

# Technical data sheet – Perforated metal planks

## Test results of serration

Gratings and perforated metal planks used as self-supporting floor coverings

Basis of the tests: Instruction sheet ZH 1/571 for flooring in working rooms and working areas where there is a potential slipping hazard. Tests have been done by the "Berufsgenossenschaftliches Institut für Arbeitsschutz – BIA, St. Augustin

The following table shows the test results of Lichtgitter products.

| Type                                   | Serration No. | Surface treatment | Pitch (mm) | Serration class | Displacement |
|--|---------------|-------------------|------------|-----------------|--------------|
| <b>Gratings out of steel S235JR</b>    |               |                   |            |                 |              |
| SP 330-34/38-3                         | ----          | galvanized        | 34x38 mm   | R 10            | V 10         |
| P 330-33-3                             | ----          | galvanized        | 33x33 mm   | R 10            | V 10         |
| P 230-33/11-3                          | ----          | galvanized        | 33x11 mm   | R 9             | V 10         |
| XSP 330-34/38-3                        | 1             | galvanized        | 34x38 mm   | R 10            | V 10         |
| XSP 330-34/38-3                        | 11            | galvanized        | 34x38 mm   | R 11            | V 10         |
| XP 230-33-3                            | 2             | galvanized        | 33x33 mm   | R 12            | V 10         |
| XP 230-33/22-3                         | 2             | galvanized        | 33x22 mm   | R 12            | V 10         |
| XP 230-33/11-3                         | 2             | galvanized        | 33x11 mm   | R 12            | V 10         |
| XP 430-33-4                            | 2             | galvanized        | 33x33 mm   | R 11            | V 10         |
| XP 330-33/22-3                         | 22            | galvanized        | 33x22 mm   | R 12            | V 10         |
| XP 230-33-3                            | 22            | galvanized        | 33x33 mm   | R 13            | V 10         |
| XP 330-33-3                            | 22            | galvanized        | 33x33 mm   | R 12            | V 10         |
| XP 230-33-3                            | 3             | galvanized        | 33x33 mm   | R 11            | V 10         |
| XP 330-33-3                            | 3             | galvanized        | 33x33 mm   | R 11            | V 10         |
| XP 230-33-3                            | 31            | galvanized        | 33x33 mm   | R 12            | V 10         |
| XP 330-33-3                            | 31            | galvanized        | 33x33 mm   | R 12            | V 10         |
| XP 430-33-4                            | 31            | galvanized        | 33x33 mm   | R 11            | V 10         |
| XP 530-33-5                            | 31            | galvanized        | 33x33 mm   | R 11            | V 10         |
| XP 330-44-3                            | 31            | galvanized        | 44x44 mm   | R 12            | V 10         |
| XP 230-33/11-3                         | 32            | galvanized        | 33x11 mm   | R 10            | V 10         |
| XP 230-33/11-3                         | 4             | galvanized        | 33x11 mm   | R 11            | V 10         |
| XP 230-33-3                            | 4             | galvanized        | 33x33 mm   | R 11            | V 10         |
| XP 330-33-3                            | 4             | galvanized        | 33x33 mm   | R 11            | V 10         |
| XP 430-33-4                            | 4             | galvanized        | 33x33 mm   | R 11            | V 10         |
| XP 530-33-5                            | 4             | galvanized        | 33x33 mm   | R 11            | V 10         |
| XP 230-33/11-3                         | 42            | galvanized        | 33x11 mm   | R 10            | V 10         |
| XP 230-33-3                            | 42            | galvanized        | 33x33 mm   | R 11            | V 10         |
| <b>Gratings out of stainless steel</b> |               |                   |            |                 |              |
| XP 225-33-3                            | 3             | pickled           | 33x33 mm   | R 12            | V 10         |
| XP 225-33-3                            | 31            | pickled           | 33x33 mm   | R 13            | V 10         |

|             |    |         |          |      |      |
|-------------|----|---------|----------|------|------|
| XP 325-33-3 | 31 | pickled | 33x33 mm | R 12 | V 10 |
| XP225-25-3  | 31 | pickled | 25x25 mm | R 13 | V 10 |
| XP 325-25-3 | 31 | pickled | 25x25 mm | R 12 | V 10 |
| XP 525-25-5 | 31 | pickled | 25x25 mm | R 12 | V 10 |
| XP 525-33-5 | 31 | pickled | 33x33 mm | R 12 | V 10 |

#### Gratings out of Aluminium AlMg 3G22

|             |    |         |          |      |      |
|-------------|----|---------|----------|------|------|
| XP 225-33-3 | 3  | pickled | 33x33 mm | R 13 | V 10 |
| XP 225-33-3 | 31 | pickled | 33x33 mm | R 13 | V 10 |
| XP 225-33-3 | 4  | pickled | 33x33 mm | R 13 | V 10 |

#### Perforated metal planks out of steel S235JR

|           |  |                               |                 |      |      |
|-----------|--|-------------------------------|-----------------|------|------|
| BR 50/2   |  | galvanized                    | rhombic         | R 11 | V 10 |
| BP 50/2   |  | galvanized                    | parallel        | R 11 | V 10 |
| BP-Ü 50/2 |  | galvanized                    | parallel raised | R 12 | V 10 |
| BN-G 50/2 |  | galvanized                    | closed          | R 9  |      |
| BN-O 50/2 |  | galvanized                    | open            | R 11 | V 10 |
| BZ 50/2   |  | galvanized                    | tooth           | R 11 | V 10 |
| BP 50/2   |  | *see below                    | parallel        | R 11 | V 10 |
| BZ 50/2   |  | * see below                   | tooth           | R 13 | V 10 |
| BN-G 50/2 |  | * see below                   | closed          | R 9  |      |
| BN-O      |  | * see below                   | open            | R 11 | V 10 |
| BN-G      |  | galvanized sanded with quartz | closed          | R 12 |      |

\* Continuously hot dipped material quality DX51D+Z200 MAC acc. to DIN EN 10327

#### Perforated metal planks out of stainless steel

|           |  |         |          |      |      |
|-----------|--|---------|----------|------|------|
| BP 50/2   |  | pickled | parallel | R 11 | V 10 |
| BN-O 50/2 |  | pickled | open     | R 11 | V 10 |
| BZ 50/2   |  | pickled | tooth    | R 12 | V 10 |

#### Perforated metal planks out of Aluminium AlMg 2G22

|           |  |         |          |      |      |
|-----------|--|---------|----------|------|------|
| BP 50/2   |  | pickled | parallel | R 11 | V 10 |
| BN-O 50/2 |  | pickled | open     | R 11 | V 10 |
| BZ 50/2   |  | pickled | tooth    | R 13 | V 10 |

#### GRP-gratings our of UP-GF

|                |  |  |         |      |      |
|----------------|--|--|---------|------|------|
| GRP-K 630-19-6 |  |  | concave | R 13 | V 10 |
| GRP-K 538-38-6 |  |  | concave | R 13 | V 10 |

#### GRP-gratings out of UP-GF with quartz sand 05-1,0 mm

|                |  |  |        |      |      |
|----------------|--|--|--------|------|------|
| GFK-K 638-38-6 |  |  | sanded | R 12 | V 10 |
|----------------|--|--|--------|------|------|

## Tailor-made stairtreads

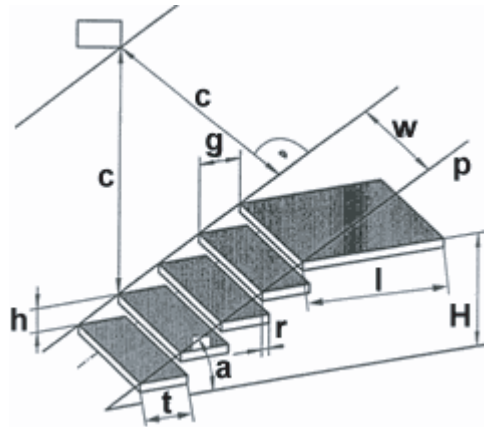
### Requirements

#### Requirements for stairs made out of steel (DIN EN ISO 14122-3)

The rise “h” and going “g”, shall meet the formula,  $600 \leq g + 2h \leq 660$ . The overlap, “r” of step or landing shall be  $\geq 10$  mm. The length of landing “l” shall be at least 800 mm and in any case  $\geq$  the width of the stair, “w”.

On the same flight, the rise shall be constant wherever possible. In the case where it is not possible to maintain the height of the rise between the level of departure and the lower step, it may be reduced by a maximum of 15%.

H = Climbing height, r = Overlap, g 0 Going,  $\alpha$  = Angle of pitch, e = Headroom, w = Width, h = Rise, p = Pitch line, l = Length of landing, t = Height of step, c = Clearance



## Perforated metal planks

### Surface treatment

#### **Surface treatment for steel gratings and steel for construction applications, in accordance with to DIN EN 10025**

- Galvanizing acc. to DIN EN ISO 1461 (hot dip galvanized)
- Galvanized followed by bitumen dipping
- Plastic coating \*, also on galvanized surfaces (colours according to RAL)
- Baked paint\*, also on galvanized surfaces (colours according to RAL)

#### **Gratings and perforated metal planks made of stainless steel, material acc. to DIN 17440**

- Pickled
- Electrochemically polished
- Glass bead blasting

#### **Gratings and perforated metal planks from aluminium, material acc. to DIN EN 485 and DIN EN 573**

- Pickled
- Baked paint\* (colours according to RAL)
- Anodised
- Plastic coating\* (colours according to RAL)

\* A coating with epoxy resin powder for outside areas is not recommended. For these areas, a polyester powder coating should be used.

Gratings and perforated metal planks receive a surface protection to avoid potential corrosion.

Gratings manufactured from stainless steel and aluminium generally do not need a corrosion protection. At least one after-treatment by pickling or anodising is recommended.

#### **Hot dip galvanizing** (usual corrosion protection for gratings)

The term “hot dip galvanizing” means the adding of a zinc finish by dipping the pre-treated parts into a molten zinc dip. The zinc coat adheres firmly to surfaces. In case of normal mechanical demands such as transportation, pedestrian or vehicle traffic, zinc does not flake off or develop cracks.

The average weight of the zinc coating is approximately 450 g per sqm of treated surface. This corresponds to a coating thickness of approximately 65 µm. The thickness of the zinc coating also depends on the thickness of the material. Before galvanizing, parts are pre-treated to provide a mechanically clean surface in order to achieve a faultless adherence of zinc.

**Bitumen dipping** is often requested as an additional treatment for galvanized gratings, and gives extra surface protection (mainly for chemical use).

**Plastic coatings** are achieved, e.g. by dipping or electrostatic powder coating. The abrasion resistance and thickness of finish required, depends upon the application, so this need to be considered when deciding which procedure and plastic to use.

#### **Painting**

Gratings and perforated metal planks can likewise be lacquered in a dipping or spraying process, preferably after galvanizing.