

A black and white photograph of horizontal window blinds. The blinds are partially open, creating a series of parallel horizontal lines. Light filters through the slats, creating a pattern of light and shadow. The perspective is from a low angle, looking up at the blinds.

seele

ISO shade®

ISOshade® is an insulating glass unit with an integrated sunblind. The unit consists of triple glazing and a sunblind in a cavity – a venetian blind with 60 or 80 mm slats or a vertical awning.

INSULATING GLASS FOR HIGH-PERFORMANCE FAÇADES

ISOshade® combines protection against sunlight, heat and noise in one compact unit. The glass make-up (heat-strengthened, toughened safety or laminated safety glass), interlayers and coatings are specified to suit individual performance requirements. The sunblind – in venetian or vertical awning format – is integrated in the cavity for effective protection against heat and glare.

CLEVER PRESSURE COMPENSATION

ISOshade® uses technology (patent pending) that ensures a design life of more than 25 years. The ingenious concept is based on a hermetically sealed cavity. A special pressure compensation system maintains the permissible climate loads in the cavity. This system ensures that, as temperatures fluctuate, the pressure in the cavity is kept at a permissible level. In other words, the cavity conditions itself via a volume-dependent system. For further protection against condensation, the spacers are filled with a desiccant.

ISOshade®

ISOSHADE®: THE BENEFITS AT A GLANCE

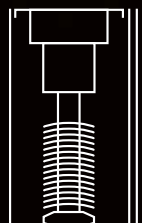
- Standard, tested element
- Protection against condensation
- A sunblind with elegant looks – thanks to a cavity without guide rails
- Control of incoming light
- Lower heating and cooling costs
- Compatible with all façade systems, including openable elements
- Installation by approved metalworking companies
- Requires little maintenance, easy replacement

HIGH LEVEL OF THERMAL

INSULATION PLUS SUNBLIND

ADVANTAGES OF INTEGRATED SUNBLINDS

- Protected against weather effects
- Requires no cleaning
- Use regardless of the weather
- No wind noise
- Easily accessible motor for low maintenance



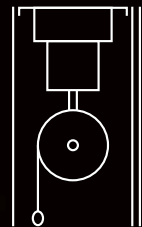
ISOSHADE® RS

Venetian blind (RS) for optimum control of incoming light

Venetian blinds offer maximum flexibility when you need to control the amount of incoming light. The slat width is 60mm (ISOshade® RS60) or 80mm (ISOshade® RS80). The venetians can be tilted so that the incoming light can be directed to suit individual requirements. At the same time a pleasant interior climate is created.

Sunblind motor

The motor is positioned for easy maintenance. Each sunblind can be opened and closed individually via a button or remote control, or centrally via a link to the building management system.



ISOSHADE® SM

Vertical awning (SM) for subdued lighting

A vertical awning matched to the product ensures subtle sun shading to create diffuse, soft lighting and a pleasant atmosphere. ISOshade® SM units are supplied with vertical awnings made from a UV-resistant material to ensure optimum shading so that the interior temperature remains agreeable.

CONTROLLING

SOLAR HEAT GAIN

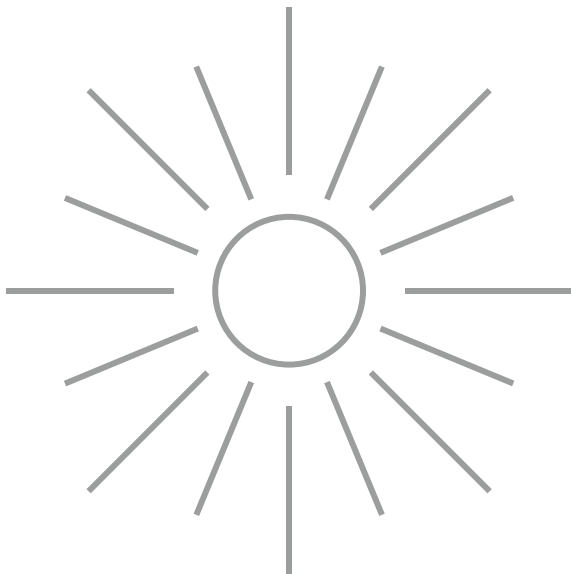
Goal:
pleasant interior climate

Top priority:
solar energy control to suit requirements

HEAT AND LIGHT EASILY REGULATED

ISOshade® creates a pleasant interior climate. The integrated sunblind system – venetian blind or vertical awning – regulates the amount of incoming heat and light regardless of wind and weather. Excess solar energy can therefore be screened off directly at the window or directed into the interior, depending on the time of year.

The amount of incoming light can be controlled individually at any time by adjusting the slats to achieve an optimum energy transmittance of 8 to 50 %. ISOshade® therefore protects against heat but exploits solar gains during cold periods. With the sunblind closed and the use of a selective solar-control coating, the g-value can reach 6 %.



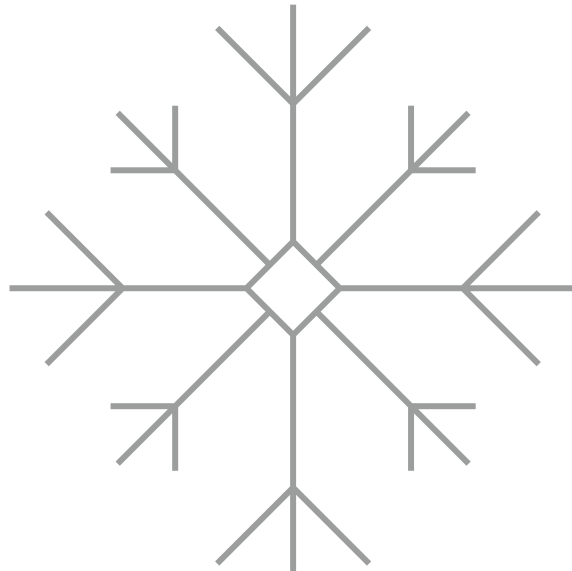
g-value

8%

OPTIMUM THERMAL PERFORMANCE

U_g-value

0.6 W/(m²K)



CONSIDERING THE WHOLE LIFE CYCLE

Goal:
minimising heating and
cooling costs

Top priority:
user comfort

Low-E glass is essential for energy-efficient buildings – and ISOshade® was specially developed for energy efficiency. The demands of the exterior climate change with the seasons, so ISOshade® reacts flexibly through the adjustability of the sunblind. In summer the solar energy remains outside, but in winter the passive solar gains can be exploited. ISOshade® therefore offers a high degree of comfort for users, with maximum admission of daylight and good lighting conditions in the building.

EFFICIENT SOUND

INSULATION

FOR ALL COMMON BUILDING TYPES

Goal:
noise protection

Top priority:
unobstructed views

Depending on requirements, ISOshade® can achieve sound reduction index (R'_w) values of 44 to 52 dB for excellent sound insulation. Even the standard version of ISOshade® complies with all customary noise control specifications for residential, industrial and production buildings as well as office glazing. Acoustic foils can be fitted to improve the airborne sound insulation yet further. The use of appropriate glass types and acoustic foils ensures that noise remains outside while offering maximum transparency.



**sound reduction
index R'_w**

44-52 dB

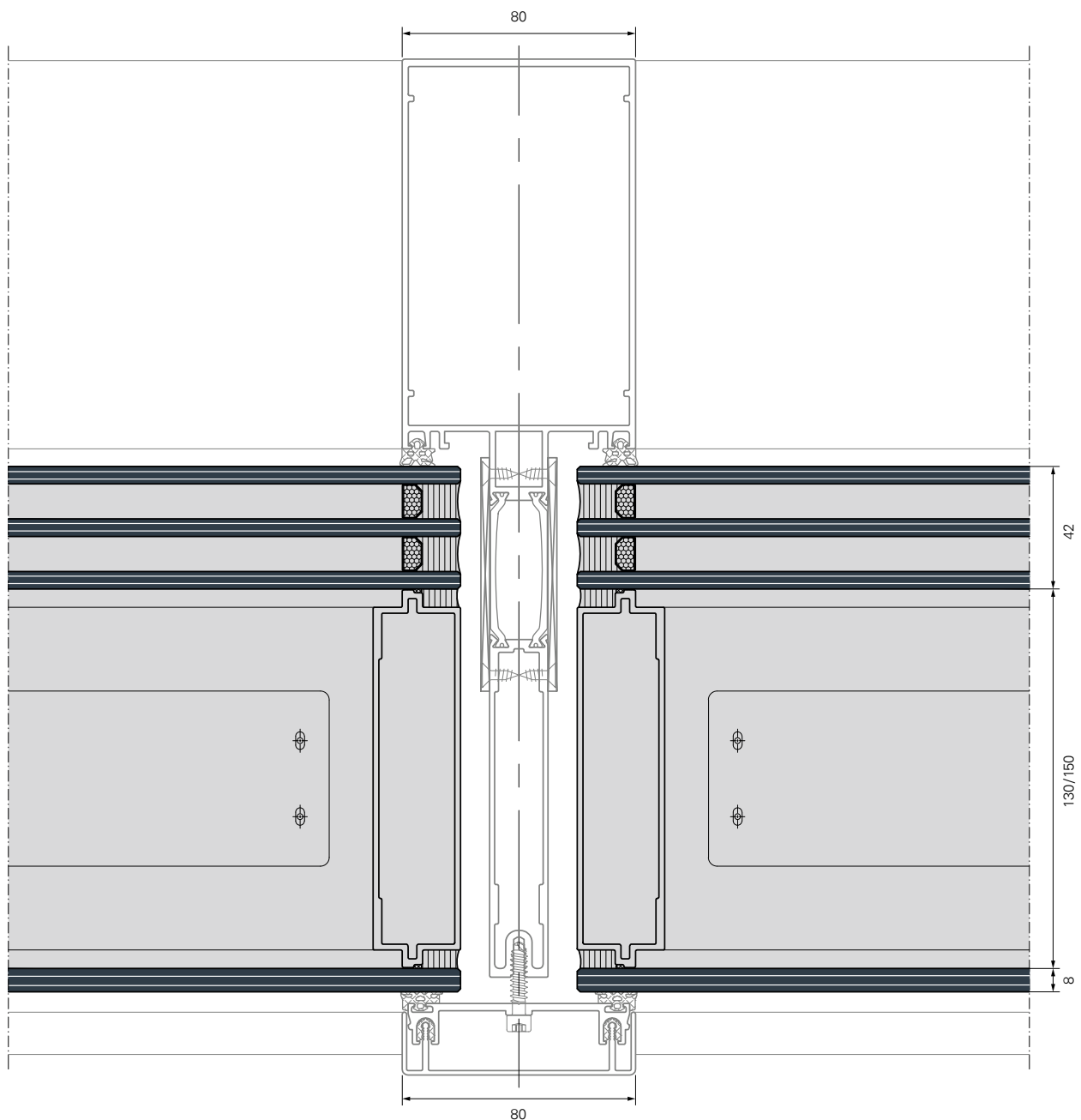
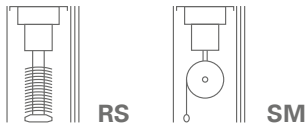
TECHNICAL DATA



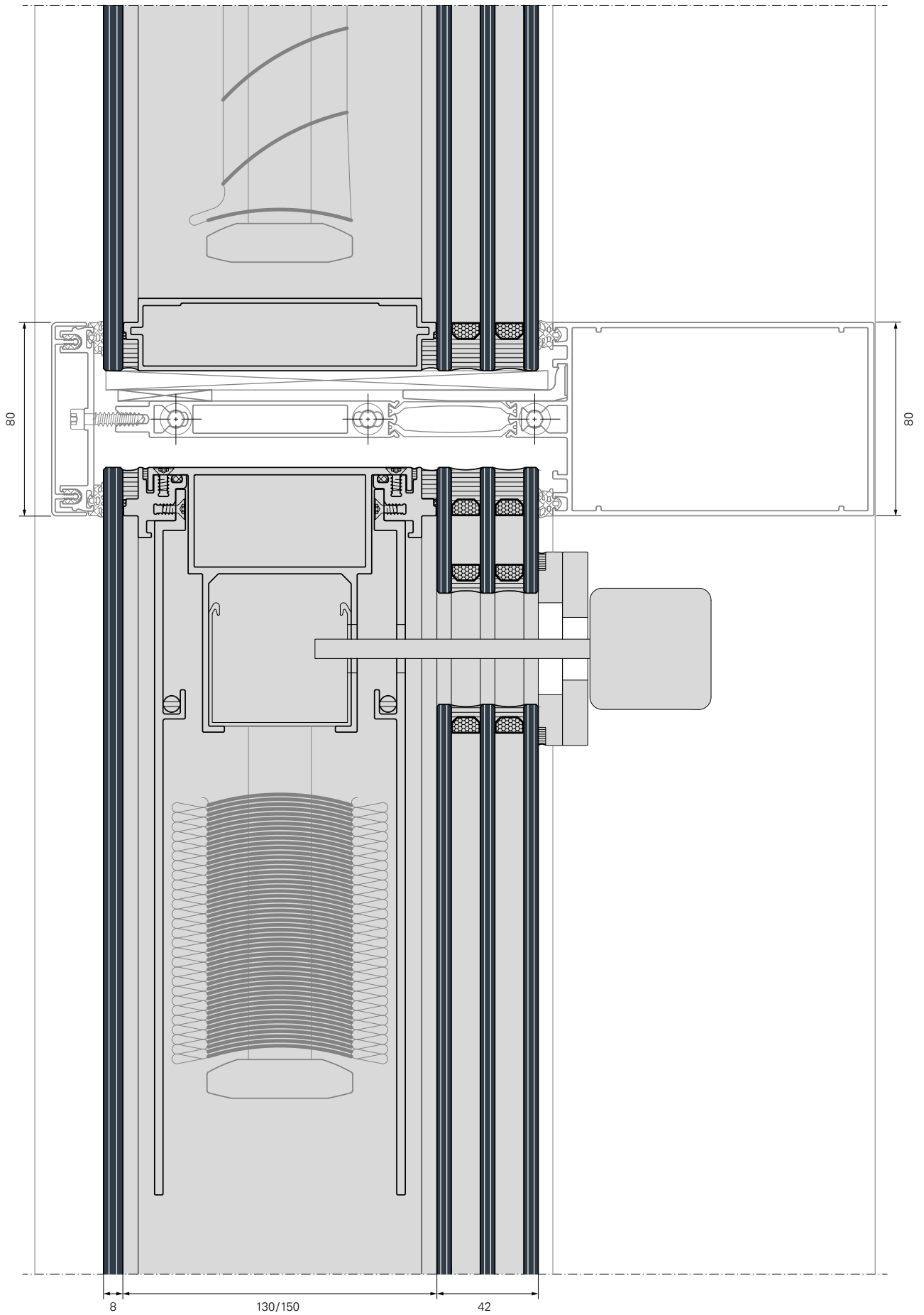
	ISOshade® RS	ISOshade® SM
Glass make-up	RS60 heat-strength. glass/cav130/hsg/ cav12/hsg/cav12/hsg RS80 heat-strength. glass/cav150/hsg/ cav12/hsg/cav12/hsg Low-E coating, argon filling	Heat-strength. glass/cav150/hsg/cav12/ hsg/cav12/hsg Low-E coating, argon filling
Options	Toughened safety/laminated safety glass, acoustic interlayer, solar-control coatings, ceramic printing	Toughened safety/laminated safety glass, acoustic interlayer, solar-control coatings, ceramic printing
Unit thickness	RS60 min. 180 mm, RS80 min. 200 mm	min. 200 mm
Dimensions	Width: 750 mm-3,200 mm Height: 1,000 mm-5,000 mm	Width: 750 mm-3,200 mm Height: 1,000 mm-5,000 mm
Options	Custom dimensions on request	Custom dimensions on request
Sunblind	Venetian blind 60 mm (RS60) Venetian blind 80 mm (RS60) Warema AF60/AF80, flat slats/Genius RAL 9006/RAL 9016	Warema SecuTex fabric 44500 - 44502
Options	Fixed blind with tilting slats, perforated/beaded slats	
Weight	>70 kg/m ²	>70 kg/m ²
Sound reduction index R'_w	44 - 52 dB	44 - 52 dB
U_g -value	0.6 W/(m ² K)	0.6 W/(m ² K)
g-value	8%	8%
Frame colour in cavity	anodised C0 (aluminium) or anodised C35 (black)	anodised C0 (aluminium) or anodised C35 (black)
Colour of spacer in insulating glass	silver or black	silver or black
Intruder resistance	RC2	RC2

MULLION/TRANSOM FAÇADE

With their slim frames, mullion/transom designs result in façades with a particularly sleek appearance. System manufacturers supply sections with various geometries for mullion/transom façades. Approved metalworking companies carry out the fabrication work.



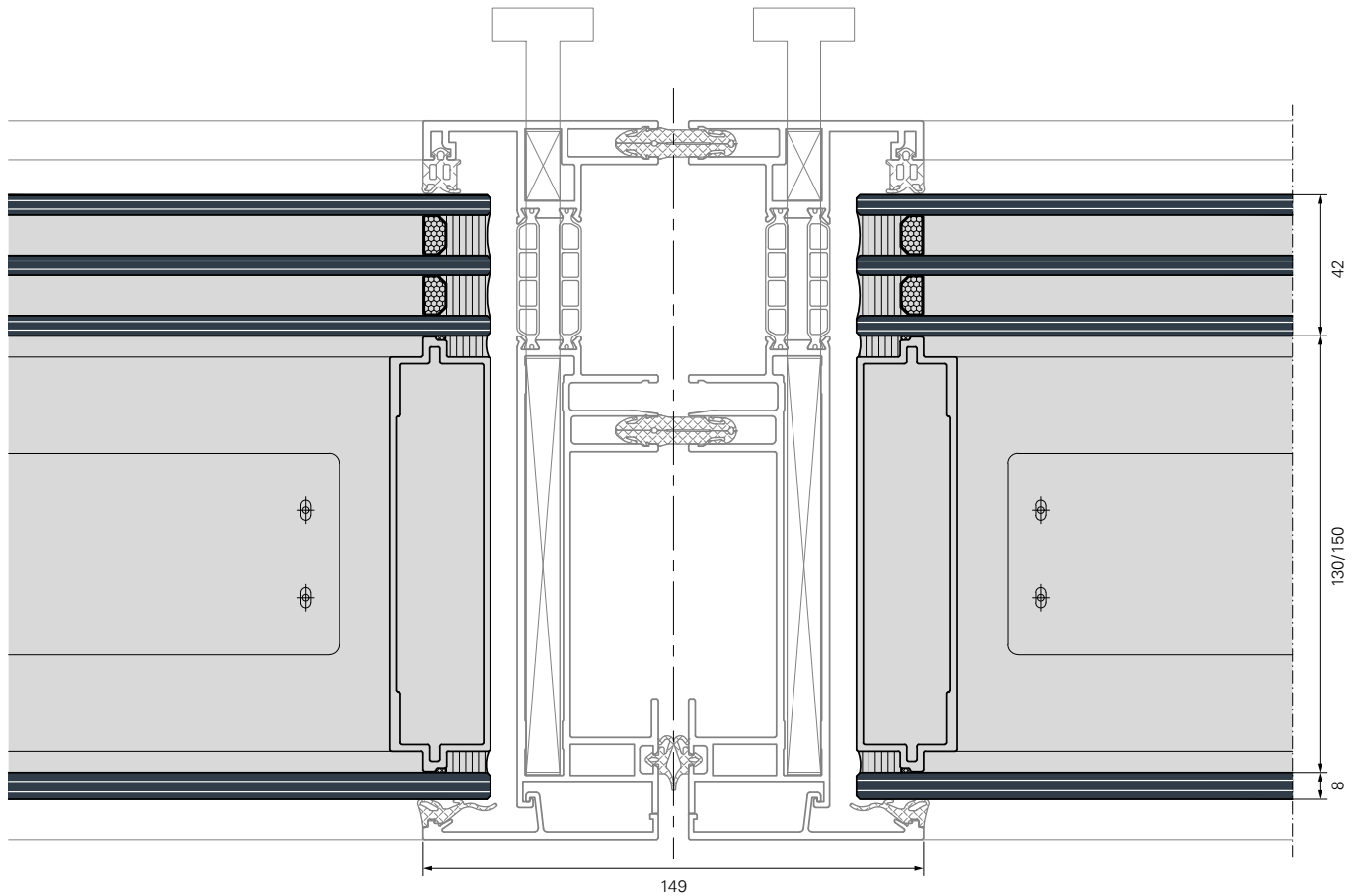
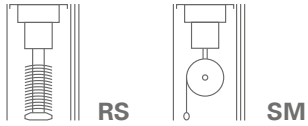
MULLION SECTION



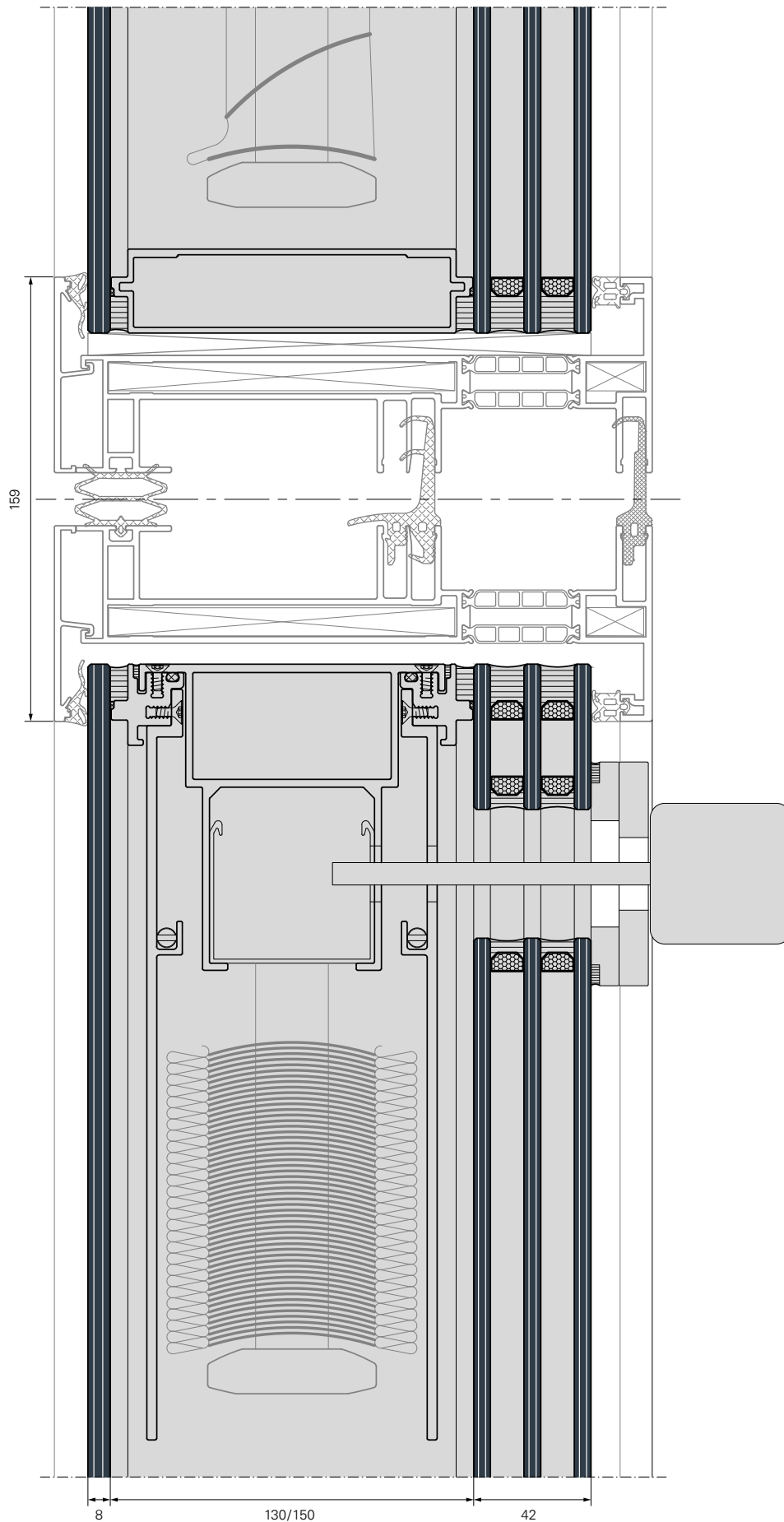
TRANSOM SECTION

UNITISED FAÇADE

When used in unitised façades, ISOshade® ensures design freedoms and subtle looks with simple, cost-effective production processes. ISOshade® units are factory-fitted by metalwork fabricators into frame sections supplied by the system manufacturers. That guarantees rapid progress on site.



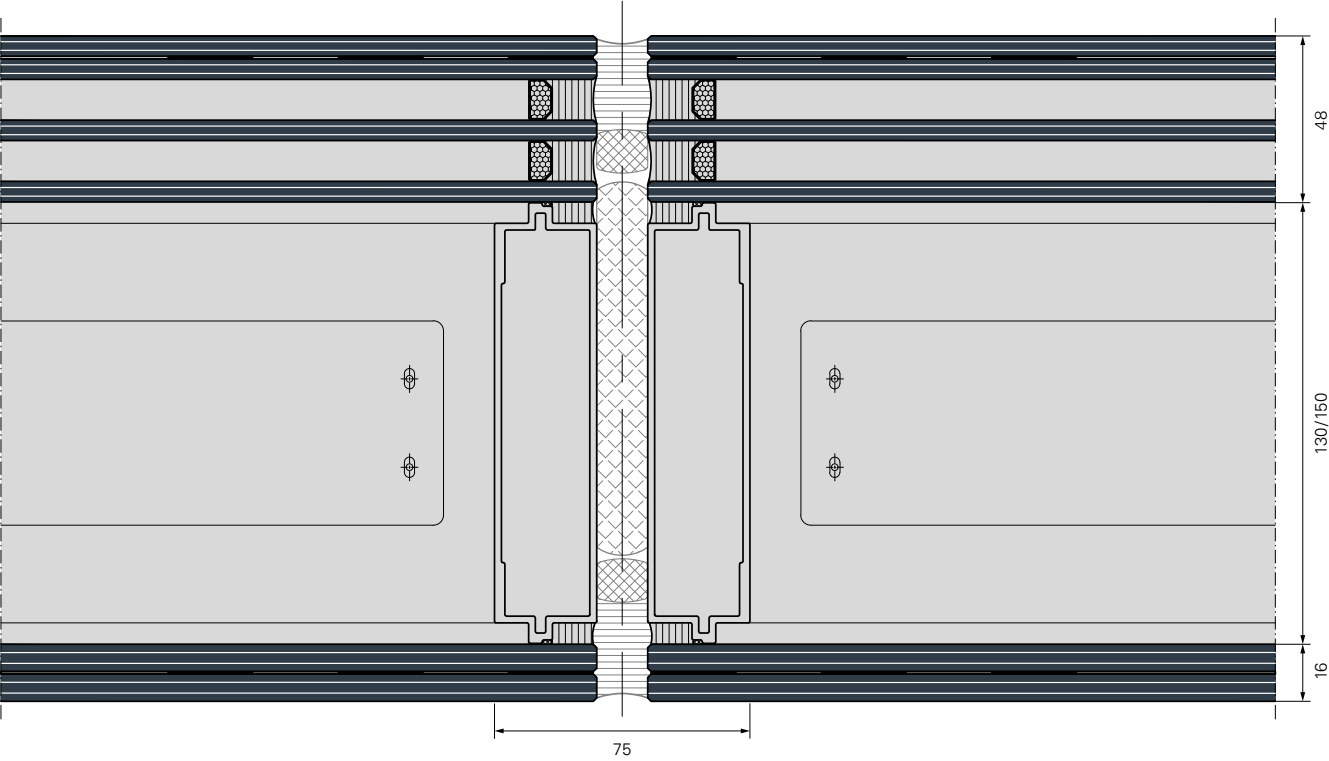
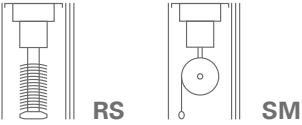
HORIZONTAL SECTION



VERTICAL SECTION

STRUCTURAL GLAZING FAÇADE

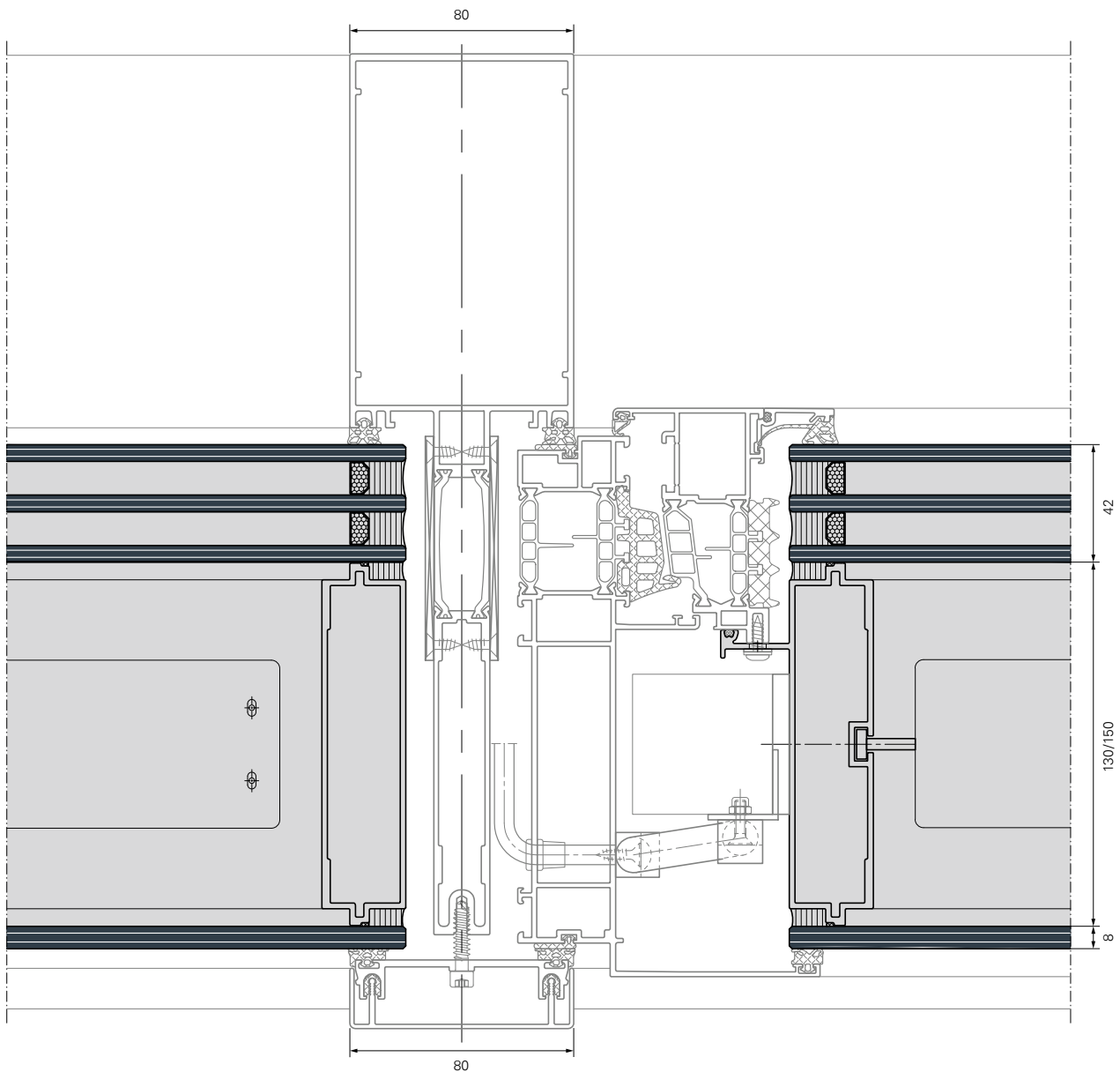
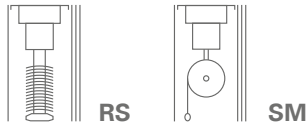
ISOshade® reveals its maximum transparency when used as a self-supporting element. The vertical façade sections are replaced by structural glazing components and each insulating glass unit is supported at two points horizontally.



HORIZONTAL SECTION

OPENING ELEMENTS

ISOshade® can be integrated in opening elements, e.g. side-hung or push-out windows, even doors. That means the building envelope can be designed for optimum daylight and fresh air gains.



HORIZONTAL SECTION SIDE-HUNG WINDOW

