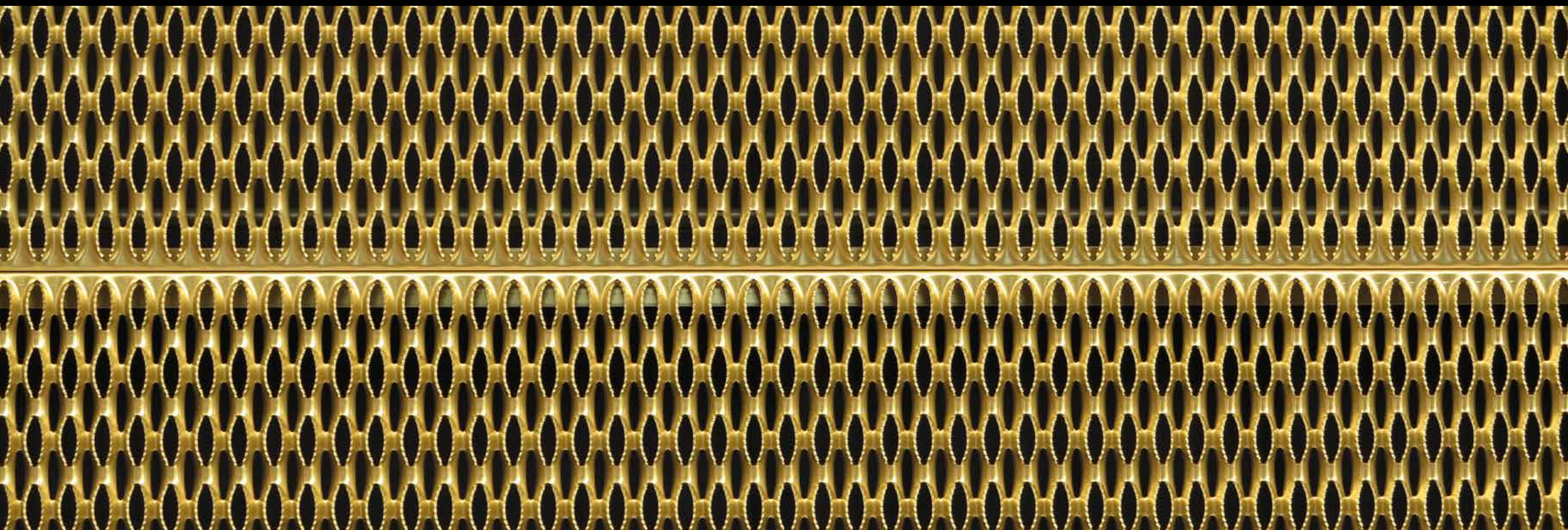
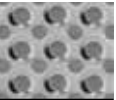




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GRIGLIATI

safety gratings



Con Graepel vai sul sicuro!

Con Graepel è semplice trovare la giusta soluzione per la “sicurezza sotto i piedi” per le industrie, per le scale, le costruzioni in metallo, le passerelle, i gradini o le scale di emergenza...

Gli oltre 125 anni di esperienza nella produzione di lamiere forate hanno portato allo sviluppo della più vasta gamma di grigliati per interni ed esterni oggi esistente sul mercato.

Questo catalogo vuole aiutarVi nella scelta del grigliato più adatto alla soluzione del Vostro problema, dal più leggero a quello più pesante.



Graepel for your safety!

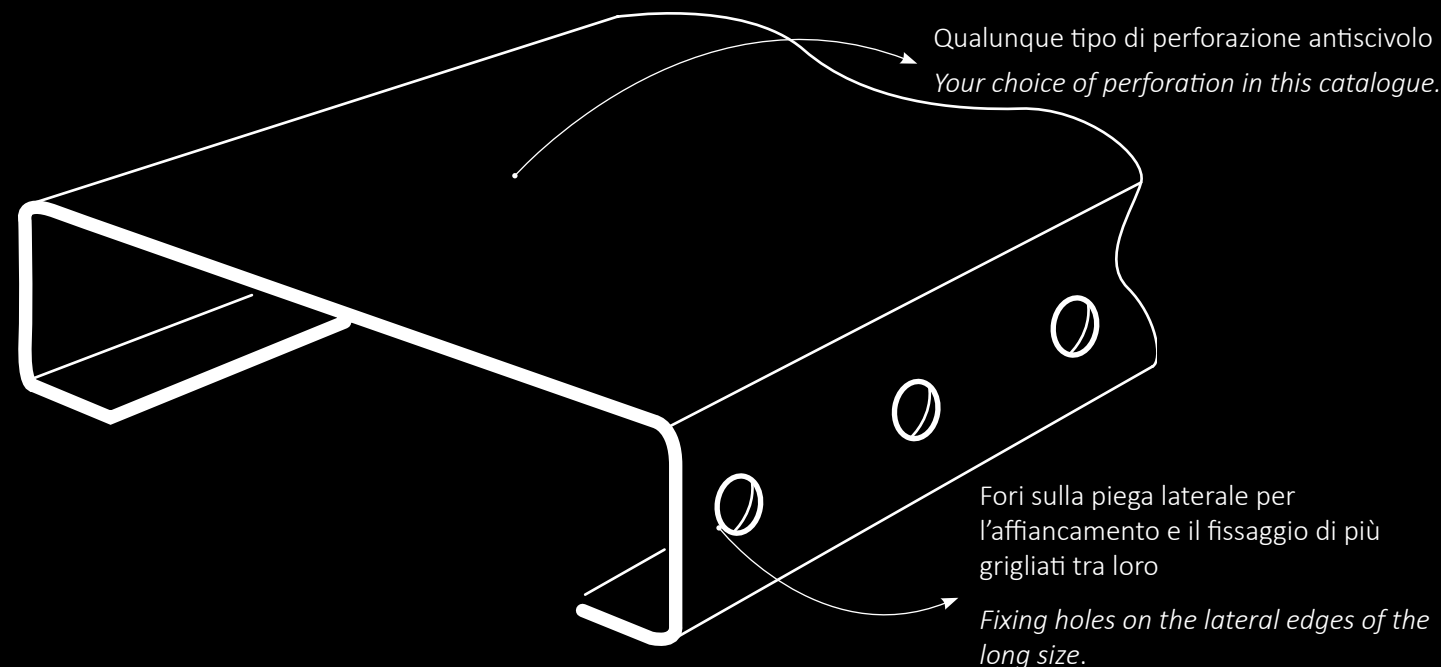
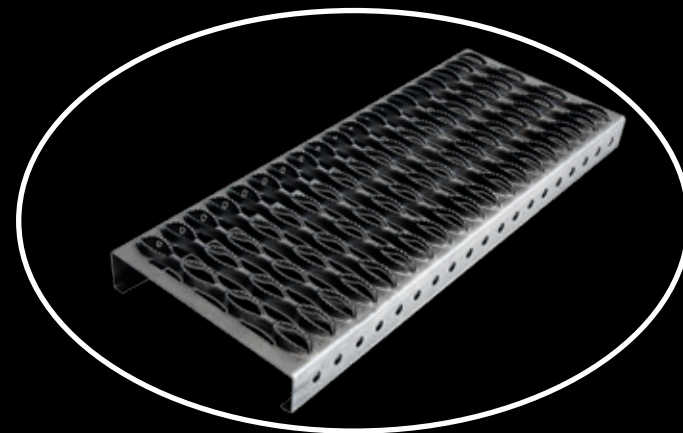
With Graepel you find the right solution to each problem of safety under feet: in industries, stairways, steel constructions, catwalks, steps and treadplates for machineries, escape routes in fire prevention

Graepel's more than 125 years of experience in perforated metals and gratings for safe grounds, indoors as well as outdoors, ensure flexibility and precision. We stay on your side already during the initial stage and help you develop your ideas.

Our present catalogue helps you to find the best solution to your problem, from the lightest to the heaviest grating. Graepel will not leave you on your own.

Grigliato

Safety grating

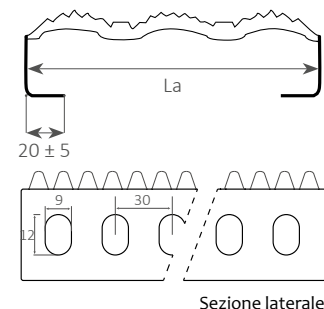


I grigliati **sono piegati a C** ed hanno fori di fissaggio su entrambi i lati lunghi. Su richiesta possono essere forniti con fori solo su uno dei due lati o anche senza. Inoltre possono essere forniti senza le pieghe laterali per un **utilizzo come lamiera piana**.

Sono fornibili nei materiali: **acciaio, acciaio zincato, acciai inossidabili e alluminio**. Sono anche disponibili vari elementi di fissaggio.

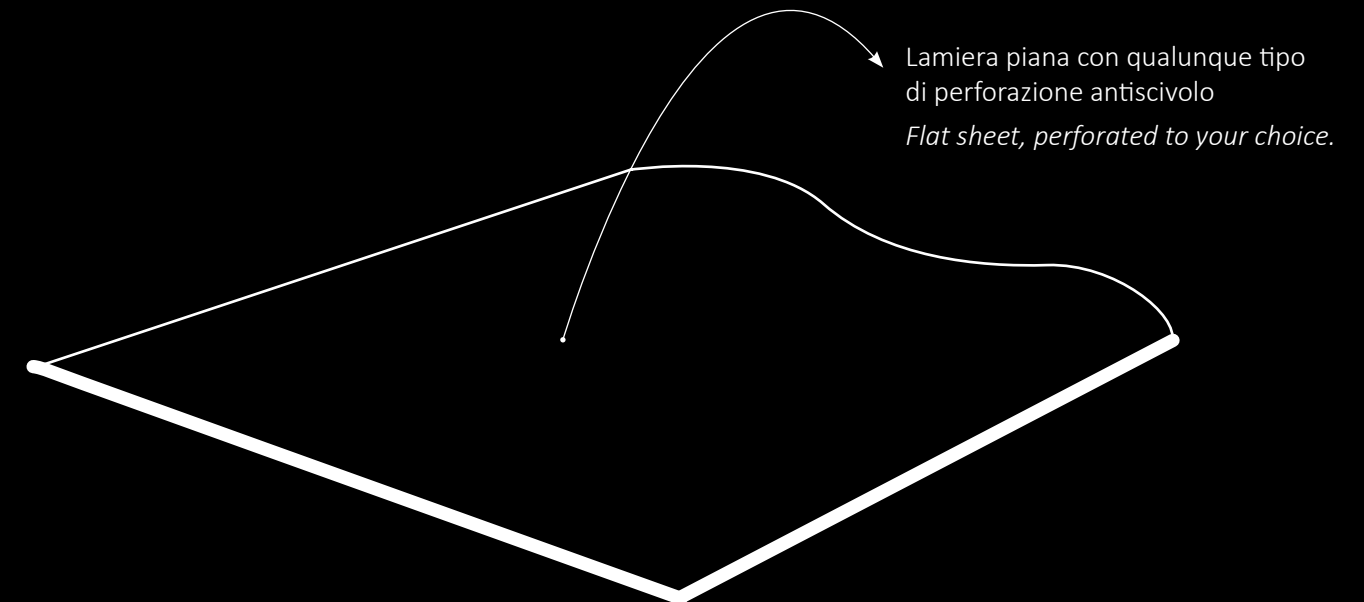
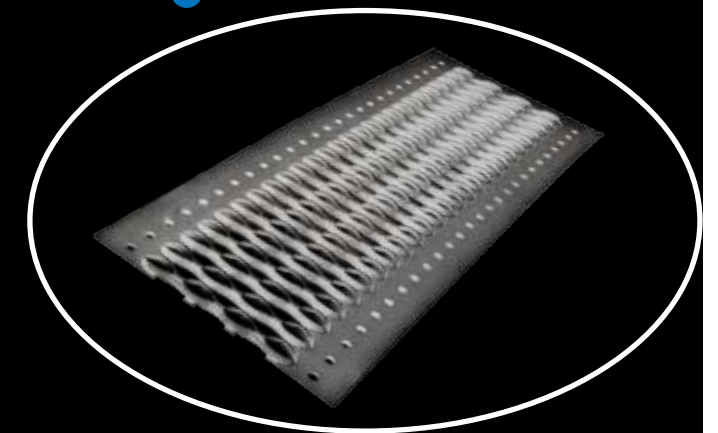
La portata dei grigliati è proporzionata all'altezza delle pieghe laterali, mentre lo spessore del materiale influisce solo parzialmente. Per aumentare la portata del singolo elemento si consiglia di unire più elementi fra di loro mediante viti attraverso gli appositi fori nelle pieghe laterali.

Per le tolleranze di lavorazione è buona norma considerare sulle lunghezze valori di +/- 4 mm, sulle larghezze di +/- 2 mm e sull'altezza delle pieghe laterali +/- 2 mm.



Lamiera antisdrucciolevole

Non-slip metal sheet

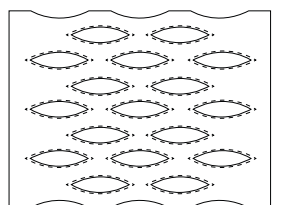


Fixing holes are **foreseen on both long sizes** of the gratings. On request they are available also with holes on just one side or even without any. Also the lateral edges can miss if the **use as flat sheet** is foreseen.

The possible raw materials are **steel, raw or galvanized, stainless steels and aluminum**.

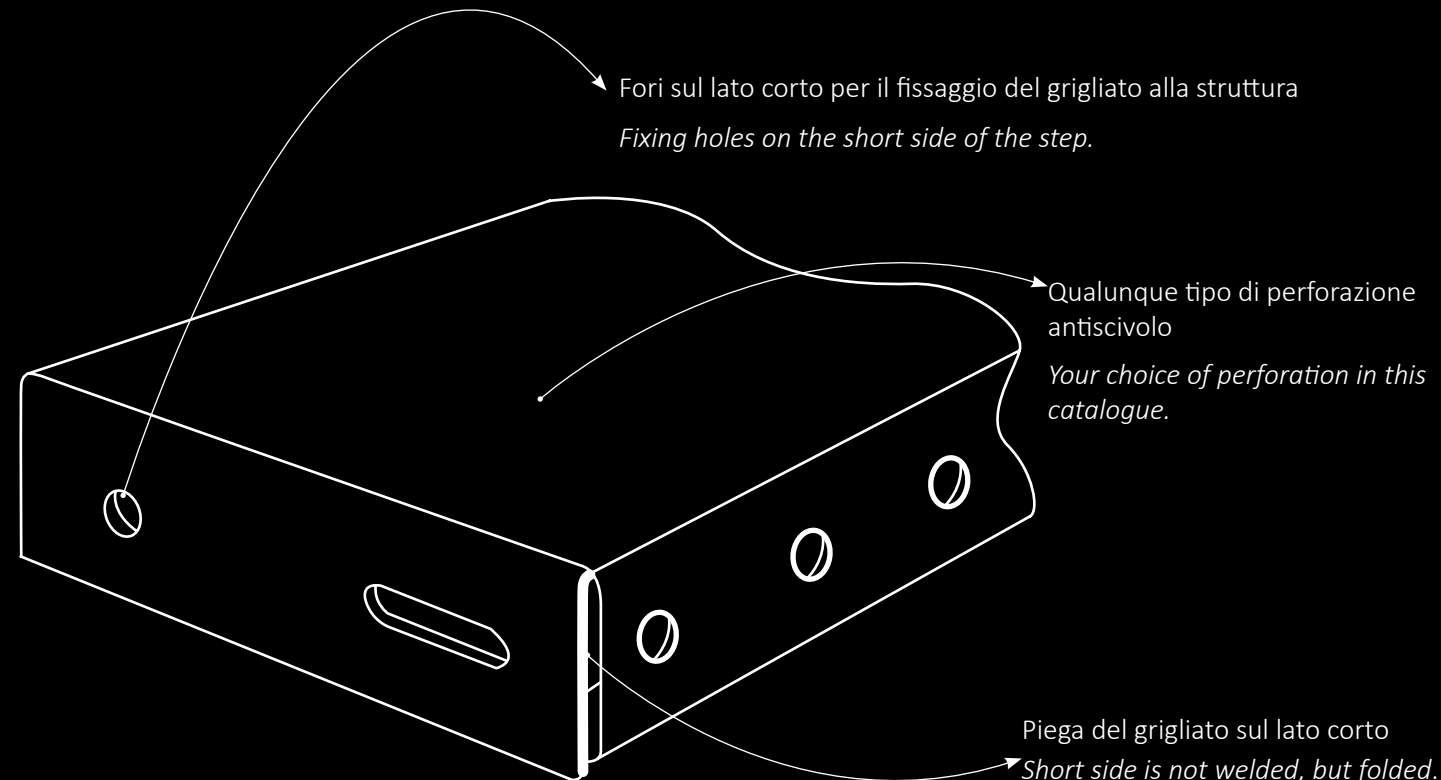
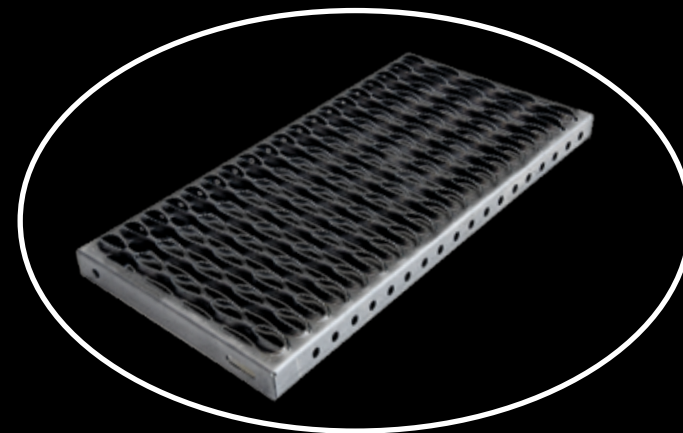
A wide range of accessories are available.

The capacity of the gratings depends on the height of the edges, while the thickness of the material has little influence. To increase the capacity of a single element it is suitable to join two or more elements together by means of screws through the lateral fixing holes. The manufacturing tolerances are within the following: length +/- 4 mm, width +/- 2 mm, height of the edges +/- 2 mm.



Gradino

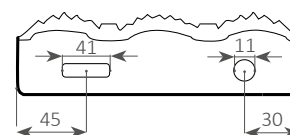
Step



I moduli metallici Graepel sono **autoportanti** e consentono di realizzare strutture di supporto leggere. **Antiscivolo e anti-vertigini**, garantiscono la massima sicurezza. Disponiamo di una **gamma completa di modelli** con un'ampia scelta di superfici.

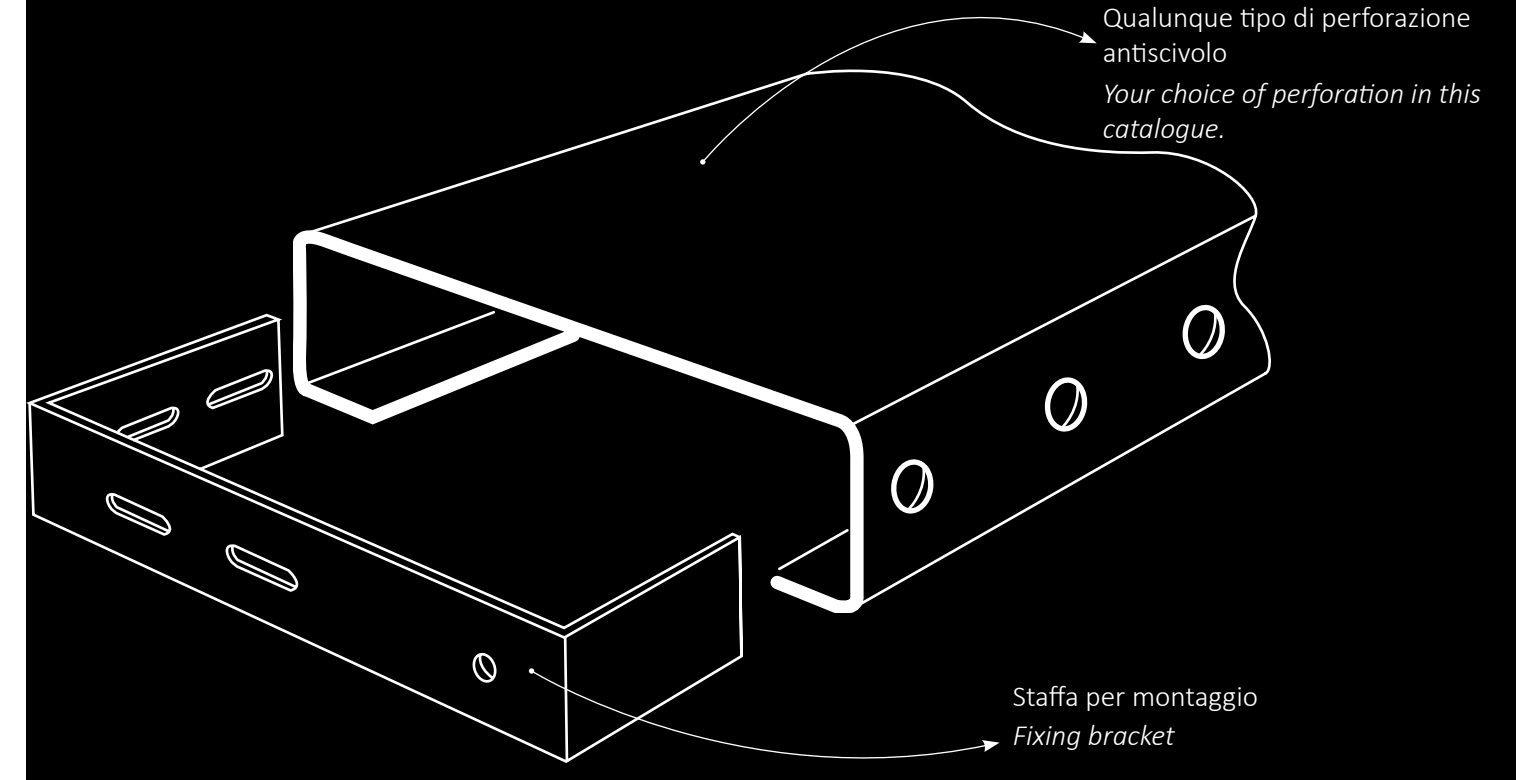
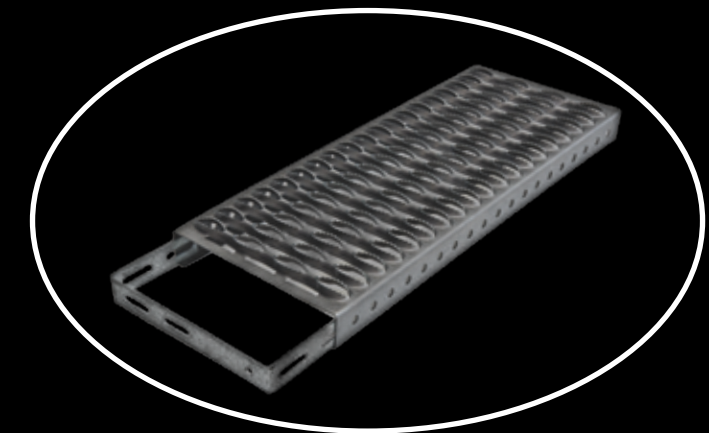
Classificazioni antiscivolo secondo DIN 51130 (R)

Questa norma classifica la resistenza allo scivolamento dei vari grigliati. I valori vanno da R 9 – resistenza minima allo scivolamento a R 13 – resistenza allo scivolamento molto elevata (p. es. per ambienti con grossa quantità di grassi e lavorazione degli alimenti).



Gradino - Grigliato con staffa

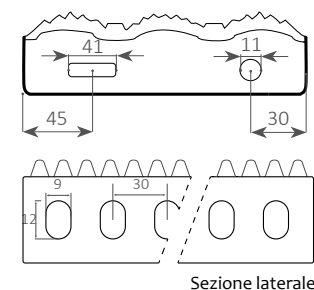
Step - Safety grating with bracket

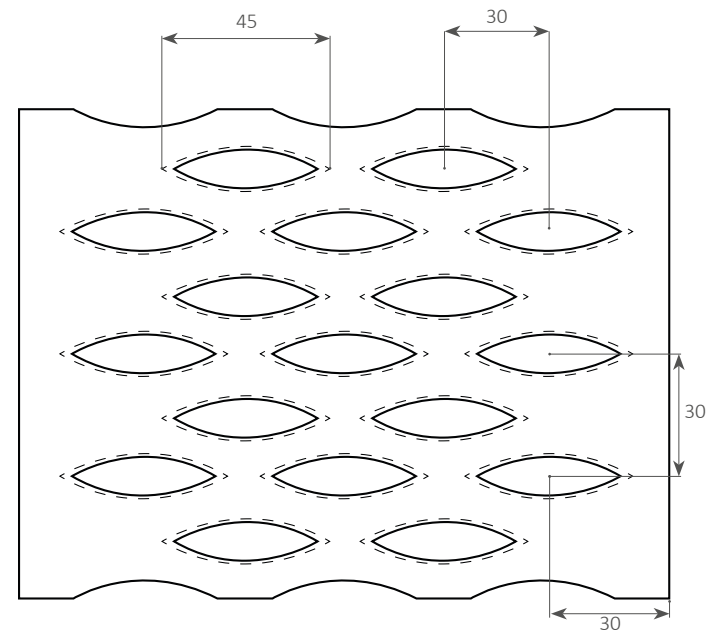


Self-supporting, Graepel metal modules allow lighter supporting structures. **Non-slip and anti-vertigo**, they provide maximum safety. A **comprehensive model range** gives a wide choice of surfaces.

Anti-slip values in accordance with DIN 51130 (R)

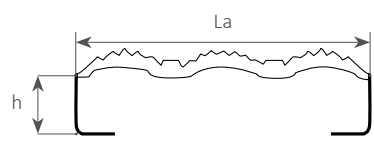
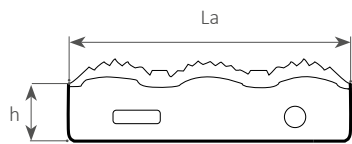
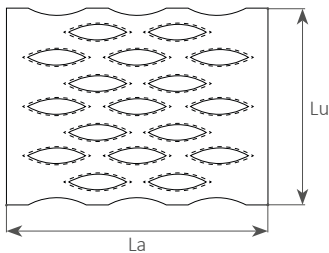
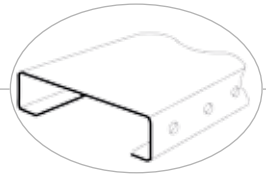
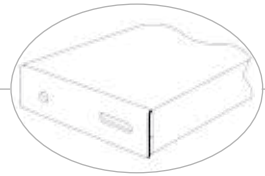
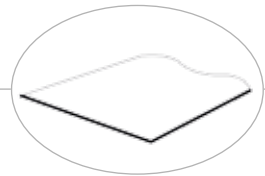
This norm classifies the anti-slip properties of the different gratings. The values go from R 9 – low anti-slip resistance to R 13 very high anti-slip resistance (for instance in the food industry).





Spessore/thickness			
Materiali Materials	Acciaio grezzo / Mild steel	2,0 e 2,5	R 13
	Acciaio zincato / Galvanized	2,0 e 2,5	R 11
	Acciaio Inox /Aisi 304	1,5 e 2,0	R 13
	Alluminio / Aluminium	2,5	R 13

*R = resistenza allo scivolamento secondo DIN 51130
*R = anti-slip values in accordance with DIN 51130



Lamiera - Sheet

Misure disponibili - Available sizes	
Lu (length)	Standard 3.000 - max 4.020
La (width)	120/180/240/300/360/420/480

Gradino - Step

Materiali - Material	La	h	Lunghezza - length
Fe zincato a caldo hot-dip galvanized steel	240 300	40 50	500/600/700/800/900/1000 1200

Grigliato - Safety grating

Misure disponibili - Available sizes	
Lunghezza (length)	Standard 3.000 - max 4.020
La (width)	120/180/240/300/360/420/480
h (height)	40/50/75/100

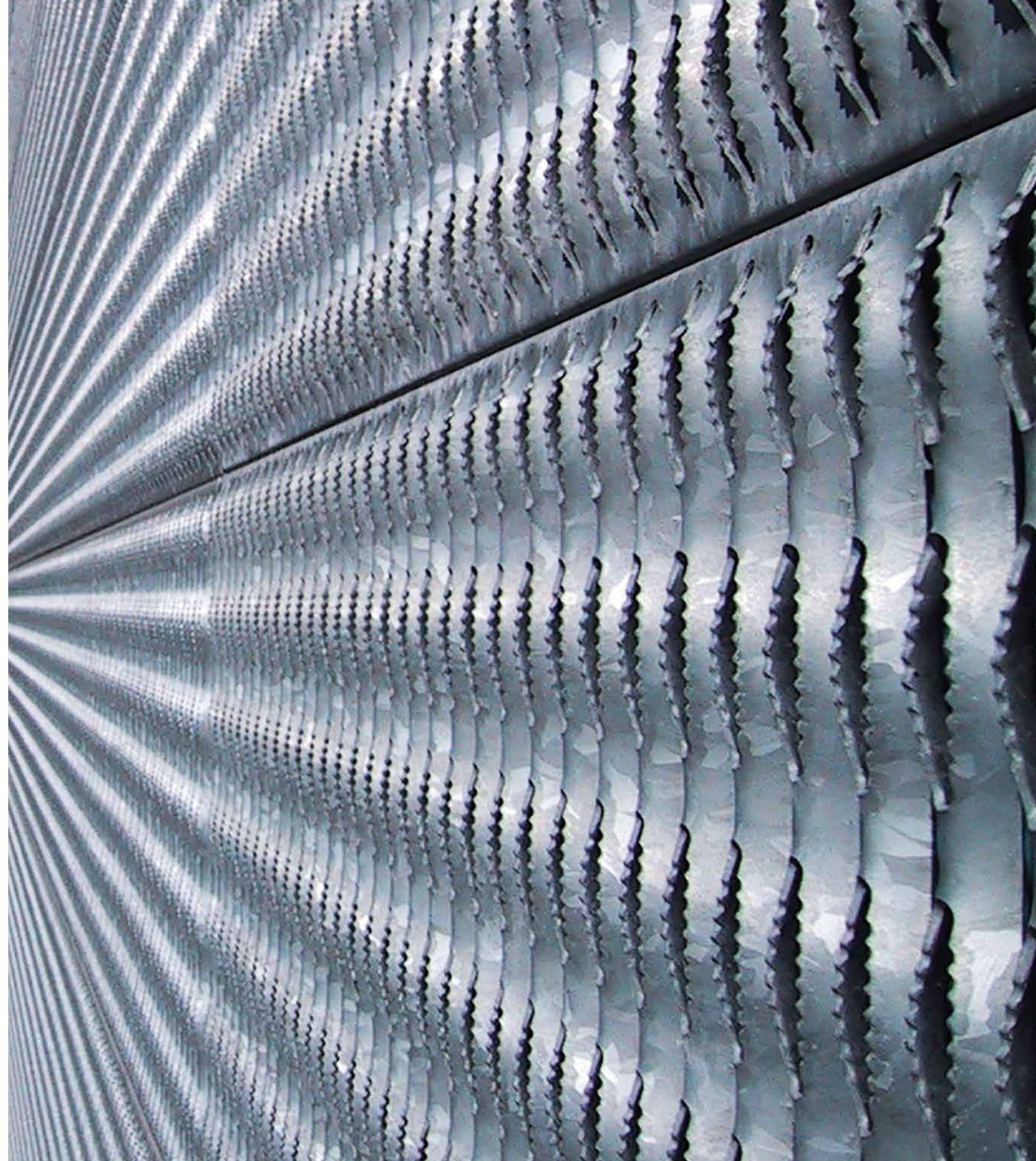
Graepel Gripp, un classico. È caratterizzato dalla **superficie dentellata** che offre una sicura presa alla suola di ogni tipo di scarpa. La sua deformazione garantisce un'ottima portata anche in senso trasversale. Le aperture dei fori non consentono il passaggio di sfere di diametro superiore a 15 mm.

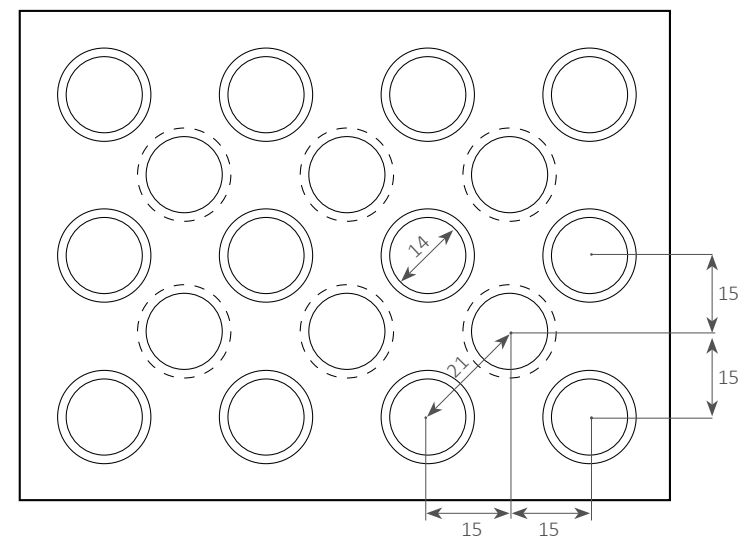
Extreme in anti-slip effect, displacement space and drainage. This grating has become a classic for universal use on floor surfaces, walkways and stairs and in steel construction. High load-bearing capacity. 15 mm barrier: no spheres exceeding 15 mm can fall through the holes.

Altre misure e materiali su richiesta - Other sizes and materials on request
Tutte le misure sono espresse in mm - All sizes in mm



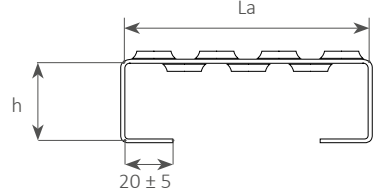
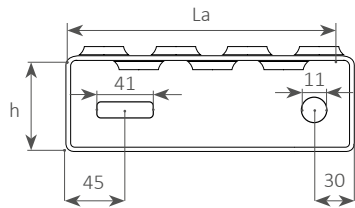
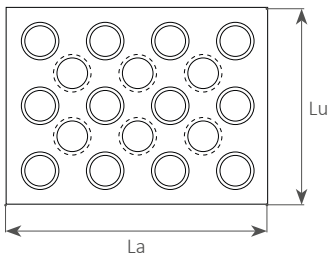
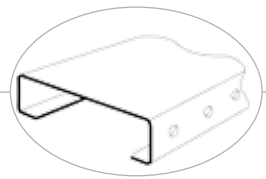
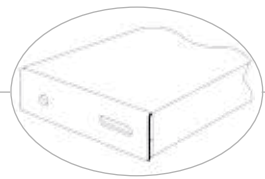
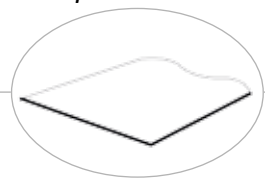
Graepel Gripp
Grigliato antidrucciolevole - *Safety grating*





Spessore/thickness			
Materiali Materials	Acciaio grezzo / Mild steel	2,0 e 2,5	R 13
	Acciaio zincato / Galvanized	2,0 e 2,5	R 11
	Acciaio Inox /Aisi 304	1,5 e 2,0	R 13
	Alluminio / Aluminium	2,5	R 13

*R = resistenza allo scivolamento secondo DIN 51130
*R = anti-slip values in accordance with DIN 51130



Lamiera - Sheet

Misure disponibili - Available sizes	
Lu (length)	Standard 3.000 - max 4.020
La (width)	120/180/240/300/360/420/480

Gradino - Step

Materiali - Material	La	h	Lunghezza - length
Fe zincato a caldo hot-dip galvanized steel	240	40	500/600/700/800/900/1000
	300	50	1200

Altre misure e materiali su richiesta - Other sizes and materials on request
Tutte le misure sono espresse in mm - All sizes in mm

Grigliato - Safety grating

Misure disponibili - Available sizes	
Lunghezza (length)	Standard 3.000 - max 4.020
La (width)	120/180/240/300/360/420/480
h (height)	40/50/75/100

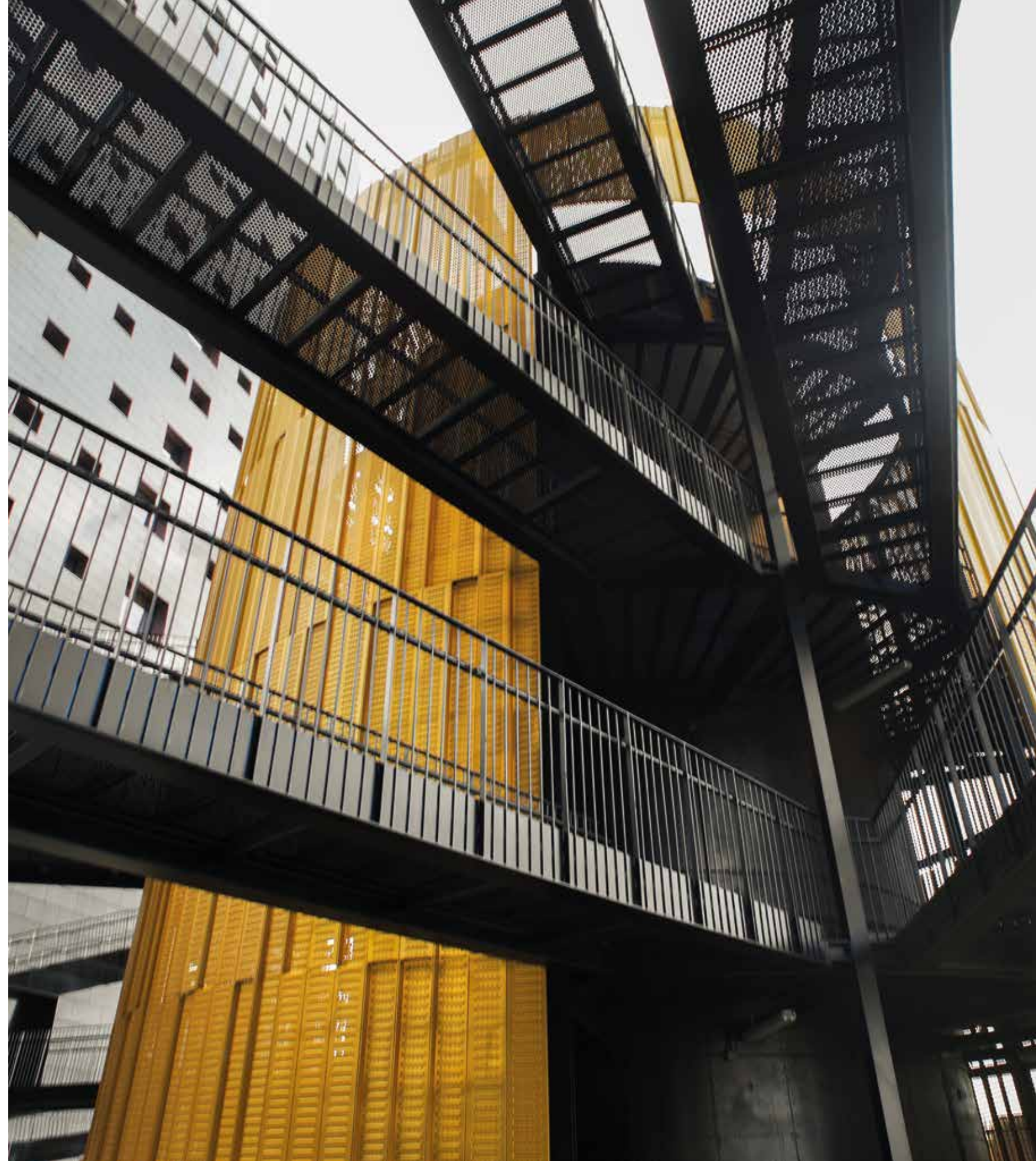
La sua superficie a **fori tondi svasati alternativamente verso l'alto e verso il basso** garantisce una superficie antisdrucciolevole molto efficace, mentre grazie alla deformazione viene rafforzata la portata di questo grigliato. Le aperture dei fori non consentono il passaggio di sfere grandi di più di 15 mm.

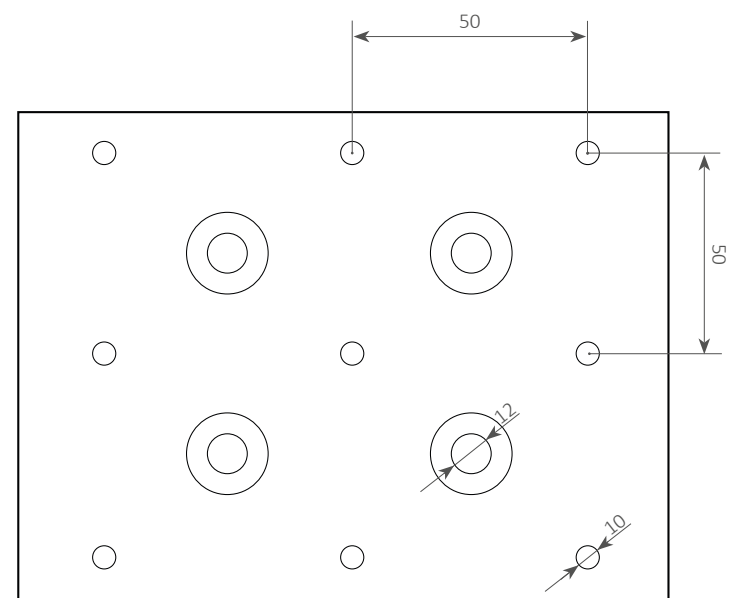
With good anti-slip effect thanks to the **upward circular perforation** and conical stamping. The **downward looking round holes** with their conical stamping assure good drainage. High load-bearing capacity. 15 mm barrier: no spheres exceeding 15 mm can fall through the holes.



Tondo 2S

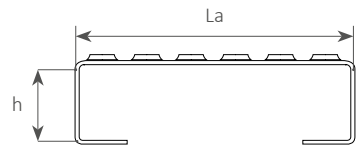
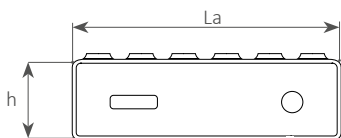
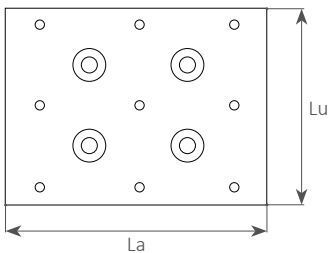
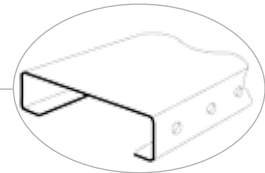
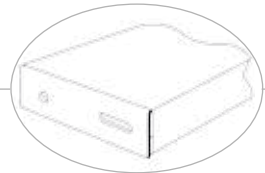
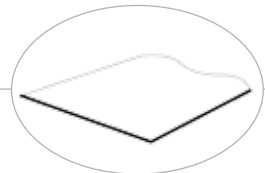
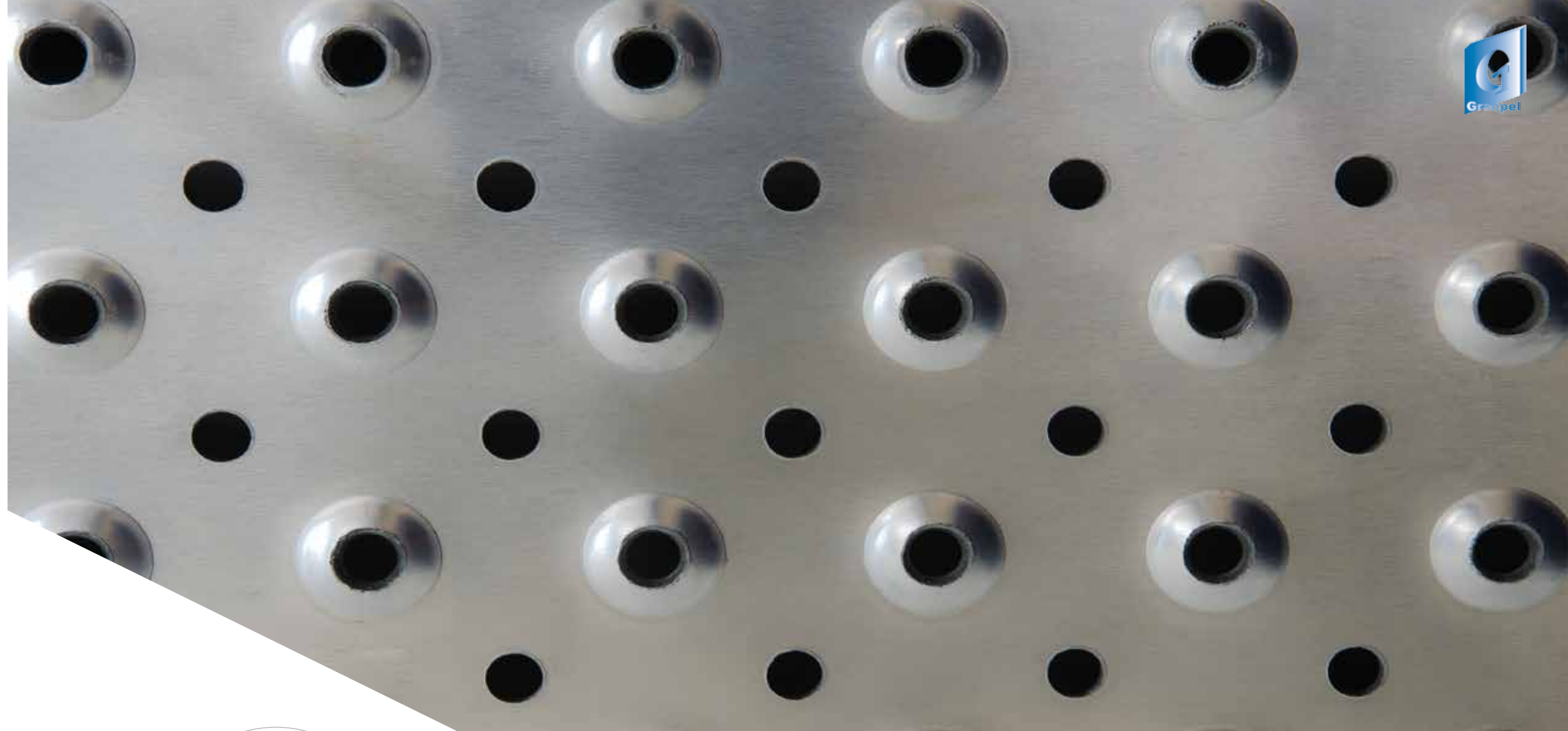
Gradino antidrucciolevole - *Non-slip step*





Spessore/thickness			
Materiali Materials	Acciaio grezzo / Mild steel	3,0 4,0 5,0	R 10
	Acciaio zincato / Galvanized	3,0 e 4,0	R 10
	Acciaio Inox /Aisi 304	1,5 e 2,0	R 11
	Alluminio / Aluminium	3,0	R 10

*R = resistenza allo scivolamento secondo DIN 51130
*R = anti-slip values in accordance with DIN 51130



Lamiera - Sheet

Misure disponibili - Available sizes	
Lu (length)	Standard 3.000
La (width)	A richiesta - on request

Gradino - Step

Materiali - Material	La	h	Lunghezza - length
Fe zincato a caldo hot-dip galvanized steel	240	40	500/600/700/800/900/1000
	300	50	1200

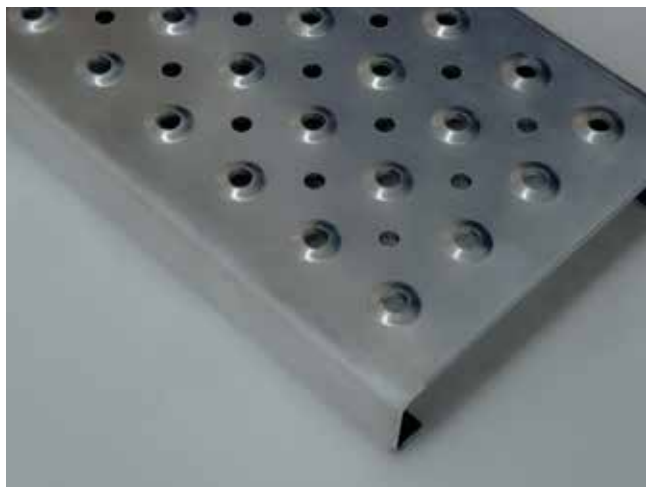
Grigliato - Safety grating

Misure disponibili - Available sizes	
Lunghezza (length)	Standard 3.000
La (width)	160/200/300
h (height)	40/50/75

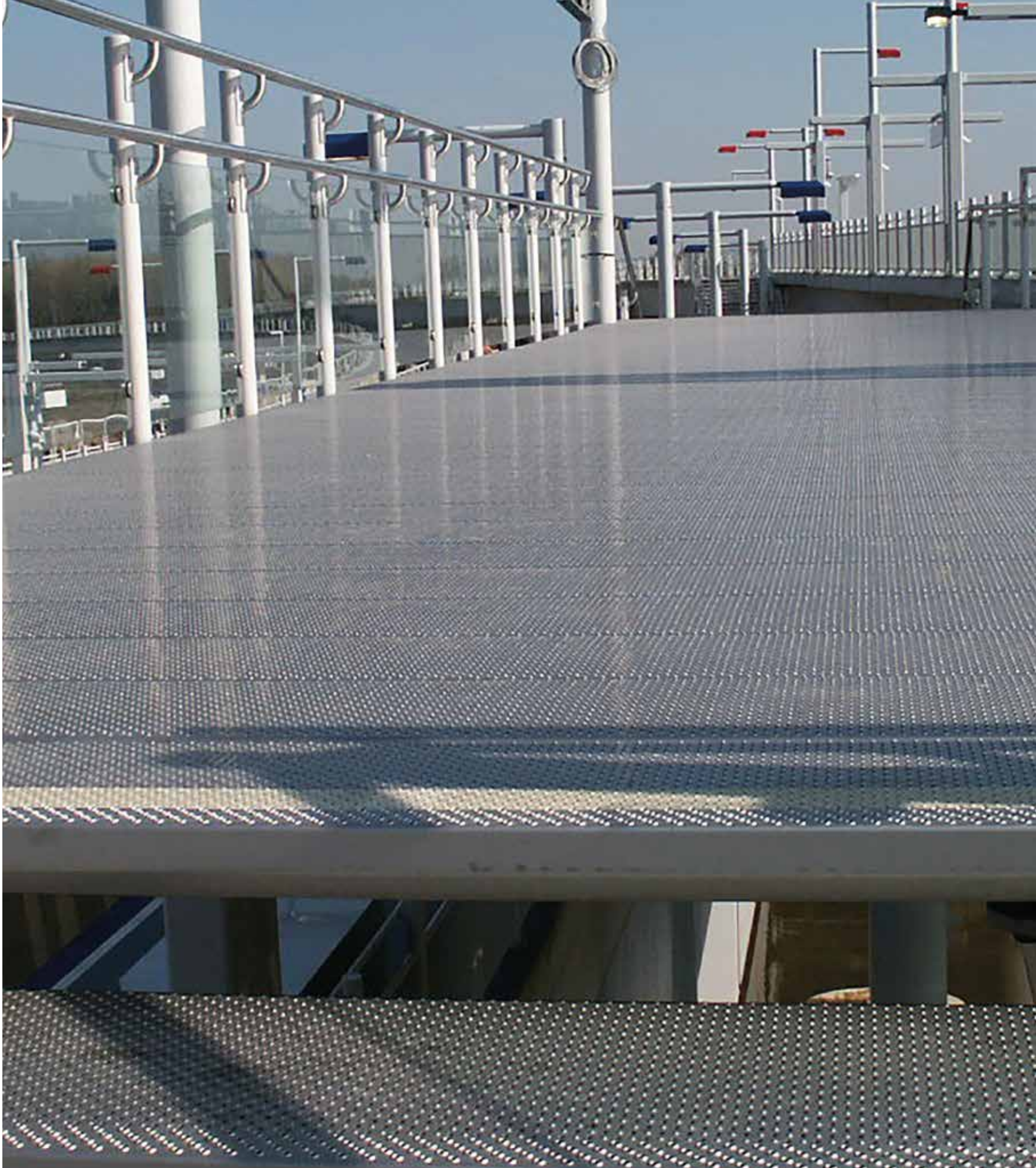
Trattasi di un grigliato particolarmente robusto fornibile anche con **spessore fino a 5 mm**. I fori svasati verso l'alto danno un buon effetto antiscivolo, mentre i fori piani con diametro 10 mm assicurano l'eliminazione istantanea di ogni liquido dalla superficie. Sono disponibili elementi fino a 300 mm e lunghi 3000 mm (Attenzione al peso!). Le aperture dei fori non consentono il passaggio di sfere di diametro superiore a 15 mm.

*This very heavy grating is available in **up to 5 mm thick plates**. The upward circular and conical holes assure a good anti-slip effect, while a sufficient drainage is given by the 10 mm flat round holes. It has high load-bearing capacity. Elements available up to 300 mm in width and 3000 mm in length. 15 mm barrier: no spheres exceeding 15 mm can fall through the holes.*

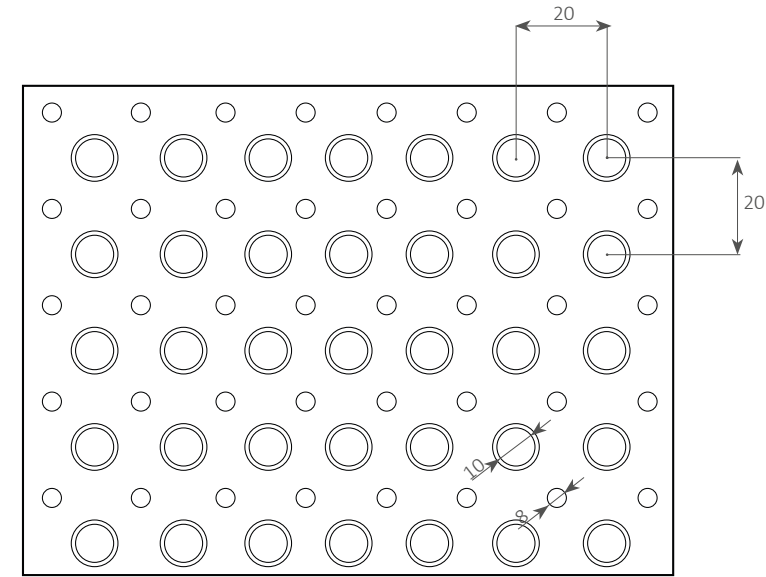
Altre misure e materiali su richiesta - Other sizes and materials on request
Tutte le misure sono espresse in mm - All sizes in mm



Fil 12
Grigliato antisdrucciolevole - *Safety grating*

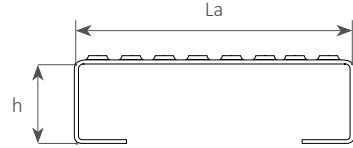
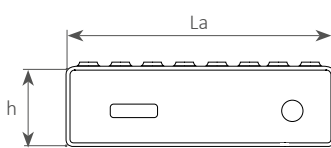
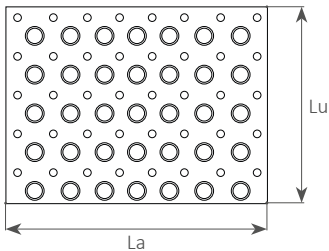
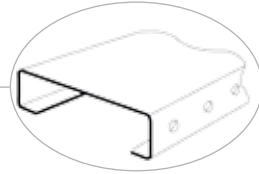
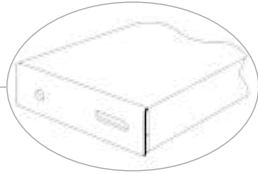
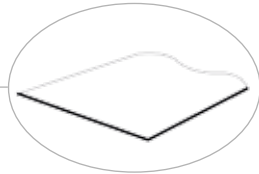
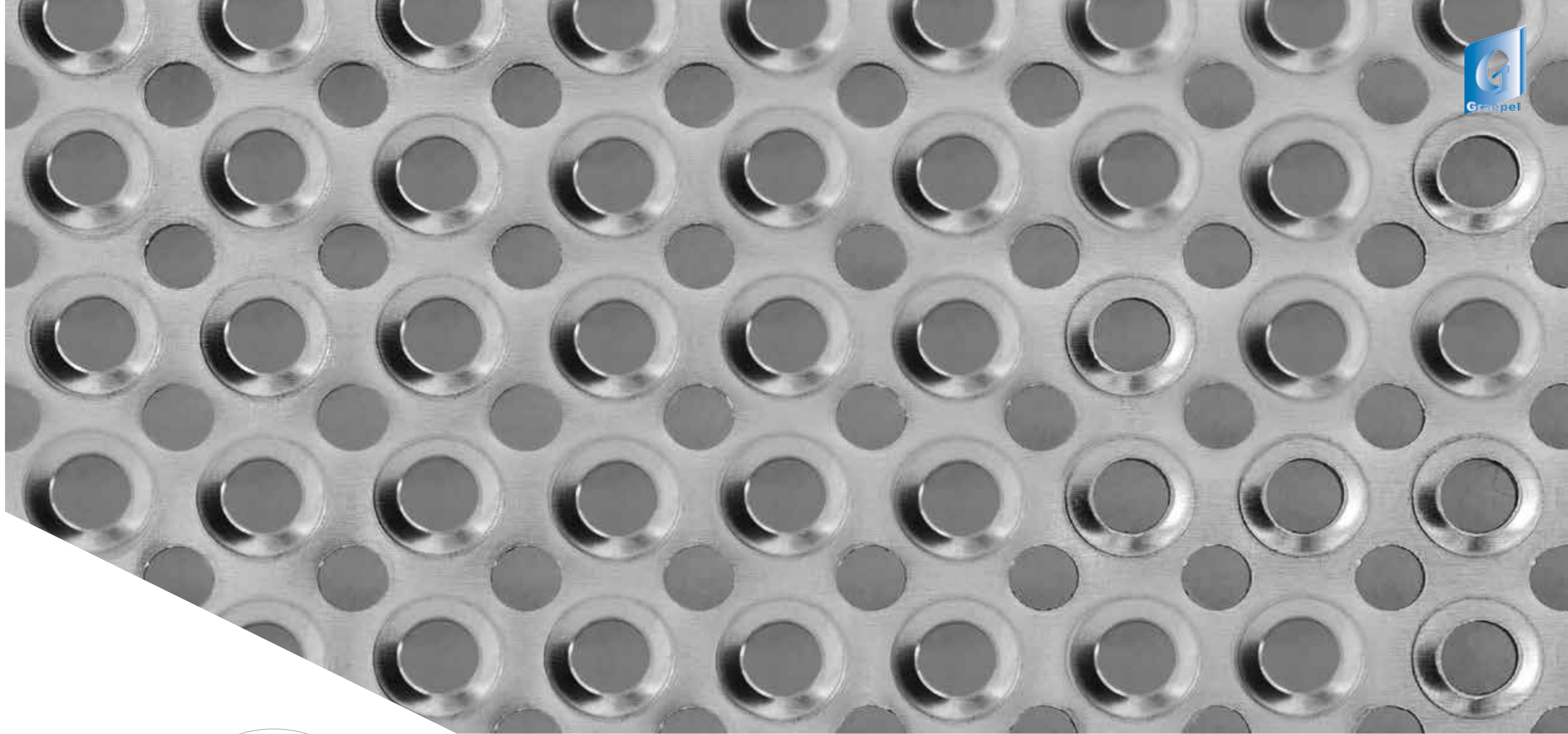


Tondo 10 S



Misure disponibili / Available sizes		Spessore/thickness	
Materiali Materials	Acciaio grezzo / Mild steel	2,0 e 2,5	R 12
	Acciaio zincato / Galvanized	2,0 e 2,5	R 11
	Acciaio Inox / Aisi 304	1,5	R 13
	Alluminio / Aluminium	2,5	R 13

*R = resistenza allo scivolamento secondo DIN 51130
*R = anti-slip values in accordance with DIN 51130



Lamiera - Sheet

Misure disponibili - Available sizes	
Lu (length)	Max 4.000
La (width)	Max 1000

Gradino - Step

Materiali - Material	La	h	Lunghezza - length
Fe zincato a caldo hot-dip galvanized steel	240	40	500/600/700/800/900/1000
	300	50	1200

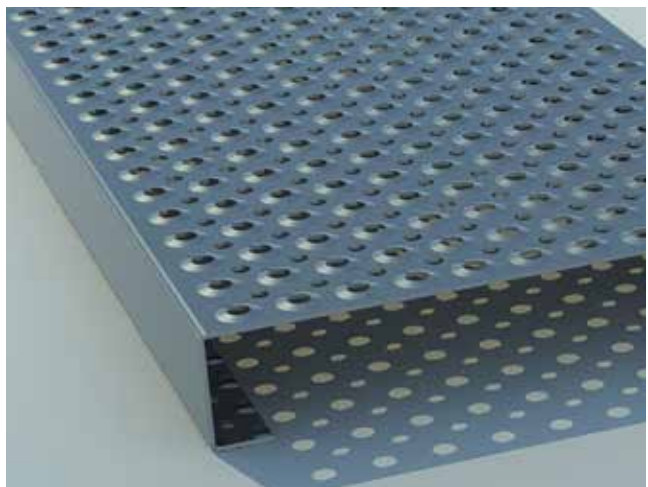
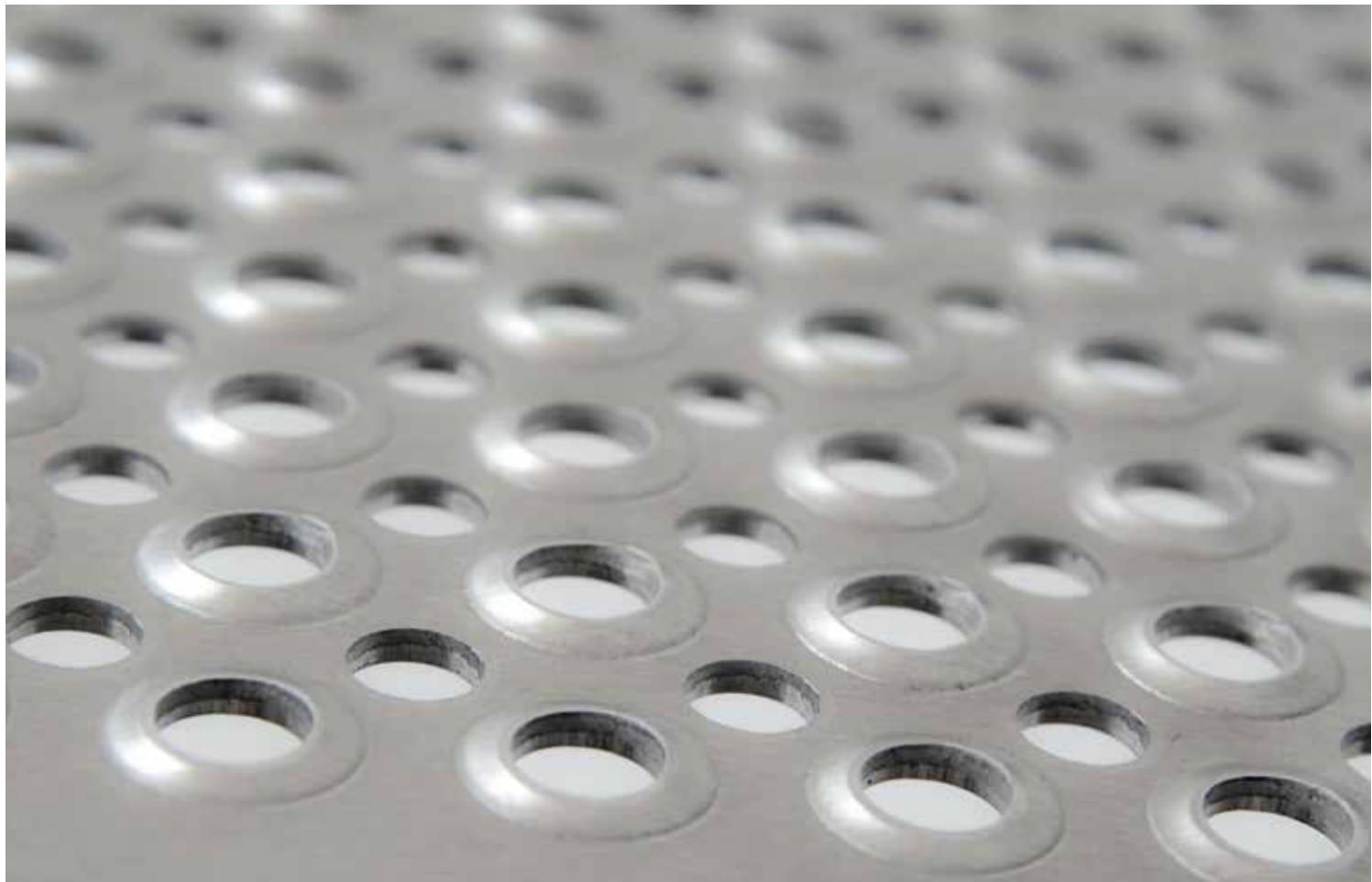
Grigliato - Safety grating

Misure disponibili - Available sizes	
Lunghezza (length)	Max 4000
La (width)	120/160/200/300
h (height)	40/50/75

Scelto da architetti famosi per la sua eleganza. La sua superficie è caratterizzata da **fori tondi svastati verso l'alto** con diametro 10 mm, per creare un buon effetto antisdrucciolevole, alternati a fori piani di drenaggio del diametro di 8 mm. Le aperture dei fori non consentono il passaggio di sfere aventi diametro superiore a 15 mm.

This grating has been chosen by star architects for claddings cause of its **pleasant look**. Available as an anti-slip grating with its upward conical perforation and its plain round holes which assure a **good drainage effect**. 15 mm barrier: no spheres exceeding 15 mm can fall through the holes.

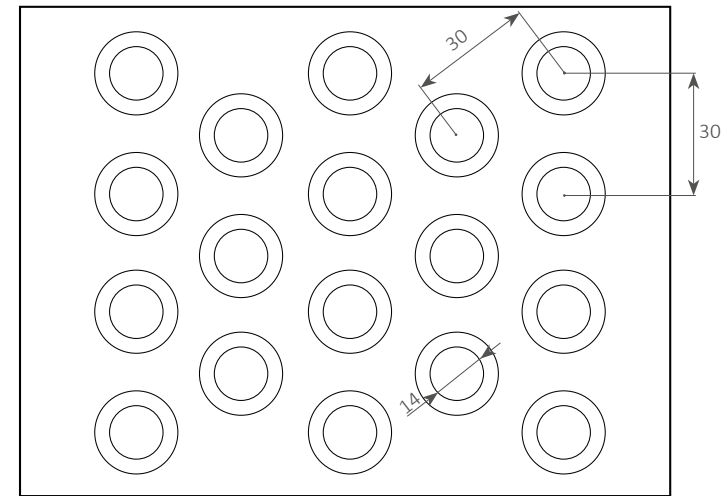
Altre misure e materiali su richiesta - Other sizes and materials on request
Tutte le misure sono espresse in mm - All sizes in mm



Tondo 10 S
Grigliato antisdrucciolevole - *Safety grating*

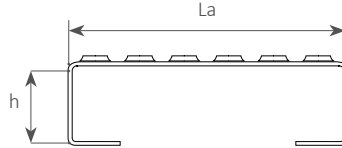
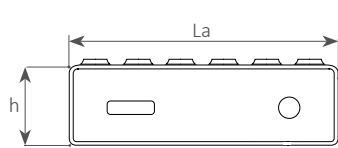
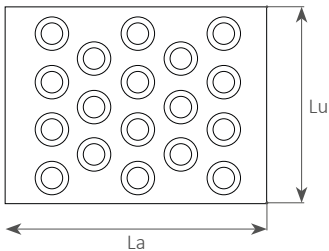
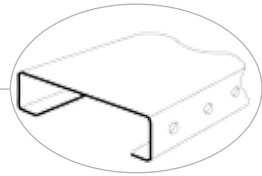
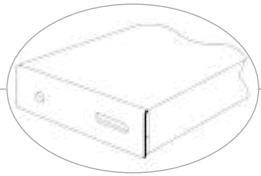
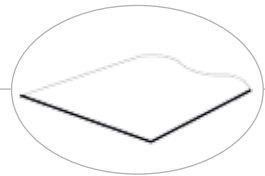


Tondo 14 svasato



Misure disponibili / Available sizes		Spessore/thickness	
Materiali Materials	Acciaio grezzo / Mild steel	2,0 e 2,5	R 12
	Acciaio zincato / Galvanized	2,0 e 2,5	R 11
	Acciaio Inox / Aisi 304	1,5	R 13
	Alluminio / Aluminium	2,5	R 13

*R = resistenza allo scivolamento secondo DIN 51130
*R = anti-slip values in accordance with DIN 51130



Lamiera - Sheet

Misure disponibili - Available sizes	
Lu (length)	Standard 3.000
La (width)	Max 1000

Gradino - Step

Materiali - Material	La	h	Lunghezza - length
Fe zincato a caldo hot-dip galvanized steel	240	40	500/600/700/800/900/1000
	300	50	1200

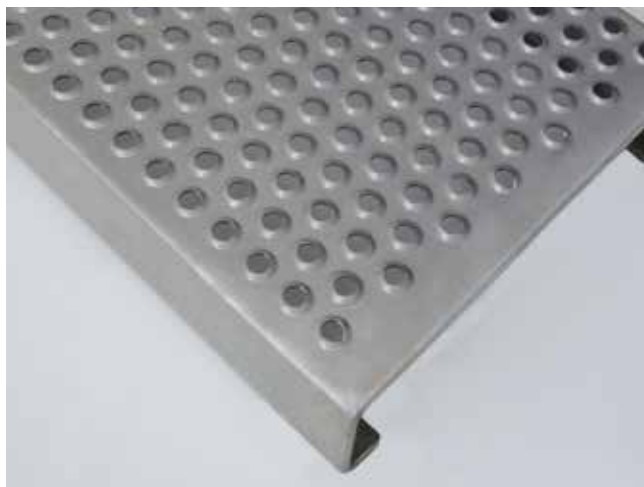
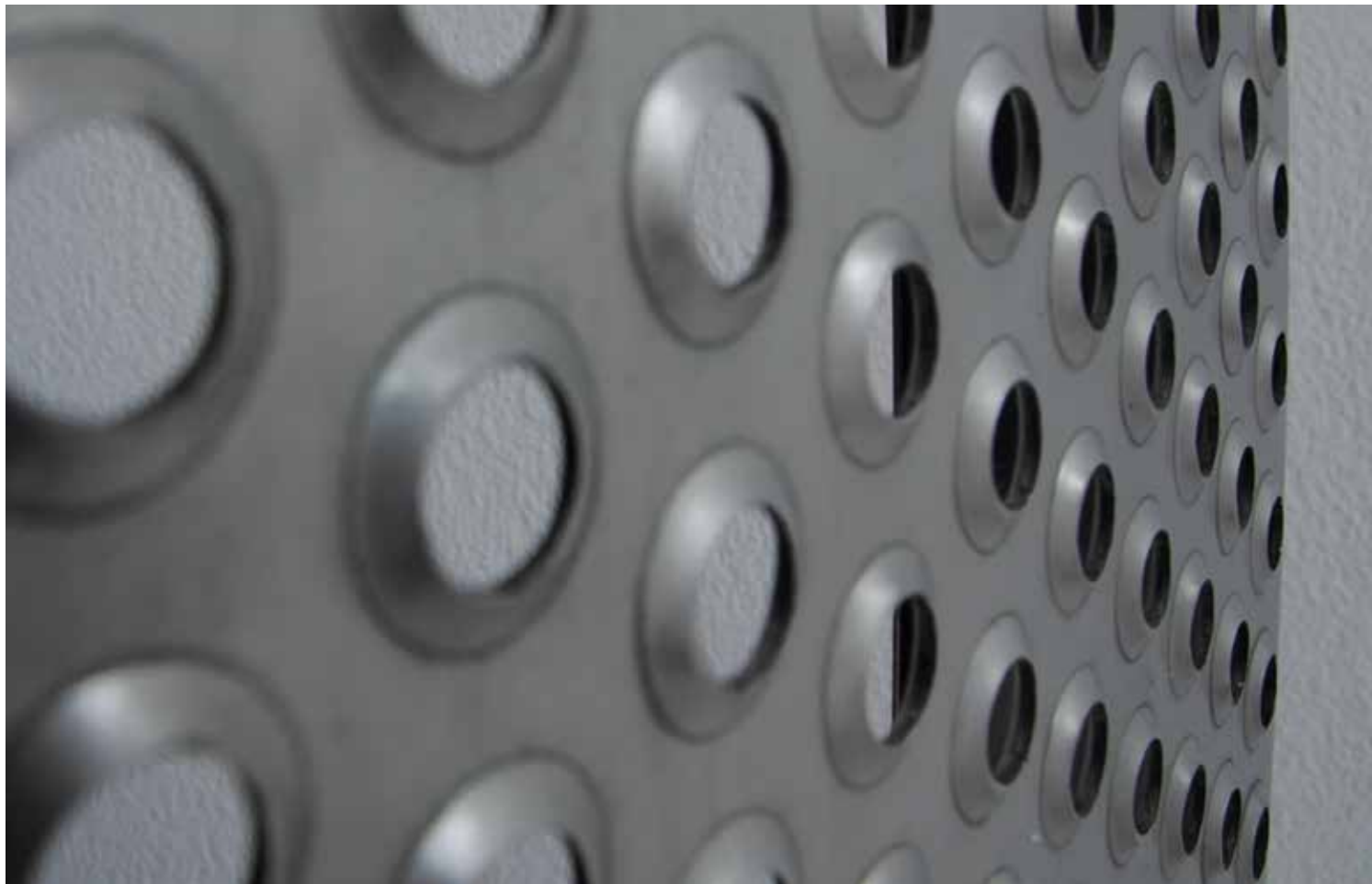
Grigliato - Safety grating

Misure disponibili - Available sizes	
Lunghezza (length)	Standard 3.000
La (width)	120/150/240/300
h (height)	40/50/75

Altre misure e materiali su richiesta - Other sizes and materials on request
Tutte le misure sono espresse in mm - All sizes in mm

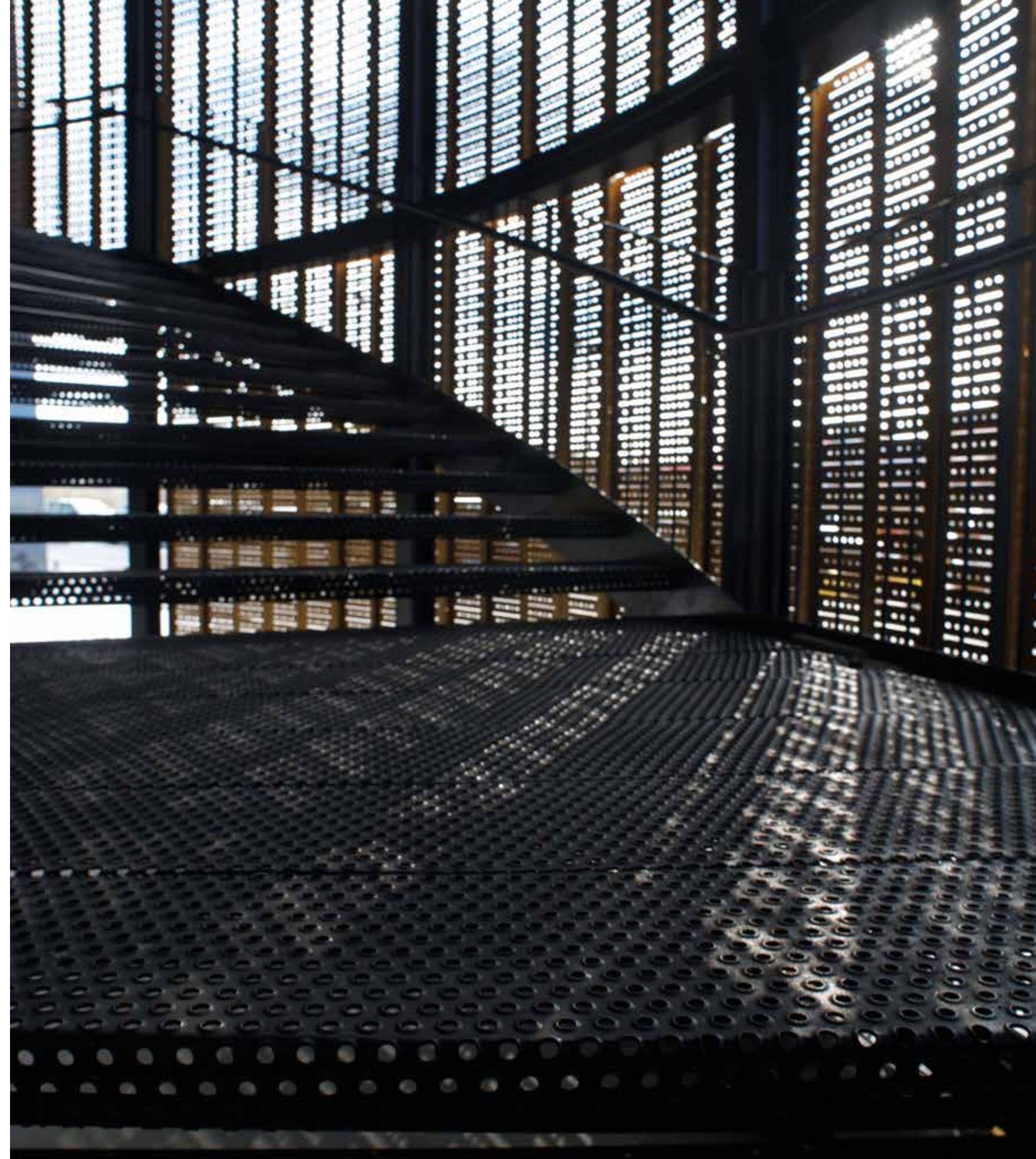
Un grigliato semplice ed economico con un buon effetto antiscivolo, ma senza fori di scarico. Può essere usato con i fori imbutiti verso il basso creando così una superficie piana adatta al passaggio di carrelli o piani inclinati per facilitare lo scivolamento di oggetti. Può quindi essere usato come semplice lamiera forata che lascia passare aria e luce. Le sue misure possono essere adattate alle Vostre esigenze. Le aperture dei fori non consentono il passaggio di sfere grandi più di 15 mm.

A simple and economic grating. It is also available with a flat surface by turning the embossed holes from upward to downward becoming suitable for movements with wheels or objects slide down inclined surfaces. It can be used just like a perforated sheet, allowing air exchange and light passage. Its sizes can vary following your needs. 15 mm barrier: no spheres exceeding 15 mm can fall through the holes.

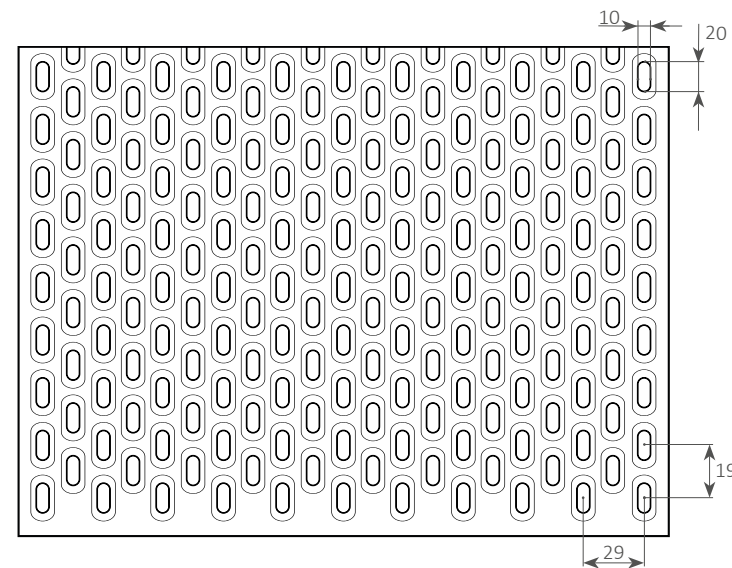


Tondo 14 svasato

Grigliato antidrucciolevole - *Safety grating*

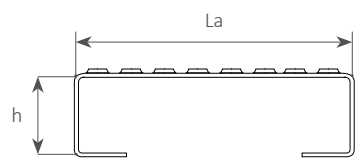
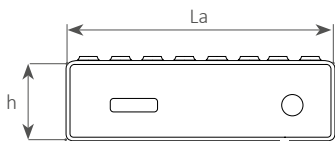
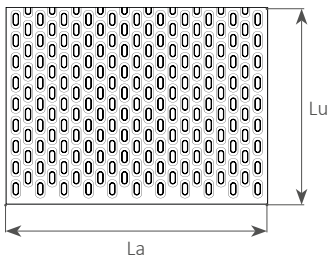
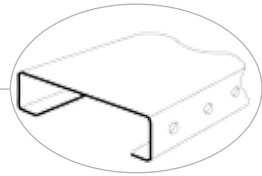
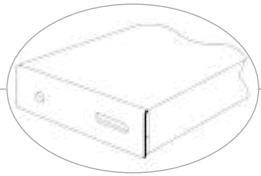
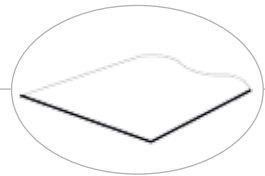


10x20 Svasato



Misure disponibili / Available sizes		Spessore/thickness	
Materiali Materials	Acciaio grezzo / Mild steel	2,0 e 2,5	R 12
	Acciaio zincato / Galvanized	2,0 e 2,5	R 11
	Acciaio Inox / Aisi 304	1,5	R 13
	Alluminio / Aluminium	2,5	R 13

*R = resistenza allo scivolamento secondo DIN 51130
*R = anti-slip values in accordance with DIN 51130



Lamiera - Sheet

Misure disponibili - Available sizes	
Lu (length)	Standard 3.000 - max 4.000
La (width)	120/150/180/240

Gradino - Step

Materiali - Material	La	h	Lunghezza - length
Fe zincato a caldo hot-dip galvanized steel	240	40	500/600/700/800/900/1000
	300	50	1200

Grigliato - Safety grating

Misure disponibili - Available sizes	
Lunghezza (length)	Standard 3.000 - max 4.000
La (width)	120/150/180/240
h (height)	40/50/75

Un altro grigliato semplice ed economico con buon effetto antiscivolo, ma senza fori di scarico. Molto richiesto anche come lamiera piana senza pieghe. Può essere usato con i fori imbutiti verso il basso creando così una **superficie piana adatta al passaggio di carrelli o piani inclinati per facilitare lo scivolamento di oggetti**. Le aperture dei fori non consentono il passaggio di sfere grandi più di 15 mm. Sono comunque fornibili come gli altri grigliati, cioè piegati in base alle esigenze del cliente.

Another economic grating with upward embossed slots offering a good anti-slip surface without drainage holes. This product is also in great demand just as flat perforated sheet. **If turned from upward to downward it offers a flat surface becoming suitable for movements with wheels or objects slide down inclined surfaces.** 15 mm barrier: no spheres exceeding 15 mm can fall through the holes.

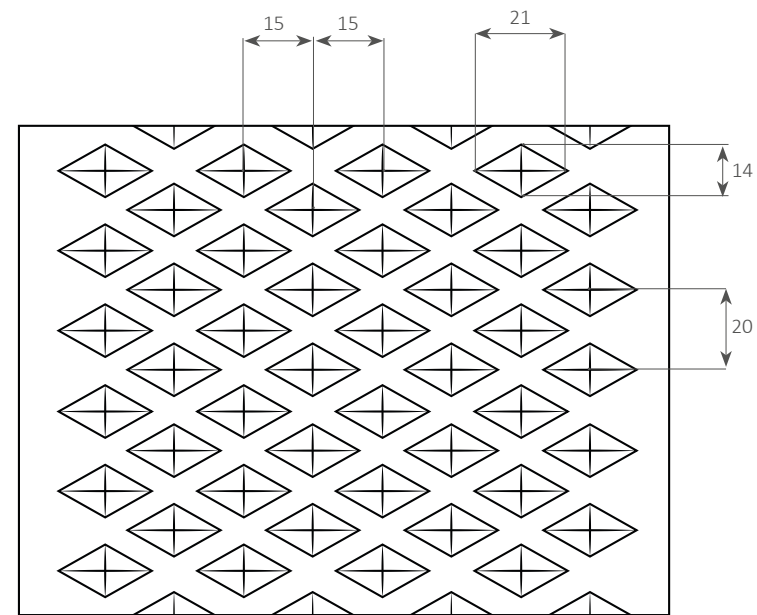
Altre misure e materiali su richiesta - Other sizes and materials on request
Tutte le misure sono espresse in mm - All sizes in mm



10x20 Svasato
Gradino antidrucciolevole - *Non-slip step*

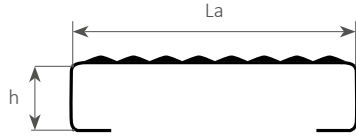
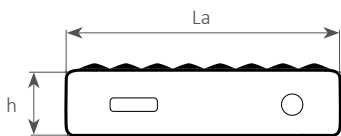
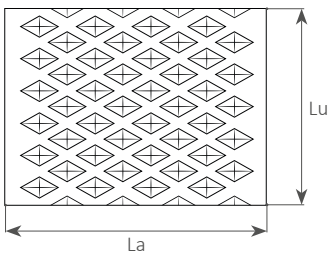
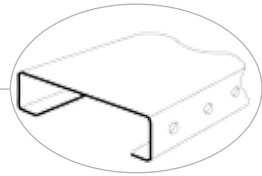
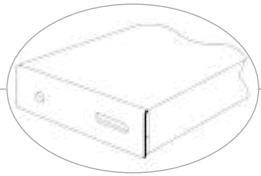
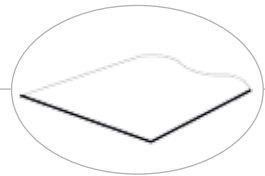
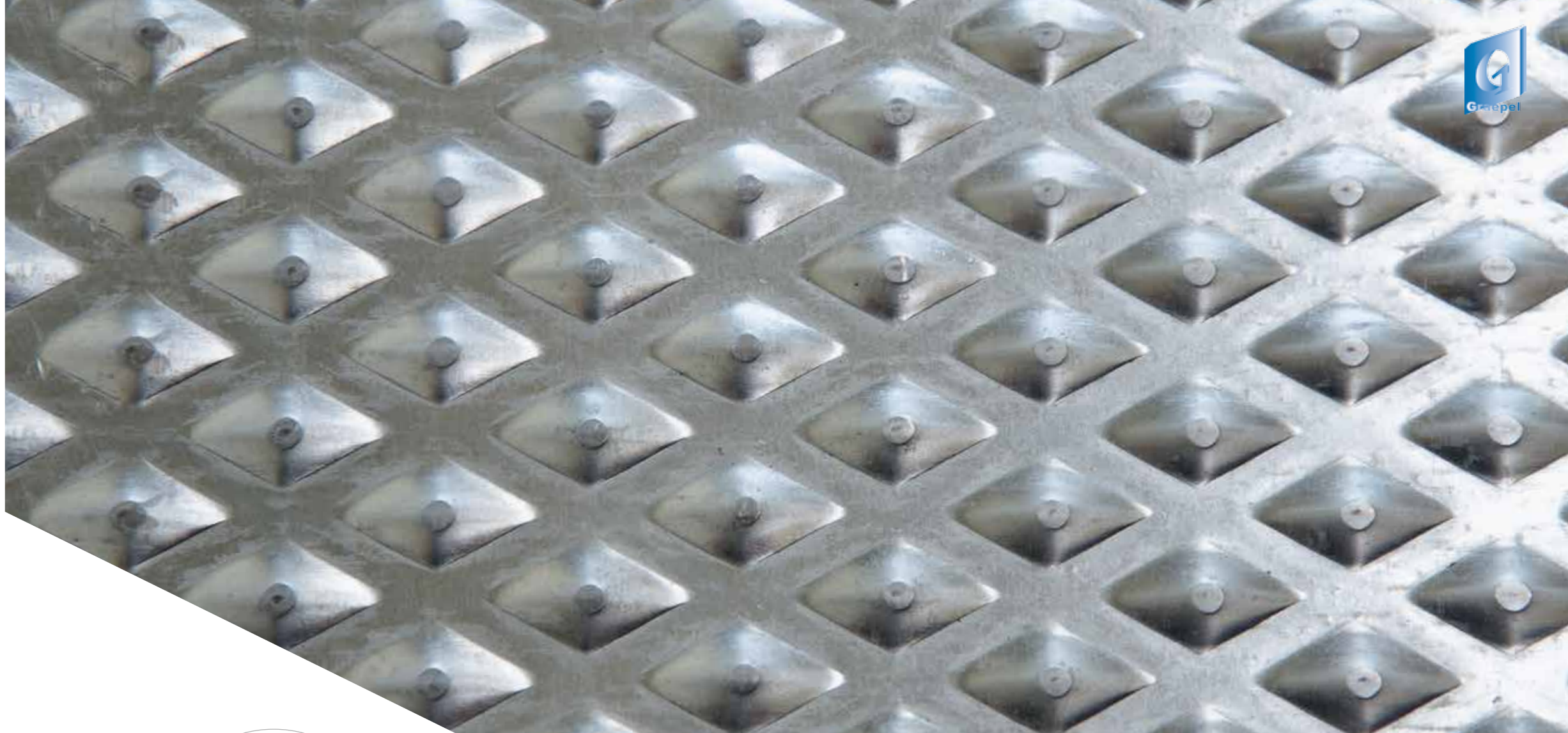


Bugne Diamante



Misure disponibili / Available sizes		Spessore/thickness	
Materiali Materials	Acciaio grezzo / Mild steel	2,0 e 2,5	R 11
	Acciaio zincato / Galvanized	2,0 e 2,5	R 10
	Acciaio Inox / Aisi 304	1,5	R 11
	Alluminio / Aluminium	2,5	R 11

*R = resistenza allo scivolamento secondo DIN 51130
*R = anti-slip values in accordance with DIN 51130



Lamiera - Sheet

Misure disponibili - Available sizes	
Lu (length)	Standard 3.000 - max 4.020
La (width)	120/180/240/300/360/420/480

Gradino - Step

Materiali - Material	La	h	Lunghezza - length
Fe zincato Galvanized steel	240	40	500/600/700/800/900/1000
	300	50	1200

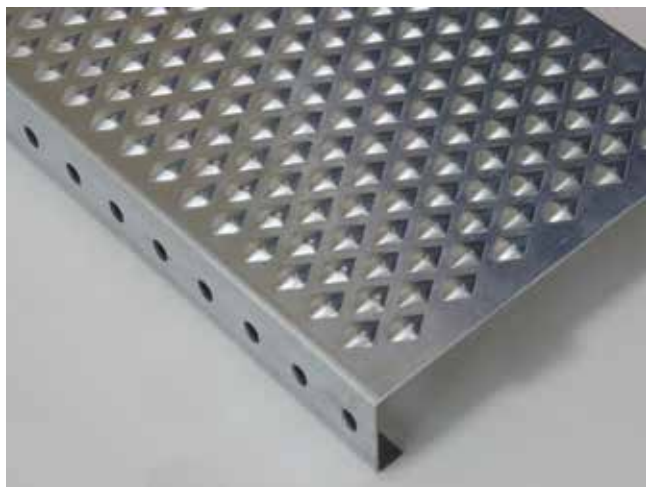
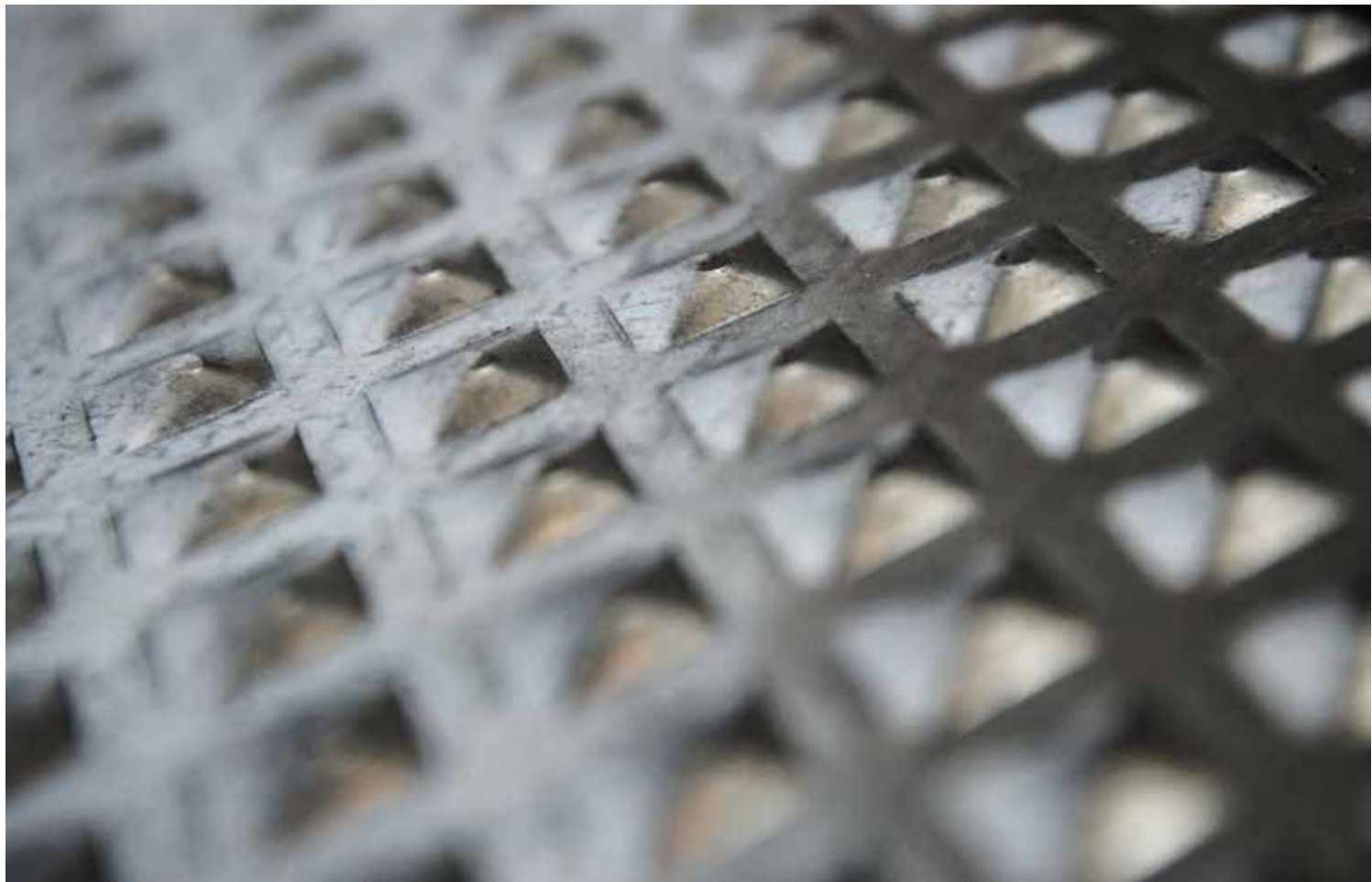
Grigliato - Safety grating

Misure disponibili - Available sizes	
Lunghezza (length)	Standard 3.000 - max 4.020
La (width)	120/180/240/300/360/420/480
h (height)	40/50/75/100

Un grigliato **completamente chiuso**. La forma delle bugne grandi 14 x 21 mm assomiglia a quella di un diamante. E' di discreta caratteristica antisdrucchiabile. **A richiesta possono essere forniti con fori di fissaggio come indicati dal cliente.**

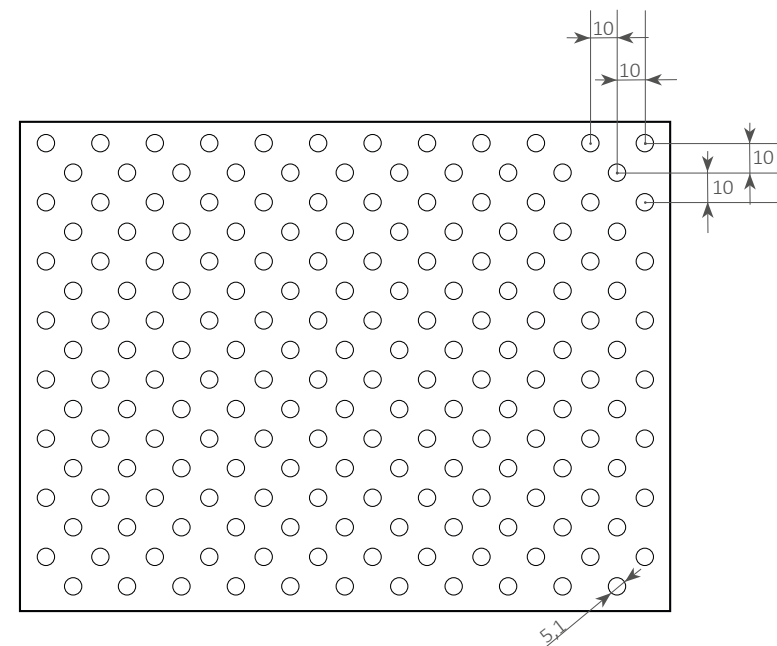
Why diamante? Because its embossed shapes, sized 14 x 21 mm, are similar to diamonds offering a fairly good anti-skid effect. **On special request drainage or fixing holes are possible.**

Altre misure e materiali su richiesta - Other sizes and materials on request
Tutte le misure sono espresse in mm - All sizes in mm



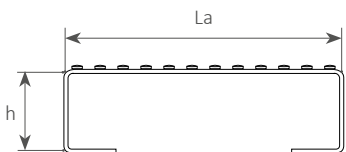
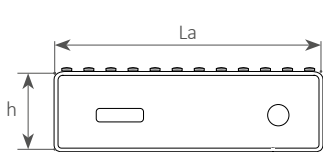
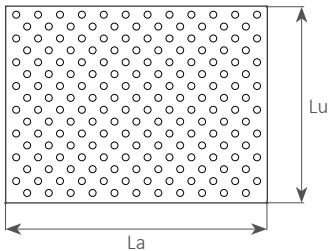
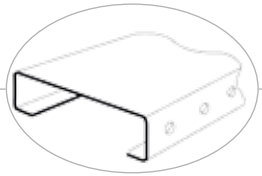
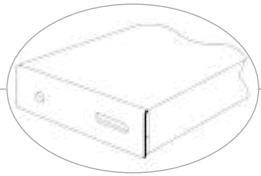
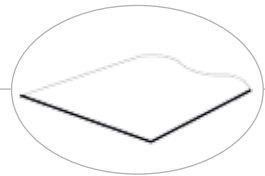
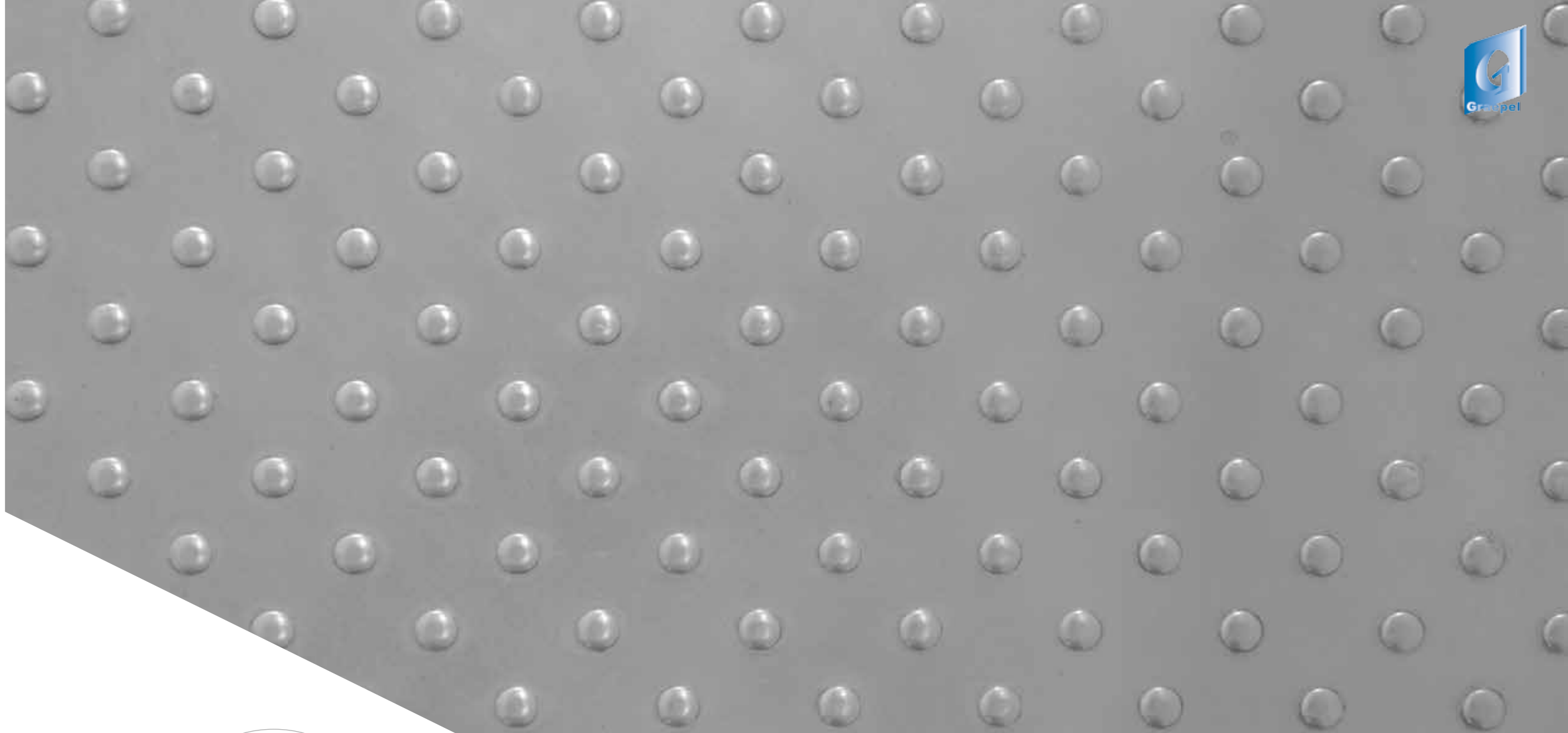
Bugne diamante
Grigliato antidrucciolevole - *Safety grating*





Misure disponibili / Available sizes		Spessore/thickness	
Materiali Materials	Acciaio grezzo / Mild steel	3,0	R 13
	Acciaio zincato / Galvanized	3,0	R 11
	Acciaio Inox / Aisi 304	not available	R 13
	Alluminio / Aluminium	3,0	R 12

*R = resistenza allo scivolamento secondo DIN 51130
*R = anti-slip values in accordance with DIN 51130



Lamiera - Sheet

Misure disponibili - Available sizes	
Lu (length)	Standard 3.000
La (width)	Max 1500

Gradino - Step

Materiali - Material	La	h	Lunghezza - length
Fe zincato Galvanized steel	240	40	A richiesta - on request
	300	50	A richiesta - on request

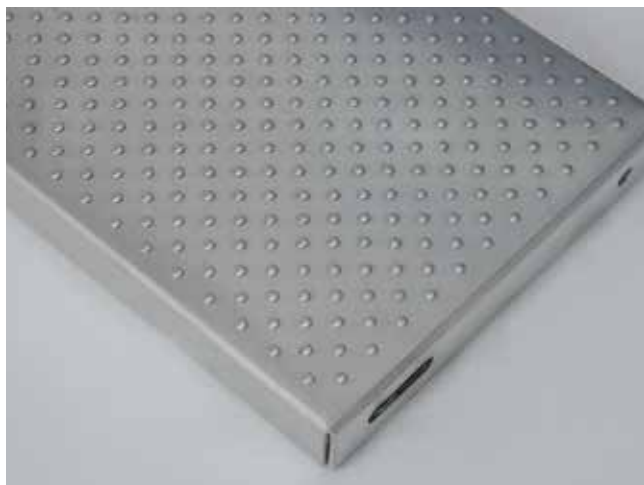
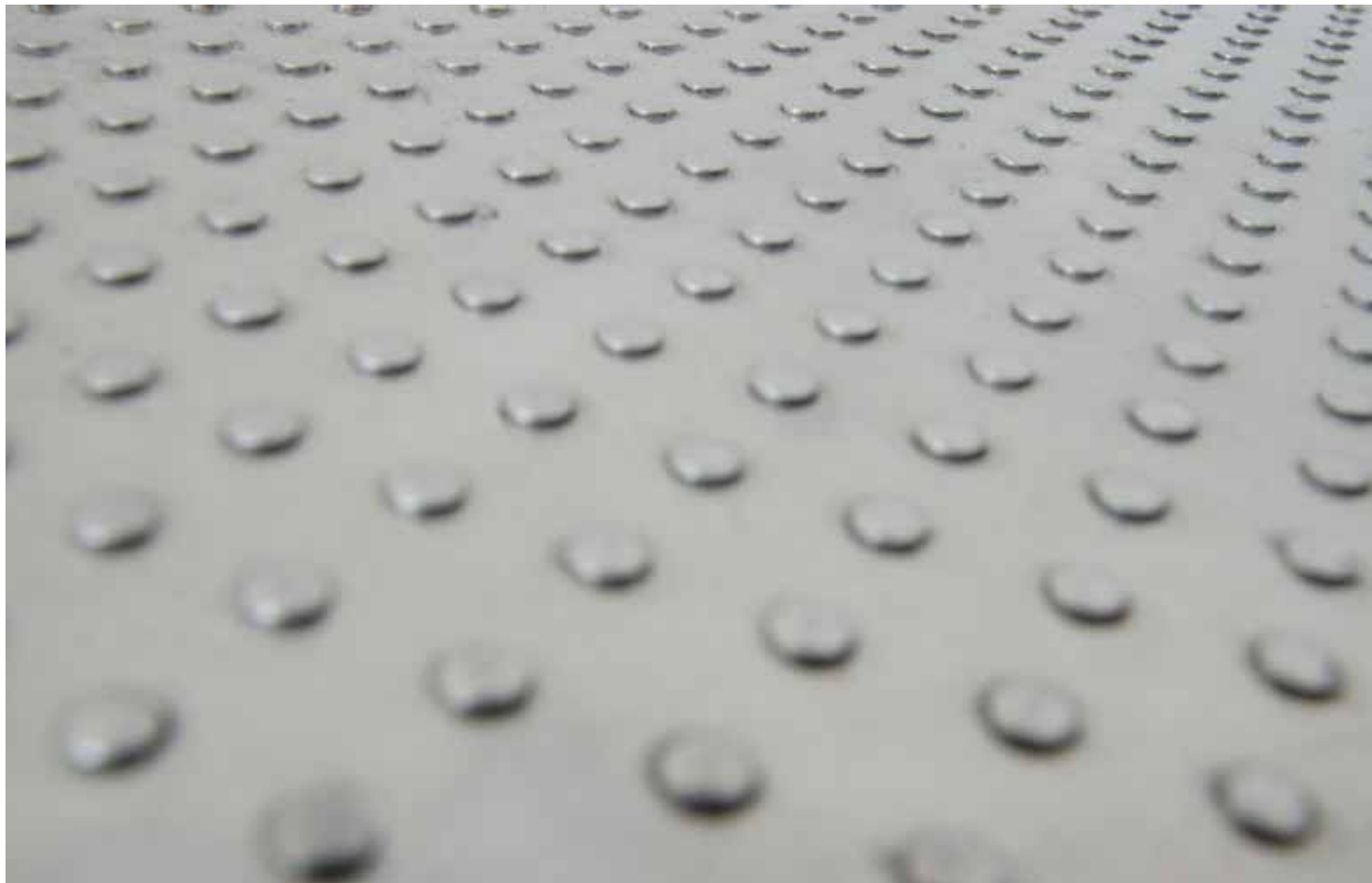
Grigliato - Safety grating

Misure disponibili - Available sizes	
Lunghezza (length)	Standard 3.000
La (width)	A richiesta - on request
h (height)	40/50/75

Un altro grigliato completamente chiuso e di **sorprendente resistenza allo scivolamento** pur essendo il diametro delle bugne di appena 5,1 mm. Se usato in presenza di acqua o in piscine, vanno comunque previsti fori di drenaggio. Anche **fornibile con sagome particolari** sia come lamiera piana che piegata (contattare ns. uffici).

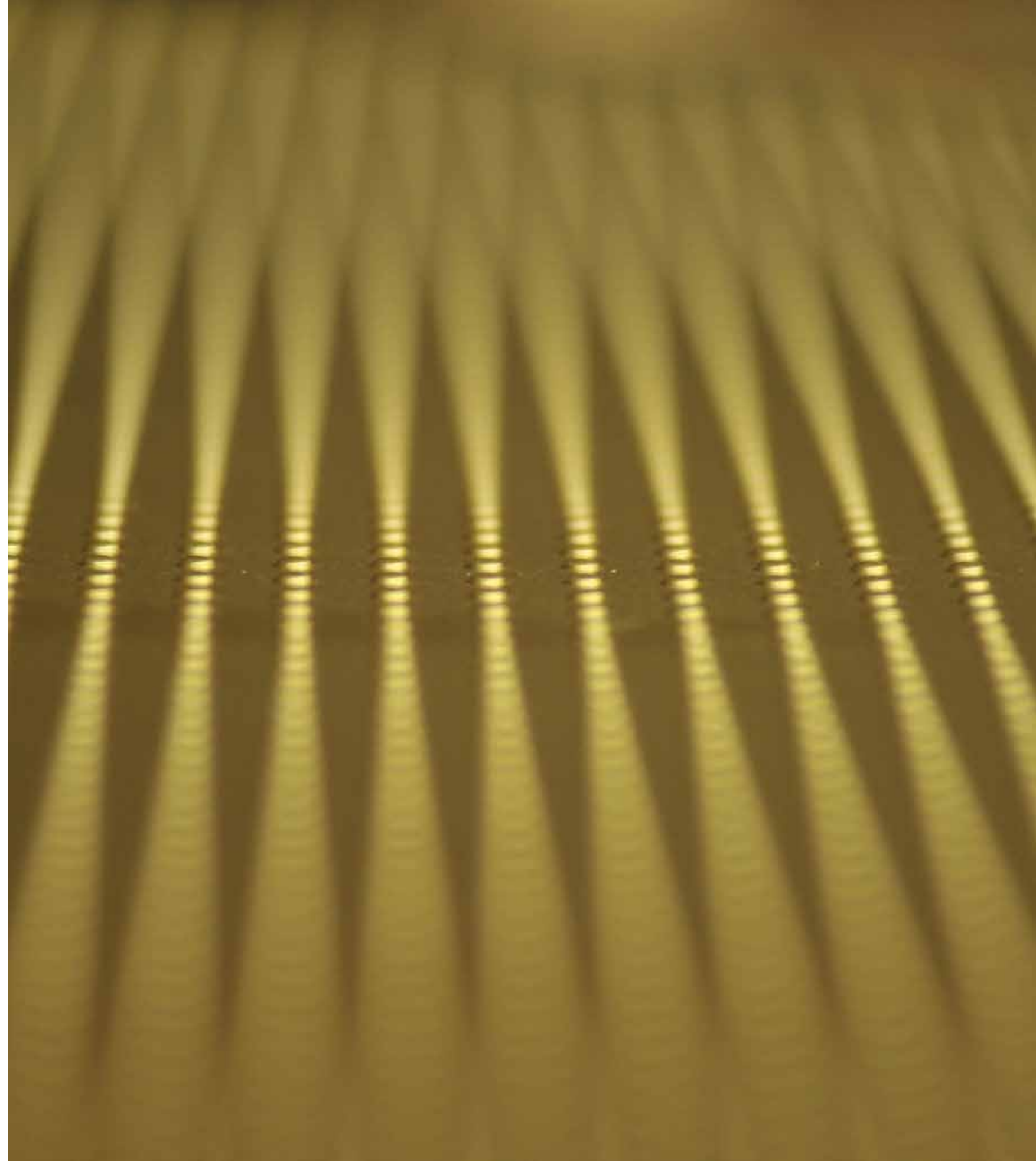
Just 5,1 mm diameter is the size of these embossed marks. Their **anti-slip effect is astonishing**. It allows barefoot walking, but, of course, if used in swimming pools drainage holes should be foreseen. Also available as flat perforated sheets. Please contact our sales offices.

Altre misure e materiali su richiesta - Other sizes and materials on request
Tutte le misure sono espresse in mm - All sizes in mm

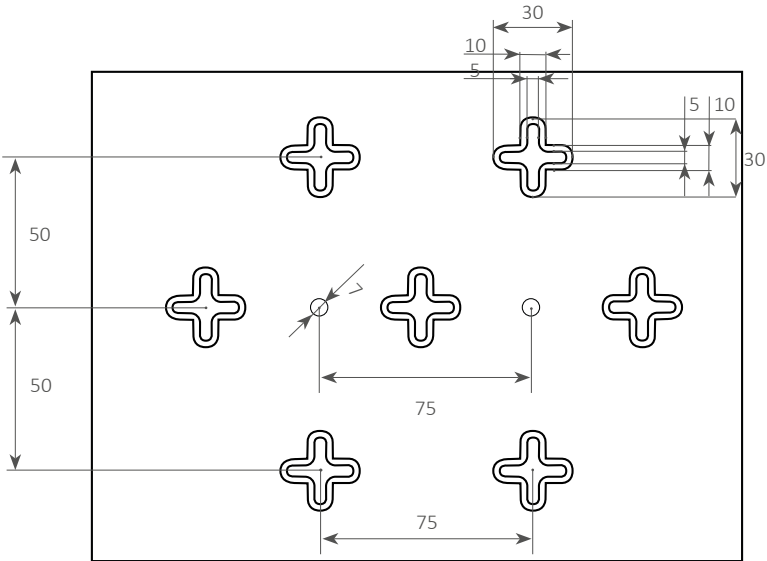


Bugnette

Gradino antidrucciolevole - *Non-slip step*

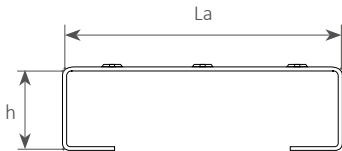
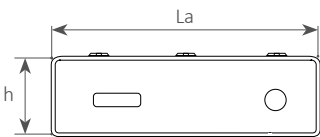
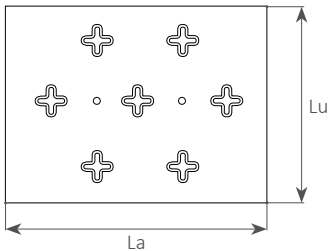
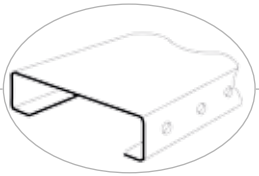
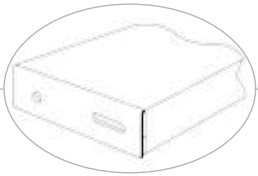
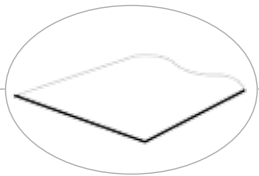
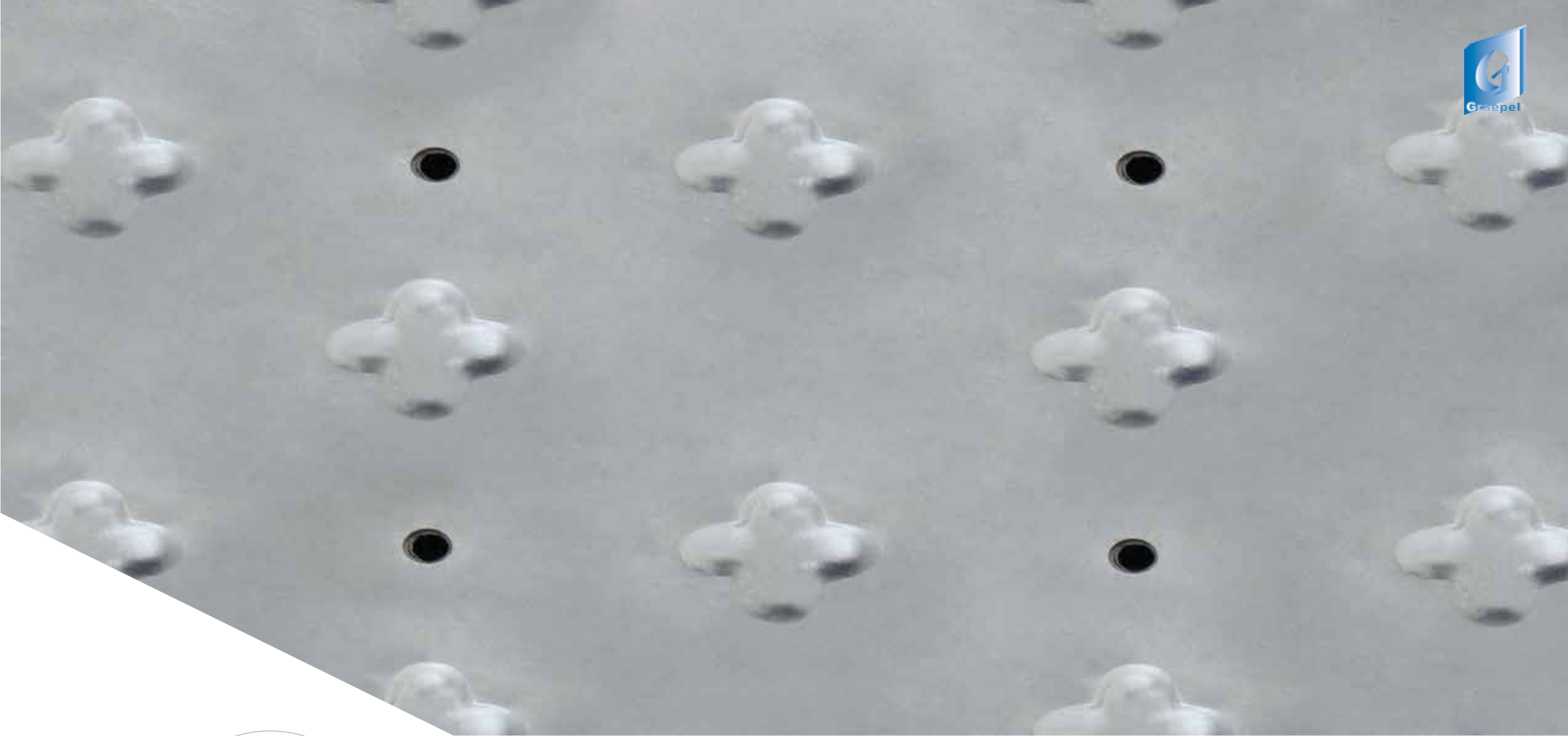


Bugna Dal One



Misure disponibili / Available sizes		Spessore/thickness	
Materiali Materials	Acciaio grezzo / Mild steel	4,0	R 11
	Acciaio zincato / Galvanized	4,0	R 10
	Acciaio Inox / Aisi 304	not available	R 11
	Alluminio / Aluminium	4,0	R 11

*R = resistenza allo scivolamento secondo DIN 51130
*R = anti-slip values in accordance with DIN 51130



Lamiera - Sheet

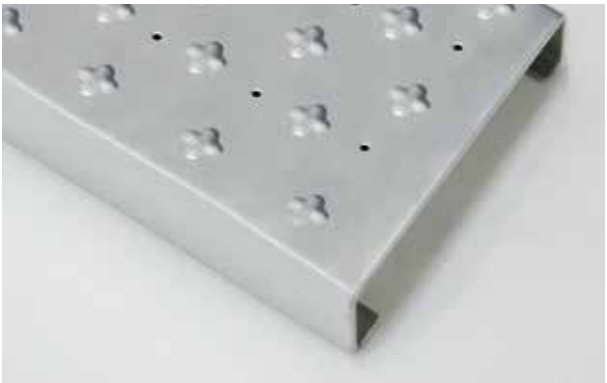
Misure disponibili - Available sizes	
Lu (length)	Standard 3.000
La (width)	A richiesta - on request

Gradino - Step

Materiali - Material	La	h	Lunghezza - length
Fe zincato a caldo hot-dip galvanized steel	240	40	A richiesta - on request
	300	50	A richiesta - on request

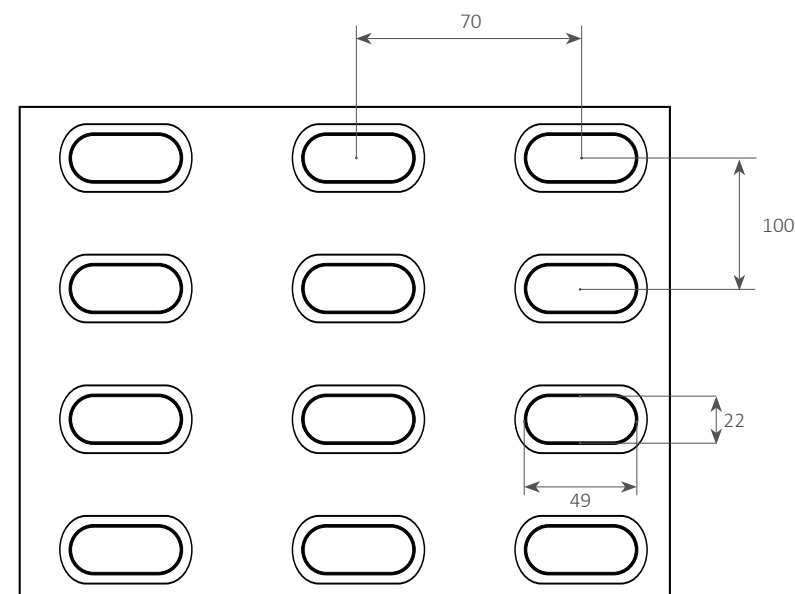
Grigliato - Safety grating

Misure disponibili - Available sizes	
Lunghezza (length)	A richiesta - on request
La (width)	A richiesta - on request
h (height)	40/50/75



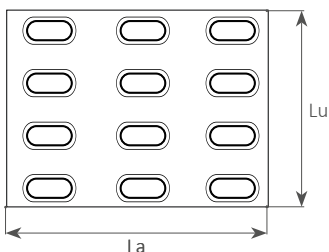
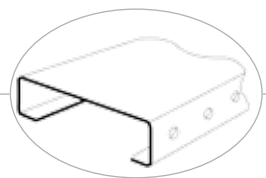
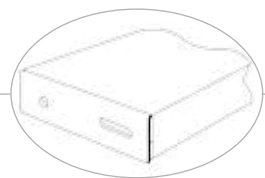
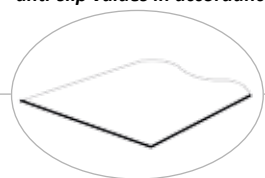
Veramente un grigliato molto particolare. Viene richiesto anche per formare delle panche negli stadi. E' fornibile in spessori fino a 3 mm. Per le possibili misure contattare ns. uffici.

A very particular embossed design. Requested mainly as benches for stands in play grounds. For available sizes please contact our sales offices.



Misure disponibili / Available sizes		Spessore/thickness	
Materiali Materials	Acciaio grezzo / Mild steel	3,0	R 10
	Acciaio zincato / Galvanized	3,0	R 10
	Acciaio Inox / Aisi 304	2,0	R 10
	Alluminio / Aluminium	3,0	R 10

*R = resistenza allo scivolamento secondo DIN 51130
*R = anti-slip values in accordance with DIN 51130

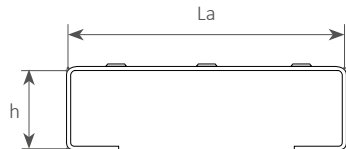
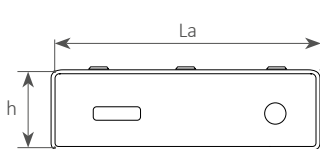


Lamiera - Sheet

Misure disponibili - Available sizes	
Lu (length)	Standard 3.000
La (width)	A richiesta - on request

Gradino - Step

Materiale - Material	La	h	Lunghezza - length
Fe zincato a caldo hot-dip galvanized steel	A richiesta - on request		



Grigliato - Safety grating

Misure disponibili - Available sizes	
Lunghezza (length)	Standard 3.000
La (width)	A richiesta - on request
h (height)	40/50/75



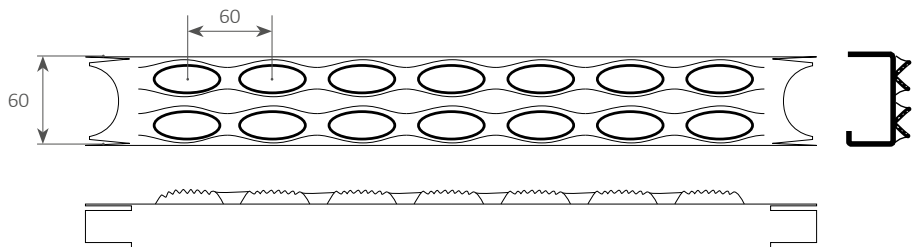
Questo grigliato è nato per creare le rampe d'accesso alle bisarche per il trasporto di automobili. **Per la sua stabilità** viene comunque richiesto anche in ambienti industriali per vari utilizzi. Per le possibili misure contattare ns. uffici.

Another very particular perforation requested mainly for loading ramps on lorries for car transports. For available sizes please contact our sales offices.

Altre misure e materiali su richiesta - Other sizes and materials on request
Tutte le misure sono espresse in mm - All sizes in mm

Pioli

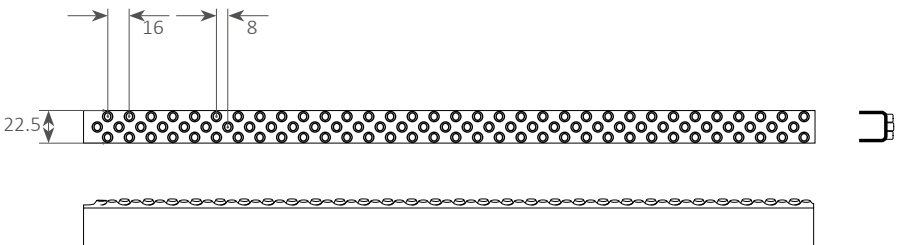
Safety rungs for ladders



Piolo Gripp

Acciaio, spessore 2 mm, Inox 1,5 mm, alluminio 2,5 mm. altezza 30 mm, larghezza 60 mm, lunghezza 500 mm, intestature tonde per la saldatura fra due tubi da 1,5” distanti fra loro ca. 500 mm. Il lato anteriore è piegato verso l’interno per ca. 7 mm.

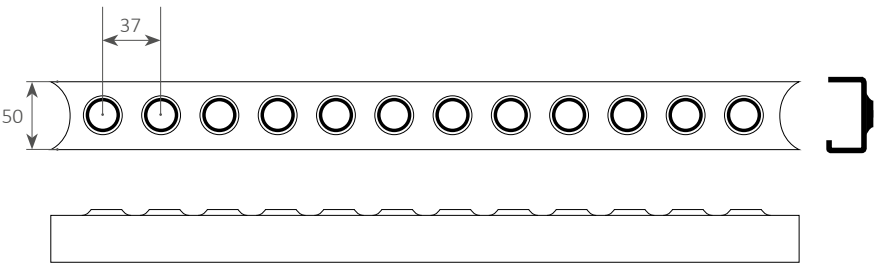
Stainless or mild steel, 2 mm thickness, tread depth 30 mm, fixed length 500 mm, width 60 mm, with clearance between ladder bars (1,5” tubes) about 500 mm, front size is bevelled insides by 7 mm.



Piolo LO4

Acciaio, alluminio spessore 2 mm, inox 1,5 mm, altezza 30 mm, larghezza 22,5 mm. A scelta barre di lunghezza 2.000 mm o pioli pronti da 308 mm con intestature tonde per la saldatura fra due tubi distanti 300 mm. Fori Ø 4 mm svasati verso l’alto.

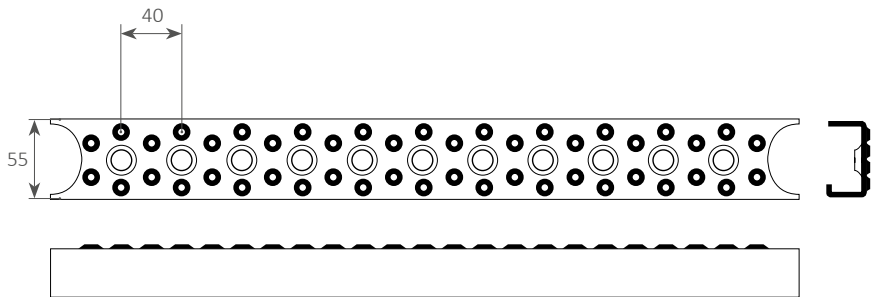
Mild steel, S/S or aluminum 2 mm thick, tread depth 30 mm, width 22,5 mm, 4 mm upwardly punched round holes, length 308 mm with clearance between ladder bars 300 mm. Also available in bars, length 2000 mm.



Piolo LO18

Acciaio sp. 2 mm., inox sp. 1,5 mm. alluminio sp. 2,5 mm, altezza 30 mm, larghezza 50 mm. Fori Ø 20 mm svasati verso l’alto. Lato anteriore piegato verso l’interno ca. 7 mm. Intestature tonde per saldatura fra 2 tubi da 1,5”. Lunghezze disponibili: 234 / 284 / 334 / 384 / 434 / 484 / 534 o barre da 2.000 mm.

2 mm thick mild steel, or 1,5 mm thick S/S, or aluminum 2,5 mm thick, tread depth 30 mm, width 50 mm, 20 mm upwardly punched round holes, front size is bevelled insides by 7 mm with clearance between ladder bars (1,5” tubes). Available lengths 234, 284, 334, 384, 434, 484, 534 mm or 2000 mm.



Piolo LO14 + 6.5

Acciaio grezzo o zincato sendzimir, spessore 2 mm, altezza 30 mm, larghezza 55 mm, lunghezza 495 mm con intestature tonde per la saldatura fra due tubi. Fori antiscivolo svasati verso l’alto Ø 6,5 mm e fori di drenaggio svasati verso il basso Ø 14 mm. Lato anteriore piegato in dentro ca. 12 mm. Altre lunghezze su richiesta.

2 mm thick mild or sendzimir galvanized steel, tread depth 30 mm, width 55 mm, length 495 mm, 6,5 mm upwardly punched round antiskid holes and 14 mm downward punched round drainage holes, front size is bevelled insides by 12 mm, clearance between ladder bars for the welding between two uprights. Other lengths on request.

Piolo Gripp

Piolo LO4

Piolo LO18

Piolo LO14 + 6.5



Calcolo del carico massimo

Maximum load estimation

Calcolo matematico dei carichi massimi in kg/m²

$$\frac{1.000^2 \times \text{carico distribuito}}{\text{larghezza grigliato} \times \text{distanza appoggi}} = \frac{1.000^2 \times P_D}{La \times Lu}$$

Esempio di calcolo

Altezza pieghe laterali H = 40 mm

Materiale Fe 33/37

Spessore lamiera S = 2,5 mm

Distanza appoggi Lu = 1.200 mm

Carico distribuito P_D da tabella (Pag. 50) = 242

kg

$$= \frac{1.000^2 \times 242}{240 \times 1.200} = 840 \text{ kg/m}^2$$

Load estimation in kg/m²

$$\frac{1.000^2 \times \text{distributed load}}{\text{grating width} \times \text{bearing length}} = \frac{1.000^2 \times P_D}{La \times Lu}$$

Example

Fold height H = 40 mm

Material Fe 33/37

Thickness sheet S = 2,5 mm

Bearing length Lu = 1.200 mm

Distributed load P_D from table (Page 50) = 242

kg

$$= \frac{1.000^2 \times 242}{240 \times 1.200} = 840 \text{ kg/m}^2$$

H = Altezza pieghe laterali in mm

S = Spessore materiale in mm

La = Larghezza grigliato in mm

Lu = Distanza fra gli appoggi in mm

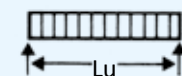
1° Rigo:

Carico distribuito

P_D in kp.

carico distribuito

uniformemente su tutto il pezzo



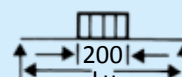
2° Rigo:

Carico concentrato

P_C in kp.

carico concentrato

al centro del pezzo



H = Fold height in mm

S = Sheet thickness in mm

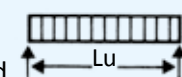
La = Grating width in mm

Lu = Bearing length in mm

Distributed load

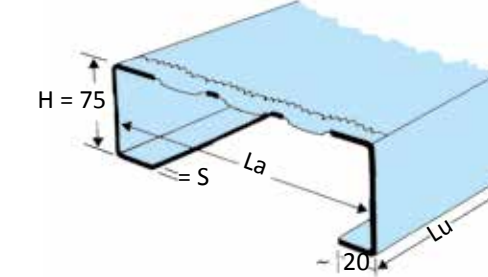
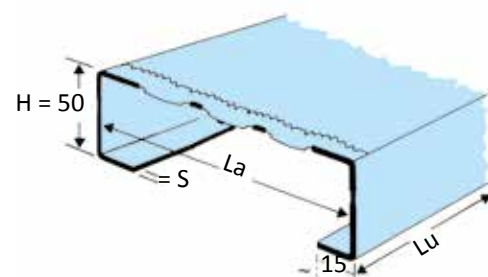
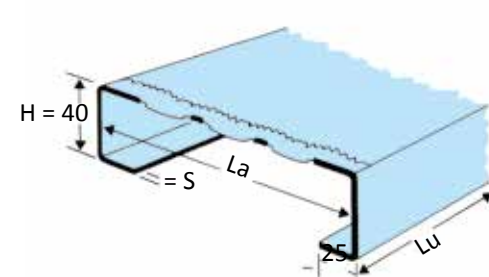
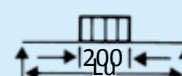
P_D in kp.

Evenly distributed load



Lumped load

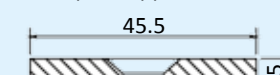
P_C in kp.



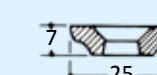
Accessori

Accessories

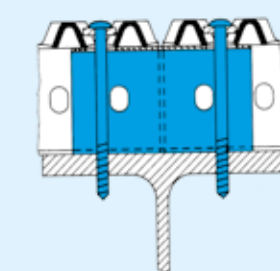
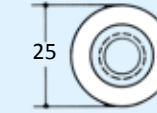
Oliva per
Graepel Gripp



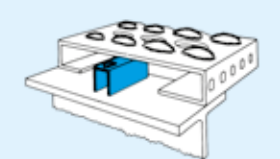
Disco per
Tondo 2 S



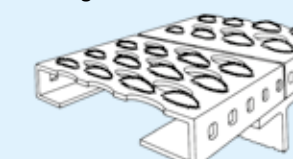
Fe zincato



Distanziale
per sostenere al centro
due grigliati e per collegarli
in lunghezza



Dapprima si avvita
il distanziale al centro
sotto un grigliato...



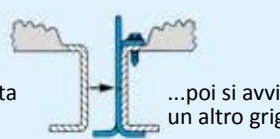
...poi si avvicina
e si avvita il
secondo grigliato



Giunto laterale
per unire lateralmente
più grigliati fra loro



Dapprima si avvita
ad un grigliato...



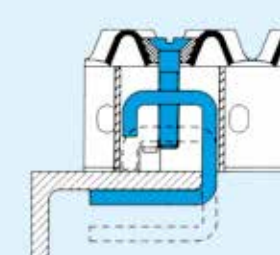
...poi si avvicina
un altro grigliato...



...si piega la linguetta...

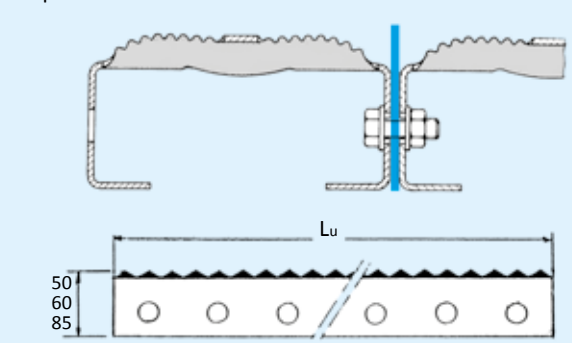


...e si avvita pure questa.



Clip tipo E
1 set è composto da
- 1 oliva o disco
(specificare!)
- 1 clip
- 1 vite
Specificare H!

Rinforzo da inserire fra due grigliati:
la portata aumenta di oltre il 40%



Avvitamento
per unire lateralmente più grigliati fra loro

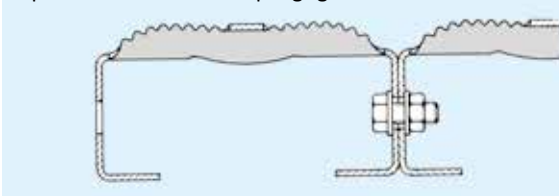
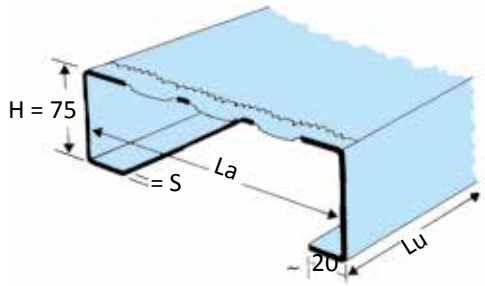
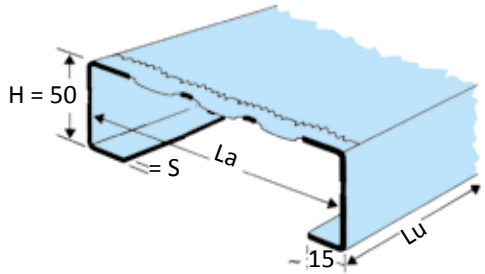
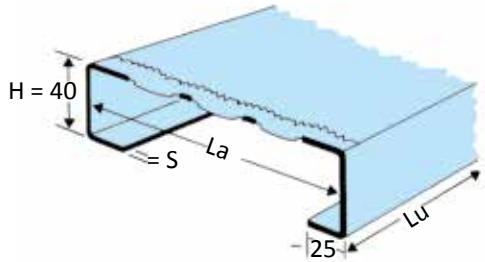


Tabella dei carichi



Loads table

H	Materiale	S	Distanza fra gli appoggi Lu in mm - <i>Bearing length</i>																											
			500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900		2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000	
40	Fe 33/37	2,0	486	405	347	303	270	243	221	202	187	173	162	152	143	135	121		109	94	82	72								
			303	243	202	173	152	135	121	110	101	93	87	81	76	71	67		64											
		2,5	580	484	415	363	322	290	264	242	223	207	193	181	171	161	145		131	113	98	86	76							
			363	290	242	207	181	161	145	132	121	112	104	97	91	85	81		76	71										
	Alluminio Al Mg 3	2,5	437	364	312	273	216	175	145	121	103	89	78	68	61	54														
			273	219	182	156	137	111	92	77	65	56	49																	
	AISI 304	1,5	368	306	260	230	204	184	167	153	141	131	122	115	108	102	97		92	84	73	64								
			230	184	153	131	115	102	91	83	76	71	65																	
50	Fe 33/37	2,0	718	598	513	449	399	359	326	299	276	256	239	224	211	199	189		180	168	146	128	113	100	89	79	71			
			449	359	299	256	224	199	180	163	150	138	128	120	112	106	100		94	90	85									
		2,5	865	721	618	541	481	433	393	361	333	309	288	270	255	240	228		216	204	177	155	137	121	107	96	86	77		
			541	433	361	309	270	240	216	197	180	166	155	144	135	127	120		114	108	103	97	86							
	Alluminio Al Mg 3	2,5	652	543	466	407	362	315	260	219	186	161	140	123	109	97	87		79	68										
			407	326	272	233	204	181	163	138	118	101	88	77	69	61														
	AISI 304	1,5	544	453	388	340	302	272	247	226	209	194	181	170	160	151	143		135	129	124	115	101	90	80	72				
			340	272	226	194	170	151	134	123	114	104	97	90	85	80	75		72											
75	Fe 33/37	2,0	1455	1212	1039	909	808	727	661	606	560	520	485	455	428	404	383		364	346	331	316	303	286	254	227	204	183	165	
			909	727	606	520	455	404	364	331	303	280	260	242	227	214	202		191	182	173	165	158	152	145	140	128	115	104	
		2,5	1773	1478	1267	1108	985	887	806	739	682	633	591	554	522	493	467		443	422	403	386	369	350	311	278	249	224	203	
			1108	887	739	633	554	493	443	403	369	341	317	296	277	261	246		233	222	211	202	193	185	177	171	156	140	127	
	Alluminio Al Mg 3	2,5	1336	1113	954	835	742	668	607	557	514	465	405	356	316	281	253		228	197	171	150	132	117	104					
			835	668	557	477	418	371	334	304	278	257	239	223	199	177	159		143	124	107	94	83							
	AISI 304	1,5	1103	918	787	689	612	551	501	459	423	394	368	344	324	306	290		275	262	251	239	229	220	212	204	184	164	148	
			689	551	459	394	344	306	275	251	229	212	197	184	171	162	153		144	137	131	125	119	115	110	106	101	98	94	



N.B.
Bugnato: -10% sui valori della tabella
Embossed: table values - 10%

Tabella dei pesi

Weight table

Peso proprio in kg al metro lineare		altezza pieghe laterali H = 40/50 mm							altezza pieghe laterali H = 75 mm						
		larghezza grigliato La = mm							larghezza grigliato La = mm						
		120	180	240	300	360	420	480	120	180	240	300	360	420	480
Fe 33/37* S = 2,0 mm	Gripp	3,6	4,5	5,4	6,3	7,2	8,1	9,0	4,6	5,5	6,4	7,3	8,2	9,1	10,1
	Tondo 2S	3,5	4,3	5,2	6,0	6,9	7,7	8,6	4,5	5,4	6,2	7,1	8,0	8,9	9,8
	Bugnato	3,8	4,7	5,7	6,6	7,6	8,5	9,5	4,8	5,8	6,7	7,7	8,6	9,6	10,6
Fe 33/37* S = 2,5 mm	Gripp	4,4	5,5	6,7	7,8	8,9	10,1	11,2	5,7	6,9	8,0	9,1	10,3	11,4	12,6
	Tondo 2S	4,3	5,4	6,5	7,6	8,6	9,7	10,8	5,6	6,7	7,8	8,9	10,0	11,1	12,2
	Bugnato	4,7	5,9	7,1	8,3	9,5	10,7	11,9	6,0	7,2	8,4	9,6	10,8	12,0	13,2
Alluminio Al Mg 3 S = 2,5 mm	Gripp	1,5	1,9	2,3	2,6	3,1	3,5	3,9	2,0	2,4	2,8	3,1	3,5	3,9	4,3
	Tondo 2S	1,5	1,8	2,2	2,5	3,0	3,4	3,7	1,9	2,3	2,7	3,0	3,4	3,8	4,2
	Bugnato	1,6	2,0	2,4	2,8	3,3	3,7	4,1	2,1	2,5	2,9	3,3	3,7	4,1	4,5
Acciaio inox AISI 304 S = 2,0 mm	Gripp	2,6	3,3	3,9	4,7	5,4	6,0	6,7	3,4	4,1	4,8	5,5	6,2	6,9	7,5
	Tondo 2S	2,5	3,2	3,8	4,6	5,2	5,8	6,5	3,3	4,0	4,6	5,4	6,0	6,7	7,3
	Bugnato	2,8	3,5	4,2	5,0	5,7	6,4	7,1	3,6	4,3	5,0	5,8	6,5	7,2	7,9

* Per materiale zincato a caldo i pesi aumentano del 10% circa

kg / linear m		Fold height H = 40/50 mm							Fold height H = 75 mm						
		Grating width La = mm							Grating width La = mm						
		120	180	240	300	360	420	480	120	180	240	300	360	420	480
Fe 33/37* S = 2,0 mm	Gripp	3,6	4,5	5,4	6,3	7,2	8,1	9,0	4,6	5,5	6,4	7,3	8,2	9,1	10,1
	Tondo 2S	3,5	4,3	5,2	6,0	6,9	7,7	8,6	4,5	5,4	6,2	7,1	8,0	8,9	9,8
	Bugnato	3,8	4,7	5,7	6,6	7,6	8,5	9,5	4,8	5,8	6,7	7,7	8,6	9,6	10,6
Fe 33/37* S = 2,5 mm	Gripp	4,4	5,5	6,7	7,8	8,9	10,1	11,2	5,7	6,9	8,0	9,1	10,3	11,4	12,6
	Tondo 2S	4,3	5,4	6,5	7,6	8,6	9,7	10,8	5,6	6,7	7,8	8,9	10,0	11,1	12,2
	Bugnato	4,7	5,9	7,1	8,3	9,5	10,7	11,9	6,0	7,2	8,4	9,6	10,8	12,0	13,2
Alluminio Al Mg 3 S = 2,5 mm	Gripp	1,5	1,9	2,3	2,6	3,1	3,5	3,9	2,0	2,4	2,8	3,1	3,5	3,9	4,3
	Tondo 2S	1,5	1,8	2,2	2,5	3,0	3,4	3,7	1,9	2,3	2,7	3,0	3,4	3,8	4,2
	Bugnato	1,6	2,0	2,4	2,8	3,3	3,7	4,1	2,1	2,5	2,9	3,3	3,7	4,1	4,5
Acciaio inox AISI 304 S = 2,0 mm	Gripp	2,6	3,3	3,9	4,7	5,4	6,0	6,7	3,4	4,1	4,8	5,5	6,2	6,9	7,5
	Tondo 2S	2,5	3,2	3,8	4,6	5,2	5,8	6,5	3,3	4,0	4,6	5,4	6,0	6,7	7,3
	Bugnato	2,8	3,5	4,2	5,0	5,7	6,4	7,1	3,6	4,3	5,0	5,8	6,5	7,2	7,9

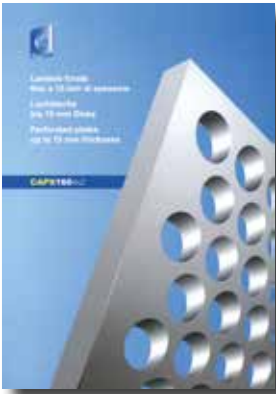
* For hot-dip galvanized materials, weights increase by 10%



Manuale e catalogo della lamiera forata
Perforated sheet manual and catalog



Cataloghi
Catalogs



Accessori per la casa / Design
Household goods / Design

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