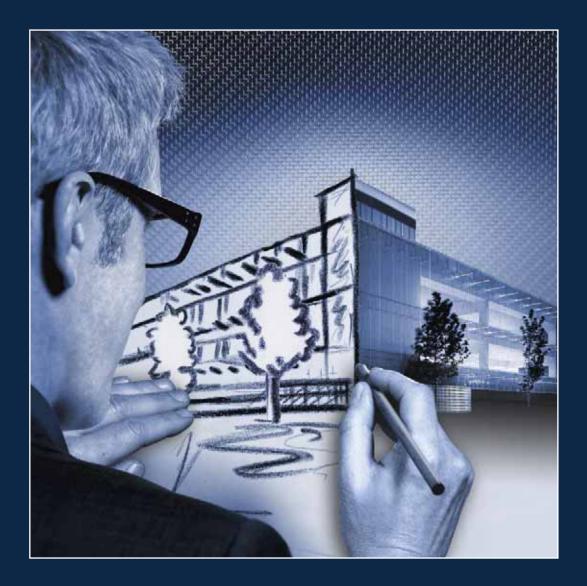
HAVER & BOECKER



#### DIE DRAHTWEBER



ARCHITECTURAL WIRE CLOTH. WEAVING IDEAS.

### THE WIRE WEAVERS

Architectural wire cloth from Haver & Boecker combines outstanding functionality with high aesthetic appeal, opening up new perspectives in creative design and enabling fascinating architectural solutions.

Our comprehensive range of designs provides architects and planners with a wealth of options when designing interior and exterior spaces. Our knowledge and experience of wire weaving and ready-to-install wire cloth elements enables us to act as a reliable partner at every stage of the project: from the initial concept right through to on time installation. The many projects that we have installed mirror our manufacturing ability. Along the way we have formed many creative partnerships with internationally renowned architects, culminating in a growing number of customers throughout the world relying upon our capabilities.

These projects - along with in-house engineering and construction departments, many patents, registered designs and trademarks provide first hand proof of our products and our unique way of weaving your ideas.



Haver & Boecker began producing wire cloth in Hohenlimburg, Germany, in 1887. Today, we are one of the world's leading wire weaving companies with a global network of branches and manufacturing facilities.

Our work is based upon experience, continuous research and development of our products and manufacturing processes, along with the knowledge and ability of our staff. This combination of tradition and innovation allows us to meet and exceed the high expectations of our customers.

# STYLISH: EFFECTIVE IN ALL AREAS.



#### Façade

Wire cloth from Haver & Boecker gives outdoor façade architecture immense individual character. As a semi-transparent outer shell with outstanding properties, our woven wire cloth combines stylish, effective design with a high degree of practical use. IMAGIC WEAVE® media façades offer modern façade design a new dimension.

- Façade design
- Guard rails
- Multi-storey car park cladding
- Sun and sound protection
- Transparent media façades



#### Ceiling

Used in ceiling design, the open weave of Haver & Boecker wire mesh creates striking metal soffits with individual aesthetic features and functional reliability.

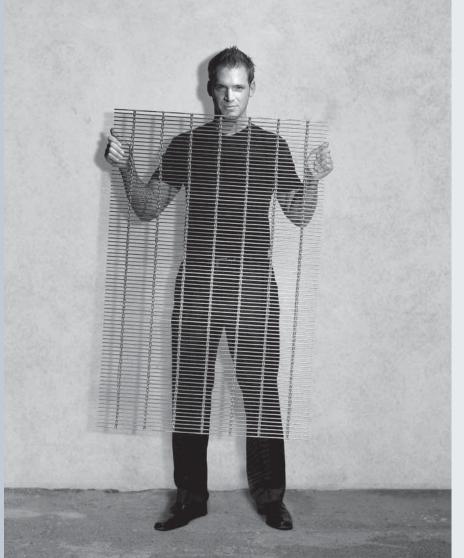
- Surface, channel and frame constructions
- Integrated lighting systems
- Interior acoustic systems
- Enclosures concealing technical installations
- Fire protection

#### Space

Versatility and robustness, stability and an exclusive appearance make Haver & Boecker woven wire cloth the ideal material for designing spaces, surfaces and other functional elements for both interior and exterior use.

- Wall claddings and room dividers
- Railings and balustrades
- Exhibition and shop designs
- Acoustic systems
- Free-standing structures

# BRILLIANT IDEAS: FAÇADE DESIGN WITH WIRE CLOTH.



#### Architectural Wire Cloth for

- Façade design
- Guard rails
- Multi-storey car park cladding
- Sun and sound protection
- Transparent media façades

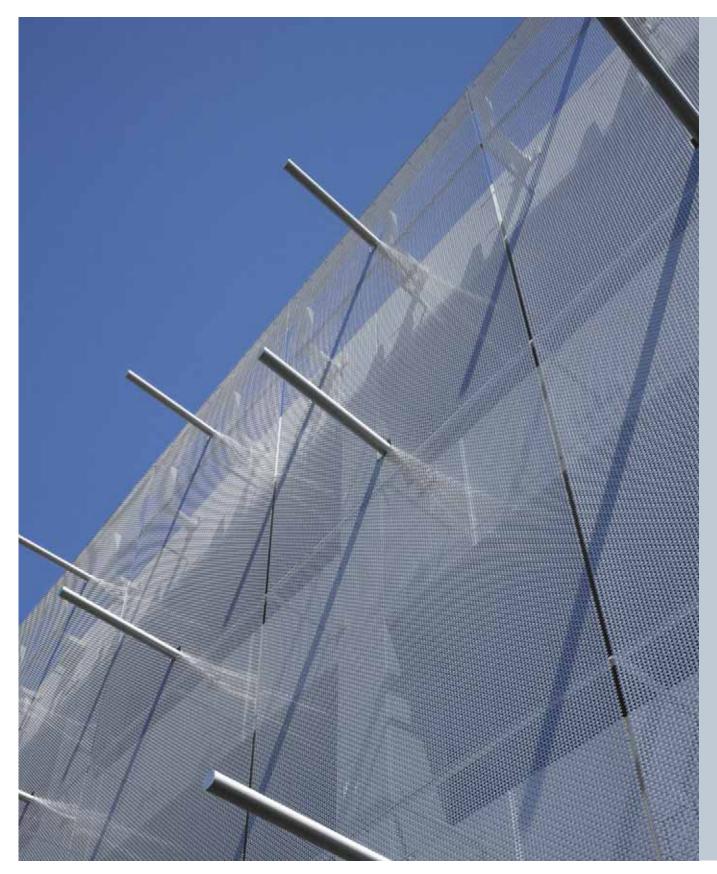
Be it for new buildings or renovation projects, Haver & Boecker wire cloth offers architects and planners a multitude of design options for exterior façades which combine sophisticated aesthetic features with a great many functions.

A wide range of different types of mesh can enhance the appearance of a building, giving it immense individual character. Depending on the lighting conditions and the viewing angle, the material can appear transparent or opaque. Light and shade, sunshine and cloud are reflected on the mesh surface, creating either a shimmering metallic effect or the impression that the building has a second skin.

Wire mesh constructions can also have a safety function, provide protection from the sun and absorb sound.

Manufactured from high-quality,

stainless steel with molybdenum, our meshes offer good corrosion resistance requiring minimal maintenance. Tried-and-tested fastening systems enable mounting solutions to be customised, guaranteeing optimum safety in even the tallest of buildings and strong winds.



Project: Chesapeake "Car Park One", Oklahoma City, USA, Architects: Elliott + Associates Architects



# Individual solutions for individual requirements.

Façade designs are distinguished not only by their impressive technology but also by the typical character their individual architects give them. Our architectural wire cloth is available in many different patterns, allowing the imagination free rein when creating functional as well as individual aesthetic features. Both in their overall construction and individual details, such designs continue to set new standards in terms of the quality and optical effect of the material.

Hence wire mesh constructions satisfy much more than just the necessary protection and safety requirements, enabling architects and planners to transform even purely functional buildings into works of art. The vast range of wire mesh projects constructed all over the world by our company reveals the enormous potential of Haver & Boecker wire cloth technology: from an office block to the 318-metre Aspire Tower in Doha, from department stores to airport car parks.

# The very best advice every step of the way.

Highly skilled and experienced, our experts are on hand to support architects and planners from the moment they first sketch out their ideas, to when the project is perfectly installed on site. It is this close collaboration and exchange of imaginative ideas in the early stages that provides the ideal prerequisites for the success of a façade design.



Project: Paradis Stasjon, Stavanger, Norway, Architect: Birger Heyerdahl



Project: Odysseum – Science Adventure, Cologne, Germany, Architect: Kaspar Kraemer

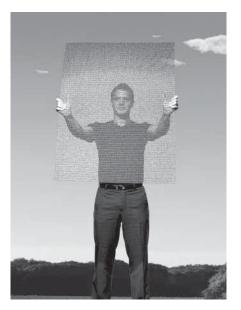


Project: Car Park 3–Airport Nuremberg, Nuremberg, Germany, Architect: Kappler Architekten



Project: Chesapeake "Car Park One", Oklahoma City, USA, Architects: Elliott + Associates Architects

# PERFECT IN SUNNY WEATHER: WIRE CLOTH AS SUN PROTECTION.

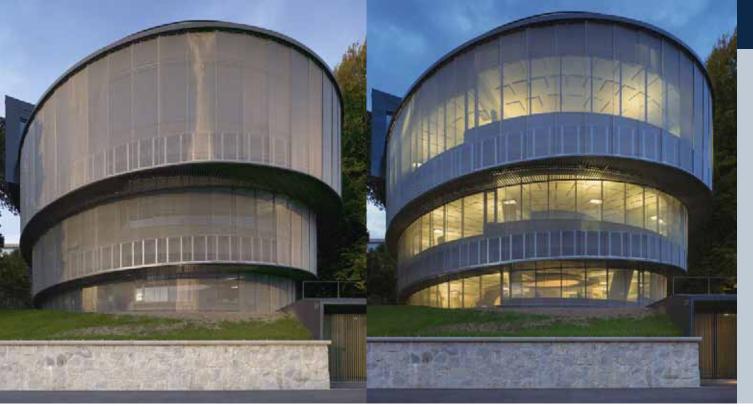


Architectural wire cloth applied to the exterior of a building offers much more effective sun protection than interior systems. Moreover, façade designs with architectural wire cloth combine excellent and attractive protection with a whole range of added advantages.

Incident solar radiation is perfectly filtered and the warming of the façade greatly reduced as a result. The transparent quality of the mesh not only enhances the visual effect of the façade; it also ensures a clear view of the building from the outside-in and vice versa. This effect offers a great many more possibilities when designing façades, especially those made of glass. Moreover, because they reduce energy costs for air conditioning, wire cloth façades that give sun protection also offer many economic savings.



Project: Clinica Hospitalaria Santa Angela de la Cruz, Seville, Spain, Architects: Blasco.Esparza y Asociados, Arquitectos



Project: Cocoon - SwissLife, Zurich, Switzerland, Architect: Camenzind Evolution



Project: Expoland, Lisbon, Portugal Architects: Frederico Valsassina Arquitectos

Project: C&A ECO-Store, Mainz, Germany Architects: Ehrich + Vogel Architekten



Project: Los Angeles Police Department, Los Angeles, USA, Architects: JFAK-John Friedmann Alice Kimm Architects (above) Project: HAtrick Hasselt, Hasselt, Belgium, Architect: Holistic Architecture 50|5 (below)

# CREATIVE SPECTRUM: COLOURED DESIGN WITH WIRE CLOTH.

Creating coloured façades with architectural wire cloth presents some highly unusual design options. Areas of colour and complex motifs can be painted directly onto the mesh and displayed over the entire façade.

Be it a logo or a graphic image,

a theatre, department store or company headquarters, this method gives any building an unmistakeable identity. The interaction of artificial light, daylight, transparency, luminosity and colour ensures that the stylistic effects of a façade change continually. A particularly spectacular optical effect can be achieved by weaving wires of different colours vertically and horizontally; the colours change with the viewing perspective of the observer, as new colours are accentuated from different angles.



Project: Los Angeles Police Department, Los Angeles, USA Architects: JFAK-John Friedmann Alice Kimm Architects

Project: De Baljurk – Kettingstraat, The Hague, Holland Architects: Archipelontwerpers Project: GAZ Electricité de Grenoble, Grenoble, France Architect: A.R.C. Grenoble

# **PROGRAMMED TO PERFECTION:** TRANSPARENT MEDIA FAÇADES WITH WIRE CLOTH.



High-class architectural wire cloth from Haver & Boecker has been combined WEAVE with the latest LED

technology from Traxon Technologies - an Osram Company - to develop IMAGIC WEAVE® media façades. The result is a powerful, versatile LED system for an individually programmable video presentation of lighting effects in up to 16 million colours on façades.

IMAGIC WEAVE® makes it possible to display lighting effects and graphic designs, moving text or luminous high-resolution video images in brilliant quality.

The system is modular and can therefore be scaled to perfectly fit surfaces of any size and shape. The desired contents are simply inserted in standard file formats via a universal interface.

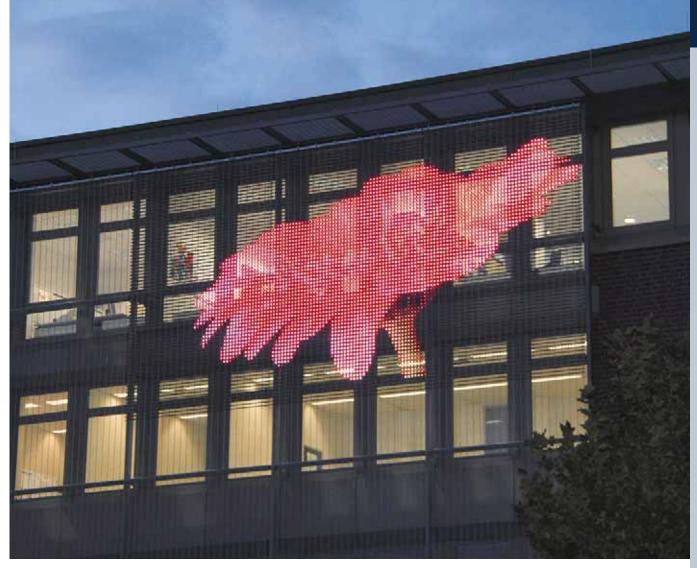
In contrast to non-transparent systems, the displayed images seem to be suspended directly in front of the façade without concealing it completely and can become strikingly transparent, depending on the ambient brightness. In addition, the slim LED profiles are mounted on the wire mesh so that they are hardly noticeable when not in use and have no effect on the aesthetics of the façades themselves.

Haver & Boecker IMAGIC WEAVE® transforms the façades of cinemas, stadiums, shopping centres, airports and high-rise buildings into eyecatching communication media.



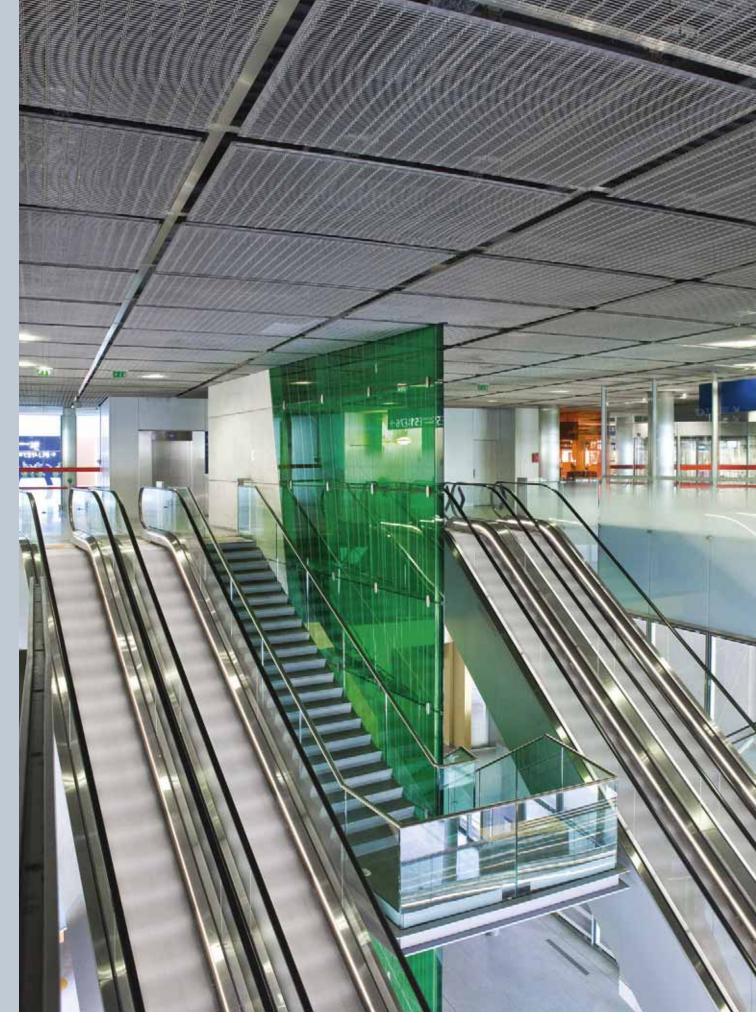


Project: Haver & Boecker media façade, Oelde, Germany, Architect: Architekturbüro Hilker



Project: Haver & Boecker media façade, Oelde, Germany, Architect: Architekturbüro Hilker





Project: Airport Roissy Charles de Gaulle, Terminal S3, Paris, France, Architect: Ingénierie et Architecture Aéroports de Paris

# HIGH DESIGN: CEILINGS MADE OF WIRE CLOTH.

Haver & Boecker architectural wire cloth presents architects and interior designers with a wide range of options for creating striking yet functional ceiling designs.

Different types of mesh and surface textures, various installations and lighting make it possible to alter the appearance of the material imaginatively in order to create ceilings which are shiny, shimmering, translucent or opaque, cool and elegant or warm and discreet. Whether in convex or concave waves, stretched tight, in parallel rolls or as cassettes, our wire cloth can be used equally well on large surfaces or in small areas.

Haver & Boecker wire mesh is also perfect for improving interior

acoustics and for cladding technical installations. It has a high fire protection standard and will not interfere with ventilation systems, air-conditioning systems and sprinkler systems.

Made of selected grades of high quality stainless steel and using a special final cleaning process, the wire cloth is also highly robust, durable and exceptionally maintenance friendly.



Architectural Wire Cloth for

- Surface, channel and frame constructions
- Integrated lighting systems
- Interior acoustic systems
- Enclosures concealing technical installations
- Fire protection



Project: Herne Bus Station, Herne, Germany Architects: Heiderich-Hummert-Klein



Project: Siggrou Avenue, Athens, Greece Architects: YPEHWDE planning unit



Project: Düsseldorf Airport, Terminal B, Düsseldorf, Germany Architects: J·S·K Architekten



Haver & Boecker wire cloth does not merely enhance indoor areas; the high-class material and perfect workmanship also creates an atmosphere of sophistication and prestige. Timelessly elegant, the mesh



Project: Malaga Exhibition Centre, Malaga, Spain, Architect: Angel Asenjo y Asociados



blends in with any style of interior architecture, lending it expression and character. A full spectrum of finely or coarsely woven meshes, which are either pliable or rigid, and a large number of mounting options open up new avenues for individual interior planning and exclusive design concepts.

The use of stainless steel wire cloth makes it possible to create free hanging structures and to divide spaces into rooms, as well as permitting large-scale constructions to be affixed to walls and ceilings.



Project: Plenary Assembly Hall in the Reichstag, Berlin, Germany, Architect: Sir Norman Foster

# MORE AND MORE POSSIBILITIES: DESIGNING SPACES WITH WIRE CLOTH.



Project: Svratka River Bridge, Brno, Czech Republic, Architects: Studio acht Architects

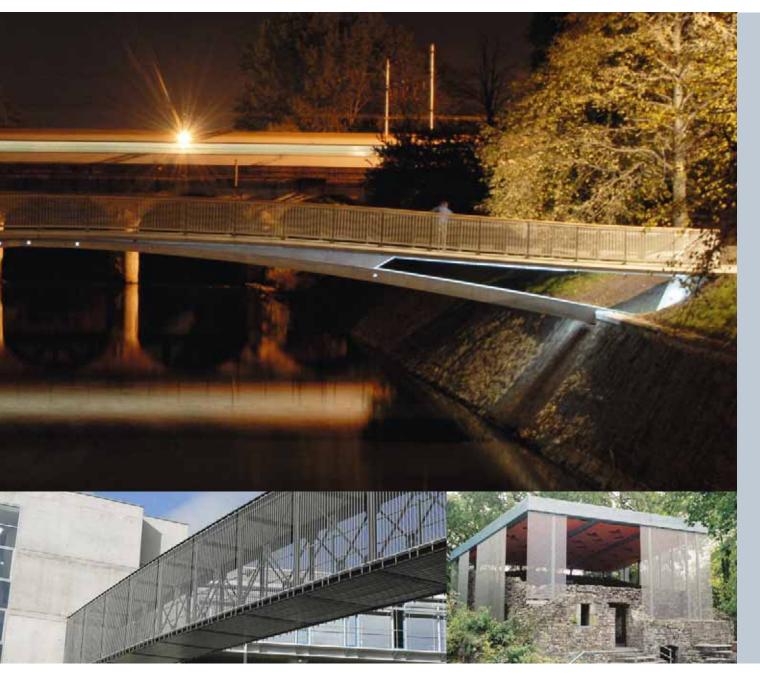
Our wire cloth reveals its enormous versatility in the design of objects, walls and interiors. Both its technical and optical properties offer imaginative construction and design concepts for interior and exterior use.

Depending on the intended use,

different types of mesh and coatings are available which are especially resistant to all kinds of weather conditions and mechanical influences.

Room dividers and wall cladding as well as attractive yet stable balustrades and railings or freestanding structures can be constructed both internally and externally.

Moreover, combined with materials such as wood, glass or exposed concrete, wire mesh creates exciting textural contrasts which enhance the appearance of both large public



Project: Svratka River Bridge, Brno, Czech Republic, Architects: Studio acht Architects

Project: Passerelle du Centre Balexert, Geneva, Switzerland Architects: Suard Architectes

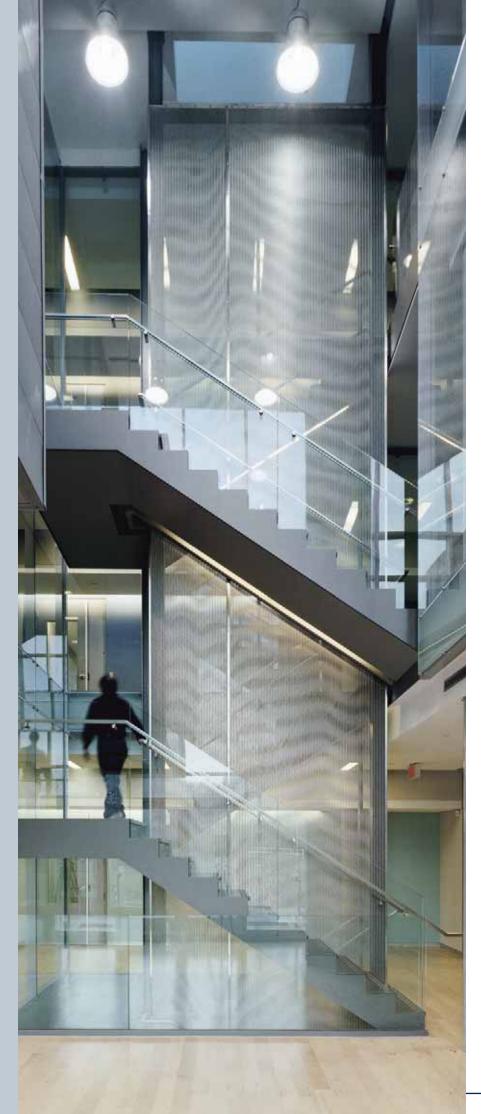
buildings and smaller architectural solutions. The play of light and shade, gloss and transparency also gives each project its own unmistakeable identity.

Project: Vlotho Castle, Vlotho, Germany Architects: Loma architecture·landscape·urbanism

#### Architectural Wire Cloth for

- Wall claddings and room dividers
- Railings and balustrades
- Exhibition and shop designs
- Acoustic systems
- Free-standing structures



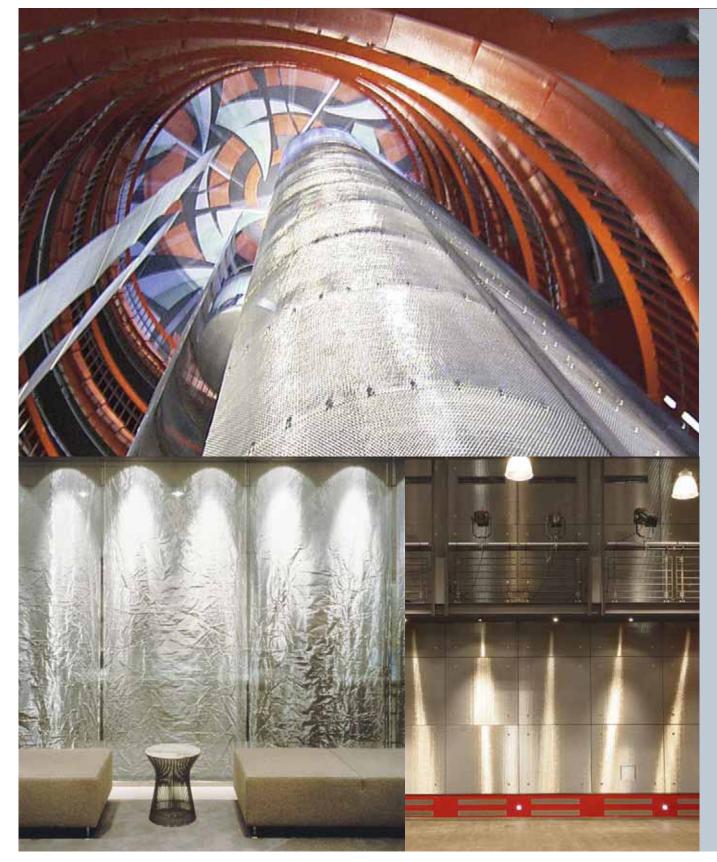


#### Perfect in any form.

Wire cloth can be fitted to various geometric shapes. Since it has considerable dimensional stability it can even be used to construct large surfaces and elements. There is no limit to the creative possibilities which range from cubic to cylindrical shapes, from orthogonal to freely designed elements, from straight edges to precisely defined radii.

Depending on the type and size of the mesh, the wire mesh surface can be transformed into a stylishly transparent or more opaque visual or anti-glare screen. The gloss finish creates fascinating structures and reflections when illuminated by artificial light or daylight, providing ideal solutions not only for prestigious indoor and outdoor spaces but also for functional constructions such as stairways and lift shafts.

Project: McGill University, Montreal, Canada Architects: KPMB Kuwabara Payne McKenna Blumberg Architects



Project: Ulm City Library, Ulm, Germany, Architect: Böhm Architekturbüro

Project: AMRO Bank, Sydney, Australia Architects: HBO + EMTB

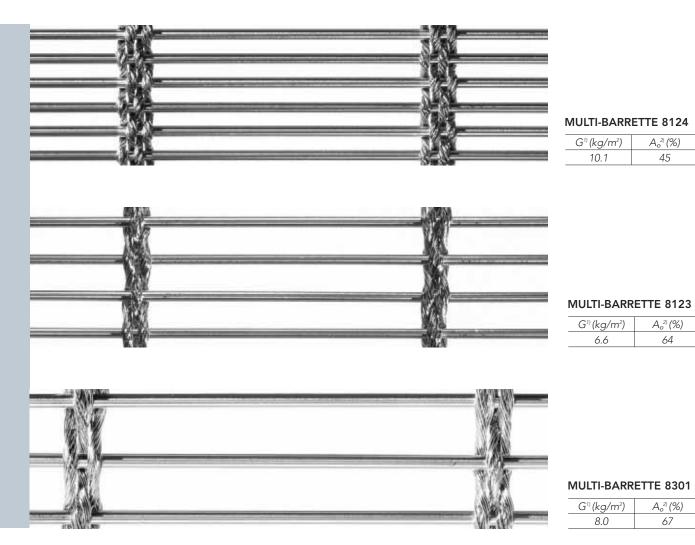
Project: Théâtre Municipal à Luxembourg, City of Luxemburg, Luxemburg, Architects: Gerling + Arendt Planungsgesellschaft mbH

# PATTERNS OF DIVERSITY: THE DIFFERENT TYPES OF WIRE CLOTH.

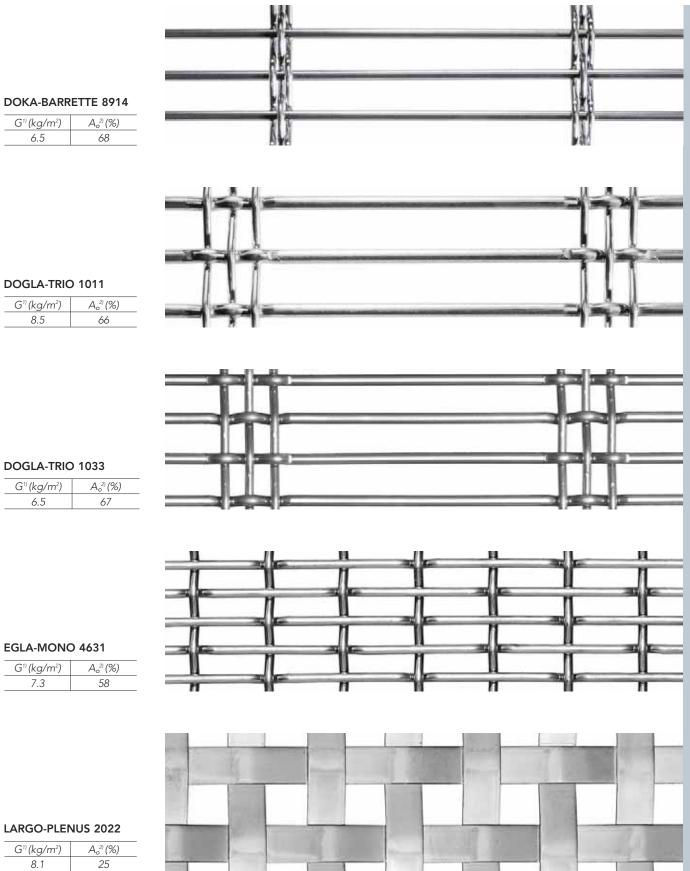
The types of wire mesh and cloth manufactured by Haver & Boecker for these applications are every bit as diverse as the architecture itself.

Very different mesh designs with specific optical and lighting effects can be produced, depending on the warp and weft wires and mesh structure. The use of different materials and high-gloss, silky matt or coloured mesh surfaces further extends the range of designs.

On a scale of 1:1 the following examples are a representative selection of the main types from our extensive portfolio of wire meshes. Of course we do develop individual types of weave, too. Please visit our website at www.weavingideas.com where you will find more information and images of Haver & Boecker Architectural Wire Cloth.



<sup>1)</sup> G=Weight, <sup>2)</sup> A<sub>o</sub>=Open Area



#### DOKA-BARRETTE 8914

G <sup>1)</sup> (kg/m <sup>2</sup> )	A, <sup>2)</sup> (%)
6.5	68

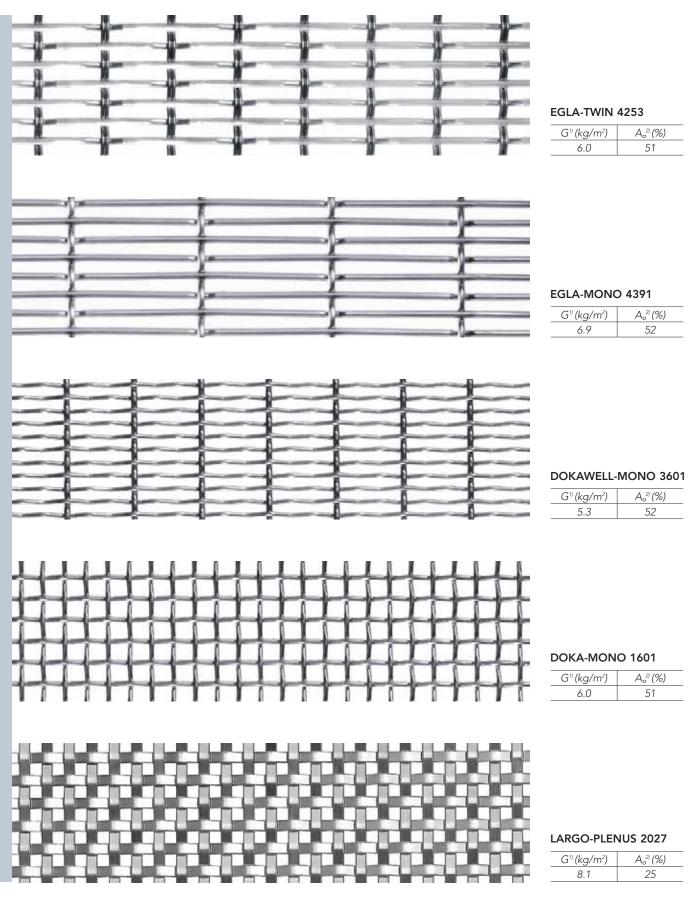
#### DOGLA-TRIO 1011

G <sup>1)</sup> (kg/m <sup>2</sup> )	A <sub>o</sub> <sup>2)</sup> (%)
8.5	66



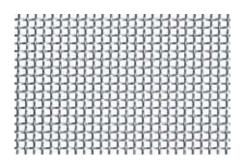
HAVER & BOECKER

# MORE TYPES OF WIRE CLOTH.



 $^{\scriptscriptstyle 1)}$  G=Weight,  $^{\scriptscriptstyle 2)}$  A\_o=Open Area

# 

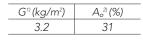


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#### CHESS 6013



#### ALTERNA 6012 G<sup>1</sup>(kg/m<sup>2</sup>) A<sub>o</sub><sup>2</sup>(%) 3.0 34



MINIFLEX 8135

G<sup>1)</sup>(kg/m<sup>2</sup>) 2.1

G <sup>1)</sup> (kg/m²)	A <sub>o</sub> <sup>2)</sup> (%)
3.0	44

#### TEXTURA

 $A_{o}^{(2)}(\%)$ 

39

A<sub>o</sub><sup>2)</sup>(%)

56

G<sup>1)</sup> (kg/m²)

5.2

 MULTIPLEX 9237

 G<sup>1)</sup> (kg/m<sup>2</sup>)
 A<sub>d</sub>

2.2

G <sup>1)</sup> (kg/m²)	A <sub>o</sub> <sup>2)</sup> (%)
0.3	41

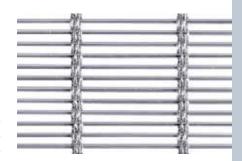
**MULTI-BARRETTE 8106** 

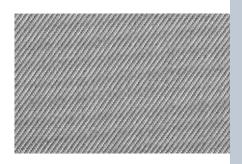
A,<sup>2)</sup>(%)

45

 $A_{o}^{(2)}(\%)$ 







#### FLEXOMESH 9246

G <sup>1)</sup> (kg/m <sup>2</sup> )	A, <sup>2)</sup> (%)
3.3	-

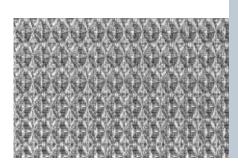
DOKAWELL-MONO 3001

G<sup>1)</sup> (kg/m<sup>2</sup>)

3.2

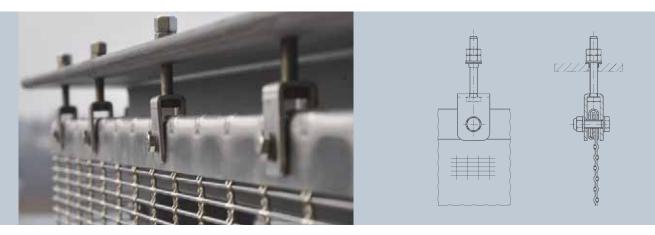
#### STRUCTURA 6501

G <sup>1)</sup> (kg/m <sup>2</sup> )	A <sub>o</sub> <sup>2)</sup> (%)
1.1	22



# BEAUTIFULLY STRONG: VERSATILE MOUNTING SYSTEMS.

Various edgings and tension systems are available which are capable of integrating the wire cloth into the façade design both technically and visually. These ensure safe, trouble-free installation and the optimum durability of the construction as a whole. The following pages show a selection of the main options. Please visit our website



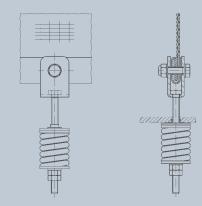
Top mounting: flat tension profile and clevis screw



Intermediate mounting: wire connectors



Bottom mounting: flat tension profile, clevis screw and pressure spring



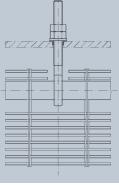
at www.weavingideas.com where you will find further information about Haver & Boecker tensioning systems.



Top mounting: round rod with eyebolts

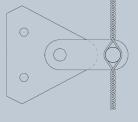


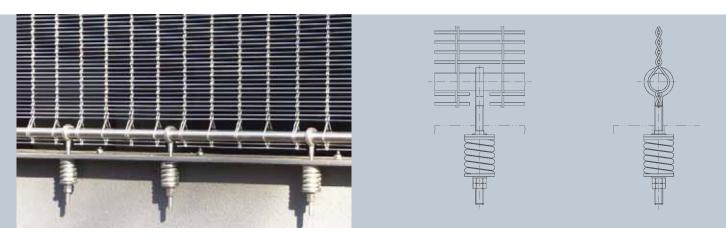
Intermediate mounting: round rod with pendular clips







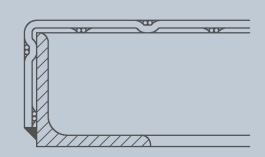




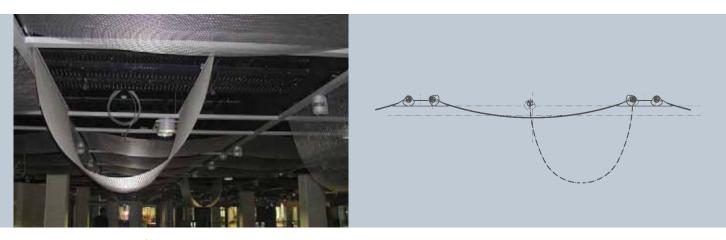
Bottom mounting: round rod with eyebolts and pressure spring

# MORE MOUNTING SYSTEMS.

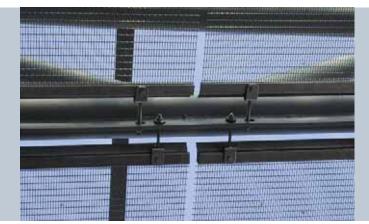


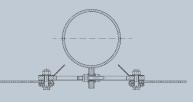


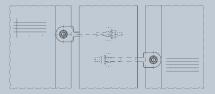
Mesh with edges folded at 90°, welded to profile system



Mesh inserted into a slot profile







Mesh with flat tension profiles and clevis screws

# STEP BY STEP TOWARDS YOUR SUCCESS.

Haver & Boecker's process chain provides maximum transparency, flexibility and quality to realize your plans. From the first draft, to production and installation - through every step of the project - a diverse group of specialists is there to support you. When creativity and technology meet, your idea generates its own individuality.

Not only do you have the support of continuous professional service, you also have the possibility to explore new aspects of your design in greater depth. You may introduce new ideas into the process at any given point in time.

Your scheme will be allocated a specific project manager, who will be your personal contact at all times.

Should you choose to use the full extent of our capabilities, or only specific areas - we will support you with our experience, knowledge and state-of-the-art technology.

#### Task:

Together we define the project and its specific requirements.

#### **Development:**

Our team formulates the approach to the solution with construction suggestions and detailed options.

#### **Detail planning:**

Co-ordination of the individual construction components.

#### Production:

Using advanced machinery, our staff guarantee precision workmanship from start to finish.

#### Installation:

Perfect and on time by qualified logistics partners and technical teams.

#### After Sales Service:

We are available for you beyond completion with support and advice.



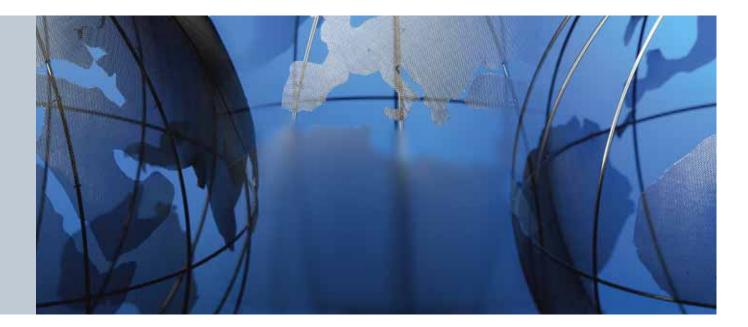


AMMA STORY AMMAN





# NO SITE IS OUT OF SIGHT.



Haver & Boecker has actively influenced the technology of wire weaving since its beginning. As a result of our successful company history, today we are able to offer our customers the benefit of our unrivalled experience, technology and know-how about wire cloth.

Whether science or research, industry or architecture - wherever Haver & Boecker wire cloth is used, our customers benefit from a broad but still unique individual service. With our worldwide weaving network we offer the comforting certainty to be your competent and reliable partner at any time and any place. So as to continue WEAVING IDEAS in time to come.

In 2010 Haver & Boecker operates production sites in Germany, Great Britain, Belgium, the USA, Canada and Brazil. More than 2,000 people work for the Group worldwide.

**Photos:** Angel Asenjo, Jaap Baselmans, Blasco.Esparza y Asociados, b-productive, Michel Brunelle, Camenzind Evolution, DIG (Deutsche Innenbau GmbH), Ehrich + Vogel Architekten, Fototeam Walkenhorst, Hedrich Blessing, Heiderich Hummert Klein, Dieter Kahl, Simon Kenny, Andreas Muhs, Fabrice Rambert, Simone Scardovelli, Pierre Sironval, Christof Weber, Henning Wegener, Klaus Werner



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