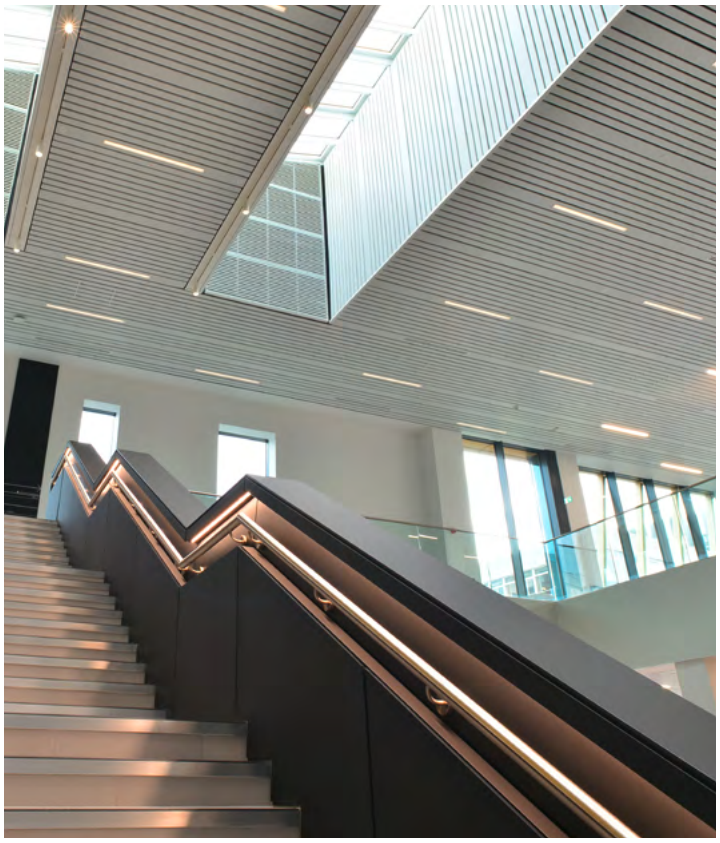
KNAUF CEILING Solutions

EXPERIENCE MORE

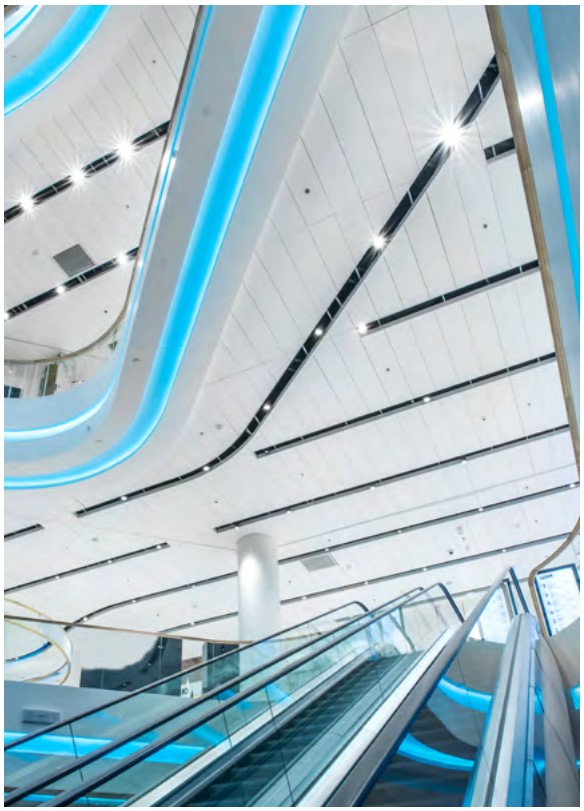
METAL SOLUTIONS

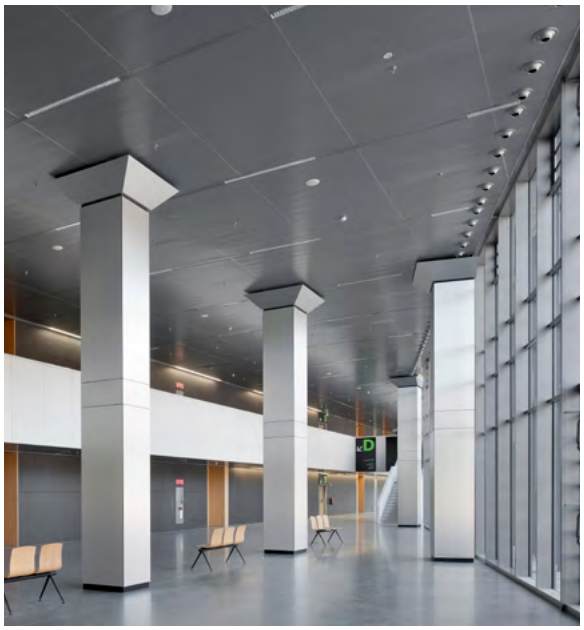
Armstrong CEILING SOLUTIONS

AMF



[Cover] METAL R-Clip (Trumpf, Warsaw, Poland, ©Szymon Polański) • **[Current page, top left to bottom right]** METAL Canopy Concave & Convex (Hôtel de ville, Châteaugiron, France, ©StudioVU) • Custom C-Profile METAL Linear Modular System (CTL Collaborative Teaching Laboratory, University of Birmingham, UK, ©Simon Miles) • METAL R-Clip (Laboratorios EPAL, Portugal, ©Joao Morgado) • METAL Tegular 8, Rg 0701, Global White (Kaspersky Lab, Moscow, Russia, ©Sergei Ananiev) • METAL V-P 500, American Walnut wood effects (Blake House, Uxbridge, UK, ©Philip Durrant) • METAL R-H 200, trapezoid shaped, Rg 0701, RAL 260 20 20 (J&T Banka Café, Brno, Czech Republic, ©Filip Šlapal)





[Current page, top left to bottom right] MESH Board, RAL 9005 (Univerexport, Novi Sad, Serbia, ©Marko Cvetkovic Cvele) • METAL R-H 200 (TsUM Shopping Mall, Kiev, Ukraine, ©Benoy/TsUM) • METAL D-H 700, triangular shaped, Rg 0701, RAL 9010 (Austria Center Vienna, Austria, ©Ludwig Schedl) • METAL R-Clip (Justice Center, Zaragoza, Spain, ©José Manuel Cutillas) • METAL Q-Clip, Rd 1522, RAL 9003 (Zürich Train Station, Passage Sihlquai, Exit Europaallee, Switzerland, ©Foto Lautenschlager) • METAL R-H 200, RAL 1036 (Zürich Train Station, Switzerland, ©Rudi Walti)

METAL & MESH CEILING SOLUTIONS

THINK BOLDER, THINK METAL

When we think bigger, we also think bolder. And one of the best ways to deliver cutting-edge interior design is by installing a contemporary metal ceiling. It helps you create a modern, aesthetically pleasing atmosphere, enhanced by acoustic performances. Knauf Ceiling Solutions Cradle to Cradle Certified® Silver metal range offers an extensive choice of colours and perforation patterns for outstanding visual appearance and effective acoustic comfort.

With our custom metal capabilities, you can create a monolithic look with extra-wide metal panels or a radial effect with trapezoids tailored to fit your space. Faceted, flat, or curved, custom metal ceilings have the unique sizes, shapes, finishes and perforations to make your next project stand out.

SHAPES & SYSTEMS

CEILING EXPOSED GRID

Exposed ceiling systems provide a modular aesthetic and are available in a variety of edge details.

CEILING CONCEALED GRID

Concealed ceiling solutions create a continuous, monolithic look by concealing all of the grid system.

OPEN CELL

Open cell metal tiles mask the plenum and provide 100% accessibility to lighting, ventilation and sprinklers with an homogeneous appearance.

FLOATING CEILING CANOPIES

Open up an almost endless range of dramatic design possibilities with canopies that can be suspended from any soffit.

VERTICAL BAFFLES

Express a new narrative with vertical baffles and create a look to visually tell a story with a solution that will spark your imagination.

FREE SPAN CORRIDOR SOLUTIONS

With easy installation and access to services, wall-to-wall corridor solutions require functionality to handle high traffic and design flexibility to connect key spaces seamlessly.

WALL SOLUTIONS

Walls solutions come in a variety of designs to provide a stunning visual durable enough for high-impact or high traffic areas. Coordinate with ceilings and other interior finishes to create signature spaces.

[Previous page] METAL R-Clip (Trumpf, Warsaw, Poland, ©Szymon Polański) • **[Current page, top to bottom]** METAL Tegular 8, Rd 1522, RAL 9010 (Centre for Medical Simulation, Medical University of Lublin, Poland, ©Szymon Polański) • METAL R-Clip (Trumpf, Warsaw, Poland, ©Szymon Polański) • METAL Cellio C49, RAL 9010 (VOX Furniture Shop, Kotobrzeg, Poland, ©Szymon Polański) • METAL D-H 700, Rd 1511, RAL 9016 (Rorschacherstrasse Training Center Hospital, St. Gallen, Switzerland, ©Foto Lautenschlager) • METAL V-P 500, Rd 2535, RAL 7016 (Finstral AG, Friedberg-Derching, Germany, ©David Güntsch) • METAL F-L 601, Rg 0701, RAL 7016 (MOXY Hotel, Warsaw, Poland, ©Szymon Polański) • METAL W-H 1000, custom laser perforations, RAL 9010 (FANUC R&D Center, Skolkovo District, Moscow, Russia, ©German Lepekhin)

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[Previous page] METAL Tegular 8 TrioGuard, Rd 1522, RAL 9010 (Slimming World Headquarters, Alfreton, UK, © Simon Miles)

METAL SOLUTIONS

There is no limit to what you can achieve with Knauf Ceiling Solutions Vario Design range.

From predefined Lay-In and Clip-In panels to variable module systems, baffles and canopies, all systems are configurable as part of the Vario Design portfolio providing additional technical performances, versatile shapes, dimensions, perforations, colours or acoustic infills to meet the specifc design needs of your projects.

Our portfolio of configurable and bespoke metal ceilings and walls gives you the freedom and flexibility to create unique solutions to fit every space.

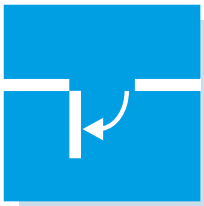
Faceted, flat or curved, our metal ceilings include unique sizes, shapes, finishes and perforations to make your project stand out from the rest.

TECHNICAL PERFORMANCES

Fire resistance

METAL F-H 300 Swing EI30 fire resistant ceiling for corridors.

Tested and classified to meet EI30 (a <-> b), in accordance with EN 13501-2.



Swing-down function

The swing-down function is available to a selection of our metal ceiling solutions. It allows you to quickly swing down the ceiling to grant easy and complete access to the plenum, helping maintain any technical element located there.

Clean room

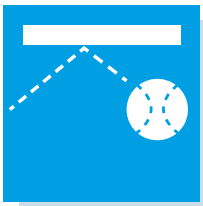
Healthcare, pharmaceutics, and the food processing industry expect the highest levels of air cleanliness. We designed our clean room metal ceiling tiles to meet these requirements for labs, data centres, and clean room assemblies.

Exterior

Choose durability's finest from our selection of exterior solutions. These ceiling tiles are tested for wind lift and corrosion resistance. We paired them with grids designed for outdoor use to create a complete system you can rely on to meet the demand of exterior performance.

Seismic

Our seismic solutions give the extra security required for seismic resistance. Use our specially designed elements for maximum performance with minimised installation complexity.



Impact resistance

Ceiling panels installed in school corridors, gymnasiums and sports halls must withstand occasional abuse, including surface impact. Our specially adapted METAL R-H 200 impact resistant solution can provide this durability feature.

Secure function

This function adds a concealed locking mechanism for metal ceilings, making them tamper-resistant and restricting access to the plenum. They are typically used in judicial and correctional facilities, public areas in general, with a low room height, or psychiatric and juvenile wards.

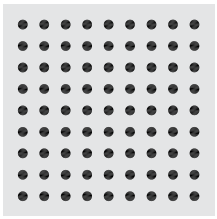
Suitable for chilled ceilings

Choose our chilled ceiling-suitable metal panels to allow for the installation of heating and cooling units, bringing comfort to all occupants with minimal air ventilation requirements.

[Previous page] METAL R-Clip (Trumpf, Warsaw, Poland, ©Szymon Polański)

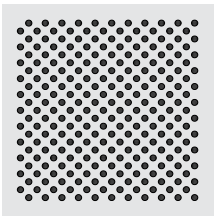
PERFORATIONS

Predefined modules are available in 3 popular perforations.



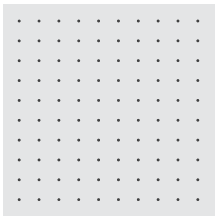
Standard perforation
Rg 2516

Hole diameter: 2.5mm
Open area: 16%



Micro-perforation
Rd 1522

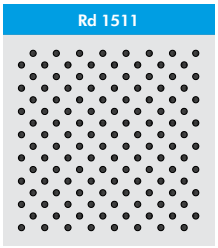
Hole diameter: 1.5mm
Open area: 22%

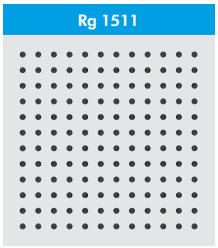


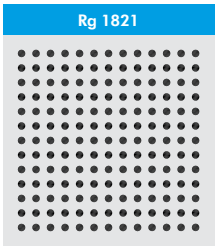
Extramicro perforation
Rg 0701

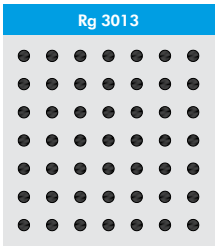
Hole diameter: 0.7mm
Open area: 1.5%

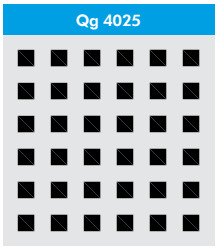
with 5 additional Vario Design Perforations.



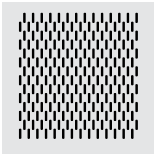


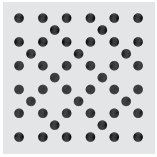


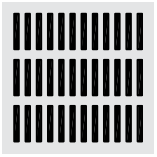


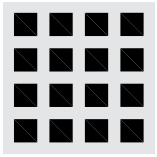


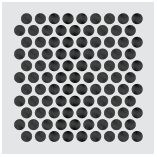
Knauf Ceiling Solutions extensive range of more than 50 perforations gives a wide choice of aesthetic options: large apertures for specialised uses such as airflow or loudspeakers to slotted perforations for a more linear appearance. Hereunder is a sample of the possibilities at your reach. For more information, please get in touch with us.



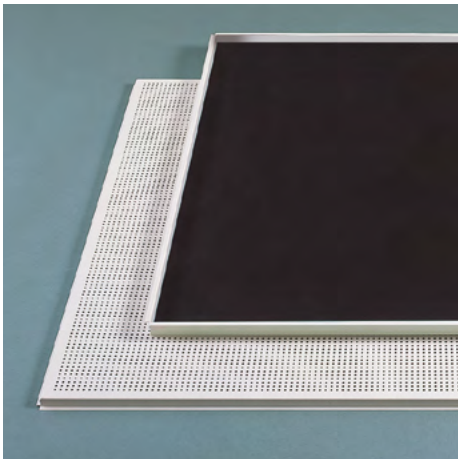








ACOUSTIC SOLUTIONS



STANDARD BLACK ACOUSTIC FLEECE

Non-woven acoustic fleece provides a cost effective solution for general sound absorption requirements. As a solution that is bonded to the reverse of the metal tile it helps eliminate pattern staining issues that may occur with loose laid solutions.

Perforations	Dnfw	α_w	Class
Rg 2516 Standard perforation	**18 dB**	**0.75(L)**	**C**
Rd 1522 Microperforation	**16 dB**	**0.70**	**C**
Rg 0701 Extramicro perforation	**21 dB**	**0.55(L)**	**D**

In addition to the standard acoustic fleece, Knauf Ceiling Solutions offers a range of Vario Design acoustic solutions: Premium OP19 for a high absorption, Premium B15 for a high absorption and attenuation, as well as acoustic pads.

For more information, please get in touch with us.

COLOURS

Knauf Ceiling Solutions standard colour for metal ceilings RAL 9010 (Pure White) and 6 additional Vario Design colours and 7 wood effects.

Colours		Wood Effects	
	RAL 9010		Ash
RAL 9003	RAL 9005	RAL 9006	Natural Bamboo
Caramel Bamboo	Maple	RAL 9007	RAL 9016
Global White	Oak	American Cherry	American Walnut

Further colours and wood effects available on request.

PERFORMANCE COATINGS

METAL BIOGUARD*

Metal BioGuard metal tiles' coating is designed for applications where suspended ceilings are required, and hygiene and cleanliness are of the utmost importance.

Metal BioGuard is more effective in the control of bacteria than a standard powder coating because it prevents the settlement of bacteria on the surface of the tile.

Metal BioGuard gives good cleanability and resistance to disinfectants as well as cleanroom performance.

For more information, please get in touch with us.

METAL TRIOGUARD™*

Metal TrioGuard™ dirt-resistant coating protects the ceiling from dirt build-up and colour fading, maintaining its original look for longer. Available in several metal designs.

- Unique dirt-resistant powder-painted finish with a lasting "*just like new*" appearance.
- Lower maintenance costs and easy to clean.
- Colour stable, keeping its original colour for up to 10 years[1].

[1] Tested using ASTM D4674 Standard Practice for Accelerated Testing for Colour Stability (10-year simulation).

*BioGuard and TrioGuard™ coatings are only available for concealed grid solutions, unperforated, in RAL 9010 or Global White, without acoustic infill or gasket.

[Current page, left to right] METAL Clip-In, Unperforated, BioGuard (Antoni Jurasz University Hospital, Bydgoszcz, Poland, ©Szymon Polański) • METAL B-H 300 (East London Line, London, UK, ©John Sturrock)

Design & Performance Systems

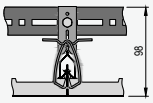
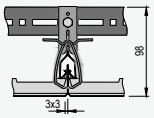
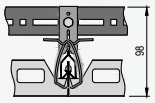
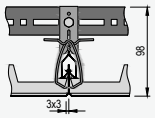
ARMSTRONG METAL Exterior Solutions

Q-Clip Exterior, Q-Clip F Exterior, R-Clip Exterior, R-Clip F Exterior

- **Armstrong METAL Exterior Solutions** are designed to perform in challenging conditions and resist different environmental factors such as high humidity and wind pressure.
- Armstrong METAL Clip-In Exterior Solutions are classified for use in C1, C2 and C3 environments as defined in EN ISO 12944-1 / EN ISO 12944-2.
- Durable exterior powder paint with enhanced UV protection.
- Design options – 4 modules available with custom colours on request.
- Security clips to maintain system integrity when subject to wind suction.
- Fully recyclable.
- Ideal for applications such as car parks, stadiums, transport hubs, and exterior walkways.

ARMSTRONG METAL Exterior Solutions

Q-Clip Exterior, Q-Clip F Exterior, R-Clip Exterior, R-Clip F Exterior

	METAL Q-Clip Exterior VD	METAL Q-Clip F Exterior VD	METAL R-Clip Exterior VD	METAL R-Clip F Exterior VD
Edge details				
System	U-Profile + DP12 A-Bar	U-Profile + DP12 A-Bar	U-Profile + DP12 A-Bar	U-Profile + DP12 A-Bar
Modules (mm)	600 x 600	600 x 600	1200 x 300 1200 x 400 1500 x 400 (further sizes on request)	1200 x 300 1200 x 600
Material & colours	Post-coated galvanised steel, 0.5 - 0.6mm RAL 9010 Exterior Powder **VD Other colours** *Custom colours on request. Both side powder-coated for exterior use.*			
Weight	4.6 - 6.6 kg/m²			*Weight varies depending on the edge detail.*
Corrosion classes	**C1, C2, C3** as per EN ISO 12944-1 / EN ISO 12944-2			
Sustainability	≈14%			

[Previous page] METAL R-Clip Exterior (Capital Fort, Sofia, Bulgaria, ©Ivan Lambrev)

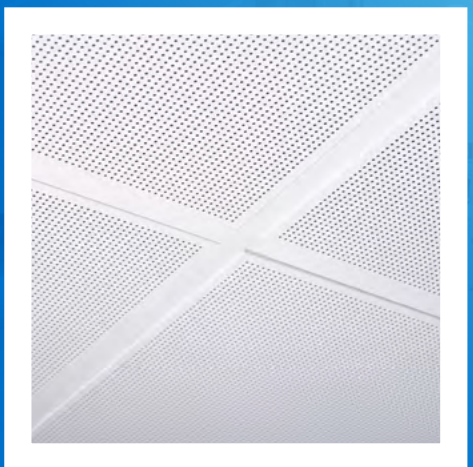
VD Options with this icon are available from our **Vario Design** range.
Some combinations of colours and/or perforations are not available for every product.
Products may vary from country to country. Please contact your local sales representative.
For further information and legal notice, please visit our website.
knaufceilingsolutions.com

Armstrong CEILING SOLUTIONS

Exposed Grid Systems

ARMSTRONG METAL Lay-In

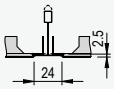
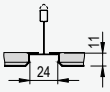
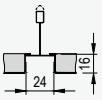
Board, Tegular



- **Armstrong METAL Lay-In** is available in a variety of edge details for installation on standard 24mm suspension systems.
- Easily assembled and fully demountable to allow access to the ceiling void.
- Cost effective ceiling solution.
- Additional design options available as part of our **Vario Design** range.
- Used in a variety of ceiling areas: from small service rooms to large commercial office buildings and major transportation terminals.

ARMSTRONG METAL Lay-In

Board, Tegular

	METAL Board VD	METAL Tegular 2 VD	METAL Tegular 8 VD	METAL Tegular 11F VD	METAL Tegular 16 VD
Edge details					
System	Exposed demountable - System C (24mm or 15mm T-Grid, butt-cut)	Exposed demountable - System C (24mm T-Grid, butt-cut)	Exposed demountable - System C (24mm T-Grid)	Exposed demountable - System C (24mm T-Grid)	Exposed demountable - System C (24mm T-Grid)
Modules (mm)	600 x 600 625 x 625 1200 x 600	600 x 600 625 x 625	500 x 500 600 x 600 675 x 675 1200 x 300 1200 x 600	600 x 600 625 x 625 1200 x 600	500 x 500 600 x 600 675 x 675 750 x 750
Material & perforations	Post-coated galvanised steel, 0.5 - 0.6mm				
	Unperforated	Standard perforation **Rg 2516** Ø: 2.5mm Open area: 16%	Micro-perforation **Rd 1522** Ø: 1.5mm Open area: 22%	Extramicro perforation **Rg 0701** Ø: 0.7mm Open area: 1.5%	
	VD Other perforations				
	Rd 1511	Rg 1511	Rg 1821	Rg 3013	Qg 4025
Colours	RAL 9010				
	VD Other colours		**VD Wood effects***		**Tiles only.*
	RAL 9003 RAL 9005 RAL 9006 RAL 9007 RAL 9016 Global White		Ash Natural Bamboo Caramel Bamboo Maple Oak American Cherry American Walnut	
Weight	**Unperforated** 3.9 - 4.9 kg/m²	**Rg 2516** 3.3 - 4.3 kg/m²	**Rd 1522** 3.1 - 4.1 kg/m²	**Rg 0701** 3.9 - 4.9 kg/m²	*Weight varies depending on the edge detail and acoustic infill.*

Acoustics

	EN ISO 354									EN ISO 10848-2	EN ISO 10140-2	
	α_w*	Class	Frequency (Hz) α_p 125	250	500	1000	2000	4000	NRC**	$D_{n,f,w}$***	R_w***	CAC****
Unperforated	0.10(L)	NC	0.25	0.15	0.05	0.05	0.10	0.10	0.10	44 dB	19 dB	–
Rg 2516 + Fleece	0.75(L)	C	0.35	0.80	0.95	0.70	0.75	0.75	0.80	18 dB	8 dB	–
Rd 1522 + Fleece	0.70	C	0.30	0.65	0.90	0.65	0.70	0.75	0.70	16 dB	6 dB	16 dB
Rg 0701 + Fleece	0.55(L)	D	0.45	0.70	0.70	0.55	0.55	0.45	0.65	21 dB	10 dB	22 dB

*as per EN ISO 11654 **as per ASTM C 423-01 ***as per EN ISO 717-1 ****as per ASTM E 413-10

Fire reaction	Euroclass **A1** (Unperforated / Perforated + No Infill) Euroclass **A2-s2, d0** (Perforated + Acoustic Fleece) as per EN 13501-1	RUS **KM1 (G1, V1, D1, T1)** as per 123-FZ		*Values applicable for RAL 9010 only.*
Light reflectance	**Unperforated** 85%	**Rg 2516** 70%	**Rd 1522** 65%	**Rg 0701** 80%	*Values applicable for RAL 9010 only.*
Humidity resistance	**90% RH**				
Indoor air quality	A+ EC 13964 E1				
Cleanability					
Sustainability	≈14% Silver*				**Value applicable for RAL 9010 only.*
Design options	Dimensions Colours Perforations Acoustic Infills Cut-Outs BioGuard	METAL Tegular Seismic			

[Previous page] METAL Tegular 8, Rd 1522 (Bari Airport, Italy, © Filippo di Pretoro)

VD Options with this icon are available from our **Vario Design** range.
Some combinations of colours and/or perforations are not available for every product.
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Armstrong CEILING SOLUTIONS

Exposed Grid Systems

ARMSTRONG METAL Lay-In

MicroLook, Axal Vector

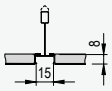
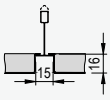
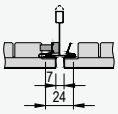
- **Armstrong METAL MicroLook** is available in a variety of edge details for installation on standard 15mm suspension systems.
- Easily assembled and fully demountable to allow access to the ceiling void.

- **Armstrong METAL Axal Vector** is an easy to install and flexible system which offers a diversity of design and applications, and can be installed with a very low void depth.
- Semi-concealed solution with 7mm reveal detailing for a monolithic effect.
- Downwardly accessible and easy to install/remove without tools.

- Additional design options available as part of our **Vario Design** range.
- Used in a variety of ceiling areas: from small service rooms to large commercial office buildings and major transportation terminals.

ARMSTRONG METAL Lay-In

MicroLook, Axal Vector

	METAL MicroLook 8 VD	METAL MicroLook 16 VD	METAL Axal Vector VD
Edge details			
System	Exposed demountable - System C (15mm T-Grid)	Exposed demountable - System C (15mm T-Grid)	Semi-concealed demountable - System C (24mm T-Grid)
Modules (mm)	500 x 500 600 x 600 675 x 675 750 x 750 1200 x 300 1200 x 600	500 x 500 600 x 600 675 x 675 750 x 750	500 x 500 600 x 300 600 x 600 675 x 675 750 x 750
Material & perforations	Post-coated galvanised steel, 0.5 - 0.6mm		
	Unperforated	Standard perforation **Rg 2516** Ø: 2.5mm Open area: 16%	Micro-perforation **Rd 1522** Ø: 1.5mm Open area: 22%
	Extramicro perforation **Rg 0701** Ø: 0.7mm Open area: 1.5%		
	VD Other perforations		
	Rd 1511	Rg 1511	Rg 1821
	Rg 3013	Qg 4025	
Colours	RAL 9010		
	VD Other colours		
	RAL 9003	RAL 9005	RAL 9006
	RAL 9007	RAL 9016	Global White
	VD Wood effects* *Tiles only.		
	Ash	Natural Bamboo	Caramel Bamboo
	Maple	Oak	American Cherry
	American Walnut		
Weight	**Unperforated** 4.0 - 5.5 kg/m²	**Rg 2516** 3.4 - 4.8 kg/m²	**Rd 1522** 3.2 - 4.5 kg/m²
	Rg 0701 4.0 - 5.5 kg/m²	*Weight varies depending on the edge detail and acoustic infill.*	

Acoustics

	EN ISO 354								EN ISO 10848-2	EN ISO 10140-2	
	α_w*	Class	Frequency (Hz) α_p 125	250	500	1000	2000	4000	NRC**	$D_{n,f,w}$***	R_w***	CAC****
Unperforated	0.10(L)	NC	0.25	0.15	0.05	0.05	0.10	0.10	0.10	44 dB	19 dB	–
Rg 2516 + Fleece	0.75(L)	C	0.35	0.80	0.95	0.70	0.75	0.75	0.80	18 dB	8 dB	–
Rd 1522 + Fleece	0.70	C	0.30	0.65	0.90	0.65	0.70	0.75	0.70	16 dB	6 dB	16 dB
Rg 0701 + Fleece	0.55(L)	D	0.45	0.70	0.70	0.55	0.55	0.45	0.65	21 dB	10 dB	22 dB

*as per EN ISO 11654 **as per ASTM C 423-01 ***as per EN ISO 717-1 ****as per ASTM E 413-10

Fire reaction	Euroclass **A1** (Unperforated / Perforated + No Infill) Euroclass **A2-s2, d0** (Perforated + Acoustic Fleece) as per EN 13501-1	RUS **KM1 (G1, V1, D1, T1)** as per 123-FZ *Values applicable for RAL 9010 only.*
Light reflectance	**Unperforated** 85%	**Rg 2516** 70%
	Rd 1522 65%	**Rg 0701** 80% *Values applicable for RAL 9010 only.*
Humidity resistance	**90% RH**	
Indoor air quality	A+ E1	
Cleanability	(TrioGuard™ only)	
Sustainability	≈14% Silver*	*Value applicable for RAL 9010 only.*
Design options	Dimensions Colours Perforations Acoustic Infills Cut-Outs	METAL Axal Vector: Secure Function; METAL Axal Vector: TrioGuard™

[Previous page] METAL Axal Vector (Sheremetyevo Airport, Moscow, Russia, ©Mikhail Feller, Stoppamedia)

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Armstrong CEILING SOLUTIONS

Exposed Grid Systems

ARMSTRONG METAL Linear & Tartan

B-H 300, B-L 302, R-L 201, K-H 400

- **Armstrong METAL Linear** combines functionality with stylish simplicity and versatility by creating a linear technical zone.
- **METAL B-H 300:** 'Easy' and 'Hook' hinge-down function, 'Swing' swing-down function for easy access to the ceiling void.
- C-Profiles in different dimensions with optional cut-outs for service integration on request.
- **Armstrong METAL Tartan** is a solution for square and/or rectangular room partitioning.
- **METAL K-H 400:** 'Easy' and 'Hook' hinge-down function, 'Swing' swing-down function for easy access to the ceiling void.
- Crossing boxes and C-Profiles in different dimensions with optional cut-outs for service integration on request.
- Easily installed and removed.
- Available in trapezoidal shapes for radial ceilings on request.
- Fully configurable large size panels.
- Additional design options available as part of our **Vario Design** range.
- Ideal for large spaces and office environments.

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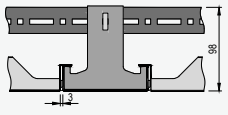
Armstrong CEILING SOLUTIONS

ARMSTRONG METAL Linear & Tartan

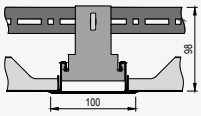
B-H 300, B-L 302, R-L 201, K-H 400

Edge details

METAL B-H 300 VD
[Linear layout]



METAL B-L 302 VD
[Linear layout]



METAL R-L 201 VD
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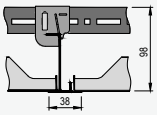
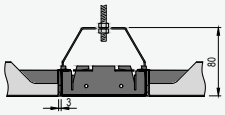
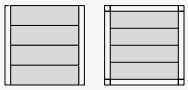


METAL K-H 400 VD
[Tartan layout]



[Linear layout] [Tartan layout]



System

U-Profile + C-Profile 100mm*	U-Profile + Bandraster 100mm	U-Profile + L-Profile	Crossing Box + C-Profile 100mm*

Further widths on request.

Dimensions (mm)

Panel length: 600 - 3300 Panel width: 247 - 1350 Max size (m^2): 2	Panel length: 600 - 3300 Panel width: 247 - 1350 Max size (m^2): 2	Panel length: 600 - 3300 Panel width: 247 - 1350 Max size (m^2): 2	Panel length: 600 - 2850 Panel width: 247 - 1350 Max size (m^2): 2

Material & perforations

Post-coated galvanised steel, 0.6 - 0.7mm

Unperforated

Standard perforation **Rg 2516**
Ø: 2.5mm
Open area: 16%

Micro-perforation **Rd 1522**
Ø: 1.5mm
Open area: 22%

Extramicro perforation **Rg 0701**
Ø: 0.7mm
Open area: 1.5%

VD Other perforations

Rd 1511

Rg 1511

Rg 1821

Rg 3013

Qg 4025

Colours

RAL 9010

VD Other colours

RAL 9003

RAL 9005

RAL 9006

RAL 9007

RAL 9016

Global White

VD Wood effects

Ash

Natural Bamboo

Caramel Bamboo

Maple

Oak

American Cherry

American Walnut

Weight

Unperforated 5.7 - 8.9 kg/m^2	**Rg 2516** 5.0 - 8.2 kg/m^2	**Rd 1522** 4.7 - 7.9 kg/m^2	**Rg 0701** 5.7 - 8.9 kg/m^2

Weight varies depending on the edge detail and acoustic infill.

Acoustics

	EN ISO 354								EN ISO 10848-2	EN ISO 10140-2	
	α_w*	Class	Frequency (Hz) α_p						NRC**	$D_{n,f,w}$***	R_w***	CAC****
			125	250	500	1000	2000	4000				
Unperforated	0.10(L)	NC	0.25	0.15	0.05	0.05	0.10	0.10	0.10	44 dB	19 dB	–
Rg 2516 + Fleece	0.75(L)	C	0.35	0.80	0.95	0.70	0.75	0.75	0.80	18 dB	8 dB	–
Rd 1522 + Fleece	0.70	C	0.30	0.65	0.90	0.65	0.70	0.75	0.70	16 dB	6 dB	16 dB
Rg 0701 + Fleece	0.55(L)	D	0.45	0.70	0.70	0.55	0.55	0.45	0.65	21 dB	10 dB	22 dB

*as per EN ISO 11654 **as per ASTM C 423-01 ***as per EN ISO 717-1 ****as per ASTM E 413-10

Fire reaction

Euroclass **A1** (Unperforated / Perforated + No Infill + No Gasket)
Euroclass **A2-s2, d0** (Perforated + Acoustic Fleece + No Gasket)
Euroclass **B-s1, d0** (Perforated + Acoustic Fleece + Gasket)
as per EN 13501-1

RUS **KM1 (G1, V1, D1, T1)**
as per 123-FZ

Values applicable for RAL 9010 only.

Light reflectance

Unperforated 85%	**Rg 2516** 70%	**Rd 1522** 65%	**Rg 0701** 80%

Values applicable for RAL 9010 only.

Humidity resistance

90% RH

Indoor air quality

A+ (only without gasket)

E1

Cleanability

Sustainability

≈14%

Silver*

Value applicable for RAL 9010 only.

Design options

	METAL B-H 300 METAL K-H 400	METAL B-H 300 Seismic
Dimensions, Colours, Perforations, Shapes, Acoustic Infills, Cut-Outs, Suitable for Chilled Ceilings, BioGuard	Swing-Down Function	Seismic

[Previous page] METAL B-H 300, RAL 9006 (Prime Corporate Center, Warsaw, Poland, ©Szymon Polański)

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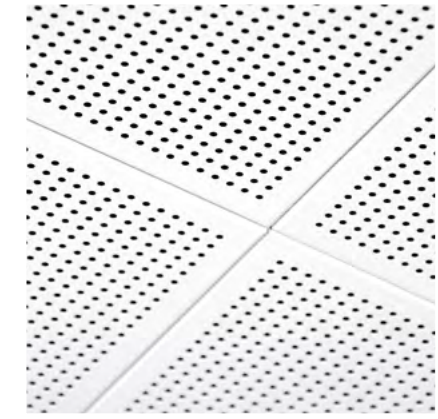
Armstrong CEILING SOLUTIONS

Concealed Grid Systems

ARMSTRONG METAL Clip-In

Q-Clip, Q-Clip F, S-Clip F, T-Clip F



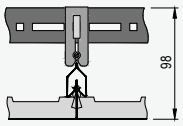
- **Armstrong METAL Clip-In** provides a versatile and sleek design in various perforations and edge details for installation using the U-Profile and DP12 A-Bar suspension system (C-Channel and Spring-T for METAL T-Clip F).
- Concealed grid for a monolithic effect.
- Ease of installation (alignment) and fully demountable.
- Maintenance-friendly system.
- METAL Q-Clip / METAL Q-Clip F available with an optional 'Window' swing-down function.
- METAL S-Clip F with integrated swing-down function.
- METAL Q-Clip / METAL Q-Clip F / METAL T-Clip F tiles available with an optional lock function.
- Additional design options available as part of our **Vario Design** range.
- Used in a variety of ceiling areas: from small service rooms to large commercial office buildings and major transportation terminals.

ARMSTRONG METAL Clip-In

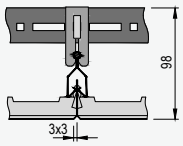
Q-Clip, Q-Clip F, S-Clip F, T-Clip F

Edge details

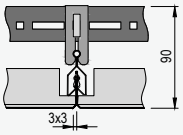
METAL Q-Clip VD



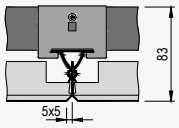
METAL Q-Clip F VD



METAL S-Clip F VD



METAL T-Clip F VD



System

METAL Q-Clip VD	METAL Q-Clip F VD	METAL S-Clip F VD	METAL T-Clip F VD
U-Profile + DP12 A-Bar	U-Profile + DP12 A-Bar	U-Profile + DP12 A-Bar	C-Channel + Spring-T

Modules (mm)

METAL Q-Clip VD	METAL Q-Clip F VD	METAL S-Clip F VD	METAL T-Clip F VD
600 x 600	500 x 500	625 x 312.5	600 x 600	900 x 300	500 x 500	750 x 750
625 x 625	600 x 300	625 x 625	625 x 312.5	1200 x 300	600 x 300	1200 x 300
	600 x 600		625 x 625	1500 x 300	600 x 600	1200 x 600
					675 x 675	1500 x 300

Material & perforations

Post-coated galvanised steel, 0.5 - 0.6mm

Unperforated	Standard perforation **Rg 2516**	Micro-perforation **Rd 1522**	Extramicro perforation **Rg 0701**
	Ø: 2.5mm Open area: 16%	Ø: 1.5mm Open area: 22%	Ø: 0.7mm Open area: 1.5%

VD Other perforations

Rd 1511	Rg 1511	Rg 1821	Rg 3013	Qg 4025

Colours

RAL 9010

VD Other colours

RAL 9003	RAL 9005	RAL 9006	RAL 9007	RAL 9016	Global White

VD Wood effects

Ash	Natural Bamboo	Caramel Bamboo	Maple	Oak	American Cherry	American Walnut

Weight

Unperforated	Rg 2516	Rd 1522	Rg 0701
4.6 - 5.5 kg/m²	4.0 - 4.8 kg/m²	3.7 - 4.5 kg/m²	4.6 - 5.5 kg/m²

Weight varies depending on the edge detail and acoustic infill.

Acoustics

	EN ISO 354									EN ISO 10848-2	EN ISO 10140-2	
	α_w*	Class	Frequency (Hz) α_p						NRC**	$D_{n,f,w}$***	R_w***	CAC****
			125	250	500	1000	2000	4000				
Unperforated	0.10(L)	NC	0.25	0.15	0.05	0.05	0.10	0.10	0.10	44 dB	19 dB	–
Rg 2516 + Fleece	0.75(L)	C	0.35	0.80	0.95	0.70	0.75	0.75	0.80	18 dB	8 dB	–
Rd 1522 + Fleece	0.70	C	0.30	0.65	0.90	0.65	0.70	0.75	0.70	16 dB	6 dB	16 dB
Rg 0701 + Fleece	0.55(L)	D	0.45	0.70	0.70	0.55	0.55	0.45	0.65	21 dB	10 dB	22 dB

*as per EN ISO 11654 **as per ASTM C 423-01 ***as per EN ISO 717-1 ****as per ASTM E 413-10

Fire reaction

Euroclass **A1** (Unperforated / Perforated + No Infill)
Euroclass **A2-s2, d0** (Perforated + Acoustic Fleece)
as per EN 13501-1

RUS **KM1 (G1, V1, D1, T1)**
as per 123-FZ

Values applicable for RAL 9010 only.

Light reflectance

Unperforated	Rg 2516	Rd 1522	Rg 0701
85%	70%	65%	80%

Values applicable for RAL 9010 only.

Humidity resistance

90% RH

Indoor air quality

A+ E1

Cleanability

(TrioGuard™ only)

Sustainability

≈14% Silver*

*Value applicable for RAL 9010 only.

Design options

				METAL Q-Clip, METAL Q-Clip F, METAL S-Clip F	METAL Q-Clip, METAL Q-Clip F METAL T-Clip F	METAL Q-Clip, METAL Q-Clip F	METAL S-Clip F, METAL T-Clip F
Colours	Perforations	Acoustic Infills	Cut-Outs	Swing-Down Function	Secure Function	Clean Room	TrioGuard™

[Previous page] METAL Q-Clip, Rd 1522, RAL 9003 (Zürich Train Station, Passage Sihlquai, Exit Europaallee, Switzerland, © Foto Lautenschlager)

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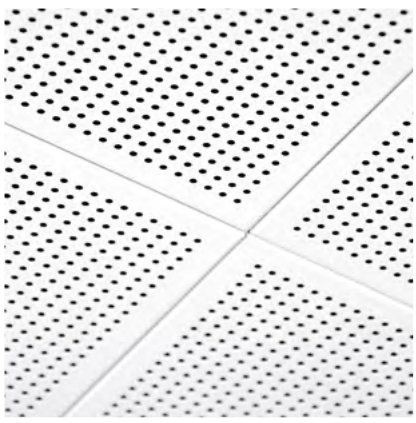
Armstrong CEILING SOLUTIONS

Concealed Grid Systems

ARMSTRONG METAL Clip-In

R-Clip, R-Clip F, T-Clip, K-Clip



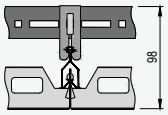
- **Armstrong METAL Clip-In** provides a versatile and simple design with excellent acoustic performance benefits.
- Concealed grid for a monolithic effect.
- Ease of installation (alignment), fully demountable and maintenance-friendly system.
- Easy access to the ceiling void.
- METAL R-Clip / METAL R-Clip F available with an optional 'Window' swing-down function.
- METAL R-Clip / METAL R-Clip F panels available with an optional lock function.
- **Armstrong METAL K-Clip** is a cost effective solution, simulating a tartan layout by using METAL Q-Clip tiles or METAL R-Clip panels in combination with exposed crossing boxes and strips.
- Crossing boxes and strips available in different sizes with optional cut-outs for service integration on request.
- Additional design options available as part of our **Vario Design** range.
- Ideal for breaking up large spaces and office environments.

ARMSTRONG METAL Clip-In

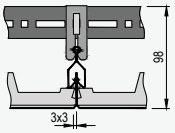
R-Clip, R-Clip F, T-Clip, K-Clip

Edge details

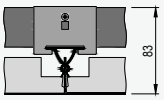
METAL R-Clip VD



METAL R-Clip F VD

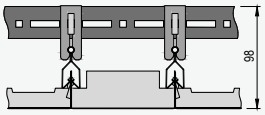


METAL T-Clip VD



METAL K-Clip VD

[Tartan layout]



with Q-Clip

with R-Clip

System

U-Profile + DP12 A-Bar	U-Profile + DP12 A-Bar	C-Channel + Spring-T

U-Profile + DP12 A-Bar
Visible Crossing Box + Strips

Dimensions/ Modules (mm)

Panel length: 600 - 2500 Panel width: 250 - 600 Max size (m^2): 1.5	1200 x 300 1200 x 600 1800 x 400	Panel length: 500 - 2500 Panel width: 300 - 400 - 500 - 600 Max size (m^2): 1.5

With METAL Q-Clip tiles:
600 x 600
625 x 625

With METAL R-Clip panels:
Panel length: 600 - 1800
Panel width: 300 - 600
Max size (m^2): 1.5

Material & perforations

Post-coated galvanised steel, 0.5 - 0.7mm

Unperforated

Standard perforation **Rg 2516**
Ø: 2.5mm
Open area: 16%

Micro-perforation **Rd 1522**
Ø: 1.5mm
Open area: 22%

Extramicro perforation **Rg 0701**
Ø: 0.7mm
Open area: 1.5%

VD Other perforations

Rd 1511 | Rg 1511 | Rg 1821 | Rg 3013 | Qg 4025

Colours

RAL 9010

VD Other colours

RAL 9003 | RAL 9005 | RAL 9006 | RAL 9007 | RAL 9016 | Global White

VD Wood effects

Ash | Natural Bamboo | Caramel Bamboo | Maple | Oak | American Cherry | American Walnut

Weight

Unperforated	Rg 2516	Rd 1522	Rg 0701
4.6 - 7.8 kg/m^2	4.0 - 6.6 kg/m^2	3.7 - 6.4 kg/m^2	4.6 - 7.3 kg/m^2

Weight varies depending on the edge detail and acoustic infill.

Acoustics

	EN ISO 354								EN ISO 10848-2	EN ISO 10140-2	
	α_w*	Class	Frequency (Hz) α_p						NRC**	$D_{n,f,w}$***	R_w***	CAC****
			125	250	500	1000	2000	4000				
Unperforated	0.10(L)	NC	0.25	0.15	0.05	0.05	0.10	0.10	0.10	44 dB	19 dB	–
Rg 2516 + Fleece	0.75(L)	C	0.35	0.80	0.95	0.70	0.75	0.75	0.80	18 dB	8 dB	–
Rd 1522 + Fleece	0.70	C	0.30	0.65	0.90	0.65	0.70	0.75	0.70	16 dB	6 dB	16 dB
Rg 0701 + Fleece	0.55(L)	D	0.45	0.70	0.70	0.55	0.55	0.45	0.65	21 dB	10 dB	22 dB

*as per EN ISO 11654 **as per ASTM C 423-01 ***as per EN ISO 717-1 ****as per ASTM E 413-10

Fire reaction

Euroclass **A1** (Unperforated / Perforated + No Infill)
Euroclass **A2-s2, d0** (Perforated + Acoustic Fleece)
as per EN 13501-1

RUS **KM1 (G1, V1, D1, T1)**
as per 123-FZ

Values applicable for RAL 9010 only.

Light reflectance

Unperforated	Rg 2516	Rd 1522	Rg 0701
85%	70%	65%	80%

Values applicable for RAL 9010 only.

Humidity resistance

90% RH

Indoor air quality

A+ | E1

Cleanability

Sustainability

≈14% | Silver*

Value applicable for RAL 9010 only.

Design options

					METAL R-Clip, METAL R-Clip F	METAL R-Clip METAL R-Clip F	METAL R-Clip F
Dimensions	Colours	Perforations	Acoustic Infills	Cut-Outs	Swing-Down Function	Secure Function	Clean Room

[Previous page] METAL R-Clip, Rd 1522, RAL 9010 (Mennica, Warsaw, Poland, ©Szymon Polański)

VD Options with this icon are available from our **Vario Design** range.
Some combinations of colours and/or perforations are not available for every product.
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Armstrong CEILING SOLUTIONS

Concealed Grid Systems

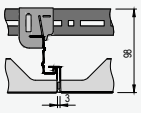
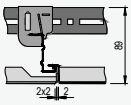
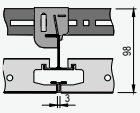
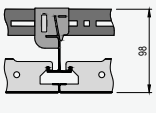
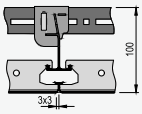
ARMSTRONG METAL Hook-On

R-H 200, Q-H 100 F, R-H 215, R-H 220, Q-H 120 F

- **Armstrong METAL Hook-On** provides a versatile and simple design with excellent acoustic performance benefits.
- Concealed grid for a monolithic effect.
- Excellent acoustic performance.
- Ease of installation (alignment) and fully demountable.
- Easy access to the ceiling void.
- Maintenance friendly system.
- **METAL R-H 200** is available in trapezoidal shapes for radial ceilings.
- Fully configurable large size panels and cost effective square tile alternatives available.
- Additional design options available as part of our **Vario Design** range.
- Used in a variety of ceiling areas: from small service rooms to large commercial office buildings and major transportation terminals.

ARMSTRONG METAL Hook-On

R-H 200, Q-H 100 F, R-H 215, R-H 220, Q-H 120 F

	METAL R-H 200 VD	METAL Q-H 100 F VD	METAL R-H 215 VD	METAL R-H 220 VD	METAL Q-H 120 F VD
Edge details					
System	U-Profile + J-Bar	U-Profile + J-Bar	U-Profile + H-Profile 35mm	U-Profile + H-Profile 28mm	U-Profile + H-Profile 28mm
Dimensions/ Modules (mm)	Panel length: 600 - 3300 Panel width: 247 - 1350 Max size (m^2): 2	600 x 600 625 x 625	Panel length: 600 - 3300 Panel width: 247 - 1350 Max size (m^2): 2	Panel length: 600 - 3300 Panel width: 247 - 1350 Max size (m^2): 2	625 x 625
Material & perforations	Post-coated galvanised steel, 0.5 - 0.6mm				
	Unperforated	Standard perforation **Rg 2516** Ø: 2.5mm Open area: 16%	Micro-perforation **Rd 1522** Ø: 1.5mm Open area: 22%	Extramicro perforation **Rg 0701** Ø: 0.7mm Open area: 1.5%	
	VD Other perforations				
	Rd 1511	Rg 1511	Rg 1821	Rg 3013	Qg 4025
Colours	RAL 9010				
	VD Other colours			**VD Wood effects**	
	RAL 9003 RAL 9005 RAL 9006 RAL 9007 RAL 9016 Global White			Ash Natural Bamboo Caramel Bamboo Maple Oak American Cherry American Walnut	
Weight	**Unperforated** 4.5 - 8.1 kg/m^2	**Rg 2516** 3.9 - 7.3 kg/m^2	**Rd 1522** 3.7 - 7.1 kg/m^2	**Rg 0701** 4.5 - 8.0 kg/m^2	*Weight varies depending on the edge detail and acoustic infill.*

Acoustics

	EN ISO 354								EN ISO 10848-2	EN ISO 10140-2	
	α_w*	Class	Frequency (Hz) α_p**						NRC**	$D_{n,f,w}$***	R_w***	CAC****
			125	250	500	1000	2000	4000				
Unperforated	0.10(L)	NC	0.25	0.15	0.05	0.05	0.10	0.10	0.10	44 dB	19 dB	–
Rg 2516 + Fleece	0.75(L)	C	0.35	0.80	0.95	0.70	0.75	0.75	0.80	18 dB	8 dB	–
Rd 1522 + Fleece	0.70	C	0.30	0.65	0.90	0.65	0.70	0.75	0.70	16 dB	6 dB	16 dB
Rg 0701 + Fleece	0.55(L)	D	0.45	0.70	0.70	0.55	0.55	0.45	0.65	21 dB	10 dB	22 dB

*as per EN ISO 11654 **as per ASTM C 423-01 ***as per EN ISO 717-1 ****as per ASTM E 413-10

Fire reaction	Euroclass **A1** (Unperforated / Perforated + No Infill + No Gasket; except METAL Q-H 100 F) Euroclass **A2-s2, d0** (Perforated + Acoustic Fleece + No Gasket; except METAL Q-H 100 F) Euroclass **B-s1, d0** (Perforated + Acoustic Fleece + Gasket; except METAL Q-H 120 F) as per EN 13501-1	RUS **KM1 (G1, V1, D1, T1)** as per 123-FZ *Values applicable for RAL 9010 only.*
Light reflectance	**Unperforated** 85% / **Rg 2516** 70% / **Rd 1522** 65% / **Rg 0701** 80%	*Values applicable for RAL 9010 only.*
Humidity resistance	**90% RH**	
Indoor air quality	A+ (only without gasket) E1	
Cleanability	(TrioGuard™ only)	
Sustainability	≈14% Silver*	*Value applicable for RAL 9010 only.*

Design options							METAL R-H 200 Seismic, METAL R-H 215 Seismic	METAL R-H 200 Impact Resistance	METAL R-H 200	METAL R-H 200, METAL Q-H 100 F, METAL R-H 215, METAL R-H 220	METAL R-H 200, METAL R-H 215	METAL R-H 200
	Dimensions	Colours	Perforations	Acoustic Infills	Cut-Outs	BioGuard	Seismic	Impact Resistance	Suitable for Chilled Ceilings	Secure Function	TrioGuard™	Shape

[Previous page] METAL R-H 200 (Rathaus St. Gallen, Switzerland, © Beat Bühler)

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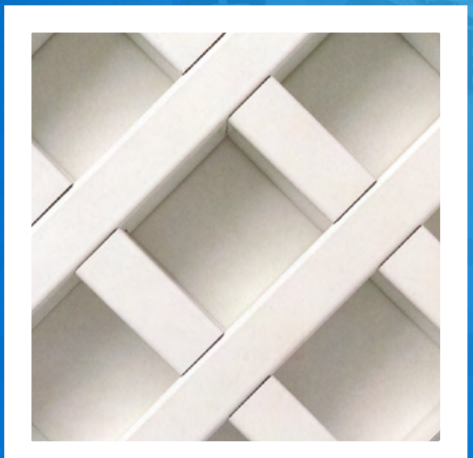
Armstrong CEILING SOLUTIONS

Open Cell Systems

ARMSTRONG METAL Lay-In

Cellio



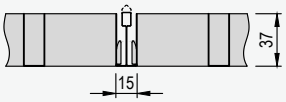
- **Armstrong METAL Cellio** durable open cell metal tiles that mask the plenum provide 100% accessibility to lighting, ventilation and sprinklers with an homogeneous appearance.
- Made of pre-coated galvanised steel 0.3mm.
- Lay-In system is fast and easy to install in standard 15mm exposed grid.
- Ideal for shops, supermarkets, shopping malls, enetrance areas, airports, railway stations and showrooms.

ARMSTRONG METAL Lay-In

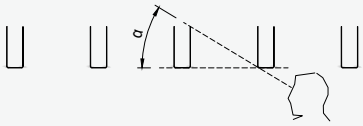
Cellio

Edge details

METAL
Cellio VD



Cut-off angle



System

Exposed demountable - System C (15mm T-Grid, butt-cut)

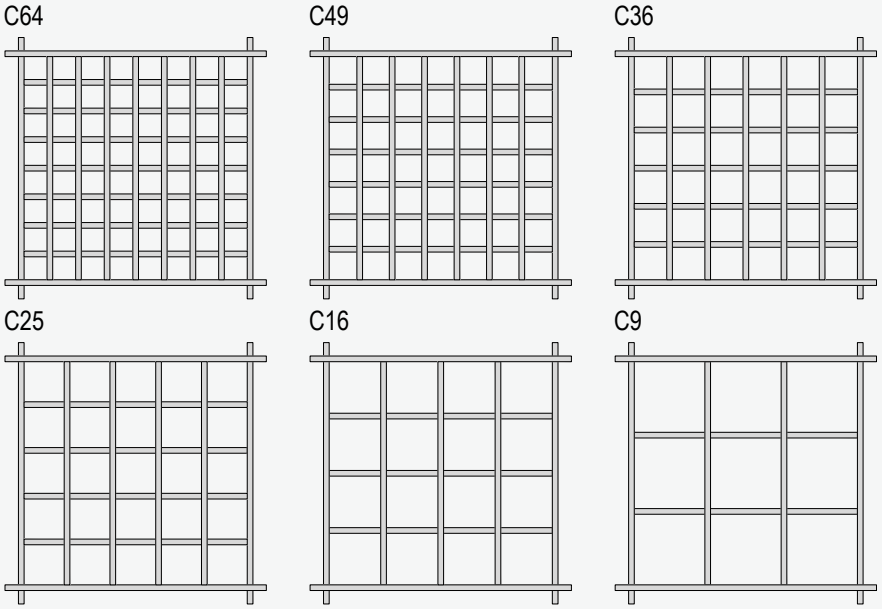
Modules (mm)

600 x 600

Material & design

Pre-coated galvanised steel, 0.3mm

	Cellio C64	Cellio C49	Cellio C36	Cellio C25	Cellio C16	Cellio C9
Cell module size:	75 x 75 x 37mm	86 x 86 x 37mm	100 x 100 x 37mm	120 x 120 x 37mm	150 x 150 x 37mm	200 x 200 x 37mm
Open area:	64%	68%	72%	76%	81%	85%
Cut off angle:	31°	27°	23°	19°	15°	11°



Colours

Global White

VD Other Colours

RAL 9005 RAL 9006

Weight

C64	C49	C36	C25	C16	C9
5.3 kg/m²	4.6 kg/m²	3.9 kg/m²	3.3 kg/m²	2.6 kg/m²	2.2 kg/m²

Fire reaction

Euroclass **A1**
as per EN 13501-1

Humidity resistance

90% RH

Indoor air quality

A+

Cleanability

Sustainability

≈14%

[Previous page] METAL Cellio C64 (Nikola Tesla Airport, Belgrade, Serbia, © Sandro Lendler)

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Armstrong CEILING SOLUTIONS

Free Span Corridor Systems

ARMSTRONG METAL Clip-In, Hook-On, Lay-In

F-Clip Access, F-H 600, F-H 600 Swing, F-H 600 Swing EI30, F-L 601

- **Armstrong METAL Corridor** is a rectangular panel free-span solution that simply spans between the walls, allowing for easy installation and access to services.
- **METAL F-L 601** with various perimeter trim solutions for a clean aesthetic finish.
- Adjustable perimeter shadow gap detailing for METAL F-Clip Access and METAL F-H 600.
- Easy, quick access to ceiling void due to swing-down functions (METAL F-Clip Access and METAL F-H 600 Swing).
- **METAL F-H 600 Swing EI30** fire resistant ceiling (a <-> b) with an additional layer of Knauf plasterboard fixed to the back of the panels and an intumescent tape sealing the gaps.
- **METAL F-Clip Access** panels available with an optional lock function.
- Fully configurable large size panels.
- Additional design options available as part of our **Vario Design** range.
- Used in corridors where the panels simply span between walls.

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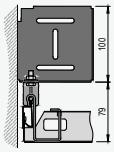
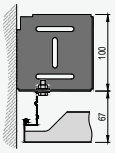
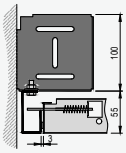
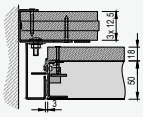
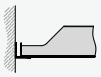
Armstrong CEILING SOLUTIONS

ARMSTRONG METAL Clip-In, Hook-On, Lay-In

F-Clip Access, F-H 600, F-H 600 Swing, F-H 600 Swing EI30, F-L 601

	METAL F-Clip Access VD	METAL F-H 600 VD	METAL F-H 600 Swing VD	METAL F-H 600 Swing EI30 VD	METAL F-L 601 VD
Edge details					
System	Wall Bracket + Half DP12 A-Bar (optional DP12 A-Bar)	Wall Bracket + J-Bar	Wall Bracket + G-Profile	Wall Profile EI30 + G-Profile EI30	Perimeter Trim
Dimensions (mm)	Panel length: 600 - 2500 Panel width: 250 - 600 Max size (m^2): 1.5	Panel length: 600 - 3300 Panel width: 247 - 1350 Max size (m^2): 2	Panel length: 600 - 3300 Panel width: 247 - 1350 Max size (m^2): 2	Panel length: 600 - 2700 Panel width: 247 - 397	Panel length: 600 - 3300 Panel width: 247 - 1350 Max size (m^2): 2
Material & perforations	Post-coated galvanised steel, 0.6 - 0.7mm				
	Unperforated	Standard perforation **Rg 2516** Ø: 2.5mm Open area: 16%	Micro-perforation **Rd 1522** Ø: 1.5mm Open area: 22%	Extramicro perforation **Rg 0701** Ø: 0.7mm Open area: 1.5%	
	VD Other perforations				
	Rd 1511	Rg 1511	Rg 1821	Rg 3013	Qg 4025
Colours	RAL 9010				
	VD Other colours: RAL 9003, RAL 9005, RAL 9006, RAL 9007, RAL 9016, Global White		**VD Wood effects**: Ash, Natural Bamboo, Caramel Bamboo, Maple, Oak, American Cherry, American Walnut		
Weight	**Unperforated** 5.7 - 7.4 kg/m^2	**Rg 2516** 5.0 - 6.6 kg/m^2	**Rd 1522** 4.7 - 6.4 kg/m^2	**Rg 0701** 5.7 - 7.3 kg/m^2	*Weight varies depending on the edge detail and acoustic infill.*

Acoustics

	EN ISO 354								EN ISO 10848-2	EN ISO 10140-2	
	α_w*	Class	Frequency (Hz) α_p** 125	250	500	1000	2000	4000	NRC**	$D_{n,f,w}$***	R_w***	CAC****
Unperforated	0.10(L)	NC	0.25	0.15	0.05	0.05	0.10	0.10	0.10	44 dB	19 dB	–
Rg 2516 + Fleece	0.75(L)	C	0.35	0.80	0.95	0.70	0.75	0.75	0.80	18 dB	8 dB	–
Rd 1522 + Fleece	0.70	C	0.30	0.65	0.90	0.65	0.70	0.75	0.70	16 dB	6 dB	16 dB
Rg 0701 + Fleece	0.55(L)	D	0.45	0.70	0.70	0.55	0.55	0.45	0.65	21 dB	10 dB	22 dB

*as per EN ISO 11654 **as per ASTM C 423-01 ***as per EN ISO 717-1 ****as per ASTM E 413-10

Fire reaction	Euroclass **A1** (METAL F-Clip Access, F-H 600, F-L 601: Unperforated / Perforated + No Infill + No Gasket) Euroclass **A2-s2, d0** (METAL F-Clip Access, F-H 600, F-L 601: Perforated + Acoustic Fleece + No Gasket) Euroclass **B-s1, d0** (METAL F-H 600 Swing, F-L 601: Perforated + Acoustic Fleece + Gasket) as per EN 13501-1	RUS **KM1 (G1, V1, D1, T1)** as per 123-FZ	*Values applicable for RAL 9010 solutions only.*
Light reflectance	**Unperforated** 85%; **Rg 2516** 70%; **Rd 1522** 65%; **Rg 0701** 80%		*Values applicable for RAL 9010 solutions only.*
Humidity resistance	**90% RH**		
Indoor air quality	A+ (only without gasket); E1		
Cleanability	(TrioGuard™ only)		
Sustainability	≈14%; Silver*		*Value applicable for RAL 9010 only.*

Design options

	METAL F-H 600 Swing EI30	METAL F-H 600, METAL F-H 600 Swing	METAL F-Clip Access	METAL F-Clip Access, METAL F-H 600, METAL F-L 601	METAL F-Clip Access, METAL F-H 600 Swing, METAL F-H 600 Swing EI30
Dimensions					
Colours					
Perforations					
Acoustic Infills					
Cut-Outs					
BioGuard					
Fire Resistance	✓				
Suitable for Chilled Ceilings		✓			
Secure Function			✓		
TrioGuard™				✓	
Swing-Down Function					✓

[Previous page] METAL F-Clip Access, Unperforated (Linz AG Center, Linz, Austria, ©Elisabeth Grebe)

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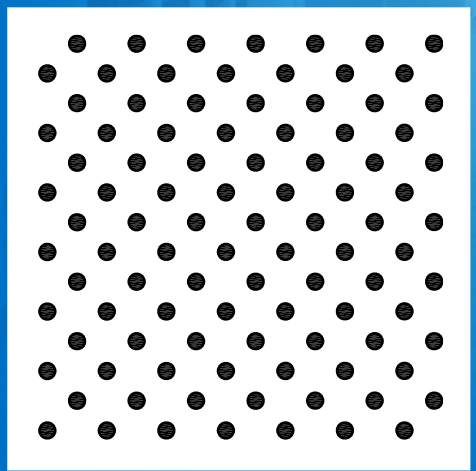
Armstrong CEILING SOLUTIONS

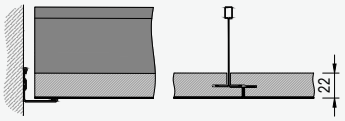
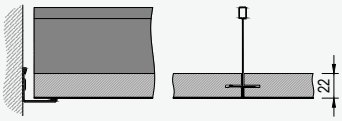
Free Span Corridor Systems

AMF Kombimetall



- **AMF Kombimetall** is a combination of a metal surface and mineral tile core.
- The combination fulfils the highest performance requirements in fire protection and acoustics.
- Used in association with AMF THERMATEX® mineral tiles, AMF Kombimetall provides the safety and ease of installation of a functional ceiling with the high quality finish of a metal ceiling.
- Ideally suited for corridors applications where the panels simply span between walls.
- Bandraster for room installation available on request.

AMF Kombimetall

Edge details	**SL2** 	**K2C2** 
System	Perimeter Trim	Perimeter Trim
Dimensions (mm)	1600 x 300 x 22 1800 x 300 x 22 2000 x 300 x 22 2500 x 300 x 22	1600 x 300 x 22 1800 x 300 x 22 2000 x 300 x 22 2500 x 300 x 22
Material & perforations	Pre-coated aluminium, 0.7mm	
	Unperforated	Perforated ∅: 2.5mm Open area: 15%
Colours	RAL 9010	
Weight	9.5 kg/m²	

Acoustics

	EN ISO 354								EN ISO 10848-2
	α_w*	Class	Frequency (Hz) α_p**						NRC**	$D_{n,f,w}$***
			125	250	500	1000	2000	4000		
Unperforated	0.20(L)	E	0.35	0.30	0.30	0.20	0.10	0.10	0.25	-
Perforated	0.65(H)	C	0.35	0.45	0.60	0.75	0.90	0.80	0.70	42 dB

*as per EN ISO 11654 **as per ASTM C 423-01 ***as per EN ISO 717-1

Fire reaction	Euroclass **A2-s1, d0** as per EN 13501-1	
Light reflectance	**Unperforated** 85%	**Perforated ∅ 2.5 mm** 70%
Humidity resistance	**90% RH**	
Cleanability		

[Previous page] AMF Kombimetall (Realschule, Grafenau, Germany)

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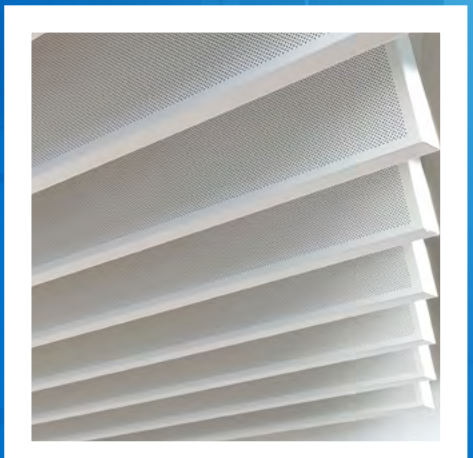
Vertical Baffle Systems

ARMSTRONG METAL Baffle

Individual



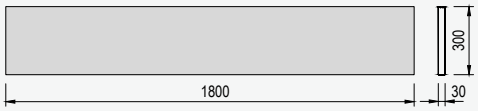
- **Armstrong METAL Baffles** are typically used in acoustically-challenged spaces, in airports, rail terminals, semi-exposed soffit buildings, offices, retail, leisure centres, etc.
- Modern linear appearance.
- Reduce noise levels and reverberation time, increase speech intelligibility.
- Robust, engineered solution.
- Quick and easy to install with adjustable hanging wires.
- Delivered with an acoustic pad fitted inside.
- Optional face covers.
- Optional connector for grouping functions.
- See our fully configurable **METAL V-P 500** system for additional options.

ARMSTRONG METAL Baffle

Individual

Edge details

METAL Baffle



System

METAL Baffle Hanging Wire Kit (length 4000mm)
Face covers and connectors available as separate items.

Not included.

Dimensions (mm)

1800 x 300 x 30

Available in 2 pieces/carton.

Material & perforations

Powder-coated galvanised steel, 0.7mm

Micro-perforation **Rd 1522**

(both vertical sides)

Acoustic pad 25mm, 25 kg/m²

Ø: 1.5mm
Open area: 22%

Colours

RAL 9010

Weight

5.7 kg/pc

Acoustics

	EN ISO 354								
	α_w*	Class	Frequency (Hz) — Octave band value α_p						NRC**
			125	250	500	1000	2000	4000	
Row distances 300mm	0.55(H)	D	0.15	0.35	0.50	0.70	0.75	0.70	0.60

*as per EN ISO 11654 **as per ASTM C 423-01

Fire reaction

Euroclass **A2-s1, d0**
as per EN 13501-1

Light reflectance

Rd 1522
65%

Humidity resistance

90% RH

Indoor air quality

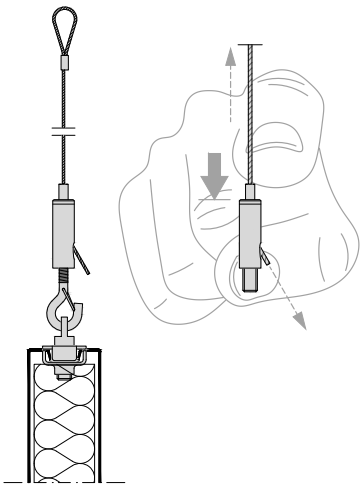
A E1

Cleanability

Sustainability

≈14%

Hanging Wire Kit



[Previous page] METAL Baffles (Tolmachevo Airport, International Terminal, Novosibirsk)

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Armstrong CEILING SOLUTIONS

Vertical Baffle Systems

ARMSTRONG METAL V-P 500, V-K 500

Grouped

- **Armstrong METAL V-P 500** (linear layout) and **Armstrong METAL V-K 500** (crossed layout) are acoustic ceiling systems well suited to busy and noisy open plan spaces.

METAL V-P 500

- Fully configurable solution with variable baffles spacing.
- Different baffle height combinations and radial installations possible.
- Suitable solution for corridors.
- Installed on U-Profile system for a perfect alignement and optional face covers.
- For alternative solutions, see our standard **METAL Baffles**.
- Further dimensions and options available on request.
- Easy service integration into the ceiling space.
- Additional design options available as part of our **Vario Design** range.

METAL V-K 500

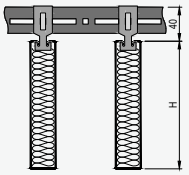
- Delivered as a kit of predefined baffle types in different lengths for standard fields sizes.
- Simple to assemble, no cutting required.

ARMSTRONG METAL V-P 500, V-K 500

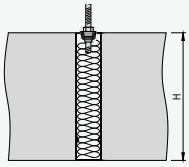
Grouped

Edge details

METAL V-P 500 VD



METAL V-K 500 VD



System

U-Profile

Direct suspended (by threaded rod)

Dimensions (mm)

Baffle length: various dimensions
Baffle width: 30
Baffle height: 150 / 200 / 250 / 300

Standard modules/fields: 3000 x 3000, 6000 x 6000, 9000 x 6000

Material & perforations

Post-coated galvanised steel, 0.7mm

Unperforated	Standard perforation **Rg 2516**	Micro-perforation **Rd 1522**	Extramicro perforation **Rg 0701**
	Ø: 2.5mm Open area: 16%	Ø: 1.5mm Open area: 22%	Ø: 0.7mm Open area: 1.5%

VD Other perforations

Rd 1511 | Rg 1511 | Rg 1821 | Rg 3013 | Qg 4025

Colours

RAL 9010

VD Other colours

RAL 9003 | RAL 9005 | RAL 9006 | RAL 9007 | RAL 9016 | Global White

VD Wood effects* **Baffles only.*

Ash | Natural Bamboo | Caramel Bamboo | Maple | Oak | American Cherry | American Walnut

Weight

Unperforated	Rg 2516	Rd 1522	Rg 0701
2.0 - 3.6 kg/m²	1.7 - 3.1 kg/m²	1.6 - 2.9 kg/m²	1.9 - 3.5 kg/m²

Acoustics

Acoustic performances will depend on baffle heights, row distance between the baffles and distance from the soffit. Acoustic values available on request.

Fire reaction

Euroclass **A2-s1, d0**
as per EN 13501-1

Values applicable for RAL 9010 solutions only.

Light reflectance

Unperforated	Rg 2516	Rd 1522	Rg 0701
85%	70%	65%	80%

Values applicable for RAL 9010 solutions only.

Humidity resistance

90% RH

Indoor air quality

A | E1

Cleanability

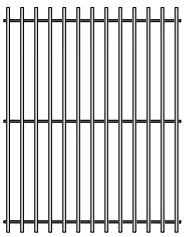
Sustainability

≈14%

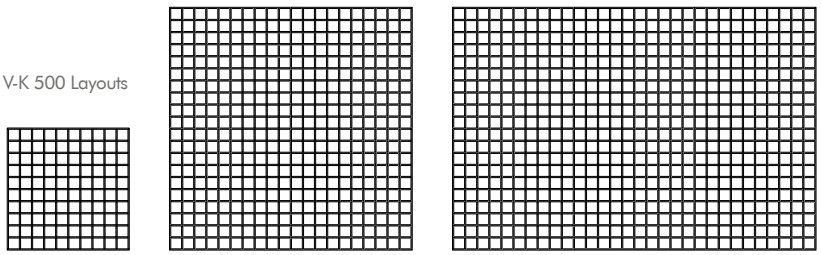
Design options

Dimensions | Colours | Perforations | Acoustic Infills

METAL V-P 500 Layout



METAL V-K 500 Layouts



3000 x 3000 | 6000 x 6000 | 9000 x 6000

[Previous page] METAL V-P 500 (E&Y, Warsaw, Poland, ©Szymon Polański)

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Armstrong CEILING SOLUTIONS

Floating Canopy Systems

ARMSTRONG METAL Canopy Convave & Convex

Individual

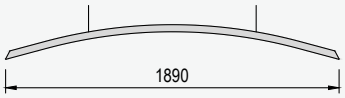
- **Armstrong METAL Canopy Concave & Convex** are a range of floating solutions. Easily suspended from the building structure, they define spaces and help accentuate an area.
- With a 360° visibility, they provide focus and create ceiling sculptures while controlling sound reverberation.
- Define spaces without any visible frame or grid.
- Adjust to various heights and angles.
- An easy to install retrofit solution that can be used under an existing ceiling.
- Visible sides are extramicro perforated to offer a smooth appearance, while standard perforation on the rear side allows for better sound absorption.
- Ideal for showrooms, entrance halls, transport hubs, meeting rooms, retail and waiting areas.

ARMSTRONG METAL Canopy Concave & Convex

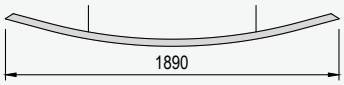
Individual

Edge details

METAL Canopy Concave



METAL Canopy Convex



System

Hanging Wire Kit M6 (length 4000mm)

Not included.

Dimensions (mm)

Concave
1890 x 1181 x 40

Convex
1890 x 1181 x 40

Available in 1 piece/carton.

Material & Perforations

Powder-coated galvanised steel panels, 0.7mm

Front side

Extramicro perforation
Rg 0701

∅: 0.7mm
Open area: 1.5%

Rear side

Standard perforation
Rg 2516

∅: 2.5mm
Open area: 16%

Black acoustic fleece + acoustic pad 20mm, 25 kg/m³

Colours

RAL 9010

Weight

Concave
28.3 kg/pc

Convex
28.3 kg/pc

Acoustics

	EN ISO 354					
	Frequency (Hz) α_p*					
	125	250	500	1000	2000	4000
Concave	0.80	1.50	2.50	2.80	2.60	2.20
Convex	0.80	1.50	2.50	2.80	2.60	2.20

*Values shown are the average of the 3 one third octave band value.

Fire reaction

Euroclass **B-s2, d0**
as per EN 13501-1

Light reflectance

80%

Humidity resistance

90% RH

Indoor air quality

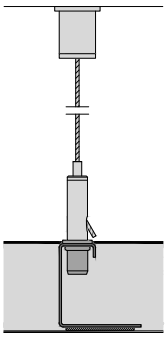
A+ E1

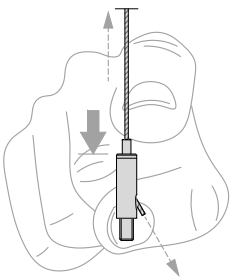
Cleanability

Sustainability

≈14%

Hanging Wire Kit





[Previous page] METAL Canopy Concave (Nice Airport, France, ©Grigori Rassinier)

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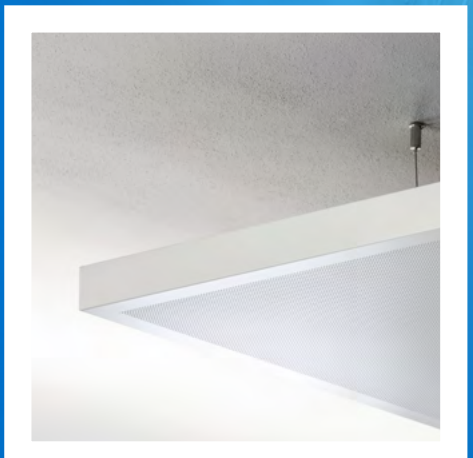
Armstrong CEILING SOLUTIONS

Floating Canopy Systems

ARMSTRONG METAL Canopy

Individual



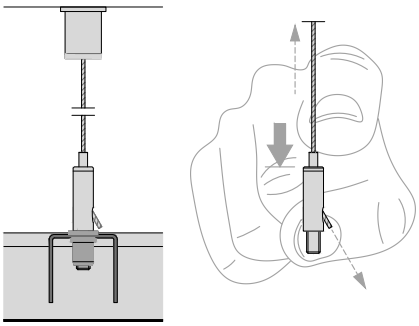
- **Armstrong METAL Canopy** is a fully configurable metal canopy. It is suspended by an adjustable hanging wire kit and is quick and easy to install.
- Metal provides a high-value appearance.
- Fully configurable solution, available with different edge details (90°/50°/20x20mm edge).
- An optional rear cover with perforation and an acoustic pad allows for better sound absorption and 360° visibility.
- An easy to install retrofit solution that can be used under an existing ceiling.
- Can be installed as a wall absorber by using a wall hanging kit (see **METAL Canopy Wall Absorber**).
- Resistant and durable.
- Ideal for showrooms, entrance halls, transport hubs, meeting rooms, retail and waiting areas.

ARMSTRONG METAL Canopy

Individual

Edge details	**METAL Canopy** [90° edge]	**METAL Canopy** [50° edge]	**METAL Canopy** [20 x 20mm edge]
System	Hanging Wire Kit M6 (length 4000mm)		*Not included.*
Dimensions (mm)	Panel length: 600 - 1800 Panel width: 600 - 1200 Panel thickness: 40		
Material & perforations	Post-coated galvanised steel, 0.7mm		
	Front side		**Rear side**
	Standard perforation **Rg 2516** ∅: 2.5mm Open area: 16%	Micro-perforation **Rd 1522** ∅: 1.5mm Open area: 22%	Extramicro perforation **Rg 0701** ∅: 0.7mm Open area: 1.5%	Standard perforation **Rg 2516** ∅: 2.5mm Open area: 16%
Colours	RAL 9010			
	VD Other colours: RAL 9003, RAL 9005, RAL 9006, RAL 9007, RAL 9016, Global White		**VD Wood effects**: Ash, Natural Bamboo, Caramel Bamboo, Maple, Oak, American Cherry, American Walnut	
Weight	**Unperforated** 4.3 - 26.0 kg/m²	**Rg 2516** 4.0 - 23.0 kg/m²	**Rd 1522** 3.9 - 21.9 kg/m²	**Rg 0701** 4.3 - 25.7 kg/m²
Fire reaction	Euroclass **A1** (Perforated + No Infill) Euroclass **A2-s2, d0** (Perforated + Acoustic Fleece) as per EN 13501-1		RUS **KM1 (G1, V1, D1, T1)** as per 123-FZ	*Values applicable for RAL 9010 solutions only.*
Light reflectance	**Unperforated** 85%	**Rg 2516** 70%	**Rd 1522** 65%	**Rg 0701** 80% *Values applicable for RAL 9010 solutions only.*
Humidity resistance	**90% RH**			
Indoor air quality	A+ E1			
Cleanability				
Sustainability	≈14% Silver*			**Value applicable for RAL 9010 solutions only.*
Design options	Dimensions, Colours, Perforations, Acoustic Infills, Cut-Outs			

Hanging Wire Kit



[Previous page] METAL Canopy, 90° edge (Community Room, Penzlin, Germany, ©Bernd Gallandi)

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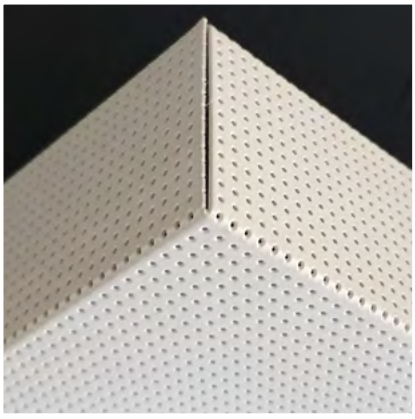
Armstrong CEILING SOLUTIONS

Floating Canopy Systems

ARMSTRONG METAL D-Clip, D-H 700

Grouped



- **Armstrong METAL D-Clip** and **Armstrong METAL D-H 700** systems are floating modular solutions for optimum flexibility. The product range features Clip-In and Hook-On rectangular panels that can be arranged to create distinctive design elements. In combination with Knauf Ceiling Solutions suspension systems it allows a minimal-height installation without any extra engineering required.
- Modular concept for optimum flexibility with fully configurable large size panels. Installed in a row or as a single item.
- Standard, end and single panels available.
- Modern absorber solution for exposed concrete soffit.
- **METAL D-Clip** with optional swing-down function or lock function.
- **METAL D-H 700** is suitable for chilled ceilings.
- Additional design options available as part of our **Vario Design** range.
- Ideal for offices, meeting rooms, retail, auditoriums, multi-purpose halls and cafeterias.

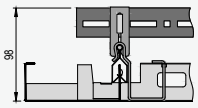
Armstrong CEILING SOLUTIONS

ARMSTRONG METAL D-Clip, D-H 700

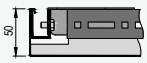
Grouped

Edge details

METAL D-Clip VD



METAL D-H 700 VD



System

U-Profile + DP12 A-Bar	U-Profile (cross connected)

Dimensions (mm)

Panel length: 600 - 2500 Panel width: 250 - 600 Max size (m^2): 1.5	Panel length: 600 - 2750 (in steps of 25mm) Panel width: 250 - 600 (in steps of 25mm) Max size (m^2): 1.65

Material & perforations

Post-coated galvanised steel, 0.6 - 0.7mm

Unperforated	Standard perforation **Rg 2516**	Micro-perforation **Rd 1522**	Extramicro perforation **Rg 0701**
	Ø: 2.5mm Open area: 16%	Ø: 1.5mm Open area: 22%	Ø: 0.7mm Open area: 1.5%

Other perforations VD

Rd 1511

Rg 1511

Rg 1821

Rg 3013

Qg 4025

Colours

RAL 9010

Other colours VD

RAL 9003

RAL 9005

RAL 9006

RAL 9007

RAL 9016

Global White

Wood effects VD

Ash

Natural Bamboo

Caramel Bamboo

Maple

Oak

American Cherry

American Walnut

Weight

Unperforated	Rg 2516	Rd 1522	Rg 0701	
6.4 - 9.5 kg/m^2	5.6 - 8.8 kg/m^2	5.3 - 8.5 kg/m^2	6.3 - 9.4 kg/m^2	*Weight varies depending on the edge detail and acoustic infill.*

Acoustics

	EN ISO 354								EN ISO 10848-2	EN ISO 10140-2
	α_w*	Class	Frequency (Hz) α_p						NRC**	$D_{n,f,w}$***	R_w***
			125	250	500	1000	2000	4000			
Unperforated	0.10(L)	NC	0.25	0.15	0.05	0.05	0.10	0.10	0.10	44 dB	19 dB
Rg 2516 + Fleece	0.75(L)	C	0.35	0.80	0.95	0.70	0.75	0.75	0.80	18 dB	8 dB
Rd 1522 + Fleece	0.70	C	0.30	0.65	0.90	0.65	0.70	0.75	0.70	16 dB	6 dB
Rg 0701 + Fleece	0.55(L)	D	0.45	0.70	0.70	0.55	0.55	0.45	0.65	21 dB	10 dB

*as per EN ISO 11654 **as per ASTM C 423-01 ***as per EN ISO 717-1

Fire reaction

Euroclass **A1** (Perforated + No Infill)
Euroclass **A2-s2, d0** (Perforated + Acoustic Fleece)
as per EN 13501-1

RUS **KM1 (G1, V1, D1, T1)**
as per 123-FZ

Values applicable for RAL 9010 solutions only.

Light reflectance

Unperforated	Rg 2516	Rd 1522	Rg 0701	
85%	70%	65%	80%	*Values applicable for RAL 9010 solutions only.*

Humidity resistance

90% RH

Indoor air quality

A+

E1

Cleanability

(TrioGuard™ only)

Sustainability

≈14%

Silver*

Value applicable for RAL 9010 solutions only.

Design options

					METAL D-Clip	METAL D-Clip	METAL D-H 700
Dimensions	Colours	Perforations	Acoustic Infills	Cut-Outs	Swing-Down Function	Secure Function	TrioGuard™

[Previous page] METAL D-H 700, Rd 1522, RAL 9010 (Siemens, Rome, Italy, © Beppe Raso)

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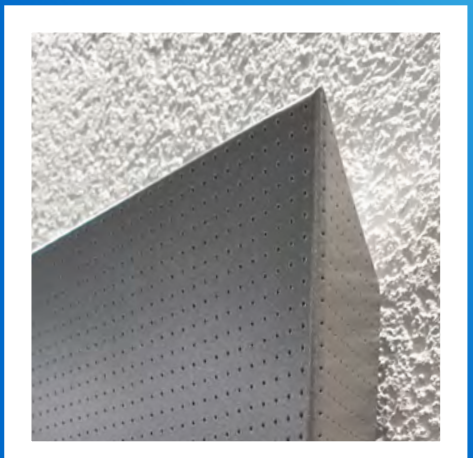
Armstrong CEILING SOLUTIONS

Wall Systems

ARMSTRONG METAL Canopy Wall Absorber

Individual



- **Armstrong METAL Canopy Wall Absorber** is a range of wall solutions that help structure and define spaces and accentuate an area. They provide a focus or create wall sculptures that help control sound reverberation within a space.
- Simple and fast installation by using a wall hanging kit.
- Durable, easy to clean and maintain.
- Fully configurable solution, available with different edge details (90°/50°/20x20mm edge).
- Optional perforated rear covers with an acoustic pad allow for better sound absorption and 360° visibility.
- The same product can be installed as a ceiling canopy (see METAL Canopy).
- The product can be installed upright or reclined.
- Additional design options available as part of our **Vario Design** range.
- Ideal for offices, meeting rooms, retail auditoriums, multi-purpose halls and cafeterias.

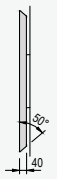
ARMSTRONG METAL Canopy Wall Absorber

Individual

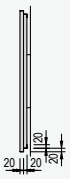
Edge details

METAL Canopy Wall Absorber VD
[90° edge]

METAL Canopy Wall Absorber VD
[50° edge]



METAL Canopy Wall Absorber VD
[20 x 20mm edge]



System

Wall Hanging Kit (4 fixing points at the wall) *Not included*

Dimensions (mm)

Panel length: 600 - 1800
Panel width: 600 - 1200
Panel thickness: 40

Material & perforations

Post-coated galvanised steel, 0.7mm

Front side			Rear side
Standard perforation **Rg 2516**	Micro-perforation **Rd 1522**	Extramicro perforation **Rg 0701**	Standard perforation **Rg 2516**
∅: 2.5mm Open area: 16%	∅: 1.5mm Open area: 22%	∅: 0.7mm Open area: 1.5%	∅: 2.5mm Open area: 16%

Colours

RAL 9010

VD Other colours

RAL 9003, RAL 9005, RAL 9006, RAL 9007, RAL 9016, Global White

VD Wood effects

Ash, Natural Bamboo, Caramel Bamboo, Maple, Oak, American Cherry, American Walnut

Weight

Rg 2516	Rd 1522	Rg 0701
4.0 - 23.0 kg/m²	3.9 - 21.9 kg/m²	4.3 - 25.7 kg/m²

Light reflectance

Rg 2516	Rd 1522	Rg 0701
70%	65%	80%

Values applicable for RAL 9010 solutions only.

Humidity resistance

90% RH

Indoor air quality

A+, E1

Cleanability

Sustainability

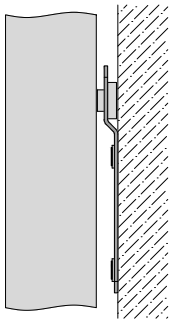
≈14%, Silver*

**Value applicable for RAL 9010 solutions only.*

Design options

Dimensions, Colours, Perforations, Acoustic Infills, Cut-Outs

Wall Hanging Kit



[Previous page] METAL Canopy Wall Absorber, 20 x 20mm edge, Rd 1522 / 90° edge, Rg 2516 / 50° edge, Rg 0701, RAL 9007 (©Knauf Ceiling Solutions)

VD Options with this icon are available from our **Vario Design** range.
Some combinations of colours and/or perforations are not available for every product.
Products may vary from country to country. Please contact your local sales representative.
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knaufceilingsolutions.com

Armstrong CEILING SOLUTIONS

Wall Systems

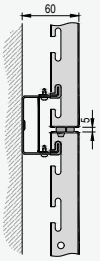
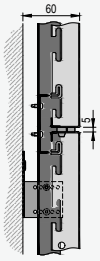
ARMSTRONG METAL W-H 1000, W-H 1100

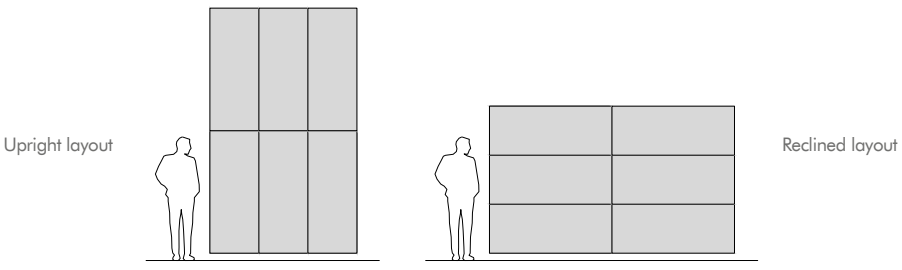
Grouped

- **Armstrong METAL W-H 1000** and **Armstrong METAL W-H 1100** are Hook-On wall cladding systems without visible fasteners which enable faster installation.
- Space saving system with a small adjustable offset distance.
- Panels can be oriented upright or reclined.
- METAL W-H 1000 with C-Wall profile is installed horizontally, while METAL W-H 1100 with U-Wall profile is installed vertically. The size and orientation of the panels will guide the choice of a system over the other.
- Fast to install and dismantle.
- A complete wall solution that meets the acoustic performance of a space.
- Additional design options available as part of our **Vario Design** range.
- Acoustic and architectural design elements for market segments such as office, education or transportation.

ARMSTRONG METAL W-H 1000, W-H 1100

Grouped

Edge details	**METAL W-H 1000** VD 	**METAL W-H 1100** VD 
System	C-Wall Profile	U-Wall Profile
Dimensions (mm)	Panel length: 600 - 3000 Panel width: 250 - 1000 Max size (m^2): 3	Panel length: 600 - 3000 Panel width: 250 - 1000 Max size (m^2): 3
Material & perforations	Post-coated galvanised steel, 1.0mm	
	Unperforated	Standard perforation **Rg 2516** Ø: 2.5mm Open area: 16%
	Micro-perforation **Rd 1522** Ø: 1.5mm Open area: 22%	
	VD Other perforations	
	Rd 1511	Rg 1511
	Rg 3013	
Colours	RAL 9010	
	VD Other colours	**VD Wood effects**
	RAL 9003, RAL 9005, RAL 9006, RAL 9007, RAL 9016, Global White	Ash, Natural Bamboo, Caramel Bamboo, Maple, Oak, American Cherry, American Walnut
Weight	**Unperforated** 8.6 - 11.3 kg/m^2	**Rg 2516** 7.3 - 10.0 kg/m^2 / **Rd 1522** 6.7 - 9.6 kg/m^2 — *Weight varies depending on the edge detail and acoustic infill.*
Light reflectance	**Unperforated** 85%	**Rg 2516** 70% / **Rd 1522** 65% — *Values applicable for RAL 9010 solutions only.*
Humidity resistance	**90% RH**	
Cleanability		
Sustainability	≈14% Silver*	**Value applicable for RAL 9010 solutions only.*
Design options	Dimensions, Colours, Perforations	



[Previous page] METAL W-H 1100 (Dubai International Airport, Dubai, UAE, © Beppe Raso)

VD Options with this icon are available from our **Vario Design** range.
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knaufceilingsolutions.com

Armstrong CEILING SOLUTIONS

MESH SOLUTIONS

Knauf Ceiling Solutions offers a wide range of mesh ceiling systems to create bold modern aesthetics.

From predefined panels to variable modules, corridor solutions and canopies, all systems can be configured as part of our Vario Design range, providing a wide choice of shapes, dimensions, patterns and colours to meet your specific design needs.

COLOURS

Knauf Ceiling Solutions standard colour for mesh ceilings RAL 9010 (Pure White) and 3 additional Vario Design colours.

Colours

RAL 9010

RAL 9005

RAL 9006

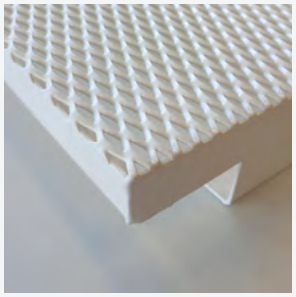
RAL 9007

Further colours available on request.

MESH vs. MESH MT

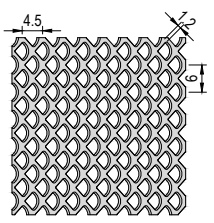
MESH
Visible side with 90° upturn on all four edges and welded stiffening profiles inside.

MESH MT
(MicroTack Technology) Flat visible side, without upturn, with welded stiffening profiles on all edges.

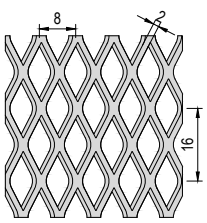


PATTERNS

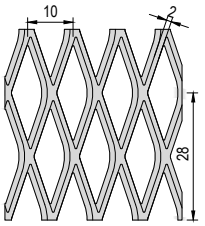
Standard - Steel Mesh Types



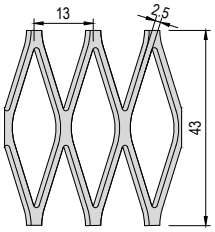
KD100
Open area: 35%



RB25
Open area: 50%

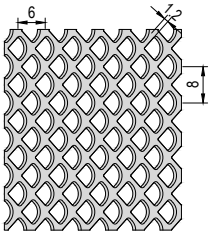


RB35
Open area: 58%

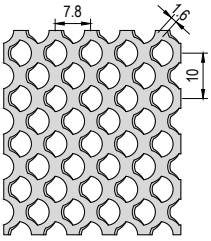


RB55
Open area: 62%

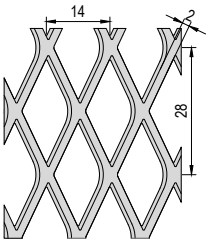
Vario Design - Steel Mesh Types



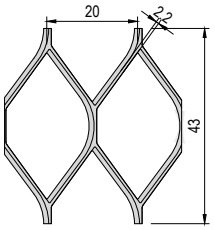
KD200
Open area: 54%



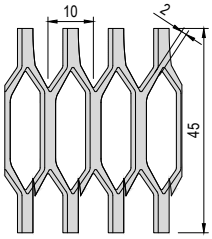
TAU30
Open area: 55%



RB35XL
Open area: 71%

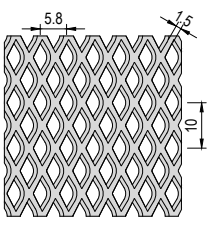


RB55XL
Open area: 79%

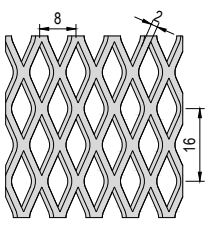


E45
Open area: 68%

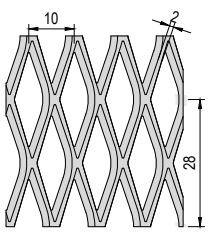
Vario Design - Aluminium Mesh Types



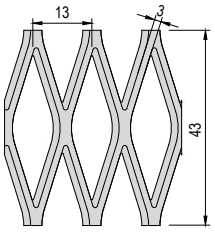
RB15AL
Open area: 45%



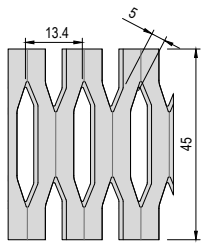
RB25AL
Open area: 47%



RB35AL
Open area: 55%



RB55AL
Open area: 55%



E45AL
Open area: 33%

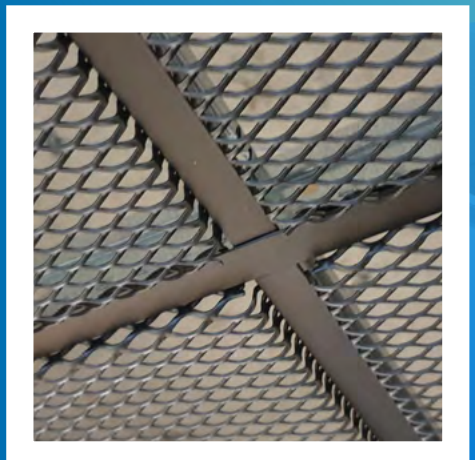
[Previous page] MESH Board, RAL 9005 (Univerexport, Novi Sad, Serbia, ©Marko Cvetkovic Cvele)

MESH patterns are directional.

Exposed Grid Systems

ARMSTRONG MESH Lay-In

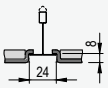
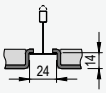
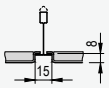
Board, Tegular, MicroLook



- Use **Armstrong MESH Lay-In** to achieve an industrial and contemporary look.
- Installed with standard exposed suspension systems.
- High open area solution.
- Additional design options available as part of our **Vario Design** range.
- Ideal choice for transport hubs, renovation projects wanting a modern touch and in general spaces with large ceiling areas.

ARMSTRONG MESH Lay-In

Board, Tegular, MicroLook

	MESH Board VD	MESH Tegular 8 VD	MESH Tegular 14 VD	MESH MicroLook 8 VD
Edge details				
System	Exposed demountable - System C (24mm T-Grid, butt-cut)	Exposed demountable - System C (24mm T-Grid, butt-cut)	Exposed demountable - System C (24mm T-Grid, butt-cut)	Exposed demountable - System C (15mm T-Grid, butt-cut)
Modules (mm)	600 x 600 625 x 625 1200 x 600 1250 x 625	600 x 600	625 x 625	600 x 600
Material & patterns	Galvanised steel KD100 / RB25 = 1.0mm RB35 / RB55 = 1.5mm (only for MESH Board)			
	KD100 Q6 x 4.5 - 1.2 x 1 Open area: 35%	**RB25** R16 x 8 - 2 x 1 Open area: 50%	**RB35** R28 x 10 - 2 x 1.5 Open area: 58%	**RB55** R43 x 13 - 2.5 x 1.5 Open area: 62%
Colours	RAL 9010			
	VD **Other colours** RAL 9005 · RAL 9006 · RAL 9007			
Weight	**KD100** 4.1 - 4.4 kg/m²	**RB25** 4.0 - 4.3 kg/m²	**RB35** 4.8 kg/m²	**RB55** 4.3 kg/m²
Fire reaction	Euroclass **A2-s1, d0** as per EN 13501-1		RUS **KM1 (G1, V1, D1, T1)** as per 123-FZ	*Values applicable for RAL 9010 solutions only.*
Humidity resistance	**95% RH**			
Indoor air quality	A+			
Cleanability				
Sustainability	≈14% Silver*			**Value applicable for RAL 9010 solutions only.*
Design options	Dimensions Colours Patterns Cut-Outs			

[Previous page] MESH MicroLook 8, RB25, RAL 9010 (77 Newman Street, London, UK, © Dave Parker)

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Armstrong CEILING SOLUTIONS

Exposed Grid Systems

ARMSTRONG MESH Linear & Tartan

B-H 300, B-H 300 MT, K-H 400, K-H 400 MT, R-L 201, R-L 201 MT, B-L 302, B-L 302 MT

- **Armstrong MESH Linear & Tartan** combines functionality with stylish simplicity and is ideal for breaking up larger ceiling spaces. Its high open area is perfect for any industrial look inspiration.
- MESH – visible side with 90° upturn on all four edges and welded stiffening profiles inside.
- MESH MT (MicroTack Technology) – flat visible side, without upturn, with welded stiffening profiles on all edges.

MESH B-H 300

- 'Easy' swing-down function for easy access to the ceiling void.
- C-Profiles available in different dimensions with optional cut-outs for service integration on request.

MESH K-H 400

- 'Easy' swing-down function for easy access to the ceiling void.
- Crossing boxes and C-Profiles available in different dimensions with optional cut-outs for service integration on request.

- Fully configurable large size panels.
- Radial ceilings with trapezoidal panels on request.
- Additional design options available as part of our **Vario Design** range.
- Ideal for open spaces and large rooms with flexible partitioning.

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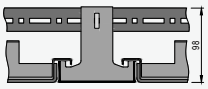
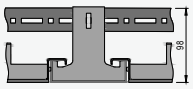
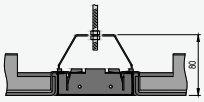
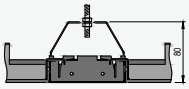
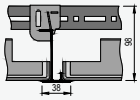
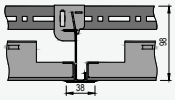
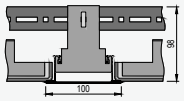
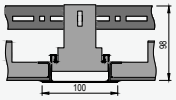
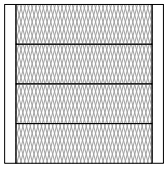
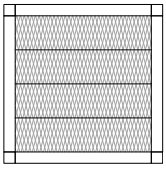
Armstrong CEILING SOLUTIONS

ARMSTRONG MESH Linear & Tartan

B-H 300, B-H 300 MT, K-H 400, K-H 400 MT, R-L 201, R-L 201 MT, B-L 302, B-L 302 MT

Edge details	**MESH B-H 300** VD [Linear layout] 	**MESH B-H 300 MT** VD [Linear layout] 	**MESH K-H 400** VD [Tartan layout] 	**MESH K-H 400 MT** VD [Tartan layout] 	
System	U-Profile + C-Profile 100mm*	U-Profile + C-Profile 100mm*	Crossing Box + C-Profile 100mm*	Crossing Box + C-Profile 100mm*	*Further widths on request.*
Edge details	**MESH R-L 201** VD [Linear layout] 	**MESH R-L 201 MT** VD [Linear layout] 	**MESH B-L 302** VD [Linear layout] 	**MESH B-L 302 MT** VD [Linear layout] 	
System	U-Profile + L-Profile	U-Profile + L-Profile	U-Profile + Bandraster 100mm	U-Profile + Bandraster 100mm	
Dimensions (mm)	**KD100** Panel length: 597 - 1500 Panel width: 247 - 500 Max size (m^2): 1.75		**RB25 RB35 RB55** Panel length: 597 - 2500 Panel width: 247 - 700 Max size (m^2): 1.75		
Material & patterns	Galvanised steel KD100 / RB25 = 1.0mm (KD100 not available for MT version) RB35 / RB55 = 1.5mm				
	KD100 Q6 x 4.5 - 1.2 x 1 Open area: 35%	**RB25** R16 x 8 - 2 x 1 Open area: 50%	**RB35** R28 x 10 - 2 x 1.5 Open area: 58%	**RB55** R43 x 13 - 2.5 x 1.5 Open area: 62%	
Colours	RAL 9010				
	VD **Other colours** RAL 9005, RAL 9006, RAL 9007				
Weight	**KD100** 8.2 - 14.5 kg/m^2	**RB25** 6.9 - 14.3 kg/m^2	**RB35** 7.8 - 15.5 kg/m^2	**RB55** 7.3 - 14.8 kg/m^2	
Fire reaction	Euroclass **A2-s1, d0** as per EN 13501-1		RUS **KM1 (G1, V1, D1, T1)** as per 123-FZ		*Values applicable for RAL 9010 solutions only.*
Humidity resistance	**95% RH**				
Indoor air quality	A+				
Cleanability					
Sustainability	≈14% Silver*				*Value applicable for RAL 9010 solutions only.*
Design options	Dimensions Colours Patterns Cut-Outs Shapes		MESH B-H 300 MESH B-H 300 MT MESH K-H 400 MESH K-H 400 MT Swing-Down Function	MESH MT versions Megapanel	

Linear layout   Tartan layout

[Previous page] MESH K-H 400 MT, custom 70% open area, RAL 9005 (65 Gresham Street, London, UK, ©Tom Green)

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Armstrong CEILING SOLUTIONS

Concealed Grid Systems

ARMSTRONG MESH Clip-In, Hook-On

R-Clip, R-H 200, R-H 200 MT, R-H 215, R-H 215 MT

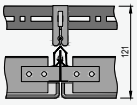
- **Armstrong MESH Clip-In & Hook-On** combines functionality with stylish simplicity and is ideal for breaking up larger ceiling spaces. Its high open area is perfect for any industrial look inspiration.
- MESH – visible side with 90° upturn on all four edges and welded stiffening profiles inside.
- MESH MT (MicroTack Technology) – flat visible side, without upturn, with welded stiffening profiles on all edges.
- MESH R-Clip / MESH R-H 200 / MESH R-H 200 MT available with lock function.
- MESH R-H 200 / MESH R-H 200 MT available in trapezoidal shapes for radial ceilings.
- Fully configurable large size panels.
- Additional design options available as part of our **Vario Design** range.
- Ideal for open spaces and large rooms with flexible partitioning.

ARMSTRONG MESH Clip-In, Hook-On

R-Clip, R-H 200, R-H 200 MT, R-H 215, R-H 215 MT

Edge details

MESH
R-Clip VD



System

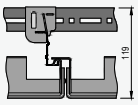
U-Profile +
DP12 A-Bar

Dimensions (mm)

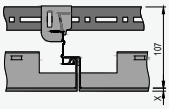
RB25 Panel length: 597 - 2500
RB35 Panel width: 247 - 700
RB55 Max size (m^2): 1.75

Edge details

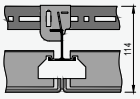
MESH
R-H 200 VD



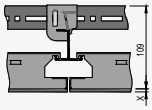
MESH
R-H 200 MT VD



MESH
R-H 215 VD



MESH
R-H 215 MT VD



X = Mesh thickness

System

U-Profile +
J-Bar

U-Profile +
J-Bar

U-Profile +
H-Profile 35mm

U-Profile +
H-Profile 35mm

Dimensions (mm)

KD100 Panel length: 597 - 1500
Panel width: 247 - 500
Max size (m^2): 1.75

RB25 Panel length: 597 - 2500
RB35 Panel width: 247 - 700
RB55 Max size (m^2): 1.75

Material & patterns

Galvanised steel
KD100 / RB25 = 1.0mm (KD100 not available for MT version and R-Clip)
RB35 / RB55 = 1.5mm

KD100
Q6 x 4.5 - 1.2 x 1
Open area: 35%

RB25
R16 x 8 - 2 x 1
Open area: 50%

RB35
R28 x 10 - 2 x 1.5
Open area: 58%

RB55
R43 x 13 - 2.5 x 1.5
Open area: 62%

Colours

RAL 9010

VD Other colours

RAL 9005 RAL 9006 RAL 9007

Weight

KD100
8.1 - 15.3 kg/m^2

RB25
6.0 - 15.0 kg/m^2

RB35
6.8 - 16.3 kg/m^2

RB55
6.3 - 15.6 kg/m^2

Fire reaction

Euroclass **A2-s1, d0**
as per EN 13501-1

RUS **KM1 (G1, V1, D1, T1)**
as per 123-FZ

Values applicable for RAL 9010 solutions only.

Humidity resistance

95% RH

Indoor air quality

A+

Cleanability

Sustainability

≈14%

Silver*

**Value applicable for RAL 9010 solutions only.*

Design options

Dimensions Colours Patterns Cut-Outs

MESH R-H 200
MESH R-H 200 MT
Shapes

MESH R-Clip
MESH R-H 200
MESH R-H 200 MT
Secure Function

[Previous page] MESH R-H 215, RB35, RAL 9006 (Automobilklub, Warsaw, Poland, ©Szymon Polański)

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Armstrong CEILING SOLUTIONS

Free Span Corridor Systems

ARMSTRONG MESH Clip-In, Hook-On, Lay-In

F-Clip Access, F-H 600, F-H 600 MT, F-L 601, F-L 601 MT

- **Armstrong MESH Free Span Corridor Systems** provide a versatile design solution for busy corridor applications.
- Flexible with easy and quick access to the ceiling void.
- MESH – visible side with 90° upturn on all four edges and welded stiffening profiles inside.
- MESH MT (MicroTack Technology) – flat visible side, without upturn, with welded stiffening profiles on all edges.
- MESH F-L 601 / MESH F-L 601 MT with various perimeter trim solutions for a clean aesthetic finish.
- Adjustable perimeter shadow gap detailing for MESH F-Clip / MESH F-H 600 / MESH F-H 600 MT.
- Fully configurable large size panels.
- Additional design options available as part of our **Vario Design** range.
- Ideal for open spaces and large rooms with flexible partitioning.

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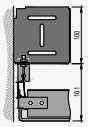
Armstrong CEILING SOLUTIONS

ARMSTRONG MESH Clip-In, Hook-On, Lay-In

F-Clip, F-H 600, F-H 600 MT, F-L 601, F-L 601 MT

Edge details

MESH
F-Clip VD



System

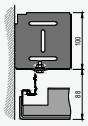
Wall Bracket +
Half DP12 A-Bar (optionally DP12 A-Bar)

Dimensions (mm)

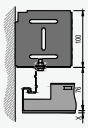
RB25 Panel length: 597 - 2500
RB35 Panel width: 247 - 700
RB55 Max size (m^2): 1.75

Edge details

MESH
F-H 600 VD



MESH
F-H 600 MT VD



MESH
F-L 601 VD

MESH
F-L 601 MT VD

X = Mesh thickness

System

U-Profile +
J-Bar

U-Profile +
J-Bar

Perimeter Trim

Perimeter Trim

Dimensions (mm)

KD100 Panel length: 597 - 1500
Panel width: 247 - 500
Max size (m^2): 1.75

RB25 Panel length: 597 - 2500
RB35 Panel width: 247 - 700
RB55 Max size (m^2): 1.75

Material & patterns

Galvanised steel
KD100 / RB25 = 1.0mm (KD100 not available for MT version and F-Clip)
RB35 / RB55 = 1.5mm

KD100
Q6 x 4.5 - 1.2 x 1
Open area: 35%

RB25
R16 x 8 - 2 x 1
Open area: 50%

RB35
R28 x 10 - 2 x 1.5
Open area: 58%

RB55
R43 x 13 - 2.5 x 1.5
Open area: 62%

Colours

RAL 9010

VD Other colours

RAL 9005 | RAL 9006 | RAL 9007

Weight

KD100 8.2 - 15.0 kg/m^2
RB25 6.9 - 14.8 kg/m^2
RB35 7.8 - 16.0 kg/m^2
RB55 7.3 - 15.3 kg/m^2

Fire reaction

Euroclass **A2-s1, d0**
as per EN 13501-1

RUS **KM1 (G1, V1, D1, T1)**
as per 123-FZ

Values applicable for RAL 9010 solutions only.

Humidity resistance

95% RH

Indoor air quality

A+

Cleanability

Sustainability

≈14%

Silver*

**Value applicable for RAL 9010 solutions only.*

Design options

	MESH F-H 600 MESH F-H 600 MT MESH F-L 601 MESH F-L 601 MT	MESH F-Clip
Dimensions		
Colours		
Patterns		
Cut-Outs		
Shapes		
Secure Function		

[Previous page] MESH F-L 601, RB35, RAL 9005 (Hines Polska, Warsaw, Poland, © Szymon Polański)

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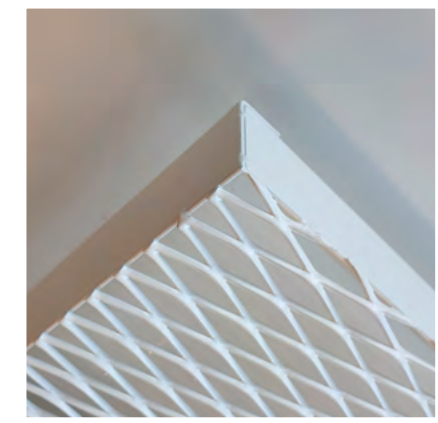
Armstrong CEILING SOLUTIONS

Floating Canopy Systems

ARMSTRONG MESH Canopy MT

Individual



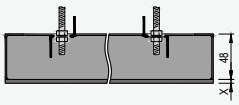
- **Armstrong MESH Canopy MT** provides a contemporary industrial look and feel. Breathe new life into your ceiling architecture – with a creative design, impressive simplicity and high performance.
- MESH MT (MicroTack Technology) – flat visible side, without upturn, with welded stiffening profiles on all edges.
- Canopies delivered with stiffeners on the back and suspended by threaded rods or adjustable hanging wire kits.
- Standard single item solution.
- For the grouping option, the canopy can be delivered on request with additional bolt holes on the edges.
- Additional design options available as part of our **Vario Design** range.
- Ideal for open spaces and large rooms with flexible partitioning.

ARMSTRONG MESH Canopy MT

Individual

Edge details

MESH
Canopy MT VD



X = Mesh thickness

System

Direct suspended (by threaded rod or wires)

Not included.

Dimensions (mm)

Panel length: 800 - 1200
Panel width: (RB25) 800 - 1202 (in steps of 8mm) / (RB35, RB55) 800 - 1200

Material & patterns

Galvanised steel
RB25 = 1.0mm
RB35 / RB55 = 1.5mm

RB25

R16 x 8 - 2 x 1
Open area: 50%

RB35

R28 x 10 - 2 x 1.5
Open area: 58%

RB55

R43 x 13 - 2.5 x 1.5
Open area: 62%

Colours

RAL 9010

VD **Other colours**

RAL 9005 | RAL 9006 | RAL 9007

Weight

RB25
6.4 - 11.5 kg/m²

RB35
6.9 - 12.6 kg/m²

RB55
6.6 - 12.0 kg/m²

Fire reaction

Euroclass **A2-s1, d0**
as per EN 13501-1

RUS **KM1 (G1, V1, D1, T1)**
as per 123-FZ

Values applicable for RAL 9010 solutions only.

Humidity resistance

95% RH

Indoor air quality

A+

Cleanability

Sustainability

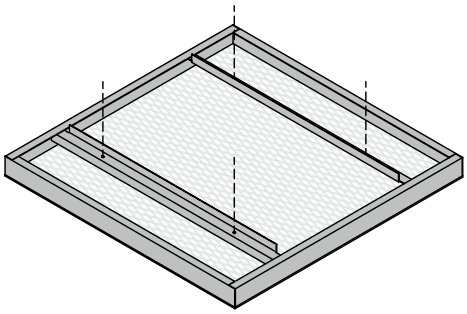
≈14%

Silver*

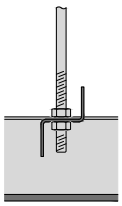
**Value applicable for RAL 9010 solutions only.*

Design options

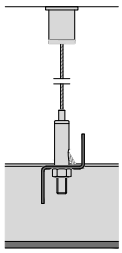
Dimensions | Colours | Patterns | Cut-Outs | Megapanel | Shape

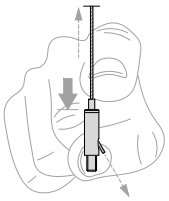


Threaded Rod M6



Hanging Wire Kit





[Previous page] MESH Canopy MT (©Knauf Ceiling Solutions)

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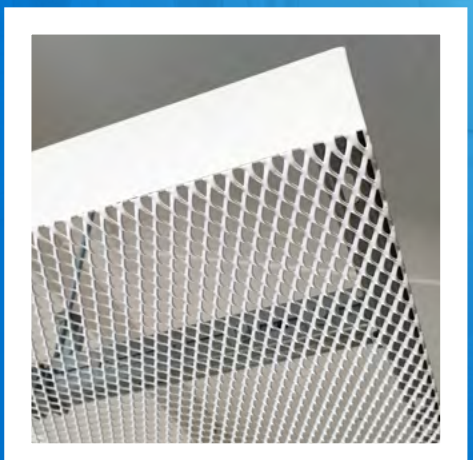
Armstrong CEILING SOLUTIONS

Floating Canopy Systems

ARMSTRONG MESH D-H 700 MT

Grouped



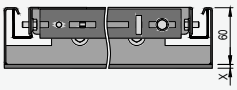
- **Armstrong MESH D-H 700 MT** offers optimum flexibility and design freedom. Breathe new life into your ceiling architecture – with a creative design, impressive simplicity and high performance.
- MESH MT (MicroTack Technology) – flat visible side , without upturn, with welded stiffening profiles on all edges.
- Standard, end and single panels available.
- Fully configurable large size panels.
- Additional design options available as part of our **Vario Design** range.
- Ideal for open spaces and large rooms with flexible partitioning.

ARMSTRONG MESH D-H 700 MT

Grouped

Edge details

MESH
D-H 700 MT VD



X = Mesh thickness

System

U-Profile (cross-connected)

Dimensions (mm)

Panel length: 585 - 2485 (in steps of 25mm)
Panel width: (RB25) 298 - 602 (in steps of 8mm) / (RB35, RB55) 247 - 700

Material & patterns

Galvanised steel
RB25 = 1.0mm
RB35 / RB55 = 1.5mm

RB25
R16 x 8 - 2 x 1
Open area: 50%

RB35
R28 x 10 - 2 x 1.5
Open area: 58%

RB55
R43 x 13 - 2.5 x 1.5
Open area: 62%

Colours

RAL 9010

VD **Other colours**

RAL 9005 RAL 9006 RAL 9007

Weight

RB25
6.8 - 14.0 kg/m²

RB35
7.6 - 16.0 kg/m²

RB55
7.2 - 15.5 kg/m²

Fire reaction

Euroclass **A2-s1, d0**
as per EN 13501-1

RUS **KM1 (G1, V1, D1, T1)**
as per 123-FZ

Values applicable for RAL 9010 solutions only.

Humidity resistance

95% RH

Indoor air quality

A+

Cleanability

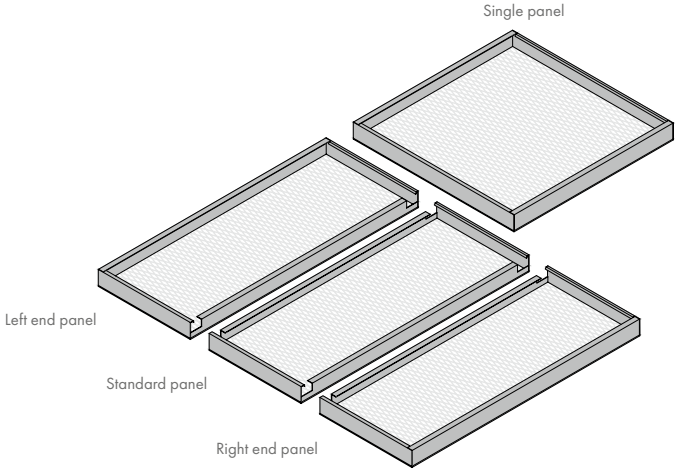
Sustainability

≈14% Silver*

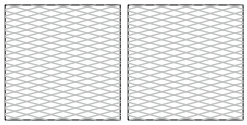
**Value applicable for RAL 9010 solutions only.*

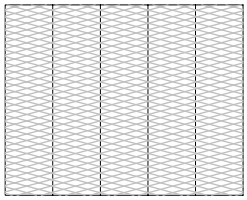
Design options

Dimensions Colours Patterns Cut-Outs Megapanel



Single panel canopy solution





Multiple panels canopy solution

[Previous page] MESH D-H 700 MT (©Knauf Ceiling Solutions)

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Armstrong CEILING SOLUTIONS

DEFINITION OF TECHNICAL PERFORMANCE ICONS

SOUND ABSORPTION

A single-number rating for random incidence sound absorption coefficients as calculated by reference to EN ISO 11654 (α_w) or to ASTM C 423-01 (NRC).

SOUND ABSORPTION CLASS

A classification for sound absorption (A – E) based upon the sound absorption α_w value.

SOUND REDUCTION

A single-number rating for airborne sound transmission (single pass) as calculated by reference to EN ISO 717-1.

SOUND ATTENUATION

A single-number rating for flanking sound transmission between adjacent rooms, as calculated by reference to EN ISO 717-1.

FIRE REACTION

Reaction to fire classification in accordance with EN 13501-1 expressed as Euroclass (A1 – F).

HUMIDITY RESISTANCE

Maximum relative humidity conditions for installation and lifetime of ceiling.

LIGHT REFLECTANCE

Light reflection is the proportion of incident light that is reflected back off the product, when tested in accordance with EN ISO 7724-2 and 3.

INDOOR AIR QUALITY

Knauf Ceiling Solutions are designed to limit the number of airborne particles in a clean room environment are tested against ISO 14644-1 and classified with an ISO class.

RECYCLED CONTENT

The recycled content of the product, as calculated in accordance with ISO 14021:2016.

CRADLE TO CRADLE CERTIFIED®

Products with this icon are C2C Certified®, providing a transparent mechanism to compare the sustainability performance of products, showing that they are designed for recycling and can help protect and sustain our environment for future generations by keeping resources in the economy for longer.

ENVIRONMENTAL PRODUCT DECLARATION (EPD)

are independently verified and registered documents that communicate transparent and comparable information about the life-cycle environmental impact of products. Knauf Ceiling Solutions EPDs have been third party certified by IBU (Institut Bauen und Umwelt e.V. (IBU) as conforming to the requirements of ISO 14025.

VOC

The VOC emission performance in accordance with the French labelling requirements.

FORMALDEHYDE (E1)

Formaldehyde emission level
(E1 = lowest test result possible).

ISO 9001 & ISO 14001

This icon demonstrates Knauf Ceiling Solutions ability to consistently provide products and services that meet customer and regulatory quality management system requirements (ISO 9001) and environmental management system requirements (ISO 14001).

EDGE DETAILS

Indicates the different edge details available for the product of reference.

DIMENSIONS

Indicates the sizes available for the product of reference.

SYSTEMS

Indicates the suspension sytems compatible with the product of reference.

COLOURS

Custom colours available for products with this icon.

WEIGHT

Weight per unit area of the product (kg/m²).

SCRATCH RESISTANCE

Products with this icon offer a superior level of surface scratch resistance.

PRODUCT HANDLING & DURABILITY

Solutions with enhanced durability for improved handling and resistance damage.

CLEAN ROOM

Products with this icon are suitable for clean room applications.

BIOGUARD

BioGuard antimicrobial finish available as a custom option for products with this icon.

TRIOGUARD™

TrioGuard dirt-resistant coating available for products with this icon.

EXTERIOR SOLUTIONS

Exterior ceiling tiles available for products with this icon.

ACOUSTIC INFILLS

Custom acoustic infills available for products with this icon.

CUT-OUTS

Custom factory cut-outs for service integration available for products with this icon.

SUITABLE FOR CHILLED CEILINGS

Products compatible with chilled ceilings unit integration indicated with this icon.

PERFORATIONS / PATTERNS

Custom perforations/patterns available for products with this icon.

SHAPES

Custom shapes available for products with this icon.

MEGAPANEL

Megapanels available for products with this icon.

SWING-DOWN FUNCTION

Swing-down functionality available for systems with this icon.

SECURE FUNCTION

Secure solutions using specifically designed components and assemblies available for systems with this icon.

SEISMIC

Seismic resistance using specifically designed components and assemblies available for systems with this icon.

IMPACT RESISTANCE

Impact solutions ceiling tiles available for products with this icon.

CLEANING AND DISINFECTION

The frequency and cleaning method of a ceiling varies from one application to another. All products can at least be cleaned with a dry cloth or vacuum cleaner.

For standard cleaning of dust, loose dirt or deposit, a soft brush, a clean, dry, soft white cloth, a normal vacuum cleaner with a soft brush or focus compressed air can be used.

For more intensive cleaning, the surfaces can be damp cleaned. This should be carried out with a wrung-out soft cloth or sponge. After cleaning, the surfaces of the tile should be dried with a soft cloth.

Wet cleaning should be carried out the lukewarm water (up to 40°C), using a sponge and mild cleaning agent (with a pH value between 7 and 9), and using medium pressure. After cleaning, the surface should be dried with a soft cloth.

Can be cleaned using focus compressed air. The apparatus used should be a cleaner that generates steam under pressure (8 bar and 175°C).

CE MARKING

In the EU, the Construction Products Regulations (305/2011/EU) defines essential requirements for products (and projects) such that they are safe and fit for their intended use. Harmonized Product Standards respond to these essential requirements and set out what tests must be conducted and how the performance must be communicated. For suspended ceilings the applicable product standard is EN 13964 Suspended Ceilings – Requirements & Test Methods.

The essential requirements identified for suspended ceiling membranes (tiles & baffles) include:

- Reaction to Fire (mandatory)
- Formaldehyde Emissions
- Sound Absorption
- Flexural Tensile Strength / Durability

It is mandatory to CE Mark products within the scope of EN 13964 and provide a Declaration of Performance in order to place the product on the market.

All Knauf Ceiling Solutions Declarations of Performance can be found on Knauf Ceiling Solutions website.

ACOUSTIC TECHNICAL GLOSSARY

WEIGHTED SOUND ABSORPTION COEFFICIENT, α_w

A single-number rating for random incidence sound absorption coefficients calculated by reference to EN ISO 11654. With this method measured values obtained in accordance with EN ISO 354, are converted into octave bands at 250, 500, 1000, 2000 and 4000 Hz and are plotted onto a graph. A standard reference curve is then shifted towards the measured values in steps of 0.05 until a "best fit" is obtained. The derived value of α_w will vary between 0.00 and 1.00 but is only expressed in multiples of 0.05, e.g. α_w = 0.65.

SHAPE INDICATOR

With reference to EN ISO 11654, the calculated value of α_w may be qualified by one or more letters (in brackets) to indicate if the product has excess sound absorption at low (L), medium (M) or high (H) frequencies.

SOUND ABSORPTION CLASS

With reference to EN ISO 11654, the calculated value of w may additionally be allocated into one of six descriptive classes in accordance with the following table:

Sound Absorption Class	α_w
A	0.90; 0.95; 1.00
B	0.80; 0.85
C	0.60; 0.65; 0.70; 0.75
D	0.30; 0.35; 0.40; 0.45; 0.50; 0.55
E	0.15; 0.20; 0.25
Not Classified	0.00; 0.05; 0.10

WEIGHTED SUSPENDED CEILING NORMALISED FLANKING LEVEL DIFFERENCE, D_{nfw}

A single-number rating of the laboratory measurement of room-to-room (horizontal) airborne flanking sound transmission of a suspended ceiling above adjacent room sharing a common ceiling plenum. It is determined in accordance with EN ISO 717-1 from measurements made in accordance with EN ISO 10848-2.

WEIGHTED SOUND REDUCTION INDEX, R_w

A single-number rating of the laboratory measurement of (vertical) airborne sound reduction of a suspended ceiling. It is determined by reference to EN ISO 717-1 from measurements of sound reduction index made in accordance with EN ISO 140-3.

NOISE REDUCTION COEFFICIENT, NRC

A single-number descriptor of random incidence sound absorption coefficients. Defined in ASTM C423-01 as the arithmetical average, to the nearest multiple of 0.05, of the measured sound absorption coefficients for the four one-third octave band centre frequencies of 250, 500, 1,000 and 2,000 Hz.

SOUND REDUCTION

A term used in relation to the vertical transmission of sound through a suspended ceiling.

SOUND ATTENUATION

A term used in relation to the horizontal transmission of sound through a suspended ceiling above adjacent rooms sharing a common ceiling plenum.

EQUIVALENT ABSORPTION AREA (EAA)

The equivalent absorption is a measure of the total sound absorption by discrete objects (canopies, screens, furniture etc) when installed in an architectural space. Because these types of absorbers have more than one surface and may be irregular in form, it is not meaningful to assign sound absorption coefficients to them. Hence the Equivalent Absorption Area per unit (measured in Sabines) is preferred to characterise the absorption provided by an individual 'space absorber'.

[Back Cover, top left to bottom right] METAL Q-Clip Exterior, Unperforated (Cajamar Office, Madrid, Spain, ©Javier Ortega) • METAL V-P 500 (E&Y, Warsaw, Poland, ©Szymon Polański) • METAL Canopy Concave & Convex (Hôtel de ville, Châteaugiron, France, ©StudioVU) • METAL R-Clip, Rd 1522, RAL 9010 (Mennica, Warsaw, Poland, ©Szymon Polański) • MESH K-H 400 MT, custom 70% open area, RAL 9005 (65 Gresham Street, London, UK, ©Tom Green)

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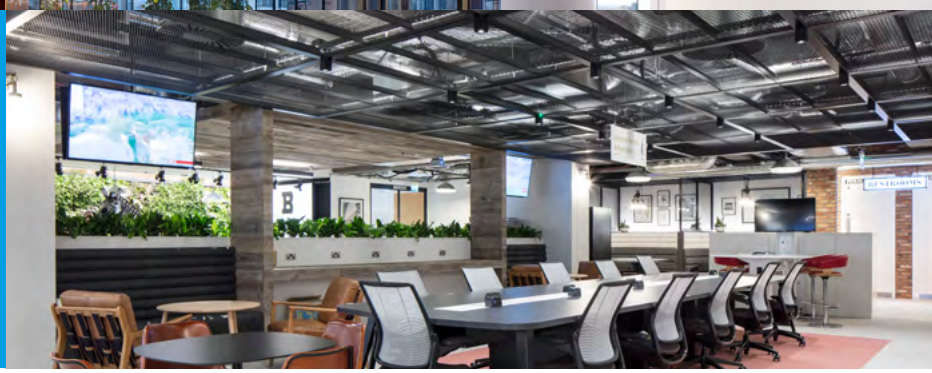

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