Data Sheet

# Crossdata 55A – Ceiling System for Data Centres

Aluminum Grid Ceiling with Joint Connectors

## Product image

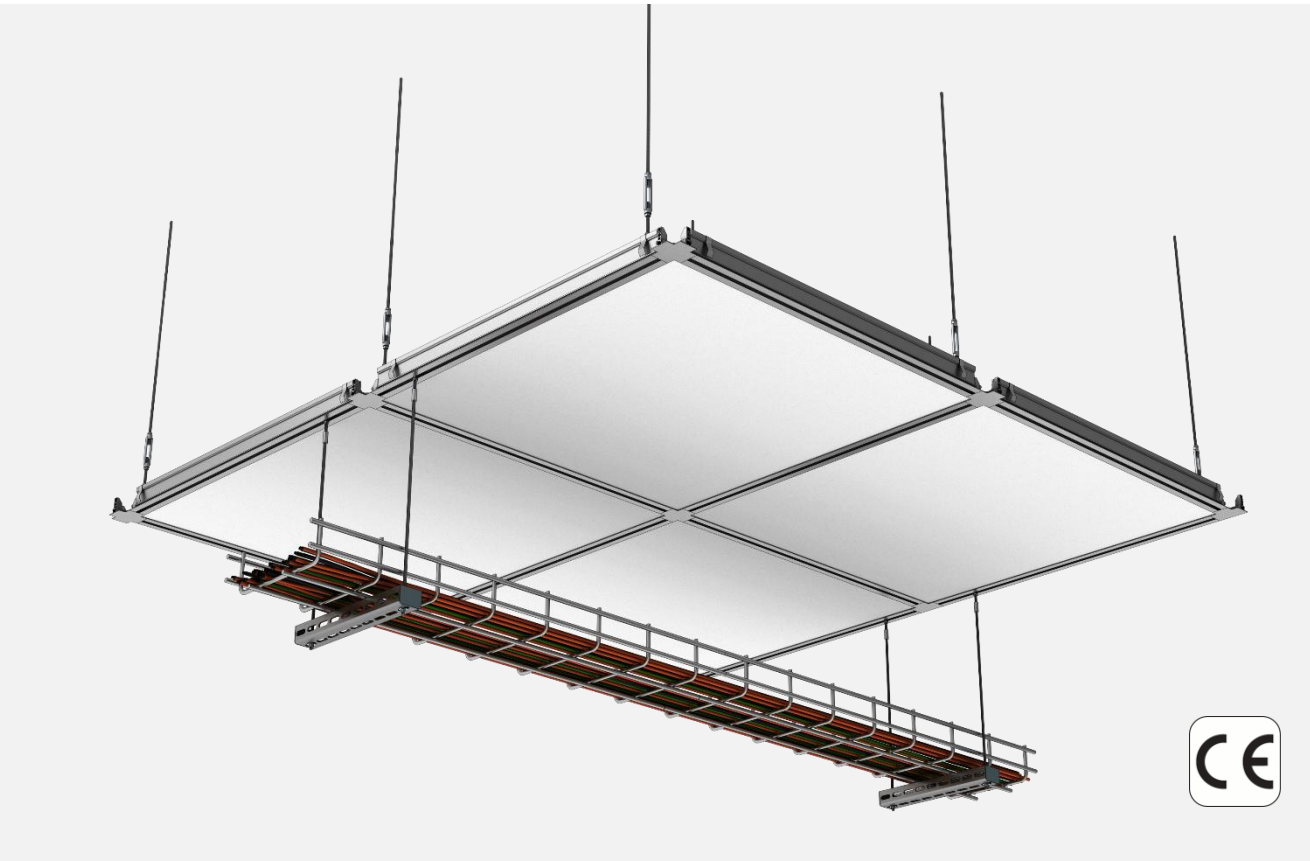


**Image 1** Crossdata 55A ceiling grid from below

## Fields of application

- Data Centers
- Clean Rooms from ISO-Class 5 acc. to ISO 14644

Walkable version available

## Lindner quality-standards

Lindner metal ceilings are produced in accordance with the highest international standards. Lindner ceiling systems comply with EN 13964 and EN 1090 Part 2 and Part 3, quality standard according to the technical regulations of TAIM (Verband Industrieller Metalldeckenhersteller TAIM e.V.).

We reserve the right to adapt and amend all details and information at any time. We do not accept liability for information that is inadvertently incorrect. This document is protected by copyright law. Processing, unauthorised use or reproduction and public distribution are not permitted. Reproduction and distribution to third parties are only permitted with our express consent.



LINDNER SE | REINRAUMTECHNIK
Bahnhofstrasse 29 | 94424 Arnstorf | Germany | Tel. +49 (0)8723 20-3671 | Reinraumtechnik@Lindner-Group.com | www.Lindner-Group.com

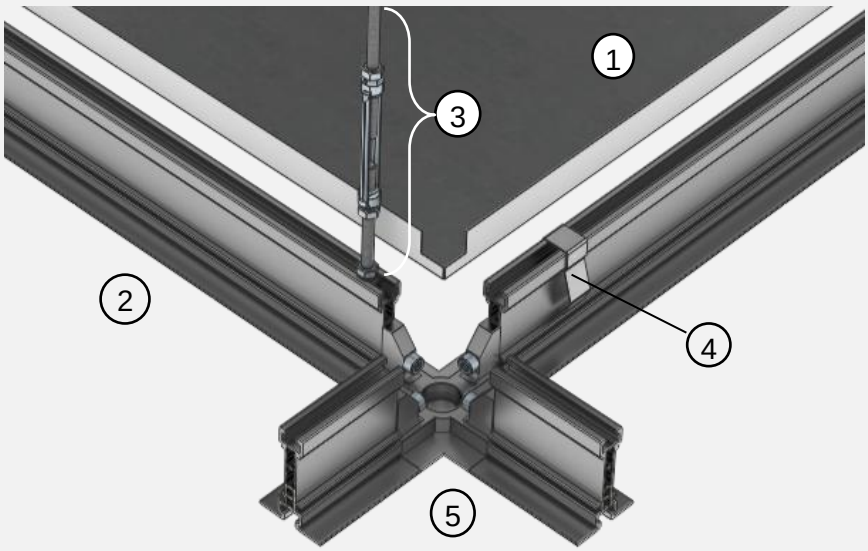
## Technical data

| | **Non walkable (walkable version available*)** |
|---|---|
| Standard ceiling grid [1)] | 1200 x 1200 mm |
| Maximum suspension distance [2)] | 1200 x 1200 mm |
| Maximum suspension height | from 250 mm |
| System weight without metal ceiling panels | 3,15 kg/m² |
| System weight walkable version [3)] | ca. 25 kg/m² |
| System height | 80 mm |
| Visible grid width | 55 mm |
| Maximum point load at the center for a span of 1200 mm [4)] | 200 kg (Deflection L/500 = 2,4 mm) |
| Maximum point load directly below the suspension point [4)] | 325 kg |
| Maximum area load [5)] | 200 kg/m² |
| Maximum line load | 260 kg/m |
| Breaking load of aluminum profile [6)] | 974, 26 kg (9557,50 N) |
| Load class (with a safety factor of 2.5) acc. To DIN EN 13964 | 389,40 kg (3,82 kN) |
| Fire classification according to EN 13501-1 [7)] | A1 (anodized ceiling grid) |
| Access to ceiling cavity | from below |
| Sound absorption coefficient | Evaluation according to ISO 11654 or ASTM C 423 depending on the ceiling panels used |
| Penetrations | Possible through joint connectors up to Ø 27 mm. Possible through metal ceiling panels. |

* The load case combination of walkability and room-side suspended loads must be structurally designed on a project-by-project basis.

1) Custom dimensions available upon request
2) Depending on additional loads
3) Includes ceiling grid, suspension system, ceiling panels, and walk-on plates
4) With Halfen screw type HS 20/12, M8, 4.6 – higher loads possible upon consultation, depending on deflection
5) With two hangers per junction point
6) Load-bearing capacity calculated according to DIN EN 13964
7) A1-s2, d0 for powder-coated support grid and powder-coated metal ceiling panels

## Substructure




**Components:**

1 = Metal ceiling panel
2 = Aluminum grid profile
3 = Suspension unit Crossdata 55A
4 = Clamping spring
5 = Joint connector

**Image 2** Crossdata 55A substructure

We reserve the right to adapt and amend all details and information at any time. We do not accept liability for information that is inadvertently incorrect. This document is protected by copyright law. Processing, unauthorised use or reproduction and public distribution are not permitted. Reproduction and distribution to third parties are only permitted with our express consent.

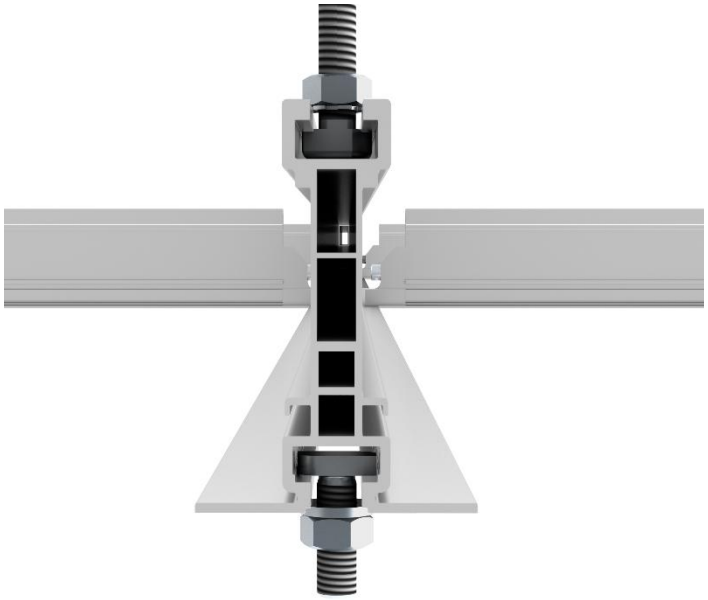


LINDNER SE | REINRAUMTECHNIK
Bahnhofstrasse 29 | 94424 Arnstorf | Germany | Tel. +49 (0)8723 20-3671 | Reinraumtechnik@Lindner-Group.com | www.Lindner-Group.com

## Illustration of groove on the room side with a suspension screw for suspended loads



The room-side suspension screw can be installed at any point along the ceiling profile at a later time and can be freely adjusted to any position.



Cross-section of ceiling profile with suspension screw on the room side.

We reserve the right to adapt and amend all details and information at any time. We do not accept liability for information that is inadvertently incorrect. This document is protected by copyright law. Processing, unauthorised use or reproduction and public distribution are not permitted. Reproduction and distribution to third parties are only permitted with our express consent.



LINDNER SE | REINRAUMTECHNIK
Bahnhofstrasse 29 | 94424 Arnstorf | Germany | Tel. +49 (0)8723 20-3671 | Reinraumtechnik@Lindner-Group.com | www.Lindner-Group.com

## General description

Metal ceiling panels with a coated surface, mounted on a suspended aluminum grid with a groove facing the room and connection points, manufactured in accordance with European standards and the TAIM standard. The Crossdata 55A ceiling system is characterized by maximum flexibility. Designed to comply with DIN EN ISO 14644. The groove facing the room allows additional loads to be suspended at any point.

### (1) Metal ceiling panel

| | |
|---|---|
| **Size and material** | Lindner ceiling panel, dimensions according to grid, made of galvanized sheet steel. |
| **Edging of ceiling panel** | L-shaped |
| **Surface** | Powder coated according to RAL or other common color systems |
| **Gloss level** | appr. 20E (RAL 9010) |
| **Serviceability** | Ceiling panels are removable. |
| **Perforation** | Depending on the sound absorption requirements |
| **Penetrations** | Penetrations are possible through the ceiling panels. (Possible through joints up to Ø 27 mm) |

### (2) Ceiling grid

Made of extruded aluminum. Surface anodized or powder-coated. Connecting parts made of galvanized steel. Grid profiles with closable groove on the cleanroom side to take certain hammer-head screws or T-slot nuts. The groove on the room side can be closed off using aluminum profiles.

### (3) Suspension unit Crossdata 55A

**Consisting of:**

| |
|---|
| Suspension bolt made of galvanized steel. |
| Turnbuckle L/R forged from galvanized steel according to DIN 1480 – for continuous height adjustment of the overall system. |
| Threaded rod made of galvanized steel for suspension from a concrete ceiling or a steel framework. Length according to suspension height. |

### (4) Clamping spring

Clamping spring to keep the ceiling panels in position when resting on the grid.

### (5) Joint connectors

Die-cast connectors in X, T, and L shapes for joining the grid profiles. 90° corners are created using L-shaped connectors.

The X-shaped connectors feature a closed opening, for example, for cable entries up to 27 mm, which can be easily opened using a special tool if necessary.

### Wall connection angle (no image)

Wall angle to connect the ceiling system to partitions, concrete walls, etc. Different designs available. Made of coated steel, optionally made of powder coated aluminum.

We reserve the right to adapt and amend all details and information at any time. We do not accept liability for information that is inadvertently incorrect. This document is protected by copyright law. Processing, unauthorised use or reproduction and public distribution are not permitted. Reproduction and distribution to third parties are only permitted with our express consent.



LINDNER SE | REINRAUMTECHNIK
Bahnhofstrasse 29 | 94424 Arnstorf | Germany | Tel. +49 (0)8723 20-3671 | Reinraumtechnik@Lindner-Group.com | www.Lindner-Group.com

## Additional equipment / installations

| | |
|---|---|
| **Light fixtures** | Installation of recessed lights and luminaires from Lindner or from other manufacturers[1)] is possible. |
| **Air conditioning components** | The ceiling system is compatible with Filter Fan Units / air supply exhausts / air grilles and other air conditioning components. |
| **Other** | Sprinklers, smoke detectors or media ducts can be set through the joint connectors or the ceiling panels. |

[1)] Situation-related clarification necessary

Installation components, such as, luminaires or air outlets can be integrated flush with the system depending on the project situation.

## Manufacturing tolerances

Lindner metal ceilings are produced in accordance with the requirements of EN 13964 as well as the TAIM technical regulations (Verband Industrieller Metalldeckenhersteller TAIM e.V. - www.taim.info).

This data sheet refers to the standard version of the above-mentioned ceiling system. Project-specific remarks and adaptations can be found in addition to the tender documents.

## Installation and use

The assembly and use shall be in accordance with the manufacturer's guidelines and the technical regulations of the TAIM.

## Moisture resistance

All materials and surfaces of the ceiling system are either galvanized (suspension system), galvanized and powder-coated (ceiling panels), anodized (aluminum grid), or powder-coated (connectors). The system and its surfaces are suitable for wet cleaning. The cleaning agents used must be approved in advance by the system manufacturer.

## Pollutant emissions

The surfaces and materials do not contain any materials that outgas or emit particles.

Susceptibility to the growth of microorganisms harmful to health: Level A – not susceptible.

## Formaldehyde emissions

Powder-coated and anodized surfaces are considered safe with regard to formaldehyde. After curing or oxidation, they contain no significant sources of formaldehyde. Galvanizing is a purely inorganic process that does not involve the use of any formaldehyde-containing substances.

We reserve the right to adapt and amend all details and information at any time. We do not accept liability for information that is inadvertently incorrect. This document is protected by copyright law. Processing, unauthorised use or reproduction and public distribution are not permitted. Reproduction and distribution to third parties are only permitted with our express consent.



LINDNER SE | REINRAUMTECHNIK
Bahnhofstrasse 29 | 94424 Arnstorf | Germany | Tel. +49 (0)8723 20-3671 | Reinraumtechnik@Lindner-Group.com | www.Lindner-Group.com