MEISER® Grating

ABOUT MEISER

MEISER, founded in 1956, is a medium-sized, owner-managed family business with its company headquarters in Schmelz-Limbach in the Saarland. In the field of grating MEISER has a leading position worldwide. The product range is supplemented by other business segments.

This includes the field of steel processing with its own slitting plants and cold rolling centres. Furthermore, MEISER operates traditional hot dip galvanising plants and a strip galvanising plant. The diversification is rounded off by the production of sheet metal profile grating, staircase systems, special sections, scaffolding systems and barrel hoops.

MEISER employs 2,400 people worldwide, 1,700 of whom work at the locations in Germany. The two main production facilities in the Saarland and Saxony are supplemented by manufacturing facilities in France, Belgium, Hungary, Dubai, Egypt, Brazil and Morocco. With numerous other branches, MEISER is represented almost all over the world. Personal support for our customers on site is therefore guaranteed.

50 years after the company was founded by Edmund Meiser, we still remain true to our origins and traditional values as a family business. Long-term planning and reliability characterise our daily work, which is supported by flexible and enthusiastic employees as well as modern and highly efficient machinery.

For us, economic activity is associated primarily with people. That is why we place special emphasis on our personal and individual contact with you, our business partners and customers. We are always available to discuss your requirement.

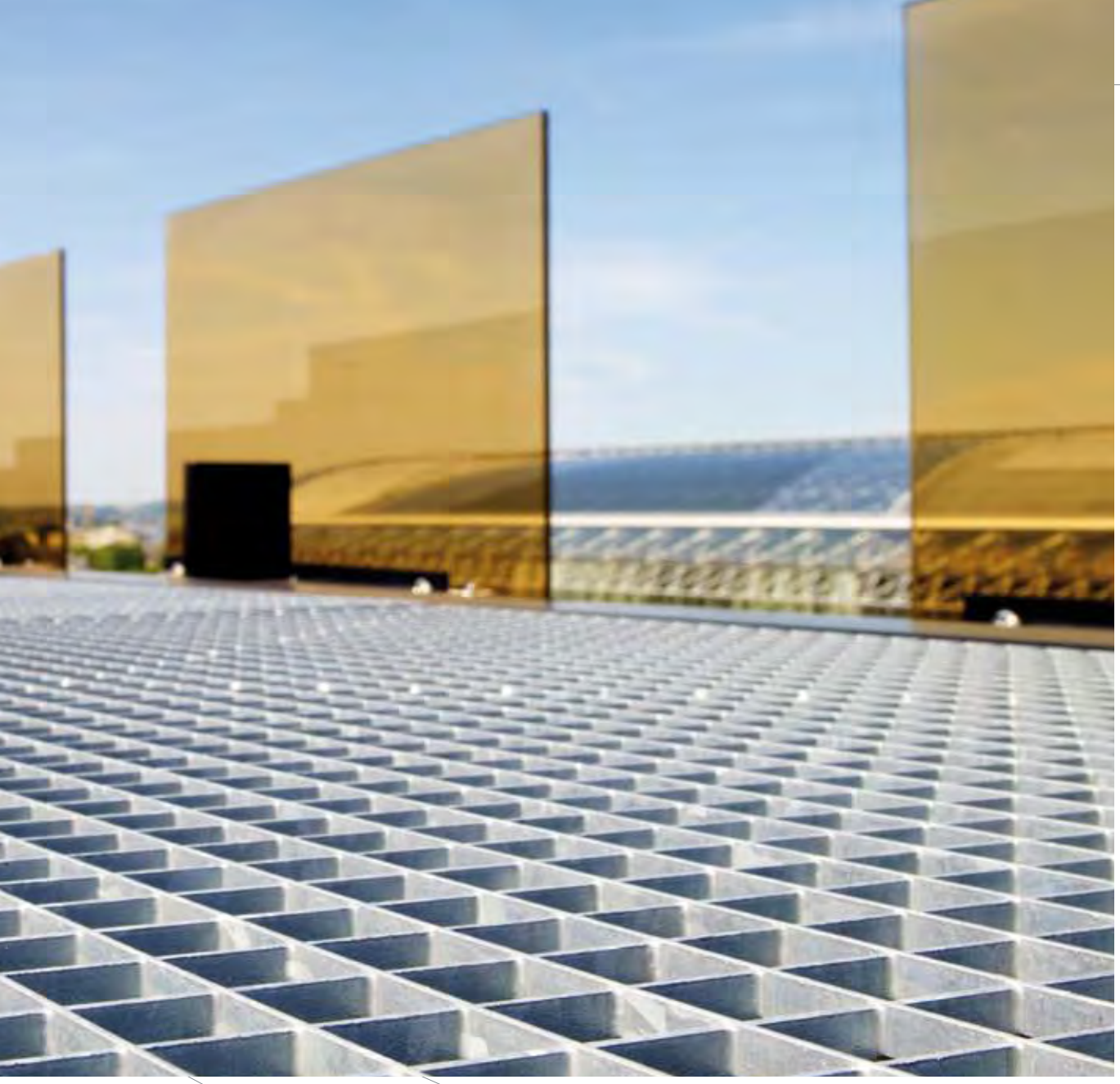
We are only able to make progress if you – our customer – is satisfied over the long term. The many unusual projects that we have implemented together with our customers confirm to us that this is the right route for us to take. We would be delighted to include you among our customers – you can depend on us!

Edmund, Wolfgang and Ulrich Meiser

TOP LEFT: LIMBACH SITE
TOP RIGHT: OELSNITZ SITE
BOTTOM, FROM LEFT TO RIGHT: WOLFGANG MEISER, EDMUND MEISER, ULRICH MEISER

MEISER Press Locked Grating

Grating is a structural element that has a high load-bearing capacity with a low dead weight and a high level of transparency. The positive-fitting connection of the bearing bars and cross bars with the surround make the grating not only a very stable, but also visually attractive product. The applications are very diverse, as grating is used everywhere in industry and architecture. As an extremely robust, safe yet light platform flooring, the grating is indispensable in all areas of heavy industry. Grating is installed in refineries, power stations, steel mills, mines and on oil platforms. Every steelworker, metalworker and fitter needs grating in his trade. Grating is being used increasingly more in the logistics industry as platform flooring and shelves. Architects and building owners appreciate the grating as a product which is both aesthetically pleasing and functional – be this as decorative facade cladding, a suspended ceiling or sun shield.

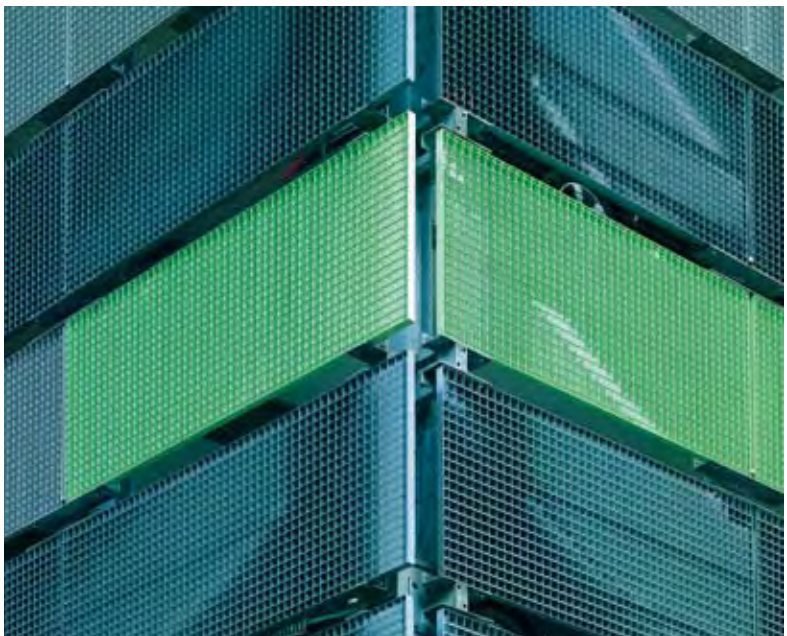


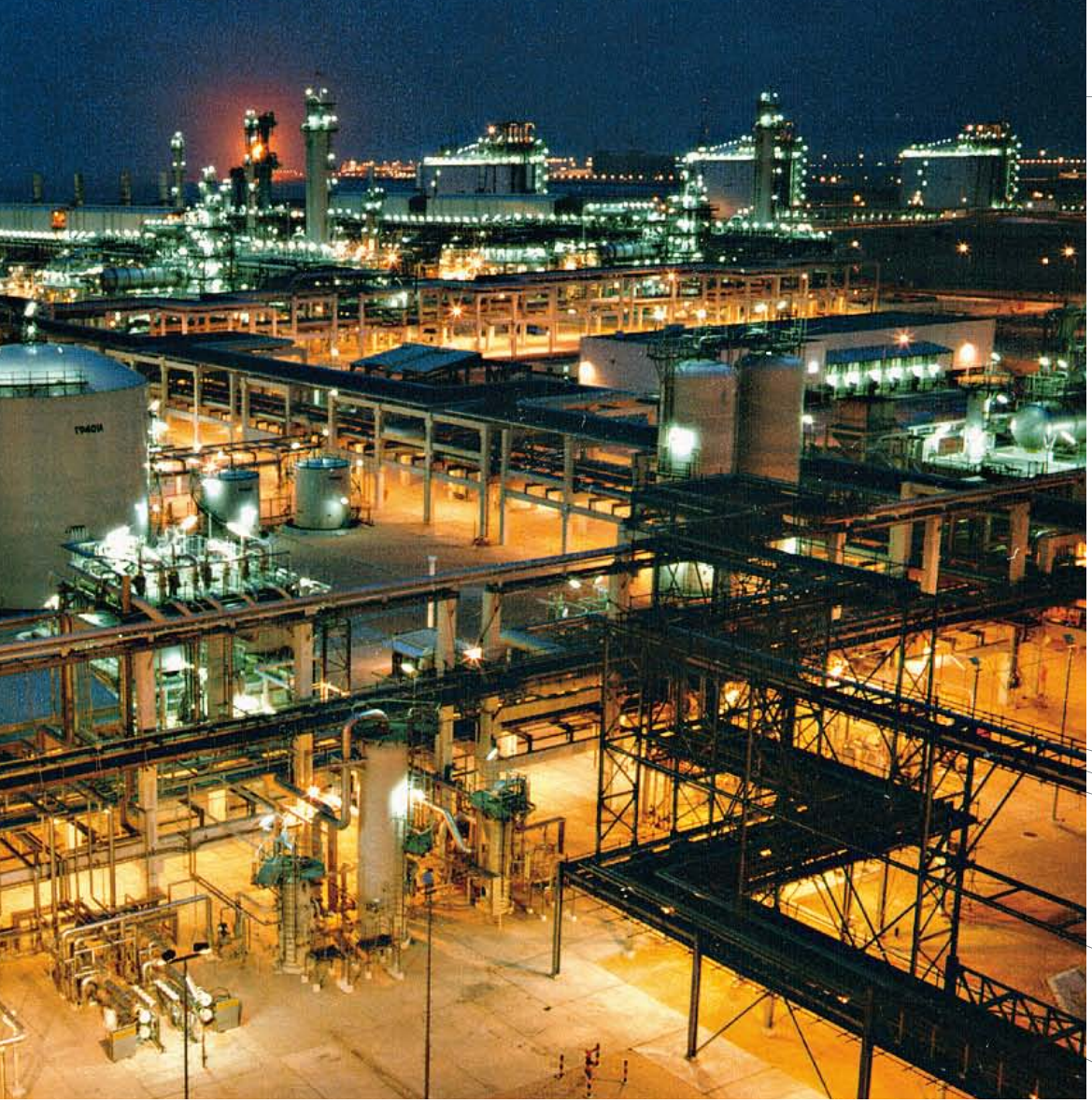
EUROPEAN COURT OF JUSTICE, LUXEMBOURG

MEISER offers the largest range of grating worldwide. The diversity of possible applications also requires an unusually large variety of products. Together with our customers we select the right grating from our range. Grating is almost always relevant to safety, and we are well aware of this responsibility. When one is standing high up on a „breezy" platform made of MEISER grating, one understands the importance of quality and reliability. We set the highest standards for our products – from the planning stage to delivery. MEISER grating is 100 % made by MEISER. More than 80 % of all grating are made to measure at our two factories in the Saarland and Vogtland for our customers. Our employees will be pleased to support and advise you with planning your projects. Static calculations and quantity surveys also form part of our scope of services.

MEISER grating – sustainable concepts.


T940SA

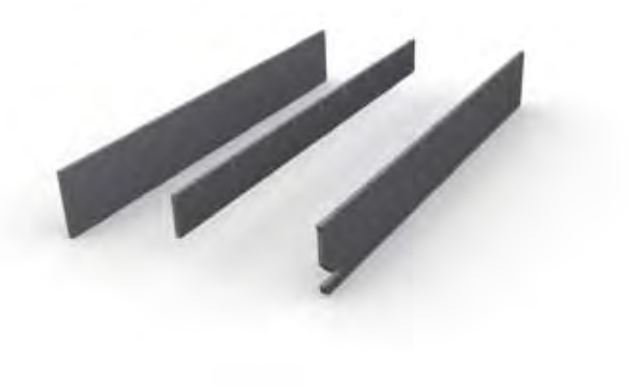




TOP: OIL AND GAS MANUFACTURING COMPANY, KATAR
BOTTOM, FROM LEFT TO RIGHT:
PEDESTRIAN BRIDGE, EMMENDINGEN; MULTI-STOREY CARPARK,
BIELEFELD; PORSCHE HIGH-BAY WAREHOUSE, AUSTRIA

Bearing bars

Bearing bars are load-bearing, vertical flat bars which run parallel to one another from one support to the next.

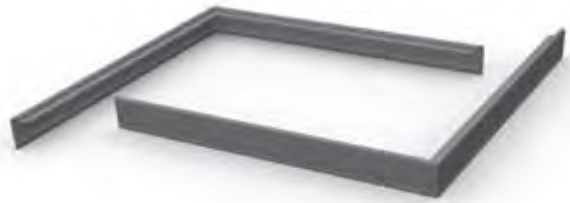


Cross bars

The cross bars run at right angles to the bearing bars, connecting them together through compression and/or welding at the crossover points.

Edge banding

All grating is banded as a rule by flat bars, T-shaped sections or U-shaped sections.

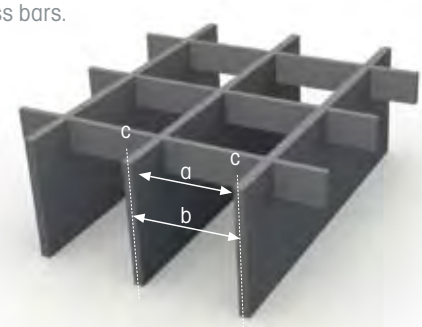


Mesh width

(a) the clear distance between the bearing bars or the cross bars.

Mesh spacing

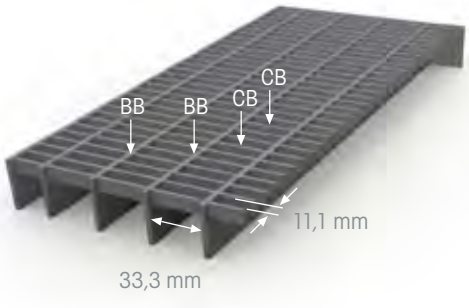
(b) distance from centre to centre of bearing bars or the cross bars.

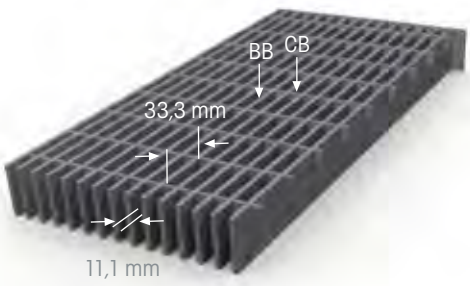


c = centre

Mesh size

The mesh size is largely determined by the mesh spacing, whereby the distance between the bearing bars (BB) and cross bars (CB) can be different. In all tables the first value is the distance between of the bearing bars, the second value is the distance between the cross bars. We would like to illustrate this here using an example of 33.3 x 11.1 and 11.1 x 33.3 (distance from the centre of the bar to the centre of the bar).



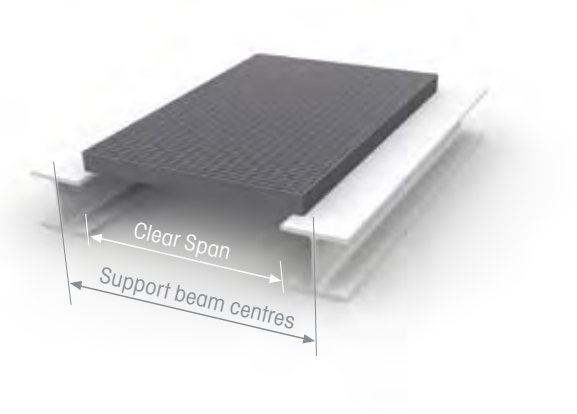


Support beam centres

Is the centre-to-centre distance of the support in the direction of the bearing bar.

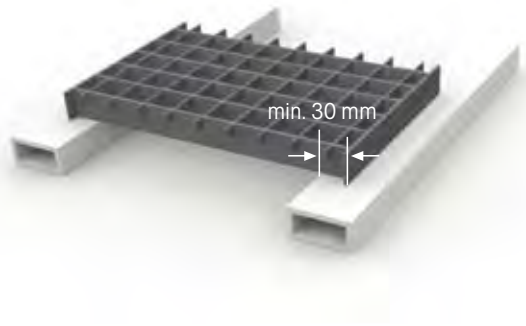
Clear Span

Is the clear distance between two supports.



Grating landing

The term „grating landing" is used to describe the length of the bearing bar ends which lie on the support structure. It should correspond to the height of the bearing bars, but also be at minimum of 30 mm.

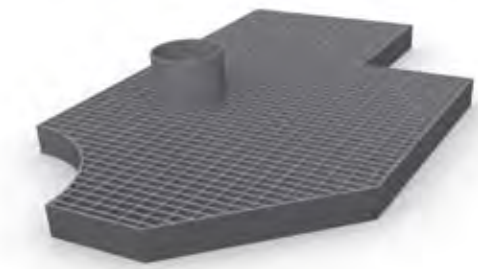


Installation / Erection clearance

The installation clearance is used during assembly to compensate for tolerances between the steel structure and grating.

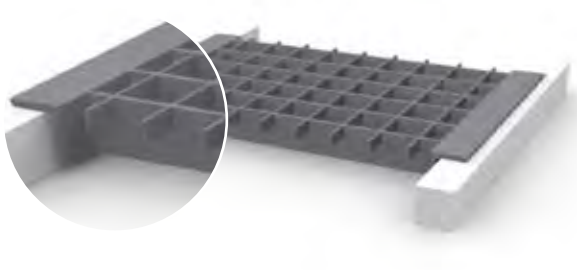
Cut-outs

If the total length of the cutout is less than 0.5 mm, we call this a „Small Cut-Out".



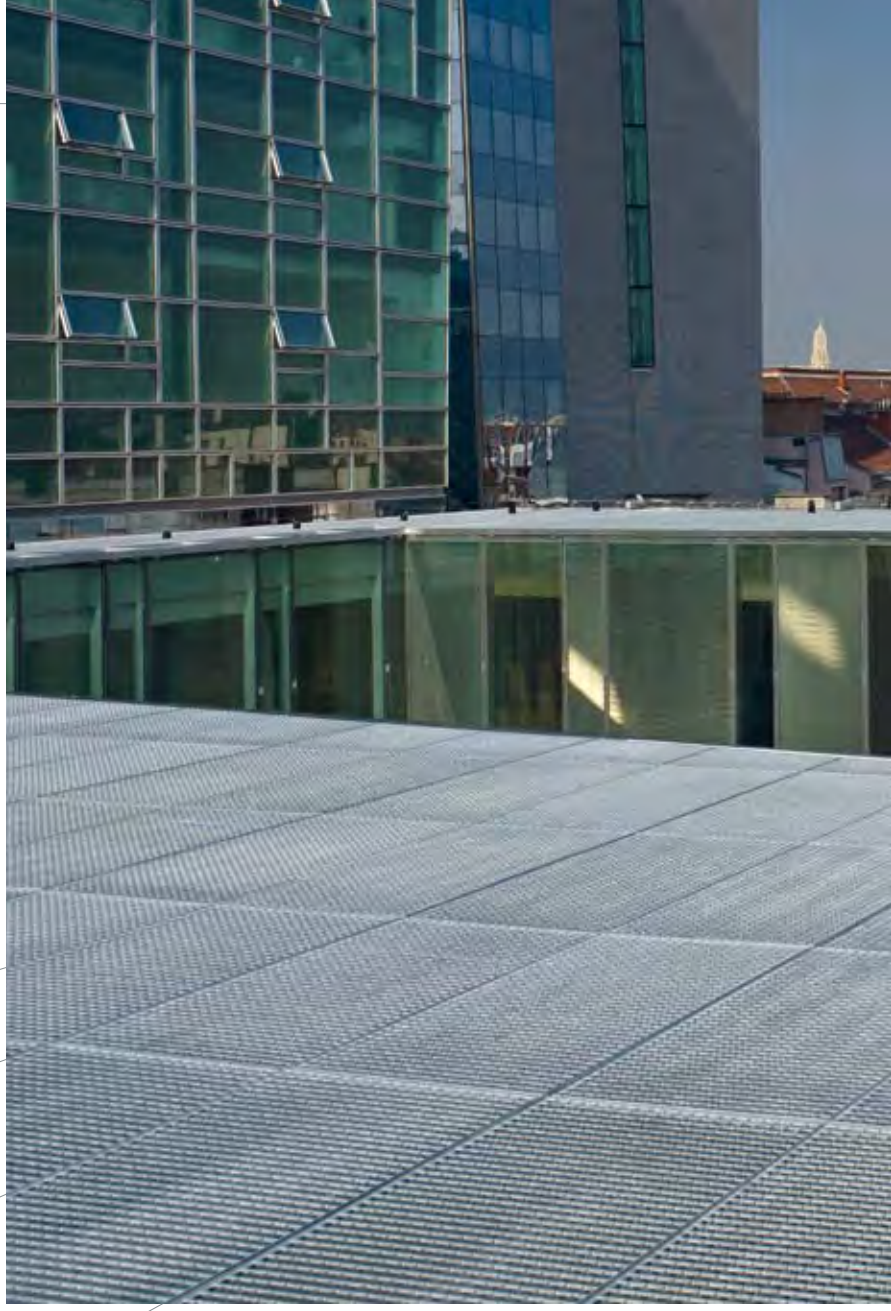
Angle collar

A bracket welded on one or more sides to the grating. The span of the bracket should correspond at least to the height of the bearing bar in this version.



Z-shaped section / MEISER special angle collar

Angle section with two folds, similar to the angle collar, in which the section protrudes into a notch in the bearing bar.

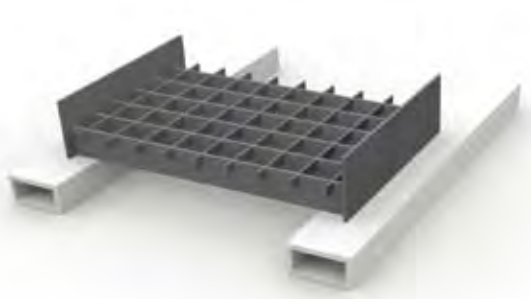


Deep Banding

Reinforced and raised edge surround downwards, e.g. in order to achieve a certain installation height.

Kick Plate

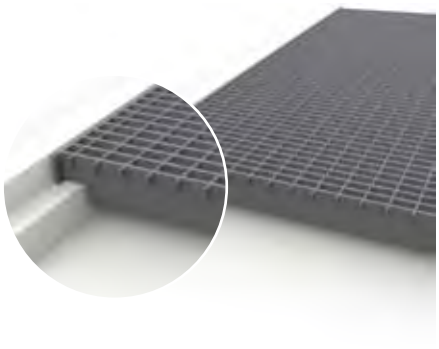
A raised surround plate, also known as a toe plate, is welded on, increases safety when walked on and protects against sliding at the grating edge. This is necessary if the clearance between the grating and the adjacent component is more than 30 mm.



OFFICE BUILDING, AUSTRIA

Notched bearing bar

Special notching of the bearing bars and the panel banding bars local to the support structure (notches should be not more than half the height of the bearing bars).



Anti-skid-properties (Serrations)

Notching of bearing and cross bars to increase slip resistance.

MEISER has its own slitting plants, wire drawing devices and cold rolling centres. We are therefore able to design a grating exactly in accordance with the requirements and wishes of our customers. Here, oversizing makes little sense, while undersizing must be avoided under all circumstances. The ideal combination of material thickness and height, associated with the matching steel quality, ensures the greatest possible economic benefits. That is our aspiration - not more and not less. We would like to explain the best-known versions to you below:

Steel grades

S 235 JR (DIN EN 10025-2)
S235JR has proven its worth due to its good weldability, malleability and strength.

S 275 JR (DIN EN 10025)
S275 JR displays comparable product characteristics to S235, although it stands out due to its somewhat higher tensile strength and resilience.

S 355 JR (DIN EN 10025)
The most important steels in the building industry are not only the well-known concrete steels, but also the steel grades S235JR and S355JR.

All of the materials referred to have no passive layer and therefore have to be protected against corrosion. Indoors a primer with an additional coat of paint is sufficient for this. At least hot dip galvanisation is required out of doors.

Material no.	Tensile strength	Yield strength	Elongation at rupture*
	Rm N/mm² min.	ReL N/mm² min.	
1.0038	360 - 510	≥ 235	26%

Material no.	Tensile strength	Yield strength	Elongation at rupture*
	Rm N/mm² min.	ReL N/mm² min.	
1.0044	430 - 580	≥ 275	23%

Material no.	Tensile strength	Yield strength	Elongation at rupture*
	Rm N/mm² min.	ReL N/mm² min.	
1.0045	510 - 680	≥ 355	22%

* Data applicable for product thickness from 3 mm to 40 mm and longitudinal test specimen with $L_0=5{,}65 * \sqrt{S_0}$

High-grade steel

The material non-rusting high-grade steel combines beneficial properties which have today become indispensable for many fields of application. Nevertheless, it is important to know which types of high-grade steel are particularly suitable for the intended purpose, since there is no universal material that can be used everywhere. Two generic terms are generally used in Germany: V2A or 1.4301 is a high-grade steel that is often found in everyday use, for example in the construction of banisters, vehicles and sinks. V4A or 1.4571 is similar to V2A, but is additionally alloyed with 2 % molybdenum (Mo). This means that the high-grade steel is more resistant to corrosion in chloride-containing media. V4A high-grade steel is used in areas, for example, which come into permanent contact with salt water, in swimming baths and the chemical industry. It is also possible to pickle and polish the surface of high-grade steel. This process is described in detail on the following page.

Aluminium

Aluminium has been increasingly used over the past few years as a construction material. Its numerous beneficial properties make aluminium an interesting and competitive alternative to steel, and in the list of the most commonly used metals it is behind steel in second position.

The specific weight of aluminium is only 2.7 kg/dm (approx. 1/3 of the weight of steel), which in conjunction with its relatively high strength and good welding properties means that in many applications it enables significant weight savings compared to steel structures.

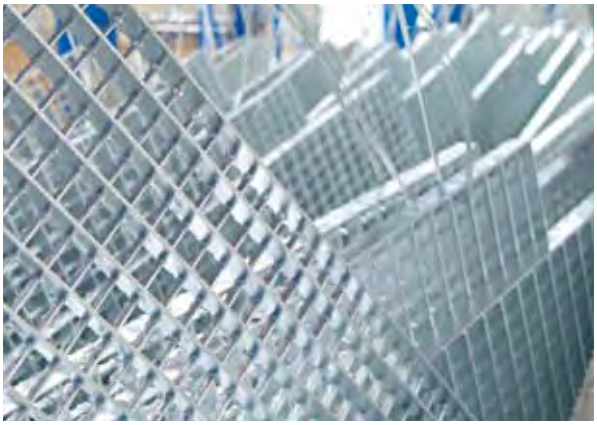
COR-TEN

Under the actual rust layer, COR-TEN steels form a particularly dense barrier layer as a result of weathering, which consists of adhesive sulphates or phosphates and protects the component against further corrosion. A distinction is made between Corten A and Corten B. Corten B ASTM A 588 material no. 1.8963, EN 10027-1: S 355J2W is not phosphorus-alloyed, approved by the building authorities, can be readily welded and offers good cold and hot workability. Owing to its insensitivity to the effects of the weather and its characteristic patina, COR-TEN steel is also used to provide highlights in architecture, for example in the case of facade cladding.

Galvanising Plant at Schmelz-Limbach

With the commissioning of the new hot dip galvanising plant we began a new chapter in the summer of 2011. Hot dip galvanising is the last but an important step in the production of the grating and guarantees the long-term corrosion protection of MEISER products without any special maintenance measures. Our new building combines attractive industrial architecture with state-of-the-art technology. The environment and the employees benefit from pollutant-free operations and exemplary working conditions, which in no way resemble the conventional image of a galvanising plant. Behind the beautiful facade, many areas of the building accommodate automated processes which ensure the highest possible level of efficiency and quality.

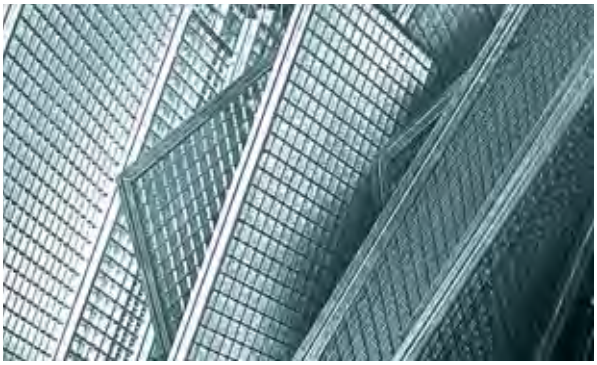
Each individual grating is loaded according to schedule into the galvanisation process and can be tracked from the time it is hung up on the cross member to when it is taken down on the lifting and lowering stations. There is therefore no danger that grating will get „lost" in the galvanising process. Chemical pretreatment, an environmentally sensitive process, is performed in a fully enclosed area which passes the emissions produced through an extraction system to a filter system, so that our environment is not polluted in any way. Using a very powerful dryer, we produce very clean and preheated surfaces before the galvanising process. This also has a very positive effect on the consumption of zinc and the surface quality. Zinc is a valuable raw material which has to be handled with care.



Plauen Galvanising Plant

The Plauen Galvanising Plant („Verzinkerei Plauen") has belonged to MEISER for some years now and enables us to also offer quality from a single source in the Vogtland region. Originally designed as a galvanising plant for steel components and locksmith's products, after the reunification of Germany a major conversion was carried out with the focus on scaffolding, which was pushed through by the then operator Thyssen Hünebeck.

Subsequently the focus has increasingly been on MEISER products, which make up more and more of the product range in Plauen. With the takeover of all of the shares in the galvanising plant in Plauen, this became an integral part of MEISER in the Vogtland. Today the production is dominated by grating, sheet metal profile grating, staircase systems and special profiles.

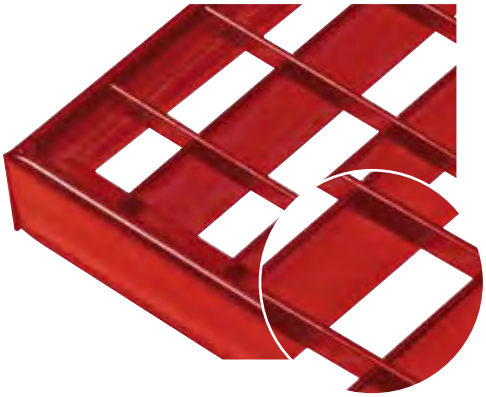


Surface refinement

MEISER grating is characterised by durability and high quality. This crucially depends on the correct surface treatment. In this respect we offer our customers numerous possibilities - be this with the focus on functionality or aesthetics. For the selection of the surface treatment there are various factors which are decisive: the personal preferences of our customer, their budget and questions of corrosion protection.

Hot dip galvanising

MEISER grating manufactured from mild steel is usually hot dip galvanised. In our new plant, which we put into operation in 2011, this is carried out in accordance with the specifications of DIN EN ISO 1461. State-of-the-art galvanising and environmental technology guarantee long-term corrosion protection which is able to withstand the usual mechanical and chemical stresses without problems.



Powder coating

If you would like to have your grating supplied in various colours, powder coating is the least expensive and most durable solution. In this process the grating is initially degreased in immersion baths, pickled and zinc-phosphated. Then the powder coating material is applied electrostatically and baked at approximately 180° C.

Particularly durable corrosion protection is offered by the MEISER DUPLEX coating, which consists of hot dip galvanising with subsequent powder coating. The powder coating is available in all possible RAL colours in various degrees of gloss and surface structures. Moreover, we are able to provide the necessary layer thicknesses for all feasible applications from C1 to C5-M.

Pickling (high-grade steel)

MEISER high-grade steel grating is usually pickled after production, as during manufacture the welding process results in scale and discolouration, which in turn represent potential points of attack for corrosion. In the pickling process the grating is immersed in a pickling bath, as a result of which they are provided with a metallically pure and protected surface.

Electro-chemical-polishing (high-grade steel)

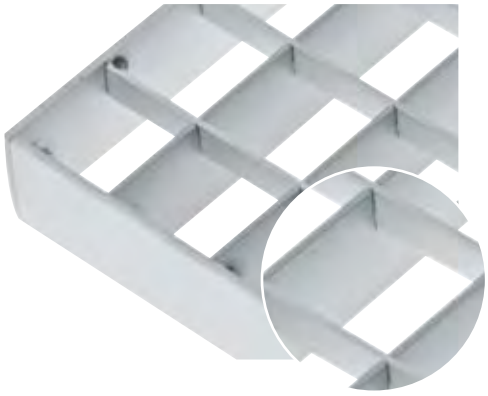
The electropolishing process represents a reversal of the electroplating process. Under the influence of direct current, metal is removed in an electrolyte from the anodic surface of the workpiece. The result is smooth and shiny surfaces which display a high level of corrosion resistance and is very easy to clean.

Glass bead blasting

Through the use of glass beads as blasting material, MEISER grating made of chrome steel and aluminium are further refined. Blasting techniques serve to specifically create matt or semi-gloss surfaces and to cover surface defects in the material. The resulting semi-gloss effect is permanently retained. The surface is cleaned of adhesive foreign particles and also strengthened, as a result of which its durability may be prolonged.

Anodising (aluminium)

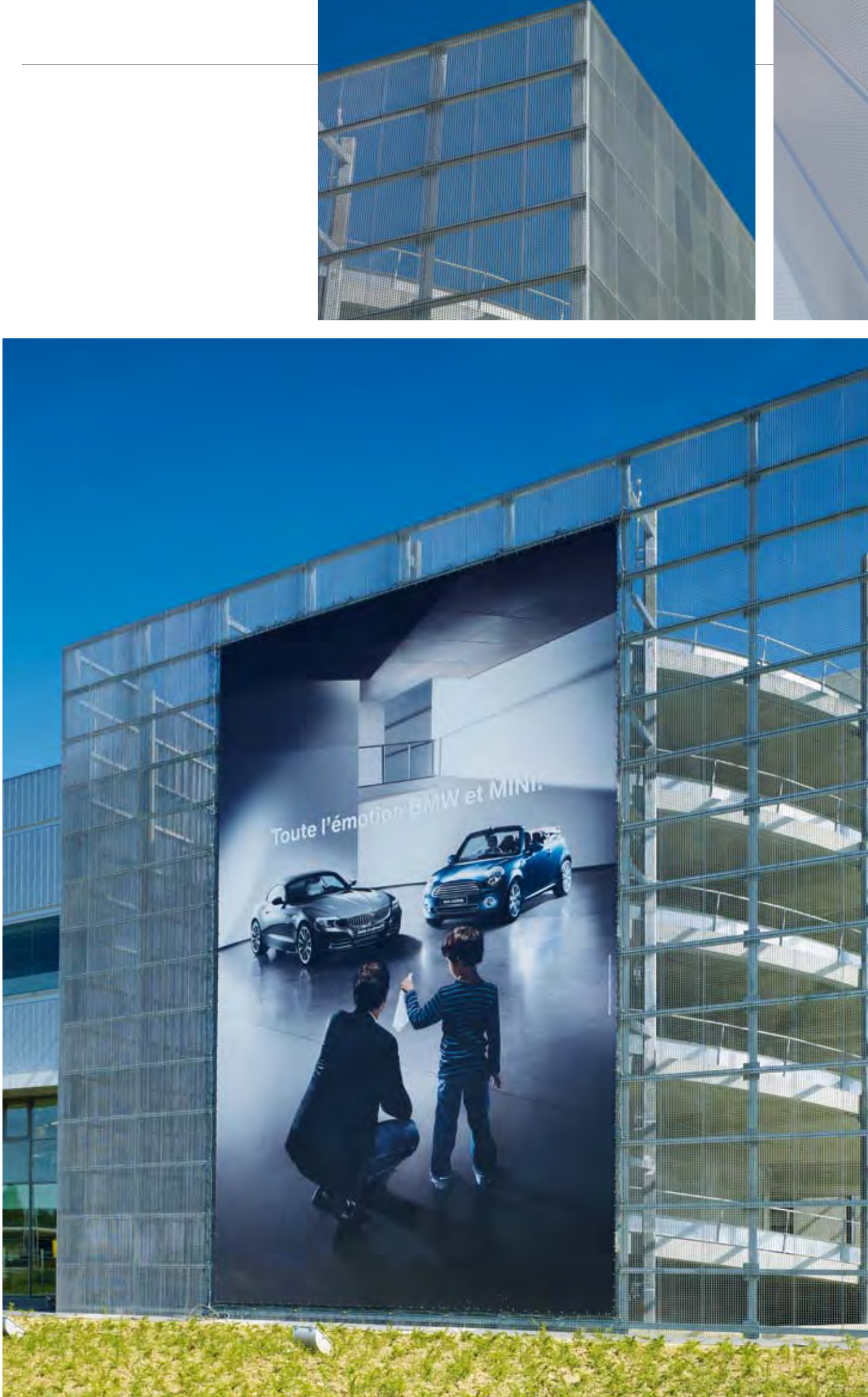
MEISER grating made of aluminium is anodised as standard in order to prevent oxidation. In the anodising process, which as a rule is carried out in an immersion bath, the material is initially degreased and pickled before the actual anodising process is performed. Here, the chemical process of electrolysis is used, with an oxidised protective layer being created on the aluminium. This can be coloured if the natural aluminium colour is not desired.



Cathodic immersion bath coating (CDC)

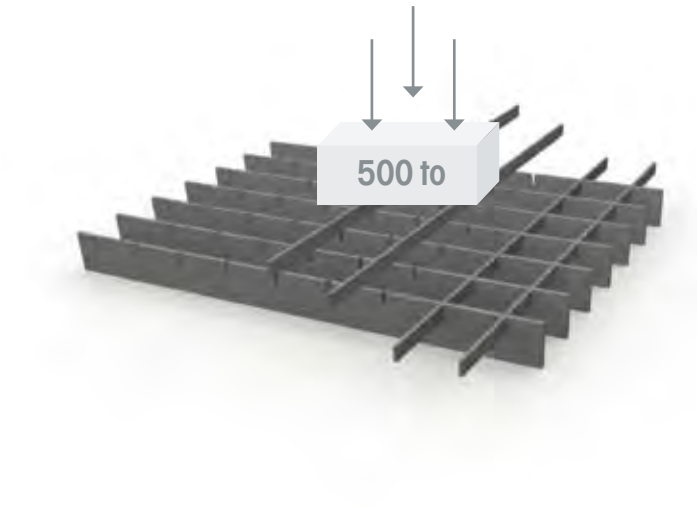
CDC is a good combination of corrosion protection, quality, cost-effective and environmental friendly. Corrosion protection that offers good resistance to mechanical and chemical stress. The underlying physical principle in electro-coating consists in attracting materials with opposite charges and producing very good adhesion as a result.

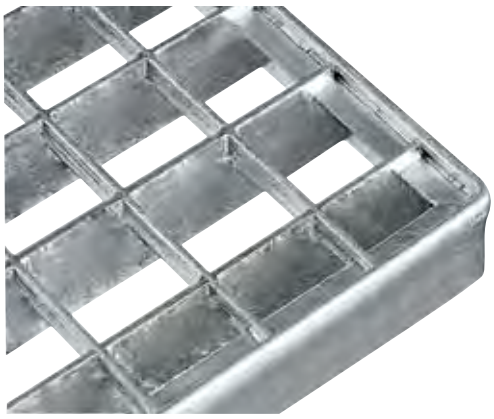
Before the coating process a direct current is applied to the workpiece, which is subsequently immersed in a coating bath with oppositely charged coating particles. In order to achieve maximum resistance of the coating, the film subsequently hardens at approximately 180° Celsius in the baking oven. Various layer thicknesses are possible, although the colour selection is limited.


Toute l'émotion BMW et MINI.

BMW, VÉLIZY

PRESS LOCKED GRATING





MEISER Press Locked Grating

The press locked grating is the most commonly used type of grating in many European countries today. Thanks to a production technology which differs significantly from that used for the press welded grating, and which enables a much greater variety of products, this type of grating provides for an almost unlimited number of applications. Its design allows for great flexibility regarding the mesh size and the height and thickness of the bearing bars. In combination with the variety of materials from which press locked grating can be manufactured, we produce grating that are exactly in line with the customer's wishes and the intended use. We do not claim that the press locked grating is the better grating, but it is certainly the more attractive and individually customised grating compared to the press welded grating.

For a press locked grating, the cross bars – which as a rule are made of cold-rolled flat steel – are pressed into the previously punched-out bearing bars. The banding bars are designed as T-shaped or flat sections, and are attached by means of automatic resistance welding. If there is an increased risk of slipping, press locked grating can be manufactured in an anti-skid design. For this, the bearing and/or cross bars are notched on the upper side. With press locked grating, the opposite end meshes are usually of equal size. But here, too, applies what has been said above: there is almost no limit to the imaginable uses and designs of press locked grating.

Common mesh spacing for bearing bars from 2 to 3 mm

Bearing bar	Cross bar								
11,1	11,1	16,65	-	22,2	33,3	44,4	49,95	66,6	99,9
15	11,1	16,65	-	22,2	33,3	44,4	49,95	66,6	99,9
21	11,1	16,65	21,0	22,2	33,3	44,4	49,95	66,6	99,9
22,2	11,1	16,65	21,0	22,2	33,3	44,4	49,95	66,6	99,9
33,3	11,1	16,65	21,0	22,2	33,3	44,4	49,95	66,6	99,9
44,4	11,1	16,65	21,0	22,2	33,3	44,4	49,95	66,6	99,9
55,5	11,1	16,65	21,0	22,2	33,3	44,4	49,95	66,6	99,9
66,6	11,1	16,65	21,0	22,2	33,3	44,4	49,95	66,6	99,9
99,9	11,1	16,65	21,0	22,2	33,3	44,4	49,95	66,6	99,9

Common mesh spacing for bearing bars from 4 to 5 mm

Bearing bar	Cross bar						
21	16,65	22,2	33,3	44,4	50	66,6	99,9
25	16,65	22,2	33,3	44,4	50	66,6	99,9
33,3	16,65	22,2	33,3	44,4	50	66,6	99,9
50	16,65	22,2	33,3	44,4	50	66,6	99,9
66,6	16,65	22,2	33,3	44,4	50	66,6	99,9
99,9	16,65	22,2	33,3	44,4	50	66,6	99,9

We will of course be pleased to fulfil any special wishes that you may have!

Standard bearing bar profiles

Bearing bar 2 mm	Bearing bar 3 mm	Bearing bar 4 mm	Bearing bar 5 mm
20/2	20/3	-	-
25/2	25/3	25/4	25/5
30/2	30/3	30/4	30/5
35/2	35/3	35/4	35/5
40/2	40/3	40/4	40/5
45/2	45/3	45/4	45/5
50/2	50/3	50/4	50/5
-	60/3	60/4	60/5
-	70/3	70/4	70/5
-	80/3	80/4	80/5
-	90/3	90/4	90/5
-	100/3	100/4	100/5
-	-	-	110/5
-	-	-	120/5
-	-	-	130/5
-	-	-	140/5
-	-	-	150/5
-	-	-	160/5
-	-	-	170/5

„Bringing nature to life" - is the motto of the treetop walk at Edersee (Lake Eder). MEISER press locked grating enable visitors to walk along the route in safety and harmonise perfectly with the architectural concept, which is based on natural shapes. The grating offer a safe path through the treetops in all weathers.

Anodised MEISER press locked grating contribute to the design of the showroom at the Porsche Centre in Lübeck. Cleverly highlighted with coloured light, the grating underline the exclusivity of the vehicles on show.

The walkways across the Saarbrucken extinguishing water ponds are covered with MEISER press locked grating in an antiskid design. As in all publicly accessible areas, it must be ensured here that the surface is slip-proof in all weathers.

When the walkways and grating were being designed, the modern style of the surrounding building complexes was taken into consideration.

At the wastewater treatment plant in the Dresden suburb of Kaditz, MEISER press locked grating provide the connection between the two digestion towers and the function tower of the plant.

The grating equipped with anti-skid protection provide a crossover which is both safe and independent of the weather.

The possible uses of grating is very varied. It is possible to find a suitable design for every application. Besides the conventional press locked grating or press welded grating, there is also a great variety of special solutions, which we would like to present to you in greater detail below. Heavy duty grating can be driven over by heavy equipment, while full grating or finned grating are increasingly finding favour among architects, as with this type of grating it is possible to create certain highlights in the design of the facade. The possible applications and the design of grating is almost limitless. We will be pleased to advise you so that together we can find the perfect solution for your application.

Full Grating

Full grating bear this name because the bearing and cross bars have the same cross-section and are therefore of equal height. A bearing bar is one whose ends are both supported and whose underside is not slotted. The advantage compared to the normal press locked grating is its improved screening and the attractive design.

Standard bearing bar profiles

Bearing bar 2 mm	Bearing bar 3 mm	Bearing bar 5 mm
20/2	20/3	-
25/2	25/3	25/5
30/2	30/3	30/5
35/2	35/3	35/5
40/2	40/3	40/5
45/2	45/3	45/5
50/2	50/3	50/5
-	60/3	60/5
-	70/3	70/5
-	80/3	-
-	90/3	-
-	100/3	-

Common mesh spacing for bearing bars from 2 to 3 mm

Bearing bar	Cross bar				
22,2	16,65	22,2	-	44,4	66,6
33,3	16,65	22,2	33,3	-	66,6
44,4	16,65	22,2	-	44,4	-
66,6	16,65	22,2	33,3	-	66,6

Common mesh spacing for bearing bars from 5 to mm

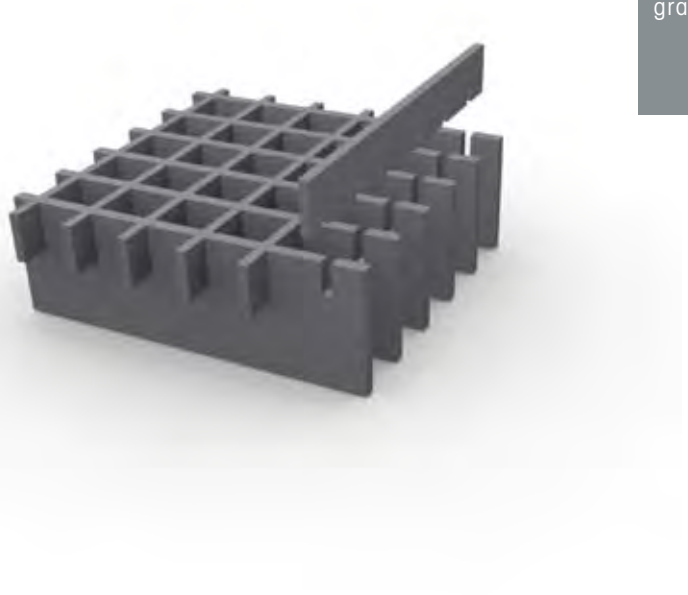
Bearing bar	Cross bar			
33,3	16,65	33,3	66,6	99,9
66,6	16,65	33,3	66,6	-
99,9	16,65	33,3	-	99,9

Heavy duty grating

From the name you can guess the intended application of the MEISER heavy duty grating. This is press locked grating with particularly deep and/or thick bearing bars. The dimensions of the cross bar are adapted accordingly.

Counter gear teeth during the pressing process gives the MEISER heavy duty grating additional stability, so that surface loads of more than 50 tonnes and wheel loads of 10 tonnes can be withstood without difficulty.

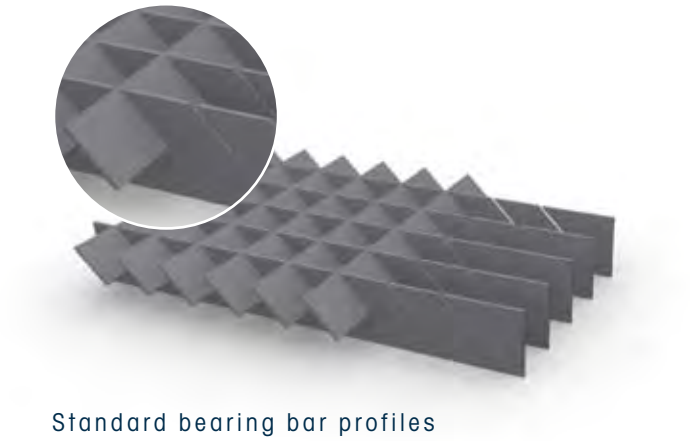
We adapt the exact design from case to case to the width between supports and the intended use. Production in high-grade steel is also possible.



Standard bearing bar profiles

Bearing bar 8 mm	Bearing bar 10 mm	Bearing bar 12 mm
80/8	80/10	-
90/8	90/10	-
100/8	100/10	100/12
110/8	110/10	110/12
120/8	120/10	120/12
130/8	130/10	130/12
140/8	140/10	140/12
150/8	150/10	150/12
-	-	160/12
-	-	170/12
-	-	180/12
-	-	190/12
-	-	200/12

Common mesh spacing			
Bearing bar	Cross bar		
25	50	75	100
50	50	75	100
75	50	75	100
100	50	75	100



Louvre Grating

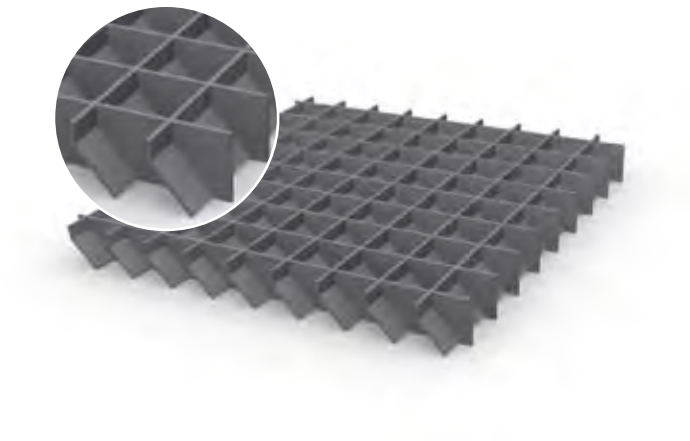
Less transparency is sometimes what is required. In these cases the louvre grating is used. There are a large number of applications, which are not restricted only to floor coverings in the case of bridges, walkways and crossovers. As a sun shield or cladding element, the louvre grating is also used in the case of ventilation grilles, facades and suspended ceilings.

MEISER offers louvre grating in steel, aluminium and high-grade steel. The cross bars can be pressed in at an angle of 15°, 30° or 45°, so that varying degrees of transparency can be achieved. Please note in your planning that for this type of grating we are only able to produce cross bar lengths of up to 1,500 mm.

Standard bearing bar profiles

2 mm	3 mm
25/2	25/3
30/2	30/3
35/2	35/3
40/2	40/3
45/2	45/3
50/2	50/3
-	60/3
-	70/3
-	80/3
-	90/3
-	100/3

Common mesh spacing				
Bearing bar	Cross bar			
33,3	16,65	22,2	33,3	66,6
66,6	16,65	22,2	33,3	66,6
99,9	16,65	22,2	33,3	66,6



Full Press Locked Louvre Grating

This special design of the louvre grating combines the technical properties of a conventional press locked grating and full grating with the attractive design of a louvre grating. The full press locked louvre grating is particularly suitable not only as facade cladding, but also as a crossover or walkway covering due to its static advantages.

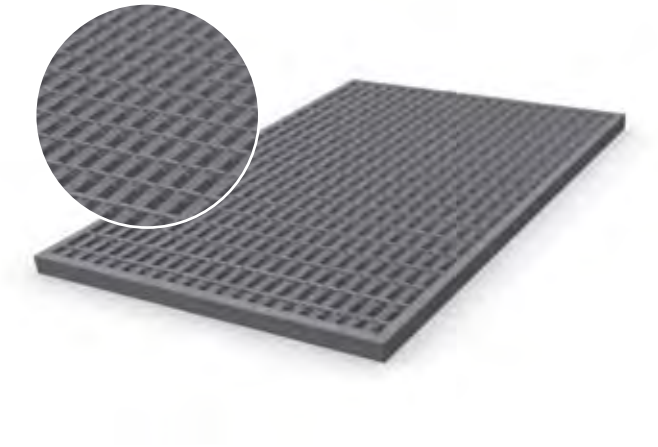
The angle of the cross bars can be freely selected in this version. The load-bearing capacity of the full press locked louvre grating benefits from the very small punch depth of the bearing bars, which is only 10 mm. MEISER offers the full press locked louvre grating in steel, aluminium and high-grade steel. A notching in the bearing bars is possible, so that this version also offers a high level of slip resistance. Please note in your planning that for this type of grating we can only produce cross bar lengths up to 1,250 mm.

Standard bearing bar profiles

2 mm	3 mm
25/2	25/3
30/2	30/3
35/2	35/3
40/2	40/3
45/2	45/3
50/2	50/3

Common mesh spacing					
Bearing bar	Cross bar				
22,2	16,65	22,2	33,3	44,4	66,6
33,3	16,65	22,2	33,3	44,4	66,6
44,4	16,65	22,2	33,3	44,4	66,6
66,6	16,65	22,2	33,3	44,4	66,6
99,9	16,65	22,2	33,3	44,4	66,6

First size mentioned = bearing bar direction; external grating dimensions



Patent Grating

The MEISER patent grating is produced with a patented punch press connection, surrounded with a U-shaped section and hot dip galvanised. The V-shaped cross bars produce a high degree of stiffness and an outstanding wiping effect.

The patent grating is therefore primarily used as a high-quality boot scraper and an extremely stable and resilient light well grating. A suitable angle frame with punched wall anchors can be supplied upon request.

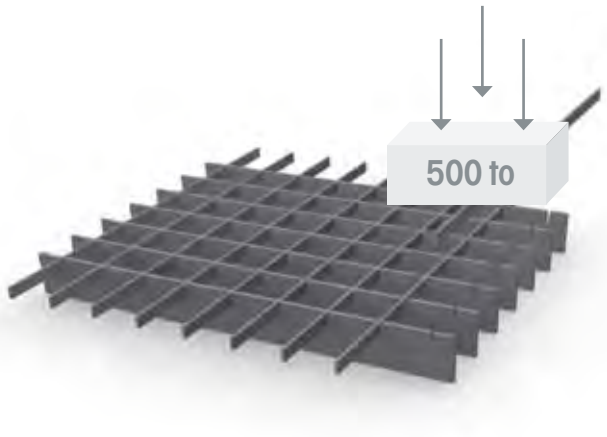
The patent grating is produced exclusively by MEISER.

Mesh width	Grating height	Bearing bar
31/24 mm	20 mm	2 mm

Ultra Grating

MEISER developed the ultra grating many years ago in order to offer cut-to-size companies an alternative to the conventional press welded mats in the form of a press locked grating design. Specially developed joining technology guarantees a solid connection between the bearing and cross bars. This can even be supplemented by spot welding upon request. The ultra grating mat is therefore ideally suited for further processing, as it is almost impossible for the cross bars to become loose during sawing.

The ultra grating mat is also available in cross bar lengths up to 1,500 mm, so that the offcuts are significantly smaller in comparison to the press welded mat. The ultra grating mat is always trimmed and available in our stock programme in various mesh spacing and sizes. Upon request, the cross bar side can also be edged.



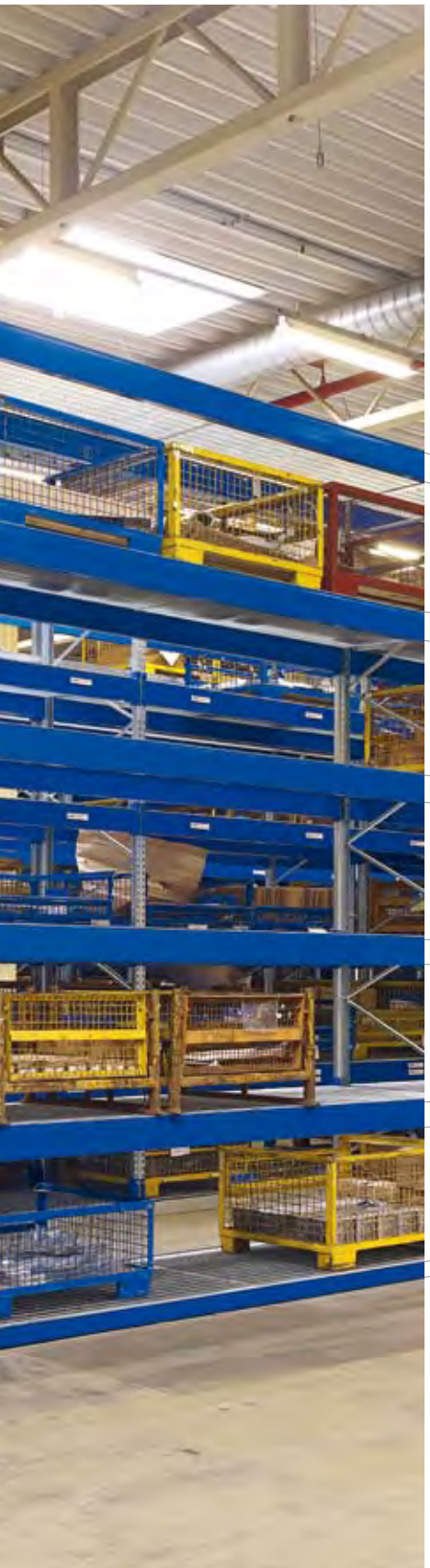
Standard bearing bar profiles

2 mm	3 mm
25/2	25/3
30/2	30/3
35/2	35/3
40/2	40/3

Common mesh spacing			
Bearing bar	Cross bar		
34,3	33,3	66,6	99,9
68,6	33,3	66,6	99,9

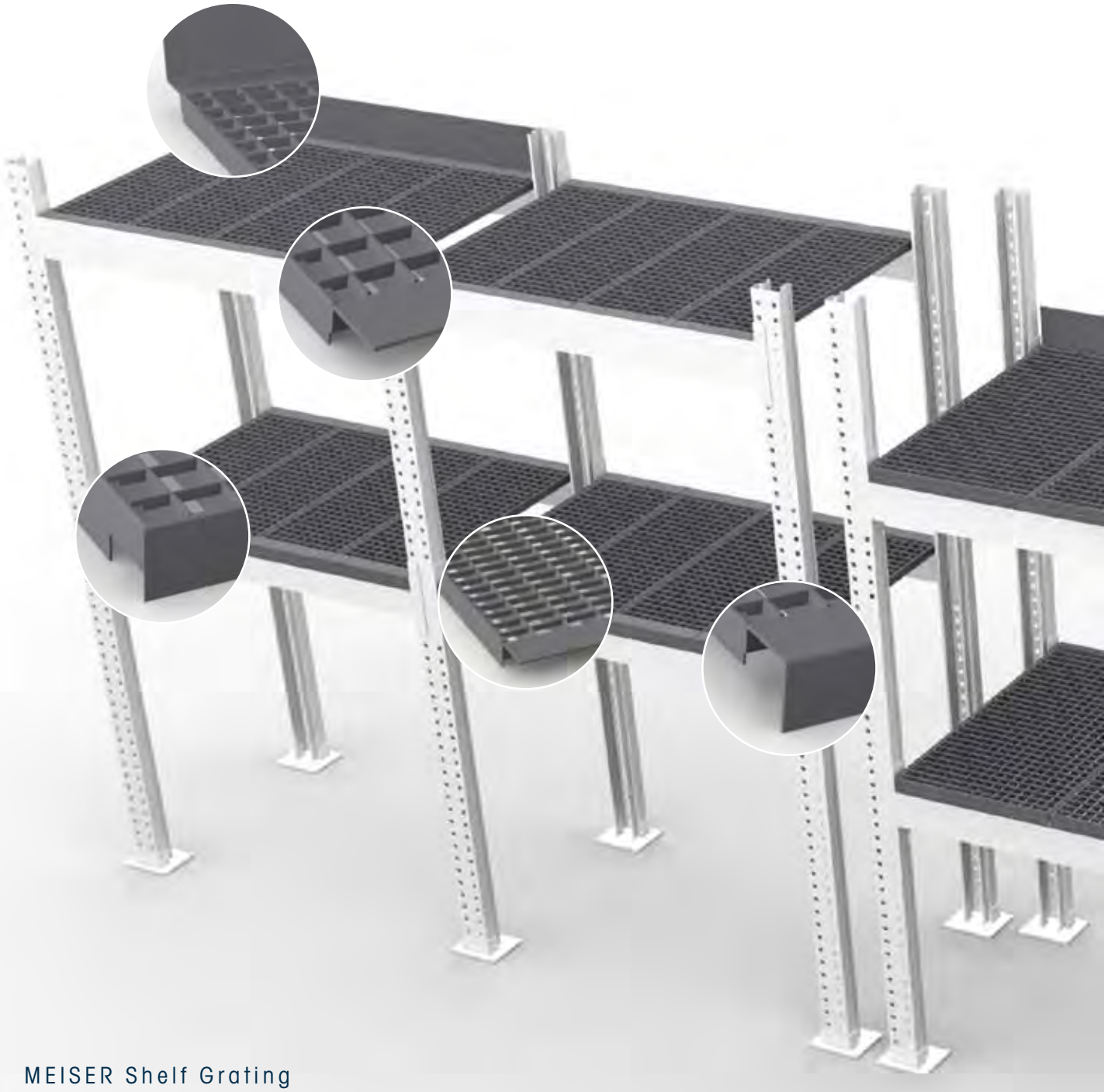

53


49
51
53
55



SHELF GRATING

HIGH-BAY WAREHOUSE, DACHAU



MEISER Shelf Grating

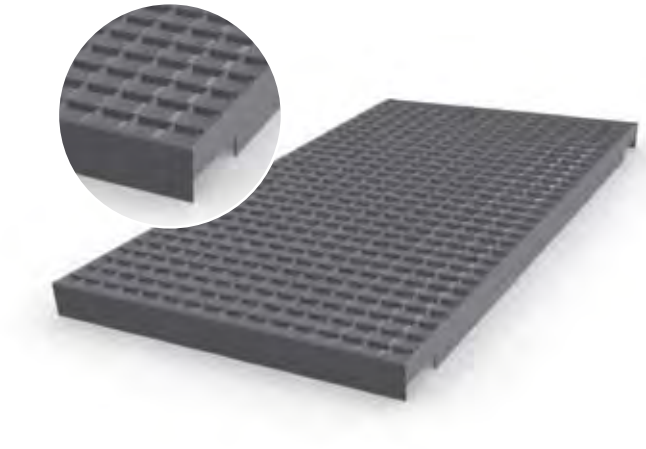
MEISER shelf grating offers decisive advantages within logistics systems compared to other shelf coverings. In addition to their durability, they are above all permeable to light and water. This is a key feature when sprinkler systems are used. The high degree of transparency of the grating means that plenty of light is able to enter, thus providing high brightness levels in the logistics system; moreover, the items stored on the shelves can be identified from below.

Ingenious detailed solutions mean that the grating is easily installed and offers the additional integrated benefits. On the following pages we present our solutions, which have been developed together with the leading suppliers of logistics systems.

Loose-Fitting Version

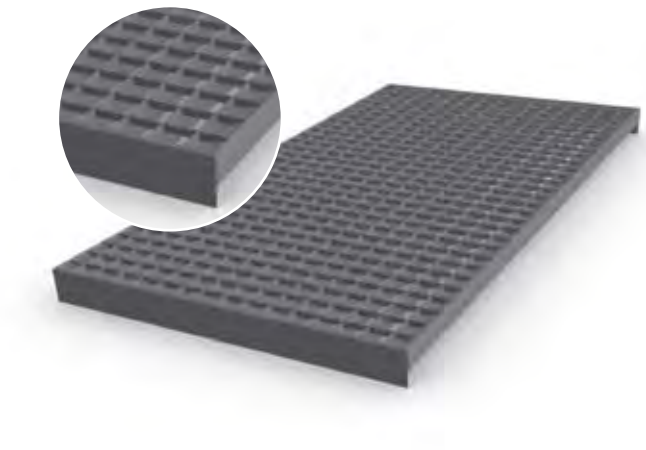
These versions of the MEISER shelf grating can be easily locked in place on the cross-members of the shelf structure. To this purpose, the T-shaped section surround, which is extended downwards, is provided with notches that are specifically adapted to the width of the cross-member.

The notches are punched up to the height of the bearing bars, so that the bearing bars are located flush on the cross-member and help to improve the statics. Further specific adjustments can be carried out, which are described below.



Shelf grating with notched T-shaped section banding bars

This is the standard design, which can be manufactured at low cost and which is suitable for various shelves of the same depth, but with different cross-members.



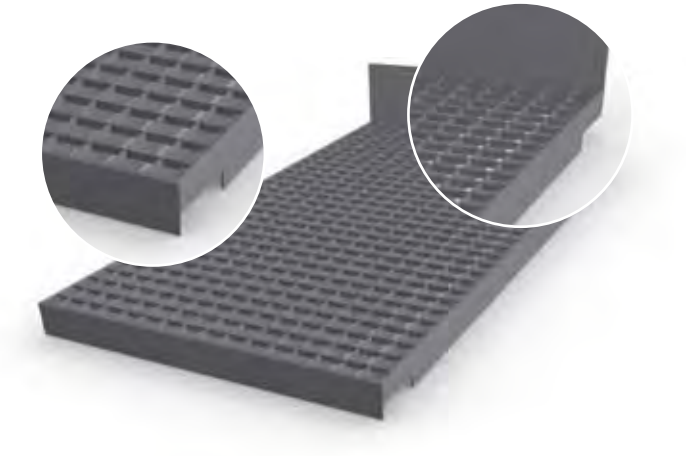
Shelf grating, bearing bar with raised edge surround

This grating has a raised edge surround, albeit only at the ends of the bearing bars. The locking function is therefore less pronounced, but the possible applications are somewhat more flexible, as it is not necessary to use a specific cross-member width.

Shelf grating, notched with push-through protection

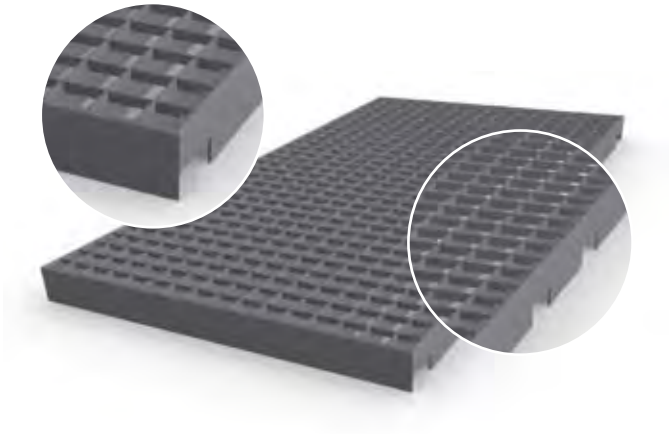
Push-through protection is an important safety element in shelf systems. If this has to be installed separately, it is associated with considerable costs.

MEISER has a shelf grating with integrated push-through protection in its range. The rear is edged with a reinforced flat bars, the height of which can be freely selected.



Shelf grating with additional notches in the area of the rests for double shelves

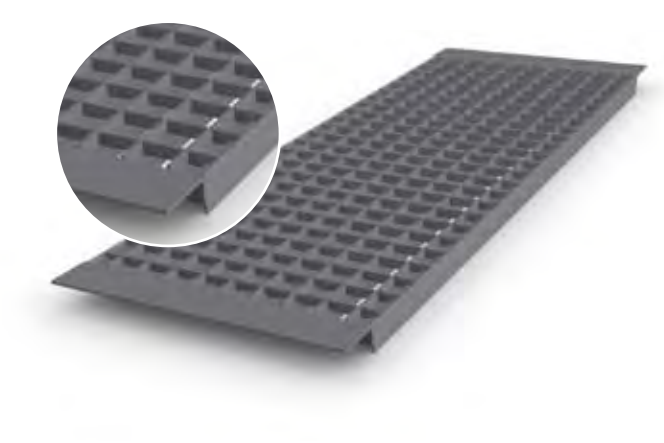
For so-called double shelves, MEISER has also developed a special type of grating. Additional notches allow a continuous connection across the double shelves. This grating can also be quickly installed.



Inserted Designs

In addition to the loose-fitting versions, MEISER has also developed this solution. Here, the ends of the bearing bars are enclosed with a Z-shaped special section that is connected to the bearing bars by means of an automatic resistance welding process. This shelf grating is also very resilient as a result.

An important advantage of the inserted shelf grating is the improved effective height of the shelf spaces. Since this shelf grating is suspended between the longitudinal girders, the insertion height of a shelf is not reduced by the grating itself.

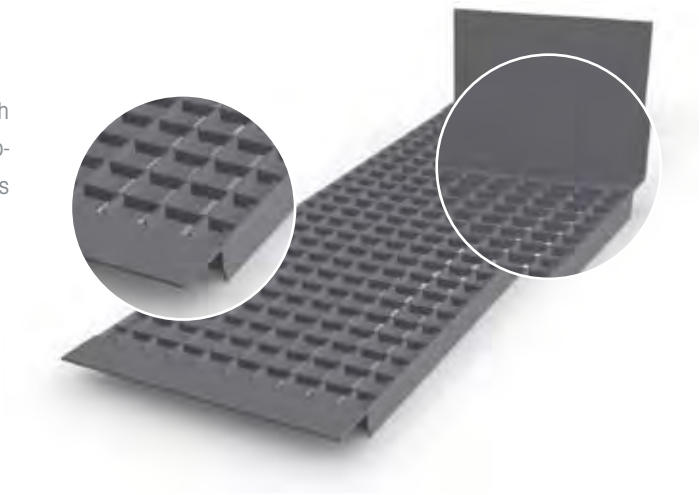


Shelf grating with Z-shaped angle section surround / MEISER special angle collar

This is the most common design of the inserted shelf grating. The angle collar used is a rolled section of our own design, which is inserted into the bearing bars and additionally welded.

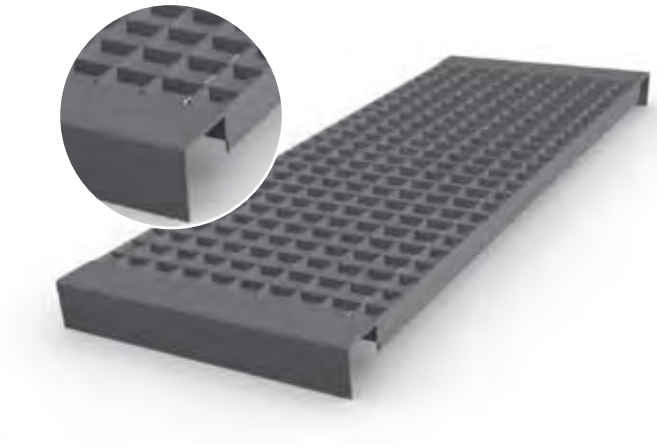
Shelf gratings with Z-shaped angle section surround and push-through protection

The inserted shelf grating is also available with push-through protection. In this case the Z-shaped special section is supplemented by an additional section, which prevents the goods from being pushed through.



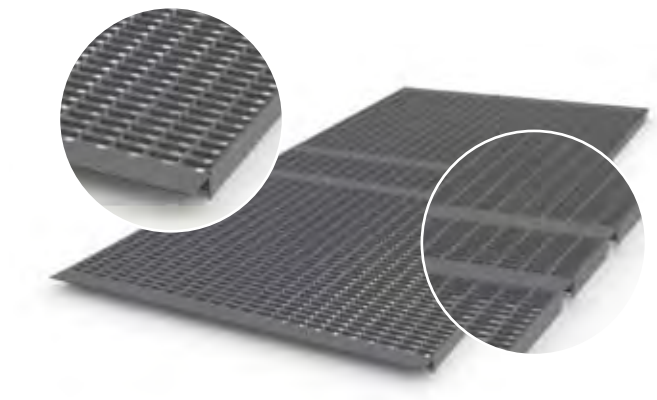
Shelf grating with U-shaped section surround

In this version, a rolled U-shaped section is welded to the ends of the bearing bars. The grating therefore lies within the shelves and is also locked with the cross-members by means of the U-shaped section. Additional safety will therefore be provided if the shelves are subjected to excessive loads.



Grating for Double Shelves

This shelf grating element consists of two grating panels which are connected by a U-shaped section in the central area of the rests to form a unit. This creates a continuous connection across the double shelves, with the full shelf height being retained.



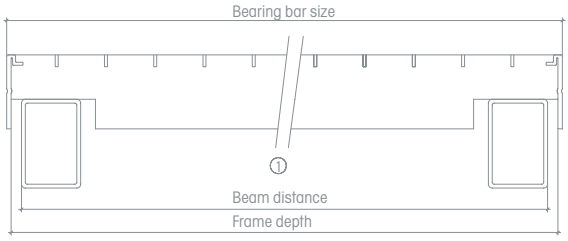
Checklist

MEISER®
www.meiser.co.uk

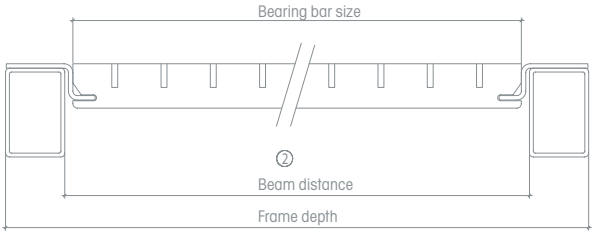
Shelf Grating

Please use the checklist as a fax template to facilitate the ordering process.

Offer number/Project number _____



SHELF GRATING LOOSE-FITTING



SHELF GRATING INSERTED

Project data

Postcode/ZIP area _____ Delivery date _____ Contact person _____ Date _____

Grating Versions

☐ Loose-fitting grating with displacement prevention
☐ Inserted grating with angle collar
☐ 30 x 30 mm
☐ 30 x 60 mm

Mesh widths

☐ With specification
☐ No specification, to be optimised

Load Bearing

☐ per shelf (frame depth _____ mm x beam length _____ mm)
_____ kg shelf load
☐ per m²
☐ Point loading

Bearing bar BB

☐ BB specification: _____
☐ BB optimised according to load

Dimensions				
Shelf load	Frame depth	Beam length		Quantity

PRESS WELDED GRATING

HEATING PLANT, FREIHAM

Press Welded Grating

MEISER press welded grating is traditionally used in many areas of industry. The continuous welding of each individual intersection point of the bearing bar and cross bar produces an extremely stable and hard-wearing structure. The cross bars normally used in the press welded grating are twisted square wires, which are resistance welded to the bearing bars.

This is carried out under high pressure using automatic resistance welding. Manufacture is carried out on production lines that have been developed by ourselves, where we can produce made-to-measure grating panels without waste and in accordance with our customer wishes. This is achieved by the fact that our machines can produce panels with cross bar lengths of up to 1,250 mm, whilst other more conventional machines are restricted to 1,000 mm. Utilising our larger panel widths can give savings of up to 20 % in the number of fixings required which obviously translates into bigger savings in installation time and labour costs. MEISER press welded grating is primarily used in the oil and gas industry, petro-chemical industry,

Common mesh spacing

Bearing bar	Cross bar						
15,08	-	-	-	38,1	50,8	76,2	101,6
17,15	-	-	-	38,1	50,8	76,2	101,6
20,77	-	24,0	-	38,1	50,8	76,2	101,6*
23,69	-	24,0	-	38,1	50,8	76,2	101,6*
25,00	-	-	-	-	-	76,2	101,6
30,15	-	-	-	38,1	50,8	76,2	101,6
33,00	-	-	31,75	-	-	-	-
34,30	19,25	24,0	-	38,1	50,8	76,2	101,6
41,45	-	24,0	-	38,1	50,8	76,2	101,6
45,23	-	24,0	-	38,1	50,8	76,2	101,6
51,45	-	24,0	-	38,1	50,8	76,2	101,6
60,30	-	24,0	-	38,1	50,8	76,2	101,6
68,60	-	24,0	-	38,1	50,8	76,2	101,6

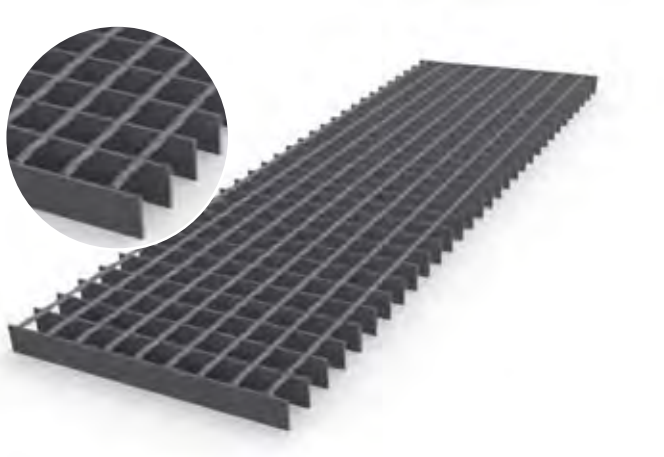
*available with restrictions

CELLULOSIC ETHANOL PLANT, STRAUBING

mining industry and in power stations. Where strong shearing forces occur and platform flooring has to be changed frequently, the superiority of the press welded grating comes into its own. Steel fabricators also appreciate the press welded grating, whose stability is ideally suited to the subsequent working of materials. MEISER press welded grating panels are normally banded with flat sections and can be produced in V2A and V4A with round or ribbed cross bars. Upon request, for grating manufactured in mild steel, the cross bars can be supplied in the size 7 mm (twisted) or 8 mm (ribbed).

Standard bearing bar profiles

Bearing bar 2 mm	Bearing bar 3 mm	Bearing bar 4 mm	Bearing bar 5 mm
-	20/3	20/4	20/5
25/2	25/3	25/4	25/5
30/2	30/3	30/4	30/5
35/2	35/3	35/4	35/5
40/2	40/3	40/4	40/5
45/2	45/3	45/4	45/5
-	50/3	50/4	50/5
-	60/3	60/4	60/5
-	70/3	70/4	70/5
-	80/3	80/4	80/5



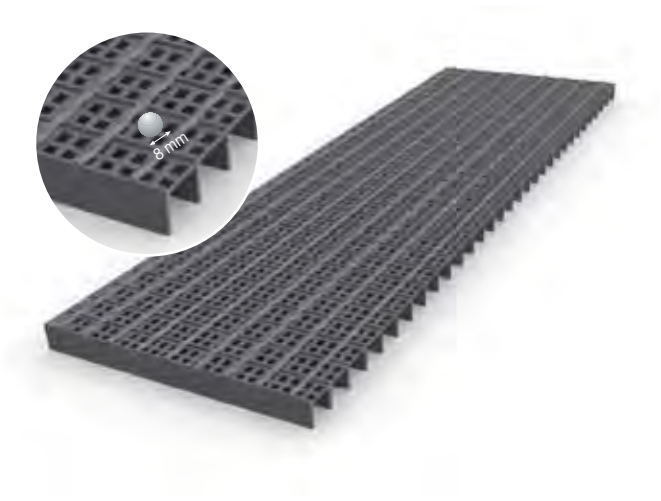
Very narrow mesh spacing, less than 15.08 mm, which is sometimes required for safety reasons, cannot be produced for the press welded grating. If it is important to prevent the passage of small parts from platforms, a close-mesh press locked grating is the first choice. However, MEISER can address this restriction with respect to press welded grating by supplementing the standard press welded grating upon request with perforated sheets. These are arranged between the bearing bars and welded to the cross bar. A ball with a diameter of 9 mm, i.e. a reference size that is often used, cannot fall through such a grating. Saarbahn GmbH in Saarbrücken has installed this type of press welded grating in its two-storey workshop halls in order to protect employees on the lower floor against falling objects.

The Sunliquid demonstration plant of Clariant AG is currently the largest plant in Germany for the production of bio-ethanol. The hazards associated with the production of bio-ethanol require high safety standards, which are fully met by MEISER press welded grating. Not only their low flammability, but also their resistance to chemicals speak in favour of the use of MEISER press welded grating in the production of bio-ethanol.

The production of polysilicon requires strict safety precautions and is associated with a potential hazard to employees and the environment. At the PV Crystalox Solar PLC factory, MEISER press welded grating forms the ideal basis, particularly in the outdoor area, for safe working and the safe handling of hazardous substances.

Inside Rügen Bridge, MEISER press welded grating used as safe walking routes. The good anti-skid properties and high torsional stiffness of the press locked grating is ideal for use in bridge building.

As with the press locked grating, the press welded grating is also available in numerous versions. We are aware of country and customer-specific requirements and are implemented in accordance with the relevant standards. It is often the case that the clear mesh width plays an important role from the aspect of safety. As the press welded grating cannot provide the fine mesh grid of a press locked grating owing to the manufacturing process, other versions have been developed which take into account the safety requirements. This guarantees that a test ball with a specific diameter cannot fall through. Special welding regulations can of course also be implemented by us.



MEISER Press Welded Grating

In the case of press welded grating, it is not possible to produce very small mesh widths for technical reasons. If the customer requires the use of press welded grating but would nevertheless like to ensure that the grating is 8 mm ball proof, then this is the grating that sould be used. By welding perforated sheets with an aperture of not more than 8 mm between the bearing bars, it is possible to produce a very "close-meshed" grating for a reasonable cost. This grating corresponds to the Spanish standard no. 486/1997 (BO 23rd April 1997, no. 97/1997).

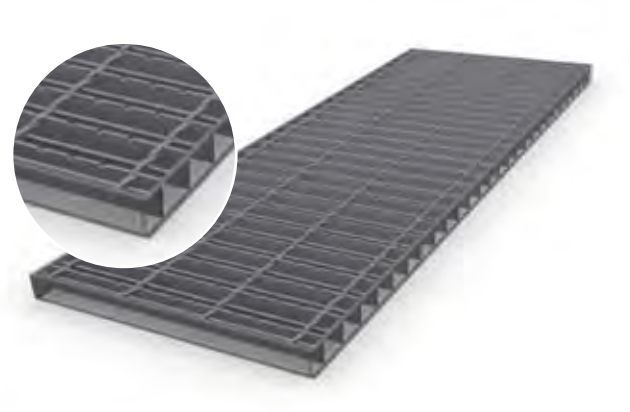
Common mesh spacing		
Bearing bar	Cross bar	
34,30	38,1	50,8

Standard bearing bar profiles

Bearing bar 2 mm	Bearing bar 3 mm
25/2	25/3
30/2	30/3
40/2	40/3

MEISER Offshore Press Welded Grating

This type of grating has been specially designed for use in the offshore oil and gas industry. The background to this is the specification is that a test ball with a diameter of 15 mm must not fall through the grating. In order to guarantee this, an intermediate round bar is welded parallel and centrally between the bearing bars to the underside of the twisted square cross bars using the automatic resistance welding method. This provides the offshore grating with additional stability, which is very useful in the harsh conditions on offshore oil rigs.



Common mesh spacing	
Bearing bar	Cross bar
34,30	101,6
38,28	101,6

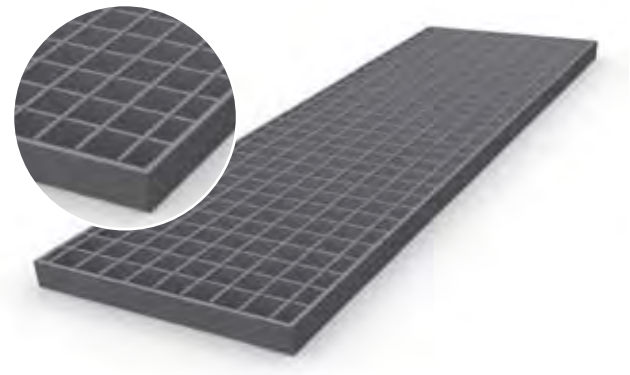
Standard bearing bar profiles

Bearing bar 3 mm	Bearing bar 4 mm	Bearing bar 5 mm
25/3	25/4	25/5
30/3	30/4	30/5
35/3	35/4	35/5
40/3	40/4	40/5
45/3	45/4	45/5
50/3	50/4	50/5
60/3	60/4	60/5

MEISER Press Welded Grating with Smooth Round Bars

The classical press welded grating is produced with twisted square bars, which offer a certain degree of slip resistance. If aesthetic aspects are important, it is also possible to use smooth round bars as cross bars.

This version is possible for all common mesh spacing.

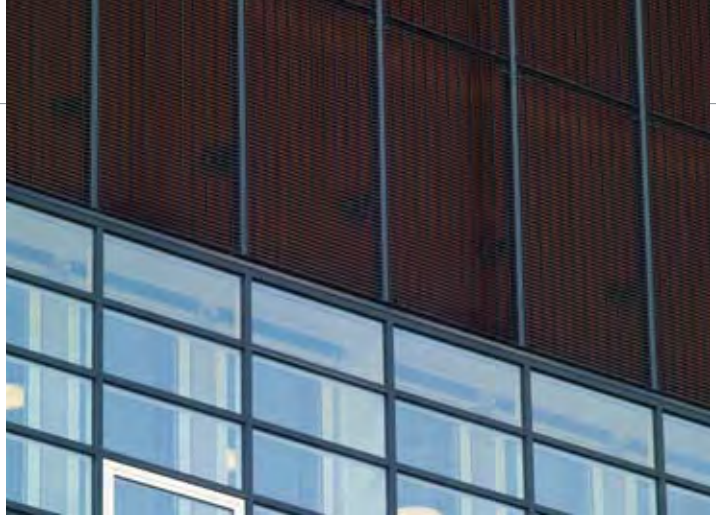


Common mesh spacing							
Bearing bar	Cross bar						
15,08	-	-	-	38,1	50,8	76,2	101,6
17,15	-	-	-	38,1	50,8	76,2	101,6
20,77	-	24,0	-	38,1	50,8	76,2	101,6*
23,69	-	24,0	-	38,1	50,8	76,2	101,6*
25,00	-	-	-	-	-	76,2	101,6
30,15	-	-	-	38,1	50,8	76,2	101,6
33,00	-	-	31,75	-	-	-	-
34,30	19,25	24,0	-	38,1	50,8	76,2	101,6
41,45	-	24,0	-	38,1	50,8	76,2	101,6
45,23	-	24,0	-	38,1	50,8	76,2	101,6
51,45	-	24,0	-	38,1	50,8	76,2	101,6
60,30	-	24,0	-	38,1	50,8	76,2	101,6
68,60	-	24,0	-	38,1	50,8	76,2	101,6

*available with restrictions

Standard bearing bar profiles

Bearing bar 2 mm	Bearing bar 3 mm	Bearing bar 4 mm	Bearing bar 5 mm
-	20/3	-	-
25/2	25/3	25/4	25/5
30/2	30/3	30/4	30/5
35/2	35/3	35/4	35/5
40/2	40/3	40/4	40/5
45/2	45/3	45/4	45/5
-	50/3	50/4	50/5
-	60/3	60/4	60/5
-	70/3	70/4	70/5
-	-	80/4	80/5



SPECIAL GRATING

UNIVERSITY, ENSCHEDE

PEDESTRIAN ZONE, KAUFBEUREN

Special Grating

Over time, MEISER has developed and produced more than 5,000 different types of grating. Most of these versions were created from very detailed specifications by the customer, architect or planning office. Often the main focus is on functionality, although it is not unusual for aesthetics to play a certain role, with a tight budget sometimes setting clear limitations. If everything comes together, we speak of special solutions or special grating, which we find particularly appealing.

Imagination and technical expertise are required for comb grating, finned grating or grating on which you can walk barefoot.

If load-bearing capacity is less important than visual screening, MEISER louvre grating are used. The requirements come from our customers, but the development and the technically reliable solution is provided by us.

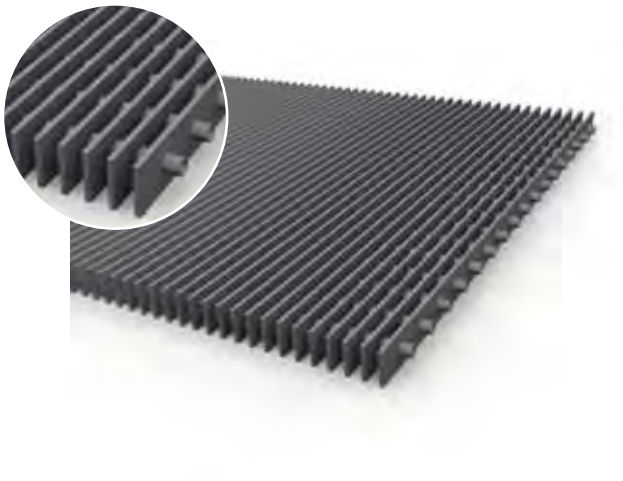
MEISER comb grating was used during the refurbishment of the Moritzburg in Halle. The west and north wing of the castle are connected by a roof that is shaped by skylights covered with aluminium, and now faced with MEISER comb grating.

Their appearance and durability are achieved by a cathodic immersion bath coating and a subsequent powder coating. This adds a touch of modernity to the historic architectural styles and shapes from the various epoques of the Moritzburg.

Fences are an important safety element in sports stadiums. As can be seen here at the Stade de la Maladière in Neuchâtel, MEISER press locked grating (the term ULTRA has a negative connotation in the field of sports stadiums) provides a stable alternative to conventional stadium fences which are of equivalent value in terms of design. Different mesh spacing and the freedom to choose the colour, as well as production in high-grade steel, offer a suitable solution for every purpose. Painted in the colours of the club, used for separating the blocks and as a border with the edge of the sports field, the MEISER fencing system offers more than just stable protection.

Every year the number of cars registered on our roads increases. This means that the problem of providing parking spaces for clinics, companies, the retail trade, airports, public facilities and many other locations continues to grow. Often it is necessary to successfully integrate a multi-storey car park into the surroundings. The facade plays an important role, also with respect to the budget. Grating offer new options for the architecture of the multi-storey car park, as well as fulfilling functional roles. In this multi-storey car park in Regensburg the grating conceal the heavy structure of the building, provide fall protection and nevertheless enable extensive ventilation.

MEISER tree grating protect the roots of our trees, ensuring a sufficient supply of water while remaining architecturally appealing. Tree grating can be inserted into a group either unobtrusively and flush with the surface. Or you can employ the somewhat raised grating as a deliberate design element, as shown in our reference photograph.



Finned Grating

MEISER finned grating stands out considerably compared to a classical grating. The function of the cross bar is taken over in this version by a pipe that is inserted centrally in the bearing bars. This provides the finned grating with a very high-quality appearance, although this is less suitable for larger span widths.

In normal cases the finned grating is not provided with a surround, particularly in order not to disrupt the very clear design. Finned grating is often used as a high-quality ventilation cover for use indoors. To this purpose they can be manufactured from aluminium and high-grade steel, or of course in the classical version of hot dip galvanised steel. They can be further adapted to individual requirements through the use of special bearing bar profiles and different pipe diameters.

Common mesh spacing						
Bearing bar	Cross bar					
11,10	50	100	150	200	250	300
21,00	50	100	150	200	250	300
22,20	50	100	150	200	250	300
25,00	50	100	150	200	250	300
33,30	50	100	150	200	250	300
44,40	50	100	150	200	250	300
66,60	50	100	150	200	250	300

Standard bearing bar profiles

Bearing bar 2 mm	Bearing bar 3 mm	Bearing bar 4 mm	Bearing bar 5 mm
25/2	25/3	25/4	25/5
30/2	30/3	30/4	30/5
35/2	35/3	35/4	35/5
40/2	40/3	40/4	40/5
45/2	45/3	45/4	45/5
50/2	50/3	50/4	50/5

Barefoot Grating

Some locations such as swimming baths are places where shoes are not usually worn. Here, a grating can be very useful. For this reason we have developed a grating which is also pleasant when walked on barefoot. The cross bar is a U-shaped section that is pressed in at a flat angle. The clearance between these treads is approximately 9 mm. They are manufactured from steel or high-grade steel.

Common mesh spacing	
Bearing bar	Cross bar
22,20	8,25
33,30	8,25
66,60	8,25

Standard bearing bar profiles

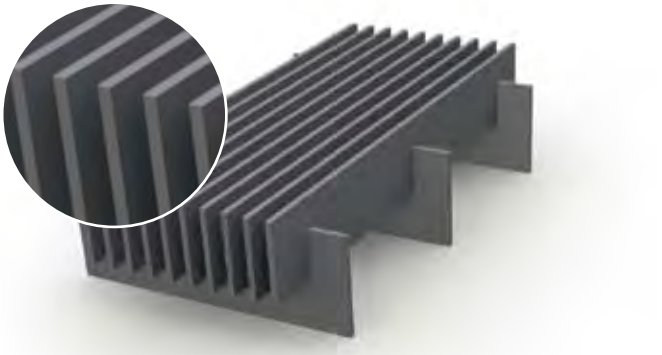
Bearing bar 2 mm	Bearing bar 3 mm
25/2	25/3
30/2	30/3
35/2	35/3
40/2	40/3
45/2	45/3
50/2	50/3
-	60/3

Comb Grating

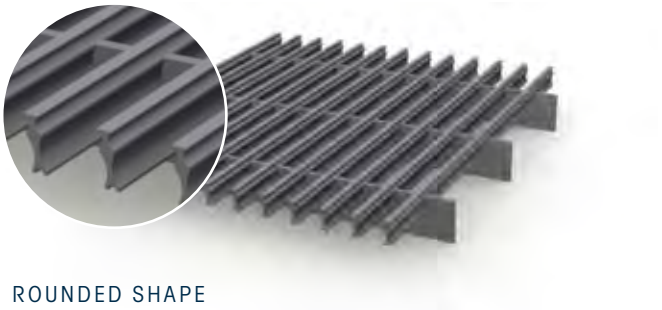
MEISER comb grating is a press locked grating with cross bars which protrude above the top surface of the bearing bars. This makes the bearing bars almost invisible, so that the grating no longer looks like a grille, but more like a comb. The emphasis on the cross bars produces a very elegant and light appearance. The clearance and number of bearing bars can be varied and are adapted to the static requirements. There are also several possible variations for the clearance of the cross bars.

MEISER comb grating can have a variety of uses, although their main application is usually where there are high aesthetical demands on appearance. This grating is therefore frequently found as a covering indoors, e.g. for air conditioning systems and heating ducts, but also as a high-quality channel grate and facade cladding in order to emphasise horizontal or vertical lines.

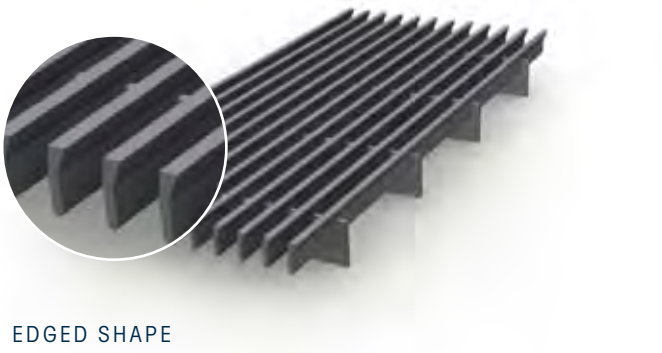
The special arrangement of the bearing and cross bars means that they can also be readily used as sun shade elements. Like the finned grating, the comb grating can also be produced with different materials and surfaces; furthermore, special profiles can be used as the cross bar for this special grating in order to provide particularly attractive effects.



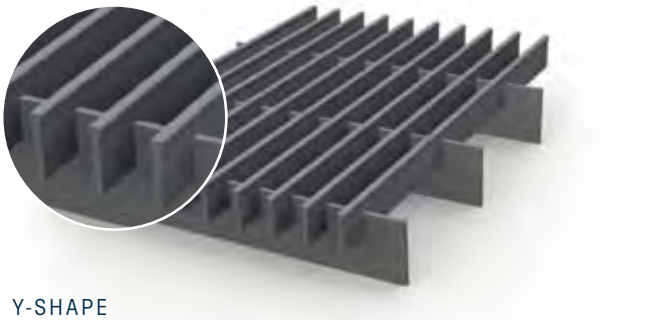
LINEAR SHAPE



ROUNDED SHAPE



EDGED SHAPE



Y-SHAPE

Common mesh spacing				
Bearing bar	Cross bar			
15,00	11,1	16,7	22,2	33,3
21,00	11,1	16,7	22,2	33,3
22,20	11,1	16,7	22,2	33,3
33,30	11,1	16,7	22,2	33,3
66,60	11,1	16,7	22,2	33,3
99,90	11,1	16,7	22,2	33,3

Standard bearing bar profiles

Bearing bar 2 mm	Bearing bar 3 mm
30/2	30/3
35/2	35/3
40/2	40/3
45/2	45/3
50/2	50/3

Tolsun

The MEISER Tolsun is a designer grating produced exclusively by MEISER. Developed by our French colleagues, the name expresses one of its important advantages, namely sun shielding.

Specially profiled aluminium fins, which are modelled on the wings of an aeroplane, serve as cross bars and give the Tolsun a special aesthetic touch. As a facade element, the Tolsun guarantees excellent sun shielding, but nevertheless a natural air supply as well, and thereby makes a significant contribution to an all-round air-conditioning system and high levels of thermal comfort.

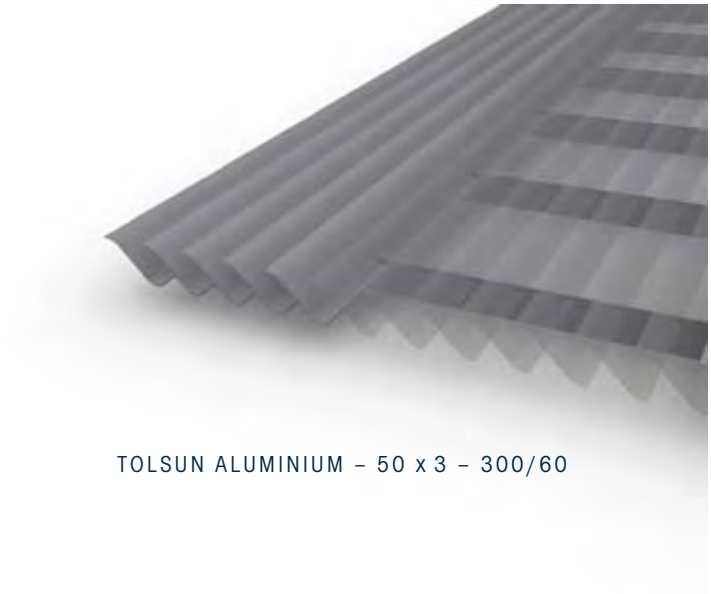
MEISER offers the Tolsun with a well thought-out idea for the means of attachment as an all-round solution for the design of the facade with an air conditioning effect. The Tolsun is an architecturally appealing and very high-quality product. The lightweight design and the possibility of producing one-part and large-surface elements provide good value for money. The MEISER Tolsun is only available in aluminium, but can be customised to your individual needs by colour anodising or colour coating.

TOLSUN ALUMINIUM – 50 x 3 – 300/120

Technical Details

Bearing bar 50/3	Cross bar 100 x 1,5
300 mm	60 mm
300 mm	120 mm
300 mm	180 mm

Maximum format 1,500 mm (bearing bar direction)
Maximum format 2,000 mm (cross bar direction)



TOLSUN ALUMINIUM – 50 x 3 – 300/60


art de la

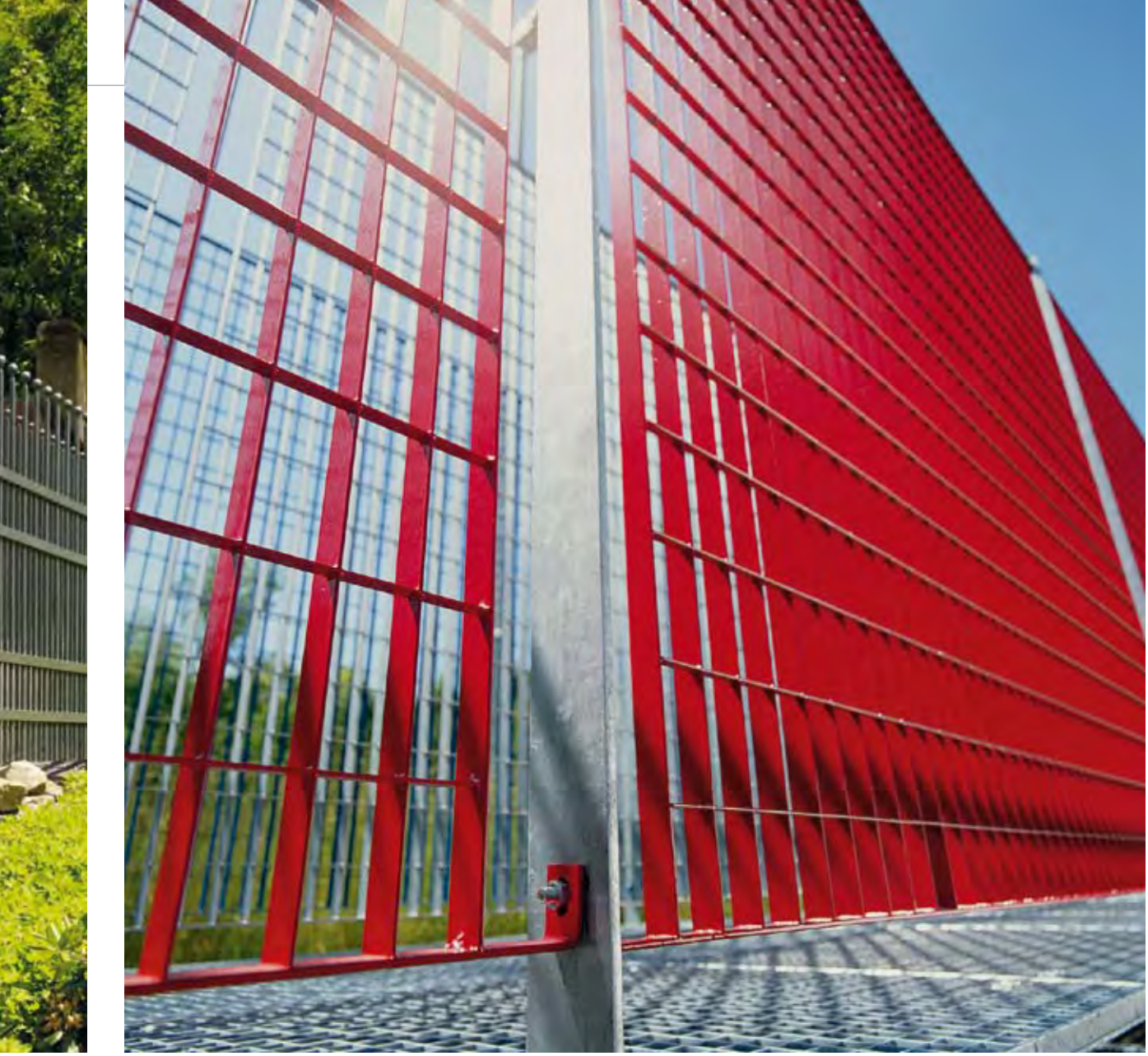
BENEDICTINE ABBEY, THOLEY

Fences

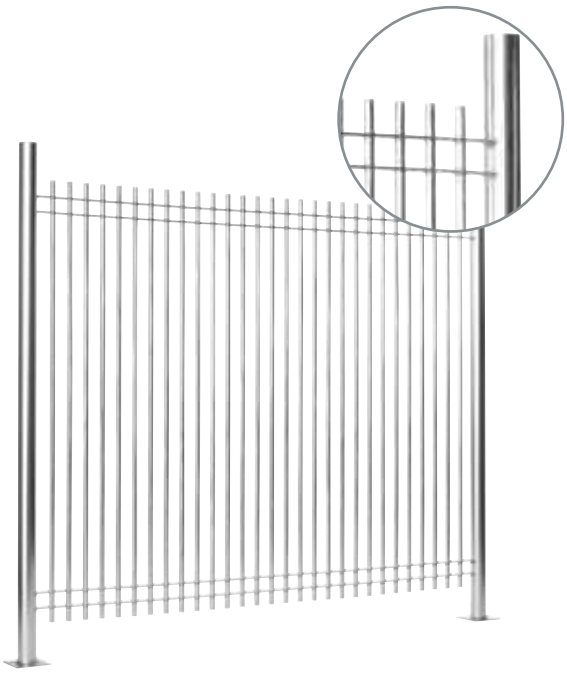
MEISER fence grating is fundamentally a grating with special edge surrounds. Depending on the purpose of the fence, the design can be very light and transparent, but also very stable and close-meshed, e.g. as a crowd barrier at events.

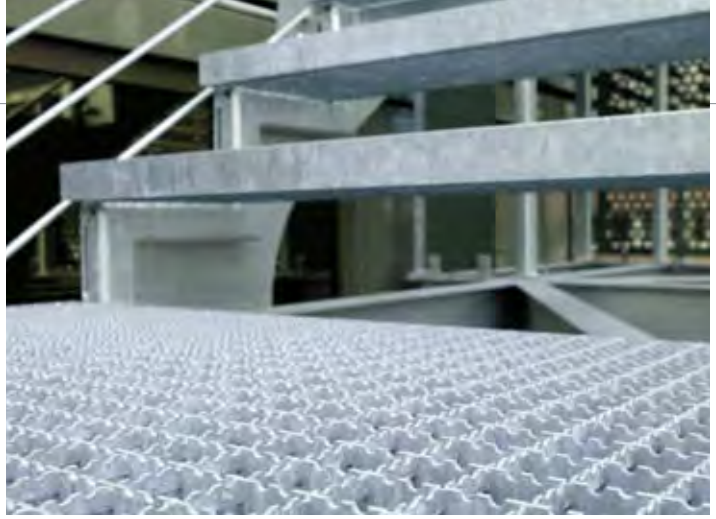
The fence height and field size can be individually selected, as can the material of the fence and the surface design. As a rule, the fence elements are enclosed with a flat bar, which contains slotted holes for easy mounting to the fence posts.

Upon request, MEISER can supply entire fence systems, including installation.



FENCE, STADIUM





STAIR TREADS

TOP, FROM LEFT TO RIGHT:
HOTEL ROOMERS, FRANKFURT;
TOWN HALL, KELKHEIM;
OFFICE BUILDING, MUNICH
BOTTOM: SKI JUMP, KLINGENTHAL

Stair treads

MEISER stair treads are manufactured from grating incorporating endplates and non-slip safety nosing to their leading edge. The tread as an essential safety element of all types of staircases must always function correctly, be it during everyday intensive use on the access path to a ski lift, or where subjected to extreme loads, if, for example, the staircase is used in an uncontrolled manner as an escape route by many people during a fire. MEISER is aware of this responsibility and has designed its stair treads accordingly. The extended, perforated safety nosing fulfils and even exceeds the latest regulations. It provides additional stability, reduces the maximum depth of the opening to 120 mm and fulfils safety class R11. At the request of the customer, the nosing can also be made of a special section, e.g. a non-slip steel flooring plate or a sanded steel angle. The safety endplates have a pronounced bead, which interlocks with the bearing bars. This prevents the endplate from tearing

RED CROSS HEAD QUARTERS, ERLANGEN

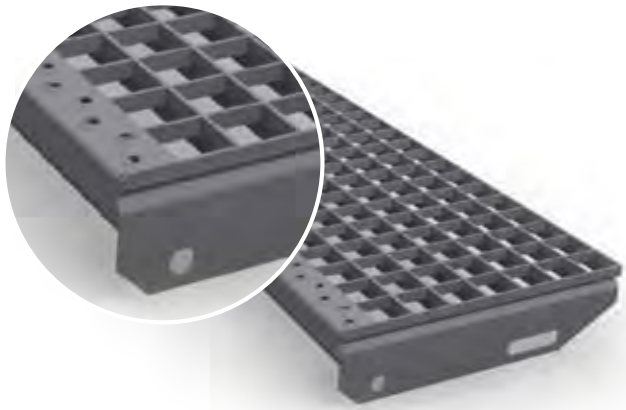
off prematurely if it is subjected to significant excess loads and causing the tread to fail. The tread surface of the MEISER stair treads can be designed individually. As a matter of principle, stair treads can be produced as press locked grating treads and press welded grating treads. The mesh spacing and height of the bearing bar are determined by the effective width and the customer's requirements. Of course we know what is required in the case of publicly accessible staircases. The stair treads are produced in accordance with the specifications of DIN 24531-1 and provide for a corresponding hole pattern in the endplates. Individual hole patterns are of course possible, as well as notched bearing bars and cross bars, so that slip resistance up to class R13 is possible. It goes without saying that stair treads can also be designed in aluminium and high-grade steel; special designs allow stair tread widths of up to 4,000 mm.

Wind turbines are increasingly dominating our countryside. Their share of regenerative energy sources is growing. Their height can reach up to 200 metres. It is essential that if such turbines have to be serviced or repaired, they can be readily and safely accessed on foot. Every turbine therefore requires a small access staircase from the outside and facilities inside which are not visible externally. In every case the steps are a crucial safety element for which no compromises are possible.

Sometimes stairs are never used, or are only used in an emergency. Then these are called emergency escape stairs, such as in this case at a hotel in Frankfurt. The grating stairtreads must be able to withstand enormous loads in the case of a fire. They are therefore designed with double anti-skid protection and a large tread depth.

In the case of large silo systems it is only possible to access the external shell because as a rule the silo is filled up with - sometimes sensitive - material. The steps then have to fit exactly on the external radius of the tank system and also possess high torsional stiffness. The steps at the fuel depot in Honau were therefore given an anti-skid design by MEISER.

Tiger and Turtle – Magic Mountain is a landmark in the Angerpark in Duisburg-Angerhausen that is modelled on a roller coaster. The large sculpture is a work of art by Heike Mutter and Ulrich Genth, which was developed as part of the Ruhr Capital of Culture Ruhr 2010. The total length of 220 metres is covered with 349 MEISER grating stairtreads, of which only 220 can be accessed on foot, however, as the remaining areas are too steep.



Press Locked Grating Treads

Press locked grating treads can be produced from mild steel, high-grade steel and aluminium. They are produced in accordance with the same principle as for press locked grating. It is possible to provide these stair treads with anti-skid-properties up to R13 by including special notches on the bearing bars and cross bars. Even very large tread widths can be produced by designing the bearing bars in the same way as heavy duty grating. Thus it is possible for even extreme loads to be reliably absorbed.

Press Welded Grating Treads

Press welded grating treads can be produced from mild steel and high-grade steel. Here too, production is based on the process used for the manufacture of press welded grating. It is possible to provide this tread design with anti-skid-properties up to R12.

SAFETY ENDPLATE WITH BEAD

Endplates

For standard stair treads, the safety endplate with bead is generally used. However, upon request a special endplate with a different drill-hole size can be attached. From a bearing bar height of 50 x 3 mm upwards the drill-hole size should be coordinated in all cases in order to avoid installation problems.

Stair tread endplates with DIN standard drill-hole	
Length (mm)	Drill-hole
240	120
270	150
305	180

Stable and safe: the new MEISER stair tread with safety nosing

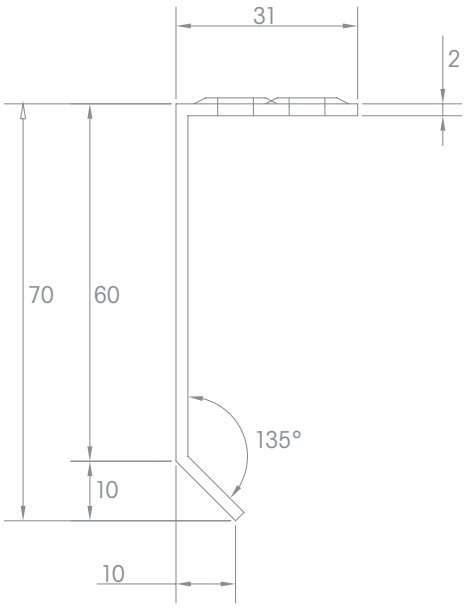
Raised safety nosing

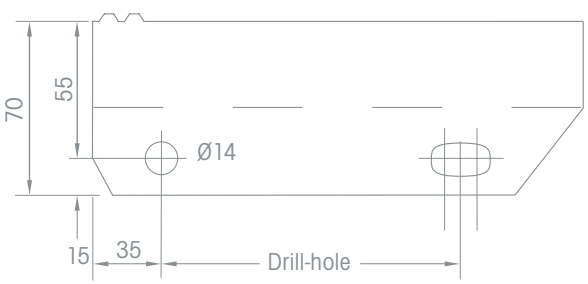
For the purposes of slip resistance and in order to increase their load-bearing capacity, stair treads are provided on the front edge with a perforated, specially shaped angle section. This so-called nosing is welded together with the endplate and the bearing bar and contributes to reinforcing the stair tread. It can also be produced from non-slip steel flooring or checker plate. We comply with specific customer wishes as well as with deviating foreign standards.

Safety nosing 70 mm

In the case of publicly accessible staircases, regulations are increasingly specifying a maximum clearance of 120 mm between the treads. We have taken this specification into account with a 70 mm-high nosing and therefore fulfil ÖNORM B 5371, which in the case of pitches of up to 190 mm permits a maximum step-through height of 120 mm.

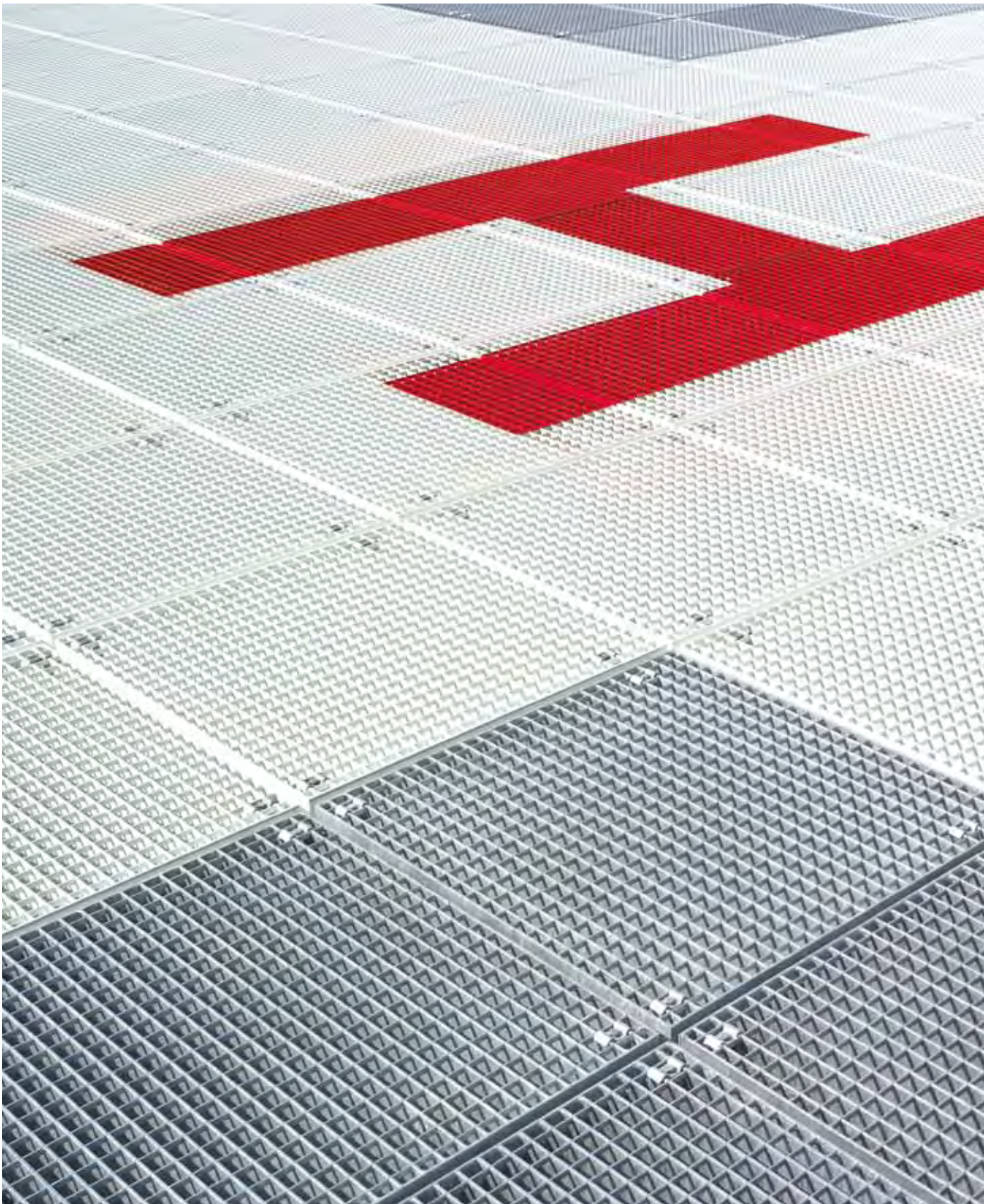
Safety nosing, perforated, Note: safety nosing 34 mm

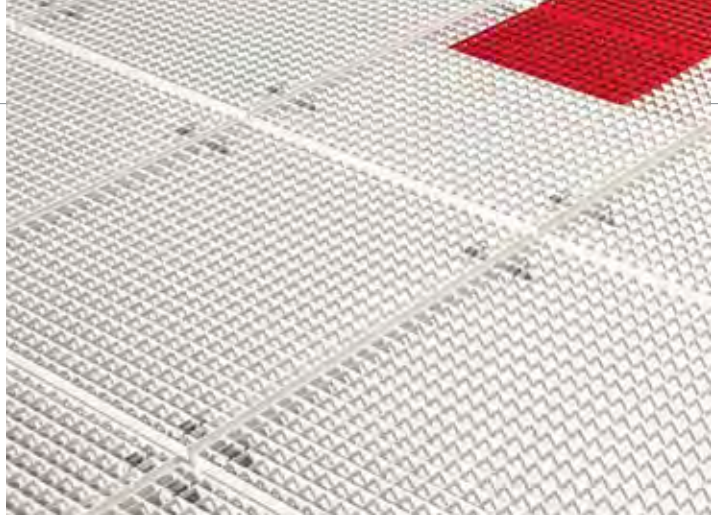




HEIGHT OF THE CLIPS 70 MM


5t



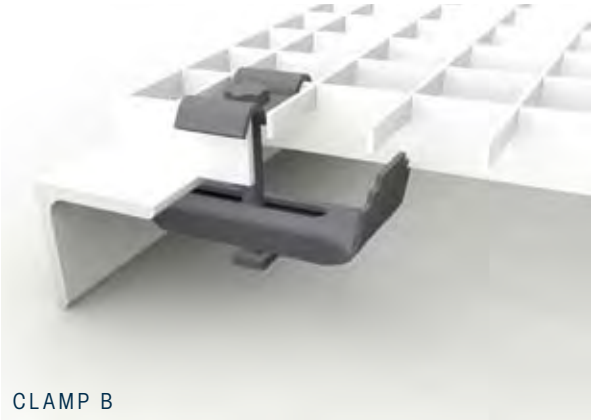


FIXING CLIPS

MEISER grating fixing clips are an important part of our service. The grating can only fulfil its function properly if it is correctly attached, as otherwise accidents can quickly happen. MEISER has the proper fixing clip for every application, from the simple standard clamp to the customised individual solution MEISER produces many clamps itself, but also works together with well-known fastening specialists.

Together with the HILTI company, the XMGR clamp has been developed, which is insensitive to vibrations and offers enormous installation advantages. On the following pages we show you the most common safety systems, which in most cases represent a good and low-cost solution.

**LUCERNE CANTONAL HOSPITAL,
SWITZERLAND**



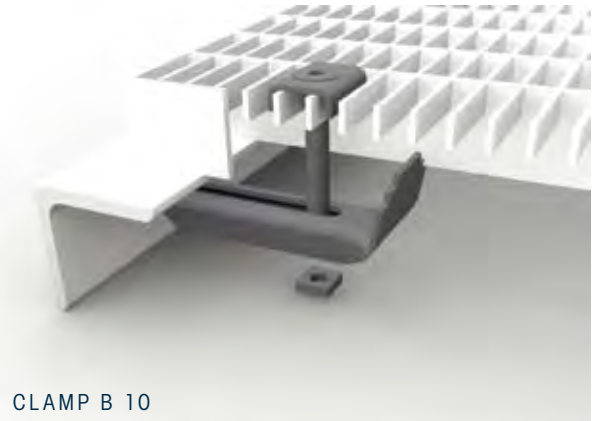
CLAMP B

Clamp B

Consisting of a saddle top clip, clamp lower part, M8x60 hexagon screws and M8 square nut.

galvanised		V2A
Designation	Mesh width (mm)	Mesh width (mm)
M0531	33 x 33	33 x 33
M0531	34 x 38	34 x 38
M2231	33 x 21	33 x 21

Not BG (Slip Review Group)-compliant.



CLAMP B 10

Clamp B 10

Consisting of a stirrup top clip, hexagon socket screw, clip lower part and nut.

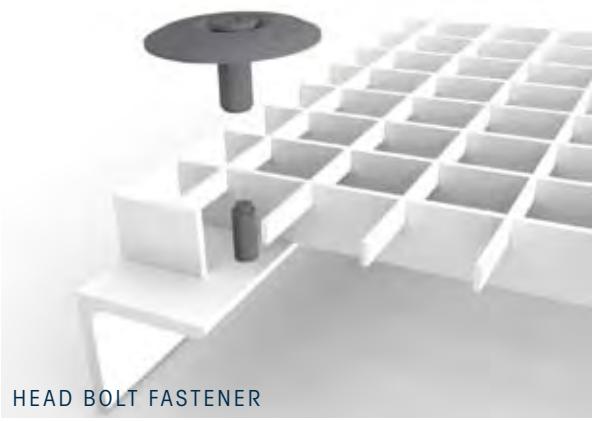
galvanised		V2A
Designation	Mesh width (mm)	Mesh width (mm)
M2331	33 x 11	33 x 11

CLAMP S

Clamp S

Consisting of a flat head screw, clamp lower part and square nut

galvanised		V2A
Designation	Mesh width (mm)	Mesh width (mm)
M2031	33 x 11	33 x 11



HEAD BOLT FASTENER

Head bolt fastener

Consisting of head bolts and retaining flange; for highly corrosive environments (e.g. offshore), also available as X-BT; pre-mounted version X-GR RU.

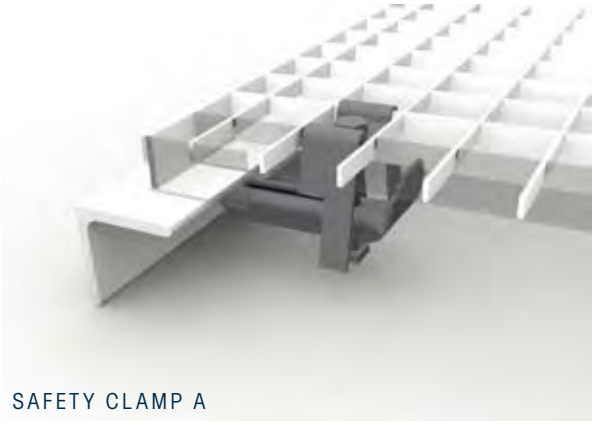
galvanised		V4A
Designation	Mesh width (mm)	Mesh width (mm)
X-FCM + X-M8	22 x 22 – 66 x 66	22 x 22 – 44 x 44
X-FCM + X-BT	22 x 22 – 66 x 66	22 x 22 – 44 x 44
X-GR-RU	33 x 33	

The illustrations are not assembly instructions.

Safety clamp A

Consisting of safety upper part, clamp lower part, hexagon screw and square nut.

galvanised		V2A
Designation	Mesh width (mm)	Mesh width (mm)
M0731	34 x 38	34 x 38

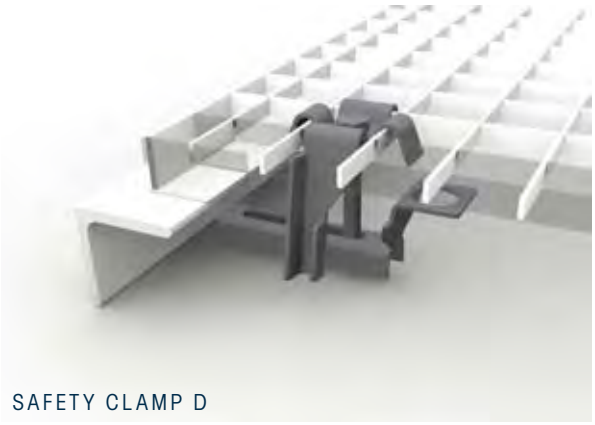


SAFETY CLAMP A

Safety clamp D

Consisting of safety upper part, clamp lower part, hexagon screw and square nut.

galvanised		V2A
Designation	Mesh width (mm)	Mesh width (mm)
M0833	34 x 38	34 x 38

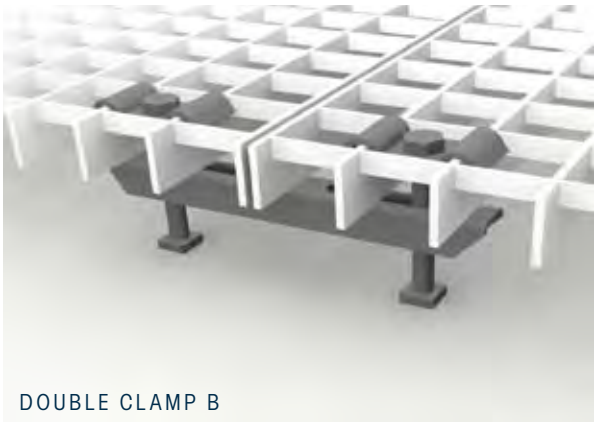


SAFETY CLAMP D

Double clamp B

Consisting of 2 saddle top clips, clamp lower part, 2 hexagon screws and 2 square nuts.

galvanised		V2A
Designation	Mesh width (mm)	Mesh width (mm)
M0540	33 x 33	33 x 33
M2240	33 x 22	33 x 22
M2340	33 x 11	33 x 11



DOUBLE CLAMP B

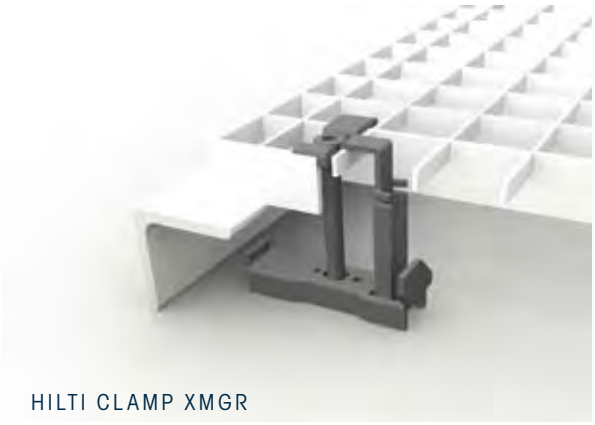
Hilti clamp XMGR

Consisting of saddle top clip and lower part connected to one another; high resistance to vibrations, easy portability by 1 person and thereby significantly shorter installation times.

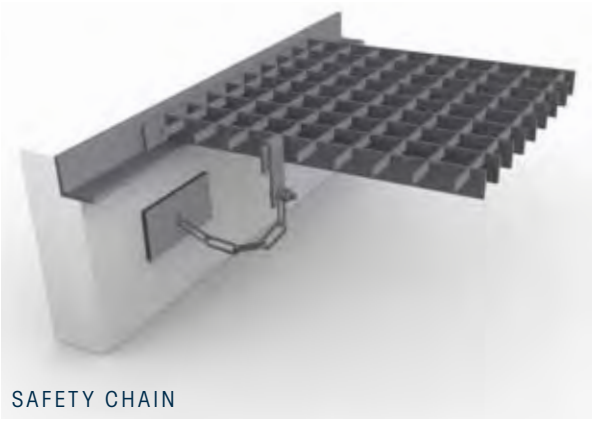
galvanised	V2A
Designation	Mesh width (mm)
XMGR	33 x 33 / 34 x 38 / 34 x 24

maximum grating height 40 mm

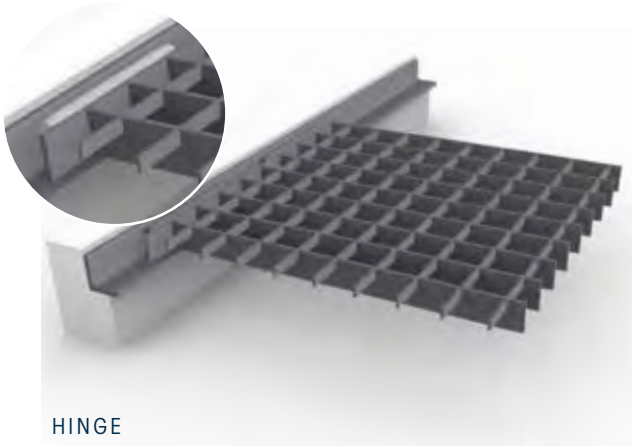
The illustrations are not assembly instructions.



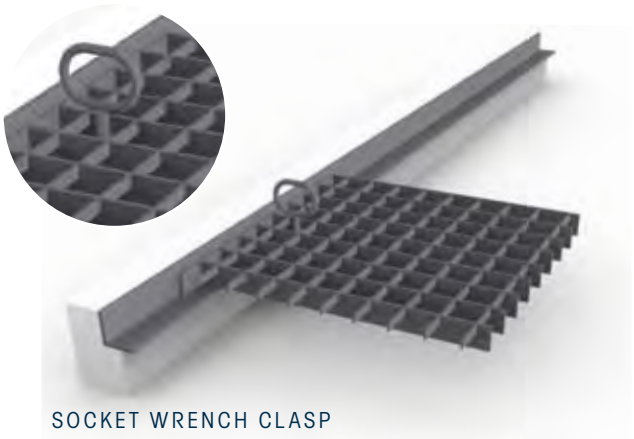
HILTI CLAMP XMGR



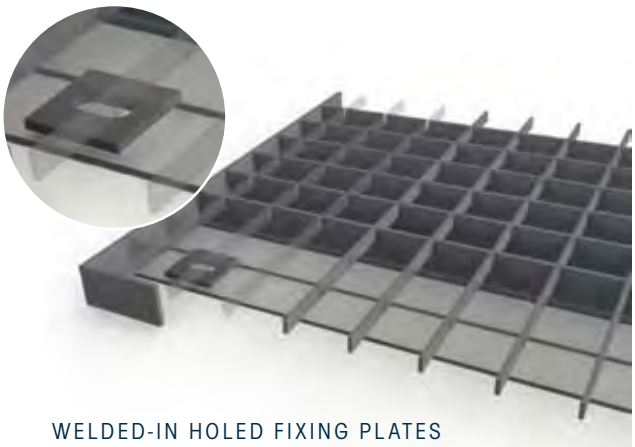
SAFETY CHAIN



HINGE



SOCKET WRENCH CLASP



WELDED-IN HOLED FIXING PLATES

Panel Attachments

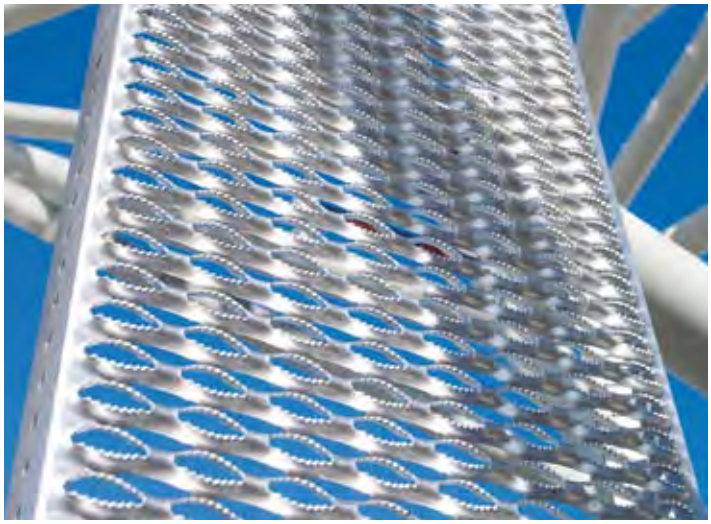
(supplied loose)

Galvanised
Designation
Safety chain
Hinge
Socket wrench clasp
Welded-in perforated plates

Welded-in Holed Fixing Plates

consisting of welded-in holed plate hole size is according to customer's specifications; screws are provided by the customer. The design and position of the welded in plate depend on the load to which the grating is subjected and the fastening possibilities available on site.

The illustrations are not assembly instructions.



PROFILE GRATING

STAIRCASES

PRODUCT RANGE

MEISER is primarily known as a leading manufacturer of open bar grating. We complement our range of industrial floor coverings with sheet metal profile grating and GRP grating. Channel grates are combined with channel bodies developed by us to form a drainage system made of steel. Furthermore, over the past few years MEISER has diversified even more strongly and is particularly active as a service provider in the field of steel processing and hot dip galvanising. We have made a name for ourselves as a provider of complete stairway systems. We offer slit strips in black and galvanised form, while in our forming plant we pro-

GRP

FALL PROTECTION MATS

SCAFFOLDING

BARREL HOOPS

duce vineyard fence posts and supporting profiles for open-air solar modules. Our own tool construction and mechanical engineering facilities position us to develop new products through to production readiness at low competitive cost. From discussions with our customers, items such as fall protection mats (spot-welded wire meshes), for example, have been created, which are often installed at factories in the automotive industry. Many manufacturers of high quality wooden barrels rely on the barrel hoops manufactured by MEISER, which are customised and delivered on a just in time basis.

VINEYARD FENCEPOSTS

DRAINAGE CHANNELS

Staircases

MEISER staircases are almost always manufactured on the basis of a request from a customer and often make a significant contribution to the aesthetic appearance of a building. In addition, a MEISER staircase must of course also reliably fulfil its function and satisfy statutory requirements to a level of 100 %. This is easier said than done, as the specifications of the DIN standards, German statutory accident insurance, German accident prevention regulations etc. are very extensive and differ from state to state, also within Germany.

But you can rely on MEISER, because we know exactly which regulations are in force, so that you do not experience a nasty surprise during the acceptance test. MEISER staircases can be constructed in a straight or winding version, with the spiral staircase being a particularly appealing challenge for MEISER. Ultimately it is personal taste, the space available and the budget which determine the design that is selected. We will be pleased to advise you and also carry out the measurements on site.

Profile Grating

MEISER sheet metal profile grating is an alternative to standard MEISER grating, especially when large span widths have to be bridged or a more closed surface is required. The special embossing and perforation of the surface ensure very high levels of slip resistance. Everywhere in industry where work is carried out with glide-enhancing substances, sheet metal profile grating is a good choice.

The possibility of producing elements of up to a length of 6,50 metres ensures fast installation, which is further accelerated with innovative fixing clips that we have developed ourselves. For indoor applications it is also possible to use sheet metal profile grating consisting of sendzimir-galvanised steel strip. This results in a significant cost advantage. One special field is non-flammable sheet metal profile grating. This version has been tested and certified by the MFPA (Material Research and Testing Institute) and is suitable, for example, as a transformer tray covering.

TOP: STAIRCASE, RED CROSS HEADQUARTERS
BOTTOM: PROFILE GRATING, SAIL CITY

Scaffolding

The long-standing collaboration with ALFIX, a leading manufacturer of scaffolding systems, culminated in 2012 in MEISER purchasing a holding in ALFIX. For more than 60 years ALFIX has stood for scaffolding systems „Made in Germany". Through continuous innovations and fair prices, ALFIX scaffolding systems have become an established brand product on the European market.

Both ALFIX and MEISER put their faith in committed and well-trained employees who ensure proximity to the customer both in-house and in the external sales force. Through continuous research and development, the products of MEISER and ALFIX continue to set the standards. With this type of scaffolding our customers will therefore always be well equipped.

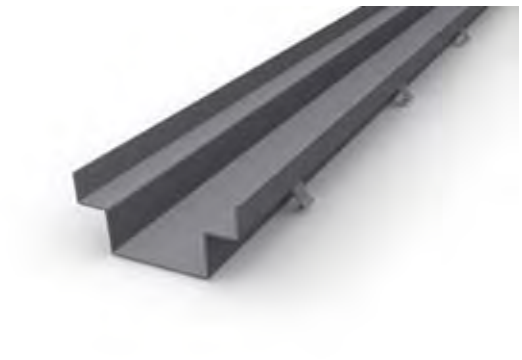
For more information visit www.alfix.de.

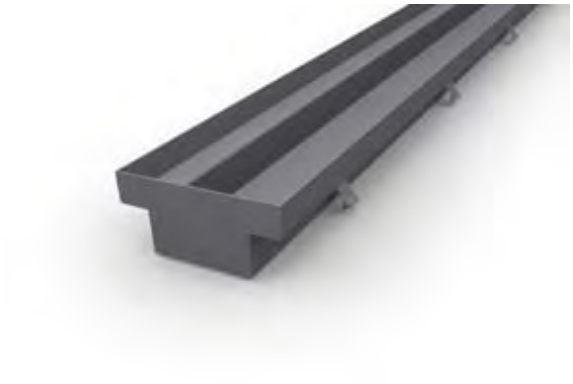
GRP

MEISER GRP grating generally have a square mesh size, as well as bearing bars and cross bars of the same height. The appearance is similar to that of a MEISER full grating made of steel. GRP grating is in demand when the environment is very corrosive or electrical conductivity is not desired.

Our products are certified by the Institute for Occupational Safety and guarantee extreme long-term slip resistance through their resistance to various media.

TOP: STEEL PROFILE TUBE SCAFFOLDING, SHIPYARD;
BOTTOM: GRP GRATING,
KEOLIS TRAIN WASHING SYSTEM





Drainage Channels

The MEISER drainage channel is a pure steel channel. In combination with MEISER grating, we offer an economical and yet very individual drainage system for sewage and rainwater. Here too, you can benefit from our extensive know-how.

All Advantages at a Glance

- Channels made-to-measure with individual pieces up to 5,000 mm in length (all special dimensions)
- Stable edges minimise the need for repair
- Very easy installation owing to the low weight
- Short delivery times
- Reliable anchoring with the concrete foundation by means of lateral anchor brackets
- Front or downward pipe outlet available
- Custom-fit laying by means of attached U-shaped section
- Tightness of the joints guaranteed by permanently elastic sealing compound
- 5 years warranty
- No formwork costs
- No breakout of the concrete edges
- Delivery with all grating types possible (bearing bar up to 200 x 14 mm)
- Trafficable by forklift trucks and heavy vehicles

Familiarly Progressive

The new MEISER channel will inspire you. Production is carried out to measure. Expert advice, very good value for money and short delivery times are for a reliable and inspiring package.

Product
Range

MEISER Heavy Duty Channels - DIN EN 1433 Standard

Drainage channels are the optimal solution for taking up rainwater that accumulates from adjacent paved surfaces or even facades, before transporting it away and discharging it into the sewers. The MEISER steel channel is also used as an evaporation channel without drainage, e.g. in underground garages.

Product Structure

- Channel body & grating made of steel, hot dip galvanised according to DIN EN ISO 1461
- Perfectly co-ordinated with one another, robust, durable and low-maintenance
- Available cross-sections:
  DN 100 --> extended length 339 mm
  DN 150 --> extended length 489 mm
  DN 200 --> extended length 639 mm
- Square cross-section (H≈W) of the channel body
- Available in lengths of 1,000 mm and 2,000 mm
- Special dimensions on request

Options

- End caps with/without horizontal outlet
- Outlet vertical with sink trap
- Nominal width of the outlet openings min.
  DN 100 (--> contents 8.7 l/m)
- Alternative channel with own gradient and a maximum length of 3,000 mm

DN = nominal diameter, designation for the nominal width (connection dimension) of pipes, fittings and components

MEISER heavy duty channel type I conforms to DIN EN 1433 with CE marking

Class A 15
+ Pedestrians
+ Cyclists
+ Green spaces

Class B 125
+ Pedestrians
+ Car parking spaces/ parkingdecks
+ Vans

Class C 250
+ Kerbs
+ Hard shoulders
+ Car parks

Class D 400
+ Roadways
+ Pedestrian zones
+ Car parks

Grating quick-release fixing clip:

The grating insert is secured with a special, non-rusting quick-release fastener against lifting & moving. The fastener retains its function even when subject to high levels of soiling.

Special sections

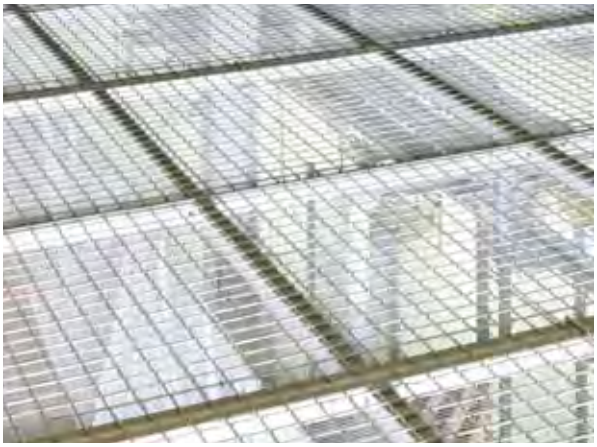
MEISER has a highly efficient tool construction and mechanical engineering system at its disposal. We therefore operate our own mechanical engineering company and know the problems in the daily production process. Open special sections with a material thickness of up to 6 mm, with or without perforations and notching, are our special field - hot dip galvanised if required. If you would like to take advantage of our experience, please contact us. We are proud of our long-standing cooperation with HILTI, where we act as a strategic partner for the supply of supporting profiles for open-air solar energy systems.

Galvanised strip/barrel hoop

In our strip galvanising plant, the steel strip that we have previously slit is galvanised in the continuous process. We specialise in the galvanising of narrow strips with a galvanised edge. Various zinc coatings are possible, as are different packing sizes. We supply galvanised slit coil from 19 x 1.3 to 90 x 5 mm, as coil goods or in bars. Our specialities include earthing straps and their further processing into barrel hoops.

Vineyard fence posts

The use of machinery and the optimisation of working routines in vineyards are becoming increasingly important. Specifically for the use of harvesters, MEISER offers a vineyard fence post system together with the distribution partner artos. It consists of fence posts with hooks located on the inside or outside, as well as restraining posts, which together guarantee optimum covering. Exactly how this works can be seen at **www.artos-weinbergpfahl.de**.



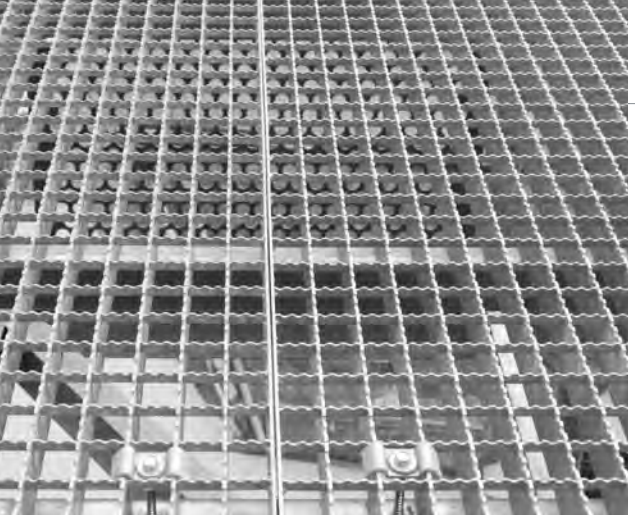
Fall protection mats and spot-welded wire meshes

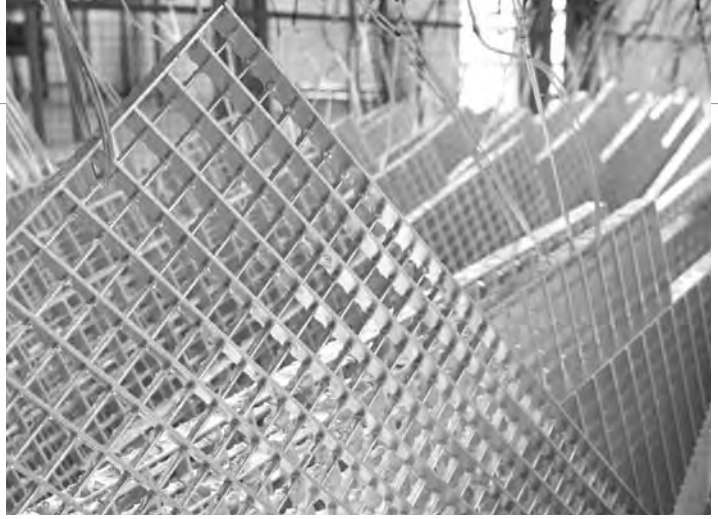
The possible uses for spot-welded wire meshes are very varied. They represent a convenient solution for securing specific areas or plants. They are fastened on site or together with prefabricated posts. The wire meshes consist of steel wires welded together crosswise whose diameter - depending on the load situation - is between 3 and 6 mm. The length and width of the elements can be freely selected within the product range.

In the automotive industry, so-called fall protection mats have become popular as a sophisticated solution for securing and inspecting production lines. MEISER delivers for all major car manufacturers such as Audi, BMW, Mercedes, VW, in accordance with the standards in force in each case.

BMW PLANT, DINGOLFING

Product
Range





STOCK PROGRAMME

GALVANISING PLANT AND LOGISTICS CENTRE
SCHMELZ-LIMBACH
COMPOUND LANDSCAPING BY DUTT&KIST
(PHOTO: © BARBARA HEINZ, SAARBRÜCKEN)

LOGISTICS CENTRE AT THE SCHMELZ-LIMBACH SITE

Stock programme

At our new premises we stock more than 300 different dimensions of standard grating and stair treads on your behalf. Order-picking and loading are carried out in the hall, so that white rust – a condition which is well known to all of us, but which often cannot be avoided unfortunately – is a thing of the past.

All dimensions are stored in considerable quantities. Your order is dispatched within 24 hours and is reliably delivered to your door after 2 – 3 days, freshly galvanised. The new stock programme offers the widest range on the market and also increases your sales opportunities.

STORAGE BUILDING AT THE OELSNITZ FACILITY

In the field of grating, our stock programme comprises the following product groups:

- Industrial grating
- Garage grating and construction standard grating
- Stair treads
- Press welded grating
- Mats
- Press welded mats and patent grating
- High-grade steel grating
- Fixing clips for industrial grating

Press Locked Industrial Grating

Mesh spacing 33 x 33 mm, Surround T-shaped section, hot dip galvanised

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
350	500	20 x 2
400	600	20 x 2
400	800	20 x 2
200	1.000	25 x 2
200	1.250	25 x 2
490	990	25 x 2
490	1.190	25 x 2
500	1.000	25 x 2
600	1.200	25 x 2
790	990	25 x 2
790	1.190	25 x 2
800	1.000	25 x 2
200	1.000	30 x 2
250	1.000	30 x 2
300	500	30 x 2
300	1.000	30 x 2
400	1.000	30 x 2
500	500	30 x 2
500	1.000	30 x 2
600	1.000	30 x 2
700	1.000	30 x 2
750	1.000	30 x 2
800	500	30 x 2
800	1.000	30 x 2
900	1.000	30 x 2
1.000	400	30 x 2
1.000	500	30 x 2
1.000	600	30 x 2
1.000	700	30 x 2
1.000	750	30 x 2
1.000	800	30 x 2
1.000	1.000	30 x 2
1.000	1.200	30 x 2
1.000	1.250	30 x 2
1.100	1.000	30 x 2
1.200	500	30 x 2
1.200	1.000	30 x 2
300	1.000	30 x 3
400	1.000	30 x 3
500	1.000	30 x 3
600	1.000	30 x 3
700	1.000	30 x 3
800	1.000	30 x 3
900	1.000	30 x 3
1.000	1.000	30 x 3
1.100	1.000	30 x 3
1.200	1.000	30 x 3
1.500	500	30 x 3
1.500	1.000	30 x 3

Mesh spacing 33 x 33 mm, Surround T-shaped section, hot dip galvanised

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
1.000	1.000	40 x 2
1.100	1.000	40 x 2
1.200	1.000	40 x 2
1.500	1.000	40 x 2
1.000	1.000	40 x 3
1.500	1.000	40 x 3

Mesh spacing 33 x 22 mm, Surround T-shaped section, hot dip galvanised

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
800	1.000	30 x 2
900	1.000	30 x 2
1.000	1.000	30 x 2
1.200	1.000	30 x 2

Mesh spacing 22 x 22 mm, Surround T-shaped section, hot dip galvanised

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
800	1.000	30 x 2
1.000	1.000	30 x 2
1.200	1.000	30 x 2

Mesh spacing 33 x 11 mm, Surround T-shaped section, hot dip galvanised

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
600	1.000	30 x 2
700	1.000	30 x 2
800	1.000	30 x 2
1.000	1.000	30 x 2
1.100	1.000	30 x 2
1.200	1.000	30 x 2

Press locked anti-skid protection industrial grating

Mesh spacing 33 x 33 mm - R12, bearing/cross bar and surround in slip-resistant finish, Surround T-shaped section, hot dip galvanised

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
500	1.000	30 x 2
600	1.000	30 x 2
700	1.000	30 x 2
800	1.000	30 x 2
900	1.000	30 x 2
1.000	1.000	30 x 2
1.000	1.000	30 x 3
1.200	1.000	30 x 3

Mesh spacing 33 x 33 R10 mm, Cross bar in slip-resistant finish, Surround T-shaped section, hot dip galvanised

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
1.000	1.000	30 x 2
1.100	1.000	30 x 2
1.200	1.000	30 x 2

Mesh spacing 33 x 11 mm, cross bar notched, hot dip galvanised, R11

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
800	1.000	30 x 2
1.000	1.000	30 x 2
1.200	1.000	30 x 3
1.250	1.000	40 x 2

Super anti-skid grating

Mesh spacing 33 x 22 mm - R13, bearing/cross bar and surround in slip-resistant finish, hot dip galvanised

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
500	1.000	30 x 3
600	1.000	30 x 3
700	1.000	30 x 3
800	1.000	30 x 3
1.000	800	30 x 3
1.000	1.000	30 x 3
1.200	1.000	30 x 3

The dimensions highlighted in colour are only stored at Schmelz-Limbach.

First size mentioned = bearing bar direction; external dimensions of the grating.

Patent Grating

Mesh spacing 33 x 18 mm, bearing bar 20/2, cross bar V-shaped, with U-shaped section surround, hot dip galvanised

Length (BB) (mm)	Width (CB) (mm)	Frame dimensions	
390	590	400	600
490	740	500	750
490	990	500	1.000

Garage Grating

Mesh spacing 33 x 33 mm, Surround T-shaped section, hot dip galvanised

Length (BB) (mm)	Width (CB)(mm)	Bearing bar (mm)	Frame dimensions	
190	990	25 x 2	200	1.000
190	1.240	25 x 2	200	1.250
240	990	30 x 2	250	1.000
240	1.240	30 x 2	250	1.250
290	290	30 x 2	300	300
390	390	30 x 2	400	400
490	490	30 x 2	500	500
590	590	40 x 2	600	600

Construction Standard Grating

Mesh spacing 33 x 33 mm, Surround T-shaped section, hot dip galvanised

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)	Frame dimensions	
290	490	20 x 2	300	500
340	490	20 x 2	350	500
390	590	20 x 2	400	600
390	690	20 x 2	400	700
390	790	20 x 2	400	800
390	990	20 x 2	400	1.000
390	1.190	20 x 2	400	1.200
490	790	20 x 2	500	800
490	990	20 x 2	500	1.000
490	1.190	20 x 2	500	1.200
590	790	20 x 2	600	800
590	990	20 x 2	600	1.000
590	1.190	20 x 2	600	1.200
590	990	25 x 2	600	1.000
590	1.190	25 x 2	600	1.200
990	490	30 x 2	1.000	500
990	590	30 x 2	1.000	600
1.190	590	30 x 2	1.200	600

Mesh spacing 33 x 11 mm, Surround T-shaped section, hot dip galvanised

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)	Frame dimensions	
290	990	20 x 2	300	1.000
340	490	20 x 2	350	500
390	590	20 x 2	400	600
390	690	20 x 2	400	700
390	790	20 x 2	400	800
390	990	20 x 2	400	1.000
490	790	20 x 2	500	800
490	990	20 x 2	500	1.000
490	1.190	20 x 2	500	1.200
590	790	20 x 2	600	800
590	990	20 x 2	600	1.000
590	1.190	20 x 2	600	1.200
490	790	25 x 2	500	800

Standard stair treads, Austria

Mesh spacing 33 x 33 mm, cross bar slip-resistant R10, with special endplate and safety nosing, hot dip galvanised

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
500	200	25 x 2
600	200	25 x 2
700	200	25 x 2
800	200	30 x 2
800	250	30 x 2
900	200	35 x 2
1.000	200	35 x 2
1.000	250	35 x 2
1.200	250	40 x 3

Drill-hole analogous to DIN 24531, mesh spacing 33 x 33 mm, cross bar slip-resistant R10, with endplates and safety nosing, hot dip galvanised

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
600	240	25 x 2
600	270	25 x 2
600	305	25 x 2
700	240	25 x 2
700	270	25 x 2
700	305	25 x 2
800	240	30 x 2
800	270	30 x 2
800	305	30 x 2
900	240	35 x 2
900	270	35 x 2
900	305	35 x 2
1.000	240	35 x 2
1.000	270	35 x 2
1.000	305	35 x 2
1.200	240	40 x 3
1.200	270	40 x 3
1.200	305	40 x 3
1.500	305	50 x 3

The garage gratings and construction standard gratings are available with and without frames.

The dimensions highlighted in colour are only stored at Schmelz-Limbach.

First size mentioned = bearing bar direction; external dimensions of the grating.

Press Welded Industrial Grating - Stair Treads

Drill-hole analogous to DIN 24531, mesh spacing 34 x 38 mm, with end-plate and nosing, hot dip galvanised

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
600	240	30 x 2
600	270	30 x 2
700	240	30 x 2
700	270	30 x 2
800	240	30 x 2
800	270	30 x 2
900	240	35 x 2
900	270	35 x 2
1.000	240	35 x 2
1.000	270	35 x 2
600	240	30 x 3
600	270	30 x 3
700	240	30 x 3
700	270	30 x 3
800	240	30 x 3
800	270	30 x 3
800	305	30 x 3
900	240	30 x 3
900	270	30 x 3
900	305	30 x 3
1.000	240	30 x 3
1.000	270	30 x 3
1.000	305	30 x 3
1.000	270	40 x 3
1.000	305	40 x 3
1.100	270	40 x 3
1.100	305	40 x 3
1.200	270	40 x 3
1.200	305	40 x 3
1.250	270	40 x 3
1.250	305	40 x 3

The dimensions highlighted in colour are only stored at Schmelz-Limbach.

* The dimensions marked with an asterisk are only stored in Oelsnitz.

First size mentioned = bearing bar direction; external dimensions of the grating.

Mesh spacing 34 x 76 mm, with endplates and nosing hot dip galvanised, Scandinavia standard *

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
600	230	25 x 3
600	260	25 x 3
700	230	25 x 3
700	260	25 x 3
800	230	25 x 3
800	260	25 x 3
900	230	25 x 3
900	260	25 x 3
1.000	230	30 x 3
1.000	260	30 x 3
1.200	260	30 x 3
1.200	300	30 x 3

Press Locked Industrial Stair Treads

Drill-hole analogous to DIN 24531, mesh spacing 33 x 33 mm, with end-plate and nosing, hot dip galvanised

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
500	230	30 x 2
600	240	30 x 2
600	270	30 x 2
700	240	30 x 2
700	270	30 x 2
800	240	30 x 2
800	270	30 x 2
900	240	35 x 2
900	270	35 x 2
1.000	240	35 x 2
1.000	270	35 x 2
600	240	30 x 3
600	270	30 x 3
700	240	30 x 3
700	270	30 x 3
800	240	30 x 3
800	270	30 x 3
800	305	30 x 3
900	240	30 x 3
900	270	30 x 3
900	305	30 x 3
1.000	240	30 x 3
1.000	270	30 x 3
1.000	305	30 x 3
1.000	270	40 x 3
1.000	305	40 x 3
1.100	270	40 x 3
1.100	305	40 x 3
1.200	270	40 x 3
1.200	305	40 x 3
1.250	270	40 x 3
1.250	305	40 x 3
1.500	305	60 x 3

Drill-hole analogous to DIN 24531, mesh spacing 33 x 11 mm, with end-plate and nosing, hot dip galvanised

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
600	270	30 x 2
700	270	30 x 2
800	270	30 x 2
900	270	35 x 2
1.000	270	35 x 2
1.000	305	30 x 3
1.100	270	40 x 3
1.100	305	40 x 3
1.200	270	40 x 3
1.200	305	40 x 3
1.250	270	40 x 3
1.250	305	40 x 3

Drill-hole analogous to DIN 24531, mesh spacing 33 x 22 mm, with end-plate and nosing, hot dip galvanised

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
800	240	30 x 2
800	270	30 x 2
800	330	30 x 2
800	330	35 x 2
900	270	35 x 2
900	330	35 x 2
1.000	240	35 x 2
1.000	270	35 x 2
1.000	330	35 x 2
1.200	330	40 x 2

Drill-hole analogous to DIN 24531, mesh spacing 22 x 22 mm, with end-plate and nosing, hot dip galvanised

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
800	330	30 x 2
1.000	330	35 x 2
1.200	330	40 x 2

Endplates

Steps endplates with DIN drill-hole

Length (mm)	Drill-hole
240	120
270	150
305	180

Slide Protection Stair Treads

Drill-hole analogous to DIN 24531, mesh spacing 33 x 33 mm, cross bar slip-resistant R12, with endplate and safety nosing, hot dip galvanised

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
600	270	30 x 2
700	270	30 x 2
800	270	30 x 2
900	270	35 x 2
1.000	270	40 x 2
600	270	30 x 3
800	270	30 x 3
1.000	270	30 x 3
1.000	305	35 x 3
1.200	270	40 x 3
1.200	305	40 x 3
1.250	270	40 x 3
1.250	305	40 x 3

Drill-hole analogous to DIN 24531, mesh spacing 33 x 11 mm, cross bar slip-resistant, with endplates and safety nosing, hot dip galvanised

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
600	240	25 x 2
700	240	25 x 2
800	240	30 x 2
800	270	30 x 2
800	305	30 x 2
900	270	35 x 2
900	305	35 x 2
1.000	270	35 x 2
1.000	305	35 x 2
1.200	270	40 x 3
1.200	305	40 x 3
1.250	270	40 x 3
1.250	305	40 x 3
1.500	305	50 x 3

Press Locked Anti-Skid-Protection Industrial Grating - Step High-Grade Steel V2A, 1.4301, pickled

Drill-hole analogous to DIN 24531, mesh spacing 33 x 33 mm

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
600	270	30 x 2
800	270	30 x 2
1.000	270	30 x 3
1.200	270	40 x 3

Press Locked Anti-Skid Protection Industrial Grating - Step High-Grade Steel V2A, 1.4301, pickled

Drill-hole analogous to DIN 24531, mesh spacing 33 x 33 mm, surround flat steel with notched bearing and cross bar R12

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
600	270	30 x 2
800	270	30 x 2
1.000	270	30 x 3
1.200	270	40 x 3

Podium Grating with Safety Nosing

Mesh spacing 33 x 33 mm, with safety nosing, hot dip galvanised

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
800	1.000	30 x 2
1.000	1.000	30 x 2
1.200	1.000	30 x 3
1.250	1.000	40 x 2

Mesh spacing 33 x 11 mm, with safety nosing, hot dip galvanised

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
800	1.000	30 x 2
1.000	1.000	30 x 2
1.200	1.000	30 x 3
1.250	1.000	40 x 2

Mesh spacing 33 x 33 mm – R12, bearing and cross bar notched, with safety nosing, hot dip galvanised

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
800	1.000	30 x 2
1.000	1.000	30 x 2
1.200	1.000	30 x 3
1.250	1.000	40 x 2

Mesh spacing 33 x 11 mm – R11, cross bar notched, with safety nosing, hot dip galvanised

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
800	1.000	30 x 2
1.000	1.000	30 x 2
1.200	1.000	30 x 3
1.250	1.000	40 x 2

Nosing

Steel, raw

Length (mm)
3.000

Press Welded Industrial Grating

Mesh spacing 34 x 38 mm, surround flat bar, hot dip galvanised

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
500	1.000	30 x 2
600	1.000	30 x 2
700	1.000	30 x 2
800	1.000	30 x 2
900	1.000	30 x 2
1.000	1.000	30 x 2
1.100	1.000	30 x 2
1.200	1.000	30 x 2
500	1.000	30 x 3
600	1.000	30 x 3
700	1.000	30 x 3
800	1.000	30 x 3
900	1.000	30 x 3
1.000	1.000	30 x 3
1.100	1.000	30 x 3
1.200	1.000	30 x 3
1.000	1.000	40 x 3
1.500	1.000	40 x 3

Mesh spacing 34 x 76 mm, surround flat bar, hot dip galvanised *

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
600	1.000	25 x 3
800	1.000	25 x 3
1.000	1.000	25 x 3
1.200	1.000	25 x 3
600	1.000	30 x 3
800	1.000	30 x 3
1.000	1.000	30 x 3
1.200	1.000	30 x 3

Mesh spacing 34 x 38 mm, with safety nosing, hot dip galvanised

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
800	1.000	30 x 2
1.000	1.000	30 x 2
1.200	1.000	30 x 3
1.250	1.000	40 x 2

The dimensions highlighted in colour are only stored at Schmelz-Limbach.

Stock Pro-gramme

Press Locked Industrial Grating High-Grade Steel V2A, 1.4301, pickled

Mesh spacing 33 x 33 mm, surround flat bar

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
600	1.000	30 x 2
800	1.000	30 x 2
1.000	1.000	30 x 2
1.200	1.000	30 x 3

Press Locked Anti-Skid Protection Industrial Grating High-Grade Steel, V2A, 1.4301, pickled

Mesh spacing 33 x 33 mm, surround flat steel with notched bearing and cross bar R12

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
600	1.000	30 x 2
800	1.000	30 x 2
1.000	1.000	30 x 2
1.200	1.000	30 x 3

High-grade steel safety nosing, V2A, 1.4301

Length (BB) (mm)
3.000

Press Locked High-Grade Steel Mat,V2A, 1.4301

Mesh spacing 33 x 33 mm, without surround, unpickled

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
3.000	1.000	30 x 2
3.000	1.000	30 x 3

Mesh spacing 33 x 11 mm, without surround, unpickled

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
3.000	1.000	30 x 2
3.000	1.000	30 x 3

Press Locked Anti-Skid Protection High-Grade Steel Mats, V2A, 1.4301

Mesh spacing 33 x 33 mm, without surround, unpickled, with notched bearing and cross bar R12

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
3.000	1.000	30 x 2
3.000	1.000	30 x 3

Press Locked Grating Mat 33 x 11 Press Locked Mats

Short sides without surround, mesh spacing 33 x 11 mm

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
4.000	1.200	25 x 2
2.400	1.200	30 x 2
3.000	1.000	30 x 2
4.000	1.200	30 x 2
2.400	1.200	30 x 3
3.000	1.000	30 x 3
3.000	1.000	40 x 3

Short sides without surround, mesh spacing 33 x 21 mm

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
4.000	1.200	30 x 2

Press Locked Grating Mat 33 x 33

Short sides without surround, mesh spacing 33 x 33 mm *

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
2.400	1.200	30 x 2
3.000	1.000	30 x 2
2.400	1.200	30 x 3
3.000	1.000	30 x 3
3.000	1.000	40 x 3

Press Locked Ultra Mat 34 x 33

Short sides without surround, bearing and cross bar welded, long sides trimmed, mesh spacing 34 x 33 mm

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
4.000	1.200	25 x 2
2.400	1.200	30 x 2
3.000	1.000	30 x 2
4.000	1.200	30 x 2
2.400	1.200	30 x 3
3.000	1.000	30 x 3
4.000	1.200	30 x 3
4.000	1.200	40 x 2
4.000	1.200	40 x 3

The dimensions highlighted in colour are only stored at Schmelz-Limbach.

First size mentioned = bearing bar direction; external dimensions of the grating.

Press Locked Anti-Skid Protection Mats

Bearing and cross bar notched, short sides without surround, long sides trimmed, mesh spacing 33 x 33 mm, R12

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
3.000	1.000	30 x 2
3.000	1.000	30 x 3
3.000	1.000	40 x 3

Cross bar notched, short sides without surround, long sides trimmed, mesh spacing 33 x 11 mm, R11

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
3.000	1.000	30 x 2
3.000	1.000	30 x 3
3.000	1.000	40 x 3

Cross bar notched, short sides without surround, long sides trimmed, mesh spacing 33 x 33 mm, R11

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
4.000	1.200	30 x 2

Press Welded Mats

Mesh spacing 34 x 38 mm, surround, long sides trimmed

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
6.100	1.000	25 x 2
6.100	1.000	25 x 3
6.100	1.000	30 x 2
3.050	1.000	30 x 2
2.400	1.000	30 x 2
6.100	1.000	30 x 3
3.050	1.000	30 x 3
2.400	1.000	30 x 3
6.100	1.000	40 x 2
6.100	1.000	40 x 3
3.050	1.000	40 x 3

Mesh spacing 34 x 24 mm, surround, long sides trimmed

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
3.050	1.000	30 x 2
6.100	1.000	30 x 2
3.050	1.000	30 x 3
6.100	1.000	30 x 3

Mesh spacing 20 x 51 mm, surround, long sides trimmed *

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
3.050	1.000	30 x 2
6.100	1.000	30 x 2
3.050	1.000	30 x 3
6.100	1.000	30 x 3
6.100	1.000	35 x 3

Press Welded Anti-Skid Protection Mats

Mesh spacing 34 x 38 mm, short sides without surround, long sides trimmed with notched bearing bar R11*

Length (BB) (mm)	Width (CB) (mm)	Bearing bar (mm)
6.100	1.000	30 x 2
6.100	1.000	30 x 3
6.100	1.000	40 x 3

The dimensions highlighted in colour are only stored at Schmelz-Limbach.

* The dimensions marked with an asterisk are only stored in Oelsnitz.

First size mentioned = bearing bar direction; external dimensions of the grating.

STATICS AND LOAD TABLES

EUROPEAN COURT OF JUSTICE,
LUXEMBOURG

Determination of the bearing bars for the individual span widths, DIN EN 1991, S235
mesh spacing 33.3 x 33.3 mm

Tread length (mm)	Industrial staircases, working platforms and walkways, load 2.00 kN/m² / 1.5 kN point loading, DIN EN ISO 14122, RAL-GZ 638 - 2008		Load 5.00 kN/m² / 2.0 kN point loading, residential building load 3.00 kN/m² / 2.0 kN point loading, contact area 50 x 50 mm	
	Bearing bar/deflection (cm)		Bearing bar/deflection (cm)	
	without sl.prot.	with sl.prot.	without sl.prot.	with sl.prot.
500	30 x 2 / 0,04	30 x 2 / 0,04	35 x 2 / 0,04	40 x 2 / 0,04
600	30 x 2 / 0,07	30 x 2 / 0,07	40 x 2 / 0,06	40 x 2 / 0,07
700	30 x 2 / 0,10	30 x 2 / 0,12	40 x 2 / 0,09	50 x 2 / 0,07
800	30 x 2 / 0,16	30 x 2 / 0,17	50 x 2 / 0,09	50 x 2 / 0,10
900	35 x 2 / 0,18	35 x 2 / 0,21	50 x 2 / 0,13	50 x 2 / 0,15
1.000	35 x 2 / 0,25	40 x 2 / 0,23	50 x 2 / 0,18	50 x 3 / 0,15
1.100	30 x 3 / 0,34	40 x 2 / 0,31	50 x 3 / 0,17	50 x 3 / 0,20
1.200	40 x 2 / 0,35	40 x 3 / 0,32	50 x 3 / 0,22	60 x 3 / 0,16
1.250	40 x 3 / 0,31	40 x 3 / 0,36	50 x 3 / 0,25	60 x 3 / 0,18
1.300	50 x 2 / 0,43	50 x 3 / 0,36	50 x 3 / 0,41	60 x 3 / 0,30
1.400	50 x 3 / 0,41	50 x 3 / 0,47	60 x 3 / 0,35	60 x 3 / 0,40
1.500	50 x 3 / 0,50	60 x 3 / 0,38	60 x 3 / 0,44	60 x 3 / 0,50
1.600	60 x 3 / 0,42	60 x 3 / 0,48	60 x 5 / 0,35	60 x 5 / 0,40
1.700	60 x 3 / 0,51	60 x 5 / 0,37	60 x 5 / 0,43	60 x 5 / 0,49
1.800	60 x 5 / 0,45	60 x 5 / 0,52	60 x 5 / 0,60	70 x 5 / 0,45
1.900	60 x 5 / 0,56	70 x 5 / 0,42	70 x 5 / 0,49	70 x 5 / 0,55
2.000	70 x 5 / 0,45	70 x 5 / 0,50	70 x 5 / 0,59	80 x 5 / 0,46
2.100	70 x 5 / 0,53	70 x 5 / 0,60	80 x 5 / 0,49	80 x 5 / 0,55
2.200	80 x 5 / 0,44	80 x 5 / 0,49	80 x 5 / 0,58	90 x 5 / 0,47
2.300	80 x 5 / 0,54	90 x 5 / 0,43	90 x 5 / 0,52	90 x 5 / 0,58
2.500	90 x 5 / 0,55	90 x 5 / 0,60	100 x 5 / 0,54	100 x 5 / 0,60
3.000	110 x 5 / 0,6	120 x 5 / 0,51	120 x 5 / 0,60	130 x 5 / 0,53

The requirements of RAL GZ 638, September 2008 edition, are complied with (deflection f < l/300 and < 0.6 cm).

Selection instructions: If there is no clear assignment of industrial or fire exit staircases, the values for industrial staircases should always be used.

For intermediate sizes (e.g. tread length 835 mm – industrial staircase without slide protection), the next higher tread length (900 mm) should be taken as the basis of assessment (bearing bar 35 x 2 mm).

SILICON, BITTERFELD

Determination of the bearing bars for the individual span widths, DIN EN 1991, S235
mesh spacing 33.3 x 11.1 mm for BB 2 – 3 mm, mesh spacing 33.3 x 16.65 mm for BB 5 mm

Tread length (mm)	Industrial staircase, working platforms and walkways, load 2.00 kN/m² / 1.5 kN point loading, DIN EN ISO 14122, RAL-GZ 638 - 2008		Load 5.00 kN/m² / 2.0 kN point loading, residential building load 3.00 kN/m² / 2.0 kN point loading, contact area 50 x 50	
	Bearing bar/deflection (cm)		Bearing bar/deflection (cm)	
	without sl.prot.	with sl.prot.	without sl.prot.	with sl.prot.
500	30 x 2 / 0,03	30 x 2 / 0,03 *	30 x 2 / 0,04	30 x 2 / 0,04 *
600	30 x 2 / 0,06	30 x 2 / 0,06 *	30 x 2 / 0,08	30 x 2 / 0,08 *
700	30 x 2 / 0,09	30 x 2 / 0,09 *	30 x 3 / 0,10	30 x 3 / 0,12 *
800	30 x 2 / 0,14	30 x 2 / 0,14 *	40 x 2 / 0,12	40 x 2 / 0,13 *
900	35 x 2 / 0,16	35 x 2 / 0,16 *	40 x 2 / 0,16	40 x 2 / 0,16 *
1.000	35 x 2 / 0,22	35 x 2 / 0,22 *	40 x 3 / 0,17	40 x 3 / 0,20 *
1.100	40 x 2 / 0,23	40 x 2 / 0,23 *	40 x 3 / 0,23	40 x 3 / 0,27 *
1.200	40 x 3 / 0,22	40 x 3 / 0,22 *	40 x 3 / 0,29	40 x 3 / 0,29 *
1.250	40 x 3 / 0,25	40 x 3 / 0,25 *	40 x 3 / 0,33	40 x 3 / 0,33 *
1.300	40 x 3 / 0,41	40 x 3 / 0,41 *	50 x 3 / 0,33	50 x 3 / 0,33 *
1.400	50 x 2 / 0,45	50 x 2 / 0,45 *	50 x 3 / 0,43	50 x 3 / 0,43 *
1.500	50 x 3 / 0,41	50 x 3 / 0,41 *	60 x 3 / 0,35	60 x 3 / 0,35 *
1.600	50 x 3 / 0,52	50 x 3 / 0,52 *	60 x 3 / 0,44	60 x 3 / 0,44 *
1.700	60 x 3 / 0,40	60 x 3 / 0,40 *	60 x 3 / 0,54	60 x 3 / 0,54 *
1.800	60 x 3 / 0,56	60 x 3 / 0,56 *	60 x 5 / 0,49	60 x 5 / 0,57
1.900	60 x 5 / 0,46	60 x 5 / 0,53	70 x 5 / 0,40	70 x 5 / 0,46
2.000	60 x 5 / 0,56	70 x 5 / 0,42	70 x 5 / 0,49	70 x 5 / 0,56
2.100	70 x 5 / 0,44	70 x 5 / 0,50	70 x 5 / 0,59	80 x 5 / 0,46
2.200	70 x 5 / 0,52	70 x 5 / 0,59	80 x 5 / 0,48	80 x 5 / 0,54
2.300	80 x 5 / 0,45	80 x 5 / 0,51	80 x 5 / 0,60	90 x 5 / 0,48
2.500	90 x 5 / 0,46	90 x 5 / 0,51	100 x 5 / 0,46	100 x 5 / 0,50
3.000	110 x 5 / 0,51	110 x 5 / 0,56	120 x 5 / 0,53	120 x 5 / 0,57

* Slide protection only on the cross bar

Press locked grating mesh spacing 33.3 x 33.3 mm, DIN EN 1991											S235 JR+N St 37-2
Bearing bars mm	Width between supports mm	200	300	400	500	600	700	800	900	1.000	1.100
20/2	FP	6,38	3,19	2,13	1,60	1,28	1,06	0,91	0,63	0,46	0,34
	FV	106,05	47,13	26,51	16,97	11,78	8,66	5,86	3,66	2,40	1,64
20/3	FP	9,57	4,79	3,19	2,39	1,91	1,60	1,36	0,95	0,69	0,52
	FV	159,07	70,70	39,77	25,45	17,67	12,99	8,80	5,49	3,60	2,46
25/2	FP	9,89	4,94	3,30	2,47	1,98	1,65	1,41	1,23	0,89	0,67
	FV	165,70	73,64	41,43	26,51	18,41	13,53	10,36	7,15	4,69	3,20
25/3	FP	14,83	7,41	4,94	3,71	2,97	2,47	2,12	1,84	1,34	1,00
	FV	248,55	110,47	62,14	39,77	27,62	20,29	15,53	10,73	7,04	4,81
30/2	FP	14,11	7,06	4,70	3,53	2,82	2,35	2,02	1,76	1,53	1,14
	FV	238,61	106,05	59,65	38,18	26,51	19,48	14,91	11,78	8,11	5,54
30/3	FP	21,17	10,58	7,06	5,29	4,23	3,53	3,02	2,65	2,29	1,72
	FV	357,91	159,07	89,48	57,27	39,77	29,22	22,37	17,67	12,16	8,31
30/4	FP	28,22	14,11	9,41	7,06	5,64	4,70	4,03	3,53	3,05	2,29
	FV	477,22	212,10	119,30	76,35	53,02	38,96	29,83	23,57	16,21	11,07
30/5	FP	35,28	17,64	11,76	8,82	7,06	5,88	5,04	4,41	3,82	2,86
	FV	596,52	265,12	149,13	95,44	66,28	48,70	37,28	29,46	20,27	13,84
35/2	FP	19,02	9,51	6,34	4,75	3,80	3,17	2,72	2,38	2,11	1,80
	FV	324,77	144,34	81,19	51,96	36,09	26,51	20,30	16,04	12,87	8,79
35/3	FP	28,53	14,26	9,51	7,13	5,71	4,75	4,08	3,57	3,17	2,70
	FV	487,16	216,52	121,79	77,95	54,13	39,77	30,45	24,06	19,31	13,19
35/4	FP	38,04	19,02	12,68	9,51	7,61	6,34	5,43	4,75	4,23	3,60
	FV	649,55	288,69	162,39	103,93	72,17	53,02	40,60	32,08	25,75	17,59
35/5	FP	47,55	23,77	15,85	11,89	9,51	7,92	6,79	5,94	5,28	4,50
	FV	811,93	360,86	202,98	129,91	90,21	66,28	50,75	40,10	32,19	21,98
40/2	FP	24,62	12,31	8,21	6,16	4,92	4,10	3,52	3,08	2,74	2,46
	FV	424,19	188,53	106,05	67,87	47,13	34,63	26,51	20,95	16,97	13,13
40/3	FP	36,93	18,47	12,31	9,23	7,39	6,16	5,28	4,62	4,10	3,69
	FV	636,29	282,80	159,07	101,81	70,70	51,94	39,77	31,42	25,45	19,69
40/4	FP	49,25	24,62	16,42	12,31	9,85	8,21	7,04	6,16	5,47	4,92
	FV	848,39	377,06	212,10	135,74	94,27	69,26	53,02	41,90	33,94	26,25
40/5	FP	61,56	30,78	20,52	15,39	12,31	10,26	8,79	7,69	6,84	6,16
	FV	1060,48	471,33	265,12	169,68	117,83	86,57	66,28	52,37	42,42	32,81
45/4	FP	61,77	30,89	20,59	15,44	12,35	10,30	8,82	7,72	6,86	6,18
	FV	1073,74	477,22	268,43	171,80	119,30	87,65	67,11	53,02	42,95	35,50
50/2	FP	37,75	18,87	12,58	9,44	7,55	6,29	5,39	4,72	4,19	3,77
	FV	662,80	294,58	165,70	106,05	73,64	54,11	41,43	32,73	26,51	21,91
50/3	FP	56,62	28,31	18,87	14,16	11,32	9,44	8,09	7,08	6,29	5,66
	FV	994,20	441,87	248,55	159,07	110,47	81,16	62,14	49,10	39,77	32,87
50/4	FP	75,49	37,75	25,16	18,87	15,10	12,58	10,78	9,44	8,39	7,55
	FV	1325,60	589,16	331,40	212,10	147,29	108,21	82,85	65,46	53,02	43,82
50/5	FP	94,37	47,18	31,46	23,59	18,87	15,73	13,48	11,80	10,49	9,44
	FV	1657,00	736,45	414,25	265,12	184,11	135,27	103,56	81,83	66,28	54,78
60/3	FP	80,06	40,03	26,69	20,01	16,01	13,34	11,44	10,01	8,90	8,01
	FV	1431,65	636,29	357,91	229,06	159,07	116,87	89,48	70,70	57,27	47,33
60/4	FP	106,74	53,37	35,58	26,69	21,35	17,79	15,25	13,34	11,86	10,67
	FV	1908,87	848,39	477,22	305,42	212,10	155,83	119,30	94,27	76,35	63,10
60/5	FP	133,43	66,72	44,48	33,36	26,69	22,24	19,06	16,68	14,83	13,34
	FV	2386,09	1060,48	596,52	381,77	265,12	194,78	149,13	117,83	95,44	78,88
70/3	FP	106,83	53,42	35,61	26,71	21,37	17,81	15,26	13,35	11,87	10,68
	FV	1948,64	866,06	487,16	311,78	216,52	159,07	121,79	96,23	77,95	64,42
70/4	FP	142,44	71,22	47,48	35,61	28,49	23,74	20,35	17,81	15,83	14,24
	FV	2598,18	1154,75	649,55	415,71	288,69	212,10	162,39	128,31	103,93	85,89
70/5	FP	178,05	89,03	59,35	44,51	35,61	29,68	25,44	22,26	19,78	17,81
		3247,73	1443,43	811,93	519,64	360,86	265,12	202,98	160,38	129,91	107,36

The table applies to the standard mesh spacing of 33.3 x 33.3 and material S235 JR+N St 37-2. The values represent the maximum permitted load-bearing capacity of the grating.

Press locked grating mesh spacing 33.3 x 33.3 mm, DIN EN 1991										S235 JR+N St 37-2
Bearing bars mm	Width between supports mm	1.200	1.300	1.400	1.500	1.600	1.700	1.800	1.900	2.000
20/2	FP	0,26	0,21	0,17	0,14	0,11	0,09	0,08	0,07	0,06
	FV	1,16	0,84	0,63	0,47	0,37	0,29	0,23	0,18	0,15
20/3	FP	0,40	0,31	0,25	0,20	0,17	0,14	0,12	0,10	0,09
	FV	1,74	1,26	0,94	0,71	0,55	0,43	0,34	0,28	0,23
25/2	FP	0,51	0,40	0,32	0,26	0,22	0,18	0,15	0,13	0,11
	FV	2,26	1,64	1,22	0,93	0,72	0,56	0,45	0,36	0,29
25/3	FP	0,77	0,60	0,48	0,39	0,32	0,27	0,23	0,19	0,16
	FV	3,39	2,46	1,83	1,39	1,07	0,84	0,67	0,54	0,44
30/2	FP	0,88	0,69	0,55	0,45	0,37	0,31	0,26	0,22	0,19
	FV	3,91	2,84	2,11	1,60	1,24	0,97	0,77	0,62	0,51
30/3	FP	1,32	1,03	0,83	0,67	0,55	0,46	0,39	0,33	0,28
	FV	5,86	4,26	3,17	2,40	1,86	1,46	1,16	0,93	0,76
30/4	FP	1,76	1,38	1,10	0,90	0,74	0,61	0,52	0,44	0,38
	FV	7,82	5,68	4,22	3,20	2,47	1,94	1,54	1,24	1,01
30/5	FP	2,20	1,72	1,38	1,12	0,92	0,77	0,65	0,55	0,47
	FV	9,77	7,10	5,28	4,00	3,09	2,43	1,93	1,56	1,27
35/2	FP	1,38	1,08	0,87	0,70	0,58	0,48	0,41	0,35	0,30
	FV	6,21	4,51	3,35	2,54	1,96	1,54	1,23	0,99	0,80
35/3	FP	2,07	1,63	1,30	1,06	0,87	0,72	0,61	0,52	0,44
	FV	9,31	6,76	5,03	3,81	2,95	2,31	1,84	1,48	1,21
35/4	FP	2,76	2,17	1,73	1,41	1,16	0,97	0,81	0,69	0,59
	FV	12,42	9,02	6,70	5,09	3,93	3,08	2,45	1,98	1,61
35/5	FP	3,45	2,71	2,17	1,76	1,45	1,21	1,02	0,86	0,74
	FV	15,52	11,27	8,38	6,36	4,91	3,85	3,07	2,47	2,01
40/2	FP	2,04	1,60	1,28	1,04	0,86	0,71	0,60	0,51	0,44
	FV	9,27	6,73	5,00	3,80	2,93	2,30	1,83	1,47	1,20
40/3	FP	3,07	2,41	1,92	1,56	1,29	1,07	0,90	0,77	0,66
	FV	13,90	10,09	7,50	5,69	4,40	3,45	2,75	2,21	1,80
40/4	FP	4,09	3,21	2,57	2,08	1,72	1,43	1,20	1,02	0,88
	FV	18,54	13,46	10,00	7,59	5,86	4,60	3,66	2,95	2,40
40/5	FP	5,11	4,01	3,21	2,60	2,14	1,79	1,50	1,28	1,09
	FV	23,17	16,82	12,51	9,49	7,33	5,75	4,58	3,69	3,00
45/4	FP	5,62	4,53	3,62	2,94	2,42	2,02	1,70	1,44	1,24
	FV	26,39	19,16	14,25	10,81	8,35	6,55	5,21	4,20	3,42
50/2	FP	3,43	3,08	2,46	2,00	1,64	1,37	1,15	0,98	0,84
	FV	18,10	13,14	9,77	7,41	5,73	4,49	3,58	2,88	2,35
50/3	FP	5,15	4,61	3,69	2,99	2,46	2,05	1,73	1,47	1,26
	FV	27,15	19,71	14,66	11,12	8,59	6,74	5,36	4,32	3,52
50/4	FP	6,86	6,15	4,92	3,99	3,29	2,74	2,30	1,96	1,68
	FV	36,20	26,28	19,54	14,83	11,45	8,99	7,15	5,76	4,69
50/5	FP	8,58	7,69	6,15	4,99	4,11	3,42	2,88	2,45	2,10
	FV	45,25	32,85	24,43	18,54	14,32	11,23	8,94	7,20	5,86
60/3	FP	7,28	6,67	6,16	5,08	4,18	3,48	2,93	2,49	2,14
	FV	39,77	33,89	25,32	19,22	14,84	11,65	9,27	7,47	6,08
60/4	FP	9,70	8,90	8,21	6,77	5,58	4,65	3,91	3,32	2,85
	FV	53,02	45,18	33,77	25,62	19,79	15,53	12,36	9,95	8,11
60/5	FP	12,13	11,12	10,26	8,47	6,97	5,81	4,89	4,15	3,56
	FV	66,28	56,48	42,21	32,03	24,74	19,41	15,45	12,44	10,13
70/3	FP	9,71	8,90	8,22	7,63	6,51	5,42	4,57	3,88	3,32
	FV	54,13	46,12	39,77	30,52	23,57	18,50	14,72	11,85	9,66
70/4	FP	12,95	11,87	10,96	10,17	8,68	7,23	6,09	5,17	4,43
	FV	72,17	61,50	53,02	40,69	31,43	24,66	19,62	15,81	12,87
70/5	FP	16,19	14,84	13,70	12,72	10,85	9,04	7,61	6,47	5,54
	FV	90,21	76,87	66,28	50,86	39,29	30,83	24,53	19,76	16,09

Legend for conversion values: see page 106/107.

Press locked grating mesh spacing 33.3 x 33.3 mm, DIN EN 1991											S235 JR+N St 37-2
Bearing bars mm	Width between supports mm	200	300	400	500	600	700	800	900	1.000	1.100
80/4	FP	182,33	91,17	60,78	45,58	36,47	30,39	26,05	22,79	20,26	18,23
	FV	3393,54	1508,24	848,39	542,97	377,06	277,02	212,10	167,58	135,74	112,18
80/5	FP	227,91	113,96	75,97	56,98	45,58	37,99	32,56	28,49	25,32	22,79
	FV	4241,93	1885,30	1060,48	678,71	471,33	346,28	265,12	209,48	169,68	140,23
90/4	FP	226,33	113,17	75,44	56,58	45,27	37,72	32,33	28,29	25,15	22,63
	FV	4294,95	1908,87	1073,74	687,19	477,22	350,61	268,43	212,10	171,80	141,98
90/5	FP	282,92	141,46	94,31	70,73	56,58	47,15	40,42	35,36	31,44	28,29
	FV	5368,69	2386,09	1342,17	858,99	596,52	438,26	335,54	265,12	214,75	177,48
100/5	FP	342,02	171,01	114,01	85,50	68,40	57,00	48,86	42,75	38,00	34,20
	FV	6628,01	2945,78	1657,00	1060,48	736,45	541,06	414,25	327,31	265,12	219,11
110/5	FP	413,84	206,92	137,95	103,46	82,77	68,97	59,12	51,73	45,98	41,38
	FV	8019,90	3564,40	2004,97	1283,18	891,10	654,69	501,24	396,04	320,80	265,12
120/5	FP	492,50	246,25	164,17	123,13	98,50	82,08	70,36	61,56	54,72	49,25
	FV	9544,34	4241,93	2386,09	1527,09	1060,48	779,13	596,52	471,33	381,77	315,52
130/5	FP	578,01	289,00	192,67	144,50	115,60	96,33	82,57	72,25	64,22	57,80
	FV	11201,34	4978,38	2800,34	1792,22	1244,59	914,40	700,08	553,15	448,05	370,29
140/5	FP	670,35	335,18	223,45	167,59	134,07	111,73	95,76	83,79	74,48	67,04
	FV	12990,91	5773,74	3247,73	2078,55	1443,43	1060,48	811,93	641,53	519,64	429,45
150/5	FP	769,54	384,77	256,51	192,38	153,91	128,26	109,93	96,19	85,50	76,95
	FV	14913,03	6628,01	3728,26	2386,09	1657,00	1217,39	932,06	736,45	596,52	492,99
160/5	FP	875,56	437,78	291,85	218,89	175,11	145,93	125,08	109,45	97,28	87,56
	FV	16967,72	7541,21	4241,93	2714,83	1885,30	1385,12	1060,48	837,91	678,71	560,92
170/5	FP	988,43	494,21	329,48	247,11	197,69	164,74	141,20	123,55	109,83	98,84
	FV	19154,96	8513,32	4788,74	3064,79	2128,33	1563,67	1197,19	945,92	766,20	633,22

The table applies to the standard mesh spacing of 33.3 x 33.3 and material S235 JR+N St 37-2. The values represent the maximum permitted load-bearing capacity of the grating.

Press locked grating mesh spacing 33.3 x 33.3 mm, DIN EN 1991										S235 JR+N St 37-2
Bearing bars mm	Width between supports mm	1.200	1.300	1.400	1.500	1.600	1.700	1.800	1.900	2.000
80/4	FP	16,58	15,19	14,03	13,02	12,16	10,58	8,91	7,57	6,48
	FV	94,27	80,32	69,26	60,33	46,92	36,81	29,29	23,59	19,22
80/5	FP	20,72	18,99	17,53	16,28	15,19	13,22	11,13	9,46	8,11
	FV	117,83	100,40	86,57	75,41	58,65	46,02	36,61	29,49	24,02
90/4	FP	20,58	18,86	17,41	16,17	15,09	14,15	12,44	10,57	9,06
	FV	119,30	101,66	87,65	76,35	66,80	52,42	41,70	33,59	27,36
90/5	FP	25,72	23,58	21,76	20,21	18,86	17,68	15,55	13,21	11,32
	FV	149,13	127,07	109,57	95,44	83,50	65,52	52,13	41,99	34,20
100/5	FP	31,09	28,50	26,31	24,43	22,80	21,38	20,12	17,74	15,21
	FV	184,11	156,88	135,27	117,83	103,56	89,88	71,51	57,60	46,92
110/5	FP	37,62	34,49	31,83	29,56	27,59	25,87	24,34	22,99	20,24
	FV	222,77	189,82	163,67	142,58	125,31	111,00	95,18	76,67	62,45
120/5	FP	44,77	41,04	37,88	35,18	32,83	30,78	28,97	27,36	25,92
	FV	265,12	225,90	194,78	169,68	149,13	132,10	117,83	99,54	81,07
130/5	FP	52,55	48,17	44,46	41,29	38,53	36,13	34,00	32,11	30,42
	FV	311,15	265,12	228,60	199,14	175,02	155,04	138,29	124,11	103,08
140/5	FP	60,94	55,86	51,57	47,88	44,69	41,90	39,43	37,24	35,28
	FV	360,86	307,48	265,12	230,95	202,98	179,80	160,38	143,94	128,74
150/5	FP	69,96	64,13	59,20	54,97	51,30	48,10	45,27	42,75	40,50
	FV	414,25	352,97	304,35	265,12	233,02	206,41	184,11	165,24	149,13
160/5	FP	79,60	72,96	67,35	62,54	58,37	54,72	51,50	48,64	46,08
	FV	471,33	401,60	346,28	301,65	265,12	234,85	209,48	188,01	169,68
170/5	FP	89,86	82,37	76,03	70,60	65,90	61,78	58,14	54,91	52,02
	FV	532,08	453,37	390,92	340,53	299,30	265,12	236,48	212,24	191,55

Legend for conversion values: see page 106/107.

BITTERFELD ARCH

Press welded grating mesh spacing 34.3 x 38.1 mm, DIN EN 1991											S235 JR+N St 37-2
Bearing bars mm	Width between supports mm	200	300	400	500	600	700	800	900	1.000	1.100
20/2	FP	6,14	3,07	2,05	1,53	1,23	1,02	0,87	0,61	0,44	0,33
	FV	114,51	50,89	28,63	18,32	12,72	9,35	6,33	3,95	2,59	1,77
20/3	FP	9,21	4,60	3,07	2,30	1,84	1,53	1,31	0,92	0,66	0,50
	FV	171,76	76,34	42,94	27,48	19,08	14,02	9,50	5,93	3,89	2,66
25/2	FP	9,52	4,76	3,17	2,38	1,90	1,59	1,36	1,18	0,86	0,64
	FV	178,92	79,52	44,73	28,63	19,88	14,61	11,18	7,72	5,07	3,46
25/3	FP	14,28	7,14	4,76	3,57	2,86	2,38	2,04	1,77	1,29	0,96
	FV	268,38	119,28	67,09	42,94	29,82	21,91	16,77	11,58	7,60	5,19
30/2	FP	13,60	6,80	4,53	3,40	2,72	2,27	1,94	1,70	1,47	1,10
	FV	257,64	114,51	64,41	41,22	28,63	21,03	16,10	12,72	8,75	5,98
30/3	FP	20,41	10,20	6,80	5,10	4,08	3,40	2,92	2,55	2,21	1,65
	FV	386,46	171,76	96,62	61,83	42,94	31,55	24,15	19,08	13,13	8,97
30/4	FP	27,21	13,60	9,07	6,80	5,44	4,53	3,89	3,40	2,94	2,21
	FV	515,28	229,01	128,82	82,44	57,25	42,06	32,21	25,45	17,51	11,96
30/5	FP	34,01	17,00	11,34	8,50	6,80	5,67	4,86	4,25	3,68	2,76
	FV	644,10	286,27	161,03	103,06	71,57	52,58	40,26	31,81	21,88	14,95
35/2	FP	18,35	9,18	6,12	4,59	3,67	3,06	2,62	2,29	2,04	1,74
	FV	350,68	155,86	87,67	56,11	38,96	28,63	21,92	17,32	13,90	9,49
35/3	FP	27,53	13,76	9,18	6,88	5,51	4,59	3,93	3,44	3,06	2,60
	FV	526,02	233,78	131,50	84,16	58,45	42,94	32,88	25,98	20,85	14,24
35/4	FP	36,71	18,35	12,24	9,18	7,34	6,12	5,24	4,59	4,08	3,47
	FV	701,35	311,71	175,34	112,22	77,93	57,25	43,83	34,63	27,80	18,99
35/5	FP	45,88	22,94	15,29	11,47	9,18	7,65	6,55	5,74	5,10	4,34
	FV	876,69	389,64	219,17	140,27	97,41	71,57	54,79	43,29	34,75	23,74
40/2	FP	23,79	11,89	7,93	5,95	4,76	3,96	3,40	2,97	2,64	2,38
	FV	458,03	203,57	114,51	73,28	50,89	37,39	28,63	22,62	18,32	14,17
40/3	FP	35,68	17,84	11,89	8,92	7,14	5,95	5,10	4,46	3,96	3,57
	FV	687,04	305,35	171,76	109,93	76,34	56,08	42,94	33,93	27,48	21,26
40/4	FP	47,58	23,79	15,86	11,89	9,52	7,93	6,80	5,95	5,29	4,76
	FV	916,05	407,14	229,01	146,57	101,78	74,78	57,25	45,24	36,64	28,35
40/5	FP	59,47	29,74	19,82	14,87	11,89	9,91	8,50	7,43	6,61	5,95
	FV	1145,07	508,92	286,27	183,21	127,23	93,47	71,57	56,55	45,80	35,43
45/4	FP	59,76	29,88	19,92	14,94	11,95	9,96	8,54	7,47	6,64	5,98
	FV	1159,38	515,28	289,85	185,50	128,82	94,64	72,46	57,25	46,38	38,33
50/2	FP	36,60	18,30	12,20	9,15	7,32	6,10	5,23	4,58	4,07	3,66
	FV	715,67	318,07	178,92	114,51	79,52	58,42	44,73	35,34	28,63	23,66
50/3	FP	54,90	27,45	18,30	13,73	10,98	9,15	7,84	6,86	6,10	5,49
	FV	1073,50	477,11	268,38	171,76	119,28	87,63	67,09	53,01	42,94	35,49
50/4	FP	73,20	36,60	24,40	18,30	14,64	12,20	10,46	9,15	8,13	7,32
	FV	1431,33	636,15	357,83	229,01	159,04	116,84	89,46	70,68	57,25	47,32
50/5	FP	91,50	45,75	30,50	22,88	18,30	15,25	13,07	11,44	10,17	9,15
	FV	1789,17	795,19	447,29	286,27	198,80	146,05	111,82	88,35	71,57	59,15
60/3	FP	77,73	38,86	25,91	19,43	15,55	12,95	11,10	9,72	8,64	7,77
	FV	1545,84	687,04	386,46	247,33	171,76	126,19	96,62	76,34	61,83	51,10
60/4	FP	103,63	51,82	34,54	25,91	20,73	17,27	14,80	12,95	11,51	10,36
	FV	2061,12	916,05	515,28	329,78	229,01	168,25	128,82	101,78	82,44	68,14
60/5	FP	129,54	64,77	43,18	32,39	25,91	21,59	18,51	16,19	14,39	12,95
	FV	2576,40	1145,07	644,10	412,22	286,27	210,32	161,03	127,23	103,06	85,17
70/3	FP	104,12	52,06	34,71	26,03	20,82	17,35	14,87	13,01	11,57	10,41
	FV	2104,06	935,14	526,02	336,65	233,78	171,76	131,50	103,90	84,16	69,56
70/4	FP	138,82	69,41	46,27	34,71	27,76	23,14	19,83	17,35	15,42	13,88
	FV	2805,42	1246,85	701,35	448,87	311,71	229,01	175,34	138,54	112,22	92,74
70/5	FP	173,53	86,77	57,84	43,38	34,71	28,92	24,79	21,69	19,28	17,35
	FV	3506,77	1558,56	876,69	561,08	389,64	286,27	219,17	173,17	140,27	115,93
80/4	FP	178,16	89,08	59,39	44,54	35,63	29,69	25,45	22,27	19,80	17,82
	FV	3664,22	1628,54	916,05	586,27	407,14	299,12	229,01	180,95	146,57	121,13
80/5	FP	222,70	111,35	74,23	55,68	44,54	37,12	31,81	27,84	24,74	22,27
	FV	4580,27	2035,68	1145,07	732,84	508,92	373,90	286,27	226,19	183,21	151,41

The table applies to the standard mesh spacing of 34.3 x 38.1 and material S235 JR + N St 37-2. The values represent the maximum permitted load-bearing capacity of the grating.

Press welded grating mesh spacing 34.3 x 38.1 mm, DIN EN 1991										S235 JR+N St 37-2
Bearing bars mm	Width between supports mm	1.200	1.300	1.400	1.500	1.600	1.700	1.800	1.900	2.000
20/2	FP	0,25	0,20	0,16	0,13	0,11	0,09	0,07	0,06	0,05
	FV	1,25	0,91	0,68	0,51	0,40	0,31	0,25	0,20	0,16
20/3	FP	0,38	0,30	0,24	0,19	0,16	0,13	0,11	0,10	0,08
	FV	1,88	1,36	1,01	0,77	0,59	0,47	0,37	0,30	0,24
25/2	FP	0,49	0,39	0,31	0,25	0,21	0,17	0,15	0,12	0,11
	FV	2,44	1,77	1,32	1,00	0,77	0,61	0,48	0,39	0,32
25/3	FP	0,74	0,58	0,46	0,38	0,31	0,26	0,22	0,19	0,16
	FV	3,66	2,66	1,98	1,50	1,16	0,91	0,72	0,58	0,47
30/2	FP	0,85	0,67	0,53	0,43	0,36	0,30	0,25	0,21	0,18
	FV	4,22	3,07	2,28	1,73	1,34	1,05	0,83	0,67	0,55
30/3	FP	1,27	1,00	0,80	0,65	0,53	0,44	0,37	0,32	0,27
	FV	6,33	4,60	3,42	2,59	2,00	1,57	1,25	1,01	0,82
30/4	FP	1,69	1,33	1,06	0,86	0,71	0,59	0,50	0,42	0,36
	FV	8,44	6,13	4,56	3,46	2,67	2,10	1,67	1,34	1,09
30/5	FP	2,12	1,66	1,33	1,08	0,89	0,74	0,62	0,53	0,45
	FV	10,55	7,66	5,70	4,32	3,34	2,62	2,08	1,68	1,37
35/2	FP	1,33	1,05	0,84	0,68	0,56	0,47	0,39	0,33	0,29
	FV	6,70	4,87	3,62	2,75	2,12	1,66	1,32	1,07	0,87
35/3	FP	2,00	1,57	1,26	1,02	0,84	0,70	0,59	0,50	0,43
	FV	10,06	7,30	5,43	4,12	3,18	2,50	1,99	1,60	1,30
35/4	FP	2,67	2,09	1,67	1,36	1,12	0,93	0,78	0,67	0,57
	FV	13,41	9,73	7,24	5,49	4,24	3,33	2,65	2,13	1,74
35/5	FP	3,33	2,62	2,09	1,70	1,40	1,16	0,98	0,83	0,71
	FV	16,76	12,17	9,05	6,86	5,30	4,16	3,31	2,67	2,17
40/2	FP	1,98	1,55	1,24	1,01	0,83	0,69	0,58	0,49	0,42
	FV	10,01	7,27	5,40	4,10	3,17	2,48	1,98	1,59	1,30
40/3	FP	2,96	2,33	1,86	1,51	1,24	1,04	0,87	0,74	0,63
	FV	15,01	10,90	8,10	6,15	4,75	3,73	2,96	2,39	1,95
40/4	FP	3,95	3,10	2,48	2,01	1,66	1,38	1,16	0,99	0,85
	FV	20,01	14,53	10,80	8,20	6,33	4,97	3,95	3,18	2,59
40/5	FP	4,94	3,88	3,10	2,52	2,07	1,73	1,45	1,23	1,06
	FV	25,02	18,16	13,50	10,25	7,92	6,21	4,94	3,98	3,24
45/4	FP	5,43	4,38	3,50	2,84	2,34	1,95	1,64	1,40	1,20
	FV	28,50	20,69	15,38	11,67	9,02	7,07	5,63	4,53	3,69
50/2	FP	3,33	2,98	2,38	1,94	1,59	1,33	1,12	0,95	0,81
	FV	19,54	14,19	10,55	8,01	6,18	4,85	3,86	3,11	2,53
50/3	FP	4,99	4,47	3,58	2,90	2,39	1,99	1,68	1,42	1,22
	FV	29,32	21,28	15,82	12,01	9,28	7,28	5,79	4,66	3,80
50/4	FP	6,65	5,96	4,77	3,87	3,19	2,65	2,23	1,90	1,63
	FV	39,09	28,38	21,10	16,01	12,37	9,70	7,72	6,22	5,07
50/5	FP	8,32	7,46	5,96	4,84	3,98	3,32	2,79	2,37	2,03
	FV	48,86	35,47	26,37	20,01	15,46	12,13	9,65	7,77	6,33
60/3	FP	7,07	6,48	5,98	4,93	4,06	3,38	2,85	2,42	2,07
	FV	42,94	36,59	27,34	20,75	16,03	12,58	10,01	8,06	6,57
60/4	FP	9,42	8,64	7,97	6,58	5,41	4,51	3,80	3,23	2,76
	FV	57,25	48,78	36,46	27,67	21,37	16,77	13,34	10,75	8,75
60/5	FP	11,78	10,80	9,96	8,22	6,77	5,64	4,75	4,03	3,46
	FV	71,57	60,98	45,57	34,58	26,72	20,96	16,68	13,43	10,94
70/3	FP	9,47	8,68	8,01	7,44	6,35	5,29	4,45	3,78	3,24
	FV	58,45	49,80	42,94	32,95	25,45	19,97	15,89	12,80	10,43
70/4	FP	12,62	11,57	10,68	9,92	8,46	7,05	5,93	5,04	4,32
	FV	77,93	66,40	57,25	43,93	33,94	26,63	21,19	17,07	13,90
70/5	FP	15,78	14,46	13,35	12,40	10,58	8,81	7,42	6,30	5,40
	FV	97,41	83,00	71,57	54,92	42,42	33,29	26,48	21,33	17,38
80/4	FP	16,20	14,85	13,70	12,73	11,88	10,34	8,70	7,39	6,34
	FV	101,78	86,73	74,78	65,14	50,66	39,75	31,63	25,48	20,75
80/5	FP	20,25	18,56	17,13	15,91	14,85	12,92	10,88	9,24	7,92
	FV	127,23	108,41	93,47	81,43	63,32	49,69	39,53	31,84	25,94

Legend for conversion values: see page 106/107.

Full grating mesh spacing 33.3 x 33.3 mm, DIN EN 1991											S235 JR+N St 37-2
Bearing bars mm	Width between supports mm	200	300	400	500	600	700	800	900	1.000	1.100
20/2	FP	4,25	2,13	1,42	1,06	0,85	0,71	0,61	0,42	0,31	0,23
	FV	70,70	31,42	17,67	11,31	7,86	5,77	3,91	2,44	1,60	1,09
20/3	FP	6,38	3,19	2,13	1,60	1,28	1,06	0,91	0,63	0,46	0,34
	FV	106,05	47,13	26,51	16,97	11,78	8,66	5,86	3,66	2,40	1,64
25/2	FP	6,59	3,30	2,20	1,65	1,32	1,10	0,94	0,82	0,59	0,45
	FV	110,47	49,10	27,62	17,67	12,27	9,02	6,90	4,77	3,13	2,14
25/3	FP	9,89	4,94	3,30	2,47	1,98	1,65	1,41	1,23	0,89	0,67
	FV	165,70	73,64	41,43	26,51	18,41	13,53	10,36	7,15	4,69	3,20
30/2	FP	9,41	4,70	3,14	2,35	1,88	1,57	1,34	1,18	1,02	0,76
	FV	159,07	70,70	39,77	25,45	17,67	12,99	9,94	7,86	5,40	3,69
30/3	FP	14,11	7,06	4,70	3,53	2,82	2,35	2,02	1,76	1,53	1,14
	FV	238,61	106,05	59,65	38,18	26,51	19,48	14,91	11,78	8,11	5,54
35/2	FP	12,68	6,34	4,23	3,17	2,54	2,11	1,81	1,58	1,41	1,20
	FV	216,52	96,23	54,13	34,64	24,06	17,67	13,53	10,69	8,58	5,86
35/3	FP	19,02	9,51	6,34	4,75	3,80	3,17	2,72	2,38	2,11	1,80
	FV	324,77	144,34	81,19	51,96	36,09	26,51	20,30	16,04	12,87	8,79
40/2	FP	16,42	8,21	5,47	4,10	3,28	2,74	2,35	2,05	1,82	1,64
	FV	282,80	125,69	70,70	45,25	31,42	23,09	17,67	13,97	11,31	8,75
40/3	FP	24,62	12,31	8,21	6,16	4,92	4,10	3,52	3,08	2,74	2,46
	FV	424,19	188,53	106,05	67,87	47,13	34,63	26,51	20,95	16,97	13,13
45/2	FP	20,59	8,21	5,47	4,10	3,28	2,74	2,35	2,05	1,82	1,64
	FV	357,91	125,69	70,70	45,25	31,42	23,09	17,67	13,97	11,31	8,75
45/3	FP	30,89	12,31	8,21	6,16	4,92	4,10	3,52	3,08	2,74	2,46
	FV	536,87	188,53	106,05	67,87	47,13	34,63	26,51	20,95	16,97	13,13
50/2	FP	25,16	12,58	8,39	6,29	5,03	4,19	3,59	3,15	2,80	2,52
	FV	441,87	196,39	110,47	70,70	49,10	36,07	27,62	21,82	17,67	14,61
50/3	FP	37,75	18,87	12,58	9,44	7,55	6,29	5,39	4,72	4,19	3,77
	FV	662,80	294,58	165,70	106,05	73,64	54,11	41,43	32,73	26,51	21,91
60/2	FP	35,58	17,79	11,86	8,90	7,12	5,93	5,08	4,45	3,95	3,56
	FV	636,29	282,80	159,07	101,81	70,70	51,94	39,77	31,42	25,45	21,03
60/3	FP	53,37	26,69	17,79	13,34	10,67	8,90	7,62	6,67	5,93	5,34
		954,43	424,19	238,61	152,71	106,05	77,91	59,65	47,13	38,18	31,55

The table applies to the standard mesh spacing of 33.3 x 33.3 and material S235 JR+N St 37-2. The values represent the maximum permitted load-bearing capacity of the grating.

For the load of full grating and louvre grating, the stated point loading has to be multiplied by a factor of 0.67.

For the load on grating made of material S355 JR, the maximum load to the left of the black line can be multiplied by 1.5, whereas to the right of it the value remains the same.

The width between supports is the clear width between the bearings of the grating. The grating landing for grating panels should be not less than the height of the grating, but always a minimum of 30 mm.

FP is the maximum point loading in kn on the load cube 200 x 200 mm. FV is the maximum uniformly distributed surface load in kn/m².

Full grating mesh spacing 33.3 x 33.3 mm, DIN EN 1991										S235 JR+N St 37-2
Bearing bars mm	Width between supports mm	1.200	1.300	1.400	1.500	1.600	1.700	1.800	1.900	2.000
20/2	FP	0,18	0,14	0,11	0,09	0,07	0,06	0,05	0,04	0,04
	FV	0,77	0,56	0,42	0,32	0,24	0,19	0,15	0,12	0,10
20/3	FP	0,26	0,21	0,17	0,14	0,11	0,09	0,08	0,07	0,06
	FV	1,16	0,84	0,63	0,47	0,37	0,29	0,23	0,18	0,15
25/2	FP	0,34	0,27	0,21	0,17	0,14	0,12	0,10	0,09	0,07
	FV	1,51	1,10	0,81	0,62	0,48	0,37	0,30	0,24	0,20
25/3	FP	0,51	0,40	0,32	0,26	0,22	0,18	0,15	0,13	0,11
	FV	2,26	1,64	1,22	0,93	0,72	0,56	0,45	0,36	0,29
30/2	FP	0,59	0,46	0,37	0,30	0,25	0,20	0,17	0,15	0,13
	FV	2,61	1,89	1,41	1,07	0,82	0,65	0,51	0,41	0,34
30/3	FP	0,88	0,69	0,55	0,45	0,37	0,31	0,26	0,22	0,19
	FV	3,91	2,84	2,11	1,60	1,24	0,97	0,77	0,62	0,51
35/2	FP	0,92	0,72	0,58	0,47	0,39	0,32	0,27	0,23	0,20
	FV	4,14	3,01	2,23	1,70	1,31	1,03	0,82	0,66	0,54
35/3	FP	1,38	1,08	0,87	0,70	0,58	0,48	0,41	0,35	0,30
	FV	6,21	4,51	3,35	2,54	1,96	1,54	1,23	0,99	0,80
40/2	FP	1,36	1,07	0,86	0,69	0,57	0,48	0,40	0,34	0,29
	FV	6,18	4,49	3,33	2,53	1,95	1,53	1,22	0,98	0,80
40/3	FP	2,04	1,60	1,28	1,04	0,86	0,71	0,60	0,51	0,44
	FV	9,27	6,73	5,00	3,80	2,93	2,30	1,83	1,47	1,20
45/2	FP	1,36	1,07	0,86	0,69	0,57	0,48	0,40	0,34	0,29
	FV	6,18	4,49	3,33	2,53	1,95	1,53	1,22	0,98	0,80
45/3	FP	2,04	1,60	1,28	1,04	0,86	0,71	0,60	0,51	0,44
	FV	9,27	6,73	5,00	3,80	2,93	2,30	1,83	1,47	1,20
50/2	FP	2,29	2,05	1,64	1,33	1,10	0,91	0,77	0,65	0,56
	FV	12,07	8,76	6,51	4,94	3,82	3,00	2,38	1,92	1,56
50/3	FP	3,43	3,08	2,46	2,00	1,64	1,37	1,15	0,98	0,84
	FV	18,10	13,14	9,77	7,41	5,73	4,49	3,58	2,88	2,35
60/2	FP	3,23	2,97	2,74	2,26	1,86	1,55	1,30	1,11	0,95
	FV	17,67	15,06	11,26	8,54	6,60	5,18	4,12	3,32	2,70
60/3	FP	4,85	4,45	4,11	3,39	2,79	2,32	1,96	1,66	1,42
		26,51	22,59	16,88	12,81	9,90	7,77	6,18	4,98	4,05

Conversion values:

1 kN ≙ 100 kg

10 KN ≙ 1 to

10 N ≙ 1 daN ≙ 1 kp

The width between supports

Accessible area with a point loading of 1.5 kN on a 200 x 200 mm load cube with a deflection ≤ 4 mm according to BGI 588 and RAL GZ 637.

Area with a point loading of 1.5 kN on a 200 x 200 mm load cube with a deflection ≤ L/200.

This is just an excerpt from our load tables. The complete tables can be found in the download area of our website at www.meiser.co.uk.

Vehicular grating, DIN EN 1991, S235 JR+N St 37-2															
Width between supports mm		200	300	400	500	600	700	800	900	1.000	1.100	1.200	1.300	1.400	1.500
Total load Wheel load LA	Small van (F2) 10 kN 200 x 200 mm	30/4	30/4	30/5	40/4	40/5	40/5	50/4	60/4	60/4	60/4	70/4	70/4	70/4	70/4
Total load Wheel load LA	Van 6,0 to 20 kN 200 x 200 mm	30/4	40/5	60/4	70/4	70/4	70/5	80/5	80/5	90/5	90/5	100/5	100/5	110/5	110/5
Total load Wheel load LA	Van 9,0 to 30 kN 200 x 260 mm	30/4	50/4	70/4	70/5	80/5	90/5	90/5	100/5	110/5	110/5	120/5	120/5	130/5	130/5
Total load Wheel load LA	Van 12,0 to 40 kN 200 x 300 mm	30/4	60/4	70/4	90/5	90/5	100/5	110/5	120/5	120/5	130/5	140/5	150/5	150/5	-
Total load Wheel load LA	Van 16,0 to / Heavy truck 30 to 50 kN 200 x 400 mm	30/4	60/4	70/4	90/5	90/5	110/5	120/5	120/5	130/5	140/5	150/5	-	-	-
Total load Wheel load LA	Heavy truck 60 to 100 kN 200 x 600 mm	30/4	60/4	70/4	90/5	120/5	130/5	150/5	-	-	-	-	-	-	-

The calculation of the bearing bars for passenger cars is carried out taking into account the vibration coefficient (braking factor) of 1.0 according to DIN EN 1991-1-1:2010-12 + NA. The calculation of the bearing bars for trucks and heavy trucks is carried out taking into account the vibration coefficient (braking factor) of 1.4 according to DIN 1072 (12.85).

Vehicular grating with forklift truck, pneumatic tyres DIN EN 1991, S235 JR+N St 37-2															
Width between supports mm		200	300	400	500	600	700	800	900	1.000	1.100	1.200	1.300	1.400	1.500
Total load Wheel load LA	3,1 to 13 kN 200 x 200 mm	30/4	35/4	40/5	50/4	60/4	70/4	70/4	70/5	70/5	80/4	80/5	80/5	90/5	90/5
Total load Wheel load LA	4,6 to 20 kN 200 x 200 mm	30/4	40/5	50/5	60/5	70/4	70/5	80/5	80/5	90/5	90/5	100/5	100/5	110/5	110/5
Total load Wheel load LA	7 to 31,5 kN 200 x 200 mm	40/4	60/4	70/4	80/4	80/5	90/5	100/5	110/5	110/5	120/5	130/5	130/5	140/5	140/5
Total load Wheel load LA	10 to 45 kN 200 x 200 mm	45/5	70/4	80/5	90/5	100/5	110/5	120/5	130/5	130/5	140/5	150/5	150/5	-	-
Total load Wheel load LA	15 to 70 kN 200 x 200 mm	60/4	80/5	100/5	110/5	120/5	140/5	150/5	-	-	-	-	-	-	-
Total load Wheel load LA	19 to 85 kN 200 x 200 mm	60/5	90/5	110/5	120/5	140/5	150/5	-	-	-	-	-	-	-	-

The calculation of the bearing bars is carried out taking into account the vibration coefficient (braking factor) of 1.4.

Vehicular grating with forklift truck, solid rubber tyres DIN EN 1991, S235 JR+N St 37-2															
Width between supports mm		200	300	400	500	600	700	800	900	1.000	1.100	1.200	1.300	1.400	1.500
Total load Wheel load LA	3,1 to 13 kN 200 x 200 mm	30/4	40/5	50/5	60/4	60/5	70/5	80/4	80/5	90/5	90/5	100/5	100/5	100/5	110/5
Total load Wheel load LA	4,6 to 20 kN 200 x 200 mm	40/4	60/4	70/4	70/5	80/5	90/5	90/5	100/5	110/5	110/5	120/5	120/5	130/5	130/5
Total load Wheel load LA	7 to 31,5 kN 200 x 200 mm	50/4	70/4	80/5	90/5	100/5	110/5	120/5	130/5	140/5	140/5	150/5	-	-	-
Total load Wheel load LA	10 to 45 kN 200 x 200 mm	60/4	80/4	90/5	110/5	120/5	130/5	140/5	150/5	-	-	-	-	-	-
Total load Wheel load LA	15 to 70 kN 200 x 200 mm	70/4	90/5	120/5	130/5	150/5	-	-	-	-	-	-	-	-	-
Total load Wheel load LA	19 to 85 kN 200 x 200 mm	70/5	100/5	130/5	150/5	-	-	-	-	-	-	-	-	-	-

The calculation of the bearing bars is carried out taking into account the vibration coefficient (braking factor) of 1.4.

Vehicular grating, DIN EN 1991, S235 JR+N St 37-2						
Width between supports mm		1.600	1.700	1.800	1.900	2.000
Total load Wheel load LA	Small van (F2) 10 kN 200 x 200 mm	70/5	70/5	80/5	80/5	90/5
Total load Wheel load LA	Van 6,0 to 20 kN 200 x 200 mm	120/5	120/5	120/5	130/5	130/5
Total load Wheel load LA	Van 9,0 to 30 kN 200 x 260 mm	140/5	140/5	150/5	150/5	-
Total load Wheel load LA	Van 12,0 to 40 kN 200 x 300 mm	-	-	-	-	-
Total load Wheel load LA	Van 16,0 to / Heavy truck 30 to 50 kN 200 x 400 mm	-	-	-	-	-
Total load Wheel load LA	Heavy truck 60 to 100 kN 200 x 600 mm	-	-	-	-	-

Vehicular grating with forklift truck, pneumatic tyres DIN EN 1991, S235 JR+N St 37-2						
Width between supports mm		1.600	1.700	1.800	1.900	2.000
Total load Wheel load LA	3,1 to 13 kN 200 x 200 mm	100/5	110/5	110/5	120/5	120/5
Total load Wheel load LA	4,6 to 20 kN 200 x 200 mm	120/5	120/5	130/5	140/5	150/5
Total load Wheel load LA	7 to 31,5 kN 200 x 200 mm	150/5	150/5	-	-	-
Total load Wheel load LA	10 to 45 kN 200 x 200 mm	-	-	-	-	-
Total load Wheel load LA	15 to 70 kN 200 x 200 mm	-	-	-	-	-
Total load Wheel load LA	19 to 85 kN 200 x 200 mm	-	-	-	-	-

Vehicular grating with forklift truck, solid rubber tyres DIN EN 1991, S235 JR+N St 37-2						
Width between supports mm		1.600	1.700	1.800	1.900	2.000
Total load Wheel load LA	3,1 to 13 kN 200 x 200 mm	110/5	120/5	130/5	130/5	140/5
Total load Wheel load LA	4,6 to 20 kN 200 x 200 mm	140/5	140/5	150/5	150/5	-
Total load Wheel load LA	7 to 31,5 kN 200 x 200 mm	-	-	-	-	-
Total load Wheel load LA	10 to 45 kN 200 x 200 mm	-	-	-	-	-
Total load Wheel load LA	15 to 70 kN 200 x 200 mm	-	-	-	-	-
Total load Wheel load LA	19 to 85 kN 200 x 200 mm	-	-	-	-	-

The table applies to the standard mesh spacing of 33.3 x 33.3 and material S235 JR+N St 37-2.

The values represent the maximum permitted load-bearing capacity of the grating.

LA = load carrying area

Conversion values:

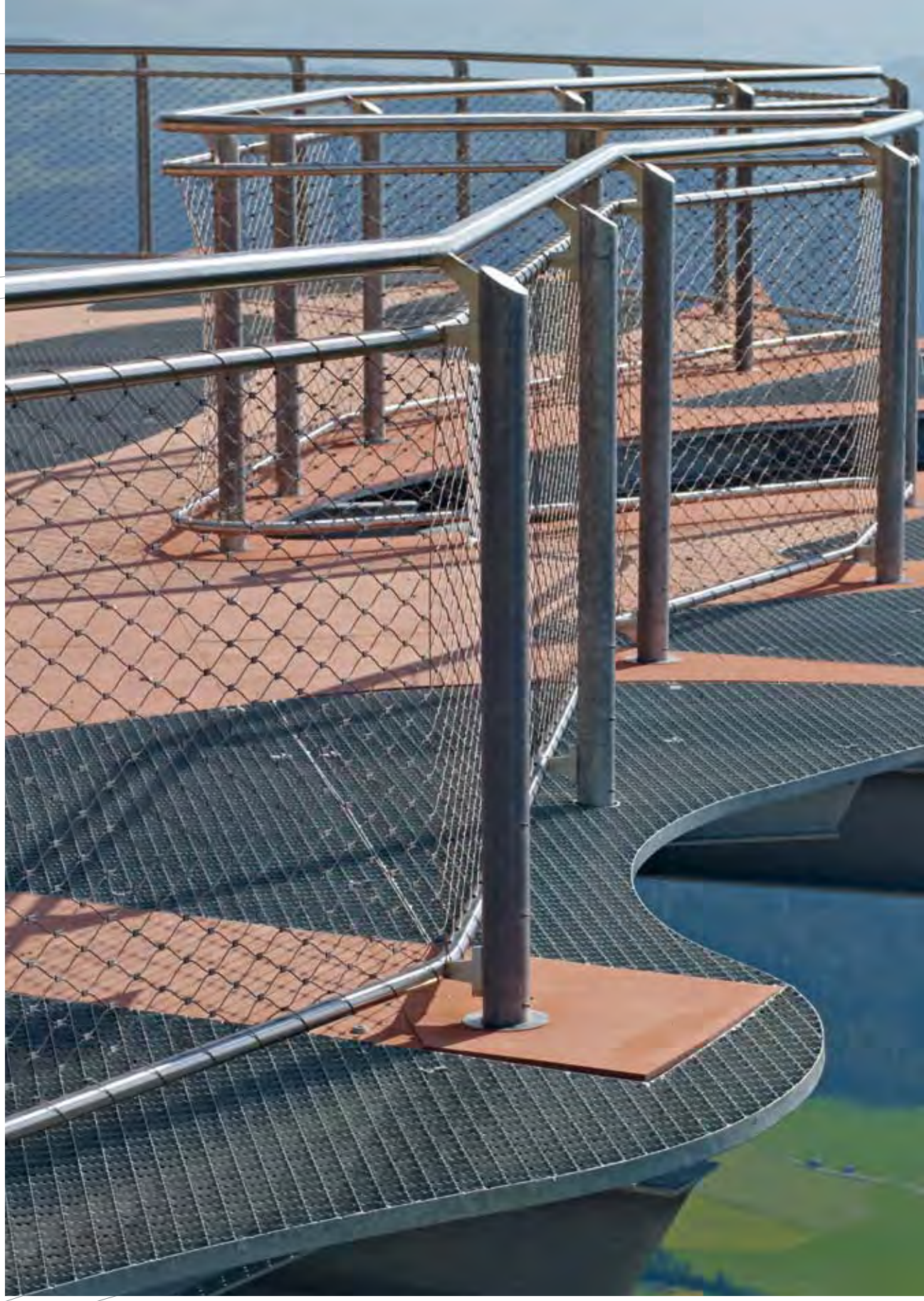
1 kN ≙ 100 kg

10 KN ≙ 1 to

10 N ≙ 1 daN ≙ 1 kp

The width between supports

The width between supports is the clear width between the bearings of the grating. The grating landing for grating panels should be not less than the height of the grating, but always a minimum of 30 mm.



STEINPLATTE OBSERVATION PLATFORM , AUSTRIA

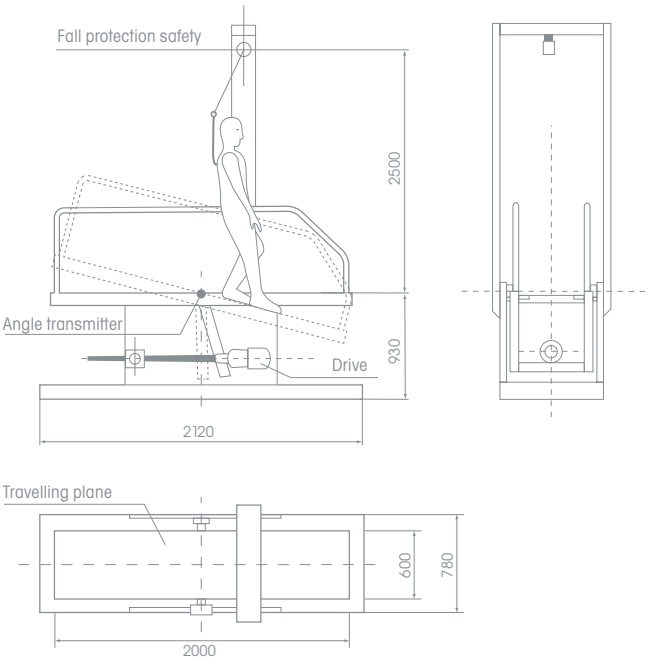
SAFETY

Safety

The theme of health and safety at work and accident prevention is growing in importance in companies and institutions. The accident prevention regulations issued by the Professional Associations and the German Social Accident Insurance (DGUV) are binding legal regulations, so that non-compliance can have serious consequences for any company. In many cases, avoidable accidents at work cause significant costs. A serious corporate commitment to pleasant and safe working conditions has an effect not least on the image of a company and enables customers to draw their own conclusions of the quality of the products and services. Irrespective of all legal consequences, all costs and the damage to our reputation,

TOP, FROM LEFT TO RIGHT:
BMW PLANT, DINGOLFING;
MOORING PLATFORM; LUCERNE CANTONAL HOSPITAL, SWITZERLAND
BOTTOM: SAARBAHN, SAARBRÜCKEN

there is one thing above all that we should not forget: we owe our success to our employees - people who are worthy of our protection. These are all good reasons for MEISER dealing in depth with this topic. We have developed a range of products which help you to prevent accidents and carry out your work safely. We have brought these products together in our catalogue called „Health and Safety at Work" in order to show you at a glance where improvements are possible and required. Ask your contact at MEISER for advice and carry out an analysis together with us with respect to how you can design your work areas to be even safer. Detailed information can be found in the MEISER health and safety at work brochure.



Anti-Skid-Properties

In recent years the issue of the slip resistance of walkable surfaces has gained in importance. Wherever work is carried out with glide-enhancing substances, i.e. where oils, greases and emulsions are used, there is an increased risk of slipping.

Outdoors, the weather plays a crucial role. Rain and snow quickly transform many areas into slides. However, MEISER offers a solution to this problem and guarantees a safe grip with MEISER anti-skid grating.

These greatly reduce the risk of slipping. Depending on the regulations or personal safety needs, MEISER can supply grating with a classification from R9 to R13. The required R number for different fields of application is specified by the „Professional Association Rule for Safety and Health at Work (BGR181)".

An analysis of this slip resistance capability is carried out by an independent test institution with clearly defined test equipment (see illustration).

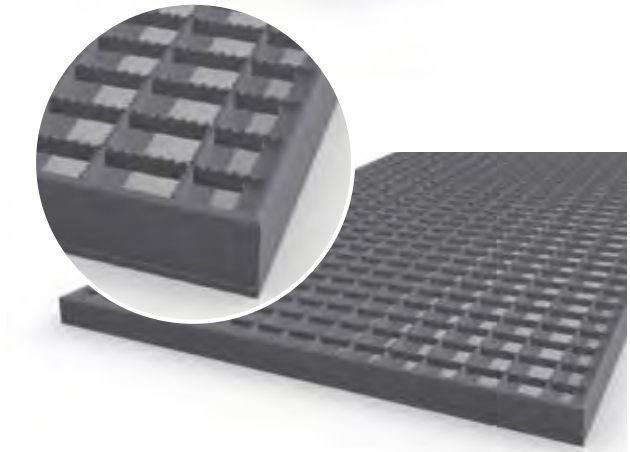
Classification

Degree	R Class
from 3° to 10°	R9
from 10° to 19°	R10
from 19° to 27°	R11
from 27° to 35°	R12
more than 35°	R13

FUEL DEPOT, HONAU

Pointed Tooth Serration SR1

The pointed tooth serration is used exclusively for press welded grating. In this form, the bearing bar is provided with particularly sharp notches by arranging crescent-shaped recesses continuously next to one another. This significantly increases the slip-resistant properties of this type of grating. With this profile it is possible to achieve slip resistance class R12 with certain mesh widths.



Saw Tooth Slide Serration SR2

Saw tooth slide serration is only possible in the case of press locked grating and is characterised by the saw tooth-shaped notching of the bearing bars and/or cross bars. With this form of slide protection, the maximum slip resistance class that can be reached is R12. This slide protection profile forms a basis for other special forms in accordance with foreign standards (e.g. Danish Railways). Please contact us about this if required.

Super Slide Serration SR3

Super slide serration is only possible in the case of press locked grating and is characterised by extremely high levels of anti-skid-properties. Here, the bearing bars and cross bars are punched to be particularly sharp-edged. With this form, the highest resistance class, i.e. R13, can be reached. This type of serration is used particularly in the food industry and in areas with high levels of contamination or regular contact with liquids.

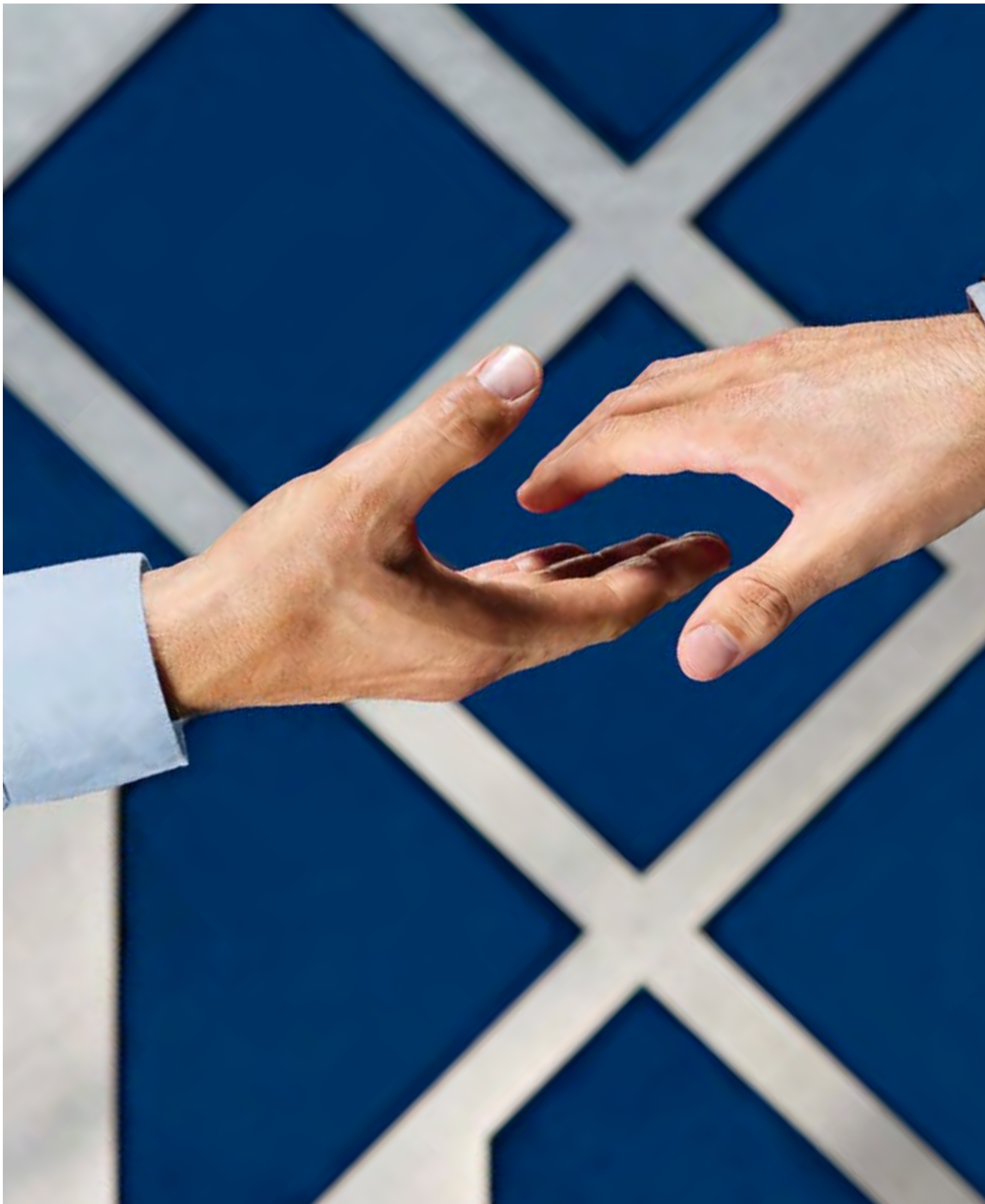
Standard Slide Serration SR4

The standard slide serration is characterised by the semi-circular notching on the bearing bars and/or cross bars, with residual webs being left between the notches. This means that in the case of press locked grating, a slip resistance class of up to R12 (notching of the bearing bar and cross bar) and in the case of press welded grating up to R11 (notching only possible on the bearing bar) can be achieved. This version is used as the standard grating in outdoor areas which are regularly frequented and accessed.

Overview of Slide (serration) Certificates

Evaluation group	Type of grating	Mesh spacing	Bearing bar (mm)	Type of anti-skid serration	Material	Surface
R10	Press welded	34 x 38	30/3	without	S 235 JR+N	galvanized
R10	Press welded	34 x 50	30/3	SR 4 T	S 235 JR+N	galvanized
R10	Press locked	33 x 33	30/3	without	S 235 JR+N	galvanized
R10	Press locked	33 x 33	30/3	without	S 235 JR+N	CDC
R10	Press locked	33 x 33	30/3	SR 4 T	S 235 JR+N	galvanized
R10	Press locked	33 x 33	30/2	SR 4 F	S 235 JR+N	galvanized
R10	Press locked	33 x 11	30/3	without	V4A	galvanized
R10	Press locked	33 x 11	30/2	without	S 235 JR+N	galvanized
R10	Press locked	33 x 16	30/5	SR 4 F	S 235 JR+N	galvanized
R11	Press welded	34 x 38	30/3	SR 41 T	S 235 JR+N	galvanized
R11	Press welded	34 x 38	30/3	SR 1 T	S 235 JR+N	galvanized
R11	Press welded	34 x 24	30/3	SR 4 T	S 235 JR+N	galvanized
R11	Press welded	34 x 38	30/3	SR 4 T	S 235 JR+N	galvanized
R11	Press welded	34 x 50	30/3	SR 1 T	S 235 JR+N	galvanized
R11	Offshore press welded	38 x 101	30/3	SR 6 T	S 235 JR+N	galvanized
R11	Press locked	33 x 11	30/2	SR 2 TF	S 235 JR+N	galvanized
R11	Press locked	33 x 11	30/2	SR 2 F	S 235 JR+N	galvanized
R11	Press locked	33 x 33	30/3	SR 2 F	S 235 JR+N	galvanized
R11	Press locked	33 x 16	50/5	SR 2 F	S 235 JR+N	galvanized
R11	Press locked	33 x 11	30/3	SR 4 F	S 235 JR+N	galvanized
R11	Press locked	33 x 11	30/2	SR 4 F	AlMg3	raw
R11	Nosing			perforated	S 235 JR+N	galvanized
R12	Press welded	34 x 38	30/3	SR 11 T	S 235 JR+N	galvanized
R12	Press locked	33 x 33	30/2	SR 4 TF	AlMg3	raw
R12	Press locked	33 x 33	30/3	SR 4 TF	1.4301	stained
R12	Press locked	33 x 33	25/3	SR 3 F	S 235 JR+N	galvanized
R12	Press locked	33 x 33	30/3	SR 4 TF	S 235 JR+N	galvanized
R12	Press locked	33 x 33	30/2	SR 2 TF	S 235 JR+N	galvanized
R12	Press locked	33 x 33	30/3	SR 4 T + SR 3 F	S 235 JR+N	galvanized
R12	Press locked	33 x 33	30/5	SR 4 T + SR 3 F	S 235 JR+N	galvanized
R13	Press locked	33 x 22	30/3	SR 3 TF	S 235 JR+N	galvanized
R13	Press locked	33 x 33	30/3	SR 3 TF	S 235 JR+N	galvanized
R13	Press locked	33 x 11	30/3	SR3 F	S 235 JR+N	galvanized

Slide protection - serrating is to be found on: T = bearing bar, F = cross bar, R = edge surround. Other sizes are possible based on the above. For production reasons, not all types of slide protection can be provided for all mesh spacing or bearing bars. We will be pleased to advise you!



SERVICE / STANDARDS AND CERTIFICATES

Service

MEISER understands service as offering its customers the greatest possible additional benefits with the punctual delivery of high-quality products. This begins with our offering you an extensive planning service. As professionals in the field of grating, we are able to plan an application faster and better than a planner who only deals with this topic from time to time or even for the first time.

A further special attraction for us is solving unusual tasks. We do not want to reduce your ideas to the possibilities at our disposal, but rather expand our possibilities through the development of new solutions. That is why new tasks are not only a technical challenge to us, but also the opportunity to improve and develop as a company.

Put us to the test!

Planning / Manufacturing / Assembling

Our offer to you includes the planning, manufacture and, upon request, assembly and preparation of installation plans – all under one roof. The continuous development of new products and the refinement of existing ones for a wide range of applications enable us to satisfy your requirements. Service is our top priority. For you this means:

- Advice on design, standards and regulations
- Preparation of assembly and manufacturing drawings
- Development of customer-specific special solutions.

For us, quality assurance is a matter of course. The designs comply – where necessary – with the latest DIN / EN standards, the conditions of the German accident prevention regulations and the specifications of the Professional Associations.

External Sales Force

Know how, quality, modern machinery, reliability and the best possible solutions to problems are the pillars on which our work is based.

Nevertheless, this is not the most important part of what makes us successful, but rather our employees, who step up to the plate every day to give their best on your behalf and position us successfully in the market.

This applies to everyone in our company - and that makes us proud. Business is done between people and not between systems. In order to ensure this in a sustainable manner and really be able to satisfy your wishes and requirements, the MEISER company puts its faith in an old, but tried and tested sales strategy: support from our professional external sales force on site in your company.

Put your faith in short communication channels and reliable contact persons who advise you on the basis of their experience and expertise, highlight possible solutions and will immediately provide you with assistance in the event that not everything is running smoothly. In our opinion this is the only correct way to ensure that your requirements are met.

We will not abandon this course, because it is the way to achieve quality and reliability which begins with the products and certainly does not end with customer support.

Service and Complaints Management

The prerequisite for the long-term satisfaction of our customers is good support - also after their purchase. A well-functioning service and complaints management system is an important part of our corporate culture and an essential part of successful and long-term cooperation.

We see it as our task to scrutinise our processes at regular intervals, initiate preventative measures and optimise our processes in order to be able to offer you an optimum service.

However, should something go wrong, the speedy processing of a complaint and the regular provision of information to our customers about progress with respect to processing the complaint is a matter of course for our employees.

Our service team is always there for you.

Contact us:

Limbach
Tel +49 (0) 6887 - 309-1367
Fax +49 (0) 6887 - 309-3000
E-Mail service@meiser.de

Oelsnitz
Tel +49 (0) 37421 - 50-2118
Fax +49 (0) 37421 - 50-2100
E-Mail service@meiser.de

You'll find your contact person on our website www.meiser.co.uk.

Quality „made in Germany"

MEISER has for many years focused on Germany as its business location. Through the further expansion of our production location in Limbach and Oelsnitz, MEISER now employs over 1,500 people in Germany. Our products therefore deserve the designation „Made in Germany".

However, we use these not only to supply our German customers, but also to export our products to the whole world. In response to specific customer wishes, we have already had our manufacturing processes verified in accordance with DIN EN 1090-2 Exc 2. As a result, we can in specific cases - and after prior arrangement with the customer - issue a CE mark for the products manufactured by MEISER.

Environment (DIN EN 50001)

Every company has to be aware of its responsibility towards our environment. For MEISER this means the firm anchoring of this idea in the corporate culture and therefore also in the minds of our employees. With the introduction of an energy and environmental management system during the course of 2013, we intend to implement this principle consistently and embed it in our production process.

As a company that produces in Germany, the highest environmental standards in the world already apply to MEISER. Our production is not associated with any harmful emissions whatsoever for the environment, and we strictly adhere to resource-saving production techniques. Our new hot dip galvanising plant is one of the most modern plants in Europe and no longer has anything in common with many old plants which are still in operation today. We generate a significant share of the electricity we need ourselves with our own solar energy systems and make use of the exhaust heat created by the production process for the production of hot water.

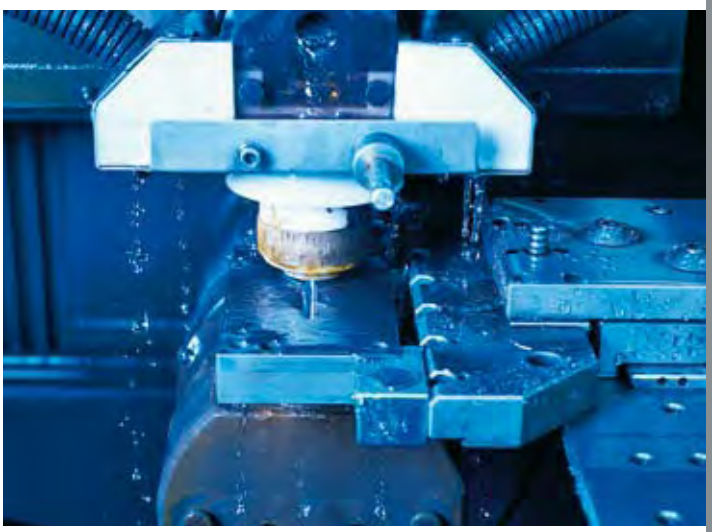
We offer our employees a safe, modern and pleasant workplace. MEISER also understands reliability to mean that our customers can rely on the fact that we respect and protect our environment.

High-Grade Steel Centre of Excellence

In our high-grade steel competence centre on the Limbach site, the high-quality materials of high-grade steel and aluminium are used to produce MEISER grating of a particularly high standard. The production of high-quality grating from high-grade steel and aluminium requires craftsmanship and the appropriate machinery. Furthermore, no ordinary black steel should be processed on the corresponding production lines if possible, as otherwise this will inevitably result in a deterioration in surface quality. We ensure the high quality of our products with state-of-the-art punching and pressing plants which are reserved exclusively for the production of high-grade steel and aluminium products. A modern waterjet cutting machine also guarantees that the cutouts are of the highest level that could never be reached with manual processing. Ultimately, we also place great emphasis on accuracy and reliability with respect to surface treatment and packaging in order to ensure that the goods reach the customer without being damaged.

Research and development

Research and development are carried out on a day-to-day basis at MEISER during the ongoing production process and as part of an in-depth exchange of information between our employees. In addition, new challenges present themselves every day in the form of queries from our customers. MEISER has its own toolmaking and mechanical engineering facilities whose origins were in the former jig manufacturing department of MLK Plauen. Today the team consists of approximately 40 highly trained and highly motivated skilled employees who deal with the design, production and maintenance of machines, plants, tools and other equipment used to manufacture the entire MEISER product range. Here, the main focus is on the continuous further development and international expansion of our company. With the possibility of installing complete production lines for the manufacture of press locked grating and press welded grating worldwide, we are able to offer consistent quality from a single source. The prerequisite for this is modern equipment with conventional CNC milling, turning and grinding centres, as well as state-of-the-art wire EDM machines - and above all experienced and motivated employees.



Checklist for Grating

Please use the checklist as a fax template
to facilitate the ordering process.

MEISER®
www.meiser.co.uk

Date _____ **Contact/Initials** _____

☐ **Inquiry** ☐ **Order** **Delivery date** _____

Load
☐ walkable, industry (according to DIN EN ISO 14122)
☐ walkable, public (according to DIN EN 1991)
☐ vehicular with _____ kN wheel load
☐ surface load _____ kN/m²

Anti-skid-properties – Serration ☐ R10 ☐ R11 ☐ R12 ☐ R13

Material / surface treatment

☐ Steel, S235JR/S355JR	☐ High-grade steel, 1.4031	☐ High-grade steel, 1.4571	☐ Aluminium, AlMg 1F15
☐ galvanised	☐ pickled	☐ pickled	☐ raw
☐ galvanised + powder coated	☐ raw	☐ raw	☐ anodised
☐ raw			☐ raw + powder coated
			☐ electropolished

Clear width between supports _____

Grating type _____

Item no. grating	Qty.	Meshing	Bearing bar	Bearing bar size Grating size	Cross bar size Grating size	...part	Accessories or special features

Item no.	Number of treads Bearing bar size	Cross bar size	Fastening material for treads	

Approximate alternative quantities

Total quantity _____ m²
Micro-cuts < 0.5 running metres as surcharge _____ pcs.
Perforated nosing _____ running metres
Fixing Clips _____ set

running metres cuts _____ running metres
Raised edge surround as bottom support from flat ____ running metres
Special parts _____

Installation planning
☐ yes ☐ no ☐ according to sketch
☐ according to design drawing
☐ according to data transmission
☐ by email transmission

Packaging
☐ Disposable packaging
☐ Euro pallets
☐ Container shipping

Name _____ **Adress** _____

Customer number _____

ISO CERTIFICATE, 9001:2008
SCHMELZ-LIMBACH

ISO CERTIFICATE, 9001:2008
OELSNITZ

ISO CERTIFICATE, 9001:2008
PLAUEN

CERTIFICATION REPORT, SLIP
RESISTANT FLOORING

CERTIFICATION MARK RAL-GZ
638 FOR GRATING

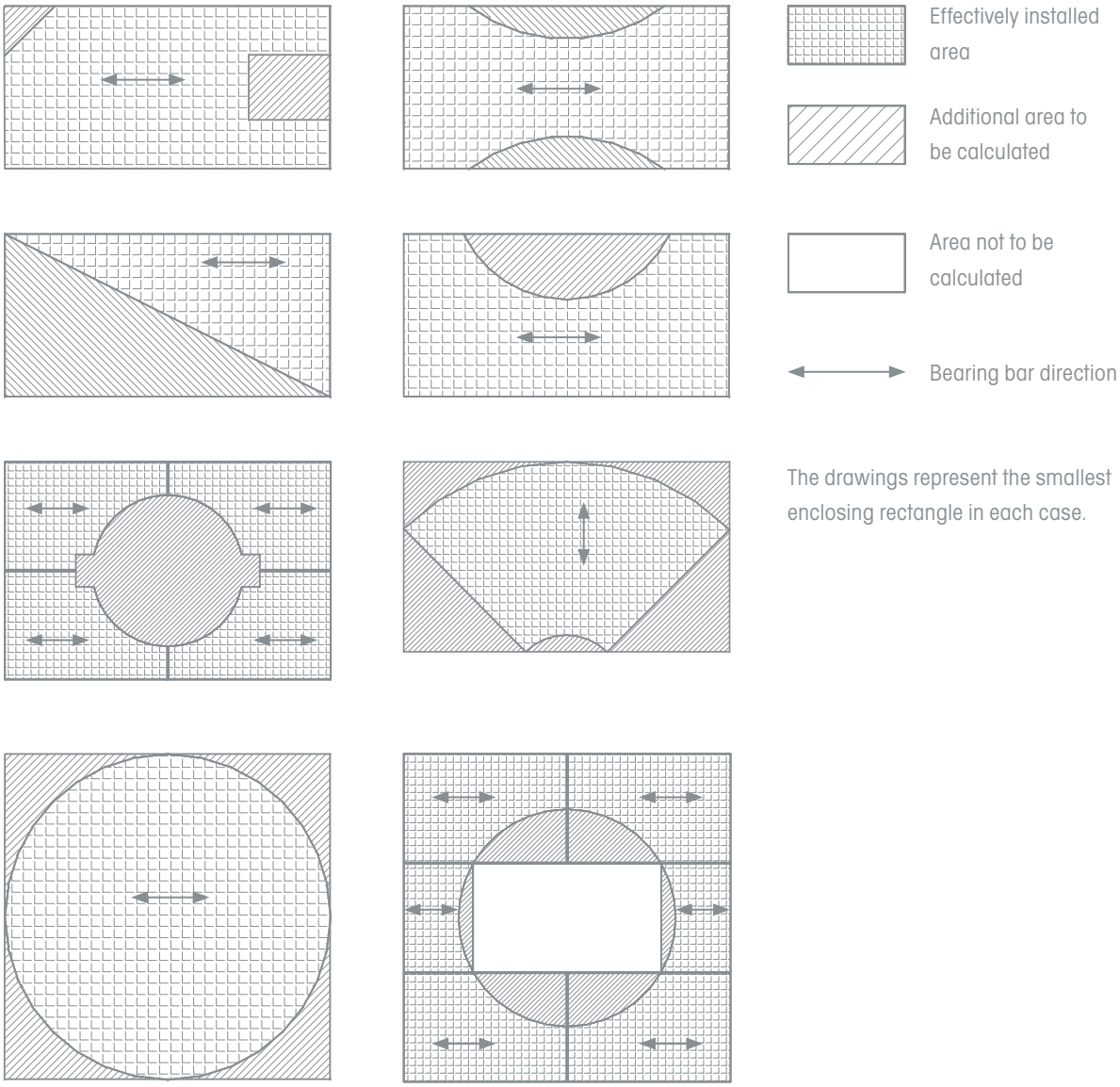
Valid standards

RAL GZ 638	Grating
DIN EN ISO 14122-3	Steel staircases
DIN 24531 -2,3	Profile grating stair treads and GRP grating stair treads
DIN 24537	Grating as floor coverings – Part 1: Grating made of metallic materials
DIN EN ISO 1461	Zinc coatings applied to steel using hot dip galvanising (piece galvanising) – requirements and testing
BGI 588	Leaflet for metal grating
BGR 181	Anti-skid-properties for floors in workrooms and work areas with danger of slipping
BS 4592	Industrial floors and stair treads - General requirements and fitting recommendations

Accounting Information for Grating

Please note the following information about our calculations:

our calculations are performed on the basis of the surface to be completed according to the smallest rectangle or square surrounding the grating in m². (As used in Worksheet H 10 of the Arbeitsgemeinschaft Industriebau e.V. (Working Committee for Industrial Construction). Cut-outs and sections are calculated including edge surround in running metres. Cut-outs and sections in the case of grating with openings and adaptations are included in the calculation, as well as the area of the grating to be manufactured. Micro-incisions are calculated including the edge surround up to an individual length of 0.5 m at a unit price per metre. Each additional piece is subject to a surcharge. Additional services such as the attachment of fastenings or reinforcements are calculated with a unit price. As a basis for our invoices we use the order confirmation, an installation plan and/or the measurements carried out on site.



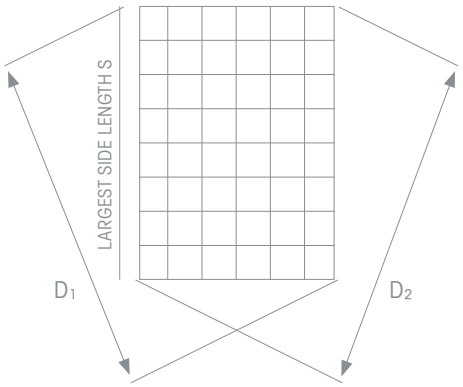
The drawings represent the smallest enclosing rectangle in each case.

Quality and Test Specification

are described in the quality assurance document RAL-GZ 638.

These manufacturing and delivery tolerances must be observed for the production of all grating in accordance with the following specification of sizes:

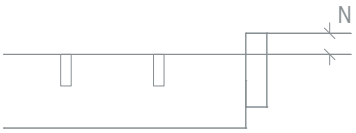
- for bearing bars ≤ 60 mm x 5 mm
- mesh spacing max. 68 mm and min. 11 mm
- grating size max. 2.0 m², with a permissible lateral dimension of at most 2,000 mm.



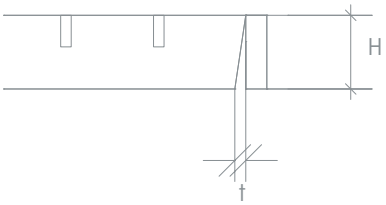
Diagonal distortion: D 1 - D 2 0 , 0 1 x s

Permitted tolerances for press locked gratings:

The tolerances occurring under a load (deformations) are not included.

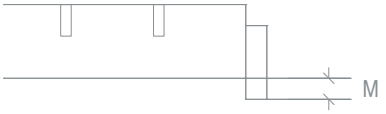


Top protruding edge N max. = 1.0 mm

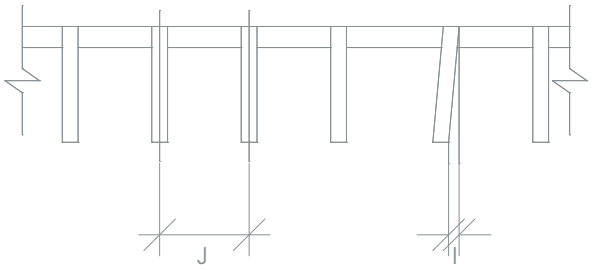


Oblique section of the bearing bar and cross bar t max. = ± 0.1 x H, but max. 3 mm

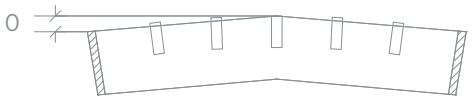
Higher cross bar K max. = 1.5 mm



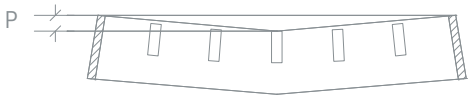
Bottom protruding edge M max. = 1.0 mm



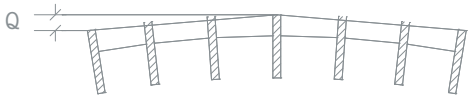
Inclination of the bearing and edge bars I max. = 0.1 x J, but max. 3 mm



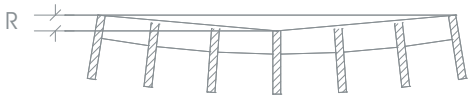
Deviations for convex O max. = 1/200 of the length for dimensions > 450 mm; max. 8 mm for dimensions smaller than 450 mm; max. 3 mm



Deviations for concave P max. = 1/200 of the length for dimensions > 600 mm; max. 8 mm for dimensions smaller than 600 mm; max. 3 mm



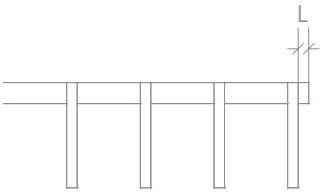
Deviations for convex Q max. = 1/200 of the width for dimensions > 450 mm; max. 8 mm for dimensions smaller than 450 mm; max. 3 mm



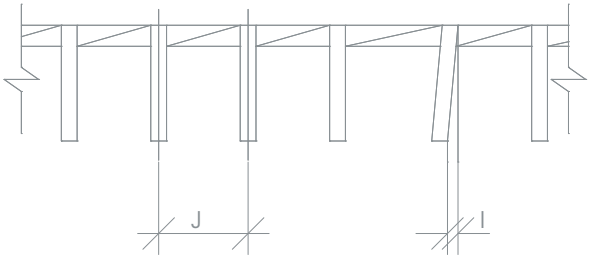
Deviations for concave R max. = 1/200 of the width for dimensions > 600 mm; max. 8 mm for dimensions smaller than 600 mm; max. 3 mm

Permitted tolerances for press welded grating:

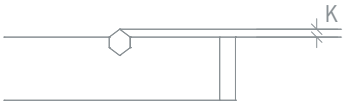
The tolerances occurring under a load (deformations) are not included.



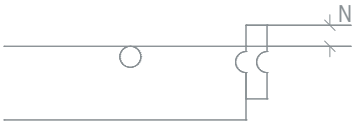
Projecting cross and edge bar L max. = 0.5 mm



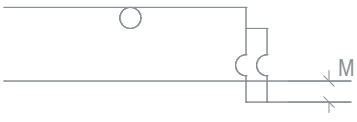
Inclination of the bearing and edge bars J max. = 0.1 x I, but max. 3 mm



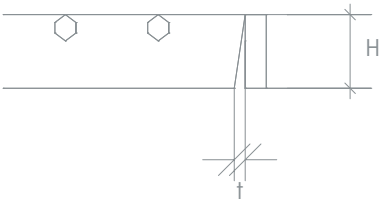
Higher cross bar K max. = 1.5 mm



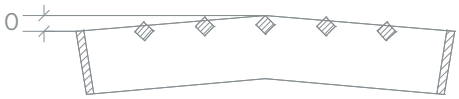
Top protruding edge N max. = 1.0 mm



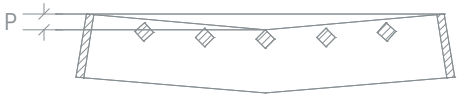
Bottom protruding edge M max. = 1.0 mm



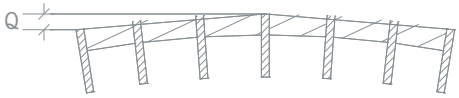
Inclination of the bearing and/or cross bar t max. = ± 0.1 x H, but max. 3 mm



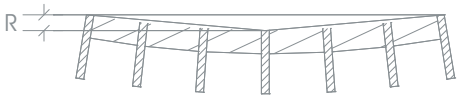
Deviations for convex O max. = 1/150 of the length for dimensions > 450 mm; max. 8 mm for dimensions smaller than 450 mm; max. 3 mm



Deviations for concave P max. = 1/200 of the length for dimensions > 600 mm; max. 8 mm for dimensions smaller than 600 mm; max. 3 mm



Deviations for convex Q max. = 1/150 of the width for dimensions > 600 mm; max. 8 mm for dimensions smaller than 450 mm; max. 3 mm



Deviations for concave R max. = 1/200 of the width for dimensions > 600 mm; max. 8 mm for dimensions smaller than 600 mm; max. 3 mm

Production sites

Germany
Gebr. MEISER GmbH
Edmund Meiser Straße 1
D-66839 Schmelz-Limbach
Tel +49 (0) 68 87 - 3 09-0
Fax +49 (0) 68 87 - 3 09-3000
E-Mail info@meiser.de

MEISER Vogtland OHG
Am Lehmteich 3
D-08606 Oelsnitz
Tel +49 (0) 37 421 - 50-0
Fax +49 (0) 37 421 - 50 2120 E-Mail
info@meiser.de

Egypt
Hady MEISER Egypt
for Bar grating production S.A.E.
6, Ramo Buildings/Nasr Road
AE-Nasr City, Cairo
Arab Republic of Egypt
Tel +202 (0) 41 51 485
Fax +202 (0) 29 10 702
E-Mail mmeiser@link.net

Belgium
FAMECO S.A.
Rue Pelé-Bois 4
B-4590 Ouffet
Tel +32 (0) 86 36 64 31
Fax +32 (0) 86 36 64 33
E-Mail sales@fameco.be

Brazil
MARANGONI-MEISER
Pisos Metálicos Ltda.
Avenida João Pinto, 1017
Parque da Empresa
CEP 13803-360 Mogi Mirim -
SP BRASIL
E-Mail info@meiser-brasilcom.br
www.meiser-brasil.com.br

France
MEISER SARL
Avenue de la Ferme du Roy
BP 80013
F-62401 Béthune Cedex
Tel +33 (0) 32 16 47 543
Fax +33 (0) 32 16 47 542
E-Mail bethune@meiser.fr

Marocco
MEISER EGL SARL
Zone industrielle sud ouest – Lot 118
MA-Mohammedia
Tel + 212 523 31 29 48
Fax + 212 523 31 29 45
GSM + 212 661 18 16 19
E-Mail meiseregl@meiser.ma

Turkey
Kartal MEISER
Izgara Üretim Ltd. S¸ ti.
Istanbul Yolu 30. km
Kartal Cad. No: 9
06980 Sarayköy Kazan/Ankara
Tel +90 (0) 312 815 43 22
Fax +90 (0) 312 815 52 23
E-Mail info@kartalmeiser.com

Hungary
MEISER Ferroste
Papirgyári ut 13
H-2400 Dunaújváros
Tel +36 (0) 25 28 30 33
Fax +36 (0) 25 50 18 70
E-mail ferroste@ferroste.hu

UAE
Lionweld MEISER LLC
DUTCO Compound
Jebel Ali Industrial 2
DUBAI
United Arab Emirates
Tel +971 (0) 48 80 11 25
Fax +971 (0) 48 80 11 99
E-Mail info@lionweldmeiser.com

Offices

Algeria
MEISER Algerie SARL
Hay Benghazi "B" n° 424,
Baraki - Alger Algérie
Tel/Fax +213 21 76 26 84
Mobil +213 66 15 03 552
E-Mail y.mouftakir@meiser.de

Bulgaria
MEISER Bulgaria EOOD
Rajko Zsinzifov ulica No 20,
vh. B, ap 19. / BG-Sofia
Tel +35 (0) 92 95 46 771
Fax +35 (0) 92 95 46 771
E-Mail meiser@abv.bg

Finland
Finnritilä Oy
Satamakatu 8
74120 Iisalmi
Finland
Tel +358 17 821 3800
Fax +358 17 821 3822
Sähköposti:
timo.koivistoinen@finnritila.com
www.finnritila.com

UK
MEISER UK Ltd
1B Poplar Road
Broadmeadow Industrial Estate
GB-Dumbarton G82 2RD
Scotland
Tel +44 (0) 13 89 76 50 00
Fax +44 (0) 13 89 76 11 66
Potto Office:
Tel +44 (0) 1642 701510
Fax +44 (0) 1642 701791
Mob +44 (0) 7823 322 456
E-Mail info@meiser.co.uk

Netherlands
RST MEISER Nederland BV
Goudsesingel 98
NL-3011 KD Rotterdam
Tel +31 (0) 10 23 31 300
Fax +31 (0) 10 41 47 847
E-Mail info@rstmeiser.nl

Agencies

Austria
MEISER Österreich GmbH
Anton-Hubmann-Platz 1
8071 Gössendorf
Fax +43 (0) 03135 - 409 53
E-Mail office@meiser.at

Poland
MEISER Polska Sp. z o.o.
ul. gen. Maczka 41
43-300 Bielsko Biała
Tel +48 33 755 23 85
Fax +48 33 755 23 87
E-Mail biuro@meiser.pl
www.meiser.pl

Romania
MEISER Romania S.R.L.
RO-3700, Oradea
Str. Henri Coanda Nr. 13
Bl. PC 23 Ap. 2 Romania
Tel +40 (0) 25 94 70 621
Fax +40 (0) 25 94 70 621
E-Mail meiser@rdslink.ro

Sweden
MEISER AB
Box 8778
SE-402 76 GÖTEBORG
Tel +46 (0) 10 - 4 58 00 00
Fax +46 (0) 31 - 55 40 51
E-Mail info@meiser.se

Switzerland
PMI MEISER Gitterroste AG
Schlüechtistrasse 6
CH-8104 Weiningen ZH
Tel +41 (0) 44 75 17 051
Fax +41 (0) 44 75 17 055
E-Mail info@meiser.ch

Spain
MEISER Rejillas Hispania S.L.
Poligono Industrial Cabezo Beaza
Avenida Luxemburgo s/n
Centro Empresarial Cartagena Plaza,
Planta 1a - Local 1,4
30353 Cartagena (Murcia)
Tel + 34 868 06 66 56
Fax + 34 868 06 66 56
E-Mail info@meiser.de

Estonia
Metal Disain Ltd
Suur-Sõjamäe 10,
EE-11415, Tallinn
Tel +372 (0) 61 01 150
+372 (0) 68 39 023
Fax +372 (0) 61 01 130
+372 (0) 68 39 021
E-Mail metaldis@metaldis.ee
www.metaldis.ee

Denmark
SEMITECH A/S
Reskavej 1
DK-4220 Korsør
Tel +45 (0) 57 52 75 75
Fax +45 (0) 57 52 75 77
E-Mail email@semitech.dk
www.semitech.dk

Croatia
MASERVICE-VRBOVEC d.o.o.
Gradecka ul. 33.
HR-10340 Vrbovec
Tel +385 (0) 12 791 - 609
Fax +385 (0) 12 791 - 884

Lithuania
UAB Morionis
Joint stock company Ltd.
Kestucio g.54
LT-3000 Kaunas
Tel +37 (0) 37 20 32 10
Fax +37 (0) 37 20 32 17
E-Mail morionis@takas.lt

Norway
NTJ AS
Melsomvikveien 3,
Postboks 113
N-3161 Stokke
Tel +47 (0) 33 30 58 30
Fax +47 (0) 33 30 58 31
E-Mail ntjas@ntj.no

South America
CUÑADO COLOMBIA
Centro histórico, plaza de la aduana
edificio andian oficina 605
Cartagena **Kolumbien**
Tel (575) 660 0025
E-Mail mcaicedo@cunadousa.com

CUINTER
C/ Juan de la fuente nº334
Comuna de Lampa–Santiago-**Chile**
Tel + 56 2 27 47 11 47
Fax + 56 2 27 47 11 12
E-Mail mail@cunado.cl

CUMEX
León tolstoi, 18
Despacho 301, Col. Nuevas Anzures
11590 - **México** D.F.
Tel 00 525 55 255 27 83
Fax 00 525 55 255 26 81
E-mail cumex@prodigy.net.mx

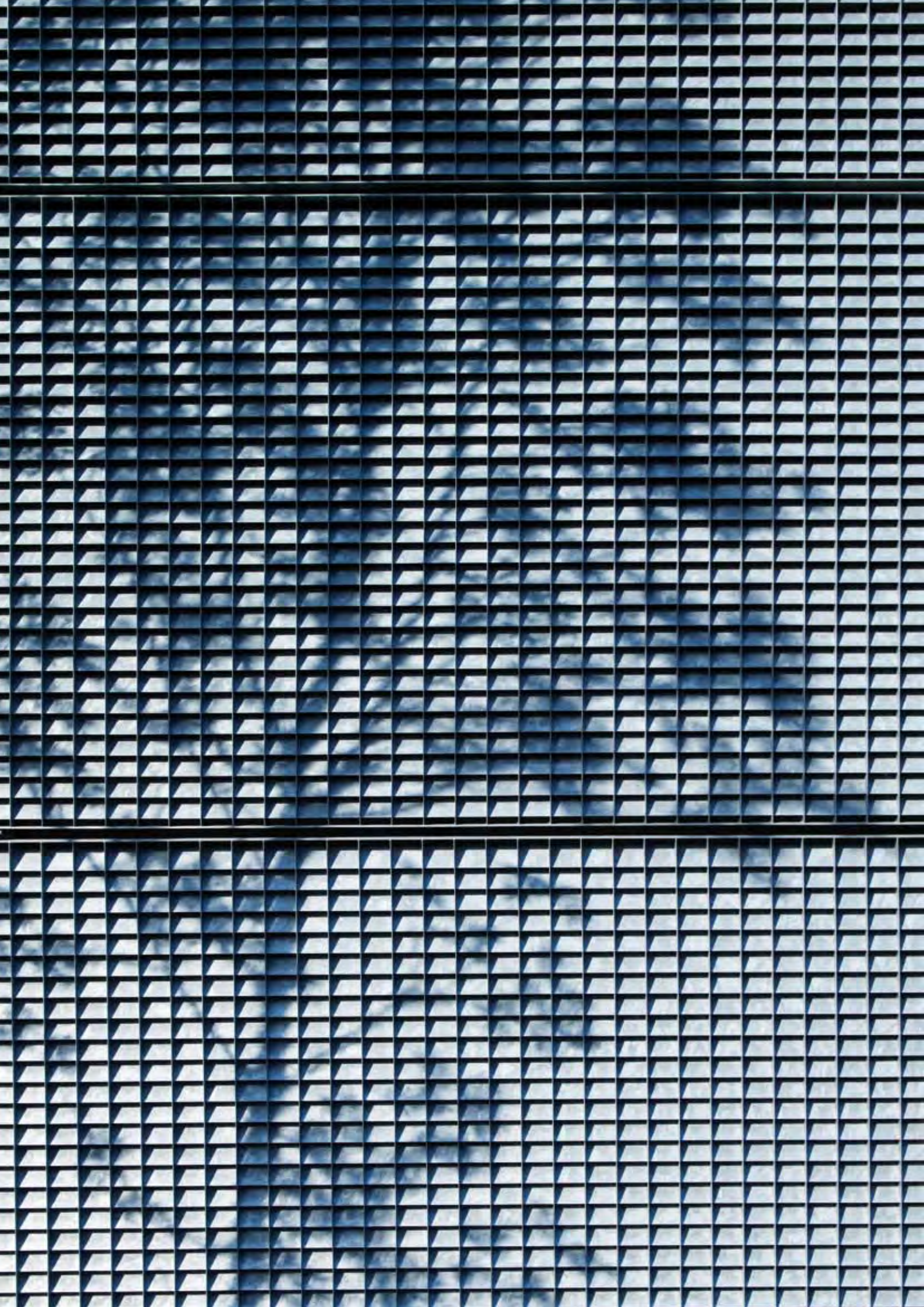
CUPERSA
Centro Empresial Peruano Suizo,
Av. Aramburu 166, Oficina 2B -
Miraflores, Lima 18 - **Perú**
Tel +51 1 416 6200
Fax +511 421 0700
E-mail info@cupersa.com

CUVENSA
Avda. Norte Sur EM 1, Parcela L-161
Parque comercial Ind. Castillito
Edo. Carabobo, Valencia - **Venezuela**
Tel 00 58 241 87 17 810
Fax 00 58 241 87 17 623
E-mail finanzas@cuvensa.com

USA
I.T.F.
2825 Wilcrest Suite 161,
77042 Houston, Texas
Tel 713 952 4111
Fax 713 952 4777
Email: itfinc@cunadousa.com

Central America
CRIBAS Y TAMICES INTERVENISPA, S.L:
Crta. Sentmenat 48-50, Nave F
08213 Polinyá (Barcelona) - España
Tel +34 93713 51 96
Fax +34 93 713 16 36
E-Mail info@intervenispa.com
www. intervenispa.com

1. A / 0613 / 2.000



Credits

Design, concept, technical illustration and lithography:

rachel mrosek, Saarbrücken,
ed-it, individual contents, Saarbrücken,
m&r Kreativ GmbH Saarbrücken

Photography: Tom Gundelwein, Rachel Mrosek

0313-500-1st edition