

Derako® Grill system

Technical
documentation

Grill ceiling/wall system

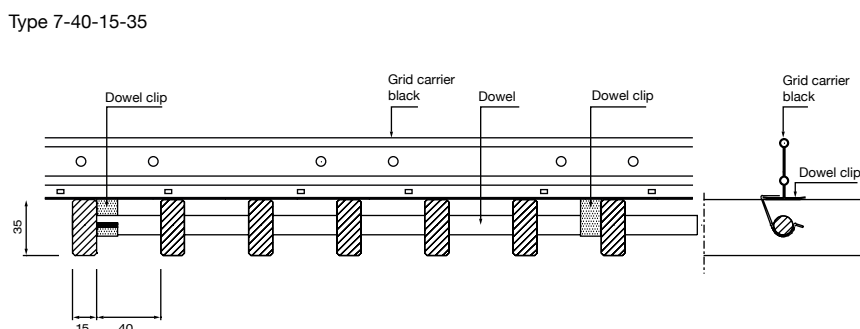
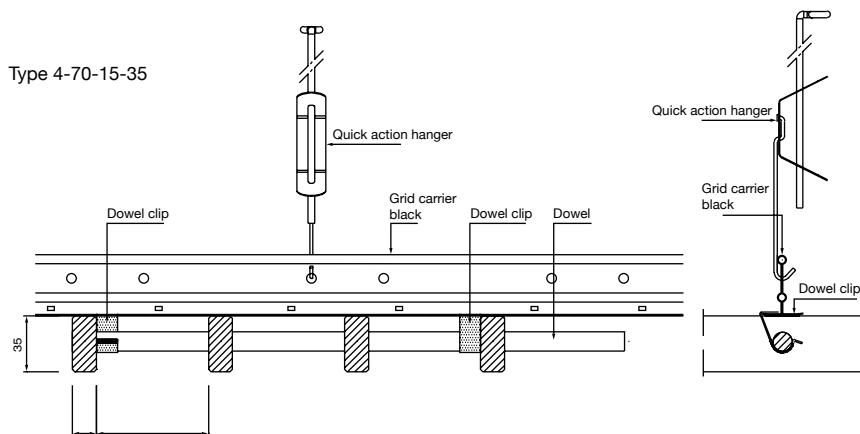
The Derako® grill system from Hunter Douglas Architectural is made of wooden panels. The panels are held in place using aluminium dowel or flexible dowel - aluminium for a flat design and flexible for curved application. The architect determines the dimensions of the grill panels and the distance between them to create panels. The open character of the grill system makes it ideal for acoustic spaces.

Grill system

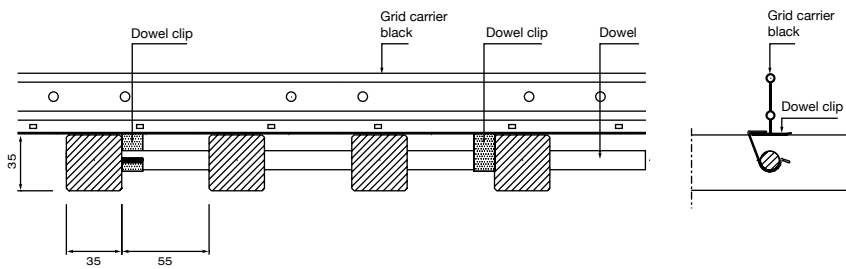
The maximum length of panels is 3300 mm and panel width may vary between 300 and 500 mm. The width depends on the chosen panel dimensions and the distance between the individual slats. The minimum measure for slats is 15 x 31 mm. The minimum distance between them is 17 mm, with a maximum slat height of 35 mm. If the slats are higher, the minimum distance between them is 20 mm. The distance between the dowels is always 300 mm. The panels slide into each other using scarf joints, creating a visual surface continuum. The partition size of the crosscut border join of the panels is 10 mm. The lengths of the grill panels are a derivative of the structural dimensions. The final length standard is determined in consultation with you.

Ceiling

The made-to-measure panels are fastened to a black carrier using special dowel clips. The panel is mounted to the rail from the facing side. The system is suspended from the structural ceiling. For the skirting and joints, Hunter Douglas Architectural has developed a wall profile and a intermediate profile. Just like the dowels, these are black, bringing continuity to the overall experience.

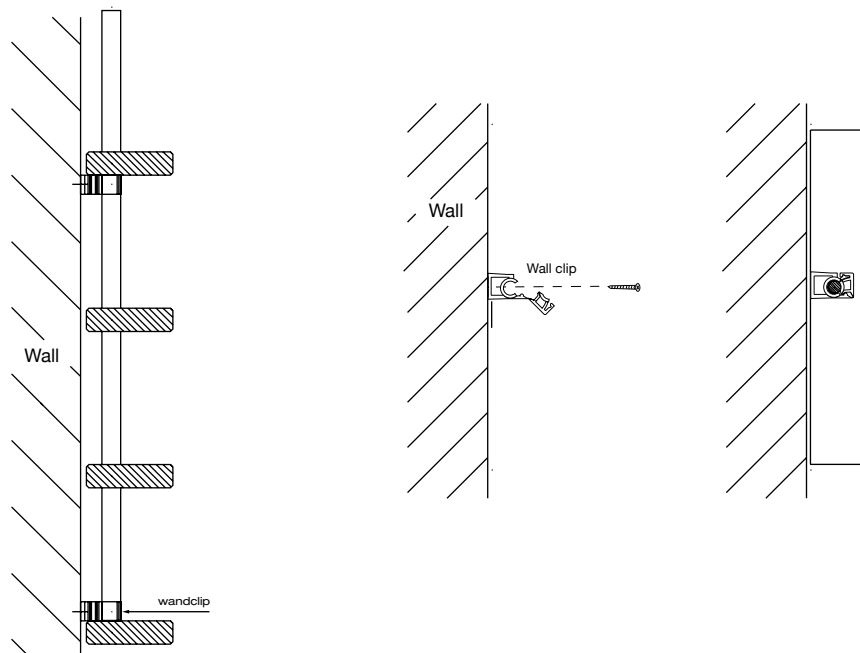


Type 4-55-35-35



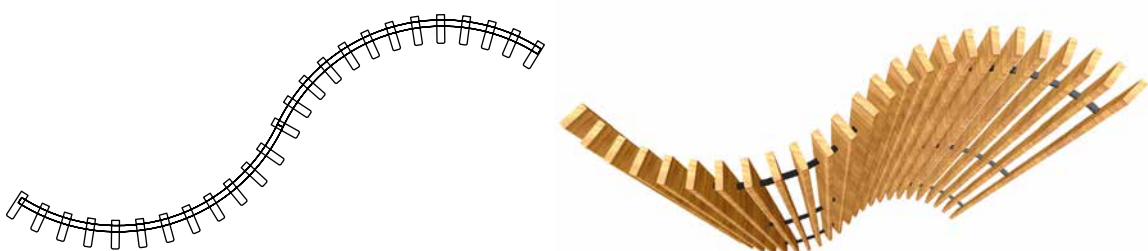
Wall

Just as with the ceiling, each panel is delivered to measure. Using wall clips, the panels are fastened directly to the structural wall. There is no filling panel for the lengthways connection of the wall panels, but an open seam of at least 10 mm instead.



Curved and other variations

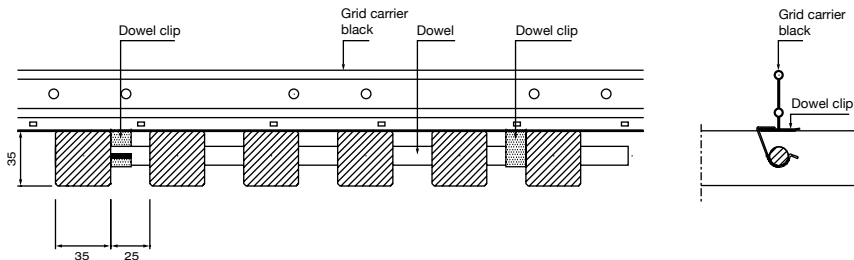
The Derako® grill ceiling and wall system offers designers and architects much freedom. The panels can be mounted both horizontally and vertically and thanks to the flexible dowel, onto curved walls, too. If the ceiling or wall has a concave, convex or undulating design, then the rails are delivered precisely to curvature specifications. Hunter Douglas staff will be pleased to help you with unusual applications and their practical implementation.



Outdoor application

The grill system is to be used as an external application under a canopy. The wooden panels are stained on all four sides and the system should be suspended rigidly to the structural ceiling by alternately mounting/clipping the dowel clips in place.

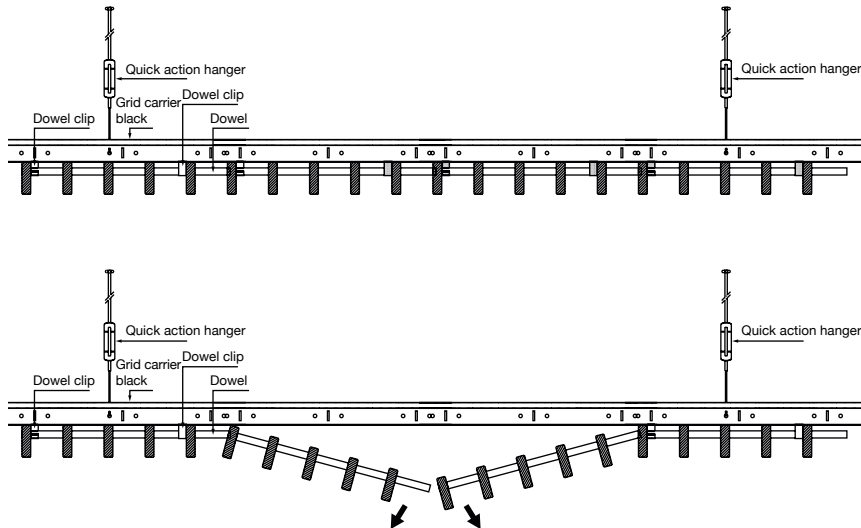
Type 6-25-35-35



Demounting

The system consists of individual panels, connected using half-edged scarf joints. This makes the system 100% demountable. The panels are demounted two at a time. The clips are demounted from the facing side by hand. Demounting the panels towards the ground at a V-angle reveals the space above. Panels should be remounted two at a time, too.

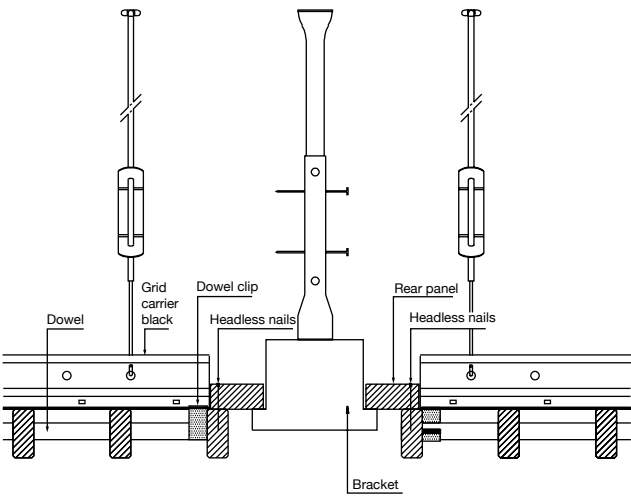
Type 5-55-15-55



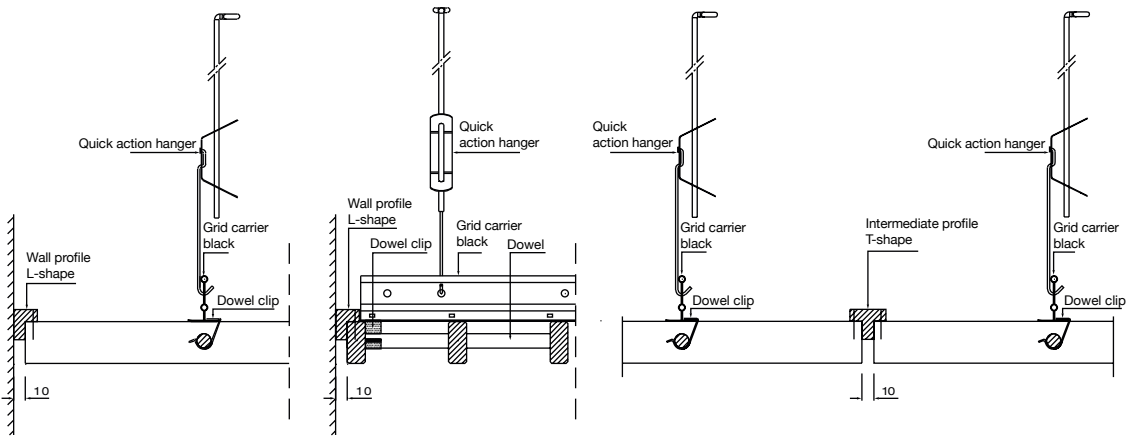
Construction

- The solid wooden panels can be given a fire resistant treatment;
- Holes are drilled through panels at 300 mm intervals;
- The dowels are inserted into the holes;
- Dowels and panels are fixed to the rear of the panel;
- The system is 100% demountable.

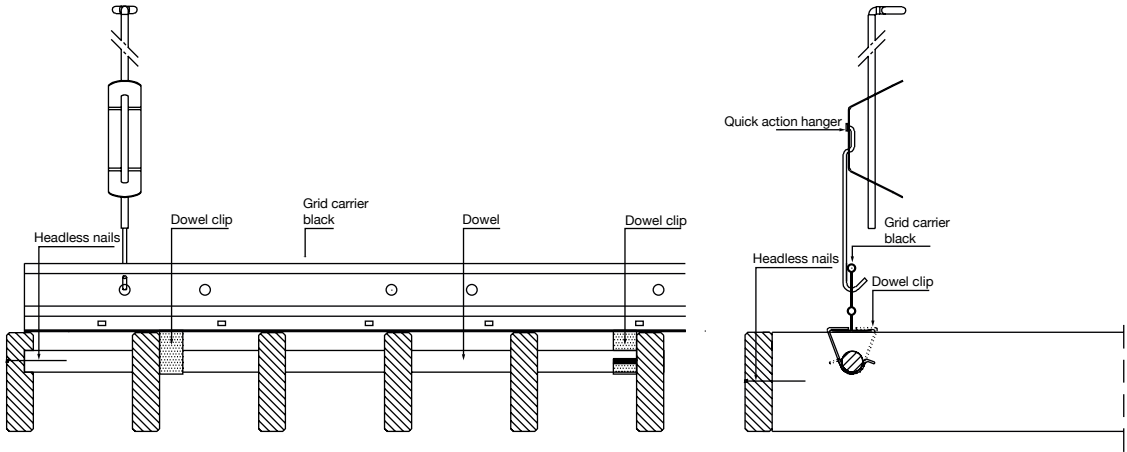
Details



Bracket



Border join



Free ending

Brief description

The Derako® Grill ceiling is a suspended ceiling system made of wooden panels, connected by dowels. Acoustic, ventilating, demountable, for both interior and exterior application, as well being ideal as wall cladding.

Systeemopbouw

Derako® wooden Grill panel ceiling consists of panels of planed panels, interconnected by aluminium or flexible dowels. The panel width varies between 300 and 500 mm and the maximum length is 3300 mm. The panels slide into each other with the help half-edged scarf joints and are fastened to a black T-profile/rail using dowel clips. The system is completely demountable. The rails can be bent into any radius. The grill system can also be used as wall cladding.

Ball impact resistant ceiling Rigid suspension from structural ceiling.

Materials

Wooden panels	Every type of wood that is suitable for a Derako® ceiling.
Moisture content	8-12% upon delivery.
Dowel clips	Tempered spring steel.
Wall clips	PVC
Dowel	Aluminium or PVC (flex)

Wood species

European Pine	Light Steamed Beech
Siberian Larch	Sipo Mahogany
Oregon Pine	Sapeli Mahogany
Western Red Cedar	Merbau
African Ayou	Meranti
European Oak	Asian Teak
American Ash	Jatoba
White Hard Maple	Cambara
American Yellow Poplar	Afzelia
Cherry	Wengé
American Walnut	

Manufacturing methods

The wooden panels are supplied with a planed surface and high quality of varnish.

Rails & Clips

Rail	Sendzimir galvanised, 24 mm.
Curved	If you require a radius, the rails are bent and fixed into the specified radius.
Dowel clips	2 per dowel for ceilings.
Wall clips	2 per dowel for walls.

Panel connectors

The Grills are connected to each other lengthways using an intermediate profile, creating a 10 mm seam.

Surface treatment

The panels can be given a varnish or oil finish. Covering or transparent, colour if so desired.

Fire resistant

The panels are given a fire treatment using the vacuum pressure method, or they are coated using fire-resistant varnish. Hunter Douglas meets European fire resistance standards (CE).

Form

Hunter Douglas works according to the design specs of the architect/client. Where technically possible, the size of the panels and partition size may be determined to suit your needs.

Dimensions

The size of the panels and number of wooden panels depends on the design. They can be made concave, convex or undulating. Panel width is between 300 and 500 mm. Panel dimensions: min. 15 mm thick - 31 mm high per panel. Alternative sizes upon request.

Dowel diameter	12 mm & 20 mm
Thickness	minimum 15 mm
Joint	minimum 17 mm for sizes up to 35 mm high. minimum 20-23 mm for sizes starting from 35 mm high.

Samples

Upon request.

References

www.derako.com or upon request.

Samenstelling grill plafond

Number of panels x space between panels x panel width x panel height.

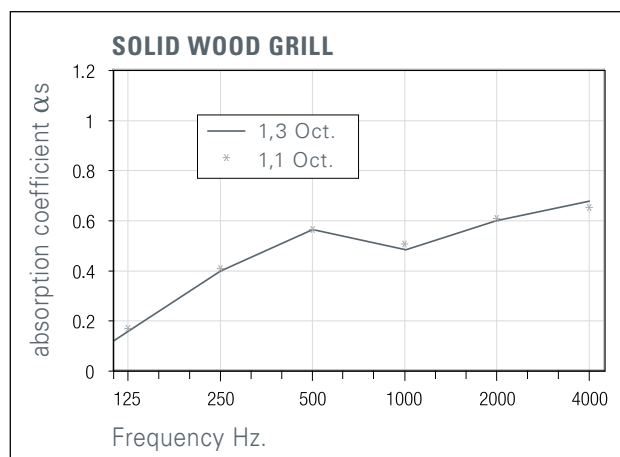
For examples, see table below:

Type	width	Type	width
4-70-15-35	340 mm	4-70-15-55	340 mm
5-55-15-35	350 mm	5-55-15-55	350 mm
7-40-15-35	385 mm	7-40-15-55	385 mm
10-25-15-35	400 mm	10-25-15-55	400 mm
3-70-35-35	315 mm		
5-40-35-35	375 mm		
6-25-35-35	360 mm		

ACOUSTICS - aW

The table shows the test results for Solid Wood grill panels

- Panelsize: 33 mm gap, 46 mm height, 17 mm width
- Wood specie: Pine
- Including: 25 mm thick polyester wool
- Test method:
ISO 354:2003, ISO 11654:1997, ASTM C423-17



Solid Wood Grill (with 25 mm polyester wool)

α_{wv} : 0.55 - NRC: 0.55

FREQUENCY (HZ)	125	250	500	1000	2000	4000
1/3 octave	0.14	0.27	0.60	0.52	0.58	0.64
	0.17	0.40	0.57	0.48	0.60	0.68
	0.24	0.55	0.55	0.54	0.65	0.64
1/1 octave	0.18	0.41	0.57	0.51	0.61	0.65

Sound absorption

Depends on the materials behind the ceiling/wall and the insulating material used.

Functional Application

Acoustic, ventilating, undulating, concave/convex design, or vertical application.
Use: interior and exterior.

Specifications

Stabu, www.derako.com or upon request.

Packaging

Packed and stacked in a box.

Storage

The panels and fittings should be kept in controlled conditions, with a relative humidity of between 55 and 65%. Cover the panels to prevent discolouration due to UV light.

Mounting

On site, the wall profile is placed and the suspension points are determined. Fasten suspension materials, hang the rails and suspend the grills from the rail with the help of dowel clips. The spaces should be wind and watertight.

Mounting manual

www.derako.com or upon request.

Tools

Trademan's tools.

Technical service

Technical advice, working plans, demonstrations, project support, mounting assistance, all upon request.

Maintenance

If cleaning is required, we recommend cleaning the ceiling with a damp, lint-free and non-abrasive cloth, using a simple, non-aggressive (pH=7) cleaning agent as required. It is hazardous to expose the ceiling to aggressive cleaning agents. Try the cleaning

agent on a small, inconspicuous area of the panels first.

Repair

The demountable system offers access to space above the elements. Repairs to the ceiling and any installations above it can be easily conducted.

Prices

Upon request, per project.

Terms and conditions

General terms and conditions deposited at Alkmaar District Court.

Delivery

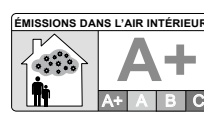
Free in the Netherlands.

Levertijd

6 to 8 working weeks, depending on the type of wood, volume and finishing.

Warranty

10 years on ceilings mounted according to Hunter Douglas instructions.



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