

Derako® Linear system

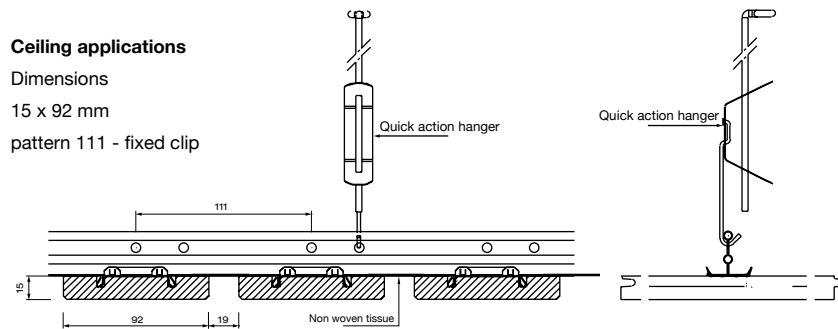
Technical
documentation

Linear ceiling/wall system

The Derako® linear system from Hunter Douglas Architectural consists of wooden slats that are fastened to a specially developed metal suspension system of rails and clips mounted in a fixed pattern. This fixing method is invisible. There are 3 types of linear system available. The system can have a removable design and be treated with a fire retardant if required.

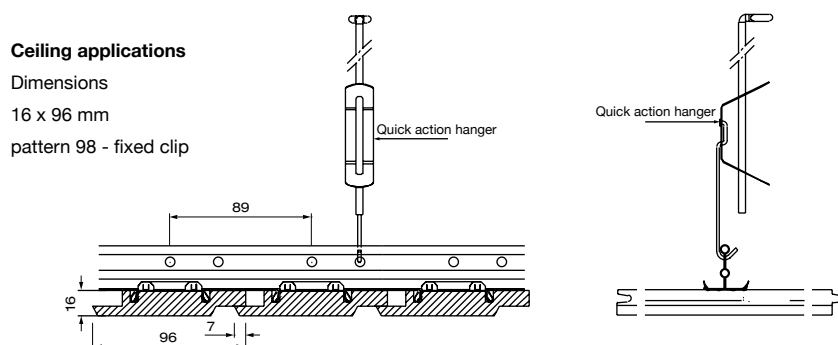
Linear open system

This unique system consists of rails and clips. The clips are fastened to the rails at equal distances (unit size) and the system is delivered prefab. Acoustic non woven tissue is glued to the wooden slats in the factory, making the system ideally suited for application in spaces where acoustic demands are made. The entire suspension system is hidden behind the wooden elements so that the side of each panel remains visible. The wooden panels are fastened to the system using mounting clips.



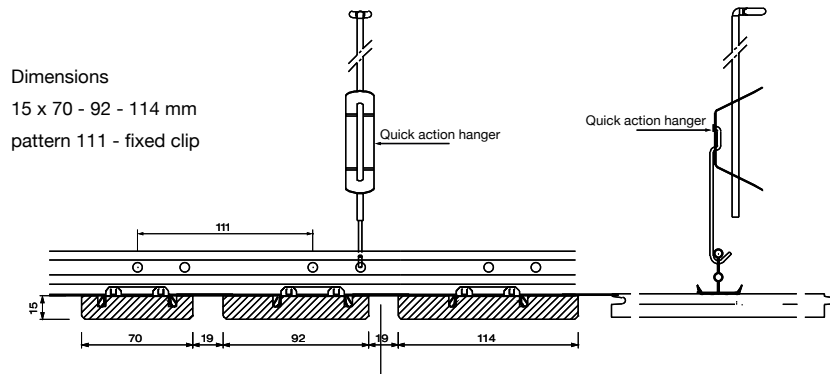
Linear closed system

In the linear closed system, each panel overlaps the next. It's also possible to use the elements as panelled sections.



Multi-panel system

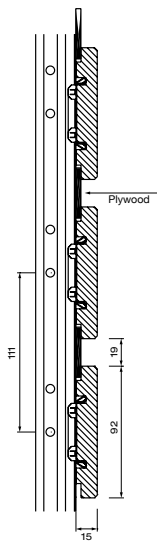
It is also possible to apply varying panel widths to one unit size. The groove at the back of the panels is then set at varying distances. A broad size (from 150 mm) is fastened to two clips.



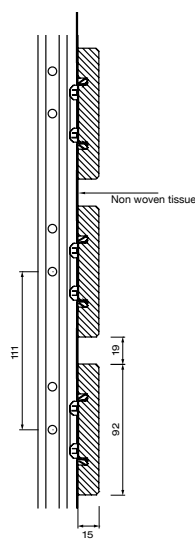
Wall

The open, closed and varying system can also be applied as wall cladding. A caddy clip or SLR profile is then used to fasten the rails and clips directly onto the structural wall. Depending on the application, the non woven tissue is replaced by hard tongue. This hard tongue is used for walls < 2000 mm and non woven tissue for walls > 2000 mm.

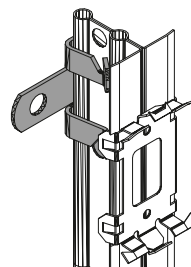
Dimensions 15 x 92 mm
pattern 111 - fixed clip



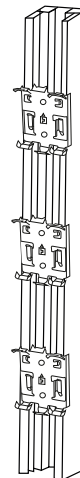
Dimensions 15 x 92 mm
pattern 111 - fixed clip



Detail carrier clip
(mounting on wall)

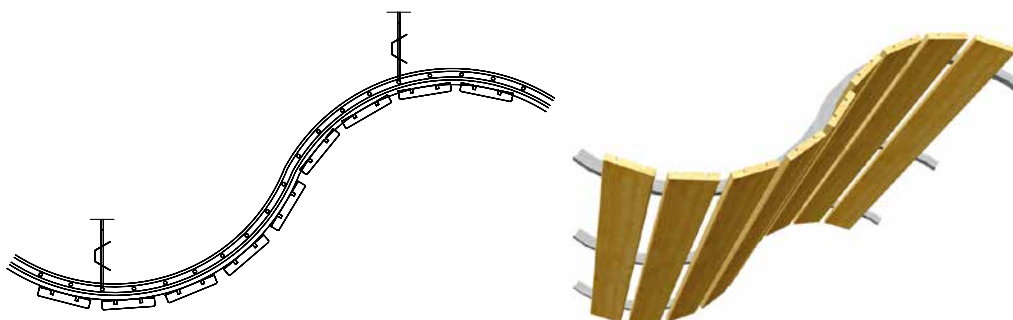


SLR profile



Curved

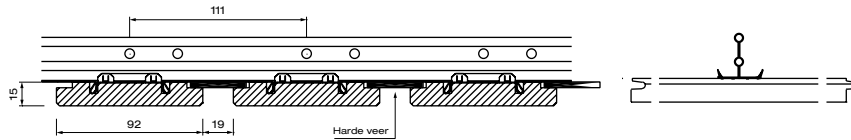
The Derako® ceiling system is also ideally suitable for curved, or arched shapes. All to the architect's specifications. The rail is bent into the desired radius in the factory and the clips are fastened prefab, too.



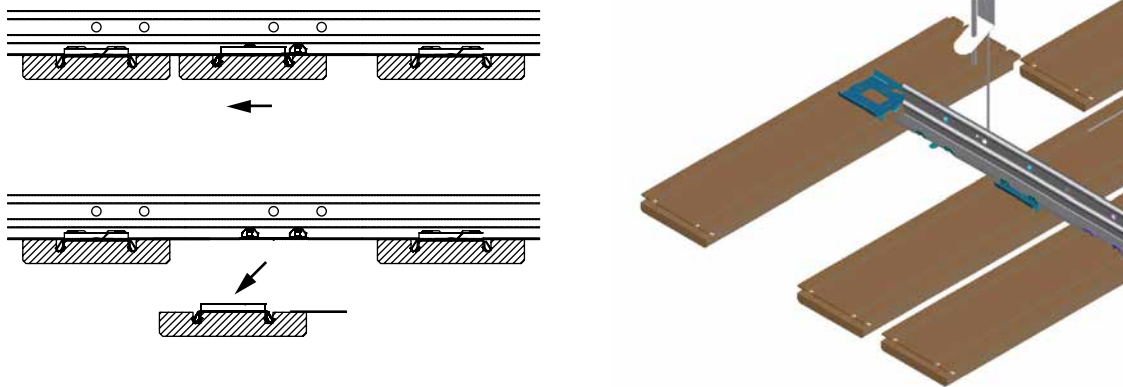
Outdoor application

All variations of the Derako® system can be applied outside, under a canopy. The wooden panels are varnished on 4 sides, the non woven tissue of the open system is replaced by hard tongue. The system is fastened to the structural ceiling using rigid suspension materials.

Dimensions 15 x 92 mm pattern 111 - fixed clip



The Derako® linear system consists of solid wooden slats that are fastened to a specially developed metal suspension system of rails and clips mounted in a fixed pattern. There are 3 types of Derako® linear system available: open, closed and multi-panel system. Acoustic, ventilating, removable, for interior and exterior applications and wall cladding.

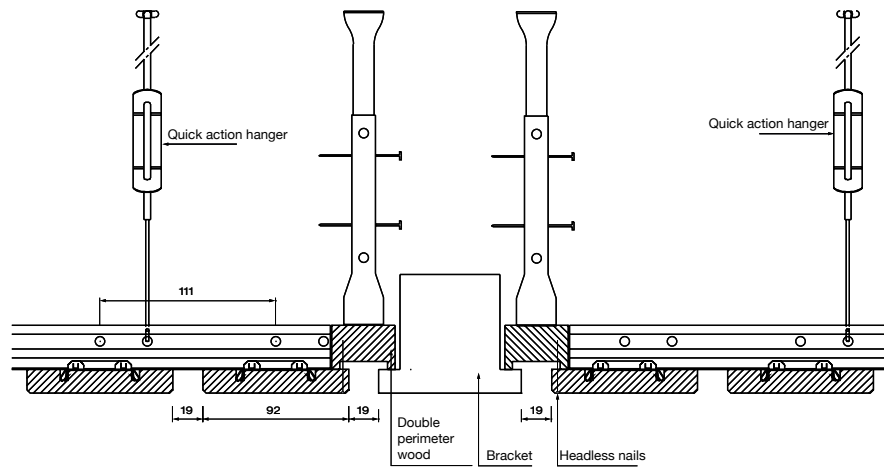


Construction

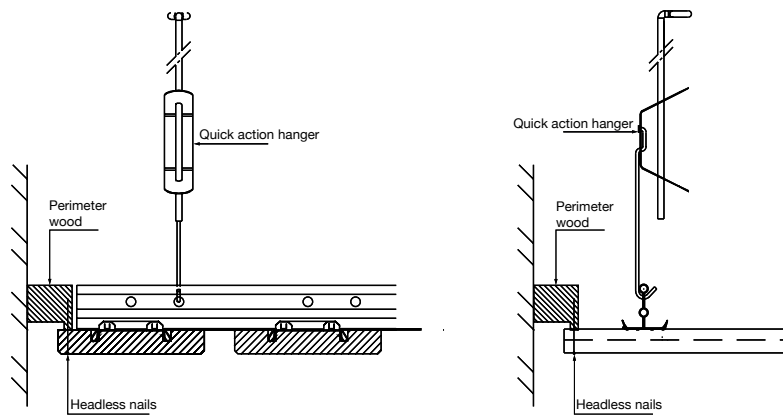
The Derako® system meets all architect and installer mounting requirements. Using the special Derako® rail/clip combination, the panels can easily be fastened in a perfect parallel fashion.

- Mounting using the Derako® clamping tool;
- Variable wooden panel length;
- Provided with tongue and groove connection
- Fixing pin for fastening the end tongue and groove, guaranteeing a durable and clean butt joint;
- Width: min. 63 mm, max.180 mm; thickness: min. 15 mm;
- Fastenings hidden from view.

Details



Bracket



Edge joining

Brief description

The Derako® linear system consists of wooden slats that are fastened to a specially developed metal suspension system of rails and clips mounted in a fixed pattern. There are 3 types of Derako® linear system available: open, closed and multi-panel system. Acoustic, ventilating, removable, for interior and exterior applications and wall cladding.

System construction

The slats are fitted with a non woven tissue strip in the factory and the Derako® clips pre-fitted to the rails. The panels are affixed to the Derako® clips using clamping tool.

Ball-proof ceiling	Rigid hangers from structural ceiling. Do not use any removable clips.
Exterior ceiling	stained on all four sides. Closed system, open system without non woven tissue or open system with hard tongue.
Pool	stained on all four sides, open system non woven tissue glued & riveted, open system without non woven tissue, open system with hard tongue.

Materials

Wooden panels	Every type of wood that is suitable for a Derako® ceiling.
Moisture content	8-12% upon delivery.
Suspension system	Sendzimir galvanised steel.
Non woven tissue	Acoustic strip.
Clips	Tempered spring steel, inclusive a GEOMET coating

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
Yellow Poplar	Afzelia
Cherry	Wengé
American Walnut	

Manufacturing Methods

The panels can be supplied planed, coarsely sanded or finely sanded.

Rails & Clips

Rails	Sendzimir galvanised, with groove for the clips.
Curved	If you require a radius, the rails are bent and fixed into the specified radius.
Pattern	A pattern is chosen on the basis of the design.
Pattern sizes	75, 82.5, 85, 89, 101.6, 105, 111, 125, 135.
Clips	Fixed or demountable. Maximum application of demountable clips is 50% of the surface.

Panel length joints

Panels with falling lengths have tongue and groove connection. During mounting, these joints are reinforced using a fixing pin.

Surface treatment

The slats can be given a transparent finish. They can also be stained in a colour, if necessary

Fire resistant

The panels are given a fire resistant coating using the vacuum pressure method, or they are coated using fire-resistant varnish. Derako® meets European fire resistance standards.

Form

Hunter Douglas works according to the design specs of the architect/client. The panels can be fashioned in various profiles.

Dimensions

Pattern size	Panel width	Joint
75	63	12
82.5	68/63,5	14.5/19
85	70	15
89	70	19
101.6	82.6	19
105	90/92	15/13
111	92	19
125	110	15
135	116	19
Thickness	minimum 15.	
Joint	minimum 2. Demountable: minimum joint 12 mm.	
Double width	145 - 180 mm. (in consultation with Hunter Douglas).	
Other profiles and sizes upon request.		

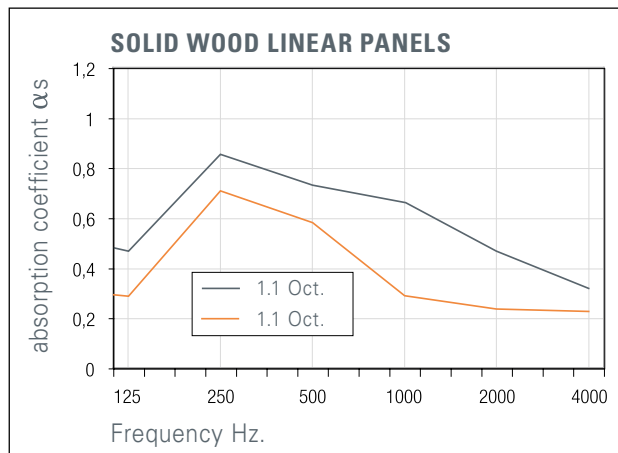
Optical characteristics

The panels are fastened invisibly. The fastening of the Derako® clip and other technical properties yield durable, parallel panel ceilings for both in and outdoor applications. The combination of Derako® rails and clips permits narrow seams.

ACOUSTICS - α_w

The table shows the test results for Solid Wood Linear panels

- 92 mm width, 15 mm thickness, 19 mm joint
- Wood specie: Pine
- Soundtex: 0.2 mm
- Test method:
ISO 354:1985/Amd.1:1997 (EN 20354:1993),
ISO 11654:1997, ASTM-C423-90a
- Test method:
ISO 354:2003, ISO 11654:1997, ASTM C423-17



Solid Wood Linear (without Rockwool) α_w : 0.30 - NRC: 0.50

FREQUENCY (HZ)	125	250	500	1000	2000	4000
1/1 octave	0.29	0.71	0.59	0.35	0.25	0.22

Solid Wood Linear (with Rockwool) α_w : 0.50 - NRC: 0.70

FREQUENCY (HZ)	125	250	500	1000	2000	4000
1/1 octave	0.57	0.83	0.76	0.65	0.47	0.33

Sound absorption

Ceiling covered with 20mm rock wool, NRC value 70.

Tensile strength clips	Frequency
European Pine	91.4
Oregon Pine	32.2
Western Red Cedar	30.0
Am. Yellow Poplar	45.4

Ball Impact Resistance

Certified for ball impact resistance according to DIN 18 032 part 3.

Functional Application

Acoustic, ventilating, open or closed system, linear fixed or varying widths, wave, concave/convex design, or applied vertically.

Use: interior and exterior.

Specifications

Stabu, www.derako.com or upon request.

Packaging

In bundle, wrapped in shrinking foil and packed in wooden crates.

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 perimeter wood is placed and the suspension points are determined. Fasten suspension materials, hang the rails, and fasten the panels to the clips using the clamping tool. The spaces should be wind and watertight.

Tools

Trademan's tools and the Derako® clamping tool.

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 the space above the elements. Repairs to the ceiling and any installations above it can be easily conducted.

References

www.derako.com or upon request.

Prices

Upon request, per project.

Terms and Conditions

General terms and conditions deposited at Alkmaar District Court.

Delivery

Free in the Netherlands.

Delivery lead times

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

Samples

Upon request.

Technisch service

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

Mounting Manual

www.derako.com or upon request.

Warrantee

10 years on ceilings mounted according to Hunter Douglas instructions.



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