



## RAISED FLOOR SYSTEMS

 **Lindner** | Building New Solutions



YOUR GLOBAL PARTNER

 **Lindner**

 **GOLDBACH**

- The company of Lindner has been established since 1965.
- Lindner Group goes public since 1991.
- At 1998, GOLDBACH Norit became a subsidiary company of LINDNER.
- Nowadays, name of Goldbach Norit has been integrated in LINDNER.



Norit-LINDNER Manufacture at Arnstorf, Germany



## CERTIFICATION

Laboratories with state-of-the-art computer controlled equipment ensure consistently high quality at all three production locations. A wide variety of product inspections in compliance with international standards can thus be carried out immediately in-house.

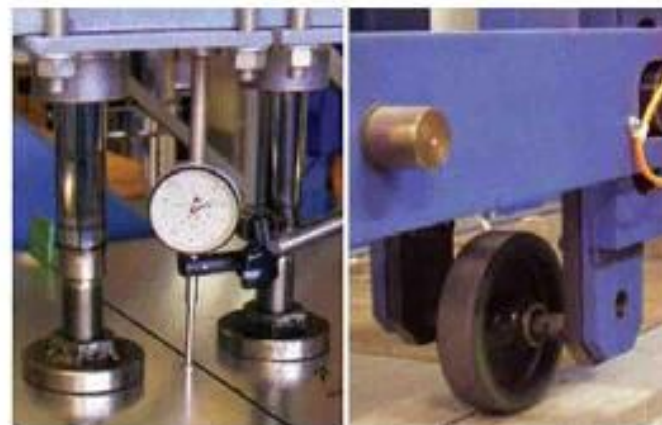
It goes without saying that Lindner AG meets and is also certified in accordance with the requirements of ISO 9001.



Inspection for load-bearing capacity.



Static forces testing machine.



Long-term load & Rolling load application.

# SPECIFICATIONS WOODEN COMPOSITE



## Type L 600 SB General Data

### PANEL

— Panel size	600 x 600 mm $\pm$ 0,2 mm
— Nominal thickness	40 $\pm$ 0,3 mm
— Squareness diagonally	$\pm$ 0,3 mm
— Composition	Particle board woodcase with 0,5 mm galvanized steel sheet, edgebanded on 4 edges.
— Coverings	HPL, vinyls and various other kinds. Covering must be selected to meet mechanical and electrical demands. A wide range even for exceptional requirements is available.

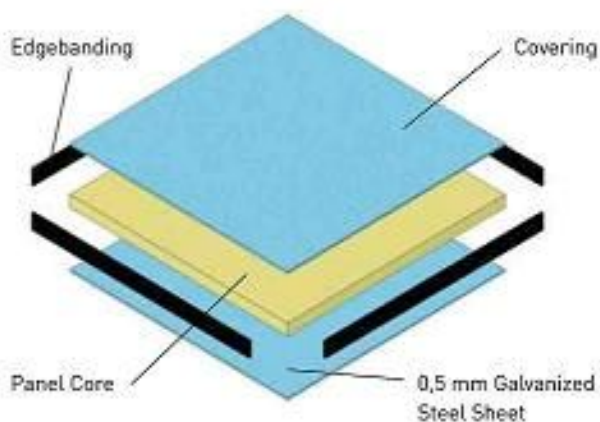
### WEIGHTS

— Per panel	Approximately 11,5 kg
— Per sqm	Approximately 32 kg

### TECHNICAL DATA

— Distributed load N/m <sup>2</sup>	30.000
— Concentrated load N	5.000
— Max. discharge resistance/ohm (depending on covering)	Approx. 10 <sup>6</sup>
— Thermal conductivity W/mk	0,14
— Floor normalised level difference dB	53
— Fire rating DIN 4102 minutes	30

## L 600 SB



- Height of floor void between concrete floor and panel : FFL minus 40 mm
- Possible Finished Floor Level (FFL) mm 80-1000\*  
\*higher FFL with reinforced subconstruction

#### VARIOUS ACCESORIES

- Electrical outlets, stairs, ramps, panel lifting devices, air and fire barriers, skirtings, bulkheads ventilation panels etc.
- Panels from processed wood materials have traditionally been used for raised floors and are an economical solution. By using panels with a high density core, good levels of fire resistance are archived, as detailed within DIN 4102 standards. The choice of raw materials keeps emissions of formaldehyde to a minimum (E1), the maintained between the panels. Lindner is the first choice in wood as well.

E1 (lowest formaldehyde-class)  
Duration of fire resistance F 30  
Very tight joints



# SPECIFICATIONS CALCIUM SULPHATE



## Type L 600 ANB General Data

### PANEL

— Panel size :	600 x 600 mm $\pm$ 0,2 mm
— Nominal thickness	30 $\pm$ 0,3 mm
— Squareness diagonally	$\pm$ 0,3 mm
— Composition	Fibre reinforced calcium sulphate, with 0,5 mm galvanized steel sheet, edgebanded on 4 edges
— Coverings	HPL, vinyls and various other kinds. Covering must be selected to meet mechanical and electrical demands. A wide range even for exceptional requirements is available.

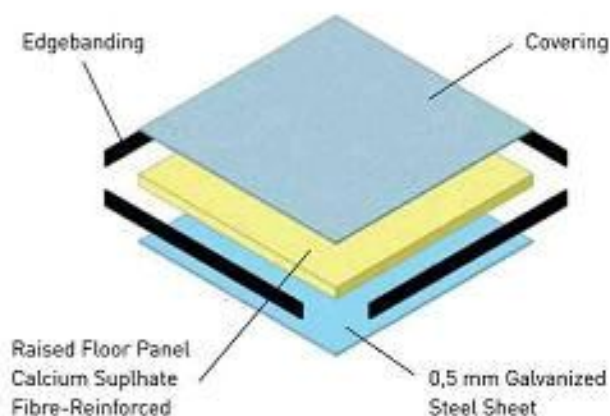
### WEIGHTS

— Per panel	Approximately 18 kg
— Per sqm	Approximately 50 kg

### TECHNICAL DATA

— Distributed load N/m <sup>2</sup>	30.000
— Concentrated load N	5.500
— Max. discharge resistance/ohm [depending on covering]	Approx. 10 <sup>6</sup>
— Thermal conductivity W/mk	0,58
— Floor normalised level difference dB	54
— Fire rating DIN 4102 minutes	60

## L 600 ANB



#### MATERIAL CLASSIFICATION

- DIN 4102 A (incombustible)
- BS476 part 7 class 1
- ASTM E-84-81 a
  - Flame spread index : 0
  - Smoke developed value : 10
- Height of floor void between concrete floor and panel FFL minus 32 mm
- Possible Finished Floor Level (FFL) mm 77-1000\*
  - \* higher FFL with reinforced subconstruction

#### VARIOUS ACCESSORIES

- Electrical outlets, stairs, ramps, panel lifting devices, air and fire barriers, skirtings, bulkheads ventilation panels etc.

Non-combustible materials constantly provide the greatest reliability with regard to fire protection. In addition to this, Lindner in-house production means that we can even control the raw materials used. The panels are recommended by the Institute for Construction Biology in Rosenheim, Germany. Additionally, emission test carried out show that the product is ideal for use in almost any type of environment.

Non-combustible material  
High level of fire resistance F 60  
Very great load-bearing capacity  
Extremely accurate fit



# SUB-STRUCTURES



## Pedestals

An important part of every floor system is its sub-structure. The pedestals create the service void and they can be produced in a variety of heights to suit voids from 20 mm to 2000 mm. The Lindner range is made in-house from the first design to final production.

The high load-bearing capacity and great durability of the steel pedestals are likewise the result of many years' experience and the unique range of possible combinations of any required reinforcement profiles with a standard pedestal. This creates unbeatable flexibility.

Wide adjustment range, Corrosion-protected  
Unbeatable flexibility, High load-bearing capacity

## Reinforcement Profiles

Even the standard versions of the Lindner floor system have a great load-bearing capacity. If this should not be sufficient, reinforcement profiles adapted to the system can be used.

The versions available here are diverse, starting with the light stringer that help to increase lateral stability and ending with control room profiles that as bridging profiles enable a grid of more than 600 mm to be achieved with heavy loads.

Another application is the construction of platforms for switch cabinets that are integrated into an access floor area.

With Lindner flooring systems all the components are perfectly coordinated with one another, one example being the patented spring clip for fastening the control room profiles.





## Construction

The Lindner FLOOR and more is an innovative system likewise made from calcium sulphate. The special feature of this system is that the panels interlock by tongue and groove joints, which are adhered together.

This creates a totally smooth surface ready for all kinds of covering. If required, access to the void can be made by fitting inspection hatches at strategic points.

Factory banding your chosen finish to these panels can considerably reduce installation times. Also coloured panels are possible which enable totally different aspects. So FLOOR and more is more than just an ordinary floor.



## Acoustic properties

The material structure, construction characteristic and high production quality of the access flooring systems make for extremely good acoustic values. They offer an exceptionally good surface for walking on.

## Fire Protection

Non-combustible material. High level of protection against fire. Great load-bearing capacity. Low susceptibility to moisture. Suitable for all floor coverings.

## Electro Properties

Irrespective of panel material, electrostatic charges are conducted off by means of the construction. Their defined Ohmic resistance according to VDE 0100 (when suitable coverings are used).

The resistance value of  $\leq 10$  required in the sub construction area in order to block off high frequency interface can be achieved by means of metallic underside of the downwards-facing panels in combination with suitable pedestal head covering.

# APPLICATION



## Application Areas

Office and administrative building,  
computer rooms, server rooms, clean  
rooms, control rooms, banking and  
convention centre.

# REFERENCE



Dubai Convention Center, Dubai  
(United Arab Emirates) - 28,000m<sup>2</sup>

IFC - International Finance Centre Hongkong  
Calcium sulphate panels - 204,000m<sup>2</sup>



Post Office Tower, Bonn (Germany)  
Calcium sulphate panels - 48,000m<sup>2</sup>  
FLOOR and more - 2,600m<sup>2</sup>





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