

RHZ BAU, SALZBURG

RHZ BAU, SALZBURG | CASE HISTORY

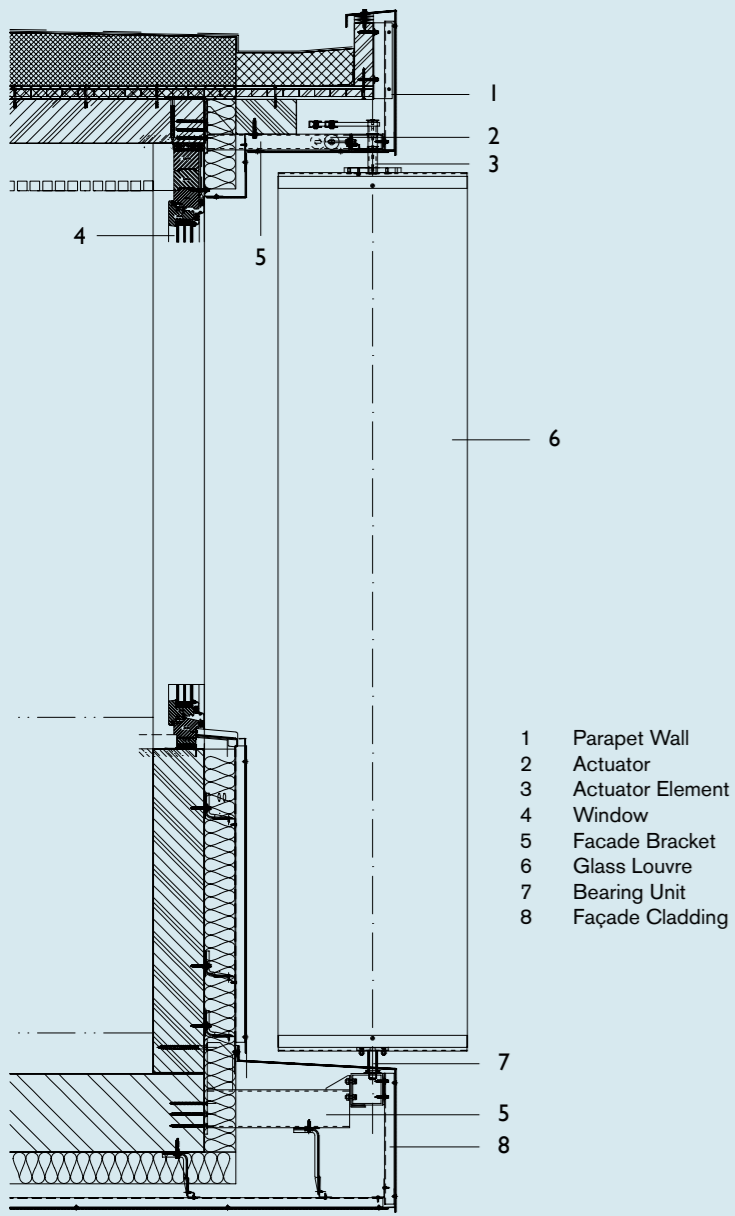
TOP-NOTCH FACADES
SUN TRACKING GLASS LOUVRES

SC – SOLAR SHADING

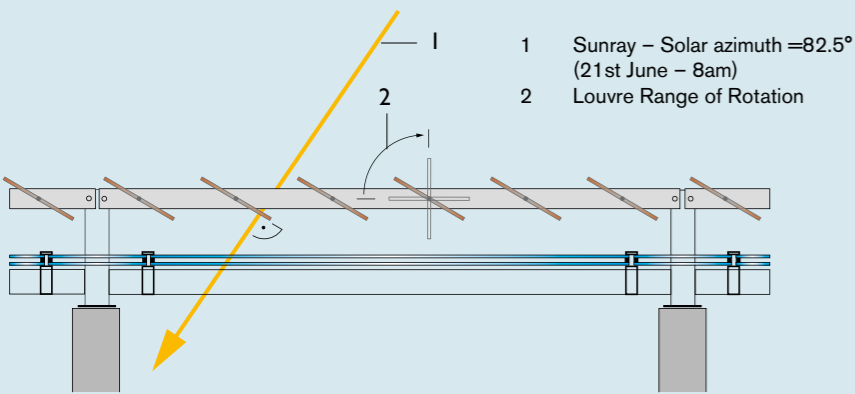


AESTHETICS MEETS FUNCTION

Project: RHZ Bau GmbH
Project site: Salzburg (A)
Occupancy: Office building
Architects: p-architektur DI Wolfgang Pöcklhofer, Salzburg
Plant Implementation: Unimet Metallverarbeitung GmbH & Co KG, Ungenach (A)
System planning: ims Ingenieurleistungen Manfred Starlinger, Kleve (D)
Facade finish: ICC Fassadentechnik GmbH, Mondsee (A)

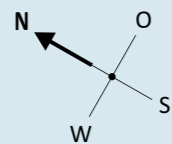


- 1 Parapet Wall
- 2 Actuator
- 3 Actuator Element
- 4 Window
- 5 Facade Bracket
- 6 Glass Louvre
- 7 Bearing Unit
- 8 Façade Cladding



- 1 Sunray – Solar azimuth =82.5° (21st June – 8am)
- 2 Louvre Range of Rotation

Illustration: Northeast Top View – There is no “best angle” for a fixed system and very few buildings rotate with the sun. An ideal indoor climate for the user is only achievable through a dynamic building envelope that reacts automatically to changing weather conditions. Customized controls offer plenty of additional functions. It’s about added value that pays off so much so that customers do not want to do without it nowadays.



PROFILE OF REQUIREMENTS

A building has to be of an outstanding quality when a building contractor with high standards builds to suit their own purposes. Solar shading as well as glare control should be achieved simultaneously by a façade-attached glass louvre solution, which, of course, also considers outstanding façade integration. This places exceeding demands on computer workplaces, where a separation of sun screens and glare control devices are usually envisaged, in order to achieve



high quality working conditions. The ideal balance between a heat shield and daylight supply system is only accomplishable by automated, sun-tracking technology. Refined glass slats that make semi-transparency and translucency adjustable through individual design as well as coloring and partial printing, optically blend seamlessly into the façade design, sustain the view, and block more than 80% of the incident solar radiation.

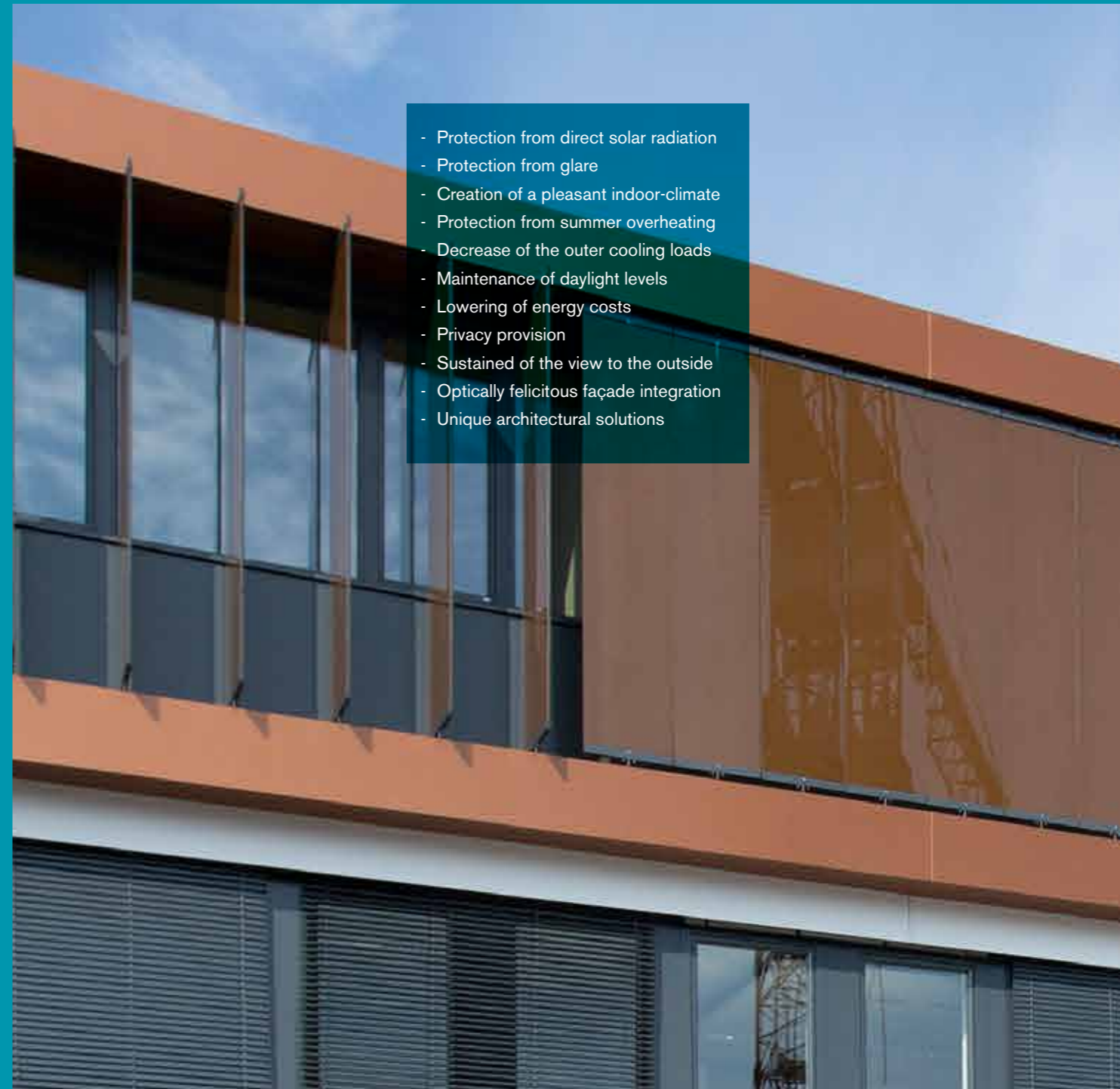


Europe-wide, solely with solar shading, the energy consumption required for cooling buildings may lower CO₂ emissions by 80 million tons – ESCORP-EU25 Survey

Through international cooperation of experienced system planers, control specialists as well as Unimet design engineers, fabricators and installers, another masterpiece succeeded to our client’s complete satisfaction.

SPECIFICATIONS

- Total system area: 202 m²
- Glass louvre type 1: 600x2,760 (mm)
- Glass louvre type 2: 1,070 x 2,650 (mm)
- Glass make-up: 10 (grey) / 8 (clear) heat strengthened incl. customized ceramic frit applied to surface 2
- Arrangement: vertical, pivotal
- Range of Rotation: 0-90°
- Actuators: 16 x linear actuator (stainless steel)
- Controls: Special control system operating large blades | 5 control zones



- Protection from direct solar radiation
- Protection from glare
- Creation of a pleasant indoor-climate
- Protection from summer overheating
- Decrease of the outer cooling loads
- Maintenance of daylight levels
- Lowering of energy costs
- Privacy provision
- Sustained of the view to the outside
- Optically felicitous façade integration
- Unique architectural solutions

ENERGY VERSUS LIGHT

Introducing an old theme in a new guise. The term 'solar shading' is too short-sighted for today's requirements. More appropriately, we should introduce a



term such as 'Solar-harnessing' systems. Inflated use of glass in facades, in the meantime, in combination with constantly increasing energy prices motivate improved use of the sun as an unlimited resource without cost. Partly contradicting parameters such as daylight and glare or solar gain and overheating open up a narrow corridor for proper planning. User-friendly designs require expertise and know-how as well as planning skills.

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SOLUTIONS

Louvres – horizontal or vertical, fixed or movable, made of aluminum, glass, timber, perforated metal, expanded metal, photovoltaic, prism, etc.

Shutter – folding overhead/sliding bi-folding/sliding shutter.

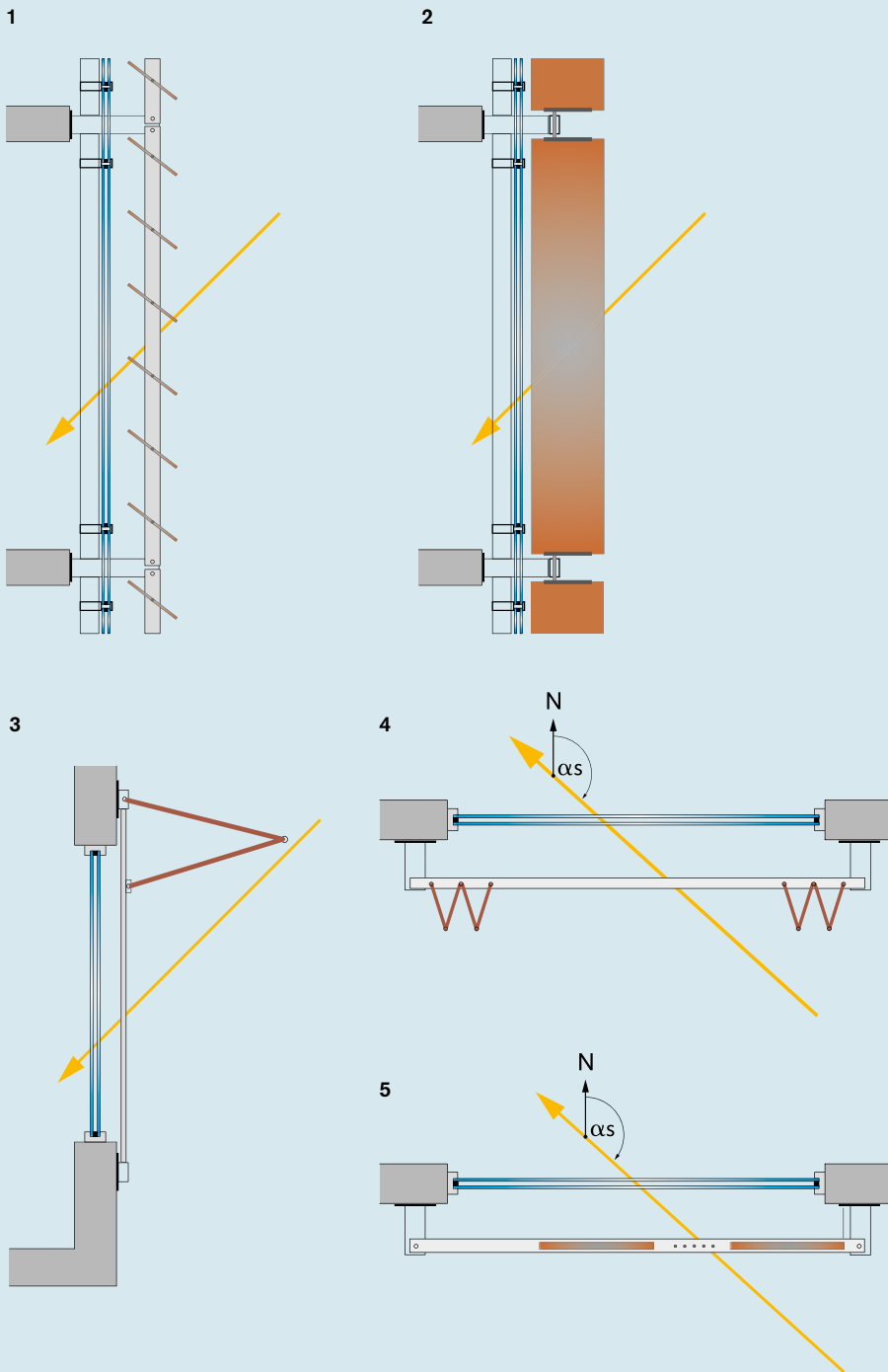


Illustration 1 – Horizontal louvre system, vertical section

Illustration 2 – Vertical louvre system, vertical section

Illustration 3 – Folding overhead shutter, vertical section

Illustration 4 – Sliding bi-fold shutter, horizontal section

Illustration 5 – Sliding shutter, horizontal section

Contact:

Unimet Metallverarbeitungs GmbH & Co KG
A-4841 Ungenach, No. 63
office@unimet.at
www.unimet.at
+43 (0)76 72 8 47 77

