LICHTGITTER COMBI-DECK combines perfectly the advantages of gratings and chequer plates.
COMBI-DECKS AND CHEQUER PLATES FOR YOUR APPLICATION:

- Platforms
- Working platforms
- Mounting platforms
- Floor coverings
- Entrances and Crossings
- Ramps
- Design Elements

LICHTGITTER-COMBI-DECK

COMBI-DECK – GRATINGS WITH ON TOP WELDED CHEQUER PLATES COMBINE IDEALLY THE ADVANTAGES OF BOTH PRODUCTS. IN ADDITION TO CUTTING CHEQUER PLATES INCLUDING COUNTERSUNK HOLES, FURTHER PROCESSING AND COMPLETE TECHNICAL DOCUMENTATION, GREAT SPANS CAN NOW ALSO BE BRIDGED WITH RELATIVELY LOW NET WEIGHT AND WITH ONLY FOUR SUFFICIENT FIXING POINTS.

YOU CAN BENEFIT FROM OUR EXPERIENCE OF VARIOUS PROJECTS WITH SEVERAL THOUSAND SQUARE METERS. THE POSITIVE FEEDBACK OF OUR CLIENTS SPEAKS FOR ITSELF AND FOR THE UNBEATABLE ADVANTAGES OF THE LICHTGITTER-COMBI-DECK.

CHARACTERISTICS
Chequer plates combine a closed surface with a slip-resistant effect. Due to different versions rating group R11 is reached, which is approved by the German professional association.

Gratings, on the other hand, have a high load capacity with a low tare weight and can be mounted very easily. The advantages of the combination with welded chequer plates on top are unbeatable and can not be achieved by another closed industrial flooring.

TYPICAL APPLICATIONS
- platforms for the industrial sector, e.g. chemical/petrochemical industry, power plants and cement industry as well as for bulk material and offshore applications
- working platforms, ramps, entrances and crossings
- applications where a special design effect is desired
SO MANY ADVANTAGES —
ONLY ACHIEVABLE BY THE LICHTGITTER COMBI-DECK

+ Bridge-over of large spans at relatively low net weight, therefore lower assembly costs
+ Increase of the clear span by 30%
+ Saving of secondary carrier and lower dimensioning of the primary steel construction
+ Easy assembly of the fixings (only 4 fixings per grating are necessary)
+ Elaboration of verifiable statical calculations for walkable and accessible coverings (due to the high loading capacity of combi-decks special loads are possible)
+ Individual solutions for every statical requirement
+ Tolerances acc. to RAL GZ 638. Hereby a high level of accuracy is guaranteed
+ Lichtgitter Combi-Deck can be produced in every height, so that a possible difference in height with neighboring floorings can be avoided.
+ Due to the production possibilities regarding the different combi-decks, the system can be specially adapted to your statical requirements
+ No interface-problems: complete range of industrial floor coverings: „Lichtgitter – Everything from one source“
# FIXING MATERIAL

This page contains technical specifications and instructions for fixing materials used in the context of pedestrian gratings and combi-decks. It includes tables and diagrams to illustrate load tables, deflection values, and various fixing methods.

## LOAD TABLE COMBI-DECK

<table>
<thead>
<tr>
<th>Grating Type</th>
<th>Bearing Bar</th>
<th>approx. weight kg/bar</th>
<th>Clear span in mm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>500</td>
</tr>
<tr>
<td>Combi-Deck</td>
<td></td>
<td></td>
<td>0,94</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0,99</td>
</tr>
<tr>
<td>Combi-Deck</td>
<td></td>
<td></td>
<td>0,89</td>
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<tr>
<td></td>
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<td></td>
<td>0,89</td>
</tr>
<tr>
<td>Combi-Deck</td>
<td></td>
<td></td>
<td>0,98</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0,98</td>
</tr>
</tbody>
</table>

## KEY TO SYMBOLS
- M: uniformly distributed load in kN/m
- G: deflection in mm at load l
- d: deflection in mm at load l
- E: deflection in mm at load l
- B: deflection in mm at load l
- R: deflection in mm at load l
- δ: deflection in mm at load l
- 1/100 = 1000 N/100 mm

## DATA
- **Material**: S235JR
- **Load**: EN ISO 14122 = 1,5kN to 200 x 200 mm; deflection 4 mm
- **Chequer plate**: applied system, without reinforcement ribs 5kN/sqm; deflection l/200

## PEDESTRIAN TRAFFIC
- **Gratings manufactured in accordance with the main provisions of the relevant DIN and EN standards.**
- **Load**: EN ISO 14122 = 1,5kN to 200 x 200 mm; deflection 4 mm
- **Chequer plate**: applied system, without reinforcement ribs 5kN/sqm; deflection l/200

## WEIGHT COMPARISON

| Weight comparison of the products chequer plates and combi deck in relation to the respective span. |
| Basis of calculation: | Combi-Deck: Accessibility acc. to EN ISO 14122 = 1,5kN to 200 x 200 mm; deflection 4 mm |
| Chequer plate: applied system, without reinforcement ribs 5kN/sqm; deflection l/200 |

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### 1. FIXING MATERIAL B133T

This type of fixing can be assembled from above for pitches of 33 mm (and over) and upon request it can be supplied with a raised ‘beard’. According to the instructions of the German Employer’s Liability Insurance Association only permissible, if an additional locating device preventing a displacement on site is available.

**Consisting of:**
- top plate
- under part
- screw, nut and washer

This fixing can be delivered in stainless steel. The length of screw should be at least the height of the grating, plus 30 mm.

### 2. FIXING MATERIAL B133T [NOT PREMOUNTED]

**This fixing material is used in case the gratings and plates are mounted separately.**

**Consisting of:**
- top clamp XOK 133
- pan head screw M8 and nut M8

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### 3. FIXING MATERIAL TB13441

By using this type of fixing no bores from above in the chequer plate are necessary. Due to the turned grading (forge-welded-grating) the combi-deck can be installed from below. This fixing material has a lot of fields of applications for example hiding of cables.

**Consisting of:**
- top clamp XOK13441
- under part X138
- hammer-head bolt M8

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### 4. TOP CLAMP XOK 133

This fixing material is used in case the gratings and plates are mounted separately.

**Consisting of:**
- top clamp XOK 133
- pan head screw M8 and nut M8
**LICHTGITTER - CHEQUER PLATES**

CHEQUER PLATES OFFER AN EASY ACCESS FOR VEHICLES AND COMBINE A CLOSED SURFACE WITH AN ANTI SLIP EFFECT (RATING GROUP R11). THEY ARE IDEALLY SUITED FOR PLATFORMS OR AS A DESIGN ELEMENT. TRUE TO THE MOTTO "EVERYTHING FROM ONE SOURCE" WE ALSO OFFER YOU FOR YOUR INDIVIDUAL CHEQUER PLATE PROJECT AN ALL-INCLUSIVE PACKAGE IN APPROVED LICHTGITTER-QUALITY.

**CHARACTERISTICS**

- Closed, resistant and serrated surface, classification R11 acc. to German Instruction Sheet BGR 181
- Closed structure of the chequer plates allows a good roll-off behavior of wheels (even smaller diameters are unproblematic)
- Closed surfaces offer a high level of protection for people and objects of value against samall parts which can fall down
- Closed surfaces are opaque.
- Perfect standard corrosion protection due to the galvanizing acc. to DIN EN ISO 1461, Duplex system is also possible

**ADVANTAGES**

+ No risk of waste – We deliver custom-made products.
+ Installation plans, technical documentation as well as project planning assistance and static support – everything from one source in perfect quality!
+ Countersunk boreholes/Fixing material – We will place the countersunk boreholes directly in the plate or inform you about other fixing options.
+ Lettering/Positioning is done according to your specifications.
+ Short delivery times / reduced warehousing – We stock the most common versions for you.
+ Precision: High production quality and modern systems.
+ Optimal use of your production plant for your core products.
+ No interface-problems – Complete range of industrial floor coverings: „Lichtgitter - Everything from one source“.

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 LICHTGITTER – ABOUT US

A BRIGHT OUTLOOK SINCE 1929

Lichtgitter was established in 1929 in order to carry out the specialized manufacturing of gratings. By the continuous monitoring of our performance, and quality systems, together with innovation in manufacturing techniques, we have ensured Lichtgitter’s place in the forefront of manufacturers of industrial floor coverings with subsidiaries all over the world. Besides the production of pressure-locked gratings, forge-welded gratings and perforated metal planks, a various offer of GRP products are part of the production range. Our current product range also includes profiled chequer plates, spiral staircases, stairtreads and ladder rungs. Together with our steel slitting service centre and hot dip galvanizing plants we provide a complete fabrication facility to our customers.

REFERENCES

CEILING COVERINGS

SUN PROTECTION

STAIRS AND RAILINGS

FACADES

FLOOR COVERINGS/WALKWAYS
EVERYTHING FROM ONE SOURCE:
forge-welded gratings, pressure-locked gratings, perforated metal planks, GRP-gratings, combi-deck, chequer plates, spiral staircases, stairtreads, ladder rungs, hot-dip galvanisation, steel service