



blaugelb Protect Fastening System

Our fastening solution for ETB-relevant elements.

Please read these installation instructions carefully before commencing installation.

Construction elements imposing safety requirements on the fastening system require particular planning and preparation:

- The necessary safety attachment points must be determined from the requirements on the construction elements and the building documentation (see also Appendix II)
- The required length of the blaugelb Protect fastening system must be selected based on the specified mounting position of the windows/doors in the bearing anchor base (the blaugelb Protect fastening system must not project beyond the inner edge of the reveal)
- The fasteners in the bearing anchor base must be determined (see Appendix I)
- For planning support, please refer to the application examples in Appendix I

Our performance documentation:

- Building authority approval Z-14.4-885
- RC2 GAS-No. 45-137/17.119 (PIV)
- RC3 GAS-No. 45-79/19.123 (PIV)
- EPD documentation (QNG according to DGNB)

Mounting steps:

1. Drill pilot holes in the window frame at the positions specified in the plan.

Drilling side:	rear of window frame
Hole depth:	see Appendix I
Hole diameter:	5 or 6 mm (depending on frame material)

Note: The blaugelb Protect fastening system can be used in combination with a variety of sealing materials. It is also suitable for use in combination with multifunctional tapes.

Installation situation – pilot hole drilled in window frame:

- Position the multifunctional tape in the required position on the window frame
- “Punch through” the multifunctional tape at the anchoring holes by means of a mandrel, awl or similar

Installation situation – pilot hole not drilled in window frame:

- Position the multifunctional tape in the required position on the window frame
- Secure the multifunctional tape over a wide area around the planned drill hole in order to prevent the tape from detaching from the window frame during drilling, and drill using a sharp drill

⚠ Caution: Risk of injury!

2. Using a cordless screwdriver and T30 bit (medium speed), screw the adjusting screw of the blaugelb Protect fastening system into the holes that have been drilled until the construction element to be mounted can be inserted easily into the anchor base.

Note:

Wooden windows: Make sure that the adjusting screw is screwed in to at least the minimum screw-in depth of 30 mm (see Appendix I).

Plastic windows: Make sure that the adjusting screw is screwed into the steel reinforcement to at least the minimum screw-in depth of 15 mm (see Appendix Ia).

Aluminium windows: Make sure that the adjusting screw is screwed into the aluminium chamber to at least the minimum screw-in depth of 15 mm (see Appendix Ib).

Repeat the procedure at all required positions.

Note:

The blaugelb Protect fastening system can be screwed through the multifunctional tape. When screwing the adjustment screw through the multifunctional tape, it must be secured so that it is not pulled away from the back of the window frame.

3. Set the construction element into the desired opening in the component and the planned installation position in the anchor base. Align the construction element to the required installation height and joint.

Using the blaugelb Protect spanner, blaugelb Protect can be adjusted both horizontally and vertically.



The arrow on the respective jaw of the blaugelb Protect spanner indicates the direction of rotation in which you can adjust the construction element by means of the hexagon nut.

Note: Measures must be taken to prevent the construction element falling out.

4. Turn out all blaugelb Protect fasteners pre-mounted on the window frame flush and tightly against the reveal/lintel as described in Section 3.

- Align the construction element vertically (if necessary, ensure that the window sills are in line)
- Check that the window/door remains vertically aligned.
- Turn blaugelb Protect into a suitable position for permanent fixing to the anchor base.

Note:

The optimum position for permanent fixing is understood to be horizontal to the breastwork/floor slab/ceiling. If this position cannot be achieved, the position can be rotated around an angle of up to $\pm 25^\circ$. The blaugelb Protect fastening system must not project beyond the inner edge of the reveal.

5. Fasten in the bearing anchor base.

5.1. Criteria for selecting the specific attachment point in the anchor base:

- Compliance with the minimum edge distance in the anchoring substrate (see appendices)
- Select an anchoring hole as close as possible to the window frame. Avoid damage to the surface of the window frame from the drill or screw chuck.

5.2. Drill the screw holes through the round holes in the blaugelb Protect Fastener. The hole depth must be at least 10 mm deeper than the required minimum screw-in depth of the chosen fastener.

Note:

Blow out the holes before screwing in the screws.

The minimum screw-in depth depends on the material of the anchor base. Note the manufacturer's requirements.

Match the hole diameter to the chosen fastener and respective anchor base. Note the manufacturer's requirements. Repeat the process for all pre-mounted blaugelb Protect fastening systems.

5.3. Carry out a final check of the correct window position (vertically/horizontally).

5.4. Screw the selected wall fasteners into the holes that have been drilled. Make absolutely sure you do not overtighten the fastener in the wall material. If using blaugelb Frame Screws FK-T30 7.5 x L, screw them in until the flat heads lie on the blaugelb Protect fastening system.

Repeat this process for all pre-mounted blaugelb Protect fastening systems.

Note:

If a wall fastener has been overtightened in the screw hole, always drill a new hole and screw a fastener into it.

5.5. Carry out a final check of all anchoring points in the window frame and wall material.

6. Document what has been done.

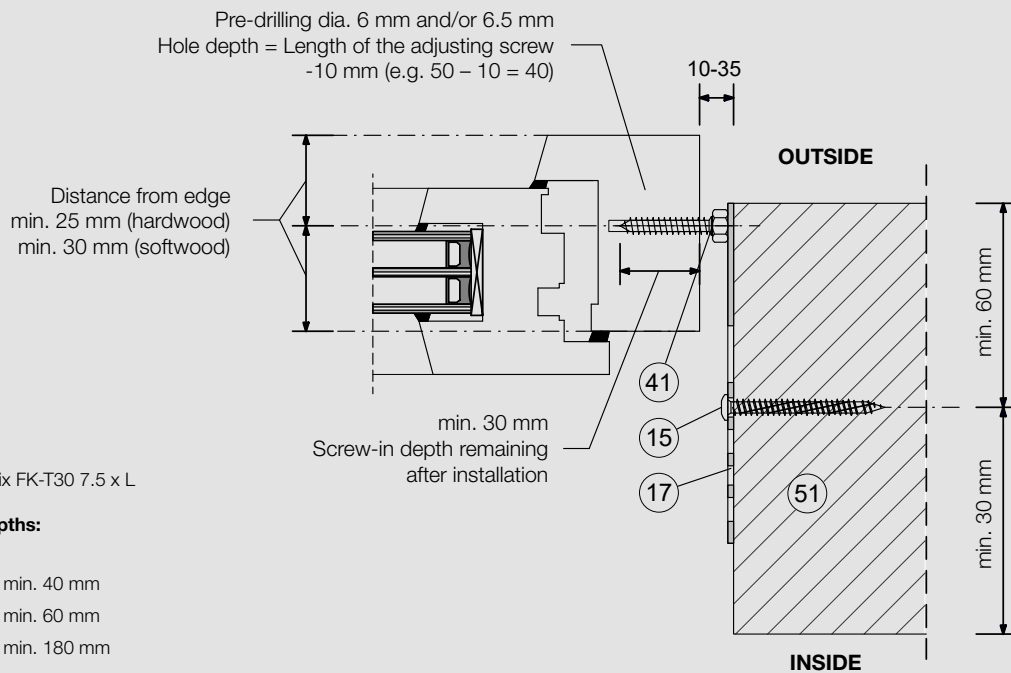
It is essential to document execution of the safety-related anchoring for the client and confirm that the installation instructions have been fulfilled.

The contractor must submit a declaration of conformity to confirm that the design complies with the type approval recorded in building authority approval Z-14.4-885.

APPENDICES

Appendix I:

Edge distance for wooden windows



15 blaugelb Frame Screw Fix FK-T30 7.5 x L

Matching screw-in depths:

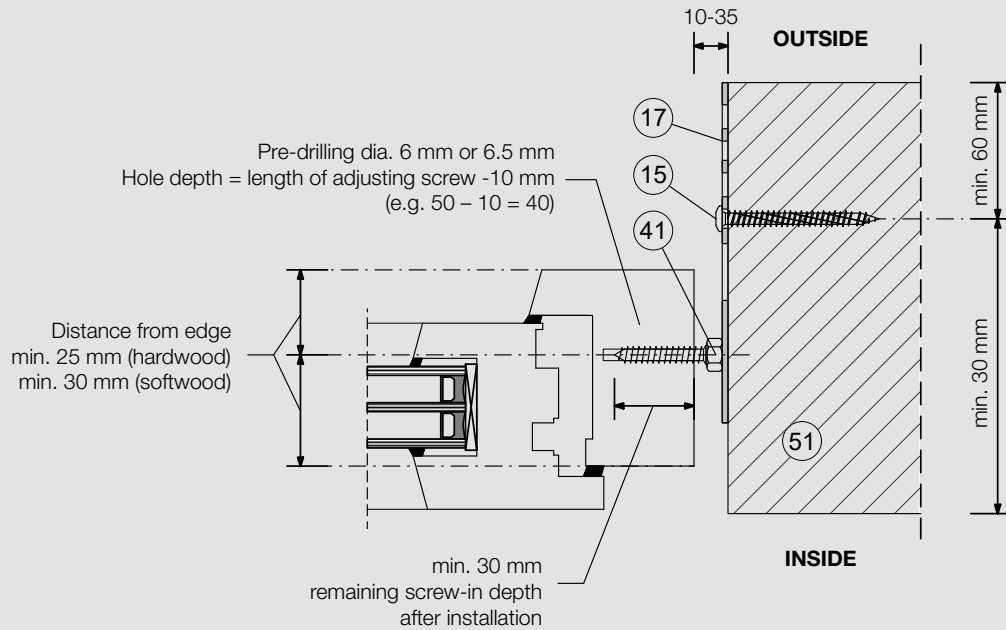
Concrete	min. 40 mm
Sand-lime brick	min. 60 mm
Hollow brick	min. 180 mm
Aerated concrete	
PP2	min. 210 mm
PP4/PP6	min. 180 mm
Wood	min. 60 mm

17 blaugelb Protect

41 Adjusting screw in blaugelb Protect according to Table 1 (see page 9)

51 Supporting wall structure

Appendix I:
 Edge distance for wooden windows



15 | blaugelb Frame Screw Fix FK-T30 7.5 x L

Matching screw-in depths:

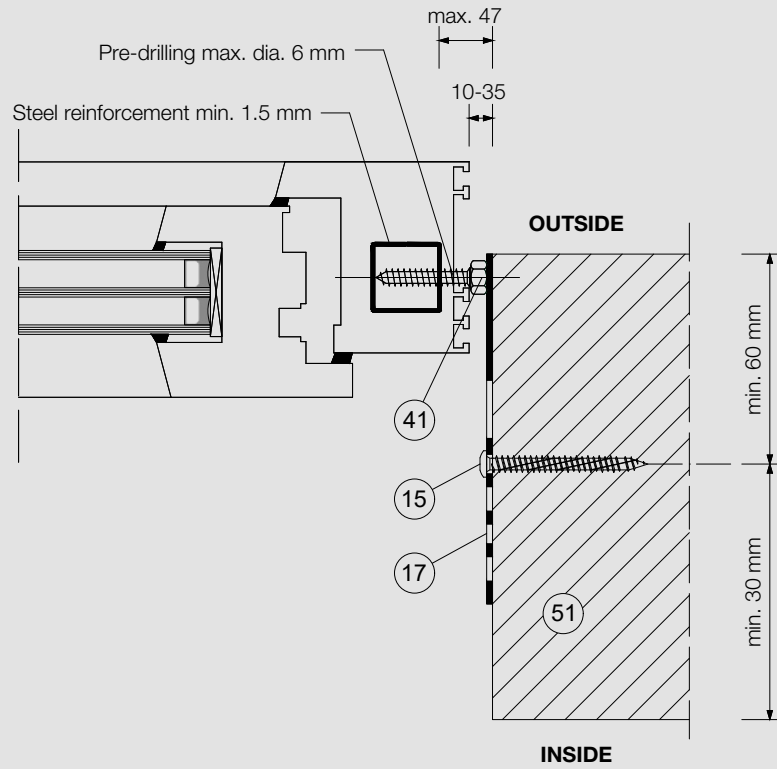
Concrete	min. 40 mm
Sand-lime brick	min. 60 mm
Hollow brick	min. 180 mm
Aerated concrete	
PP2	min. 210 mm
PP4/PP6	min. 180 mm
Wood	min. 60 mm

17 | blaugelb Protect

41 | Adjusting screw in blaugelb Protect according to Table 1
 (see page 9)

51 | Supporting wall structure

Appendix Ia:
Edge distance for plastic windows



15 blaugelb Frame Screw Fix FK-T30 7.5 x L

Matching screw-in depths:

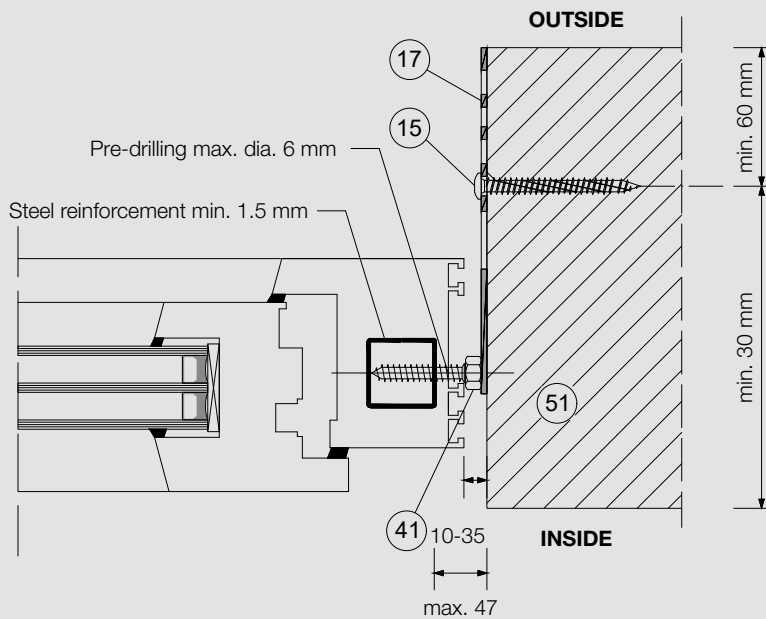
Concrete	min. 40 mm
Sand-lime brick	min. 60 mm
Hollow brick	min. 180 mm
Aerated concrete	
PP2	min. 210 mm
PP4/PP6	min. 180 mm
Wood	min. 60 mm

17 blaugelb Protect

41 Adjusting screw in blaugelb Protect according to Table 1
(see page 9)

51 Supporting wall structure

Appendix Ia:
 Edge distance for plastic windows



15 blaugelb Frame Screw Fix FK-T30 7.5 x L

Matching screw-in depths:

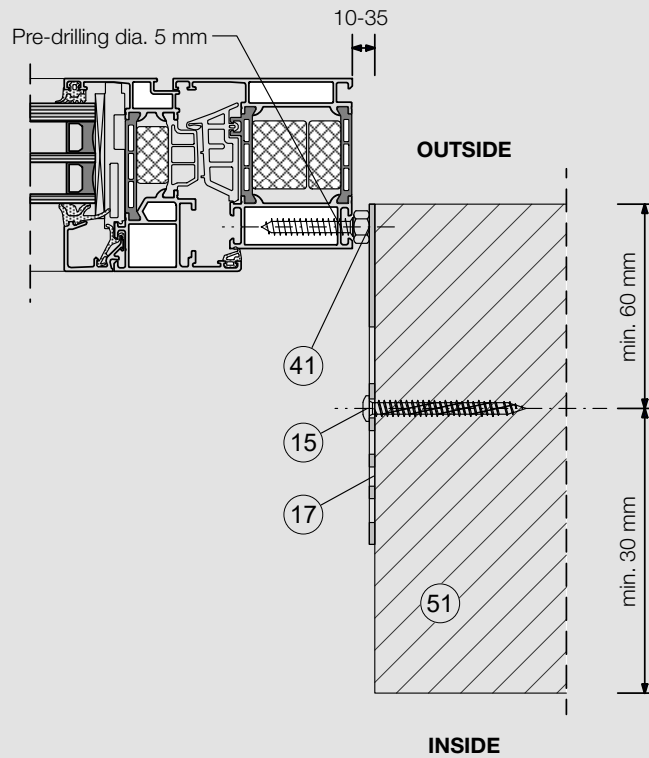
Concrete	min. 40 mm
Sand-lime brick	min. 60 mm
Hollow brick	min. 180 mm
Aerated concrete	
PP2	min. 210 mm
PP4/PP6	min. 180 mm
Wood	min. 60 mm

17 blaugelb Protect

41 Adjusting screw in blaugelb Protect according to Table 1
 (see page 9)

51 Supporting wall structure

Appendix Ib:
Clearance for aluminium windows



15 | blaugelb Frame Screw Fix FK-T30 7.5 x L

Matching screw-in depths:

Concrete	min. 40 mm
Sand-lime brick	min. 60 mm
Hollow brick	min. 180 mm
Aerated concrete	
PP2	min. 210 mm
PP4/PP6	min. 180 mm
Wood	min. 60 mm

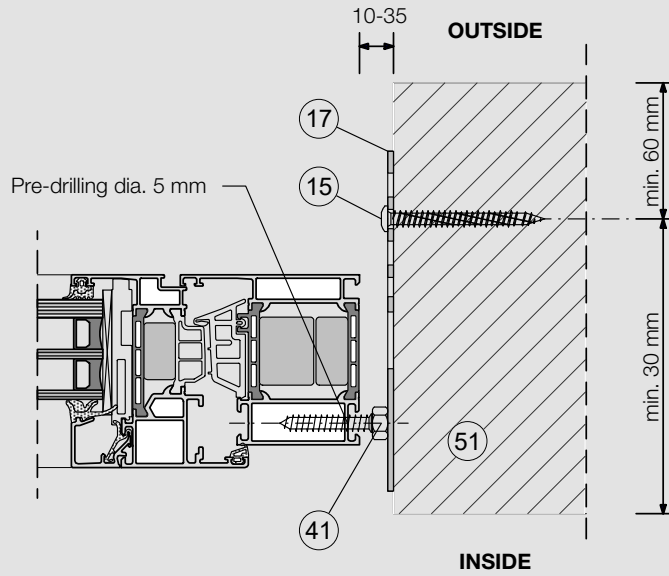
17 | blaugelb Protect

41 | Adjusting screw in blaugelb Protect according to Table 1
(see page 9)

51 | Supporting wall structure

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Protect Fastening System
 Our fastening solution for ETB-relevant elements.

Appendix Ib:
 Clearance for aluminium windows



15 blaugelb Frame Screw Fix FK-T30 7.5 x L

Matching screw-in depths:

Concrete	min. 40 mm
Sand-lime brick	min. 60 mm
Hollow brick	min. 180 mm
Aerated concrete	
PP2	min. 210 mm
PP4/PP6	min. 180 mm
Wood	min. 60 mm

17 blaugelb Protect

41 Adjusting screw in blaugelb Protect according to Table 1
 (see page 9)

51 Supporting wall structure

Appendix Ic:
Overview/assignment of blaugelb Protect fastening system for application

Table 1:

Frame material	Joint width	Screw-in depth	Outer edge of window frame to screw engagement	Minimum length of adjusting screw for joint width ≤ 10 mm	Minimum length of adjusting screw for joint width ≤ 15 mm	Minimum length of adjusting screw for joint width ≤ 20 mm	Minimum length of adjusting screw for joint width ≤ 25 mm	Minimum length of adjusting screw for joint width ≤ 30 mm	Minimum length of adjusting screw for joint width ≤ 35 mm
Aluminium	≤ 35 mm	≥ 15 mm	5 mm	35 mm	35 mm	45 mm	45 mm	50 mm	60 mm
Wood	≤ 35 mm	≥ 35 mm	0	45 mm	50 mm	60 mm	60 mm	70 mm	70 mm
Plastic	≤ 35 mm	≥ 15 mm	7 – 12 mm	45 mm	45 mm	50 mm	60 mm	60 mm	70 mm

Properties / boundary conditions

Porous concrete: PP2

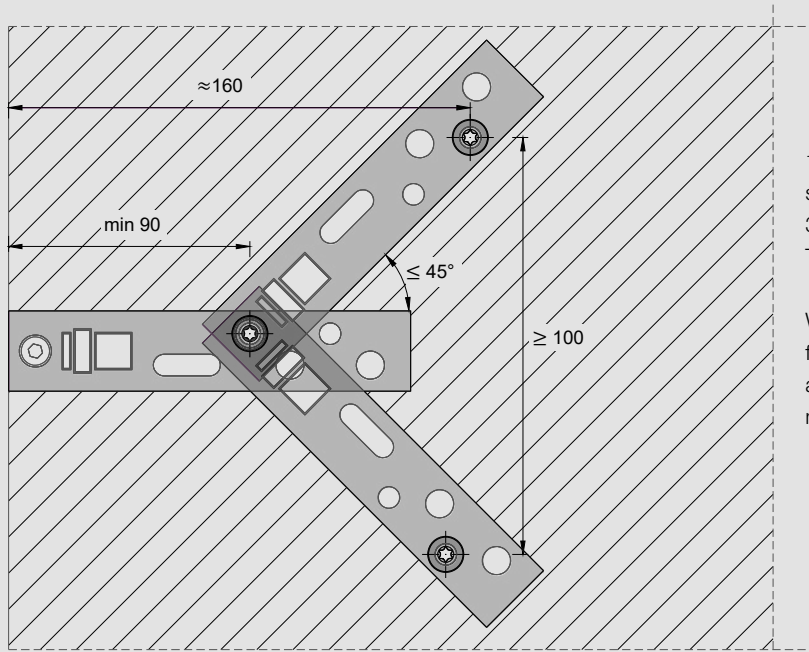
No pilot holes

Screw-in depth: 210 mm

Distance from edge of component: ≥ 90 mm

Distance from horizontal joint: ≥ 60 mm

Positioning of blaugelb Frame Screws Fix

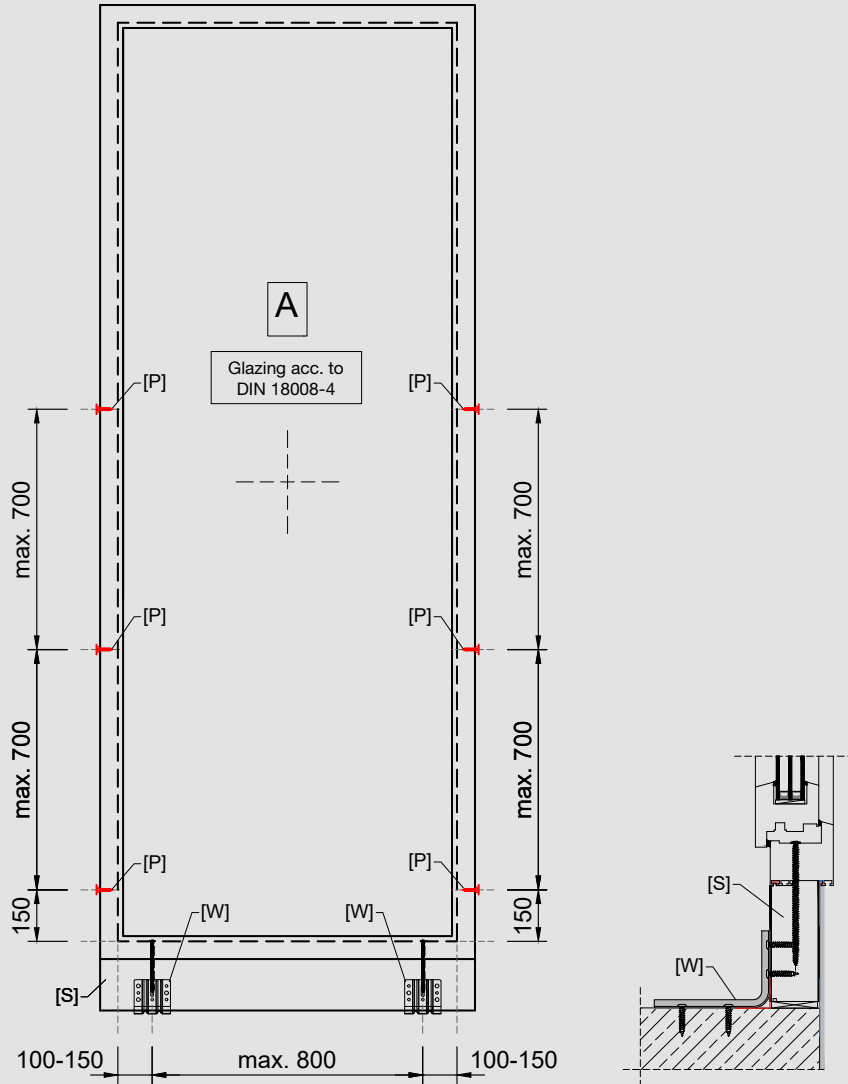


1x Protect with adjusting screw and 2x Protect without adjusting screw – angle from horizontal of $\leq 45^\circ$ and ≥ 100 mm
3 blaugelb Frame Screws Fix
Turn-in depth of screw PP2: ≥ 210 mm

When ensuring the listed minimum edge distances, the spread angle from horizontal may be designed to be less than 45° but the vertical axis distance of the Frame Screws Fix installed in the anchor body must not be less than 100 mm.

Appendix II:

Attachment points in window frames according to the ETB guideline “Components providing fall arrest protection”, category A

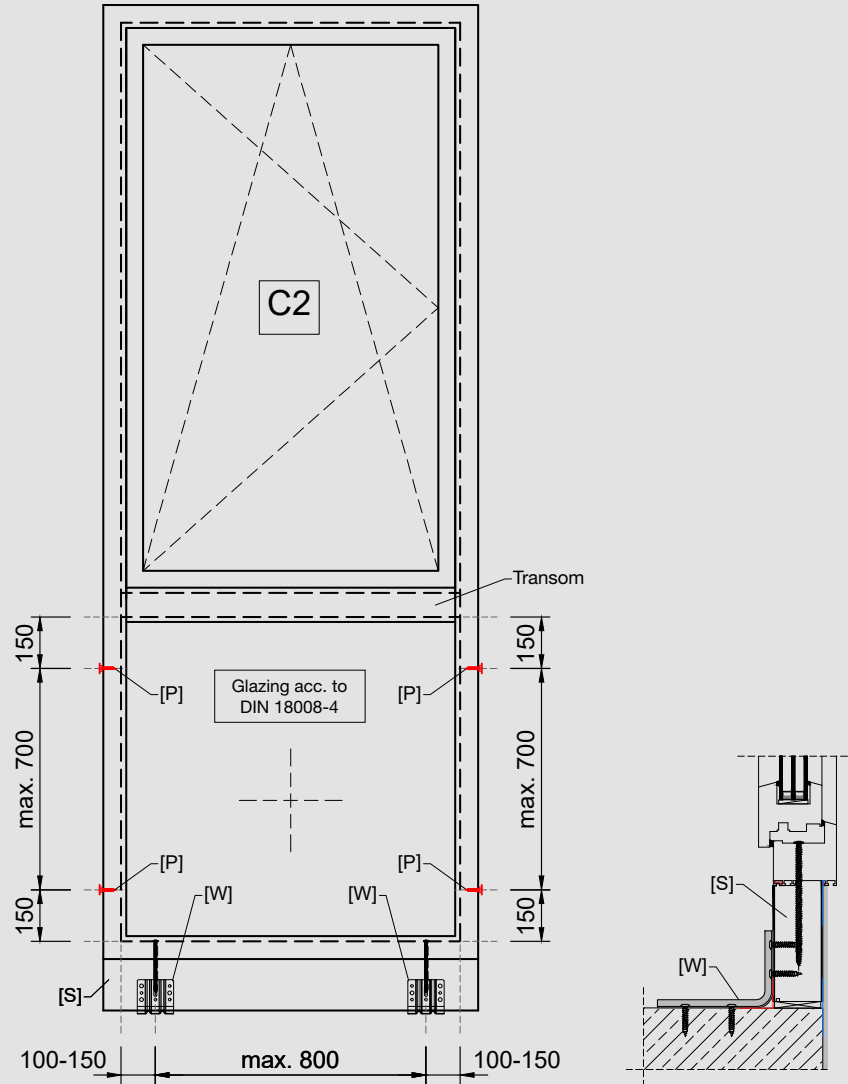


This schematic diagram highlights only the safety-relevant fastenings in accordance with the ETB guideline “Components providing fall arrest protection”.
 The other attachment points required are determined by the applicable basis for fastening.
 RAL LzM 03/24 p. 160

- [P] blaugelb Protect
- [W] blaugelb assembly bracket
- [S] blaugelb plinth thermal insulation profile (SDP)

Appendix IIa:

Attachment points in window frames according to the ETB guideline “Components providing fall arrest protection”, category C2

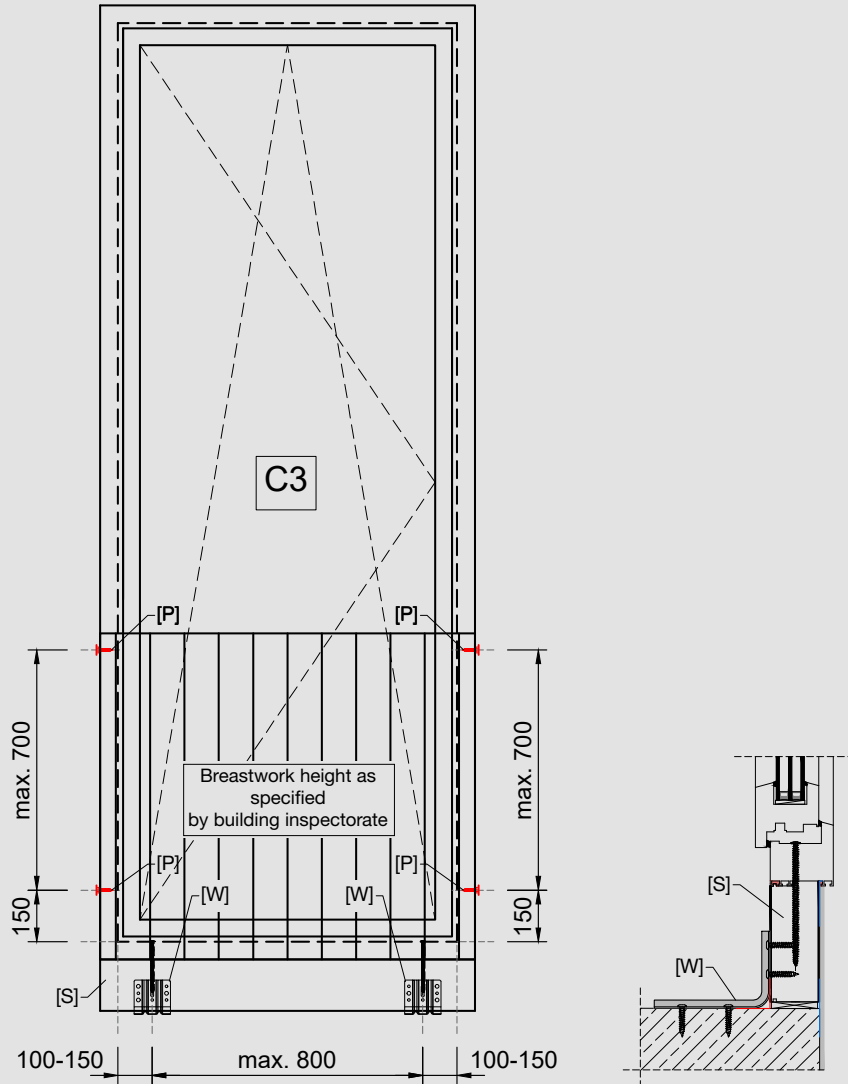


This schematic diagram highlights only the safety-relevant fastenings in accordance with the ETB guideline “Components providing fall arrest protection”.
 The other attachment points required are determined by the applicable basis for fastening.
 RAL LzM 03/24 p. 160

- [P] blaugelb Protect
- [W] blaugelb assembly bracket
- [S] blaugelb plinth thermal insulation profile (SDP)

Appendix IIb:

Attachment points in window frames according to the ETB guideline "Components providing fall arrest protection", category C3



This schematic diagram highlights only the safety-relevant fastenings in accordance with the ETB guideline "Components providing fall arrest protection".
 The other attachment points required are determined by the applicable basis for fastening.
 RAL LzM 03/24 p. 160

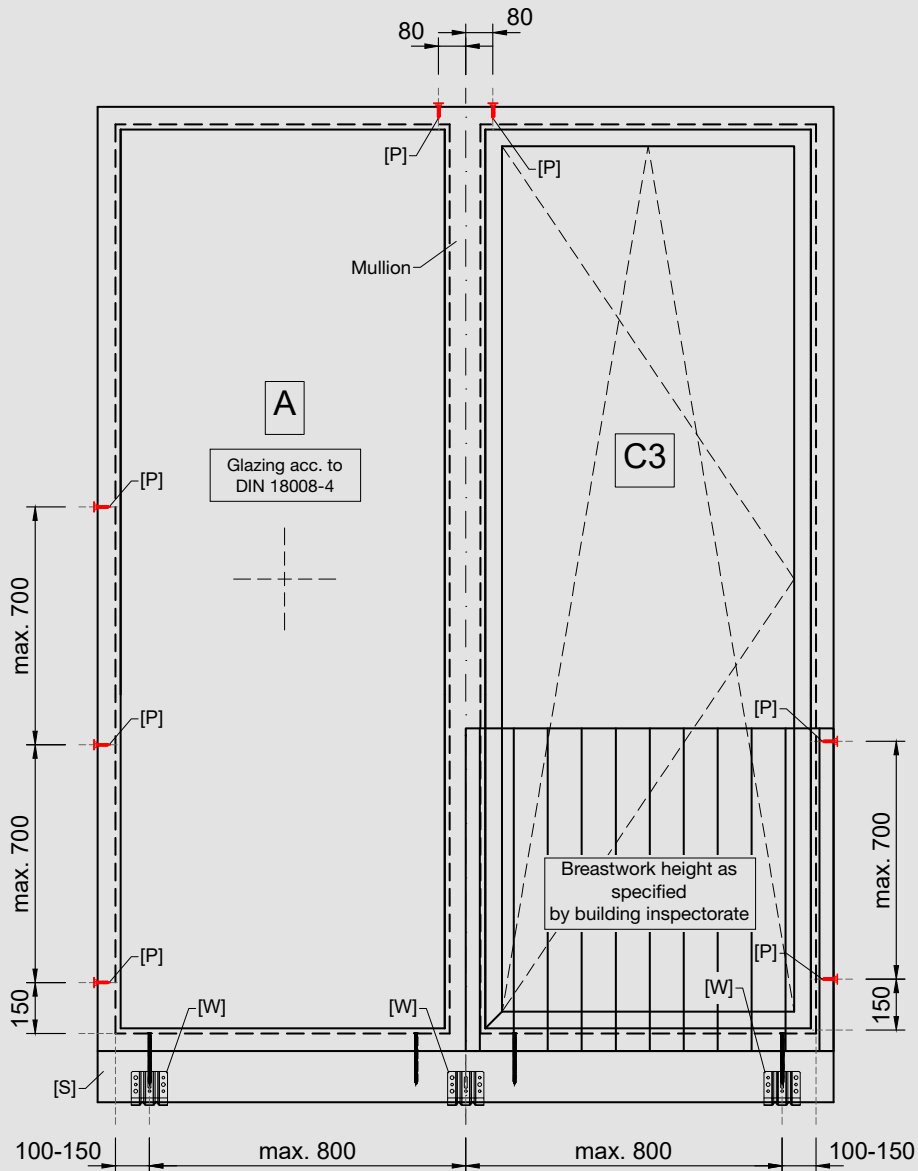
- [P] blaugelb Protect
- [W] blaugelb assembly bracket
- [S] blaugelb plinth thermal insulation profile (SDP)

Note:

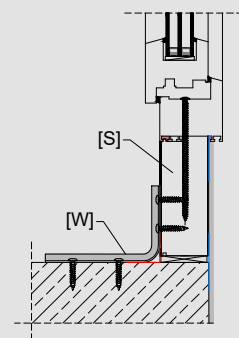
The height of the breastwork is determined by the local building regulations and the intended use.

Appendix IIc:

Attachment points in window frames according to the ETB guideline "Components providing fall arrest protection", combination of category A, C3



This schematic diagram highlights only the safety-relevant fastenings in accordance with the ETB guideline "Components providing fall arrest protection". The other attachment points required are determined by the applicable basis for fastening.
RAL LzM 03/24 p. 160



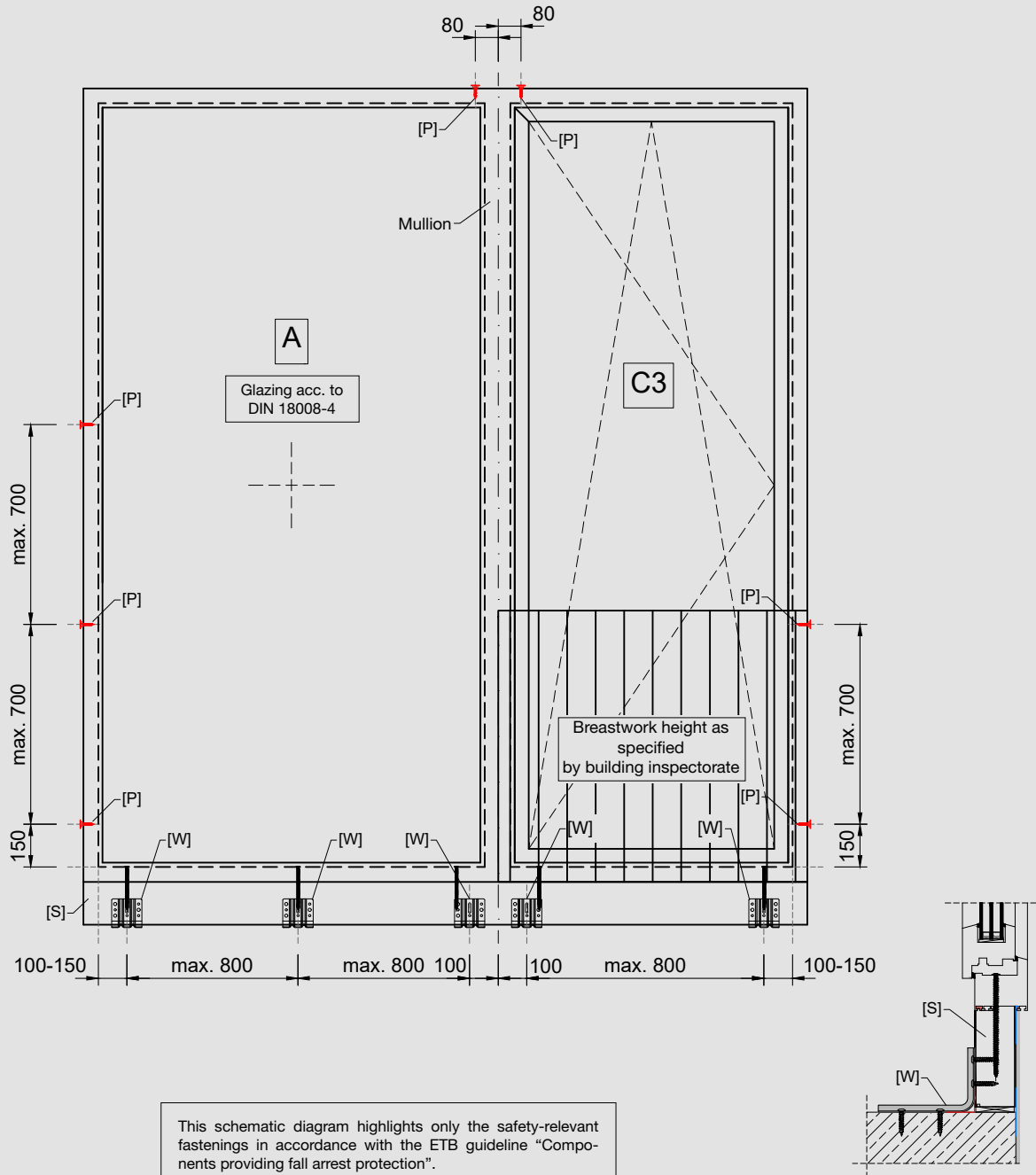
- [P] blaugelb Protect
- [W] blaugelb Assembly Bracket
- [S] blaugelb Plinth Thermal Insulation Profile (SDP)

Note:

The height of the breastwork is determined by the local building regulations and the intended use.

Appendix II.d:

Attachment points in window frames according to the ETB guideline "Components providing fall arrest protection", combination of category A, C3 – asymmetric element



This schematic diagram highlights only the safety-relevant fastenings in accordance with the ETB guideline "Components providing fall arrest protection". The other attachment points required are determined by the applicable basis for fastening.
 RAL LzM 03/24 p. 160

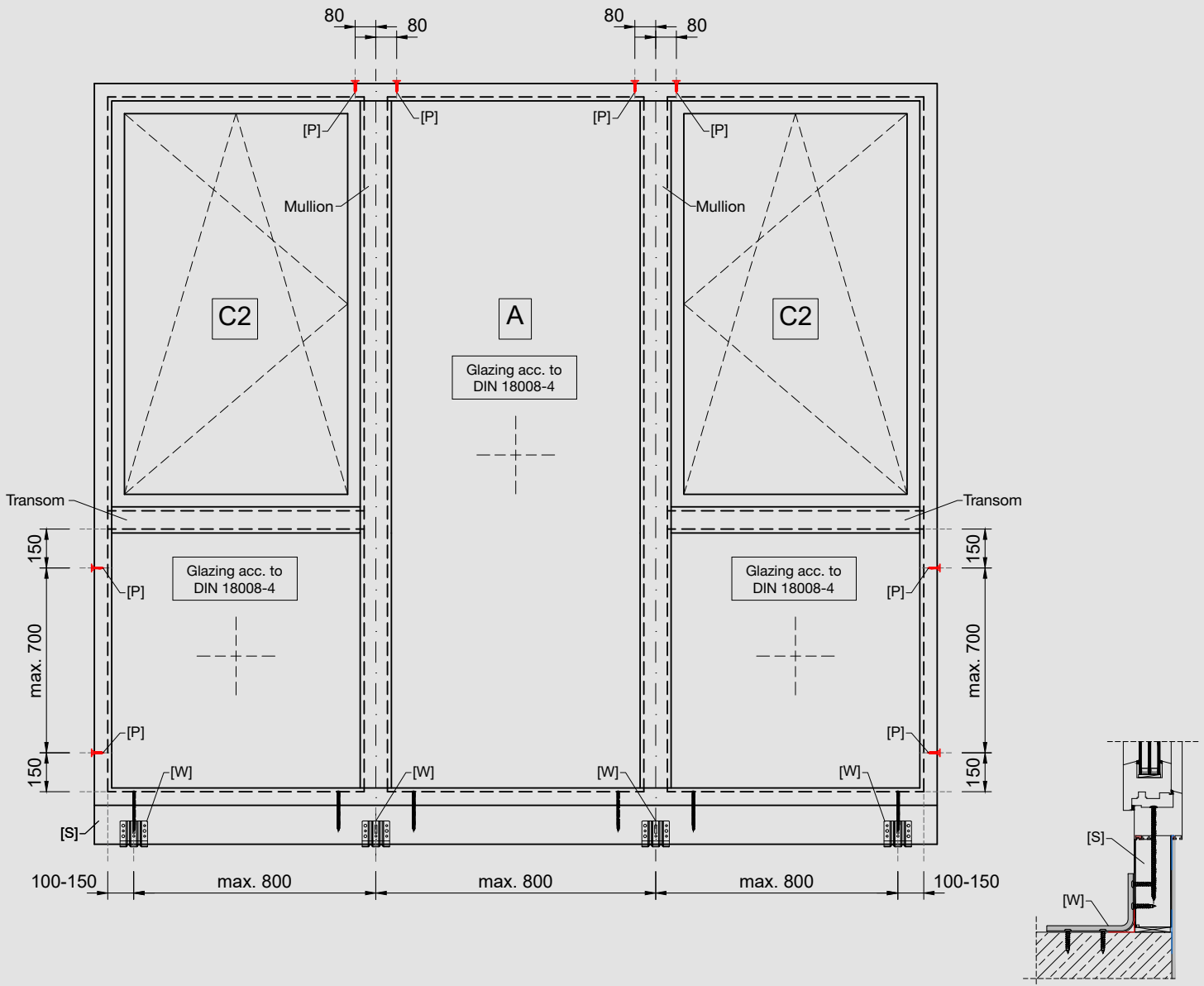
- [P] blaugelb Protect
- [W] blaugelb Assembly Bracket
- [S] blaugelb Plinth Thermal Insulation Profile (SDP)

Note:

The height of the breastwork is determined by the local building regulations and the intended use.

Appendix II:

Attachment points in window frames according to the ETB guideline "Components providing fall arrest protection", combination of category C2, A, C2



This schematic diagram highlights only the safety-relevant fastenings in accordance with the ETB guideline "Components providing fall arrest protection".
 The other attachment points required are determined by the applicable basis for fastening.
 RAL LzM 03/24 p. 160

- [P] blaugelb Protect
- [W] blaugelb Assembly Bracket
- [S] blaugelb Plinth Thermal Insulation Profile (SDP)

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