

Forge-welded gratings | Pressure-locked gratings | Perforated metal planks | GRP gratings | Chequer plates  
Spiral staircases | Staircases | Ladder rungs | Steel Service | Hot dip galvanising



## Lichtgitter Perforated Metal Planks



**lichtgitter**

## **B** Perforated Metal Planks

Perforated metal planks are the ideal supplement to the Lichtgitter range of the well known walkable metal floor coverings, forge-welded and pressure-locked gratings.

Perforated metal planks are C-profiled, edged structural elements and are produced on CNC-controlled punching machines and roll formers.

Perforated metal planks are characterised in particular by their high slip resistance (example: perforated

metal plank type BZ 50/2, surface pre-galvanised = assessment group R13) and stable, safe treads and standing surfaces, and therefore increase safety in the workplace. They are also ideal for use where large supporting widths have to be bridged or high loads are specified. This eliminates the need for expensive substructures, resulting in considerable cost savings. Other impressive features are the rapid availability and ease of assembly of the perforated metal planks.

There is a wide range of possible applications of perforated metal planks. They can be used as working platforms, ramps, facades, stands and much more. They may also be used as walkways and supply paths, as well as large area protective mats for working areas below conveyor systems.



Staircase at Hanover Expo

Automotive factory



## B Perforated Metal Planks

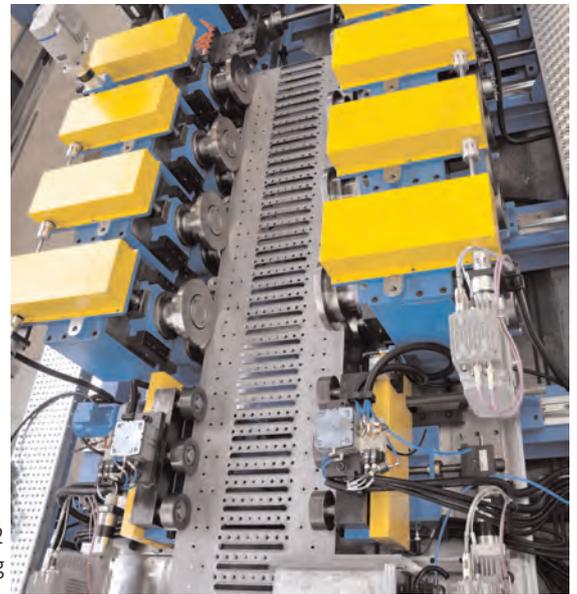
### Production

Perforated metal planks are produced in the following production stages:

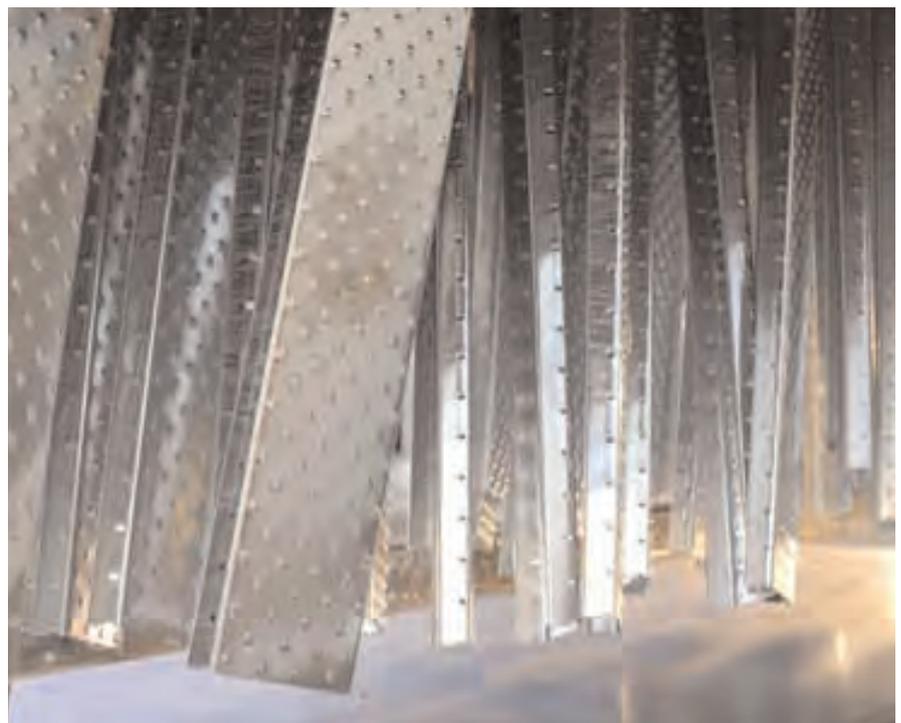
- After it has been inspected on arrival, the material delivered in coils is fed to the production line.
- The required surface profiles are punched with modern presses and stamps and the planks are cut to length
- A CNC-controlled roll former rolls the punched planks to the characteristic C-profile having the desired height and width.
- Any cutouts required are produced according to the customer's specification and are generally lined with an edging to the height of the perforated metal plank.
- The perforated metal planks are galvanised as standard according to DIN EN ISO 1461 at Verzinkerei Sulz GmbH (galvanising plant) owned by the Group. Other surface treatments, such as powder coating, can also be provided.
- Perforated metal planks can be supplied in steel, stainless steel and aluminium.



Operation 1  
Punching



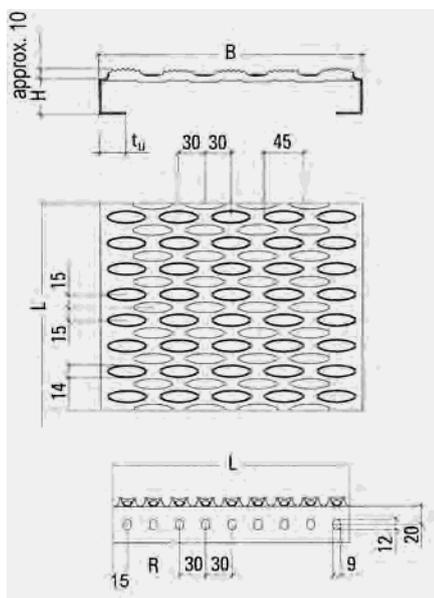
Operation 2  
Roll forming



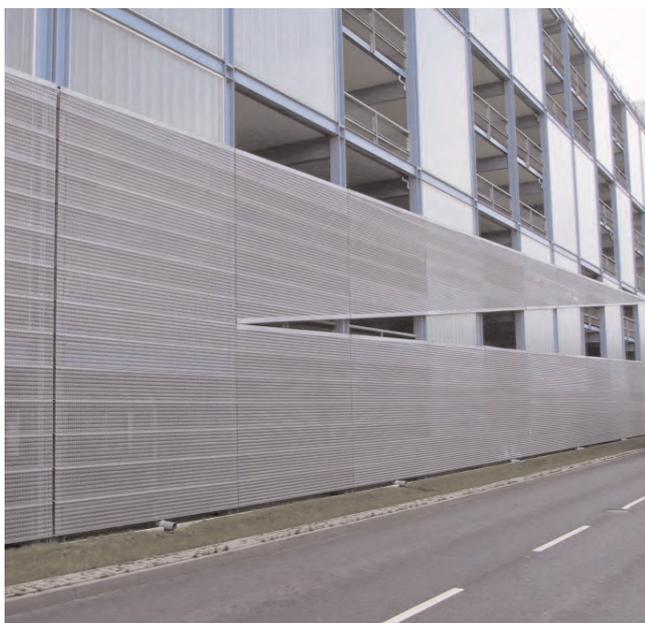
Operation 3  
Surface treatment

# B Perforated Metal Plank Type BZ

Due to their extremely serrated surface profiling, perforated metal planks **type BZ** (tooth) offer a high degree of slip resistance. BZ gratings are therefore ideal for working areas where oil and grease are used.



Perforated metal plank <b>BZ</b>	
Materials	Plank thickness
Galvanised steel Stainless steel Aluminium Pre-treated	2 and 2,5 mm 1,5 and 2 mm 2 and 2,5 mm on request
Module <b>R</b> Production lengths <b>L</b> Widths <b>B</b>	30 mm n x 30; n x 30 + 15; n x 30 - 15 120, 180, 240, 300, 360, 420, 480 mm
Heights <b>H</b> Rim <b>t<sub>u</sub></b>	40, 50, 75, 100, 125*, 150* mm at least 10 mm
Special versions can be supplied on request, depending on quantities purchased * Width limited from a height of $\geq 75$ mm second row of holes as default	



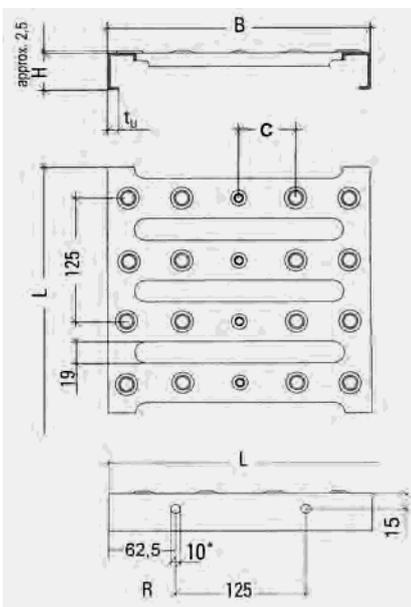
Multi-storey carpark facade



Suspended ceiling, BMW Regensburg

## B Perforated Metal Plank Type BP

Perforated metal planks, **type BP** (parallel), are characterised by their smooth line profiling and high loading capacity. For this reason this type of perforated metal plank is frequently used when large areas have to be covered in industrial areas and where stringent demands are made on load bearing capacity. Type BP can also be supplied without holes and is therefore ideal for use in the shelving construction sector.



C = depending on plank width  
\* slot 9 x 12 mm also possible

Perforated metal plank <b>BP</b>	
Materials	Plank thickness
Galvanised steel Stainless steel Aluminium Pre-treated	2 and 2,5 mm 1,5 and 2 mm 2 and 2,5 mm on request
Module <b>R</b> Production lengths <b>L</b> Widths <b>B</b> Heights <b>H</b> Rim <b>t<sub>u</sub></b>	125 mm preferably n x R 150, 200, 250, 300, 400 mm 30, 50, 75, 100, 125*, 150* mm at least 10 mm
Special versions can be supplied on request, depending on quantities purchased * Width limited from a height of $\geq 75$ mm second row of holes as default	



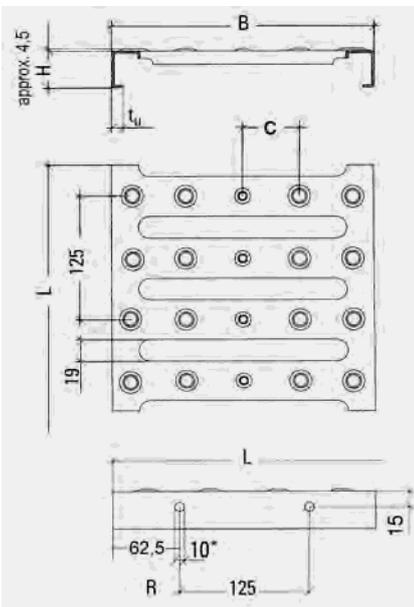
Shelf floor



ICE-maintenance platform

# B Perforated Metal Plank Type BP-Ü

Perforated metal plank **type BP-Ü** (parallel raised) is comparable to type BP but due to the raised punching type BP-Ü is characterised by a high level of slip resistance (assessment group R13)

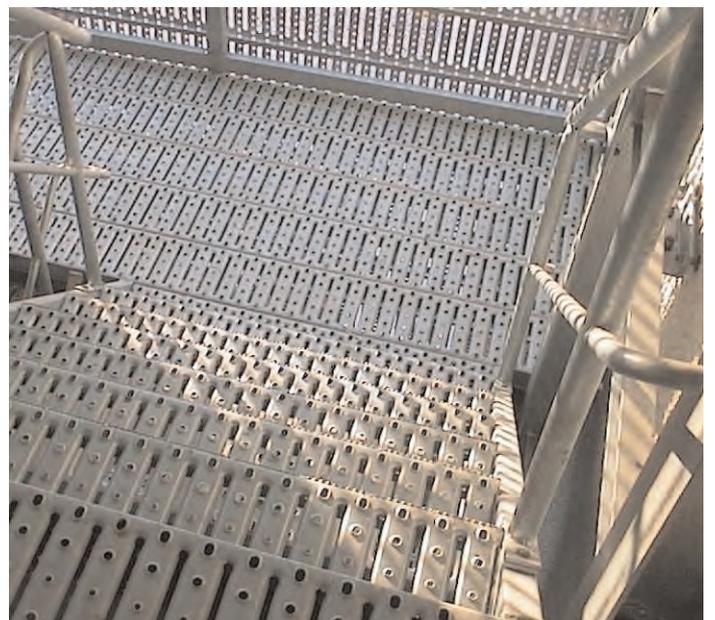


C = depending on grating width  
 \* a slot of 9 x 12 mm is also possible

Perforated metal plank <b>BP-Ü</b>	
Materials	Plank thickness
Galvanised steel Stainless steel Aluminium Pre-treated	2 and 2,5 mm 1,5 and 2 mm 2 and 2,5 mm on request
Module <b>R</b> Production lengths <b>L</b> Widths <b>B</b> Heights <b>H</b> Rim <b>t<sub>u</sub></b>	125 mm preferably n x R 150, 200, 250, 300, 400 mm 50, 75, 100, 125*, 150* mm at least 10 mm
Special versions can be supplied on request, depending on quantities purchased *Width limited from a height of $\geq 75$ mm second row of holes as default	



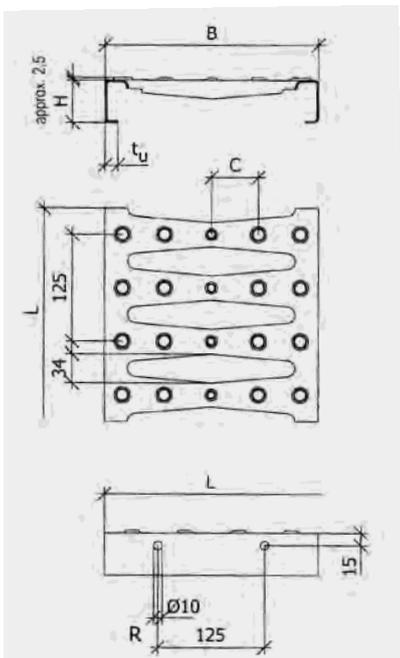
Facade gratings



Staircase gratings

# B Perforated Metal Plank Type BR

The perforated metal plank **type BR** (rhombic) is ideal for use where concentrated loads are applied to small contact surfaces, for example passenger car trafficability on access ramps or parking places. Because of the higher punching of the holes greater slip resistance is also achieved (R13).



C = depending on grating width  
\* slots 9 x 12 mm also possible

Perforated metal planks <b>BR</b>	
Materials	Plank thickness
Galvanised steel Stainless steel Aluminium Pre-treated	2 and 2,5 mm 1,5 and 2 mm 2 and 2,5 mm on request
Module <b>R</b> Production lengths <b>L</b> Widths <b>B</b> Heights <b>H</b> Rim <b>t<sub>u</sub></b>	125 mm preferably n x R 150, 200, 250, 300 mm 30, 50, 75, 100, 125*, 150* mm at least 10 mm
Special versions can be supplied on request, depending on quantities purchased * Width limited from a height of $\geq 75$ mm second row of holes as default	



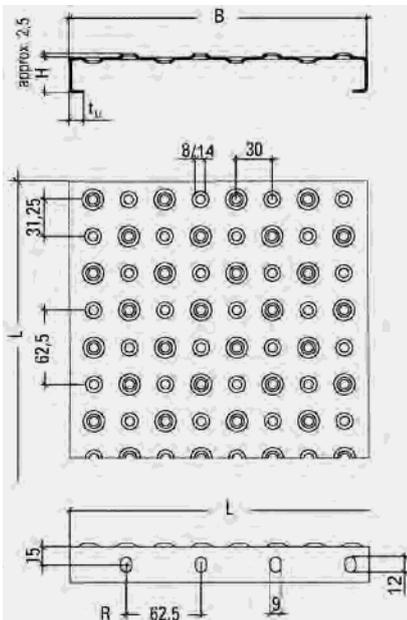
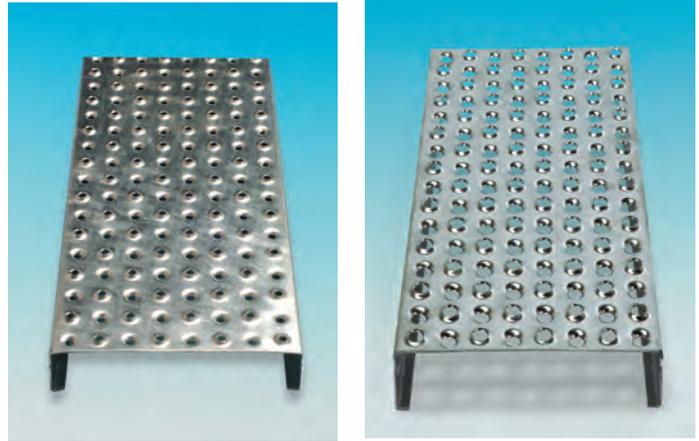
Gangway (Fish farm)



Car access ramp

# B Perforated Metal Plank Type BN-O / BN-OL

Perforated metal planks, **type BN-O** (holes open), offer excellent stability with the upwardly punched holes. The drain holes, with a diameter of 8 mm, also guarantee good drainage. The BN-O grating guarantees high stability under normal pedestrian traffic. **Type BN-OL** differs from type BN-O only by the larger hole diameter of 14 mm



Perforated metal plank <b>BN-O</b>	
Materials	Plank thickness
Galvanised steel Stainless steel Aluminium Pre-treated	2 and 2,5 mm 1,5 and 2 mm 2 and 2,5 mm on request
Module <b>R</b> Productions lengths <b>L</b> Widths <b>B</b> Heights <b>H</b> Rim <b>t<sub>u</sub></b>	125 mm (62,5 mm) preferably n x R 150, 200, 250, 300* mm 30, 50, 75, 100, 125**, 150** mm at least 10 mm
Special versions can be supplied on request, depending on quantities purchased * Note plank thickness ** Width limited from a height of $\geq 75$ mm second row of holes as default	



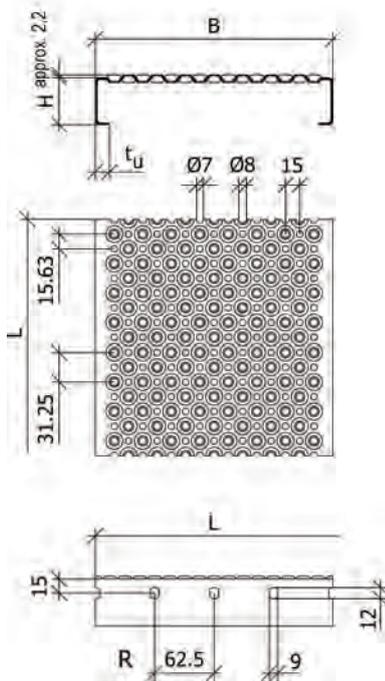
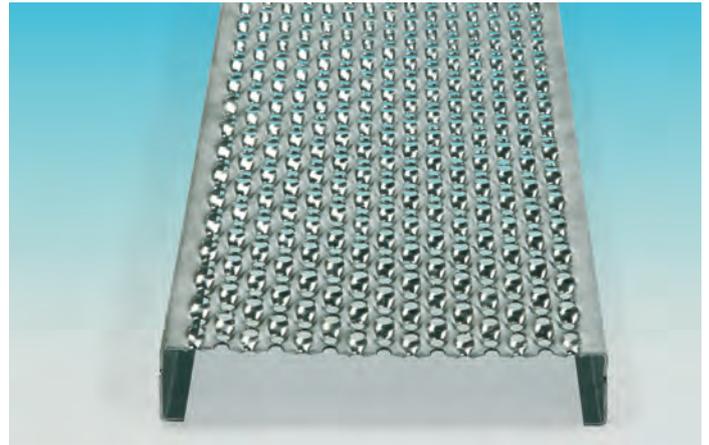
Wall lining



Working platform

## B Perforated Metal Plank Type BN-OP

Perforated metal planks, **type BN-OP**, correspond to type BN-O in terms of the punching pattern, but have twice the number of holes. The drain holes have a diameter of 7 mm and thereby increase the drainage performance and light and air permeability



Perforated metal plank <b>BN-OP</b>	
Materials	Plank thickness
Galvanised steel Stainless steel Aluminium Pre-treated	2 and 2,5 mm 1,5 and 2 mm 2 and 2,5 mm on request
Module <b>R</b> Production lengths <b>L</b> Widths <b>B</b> Heights <b>H</b> Rim <b>t<sub>u</sub></b>	125 mm (62,5 mm) preferably n x R 150, 200, 250, 300* mm 30, 50, 75, 100, 125**, 150** mm at least 10 mm
Special versions can be supplied on request, depending on quantities purchased * Note plank thickness ** Width limited from a height of $\geq 75$ mm second row of holes as default	



Landing stage

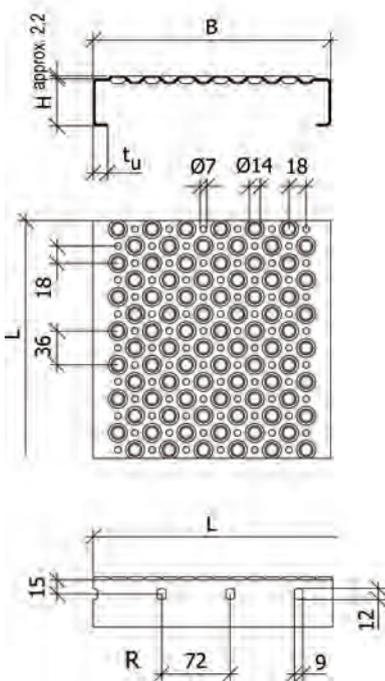
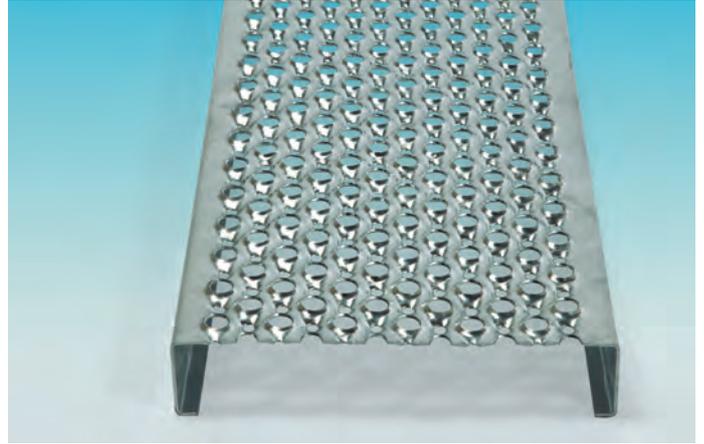


Gangway

## B Perforated Metal Plank Type BN-OD

Perforated metal planks, **type BN-OD**, are characterised by two different hole sizes, The upwardly punched holes have a diameter of 14 mm and the downwardly punched holes have a diameter of 7 mm.

This type of grating is in widespread use in the Scandinavian countries.



Perforated metal planks <b>BN-OD</b>	
Materials	Plank thickness
Galvanised steel Stainless steel Aluminium Pre-treated	2 and 2,5 mm 1,5 and 2 mm 2 and 2,5 mm on request
Module <b>R</b> Productions lengths <b>L</b> Widths <b>B</b> Heights <b>H</b> Rim <b>t<sub>u</sub></b>	144 mm (72 mm) preferably n x R 150, 200, 250* mm 30, 50, 75, 100, 125**, 150** mm at least 10 mm
Special versions can be supplied on request, depending on quantities purchased	
* Note plank thickness	
** Width limited	
from a height of $\geq 75$ mm second row of holes as default	



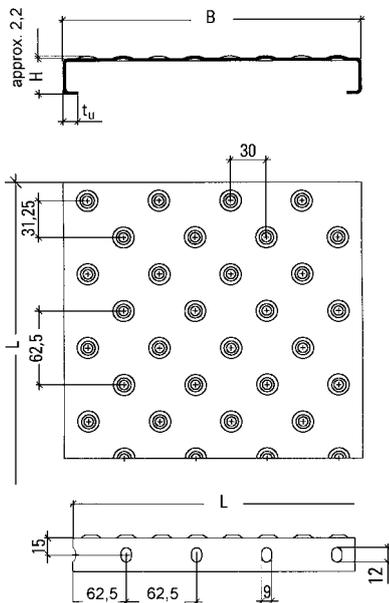
Walkways



Landing stage

# B Perforated Metal Plank Type BN-G

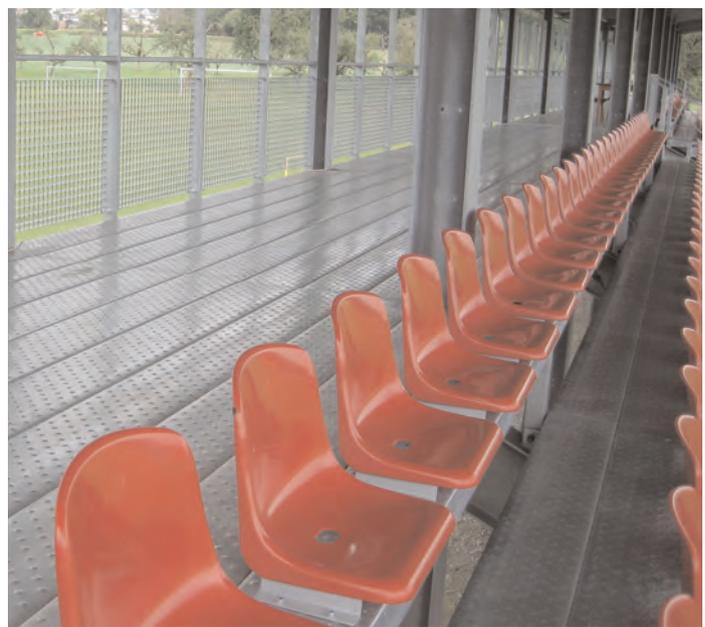
In the case of perforated metal planks **type BN-G** (hole closed), the upwardly punched holes are closed and offer high slip resistance. BN-G gratings are frequently used in indoor areas where in the first place a closed surface is required, and in the second place good walking comfort must be guaranteed.



Perforated metal plank <b>BN-G</b>	
Materials	Plank thickness
Galvanised steel Stainless steel Aluminium Pre-treated	2 and 2,5 mm 1,5 and 2 mm 2 and 2,5 mm on request
Module <b>R</b> Production lengths <b>L</b> Widths <b>B</b> Heights <b>H</b> Rim <b>t<sub>u</sub></b>	125 mm (62,5 mm) preferably n x R 150, 200, 250, 300* mm 30, 50, 75, 100, 125**, 150** mm at least 10 mm
Special versions can be supplied on request, depending on quantities purchased * Note plank thickness ** Width limited from a height of $\geq 75$ mm second row of holes as default	



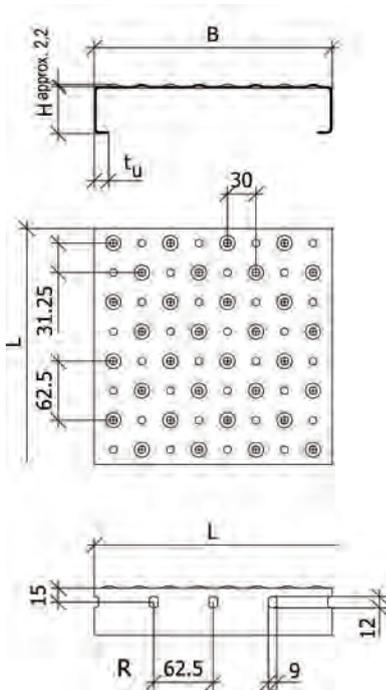
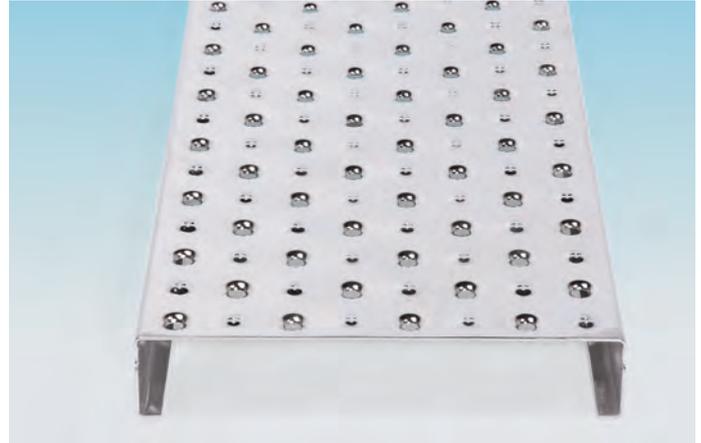
BMW Regensburg



Stadium gratings

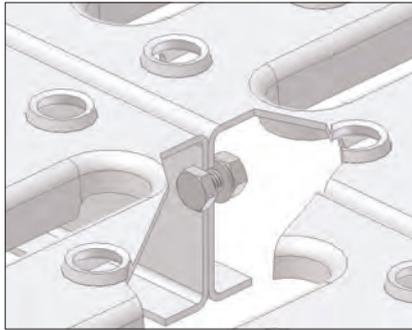
## B Perforated Metal Plank Type BN-GA

The surface of perforated metal planks, type **BN-GA** is a mix of closed and conic drainage holes. Therefore the planks do not have sharp edges and it is possible to go barefoot on the planks. At the same time liquids flow immediately through the conic drainage holes and aquaplaning can be avoided.



Perforated metal planks <b>BN-GA</b>	
Materials	Plank thickness
Galvanised steel Stainless steel Aluminium Pre-treated	2 and 2,5 mm 1,5 and 2 mm 2 and 2,5 mm on request
Module <b>R</b> Productions lengths <b>L</b> Widths <b>B</b> Heights <b>H</b> Rim <b>t<sub>u</sub></b>	125 mm (62,5 mm) preferably n x R 150, 200, 250* mm 30, 50, 75, 100, 125**, 150** mm at least 10 mm
Special versions can be supplied on request, depending on quantities purchased * Note plank thickness ** Width limited from a height of $\geq 75$ mm second row of holes as default	

Special fastening materials have been developed for all versions of perforated metal planks and for all substructures existing in practice.



From a width of 300 mm perforated metal planks must be secured with the substructure against lifting and displacement at at least four points.  
From a width of below 300 mm two fastenings are sufficient.

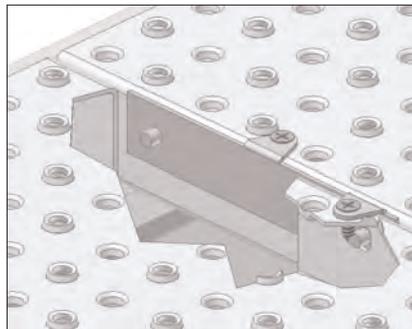
The fastenings are available as standard in a galvanised version but they may also be supplied in stainless steel.

## No. 29 Screw connection

Consisting of:

- Screw M8 x 20 ISO 4017 (DIN 933)
- Washer 9 DIN 126 and nut M8 ISO 7042 (DIN 980), self-locking

Fastening material suitable for BR, BP, BP-Ü, BZ, BN-O and BN-G



## No. 27 Element butt joint

prevents the formation of trip hazards and increases load distribution on unscrewed elements with large span widths

Consisting of:

- Connection part
- Thread-cutting screw M5 x 20 DIN 7516

Fastening material suitable for BR, BP, BP-Ü, BZ, BN-O and BN-G



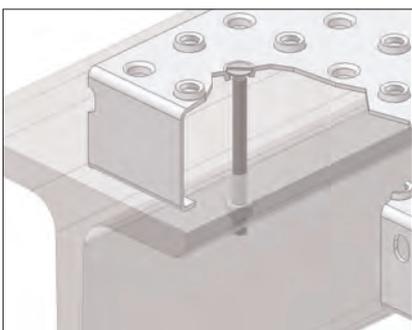
## No. 27 Connection clamp - new

prevents differing deflection of loaded and unloaded gratings so that a trip hazard > 4 mm cannot be formed.

Consisting of:

- Spring steel clamp

Fastening material suitable for BZ



## No. 26 Direct screw connection

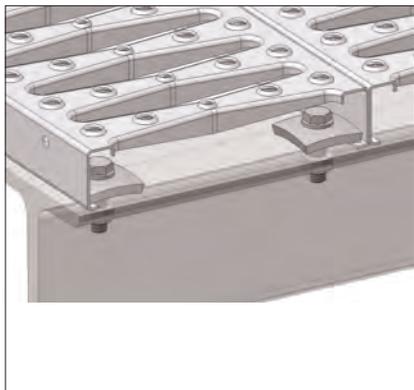
makes a secure connection to the substructure, consisting of:

- Countersunk M8 x ... ISO 2009 (DIN 965)
- Washer 9 DIN 126
- Nut M8 ISO 7042 (DIN 980), self-locking

With olive for BZ gratings

Fastening material suitable for BR, BP, BP-Ü, BZ and BN-O

## B Fastenings



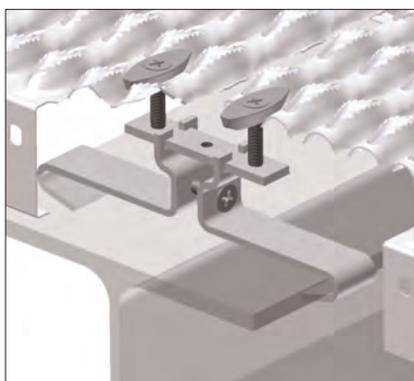
### No. 34 Clamping claw

is used to fasten perforated metal planks to the substructure. The grating is pressed onto the steel structure with a defined clamping force by means of screw M12, to a suitable tightening torque. As a result a defined horizontal force is simultaneously transferred, thereby protecting the gratings against lifting.

Consisting of:

- Curved flat 50 x 8 mm
  - Screw M12 x .... ISO 4017 (DIN 933)
  - Washer 13 DIN 126 and nut M 12 ISO 7042 (DIN 980), self-locking
- Alternatively with steel structure screw according to DIN 7990

Fastening material suitable for BR, BP, BP-Ü, BZ, BN-G and BN-O



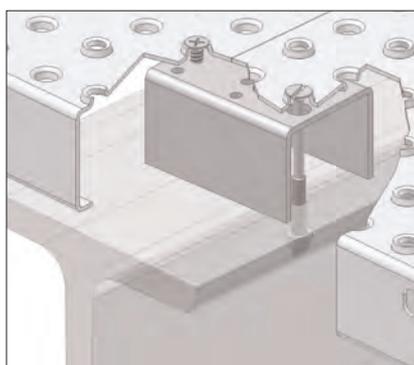
### No. 24 Butt joint - new

serves as a fastening without drilled holes for perforated metal plank, whilst at the same time providing spacing from the substructure.

Consisting of:

- 2 clamping brackets
- Threaded bars with 3 countersunks M8 x ..... according to ISO 7050 (DIN 7982)
- 2 olive (see fastening no. 32)

Fastening material suitable for BR, BP, BP-Ü, BZ and BN-O -

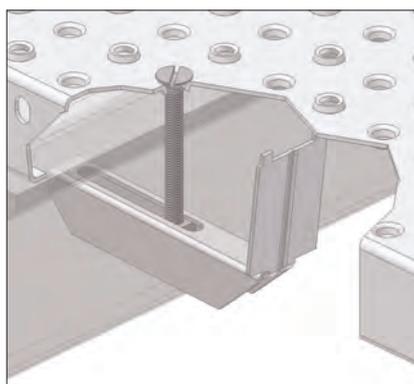


### No. 24 Butt joint

prevents trip hazards at the joints, whilst at the same time providing perfect fastening to the substructure. Consisting of:

- U-profile
- Countersunk screw M8 x .... ISO 2009 (DIN 965)  
alternatively: Countersunk-head tapping screws according to ISO 7050 (DIN 7982)
- Washer 9 DIN 125
- Nut M8 ISO 7042 (DIN 980), self-locking

Fastening material suitable for BN-O and BN-G. For BN-G, the hole required in the perforated metal plank to be provided by the customer.

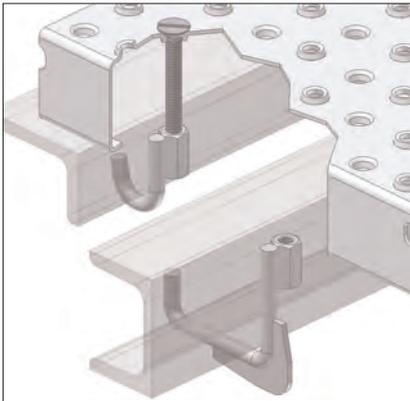


### No. 21 Clamp fastening

Clamp connection, consisting of :

- Clamp bottom
- Countersunk screw M8 x ISO 2009 (DIN 965)
- Square nut M8 DIN 557
- An olive is also supplied for BZ gratings

Fastening material suitable for BR, BP, BP-Ü, BZ and BN-O  
Grating type and height must be specified when ordering

**No. 22 Hook screw fastening**

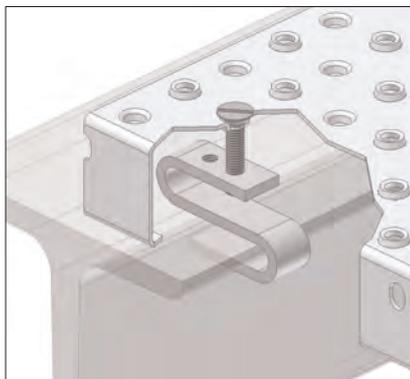
for perforated metal planks on vertical support profiles without a lower flange, consisting of :

- Clamp bottom
- Countersunk screw M8...ISO 2009 (DIN 965)
- An olive is also supplied for BZ gratings

The profile of the substructure must be specified when ordering

**No. 23**, as no. 22, but vertical support profiles with lower flange

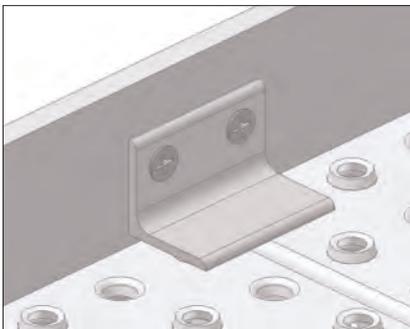
Fastening materials suitable for BR, BP, BP-Ü, BZ and BN-O

**No. 25 S-Clamp**

Clamping connection, consisting of:

- S- hooks (suitable for a substructure with a flange thickness of 9 mm maximum)
- Countersunk screw M8 x ... ISO 2009 (DIN 965)
- also an olive for BZ gratings

Fastening material suitable for BR, BP, BP-Ü and BZ

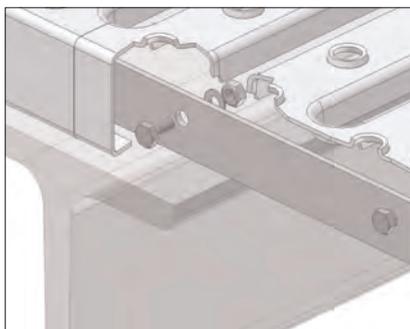
**No. 30 Angle fastening**

prevents lifting of perforated metal planks

Consisting of:

- Angle piece 30/30/3....50 mm long
- 2 thread-cutting screws M5 x 20 DIN 7516

Fastening material suitable for BR, BP, BP-Ü, BZ, BN-O and BN-G

**No. 31 Butt strap**

Suitable for connecting the grating elements together on the joint and for limited load transfer

Fastening material suitable for BR, BP, BP-Ü, BZ, BN-O and BN-G

**No. 32 Olive**

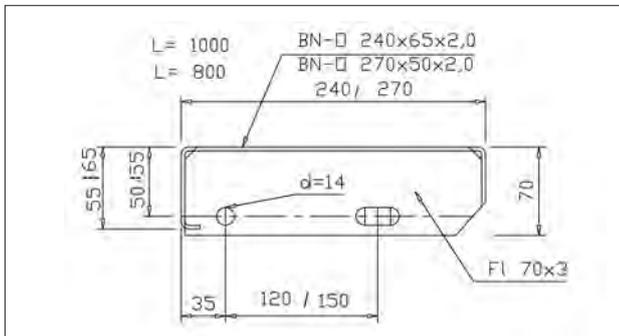
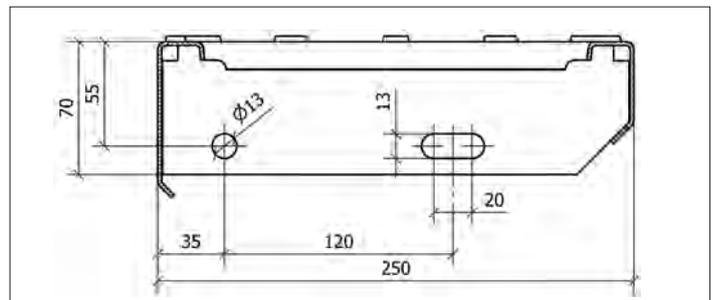
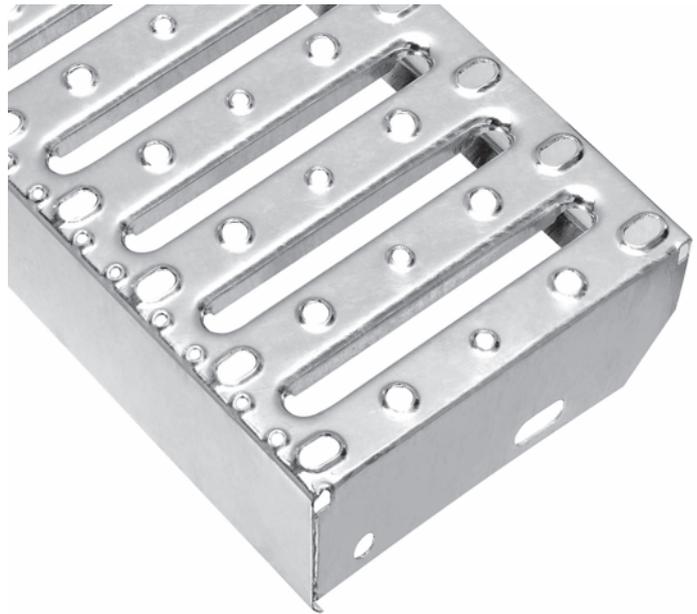
Top of fastening for BZ perforated metal planks.

Made of grey cast iron without surface treatment and of PA 6.6 plastic.

## B Stairtreads

Tailor-made and standard stairtreads of perforated metal planks are produced in the same surface profiling as the associated landings, thus ensuring that the complete staircase has a uniform appearance.

To achieve safety of the stairtreads a slip resistant seal strip can be fitted. Furthermore, the treads are fitted as standard with perforated side plates with holes according to DIN 24531-2.



### Fastening material for treads

consisting of:

- Hexagon head screw M12 x 35 ISO 4017 (DIN 933)
- Hexagon head screw M12 ISO 4032 (DIN 934)
- Washer A14 DIN 7989

Internal staircase at Klagenfurt Stadium



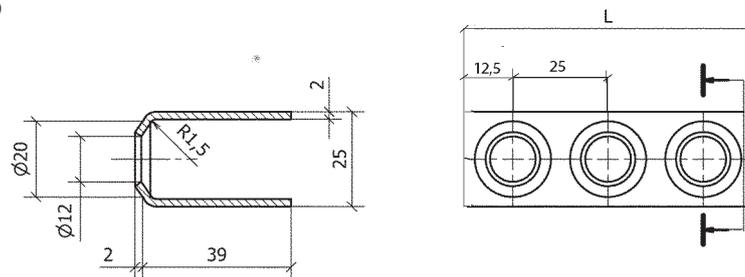
For a wide variety of applications Lichtgitter offers special ladder rungs to guarantee safe climbing of ladders. The special profiling of the ladder rungs stands for high slip resistance. The ladder rungs can be supplied in steel, stainless steel and aluminium.



## Ladder rungs LSP 25

Description	400 or 800/25/39/2 mm
Materials	Steel Stainless steel 1.4301 Stainless steel 1,4571 Aluminium AIMg3G22
Length	400 / 800 mm
Surface	self-coloured

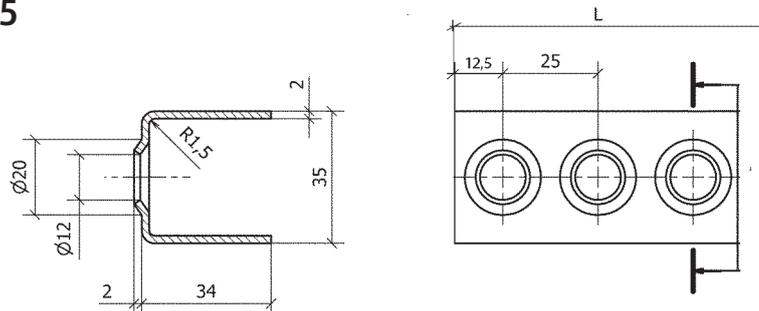
## LSP 25



## Ladder rungs LSP 35

Description	2000/35/34/2 mm
Materials	Steel Stainless steel 1.4301 Stainless steel 1,4571 Aluminium AIMg3G22
Length	2000 mm
Surface	self-coloured

## LSP 35

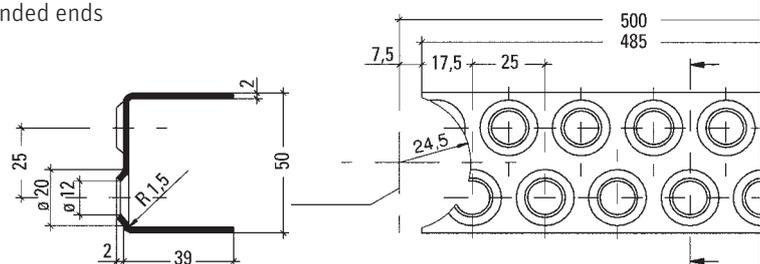


## Ladder rungs LSP 50

Description	2000/50/39/2 mm
Materials	Steel Stainless steel 1.4301 Stainless steel 1,4571 Aluminium AIMg3G22
Length	2000 mm
Surface	self-coloured
LSP 50G	497/50/39/2 mm with straight ends
LSP 50 R	485/50/39/2 with rounded ends suitable for tube d=48,3 mm

## LSP 50

G = with straight ends  
R = with rounded ends



Regarding the use of ladder rungs type LSP 50 we refer to the standard EN ISO 14122, part 4: Permanent stepladders

# Latest state of the art production technology



Latest technology in the field of roll forming



# Solutions from Lichtgitter: What can we do for you?



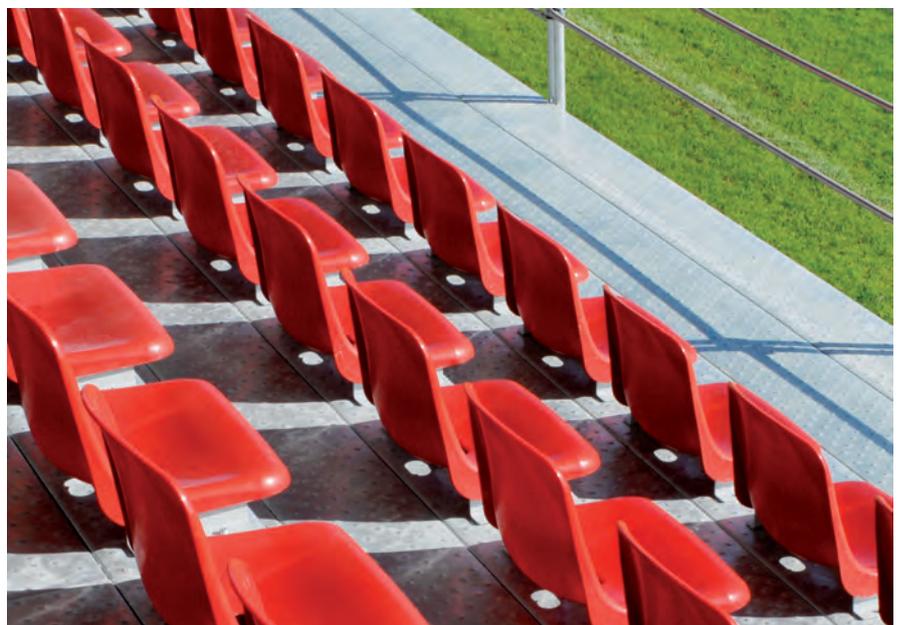
**Stadia Salzburg, Innsbruck, Klagenfurt**

Patented, modular stand systems supplied for the European Football Championship 2008 and partially assembled

Footbridge in a major garden centre



Stand gratings



Forge-welded gratings | Pressure-locked gratings | Perforated metal planks | GRP gratings | Chequer plates  
Spiral staircases | Staircases | Ladder rungs | Steel Service | Hot dip galvanising

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