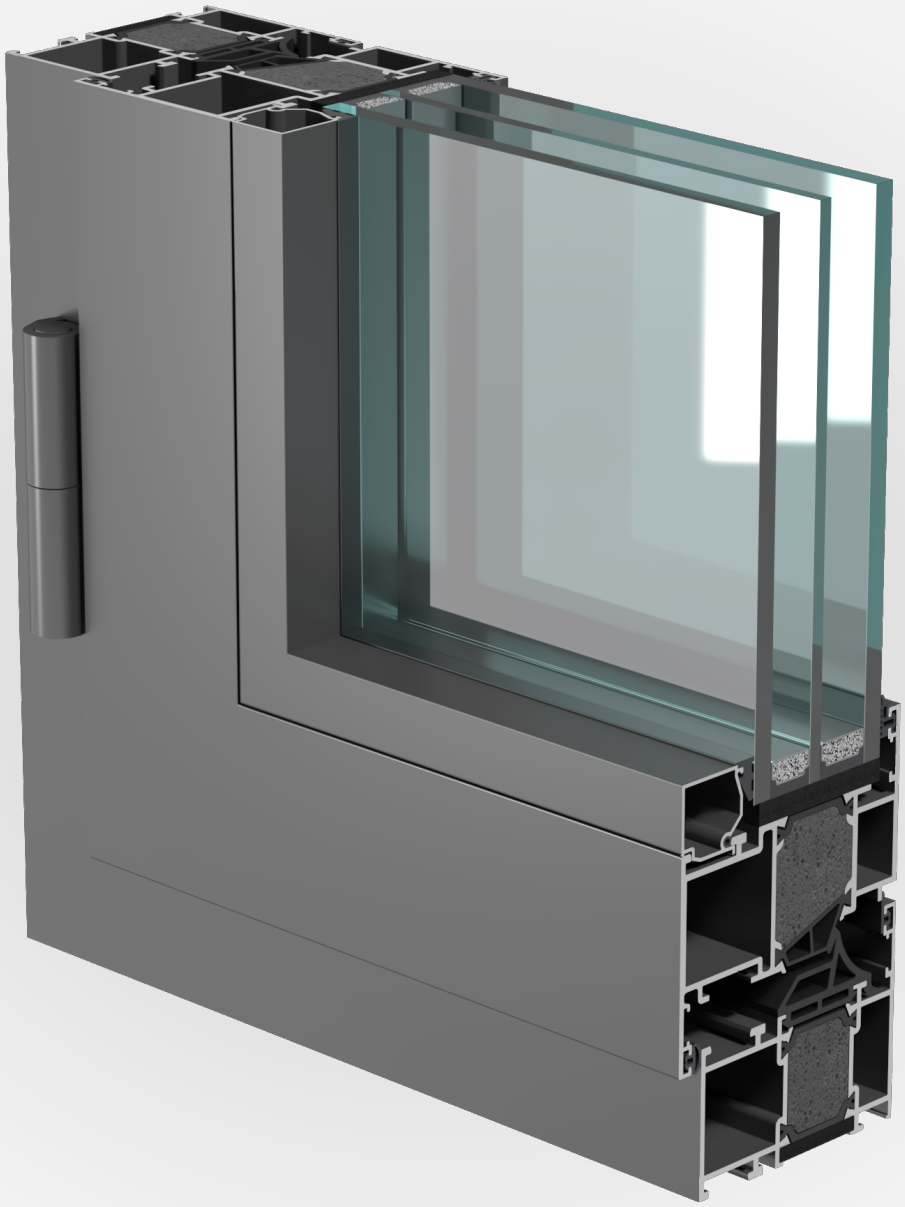
Masttech 71

Thermally insulated profile system

Technical catalogue



Masttech

Алюминиевые системы нового поколения

Masttech 71

“warm” stained-glass profile system (with thermal break)

Technical catalogue

September 2022

The MastTech-71 stained-glass glazing system is designed for manufacture of "warm" glazing: doors, conventional and stained-glass windows. The MastTech-71 aluminium profile system can be used to create translucent enclosures to be built into wall openings and stained-glass structures which can be assembled either "slab-to-slab" or "over the floor slab overhang" using the façade glazing elements that are an integral part of the MastTech-71 system.

The MastTech-71 stained-glass glazing system was developed based on our long-term experience in development and use of profile systems. All profiles and sub-assemblies are specifically designed to simplify the assembly and installation operations and minimise costs.

The system is based on quenched and artificially aged (T1) AD31 alloy aluminium profiles, which comply with modern building regulations and the requirements for stained-glass structures in new construction.

System profiles can be coated with powder paints as per GOST 9.410-88. The coating colour is assigned by the customer according to the RAL chart.

MastTech-71 system also comprises gaskets, fittings and tools for profile machining.

Gaskets are manufactured from thermoplastic elastomers (TPE) or ethylene-propylene-blockne monomer (EPDM) as per GOST 30778-2001. Gaskets remain functional at temperatures from -40 °C to +40 °C. Minimum service life is 10 years.

The components of the system are used in the frame and sash assemblies. The materials used to manufacture the fittings comply with the applicable standards. Hinges and locking mechanisms from leading European window fitting manufacturers can be used due to the euro grooves for fittings provided in the profiles.

Glass in stained-glass windows and permanent sashes is padded and secured with glazing beads and gaskets. MastTech-71 system provides for a frame filling of up to 52 mm in thickness. A special feature of the Masttech-71 system is that the entire weight of the filling is distributed only to the internal half of the "warm" profile. Therefore, the external part of the profile is not stressed by the weight of the filling, which rules out the possibility of "slipping" of one half of the profile in relation to the other one over the thermal bridges. This is ensured by the original shape of the support pad.

The corner gaskets are cut at a 45° angle and bonded together using cyanoacrylate-based adhesive.

The cut profile lengths given in the catalogue are accurate, except for the values marked with footnotes. In some cases, they shall be rounded according to the accuracy and specifications of the workshop equipment. For this reason, it is advisable to produce test pieces during the process assimilation phase or in the case of large cutting volumes, in order to check the dimensions.

The manufacturer reserves the right to make modifications to the profile system in order to improve the operational, economic or technological performance of the system.

Material	AD31 alloy, T1
Air permeability, m ^{3}/m^2*h	0.05 (at 100 Pa)
Water permeability	not permeable at 600 Pa
Reduced thermal resistance of the structure m^2*°C/W	up to 0.81
Resistance to wind load, Pa	1500 (Class A)
Gasket material	EPDM/TPE
Fitting groove	euro groove, 15 x 20 mm
Filling thickness, mm	26...52
Frame to sash clearance, mm	5
Flange for filling members, mm	18

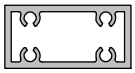
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profiles with "v" index		01-09...01-14
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fasteners		01-25...01-26
gaskets (table)		01-26...01-27
foamed inserts for profiles (table)		01-28...01-30
Profiles — scale 1:1	02	**02-01…02-38**
Sections	03	**03-01…03-70**
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Selection tables for blocks of conventional and stained-glass windows		05-01...05-04
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Selection of profile type by window sash width		06-01
Verification of fittings according to permissible filling weight		06-02
Turn window — locking with eccentric pins. For installation up to 75 m above the ground		06-03...06-04
Turn window — locking with eccentric pins. For installation above 75 m from the ground		06-05...06-06
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Pivoted window (fanlight) — top handle. Arrangement.		06-09
Selection of pivoted window fittings — top handle		06-10
Pivoted window (fanlight) — lateral handle. Arrangement.		06-11
Selection of pivoted window fittings — lateral handle		06-12
Pivoted window (fanlight) — top handle. Concealed fittings		06-13...06-14
Concealed fittings — pivoted window, lateral handle		06-15...06-16
Tilt & turn window		06-17...06-18
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Double sash forend window. Tilt & turn sash + turn sash with **FF-1502**		06-23
Double sash forend window. Tilt & turn sash + turn sash with **FF-1503**		06-24
Inward and outward opening doors with thermal break		06-25...06-26
Additional solutions	07	**07-01…07-28**
Air conditioner cages		07-01...07-10
Installation of ventilation grill and arrangement of ventilation duct		07-11...07-12
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External handrail.		07-21...07-26
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Sub-assemblies	08	**08-01…08-72**
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Fire-resistant structures	09	**09-01…08-44**
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Frame structures		10-09...10-14
Equipment and tools	11	**11-01…10-09**

P00-001
pull rod

Perimeter(mm)-49

P00-002
sash-mounted drip moulding

Perimeter(mm)-77

P00-003-2
handrail 25 x 50

Perimeter(mm)-150

P00-004
strip 100 x 5

Perimeter(mm)-210

P00-009
rectangular pipe 20 x 13 mm

Perimeter(mm)-64

P00-015
strip 80 x 5

Perimeter(mm)-170

P00-016
strip 50 x 5

Perimeter(mm)-110

P00-019
channel 10 x 10 x 1

Perimeter(mm)-67

P00-020
rectangular pipe 70 x 30 x 1.2

Perimeter(mm)-200

P00-023
ventilation grill lamella 30 mm

Perimeter(mm)-153

P00-094
holder

Perimeter(mm)-85

P00-028
support pad shape for warm systems

Perimeter(mm)-91

P00-028-2
support pad shape for warm systems

Perimeter(mm)-103

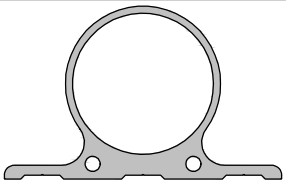
P00-029-2
batten holder

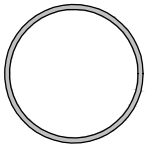
Perimeter(mm)-101

P00-030
rabbet ledge profile

Perimeter(mm)-87

P00-032
pipe holder 55 mm

Perimeter (mm)-342


P00-033
circular pipe 55 x 2 mm

Perimeter(mm)-173

P00-031
felt holder

Perimeter(mm)-58

P00-034
angle piece 30 x 15 x 1.5

Perimeter(mm)-90

P00-035
batten holder 30 mm flat

Perimeter(mm)-107

P00-037
swivel adapter

Perimeter(mm)-116

P00-041
rectangular pipe 50 x 30 x 3

Perimeter(mm)-159

P00-044
batten holder 18 mm

Perimeter(mm)-70

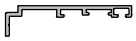
P00-050-71
ventilation sash adapter

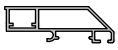
Perimeter(mm)-120

P00-058-50
support pad 50 mm

Perimeter(mm)-108

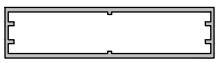
P00-058-60
support pad 60 mm


P00-059
rabbet ledge wing 45 mm

Perimeter(mm)-158

P00-059-2
mullion wing for sash not visible from the outside

Perimeter(mm)-139

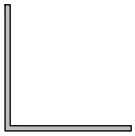
P00-078
angle piece 25 x 25 x 1.5

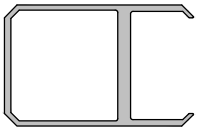
Perimeter(mm)-100

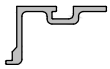
P00-078-83
mullion extender 83 mm

Perimeter(mm)-206

P00-080
angle piece 15 x 15 x 1.5

Perimeter(mm)-60

P00-081
angle piece 50 x 50 x 2

Perimeter(mm)-200

P00-082-48
mullion levelling insert 48 mm

Perimeter(mm)-291

P00-095
frame
retainer
in façade

Perimeter(mm)-141

P00-137
door-to-sill
adapter

Perimeter(mm)-88
◇ — delivery period 8–10 weeks

P00-501-25
glazing bead
3.5 mm
harness
sealing

Perimeter(mm)-97

P00-502
glazing bead
6.5 mm

Perimeter(mm)-93

P00-502-2
glazing bead
6.5 mm
harness
sealing

Perimeter(mm)-112

P00-502-25
glazing bead
5.5 mm
closed profile

Perimeter(mm)-89

P00-503
glazing bead
12.5 mm

Perimeter(mm)-105

P00-503-2
glazing bead
12.5 mm
closed profile

Perimeter(mm)-89

P00-503-25
glazing bead
15.5 mm
closed profile

Perimeter(mm)-89

P00-504
glazing bead
18.5 mm

Perimeter(mm)-138

P00-504-2
glazing bead
18.5 mm
closed profile

Perimeter(mm)-91

P00-504-25
glazing bead
21.5 mm
closed profile

Perimeter(mm)-95

P00-506
glazing bead
24.5 mm

Perimeter(mm)-151

P00-506-2
glazing bead
24.5 mm
closed

Perimeter(mm)-98

P00-506-25
glazing bead
27.5 mm
closed profile

Perimeter(mm)-105

P00-506-3
groove
glazing
bead
24.5 mm

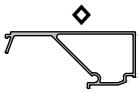
Perimeter(mm)-161

P00-507
glazing bead
30.5 mm

Perimeter(mm)-163

P00-507-2
glazing bead
30.5 mm
closed profile

Perimeter(mm)-113

P00-510
glazing bead
51.5 mm
closed profile

Perimeter(mm)-160
◇ — delivery period 8–10 weeks

P00-511
glazing bead
2.5 mm
flange 24 mm

Perimeter(mm)-82

P00-514
glazing bead 2 mm
for 4 mm groove

Perimeter(mm)-77

P00-515
glazing bead
10.5 mm for
4 mm groove

Perimeter(mm)-104

P00-520
glazing bead
18 x 9 x 2 mm

Perimeter(mm)-58

P00-530
external
glazing
bead
cover

Perimeter(mm)-77

P00-530-07
cover 7 mm
of the
external
glazing bead

Perimeter(mm)-71

P00-530-18
external
glazing bead
18 mm

Perimeter(mm)-153

P00-542
glazing bead
43 x 19 x 6.5 mm

Perimeter(mm)-159

P00-542-25
glazing bead
43 x 19 x 9.5 mm

Perimeter(mm)-165

P00-543
glazing bead
43 x 19 x 12.5 mm

Perimeter(mm)-171

P00-543-25
glazing bead
43 x 19 x 15.5 mm

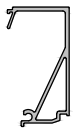
Perimeter(mm)-177

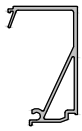
P00-544
glazing bead
43 x 19 x 18.5 mm

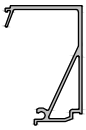
Perimeter(mm)-183

P00-544-25
glazing bead
43 x 19 x 21.5 mm

Perimeter(mm)-189

P00-546
glazing bead
43 x 19 x 24.5 mm

Perimeter(mm)-189

P00-546-25
glazing bead
43 x 19 x 27.5 mm

Perimeter(mm)-195

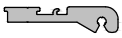
P00-547
glazing bead
43 x 19 x 30.5 mm

Perimeter(mm)-201

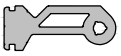
P00-550
glazing bead
25 x 12 x 3 mm

Perimeter(mm)-83

P00-612
impost
block
external for
warm
systems

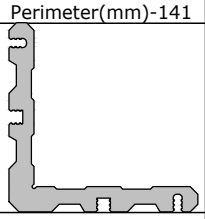
Perimeter(mm)-134

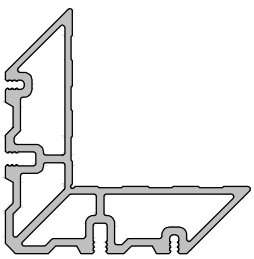
P00-612-3
impost
block
external

Perimeter(mm)-128

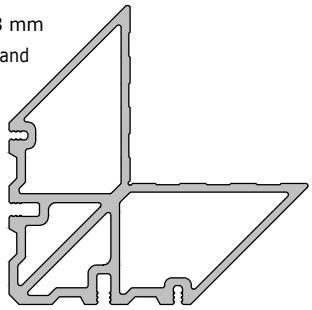
P00-613
medium
block for
warm
systems

Perimeter(mm)-130

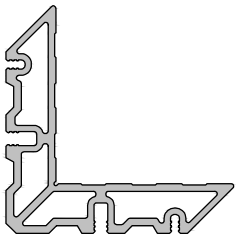
P00-615
mullion
block 25
mm

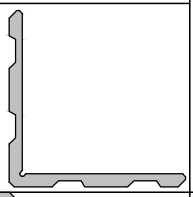
Perimeter(mm)-141

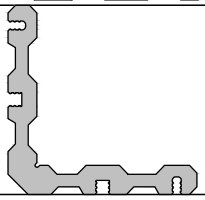
P00-616
corner block
10 mm for
squeezing and
fixing by pin 5

Perimeter(mm)-363

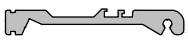
P00-617
corner block
26.5 mm for
squeezing and
fixing by
pin 5

Perimeter(mm)-455

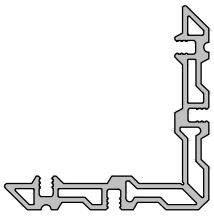
P00-618
corner block 48 mm
for squeezing and
fixing by
pin 5

Perimeter(mm)-515

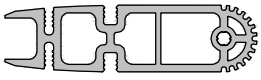
P00-619
corner block
19.7 mm for
squeezing and
fixing by
pin 5

Perimeter(mm)-435

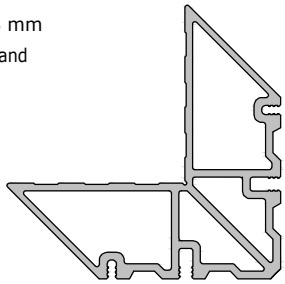
P00-620
corner block
5.2 mm for
squeezing

Perimeter(mm)-286

P00-621
corner block 11.5 mm
for squeezing and
fixing by pin 5

Perimeter(mm)-363

P00-622
Impost
block
external
long

Perimeter(mm)-196

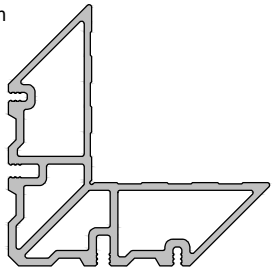
P00-623
corner block
13.4 mm for
squeezing and
fixing by pin 5

Perimeter(mm)-410

P00-626-26
Swivel
block 26
mm

Perimeter(mm)-373

P00-627
corner block 38 mm
for squeezing and
fixing by
pin 5

Perimeter(mm)-487

P00-630-75
block 75 mm

Perimeter(mm)-241

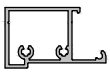
P00-632
corner block 33 mm
for squeezing and
fixing by pin 5

Perimeter(mm)-473

P00-010-27
spacer profile 27 mm
for fitting groove

Perimeter(mm)-118

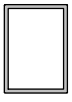
P00-045-01
duct
housing
35 mm

Perimeter(mm)-166

P00-100-40
laid-on
window sill
40 mm

Perimeter(mm)-142

P24-012
visor for
narrow
frame

Perimeter(mm)-102

P05-02-3525015
rectangular pipe
35 x 25 x 1.5

Perimeter(mm)-119

P05-02-353502
rectangular
35 x 35 x 2

Perimeter(mm)-139

P05-02-604020
rectangular
60 x 40 x 2



P05-04-0340
strip
40 x 3

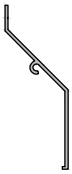
Perimeter(mm)-86

P30-001
lamella
50 x 28



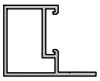
Perimeter(mm)-156

P30-002
lamella
65 x 25



Perimeter(mm)-167

P30-101
grill
frame



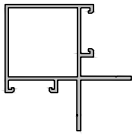
Perimeter(mm)-149

P30-102
paneless
frame



Perimeter(mm)-156

P30-301
corner
mullion



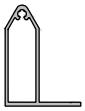
Perimeter(mm)-259

P30-401
grill
transom



Perimeter(mm)-95

P30-601
grill
block



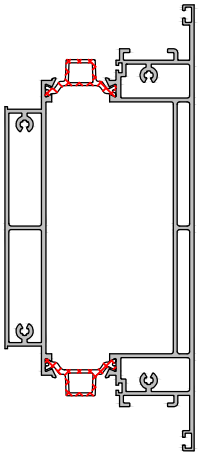
Perimeter(mm)-131

P40-002
base
mullion
adapter



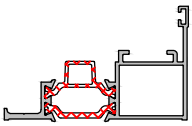
Perimeter(mm)-101

P67-216
ventilation sash
100 mm



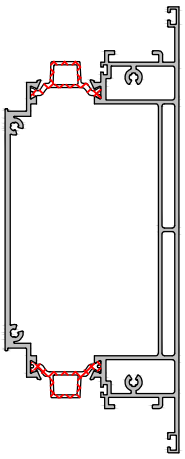
Perimeter(mm)-652

P67-217
Ventilation
sash
adapter



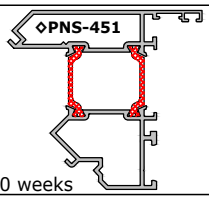
Perimeter(mm)-305

P67-218
ventilation sash
100 mm
structural



Perimeter(mm)-639

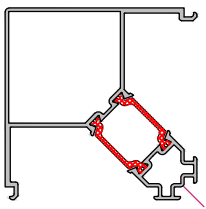
P71-001
corner
adapter 45°



Perimeter(mm)-403

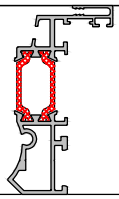
◇ — delivery period 8–10 weeks

P71-002
corner
frame
adapter 90°



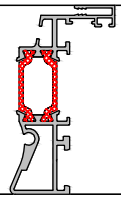
Perimeter(mm)-425

P71-006
swivel
adapter



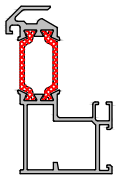
Perimeter(mm)-380

P71-006-2
all-purpose
swivel adapter



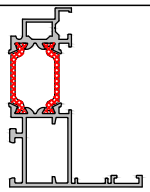
Perimeter(mm)-380

P71-005-3
turning adapter,
isolated



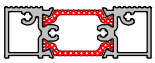
Perimeter(mm)-305

P71-007
turning
adapter



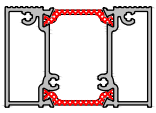
Perimeter(mm)-338

P71-014
door sill
20 mm



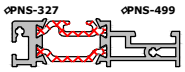
Perimeter(mm)-176

P71-014-2
door sill
40 mm



Perimeter(mm)-215

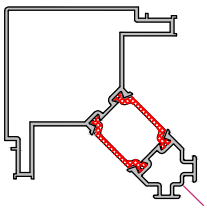
P71-014-4
groove sill of the internal
opening door



Perimeter(mm)-246

◇ — delivery period 8–10 weeks

P71-015
angled
mullion
adapter 90°



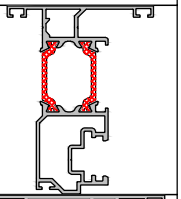
Perimeter(mm)-396

P71-018
spacer
25 mm



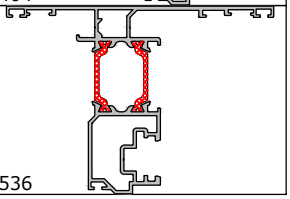
Perimeter(mm)-316

P71-020
window
forend



Perimeter(mm)-404

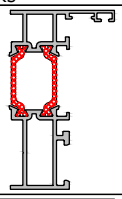
P71-023
window forend
of sash not
visible from the
outside

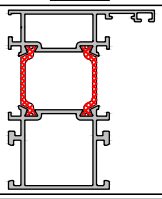


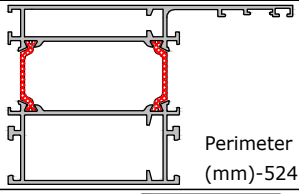
Perimeter(mm)-536

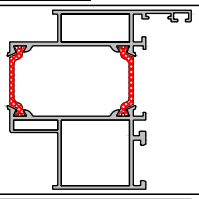
P71-025
base
rabbet
ledge
◇PNS-446 ◇PNS-302

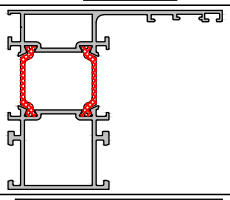
Perimeter(mm)-261
◇ — delivery period 8–10 weeks

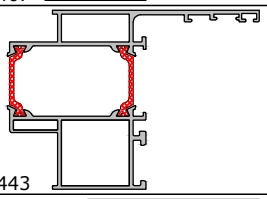
P71-101
narrow
window
frame

Perimeter(mm)-173

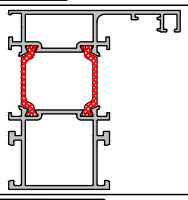
P71-102
window
frame

Perimeter(mm)-407

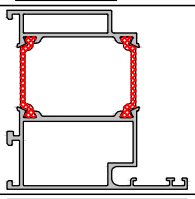
P71-104
wide frame
of sash not
visible from
the outside

Perimeter (mm)-524

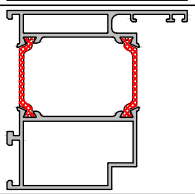
P71-108
façade
window
frame

Perimeter(mm)-383

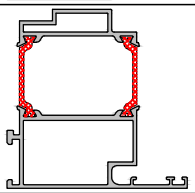
P71-113
frame of
sash not
visible from
the outside

Perimeter(mm)-467

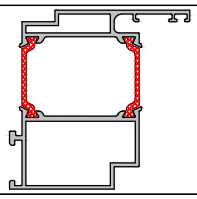
P71-114
frame of sash
not visible
from the
outside façade

Perimeter(mm)-443

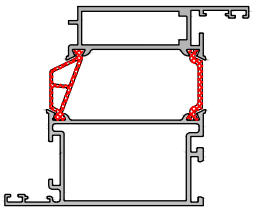
P71-115
ventilation
sash frame

Perimeter(mm)-442

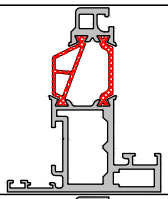
P71-171
outward
opening
door frame

Perimeter(mm)-366

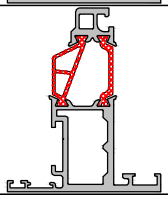
P71-172
inward
opening
door frame

Perimeter(mm)-366

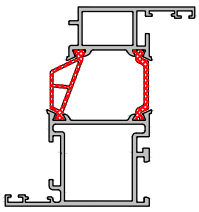
P71-173
outward
opening
stained-glass
door frame

Perimeter(mm)-352

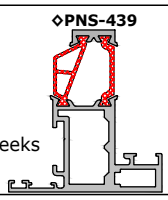
P71-174
inward
opening
stained-glass
door frame

Perimeter(mm)-353

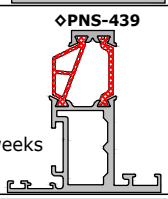
P71-205
wide
window
frame

Perimeter(mm)-486

P71-206
sash not
visible
from the
outside

Perimeter(mm)-359

P71-206-54
sash not
visible
from the
outside

Perimeter(mm)-359

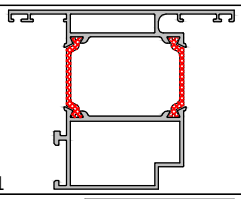
P71-207
window
sash

Perimeter(mm)-442

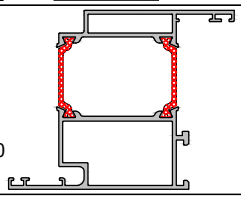
P71-209
structural
sash
◇PNS-439

◇ — delivery period 8–10 weeks
Perimeter(mm)-330

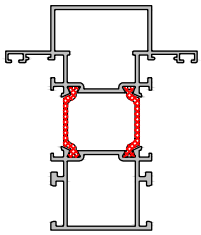
P71-209-54
structural
sash
◇PNS-439

◇ — delivery period 8–10 weeks
Perimeter(mm)-330

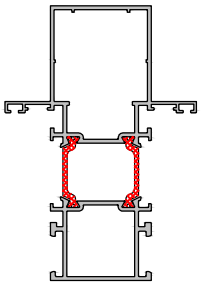
P71-212
door
base
◇PNS-217
Perimeter(mm)-527
◇PNS-113
◇ — delivery period 8–10 weeks

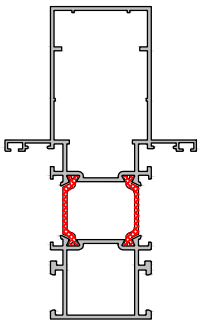
◇PNS-417
P71-212-190
base 145 mm
Perimeter (mm)-617

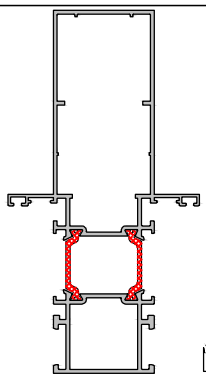
P71-271
T-shaped
door leaf

Perimeter(mm)-421

P71-272
Z-shaped
door leaf

Perimeter(mm)-420

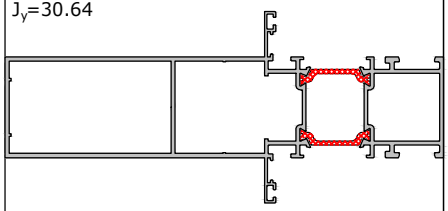
P71-300-89
mullion 89 mm
J_x=31.13
J_y=19.08

Perimeter(mm)-503

P71-301
mullion 109 mm
J_x=55.36
J_y=21.37

Perimeter(mm)-543

P71-302
mullion 124 mm
J_x=77.15
J_y=23.30

Perimeter(mm)-573

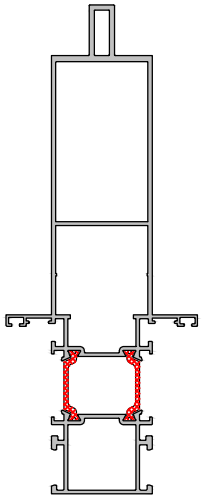
P71-303
mullion 144 mm
J_x=112.57
J_y=25.52

Perimeter(mm)-613

P71-304
mullion 174 mm
J_x=203.95
J_y=30.64



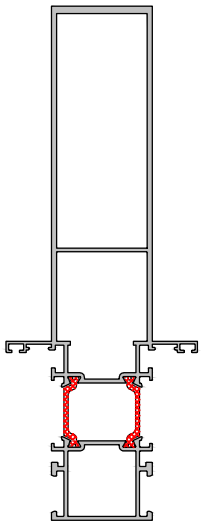
Perimeter(mm)-674

P71-304-21
mullion 174 mm
with decorative
projection
J_x=288.51
J_y=31.09



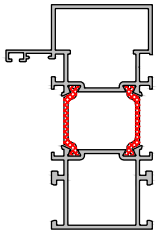
Perimeter(mm)-713

P71-305
mullion 204 mm
J_x=371.79
J_y=37.41



Perimeter(mm)-734

P71-310-89
mullion 89 mm
single-arm
J_x=34.62
J_y=15.82



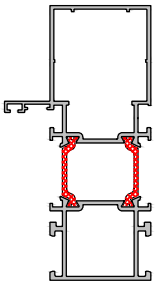
Perimeter(mm)-443

P38-005-08
spacer
8 mm



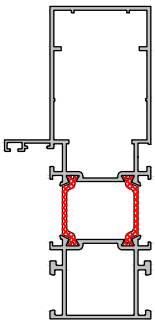
Perimeter(mm)-65
◇ — delivery period 8–10 weeks

P71-311
mullion 109 mm
single-arm
J_x=54.48
J_y=18.11



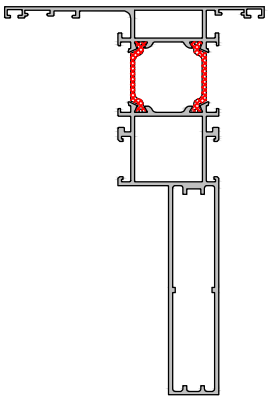
Perimeter(mm)-479

P71-312
mullion 124 mm
single-arm
J_x=79.68
J_y=20.05



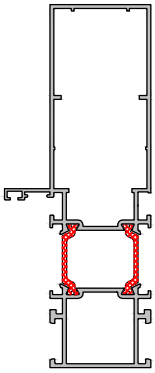
Perimeter(mm)-509

P71-313
mullion 154 mm
for sash not
visible from the
outside
J_x=163.55
J_y=37.96



Perimeter(mm)-698

P71-313-2
mullion 144 mm
single-arm
J_x=112.44
J_y=22.28



Perimeter(mm)-549

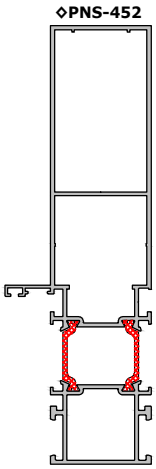
P38-005-10
spacer
10 mm



Perimeter(mm)-73

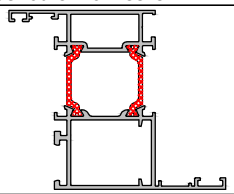
P71-314
mullion 174 mm
single-arm
J_x=203.81
J_y=27.43

◇PNS-452

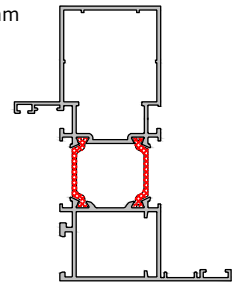


Perimeter(mm)-609
◇ — delivery period 8–10 weeks

P71-320
impost 71 mm
turning
J_x=27.02
J_y=19.99

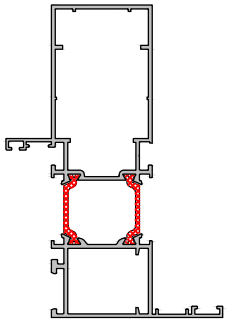


P71-321
impost 109 mm
turning
J_x=61.61
J_y=24.72



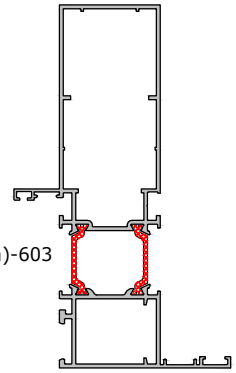
Perimeter(mm)-533

P71-322
impost 124
mm turning
J_x=85.36
J_y=26.65



Perimeter(mm)-563

P71-323
impost 144
mm turning
J_x=123.27
J_y=28.88



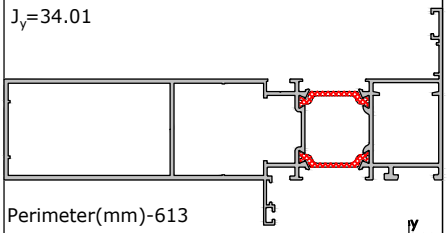
Perimeter(mm)-603

P38-005-12
spacer
12 mm



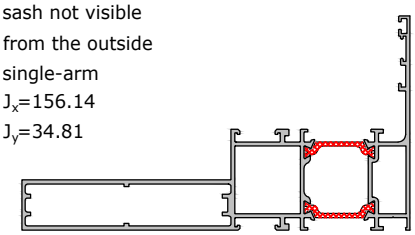
Perimeter(mm)-81

P71-324
impost 174 mm
turning
J_x=220.22
J_y=34.01



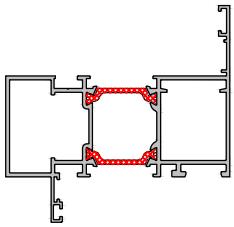
Perimeter(mm)-613
◇ — delivery period 8–10 weeks

P71-325
mullion 154 mm for
sash not visible
from the outside
single-arm
J_x=156.14
J_y=34.81



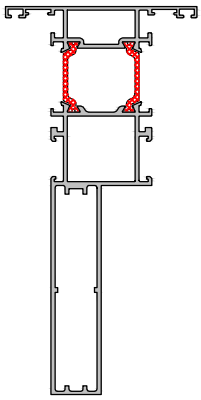
Perimeter(mm)-638

P71-326
impost 89 mm
turning
J_x=40.18
J_y=22.44



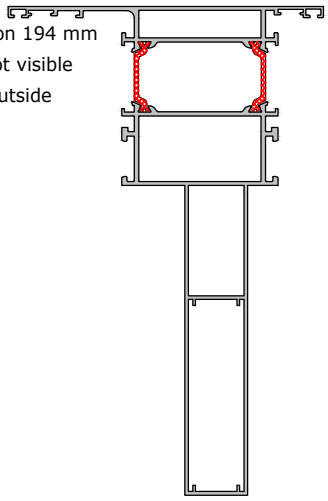
Perimeter(mm)-491

P71-333
inward-reinforced
mullion 154 mm
J_x=150.38
J_y=21.26



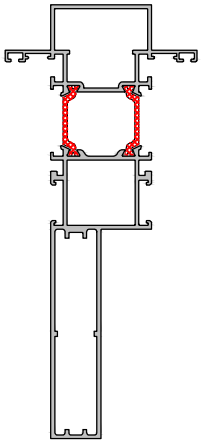
Perimeter(mm)-636

P71-354
wide mullion 194 mm
for sash not visible
from the outside
J_x=318.69
J_y=77.35



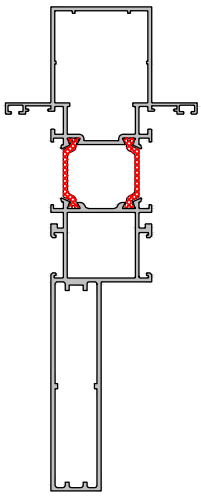
Perimeter(mm)-818

P71-340
mullion 172 mm
bidirectional
J_x=178.90
J_y=23.78



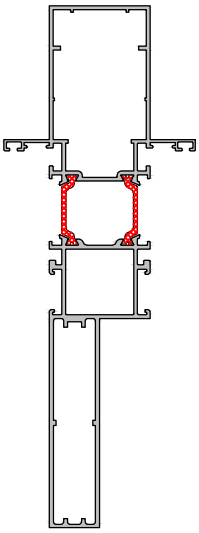
Perimeter(mm)-674

P71-341
mullion 192 mm
bidirectional
J_x=218.08
J_y=26.12



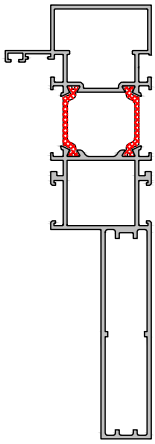
Perimeter(mm)-714

P71-342
bidirectional
mullion 207 mm
J_x=258.91
J_y=28.09



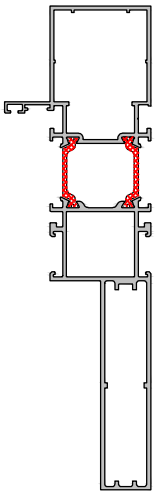
Perimeter(mm)-745

P71-346
mullion 172 mm
single-arm
bidirectional
J_x=172.03
J_y=21.19



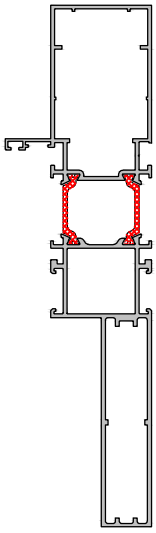
Perimeter(mm)-614

P71-347
mullion 192 mm
single-arm
bidirectional
J_x=212.60
J_y=23.50



Perimeter(mm)-654

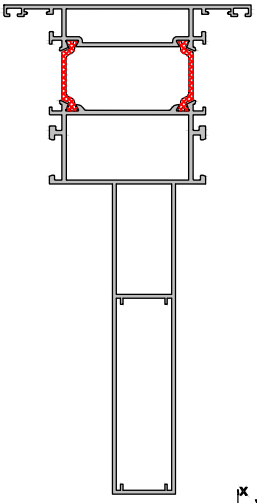
P71-348
mullion 207 mm
single-arm
bidirectional
J_x=254.54
J_y=25.45



Perimeter(mm)-684

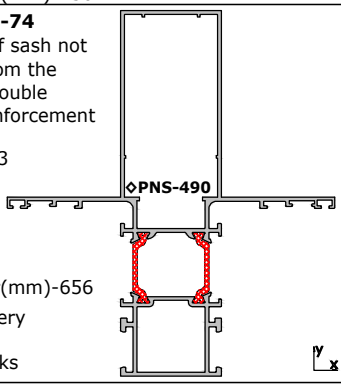
P71-355
wide
inward-reinforced
mullion 194 mm

J_x=301.18
J_y=55.33



Perimeter(mm)-756

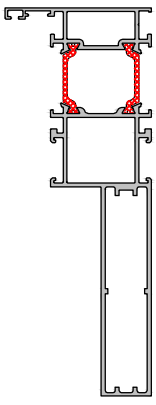
P71-361-74
mullion of sash not visible from the outside double sided reinforcement 74 mm
J_x=113.73
J_y=56.56



Perimeter(mm)-656
◇ — delivery period 8–10 weeks

P71-373
inward-reinforced
mullion 154 mm
single-arm

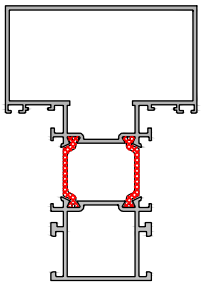
J_x=142.02
J_y=18.70



Perimeter(mm)-578

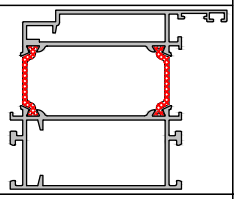
P71-376-38
architectural
mullion 109 mm

J_x=69.52
J_y=39.00



Perimeter(mm)-543

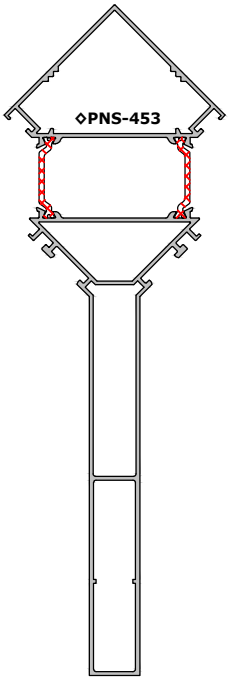
P71-404
Impost expander



Perimeter(mm)-536

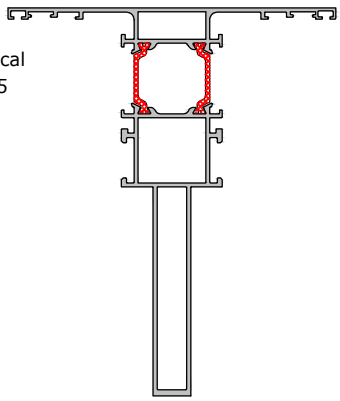
P71-380-360
inward-reinforced
corner
mullion

J_x=535.01
J_y=57.10



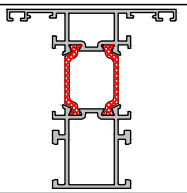
Perimeter(mm)-737
◇ — delivery period 8–10 weeks

P71-390
mullion of sash not visible from the outside
symmetrical
J_x=172.85
J_y=49.12



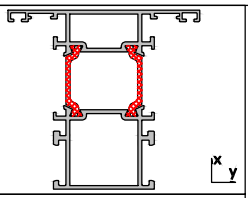
Perimeter(mm)-753

P71-402
narrow
impost
J_x=22.29
J_y=9.45



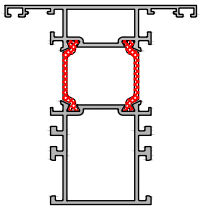
Perimeter(mm)-405

P71-403
impost
J_x=24.92
J_y=16.64



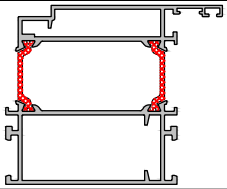
Perimeter(mm)-468

P71-403-79
window
impost
J_x=32.48
J_y=17.98



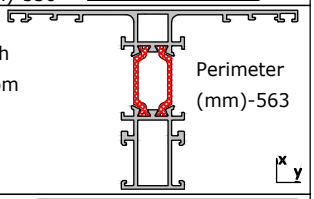
Perimeter(mm)-509
◇ — delivery period 8–10 weeks

P71-404-2
section extension



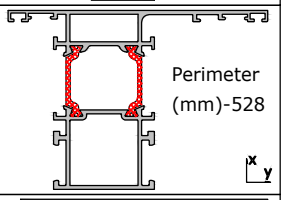
Perimeter(mm)-536

P71-405
impost of sash not visible from the outside
J_x=25.95
J_y=28.95



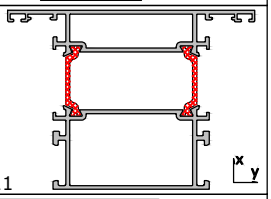
Perimeter (mm)-563

P71-406
impost of sash not visible from the outside
J_x=28.27
J_y=31.03



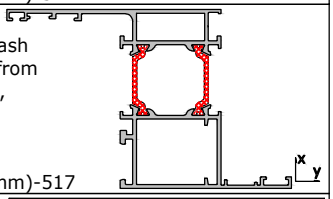
Perimeter (mm)-528

P71-407
wide
impost
J_x=32.31
J_y=48.12



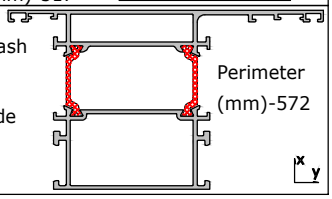
Perimeter(mm)-511

P71-409
impost of sash not visible from the outside, turning
J_x=31.38
J_y=34.87



Perimeter(mm)-517

P71-410
impost of sash not visible from the outside, wide
J_x=35.51
J_y=68.14

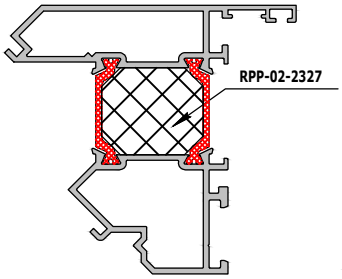


Perimeter (mm)-572

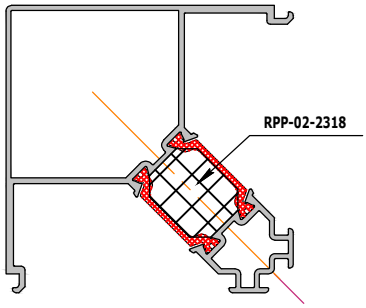
Profiles with "v" index

Index "v" in the combined profile designation indicates the increased thermal insulation properties of the profile. To achieve this, a polyethylene foam insert is placed in the medium profile chamber formed by the thermal bridges along the entire length of the profile after painting.
These profiles shall be used in conjunction with an additional polyethylene foam gaskets around the perimeter of the filling.

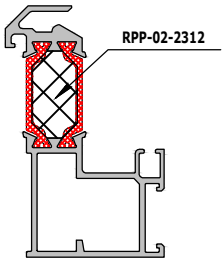
P71v-001



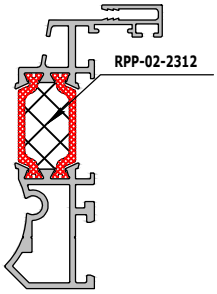
P71v-002



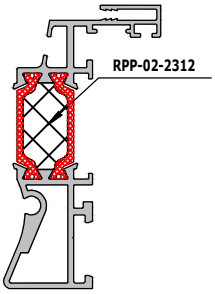
P71v-005-3



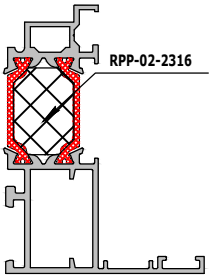
P71v-006



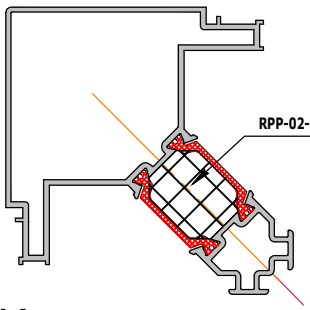
P71v-006-2



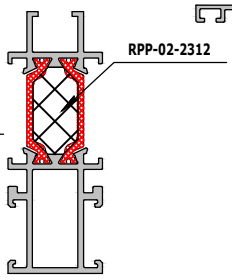
P71v-007



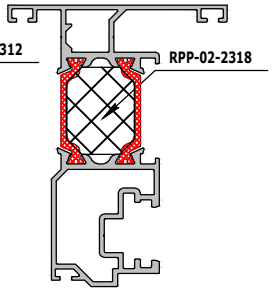
P71v-015



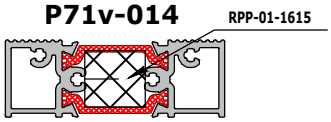
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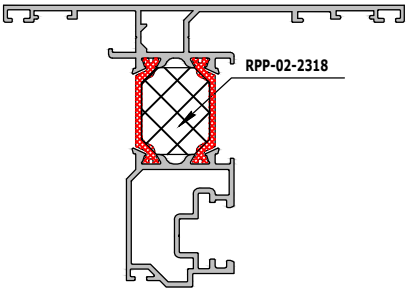
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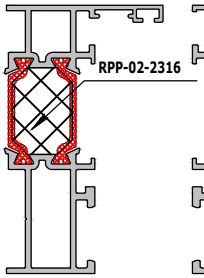
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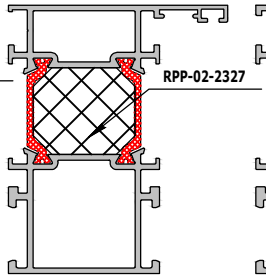
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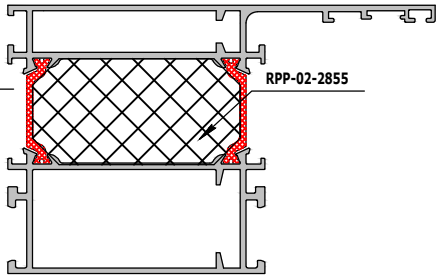
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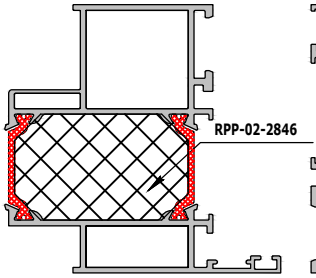
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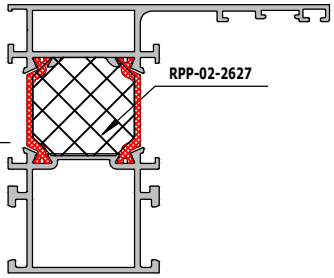
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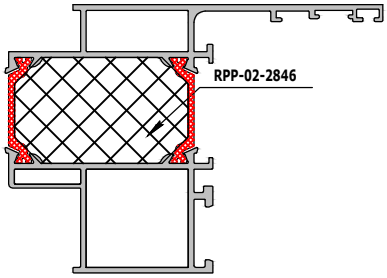
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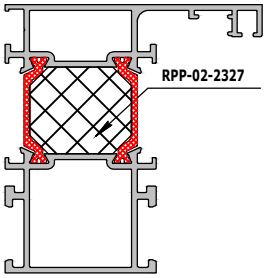
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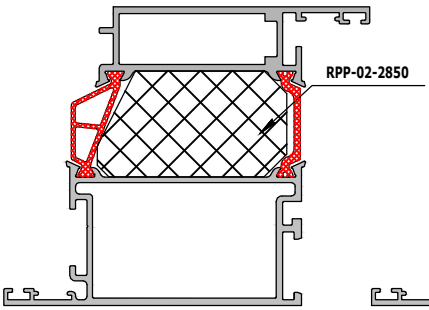
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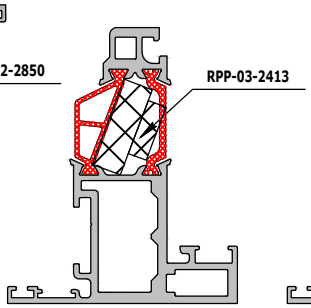
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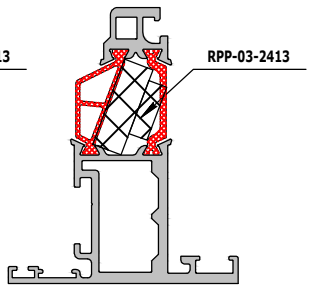
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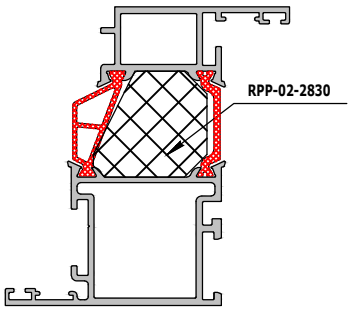
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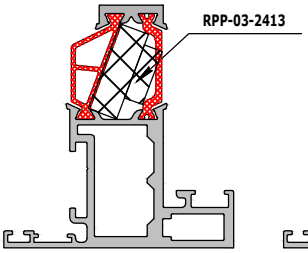
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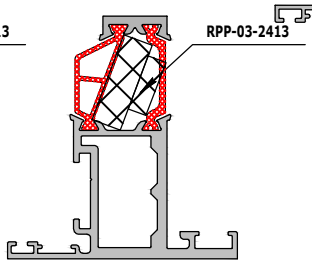
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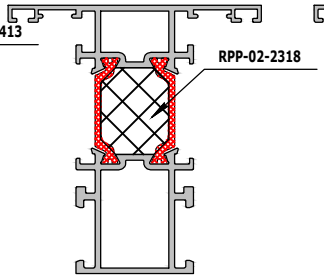
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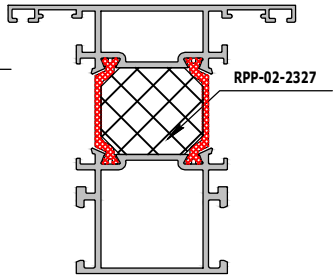
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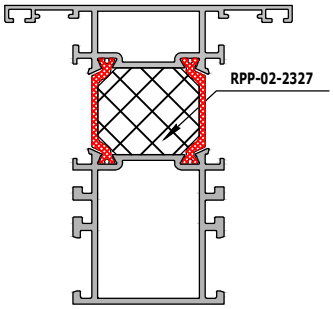
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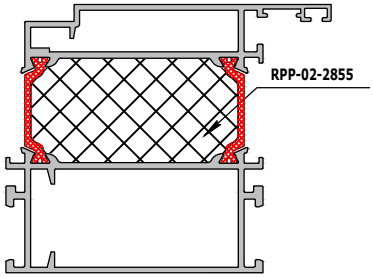
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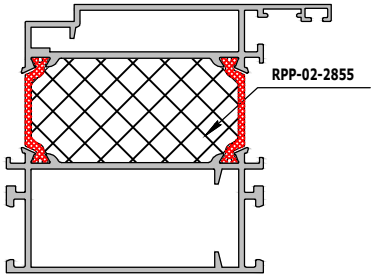
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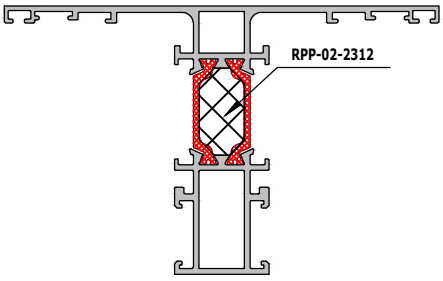
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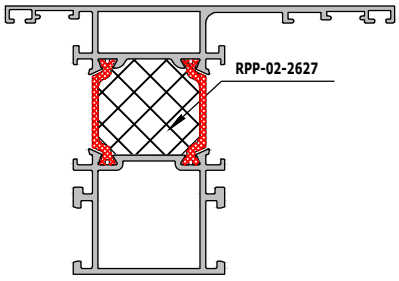
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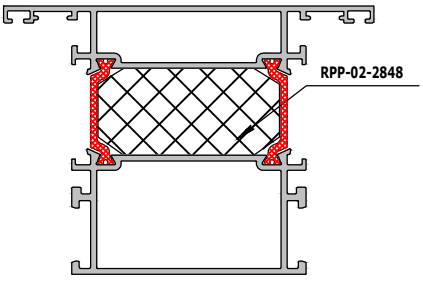
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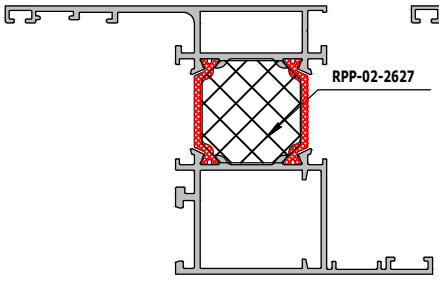
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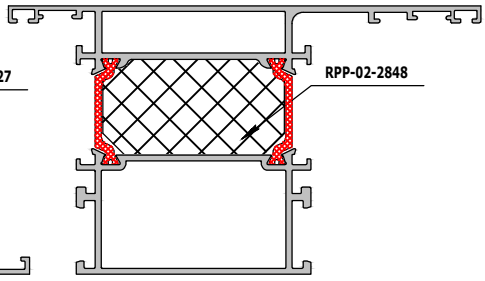
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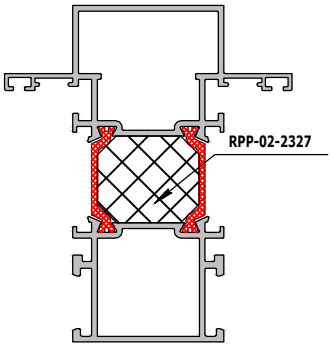
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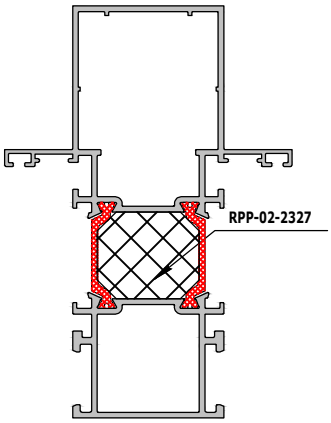
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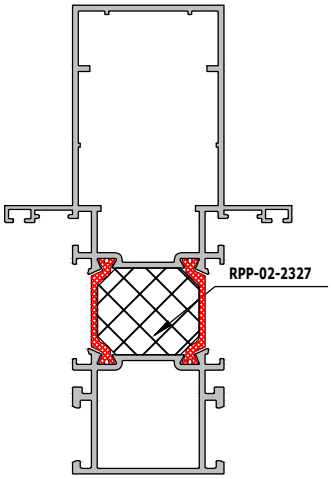
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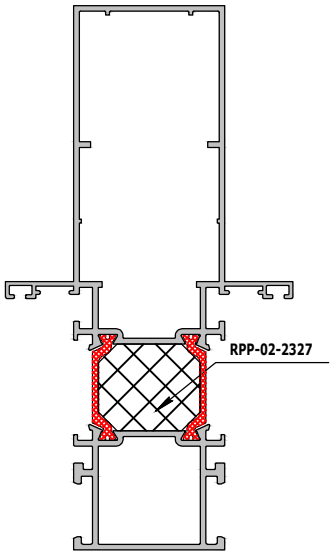
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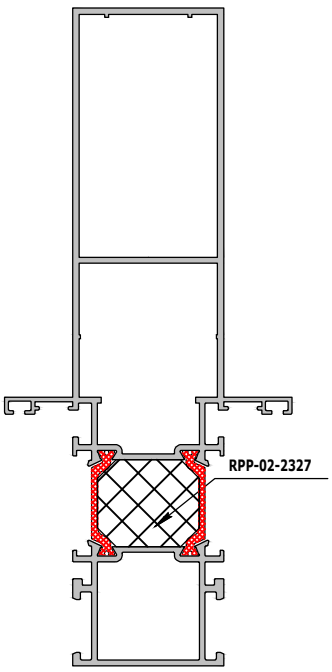
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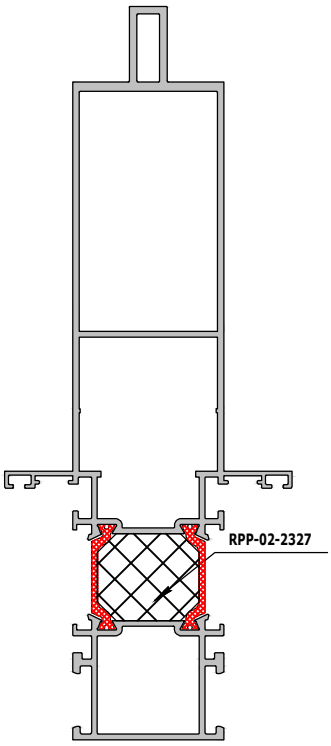
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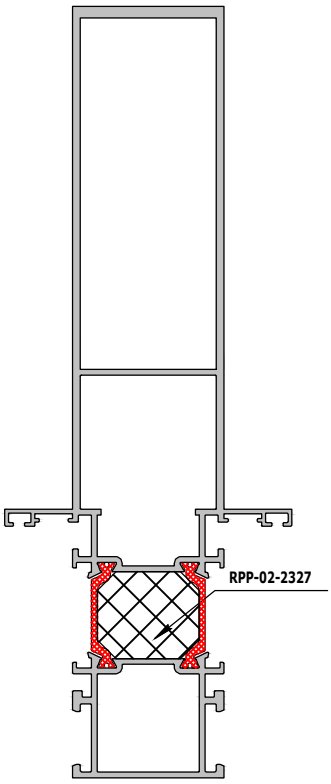
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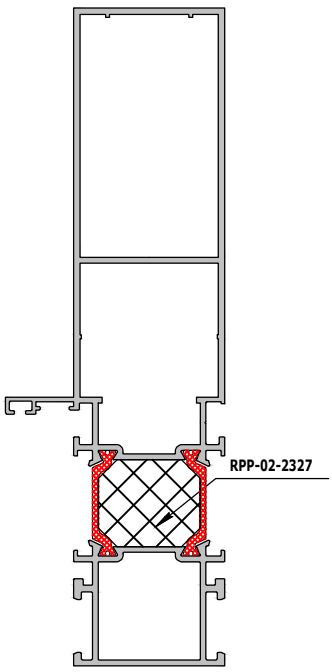
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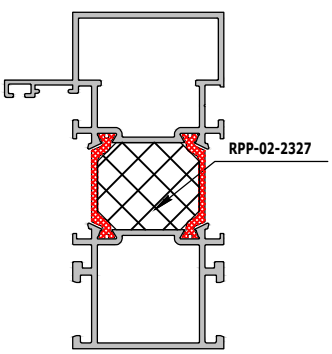
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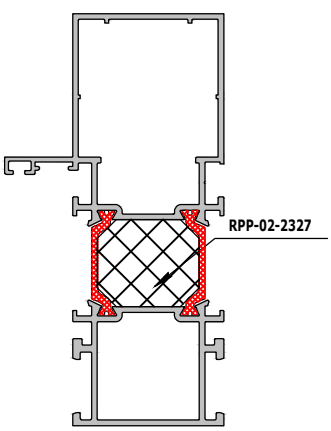
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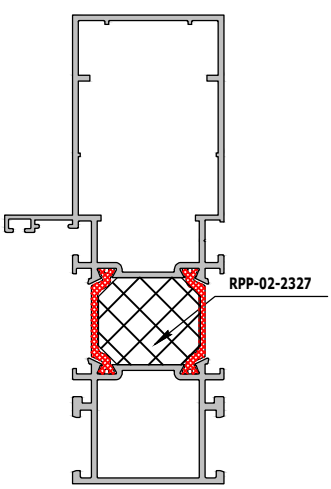
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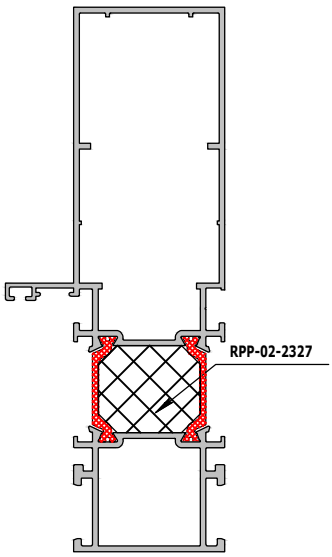
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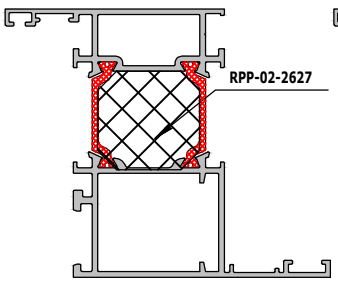


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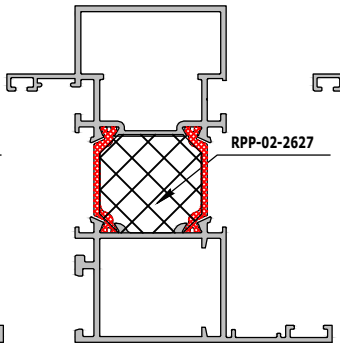


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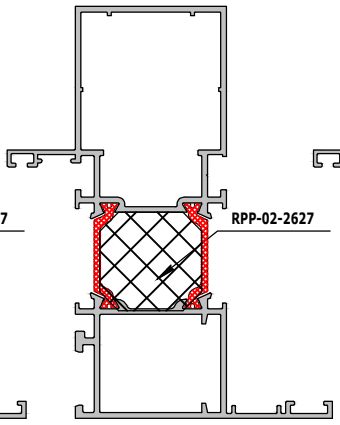
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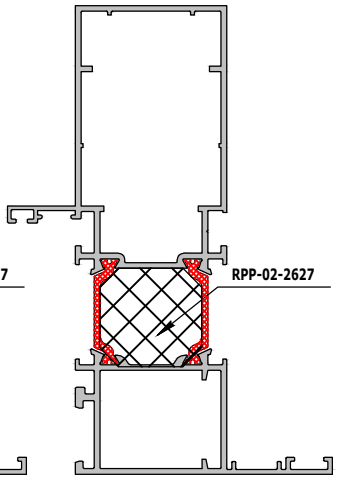
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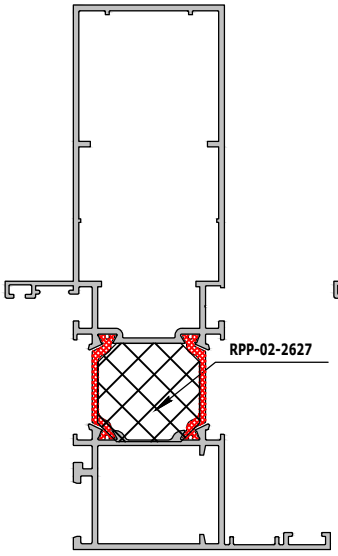
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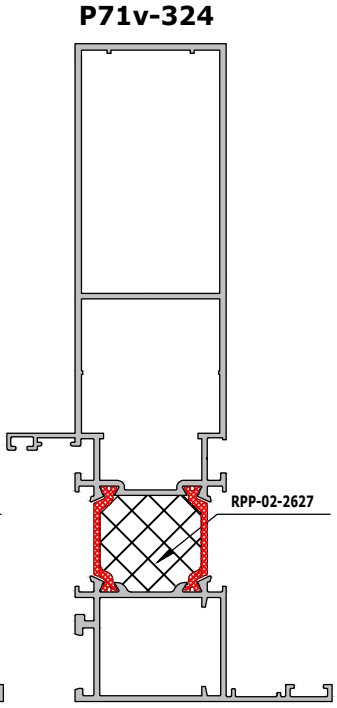
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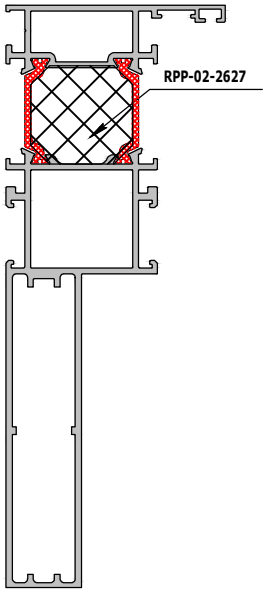
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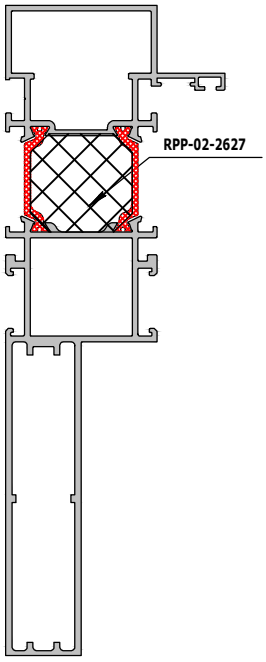
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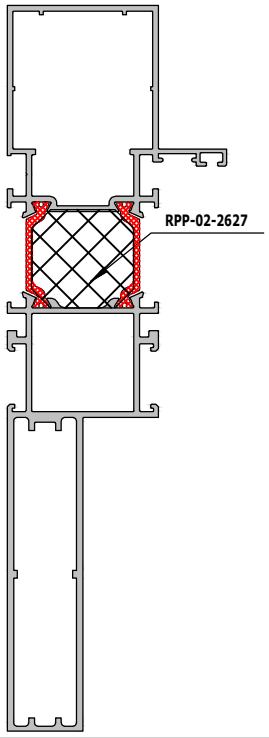
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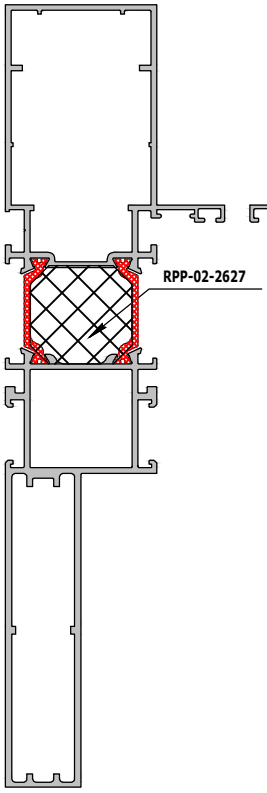
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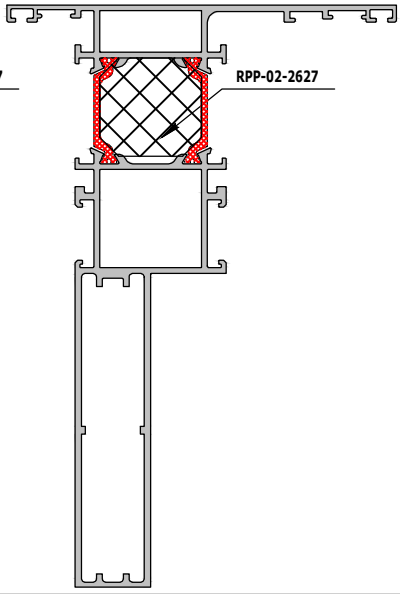
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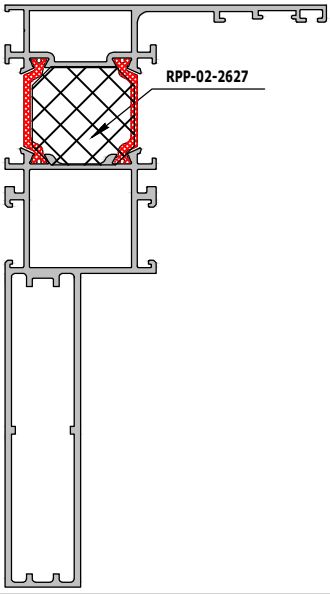
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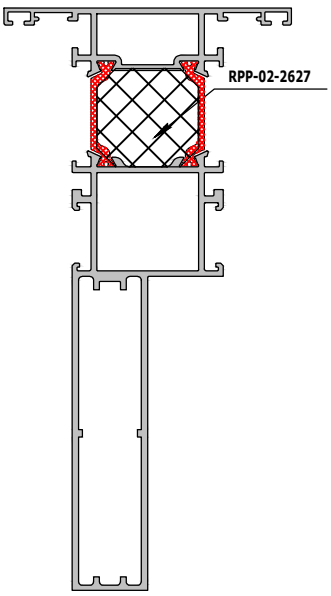


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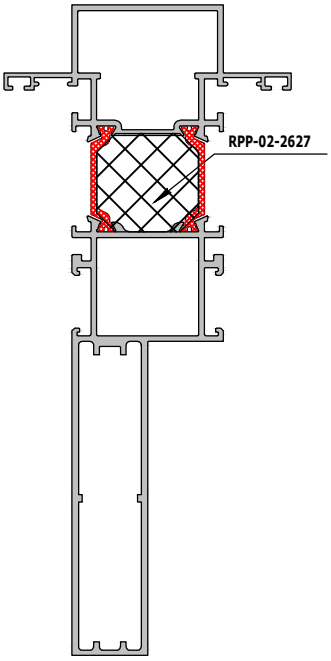


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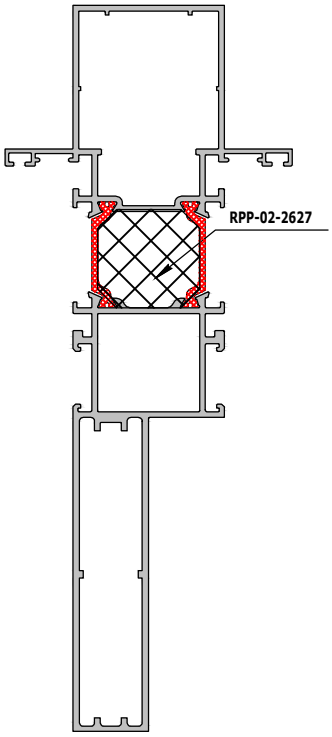
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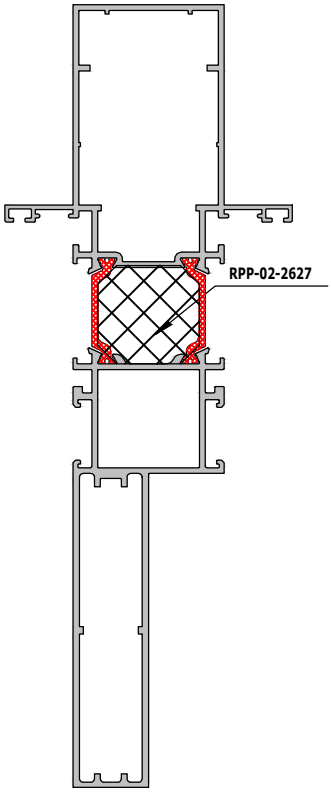
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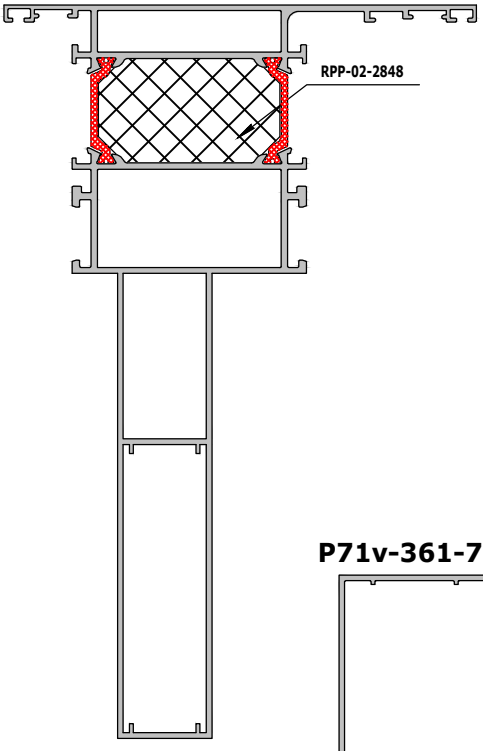
P71v-341



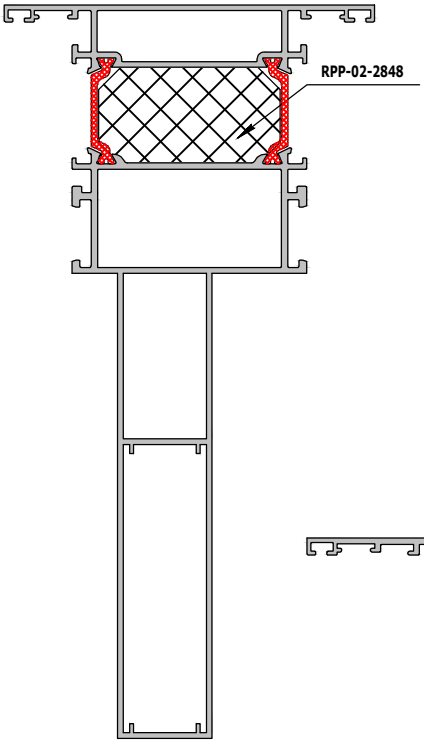
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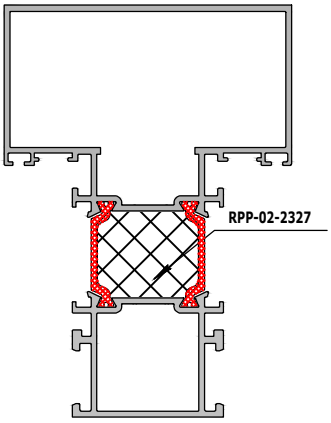
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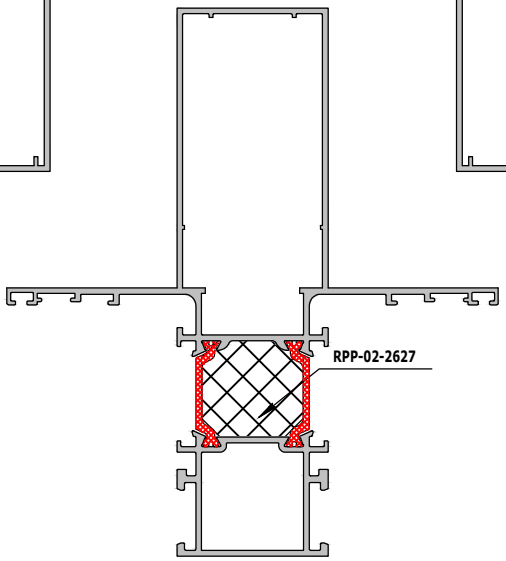
P71v-355



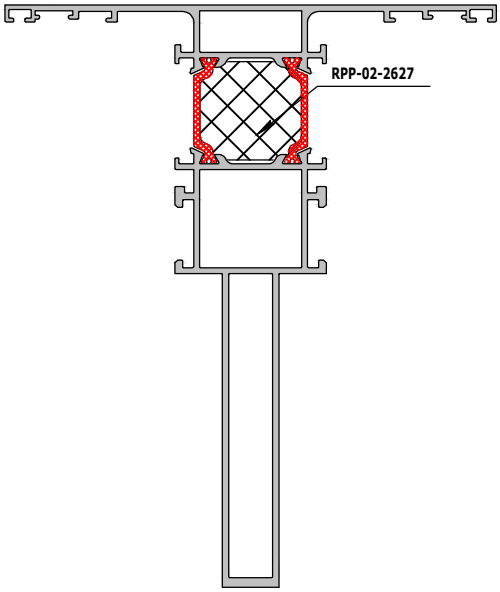
P71v-326-38



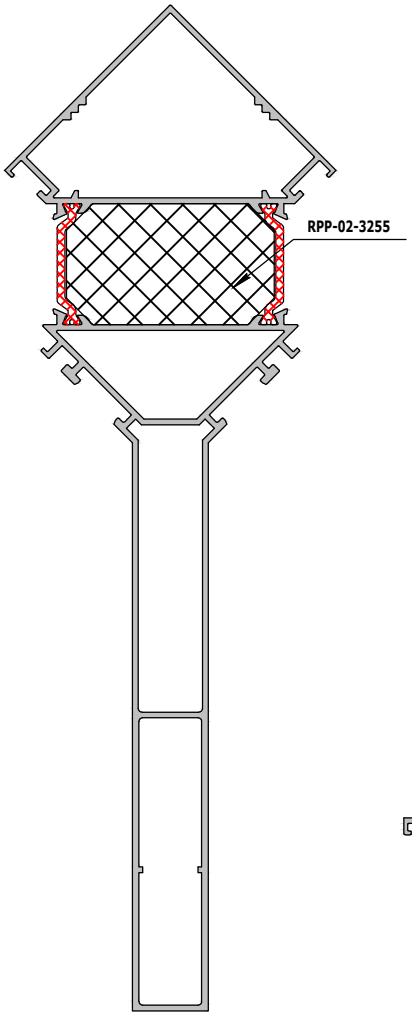
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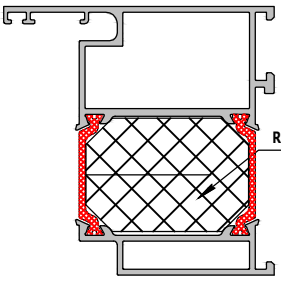
P71v-390



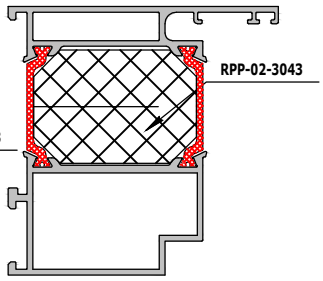
P71v-380-260



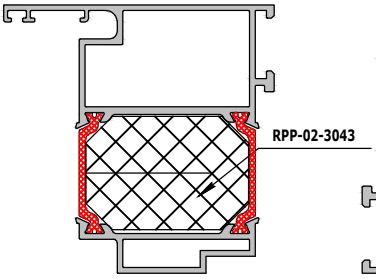
P71v-171



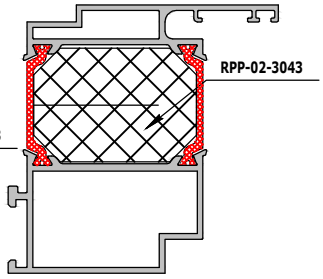
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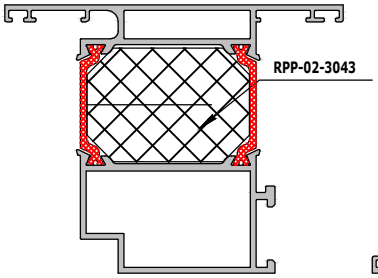
P71v-173



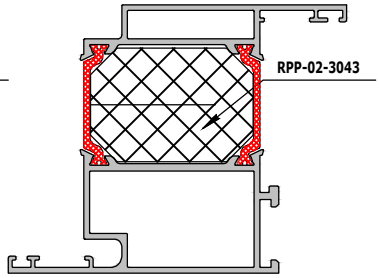
P71v-174



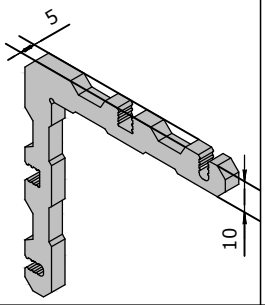
P71v-271



P71v-272

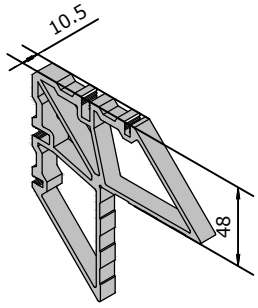


C117-5
Corner block,
5 x 10 mm

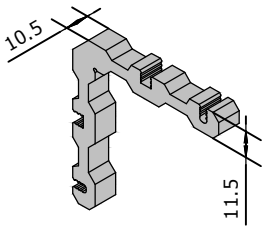


manufactured from
profile P00-616

C119-10
Corner block,
10.5 x 48 mm

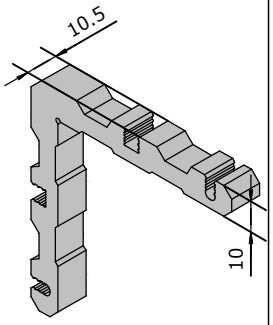


C122-11
Corner block
10.5 x 11.5



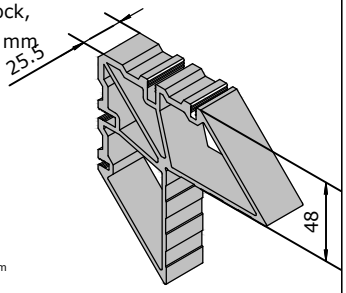
manufactured from
profile P00-621

C117-10
Corner block,
10.5 x 10 mm



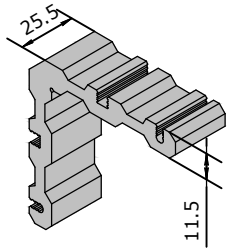
manufactured from
profile P00-616

C119-25
Corner block,
25.5 x 48 mm



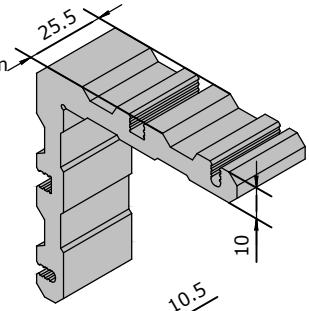
manufactured from
profile P00-618

C122-26
Corner block
25.5 x 11.5



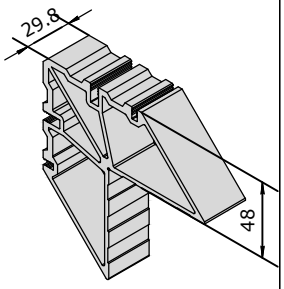
manufactured from
profile P00-621

C117-25
Corner block,
25.5 x 10 mm



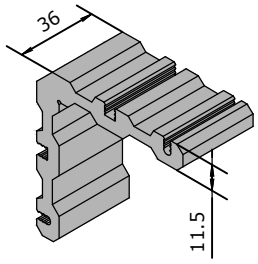
manufactured from
profile P00-616

C119-30
Corner block,
29.8 x 48 mm



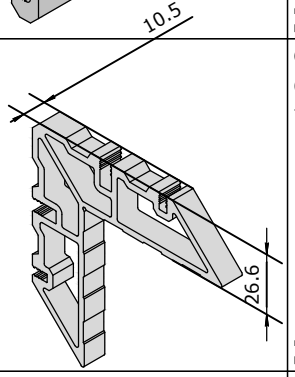
manufactured from
profile P00-618

C122-36
Corner block
36 x 11.5



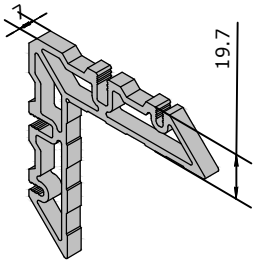
manufactured from
profile P00-621

C118-10
Corner block
10.5 x 26.6 mm



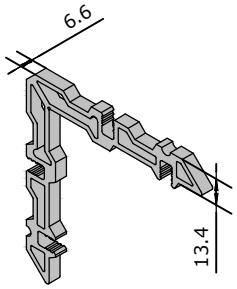
manufactured from
profile P00-617

C120-07
Corner block,
7 x 19.7 mm



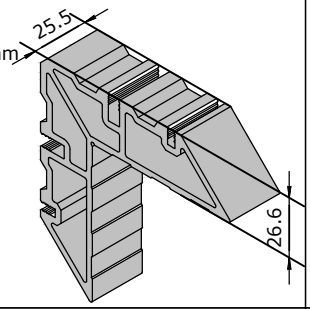
manufactured from
profile P00-619

C123-7
Corner block,
6.6 x 13.4 mm



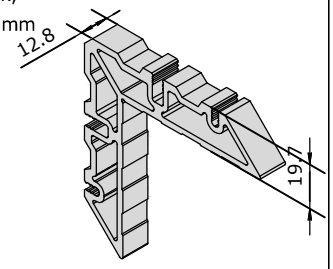
manufactured from
profile P00-623

C118-25
Corner block
25.5 x 26.6 mm



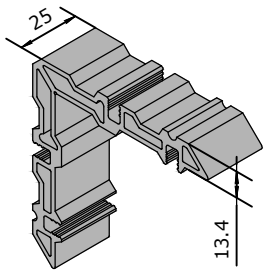
manufactured from
profile P00-617

C120-13
Corner block,
12.8 x 19.7 mm



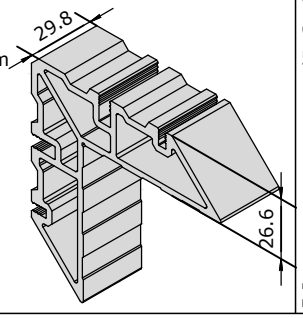
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C123-25
Corner block,
25 x 13.4 mm



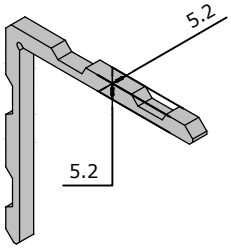
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profile P00-623

C118-30
Corner block,
29.8 x 26.6 mm



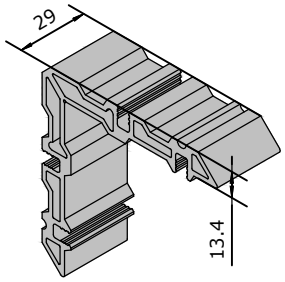
manufactured from
profile P00-617

C121-05
Corner block,
5.2 x 5.2 mm



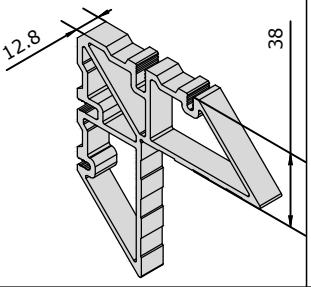
manufactured from
profile P00-620

C123-29
Corner block,
29 x 13.4 mm



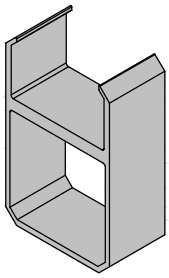
manufactured from
profile P00-623

C125-13
Corner block,
12.8 x 38 mm



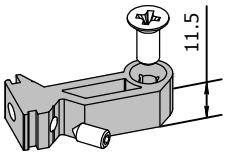
manufactured from profile P00-627

C201-25
Mullion levelling insert 48 x 25.5 mm



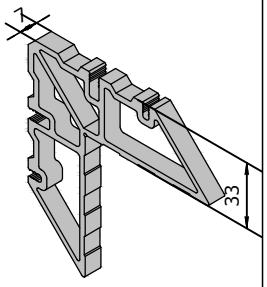
manufactured from profile P00-082-48

C522-12
Medium impost block 11.5 mm (for warm systems)



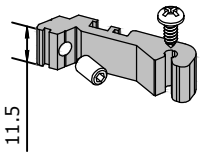
manufactured from profile P00-613

C127-07
Corner block
7 x 33 mm



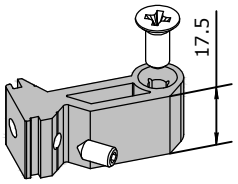
manufactured from profile P00-632

C521-12
Impost block narrow 11.5 mm (for warm systems)



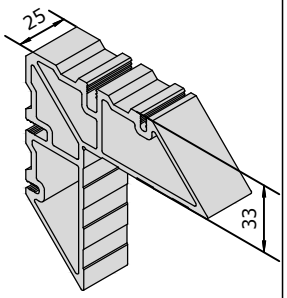
manufactured from profile P00-612

C522-17
Medium impost block 17.5 mm (for warm systems)



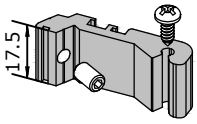
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C127-25
Corner block
25 x 33 mm



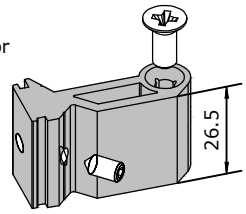
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C521-17
Impost block narrow 17.5 mm (for warm systems)



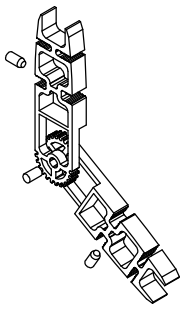
manufactured from profile P00-612

C522-26
Medium impost block 26.5 mm (for warm systems)



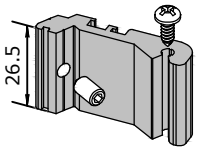
manufactured from profile P00-613

C150-10
Swivel block
10 mm



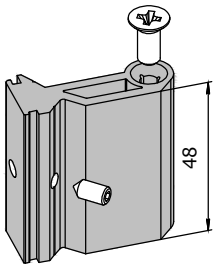
manufactured from profile P00-626-26

C521-26
Impost block narrow 26.5 mm (for warm systems)



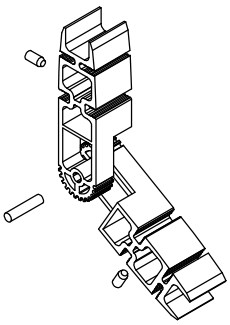
manufactured from profile P00-612

C522-48
Medium impost block 48 mm (for warm systems)



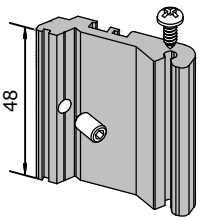
manufactured from profile P00-613

C150-25
Swivel block
25 mm



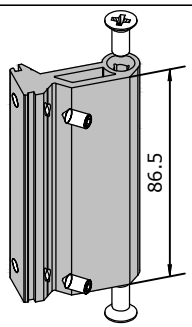
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C521-48
Impost block narrow 48 mm (for warm systems)



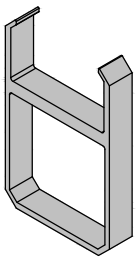
manufactured from profile P00-612

C522-86
Medium impost block 86.5 mm (for warm systems)



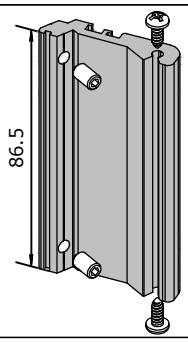
manufactured from profile P00-613

C201-11
Mullion levelling insert 48 x 11.5 mm



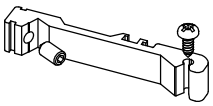
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C521-86
Impost block narrow 86.5 mm (for warm systems)



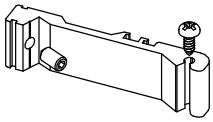
manufactured from profile P00-612

C523-12
Impost block narrow 11.5 mm (for warm systems)



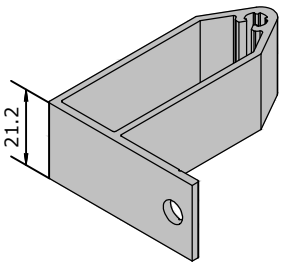
manufactured from profile P00-622

C523-17
Impost block
narrow 17.5 mm
(for warm systems)



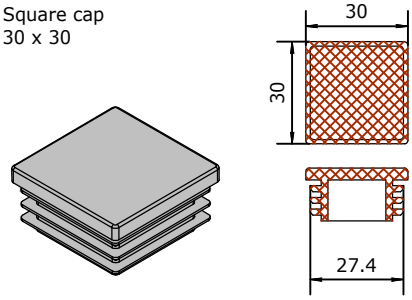
manufactured from
profile P00-622

C530-22
Impost block
21.2 x 14 mm

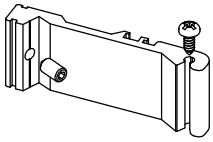


manufactured from
profile P30-601

F020-30
Square cap
30 x 30

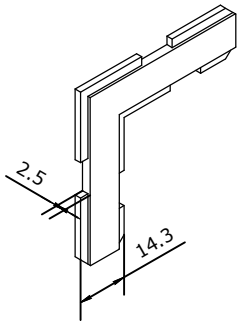


C523-26
Impost block
narrow 26.5 mm
(for warm systems)

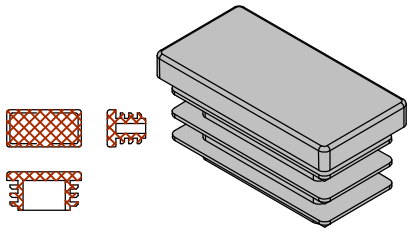


manufactured from
profile P00-622

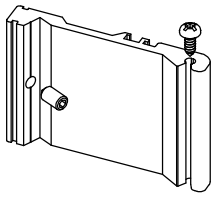
C602
Levelling angle
14.3 x 2.5



F020-3015
Rectangular cap
30 x 15

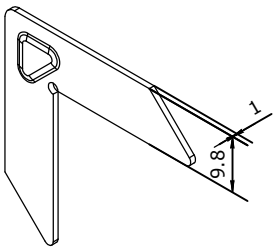


C523-48
Impost block
narrow 48 mm (for
warm systems)

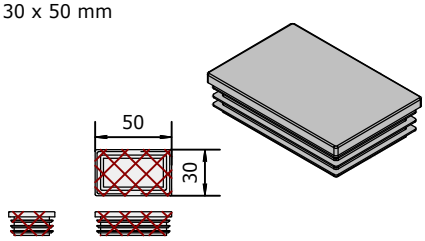


manufactured from
profile P00-622

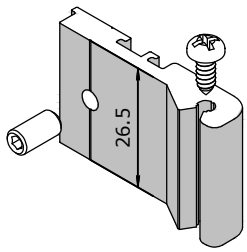
C605
Levelling angle
10 x 1



F020-3050
Rectangular cap
30 x 50 mm

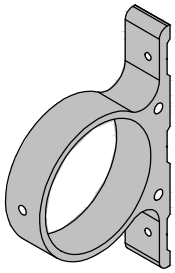


C528-26
Impost block
narrow 26.5 mm
(for warm systems)

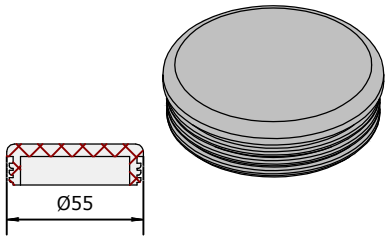


manufactured from
profile P00-612-3

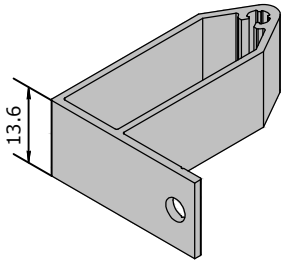
F017-18S
Mullion holder
18 mm



F020-55
Round cap 55 mm

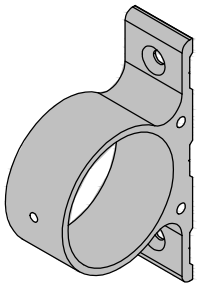


C530-14
Impost
block 14 x
14 mm

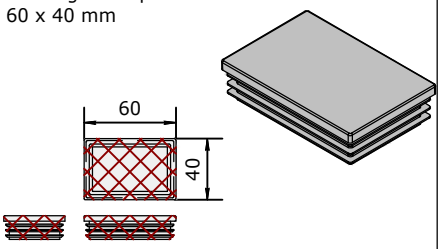


manufactured from
profile P30-601

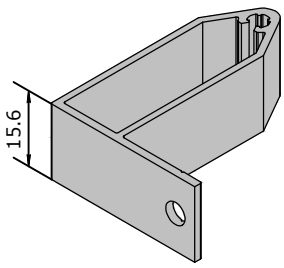
F017-30F
Frame holder
30 mm



F020-6040
Rectangular cap
60 x 40 mm

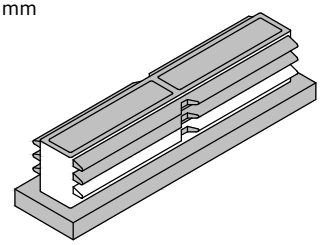


C530-16
Impost block
15.6 x 14 mm

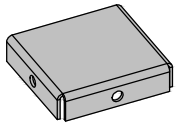


manufactured from
profile P30-601

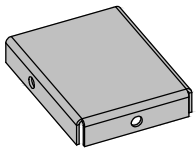
F020-2082
plastic cap
20 x 82 mm



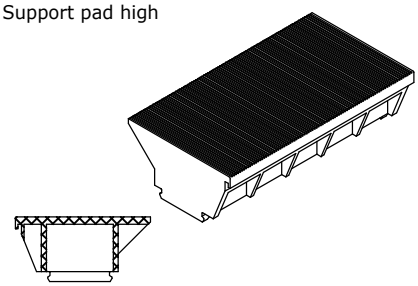
F020a-3038-for P71-301
Aluminium
mullion end
cap



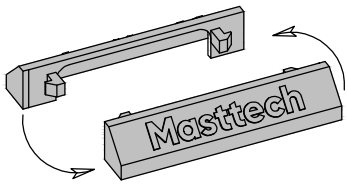
F020a-3053-for P71-302
Aluminium
mullion end
cap



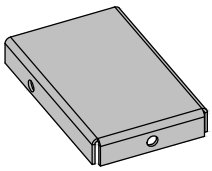
F026-71-22
Support pad high



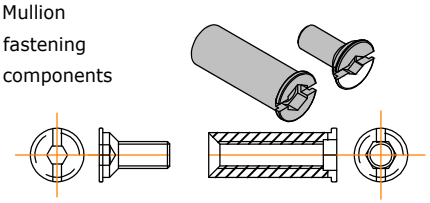
F031-50
Water drain hole cap (for
MasTTech systems)



F020a-3073-for P71-303
Aluminium
mullion end
cap

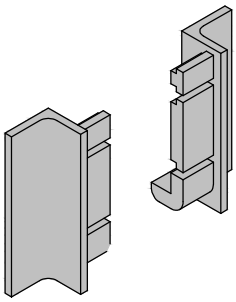


F027-25
Mullion
fastening
components



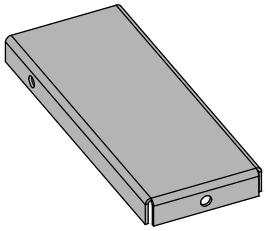
Components:
S801-0615— **1 pc**
Screw M6x15 with flat triangle hexagonal socket head
S811-0628— **1 pc**
threaded bush M6x28 with flat hexagon head

F080-4
Passive sash caps
(pair)

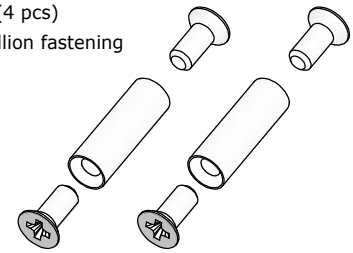


To be installed in the passive sash profiles P67-271 and P67-272

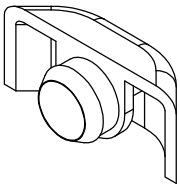
F020a-30103-for P71-304
Aluminium
mullion end
cap



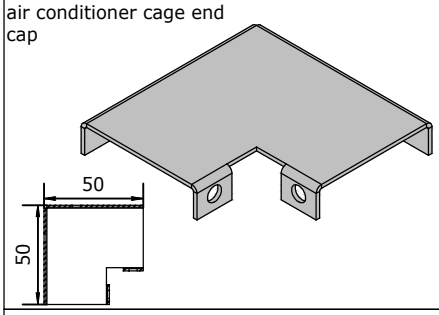
F027-29
bushing (2 pcs)
screw (4 pcs)
for mullion fastening



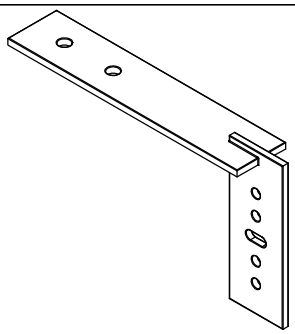
F031
Water drain hole
cap D = 10



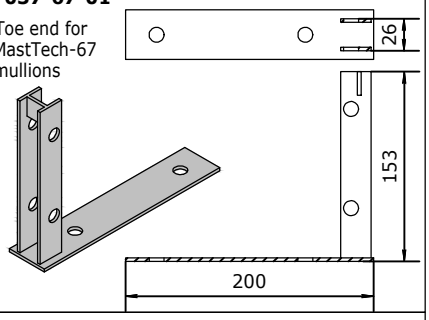
F020a-5050
air conditioner cage end
cap



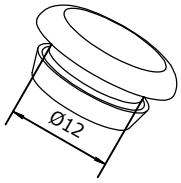
F029-12
L-shaped
bracket



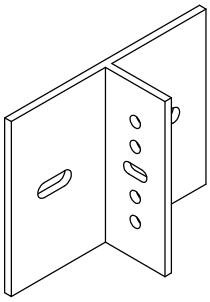
F037-67-01
Toe end for
MastTech-67
mullions



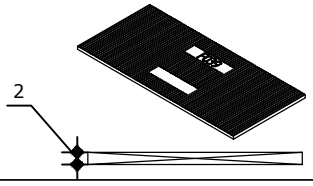
F022
Decorative cap,
d = 12 mm



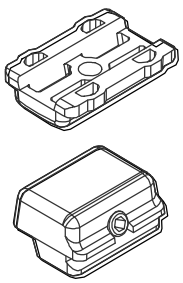
F029T
T-shaped
bracket



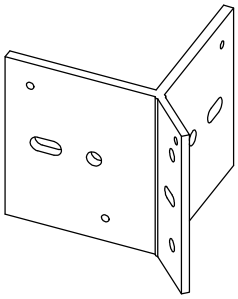
Levelling
pads
F039-2 — 35 x 2 mm
F039-230 — 30 x 2 mm
F039-242 — 42 x 2 mm
F039-254 — 54 x 2 mm



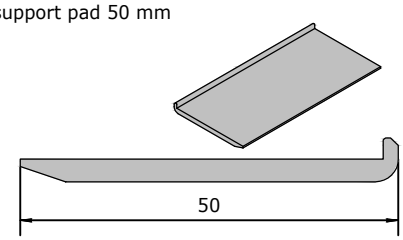
F023
Sash
anti-sag
thrust plate



F029Y
Corner bracket,
Y-shaped

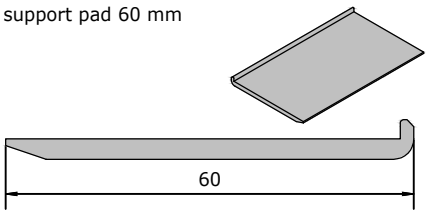


F050-50
support pad 50 mm



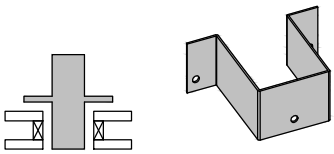
manufactured from
profile P00-058-50

F050-60
support pad 60 mm



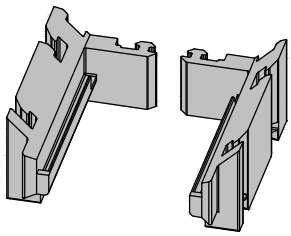
manufactured from profile P00-058-60

F066a-53
insert 53 mm for P67-302 mullion

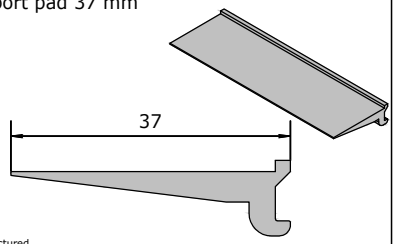


manufactured from aluminium sheet. paintable in RAL colours

F067-71
Impost weather strip

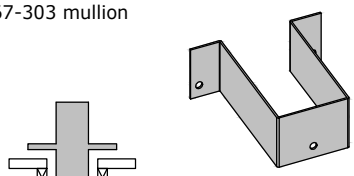


F064
support pad 37 mm



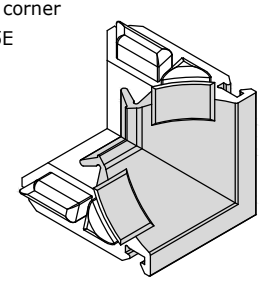
manufactured from profile P00-28

F066a-73
insert 73 mm for P67-303 mullion

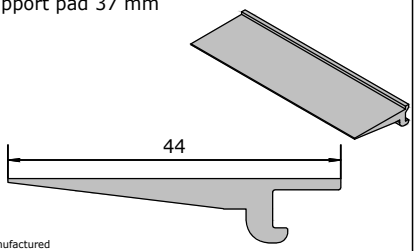


manufactured from aluminium sheet. paintable in RAL colours

F068-75
Medium gasket corner connector R075E

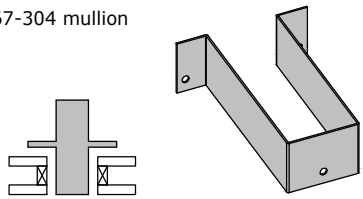


F064-2
support pad 37 mm



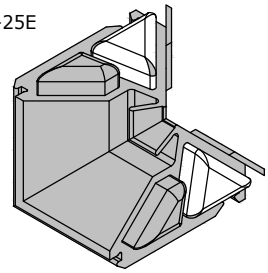
manufactured from profile P00-28-2

F066a-103
insert 103 mm for P67-304 mullion

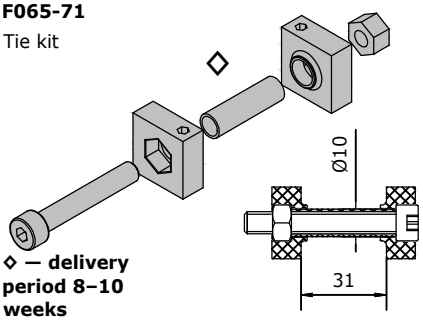


manufactured from aluminium sheet. paintable in RAL colours

F068-75-25
Medium gasket corner connector R075-25E

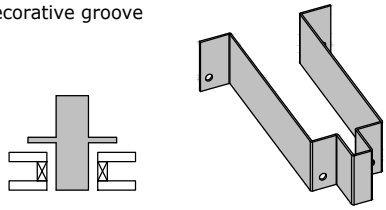


F065-71
Tie kit



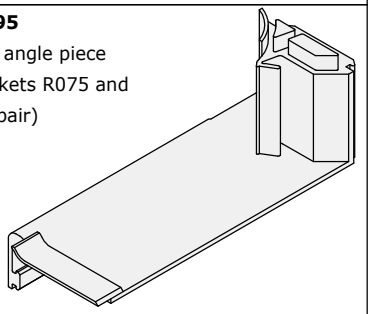
◇ — delivery period 8–10 weeks

F066a-103-20
insert 103 mm with decorative groove



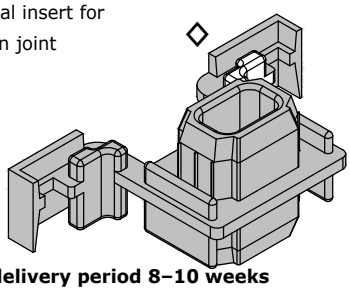
manufactured from aluminium sheet. paintable in RAL colours

F068-95
mating angle piece for gaskets R075 and R095 (pair)



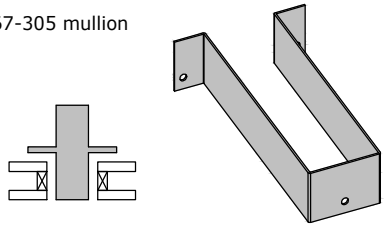
◇ — delivery period 8–10 weeks

F066-71
Internal insert for mullion joint



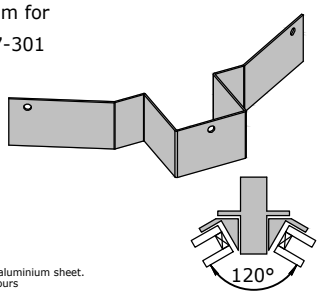
◇ — delivery period 8–10 weeks

F066a-133
insert 133 mm for P67-305 mullion



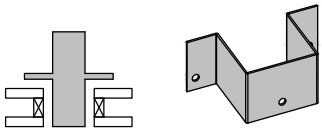
manufactured from aluminium sheet. paintable in RAL colours

F069a-38
insert 38 mm for mullion P67-301



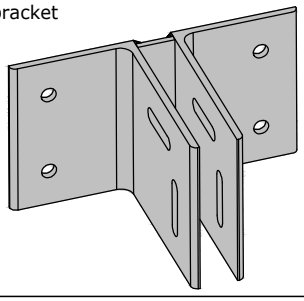
manufactured from aluminium sheet. paintable in RAL colours

F066a-38
insert 38 mm for mullion P67-301

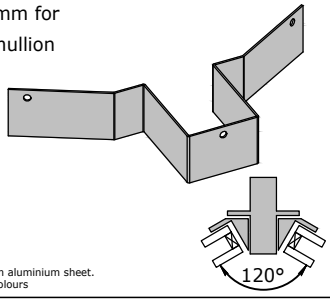


manufactured from aluminium sheet. paintable in RAL colours

F67-01-15
Female T-bracket

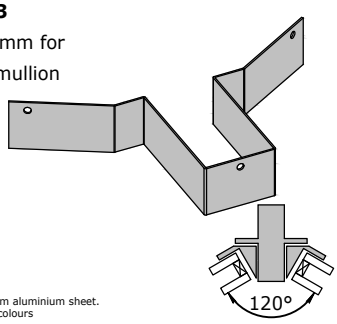


F069a-53
insert 53 mm for P67-302 mullion



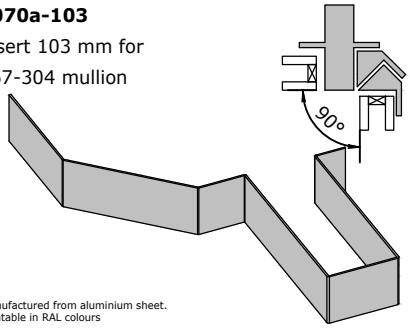
manufactured from aluminium sheet. paintable in RAL colours

F069a-73
insert 73 mm for
P67-303 mullion



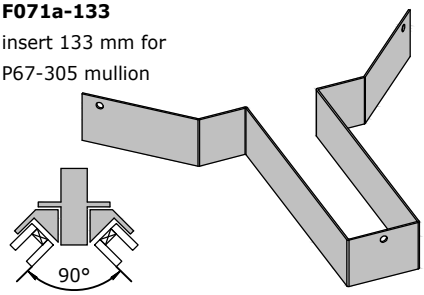
manufactured from aluminium sheet.
paintable in RAL colours

F070a-103
insert 103 mm for
P67-304 mullion



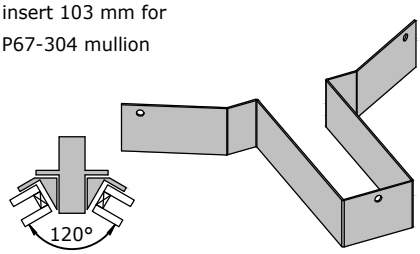
manufactured from aluminium sheet.
paintable in RAL colours

F071a-133
insert 133 mm for
P67-305 mullion



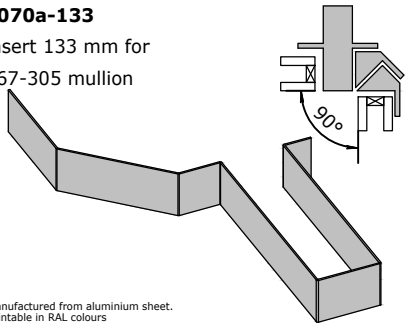
manufactured from aluminium sheet.
paintable in RAL colours

F069a-103
insert 103 mm for
P67-304 mullion



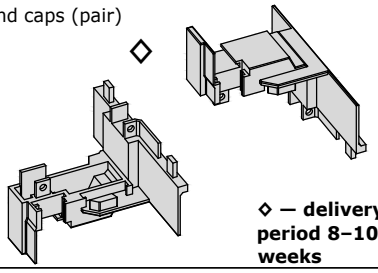
manufactured from aluminium sheet.
paintable in RAL colours

F070a-133
insert 133 mm for
P67-305 mullion



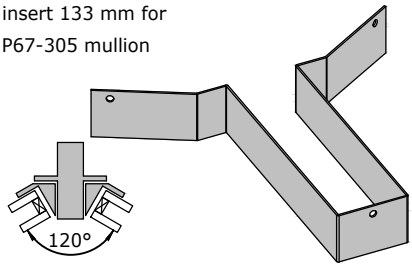
manufactured from aluminium sheet.
paintable in RAL colours

F072-71
MastTech-71 window
forend caps (pair)



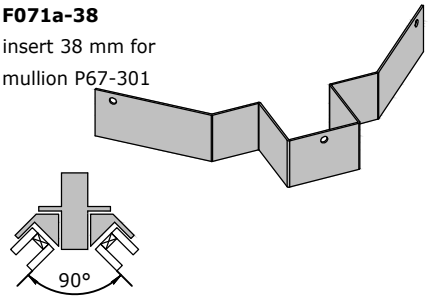
◇ — delivery period 8–10 weeks

F069a-133
insert 133 mm for
P67-305 mullion



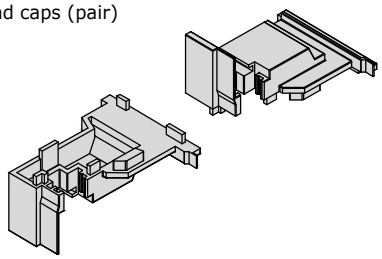
manufactured from aluminium sheet.
paintable in RAL colours

F071a-38
insert 38 mm for
mullion P67-301

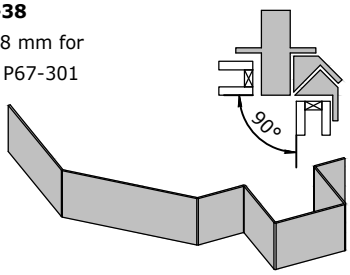


manufactured from aluminium sheet.
paintable in RAL colours

F074-71
MastTech-71 window
forend caps (pair)

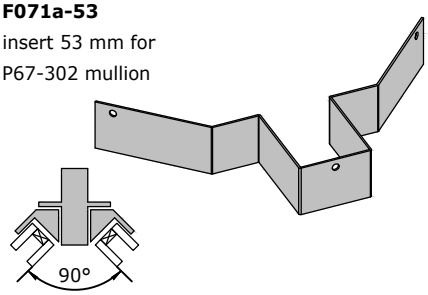


F070a-38
insert 38 mm for
mullion P67-301



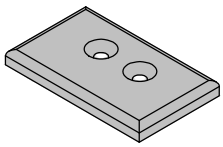
manufactured from aluminium sheet.
paintable in RAL colours

F071a-53
insert 53 mm for
P67-302 mullion

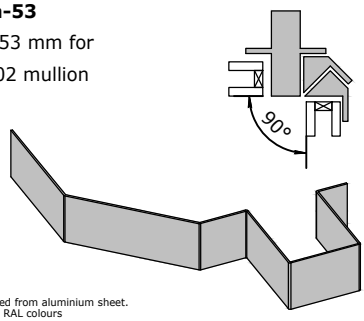


manufactured from aluminium sheet.
paintable in RAL colours

F075
screen holder cap

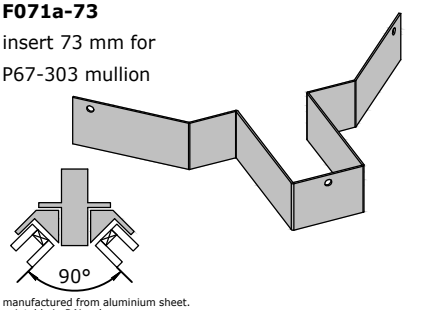


F070a-53
insert 53 mm for
P67-302 mullion



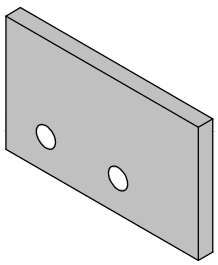
manufactured from aluminium sheet.
paintable in RAL colours

F071a-73
insert 73 mm for
P67-303 mullion

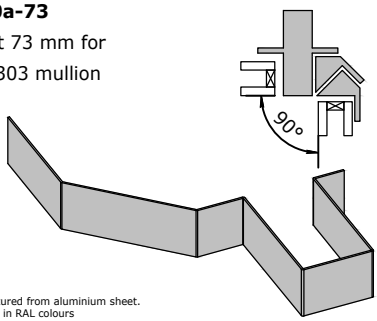


manufactured from aluminium sheet.
paintable in RAL colours

F075a-40-24
aluminium cap
40 x 24 mm

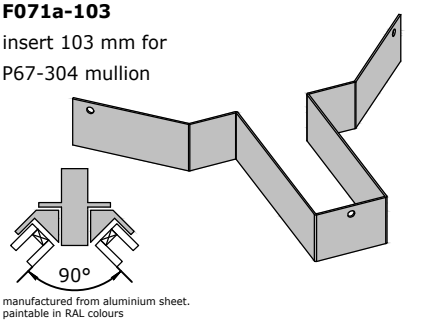


F070a-73
insert 73 mm for
P67-303 mullion



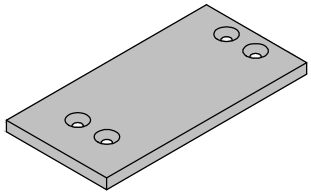
manufactured from aluminium sheet.
paintable in RAL colours

F071a-103
insert 103 mm for
P67-304 mullion

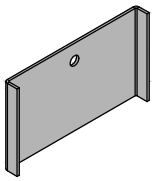


manufactured from aluminium sheet.
paintable in RAL colours

F075a-80-5
aluminium screen holder cap for 80 mm offset

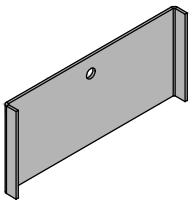


F076a-058
insert 58 mm for
P67-373 mullion



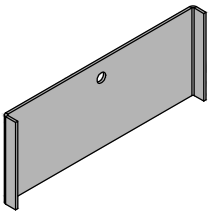
manufactured from aluminium sheet.
paintable in RAL colours

F076a-076
insert 76 mm for
P67-333 mullion



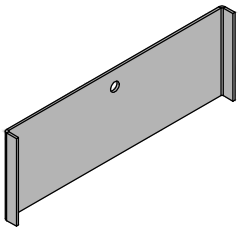
manufactured from aluminium sheet.
paintable in RAL colours

F076a-085
insert 85 mm for
mullion P67-325



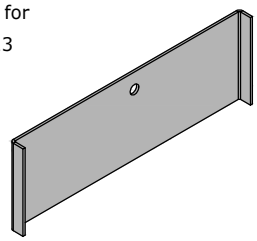
manufactured from aluminium sheet.
paintable in RAL colours

F076a-098
insert 98 mm for
mullion P67-355



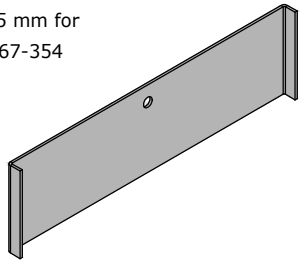
manufactured from aluminium sheet.
paintable in RAL colours

F076a-103
insert 103 mm for
mullion P67-313



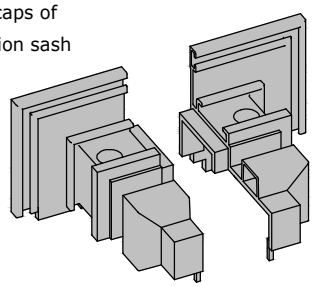
manufactured from aluminium sheet.
paintable in RAL colours

F076a-125
insert 125 mm for
mullion P67-354

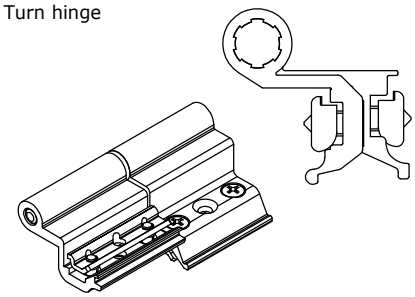


manufactured from aluminium sheet.
paintable in RAL colours

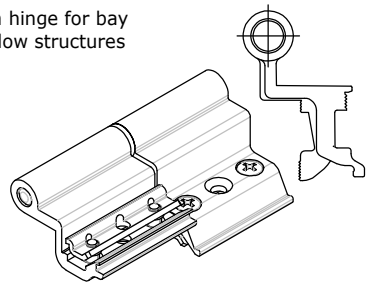
F081-71-100
corner caps of
ventilation sash
(pair)



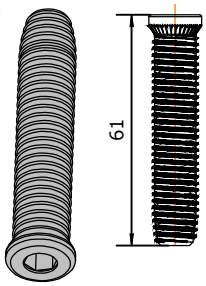
F101
Turn hinge



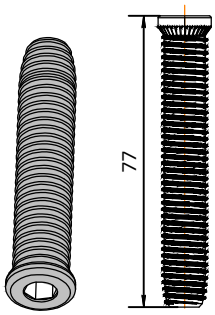
F108
Turn hinge for bay
window structures



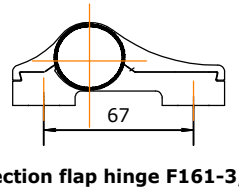
F152
60 mm anchor screw
for flap hinge



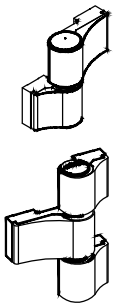
F152-77
anchor screw 77 mm
for flap hinge



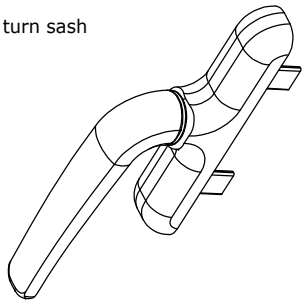
2-section flap hinge F161-2,
centre-to-centre distance 67 mm
(for anchor fastening)



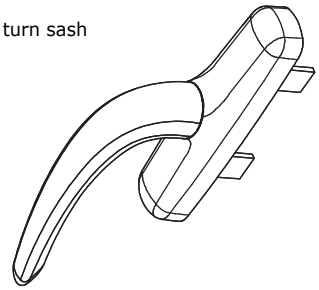
3-section flap hinge F161-3,
centre-to-centre distance 67 mm
(for anchor fastening)



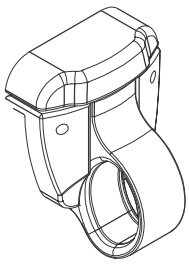
F201
Handle for turn sash
(narrow)



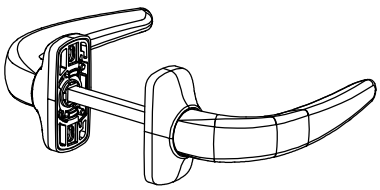
F203
Handle for turn sash
(wide)



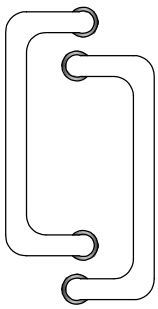
F204
Fanlight latch



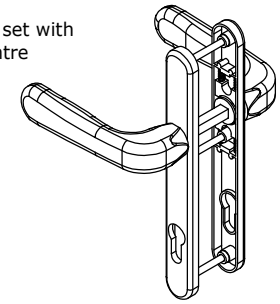
F205
Lever door handle
(pair)



F206
Bail handle (300 mm)
set

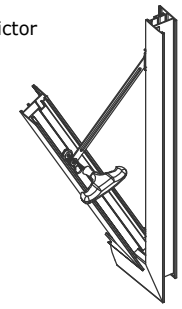


F209
Lever handle set with
centre-to-centre
distance
of 85 mm

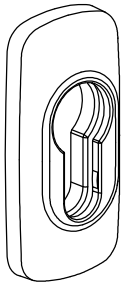


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profiles (1:1)
sections
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sub-assemblies tables
fitting arrangements
additional solutions
sub-assemblies
fire-resistant structures
connections
equipment and tools

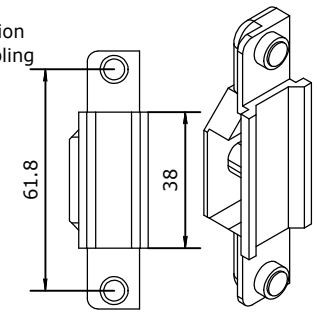
F401
Lever opening restrictor (pair)



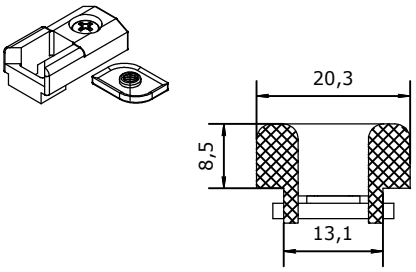
F513
Cylinder cover plate



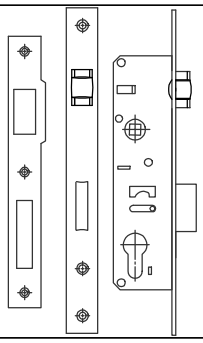
F602
Three-position handle coupling



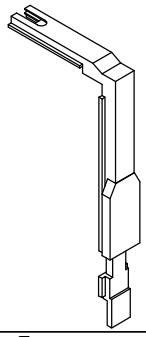
F502
Window catch retainer



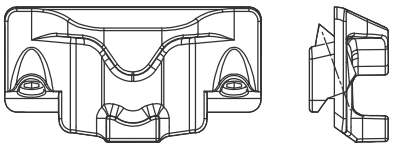
F517
Roller lock with mating plate
D = 30



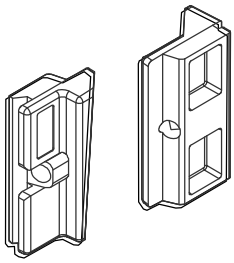
F612
Additional corner switch of tilt & turn window



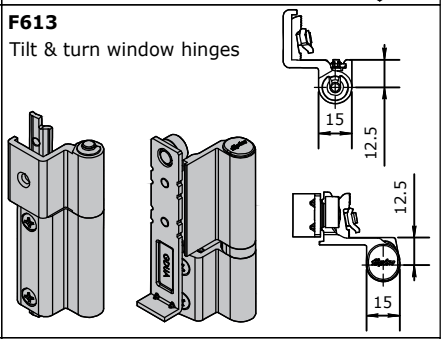
F506
Microventilation



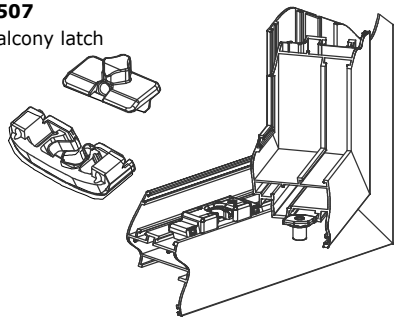
F505
Locking point from the hinge side



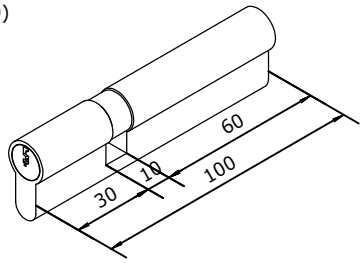
F613
Tilt & turn window hinges



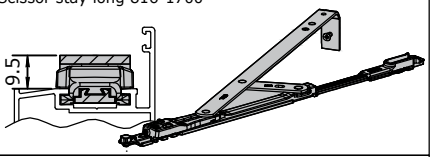
F507
Balcony latch



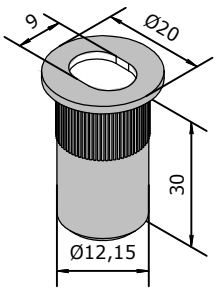
F522-30-70
Profile lock cylinder, 100 mm
(30–70)



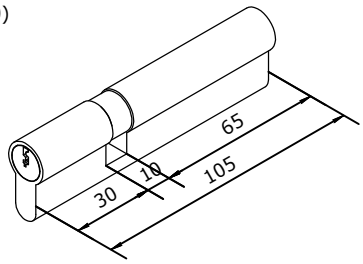
FF-1448
Scissor stay short 364-700
F614
Scissor stay short 402-750
F615
Scissor stay medium 592-1200
F617
Scissor stay long 816-1700



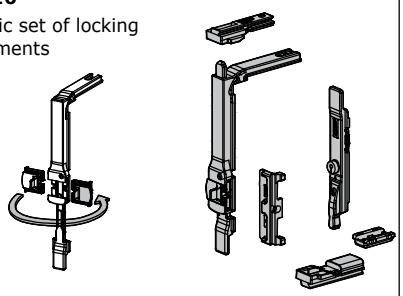
F509
In-floor catch socket, d = 9



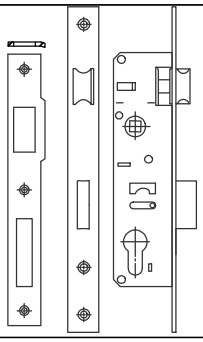
F522-35-70
Profile lock cylinder, 105 mm
(35–70)



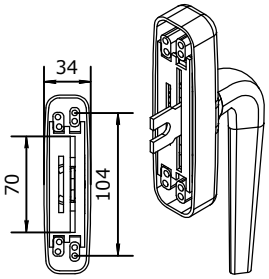
F616
basic set of locking elements



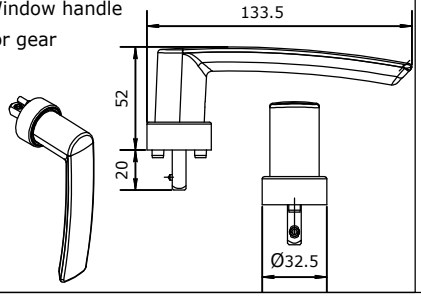
F511
Lever lock D = 30



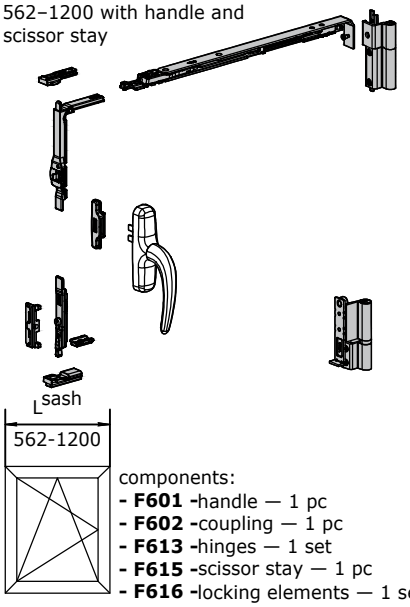
F601
Three-position window handle



FF-0500A
Window handle for gear

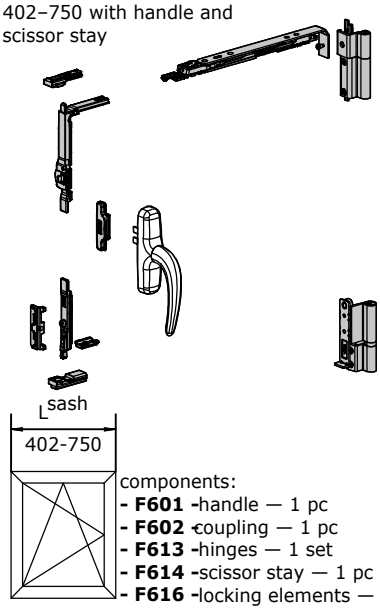


F630
tilt & turn window kit L = 562–1200 with handle and scissor stay



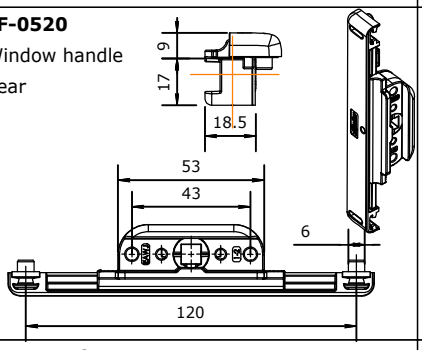
components:
- **F601 -**handle — 1 pc
- **F602 -**coupling — 1 pc
- **F613 -**hinges — 1 set
- **F615 -**scissor stay — 1 pc
- **F616 -**locking elements — 1 set

F631
tilt & turn window kit L = 402–750 with handle and scissor stay

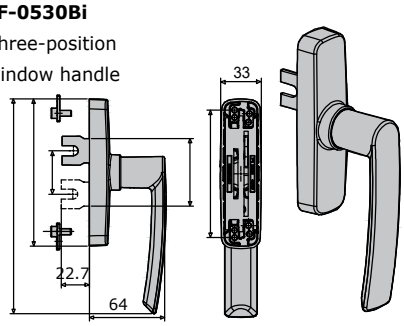


components:
- **F601 -**handle — 1 pc
- **F602 -**coupling — 1 pc
- **F613 -**hinges — 1 set
- **F614 -**scissor stay — 1 pc
- **F616 -**locking elements — 1 set

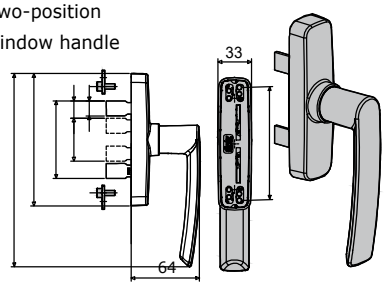
FF-0520
Window handle gear



FF-0530Bi
Three-position window handle

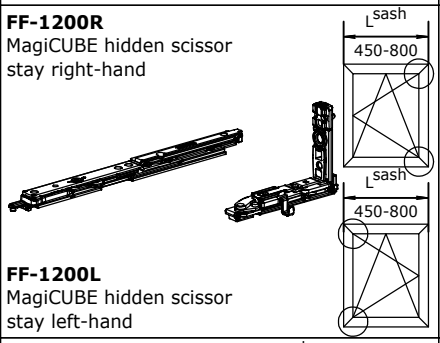


FF-0540Bi
Two-position window handle



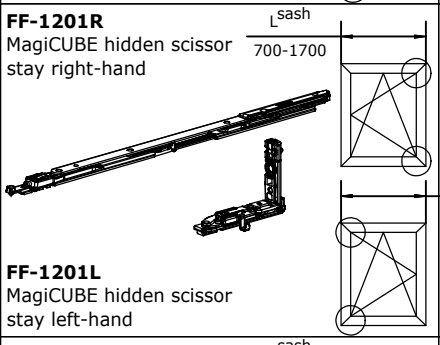
FF-1200R
MagiCUBE hidden scissor stay right-hand

FF-1200L
MagiCUBE hidden scissor stay left-hand



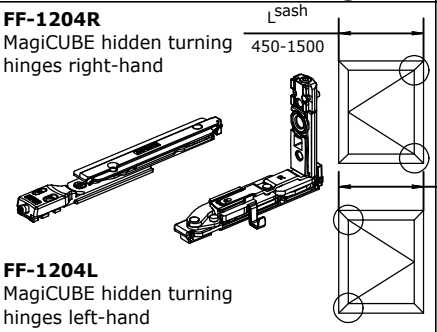
FF-1201R
MagiCUBE hidden scissor stay right-hand

FF-1201L
MagiCUBE hidden scissor stay left-hand

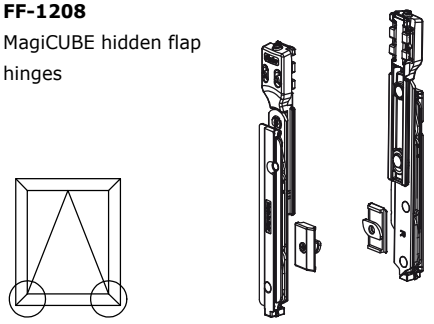


FF-1204R
MagiCUBE hidden turning hinges right-hand

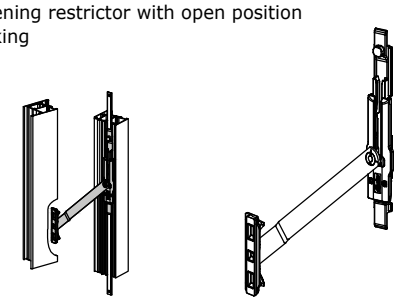
FF-1204L
MagiCUBE hidden turning hinges left-hand



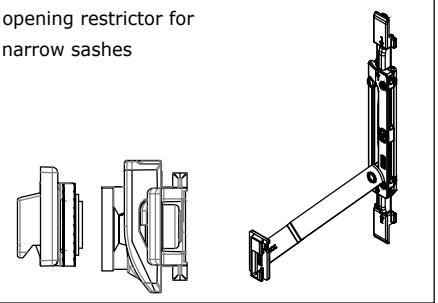
FF-1208
MagiCUBE hidden flap hinges



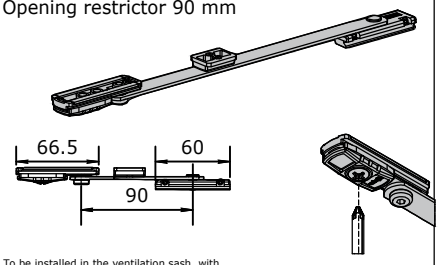
FF-1456
Opening restrictor with open position locking



FF-1457KD
opening restrictor for narrow sashes

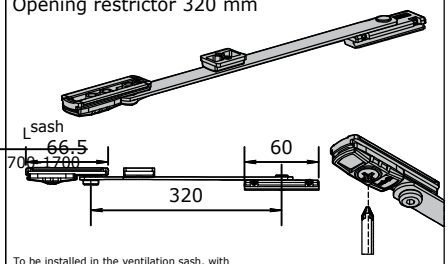


FF1459-90
Opening restrictor 90 mm



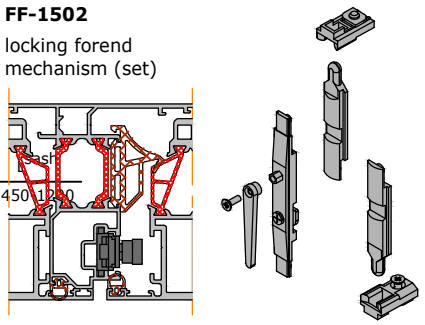
To be installed in the ventilation sash, with sash opening force adjustment.

FF-1459C
Opening restrictor 320 mm

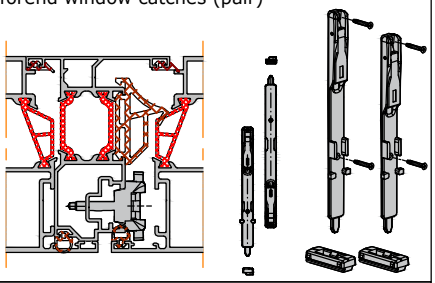


To be installed in the ventilation sash, with sash opening force adjustment.

FF-1502
locking forend mechanism (set)

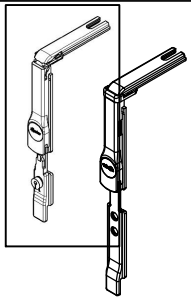


FF-1503
forend window catches (pair)

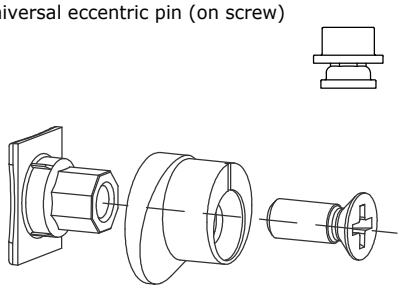


FF-1515A
corner switch for turn window

FF-1515B
top-hung window corner switch

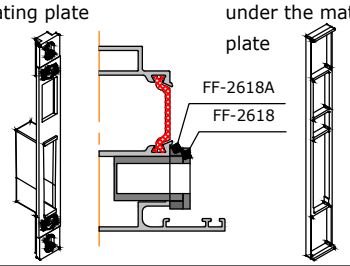


FF-1596C
Universal eccentric pin (on screw)

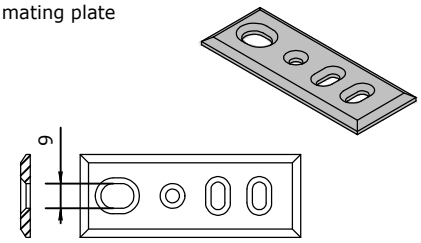


FF-2618
adjustable mating plate

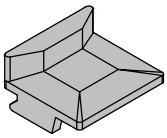
FF-2618A
pad to be placed under the mating plate

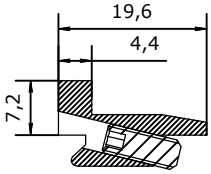


FF-3734
floor catch bolt mating plate

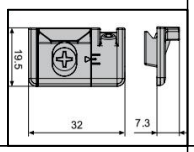


FF-1597i
Mating plate of pin

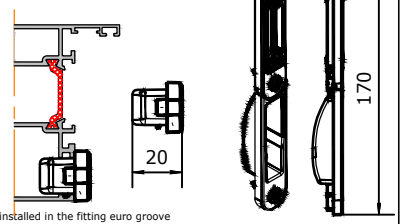




FF-1597A
Adjustable mating plate of pin

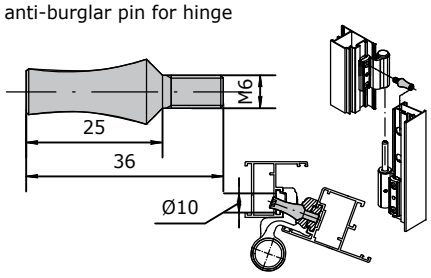


FF-2620
adjustable universal mating plate, euro groove



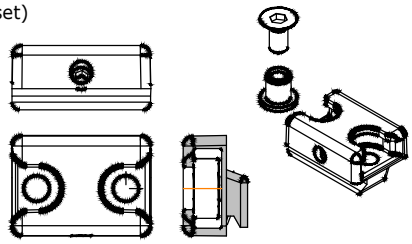
To be installed in the fitting euro groove

FF-5690 Fapim 5690
anti-burglar pin for hinge

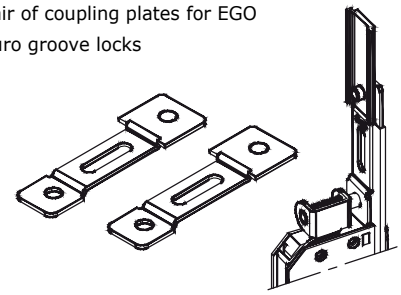


To be installed in the hinge instead of a screw

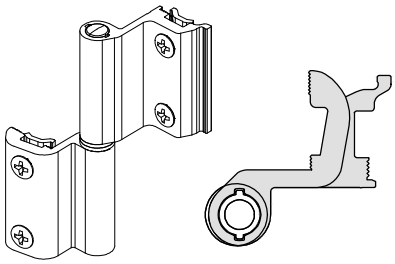
FF-1636A
Anti-burglary pin with mating plate (set)



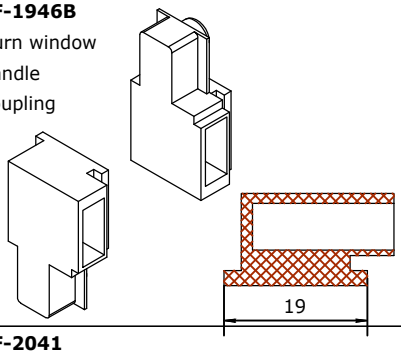
FF-2628
Pair of coupling plates for EGO euro groove locks



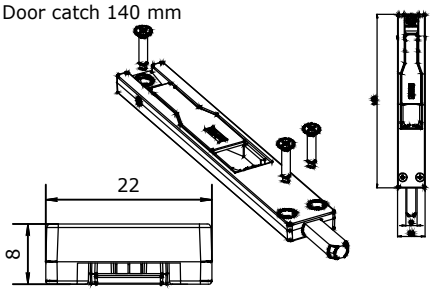
FF-9730z1
Turn hinge



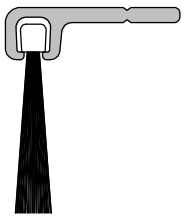
FF-1946B
Turn window handle coupling



FF-3722A
Door catch 140 mm

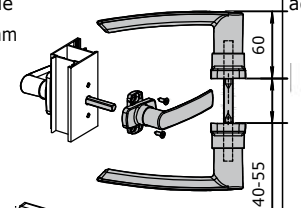


FF-DG1030
nylon brush h = 25, L = 2.000

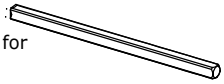


FF-DF500Ai
transversal brush holder, L = 2.000

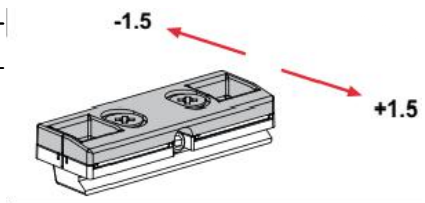
FF-2041
Lever door handle for doors 40–55 mm (pair)



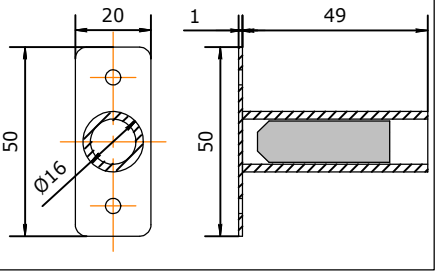
FF-2101
Door handle stud for doors 70–85 mm



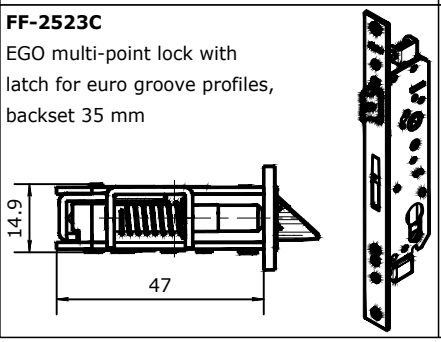
FF-4135A
adjustable catch socket



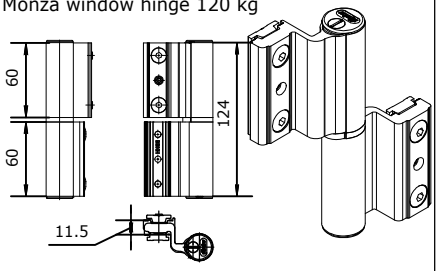
F921-16
Thermal door interlock



FF-2523C
EGO multi-point lock with latch for euro groove profiles, backset 35 mm



FF-5671
Monza window hinge 120 kg



To be installed in the fitting euro groove. Load up to 120 kg.

S001 Self-tapping screw 3.5 x 9.5 with round head

S002 Self-tapping screw 3.5 x 13 with round head

S003 Self-tapping screw 3.5 x 32 with round head

S006 Self-tapping screw 3.9 x 19 with countersunk head

S006-13 Self-tapping screw 3.9 x 13 with countersunk head

S008 Self-tapping screw 3.9 x 32 with countersunk head

S015 Self-tapping screw 5.5 x 45 with countersunk head

Sd003 Self-drilling tapping screw 3.9 x 19 with countersunk head

Sd005-48-70 Self-drilling tapping screw 4.8 x 70 with round head

Sd001 Self-drilling tapping screw 3.9 x 32 with countersunk head

Sd010-42-19
self-tapping screw with press-washer and drill 4.2 x 19

S202 Screw M6x14 with countersunk head

S205 setting screw M5x10

S216 Screw M4x7 with round head

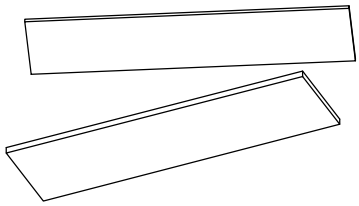
S330-06 screw rivet M6

S402 round pin d5x15

S403 round pin d5x10

All fasteners used are made of stainless steel

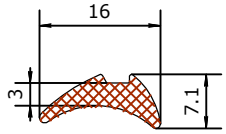
Levelling pads



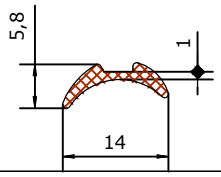
thickness / width	1 mm	2 mm	3 mm	4 mm	5 mm	6 mm
12 mm	F006	F007	F008	F009	F010	F039-612
22 mm	F001	F002	F003	F004	F005	
30 mm		F039-230				F039-630
35 mm		F039-2				
40 mm						F039-640
42 mm		F039-242				
46 mm	F039-146	F039-246	F039-346	F039-446	F039-546	F039-646
50 mm						F039-650
54 mm		F039-254				
60 mm						F039-660
66 mm		F039-266				

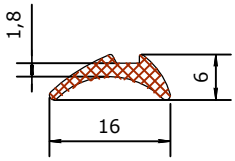
Notes.

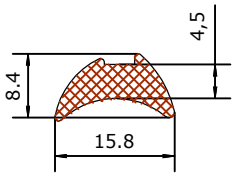
contents
profiles
delivery set
profiles (1:1)
sections
glazing tables
sub-assemblies tables
fitting arrangements
additional solutions
sub-assemblies
fire-resistant structures
connections
equipment and tools

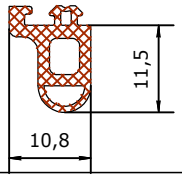
R004E
glass gasket internal 4–5 mm
EPDM


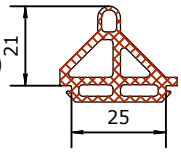
R007
insect screen gasket

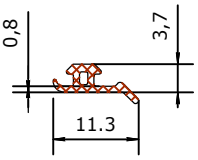

R009
C-shaped gasket 1 mm


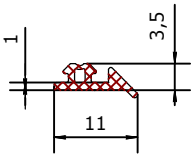
R010
C-shaped gasket 2 mm


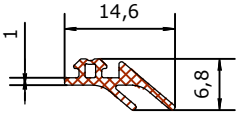
R011E
C-shaped gasket 5–6 mm
EPDM


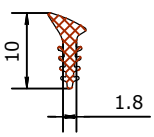
R013E
rabbet ledge gasket 10 mm
EPDM


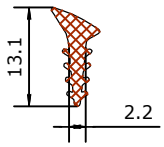
R014E
medium rabbet ledge gasket (thermal bridge 28 mm)
EPDM
Scale 1:2


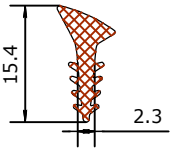
R015E
external glass gasket 1 mm
EPDM


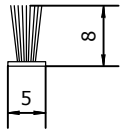
R015-2E
external rabbet ledge gasket 1 mm
EPDM


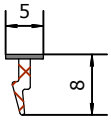
R015-3E
external rabbet ledge gasket 3 mm
EPDM


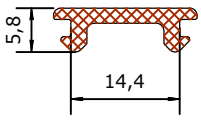
R017
Microclean gasket 10 mm


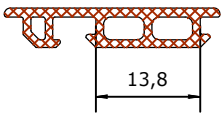
R018
Microclean gasket 13 mm


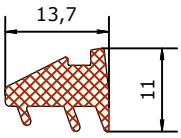
R019E
Microclean gasket 15 mm
EPDM


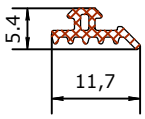
R021
felt gasket 5 x 8 mm


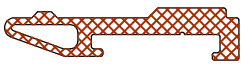
R021-2
rabbet ledge gasket


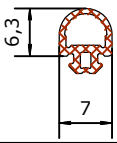
R036
gasket cap for groove 14 mm


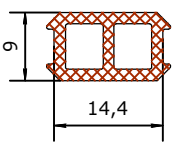
R036-2
gasket cap for groove 14 mm


R039
gasket 7 mm


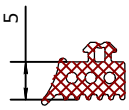
R040E
external glass gasket 2 mm
EPDM


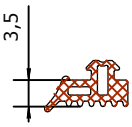
R042-3
adapter insulator


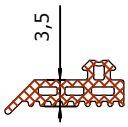
R046E
rabbet ledge gasket
EPDM


R048E
butt joint gasket 14 mm
EPDM


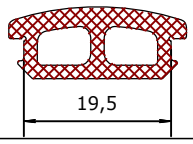
R052
harness sealing 3 mm

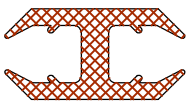

R054E
external gasket 5 mm
EPDM


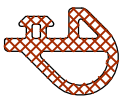
R055E
external gasket 3.5 mm
EPDM


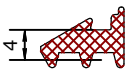
R055-2
external gasket 3.5 mm wide


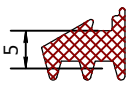
R056E
rabbet ledge gasket 7 mm
EPDM

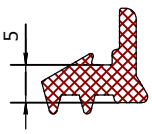

R057E
gasket groove cap 19.5 mm
EPDM


R058
Filling mating gasket 5–7 mm


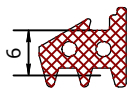
R059E
external rabbet ledge gasket
EPDM


R064-2E
tapered gasket 4 mm
EPDM


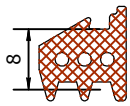
R065-2E
tapered gasket 5 mm
EPDM


R065-12
tapered gasket 5 mm


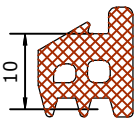
R066-2E
tapered gasket 6 mm
EPDM



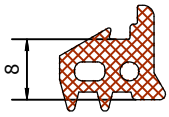
R068-2E
tapered gasket 8 mm
EPDM



R068-10
tapered gasket 10 mm



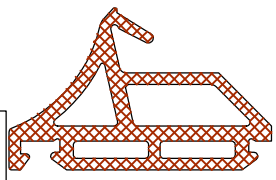
R068-12
tapered gasket 8 mm



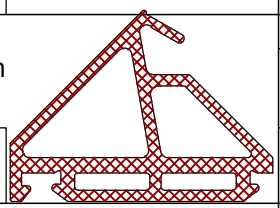
R072E
rabbet ledge gasket 2 mm
EPDM



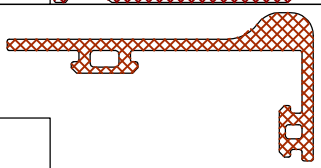
R075E
medium rabbet ledge gasket
EPDM



R075-25E
high medium gasket
EPDM

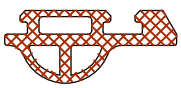


R095E
Door sill gasket
EPDM



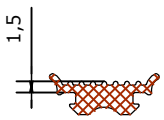
◇ — delivery period 8–10 weeks

R096E
Door sill gasket
EPDM

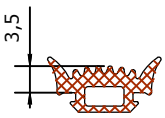


◇ — delivery period 8–10 weeks

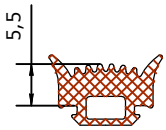
R301
façade gasket 1.5 mm



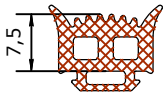
R303
façade gasket 3.5 mm



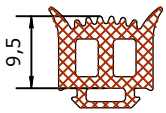
R305
façade gasket 5.5 mm



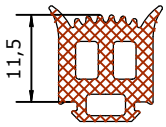
R307
façade gasket 7.5 mm



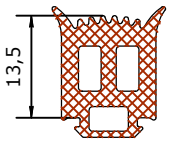
R309
façade gasket 9.5 mm



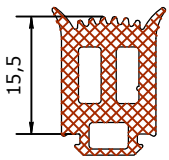
R311
façade gasket 11.5 mm



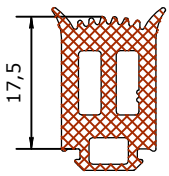
R313
façade gasket 13.5 mm



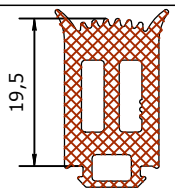
R315
façade gasket 15.5 mm



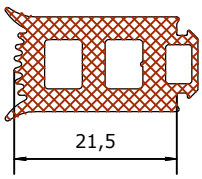
R317
façade gasket 17.5 mm



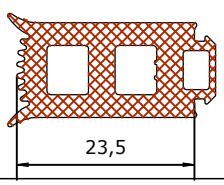
R319
façade gasket 19.5 mm



R321
façade gasket 21.5 mm



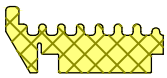
R323
façade gasket 23.5 mm



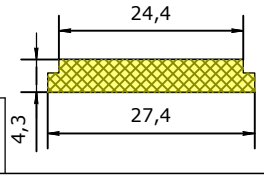
RP104
foamed gasket 44 x 5 mm



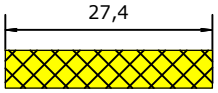
RP106
foamed gasket
Scale 1:2



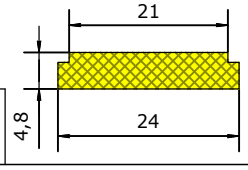
RP107
foamed gasket



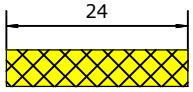
RP107-2
foamed gasket



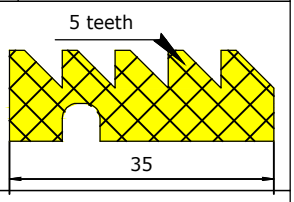
RP108
foamed gasket



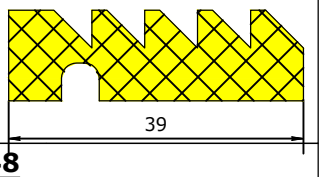
RP108-2
foamed gasket



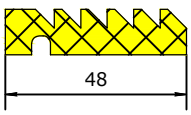
RP109-2
foamed gasket



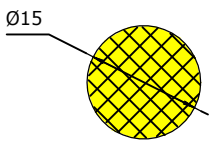
RP110-2
foamed gasket



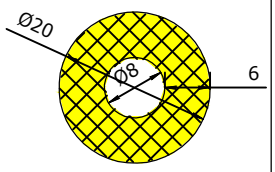
RP110-48
foamed gasket
Scale 1:2



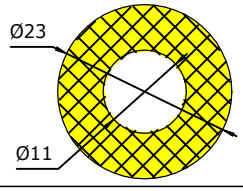
RV-15
Vilatherm 15 mm (solid)



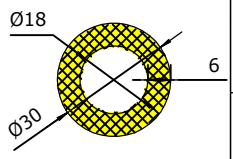
RV-20-8-6
Vilatherm 20 mm (8/6)



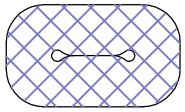
RV-23-11-6
Vilatherm 23 mm (11/6)



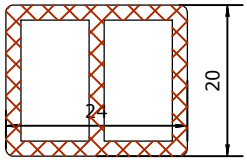
RV-30-18-6
Vilatherm
30 mm (18/6)
Scale 1:2



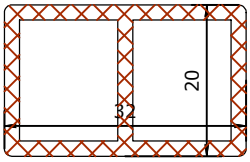
RV-40-10
Vilatherm
40/10 mm



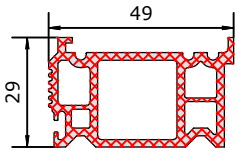
PP-024
façade
spacer
24 x 20 mm



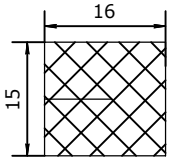
PP-032
façade
spacer
32 x 20 mm



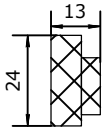
PP-101-01
universal
underlaying
profile
Scale 1:2



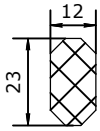
RPP-01-1615
foamed
insert
16 x 15 mm
Scale 1:1



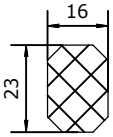
RPP-03-2413
foamed
insert
24 x 13 mm
Scale 1:2



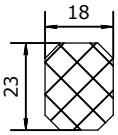
RPP-02-2312
foamed
insert
23 x 12 mm
Scale 1:2



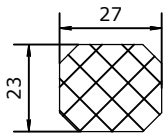
RPP-02-2316
foamed
insert
23 x 16 mm
Scale 1:2



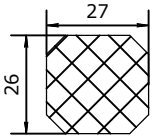
RPP-02-2318
foamed
insert
23 x 18 mm
Scale 1:2



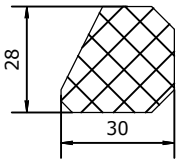
RPP-02-2327
foamed
insert
23 x 27 mm
Scale 1:2



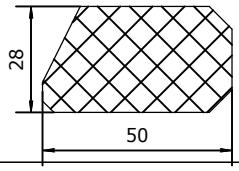
RPP-02-2627
foamed
insert
26 x 27 mm
Scale 1:2



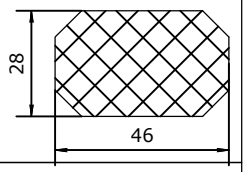
RPP-02-2830
foamed
insert
28 x 30 mm
Scale 1:2



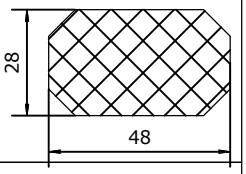
RPP-02-2850
foamed
insert
28 x 50 mm
Scale 1:2



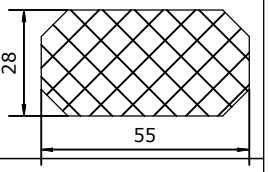
RPP-02-2846
foamed
insert
28 x 46 mm
Scale 1:2



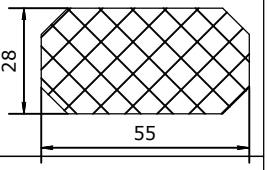
RPP-02-2848
foamed
insert
28 x 48 mm
Scale 1:2



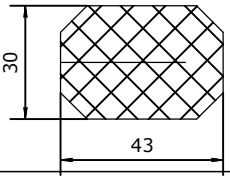
RPP-02-2855
foamed
insert
28 x 55 mm
Scale 1:2



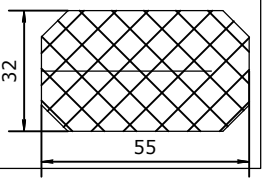
RPP-02-2855
foamed
insert
28 x 55 mm
Scale 1:2



RPP-02-3043
foamed
insert
30 x 43 mm
Scale 1:2



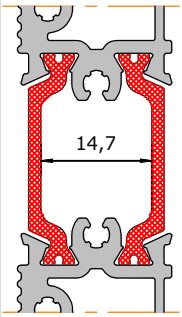
RPP-02-3255
foamed
insert
32 x 55 mm
Scale 1:2



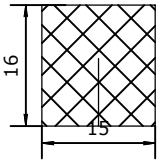
profile list

chamber shape

P71-014

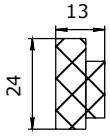
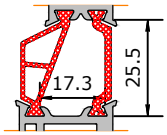
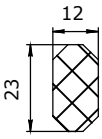
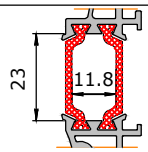
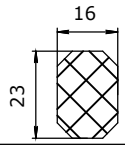
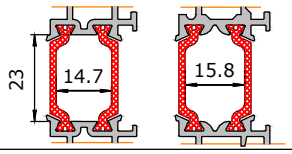
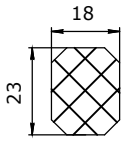
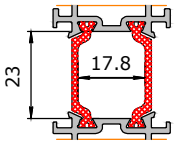
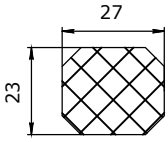
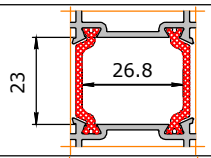
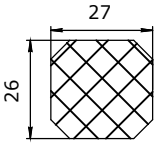
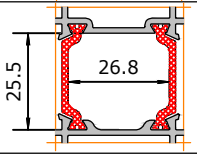
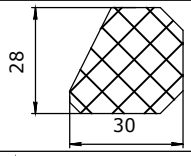
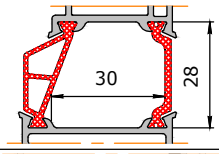
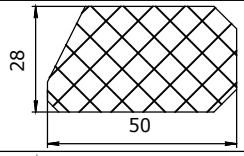
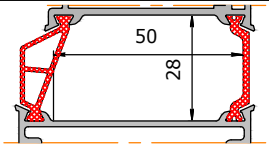
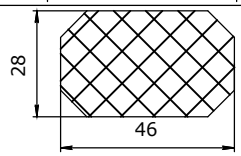
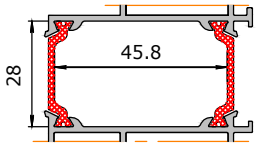
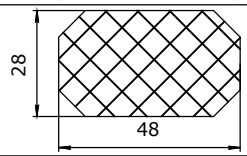
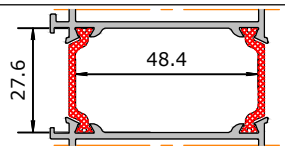
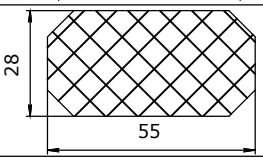
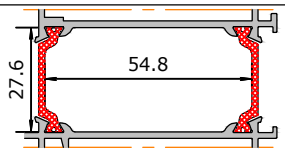
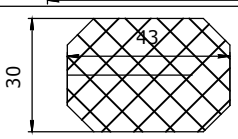
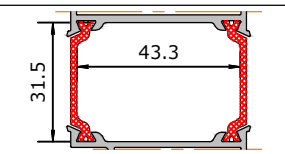
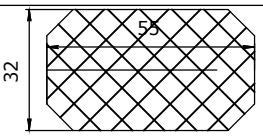
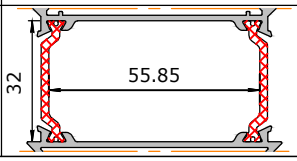


insert shape



article of the insert

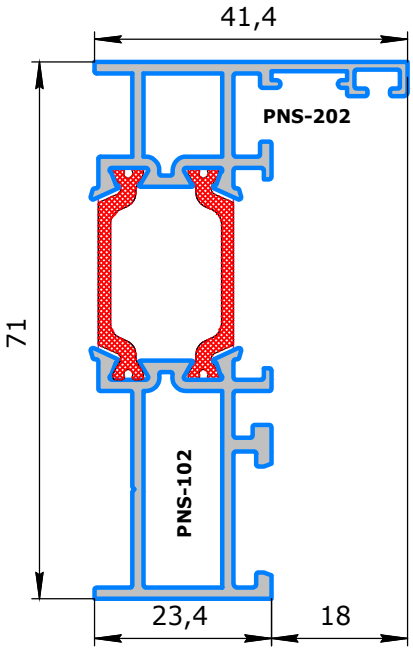
RPP-01-1615
foamed
insert 16 x
15 mm

article of the insert	insert shape	chamber shape	profile list
RPP-03-2413 foamed insert 24 x 13 mm			P71-206 P71-206-54 P71-209 P71-209-54
RPP-02-2312 foamed insert 23 x 12 mm			P71-005-3 P71-018 P71-405
RPP-02-2316 foamed insert 23 x 16 mm			P71-007 P71-101
RPP-02-2318 foamed insert 23 x 18 mm			P71-002 P71-015 P71-020 P71-402
RPP-02-2327 foamed insert 23 x 27 mm			P71-001, P71-102, P71-300-89 P71-301, P71-302, P71-303 P71-304, P71-304-21, P71-305 P71-310-89, P71-311, P71-312 P71-313-2, P71-376-38, P71-403 P71-403-79
RPP-02-2627 foamed insert 26 x 27 mm			P71-113, P71-313, P71-320 P71-321, P71-322, P71-323 P71-325, P71-326, P71-333 P71-340, P71-341, P71-342 P71-346, P71-347, P71-348 P71-373, P71-406, P71-409
RPP-02-2830 foamed insert 28 x 30 mm			P71-207
RPP-02-2850 foamed insert 28 x 50 mm			P71-205
RPP-02-2846 foamed insert 28 x 46 mm			P71-108 P71-114
RPP-02-2848 foamed insert 28 x 48 mm			P71-354 P71-355 P71-407 P71-410
RPP-02-2855 foamed insert 28 x 55 mm			P71-104 P71-404
RPP-02-3043 foamed insert 30 x 43 mm			P71-171 P71-172 P71-173 P71-174 P71-271 P71-272
RPP-02-3255 foamed insert 32 x 55 mm			P71-380-260

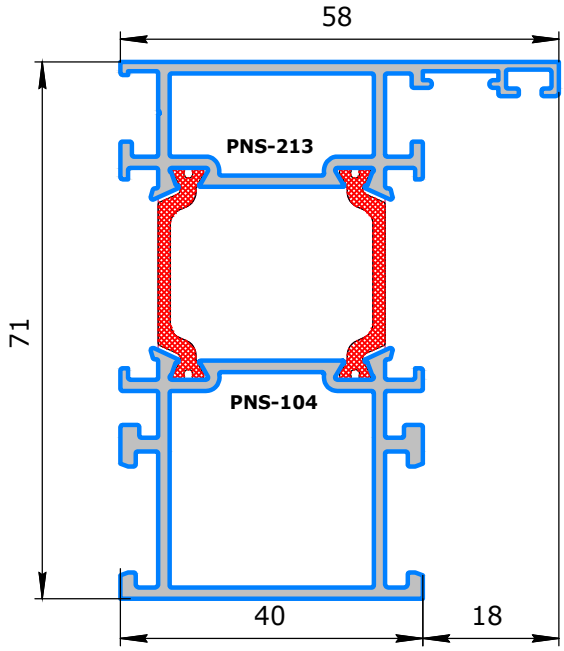
Notes.

contents
profiles
delivery set
profiles (1:1)
sections
glazing tables
sub-assemblies tables
fitting arrangements
additional solutions
sub-assemblies
fire-resistant structures
connections
equipment and tools

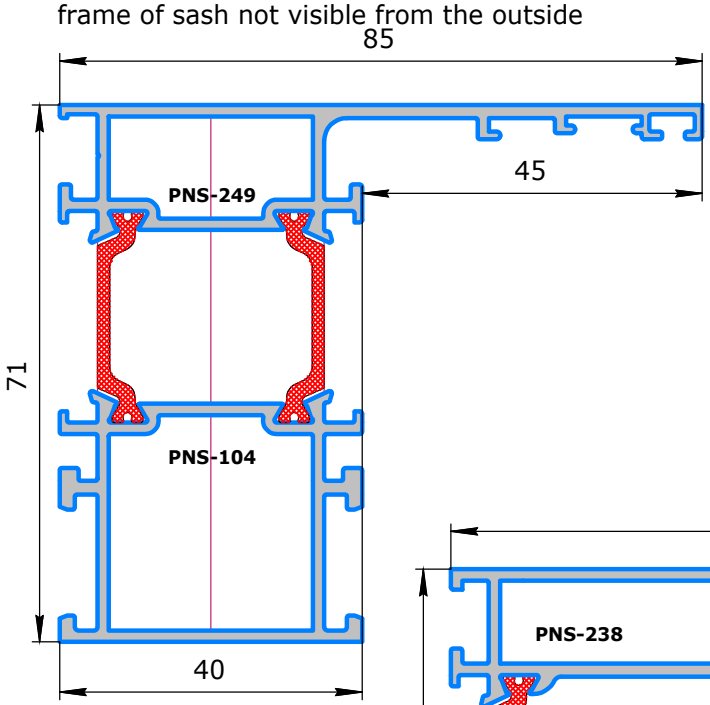
P71-101
narrow window frame



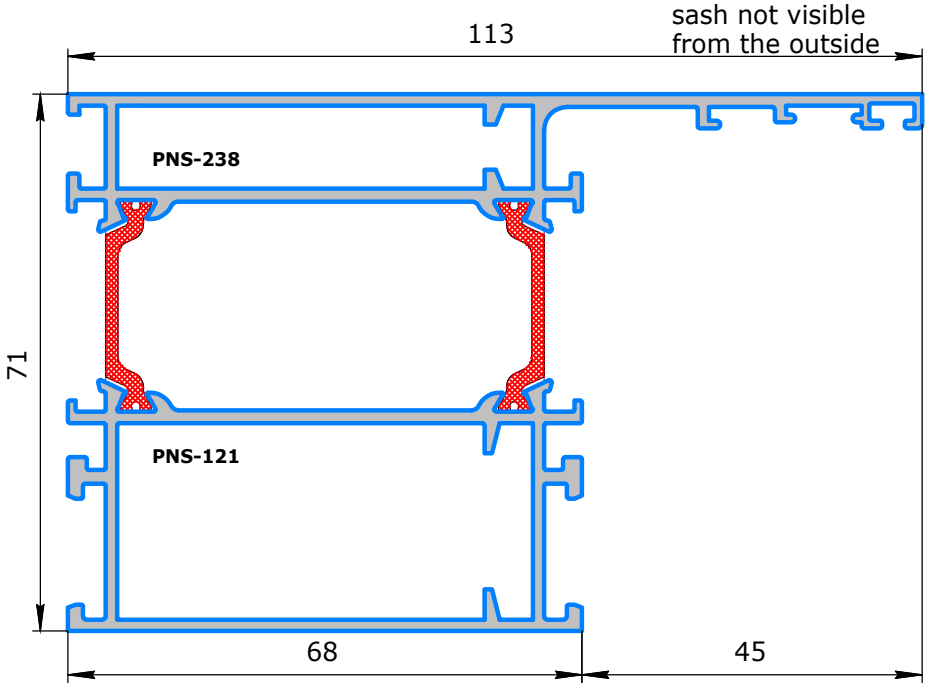
P71-102
window frame

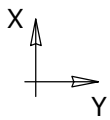


P71-113
frame of sash not visible from the outside

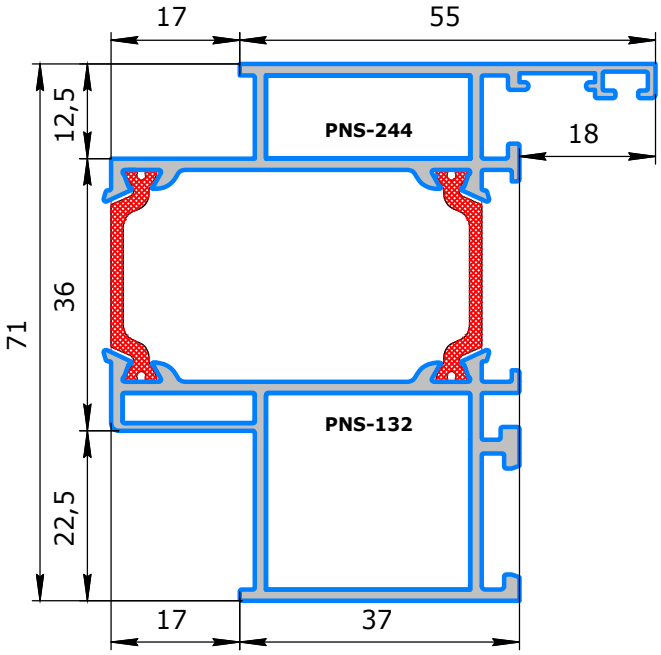


P71-104
Wide frame of sash not visible from the outside

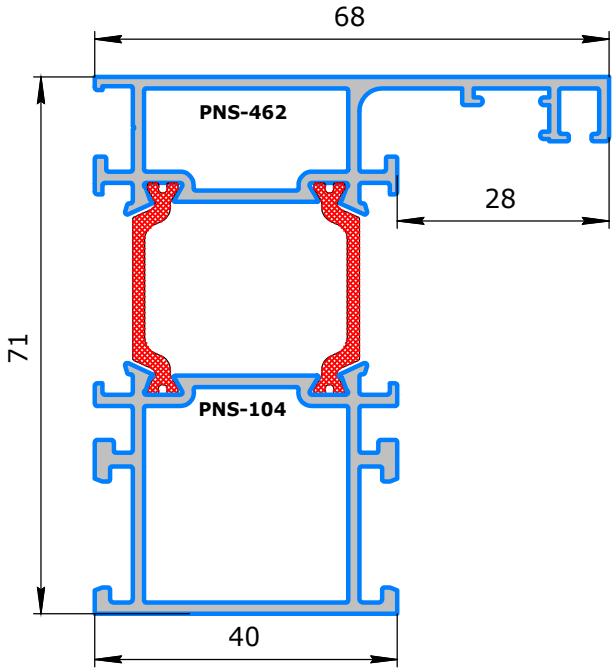




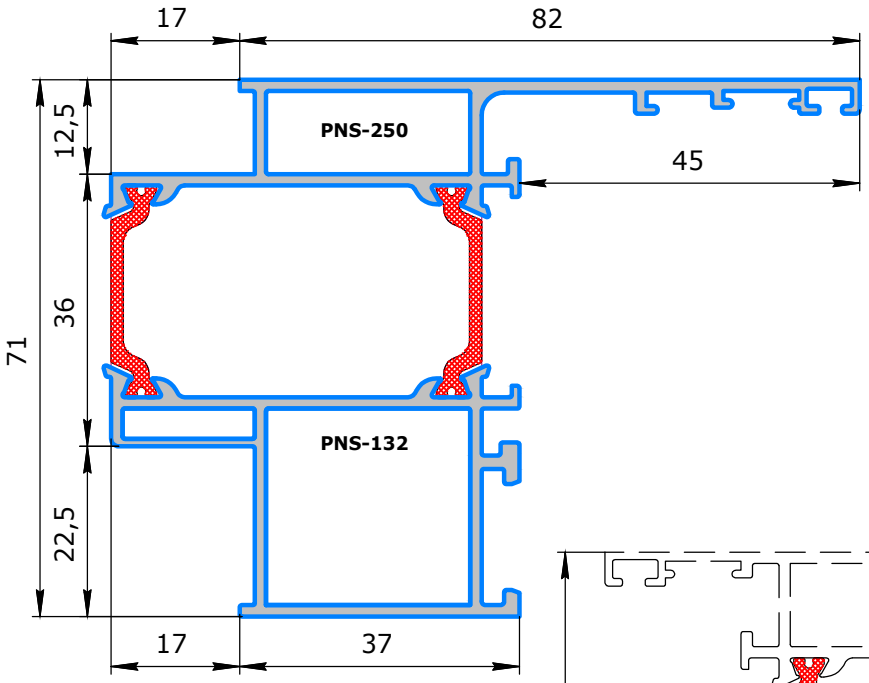
P71-108
window frame façade



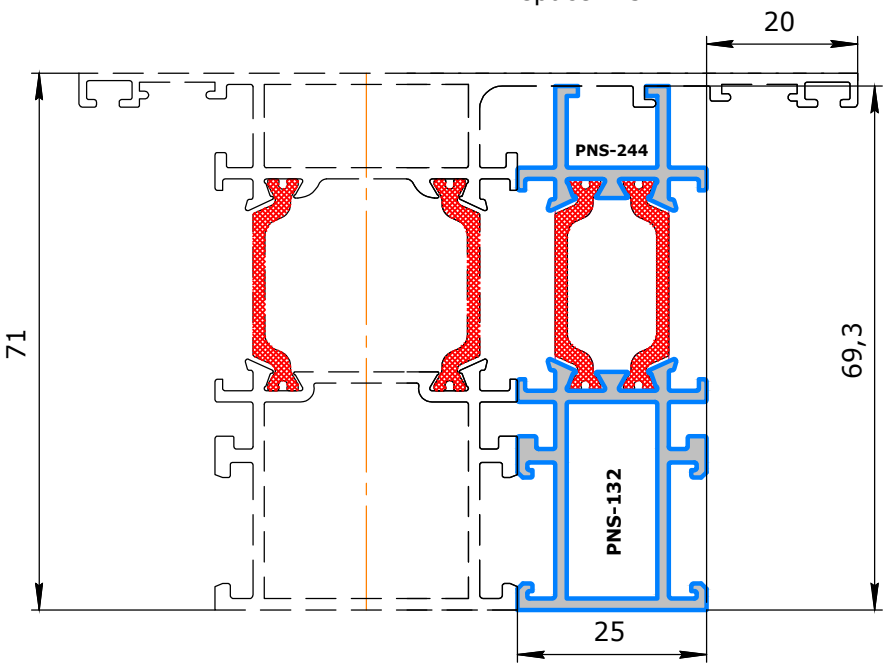
P71-115
ventilation sash frame

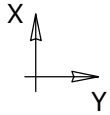


P71-114
frame of sash not visible from the outside façade

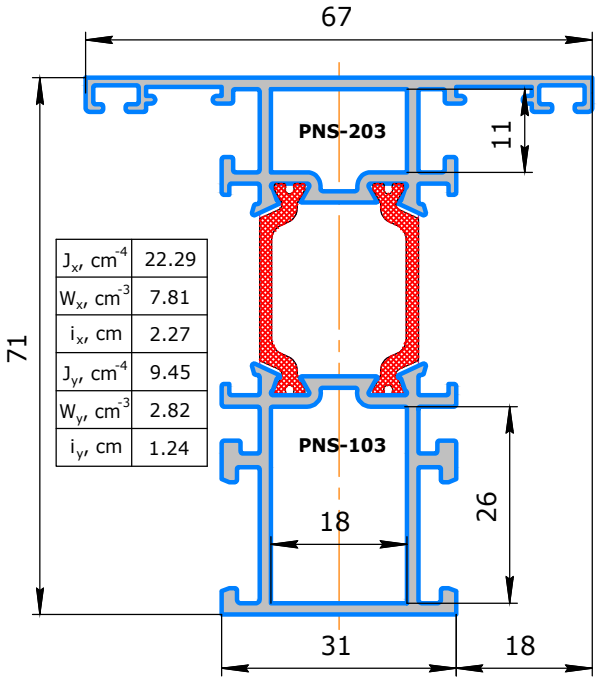


P71-018
spacer 25 mm



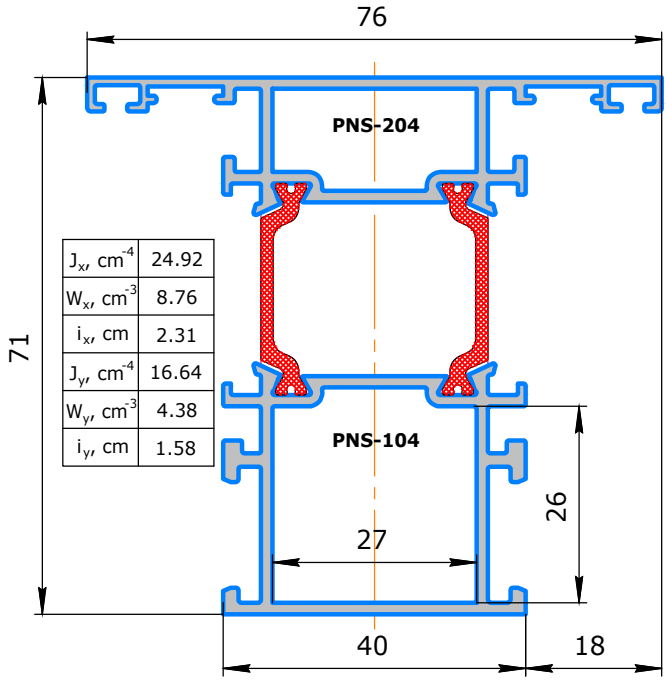


P71-402
narrow impost



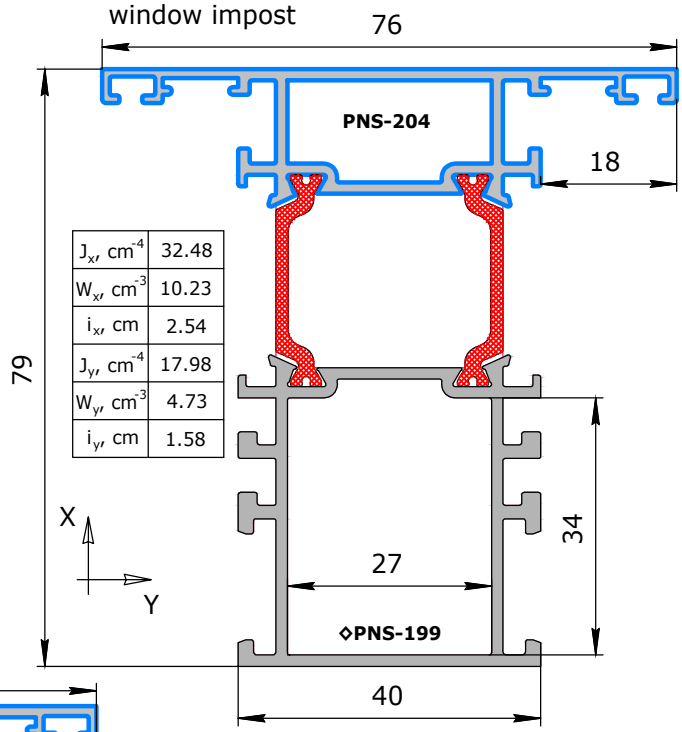
J_x, cm^{-4}	22.29
W_x, cm^{-3}	7.81
i_x, cm	2.27
J_y, cm^{-4}	9.45
W_y, cm^{-3}	2.82
i_y, cm	1.24

P71-403
impost



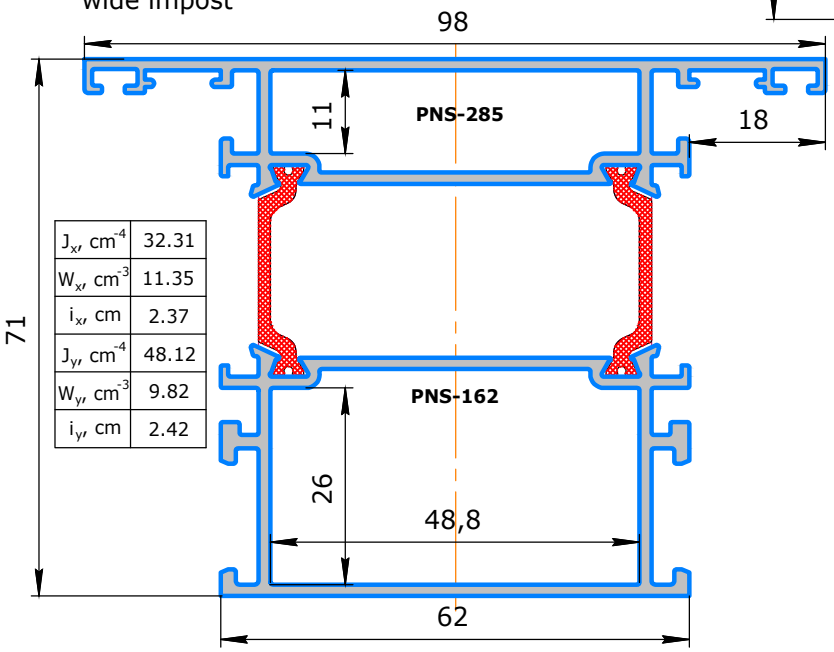
J_x, cm^{-4}	24.92
W_x, cm^{-3}	8.76
i_x, cm	2.31
J_y, cm^{-4}	16.64
W_y, cm^{-3}	4.38
i_y, cm	1.58

P71-403-79
window impost



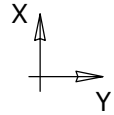
J_x, cm^{-4}	32.48
W_x, cm^{-3}	10.23
i_x, cm	2.54
J_y, cm^{-4}	17.98
W_y, cm^{-3}	4.73
i_y, cm	1.58

P71-407
wide impost

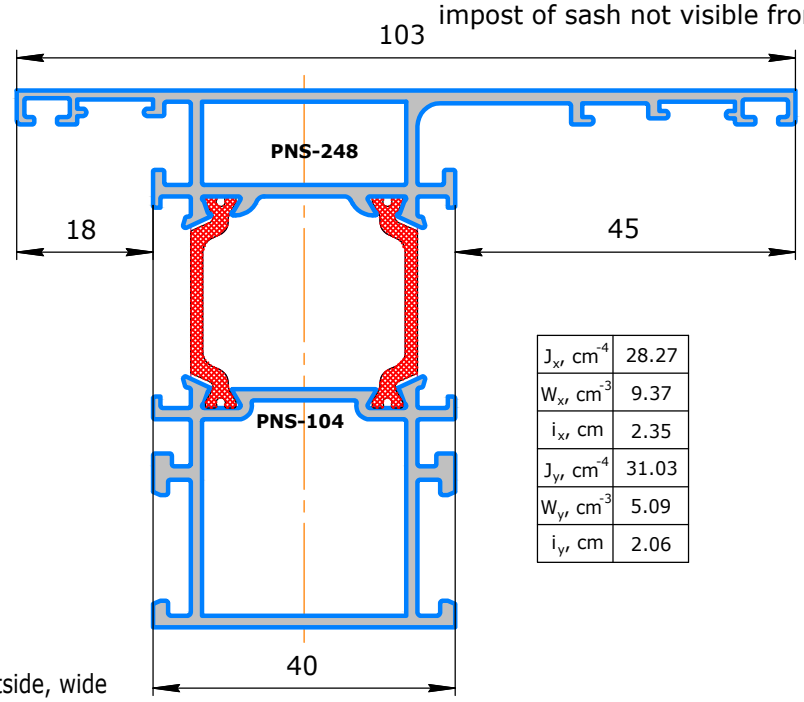


J_x, cm^{-4}	32.31
W_x, cm^{-3}	11.35
i_x, cm	2.37
J_y, cm^{-4}	48.12
W_y, cm^{-3}	9.82
i_y, cm	2.42

◇ — delivery period 8–10 weeks

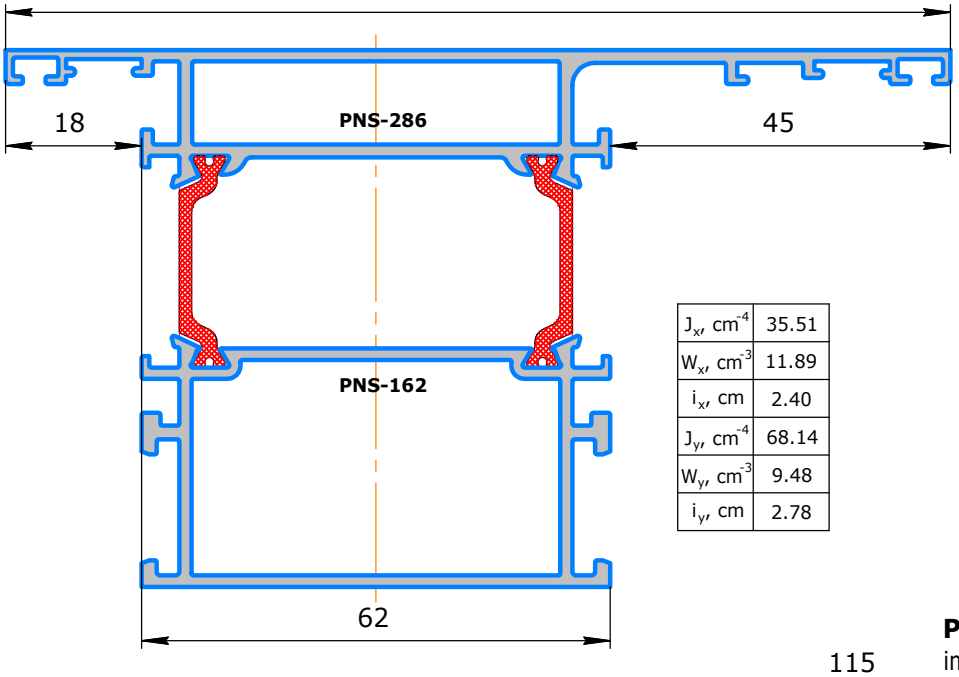


P71-406
impost of sash not visible from the outside



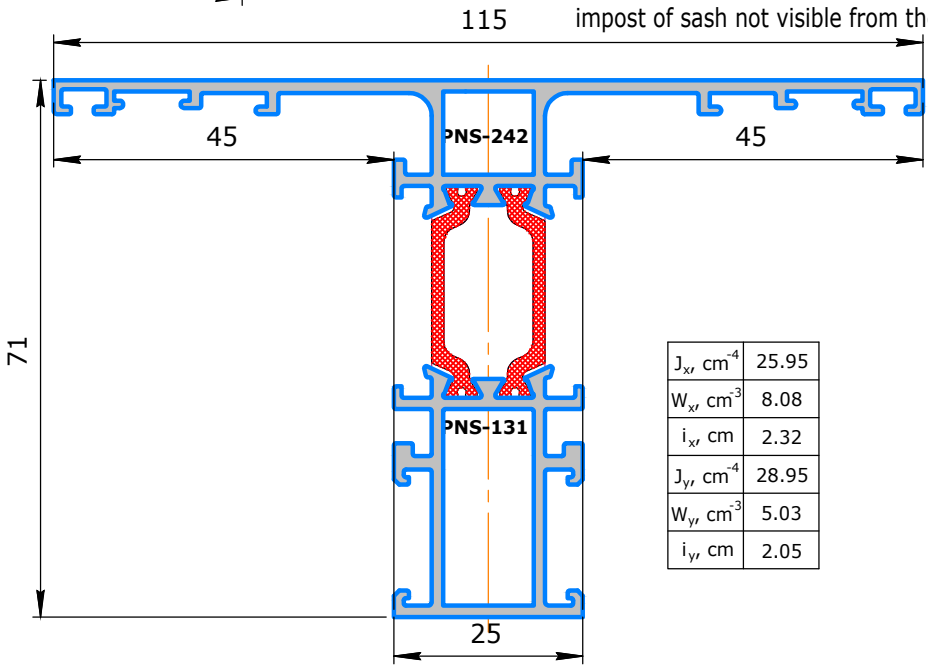
J_x, cm^{-4}	28.27
W_x, cm^{-3}	9.37
i_x, cm	2.35
J_y, cm^{-4}	31.03
W_y, cm^{-3}	5.09
i_y, cm	2.06

P71-410
impost of sash not visible from the outside, wide



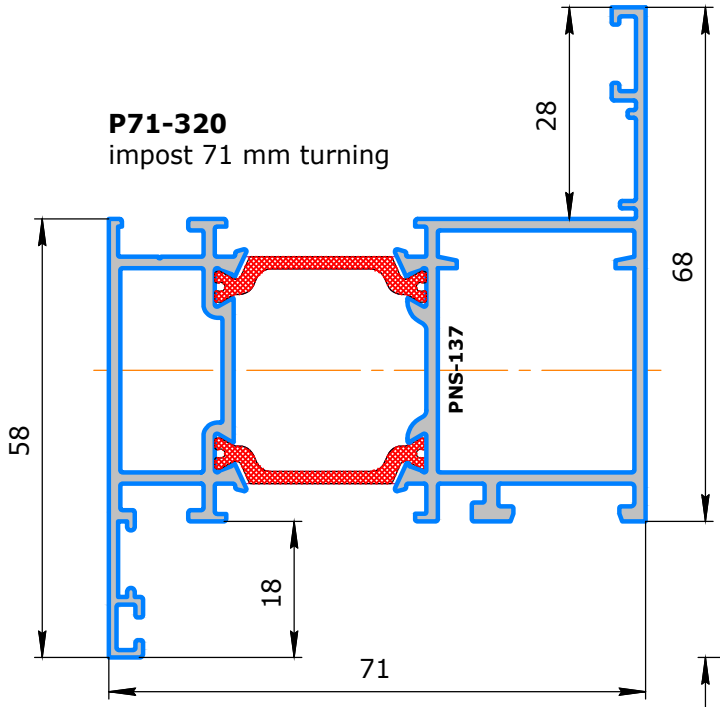
J_x, cm^{-4}	35.51
W_x, cm^{-3}	11.89
i_x, cm	2.40
J_y, cm^{-4}	68.14
W_y, cm^{-3}	9.48
i_y, cm	2.78

P71-405
impost of sash not visible from the outside



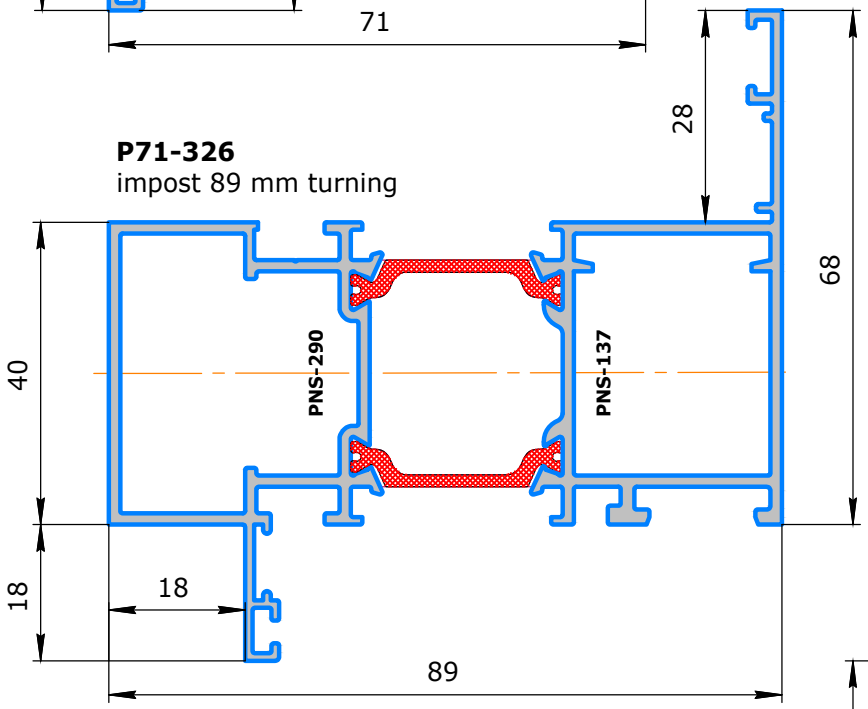
J_x, cm^{-4}	25.95
W_x, cm^{-3}	8.08
i_x, cm	2.32
J_y, cm^{-4}	28.95
W_y, cm^{-3}	5.03
i_y, cm	2.05

P71-320
impost 71 mm turning



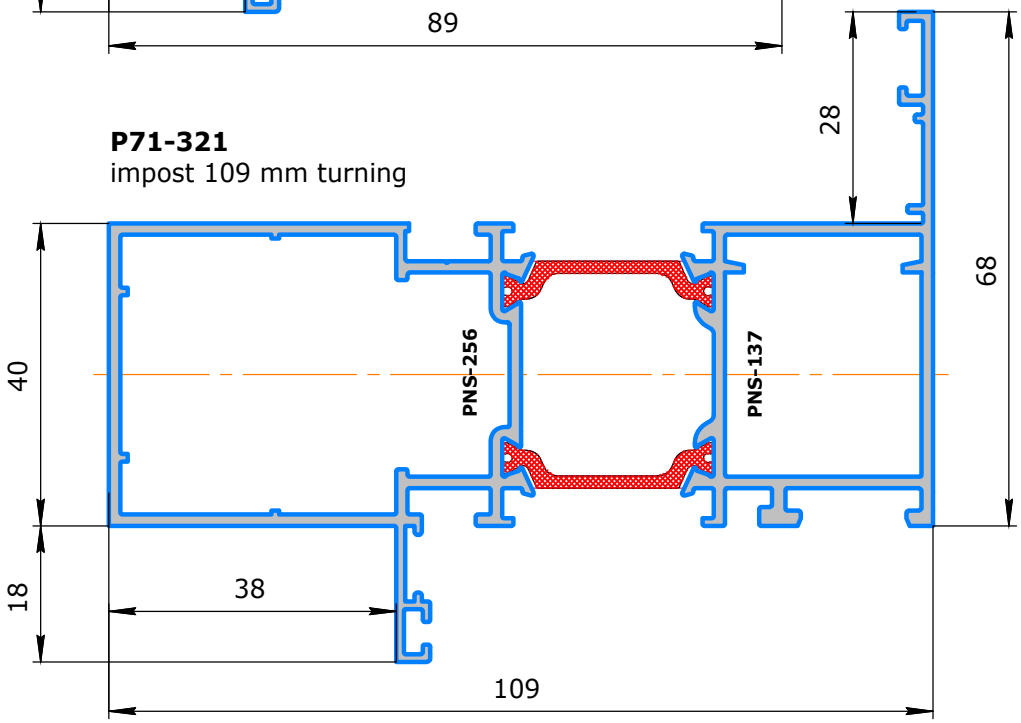
J_x, cm^{-4}	27.02
W_x, cm^{-3}	10.56
i_x, cm	2.40
J_y, cm^{-4}	19.99
W_y, cm^{-3}	4.24
i_y, cm	1.73

P71-326
impost 89 mm turning

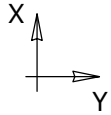


J_x, cm^{-4}	40.18
W_x, cm^{-3}	12.19
i_x, cm	2.78
J_y, cm^{-4}	22.44
W_y, cm^{-3}	4.75
i_y, cm	1.74

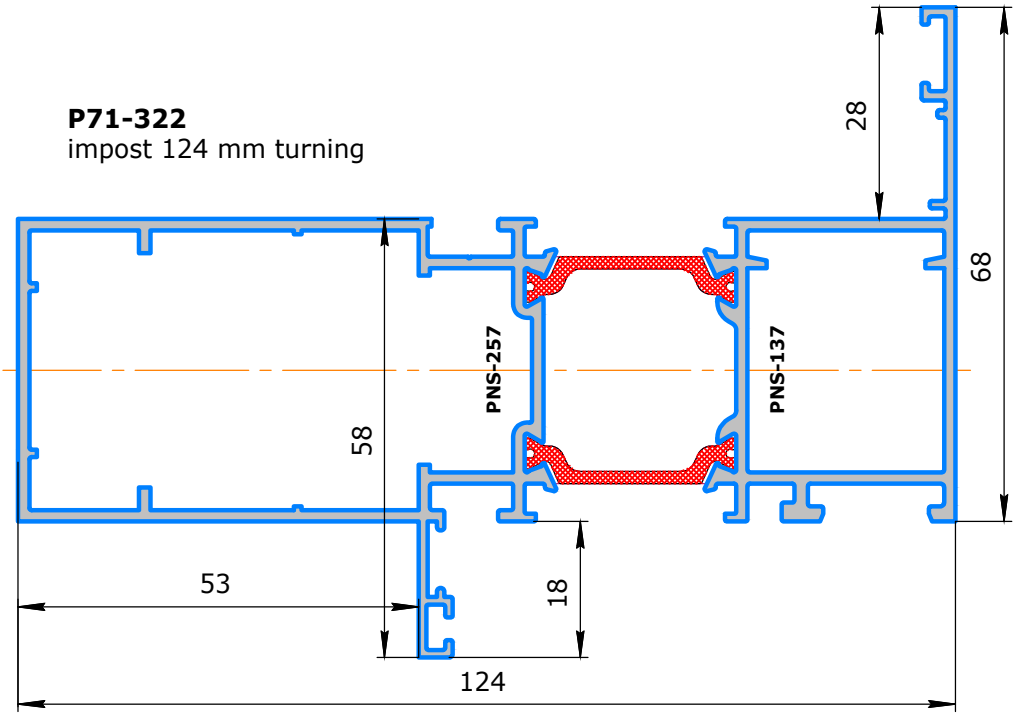
P71-321
impost 109 mm turning



J_x, cm^{-4}	61.61
W_x, cm^{-3}	14.37
i_x, cm	3.31
J_y, cm^{-4}	24.72
W_y, cm^{-3}	5.23
i_y, cm	1.75

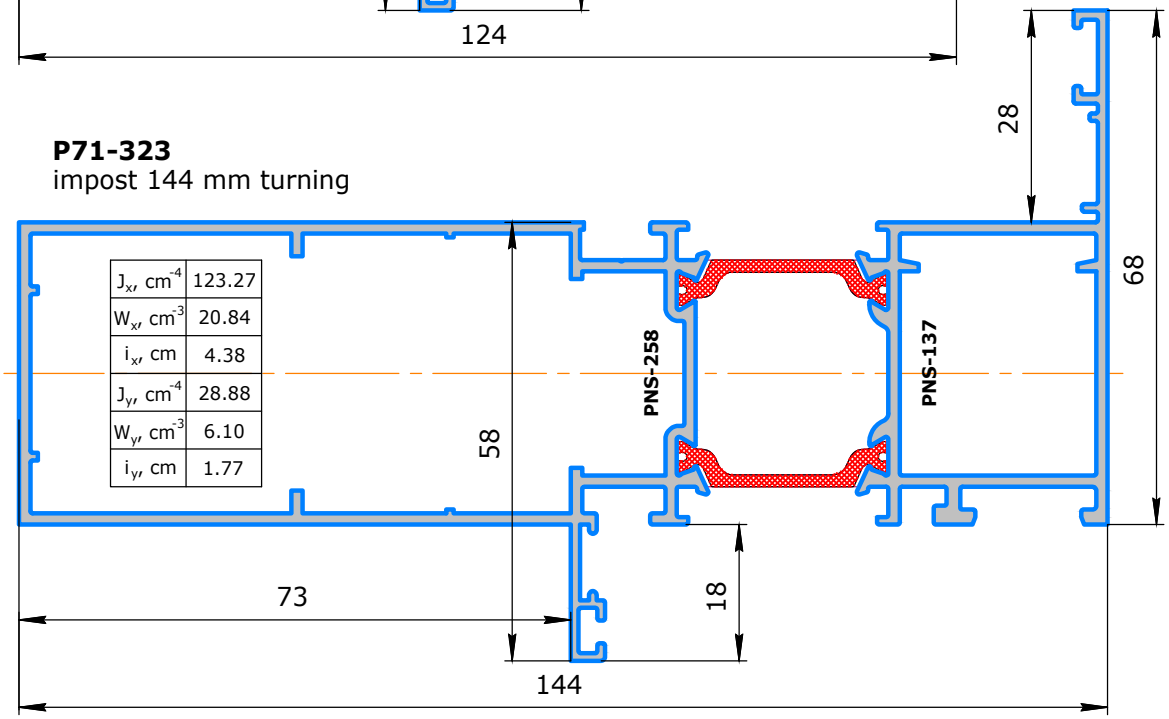


P71-322
impost 124 mm turning



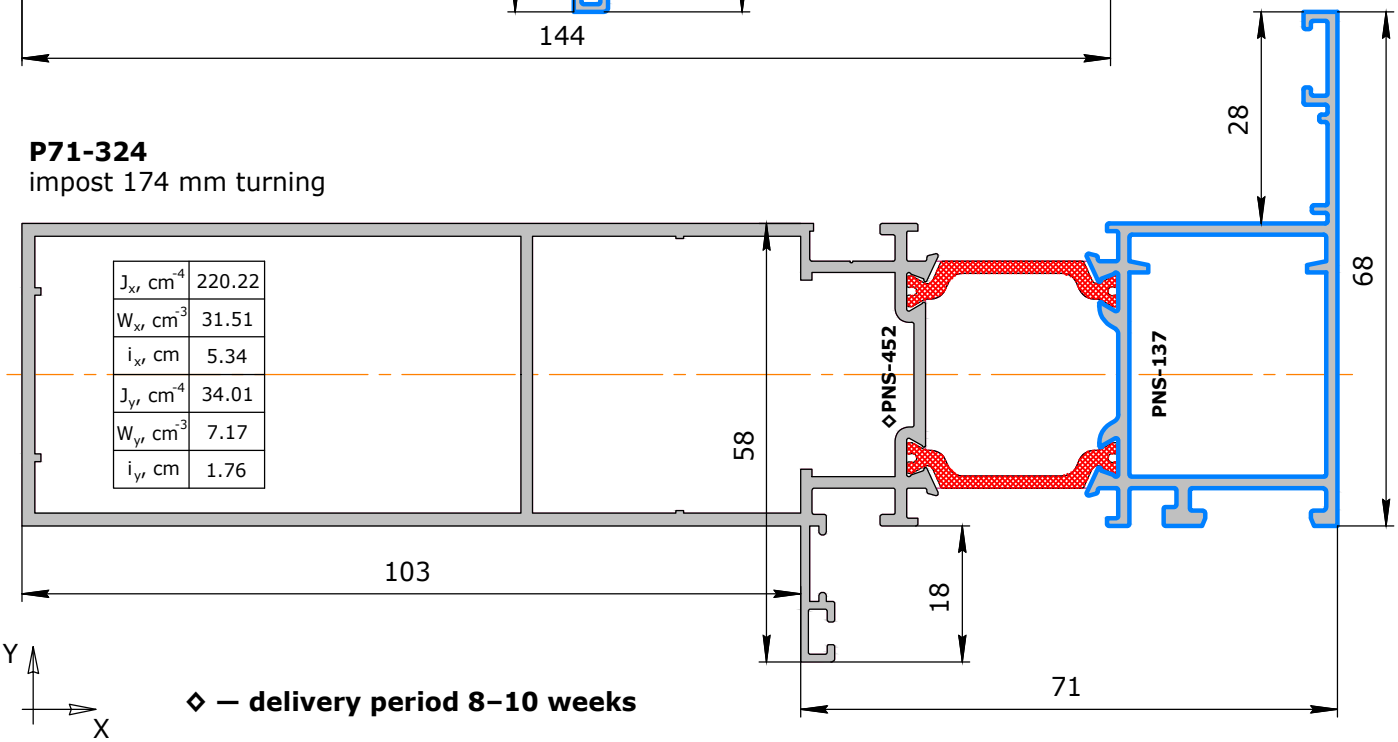
J_x, cm^{-4}	85.36
W_x, cm^{-3}	17.17
i_x, cm	3.77
J_y, cm^{-4}	26.65
W_y, cm^{-3}	5.63
i_y, cm	1.76

P71-323
impost 144 mm turning



J_x, cm^{-4}	123.27
W_x, cm^{-3}	20.84
i_x, cm	4.38
J_y, cm^{-4}	28.88
W_y, cm^{-3}	6.10
i_y, cm	1.77

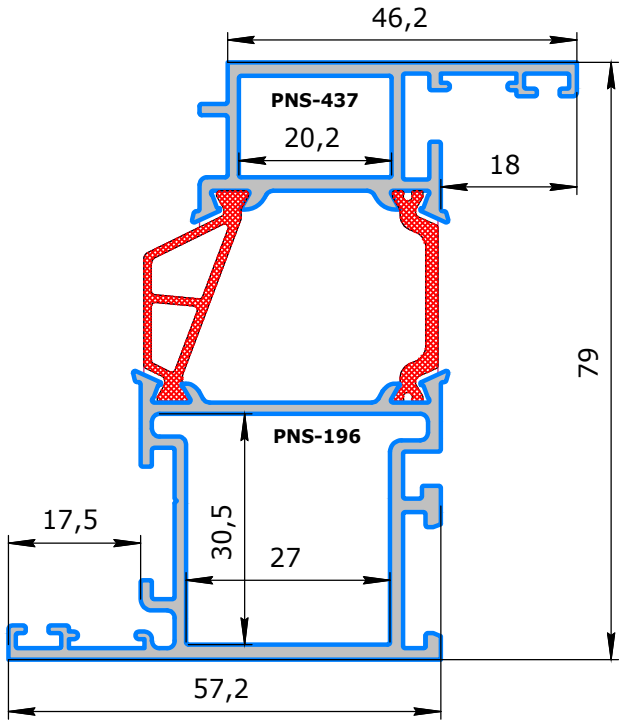
P71-324
impost 174 mm turning



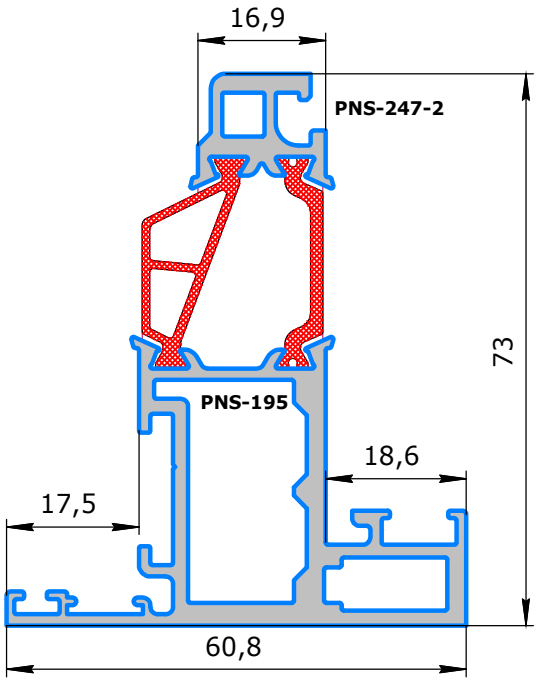
J_x, cm^{-4}	220.22
W_x, cm^{-3}	31.51
i_x, cm	5.34
J_y, cm^{-4}	34.01
W_y, cm^{-3}	7.17
i_y, cm	1.76

◇ — delivery period 8–10 weeks

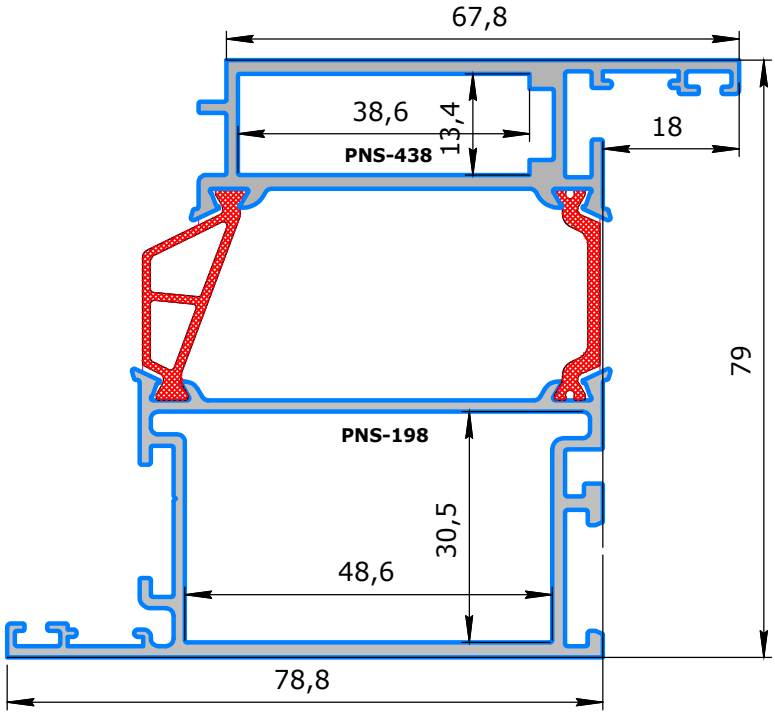
P71-207
window sash



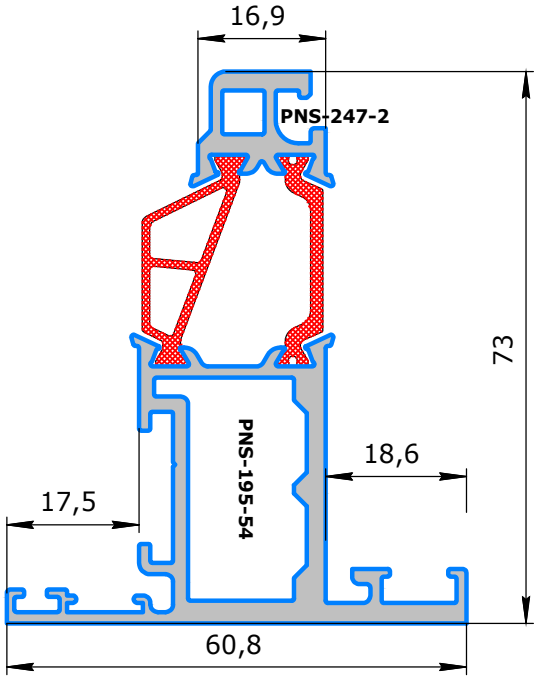
P71-206
window sash not visible from the outside



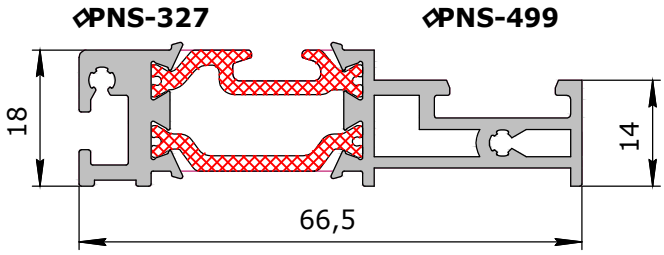
P71-205
wide window sash



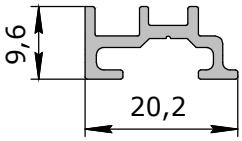
P71-206-54
window sash not visible from the outside



P71-014-4
groove sill of the internal opening door

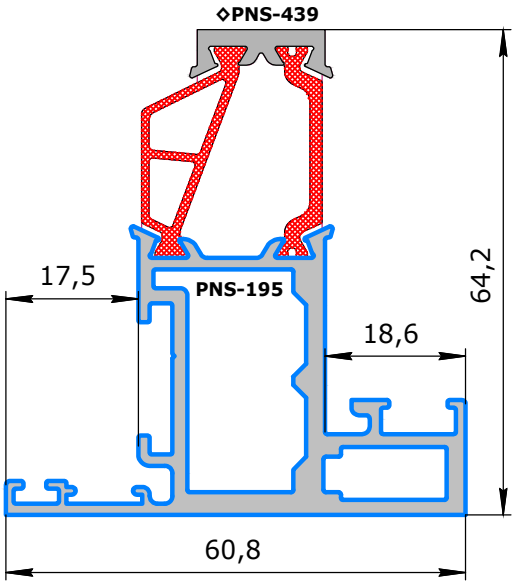


◇P00-137
door-to-sill adapter

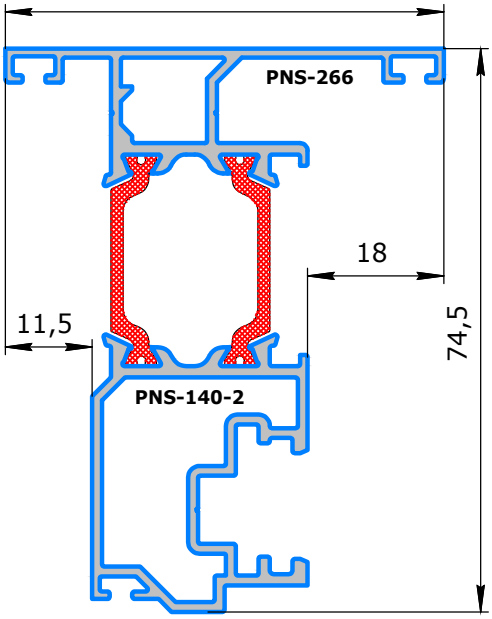


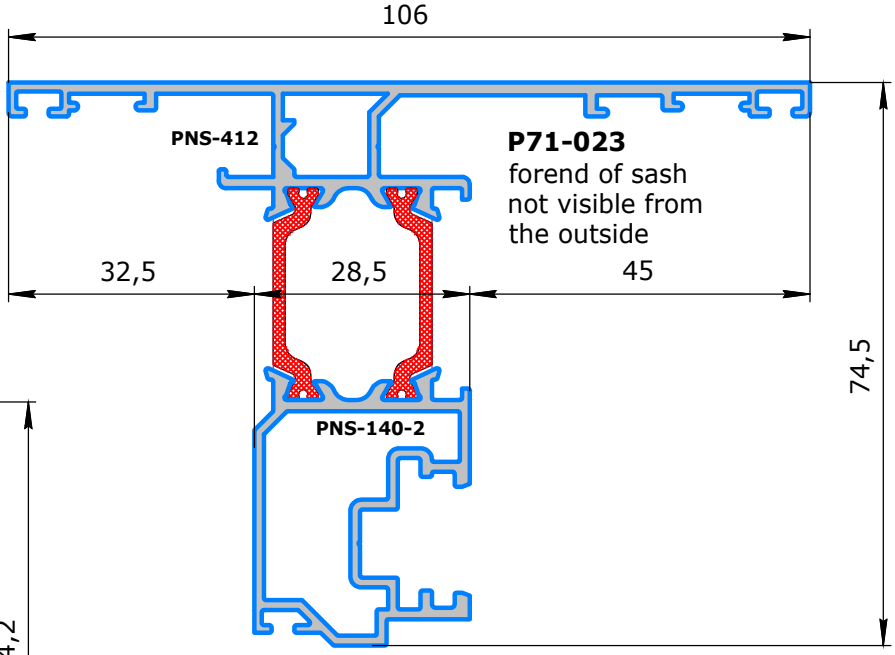
◇ — delivery period 8–10 weeks

P71-209
structural
sash



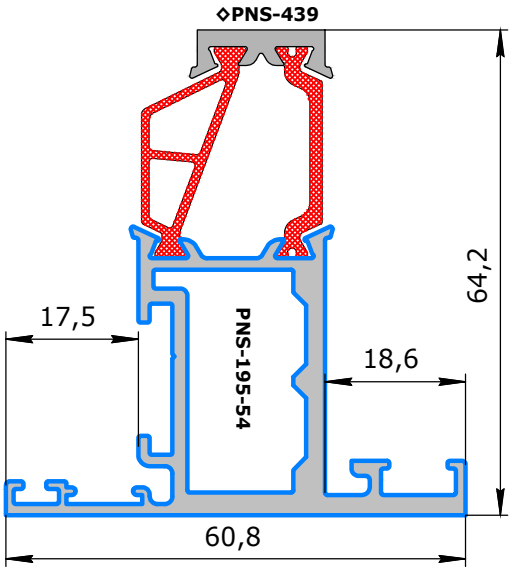
P71-020
window
forend

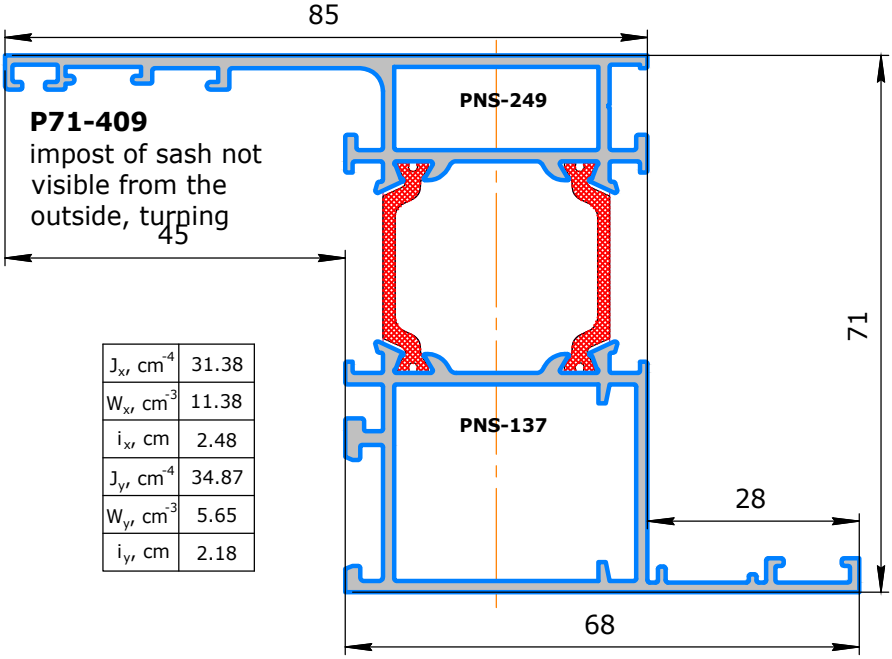




P71-023
forend of sash
not visible from
the outside

P71-209-54
structural
sash



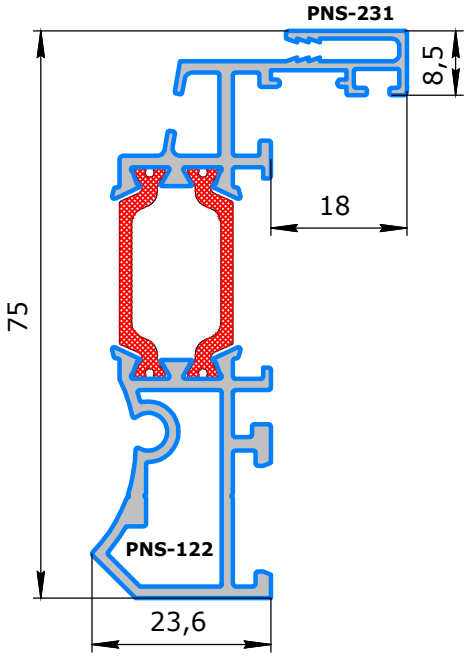


P71-409
impost of sash not
visible from the
outside, turning

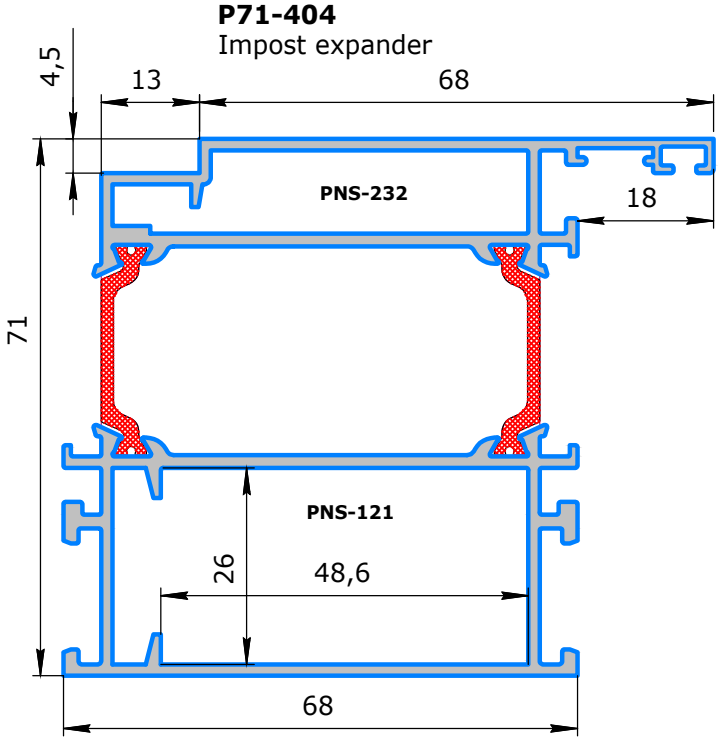
J_x, cm^{-4}	31.38
W_x, cm^{-3}	11.38
i_x, cm	2.48
J_y, cm^{-4}	34.87
W_y, cm^{-3}	5.65
i_y, cm	2.18

◇ — delivery period 8–10 weeks

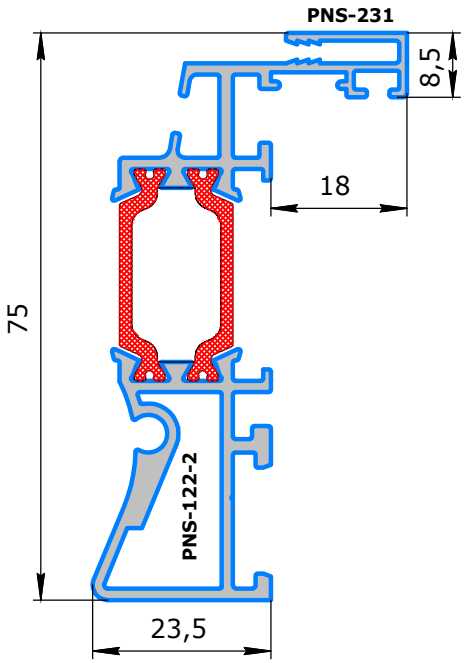
P71-006
swivel adapter



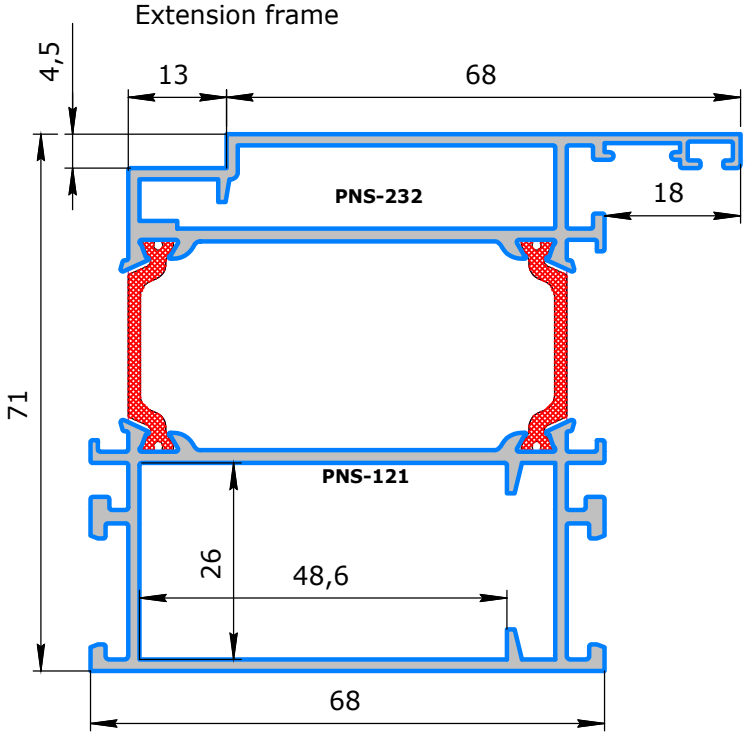
P71-404
Impost expander



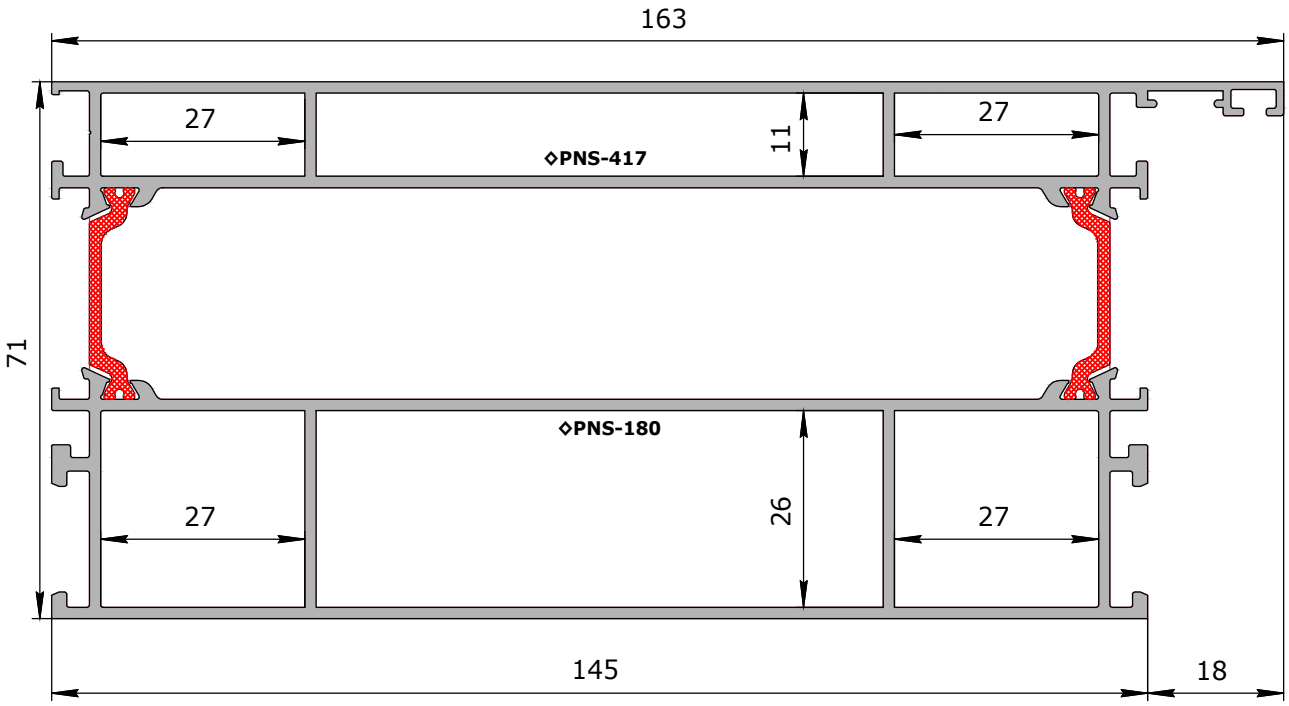
P71-006-2
all-purpose swivel adapter



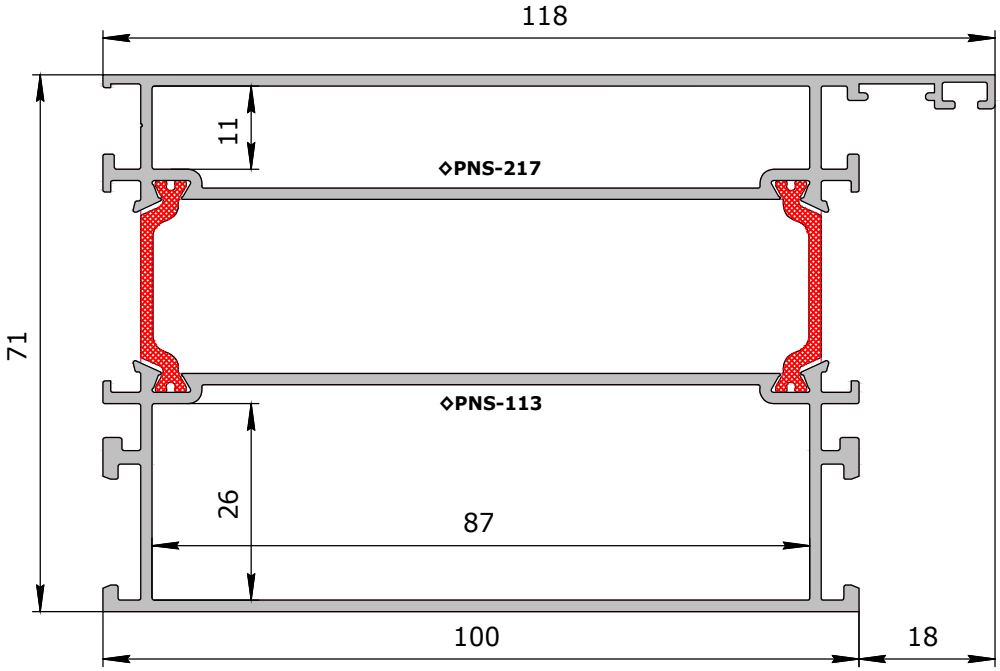
P71-404-2
Extension frame



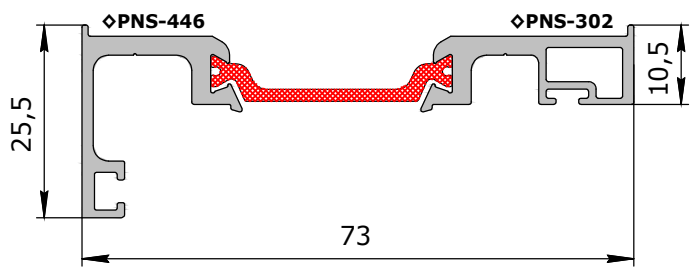
P71-212-190
Base 145 mm



P71-212
Base 100 mm

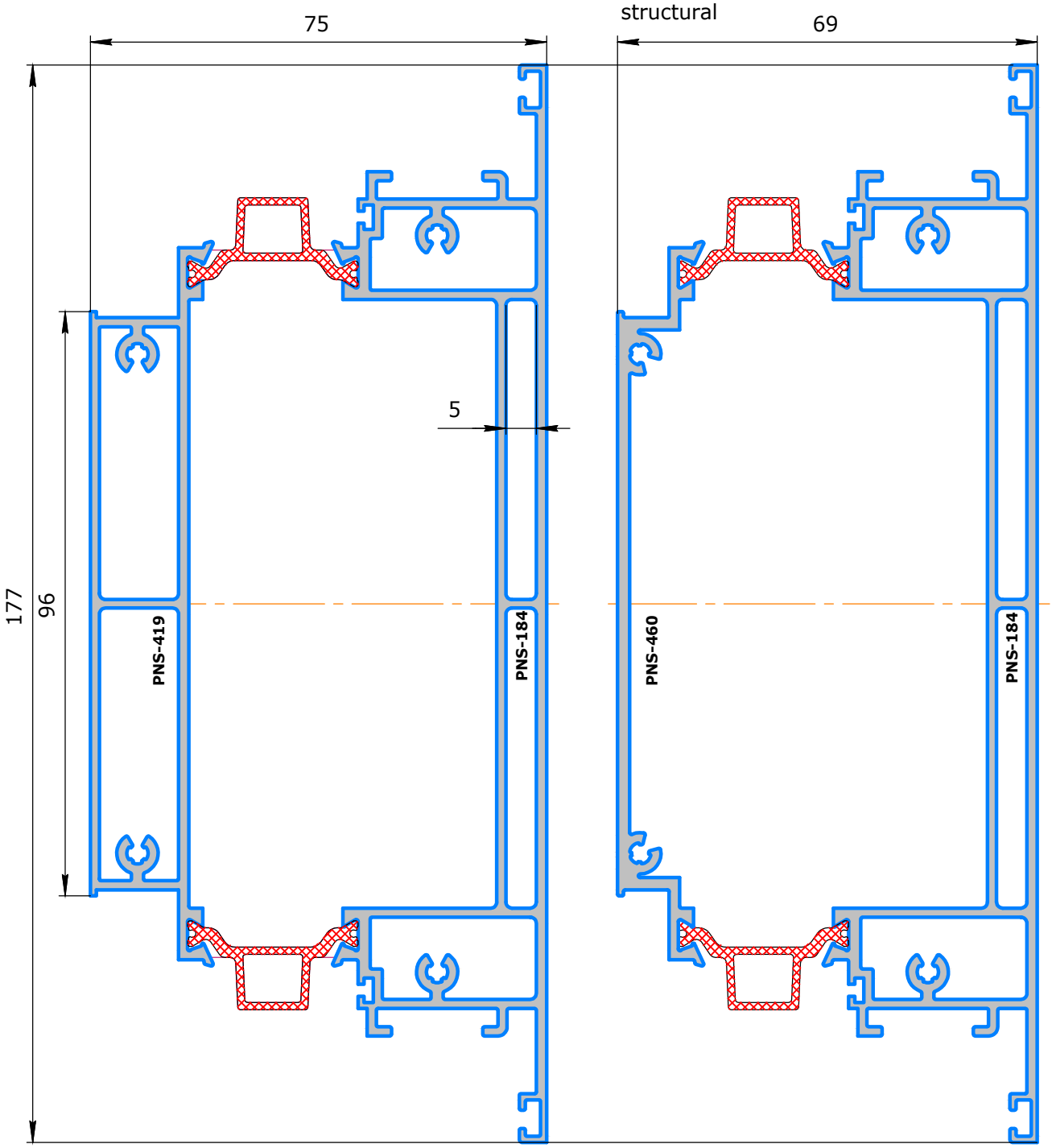


P71-025
base rabbet ledge



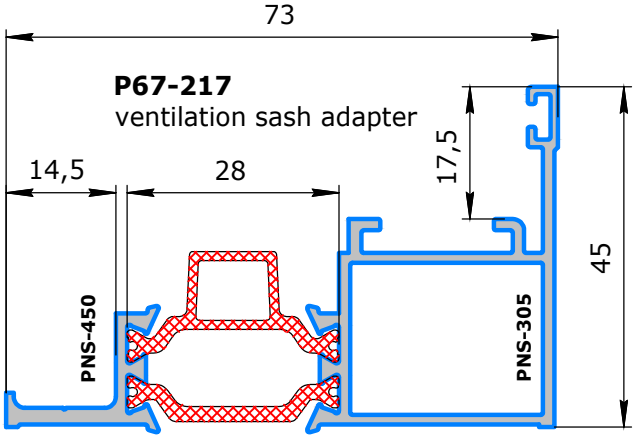
◇ — delivery period 8–10 weeks

P67-216
ventilation sash 100 mm

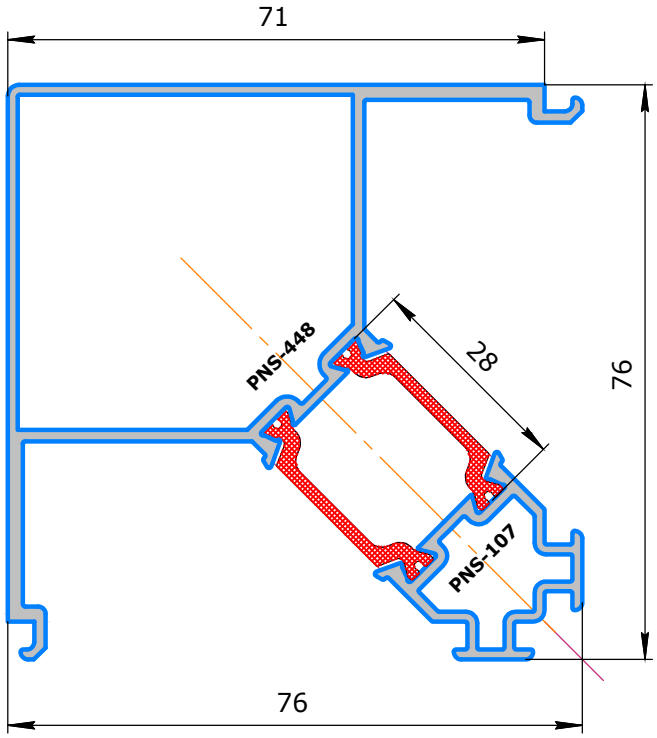


P67-218
ventilation sash 100 mm
structural

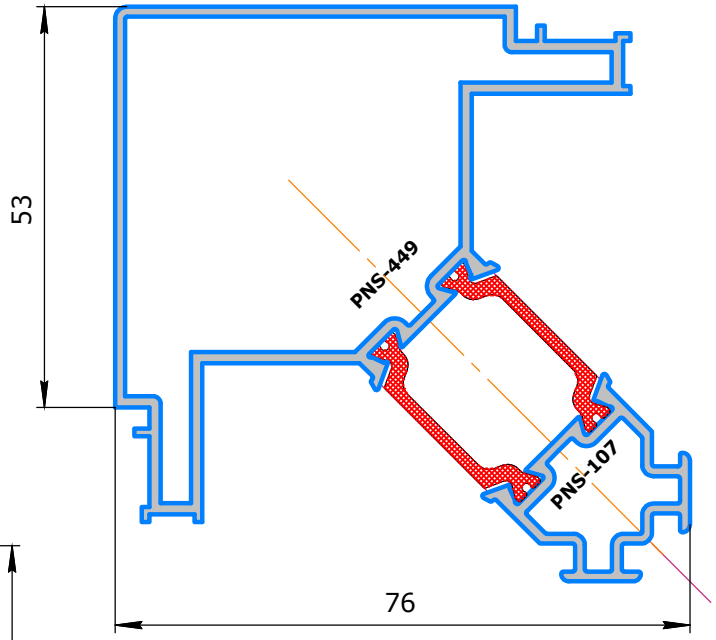
P67-217
ventilation sash adapter



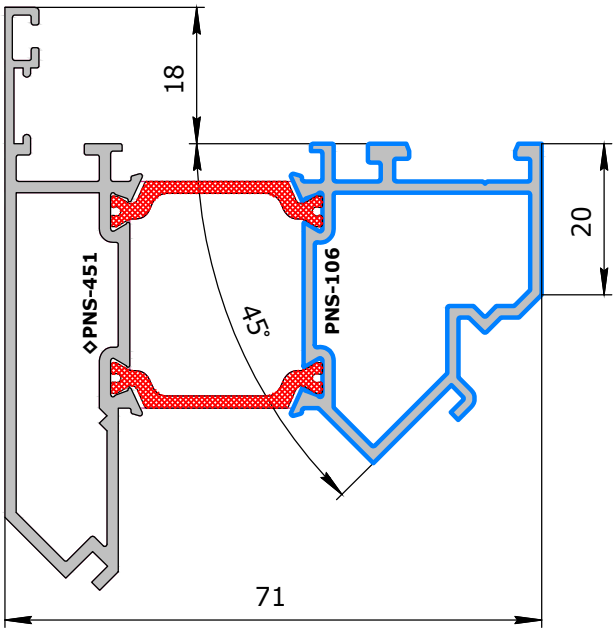
P71-002
corner frame adapter 90°



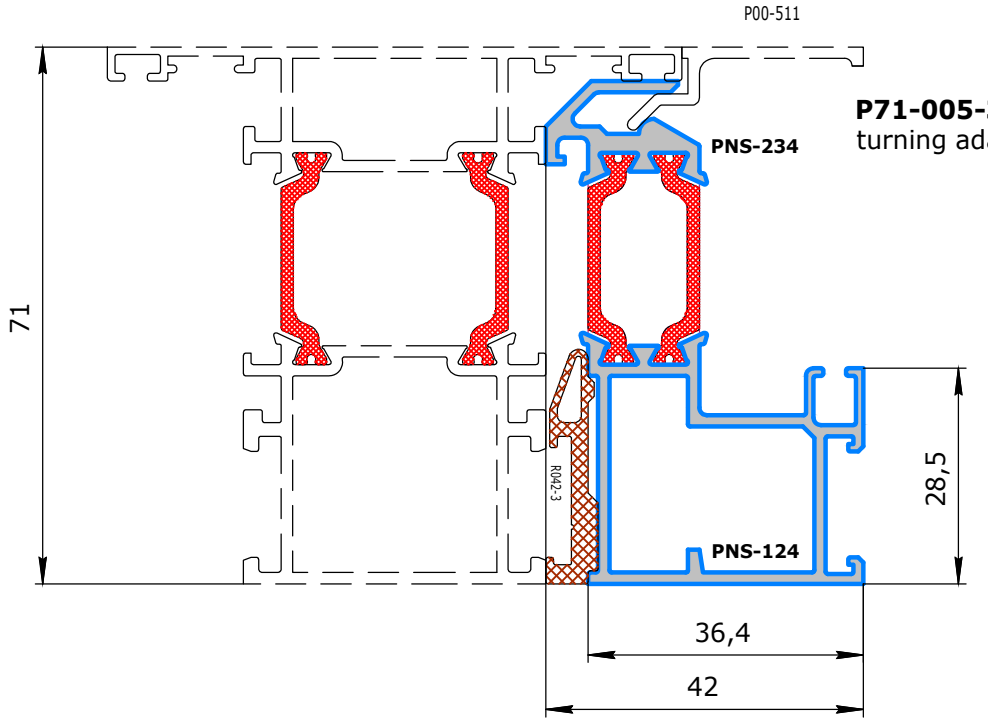
P71-015
angled mullion adapter 90°



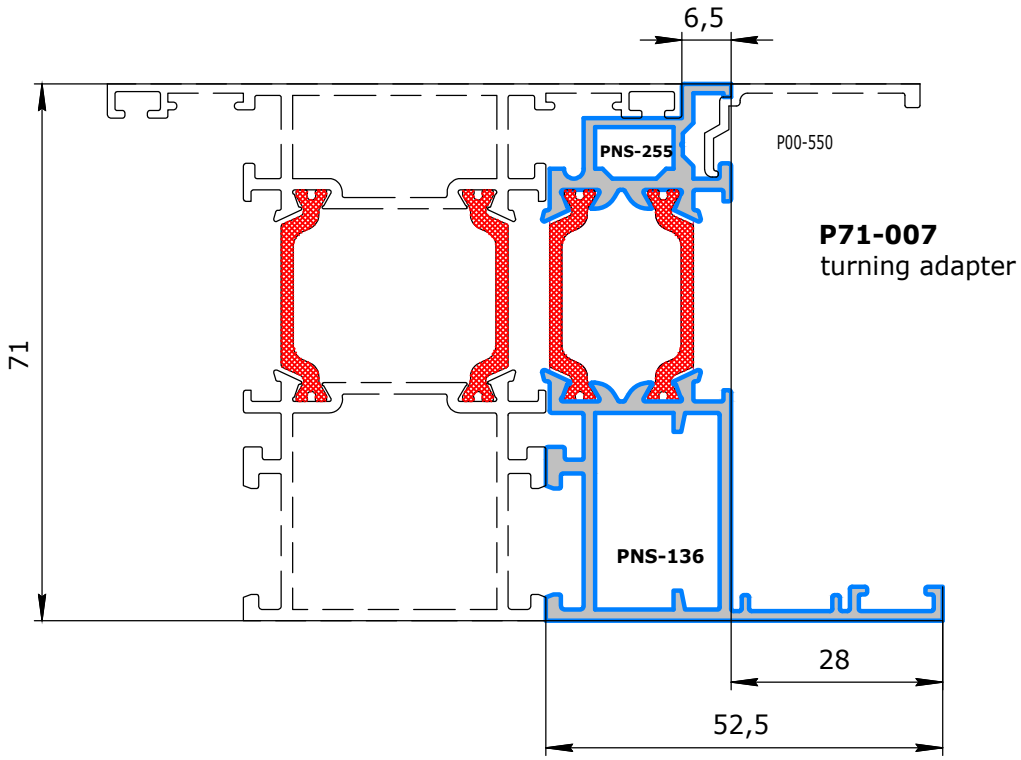
P71-001
corner adapter 45°



◇ — delivery period 8–10 weeks

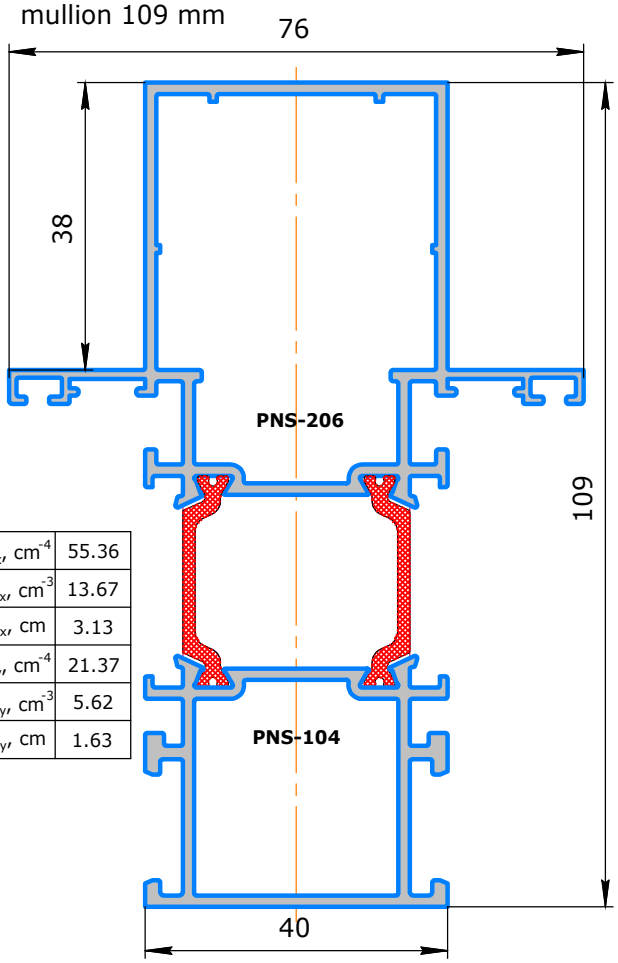


P71-005-3
turning adapter, isolated



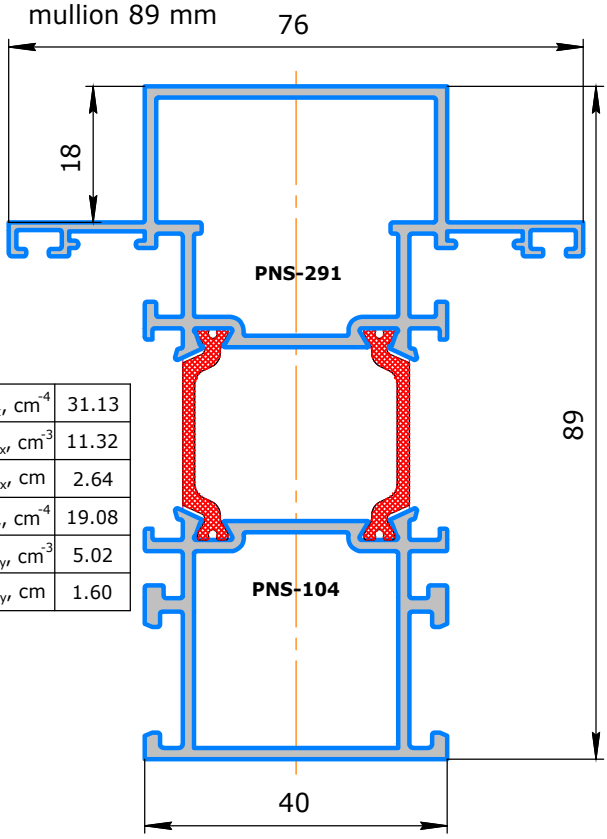
P71-007
turning adapter

P71-301
mullion 109 mm



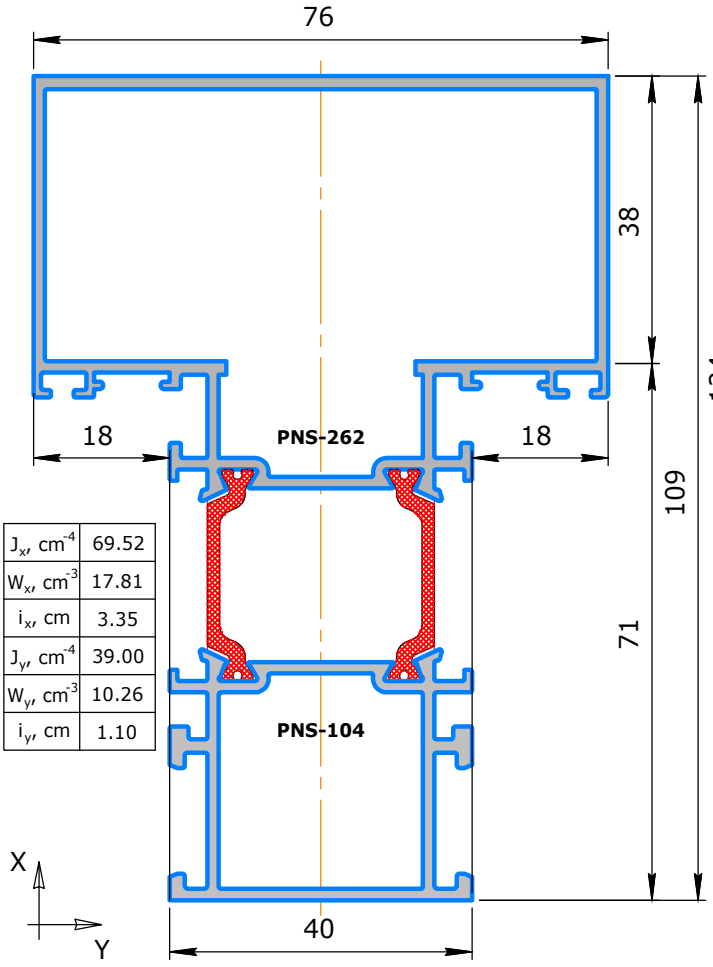
J_x, cm^{-4}	55.36
W_x, cm^{-3}	13.67
i_x, cm	3.13
J_y, cm^{-4}	21.37
W_y, cm^{-3}	5.62
i_y, cm	1.63

P71-300-89
mullion 89 mm



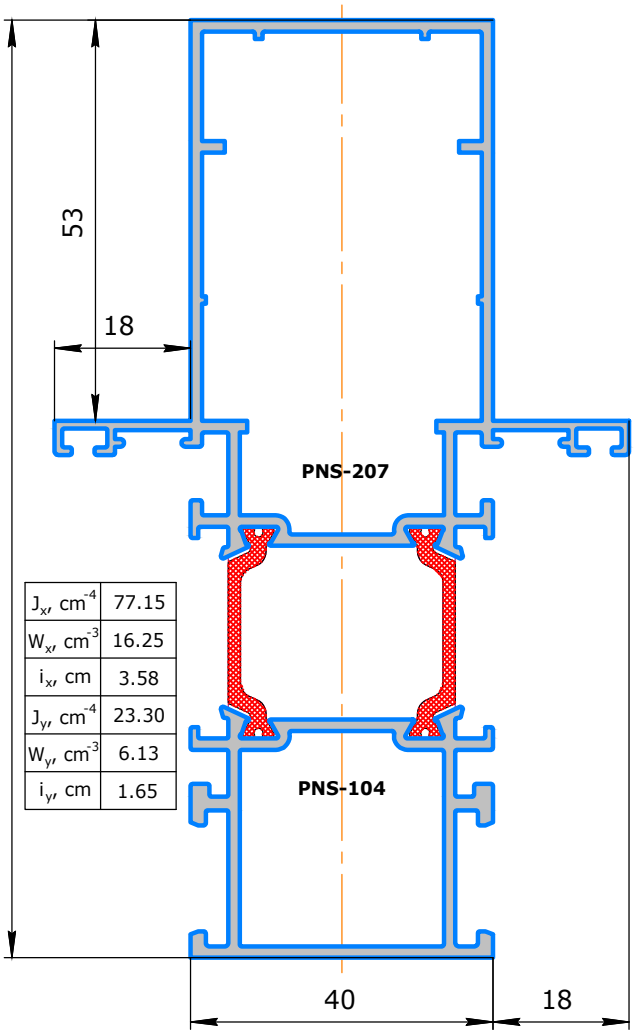
J_x, cm^{-4}	31.13
W_x, cm^{-3}	11.32
i_x, cm	2.64
J_y, cm^{-4}	19.08
W_y, cm^{-3}	5.02
i_y, cm	1.60

P71-376-38
architectural mullion 109 mm



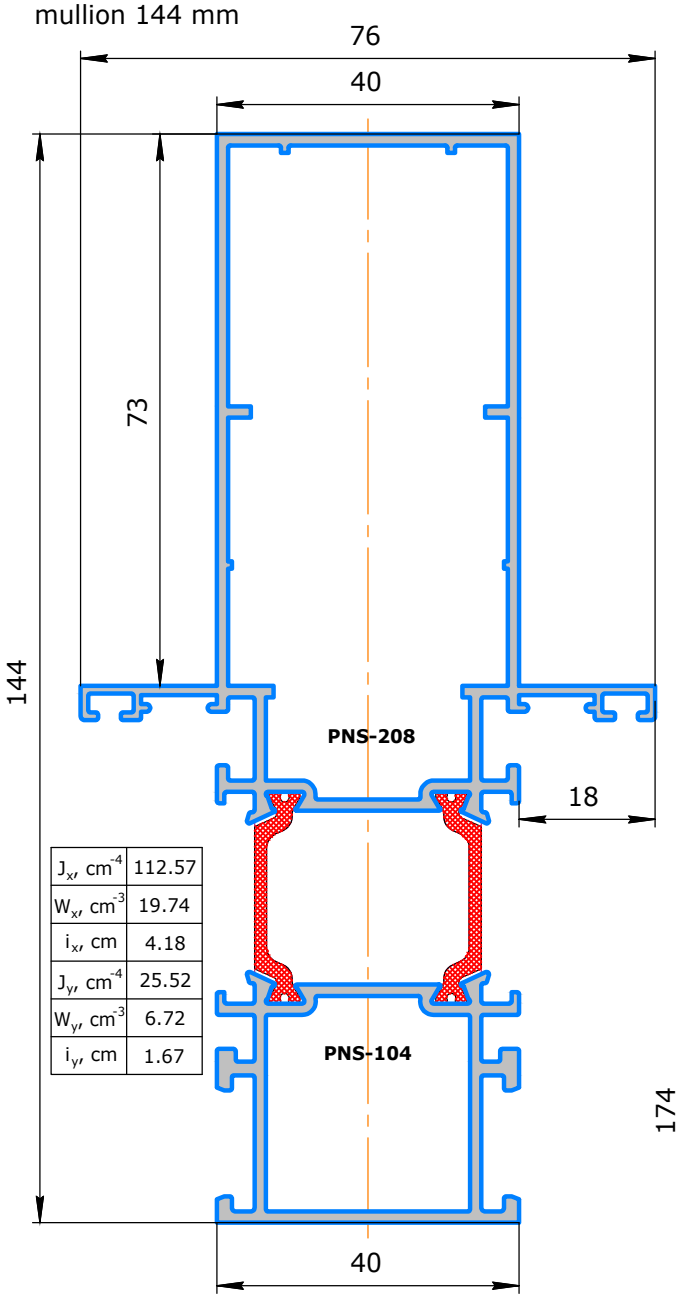
J_x, cm^{-4}	69.52
W_x, cm^{-3}	17.81
i_x, cm	3.35
J_y, cm^{-4}	39.00
W_y, cm^{-3}	10.26
i_y, cm	1.10

P71-302
mullion 124 mm



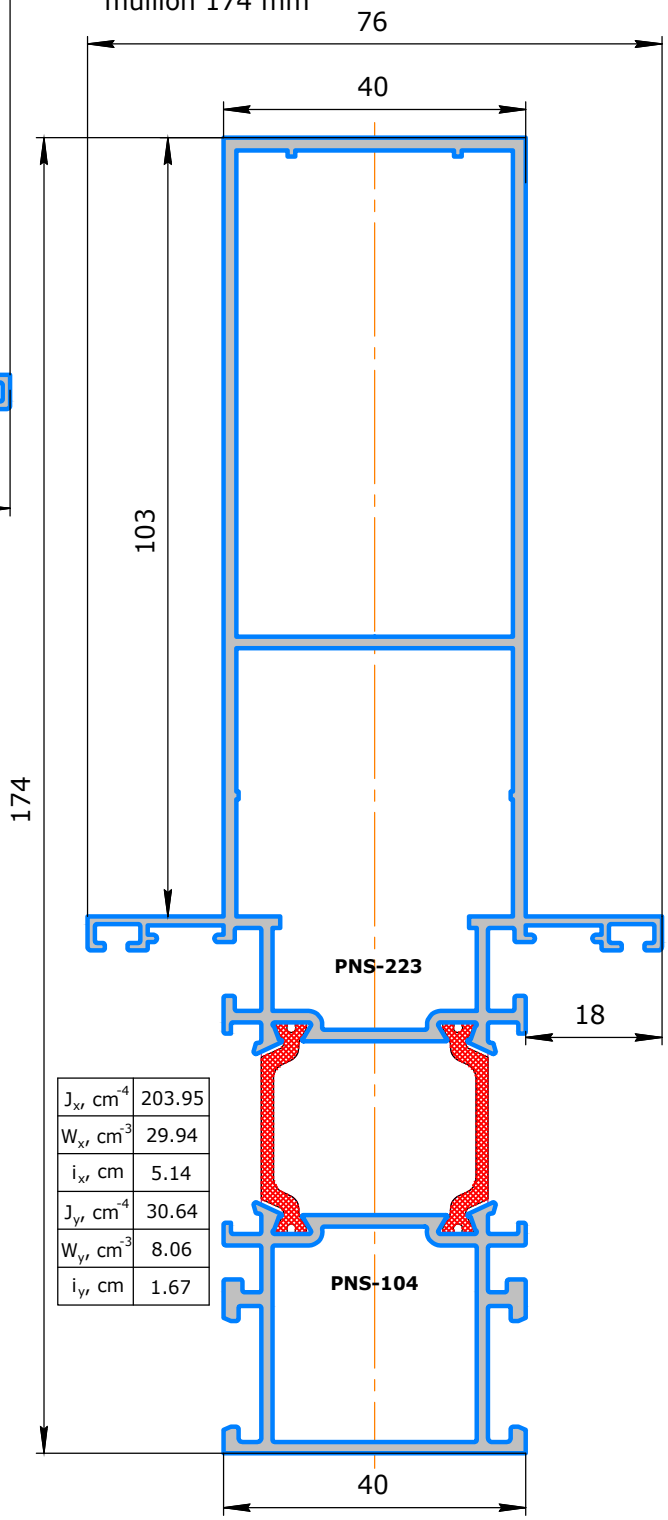
J_x, cm^{-4}	77.15
W_x, cm^{-3}	16.25
i_x, cm	3.58
J_y, cm^{-4}	23.30
W_y, cm^{-3}	6.13
i_y, cm	1.65

P71-303
mullion 144 mm

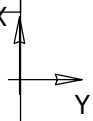


J_x, cm^{-4}	112.57
W_x, cm^{-3}	19.74
i_x, cm	4.18
J_y, cm^{-4}	25.52
W_y, cm^{-3}	6.72
i_y, cm	1.67

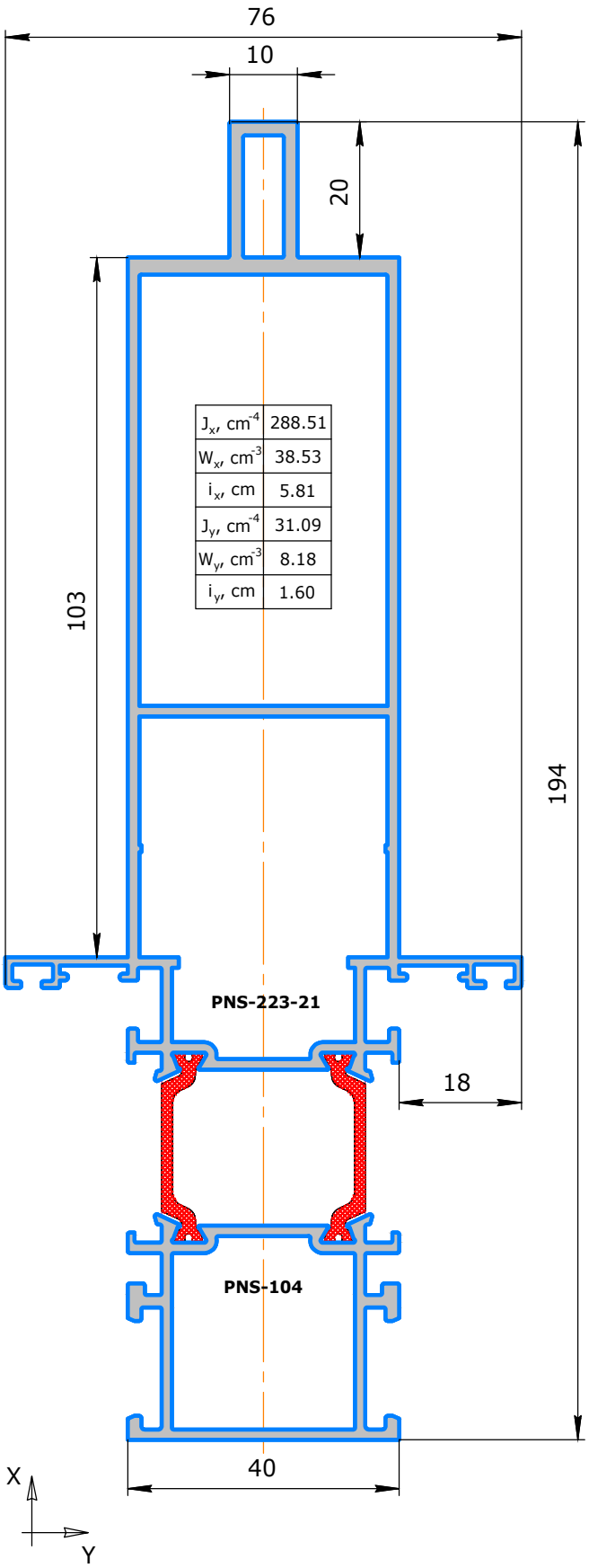
P71-304
mullion 174 mm



J_x, cm^{-4}	203.95
W_x, cm^{-3}	29.94
i_x, cm	5.14
J_y, cm^{-4}	30.64
W_y, cm^{-3}	8.06
i_y, cm	1.67

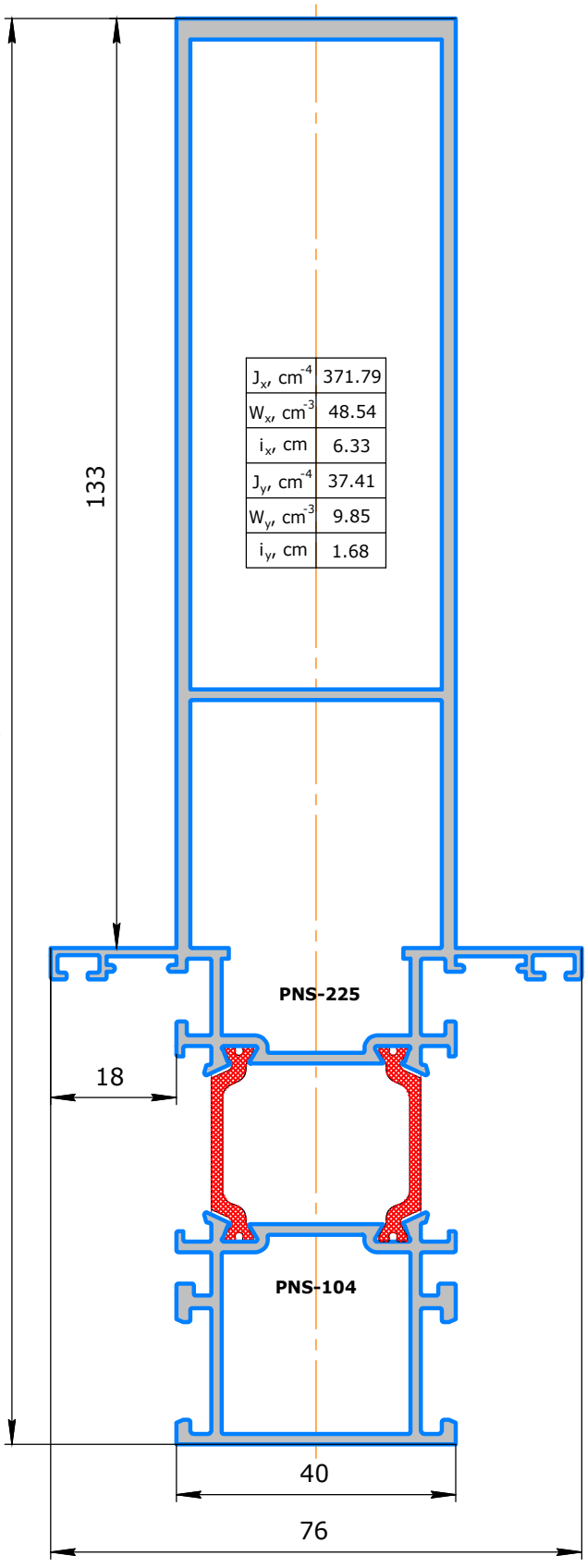


P71-304-21
mullion 174 mm with
decorative projection



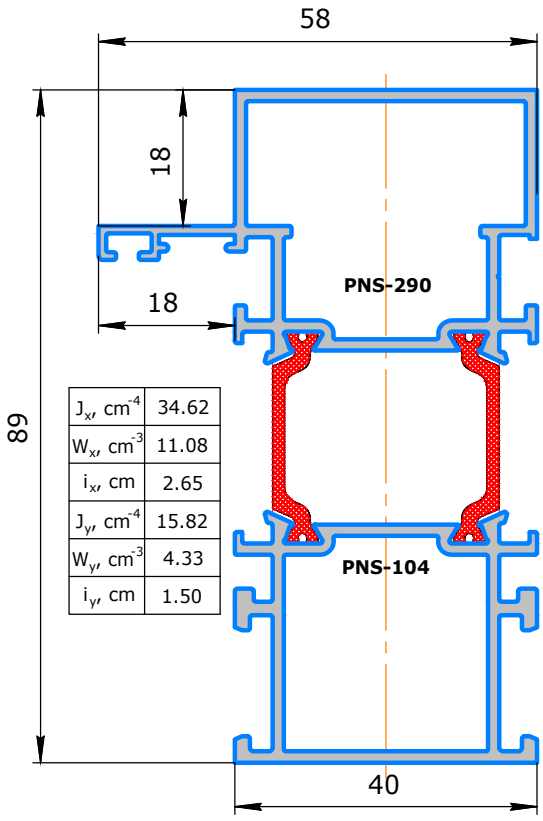
J_x, cm^{-4}	288.51
W_x, cm^{-3}	38.53
i_x, cm	5.81
J_y, cm^{-4}	31.09
W_y, cm^{-3}	8.18
i_y, cm	1.60

P71-305
mullion 204 mm



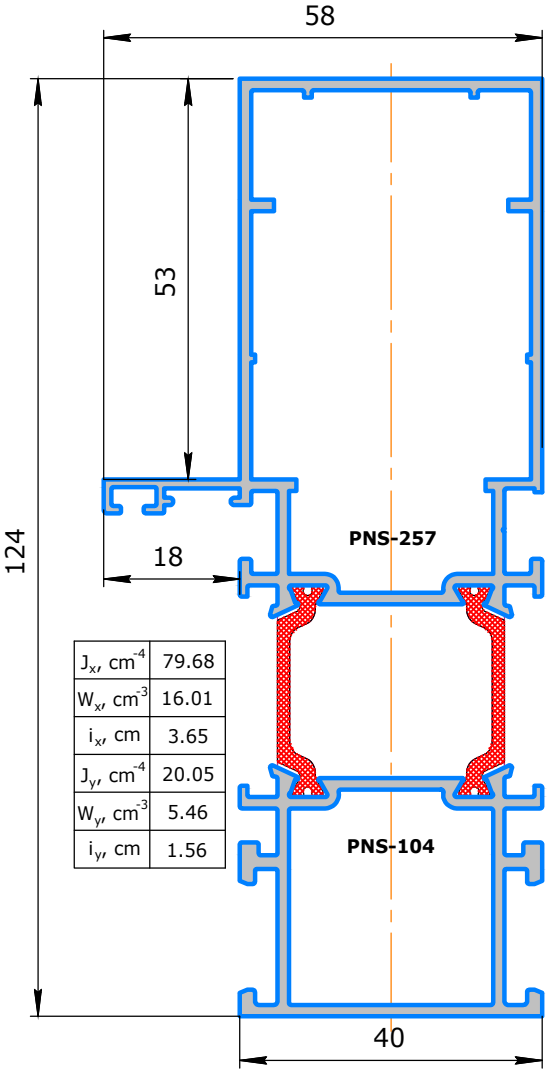
J_x, cm^{-4}	371.79
W_x, cm^{-3}	48.54
i_x, cm	6.33
J_y, cm^{-4}	37.41
W_y, cm^{-3}	9.85
i_y, cm	1.68

P71-310-89
mullion 89 mm single-arm



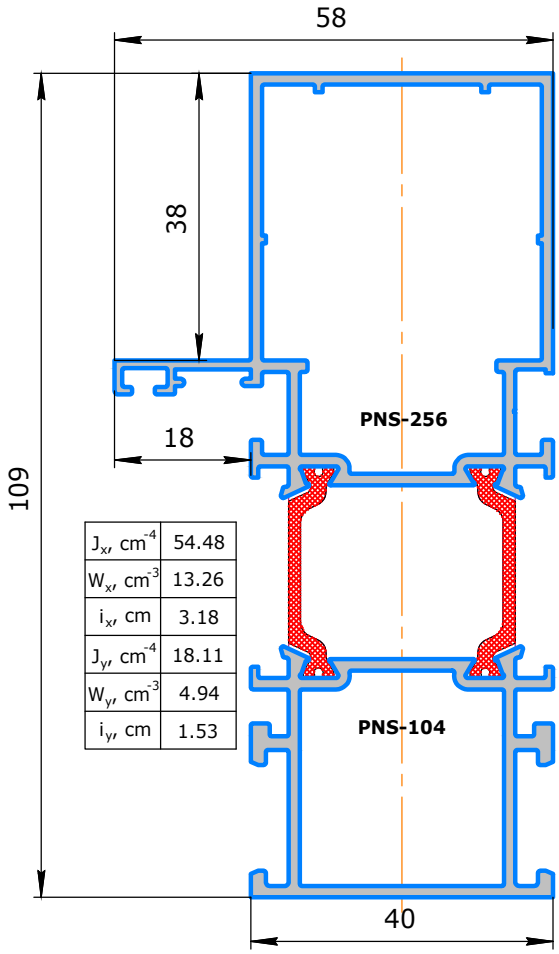
J_x, cm^{-4}	34.62
W_x, cm^{-3}	11.08
i_x, cm	2.65
J_y, cm^{-4}	15.82
W_y, cm^{-3}	4.33
i_y, cm	1.50

P71-312
mullion 124 mm single-arm



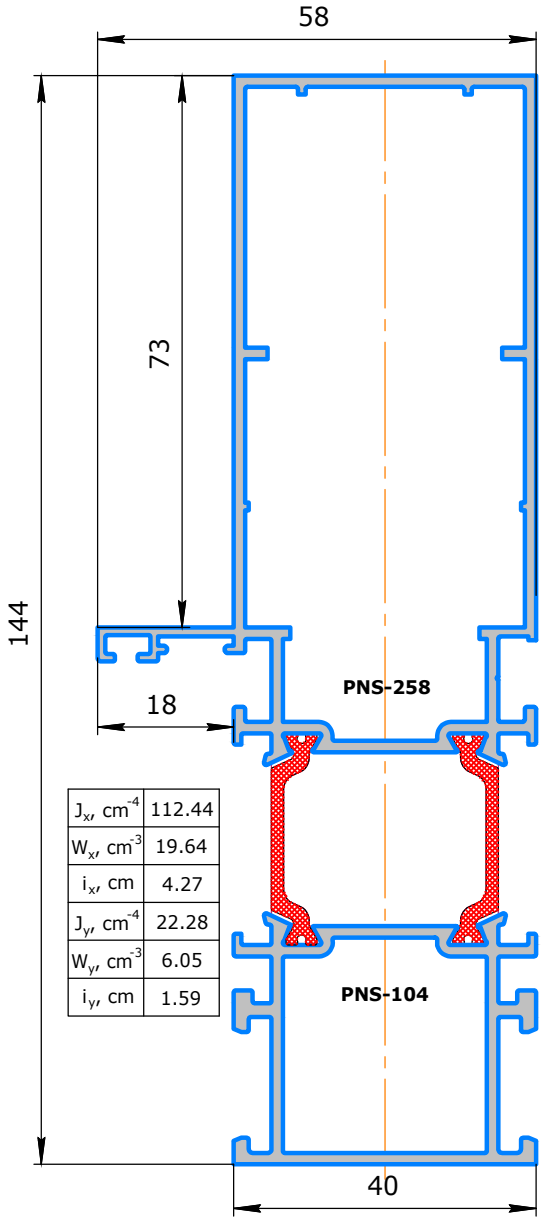
J_x, cm^{-4}	79.68
W_x, cm^{-3}	16.01
i_x, cm	3.65
J_y, cm^{-4}	20.05
W_y, cm^{-3}	5.46
i_y, cm	1.56

P71-311
mullion 109 mm single-arm



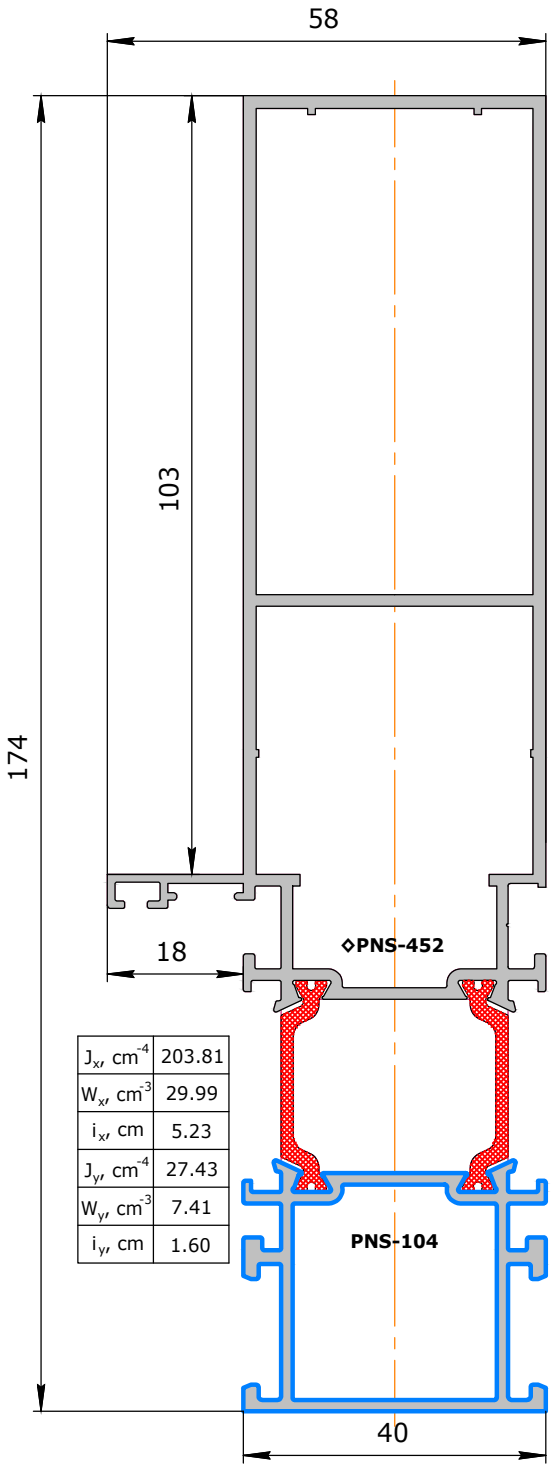
J_x, cm^{-4}	54.48
W_x, cm^{-3}	13.26
i_x, cm	3.18
J_y, cm^{-4}	18.11
W_y, cm^{-3}	4.94
i_y, cm	1.53

P71-313-2
mullion 144 mm single-arm



J_x, cm^{-4}	112.44
W_x, cm^{-3}	19.64
i_x, cm	4.27
J_y, cm^{-4}	22.28
W_y, cm^{-3}	6.05
i_y, cm	1.59

P71-314
mullion 174 mm single-arm

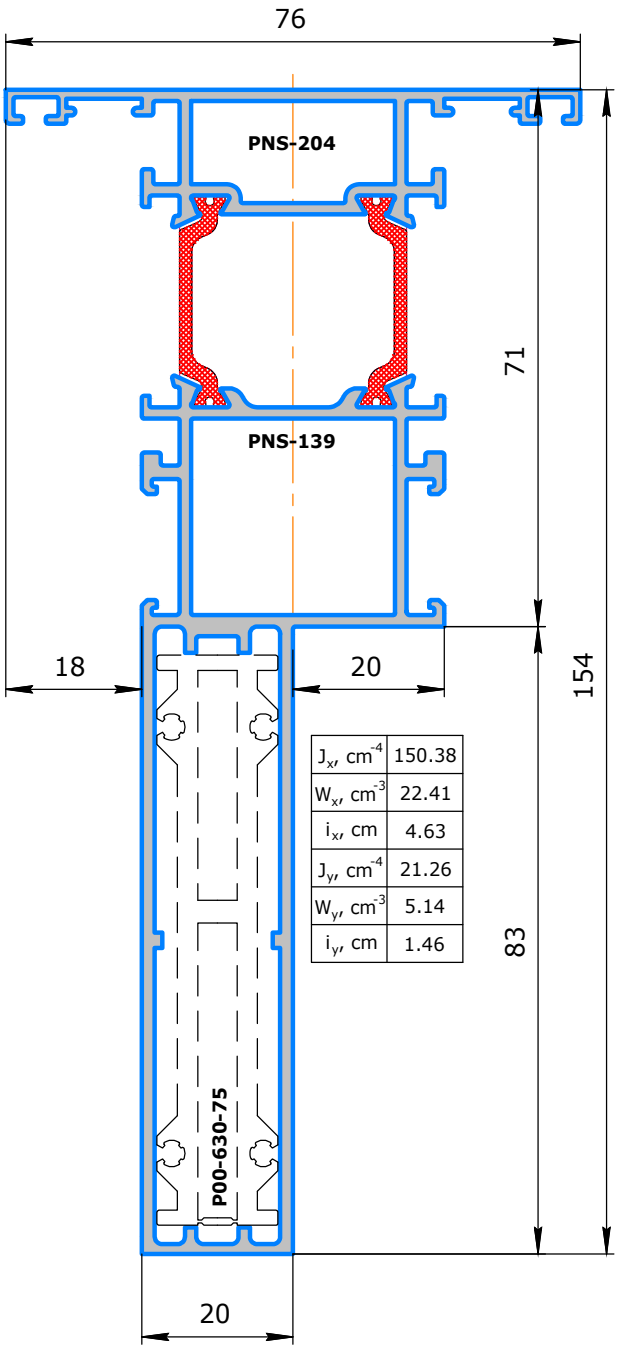


J_x, cm^{-4}	203.81
W_x, cm^{-3}	29.99
i_x, cm	5.23
J_y, cm^{-4}	27.43
W_y, cm^{-3}	7.41
i_y, cm	1.60

◇ — delivery period 8–10 weeks

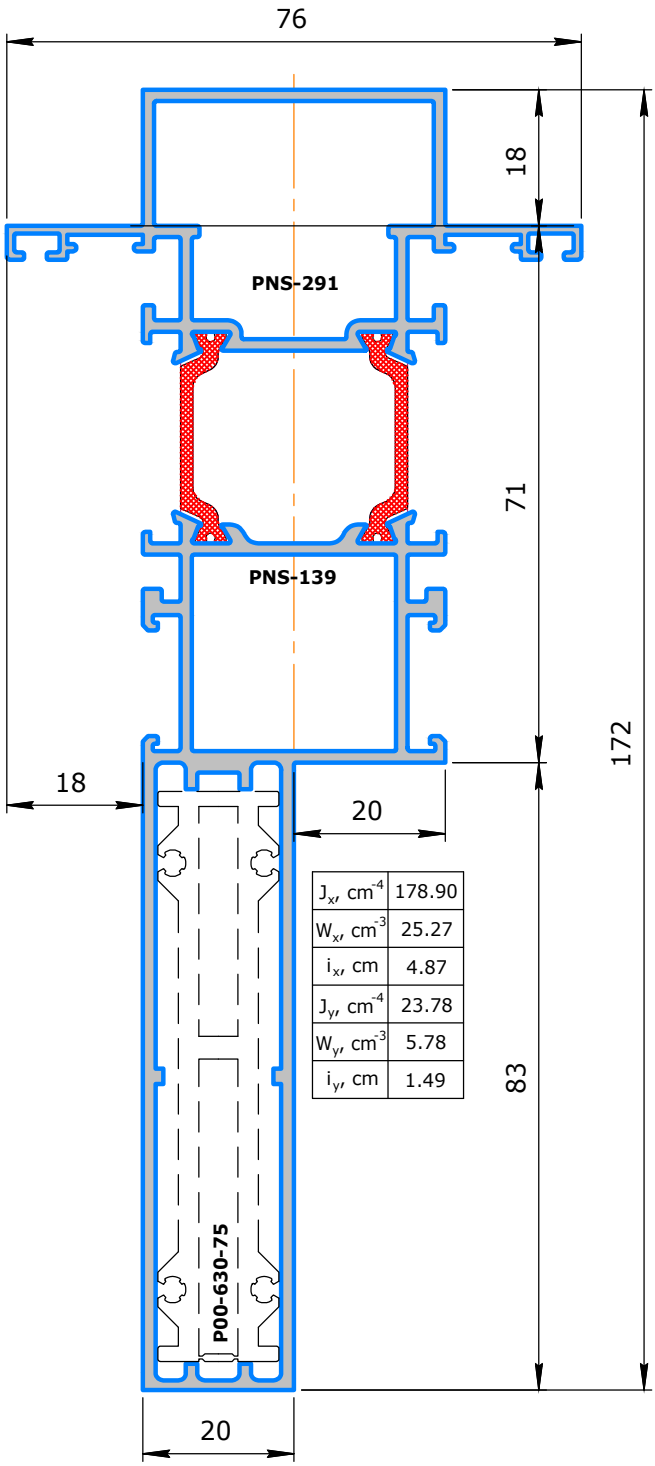
contents
profiles
delivery set
profiles (1:1)
sections
glazing tables
sub-assemblies tables
fitting arrangements
additional solutions
sub-assemblies
fire-resistant structures
connections
equipment and tools

P71-333
inward-reinforced mullion 154 mm

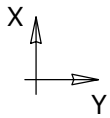


J_x, cm^{-4}	150.38
W_x, cm^{-3}	22.41
i_x, cm	4.63
J_y, cm^{-4}	21.26
W_y, cm^{-3}	5.14
i_y, cm	1.46

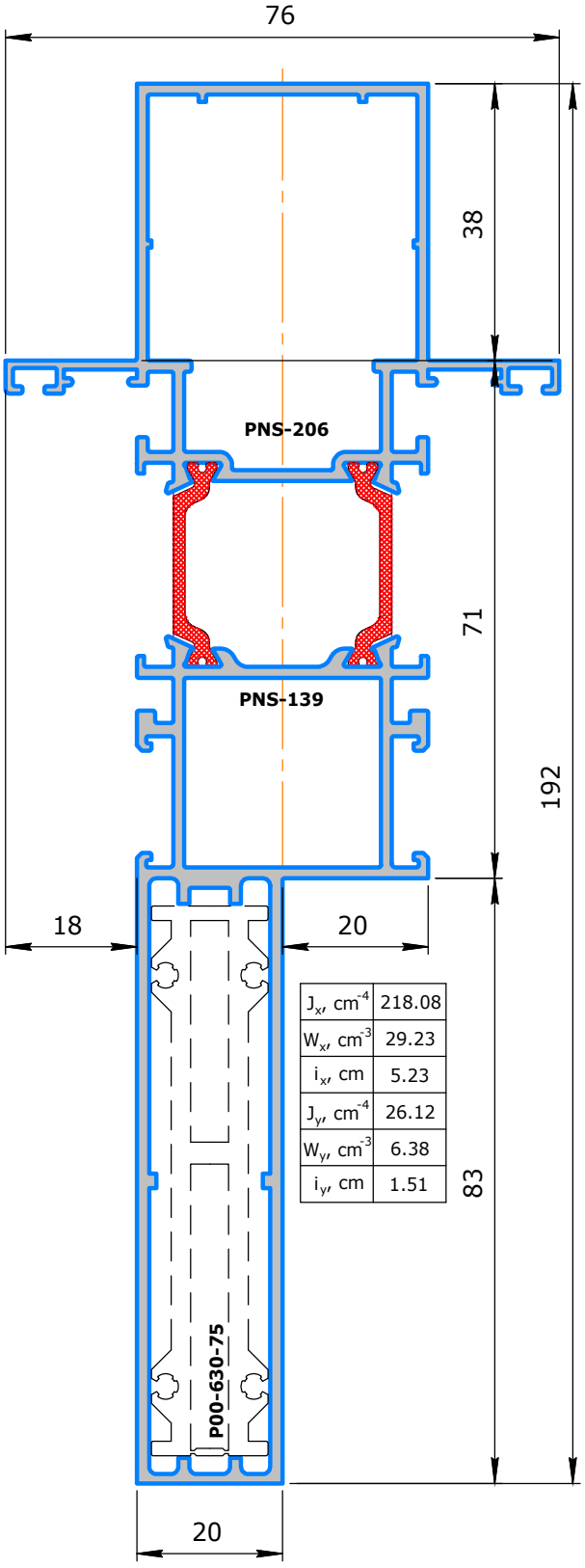
P71-340
mullion 172 mm bidirectional



J_x, cm^{-4}	178.90
W_x, cm^{-3}	25.27
i_x, cm	4.87
J_y, cm^{-4}	23.78
W_y, cm^{-3}	5.78
i_y, cm	1.49

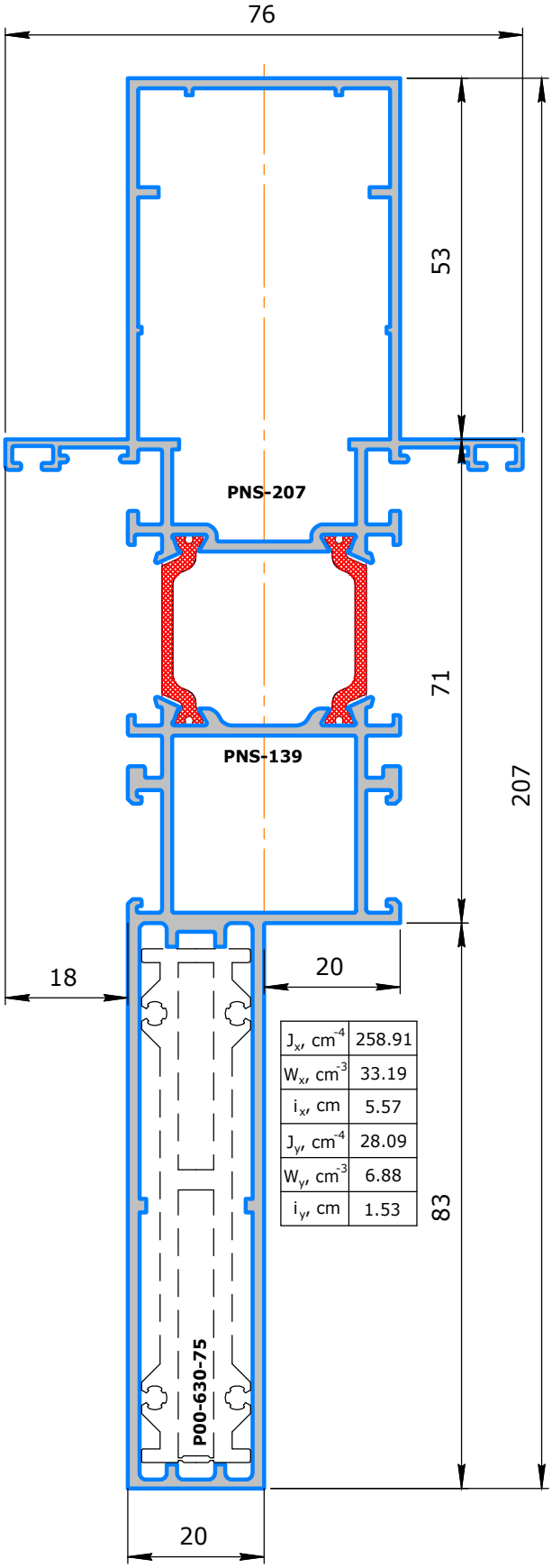


P71-341
mullion 192 mm bidirectional

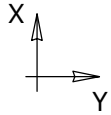


J_x, cm^{-4}	218.08
W_x, cm^{-3}	29.23
i_x, cm	5.23
J_y, cm^{-4}	26.12
W_y, cm^{-3}	6.38
i_y, cm	1.51

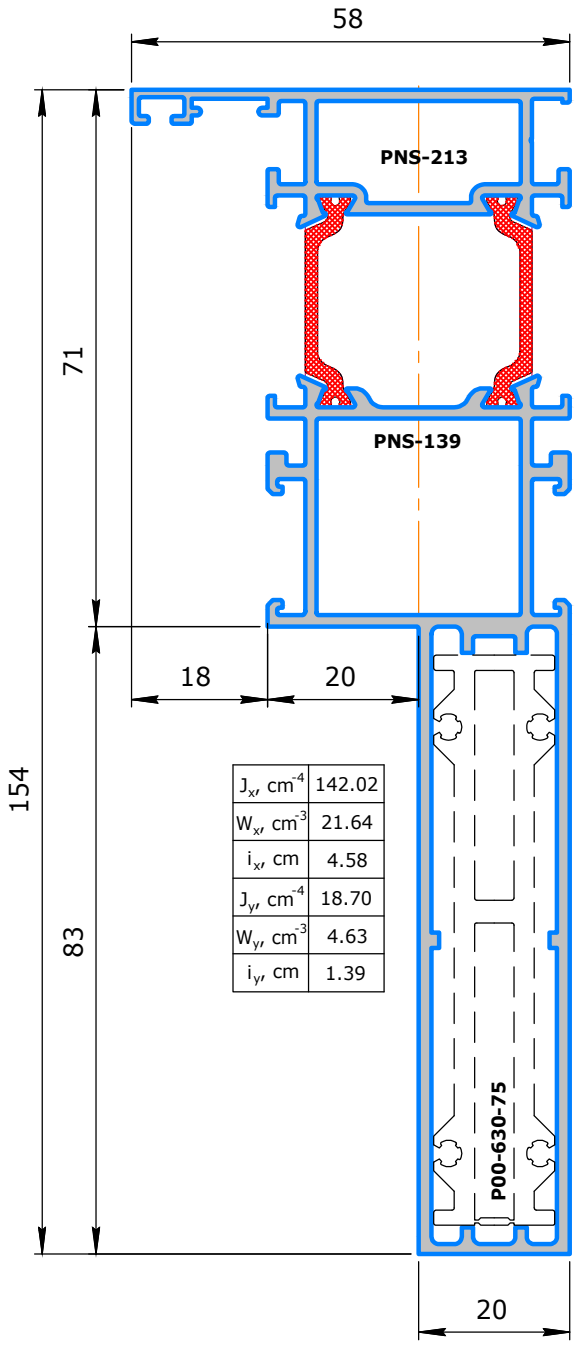
P71-342
mullion 207 mm bidirectional



J_x, cm^{-4}	258.91
W_x, cm^{-3}	33.19
i_x, cm	5.57
J_y, cm^{-4}	28.09
W_y, cm^{-3}	6.88
i_y, cm	1.53

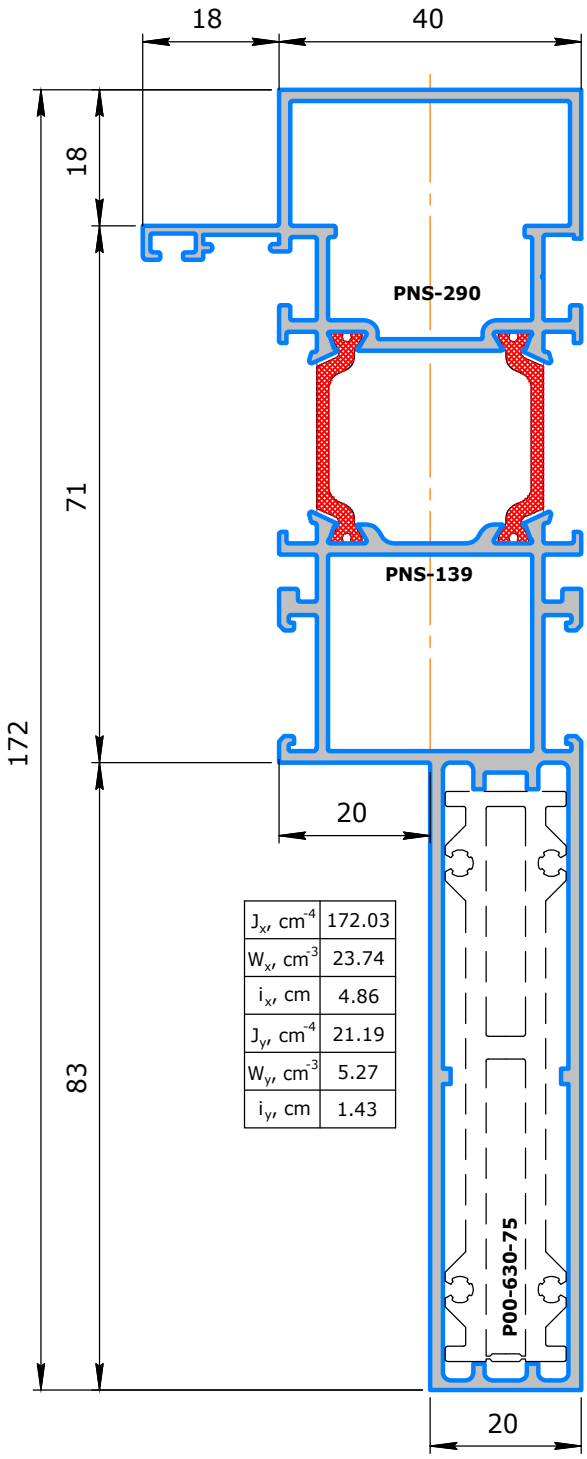


P71-373
inward-reinforced mullion 154 mm single-arm

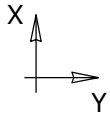


J_x, cm^{-4}	142.02
W_x, cm^{-3}	21.64
i_x, cm	4.58
J_y, cm^{-4}	18.70
W_y, cm^{-3}	4.63
i_y, cm	1.39

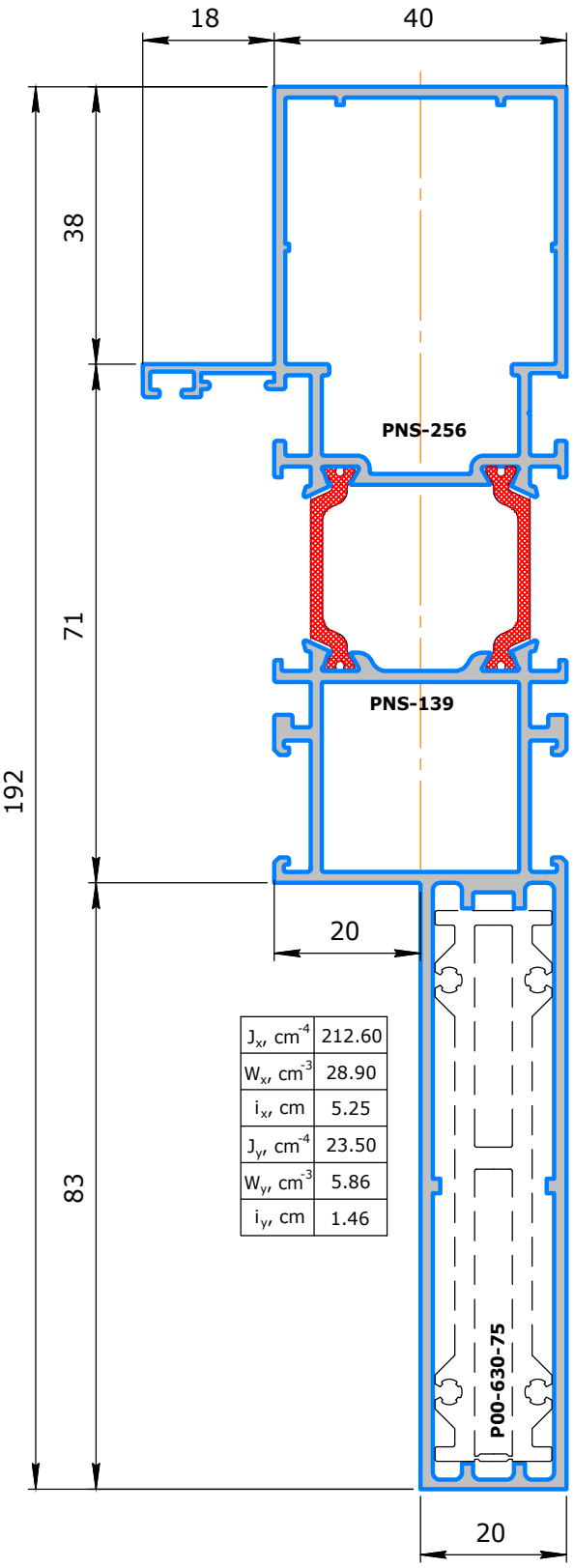
P71-346
mullion 172 mm single-arm bidirectional



J_x, cm^{-4}	172.03
W_x, cm^{-3}	23.74
i_x, cm	4.86
J_y, cm^{-4}	21.19
W_y, cm^{-3}	5.27
i_y, cm	1.43

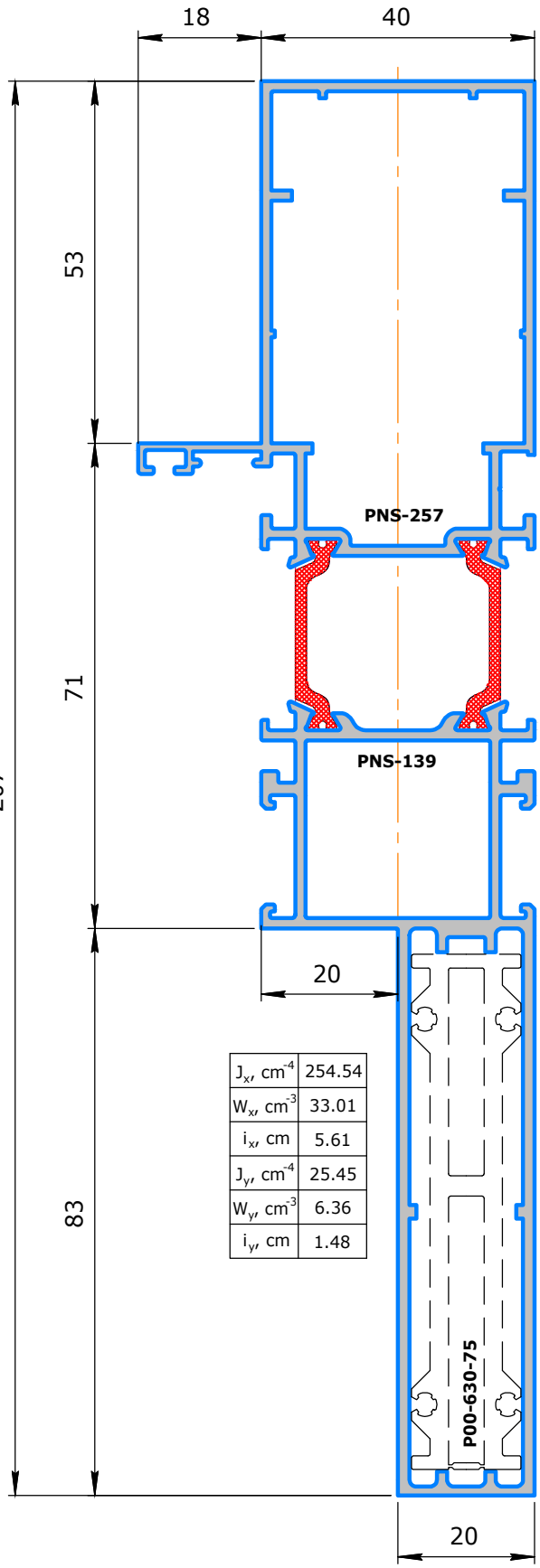


P71-347
mullion 192 mm single-arm bidirectional

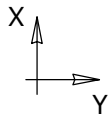


J_x, cm^{-4}	212.60
W_x, cm^{-3}	28.90
i_x, cm	5.25
J_y, cm^{-4}	23.50
W_y, cm^{-3}	5.86
i_y, cm	1.46

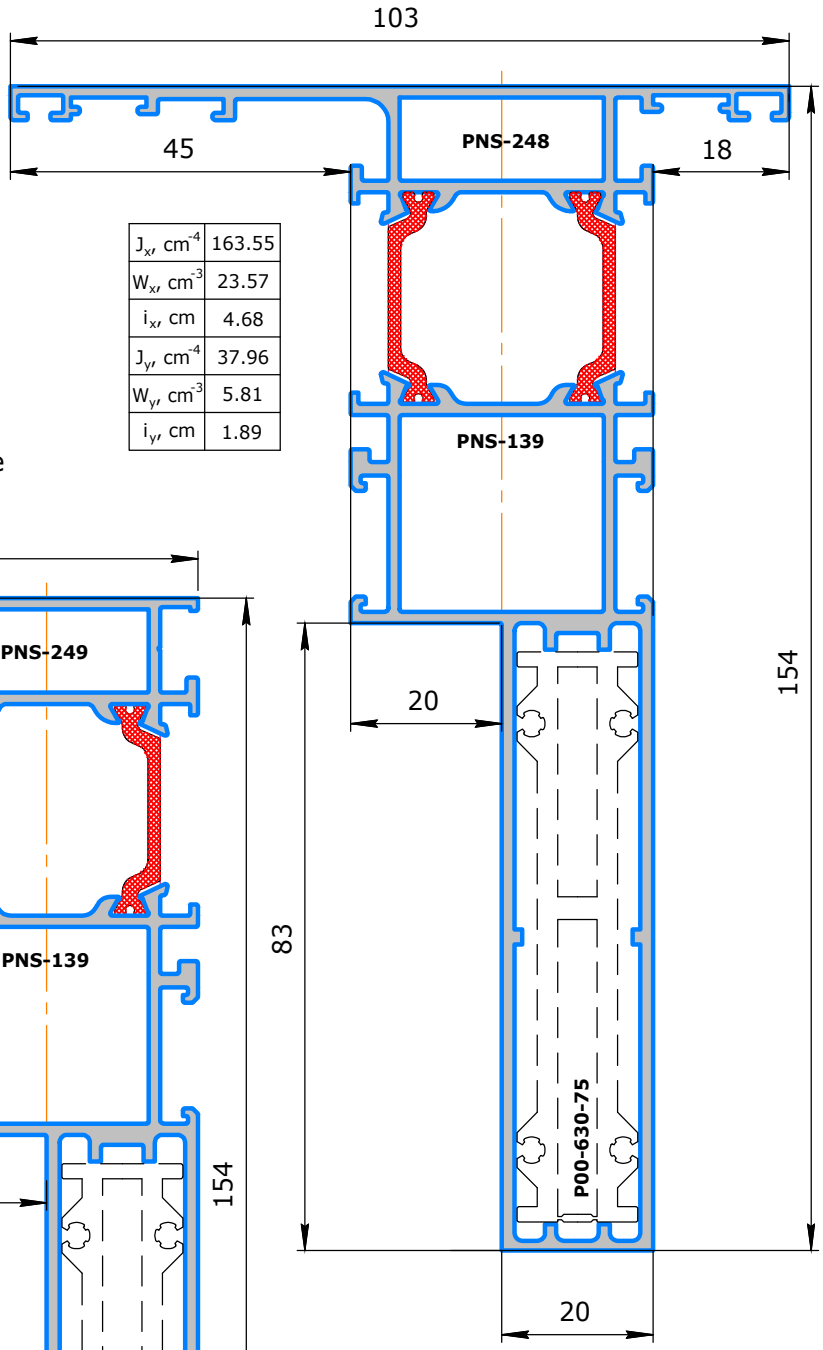
P71-348
mullion 207 mm single-arm bidirectional



J_x, cm^{-4}	254.54
W_x, cm^{-3}	33.01
i_x, cm	5.61
J_y, cm^{-4}	25.45
W_y, cm^{-3}	6.36
i_y, cm	1.48

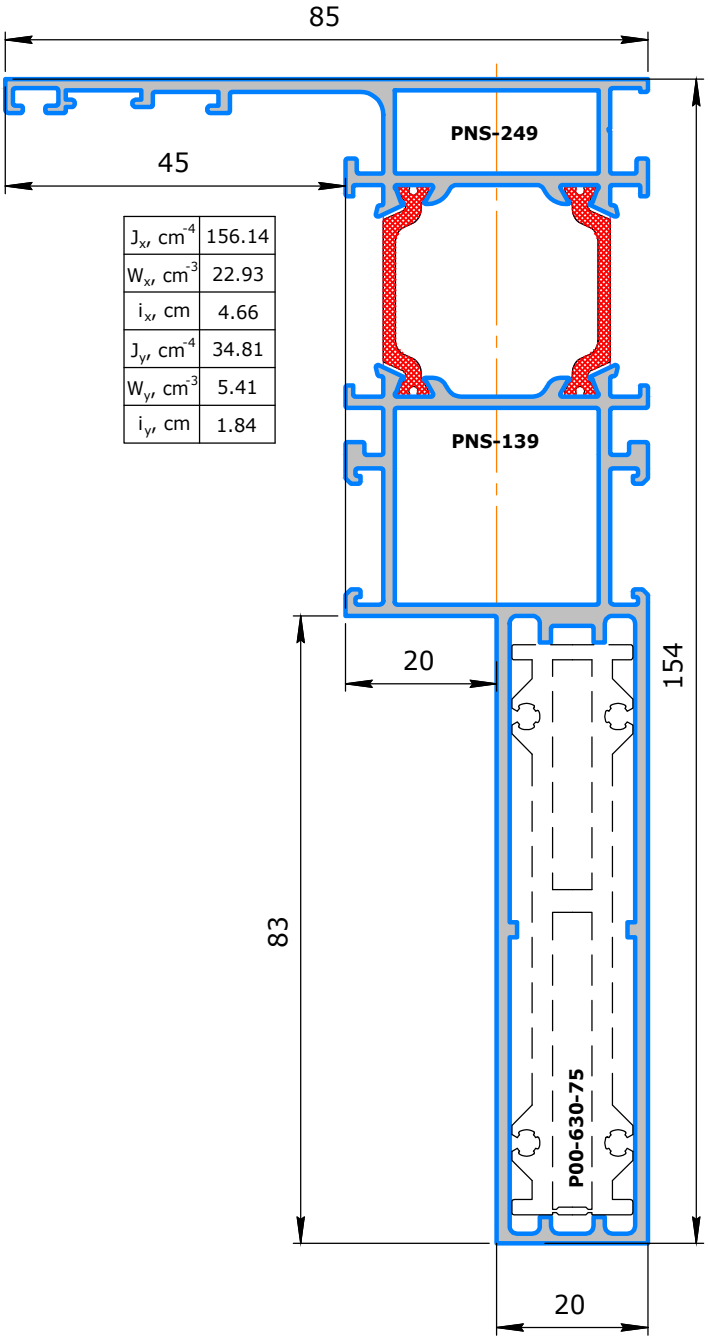


P71-313
mullion 154 mm for sash not visible from the outside



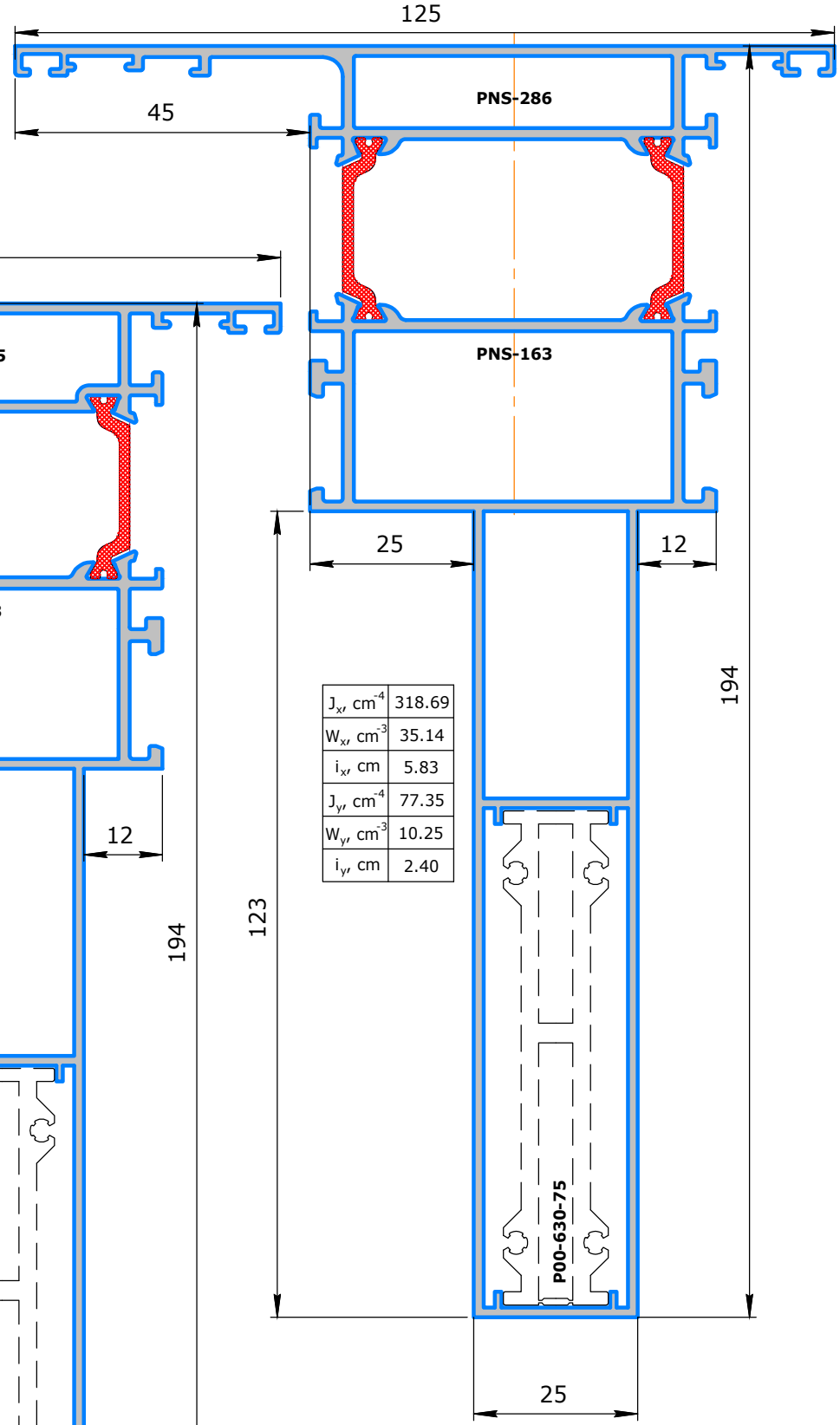
J_x, cm^{-4}	163.55
W_x, cm^{-3}	23.57
i_x, cm	4.68
J_y, cm^{-4}	37.96
W_y, cm^{-3}	5.81
i_y, cm	1.89

P71-325
mullion 154 mm for sash not visible from the outside single-arm



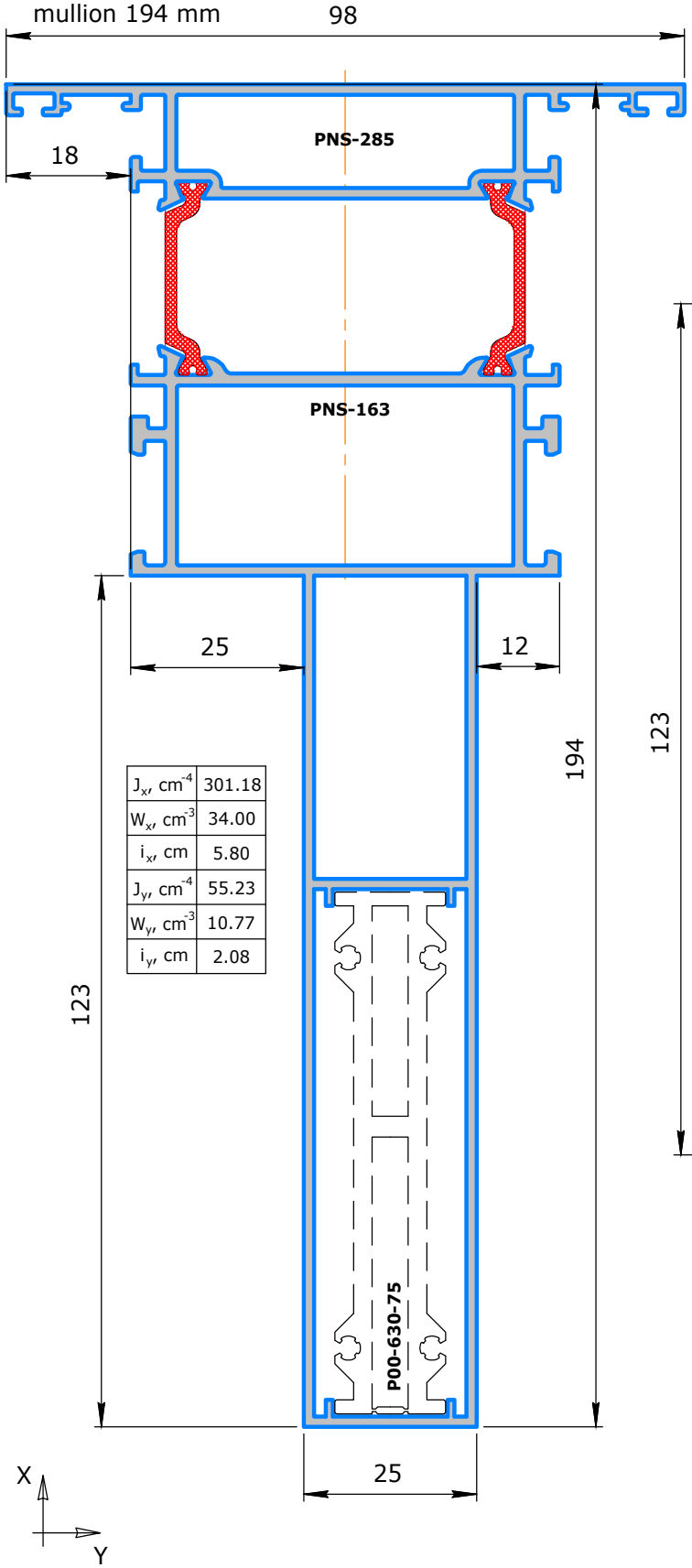
J_x, cm^{-4}	156.14
W_x, cm^{-3}	22.93
i_x, cm	4.66
J_y, cm^{-4}	34.81
W_y, cm^{-3}	5.41
i_y, cm	1.84

P71-354
wide mullion 194 mm for sash not visible from the outside



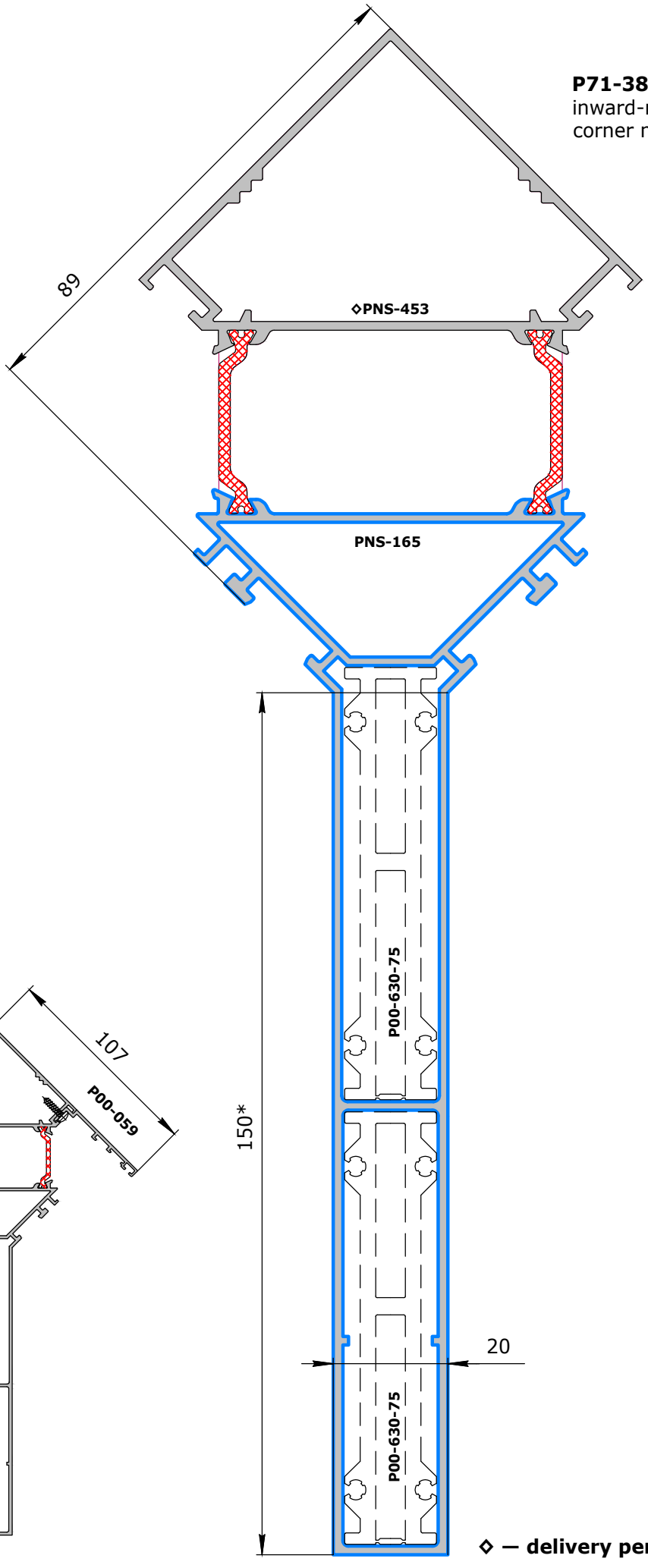
J_x, cm^{-4}	318.69
W_x, cm^{-3}	35.14
i_x, cm	5.83
J_y, cm^{-4}	77.35
W_y, cm^{-3}	10.25
i_y, cm	2.40

P71-355
wide inward-reinforced mullion 194 mm



J_x, cm^{-4}	301.18
W_x, cm^{-3}	34.00
i_x, cm	5.80
J_y, cm^{-4}	55.23
W_y, cm^{-3}	10.77
i_y, cm	2.08

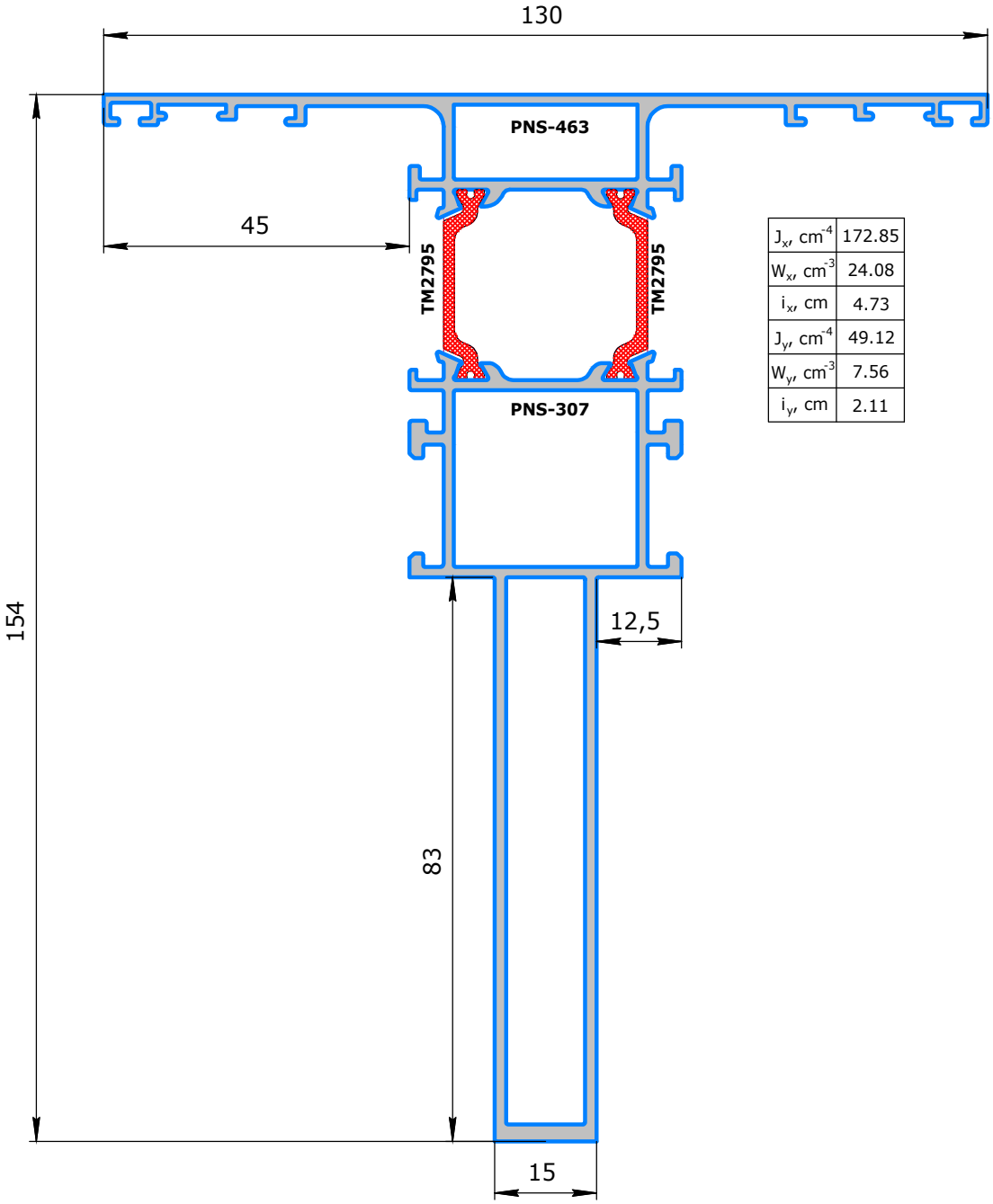
P71-380-260
inward-reinforced
corner mullion



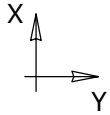
J_x, cm^{-4}	535.01
W_x, cm^{-3}	50.28
i_x, cm	7.29
J_y, cm^{-4}	57.10
W_y, cm^{-3}	13.02
i_y, cm	1.99

◇ — delivery period 8–10 weeks

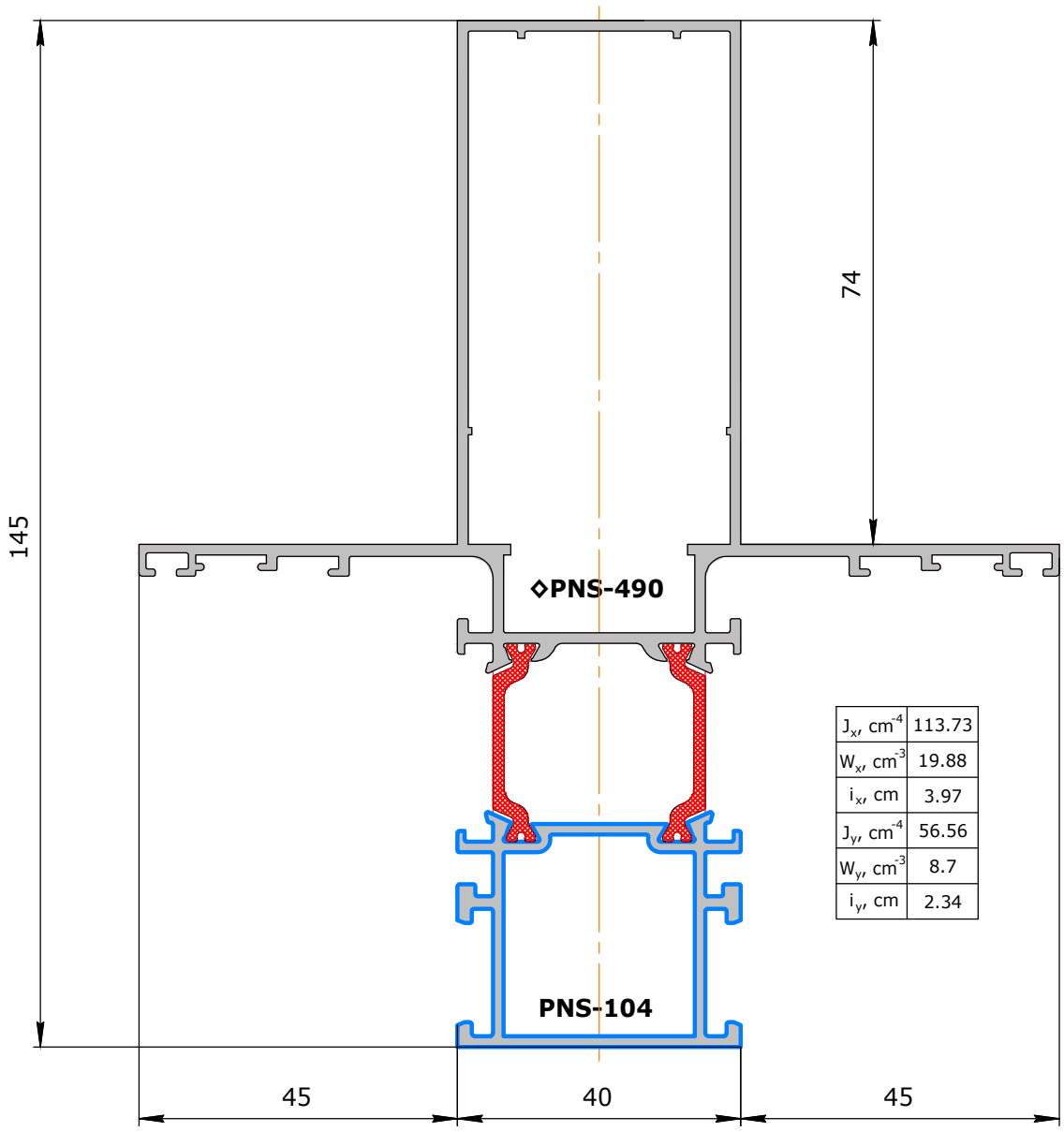
P71-390
mullion of sash not visible from the outside symmetrical



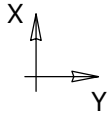
J_x, cm^{-4}	172.85
W_x, cm^{-3}	24.08
i_x, cm	4.73
J_y, cm^{-4}	49.12
W_y, cm^{-3}	7.56
i_y, cm	2.11



P71-361-74
mullion of sash not visible from the outside double sided reinforcement 74 mm

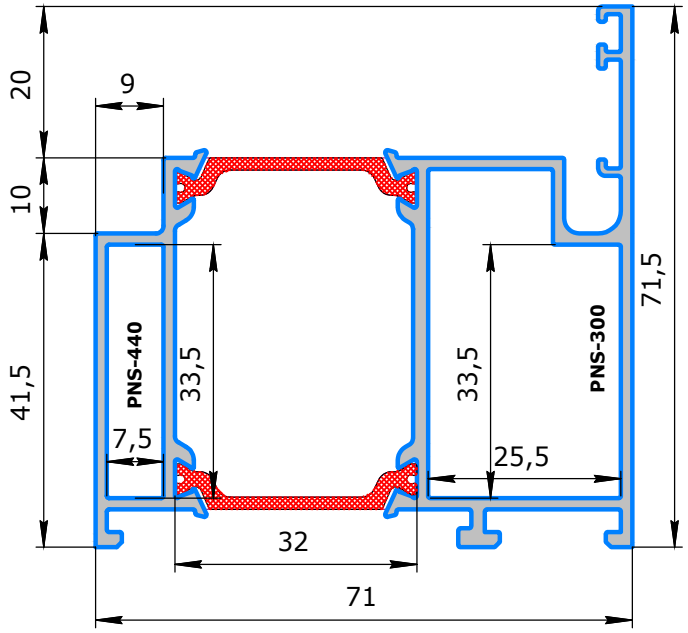


J_x, cm^{-4}	113.73
W_x, cm^{-3}	19.88
i_x, cm	3.97
J_y, cm^{-4}	56.56
W_y, cm^{-3}	8.7
i_y, cm	2.34

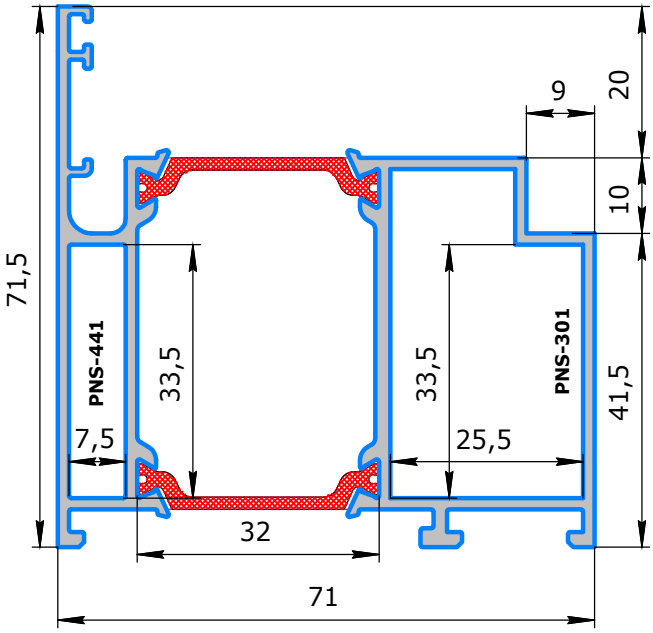


◇ — delivery period 8–10 weeks

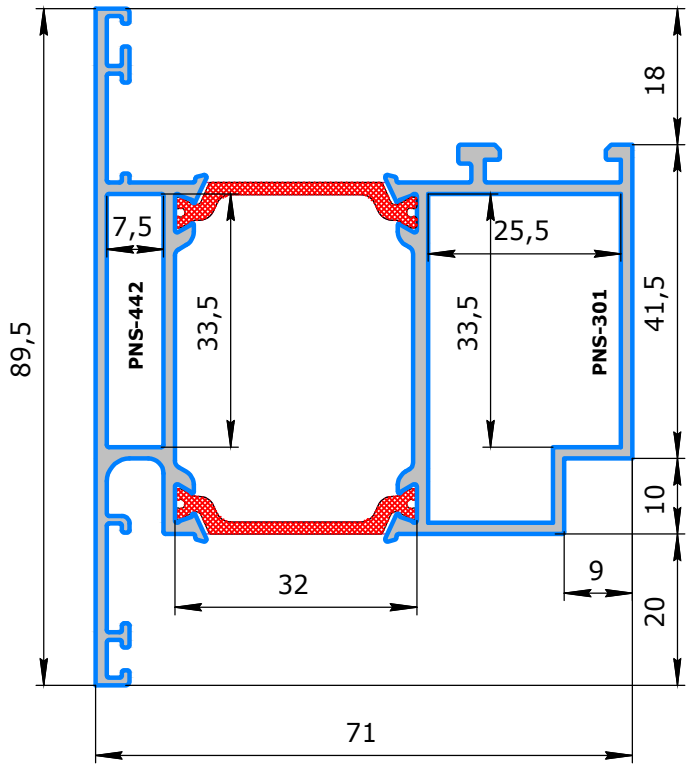
P71-171
outward opening door frame



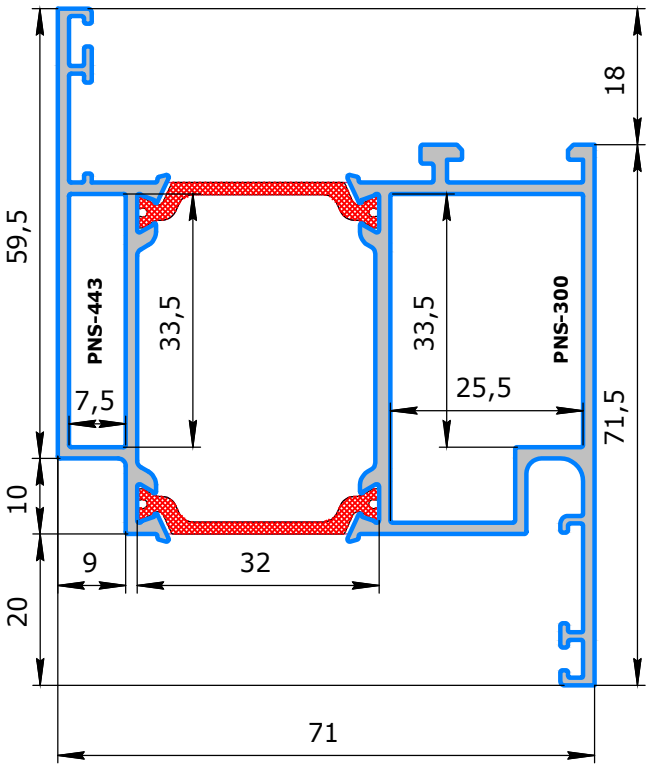
P71-172
inward opening door frame



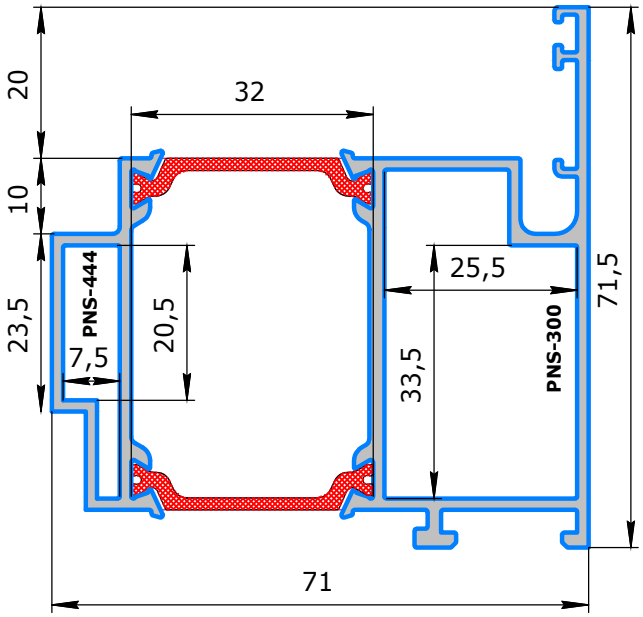
P71-271
T-shaped door leaf



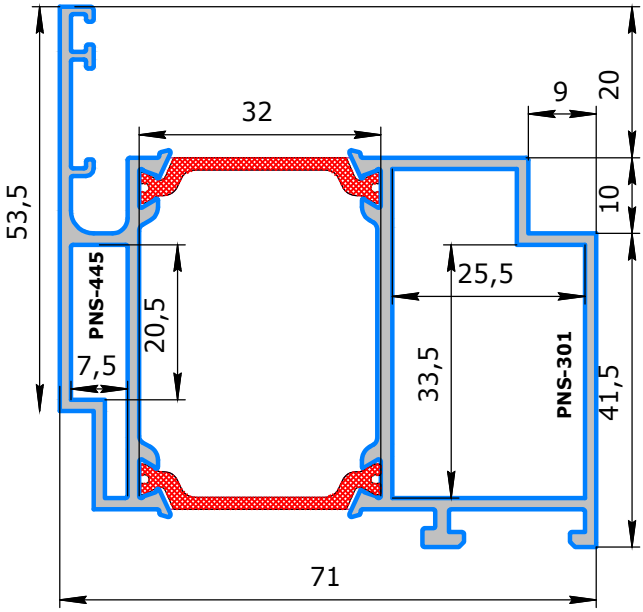
P71-272
Z-shaped door leaf



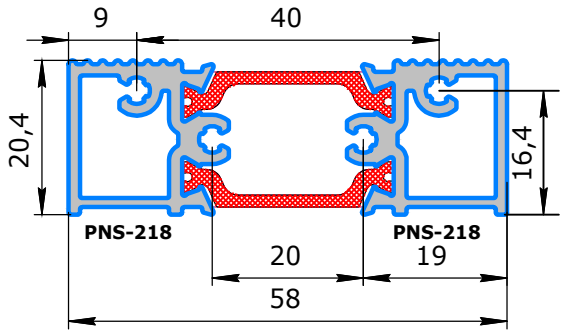
P71-173
outward opening
stained-glass door frame



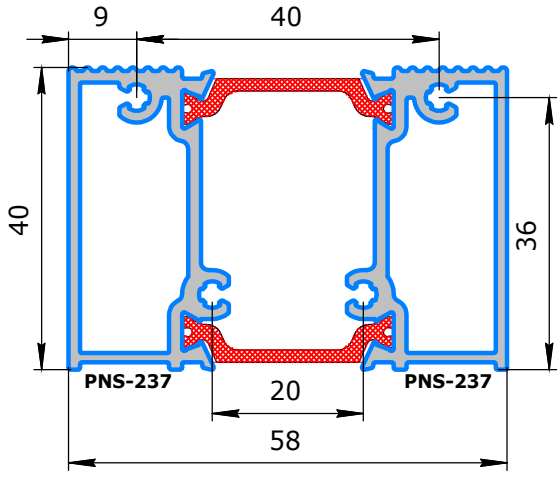
P71-174
inward opening
stained-glass door frame

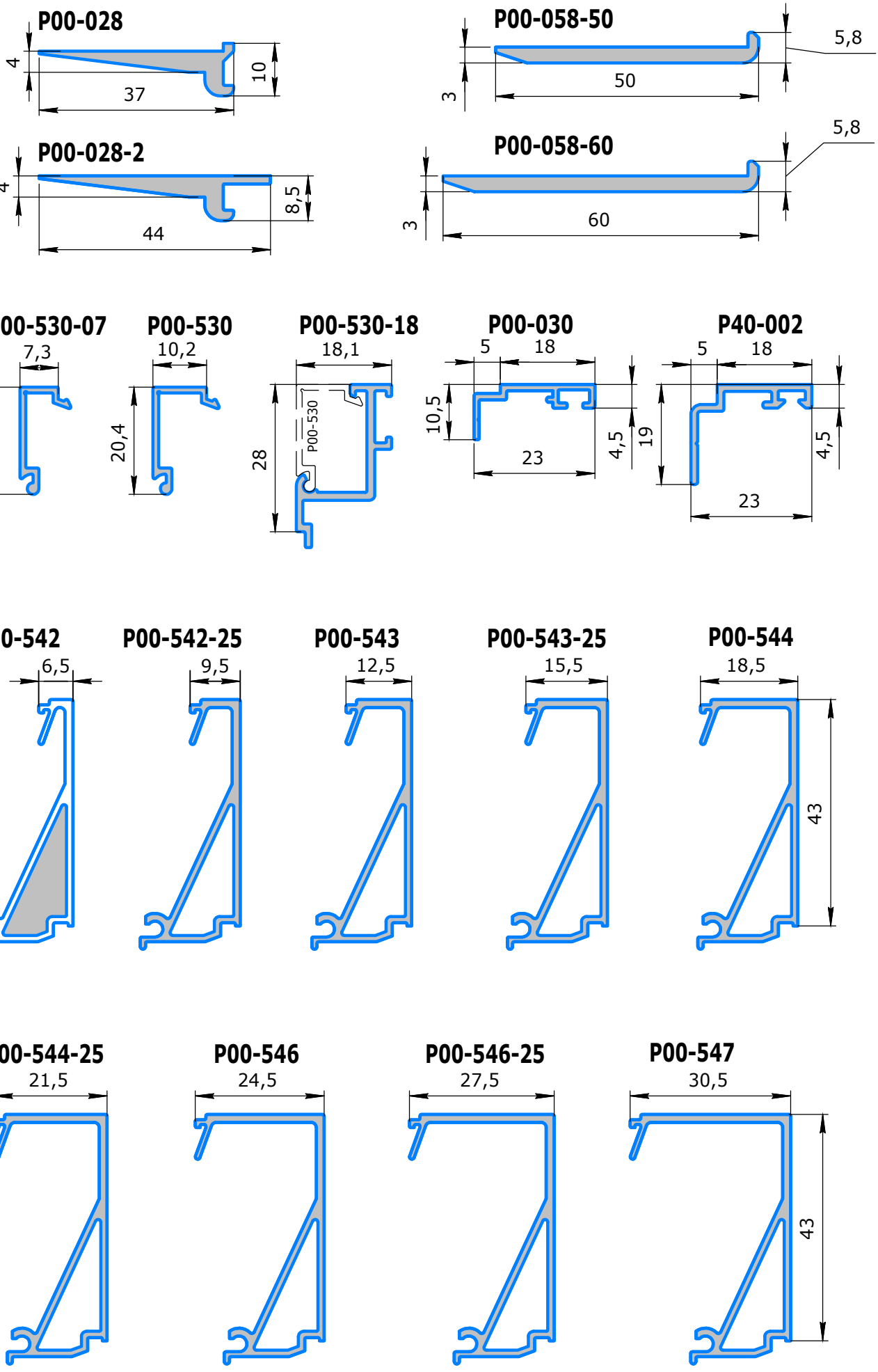


P71-014
Door sill 20 mm



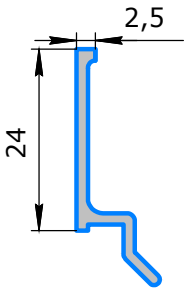
P71-014-2
Door sill 40 mm



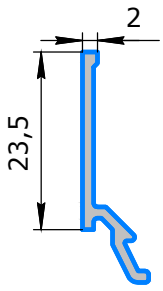

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P00-058-60
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P00-530-07
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P00-530
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P00-030
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P00-547
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◇ — delivery period 8–10 weeks

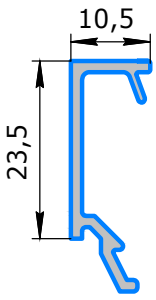
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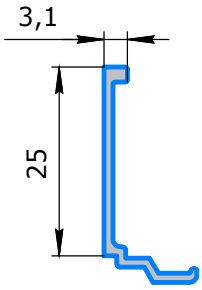
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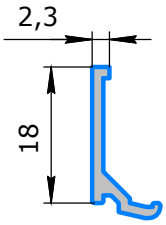
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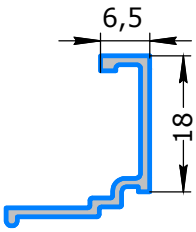
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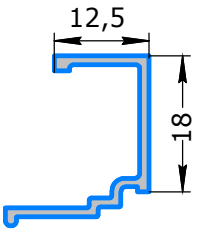
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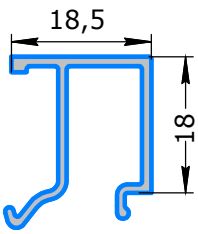
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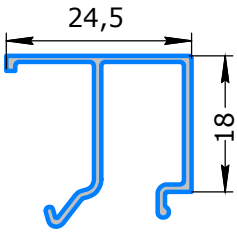
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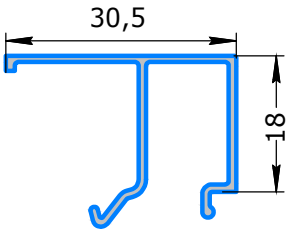
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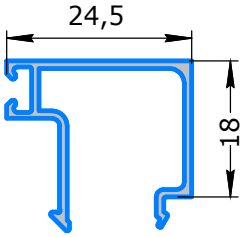
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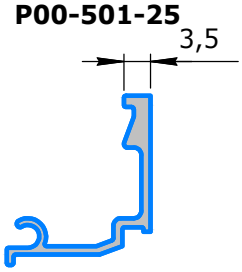
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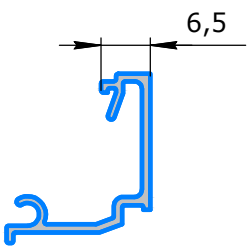
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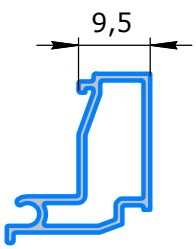
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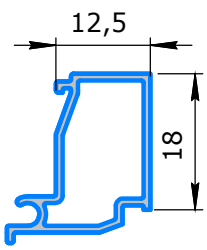
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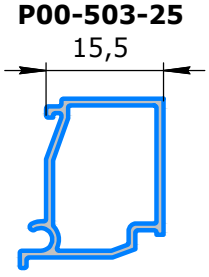
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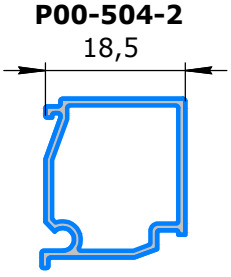
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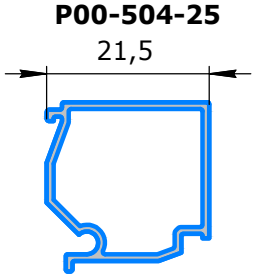
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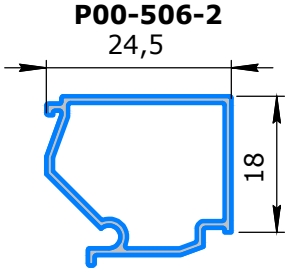
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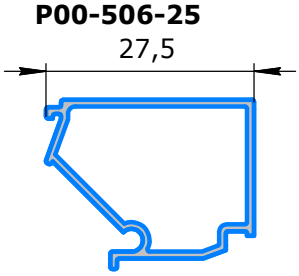
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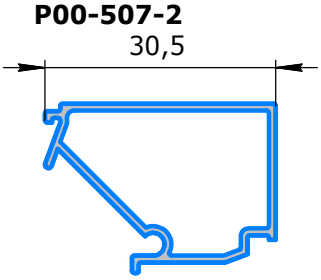
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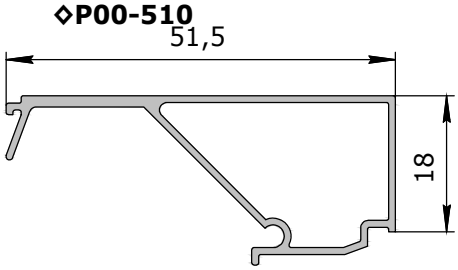
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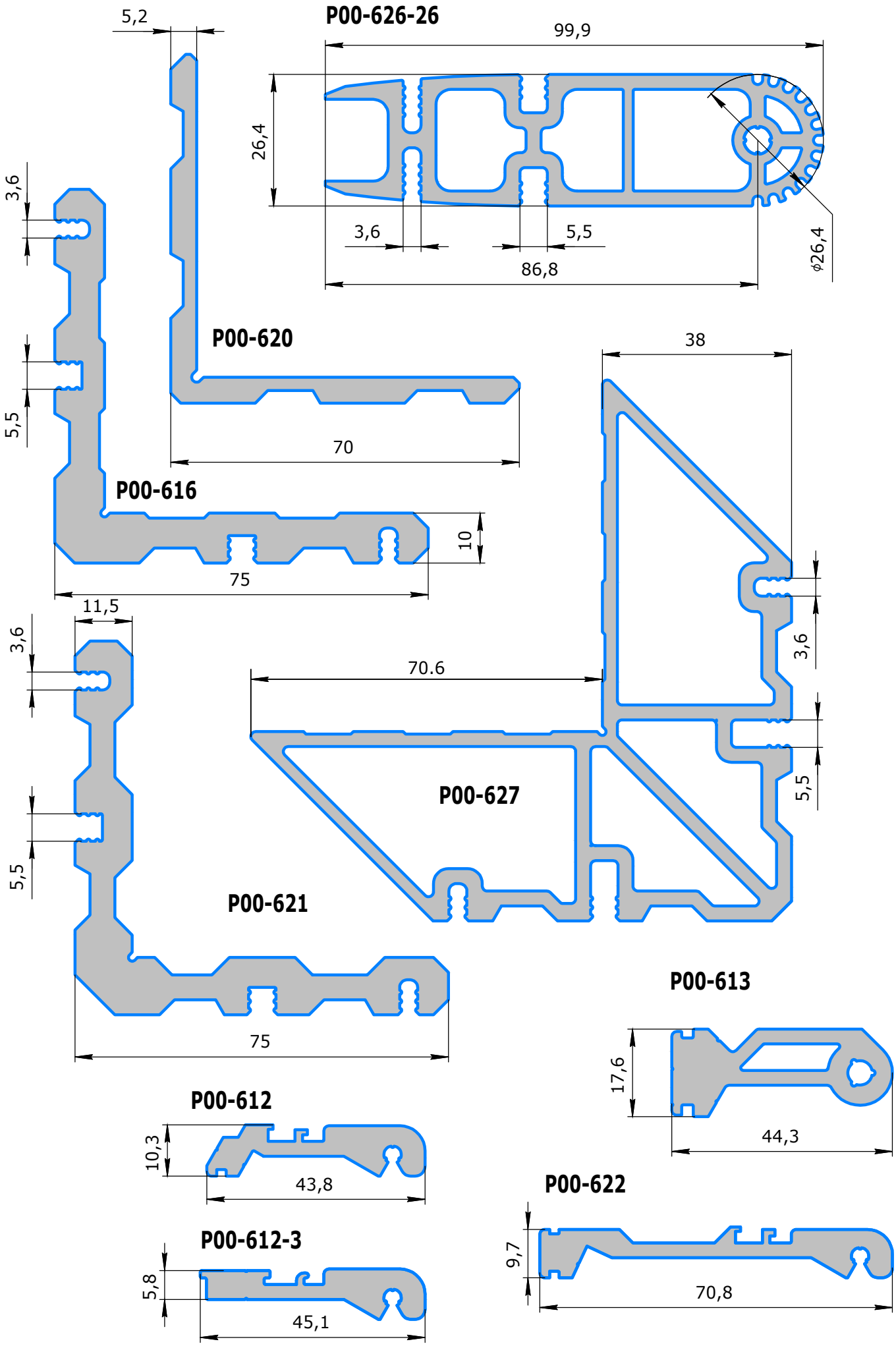


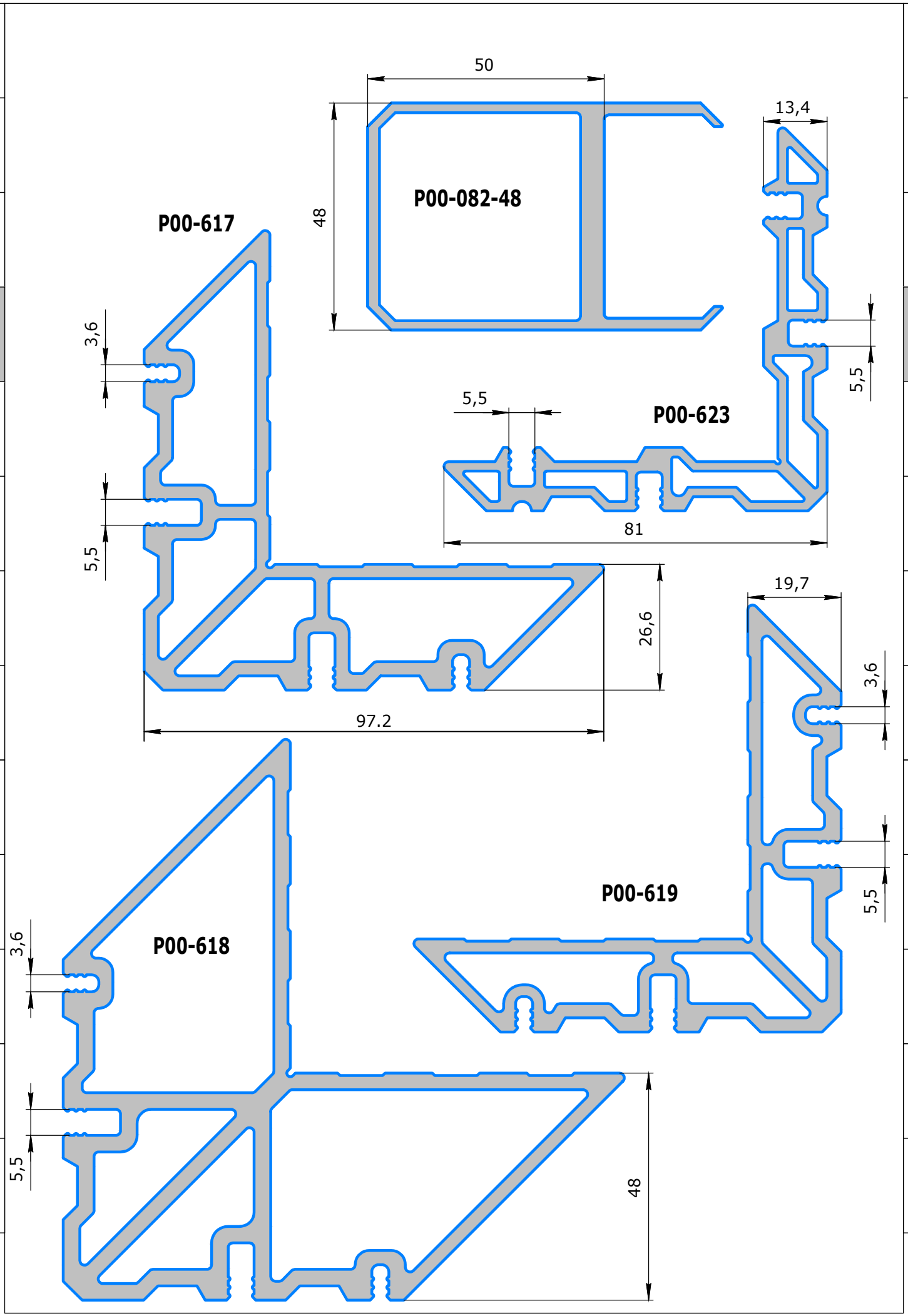
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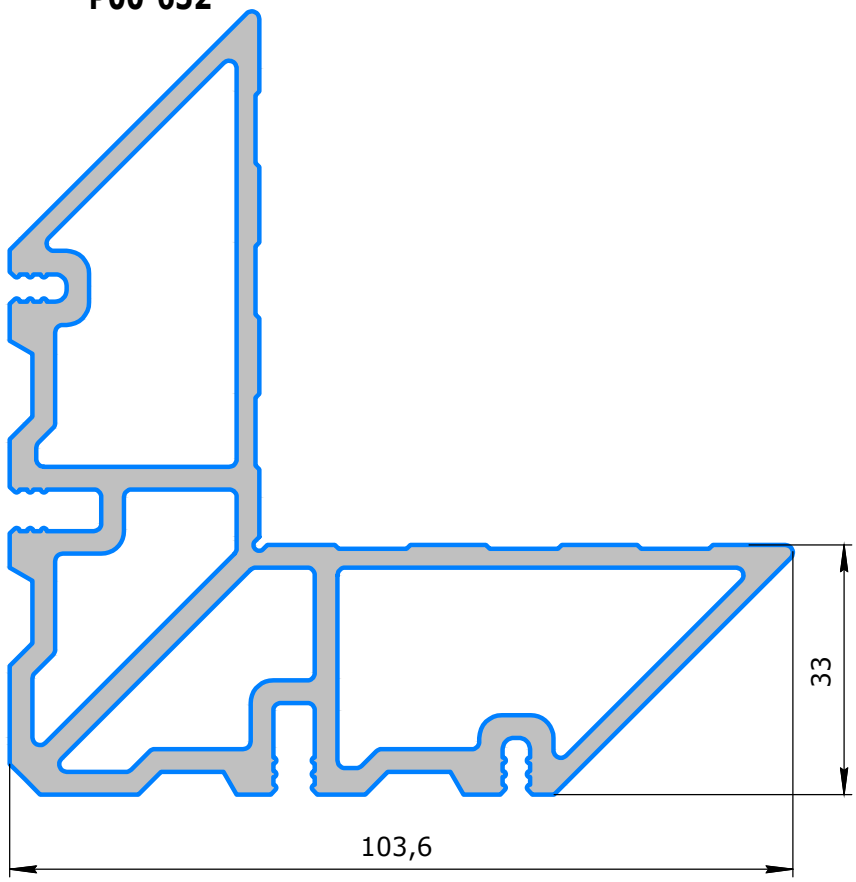
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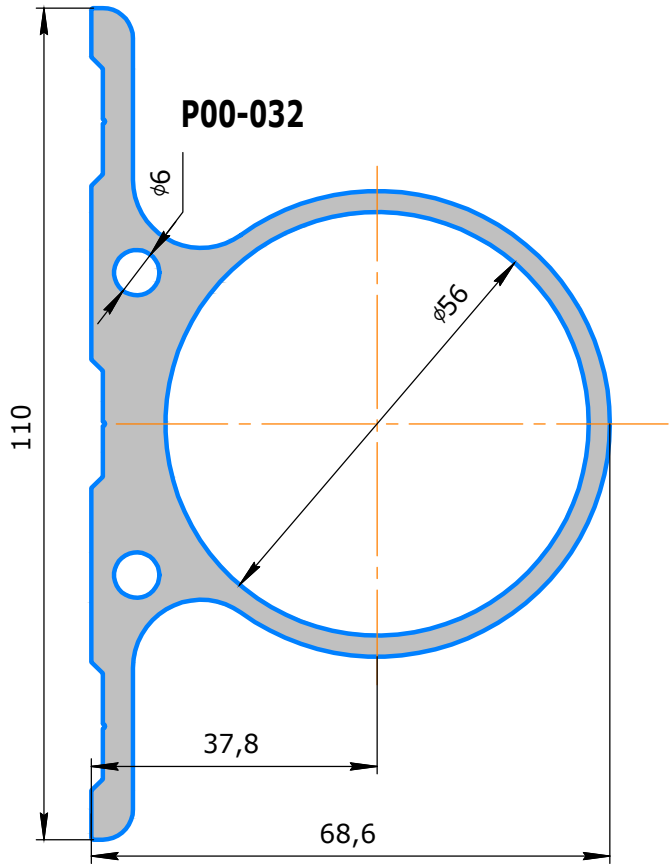

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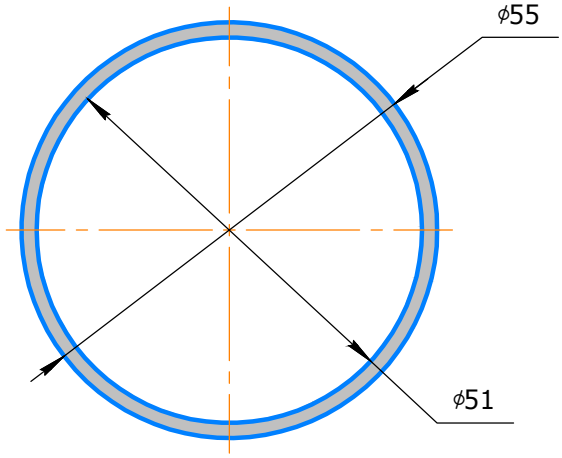
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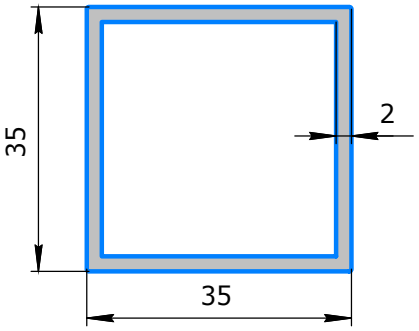
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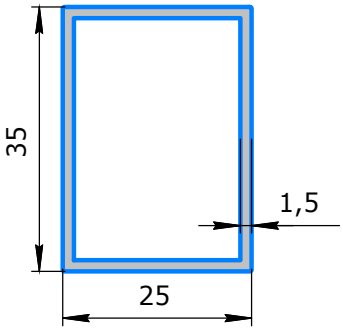
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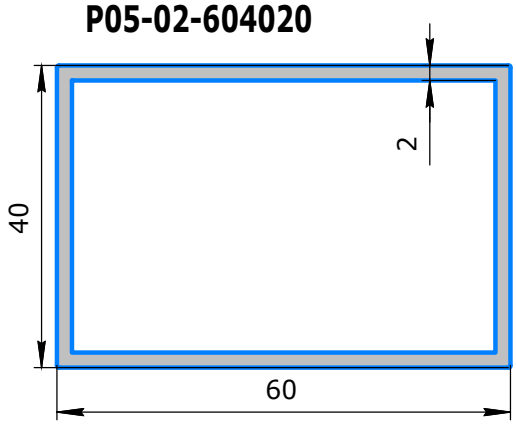
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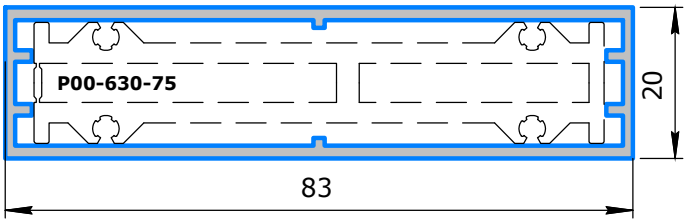
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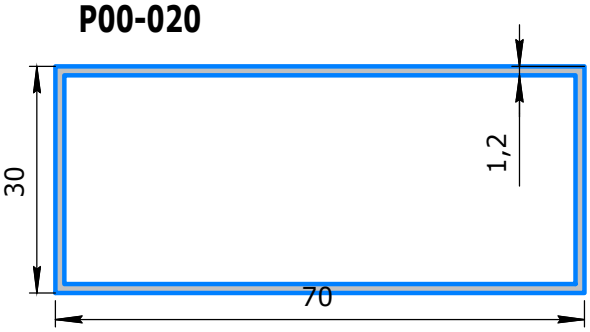
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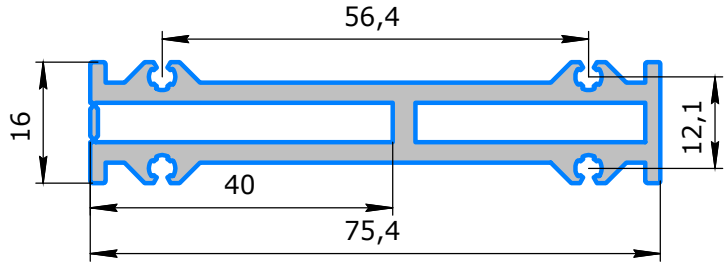
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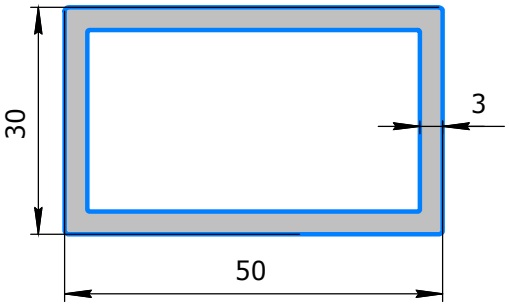
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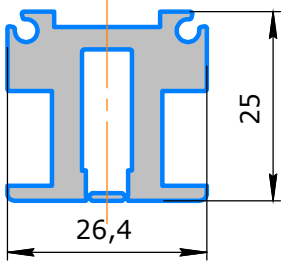
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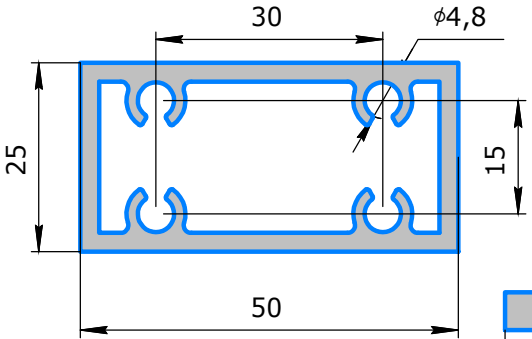
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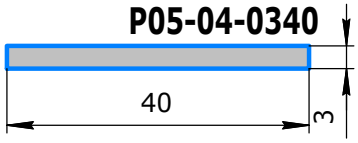
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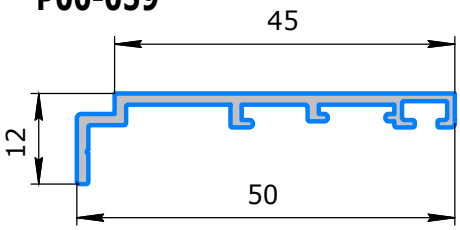
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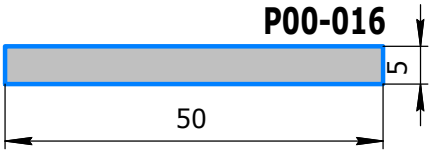
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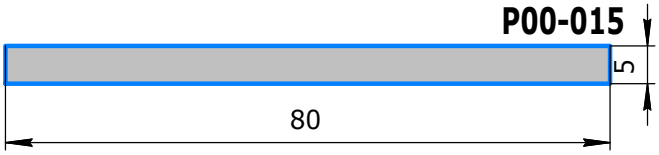
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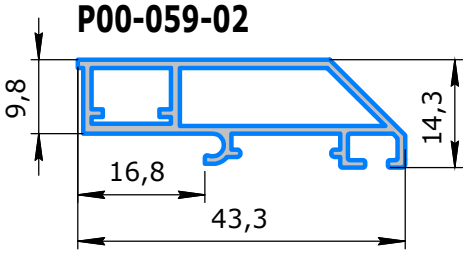
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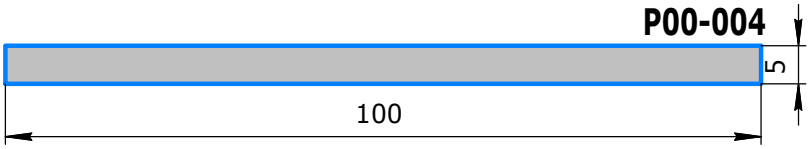
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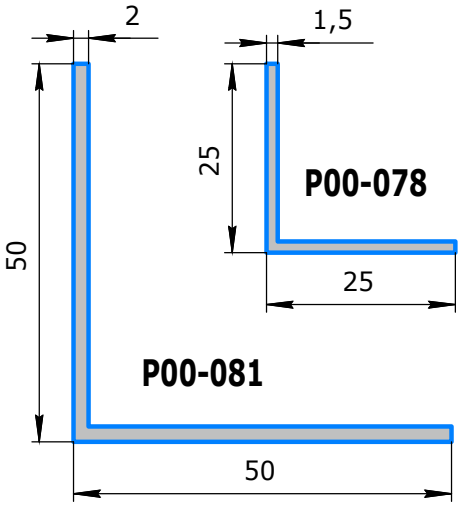


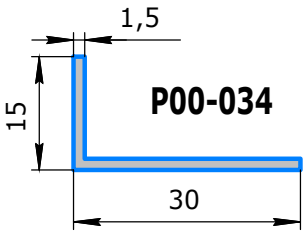
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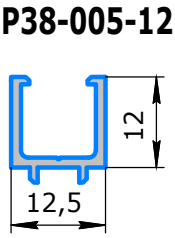


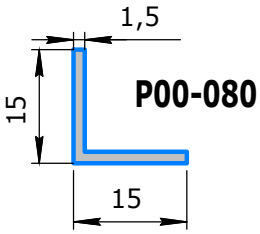
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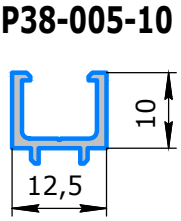


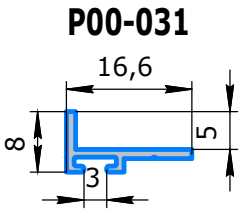

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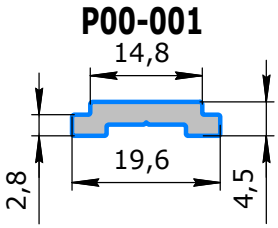

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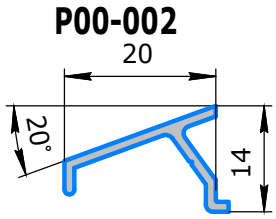

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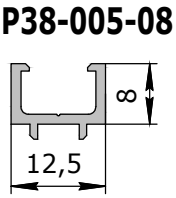

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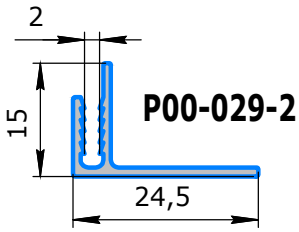

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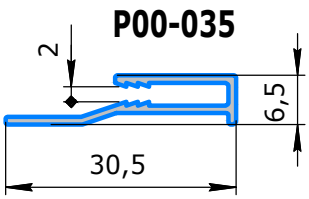

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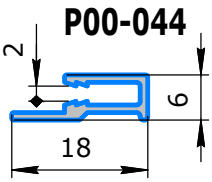

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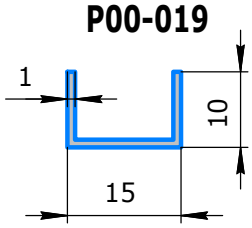

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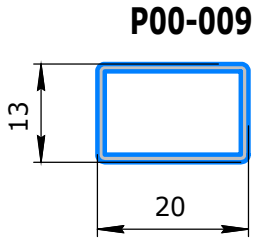

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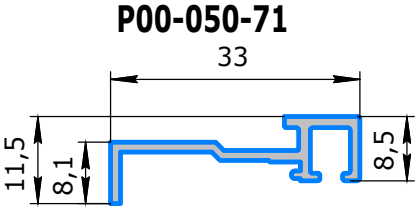

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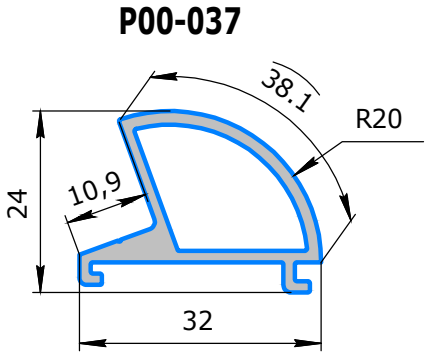

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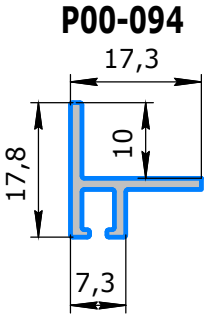

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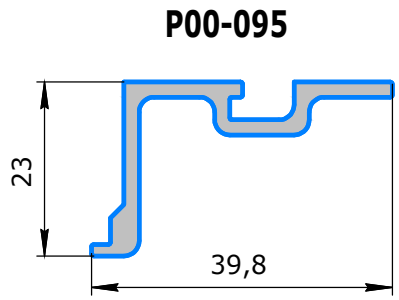

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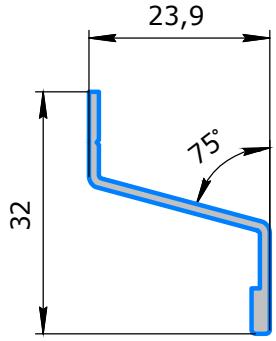

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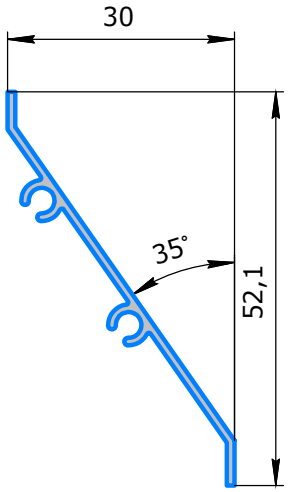

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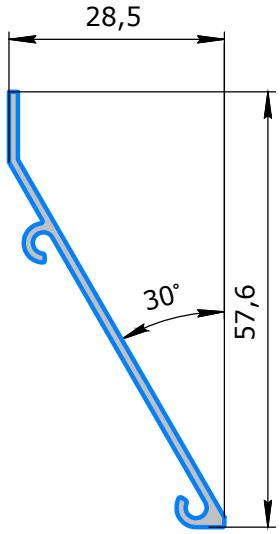
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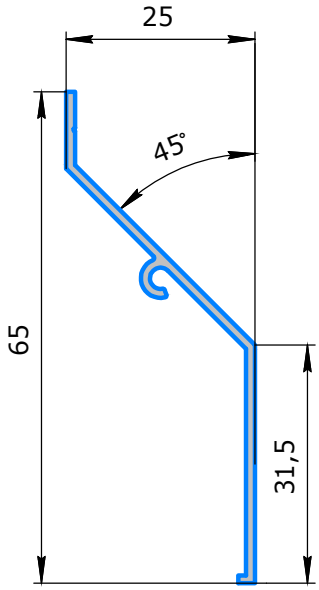
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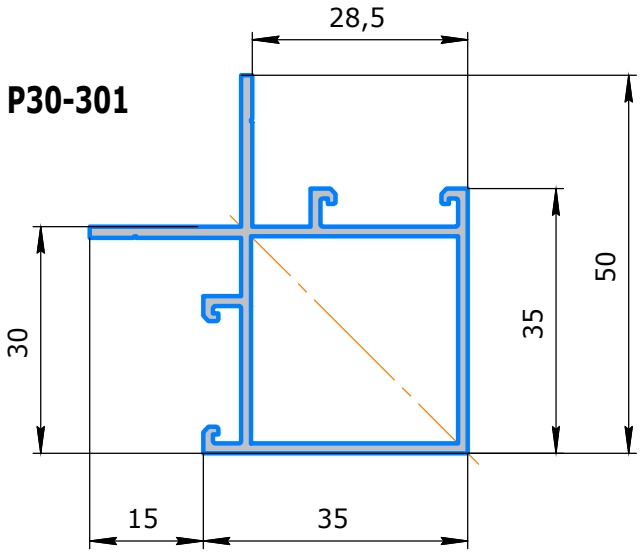
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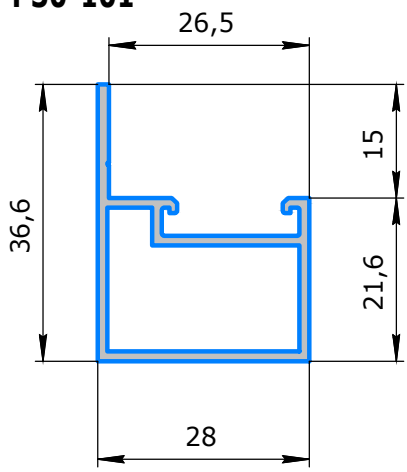
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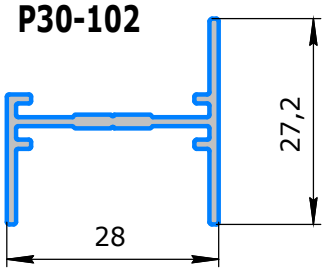
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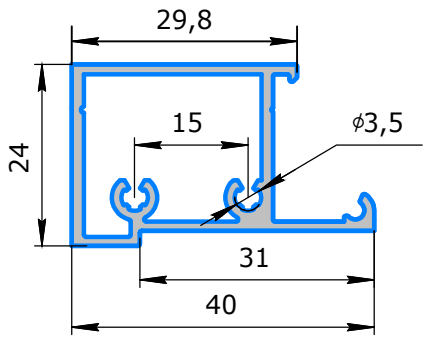
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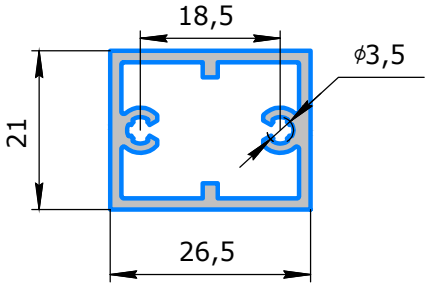
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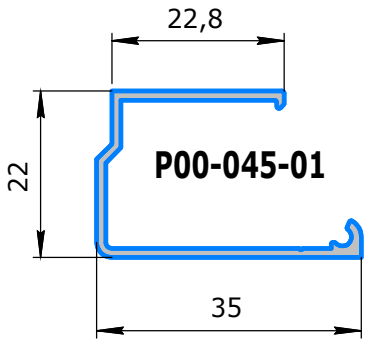
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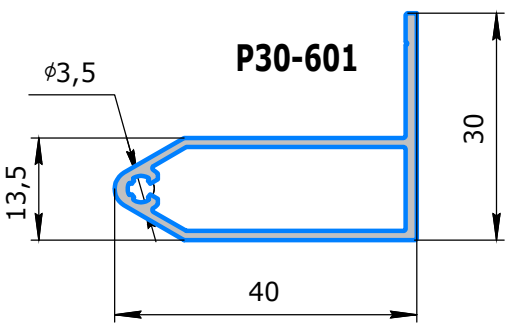
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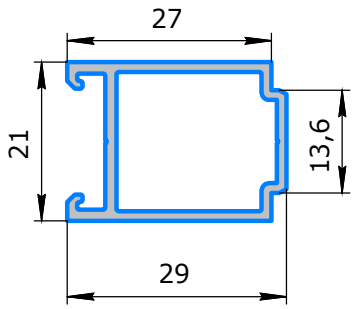
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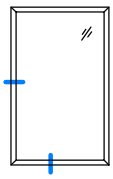
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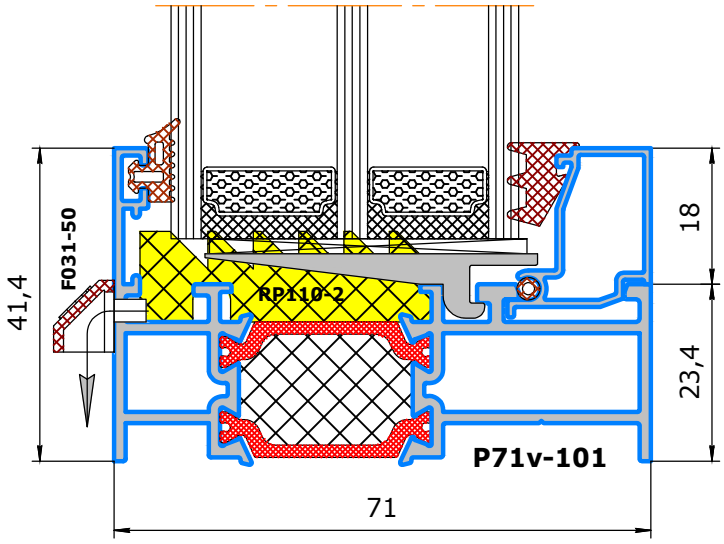


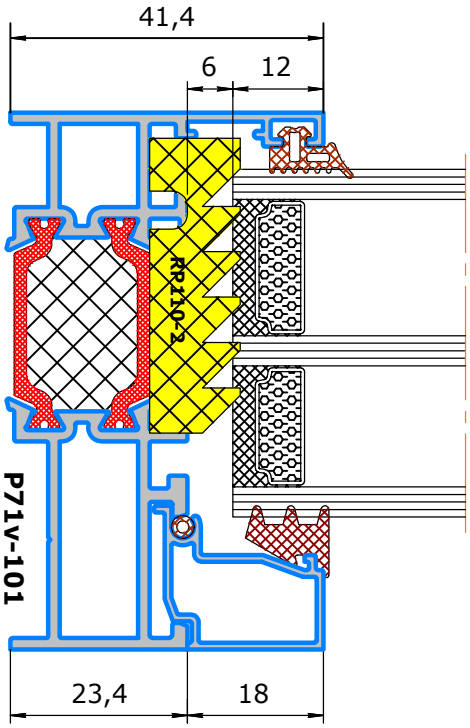
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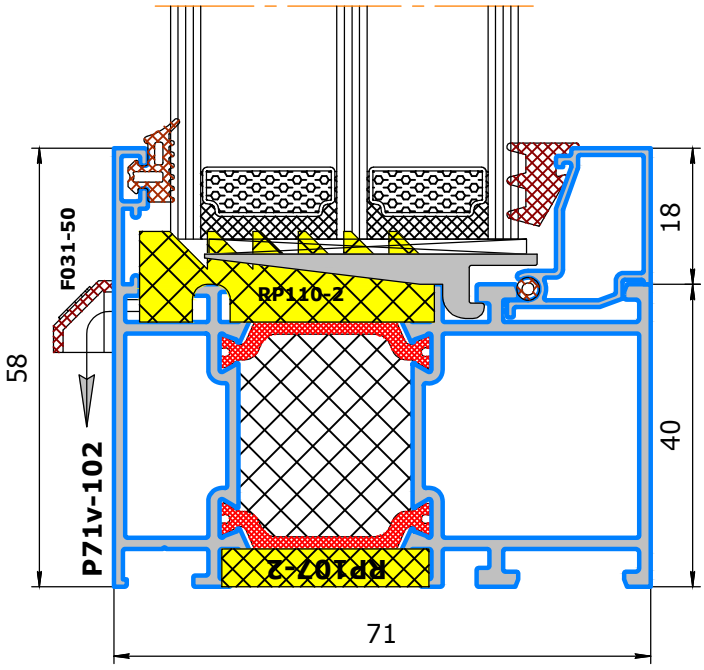
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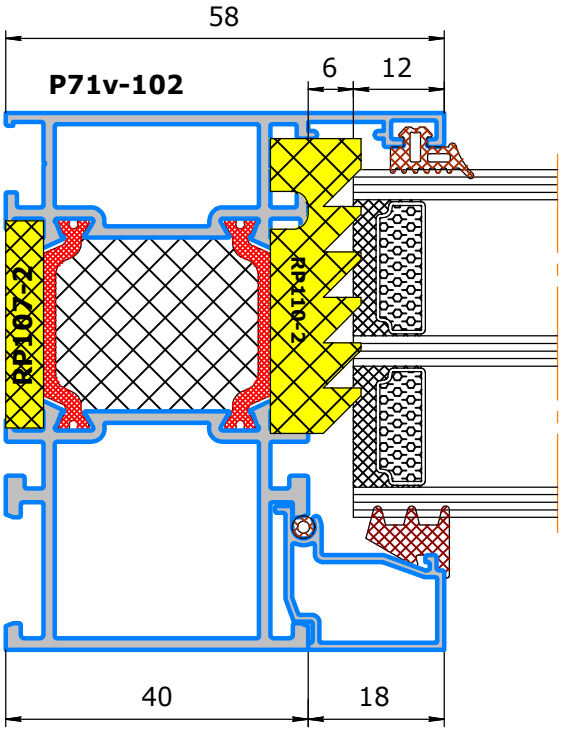
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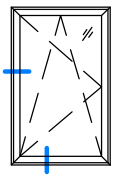


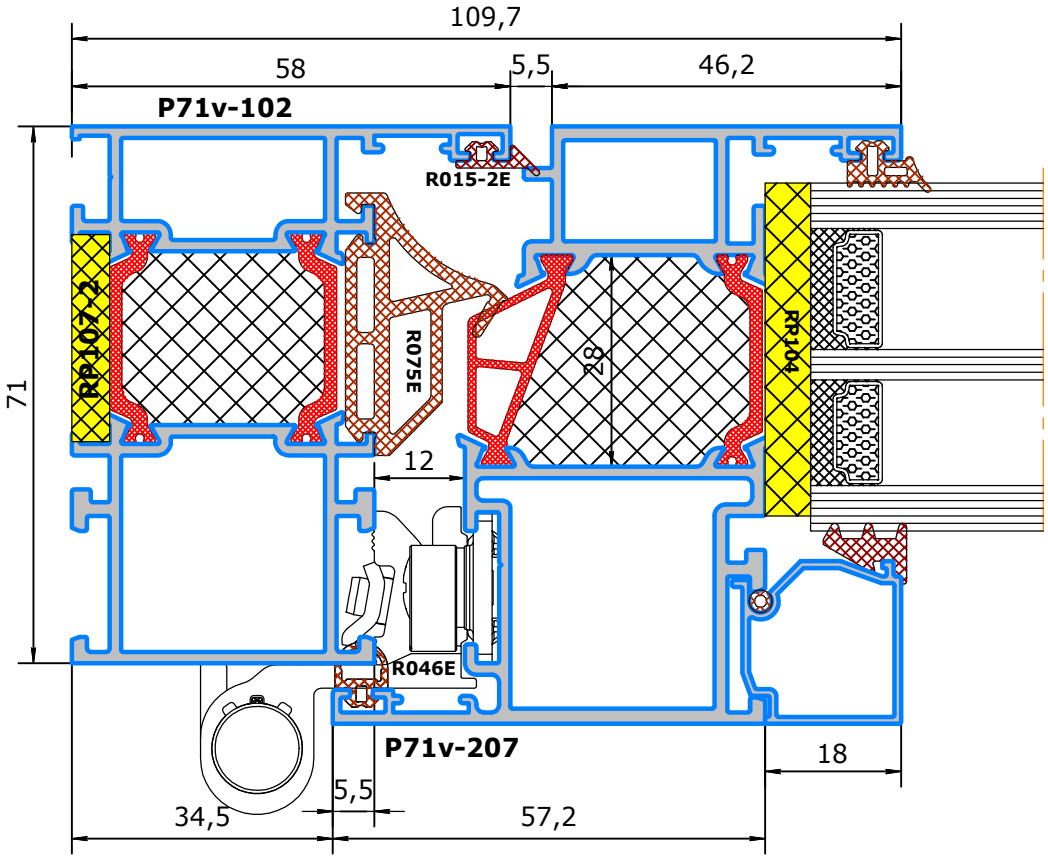


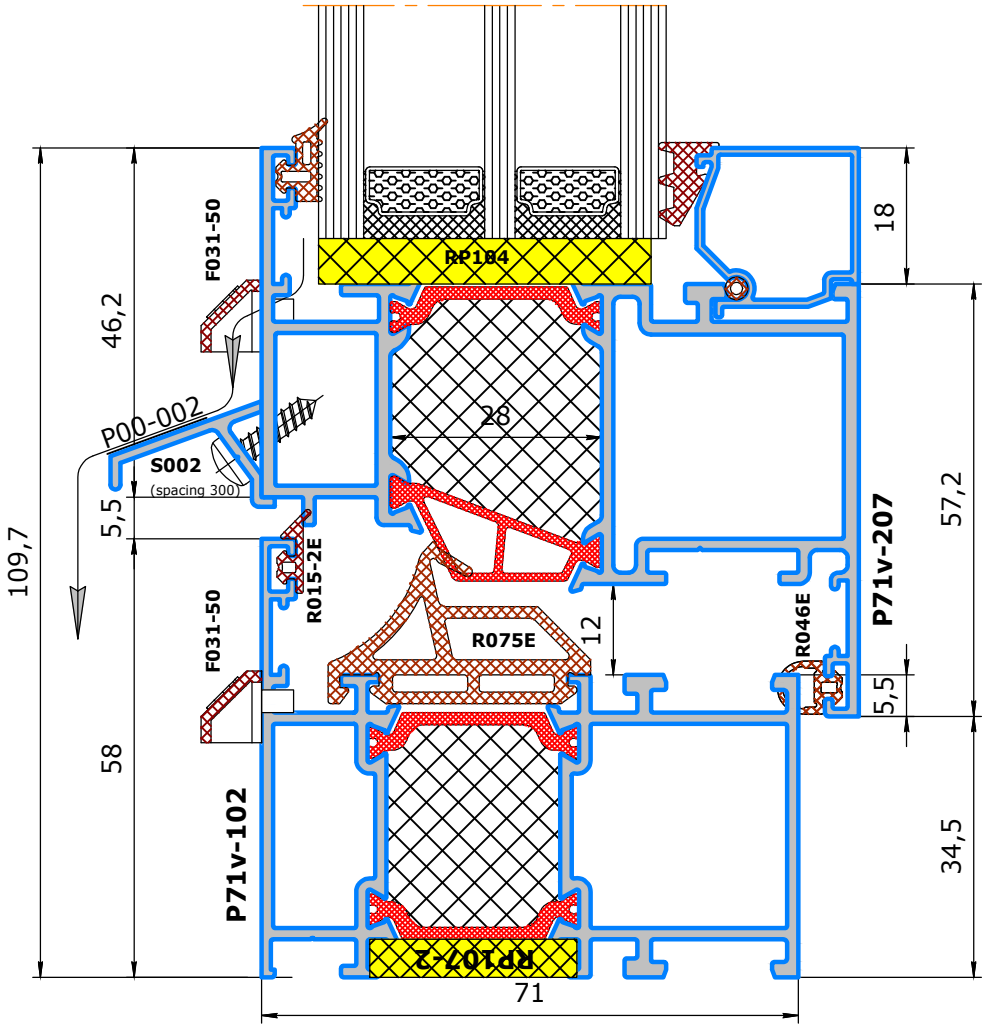


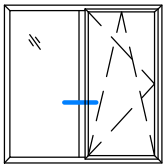


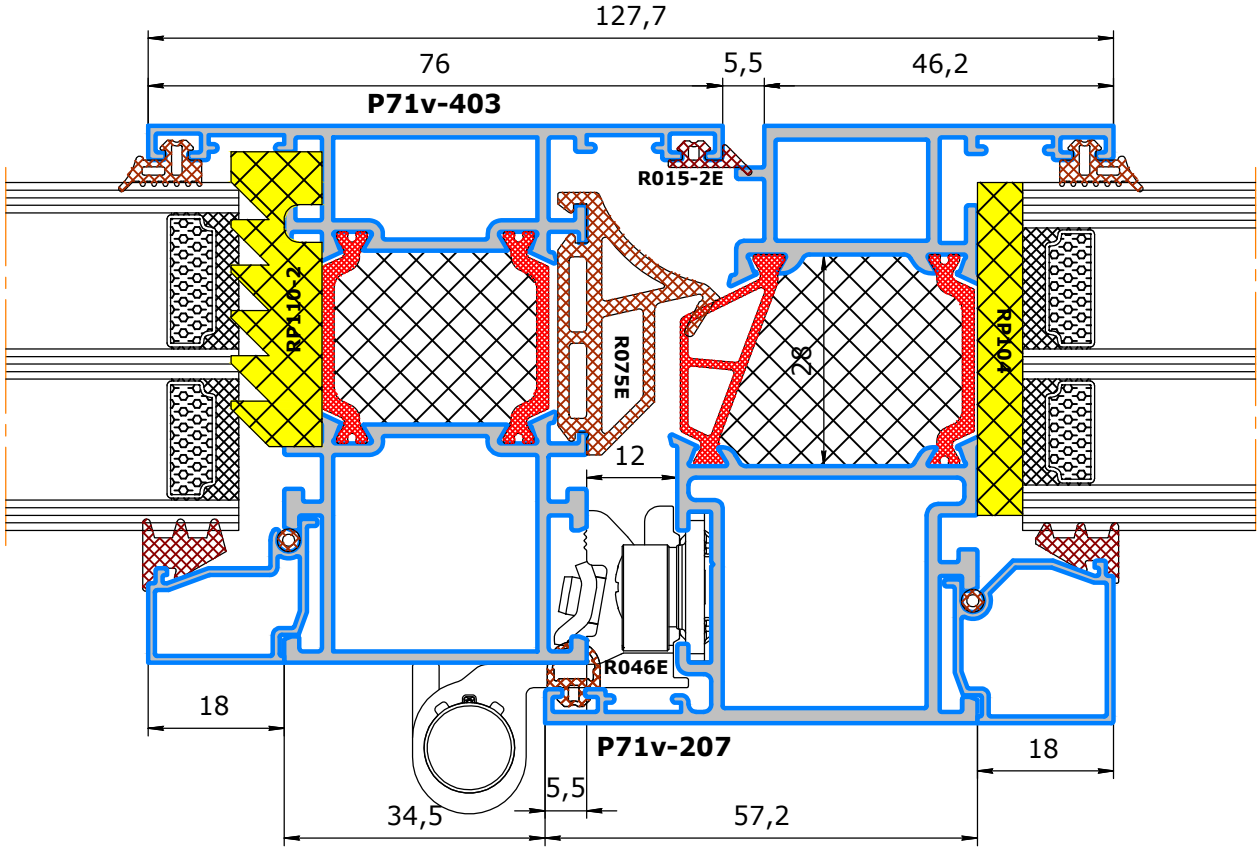


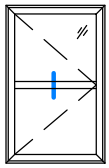


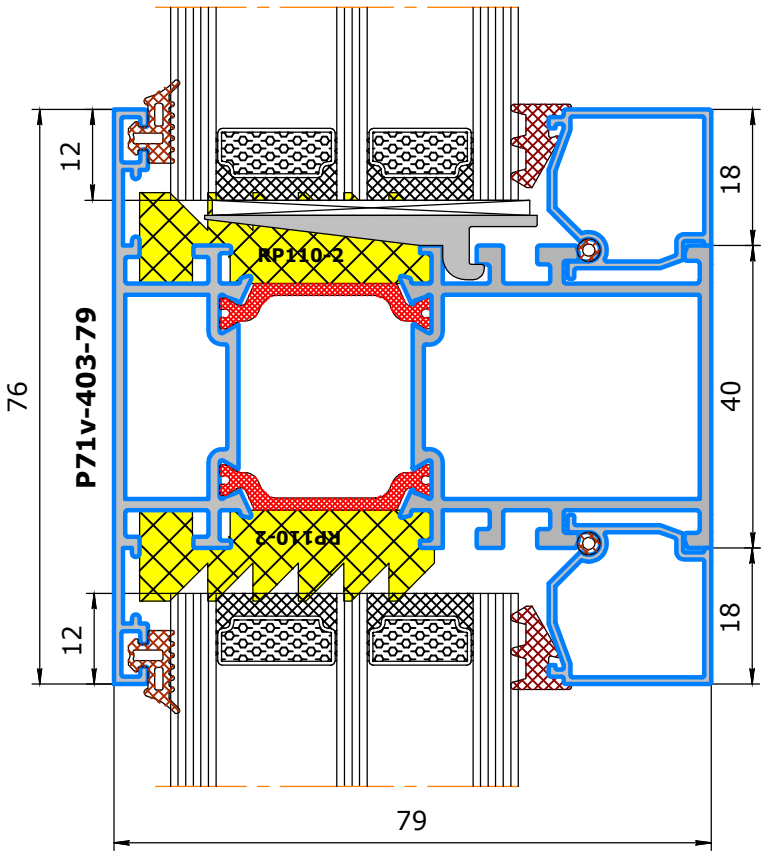

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RP107-2
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RP104
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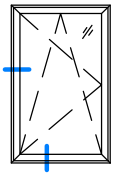

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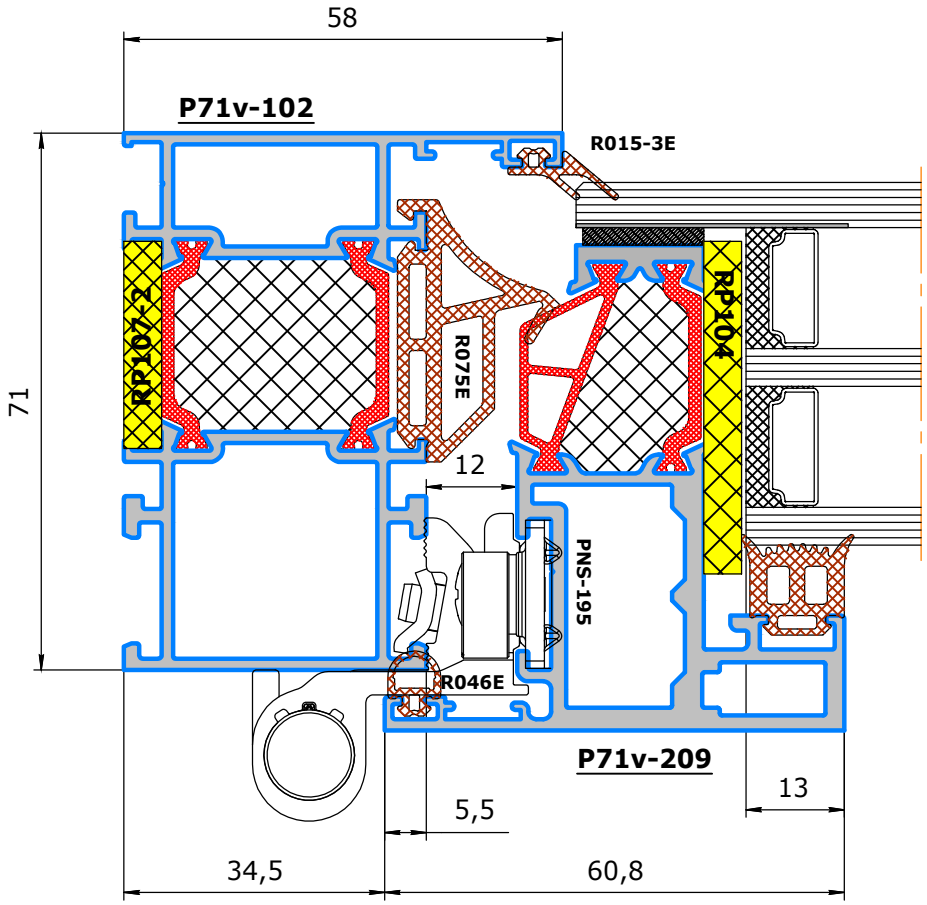


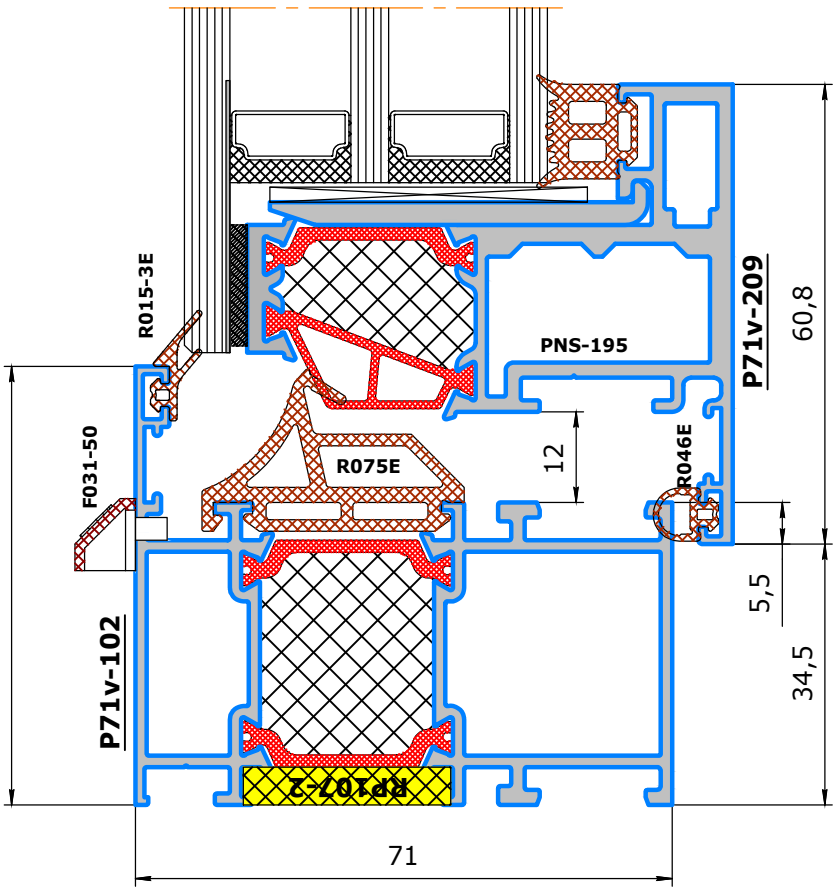

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57,2

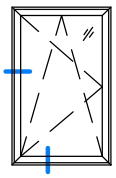


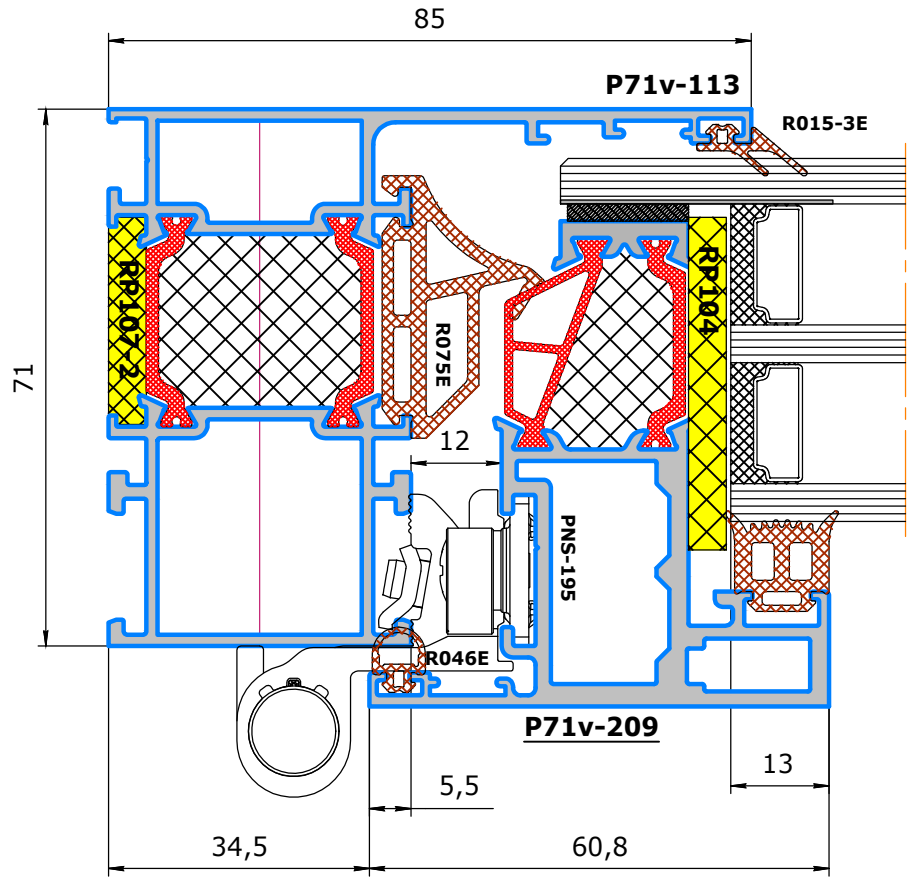

12
18
RP110-2
P71v-403-79
76
40
RP110-2
12
18
79

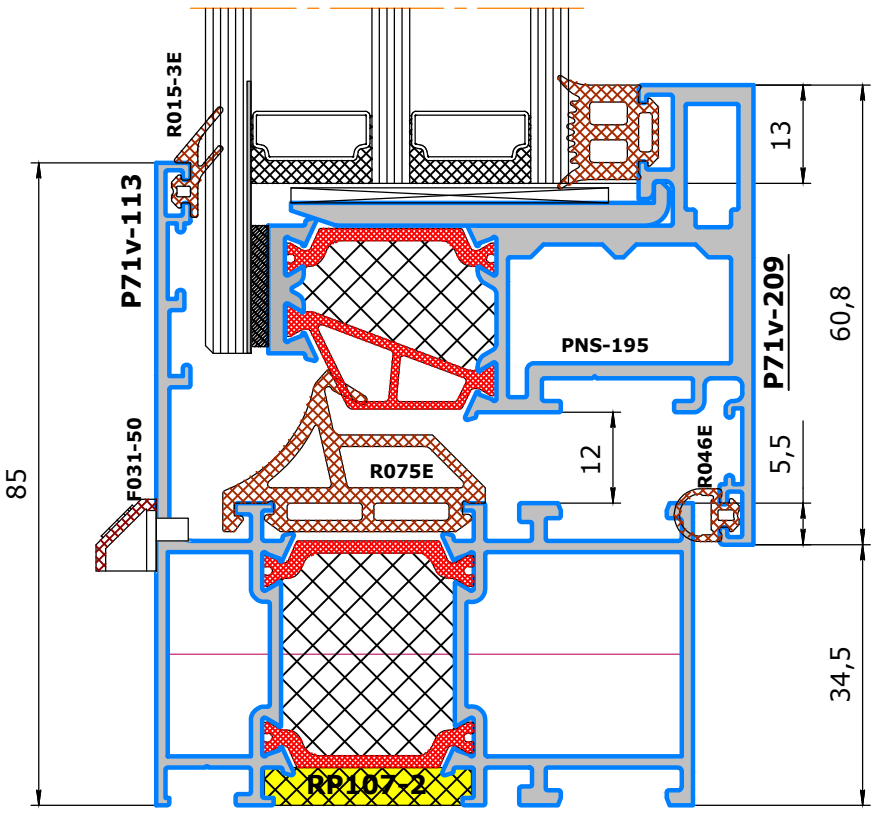



58
P71v-102
R015-3E
RP107-2
R075E
RP107-2
71
12
PNS-195
R046E
P71v-209
13
5,5
34,5
60,8

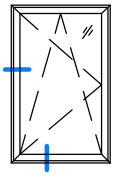

R015-3E
PNS-195
P71v-209
60,8
F031-50
R075E
12
R046E
58
5,5
34,5
P71v-102
RP107-2
71

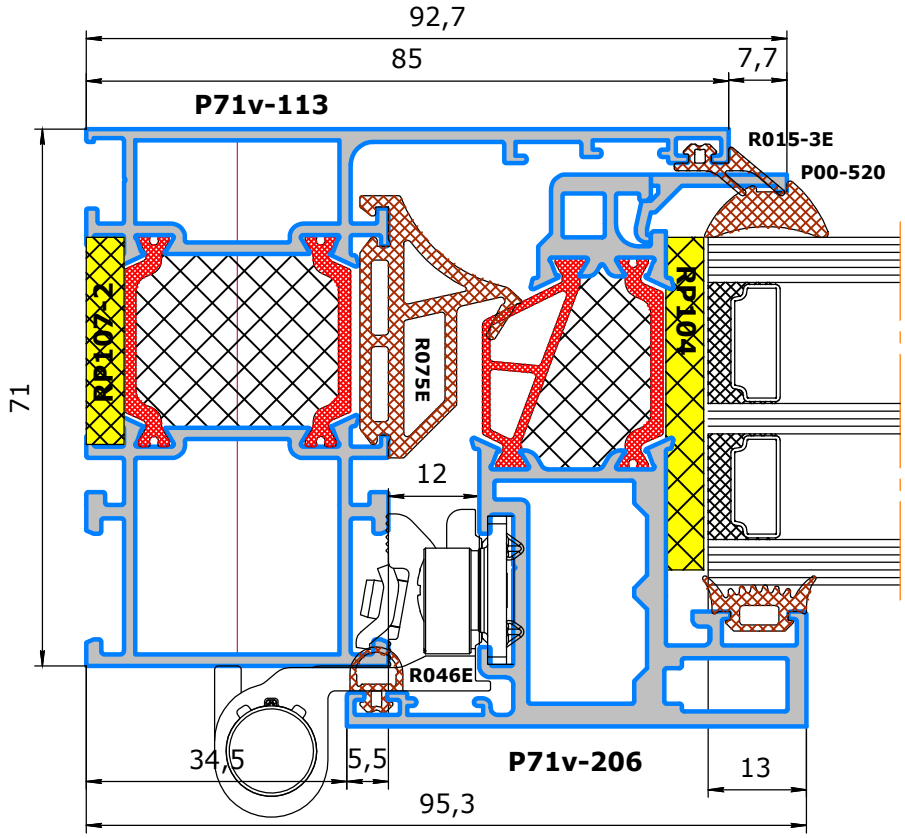


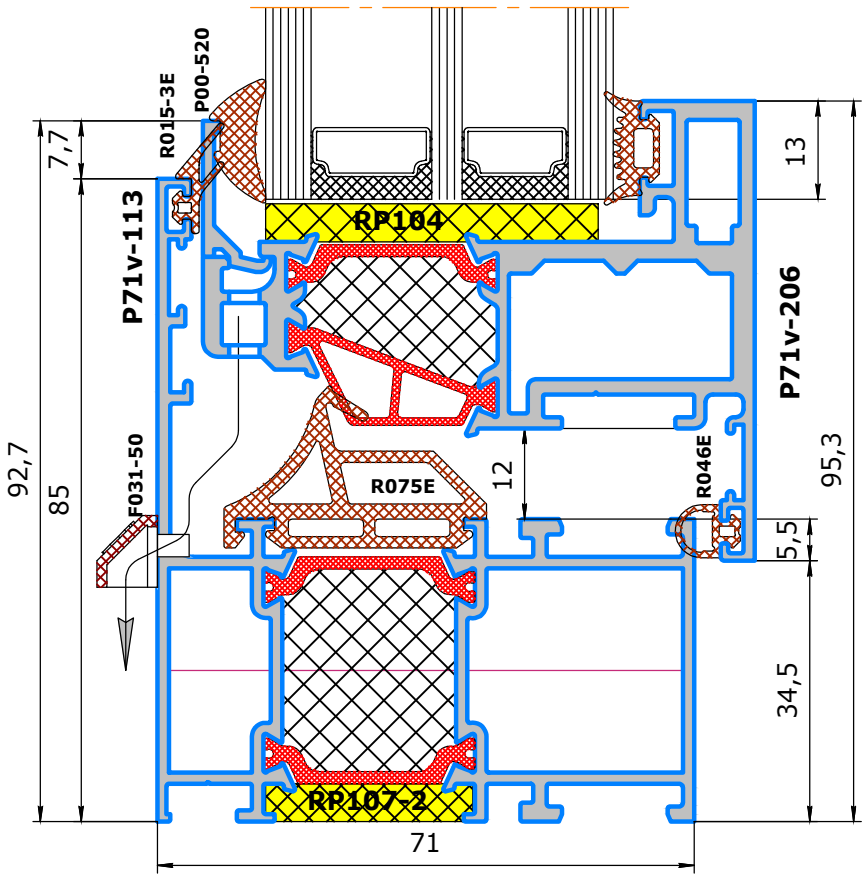

85
P71v-113
R015-3E
RP107-2
R075E
RP107-4
71
12
PNS-195
R046E
P71v-209
13
5,5
34,5
60,8

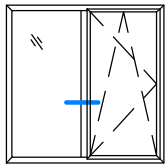

R015-3E
P71v-113
13
P71v-209
60,8
PNS-195
F031-50
R075E
12
R046E
5,5
85
34,5
RP107-2

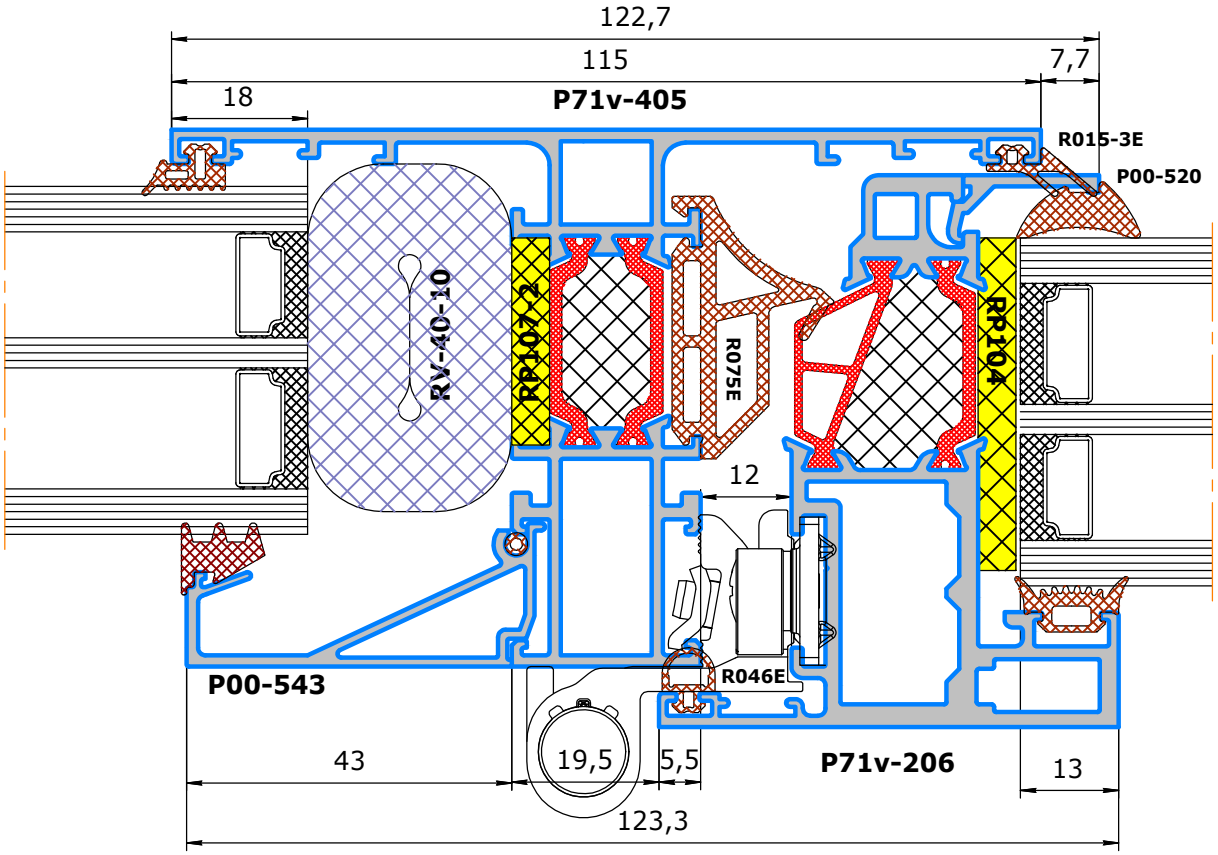
Window structures "with sash not visible from the outside"

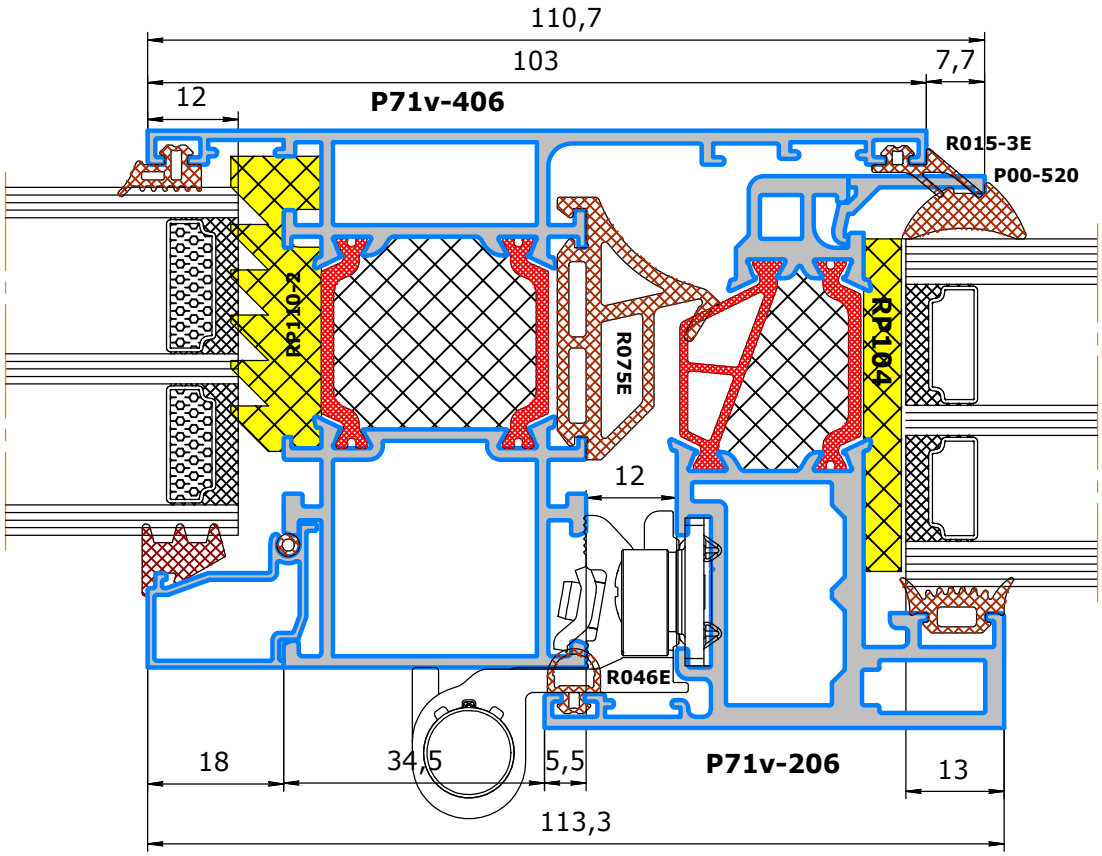


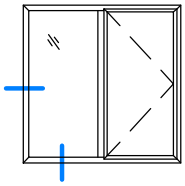


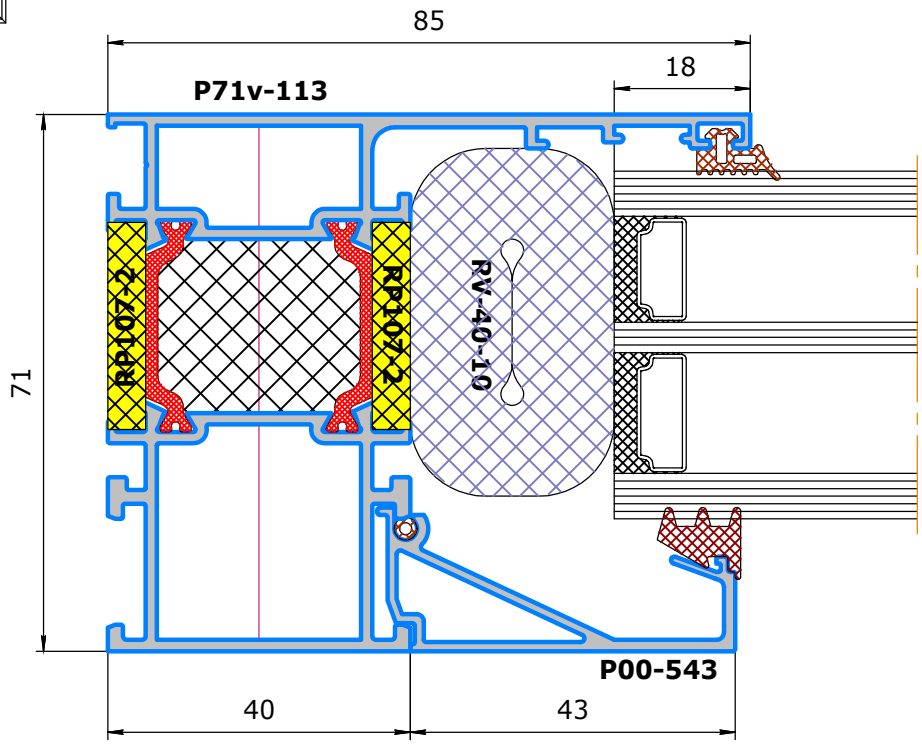


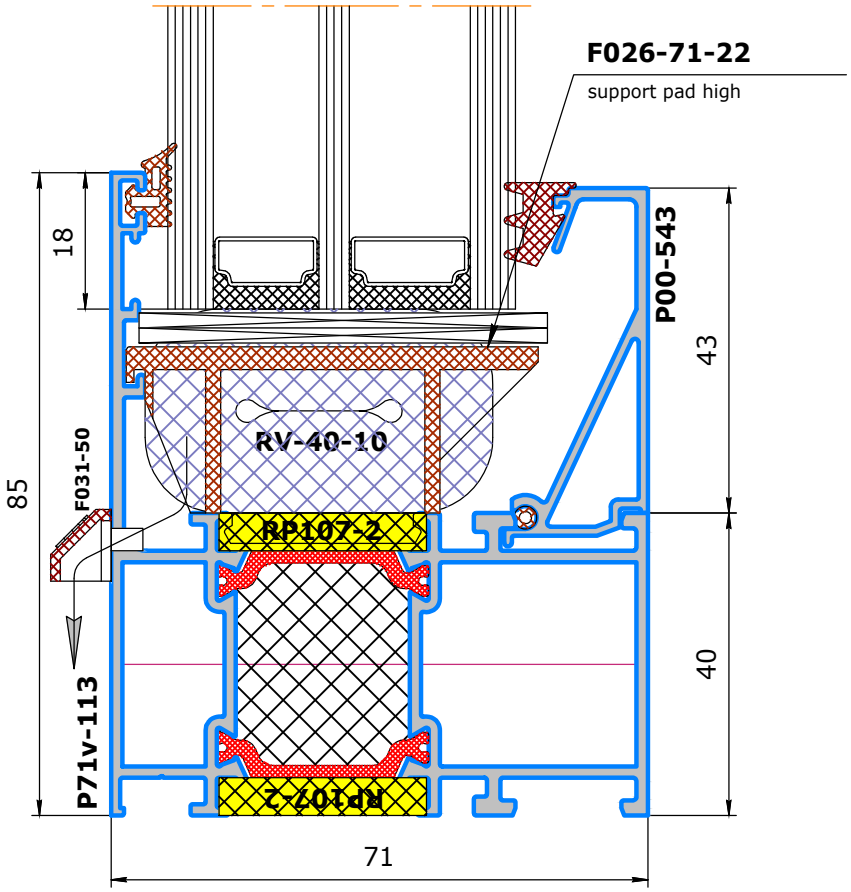


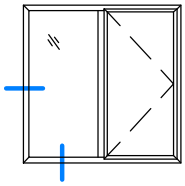

122,7
115
7,7
18
P71v-405
R015-3E
P00-520
RV-40-10
RP107-22
R075E
RP104
12
R046E
P00-543
43
19,5
5,5
P71v-206
13
123,3

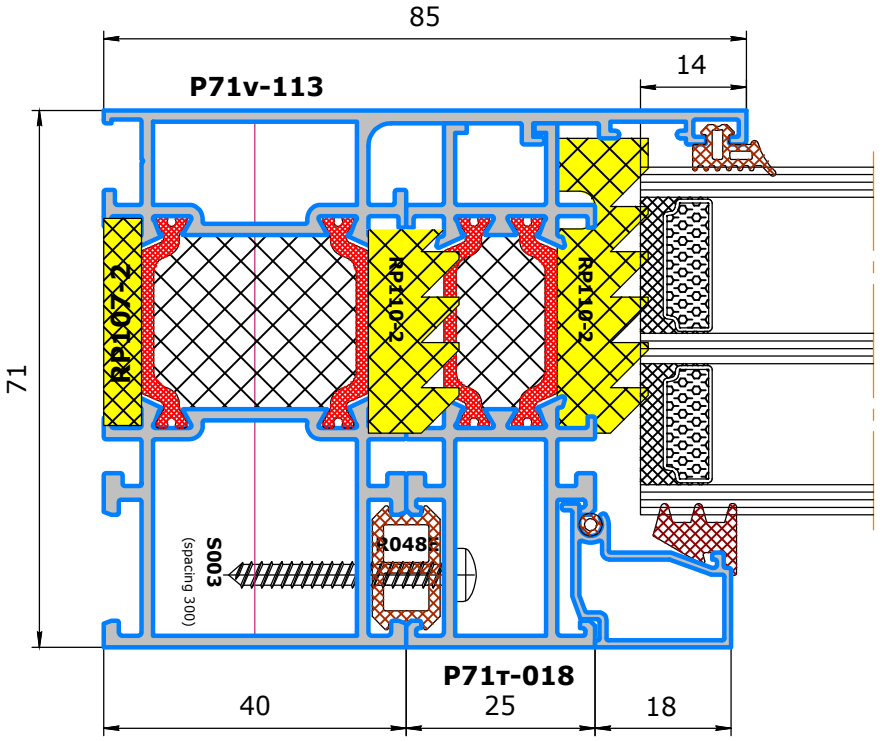

110,7
103
7,7
12
P71v-406
R015-3E
P00-520
RP107-22
R075E
RP104
12
R046E
18
34,5
5,5
P71v-206
13
113,3

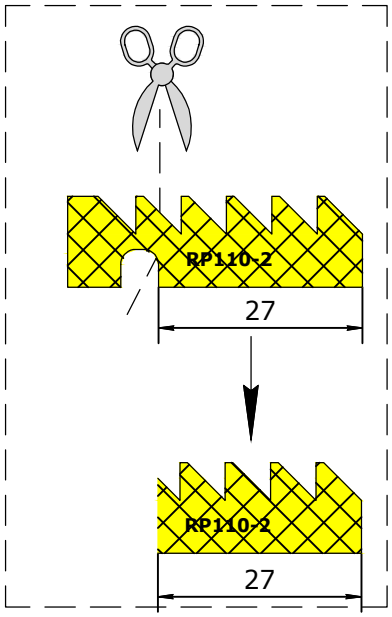


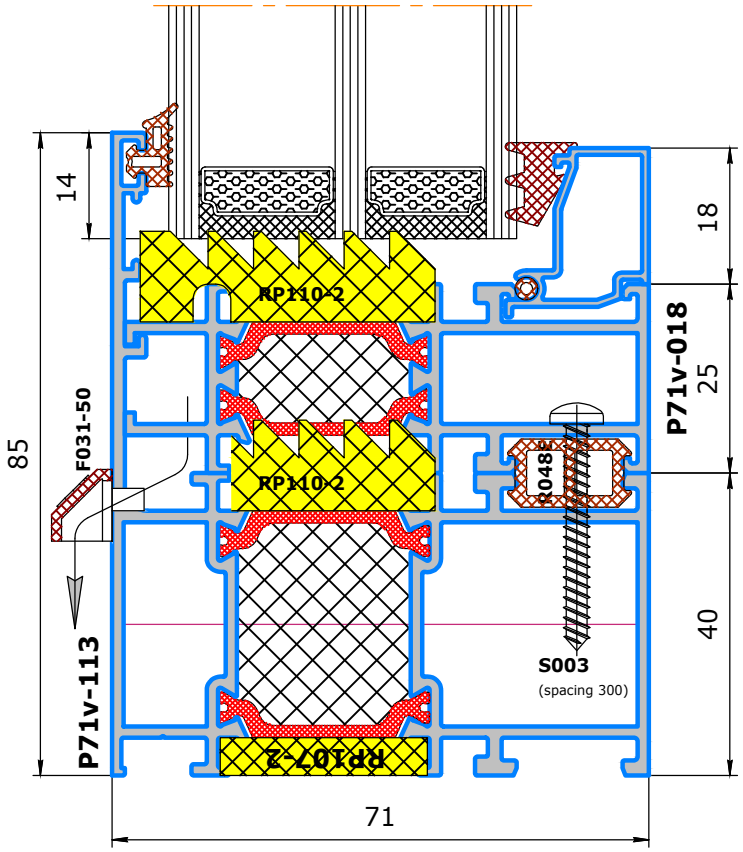

85
18
P71v-113
71
RP107-2
RP107-2
RV-40-10
P00-543
40
43


F026-71-22
support pad high
18
P00-543
43
85
F031-50
RV-40-10
RP107-2
40
P71v-113
RP107-2
71

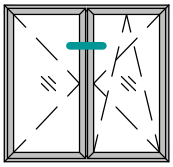




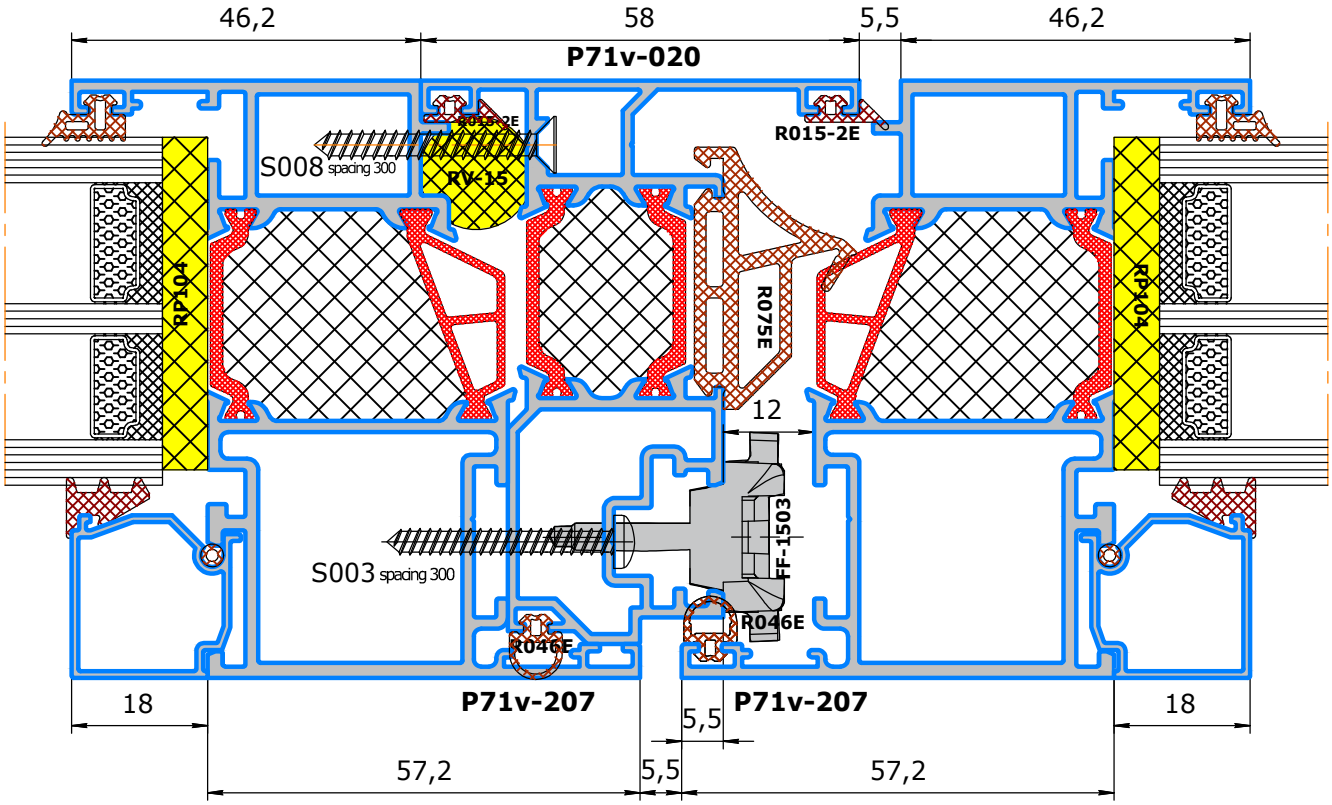


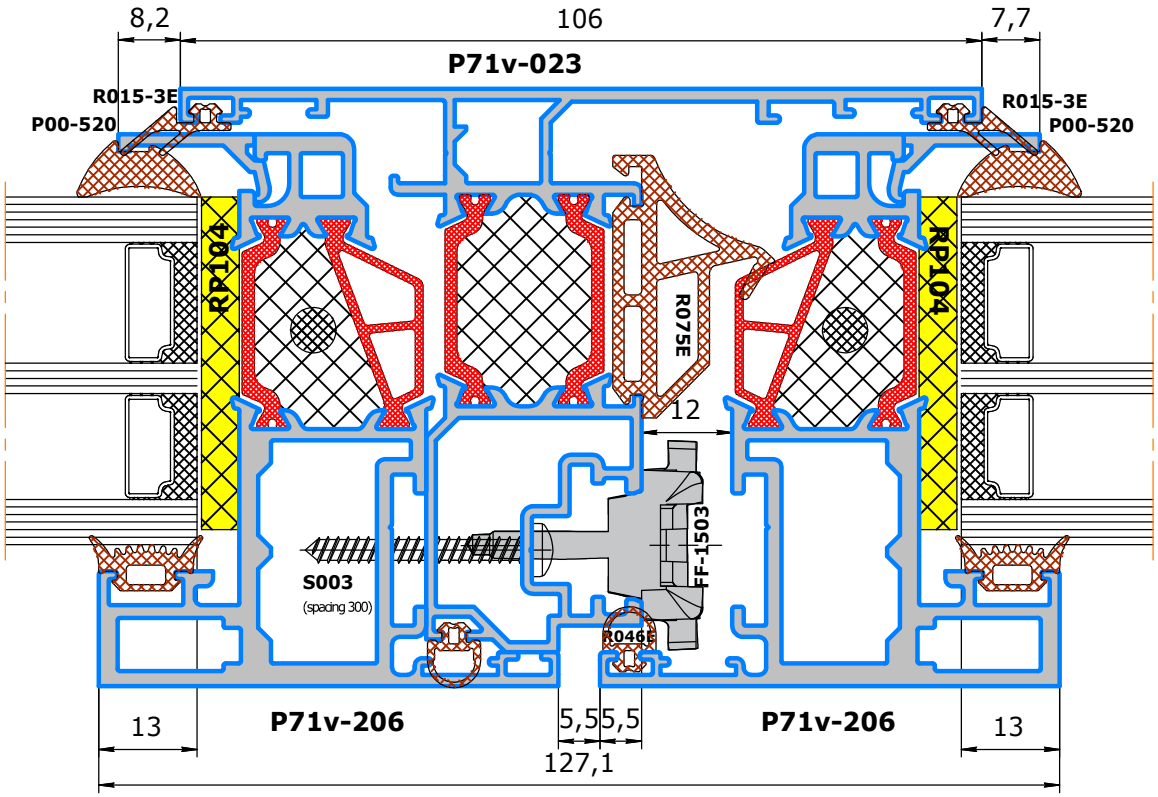


It is recommended that the joints between the frame profiles and the spacer P71-018 are additionally sealed with a neutral sealant along the entire length of the profiles.



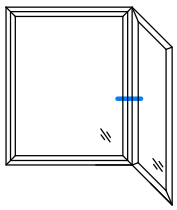
Forend window

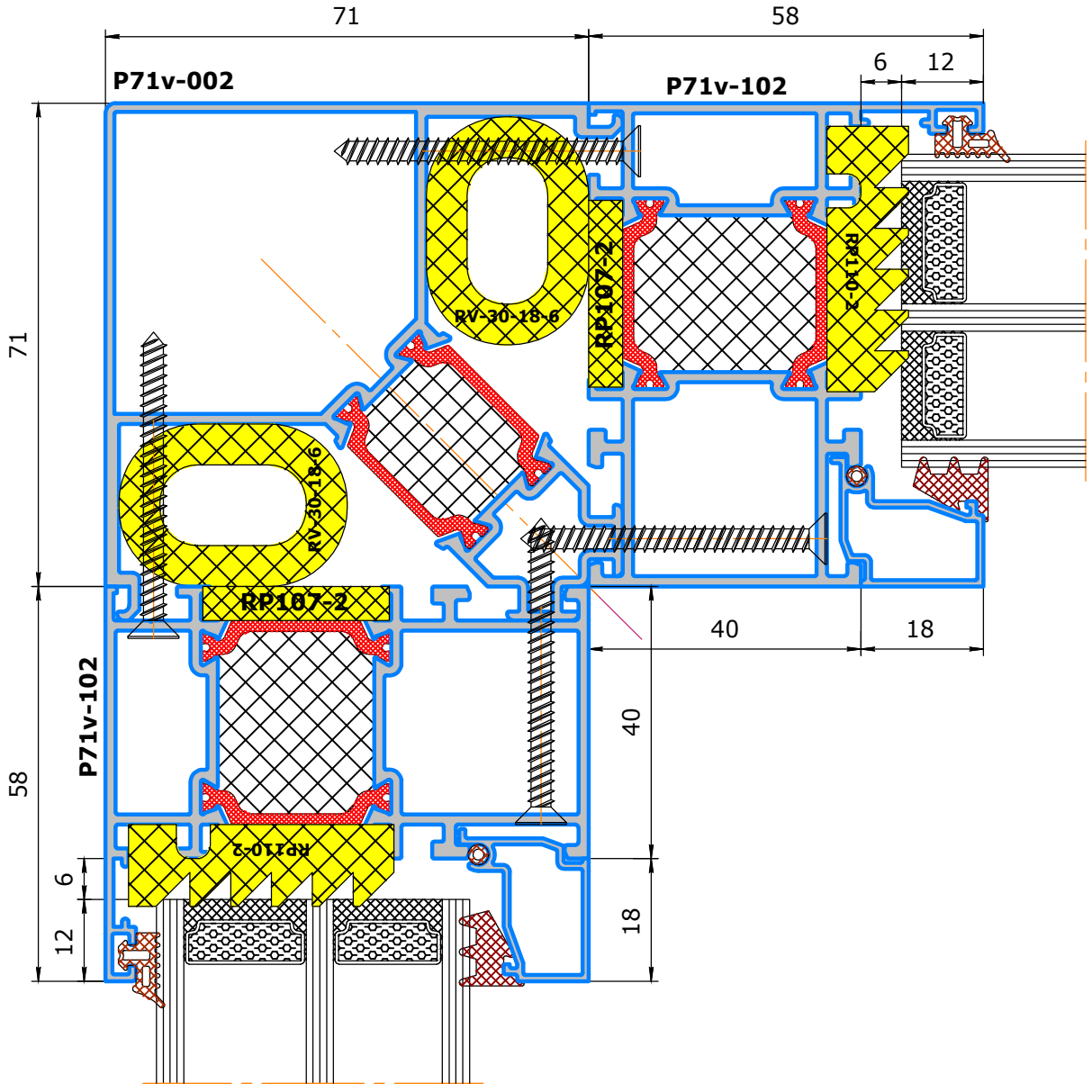




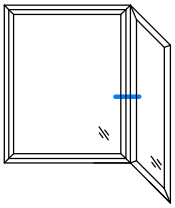
It is recommended that the joints between the sash profiles and the forend are additionally sealed with a neutral sealant along the entire length of the profiles.

Corner window external corner

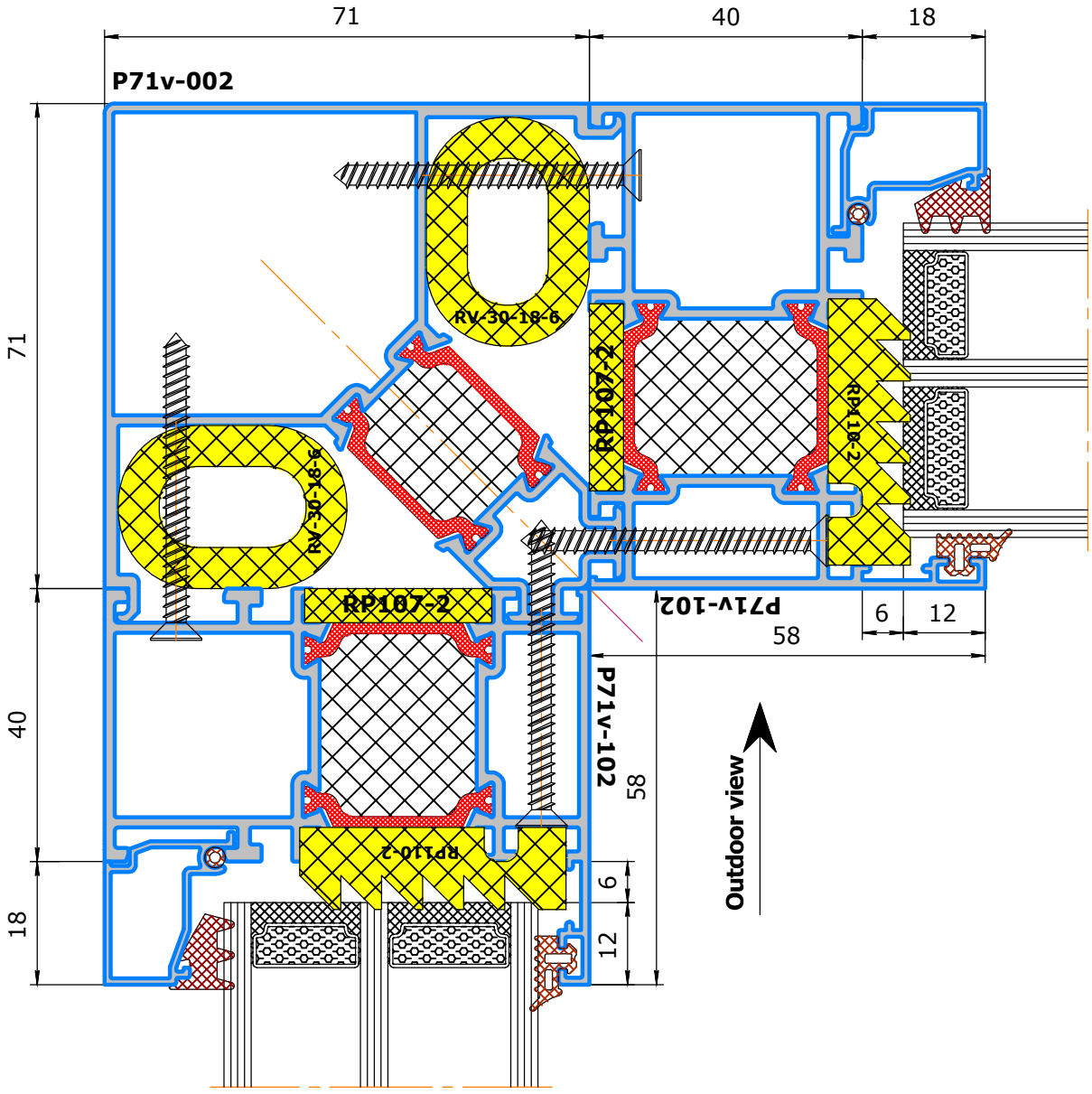




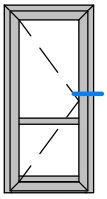
The 90-degree frame connection joint shall be assembled in the workshop, the joints between the mullion profiles and the adapter shall be additionally sealed with neutral sealant along the entire length of the profiles.

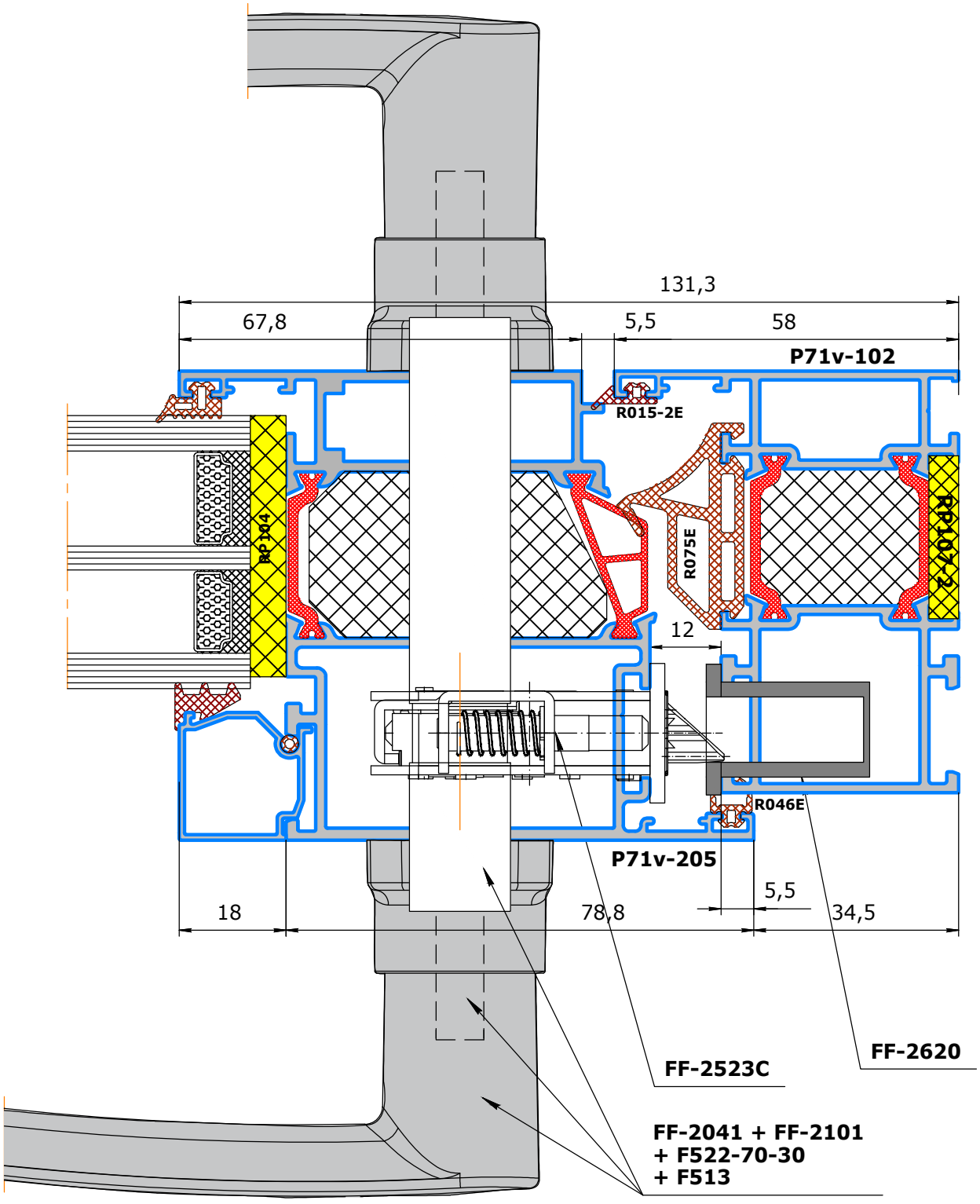


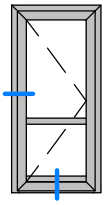
Corner window internal corner

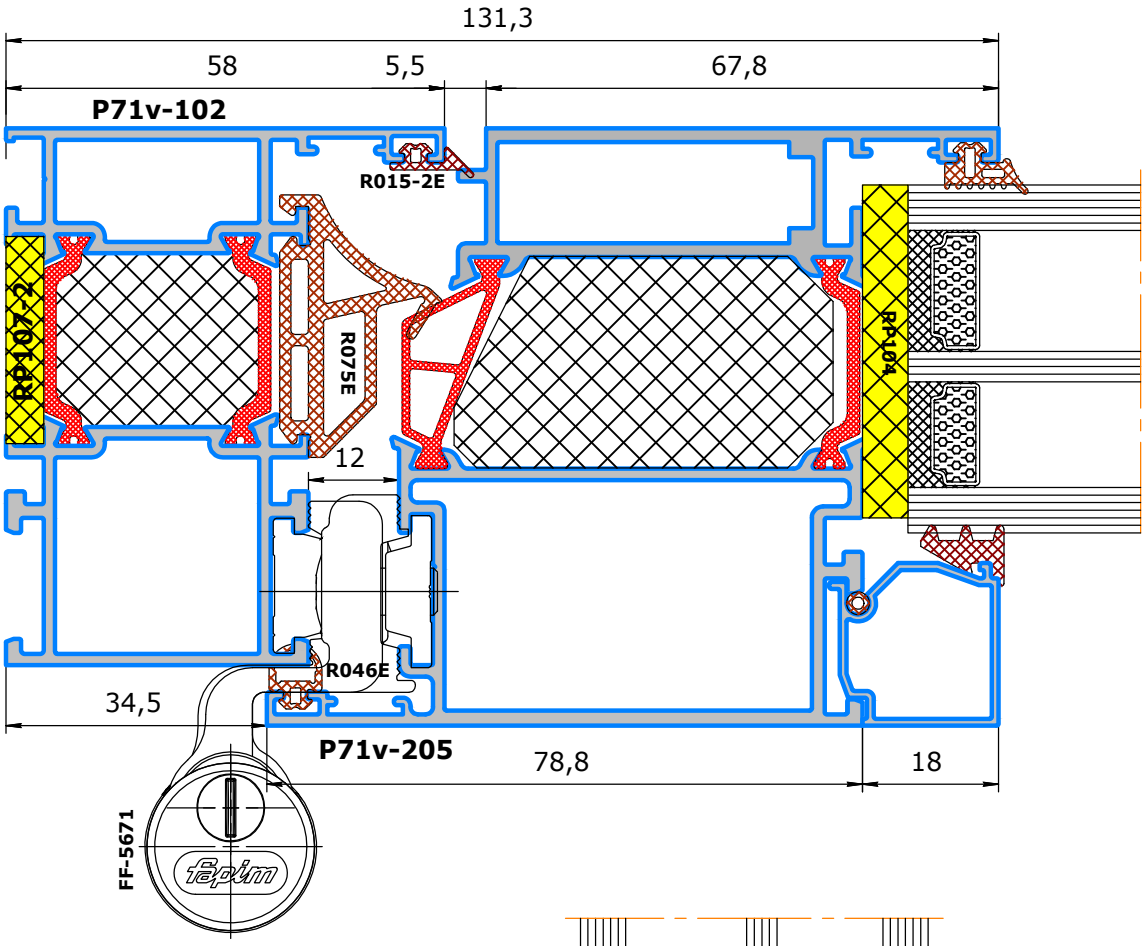


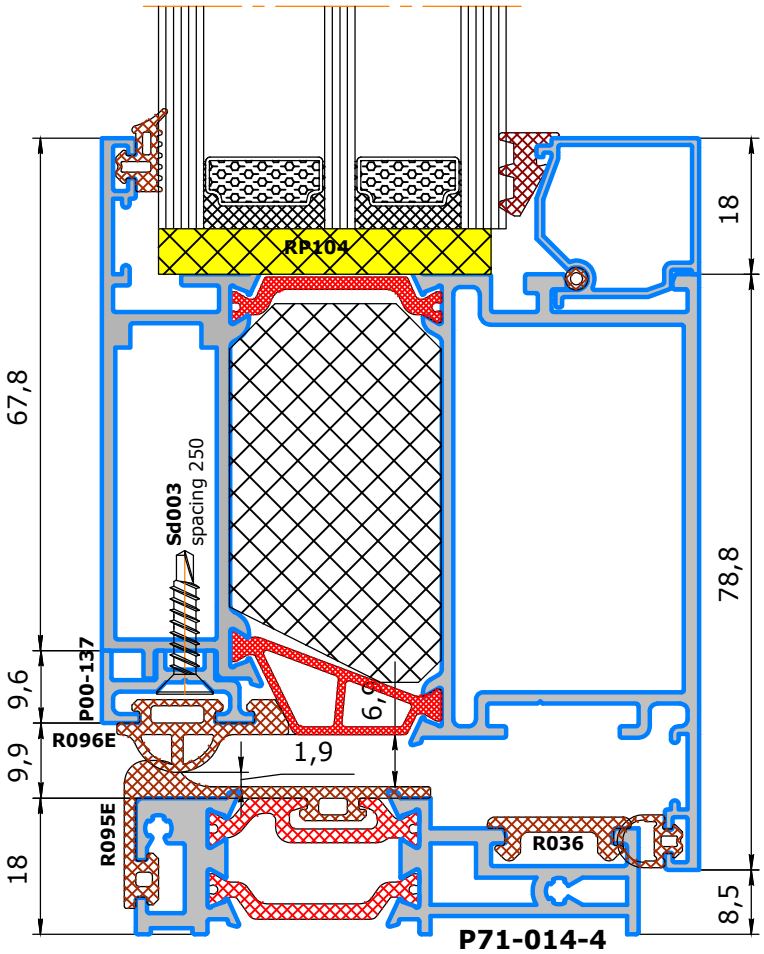
The 90-degree frame connection joint shall be assembled in the workshop, the joints between the mullion profiles and the adapter shall be additionally sealed with neutral sealant along the entire length of the profiles.

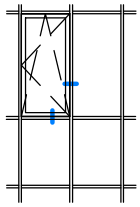


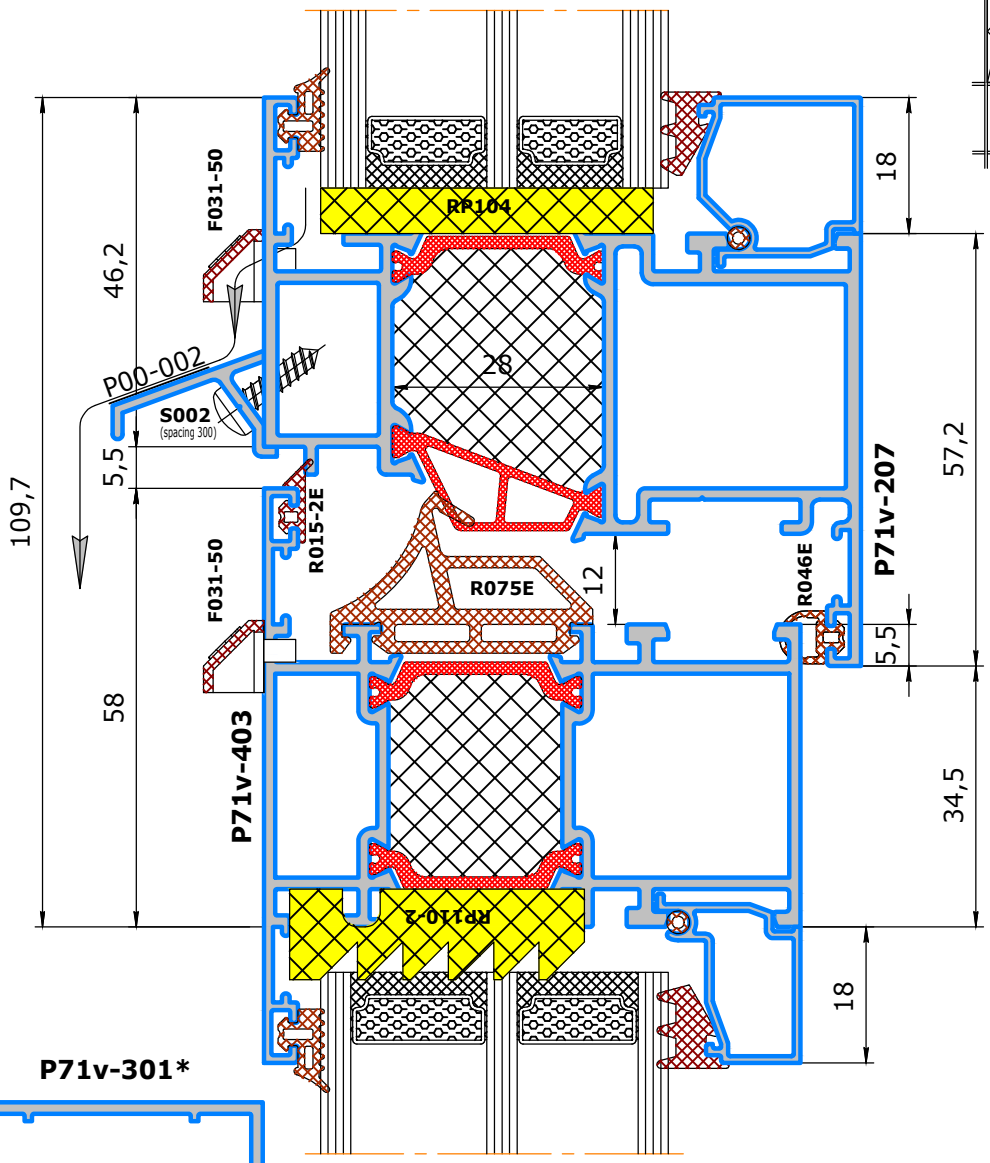

131,3
67,8
5,5
58
P71v-102
R015-2E
RP 104
R075E
RP 107-2
12
R046E
P71v-205
18
78,8
5,5
34,5
FF-2620
FF-2523C
FF-2041 + FF-2101
+ F522-70-30
+ F513



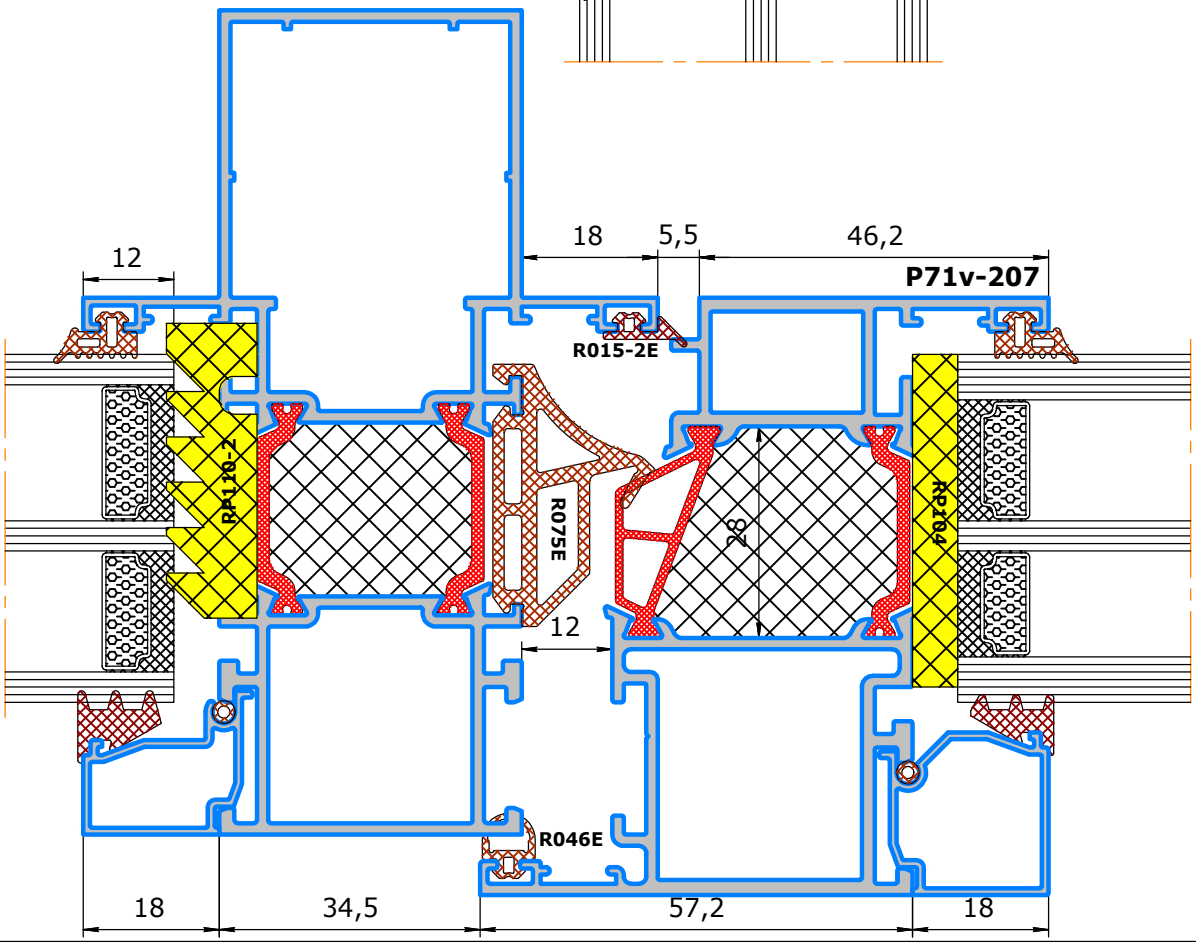

131,3
58
5,5
67,8
P71v-102
R015-2E
RP107-C1
R075E
RP104
12
R046E
34,5
P71v-205
78,8
18
FF-5671
fapim

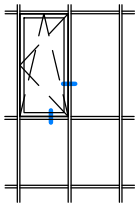

RP104
18
67,8
Sd003
spacing 250
78,8
P00-137
9,6
6,9
R096E
1,9
9,9
R095E
R036
18
8,5
P71-014-4

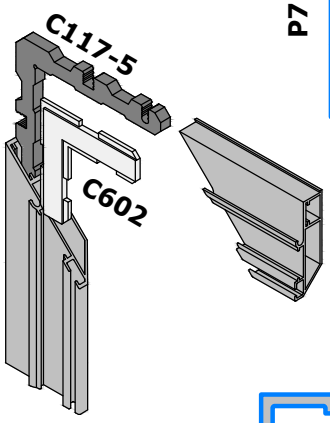


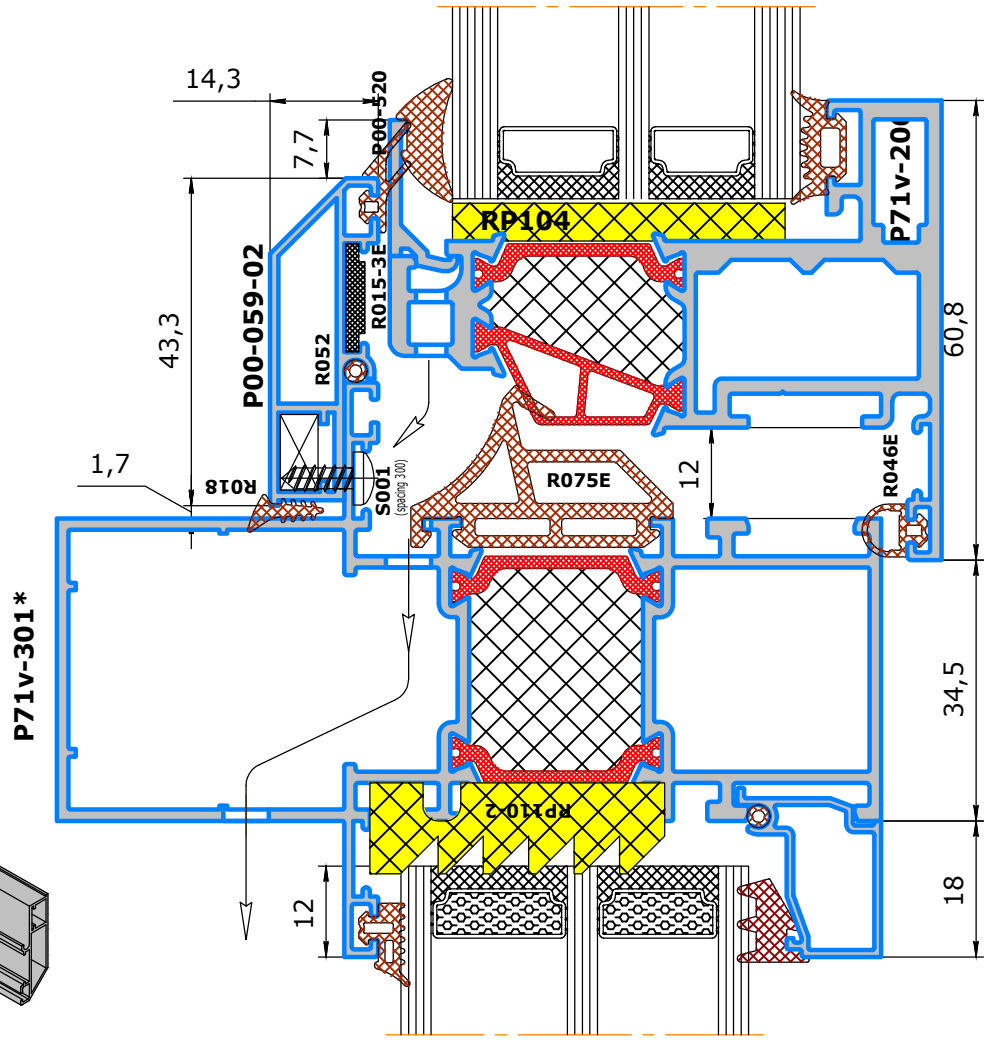

F031-50
RP104
46,2
18
P00-002
S002
(spacing 300)
28
5,5
109,7
R015-2E
F031-50
R075E
12
R046E
P71v-207
57,2
5,5
58
P71v-403
34,5
RP110-2
18

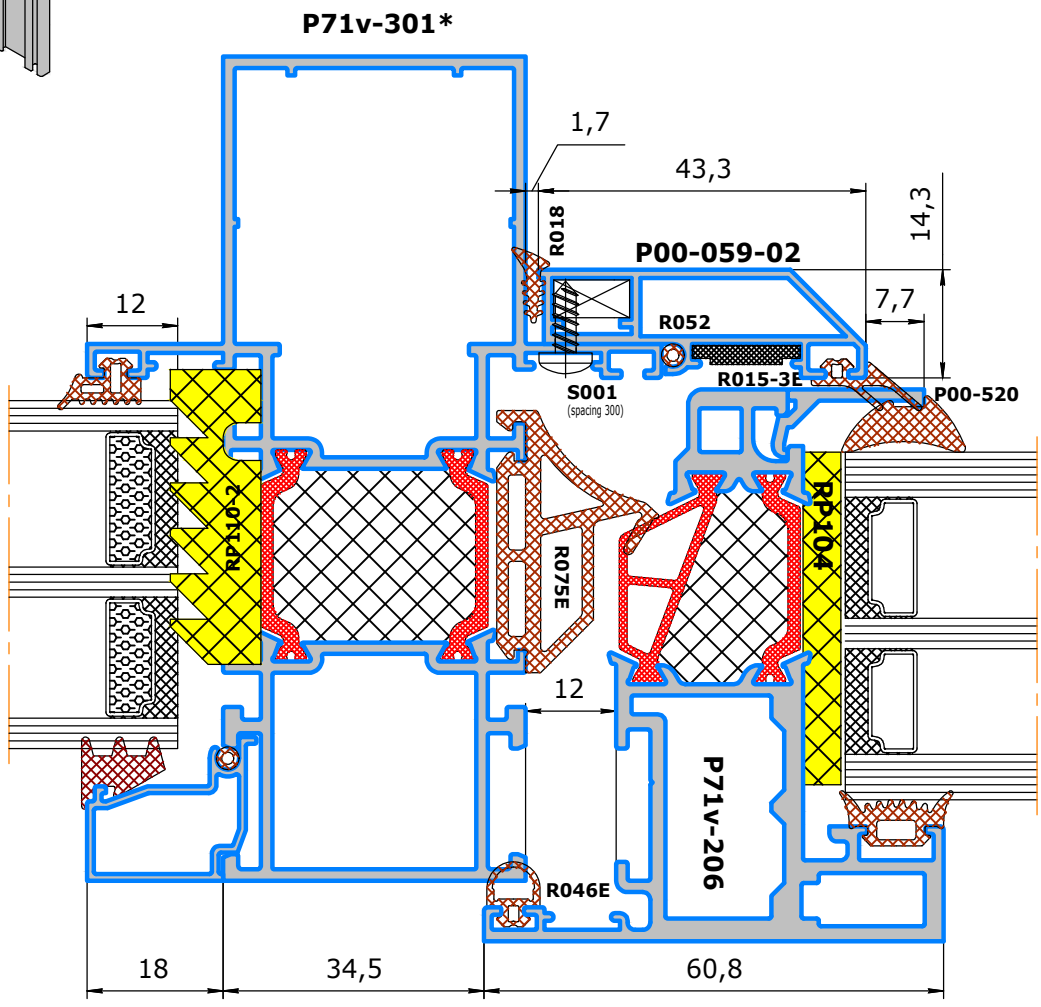
P71v-301*

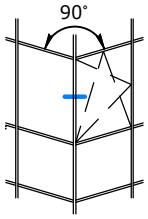

12
18
5,5
46,2
P71v-207
R015-2E
RP126-2
R075E
28
RP104
12
R046E
18
34,5
57,2
18

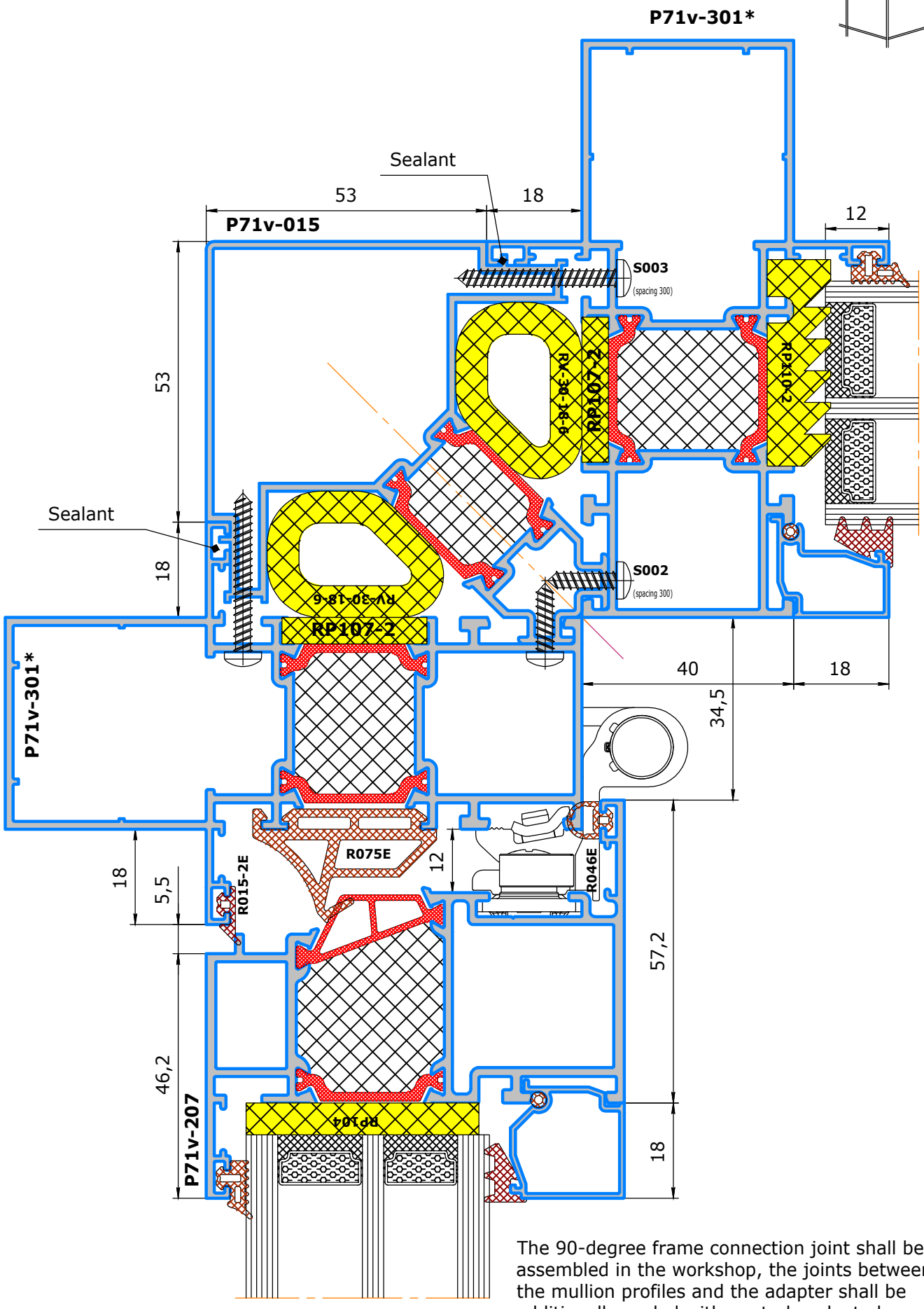



C117-5
C602

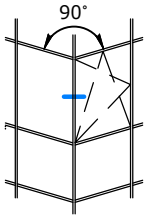

P71v-301*
14,3
7,7
P00-520
P00-059-02
RP104
R015-3E
R052
43,3
1,7
R018
S001
(spacing 300)
R075E
12
R046E
60,8
34,5
18
RP110-2
12

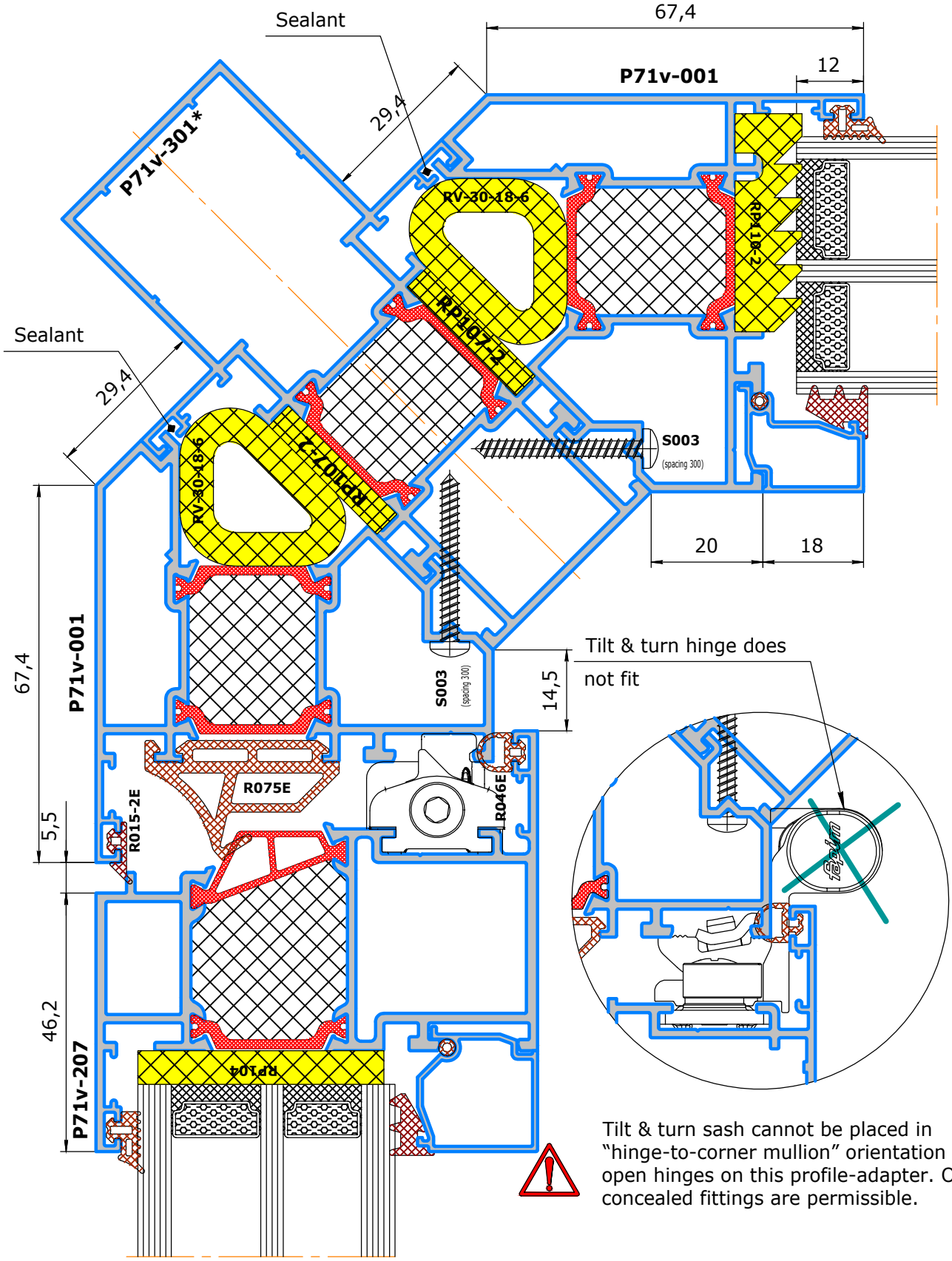

P71v-301*
1,7
43,3
14,3
R018
P00-059-02
7,7
12
R052
S001
(spacing 300)
R015-3E
P00-520
RP110-2
R075E
RP104
12
P71v-206
R046E
18
34,5
60,8





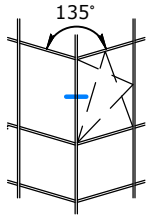
The 90-degree frame connection joint shall be assembled in the workshop, the joints between the mullion profiles and the adapter shall be additionally sealed with neutral sealant along the entire length of the profiles.

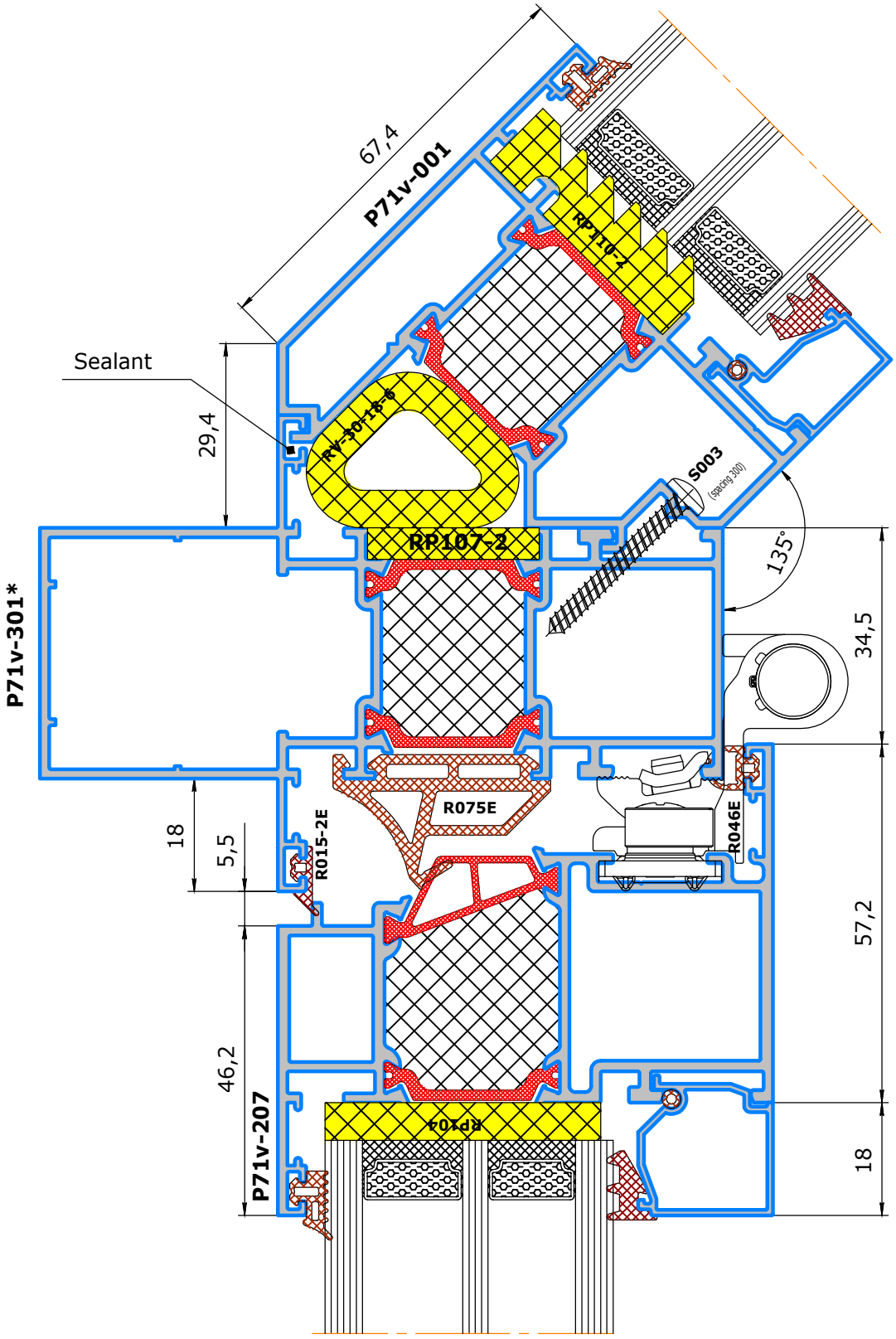




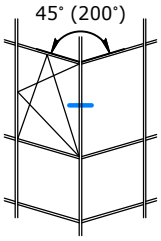
Tilt & turn sash cannot be placed in "hinge-to-corner mullion" orientation with open hinges on this profile-adapter. Only concealed fittings are permissible.

The 90-degree frame connection joint shall be assembled in the workshop, the joints between the mullion profiles and the adapter shall be additionally sealed with neutral sealant along the entire length of the profiles.

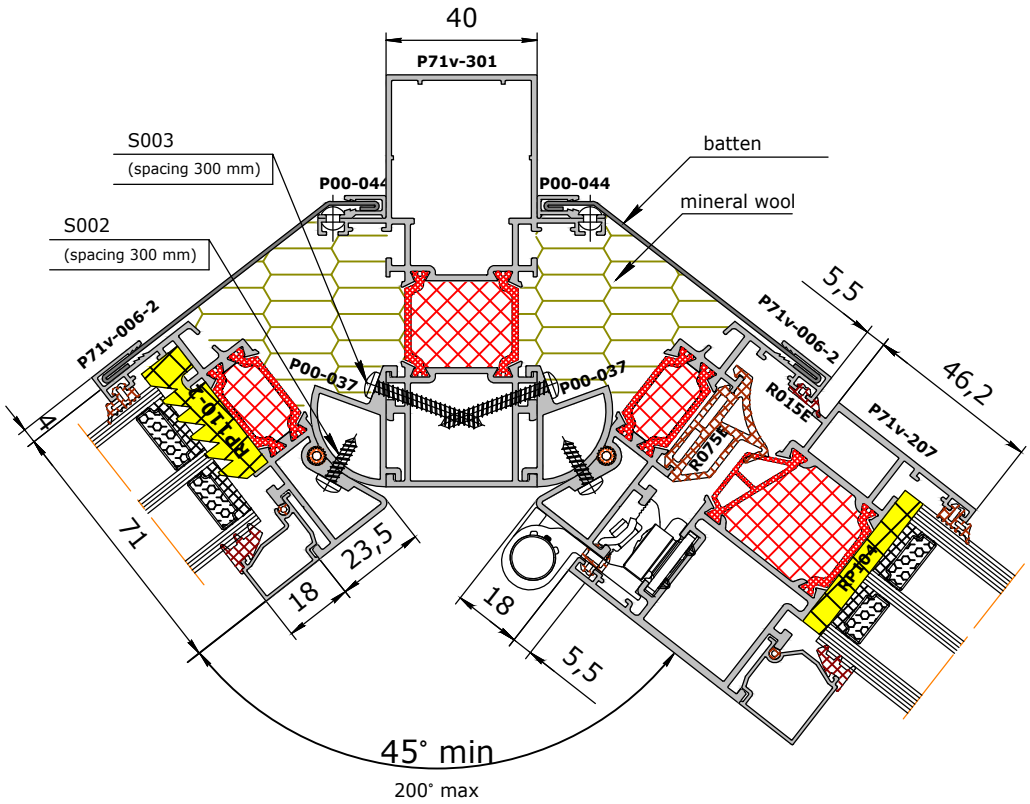


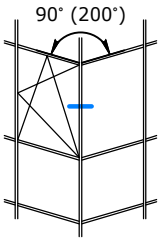


The frame connection joint shall be assembled in the workshop, the joints between the mullion profiles and the adapter shall be additionally sealed with neutral sealant along the entire length of the profiles.

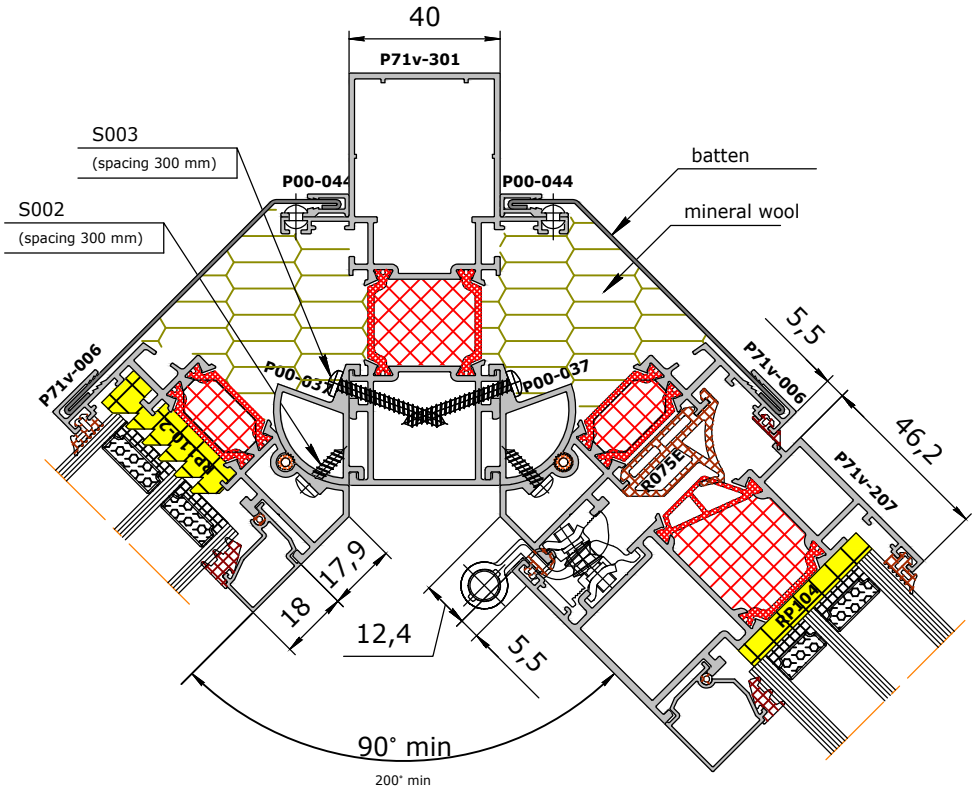


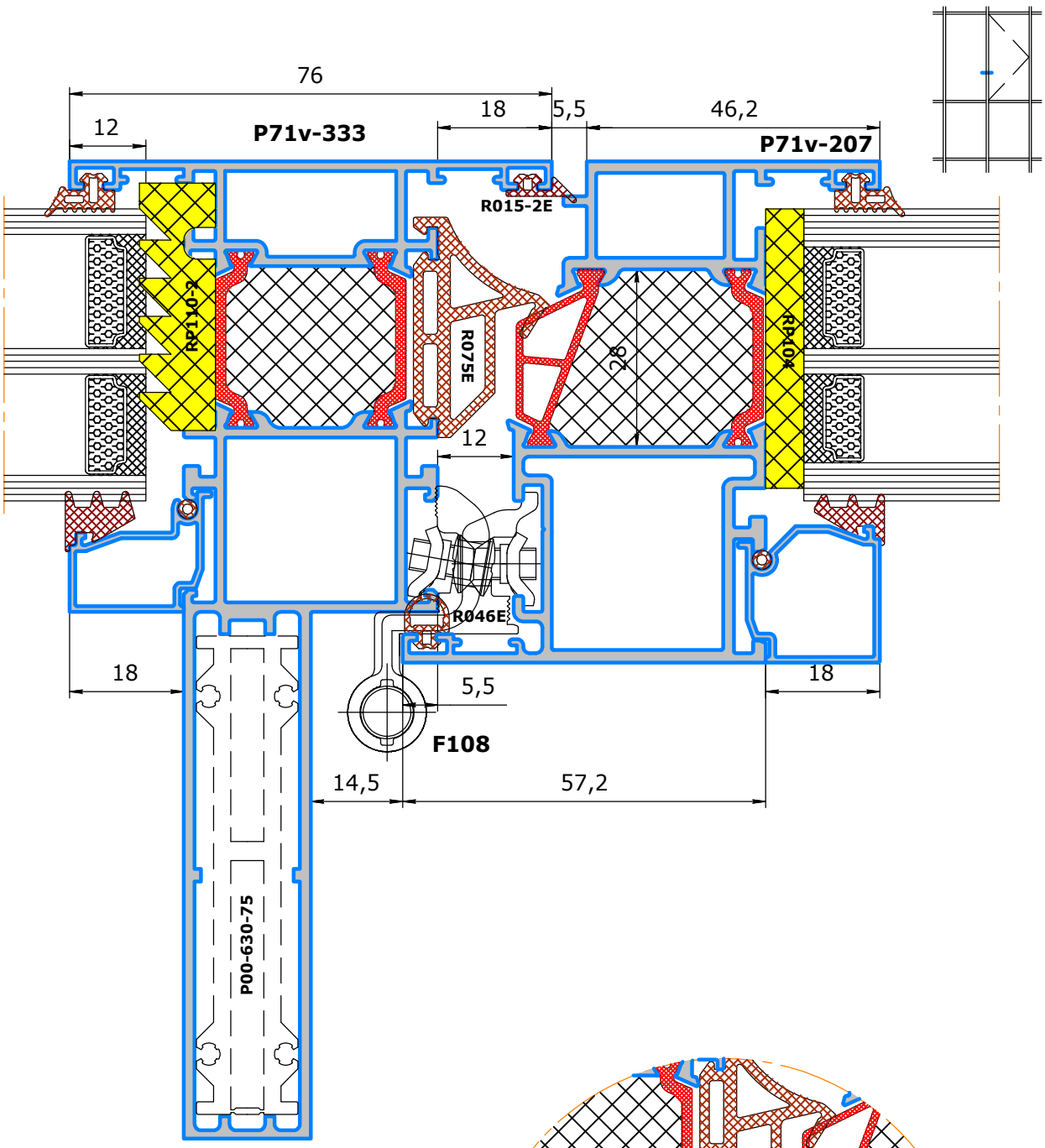
Universal swivel adapter P71v-006-2

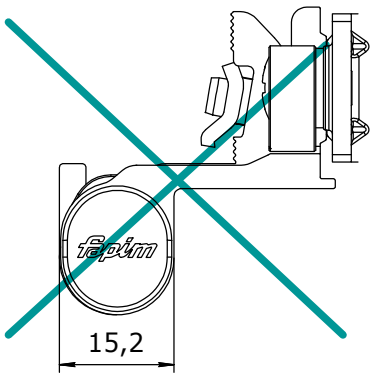


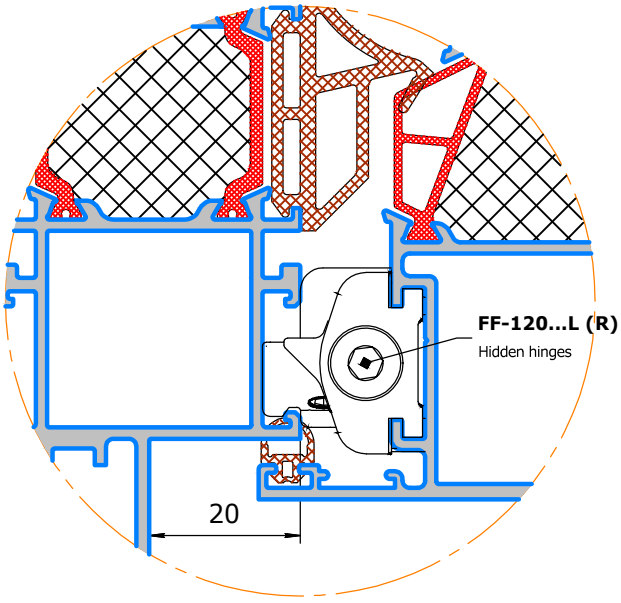


Universal swivel adapter P71v-006

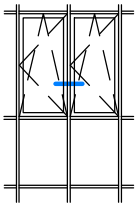




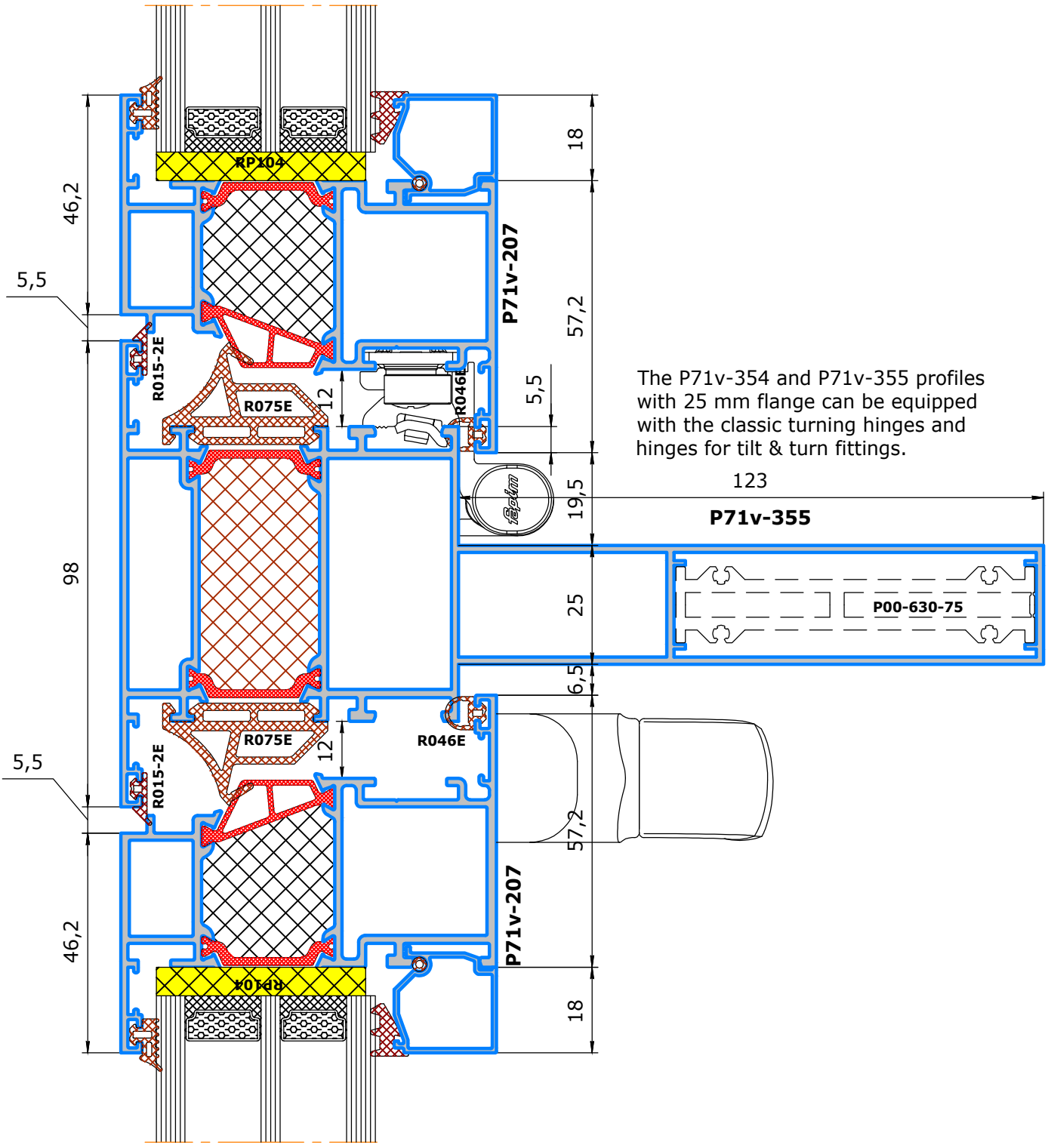




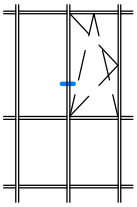
Hidden hinges are used in the inward-reinforced mullions with 20 mm flange in hinge-to-mullion orientation for tilt & turn fittings. For turning fittings, hinge F108 with offset rotation axis is used (a conventional hinge will not fit on the mullion).

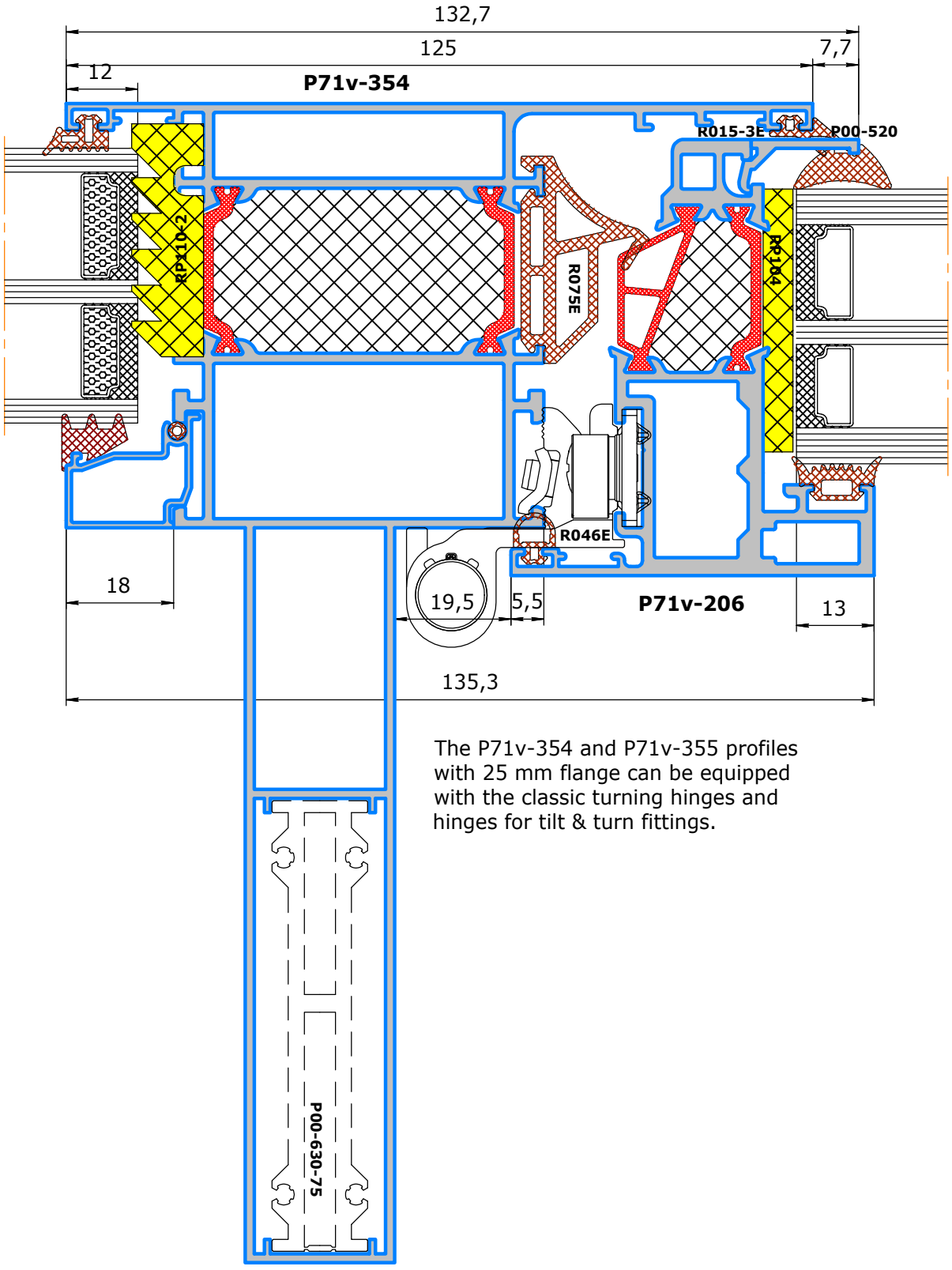


"Inward-reinforced mullion" stained-glass structures

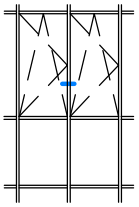


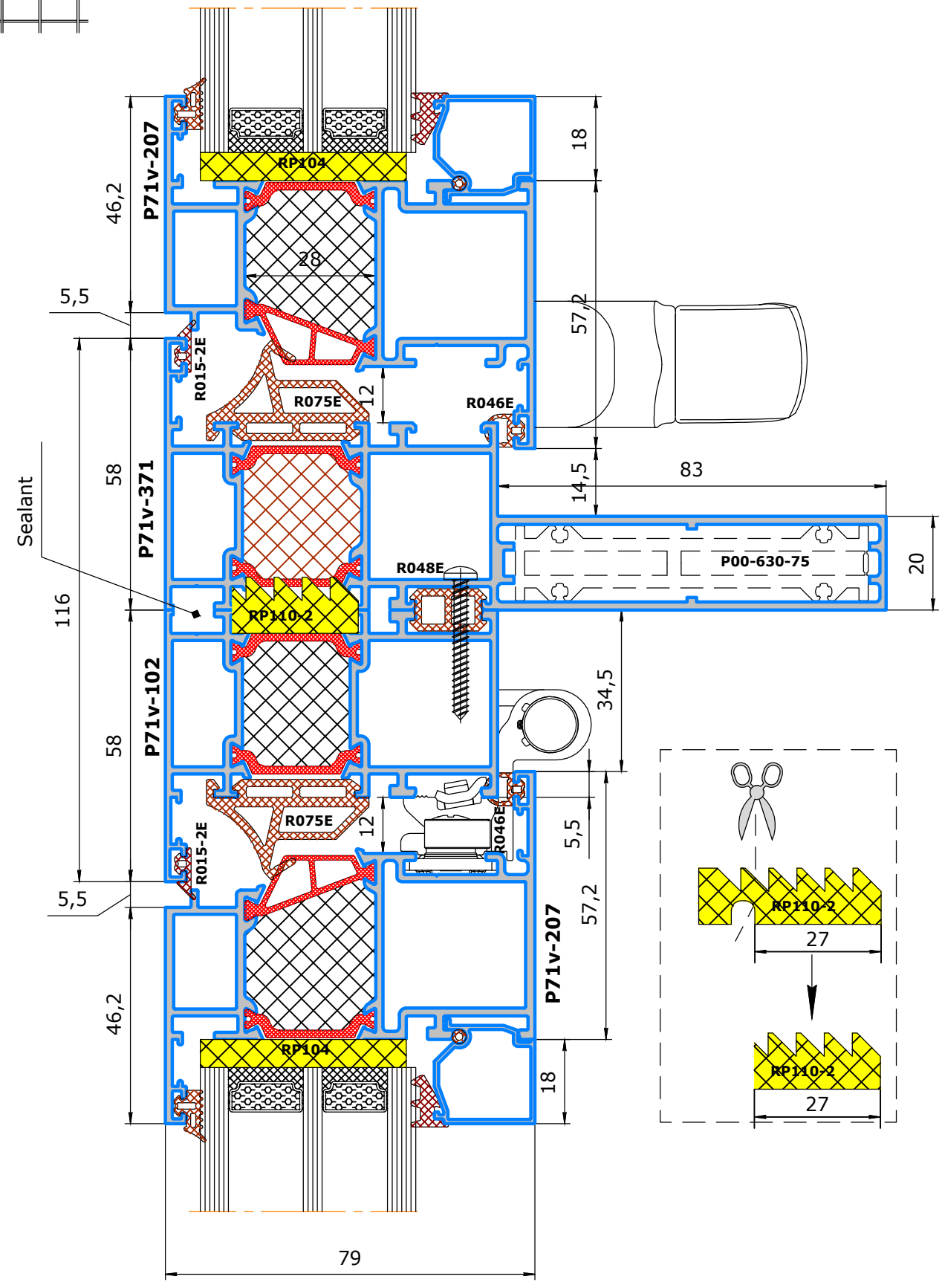
The P71v-354 and P71v-355 profiles with 25 mm flange can be equipped with the classic turning hinges and hinges for tilt & turn fittings.



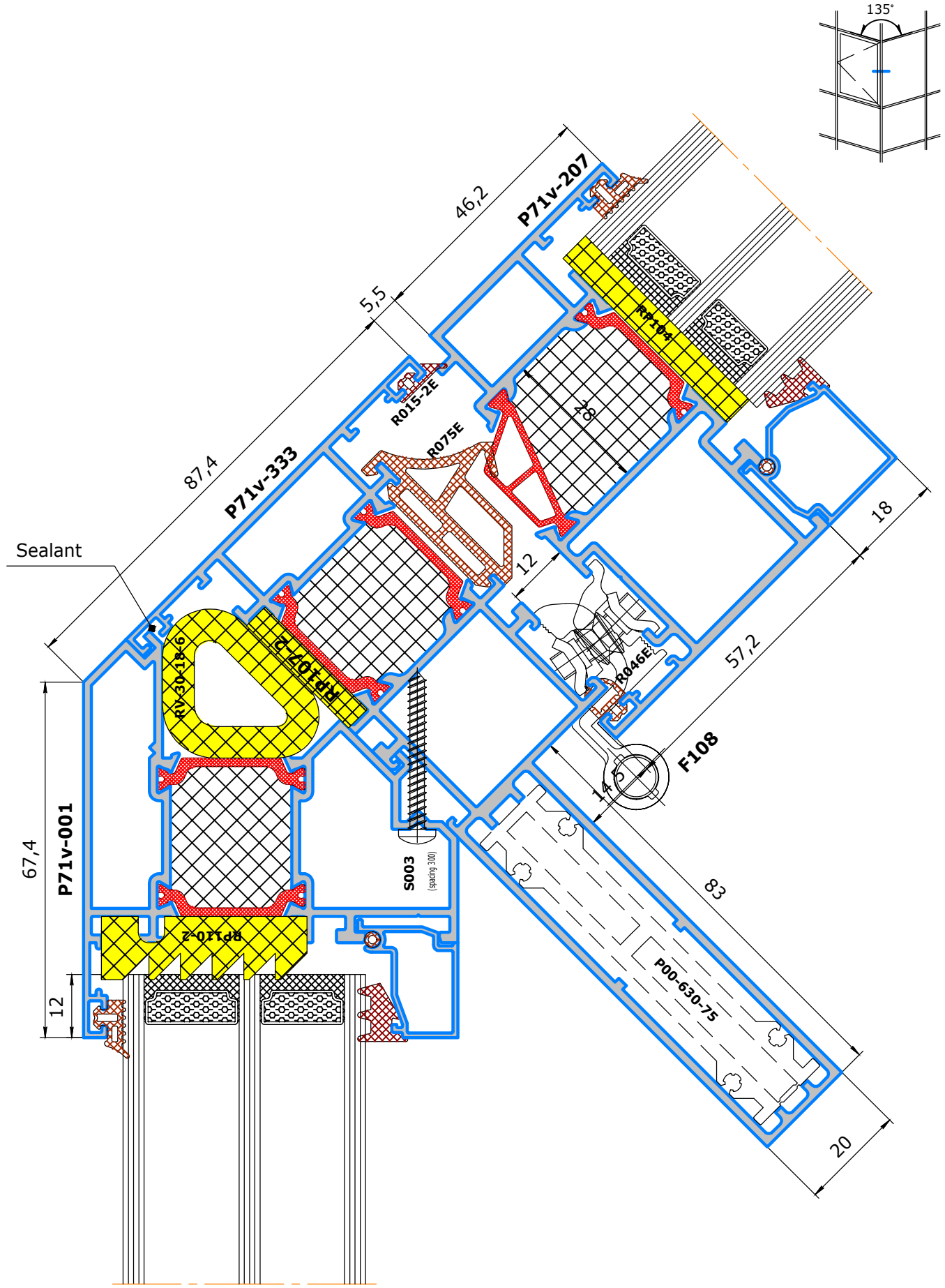


The P71v-354 and P71v-355 profiles with 25 mm flange can be equipped with the classic turning hinges and hinges for tilt & turn fittings.

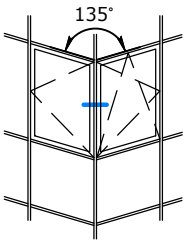


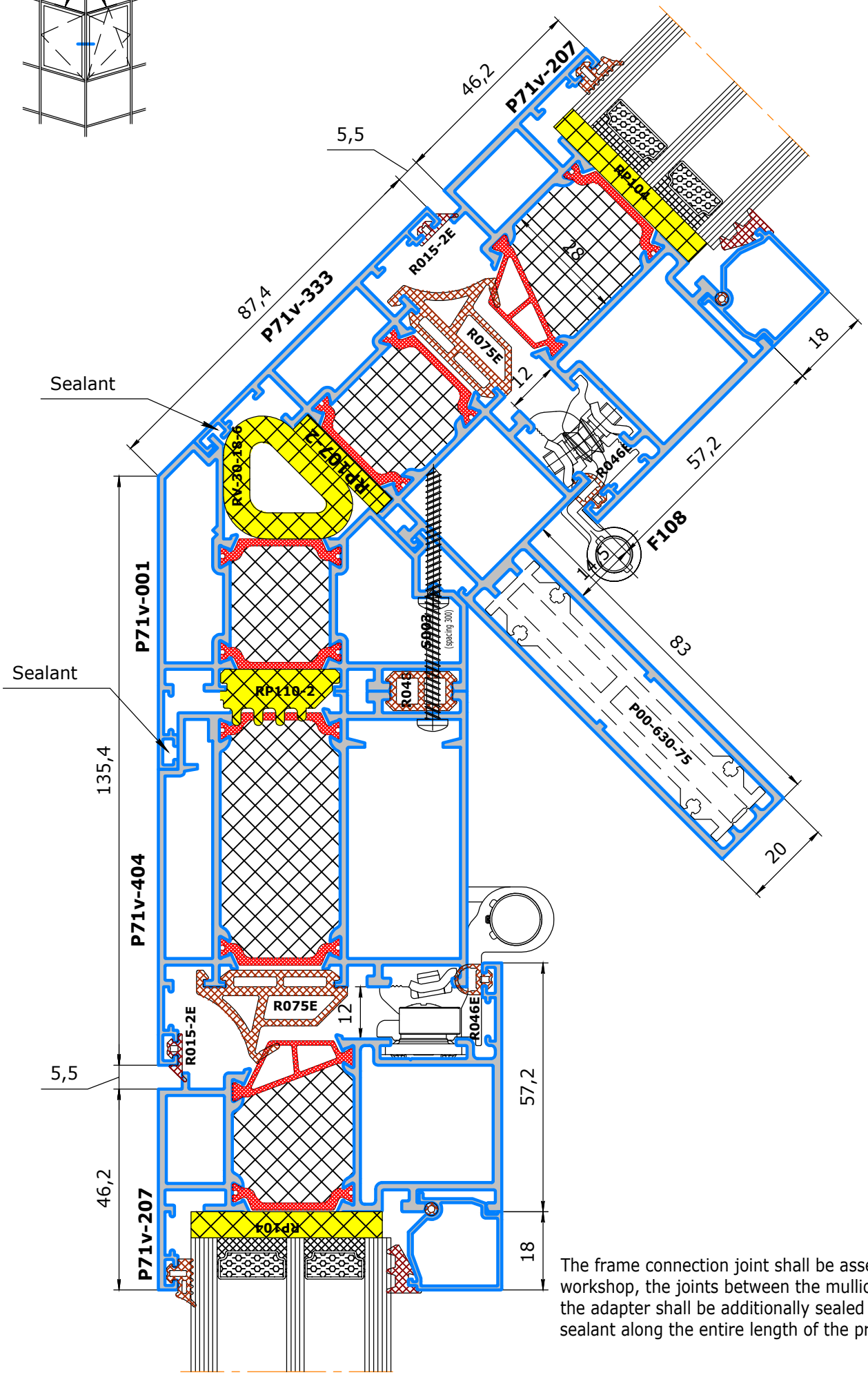


The frame connection joint shall be assembled in the workshop, the joints between the mullion profiles and the adapter shall be additionally sealed with neutral sealant along the entire length of the profiles.



The frame connection joint shall be assembled in the workshop, the joints between the mullion profiles and the adapter shall be additionally sealed with neutral sealant along the entire length of the profiles.

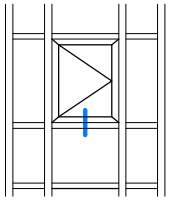


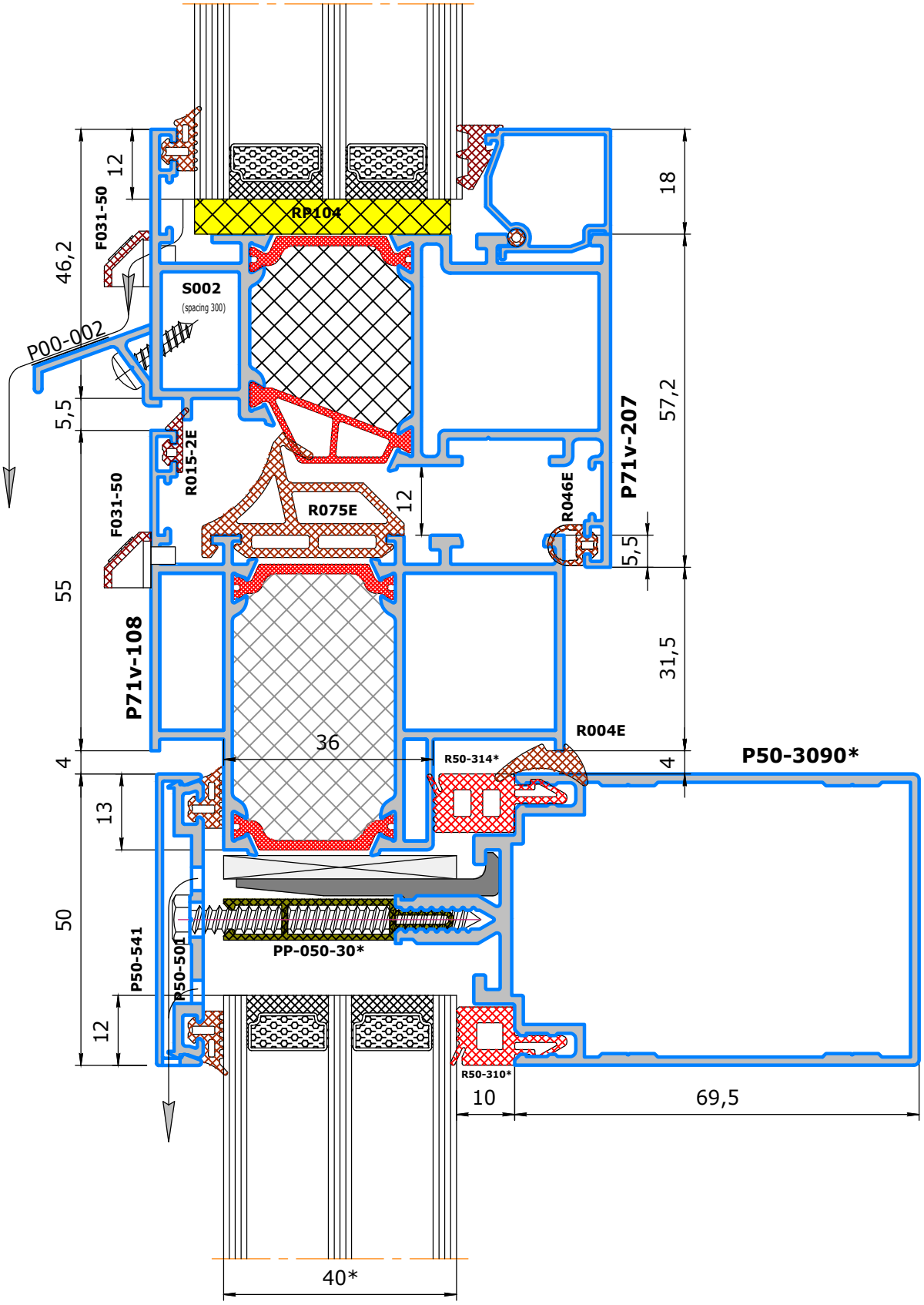


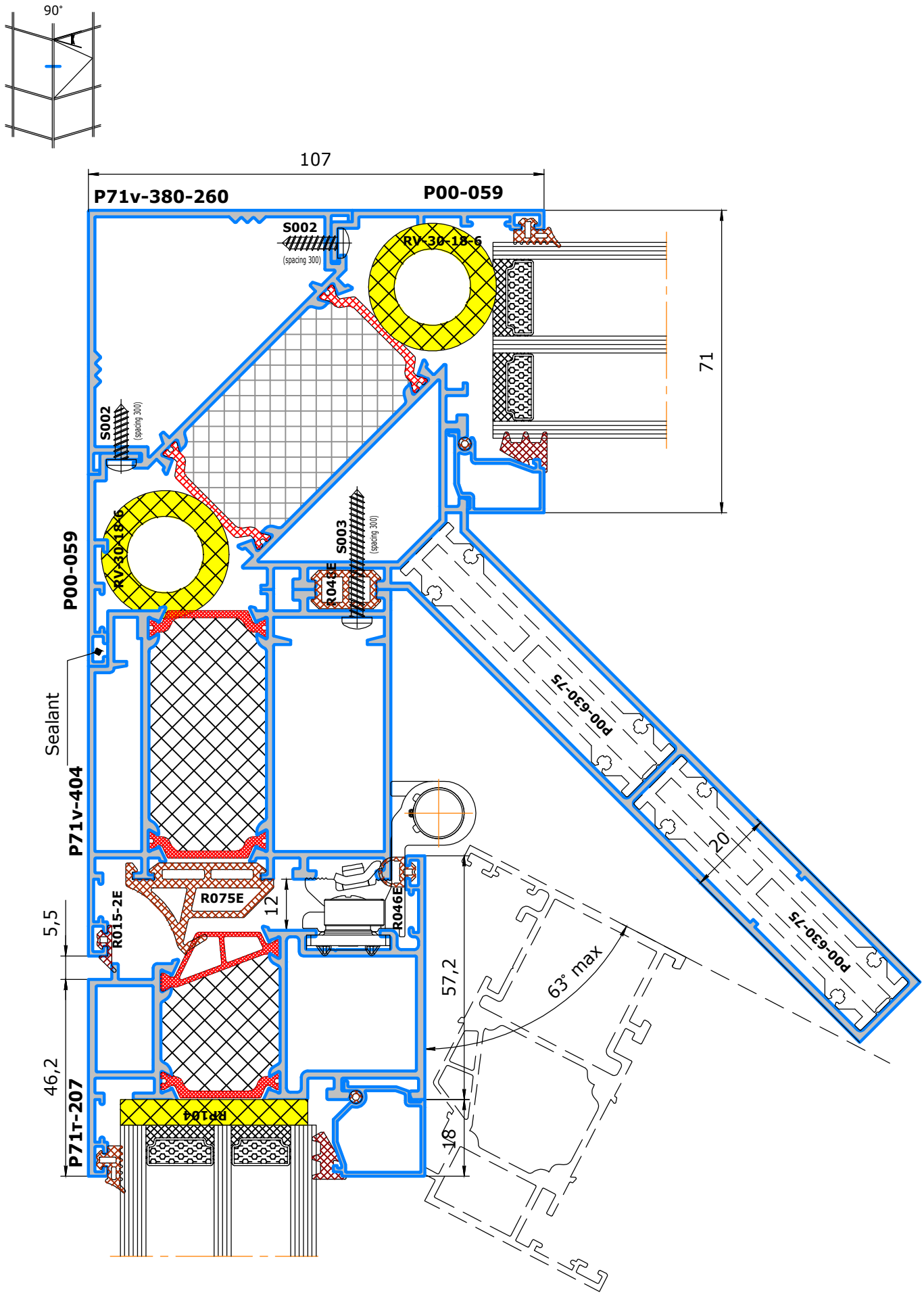
The frame connection joint shall be assembled in the workshop, the joints between the mullion profiles and the adapter shall be additionally sealed with neutral sealant along the entire length of the profiles.

Scale 1:1.2

Window frame integrated in the MastTech-50 façade system



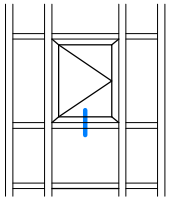


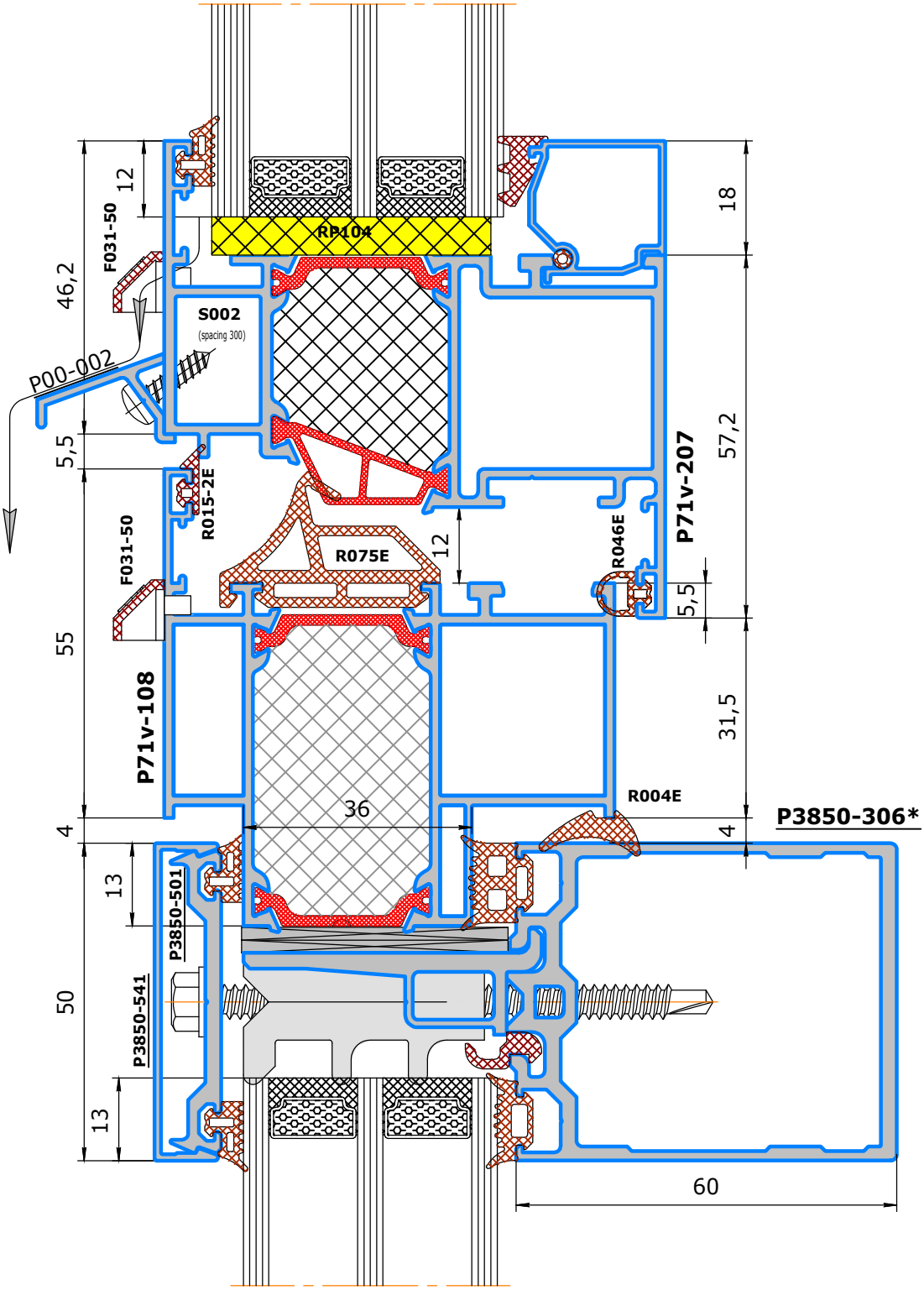


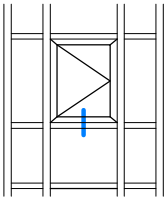
The frame connection joint shall be assembled in the workshop, the joints between the mullion profiles and the adapter shall be additionally sealed with neutral sealant along the entire length of the profiles.

Scale 1:1.2

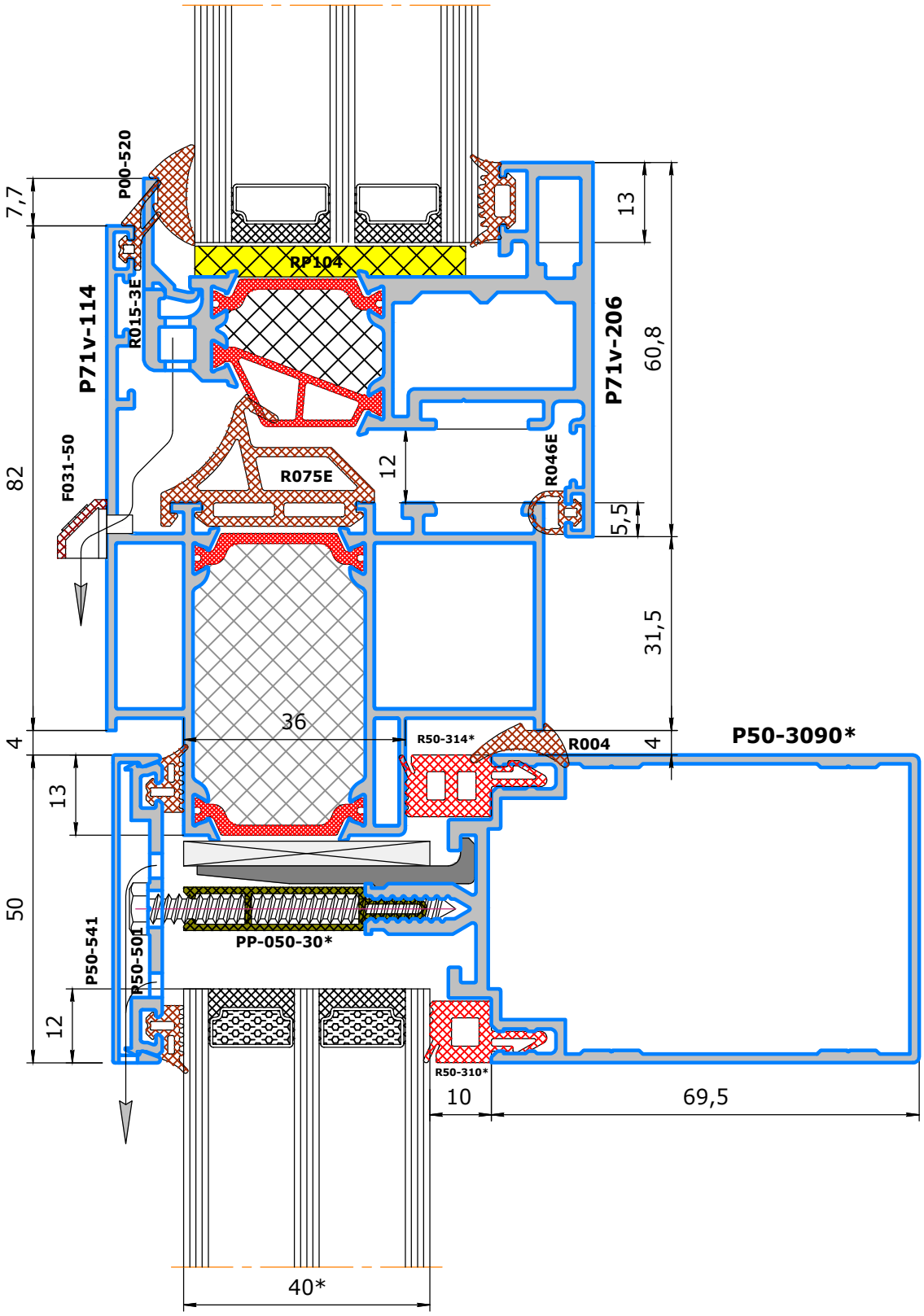
Window frame integrated in the MastTech-38 façade system



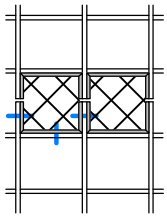




Window frame integrated in the MastTech-50 façade system

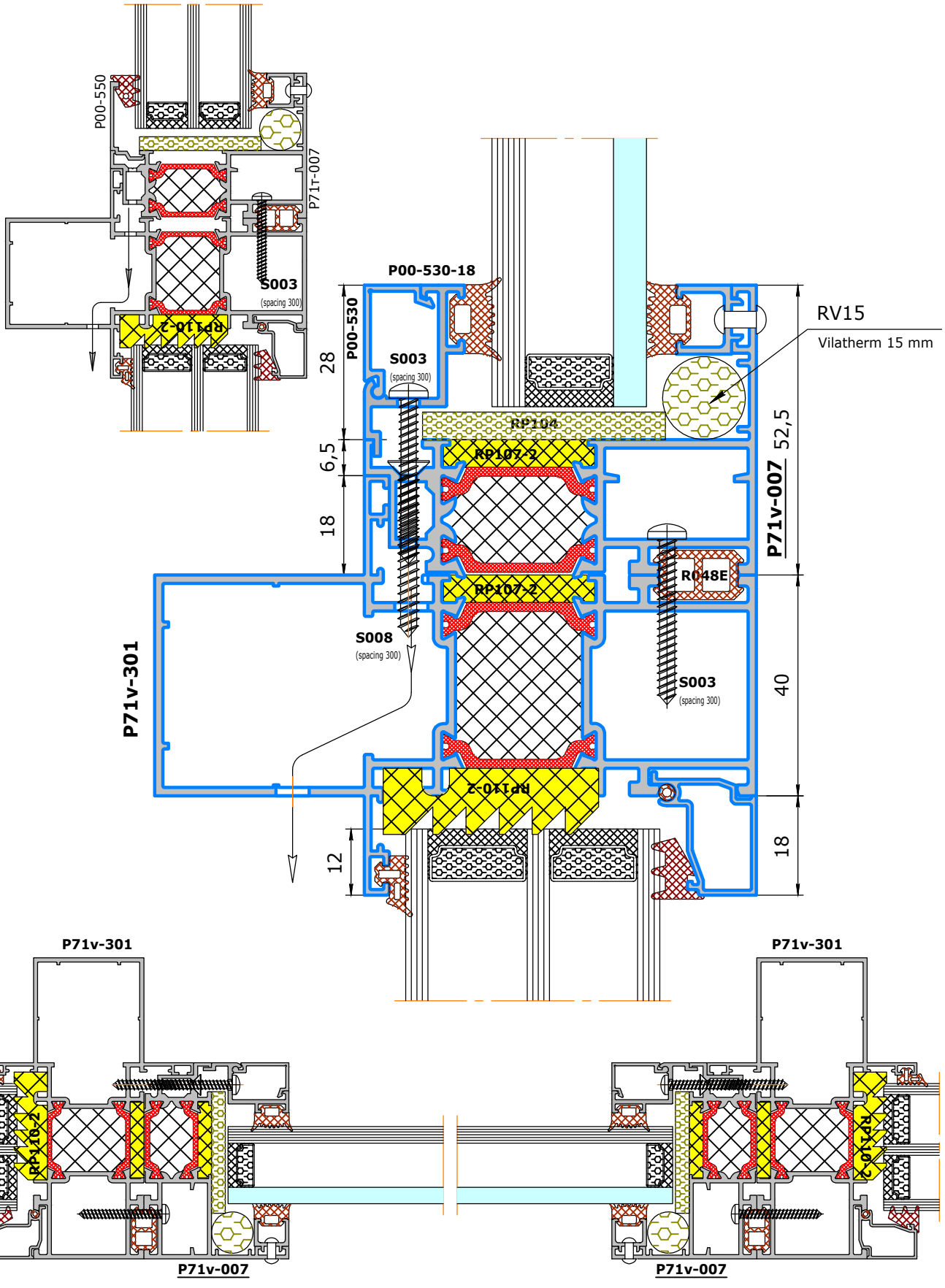


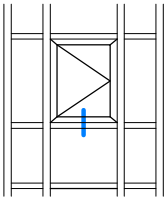
Glazing against the slabs Version 1 — semi-frame assembly



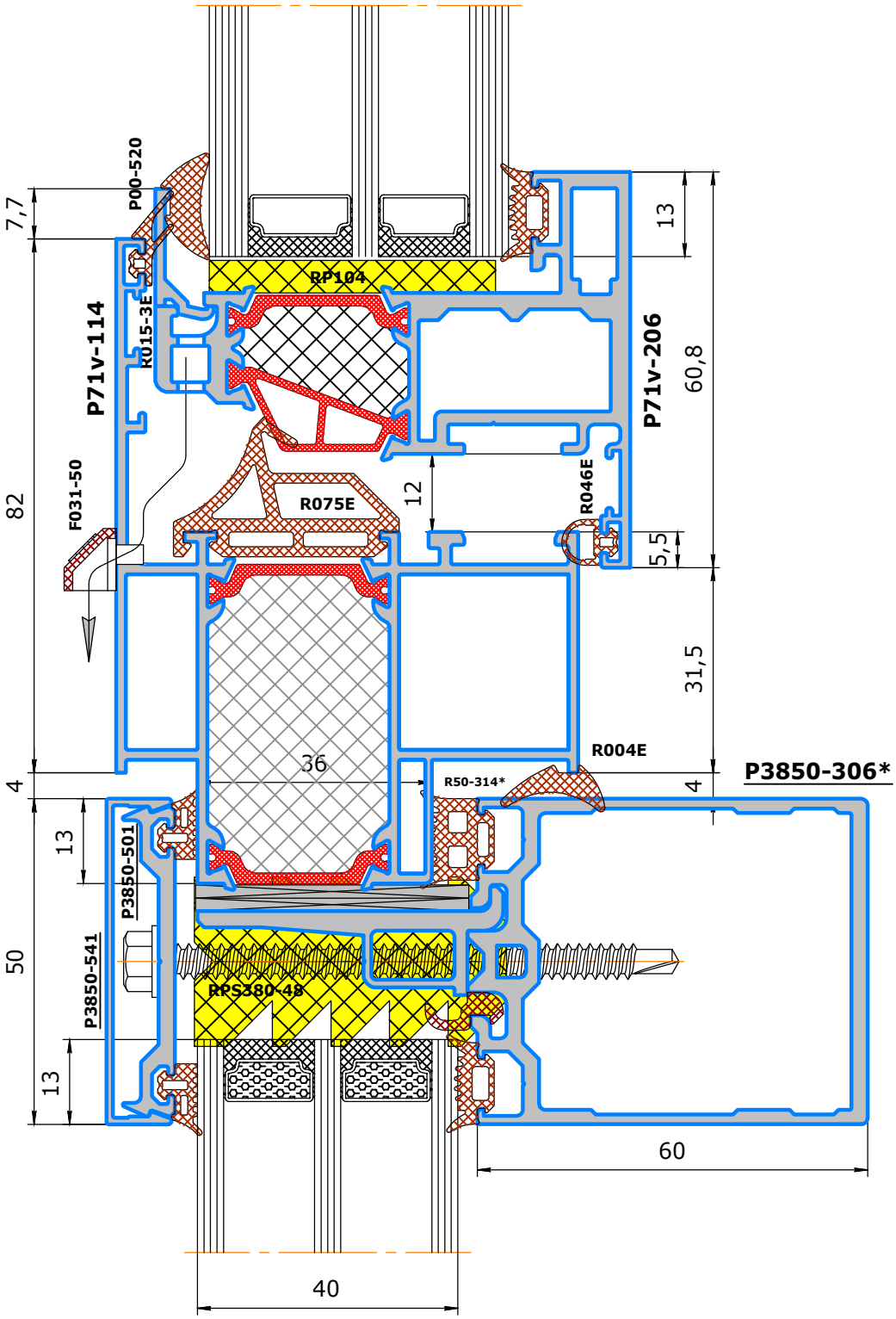
Assemble two half-frames from the turning adapter using angle-shaped embedded parts **C117-25** and **C117-5**. Insert the assembled half-frames into the stained-glass cell and secure them with self-tapping screws.

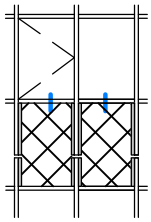
application of a wedged glazing bead P00-550

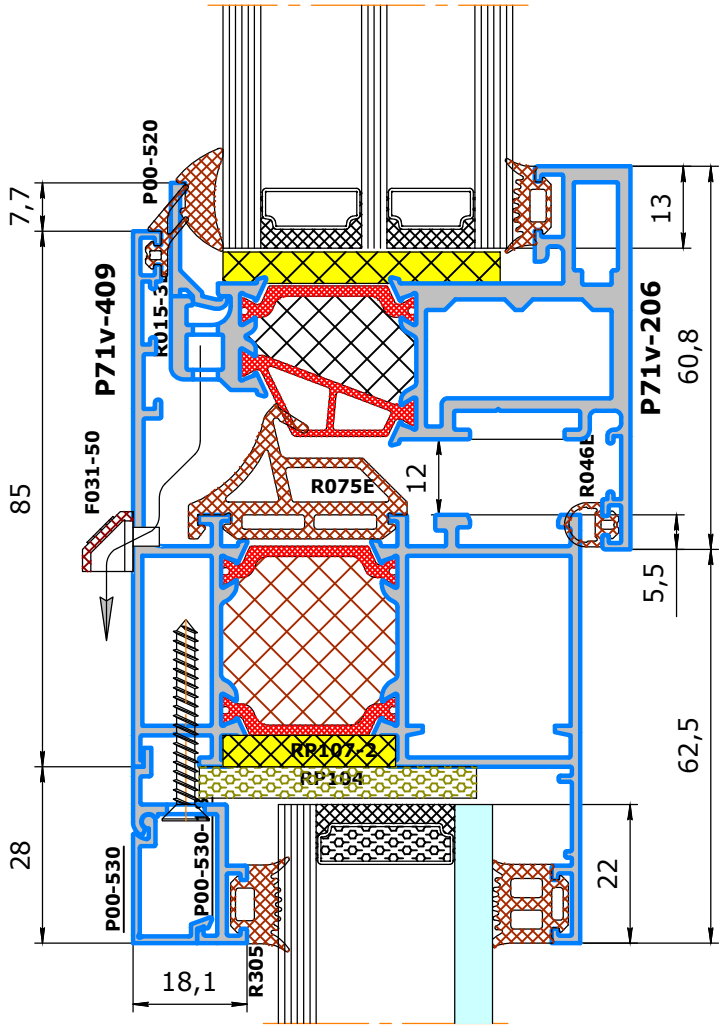




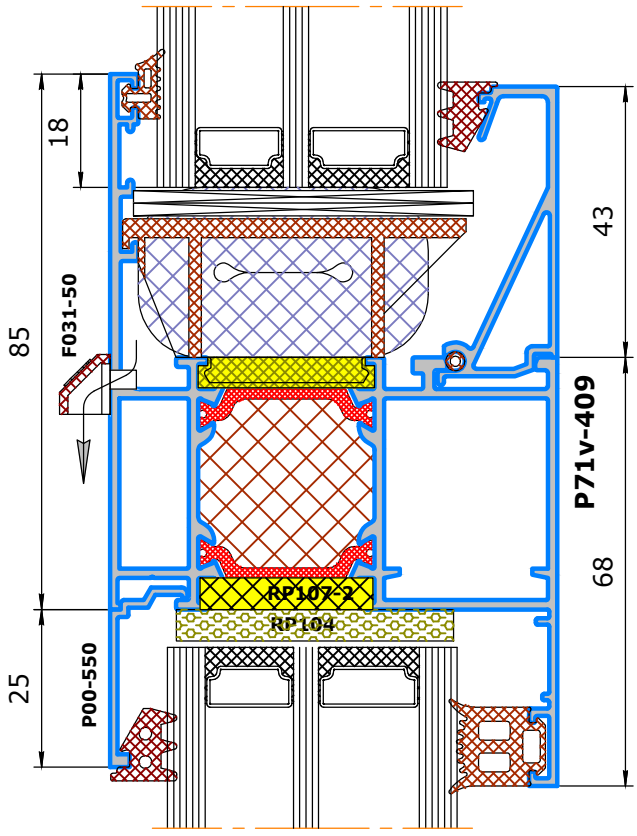
Window frame integrated in the MastTech-38 façade system

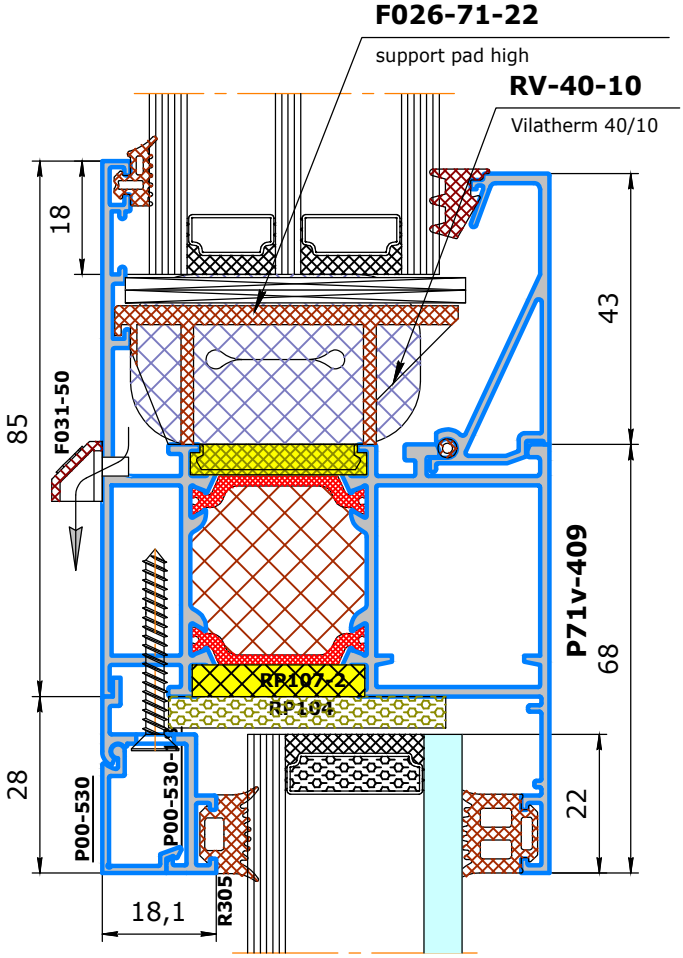




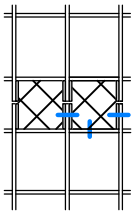


application of a wedged glazing bead P00-550



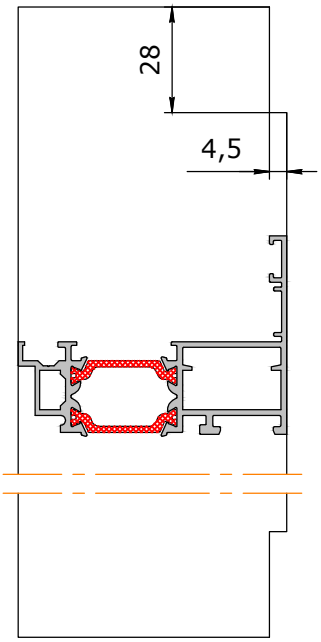


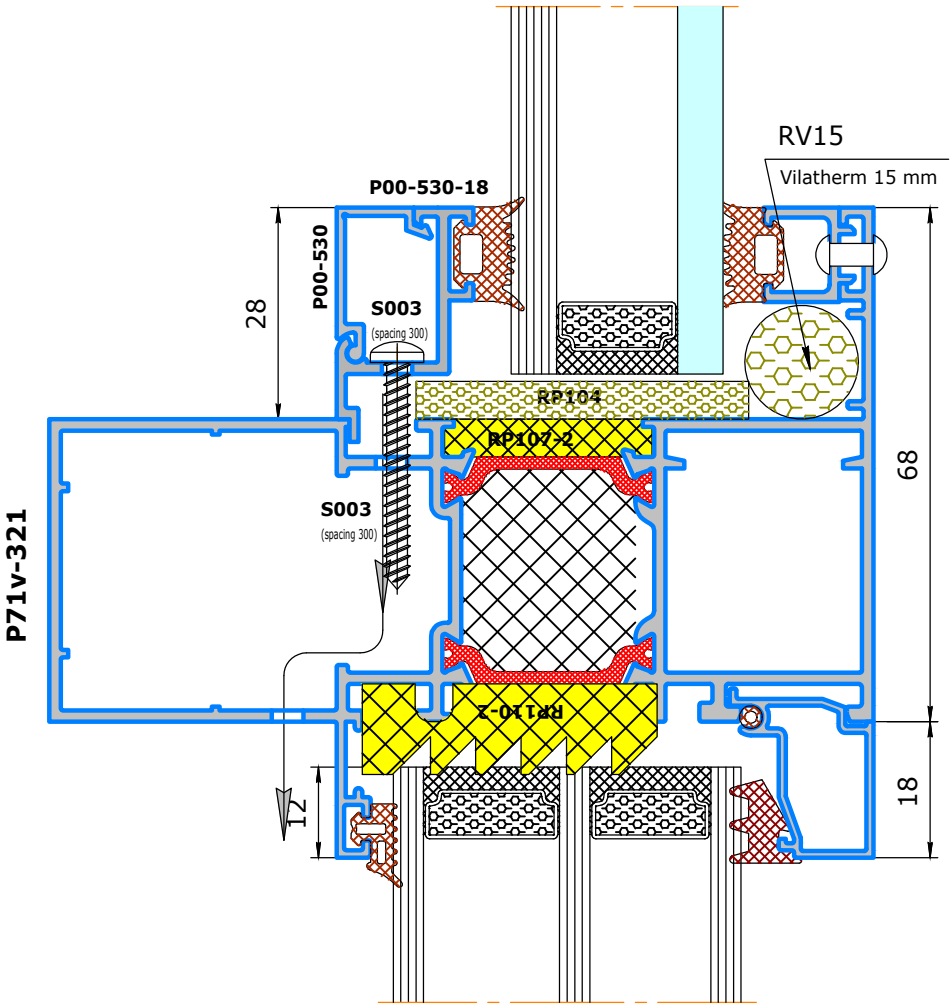
1:1,2



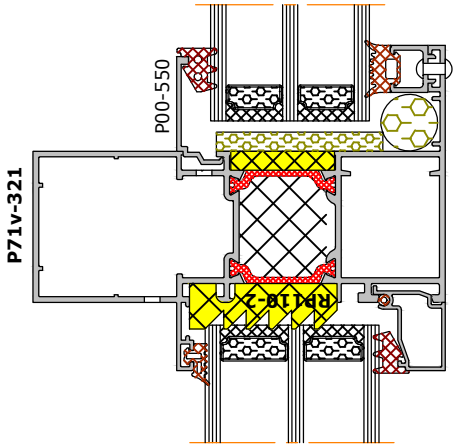
Glazing against the slabs Version 2 — using single-arm imposts

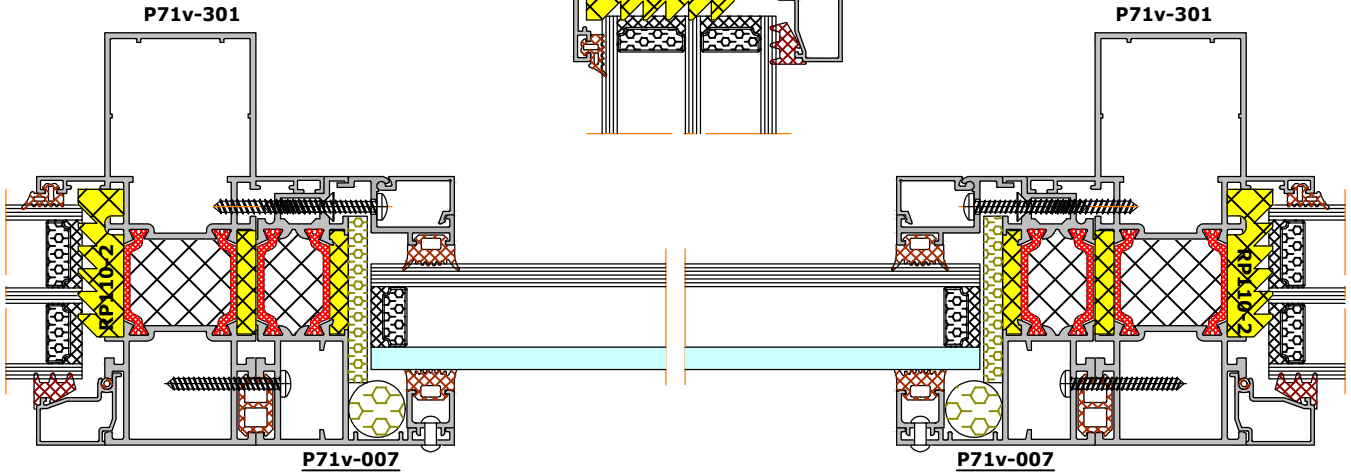
When using single-arm imposts, the turning adapter shall be only inserted into the pre-milled vertical mullions.

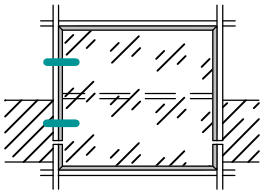


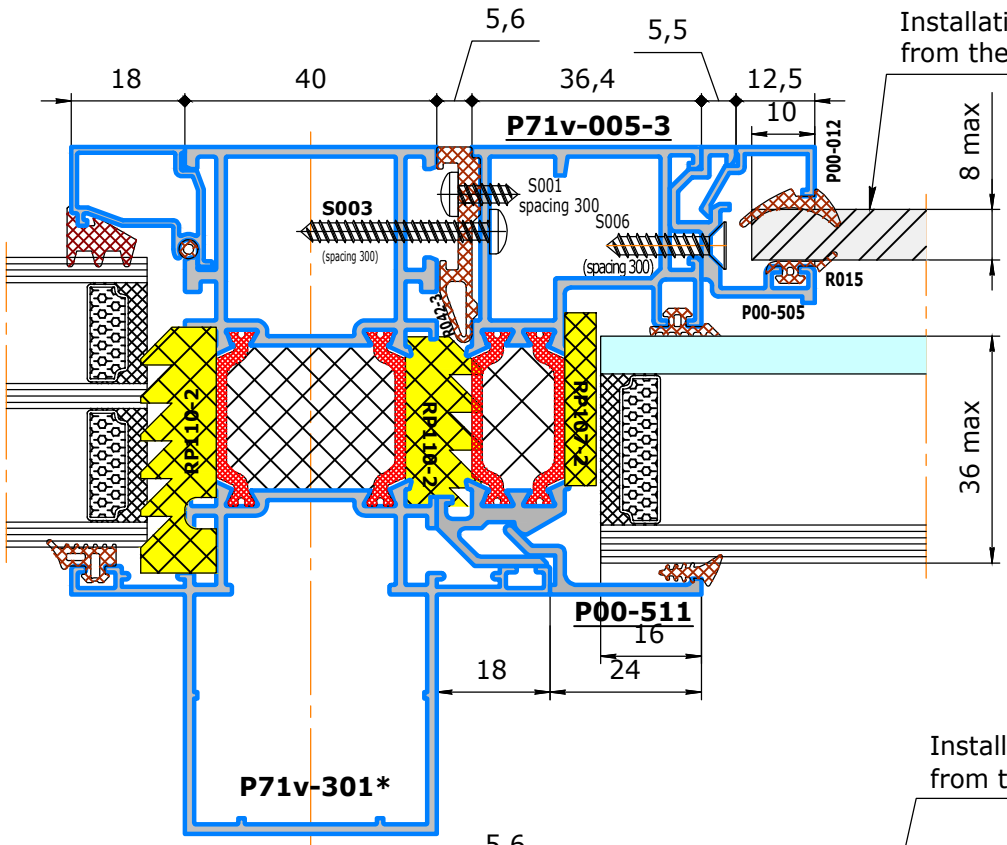


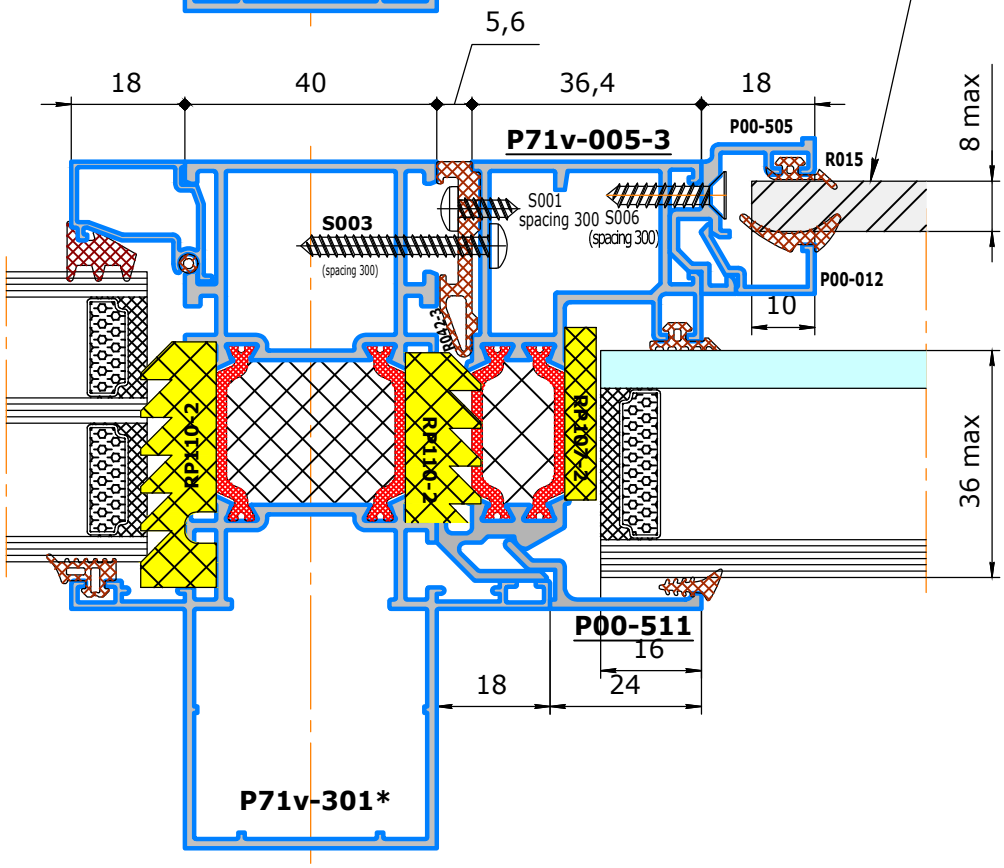
application of a wedged glazing bead P00-550



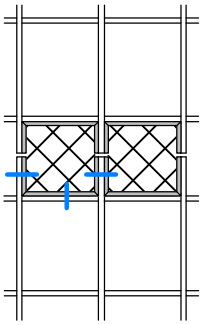


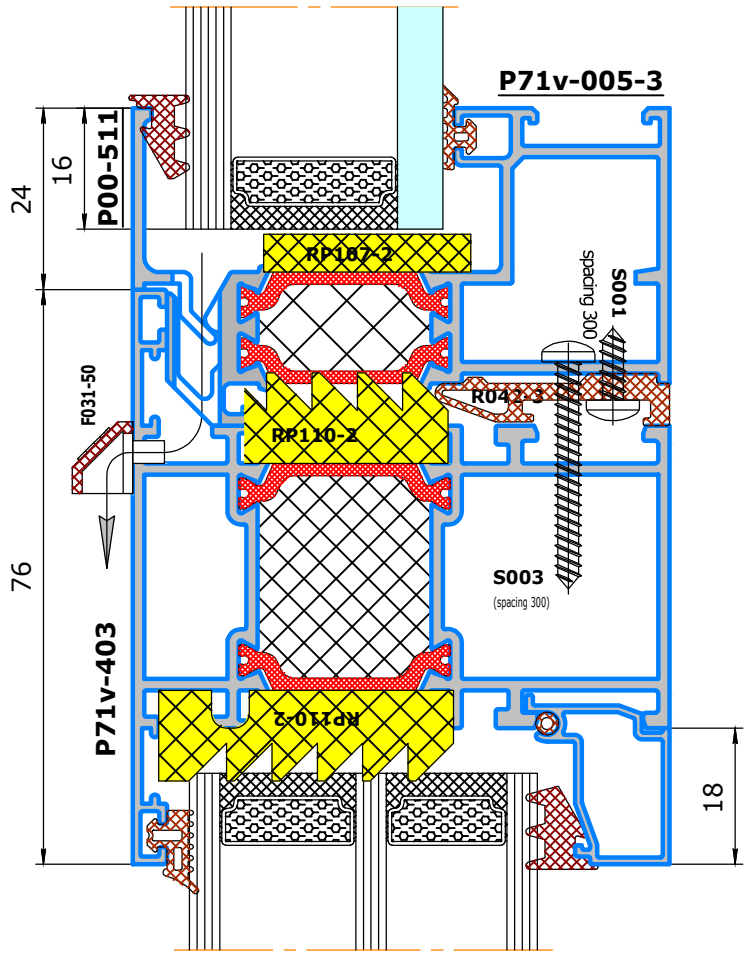


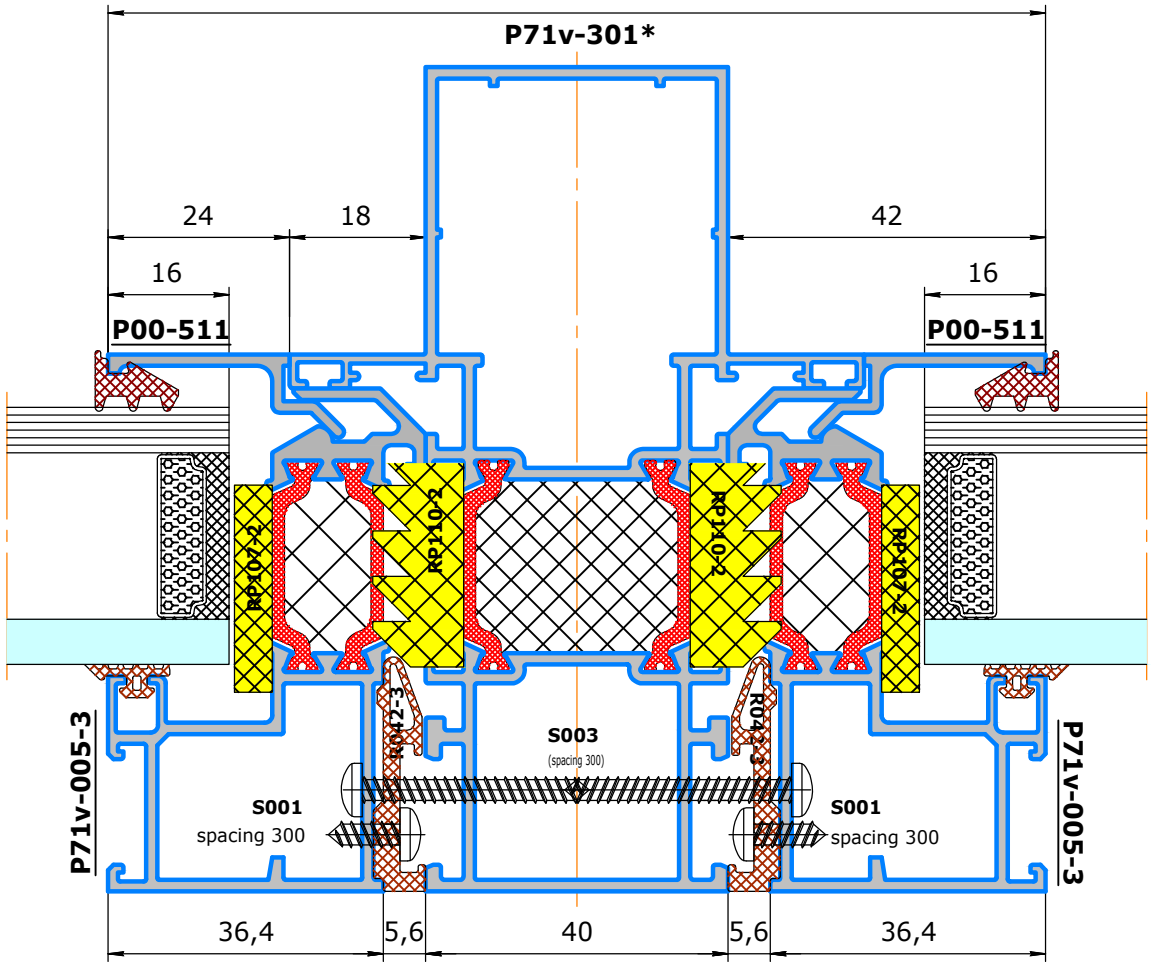

Installation of filling from the inside
5,6
5,5
18
40
36,4
12,5
10
P71v-005-3
P00-012
8 max
S001
spacing 300
S003
(spacing 300)
S006
(spacing 300)
R015
P00-505
RP10-2
RP10-2
RP10-2
36 max
P00-511
16
18
24
P71v-301*

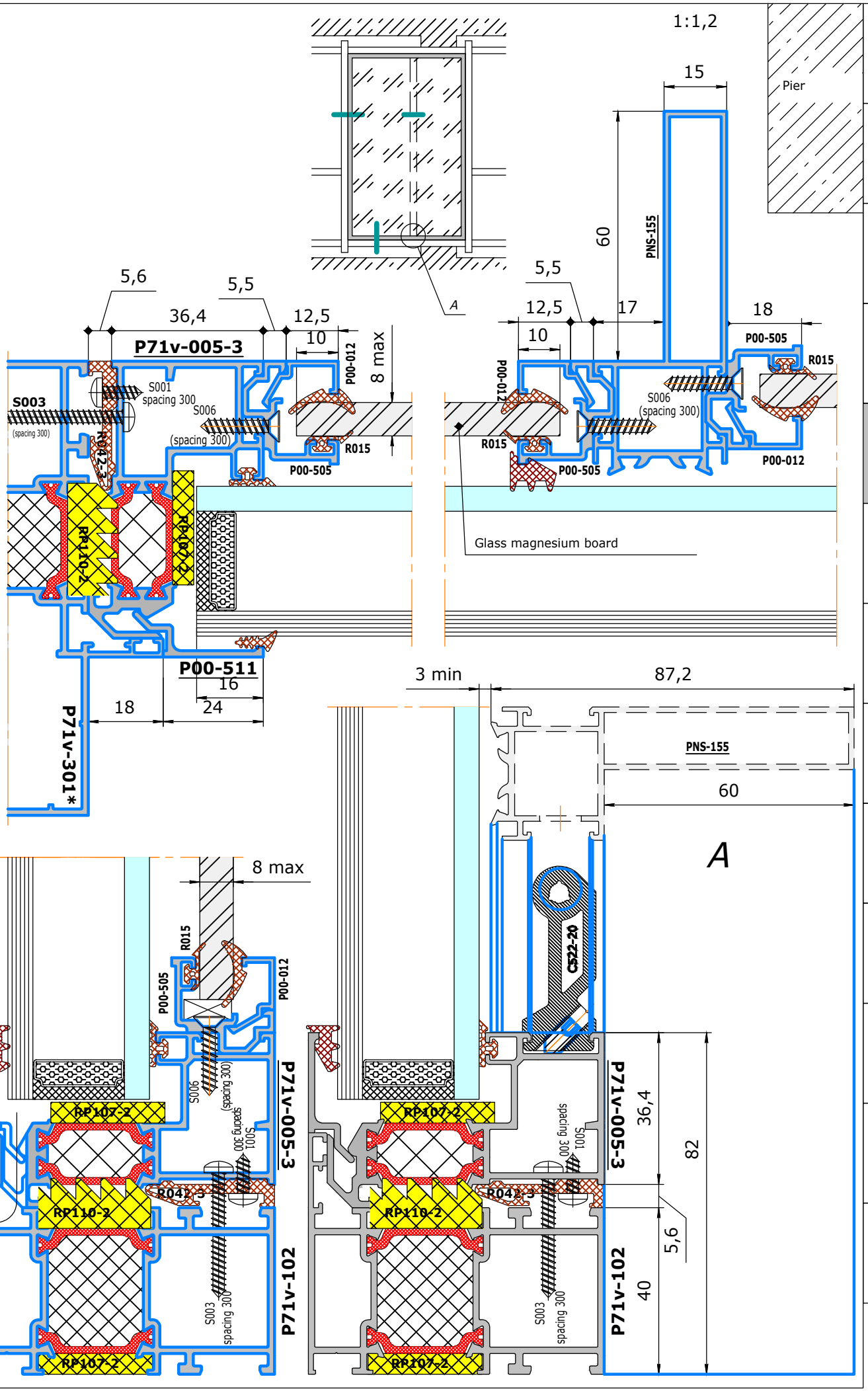

Installation of filling from the outside
5,6
18
40
36,4
18
P71v-005-3
P00-505
R015
8 max
S001
spacing 300
S003
(spacing 300)
S006
(spacing 300)
P00-012
10
RP10-2
RP10-2
RP10-2
36 max
P00-511
16
18
24
P71v-301*

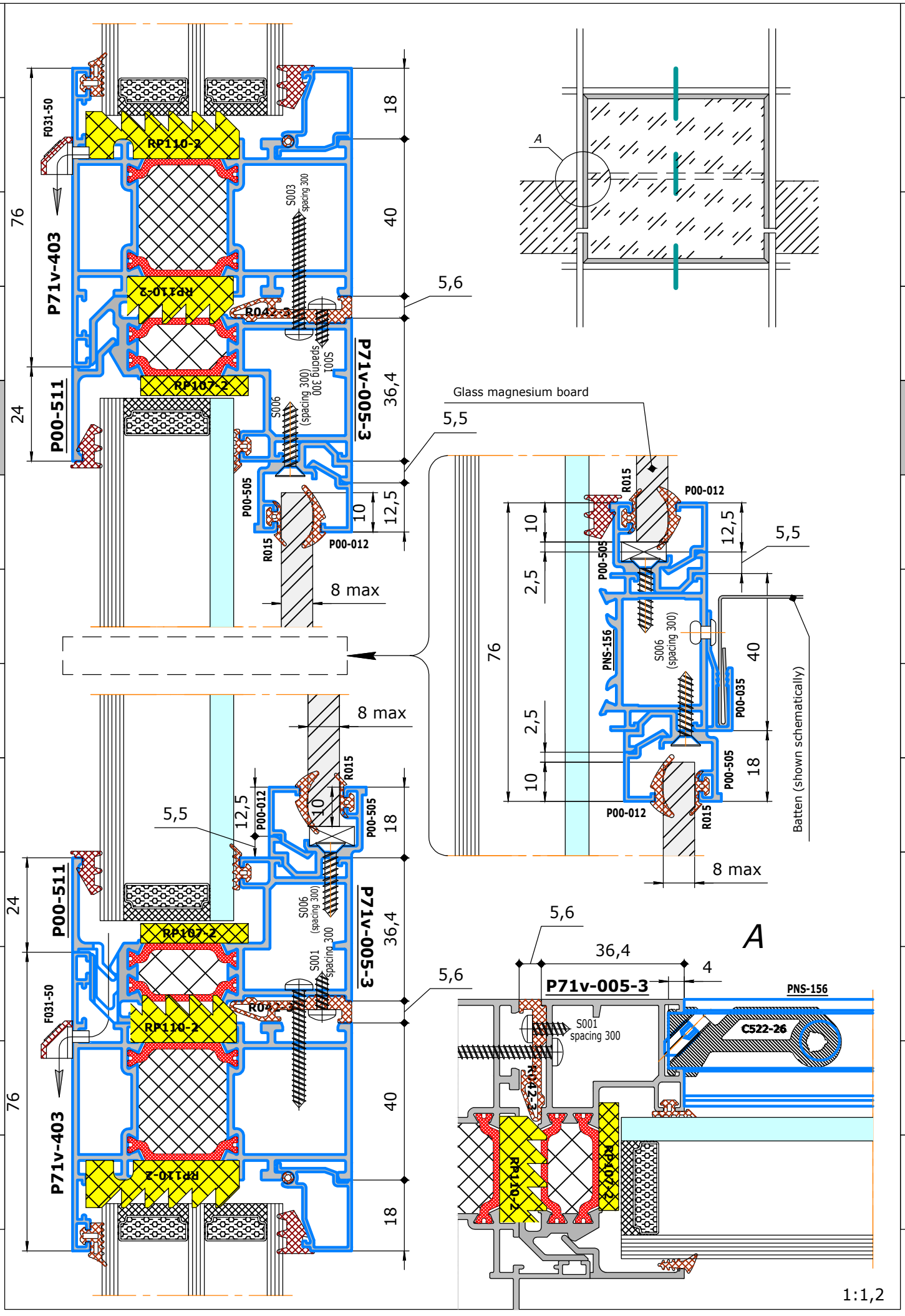
Glazing against the slabs version 3 — semi-frame assembly profile P71-005-3

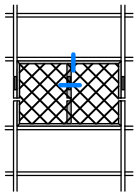


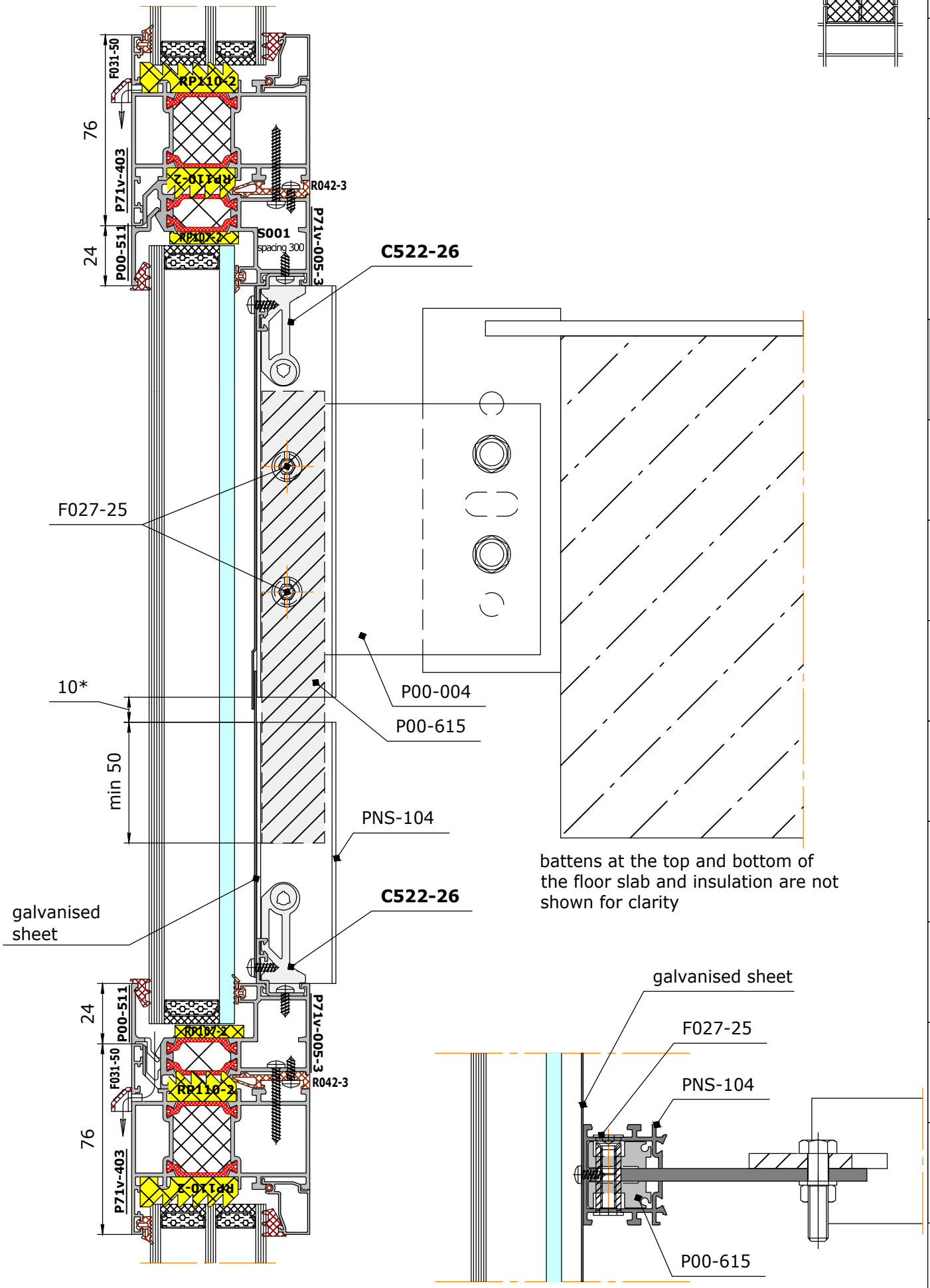





1:1,2
Pier
15
60
PNS-155
5,5
12,5
17
18
10
P00-505
R015
P00-012
S006
(spacing 300)
R015
P00-505
P00-012
Glass magnesium board
A
5,6
5,5
36,4
12,5
10
8 max
P71v-005-3
S001
spacing 300
S006
(spacing 300)
S003
(spacing 300)
R015
P00-505
RP107-2
RP110-2
P00-511
16
18
24
P71v-301*
3 min
87,2
PNS-155
60
A
8 max
R015
P00-505
P00-012
S006
(spacing 300)
S001
spacing 300
R042-3
RP107-2
RP110-2
S003
spacing 300
P71v-005-3
P71v-102
P00-511
24
58
F031-50
C522-20
36,4
82
5,6
40

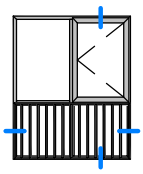

F031-50
RP110-2
P71v-403
RP110-2
S003
spacing 300
R042-3
S001
spacing 300
RP107-2
P00-511
S006
(spacing 300)
P71v-005-3
36,4
5,6
5,5
P00-505
R015
P00-012
10
12,5
8 max
76
24
18
40
A
Glass magnesium board
2,5
PNS-156
S006
(spacing 300)
P00-035
Batten (shown schematically)
C522-26
P71v-005-3
4
S001
spacing 300
R042-3
RP107-2
RP110-2
1:1,2

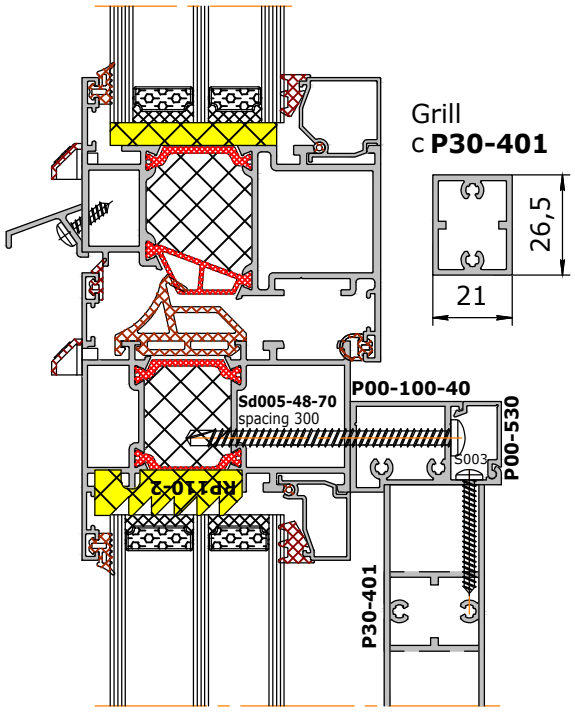


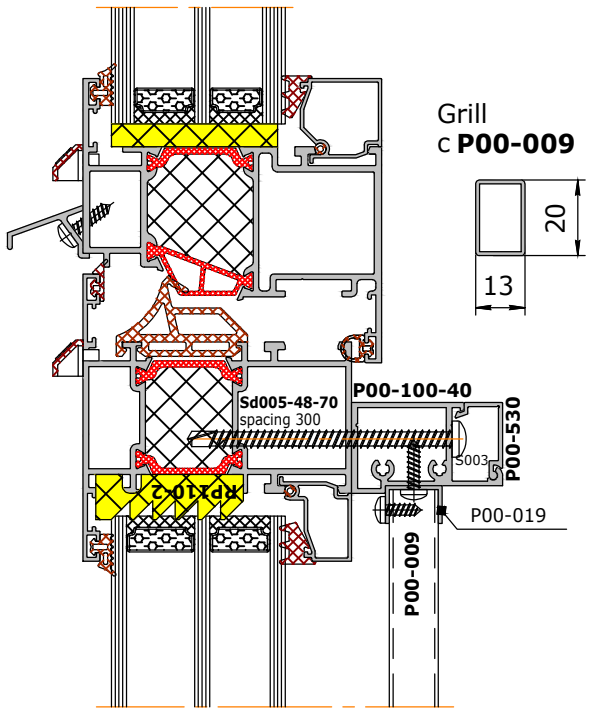


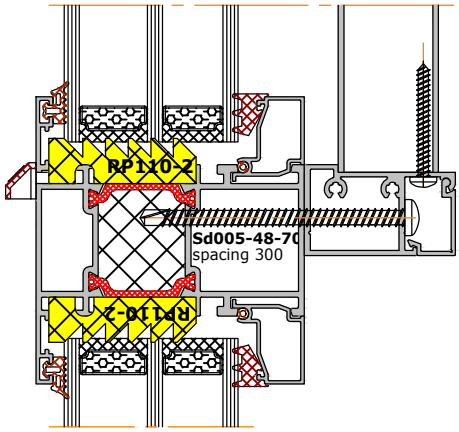
battens at the top and bottom of the floor slab and insulation are not shown for clarity

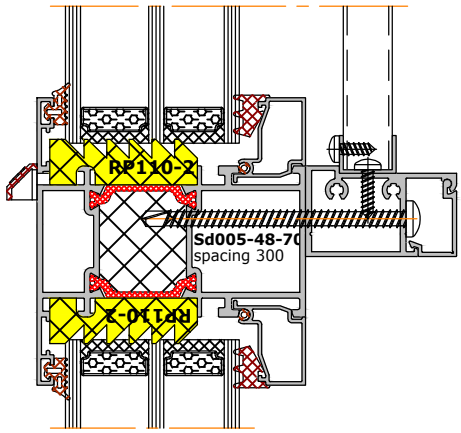
Internal impost reinforcement. Installation of the internal grill

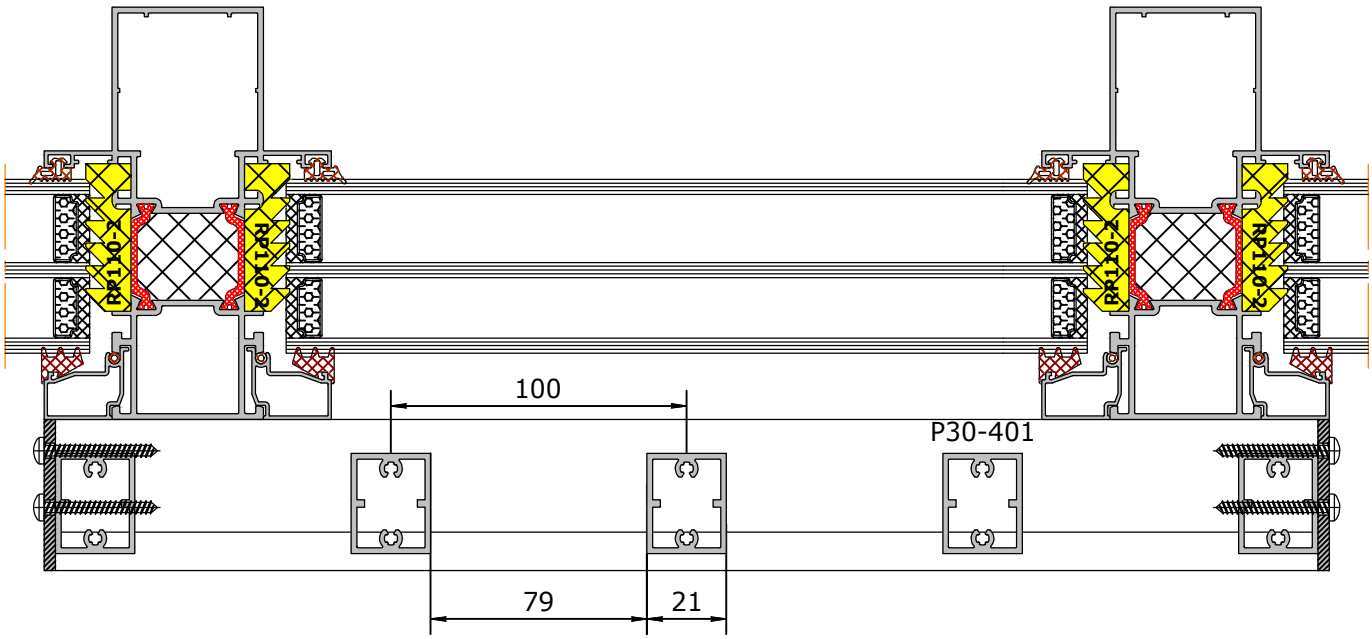


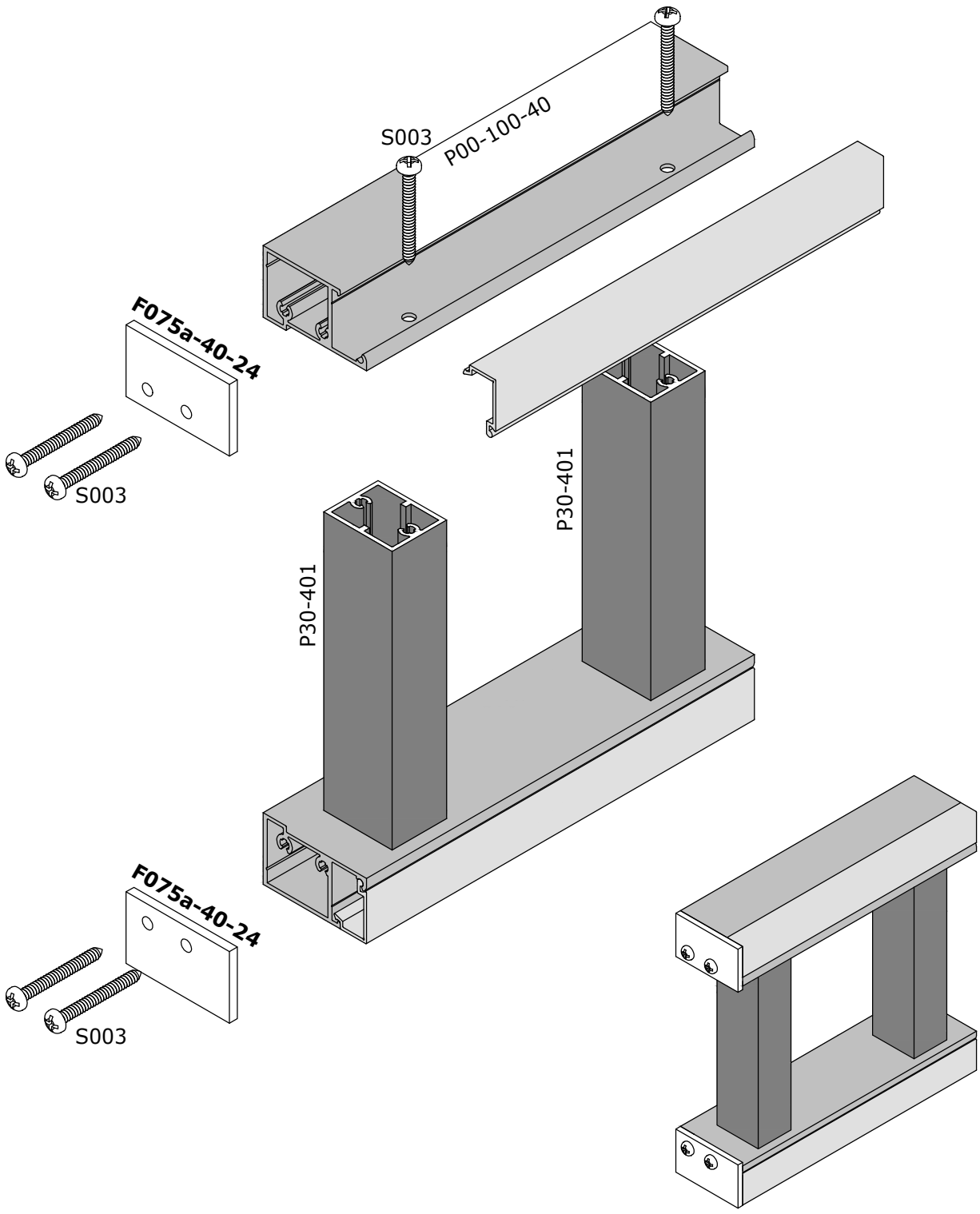


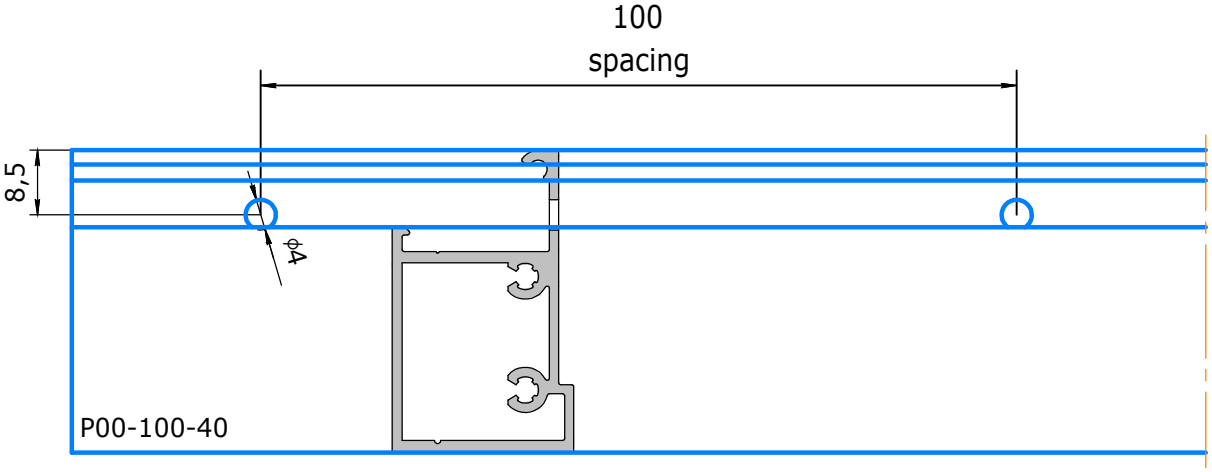


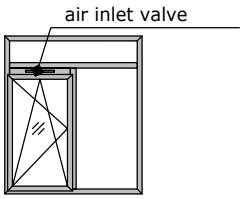


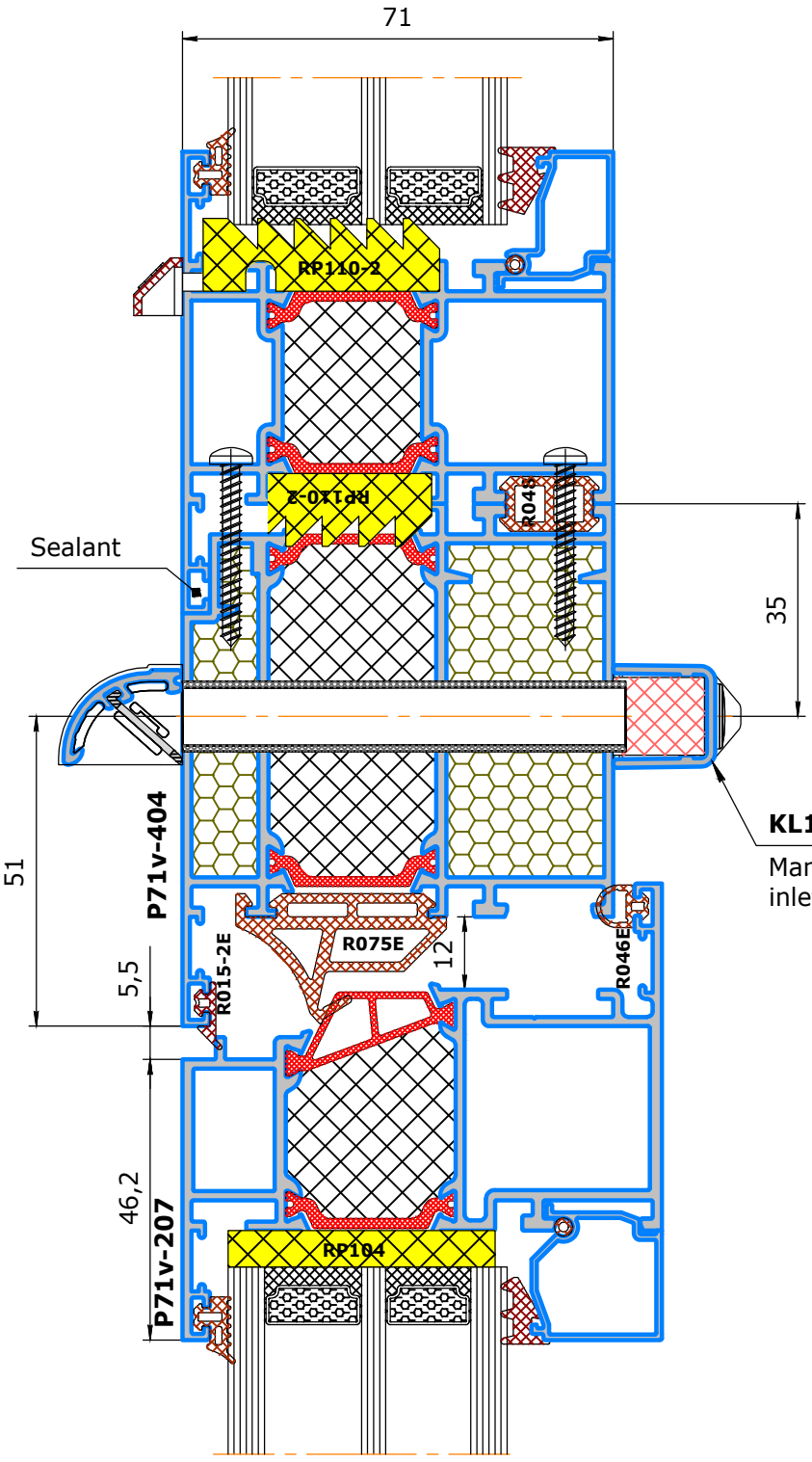





S003
P00-100-40
F075a-40-24
S003
P30-401
P30-401
F075a-40-24
S003


100
spacing
8,5
ϕ4
P00-100-40



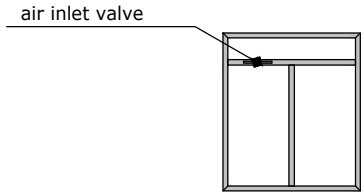


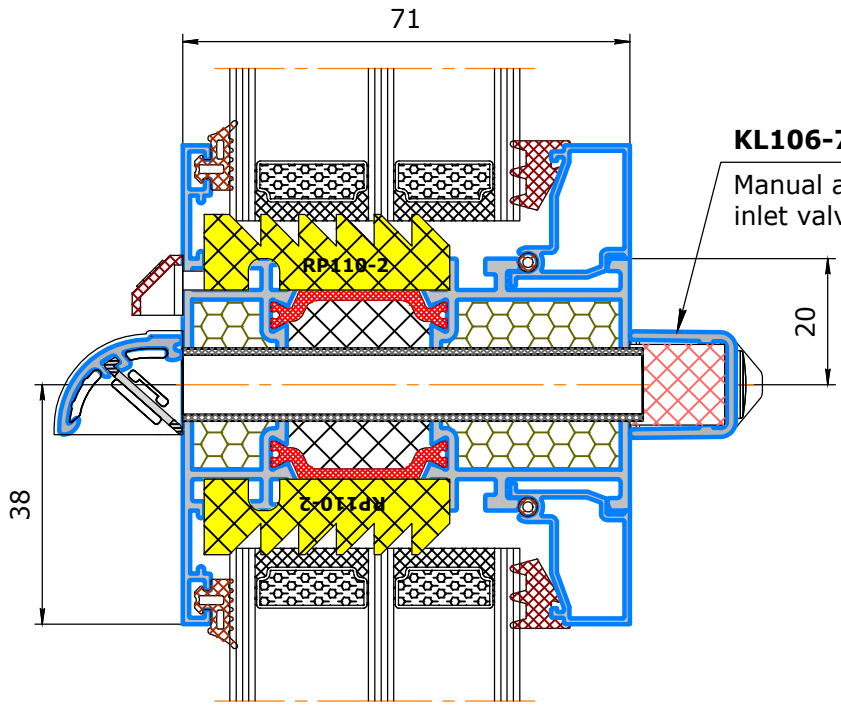
KL106-71-xxx

Manual aluminium air inlet valve

1:1,2

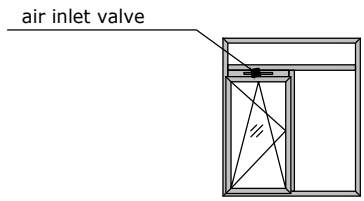
It is recommended to additionally seal the joints between the impost profiles and the expander profiles with a neutral sealant along the entire length of the profiles.

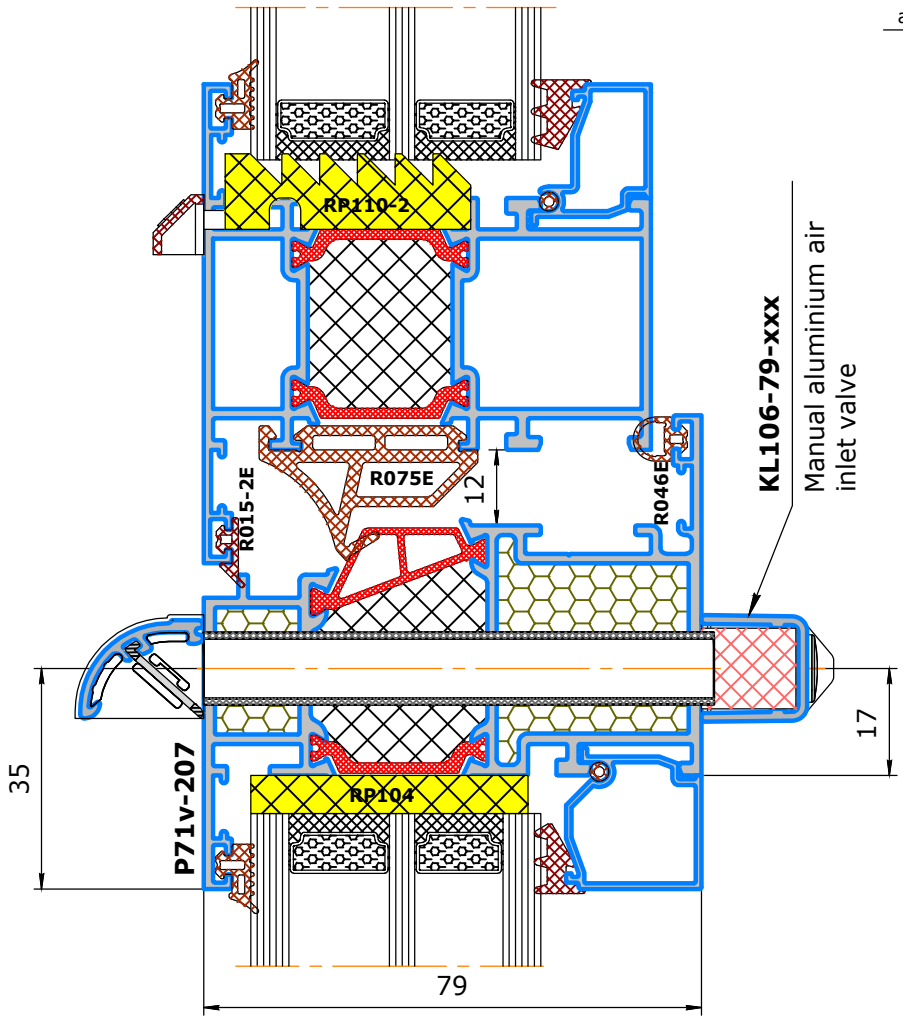




KL106-71-xxx

Manual aluminium air inlet valve

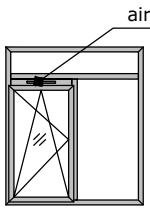


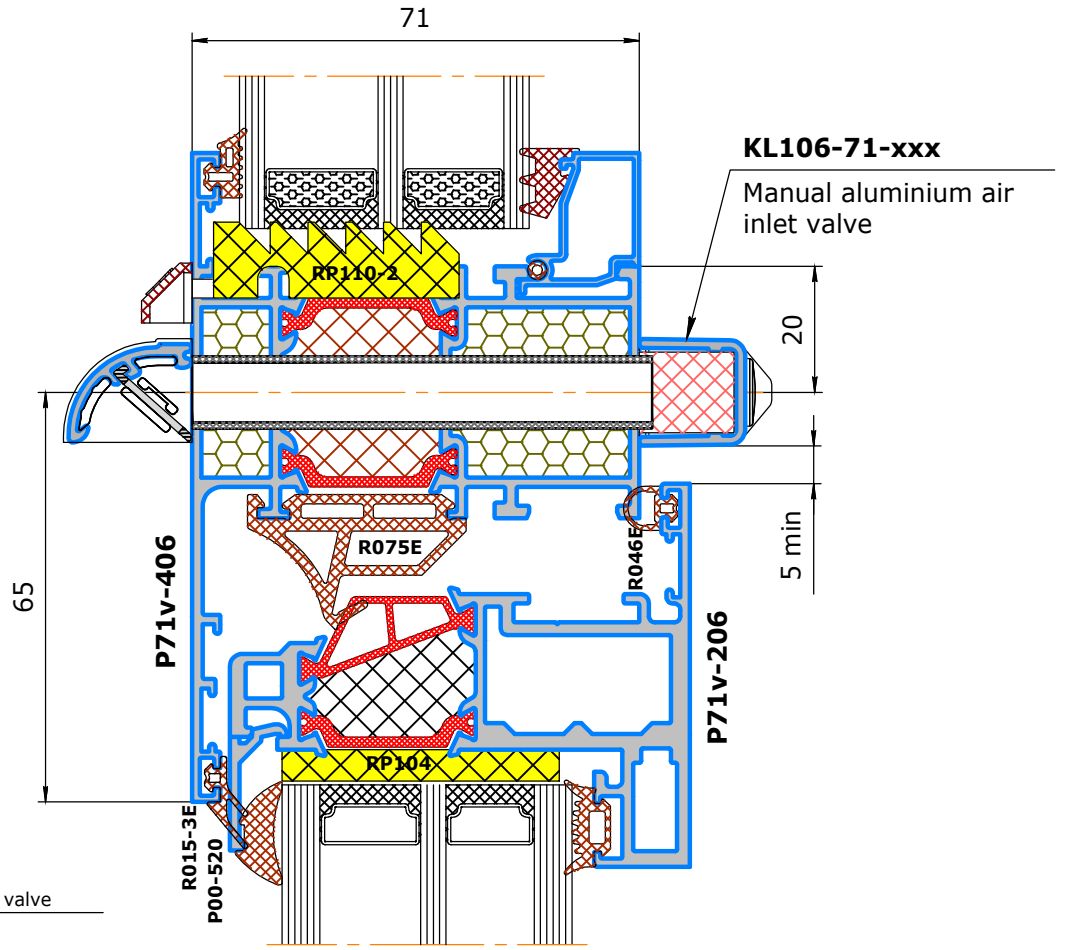


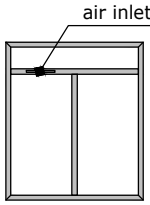
KL106-79-xxx

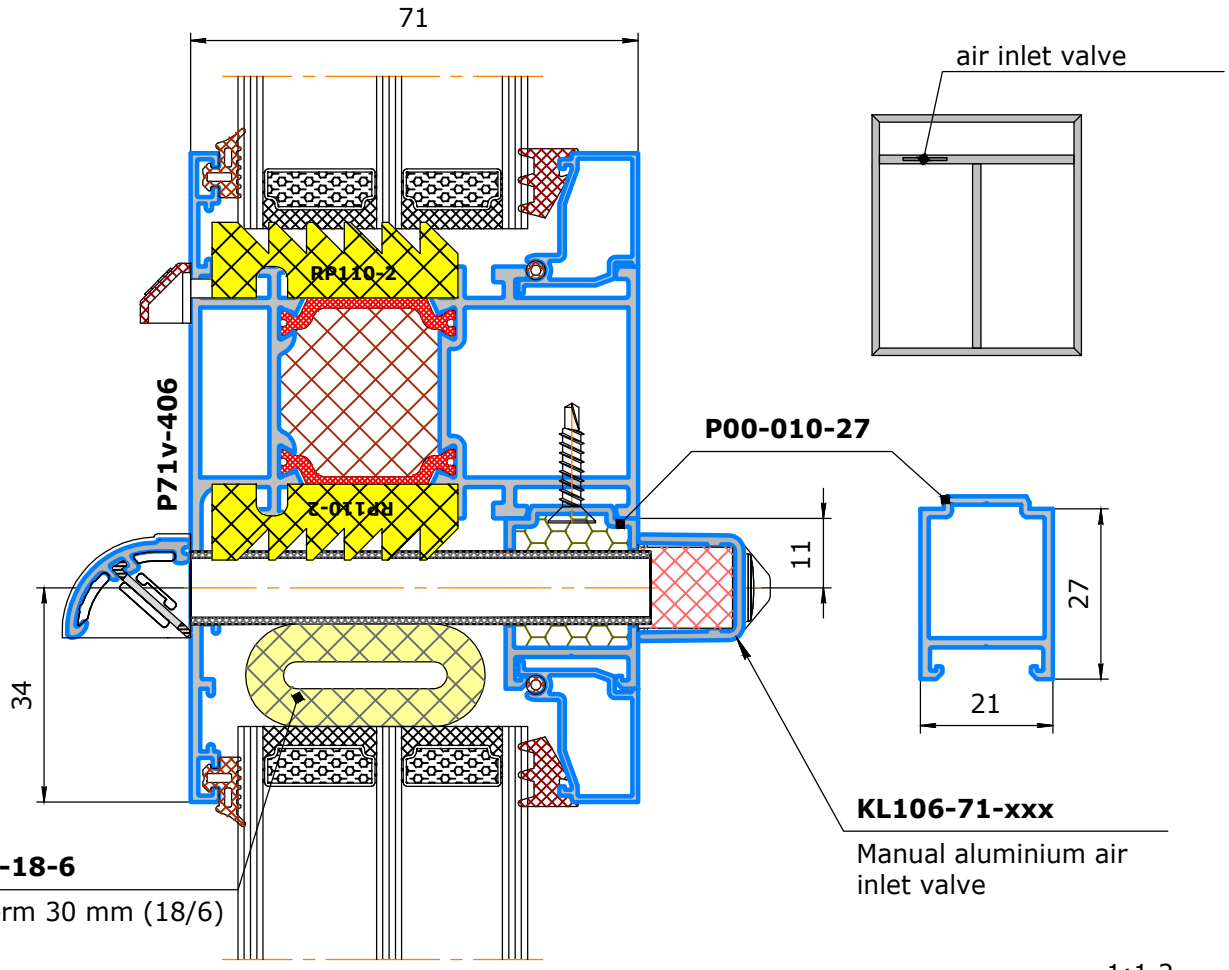
Manual aluminium air inlet valve

1:1,2


air inlet valve

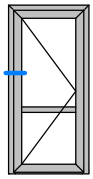

71
KL106-71-xxx
Manual aluminium air inlet valve
RP110-2
20
5 min
65
P71v-406
R075E
R046E
P71v-206
RP104
R015-3E
P00-520

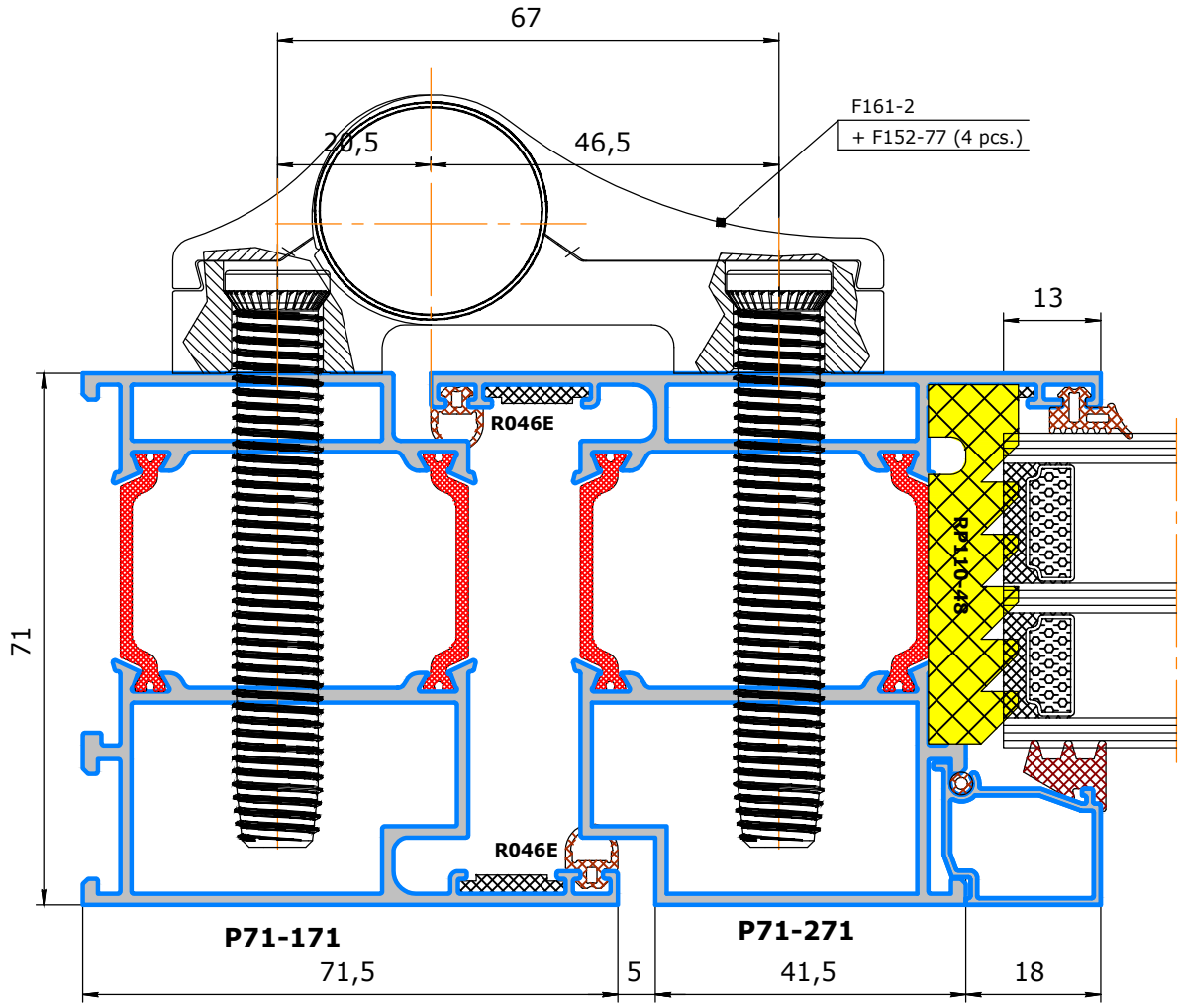

air inlet valve

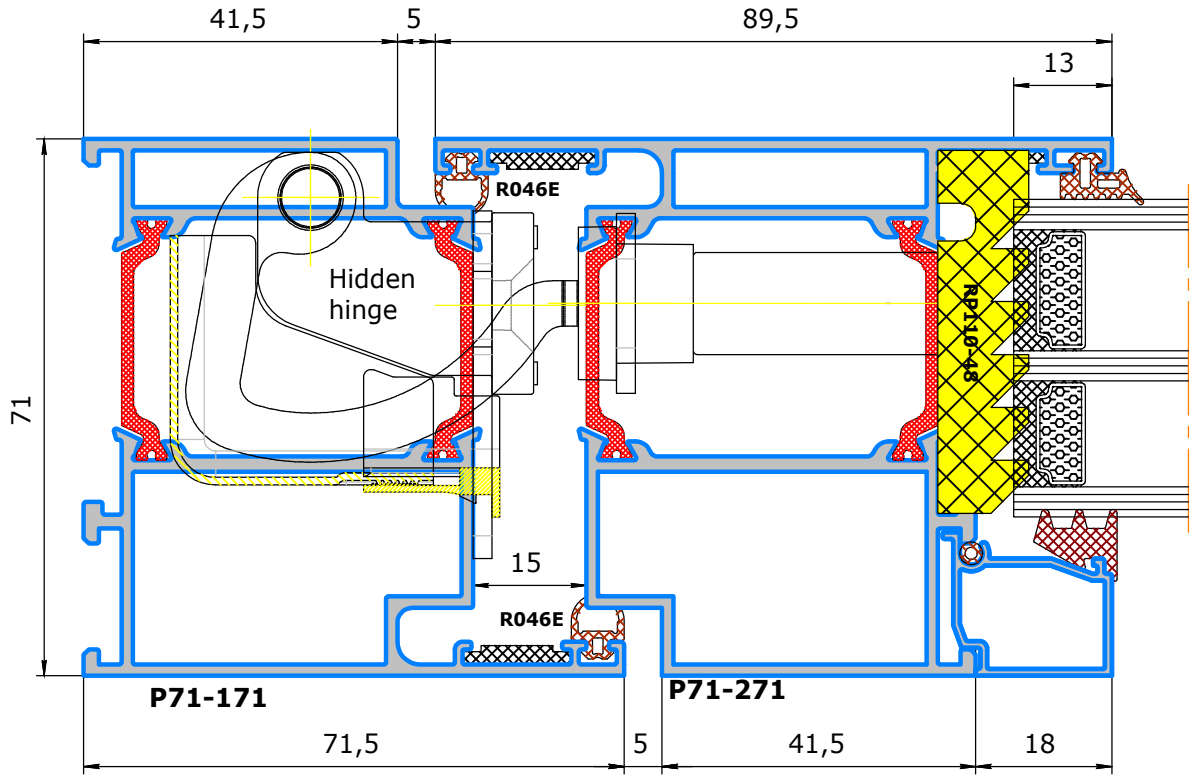

71
air inlet valve
RP110-2
P71v-406
P00-010-27
RP110-2
11
27
21
34
KL106-71-xxx
Manual aluminium air inlet valve
RV-30-18-6
Vilatherm 30 mm (18/6)

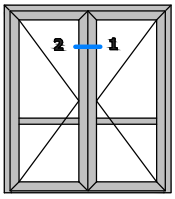
1:1,2

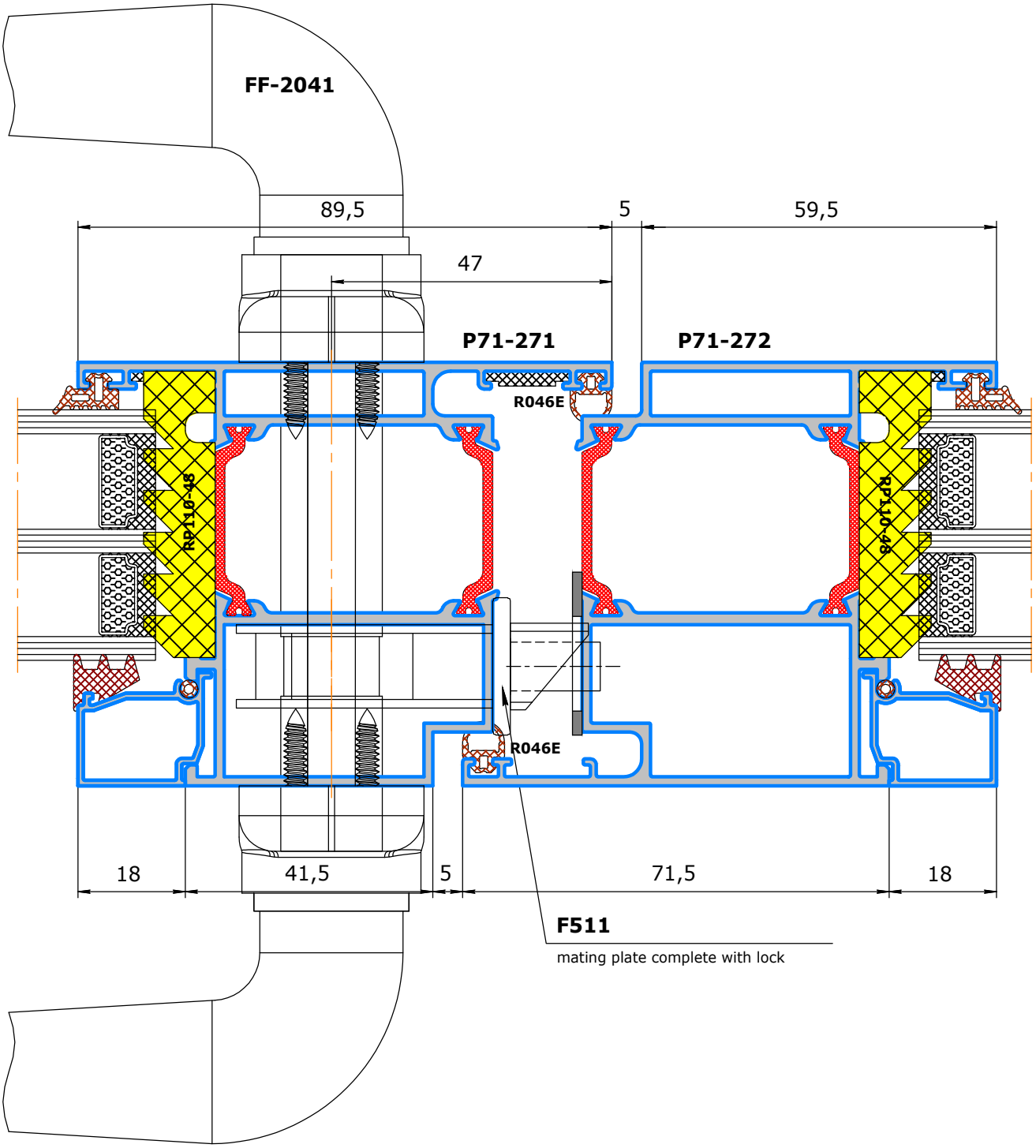
Outward opening doors

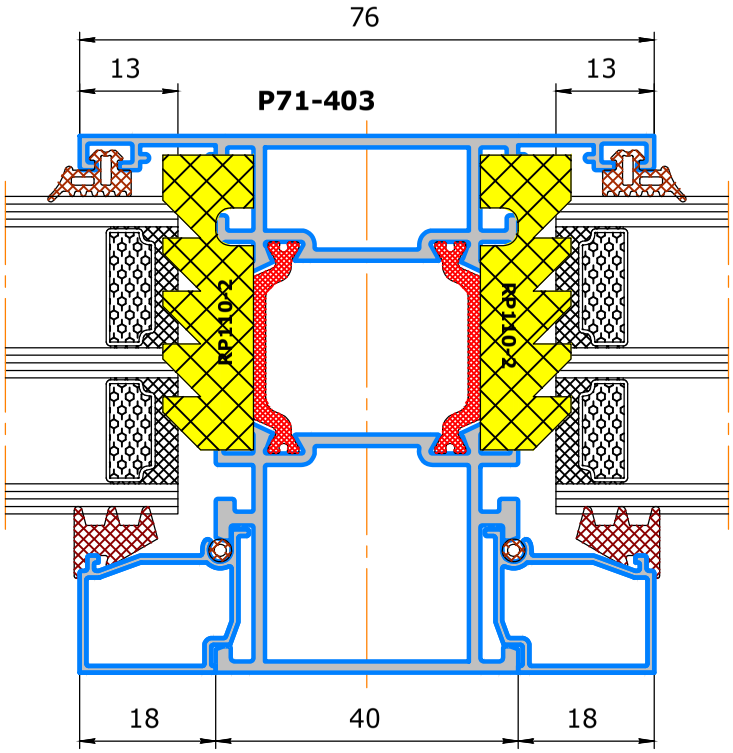


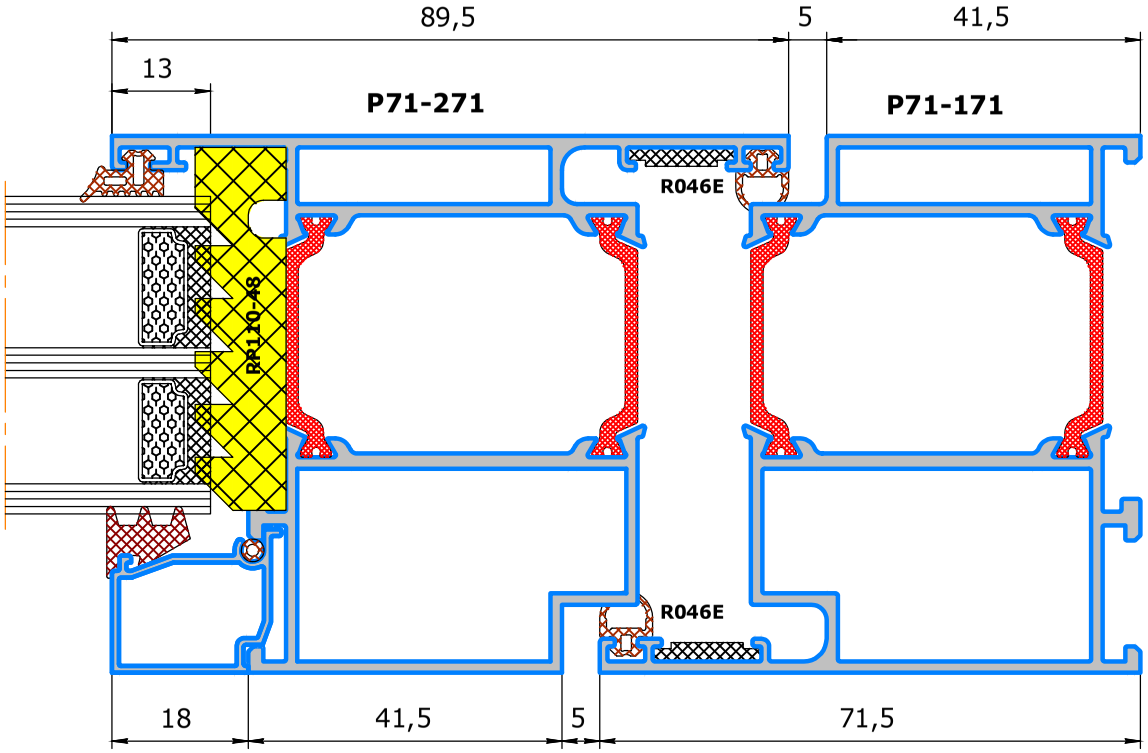


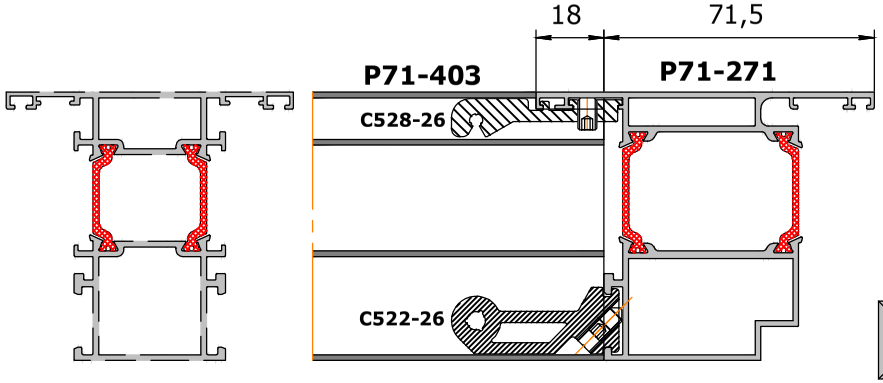


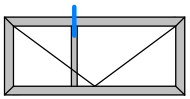

2
1

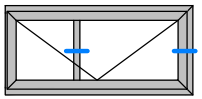

FF-2041
89,5
5
59,5
47
P71-271
P71-272
R046E
RP110-48
RP110-48
R046E
18
41,5
5
71,5
18
F511
mating plate complete with lock



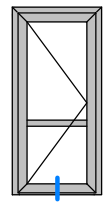


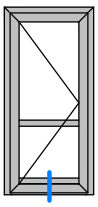


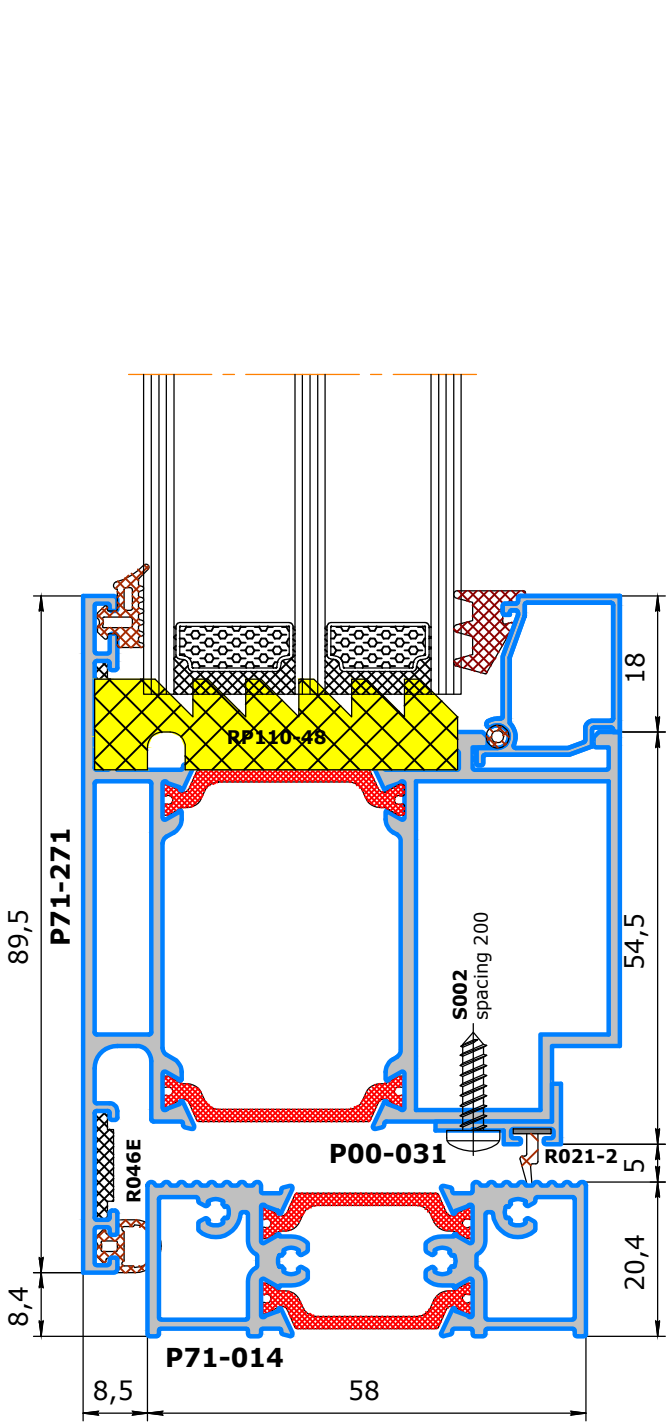


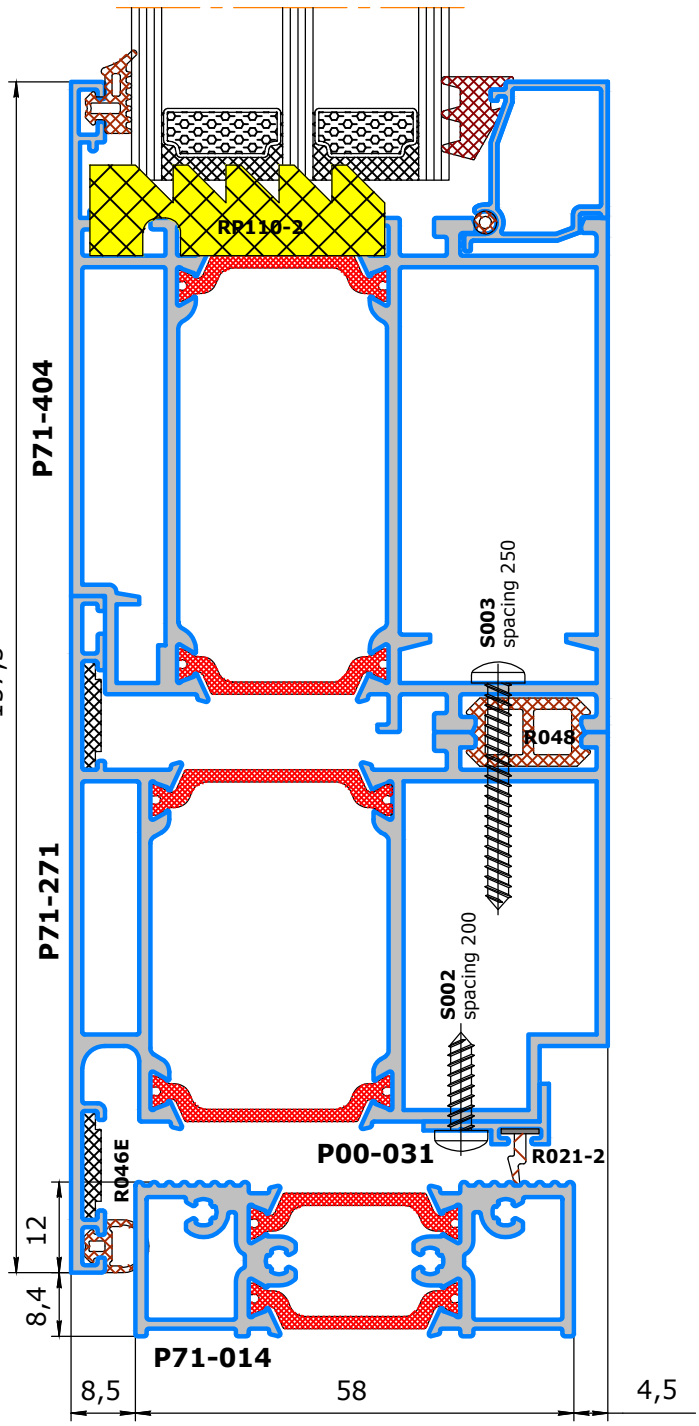


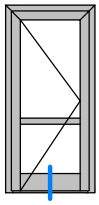
equipment and tools | connections | fire-resistant structures | sub-assemblies | additional solutions | fitting arrangements | sub-assemblies tables | glazing tables | **sections** | profiles (1:1) | delivery set | profiles | contents

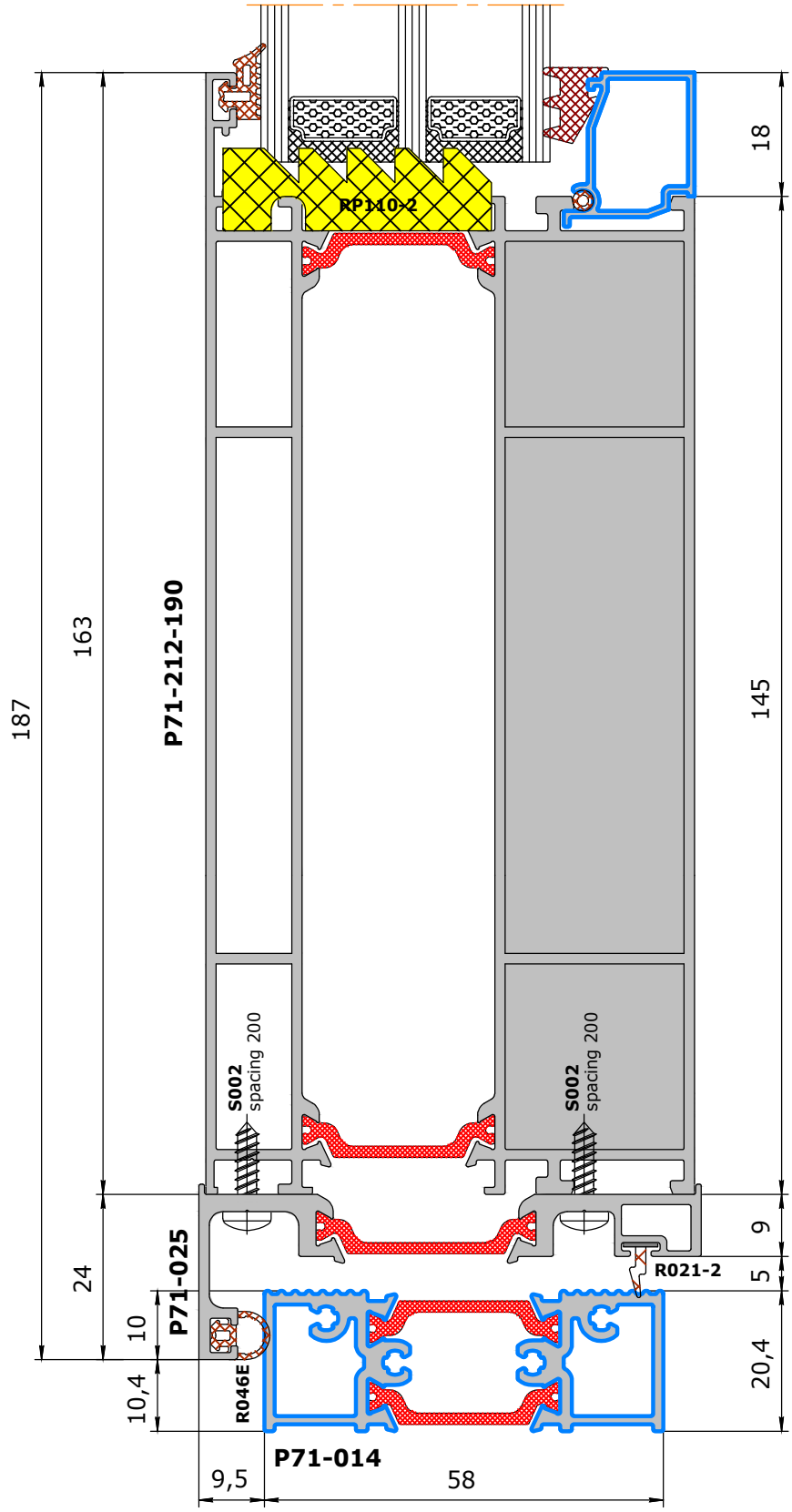




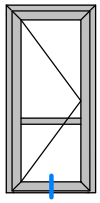

RP110-48
P71-271
89,5
18
54,5
5
20,4
8,4
S002
spacing 200
R046E
P00-031
R021-2
P71-014
8,5
58

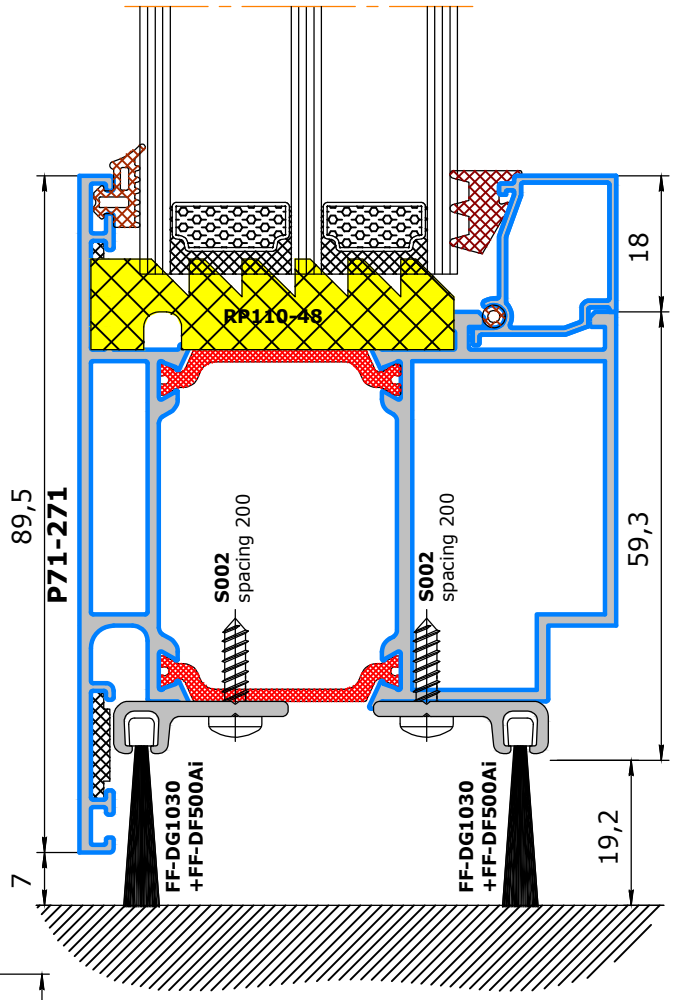

RP110-2
P71-404
157,5
S003
spacing 250
R048
P71-271
12
8,4
S002
spacing 200
R046E
P00-031
R021-2
P71-014
8,5
58
4,5

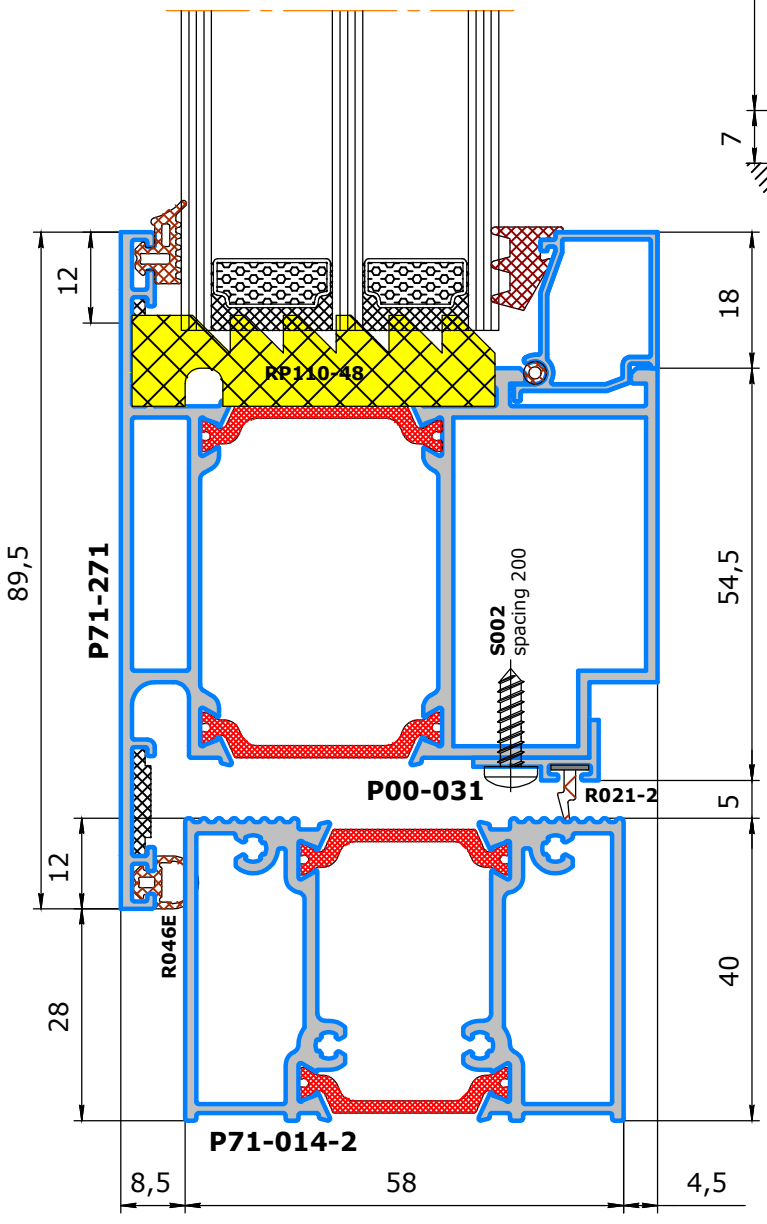


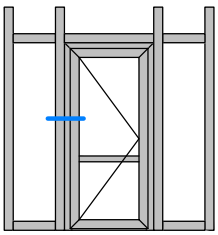


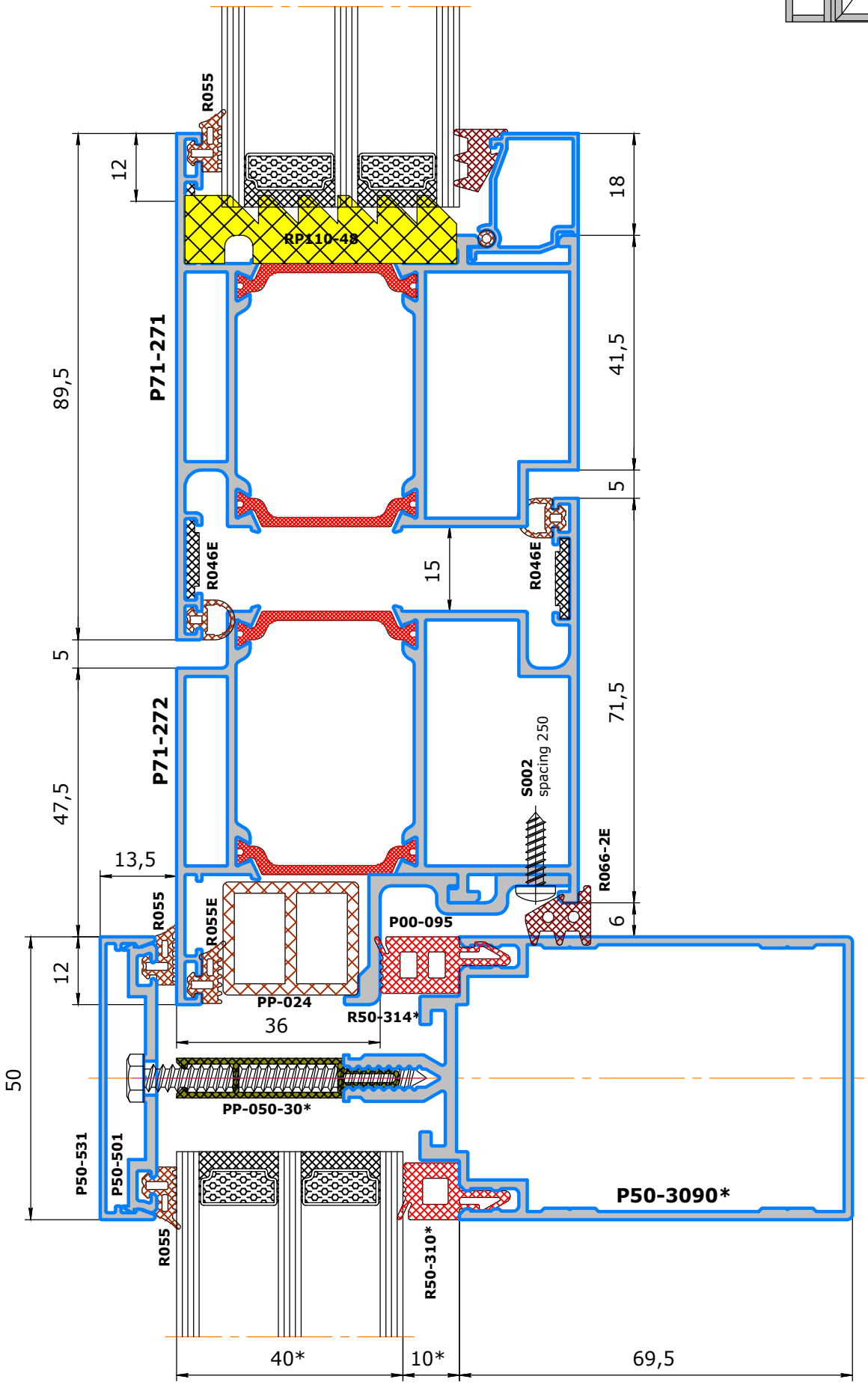
contents
profiles
delivery set
profiles (1:1)
sections
glazing tables
sub-assemblies tables
fitting arrangements
additional solutions
sub-assemblies
fire-resistant structures
connections
equipment and tools

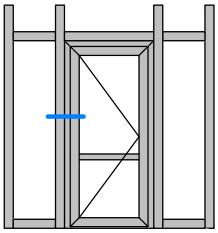


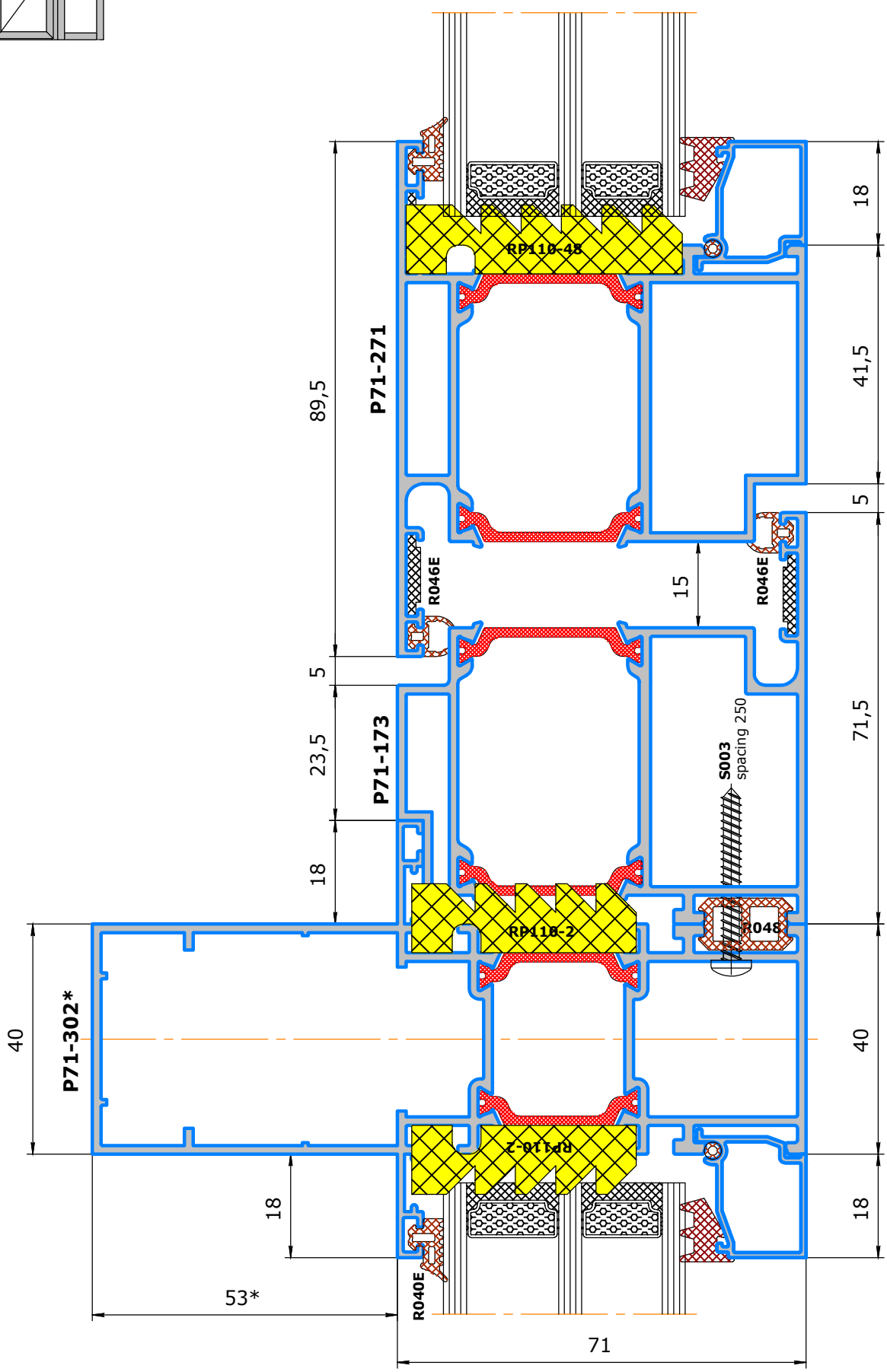

RP110-48
18
89,5
P71-271
S002
spacing 200
S002
spacing 200
59,3
FF-DG1030
+FF-DF500Ai
FF-DG1030
+FF-DF500Ai
19,2
7


12
RP110-48
18
89,5
P71-271
S002
spacing 200
54,5
P00-031
R021-2
5
12
R046E
28
40
P71-014-2
8,5
58
4,5

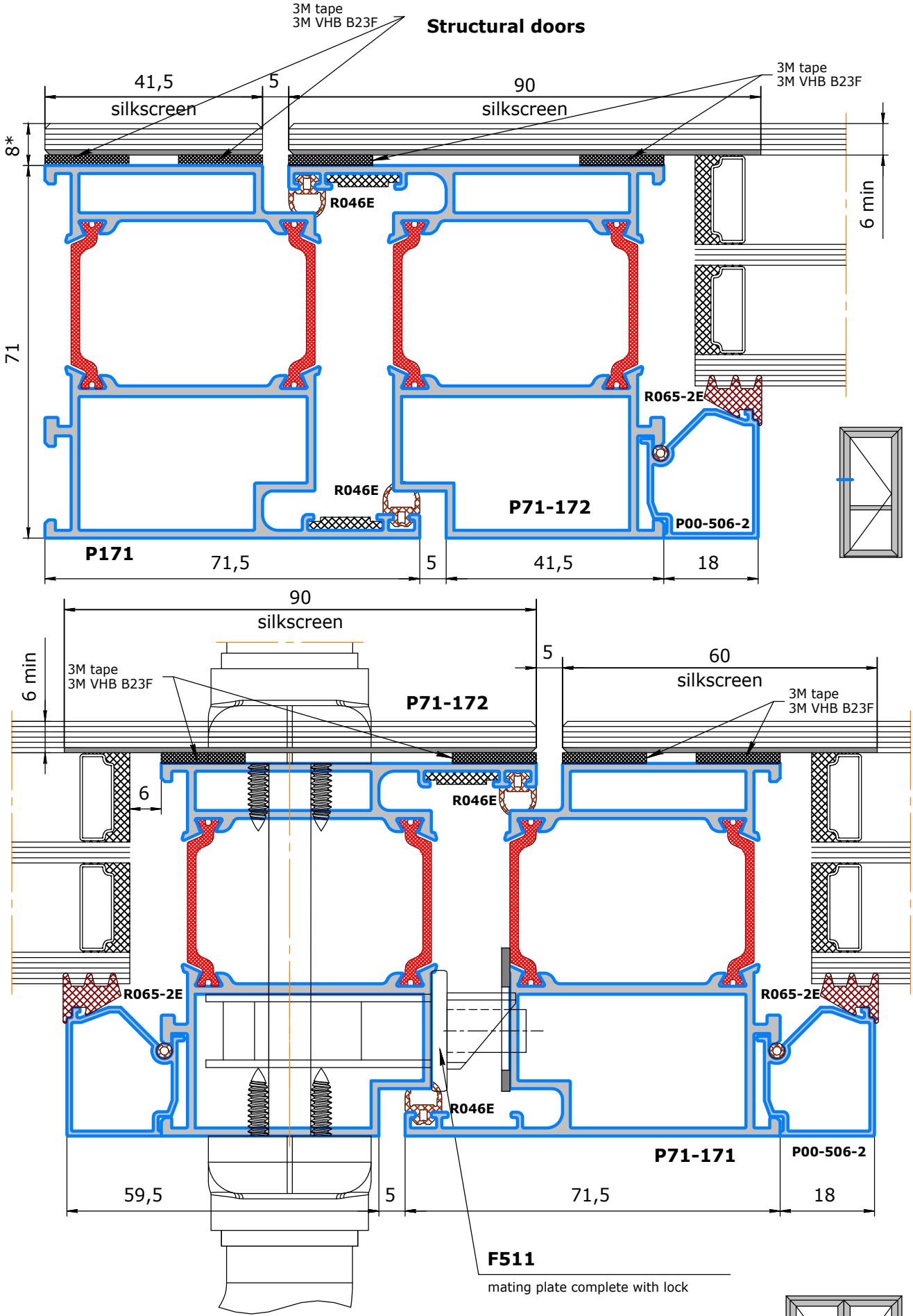



R055
12
RP110-48
18
41,5
89,5
P71-271
5
R046E
15
R046E
5
71,5
47,5
P71-272
S002
spacing 250
R066-2E
6
13,5
R055
R055E
P00-095
12
PP-024
R50-314*
36
50
PP-050-30*
P50-531
P50-501
P50-3090*
R055
R50-310*
40*
10*
69,5

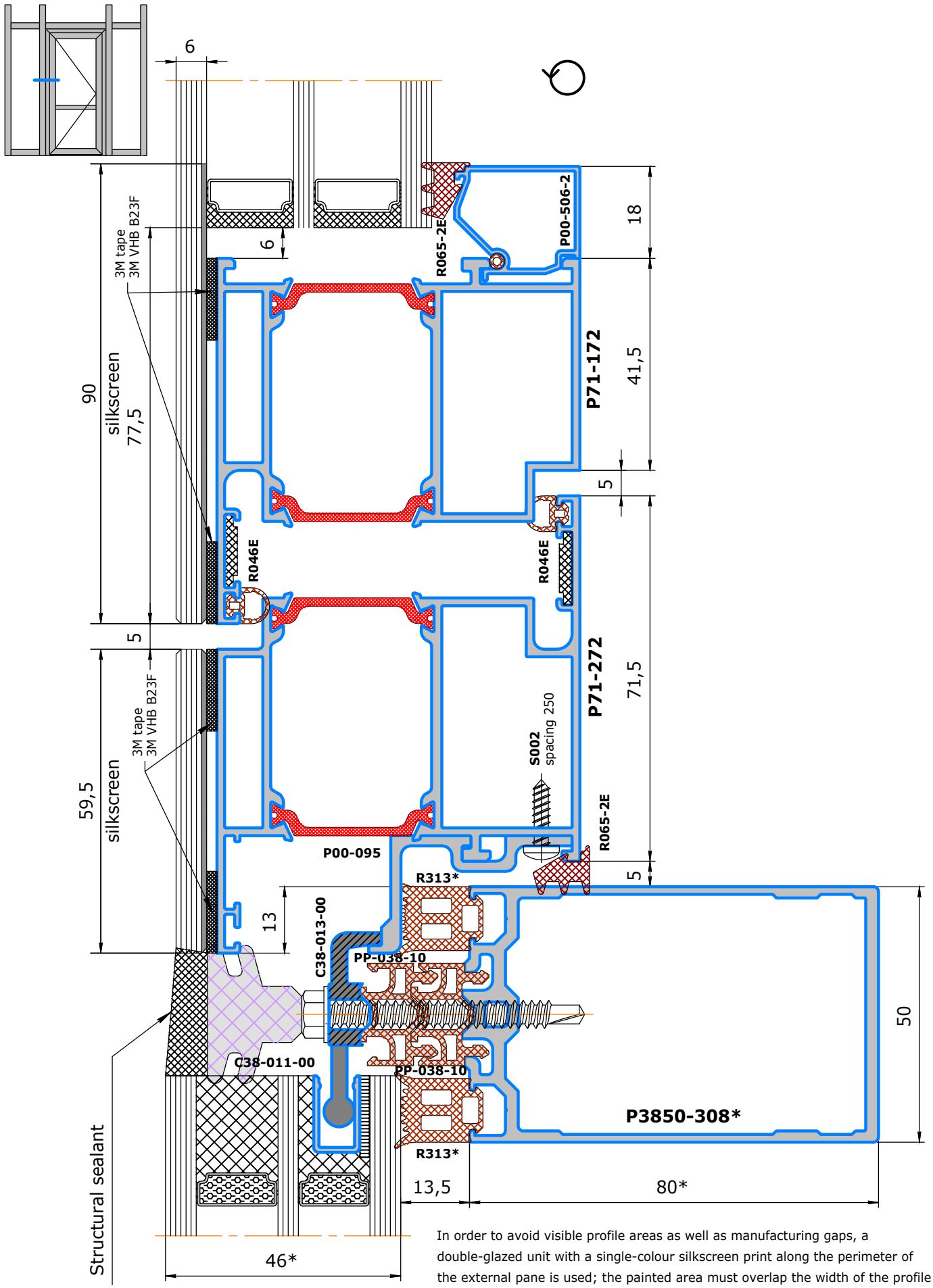



P71-271
P71-173
P71-302*
RP110-48
RP110-2
RP110-Z
R046E
R046E
R048
R040E
S003
spacing 250
89,5
5
23,5
18
40
53*
18
15
5
41,5
71,5
40
18
18
71

Structural doors

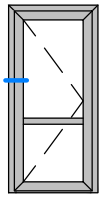


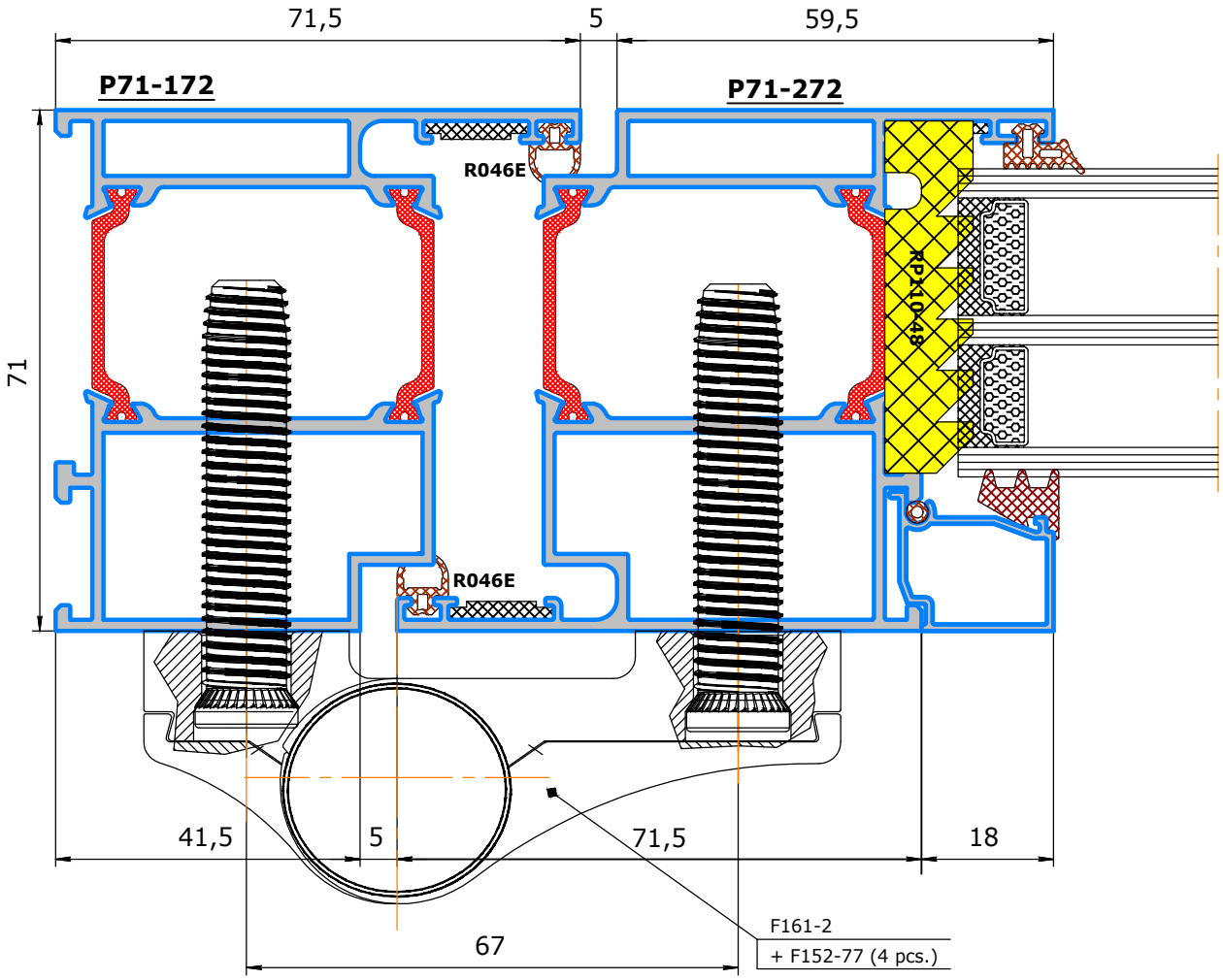
In order to avoid visible profile areas as well as manufacturing gaps, a double-glazed unit with a single-colour silkscreen print along the perimeter of the external pane is used; the painted area must overlap the width of the profile and the manufacturing joints. 3M mounting tape to be used: 3M VHB B23F (black) — double-sided mounting tape 18 mm, acrylic foam base, acrylic adhesive, 2.3 mm thick. Prior to bonding the double-glazed unit, determine the adhesive strength of the bonded materials.

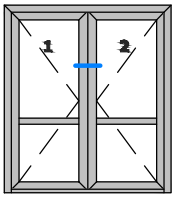


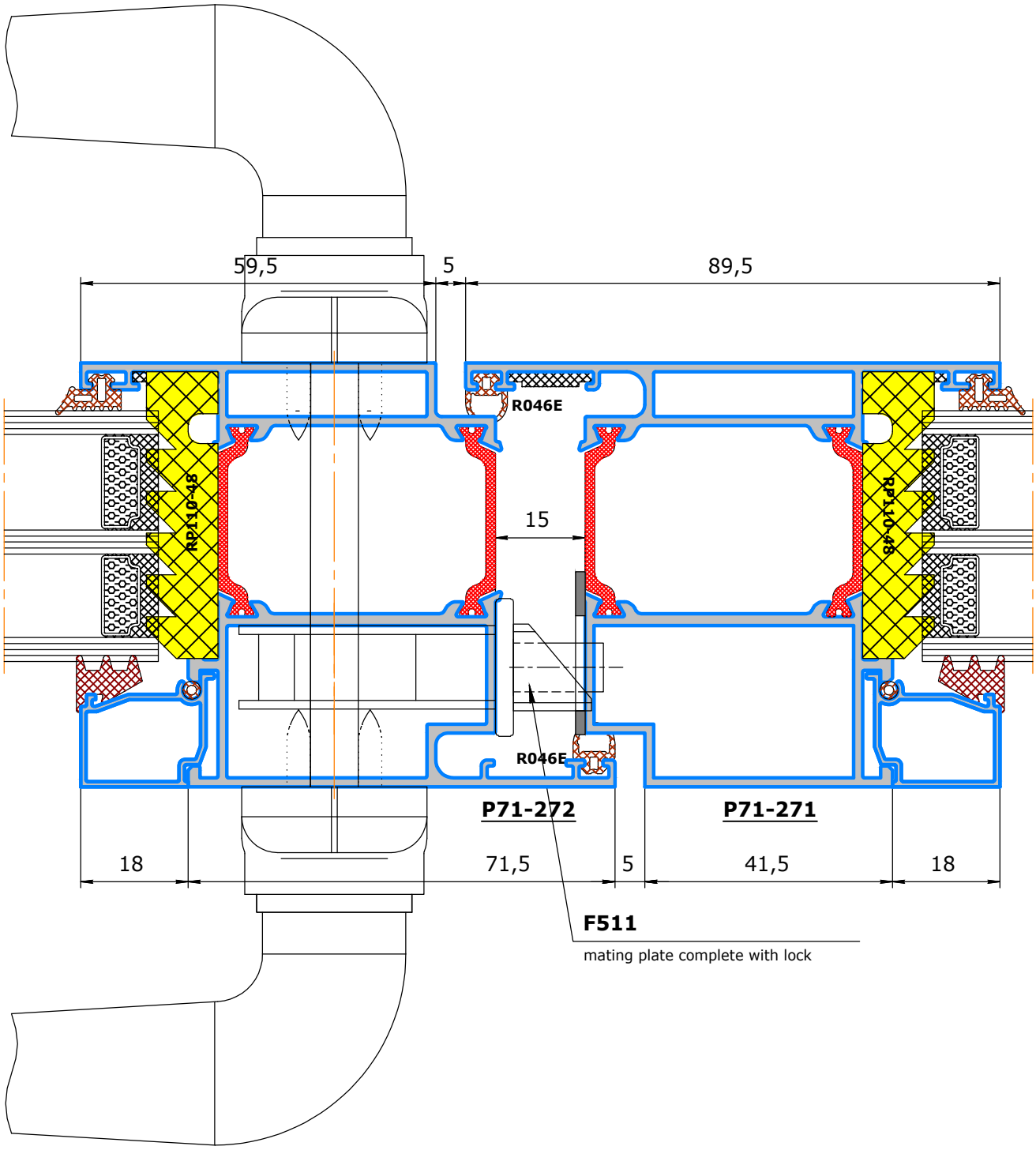
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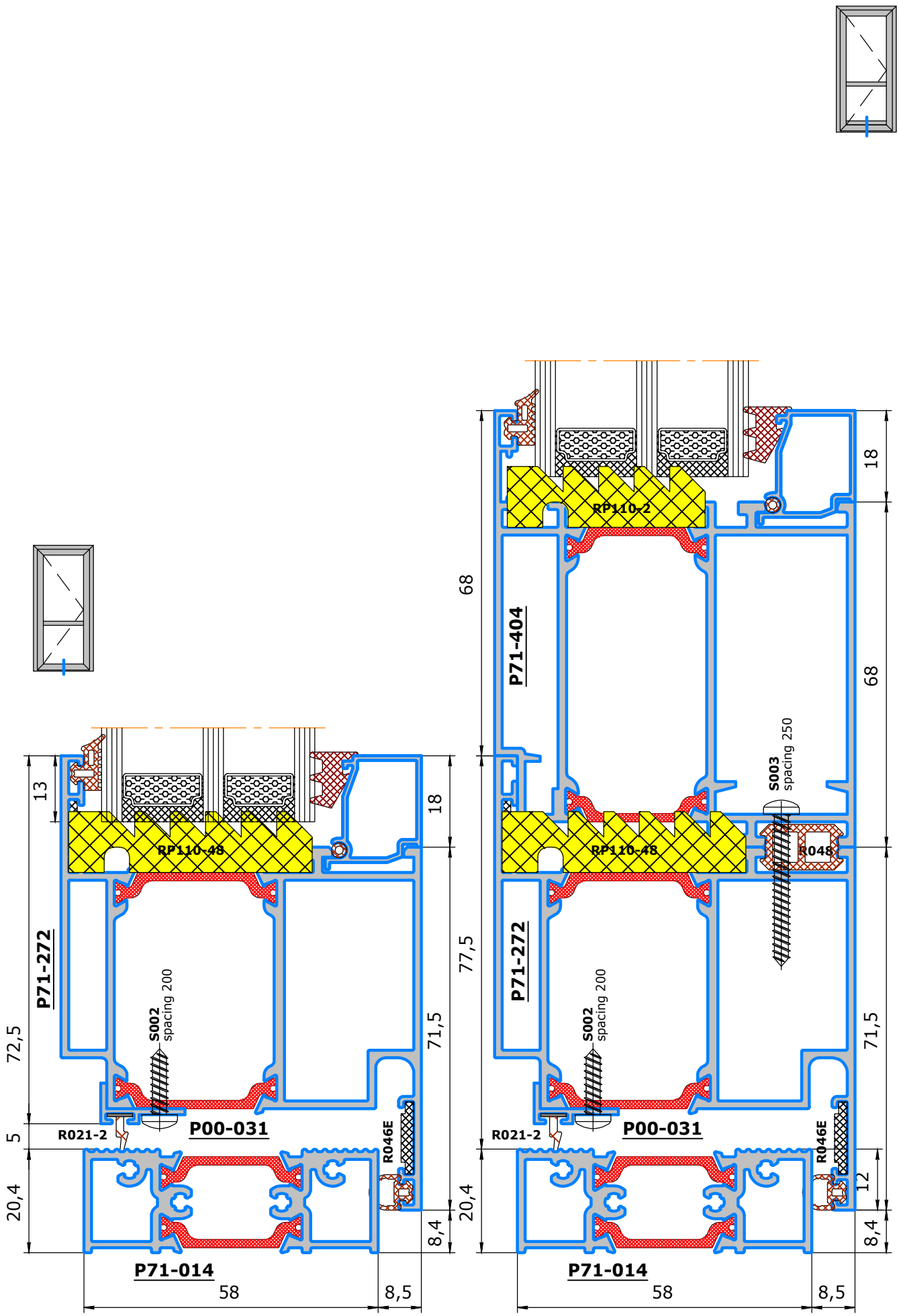
Inward opening doors

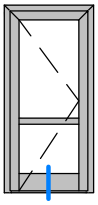


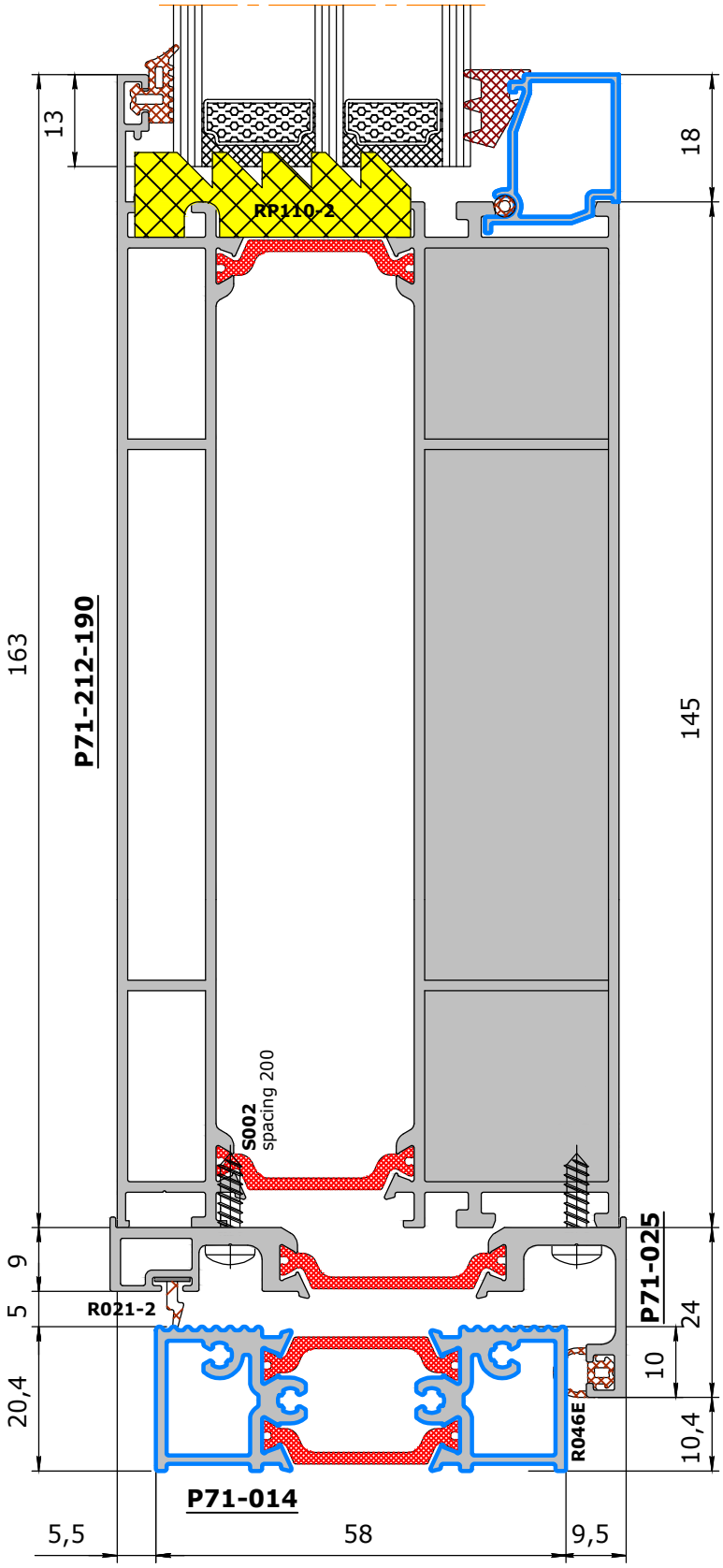



1
2

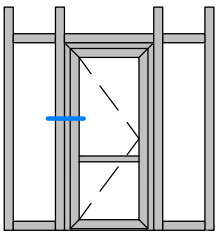

59,5
5
89,5
R046E
RP110-48
RP110-48
15
R046E
P71-272
P71-271
18
71,5
5
41,5
18
F511
mating plate complete with lock

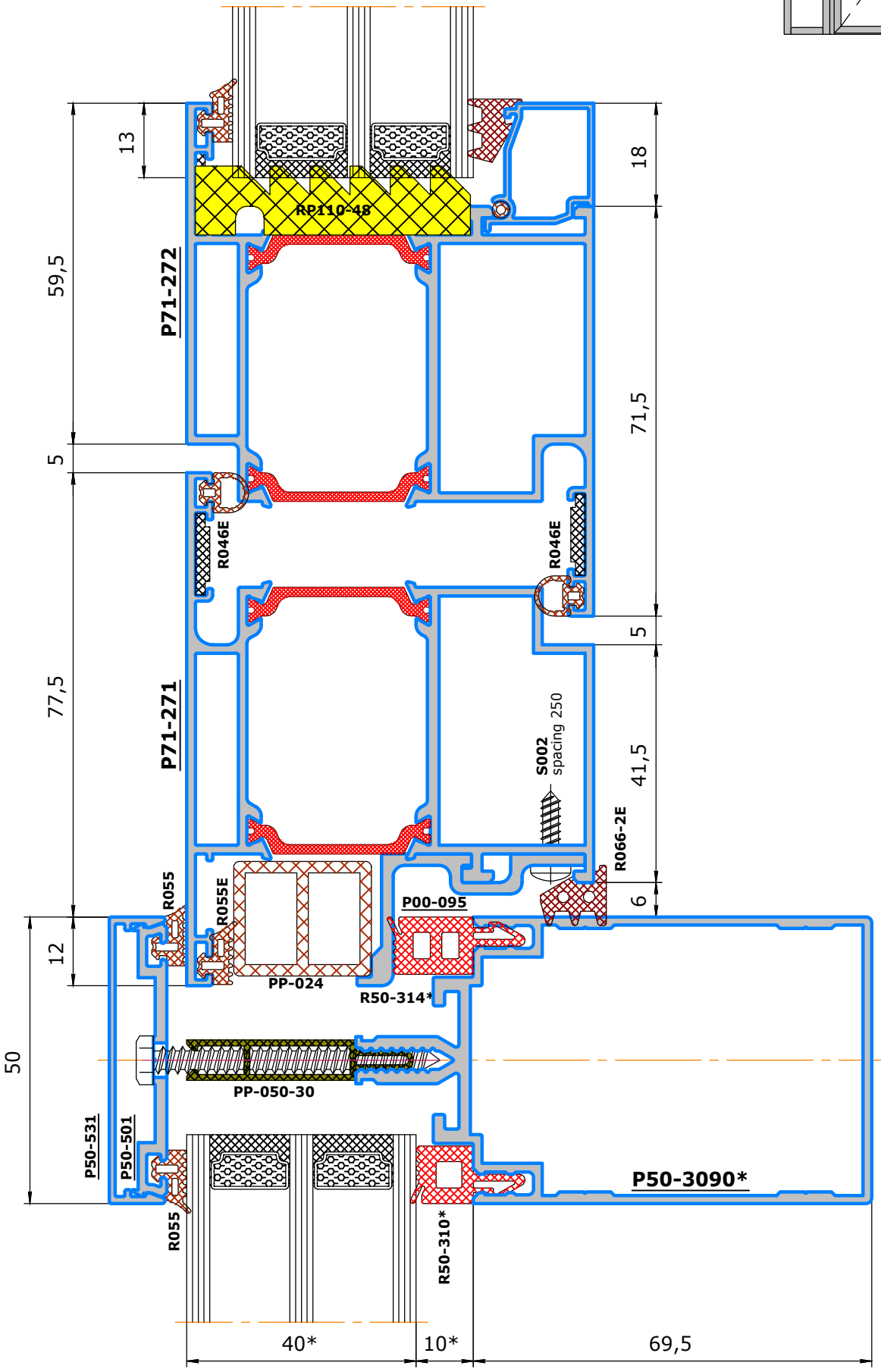

P71-272
RP110-48
S002
spacing 200
R021-2
P00-031
R046E
P71-014
58
8,5
72,5
13
5
20,4
18
71,5
8,4
77,5
P71-404
RP110-2
S003
spacing 250
R048
68
12

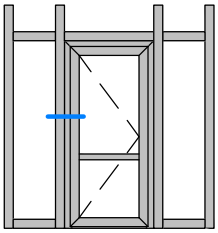


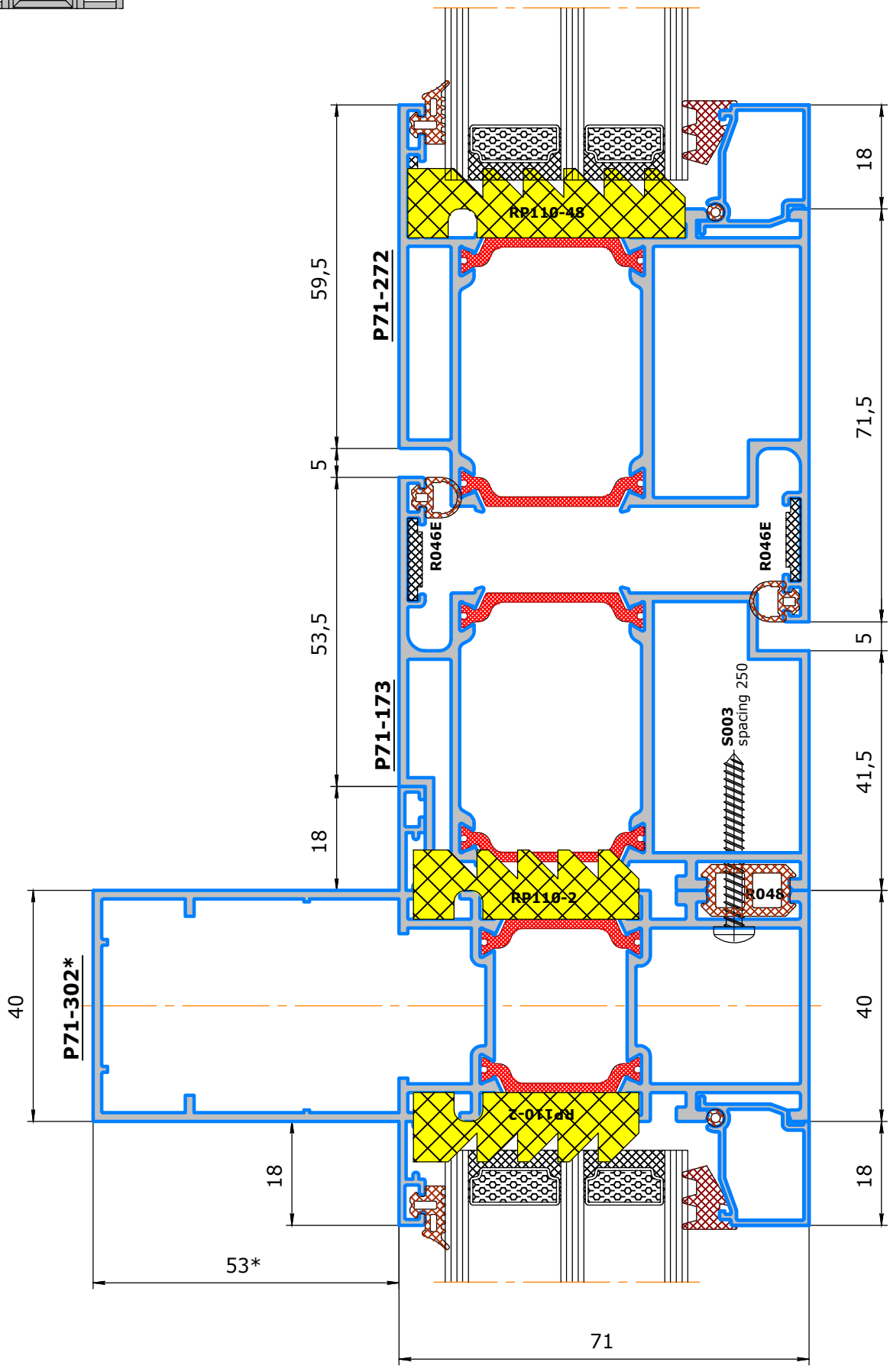


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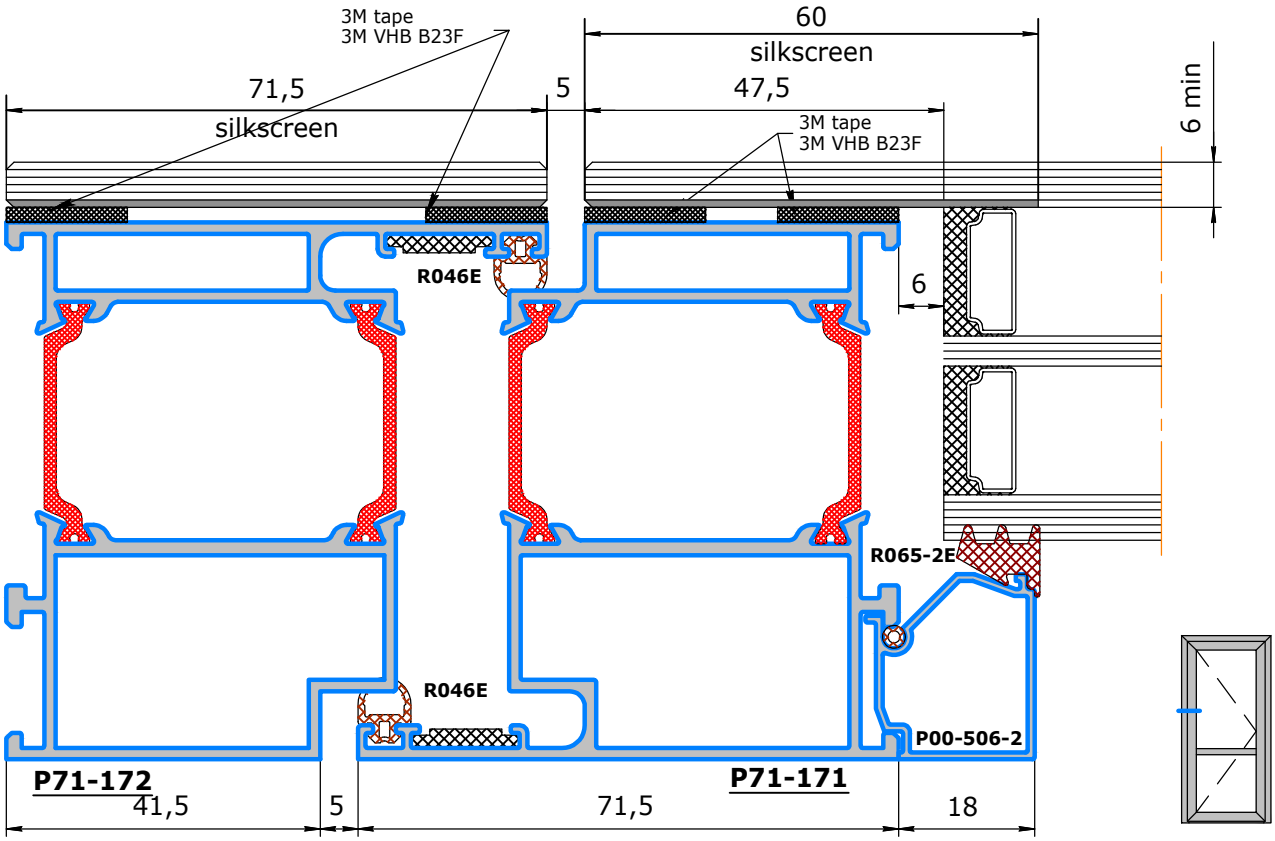


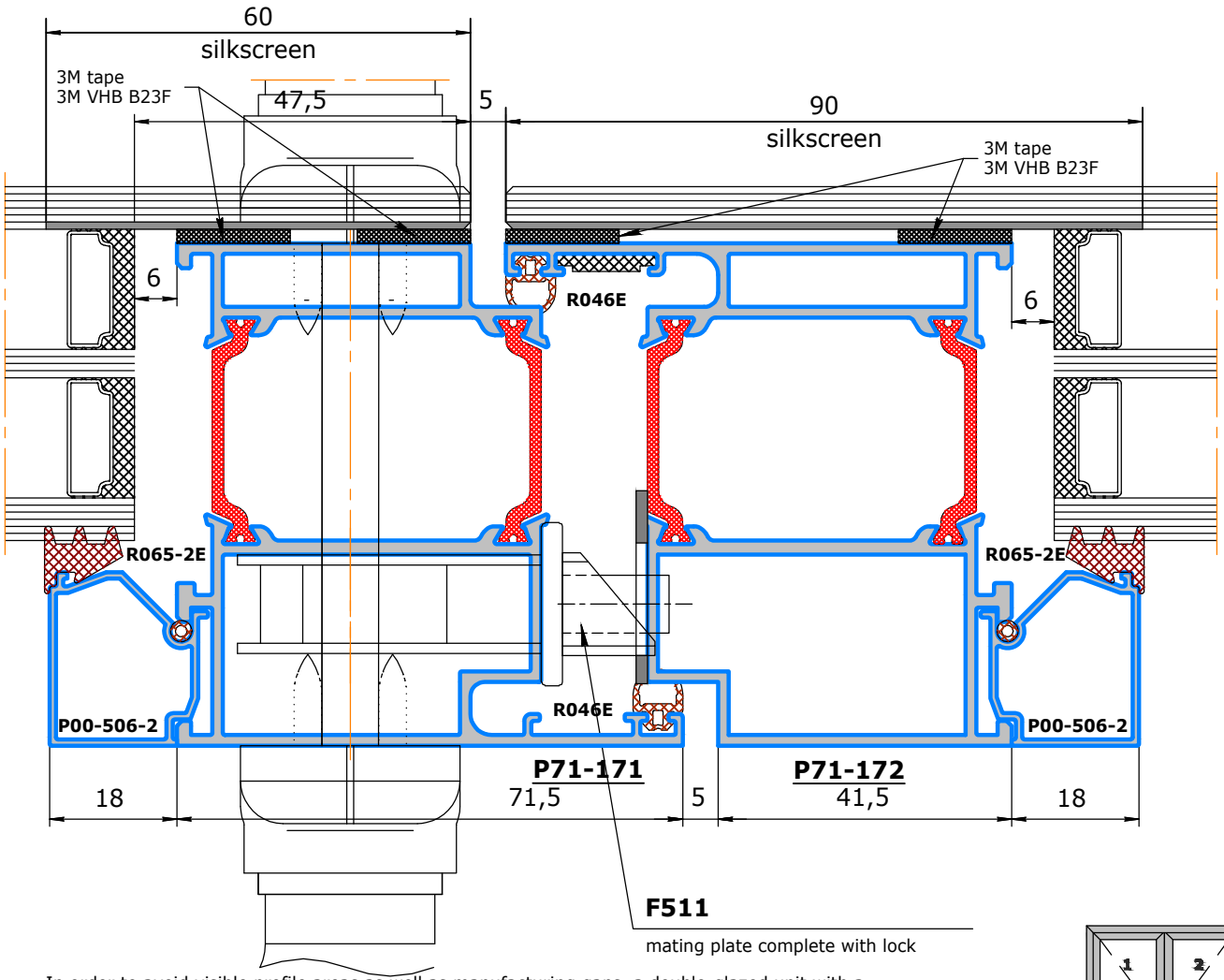

13
59,5
5
77,5
12
50
18
71,5
5
41,5
6
RP110-48
P71-272
P71-271
R046E
R046E
S002
spacing 250
R066-2E
R055
R055E
P00-095
PP-024
R50-314*
PP-050-30
P50-531
P50-501
R055
R50-310*
P50-3090*
40*
10*
69,5



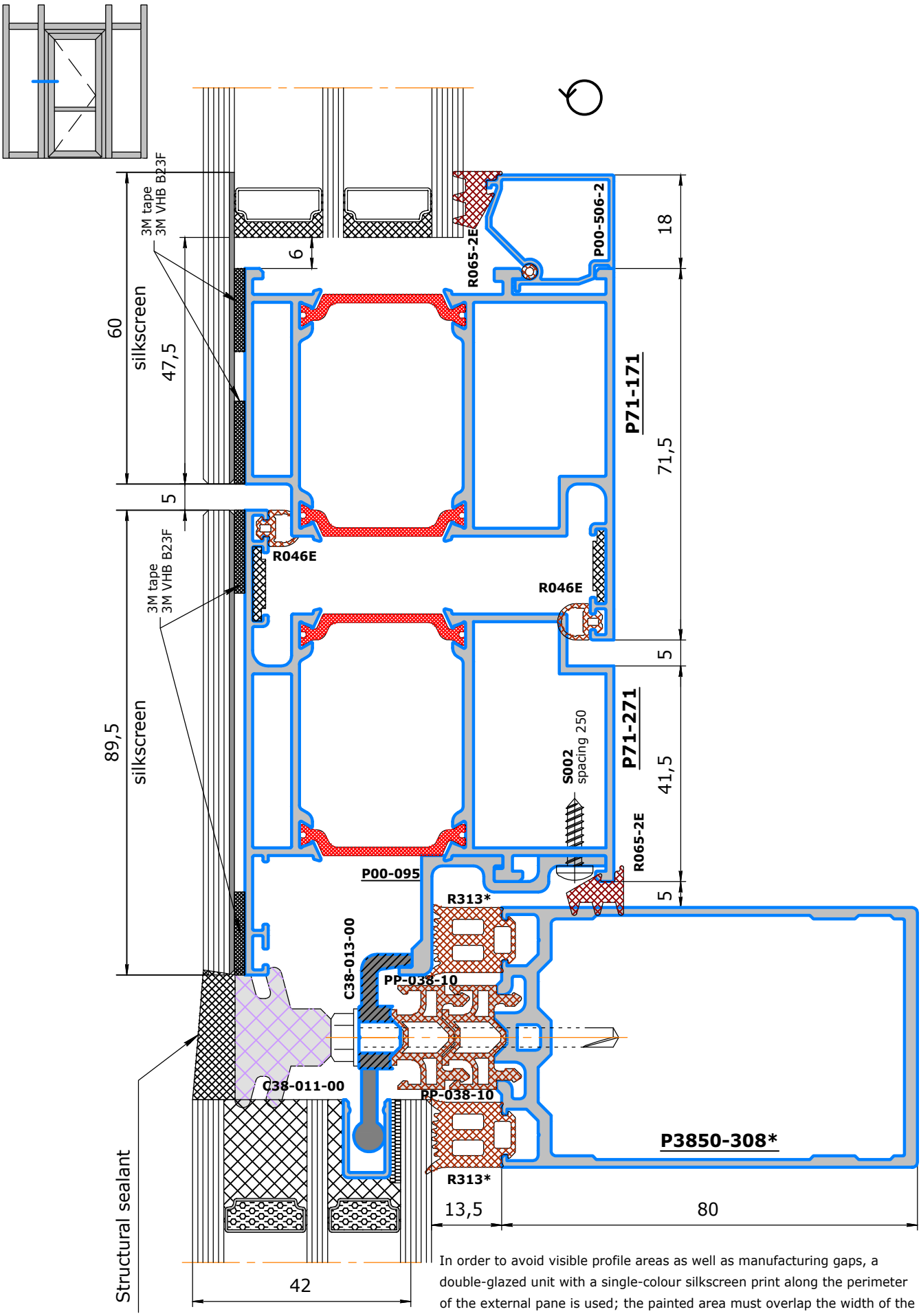

P71-272
P71-173
P71-302*
RP110-48
RP110-2
RP110-2
R046E
R046E
R048
S003
spacing 250
59,5
5
53,5
18
40
18
53*
71
18
71,5
5
41,5
40
18

Structural doors



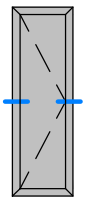


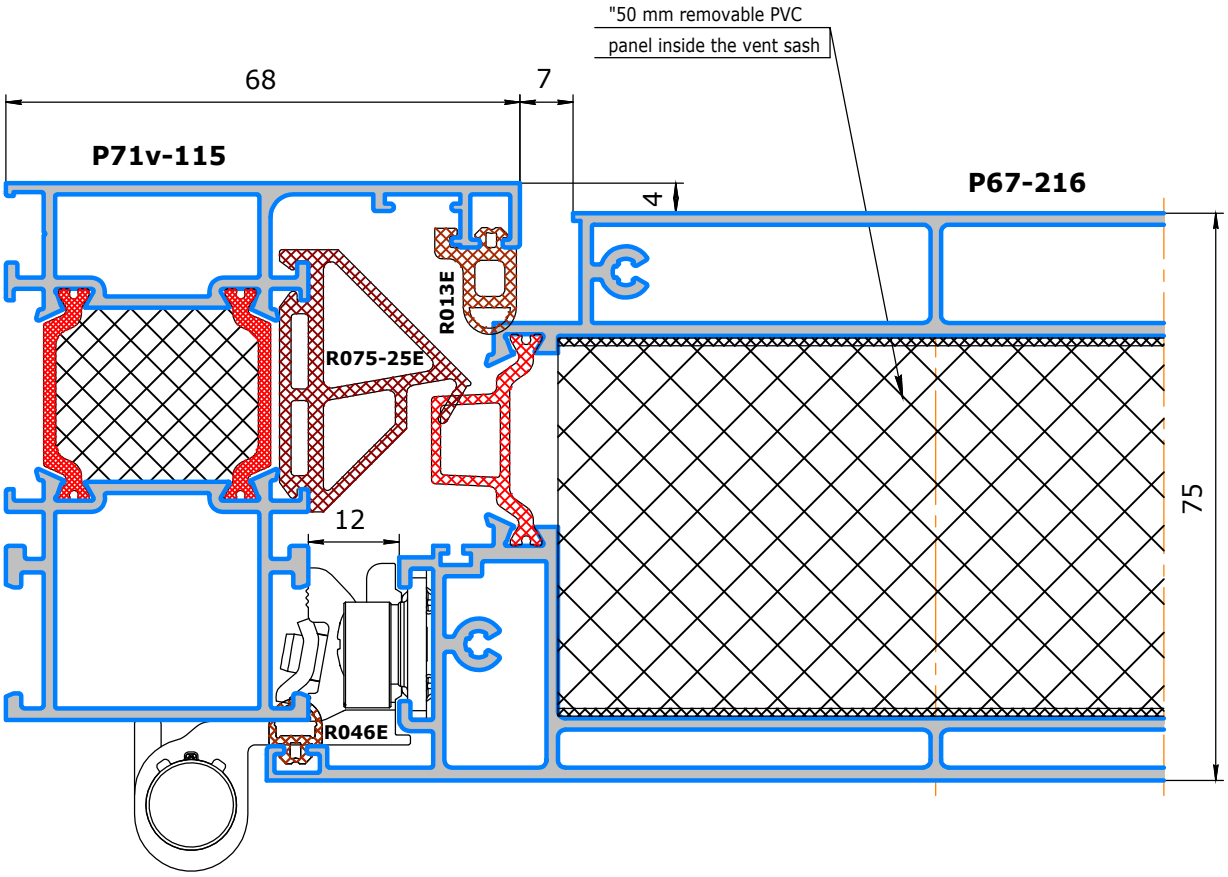
In order to avoid visible profile areas as well as manufacturing gaps, a double-glazed unit with a single-colour silkscreen print along the perimeter of the external pane is used; the painted area must overlap the width of the profile and the manufacturing joints. 3M mounting tape to be used: 3M VHB B23F (black) — double-sided mounting tape 18 mm, acrylic foam base, acrylic adhesive, 2.3 mm thick. Prior to bonding the double-glazed unit, determine the adhesive strength of the bonded materials.

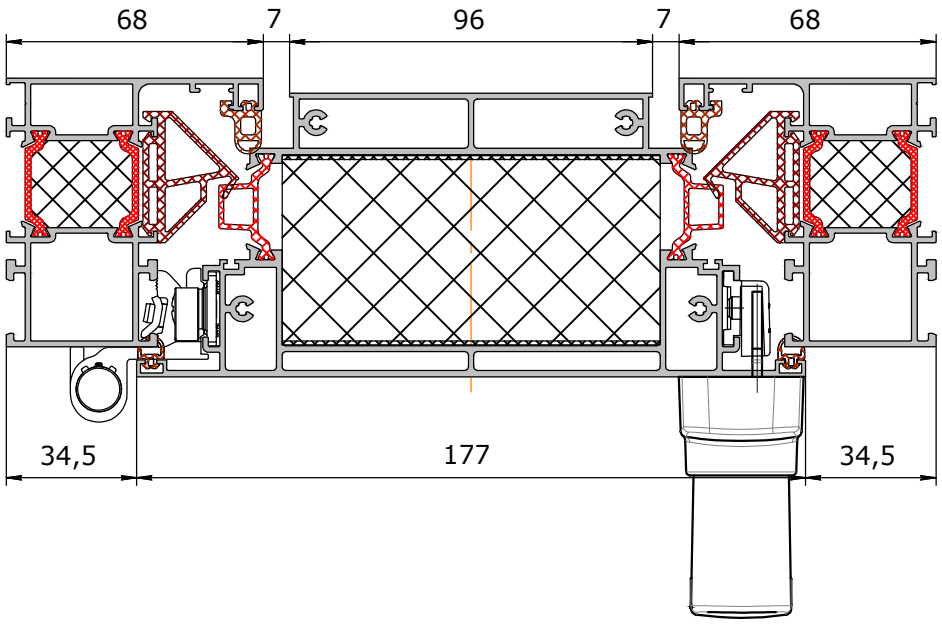


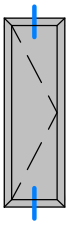
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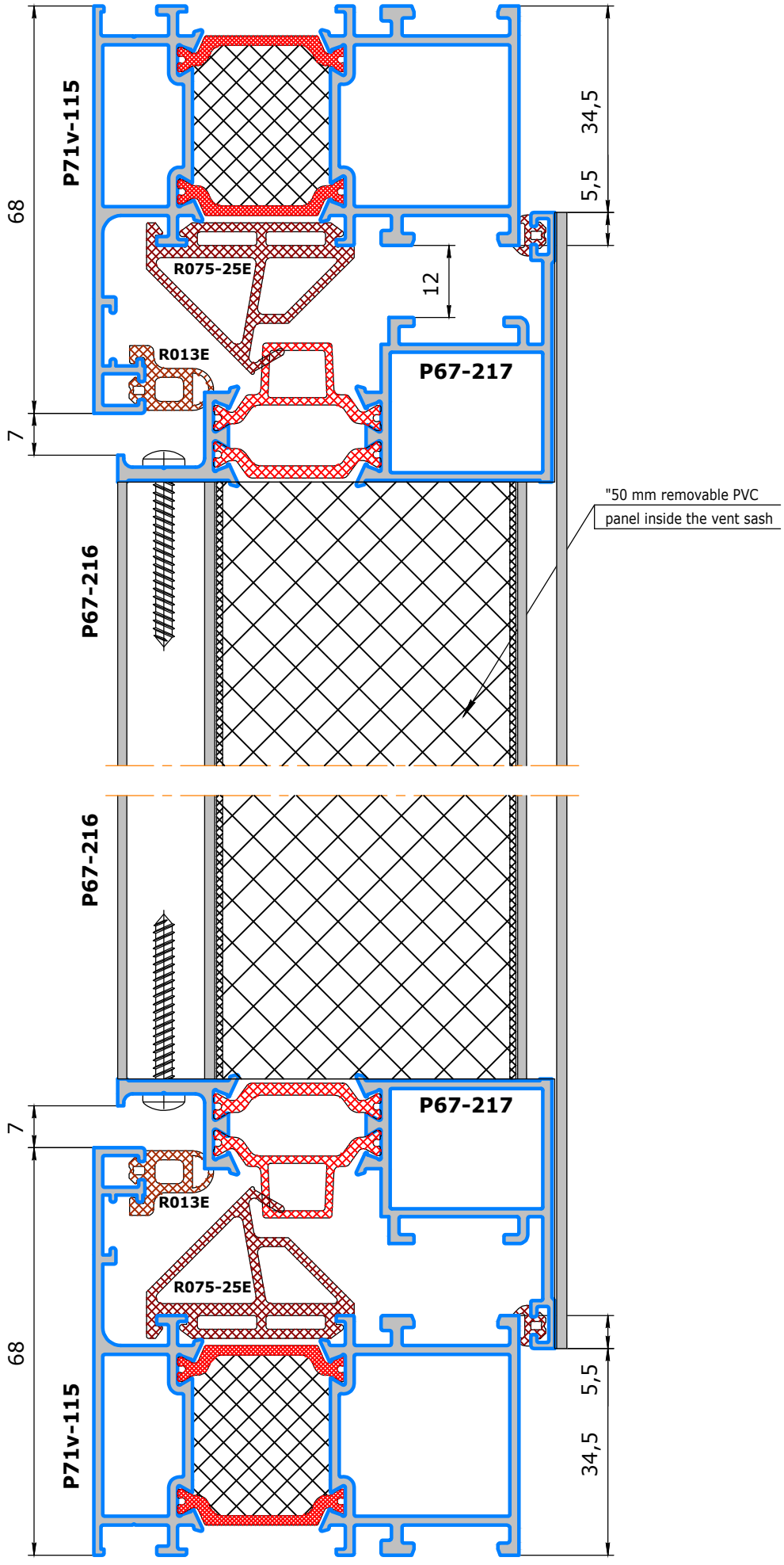
Ventilation sash



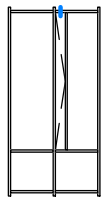


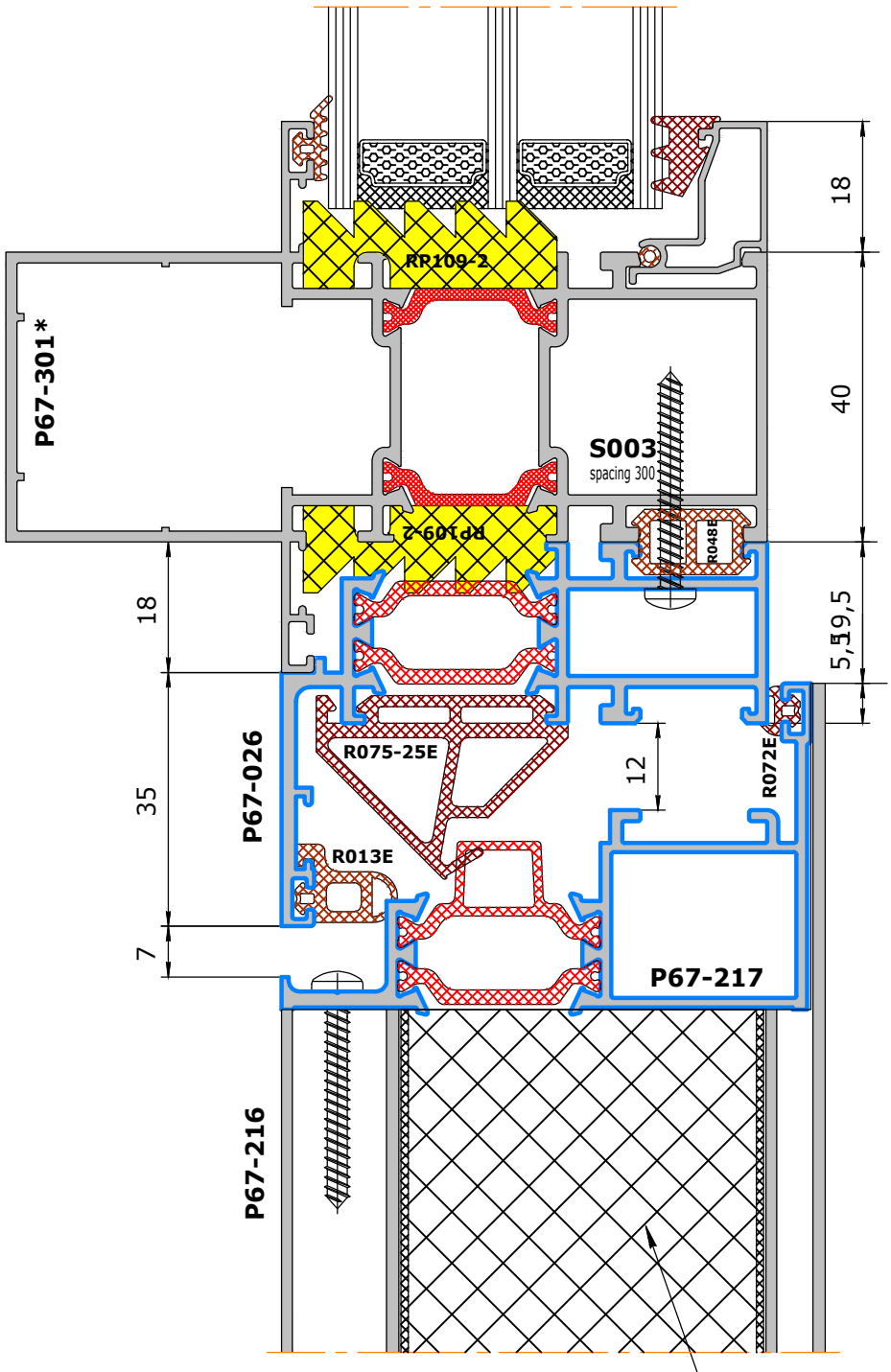


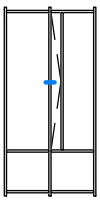


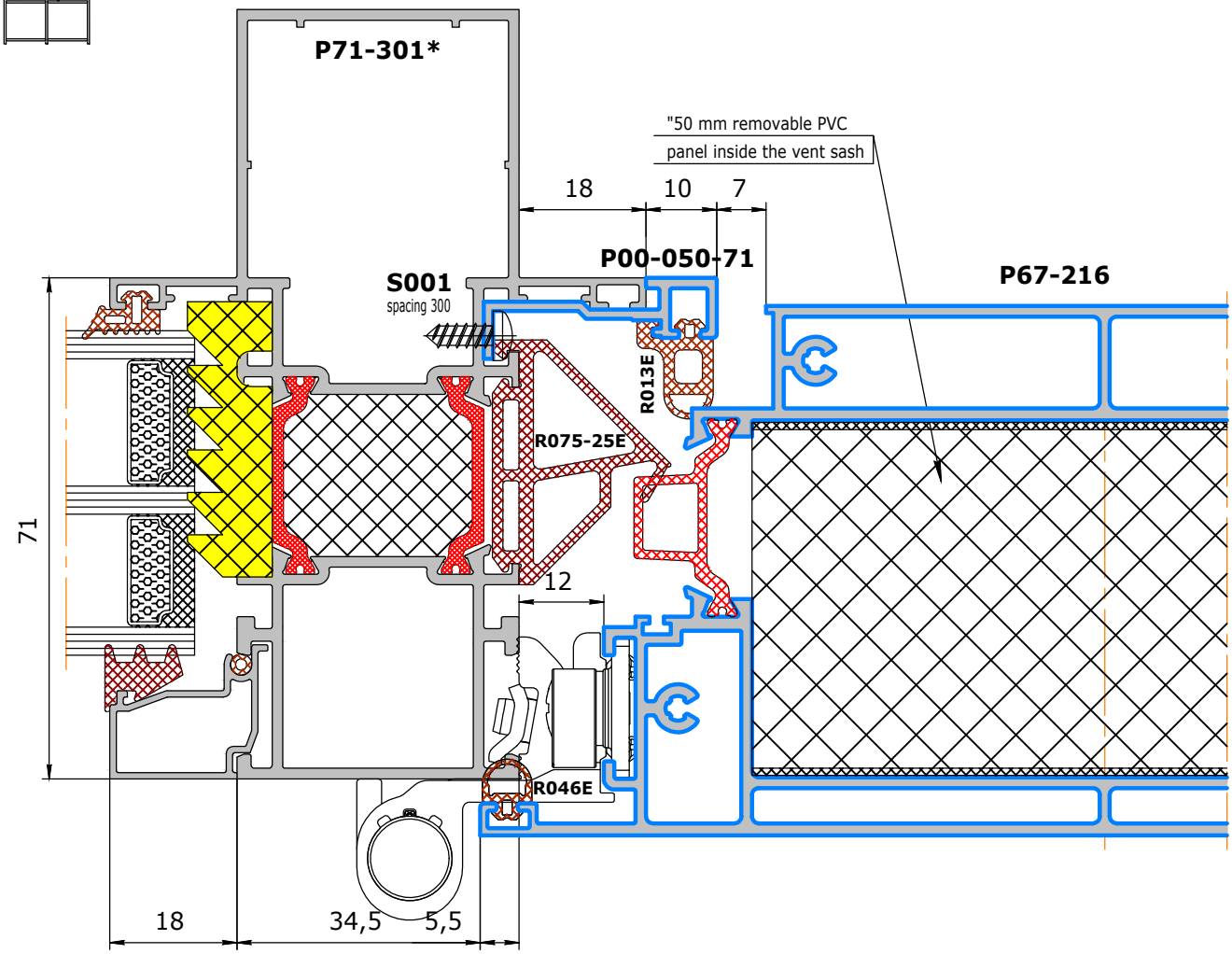


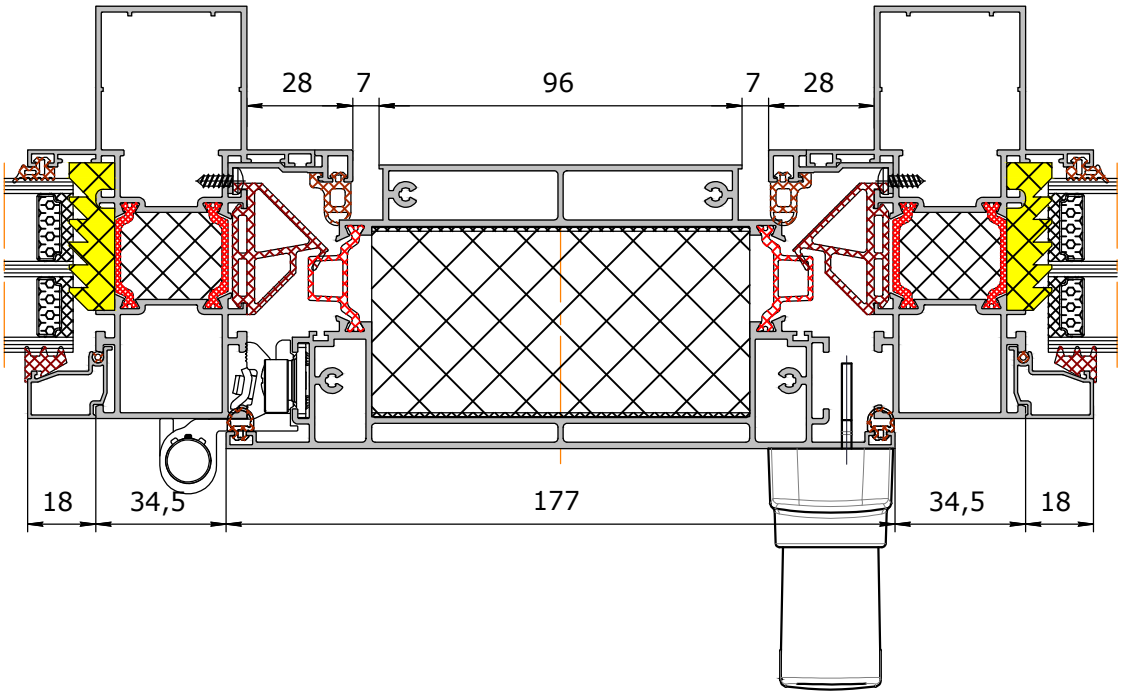
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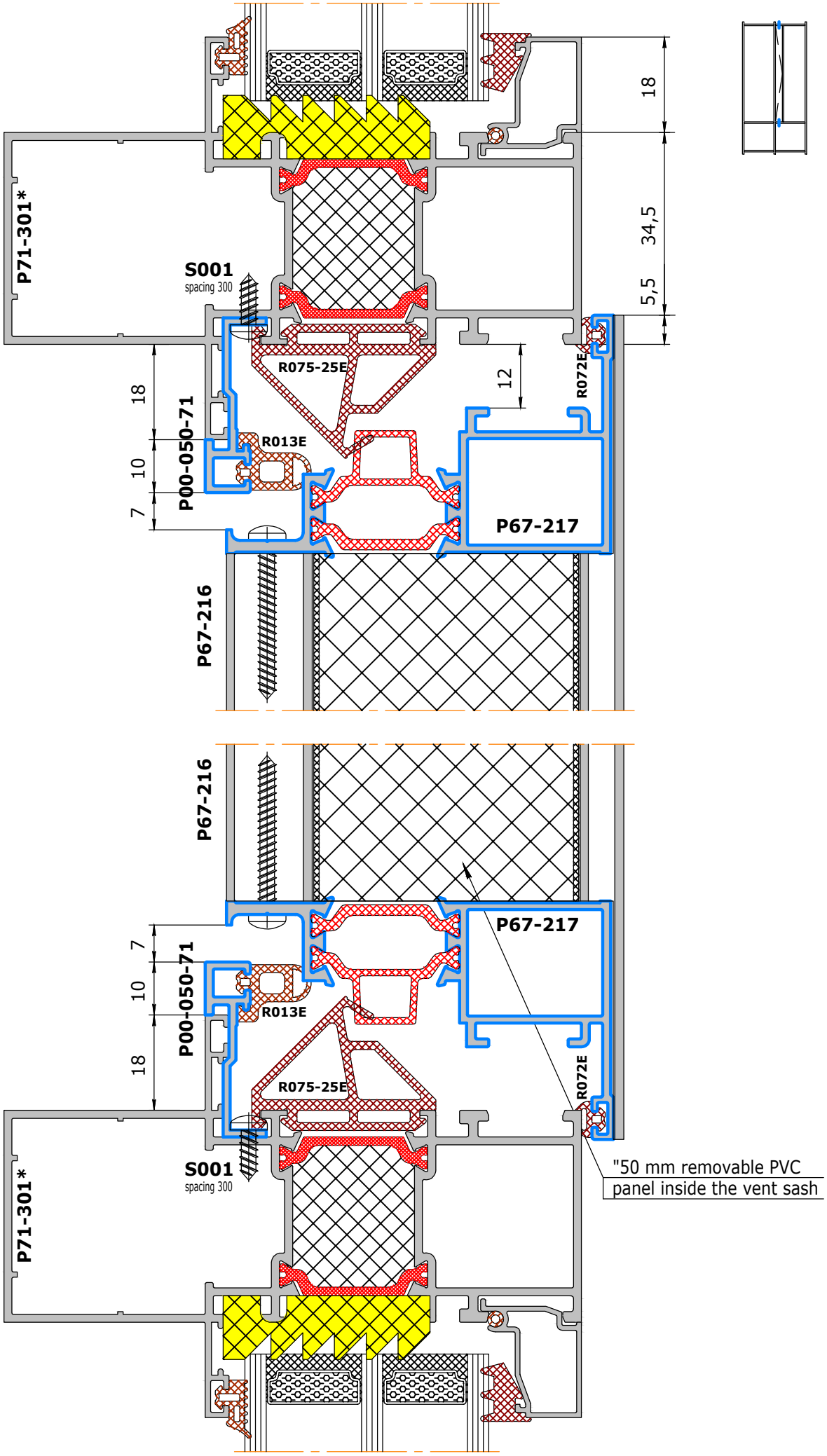



RR109-2
P67-301*
S003
spacing 300
RP109-2
R048E
18
40
5,5
9,5
18
35
7
P67-026
R075-25E
12
R072E
R013E
P67-217
P67-216
"50 mm removable PVC
panel inside the vent sash

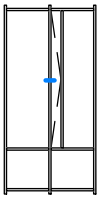


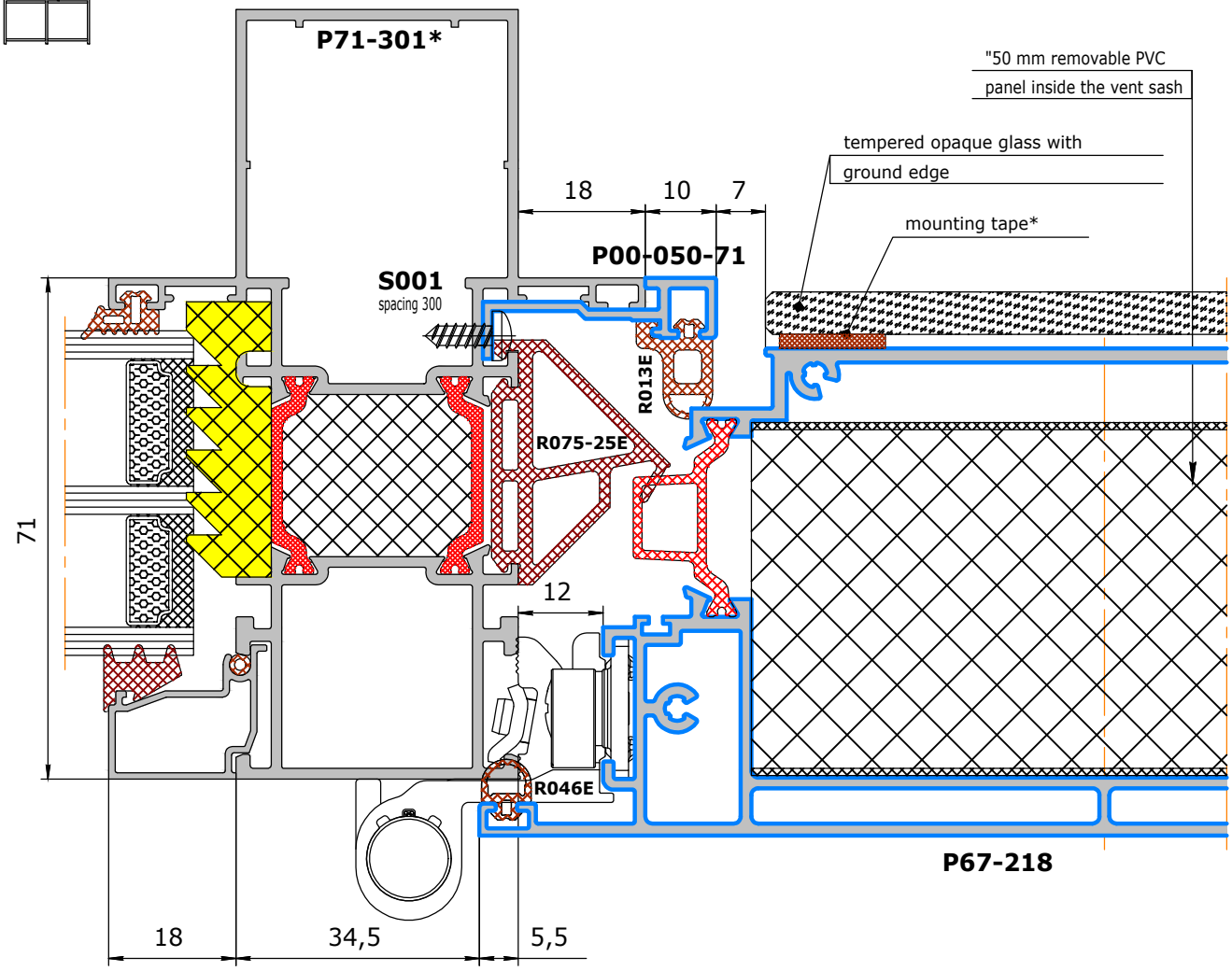

P71-301*
"50 mm removable PVC
panel inside the vent sash
18
10
7
P00-050-71
P67-216
S001
spacing 300
R013E
R075-25E
71
12
R046E
18
34,5
5,5

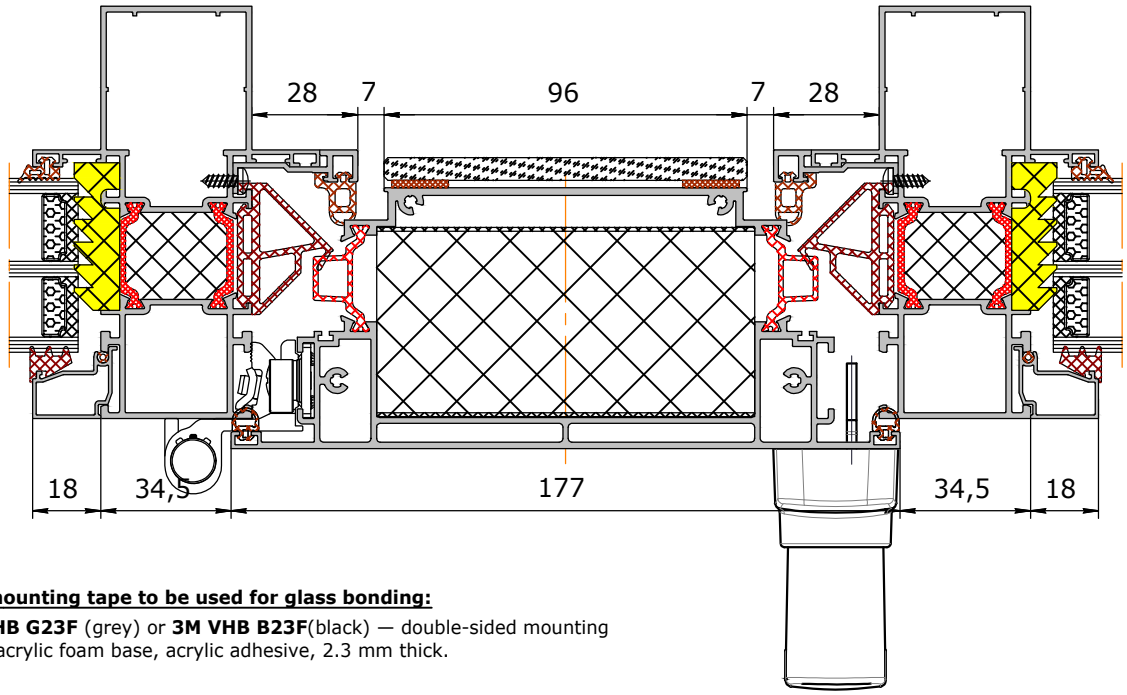

28
7
96
7
28
18
34,5
177
34,5
18


P71-301*
S001
spacing 300
R075-25E
R072E
R013E
P00-050-71
P67-217
P67-216
18
34,5
5,5
12
10
7
"50 mm removable PVC
panel inside the vent sash

Ventilation sash in structural design

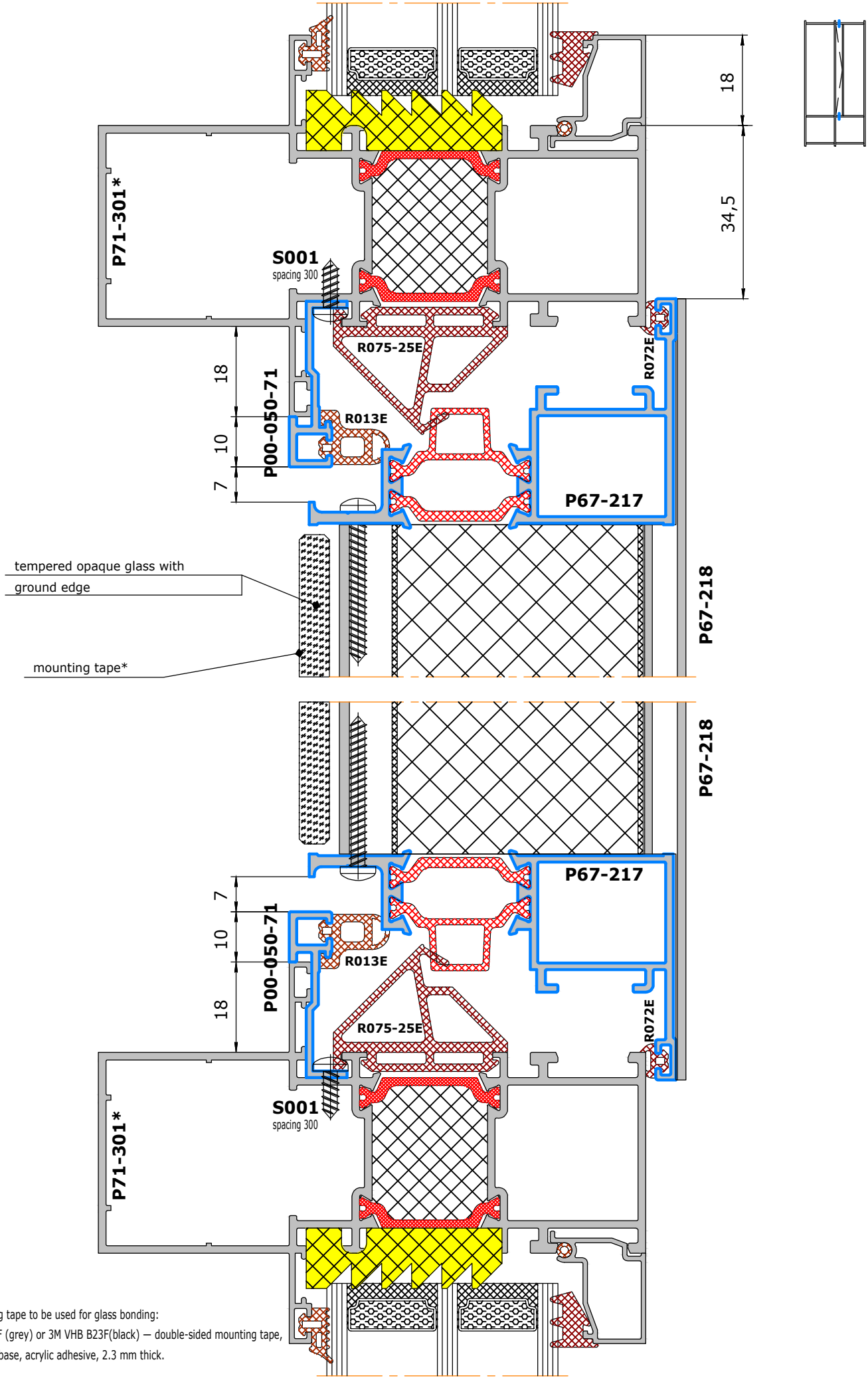




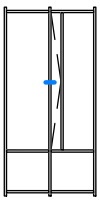


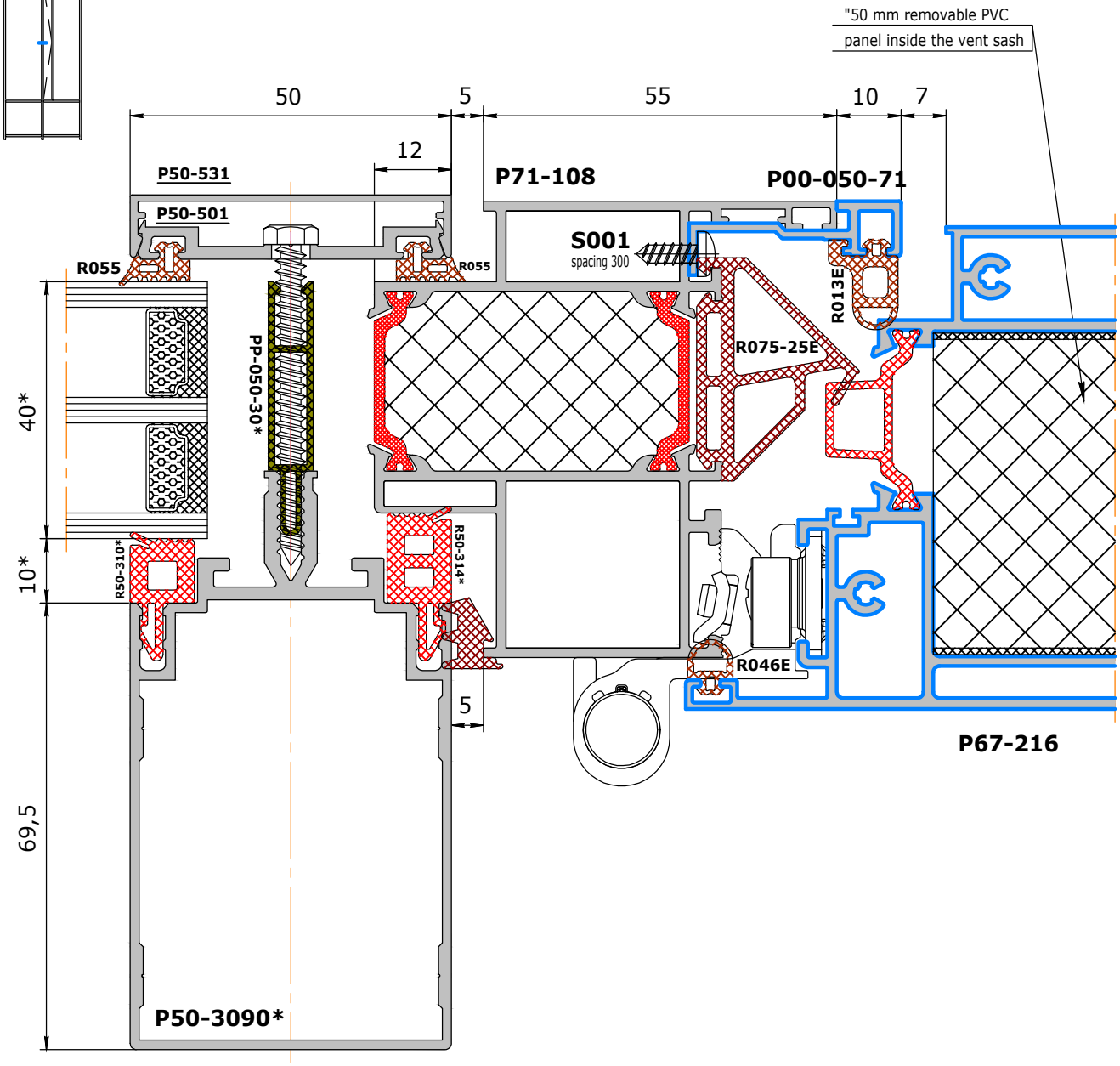
* — **mounting tape to be used for glass bonding:**

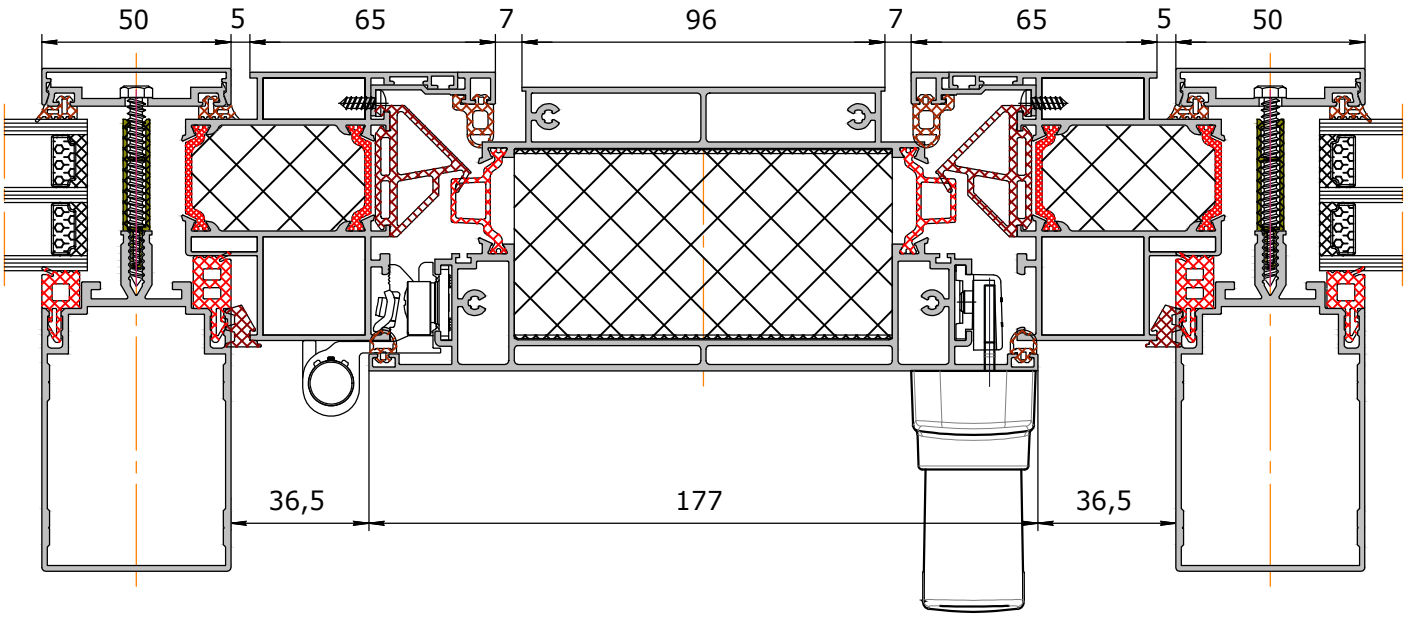
3M VHB G23F (grey) or **3M VHB B23F**(black) — double-sided mounting tape, acrylic foam base, acrylic adhesive, 2.3 mm thick.



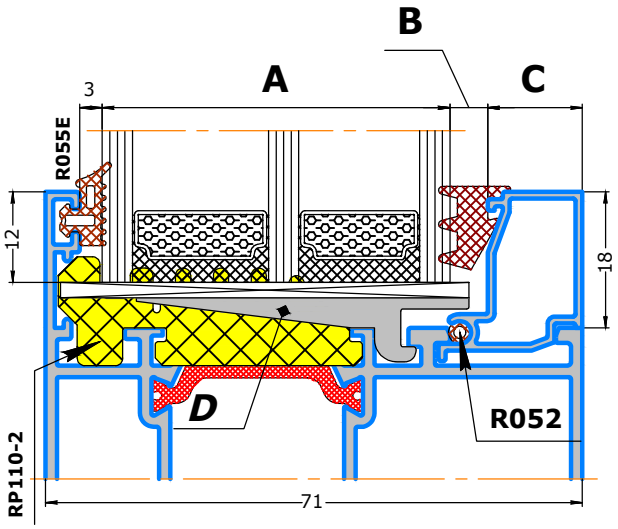
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3M VHB G23F (grey) or 3M VHB B23F(black) – double-sided mounting tape, acrylic foam base, acrylic adhesive, 2.3 mm thick.



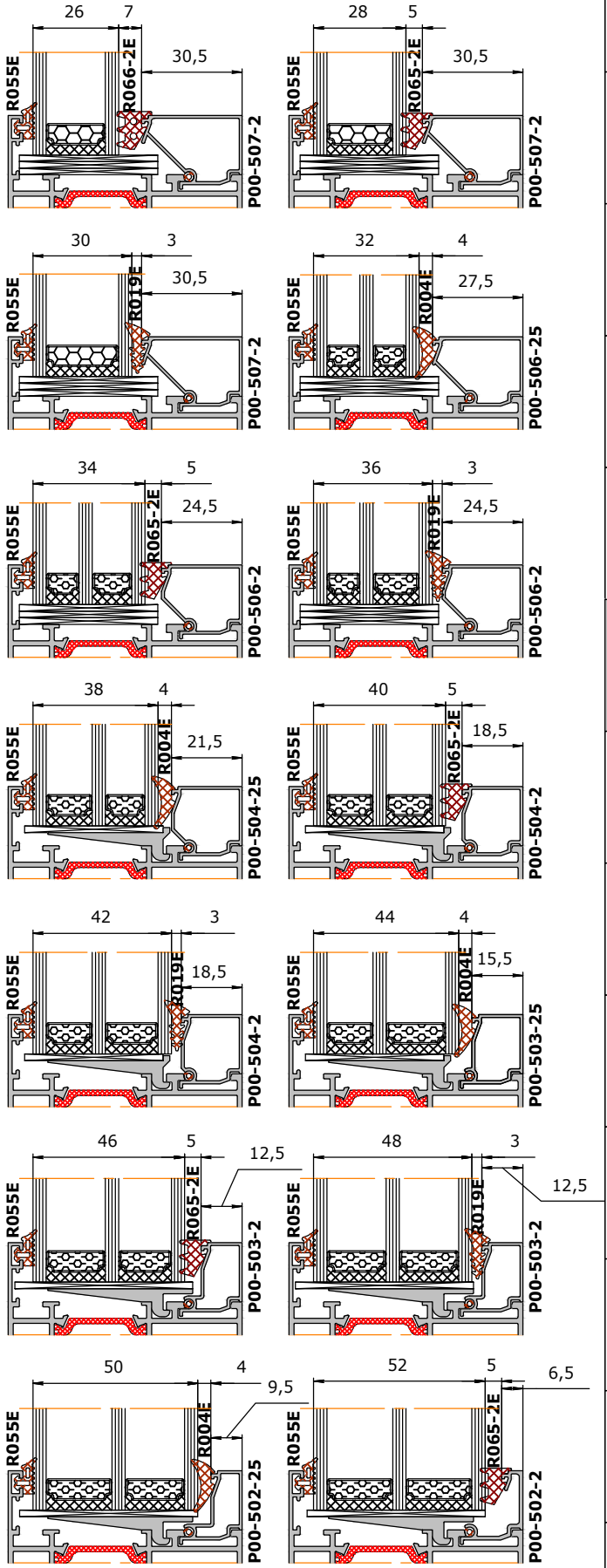

"50 mm removable PVC
panel inside the vent sash
50
5
55
10
7
12
P50-531
P50-501
P71-108
P00-050-71
S001
spacing 300
R055
R055
R013E
R075-25E
PP-050-30*
40*
10*
R50-310*
R50-314*
R046E
5
P67-216
69,5
P50-3090*


50
5
65
7
96
7
65
5
50
36,5
177
36,5

Fill-in table: main frame profiles



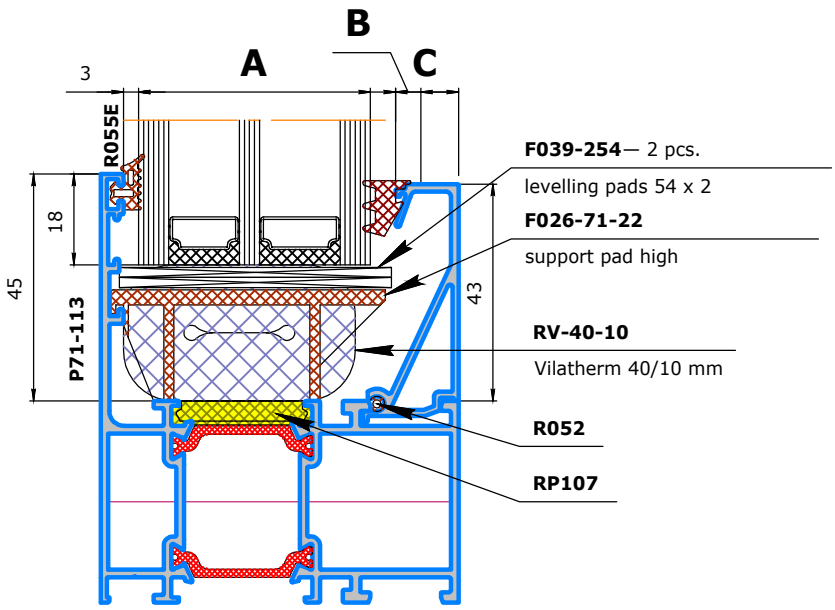
filling thickness **A**	internal gasket **B**	glazing bead **C**	support pad **D**
26	**R066-2E** (6 mm)	**P00-507-2** (30.5 mm)	**F039-242** 3 pcs.
28	**R065-2E** (5 mm)	**P00-507-2** (30.5 mm)	**F039-242** 3 pcs.
30	**R019E** (3 mm)	**P00-507-2** (30.5 mm)	**F039-242** 3 pcs.
32	**R004E** (4 mm)	**P00-506-2** (24.5 mm)	**F039-242** 3 pcs.
34	**R065-2E** (5 mm)	**P00-506-2** (24.5 mm)	**F039-242** 3 pcs.
36	**R019E** (3 mm)	**P00-506-2** (24.5 mm)	**F039-242** 3 pcs.
38	**R004E** (4 mm)	**P00-504-25** (21.5 mm)	**F064 + F039-242**
40	**R065-2E** (5 mm)	**P00-504-2** (18.5 mm)	**F064 + F039-242**
42	**R019E** (3 mm)	**P00-504-2** (18.5 mm)	**F064 + F039-242**
44	**R004E** (4 mm)	**P00-503-25** (15.5 mm)	**F064 + F039-242**
46	**R065-2E** (5 mm)	**P00-503-2** (12.5 mm)	**F064-2 + F039-254**
48	**R019E** (3 mm)	**P00-503-2** (12.5 mm)	**F064-2 + F039-254**
50	**R004E** (4 mm)	**P00-502-25** (9.5 mm)	**F064-2 + F039-254**
52	**R065-2E** (5 mm)	**P00-502-2** (6.5 mm)	**F064-2 + F039-254**

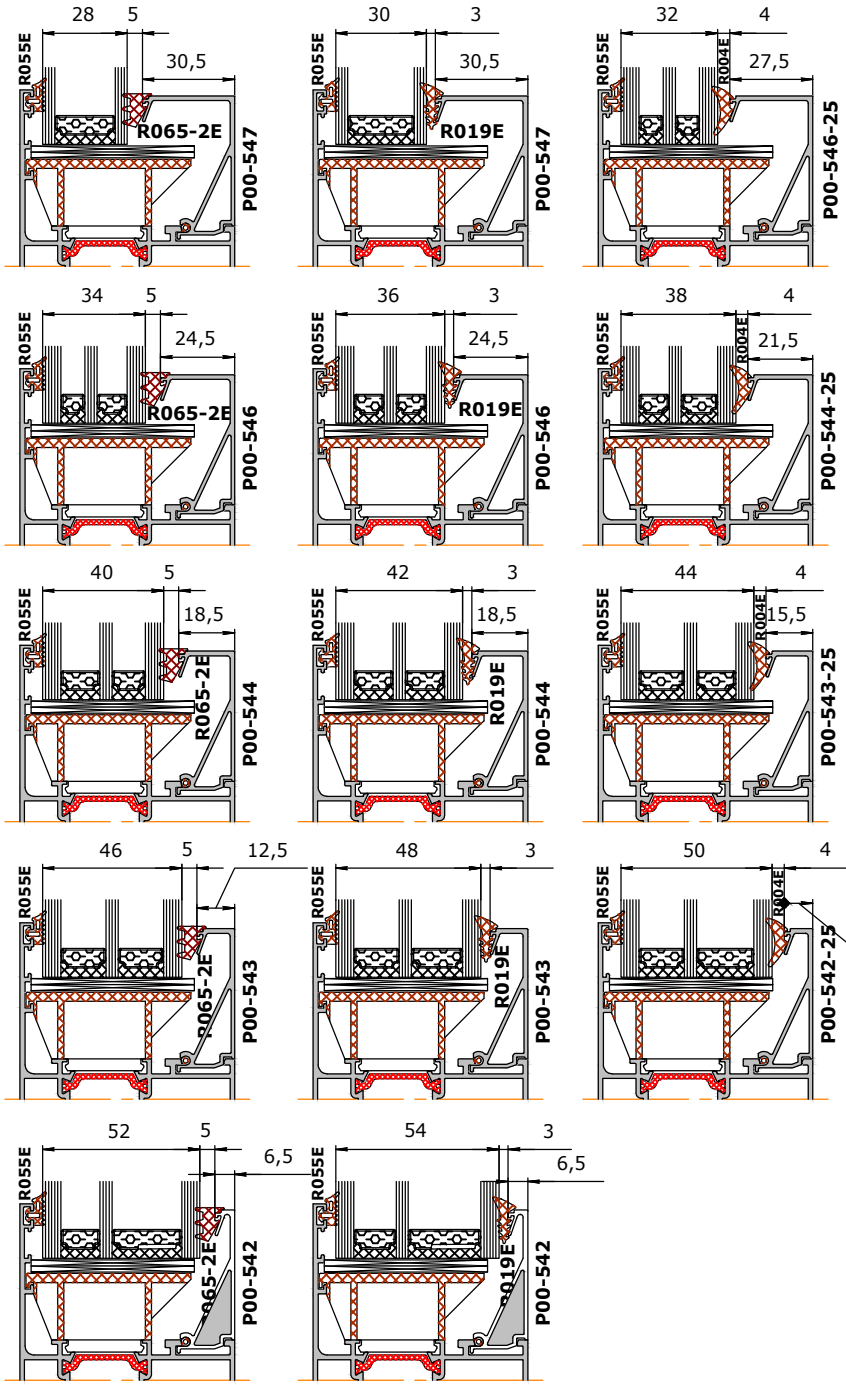


The selection of gaskets to be used for the installation of double-glazed units in aluminium structures specified in the technical documentation for Masttech systems is indicative and serves only to draw up the primary specification of the materials used. Since regulatory documentation on glued double-glazed units (GOSTs, SP, TU, etc.) allows for variations in thickness with a tolerance of +/-1 mm, the gaskets shall be accurately selected experimentally for each batch of double-glazed units. Otherwise, the gaskets may not adhere tightly to the fillings, resulting in leaks and blowouts. This will be the responsibility of the company that installed the aluminium structures.

Fill-in table: profiles (wings 45 mm) of the frame for the sash not visible from the outside

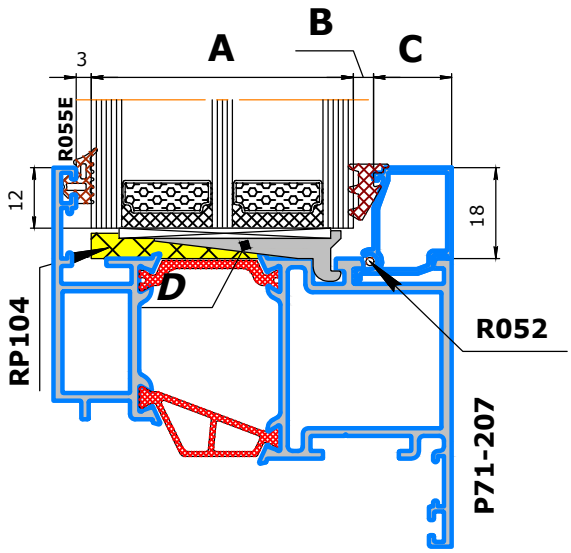
filling thickness **A**	external gasket **B**	internal gasket **C**	glazing bead **D**
28		**R065-2E** 5 mm	**P00-547** 30.5 mm
30		**R019E** 3 mm	
32		**R004E** 4 mm	**P00-546-25** 27.5 mm
34		**R065-2E** 5 mm	**P00-546** 24.5 mm
36		**R019E** 3 mm	
38		**R004E** 4 mm	**P00-544-25** 21.5 mm
40	**R055E** 3.5 mm	**R065-2E** 5 mm	**P00-544** 18.5 mm
42		**R019E** 3 mm	
44		**R004E** 4 mm	**P00-543-25** 15.5 mm
46		**R065-2E** 5 mm	**P00-543** 12.5 mm
48		**R019E** 3 mm	
50		**R004E** 4 mm	**P00-542-25** 9.5 mm
52		**R065-2E** 5 mm	**P00-542** 6.5 mm
54		**R019E** 3 mm	



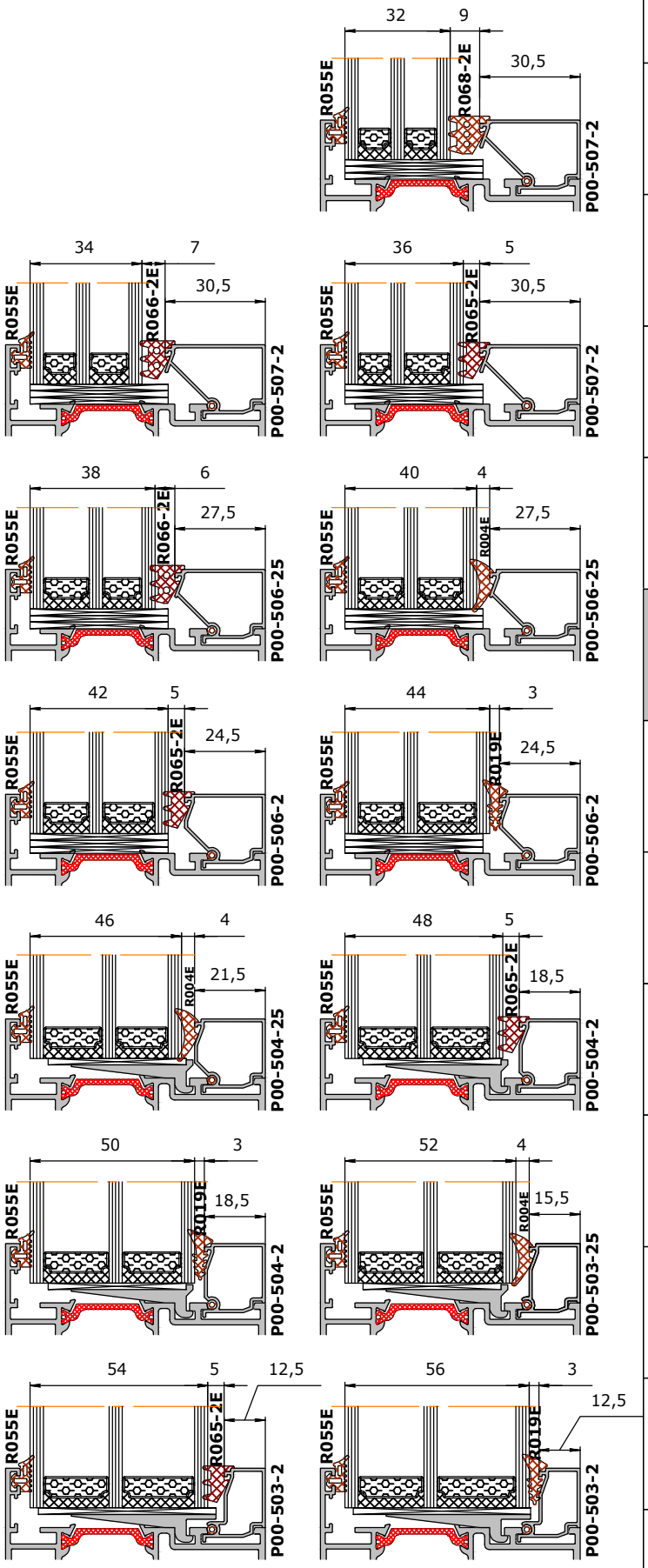


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Fill-in table: sash P71-207



filling thickness **A**	internal gasket **B**	glazing bead **C**	support pad **D**
32	**R068-2E** (8 mm)	**P00-507-2** (30.5 mm)	**F039-242** 3 pcs.
34	**R066-2E** (6 mm)	**P00-507-2** (30.5 mm)	**F039-242** 3 pcs.
36	**R065-2E** (5 mm)	**P00-507-2** (30.5 mm)	**F039-242** 3 pcs.
38	**R066-2E** (6 mm)	**P00-506-25** (27.5 mm)	**F039-242** 3 pcs.
40	**R004E** (4 mm)	**P00-506-25** (27.5 mm)	**F039-242** 3 pcs.
42	**R065-2E** (5 mm)	**P00-506-2** (24.5 mm)	**F039-242** 3 pcs.
44	**R019E** (3 mm)	**P00-506-2** (24.5 mm)	**F039-242** 3 pcs.
46	**R004E** (4 mm)	**P00-504-25** (21.5 mm)	**F064 + F039-254**
48	**R065-2E** (5 mm)	**P00-504-2** (18.5 mm)	**F064 + F039-254**
50	**R019E** (3 mm)	**P00-504-2** (18.5 mm)	**F064 + F039-254**
52	**R004E** (4 mm)	**P00-503-25** (15.5 mm)	**F064 + F039-254**
54	**R065-2E** (5 mm)	**P00-503-2** (12.5 mm)	**F064-2 + F039-254**
56	**R019E** (3 mm)	**P00-503-2** (12.5 mm)	**F064-2 + F039-254**

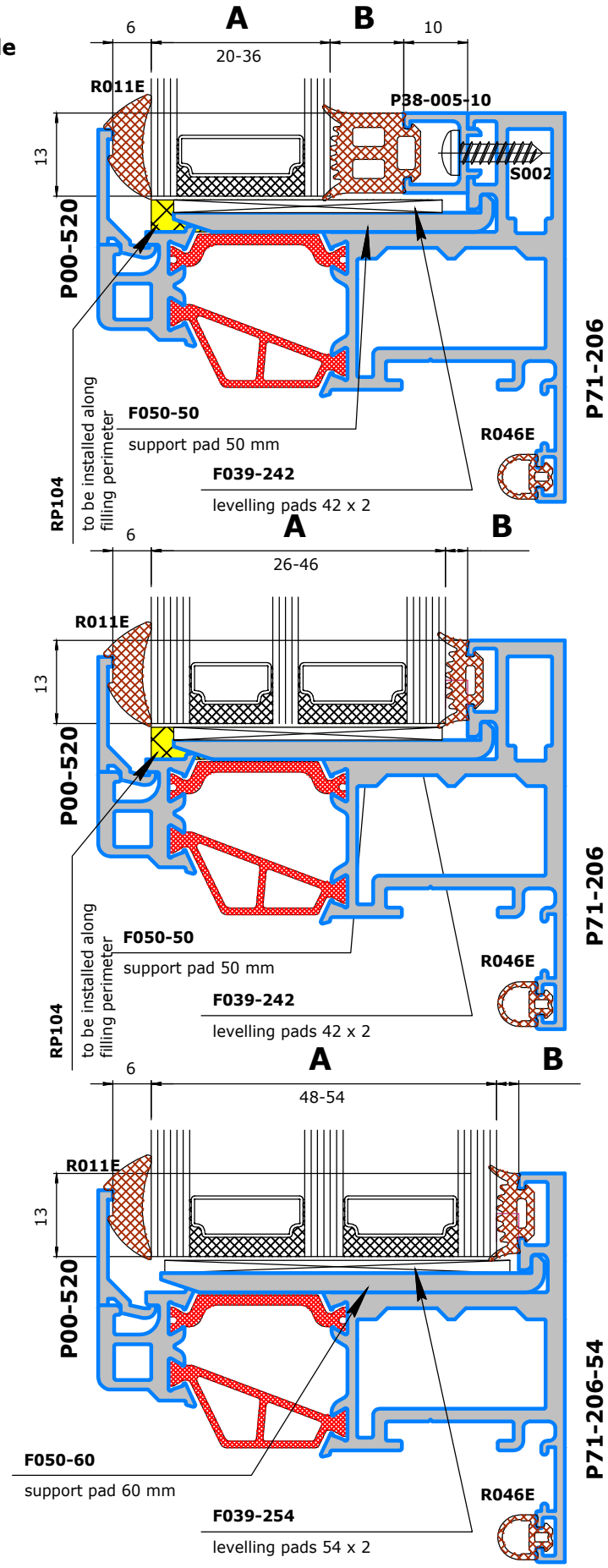


The selection of gaskets to be used for the installation of double-glazed units in aluminium structures specified in the technical documentation for Masttech systems is indicative and serves only to draw up the primary specification of the materials used. Since regulatory documentation on glued double-glazed units (GOSTs, SP, TU, etc.) allows for variations in thickness with a tolerance of +/-1 mm, the gaskets shall be accurately selected experimentally for each batch of double-glazed units. Otherwise, the gaskets may not adhere tightly to the fillings, resulting in leaks and blowouts. This will be the responsibility of the company that installed the aluminium structures.

Fill-in table:

sash P71-206 not visible from the outside

filling thickness **A**	internal gasket **B**	spacer	support pad
20	**R319** 19.5 mm	**P38-005-10** 10 mm	**F050-50** pad 50 mm + **F039-242** levelling pad 42 x 2 mm
22	**R317** 17.5 mm		
24	**R315** 15.5 mm		
26	**R313** 13.5 mm		
28	**R311** 11.5 mm		
30	**R309** 9.5 mm		
32	**R307** 7.5 mm		
34	**R305** 5.5 mm		
36	**R303** 3.5 mm		
26	**R323** 23.5 mm	---	
28	**R321** 21.5 mm		
30	**R319** 19.5 mm		
32	**R317** 17.5 mm		
34	**R315** 15.5 mm		
36	**R313** 13.5 mm		
38	**R311** 11.5 mm		
40	**R309** 9.5 mm		
42	**R307** 7.5 mm		
44	**R305** 5.5 mm		
46	**R303** 3.5 mm		
48	**R309** 9.5 mm	---	**F050-60** pad 60 mm + **F039-254** levelling pad 54 x 2 mm
50	**R307** 7.5 mm		
52	**R305** 5.5 mm		
54	**R303** 3.5 mm		

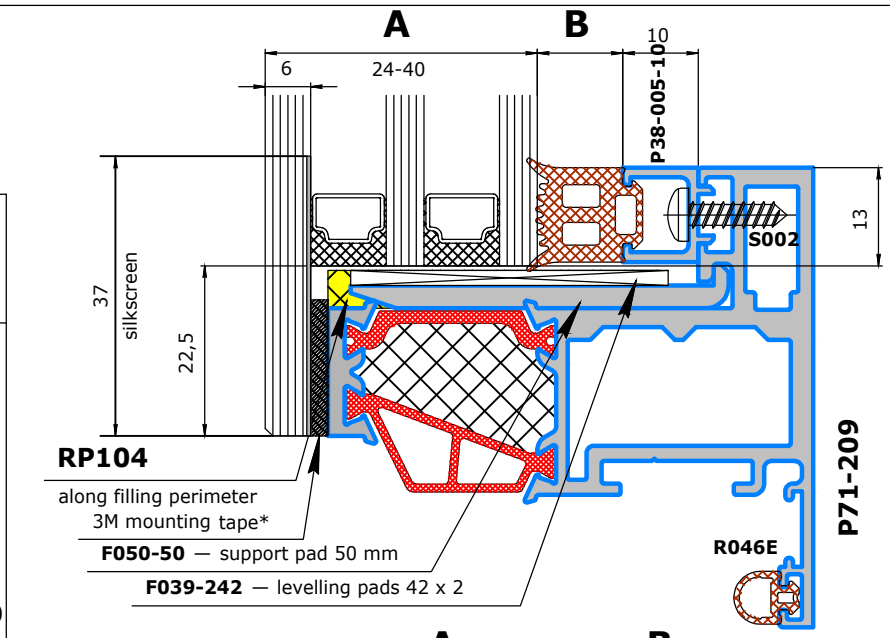


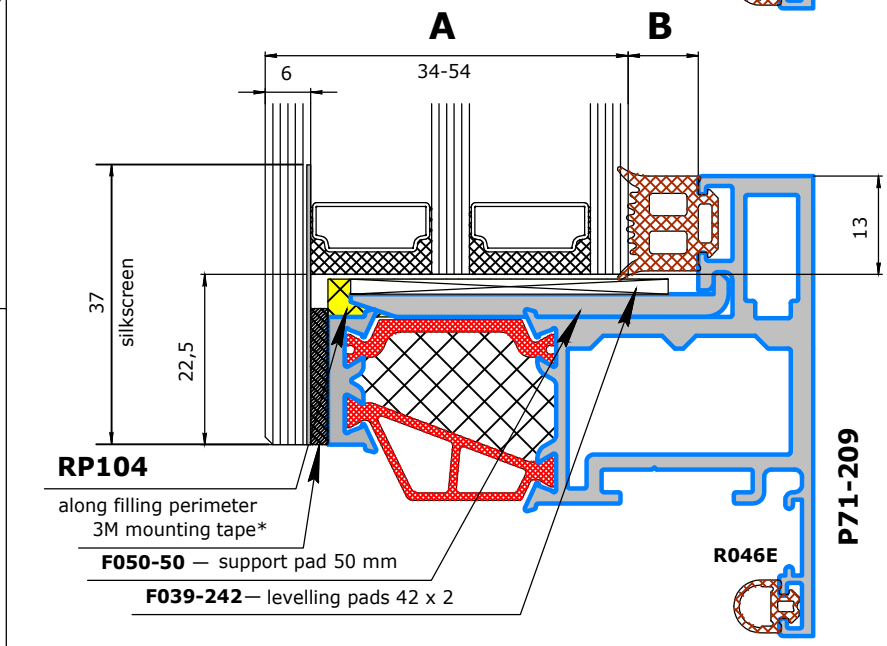
The selection of gaskets to be used for the installation of double-glazed units in aluminium structures specified in the technical documentation for Masttech systems is indicative and serves only to draw up the primary specification of the materials used. Since regulatory documentation on glued double-glazed units (GOSTs, SP, TU, etc.) allows for variations in thickness with a tolerance of +/-1 mm, the gaskets shall be accurately selected experimentally for each batch of double-glazed units. Otherwise, the gaskets may not adhere tightly to the fillings, resulting in leaks and blowouts. This will be the responsibility of the company that installed the aluminium structures.

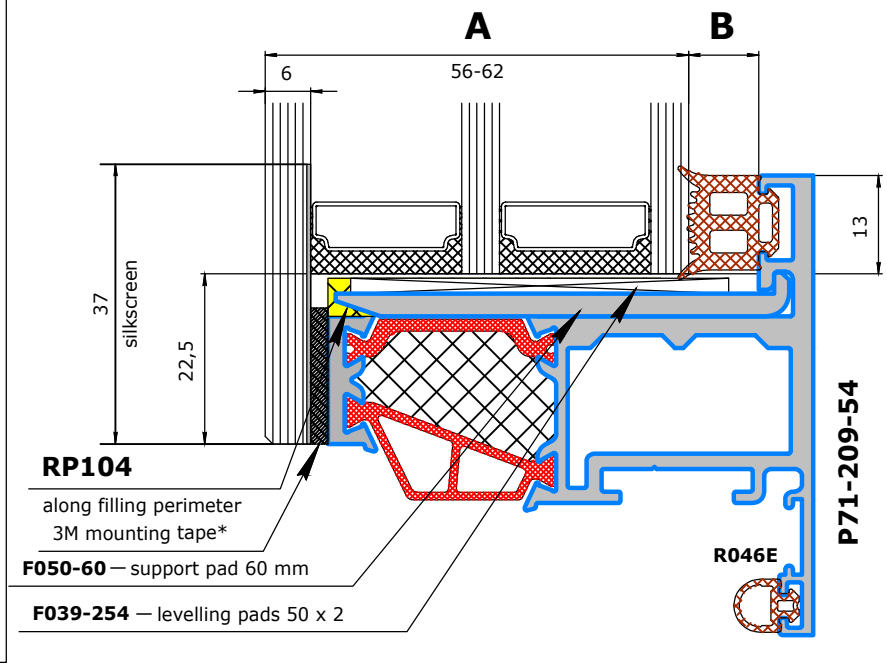
Fill-in table:

structural sash P71-209

filling thickness **A**	internal gasket **B**	spacer
24	**R323** 23.5 mm	**P38-005-10** 10 mm
26	**R321** 21.5 mm	
28	**R319** 19.5 mm	
30	**R317** 17.5 mm	
32	**R315** 15.5 mm	
34	**R313** 13.5 mm	
36	**R311** 11.5 mm	
38	**R309** 9.5 mm	
40	**R307** 7.5 mm	
34	**R323** 23.5 mm	----
36	**R321** 21.5 mm	
38	**R319** 19.5 mm	
40	**R317** 17.5 mm	
42	**R315** 15.5 mm	
44	**R313** 13.5 mm	
46	**R311** 11.5 mm	
48	**R309** 9.5 mm	
50	**R307** 7.5 mm	
52	**R305** 5.5 mm	
54	**R303** 3.5 mm	
56	**R309** 9.5 mm	
58	**R307** 7.5 mm	
60	**R305** 5.5 mm	
62	**R303** 3.5 mm	







In order to avoid a visible 6 mm manufacturing gap, the external glass pane is provided with a single-colour, 37 mm wide silkscreen print along the perimeter; the colour of the silkscreen print to be agreed with the customer. The edge of the outer glass shall be blunted

* — Mounting tape to be used for glass bonding: 3M VHB B23F (black) — double-sided mounting tape 18 mm, acrylic foam base, acrylic adhesive, 2.3 mm thick. Prior to bonding the double-glazed unit, determine the adhesive strength of the bonded materials.

Glass bonding instructions.

Materials and tools used.

1. VHB tape: 3M VHB G23F (grey) or 3M VHB B23F (black), 18 mm wide. Double-sided mounting tape, acrylic foam base, acrylic adhesive, 2.3 mm thick.
2. primer: Primer 94EF – Always apply a thin layer of Primer 94EF on powder coatings after abrasive treatment.
3. Silane glass primer: multiplies the adhesive strength of the tape. To be used under low temperatures or when bonding live panels.
4. Abrasive: Scotch-Brite 07447. The use of other abrasives is not recommended as they may leave too deep a risk on the surface reducing the bond strength.
5. Lint-free wipes.
6. Plastic tape applicator. Ensures that the tape is applied to the glass with a minimum of bubbles.
7. Sharp knife. Cut two layers of tape at the corners of the frame to create an airtight joint. Use a sharp knife – a blunt blade will damage the tape and prevent an airtight joint.
8. Two-handed pressure roller. Used to press the tape to the profile immediately after applying and to further press the glass to the profile with the tape applied. Apply firm pressure with both hands – good pressure is essential to ensure that the tape contacts both surfaces and forms a strong and durable joint.
9. Silicone. Sealing the perimeter of the sash with silicone sealant is recommended – although VHB™ tape is highly resistant to environmental conditions, the joint should be sealed as water could freeze there and compress the glass.

Frame preparation

1. Make sure that all necessary tools and materials are available.
2. Make sure that the room temperature is at least +15 °C
3. Treat the powder-coated area of the frame to be bonded with Scotch-Brite 7447 abrasive. Do not remove all of the powder coating. Remove only the top layer, leaving a matt finish.
4. Clean the treated surface with an isopropanol/water mixture (1:1 by volume).
5. Apply 94EF Primer with a slightly dampened wipe. Apply only one coat in the minimum amount.
6. Apply the tape 5 minutes after the surface has been treated with an adhesion promoter.

Glass surface preparation

1. Treat the glass with glass silane primer by applying only one coat in a minimum amount. Allow to dry for at least 5 minutes before applying the tape. Immediately remove any excess primer with a dry, clean wipe before it dries.
2. If the glass is very dirty, clean it with acetone, heptane or a mixture of isopropanol and water (1:1) before applying the silane primer.
3. There should be no cloudy stains on the glass after treatment with silane primer, otherwise clean the glass and reapply the primer.

Tape application

1. Apply the tape to the prepared frame using a manual applicator. Tape application without an applicator is not recommended as it is difficult to ensure a quality application without air bubbles.
2. To apply the tape evenly, make sure it fits into the groove of the applicator; move the applicator along the edge of the frame, pressing the tab at the bottom of the applicator against the edge of the glass.
3. Overlap the tape in the corners of the glass so that the second layer of tape is on top of the first one.
4. Roll the tape with a stiff roller without removing the protective film. Press the roller firmly during operation. Only this roller should be used.
5. Roll the tape all the way to the end of the frame and, preferably, at the ends on both sides. Adhesion of the tape to the frame can be checked by tearing the tape's protective film at the frame edge. When doing so, the tape must remain in place; if the tape tears off, flat it with a roller again. If the tape continues to come off the surface, the cleaning procedure may have been carried out incorrectly. In this case it may be necessary to remove the tape and re-prepare the surface.

Frame corner piece – 90-degree bevel

1. Attach the tape to the frame so that the second layer of tape overlaps the first layer in each corner.
2. Use a roller to press the tape onto the frame – if the tape is not pressed down, it may come off during subsequent operations. Do not immediately press the tape down as hard as possible as it may shift. If the tape is displaced, remove it and reapply.
3. Cut through the top protective layer of tape in each corner close to the inner edge of the bottom layer and remove the cut-off. If the edge of the bottom layer is bent upwards and may prevent the glass from fitting tightly, the excess tape should also be cut off and removed.
4. Gently smooth out and press the trimmed section of the tape with your thumb – the edges of the tape will fuse together when pressed, providing an extra seal.
5. Roll the seam you have made with the edge of the roller to ensure a strong adhesive bond. Make sure both edges of the tape are in contact.
6. Only then remove the protective film from the tape.

Joining

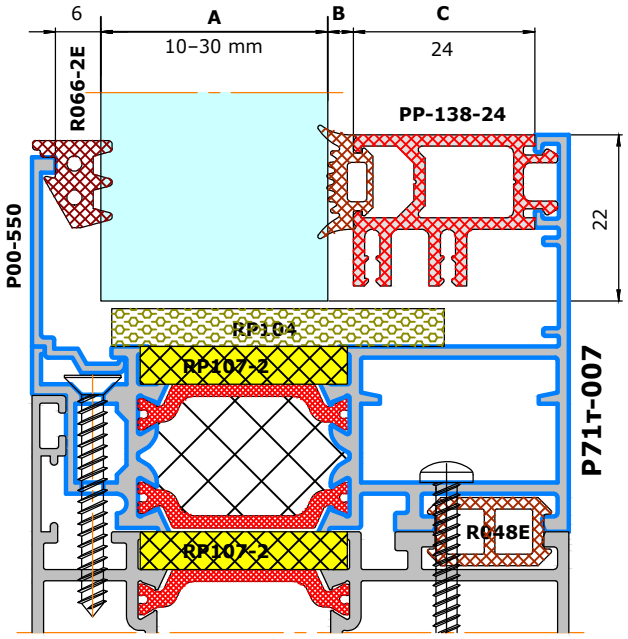
1. Use the guides to ensure that the glass is positioned correctly on the frame at the first try. Once joined, the glass cannot be repositioned.
2. Move the glass with special devices (suction cups).
3. To fit the glass, lift it up, remove the protective film and lower the glass onto the frame.
4. After joining, apply additional pressure to the tape using a VULKAN or other manual pressing device.
5. Finally, to verify the pressing quality, check how the colour of the tape has changed. Good adhesion: if you look at the tape through the glass, you will see a uniform grey tint. Satisfactory adhesion: if you look at the tape through the glass, you will see a light grey tint in some places – additional pressing is required.

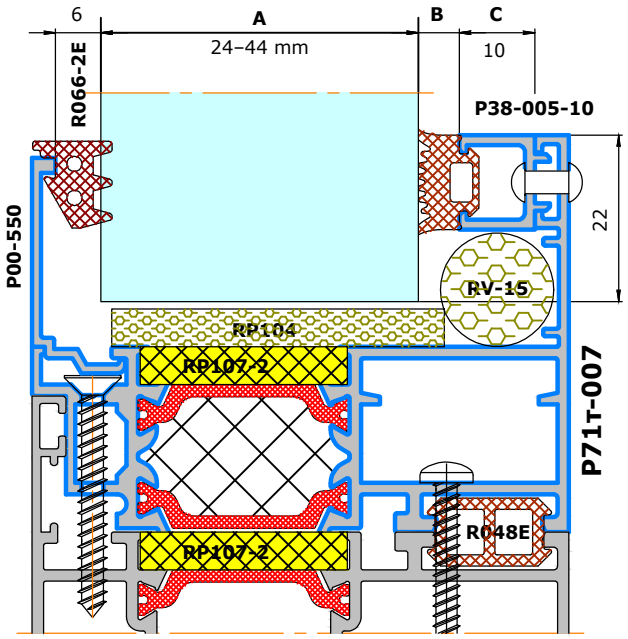
Sealing

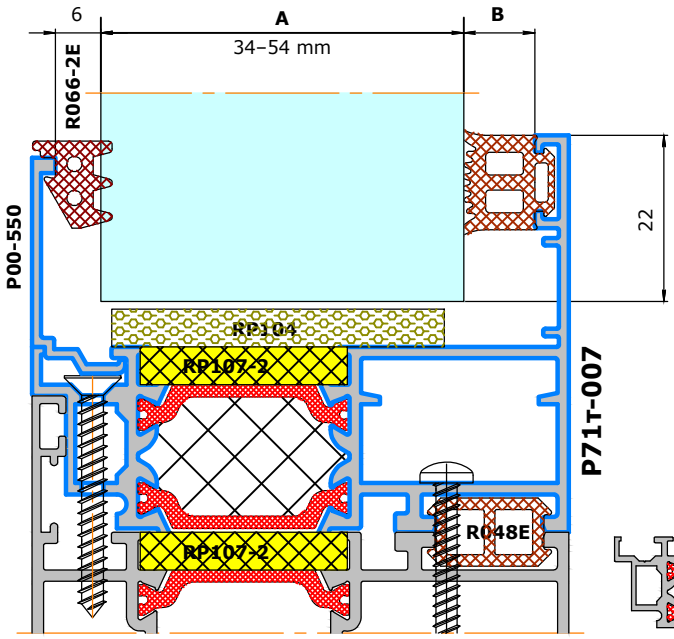
It is recommended to apply a neutral silicone sealant around the perimeter of the glass to protect the joint from external influences and water ingress into the gap between the frame and the glass.

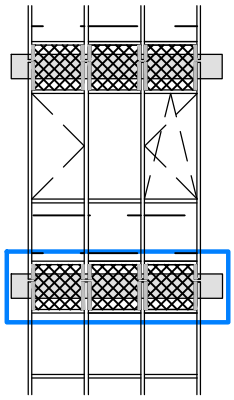
Fill-in table: outdoor glazing turning adapter, external glazing bead P00-550

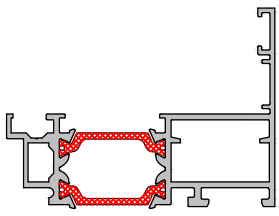
filling thickness **A**	internal gasket **B**	spacer **C**
6	**R317** 17.5 mm	**PP-138-24 + P38-005-10**
8	**R315** 15.5 mm	
10	**R323** 23.5 mm	**PP-138-24** 24 mm
12	**R321** 21.5 mm	
14	**R319** 19.5 mm	
16	**R317** 17.5 mm	
18	**R315** 15.5 mm	
20	**R313** 13.5 mm	
22	**R311** 11.5 mm	
24	**R309** 9.5 mm	
26	**R307** 7.5 mm	
28	**R305** 5.5 mm	
30	**R303** 3.5 mm	
24	**R323** 23.5 mm	**P38-005-10** 10 mm
26	**R321** 21.5 mm	
28	**R319** 19.5 mm	
30	**R317** 17.5 mm	
32	**R315** 15.5 mm	
34	**R313** 13.5 mm	
36	**R311** 11.5 mm	
38	**R309** 9.5 mm	
40	**R307** 7.5 mm	
42	**R305** 5.5 mm	
44	**R303** 3.5 mm	
34	**R323** 23.5 mm	---
36	**R321** 21.5 mm	
38	**R319** 19.5 mm	
40	**R317** 17.5 mm	
42	**R315** 15.5 mm	
44	**R313** 13.5 mm	
46	**R311** 11.5 mm	
48	**R309** 9.5 mm	
50	**R307** 7.5 mm	
52	**R305** 5.5 mm	
54	**R303** 3.5 mm	







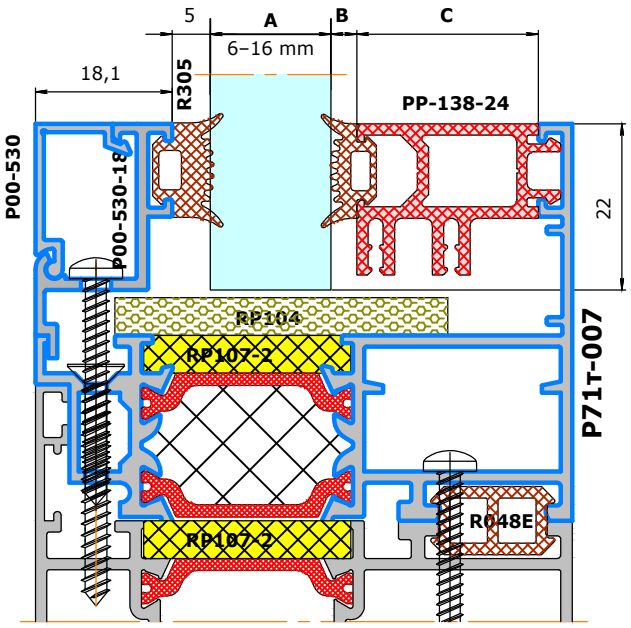


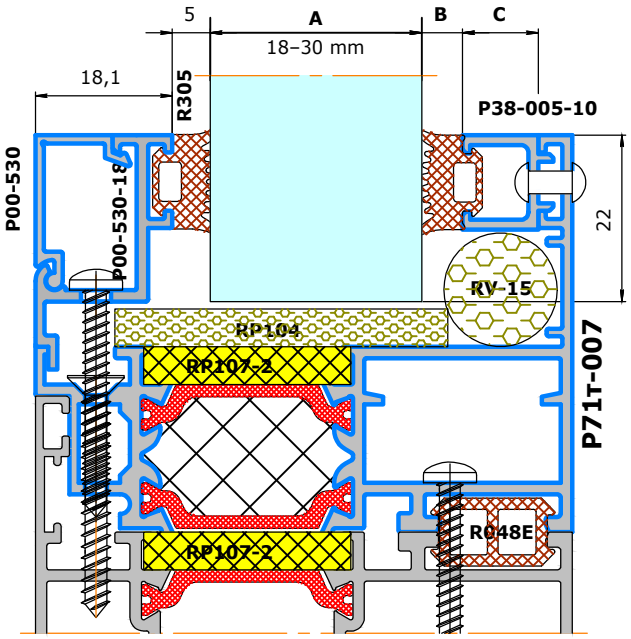


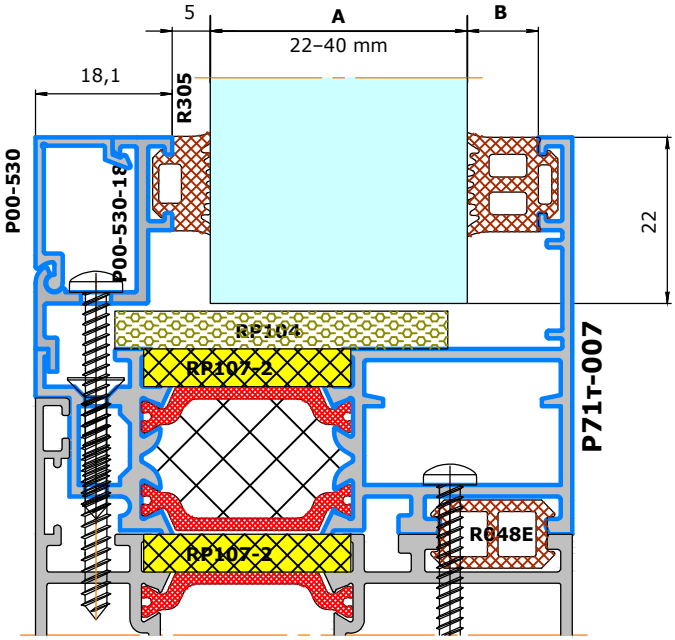
Glazing bead **P00-550** is used for medium-format fillings (max. width 1.5–2 m)
Otherwise a screw-on glazing bead is used **P00-530-18**

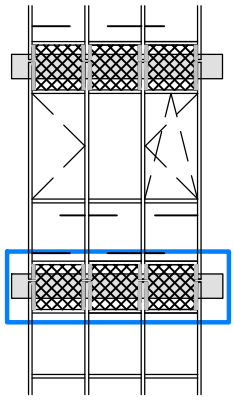
Fill-in table: outdoor glazing
turning adapter, external glazing bead P00-530-18

filling thickness **A**	internal gasket **B**	spacer **C**
6	**R313** 13.5 mm	**PP-138-24** 24 mm
8	**R311** 11.5 mm	
10	**R309** 9.5 mm	
12	**R307** 7.5 mm	
14	**R305** 5.5 mm	
16	**R303** 3.5 mm	
18	**R315** 15.5 mm	**P38-005-10** 10 mm
20	**R313** 13.5 mm	
22	**R311** 11.5 mm	
24	**R309** 9.5 mm	
26	**R307** 7.5 mm	
28	**R305** 5.5 mm	
30	**R303** 3.5 mm	
22	**R321** 21.5 mm	---
24	**R319** 19.5 mm	
26	**R317** 17.5 mm	
28	**R315** 15.5 mm	
30	**R313** 13.5 mm	
32	**R311** 11.5 mm	
34	**R309** 9.5 mm	
36	**R307** 7.5 mm	
38	**R305** 5.5 mm	
40	**R303** 3.5 mm	

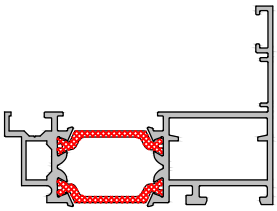






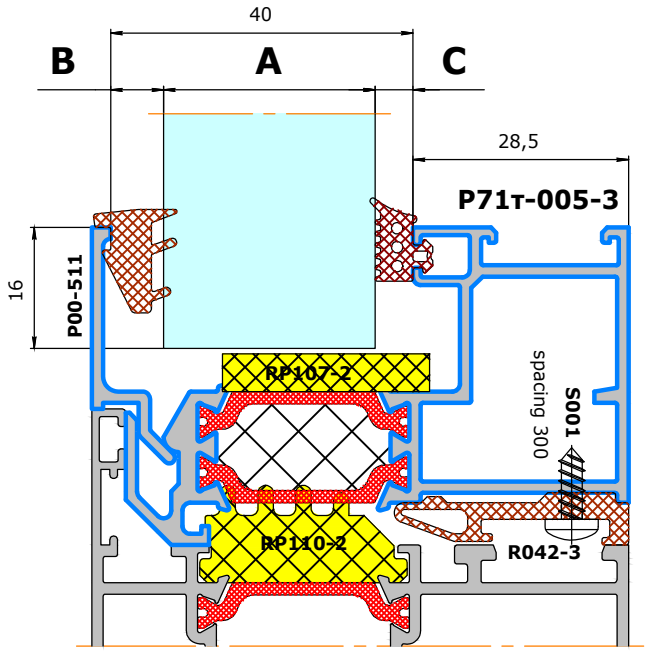


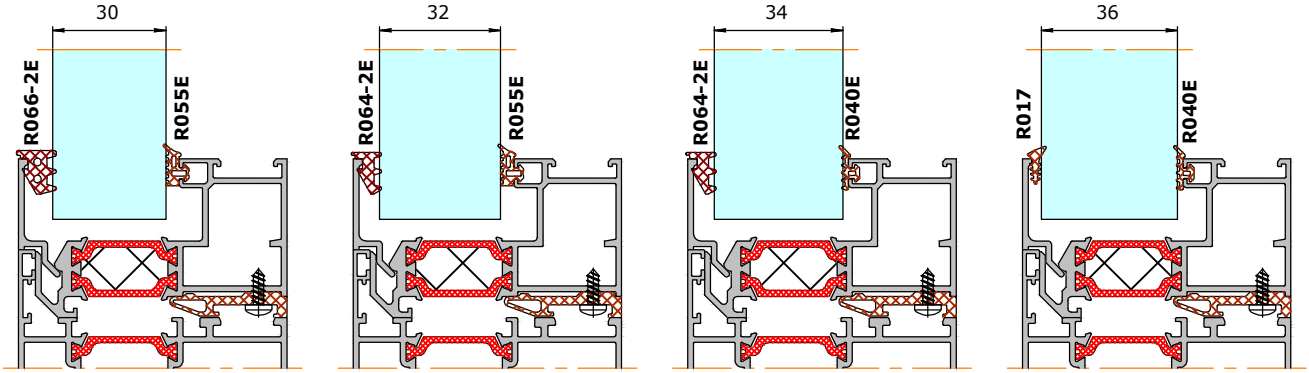
Screw-on glazing bead **P00-530-18** is used for large-format fillings (max. width 1.5–2 m). Otherwise a glazing bead **P00-550** is used.



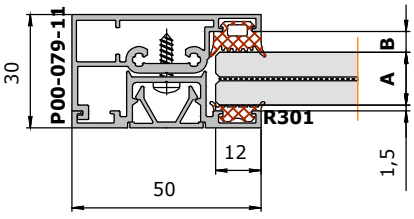
Fill-in table: outdoor glazing turning adapter P71-005-3

filling thickness **A**	external gasket **B**	internal gasket **C**
28	**R039** 7 mm	**R054E** 5 mm
30	**R066-2E** 6 mm	**R055E** 3.5 mm
32	**R064-2E** 4 mm	**R055E** 3.5 mm
34	**R064-2E** 4 mm	**R040E** 1.5 mm
36	**R017** 2 mm	**R040E** 1.5 mm



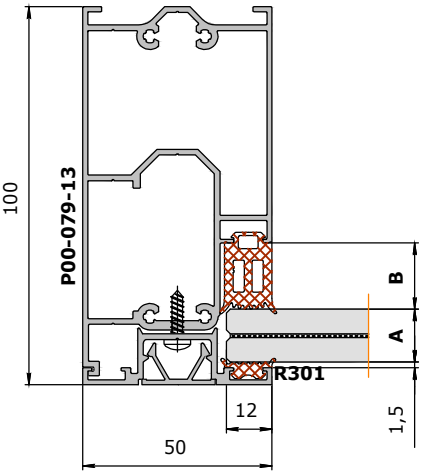


Fill-in table: outdoor screens

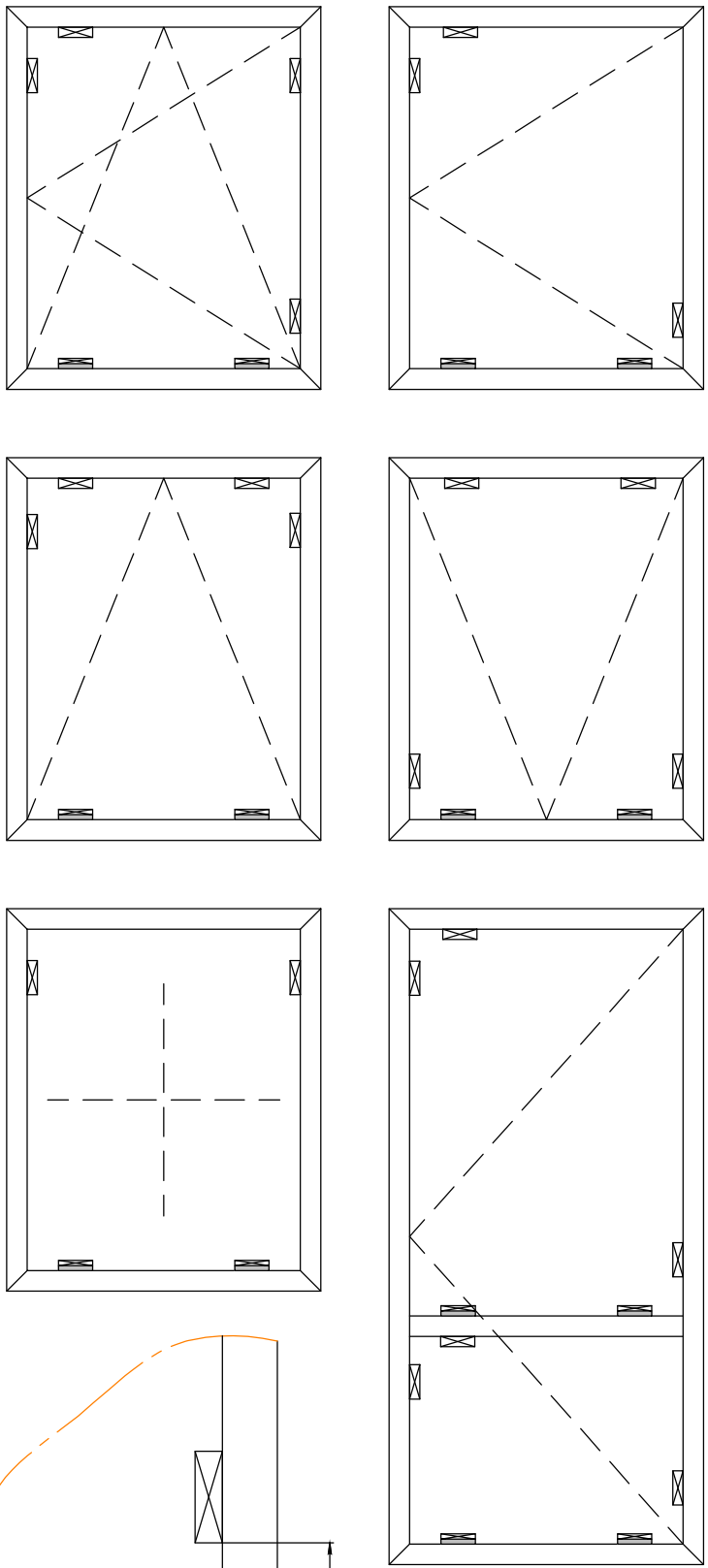


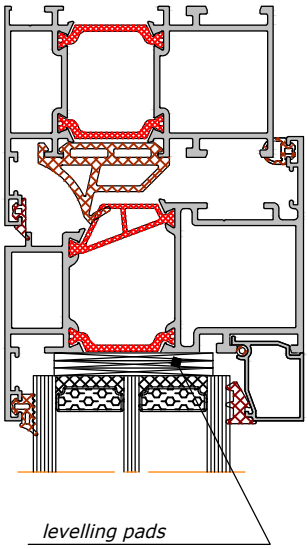
filling thickness **A**	external gasket	internal gasket **B**
6	**R301** 1.5 mm	**R313** – 13.5 mm
8		**R311** – 11.5 mm
10		**R309** – 9.5 mm
12		**R307** – 7.5 mm
14		**R305** – 5.5 mm
16		**R303** – 3.5 mm
18		**R301** – 1.5 mm

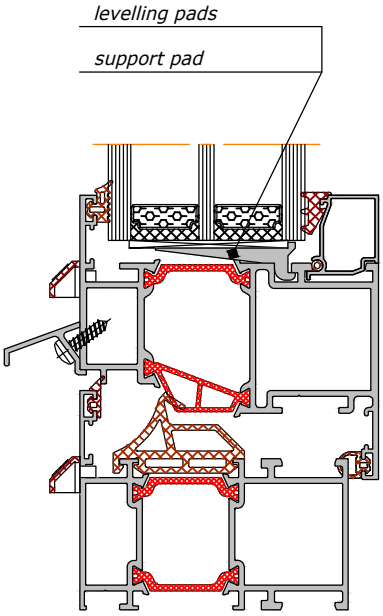
filling thickness **A**	external gasket	internal gasket **B**
2	**R309** 9.5 mm	**R323** – 23.5 mm
4		**R321** – 21.5 mm
6		**R319** – 19.5 mm
8	**R301** 1.5 mm	**R323** – 23.5 mm
10		**R321** – 21.5 mm
12		**R319** – 19.5 mm
14		**R317** – 17.5 mm
16		**R315** – 15.5 mm
18		**R313** – 13.5 mm
20		**R311** – 11.5 mm
22		**R309** – 9.5 mm
24		**R307** – 7.5 mm
26		**R305** – 5.5 mm
28		**R303** – 3.5 mm
30		**R301** – 1.5 mm



Pad installation diagram
(support and wedging levelling pads)

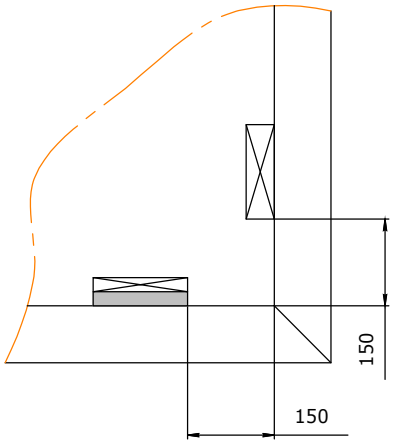






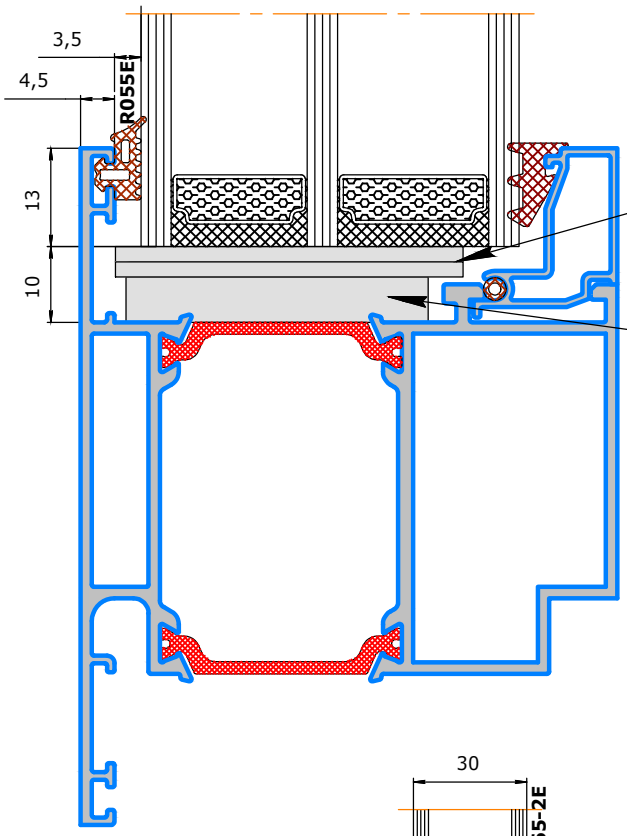
levelling pads

levelling pads and support pad



Before fixing with glazing beads, the filling of the opening and "blind" glazing elements must be "wedged" in place. Wedging is carried out using plastic levelling pads in accordance with the pattern specified for this type of opening. The aluminium support pads are only placed on the lower part of the sash and intended to transfer the weight of the filling to the internal part of the "warm" profile.

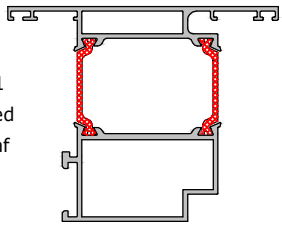
Door profile glazing table



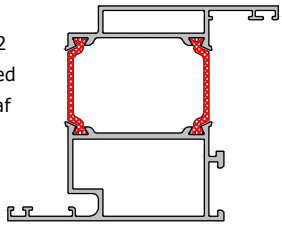
F039-246
levelling pad 46 x 2 mm
2 pcs.

F039-640
levelling pad 40 x 6 mm

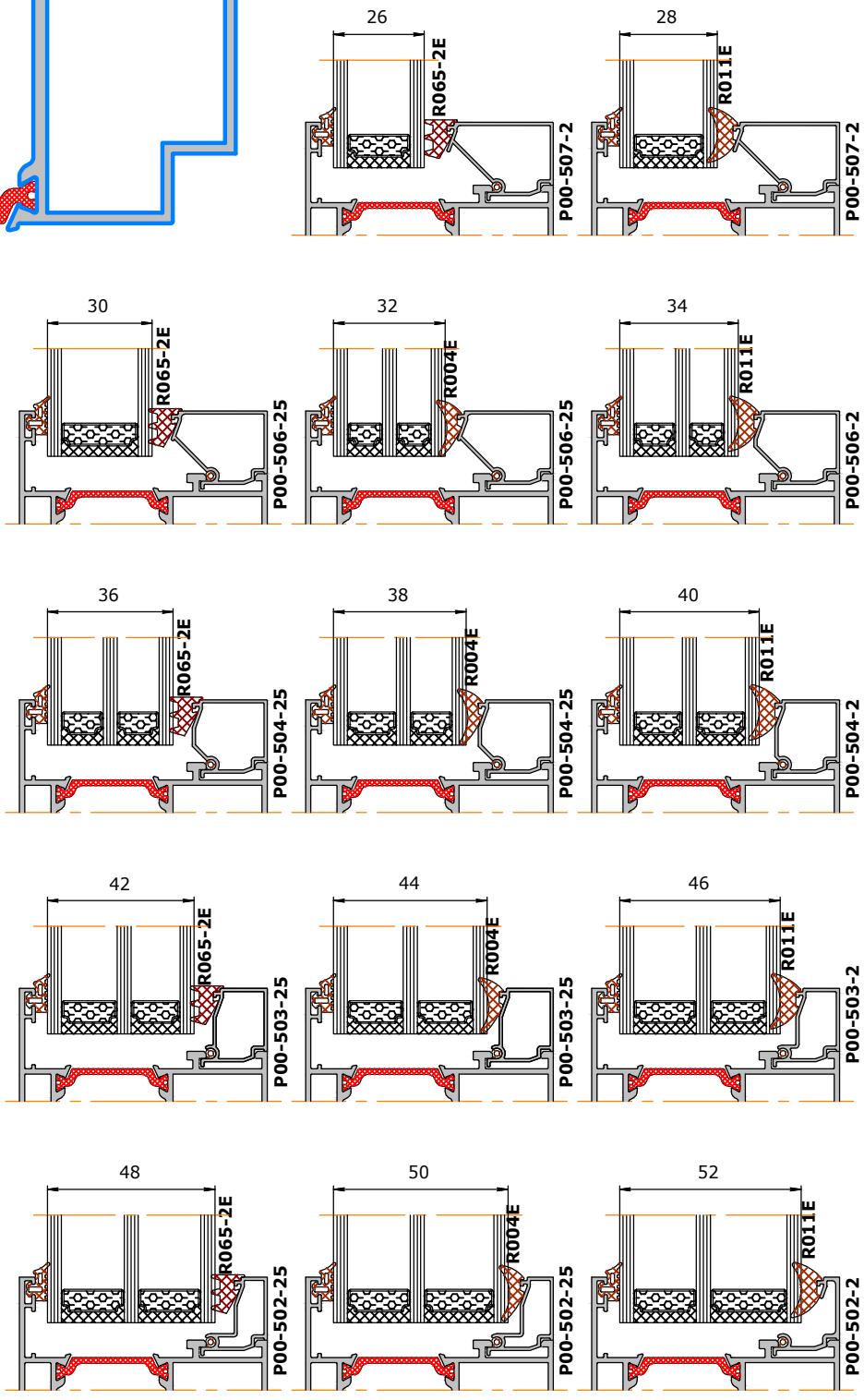
Applicable profiles for this table



P71-271
T-shaped
door leaf

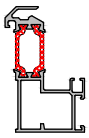
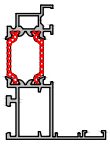
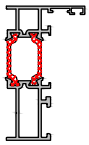
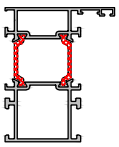
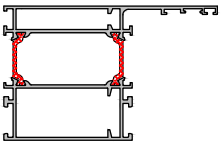
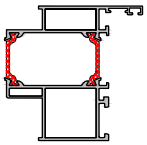
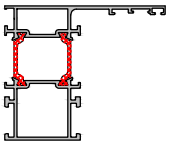
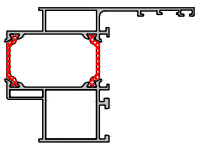
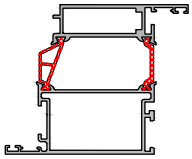


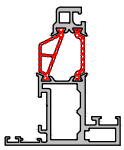
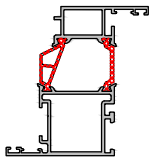
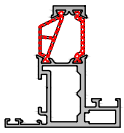
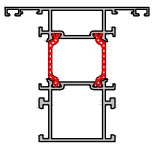
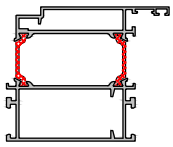
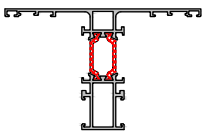
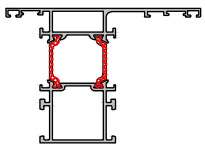
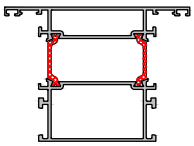
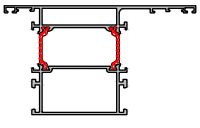
P71-272
Z-shaped
door leaf

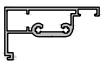


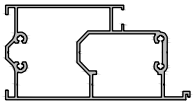
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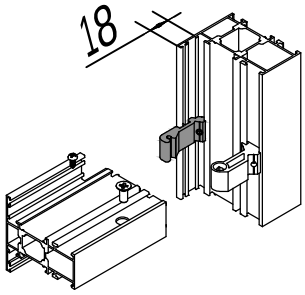
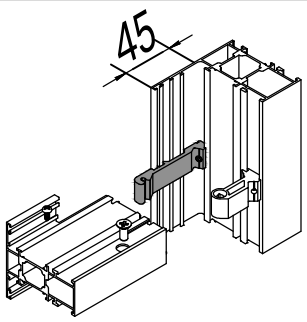
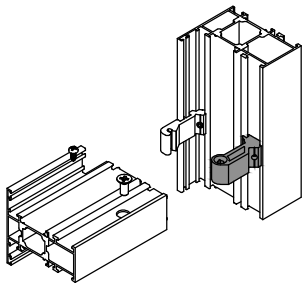
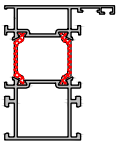
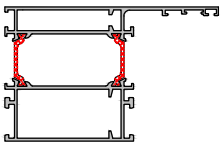
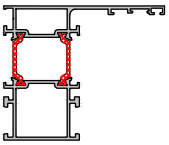
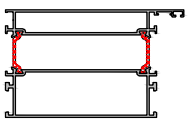
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profiles
delivery set
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sections
glazing tables
sub-assemblies tables
fitting arrangements
additional solutions
sub-assemblies
fire-resistant structures
connections
equipment and tools

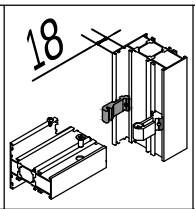
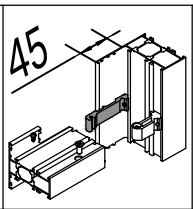
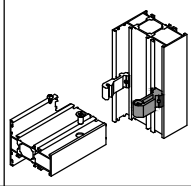
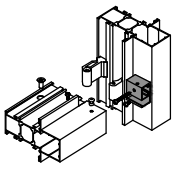
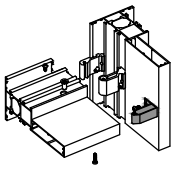
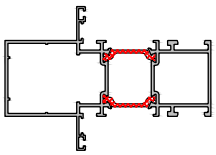
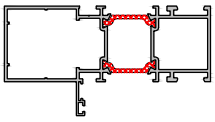
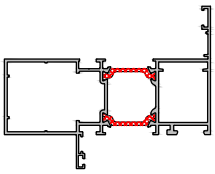
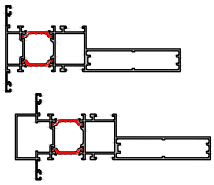
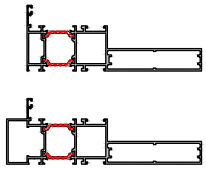
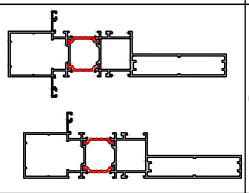
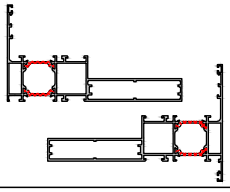
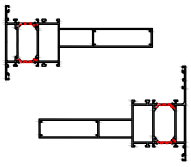
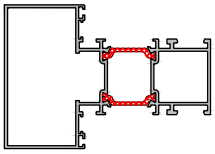
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P71-101		C117-10 C117-25 C605	C117-10 C117-25 C605 S403 (4 pcs.)
P71-102		C118-10 C118-25 C605	C118-10 C118-25 C605 S402 (4 pcs.)
P71-104		C119-10 C119-25 C605	C119-10 C119-25 C605 S402 (4 pcs.)
P71-108		C118-10 C118-25 C605	C118-10 C118-25 C605 S402 (4 pcs.)
P71-113		C118-10 C118-25 C605	C118-10 C118-25 C605 S402 (4 pcs.)
P71-114		C118-10 C118-25 C605	C118-10 C118-25 C605 S402 (4 pcs.)
P71-205		C119-30 C125-13 C605 (2 pcs.)	C119-30 C125-13 C605 (2 pcs.) S403 (4 pcs.)

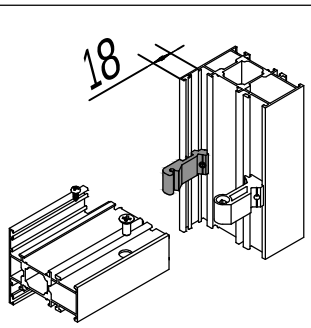
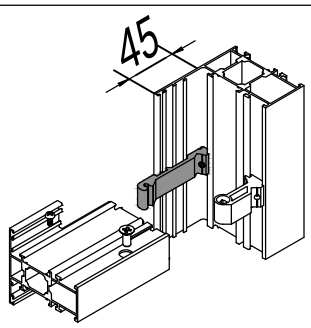
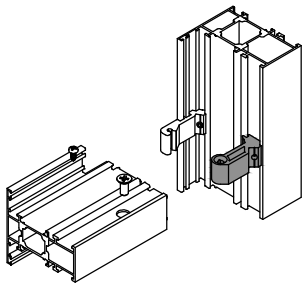
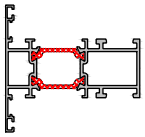
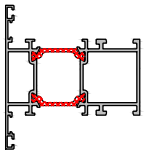
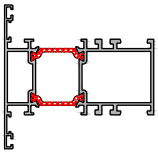
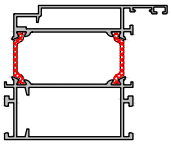
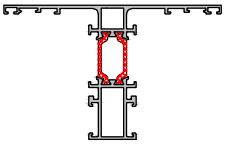
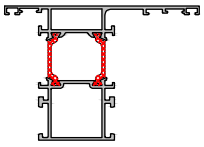
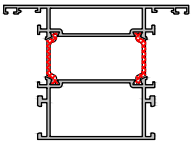
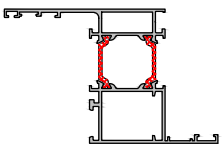
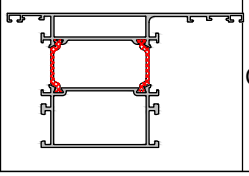
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P71-209		C123-7 C123-29 C605	-
P71-403		C118-10 C118-25 C605 (2 pcs.)	C118-10 C118-25 C605 (2 pcs.) S402 (4 pcs.)
P71-404-2		C117-5 C119-25 C605	C117-5 C119-25 C605 S402 (2 pcs.) S403 (2 pcs.)
P71-405		C122-11 C122-26 C605 (2 pcs.)	C122-11 C122-26 C605 (2 pcs.) S402 (4 pcs.)
P71-406		C118-10 C118-25 C605 (2 pcs.)	C118-10 C118-25 C605 (2 pcs.) S402 (4 pcs.)
P71-407		C119-10 C119-25 C605 (2 pcs.)	C119-10 C119-25 C605 (2 pcs.) S402 (4 pcs.)
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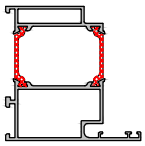
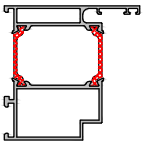
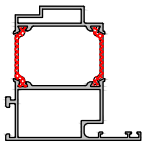
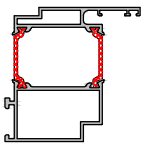
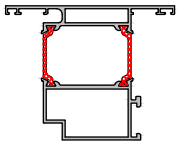
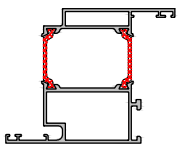
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P00-079-11		C117-10	C117-10 S403 (2 pcs.)

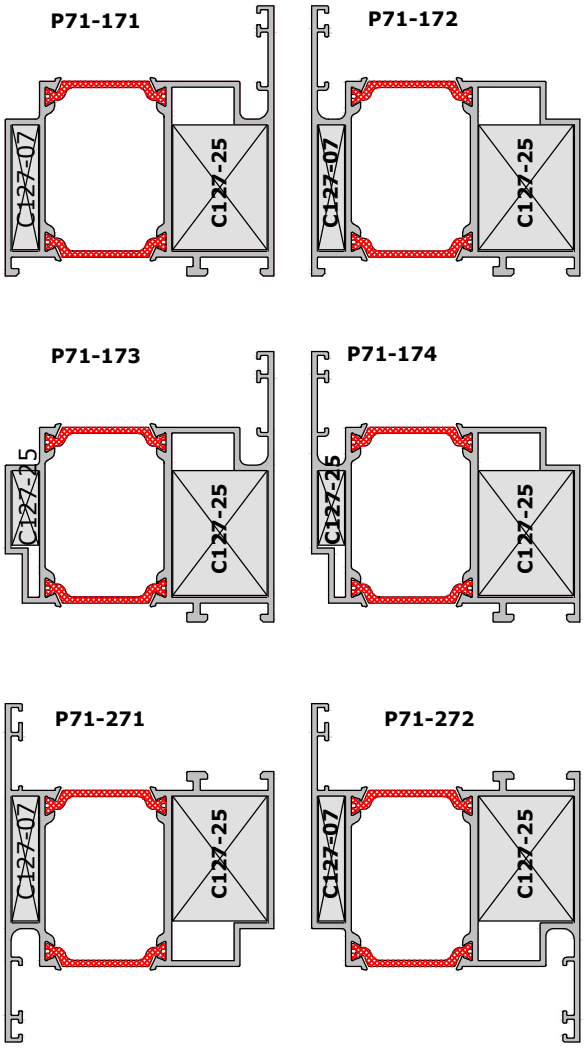
profile	View		
P00-079-13		C122-36	C122-36 S403 (2 pcs.)
P30-101		C123-25	C123-25 S403 (2 pcs.)

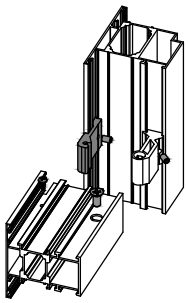
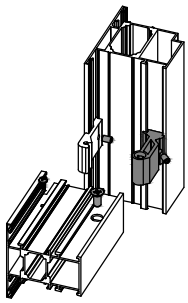
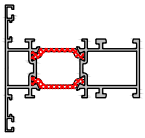
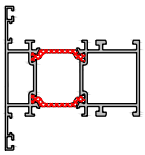
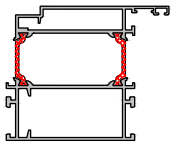
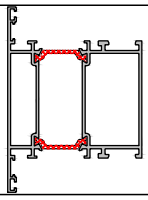
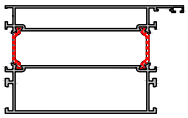
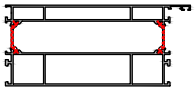
profile	View			
P71-102		C521-26	C523-26	C522-26
P71-104		C521-48	C523-48	C522-48
P71-113		C521-26	C523-26	C522-26
P71-212		C521-86	C523-86	C522-86
P71-212-190		C521-26 2 pcs.	C523-26 2 pcs.	C522-26 2 pcs.

profile	View					
P71-301 P71-302 P71-303 P71-304 P71-304-21 P71-305		C521-26	C523-26	C522-26	P40-005 (30 mm) S001 S003	-
P71-311 P71-312 P71-313-2 P71-314		C521-26	C523-26	C522-26	P40-005 (30 mm) S001 S003	-
P71-321 P71-322 P71-323 P71-324		C521-26	C523-26	C522-26	P40-005 (30 mm) S001 S003	-
P71-333 P71-340		C521-26	C523-26	C522-26	-	C530-16 S001 (2 pcs.) S002
P71-373 P71-346		C521-26	C523-26	C522-26	-	C530-16 S001 (2 pcs.) S002
P71-341 P71-342 P71-347 P71-348		C521-26	C523-26	C522-26	P40-005 (30 mm) S001 S003	C530-16 S001 (2 pcs.) S002
P71-325 P71-313		C521-26	C523-26	C522-26	-	C530-16 S001 (2 pcs.) S002
P71-355 P71-354		C521-48	C523-48	C522-48	-	C530-22 S001 (2 pcs.) S002
P71-376-38		C521-26	C523-26	C522-26	-	-

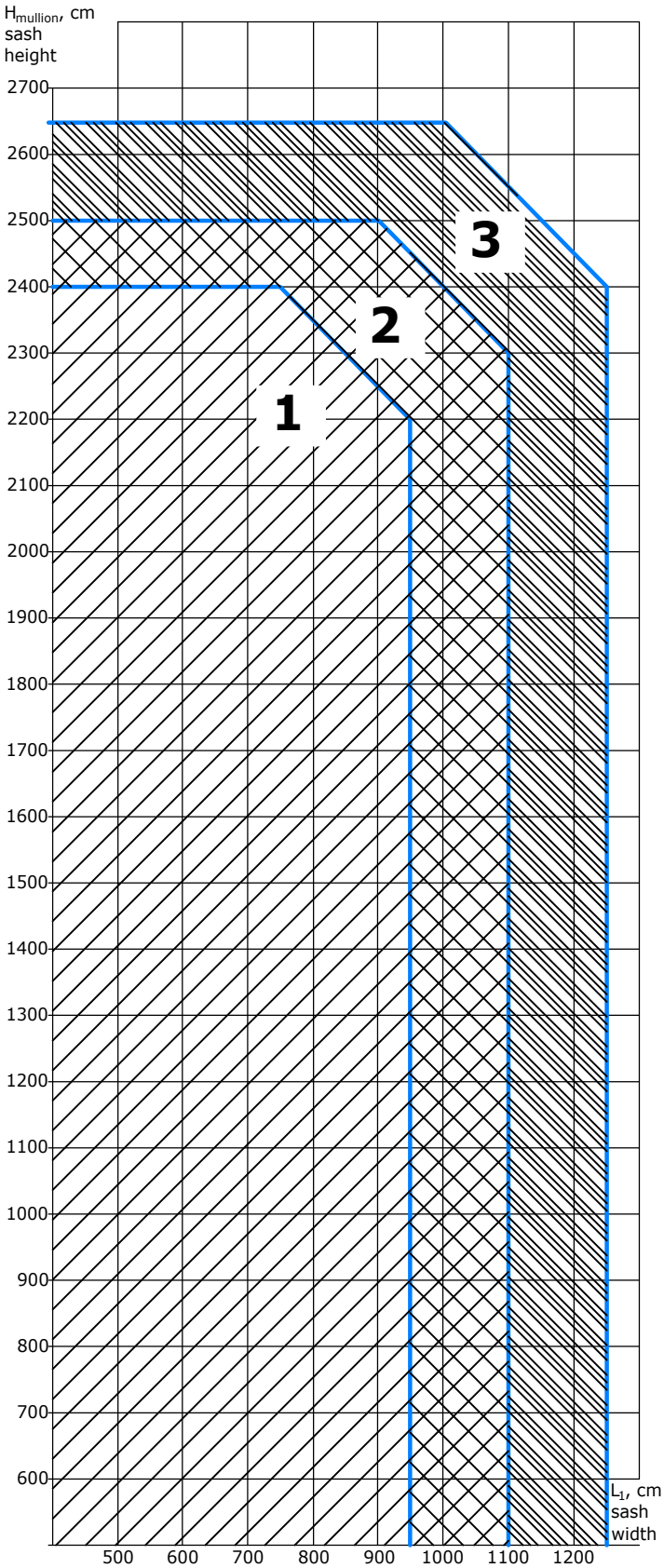
profile	View			
P71-402		C521-17	C523-17	C522-17
P71-403		C521-26	C523-26	C522-26
P71-403-79		C521-26	-	C522-26
P71-404		C521-26	C523-26	C522-26
P71-405		C521-12	C523-12	C522-12
P71-406		C521-26	C523-26	C522-26
P71-407		C521-48	C523-48	C522-48
P71-409		C521-26	C523-26	C522-26
P71-410		C521-48	C523-48	C522-48

profile	View		
P71-171		C127-07 C127-25 C602	C127-07 C127-25 C602 S402 (4 pcs.)
P71-172		C127-07 C127-25 C602	C127-07 C127-25 C602 S402 (4 pcs.)
P71-173		C120-07 C127-25 C602	C120-07 C127-25 C602 S402 (2 pcs.)
P71-174		C120-07 C127-25 C602	C120-07 C127-25 C602 S402 (2 pcs.)
P71-271		C127-07 C127-25 C602 (2 pcs.)	C127-07 C127-25 C602 (2 pcs.) S402 (4 pcs.)
P71-272		C127-07 C127-25 C602 (2 pcs.)	C127-07 C127-25 C602 (2 pcs.) S402 (4 pcs.)

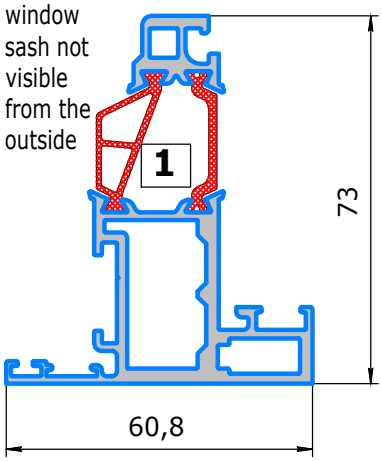


profile	View		
P71-402			C522-17
P71-403		C528-26	C522-26
P71-404		C528-26	C522-26
P71-407		C528-20 (2 pcs.)	C528-20 (2 pcs.)
P71-212		C528-26 (2 pcs.)	C522-86
P71-212-190		C528-26 (2 pcs.)	C522-26 (2 pcs.)

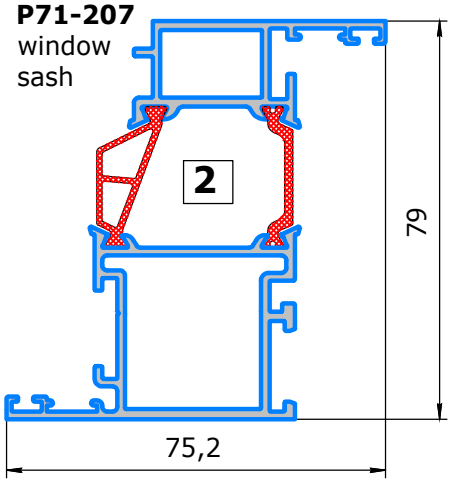
Selection of profile type by window sash width



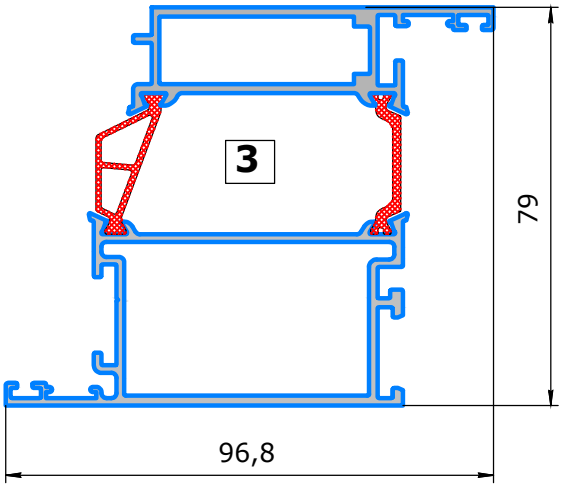
P71-206
window sash not visible from the outside



P71-207
window sash



P71-205
wide window sash



Verification of fittings according to permissible filling weight

The maximum permitted sash weight with tilt & turn fittings is:
- For exposed fittings — 100 kg
- For concealed fittings — 120 kg

Permissible sash weight for 51 mm double-glazed unit								
2500	83	98	110	125	138	153	165	180
2400	80	94	106	120	132	147	159	173
2300	76	90	102	115	127	141	152	166
2200	73	86	97	110	121	135	146	159
2100	70	82	93	105	116	129	139	152
2000	66	78	88	100	110	122	132	144
1900	63	75	84	95	105	116	126	136
1800	60	71	80	90	99	110	119	130
1700	57	67	75	85	94	104	113	123
1600	53	63	71	80	88	98	106	116
1500	50	59	66	75	83	92	99	108
1400	47	55	62	70	77	86	93	101
1300	43	51	58	65	72	80	86	94
1200	40	47	53	60	66	74	80	87
1100	37	43	49	55	61	68	73	80
1000	33	39	44	50	55	61	66	72
MM.	**600**	**700**	**800**	**900**	**1000**	**1100**	**1200**	**1300**

Double-glazed unit 51 mm:
8 mm Planibel Crystalvision (on request) —
14 mm Argon 90% —
6 mm Planibel Top N+T item 3 (on request) —
14 mm Argon 90% —
44.2 Stratobel Top N

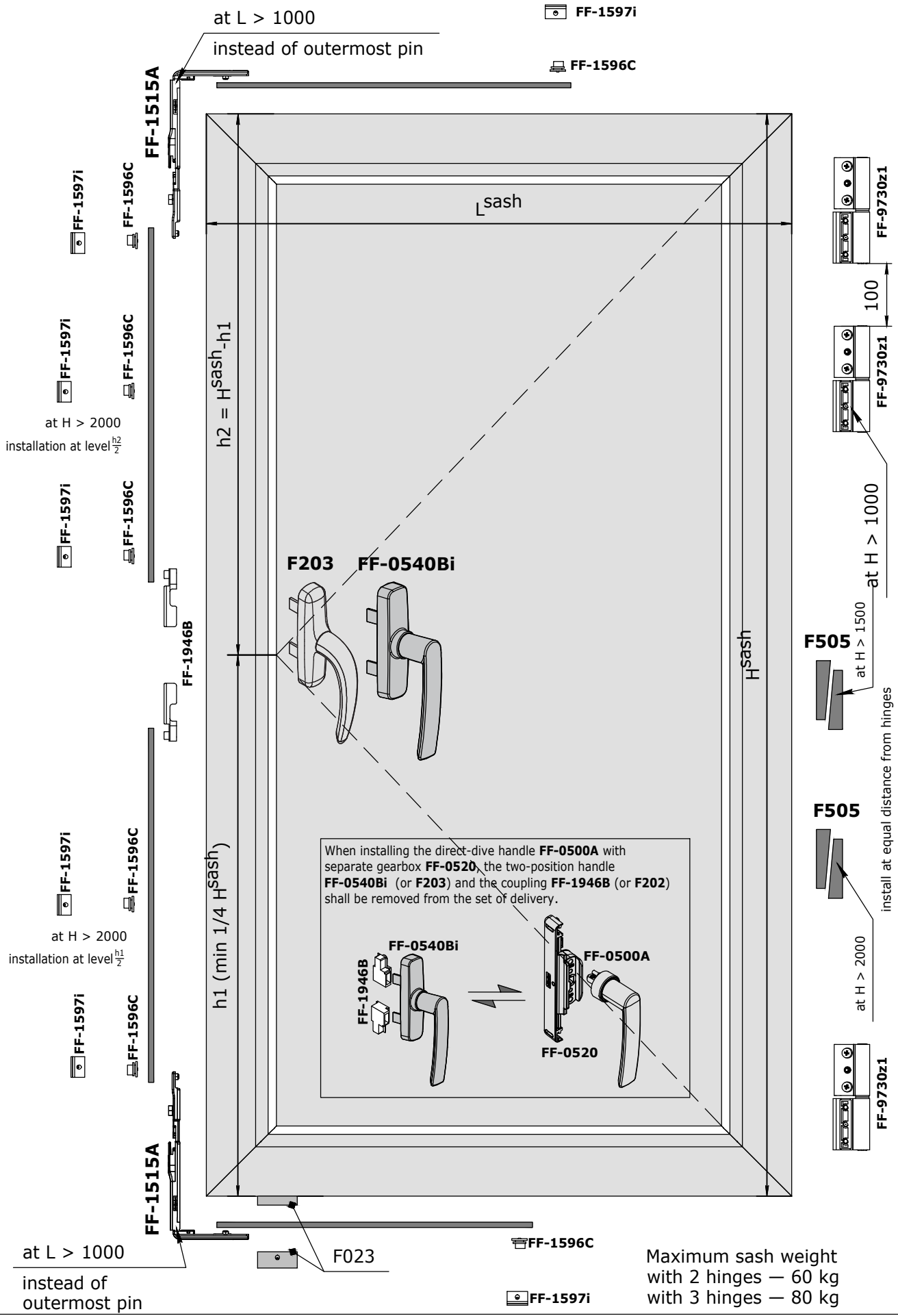
total thickness of glasses — 22 mm
weight of 1 sq.m. — 22 x 2.5 = 55 kg/sq.m.

Range of application of hidden tilt & turn fittings (up to 120 kg)

range of application of exposed tilt & turn fittings (up to 100 kg)

contents
profiles
delivery set
profiles (1:1)
sections
glazing tables
sub-assemblies tables
fitting arrangements
additional solutions
sub-assemblies
fire-resistant structures
connections
equipment and tools

Turn window — locking with eccentric pins
For installation up to 75 m above the ground

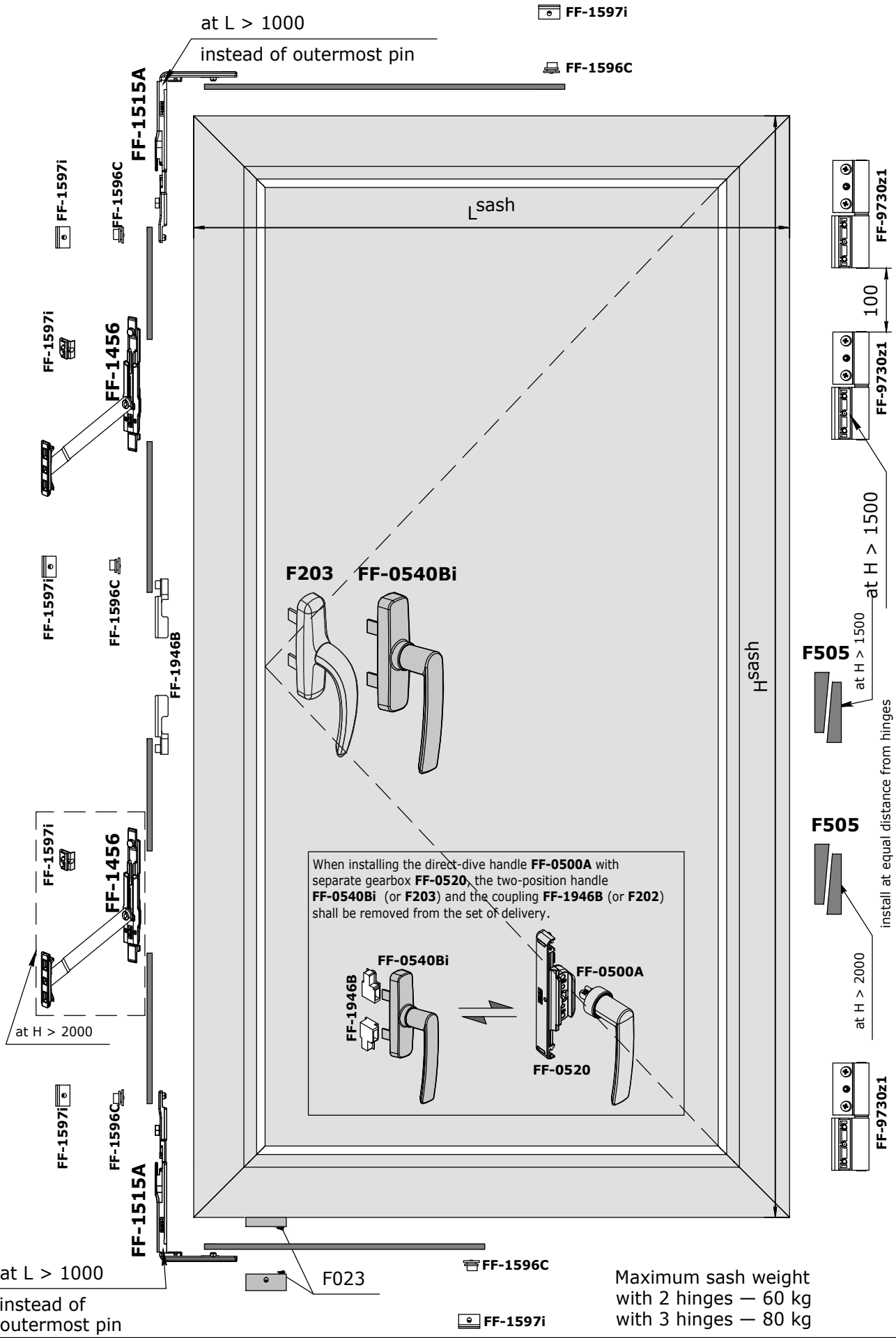


Maximum sash weight
with 2 hinges — 60 kg
with 3 hinges — 80 kg

Turn window — locking with pins.
For installation up to 75 m above the ground

Height	Designation	Article	sash width	
			400–1000	1000–1200
400–1000	Handle	FF-0540Bi	1 pc.	
	Handle coupling	FF-1946B	1 pc.	
	hinges	FF-9730z1	2 pcs.	
	corner switch	FF-1515A	-	2 pcs.
	Eccentric pin	FF-1596C	3 pcs.	
	mating plate	FF-1597i	4 pcs.	
	sash thrust plate	F023	1 pc.	
1001–1500	Handle	FF-0540Bi	1 pc.	
	Handle coupling	FF-1946B	1 pc.	
	hinges	FF-9730z1	3 pcs.	
	locking point from the hinge side	F505	-	
	corner switch	FF-1515A	-	2 pcs.
	Eccentric pin	FF-1596C	3 pcs.	
	mating plate	FF-1597i	3 pcs.	
	sash thrust plate	F023	1 pc.	
1501–2000	Handle	FF-0540Bi	1 pc.	
	Handle coupling	FF-1946B	1 pc.	
	hinges	FF-9730z1	3 pcs.	
	locking point from the hinge side	F505	1 pc.	
	corner switch	FF-1515A	-	2 pcs.
	Eccentric pin	FF-1596C	3 pcs.	
	mating plate	FF-1597i	3 pcs.	
	sash thrust plate	F023	1 pc.	
2001–2500	Handle	FF-0540Bi	1 pc.	
	Handle coupling	FF-1946B	1 pc.	
	hinges	FF-9730z1	3 pcs.	
	locking point from the hinge side	F505	2 pcs.	
	corner switch	FF-1515A	-	2 pcs.
	Eccentric pin	FF-1596C	5 pcs.	
	mating plate	FF-1597i	5 pcs.	
	sash thrust plate	F023	1 pc.	

Turn window — locking with eccentric pins
For installation above 75 m from the ground

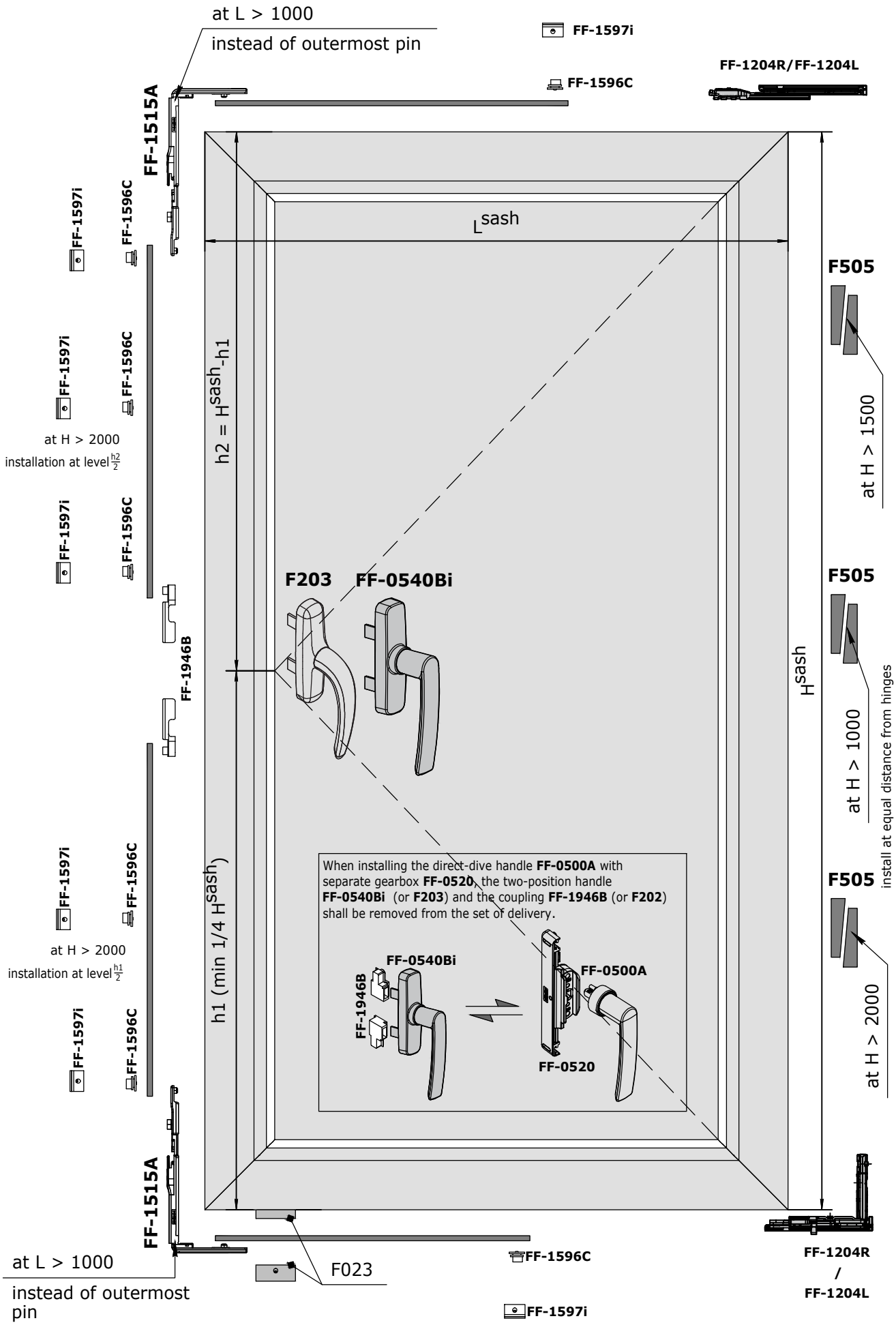


Maximum sash weight
with 2 hinges — 60 kg
with 3 hinges — 80 kg

Turn window — locking with pins.
For installation above 75 m from the ground

Height	Designation	Article	sash width	
			400–1000	1000–1200
400–1000	Handle	FF-0540Bi	1 pc.	
	Handle coupling	FF-1946B	1 pc.	
	hinges	FF-9730z1	2 pcs.	
	corner switch	FF-1515A	-	2 pcs.
	Eccentric pin	FF-1596C	3 pcs.	
	mating plate	FF-1597i	4 pcs.	
	sash thrust plate	F023	1 pc.	
	Opening restrictor with open position locking	FF-1456	1 pc.	
1001–1500	Handle	FF-0540Bi	1 pc.	
	Handle coupling	FF-1946B	1 pc.	
	hinges	FF-9730z1	2 pcs.	
	locking point from the hinge side	F505	-	
	corner switch	FF-1515A	-	2 pcs.
	Eccentric pin	FF-1596C	3 pcs.	
	mating plate	FF-1597i	4 pcs.	
	sash thrust plate	F023	1 pc.	
	Opening restrictor with open position locking	FF-1456	1 pc.	
1501–2000	Handle	FF-0540Bi	1 pc.	
	Handle coupling	FF-1946B	1 pc.	
	hinges	FF-9730z1	2 pcs.	
	locking point from the hinge side	F505	1 pc.	
	corner switch	FF-1515A	-	2 pcs.
	Eccentric pin	FF-1596C	3 pcs.	
	mating plate	FF-1597i	4 pcs.	
	sash thrust plate	F023	1 pc.	
	Opening restrictor with open position locking	FF-1456	1 pc.	
2001–2500	Handle	FF-0540Bi	1 pc.	
	Handle coupling	FF-1946B	1 pc.	
	hinges	FF-9730z1	3 pcs.	
	locking point from the hinge side	F505	2 pcs.	
	corner switch	FF-1515A	-	2 pcs.
	Eccentric pin	FF-1596C	5 pcs.	
	mating plate	FF-1597i	6 pcs.	
	sash thrust plate	F023	1 pc.	
	Opening restrictor with open position locking	FF-1456	2 pcs.	

Turn window — hidden hinges

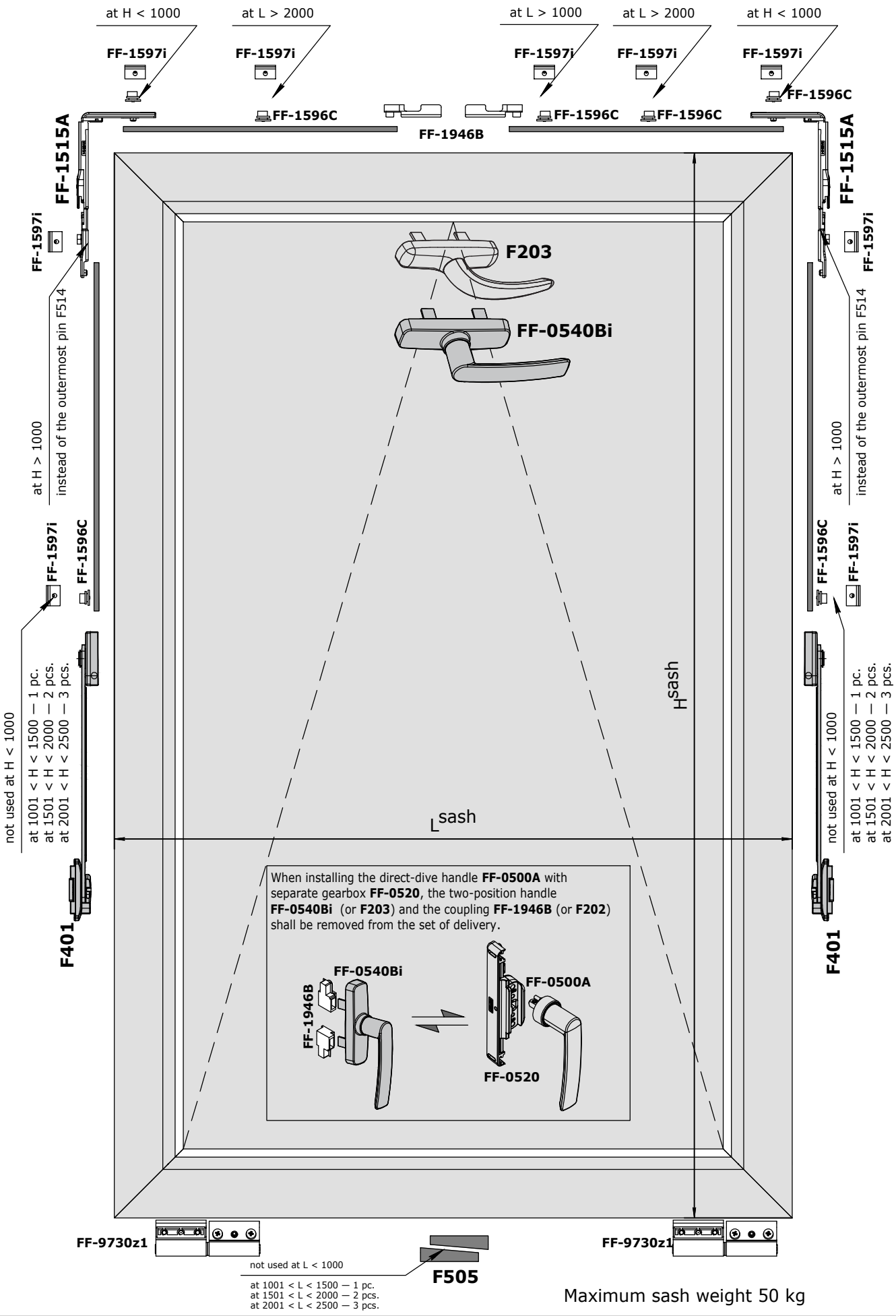


Maximum sash weight 120 kg

Concealed fittings — turn window

Height	description	article	sash width	
			400–1000	1000–1200
400–1000	Handle	FF-0540Bi	1 pc.	
	Handle coupling	FF-1946B	1 pc.	
	hidden hinges	FF-1204 R/L	1 pc.	
	corner switch	FF-1515A	-	2 pcs.
	Eccentric pin	FF-1596C	3 pcs.	
	mating plate	FF-1597i	3 pcs.	
	sash thrust plate	F023	1 pc.	
1001–1500	Handle	FF-0540Bi	1 pc.	
	Handle coupling	FF-1946B	1 pc.	
	hidden hinges	FF-1204 R/L	1 pc.	
	locking point from the hinge side	F505	1 pc.	
	corner switch	FF-1515A	-	2 pcs.
	Eccentric pin	FF-1596C	3 pcs.	
	mating plate	FF-1597i	3 pcs.	
	sash thrust plate	F023	1 pc.	
1501–2000	Handle	FF-0540Bi	1 pc.	
	Handle coupling	FF-1946B	1 pc.	
	hidden hinges	FF-1204 R/L	1 pc.	
	locking point from the hinge side	F505	2 pcs.	
	corner switch	FF-1515A	-	2 pcs.
	Eccentric pin	FF-1596C	3 pcs.	
	mating plate	FF-1597i	3 pcs.	
	sash thrust plate	F023	1 pc.	
2001–2500	Handle	FF-0540Bi	1 pc.	
	Handle coupling	FF-1946B	1 pc.	
	hidden hinges	FF-1204 R/L	1 pc.	
	locking point from the hinge side	F505	3 pcs.	
	corner switch	FF-1515A	-	2 pcs.
	Eccentric pin	FF-1596C	5 pcs.	
	mating plate	FF-1597i	5 pcs.	
	sash thrust plate	F023	1 pc.	

Pivoted window (fanlight) — top handle. Arrangement.



Maximum sash weight 50 kg

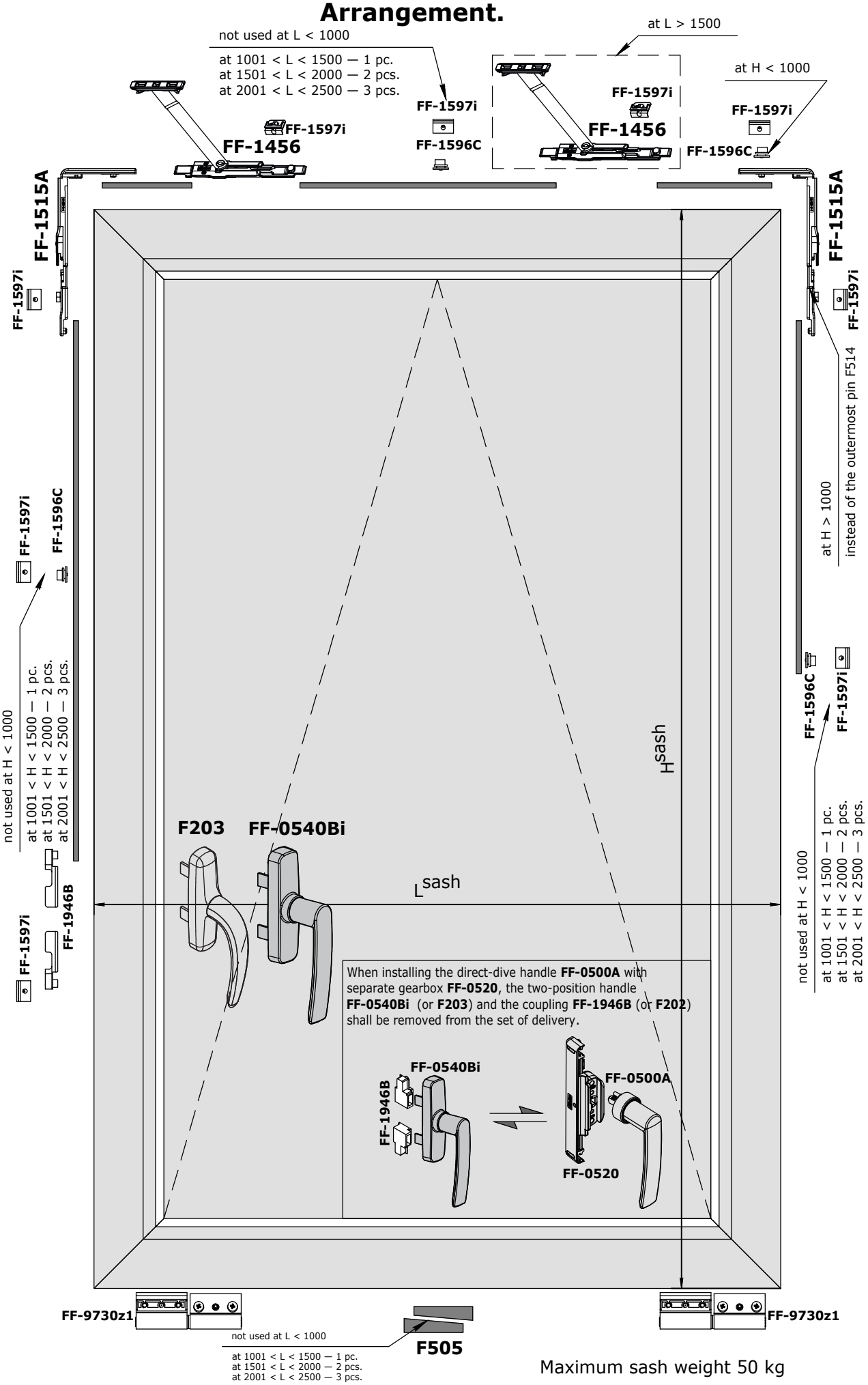
Selection of pivoted window fittings — top handle

Height	description	article	sash width			
			400–1000	1001–1500	1501–2000	2001–2500
400–1000	Handle	FF-0540Bi	1 pc.			
	Handle coupling	FF-1946B	1 pc.			
	hinges	FF-9730z1	2 pcs.			
	Eccentric pin	FF-1596C	2 pcs.	3 pcs.		5 pcs.
	mating plate	FF-1597i	2 pcs.	3 pcs.		5 pcs.
	locking point from the hinge side	F505	-	1 pc.	2 pcs.	3 pcs.
	opening restrictor	F401	1 pc. (pair)			

1001–1500	Handle	FF-0540Bi	1 pc.		
	Handle coupling	FF-1946B	1 pc.		
	hinges	FF-9730z1	2 pcs.		
	corner switch	FF-1515A	2 pcs.		
	Eccentric pin	FF-1596C	4 pcs.	5 pcs.	
	mating plate	FF-1597i	4 pcs.	5 pcs.	
	locking point from the hinge side	F505	-	1 pc.	2 pcs.
	opening restrictor	F401	1 pc. (pair)		

1501–2000	Handle	FF-0540Bi	1 pc.	
	Handle coupling	FF-1946B	1 pc.	
	hinges	FF-9730z1	2 pcs.	
	corner switch	FF-1515A	2 pcs.	
	Eccentric pin	FF-1596C	6 pcs.	7 pcs.
	mating plate	FF-1597i	6 pcs.	7 pcs.
	locking point from the hinge side	F505	-	1 pc.
	opening restrictor	F401	1 pc. (pair)	

Pivoted window (fanlight) — lateral handle. Arrangement.



Maximum sash weight 50 kg

Selection of pivoted window fittings — lateral handle

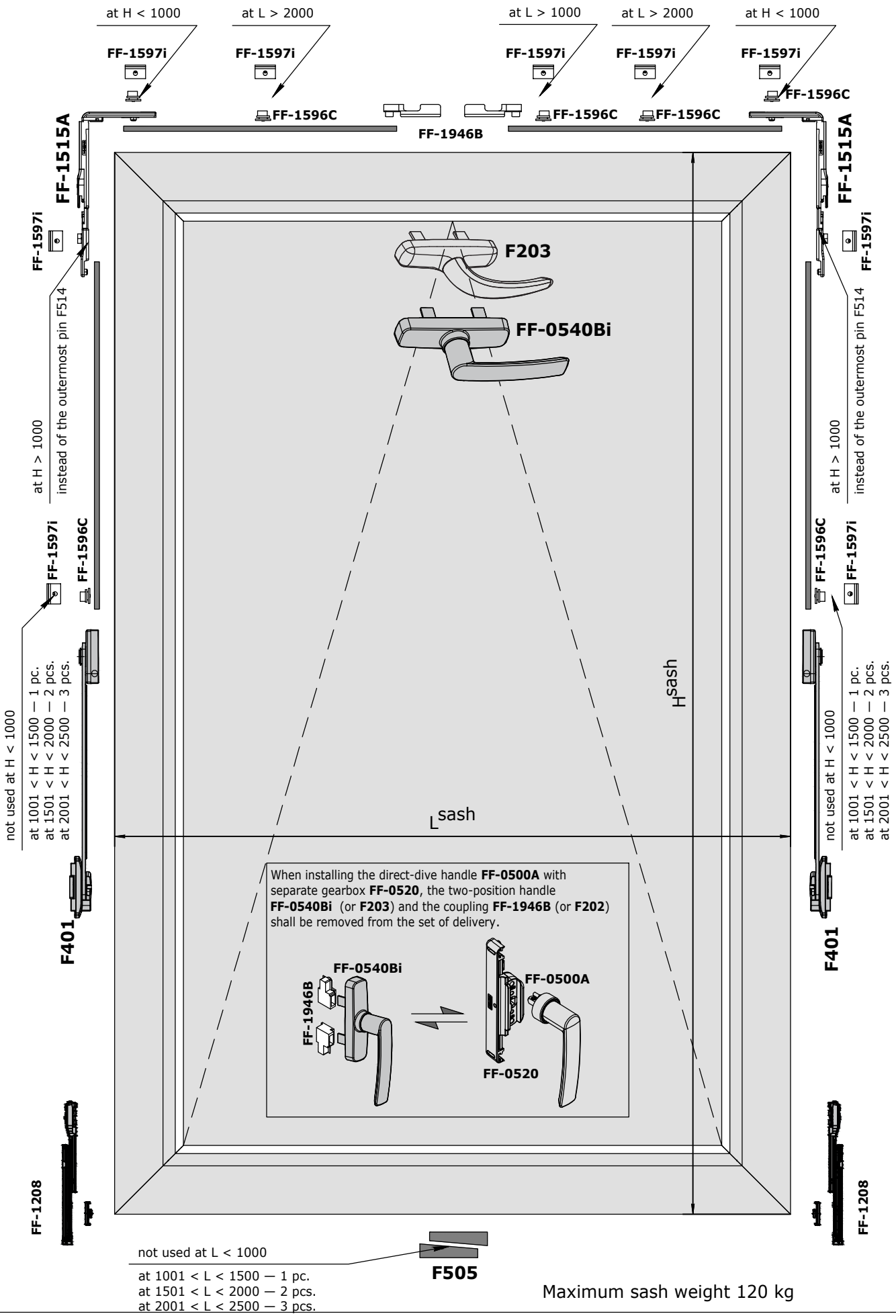
Height	description	article	sash width			
			400–1000	1001–1500	1501–2000	2001–2500
400–1000	Handle	FF-0540Bi	1 pc.			
	Handle coupling	FF-1946B	1 pc.			
	hinges	FF-9730z1	2 pcs.			
	corner switch	FF-1515A	1 pc.			
	Eccentric pin	FF-1596C	1 pc.	2 pcs.	3 pcs.	4 pcs.
	mating plate	FF-1597i	3 pcs.	4 pcs.	6 pcs.	7 pcs.
	locking point from the hinge side	F505	-	1 pc.	2 pcs.	3 pcs.
	opening restrictor	FF-1546	1 pc.		2 pcs.	

1001–1500	Handle	FF-0540Bi	1 pc.		
	Handle coupling	FF-1946B	1 pc.		
	hinges	FF-9730z1	2 pcs.		
	corner switch	FF-1515A	2 pcs.		
	Eccentric pin	FF-1596C	2 pcs.	3 pcs.	4 pcs.
	mating plate	FF-1597i	5 pcs.	6 pcs.	8 pcs.
	locking point from the hinge side	F505	-	1 pc.	2 pcs.
	opening restrictor	FF-1546	1 pc.		2 pcs.

1501–2000	Handle	FF-0540Bi	1 pc.	
	Handle coupling	FF-1946B	1 pc.	
	hinges	FF-9730z1	2 pcs.	
	corner switch	FF-1515A	2 pcs.	
	Eccentric pin	FF-1596C	4 pcs.	5 pcs.
	mating plate	FF-1597i	7 pcs.	8 pcs.
	locking point from the hinge side	F505	-	1 pc.
	opening restrictor	FF-1546	1 pc.	

2001–2500	Handle	FF-0540Bi	1 pc.
	Handle coupling	FF-1946B	1 pc.
	hinges	FF-9730z1	2 pcs.
	corner switch	FF-1515A	2 pcs.
	Eccentric pin	FF-1596C	6 pcs.
	mating plate	FF-1597i	6 pcs.
	locking point from the hinge side	F505	-
	opening restrictor	F401	1 pc. (pair)

Pivoted window (fanlight) — top handle. Concealed fittings



Maximum sash weight 120 kg

Concealed fittings — pivoted window, top handle

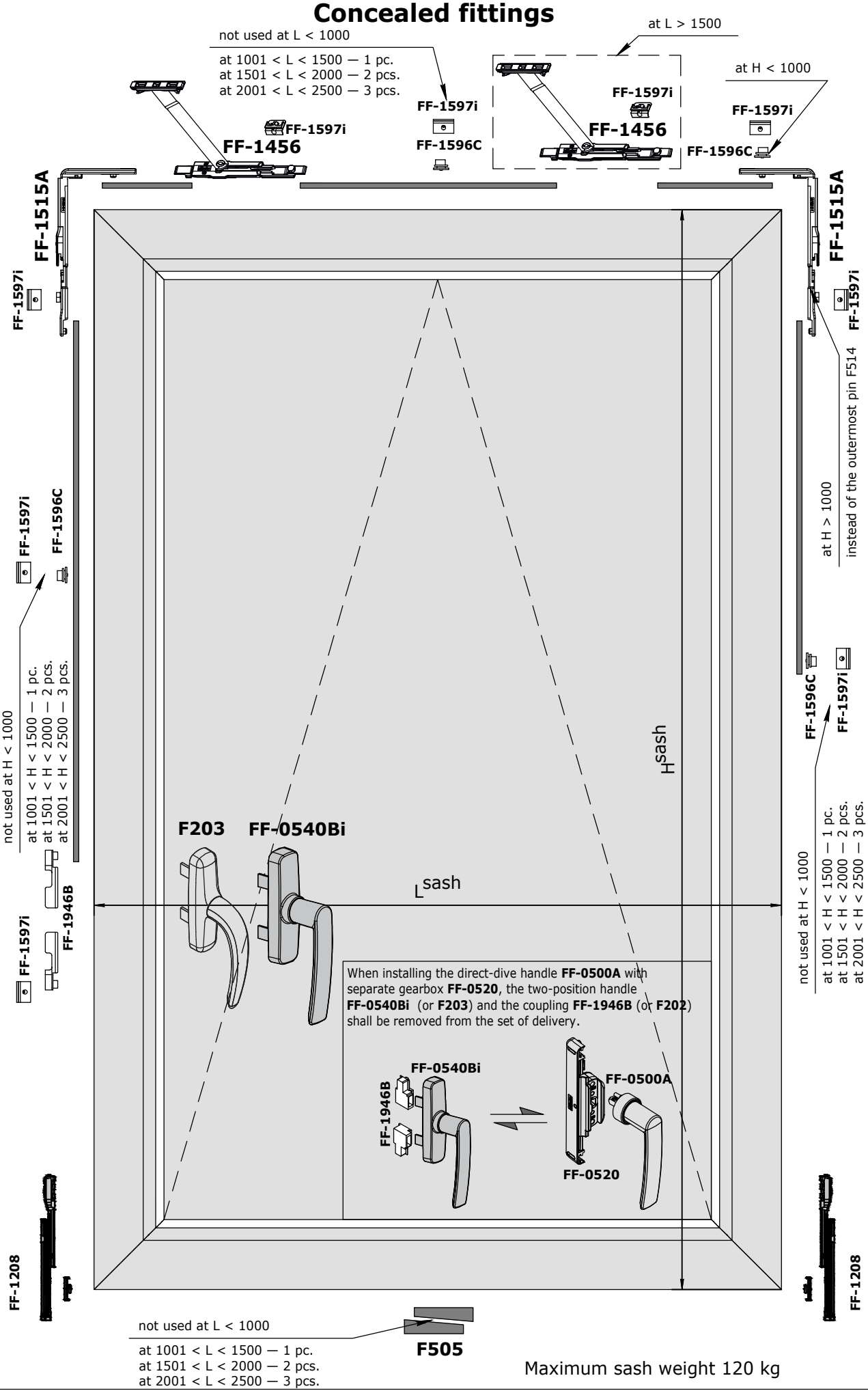
Height	description	article	sash width			
			400–1000	1001–1500	1501–2000	2001–2500
400–1000	Handle	FF-0540Bi	1 pc.			
	Handle coupling	FF-1946B	1 pc.			
	hidden flap hinges	FF-1208	1 pc.			
	Eccentric pin	FF-1596C	2 pcs.	3 pcs.		5 pcs.
	mating plate	FF-1597i	2 pcs.	3 pcs.		5 pcs.
	locking point from the hinge side	F505	-	1 pc.	2 pcs.	3 pcs.
	opening restrictor	F401	1 pc. (pair)			

1001–1500	Handle	FF-0540Bi	1 pc.		
	Handle coupling	FF-1946B	1 pc.		
	hidden flap hinges	FF-1208	1 pc.		
	corner switch	FF-1515A	2 pcs.		
	Eccentric pin	FF-1596C	4 pcs.	5 pcs.	
	mating plate	FF-1597i	4 pcs.	5 pcs.	
	locking point from the hinge side	F505	-	1 pc.	2 pcs.
	opening restrictor	F401	1 pc. (pair)		

1501–2000	Handle	FF-0540Bi	1 pc.	
	Handle coupling	FF-1946B	1 pc.	
	hidden flap hinges	FF-1208	1 pc.	
	corner switch	FF-1515A	2 pcs.	
	Eccentric pin	FF-1596C	6 pcs.	7 pcs.
	mating plate	FF-1597i	6 pcs.	7 pcs.
	locking point from the hinge side	F505	-	1 pc.
	opening restrictor	F401	1 pc. (pair)	

2001–2500	Handle	FF-0540Bi	1 pc.
	Handle coupling	FF-1946B	1 pc.
	hidden flap hinges	FF-1208	1 pc.
	corner switch	FF-1515A	2 pcs.
	Eccentric pin	FF-1596C	6 pcs.
	mating plate	FF-1597i	6 pcs.
	locking point from the hinge side	F505	-
	opening restrictor	F401	1 pc. (pair)

Pivoted window (fanlight) — lateral handle. Concealed fittings



Maximum sash weight 120 kg

Concealed fittings — pivoted window, lateral handle

Height	description	article	sash width			
			400–1000	1001–1500	1501–2000	2001–2500
400–1000	Handle	FF-0540Bi	1 pc.			
	Handle coupling	FF-1946B	1 pc.			
	hidden flap hinges	FF-1208	1 pc.			
	corner switch	FF-1515A	1 pc.			
	Eccentric pin	FF-1596C	1 pc.	2 pcs.	3 pcs.	4 pcs.
	mating plate	FF-1597i	3 pcs.	4 pcs.	6 pcs.	7 pcs.
	locking point from the hinge side	F505	-	1 pc.	2 pcs.	3 pcs.
	opening restrictor	FF-1546	1 pc.		2 pcs.	

1001–1500	Handle	FF-0540Bi	1 pc.		
	Handle coupling	FF-1946B	1 pc.		
	hidden flap hinges	FF-1208	1 pc.		
	corner switch	FF-1515A	2 pcs.		
	Eccentric pin	FF-1596C	2 pcs.	3 pcs.	4 pcs.
	mating plate	FF-1597i	5 pcs.	6 pcs.	8 pcs.
	locking point from the hinge side	F505	-	1 pc.	2 pcs.
	opening restrictor	FF-1546	1 pc.		2 pcs.

1501–2000	Handle	FF-0540Bi	1 pc.	
	Handle coupling	FF-1946B	1 pc.	
	hidden flap hinges	FF-1208	1 pc.	
	corner switch	FF-1515A	2 pcs.	
	Eccentric pin	FF-1596C	4 pcs.	5 pcs.
	mating plate	FF-1597i	7 pcs.	8 pcs.
	locking point from the hinge side	F505	-	1 pc.
	opening restrictor	FF-1546	1 pc.	

2001–2500	Handle	FF-0540Bi	1 pc.
	Handle coupling	FF-1946B	1 pc.
	hidden flap hinges	FF-1208	1 pc.
	corner switch	FF-1515A	2 pcs.
	Eccentric pin	FF-1596C	6 pcs.
	mating plate	FF-1597i	9 pcs.
	locking point from the hinge side	F505	-
	opening restrictor	FF-1546	1 pc.

Tilt & turn window Arrangement.

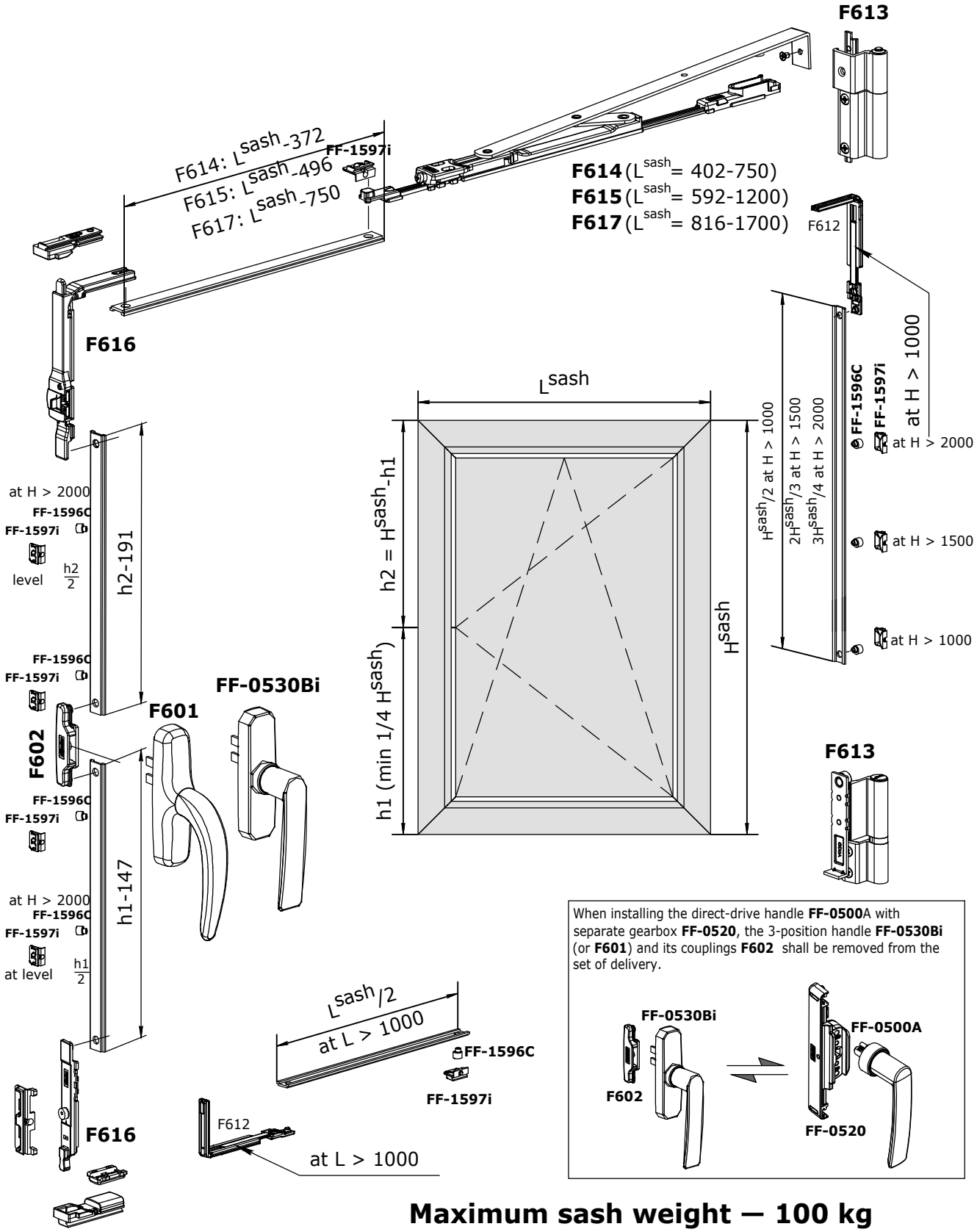


F630
tilt & turn window kit L = 562–1200
with handle and scissor stay

components:
— F601 — handle — 1 pc.
— F602 — coupling — 1 pc.
— F613 — hinges — 1 set
— F615 — scissor stay — 1 pc.
— F616 — locking elements — 1 set

F631
tilt & turn window kit L = 402–750
with handle and scissor stay

components:
— F601 — handle — 1 pc.
— F602 — coupling — 1 pc.
— F613 — hinges — 1 set
— F614 — scissor stay — 1 pc.
— F616 — locking elements — 1 set



When installing the direct-drive handle **FF-0500**A with separate gearbox **FF-0520**, the 3-position handle **FF-0530Bi** (or **F601**) and its couplings **F602** shall be removed from the set of delivery.

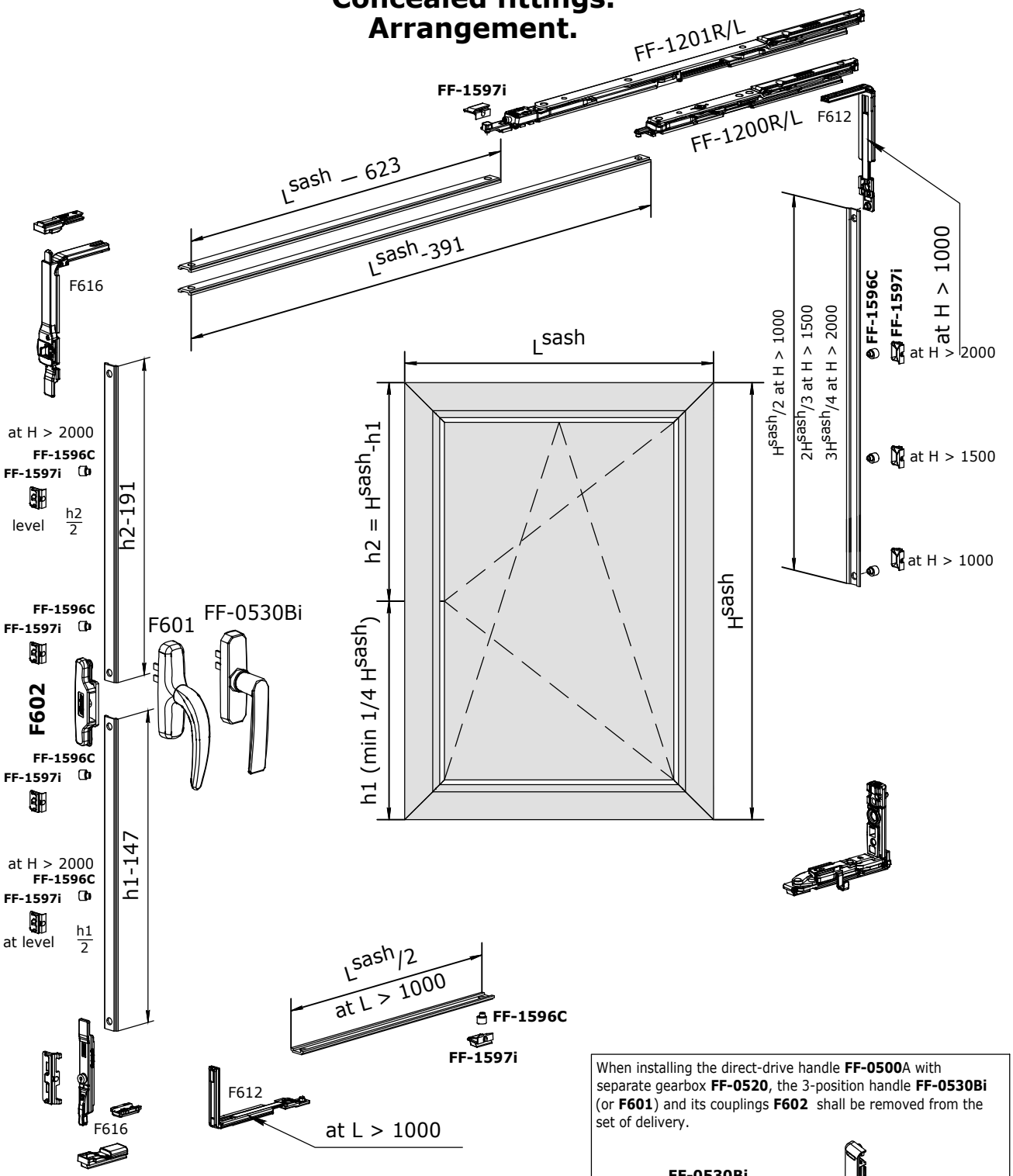
Maximum sash weight — 100 kg

pull rod dimensions are for reference only and may vary.

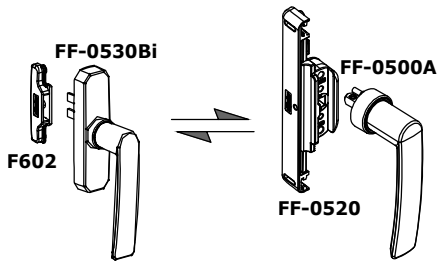
Tilt & turn window

Height	description	article	sash width	
			450–800	801–1200
400–1000	Handle	FF-0530Bi	1 pc.	
	Handle coupling	F602	1 pc.	
	scissor stay for tilt & turn window	1 pc.	F614	F615
	hinges for for tilt & turn window	1 pc.	F613	
	set of locking elements for tilt & turn window	FF1481i	1 pc.	
	corner switch	F612	-	1 pc.
	Eccentric pin	FF-1596C	1 pc.	2 pcs.
	mating plate	FF-1597i	1 pc.	3 pcs.
1001–1500	Handle	FF-0530Bi	1 pc.	
	Handle coupling	F602	1 pc.	
	scissor stay for tilt & turn window	1 pc.	F614	F615
	hinges for for tilt & turn window	1 pc.	F613	
	set of locking elements for tilt & turn window	FF1481i	1 pc.	
	corner switch	F612	1 pc.	2 pcs.
	Eccentric pin	FF-1596C	2 pcs.	3 pcs.
	mating plate	FF-1597i	2 pcs.	4 pcs.
1501–2000	Handle	FF-0530Bi	1 pc.	
	Handle coupling	F602	1 pc.	
	scissor stay for tilt & turn window	1 pc.	F614	F615
	hinges for for tilt & turn window	1 pc.	F613	
	set of locking elements for tilt & turn window	FF1481i	1 pc.	
	corner switch	F612	1 pc.	2 pcs.
	Eccentric pin	FF-1596C	3 pcs.	4 pcs.
	mating plate	FF-1597i	3 pcs.	5 pcs.
2001–2500	Handle	FF-0530Bi	1 pc.	
	Handle coupling	F602	1 pc.	
	scissor stay for tilt & turn window	1 pc.	F614	F615
	hinges for for tilt & turn window	1 pc.	F613	
	set of locking elements for tilt & turn window	FF1481i	1 pc.	
	corner switch	F612	1 pc.	2 pcs.
	Eccentric pin	FF-1596C	6 pcs.	7 pcs.
	mating plate	FF-1597i	6 pcs.	8 pcs.

Tilt & turn window
Concealed fittings.
Arrangement.



When installing the direct-drive handle **FF-0500**A with separate gearbox **FF-0520**, the 3-position handle **FF-0530Bi** (or **F601**) and its couplings **F602** shall be removed from the set of delivery.



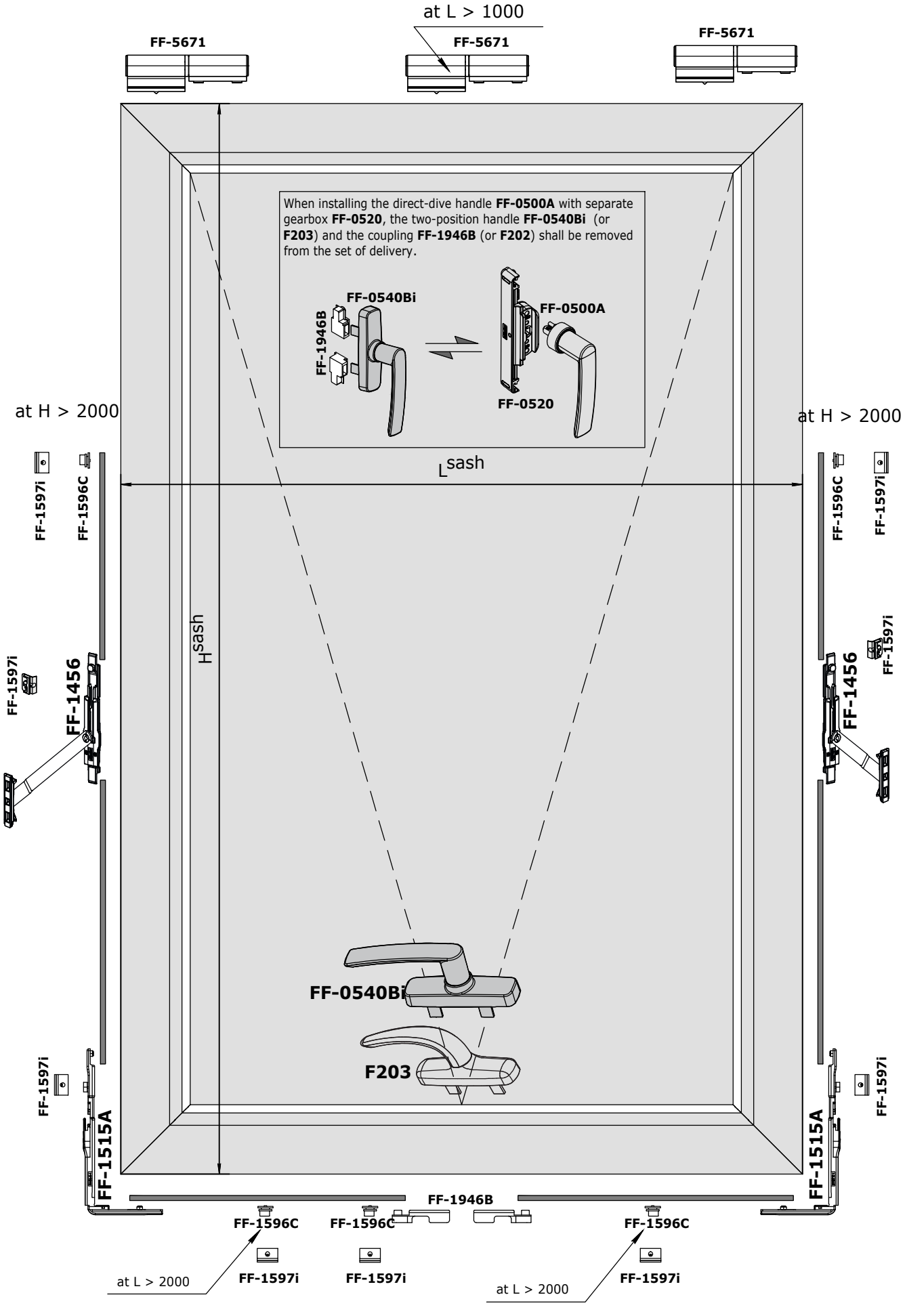
Maximum sash weight — 120 kg

pull rod dimensions are for reference only and may vary.

Concealed fittings — tilt & turn window

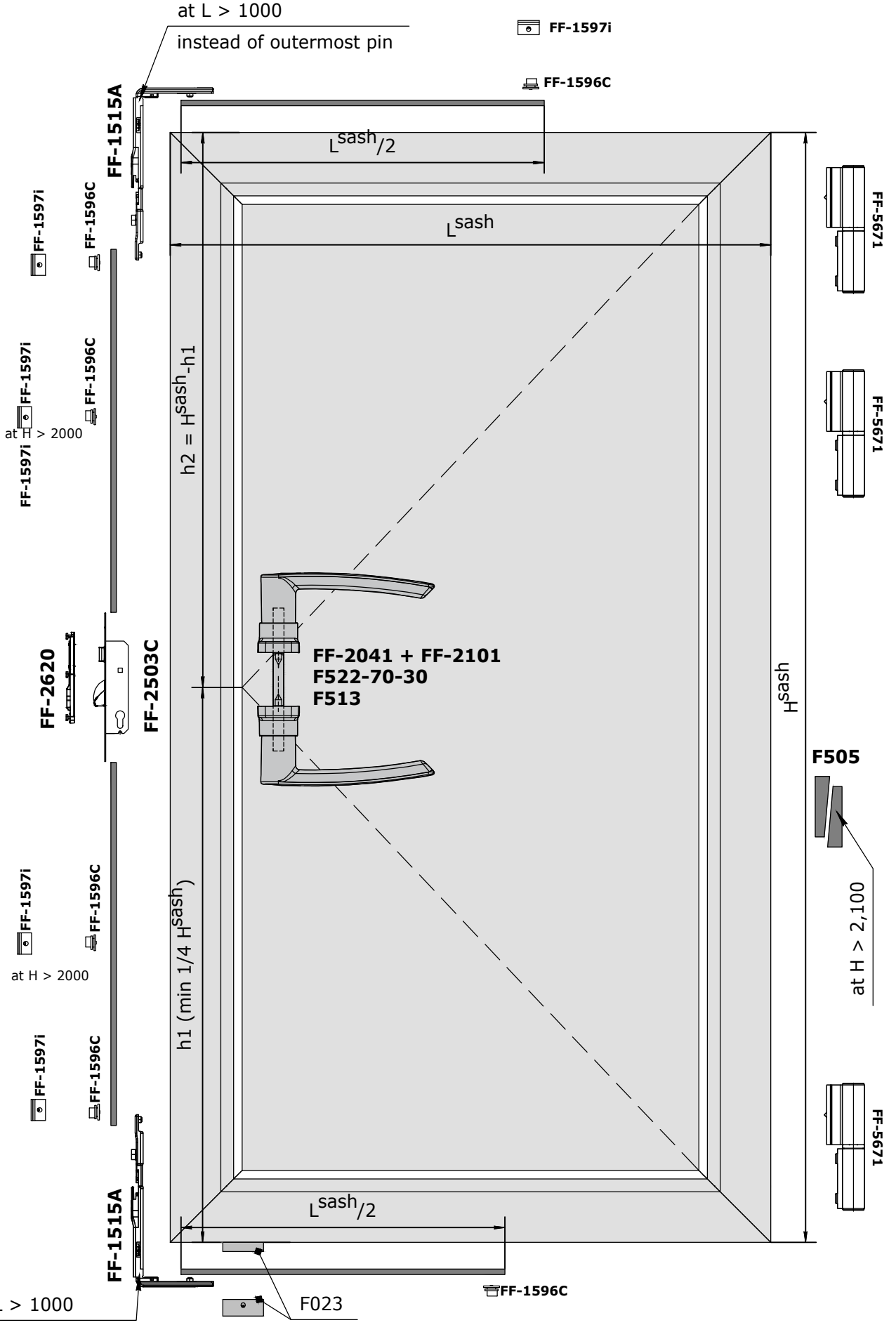
Height	description	article	sash width	
			450–800	801–1200
400–1000	Handle	FF-0530Bi	1 pc.	
	Handle coupling	F602	1 pc.	
	hidden hinges and scissor stay	1 pc.	FF-1200 R/L	FF-1201 R/L
	set of locking elements for tilt & turn window	FF1481i	1 pc.	
	corner switch	F612	-	1 pc.
	Eccentric pin	FF-1596C	1 pc.	2 pcs.
	mating plate	FF-1597i	1 pc.	3 pcs.
1001–1500	Handle	FF-0530Bi	1 pc.	
	Handle coupling	F602	1 pc.	
	hidden hinges and scissor stay	1 pc.	FF-1200 R/L	FF-1201 R/L
	set of locking elements for tilt & turn window	FF1481i	1 pc.	
	corner switch	F612	1 pc.	2 pcs.
	Eccentric pin	FF-1596C	2 pcs.	3 pcs.
	mating plate	FF-1597i	2 pcs.	4 pcs.
1501–2000	Handle	FF-0530Bi	1 pc.	
	Handle coupling	F602	1 pc.	
	hidden hinges and scissor stay	1 pc.	FF-1200 R/L	FF-1201 R/L
	set of locking elements for tilt & turn window	FF1481i	1 pc.	
	corner switch	F612	1 pc.	2 pcs.
	Eccentric pin	FF-1596C	3 pcs.	4 pcs.
	mating plate	FF-1597i	3 pcs.	5 pcs.
2001–2500	Handle	FF-0530Bi	1 pc.	
	Handle coupling	F602	1 pc.	
	hidden hinges and scissor stay	1 pc.	FF-1200 R/L	FF-1201 R/L
	set of locking elements for tilt & turn window	FF1481i	1 pc.	
	corner switch	F612	1 pc.	2 pcs.
	Eccentric pin	FF-1596C	6 pcs.	7 pcs.
	mating plate	FF-1597i	6 pcs.	8 pcs.

Hanging window with locking in the open position

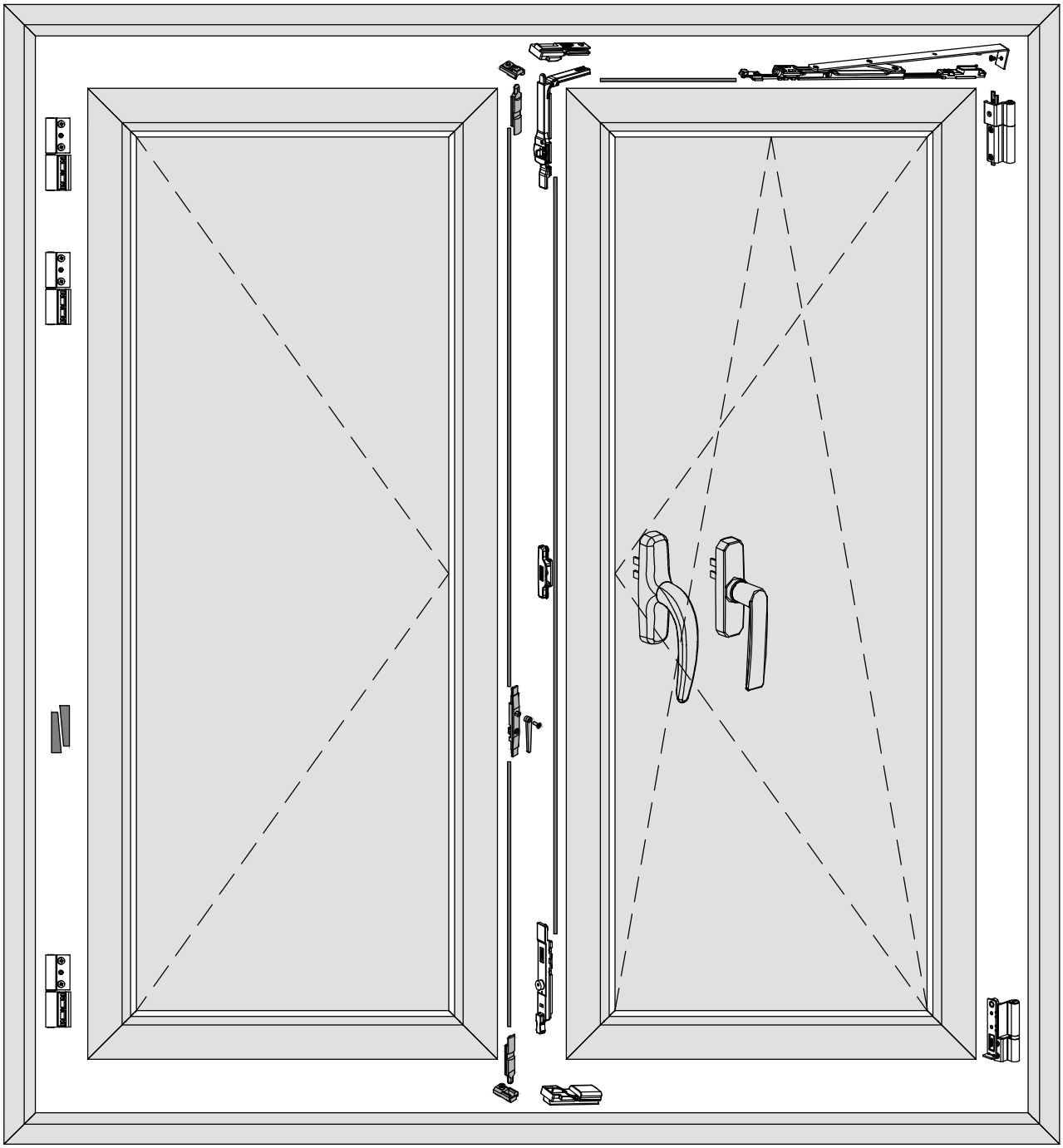


Maximum sash weight 100 kg

Balcony block door — double-sided handle



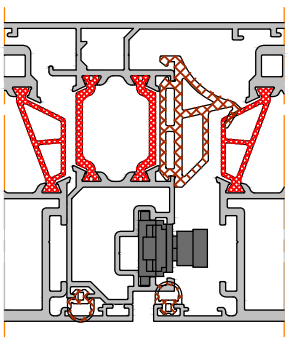
Double sash forend window.
Tilt & turn sash + turn sash.

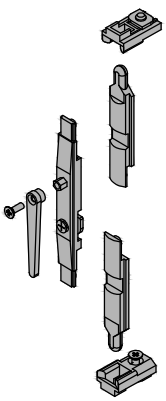


For locking the forend sash, use the kit **F-1502** including 2 pull rod ends, mating socket plates and geared handle. The rest of the active and passive sash fittings remain unchanged.

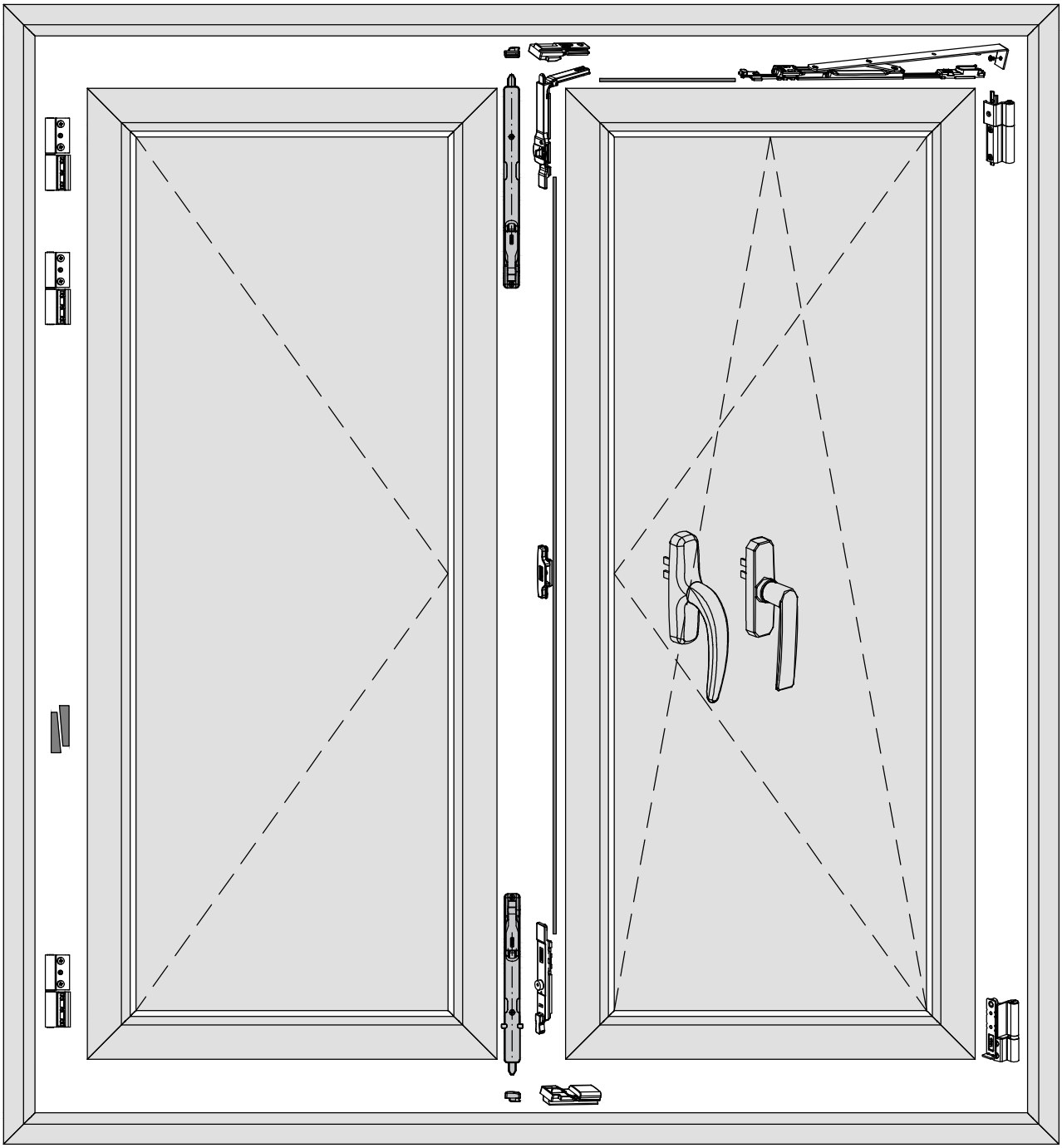
FF-1502

locking forend mechanism (set)



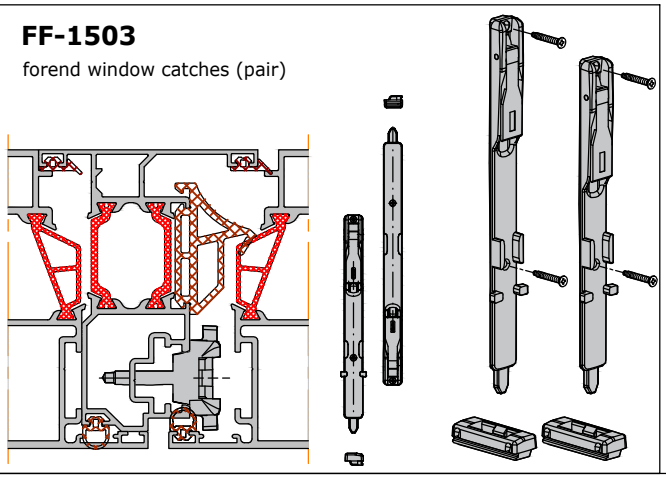


Double sash forend window.
Tilt & turn sash + turn sash.



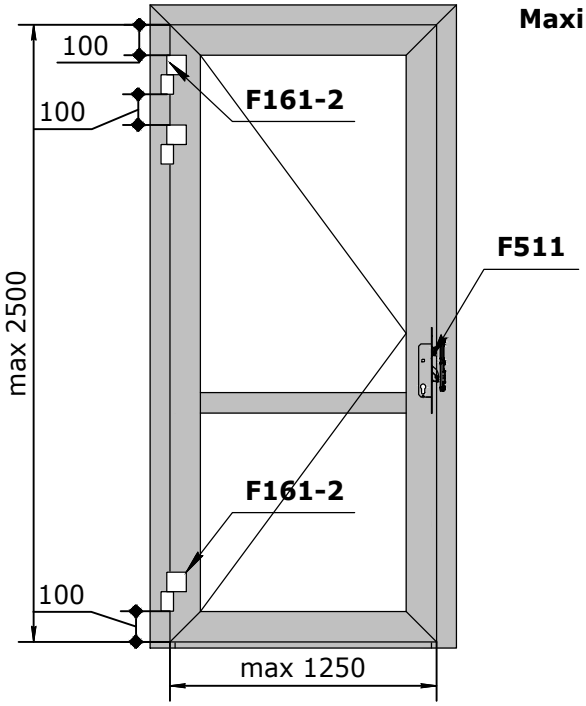
FF-1503

forend window catches (pair)



For locking the forend sash, use the kit **FF-1503** including 2 catches and mating plates. The locking elements located on the front vertical part of the tilt & turn sash engage with these window catches. The rest of the active and passive sash fittings remain unchanged.

Inward and outward opening doors with thermal break



Maximum load on hinges

for public buildings

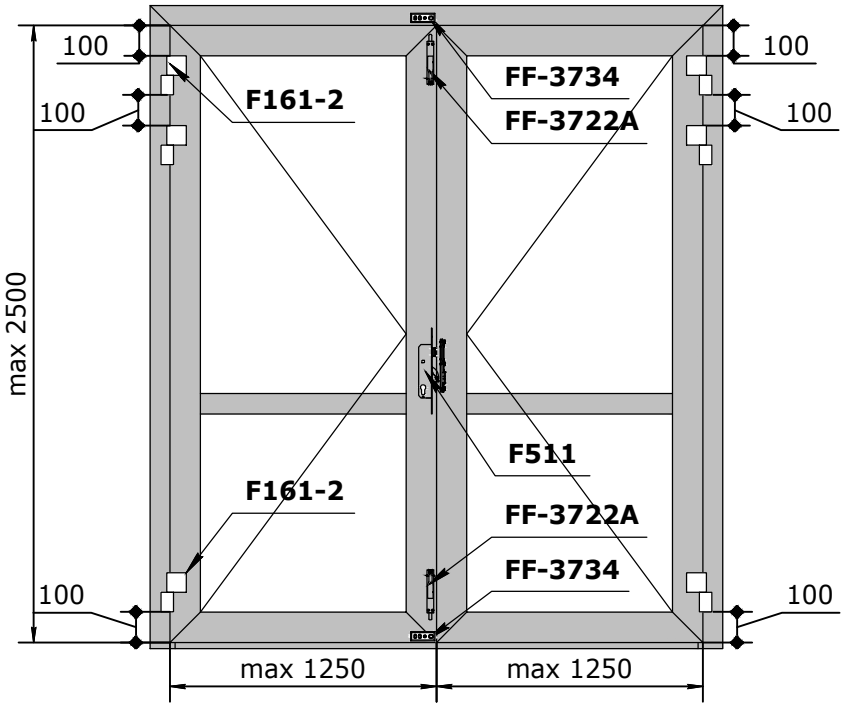
double-section hinges
2 hinges — 145 kg
3 hinges — 165 kg

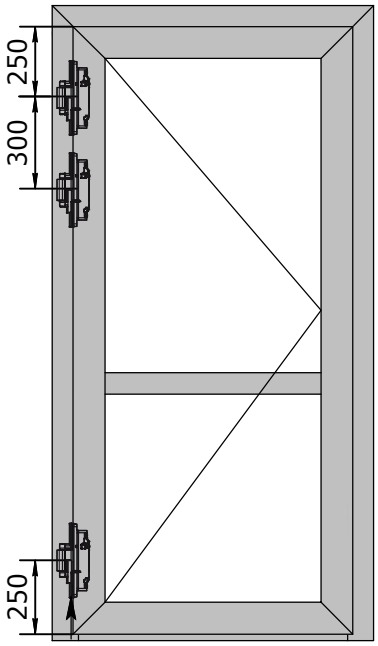
three-section hinges
2 hinges — 150 kg
3 hinges — 170 kg

- Maximum load **on two double-section flap hinges** is **145 kg** (for public buildings, without a door closer)
- Maximum load on hinges is indicated **for two hinges per sash** and subject to condition of H/L ≥ 2.
- When H/L is less than 2, the maximum load is reduced by 10% for each ratio value in increments of 0.1:

H/L ≥ 2 -> P^{max} = 100%
H/L = 1.9 -> P^{max} = 90%
H/L = 1.8 -> P^{max} = 80%
...

- If a third hinge is installed next to the top hinge, the maximum load is increased by 15%



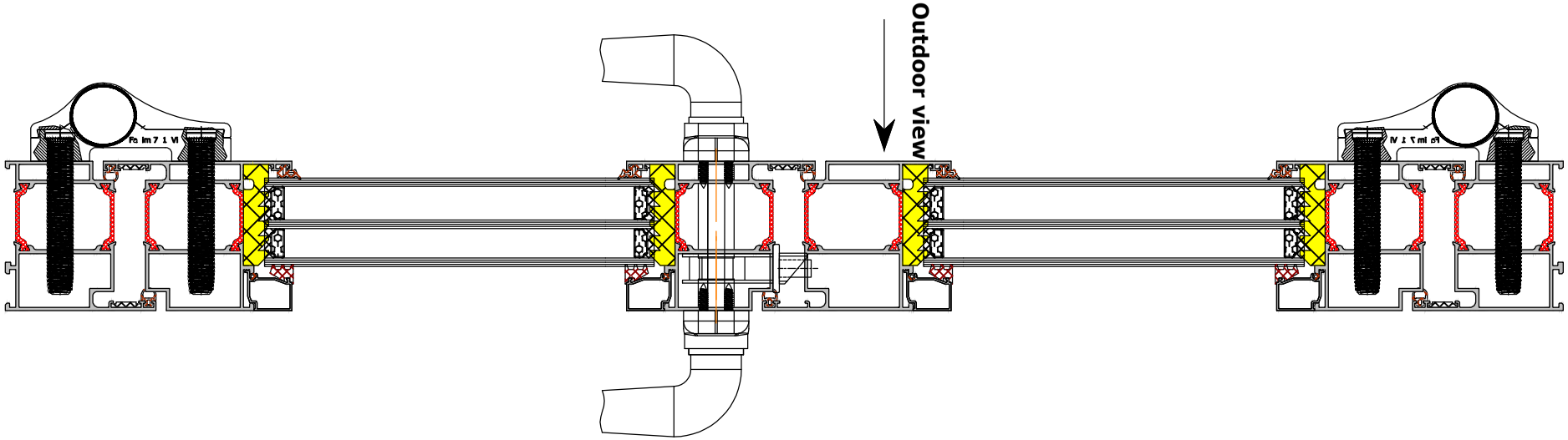


H^{sash} > 2200 — 2 hinges
H^{sash} 2200 > 2500 — 3 hinges
H^{sash} > 2500 — 4 hinges

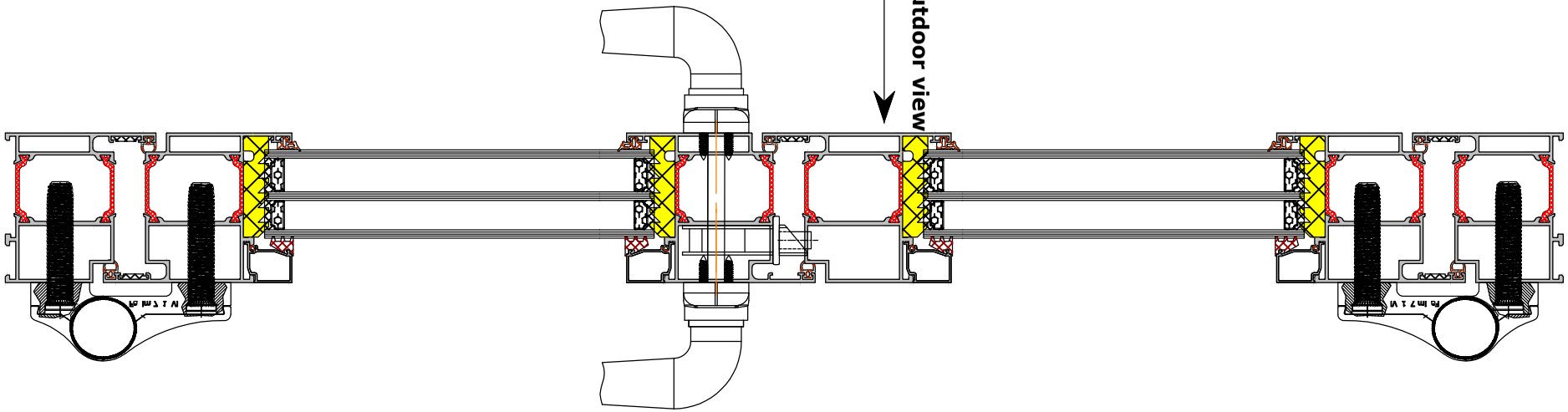
For installation of door closer —
- **at least 3 hinges**

Permissible load
2 hinges — up to 100 kg
3 hinges — up to 140 kg

Horizontal cross-section of outward opening door

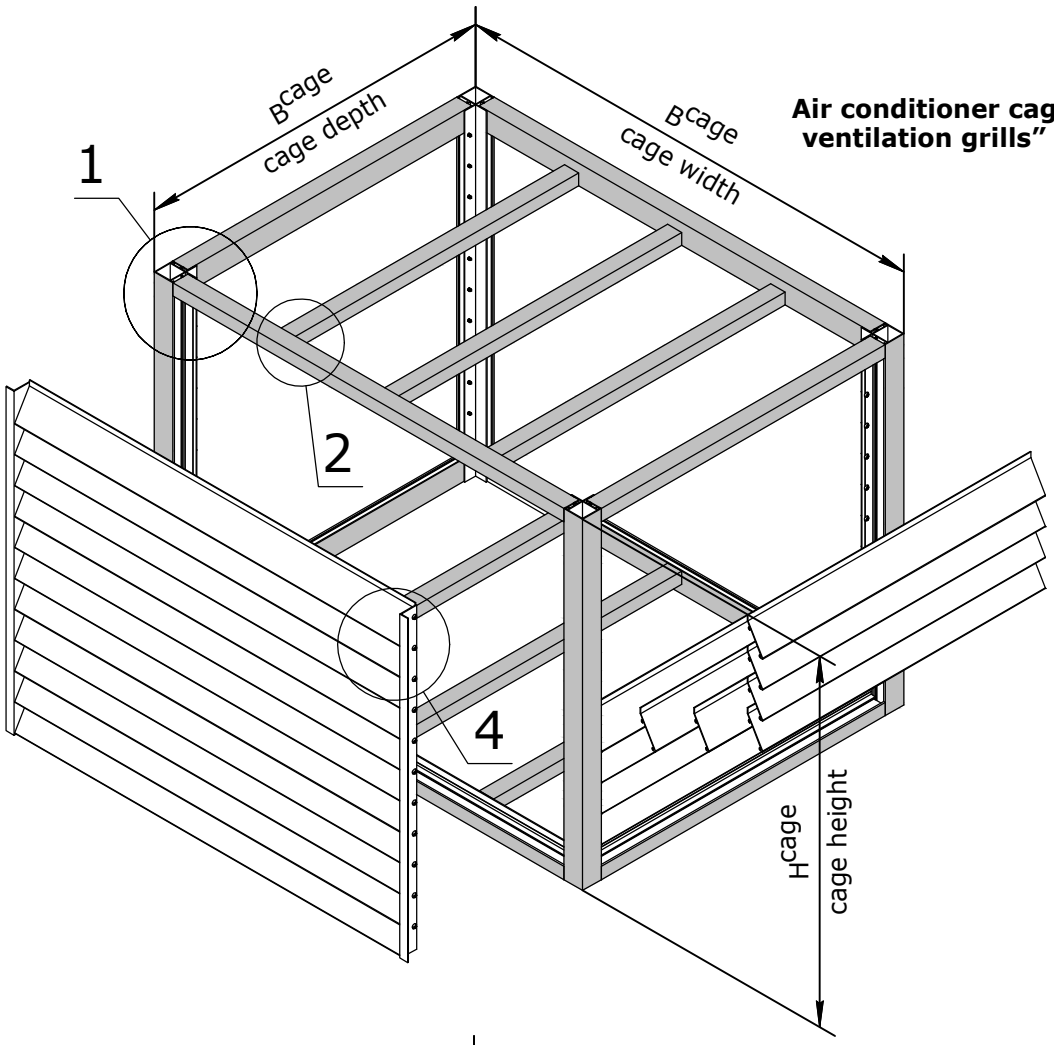


Horizontal cross-section of inward opening door

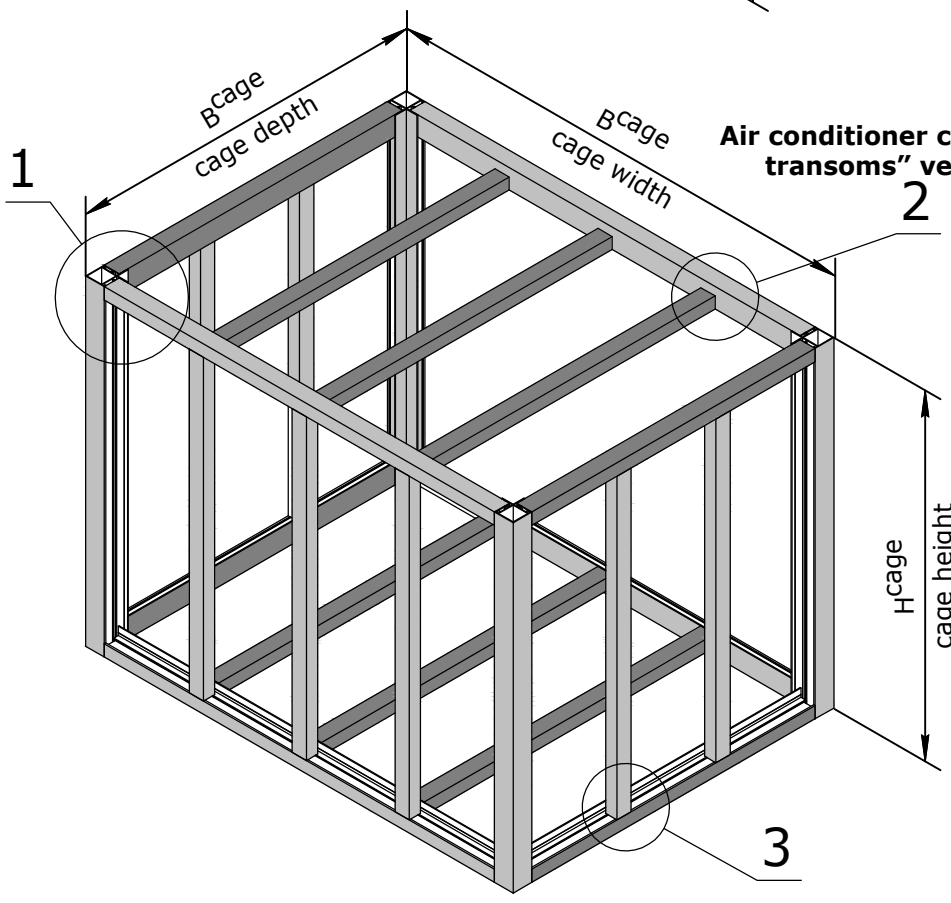


equipment and tools | connections | fire-resistant structures | sub-assemblies | additional solutions | **fitting arrangements** | sub-assemblies tables | glazing tables | sections | profiles (1:1) | delivery set | profiles | contents

Air conditioner cages



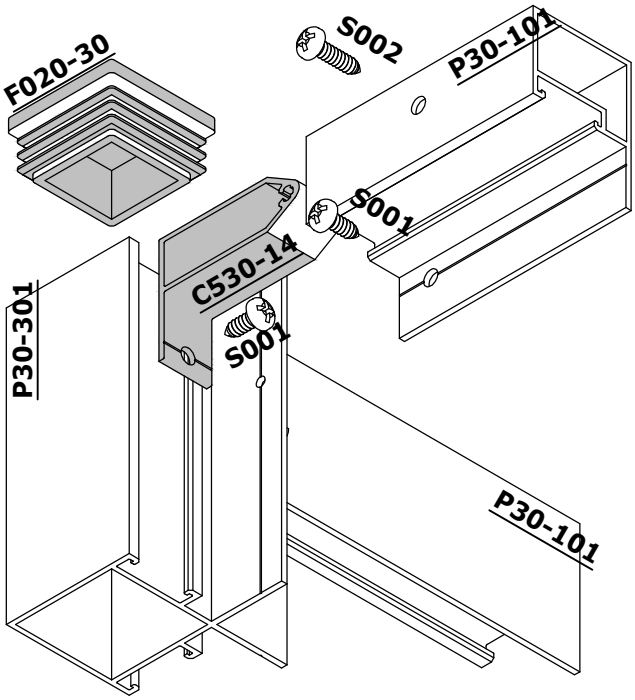
Air conditioner cage, "with ventilation grills" version

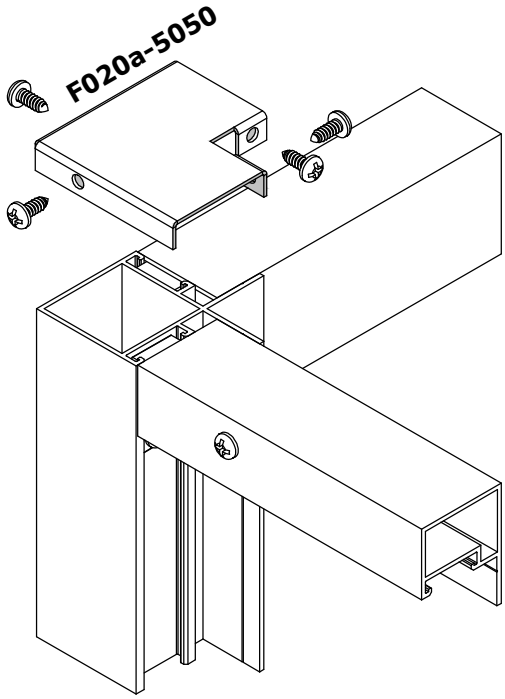


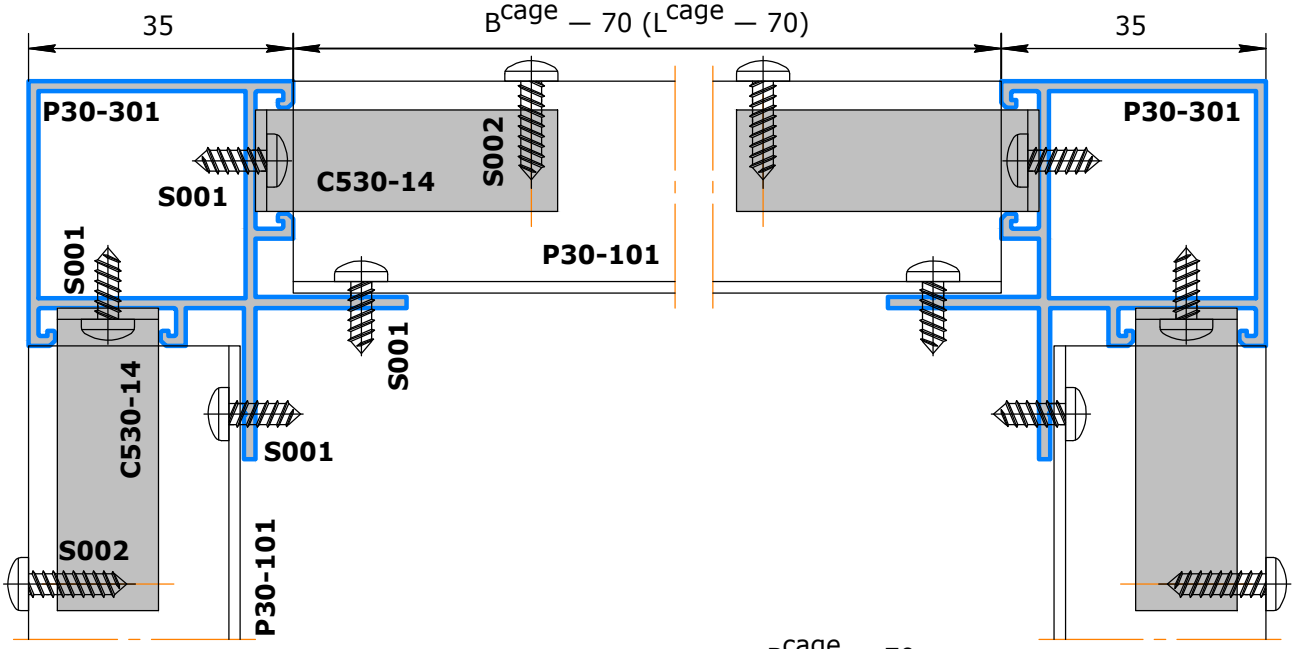
Air conditioner cage, "on transoms" version

contents
profiles
delivery set
profiles (1:1)
sections
glazing tables
sub-assemblies tables
fitting arrangements
additional solutions
sub-assemblies
fire-resistant structures
connections
equipment and tools

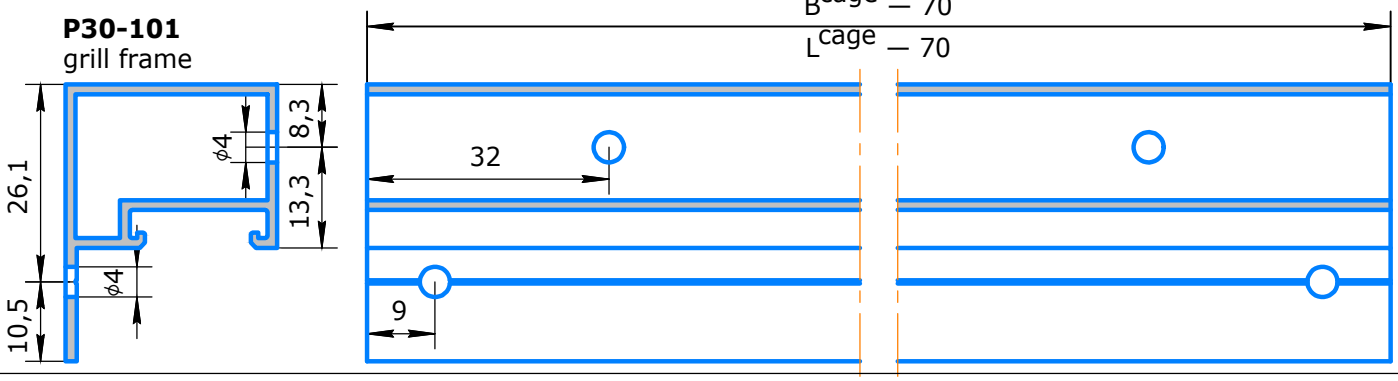
Assembly 1



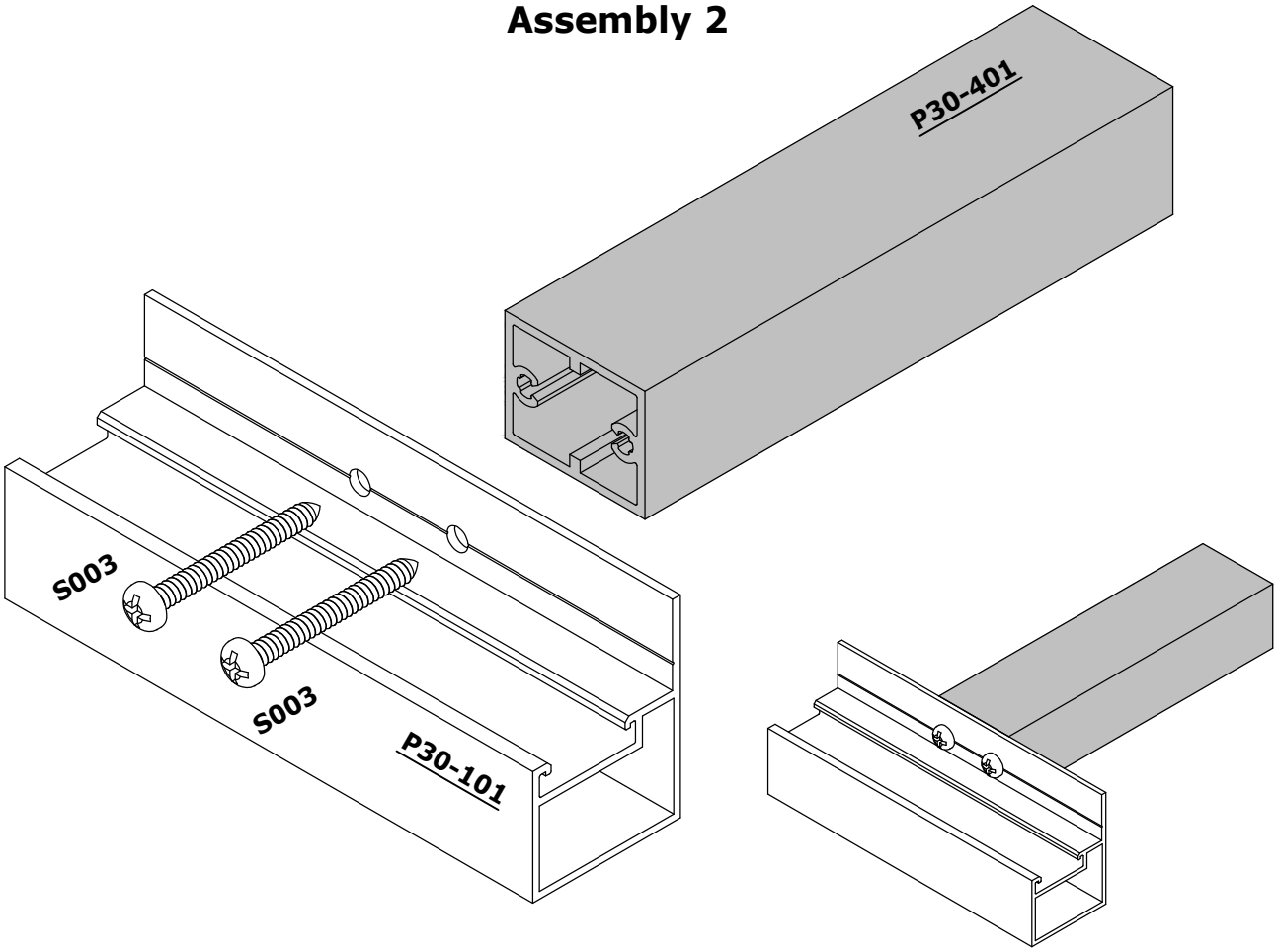


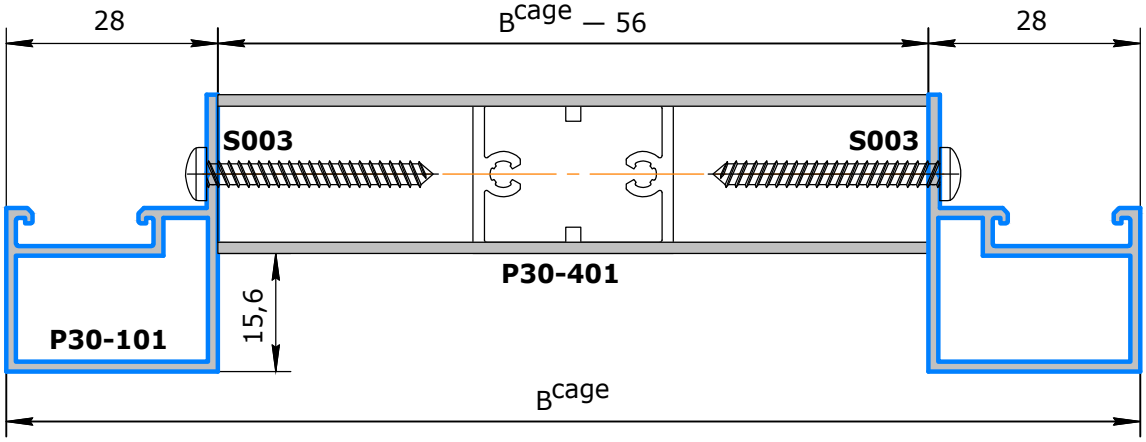


P30-101
grill frame

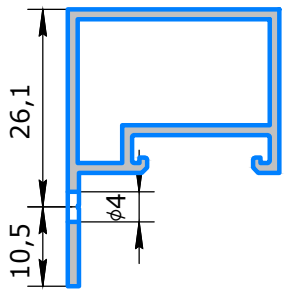


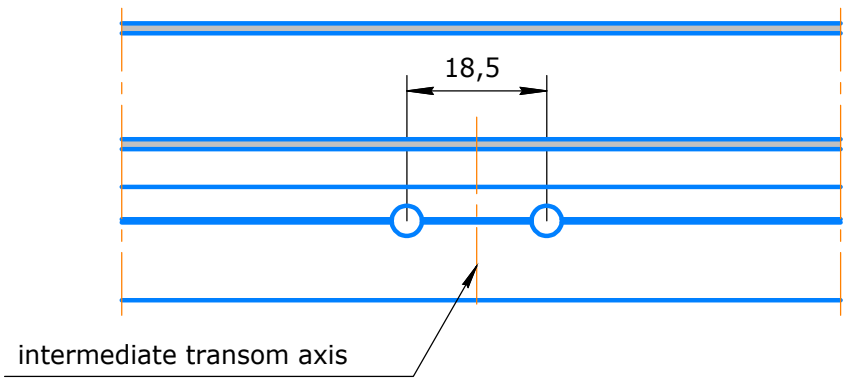
Assembly 2



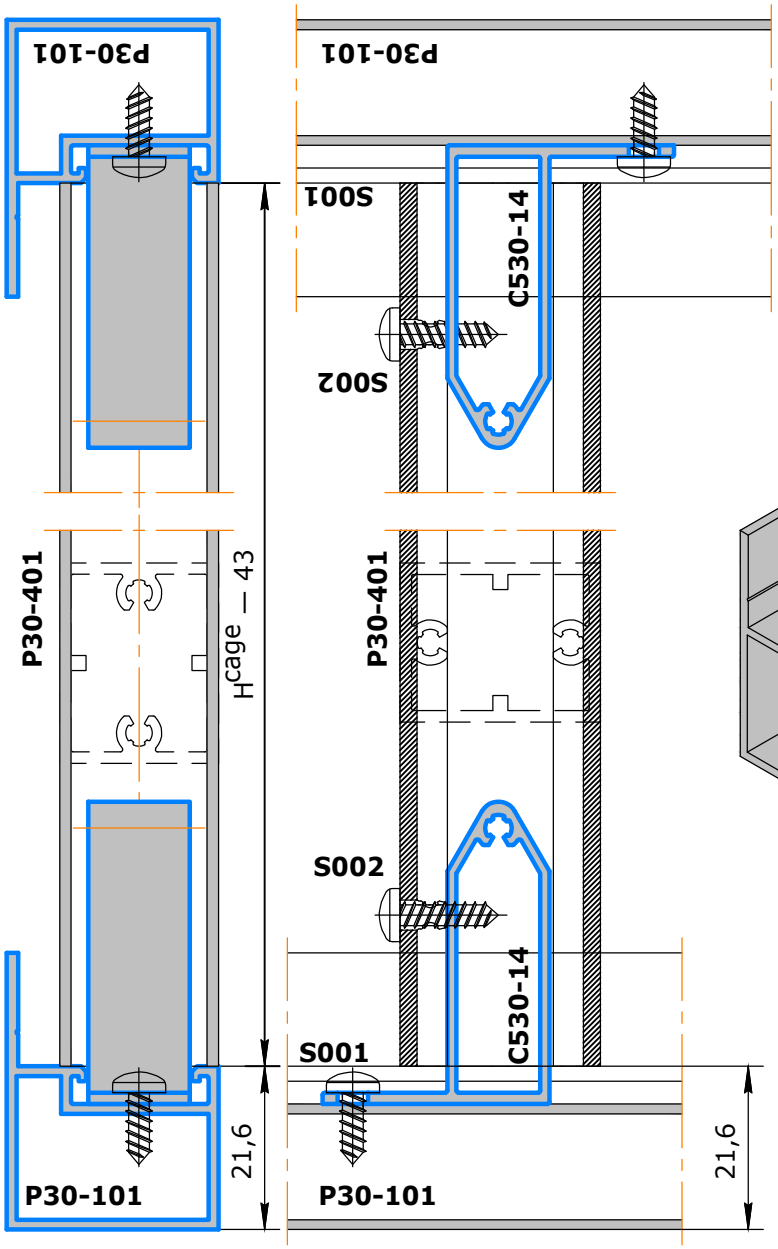


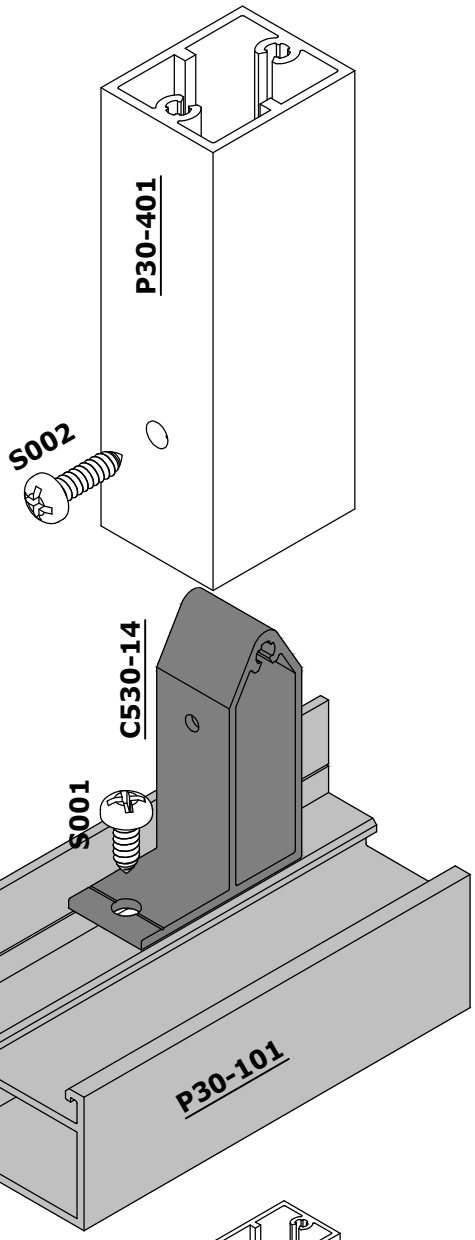
P30-101
grill frame

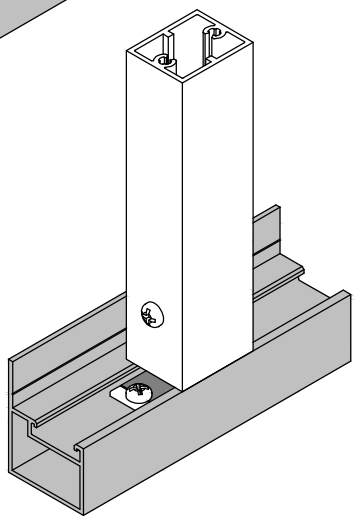




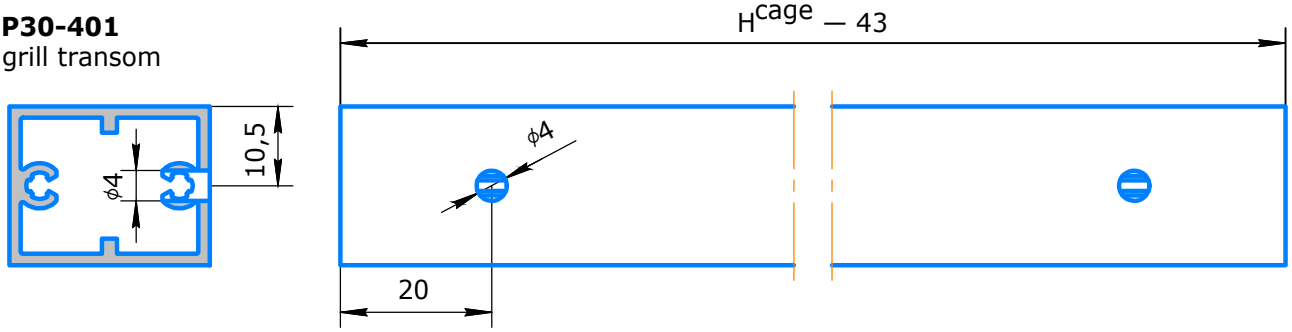
Assembly 3



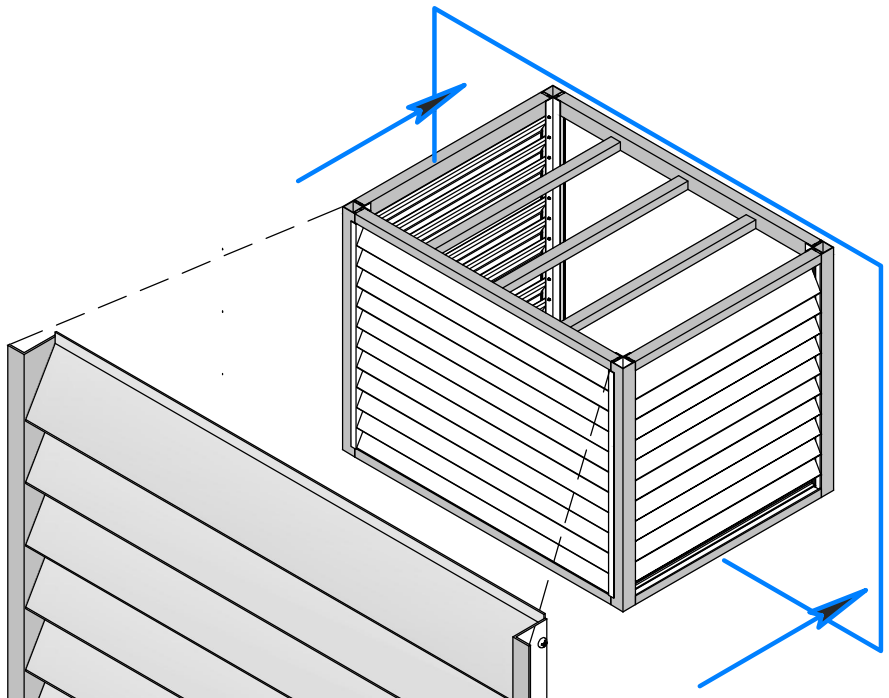


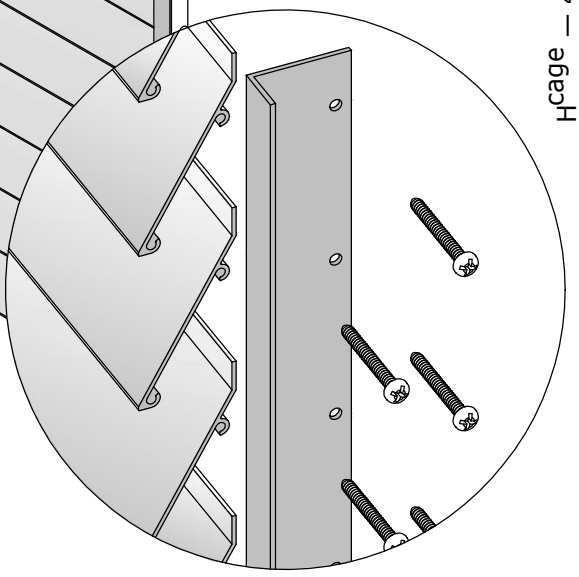


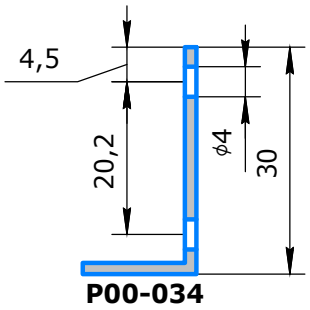
P30-401
grill transom

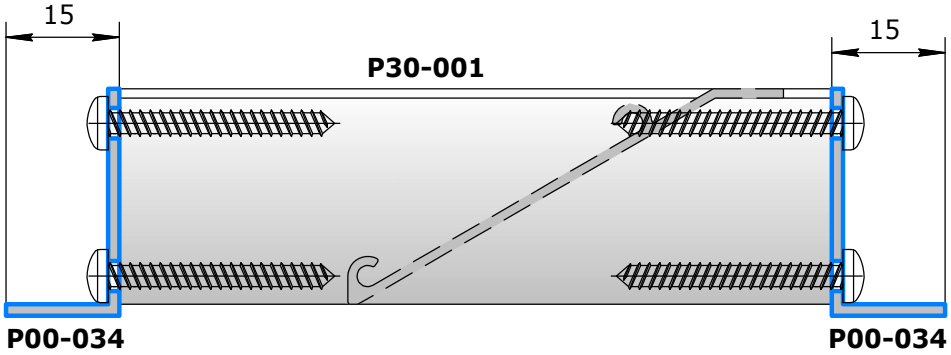


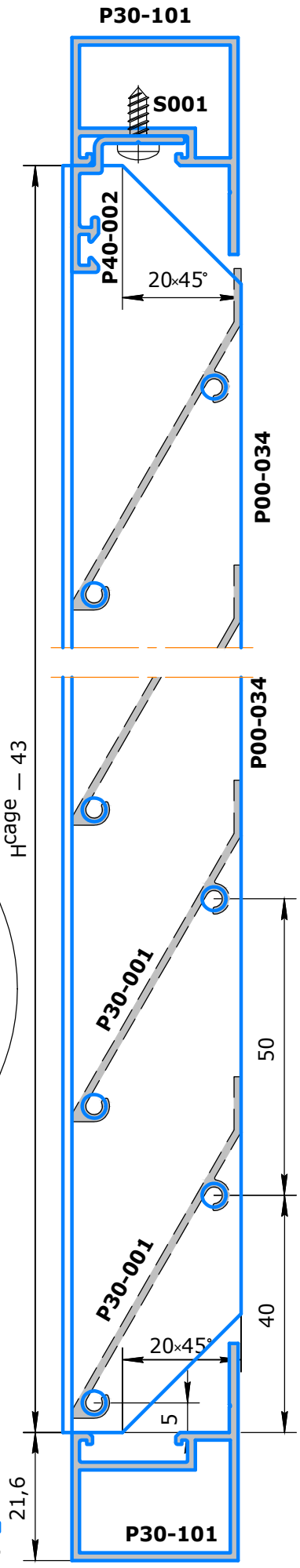
Assembly 4

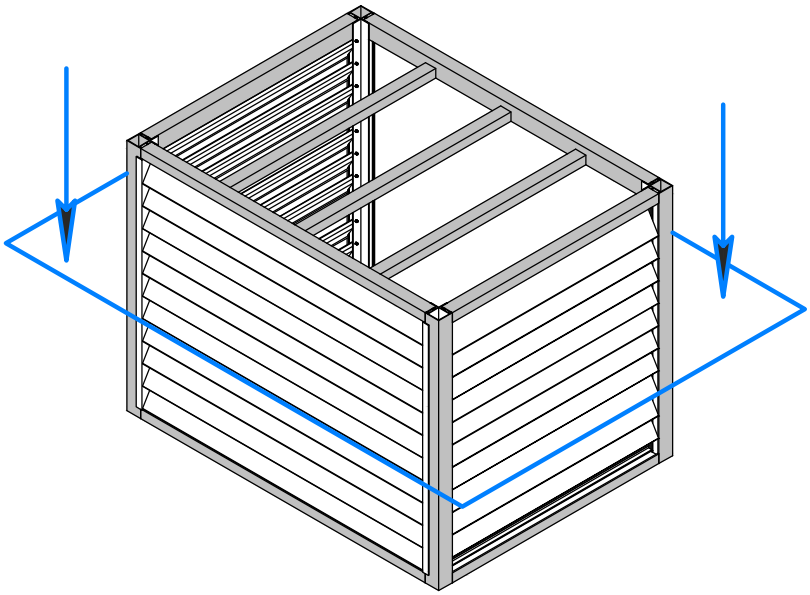


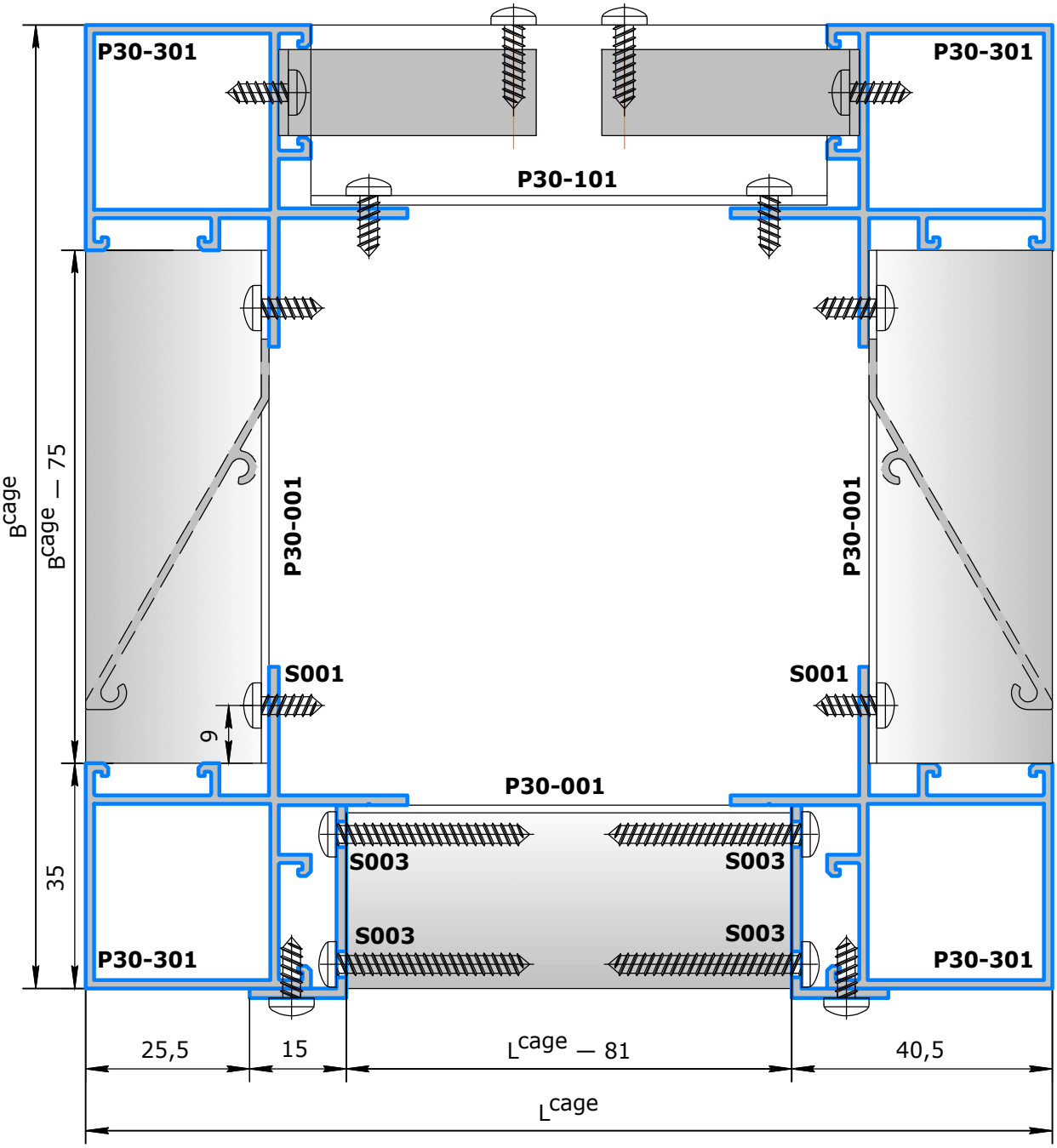


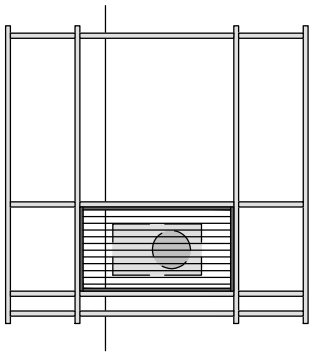

4,5
20,2
ϕ4
30
P00-034

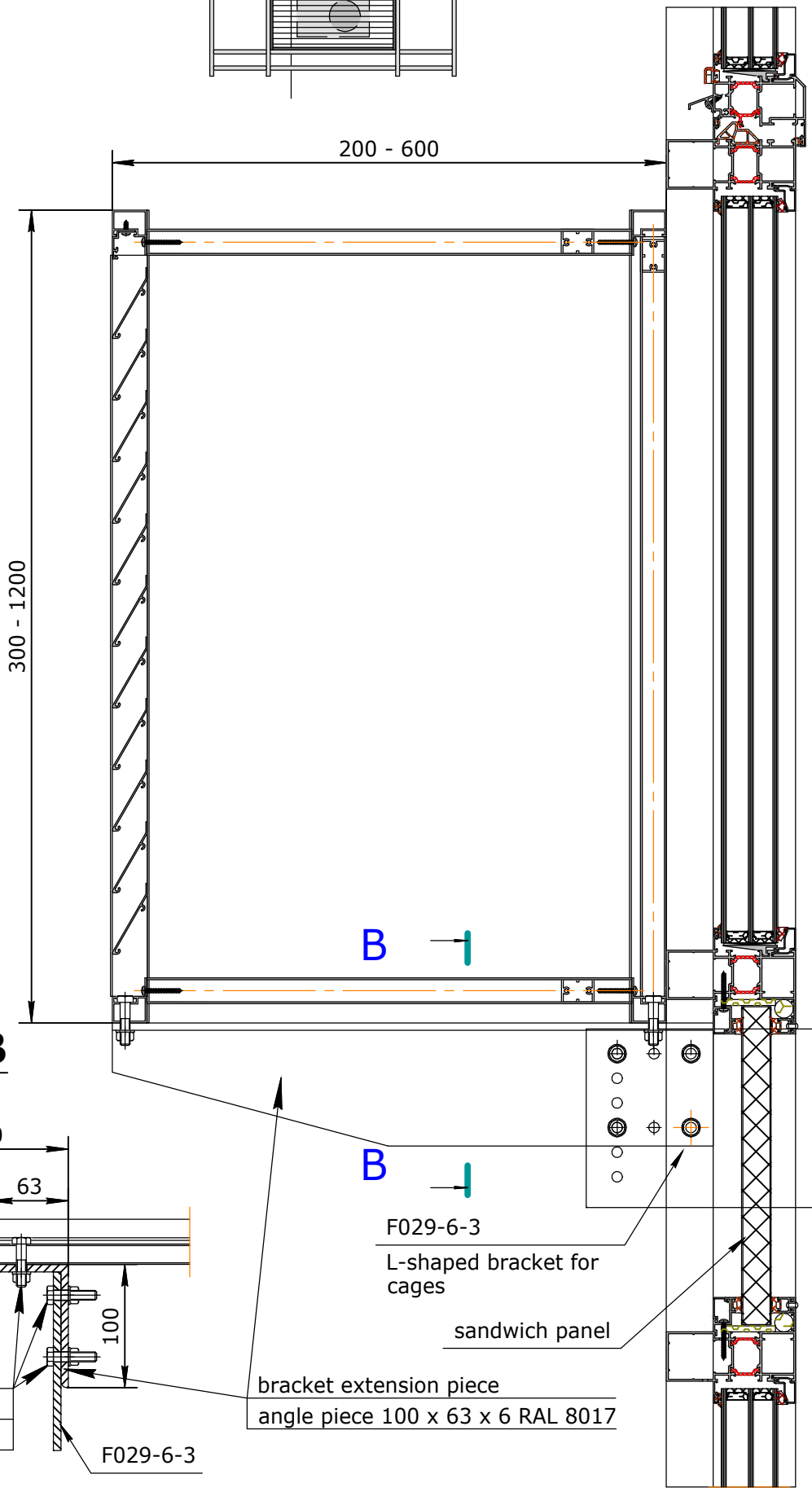

15
P30-001
15
P00-034
P00-034

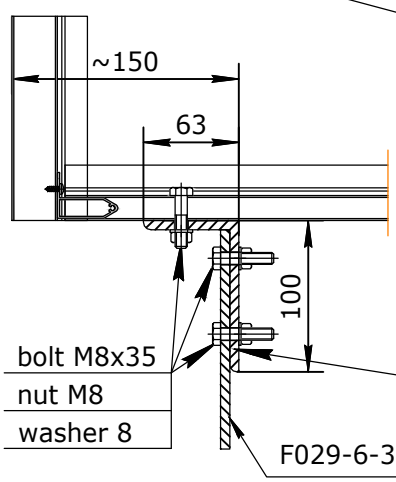

P30-101
S001
P40-002
20×45°
P00-034
H cage – 43
P00-034
P30-001
50
P30-001
40
20×45°
5
21,6
P30-101

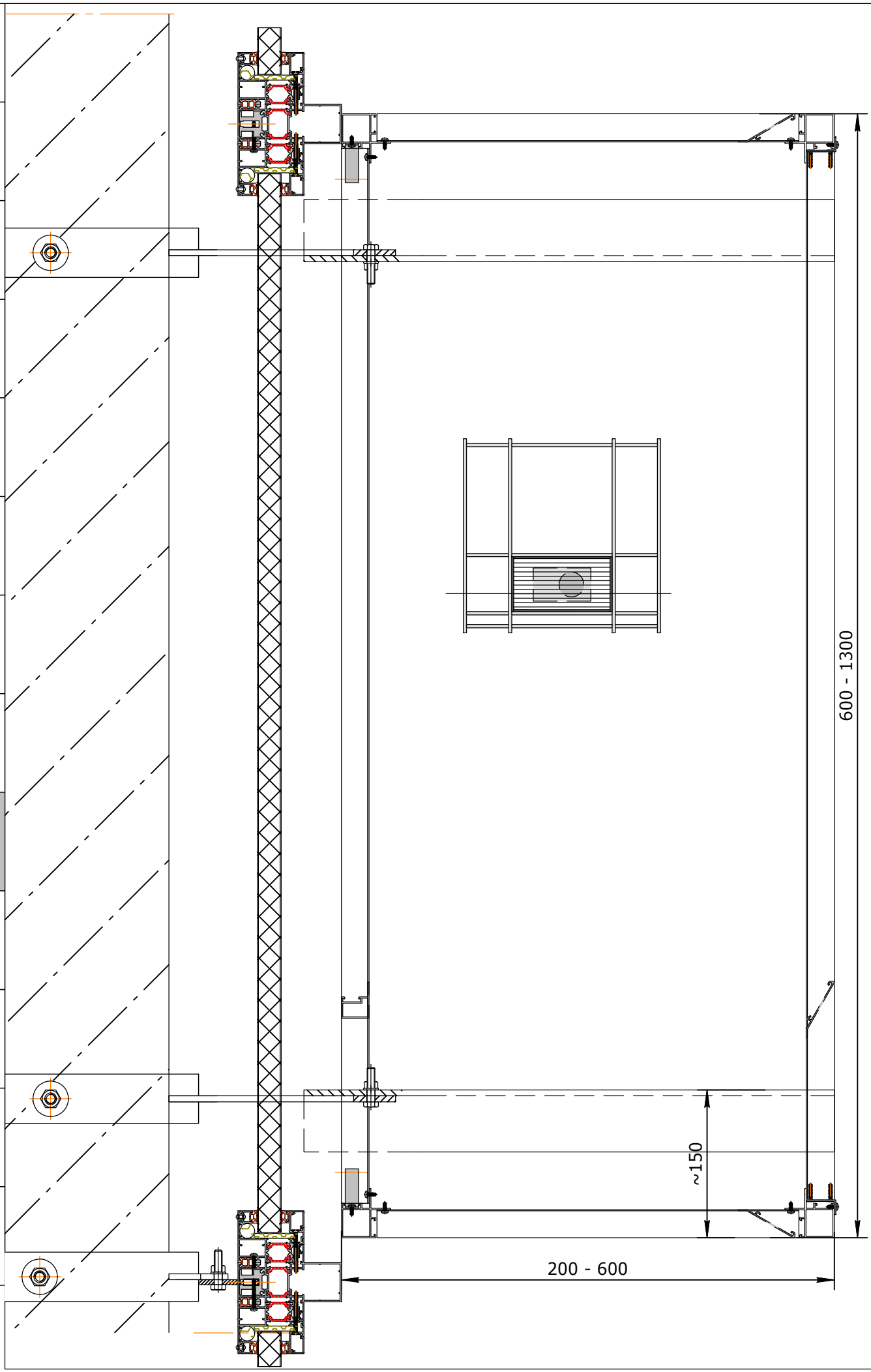



P30-301
P30-301
P30-101
P30-001
P30-001
S001
S001
9
P30-001
S003
S003
S003
S003
P30-301
P30-301
35
B cage
B cage — 75
25,5
15
L cage — 81
40,5
L cage



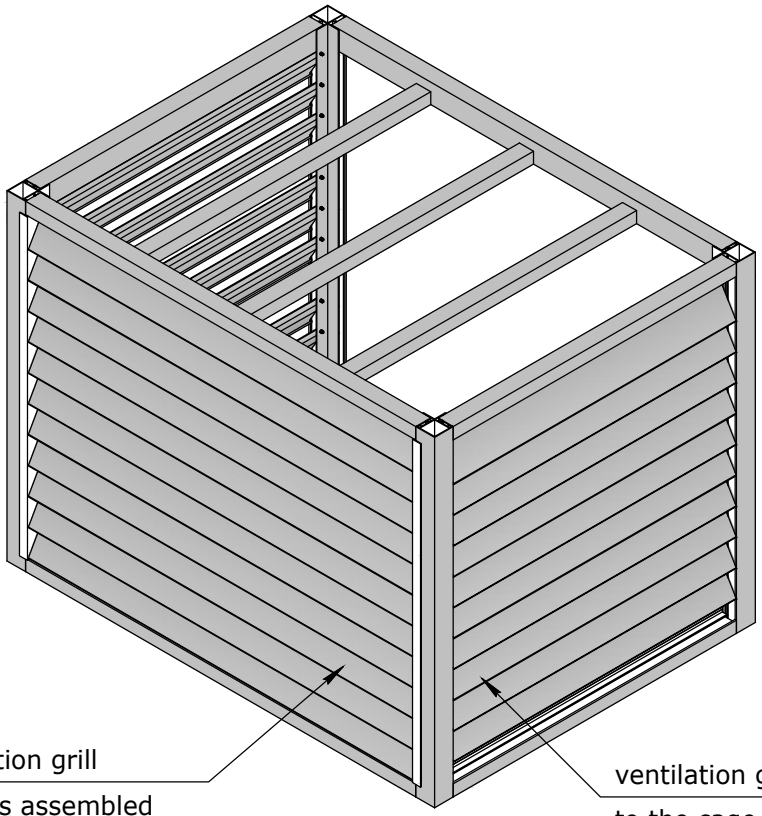

200 - 600
300 - 1200
B
B
F029-6-3
L-shaped bracket for cages
sandwich panel
bracket extension piece
angle piece 100 x 63 x 6 RAL 8017


B – B
~150
63
100
bolt M8x35
nut M8
washer 8
F029-6-3



contents
profiles
delivery set
profiles (1:1)
sections
glazing tables
sub-assemblies tables
fitting arrangements
additional solutions
sub-assemblies
fire-resistant structures
connections
equipment and tools

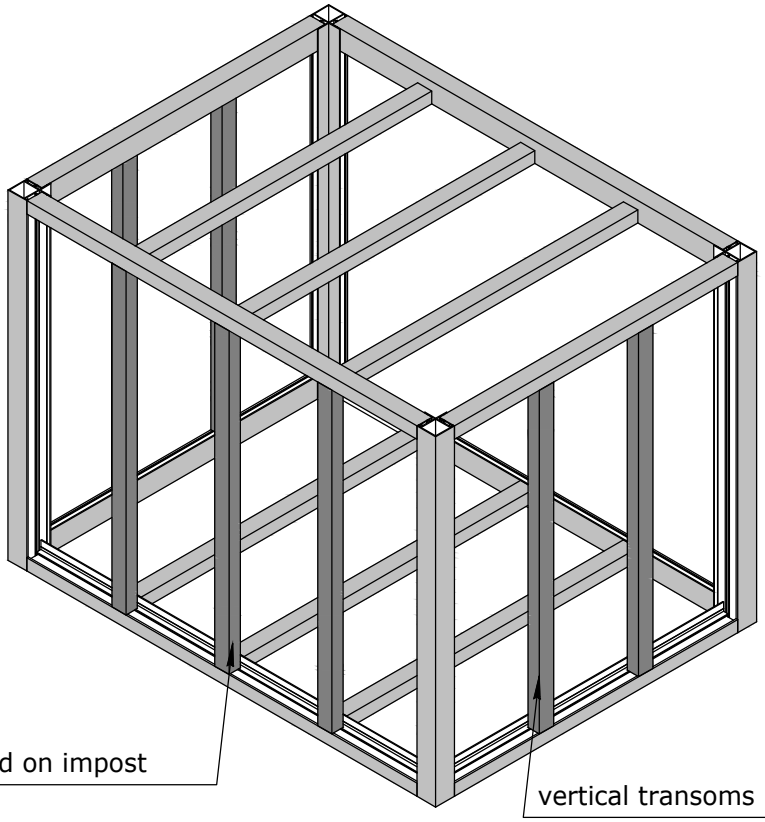
"On ventilation grill" version



ventilation grill lamellas assembled on the frame

ventilation grill lamellas attached to the cage frame

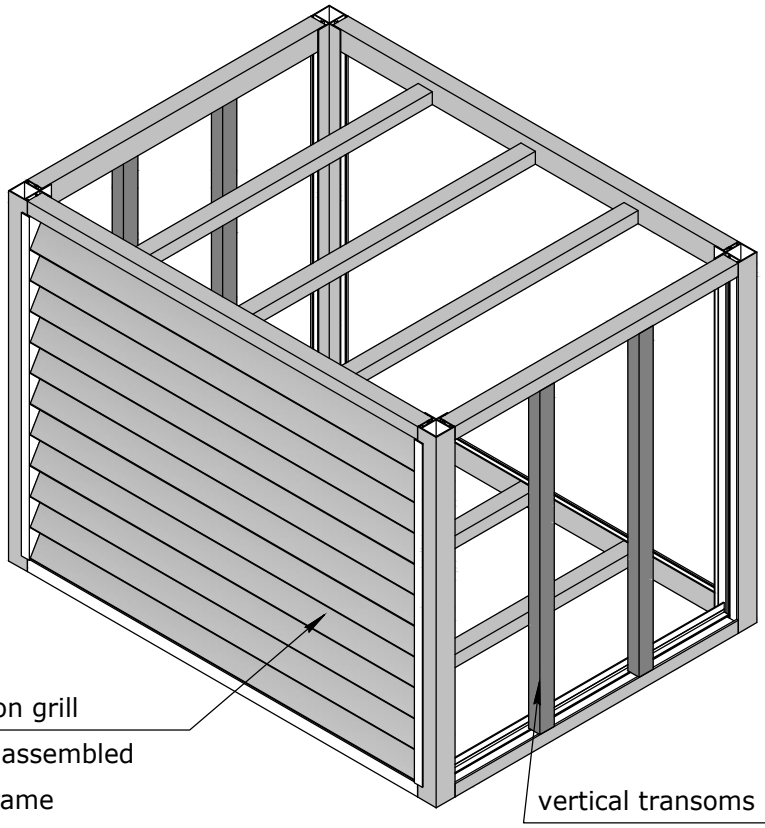
Design version **"on transoms"**



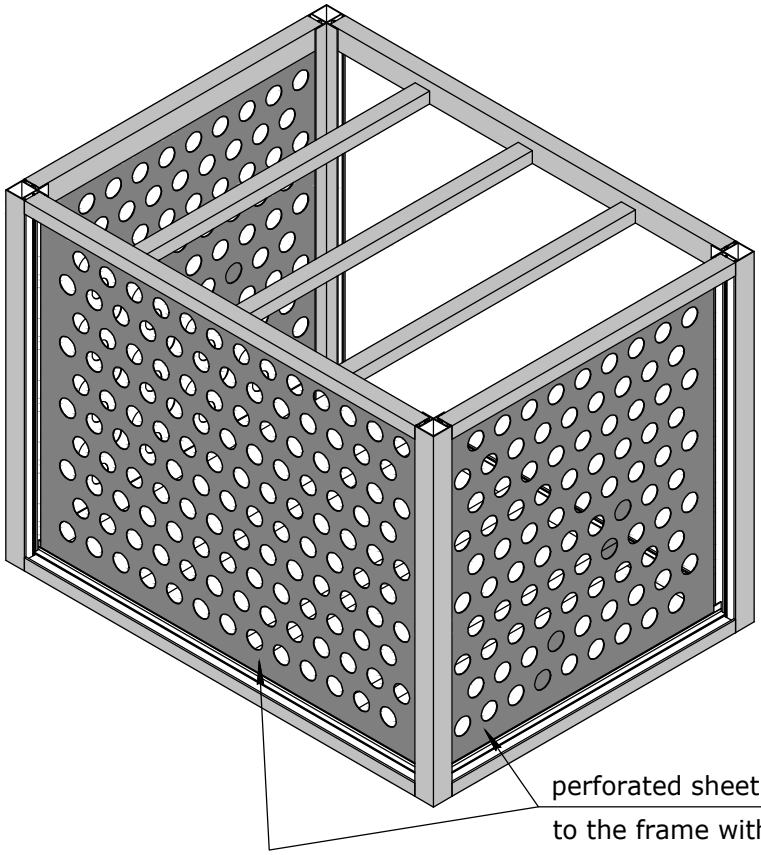
vertical transoms mounted on impost embedding parts

vertical transoms mounted on impost embedding parts

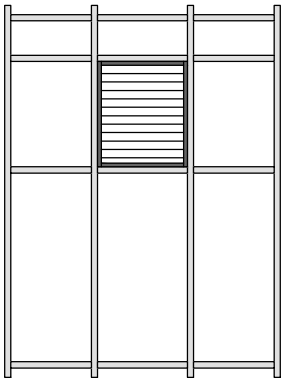
"On ventilation grill and transoms"
(combined) version

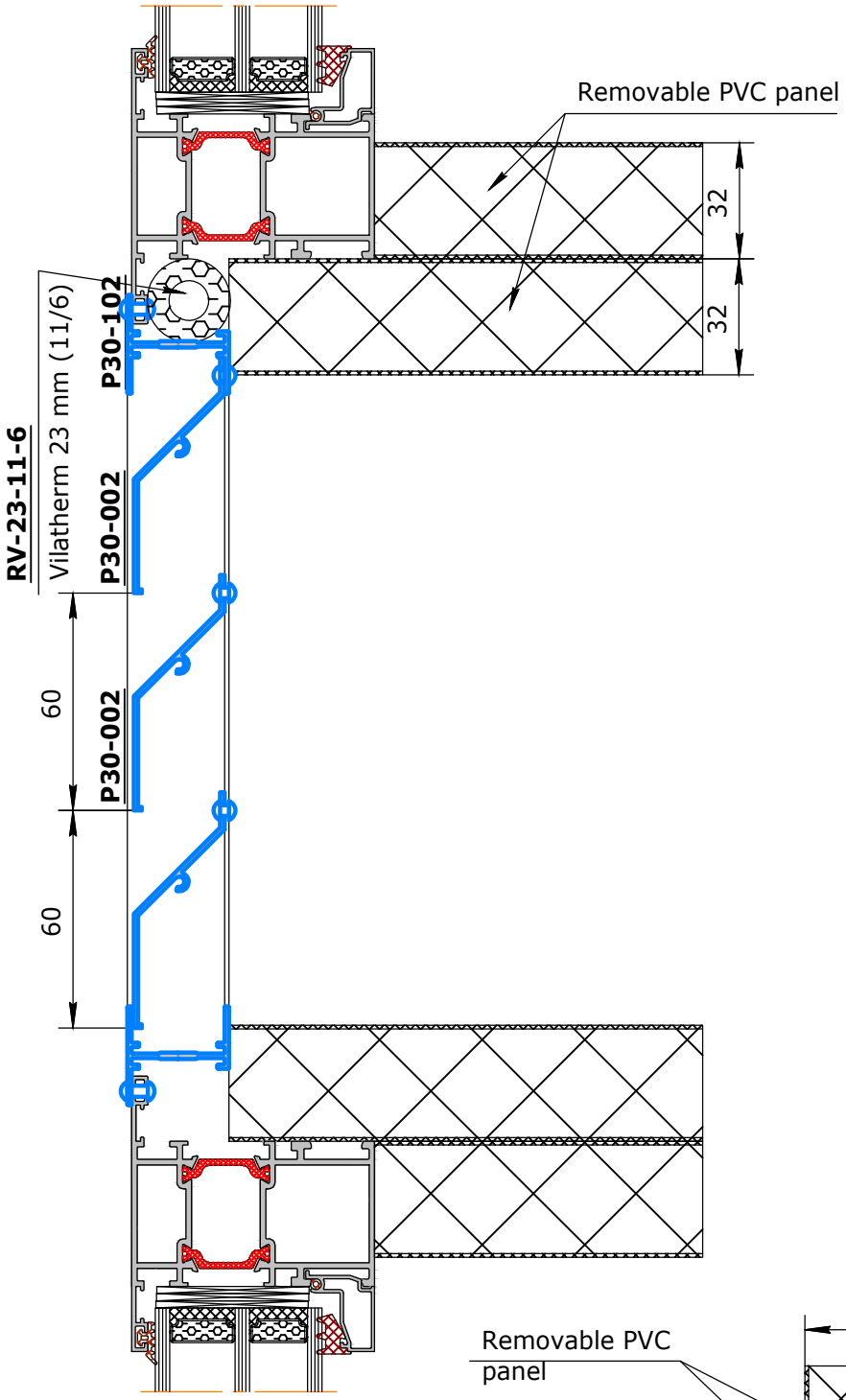


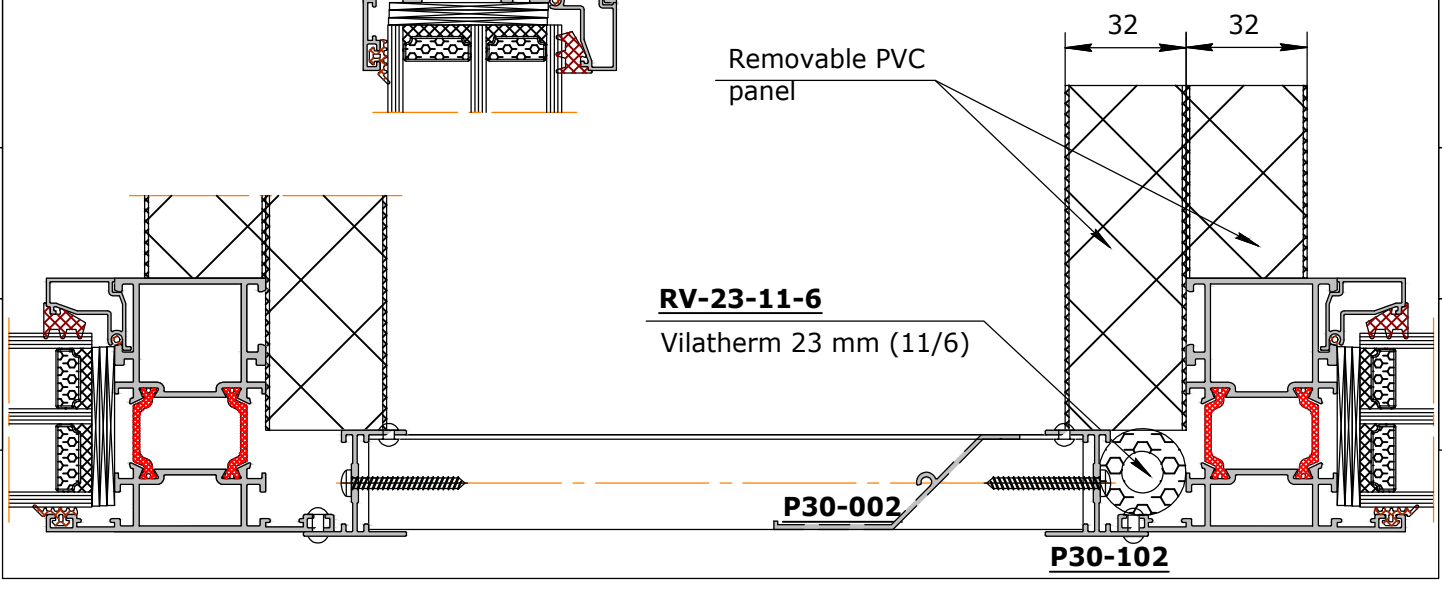
Design version **"on perforated sheet"**

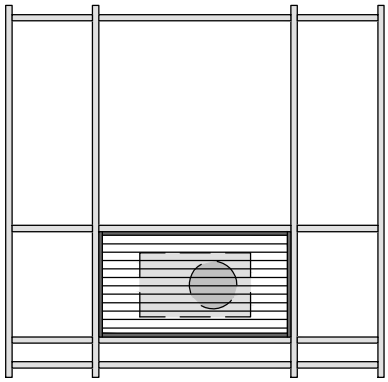


Installation of ventilation grill and arrangement of ventilation duct

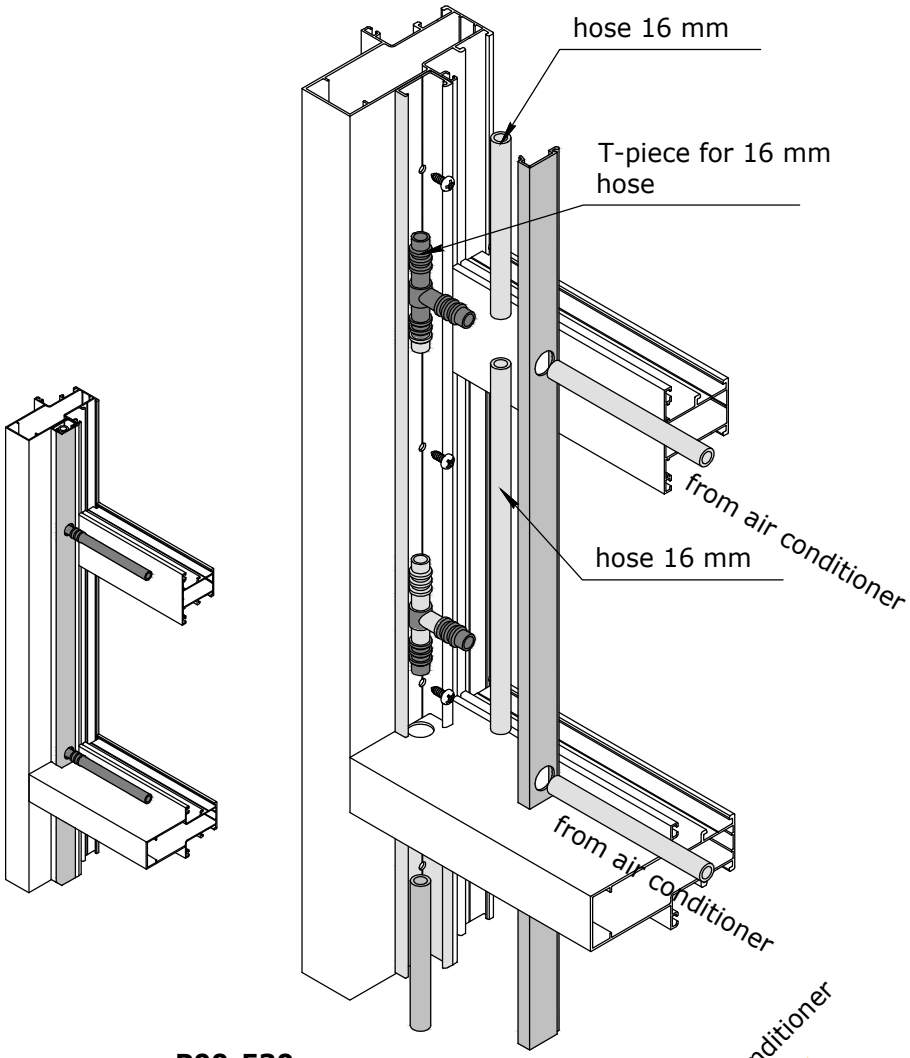




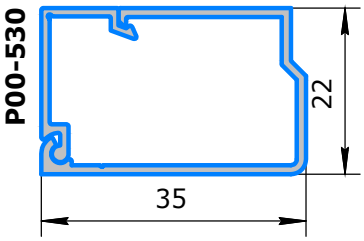


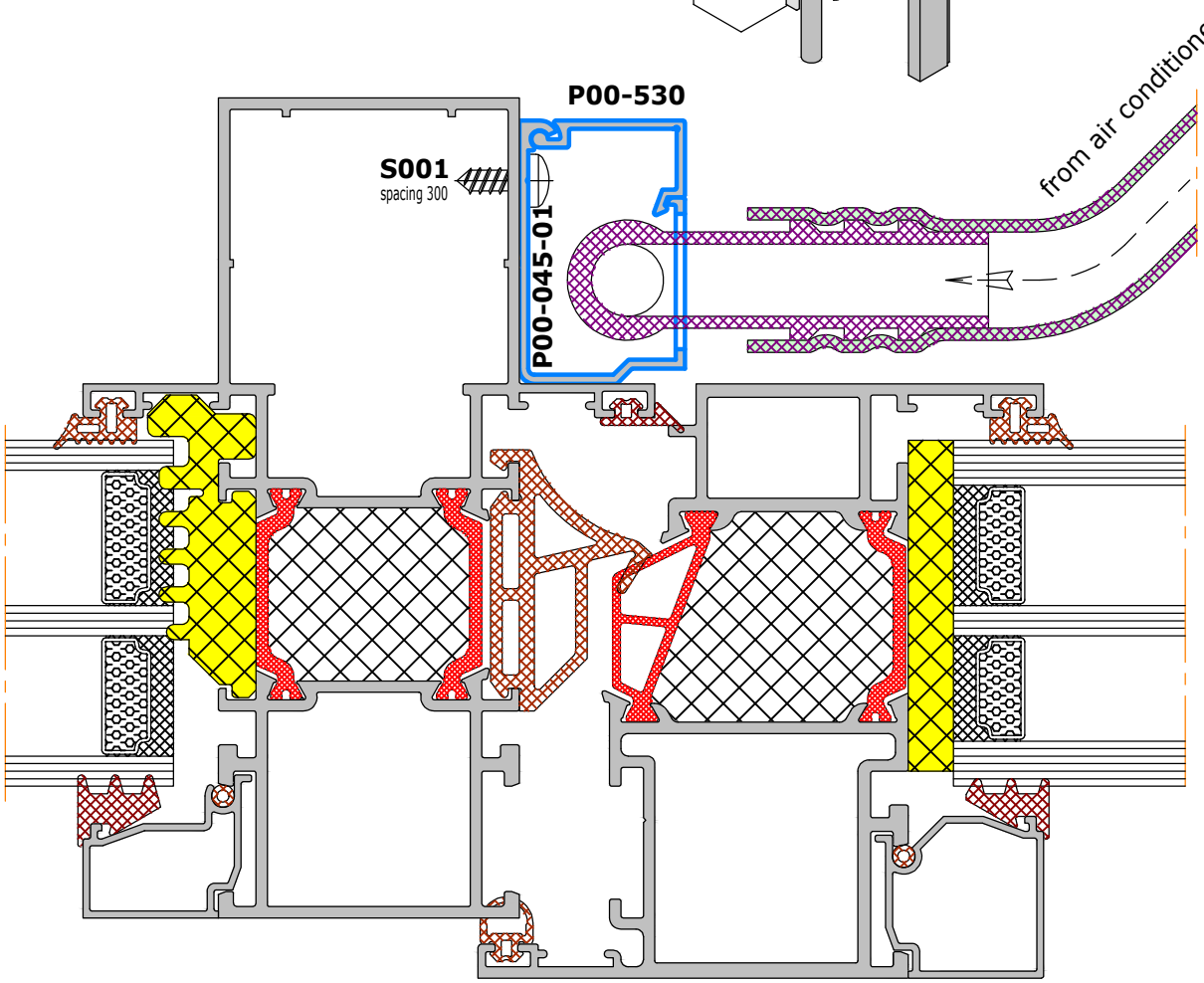


Arrangement of air conditioner condensate drainage

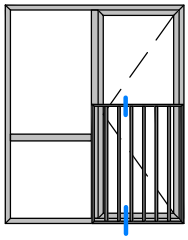


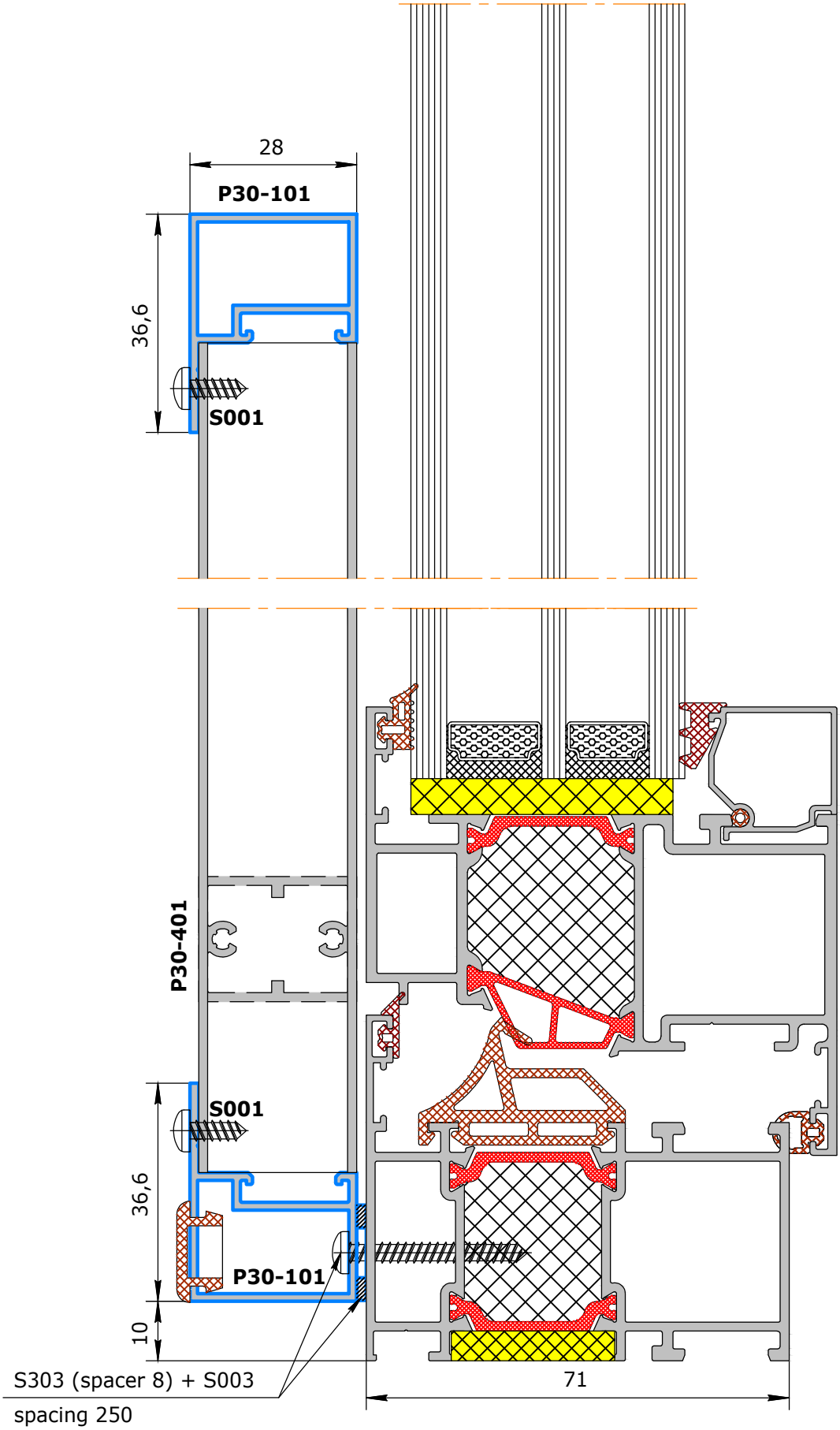
P00-045-01
duct housing 35 mm

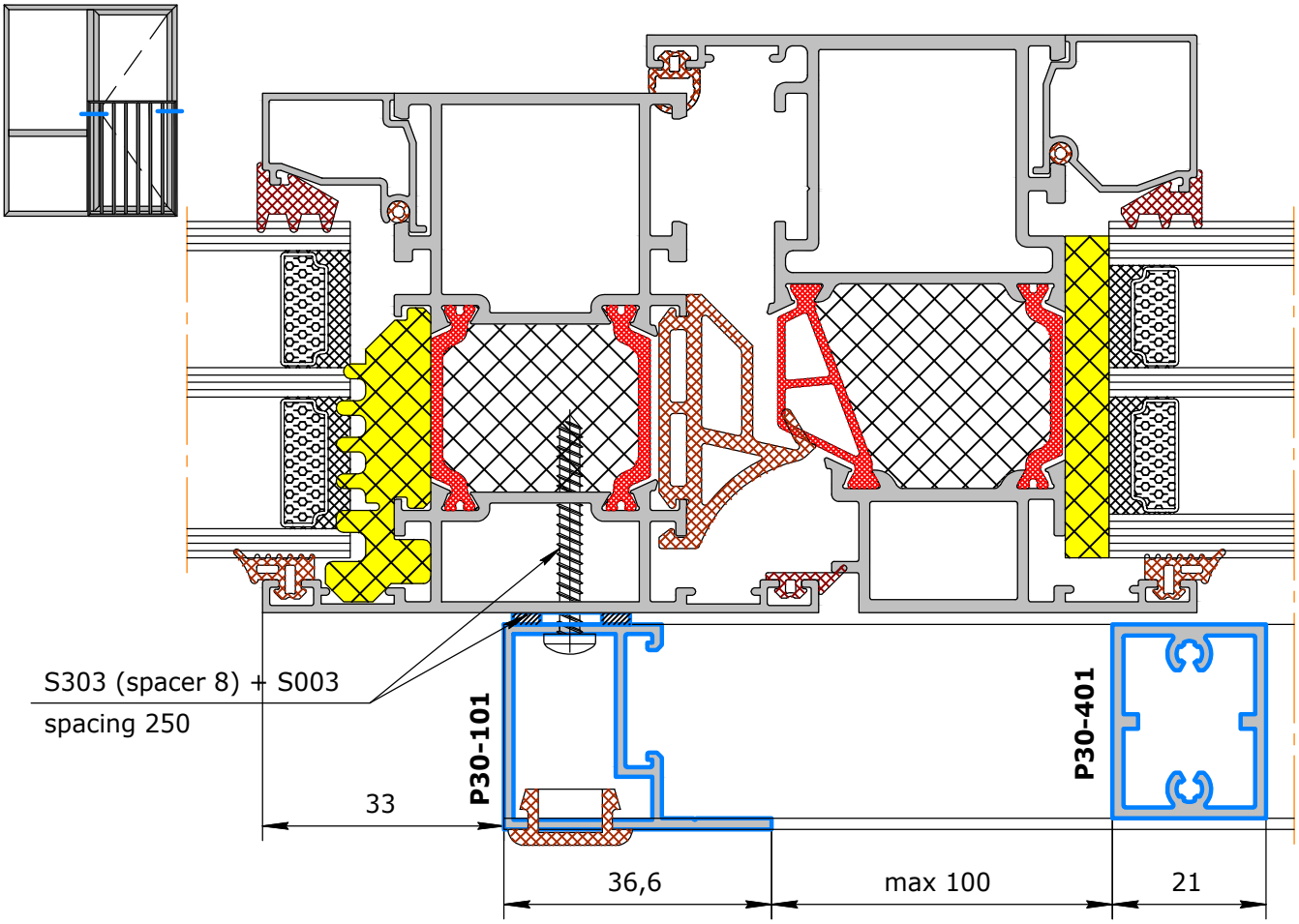


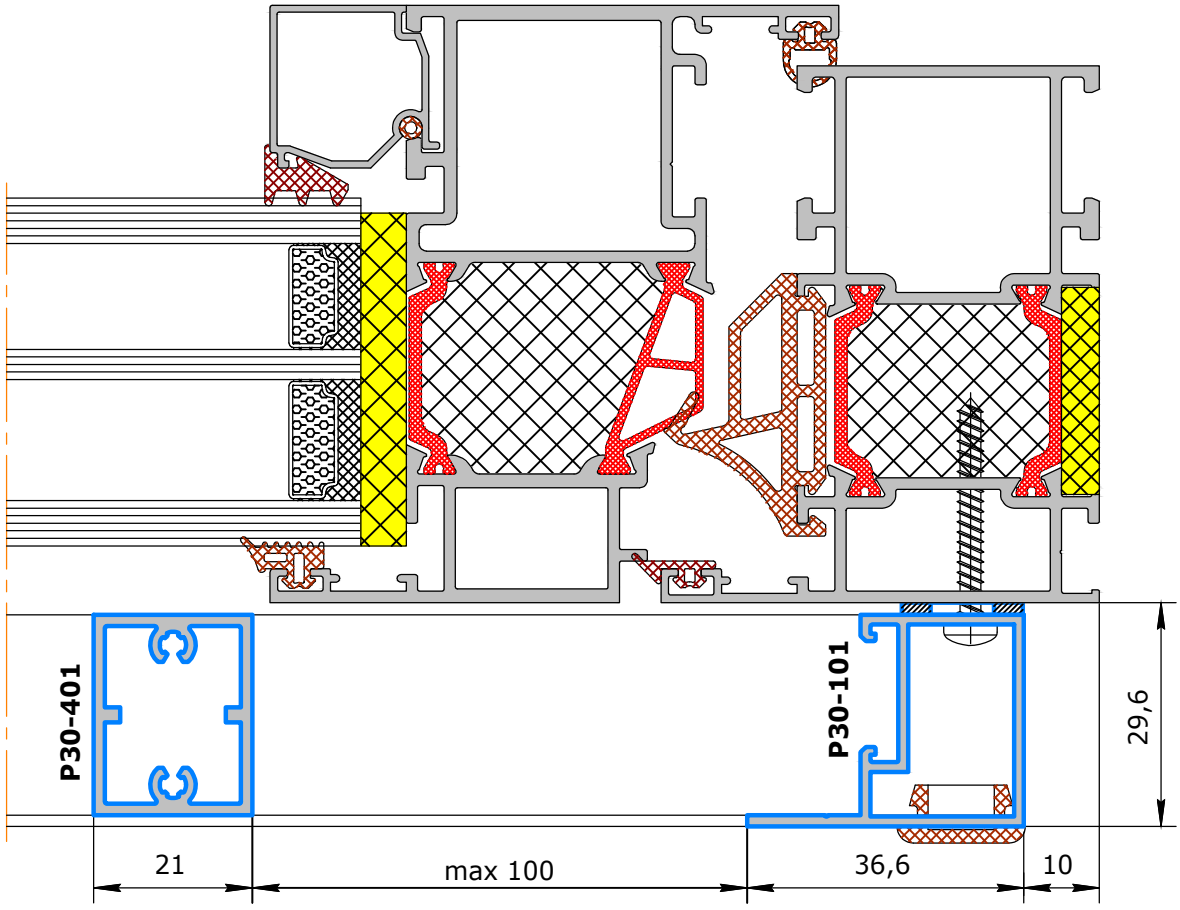


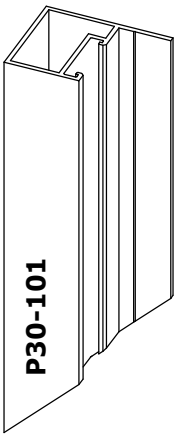
French balcony.
External grill

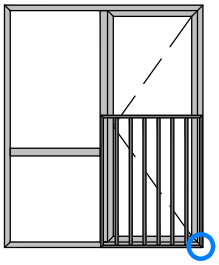




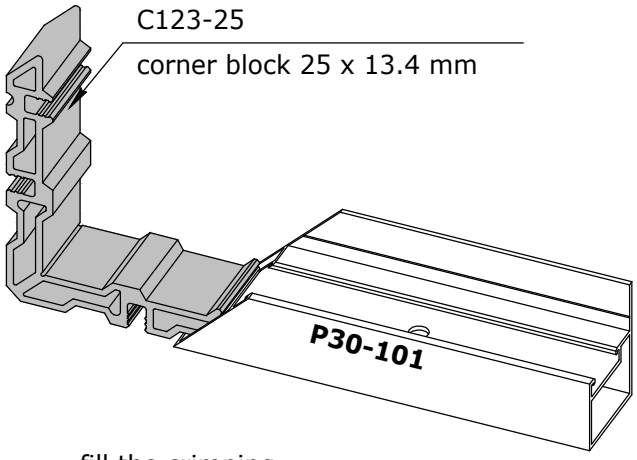

S303 (spacer 8) + S003
spacing 250
33
P30-101
P30-401
36,6
max 100
21


P30-401
P30-101
29,6
21
max 100
36,6
10

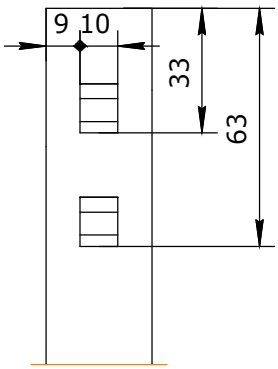


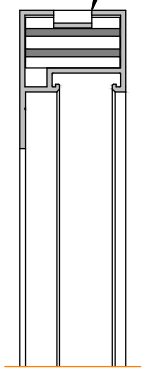


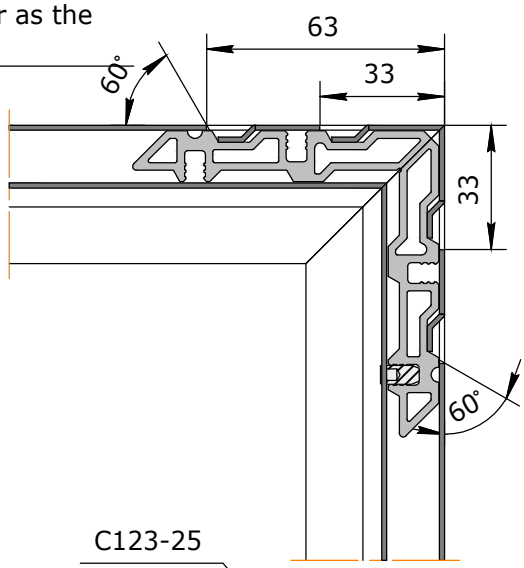
Apply one- or two-component aluminium bonding adhesive (**E006**) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (**E007**).



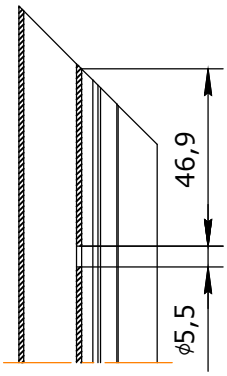
Crimping assembly

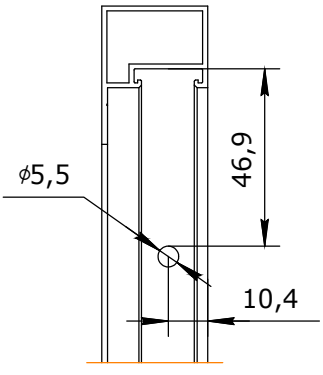


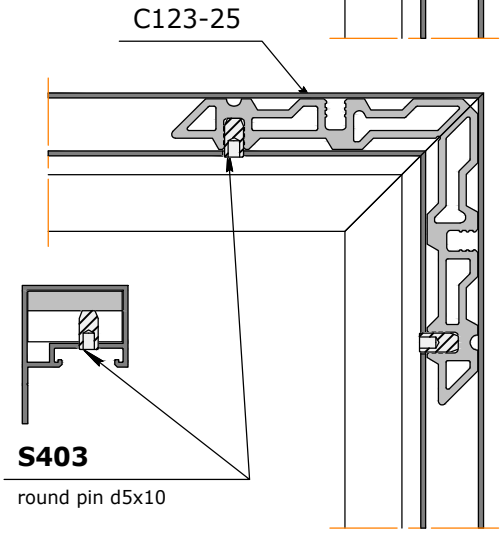


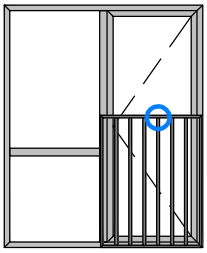


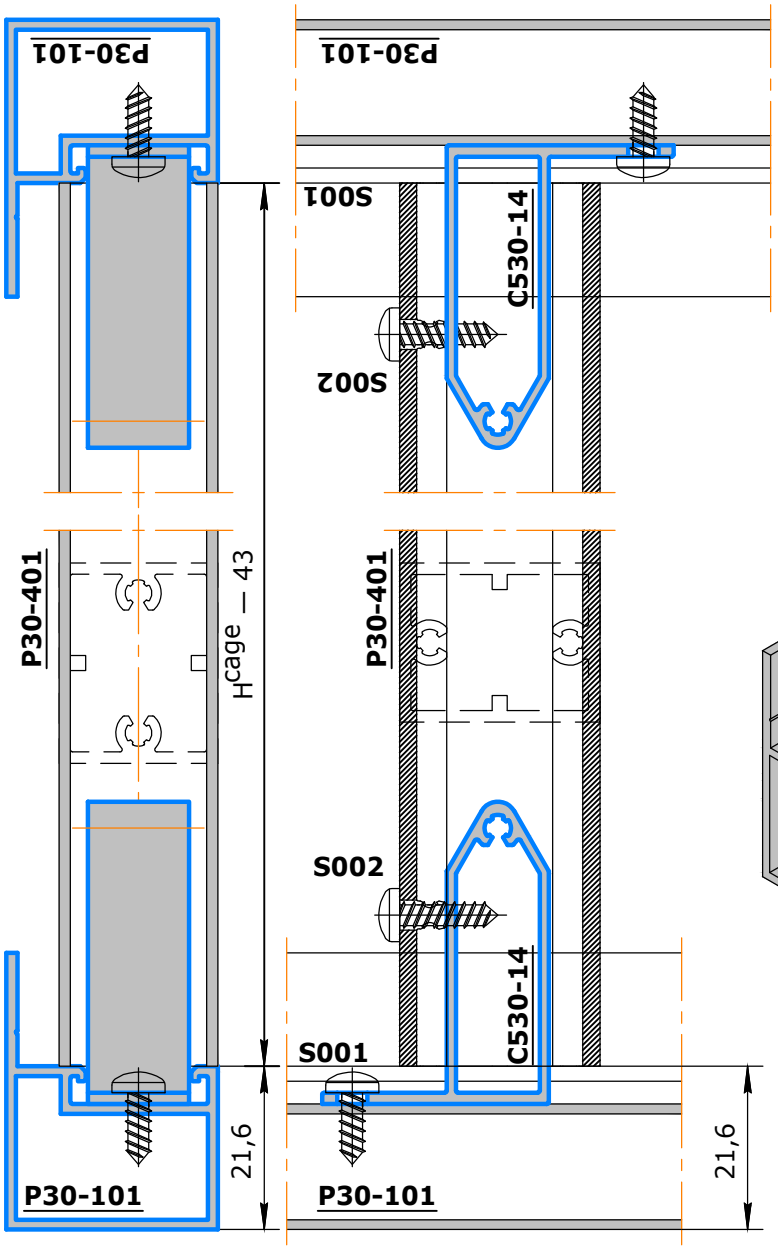
Pin assembly

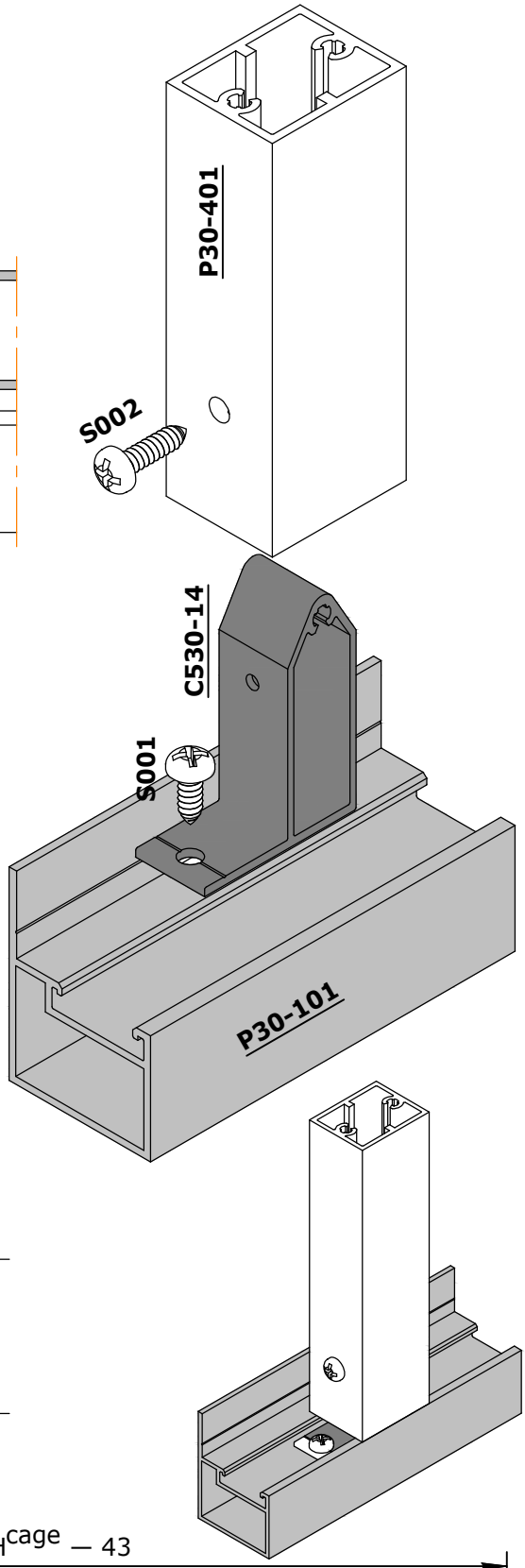




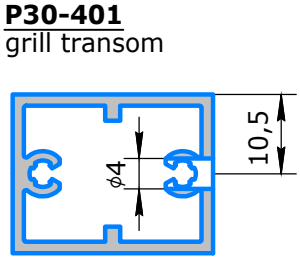


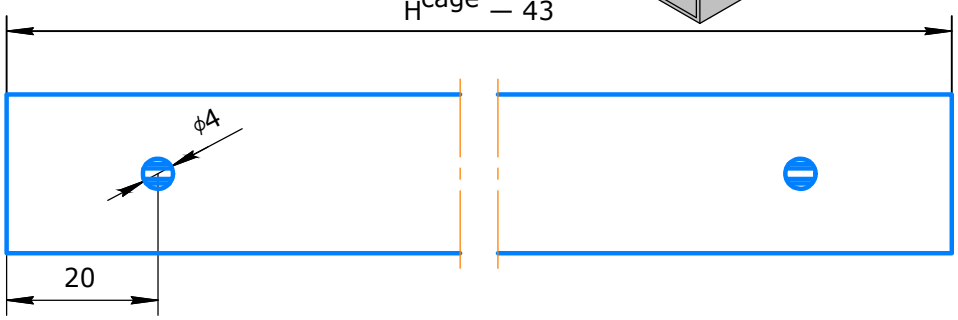




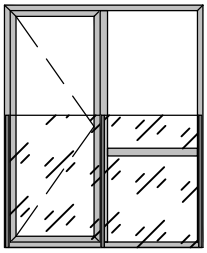


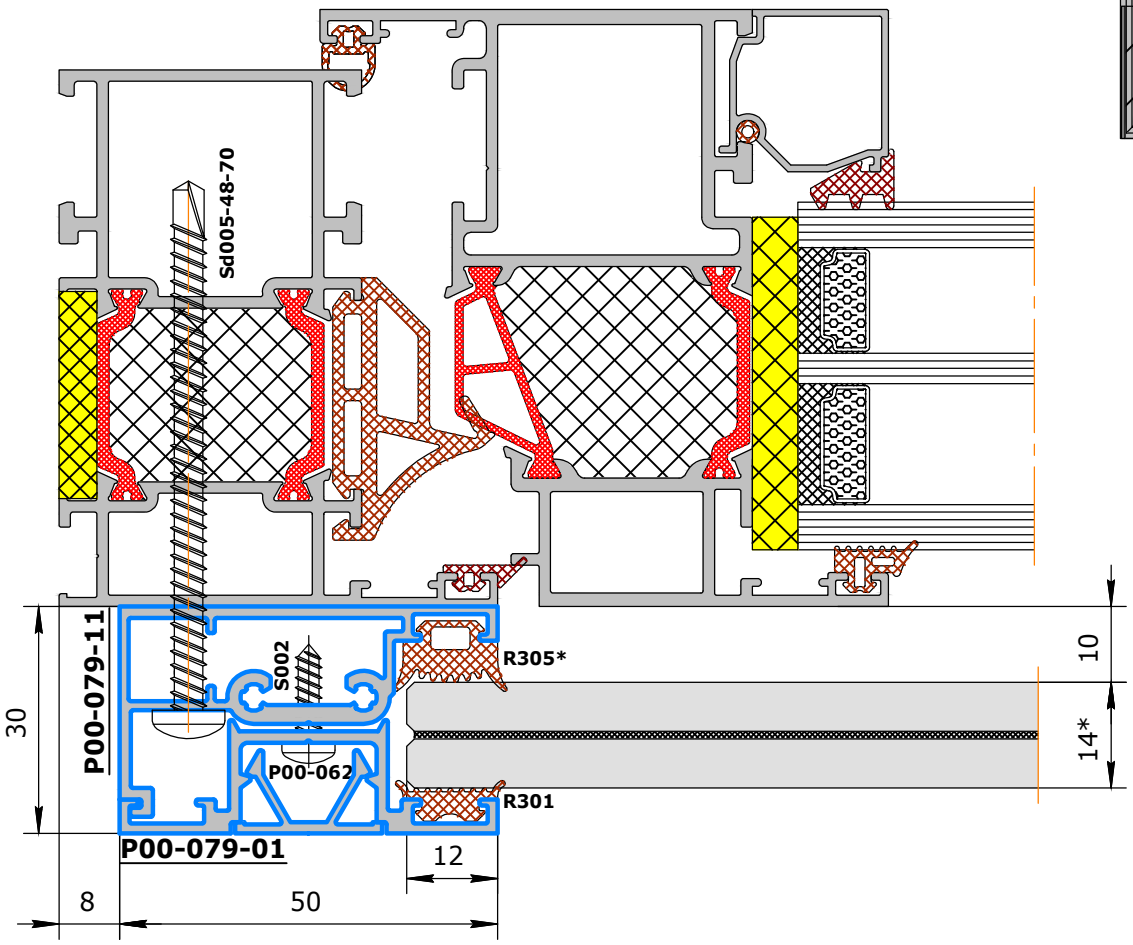
P30-401
grill transom

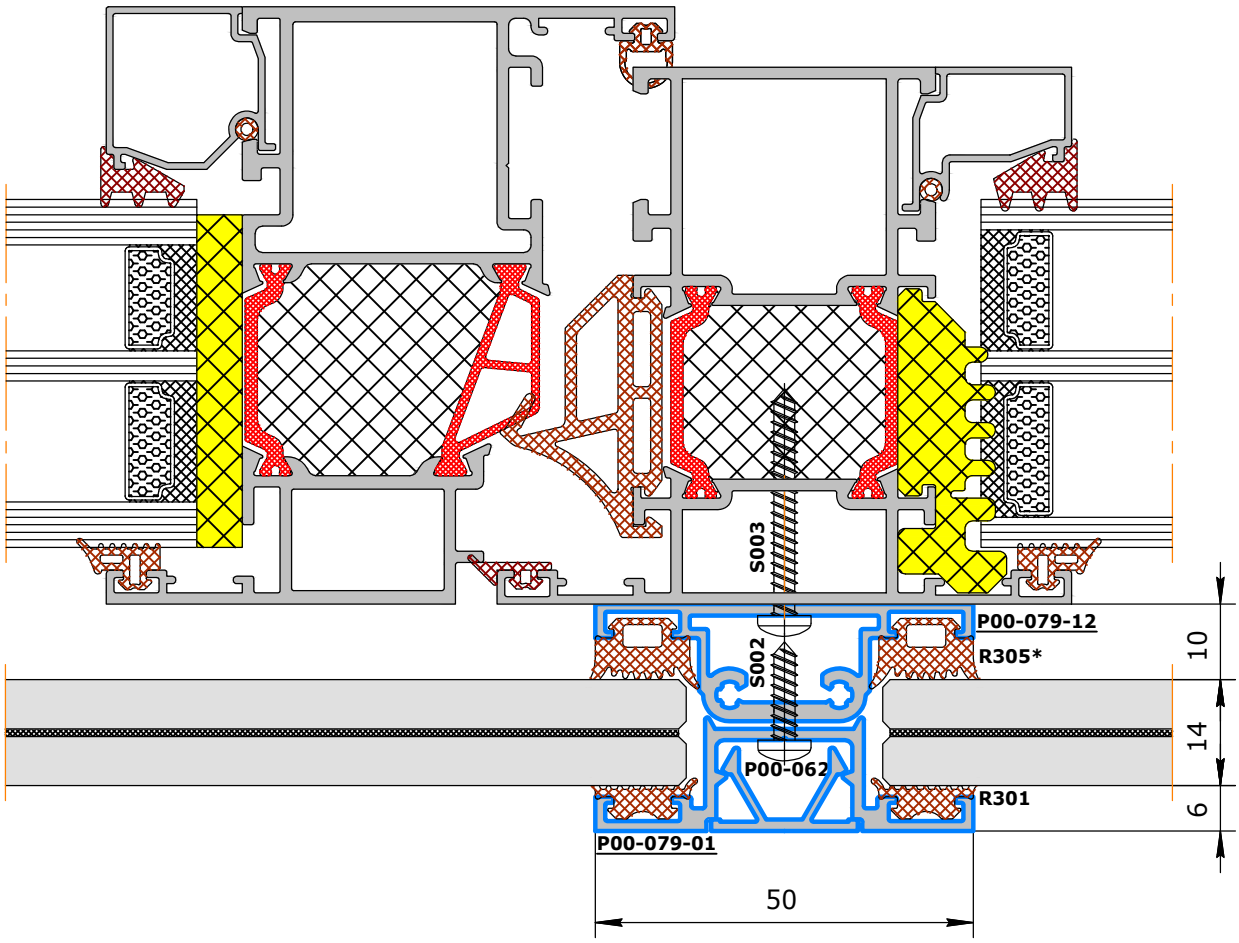


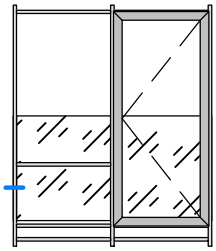


French balcony.
External screen — offset 10 mm

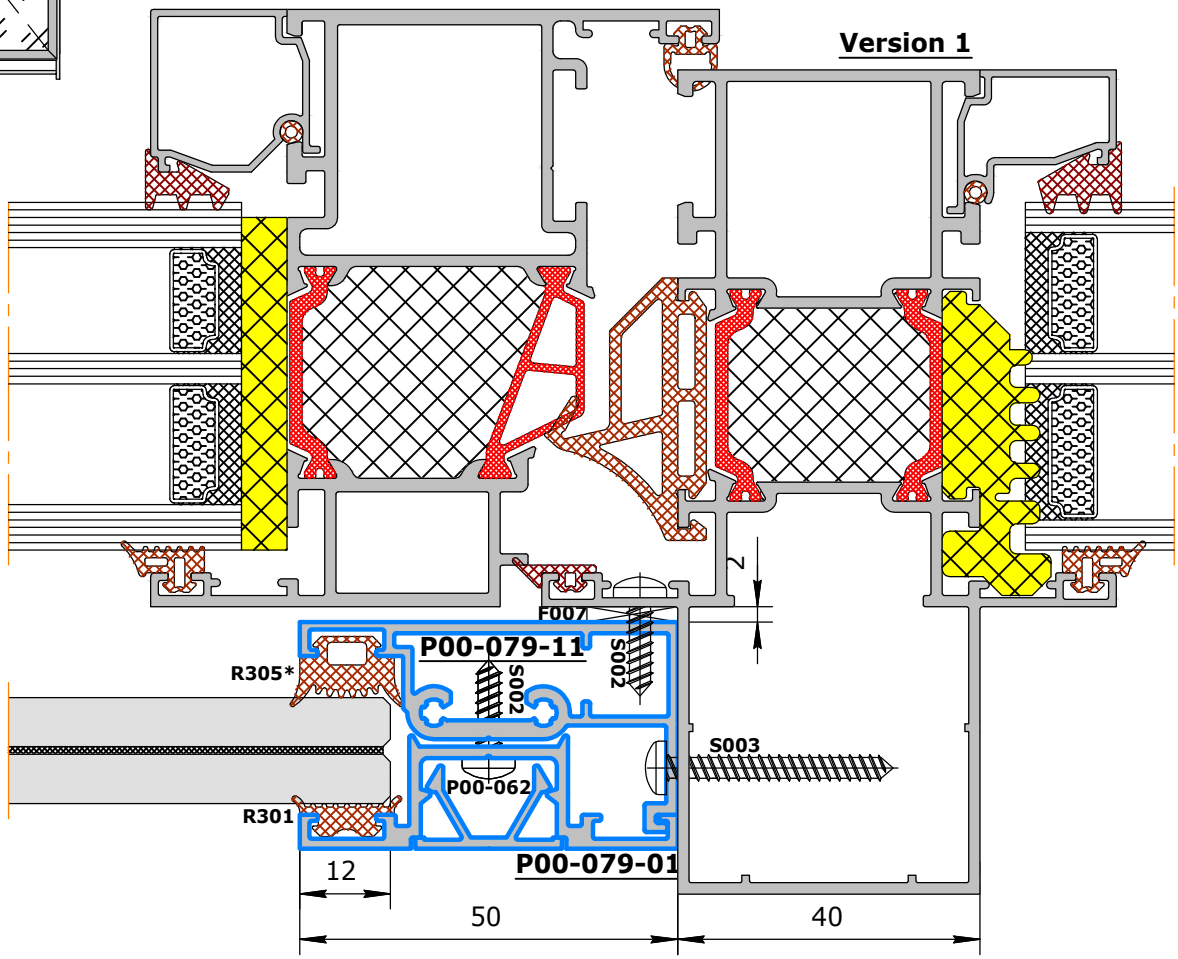




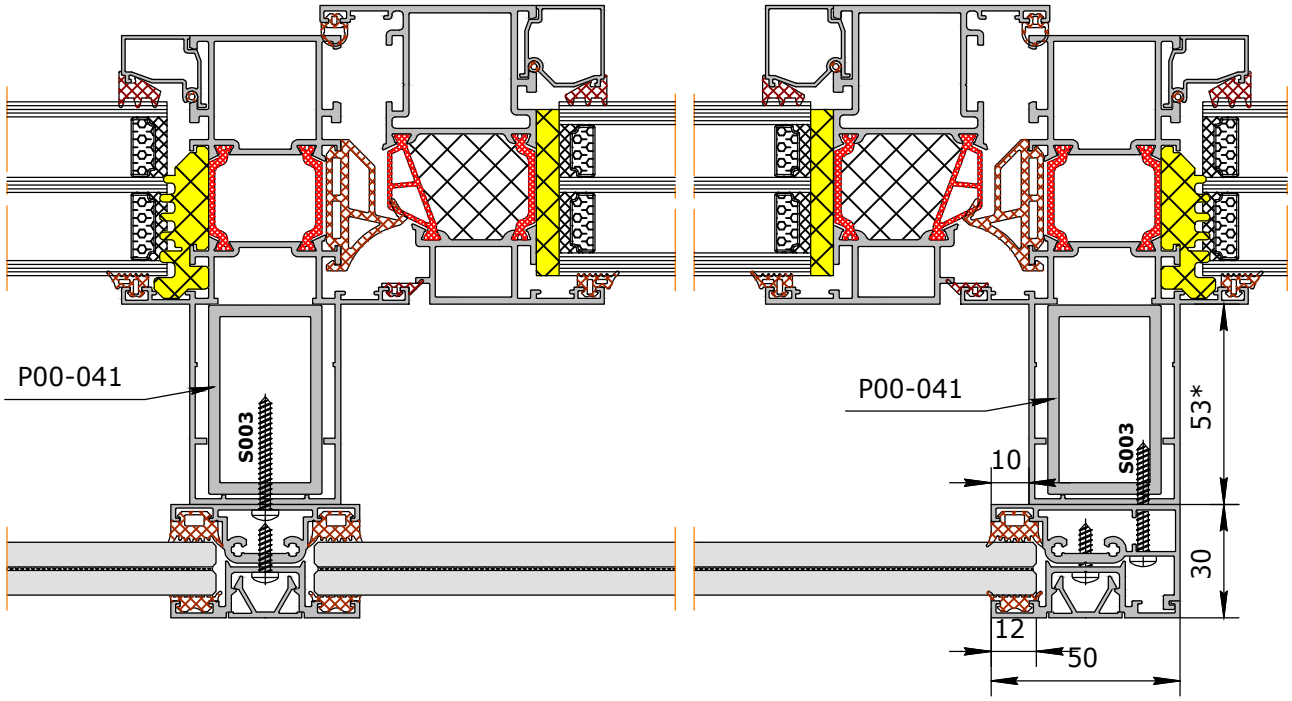




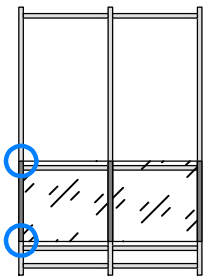
Version 1

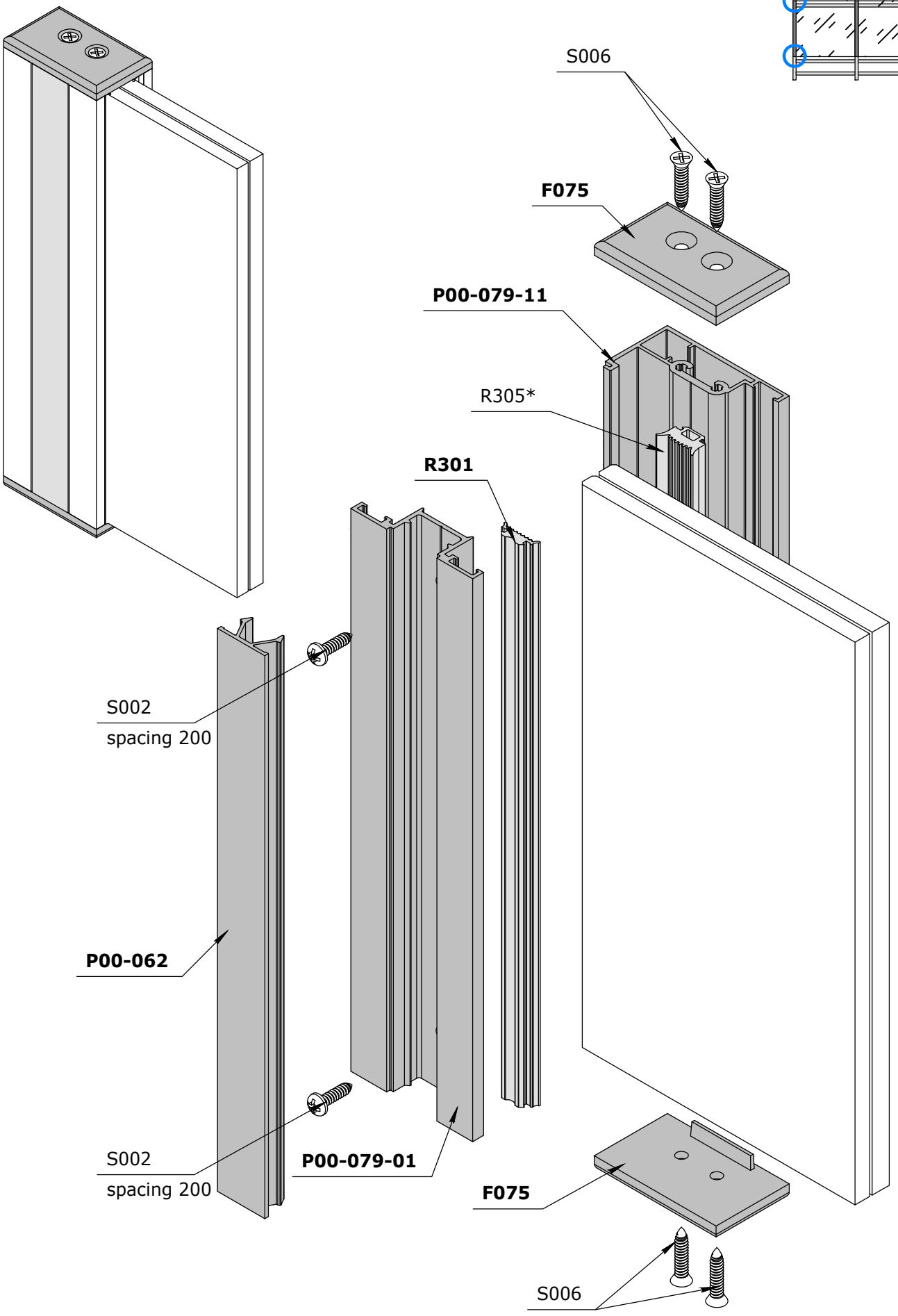


Version 2 (Scale 1:2)

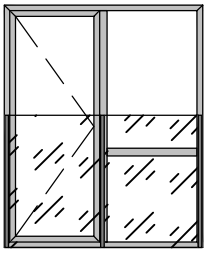


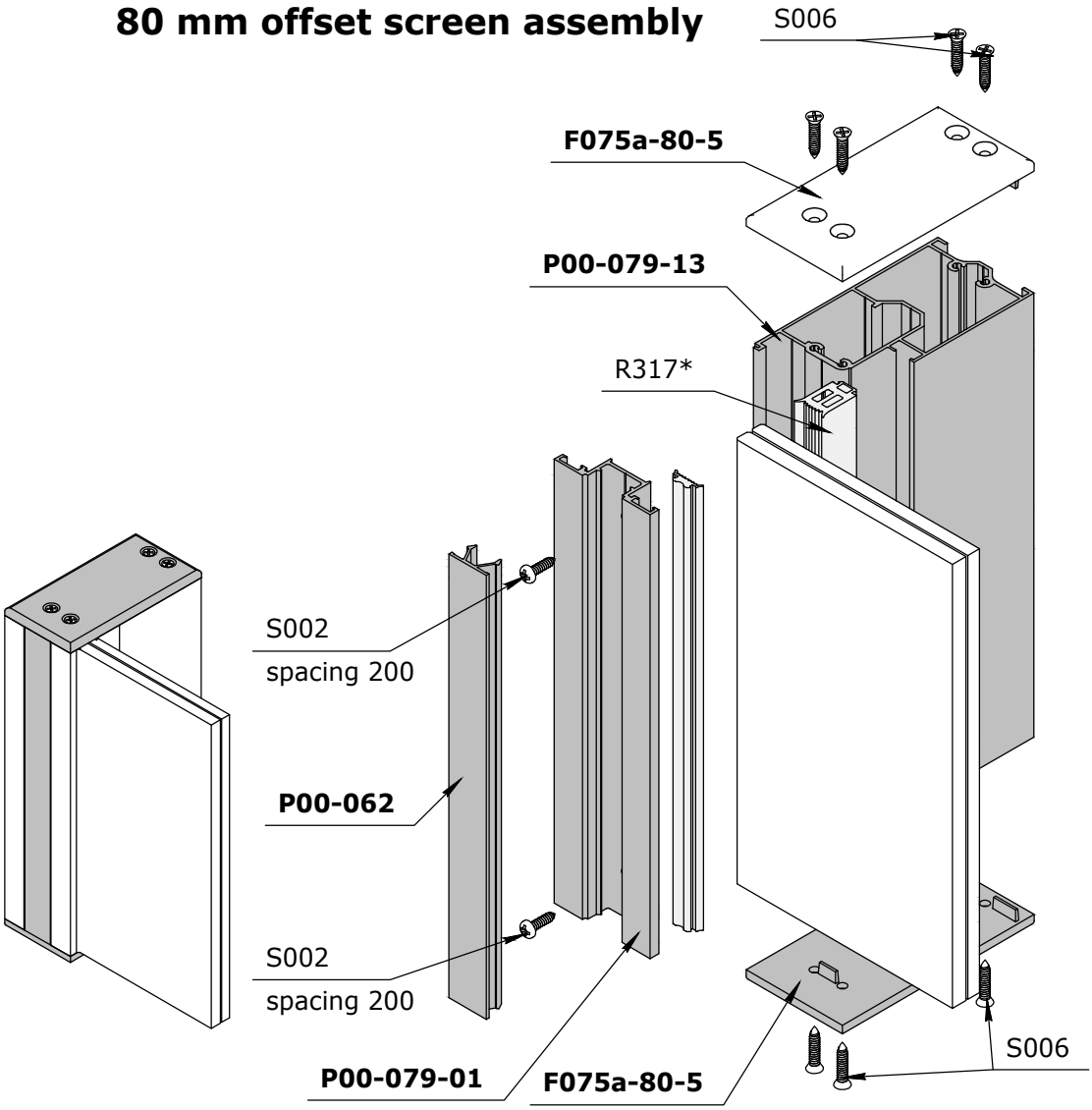
10 mm offset screen assembly

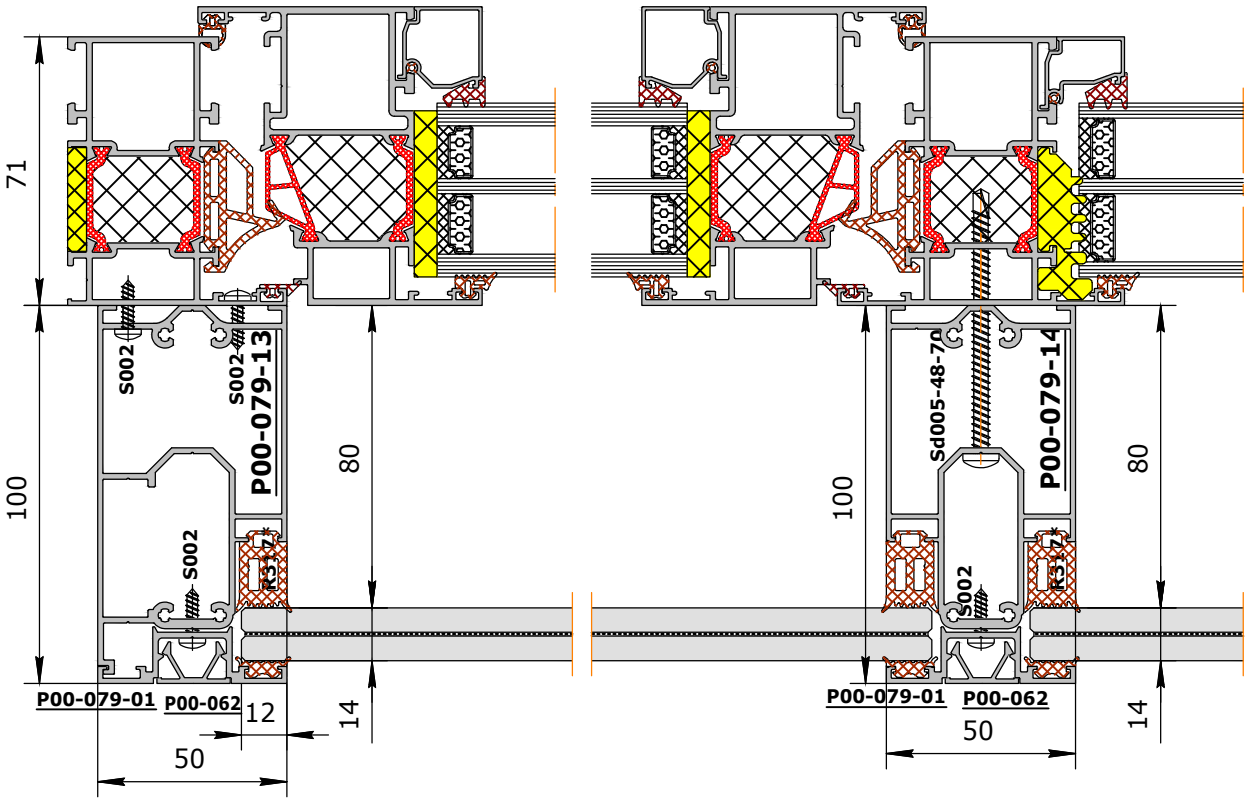




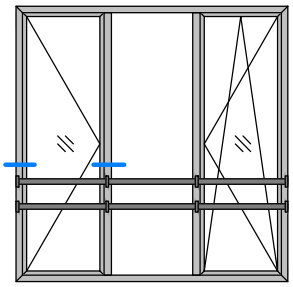
80 mm offset screen assembly

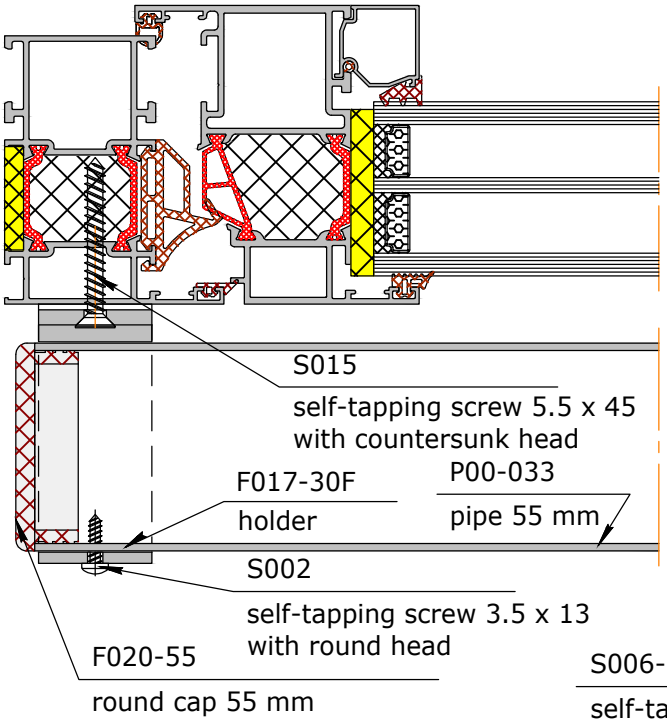


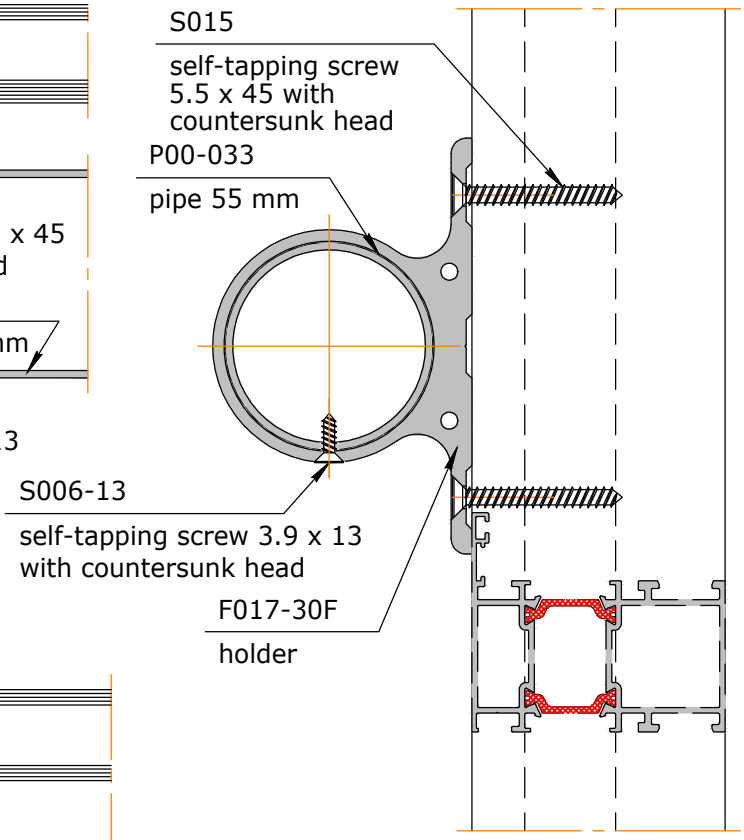


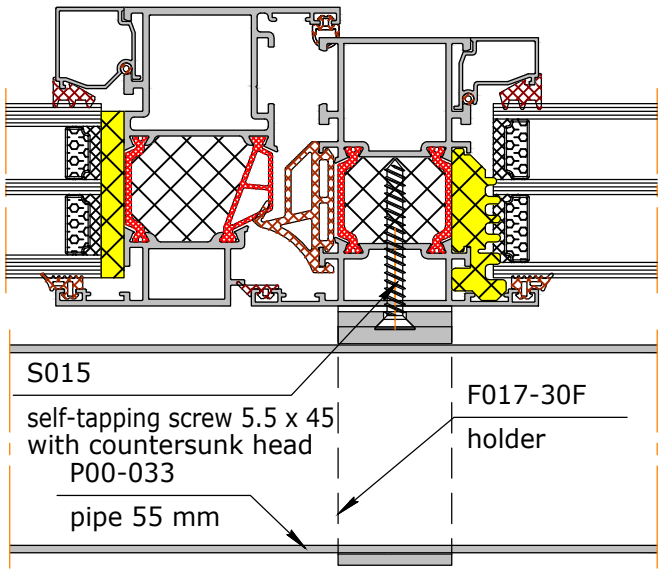


External handrail.
Version 1-1: Frame mounting.
Single handrail holders

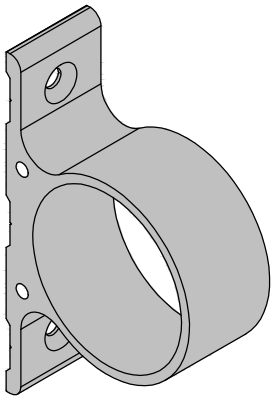


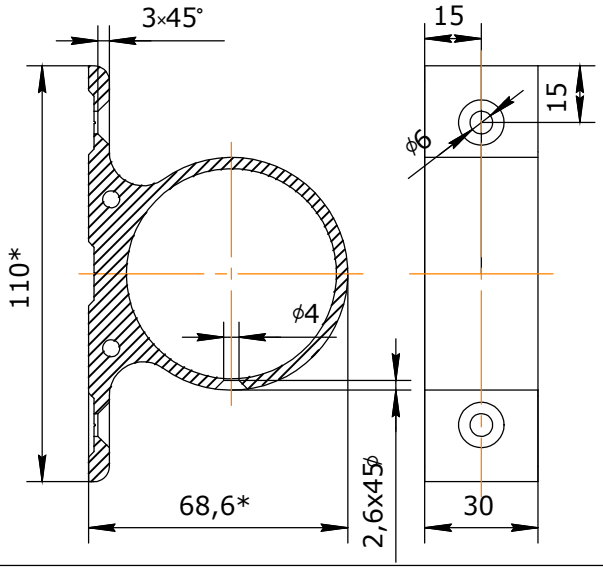


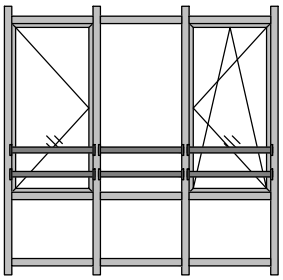




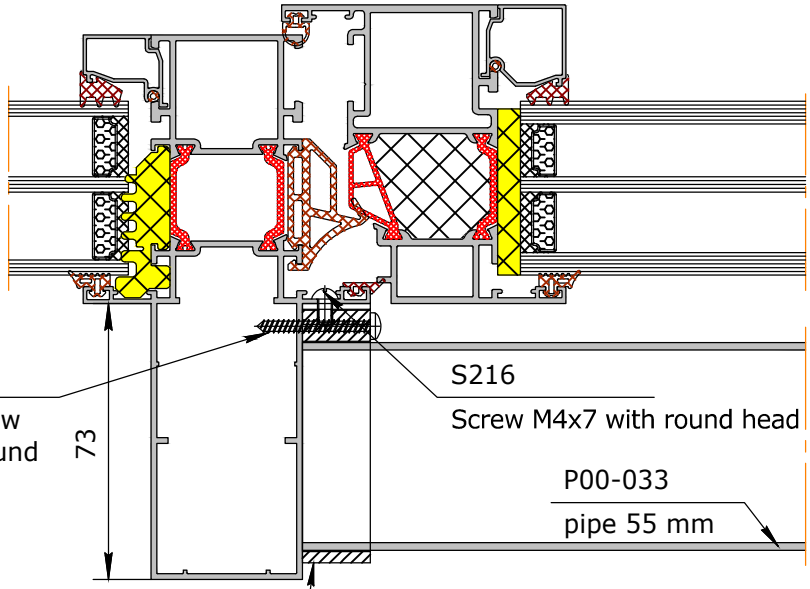
F017-30F
frame holder 30 mm

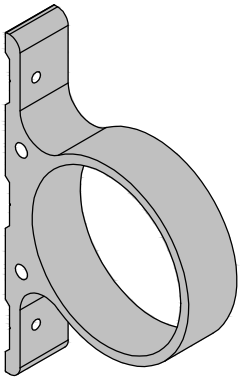




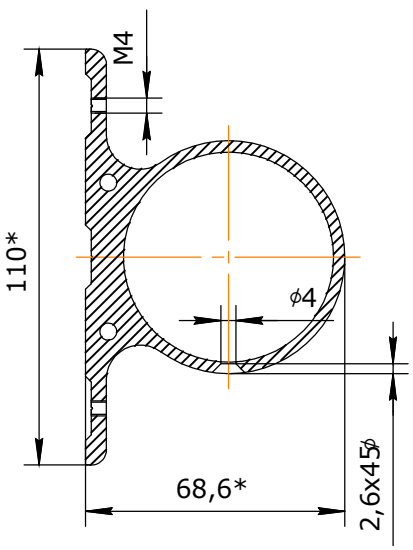


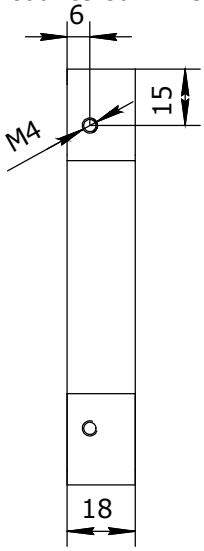
External handrail. Version 1-2: Stained-glass mounting. Single handrail holders

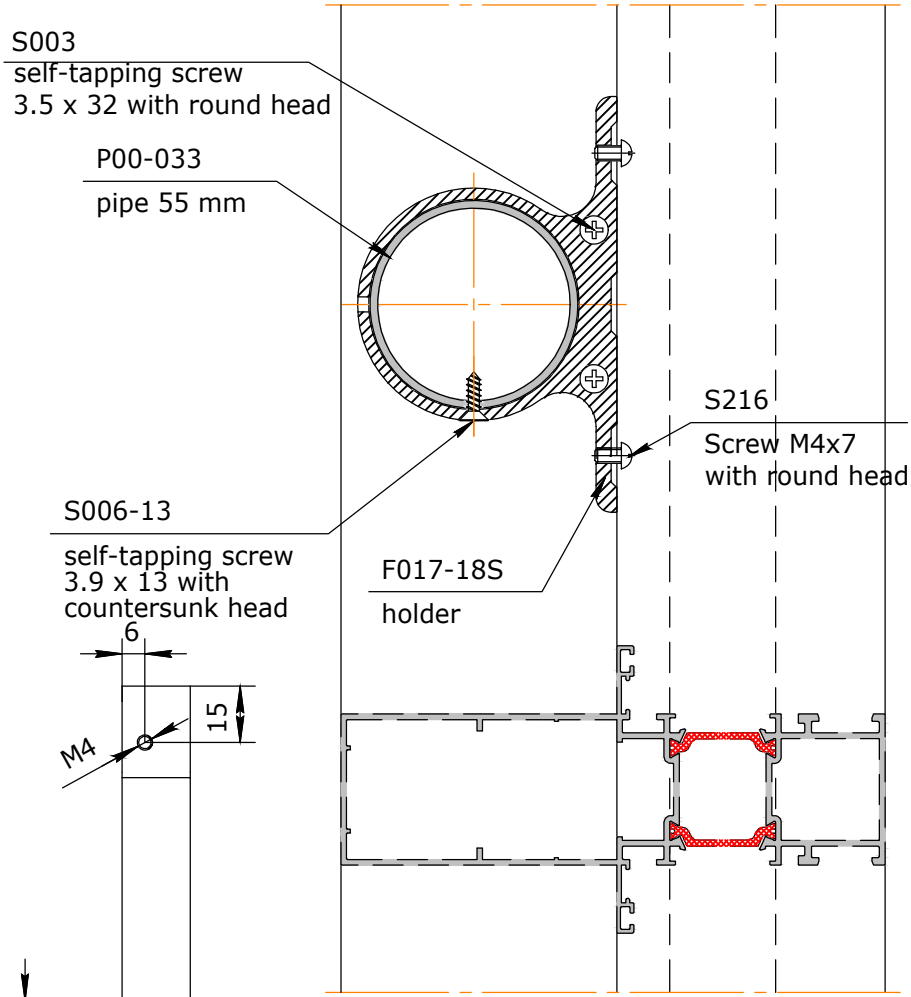




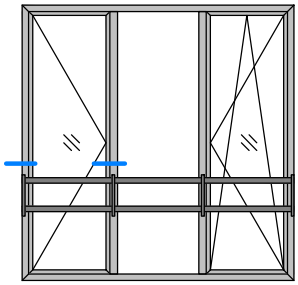
F017-18S
mullion holder 18 mm

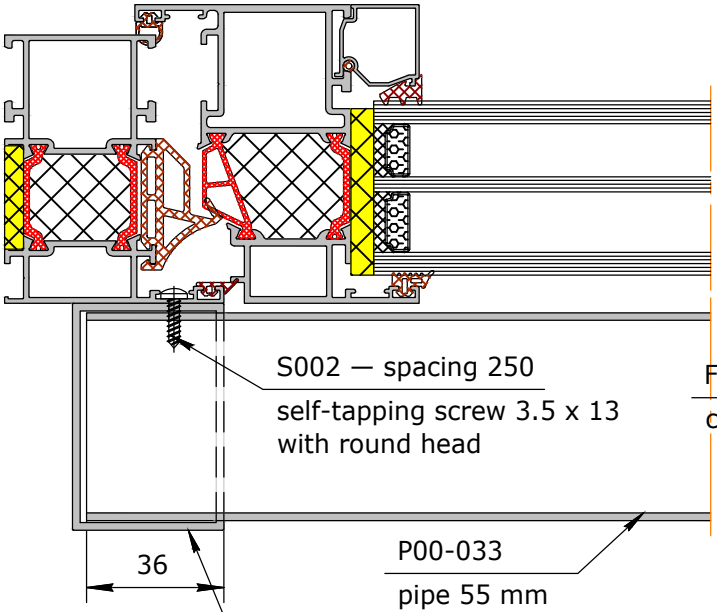


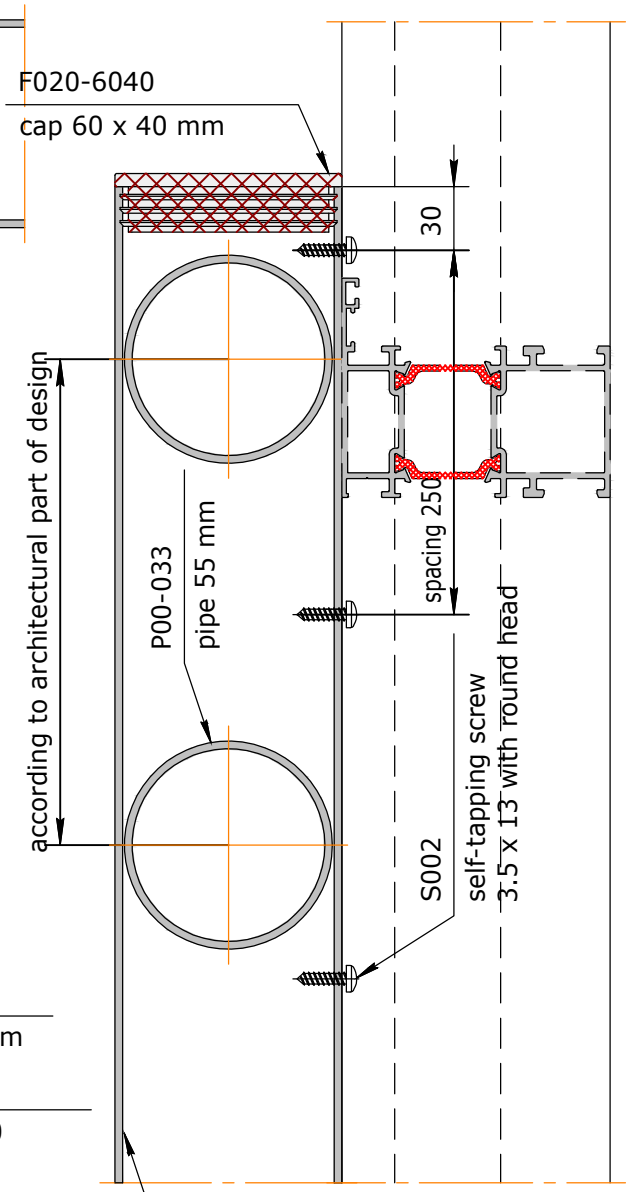


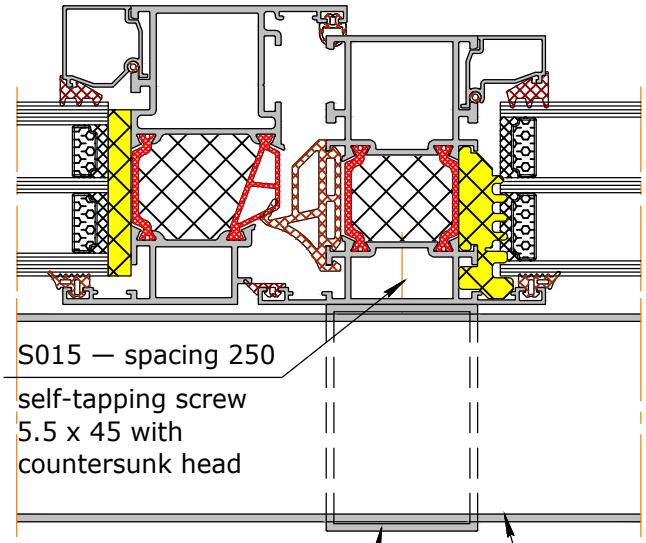


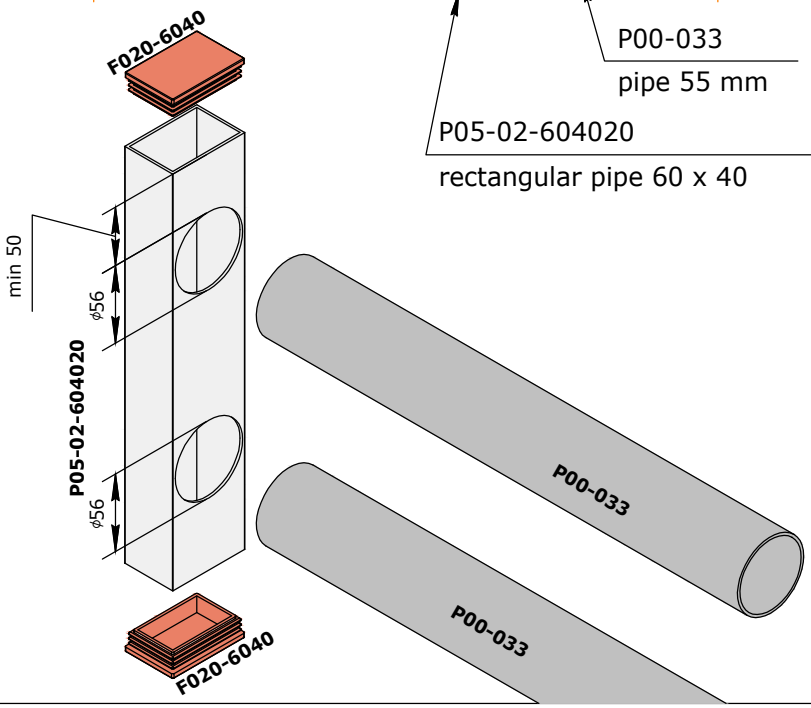
External handrail.
Version 2-1: Frame mounting.
Vertical handrail holders



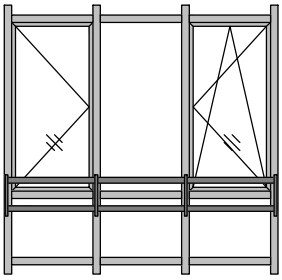


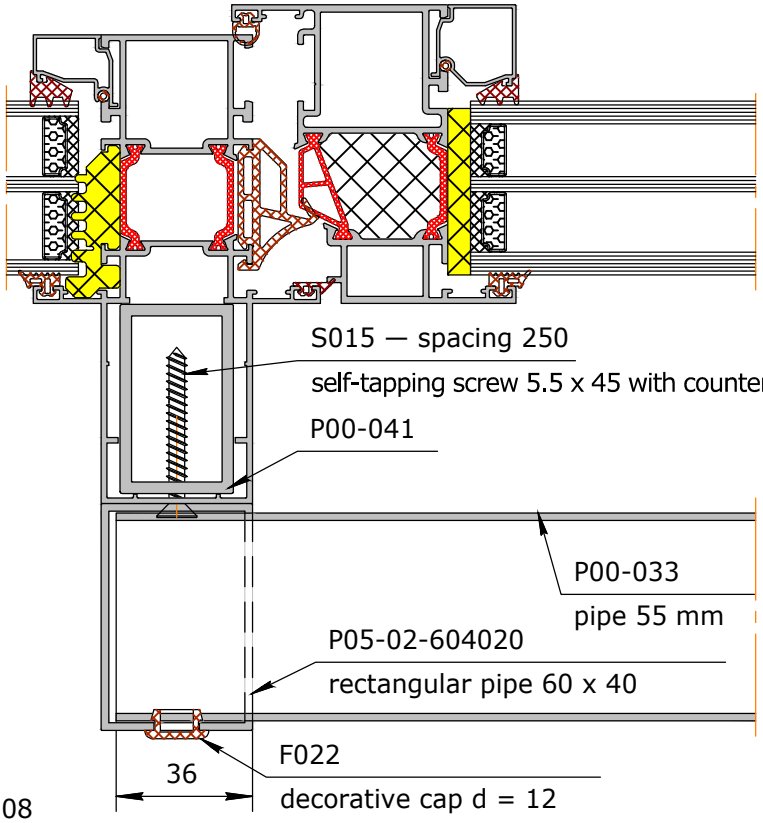


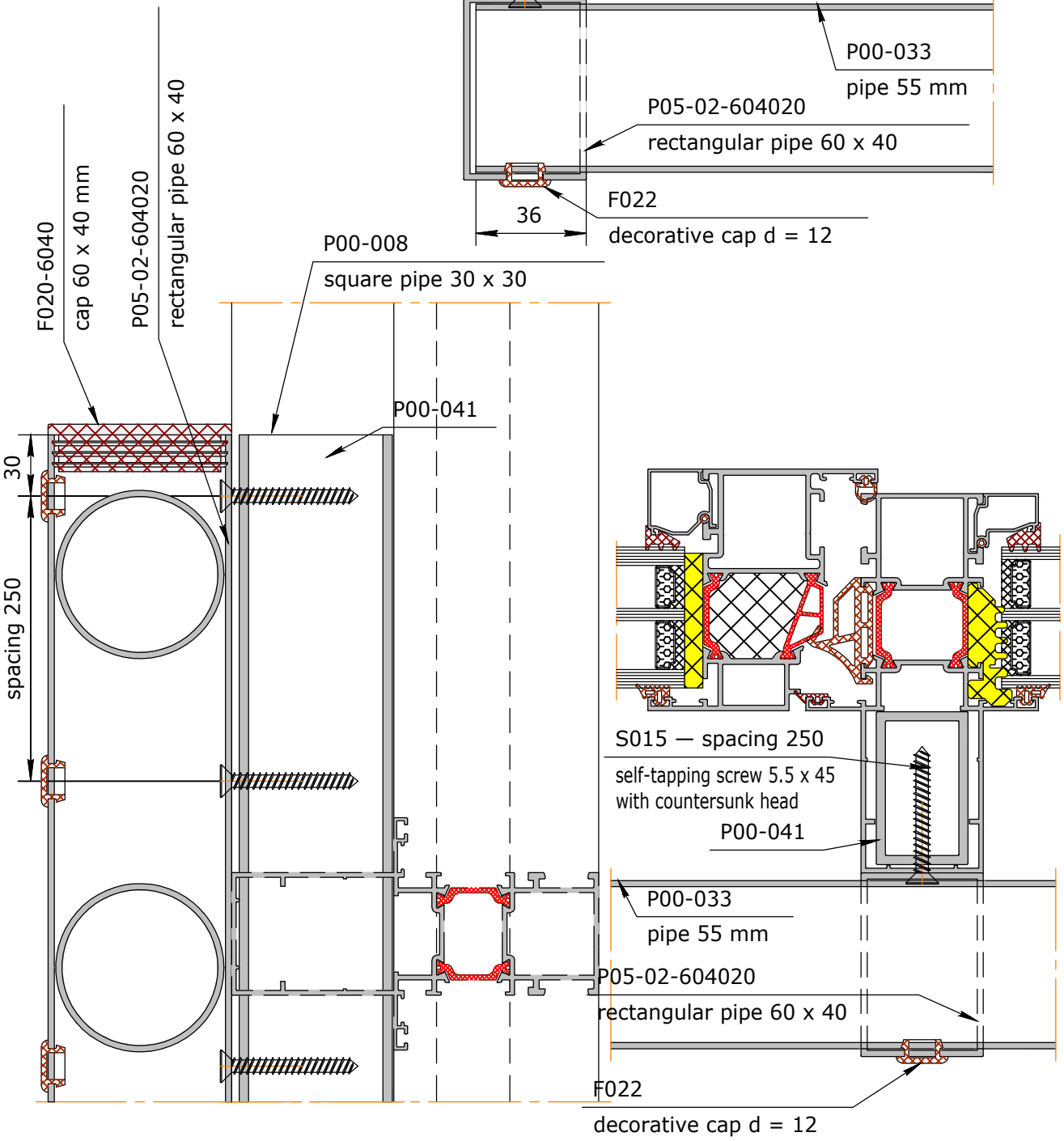




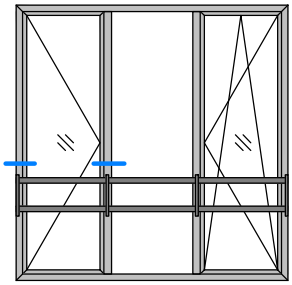
External handrail. Version 2-2: Stained-glass mounting. Vertical handrail holders

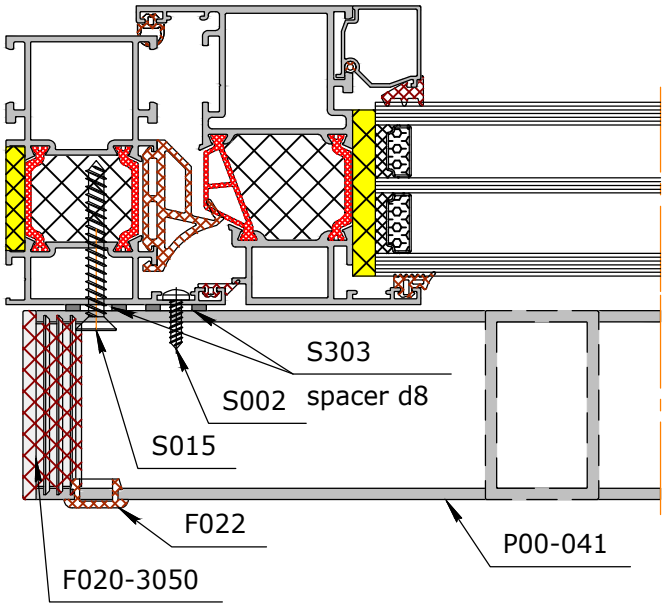


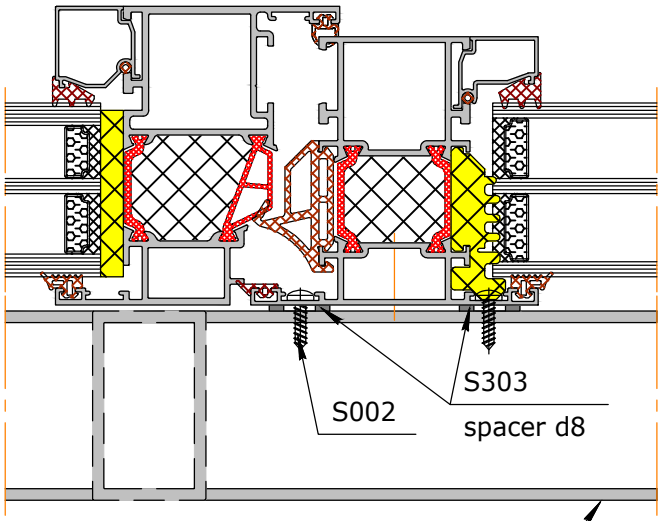


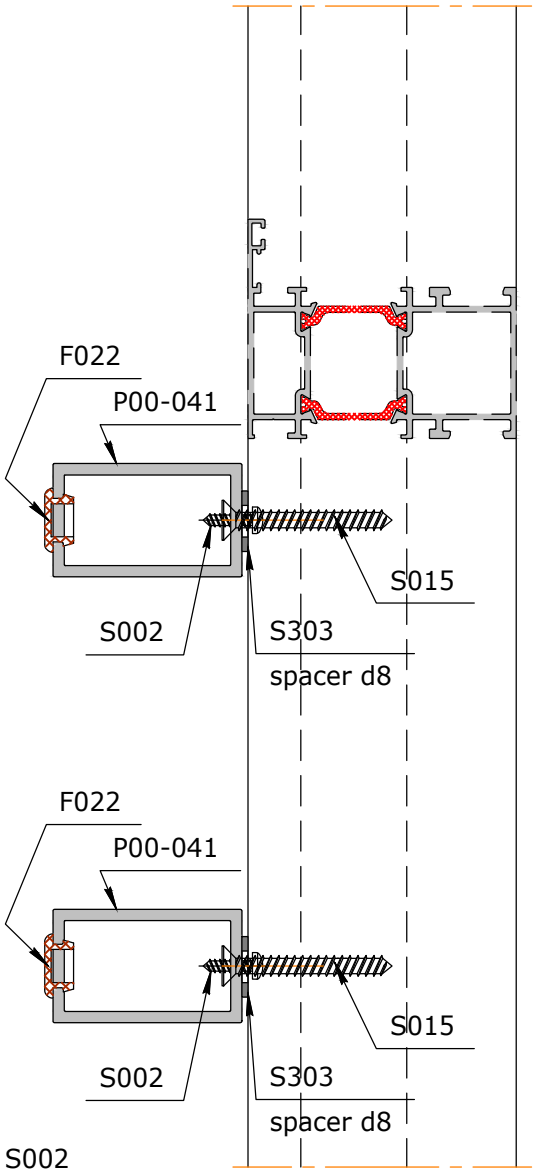


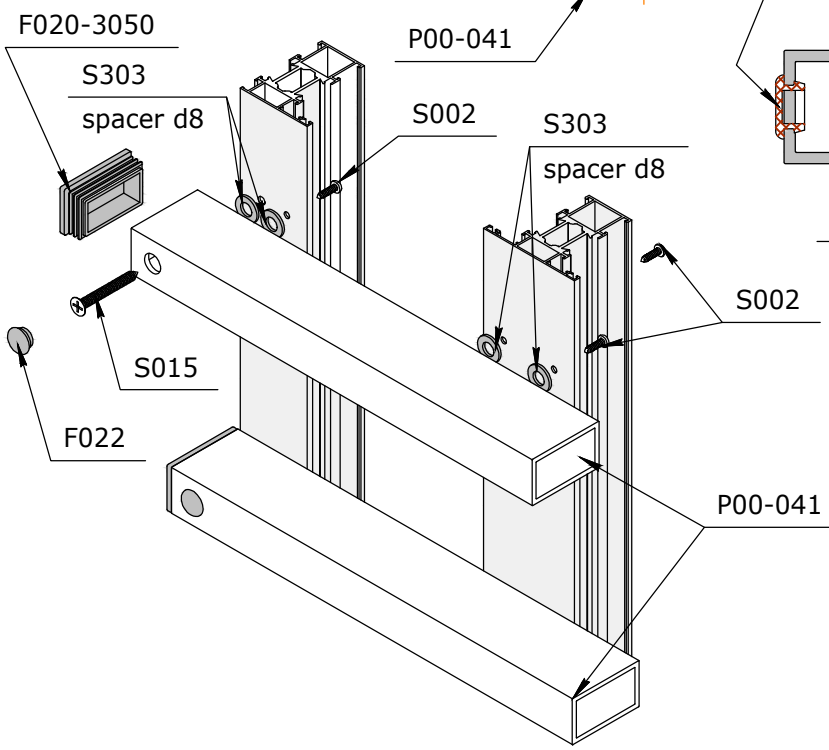
External handrail.
Version 3-1: Frame mounting.
Rectangular handrail



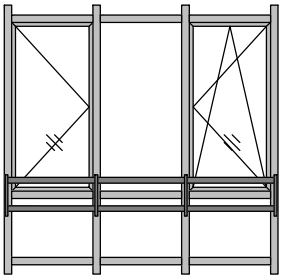


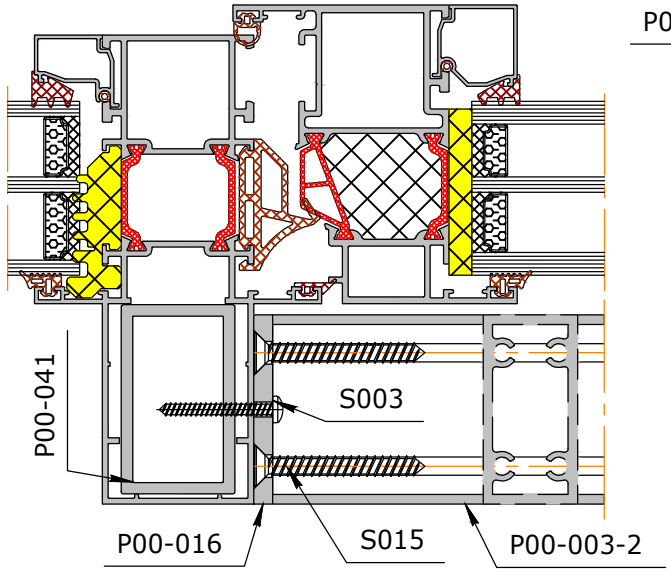


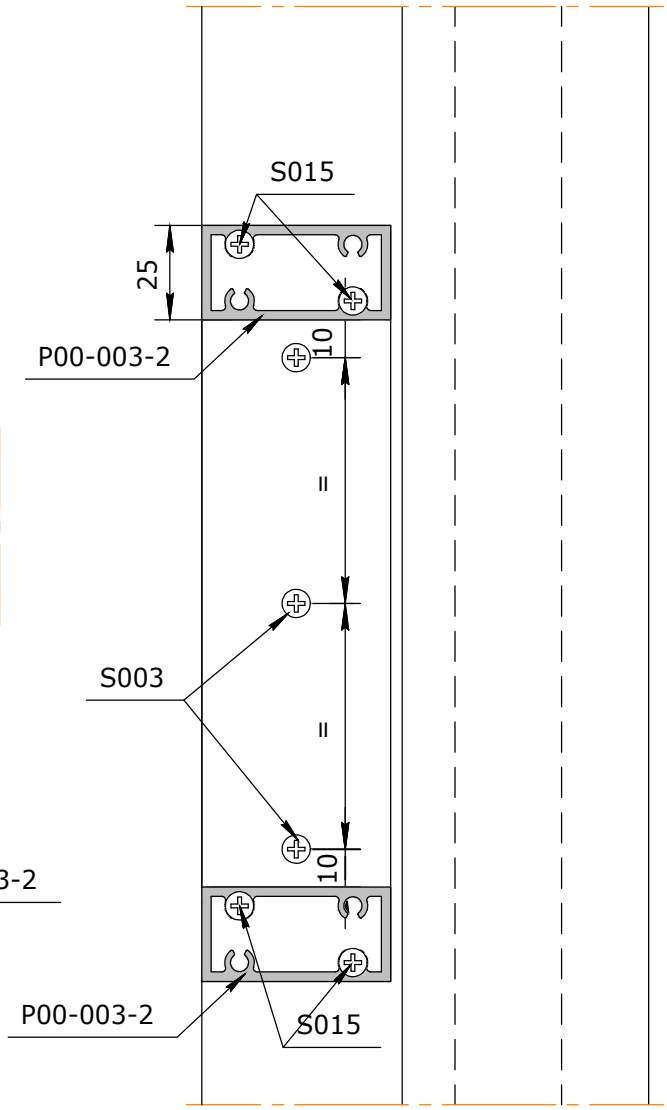


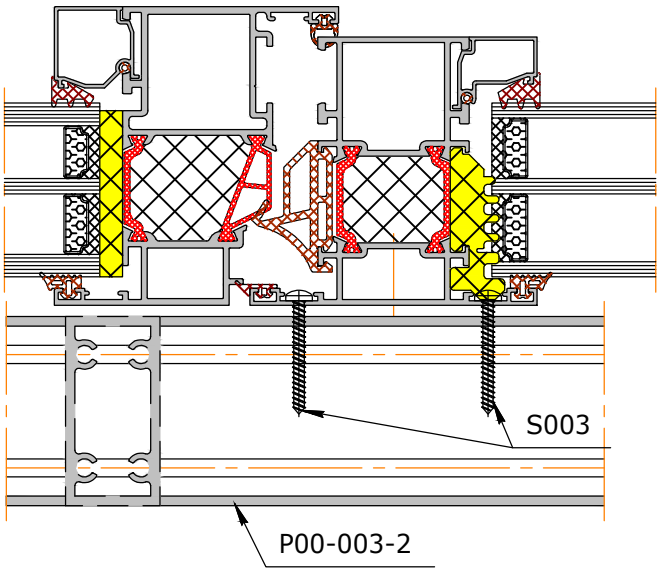


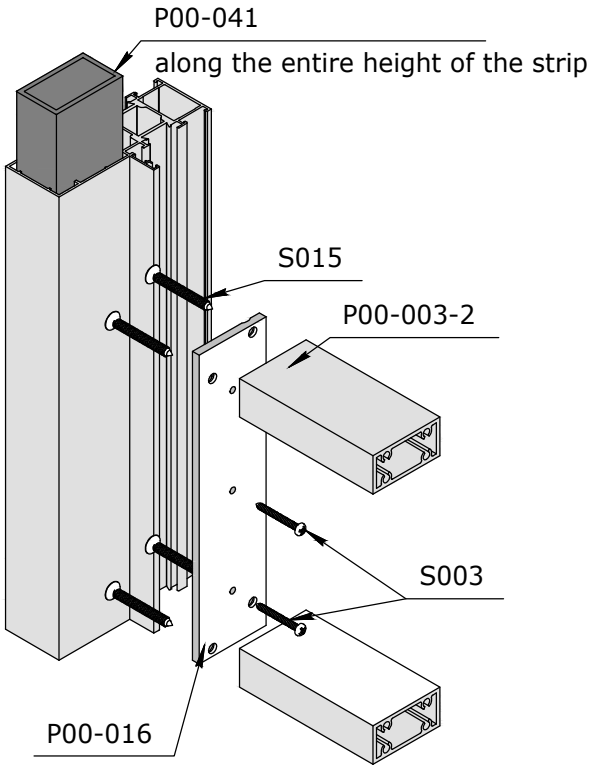
External handrail. Version 3-2: Stained-glass mounting. Rectangular handrail



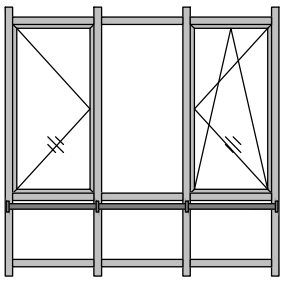


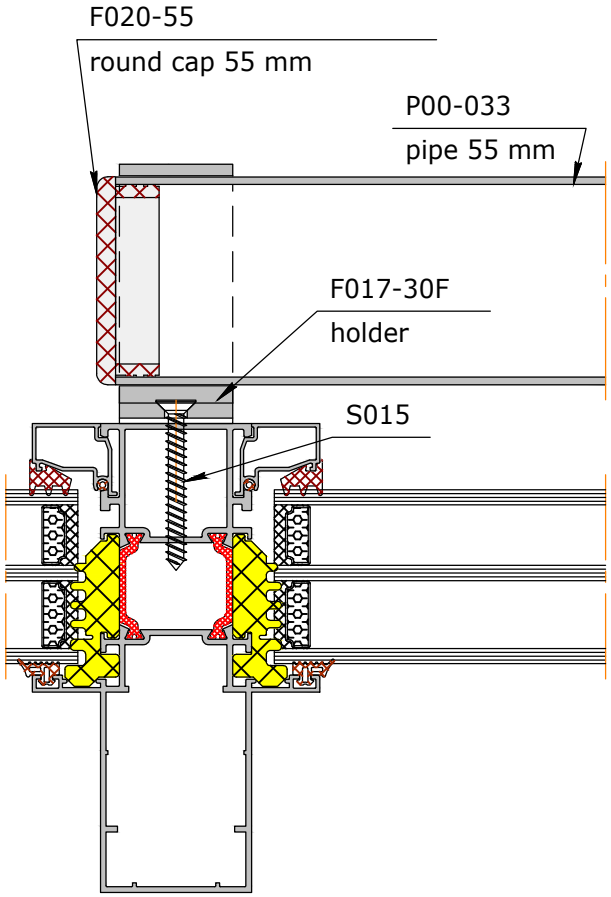


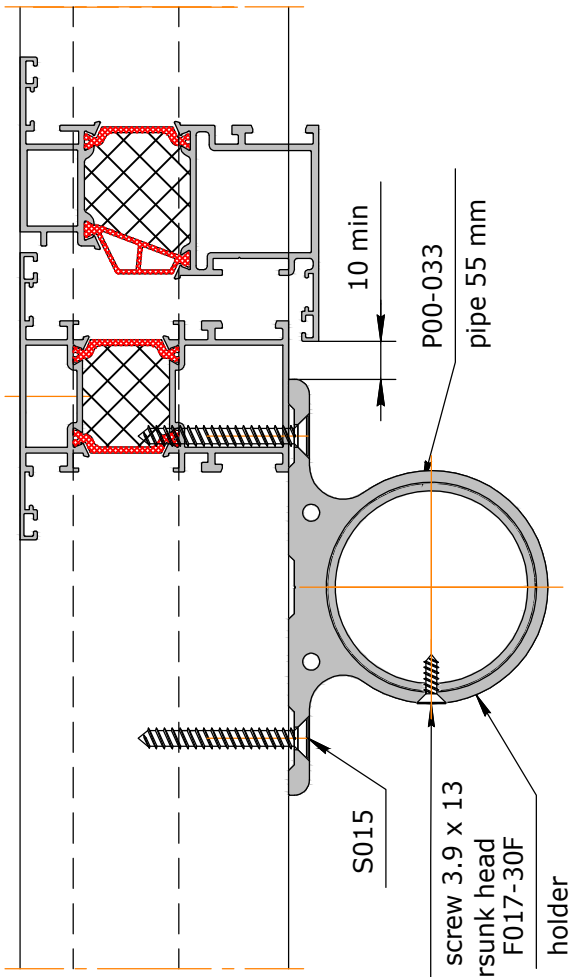




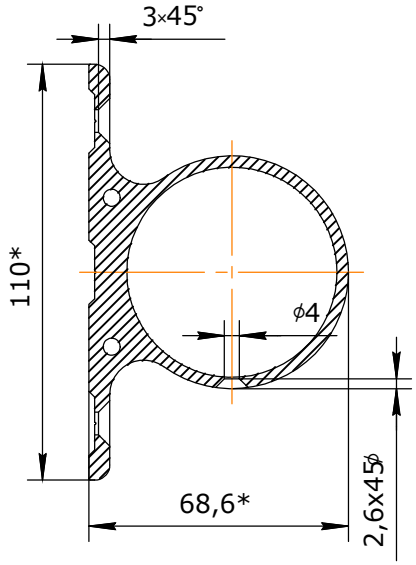
Internal handrail.

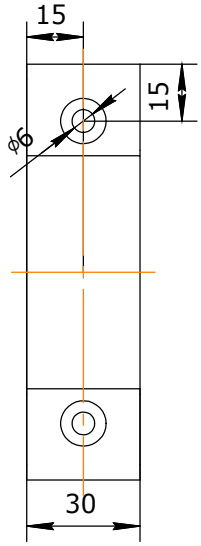


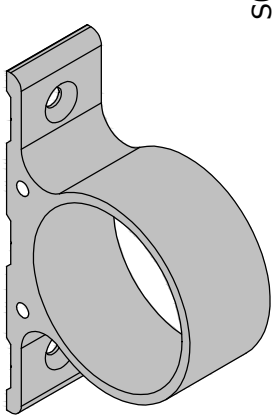




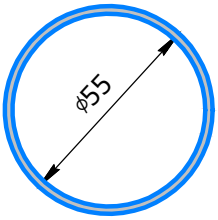
F017-30F
frame holder 30 mm





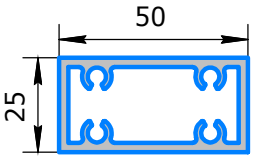


P00-033
circular pipe 55 x 2



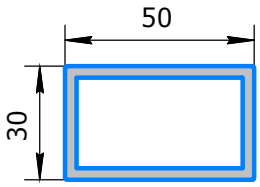
J_x = 11.71 cm^{-4}
J_y = 11.71 cm^{-4}

P00-003-2
handrail 25 x 50



J_x = 3.98 cm^{-4}
J_y = 12.71 cm^{-4}

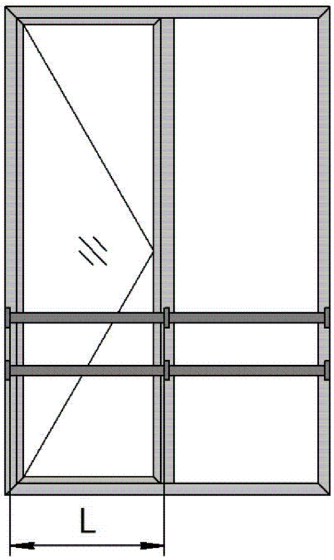
P00-041
rectangular pipe
50 x 30 x 3



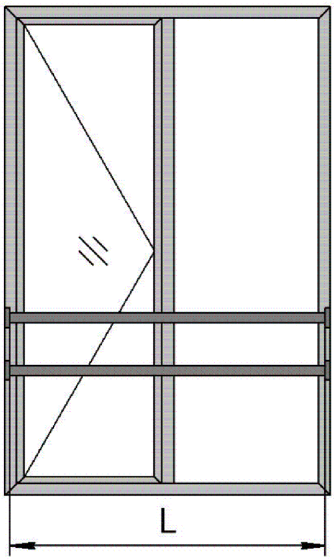
J_x = 6.18 cm^{-4}
J_y = 14.2 cm^{-4}

Horizontal handrail profile design

installation with intermediate fixing



installation without intermediate fixing



- L — working length of the profile. It is taken equal to the distance between the handrail attachment points — $L := 180\ [sm]$
- m — weight of the handrail profile; an average value of 1.5 kg/running meter is assumed. — $m := 0.015\ [kg/sm]$
- E — modulus of elasticity. For aluminium, E = 710,000 kgf/cm²; for steel, E = 2,100,000 kgf/cm². — $E := 710{,}000\ [kg/sm^2]$
- q — standard value of the external load. It is assumed to be 0.5 kN/m (according to SP 20.13330.2016, para. 8.3.2) — $q := 0.5099\ [kg/sm]$
- γ_t — the reliability factor in relation to loading is taken according to SP 20.13330.2016, para. 8.3.4; — $\gamma_t := 1.2$
- $f_{permissible}$ — maximum permissible sagging of the handrail. We define it according to SP 20.13330.2016, appendix E.2, Table E1, paras. 2a and 3, as for a span not exceeding 3 m.
- $Jy1$ — the required moment of inertia when sagging is caused by an external load
- $Jy2$ — the required moment of inertia when sagging is caused by the profile's own weight

$f_{permissible} := \frac{L}{150}$ $\quad f_{permissible} := 1.2\ [sm]$

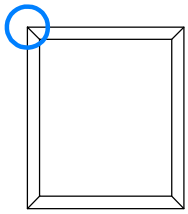
The horizontal profile is designed according to the stiffness condition depending on the wind load. The standard external load is taken as the external load applied to the structure. The performance condition for this criterion can be written as **$f_{permissible} > f_{actual}$.**

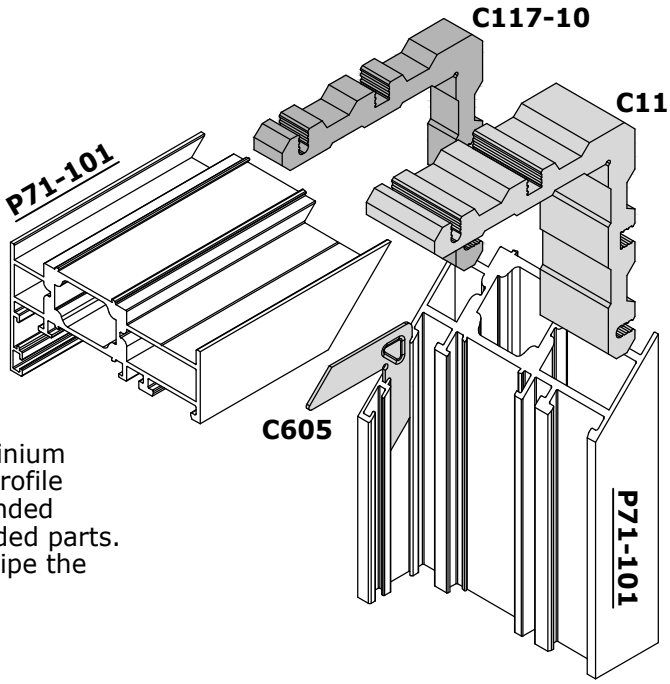
$$Jy1 := \frac{5}{384} \cdot \frac{q \cdot L^4 \cdot \gamma_t}{E \cdot f_{permissible}} \qquad Jy1 = 9.82\ [sm^{-4}]$$

$$Jy2 := \frac{5 \cdot m \cdot L^4 \cdot \gamma_t}{384 \cdot E \cdot f_{permissible}} \qquad Jy2 = 0.289\ [sm^{-4}]$$

$$Jy_{required} := Jy1 + Jy2 \qquad Jy_{required} = 10.105\ [sm^{-4}]$$

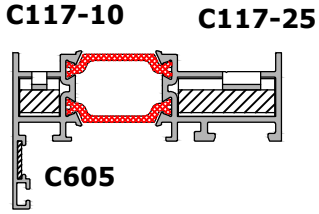
L-joint assembly: frame P71-101

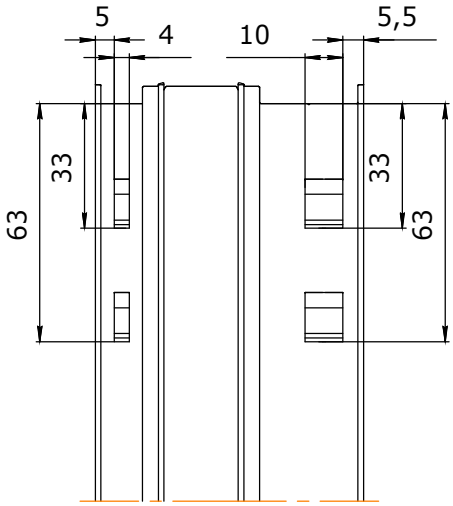


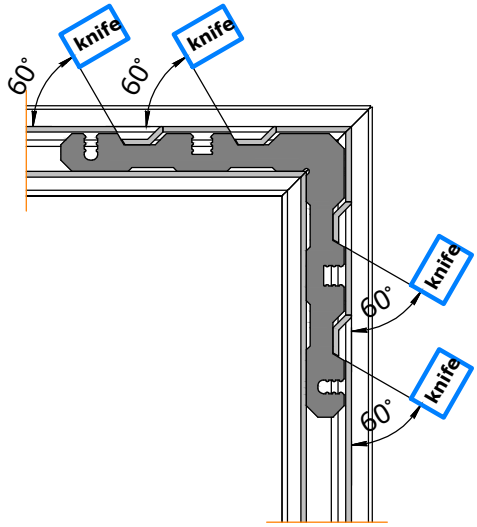


Apply one- or two-component aluminium bonding adhesive (**E006**) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (**E007**).

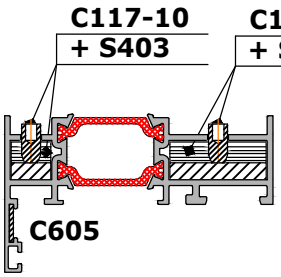
Crimping assembly

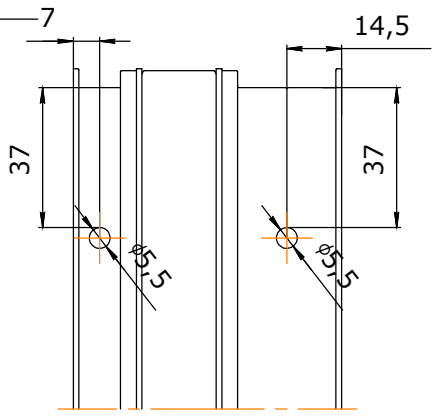


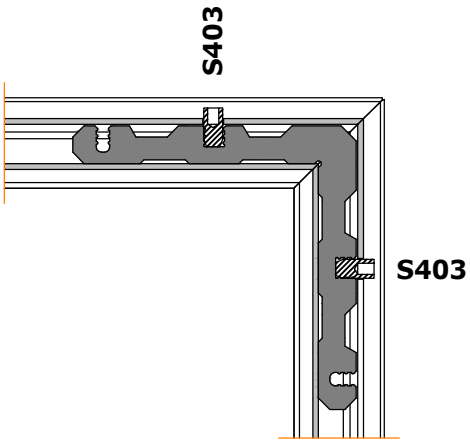




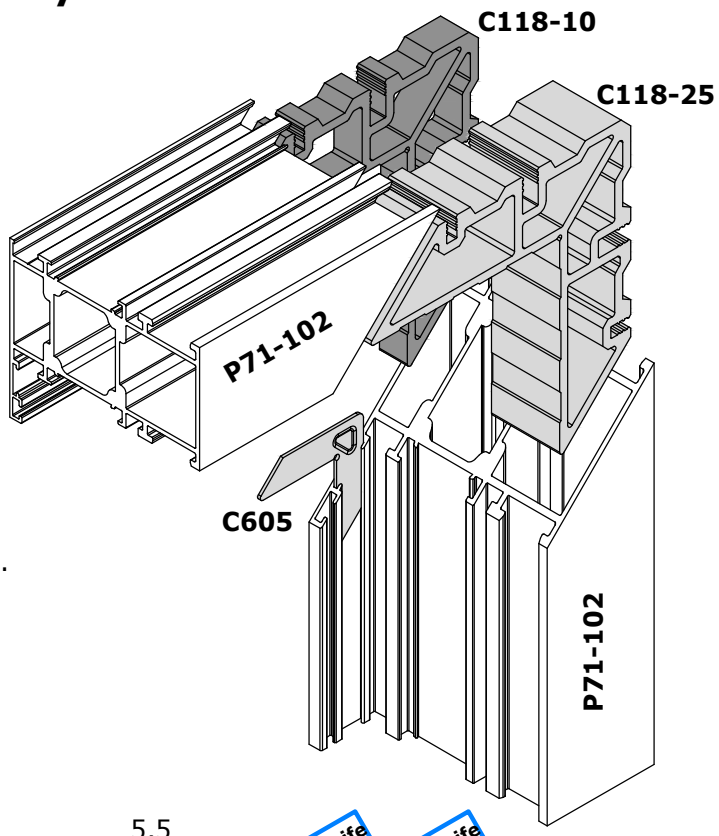
Pin assembly





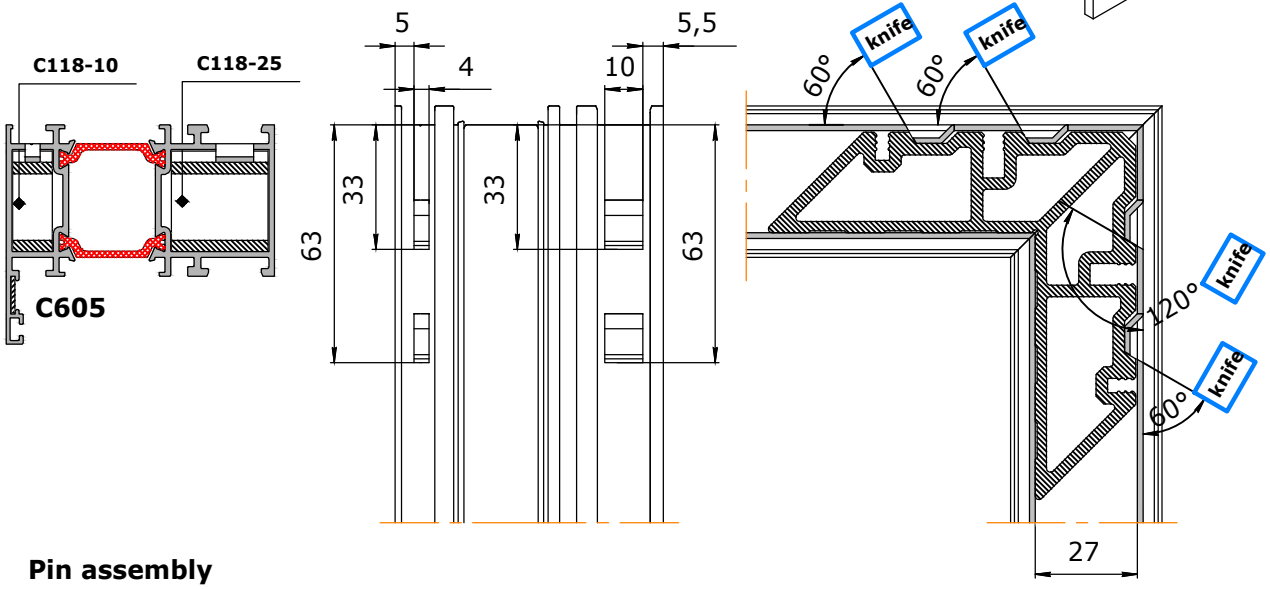


L-joint assembly: frame P71-102

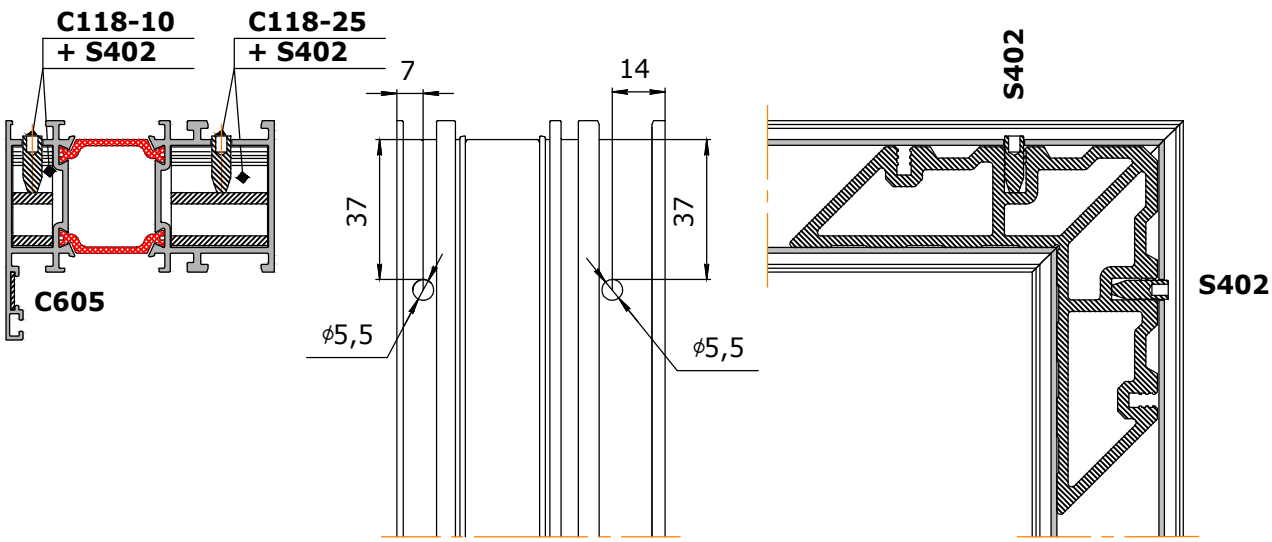


Apply one- or two-component aluminium bonding adhesive (**E006**) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (**E007**).

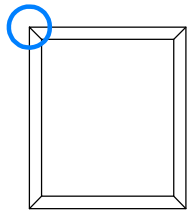
Crimping assembly

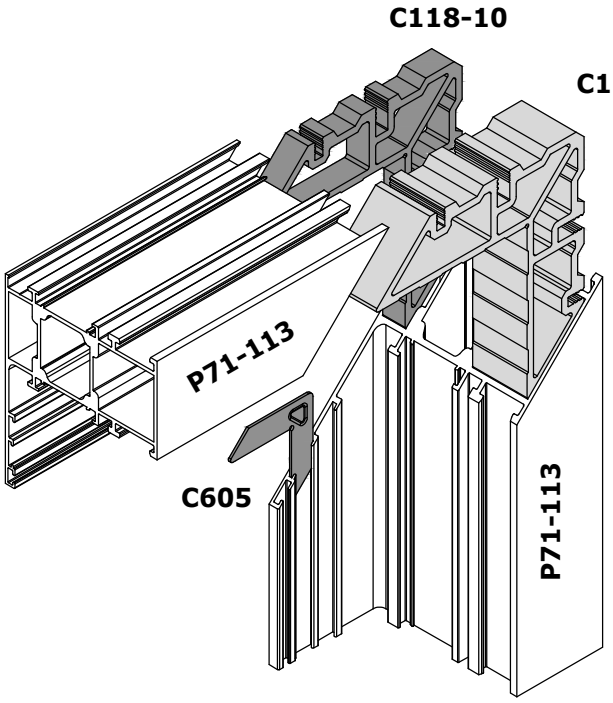


Pin assembly



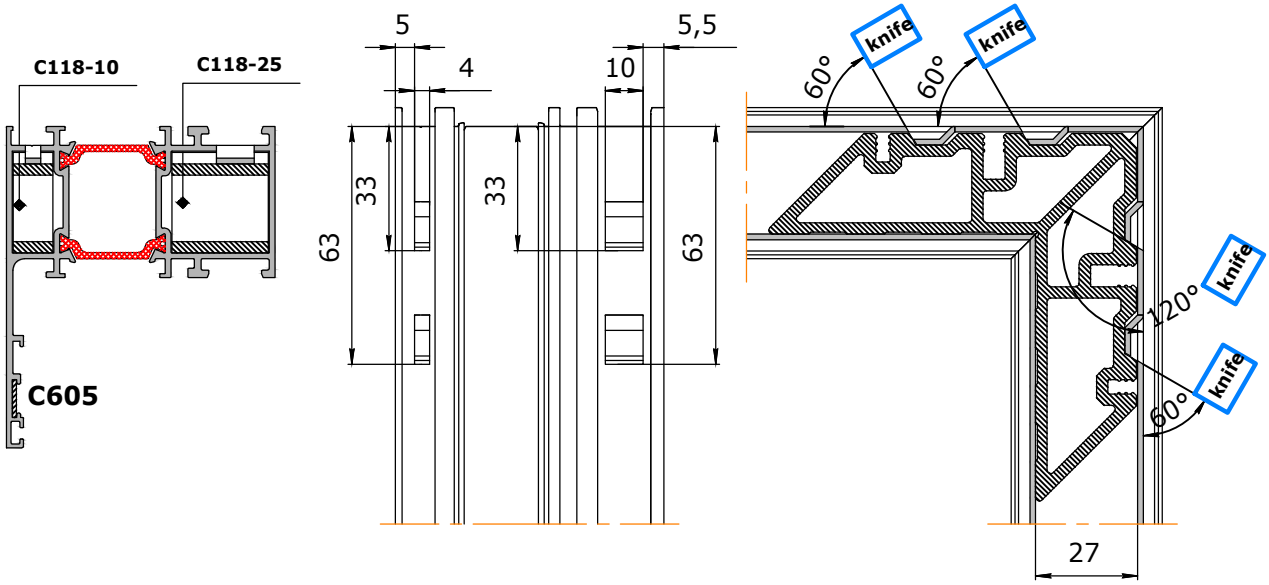
L-joint assembly: frame P71-113



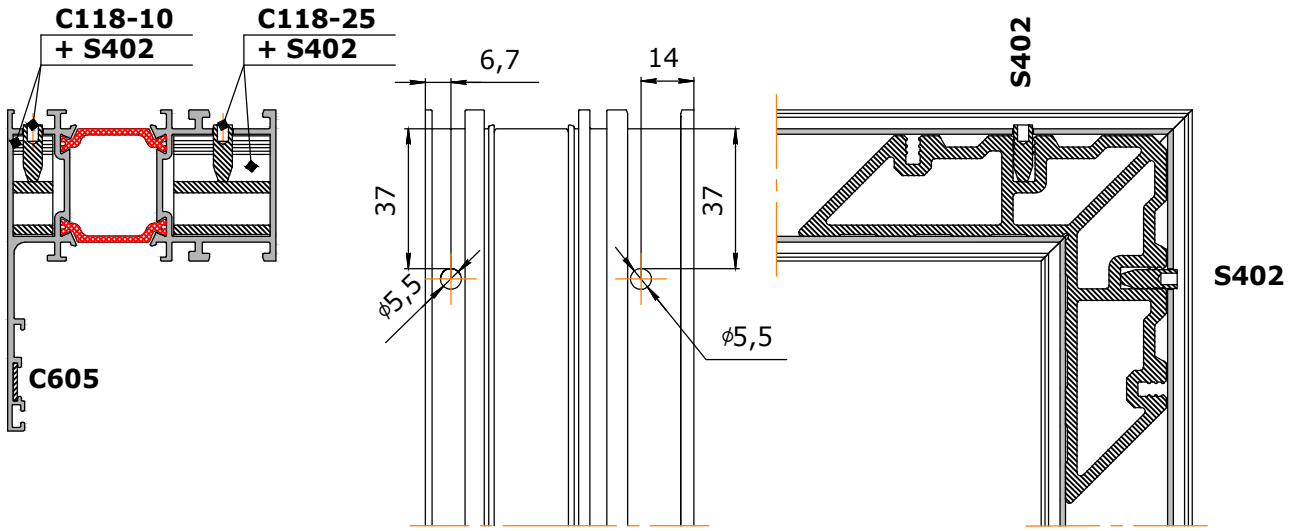


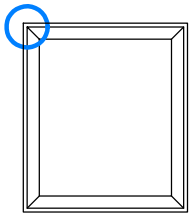
Apply one- or two-component aluminium bonding adhesive (**E006**) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (**E007**).

Crimping assembly

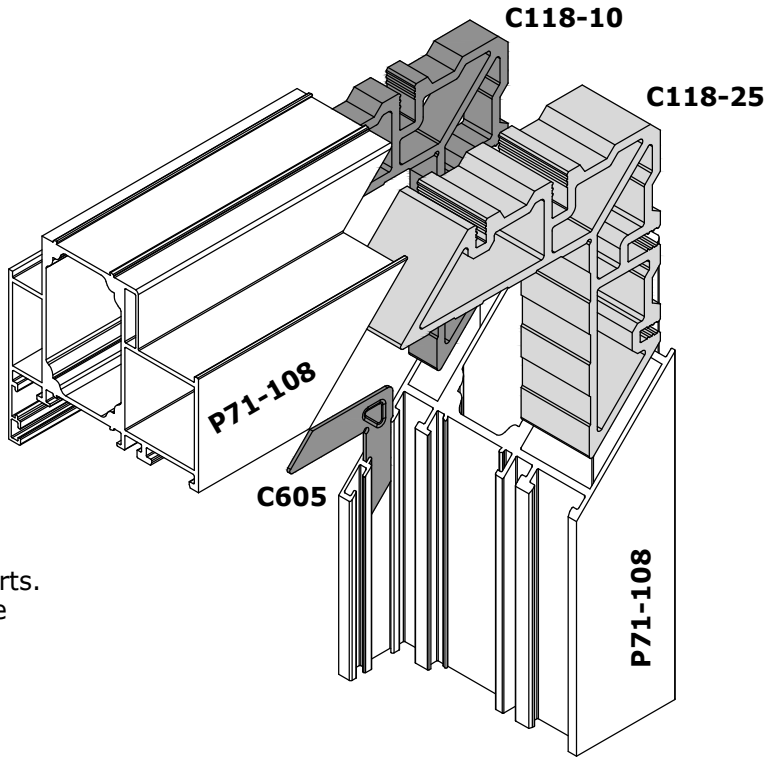


Pin assembly



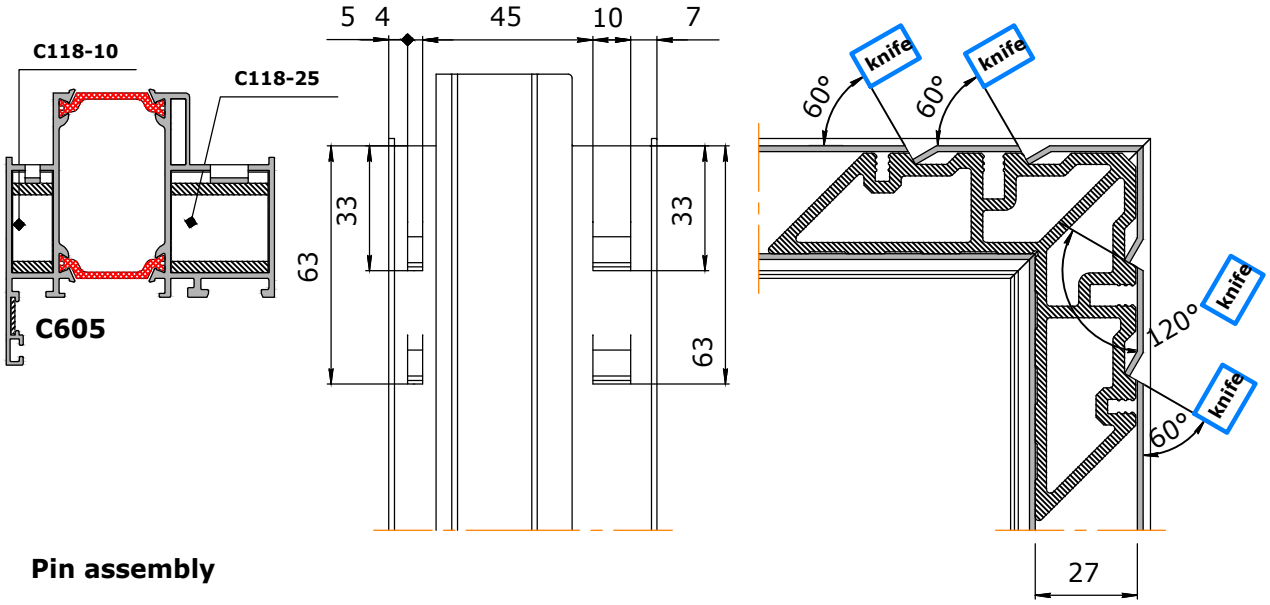


L-joint assembly: frame P71-108

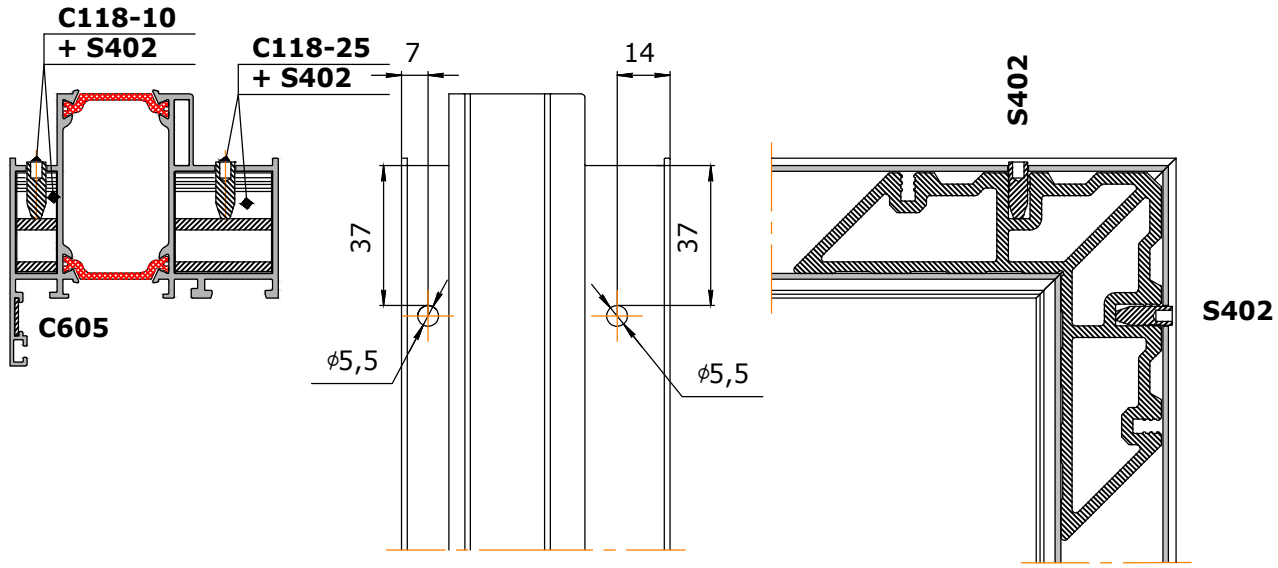


Apply one- or two-component aluminium bonding adhesive (**E006**) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (**E007**).

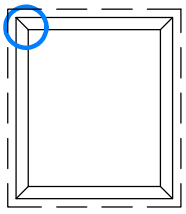
Crimping assembly

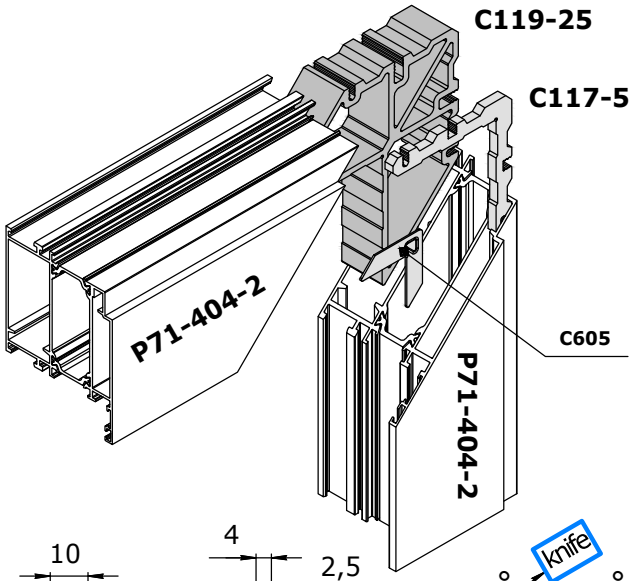


Pin assembly

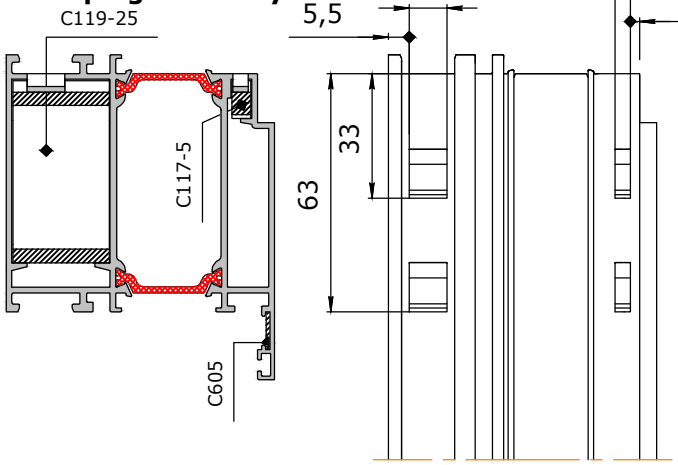


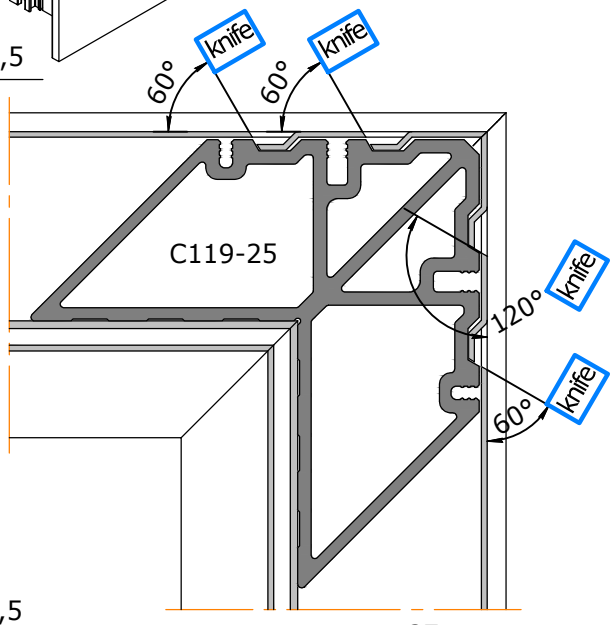
Machining and assembly: L-joint
Extension frame P71-404-2



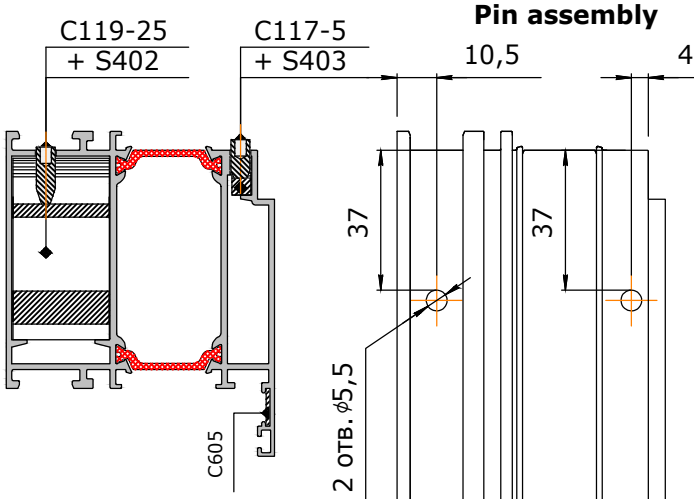


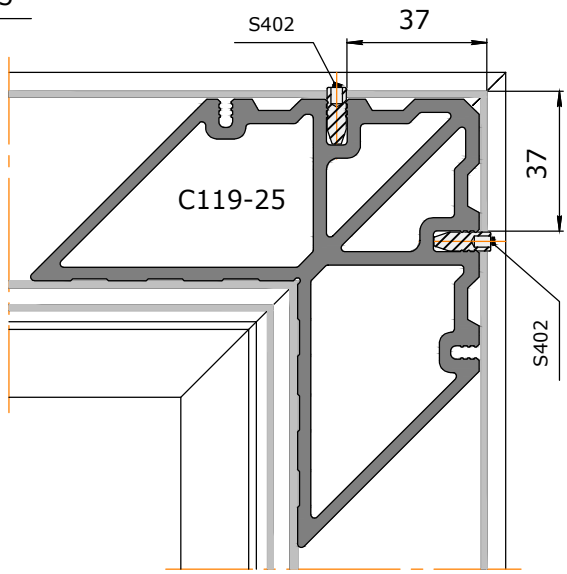
Crimping assembly

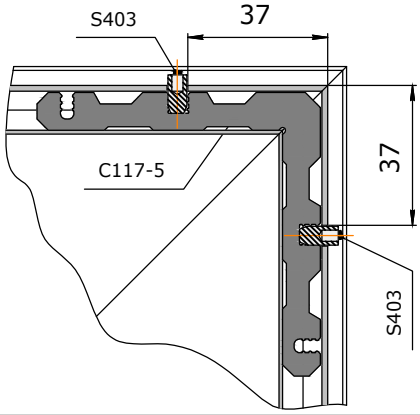




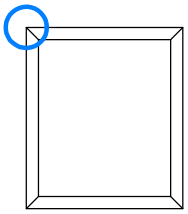
Pin assembly



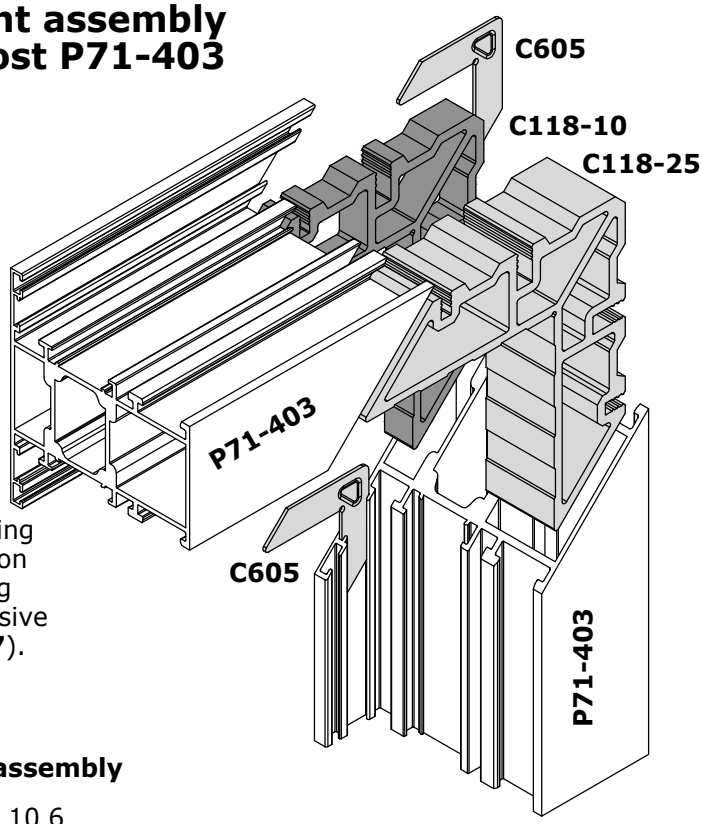




Apply one- or two-component aluminium bonding adhesive (E006) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (E007).

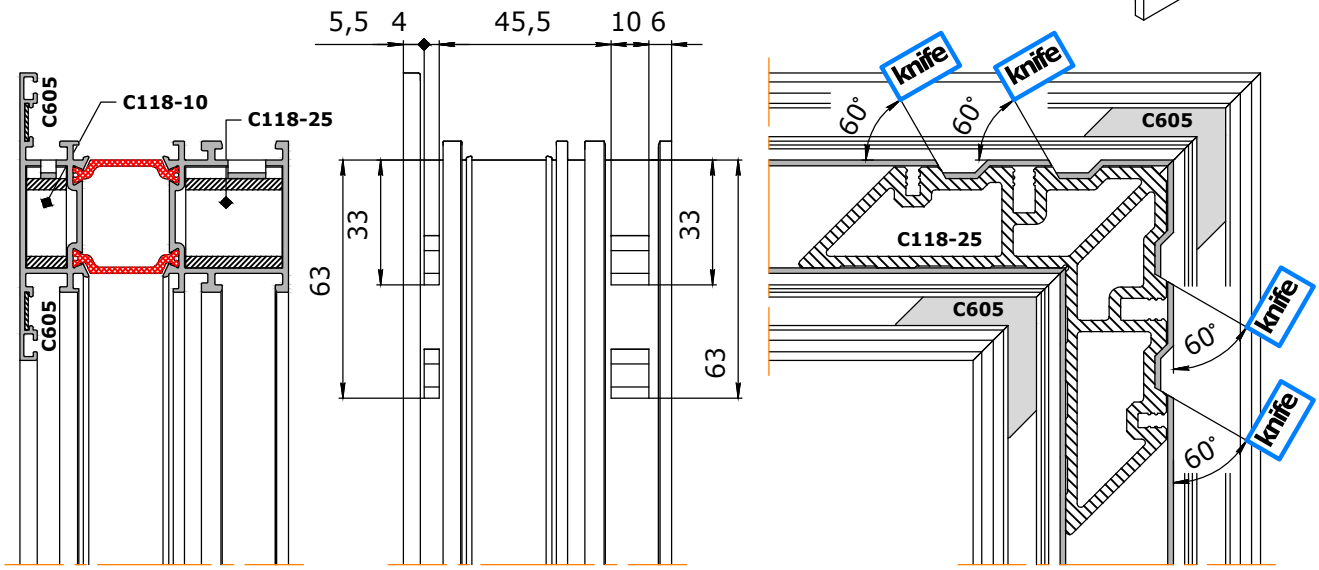


L-joint assembly
Impost P71-403

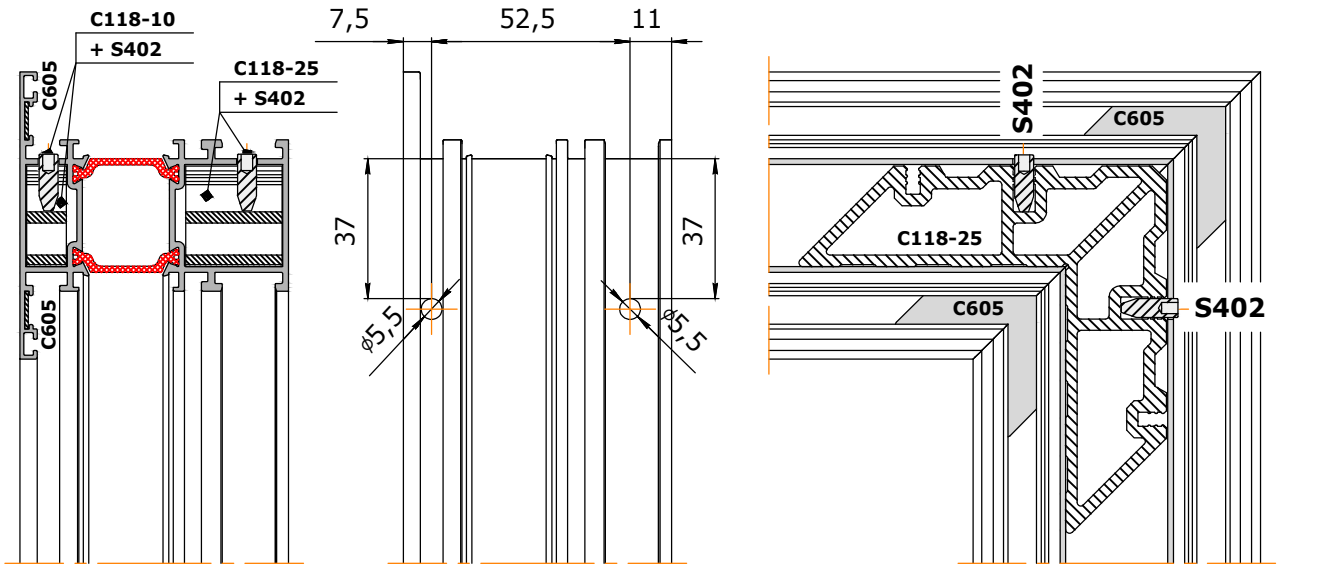


Apply one- or two-component aluminium bonding adhesive (**E006**) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (**E007**).

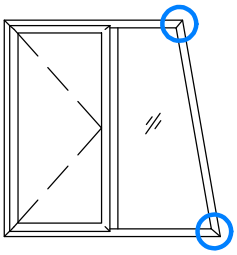
Crimping assembly

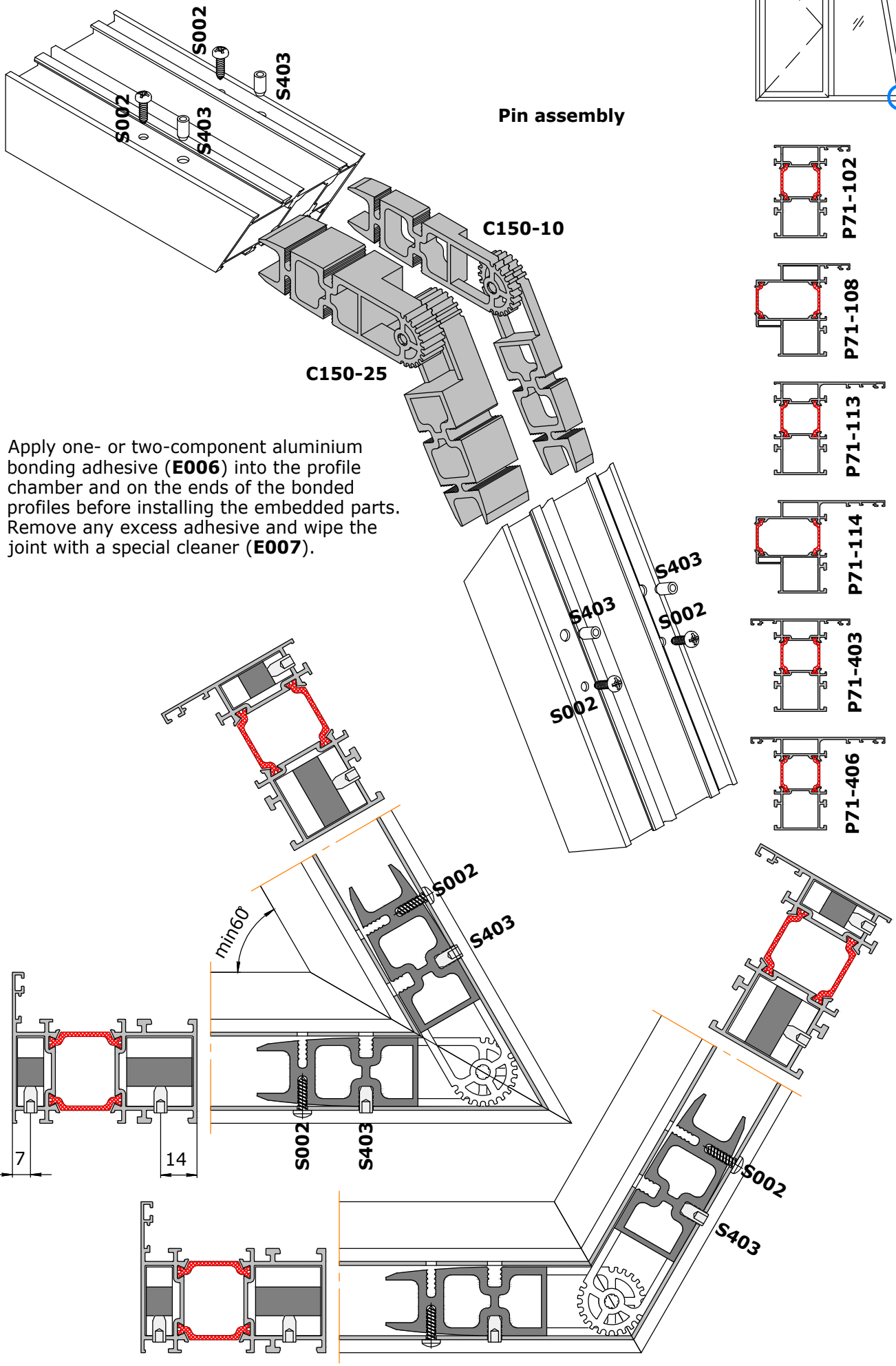


Pin assembly



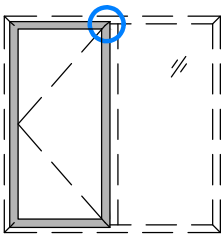
Machining and assembly: swivel L-joint
Window frame

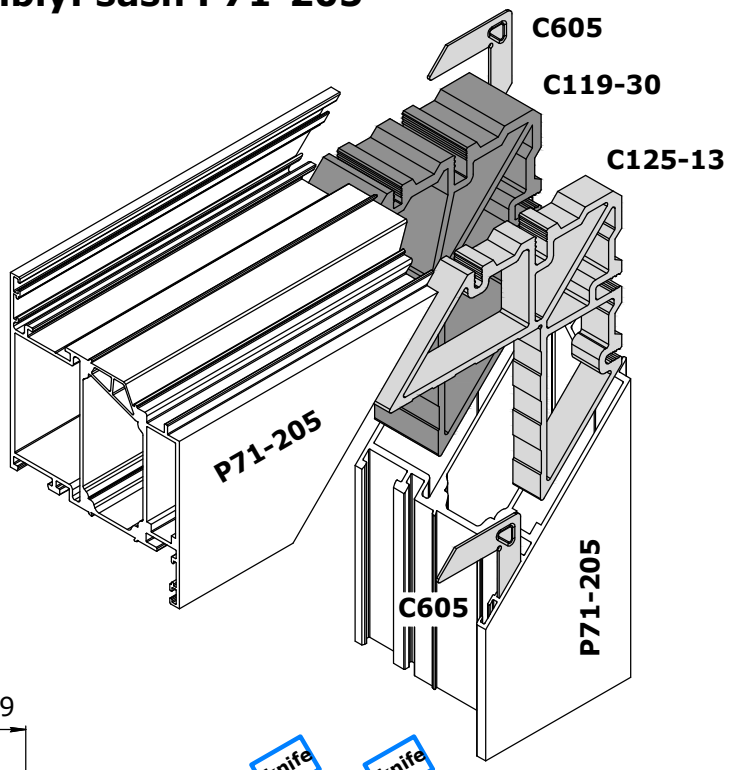




Apply one- or two-component aluminium bonding adhesive (**E006**) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (**E007**).

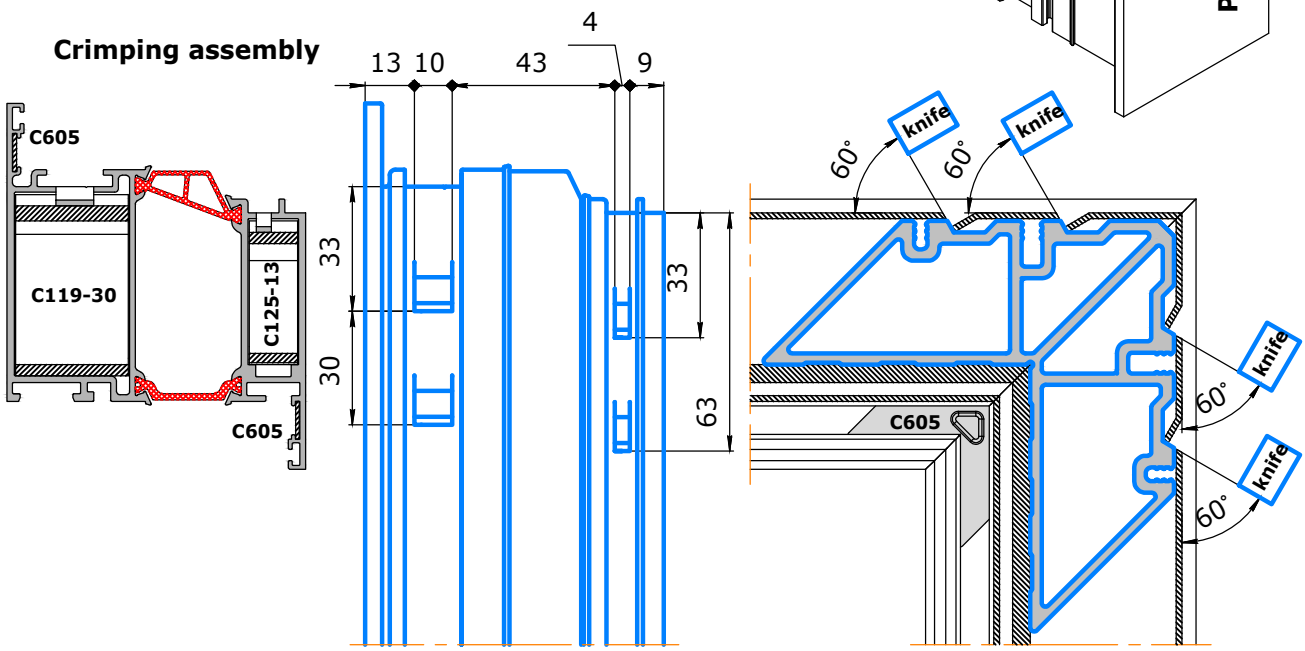
L-joint assembly: sash P71-205



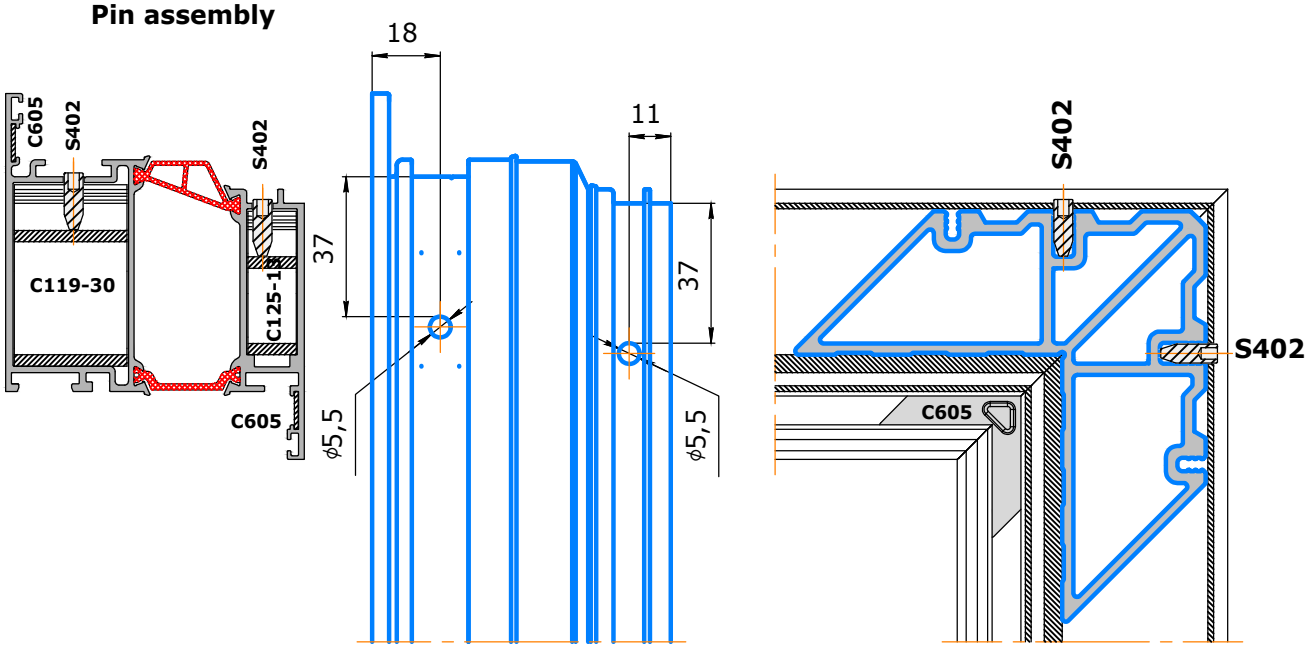


Apply one- or two-component aluminium bonding adhesive (**E006**) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (**E007**).

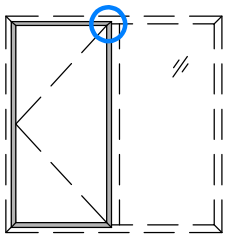
Crimping assembly



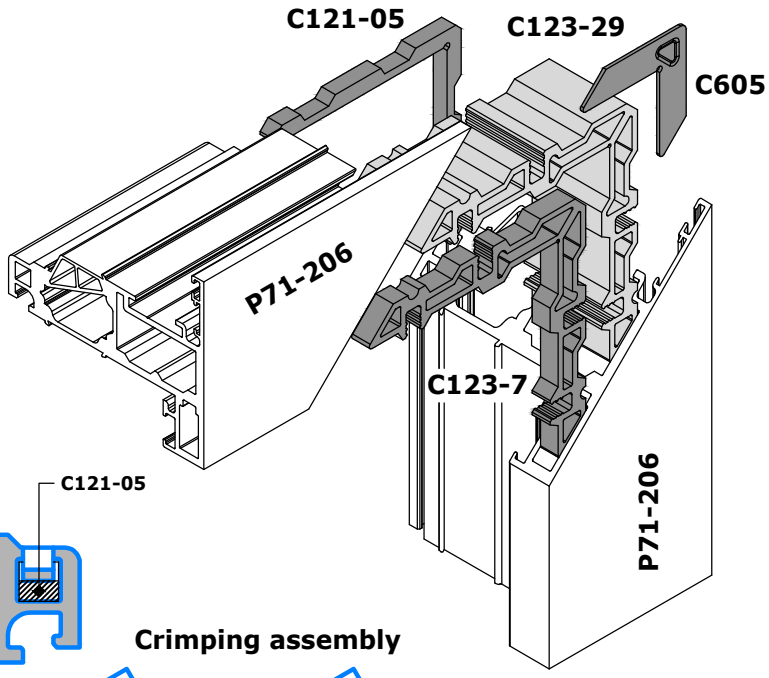
Pin assembly

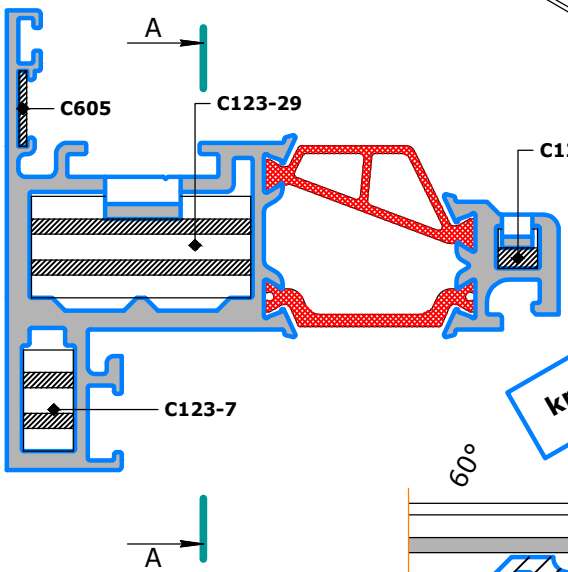


L-joint assembly: sash P71-206

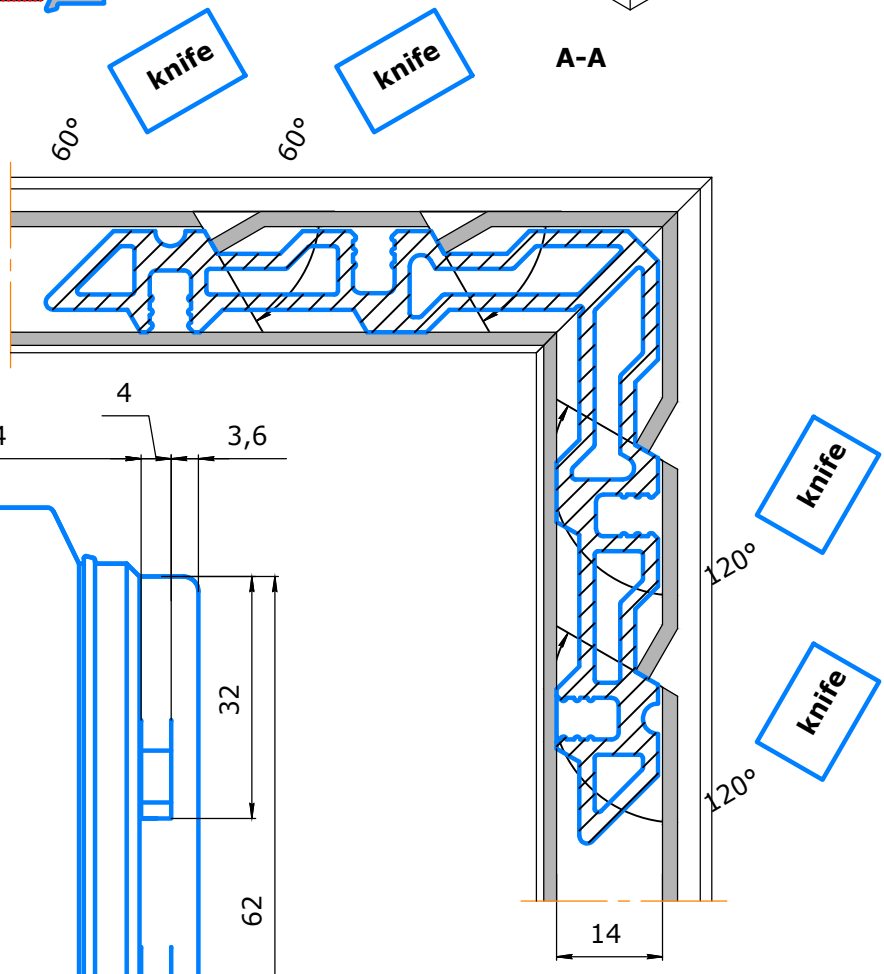


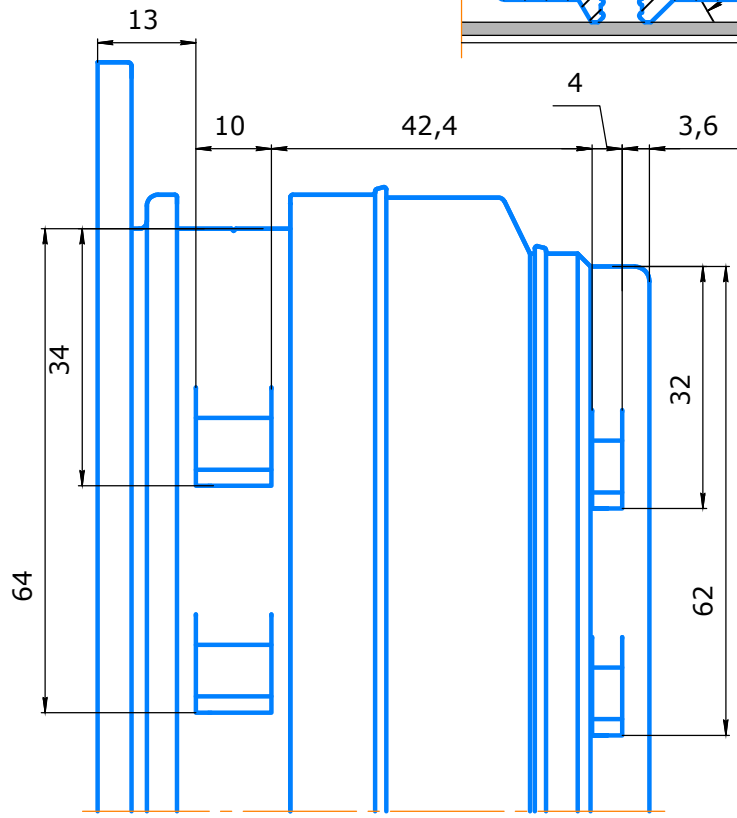
Apply one- or two-component aluminium bonding adhesive (**E006**) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (**E007**).



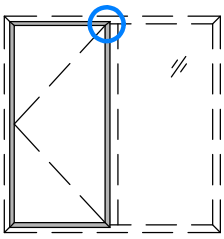


Crimping assembly

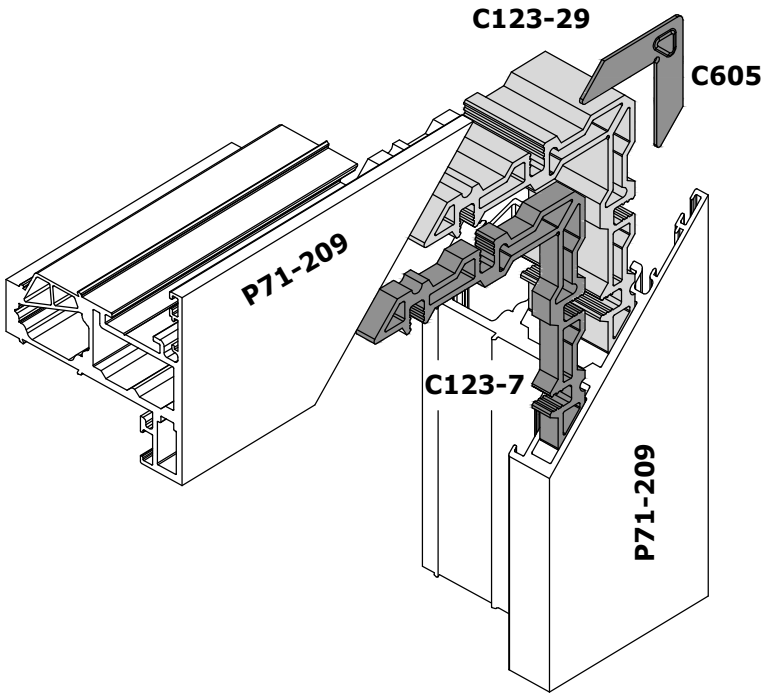


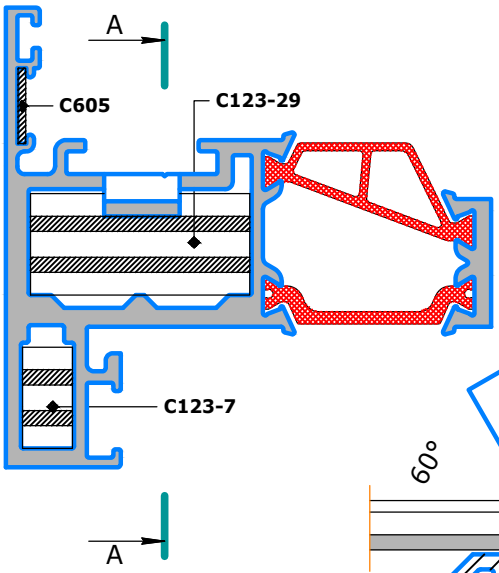


L-joint assembly: sash P71-209

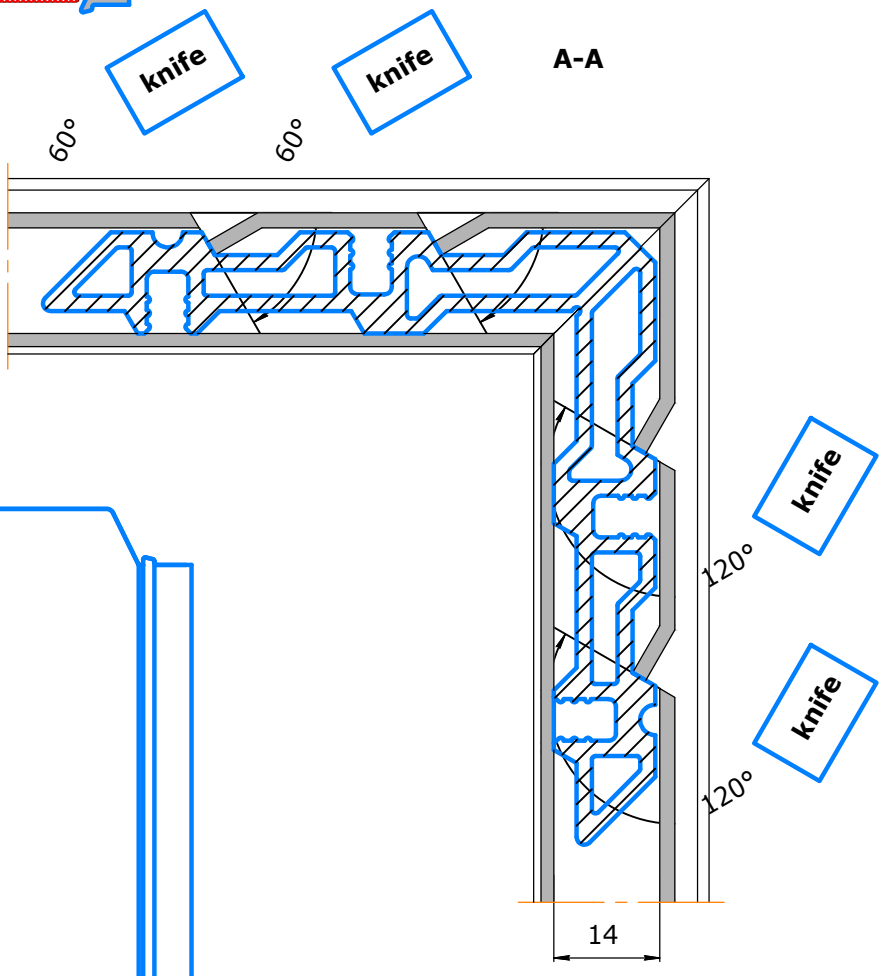


Apply one- or two-component aluminium bonding adhesive (**E006**) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (**E007**).



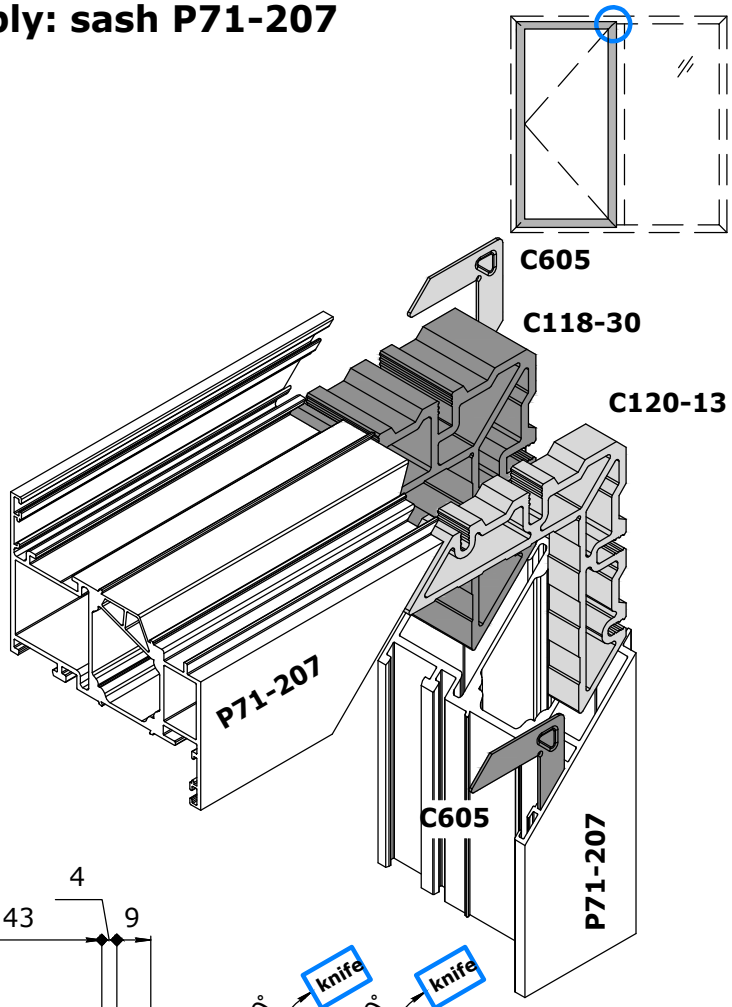


Crimping assembly

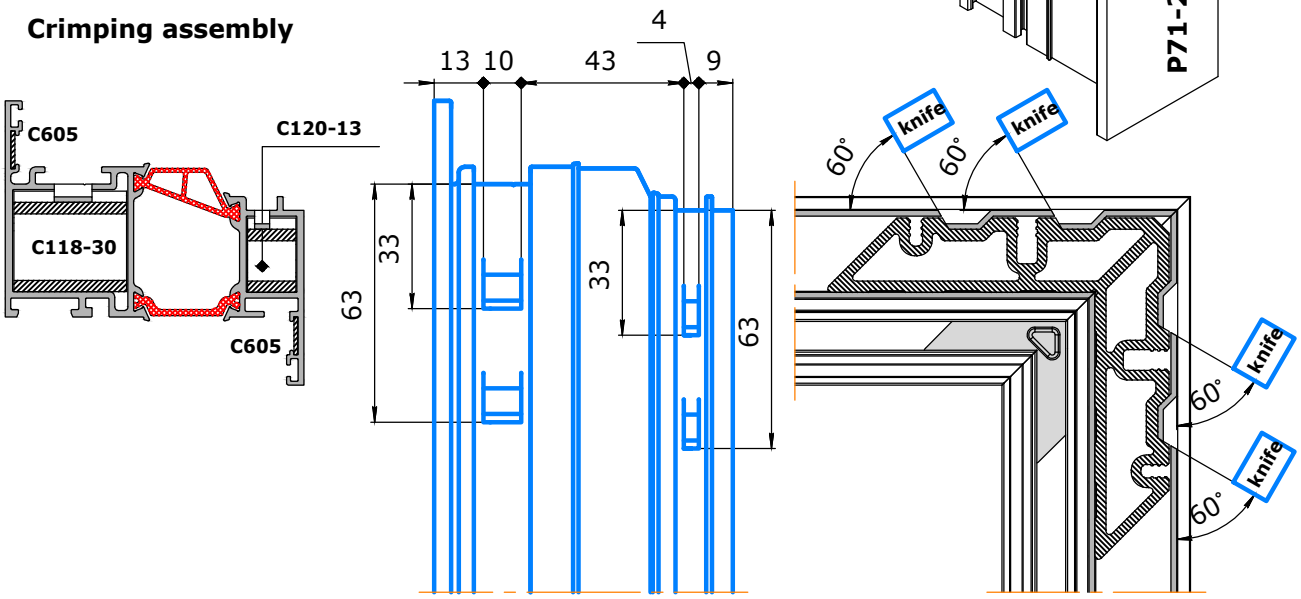


L-joint assembly: sash P71-207

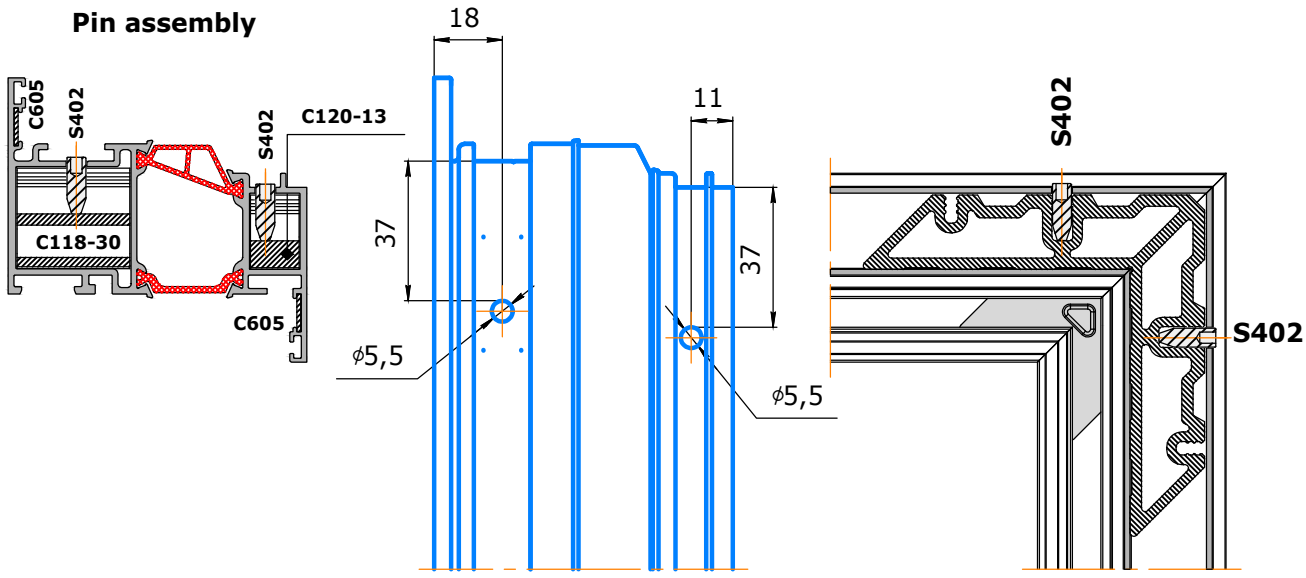
Apply one- or two-component aluminium bonding adhesive (**E006**) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (**E007**).



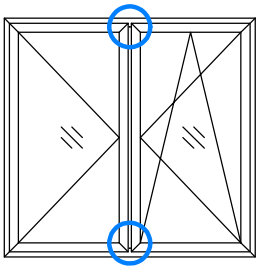
Crimping assembly

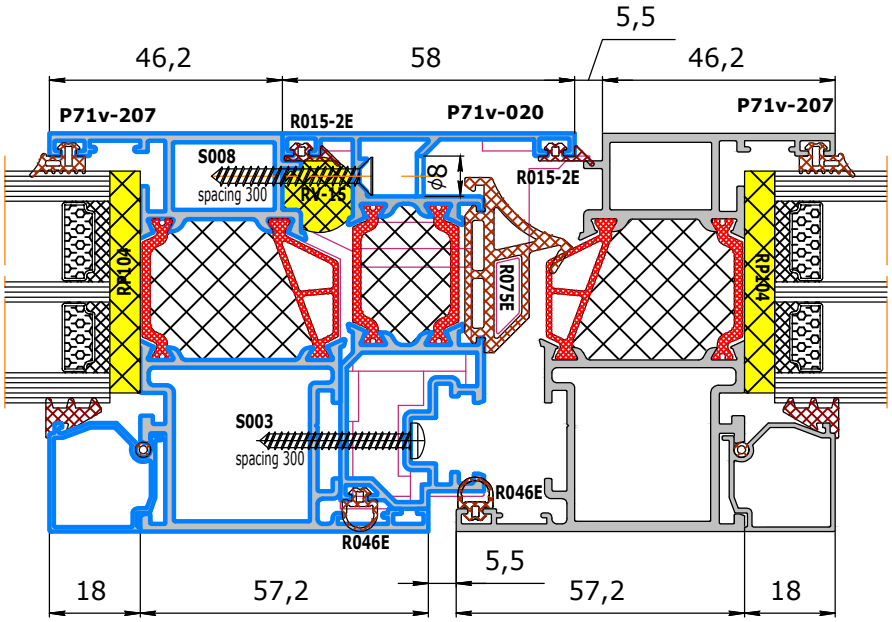


Pin assembly

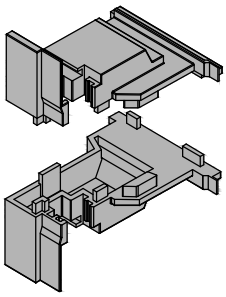


Window forend assembly P71-020

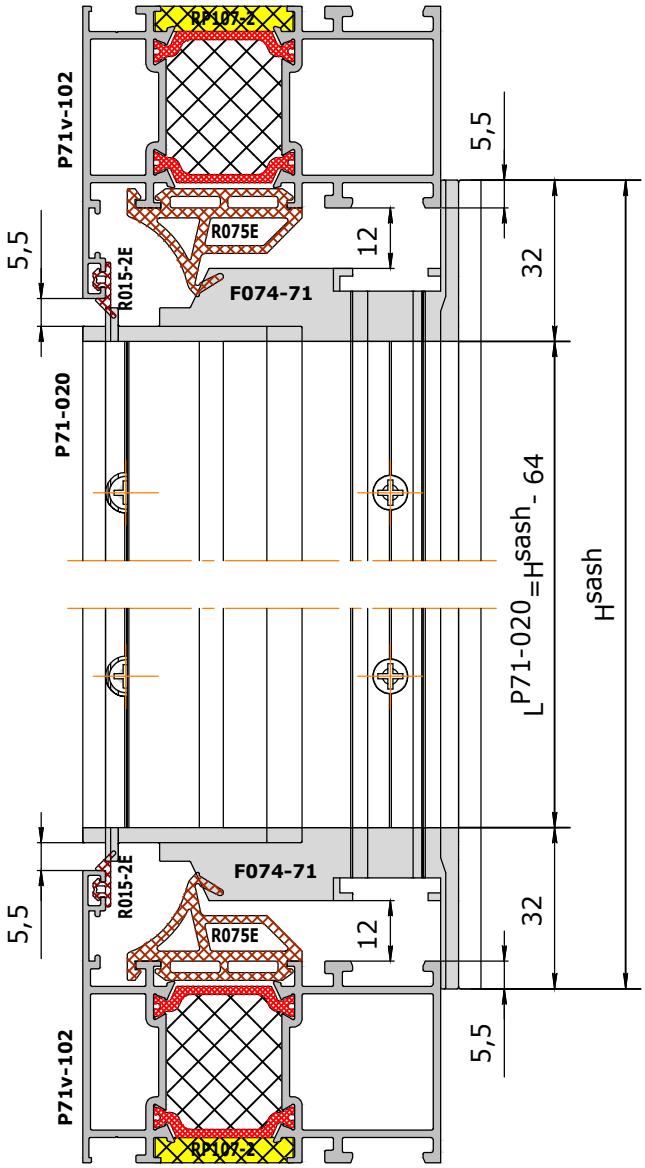


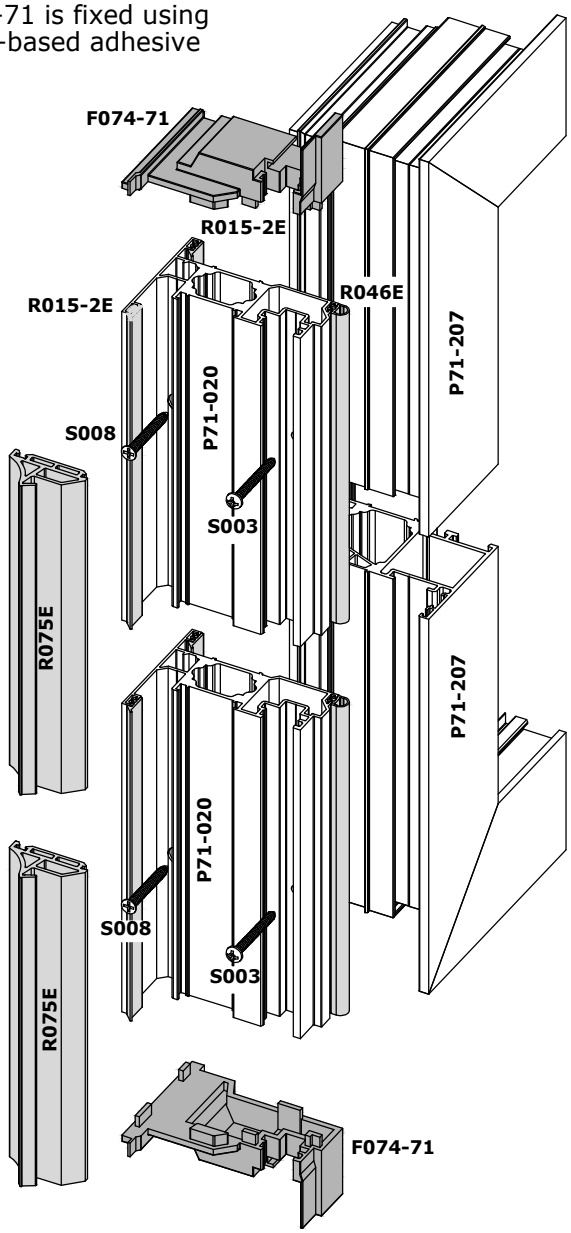


F074-71
MastTech-71 window forend caps (pair)

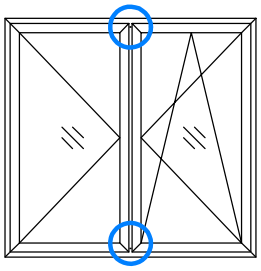


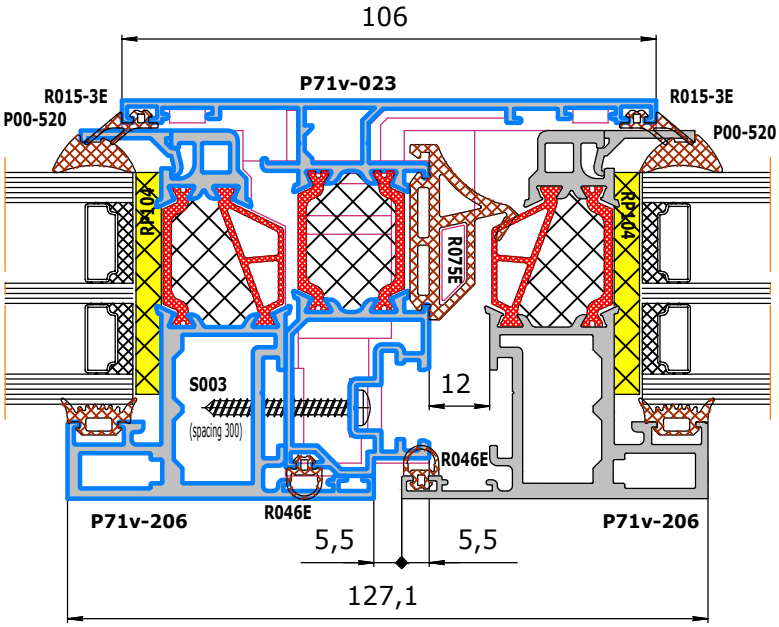
The cap F074-71 is fixed using cyanoacrylate-based adhesive



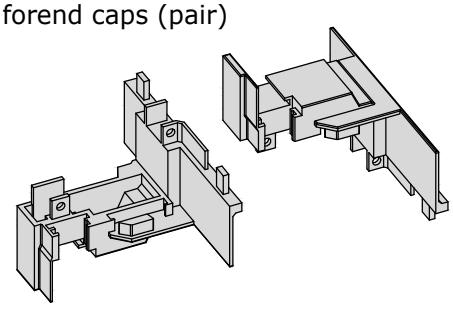


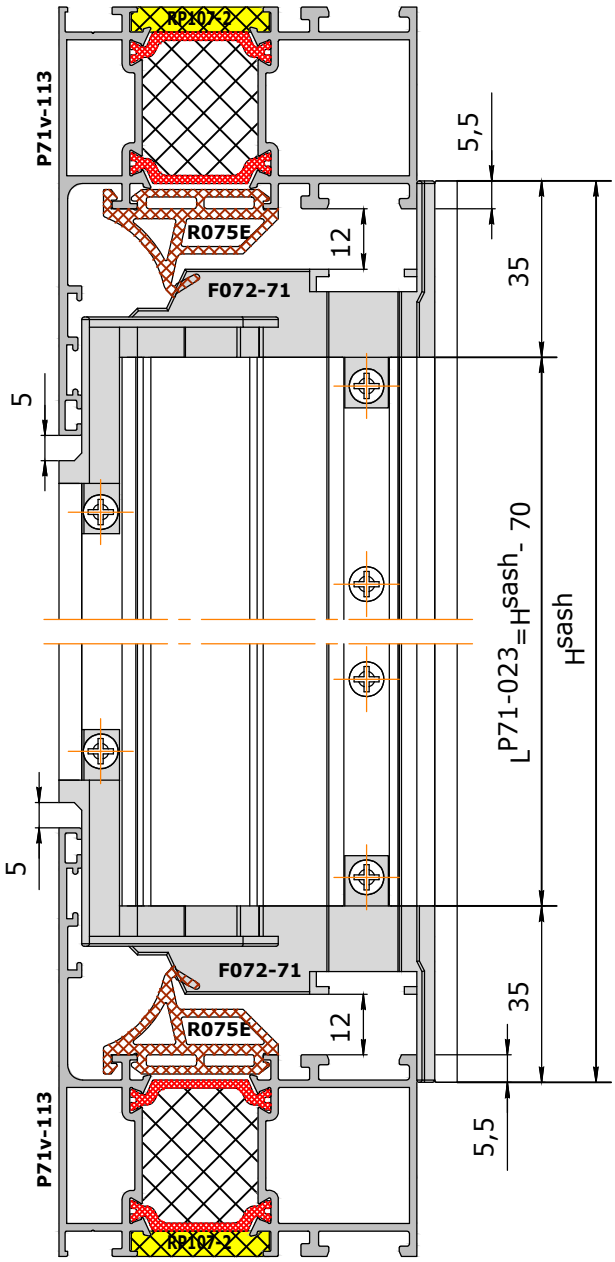
Window forend assembly
P71-023

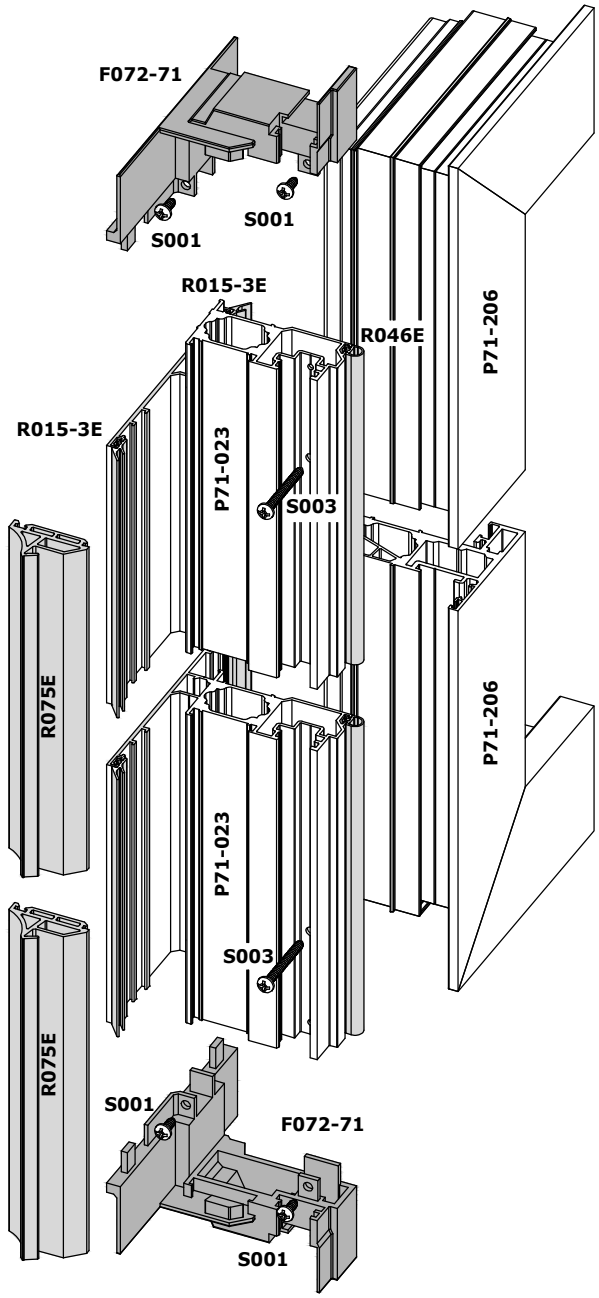




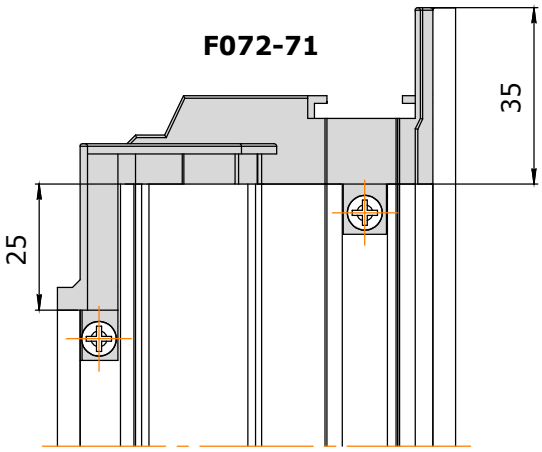
F072-71
MastTech-71 window forend caps (pair)

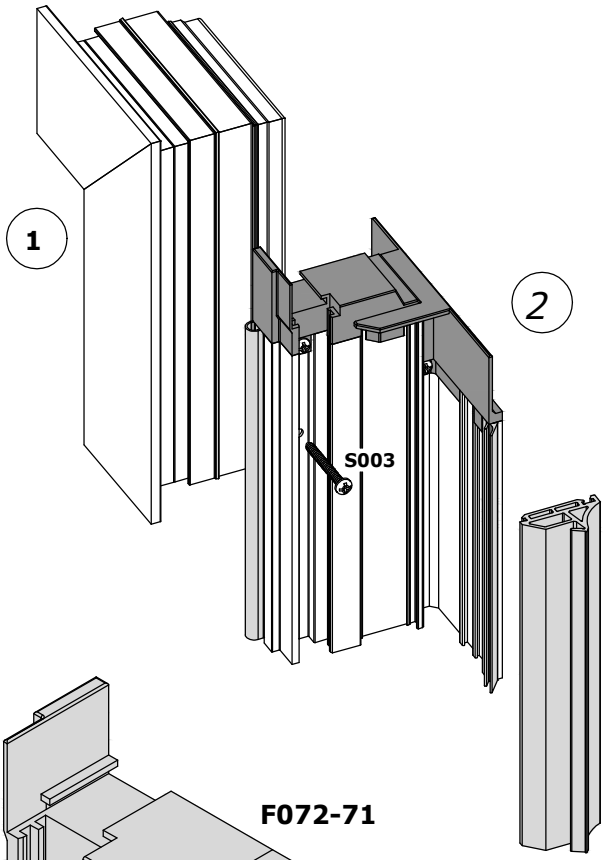




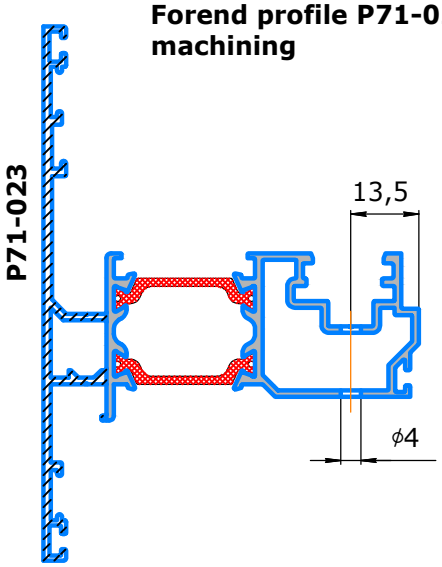


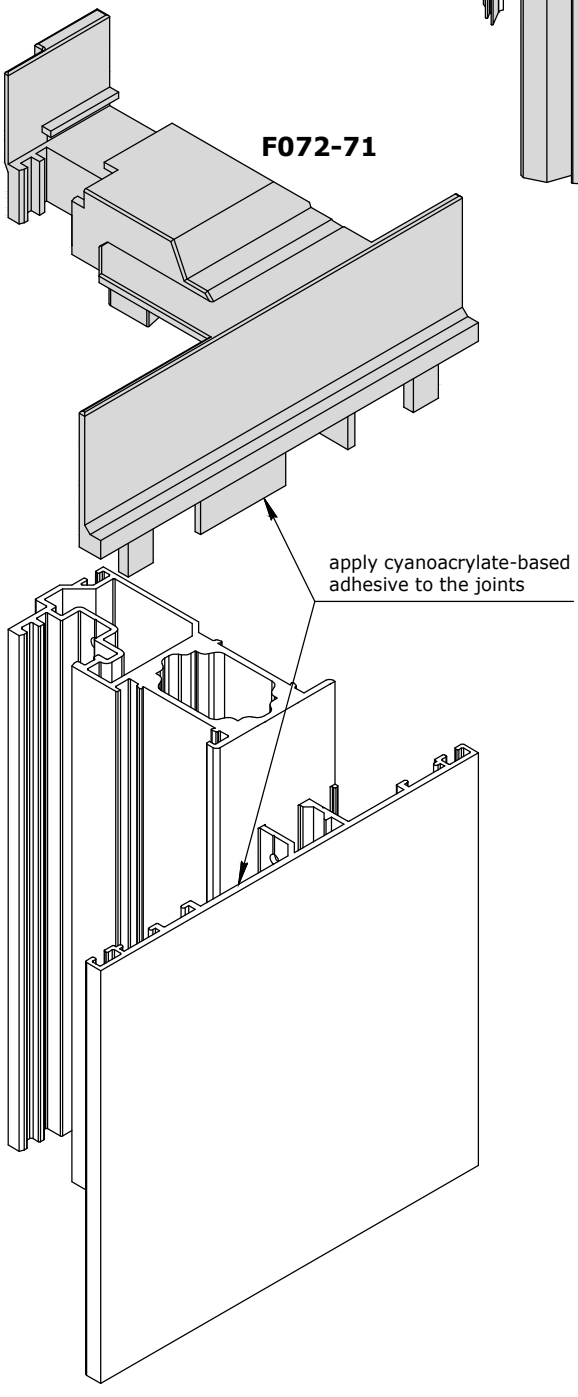
The forend is installed on the assembled sash with the filling installed and fixed in it.

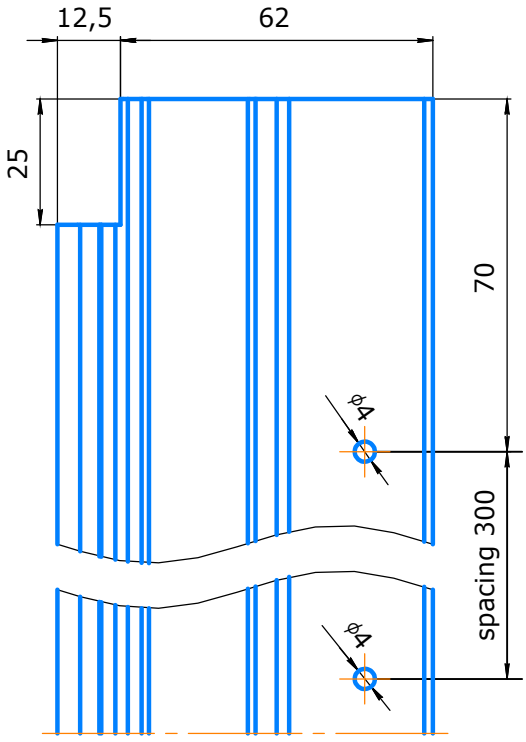




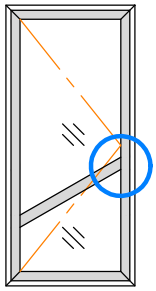
Forend profile P71-023 machining







T-joint assembly: installation of inclined impost P71-403-79 in window sash



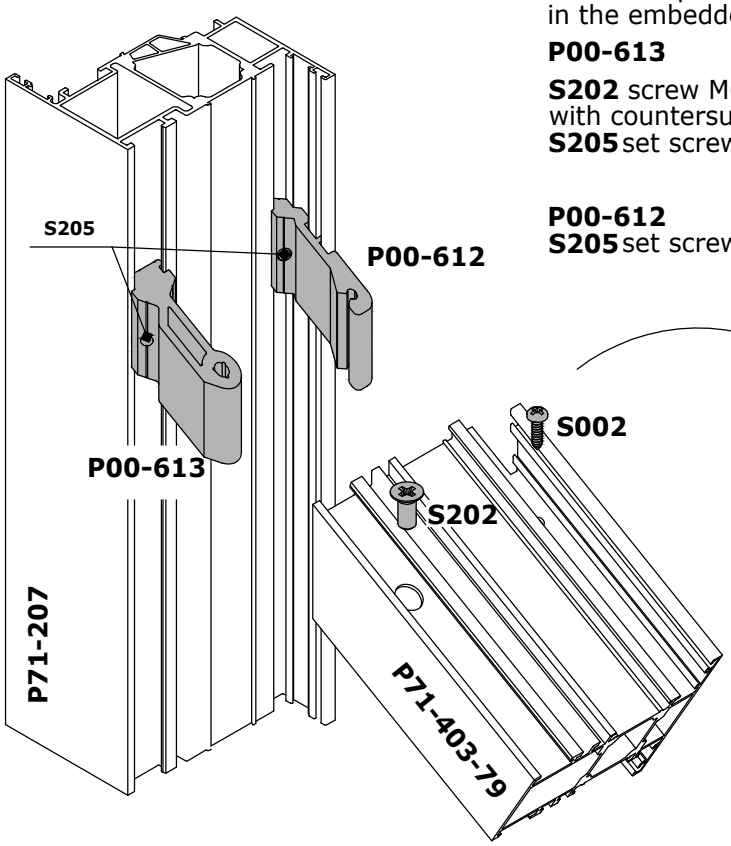
Screw torque
in the embedded part

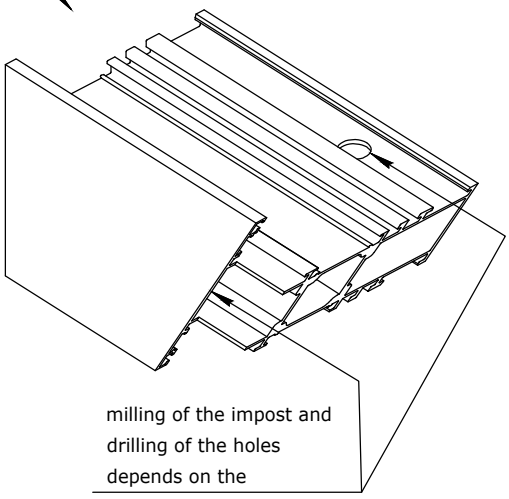
P00-613

S202 screw M6x14 with countersunk head	min — 4.5 N/m max — 6 N/m
S205 set screw M5	min — 2 N/m max — 2.5 N/m

P00-612

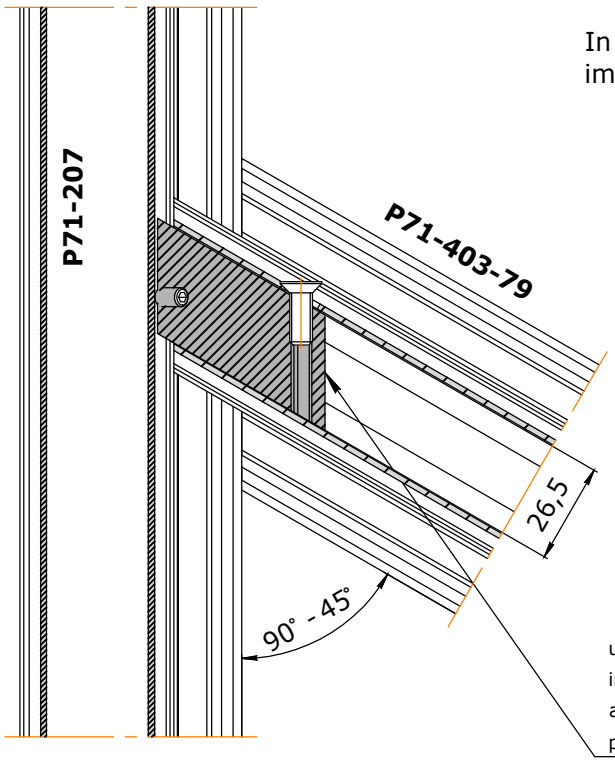
S205 set screw M5	min — 2 N/m max — 2.5 N/m





milling of the impost and drilling of the holes depends on the inclination angle

Apply one- or two-component aluminium bonding adhesive (**E006**) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (**E007**). To prevent moisture leakage, seal the joint between the impost and the mullion with a neutral sealant.

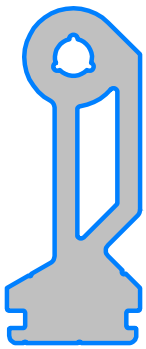


In order to install an impost in a window sash, the impost shall be milled in a "simplified" manner.

P00-612
impost block external

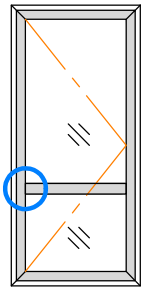


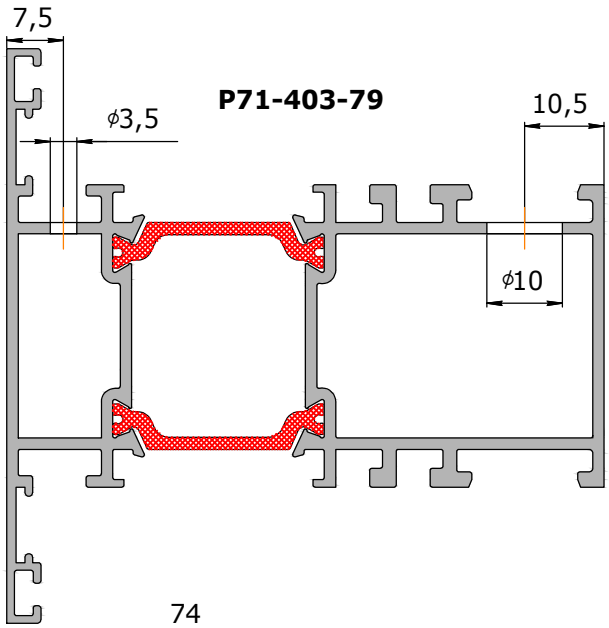
P00-613
Impost block internal



use profiles P00-612 and P00-613 for the manufacture of inclined embedded parts. Depending on the inclination angle of the impost, the angle for cutting the block profiles will vary.

T-joint assembly: installation of impost P71-403-79 in window sash





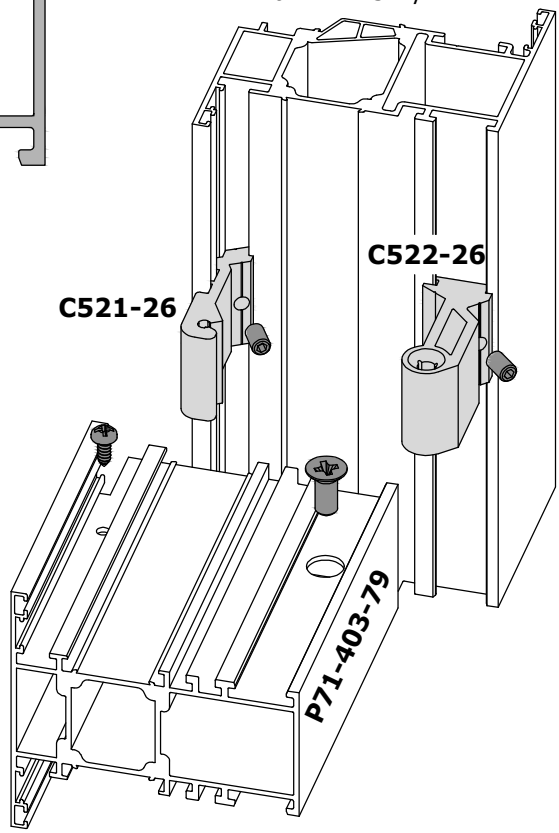
Screw torque in the embedded part

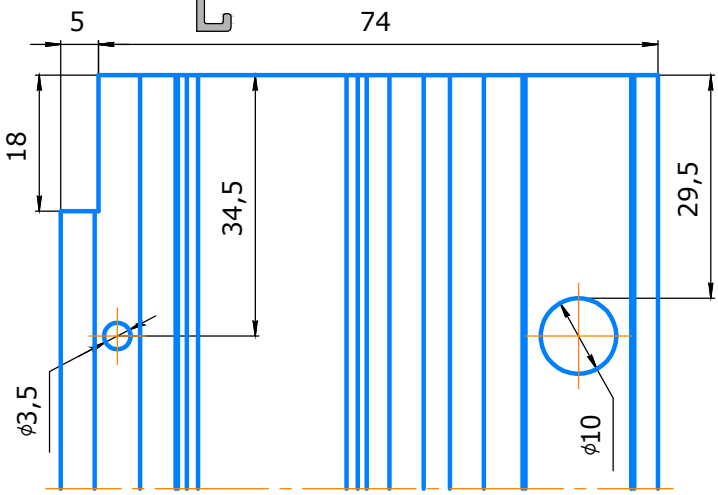
C522-26

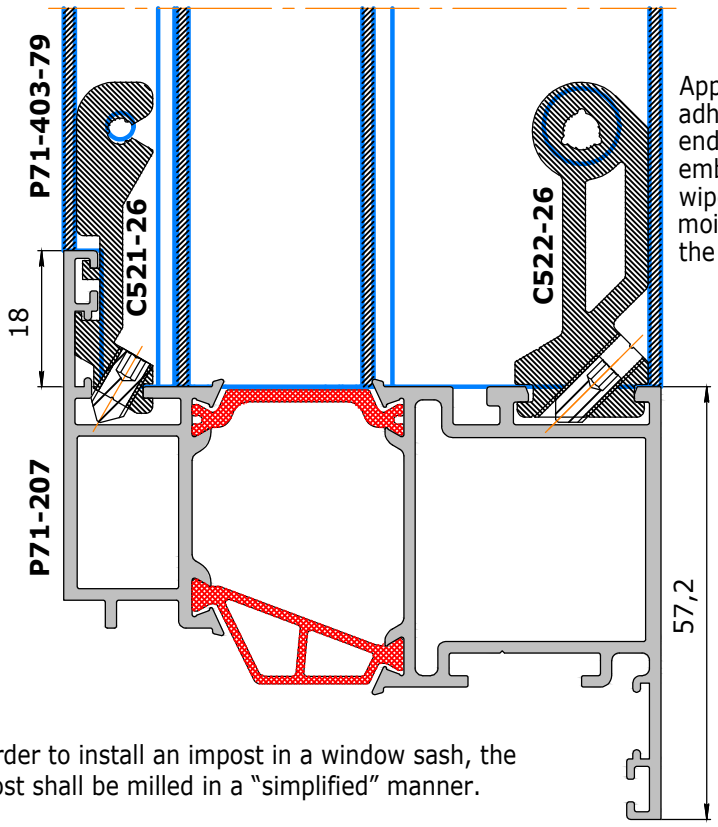
screw M6 with countersunk head — min — 4.5 N/m, max — 6 N/m
screw M5 — min — 2 N/m, max — 2.5 N/m

C521-26

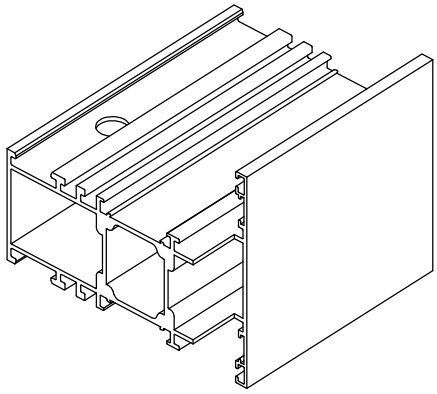
screw M5 — min — 2 N/m, max — 2.5 N/m





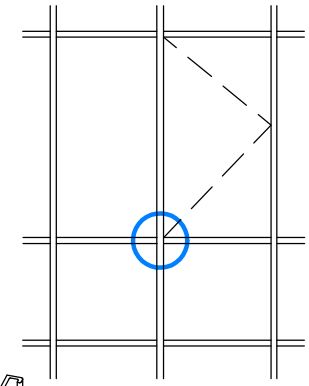


Apply one- or two-component aluminium bonding adhesive (**E006**) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (**E007**). To prevent moisture leakage, seal the joint between the impost and the sash with a neutral sealant.

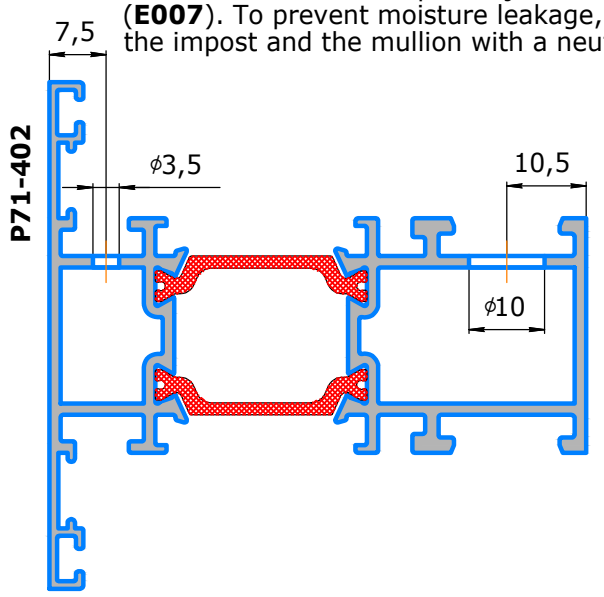


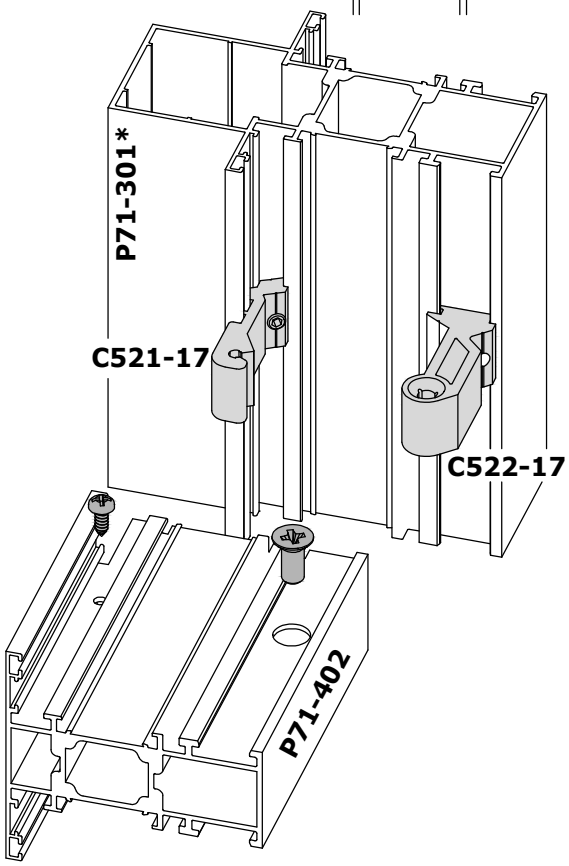
In order to install an impost in a window sash, the impost shall be milled in a "simplified" manner.

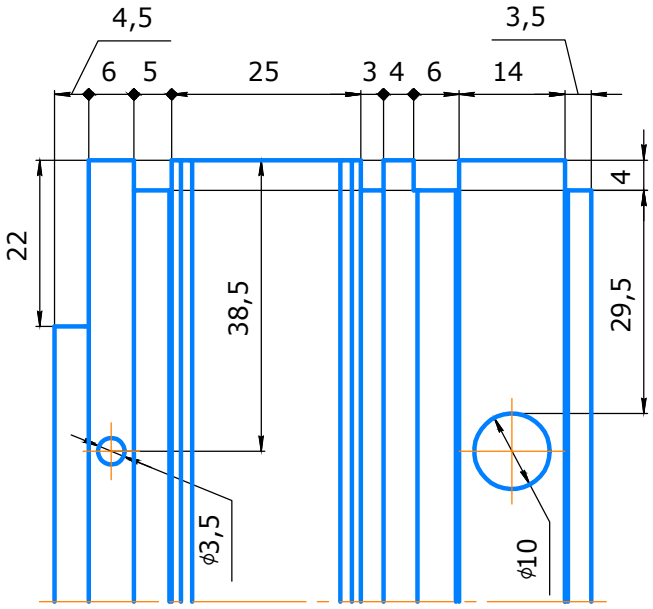
T-joint assembly: installation of impost P71-402



Apply one- or two-component aluminium bonding adhesive (**E006**) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (**E007**). To prevent moisture leakage, seal the joint between the impost and the mullion with a neutral sealant.







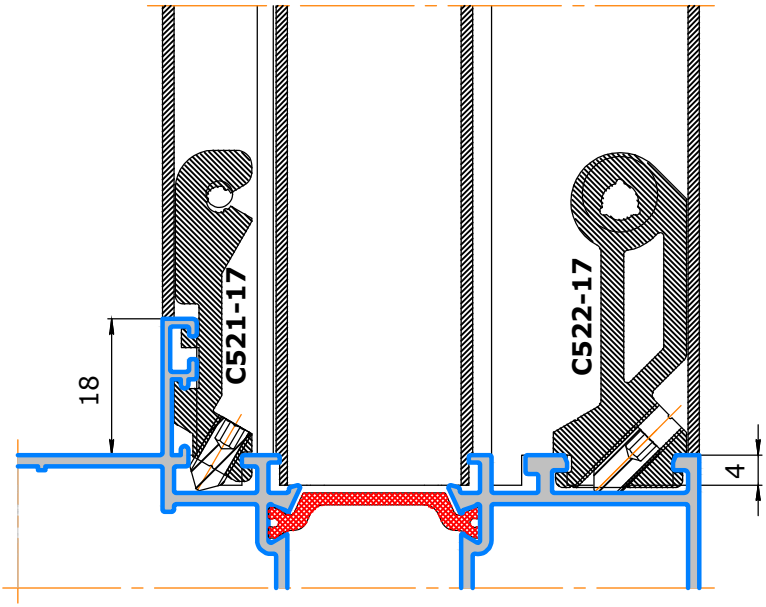
Screw torque in the embedded part

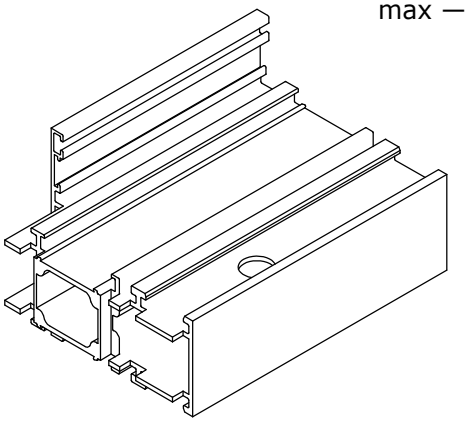
C522-17

screw M6 with countersunk head	min — 4.5 N/m max — 6 N/m
screw M5	min — 2 N/m max — 2.5 N/m

C521-17

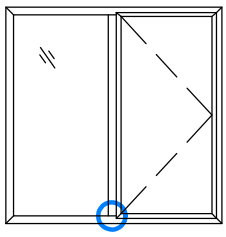
screw M5	min — 2 N/m max — 2.5 N/m

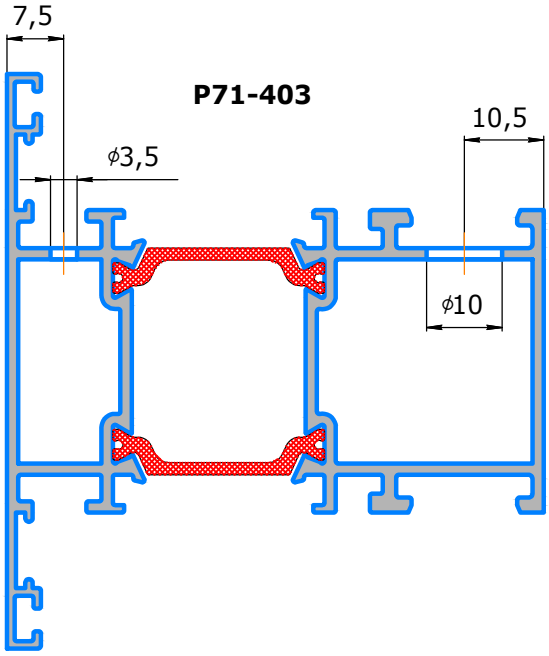




Classic (complex) milling is preferred when machining the imposts.

T-joint assembly: installation of impost P71-403





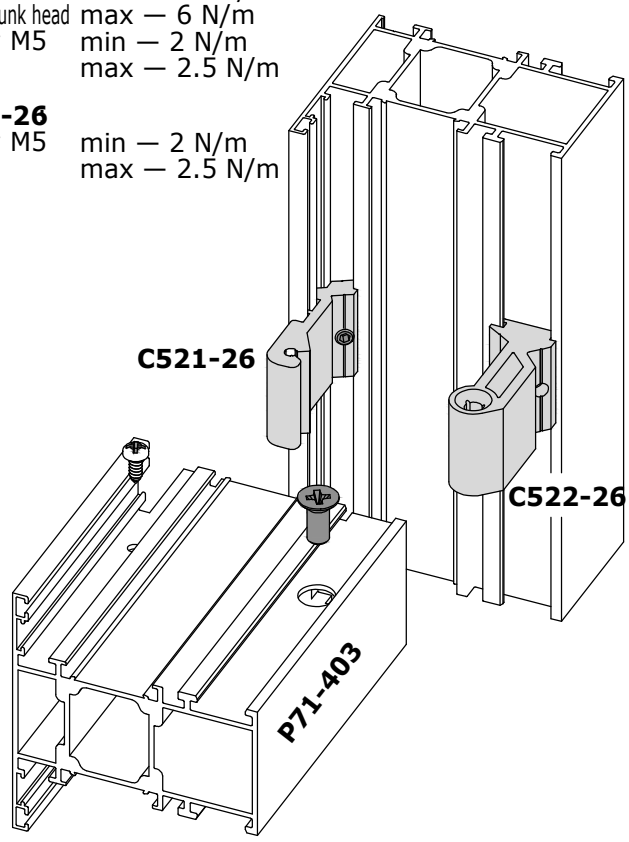
Screw torque in the embedded part

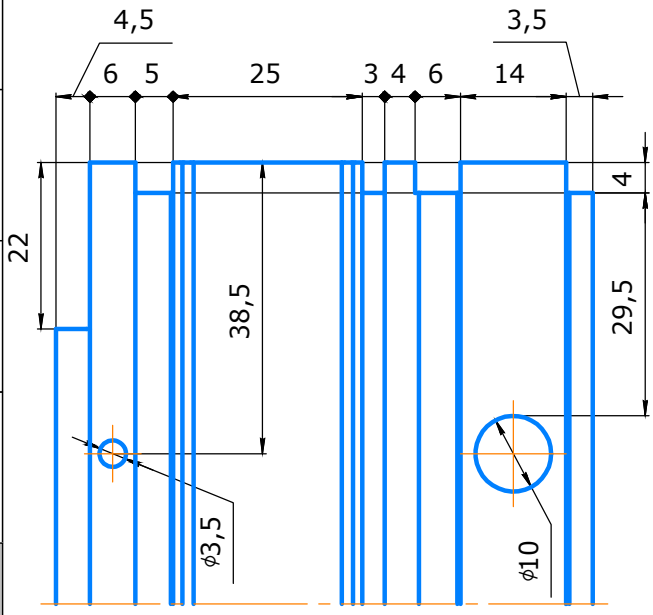
C522-26

screw M6 with countersunk head	min — 4.5 N/m max — 6 N/m
screw M5	min — 2 N/m max — 2.5 N/m

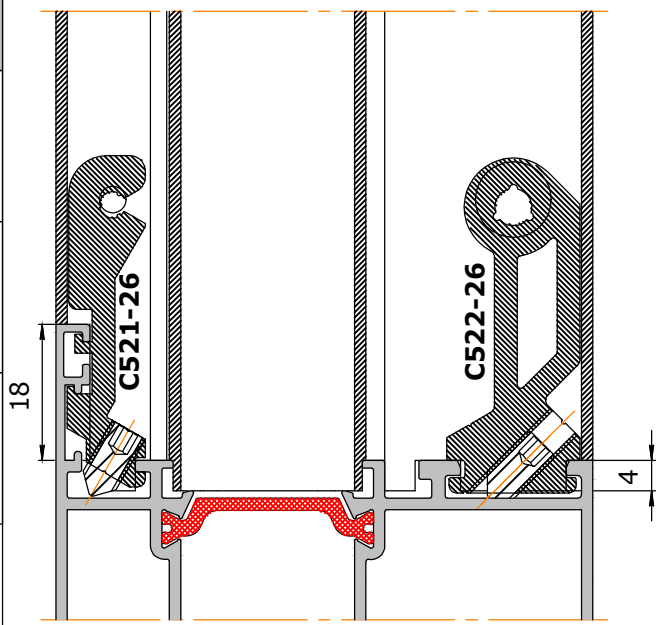
C521-26

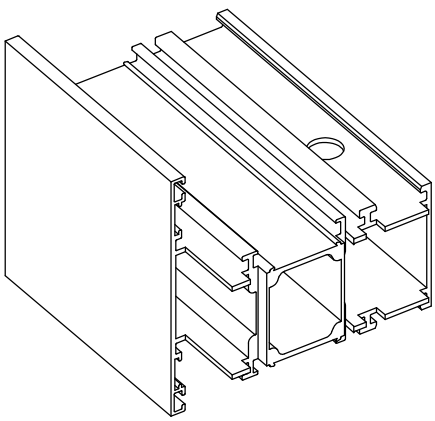
screw M5	min — 2 N/m max — 2.5 N/m





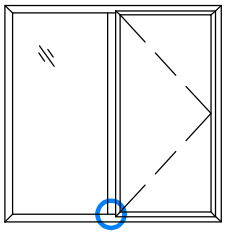
Apply one- or two-component aluminium bonding adhesive (**E006**) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (**E007**). To prevent moisture leakage, seal the joint between the impost and the frame with a neutral sealant.

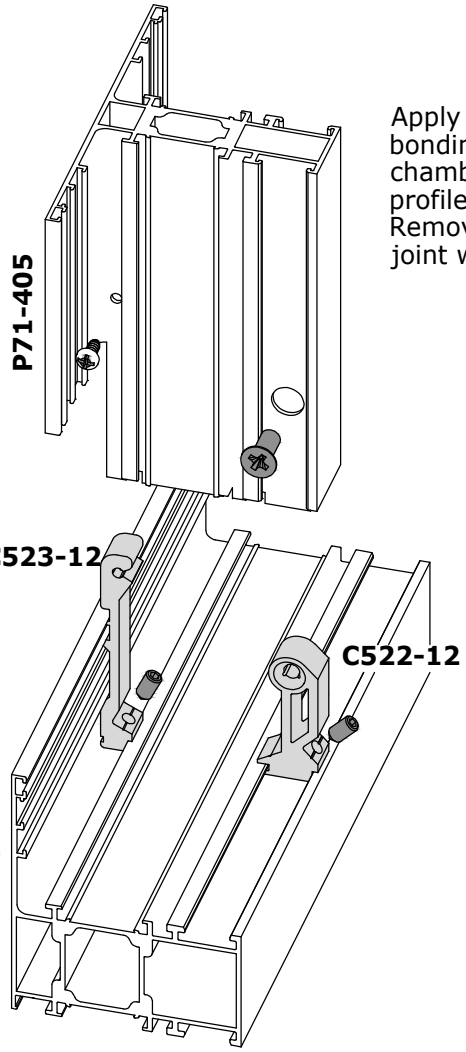




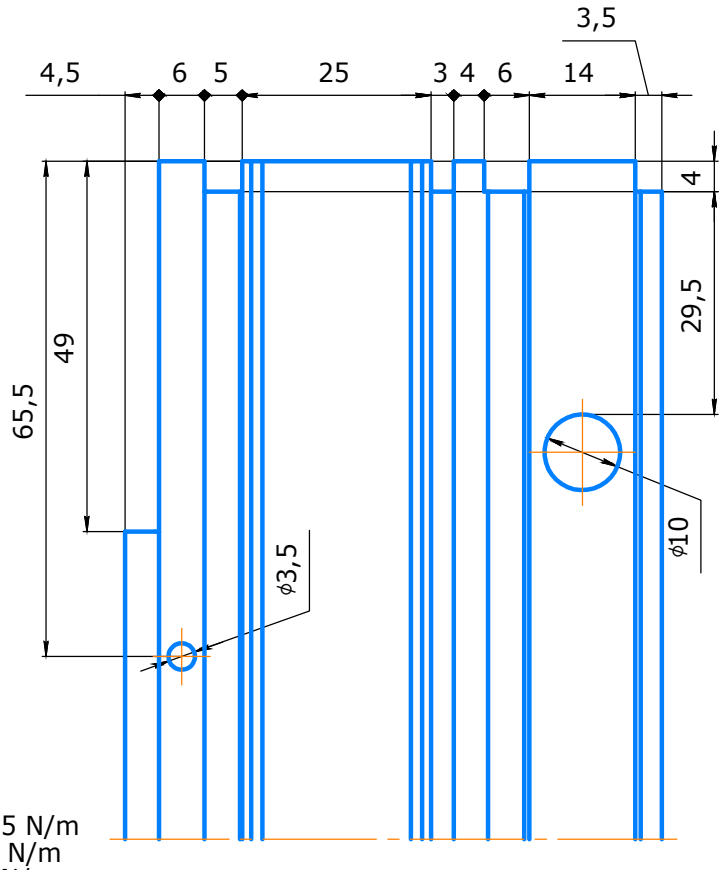
Classic (complex) milling is preferred when machining the imposts.

T-joint assembly: installation of impost P71-405





Apply one- or two-component aluminium bonding adhesive (**E006**) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (**E007**).



Screw torque in the embedded part

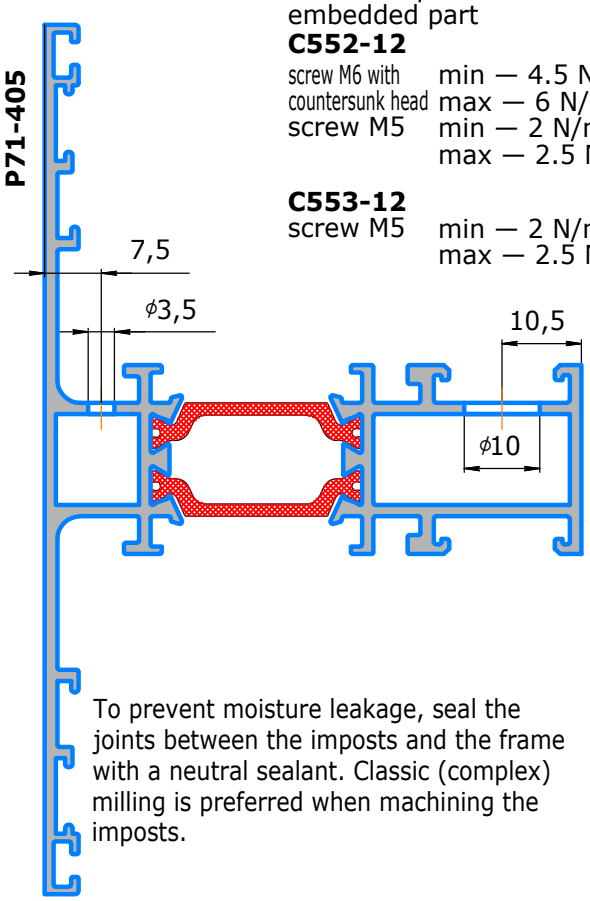
C552-12

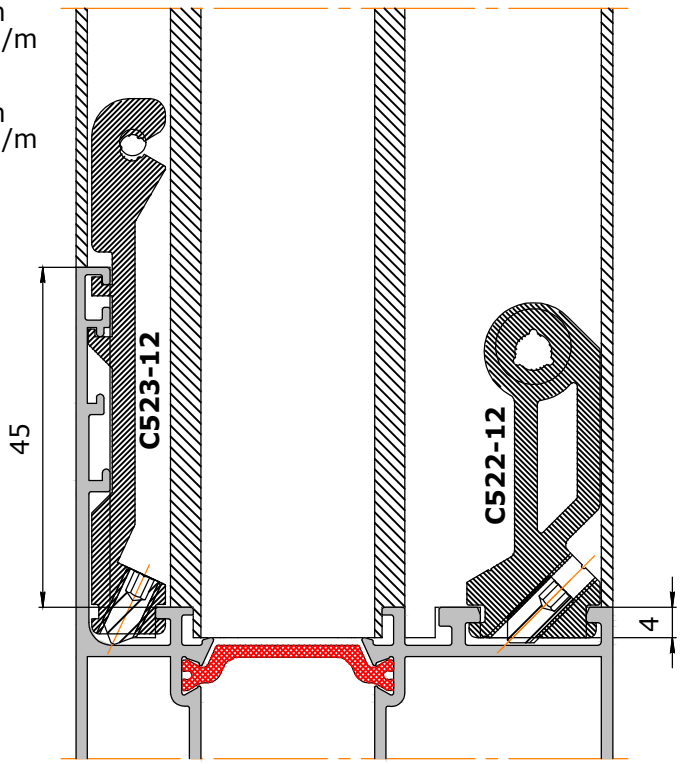
screw M6 with countersunk head — min — 4.5 N/m, max — 6 N/m

screw M5 — min — 2 N/m, max — 2.5 N/m

C553-12

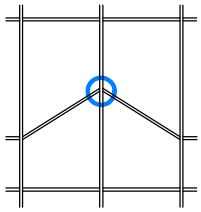
screw M5 — min — 2 N/m, max — 2.5 N/m



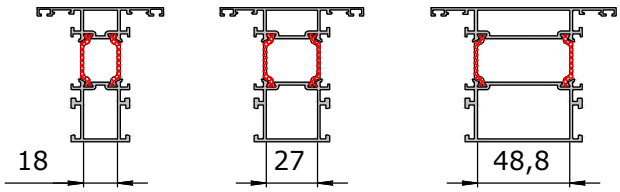


To prevent moisture leakage, seal the joints between the imposts and the frame with a neutral sealant. Classic (complex) milling is preferred when machining the imposts.

T-joint assembly: installation of inclined impost external mullion flange 18 mm



P71-402 **P71-403** **P71-407**



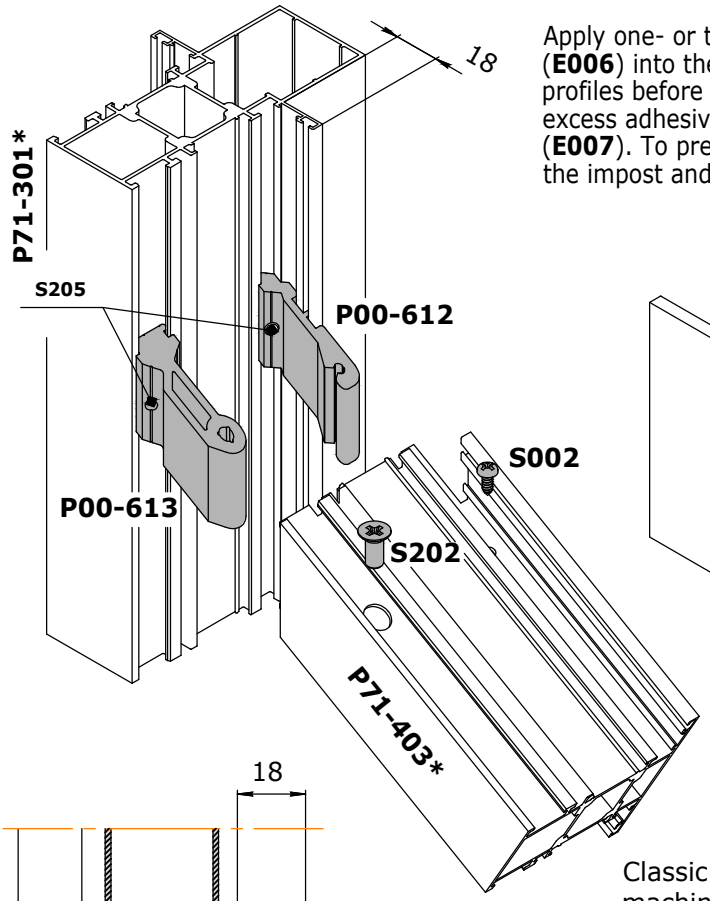
Screw torque in the embedded part

P00-613

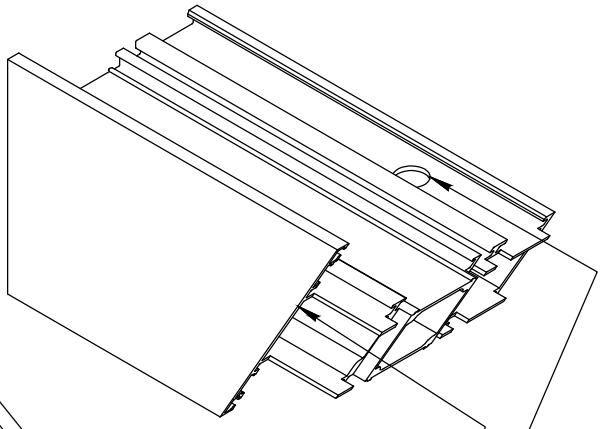
S202 screw M6x14 with countersunk head	min — 4.5 N/m max — 6 N/m
S205 set screw M5	min — 2 N/m max — 2.5 N/m

P00-612

S205 set screw M5	min — 2 N/m max — 2.5 N/m

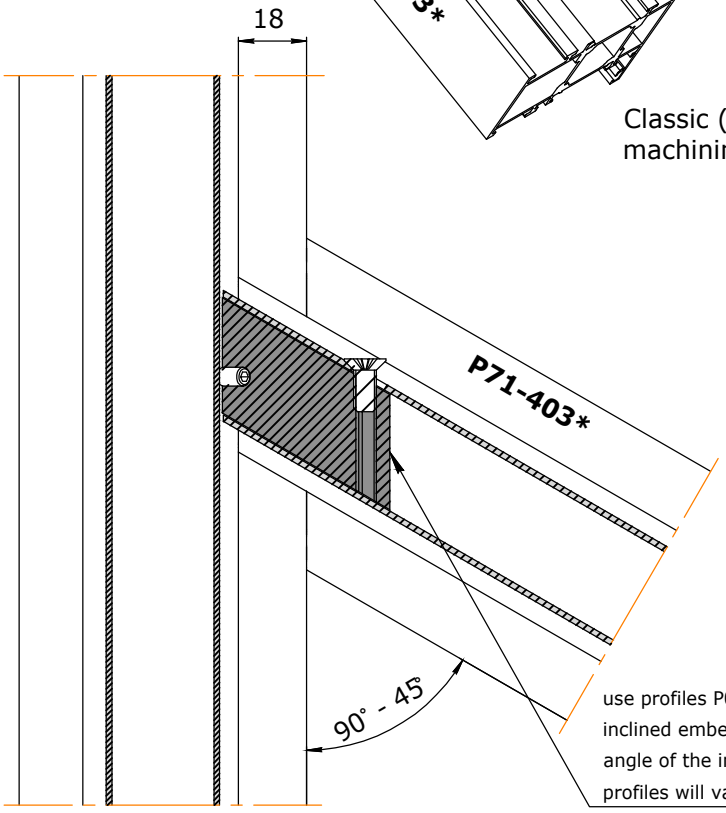


Apply one- or two-component aluminium bonding adhesive (**E006**) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (**E007**). To prevent moisture leakage, seal the joint between the impost and the mullion with a neutral sealant.



milling of the impost and drilling of the holes depends on the inclination angle

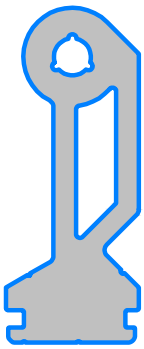
Classic (complex) milling is preferred when machining the imposts.



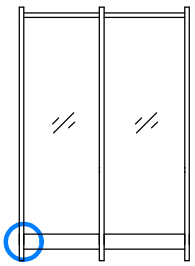
P00-612
impost block external



P00-613
Impost block internal

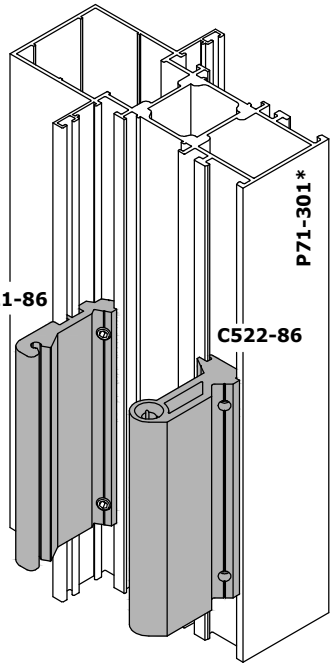


use profiles P00-612 and P00-613 for the manufacture of inclined embedded parts. Depending on the inclination angle of the impost, the angle for cutting the block profiles will vary.



T-joint assembly: installation of base P71-212

Apply one- or two-component aluminium bonding adhesive (**E006**) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (**E007**).
To prevent moisture leakage along the sash, seal the joint between the base and the mullion with a neutral sealant.



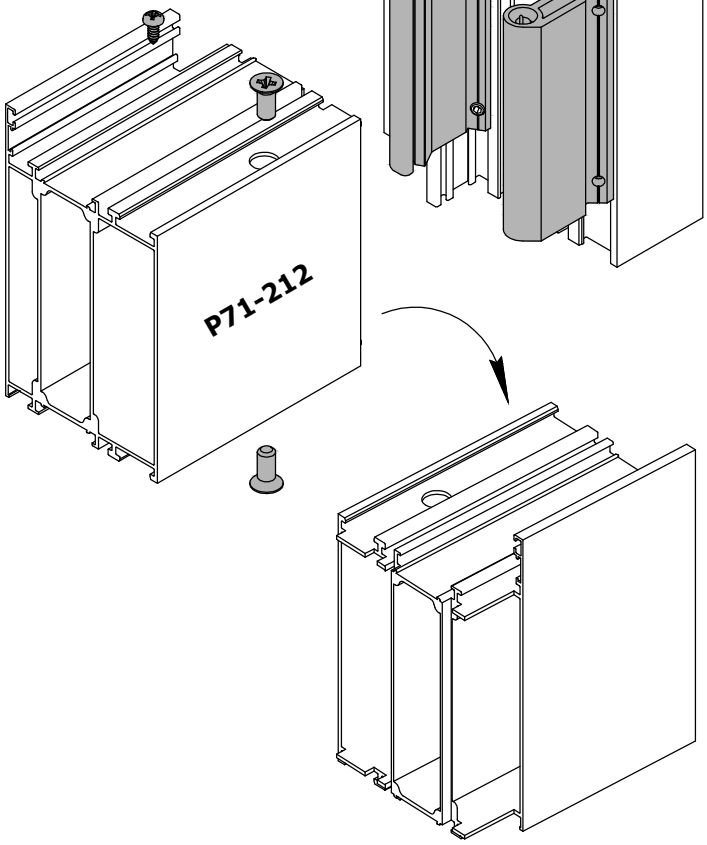
Screw torque in the embedded part

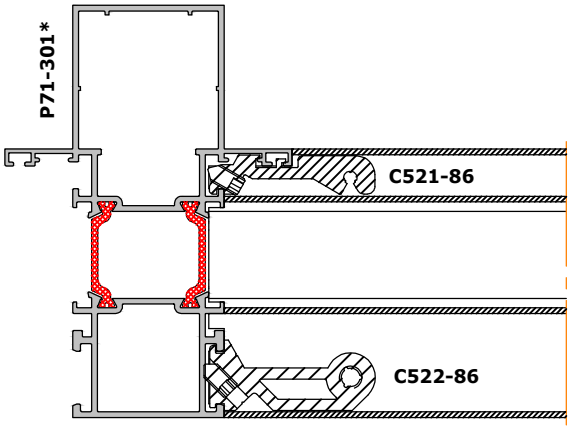
C522-86

screw M6 with countersunk head	min — 4.5 N/m max — 6 N/m
screw M5	min — 2 N/m max — 2.5 N/m

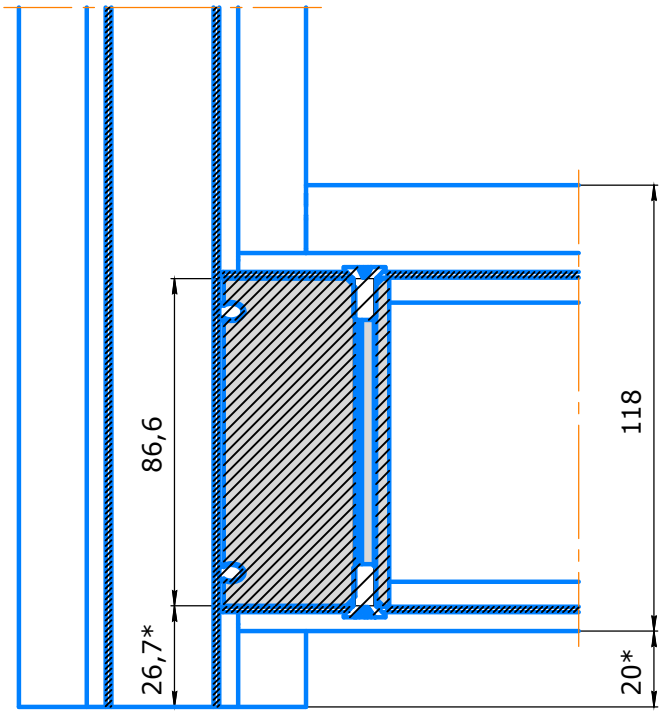
C521-86

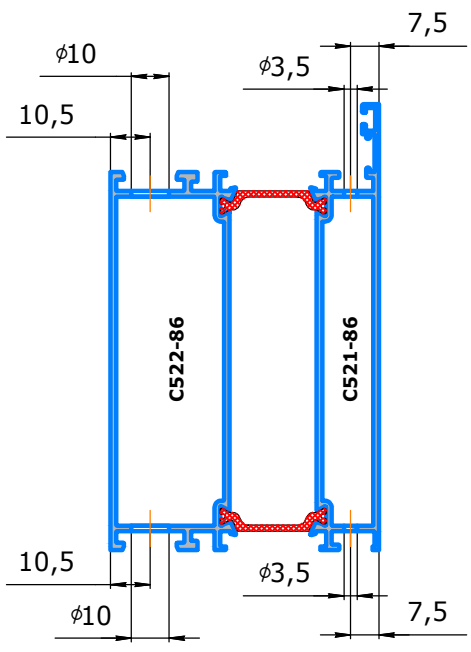
screw M5	min — 2 N/m max — 2.5 N/m



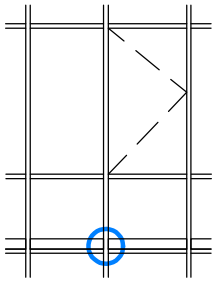


Classic (complex) milling is preferred when machining the imposts.
Carry out the face machining operation in the same way as for P71-403

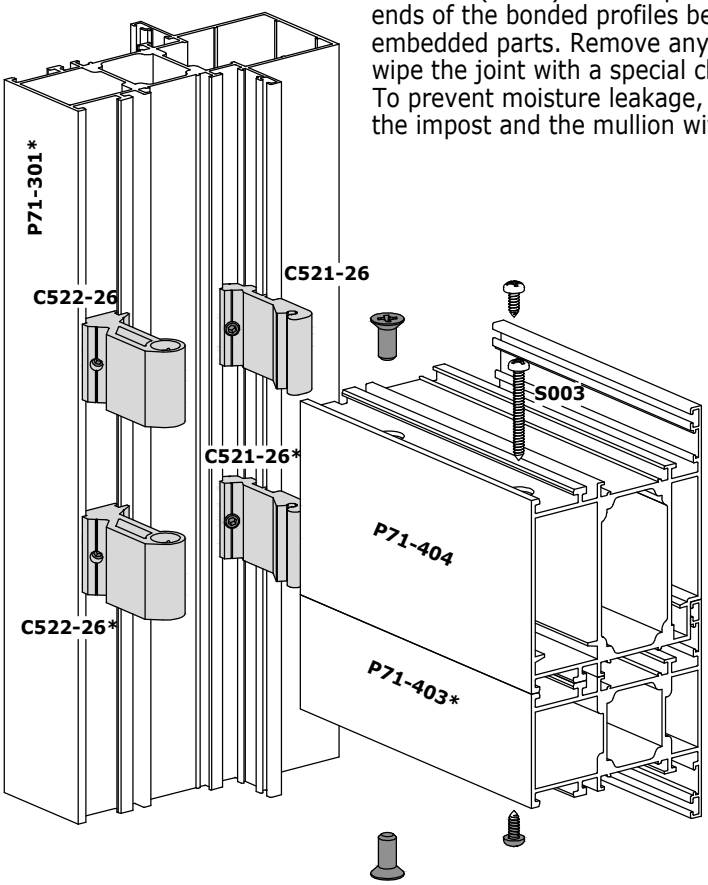




T-joint assembly: installation of expander impost P71-404



Apply one- or two-component aluminium bonding adhesive (**E006**) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (**E007**).
To prevent moisture leakage, seal the joint between the impost and the mullion with a neutral sealant.



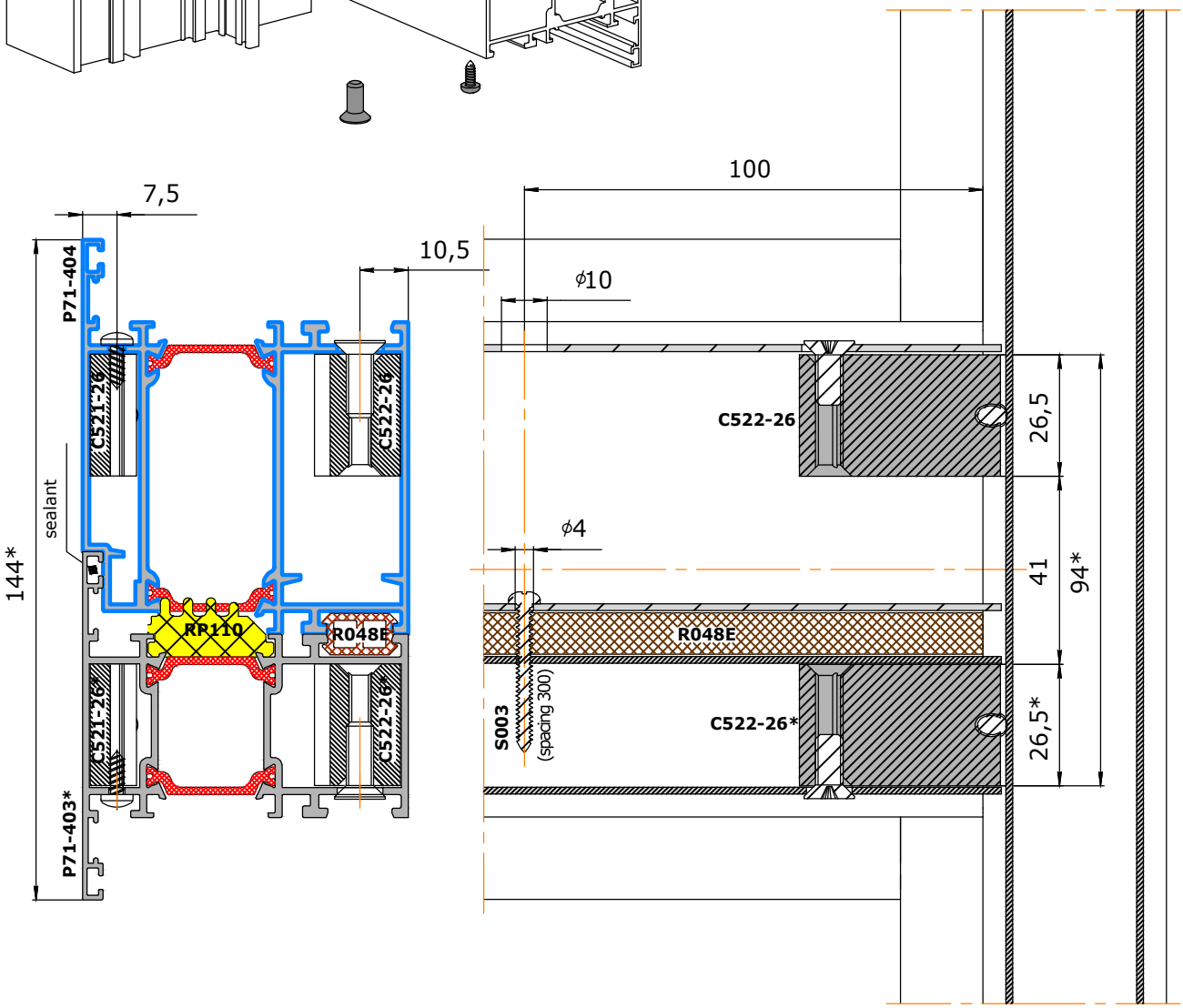
Screw torque in the embedded part

C522-26

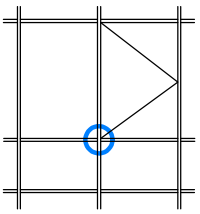
screw M6 with countersunk head	min — 4.5 N/m max — 6 N/m
screw M5	min — 2 N/m max — 2.5 N/m

C521-26

screw M5	min — 2 N/m max — 2.5 N/m



T-joint assembly: installation of reinforced impost P71-301



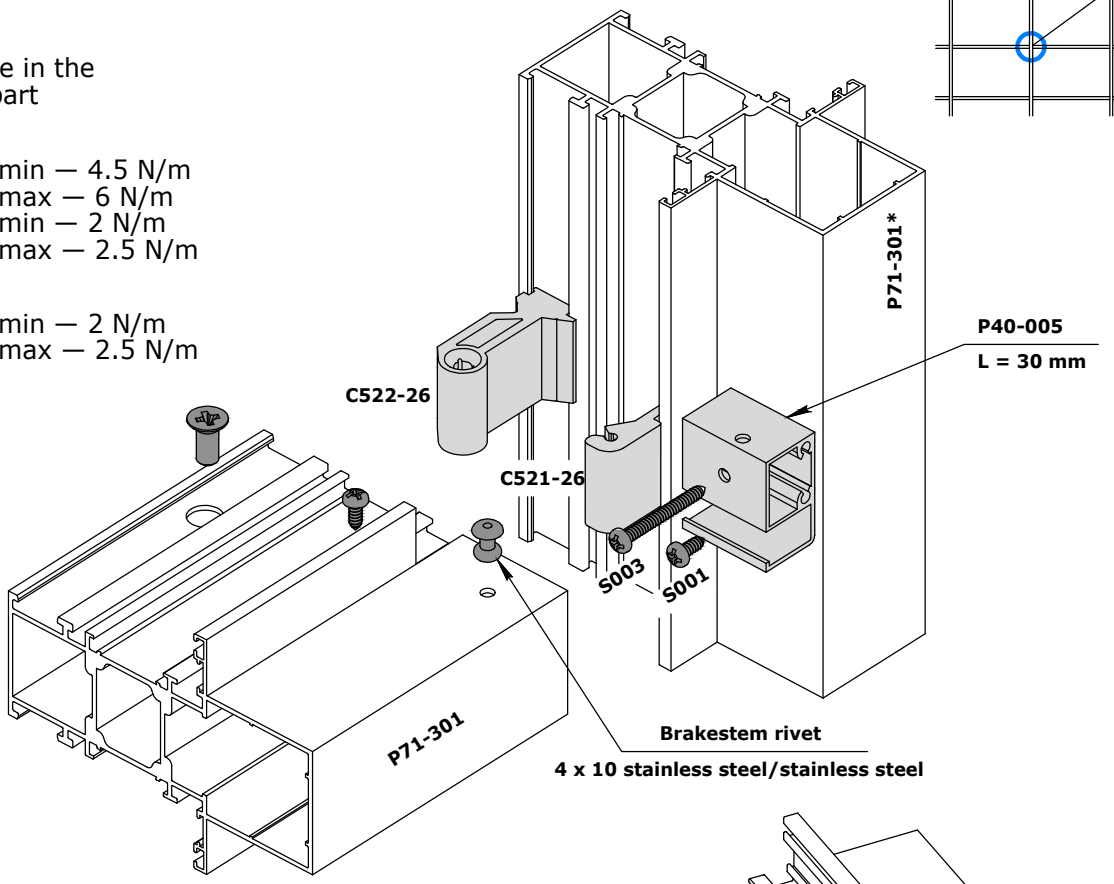
Screw torque in the embedded part

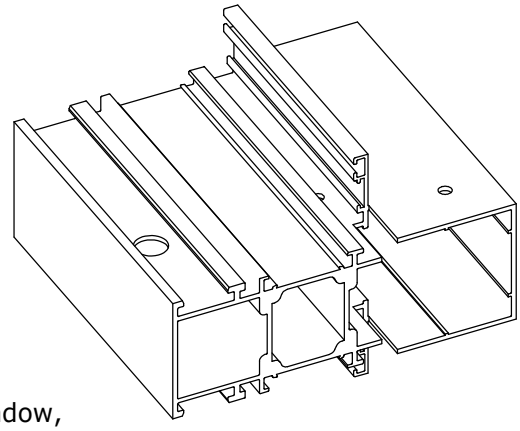
C522-26

screw M6 with countersunk head — min — 4.5 N/m, max — 6 N/m
screw M5 — min — 2 N/m, max — 2.5 N/m

C521-26

screw M5 — min — 2 N/m, max — 2.5 N/m

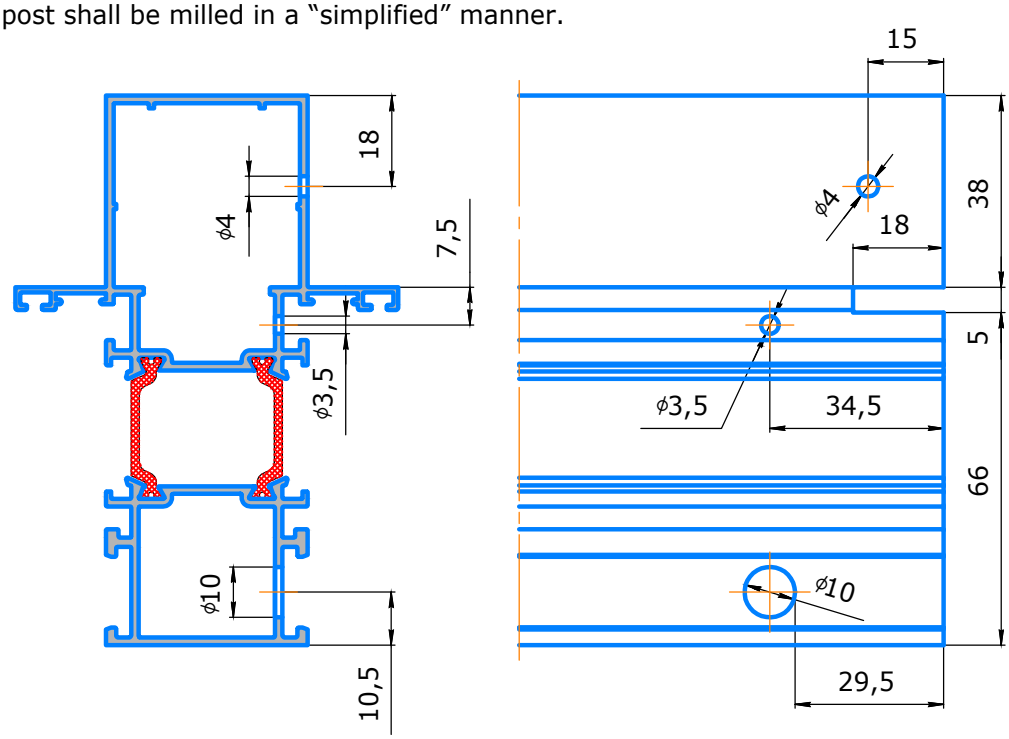


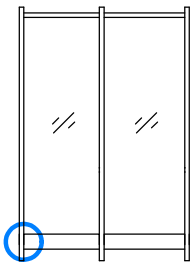


Apply one- or two-component aluminium bonding adhesive (**E006**) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (**E007**).
To prevent moisture leakage, seal the joint between the impost and the mullion with a neutral sealant.

Machining the imposts with an external pillar

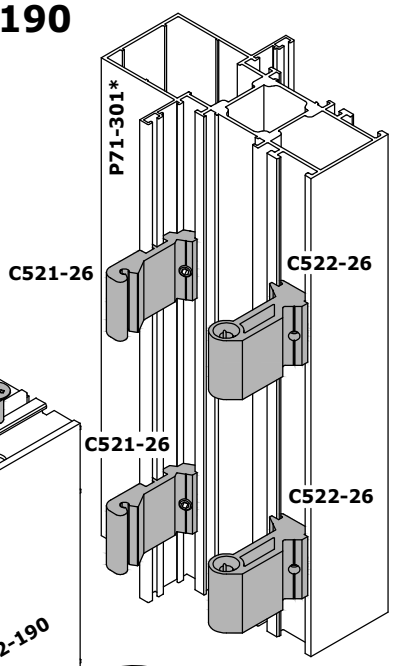
In order to install a reinforced impost in a stained-glass window, the impost shall be milled in a "simplified" manner.





T-joint assembly: installation of base P71-212-190

Apply one- or two-component aluminium bonding adhesive (**E006**) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (**E007**).
To prevent moisture leakage along the sash, seal the joint between the base and the mullion with a neutral sealant.



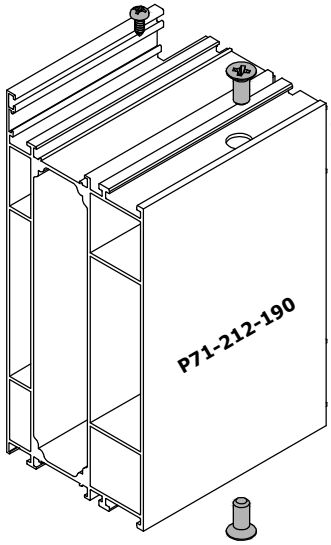
Screw torque in the embedded part

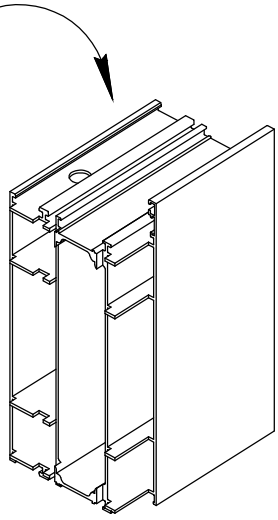
C522-26

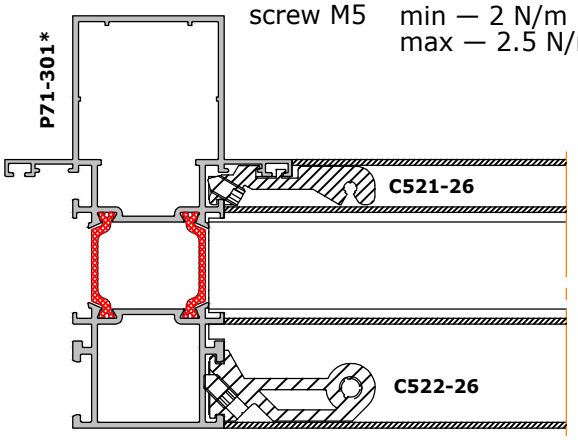
screw M6 with countersunk head	min — 4.5 N/m max — 6 N/m
screw M5	min — 2 N/m max — 2.5 N/m

C521-26

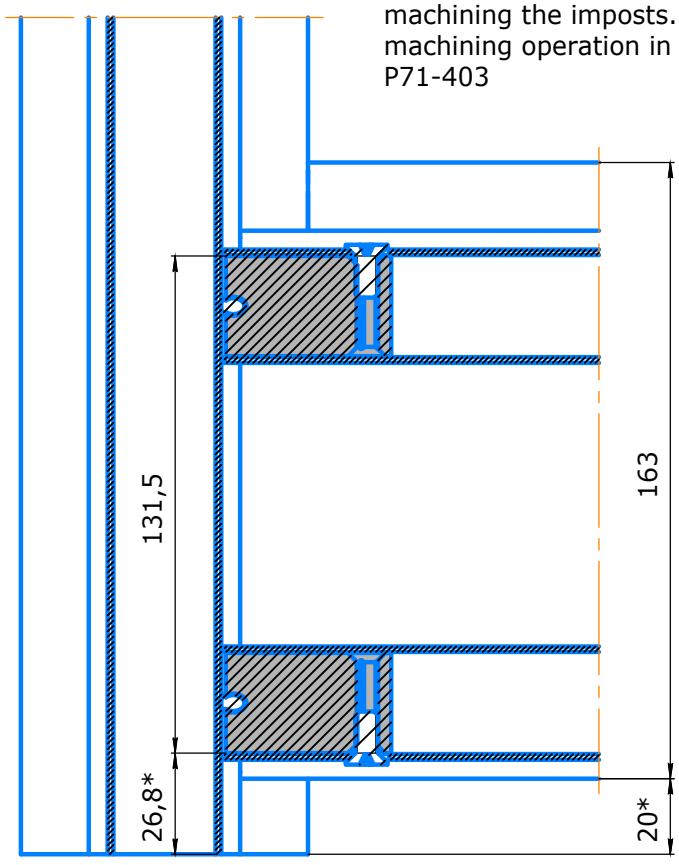
screw M5	min — 2 N/m max — 2.5 N/m

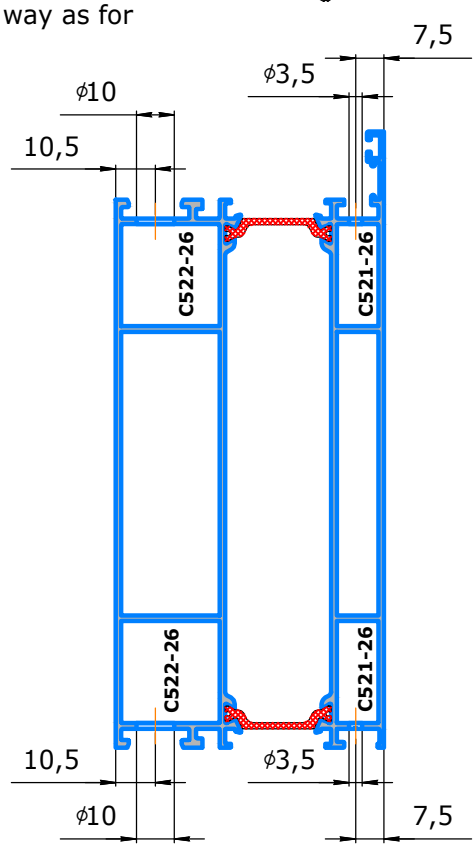




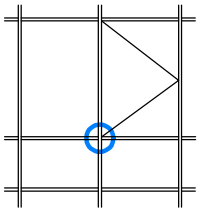


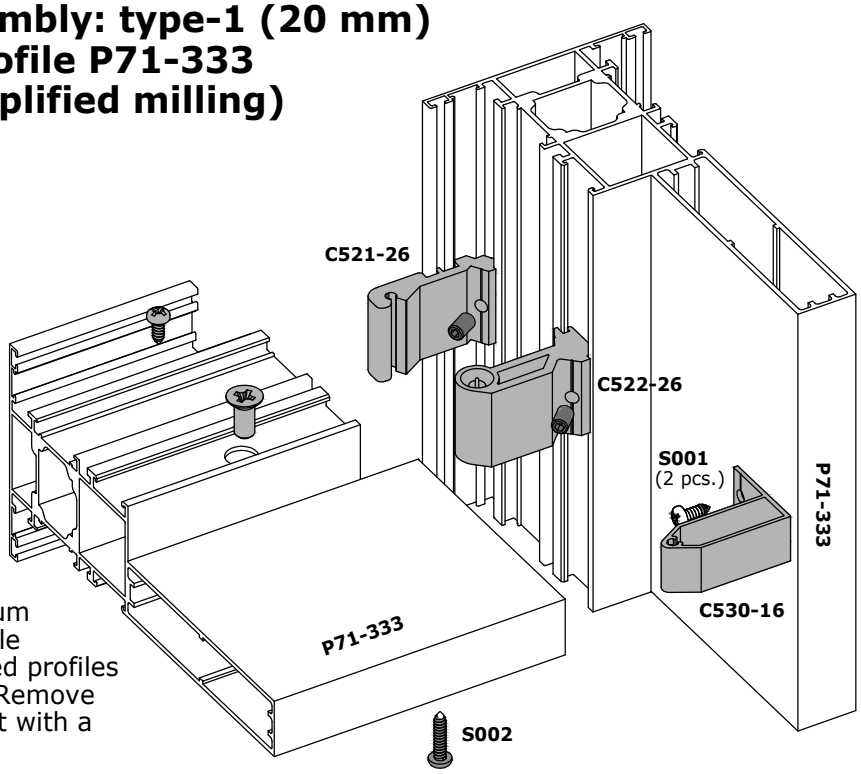
Classic (complex) milling is preferred when machining the imposts. Carry out the face machining operation in the same way as for P71-403



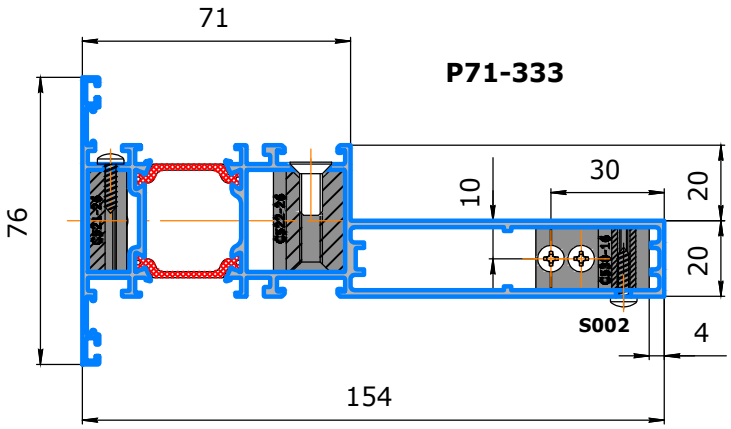


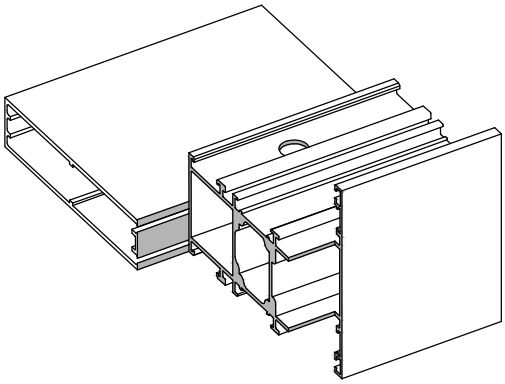
T-joint assembly: type-1 (20 mm) profile P71-333 (simplified milling)

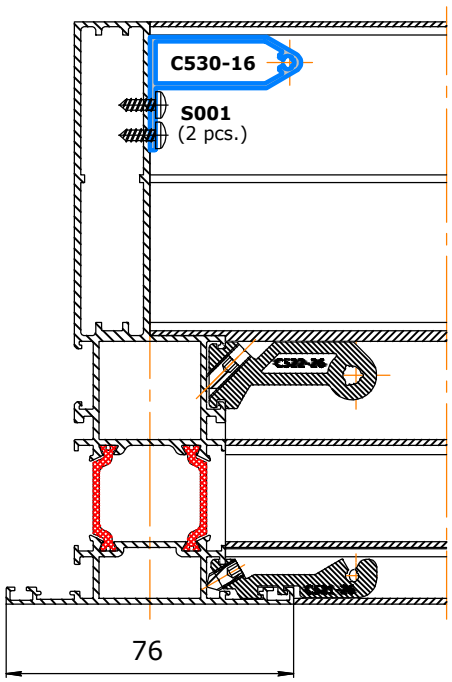


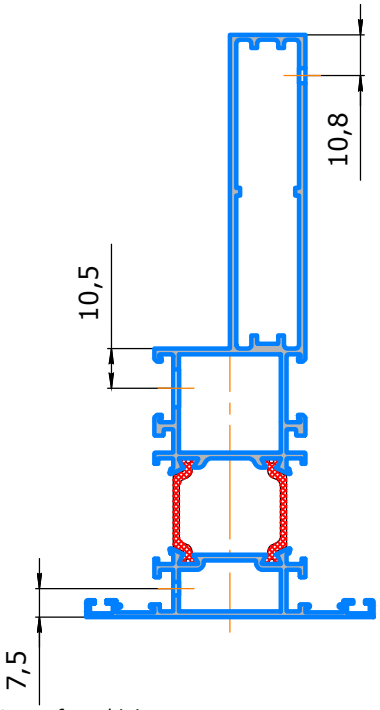


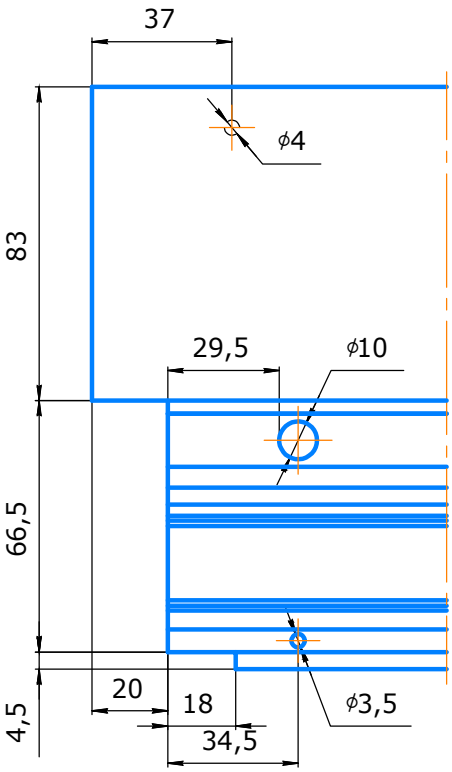
Apply one- or two-component aluminium bonding adhesive (E006) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (E007).



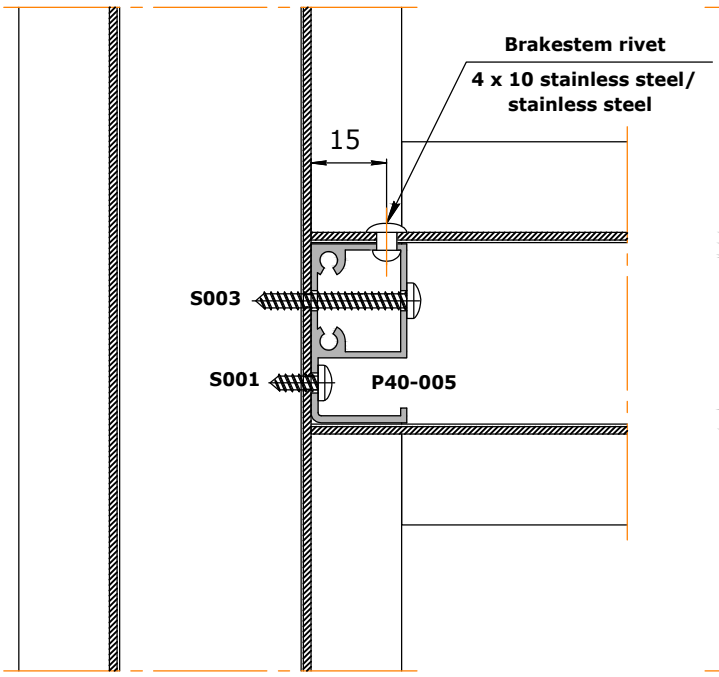


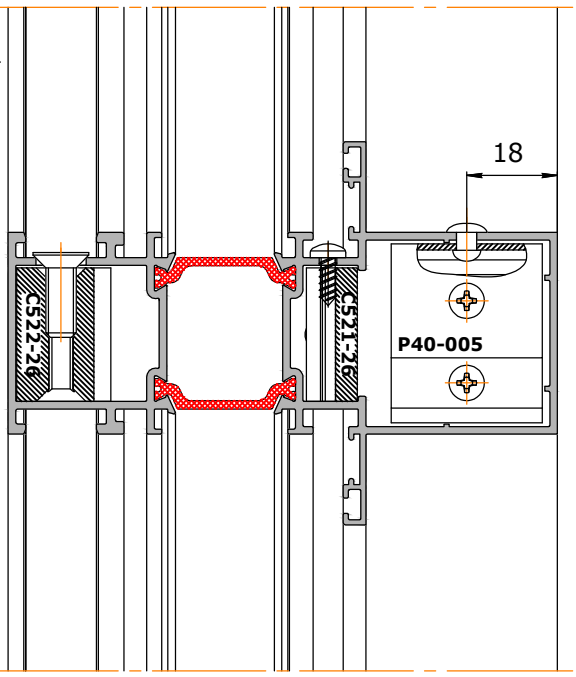


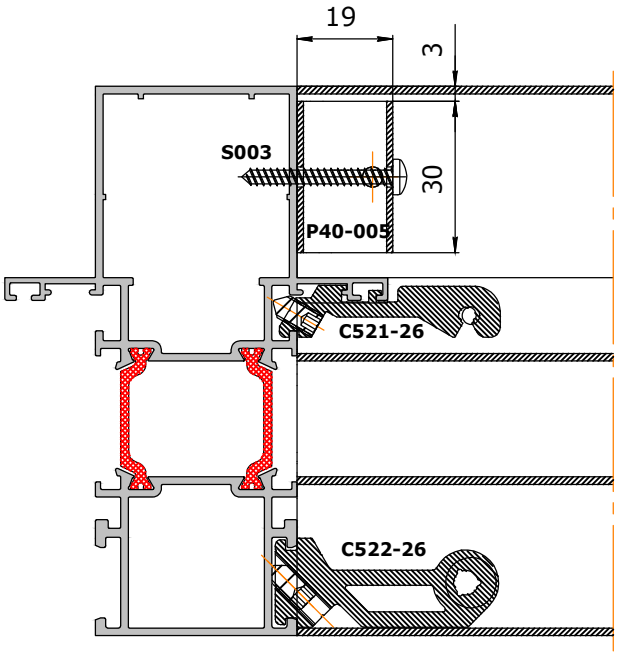


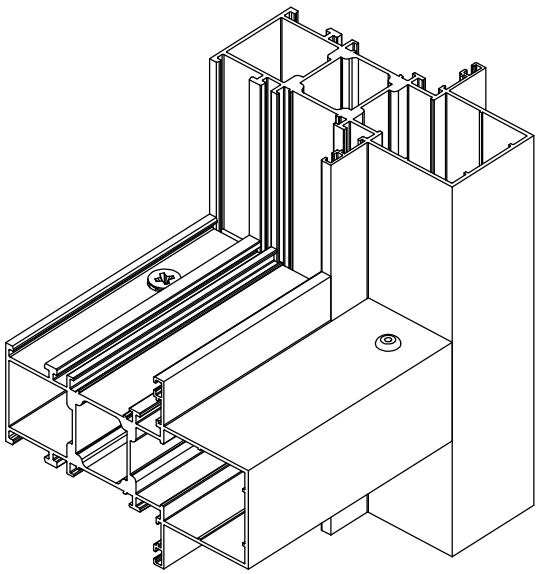


A machining centre or other equipment suitable for this type of machining is required to implement this sub-assembly.

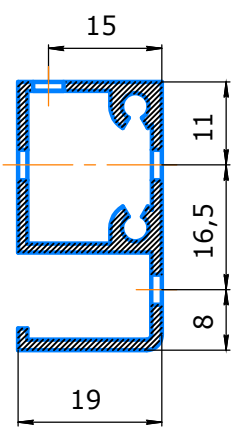


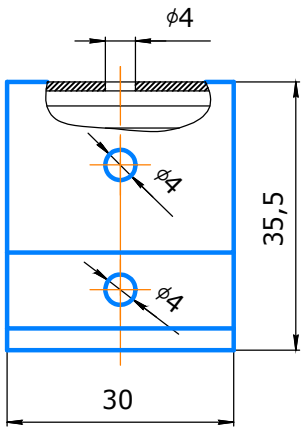


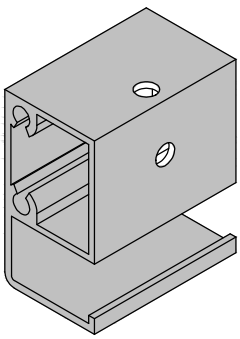


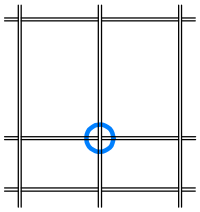


Machining of profile P40-005 for manufacture of the embedded part

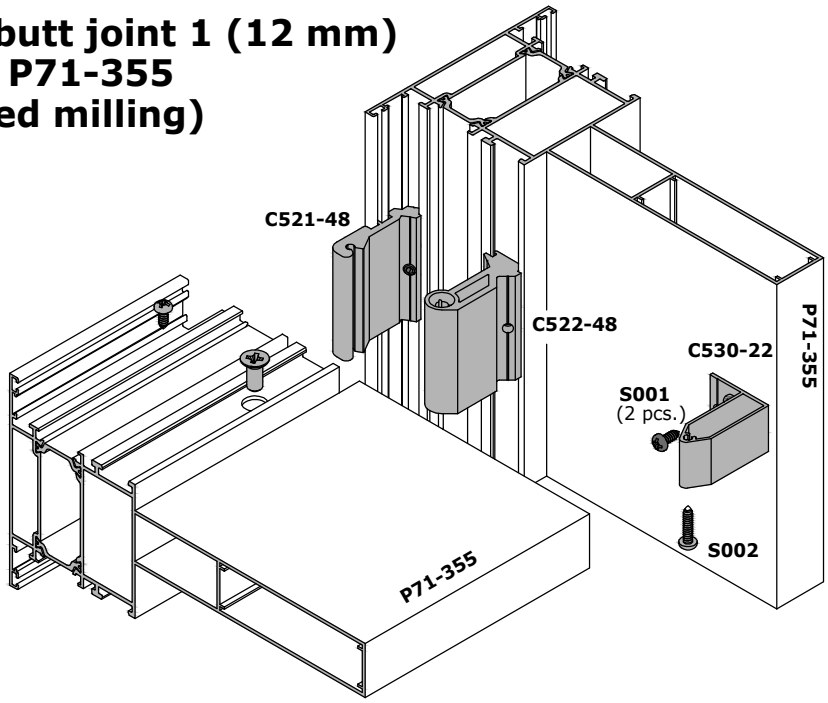




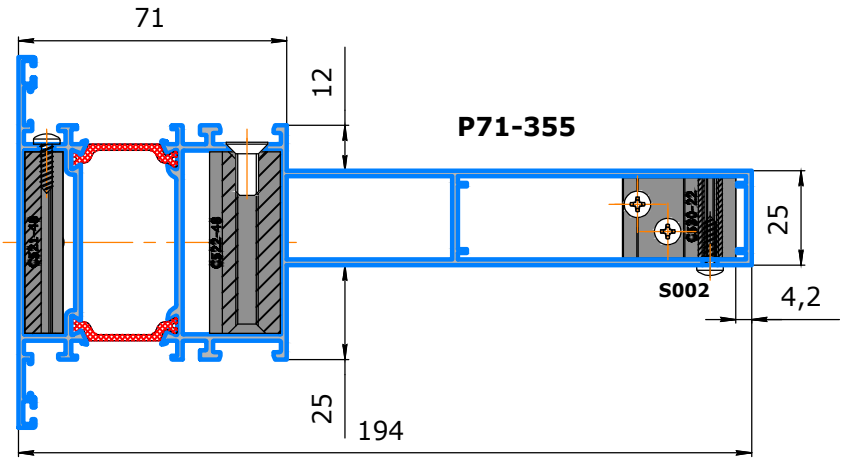


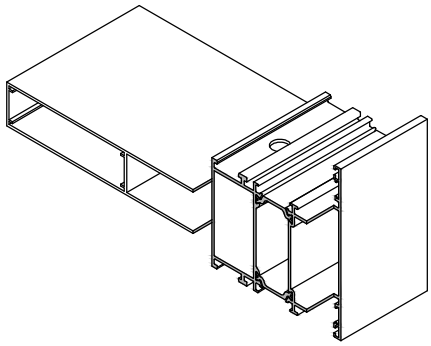


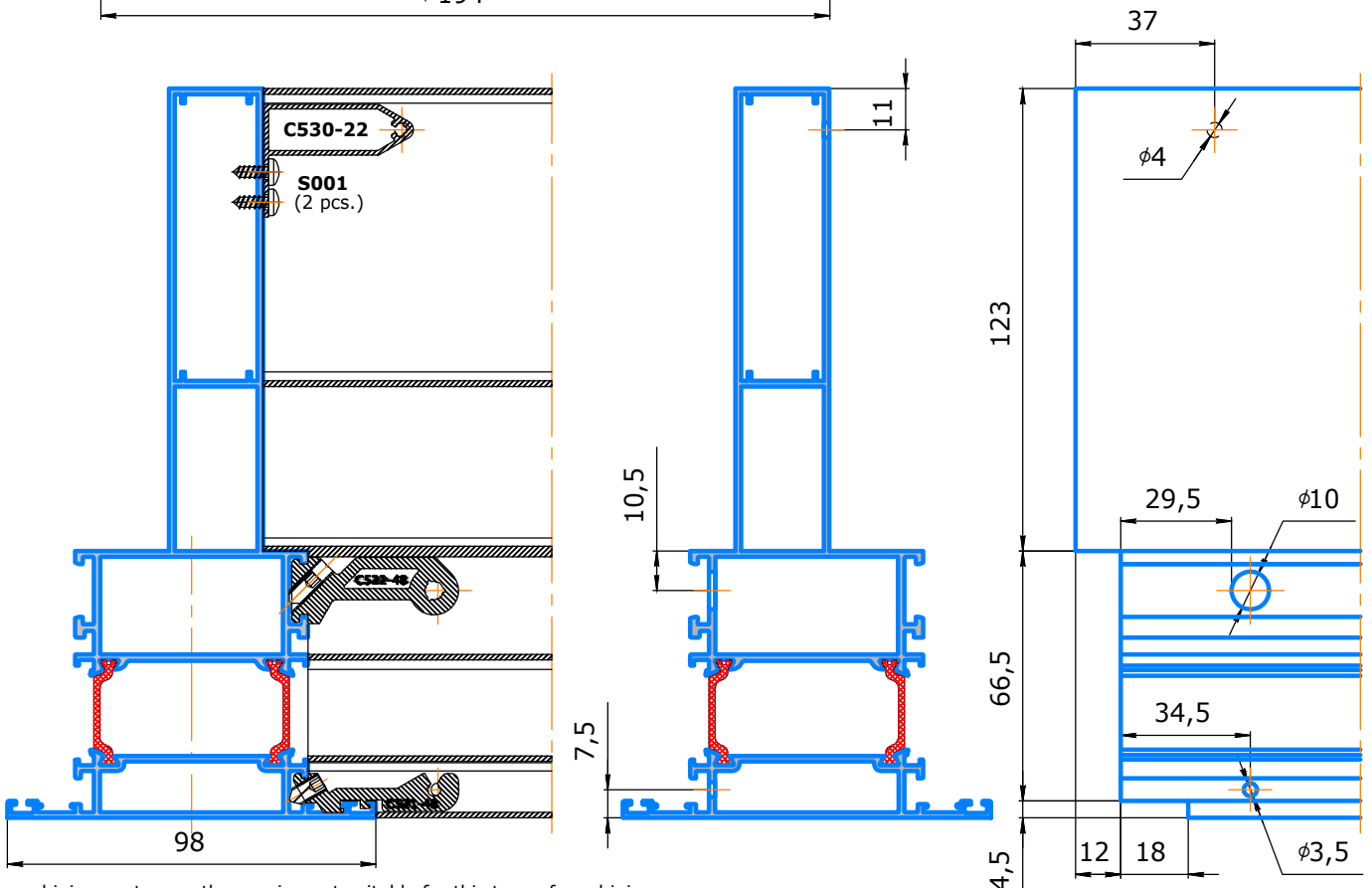
T-joint assembly: butt joint 1 (12 mm) profile P71-355 (simplified milling)



Apply one- or two-component aluminium bonding adhesive (E006) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (E007).

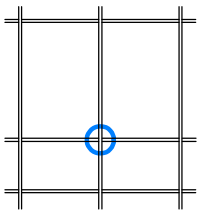


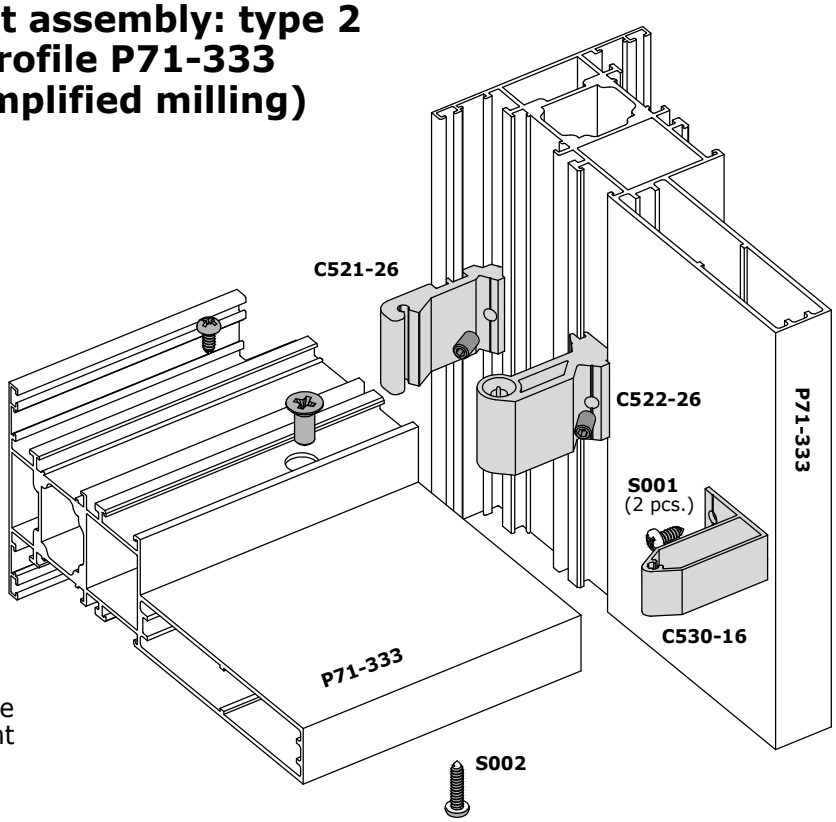




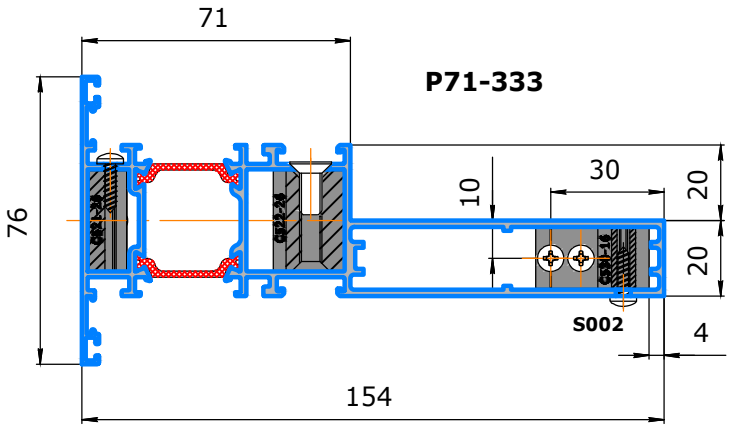
A machining centre or other equipment suitable for this type of machining is required to implement this sub-assembly.

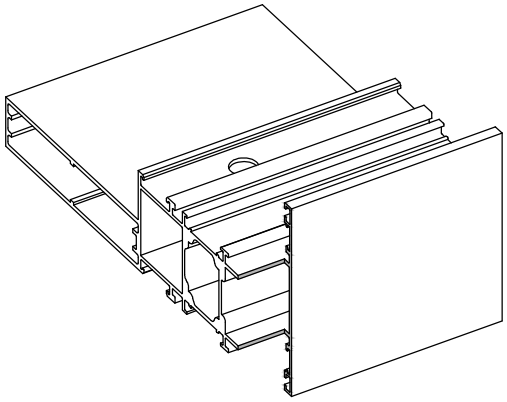
T-joint assembly: type 2 profile P71-333 (simplified milling)

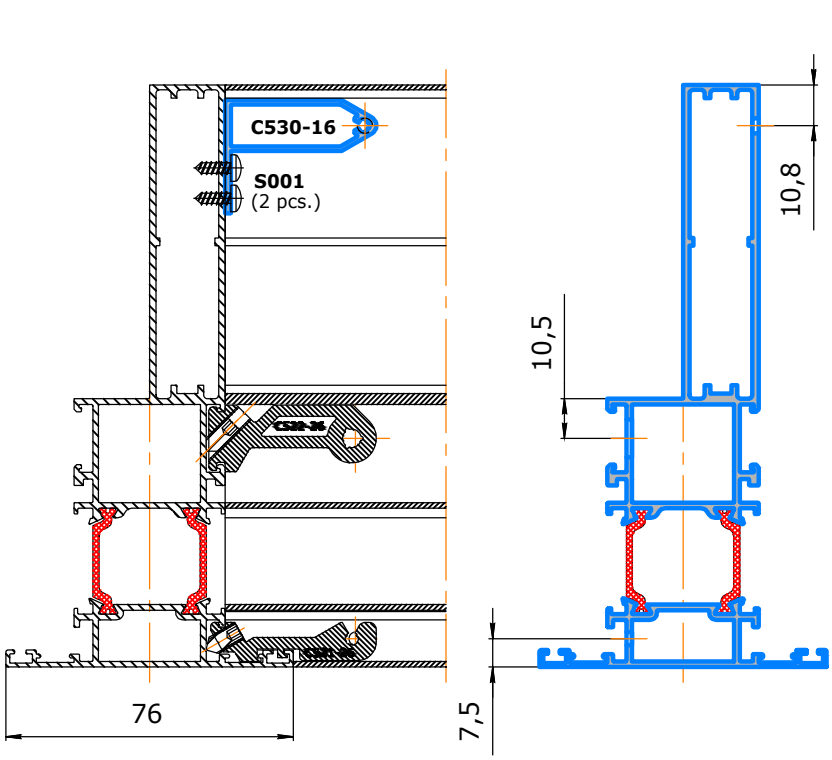




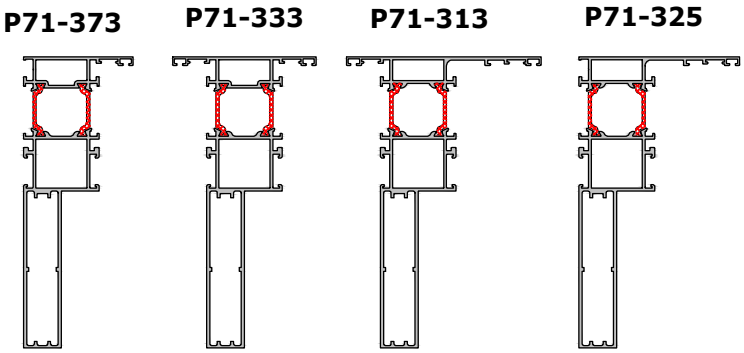
Apply one- or two-component aluminium bonding adhesive (E006) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (E007).

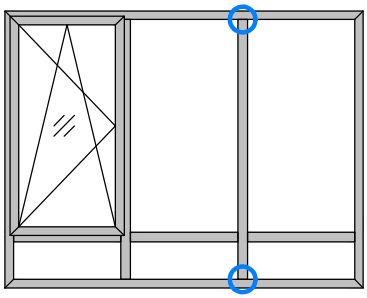




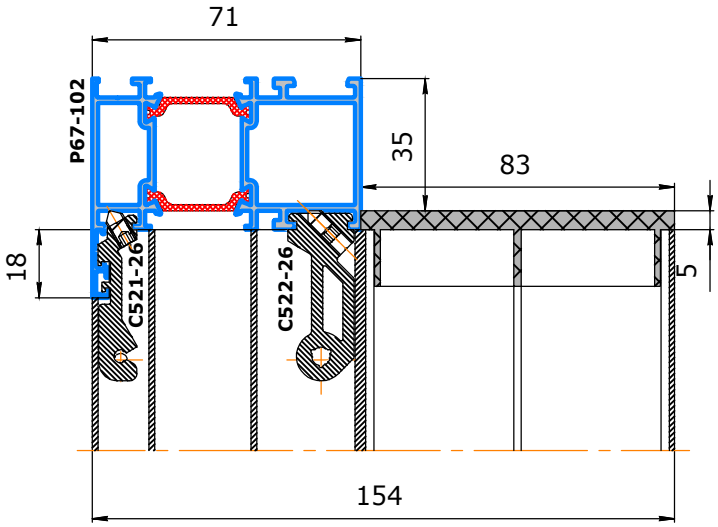


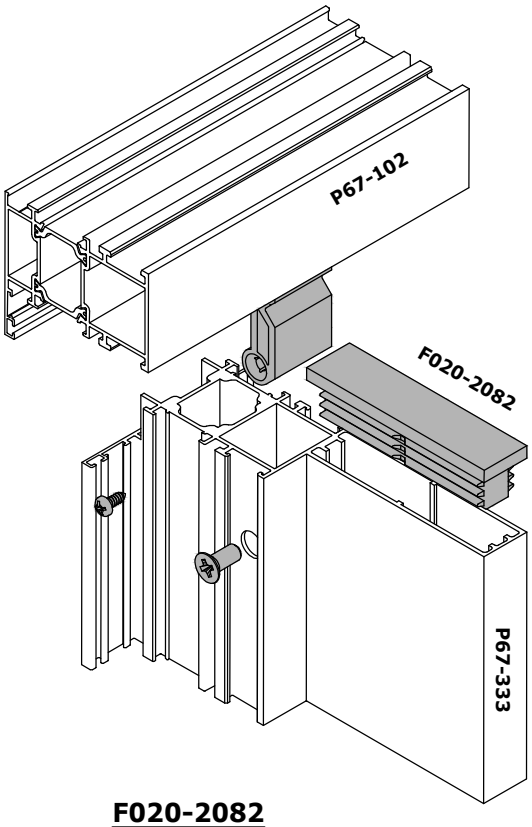
T-joint assembly: frame — wing 18 mm installation of caps on the inward-reinforced impost



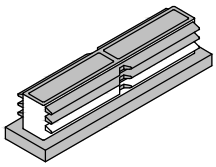


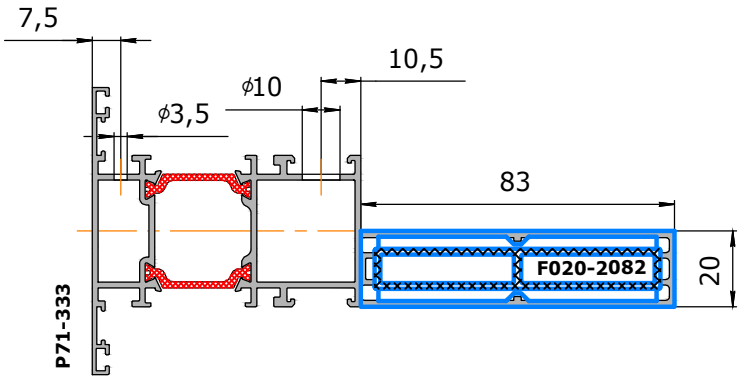
Apply one- or two-component aluminium bonding adhesive (E006) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (E007).



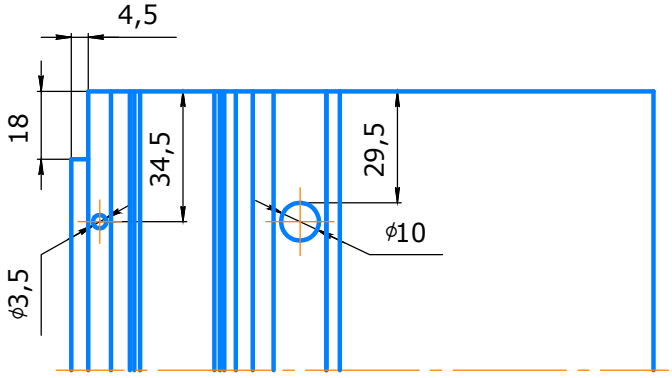


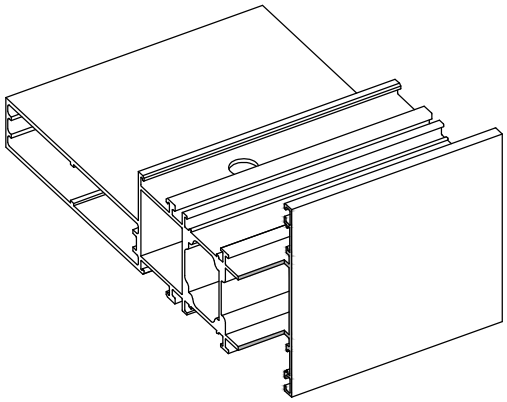
F020-2082
plastic cap
20 x 82 mm



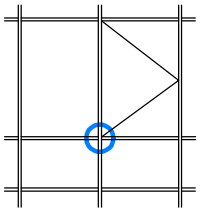


Additional adhesive fixation is recommended.

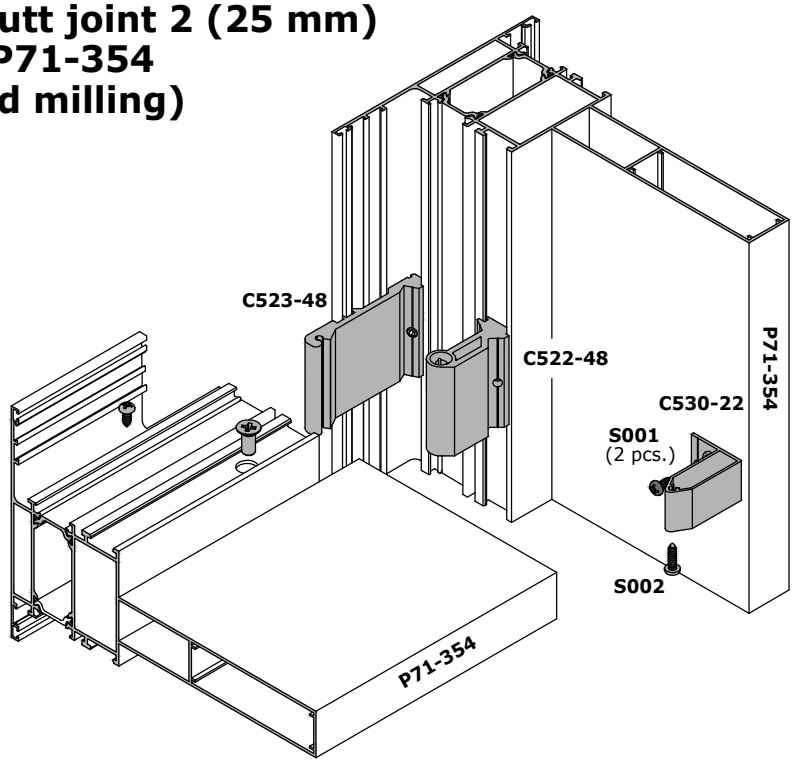


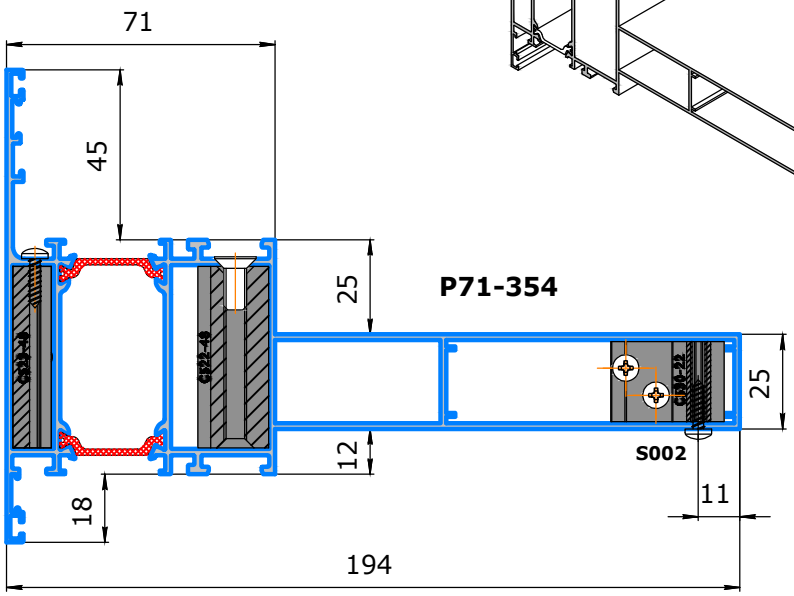


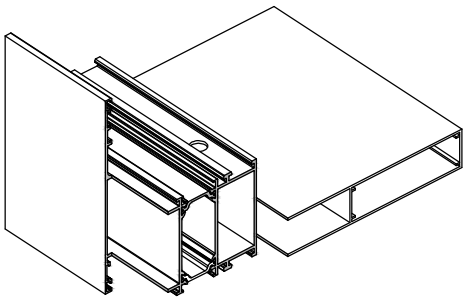
T-joint assembly: butt joint 2 (25 mm) profile P71-354 (simplified milling)

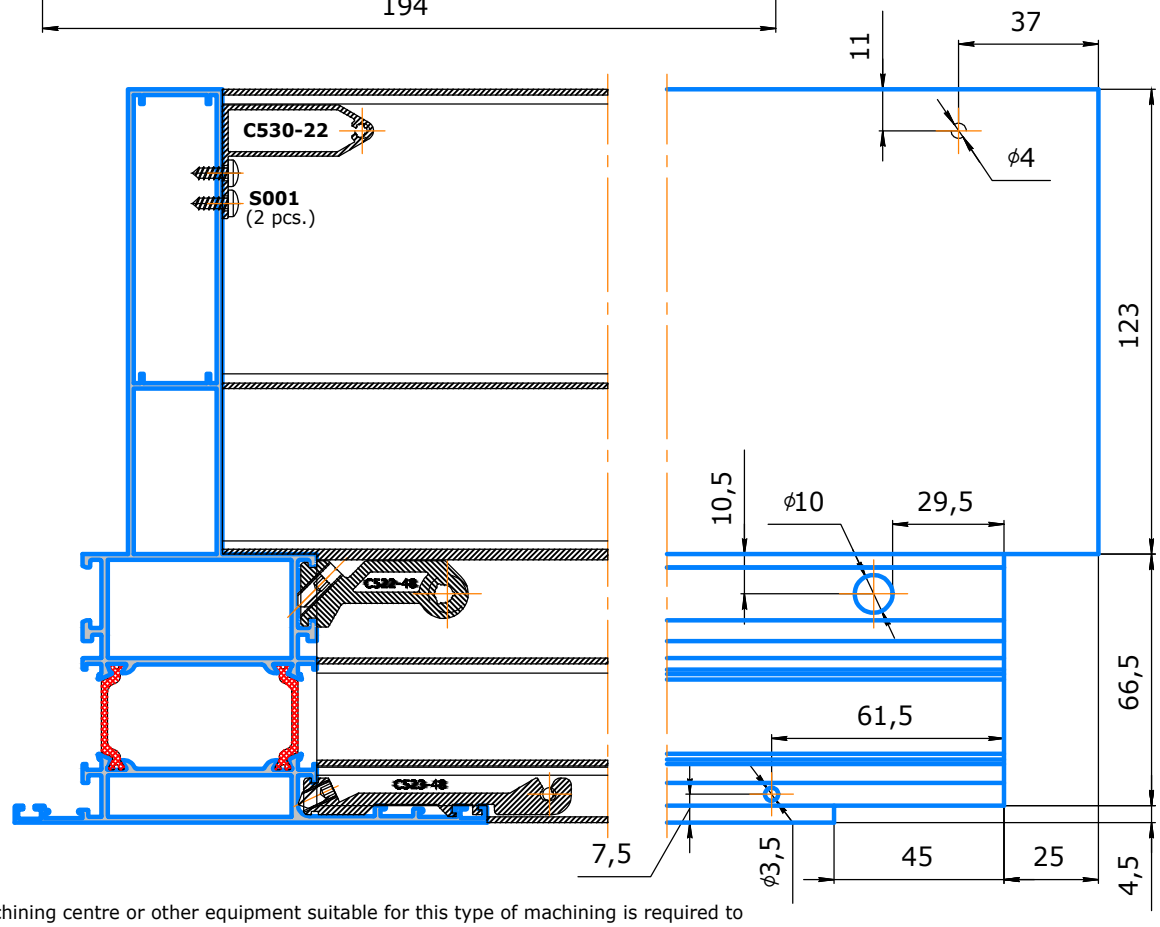


Apply one- or two-component aluminium bonding adhesive (E006) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (E007).

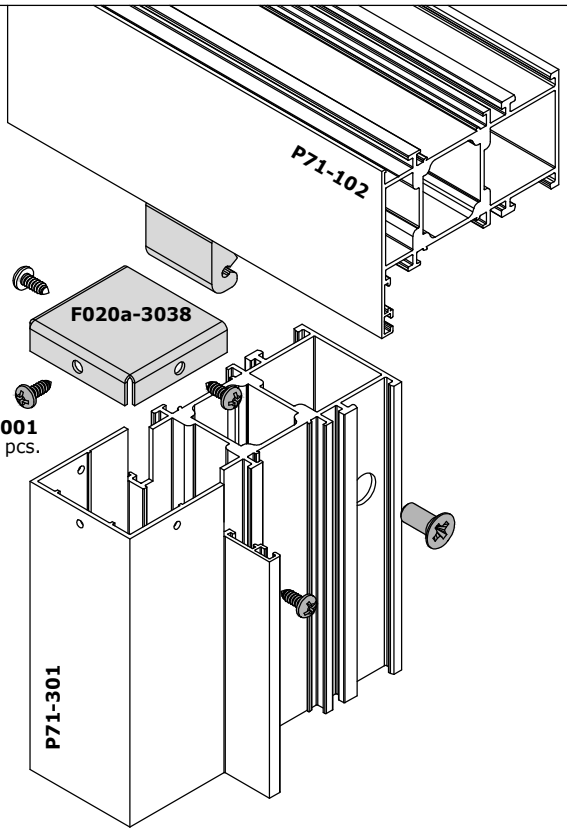




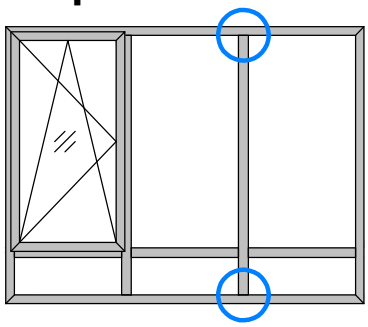




A machining centre or other equipment suitable for this type of machining is required to implement this sub-assembly.



T-joint assembly: installation of caps on the outward-reinforced impost



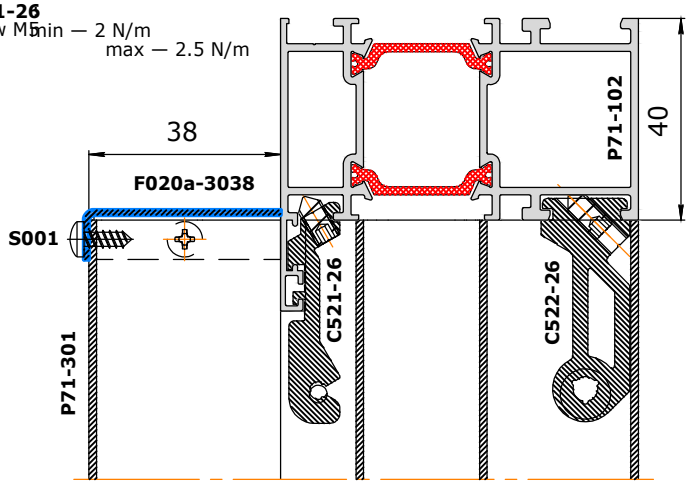
Screw torque in the embedded part

C522-26

screw M6 with countersunk head — min — 4.5 N/m, max — 6 N/m
screw M5 — min — 2 N/m, max — 2.5 N/m

C521-26

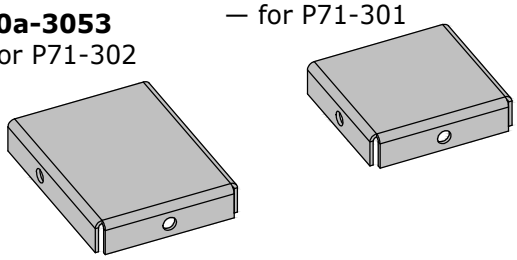
screw M5 — min — 2 N/m, max — 2.5 N/m



Mullion end caps (aluminium)

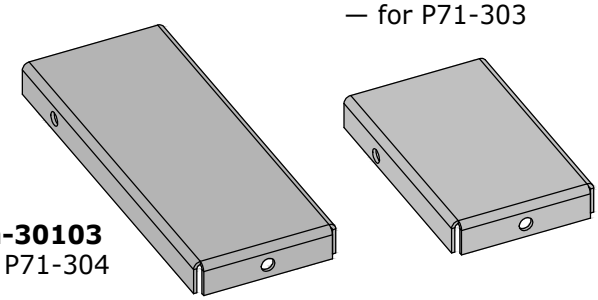
F020a-3053 — for P71-302

F020a-3038 — for P71-301

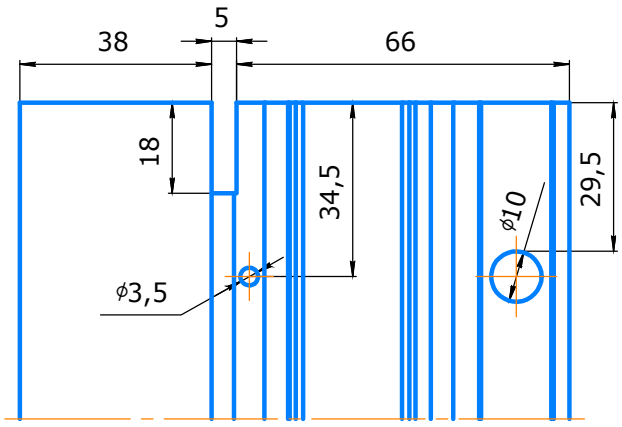


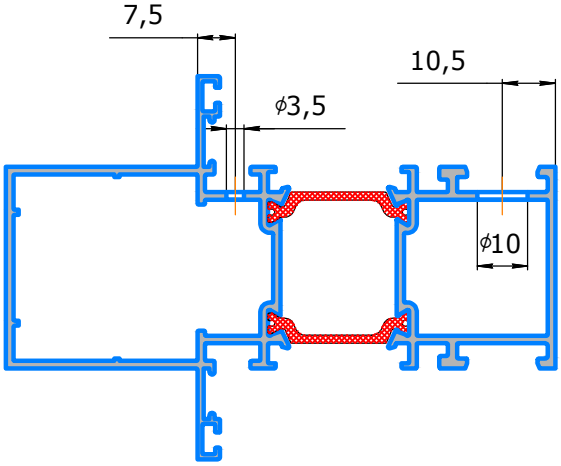
F020a-3073 — for P71-303

F020a-30103 — for P71-304



In order to install a reinforced impost in a stained-glass window, the impost shall be milled in a "simplified" manner.

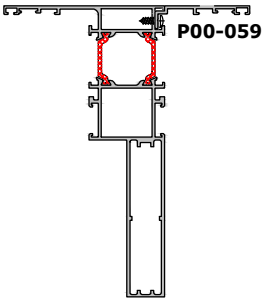




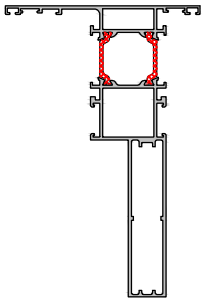
Apply one- or two-component aluminium bonding adhesive (**E006**) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (**E007**). To prevent moisture leakage, seal the joint between the impost and the mullion with a neutral sealant.

T-joint assembly: frame — wing 45 mm installation of caps on the inward-reinforced impost

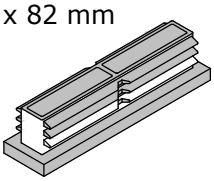
P71-325

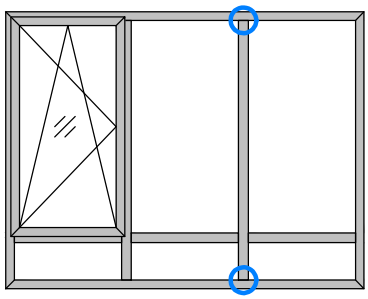


P71-313



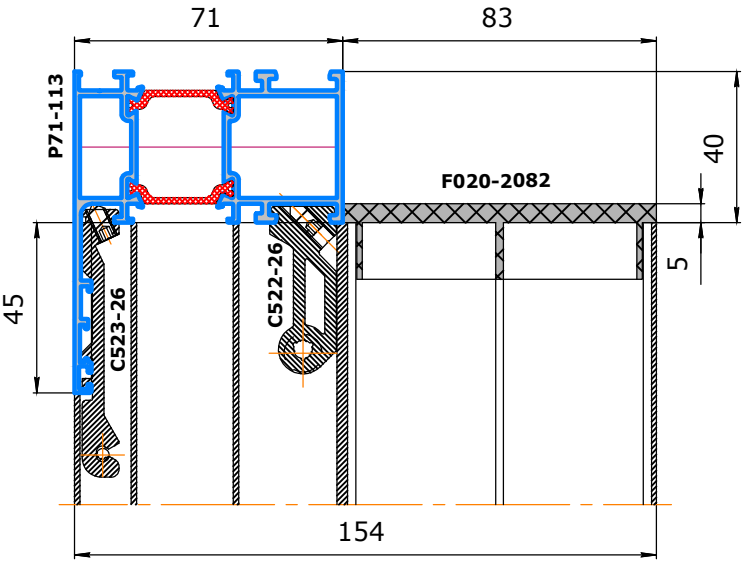
F020-2082
plastic cap
20 x 82 mm

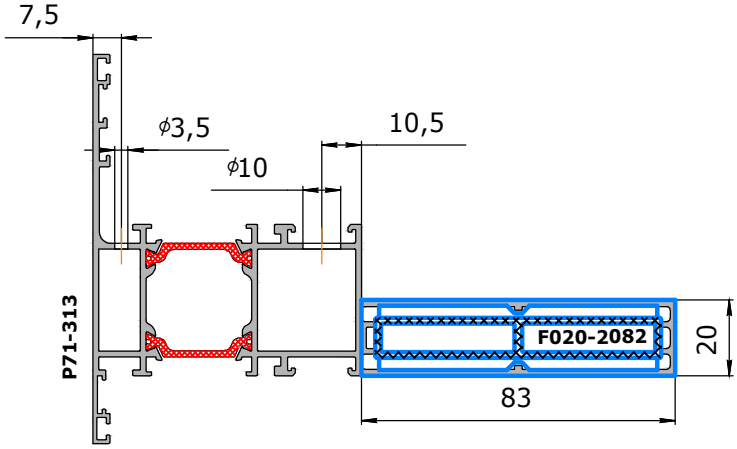


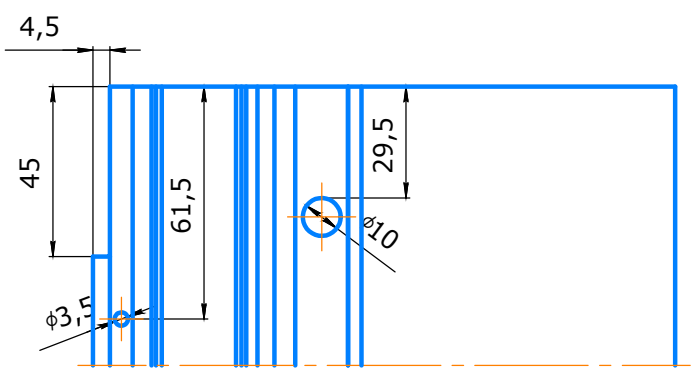


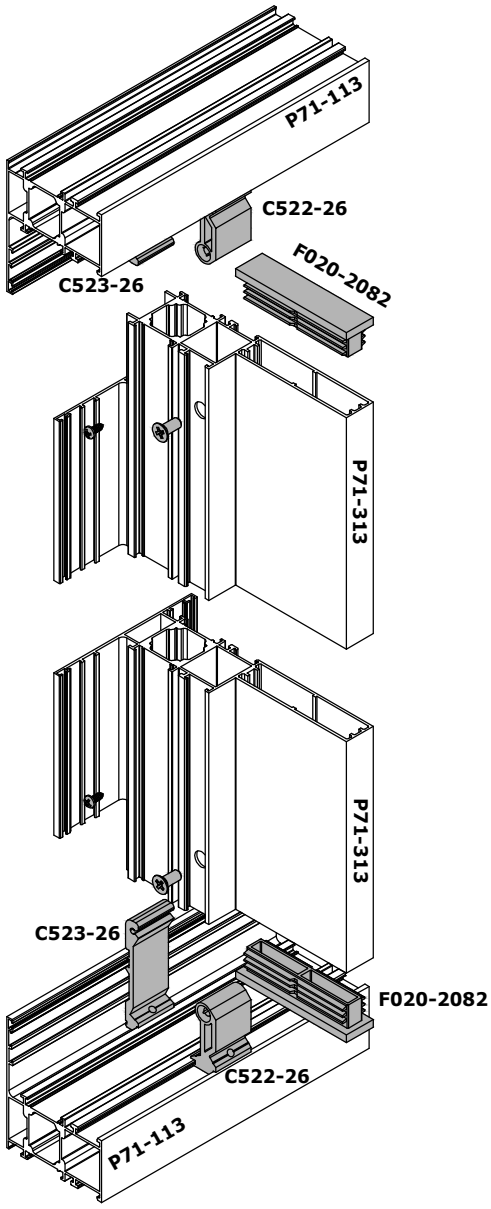
Additional adhesive fixation is recommended.

Apply one- or two-component aluminium bonding adhesive (E006) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (E007).

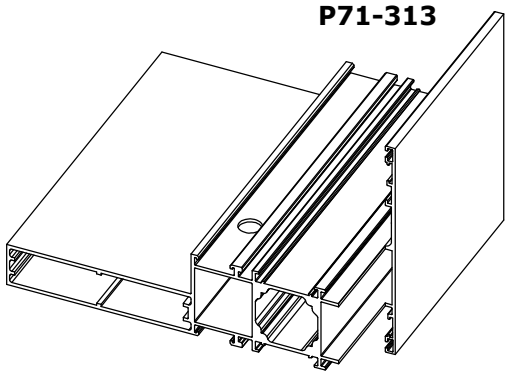


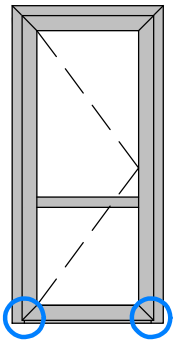


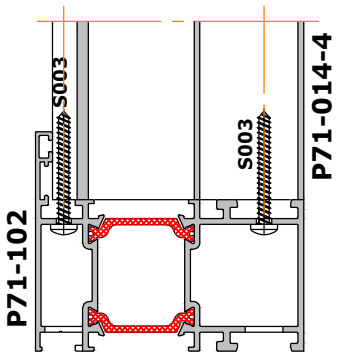


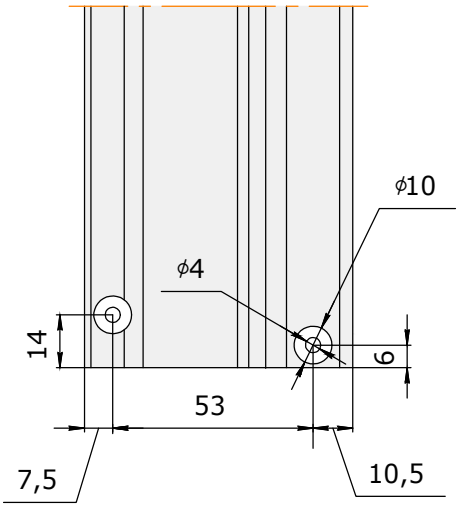


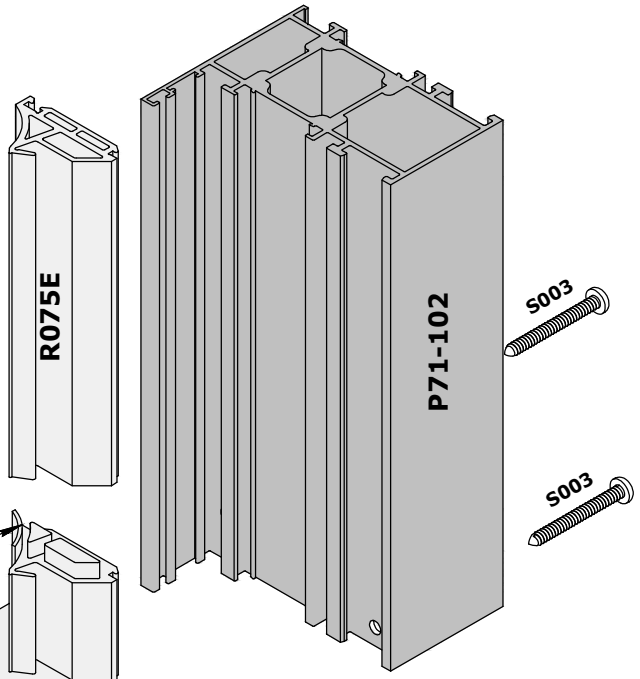
P71-313

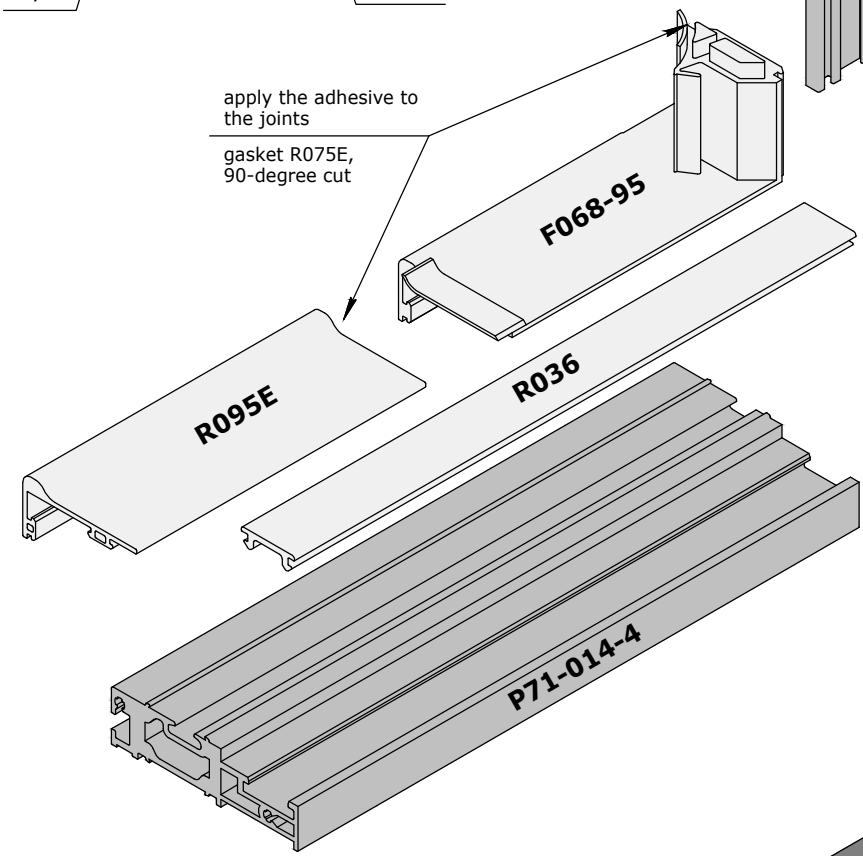


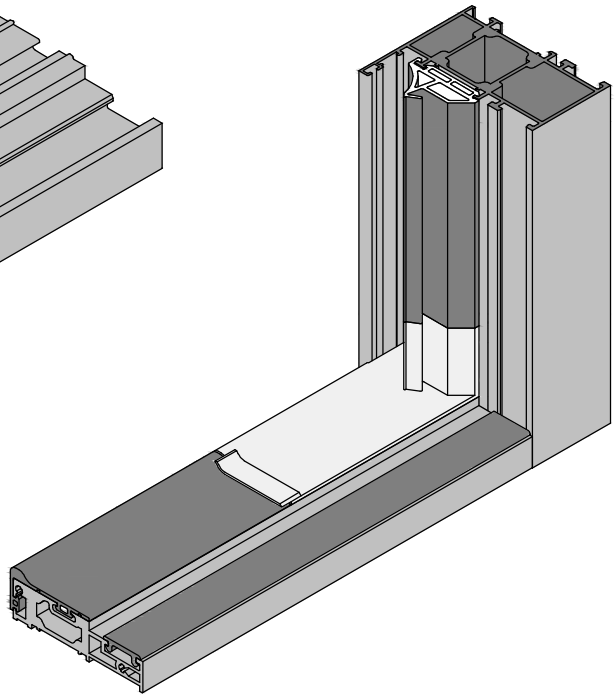



S003
S003
P71-014-4
P71-102

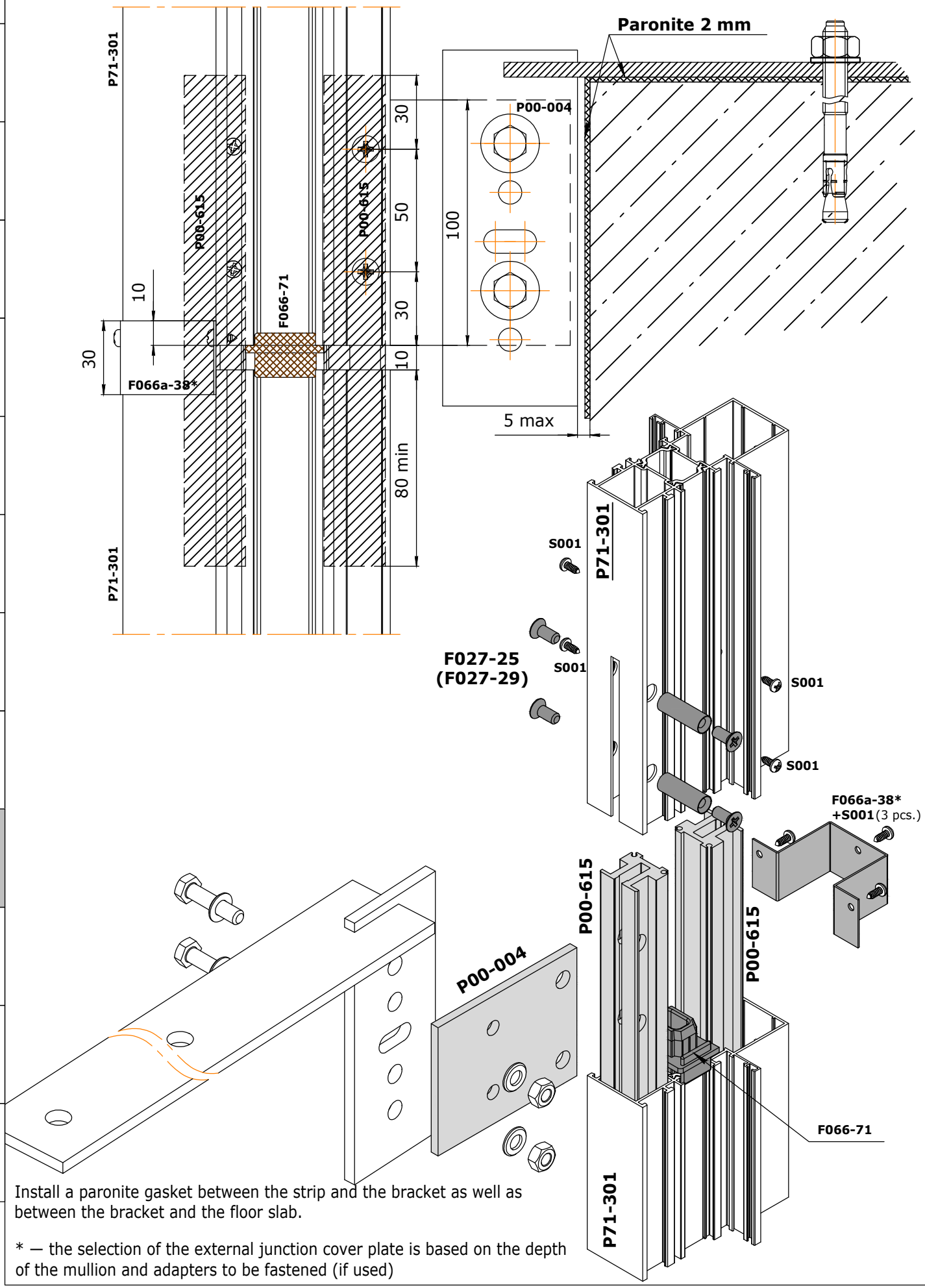

ϕ10
ϕ4
14
6
53
7,5
10,5


R075E
P71-102
S003
S003


apply the adhesive to the joints
gasket R075E, 90-degree cut
F068-95
R095E
R036
P71-014-4

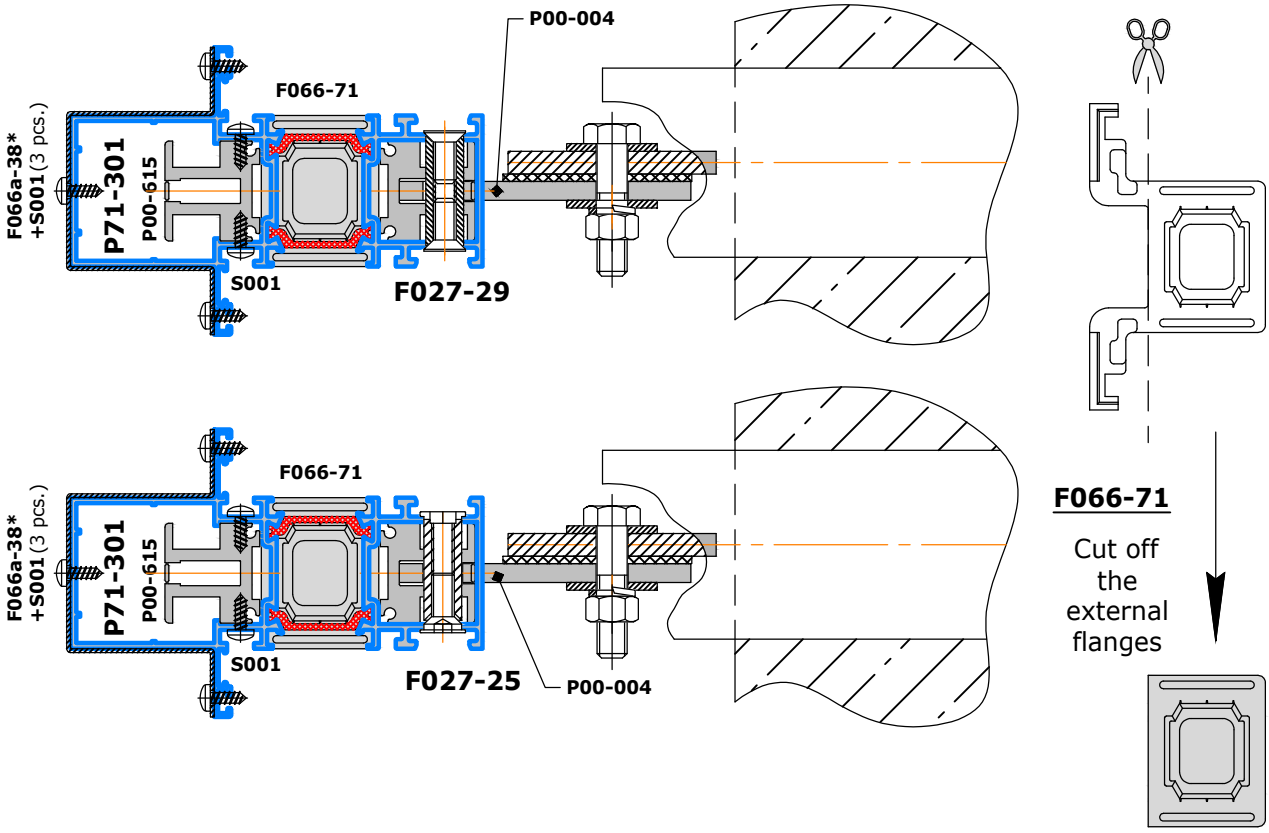


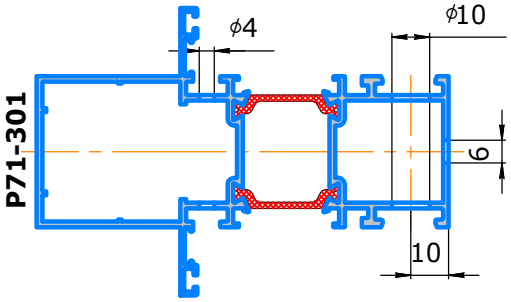
Mullion joint assembly: bracket
Installation of mullions over a slab overhang



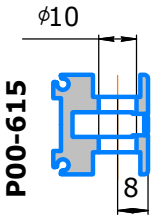
Install a paronite gasket between the strip and the bracket as well as between the bracket and the floor slab.

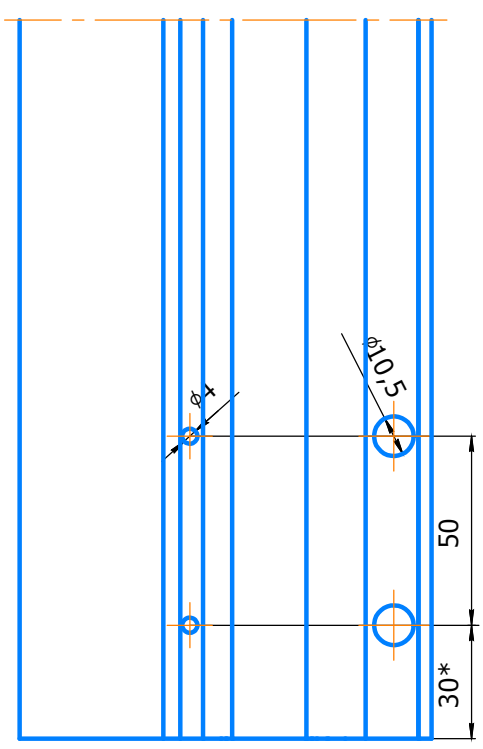
* — the selection of the external junction cover plate is based on the depth of the mullion and adapters to be fastened (if used)

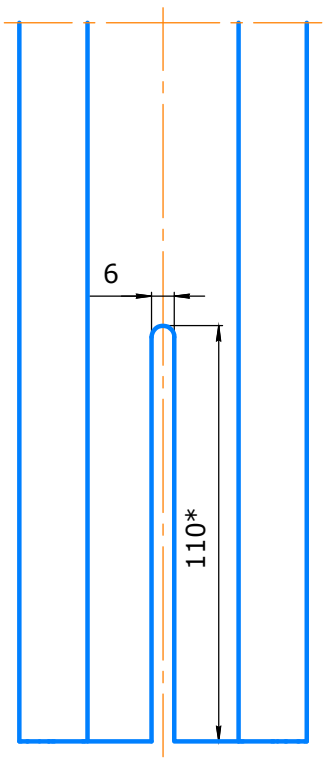


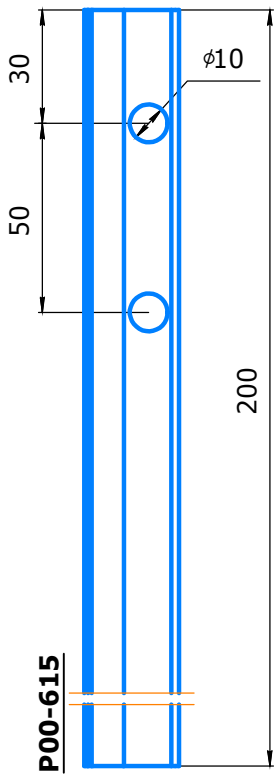


Machining:
outward-reinforced mullion
Embedded part P00-615

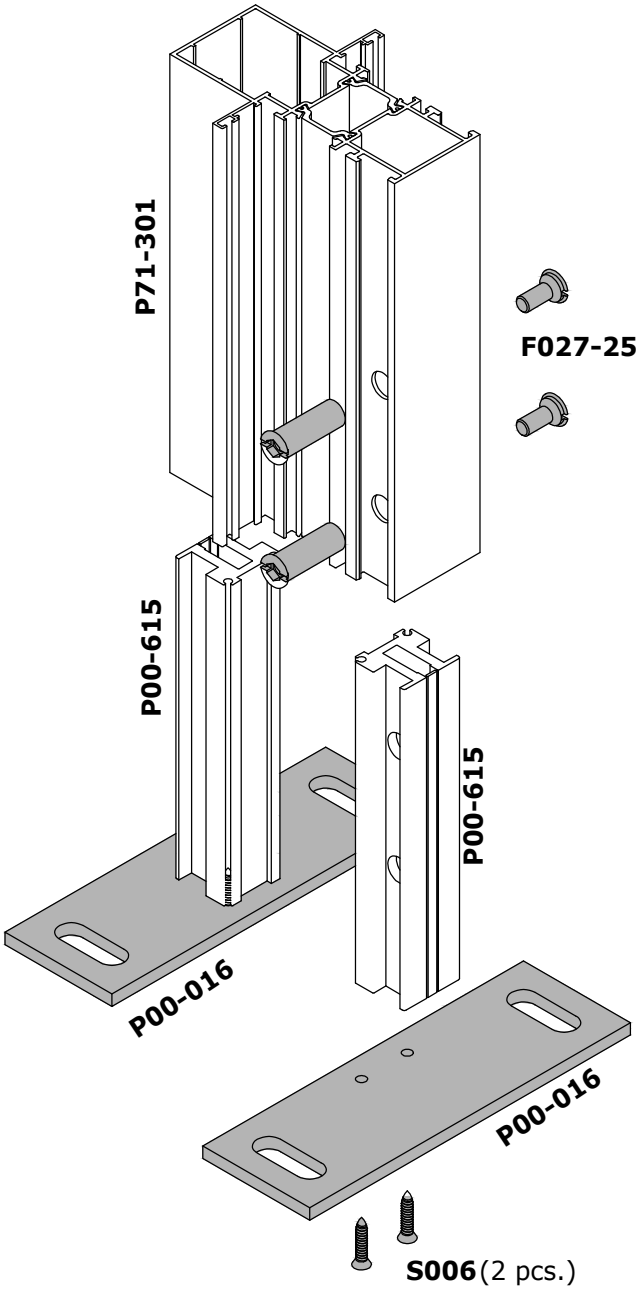


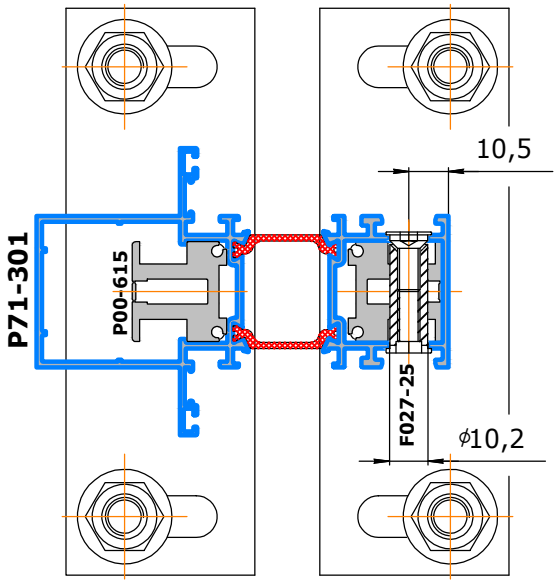


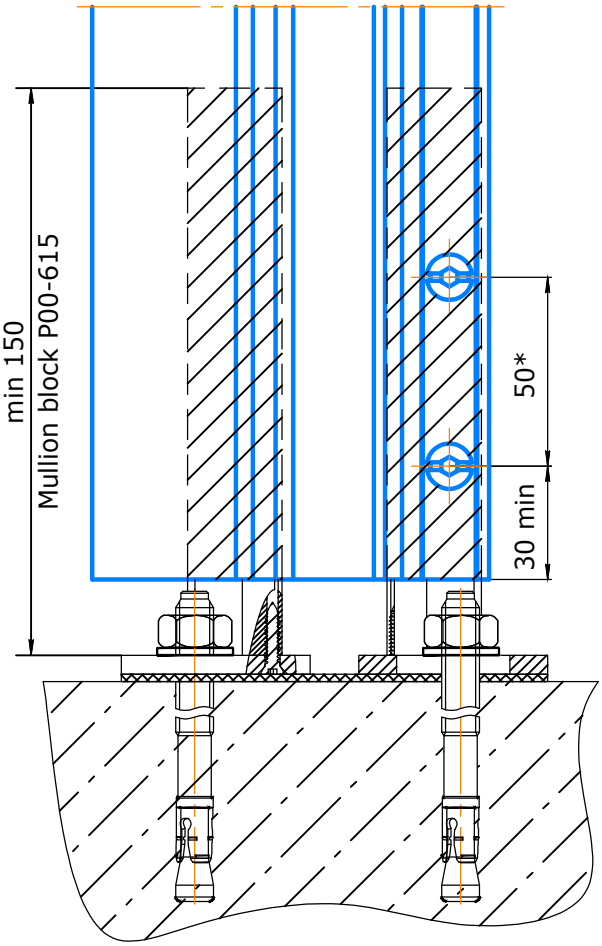




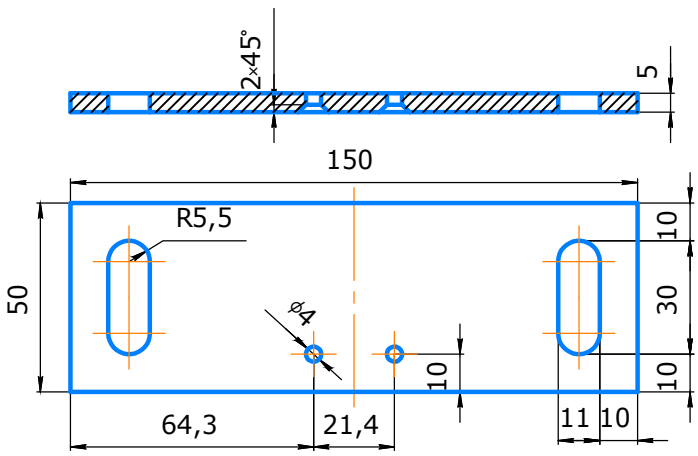
Mullion joint assembly: "aluminium toe end"
Installation of mullions in the opening



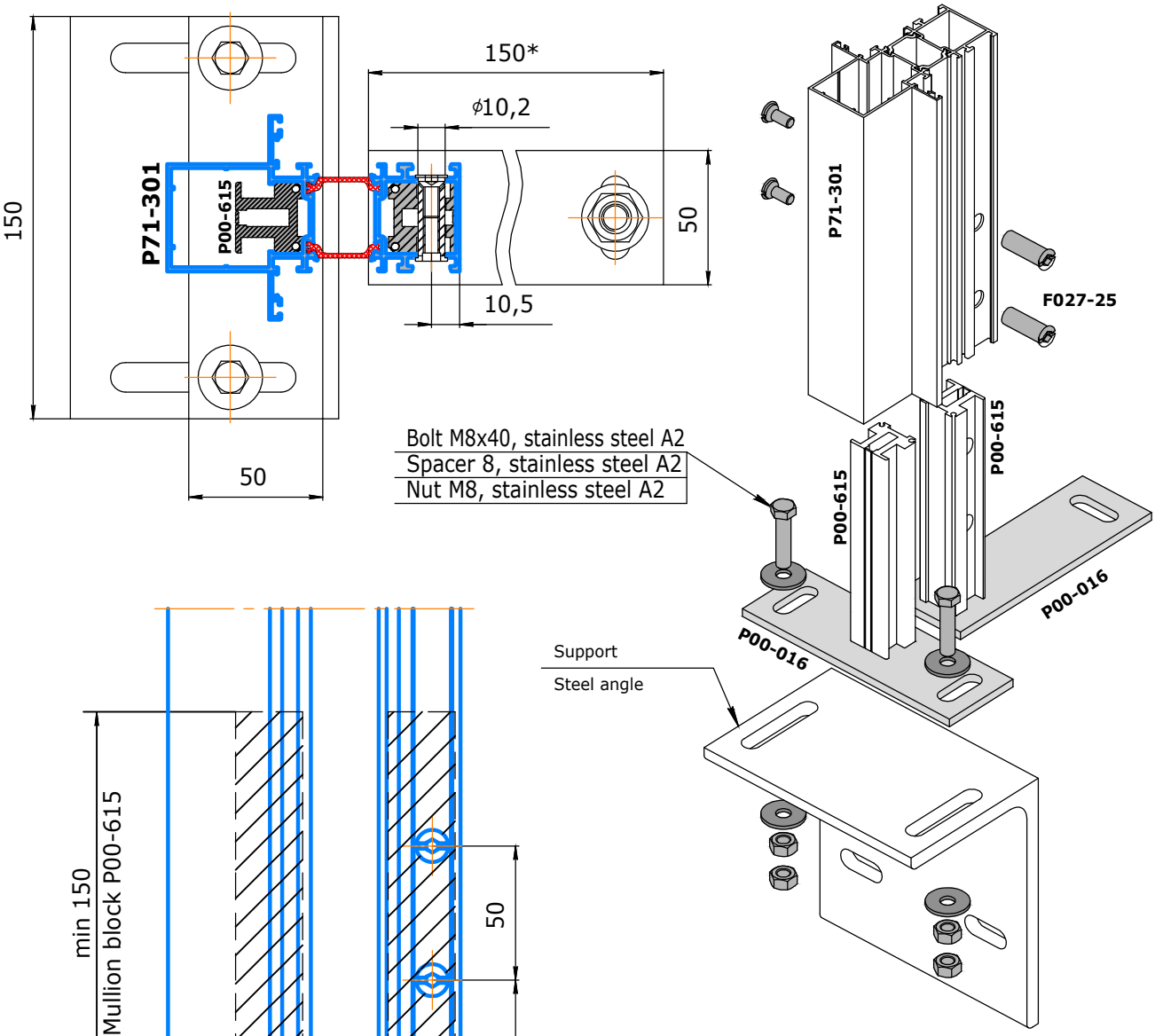


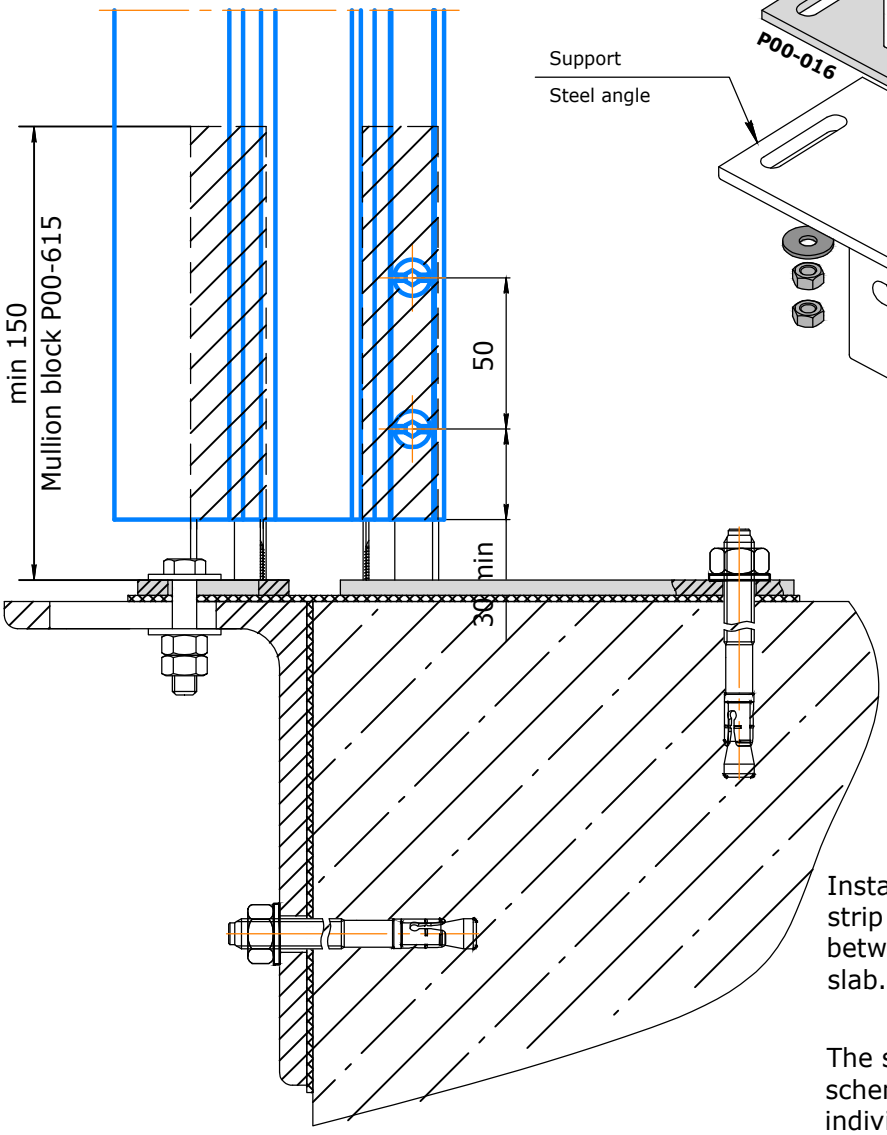


Mounting plate for "toe end" is made of aluminium profile P00-016 — strip 5 x 50



Mullion joint assembly: "aluminium toe end"
Installation of mullions in the opening over the outhanging flange



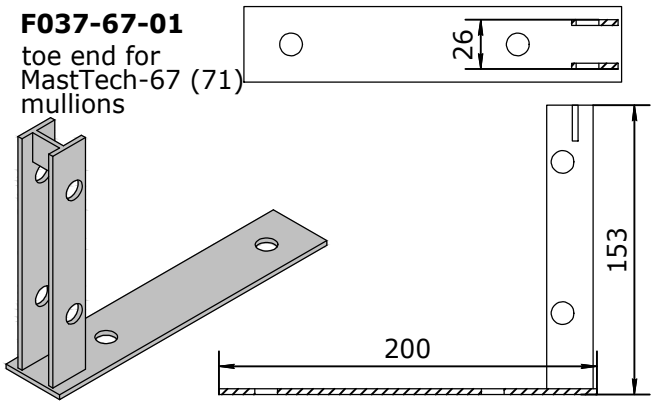


Install a paronite gasket between the strip and the bracket as well as between the bracket and the floor slab.

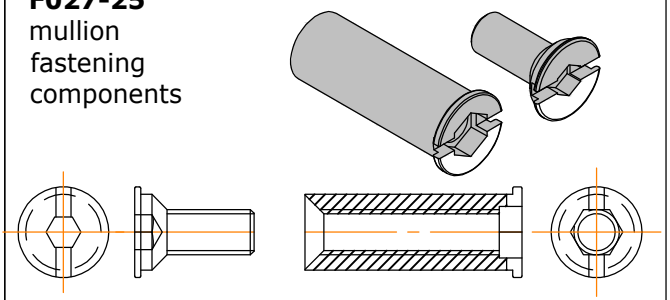
The steel corner support is shown schematically (to be designed individually for each case)

Mullion joint assembly: “steel toe end”
Installation of mullions in the opening

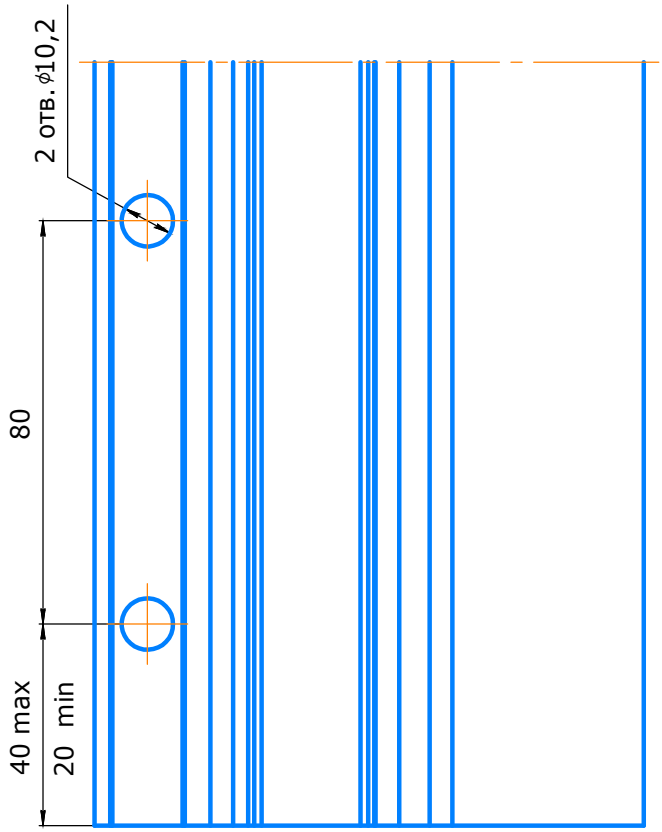
F037-67-01
toe end for MastTech-67 (71) mullions

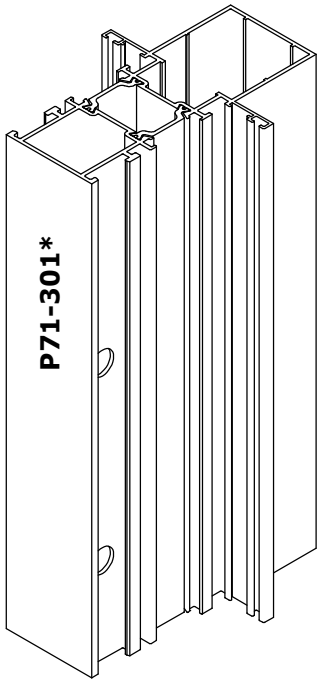


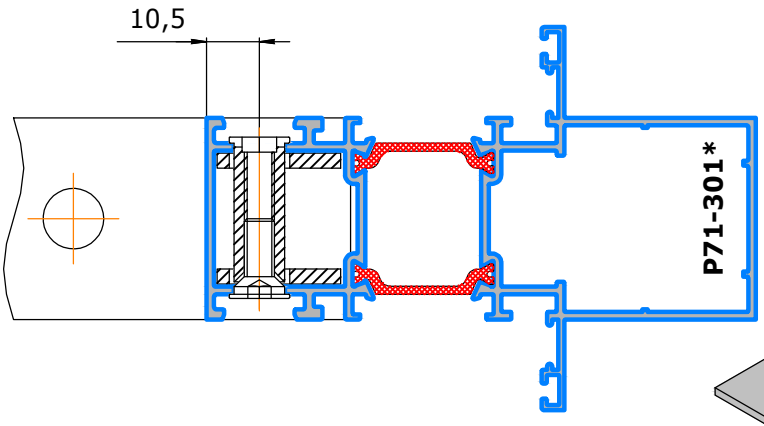
F027-25
mullion fastening components



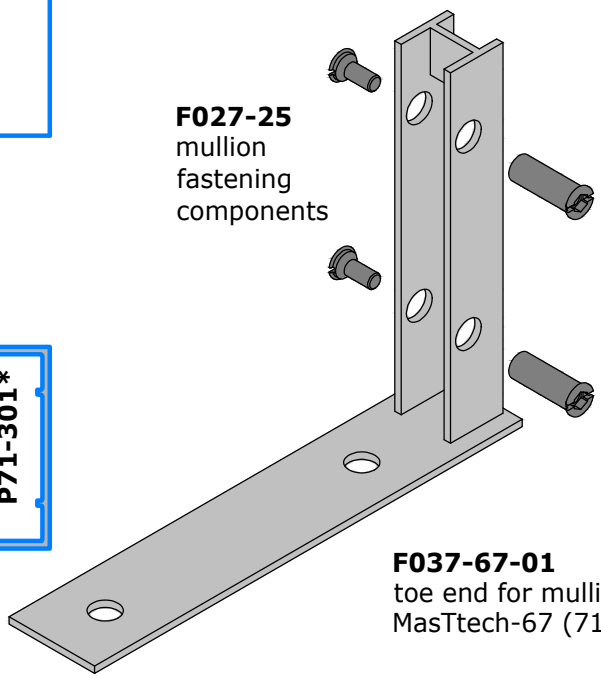
Components:
S801-0615— 1 pc.
Screw M6x15 with flat triangle hexagonal socket head
S811-0628— 1 pc.
threaded bush M6x28 with flat hexagon head







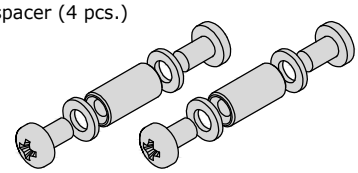
F027-25
mullion fastening components

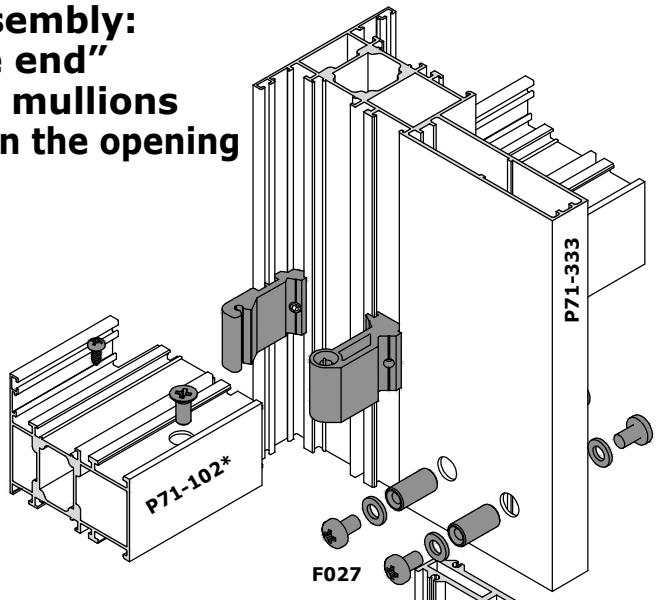


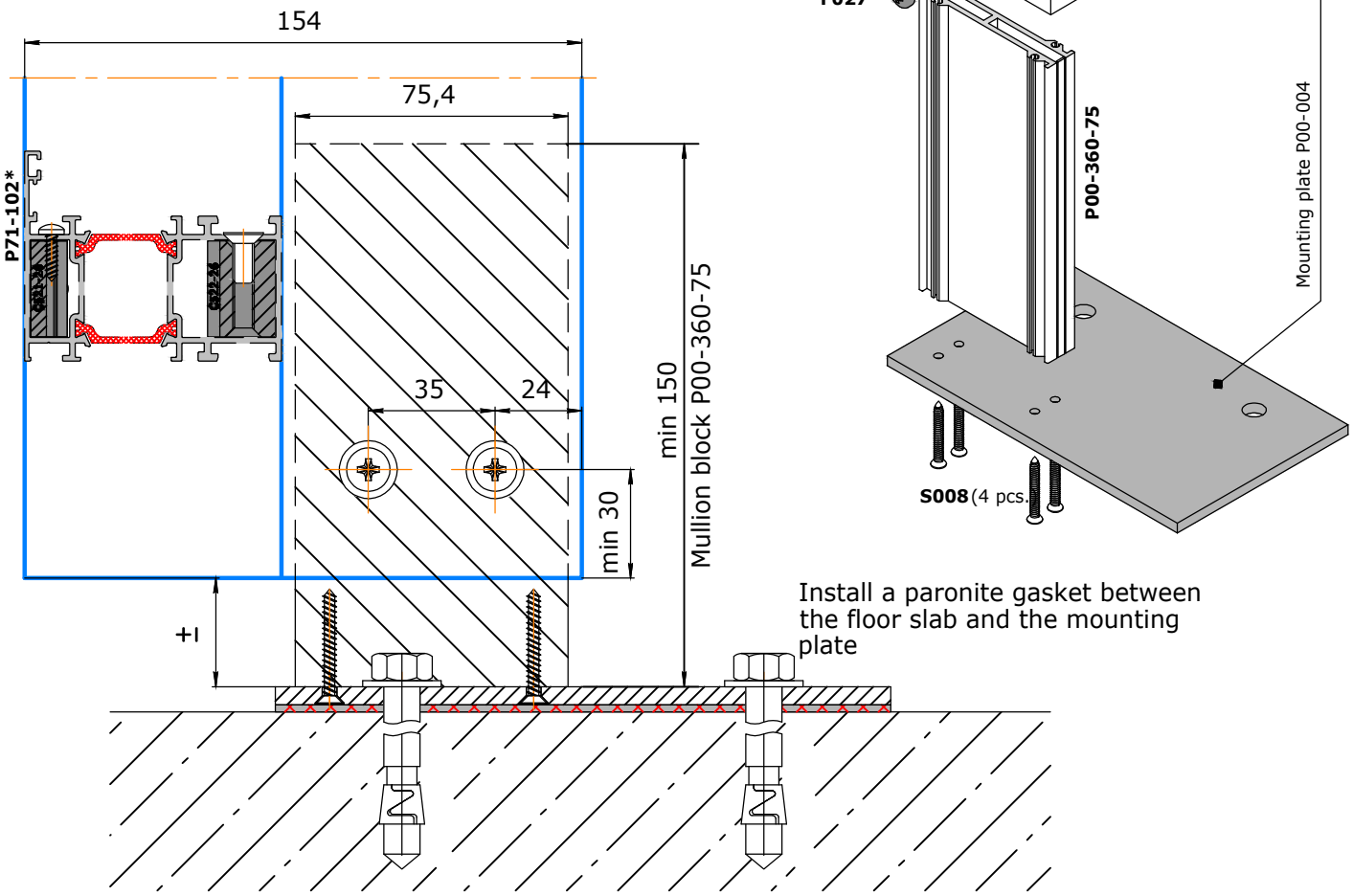
F037-67-01
toe end for mullions MasTtech-67 (71)

Mullion joint assembly: "aluminium toe end" Inward-reinforced mullions Installation of mullions in the opening

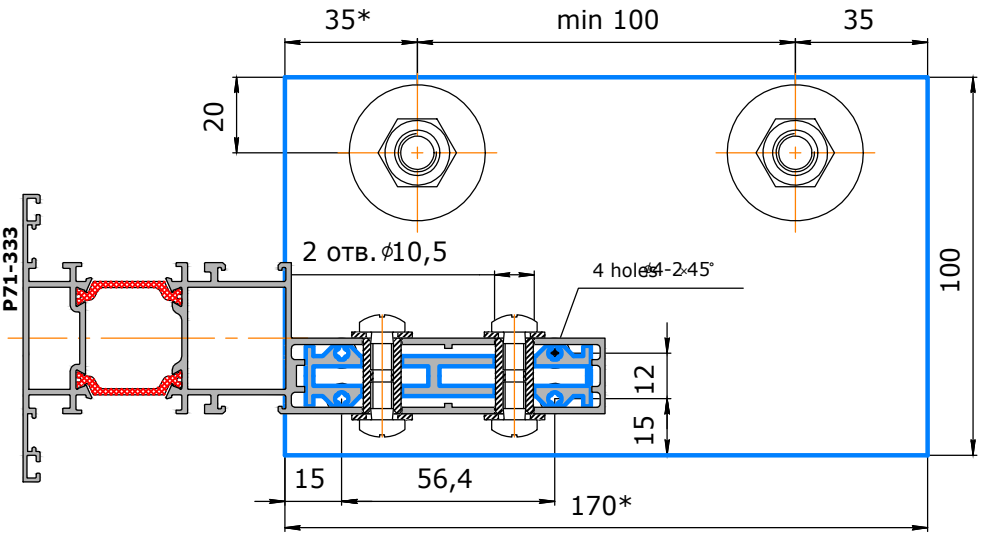
F027
Mullion fastening kit:
Bushing (2 pcs.), screw (4 pcs.), spacer (4 pcs.)





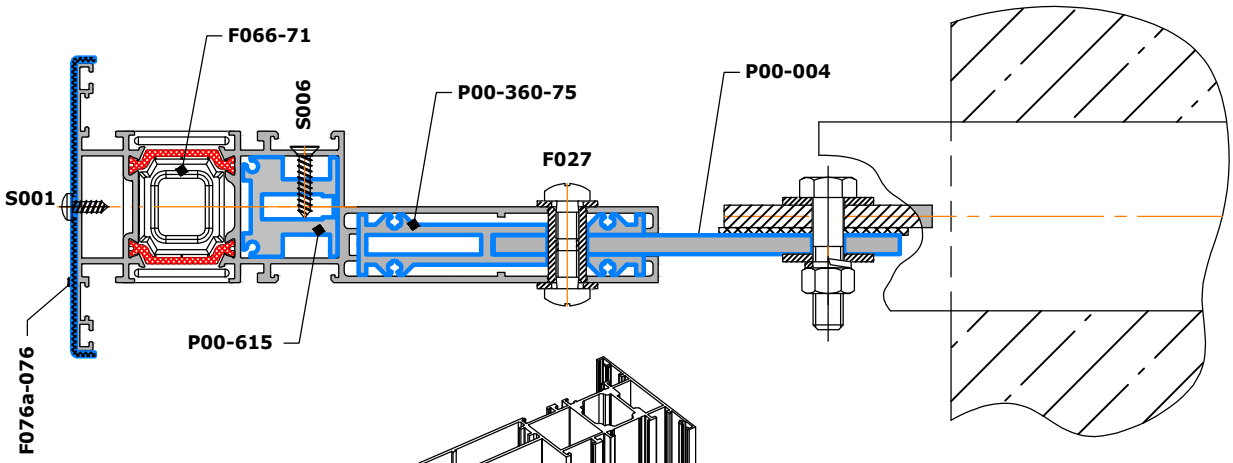


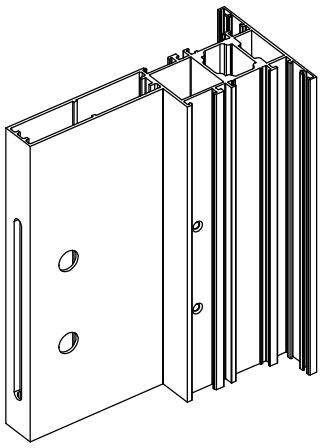
Install a paronite gasket between the floor slab and the mounting plate

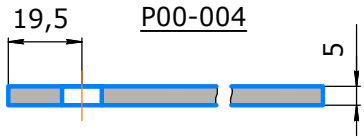


* — mounting plate for "toe end" is made of aluminium profile P00-004 (strip 5 x 100), shown schematically

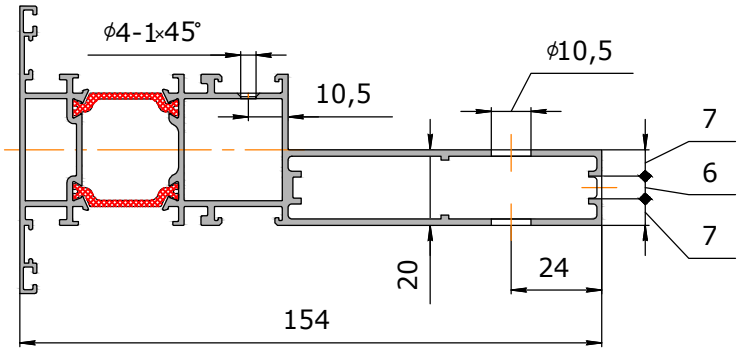
Mullion joint assembly: bracket
Installation of mullions over a slab overhang

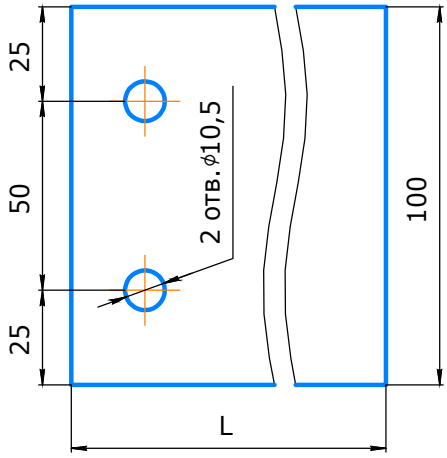


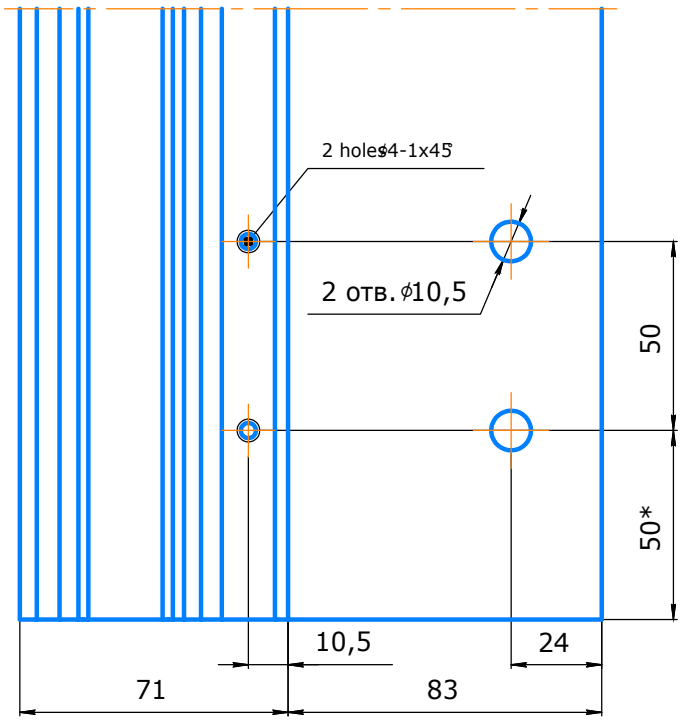


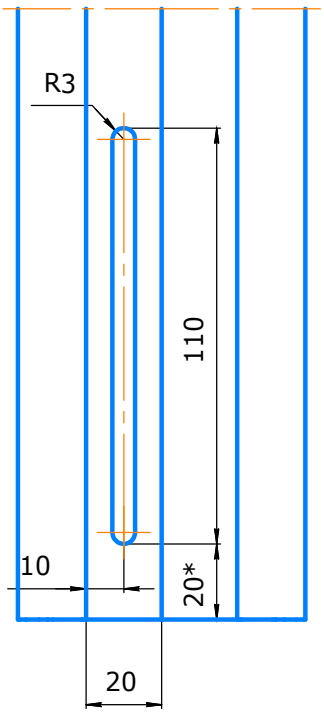


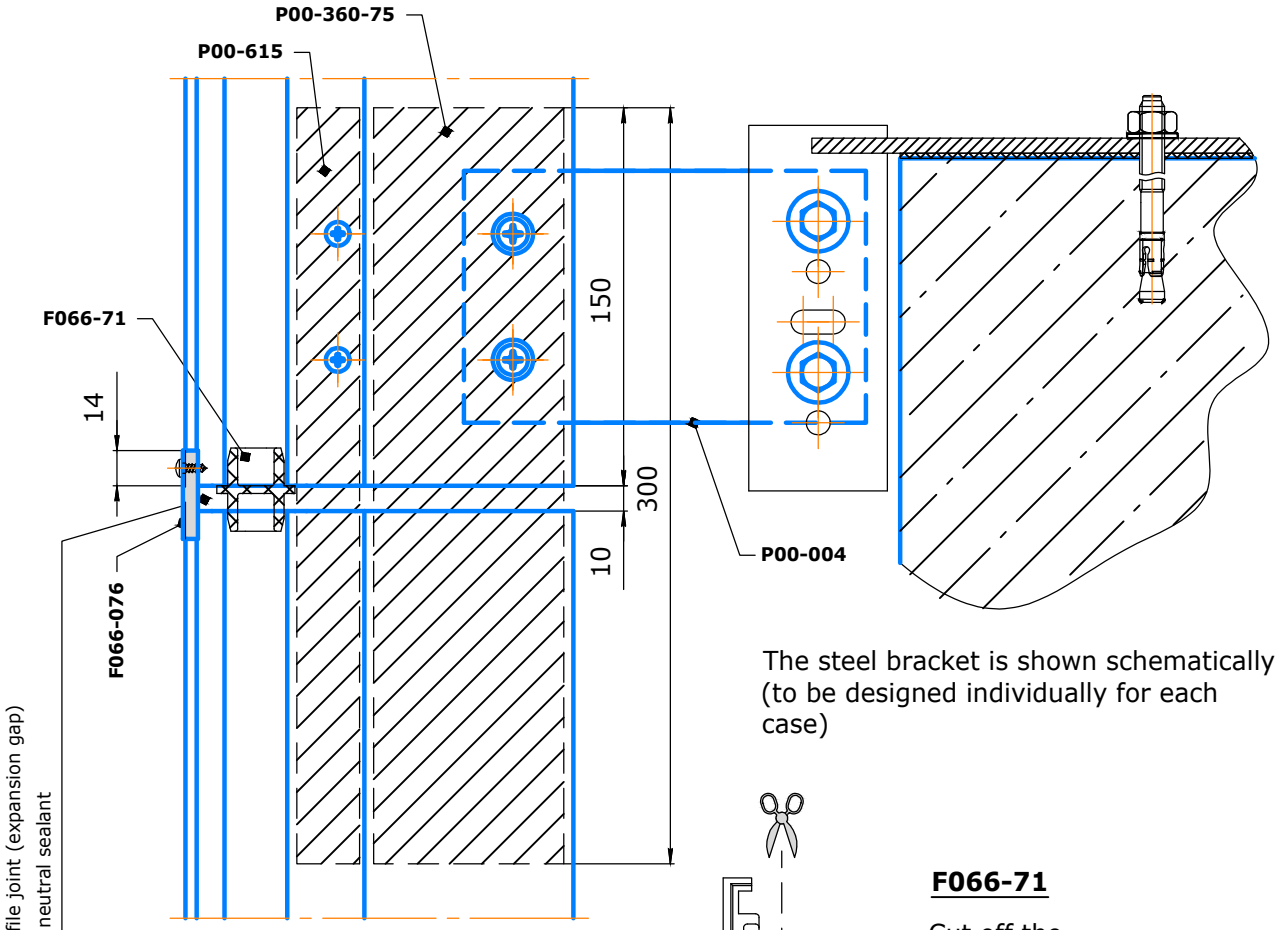
P71-333



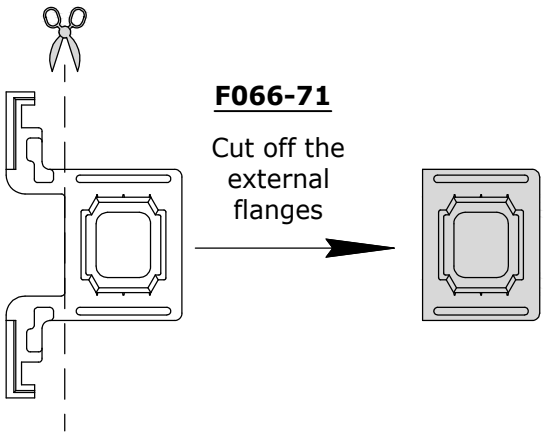






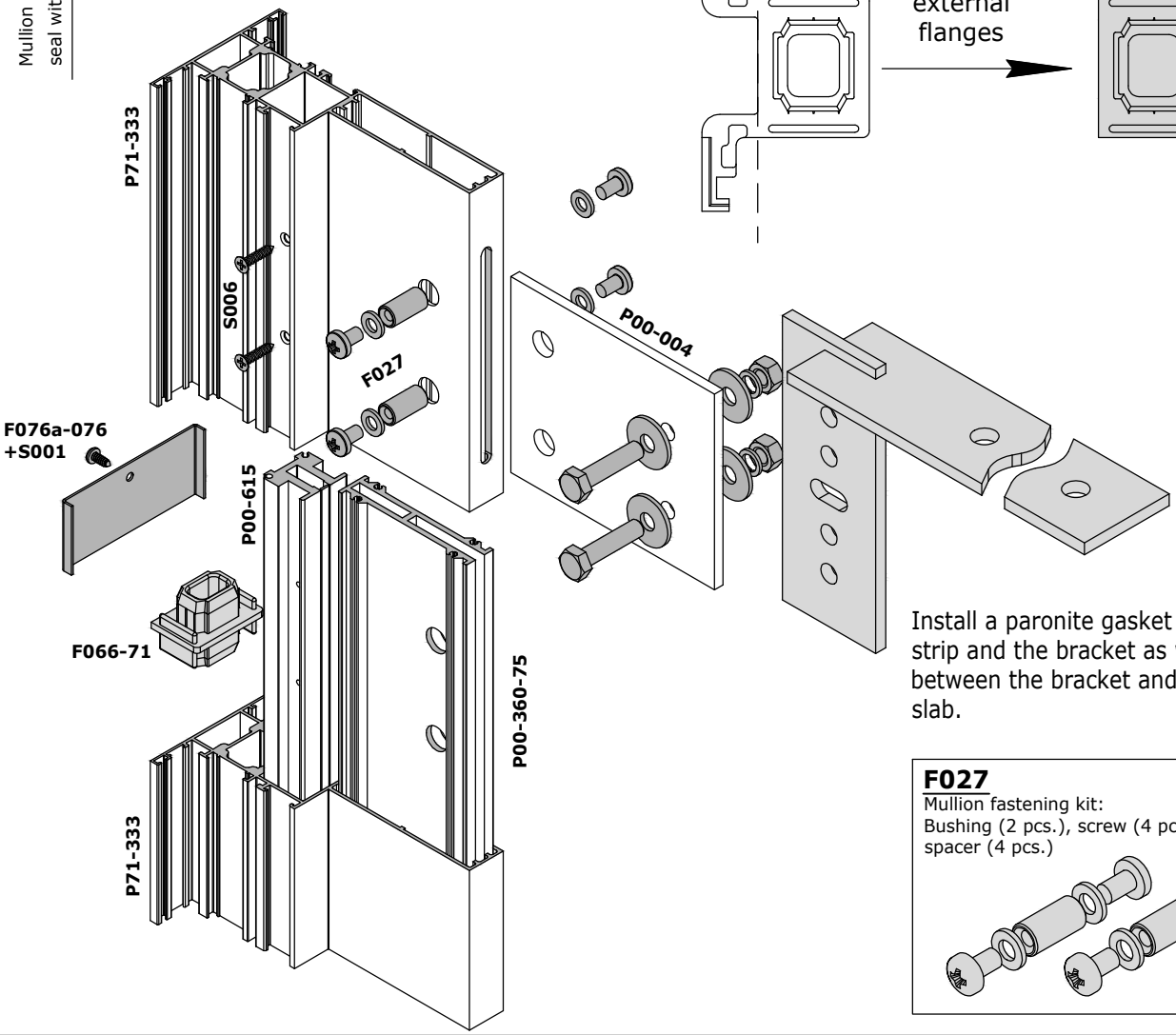


The steel bracket is shown schematically (to be designed individually for each case)



F066-71

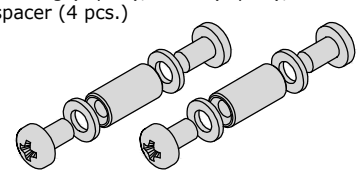
Cut off the external flanges



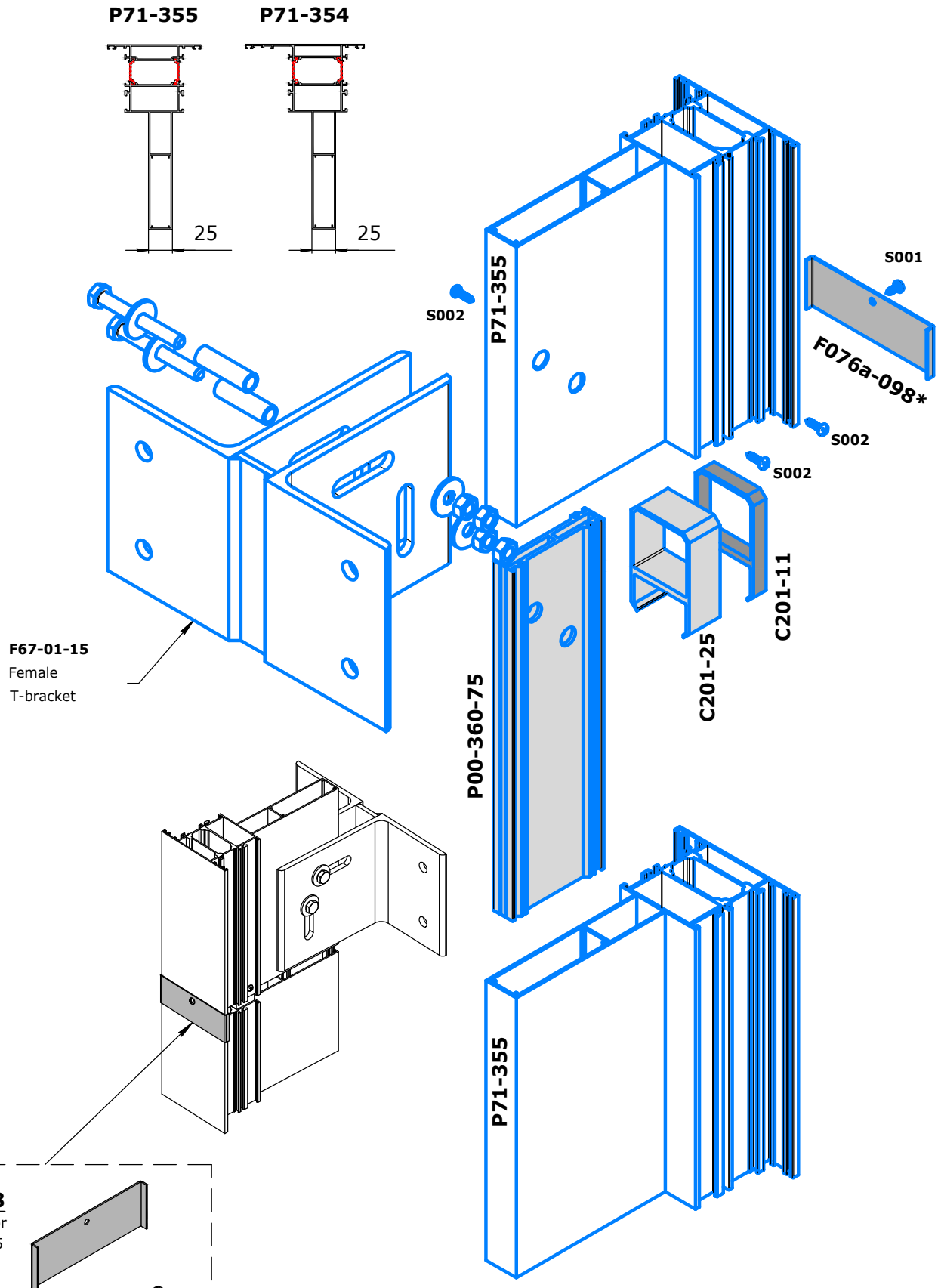
Install a paronite gasket between the strip and the bracket as well as between the bracket and the floor slab.

F027

Mullion fastening kit:
Bushing (2 pcs.), screw (4 pcs.), spacer (4 pcs.)



Mullion joint assembly diagram: joint of mullions P71-355



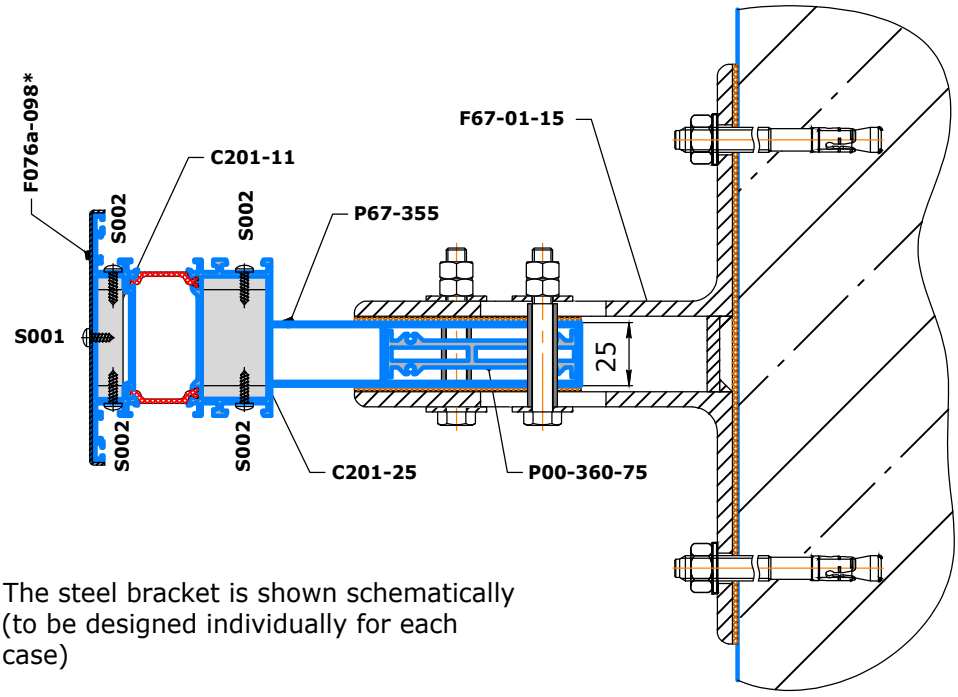
F076a-098
insert 98 mm for mullion P71-355

F076a-125
insert 125 mm for mullion P71-354

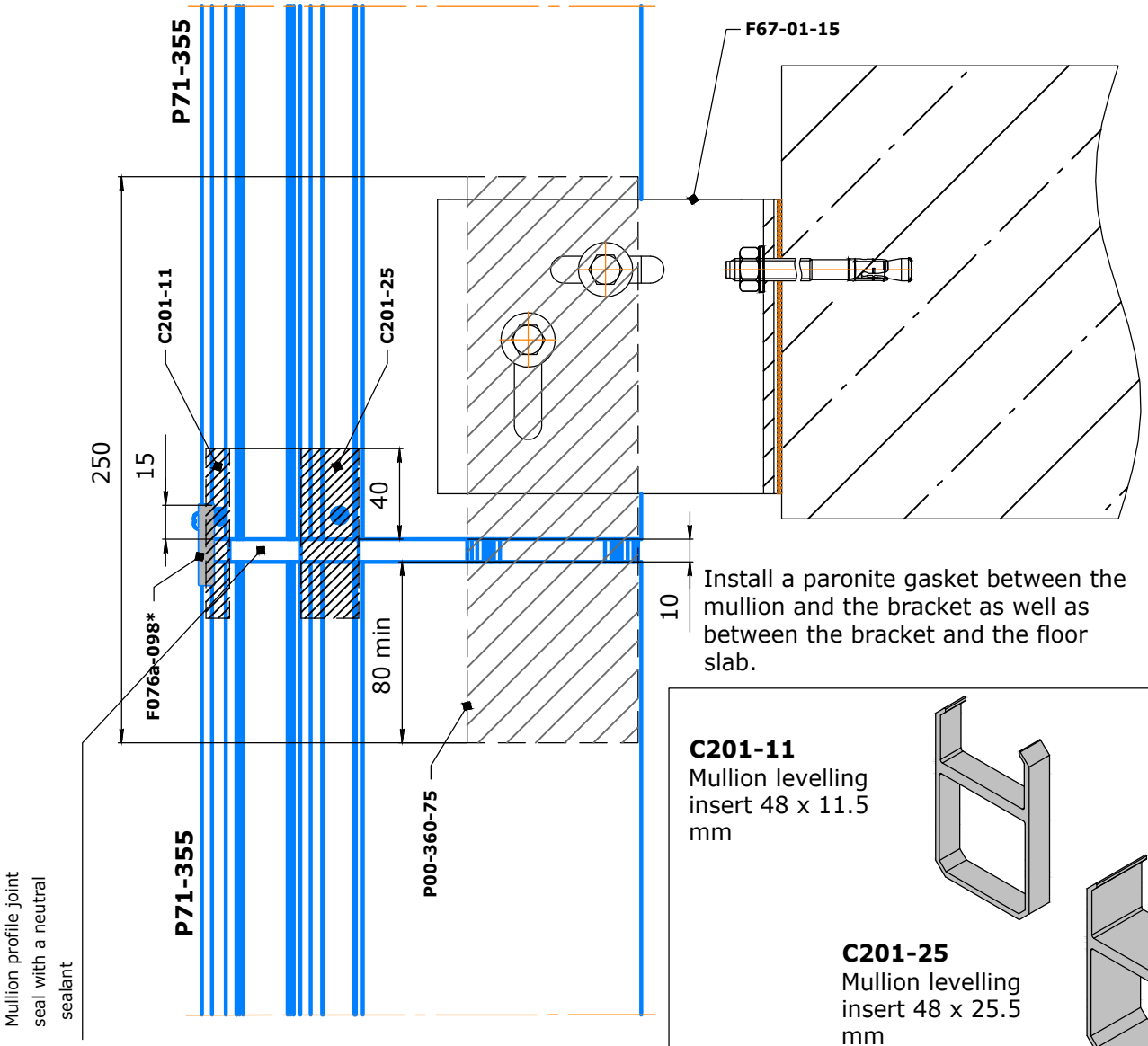
Manufactured from aluminium sheet.
Paintable in RAL colours

Install a paronite gasket between the mullion and the bracket as well as between the bracket and the floor slab.

The steel bracket is shown schematically (to be designed individually for each case)



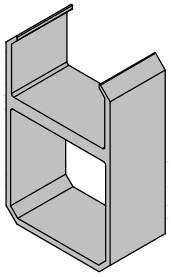
The steel bracket is shown schematically (to be designed individually for each case)



Install a paronite gasket between the mullion and the bracket as well as between the bracket and the floor slab.

C201-11
Mullion levelling insert 48 x 11.5 mm

C201-25
Mullion levelling insert 48 x 25.5 mm



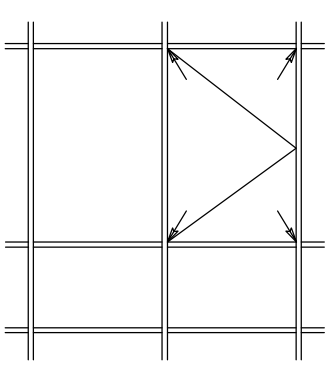
manufactured from profile P00-082-48

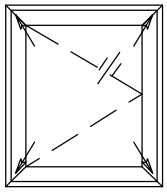
Gluing the gasket joints

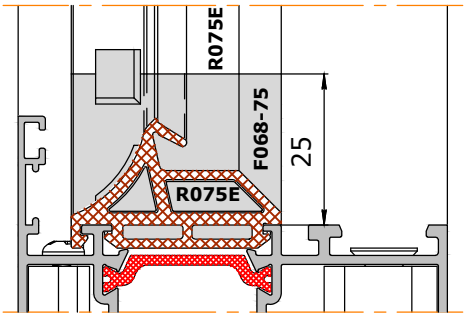
All gaskets joined together shall be cut at a 45-degree angle and glued together at a joint using cyanoacrylate based adhesive.

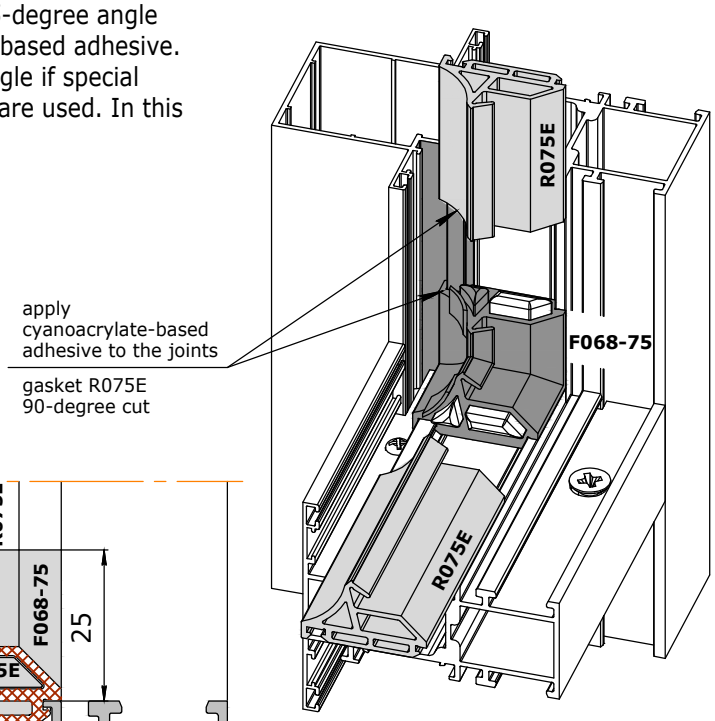
The gaskets may not be cut at a 45-degree angle if special angled connecting gasket spacers (e.g. F068-75) are used. In this case, the gaskets shall be cut off at right angles.

Installation of medium window gasket





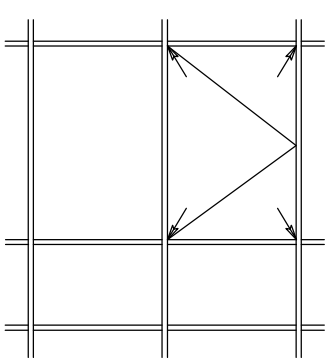


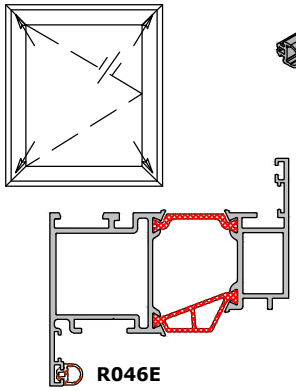


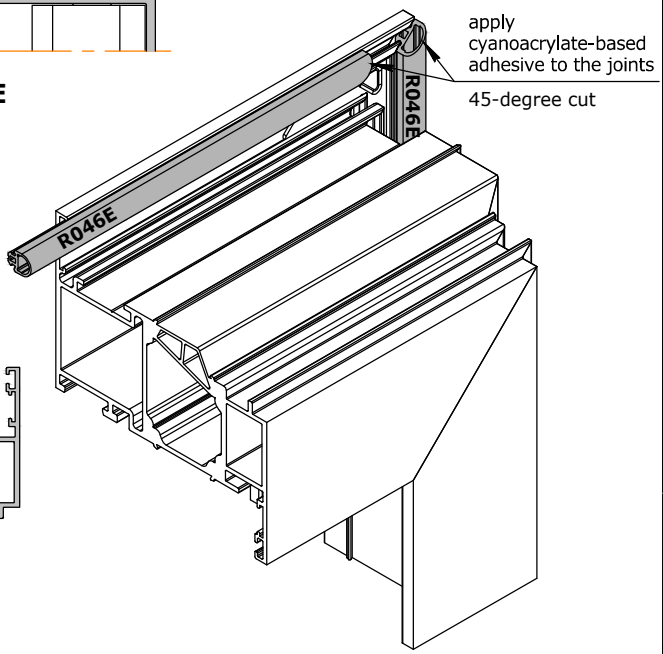
The medium window gaskets are installed in the same way.

Installation of rabbet ledge gasket R046E

The other gaskets are fitted in a similar way.

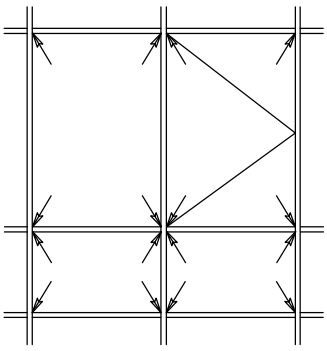


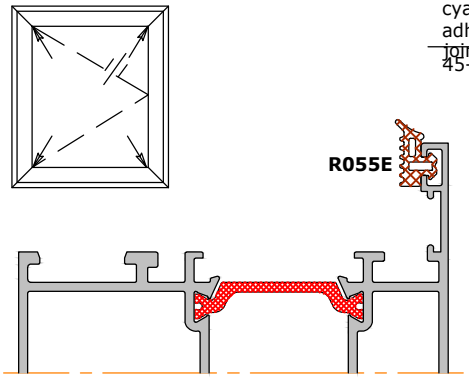


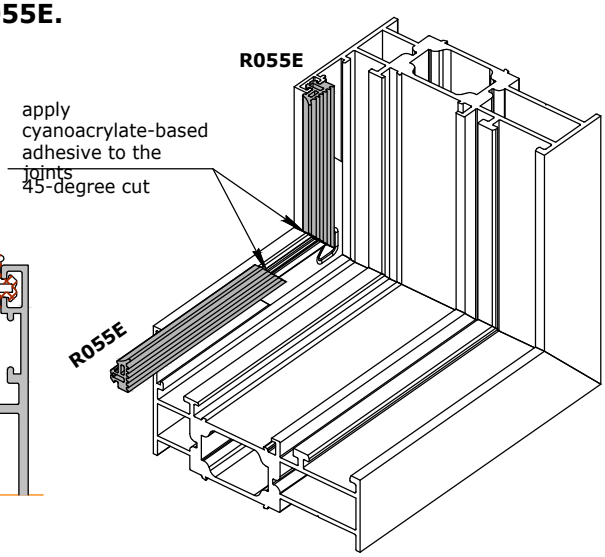


Installation of the external filling gasket R055E.

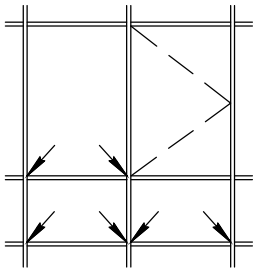
The other external filling gaskets shall be installed in the same way.



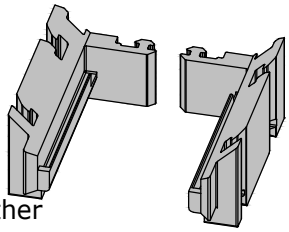




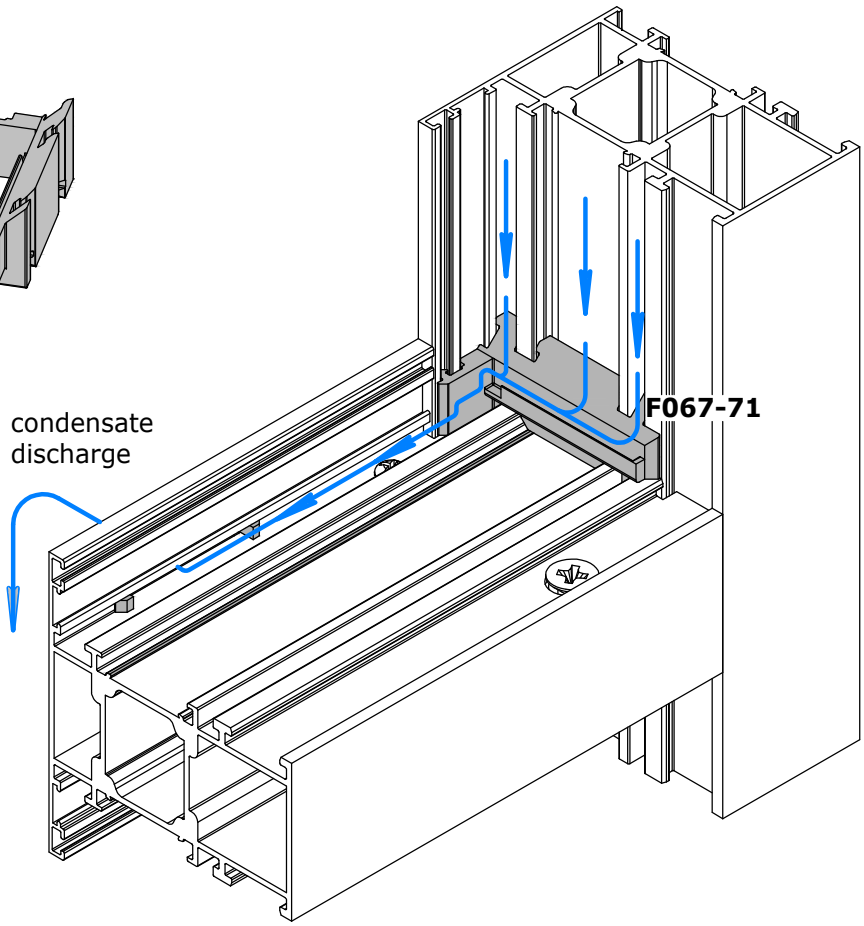
T-joint assembly: moisture drainage
Installation of weather strip F067-71



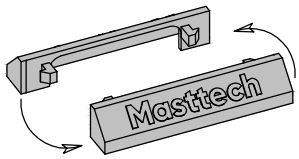
The weather strips F067-71 shall be installed in each "blind" opening of the stained-glass window. The seals are installed in the corner formed by the vertical mullion and the bottom impost, i.e. they are only installed under the filling. Additional sealant application (under the gasket on the profile joint) is recommended

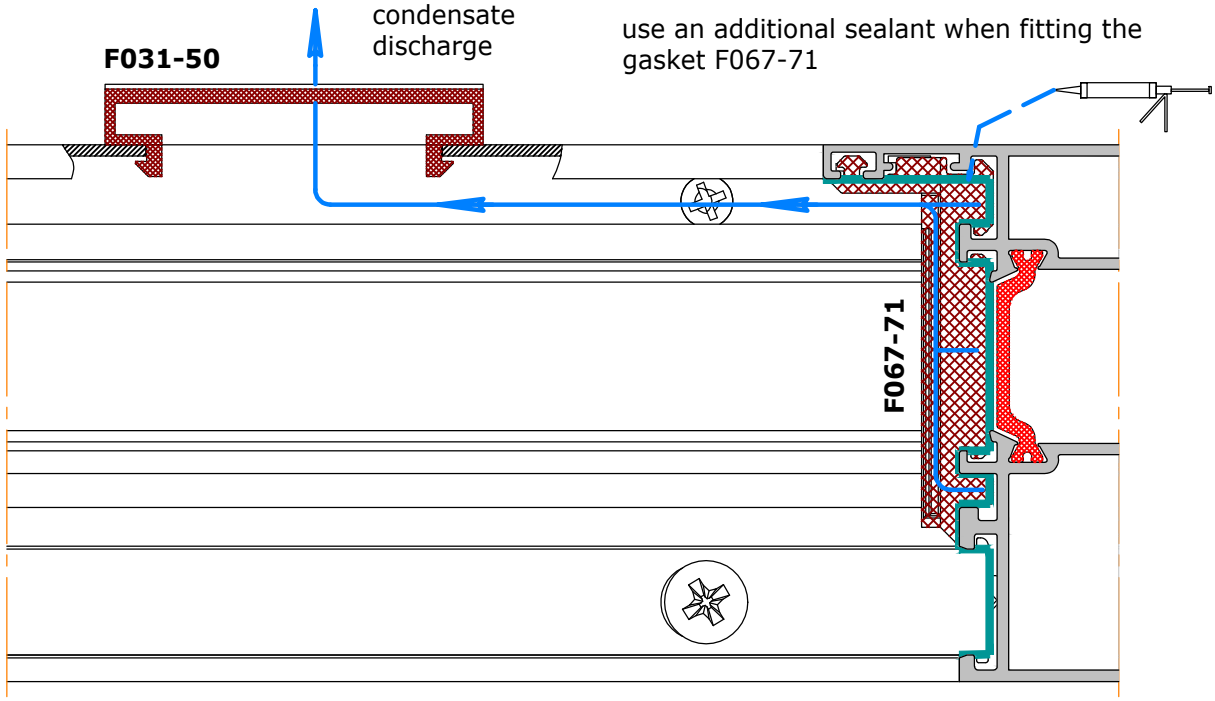


F067-71
Impost weather strip (pair)



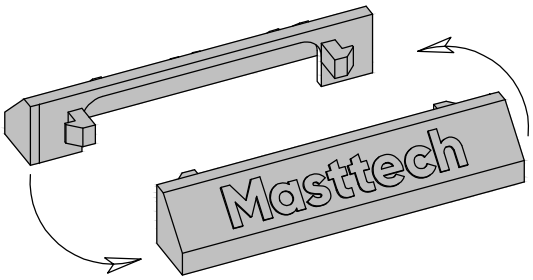
F031-50
Water drain hole cap (for MasTTech systems)

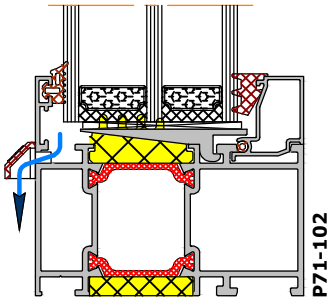


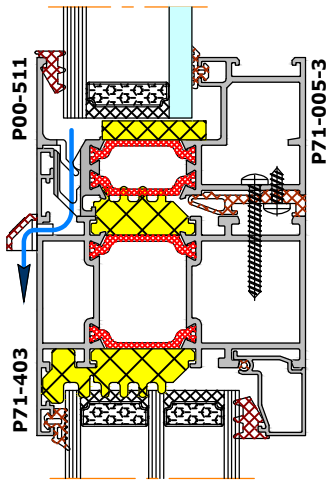


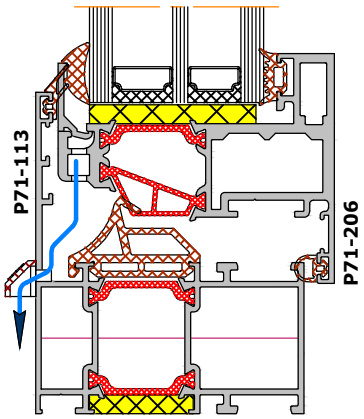
Drainage arrangement

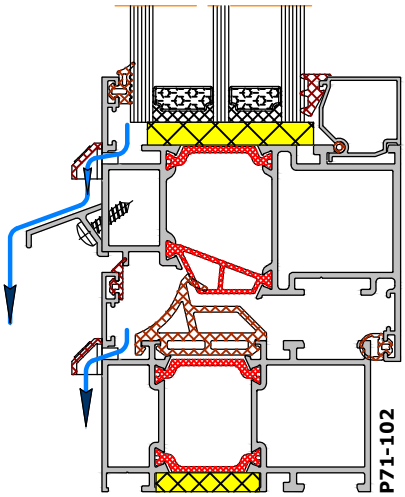
F031-50
Water drain hole cap (for MasTTech systems)

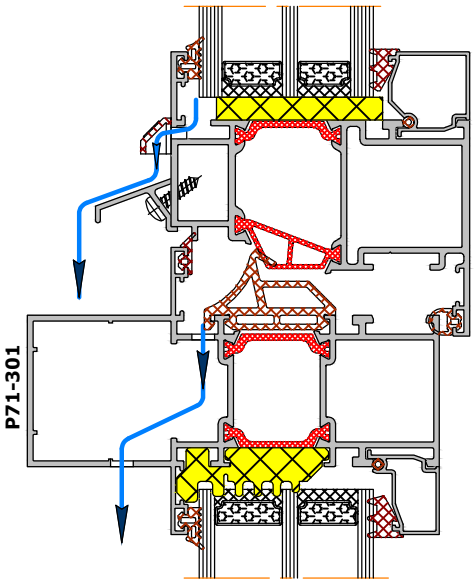


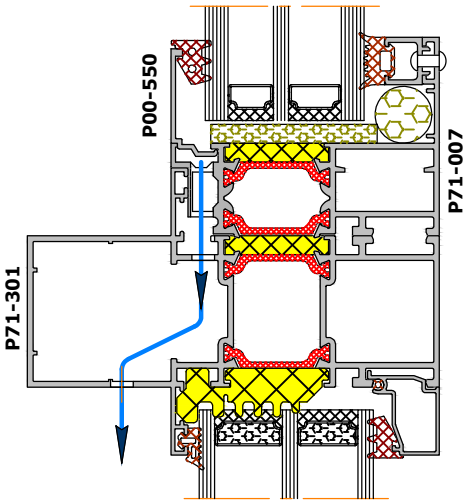


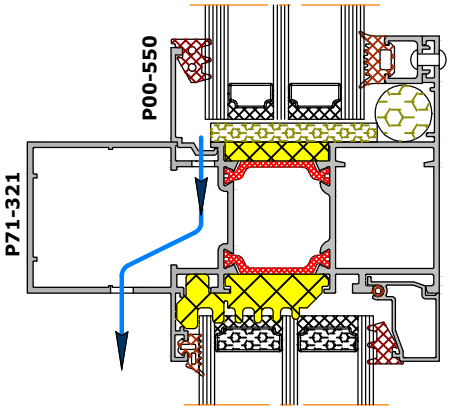


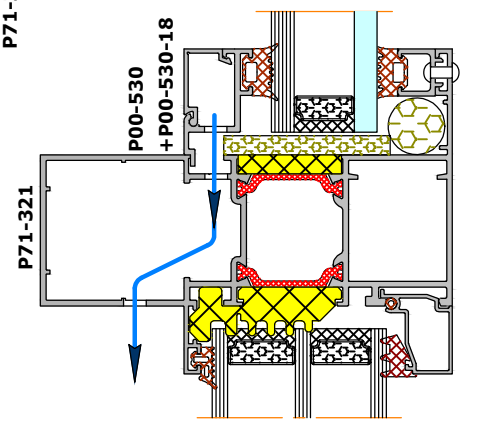


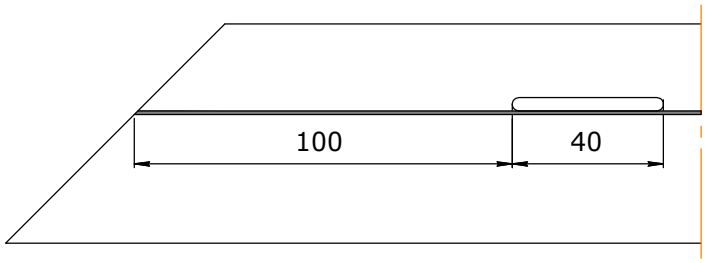


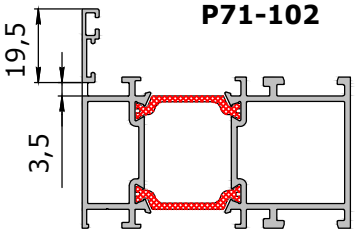


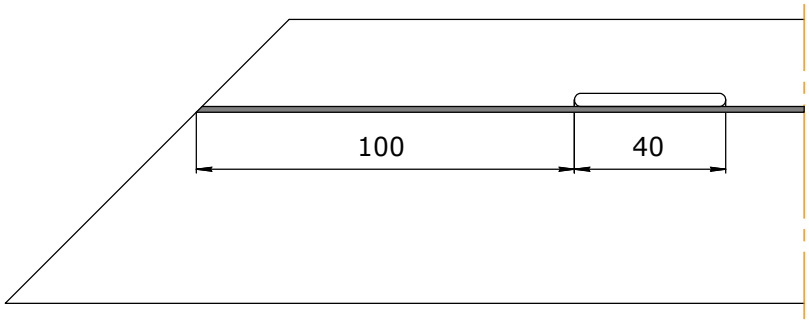


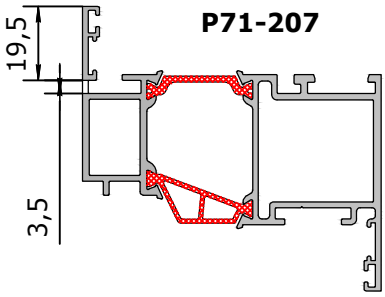


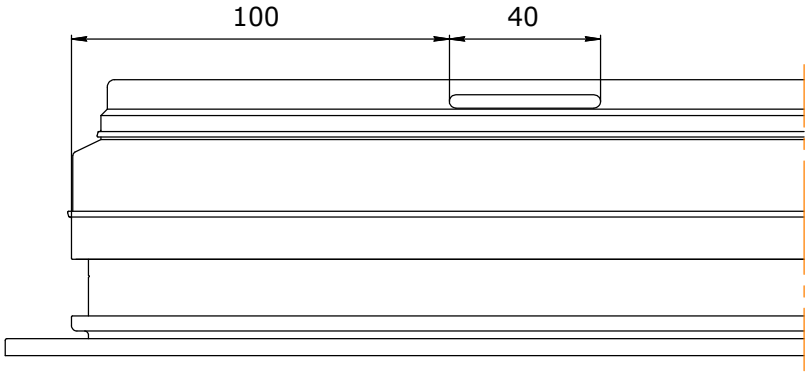


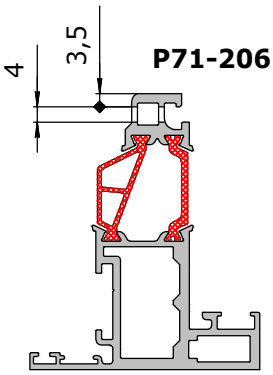

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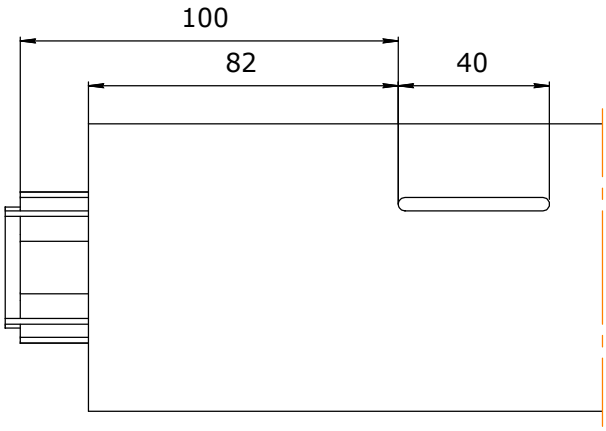

P71-102
19,5
3,5

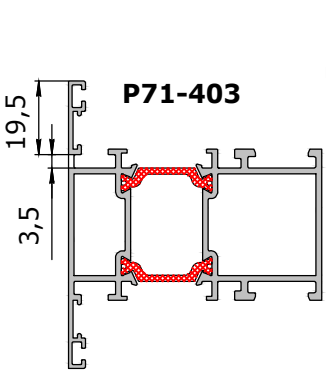

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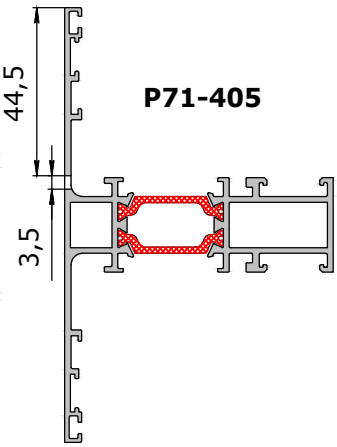

P71-207
19,5
3,5

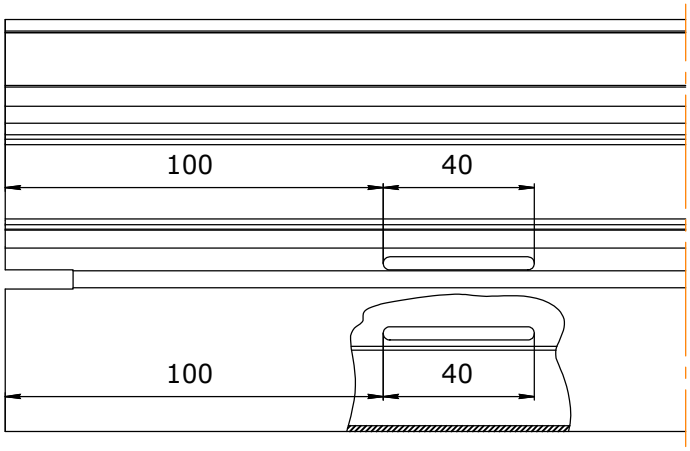

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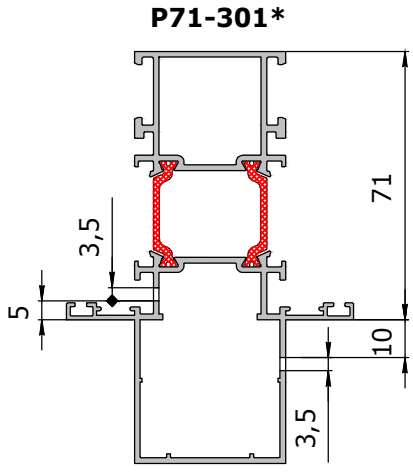

P71-206
4
3,5


100
82
40


P71-403
19,5
3,5


P71-405
44,5
3,5

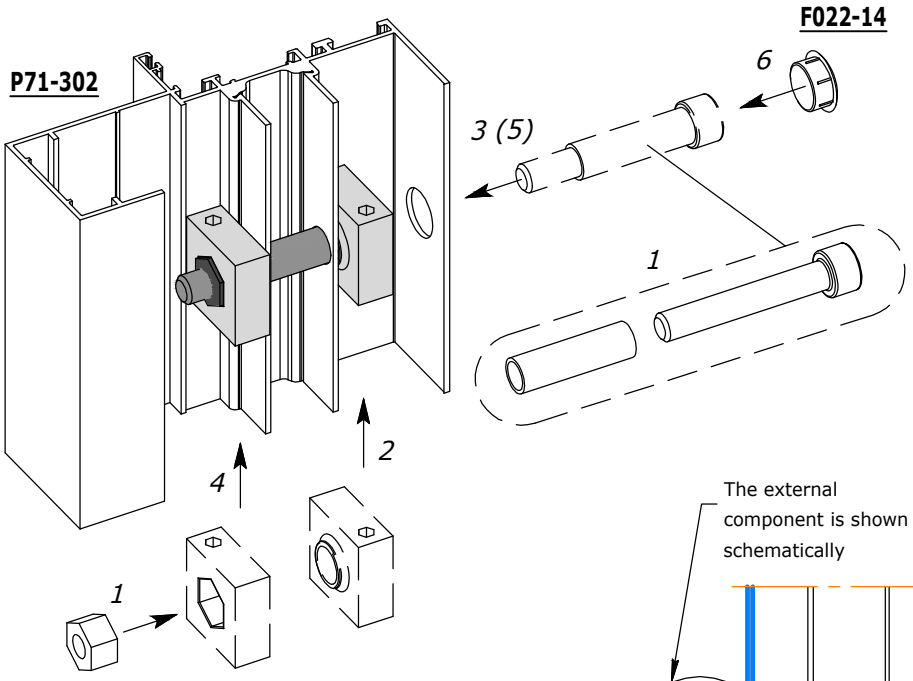

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40
100
40


P71-301*
71
3,5
5
10
3,5

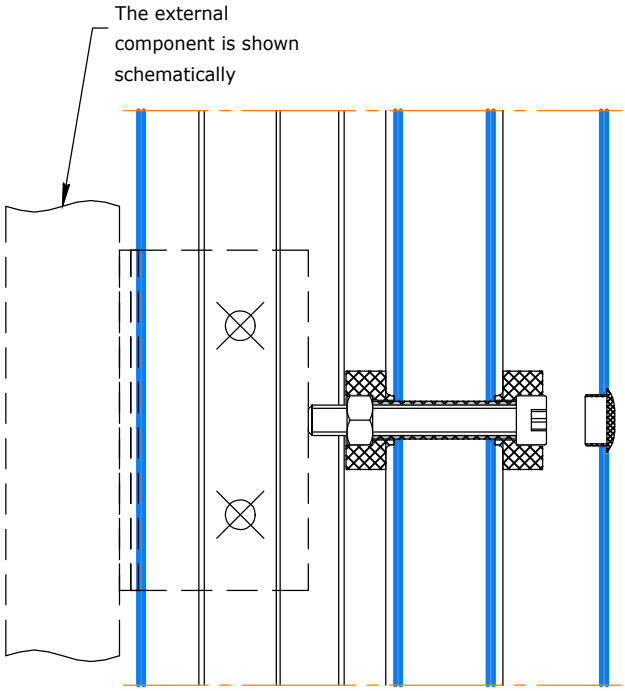
Tightening of combined mullion profiles

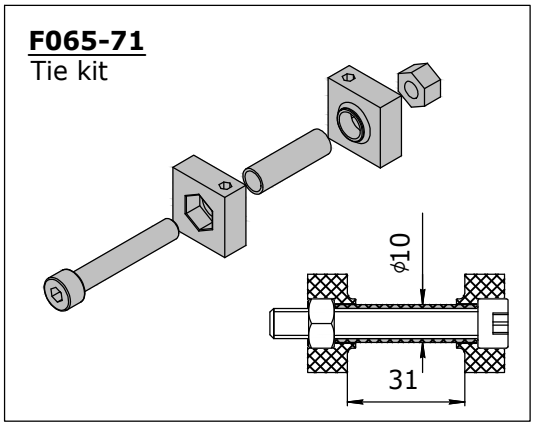
In the area where the external elements are attached to the combined structural profiles, in order to avoid shearing and transverse stretching of the PNS profile joint areas formed by thermal bridges, the tie kit F065-71 shall be used.
The combined profiles must be able to withstand the shear and lateral tension tests in the joint areas.
Load-carrying capacity under shear shall not be less than 40 N/mm of specimen length
Load-carrying capacity under transverse tension shall not be less than 80 N/mm of specimen length

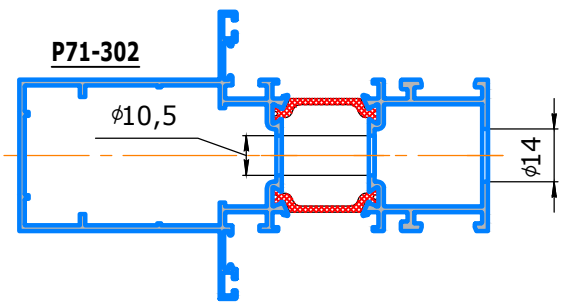
Tightening from the inside

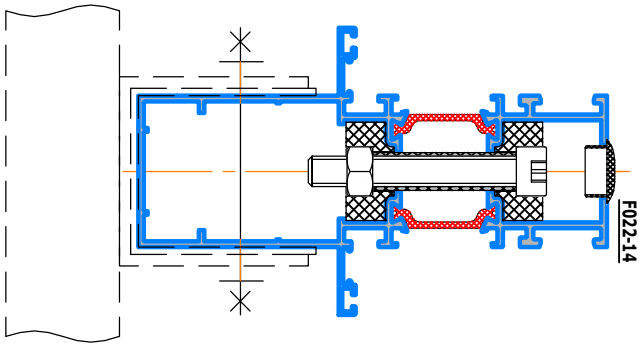


Tightening torque of the screw in the turnbuckle kit F065-71:
screw M8 min — 4.5 N/m
max — 6 N/m







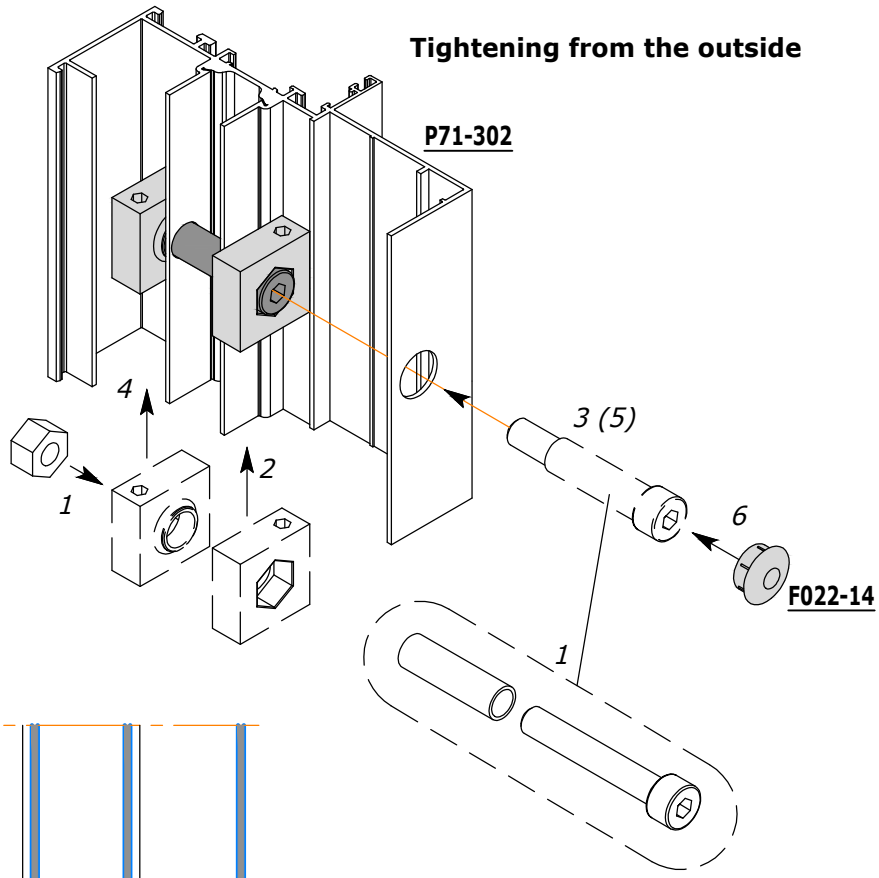


Tightening of combined mullion profiles

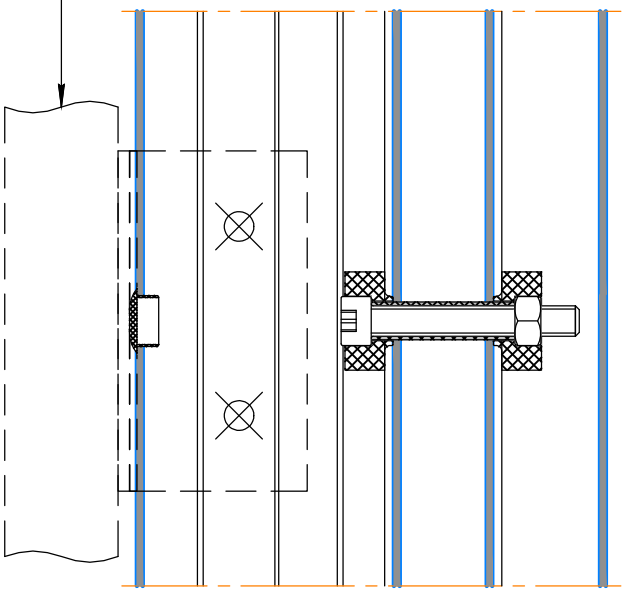
In the area where the external elements are attached to the combined structural profiles, in order to avoid shearing and transverse stretching of the PNS profile joint areas formed by thermal bridges, the tie kit F065-71 shall be used.
The combined profiles must be able to withstand the shear and lateral tension tests in the joint areas.
Load-carrying capacity under shear shall not be less than 40 N/mm of specimen length
Load-carrying capacity under transverse tension shall not be less than 80 N/mm of specimen length

Tightening torque of the screw in the turnbuckle kit F065-71:
screw M8 min — 4.5 N/m
max — 6 N/m

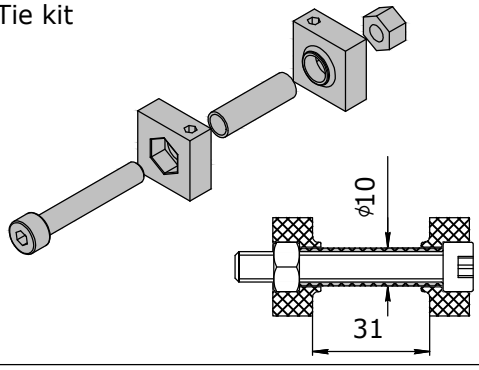
Tightening from the outside

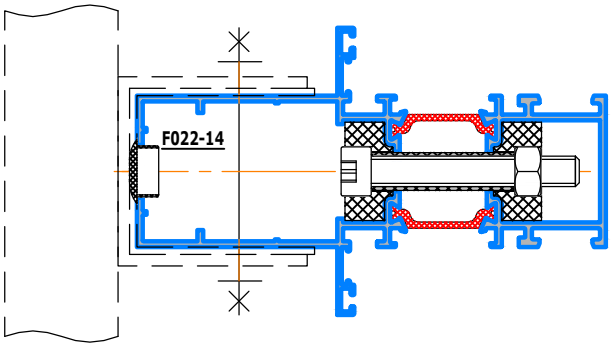


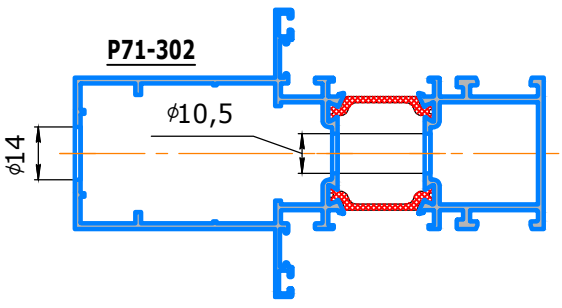
The external component is shown schematically



F065-71
Tie kit



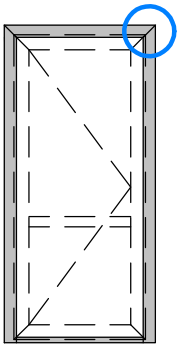


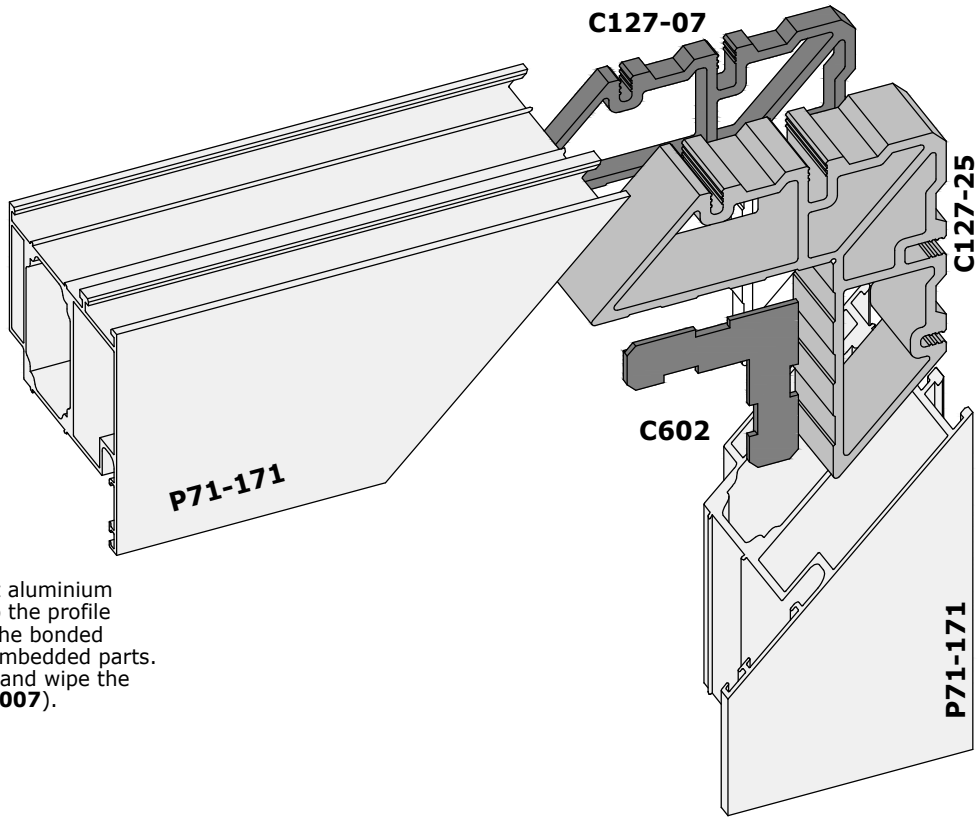


Notes

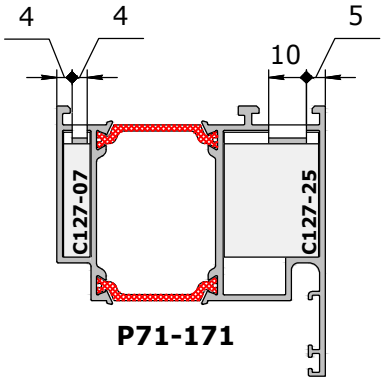
contents
profiles
delivery set
profiles (1:1)
sections
glazing tables
sub-assemblies tables
fitting arrangements
additional solutions
sub-assemblies
fire-resistant structures
connections
equipment and tools

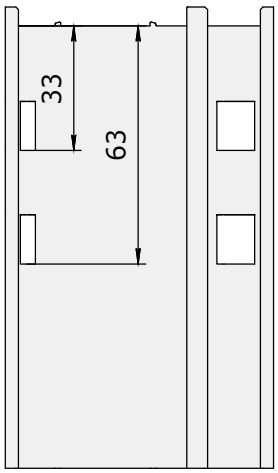
L-joint assembly: Frame P71-171

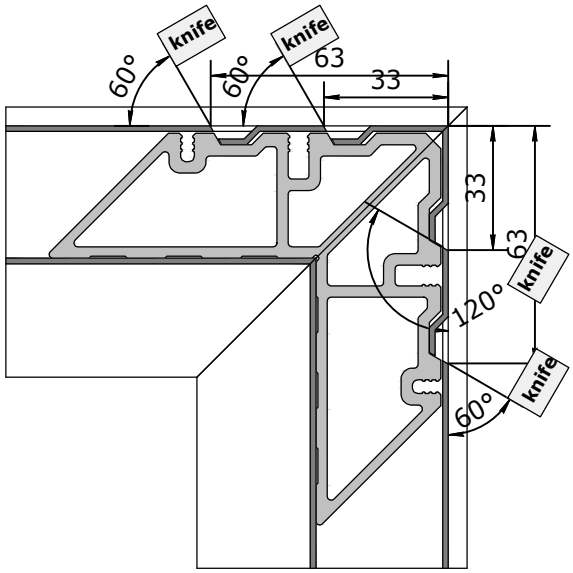


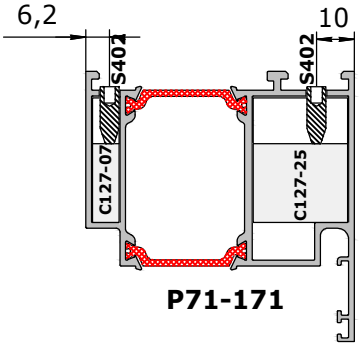


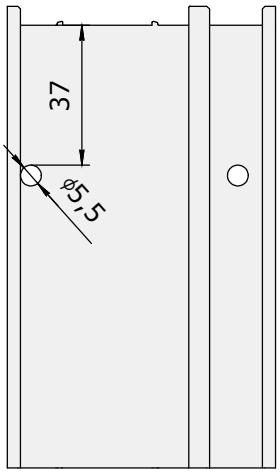
Apply one- or two-component aluminium bonding adhesive (**E006**) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (**E007**).

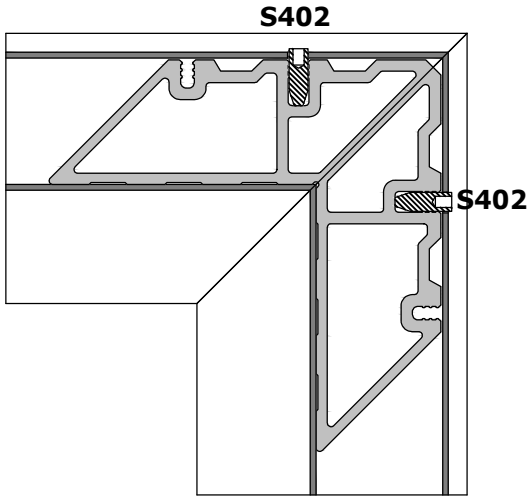




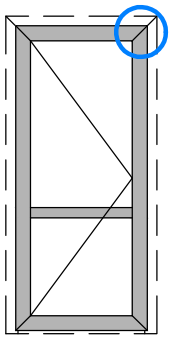


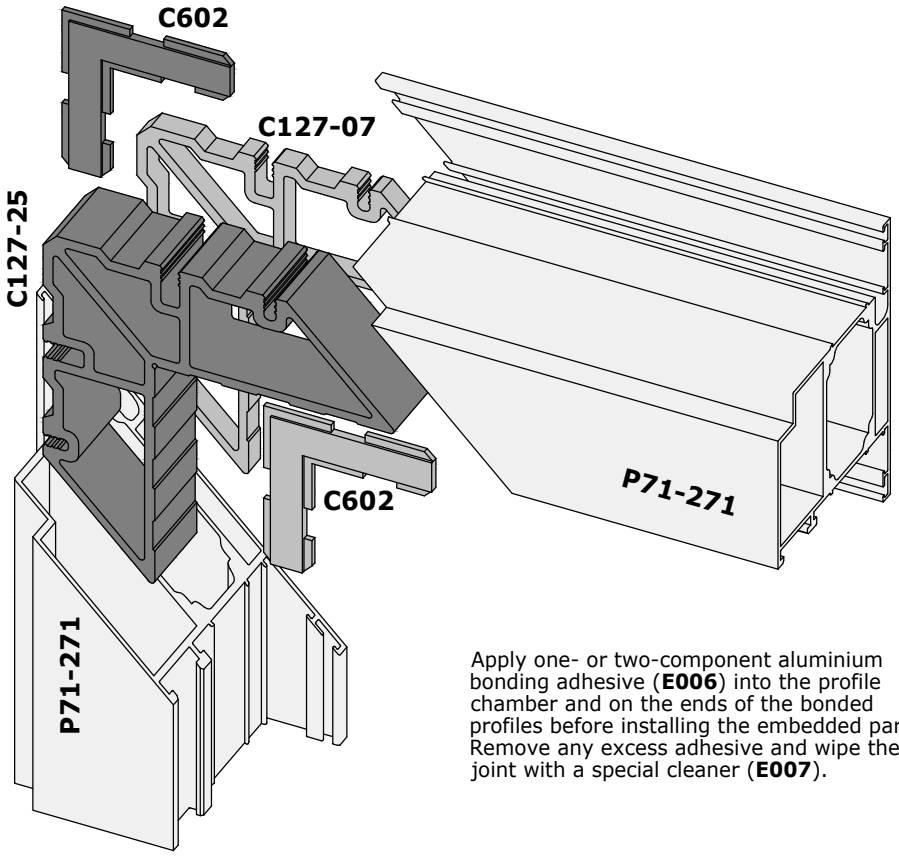




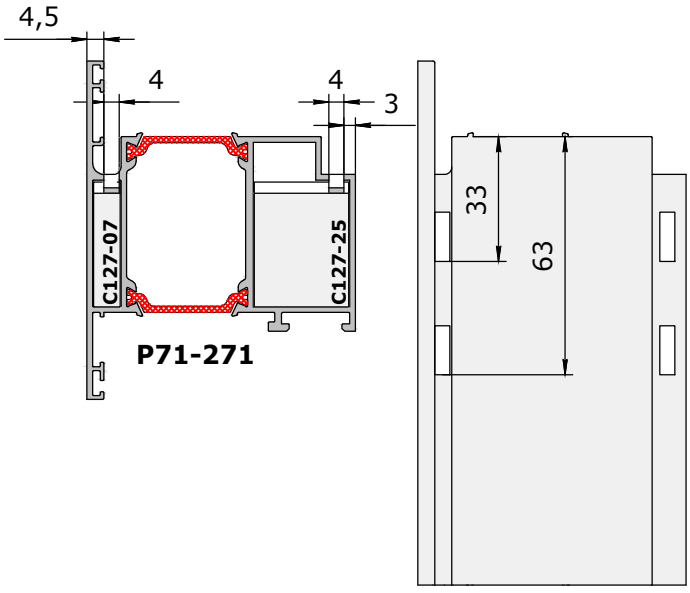


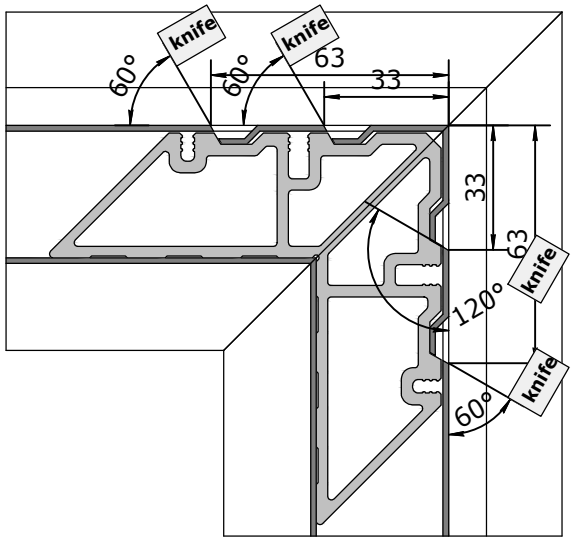
L-joint assembly: Sash P71-271



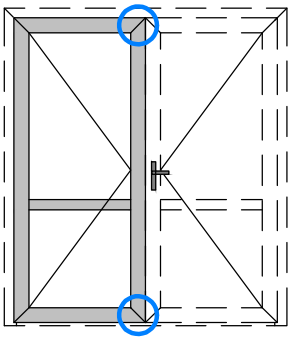


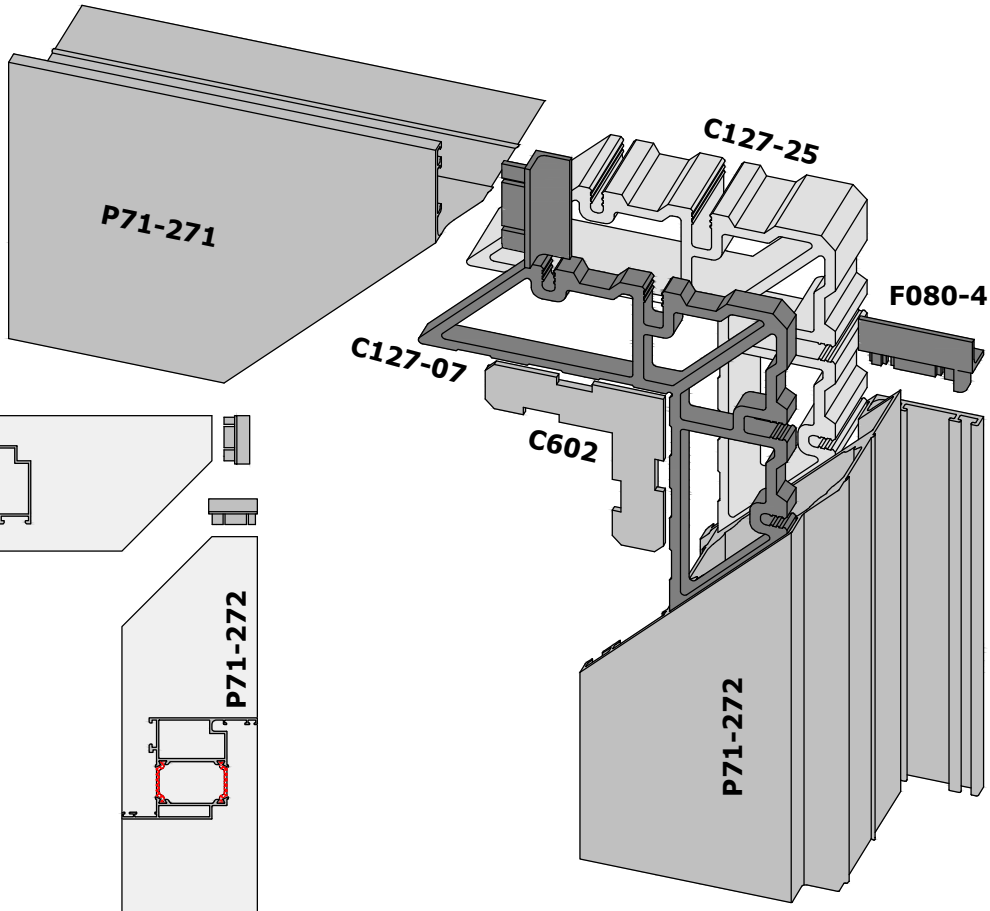
Apply one- or two-component aluminium bonding adhesive (**E006**) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (**E007**).

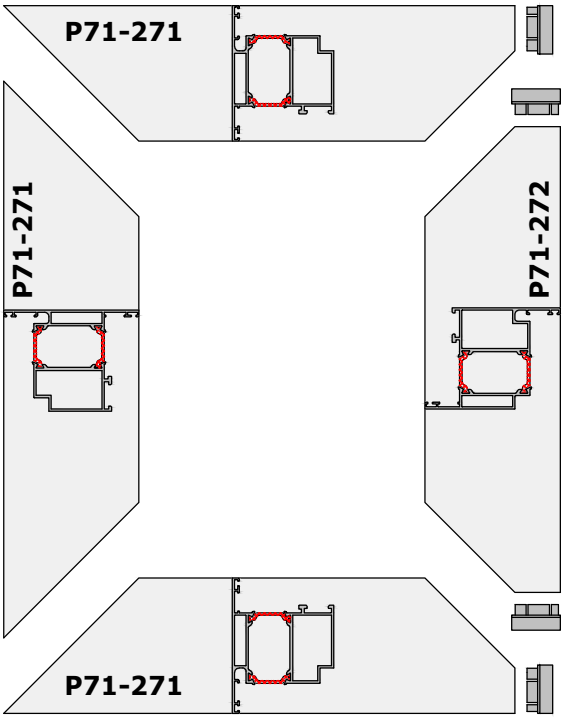




L-joint assembly:
Mating the sashes P71-271 and P71-272

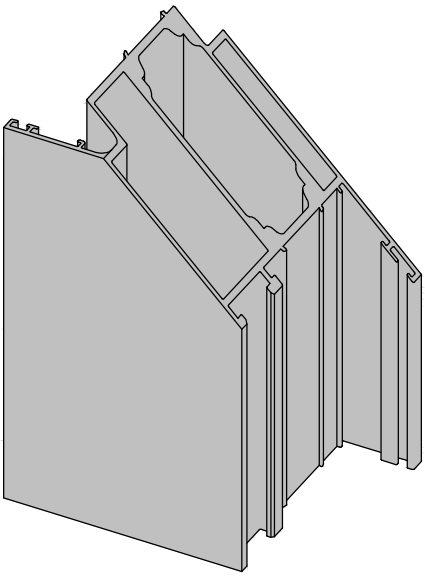


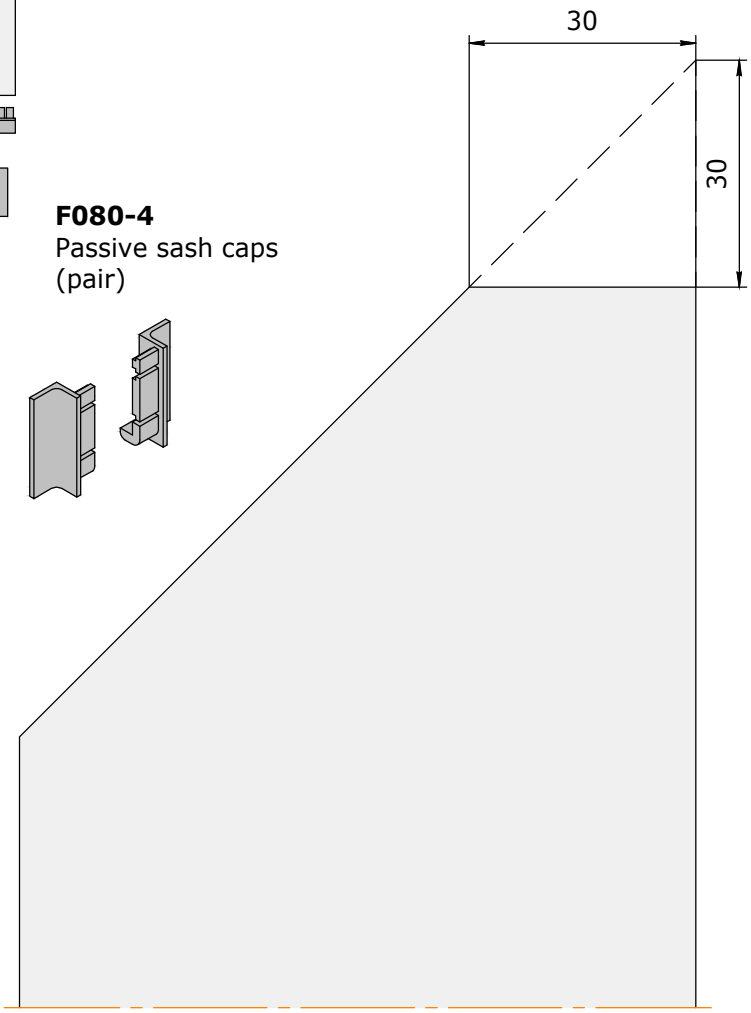




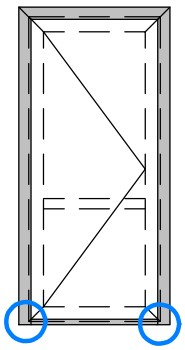
Apply one- or two-component aluminium bonding adhesive (**E006**) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (**E007**).

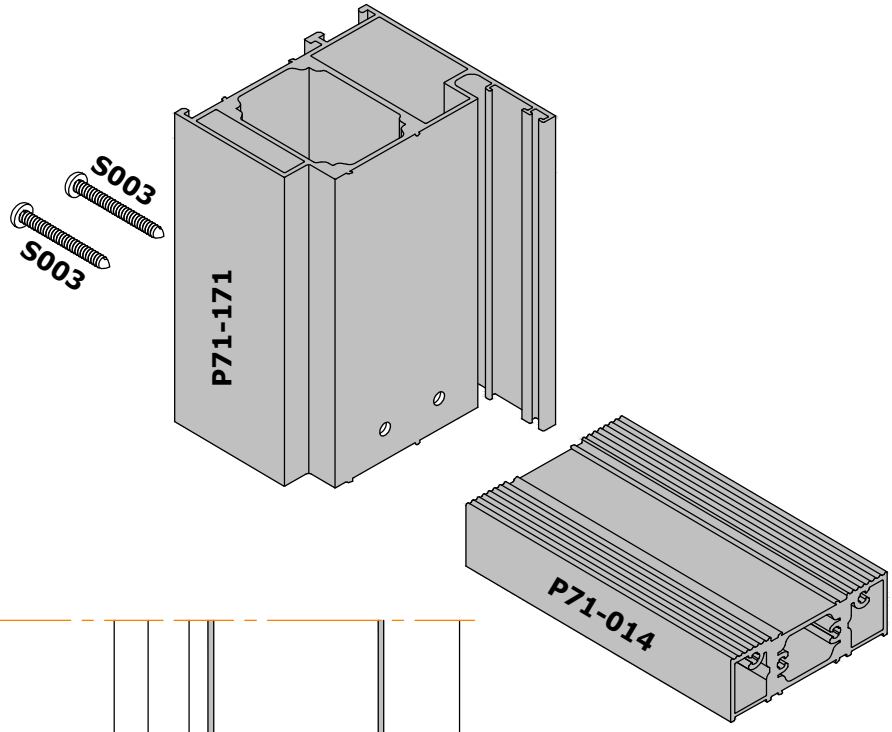
F080-4
Passive sash caps
(pair)

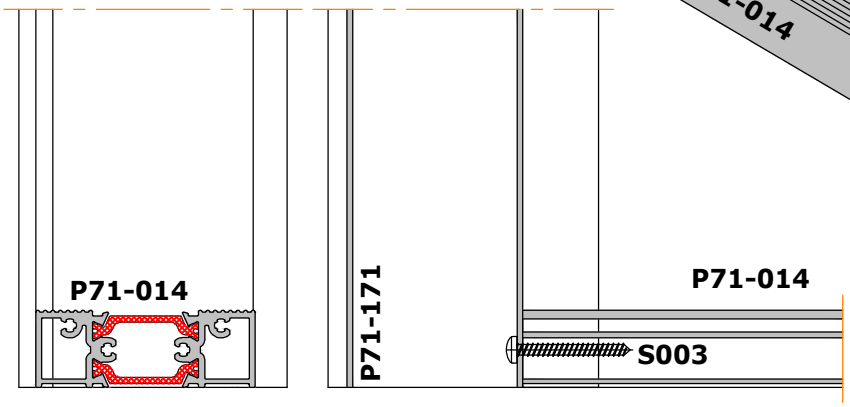


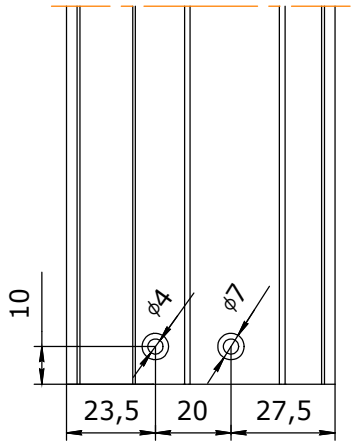


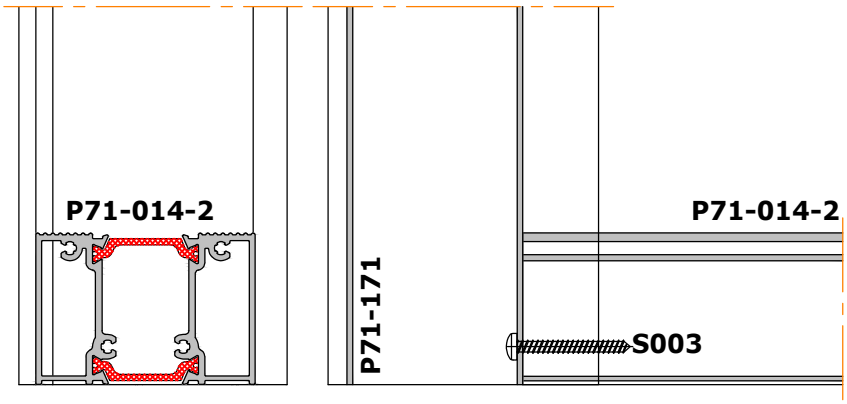
Sill mounting assembly

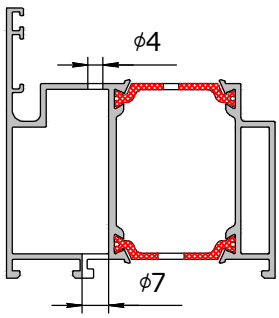


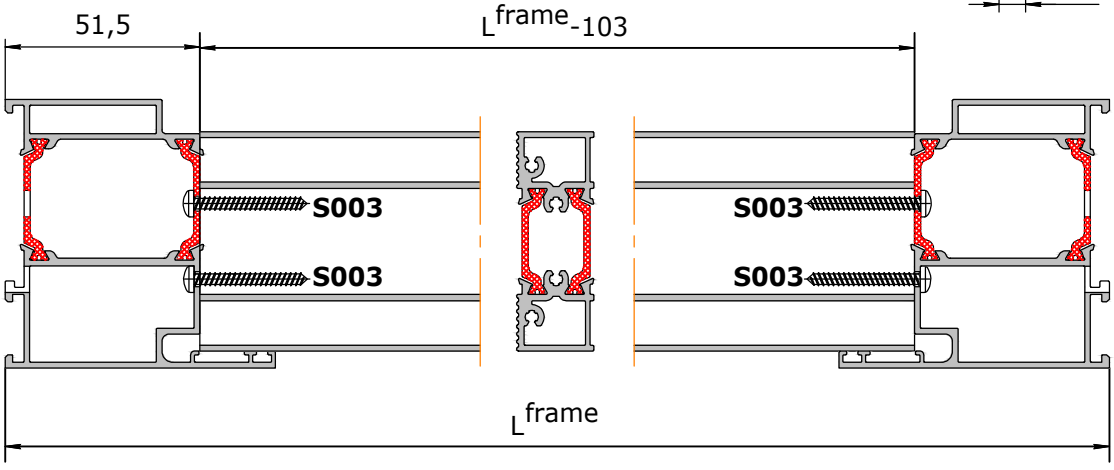




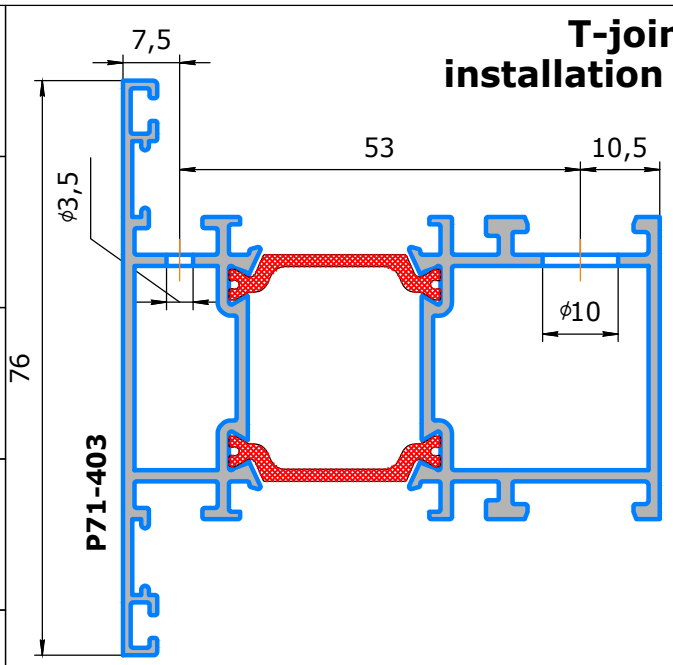


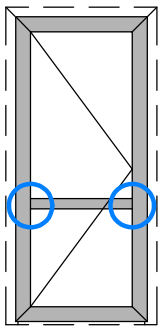






T-joint assembly: installation of impost P71-403

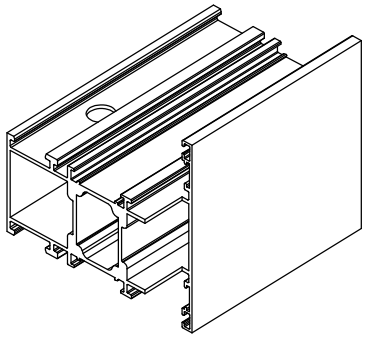


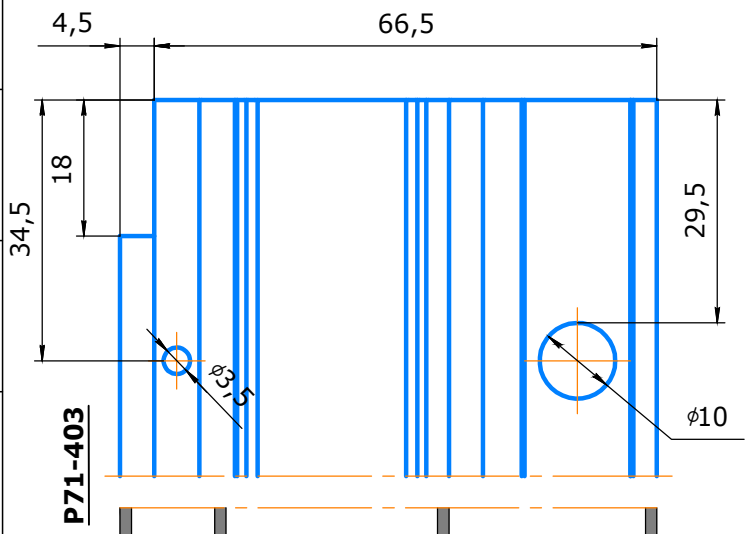


Screw torque in the embedded part

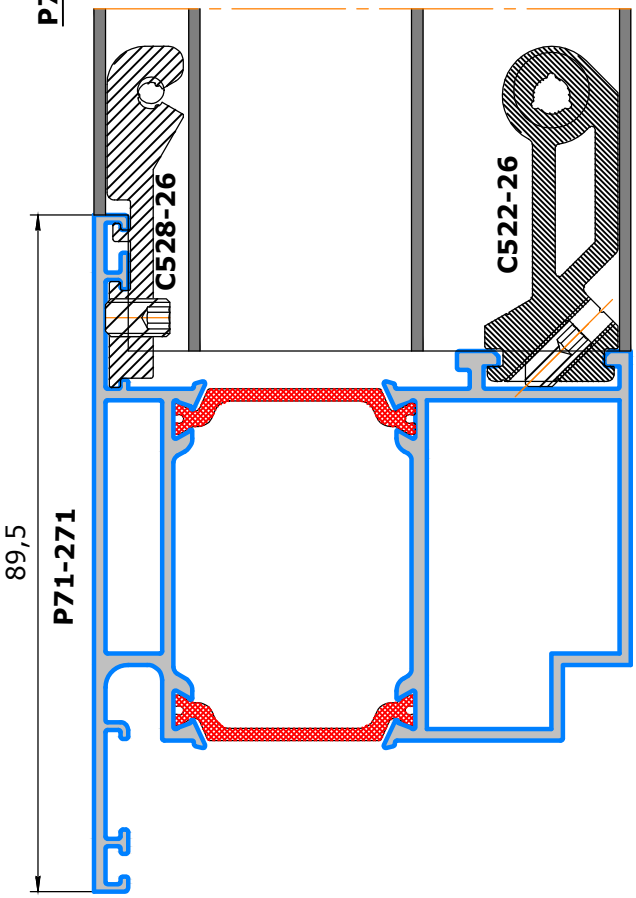
C552-26:
screw M6 with countersunk head — min — 4.5 N/m, max — 6 N/m
screw M5 — min — 2 N/m, max — 2.5 N/m

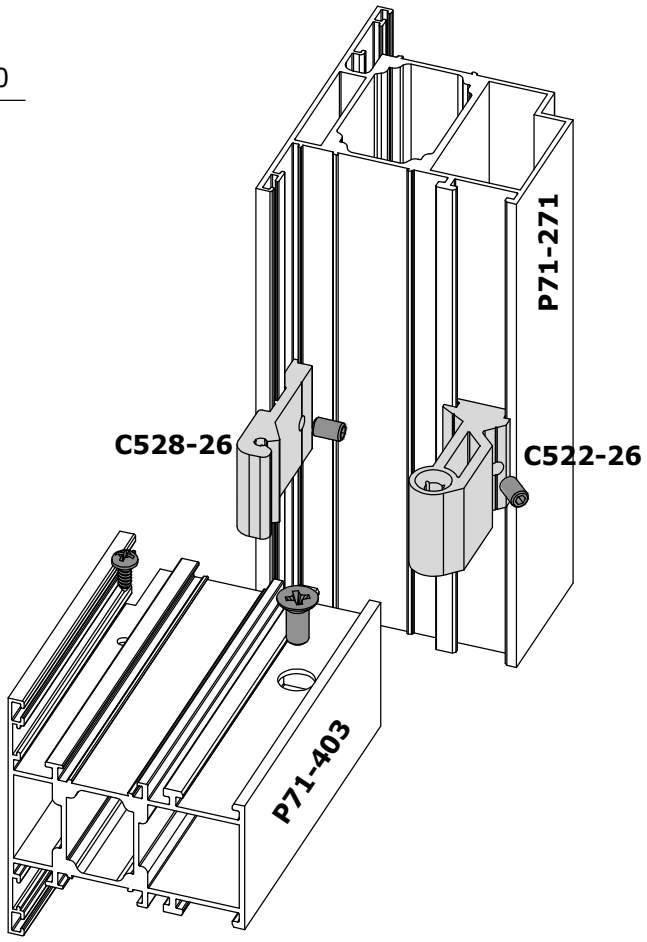
C558-26:
screw M5 — min — 2 N/m, max — 2.5 N/m





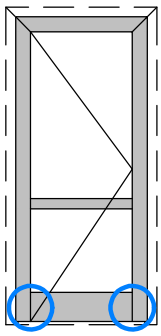
Apply one- or two-component aluminium bonding adhesive (**E006**) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (**E007**).





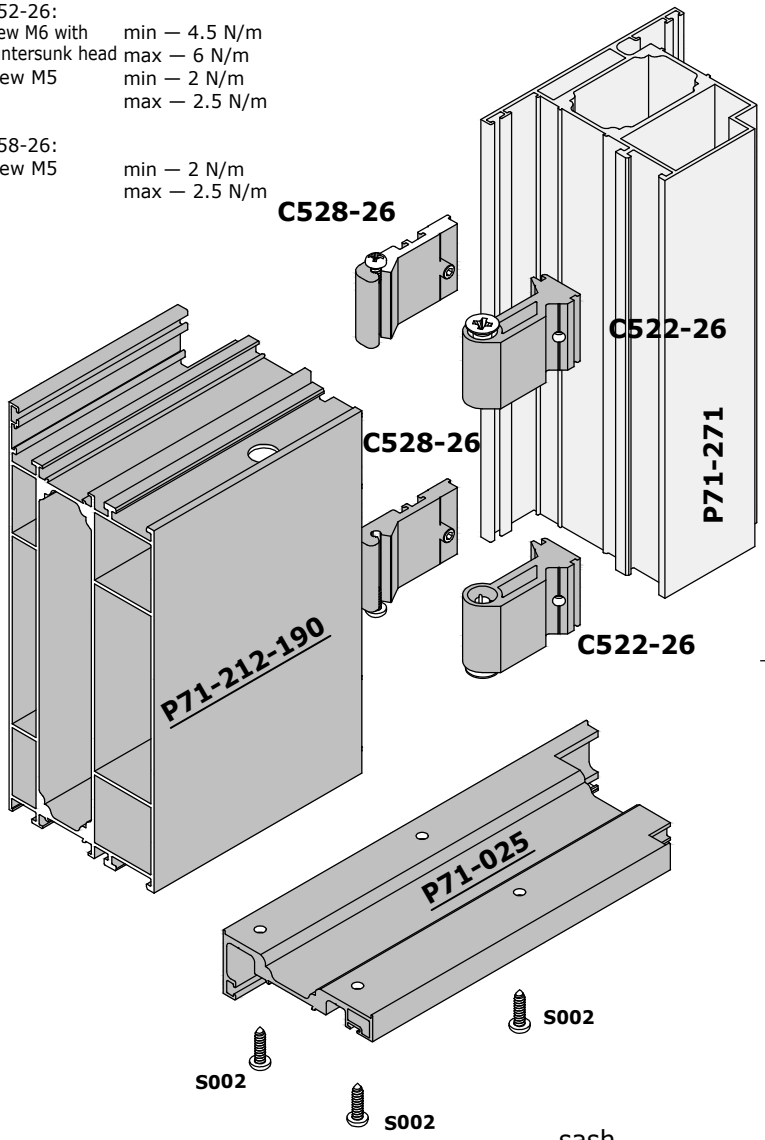
To prevent moisture leakage along the mullions, seal the joints between the imposts and the mullions with a neutral sealant.

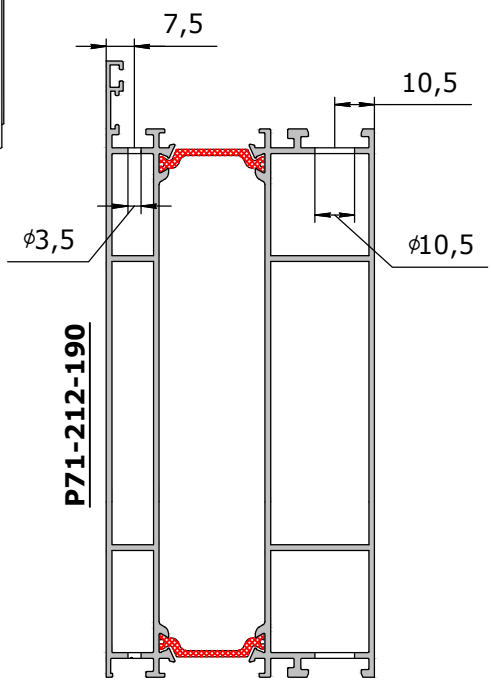
T-joint assembly: installation of base P71-212-190

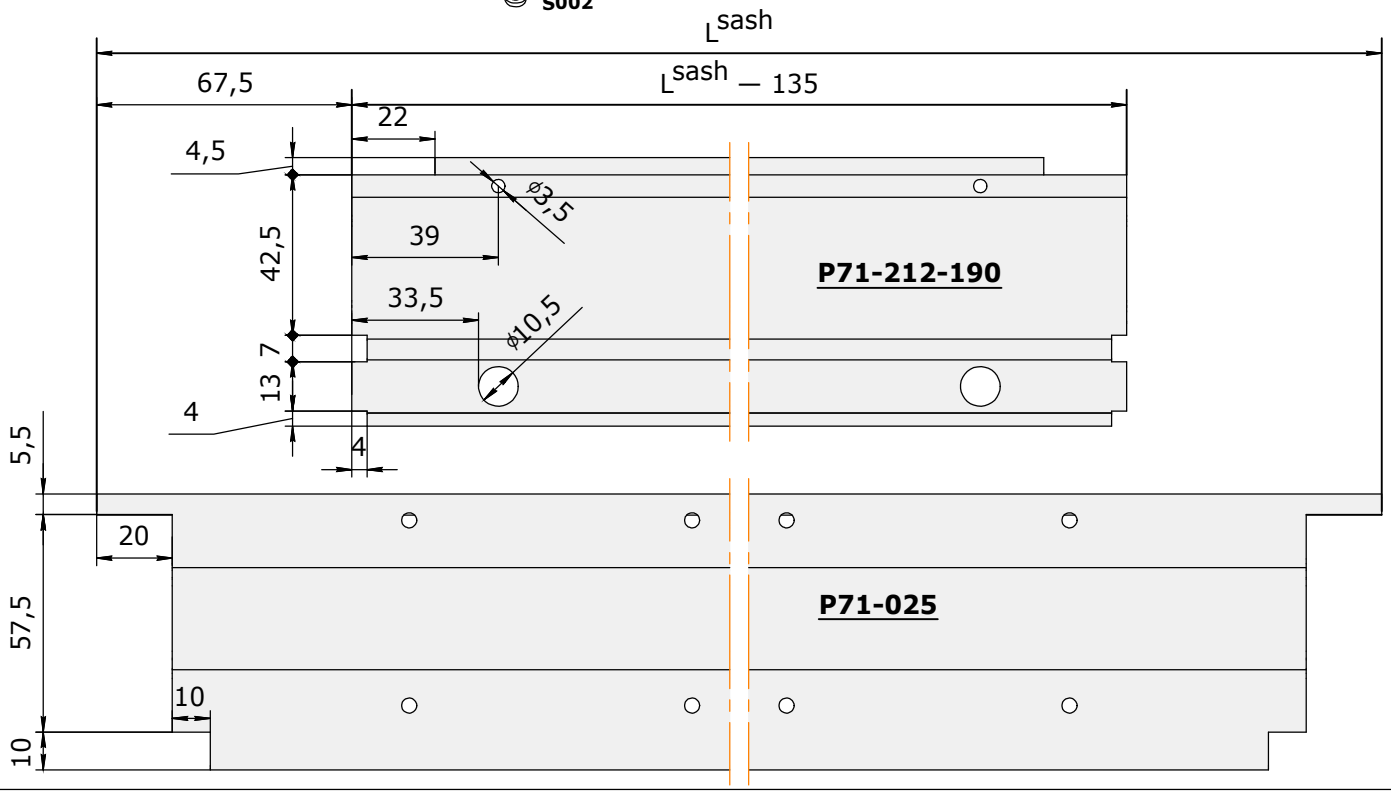


Screw torque in the embedded part
C552-26:
screw M6 with countersunk head — min — 4.5 N/m, max — 6 N/m
screw M5 — min — 2 N/m, max — 2.5 N/m

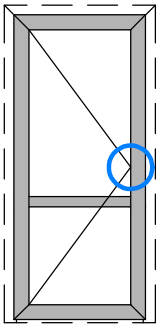
C558-26:
screw M5 — min — 2 N/m, max — 2.5 N/m







Lock installation



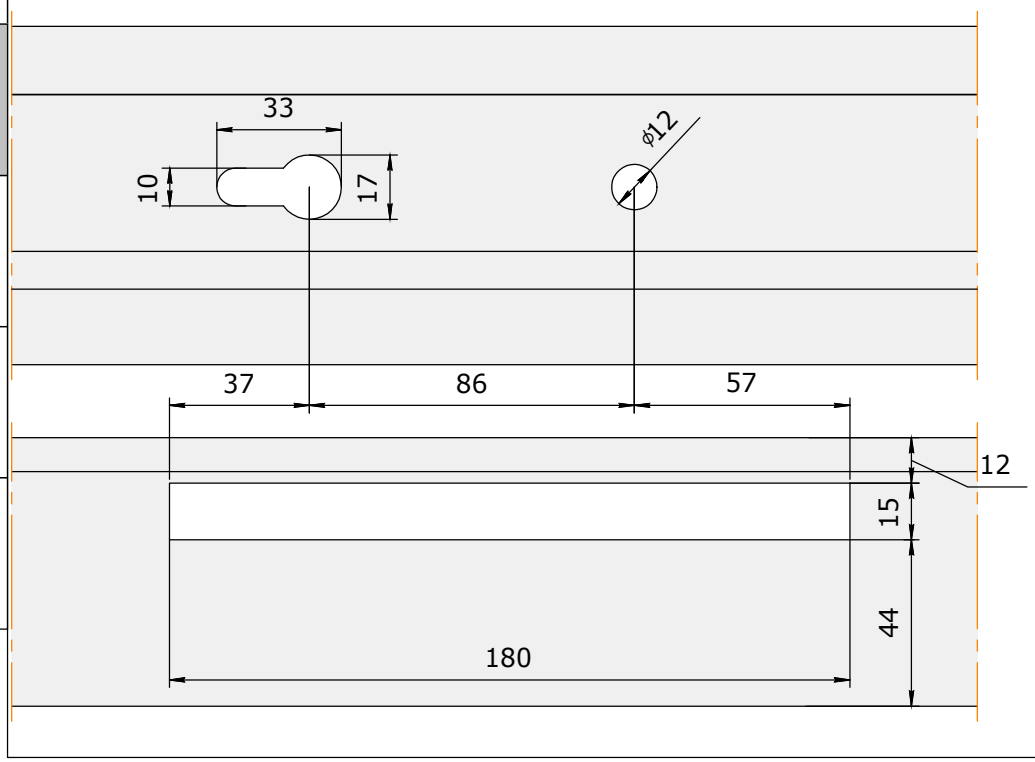
FF-2041
Lever door handle (pair)
for doors 40–55 mm

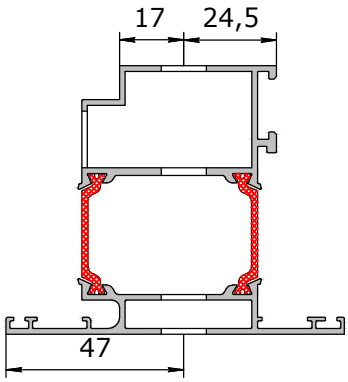
FF-2101
Door handle stud

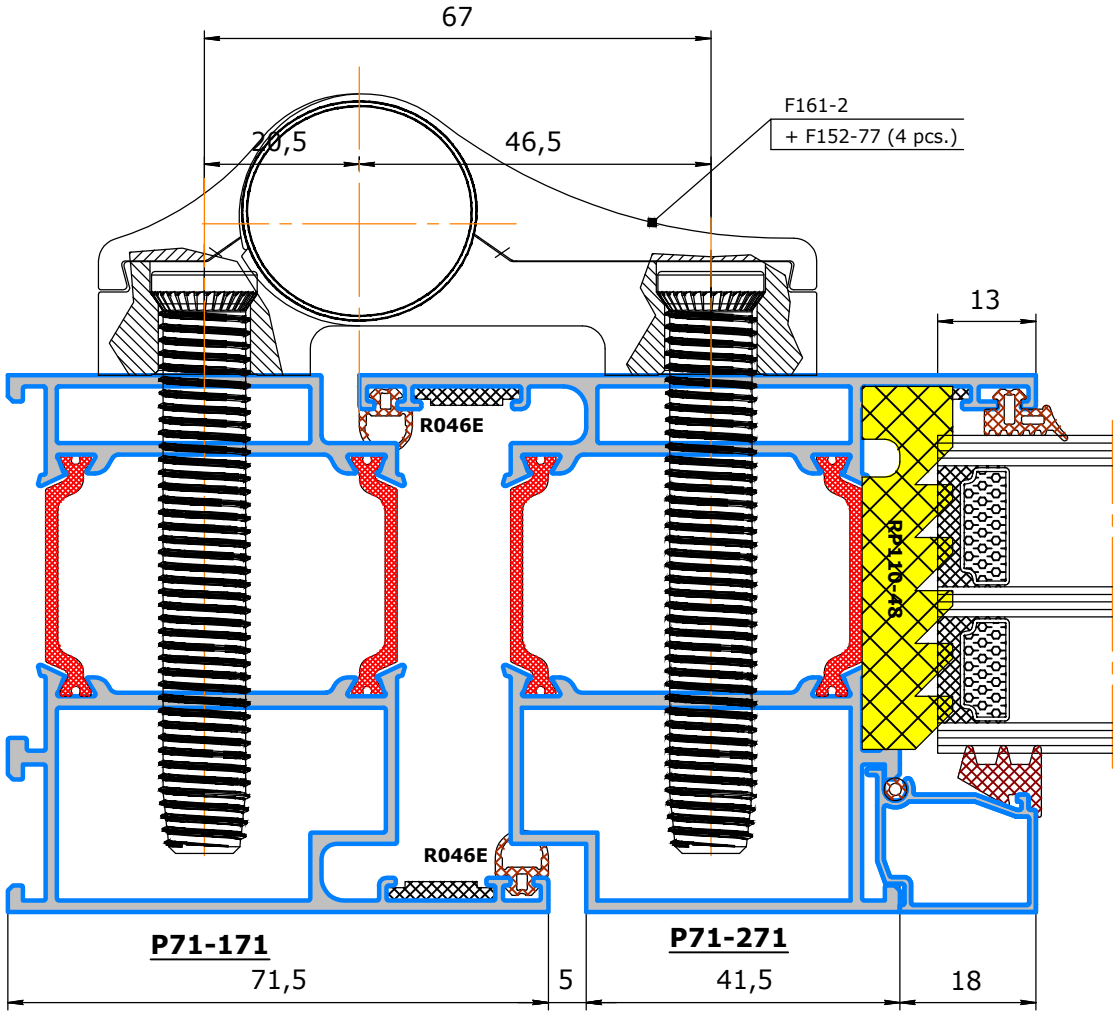
F522-35-70
lock cylinder 105 mm
35-70

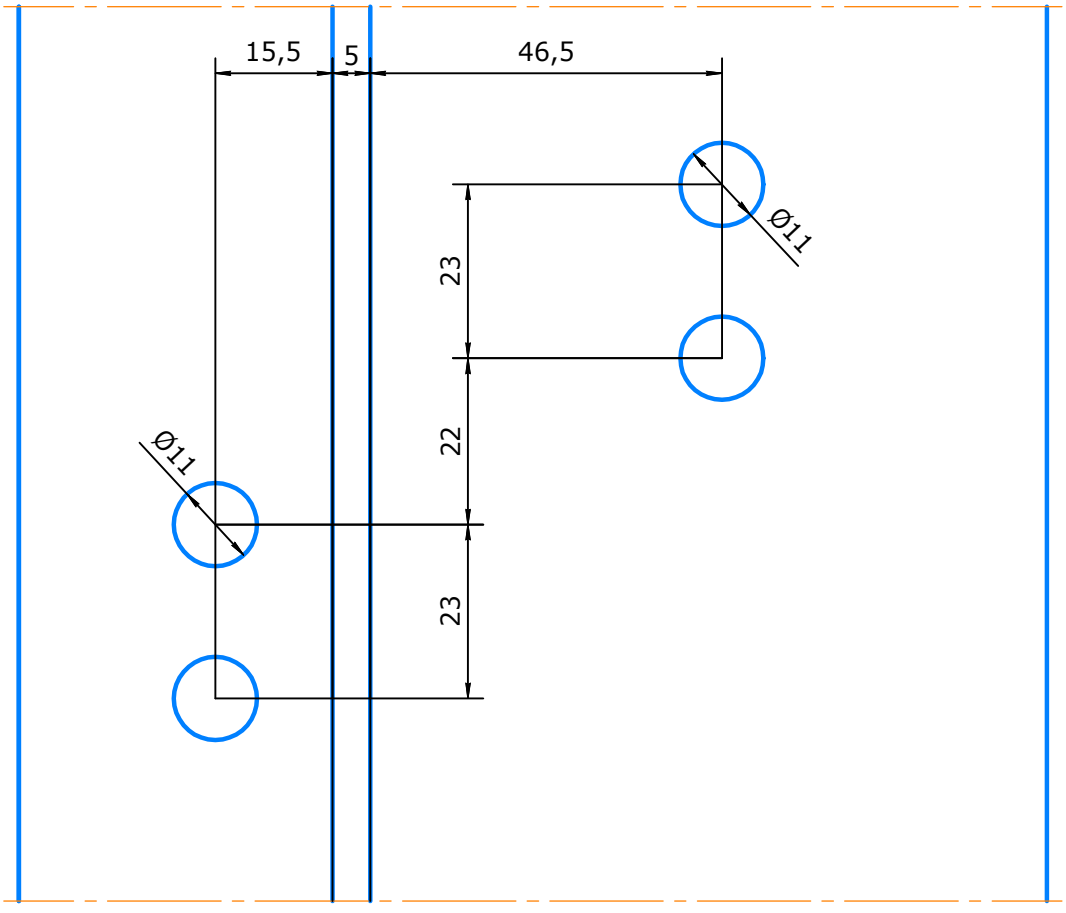
F513
cylinder cover plate
h = 10 mm

F511
Lever lock D = 30

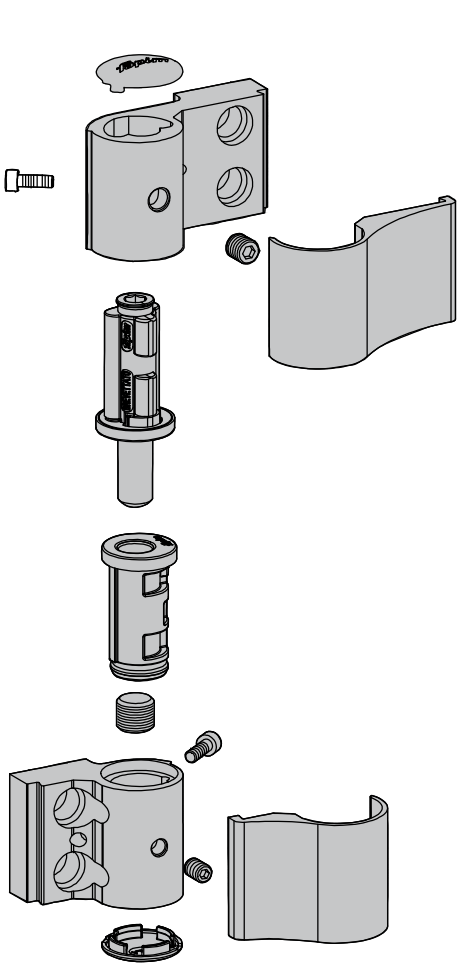


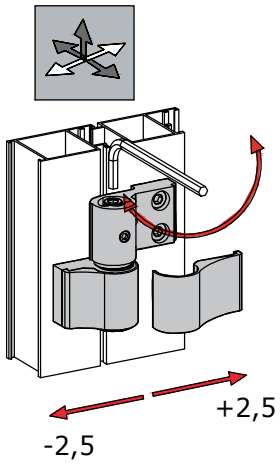


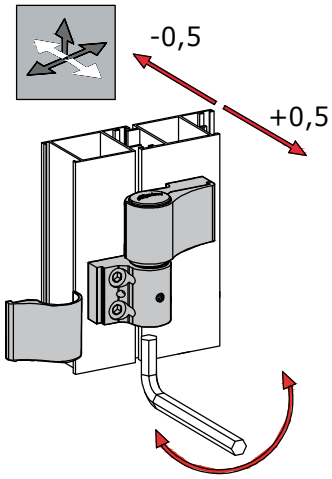

67
20,5
46,5
F161-2
+ F152-77 (4 pcs.)
13
R046E
RP110-93
R046E
P71-171
71,5
5
P71-271
41,5
18

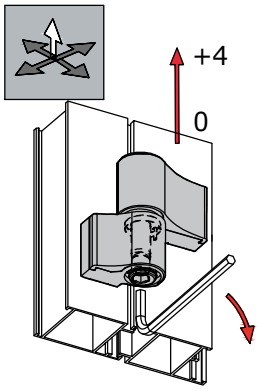

15,5
5
46,5
Ø11
23
22
23
Ø11

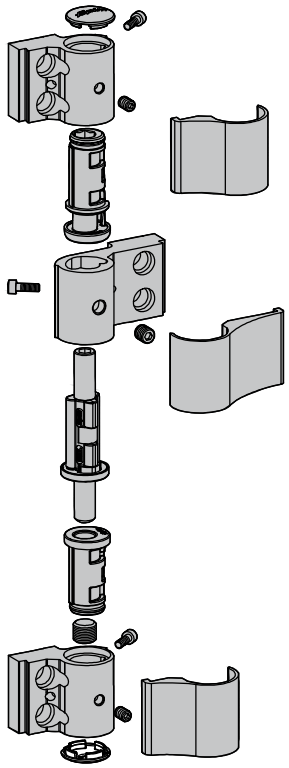
Hinge adjustment

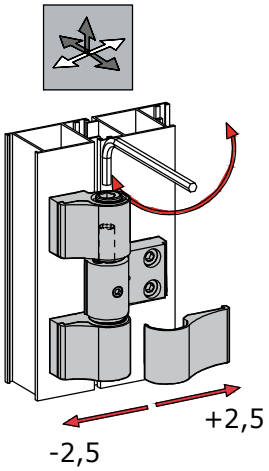


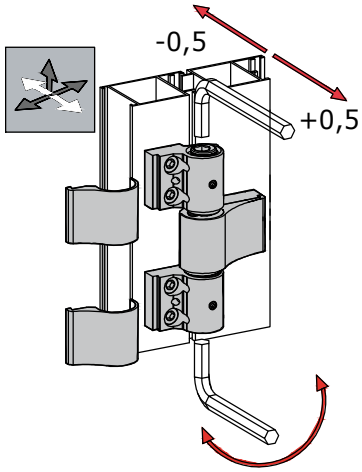


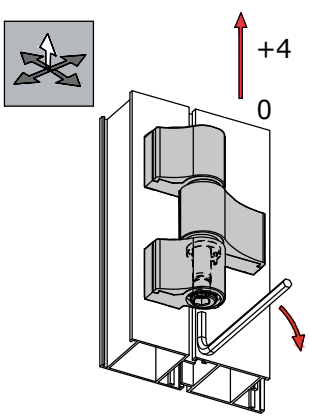








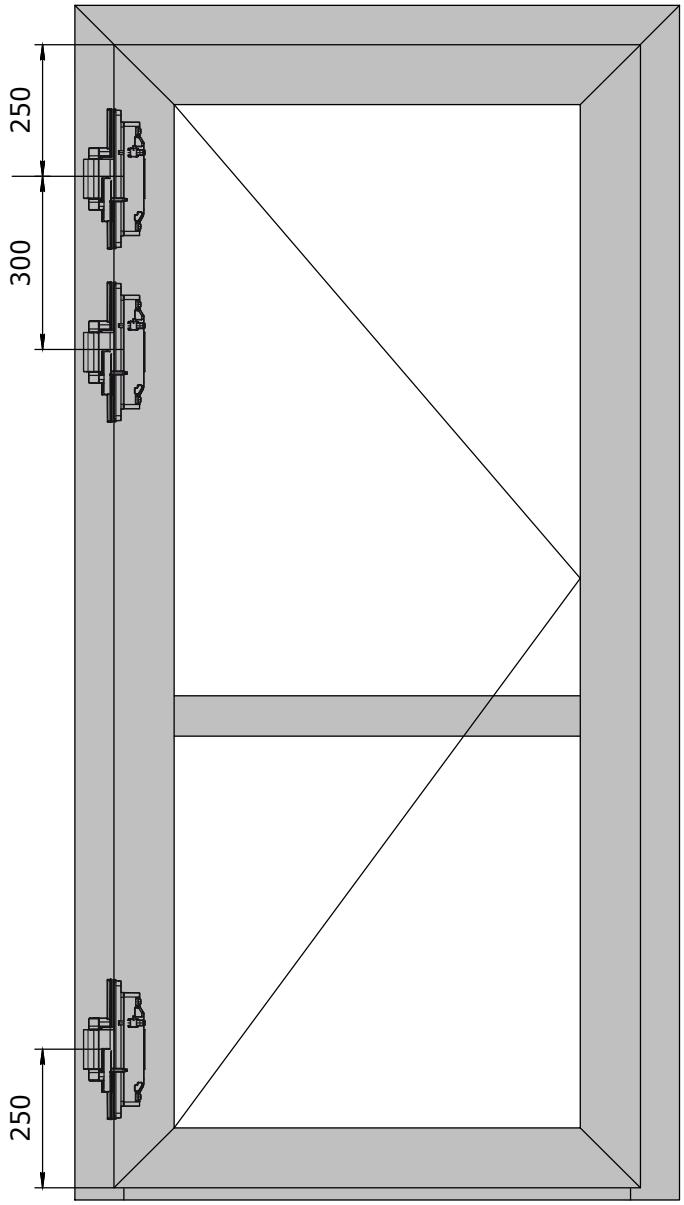


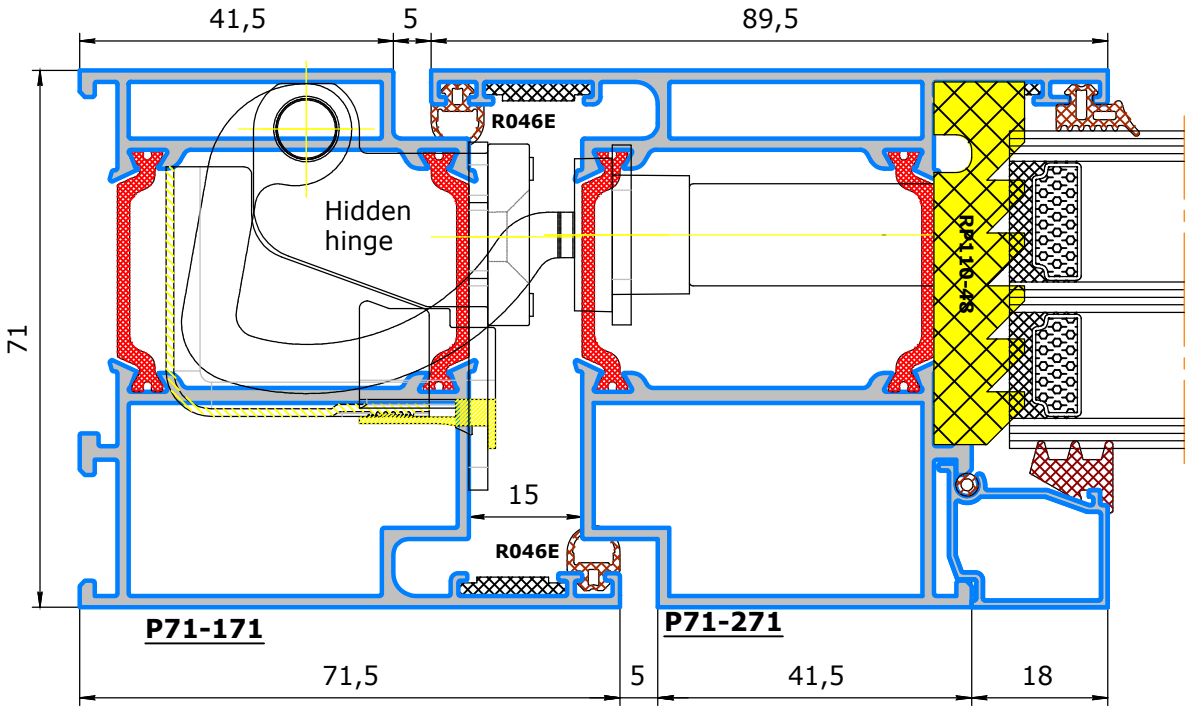


H^{sash} > 2200 — 2 hinges
H^{sash} 2200 > 2500 — 3 hinges
H^{sash} > 2500 — 4 hinges

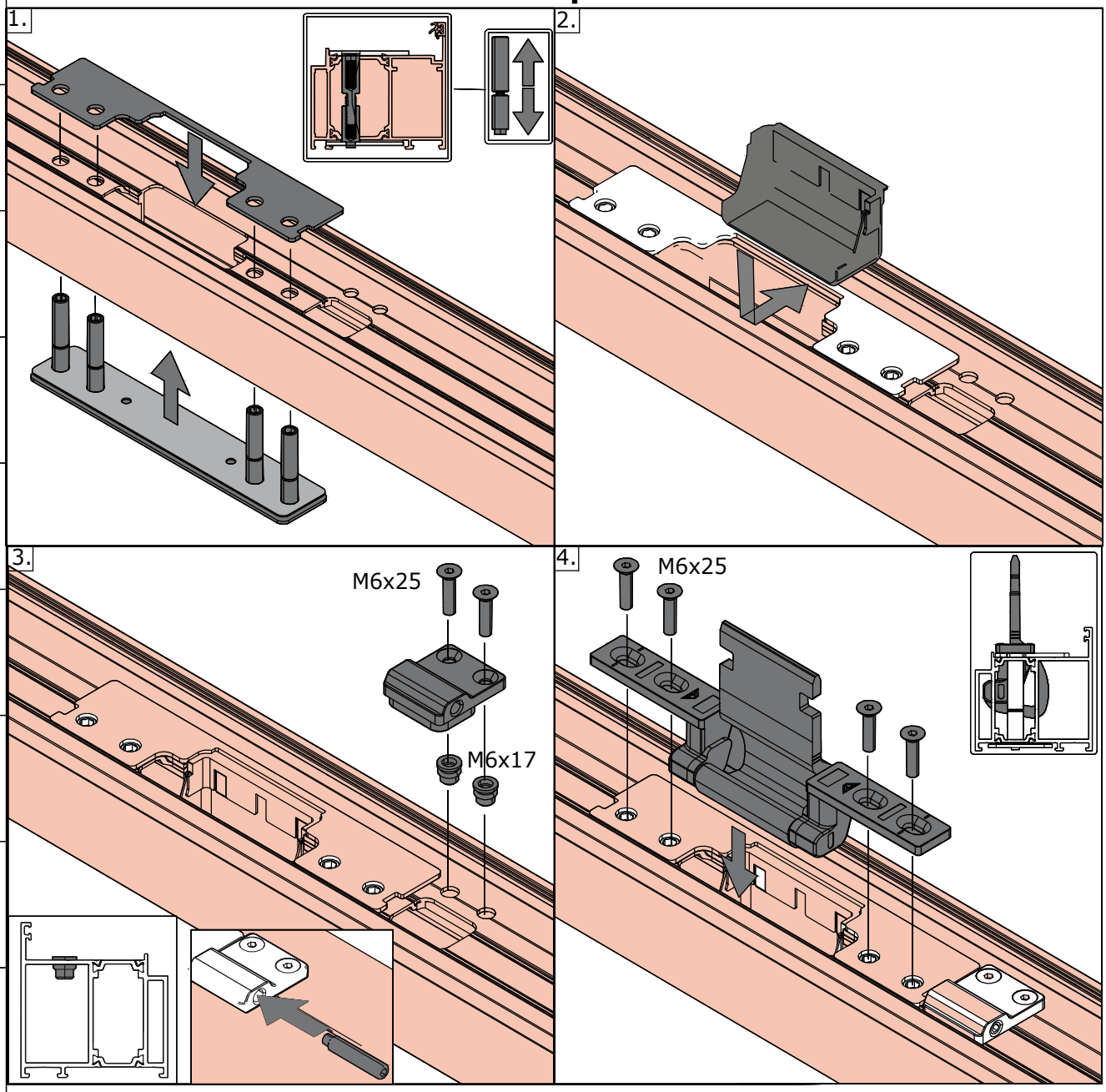
For installation of door closer —
- **at least 3 hinges**

Permissible load
2 hinges — up to 100 kg
3 hinges — up to 140 kg

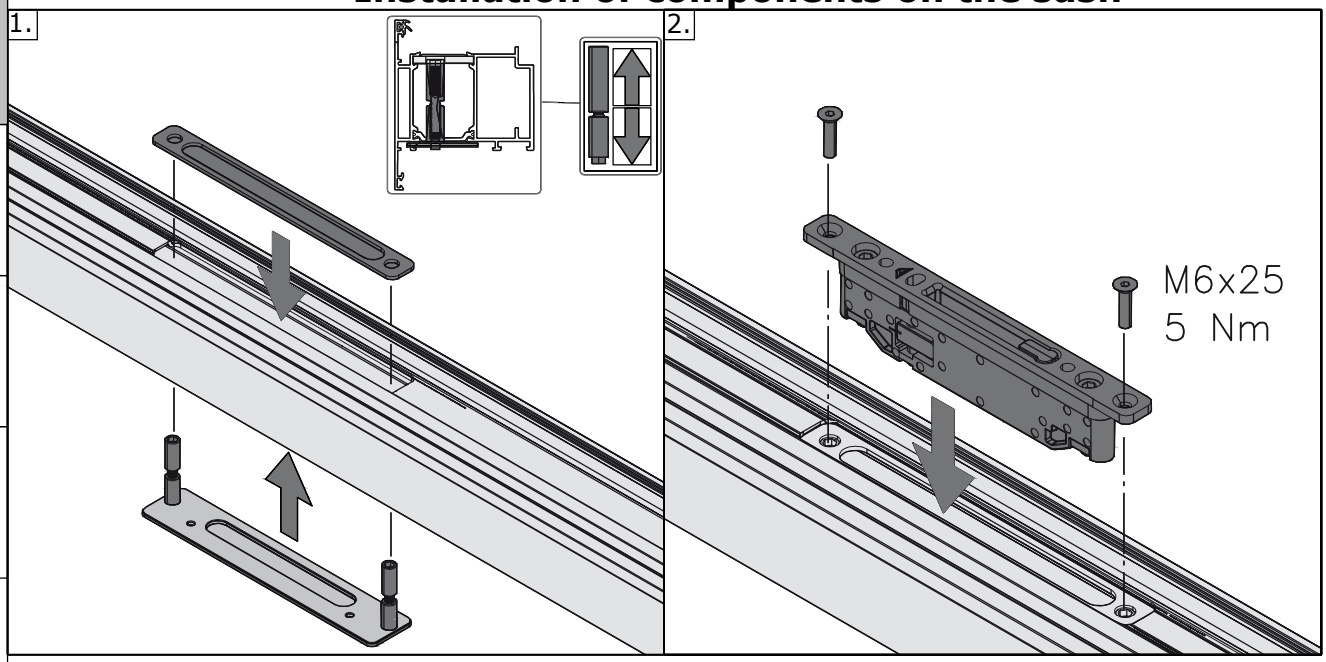




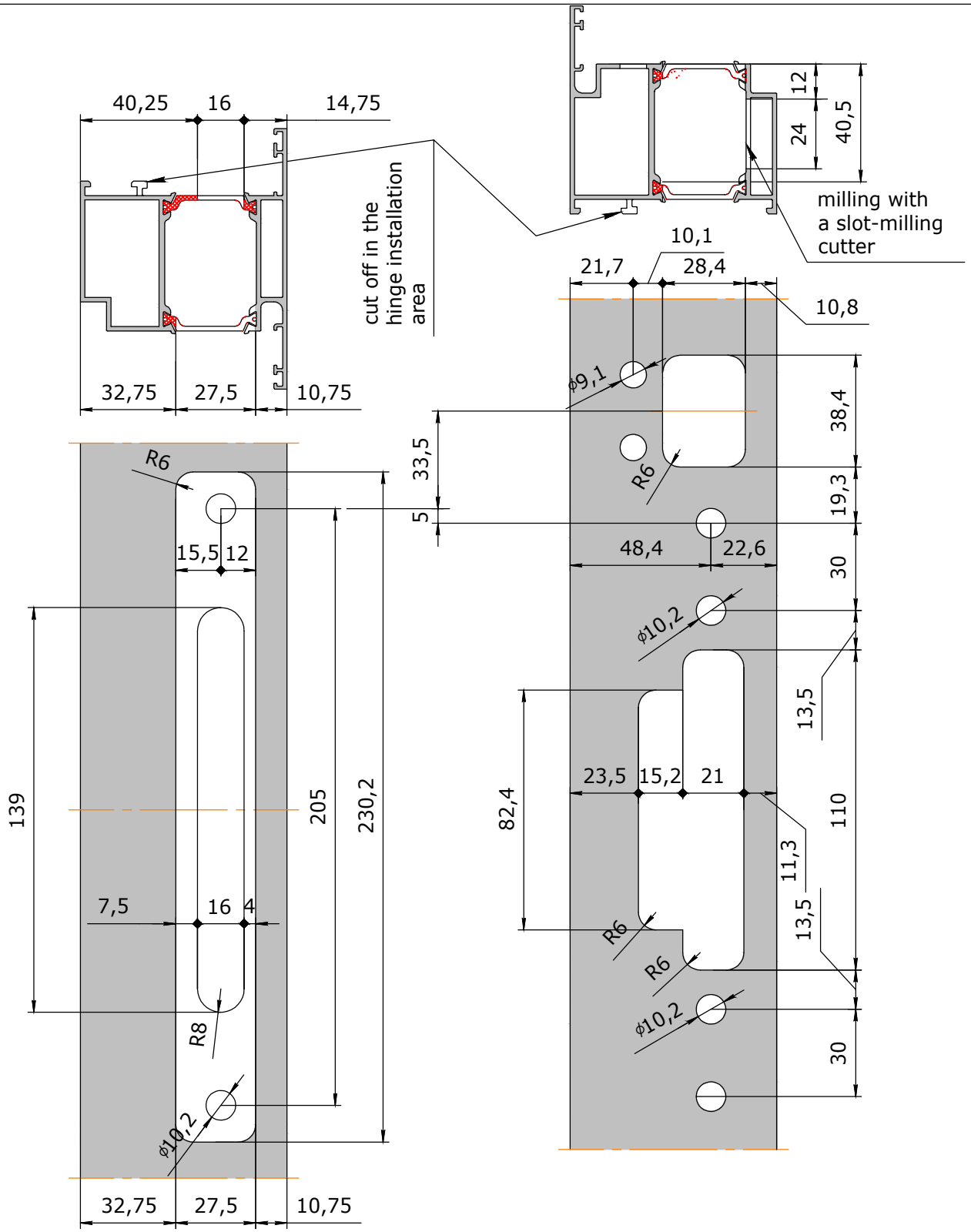
Installation of components on the frame

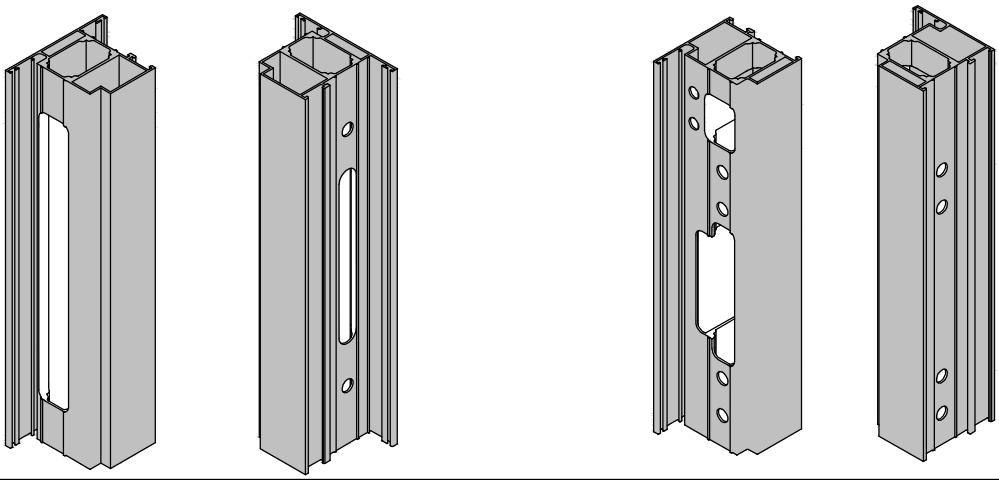


Installation of components on the sash



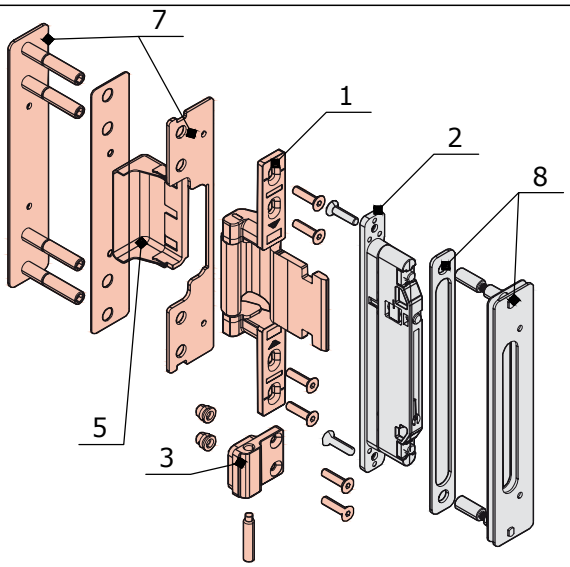
For detailed installation and machining diagrams, please refer to the fitting supplier's (ROTO) catalogue.


40,25
16
14,75
32,75
27,5
10,75
cut off in the hinge installation area
12
24
40,5
milling with a slot-milling cutter
10,1
21,7
28,4
10,8
ø9,1
38,4
R6
33,5
5
19,3
48,4
22,6
30
ø10,2
13,5
23,5
15,2
21
82,4
110
11,3
13,5
R6
R6
ø10,2
30
R6
15,5
12
139
205
230,2
7,5
16
4
R8
ø10,2
32,75
27,5
10,75



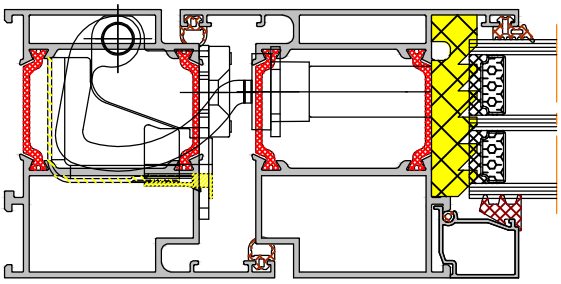
FR-251-1
hidden door hinge
(black)

Components:
1 - **FR-828097**— Frame part of hinge IV C7.140 (black)
2 - **FR-811094**— Sash part of hinge IV C7.140 (black)
3 - **FR-833603**— Height adjustment module type III (black)
4 - **FR-813631**— Mounting kit
5 - **FR-811102**— Solid C hinge cup
6 - **FR-821605**— Mounting screw C7.140 black M6x25 (6 pcs.)
7 - **FR-840180**— Frame & hinges kit III
8 - **FR-896830**— Hinge mounting kit sash VIII



FR-251-2
hidden door hinge
(silver)

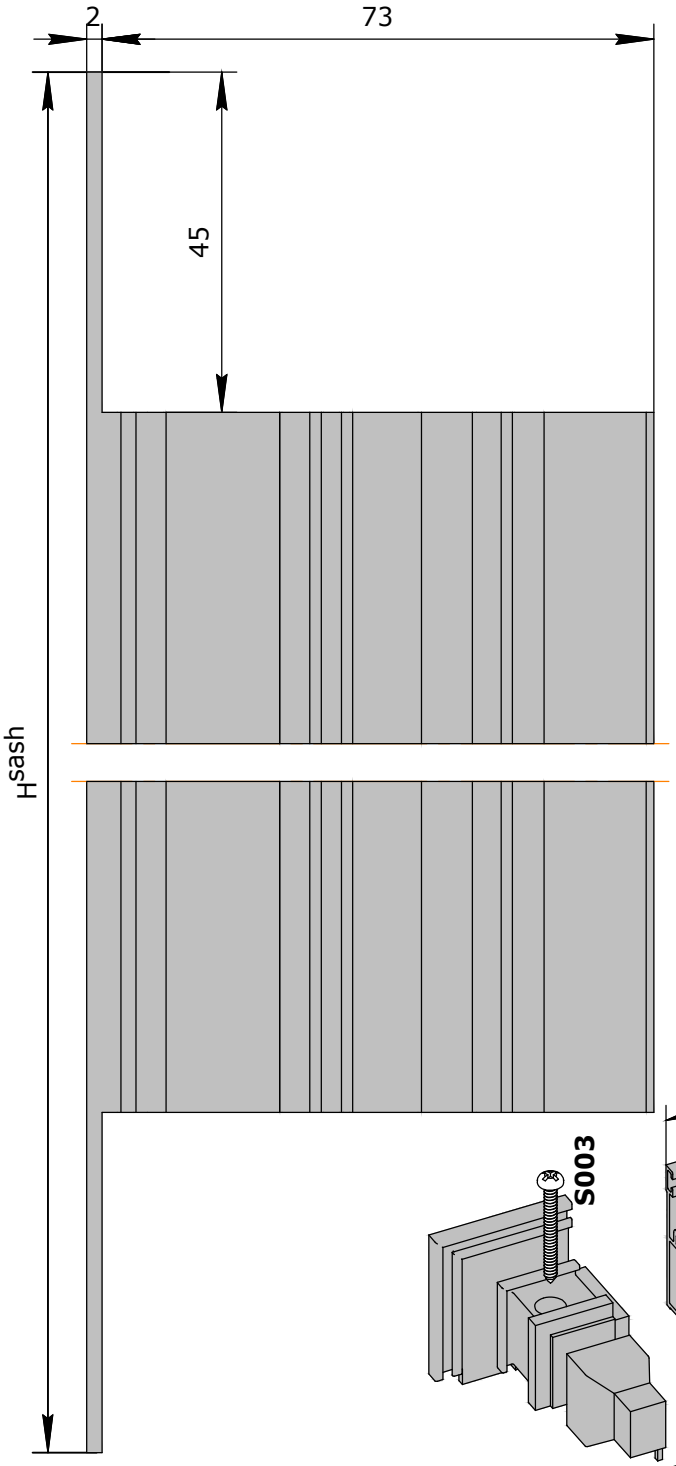
Components:
1 - **FR-828096**— Frame part of hinge IV C7.140 (silver)
2 - **FR-811092**— Sash part of hinge IV C7.140 (silver)
3 - **FR-833602**— Height adjustment module type III (silver)
4 - **FR-813631**— Mounting kit
5 - **FR-811102**— Solid C hinge cup
6 - **FR-821604**— Mounting screw C7.140 (silver) M6x25 (6 pcs.)
7 - **FR-840180**— Frame & hinges kit III
8 - **FR-896830**— Hinge mounting kit sash VIII



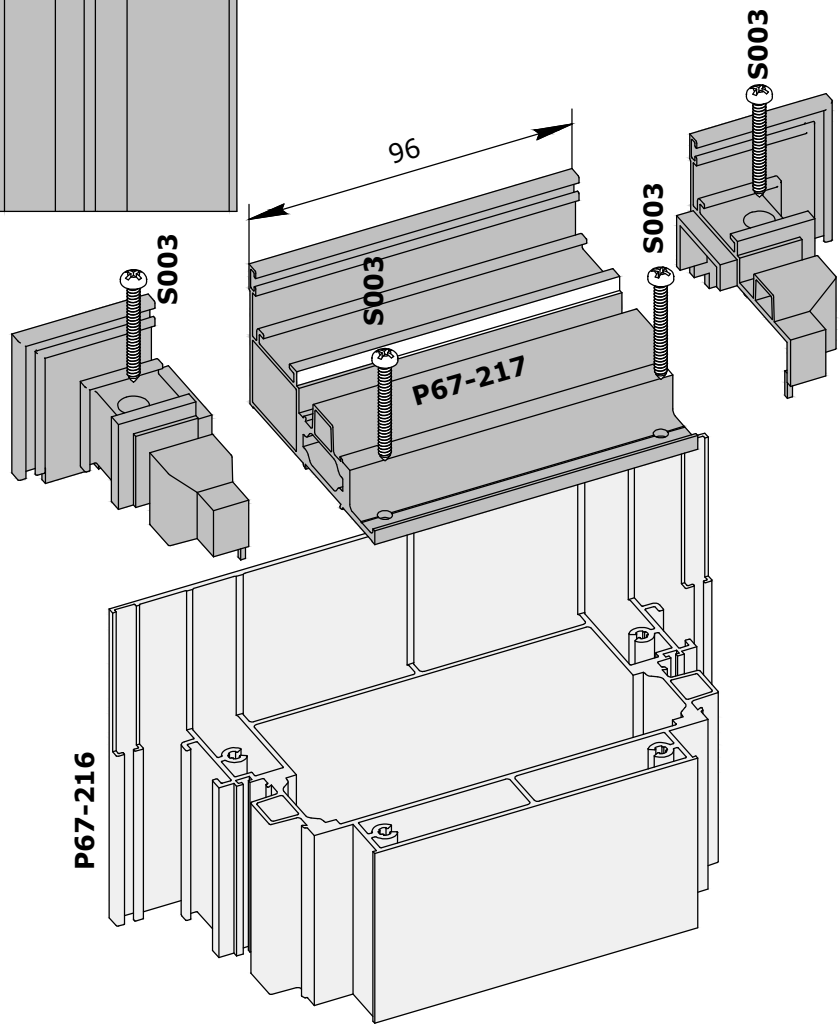
Notes

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delivery set
profiles (1:1)
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sub-assemblies tables
fitting arrangements
additional solutions
sub-assemblies
fire-resistant structures
connections
equipment and tools

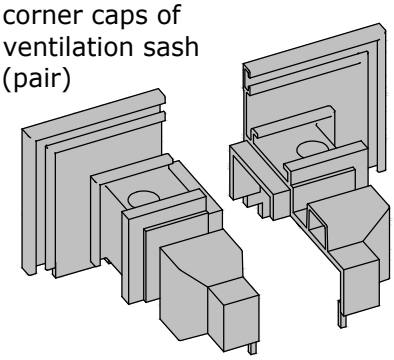
End cap installation



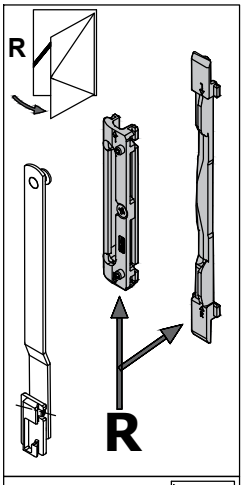
When installing corner caps and end profiles, ensure that they are additionally secured with adhesive. Apply adhesive all around the joint plane.

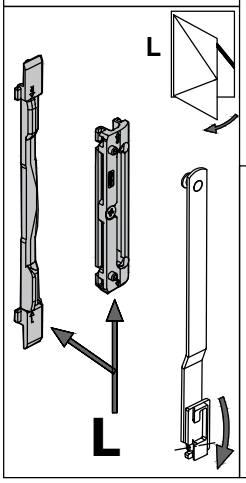


F081-71-100
corner caps of ventilation sash (pair)

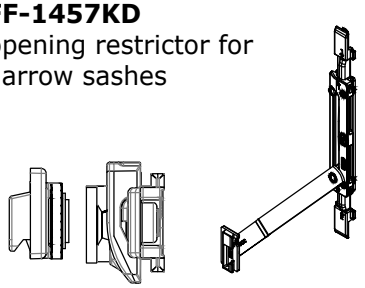


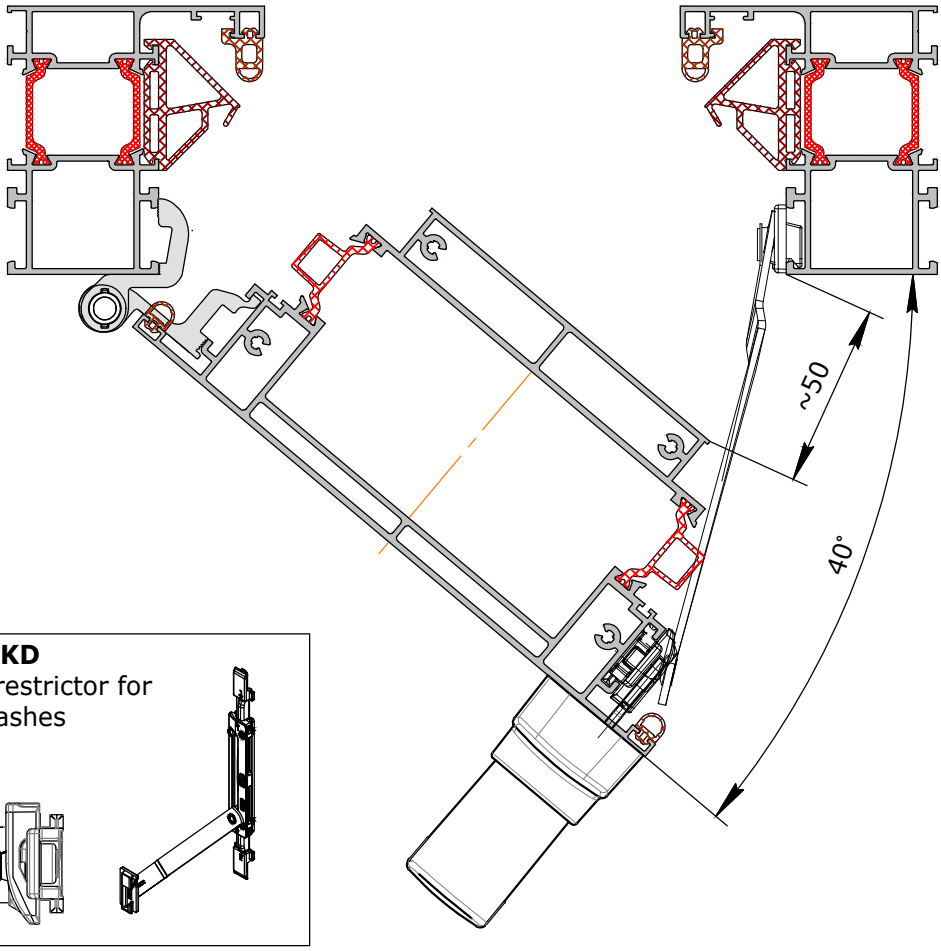
Doorstop installation diagram

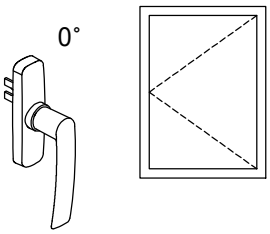


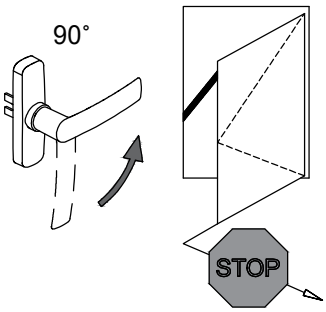


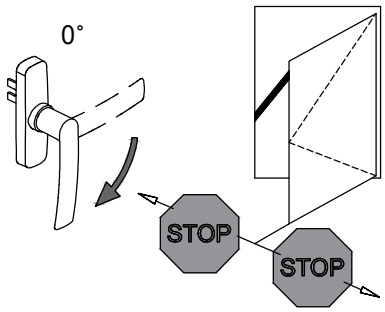
FF-1457KD
opening restrictor for narrow sashes

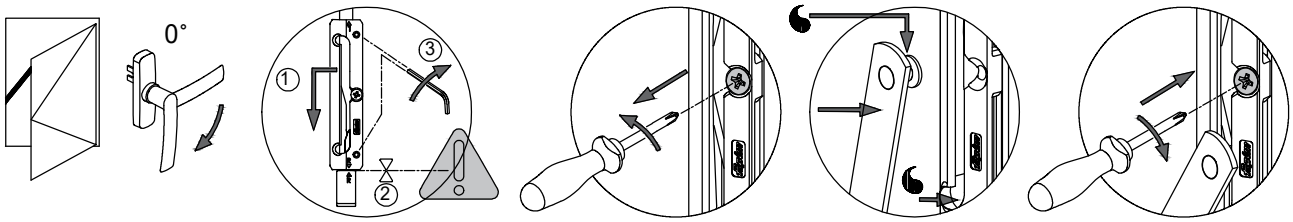


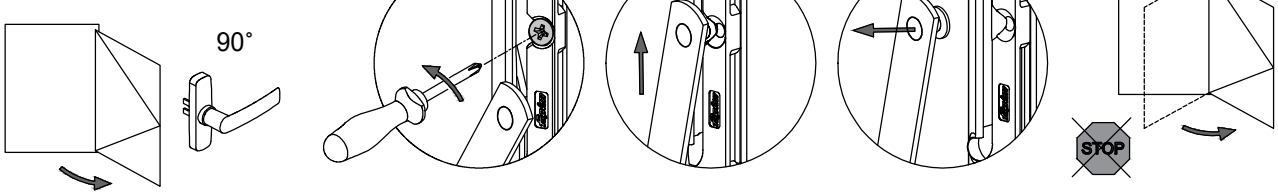




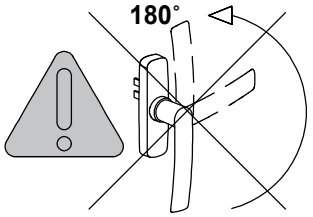






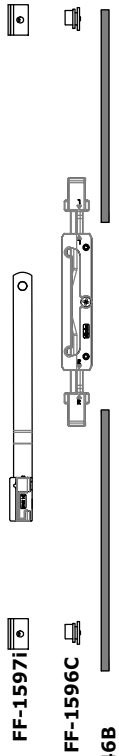


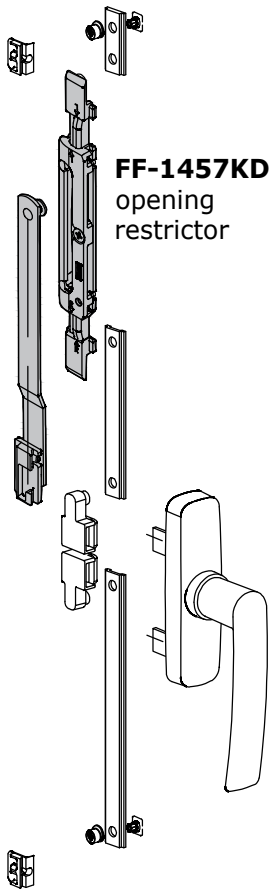
Fittings installation diagram



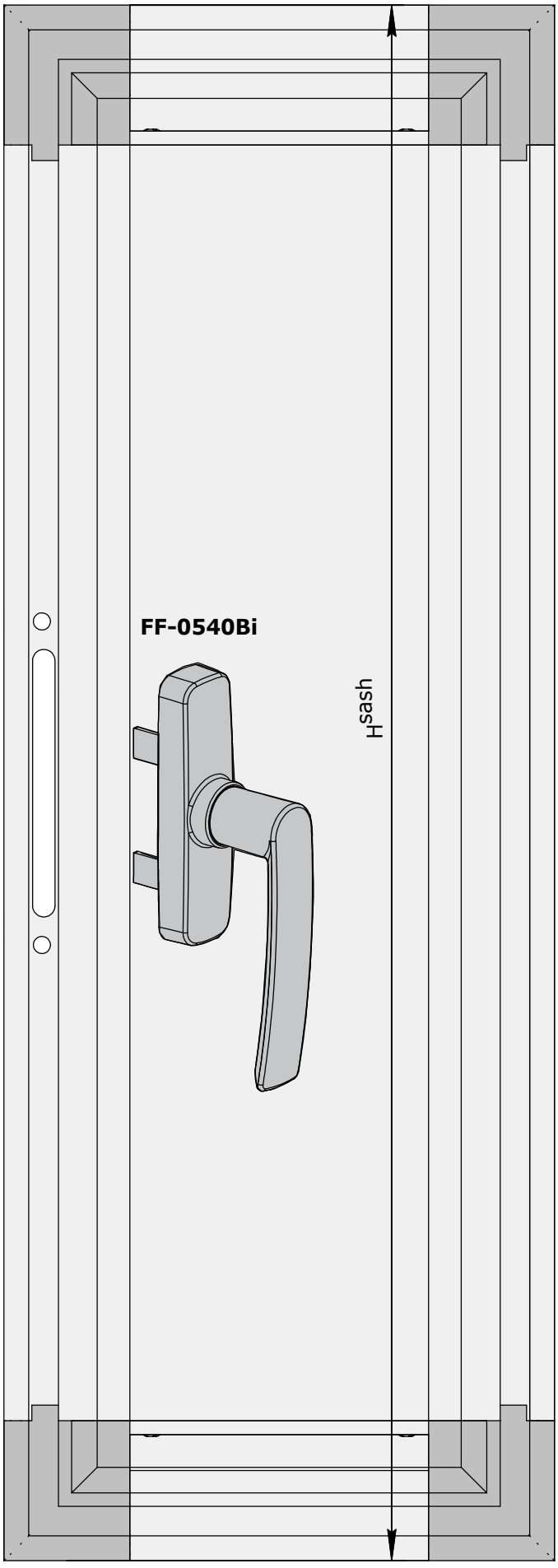
with opening restraint
H^{sash} > 650

without opening restraint
H^{sash} > 400

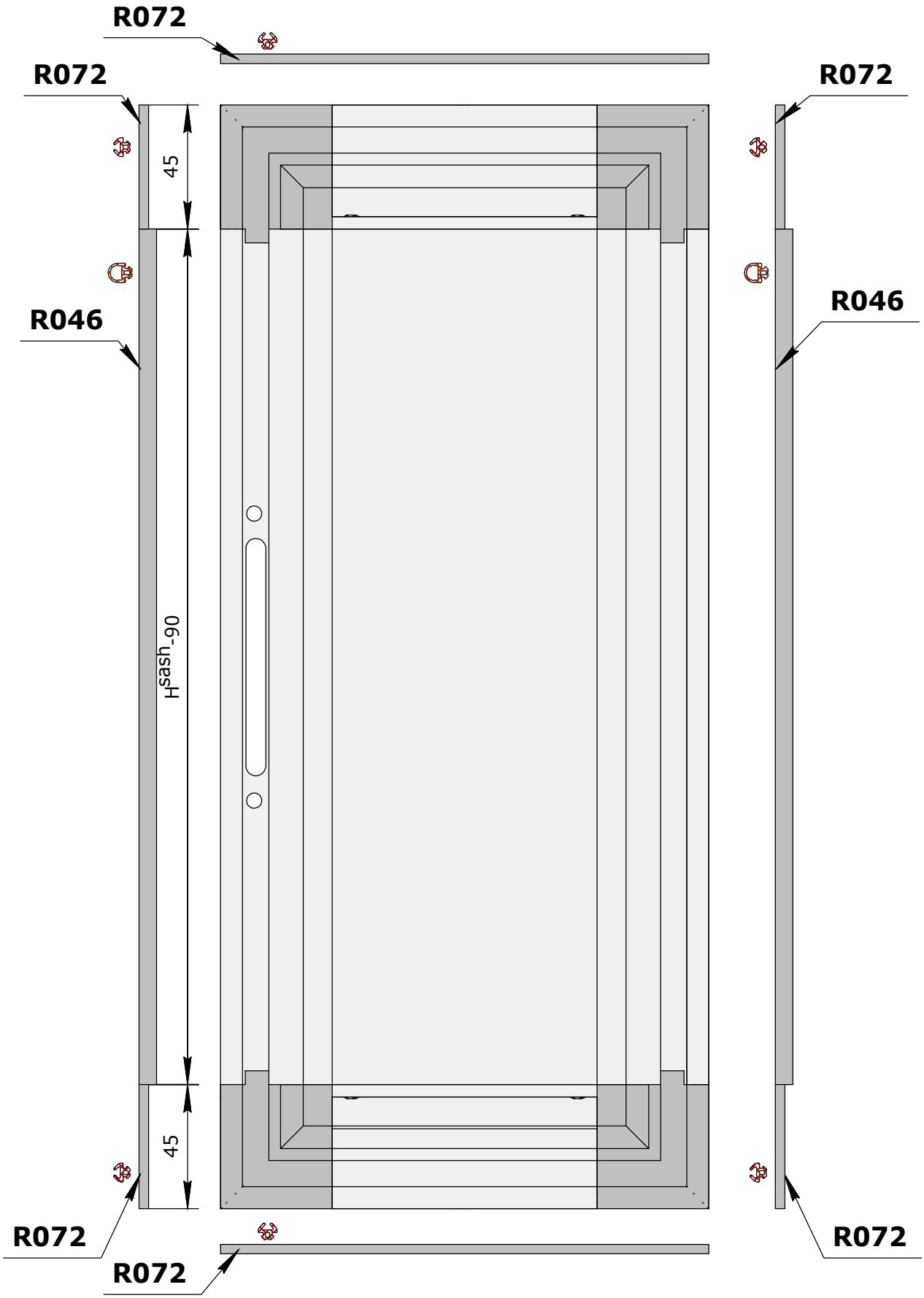




FF-1457KD
opening restrictor

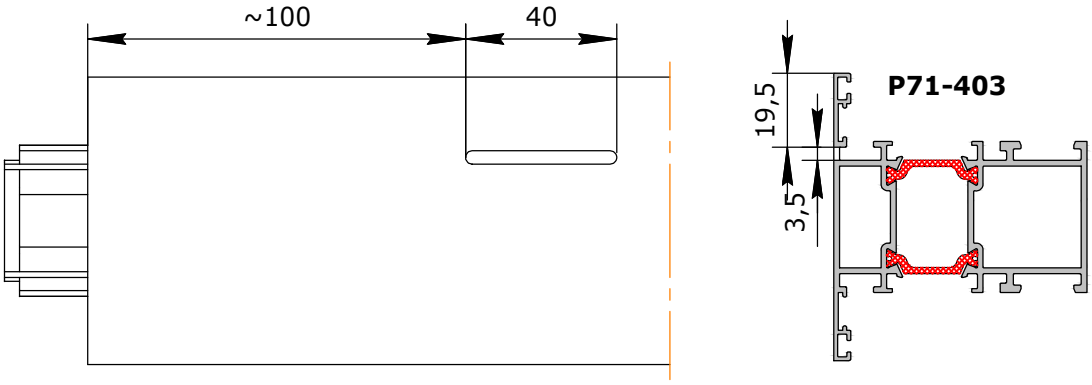


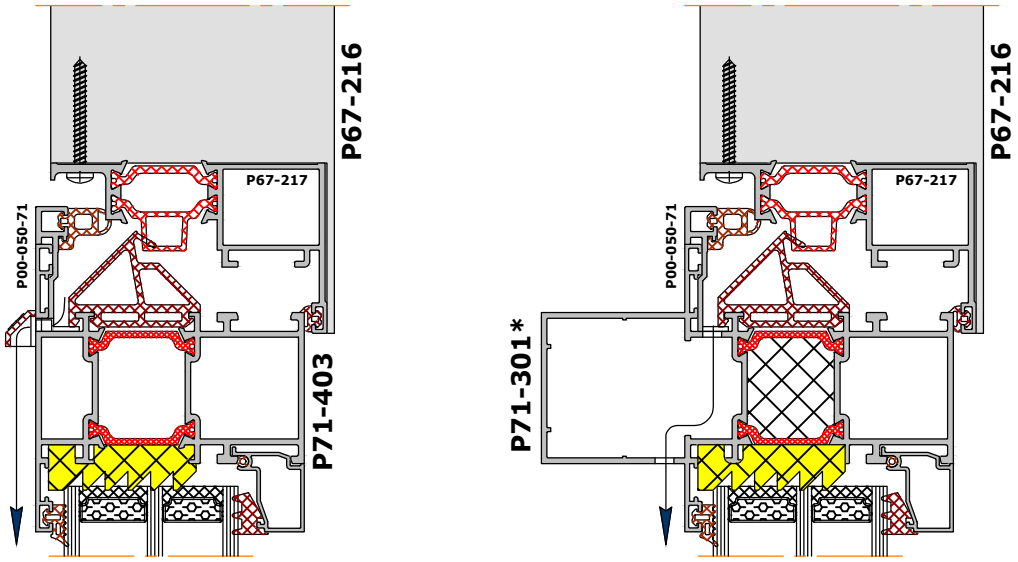
Sash gasket installation diagram



R046 is used as internal rabbet ledge gasket and fitted in the aluminium profile of ventilator sash. Gasket R072 is fitted in the plastic covers of ventilator sash. The gaskets must be inserted into each other at the joints. Short sections of gaskets shall be bonded to the (cap) profile groove.

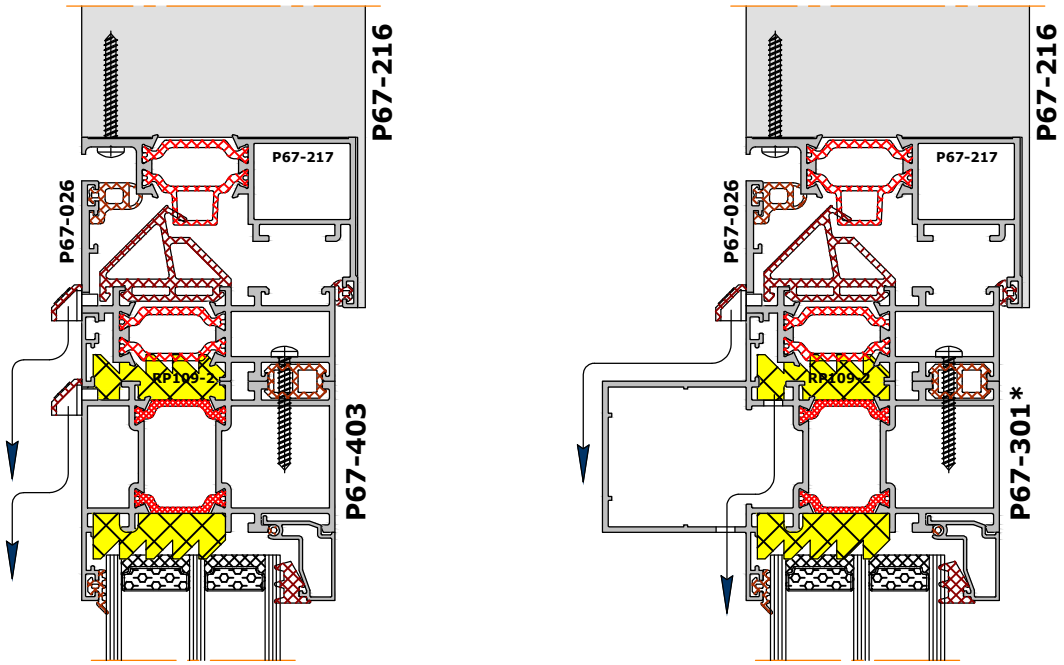
Drainage arrangement for installation in Masttech-71 stained-glass window





In wing P00-050-71, the profile pieces opposite the drain holes shall be cut out.

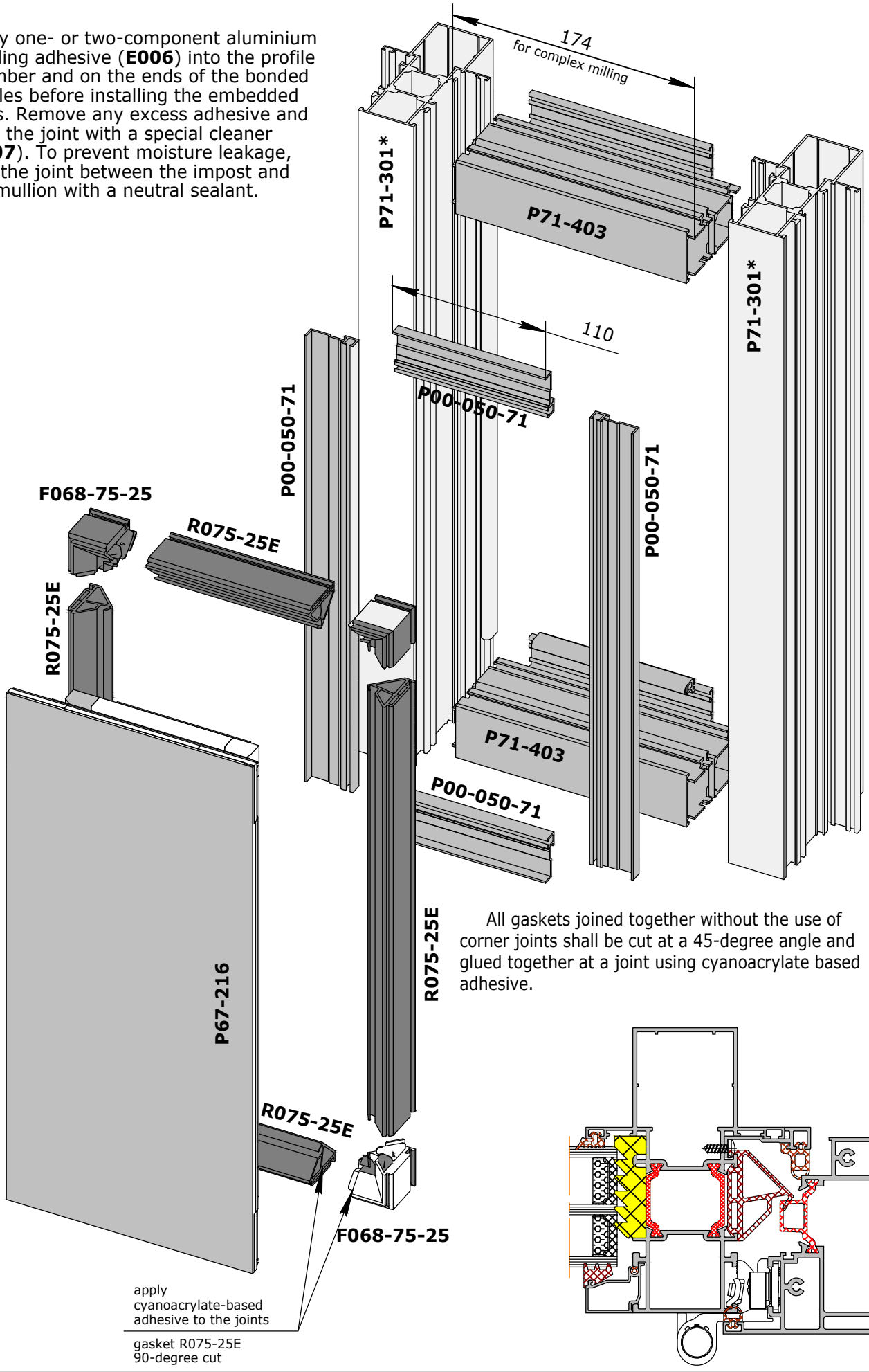
Drainage arrangement for installation in Masttech-67 stained-glass window



In the foamed gasket **RP109-2,** the profile pieces opposite the drain holes shall be cut out.

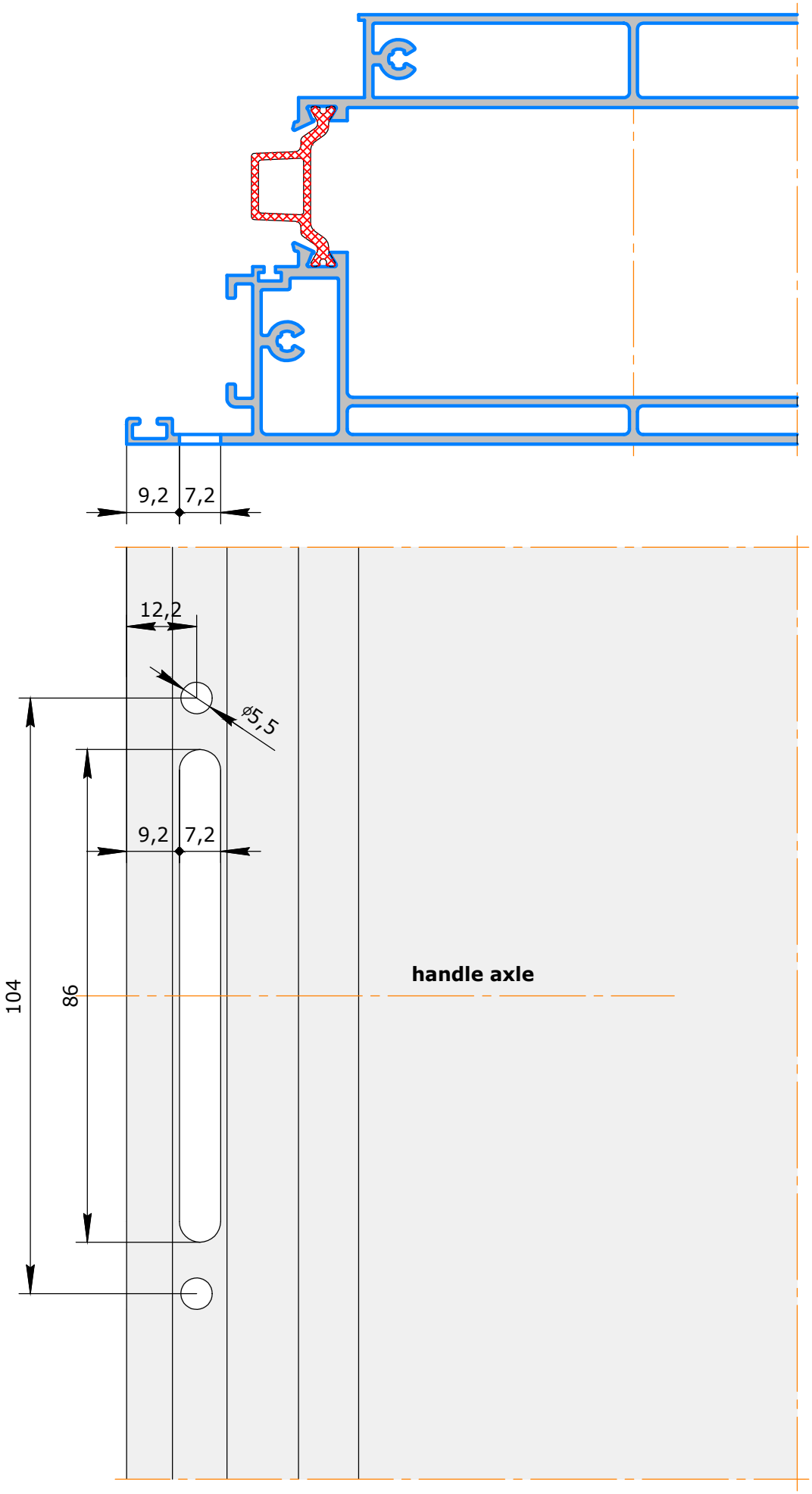
Installation of ventilation sash in Masttech-71 stained-glass window

Apply one- or two-component aluminium bonding adhesive (**E006**) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (**E007**). To prevent moisture leakage, seal the joint between the impost and the mullion with a neutral sealant.



All gaskets joined together without the use of corner joints shall be cut at a 45-degree angle and glued together at a joint using cyanoacrylate based adhesive.

Machining for handle installation

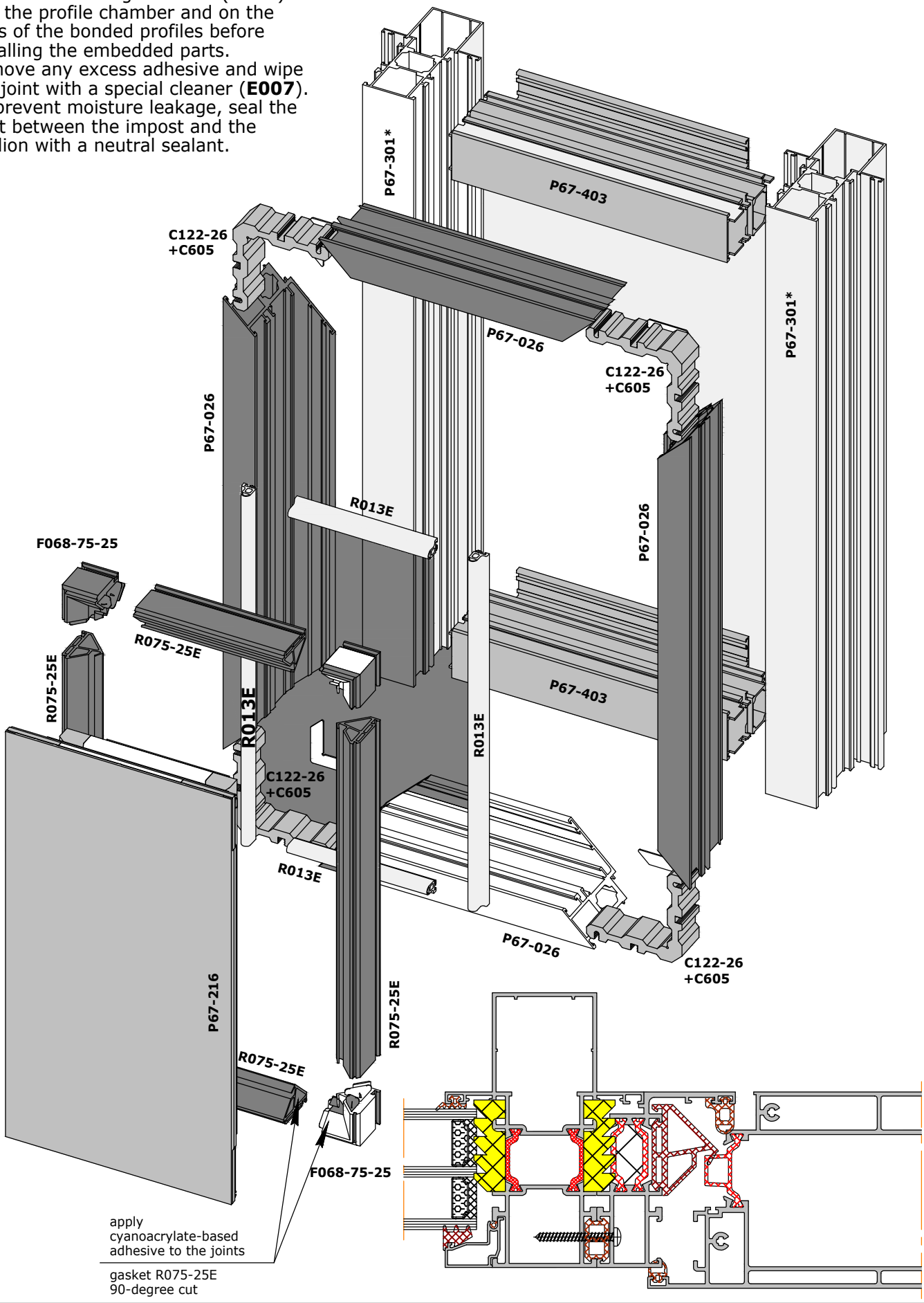


contents
profiles
delivery set
profiles (1:1)
sections
glazing tables
sub-assemblies tables
fitting arrangements
additional solutions
sub-assemblies
fire-resistant structures
connections
equipment and tools

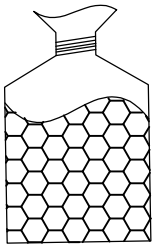
Installation of ventilation sash in Masttech-67 stained-glass window

All gaskets joined together without the use of corner joints shall be cut at a 45-degree angle and glued together at a joint using cyanoacrylate based adhesive.

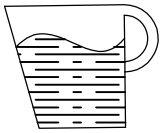
Apply one- or two-component aluminium bonding adhesive (**E006**) into the profile chamber and on the ends of the bonded profiles before installing the embedded parts. Remove any excess adhesive and wipe the joint with a special cleaner (**E007**). To prevent moisture leakage, seal the joint between the impost and the mullion with a neutral sealant.



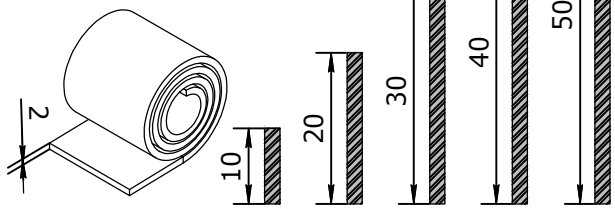
Profile fillers **E010** —
loose
fire resistant
material



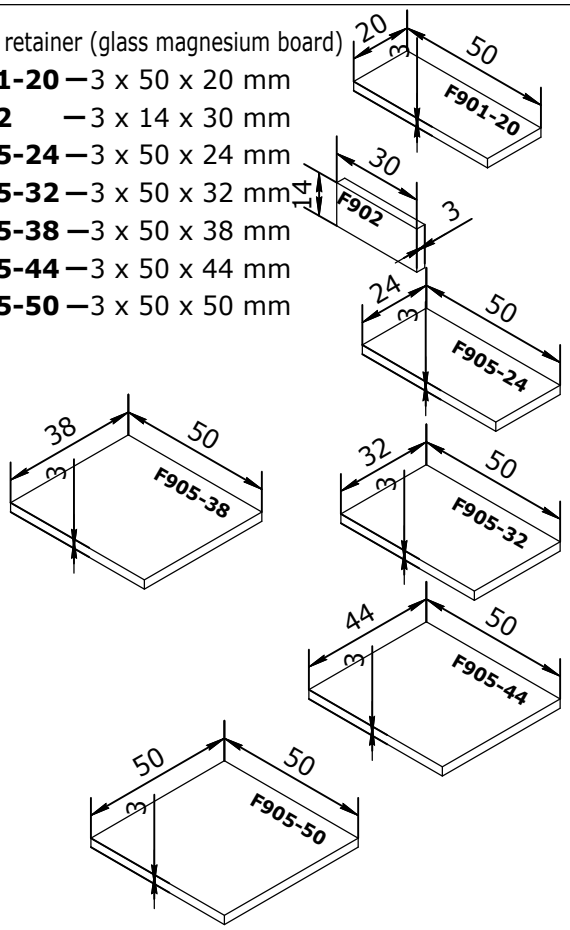
E011 — adhesive
"liquid glass"



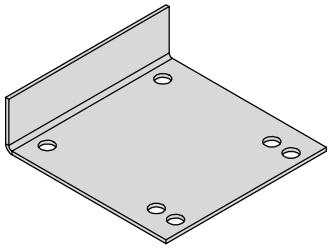
thermal expansion tape
F922-50 — 2 x 50 mm
F922-40 — 2 x 40 mm
F922-30 — 2 x 30 mm
F922-20 — 2 x 20 mm
F922-10 — 2 x 10 mm

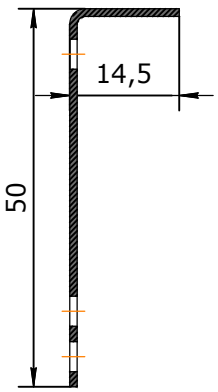


Glass retainer (glass magnesium board)
F901-20 — 3 x 50 x 20 mm
F902 — 3 x 14 x 30 mm
F905-24 — 3 x 50 x 24 mm
F905-32 — 3 x 50 x 32 mm
F905-38 — 3 x 50 x 38 mm
F905-44 — 3 x 50 x 44 mm
F905-50 — 3 x 50 x 50 mm



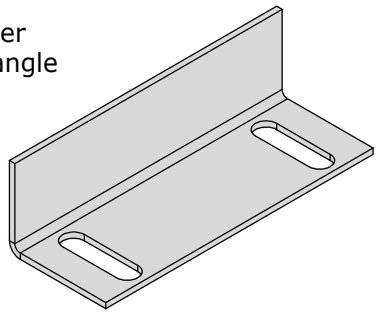
F916
steel retainer

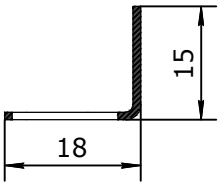




Stainless steel

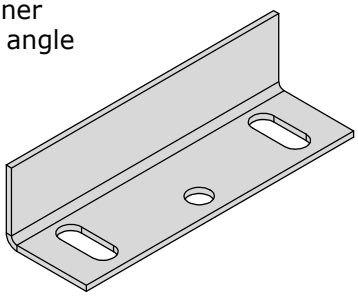
F917
steel retainer
- external angle

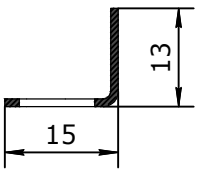




Stainless steel

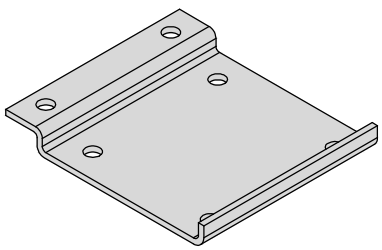
F917-13
steel retainer
- external angle

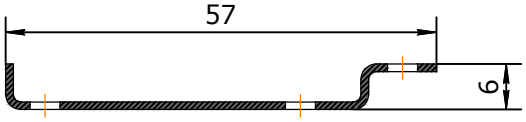




Stainless steel

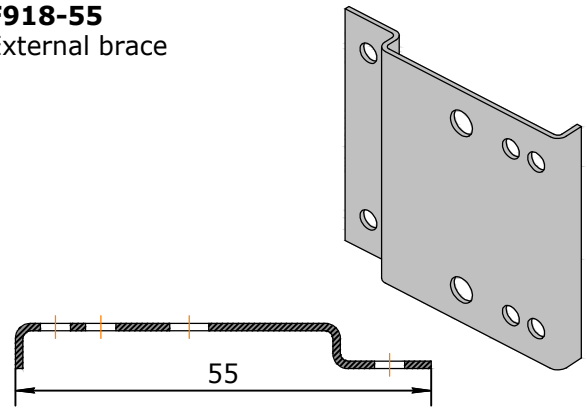
F918
External brace





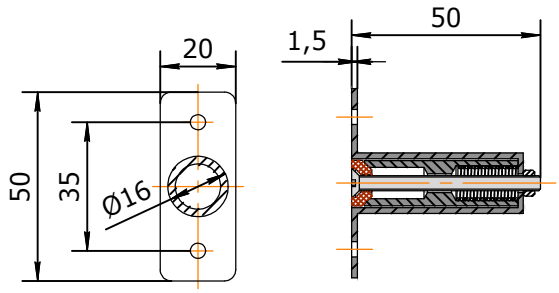
Stainless steel

F918-55
External brace

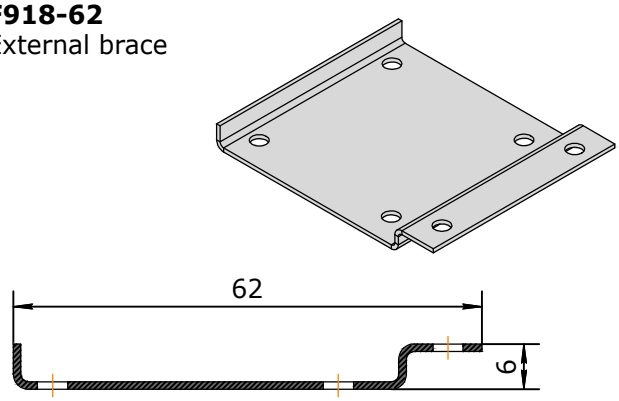


Stainless steel

F921-16
Thermal door interlock

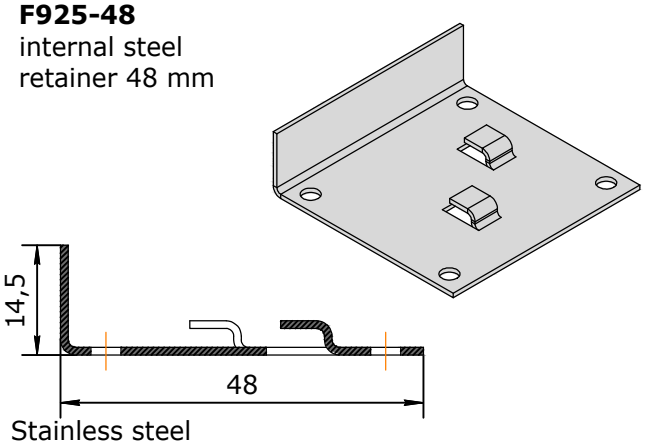


F918-62
External brace



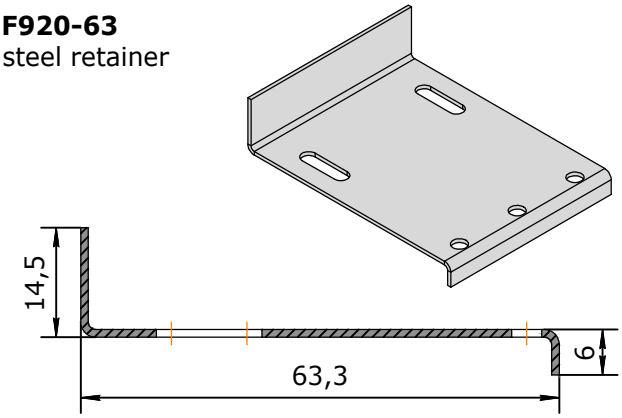
Stainless steel

F925-48
internal steel
retainer 48 mm



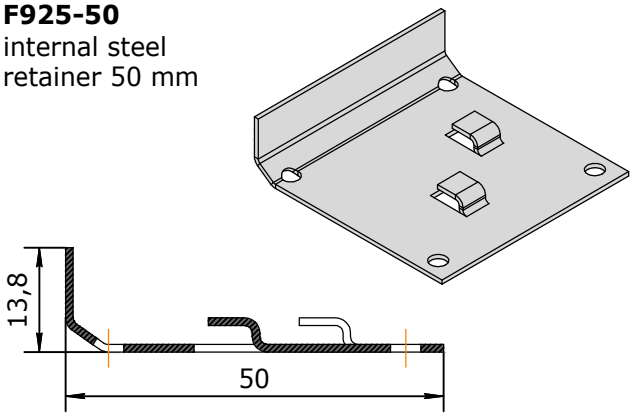
Stainless steel

F920-63
steel retainer



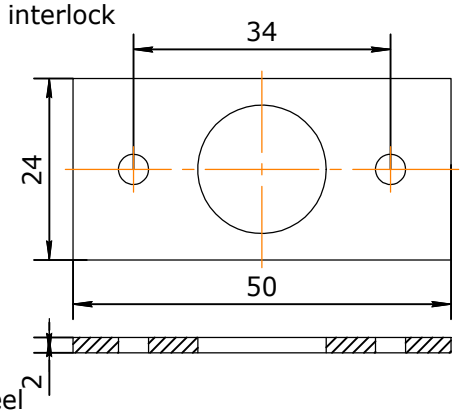
Stainless steel

F925-50
internal steel
retainer 50 mm



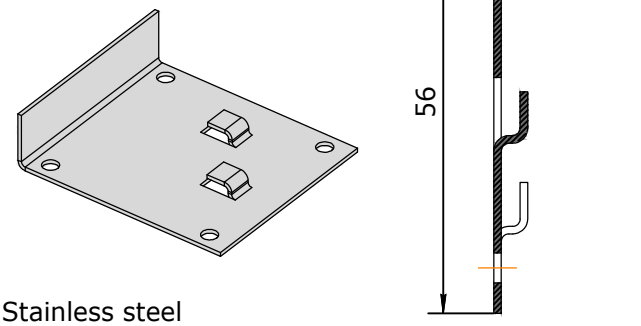
Stainless steel

F921-01
Supporting interlock plate



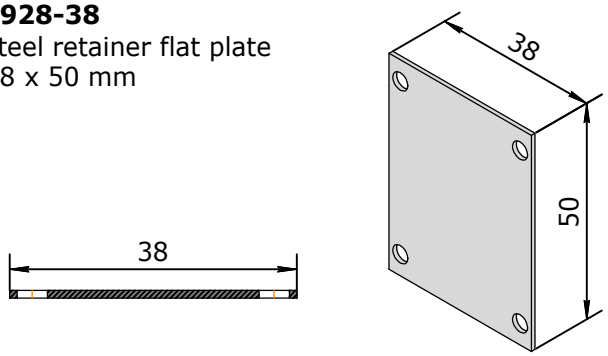
Stainless steel

F925-56
internal straight steel retainer
56 mm



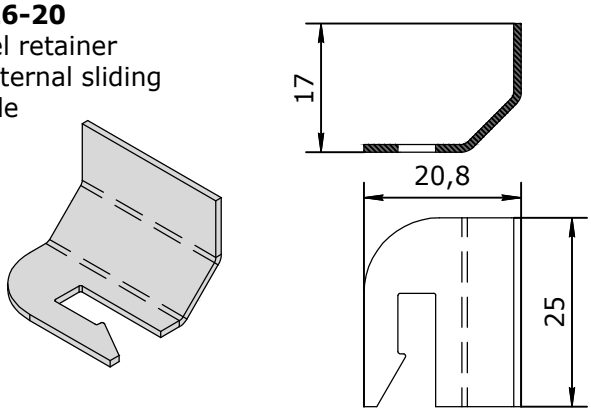
Stainless steel

F928-38
steel retainer flat plate
38 x 50 mm



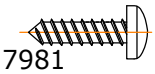
Stainless steel

F926-20
steel retainer
- external sliding
angle

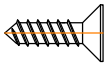


Stainless steel

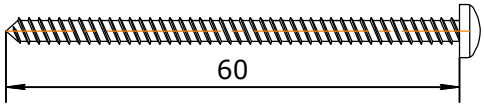
S001-35-13-ss
Stainless self-tapping screw
3.5 x 13 with round head DIN7981



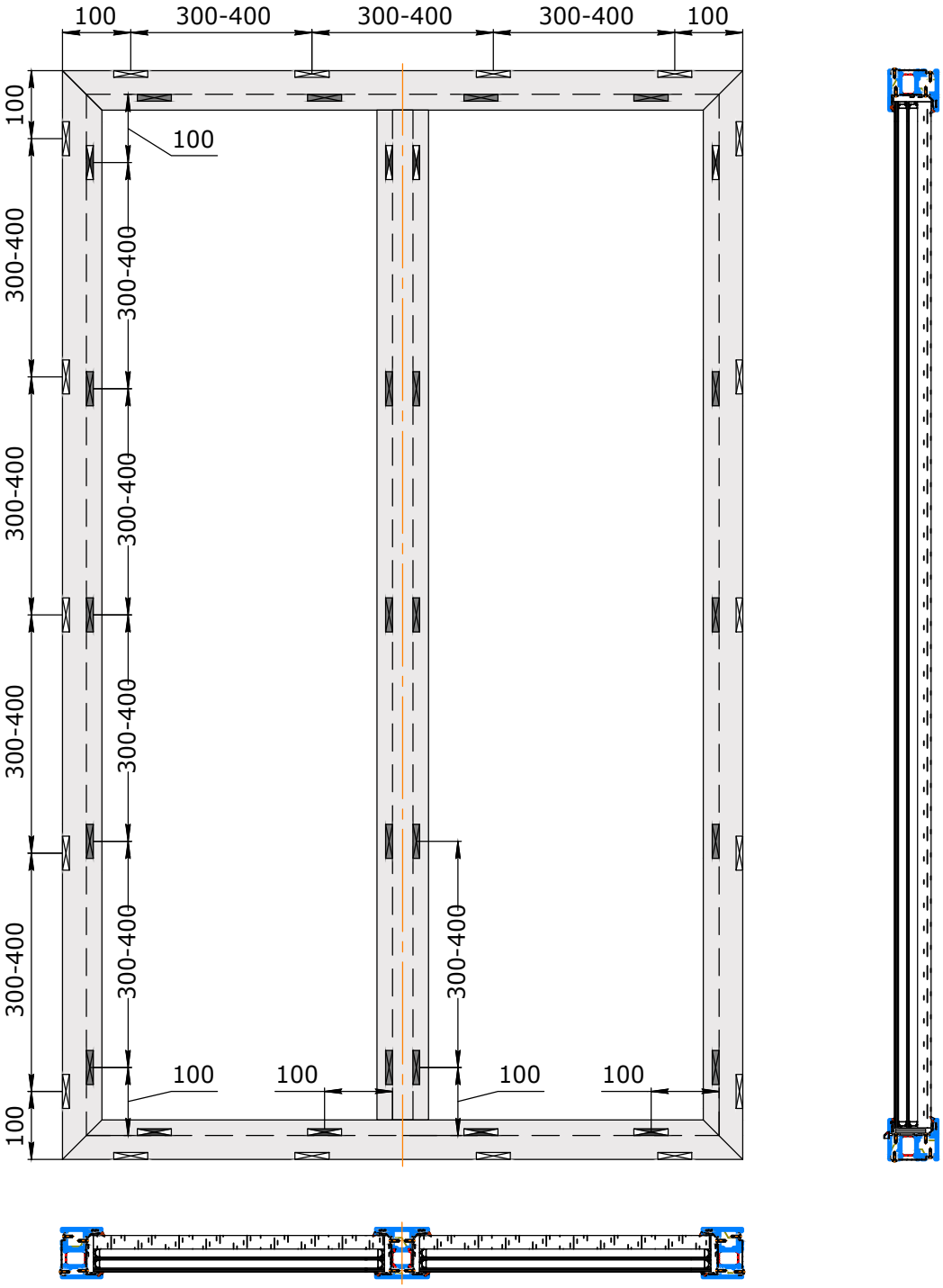
S002-35-13-ss
Stainless self-tapping screw
3.5 x 13 with countersunk
head DIN7982

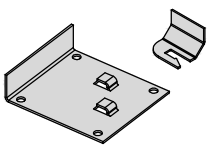


S001-35-60-ss
Stainless self-tapping screw
3.5 x 60 with round head DIN7981

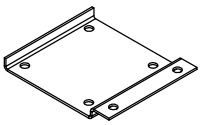


Tightening steel members installation diagram

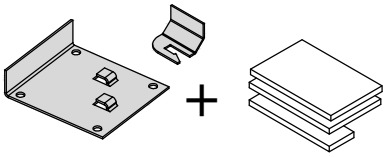




- Tightening steel angles **F925-56*** + **F926-20***



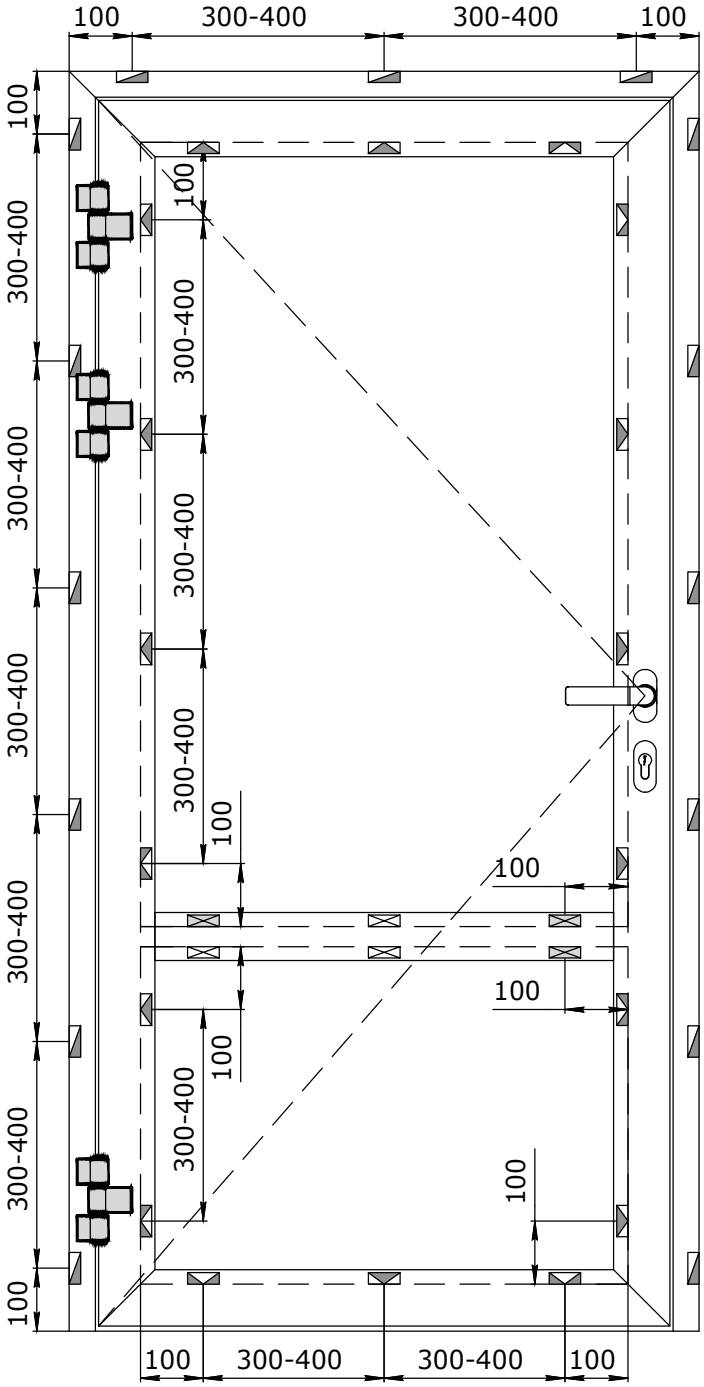
- Tightening steel brace **F918-62**

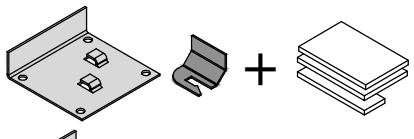


Tightening steel angles **F925-56*** + **F926-20*** + glass retainers **F902*** + **F905-50*** (2 pcs.)

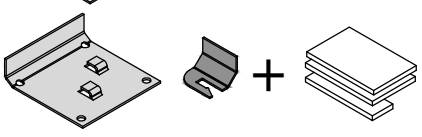
* — depends on filling thickness

Tightening steel members installation diagram

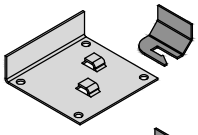




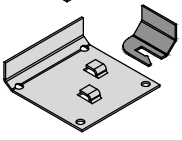
- Tightening steel angles **F925-48** + **F926-20** + glass retainers **F902** + **F905-24*** (2 pcs.)



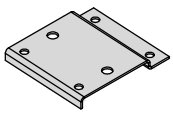
- Tightening steel angles **F925-50** + **F926-20** + glass retainers **F902** + **F905-24*** (2 pcs.)



- Tightening steel angles **F925-48** + **F926-20**

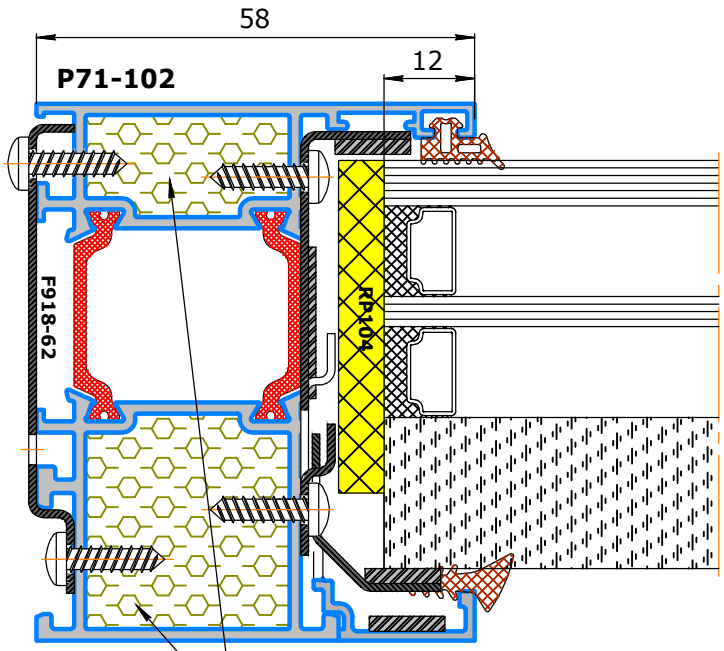


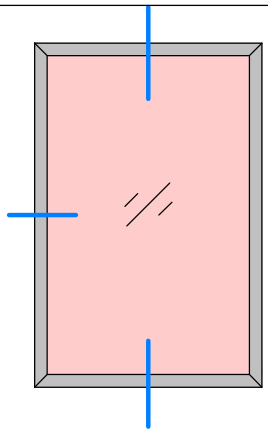
- Tightening steel angles **F925-50** + **F926-20**



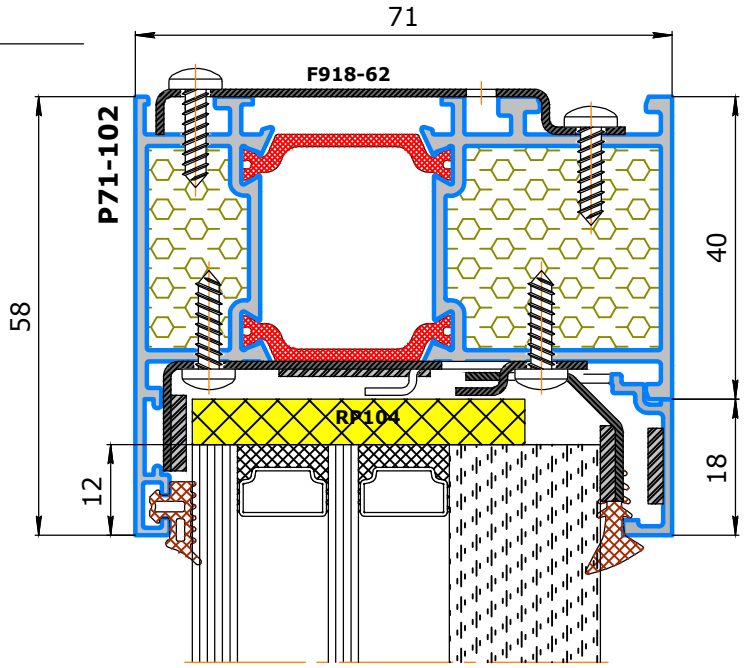
- **F918-55*** External brace

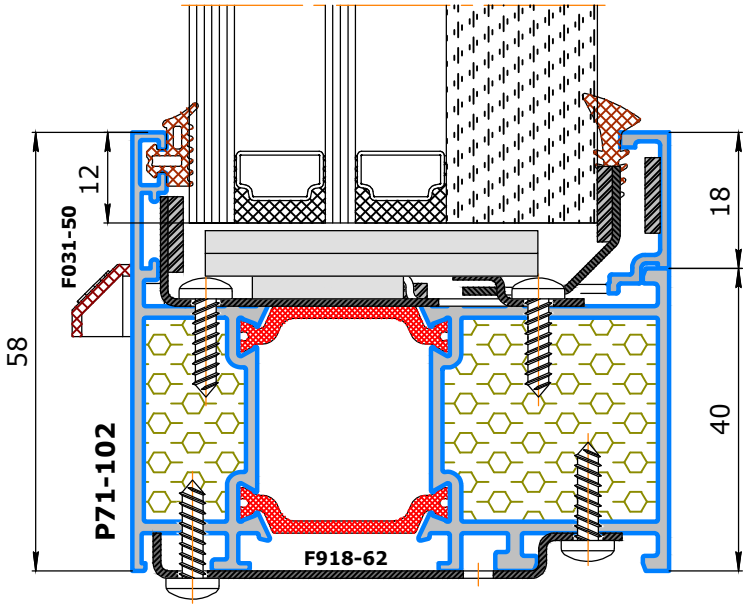
* — depends on design parameters





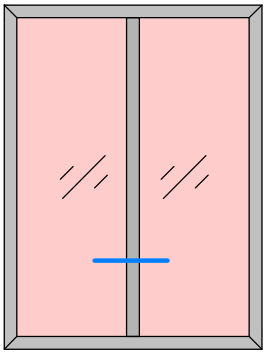
ThermoMast fire resistant material*

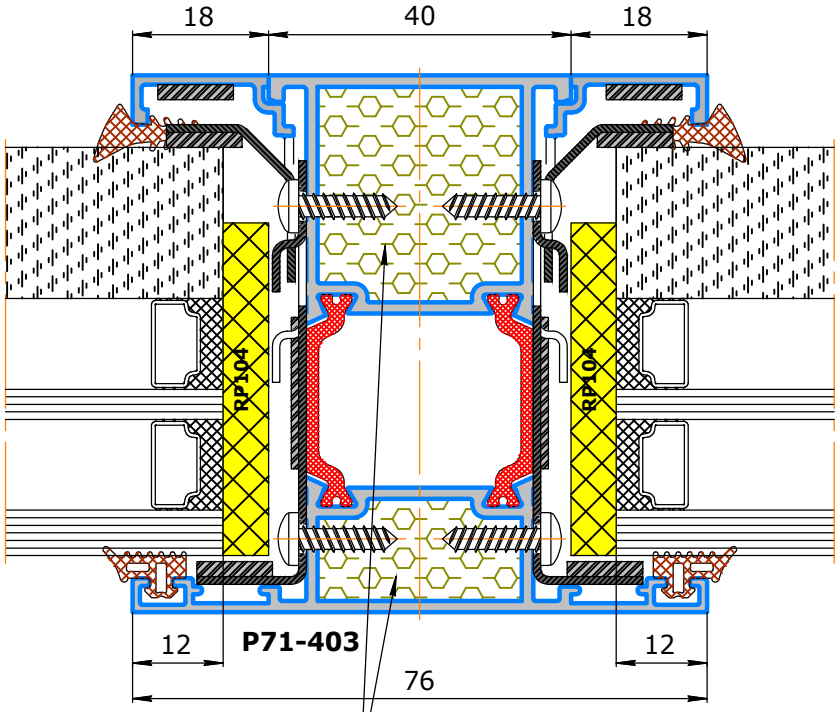




* — depends on the specifics of the facility

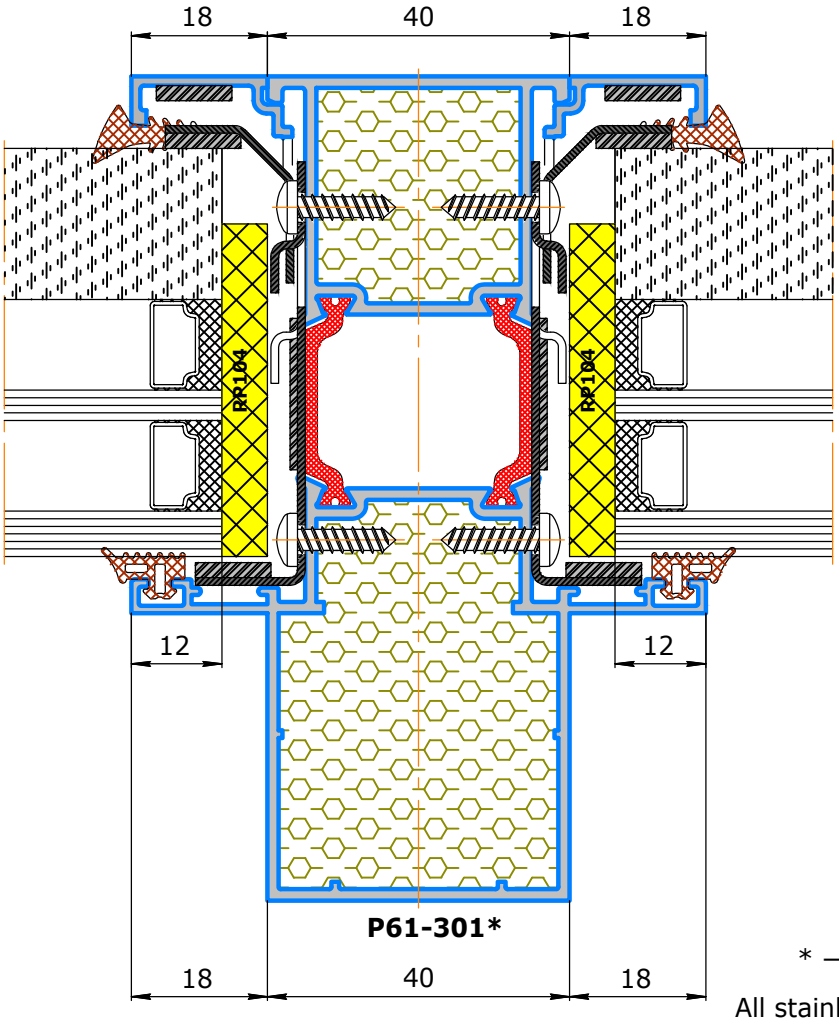
All stainless steel retainers shall be installed using the stainless self-tapping screws **S001-35-13**.





P71-403

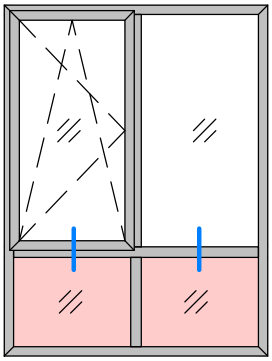
ThermoMast fire resistant material*

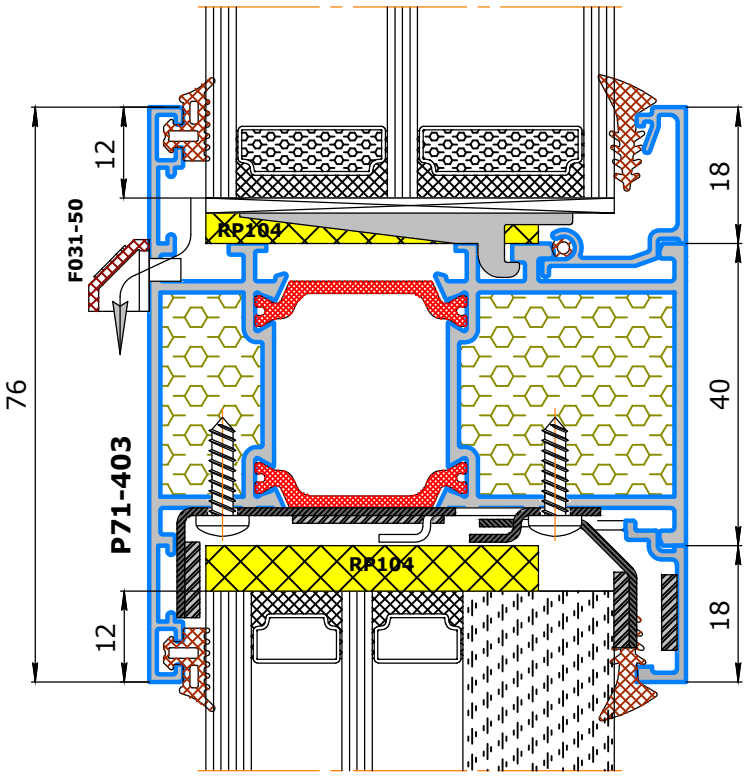


P61-301*

* — depends on the specifics of the facility

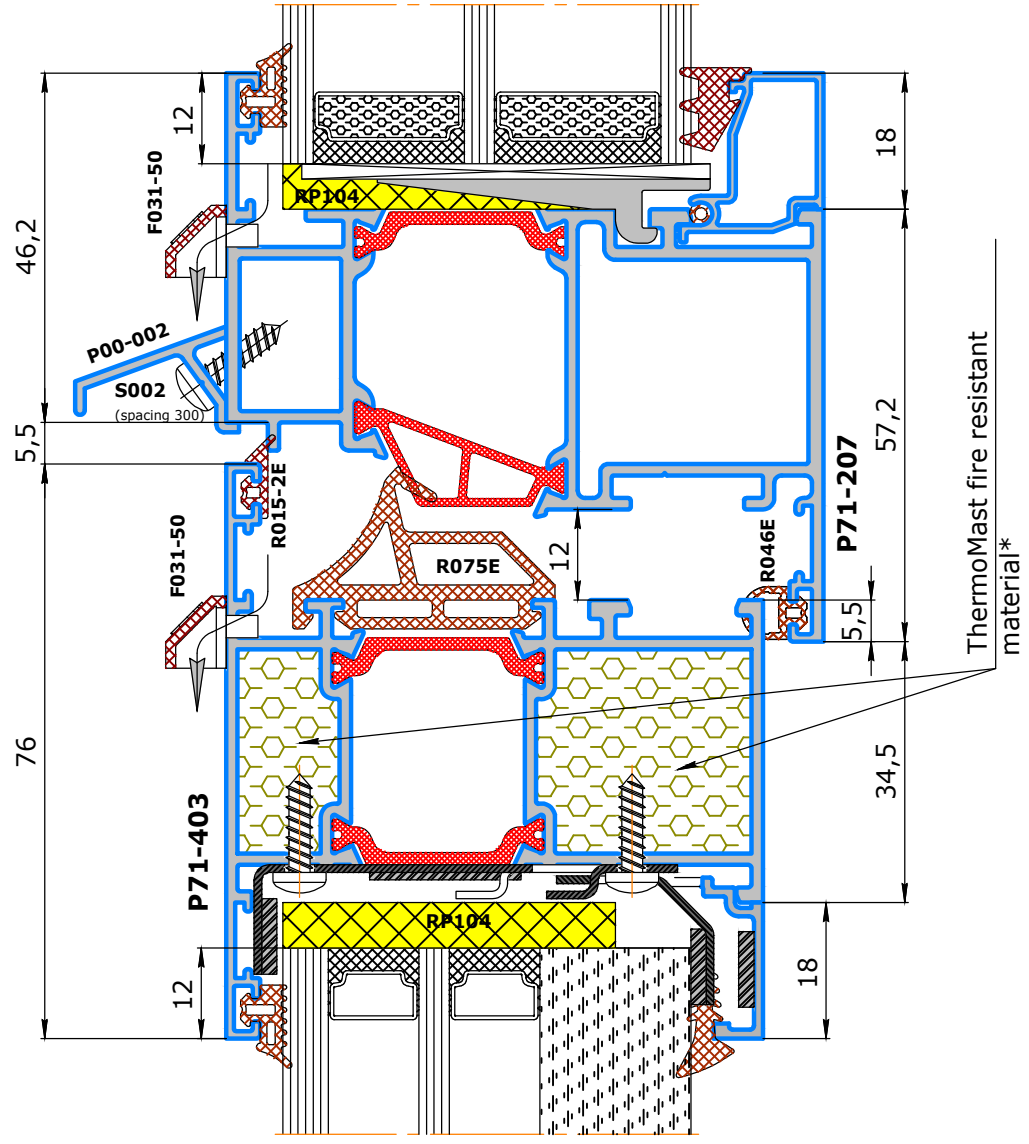
All stainless steel retainers shall be installed using the stainless self-tapping screws **S001-35-13**.

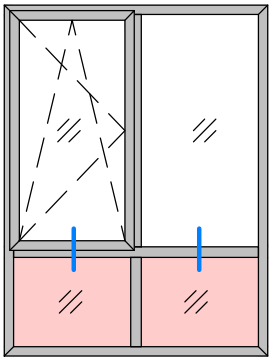


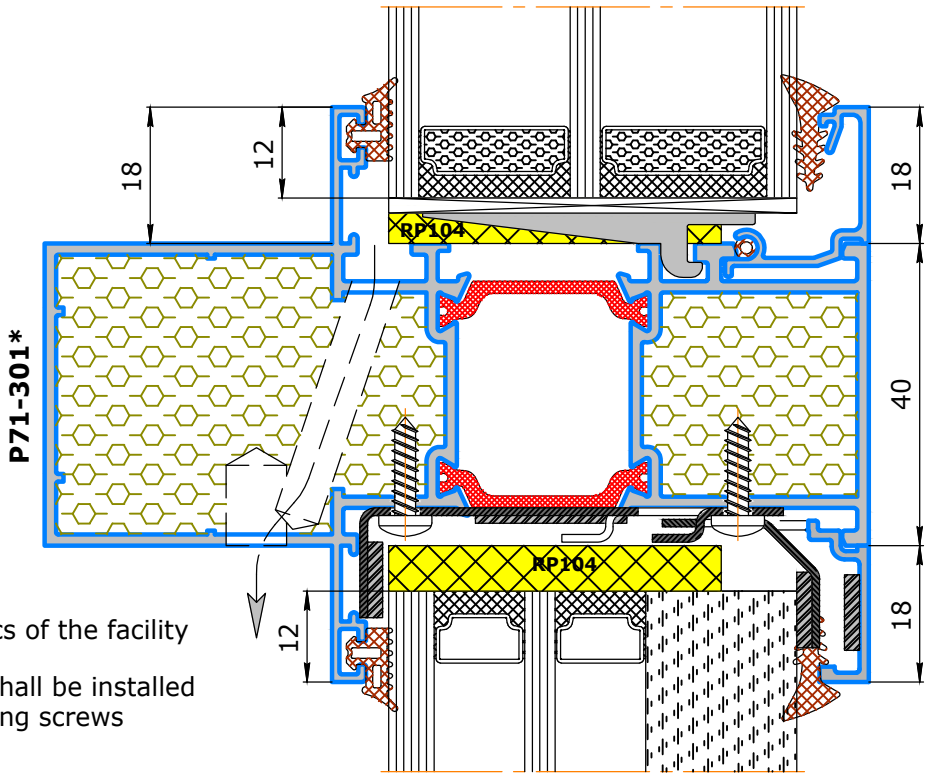


* — depends on the specifics of the facility

All stainless steel retainers shall be installed using the stainless self-tapping screws **S001-35-13**.

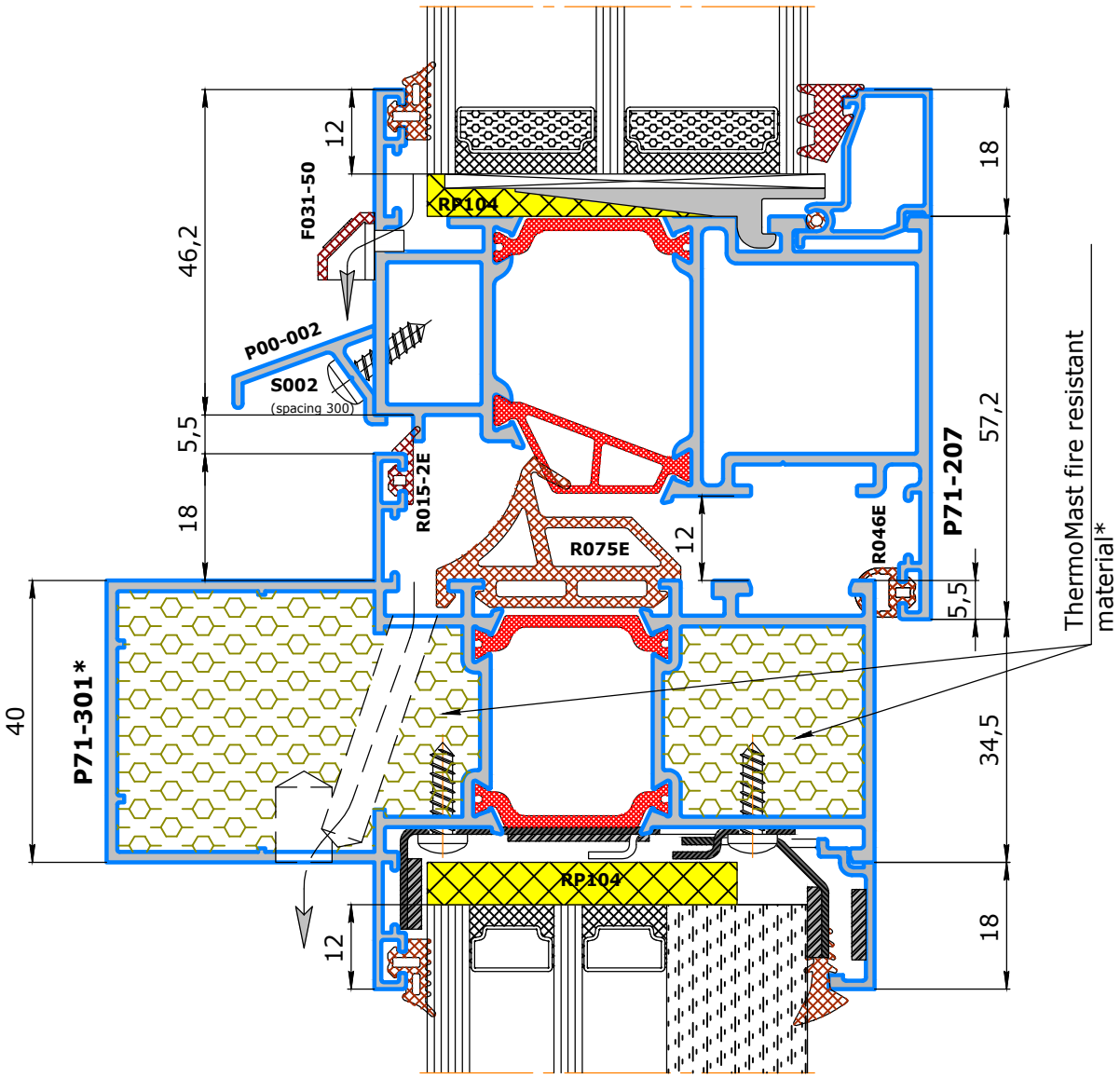




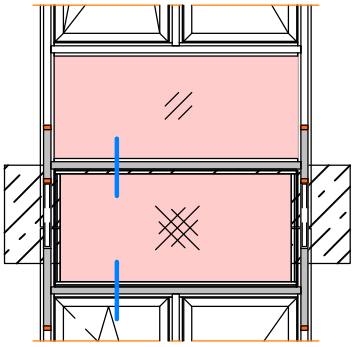


* — depends on the specifics of the facility

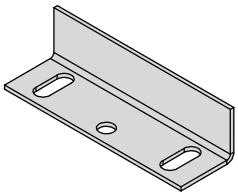
All stainless steel retainers shall be installed using the stainless self-tapping screws **S001-35-13**.



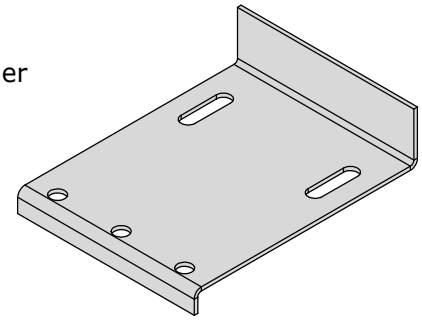
Fireproof glazing in the area of the interstorey belt building facade glazing

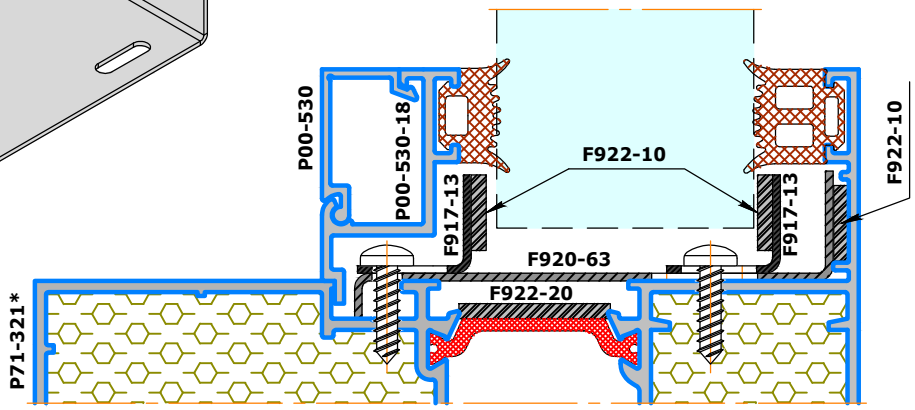


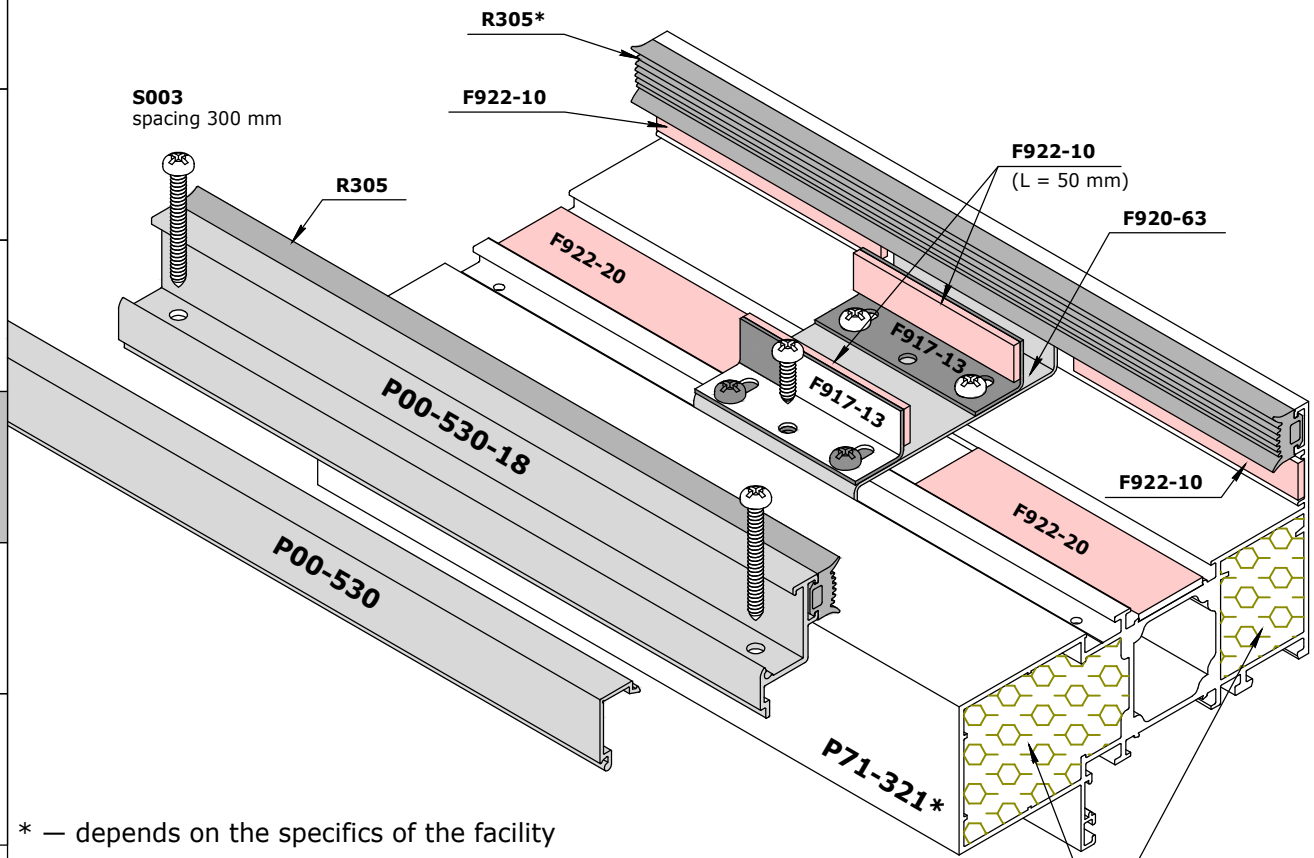
F917-13
steel retainer
- external angle



F920-63
steel retainer

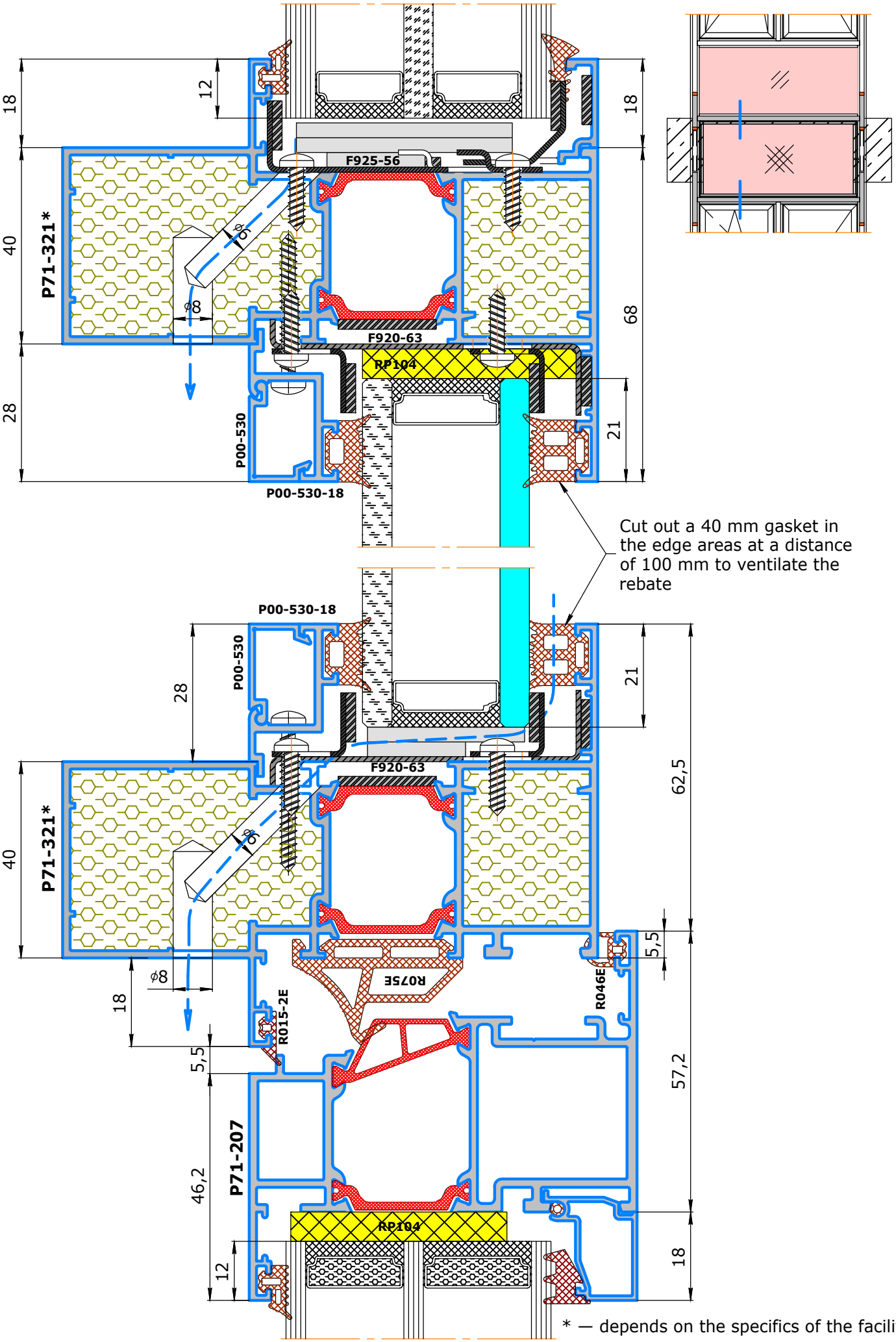




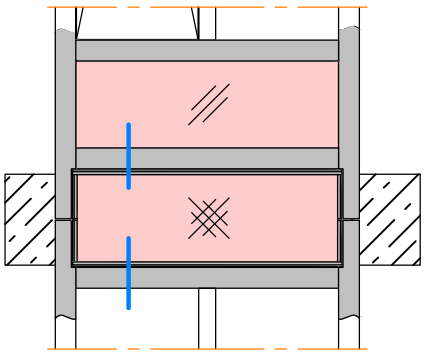


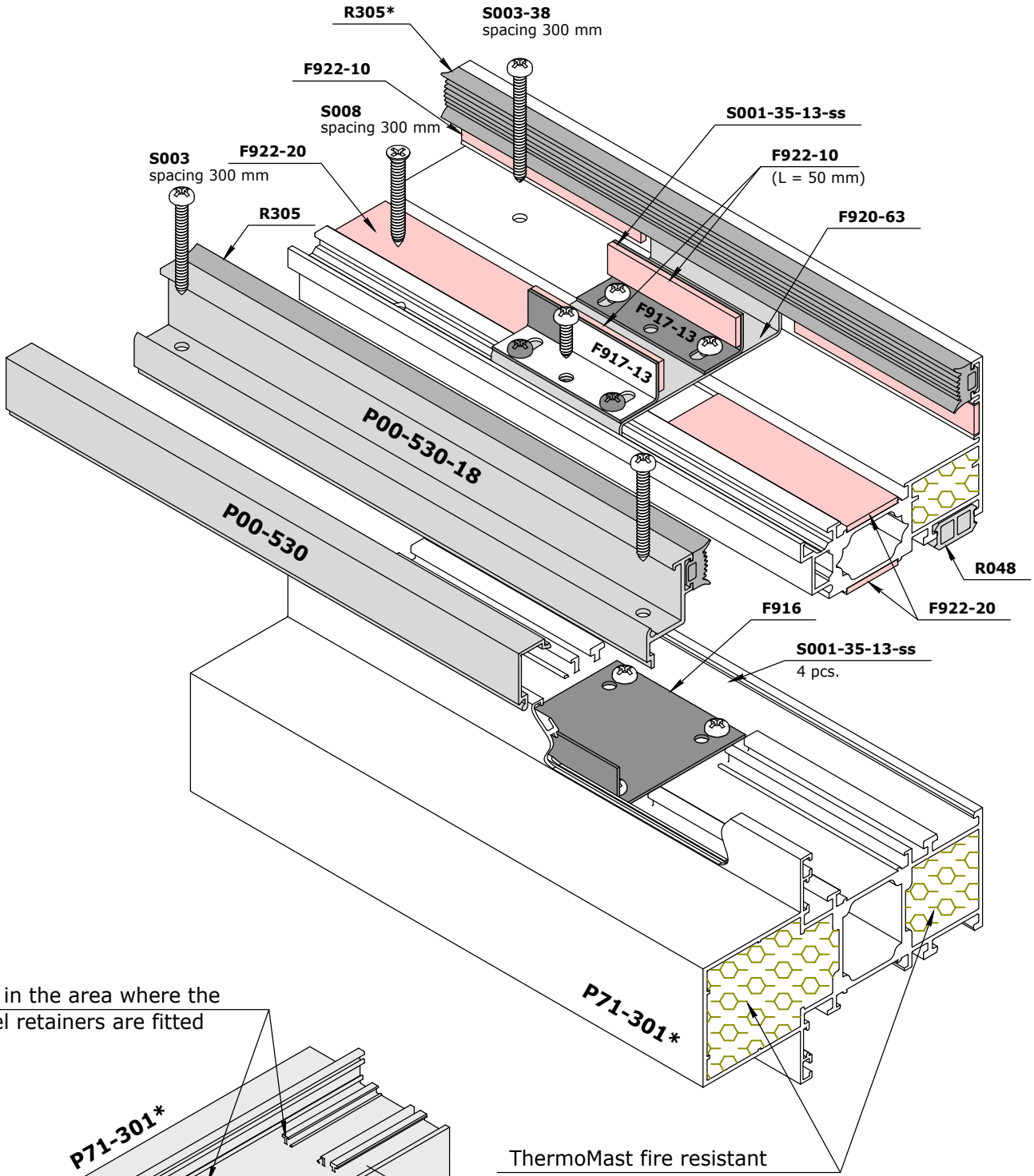
* — depends on the specifics of the facility

All stainless steel retainers shall be installed using the stainless self-tapping screws **S001-35-13.**

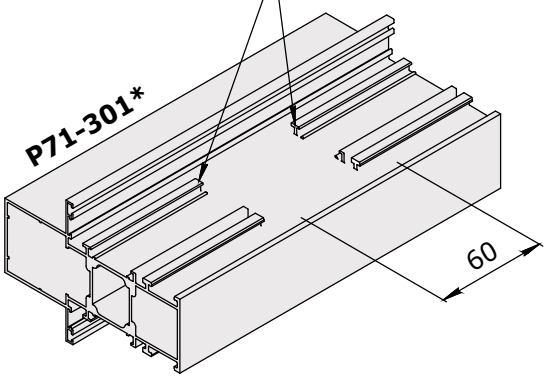

18
12
40
28
P71-321*
F925-56
ϕ8
ϕ8
F920-63
RP104
P00-530
P00-530-18
18
68
21
Cut out a 40 mm gasket in the edge areas at a distance of 100 mm to ventilate the rebate
P00-530-18
P00-530
28
21
F920-63
40
P71-321*
ϕ8
ϕ8
62,5
5,5
18
R075E
R015-2E
R046E
5,5
57,2
46,2
P71-207
RP104
12
18
* — depends on the specifics of the facility

Fireproof glazing in the area of the interstorey belt turning profile P71-007 building facade glazing





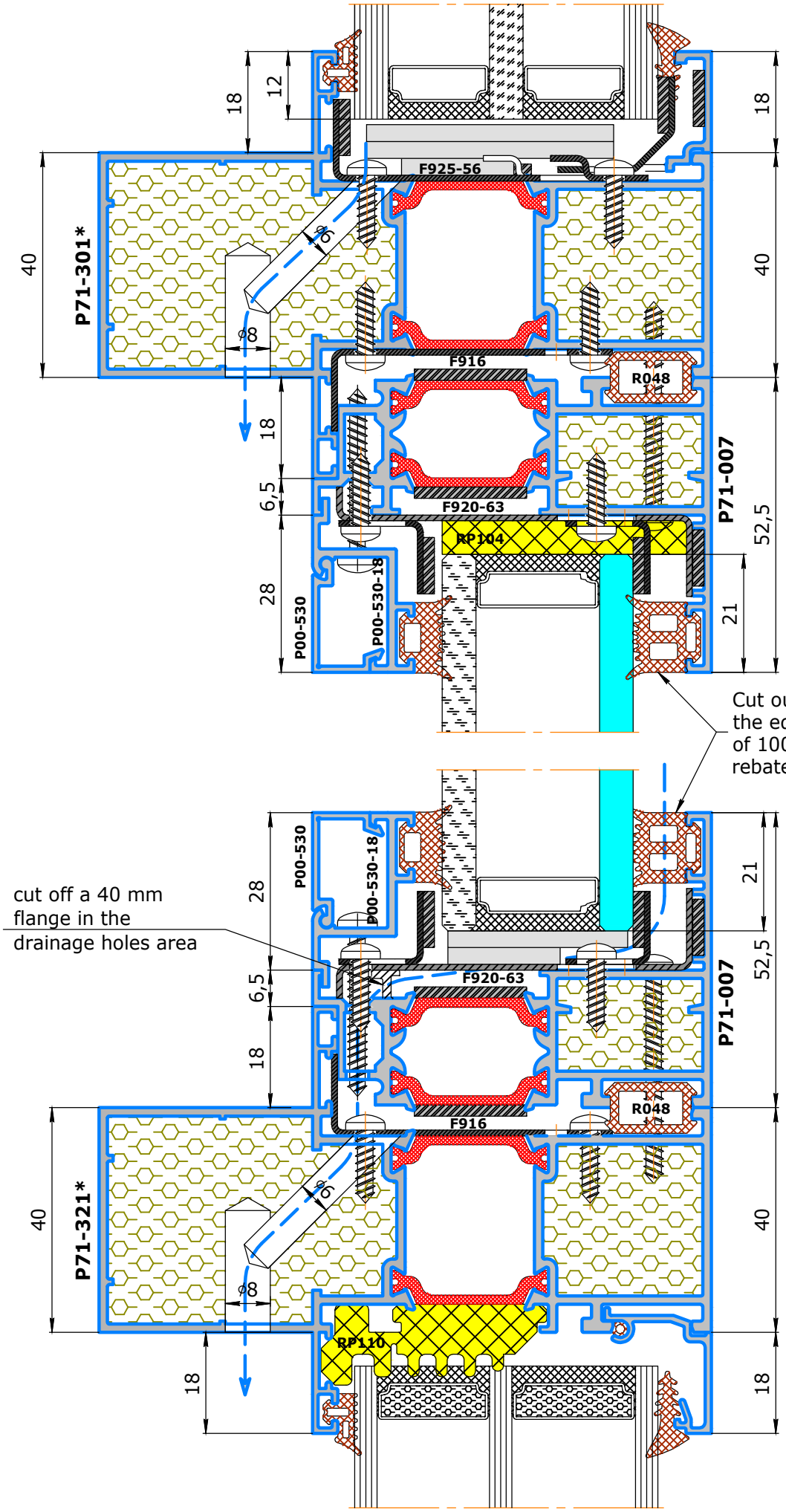
mill in the area where the steel retainers are fitted

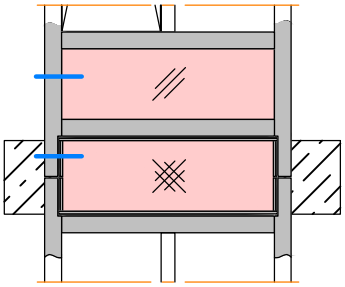


ThermoMast fire resistant material*

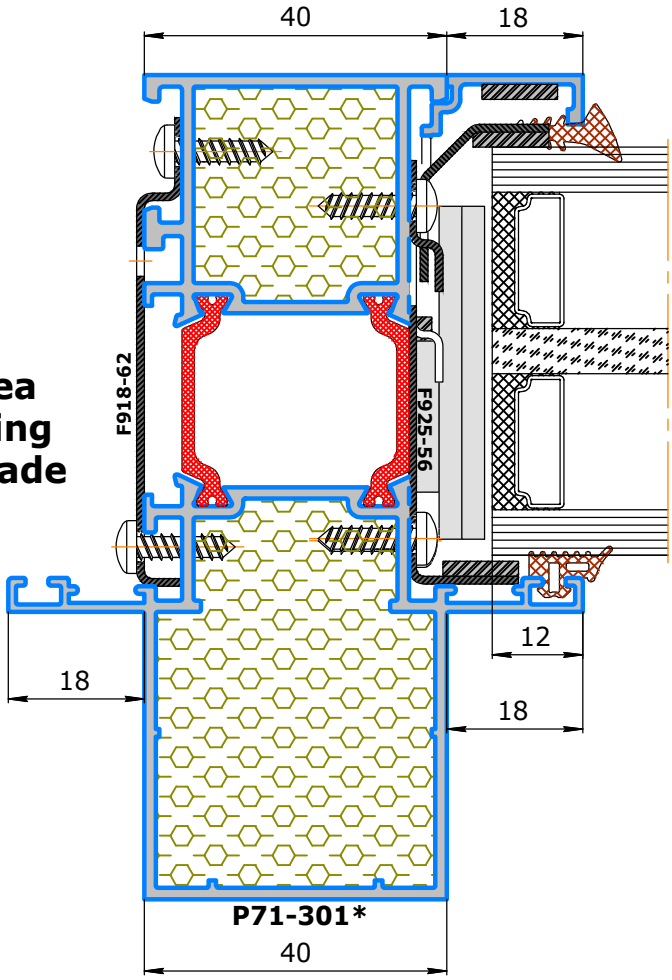
* — depends on the specifics of the facility

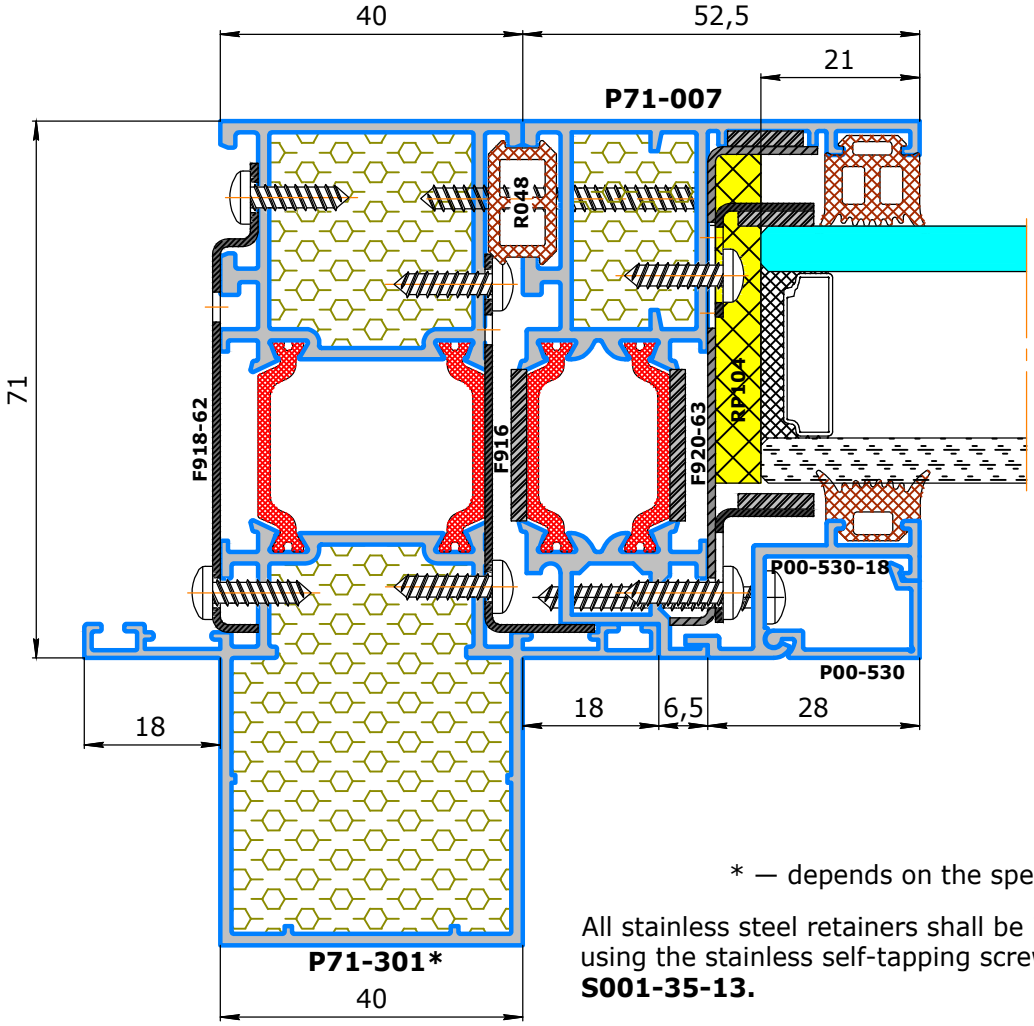
All stainless steel retainers shall be installed using the stainless self-tapping screws **S001-35-13.**


P71-301*
P71-007
P71-321*
P71-007
F925-56
F916
R048
F920-63
RP104
P00-530
P00-530-18
RP110
18
12
40
52,5
21
28
6,5
ø6
ø8
Cut out a 40 mm gasket in the edge areas at a distance of 100 mm to ventilate the rebate
cut off a 40 mm flange in the drainage holes area



Fireproof glazing in the area of the interstorey belt turning profile P71-007 building facade glazing

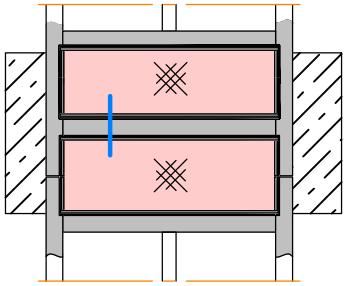


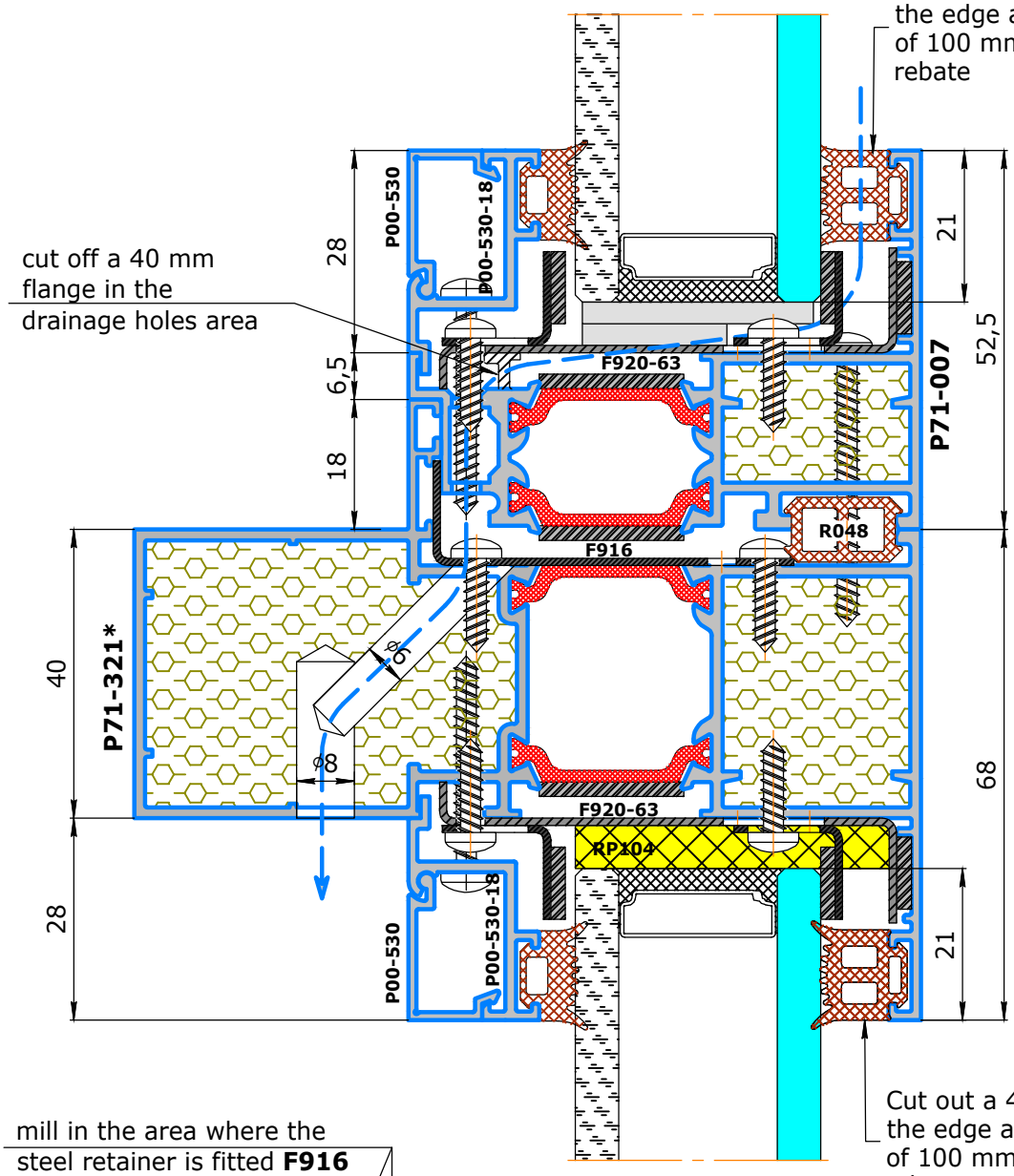


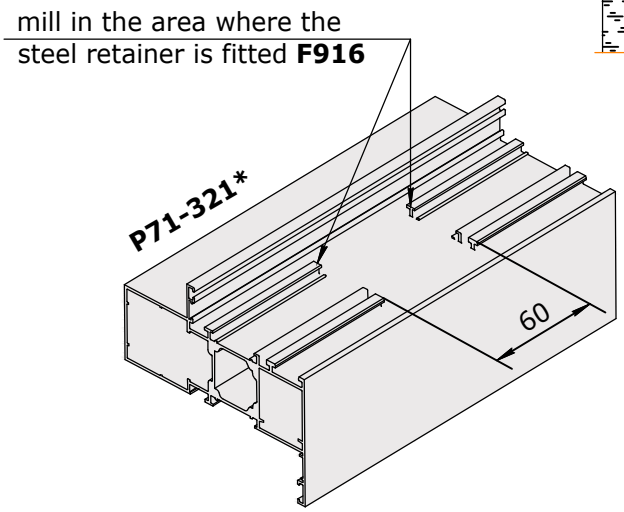
* — depends on the specifics of the facility

All stainless steel retainers shall be installed using the stainless self-tapping screws **S001-35-13.**

Fireproof glazing in the area of the interstorey belt turning profile P71-007 building facade glazing



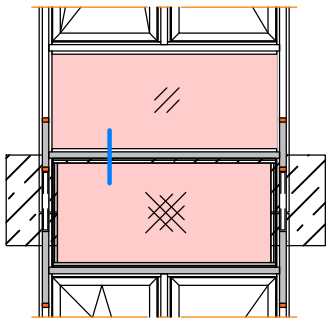


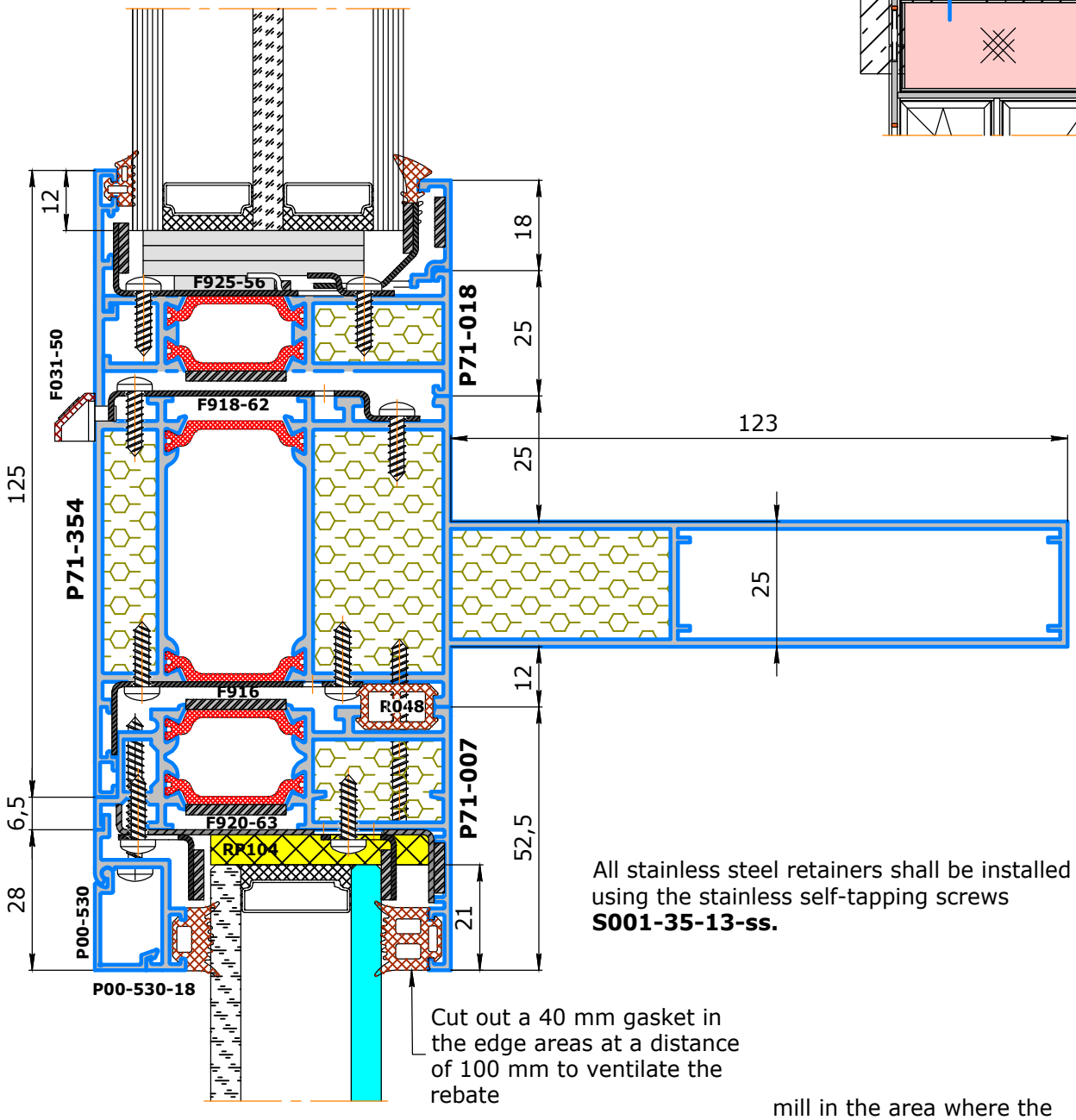


* — depends on the specifics of the facility

All stainless steel retainers shall be installed using the stainless self-tapping screws **S001-35-13.**

Fireproof glazing in the area of the interstorey belt turning profile P71-007 building facade glazing

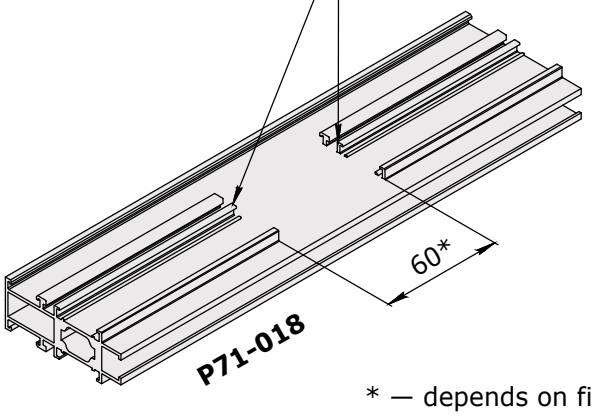




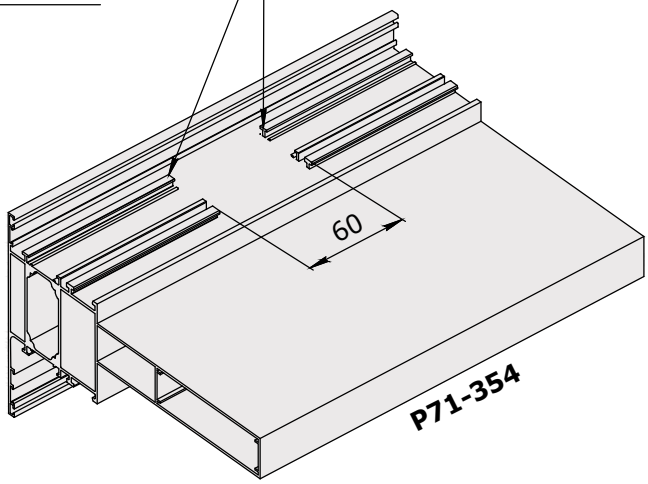
All stainless steel retainers shall be installed using the stainless self-tapping screws **S001-35-13-ss.**

Cut out a 40 mm gasket in the edge areas at a distance of 100 mm to ventilate the rebate

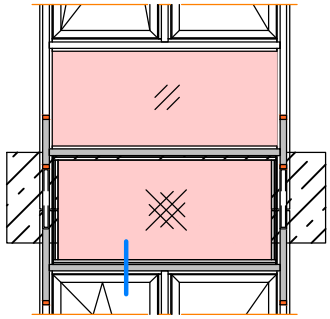
mill on both sides in the areas where the steel retainers are fitted

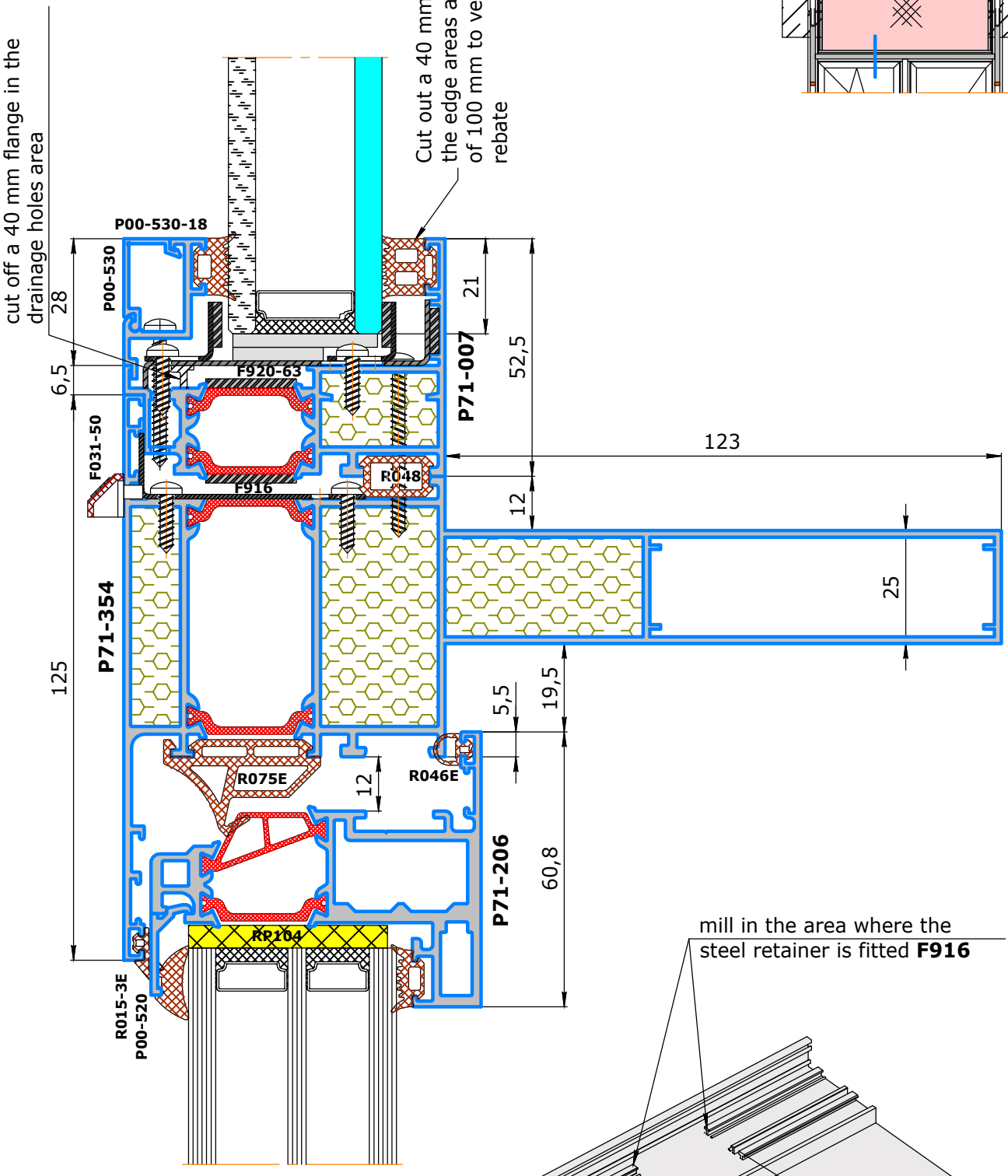


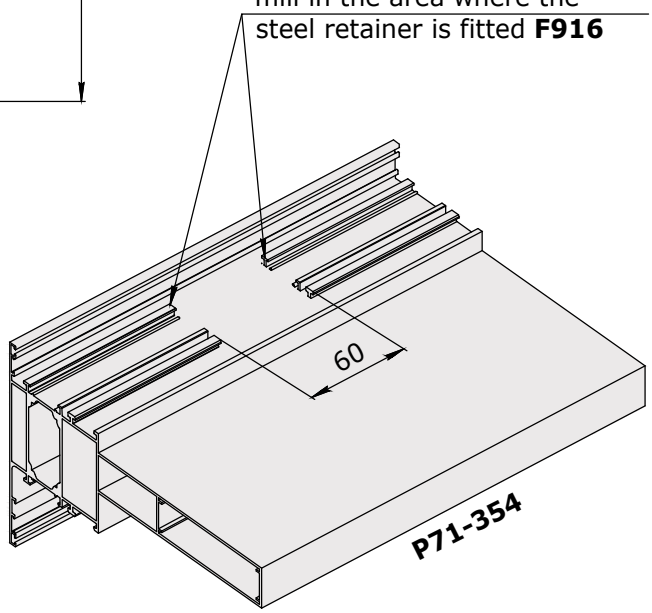
mill in the area where the steel retainer is fitted **F916**



* — depends on filling

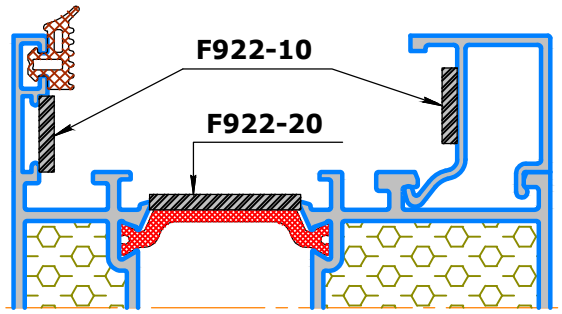


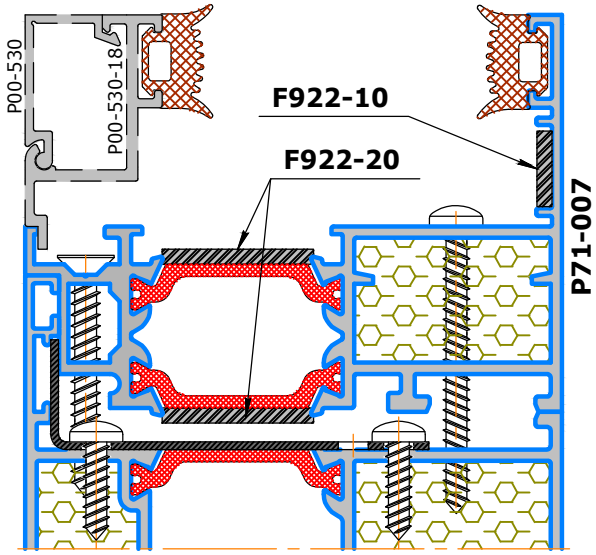




All stainless steel retainers shall be installed using the stainless self-tapping screws **S001-35-13.**

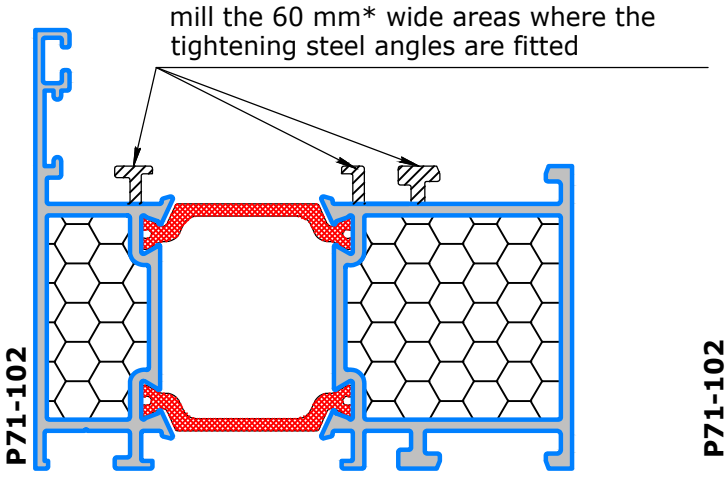
Installation of thermal expansion tapes

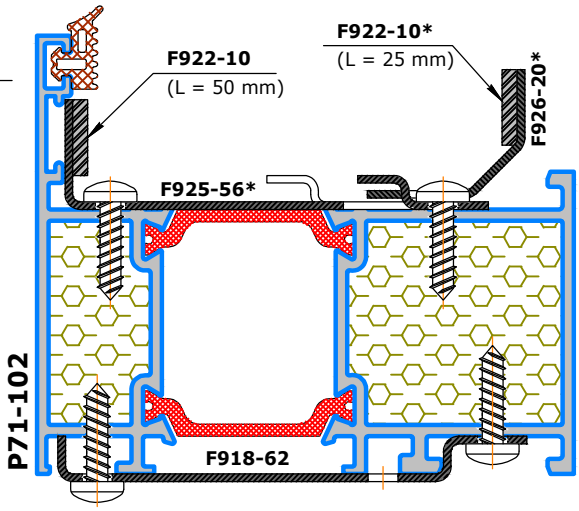


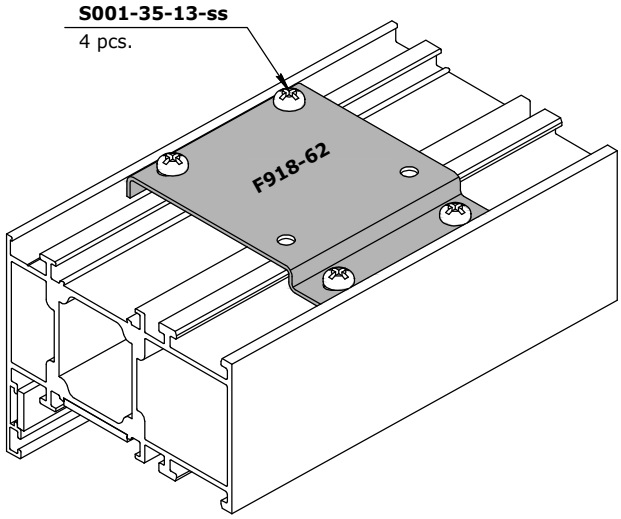


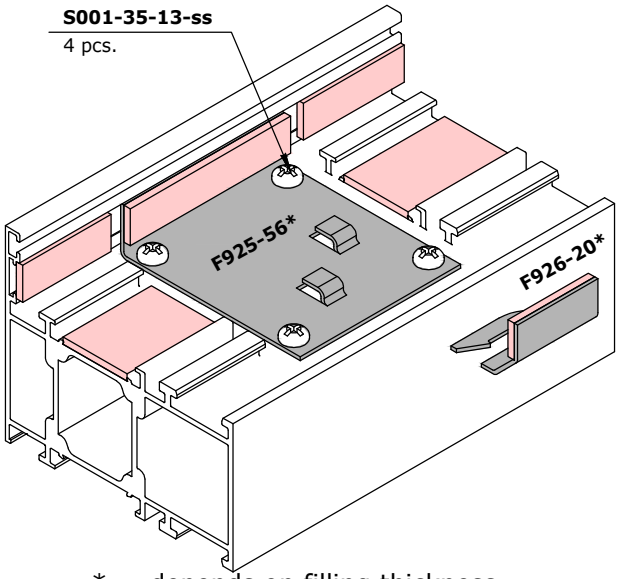
The self-adhesive sealing thermal expansion (intumescent) tape, based on oxidised graphite, shall be installed around the perimeter of the fire-resistant filler and at the junction of the two profiles. Operating principle: In the event of a fire, the heat-sealing tape immediately begins to intumesce under the effect of high temperatures (from 180 °C). It expands tenfold and fills the gaps in the fire resistant structure, preventing the spread of fire and combustion products to adjacent rooms.

Tightening steel members installation







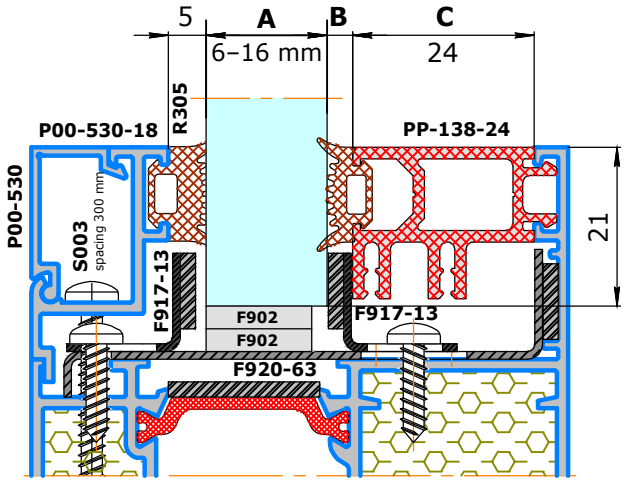


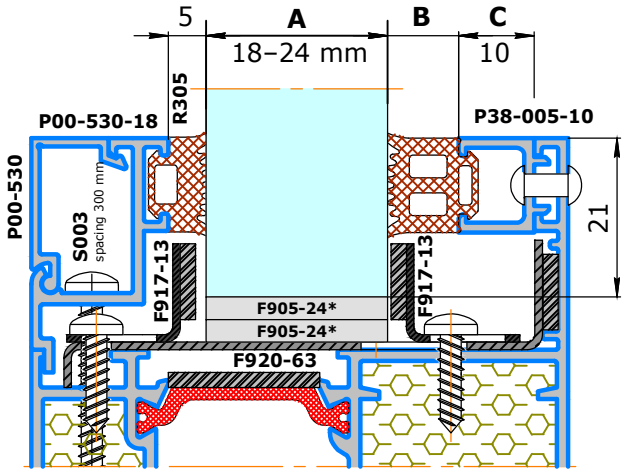
All stainless steel retainers shall be installed using the stainless self-tapping screws **S001-35-13.**

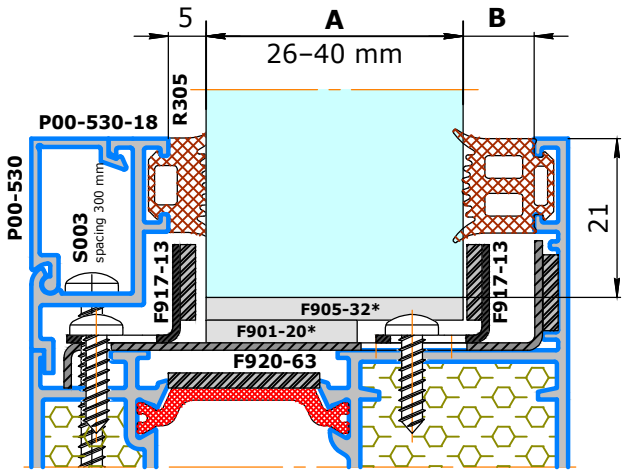
* — depends on filling thickness

Fill-in table: outdoor glazing external glazing bead P00-530-18

filling thickness **A**	internal gasket **B**	glass retainers	spacer **C**
6	**R313** 13.5 mm	**F902** (2 pcs.)	**PP-138-24** 24 mm
8	**R311** 11.5 mm		
10	**R309** 9.5 mm		
12	**R307** 7.5 mm		
14	**R305** 5.5 mm		
16	**R303** 3.5 mm		
18	**R315** 15.5 mm	**F901-20** (2 pcs.)	**P38-005-10** 10 mm
20	**R313** 13.5 mm		
22	**R311** 11.5 mm		
24	**R309** 9.5 mm	**F905-24** (2 pcs.)	
26	**R317** 17.5 mm	**F905-24** **F902**	
28	**R315** 15.5 mm		
30	**R313** 13.5 mm		
32	**R311** 11.5 mm	**F905-32** **F901-20**	
34	**R309** 9.5 mm		
36	**R307** 7.5 mm		
38	**R305** 5.5 mm	**F905-38** **F901-24**	
40	**R303** 3.5 mm		



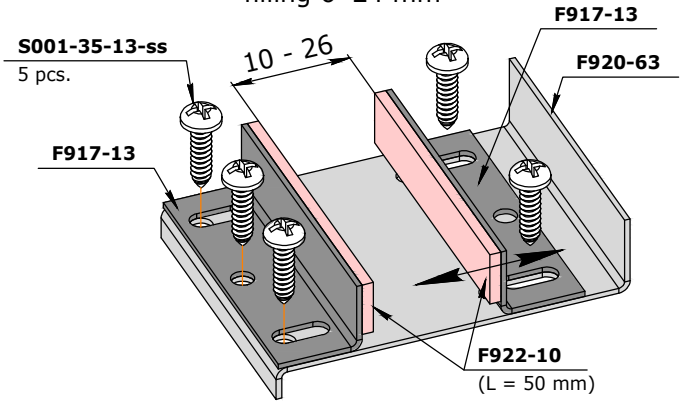




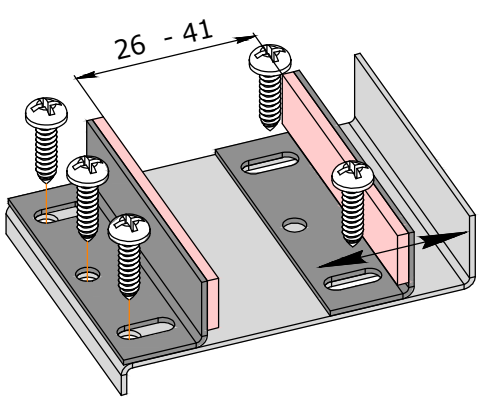
* — depends on filling thickness

Arrangement of adjustable steel retainer F917-13

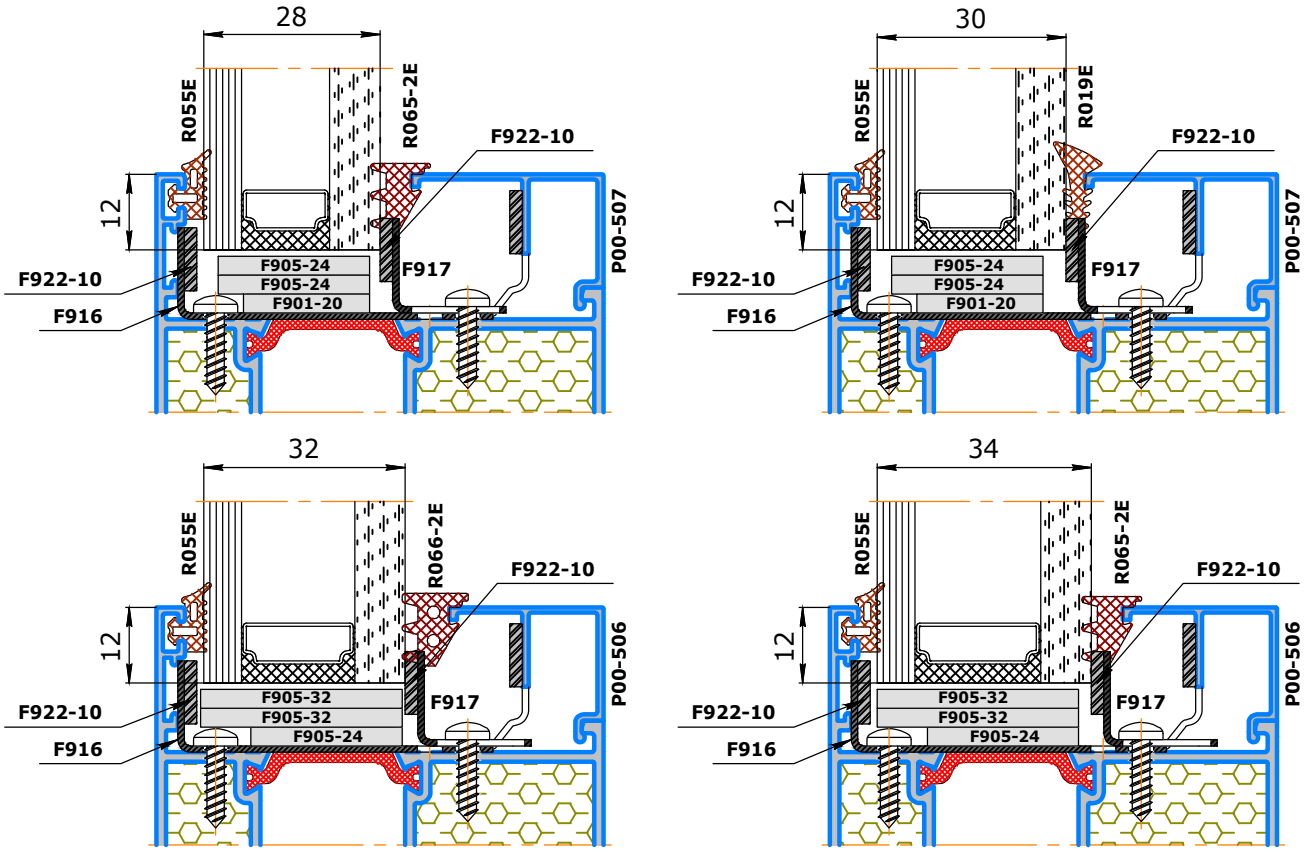
filling 6–24 mm

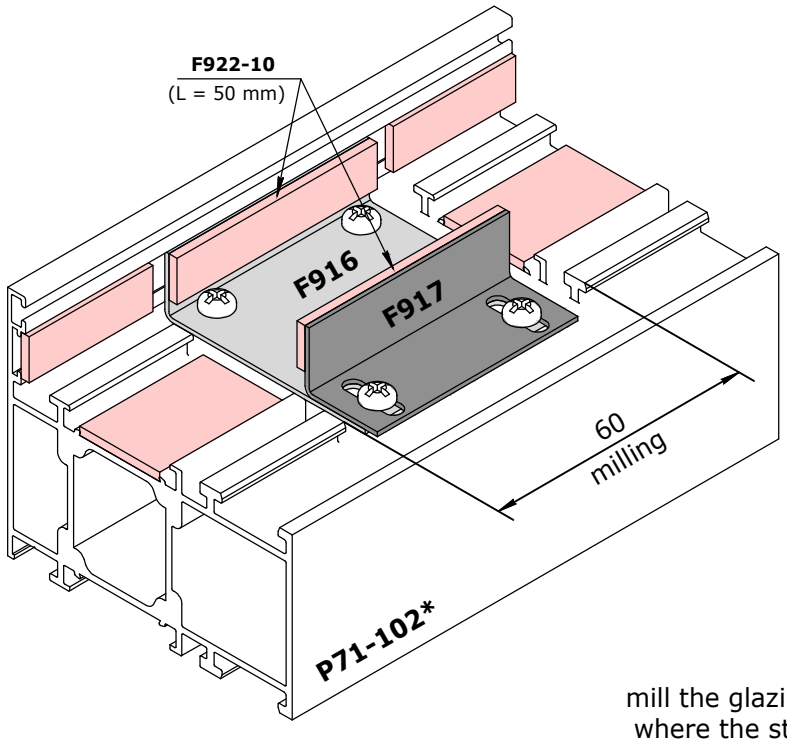


filling 26–40 mm

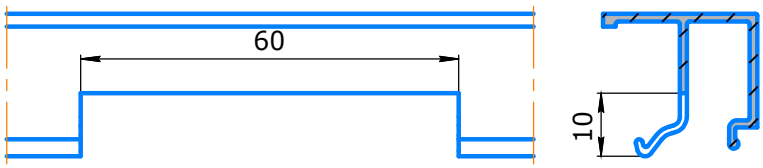


Glazing table
fire-resistant filling
28–34 mm





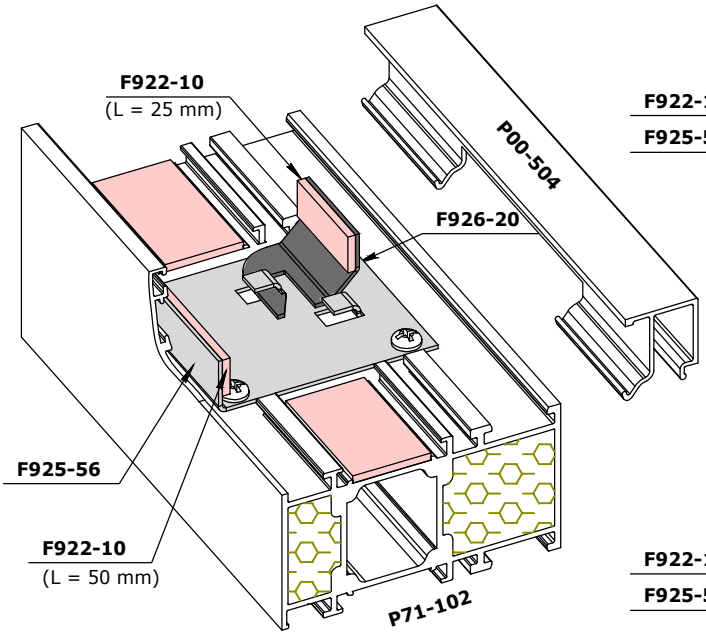
mill the glazing beads in the area where the steel retainer is fitted

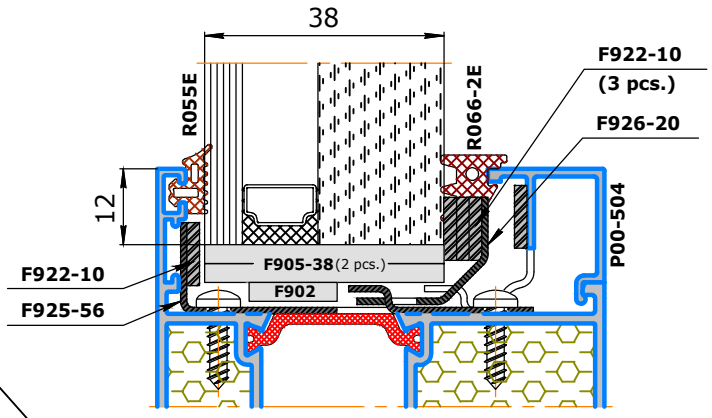


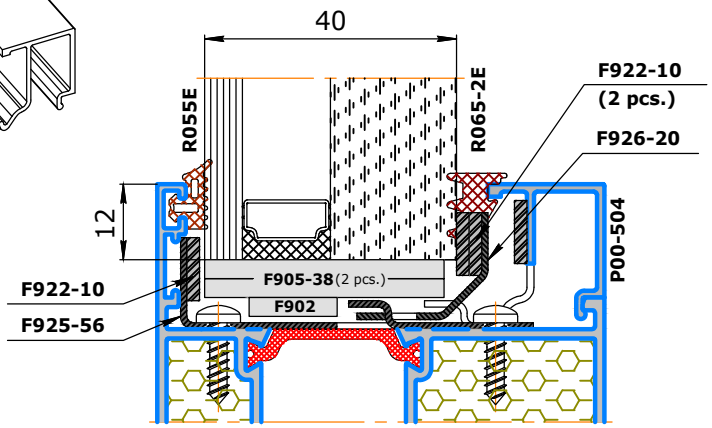
All stainless steel retainers shall be installed using the stainless self-tapping screws **S001-35-13.**

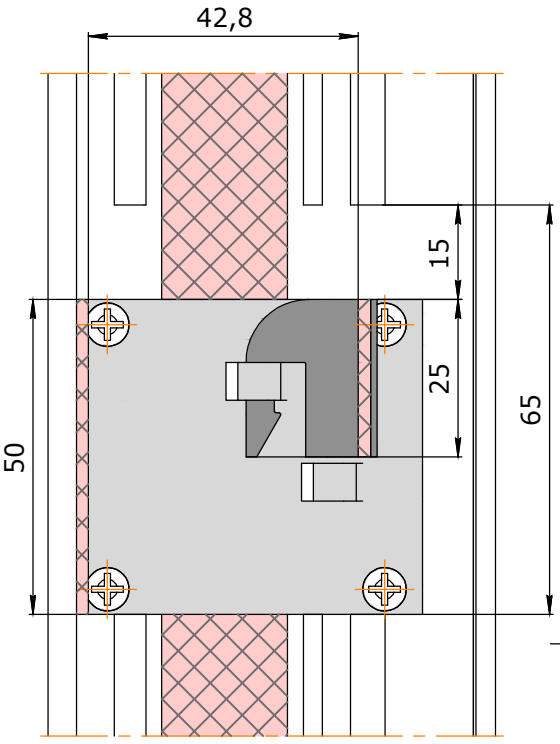
Glazing table
fire-resistant filling
38–42 mm

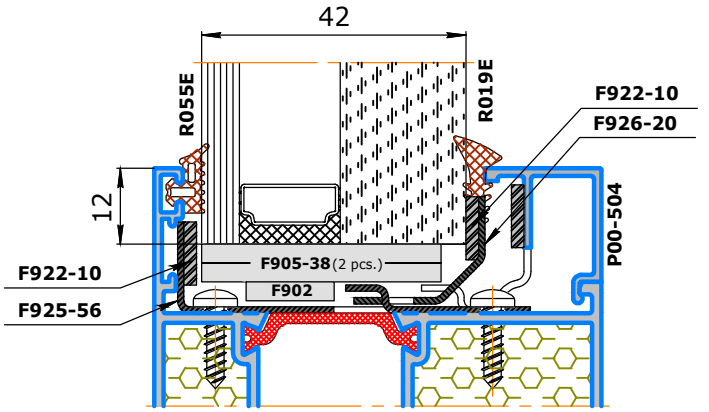
All stainless steel retainers shall be installed using the stainless self-tapping screws **S001-35-13.**



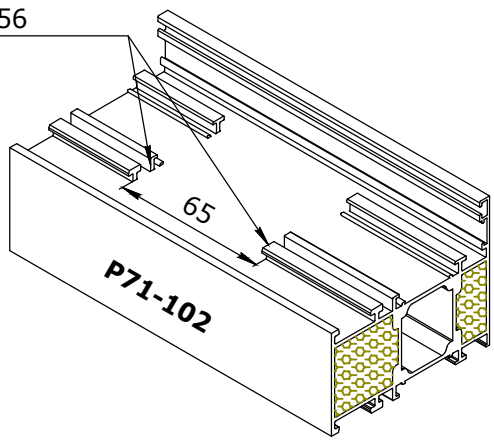




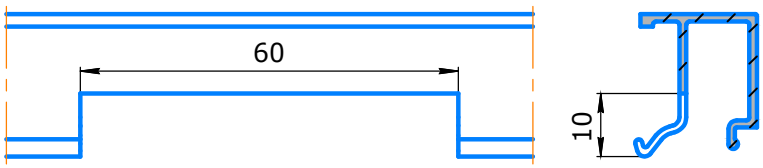




milling for installation of steel retainer F925-56

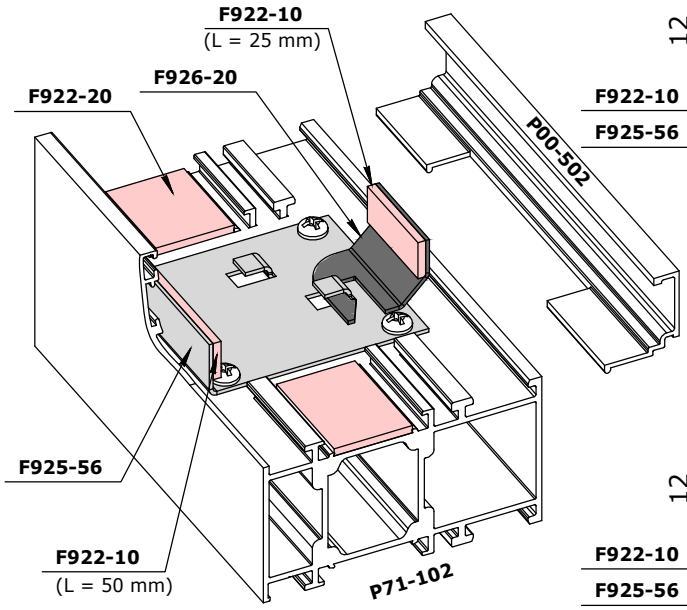


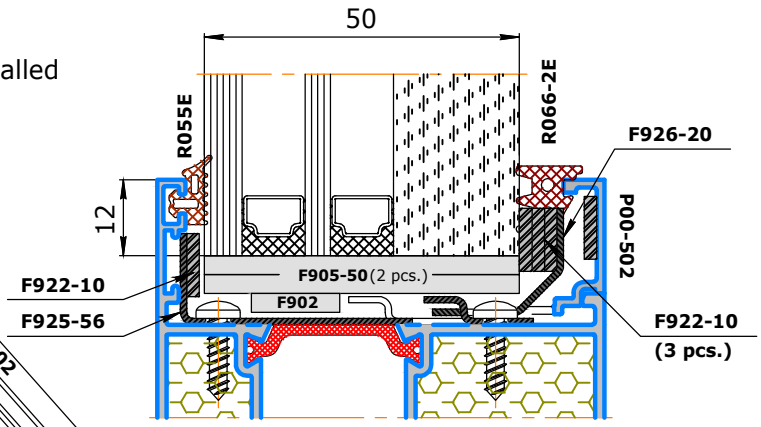
Machining glazing bead P00-504

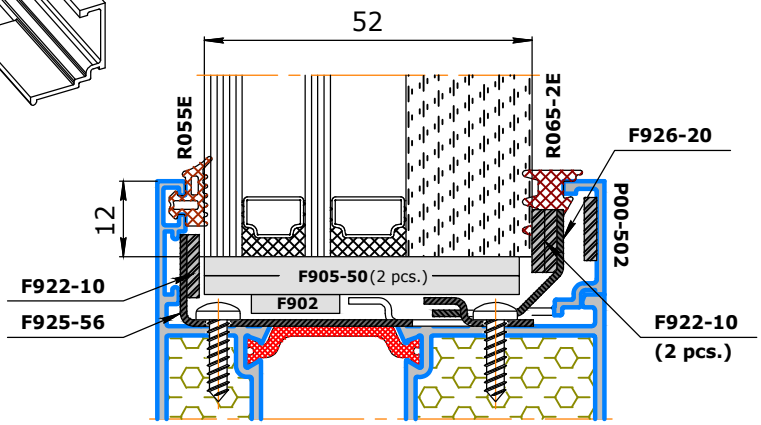


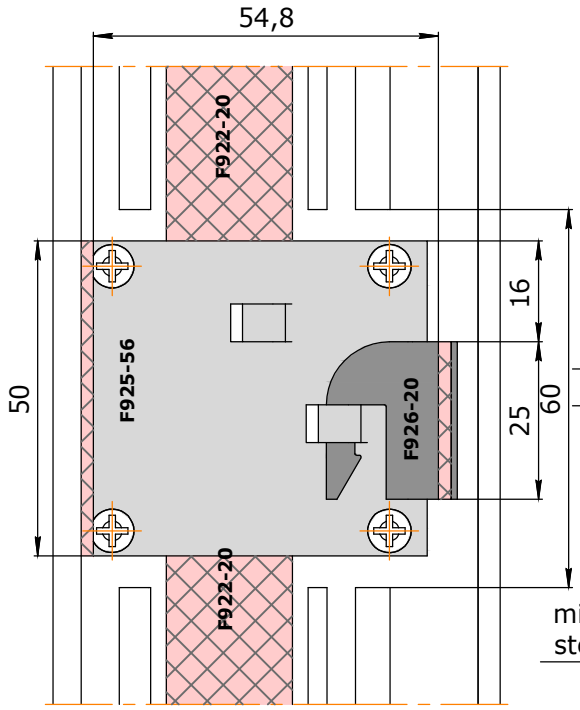
Glazing table
fire-resistant filling
50–54 mm

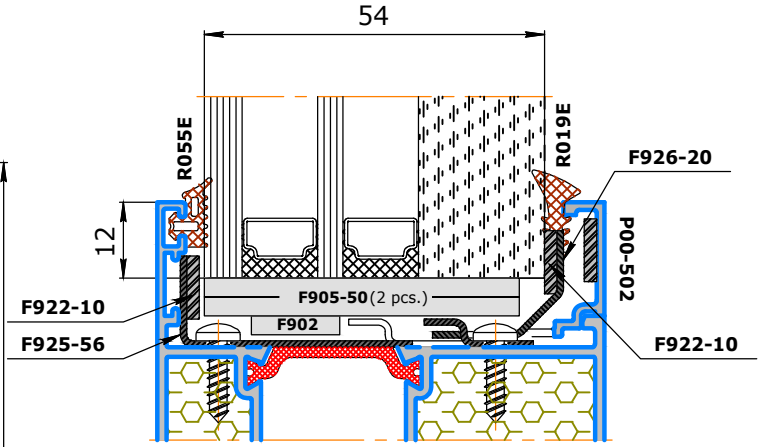
All stainless steel retainers shall be installed using the stainless self-tapping screws **S001-35-13.**



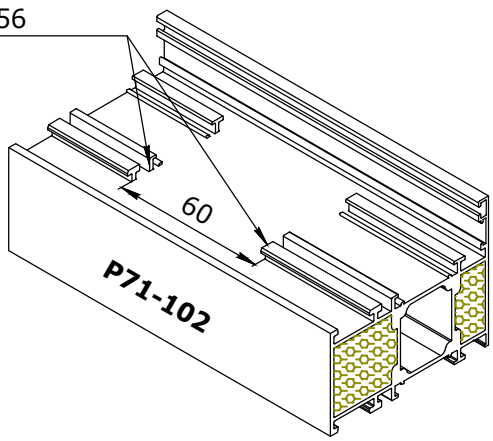




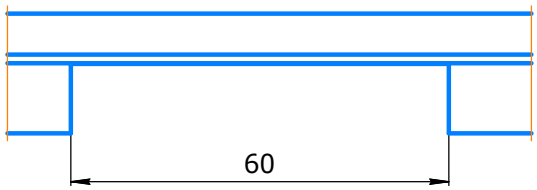


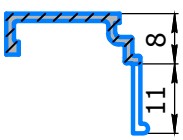


milling for installation of steel retainer F925-56



Machining glazing bead P00-502





Procedure for filling profiles with fire resistant material

1. Cut up the profiles to assemble the structure. Mill the profile ends (where necessary) for subsequent assembly.

2. Place the profiles upright. The ends of the profiles sawn at a 45-degree angle must face downwards.

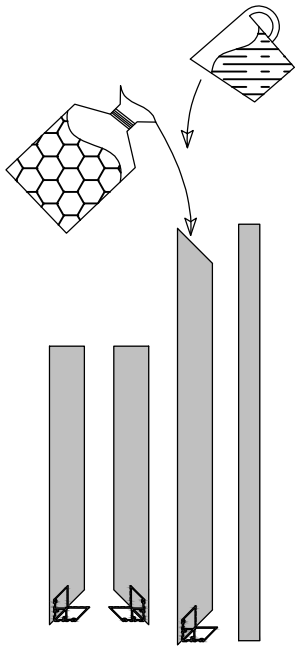
3. Temporarily insert the corner embedding parts into the profile chambers and fix them in place. Seal the open profile chambers from below with masking tape. Make 2–3 holes of 5–7 mm dia. each in the masking tape. It is also permissible to make a "plug" of fire-fighting foam in the profile instead of masking tape.

4. Fill the internal chambers of the profiles with loose fire resistant material. Leave space where the embedded parts are to be installed.

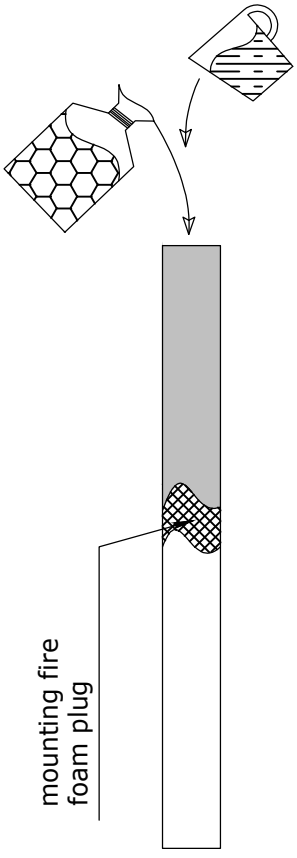
5. Pour "liquid glass" adhesive into the profile chambers filled with fire resistant material. The excess of adhesive that leaks out is suitable for re-use.

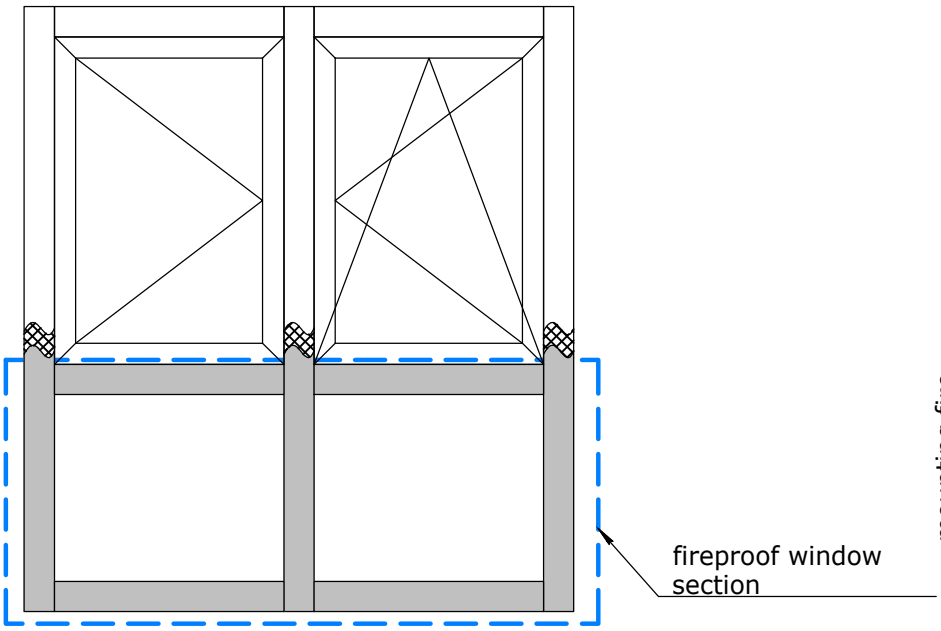
6. Allow the adhesive to dry on the profiles for 6–8 hours.

7. Install the tightening steel members (angles and braces) and foaming tape on the dried-out prefabricated profiles. Fix the steel components with self-tapping screws. The use of rivets is not recommended.

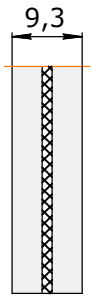


If it is not necessary to fill the entire profile with loose fire retardant material, make an opening in the non-facing part of the profile and pour the fire retardant foam through this opening to form a "plug". Once the foam has cured, fill the remaining part of the profile with loose fire resistant material and adhesive following the procedure above.





Range of fire-resistant laminated glass

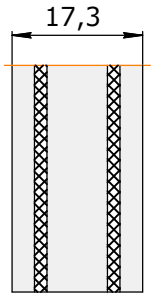


EIW15

Pyrobel 8

laminated glass
4-gel-4

9.3 mm thick (+/-1 mm)
weight 20 kg/sq. m

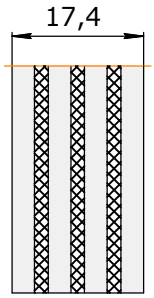


EIW30

Pyrobel 16

laminated glass
3-gel-8-gel-3

17.3 mm thick (+/-1.2 mm)
weight 40 kg/sq. m

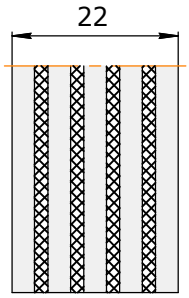


EIW45

Pyrobel 17

laminated glass
3-gel-3-gel-3-gel-3

17.4 mm thick (+/-2 mm)
weight 40 kg/sq. m

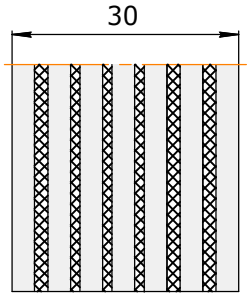


EIW60

Pyrobel 21

laminated glass
3-gel-3-gel-3-gel-3-gel-3

22 mm thick (+/-2 mm)
weight 47 kg/sq. m



EIW90

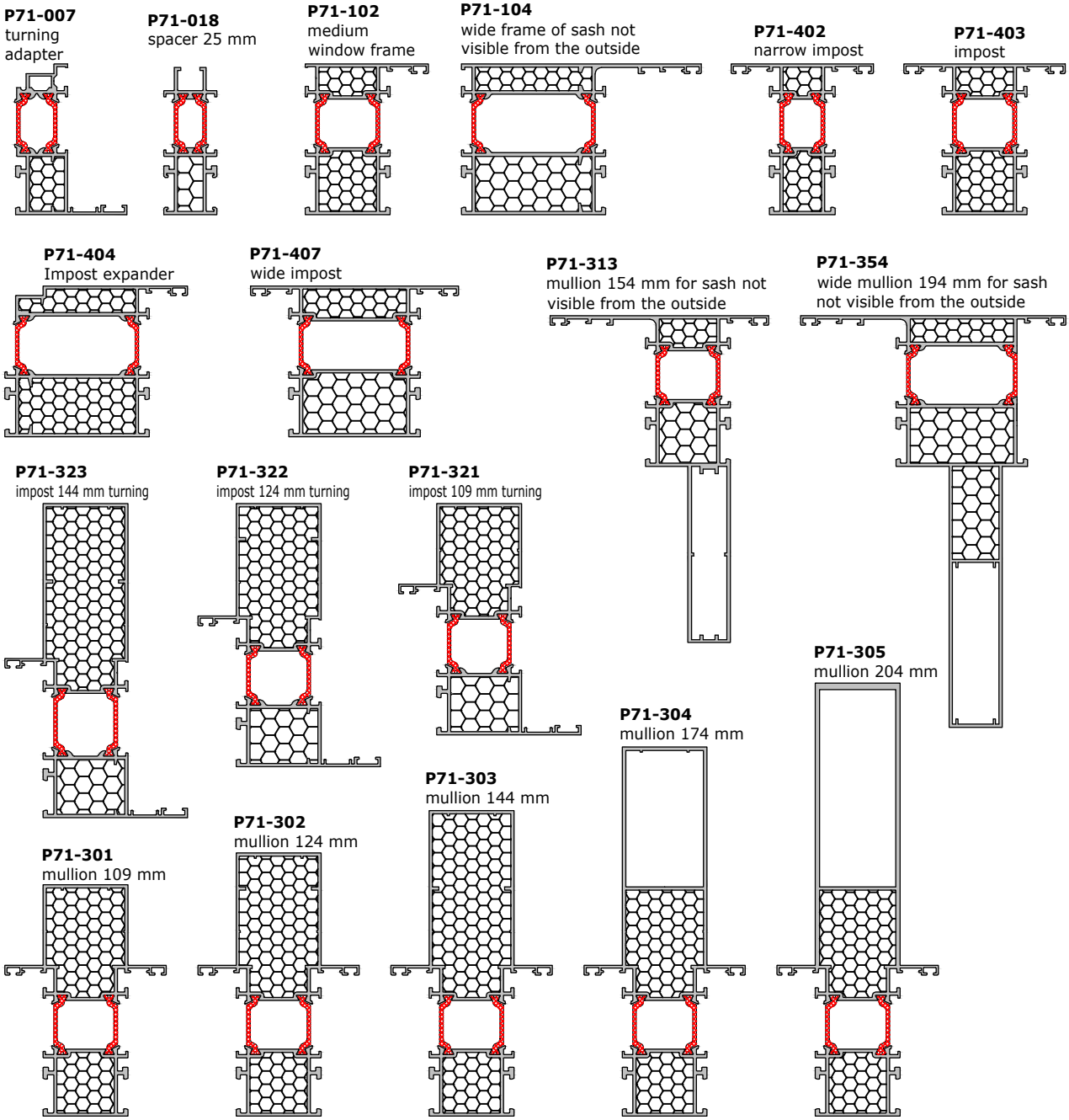
Pyrobel 30

laminated glass
3-gel-3-gel-3-gel-3-gel
-3-gel-3-gel-3

30 mm thick (+/-2 mm)
weight 69 kg/sq. m

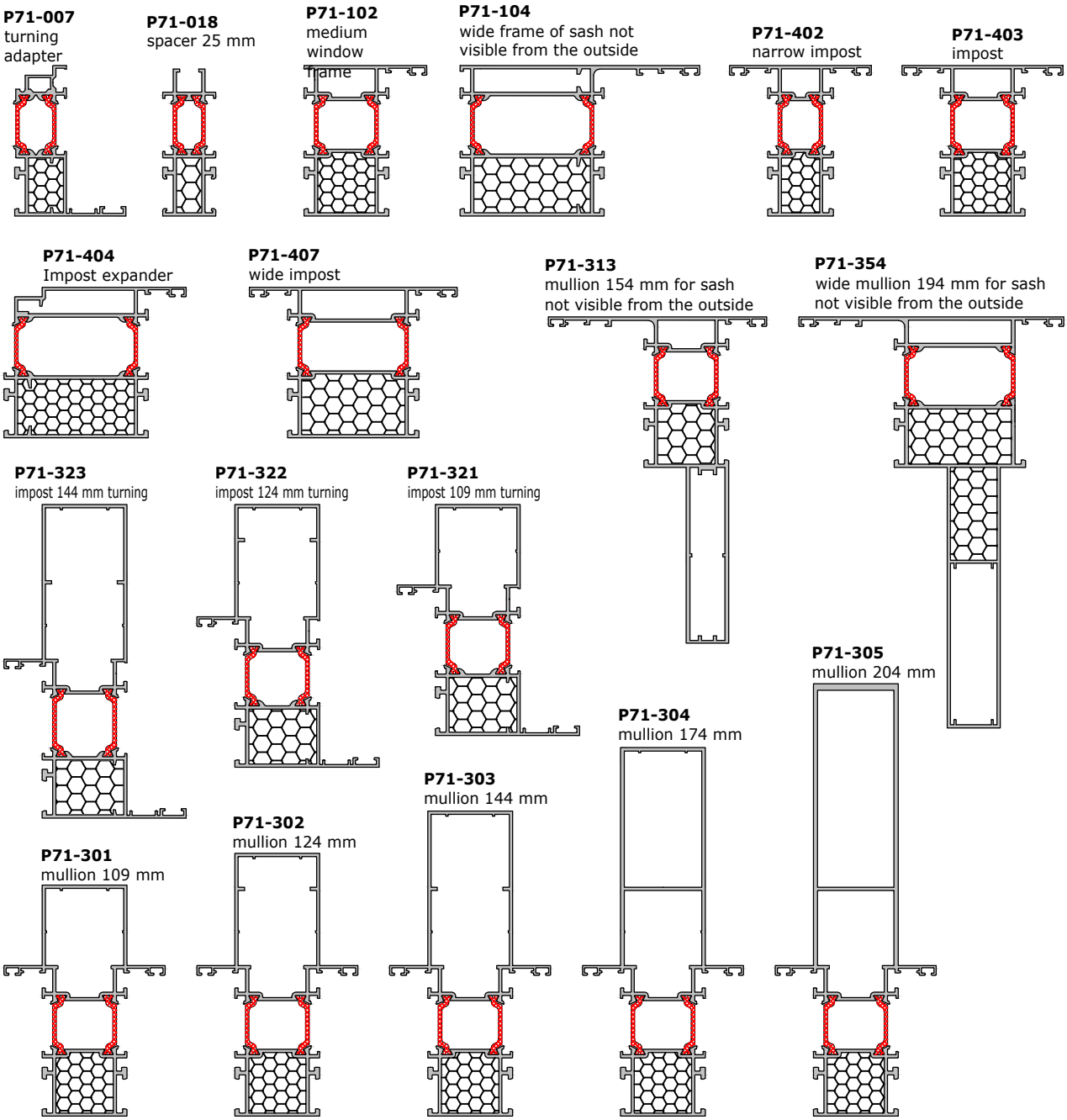
Volumes of profile filling with ThermoMast fire resistant material (for fire resistance class E60)

Filler consumption for profiles **E60**			
Designation	**E10**	**E11**	**weight of running meter**
P71-007	0.4 L/running meter	0.1 L/running meter	1.819
P71-018	0.3 L/running meter	0.1 L/running meter	1.516
P71-102	1 L/running meter	0.2 L/running meter	2.978
P71-104	2 L/running meter	0.5 L/running meter	5.339
P71-402	0.6 L/running meter	0.1 L/running meter	2.303
P71-403	1 L/running meter	0.2 L/running meter	3.075
P71-404	1.9 L/running meter	0.4 L/running meter	4.868
P71-407	1.9 L/running meter	0.4 L/running meter	4.857
P71-301	2.4 L/running meter	0.6 L/running meter	4.342
P71-302	3 L/running meter	0.7 L/running meter	6.713
P71-303	3.7 L/running meter	0.9 L/running meter	8
P71-304	2.4 L/running meter	0.6 L/running meter	6.496
P71-305	2.3 L/running meter	0.5 L/running meter	6.855
P71-313	0.9 L/running meter	0.2 L/running meter	4.022
P71-321	2.5 L/running meter	0.6 L/running meter	5.821
P71-322	3 L/running meter	0.7 L/running meter	6.717
P71-323	3.8 L/running meter	0.9 L/running meter	8.13
P71-354	1.7 L/running meter	0.4 L/running meter	6.012



Volumes of profile filling with ThermoMast fire resistant material (for fire resistance class E30)

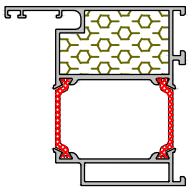
Filler consumption for profiles **E30**			
Designation	**E10**	**E11**	**weight, kg/running meter**
P71-007	0.4 L/running meter	0.1 L/running meter	1.819
P71-018	0.3 L/running meter	0.1 L/running meter	1.516
P71-102	0.7 L/running meter	0.2 L/running meter	2.603
P71-104	1.4 L/running meter	0.3 L/running meter	4.339
P71-402	0.5 L/running meter	0.1 L/running meter	2.178
P71-403	0.7 L/running meter	0.2 L/running meter	2.7
P71-404	1.4 L/running meter	0.3 L/running meter	4.118
P71-407	1.3 L/running meter	0.3 L/running meter	3.982
P71-301	0.7 L/running meter	0.2 L/running meter	3.067
P71-302	0.7 L/running meter	0.2 L/running meter	3.213
P71-303	0.7 L/running meter	0.2 L/running meter	3.375
P71-304	0.7 L/running meter	0.2 L/running meter	3.871
P71-305	0.7 L/running meter	0.2 L/running meter	4.48
P71-313	0.7 L/running meter	0.2 L/running meter	3.772
P71-321	0.8 L/running meter	0.2 L/running meter	3.196
P71-322	0.8 L/running meter	0.2 L/running meter	3.346
P71-323	0.8 L/running meter	0.2 L/running meter	3.505
P71-354	1.2 L/running meter	0.3 L/running meter	5.262



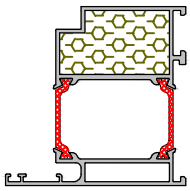
Volumes of profile filling with ThermoMast fire resistant material (for fire resistance class E30)

Filler consumption for profiles E30			
Designation	**E10**	**E11**	**theoretical weight, kg/running meter**
P71-014	0.1 L/running meter	0.05 L/running meter	1.27
P71-014-2	0.45 L/running meter	0.1 L/running meter	2.036
P71-171	1 L/running meter	0.2 L/running meter	3.159
P71-172	1 L/running meter	0.2 L/running meter	3.158
P71-173	1 L/running meter	0.2 L/running meter	3.128
P71-174	1 L/running meter	0.2 L/running meter	3.129
P71-212-190	3.3 L/running meter	0.8 L/running meter	8.531
P71-271	1 L/running meter	0.2 L/running meter	3.253
P71-272	1 L/running meter	0.2 L/running meter	3.254

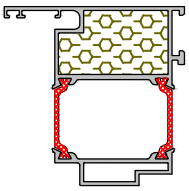
P71-171



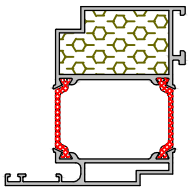
P71-172



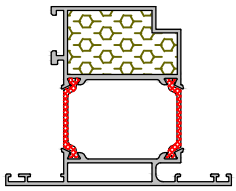
P71-173



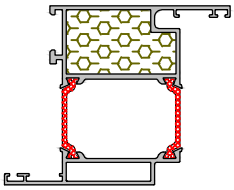
P71-174



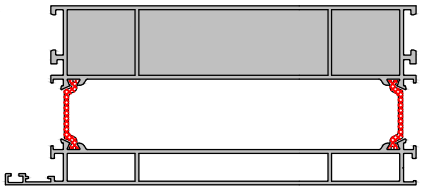
P71-271



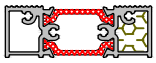
P71-272



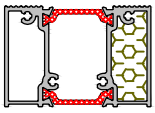
P71-212-190



P71-014



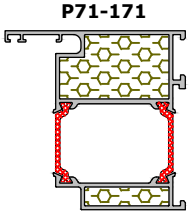
P71-014-2



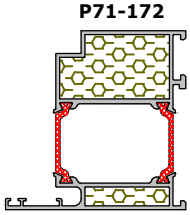
Volumes of profile filling with ThermoMast fire resistant material (for fire resistance class E60)

Filler consumption for profiles E60			
Designation	**E10**	**E11**	**theoretical weight, kg/running meter**
P71-014	0.3 L/running meter	0.1 L/running meter	1.534
P71-014-2	0.9 L/running meter	0.2 L/running meter	2.725
P71-171	1.2 L/running meter	0.3 L/running meter	3.536
P71-172	1.2 L/running meter	0.3 L/running meter	3.535
P71-173	1.2 L/running meter	0.3 L/running meter	3.417
P71-174	1.2 L/running meter	0.3 L/running meter	3.416
P71-212-190	4.7 L/running meter	1.1 L/running meter	10.659
P71-271	1.2 L/running meter	0.3 L/running meter	3.63
P71-272	1.2 L/running meter	0.3 L/running meter	3.631

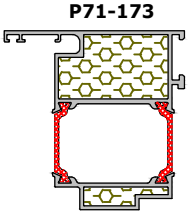
P71-171



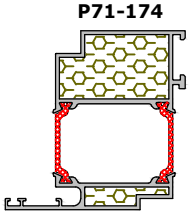
P71-172



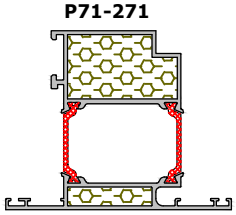
P71-173



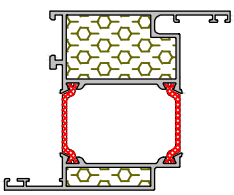
P71-174



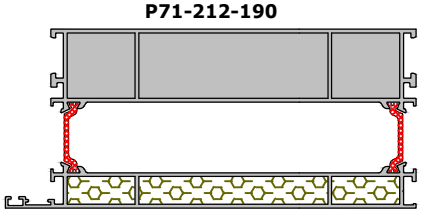
P71-271



P71-272



P71-212-190



P71-014



P71-014-2

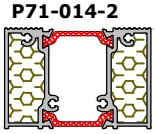
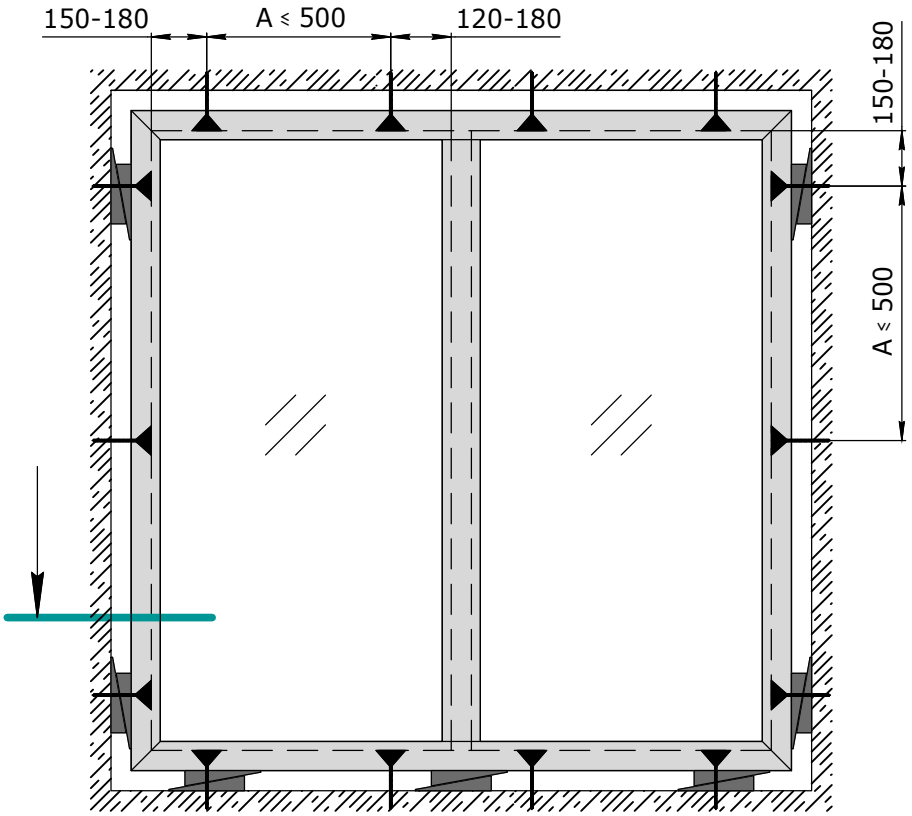


Diagram for attaching the frame structures into the opening

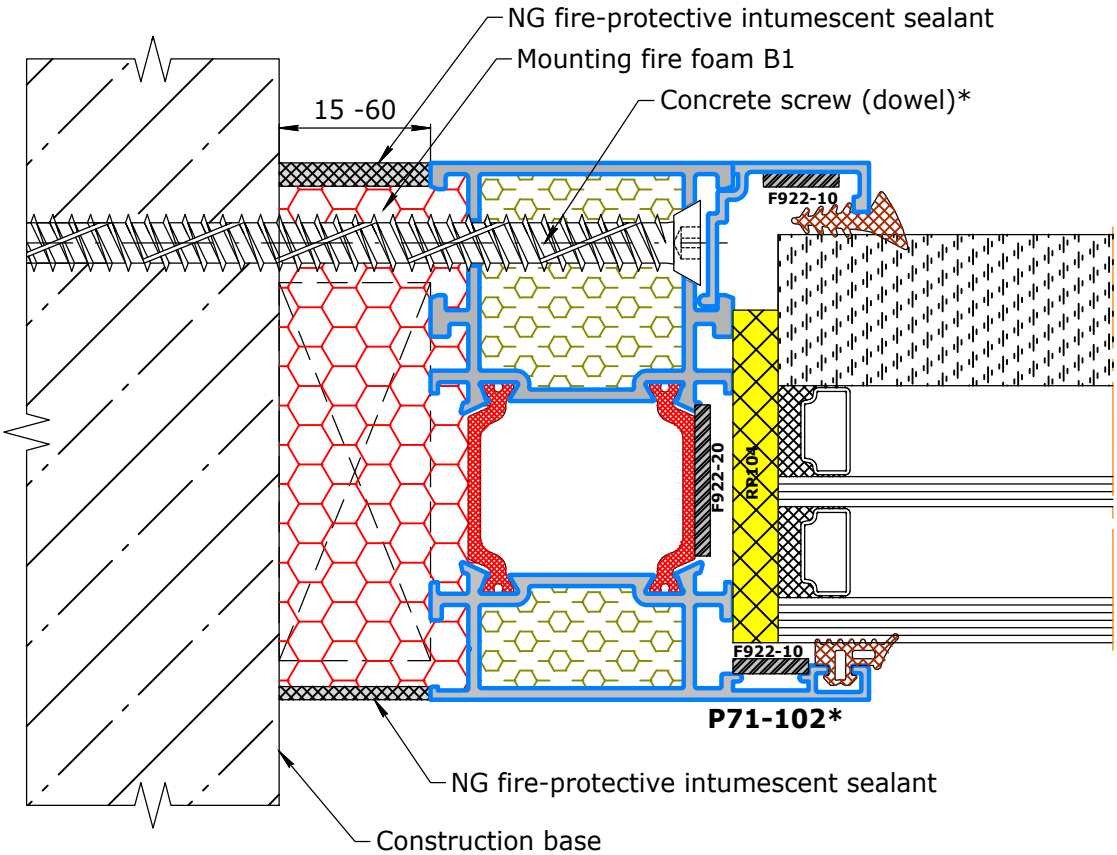


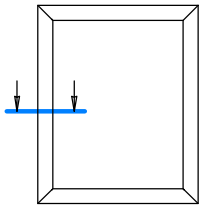
A — distance between the fasteners

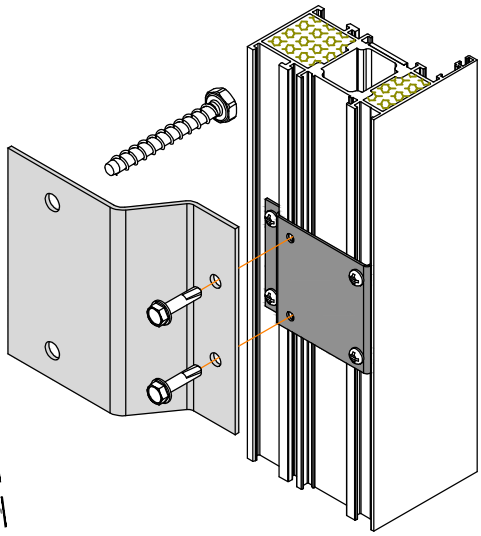
— fasteners (dowels)

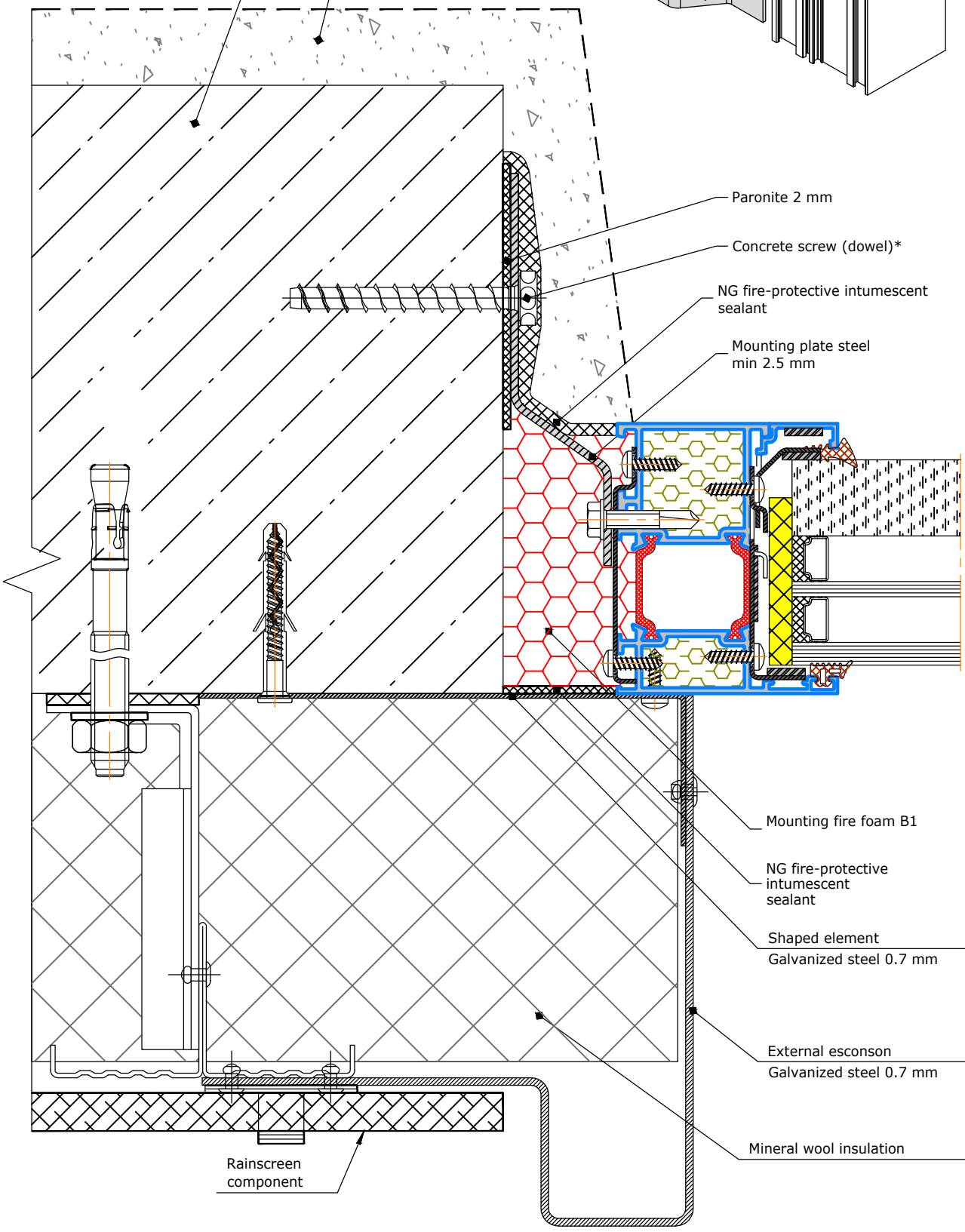
— support (bearing) pads NG (glass magnesium board)

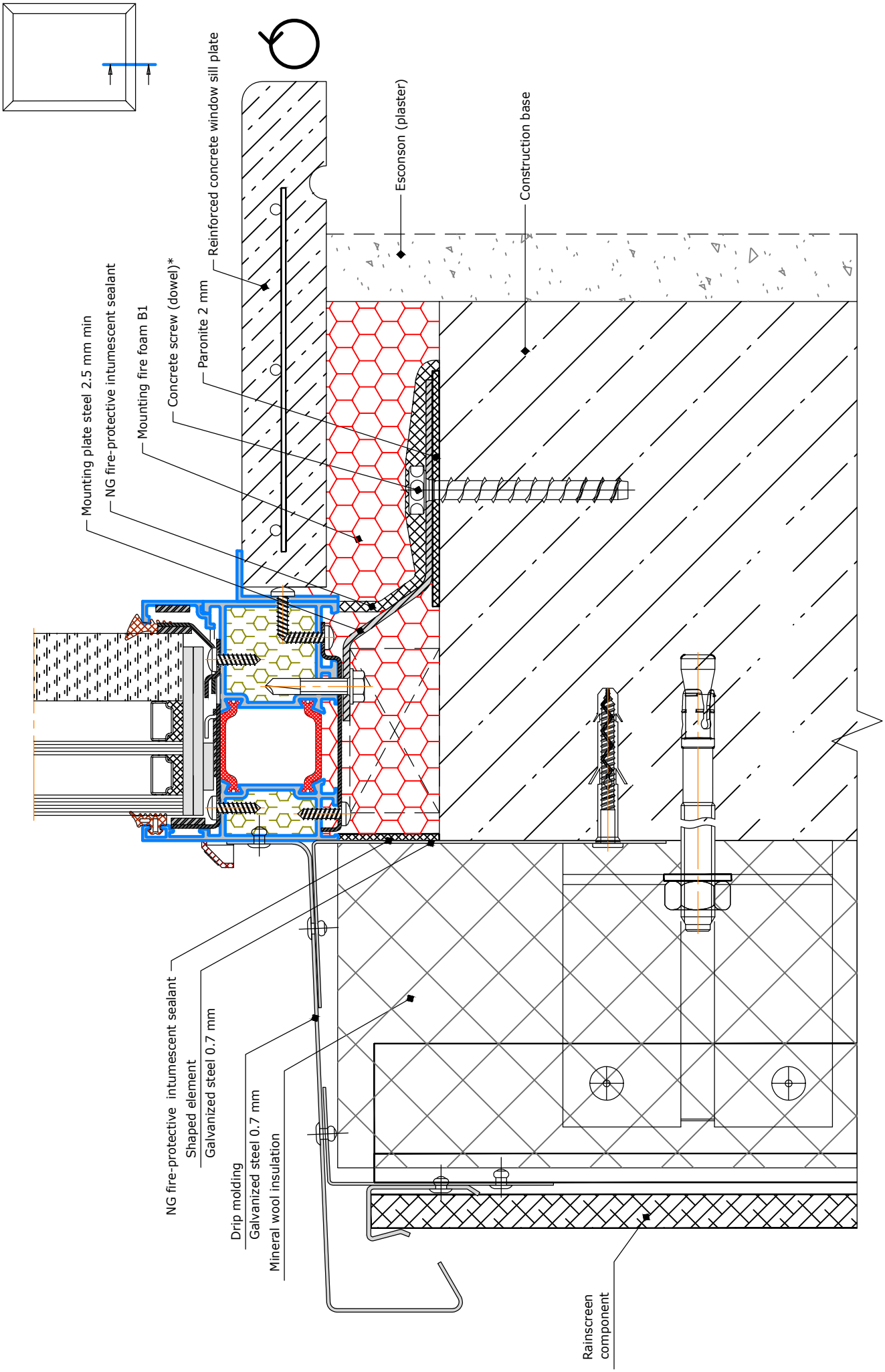
* — depends on the specifics of the facility. The length of the concrete dowel (screw) depends on the mounting joint.





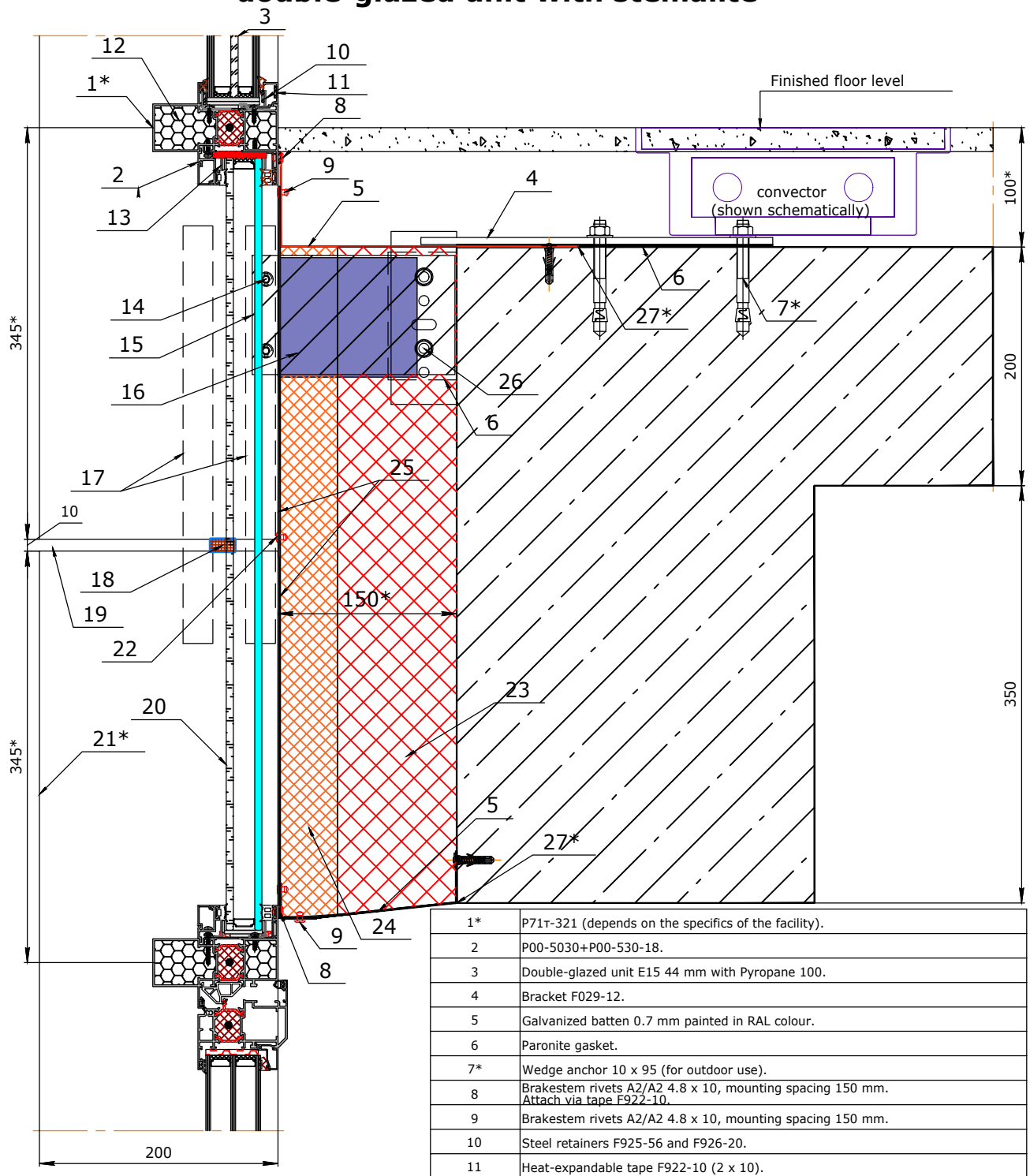



Construction base
Esconson (plaster)
Paronite 2 mm
Concrete screw (dowel)*
NG fire-protective intumescent sealant
Mounting plate steel min 2.5 mm
Mounting fire foam B1
NG fire-protective intumescent sealant
Shaped element
Galvanized steel 0.7 mm
External esconson
Galvanized steel 0.7 mm
Mineral wool insulation
Rainscreen component



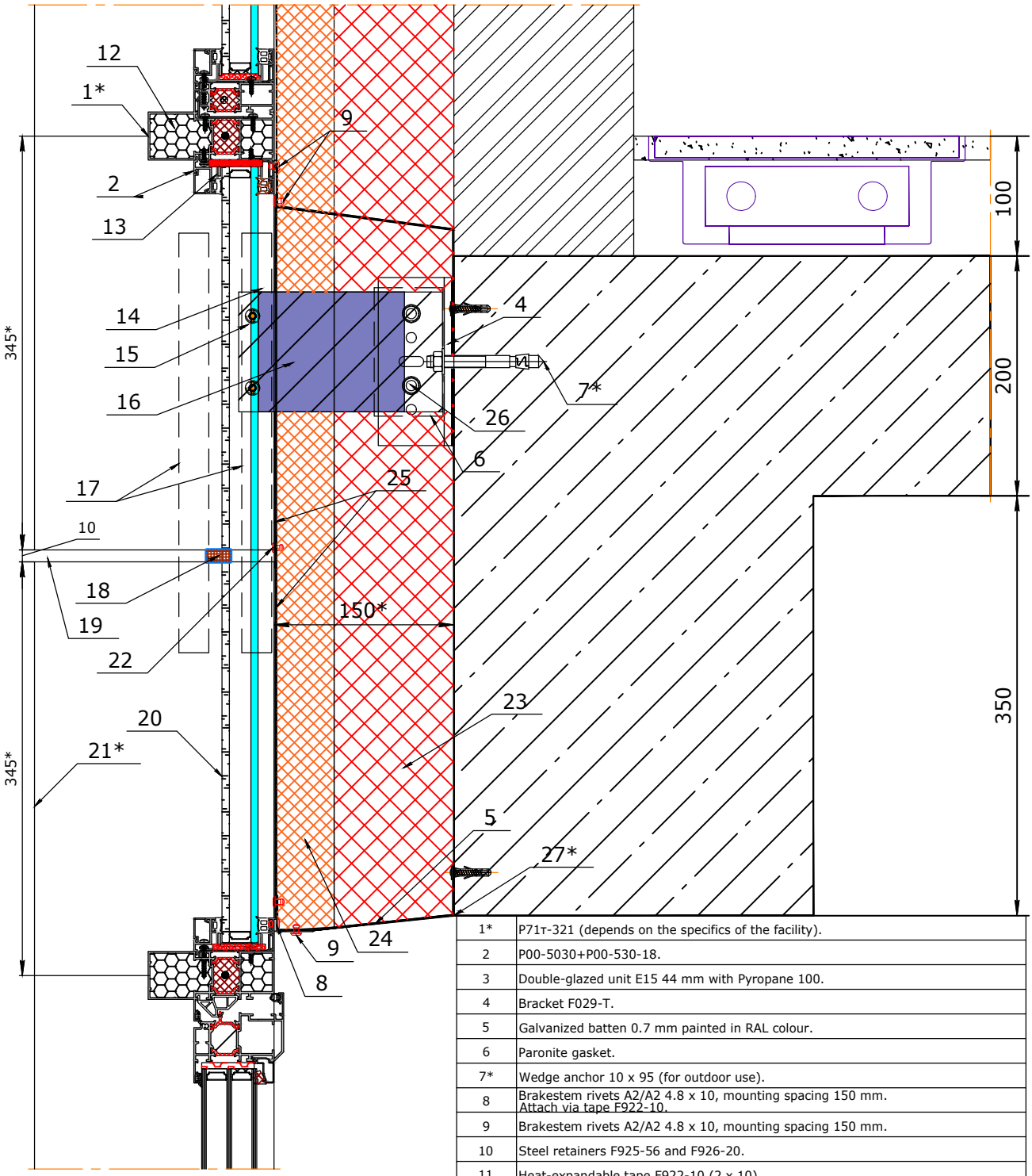
contents
profiles
delivery set
profiles (1:1)
sections
glazing tables
sub-assemblies tables
fitting arrangements
additional solutions
sub-assemblies
fire-resistant structures
connections
equipment and tools

Slab penetration joint filling — double-glazed unit with stemalite



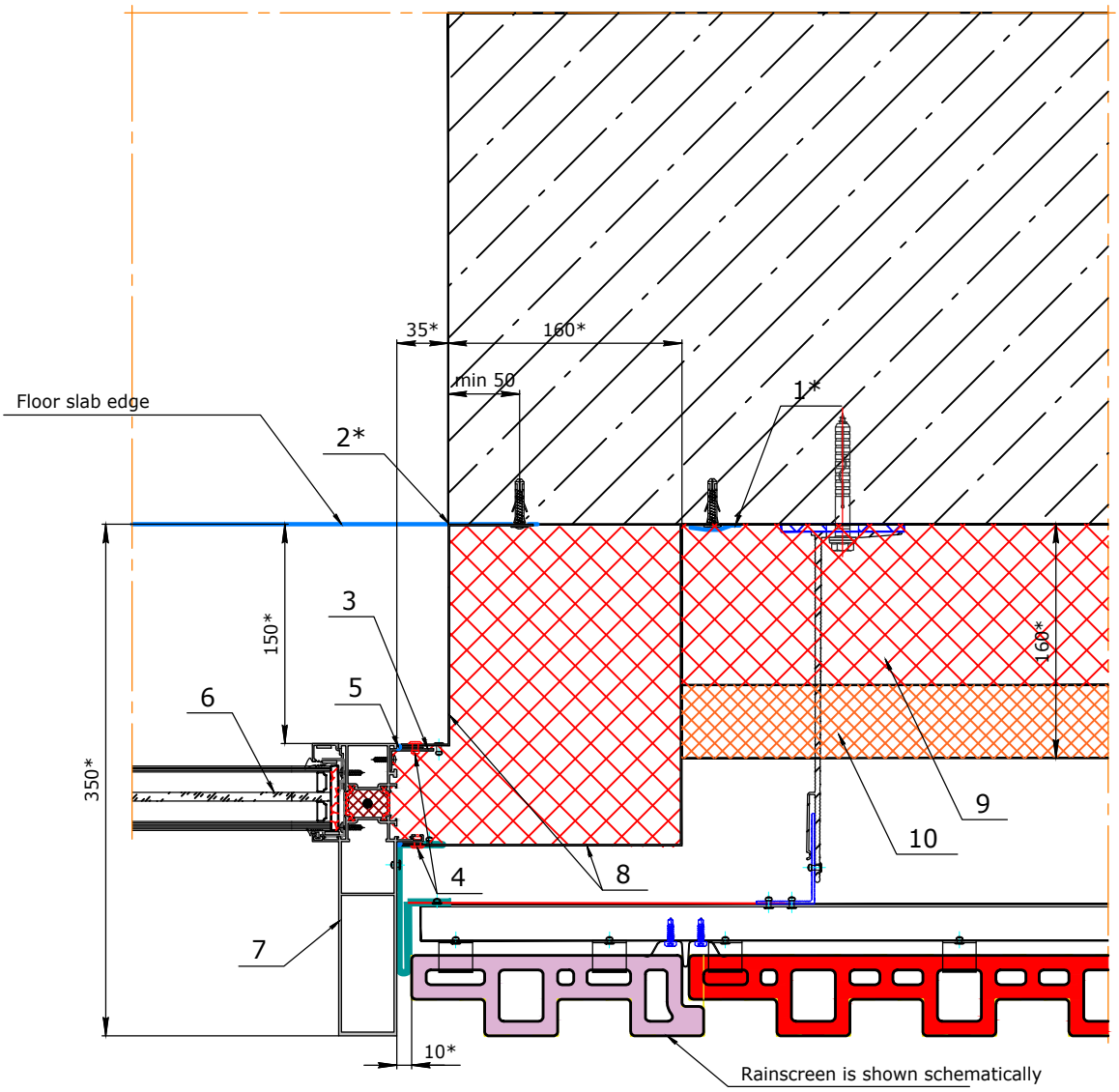
1*	P71т-321 (depends on the specifics of the facility).
2	P00-5030+P00-530-18.
3	Double-glazed unit E15 44 mm with Pyropane 100.
4	Bracket F029-12.
5	Galvanized batten 0.7 mm painted in RAL colour.
6	Paronite gasket.
7*	Wedge anchor 10 x 95 (for outdoor use).
8	Brakestem rivets A2/A2 4.8 x 10, mounting spacing 150 mm. Attach via tape F922-10.
9	Brakestem rivets A2/A2 4.8 x 10, mounting spacing 150 mm.
10	Steel retainers F925-56 and F926-20.
11	Heat-expandable tape F922-10 (2 x 10).
12	ThermoMast loose fire resistant material.
13	Steel angles F920-63 and F917-13 2 pcs.
14	Bushings and screws F027-29 2 sets.
15	Alluminium strip 100 x 5 P00-004.
16	Thermal expansion tape to be bonded to the aluminium strip.
17	Block P00-615 L = 350 mm.
18	Internal insert for mullions F066-71 joint.
19	Fill the expansion joint with structural sealant.
20	Double-glazed unit with RAL-coloured stemalite.
21*	P71т-305 (depends on the specifics of the facility).
22	Brakestem rivets A2/A2 4.8 x 10, mounting spacing 150 mm. Sliding connection.
23	Izovol L-35 or equivalent insulating material.
24	Izovol ST-90 or equivalent insulating material.
25	Galvanized sheet painted in RAL colour.
26	Bolt M8x35 2 pcs. nut M8 2 pcs. washer 8 4 pcs.
27*	STIZ B sealant or equivalent.

* — depends on the specifics of the facility



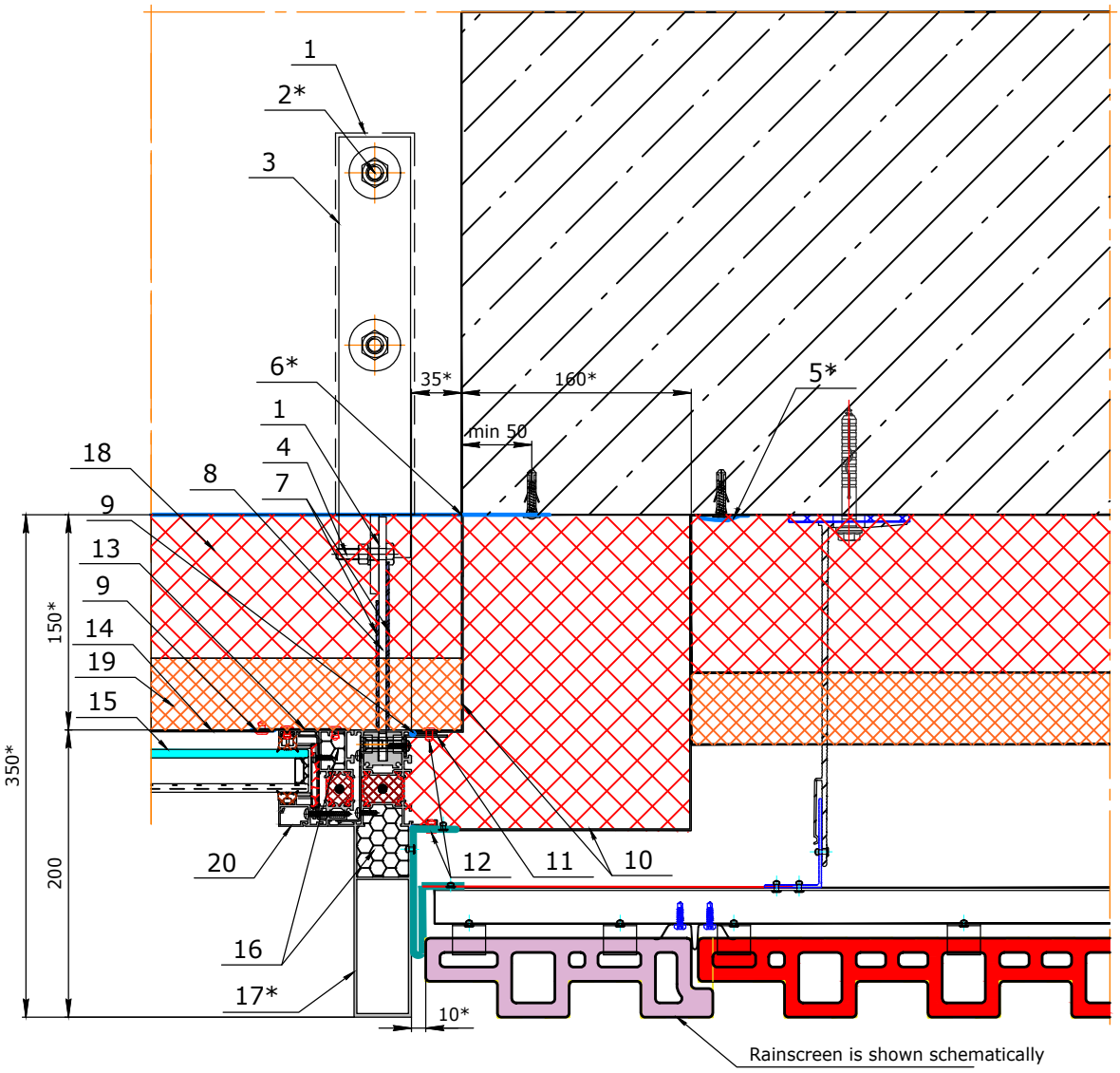
1*	P71т-321 (depends on the specifics of the facility).
2	P00-5030+P00-530-18.
3	Double-glazed unit E15 44 mm with Pyropane 100.
4	Bracket F029-T.
5	Galvanized batten 0.7 mm painted in RAL colour.
6	Paronite gasket.
7*	Wedge anchor 10 x 95 (for outdoor use).
8	Brakestem rivets A2/A2 4.8 x 10, mounting spacing 150 mm. Attach via tape F922-10.
9	Brakestem rivets A2/A2 4.8 x 10, mounting spacing 150 mm.
10	Steel retainers F925-56 and F926-20.
11	Heat-expandable tape F922-10 (2 x 10).
12	ThermoMast loose fire resistant material.
13	Steel angles F920-63 and F917-13 2 pcs.
14	Bushings and screws F027-29 2 sets.
15	Alluminium strip 100 x 5 P00-004.
16	Thermal expansion tape to be bonded to the aluminium strip.
17	Block P00-615 L = 350 mm.
18	Internal insert for mullions F066-71 joint.
19	Fill the expansion joint with structural sealant.
20	Double-glazed unit with RAL-coloured stemalite.
21*	P71т-305 (depends on the specifics of the facility).
22	Brakestem rivets A2/A2 4.8 x 10, mounting spacing 150 mm. Sliding connection.
23	Izovol L-35 or equivalent insulating material.
24	Izovol ST-90 or equivalent insulating material.
25	Galvanized sheet painted in RAL colour.
26	Bolt M8x35 2 pcs. nut M8 2 pcs. washer 8 4 pcs.
27*	STIZ B sealant or equivalent.

* — depends on the specifics of the facility



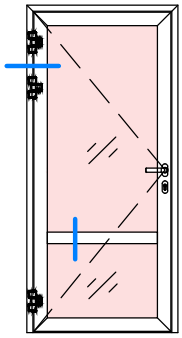
1*	STIZ A sealant or equivalent.
2*	STIZ B sealant or equivalent.
3	Galvanized angle 0.7 mm painted in RAL colour.
4	Brakestem rivets A2/A2 4.8 x 10, mounting spacing 150 mm.
5	Silicone sealant.
6	Double-glazed unit E15 44 mm with Pyropane 100.
7	P71т-305 (depends on the specifics of the facility).
8	Galvanized batten 0.7 mm painted in RAL colour.
9	Izovol L-35 or equivalent insulating material.
10	Izovol ST-90 or equivalent insulating material.

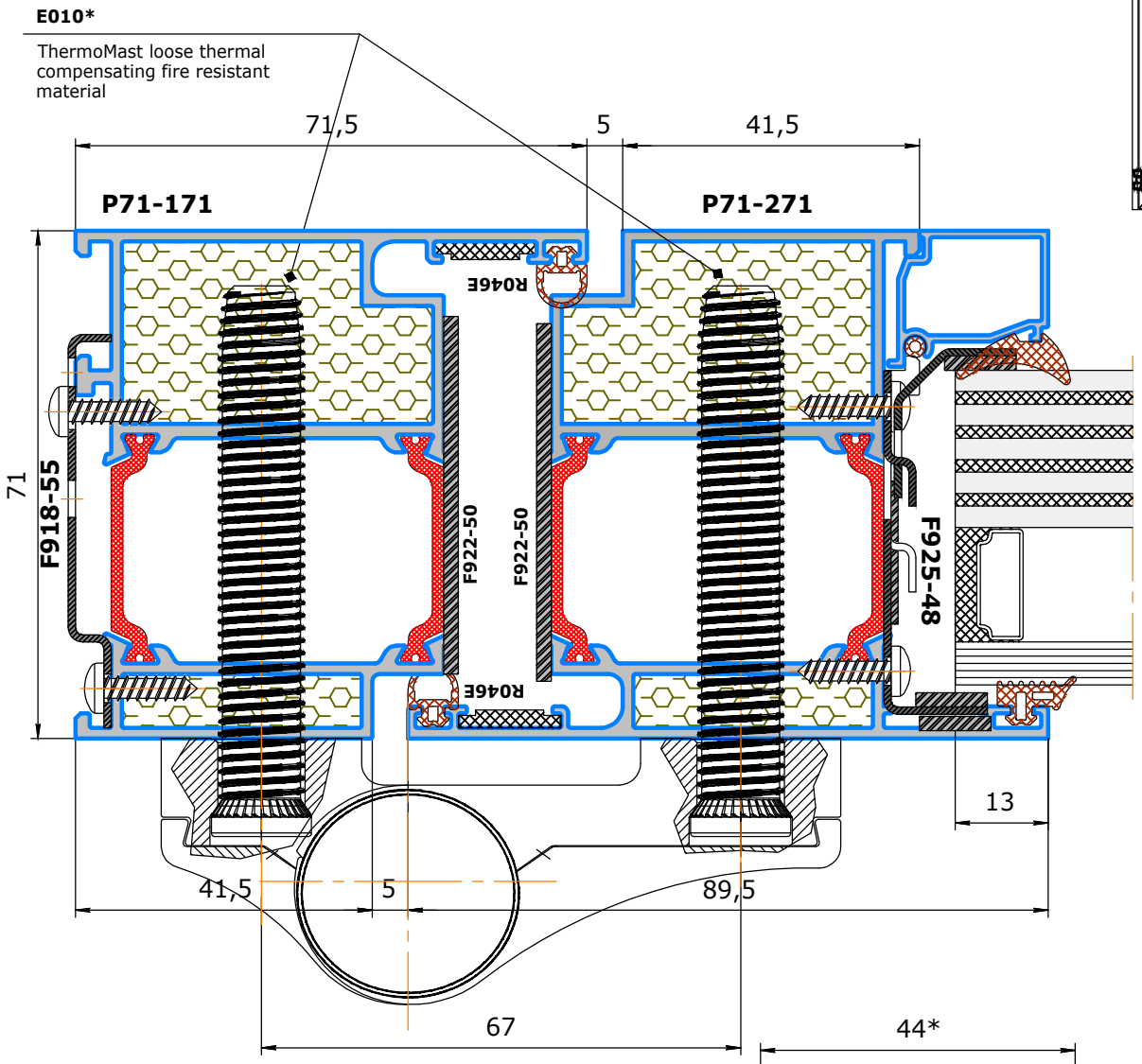
* — depends on the specifics of the facility

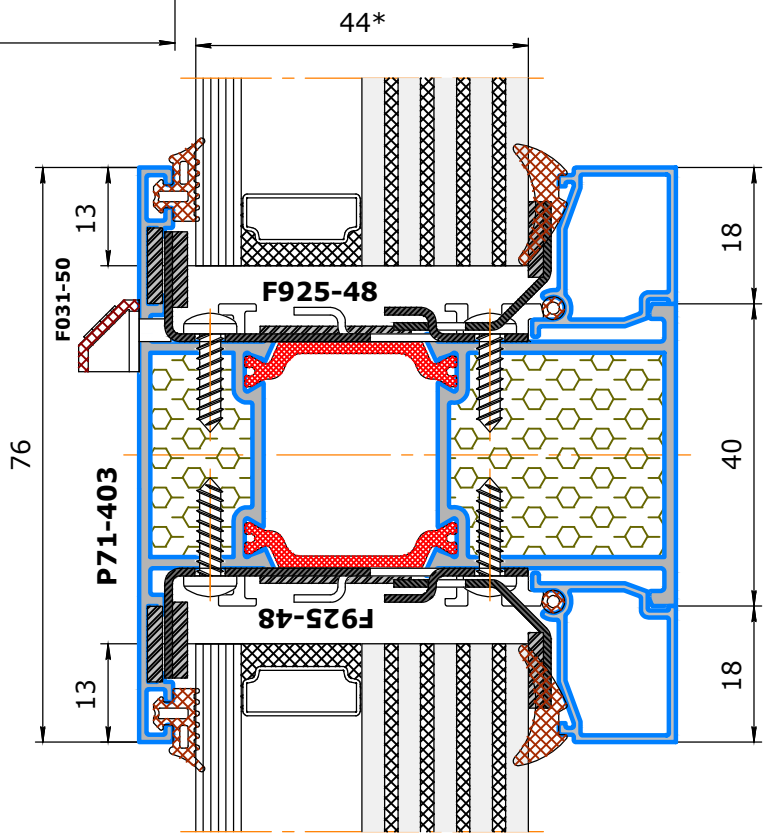


1	Paronite gasket.
2*	Wedge anchor 10 x 95 (for outdoor use).
3	Bracket F029-12.
4	Bolt M8x35 2 pcs. nut M8 2 pcs. washer 8 4 pcs.
5*	STIZ A sealant or equivalent.
6*	STIZ B sealant or equivalent.
7	Thermal expansion tape to be bonded to the aluminium strip.
8	Alluminium strip 100 x 5 P00-004.
9	Silicone sealant.
10	Galvanized batten 0.7 mm painted in RAL colour.
11	Galvanized angle 0.7 mm painted in RAL colour.
12	Brakestem rivets A2/A2 4.8 x 10, mounting spacing 150 mm.
13	Galvanized steel strip 0.7 mm painted in RAL colour.
14	Galvanized steel 0.7 mm
15	Double-glazed unit with RAL-coloured stemalite.
16	ThermoMast loose fire resistant material.
17	P71т-305 (depends on the specifics of the facility).
18	Izovol L-35 or equivalent insulating material.
19	Izovol ST-90 or equivalent insulating material.
20	P00-5030+P00-530-18.

* — depends on the specifics of the facility

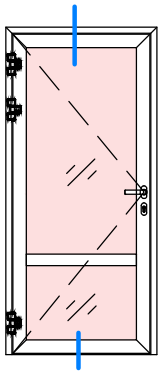


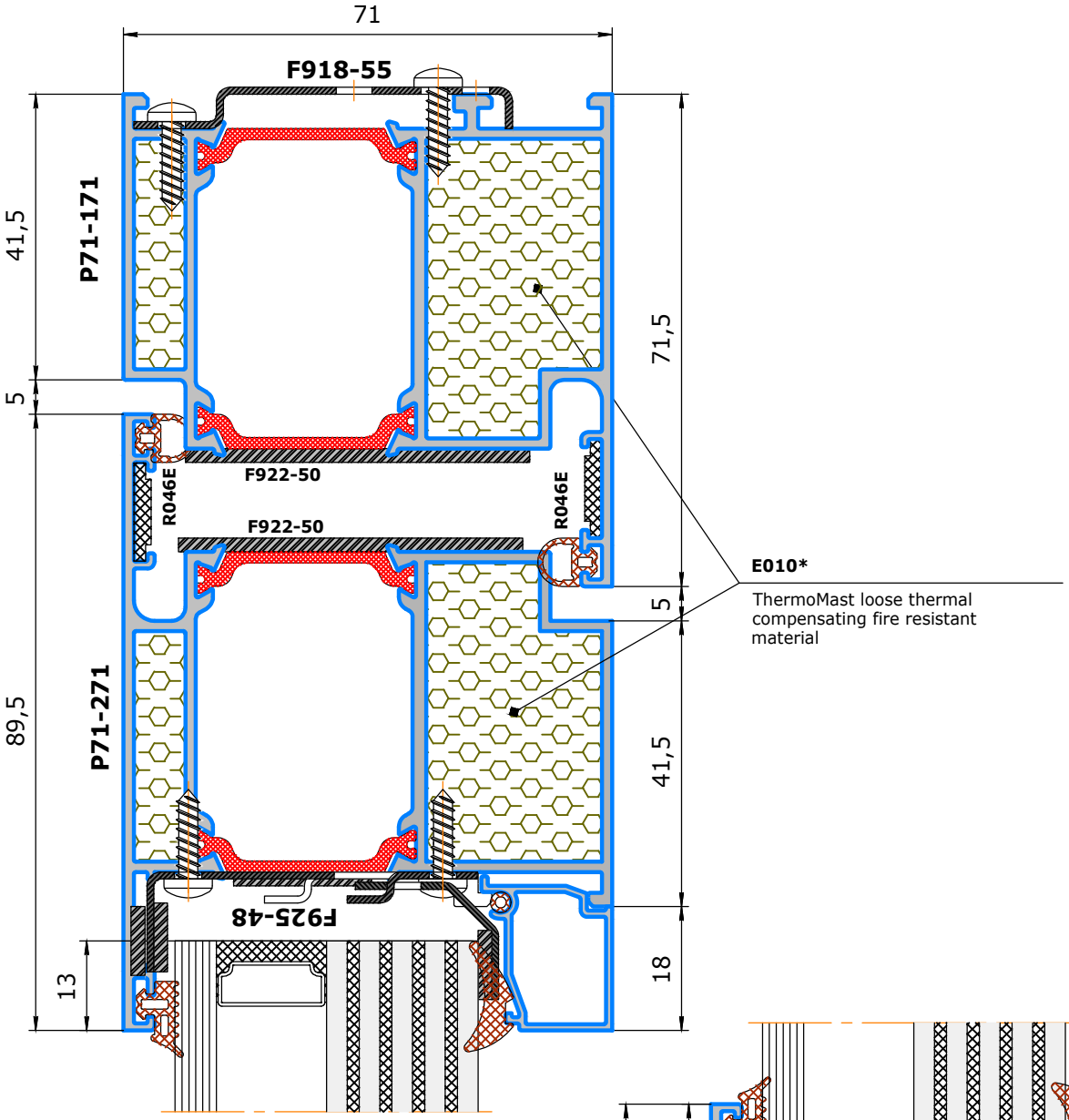


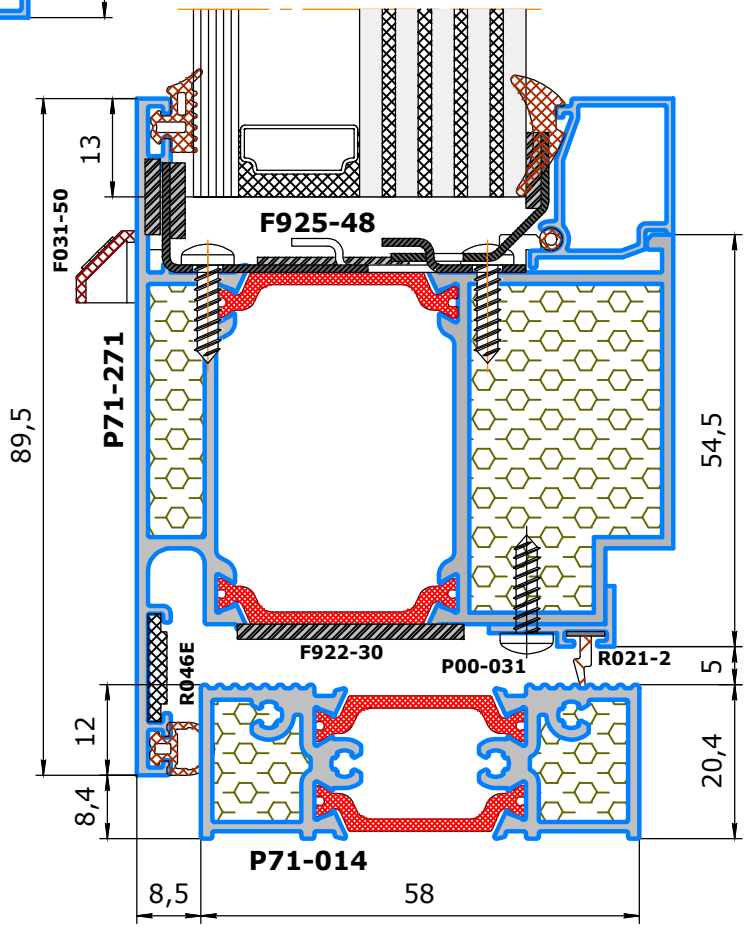


* — depends on the specifics of the facility

All stainless steel retainers shall be installed using the stainless self-tapping screws **S001-35-13-ss.**



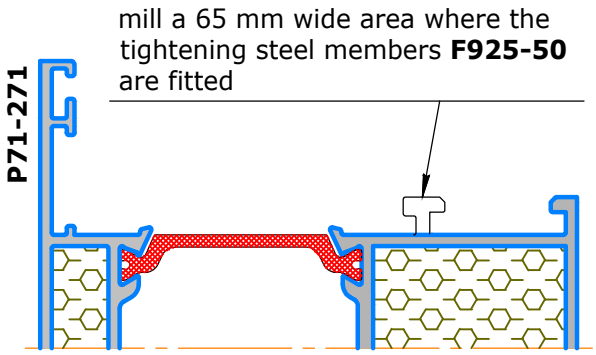


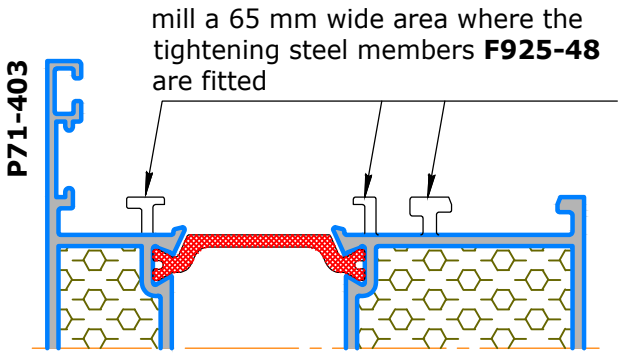


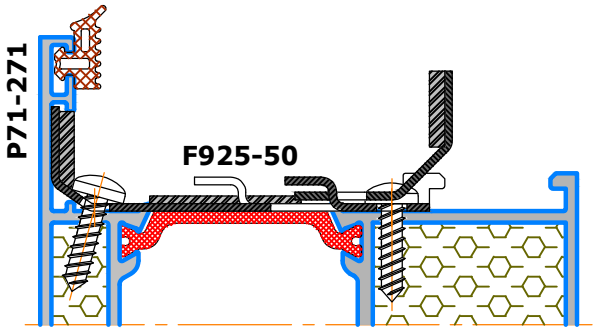
* — depends on the specifics of the facility

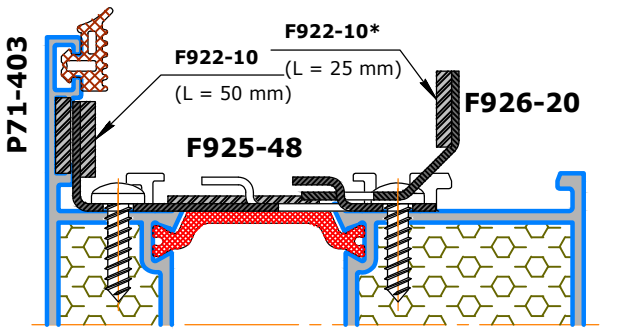
All stainless steel retainers and supplementary aluminium profiles shall be installed using the stainless self-tapping screws **S001-35-13-ss.**

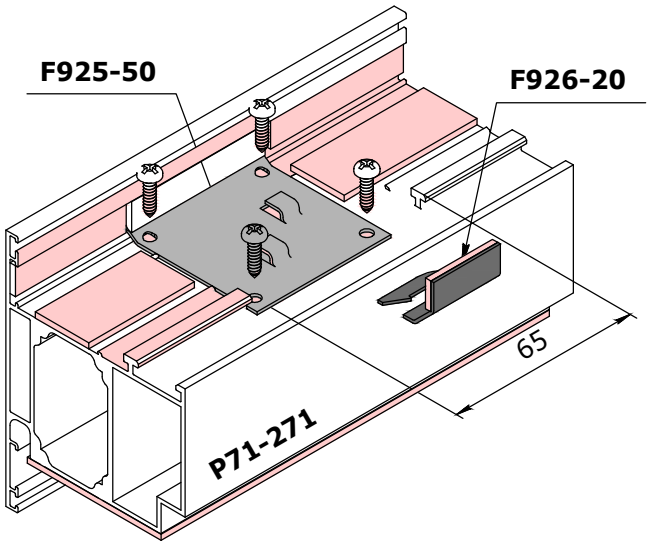
Installation of tightening steel steel members

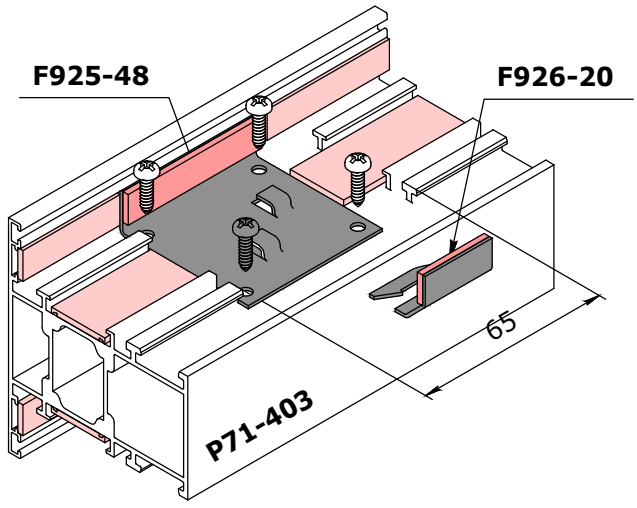


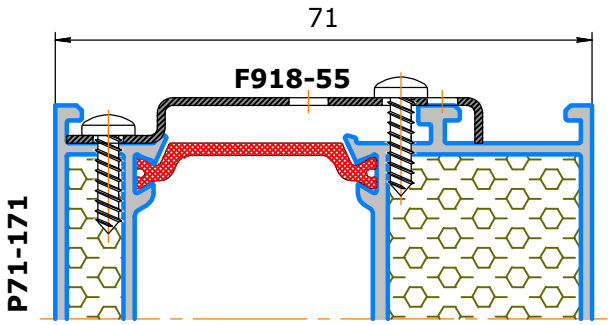


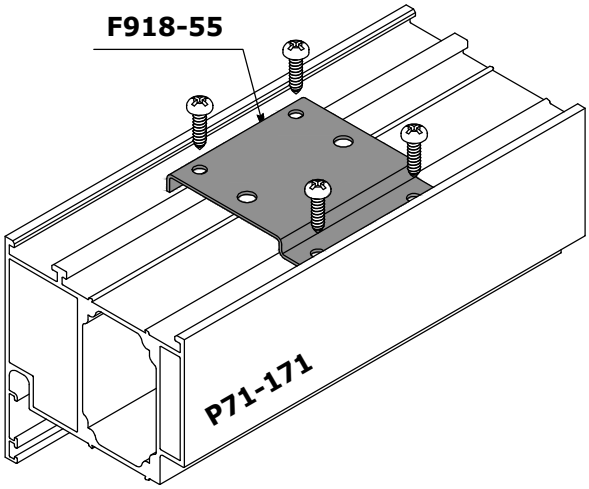






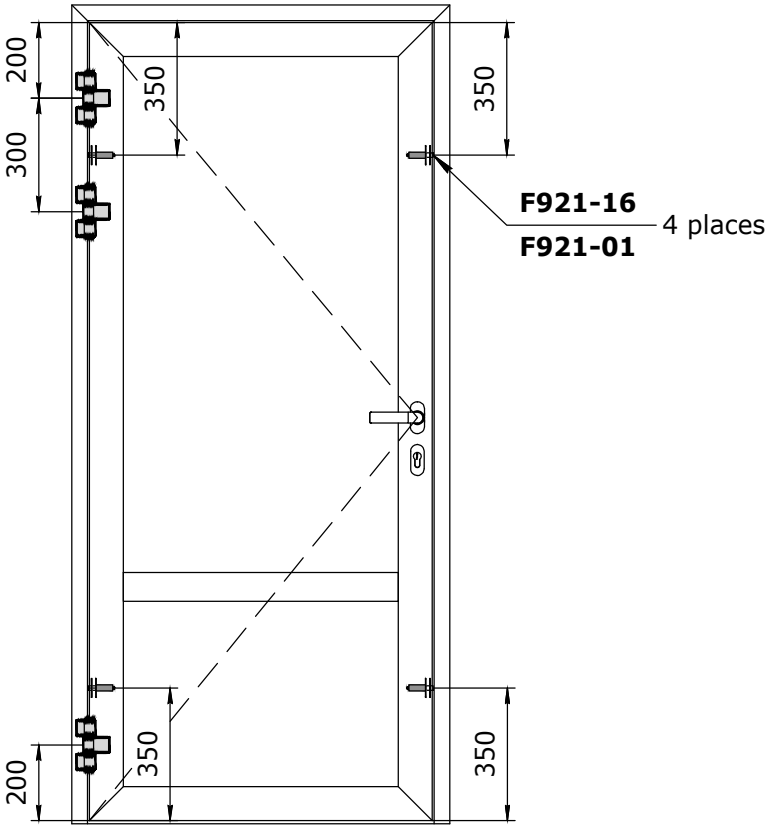


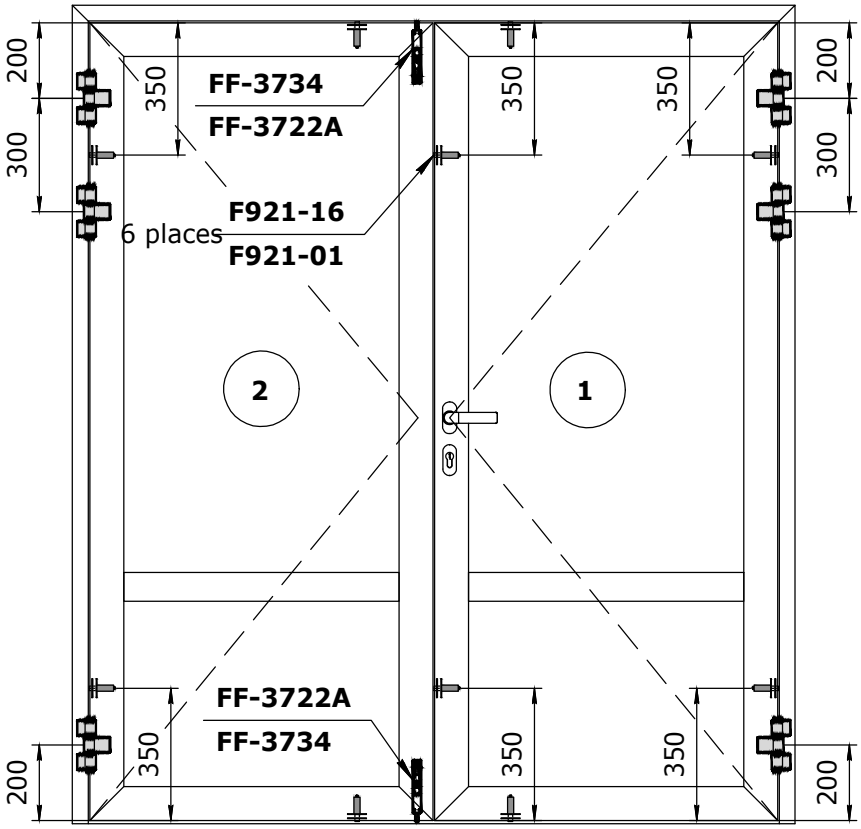




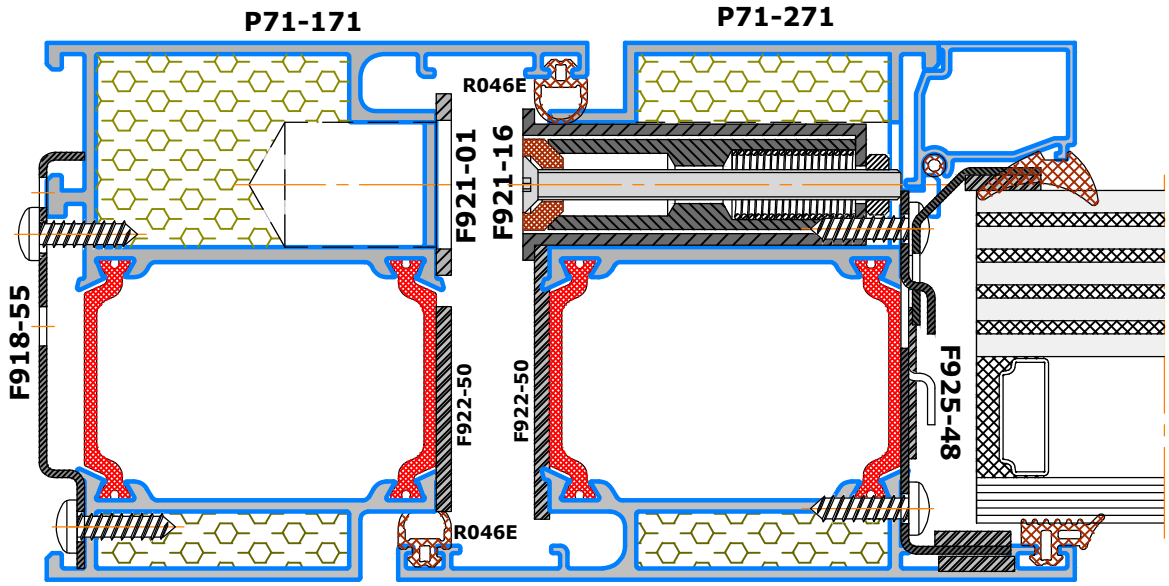
All stainless steel retainers shall be installed using the stainless self-tapping screws **S001-35-13-ss.**

Thermal interlock installation diagram

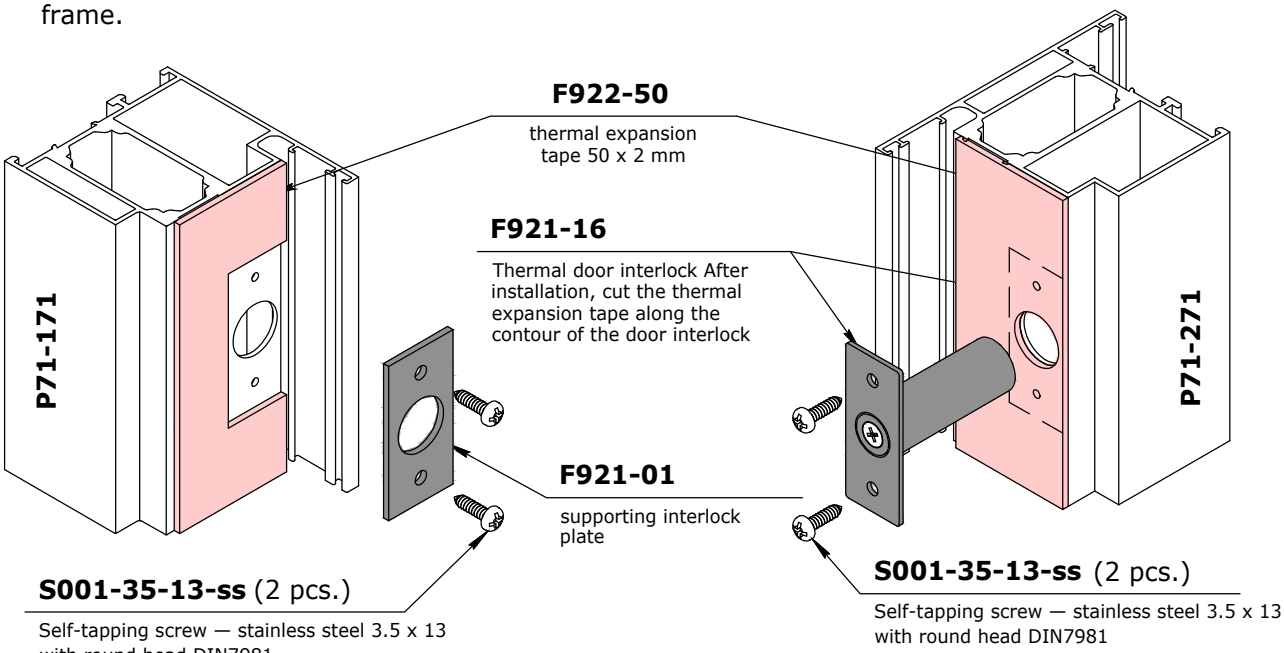


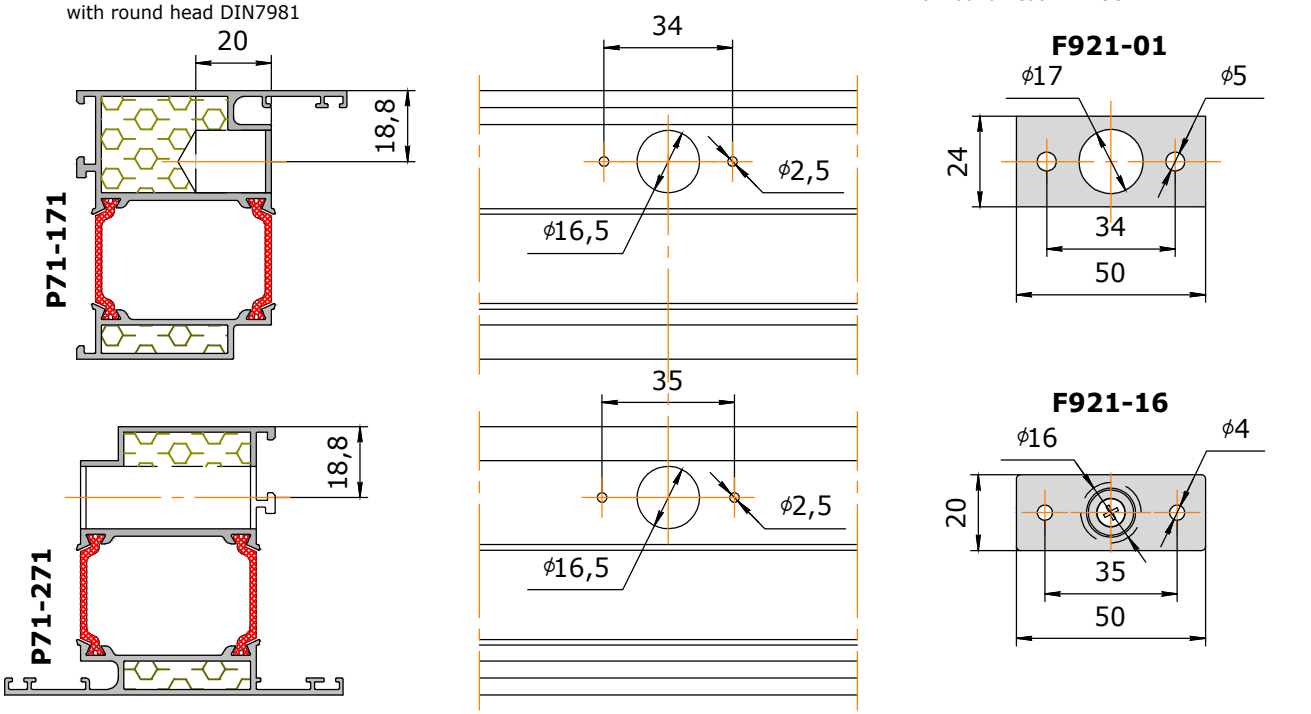


* — The quantity of hinges depends on the product parameters



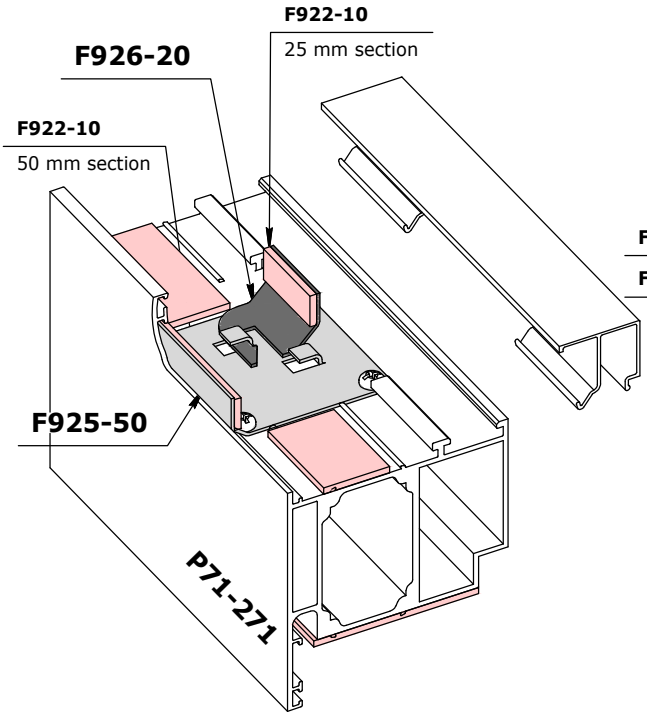
The thermal interlock "**F921-16**" is triggered when the temperature rises during a fire; the fusible cap of the interlock melts and releases a spring-loaded pintle which shoots out into the groove on the door frame.

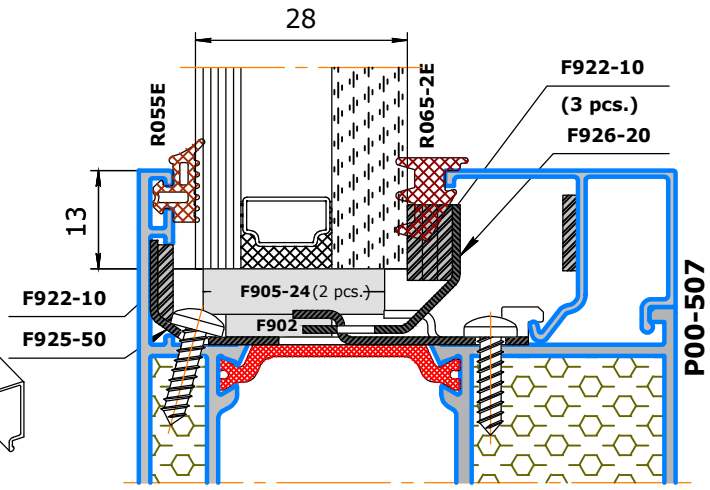


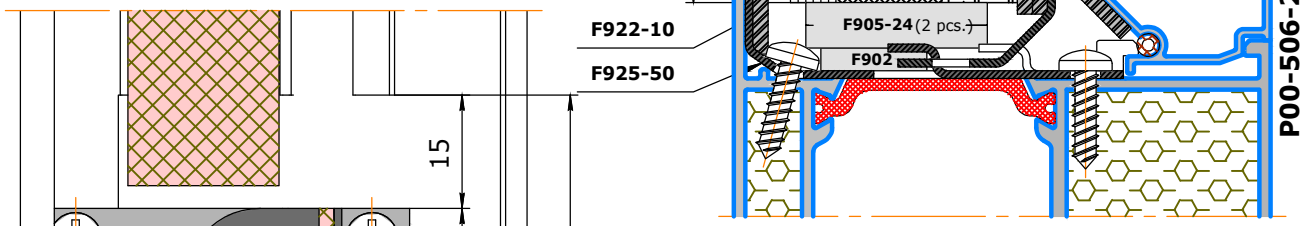


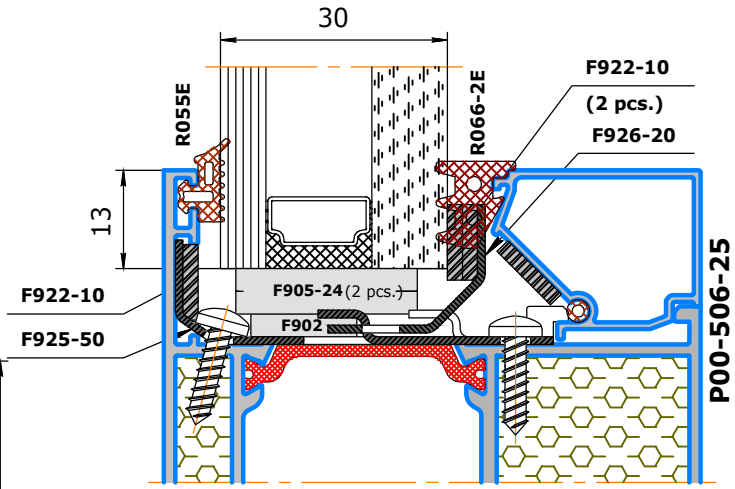
Glazing table fire-resistant filling 28–32 mm door sash

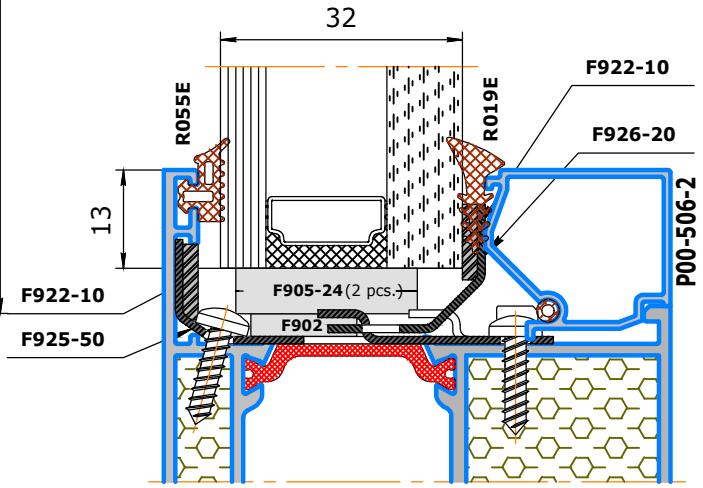
All stainless steel retainers shall be installed using the stainless self-tapping screws **S001-35-13-ss.**



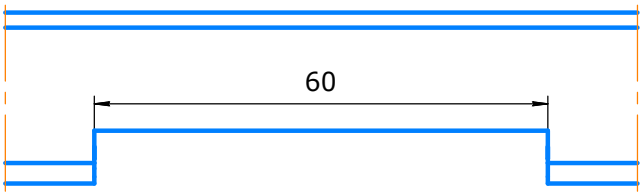


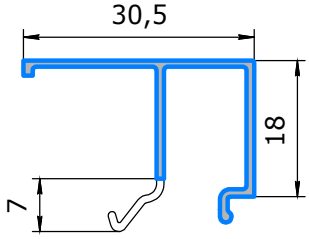






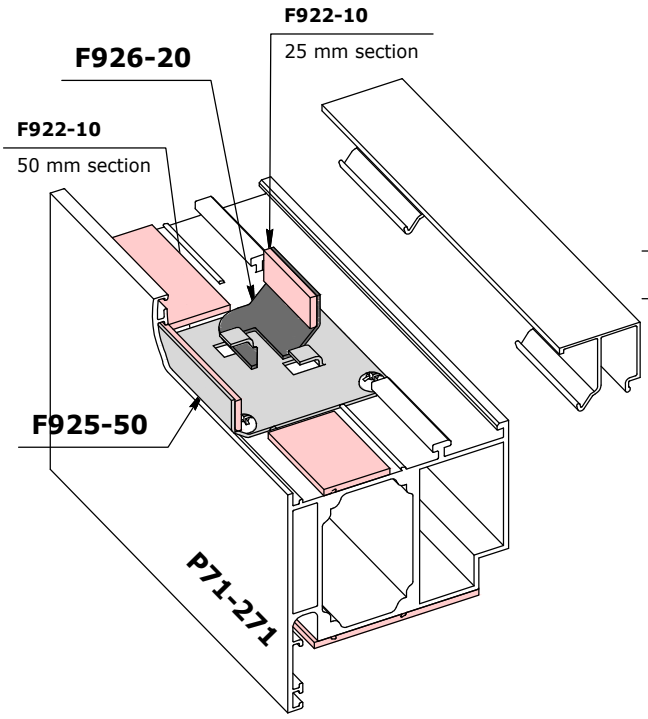
Machining glazing bead P00-507

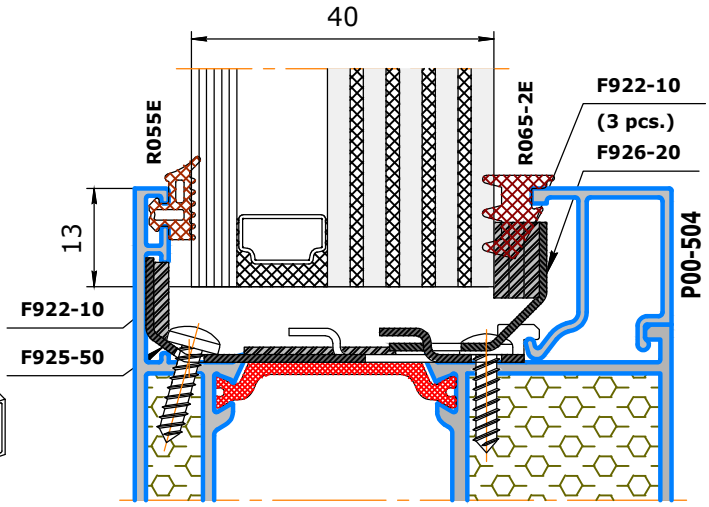


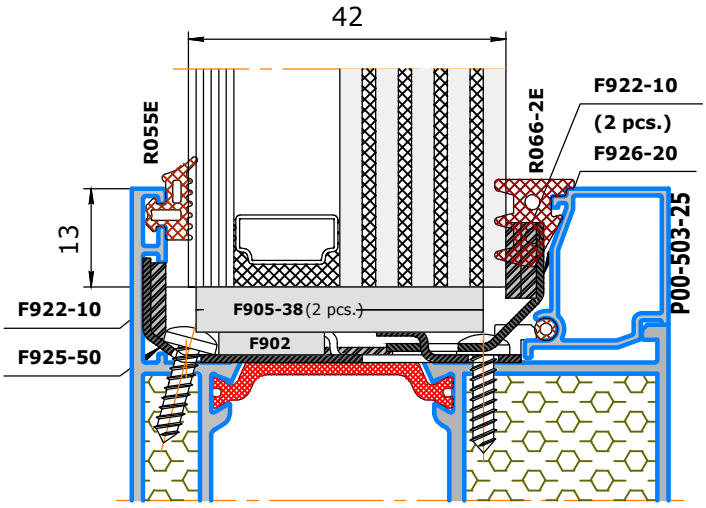


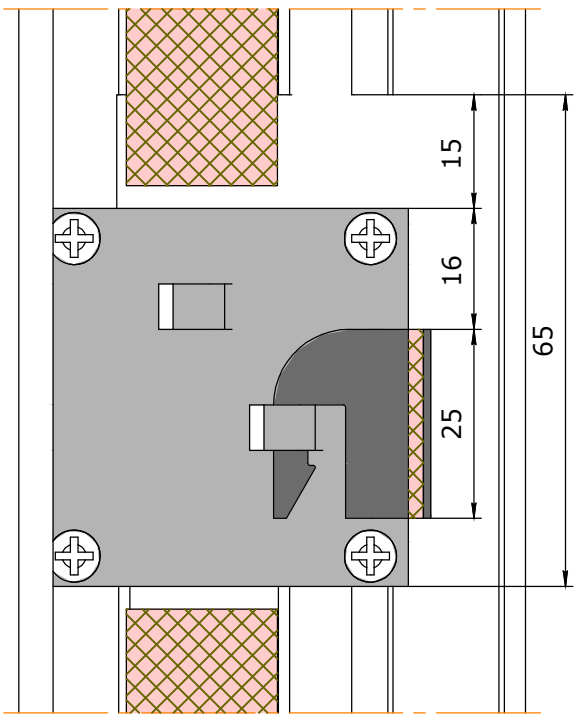
Glazing table fire-resistant filling 40–44 mm door sash

All stainless steel retainers shall be installed using the stainless self-tapping screws **S001-35-13-ss.**









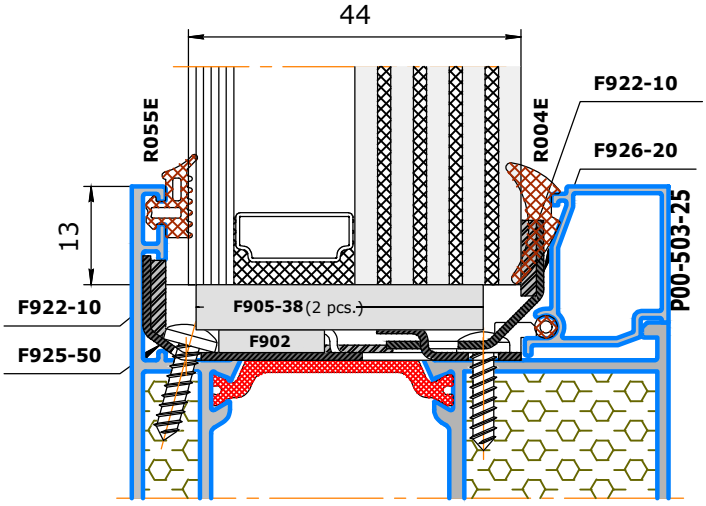


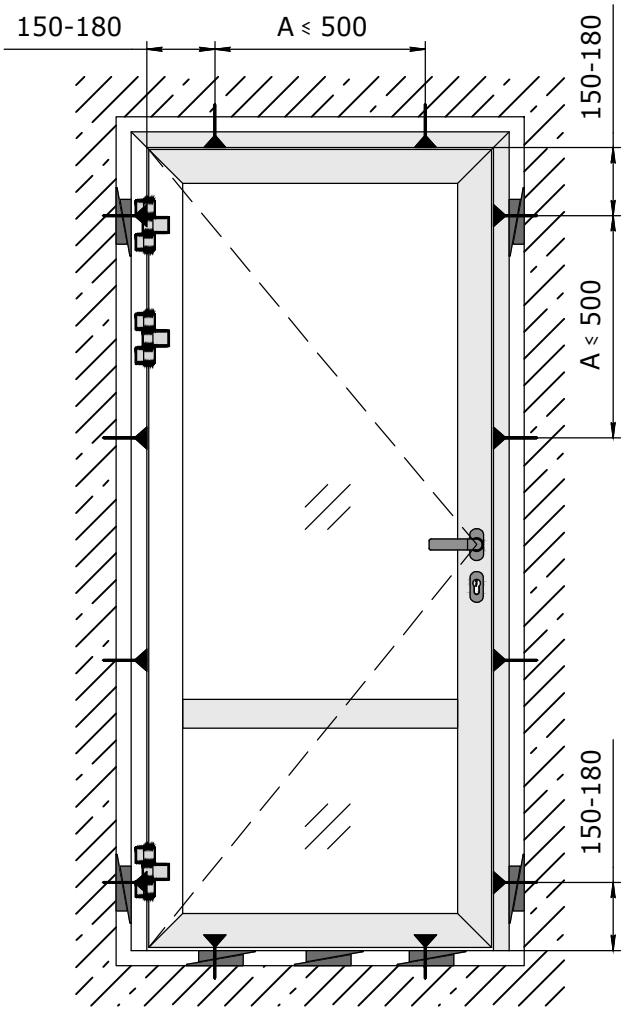
Diagram for attaching the frame structures in the opening

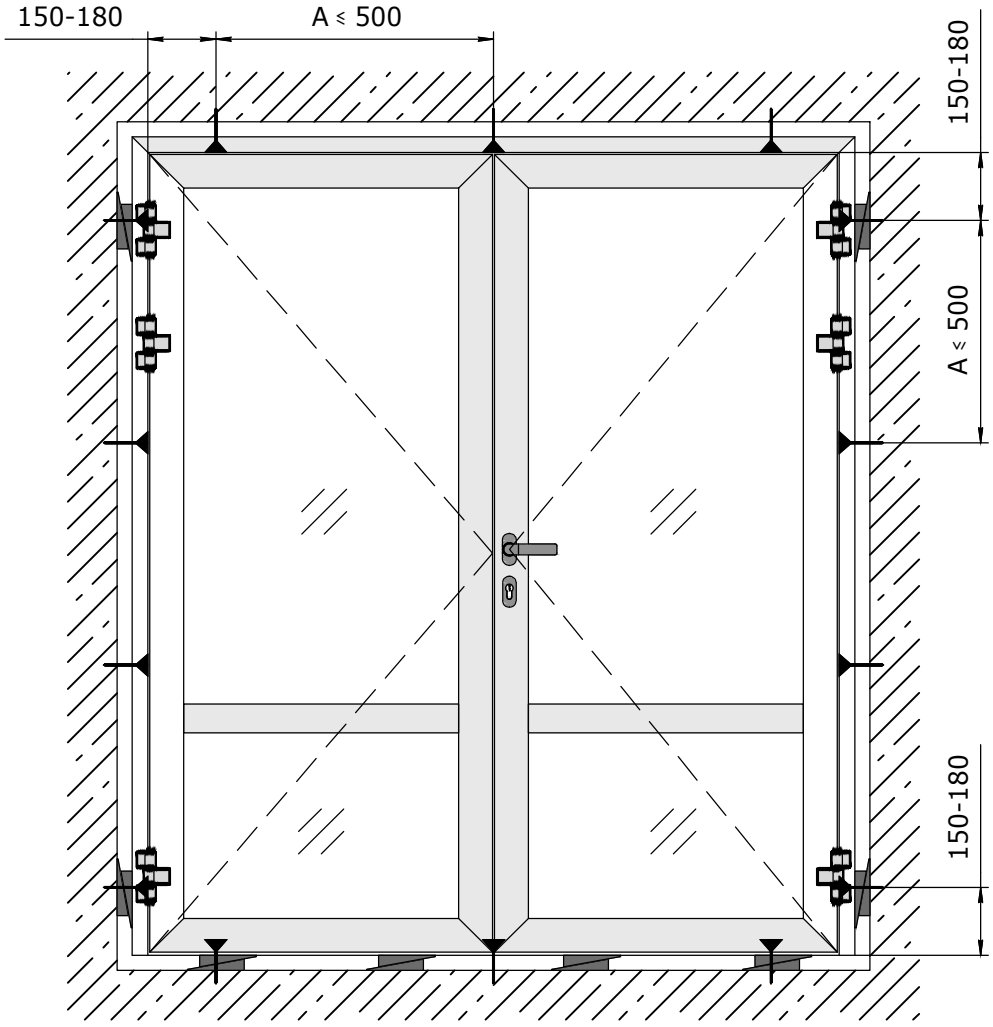
A — distance between the fasteners

— fasteners* (dowel*)

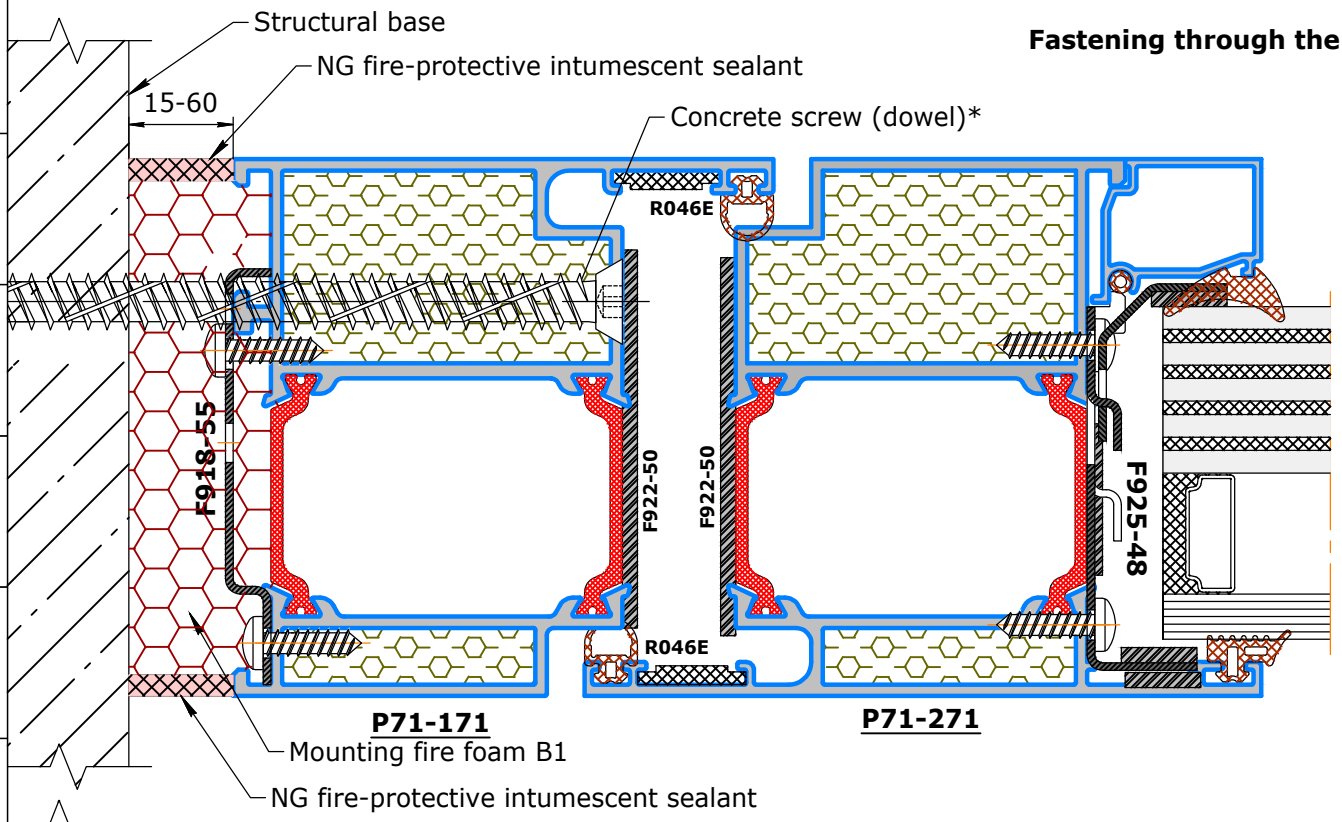
— support (bearing) pads NG (glass magnesium board)

* — depends on the specifics of the facility. The length of the concrete dowel (screw) depends on the mounting joint.

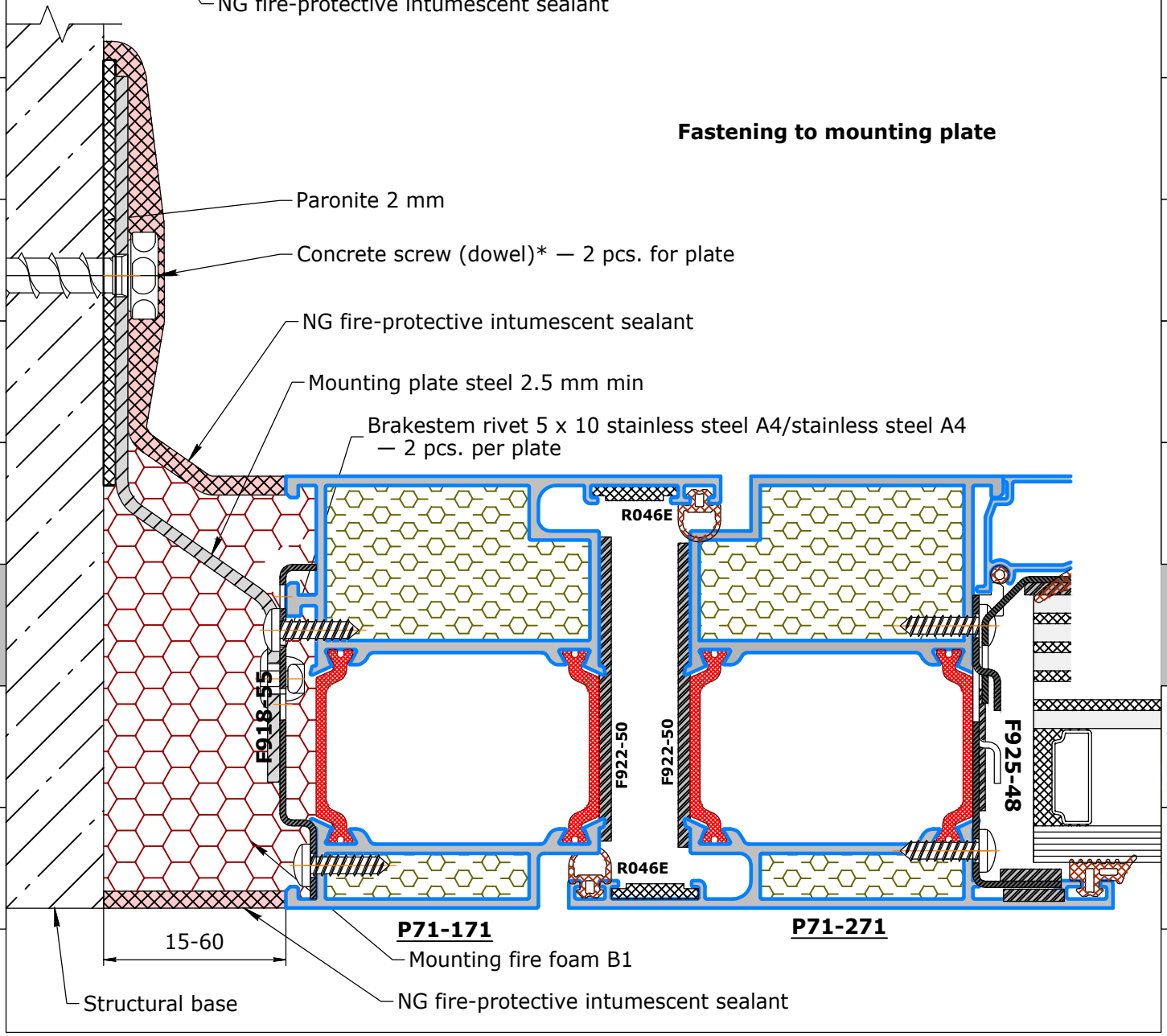




Fastening through the frame

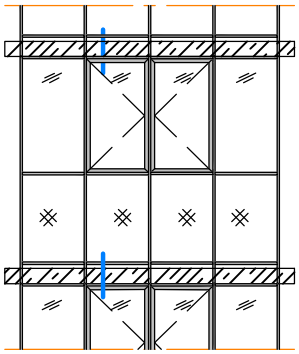


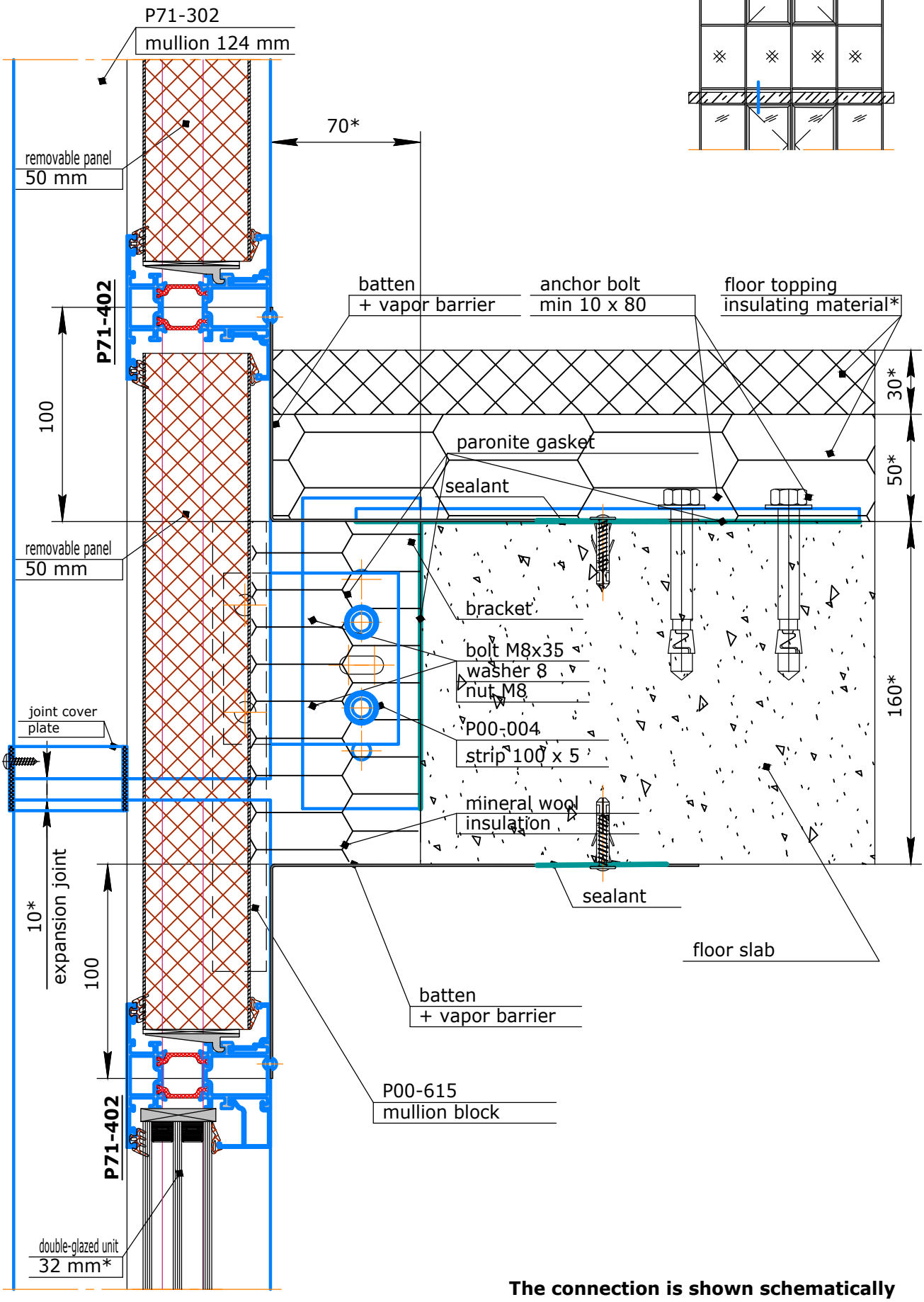
Fastening to mounting plate



Notes.

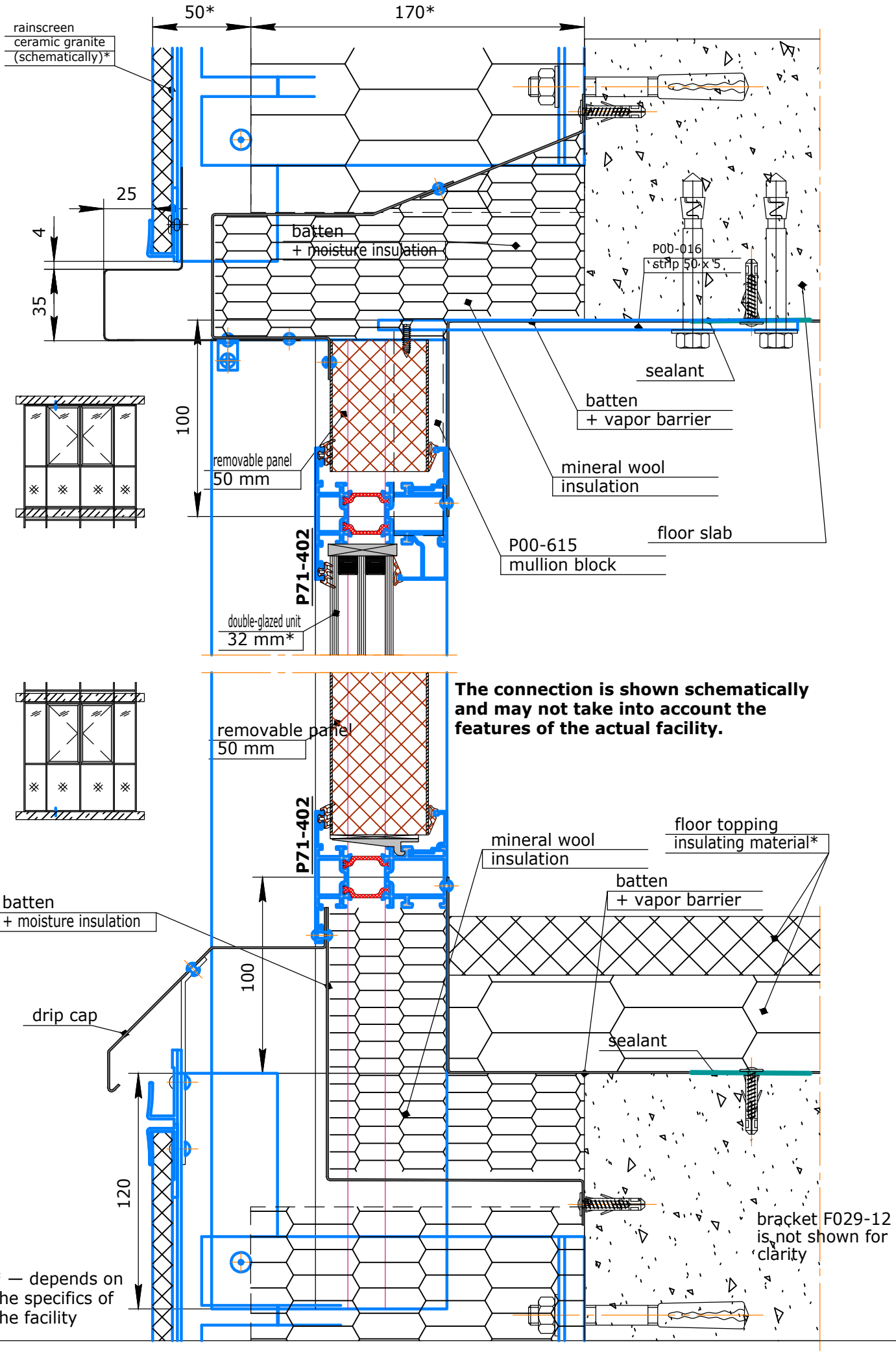
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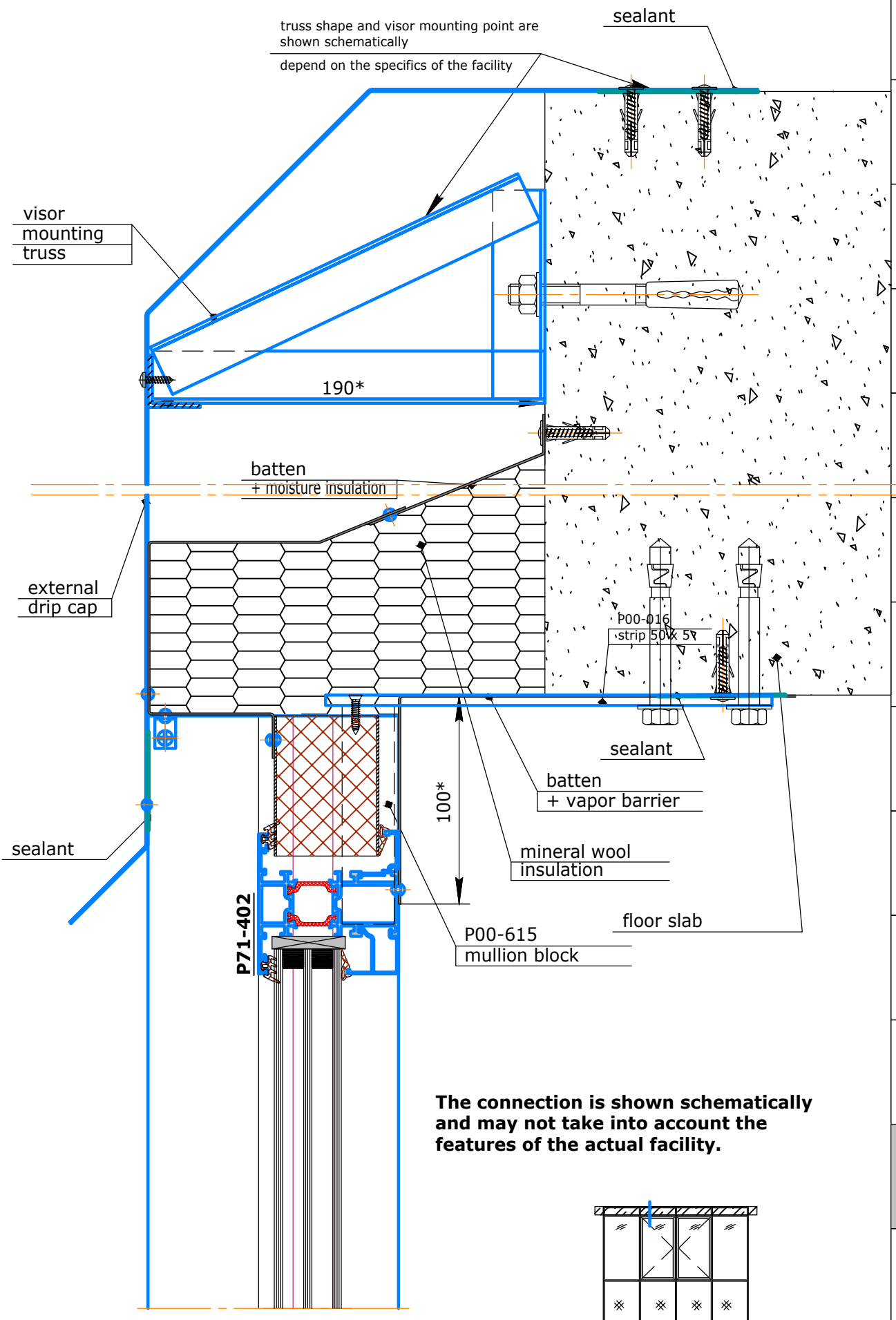




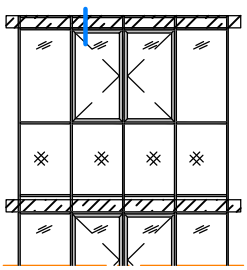
* — depends on the specifics of the facility

The connection is shown schematically and may not take into account the features of the actual facility.

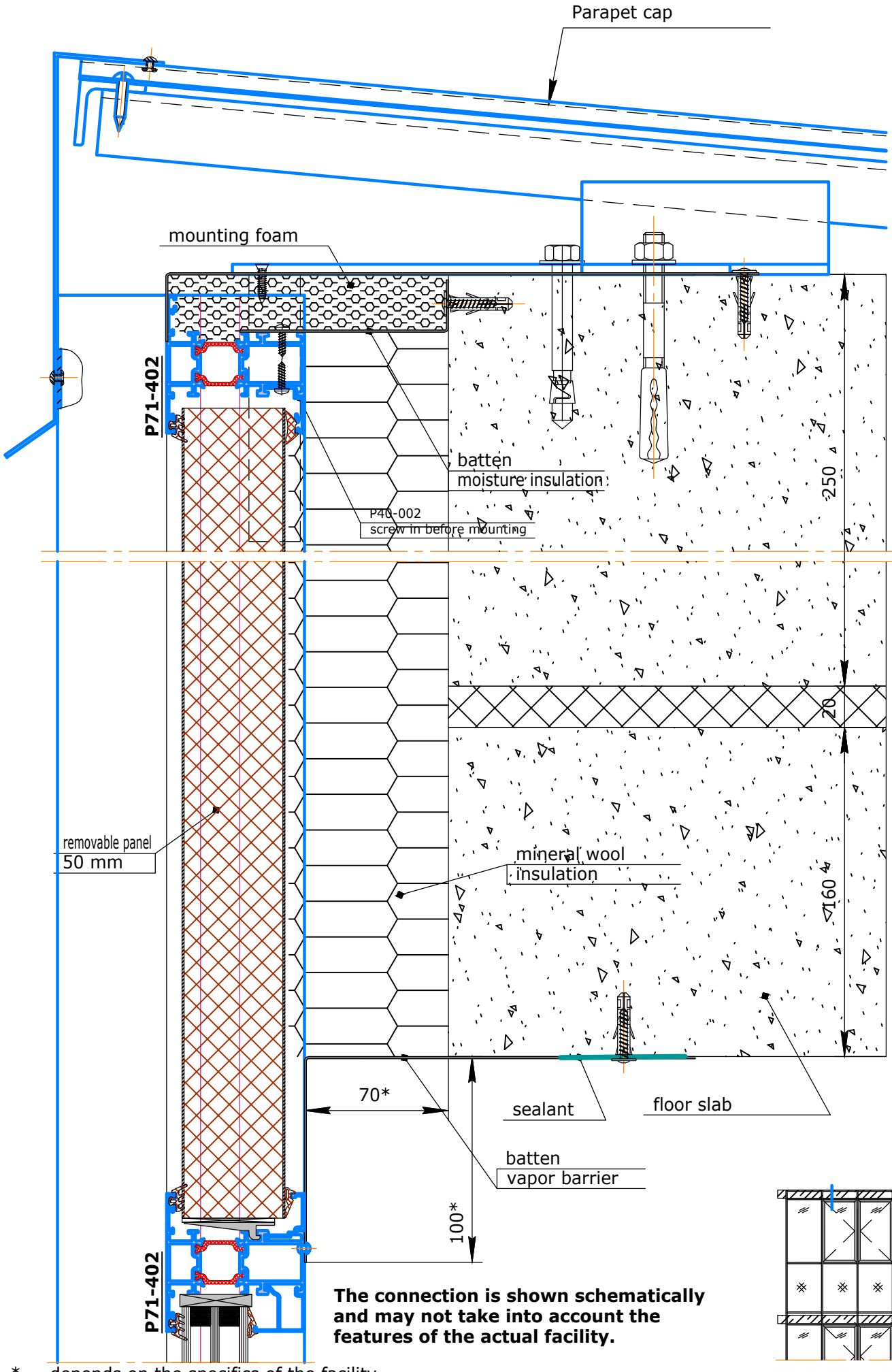

50*
170*
rainscreen
ceramic granite
(schematically)*
25
4
35
batten
+ moisture insulation
P00-016
strip 50 x 5
sealant
batten
+ vapor barrier
mineral wool
insulation
floor slab
P00-615
mullion block
100
removable panel
50 mm
P71-402
double-glazed unit
32 mm*
The connection is shown schematically and may not take into account the features of the actual facility.
removable panel
50 mm
P71-402
mineral wool
insulation
floor topping
insulating material*
batten
+ vapor barrier
batten
+ moisture insulation
100
drip cap
sealant
120
bracket F029-12
is not shown for
clarity
* — depends on
the specifics of
the facility



The connection is shown schematically and may not take into account the features of the actual facility.

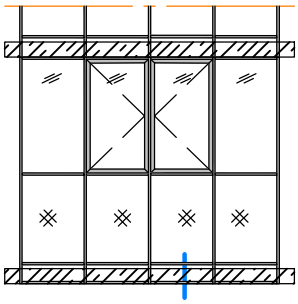


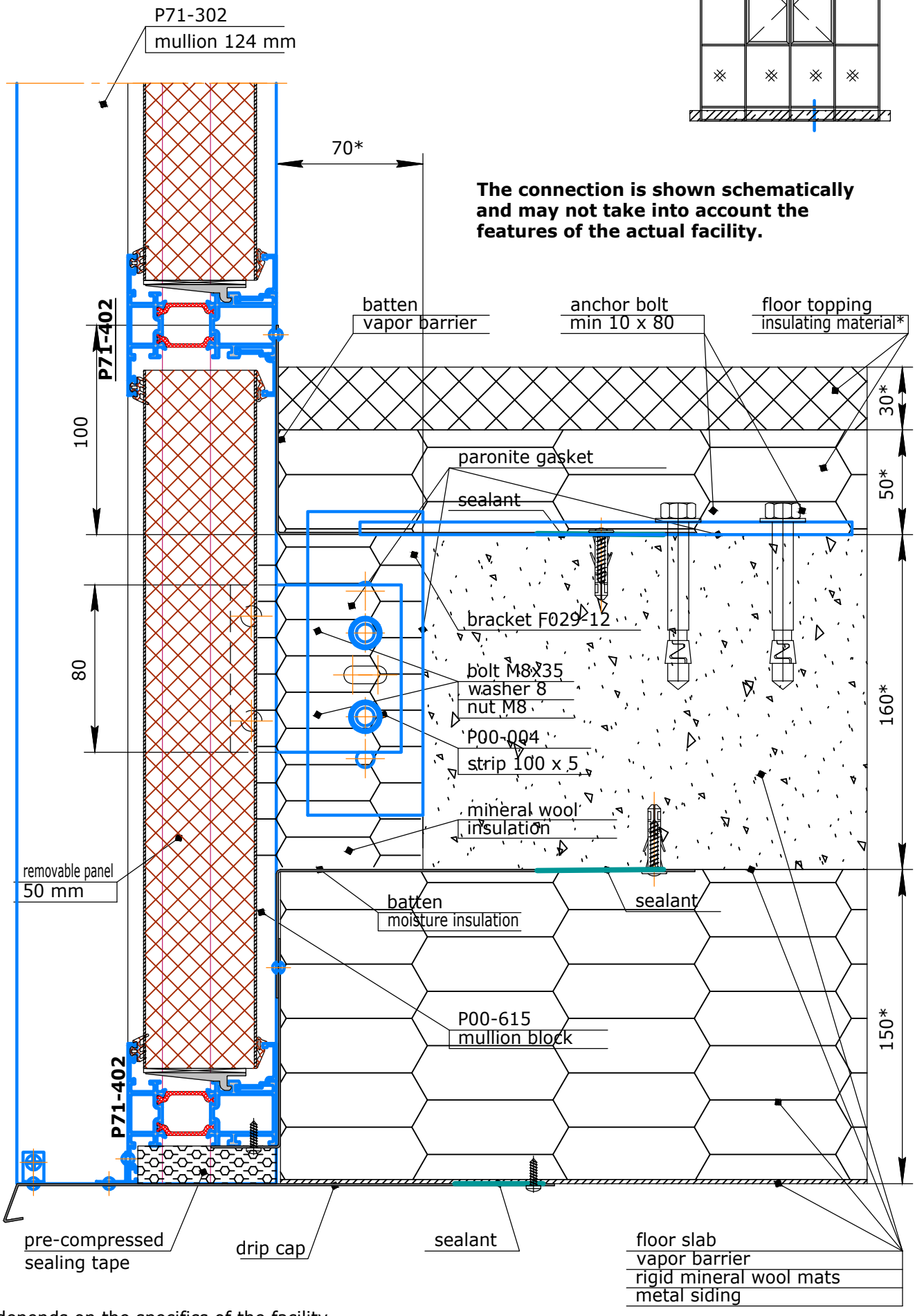
* — depends on the specifics of the facility



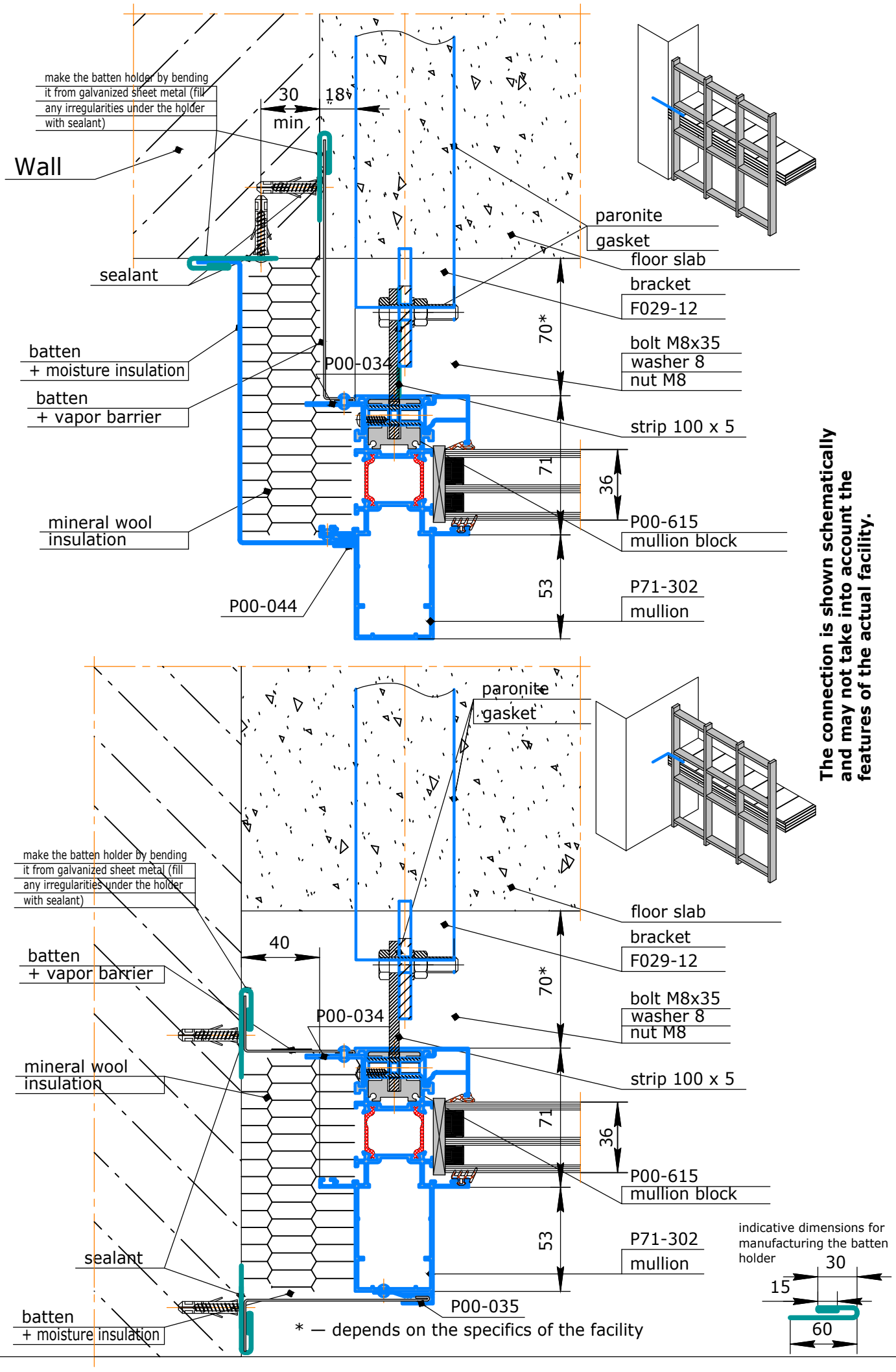
The connection is shown schematically and may not take into account the features of the actual facility.

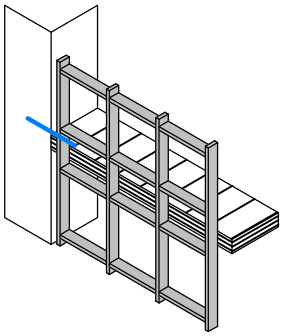
* — depends on the specifics of the facility



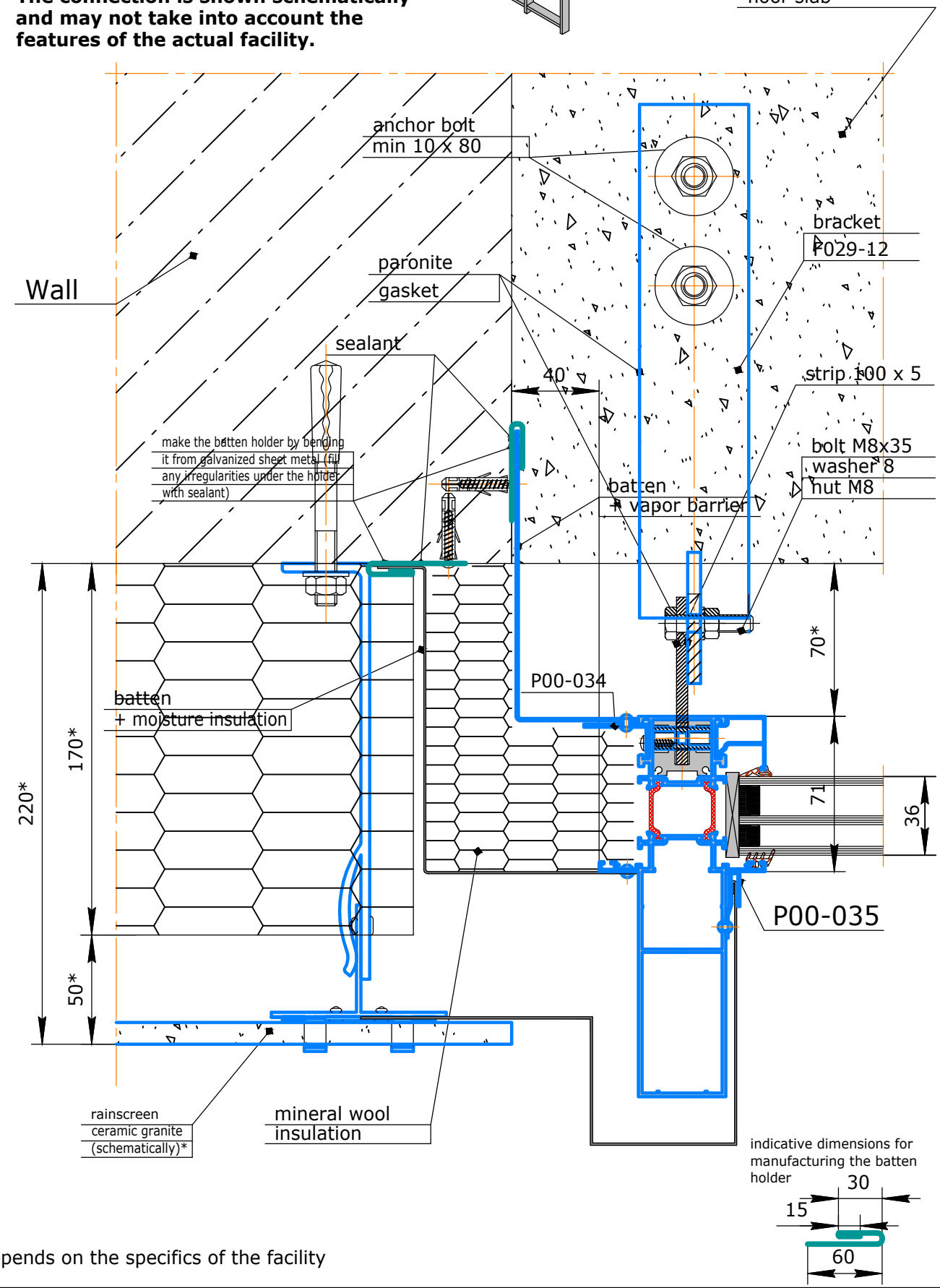


* — depends on the specifics of the facility


make the batten holder by bending it from galvanized sheet metal (fill any irregularities under the holder with sealant)
30 min
18
Wall
sealant
batten + moisture insulation
batten + vapor barrier
mineral wool insulation
P00-044
P00-034
paronite gasket
floor slab
bracket F029-12
bolt M8x35 washer 8 nut M8
strip 100 x 5
P00-615 mullion block
P71-302 mullion
70*
71
36
53
The connection is shown schematically and may not take into account the features of the actual facility.
make the batten holder by bending it from galvanized sheet metal (fill any irregularities under the holder with sealant)
40
batten + vapor barrier
mineral wool insulation
sealant
batten + moisture insulation
P00-035
indicative dimensions for manufacturing the batten holder
30
15
60
* — depends on the specifics of the facility



The connection is shown schematically and may not take into account the features of the actual facility.



* — depends on the specifics of the facility

The connection is shown schematically and may not take into account the features of the actual facility.

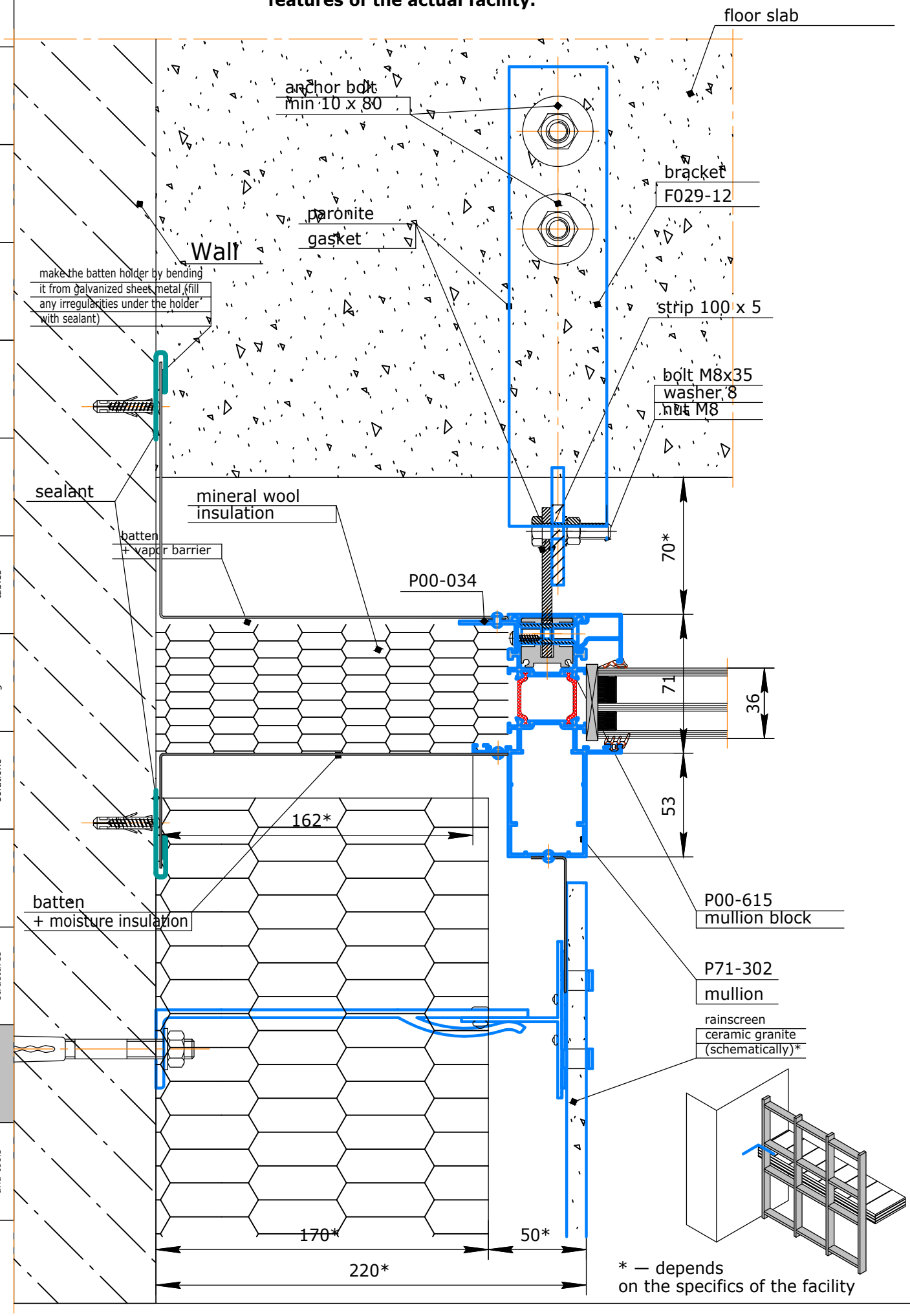
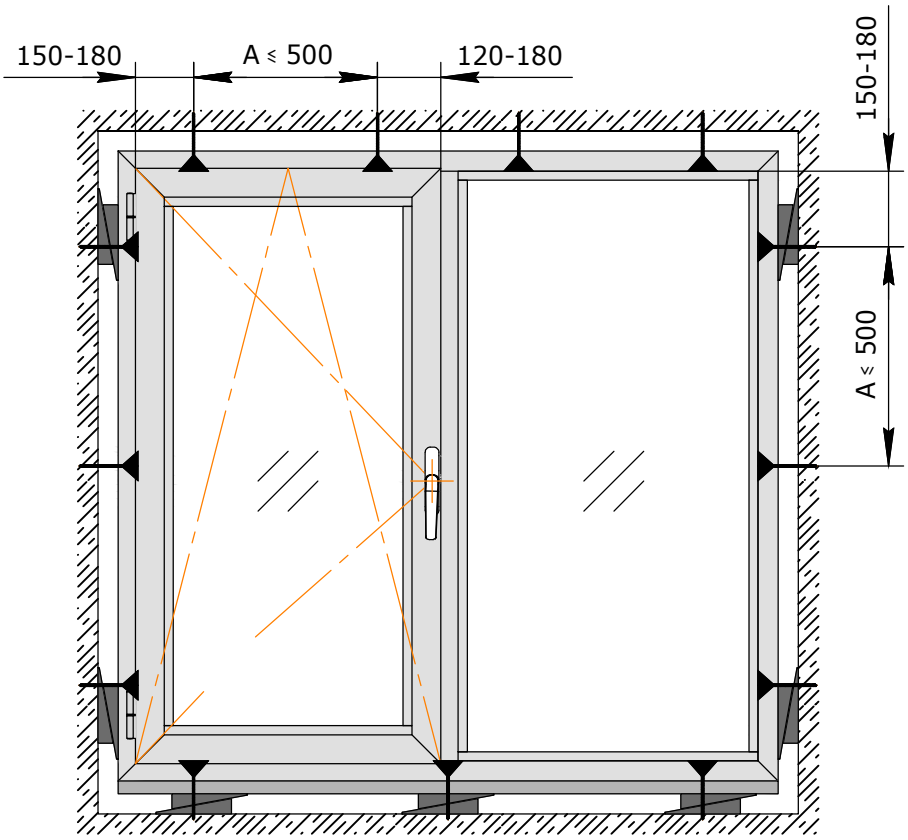
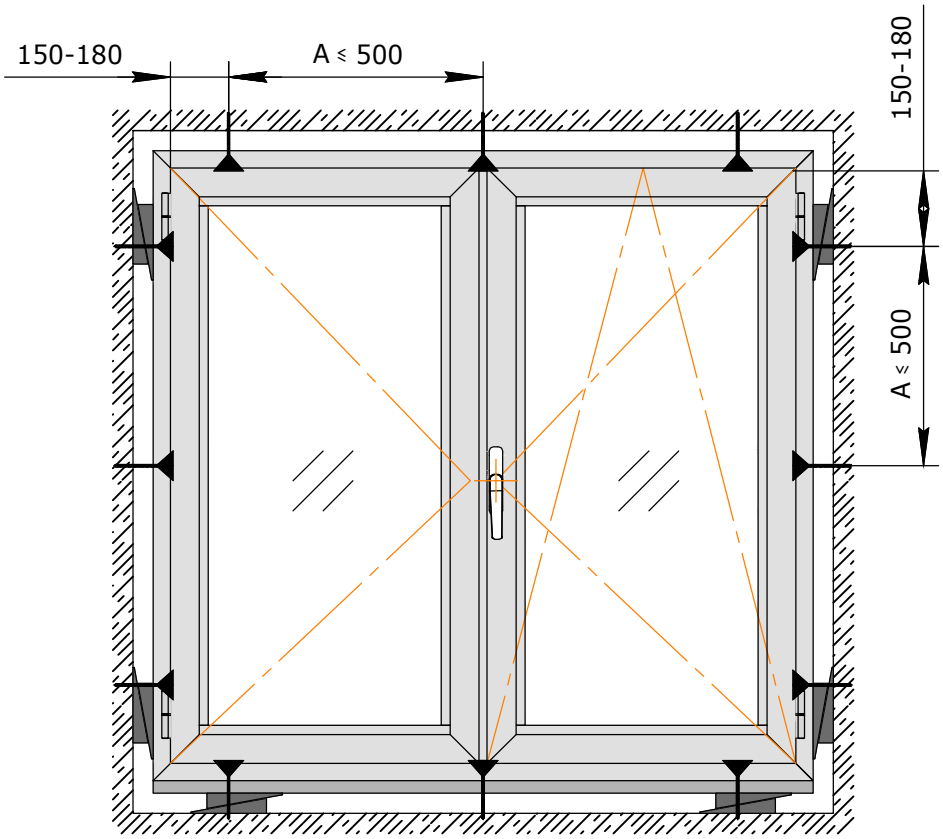


Diagram for attaching the frame structures into the opening.



a) Window unit with vertical impost



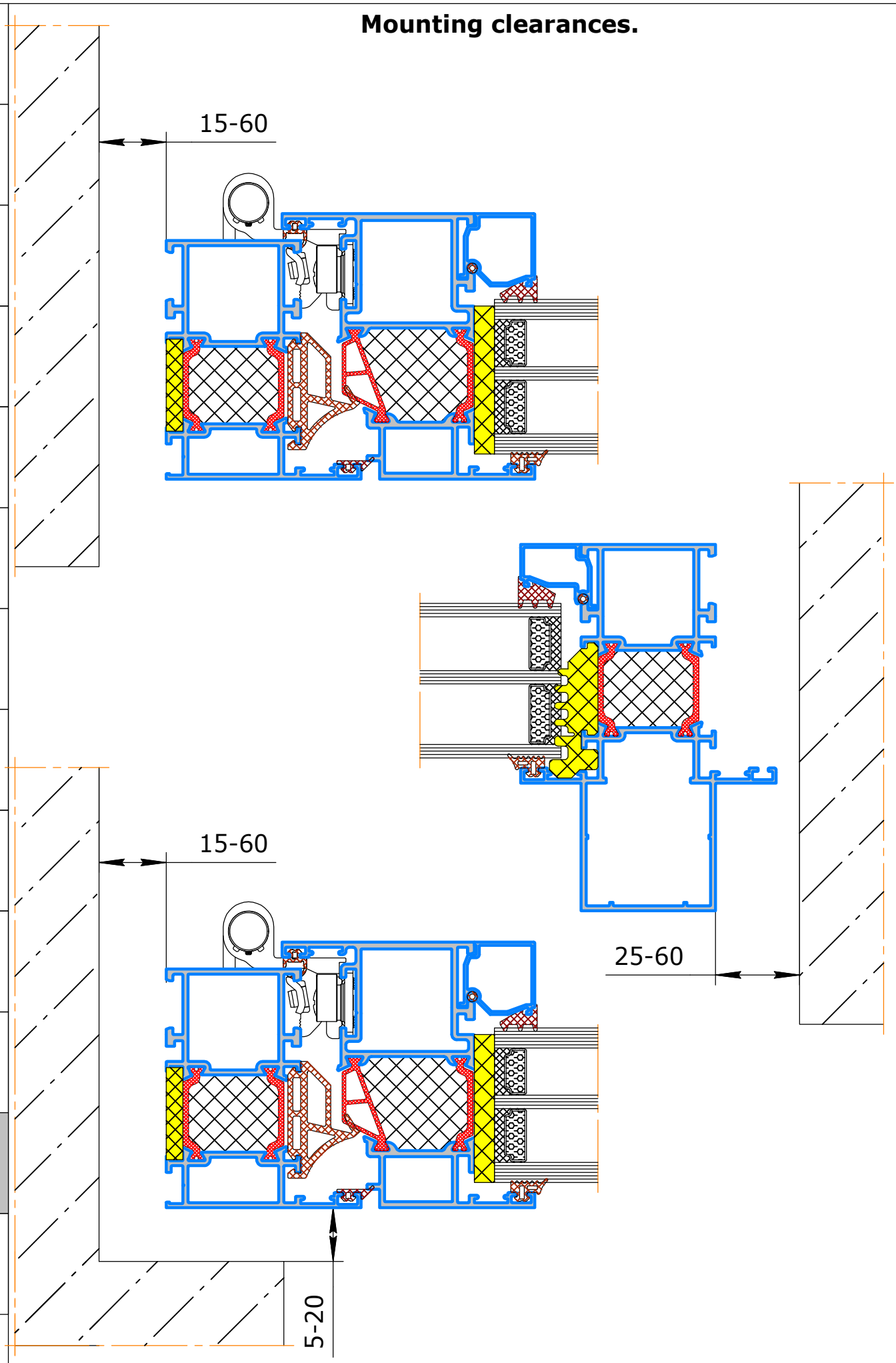
b) Window unit with an impost-free (forend) rabbet ledge

A — distance between the fasteners

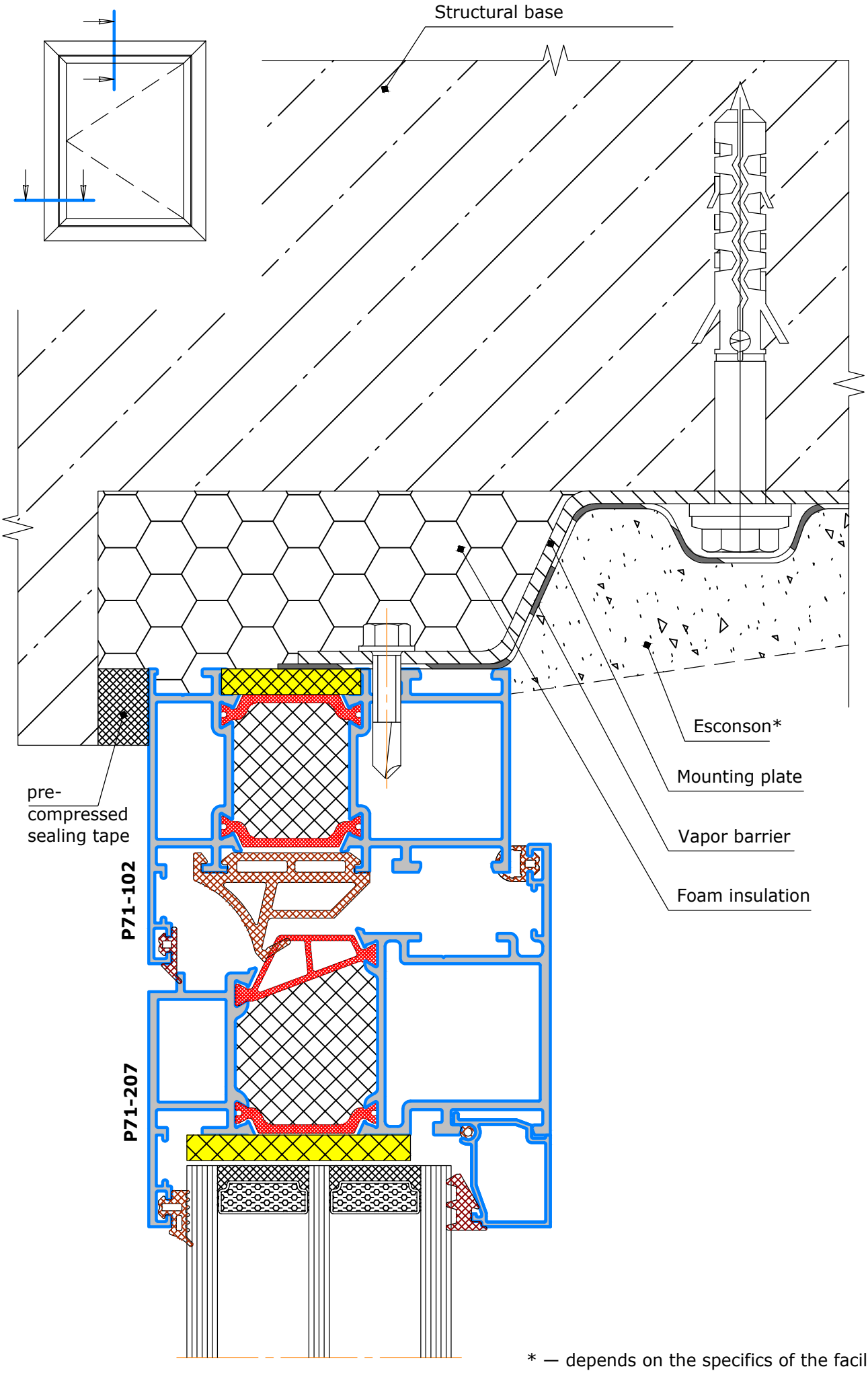
— fasteners (of system)

— support (bearing) pads.

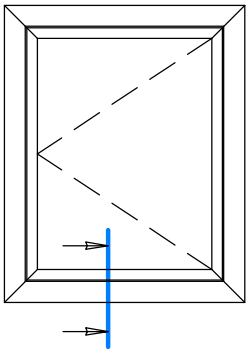
Mounting clearances.

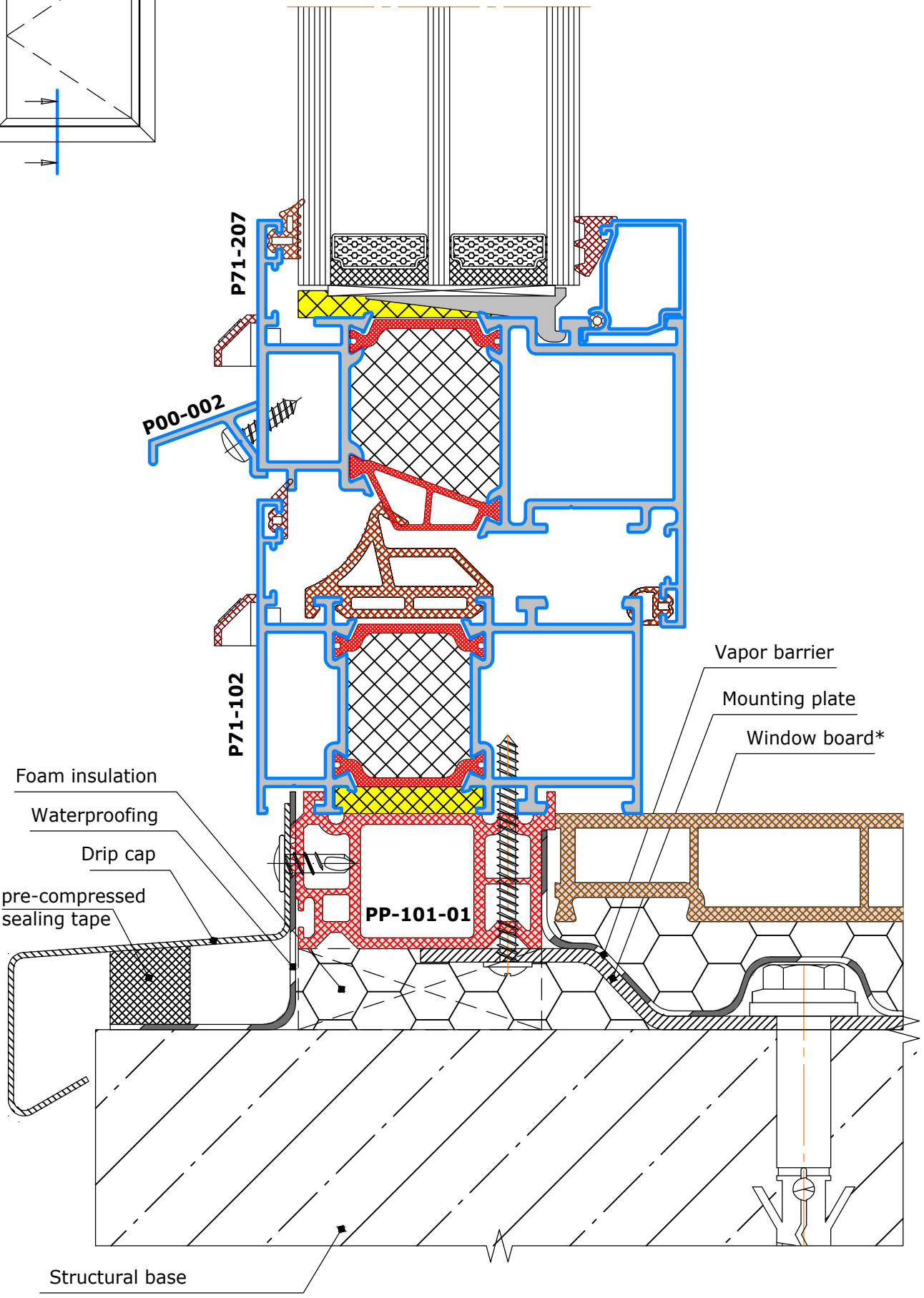


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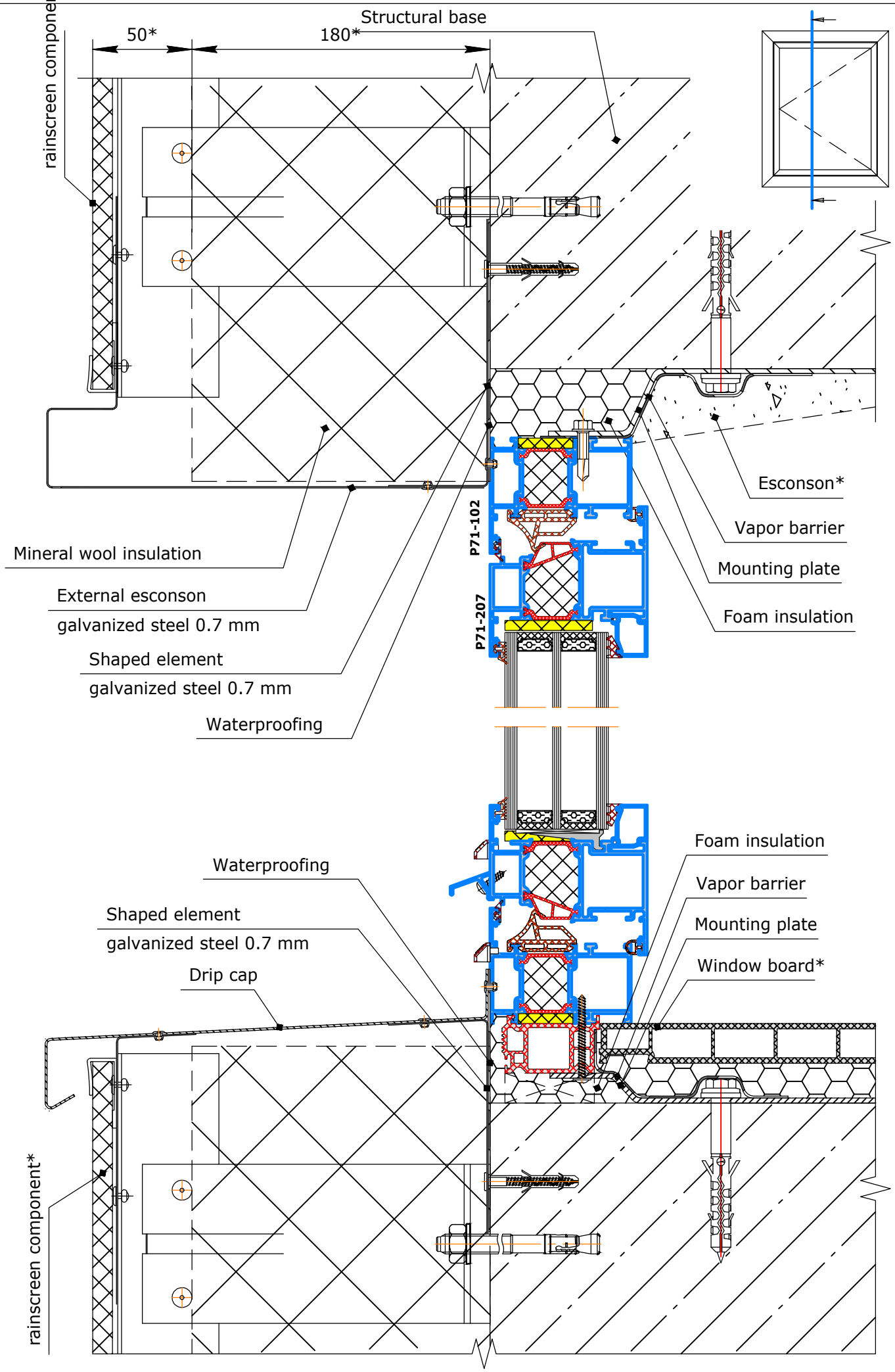


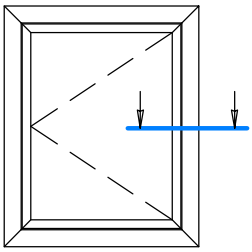
* — depends on the specifics of the facility

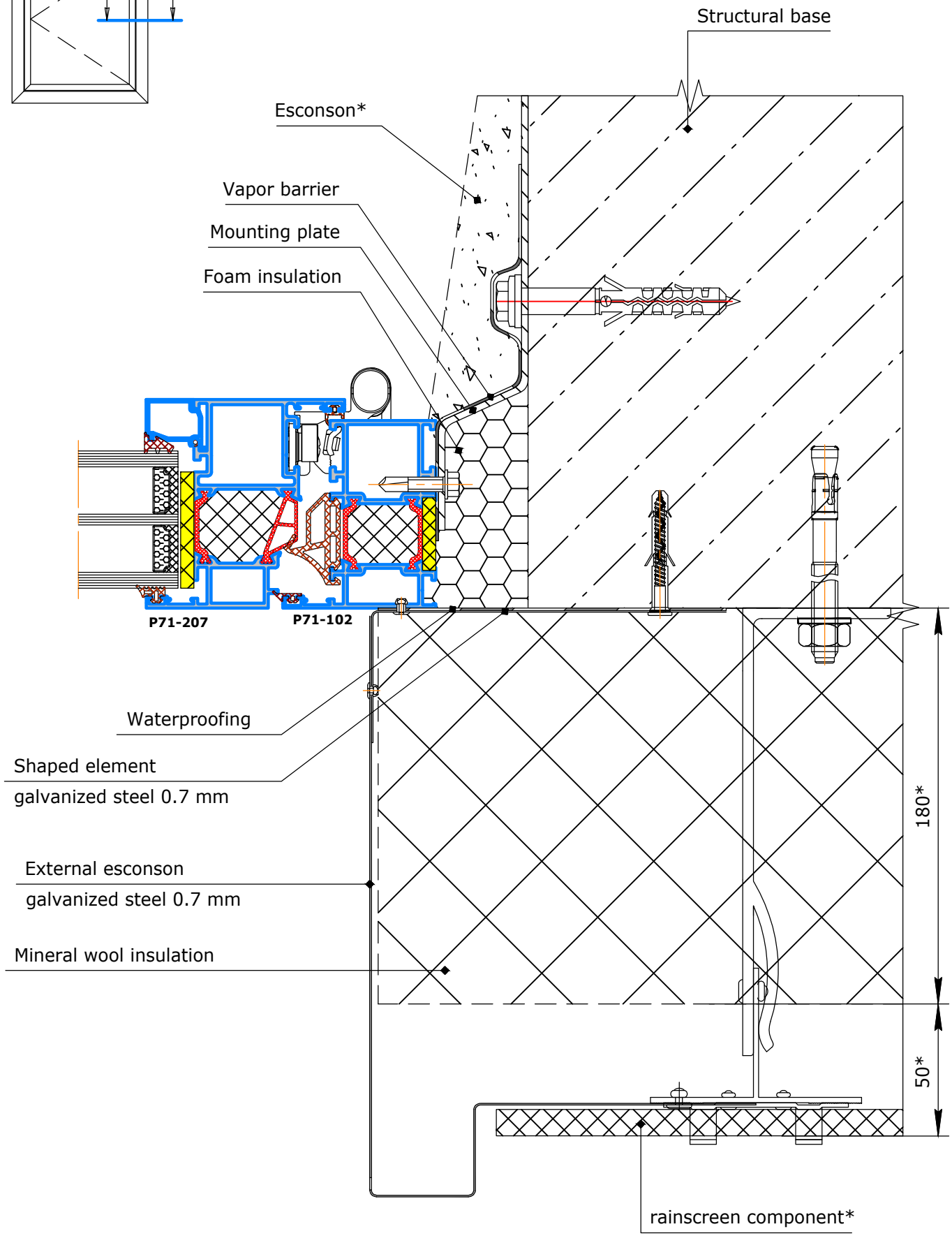




* — depends on the specifics of the facility


rainscreen component*
50*
180*
Structural base
Esconson*
Vapor barrier
Mounting plate
Foam insulation
P71-102
P71-207
Mineral wool insulation
External esconson
galvanized steel 0.7 mm
Shaped element
galvanized steel 0.7 mm
Waterproofing
Foam insulation
Vapor barrier
Mounting plate
Window board*
Waterproofing
Shaped element
galvanized steel 0.7 mm
Drip cap
rainscreen component*





* — depends on the specifics of the facility

E001
Gasket packing roller



E005
Cyanoacrylate adhesive for gaskets



CA-cyanoacrylate adhesive.
Adhesive viscosity 20 mPa.sec.
One-component instant adhesive for sealing profiles made of APTK/EPDM (rubber elastomers) for fast and secure bonding of joints and corner bevels of rubber gaskets.

E006
Single-component adhesive for profiles



One-component, moisture-curing, solvent-free, joint-filling polyurethane adhesive with fast reaction time and viscoelastic adhesive joint

E007
painted and anodized profile cleaner

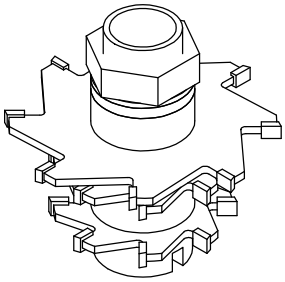


Fast-drying cleaning agent. Suitable for cleaning anodised and painted aluminium and polyurethane profiles, for removing dust, adhesive residues from protective film, grease pencil and rubber marks, fresh polyurethane foam and sealant residues such as resin/bitumen.

E004
Hex wrench kit

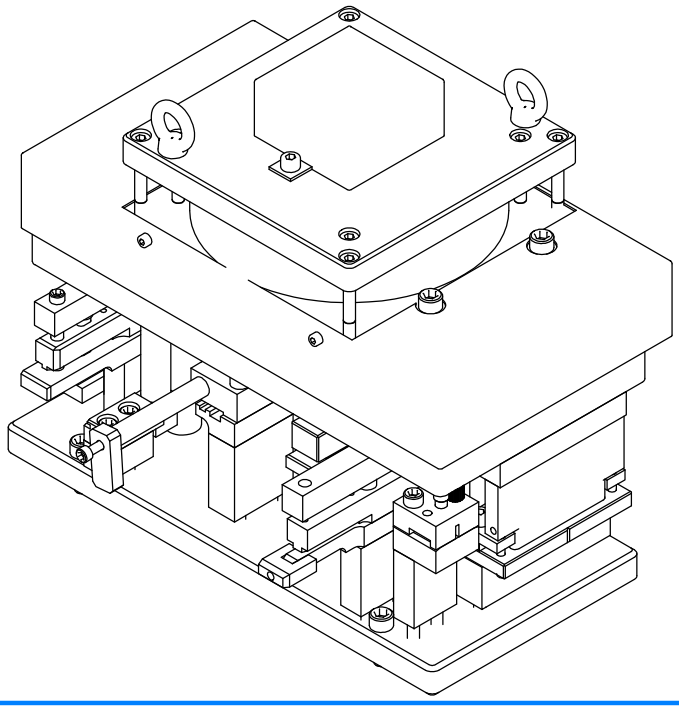


Gang milling cutter for
MastTech-71 profiles
E406-71
E411-71
E431
E433
E434



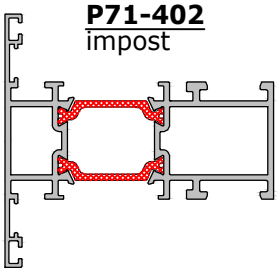
E508
Pneumatic punch press for **MastTech-67** profiles (11 operations)

E513
Pneumatic punch press for drainage

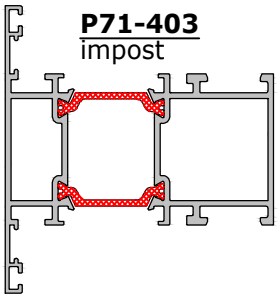


Machined profiles

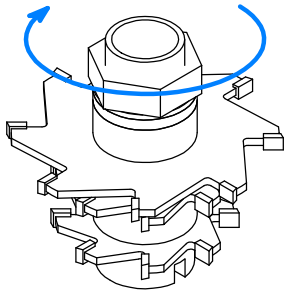
P71-402
impost

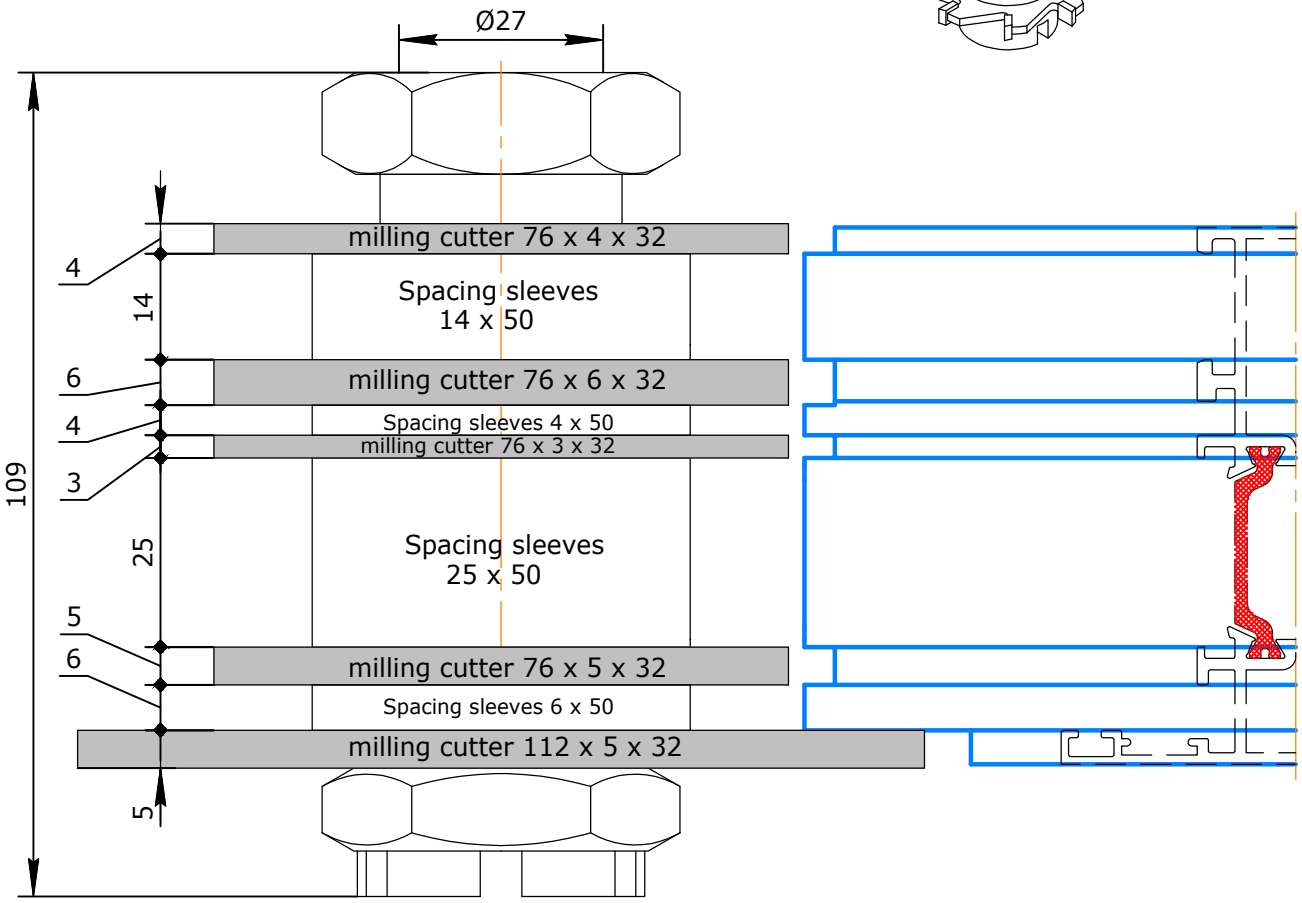


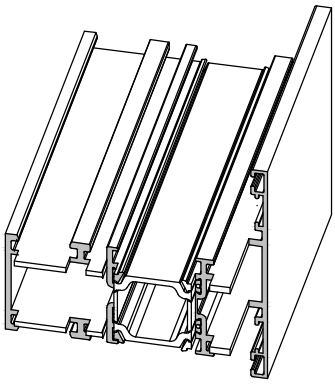
P71-403
impost

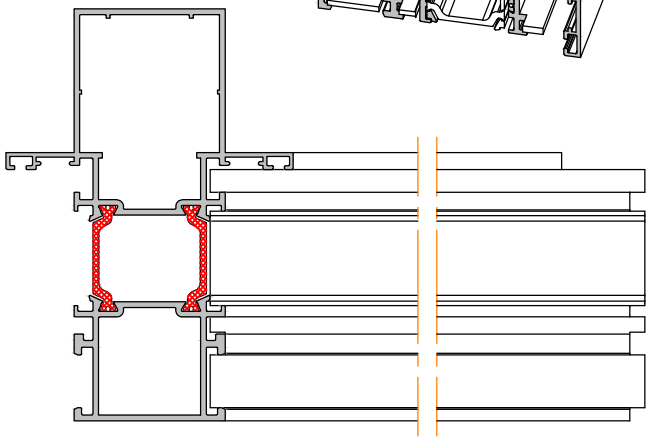


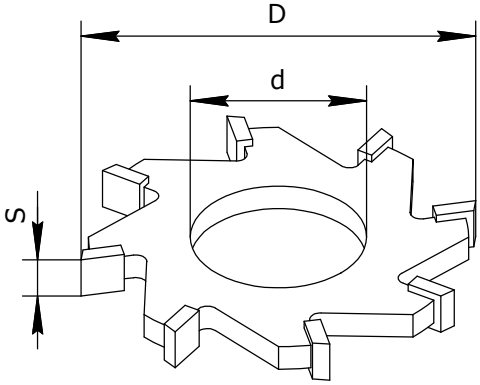
E406-71
Gang milling cutter for
MastTech-71 profiles









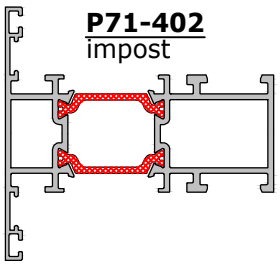


disk cutters used in the kit

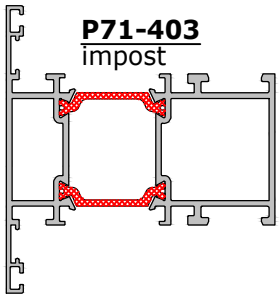
	D	S	d	qty.
E400-112-5:	112	5	32	1
E400-76-3:	76	3	32	1
E400-76-4:	76	4	32	1
E400-76-5:	76	5	32	1
E400-76-6:	76	6	32	1

Machined profiles

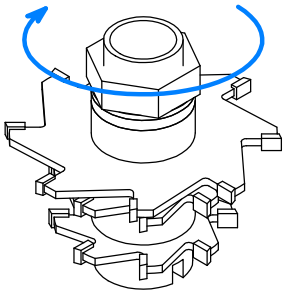
P71-402
impost

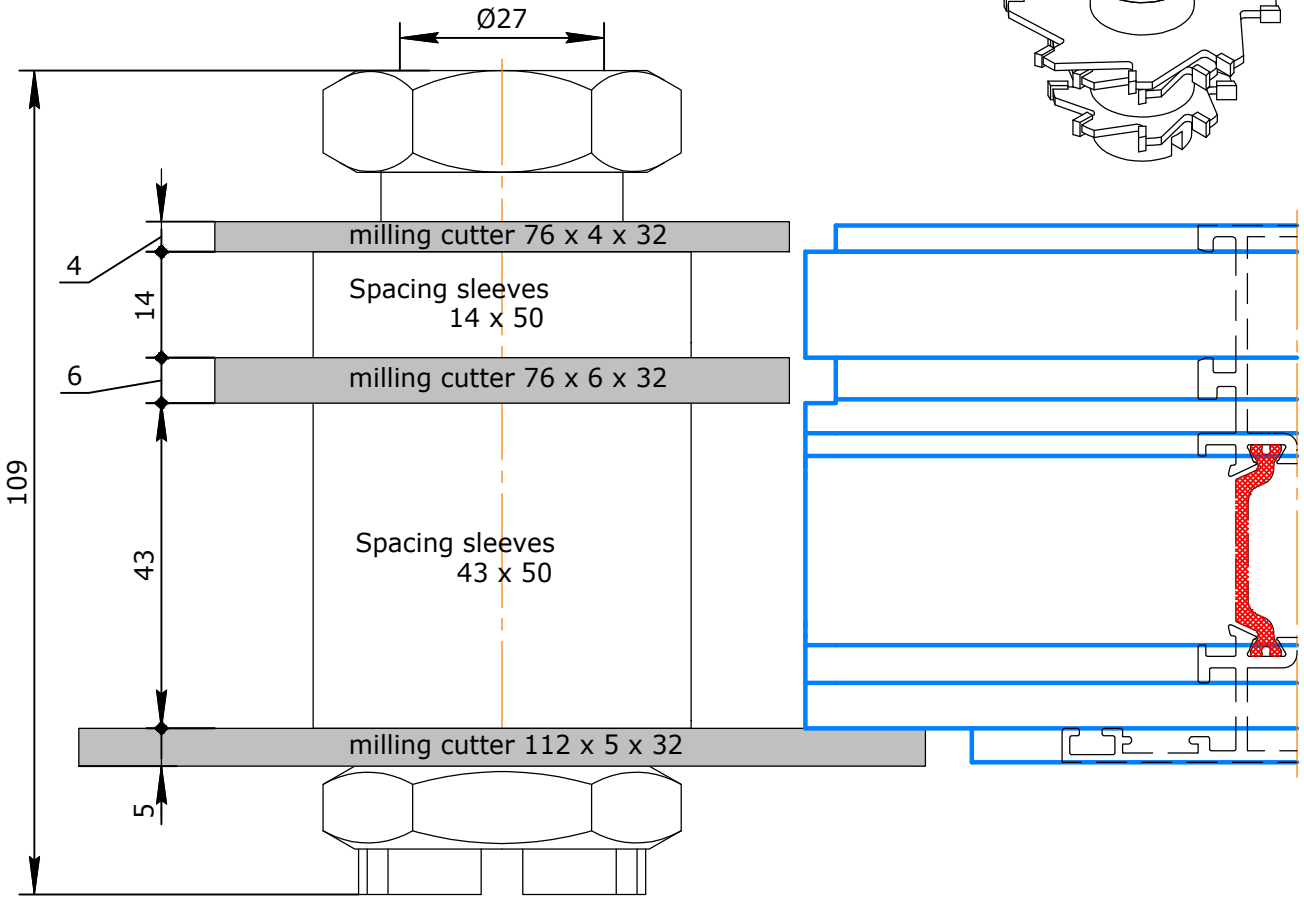


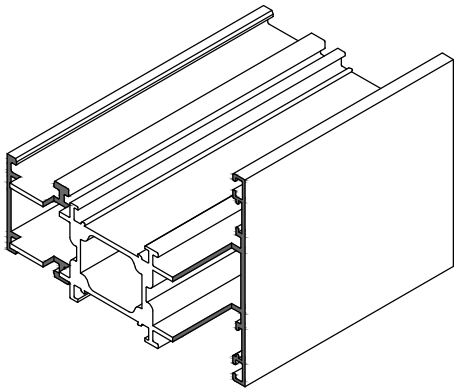
P71-403
impost

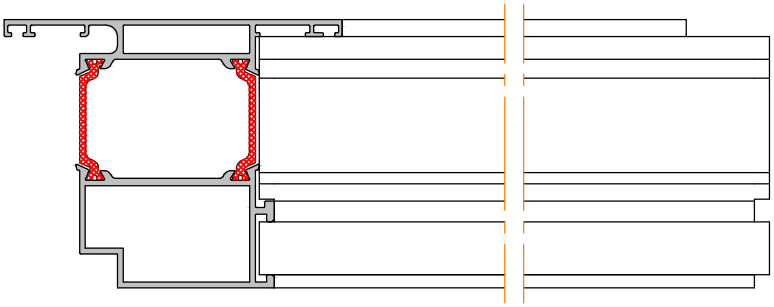


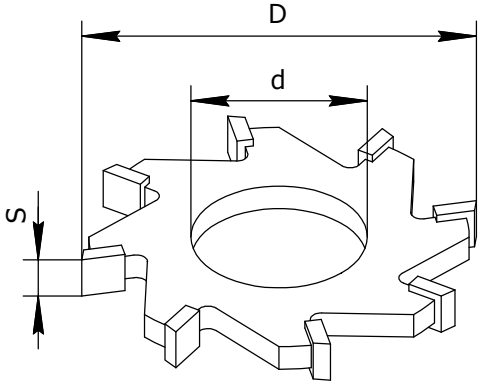
E406-71-1
Gang milling cutter for **MastTech-71** profiles









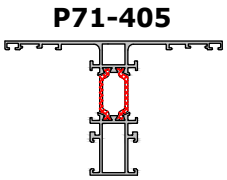


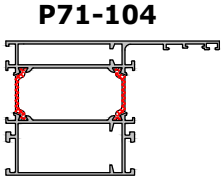
disk cutters used in the kit

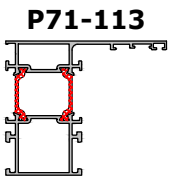
	D	S	d	qty.
E400-112-5:	112	5	32	1
E400-76-4:	76	4	32	1
E400-76-6:	76	6	32	1

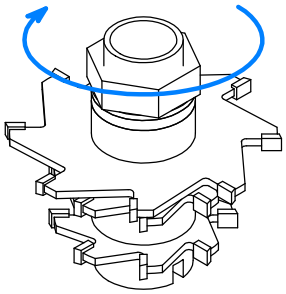
Machined profiles

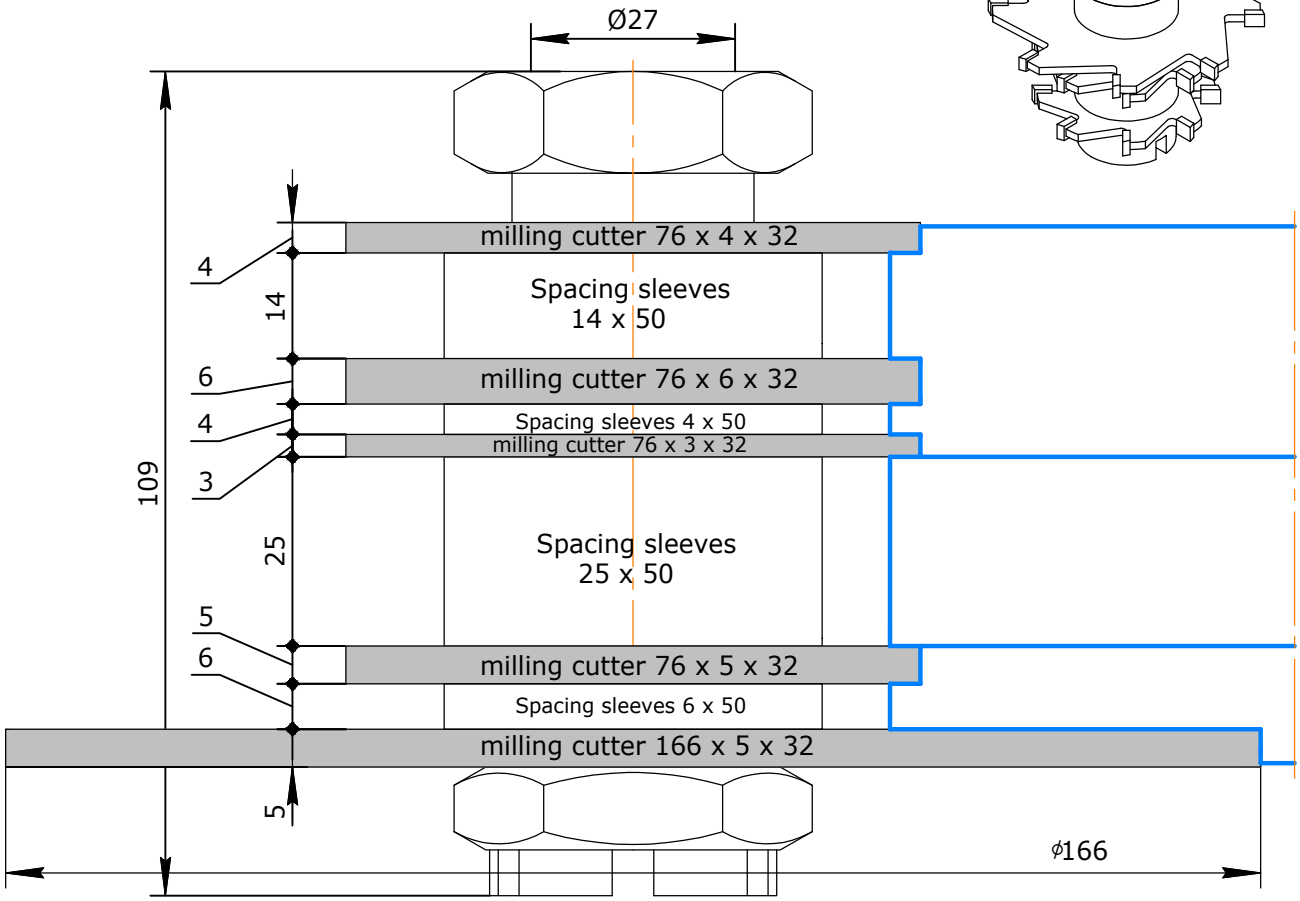
E411-71
Gang milling cutter for **MastTech-71** profiles sash not visible from the outside

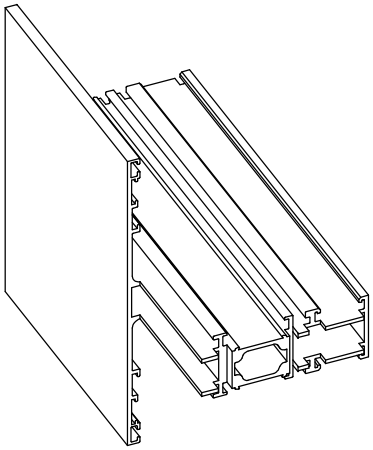


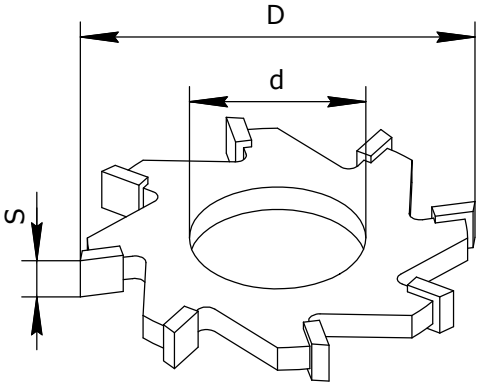


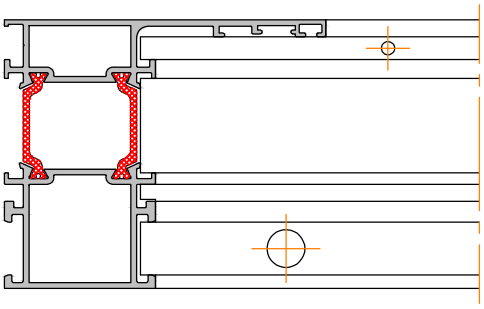










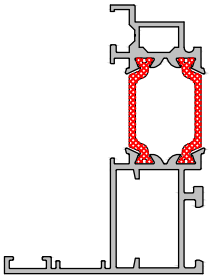


disk cutters used in the kit

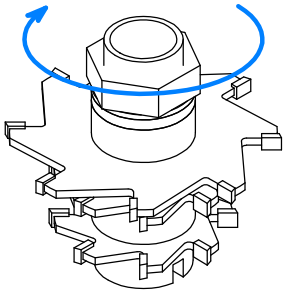
	D	S	d	qty.
E400-166-5:	166	5	32	1
E400-76-3:	76	3	32	1
E400-76-4:	76	4	32	1
E400-76-5:	76	5	32	1
E400-76-6:	76	6	32	1

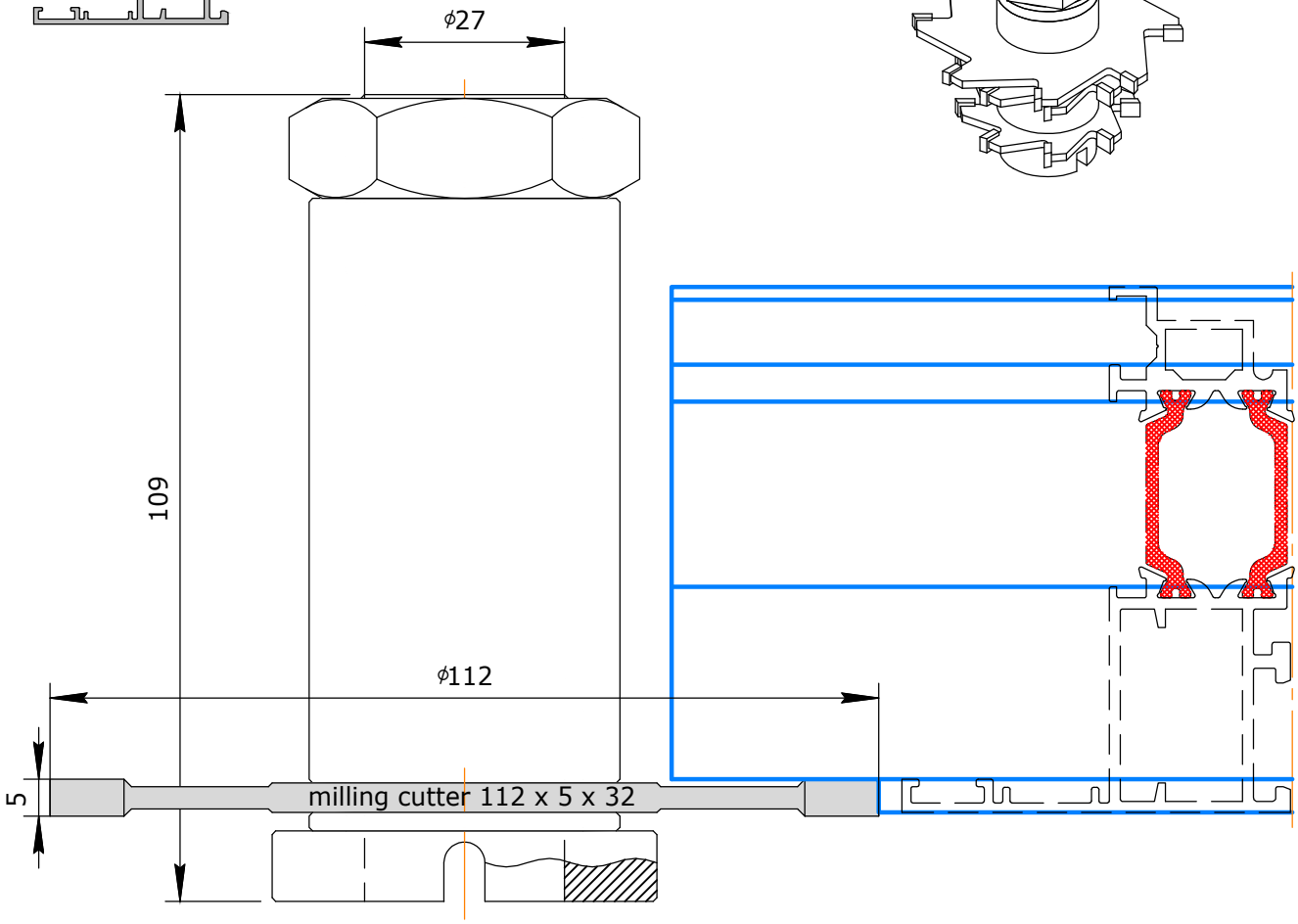
Machined profiles

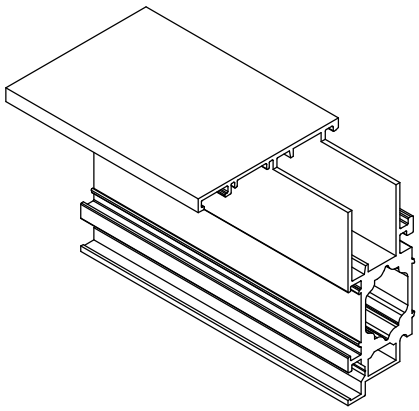
P71-007

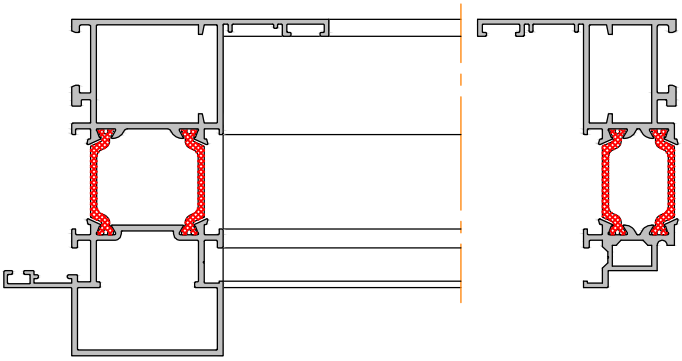


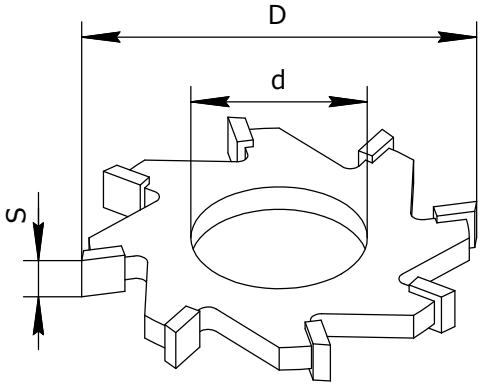
E431
Gang milling cutter
for **MastTech** profiles







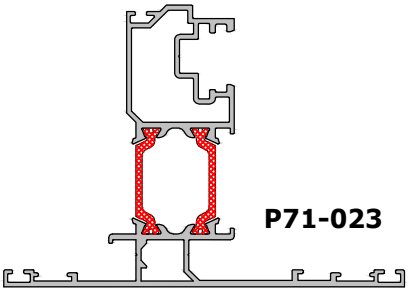




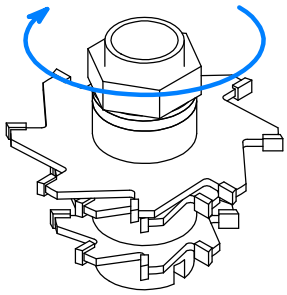
disk cutters used in the kit

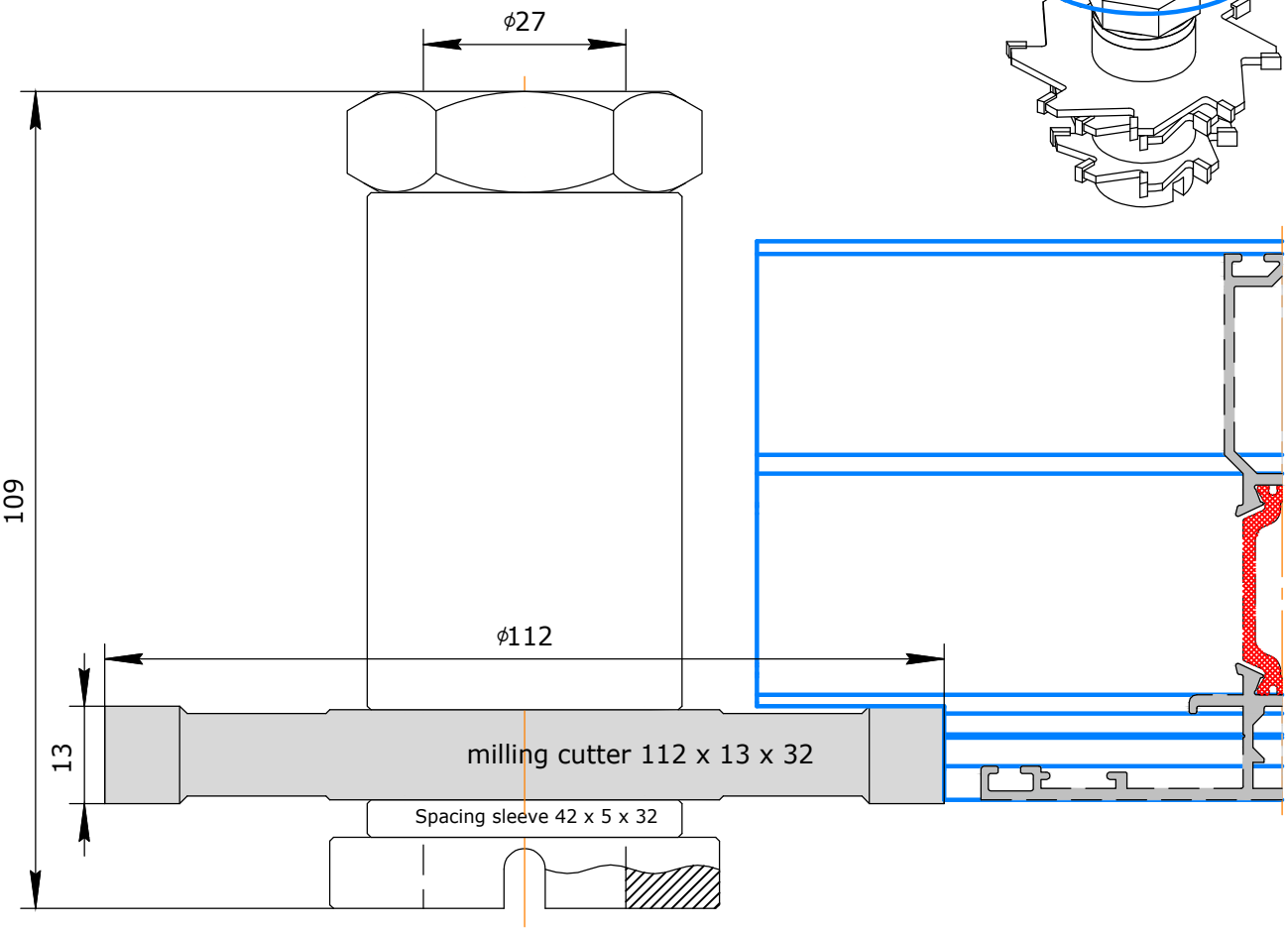
	D	S	d	qty.
E400-112-5:	112	5	32	1

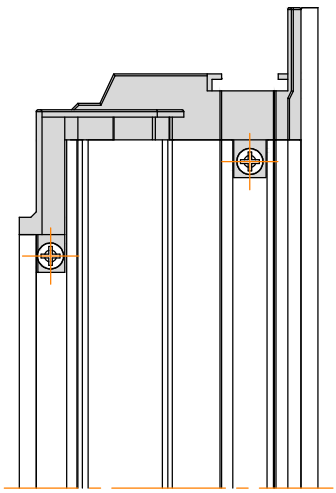
Machined profiles

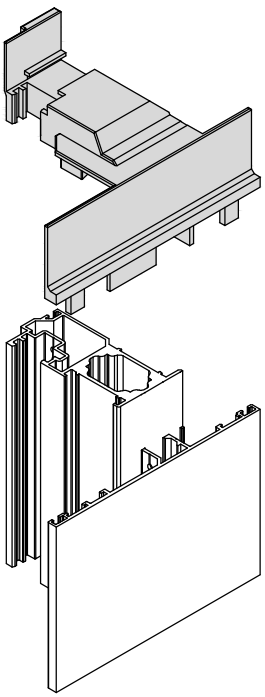


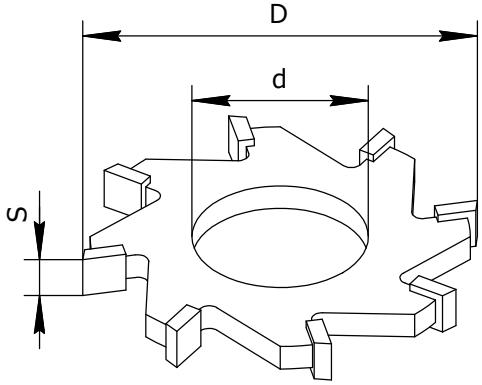
E433
Gang milling cutter for **MastTech-71** profiles









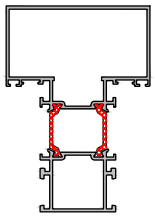


disk cutters used in the kit

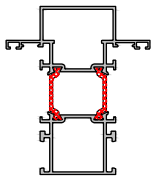
	D	S	d	qty.
E400-112-13:	112	13	32	1

Machined profiles

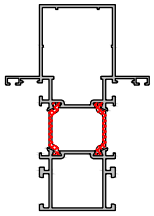
P71-376-38



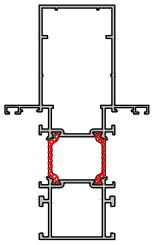
P71-300-89



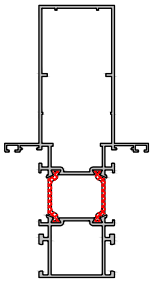
P71-301



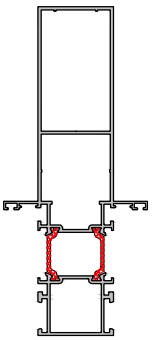
P71-302



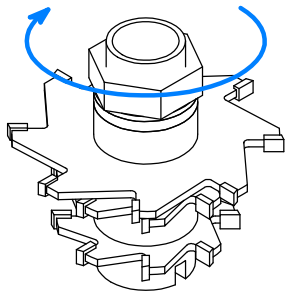
P71-303

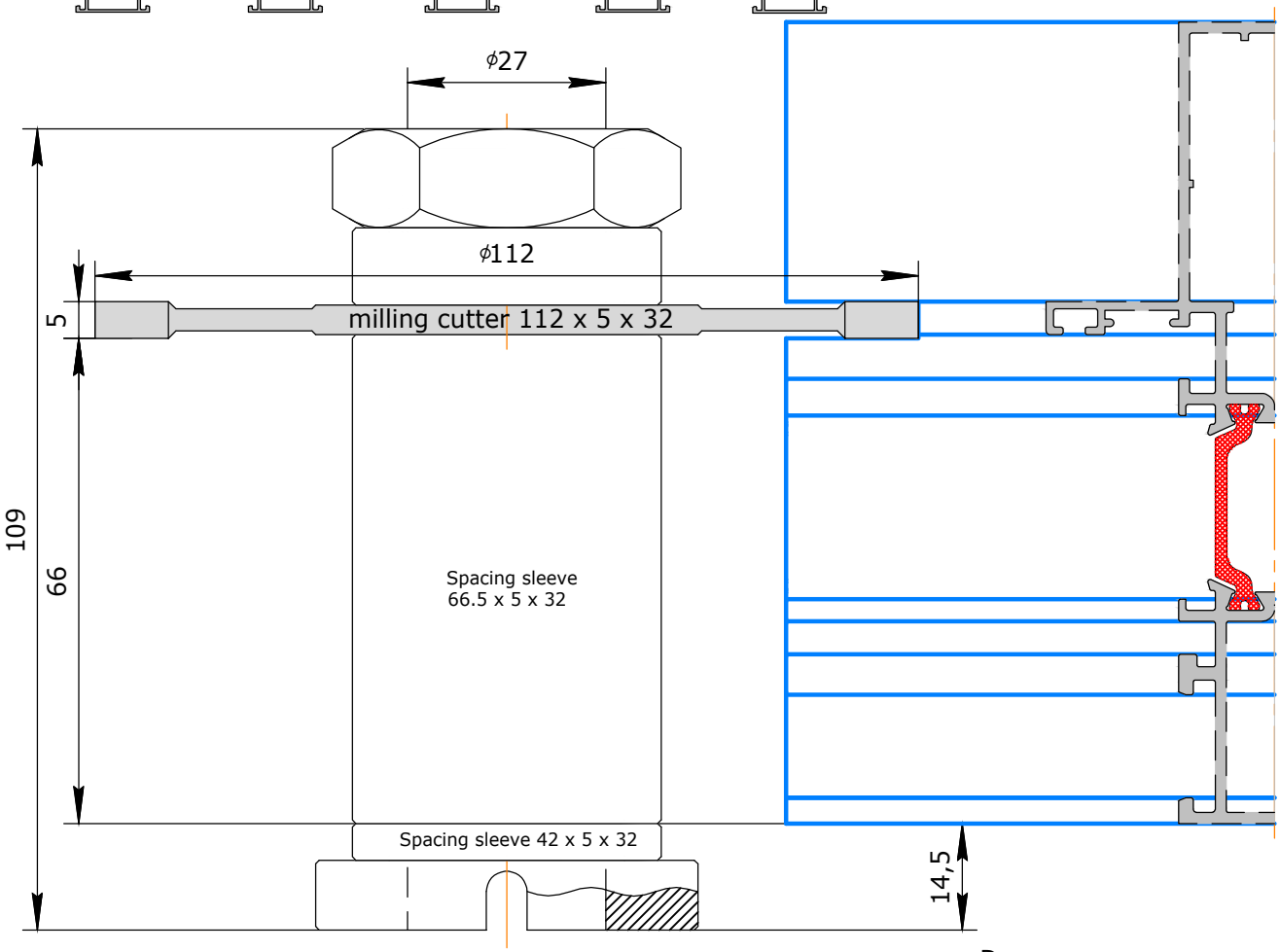


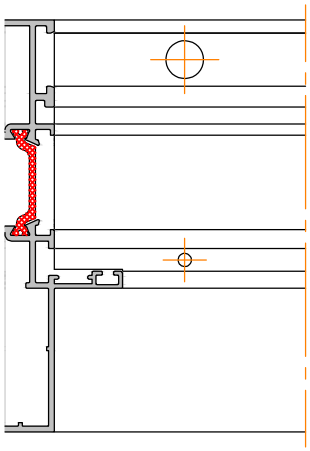
P71-304

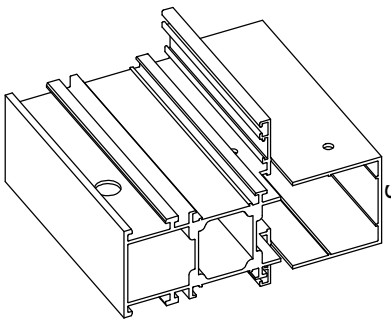


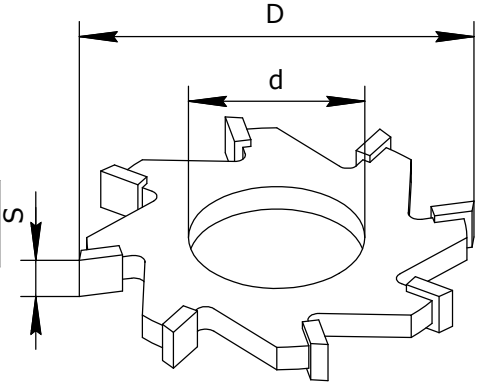
E434
Gang milling cutter for **MastTech-71** profiles









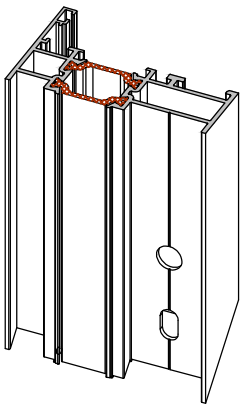


disk cutters used in the kit

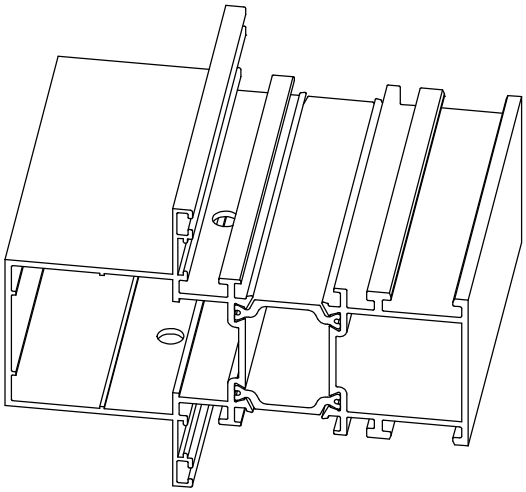
	D	S	d	qty.
E400-112-5:	112	5	32	1

Pneumatic punching die E508.

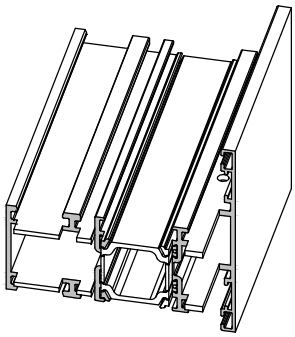
Perforation for block C116



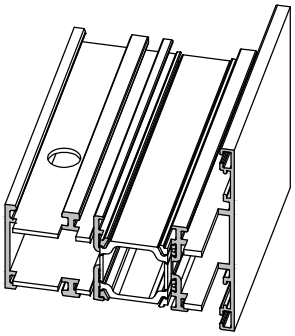
Punching the drainage holes in reinforced meeting rails



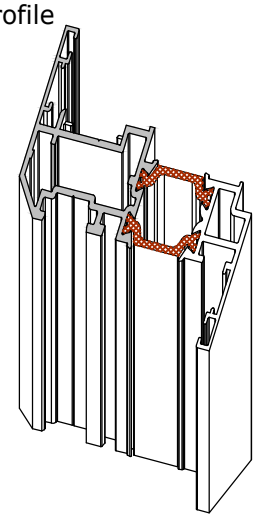
Perforation for 4 mm self-tapping screws in the external chamber of the impost profile



Perforation for 6 mm screws in the external chamber of the impost profile



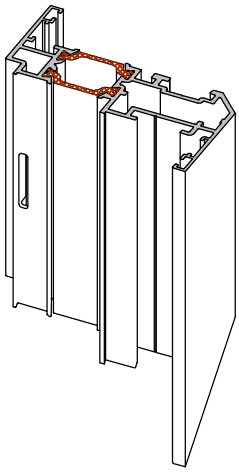
Opening the fitting groove of the window profile



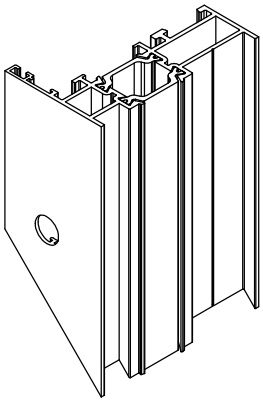
8 mm hole in pull rod P00-001



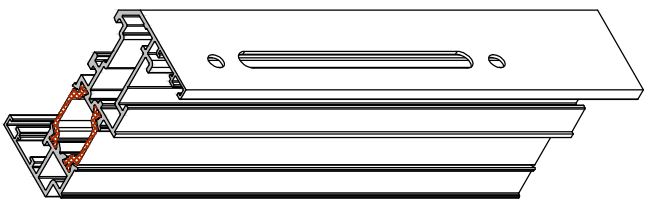
Punching the drainage groove in the window profile



Punching the drainage hole for cap F031

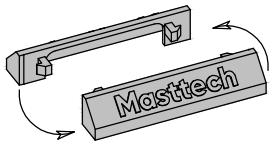


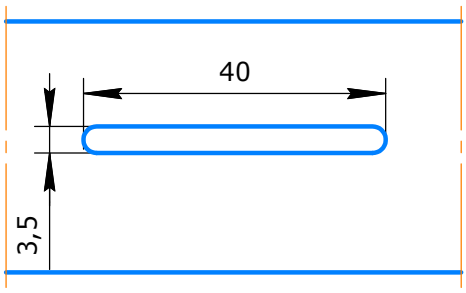
Groove and holes in the sash for handle.



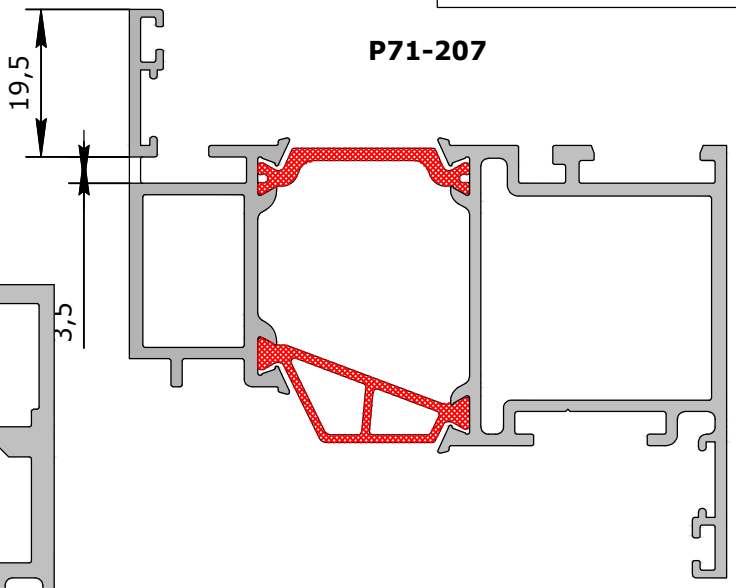
Pneumatic punching die E513.
Drainage hole (drainage)

F031-50

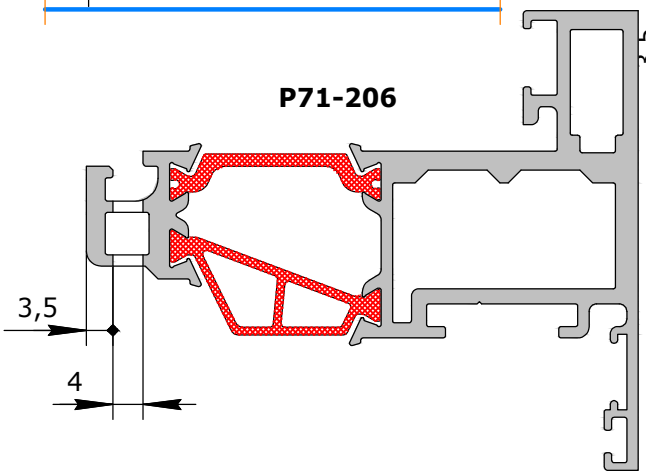




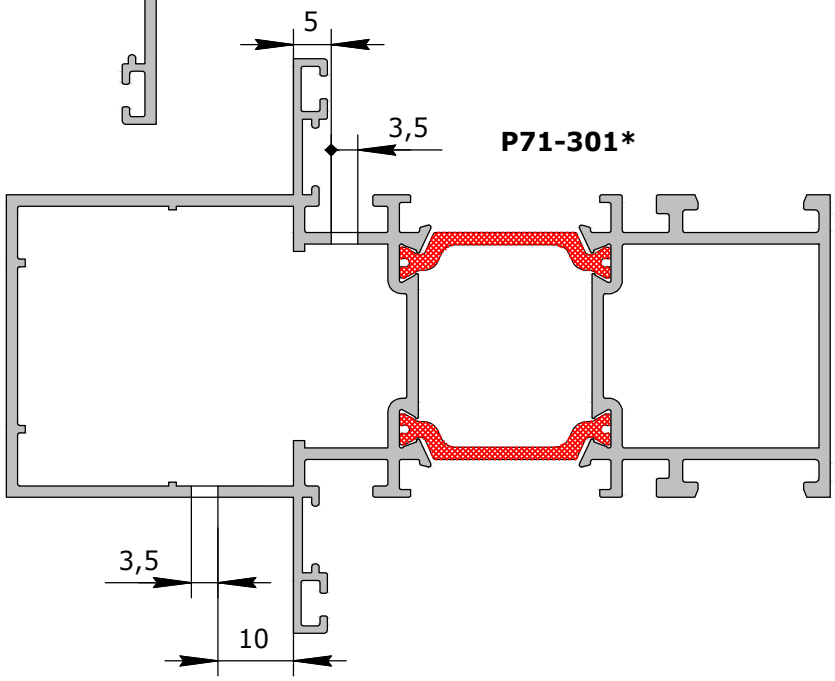
P71-207



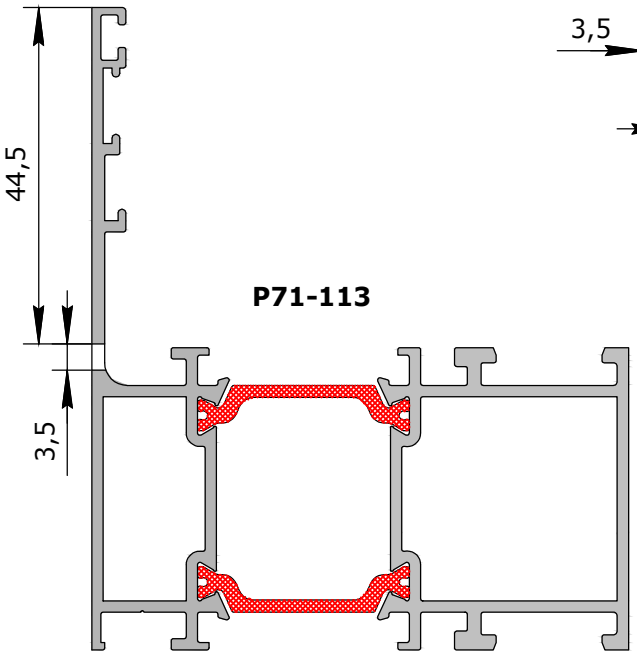
P71-206



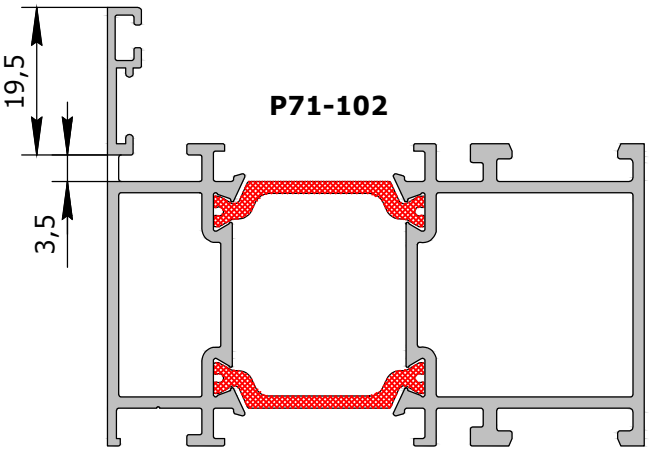
P71-301*



P71-113



P71-102



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