

Practical Examples of Daylight Systems for Architecture

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SOLUTIONS





INTRODUCTION

Why Daylight?

Abundant

Free

Healthy

Sustainable

Cost Savings

Major component of Architecture



PLANNING CONSIDERATIONS

Orientation

... of the site, building, openings, building form...

Local Intensity, Regularity, Seasonal Differences

... how much to use and when...

Direct vs. Indirect

... reflection, diffusion, filtration...

Shading

... fixed vs. adjustable, potential heat gain...

Materials

... technical and aesthetic qualities...

Mood

... creating atmosphere...



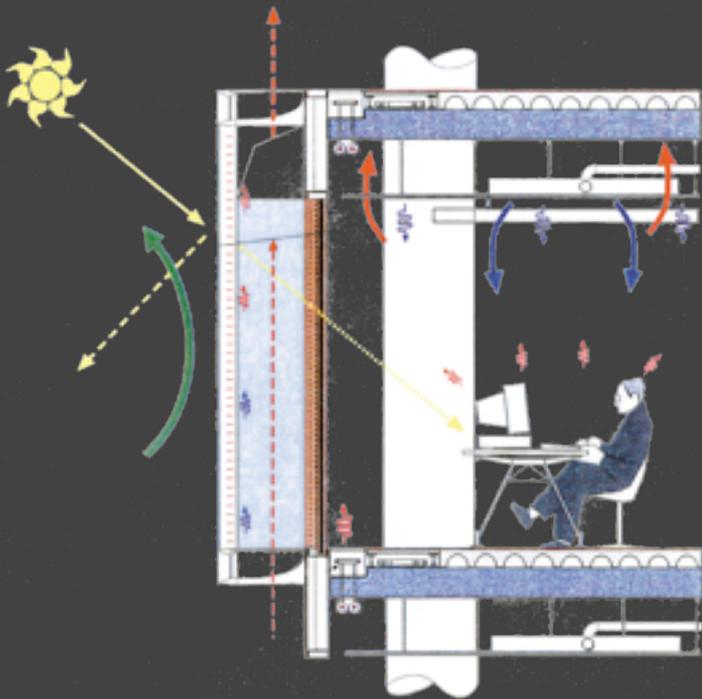
ARAG TOWER

Climate Façade 80cm Double Façade with integrated adjustable shading systems.

ARAG TOWER

Climate Facade Inner façade fully openable, allowing natural ventilation. Reduces heat gain. Significant HVAC system reductions.





ARAG TOWER

Climate Facade Integrated daylight and ventilation system designed to optimize working climate and comfort while reducing operating and MEP installation costs.

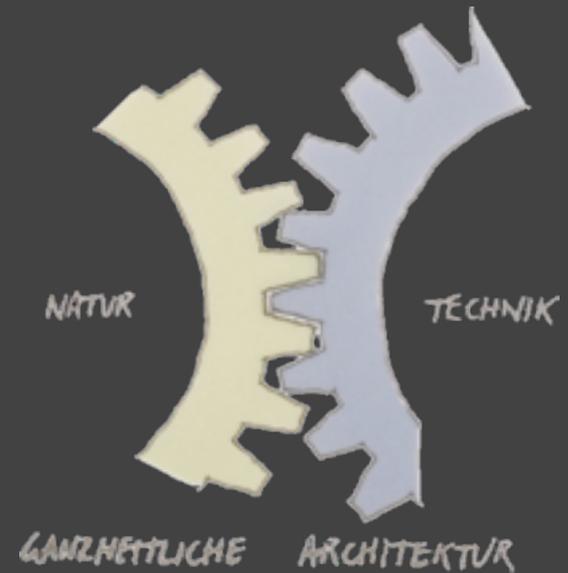


ARAG TOWER

Glazed Interior Partitions All internal spaces have daylight. Lighting operating costs significantly reduced. Cooling loads also reduced.

DB-CARGO

Building Form Every office has a direct window view. The building is integrated with the landscape: interior and exterior spaces interlock.





DB-CARGO

Passive Shading Facade profile spacing and shape help control direct sunlight at peak path of sun.

Active Shading Adjustable exterior sun screen systems with automatic and manual controls.



DB-CARGO

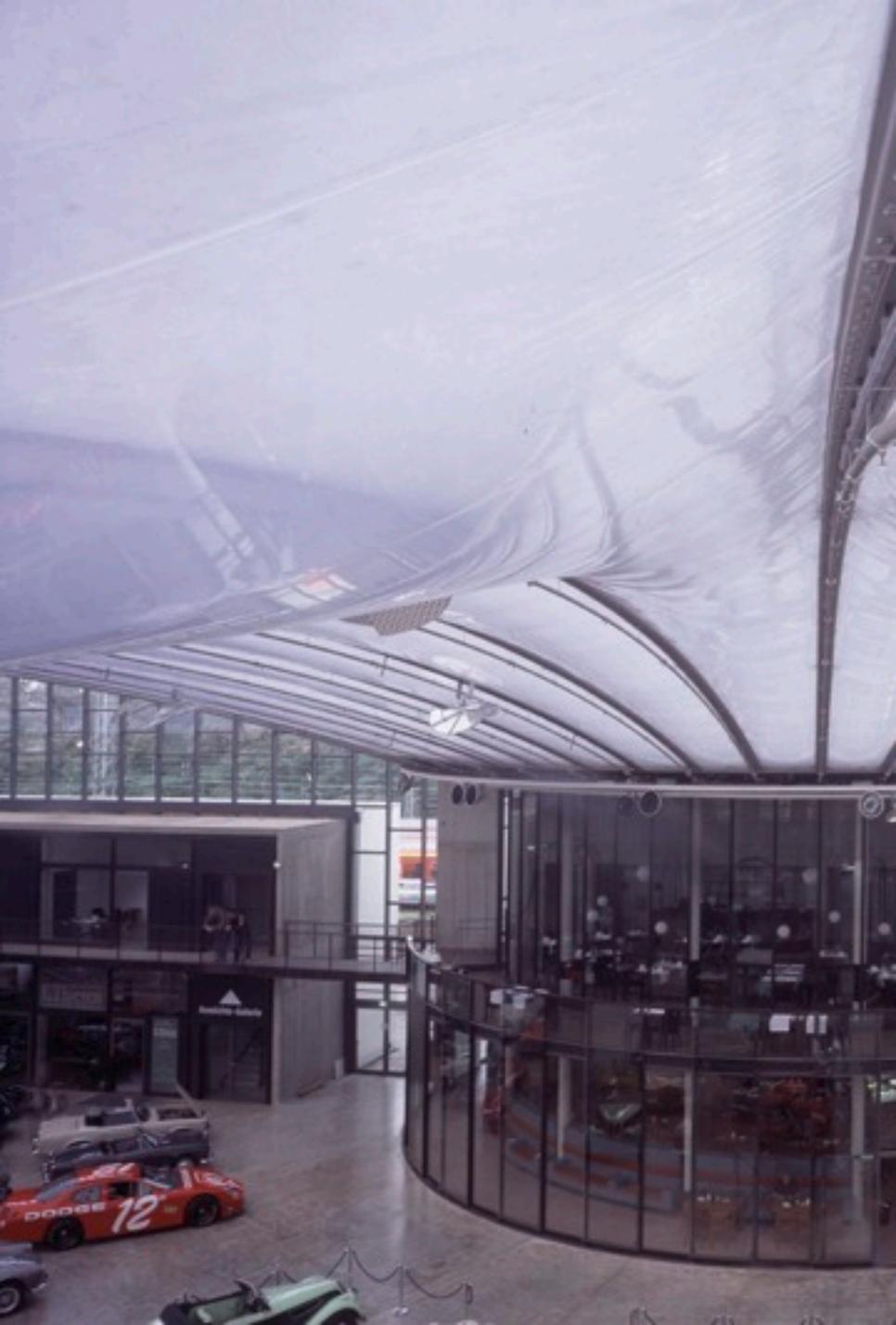
DB-CARGO



MEILENWERK

**130 m Insulated Foil Roof Largest in Europe
No Sprinklers Required**





MEILENWERK

Low cost Simple foil “cushions” kept filled with air with an air pump that uses less energy than a vacuum cleaner.

MEILENWERK



MEILENWERK

Modern Materials



XVA GALLERY, BASTAKIYA, DUBAI

Traditional Materials





XVA GALLERY, BASTAKIYA, DUBAI

Different Eras
Different Materials
Same Principles

Die Kunst, das Morgen zu denken.

Helmut Rhode

The Art, to think the tomorrow.

Helmut Rhode



Our century started with curiosity. In the building arts – as in all the arts – doors were opened and works created that will be valid far beyond our century...

But I am again curious if the classical view points for sensible construction will gain credence once more:

- Simple solutions for complex problems.
- Careful use of materials, work force, construction and operating costs.
- Harmony and resonance of the individual parts with the whole.



THANK YOU

SOME HELPFUL REFERENCES

RKW website: www.rkw-as.de

DGNB website: www.dgnb.de