

Technology.

feco partition wall systems
create room solutions
that connect
and inspire people.

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feco partition wall systems are as individual as your project. System partition walls are lightweight, non-load-bearing, unitized and removable interior walls with closed and transparent surfaces made of wood, glass and metal. They consist of a metal substructure and two-sided cladding with intermediate insulation as well as glazings and doors. The wall elements are prefabricated building-specific at the factory and assembled on site in short, clean assembly processes.

feco system partition walls meet the highest construction-related requirements in terms of sound insulation, sound absorption, fire protection and statics. Add to this, the wide-ranging design options. In addition to a wide variety of surfaces, the feco system offers a wide range of glazing constructions for every requirement and every taste.

The big advantage of the system partition walls is their relocatability. In conjunction with an element system matched to the building grid, rooms can be subsequently adapted to requirements, walls installed and removed or doors exchanged for wall elements. If desired, even during ongoing business operations. The additional investment compared to drywall walls usually pays for itself with the first conversion measure.

The partition wall elements – whether solid wall, glazing or door units – all have a basic wall thickness of 105 mm.

Door and glass frames are face-flush with the closed wall elements and separated by 6 mm shadow joints. The only exceptions to this wall thickness are the recessed-designed fecoplan glazings and the special design variants with wall thicknesses of 125 mm and 175 mm respectively for exceptional static and acoustic requirements.

All fastenings are concealed as standard. Screw connections or other point connections are not visible, neither in the closed wall elements nor in glass walls. Connections to the floor, wall and ceiling have recessed shadow joints. The ceiling connection has a standard telescopic design to accommodate construction tolerances and structural movements.

One special aspect of the feco partition wall system is the way in which the wall panels are connected to the substructure. In the patented feco clamping system, wall panels are clipped into the system uprights using the full-length, reverse-mounted steel retaining rails. This method provides more stability, more accurate joint alignment and increased sound insulation values compared to structures with only point fixture. The wall panels contribute to high static strength across their entire surface area, while the slim system uprights reduce the transmission of sound waves.

Wall heights of up to 5.000 mm, sound insulation values up to $R_{w,P} = 52$ dB, and fire resistance ratings up to 90 minutes with a uniform wall thickness of 105 mm are possible, as proven by numerous test reports, test certificates and approvals.

Please contact us for more information on how we can individually meet your specific requirements.

feco product overview

Product	Detail	Description	Wall thickness	Panel/ Glass/ Door leaf thickness	Visible width vertical/ horizontal	Sound insulation test values $R_{w,P}$	Fire resistance
fecowand		Solid wall	105 mm	2 x 19 mm	-	47-52 dB	EI30 EI90
fecowand		Solid wall in special thickness	125 mm 175 mm	2 x 19 mm	-	47-57 dB	EI30
fecoorga		Wall organisation	105 mm	2 x 19 mm	-	45-52 dB	EI30 EI90
fecophon		Acoustic solid wall	105 mm	2 x 19 mm	-	27-49 dB	-
fecoplan		All-glass construction	35 mm	10-18 mm	0/50 mm	35-42 dB	-
fecocent		Wall-centered glazing	105 mm	8 mm 28 mm	35/35 mm	32-37 dB 37-42 dB	G30 F30
fecofix		Wall-flush glazing	105 mm	1 x 5-8 mm 2 x 5-8 mm	20/20 mm	32-37 dB 39-49 dB	F30
fecostruct		Face-flush glazing	105 mm	1 x 6-8 mm 2 x 6-8 mm	20/20 mm	32-37 dB 39-47 dB	-
fecotür Wood		Wooden doors	105 mm	40-105 mm	18-50 mm	23-42 dB	T30
fecotür Glass		Glassdoors	105 mm	10 mm 40-105 mm	18-50 mm	23-32 dB 32-42 dB	-

The feco partition wall system is constantly being further developed. Ask us about the latest innovations.



Flexible partition wall system as solid wall

Dimensions: Building-specific element-width and element-height, wall thickness 105 mm, optional special design variant with wall thicknesses of 125 mm and 175 mm, recommended element size undivided up to W x H = 1,000 x 3,000 mm

Cladding: 2 x 19 mm three-layer particle board accordance with DIN EN 312-1, P2 gluing, formaldehyde emission class E1, building material class B2, optional other wood-based panels (MDF, OSB), particleboard B1, fire protection F90 with 2 x 18 mm gypsum particleboard A2

Surfaces: Melamine resin direct-coating according to DIN EN 14322 as per collection, optional CPL-/HPL-coating material according to DIN EN 438 (standard with EI90), real wood veneers, paint finishing, fibreglass or fabric, steel cases powder-coated in popular RAL colours, aluminium cases natural E6/EV1 anodized

Edges: 1 mm ABS edge all around, same colour as the surface, veneer surface with 1 mm-thick veneer edge, metal cases edged on four sides

Substructure: Galvanized rolled-steel sections, standard uprights with installation openings, full-length clips retaining rails on the reverse of the cladding, optional slotted uprights with integrated vertical organisation with 32 mm pitch

Insulation: 60 mm mineral wool insulation with high bio-solubility, building material class A1 (incombustible), density approx. 50 kg/m³, increased sound insulation requirement with 40 mm mineral fibre insulation and weighting with 12.5 to 20 mm gypsum plasterboards

Connecting profiles: U-shaped rolled-steel sections as recessed connecting joints, coated in RAL 7016 anthracite, optionally in other popular RAL colours

Floor connection: Telescopic, integrated negative skirting approx. 30-100 mm (80 mm standard), recessed approx. 20 mm

Ceiling connection: Telescopic, shadow joint approx. 20 mm (up to 80 mm), absorption of standard tolerances and structural movements up to +/- 15 mm as standard, optional higher tolerance absorption possible

Sound insulation: (also see page 38-41)

Sound-insulation test value solid wall $R_{w,P} = 47$ dB

Sound insulation - solid wall increased $R_{w,P} = 48/51/52$ dB

Sound insulation - solid wall 175 mm $R_{w,P} = 57$ dB

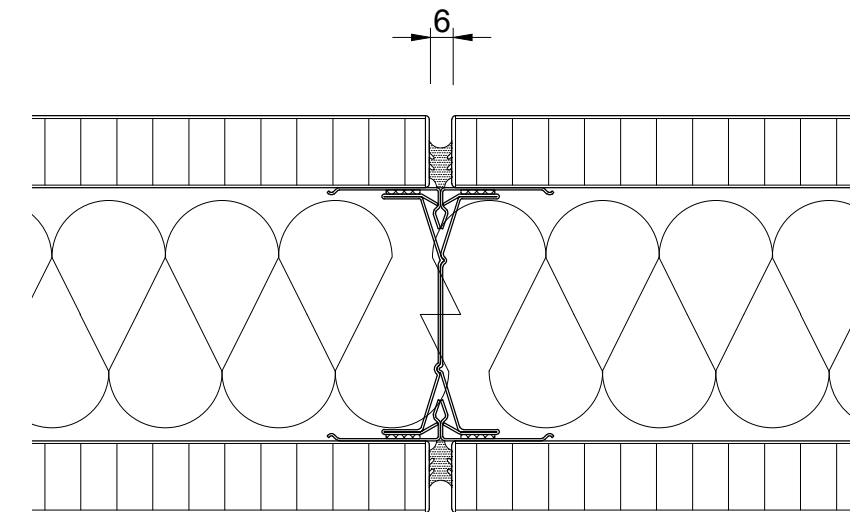
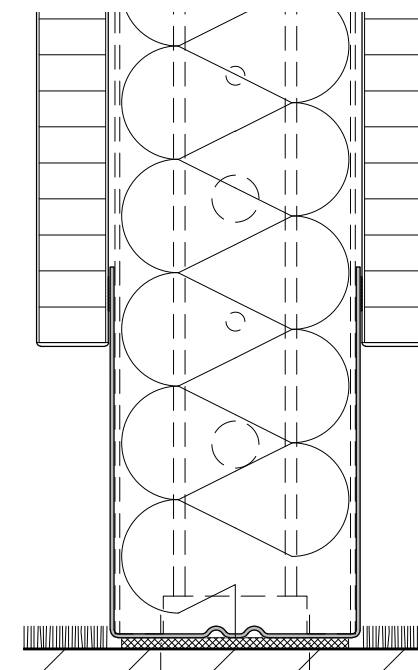
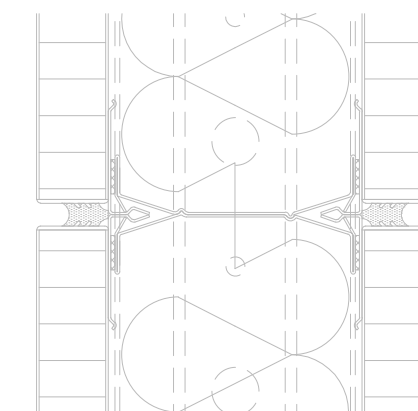
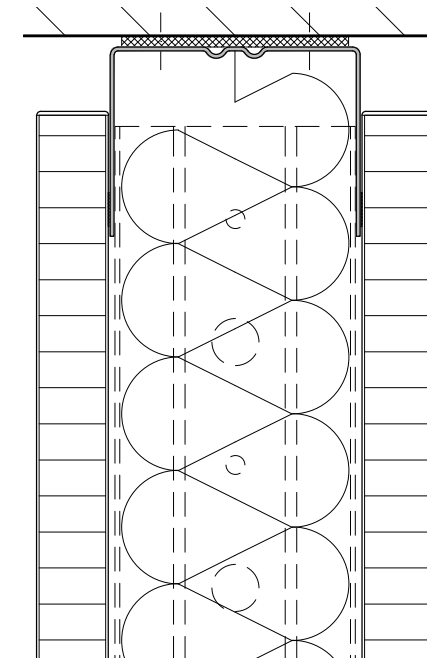
Statics certification: According to DIN 4103, Part 1, Installation area 1 and 2

Fire resistance: (also see page 44-45)

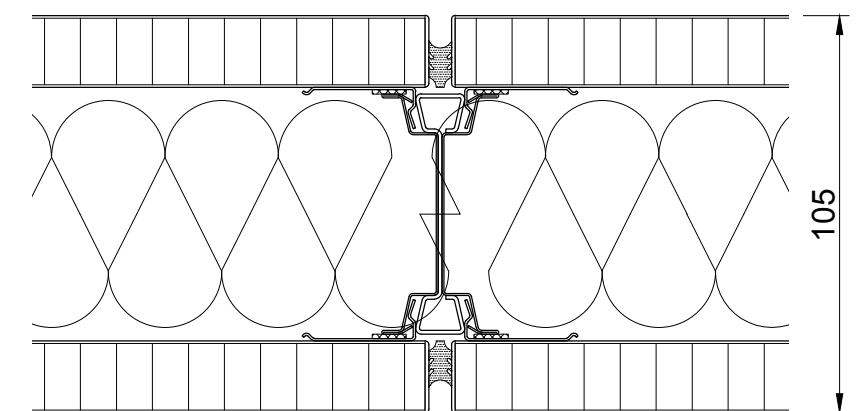
EI0 (no requirements)

EI30 solid wall up to W x H = 1.500 x 4.000 mm

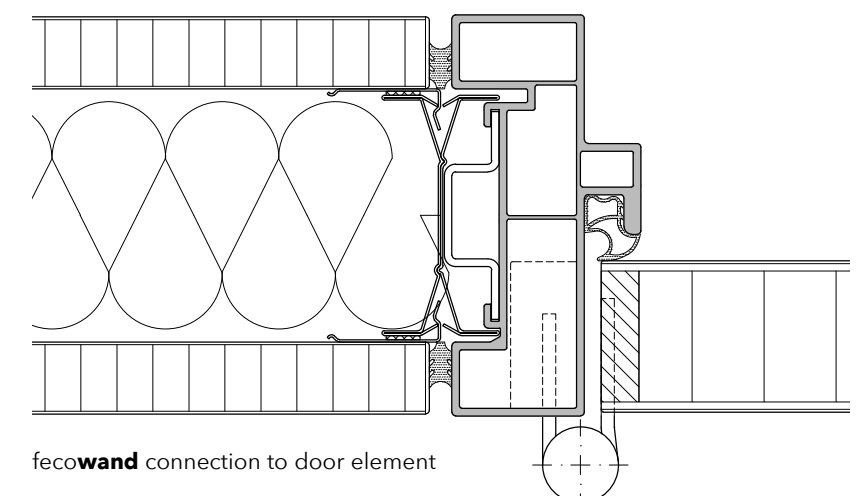
EI90 solid wall up to W x H = 1.250 x 3.000 mm



fecowand horizontal section with standard upright



fecowand horizontal section with slotted upright



fecowand connection to door element



Partition wall system with wall-integrated horizontal or vertical organization

Dimensions: Building-specific element-width and element-height, wall thickness 105 mm, recommended element size
vertical organization undivided up to $W \times H = 1,000 \times 3,000$ mm
horizontal organization to $W \times H = 2,000 \times 3,000$ mm

Cladding: 2 x 19 mm three-layer particle board, gluing P2, formaldehyde emission class E1, building material class B2, optional B1, EI90 fire protection with 2 x 18 mm A2 gypsum particleboards, optional fecophon acoustics horizontal organization with wall-integrated 10-15 mm-high aluminium cross-section profiles for hanging in, standard height grid $H = 350$ mm

Surfaces: Melamine resin direct-coating as per collection, optional CPL/HP L coating material, real wood veneers, paint finishing, steel cases powder-coated in popular RAL colours, aluminium cases natural E6/EV1 anodized, pinnable felt surfaces as per collection, cross-section profiles aluminium natural E6/EV1 anodized

Substructure: Galvanized rolled-steel sections, standard uprights for horizontal organization, slotted uprights with 32 mm pitch hanging slots for vertical organisation, each with installation openings, full-length clips retaining rails on the reverse of the panels

Insulation: 40/60 mm mineral fibre insulation with high bio-solubility, building material class A1, density approx. 50 kg/m^3 , increased sound insulation requirement with plasterboard weighting

Connecting profiles: U-shaped rolled-steel sections as recessed connecting joints, coated in RAL 7016 anthracite, optionally in other popular RAL colours

Floor connection: Telescopic, integrated negative skirting approx. 30-100 mm (80 mm standard), recessed approx. 20 mm

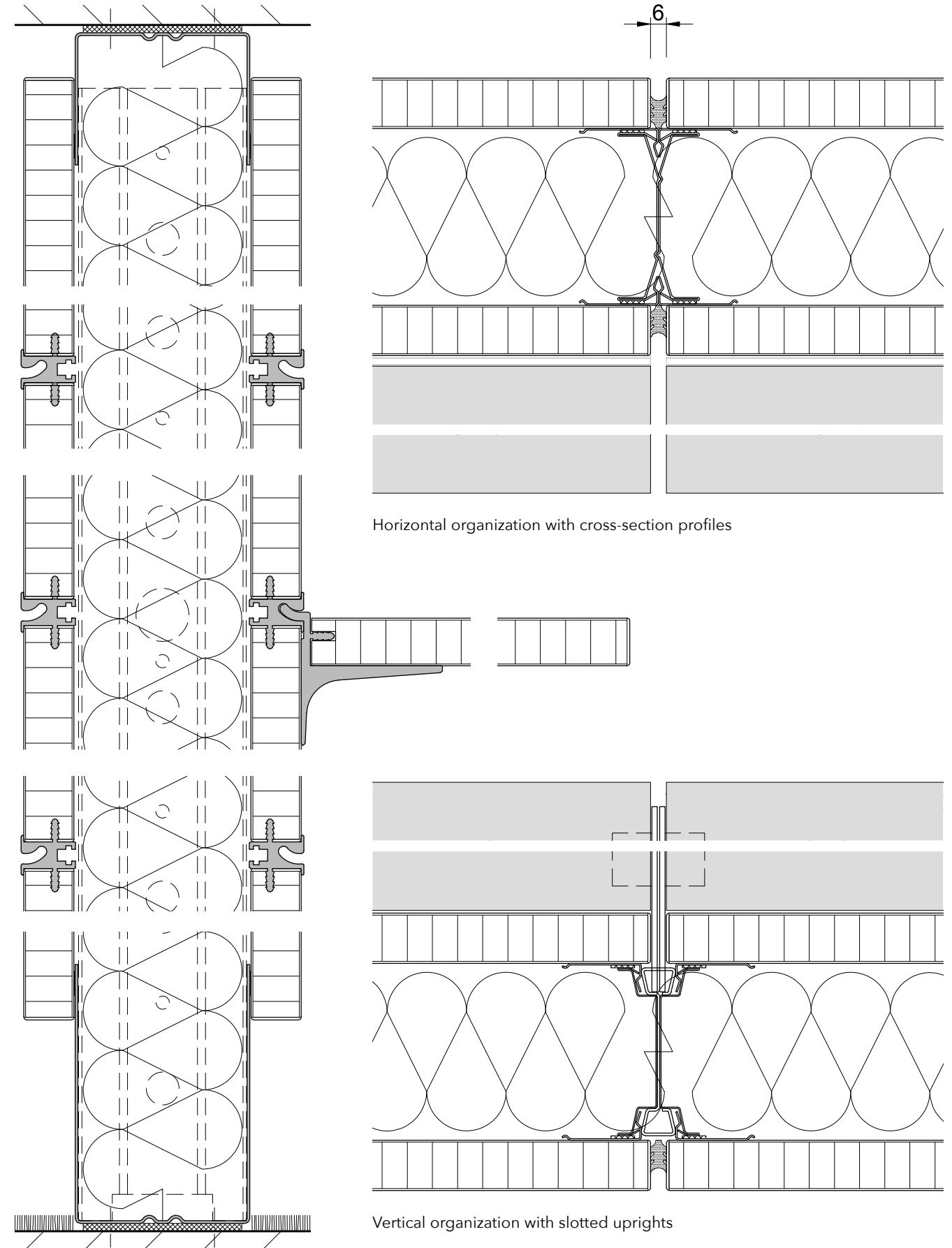
Ceiling connection: Telescopic, shadow joint approx. 20 mm (up to 80 mm), absorption of standard tolerances and structural movements up to ± 15 mm as standard, optional higher tolerance absorption possible, minimum inset of slotted uprights in ceiling connection profile ≥ 25 mm with load from wall organizers

Sound insulation: Sound-insulation test values
Solid wall with aluminium transverse joints approx. 1-2 dB
lower than solid wall fecowand
Solid wall with slotted uprights $R_{w,P} = 47/48/51/52$ dB (with joint profiles)

Statics certification: Data for upright spacing ≤ 1.000 mm, wall height ≤ 4.000 mm and reach ≤ 300 mm (others on request); Horizontal organization: Allowable load max. 40 kg per removable shelf for up to 4 rows on top of each other, one or both sides of the wall; Vertical organization: Allowable load max. 45 kg per removable shelf for up to 4 rows on top of each other, one or both sides of the wall

Fire resistance: EI30 solid wall with aluminium transverse joints or slotted uprights, EI90 solid wall with slotted uprights, console loads on request

Organizers: Wooden and glass hanging shelves, cloakroom shelves, bulletin boards, whiteboards, magnetic rails, organization panels, storage trays, hooks, cable systems and more on request



Horizontal organization with cross-section profiles

Vertical organization with slotted uprights



Sound absorbing partition wall system with perforation or slots

Dimensions: Building-specific element-width and element-height, wall thickness 105 mm, recommended element size undivided up to $W \times H = 1,000 \times 3,000$ mm

Cladding: Acoustic elements with perforation or slots: 2 x 19 mm medium-density fibreboard panels (MDF) according to DIN EN 622-5, P2 gluing, formaldehyde emission class E1 (base board), building material class B2, optional B1, rear acoustic fleece in black

Acoustic elements with micro-perforation: 2 x 19 mm sandwich panels made of wooden materials, inset surrounding frame, formaldehyde emission class E1 (base board), building material class B2, rear acoustic fleece in black

Surfaces: Melamine resin direct-coating according to DIN EN 14 322 as per collection, optional CPL-/HPL-coating material according to DIN EN 438 (standard with micro-perforation), real wood veneers or paint finishing

Edges: 1 mm ABS edge all around, same colour as the surface, veneer surface with 1 mm thick veneer edge

Substructure: rolled-steel sections, Standard upright with installation openings, clips retaining rails on reverse of cladding, optional slotted uprights with integrated vertical organisation with 32 mm pitch

Insulation: 20/30/40/60 mm mineral fibre insulation with high bio-solubility, building material class A1, density approx. 40-50 kg/m³, acoustic basins and weighting depending on sound-insulation requirements

Connecting profiles : U-shaped rolled-steel sections as recessed connecting joints, coated in RAL 7016 anthracite, optionally in other popular RAL colours

Floor connection: Telescopic, integrated negative skirting approx. 30-100 mm (80 mm standard), recessed approx. 20 mm

Ceiling connection: Telescopic, shadow joint approx. 20 mm (up to 80 mm), absorption of standard tolerances and structural movements up to +/- 15 mm as standard, optional higher tolerance absorption possible

Sound insulation: (also see pages 38-41)

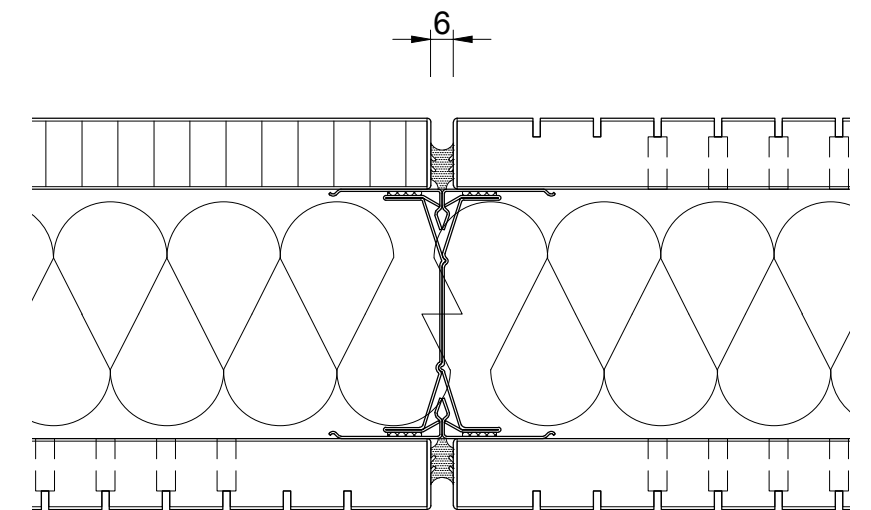
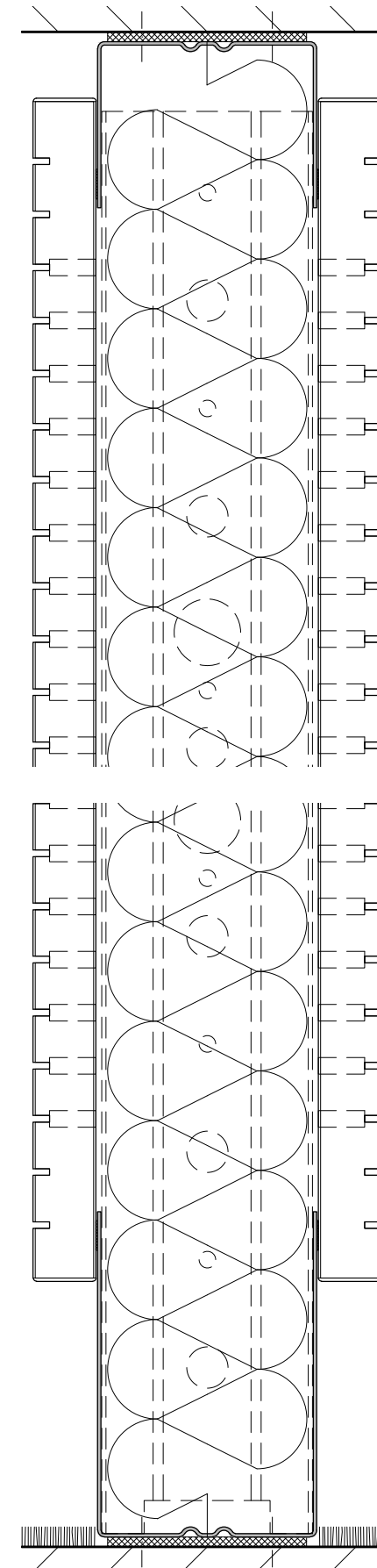
Sound-insulation test value perforation/slots one side	$R_{w,P} = 42-49$ dB
Sound-insulation test value perforation/ slots two-sided	$R_{w,P} = 27-49$ dB
Sound-insulation test value micro-perforation/slots one side	$R_{w,P} = 42-47$ dB
Sound-insulation test value micro-perforation on both sides	$R_{w,P} = 27-47$ dB

Sound absorption: (also see page 42)

Sound absorption coefficient slots S14/2	$\alpha_w = 0.50$
Sound absorption coefficient slots S27/5	$\alpha_w = 0.55$
Sound absorption coefficient perforation R16/16/5	$\alpha_w = 0.50$
Sound absorption coefficient fine perforation F8/8/2	$\alpha_w = 0.45$
Sound absorption coefficient micro-perforation M3/3/1	$\alpha_w = 0.60-0.85$

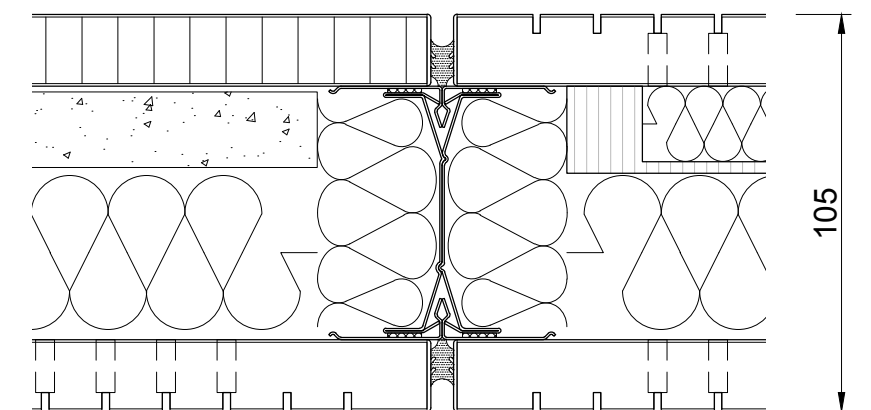
Statics certification: According to DIN 4103, Part 1, Installation area 1 and 2

Fire resistance: EI0 (no requirements)



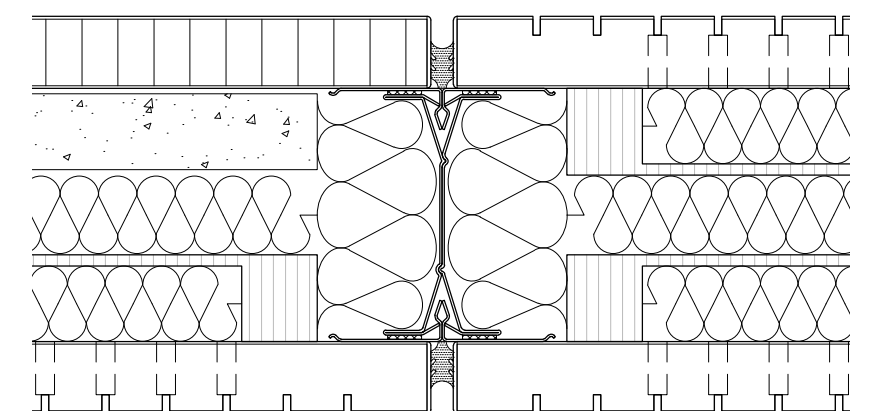
Acoustic element - one side (V1)

Acoustic element on both sides (V1)



Acoustic element - one side (V2)

Acoustic element on both sides (V3)



Acoustic element one side (V4)

Acoustic element on both sides (V4)



Central single-pane glazing as post-free all-glass construction

Dimensions: Building-specific element-width and element-height, wall thickness 35 mm, recommended element size
Tempered undivided to W x H = 1,350 x 3,000 mm
Laminated undivided to W x H = 1,000 x 3,000 mm

Design: All-glass construction with aluminium glass-retaining profiles on the floor and ceiling, without vertical uprights, glass joints as dry bonding (with passivated front edges), optionally with silicone jointing

Connecting profiles: Aluminium glass-retaining profiles 50 mm facing width and 35 mm depth, glass inset 15-25 mm according to DIN 18008

Surface: Aluminium glass-retaining profiles E6/EV1 anodized, optionally powder-coated in popular RAL colours

Glazing: Single-pane or laminated glass*
Single pane safety glass 10-12 mm tempered
Laminated safety glass 16-18 mm laminated
visible glass edges ground and polished

Floor connection: Three-part floor profile at 50 mm height, with base profile, clamp jaw and covering profile

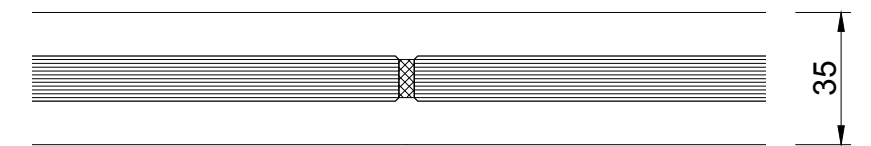
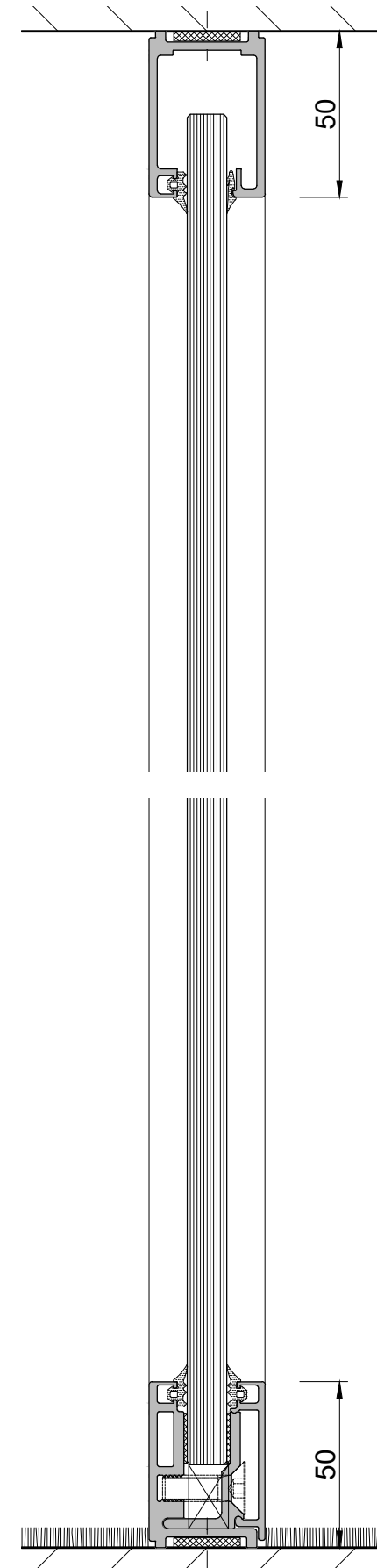
Ceiling connection: One-piece ceiling profile at 50 mm height for tolerance absorption, optional three-part; absorption of standard tolerances and structural movements to +/- 15 mm (three-part +/- 5 mm), optional ceiling profile at 70 mm height for higher tolerance absorption

Sound insulation: (also see pages 38-41)
Sound-insulation test values - Single-pane glazing $R_{w,Glas} = 35-37$ dB
Sound-insulation test values - laminated glass $R_{w,Glas} = 37-42$ dB

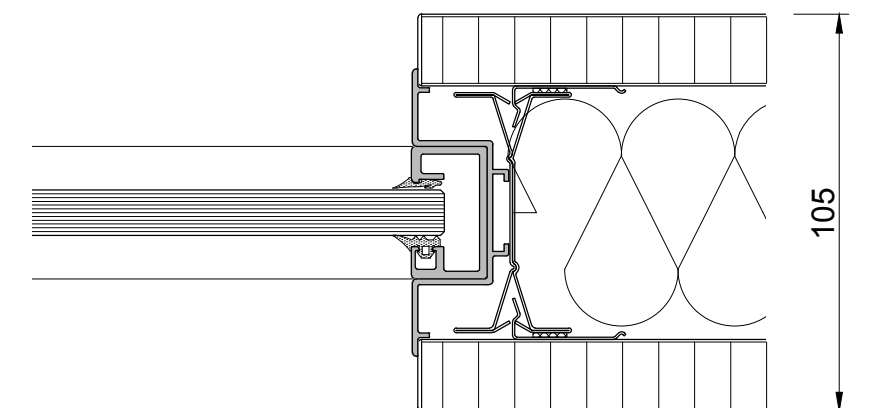
Statics certification: According to DIN 4103, Part 1, installation area 1 and 2, optionally, formation as fall-protection glazing according to the General Building Inspection Test Certificate

Fire resistance: EI0 (no requirements)

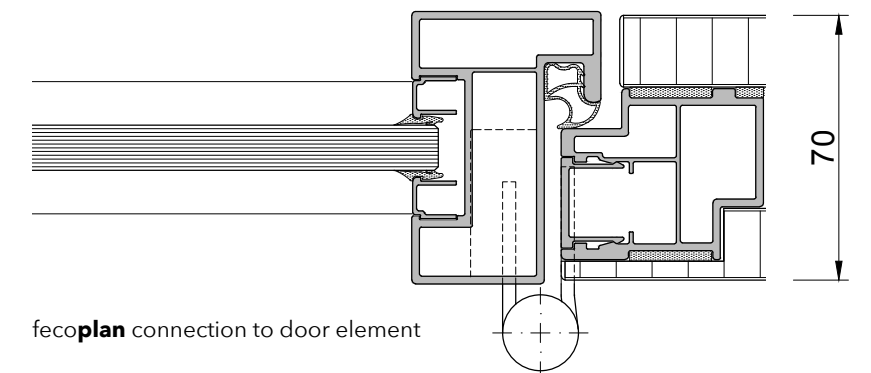
*Glazing which extends down to the floor must, according to Workplace Regulations and Accident Prevention Regulations, be safety glass (single or laminated safety glass). With full glazing, it is also recommended that glass marking be included at eye level. The risk of spontaneous breakage with single-pane safety glass can be reduced by the use of heat-soak-tested single-pane safety glass.



fecoplan horizontal section



fecoplan connection to solid wall



fecoplan connection to door element



Central single-pane or double glazing or insulation glass with 35 mm aluminium frame, optional G30 and F30

Dimensions: Building-specific element-width and element-height, wall thickness 105 mm, recommended element size when undivided to W x H = 1,350 x 3,000 mm

Structure: Glass frame made of aluminium profiles, mitred corners connected with 3D clamping angles, facing width of glass frame all around 35 mm

Surface: Glazing frame Aluminium natural E6/EV1 anodized, optionally powder-coated in popular RAL colours

Glazing: Single- or double-pane glazing consisting of float, tempered, laminated and fire-resistant glass* Single-pane glazing 8-10 mm of float, tempered and laminated glass. Insulation glazing 28 mm insulating glass consisting of float, tempered, laminated Fire-resistant glazing 27 mm fire-resistant clear glass

Substructure: Galvanized rolled-steel sections, standard uprights with installation openings, optional slotted uprights for integrated vertical organization with 32 mm pitch

Connecting profiles: U-shaped rolled-steel sections as recessed connecting joints, coated in RAL 7016 anthracite, optionally in other popular RAL colours.

Floor connection: Telescopic, integrated negative skirting approx. 50-100 mm high (80 mm standard), recessed 20 mm

Ceiling connection: Telescopic, shadow joint approx. 20 mm (to 50 mm), absorption of standard tolerances and structural movements up to +/- 10 mm (fire protection +/- 5 mm), optional higher tolerance absorption possible

Sound insulation: (also see page 38-41)

Sound-insulation test values - Single-pane glazing $R_{w,P} = 32/35/37$ dB

Sound-insulation test values - Double glazing $R_{w,P} = 37/39/42$ dB

Sound-insulation test values - Fire-resistant glazing $R_{w,P} = 37/42$ dB

Statics certification: According to DIN 4103, Part 1, Installation area 1 and 2

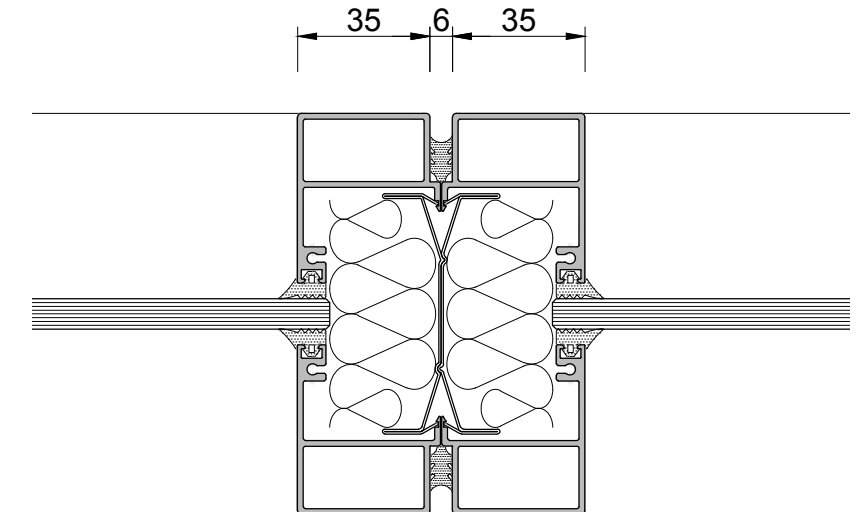
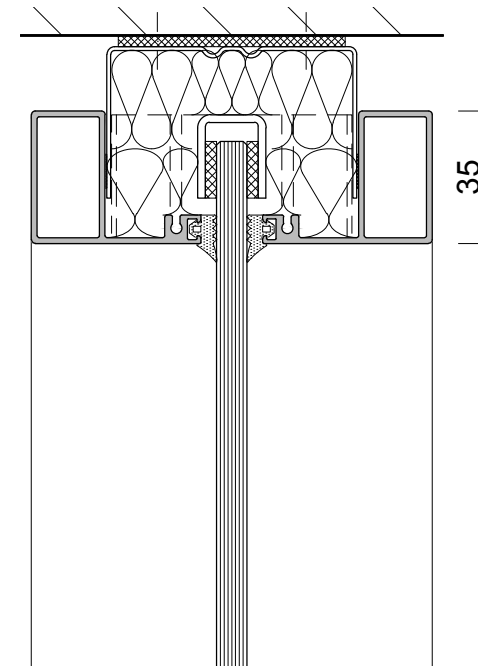
Fire protection: (also see pages 44-45)

EI0 (no requirements)

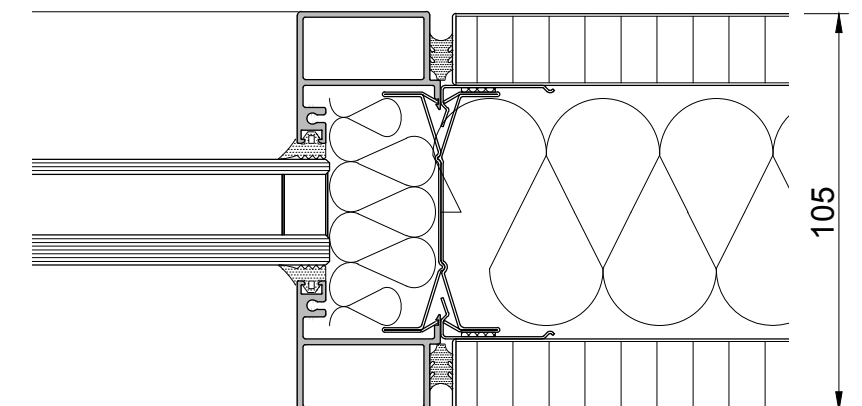
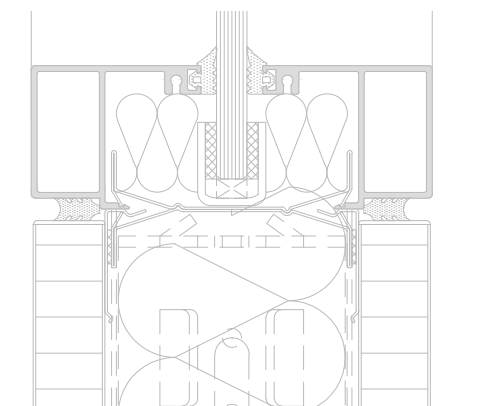
G30 top glazing, undivided to W x H = 2,050 x 1,150 mm

F30 full-glazing, undivided to W x H = 1,350 x 3,000 mm

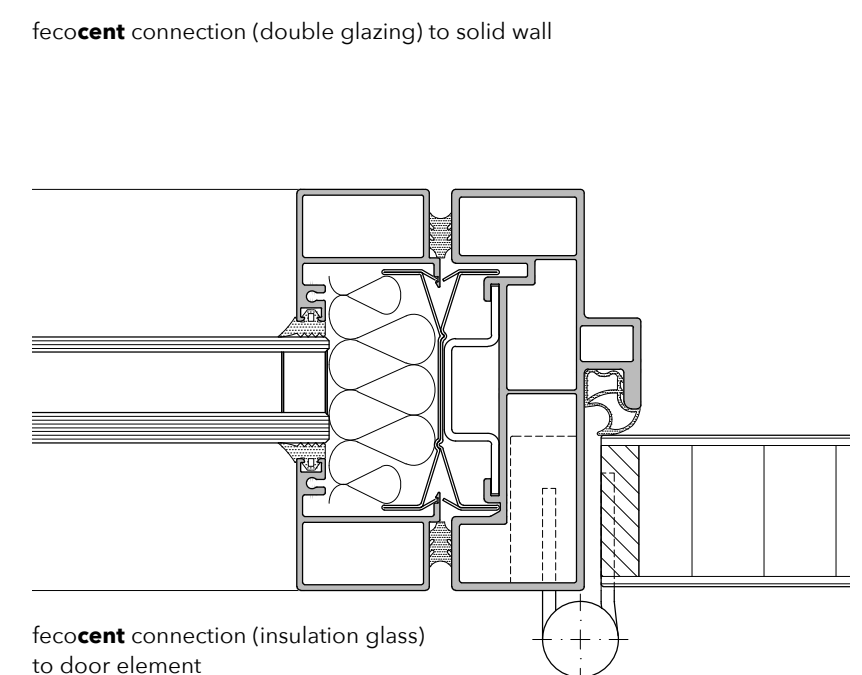
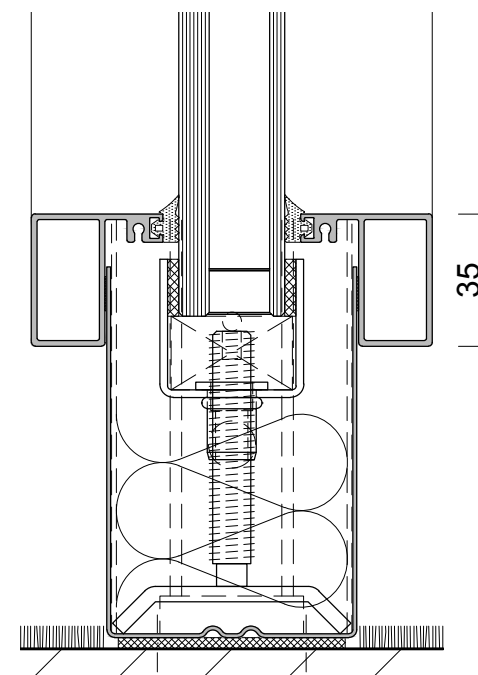
*Glazing which extends down to the floor must, according to Workplace Regulations and Accident Prevention Regulations, be safety glass (single or laminated safety glass). With full glazing, it is also recommended that glass marking be included at eye level. The risk of spontaneous breakage with single-pane safety glass can be reduced by the use of heat-soak-tested single-pane safety glass. Fire-resistant glass has different visual properties due to design.



fecocent horizontal section (single-pane glazing)



fecocent connection (double glazing) to solid wall



fecocent connection (insulation glass) to door element



fecofix glass elements are prefabricated in the factory and supplied as fully-glazed elements. Factory installation of cleaned glass panes into an undivided glass frame ensures cleanliness in the inter-pane space. Blinds can also be integrated in the factory. The glass retaining rails on both sides enable subsequent removal of a glass pane without having to uninstall the glass element.

Wall-flush single or double-glazing with a 20-mm-thin aluminium frame

Dimensions: Building-specific element-width and element-height, wall thickness 105 mm, recommended element size undivided up to $W \times H = 1.350 \times 3.000$ mm

Structure: Glass frame made of aluminium profiles, without centre joints, mitred corners connected with 3D clamping angles, facing width of glass frame all around 20 mm

Surface: Glazing frame Aluminium natural E6/EV1 anodized, optionally powder-coated in popular RAL colours

Glazing: Single or twin-pane double-glazing consisting of float, tempered and laminated glass*
Single-pane glazing 5-8 mm float/tempered/laminated glass
Double-glazing 2 x 5-8 mm float/tempered/laminated glass

Substructure: Galvanized rolled-steel sections, standard uprights with installation openings, optional uprights with slotted rail for integrated vertical organization with 32 mm pitch

Connecting profiles: U-shaped rolled-steel sections as recessed connecting joints, coated in RAL 7016 anthracite grey, optionally in other popular RAL colours.

Frame tops: Flush-front aluminium profile (20 + 6 mm) in the surface of the glazing frame or recessed L-system angle in the surface of the connecting profiles

Floor connection: Telescopic, integrated negative skirting approx. approx. 50-100 mm high (80 mm standard), recessed approx. 20 mm, with full-glazing three-part base floor track and level adjuster

Ceiling connection: Telescopic, shadow joint approx. 20-50 mm, absorption of standard tolerances and structural movements up to ± 15 mm (without frame top ± 5 mm), optional higher tolerance absorption possible

Sound insulation: (also see page 38-41)

Sound-insulation test values - Single-pane glazing $R_{w,P} = 32/35/37$ dB

Sound-insulation test values - Double glazing $R_{w,P} = 39/43/45/47/49$ dB

Statics certification: According to DIN 4103, Part 1, Installation area 1 and 2, optionally, formation as fall-protection glazing according to the General Building Inspection Test Certificate

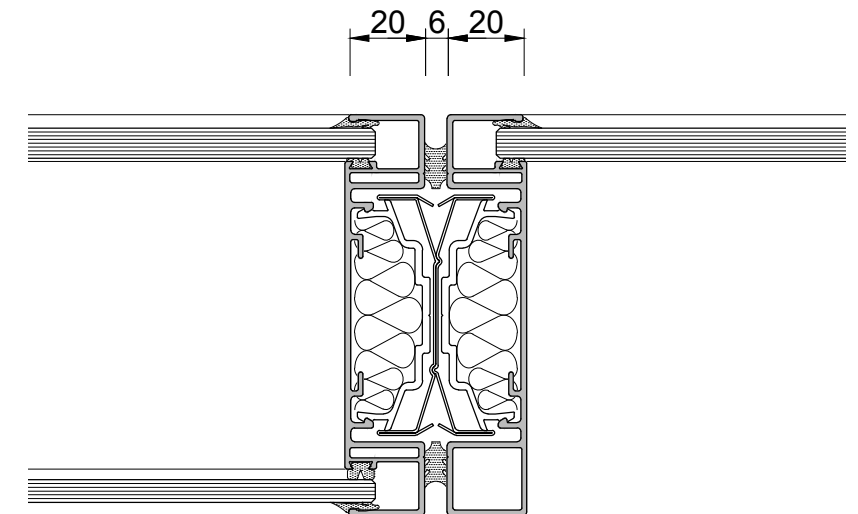
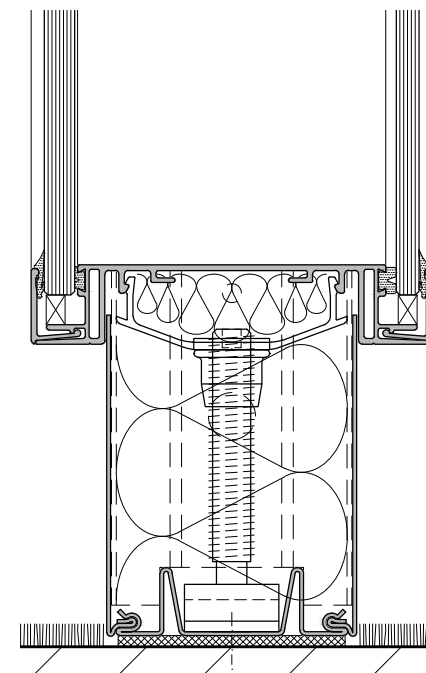
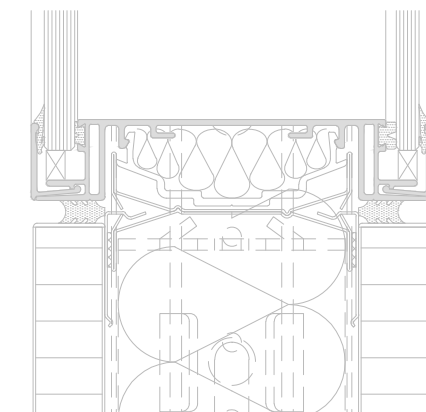
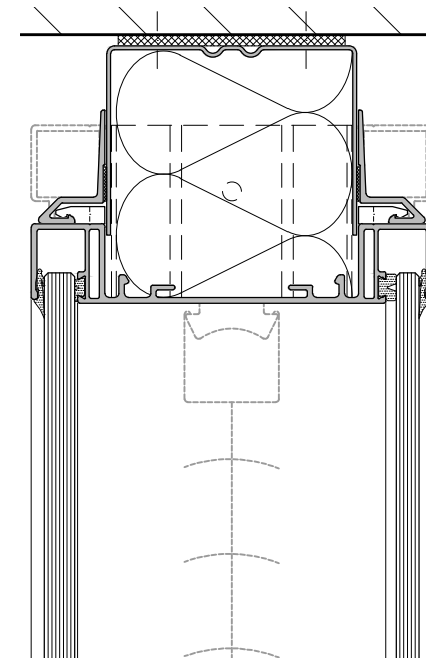
fire protection: (also see pages 44-45)

EI0 (no requirements)

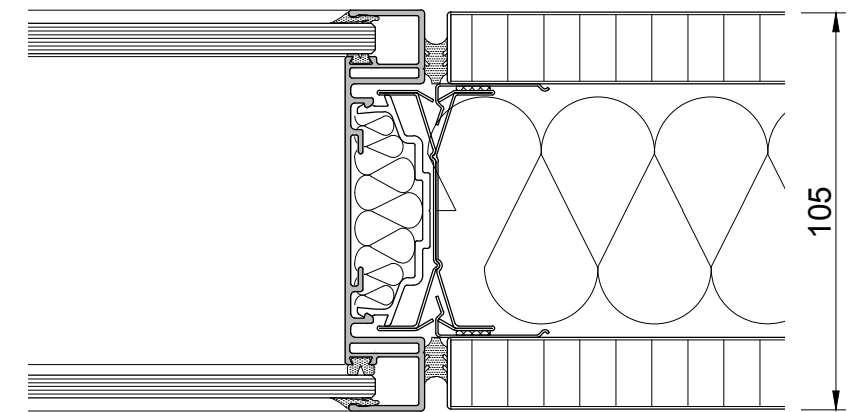
F30 triple-pane full-glazing, undivided to $W \times H = 1,350 \times 3,000$ mm

Option - blinds (F0): 25 mm wide horizontal slats, centreline in the space between the panes, manual operation using a rotary knob with reverse function or electric with a lifting, lowering and tilting function, optional with group or remote control

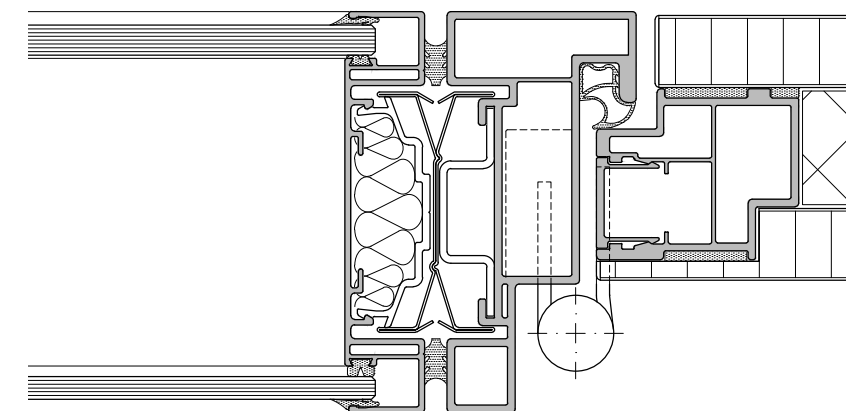
*Glazing which extends down to the floor must, according to Workplace Regulations and Accident Prevention Regulations, be safety glass (single or laminated safety glass). With full glazing, it is also recommended that glass marking be included at eye level. The risk of spontaneous breakage with single-pane safety glass can be reduced by the use of heat-soak-tested single-pane safety glass. Fire-resistant glass has different visual properties due to design.



fecofix horizontal section (double on single glazing)



fecofix connection (double glazing) to solid wall



fecofix connection (double glazing) to door element



fecostruct glass elements are prefabricated in the factory and supplied as fully-glazed units. The factory bonding of cleaned glass panes on a continuous glass-supporting frame ensures cleanliness in the space between the double-glazing panes. Blinds can also be integrated in the factory. The two-part base frame allows a glass pane to be removed later without having to uninstall the glass element.

Face-flush single- or double-glazing as frameless structural-glazing-construction

Dimensions: Building-specific element-width and element-height, wall thickness 105 mm, recommended element size when undivided to $W \times H = 1,350 \times 3,000$ mm

Structure: Bonding of the glass panes on a two-part base frame made of aluminium profiles without centre joint, mitred corners connected with 3D clamping angles, facing width of bonding all around 20 mm

Bonding: Using structural-glazing procedure as self-supporting construction; bond is UV-resistant with homogenous surface

Surface: Glass frame aluminium natural, E6/EV1 anodized, optionally powder-coated in popular RAL colours, bonding surface aluminium colour, optional in black

Glazing: Single- or double-pane glazing consisting of float, tempered and laminated glass*, glass edges ground and polished all around
Single-pane glazing 6-8 mm float/tempered/laminated glass
Double-glazing 2 x 6-8 mm float/tempered/laminated glass

Substructure: Galvanized rolled-steel sections, standard uprights with installation openings, optional slotted uprights for integrated vertical organization with 32 mm pitch

Connecting profiles: U-shaped rolled-steel sections as recessed connecting joints, coated in RAL 7016 anthracite grey, optionally in other popular RAL colours.

Frame tops: recessed L-system angle in surface of the tracks

Floor connection: Telescopic, integrated negative base, height approx. 50-80 mm (80 mm standard), recessed approx. 20 mm, with full-glazing three-part base floor track and level adjuster

Ceiling connection: Telescopic, shadow joint approx. 50 mm, absorption of standard tolerances and structural movements up to ± 15 mm (without frame top ± 5 mm), optional higher tolerance absorption possible

Sound insulation: (also see page 38-41)

Sound-insulation test values - Single-pane glazing $R_{w,P} = 32/35/37$ dB

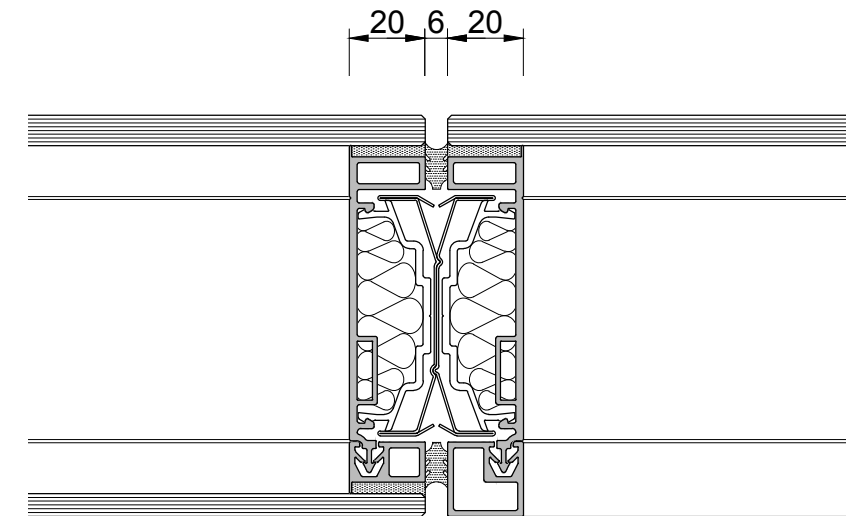
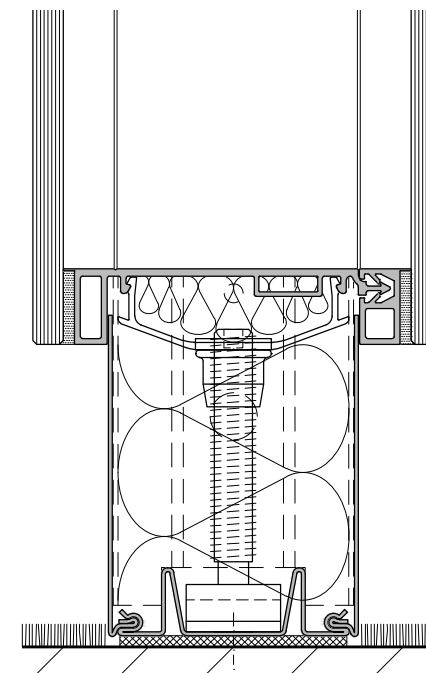
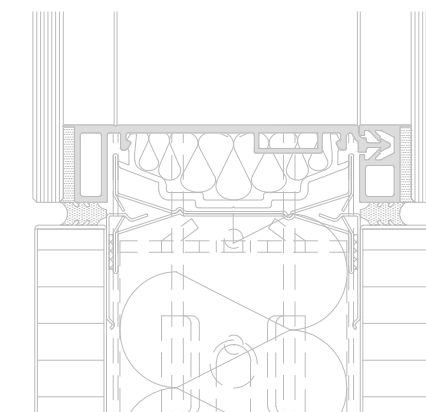
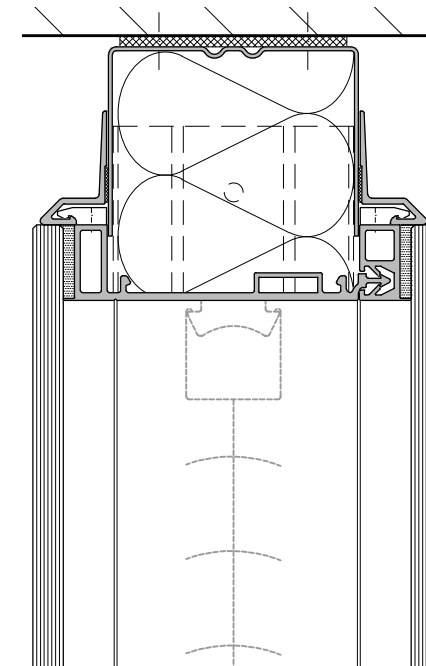
Sound-insulation test values - Double glazing $R_{w,P} = 43/47$ dB

Statics certification: According to DIN 4103, Part 1, Installation area 1 and 2, optionally, formation as fall-protection glazing according to the General Building Inspection Test Certificate

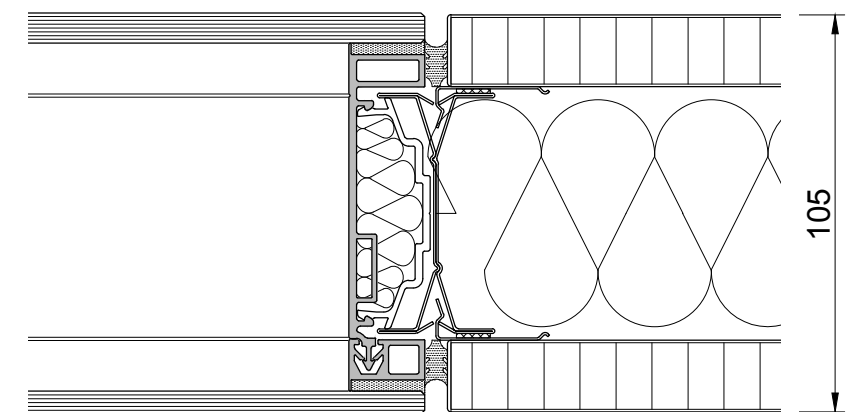
Fire resistance: EI0 (no requirements)

Option - blinds: 25 mm wide horizontal slats, centreline in the space between the panes, manual operation using a rotary knob with reverse function or electric with a lifting, lowering and tilting function, optional with group or remote control

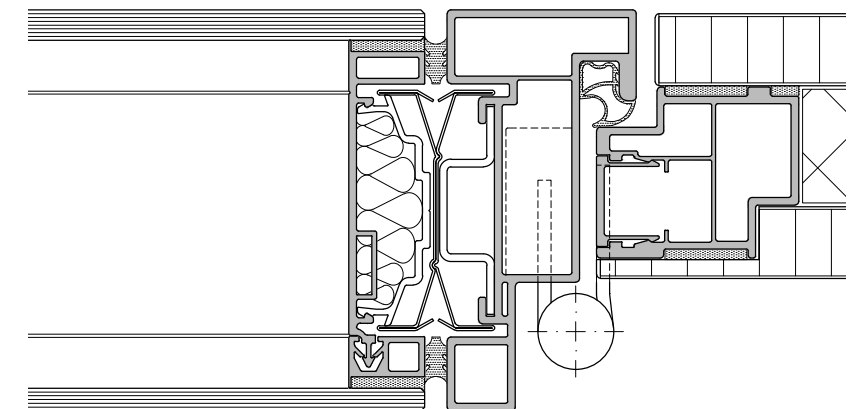
*Glazing which extends down to the floor must, according to Workplace Regulations and Accident Prevention Regulations, be safety glass (single or laminated safety glass). With full glazing, it is also recommended that glass marking be included at eye level. The risk of spontaneous breakage with single-pane safety glass can be reduced by the use of heat-soak-tested single-pane safety glass.



fecostruct horizontal section (double on single glazing)



fecostruct connection (double glazing) to solid wall



fecostruct connection (double glazing) to door element



The basic system details for feco door elements, such as hinge pockets and rebate depth, are almost always identical and enable a range of different door frames and door leaves to be combined.

The system sections show only a selection of the possible combinations. On page 39 you can find an overview of the possible door variants with sound insulation values.

System door elements with wood, glass or framed door leaves

Dimensions: Standard door element size: W x H = 1,000 x 2,118 mm (frame dimension 994 x 2.115 mm), frame depth 105 mm, clear width of door passage for single-rebate frames W x H = 894 x 2,065 mm, clear width of door passage for double-rebate frames W x H = 864 x 2,050 mm, optional element width and height is building-specific, e.g. ceiling-height and adapted to DIN 18040 Barrier-free Construction.

Wooden door element **H40**

Door frame: Aluminium frame 35/50T70; alum. frame 35/35 or steel frame 35/50 – see door frame description on page 32

Door leaf: Wooden flush door leaf according to DIN 68 706, door leaf thickness 40 mm, solid wood concealed edges all around, 3 mm hardboard cover on both sides, tubular chipboard, full chipboard or sound insulation insert (SSK 0/1/2), flush closing, hinge side flush with the door frame

Surface: Both sides covered with 0.8 mm HPL laminate according to DIN EN 438, optional real wood veneer, door leaf edges transparently coated

Door fittings: For wooden-door elements, see page 32

Sound insulation: (also see pages 38-39)
Sound-insulation test values H40 $R_{w,p}$ = 23/32/37 dB

Fire protection: (also see pages 44-45)
optional T30 or T30-smoke safe, tested in solid wall EI30 and EI90, to W x H = 1,200 x 2,580 mm (with steel frame)

Wooden door element **H70**

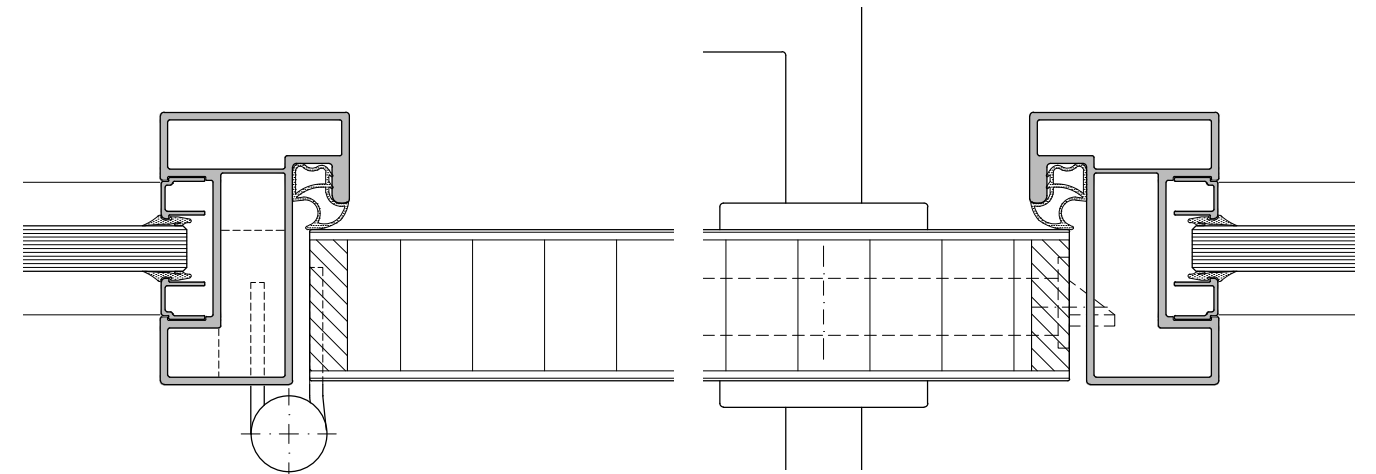
Door frame: Alum. frame 35/50T70, alum. frame 35/35, steel frame 35/50, alum. frame 18/50, alum. frame 18/0 with corridor-side concealed door-frame recess, double-rebate alum. frame 35/50/15 or double-rebate steel frame 35/65 – see door frame description on page 32

Door leaf: Aluminium framed wooden door leaf, door leaf thickness 70 mm, covered with 2 x 19 mm wooden panels, door-leaf frame consists of aluminum profiles, system groove on the face side for flush-mounting all fittings, sound insulation insert, flush closing with jamb rebate, depending on door frame on hinge side, opposite to hinge side (corridor-side) or on both sides flush to door frame/covering/glazing

Surface: On both sides melamine resin direct-coating according to DIN EN 14 322, optional HPL laminate to DIN EN 438 or real wood veneers, frame in aluminium anodized E6/EV1, optionally powder-coated in popular RAL colours

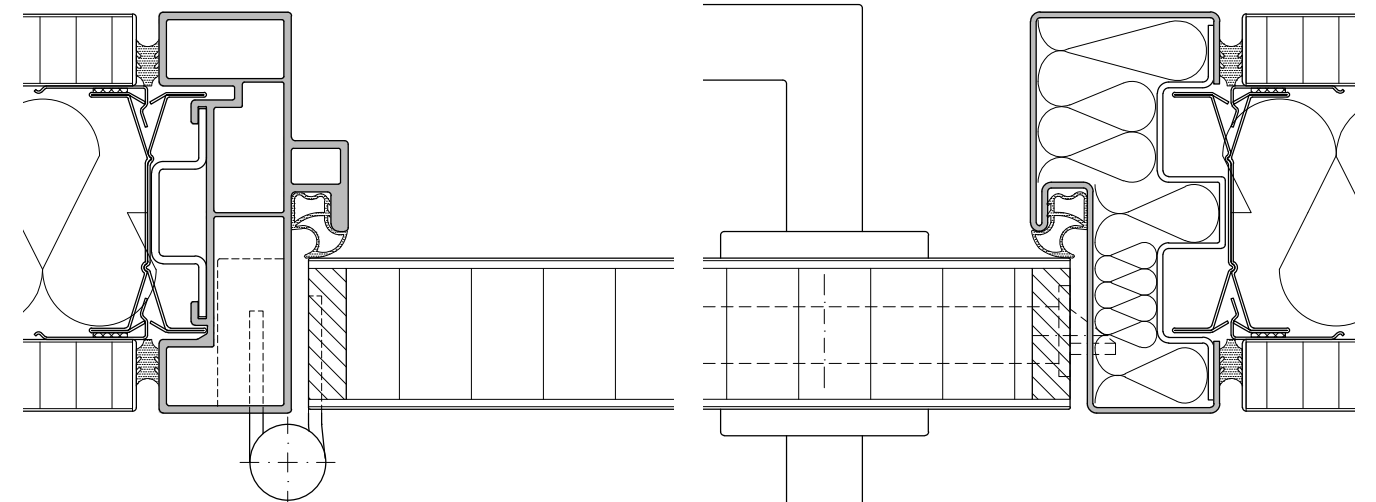
Door fittings: For wooden door elements see page 32

Sound insulation: (also see pages 38-39)
Sound-insulation test values H70 with single-rebate door frame $R_{w,p}$ = 37/40 dB
Sound-insulation test value H70 with double-rebate frame $R_{w,p}$ = 42 dB



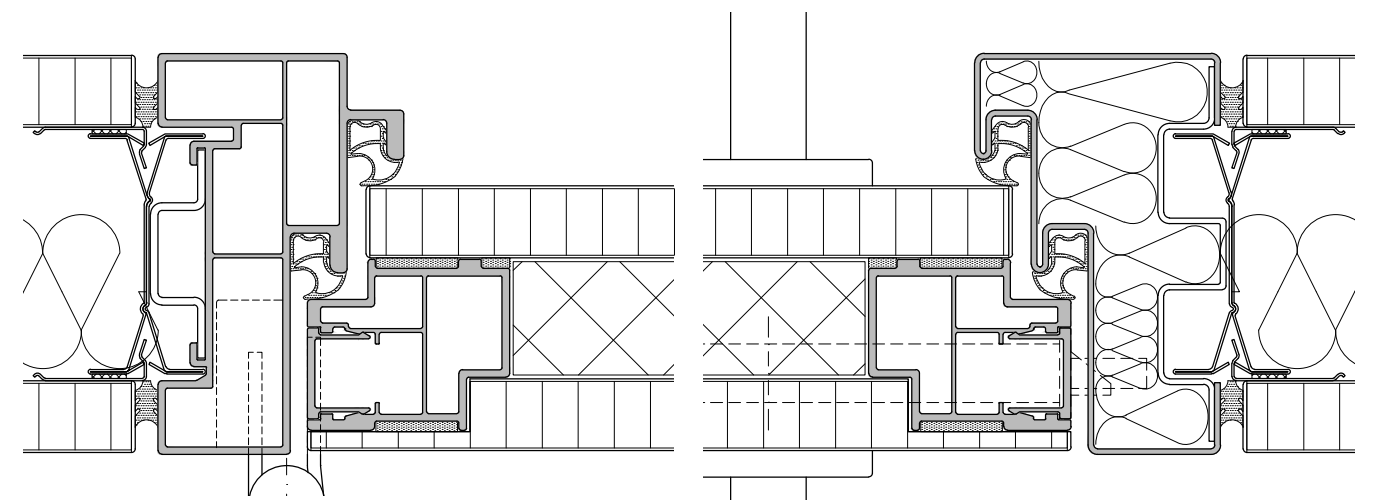
Wooden door element **H40** with alum. frame 35/50T70

... next to fecoplan glazing



Wooden door element **H40** with alum. frame 35/35

... with steel frame 35/50



Wooden door element **H70** with alum. frame 35/50/15

... with steel frame 35/65



Wooden door element **H70**

Door frame: Alum. frame 35/50T70, alum. frame 35/35, steel frame 35/50, alum. frame 18/50, alum. frame 18/0 with corridor-side concealed door-frame recess, double-rebate alum. frame 35/50/15 or double-rebate steel frame 35/65 – see door frame description on page 32

Door leaf: Aluminium framed wooden door leaf, door leaf thickness 70 mm, covered with 2 x 19 mm wooden panels, door-leaf frame consists of aluminum profiles, system groove on the face side for flush-mounting all fittings, sound insulation insert, flush closing with jamb rebate, depending on door frame on hinge side, opposite to hinge side (corridor-side) or on both sides flush to door frame/covering/glazing

Surface: On both sides melamine resin direct-coating according to DIN EN 14 322, optional HPL laminate to DIN EN 438 or real wood veneers, frame in aluminium anodized E6/EV1, optionally powder-coated in popular RAL colours

Door fittings: For wooden door elements see page 32

Sound insulation: (also see pages 38-39)

Sound-insulation test values H70 with single-rebate door frame $R_{w,P} = 37/40$ dB

Sound-insulation test value H70 with double-rebate frame $R_{w,P} = 42$ dB

Wooden door element **H85**

Door frame: Alum. frame 18/50 or alum. frame 18/0 with corridor-side concealed door-frame recess Alum. frame 18/50 or alum. frame 18/0 with corridor-side concealed door-frame recess – see door frame description on page 32

Door leaf: Aluminium framed wooden door leaf, door leaf thickness 85 mm, covered with 2 x 19 mm wooden panels, door-leaf frame consists of aluminum profiles, system groove on the face side for flush-mounting all fittings, sound insulation insert, rebated on the hinge side with jamb rebate, opposite to hinge side (corridor-side) flush to door frame/covering/glazing

Surface: See wooden door element H70

Door fittings: For wooden door elements see page 32

Sound insulation: (also see pages 38-39)

Sound-insulation test value H85 $R_{w,P} = 42$ dB

Wooden door element **H105**

Door frame: Alum. frame 35/65 or alum. frame 35/0 with corridor-side concealed door-frame recess – see door frame description on page 32

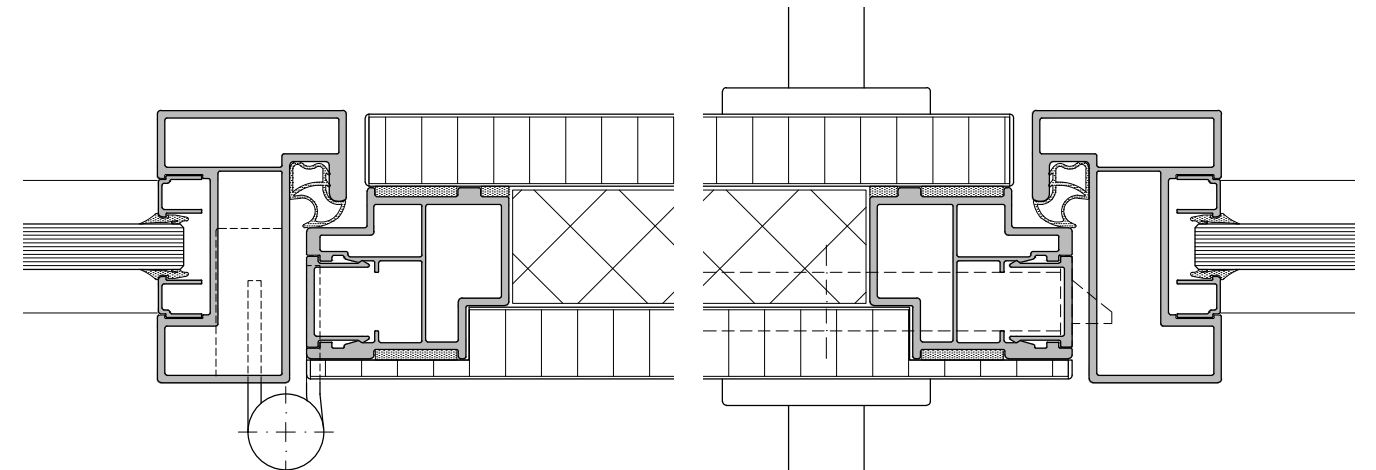
Door leaf: Aluminum-frame wooden door leaf, door leaf thickness 105 mm, covered with 2 x 19 mm wooden panels, door-leaf frame consists of aluminum profiles, system groove on the face side for flush-mounting all fittings, sound insulation insert, flush closing with double jamb rebate, on both sides flush to door frame/covering/glazing

Surface: See wooden door element H70

Door fittings: For wooden door elements see page 32

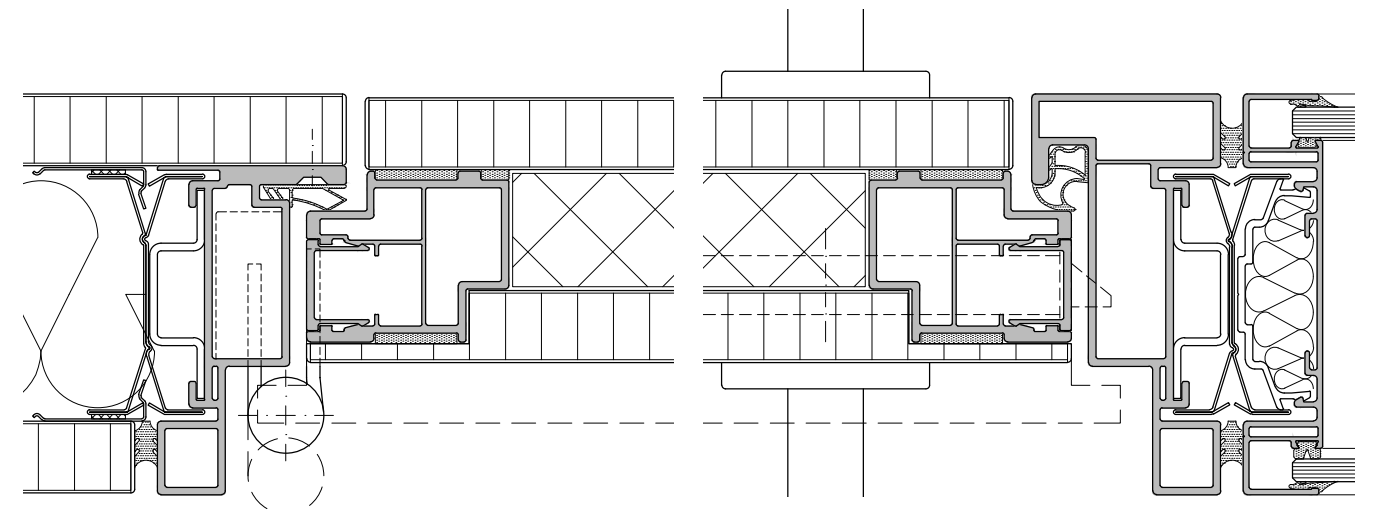
Sound insulation: (also see pages 38-39)

Sound-insulation test values H105 $R_{w,P} = 37/42$ dB



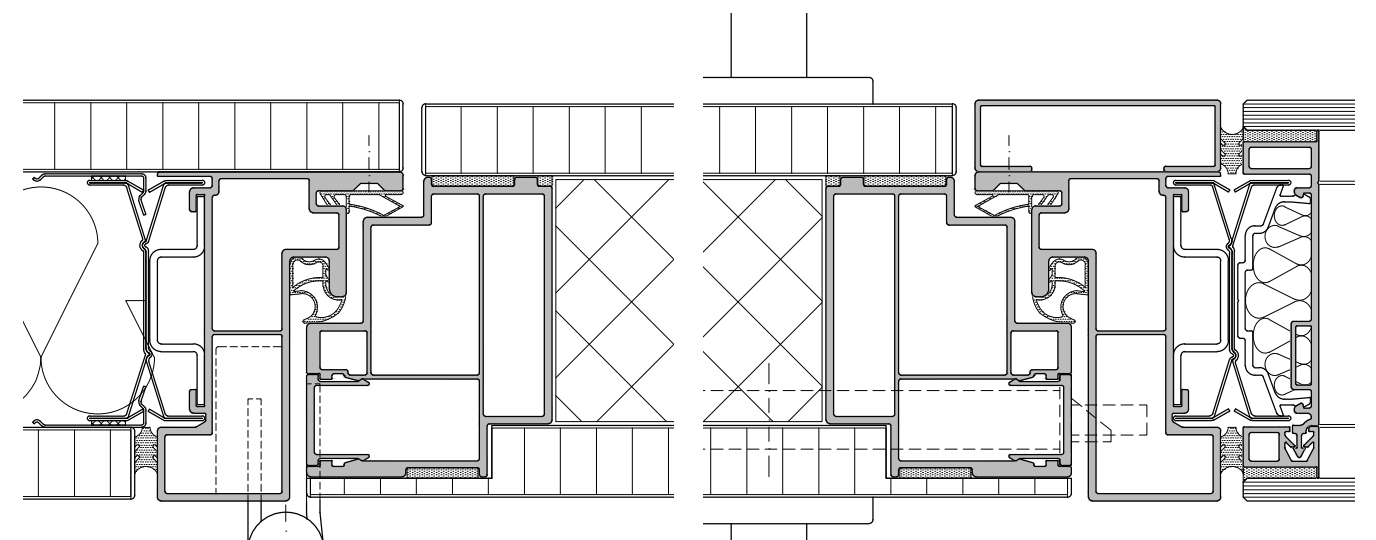
Wooden door element **H70** with alum. frame 35/50T70

... next to fecoplan glazing



Wooden door element **H70 (H85)** with alum. frame 18/0

... with alum. frame 18/50 next to fecofix glazing



Wooden door element **H105** with alum. frame 35/0

... with alum. frame 35/65 next to fecostruct glazing



Glass door element **G10**

Door frame: Aluminium frame 35/50T70; alum. frame 35/35 or steel frame 35/50 – see door frame description on page 32

Door leaf: All-glass door leaf made of 10 mm single-pane safety glass (tempered); glass edges ground and polished all around

Door fittings: For glass door elements see page 32

Sound insulation: (also see pages 38-39)
Sound-insulation test values G10 $R_{w,p}$ = 23/32 dB

Glass door element, aluminum frame **A40**

Door frame: Aluminium frame 35/50T70; alum. frame 35/35 or steel frame 35/50 – see door frame description on page 32

Door leaf: Aluminium door leaf with single-pane glazing, door leaf thickness 40 mm, flush closing, hinge side flush with the door frame

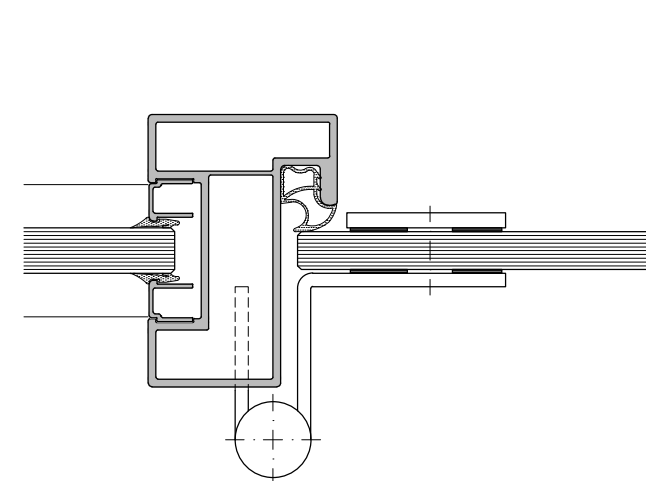
Frame: Made of extruded aluminium profiles, mitred corners connected with 3D clamping angles, system groove on the edge for the flush-mounting of all fittings, facing width 80 mm all around

Surface: Frame aluminium natural, E6/EV1 anodized, optionally powder-coated in popular RAL colours

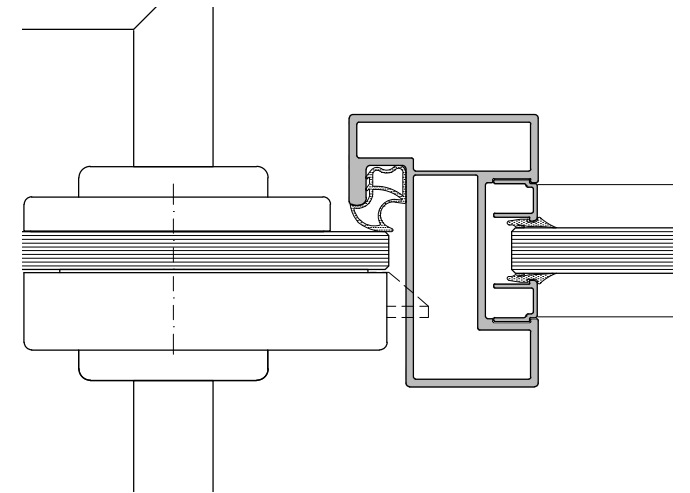
Glazing: Single-pane glazing 8-10 mm tempered/laminated safety glass

Door fittings: For aluminium framed door elements see page 32

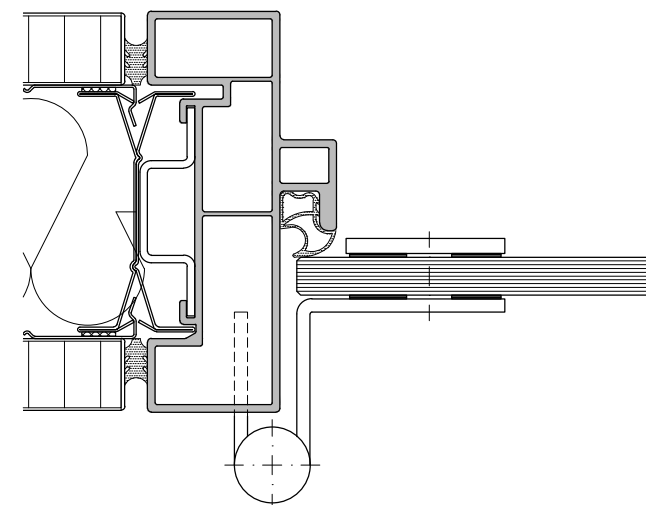
Sound insulation: (also see pages 38-39)
Sound-insulation test values A40 $R_{w,p}$ = 32/35/37 dB



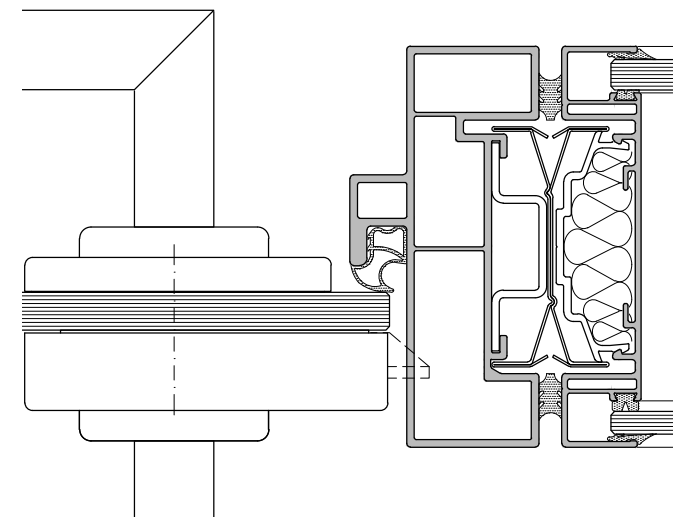
Glass door element **G10** with alum. frame 35/50T70



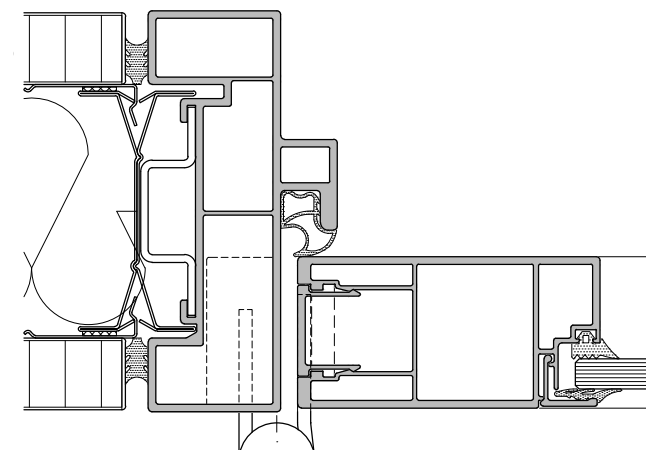
... next to feco**plan** glazing



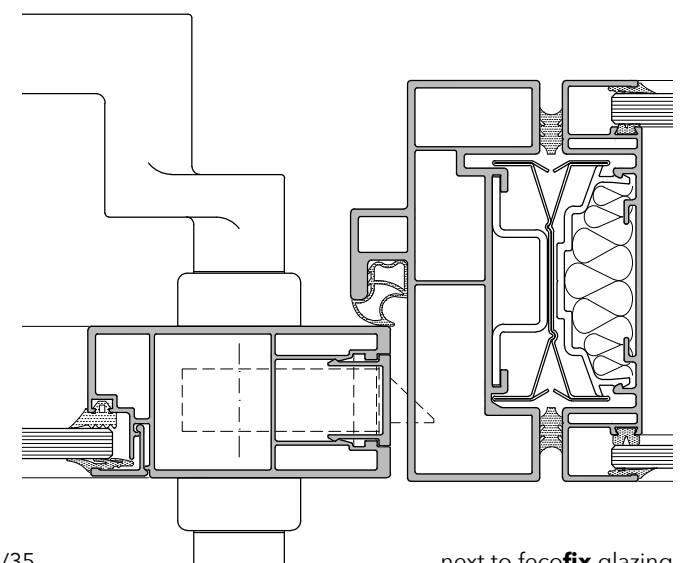
Glass door element **G10** with alum. frame 35/35



... next to feco**fix** glazing



Glass door element, aluminum frame **A40** with alum. frame 35/35



... next to feco**fix** glazing



Glass door element, aluminum frame **A70**

Door frame: Aluminium frame 35/50T70; alum. frame 35/35, steel frame 35/50, alum. frame 18/50, alum. frame 18/0 with corridor-side concealed door-frame recess, double-rebate alum. frame 35/50/15 or double-rebate steel frame 35/65 – see door frame description on page 32

Door leaf: Aluminium door leaf with double glazing, door thickness 70 mm, flush closing with jamb rebate, on the hinge side or opposite to hinge side (corridor-side) depending on door frame, or on both sides flush to door frame/covering/glazing

Frame: Made of extruded aluminium profiles, mitred corners connected with 3D clamping angles, system groove on the edge for the flush-mounting of all fittings, facing width 75/90 mm

Surface: Frame aluminium natural, E6/EV1 anodized, optionally powder-coated in popular RAL colours

Glazing: Twin-pane double-glazing 2 x 5-10 mm tempered/laminated

Door fittings: For aluminium framed door elements see page 32

Sound insulation: (also see page 38-39)

Sound-insulation test values A70 with single-rebate door frame $R_{w,P} = 37/40$ dB
Sound-insulation test value A70 with double-rebate frame $R_{w,P} = 42$ dB

Option - blinds: 25 mm wide horizontal slats, centreline in the space between the panes, manual operation using a rotary knob with reverse function or electric with a lifting, lowering and tilting function, incl. concealed cable transition

Glass door element, aluminum frame **A85***

Door frame: Alum. frame 18/50 or alum. frame 18/0 with corridor-side concealed door-frame recess – see door frame description on page 32

Door leaf: Aluminium-frame door leaf with double glazing, door leaf thickness 85 mm, rebated on the hinge side with jamb rebate, on opposite hinge side (corridor side) face-flush to door frame/covering/glazing

Frame: Made of extruded aluminium profiles, mitred corners connected with 3D clamping angles, system groove on the edge for the flush-mounting of all fittings, facing width 65/95 mm

Surface: Frame aluminium natural, E6/EV1 anodized, optionally powder-coated in popular RAL colours

Glazing: Twin-pane double-glazing 2 x 5-10 mm tempered/laminated

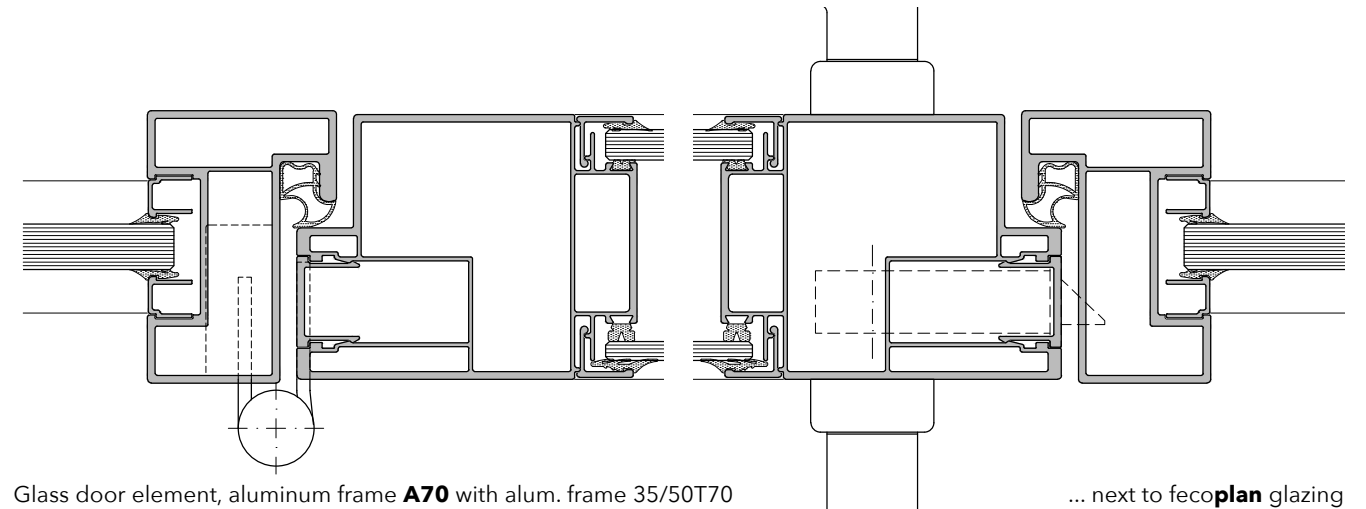
Door fittings: For aluminium framed door elements see page 32

Sound insulation: (also see pages 38-39)

Sound-insulation test value A85 $R_{w,P} = 42$ dB

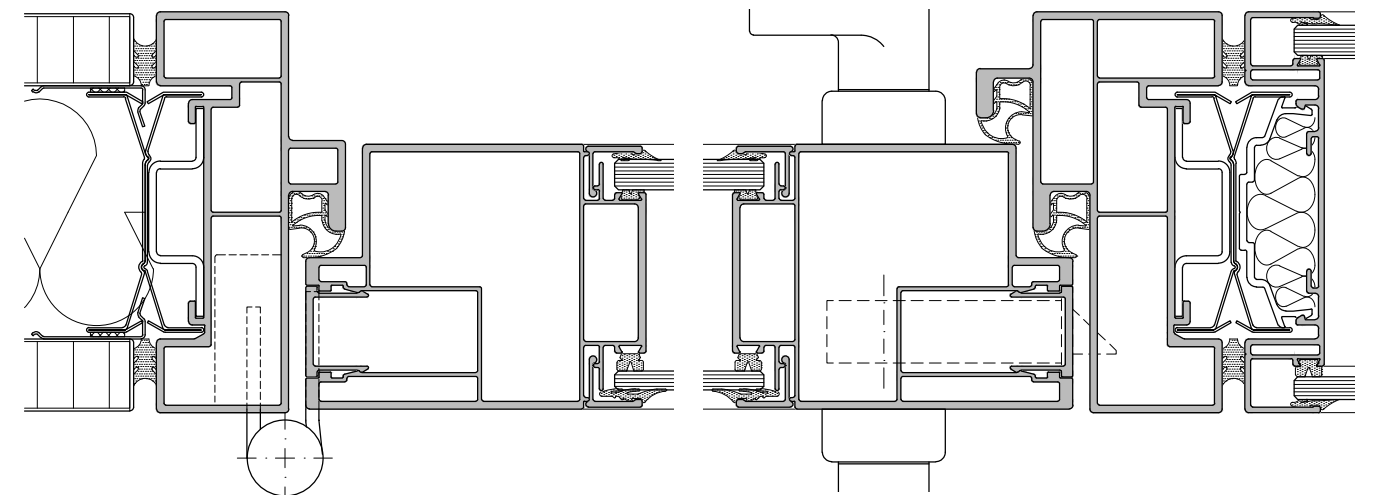
Option - blinds: 25 mm wide horizontal slats, centreline in the space between the panes, manual operation using a rotary knob with reverse function or electric with a lifting, lowering and tilting function, incl. concealed cable transition

*Availability on request



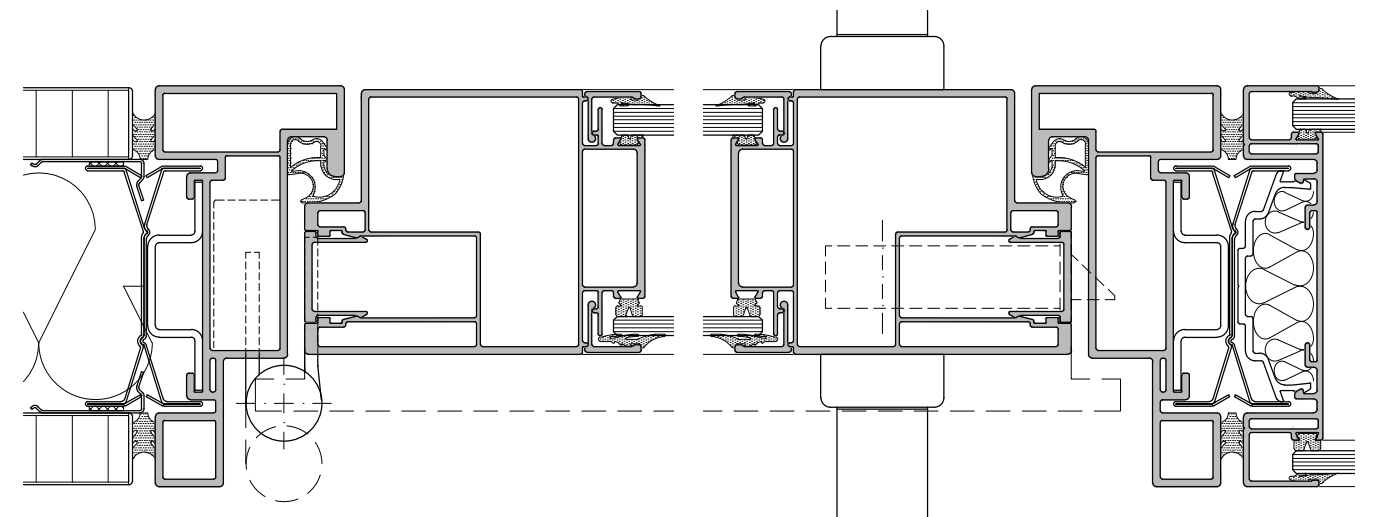
Glass door element, aluminum frame **A70** with alum. frame 35/50T70

... next to fecoplan glazing



Glass door element, aluminum frame **A70** with alum. frame 35/35

... with alum. frame 35/50/15 next to fecofix glazing



Glass door element, aluminum frame **A70 (A85)** with alum. frame 18/50

... next to fecofix glazing



Structural glazing door element **S70**

Door frame: Aluminium frame 35/50T70; alum. frame 35/35, steel frame 35/50, alum. frame 18/50 alum. frame 18/0 Door-frame recess – see door frame description on page 32

Door leaf: Structural-glazing door leaf with double-glazing, door leaf thickness 70 mm, facing width bonding/frame 50/65 mm, flush closing with jamb rebate, on the hinge side or opposite to hinge side (corridor-side) depending on door frame, or on both sides flush to door frame/covering/glazing

Bonding: The glass panes are bonded in a structural-glazing procedure and self-supporting on a surrounding base frame

Frame: Made of extruded aluminium profiles, mitred corners connected with 3D clamping angles, system groove on the edge for the flush-mounting of all fittings, door frame in aluminium natural, E6/EV1 anodized, optionally powder-coated in popular RAL colours

Glazing: Twin-pane double-glazing, frame printing 50/65 mm all around (on bottom 65 mm) in aluminium colour, optionally in black, glass edges ground and polished all around, double-glazing 5 + 8 mm tempered

Door fittings: For aluminium framed door elements see page 32

Sound insulation: Sound-insulation test value S70 $R_{w,P} = 37$ dB

Structural glazing door element **S105**

Door frame: Alum. frame 35/65 or alum. frame 35/0 with corridor-side concealed door-frame recess – see door frame description on page 32

Door leaf: Structural-glazing door leaf with double-glazing, door leaf thickness 105 mm, facing width bonding/frame 50/80 mm (on bottom 65 mm), flush closing with double jamb rebate, on both sides flush to door frame/covering/glazing

Bonding: The glass panes are bonded in a structural-glazing procedure and self-supporting on a surrounding base frame

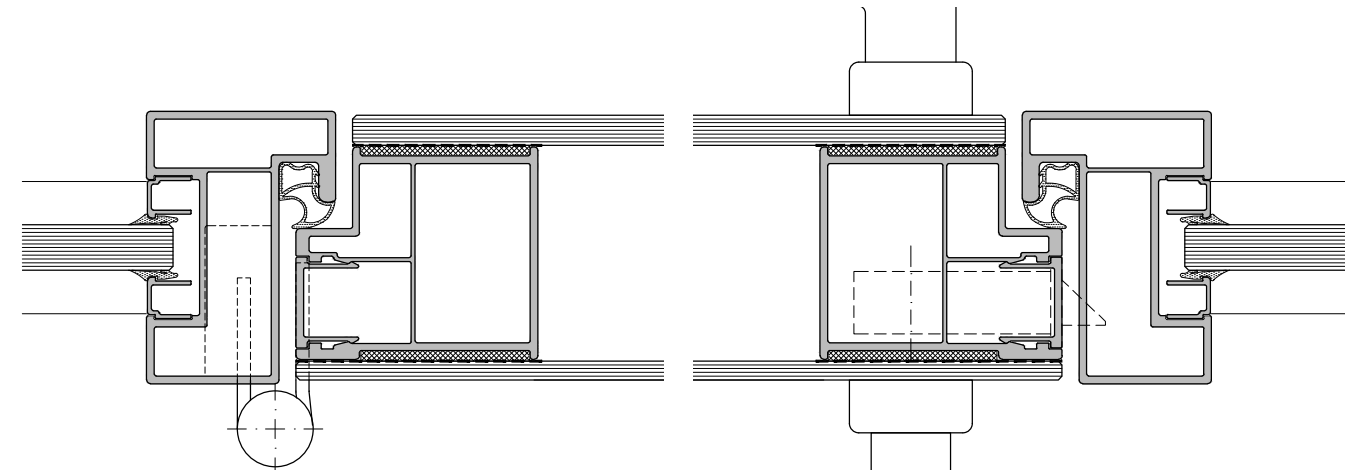
Frame: Made of extruded aluminium profiles, mitred corners connected with 3D clamping angles, system groove on the edge for the flush-mounting of all fittings, door frame in aluminium natural, E6/EV1 anodized, optionally powder-coated in popular RAL colours

Glazing: Twin-pane double-glazing, frame printing 50/80 mm all around (on bottom 65 mm) in aluminium colour, optionally in black, glass edges ground and polished all around, double-glazing 5/6 + 8 mm tempered/laminated

Door fittings: For aluminium framed door elements see page 32

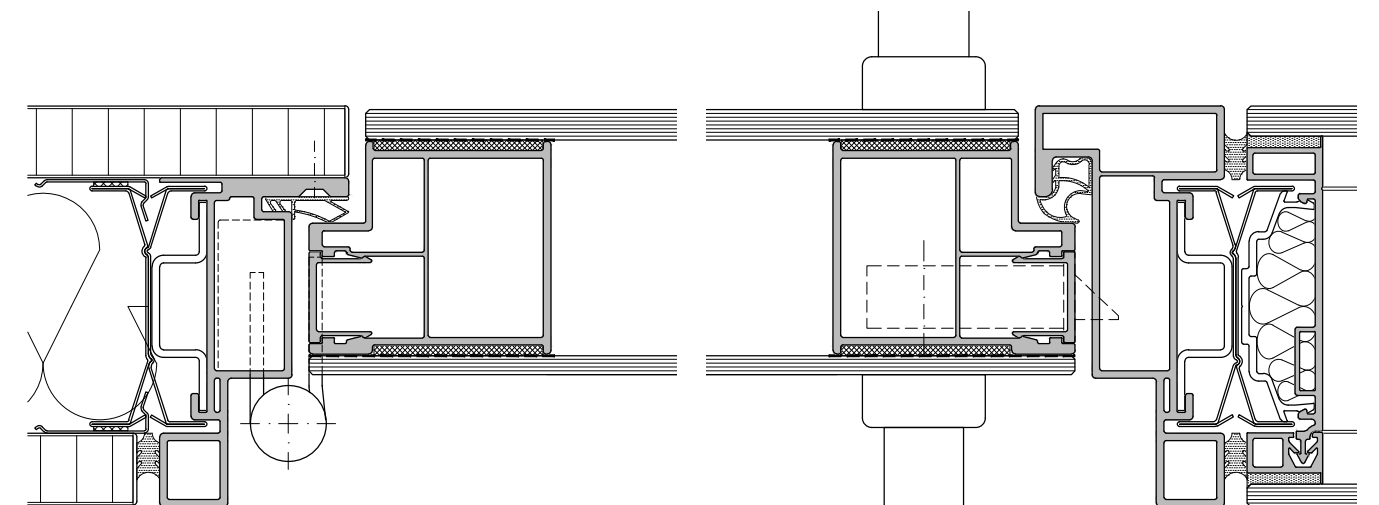
Sound insulation: Sound-insulation test values S105 $R_{w,P} = 37/42$ dB

Option blinds: 25 mm wide horizontal slats, centreline in the space between the panes, manual operation using a rotary knob with reverse function or electric with a lifting, lowering and tilting function, incl. concealed cable transition



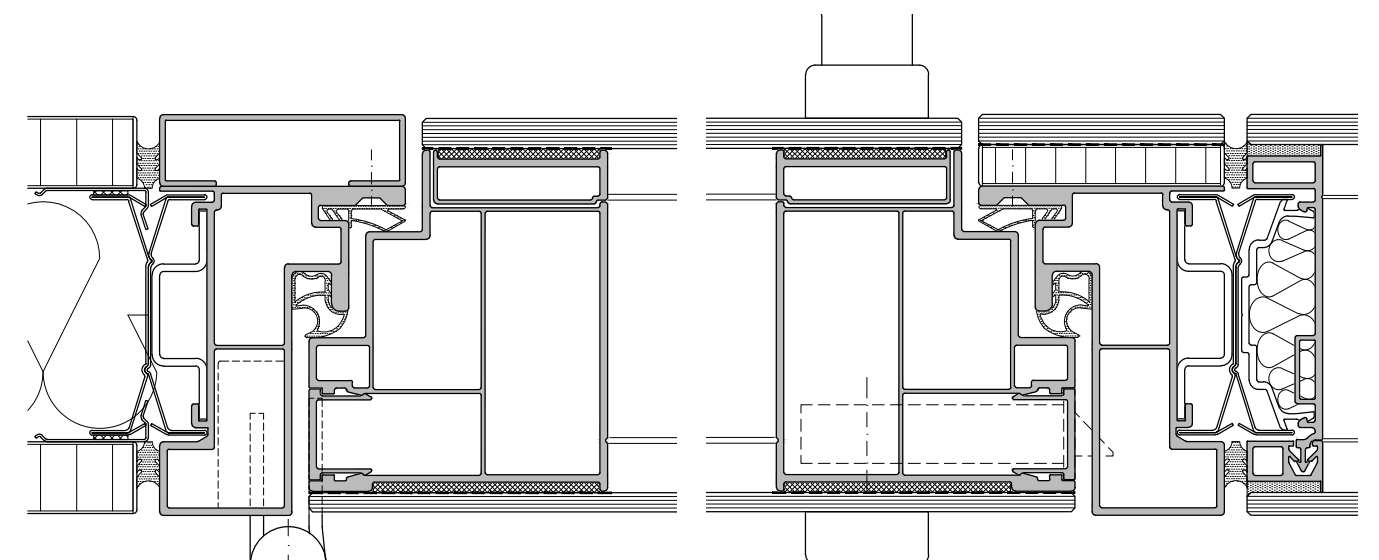
Structural glazing door element **S70** with alum. frame 35/50T70

... next to fecoplan glazing



Structural glazing door element **S70** with alum. frame 18/0

... with alum. frame 18/50 next to fecostruct glazing



Structural glazing door element **S105** with alum. frame 35/65

... with alum. frame 35/0 next to fecostruct glazing



Door element with door side-part **TST70**

Door frame: Alum. frame 35/50T70 for all-glass construction fecoplan – see door frame description on page 32

Door side-part: Side part for door, aluminium; integrated in door frame, with frame depth 70 mm and element width 125 mm, as installation panel for switches, socket outlets and room signage

Surface: Aluminium, natural, E6/EV1 anodized, optionally powder-coated in popular RAL colours

Door leaves: Wooden door leaf H40 or H70, glass door leaf G10, aluminium-frame door leaf A40 or A70, structural-glazing door leaf S70

Glass sliding-door element **ST10**

Dimensions: Standard door element size W x H = 1,000 x 2,118 mm (frame dimension 994 x 2,115 mm), frame depth 105 mm, clear width of sliding-door element W x H = 779 x 2,065 mm, optional element width and height building-specific, e.g. ceiling-height and adapted to DIN 18040 Barrier-free Construction

Door frame: Aluminium through-way frame 35/35, design as alum. frame 35/35 (see page 32), but without frame rebate, hinge pockets and door sealing

Door leaf: All-glass door leaf made of 10 mm single-pane safety clear glass (tempered); glass edges ground and polished all around

Door fittings: For sliding-door elements, see page 32

Sound insulation: No sound-insulation requirement

Glass sliding-door element **ST10B**

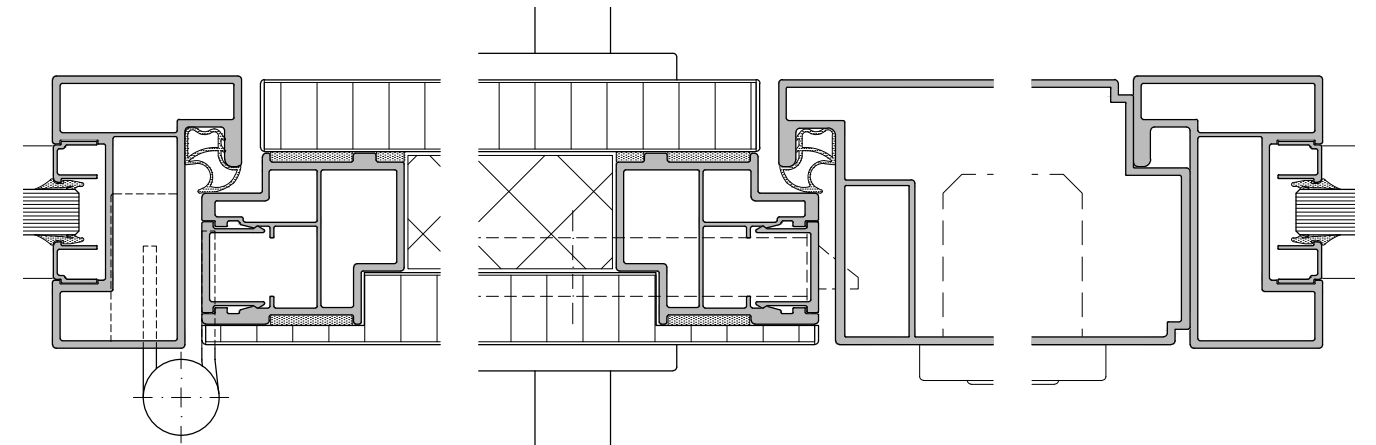
Dimensions: Standard door element size: W x H = 1,000 x 2,118 mm, with fecoplan ceiling-height to H = 3,000 mm, clear width of sliding-door element W x H = 864 x 2,065 mm, with fecoplan element height minus 50 mm, optional building-specific element-width and element-height, adapted to DIN 18040 Barrier-free Construction

Door frame: With fecoplan without door frame, optional with vertical aluminium-sealing with 15 mm visible width, surface aluminium, natural E6/EV1 anodized, optionally powder-coated in popular RAL colours, with sealing lip in pale grey, optionally in black

Door leaf: All-glass door leaf made of 10 mm single-pane safety clear glass (tempered); glass edges ground and polished all around

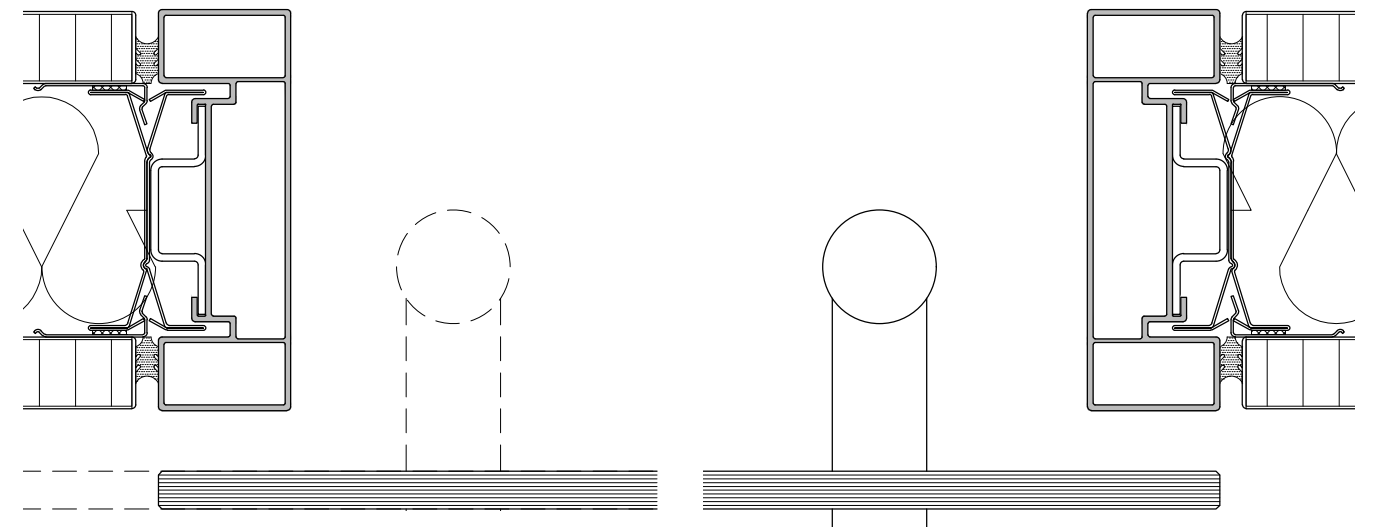
Door fittings: For sliding-door elements see page 32

Sound insulation: No sound-insulation requirement
Sound-insulation test value with seal profiles up to $R_{w,P} = 27$ dB

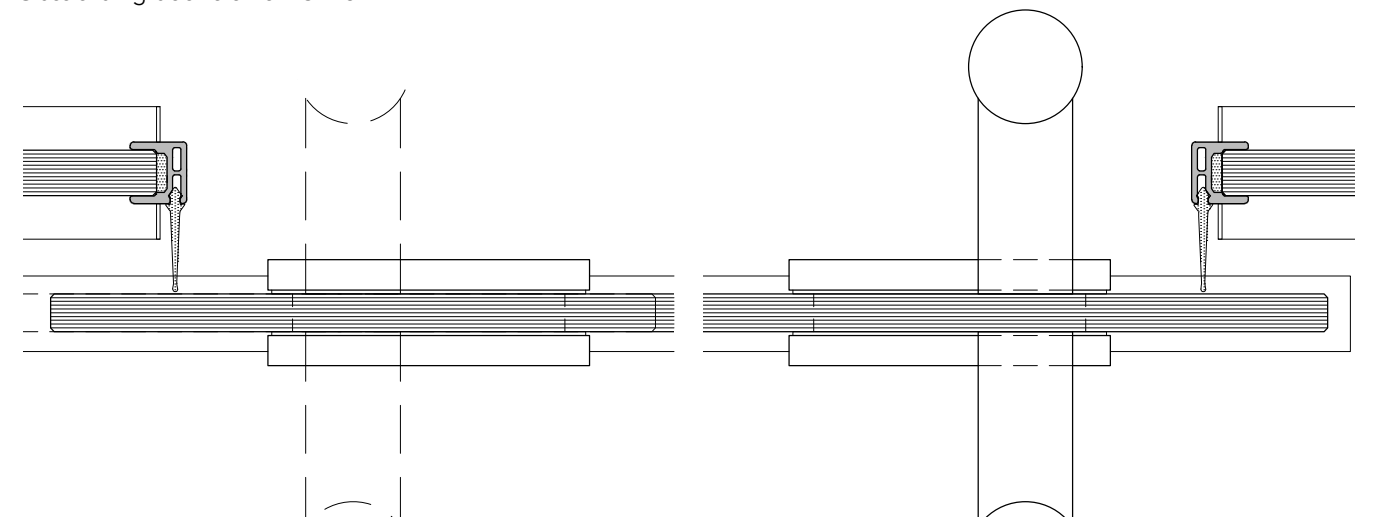


Door element with door side-part **TST70**

... next to fecoplan glazing



Glass sliding-door element **ST10**



Glass sliding-door element **ST10B**
with bottom-railed sliding door

... and integrated sound sealing
inside fecoplan glazing

Door frames

Aluminium frame 35/35: Aluminium door frame width 35/35 mm (hinge side/opposite hinge side) for hinge-side flush door leaf 40-70 mm thick, made of extruded aluminium profiles, mitred corners connected with 3D clamping angles, surface aluminium natural E6/EV1 anodized, optionally powder-coated in popular RAL colours 3-D adjustable hinge pockets, door sealing with welded mitre corners

Aluminium frame 35/50T70: Aluminium door frame width 35/50 mm and frame depth 70 mm for all-glass construction fecoplan, with laterally integrated glass fixture for 40-70 mm thick door leaf on hinge side/flush on both sides, otherwise identical to aluminium frame 35/35

Aluminium frame 35/50/15: Double-rebate aluminium door frame width 35/50 mm and 15 mm rebate for hinge-side flush door leaf 70 mm thick, design identical to aluminium frame 35/35, additional second rebate and door sealing

Steel frame 35/50: Steel door frame with width 35/50 mm for hinge-side flush door leaf 40-70 mm thick, made of galvanized steel profiles, mitred corners welded and polished, surface powder-coated in popular RAL colours, height-adjustable channel brackets, 3D adjustable hinge pockets, door sealing with welded mitred corners

Steel frame 35/65: Double-rebate steel door frame width 35/65 mm for hinge-side flush door leaf 70 mm thick, same design as steel frame 35/50, additional second rebate and door sealing

Aluminium frame 18/50: Aluminium door frame width 18/50 mm for opposite hinge-side (corridor-side) flush door leaf 70-85 mm thick, made of extruded aluminium profiles, mitred corners connected with 3D clamping angles, surface aluminium natural E6/EV1 anodized, optionally powder-coated in popular RAL colours, 3D adjustable hinge pockets, door sealing with welded mitre corners (note: door stop necessary)

Aluminium frame 18/0: Aluminium door frame width 18/0 mm for opposite hinge-side (corridor-side) flush door leaf 70-85 mm thick, with opposite hinge-side concealed door-frame recess, otherwise identical to aluminium frame 18/50

Aluminium frame 35/0-65: Double-rebate aluminium door frame width 35/0 or 35/65 mm for two-sided flush door leaf 105 mm thick, optionally with concealed (0) or front-flush frame (65), design identical to aluminium frame 35/35, additional second rebate and door sealing

Door fittings

Door fittings - wooden doors: Triple-roll hinges, 3D adjustable, height 120 mm, surface in stainless steel, brushed matt

Hinges for wooden door unit H70-H105, please see framed doors

Mortise lock, class 4 according to DIN 18 251, with whisper trap, stainless steel forend, designed for profile cylinder (PC)

Handle set round or mitre-shape with round escutcheons, swivel-mounted, class 3 according to DIN EN 1906, surface aluminium F1 or stainless steel, brushed matt, with PC escutcheon, optional standard handle sets

Automatic drop seal from $R_{w,P} = 32$ dB (SSK 1)

Door fittings - glass doors: Glass door triple-roll hinges with angular hinge straps, 3D adjustable, height 120 mm, surface aluminium colour or stainless steel, brushed matt

Glass door lock, class 3 according to DIN 18 251, with whisper trap, angular lock case, prepared for profile cylinder (PC), anodized EV1 aluminium surface, optional stainless steel, brushed matt

Handle set round or mitre-shape with round escutcheons, swivel-mounted, class 3 according to DIN EN 1906, surface aluminium F1 or stainless steel, brushed matt, without PC escutcheon, optional standard handle sets

Automatic floor seal from $R_{w,P} = 32$ dB (SSK 1), surface aluminium EV1 anodized, optimally powder-coated

Door fittings - framed doors: Triple-roll hinges with angular hinge straps, 3D adjustable, height 120 mm, surface in stainless steel, brushed matt, flush mounted on front side

Tubular-frame mortise lock, class 3 according to DIN 18 251, with whisper trap (not for S105), stainless steel forend, designed for profile cylinder (PC)

Offset tubular-frame handle set, round or mitre-shape with oval escutcheons, class 3 according to DIN EN 1906, surface aluminium F1 or stainless steel, brushed matt, with PC oval escutcheon, optional standard handle sets

Automatic floor seal from $R_{w,P} = 32$ dB (SSK 1)

Door fittings - sliding doors: Aluminium sliding-door fittings, roller carriage with double roller, surface aluminium natural E6/EV1 anodized, optional powder coated in popular RAL colours, with end stopper and bottom guide

Glass-sliding-door unit ST10B with 2 stainless steel bottom-rolls $D = 85$ mm and 20×6 mm bottom-rail in stainless steel, brushed matt, top channel aluminium profile $W \times H = 35 \times 50$ mm with integrated end stopper, surface aluminium natural E6/EV1 anodized, optional powder coated in popular RAL colours

Push bar diameter 30 mm, height 1,200 mm, optional 1,800 mm, surface in stainless steel, brushed matt



Wall-integrated air-passage elements

Dimensions: Building-specific element-width and element-height, wall thickness 105 mm, minimum width of axis dimension for wall element $W \geq 250$ mm, length of overflow element inside per unit $L = 500 - 1,200$ mm, installation vertical or horizontal

Cladding: 2 x 19 mm wooden panels, P2 gluing, formaldehyde emission class E1, building material class B2

Surfaces: Melamine resin direct-coating as per collection, optional CPL/HPL coating materials, real wood veneers, paint finishing, steel cases powder-coated in RAL colours or aluminium cases natural E6/EV1 anodized

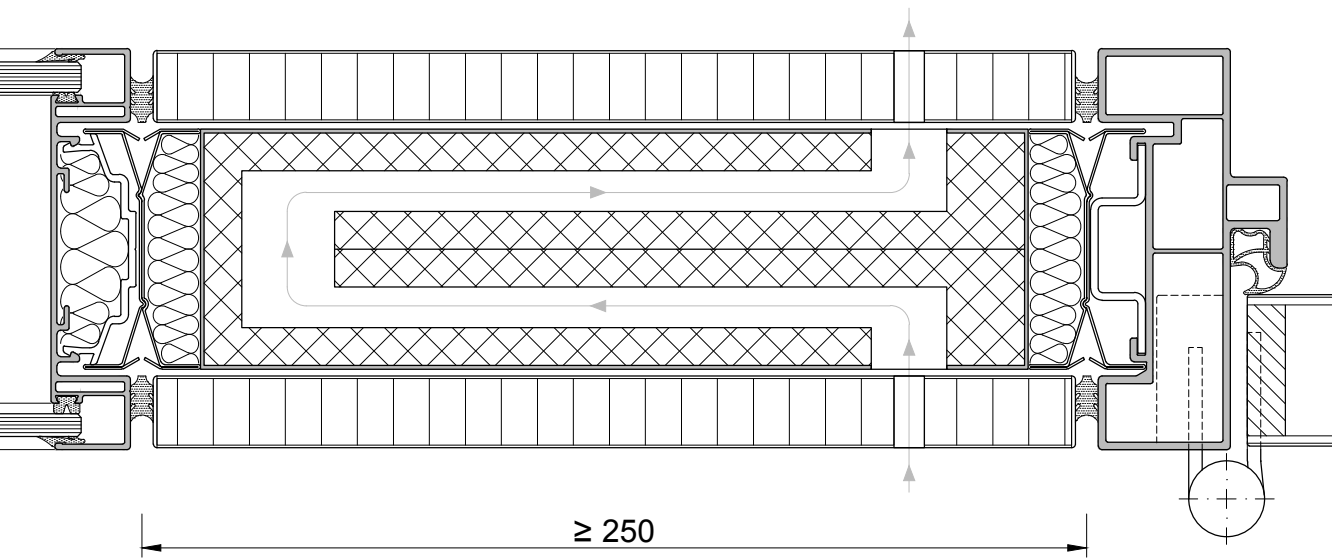
Perforation: Front-side slotting, joint width 8 - 12 mm; optional hole perforation with metal cases

Air-passage unit: Air-passage element with meandering airflow and oppositely arranged air inlets and outlets, composite construction with sound-absorbing inner lining made of B2-class material

Air flow rate: Depending on the design, sound insulation and effective length approx. 50-100 m³/hm per linear meter effective length at approx. 10-20 Pa pressure loss

Sound insulation:
Standard-sound-level difference $D_{n,e,w} = 37-50$ dB
Sound-insulation test value (surface-dependent) $R_{w,P} = 22-37$ dB

Fire resistance: EI0 (no requirements)





System details for wall stops, wall abutments, corner elements and T-joints

Free-standing wall stops

End profile: Extruded aluminium profile, facing width 20/50 mm, surface natural E6/EV1 anodized, optionally powder-coated in popular RAL colours

Wall abutments

Wall abutment: Telescopic approx. 20 mm shadow joint

Connecting profile: U-shaped rolled-steel sections as recessed connecting joints, coated in RAL 7016 anthracite, optionally in other popular RAL colours

Connection panels: If required, flush-front aluminium profile 50 mm in the surface of the glass frame or solid wall panel 80/105 mm in the surface of the cladding

90° corner element

Dimension: Element width 105/105 mm, optionally building-specific

Design: According to fecowand solid-wall element, outer corner of cladding mitred, inside corner 20/20 mm

T-joint to fecowand

System connection: T-connection with 6 mm system joint, optional with telescopic wall-connecting profile, with 20 mm shadow joint

Connecting profile: U-shaped rolled-steel sections as recessed connecting joints, coated in RAL 7016 anthracite, optionally in other popular RAL colours

T-joint to fecoplan

System connection: T-connection with all-glass-abutment and dry bonding, optionally with silicone jointing

T-joints to fecocent/fecofix

System connection: T-connection with a reduced aluminium sword profile and 6 mm system joint

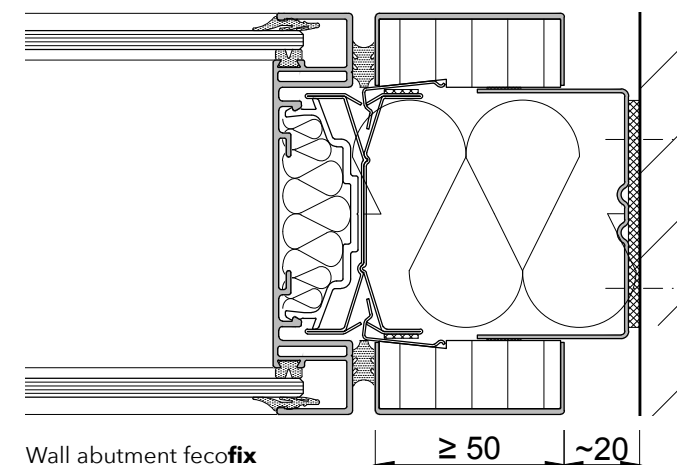
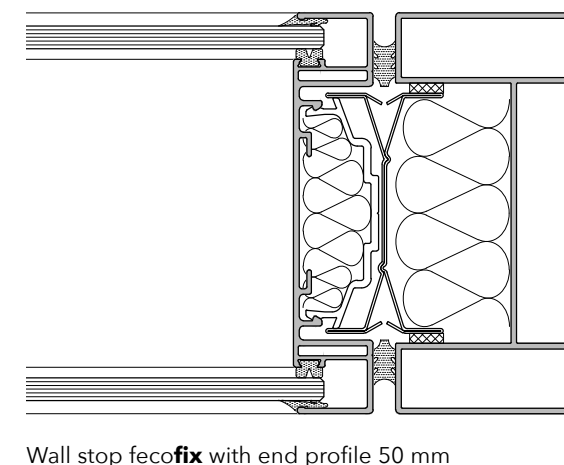
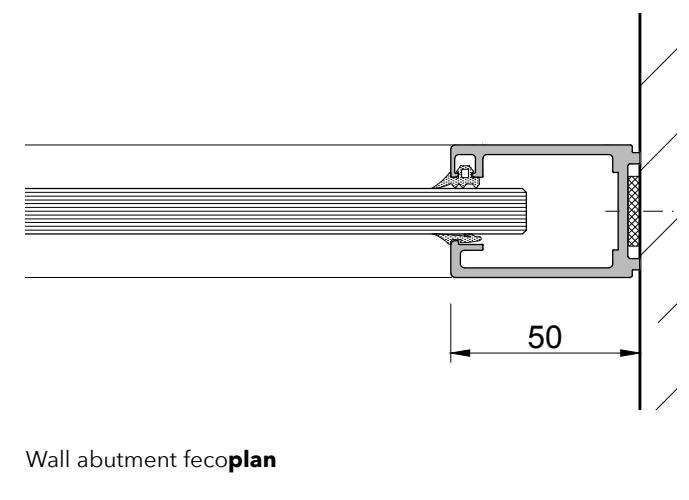
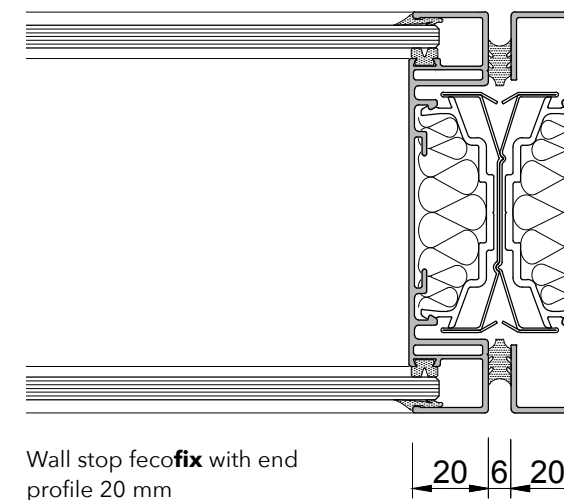
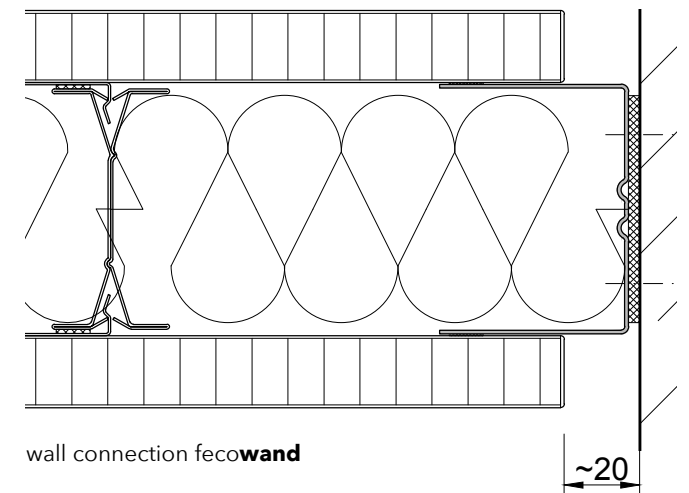
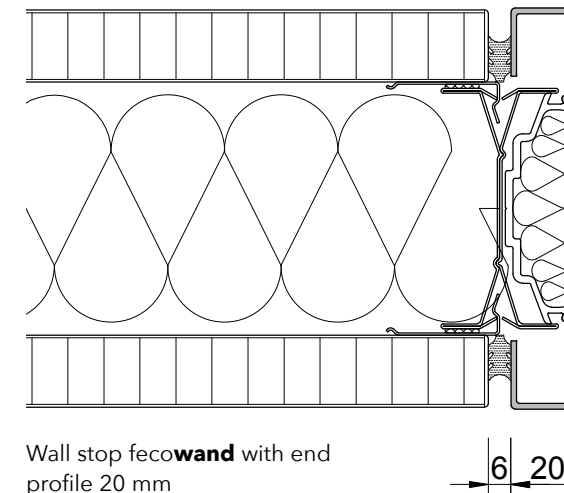
Connecting profile: Extruded aluminium profile, facing width 2+20 mm, on both sides tapered to a cladding thickness of 72 mm, surface natural E6/EV1 anodized, optionally powder-coated in popular RAL colours

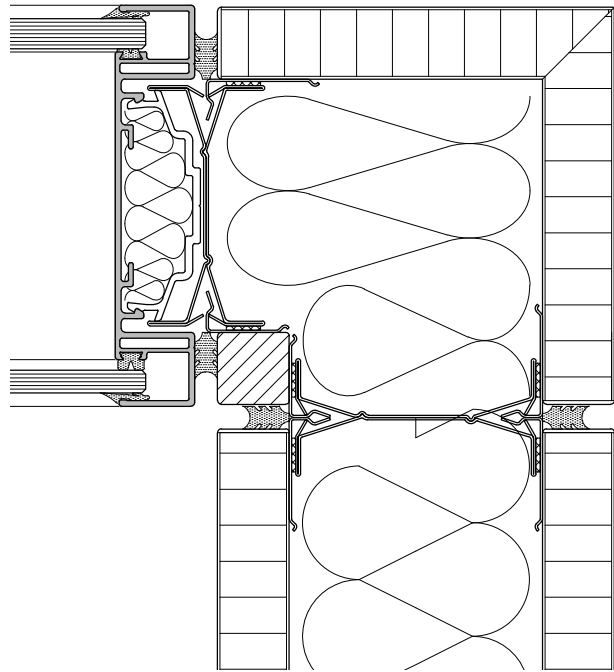
T-joints to fecofix/fecostruct

System connection: T-connection with a reduced aluminium sword profile and 6 mm system joint

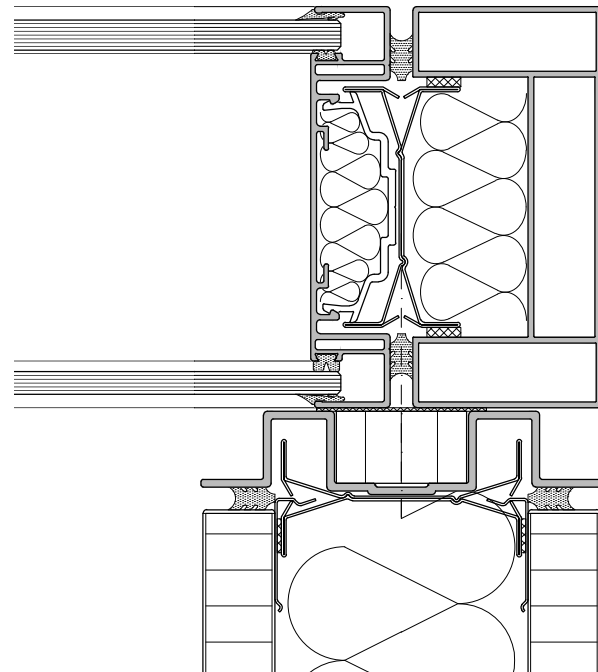
Connecting profile: Extruded aluminium profile, facing width 2+20 mm, tapered to 46 mm wall thickness (two glazing frames with shadow joint), surface natural E6/EV1 anodized, optionally powder-coated in popular RAL colours

The illustrated system details are a selection of the main ones. There are many other system and special details, enabling almost any installation requirements to be met.

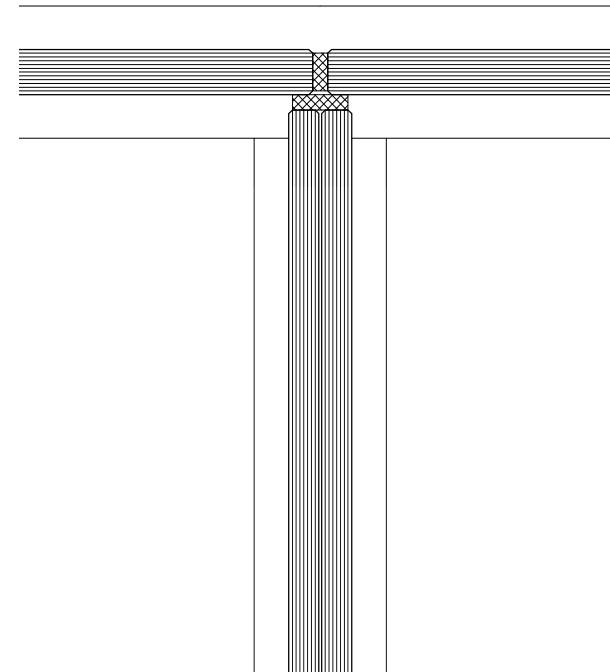




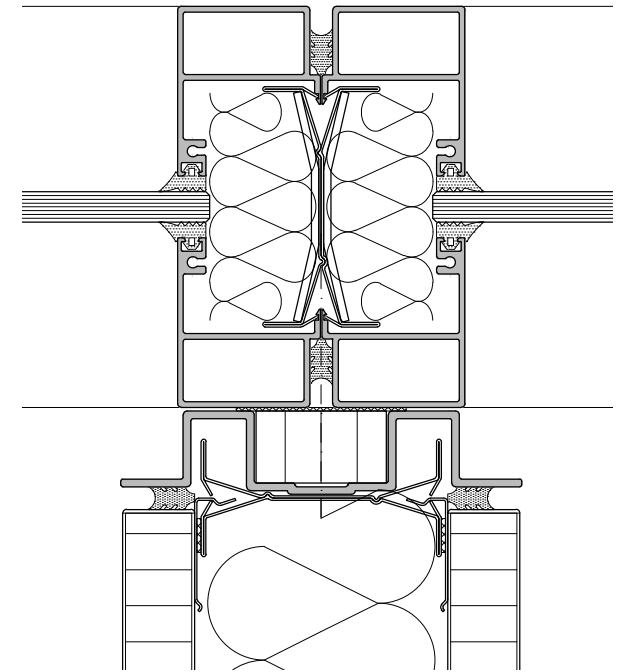
90° corner element with 105/105 mm outer corner



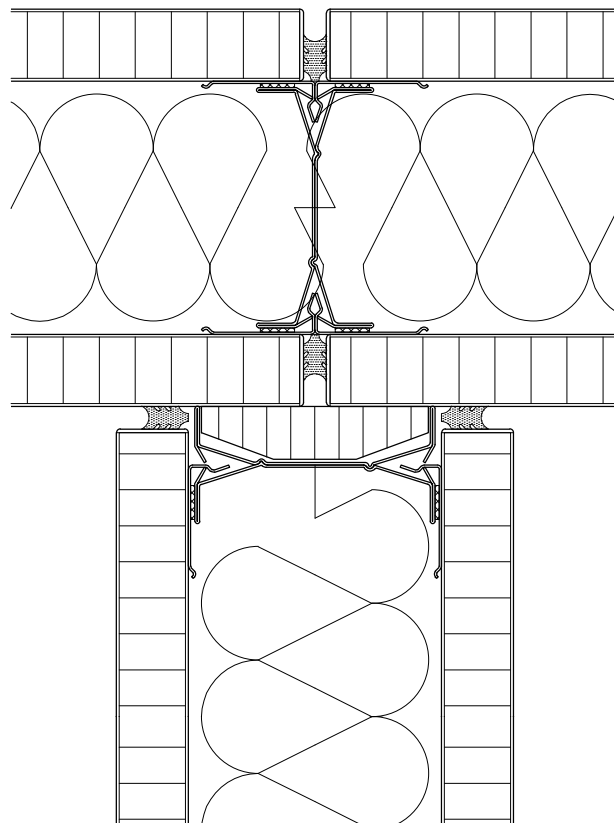
Corner formation 90° in centre-grid design with 50/105 mm end profile



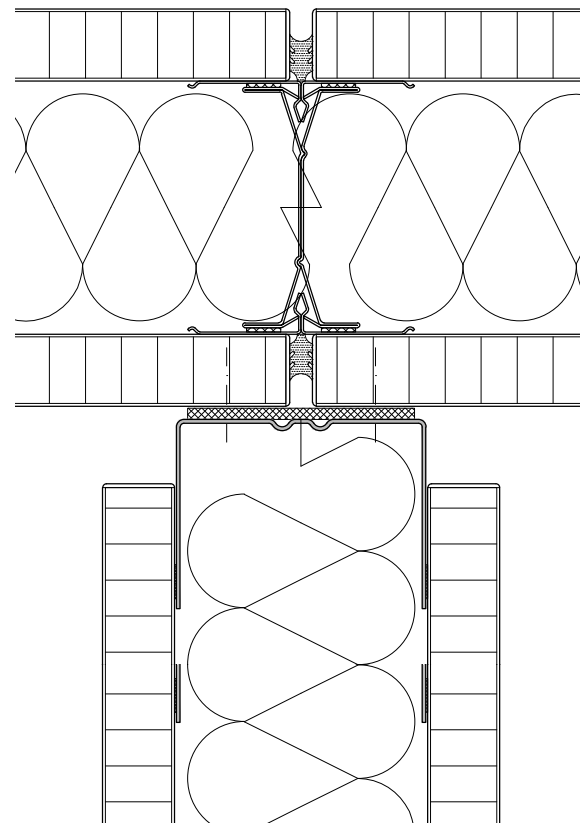
fecoplan T-joint



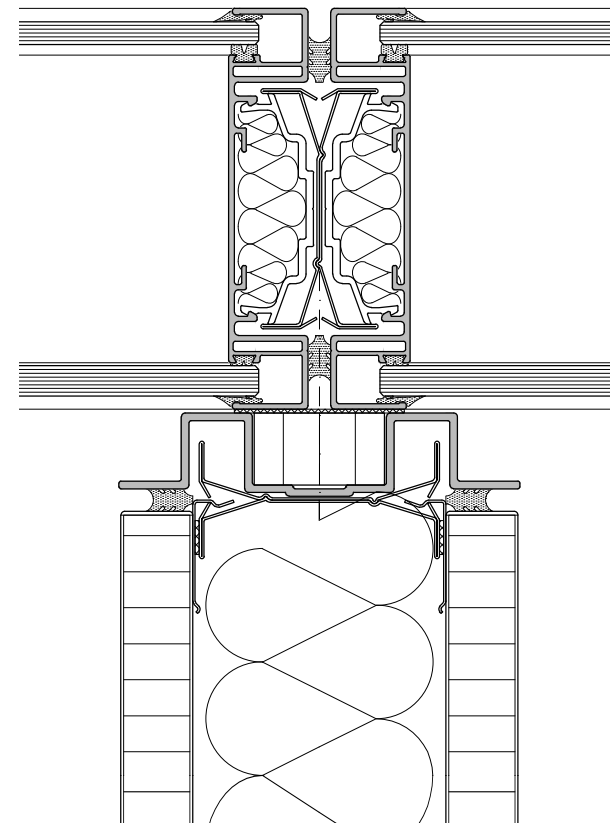
fecocent T-joint



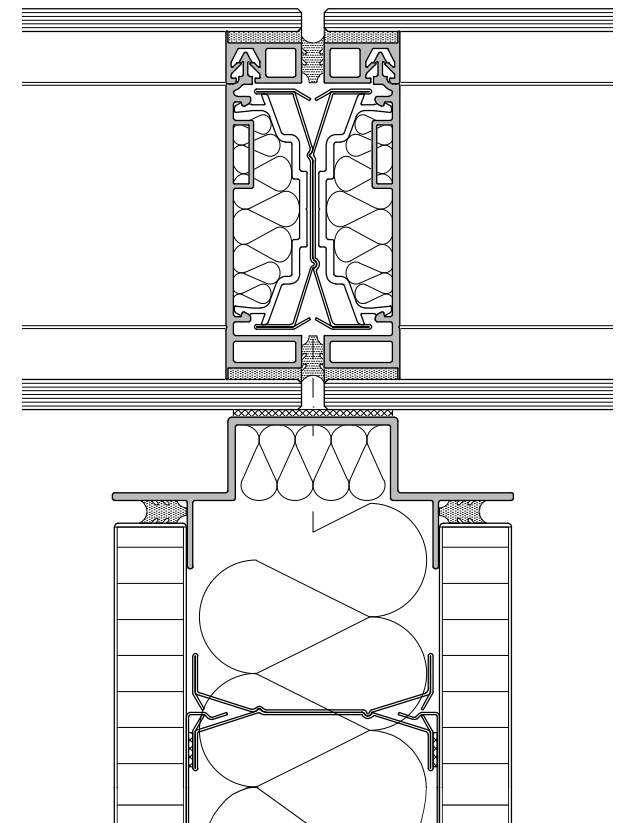
fecowand T-joint



T-joint with wall-abutment profile



fecofix T-joint



fecostruct T-joint

The reduction of sound from room to room is called sound insulation (air sound insulation). The higher the sound insulation value, the lower the clarity of the transmitted language in the receiving area, and consequently the higher the discretion level.

In addition to the acoustic conditions in the room, which are determined by the type and number of sound-absorbing = sound-deadening surfaces (see also page 42), sound insulation also has a significant influence on the level of concentration and quality of work achievable in a room.

In the 2018-01 Version, DIN 4109 "Sound insulation in buildings", does not contain any specifications for air sound insulation in office buildings. In practice, the recommendations of Supplement 2 of DIN 4109, dated 1989-11, are frequently consulted.

Extract from DIN 4109, Supplement 2, Table 3, Section 2, dated November 1989, recommendations for normal and increased sound insulation, office and administration buildings:

Line	Component	Recommendations for normal sound insulation	Recommendations for increased sound insulation	Notes
		req. R'_{w}	req. R'_{w}	
6	Walls between rooms with usual office activity	37 dB	≥ 42 dB	It is important to ensure that these values are not worsened by indirect sound transmission via corridors and doors.
7	Walls between corridors and rooms as per line 6	37 dB	≥ 42 dB	
8	Walls of rooms for concentrated intellectual activity or for discussing confidential matters, e.g. between the boardroom and anteroom	45 dB	≥ 52 dB	
9	Walls between corridors and rooms as per line 8	45 dB	≥ 52 dB	
10	Doors in walls as per lines 6 and 7	27 dB	≥ 32 dB	For doors the values are valid for sound insulation solely via doors.
11	Doors in walls as per lines 8 and 9	37 dB	-	

Definition of the characteristic values according to DIN 4109:

- R'_{w} evaluated sound reduction in decibels with sound transmission via flanking components
- R_w evaluated sound reduction in decibels without sound transmission via flanking components
- $R_{w,P}$ evaluated sound reduction in decibels as a test value without flanking transmission, proven by aptitude test in a laboratory
- $R_{w,R}$ evaluated sound reduction in decibels as a parameter without flanking transmission, calculated by subtracting the allowance from the test value $R_{w,P}$ resulting to ($R_{w,R} = R_{w,P} - VHM$)

VHM allowance: 2 dB for walls and windows, 5 dB for doors

The recommendations contained in DIN 4109, Supplement 2, describe resulting sound insulation values $R'_{w,r}$ as they are to be realized when installed on site.

The Standard generally distinguishes between walls and doors. It thus takes into account the fact that the door as a moving part has a lower sound insulation capability.

The resulting sound insulation between two rooms is determined by both the partition wall system (with solid-wall, glazing, door) and the flanking components - floor, wall, facade, ceiling. If one of the adjacent components has a low sound insulation or vertical transmission value, the sound insulation of the separating component (partition wall) may be ineffective and the sound will be transmitted. When dimensioning room-to-room sound insulation, the flanking components should therefore also be taken into account.

DIN 4109, Supplement 2, is intended as a recommendation for sound insulation in buildings. When the Standard was drawn up, closed partitions without visual contact between individuals represented the benchmark for dimensioning sound insulation. The current, high transparency of glass partition walls creates a natural discretion that affects the behaviour of people on both sides of a partition wall. The sound insulation values used for glazed partitions, in particular corridor walls, are in practice therefore usually lower than for closed partitions.

The $R_{w,P}$ sound insulation values listed in the following tables contain test values for complete partition walls or wall panels, including related floor, ceiling and wall connections. The test values have been determined in a building-acoustics test bench and verified by extensive test reports.

To eliminate scattering differences between test and actual values, DIN 4109 recommends the application of an allowance of 2 dB for solid and glass partition walls and 5 dB for doors.

The sound-insulation test value $R_{w,P}$ minus this allowance of 2 dB/5 dB equals the calculated value $R_{w,R}$. The combination of the calculation values of various elements leads to the resulting sound-insulation value $R_{w,R,res}$, which in conjunction with the sound longitudinal insulation values of the flanking components, results in the locally measurable sound insulation R'_{w} .

The resulting building sound insulation depends on craftsmanship and many other factors. We strongly recommend the involvement of an acoustics expert and the setting of $R_{w,P}$ sound insulation test values that are verifiable and objectively comparable in all tenders.

Overview – sound-insulation test values for door elements

and the combination possibilities of door leaves and door frames

	Door frame	Alum. 35/50T70	Alum. 35/35	Steel 35/50	Alum. 35/50/15	Steel 35/65	Alum. 18/50	Alum. 18/0	Alum. 35/0-65
Door leaf	$R_{w,P}$								
Wood H40		23 dB 32 dB 37 dB	23 dB 32 dB 37 dB	23 dB 32 dB 37 dB	-	-	-	-	-
Wood H70		37 dB	37 dB 40 dB	37 dB 40 dB	42 dB	42 dB 45 dB	37 dB 40 dB	37 dB 40 dB	-
Wood H85		-	-	-	-	-	42 dB	42 dB	-
Wood H105		-	-	-	-	-	-	-	37 dB 42 dB
Glass G10		23 dB 32 dB	23 dB 32 dB	23 dB 32 dB	-	-	23 dB 32 dB	23 dB 32 dB	-
Glass A40		32 dB 35 dB 37 dB	32 dB 35 dB 37 dB	32 dB 35 dB 37 dB	-	-	-	-	-
Glass A70		37 dB	37 dB 40 dB	37 dB 40 dB	42 dB	42 dB	37 dB 40 dB	37 dB 40 dB	-
Glass A85		-	-	-	-	-	42 dB	42 dB	-
Glass S70		37 dB	37 dB	37 dB	-	-	37 dB	37 dB	-
Glass S105		-	-	-	-	-	-	-	37 dB 42 dB

All values are sound-insulation test values $R_{w,P}$; bold = popular combinations
 $R_{w,P} = 32$ dB sound insulation class 1, $R_{w,P} = 37$ dB sound insulation class 2, $R_{w,P} = 42$ dB sound insulation class 3

Overview – sound insulation test values – glass elements

and combined glazing and solid wall elements

Glazing	Detail	Glass thickness	Type	R _{w,P}	Solid wall fecophon R _{w,P} = 37-39 dB		Solid wall fecophon R _{w,P} = 43 dB		Solid wall fecowand R _{w,P} = 47 dB		Solid wall fecowand R _{w,P} = 51-52 dB	
					GB	TG	GB	TG	GB	TG	GB	TG
fecoplan		10 mm	FP-10E	35 dB	-	-	-	-	-	-	-	-
		12 mm	FP-12E	37 dB	-	-	-	-	-	-	-	-
		16 mm	FP-16V	40 dB	-	-	-	-	-	-	-	-
		16 mm	FP-16S	42 dB	-	-	-	-	-	-	-	-
fecocent		8 mm	FC-8E	32 dB	33 dB	35 dB	33 dB	37 dB	33 dB	37 dB	-	-
		8 mm	FC-8V	35 dB	35 dB	36 dB	36 dB	39 dB	36 dB	40 dB	-	-
		8 mm	FC-8S	37 dB	37 dB	37 dB	38 dB	40 dB	38 dB	41 dB	-	-
		28 mm	FC-84E	37 dB	37 dB	37 dB	38 dB	40 dB	38 dB	41 dB	-	-
		28 mm	FC-84VE	39 dB	39 dB	39 dB	40 dB	41 dB	40 dB	43 dB	-	44 dB
		28 mm	FC-88SE	42 dB	-	-	42 dB	43 dB	43 dB	45 dB	-	46 dB
		28 mm	FC-58BE	37 dB	-	-	-	-	-	41 dB	-	42 dB
		28 mm	FC-66BB	42 dB	-	-	-	-	-	45 dB	-	46 dB
fecofix		8 mm	FF-8E	32 dB	33 dB	35 dB	33 dB	37 dB	33 dB	37 dB	-	-
		8 mm	FF-8V	35 dB	35 dB	36 dB	36 dB	39 dB	36 dB	40 dB	-	-
		8 mm	FF-8S	37 dB	37 dB	37 dB	38 dB	40 dB	38 dB	41 dB	-	-
		2 x 5/6 mm	FF-55E	39 dB	39 dB	39 dB	40 dB	41 dB	40 dB	43 dB	-	44 dB
		6 + 8 mm	FF-86E	43 dB	-	-	43 dB	43 dB	44 dB	45 dB	-	47 dB
		6 + 8 mm	FF-86VE	45 dB	-	-	-	-	45 dB	46 dB	46 dB	48 dB
		6 + 8 mm	FF-86SEG	47 dB	-	-	-	-	47 dB	-	48 dB	49 dB
		8 + 8 mm	FF-88SSG	49 dB	-	-	-	-	-	-	49 dB	50 dB
fecestruct		8 mm	FS-8E	32 dB	33 dB	35 dB	33 dB	37 dB	33 dB	37 dB	-	-
		8 mm	FS-8V	35 dB	35 dB	36 dB	36 dB	39 dB	36 dB	40 dB	-	-
		8 mm	FS-8S	37 dB	37 dB	37 dB	38 dB	40 dB	38 dB	41 dB	-	-
		6 + 8 mm	FS-86E	43 dB	-	-	43 dB	43 dB	44 dB	45 dB	-	47 dB
		6 + 8 mm	FS-86SEG	47 dB	-	-	-	-	47 dB	-	48 dB	49 dB

The sound insulation test values for glazings and solid walls have been tested and proven in a building-acoustics test bench as complete elements or walls, including the connections. The sound insulation for the balustrade and top glazing units are calculated as a combination of solid-wall and glass elements using the formula for resulting sound insulation values as per DIN 4109.

The calculation basis is a wall element with the height H = 3,000 mm with glazing from H = 900 mm (GB) or 2,118 mm (TG). Sound insulation values vary for other configurations.

The feco system offers several other variants that may be of interest. Please contact us for more information.

GB = glass balustrade
TG = top glazing



Glass and concrete, which are extensively used in architecture, are sound-reflecting surfaces that result in long reverberation periods in offices. In addition, component activation does not permit the installation of large-area sound-absorbing suspended ceilings. Compensating surfaces become necessary for improved room acoustics.

feco has optimized the partition wall system and offers the combination of excellent sound insulation and good sound absorption with the same wall thickness of 105 mm. The following table shows the range of the realization possibilities including the sound insulation and sound absorption test values.

The weighted sound absorption coefficient α_w according to Standard DIN EN ISO 11654 covers the entire frequency range from 250 Hz to 4,000 Hz.

Particularly relevant to human language are the frequencies around 500 and 1000 Hz. Here, the α_s values of the fecophon acoustic units, with values up to 1.0, are significantly above the weighted absorption degree α_w . Upon request, we will be happy to provide you with the available test certificates.

The sound absorption coefficients are based on a realistic test set-up using the relatively small amount of space between the partition walls.



Static strength for system partition walls is calculated according to the requirements of DIN 4103, Part 1 "Non-load bearing inner partition walls" The Standard distinguishes between two installation areas:

Installation area 1: "Areas with low people densities, such as in homes, hotels, office and hospital rooms and similarly used spaces including the corridors."

Installation area 2: "Areas with a large numbers of persons, such as those required in larger meeting halls, school rooms, lecture halls, exhibition and sales rooms and similarly used rooms."

The fulfilment of the static requirements according to DIN 4103-1 has been confirmed for the feco partition wall through comprehensive static analyses.

Furthermore, the glazing systems fecoplan, fecofix and fecostruct can be realised as fall-protection glazings in accordance with DIN 18008-4 and are proven by General Building Inspection Test Certificates (AbP). The design as fall-protection glazing requires appropriate statics of the floor and ceiling connections provided by the customer.

The following Table outlines the static strength of the feco partition wall system as a function of the wall height, installation area, upright design and upright spacing. The dimensioning of the elements also has to be coordinated with other aspects, such as surfaces, glass dimensions and fire protection certificates.

Numerous special solutions complete the feasible spectrum. Please contact us for more information.

Overview – acoustic values fecophon

with sound absorption coefficient α_w and sound-insulation test value $R_{w,P}$

Acoustic	Slot 14/2		Slot 27/5		Perforation 16/16/5		Micro-perforation 3/3/1	
	α_w $R_{w,P}$	Acoustic one-sided	Acoustic two-sided	Acoustic one-sided	Acoustic two-sided	Acoustic one-sided	Acoustic two-sided	Acoustic one-sided
Wall constr. level V1	0.50 42 dB	2 x 0.50 27 dB	0.55 43 dB	2 x 0.55 37 dB	0.50 42 dB	2 x 0.50 37 dB	0.75 42 dB	2 x 0.75 27 dB
Wall constr. level V2	0.45 44 dB	2 x 0.45 39 dB	0.55 45 dB	2 x 0.50 40 dB	0.50 44 dB	2 x 0.45 39 dB	0.85 44 dB	2 x 0.60 37 dB
Wall constr. level V3	0.50 46 dB	0.45+0.50 41 dB	0.50 47 dB	0.50+0.55 45 dB	0.45 46 dB	0.45+0.50 43 dB	0.65 45 dB	0.65+0.85 39 dB
Wall constr. level V4	0.50 48 dB	2 x 0.50 43 dB	0.50 49 dB	2 x 0.50 48 dB	0.45 48 dB	2 x 0.45 47 dB	0.65 47 dB	2 x 0.65 43 dB
Wall constr. level V5	-	2 x 0.45 47 dB	-	-	-	-	-	2 x 0.60 47 dB

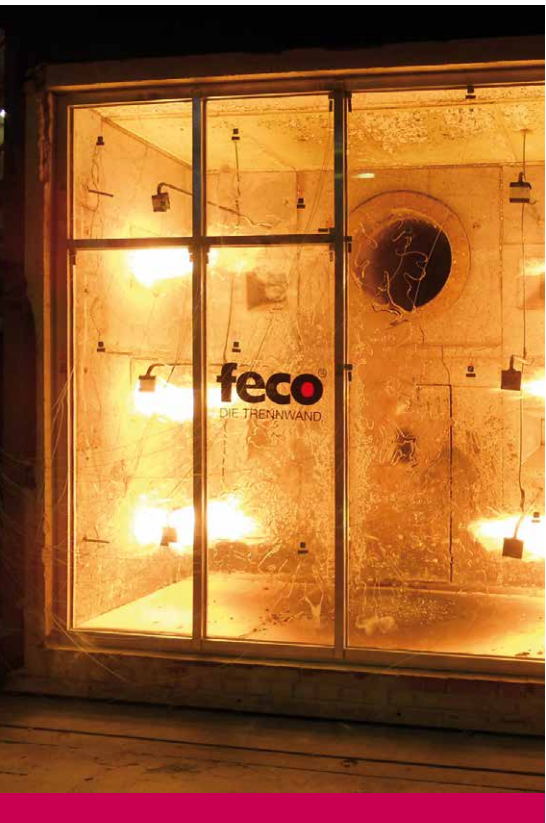
All values are based on a uniform wall thickness of 105 mm.
The values in italics are derived for the specific constellation from existing test reports.

Overview – feco partition wall statics

Extract of statically-permissible element widths

Wall height	Solid wall fecowand			Glass wall fecofix/fecostruct				Glass wall fecoplan		
	EB 1	EB 2		EB 1	EB 2		FPG	EB 1	EB 2	FPG
		Standard uprights	Slotted uprights		Standard uprights	Slotted uprights				
2,500	1,500*	1,200	1,350*	3,000*	1,100	1,700*	500-1,350	1,500*	1,500*	750-1,350
3,000	1,500*	1,200	1,350*	2,300*	1,000	1,400	500-1,350*	1,500*	1,500*	750-1,350*
3,500	1,500*	1,200	1,350*	2,000*	900	1,300	500-1,350**	1,500*	1,500*	750-1,350*
4,000	1,500*	1,000	1,350*	1,500*	850	1,200	-	1,500*	1,500*	-
4,500	1,500*	750	1,000	1,100	800	1,150	-	1,500*	1,500*	-
5,000	1,500*	600	750	900	800	1,100	-	1,500*	1,500*	-

All values in millimeters (mm) for a wall thickness of 105 mm (fecoplan 35 mm). EB 1 = Installation area 1, EB 2 = Installation area 2, FPG = fall-protection glazing.
Solid wall fecowand and glass wall fecofix / fecostruct upwards from wall height ≥ 3,000 mm with horizontal division. Solid wall fecowand W ≥ 1,250 mm with vertical hidden uprights to prevent bulging of the wall panels. *Theoretical values. Please note the maximum element sizes. ** Glass wall fecofix.



The requirements for the fire protection of buildings in Germany are basically regulated by the building regulations of the federal states (LBO), the regulations of DIN 4102 “Fire behaviour of building materials and building components” and the specifications of the building supervisory authorities. Definite, building-specific requirements are defined in the building permit.

According to the Building Rules List, system partition walls are regarded as so-called “non-regulated building products” and require proof of usability in the form of a “General Building Inspectorate Test Certificate” (AbP) for solid walls, a “General Building Inspectorate Approval” (AbZ) or “General Type Approval” (ABG) for glazing and doors or alternatively an “Approval in Individual Cases” (ZiE).

The walls of fire sections must be carried out fire-resistant (EI90) according to LBO, and those of necessary corridors fire-retardant (EI30). As a rule, this does not apply to corridors within units that are used for office or administrative purposes and have a usable area of no more than 400 m² per floor.

Proof of fire-protection suitability is on the basis of DIN 4102 »Fire behaviour of building materials and building components«, which comprises several parts:

DIN 4102 Part 1 describes the material requirements and divides these up according to fire behaviour into the building

material classes “A1/A2 non-flammable”, “B1 inflammable”, “B2 normal flammability” and “B3 high flammability”. B3 class building materials may not be used in buildings at all. Alternatively, building products can be proven according to the EN classification DIN EN 13501.

DIN 4102 Part 2 describes the component requirements and divides these up into fire-resistance classes EI30, EI60, EI90, etc. Fire resistance classes EI30 and EI90 are relevant as corridor and fire compartment walls. The classification is supplemented by the building material classes of the main (supporting) parts and the remaining components. This results in the short designations according to DIN 4102-2, Table 2, e.g. “EI30-AB” for a system partition wall with steel substructure and planking of building material class B2 or “EI30-A” with planking of building material class A2.

DIN 4102 Part 5 regulates the requirements for “fire protection closures”, i.e. fire doors. Doors in EI30 solid walls, if tight-fitting, are generally permitted as doors without fire protection, doors in EI90 walls must be designed as self-closing fire protection closures in T30.

DIN 4102 Part 13 contains the requirements for “fire-resistant glazings”, which are generally classified as E or EI glazing. G glazings refer to translucent components intended to prevent fire and smoke from spreading based on their fire-resistance duration. EI glazings refer to light transmissive components that also restrict the passage of heat radiation.

Top glazings in F30 partitions can be G glazings from a height of ≥ 1.80 m upwards. Lower-height glazings normally must be F glass. Depending on the building and fire protection concept, G glazing may sometimes be required for floor to ceiling glass walls.

Due to their design, fire-resistant glazing has different visual properties and lower light-transmission values than glass without fire-resistant properties.

Compliance with fire-safety requirements also requires professional design and manufacture of the flanking components. Possible connections are detailed in the test certificates.

The adjacent Table provides an overview of the main feco partition-wall fire-safety solutions. In addition, there are numerous variants and building-based special solutions.

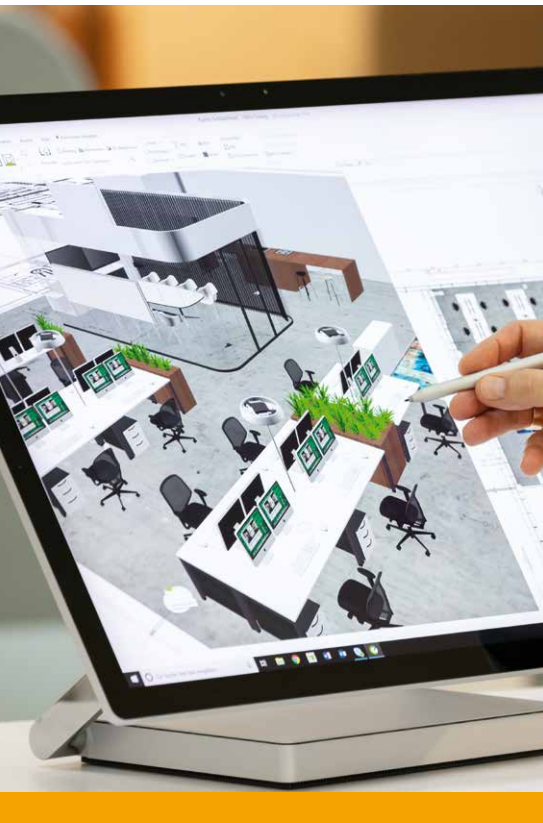
Overview – feco fire-protection solutions

Extract from current test certificates

Product	System detail	Dimensions	Materials
fecowand EI30		Upright spacing x wall height up to W x H = 1,500 x 4,000 mm	Cladding made of particleboard B2 (B1) gypsum particle-board A2
fecowand EI90		Upright spacing x wall height up to W x H = 1,250 x 3,000 mm	Cladding made of gypsum particle-board A2
fecopur G30		Axis dimension of glazing up to W x H = 2,050 x 1,150 mm	Insulation glazing with fire-resistant clear glass
fecocent G30		Axis dimension of glazing up to W x H = 2,050 x 1,150 mm	Insulation glazing with fire-resistant clear glass
fecocent F30		Axis dimension of glazing up to W x H = 1,350 x 2,900 mm*	Insulation glazing with fire-resistant clear glass
fecofix F30		Axis dimension of glazing up to W x H = 1,350 x 2,900 mm*	Triple-pane glazing with fire-resistant clear glass
fecolux G30		Axis dimension of glazing up to W x H = 1,500 x 1,135 mm W x H = 1,250 x 2,520 mm	Double-glazing with fire-resistant clear glass
fecolux F30		Axis dimension of glazing up to W x H = 1,000 x 2,900 mm* W x H = 1,350 x 2,035 mm	Double-glazing with fire-resistant clear glass
fecotür T30/RS		Axis dimension of door element up to W x H = 1,200 x 2,580 mm tested in fecowand EI30 and F90	Steel frame with wooden fire-resistant door leaf, optional with smoke protection

* Glazing with an axis dimension H = 2,900 mm enables (with floor and ceiling connection) undivided floor-to-ceiling glass elements with a wall height of H = 3,000 mm.

Planning of system-partition walls



The right element system is crucial for the economy and flexibility in the use of system-partition walls.

Office and administration buildings are usually designed based of a building grid, which you will find in the facade and construction grid. The shown example is based on the commonly encountered facade and construction grid of 1,350 mm.

The transfer of the facade grid on the corridor partition wall provides a unified architecture, allowing the connection of office dividing partitions in each facade axis, without requiring modification of the corridor partition wall. Office partitions usually have fewer points of reference, so that in this regard, the wall layout can be decided based on economic aspects.

A wall division into the most uniform grid dimensions possible, enables it to have a large number of identical units, thus allowing for greater flexibility during subsequent conversion work. At the same time, a certain series effect arises during production, which means that the selling price can be lower.

Undivided glass units can generally have an element width of up to $W = 1,350$ mm and an element height of $H = 3,000$ mm (unless high noise and fire-protection requirements apply). feco offers appealing glazing solutions with tapered connection profiles for perpendicular connecting of office partition walls with glazed corridor partition walls.

When optimal use is made of the wood-based panels, solid wall units are most economical at an element width of $W = 1,000$, and can be realized undivided up to a height of $H = 3,000$ mm. Division with a narrow system joint is more suited for all other dimensions.

Door elements have a standard width of $W = 1,000$ mm (including the door frame). Differences compared to the building grid, for example $W = 1,350$ mm - $1,000$ mm = 350 mm, can be used as door side-part in different variants:

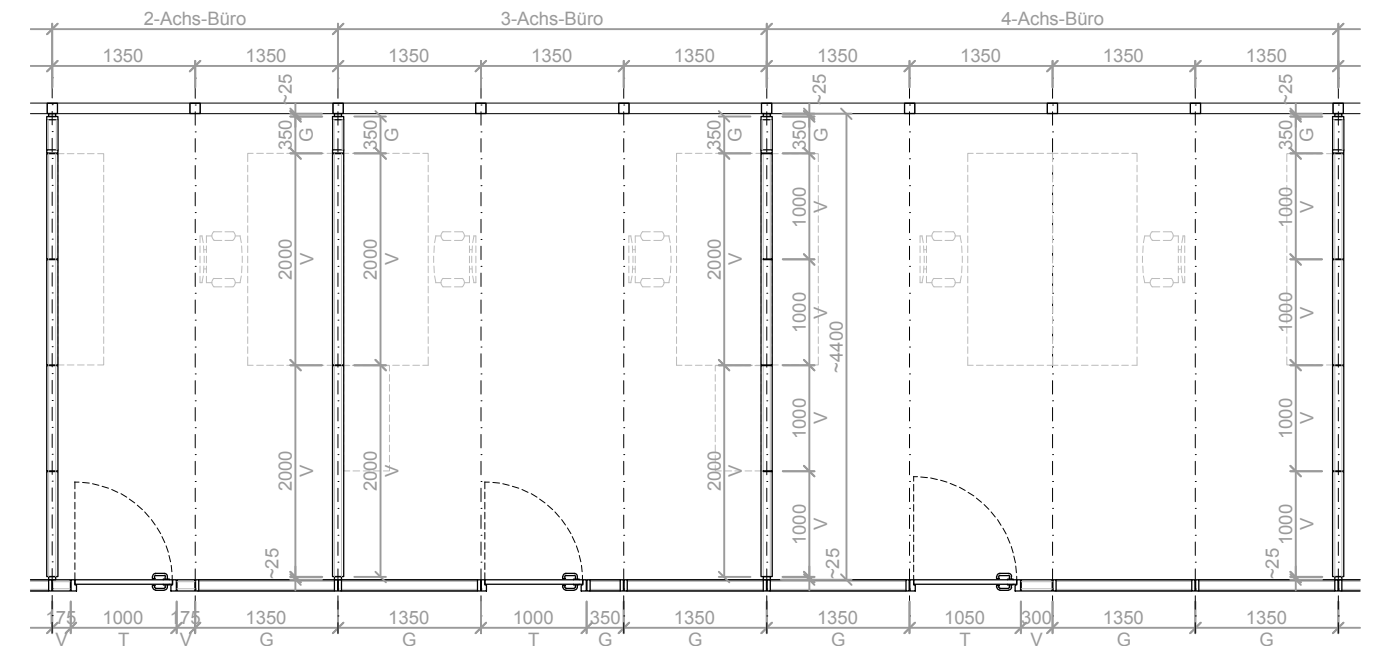
A glass door side-part with a width/height ratio of at least 1:10 creates additional transparency. A solid door side-part provides space as a technology panel for the installation of light switches and sockets, and room signage. Division into two half-width panels, for example $W = 175$ mm, also enables the connection of an office partition wall if the door is placed next to the wall, e.g. in a 2-axis office. An air-overflow unit can also be integrated into a solid-wall door panel.

Depending on the door design, door elements that have to meet the requirements of DIN 18040 Barrier-free Construction, require an element width of $W = 1,050 - 1,125$ mm, to enable clear passage of 900 mm with the door leaf opened at 90° .

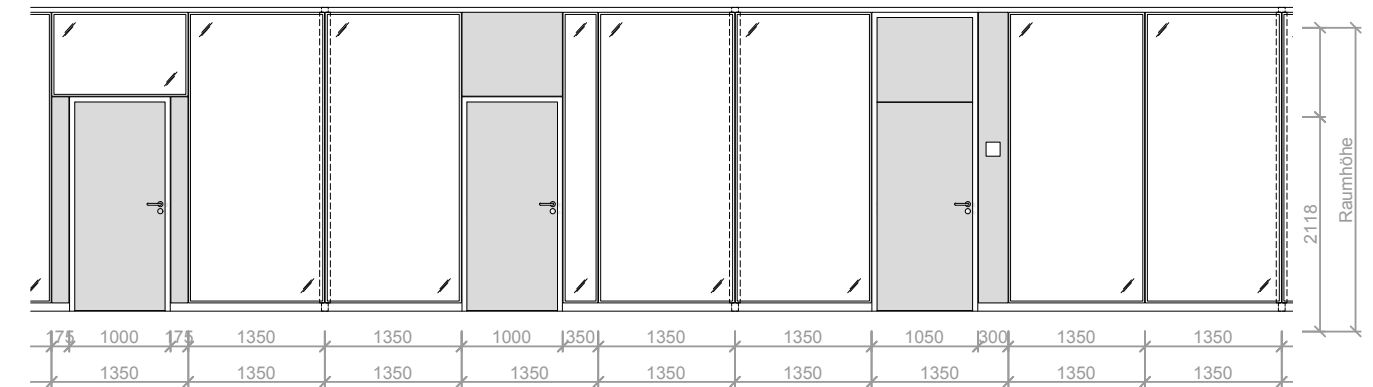
The standard height of the door elements is $H = 2,118$ mm (height of door frame $2,115$ mm). A closed solid-wall upper panel is placed above it or top glazing can be installed. Depending on the installation situation, the top glazing can also extend across the solid wall door side-part and thus support the entire axis width. Alternatively, doors up to $H = 3,000$ mm can be realised with room-high undivided door frames. Room-high, wooden door leaves are generally arranged with an integrated door leaf top panel, glass and frame door leaves are designed undivided.

Element sizes should be determined - also with regard to future room changes - on the basis of the customer's construction possibilities for the installation and transport of the wall elements. In high-rise buildings that cannot be accessed from the outside, the clear dimensions of the freight elevator will determine the maximum element size.

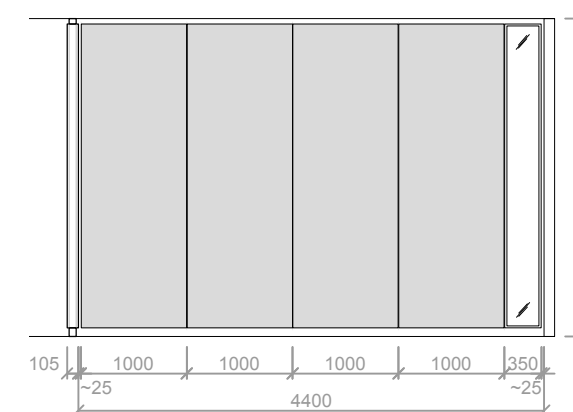
The illustrations opposite are schematic examples of the unitization of system-partition walls as an initial orientation for your planning. We are sure to have the right solution for your building and your requirements.



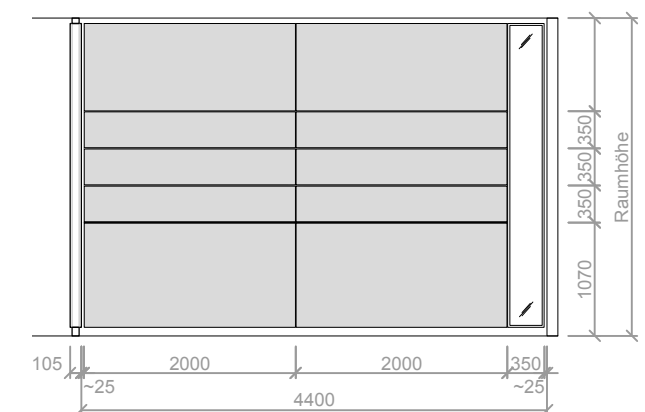
Floor plan - sample rooms



View - corridor partition wall



View, office partition wall 1



View, office partition wall 2

Installing system partition walls



System partition walls – whether made of wood or glass – are based on a firm connection of the connecting profiles to the floor, ceiling, wall and facade. This calls for sufficient fixing and load transfer ability, which solid components and braced drywall partitions normally have. A drilling depth of 50 mm is sufficient for screw connections spaced approx. 400-500 mm apart, meaning that fixing to concrete-core cooled and heated components is also generally possible.

The connection of fire-protection walls always requires solid components. In some cases, using a previously installed wooden sleeper or sill in the floor and a fire-protection drywall partition towards the ceiling will do, to ensure a smooth construction process and flexibility of movement.

Building-specific production of system partition walls requires complete measurement of the site prior to manufacture of the wall elements. This takes place as soon as on-site preparation work to floors, walls and ceiling is completed and dimensions are set.

System partition walls are created for indoor use in offices and administrative buildings with a largely uniform indoor climate. In the feco system, all wall elements are prefabricated to the greatest extent possible to ensure optimal quality and quick local installation. The wall panels of the solid-wall units, which are usually made of wooden materials, are made to measure, including the edges. The glass frames too are assembled already in the factory, and in the case of double glazing are even finish-glazed to prevent contamination of the inter-pane space during installation. Removal of individual glass panes, if necessary, is still possible.

The basis for the installation and assembly of the partition wall elements is – in order to prevent the hygroscopic wood materials from warping and the double glazing from fogging – a closed building with a climate that roughly corresponds to the subsequent room climate, i.e. with neither extreme humidity nor extraordinary temperatures.

As partition wall system are assembled using surface-finished elements, the amount of dirt generated is comparatively low compared to other building processes. All the dirt-generating processes (screed, drywall work, painting, etc.) are generally completed in advance in order to minimize the risk of damage to the system-partition walls.

We recommend laying down the floor after the partition walls have been installed, as a continuous floor surface may reduce the degree of sound insulation. Alternatively, the partition walls can be installed on previously laid and protected flooring.

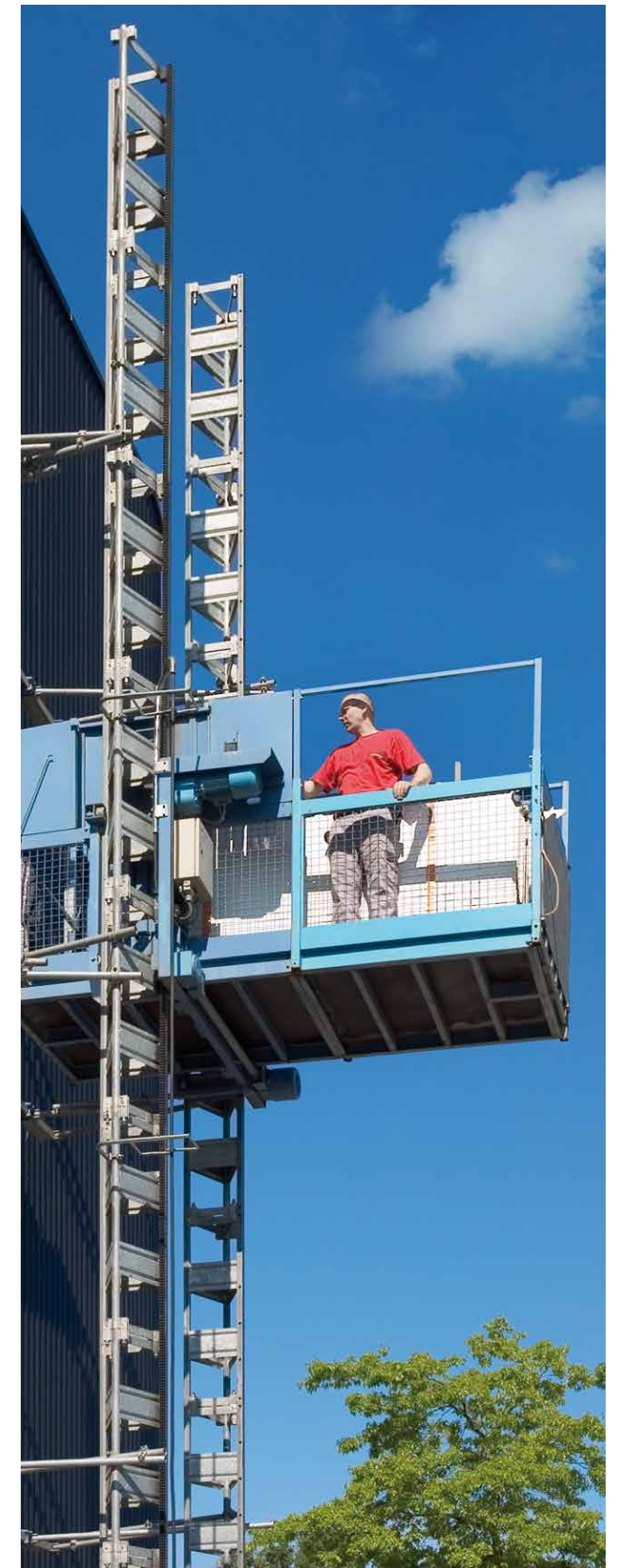
One important aspect regarding the speed and efficiency of the assembly process of system-partition walls is the installation of the prefabricated materials. Partition wall elements are generally delivered on special long pallets or



glass frames that are only opened at the installation site to minimize the risk of damage. If the size of the internal/load elevator provided by the customer does not permit the transport of the large-format wall elements, suitable facade openings should be provided on each floor, as level as possible with the floor, so that the palletized material can be tended to by external elevator or scissor lift and transported directly to the corresponding place of use. The adjacent images illustrate all these types of transport.

System-partition walls are levelled out on the customer-provided floor, which carries their static permanent weight. The ceiling connection is flexible and enables the absorption of standard tolerances and structural movements (see product pages). If subsequent ceiling deflections lead to changes in the position of the floor, this can have effects on the position of the wall elements, the joint pattern and the physical properties of the building, which does not constitute a deficiency in the partition wall system.

In the case of single-pane safety glass (tempered), spontaneous breakage may occasionally occur at a later date due to invisible nickel-sulphide inclusions in the base glass. This cannot be excluded in principle, cannot be determined non-destructively and therefore also does not constitute a deficiency. The probability of spontaneous breakage can be reduced to a residual risk according to DIN EN 14 179 by using heat-soak-tested single-pane safety glass, which is additionally subject to a heat-soak test. Please contact us for more information.



Wall panels and wooden doors



Pure white
U-05 M1



Traffic white
U-06 M1



Premium white
U-07 M2



White grey
U-10 M2



Light grey
U-15 M2



White aluminium
M-23 M5



Graphite grey
U-75 M4



Anthracite grey
U-80 M3



Decorative oak
D-EI M5



Beech veneer, natural
F-BU F1



Maple veneer, natural
F-AH F2



Oak veneer, natural
F-EI F2



American walnut veneer
F-NB F4



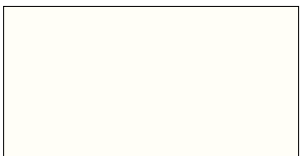
Smoked oak veneer
F-RE F6

On request we can provide you with original surface samples.

Glass frames and door frames



Aluminium natural
E6/EV1 G1



Pure white
RAL 9010 G2



Traffic white
RAL 9016 G2



White aluminium
RAL 9006 G2



Grey aluminium
RAL 9007 G2



Graphite grey
DB 703 G2



Anthracite grey
RAL 7016 G2

Connecting profiles



Anthracite grey
RAL 7016 A1



White aluminium
RAL 9006 A2



Grey aluminium
RAL 9007 A2



Graphite grey
DB 703 A2



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