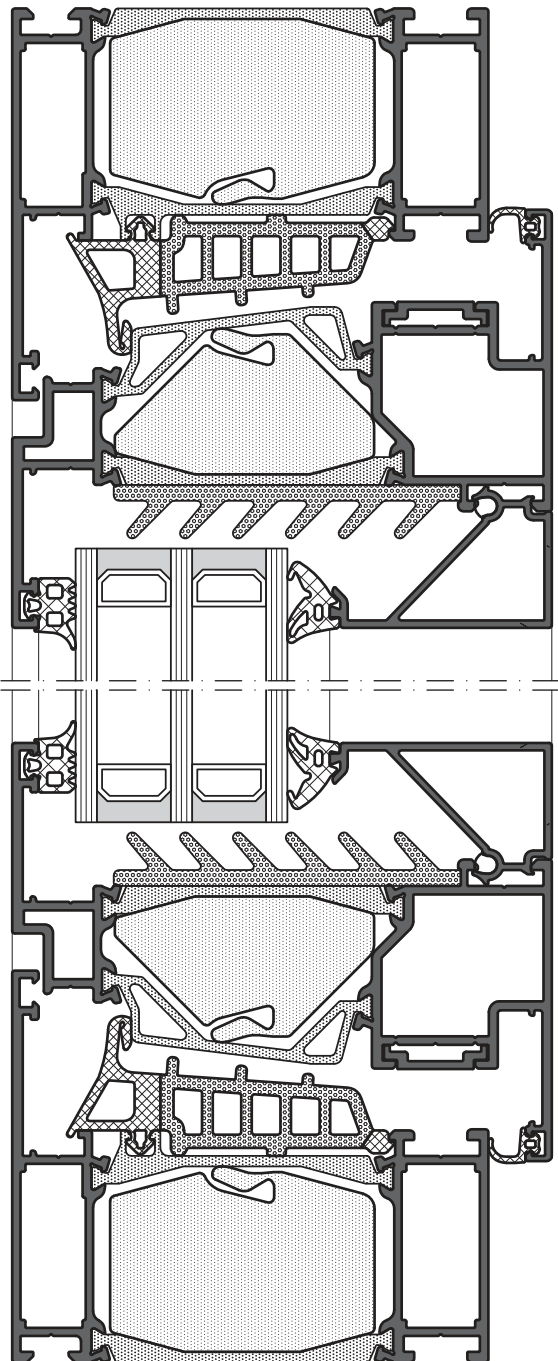


FRAME+ 90 WI/WB/WB-T Product range	Index Profiles Gaskets Accessories Tools Fitting	Product range
FRAME+ 90 WI	Window sections Assembly options	90 WI
FRAME+ 90 WB	Window sections Assembly options	90 WB
FRAME+ 90 WB-T	Window sections Assembly options	90 WB-T
FRAME+ 90 WI/WB/WB-T	Fitting	Beschlag
FRAME+ 90 WI/WB/WB-T	Thermal insulation	Thermal insulation
Technical information	Technical conditions General terms of sale	Technical information

Window system FRAME⁺
Top Energy Saving according to the latest standards



Reduced sectional representation

Tests	
U _f values	0.7 to 1.0 W/(m ² K)
Air permeability	Class 4
Water tightness	E 1200
Resistance to wind load	C5/B5
Noise protection	R _w (C;C _{tr}) to 45 dB
Burglar resistance	RC 2
Mechanical strength	Class 4
Operating forces	Class 1
Resistance against impact	Class 5

■ **Excellent product properties**

- Passive house certified thermal insulation
U_f value = 0.79 W/(m²K) (173 mm face)
U_f value = 0.89 W/(m²K) (117 mm face)
U_f value = 1.0 W/(m²K) integration outer frame (100 mm face)
U_w value = 0,75 W/(m²K) (173 mm face)
U_w value = 0.77 W/(m²K) (117 mm face)
U_w value = 0.79 W/(m²K) integration outer frame (100 mm face)
All U_w values with U_g = 0.6 W/(m²K),
Ψ_g = 0.031 W/(mK), size 1.23 m x 1.48 m.
- Innovative insulating bar material THERMORIT with very low thermal conductivity and suitable for composite coating and anodising.
- Single-piece, co-extruded medial gasket with an insulating proportion of foam.
- Composite insulation of the profile cavities by means of highly effective insulation insertions.
- Insulation of the glazing rebate for triple glazing by means of a glazing rebate insulating block with large ventilation spaces.
- Integration outer frames as the perfect supplement for the THERM⁺ passive house certified facade system.

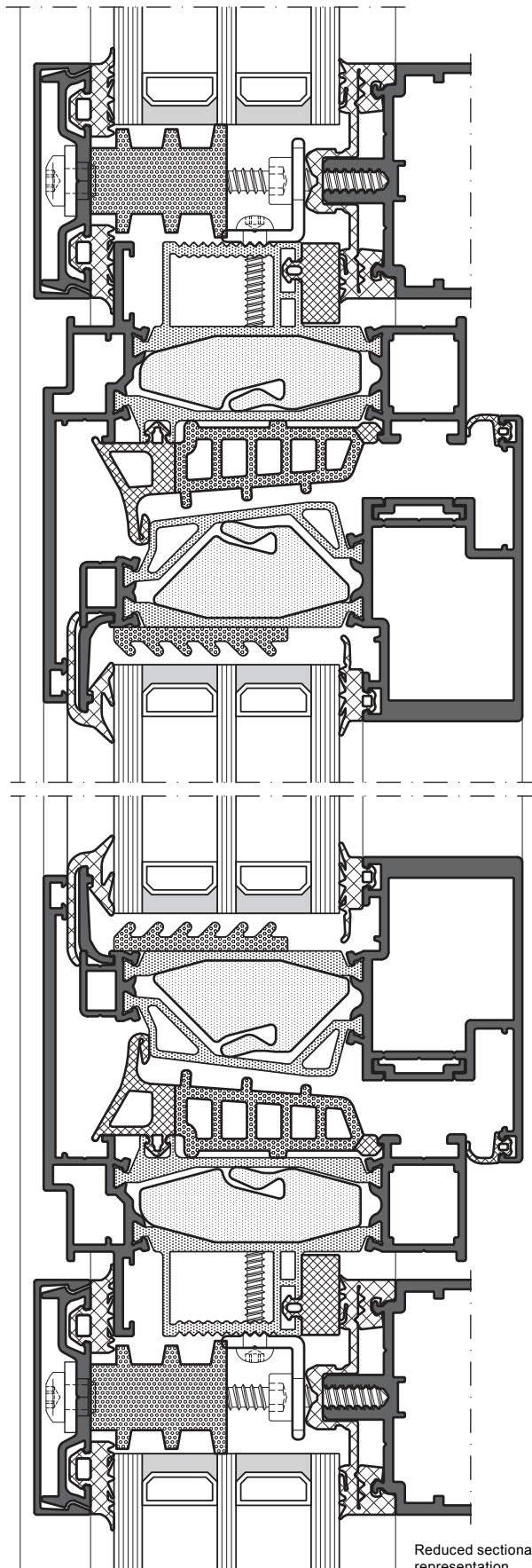
■ **Optimum planning**

- **Fitting variants**
Surface-mounted tilt and turn up to 130 kg/200 kg
Surface-mounted turn up to 300 kg
Concealed tilt and turn up to 150 kg
- **Opening variants**
Tilt and turn/turn/tilt before turn/tilt/Parallel tilt and slide door.
- Concealed motors with an extremely slim face can also be integrated in narrow outer frames such as e.g. integration outer frames.
- Innovative, mounting material almost free from thermal bridges for insertion elements in the facade.
- Strong glass support and thermally insulated base profile for the load transfer of heavy triple glazing elements.
- Installation of the block sash from the FRAME⁺ WB series is possible due to simple additional measures, by means of which a reduction of the face widths of the opening elements is achieved.
- Infill thickness in the fixed panel of 36 to 65 mm, in the sash of 34 to 80 mm, in the block sash of 40 to 60 mm.

■ **Efficient installation**

- Modular system units.
- Corner connections up to and including 100 mm outer frame interior face width with new, innovative adhesive injection procedure.
- Efficient processing of the glazing rebate insulating block by means of prefabricated corners.
- Integration outer frames with easy adaptation of the clamping thickness using compensation gaskets and compensation profiles.
- Simple enlargement profile for integration elements in case of a width offset between the add-on construction and the structural profile.
- Tools can be used for all FRAME⁺ window series.

Window system FRAME⁺
The superior quality concealed sash window



■ **Excellent product properties**

- Passive house certified thermal insulation
 U_f value = 0.89 W/(m²K) (103 mm face)
 U_f value = 1.0 W/(m²K) integration outer frame (86 mm face width)
 U_w value = 0.76 W/(m²K) (103 mm face width)
 U_w value = 0.78 W/(m²K) integration outer frame (86 mm face width)
 All U_w values with $U_g = 0.6$ W/(m²K),
 $\Psi_g = 0.031$ W/(mK), size 1.23 m x 1.48 m.
- Innovative insulating bar material THERMORIT with very low thermal conductivity and suitable for composite coating and anodising.
- Single-piece, co-extruded medial gasket with an insulating proportion of foam.
- Composite insulation of the profile cavities by means of highly effective insulation insertions.
- Insulation of the glazing rebate for triple glazing by means of a glazing rebate insulating block with large ventilation spaces.
- Integration outer frames as the perfect supplement for the THERM⁺ passive house certified facade system.

■ **Optimum planning**

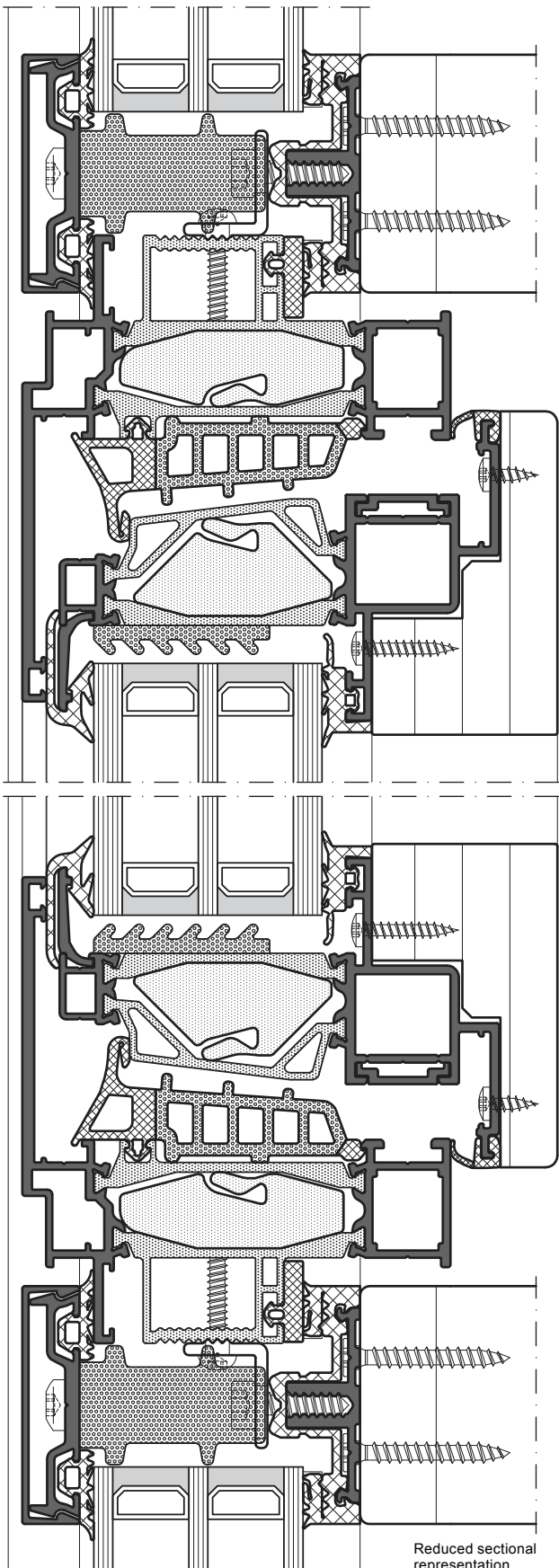
- **Fitting variants**
 Surface-mounted tilt and turn up to 130 kg/200 kg
 Surface-mounted turn up to 300 kg
 Concealed tilt and turn up to 150 kg
- **Opening variants**
 Tilt and turn/turn/tilt before turn/tilt.
- Concealed motors with an extremely slim face can also be integrated in narrow outer frames such as e.g. integration outer frames.
- Innovative, mounting material almost free from thermal bridges for insertion elements in the facade.
- Strong glass support and thermally insulated base profile for the load transfer of heavy triple glazing elements.
- Infill thickness in the block sash of 40 to 60 mm.

■ **Efficient installation**

- Modular system units.
- Corner connections up to and including 100 mm outer frame interior face width with new, innovative adhesive injection procedure.
- Efficient processing of the glazing rebate insulating block by means of prefabricated corners.
- Integration outer frames with easy adaptation of the clamping thickness using compensation gaskets and compensation profiles.
- Simple enlargement profile for integration elements in case of a width offset between the add-on construction and the structural profile.
- Tools can be used for all FRAME⁺ window series.

Approvals	
U_f values	0.89 to 1.1 W/(m ² K)
Air permeability	Class 4
Water tightness	E 1200
Resistance to wind load	C5/B5
Noise protection	R_w (C;C _{tr}) to 45 dB
Burglar resistance	RC 2
Mechanical strength	Class 4
Operating forces	Class 1
Resistance against impact	Class 5

Window system FRAME⁺
The new aluminium timber window



■ **Excellent product properties**

- Outstanding thermal insulation with a volume fraction of 60% of the innovative material used for THERMORIT bars and suitable for composite coating and anodising.
 U_i value = 1.0 W/(m²K)
 U_w value = 0.77 W/(m²K)
 All U_w values with $U_g = 0.6$ W/(m²K),
 $\Psi_g = 0.031$ W/(mK), size 1.23 m x 1.48 m.
- Real wood cladding on the inside as a decorative element, perfectly suited to the optical appearance of the curtain wall. Wide range of different types of wood.
- Safe glazing technology in conformity with the standards offering large ventilation spaces and an exterior gasket frame with corner vulcanisation.
- Individual design options for the interior outer frame profile by using colour adaptable cover profiles.
- One piece coextruded medialgasket with insulating foam percentage.
- Insulation of the glazing rebate by glazing rebate insulating block with large ventilation spaces and insulation of the hollow profile sections by high thermal insulating insertions.
- Integration outer frames as the perfect supplement for the THERM⁺ passive house certified facade system.

■ **Optimum planning**

- **Fitting variants**
 Surface-mounted tilt and turn up to 130 kg
 Concealed tilt and turn up to 150 kg
- **Opening variants**
 Tilt and turn/turn/tilt before turn/tilt.
- Innovative, mounting material almost free from thermal bridges for insertion elements in the facade.
- Strong glass support and thermally insulated base profile for the load transfer of heavy triple glazing elements.
- Infill thickness in the block sash of 40 to 60 mm.

■ **Efficient installation**

- Aluminium timber window with identical processing technology of standard aluminium windows.
- Real wood cladding on the inside with simple screw connection technique on production or construction site, exchangeable after installation.
- Two options for outer frame with integrated clamping zone with double or triple glazing.
- Compensation of glass infill thickness by special clip gaskets.
- Sash profiles available with black anodised surface (invisible on the in- and outside, when closed).
- Tools can be used for all FRAME⁺ window series.
- Available as system for self-fabrication or as pre-assembled units.

Approvals	
U_i values	0.73/0.88 – 1.0 W/(m ² K)
Air permeability	Class 4
Water tightness	E 1200
Resistance to wind load	C5/B5
Noise protection	R_w ($C_i; C_{tr}$) to 45 dB
Burglar resistance	RC 2
Mechanical strength	Class 4
Operating forces	Class 1
Resistance against impact	Class 5

Window system FRAME⁺
Quality in detail

■ **Reliability assured by tested quality**

- The FRAME⁺ window system has undergone rigorous testing according to the product standard for windows and exterior doors EN 14351.1 and achieved the following classifications. These values are at the same time the base for simplified CE marking of windows.

	FRAME⁺ 90 WI Aluminium window	FRAME⁺ 90 WB Aluminium window	FRAME⁺ 90 WB-T Aluminium window
System values			
U _f -value passive house	= 0.79 W/(m ² K)	= 0.75 W/(m ² K)	–
U _f -value ¹	≥ 0.70 W/(m ² K)	≥ 0.75 W/(m ² K)	≥ 0.89 W/(m ² K)
System depth	90 mm	90 mm	90 mm
Applications			
Punched opening window	X	X	X
Curtain wall insertion element	X	X	X
Casement sash		X	X
Application limits*			
Max. weight turn-tilt	130/200 kg**	130/200 kg**	130 kg
Max. weight turn	130/200/300 kg**	130/200/300 kg**	130 kg
Max. weight concealed fitting	150 kg	150 kg	150 kg
Max. sash dimensions ²	1,600 x 2,100 mm / 1,100 x 2,500 mm	1,600 x 2,100 mm / 1,100 x 2,500 mm	1,600 x 2,100 mm / 1,100 x 2,500 mm
Infill thickness sash	34 to 80 mm	40 to 60 mm	40 to 60 mm
Infill thickness fixed glazing	36 to 65 mm	–	–

¹ Thermal insulation based on DIN ISO 1077-2.

² Admissible sash dimensions see diagramme of fittings.

* Applications outside these limits, would be subject to an assessment by our Technical Department.

** 130 kg with standard fitting, up to 200/300 kg with reinforced fitting.

Opening options:

- Turn-tilt window
- Turn window
- Tilt-turn window (tilt first)
- Tilt window
- Parallel tilt and slide door

Fitting options:

- Standard fitting
- Concealed fitting

Handles/Motor:

- Individual commercial handles with integration gear
- RAICO system handles
- Motor operation