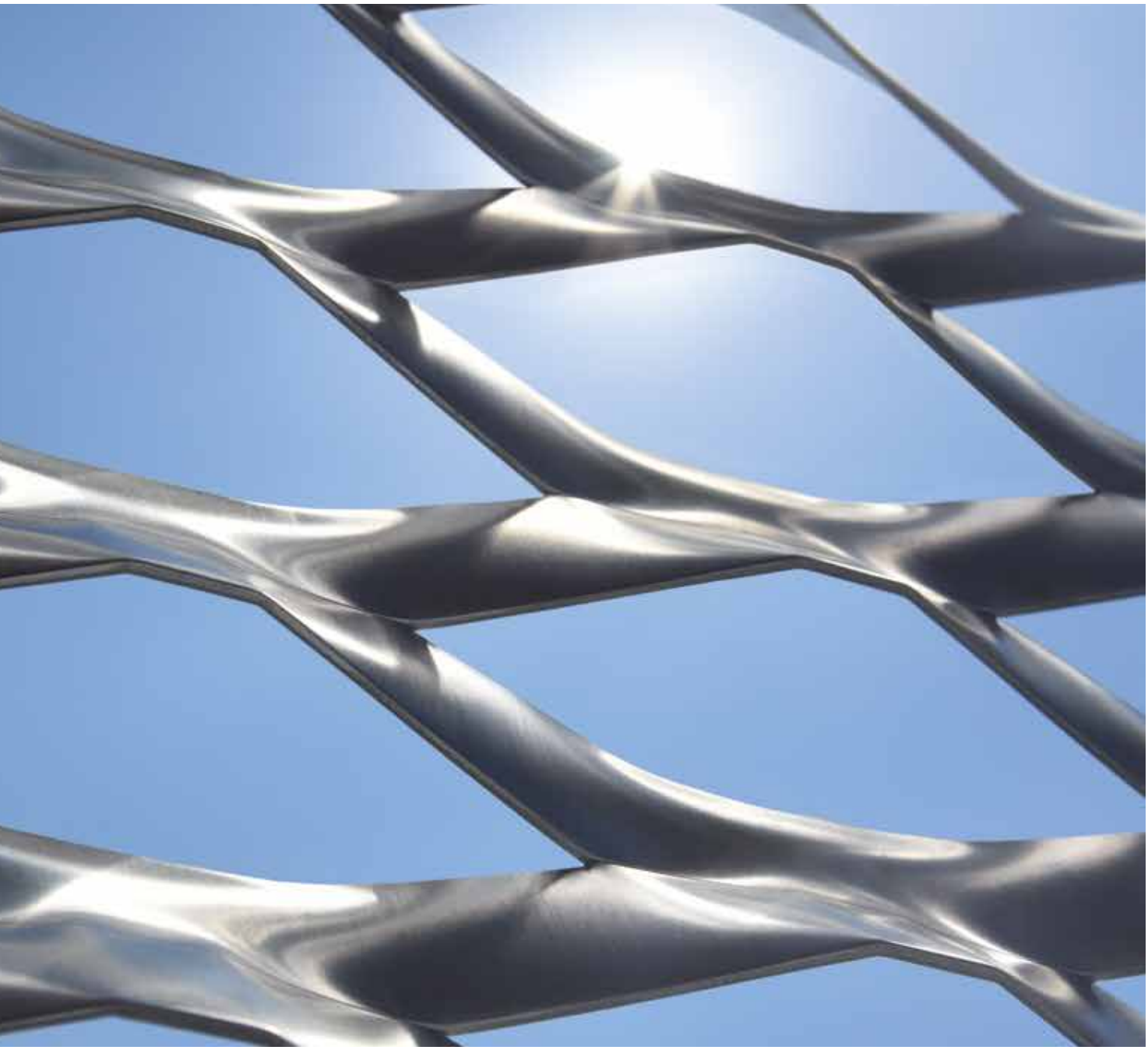
Fils

Expanded metal - meshes and gratings

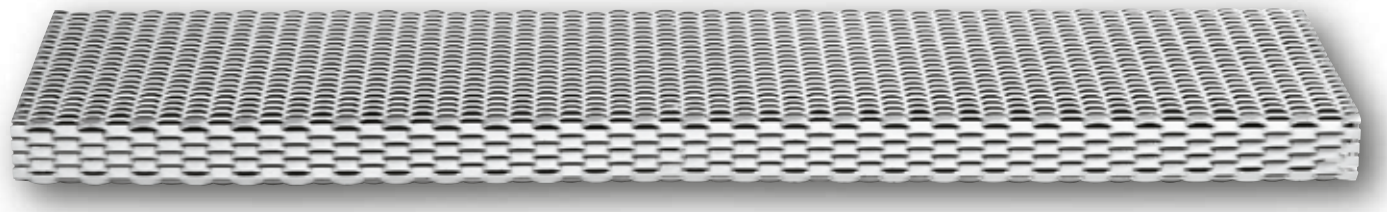


Catalogue of expanded metal patterns, expanded gratings and finished products

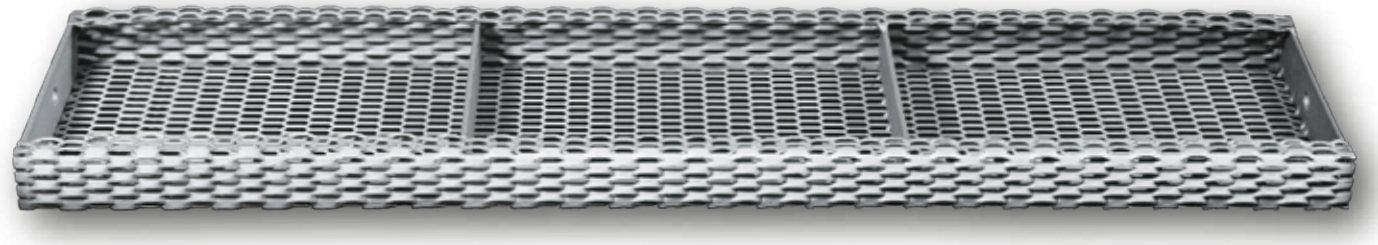
STAIR TREADS AND LANDINGS

GRIGLIOFILS

Compliant with Ministerial Decree dated 17/01/2018 - NTC 2018*
Reference legislation approved by
Decree of the Ministry of Infrastructure



NON-SLIP - ANTI-PANIC - ANTI-HEEL - ANTI-ICE



DISTRIBUTED VERTICAL LOAD
510 [kg/m^2]

CONCENTRATED VERTICAL LOAD
510 [kg]

DIN 51130 SLIP-RESISTANCE
CLASSIFICATION COMPLIANT
R13

*Estratto pag 91

100% Made in Italy

100% Italian Made Products

Social responsibility

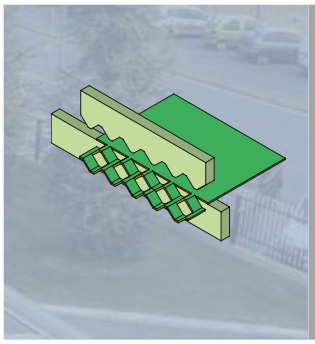
Our manufacturing is carried out exclusively by individuals protected under EU employment law. All of our products are strictly made according to specific legislation in force on safety and the prevention of accidents.

ENVIRONMENTALLY-FRIENDLY

FILS IS COMMITTED TO GREEN ISSUES NOT ONLY IN ITS INTENTIONS OR STATEMENTS BUT ALSO IN ITS ACTIONS AND USES MATERIALS AND PRODUCTION PROCESSES THAT ARE MINDFUL OF THE ENVIRONMENTAL IMPACT.

Green energy

95% of the energy required for production comes from photovoltaic systems.

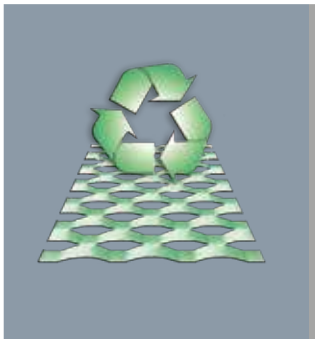


Pollution-free process

“Expanding” is a cold-pressing process that does not require the use of pollutants

Zero-scrap processing

Expanded metal is produced without any work scrap with the optimized use of raw materials



Recyclable

At the end of its life cycle, expanded metal is 100% recycled, according to waste collection rules

The power of innovation

Using the finest raw materials, Fils produces the highest quality gratings and expanded metal, turning them into industry, construction and architecture solutions.

With continuous innovation, Fils guarantees the company and designers satisfaction all over the world.

Stair treads for getting around safely

Non-slip - anti-panic - anti-heel - anti-ice.

Fils walkways allow you to walk without slipping, under wet or dry conditions, even in oily industrial environments. Fils products comply with legal regulations, are certified in terms of load capacity and are certified for skid resistance in accordance with current legislation.

At page 62 the news steps and landings GRIGLIOFILS

Fencing to protect spaces and privacy
Cordon off hazards and prevent risks. Protect the privacy of your premises.

Our fencing and parapets are the ideal solution and can be configured to meet diverse needs in terms of privacy. Robust materials guarantee the utmost comfort in various context.

Modular cladding and metal façades
Contemporary modular surfaces.

For façades or interior design, expanded metal cladding panels lend themselves to numerous patterns, whether horizontally or vertically. The choice of mesh and juxtaposition provides many possible creative designs.

Maximum scope for personalisation
Customised services to achieve the desired effect, both in terms of aesthetics and functionality.

The design meets many of today's demands: transparency, light weight and airiness, as well as protection from sunlight. The designer needs materials that are both simple and durable such as expanded metal, which enables maximum flexibility in the choice of dimensions and shapes.

Smart shading
The energy of natural light and the comfort of shade.

The expanded metal ‘fin’ sunshades screen and filter sunlight; they adjust almost organically to provide the utmost comfort to your guests. Mobility of the screening elements has become component of paramount importance in terms of building performance.

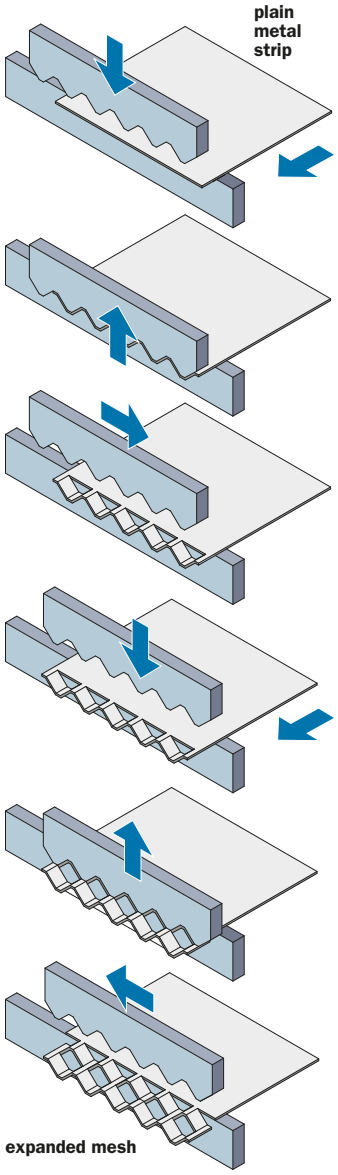
Protective and aesthetic finishes
A range of colour finishes for a premium result and durability.

Selecting a high-quality professional surface finish not only affects the aesthetic appearance, but also makes sure that the materials used are long-lasting. Anodising and painting allow the broadest choice of colour hues for the intended use of the project.

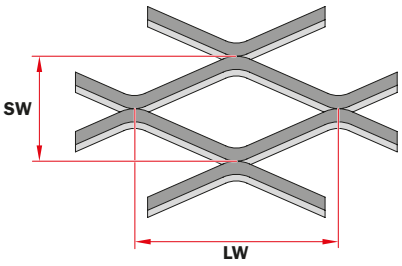
EXPANDED MESH DIAGRAMS AND CHARACTERISTICS

Definitions used in legends

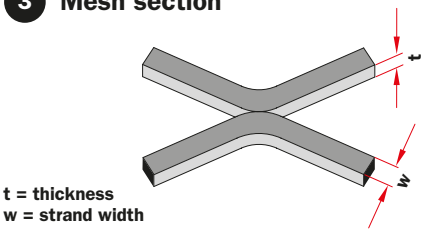
1 Expanding the metal



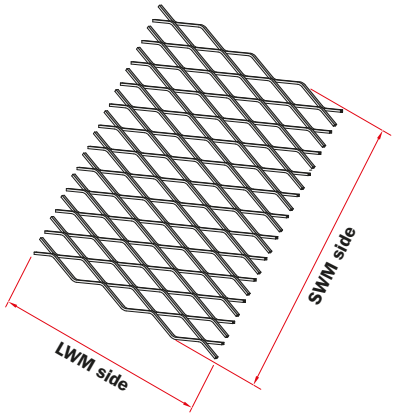
2 Mesh dimensions



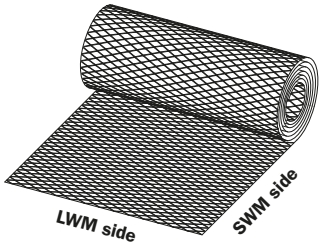
3 Mesh section



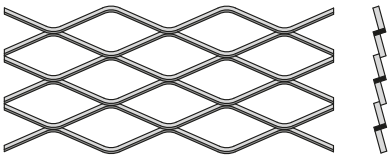
4 Sheet dimensions/thickness



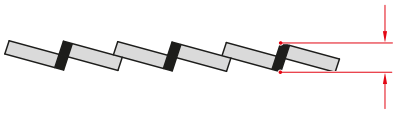
5 Roll/Coil of expanded mesh



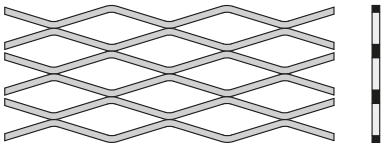
6 Expanded mesh, not flattened



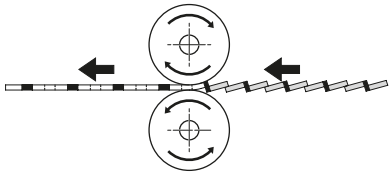
7 Final thickness of expanded mesh

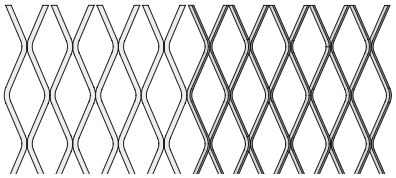


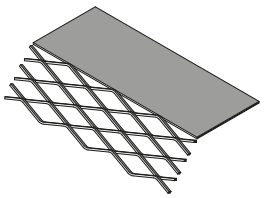
8 Expanded mesh, flattened



9 Flattening diagram

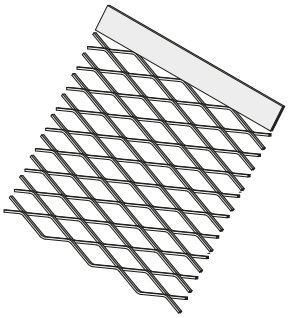




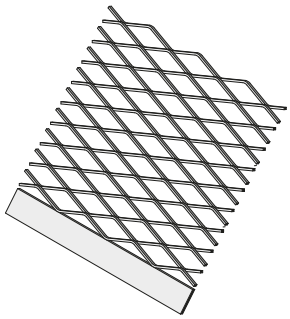


Special details on request

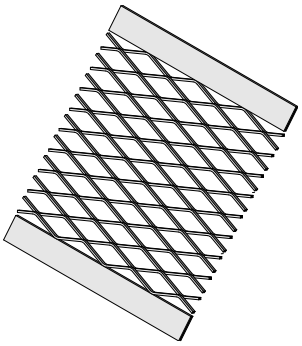
10 **Plain edge at the beginning running parallel with LWM**



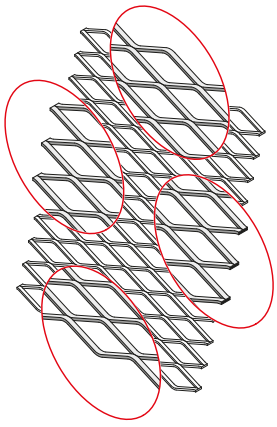
11 **Plain edge at the end running parallel with LWM**



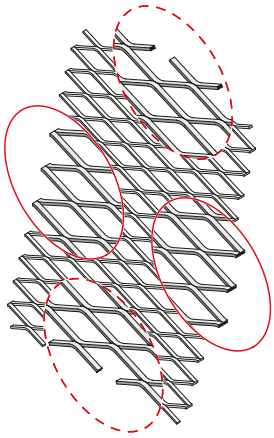
12 **Plain edges at the beginning and the end**



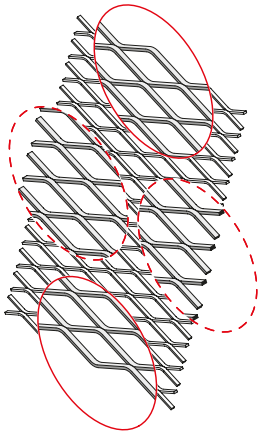
13 **All sides closed meshes**



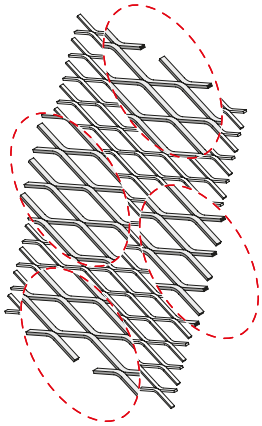
14 **Closed mesh along LW**



15 **Closed mesh along SW**



16 **All sides open meshes**

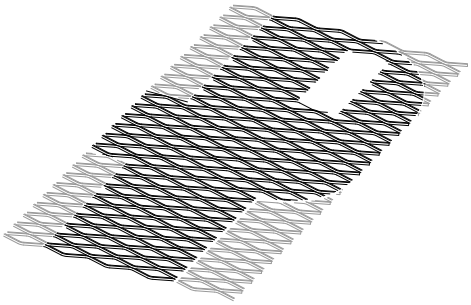


Closed mesh

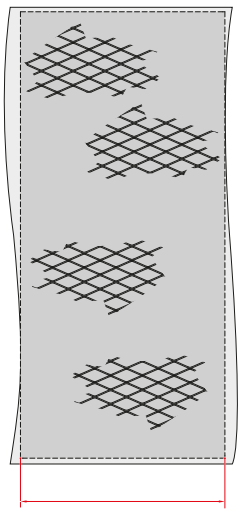
Open mesh

Possible expanding effects put right with special reprocessing

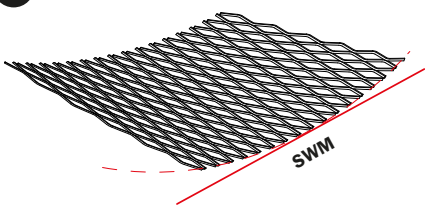
17 **Shaped plasma cutting**



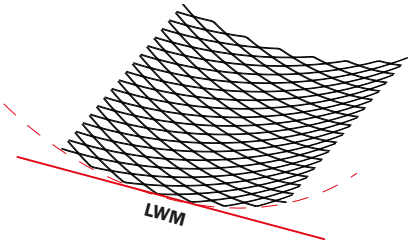
18 **Buckling of mesh strip**



19 **Mesh bulging along SWM**



20 **Mesh bulging along LWM**



Our technicians are always ready to answer your queries

Expanded metal square mesh

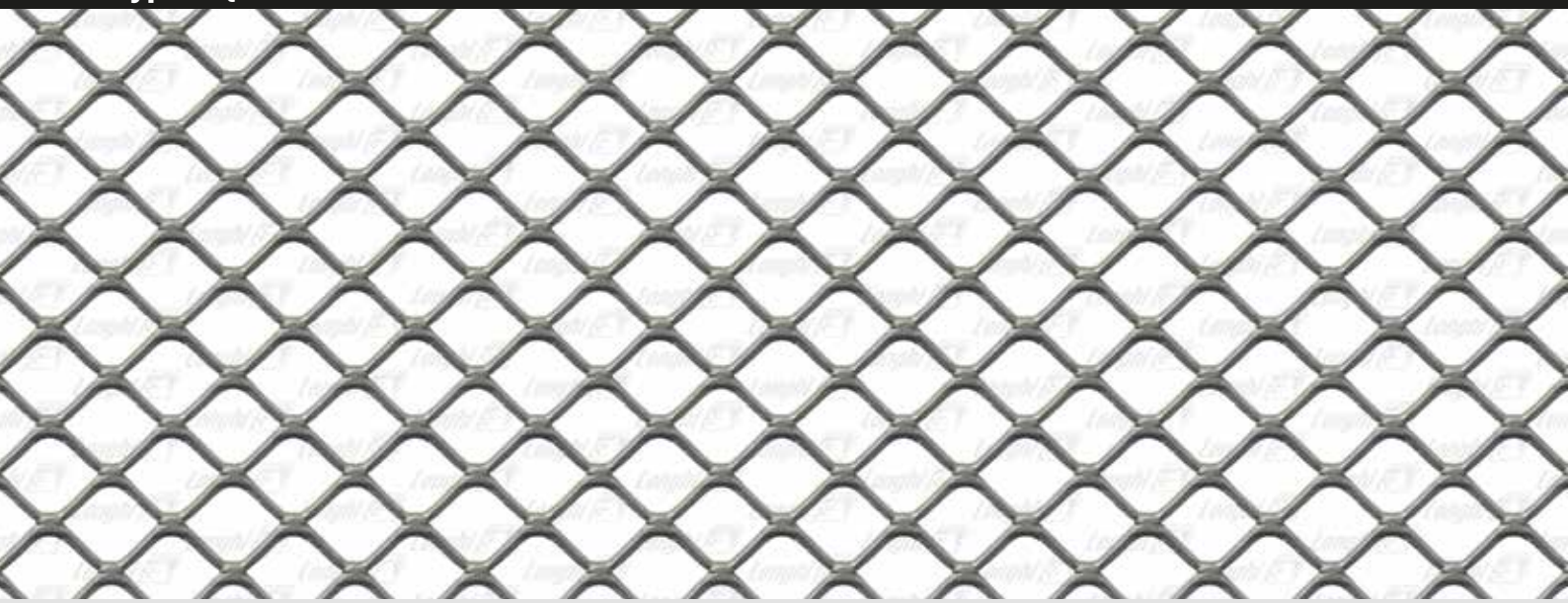
Mesh Type SQ 20

expanded metal square mesh

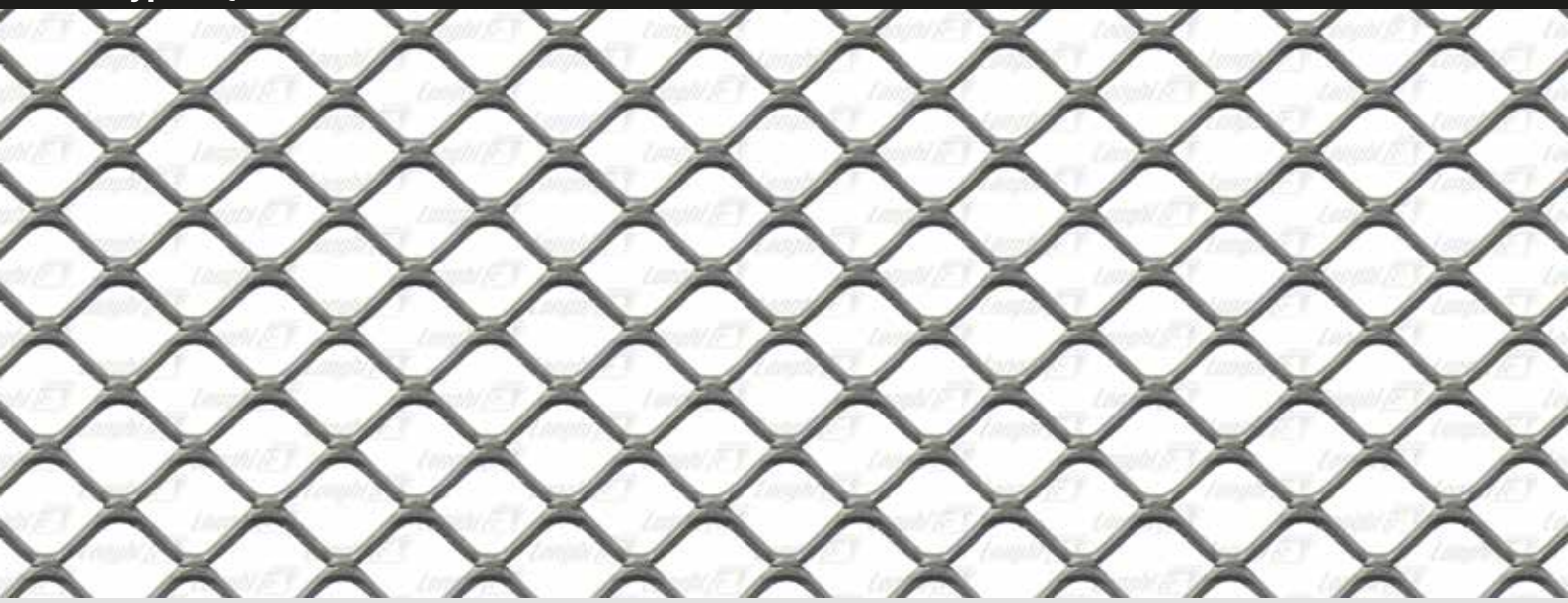
14	Type SQ 16	flattened
	Type SQ 20	flattened
	Type SQ 30	flattened
16	Type SQ 40	flattened
	Type SQ 50	flattened
	Type SQ 60	flattened
18	Type SQ 70	flattened
	Type SQ 80	flattened
	Type SQ 90	flattened
20	Type SQ 100	flattened
	Type SQ 120	flattened
22	Type Q 40	aluminium
	Type SQ 40	flattened/aluminium
	Type Q 50	aluminium
	Type SQ 50	flattened/aluminium
	Type Q 60	aluminium
	Type SQ 60	flattened/aluminium
	Type Q 70	aluminium
	Type SQ 70	flattened/aluminium

Expanded metal square mesh - flattened

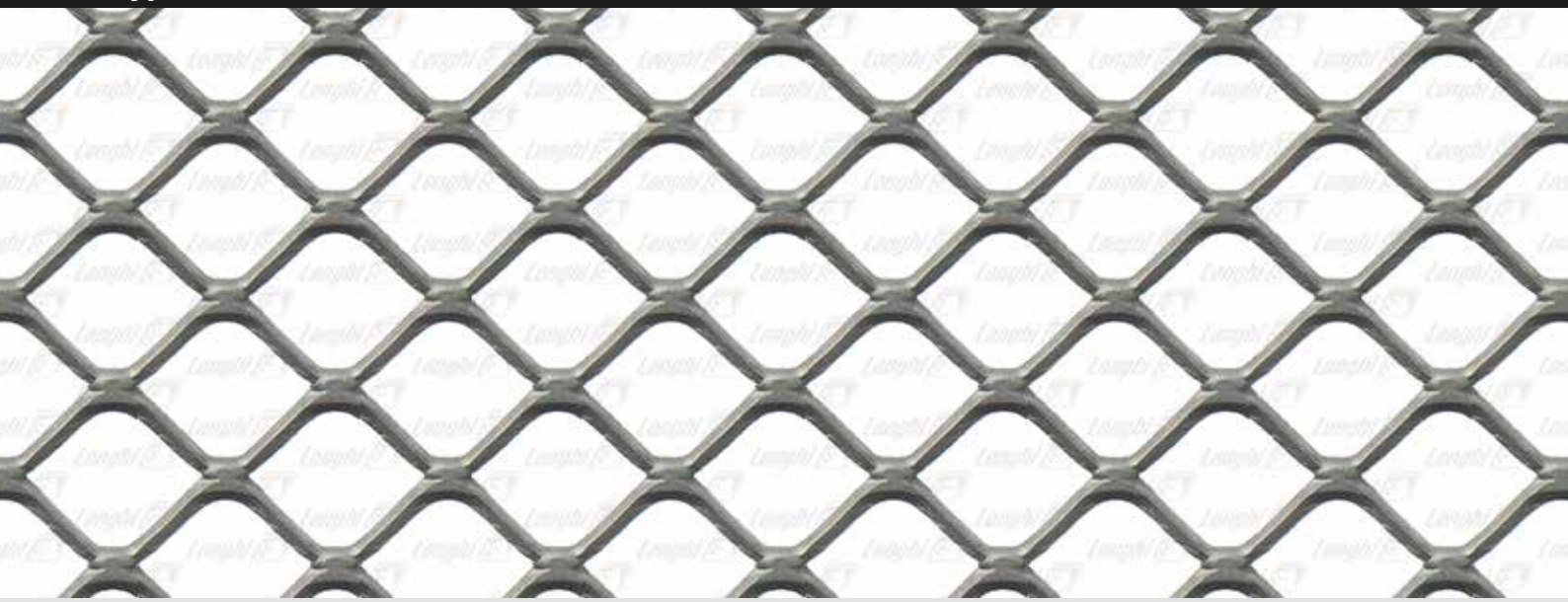
Type SQ 16



Type SQ 20



Type SQ 30



Expanded metal square mesh - flattened

Type	LW	SW nominal	SW actual	w	t	kg/m²	Sheet sizes: LWM side	Sheet sizes: SWM side
SQ 16 t **1.5**	16	13	(13)	1.5	1.5	2.7	1000	x 2000 **F**
SQ 20 t **1.5**	20	15.5	(15.5)	1.7	1.5	2.5	1000	x 2000 **F**
SQ 30 t **1.5**	30	24.3	(24.3)	1.5	1.5	1.5	Made to order	Made to order
SQ 30 t **2.0**	30	24.3	(24.3)	2.0	2.0	2.5	1000	x 2000 **F**

SQ = Square Flattened

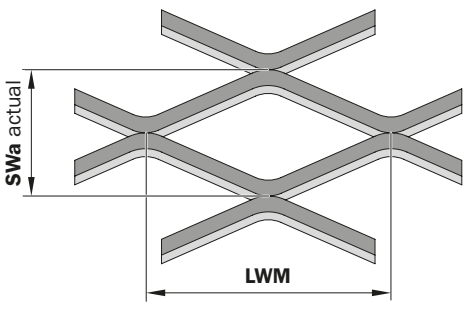
F = Sheet

Values in mm.
The weights given in the table are indicative and refer to carbon steel mesh.
On request some of the meshes can be processed from pre-galvanized steel, aluminium, copper and brass.
The highlighted data are for the mesh in the photos.

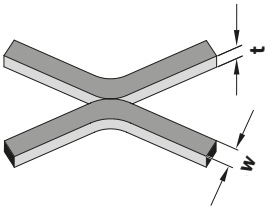
Legenda

LW = Long way pitch
SWn = Short way pitch nominal
SWa = Short way pitch actual
w = strand widht
t = thickness
LWM side
SWM side

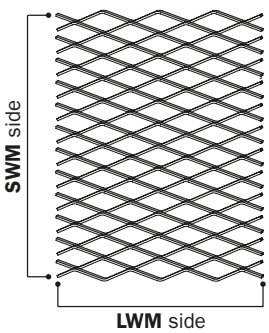
Mesh dimensions



Mesh section



Sheet sizes



Expanded metal square mesh - flattened

Type SQ 40

Type SQ 50

Type SQ 60

Expanded metal square mesh – flattened

Type	LW	SW nominal	SW actual	w	t	kg/m²	Sheet sizes: LWM side	Sheet sizes: SWM side
SQ 40 t **2.5**	40	30	(30)	3.0	2.0	3.2	Made to order	Made to order
SQ 40 t **2.5**	40	30	(30)	1.5	1.5	4.0	1000	x 2000 **F**
SQ 50 t **2.5**	50	45	(37)	4.0	2.5	4.2	1000	x 2000 **F**
SQ 50 t **3.0**	50	45	(37)	4.0	3.0	5.1	1000	x 2000 **F**
SQ 60 t **2.5**	60	45	(45)	4.5	2.5	4.0	Made to order	Made to order
SQ 60 t **3.0**	60	45	(45)	4.5	3.0	4.8	1000	x 2000 **F**

SQ = Square Flattened

F = Sheet

Values in mm.
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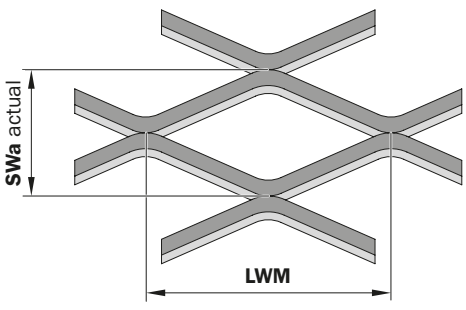
The highlighted data are for the mesh in the photos.

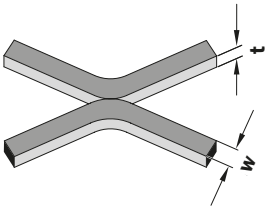
Legenda

LW = Long way pitch
SWn = Short way pitch nominal
SWa = Short way pitch actual
w = strand widht
t = thickness
LWM side
SWM side

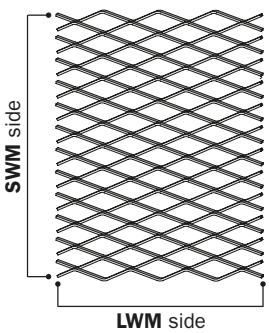
Mesh dimensions



Mesh section



Sheet sizes

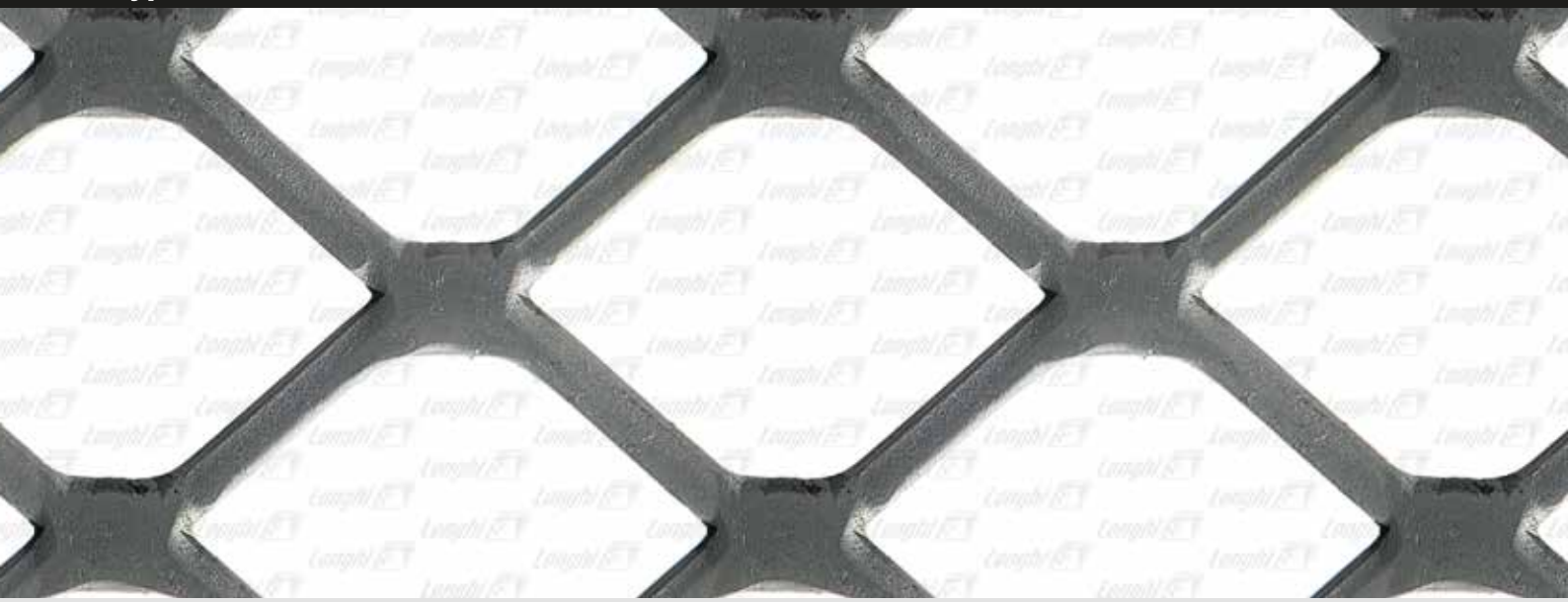


Expanded metal square mesh - flattened

Type SQ 70

Type SQ 80

Type SQ 90



Expanded metal square mesh – flattened

Type	LW	SW nominal	SW actual	w	t	kg/m²	Sheet sizes: LWM side	Sheet sizes: SWM side
SQ 70 t **3.0**	70	53	(53)	5.0	3.0	4.5	1000	x 2000 **F**
SQ 70 t **4.0**	70	53	(53)	6.6	4.5	7.1	1000	x 2000 **F**
SQ 80 t **3.0**	80	56	(56)	5.0	3.0	4.2	1000	x 2000 **F**
SQ 80 t **4.0**	80	56	(56)	6.2	4.0	6.9	1000	x 2000 **F**
SQ 90 t **3.0**	90	64	(64)	5.0	3.0	3.7	Made to order	Made to order
SQ 90 t **4.0**	90	64	(64)	6.0	4.0	5.9	1000	x 2000 **F**

SQ = Square Flattened

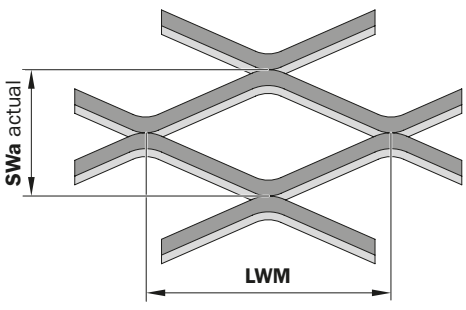
F = Sheet

Values in mm.
The weights given in the table are indicative and refer to carbon steel mesh.
On request some of the meshes can be processed from pre-galvanized steel, aluminium, copper and brass.
The highlighted data are for the mesh in the photos.

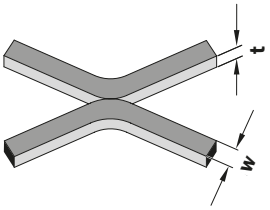
Legenda

LW = Long way pitch
SWn = Short way pitch nominal
SWa = Short way pitch actual
w = strand widht
t = thickness
LWM side
SWM side

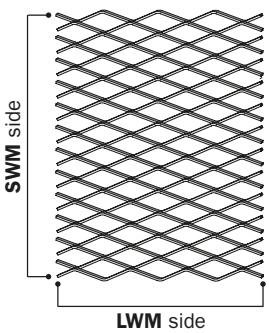
Mesh dimensions



Mesh section

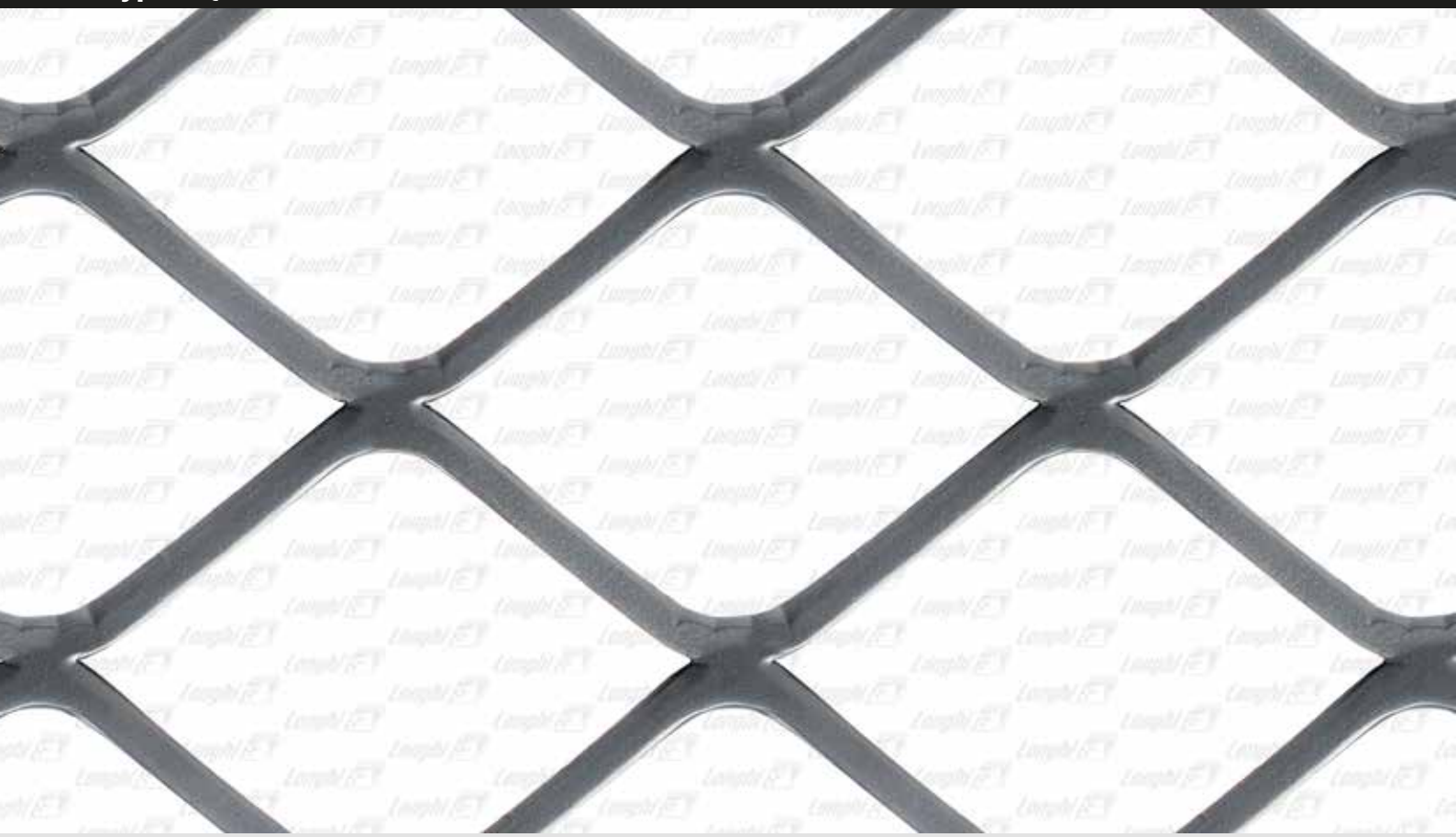


Sheet sizes

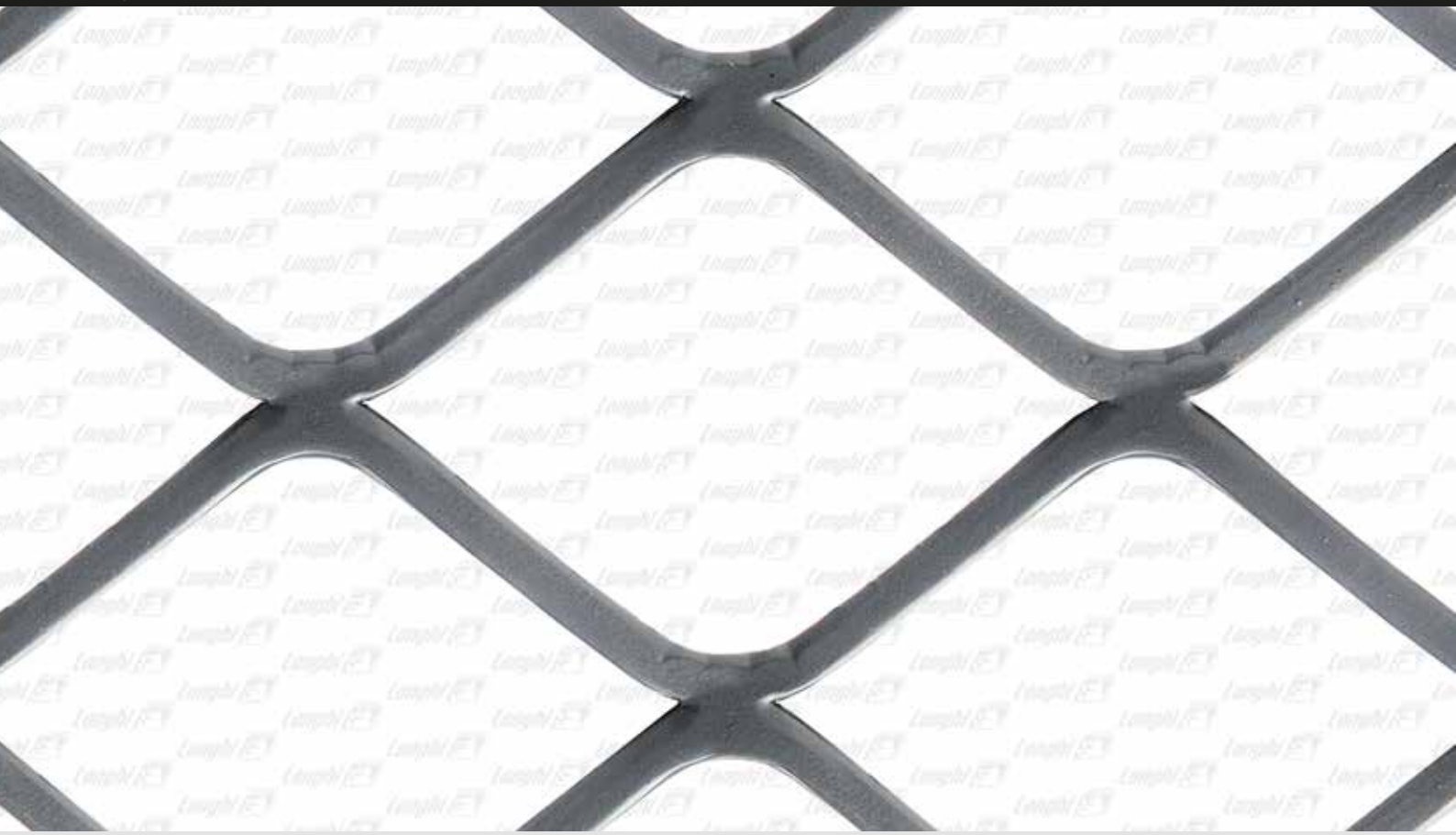


Expanded metal square mesh - flattened

Type SQ 100



Type SQ 120



Expanded metal square mesh - flattened

Type	LW	SW nominal	SW actual	w	t	kg/m²	Sheet sizes: LWM side	Sheet sizes: SWM side
SQ 100 t **3.0**	100	74	(74)	6.0	3.0	3.9	Made to order	Made to order
SQ 100 t **4.0**	100	74	(74)	6.0	4.0	5.1	1000	x 2000 **F**
SQ 120 t **3.0**	120	87	(87)	6.0	3.0	4.2	Made to order	Made to order
SQ 120 t **4.0**	120	87	(87)	6.0	4.0	4.4	1000	x 2000 **F**

SQ = Square Flattened

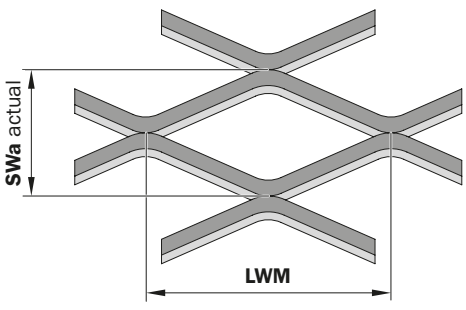
F = Sheet

Values in mm.
The weights given in the table are indicative and refer to carbon steel mesh.
On request some of the meshes can be processed from pre-galvanized steel, aluminium, copper and brass.
The highlighted data are for the mesh in the photos.

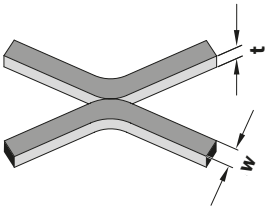
Legenda

LW = Long way pitch
SWn = Short way pitch nominal
SWa = Short way pitch actual
w = strand widht
t = thickness
LWM side
SWM side

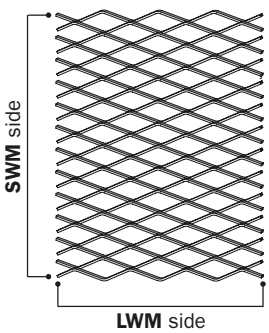
Mesh dimensions



Mesh section



Sheet sizes



Expanded and flattened square mesh - Aluminium

Type SQ 40

Type SQ 50

Type SQ 60

Type SQ 70

Expanded and flattened square mesh - Aluminium

Type	LW nominal	SW actual	w	t	kg/m²	Sheet sizes: LWM side	Sheet sizes: SWM side
Q 40 t **3.0**	40 x 30	(27) -	3.5	x 3.0	2.1	Made to order	Made to order **F**
SQ 40 t **3.0**	40 x 30	(30) -	3.5	x 3.0	1.9	Made to order	Made to order **F**
Q 50 t **3.0**	50 x 37	(35) -	3.5	x 3.0	1.8	Made to order	Made to order **F**
SQ 50 t **3.0**	50 x 37	(37) -	3.5	x 3.0	1.6	Made to order	Made to order **F**
Q 60 t **4.0**	60 x 45	(41) -	4.5	x 4.0	2.65	Made to order	Made to order **F**
SQ 40 t **4.0**	60 x 45	(45) -	4.5	x 4.0	2.2	Made to order	Made to order **F**
Q 70 t **4.0**	70 x 53	(48) -	4.8	x 3.0	2.2	Made to order	Made to order **F**
SQ 70 t **4.0**	70 x 53	(53) -	4.8	x 4.0	2.0	Made to order	Made to order **F**

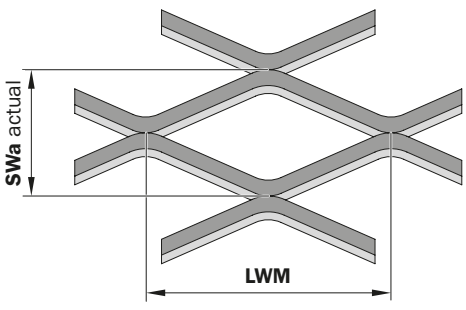
Q = Square **SQ** = Square Flattened **F** = Sheet

Values in mm.
On request some of the meshes can be processed from pre-galvanized steel, aluminium, copper and brass.
The highlighted data are for the mesh in the photos.

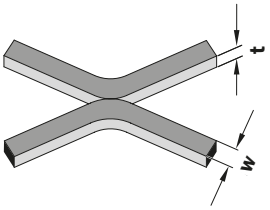
Legenda

LW = Long way pitch
SWn = Short way pitch nominal
SWa = Short way pitch actual
w = strand widht
t = thickness
LWM side
SWM side

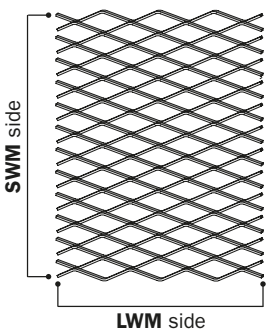
Mesh dimensions

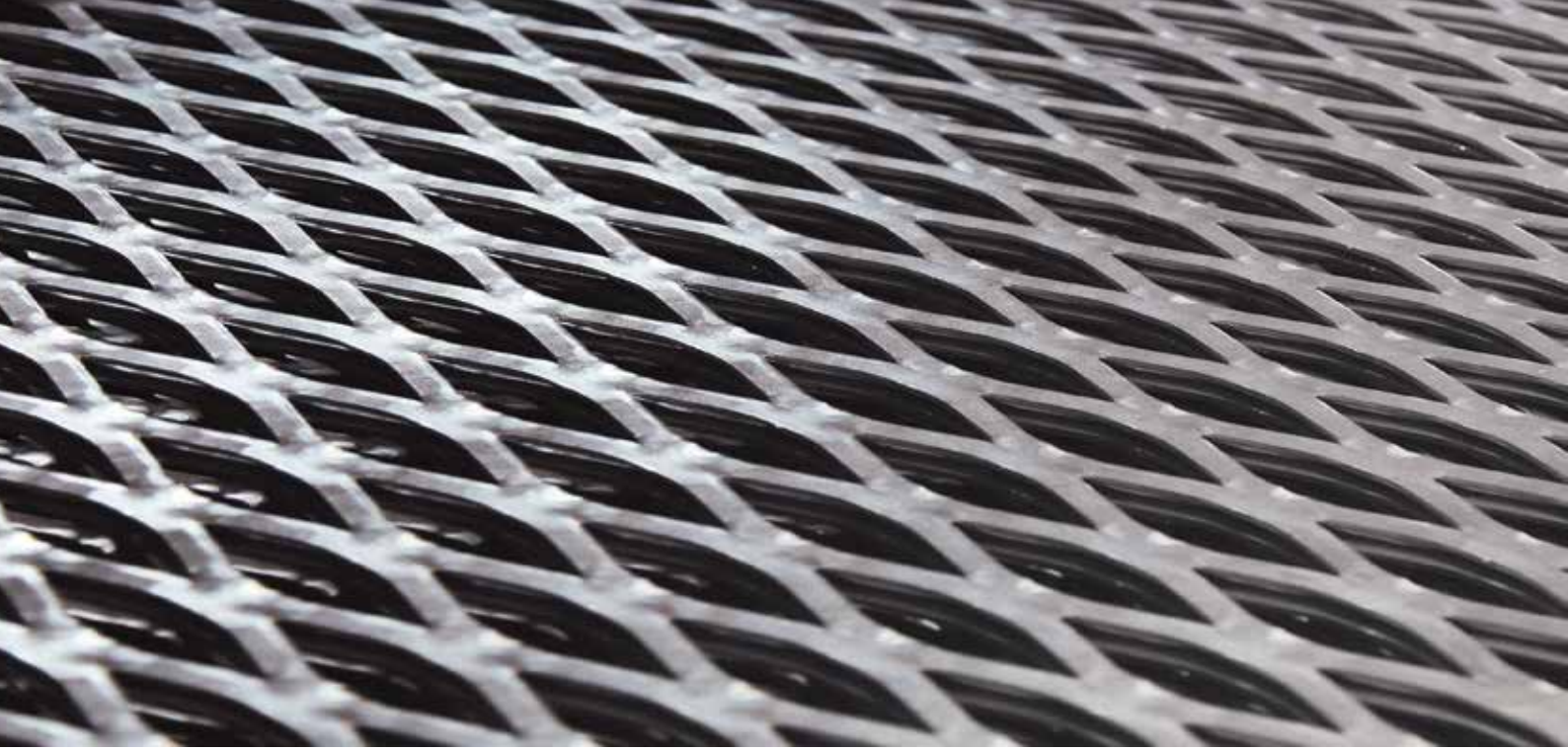


Mesh section



Sheet sizes





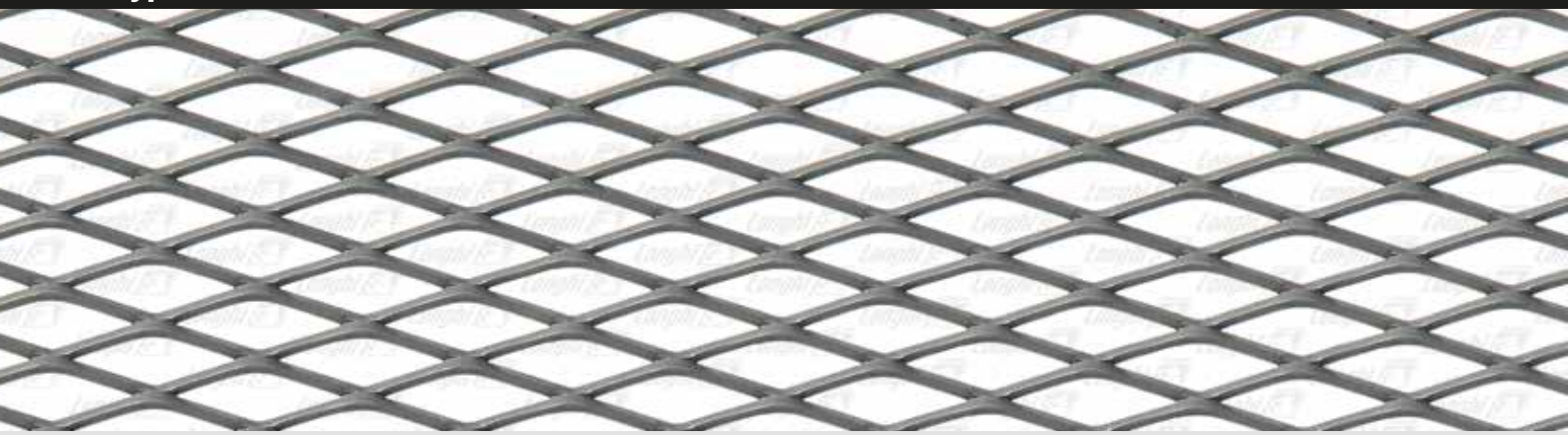
Expanded metal diamond mesh

Expanded metal diamond mesh, flattened - Type S17

expanded metal diamond mesh

Expanded diamond mesh

Type 25



Type 31

Types 17 - 28

Types 27 - 41

Expanded diamond mesh

Type	LW	SW nominal	SW actual	w	t	kg/m²	Sheet rolls and sizes: LWM side	SWM side
25 t **1.5**	28	10	(10)	2.0	1.5	4.8	1000 - 1250 - 1500	x 6000 **R**
31 t **3.0**	28	14	(13.5)	2.0	1.5	3.5	1000 - 1250	x 6000 **R**
17 t **1.5**	43	10	(13)	2.5	1.5	4.2	1000	x 2000 **F**
							1000 - 1250 - 1500	x 6000 **r**
							2000 - 2500	x 3400 **R**
28 t **2.0**	43	10	(13)	2.5	1.5	5.5	1000	x 2000 **F**
							1000 - 1250 - 1500	x 6000 **R**
							2000 - 2500	x 3400 **R**
27 t **1.5**	43	40	(16.2)	2.5	1.5	3.8	1000	x 2000 **F**
							1000	x 6000 **R**
41 t **3.0**	43	17	(18.5)	5.0	3.0	12.5	Made to order	x Made to order

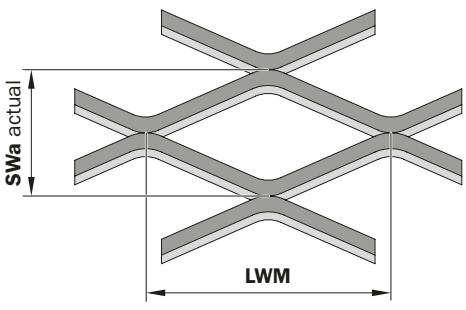
F = Sheet **R** = Roll

Values in mm.
The weights given in the table are indicative and refer to carbon steel mesh.
On request some of the meshes can be processed from pre-galvanized steel, aluminium, copper and brass.
The highlighted data are for the mesh in the photos..

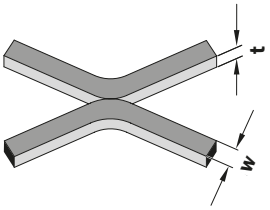
Legenda

LW = Long way pitch
SWn = Short way pitch nominal
SWa = Short way pitch actual
w = strand widht
t = thickness
LWM side
SWM side

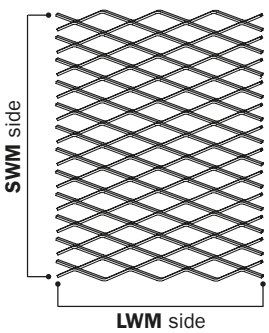
Mesh dimensions



Mesh section



Sheet sizes



Expanded metal diamond mesh

Types 4 - 220 - 9 - 22 - 40

Type 60

Type 76

Type 85

Expanded metal diamond mesh

Type	LW	SW nominal	SW actual	w	t	kg/m²	Sheet rolls and sizes: LWM side	SWM side
4 t **3.0**	62.5	x 20	(23)	- 3.0	x 1.5	3.0	1000	x 2000 **F**
							1000 - 1250 - 1500	x 6000 **R**
							2000 - 2500	x 5000 **R**
220 t **3.0**	62.5	x 20	(23)	- 3.0	x 2.0	4.2	1000	x 2000 **F**
							1000 - 1250 - 1500	x 6000 **R**
							2000 - 2500	x 5000 **R**
19 t **3.0**	62.5	x 20	(23.4)	- 3.0	x 3.0	6.3	1000 - 1250 - 1500	x 5000 **R**
22 t **3.0**	62.5	x 20	(23.4)	- 4.5	x 3.0	6.3	1000 - 1250 - 1500	x 5000 **R**
40 t **3.0**	62.5	x 20	(23.4)	- 6.0	x 3.0	12.0	1000 - 1250 - 1500	x 3000 **F**
60 t **3.0**	62.5	x 30	(33)	- 3.0	x 3.0	4.2	1000 - 1250 - 1500	x 6000 **R**
76 t **3.0**	76	x 40	(31)	- 3.0	x 3.0	4.5	1000	x 6000 **R**
85 t **3.0**	85	x 40	(40)	- 3.0	x 3.0	3.5	1000 - 1250 - 1500	x 6000 **R**

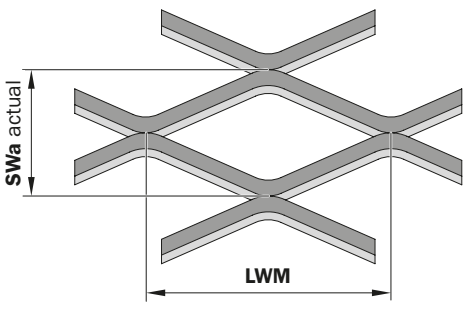
F = Sheet **R** = Roll

Values in mm.
The weights given in the table are indicative and refer to carbon steel mesh.
On request some of the meshes can be processed from pre-galvanized steel, aluminium, copper and brass.
The highlighted data are for the mesh in the photos.

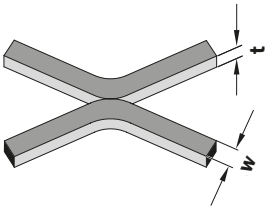
Legenda

LW = Long way pitch
SWn = Short way pitch nominal
SWa = Short way pitch actual
w = strand widht
t = thickness
LWM side
SWM side

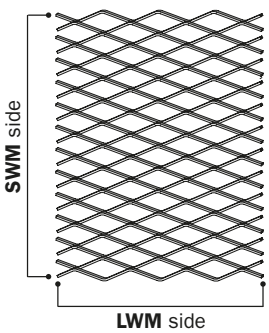
Mesh dimensions



Mesh section



Sheet sizes



Expanded metal diamond mesh

Type 33

Types 24 - 21 - 24 A

Types 73 - 74 - 75

Expanded metal diamond mesh

Type	LW nominal	SW actual	w	t	kg/m²	Sheet rolls and sizes: LWM side	SWM side
33 t **3.0**	90 x 30	(30) -	3.0	x 3.0	4.3	1000 - 1250 - 1500	x 6000 **R**
24 t **3.0**	110 x 40	(40) -	3.0	x 3.0	3.6	1000 - 1250 - 1500 - 2000 - 2500	x 10000 **R**
21 t **3.0**	110 x 40	(40) -	4.5	x 3.0	5.2	1000 - 1250 - 1500 - 2000 - 2500	x 6500 **R**
24 A t **3.0**	110 x 40	(43) -	6.0	x 3.0	6.5	1000 - 1250 - 1500 - 2000 - 2500	x 5000 **R**
73 t **3.0**	115 x 55	(63) -	3.0	x 3.0	2.5	Made to order	x Made to order
74 t **5.0**	115 x 55	(55) -	4.0	x 5.0	5.1	Made to order	x Made to order
75 t **5.0**	115 x 55	(63) -	5.0	x 5.0	5.1	Made to order	x Made to order

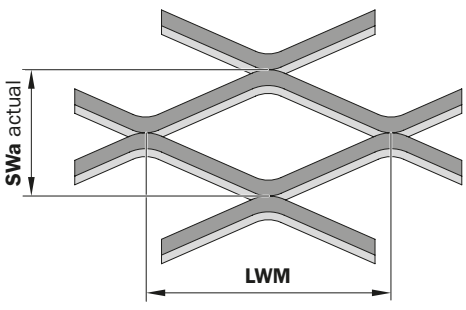
R = Roll

Values in mm.
The weights given in the table are indicative and refer to carbon steel mesh.
On request some of the meshes can be processed from pre-galvanized steel, aluminium, copper and brass.
The highlighted data are for the mesh in the photos.

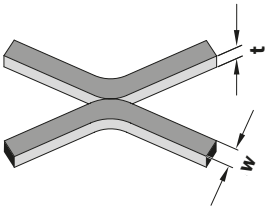
Legenda

LW = Long way pitch
SWn = Short way pitch nominal
SWa = Short way pitch actual
w = strand widht
t = thickness
LWM side
SWM side

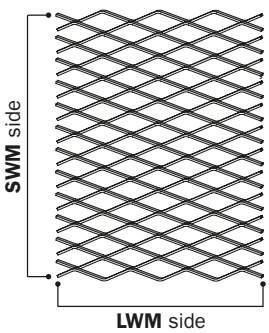
Mesh dimensions



Mesh section

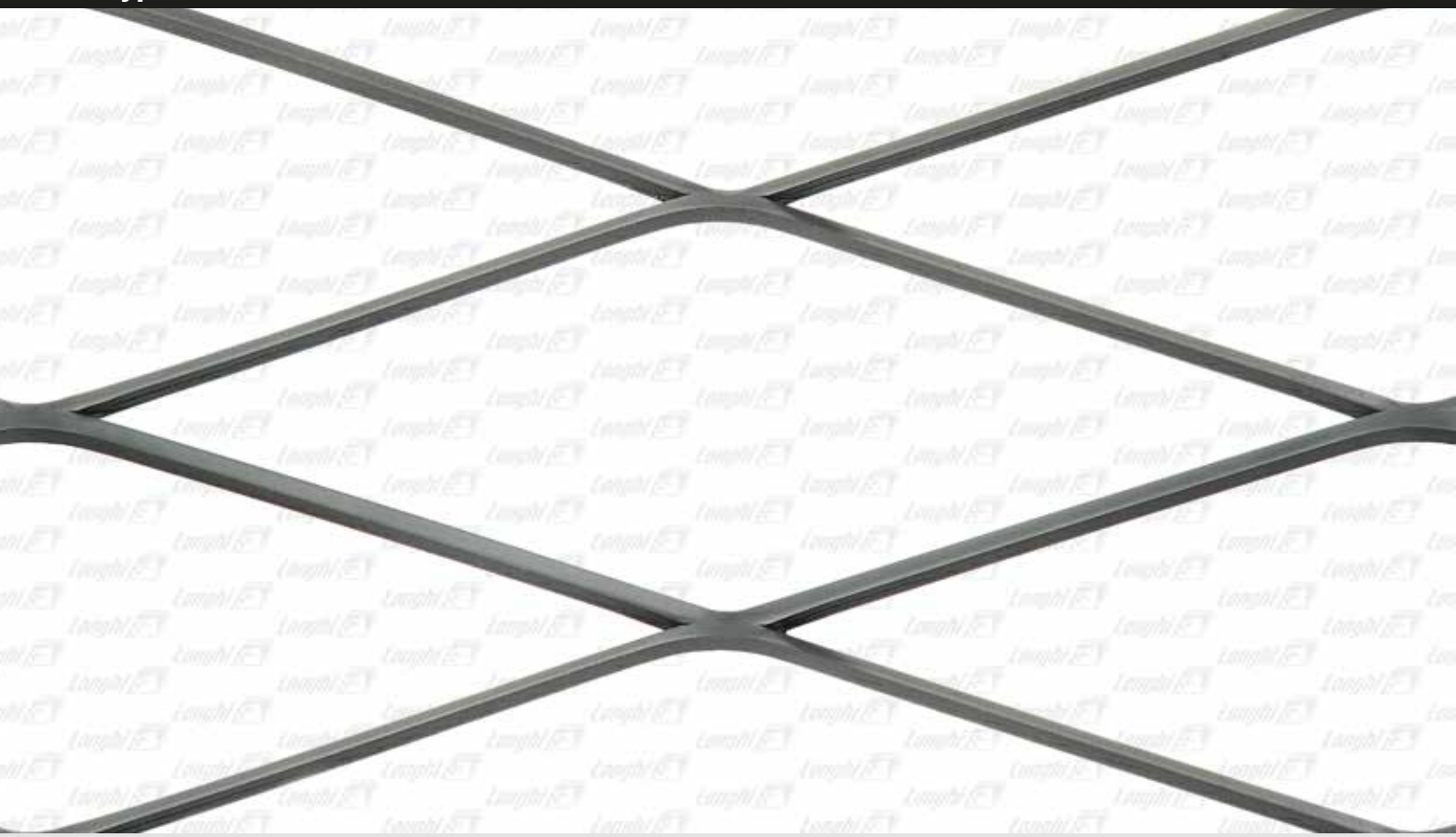


Sheet sizes



Expanded metal diamond mesh

Types 44 - 45 - 48



Types 8 - 9 - 13

Expanded metal diamond mesh

Type	LW	SW nominal	SW actual	w	t	kg/m²	Sheet rolls and sizes: LWM side	SWM side
44 t **3.0**	200	55	(62)	4.7	3.0	3.6	1000 - 1250 - 1500 - 2000 - 2500	x 9000 **R**
45 t **3.0**	200	55	(62)	6.2	3.0	4.7	1000 - 1250 - 1500 - 2000 - 2500	x 7000 **R**
48 t **5.0**	200	55	(62)	6.2	3.0	6.7	1000 - 1250 - 1500 - 2000 - 2500	x 8000 **R**
8 t **3.0**	200	75	(80)	6.2	3.0	3.9	1000 - 1250 - 1500 - 2000 - 2500	x 10000 **R**
9 t **3.0**	200	75	(80)	4.5	3.0	2.9	1000 - 1250 - 1500 - 2000 - 2500	x 12000 **R**
13 t **5.0**	200	75	(80)	5.3	5.0	5.1	1000 - 1250 - 1500 - 2000 - 2500	x 11000 **R**

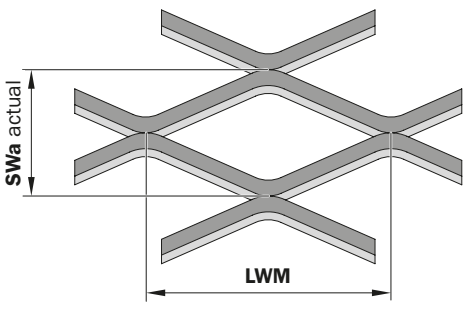
R = Roll

Values in mm.
The weights given in the table are indicative and refer to carbon steel mesh.
On request some of the meshes can be processed from pre-galvanized steel, aluminium, copper and brass.
The highlighted data are for the mesh in the photos.

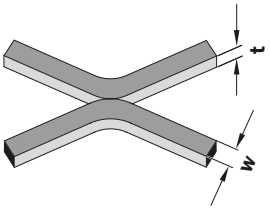
Legenda

LW = Long way pitch
SWn = Short way pitch nominal
SWa = Short way pitch actual
w = strand widht
t = thickness
LWM side
SWM side

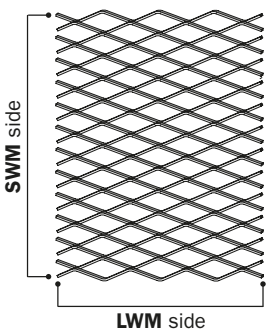
Mesh dimensions



Mesh section

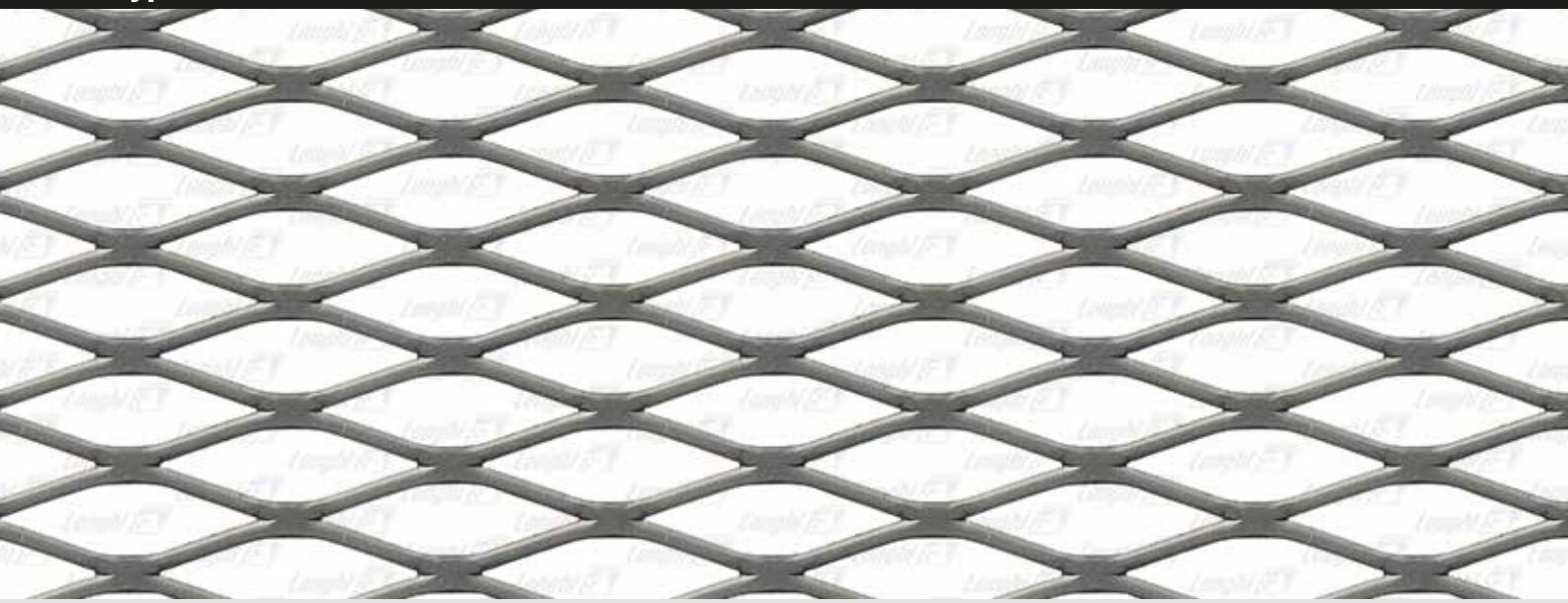


Sheet sizes

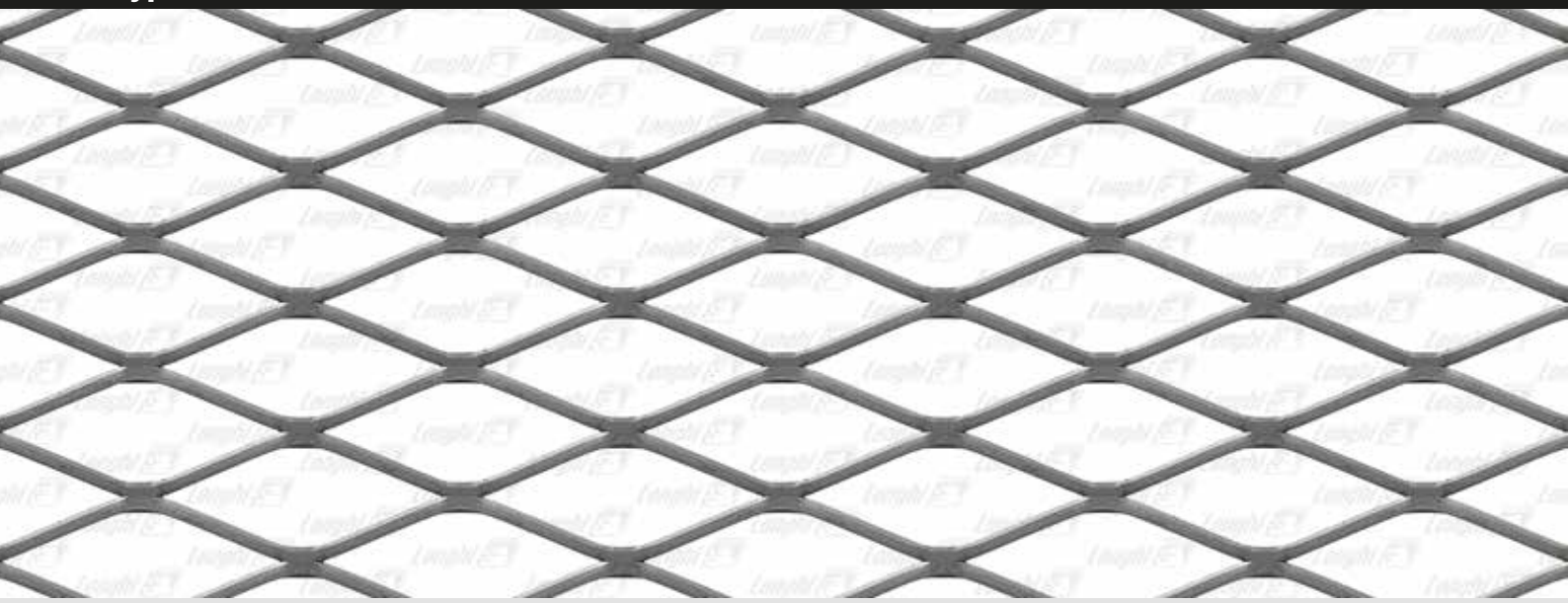


Expanded metal diamond mesh

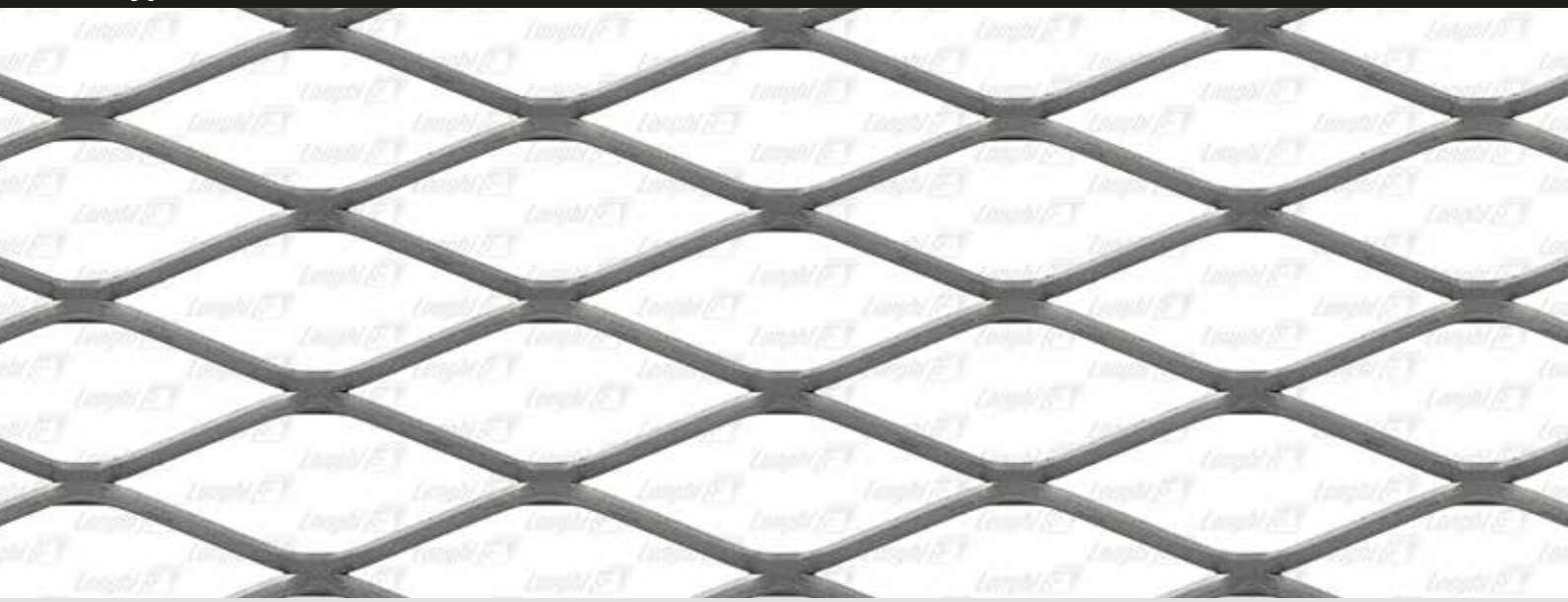
Types S 17 - S 28



Type S 27



Types S 4 - S 220



Expanded metal diamond mesh

Type	LW nominal	SW nominal	SW actual	w	t	kg/m²	Sheet rolls and sizes: LWM side	SWM side
S 17 t **1.5**	43	10	(14.6)	2.5	1.5	3.9	1000	x 2000 **F**
	43	10	(14.6)	2.5	1.5	3.9	1000 - 1250 - 1500	x 6000 **R**
	43	10	(14.6)	2.5	1.5	3.9	2000 - 2500	x 3700 **R**
S 28 t **2.0**	43	10	(14.5)	2.5	2.0	5.3	1000	x 2000 **F**
	43	10	(14.5)	2.5	2.0	5.3	1000 - 1250 - 1500	x 6000 **R**
	43	10	(14.5)	2.5	2.0	5.3	1500 - 2000 - 2500	x 3700 **R**
S 17 t **1.5**	43	17	(17.7)	2.8	1.5	3.6	1000	x 2000 **F**
	43	17	(17.7)	2.8	1.5	3.6	1000	x 6000 **R**
S 4 t **1.5**	62.5	20	(25.5)	3.0	1.5	2.8	1000	x 2000 **F**
	62.5	20	(25.5)	3.0	1.5	2.8	1000 - 1250 - 1500	x 6000 **R**
	62.5	20	(25.5)	3.0	1.5	2.8	2000 - 2500	x 5500 **R**
S 220 t **2.0**	62.5	20	(24.5)	3.0	2.0	3.9	1000	x 2000 **F**
	62.5	20	(24.5)	3.0	2.0	3.9	1000 - 1250 - 1500	x 6000 **R**
	62.5	20	(24.5)	3.0	2.0	3.9	2000 - 2500	x 5500 **R**

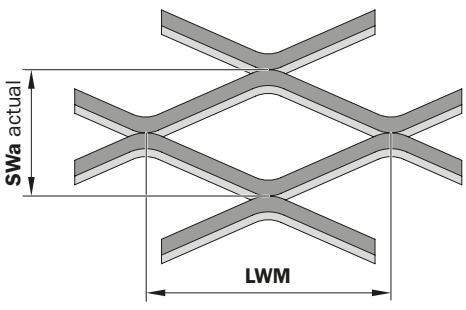
S = Flattened **F** = Sheet **R** = Roll

Values in mm.
The weights given in the table are indicative and refer to carbon steel mesh.
On request some of the meshes can be processed from pre-galvanized steel, aluminium, copper and brass.
The highlighted data are for the mesh in the photos.

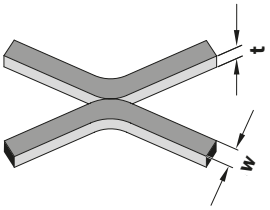
Legenda

LW = Long way pitch
SWn = Short way pitch nominal
SWa = Short way pitch actual
w = strand widht
t = thickness
LWM side
SWM side

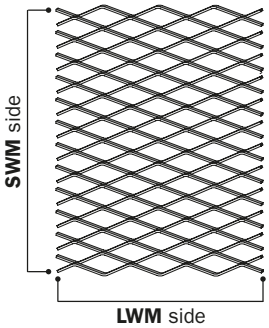
Mesh dimensions



Mesh section

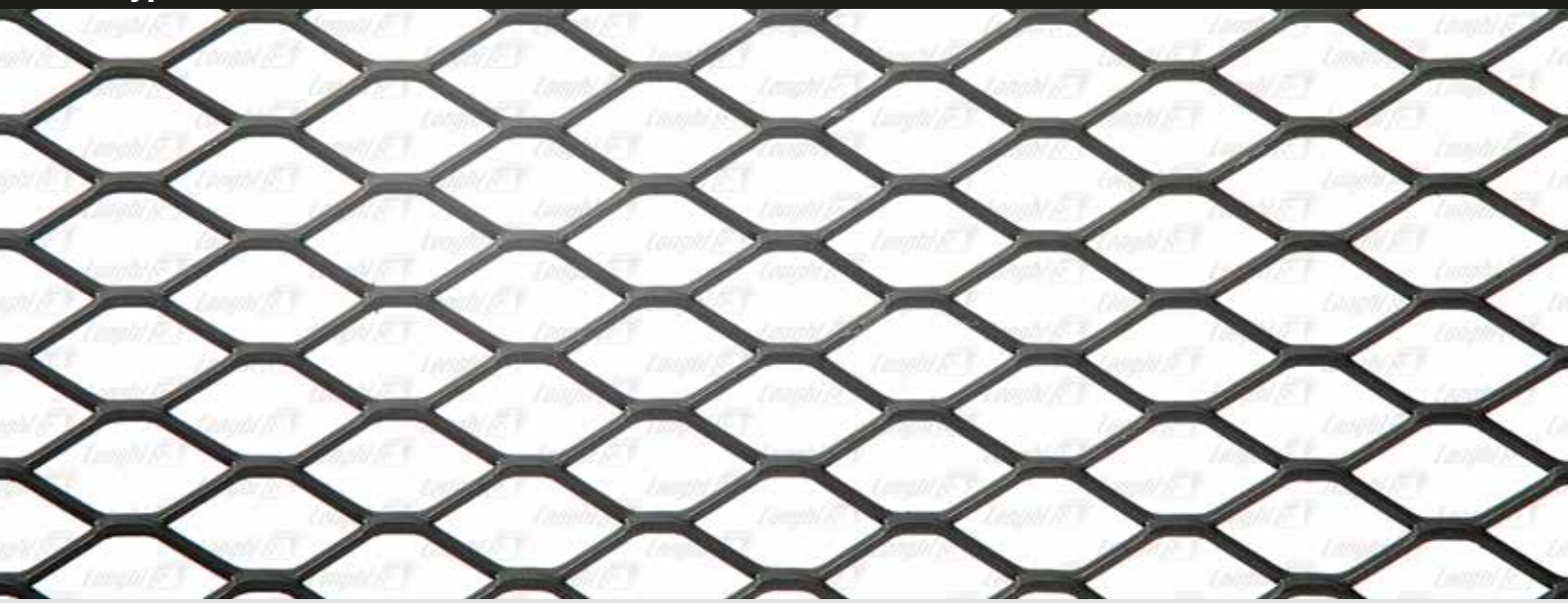


Sheet sizes

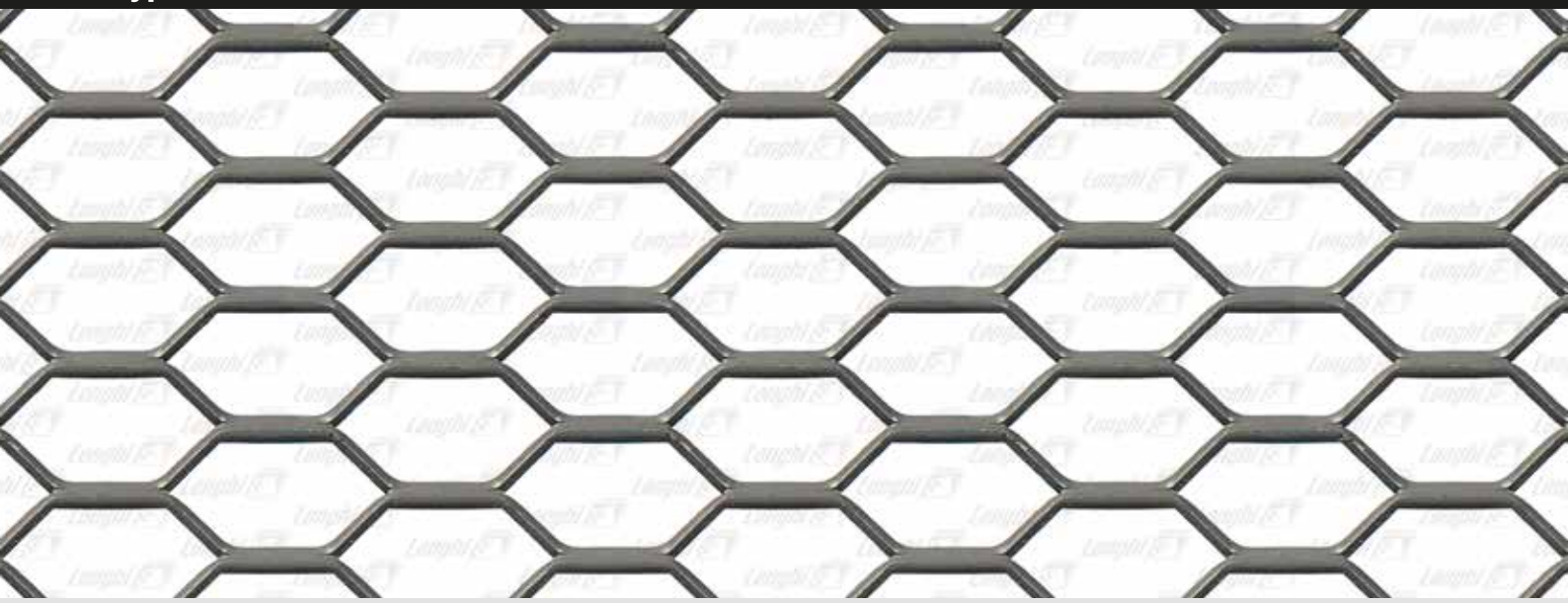


Expanded metal hexagonal mesh – Toothed diamond

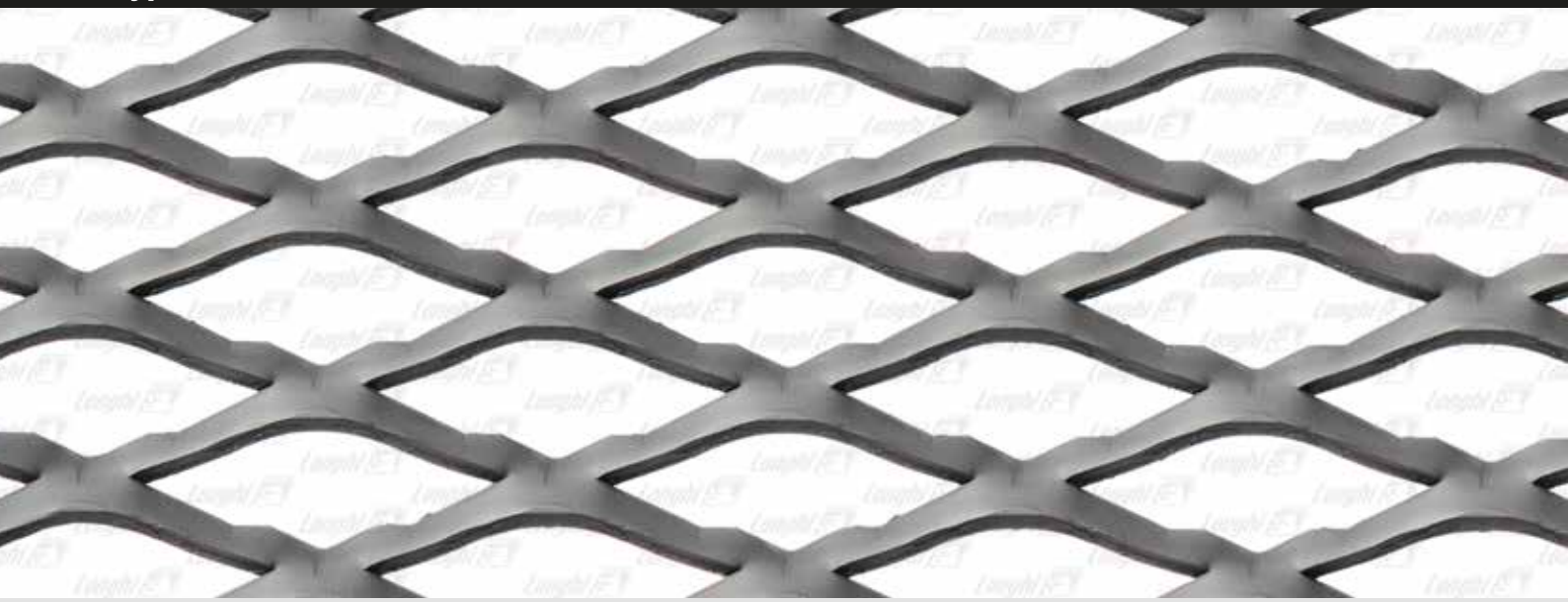
Type E 35



Types E 1.5 - E 2



Types 96 - 97



Expanded metal hexagonal mesh – Toothed diamond

Type		LW	SW nominal	SW actual	w	t	kg/m²	Sheet sizes: LWM side	Sheet sizes: SWM side
E 35	t **2.0**	35	15	(15)	2.0	2.0	4.0	1000	x 6000 **R**
E 1,5	t **1.5**	45	18	(17.5)	2.2	1.5	3.0	1000	x 6000 **R**
E 2	t **2.0**	45	40	(17.5)	2.2	2.0	3.9	1000	x 6000 **R**
96	t **3.0**	62.5	55	(25)	4.3	3.0	8.14	Made to order	x Made to order
97	t **3.0**	62.5	55	(25)	6.2	3.0	11.7	Made to order	x Made to order

E = Hexagonal

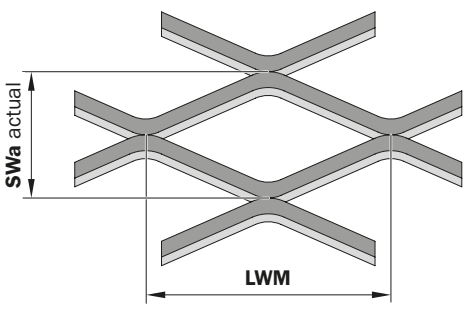
R = Roll

Values in mm.
The weights given in the table are indicative and refer to carbon steel mesh.
On request some of the meshes can be processed from pre-galvanized steel, aluminium, copper and brass.
The highlighted data are for the mesh in the photos.

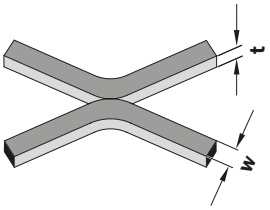
Legenda

LW = Long way pitch
SWn = Short way pitch nominal
SWa = Short way pitch actual
w = strand widht
t = thickness
LWM side
SWM side

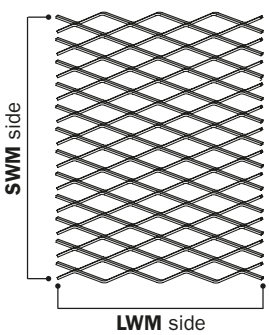
Mesh dimensions



Mesh section

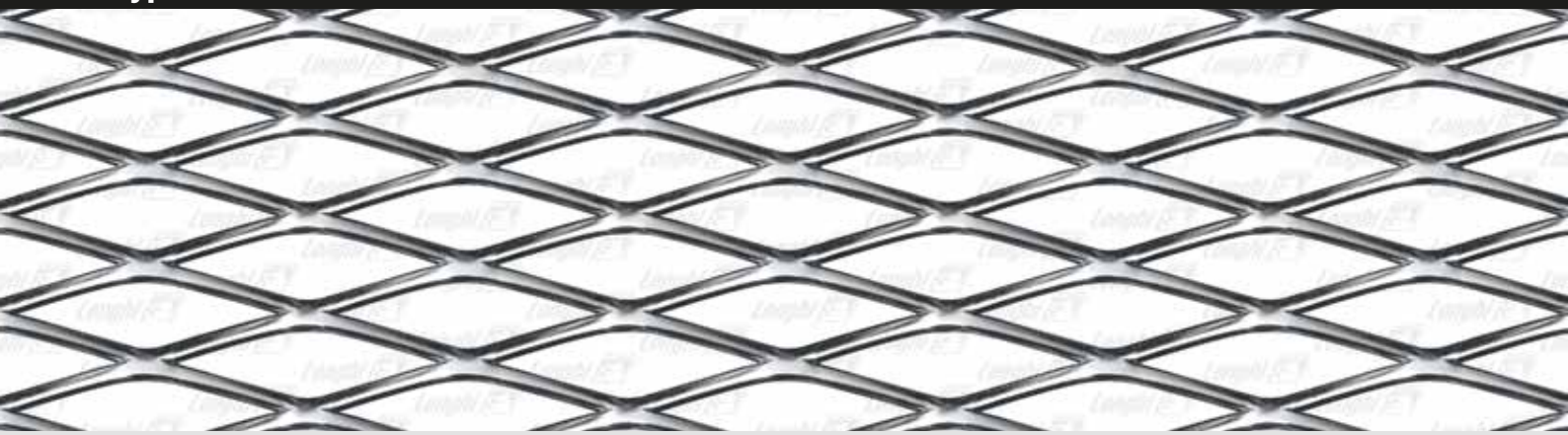


Sheet sizes



Expanded metal diamond mesh stainless steel AISI 304

Type N 17



Type S 17 Flattened

Type N 220

Type S 220 Flattened

Expanded metal diamond mesh stainless steel AISI 304

Type	LW	SW nominal	SW actual	w	t	kg/m²	Sheet sizes: LWM side	Sheet sizes: SWM side
17 t **3.0**	43	10	(13)	2.5	1.5	4.2	1000	x 2000 **R**
S 17 t **3.0**	43	10	(14.6)	2.5	1.5	3.9	1000	x 2000 **R**
220 t **3.0**	62.5	20	(23)	3.0	2.0	4.2	1000	x 2000 **R**
S 220 t **3.0**	62.5	20	(24.5)	3.0	2.0	3.9	1000 -	x 2000 **R**

S = Flattened

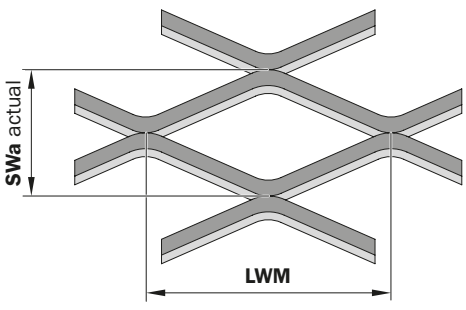
F = Sheet

Values in mm.
The weights given in the table are indicative and refer to steel AISI 304 mesh.
The highlighted data are for the mesh in the photos.

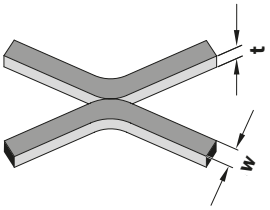
Legenda

LW = Long way pitch
SWn = Short way pitch nominal
SWa = Short way pitch actual
w = strand widht
t = thickness
LWM side
SWM side

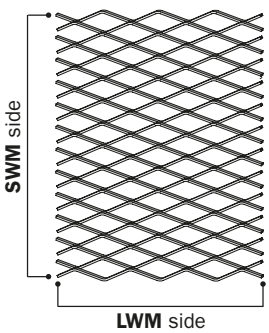
Mesh dimensions



Mesh section



Sheet sizes



Expanded grating

Fils 21 expanded grating

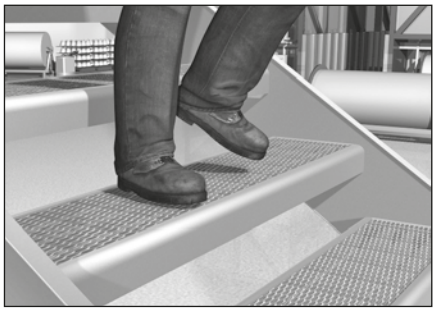
expanded metal gratings

FILS 21 GRATING – NON-SLIP
Certified to standard DIN 51130

The non-slip features of the Fils 21

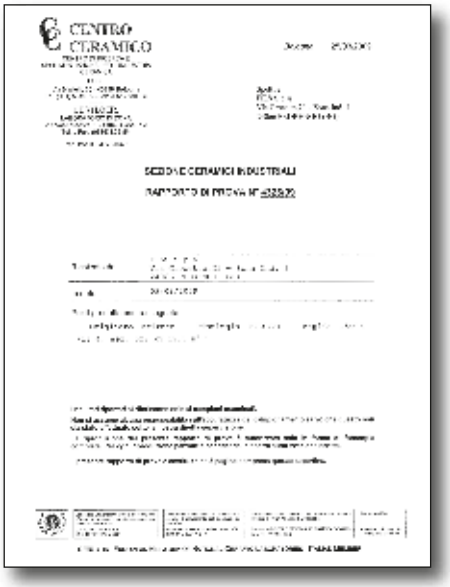
For worksites with a high risk of slipping, **FILS** certified **non-slip gratings** guarantee an **improved safety and greater stability**. Lower risks of slips or falls, both on horizontal surfaces and slopes.

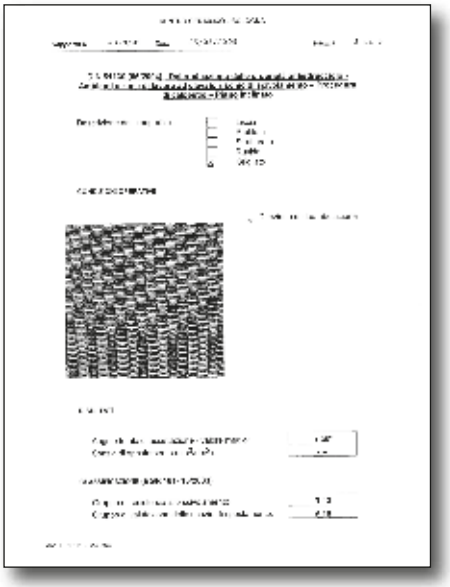
The design of the mesh gives the following characteristics: anti-panic, heel-safe, anti-ice.



Slip resistance backed by test reports

The test for DIN 51130 classification was developed by an internationally recognised laboratory, **the Centro Ceramico Bologna,** which is able to award quality standards for numerous scientific centres and laboratories.

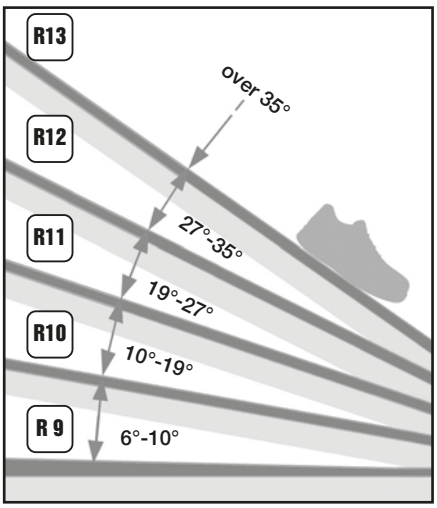

CENTRO CERAMICO



CLASSIFICATION (BGR 181 - 10/2003)

Group of anti - slip properties: **R13**
Movement area evaluation group: **V10**

DIN 51130 classification



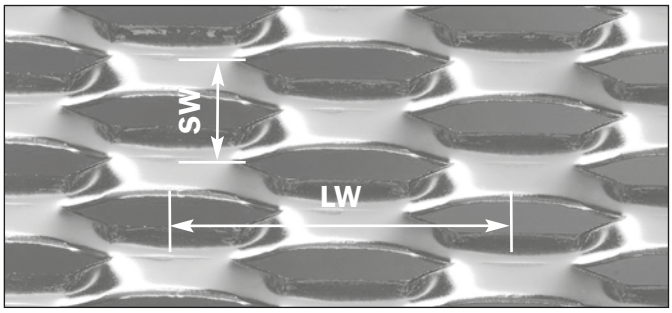
Angle of inclination

Angle of inclination used in the test	DIN 51130 classification	Type of friction in the tests on the sloping plane
6° ≤ α ≤ 10°	R 9	Minimum coefficient of friction
10° < α ≤ 19°	R 10	Normal coefficient of friction
19° < α ≤ 27°	R 11	Coefficient of friction higher than the norm
27° < α ≤ 35°	R 12	High coefficient of friction
α > 35°	R 13	Very high coefficient of friction

WITH REFERENCE TO THE DIN 51130 CLASSIFICATION, FILS 21 EXPANDED METAL ACHIEVED THE FOLLOWING RESULTS:

R13 Lenghtwise light entrance
R13 Lenghtwise opposite the light entrance

Fils 21 Grating Dimensions



▲ *actual SW*

Type Fils 21 Mesh
LW 45 x SW 15 (13.4)▲ - w 5 x t 3 mm

Stair treads and landings made with Fils 21 grating:
INDUSTRIA, SUPERFILS, SICURFILS.

TYPE 43 GRATING – NON-SLIP
Certified to standard DIN 51130

Non-slip features of the Type 43 grating

For worksites with a high risk of slipping, **FILS** certified **non-slip gratings** guarantee an **improved safety and greater stability**. Lower risks of slips or falls, both on horizontal surfaces and slopes.

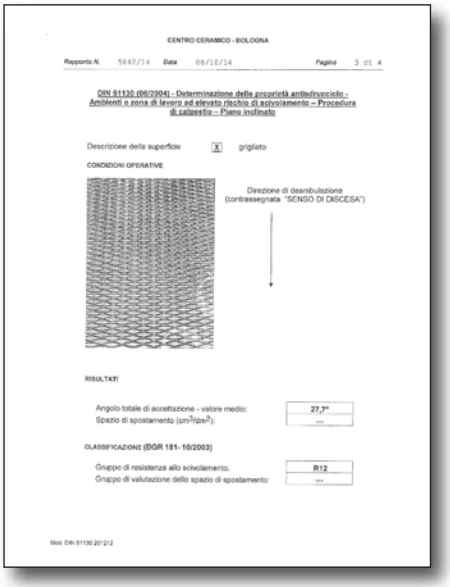
Slip resistance backed by test reports

The test for DIN 51130 classification was developed by an internationally recognised laboratory, **the Centro Ceramico Bologna,** which is able to award quality standards for numerous scientific centres and laboratories.


CENTRO CERAMICO

SEZIONE CERAMICI INDUSTRIALI

RAPPORTO DI PROVA N° 5842/14


CENTRO CERAMICO - BOLOGNA

DIN 51130 (06/2004) - Determinazione delle proprietà antisdrucciolo - Ambienti a zona di lavoro ad elevato rischio di scivolamento – Procedura di calpestio – Piano inclinato

Descrizione della superficie [X] grigliato

CONDIZIONI OPERATIVE

Direzione di deambulazione (contrassegnata "SENSO DI DISCESA")

RISULTATI

Angolo totale di accettazione - valore medio: 27,7°

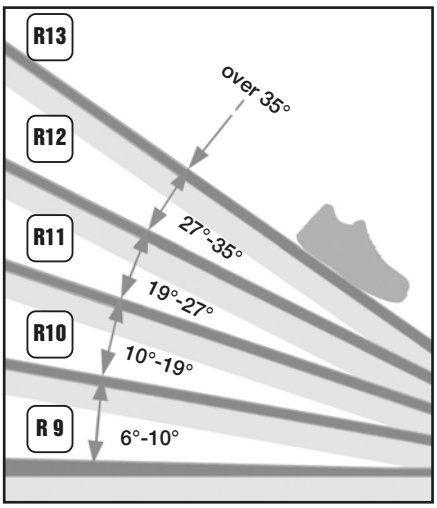
CLASSIFICAZIONE (BGR 181- 10/2003)

Gruppo di resistenza allo scivolamento: R12

CLASSIFICATION (BGR 181 - 10/2003)

Group of anti - slip properties: **R13**
Movement area evaluation group: **V10**

DIN 51130 classification



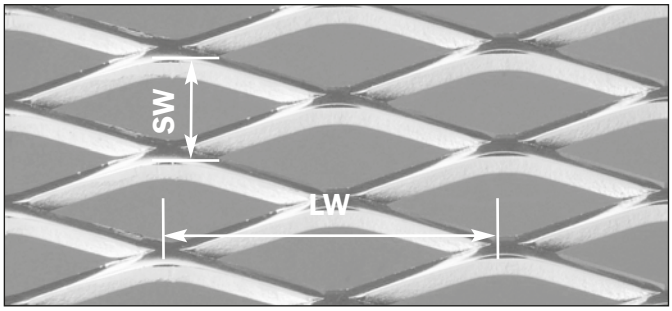
Angle of inclination

Angle of inclination used in the test	DIN 51130 classification	Type of friction in the tests on the sloping plane
6° ≤ α ≤ 10°	R 9	Minimum coefficient of friction
10° < α ≤ 19°	R 10	Normal coefficient of friction
19° < α ≤ 27°	R 11	Coefficient of friction higher than the norm
27° < α ≤ 35°	R 12	High coefficient of friction
α > 35°	R 13	Very high coefficient of friction

WITH REFERENCE TO THE DIN 51130 CLASSIFICATION, FILS 43 EXPANDED METAL ACHIEVED THE FOLLOWING RESULTS:

R12 Lenghtwise light entrance
R13 Lenghtwise opposite the light entrance

Type 43 Grating Dimensions



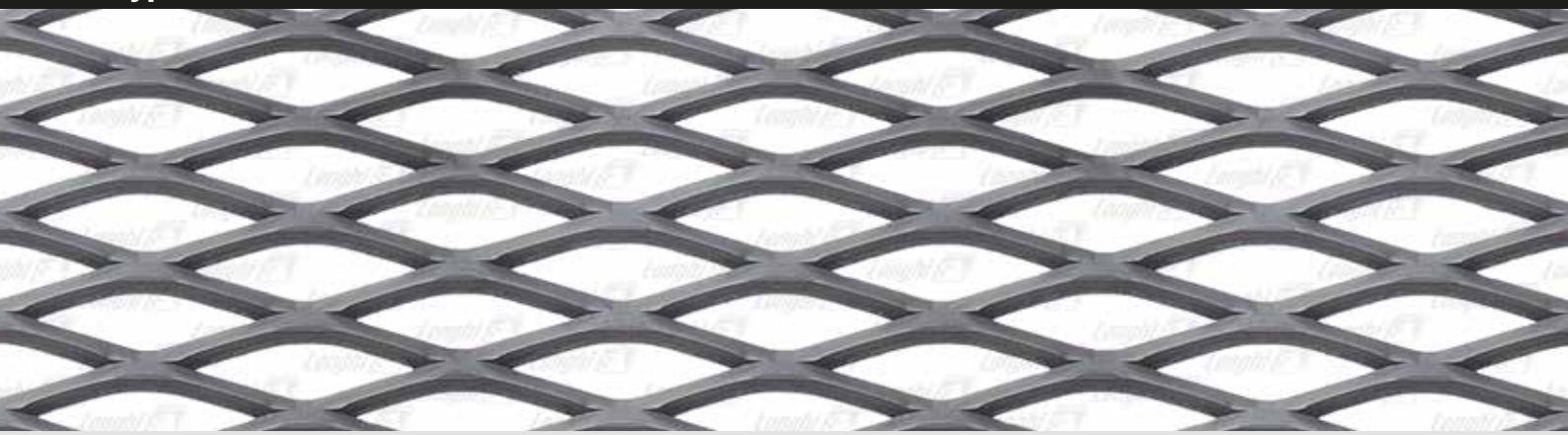
▲ *actual SW*

Type 43 Mesh
LW 45 x SW 15 (13.4)▲ - w 5 x t 2 mm step
t 3 mm landing

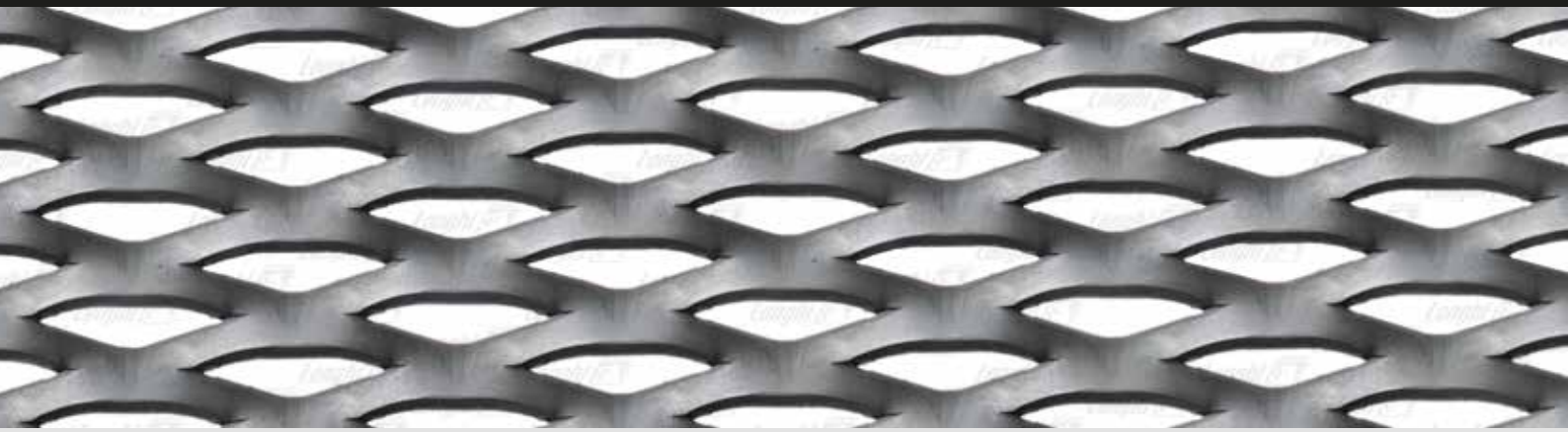
Stair treads and landings made with Type 43 grating:
ECO, BETA.

Expanded grating

Type 43

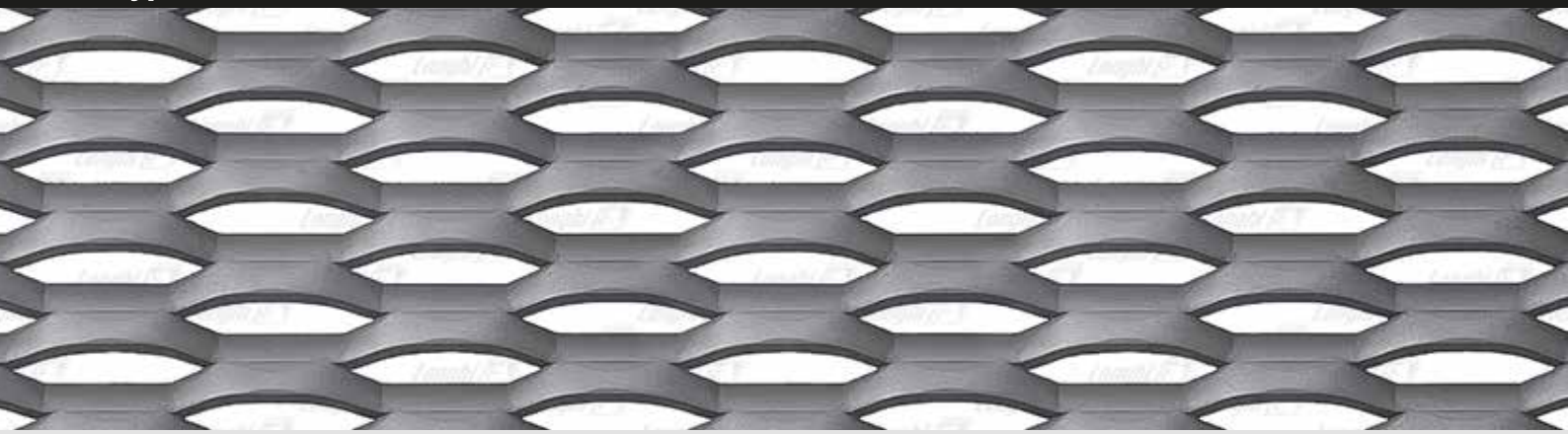


Types Fils 15 - Fils 16



Type Fils 20

Types Fils 21 - Fils 22



Expanded grating

Type	LW	SW nominal	SW actual	w x t	kg/m²	Sheet sizes: LWM side	Sheet sizes: SWM side
43 t **3.0**	43 x	10	(13.3) -	3.0 x 3.0	10.5	1000	x 2000 **F**
	43 x	30	(13.3) -	3.0 x 3.0	10.5	1250	x 2500 **F**
Fils 15 t **3.0**	43 x	17	(14) -	5.0 x 3.0	17.0	1000	x 2000 **F**
Fils 16 t **4.0**	43 x	17	(14) -	5.0 x 4.0	23.0	Made to order	x Made to order
Fils 20 t **3.0**	45 x	15	(11.4) -	3.3 x 3.0	13.8	1000	x 2000 **F**
Fils 21 t **3.0**	45 x	15	(13.4) -	5.0 x 3.0	17.5	1000	x 2000 **F**
	45 x	55	(13.4) -	5.0 x 3.0	17.5	1250	x 2500 **F**
	45 x	55	(13.4) -	5.0 x 3.0	17.5	1500	x 3000 **F**
Fils 22 t **4.0**	45 x	15	(13.4) -	5.0 x 4.0	24.0	1000	x 2000 **F**

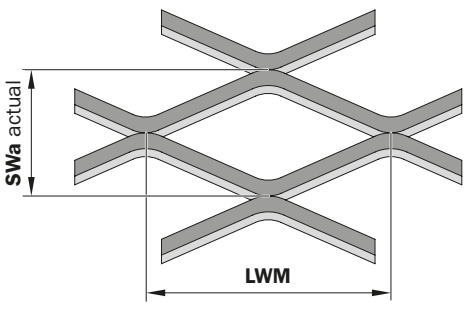
F = Sheet

Values in mm.
The weights given in the table are indicative and refer to carbon steel mesh.
On request some of the meshes can be processed from pre-galvanized steel, aluminium, copper and brass.
The highlighted data are for the mesh in the photos.

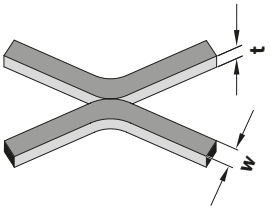
Legenda

LW = Long way pitch
SWn = Short way pitch nominal
SWa = Short way pitch actual
w = strand widht
t = thickness
LWM side
SWM side

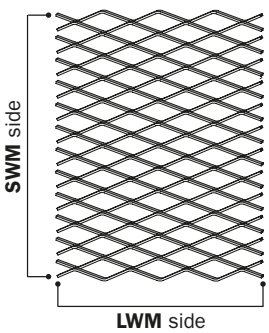
Mesh dimensions



Mesh section



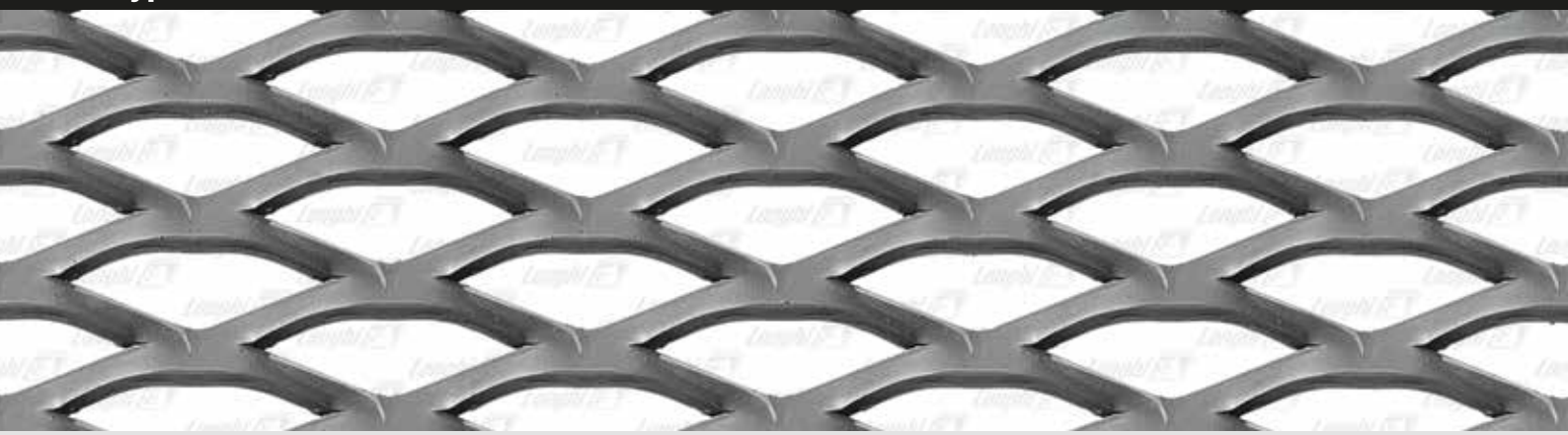
Sheet sizes



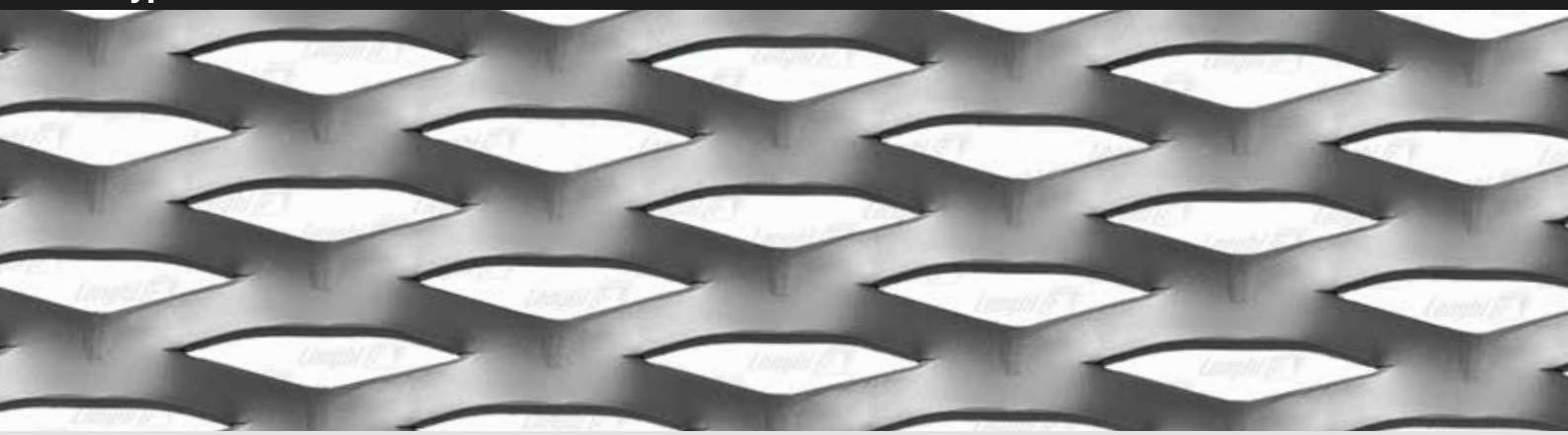
Expanded grating

Types E 3 - E 4

Type P 02



Types Fils 4 - Fils 5



Types Fils 6 - Fils 7 - Fils 8

Expanded grating

Type		LW	SW nominal	SW actual	w	t	kg/m²	Sheet sizes: LWM side	Sheet sizes: SWM side
E 3	t **3.0**	45	18	(19.5)	4.5	3.0	11.0	1000	x 2000 **F**
		45	18	(19.5)	4.5	3.0	11.0	1250	x 2500 **F**
		45	18	(19.5)	4.5	3.0	11.0	1500	x 3000 **F**
E 4	t **4.0**	45	18	(19.5)	4.5	4.0	14.0	1000	x 2000 **F**
		45	18	(19.5)	4.5	4.0	14.0	1250	x 2500 **F**
P 02	t **3.0**	53.5	20	(18)	5.0	3.0	13.0	1000	x 2000 **F**
		53.5	20	(18)	5.0	3.0	13.0	1250	x 2000 **F**
		53.5	20	(18)	5.0	3.0	13.0	1500	x 3000 **F**
Fils 4	t **4.0**	62.5	20	(20)	7.5	4.0	23.0	1000	x 2000 **F**
		62.5	20	(20)	7.5	4.0	23.0	1250	x 2500 **F**
Fils 5	t **3.0**	62.5	20	(20)	7.5	4.0	18.0	1250	x 2000 **F**
		62.5	20	(20)	7.5	3.0	18.0	1250	x 2500 **F**
		62.5	20	(20)	7.5	3.0	18.0	1500	x 3000 **R**
Fils 6	t **4.0**	90	30	(22.3)	7.5	4.0	21.0	1000	x 2000 **F**
Fils 7	t **4.0**	90	30	(22.3)	8.3	4.0	23.0	Made to order	x Made to order
Fils 8	t **5.0**	90	30	(22.3)	7.2	5.0	25.0	Made to order	x Made to order

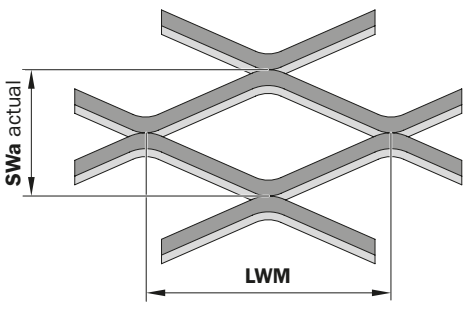
F = Sheet

Values in mm.
The weights given in the table are indicative and refer to carbon steel mesh.
On request some of the meshes can be processed from pre-galvanized steel, aluminium, copper and brass.
The highlighted data are for the mesh in the photos.

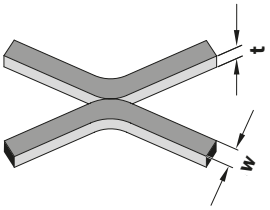
Legenda

LW = Long way pitch
SWn = Short way pitch nominal
SWa = Short way pitch actual
w = strand widht
t = thickness
LWM side
SWM side

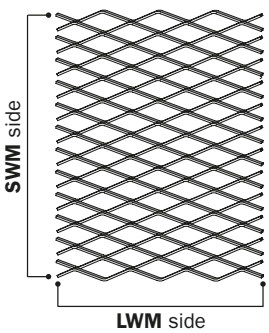
Mesh dimensions



Mesh section

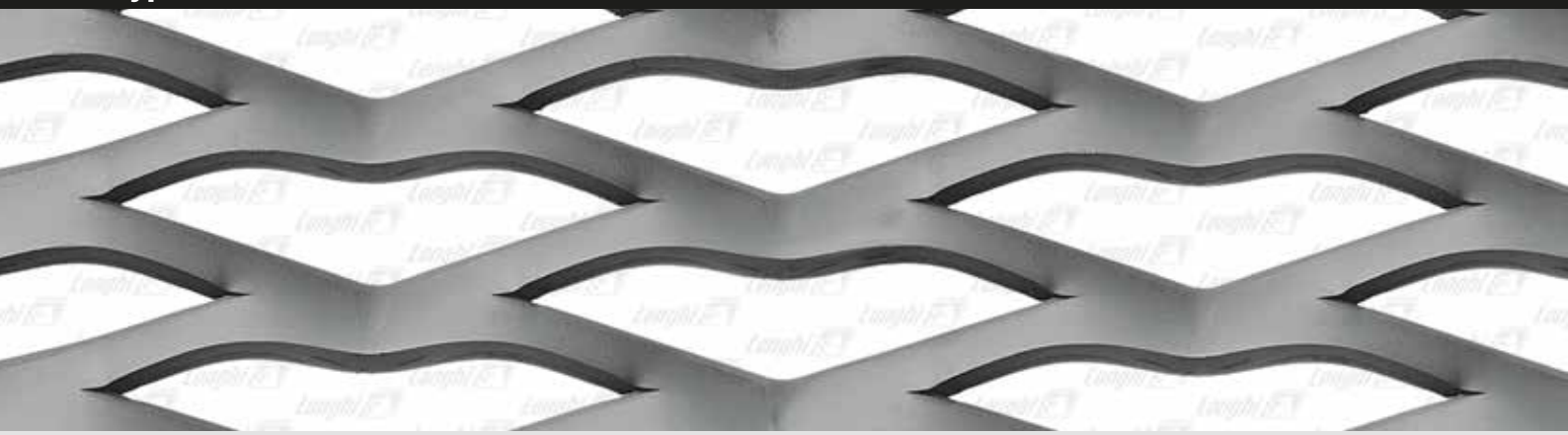


Sheet sizes



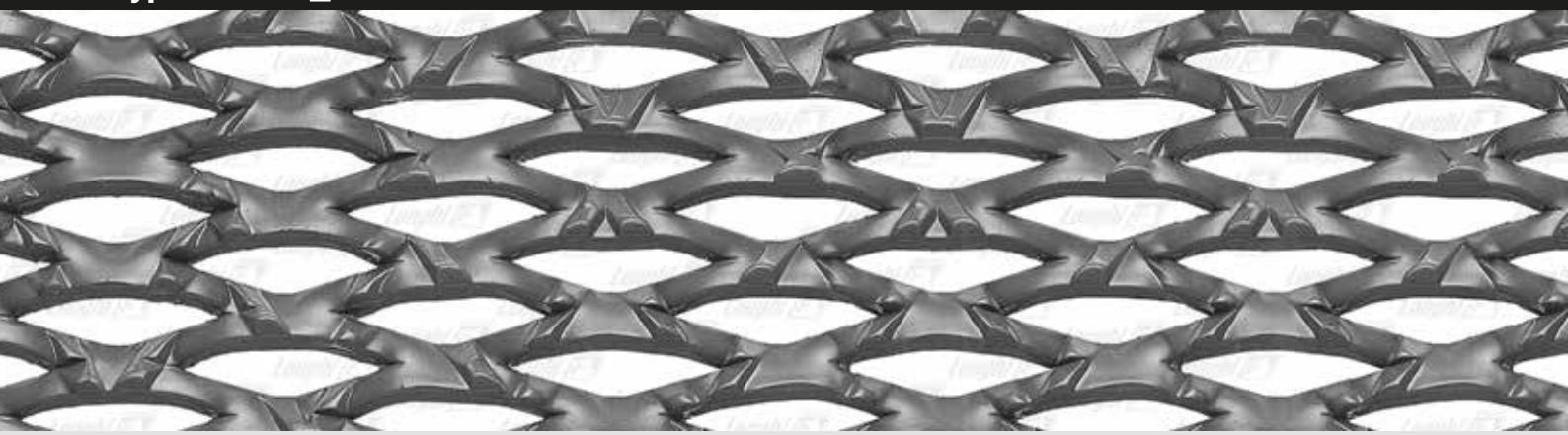
Expanded grating - ribbed

Types Fils 1 - Fils 2 - Fils 3

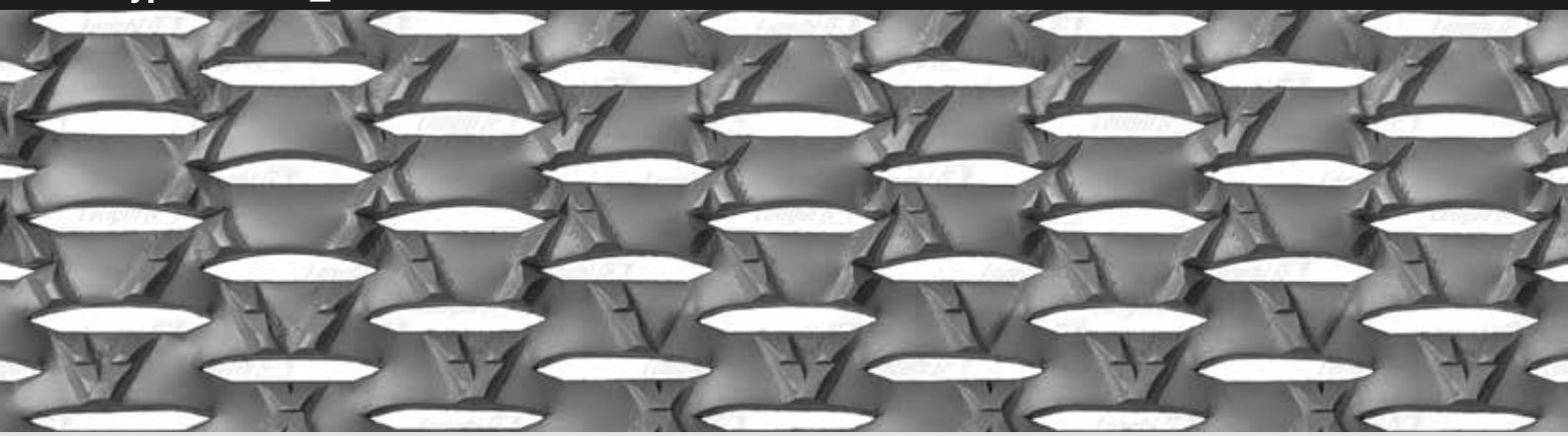


Type Fils 9

Type Fils 15 S - Ribbed



Type Fils 21 S - Ribbed



Expanded grating - ribbed

Type	LW	SW nominal	SW actual	w x t	kg/m²	Sheet sizes: LWM side	Sheet sizes: SWM side
Fils 1 t **4.0**	110 x	40	(19.5) -	7.0 x 4.0	17.0	1000	x 2000 **F**
	110 x	40	(19.5) -	7.0 x 4.0	17.0	1250	x 2500 **F**
	110 x	40	(19.5) -	7.0 x 4.0	17.0	1500	x 3000 **F**
Fils 2 t **4.0**	110 x	40	(19.5) -	8.0 x 4.0	19.5	1000	x 2000 **F**
Fils 3 t **5.0**	110 x	40	(19.5) -	4.5 x 4.0	22.0	1250	x 2500 **F**
Fils 9 t **3.0**	125 x	40	(43) -	12.0 x 4.0	17.5	Made to order	x Made to order
Fils 15 S t **3.0**	43 x	17	(18) -	5.0 x 3.0	21.0	Made to order	x Made to order
Fils 15 S	45 x	20	(13.4) -	5.0 x 3.0	21.5	1000	x 2000 **F**

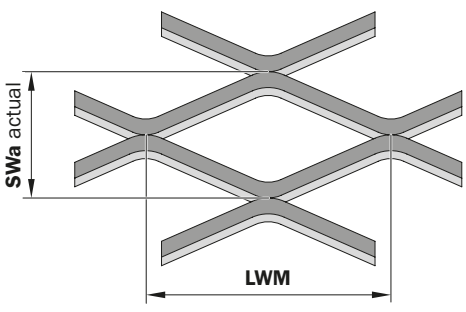
S = Ribbed — **F** = Sheet

Values in mm.
The weights given in the table are indicative and refer to carbon steel mesh.
On request some of the meshes can be processed from pre-galvanized steel, aluminium, copper and brass.
The highlighted data are for the mesh in the photos.

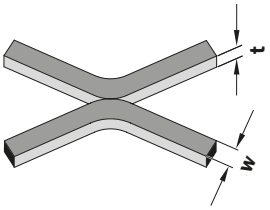
Legenda

LW = Long way pitch
SWn = Short way pitch nominal
SWa = Short way pitch actual
w = strand widht
t = thickness
LWM side
SWM side

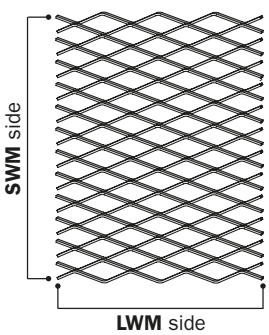
Mesh dimensions



Mesh section

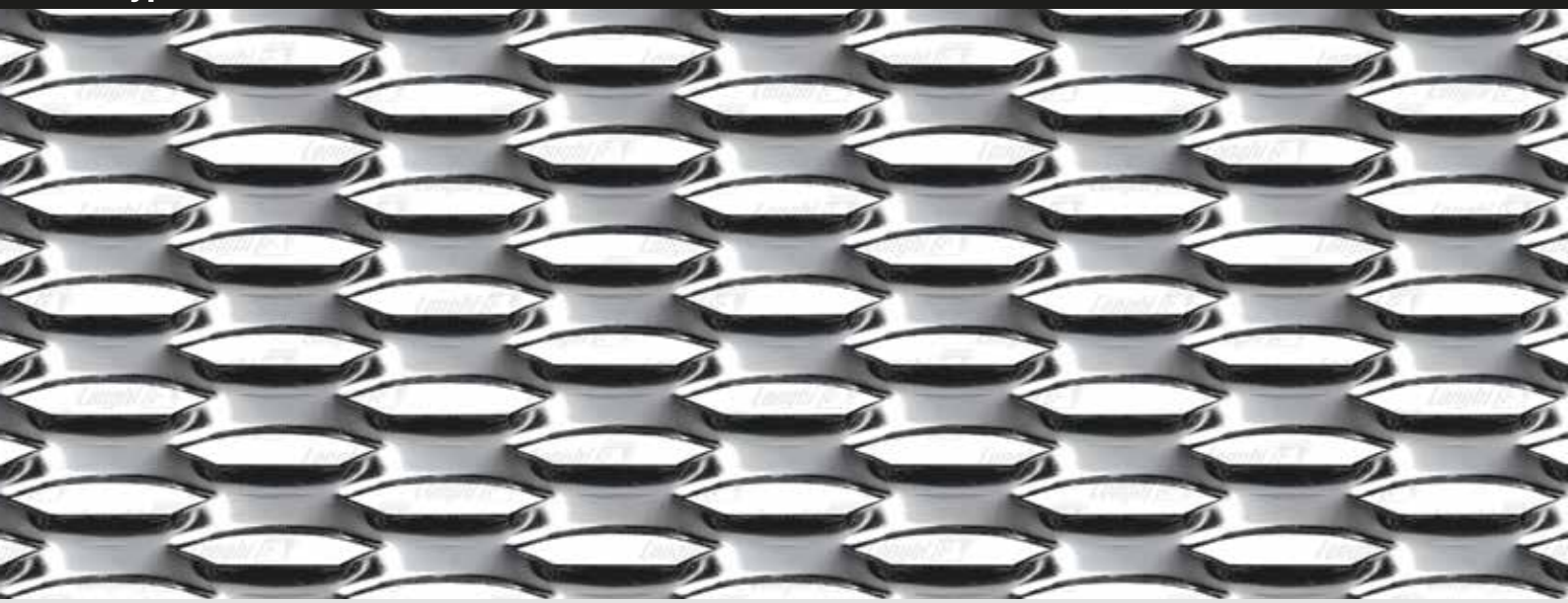


Sheet sizes

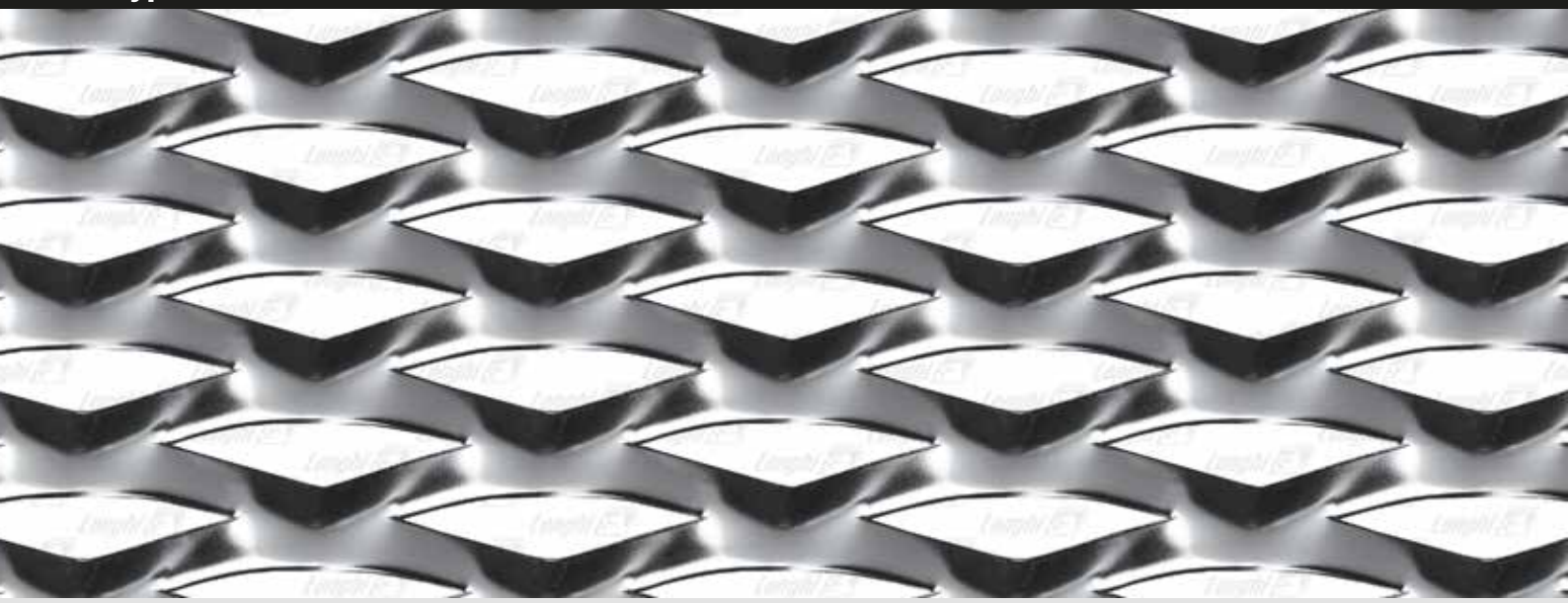


Expanded grating - Stainless steel AISI 304

Type Fils 21



Type Fils 5



Type Fils 1

Expanded grating - Stainless steel AISI 304

Type	LW	SW nominal	SW actual	w	t	kg/m²	Sheet sizes: LWM side	Sheet sizes: SWM side
Fils 21 t **4.0**	45	15	(13.4)	5.0	2.0	11.6	1000	x 2000 **F**
Fils 21 t **4.0**	45	15	(13.4)	5.0	3.0	17.5	1000	x 2000 **F**
Fils 5 t **4.0**	62.5	20	(20)	7.5	2.0	12.0	Made to order	x Made to order
Fils 5 t **5.0**	62.5	20	(20)	7.5	3.0	18.0	1250	x 2500 **F**
Fils 1 t **2.0**	110	40	(25.4)	7.0	2.0	8.6	1000	x 2000 **F**
Fils 1 t **3.0**	110	40	(25.4)	7.0	3.0	13.0	1000	x 2000 **F**

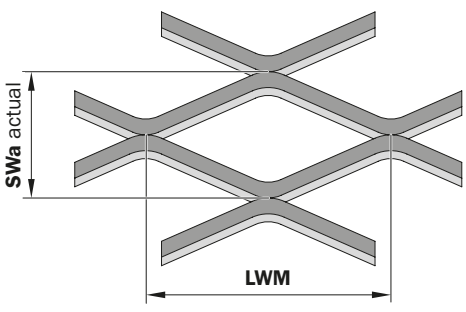
F = Sheet

Values in mm.
The weights given in the table are indicative and refer to stainless steel AISI 304 mesh.
The highlighted data are for the mesh in the photos.

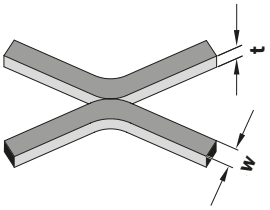
Legenda

LW = Long way pitch
SWn = Short way pitch nominal
SWa = Short way pitch actual
w = strand widht
t = thickness
LWM side
SWM side

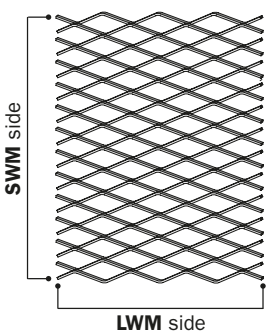
Mesh dimensions



Mesh section

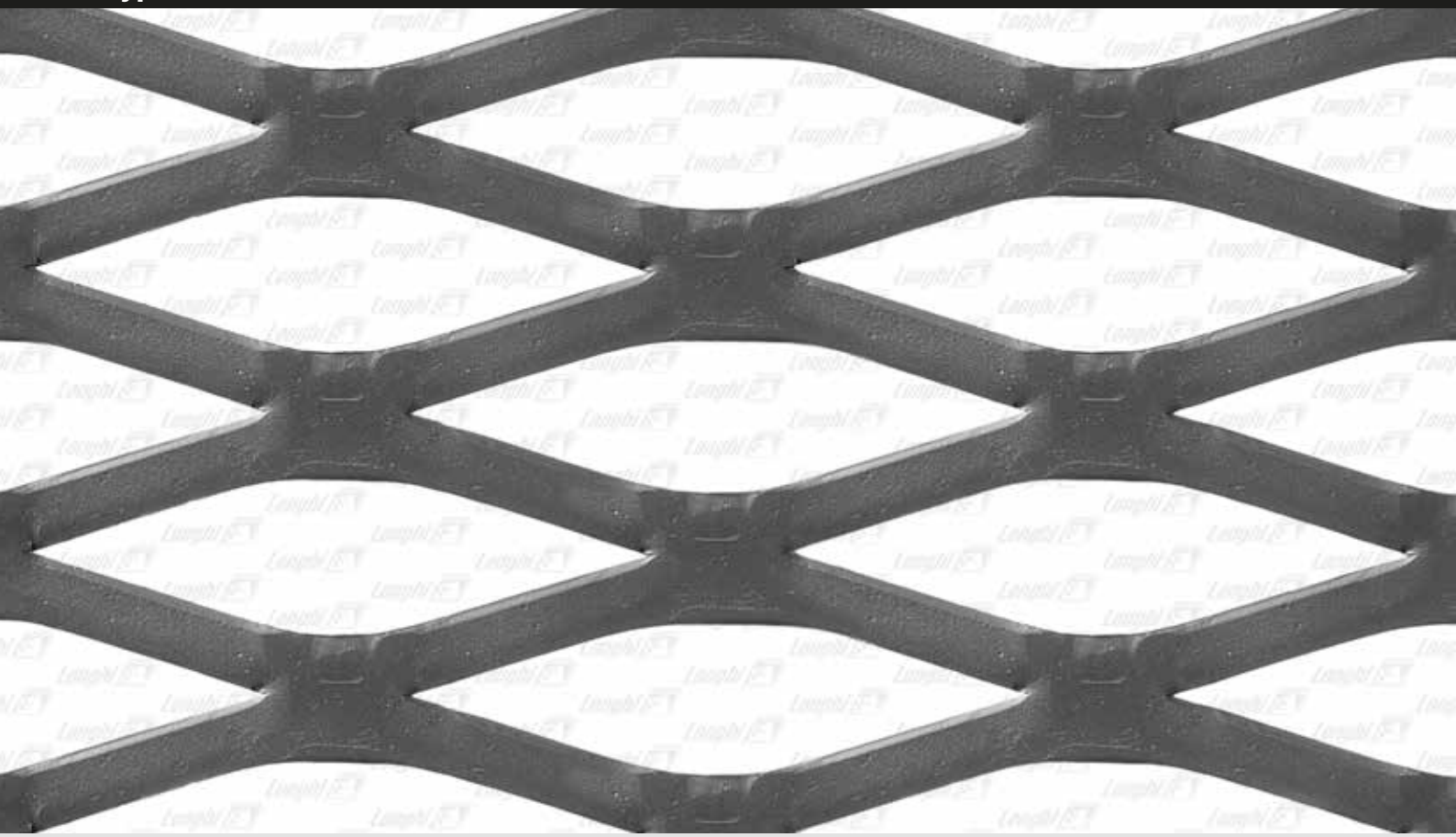


Sheet sizes

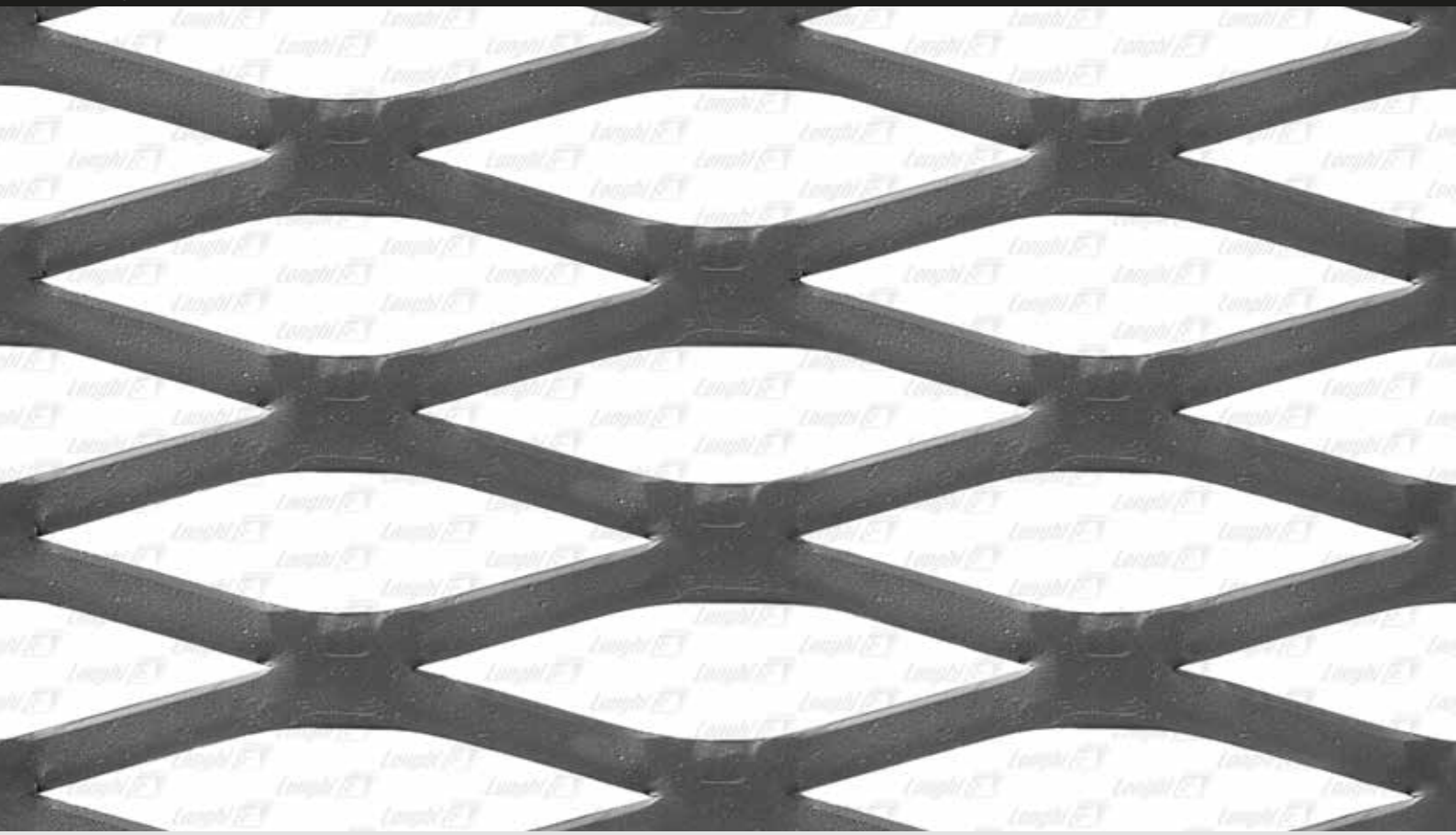


Expanded grating - flattened

Types SP 2 - SP 5



Types SP 2A - SP 5A



Expanded grating - flattened

Type	LW	SW nominal	SW actual	w	t	kg/m²	Sheet sizes: LWM side	Sheet sizes: SWM side
SP 2 t **4.0**	110	x 40	(41.6) -	9.5	x 4.0	14.0	1000	x 2000 **F**
	110	x 40	(41.6) -	9.5	x 4.0	14.0	1250	x 2500 **F**
SP 5 t **5.0**	110	x 40	(41.6) -	9.5	x 5.0	17.5	Made to order	x Made to order
SP 2A t **4.0**	110	x 40	(37) -	9.5	x 4.0	16.0	1000	x 2000 **F**
SP 5A t **5.0**	110	x 40	(37) -	9.5	x 5.0	18.5	Made to order	x Made to order

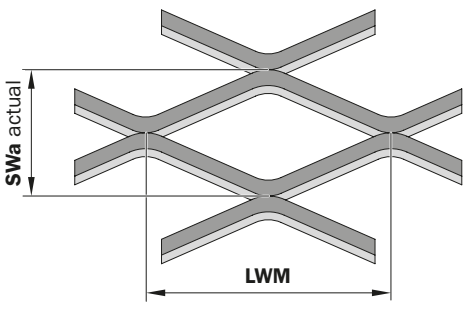
S = Flattened — **F** = Sheet

Values in mm.
The weights given in the table are indicative and refer to carbon steel mesh.
The highlighted data are for the mesh in the photos.

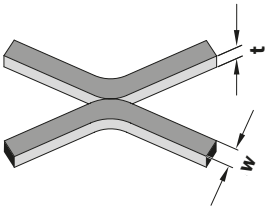
Legenda

LW = Long way pitch
SWn = Short way pitch nominal
SWa = Short way pitch actual
w = strand widht
t = thickness
LWM side
SWM side

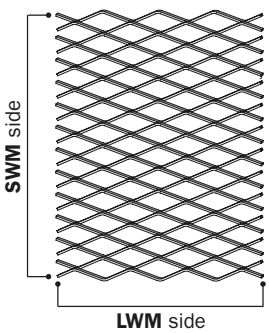
Mesh dimensions



Mesh section

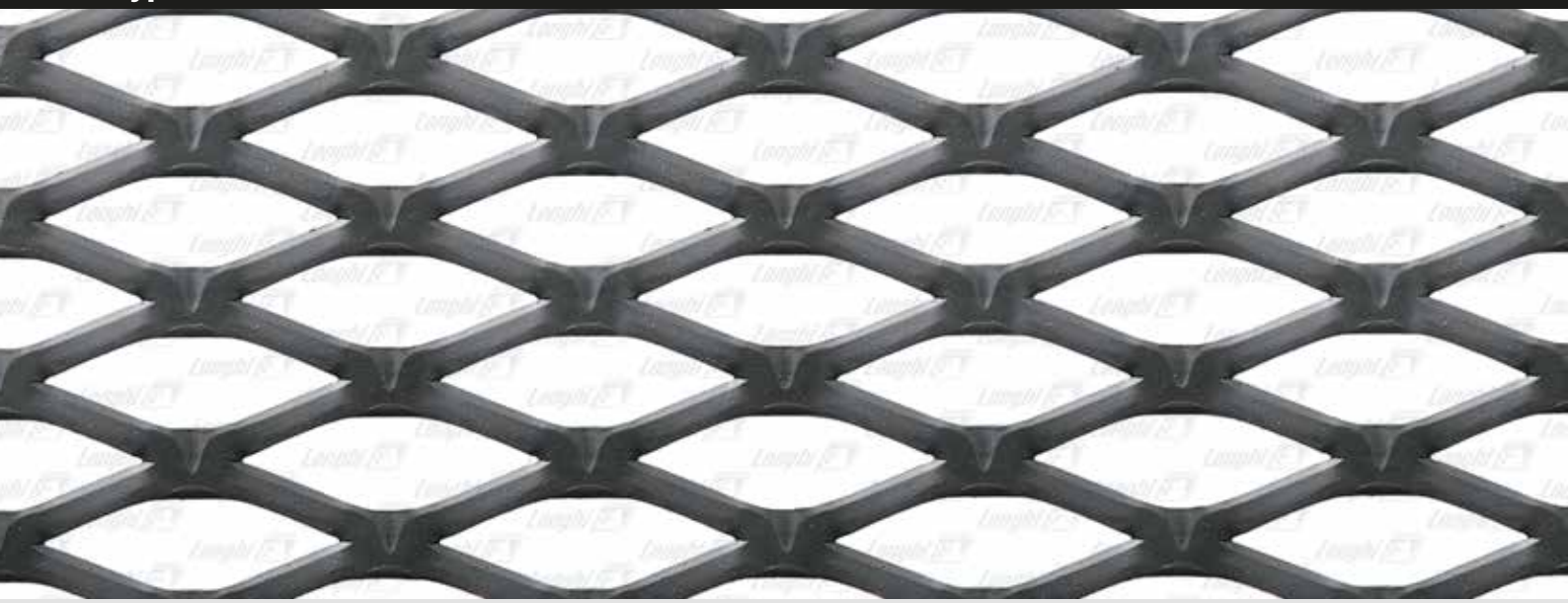


Sheet sizes

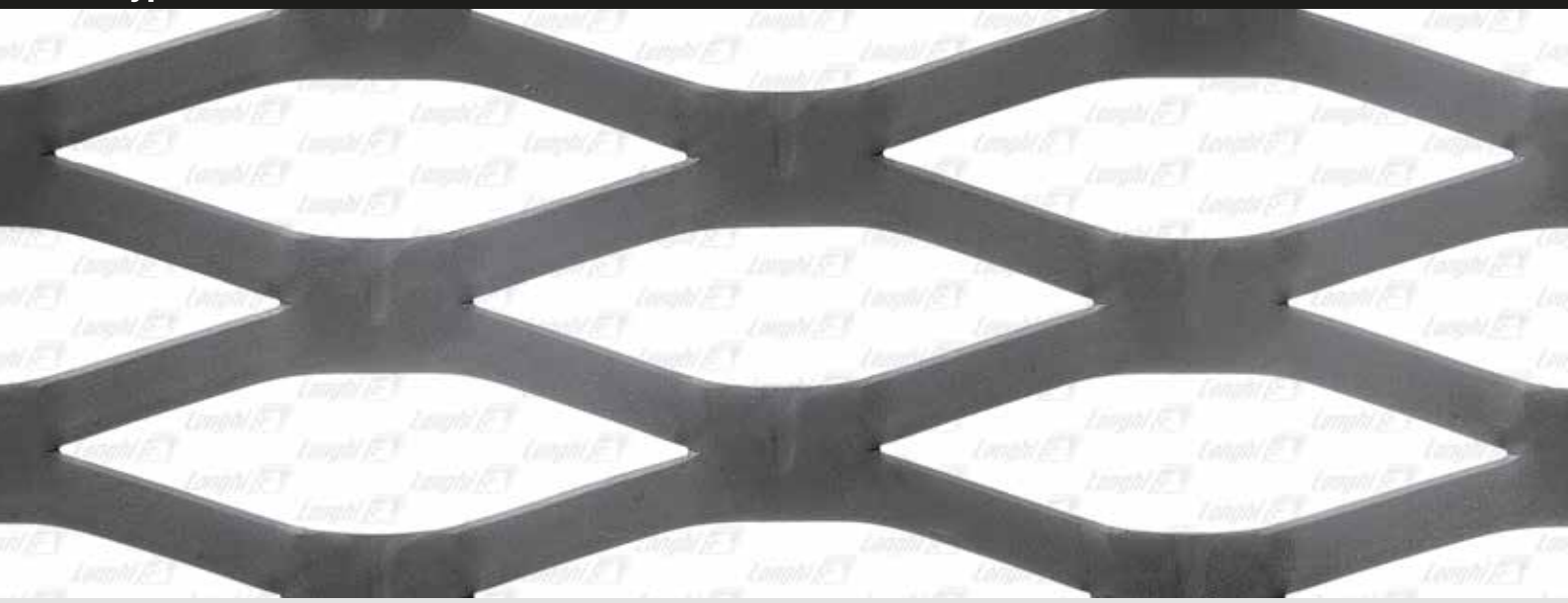


Expanded and flattened grating for livestock

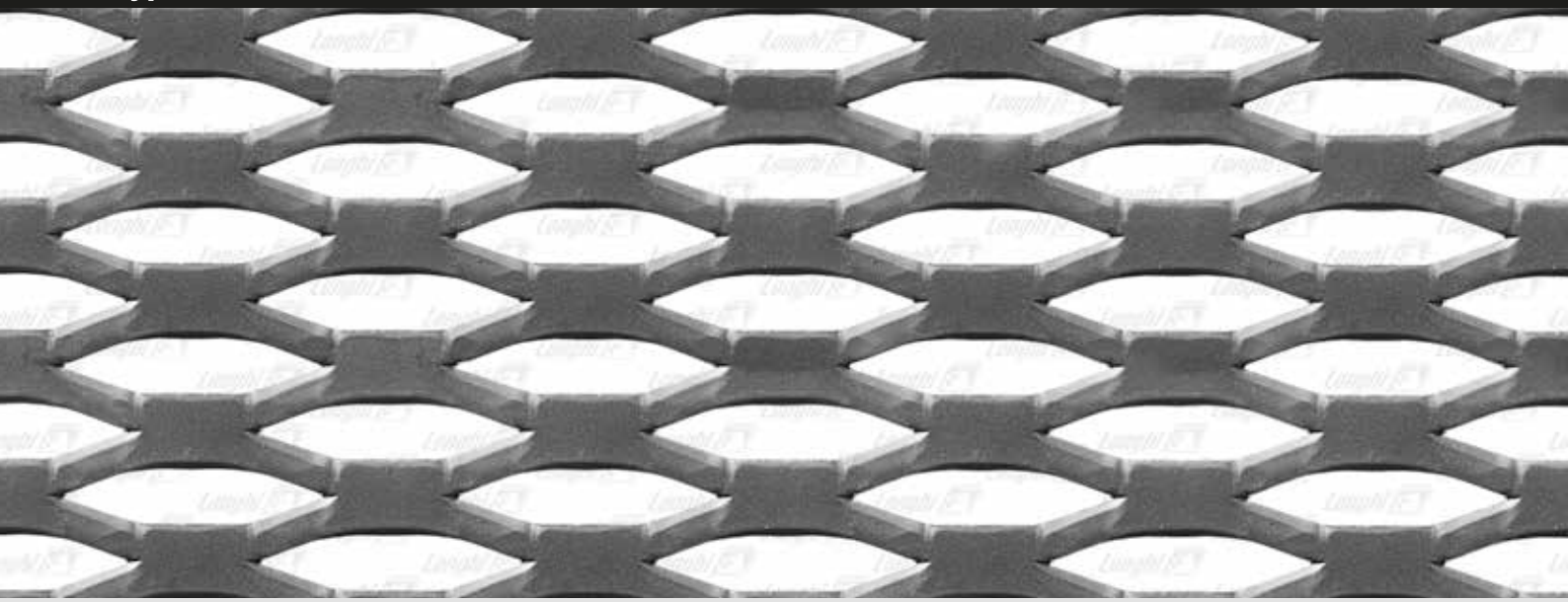
Types PS 01 - 02 Flattened



Types PS 03 - 04 Flattened



Type SC 3 Flattened



Expanded and flattened grating for livestock

Type	LW	SW nominal	SW actual	Dimension empty	w	t	kg/m²	Sheet sizes LWM side	SWM side
PS 01 t **2.0**	53.5 x	20	(21.5) -	40 x 12	4.8 x	2.0	7.0	1000	x 2000 F
PS 02 t **3.0**	53.5 x	20	(21.5) -	40 x 12	4.8 x	2.0	10.5	1000	x 2000 F
PS 03 t **3.0**	110 x	40	(21.5) -	40 x 12	4.8 x	2.0	11.0	Made to order	x Made to order
PS 04 t **4.0**	110 x	40	(21.5) -	40 x 12	4.8 x	2.0	15.0	Made to order	x Made to order
SC 3 t **3.0**	52 x	14	(21.5) -	40 x 12	4.8 x	2.0	12.5	1000	x 2000 F

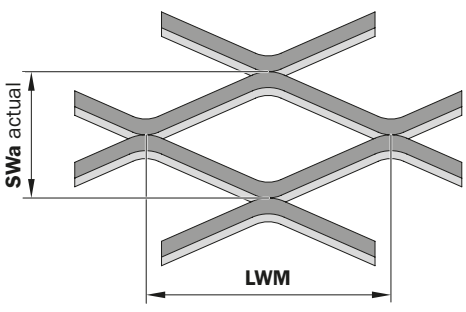
S = Flattened **F** = Sheet

Values in mm.
The weights given in the table are indicative and refer to carbon steel mesh.
On request some of the meshes can be processed from pre-galvanized steel, aluminium, copper and brass.
The highlighted data are for the mesh in the photos.

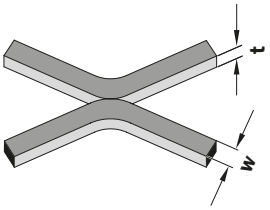
Legenda

LW = Long way pitch
SWn = Short way pitch nominal
SWa = Short way pitch actual
w = strand widht
t = thickness
LWM side
SWM side

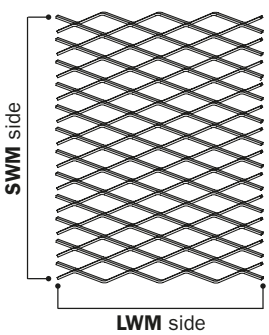
Mesh dimensions



Mesh section

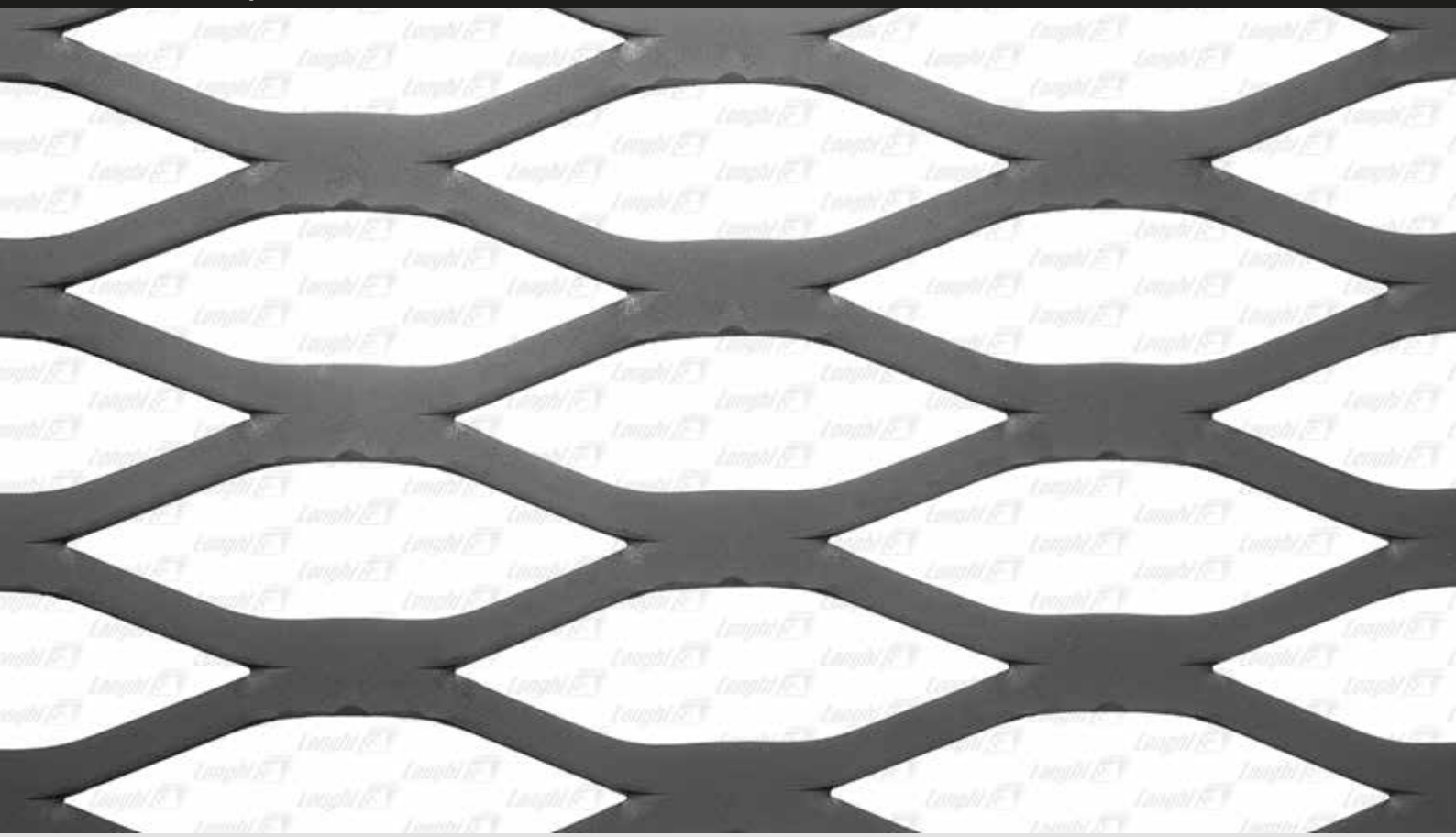


Sheet sizes



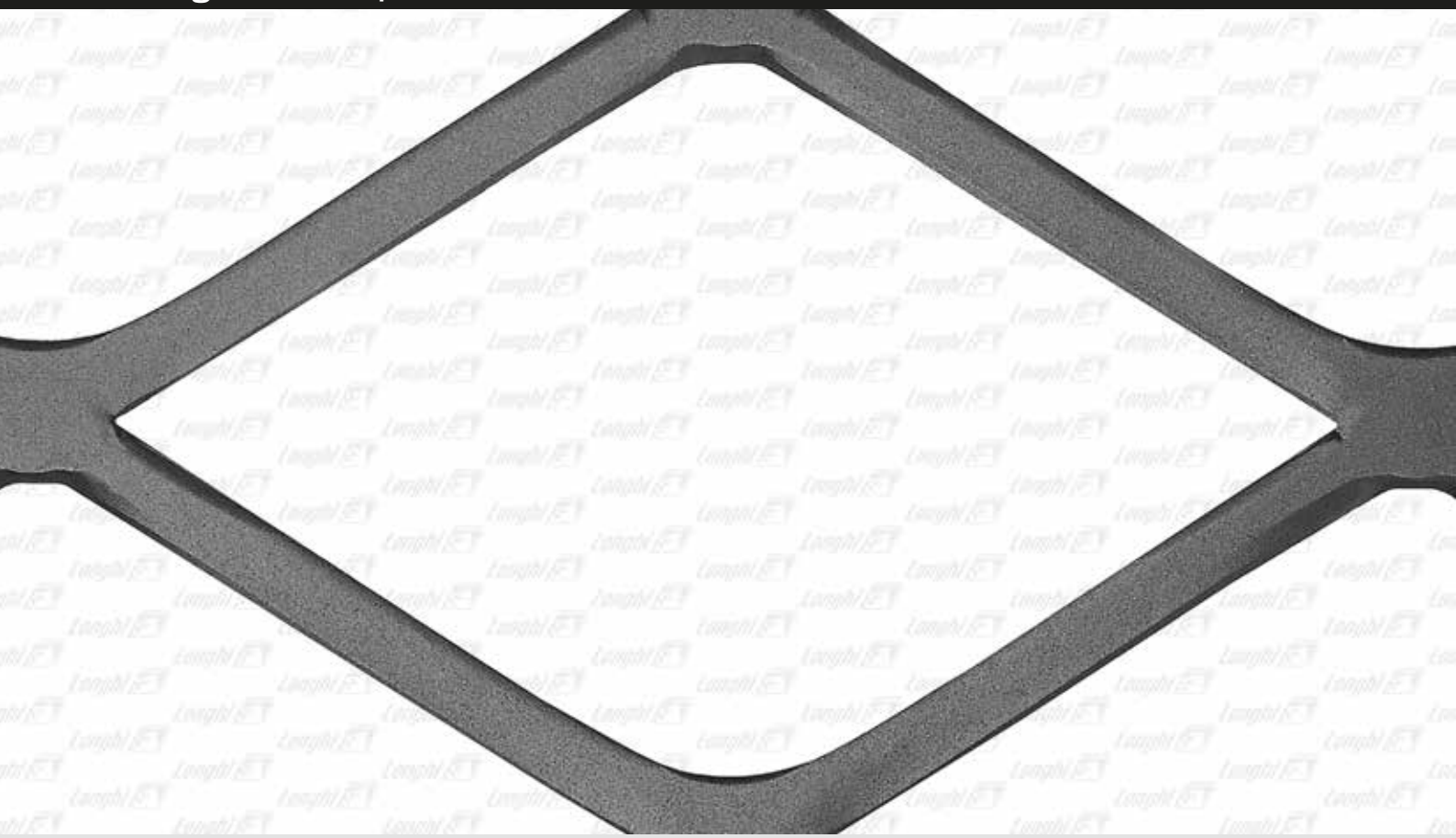
Flattened grating loading trays for tile and brick kilns

Platform sp 3 mm



Expanded grating - flattened

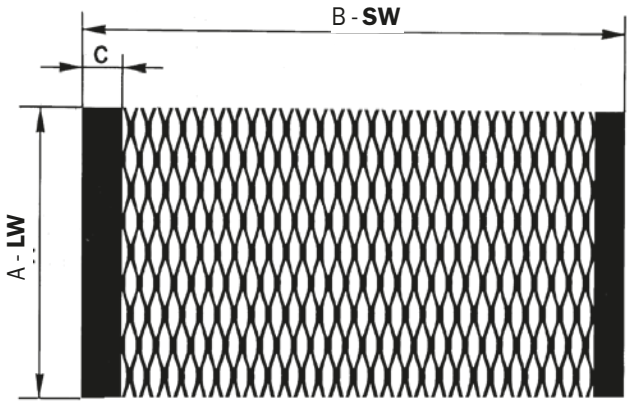
Grating Medioevo sp 5 mm



Flattened grating loading trays for tile and brick kilns

Type	LW	SW nominal	SW actual	Dimension empty	w	t	kg/m²	Sheet sizes LWM side	SWM side
Platform t **3.0**	110	x 40	(37)	- 80 x 24	7.0	x 3.0	9.0	Made to order	x Made to order

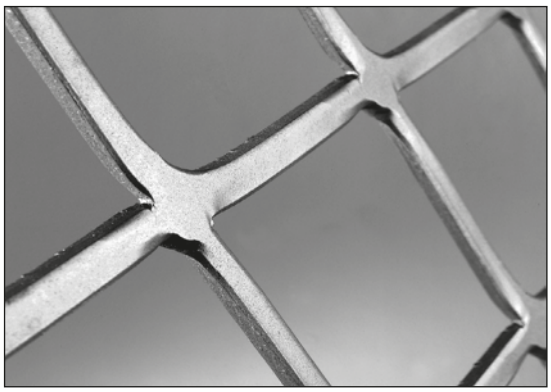
Values in mm.
The weights given in the table are indicative and refer to carbon steel mesh.
On request some of the meshes can be processed from pre-galvanized steel, aluminium, copper and brass.
The highlighted data are for the mesh in the photos.



Medioevo Expanded grating - flattened

Type	LW	SW nominal	SW actual	w	t	kg/m²	Sheet sizes LWM side	SWM side
Grating t **5.0**	200 x 100		(125) -	12.0	x 5.0	8.0	1000	x 2000 **F**

Values in mm.
The weights given in the table are indicative and refer to carbon steel mesh.
On request some of the meshes can be processed from pre-galvanized steel, aluminium, copper and brass.
The highlighted data are for the mesh in the photos.



GRIGLIOFILS Steps

Stair treads for safety stairs




stair treads

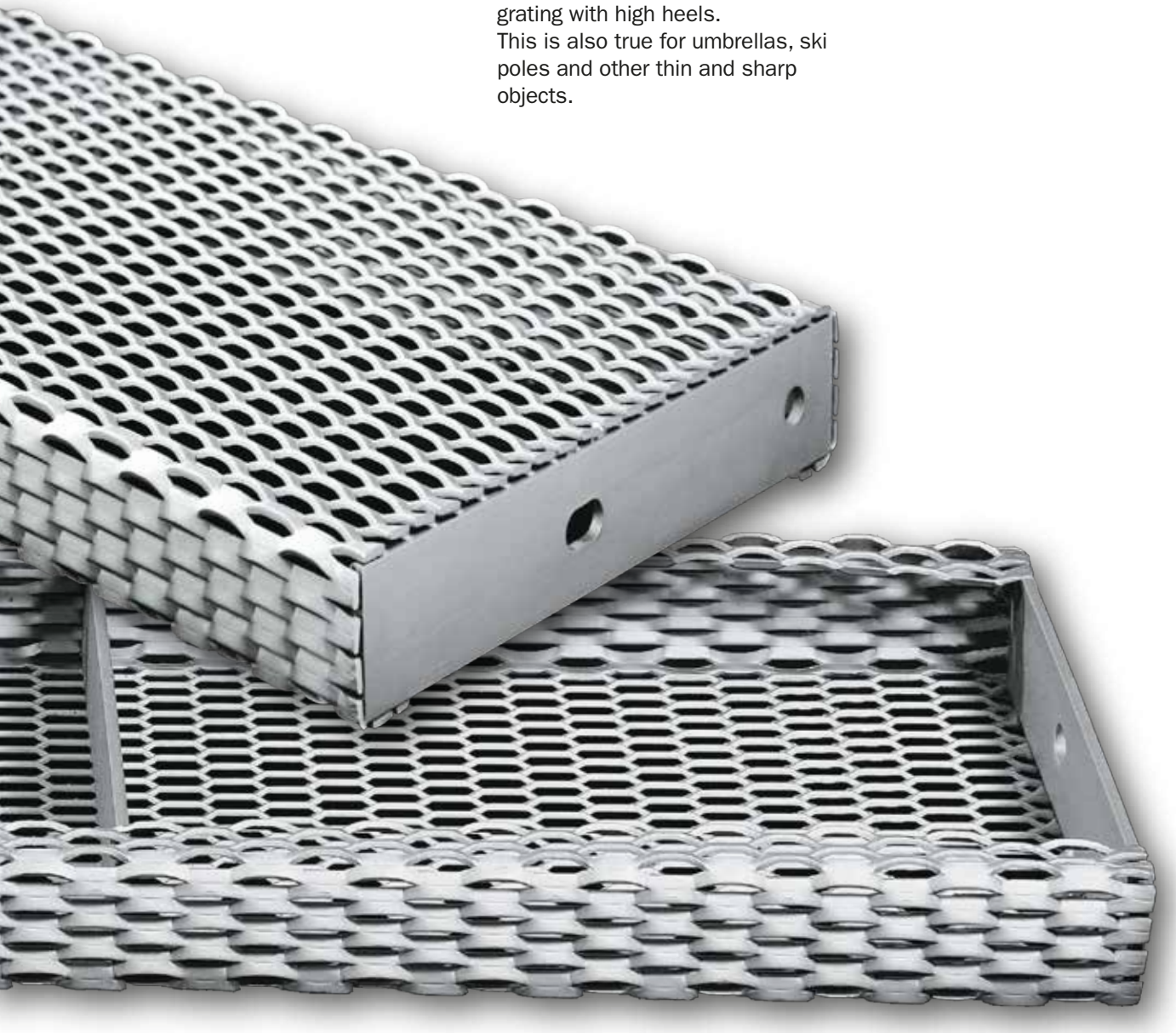
Certifications and functional characteristics of stairs treads and landings

Certified load capacity
All Fils stair treads and landings are certified according to the current standard (NTC 2018 - Ministerial Decree dated 17/01/2018), which defines the distributed and concentrated loads to guarantee maximum safety.

Non-slip
Thanks to their excellent slip-resistant characteristics, risks of slipping or falls can be prevented. The non-slip coefficients are defined by Standard DIN 51130. (From page 42)

Heel-saving
The shape of the mesh prevents the risk of falling and being stuck in the grating with high heels.
This is also true for umbrellas, ski poles and other thin and sharp objects.

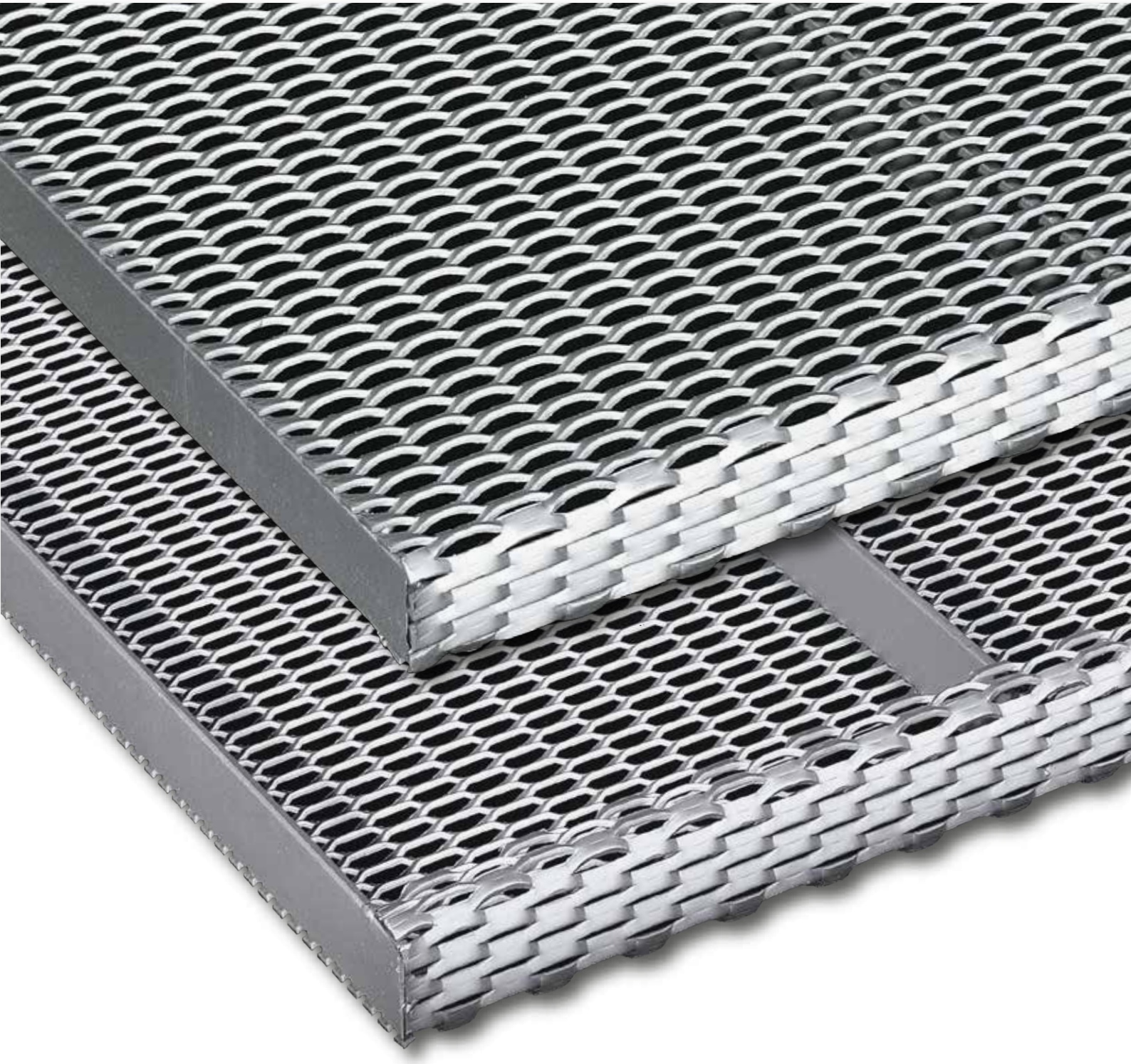
Anti-panic
The expanded mesh grid with its characteristics shape limits the view of the void below and avoids the sense of “vertigo” that might affect the person looking down.



NEW **GRIGLIOFILS** STAIR TREADS AND LANDINGS

FILS innovation.
The new stair treads and landings are made with an optimised construction method.
They are manufactured from a single expanded mesh element, which is folded and stiffened with supporting cross-bars.

The side plates have holes and slots, enabling them to be fixed easily.



SYNOPTIC CHART

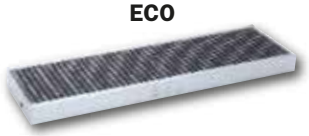
STAIR TREADS

SW

200

LW 500 600 700

ECO



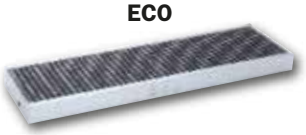
408 408

Mesh Type 43 - **t 2**

250

LW 800 900 1000

ECO

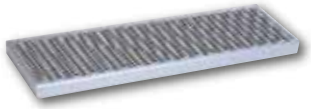


408 408

Mesh Type 43 - **t 2**

LW 500 600 700 800 900 1000

INDUSTRIA

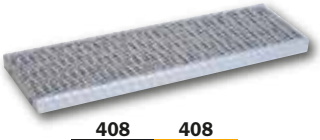


408 408

Mesh Fils 21 - **t 2.5**

LW 700 800 1000

SUPERFILS



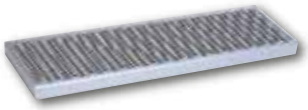
408 408

Mesh Fils 21 S - **t 3**

300

LW 500 600 700 800 900 1000

INDUSTRIA

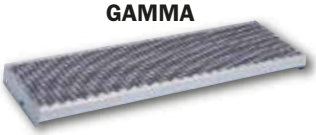


408 408

Mesh Fils 21 - **t 2.5**

LW ■ 1200

GAMMA

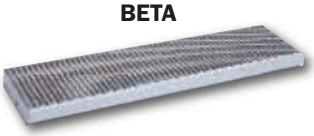


408 408

Mesh Fils 20 - **t 2.5**

LW ■ 1200

BETA



408 408

Mesh Type 43 - **t 3**

LW ■ 1200

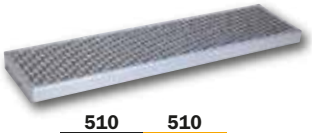
SICURFILS 4

408 408

Mesh Fils 21 - **t 3**

LW ■ 1200

SICURFILS 5



510 510

Mesh Fils 21 - **t 3**

LW 500 600 700 800 900 1000

GRIGLIOFILS

510 510

Mesh Fils 21 - **t 3**

LW 800 900 1000 ■ 1200

GRIGLIOFILS

510 510

Mesh Fils 21 - **t 3**

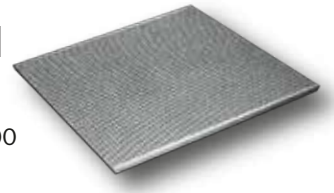
LANDINGS

Meshes

Fils 20 t 2.5

GAMMA

LW 1200 — SW 1200

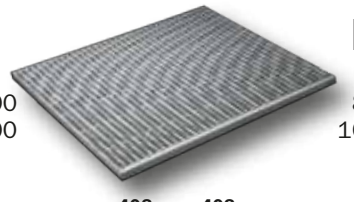


408 408

Type 43 t 3

ECO

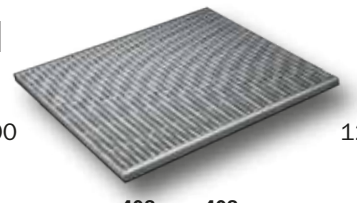
LW 800 1000 — SW 800 1000



408 408

BETA

LW 1200 — SW 1200

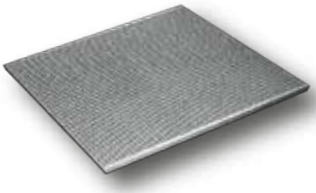


408 408

Fils 21 t 3

INDUSTRIA

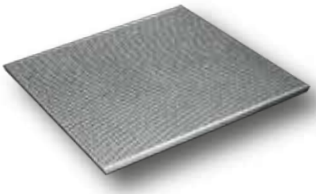
LW 800 1000 — SW 800 1000



408 408

SICURFILS 4/5

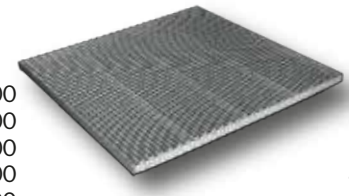
LW 1200 — SW 1200



510 510

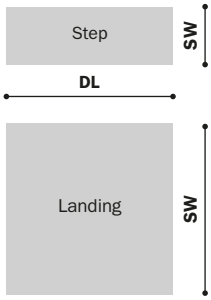
GRIGLIOFILS

LW 500 600 700 800 900 1000 1200 — SW 500 600 700 800 900 1000 1200



510 510

Dimensions in mm



Working loads

CAPACITY Kg/m² 408 DISTRIBUTED

CAPACITY KG 408 CONCENTRATED

CATEGORIES A - B1 - B2 - C1 - C2 - D1

Working loads

CAPACITY Kg/m² 510 DISTRIBUTED

CAPACITY KG 510 CONCENTRATED

CATEGORIES C3 - C4 - C5 - D2

The load categories are listed in table 3.1.II illustrating Technical Building Standards under Ministerial Decree dated 17/01/2018 (page 91)

■ Also for safety stairs

GRIGLIOFILS Stair tread - SW 250 mm

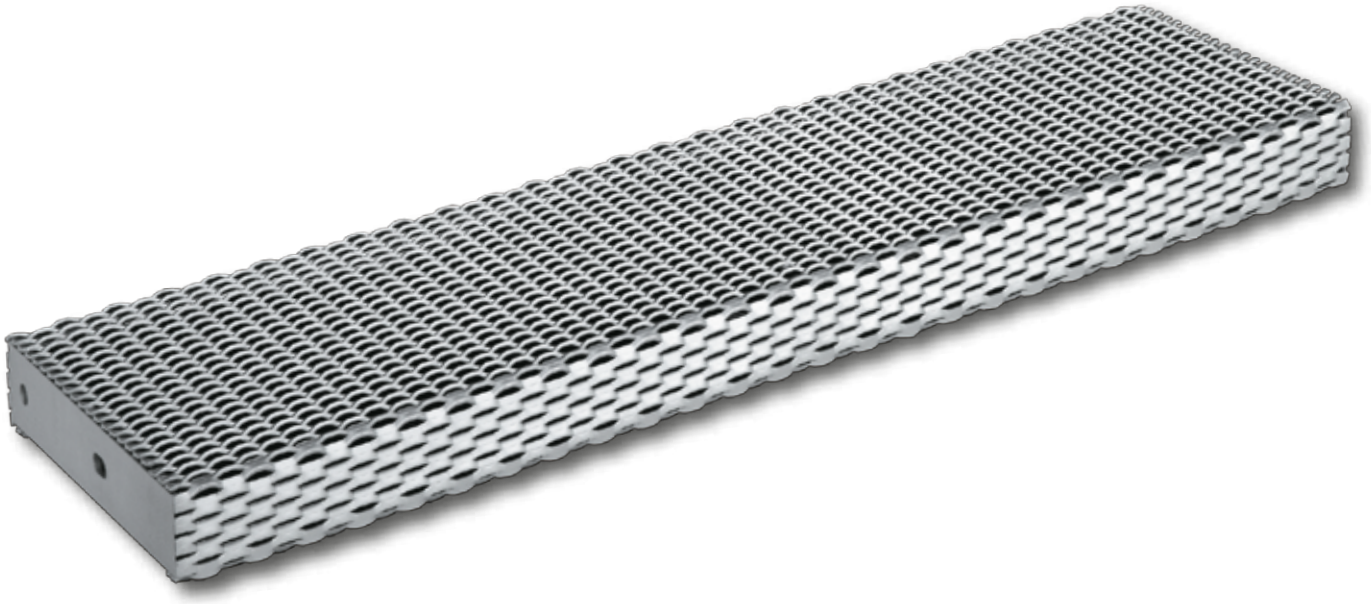
Certified stair tread

CAPACITY Kg/m² 510 DISTRIBUTED

CAPACITY KG 510 CONCENTRATED

CATEGORIES C3 - C4 - C5 - D2

The load categories are listed in table 3.1.II illustrating Technical Building Standards under Ministerial Decree dated 17/01/2018 (page 91)



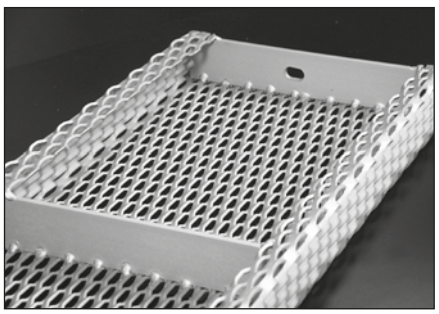
Actual mesh dimensions

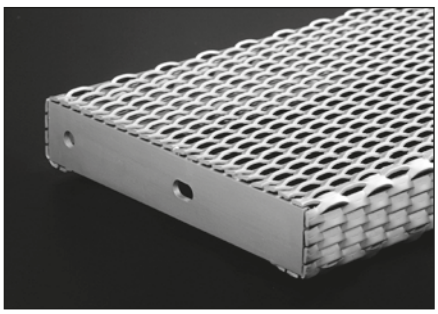
Reference Standard DIN 51130 (From page 42)

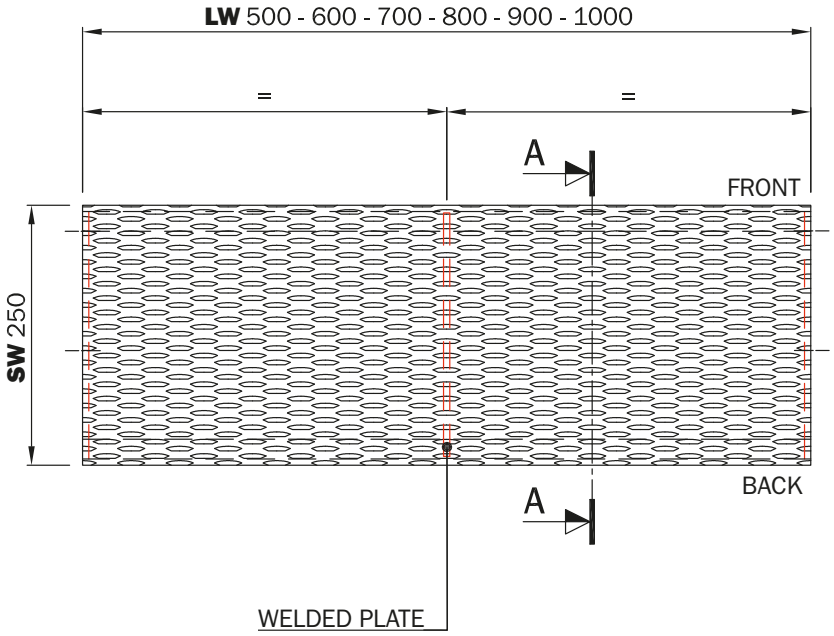
Fils 21 Mesh

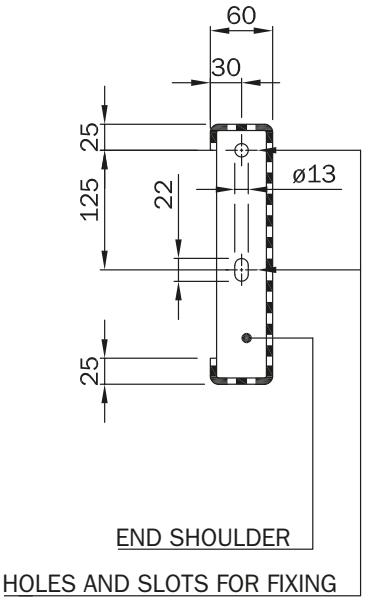
LW 45 x SW 15 (13.4)▲ - w 5 x t 3 mm

▲ *actual SW*



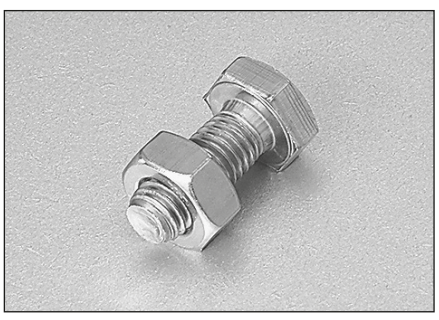






GRIGLIOFILS	LW	SW	H	Weight kg/each AC	Weight kg/each ACZ	Load capacity Kg/m² distributed	Load capacity Kg concentrated
	500	250	60/25	5.0	5.5	510	510
	600	250	60/25	5.7	6.3	510	510
	700	250	60/25	6.4	7.1	510	510
	800	250	60/25	7.1	7.9	510	510
	900	250	60/25	7.8	8.6	510	510
	1000	250	60/25	8.4	9.3	510	510

Values in mm.
We can make customized stair treads upon request.
AC - Carbon Steel
ACZ - Hot-dip galvanised Carbon Steel



Stair tread bolted fixing system
hole Ø 13 mm
slot 13 x 22 mm

Bolt M12 x 30 mm underhead

GRIGLIOFILS Stair tread - SW 300 mm

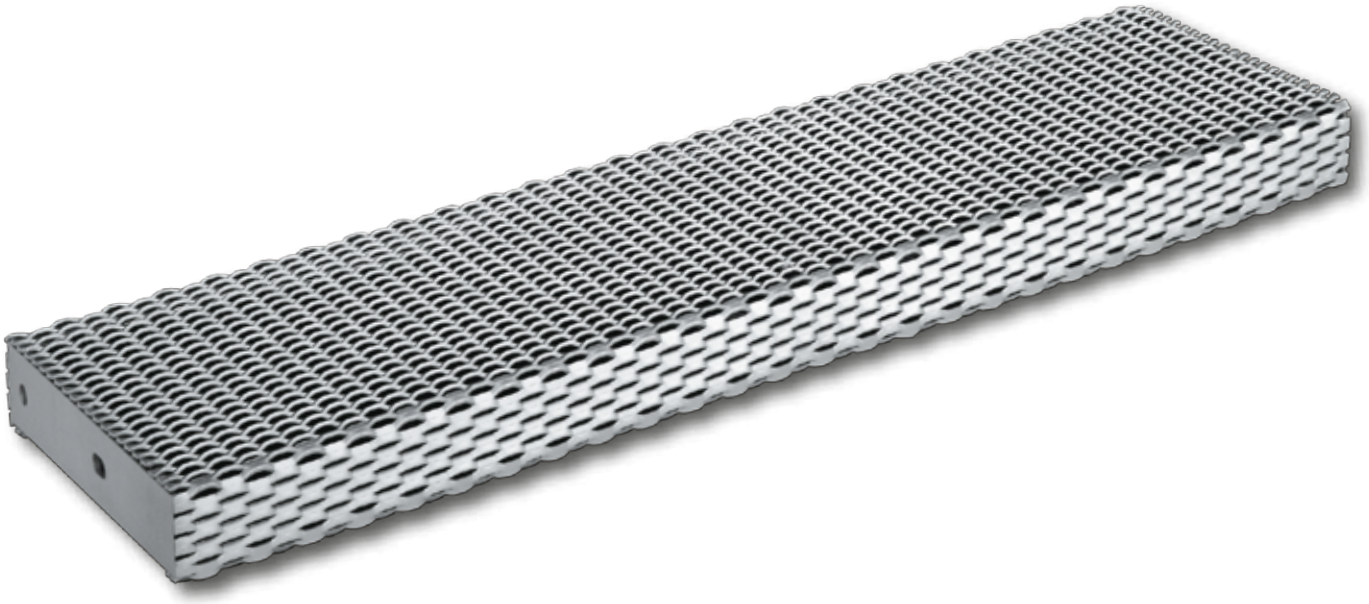
Certified stair tread

CAPACITY Kg/m² 510 DISTRIBUTED

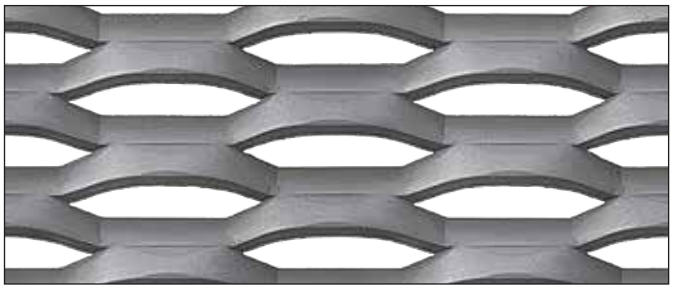
CAPACITY KG 510 CONCENTRATED

CATEGORIES C3 - C4 - C5 - D2

The load categories are listed in table 3.1.II illustrating Technical Building Standards under Ministerial Decree dated 17/01/2018 (page 91)



Actual mesh dimensions

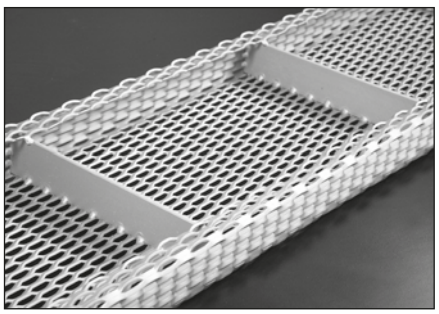


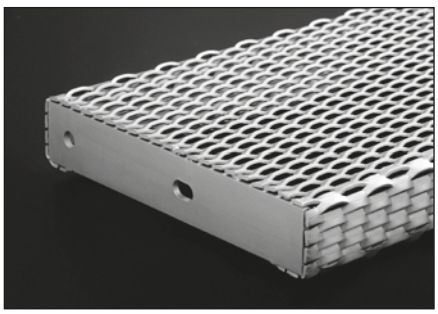
Reference Standard DIN 51130 (From page 42)

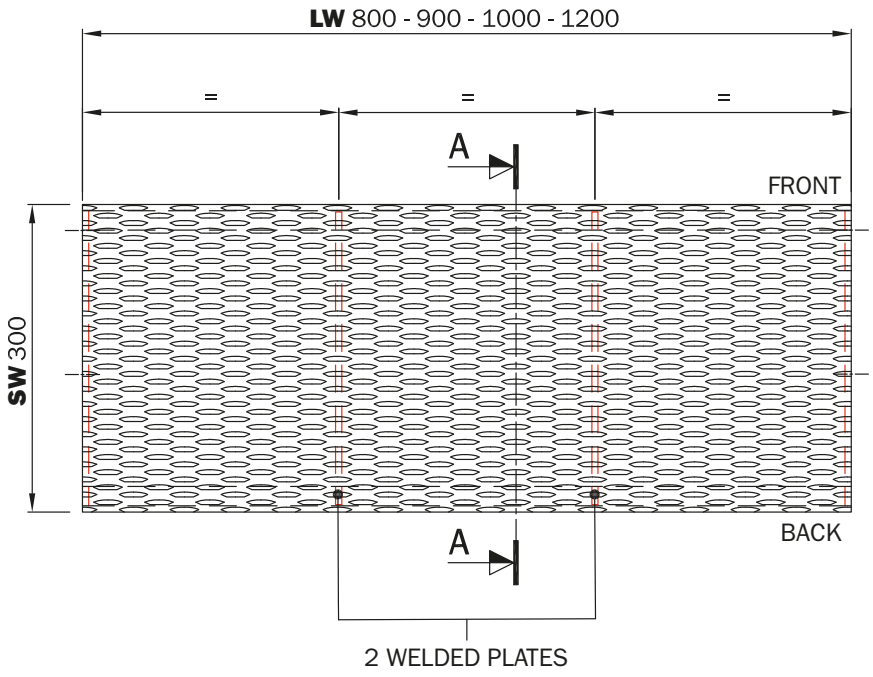
Fils 21 Mesh

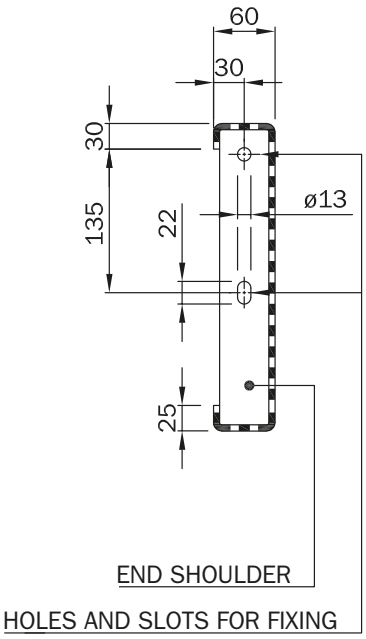
LW 45 x SW 15 (13.4) ▲ - w 5 x t 3 mm

▲ *actual SW*



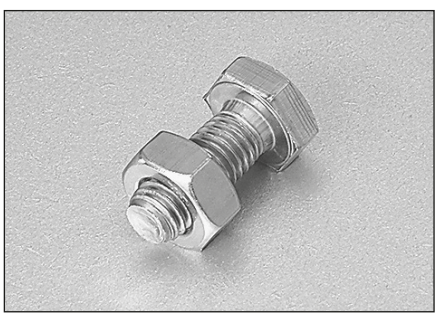






GRIGLIOFILS	LW	SW	H	Weight kg/each AC	Weight kg/each ACZ	Load capacity Kg/m² distributed	Load capacity Kg concentrated
	800	300	60/25	8.6	9.5	510	510
	900	300	60/25	9.4	10.4	510	510
	1000	300	60/25	10.2	11.2	510	510
	1200	300	60/25	11.8	13.0	510	510

Values in mm.
We can make customized stair treads upon request.
AC - Carbon Steel
ACZ - Hot-dip galvanised Carbon Steel



Stair tread bolted fixing system
hole Ø 13 mm
slot 13 x 22 mm

Bolt M12 x 30 mm underhead

BETA Stair tread - SW 300 mm

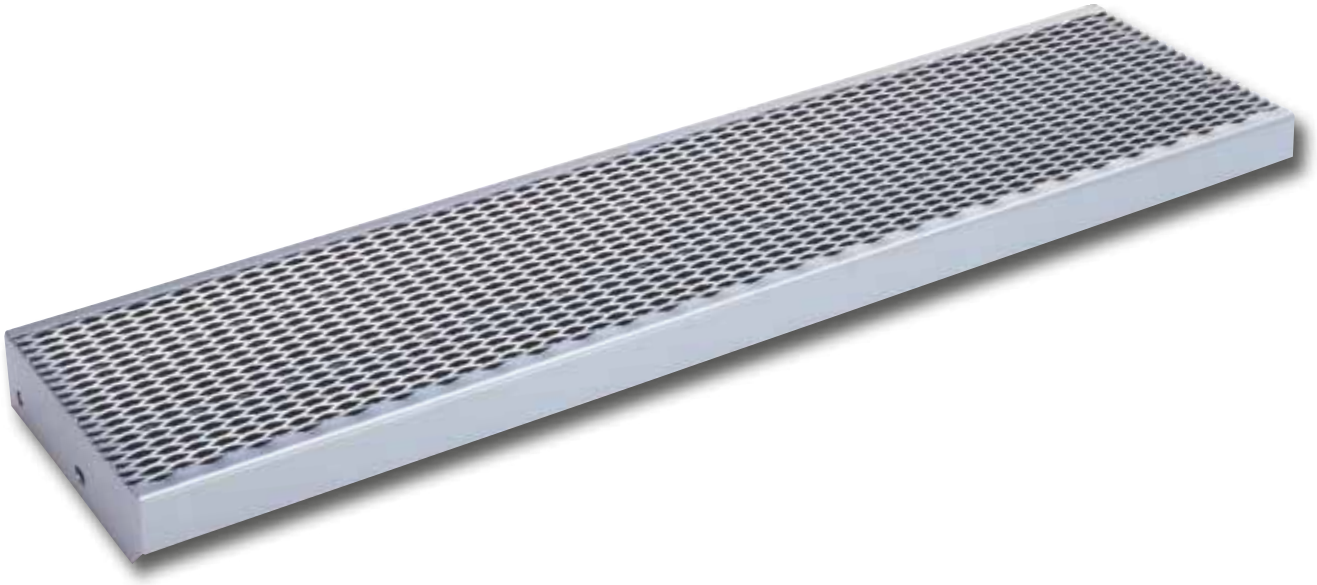
Certified stair tread

CAPACITY Kg/m² 408 DISTRIBUTED

CAPACITY KG 408 CONCENTRATED

CATEGORIES A - B1 - B2 - C1 - C2 - D1

The load categories are listed in table 3.1.II illustrating Technical Building Standards under Ministerial Decree dated 17/01/2018 (page 91)



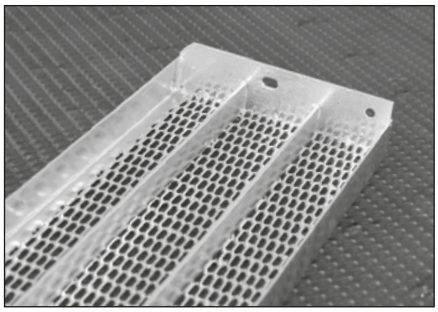
Actual mesh dimensions

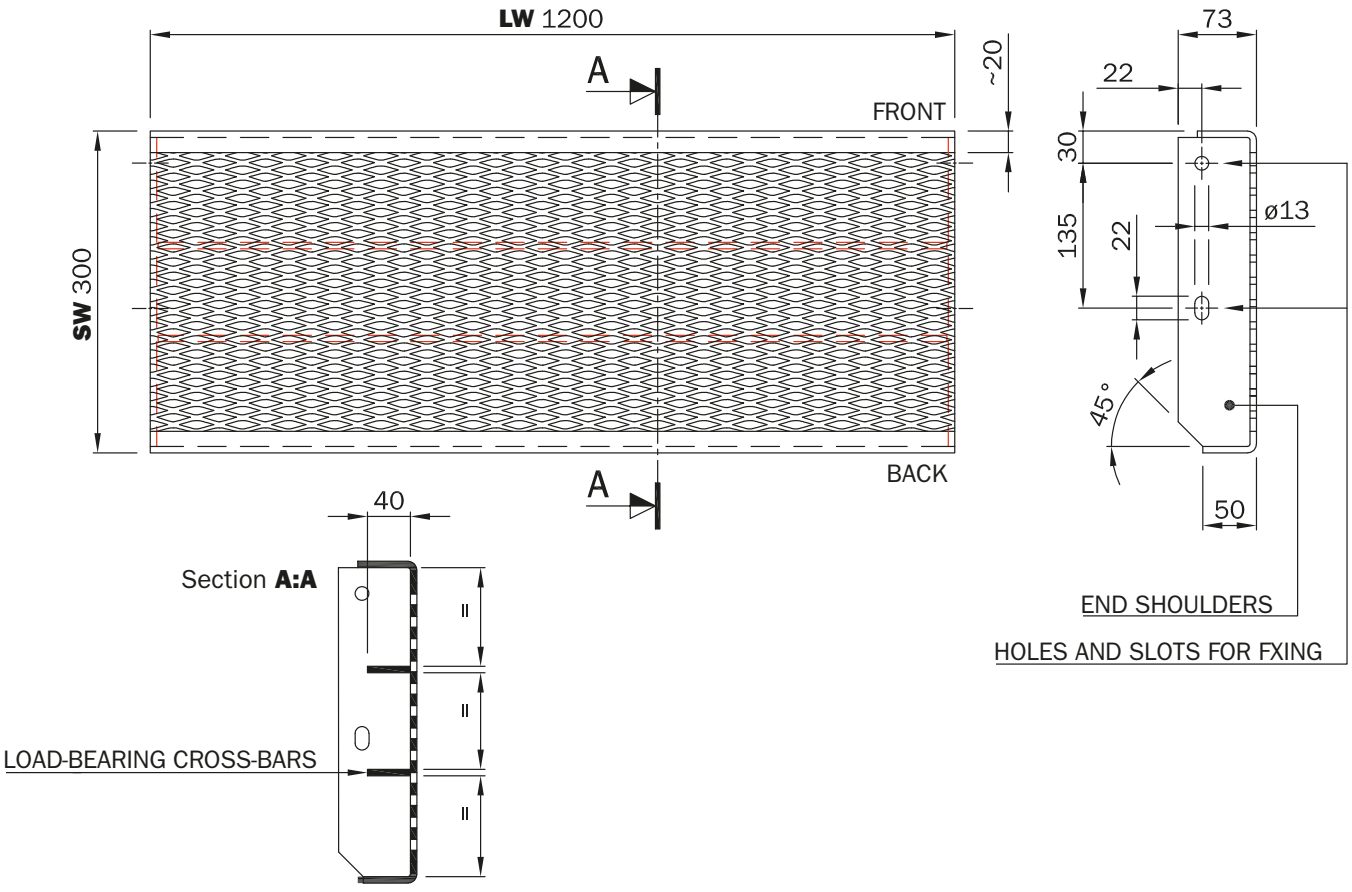
Reference Standard DIN 51130 (From page 42)

Type 43 Mesh

LW 43 x SW 10 (13.3)▲ - w 3 x t 3 mm

▲ *actual SW*



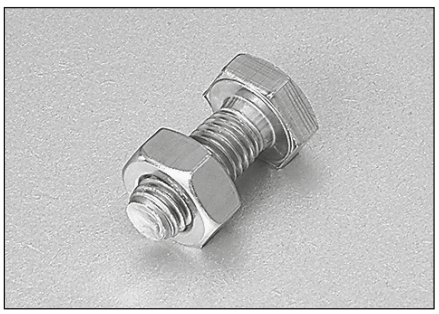


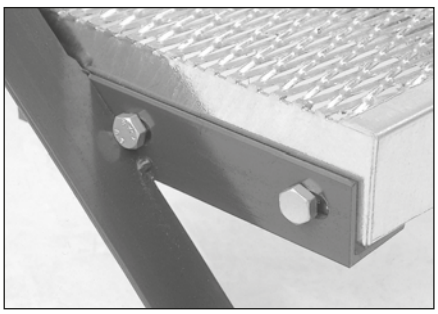
BETA	LW	SW	H	Weight kg/each AC	Weight kg/each ACZ	Load capacity Kg/m² distributed	Load capacity Kg concentrated
	1200	300	73	10.5	11.5	408	408

Values in mm.
We can make customized stair treads upon request.
AC - Carbon Steel
ACZ - Hot-dip galvanised Carbon Steel

Stair tread bolted fixing system
hole Ø 13 mm
slot 13 x 22 mm

Bolt M12 x 30 mm underhead





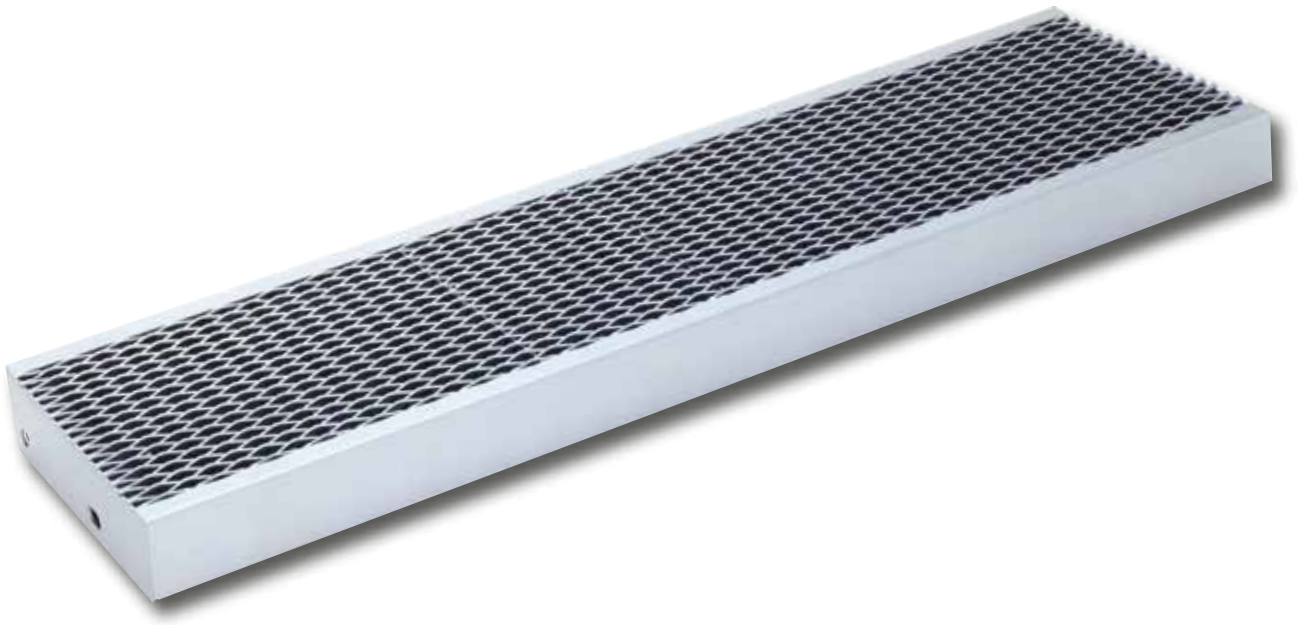
ECO Stair tread - SW 200 mm

Certified stair tread

CAPACITY Kg/m²	CAPACITY KG
408	408
DISTRIBUTED	CONCENTRATED

CATEGORIES
A - B1 - B2 - C1 - C2 - D1

The load categories are listed in table 3.1.II illustrating Technical Building Standards under Ministerial Decree dated 17/01/2018 (page 91)



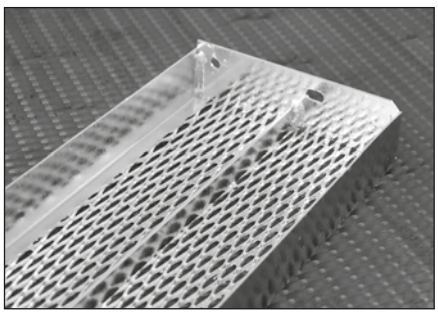
Actual mesh dimensions

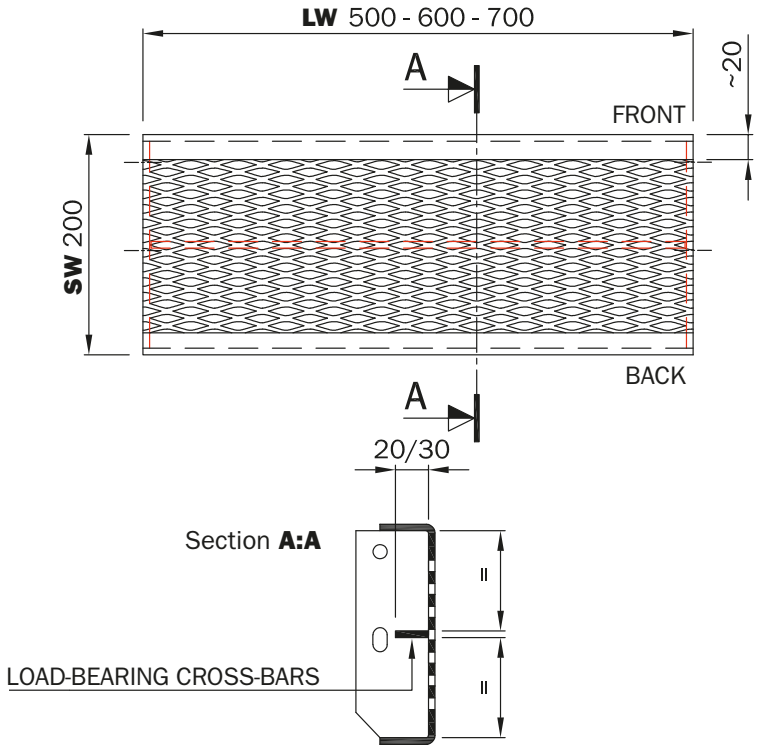
Reference Standard DIN 51130 (From page 42)

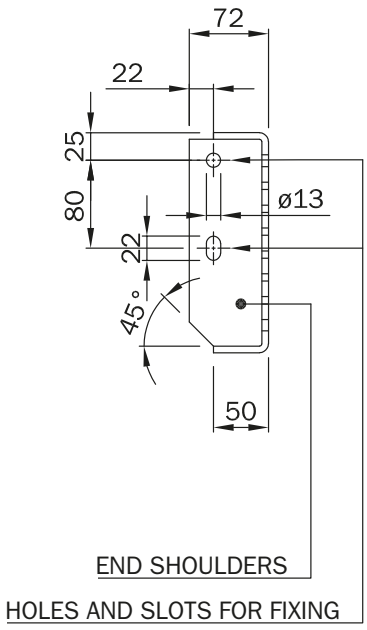
Type 43 Mesh

LW 43 x SW 10 (13.3)▲ - width 3 x t 2 mm

▲ *actual SW*





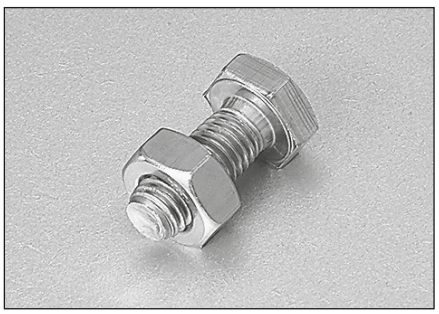


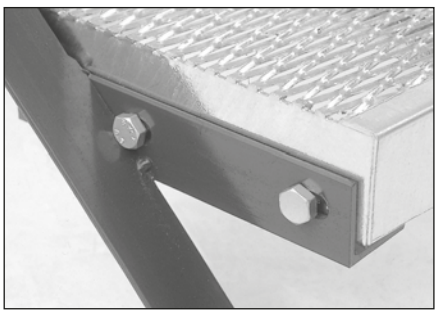
ECO	LW	SW	H	Weight kg/each AC	Weight kg/each ACZ	Load capacity Kg/m² distributed	Load capacity Kg concentrated
	500	200	72	2.6	3.0	408	408
	600	200	72	3.0	3.4	408	408
	700	200	72	3.7	4.2	408	408

Values in mm.
We can make customized stair treads upon request.
AC - Carbon Steel
ACZ - Hot-dip galvanised Carbon Steel

Stair tread bolted fixing system
hole Ø 13 mm
slot 13 x 22 mm

Bolt M12 x 30 mm underhead





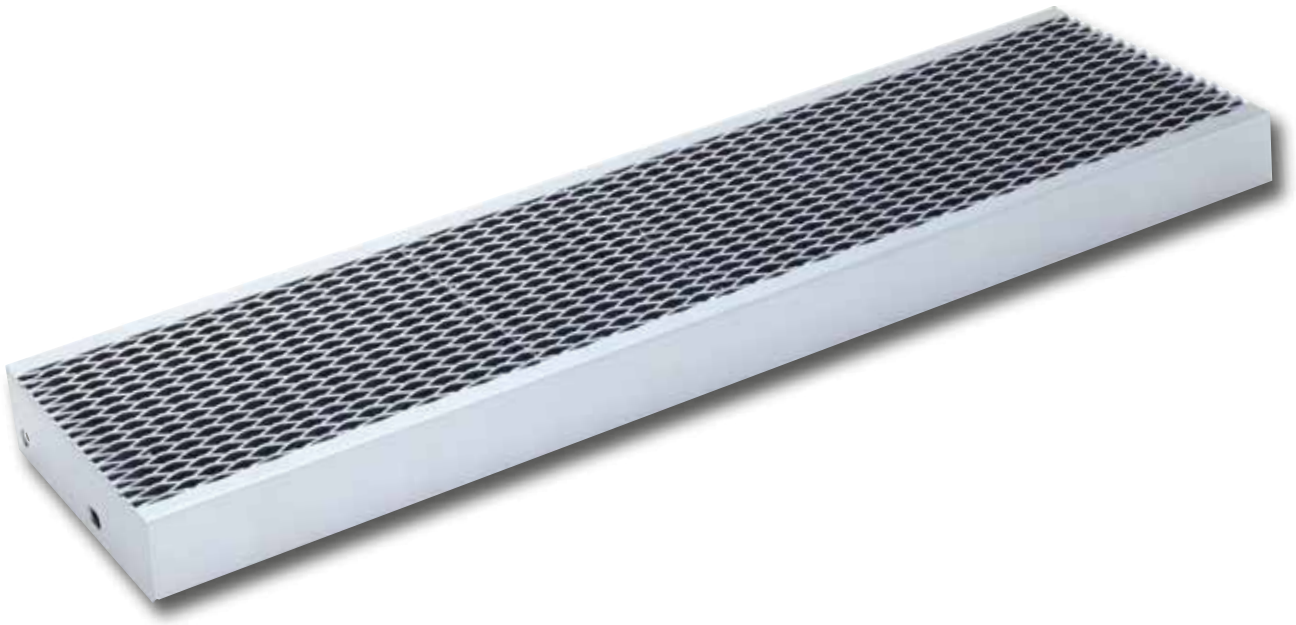
ECO Stair tread - SW 250 mm

Certified stair tread

CAPACITY Kg/m²	CAPACITY KG
408	408
DISTRIBUTED	CONCENTRATED

CATEGORIES
A - B1 - B2 - C1 - C2 - D1

The load categories are listed in table 3.1.II illustrating Technical Building Standards under Ministerial Decree dated 17/01/2018 (page 91)



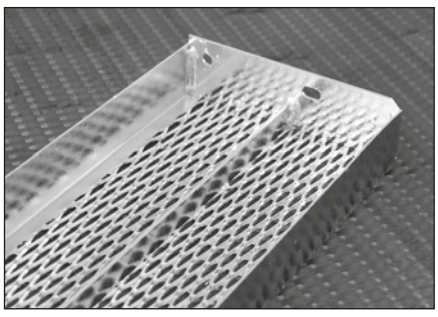
Actual mesh dimensions

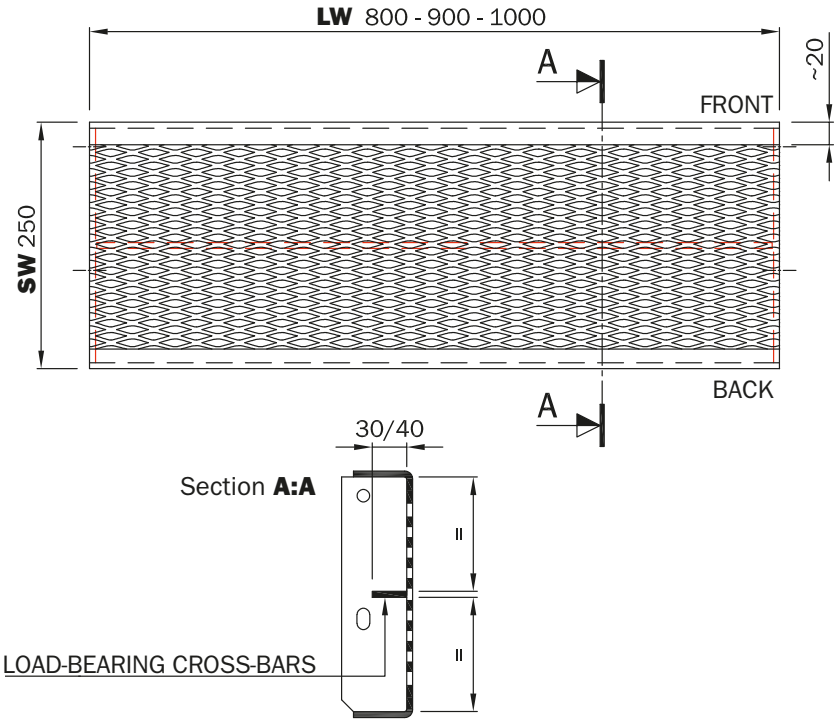
Reference Standard DIN 51130 (From page 42)

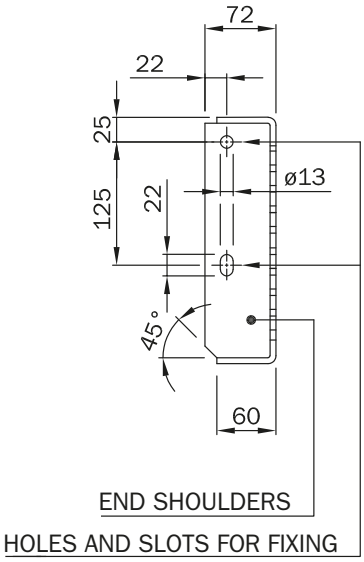
Mesh Type 43

LW 43 x SW 10 (13.3)▲ - strand width 3 x thickness 2 mm

▲ *actual SW*





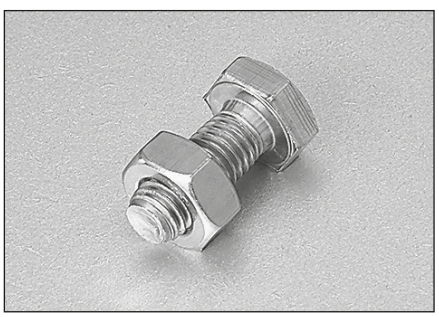


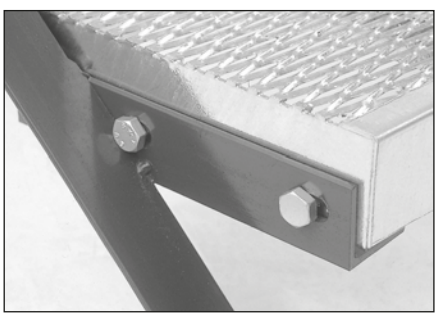
ECO	LW	SW	H	Weight kg/each AC	Weight kg/each ACZ	Load capacity Kg/m² distributed	Load capacity Kg concentrated
	800	250	72	4.6	5.3	408	408
	900	250	72	5.1	5.8	408	408
	1000	250	72	6.6	7.0	408	408

Values in mm.
We can make customized stair treads upon request.
AC - Carbon Steel
ACZ - Hot-dip galvanised Carbon Steel

Stair tread bolted fixing system
hole Ø 13 mm
slot 13 x 22 mm

Bolt M12 x 30 mm underhead





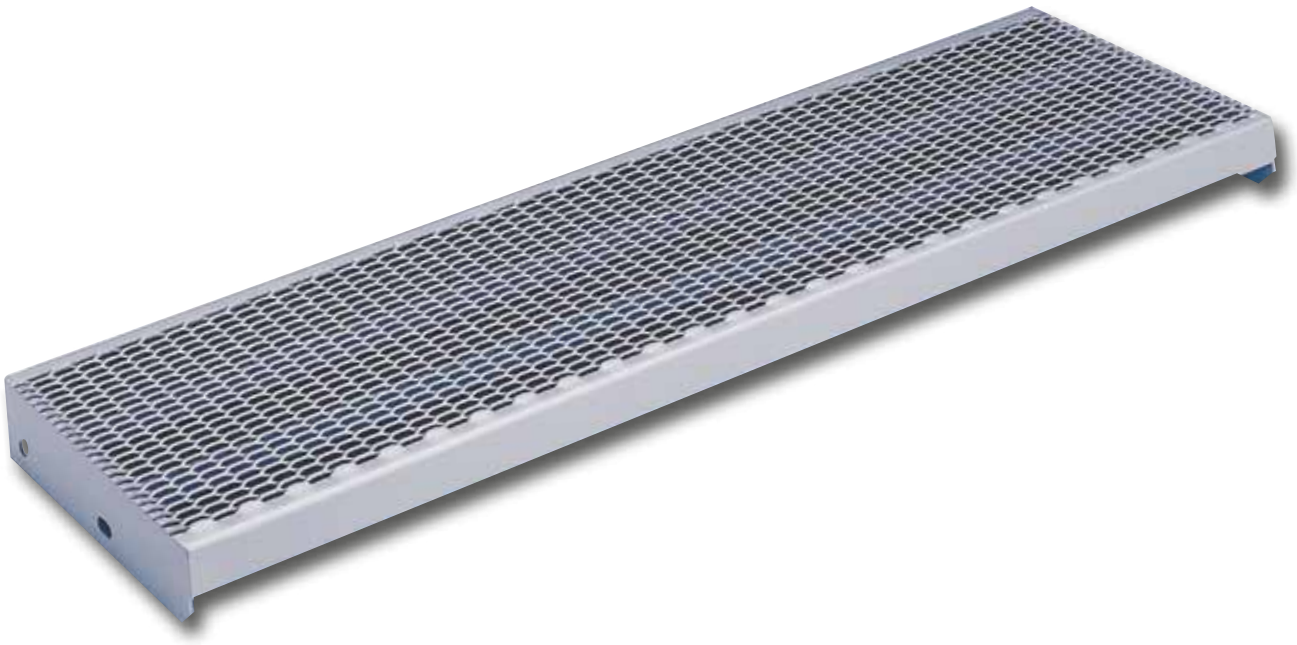
GAMMA Stair tread - SW 300 mm

Certified stair tread

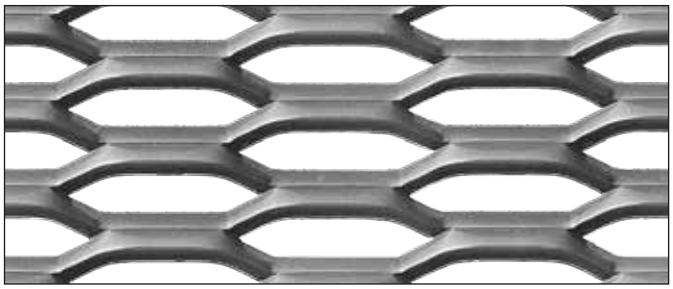
CAPACITY Kg/m²	CAPACITY KG
408	408
DISTRIBUTED	CONCENTRATED

CATEGORIES
A - B1 - B2 - C1 - C2 - D1

The load categories are listed in table 3.1.II illustrating Technical Building Standards under Ministerial Decree dated 17/01/2018 (page 91)

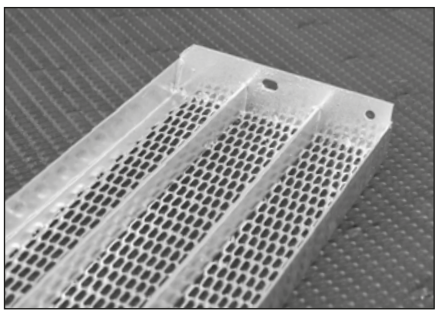


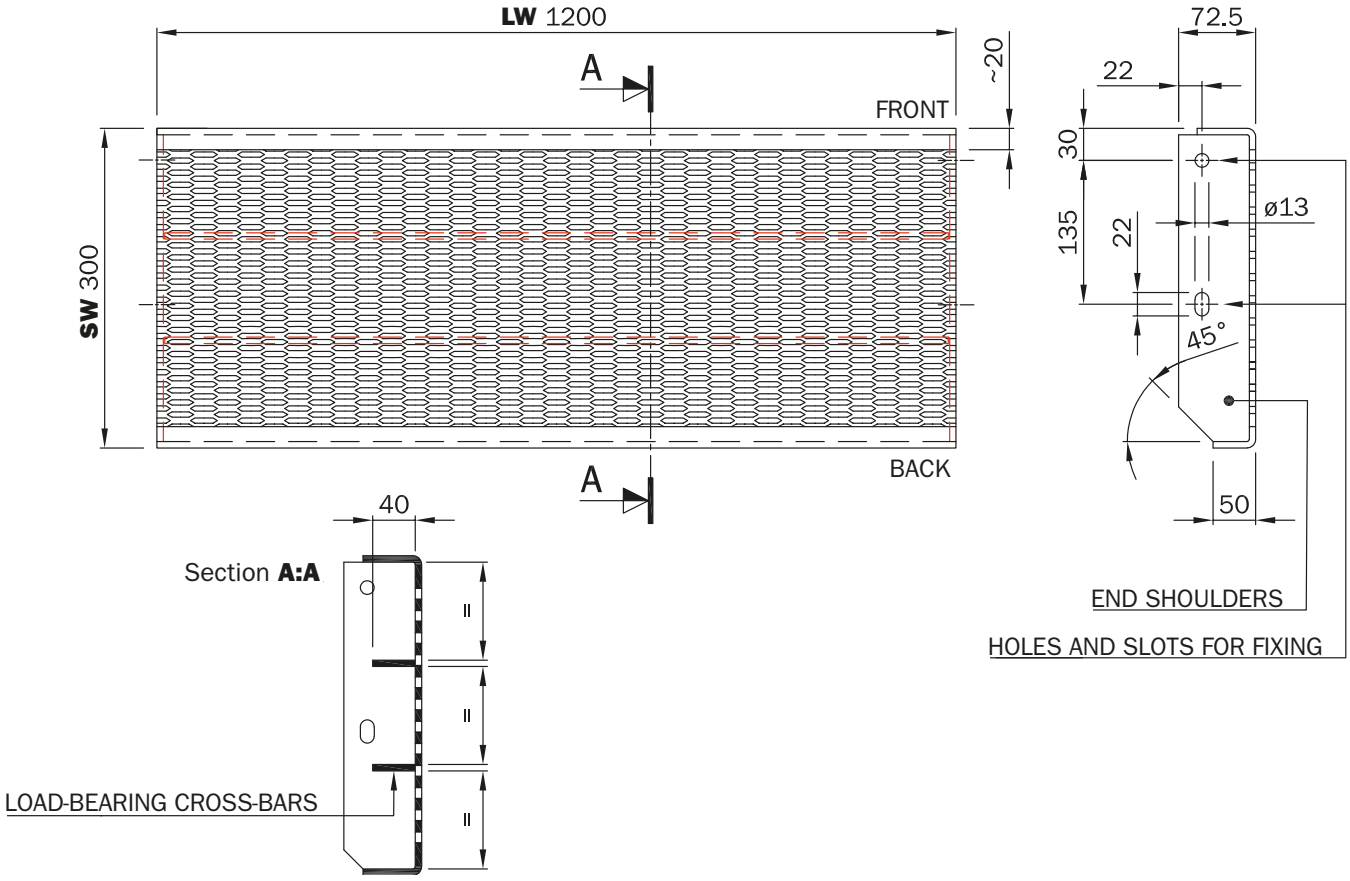
Actual mesh dimensions



Fils 20 Mesh
LW 45 x SW 15 (11.4)▲ - w 3.3 x t 2.5 mm

▲ *actual SW*



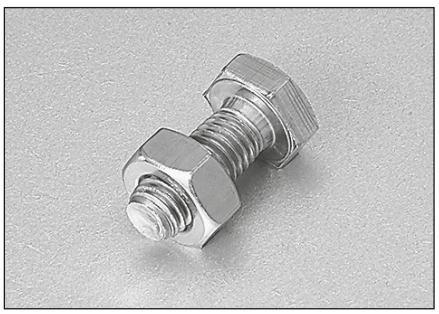


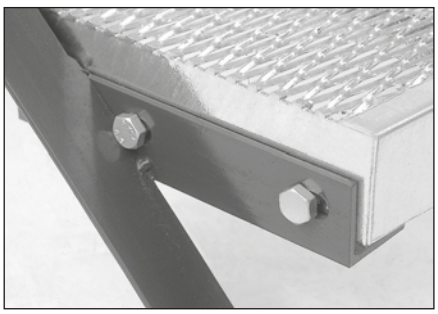
GAMMA	LW	SW	H	Weight kg/each AC	Weight kg/each ACZ	Load capacity Kg/m² distributed	Load capacity Kg concentrated
	1200	300	72.5	10.0	11.0	408	408

Values in mm.
We can make customized stair treads upon request.
AC - Carbon Steel
ACZ - Hot-dip galvanised Carbon Steel

Stair tread bolted fixing system
hole Ø 13 mm
slot 13 x 22 mm

Bolt M12 x 30 mm underhead





INDUSTRIA Stair tread - SW 250 mm

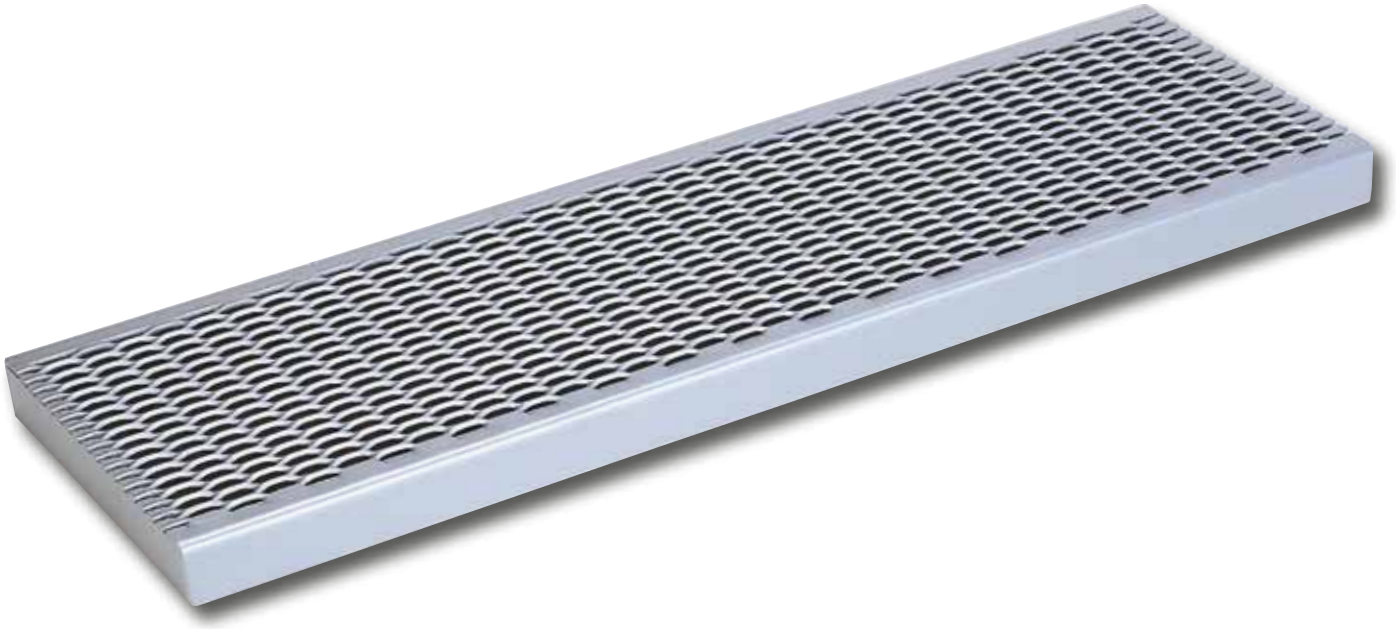
Certified stair tread

CAPACITY Kg/m² 408 DISTRIBUTED

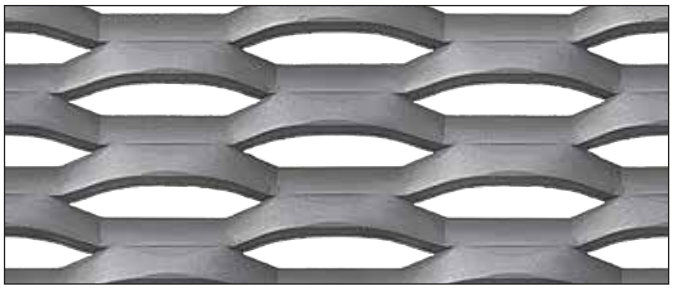
CAPACITY KG 408 CONCENTRATED

CATEGORIES A - B1 - B2 - C1 - C2 - D1

The load categories are listed in table 3.1.II illustrating Technical Building Standards under Ministerial Decree dated 17/01/2018 (page 91)



Actual mesh dimensions

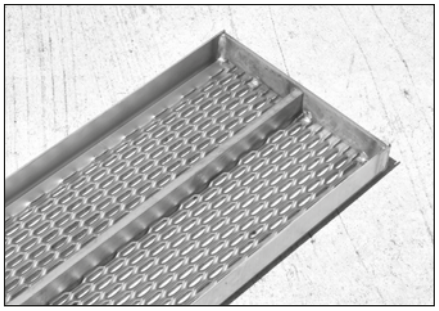


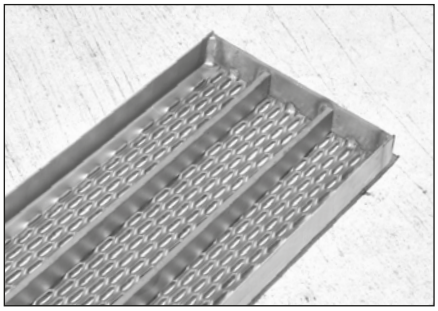
Reference Standard DIN 51130 (From page 42)

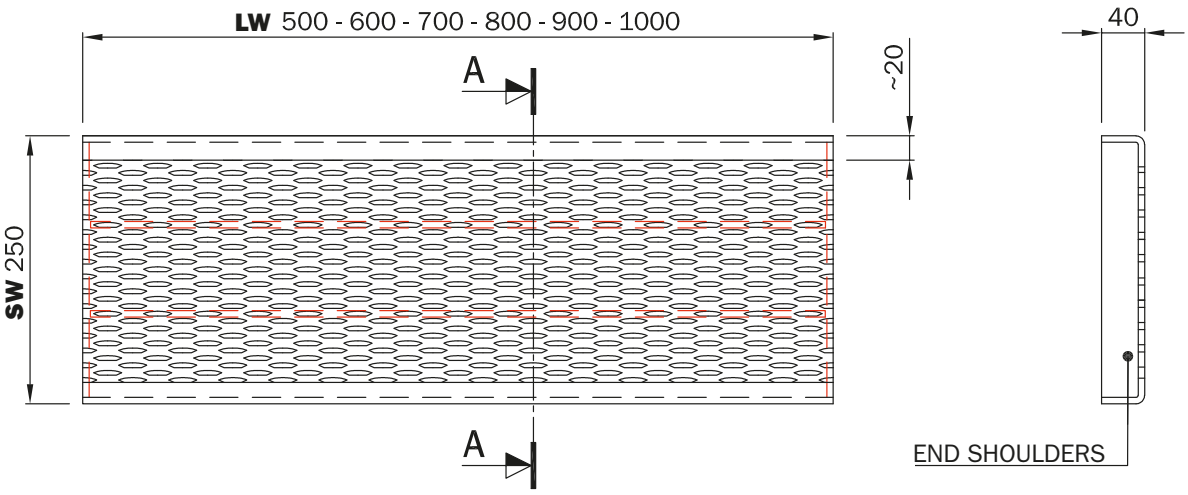
Fils 21 Mesh

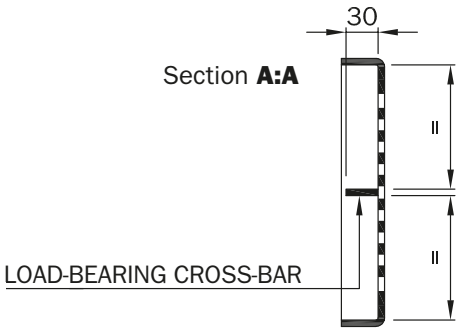
LW 45 x SW 15 (13.4)▲ - w 5 x t 2.5 mm

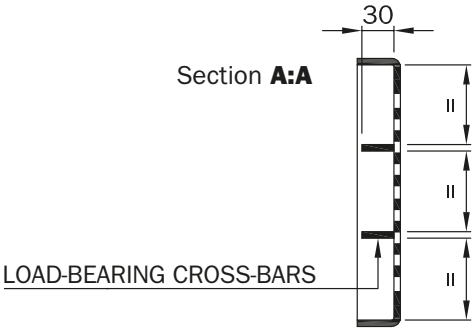
▲ *actual SW*











INDUSTRIA	LW	SW	H	Weight kg/each AC	Weight kg/each ACZ	Load capacity Kg/m² distributed	Load capacity Kg concentrated
	500	250	40	3.8	4.2	408	408
	600	250	40	4.4	4.9	408	408
	700	250	40	5.5	6.1	408	408
	800	250	40	6.9	7.6	408	408
	900	250	40	9.0	9.9	408	408
	1000	250	40	10.8	11.9	408	408

Values in mm.
We can make stair treads to order upon request.
AC - Carbon Steel
ACZ - Hot-dip galvanised Carbon Steel

Stair tread welding fixing system according to ST 117

Welding procedure and welders qualified in accordance with UNI EN 287/1 UNI EN 15614 - 1

INDUSTRIA Stair tread - SW 300 mm

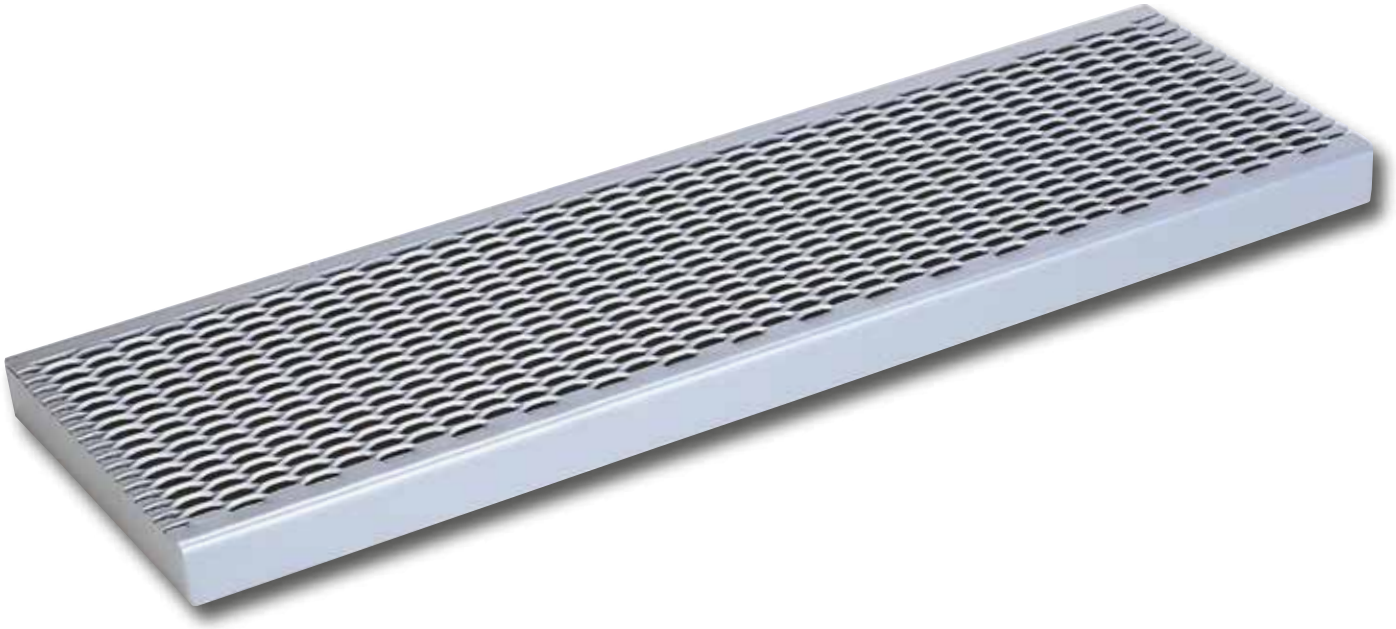
Certified stair tread

CAPACITY Kg/m²
408
DISTRIBUTED

CAPACITY KG
408
CONCENTRATED

CATEGORIES
A - B1 - B2 - C1 - C2 - D1

The load categories are listed in table 3.1.II illustrating Technical Building Standards under Ministerial Decree dated 17/01/2018 (page 91)



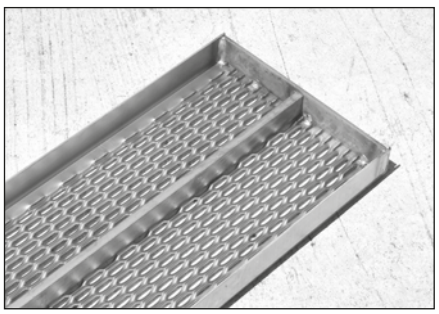
Actual mesh dimensions

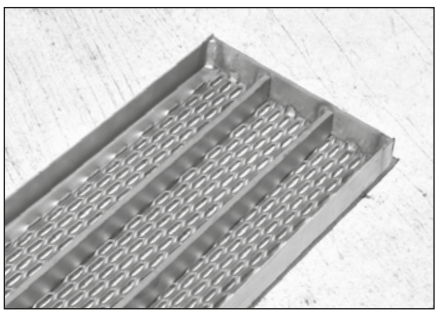
Reference Standard DIN 51130 (From page 42)

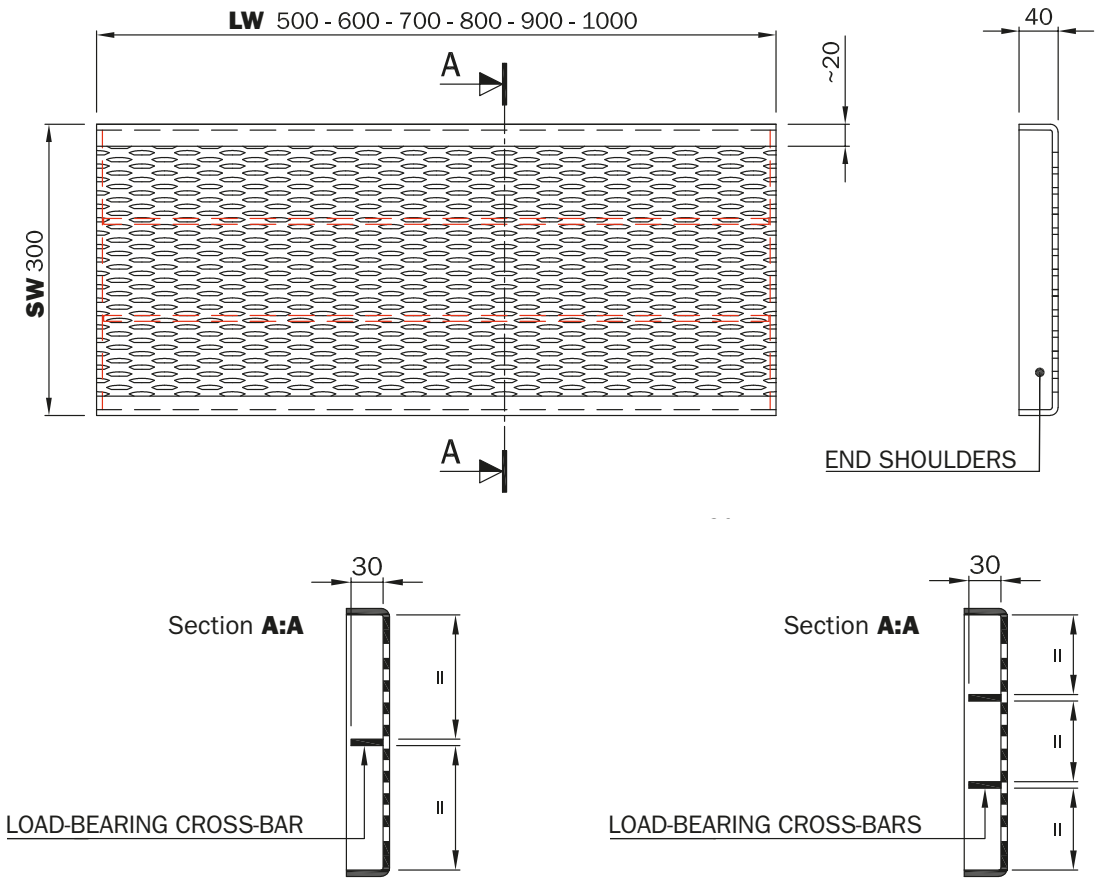
Fils 21 Mesh

LW 45 x SW 15 (13.4)▲ - w 5 x t 2.5 mm

▲ *actual SW*







INDUSTRIA	LW	SW	H	Weight kg/each AC	Weight kg/each ACZ	Load capacity Kg/m² distributed	Load capacity Kg concentrated
	500	300	40	4.3	4.8	408	408
	600	300	40	5.0	5.5	408	408
	700	300	40	6.1	6.8	408	408
	800	300	40	7.7	8.5	408	408
	900	300	40	9.8	10.8	408	408
	1000	300	40	11.7	12.9	408	408

Values in mm.
We can make customized stair treads upon request.
AC - Carbon Steel
ACZ - Hot-dip galvanised Carbon Steel

Stair tread welding fixing system according to ST 117

Welding procedure and welders qualified in accordance with UNI EN 287/1 UNI EN 15614 - 1

SICURFILS 4 Stair tread - SW 300 mm

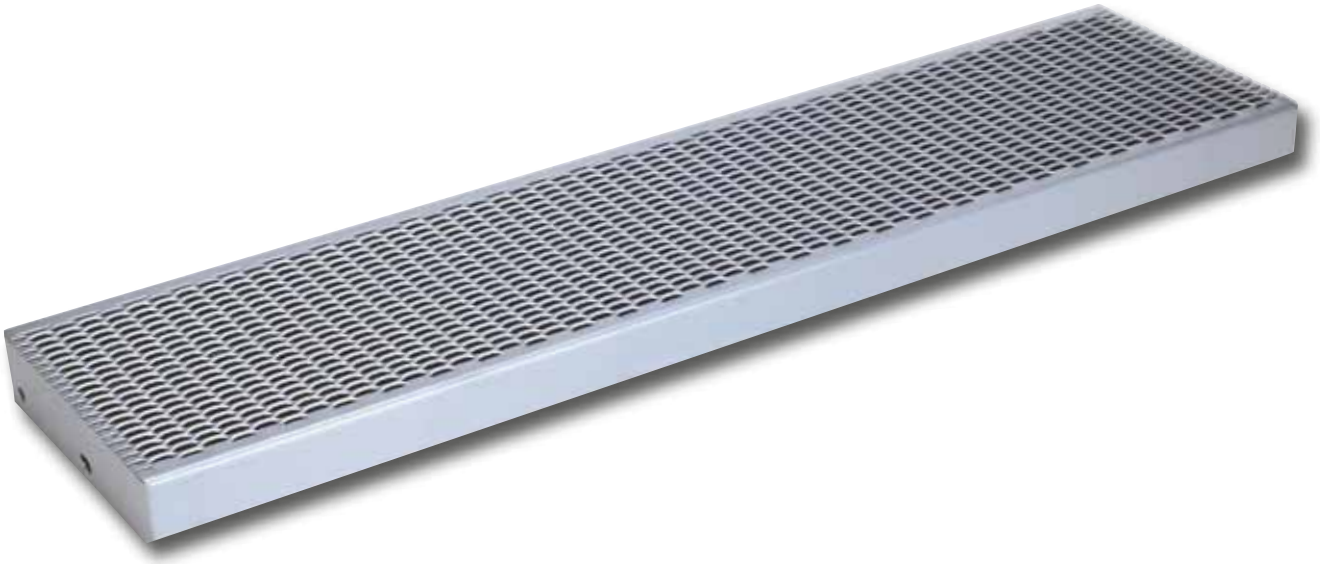
Certified stair tread

CAPACITY Kg/m² 408 DISTRIBUTED

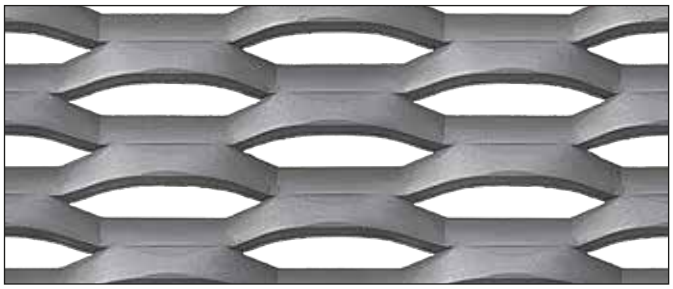
CAPACITY KG 408 CONCENTRATED

CATEGORIES A - B1 - B2 - C1 - C2 - D1

The load categories are listed in table 3.1.II illustrating Technical Building Standards under Ministerial Decree dated 17/01/2018 (page 91)



Actual mesh dimensions

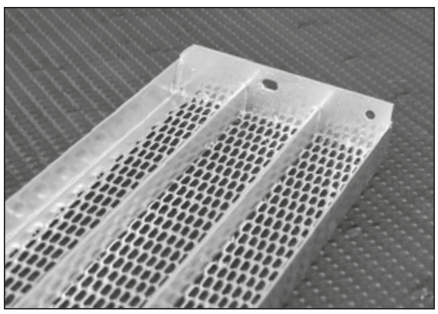


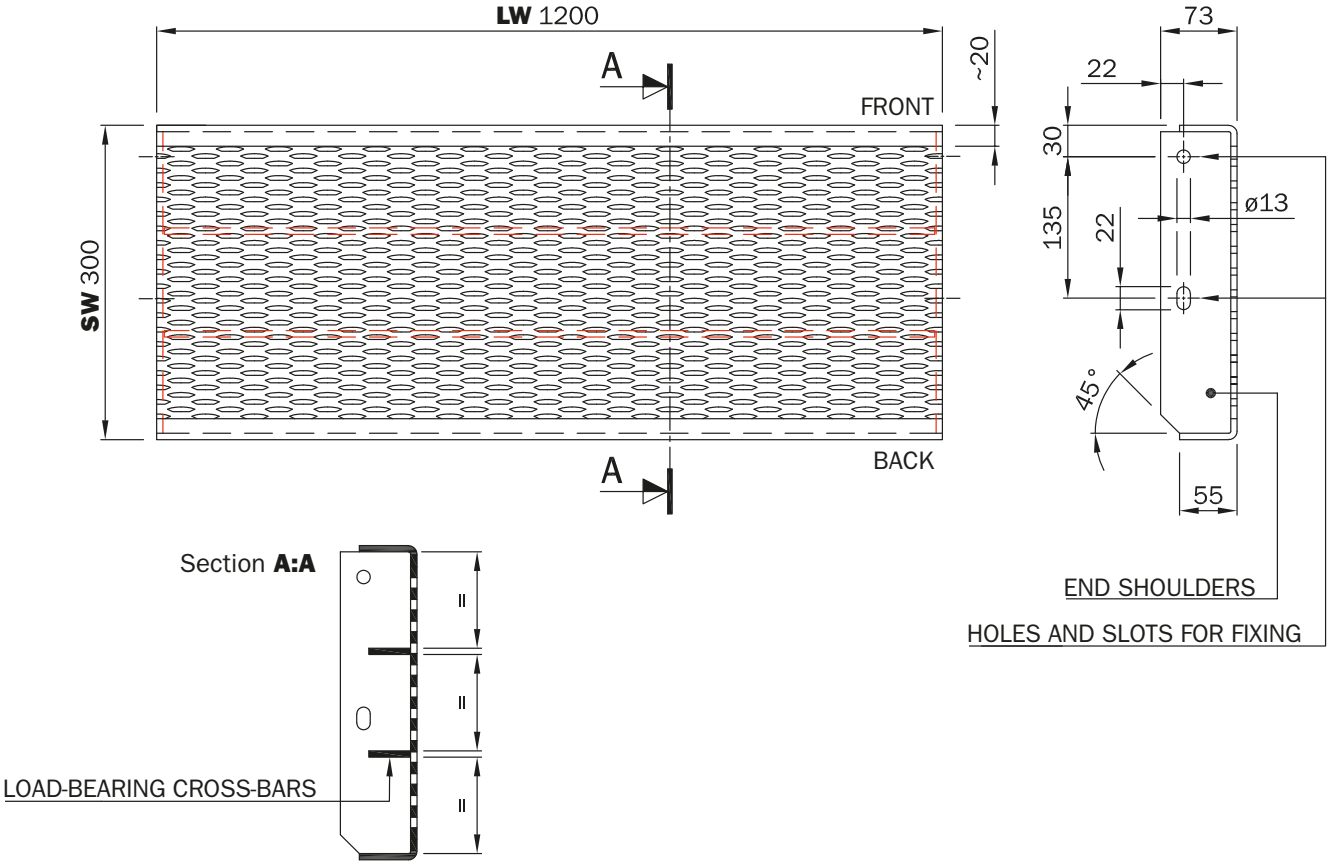
Reference Standard DIN 51130 (From page 42)

Fils 21 Mesh

LW 45 x SW 15 (13.4)▲ - w 5 x t 3 mm

▲ *actual SW*



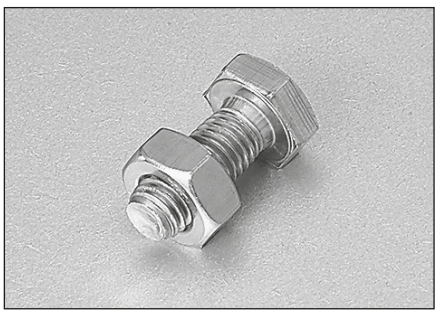


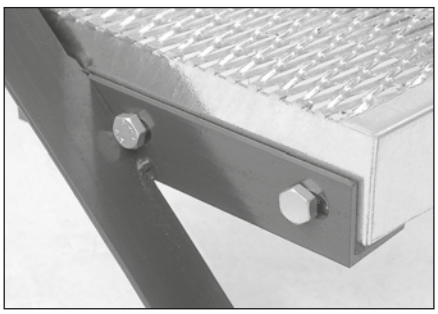
SICURFILS 4	LW	SW	H	Weight kg/each AC	Weight kg/each ACZ	Load capacity Kg/m² distributed	Load capacity Kg concentrated
	1200	300	73	13.0	14.5	408	408

Values in mm.
We can make customized stair treads upon request.
AC - Carbon Steel
ACZ - Hot-dip galvanised Carbon Steel

Stair tread bolted fixing system
hole Ø 13 mm
slot 13 x 22 mm

Bolt M12 x 30 mm underhead





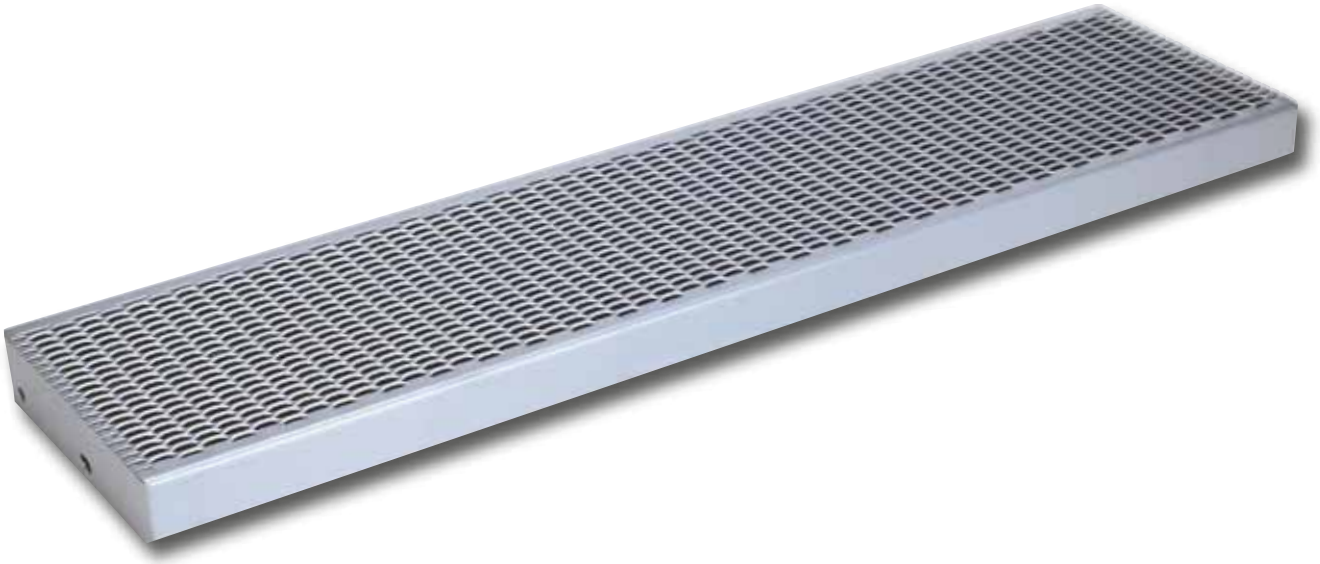
SICURFILS 5 Stair tread - SW 300 mm

Certified stair tread

CAPACITY Kg/m²	CAPACITY KG
510	510
DISTRIBUTED	CONCENTRATED

CATEGORIES
A - B1 - B2 - C1 - C2 - D1

The load categories are listed in table 3.1.II illustrating Technical Building Standards under Ministerial Decree dated 17/01/2018 (page 91)

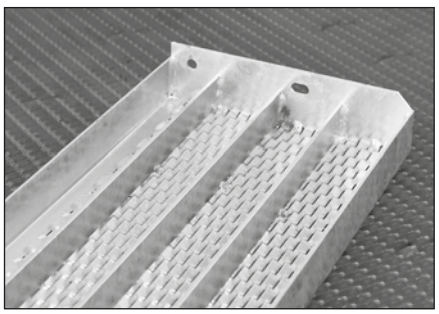


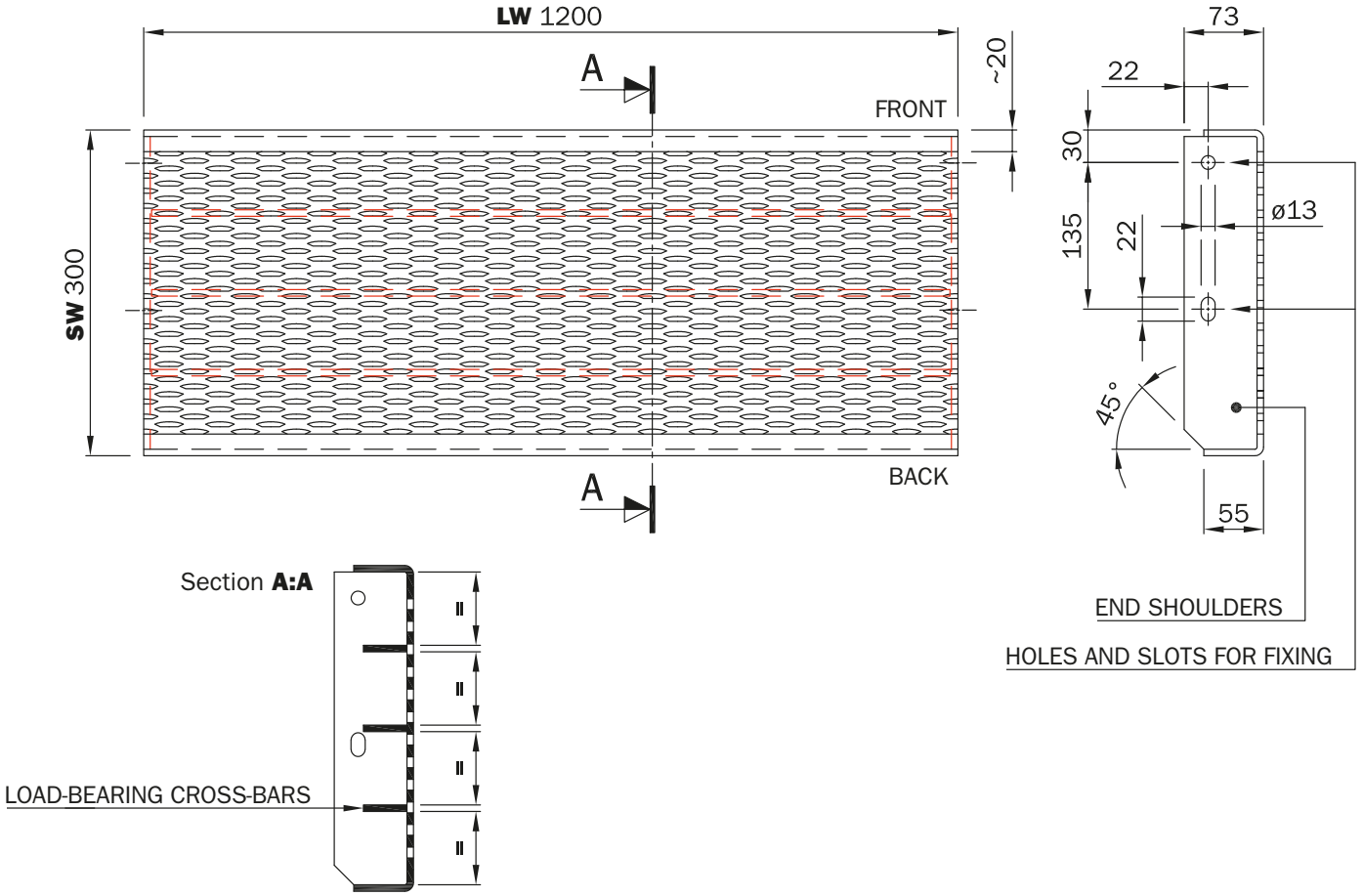
Actual mesh dimensions

Reference Standard DIN 51130 (From page 42)

Fils 21 Mesh
LW 45 x SW 15 (13.4)▲ - w 5 x t 3 mm

▲ *actual SW*



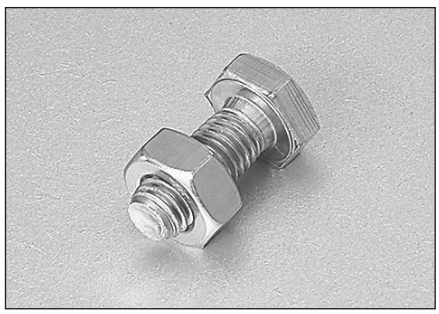


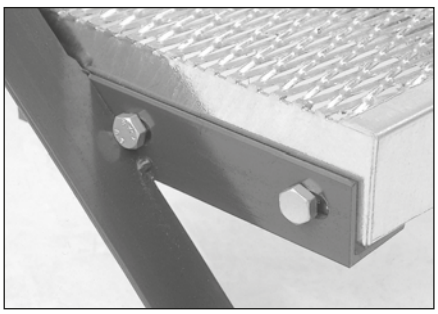
SICURFILS 5	LW	SW	H	Weight kg/each AC	Weight kg/each ACZ	Load capacity Kg/m² distributed	Load capacity Kg concentrated
	1200	300	73	15.3	16.8	510	510

Values in mm.
We can make customized stair treads upon request.
AC - Carbon Steel
ACZ - Hot-dip galvanised Carbon Steel

Stair tread bolted fixing system
hole Ø 13 mm
slot 13 x 22 mm

Bolt M12 x 30 mm underhead





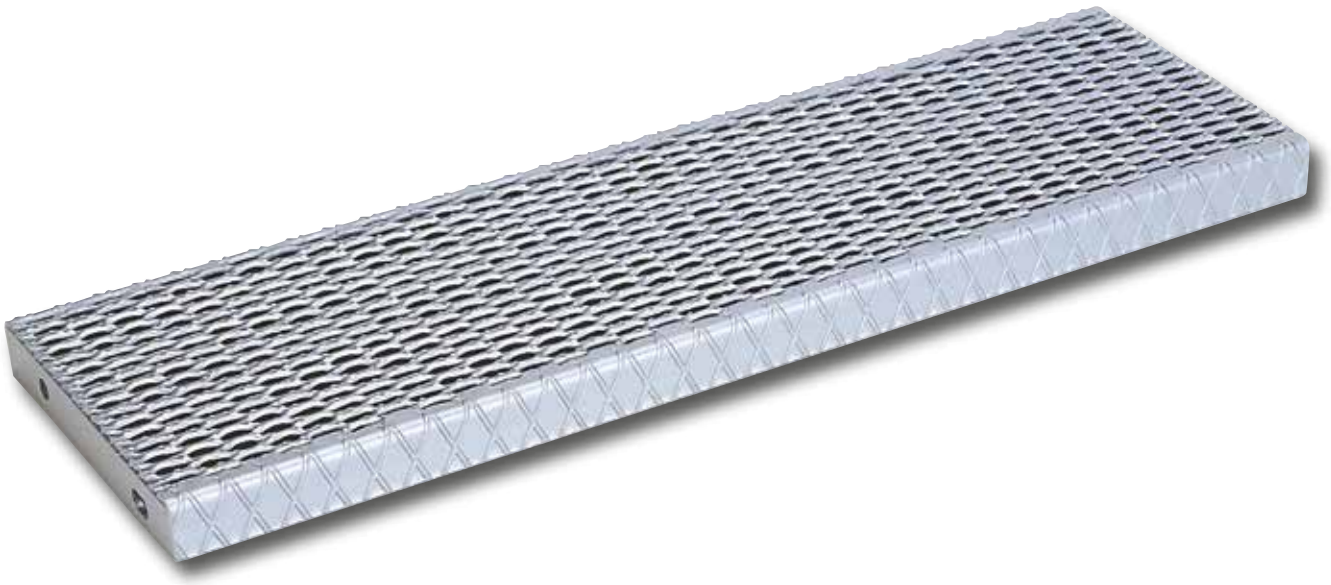
SUPERFILS 5 Stair tread - SW 250 mm

Certified stair tread

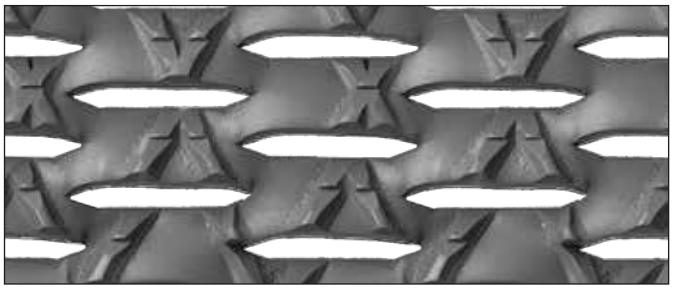
CAPACITY Kg/m²	CAPACITY KG
408	408
DISTRIBUTED	CONCENTRATED

CATEGORIES
A - B1 - B2 - C1 - C2 - D1

The load categories are listed in table 3.1.II illustrating Technical Building Standards under Ministerial Decree dated 17/01/2018 (page 91)

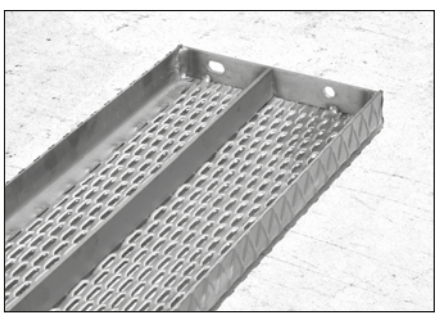


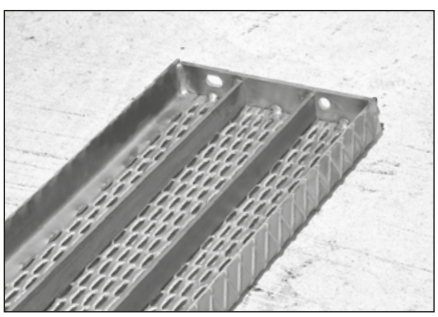
Actual mesh dimensions

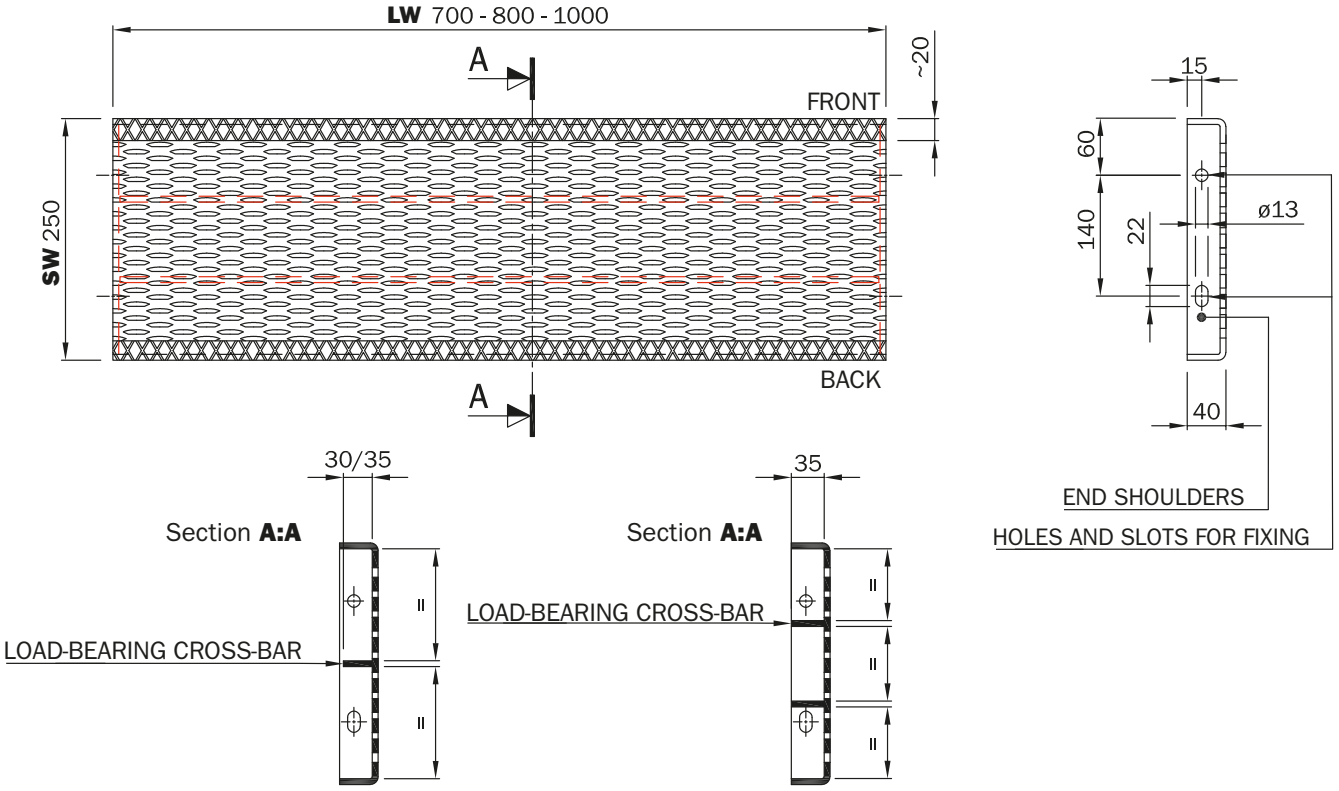


Fils 21 S Mesh - Ribbed
LW 45 x SW 15 (13.4)▲ - w 5 x t 3 mm

▲ *actual SW*





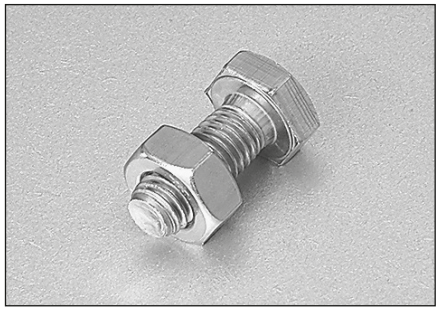


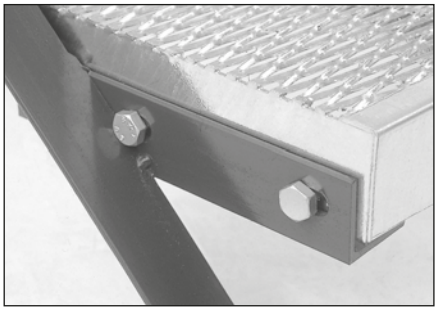
SUPERFILS	LW	SW	H	Weight kg/each AC	Weight kg/each ACZ	Load capacity Kg/m² distributed	Load capacity Kg concentrated
	700	250	40	6.8	7.5	408	408
	800	250	40	8.0	8.8	408	408
	1000	250	40	10.9	12.0	408	408

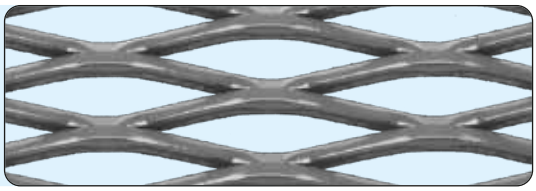
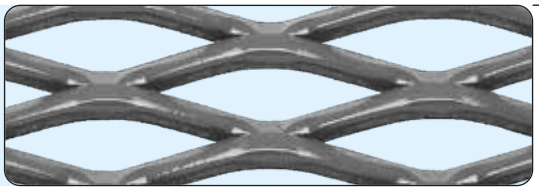
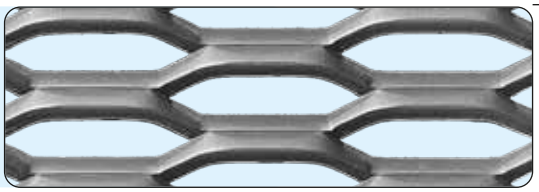
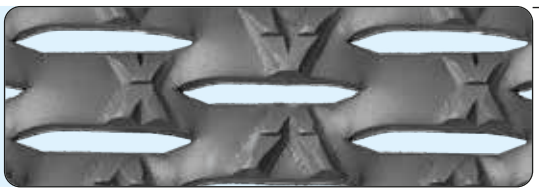
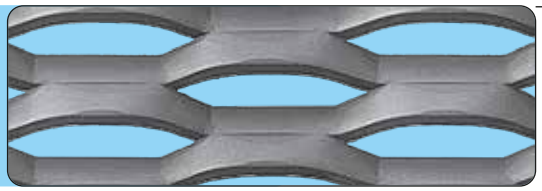
Values in mm.
We can make customized stair treads upon request.
AC - Carbon Steel
ACZ - Hot-dip galvanised Carbon Steel

Stair tread bolted fixing system
hole Ø 13 mm
slot 13 x 22 mm

Bolt M12 x 30 mm underhead





STAIR TREAD	MESH	SIZE mm
ECO Type 43 - t 2		LW 500 - 600 - 700 x SW **200** x H 72 LW 800 - 900 - 1000 x SW **250** x H 72
BETA Type 43 - t 3		■ LW 1200 x SW **300** H 73
GAMMA Fils 20 - t 2.5		■ LW 1200 x SW **300** H 72.5
INDUSTRIA Fils 21 - t 2.5		LW 500 - 600 - 700 x SW **250** x H 40 LW 800 - 900 - 1000 x SW **250** x H 40 LW 500 - 600 - 700 x SW **300** x H 40 LW 800 - 900 - 1000 x SW **300** x H 40
SUPERFILS Fils 21 **S** - t 3 **S** = ribbed		LW 700 - 700 - 1000 x SW **250** x H 40
SICURFILS 4 Fils 21 - t 3		■ LW 1200 x SW **300** H 73
SICURFILS 5 Fils 21 - t 3		■ LW 1200 x SW **300** H 73
GRIGLIOFILS Fils 21 - t 3		LW 500 - 600 - 700 x SW **300** x H 60/25 LW 800 - 900 - 1000 x SW **200** x H 60/25 LW 800 - 900 - 1000 x SW **300** x H 60/25 ■ LW 1200 x SW **300** x H 40 ■ also for safety stairs

Thanks to the maximum non-slip coefficient and its characteristics, GRIGLIOFILS stair treads and landings can be used in different ways.

VERTICAL LOAD DISTRIBUTED	VERTICAL LOAD CONCENTRATED	NON-SLIP COEFFICIENT DIRECTION ASCENT - DESCENT	ANTI-HEEL	ANTI-PANIC	FIXING
408 Kg/m²	408 Kg	R12 - R13			Bolts
408 Kg/m²	408 Kg	R12 - R13			Bolts
408 Kg/m²	408 Kg	R12 - R12	✔	✔	Bolts
408 Kg/m²	408 Kg	R13 - R13	✔	✔	Welding
408 Kg/m²	408 Kg	R13 - R13	✔	✔	Bolts
408 Kg/m²	408 Kg	R13 - R13	✔	✔	Bolts
510 Kg/m²	510 Kg	R13 - R13	✔	✔	Bolts
510 Kg/m²	510 Kg	R13 - R13	✔	✔	Bolts

R 13 - R 13
R 12 - R 12
R 12 - R 13

CAPACITY Kg/m²	CAPACITY KG
408 DISTRIBUTED	408 CONCENTRATED

CATEGORIES A - B1 - B2 - C1 - C2 - D1

CAPACITY Kg/m²	CAPACITY KG
510 DISTRIBUTED	510 CONCENTRATED

CATEGORIES C3 - C4 - C5 - D2

DOORMATS

LUSSO Doormat in hot-dip galvanised carbon steel

Type	LW		SW	H	mesh thickness	kg/cad.
Fils 20 Mesh	700	x	350	22	2.0	3.7
	800	x	400	22	2.0	4.7
	1000	x	500	22	2.0	7.0

5 YEARS OF WARRANTY AGAINST RUST AND MECHANICAL DAMAGES

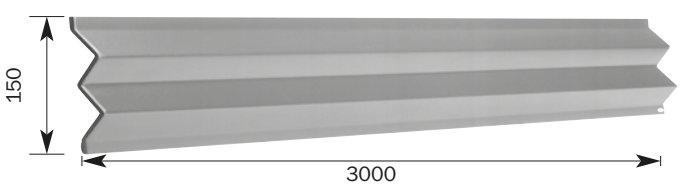
GRIPP Doormat in hot-dip galvanised carbon steel

Type	LW		SW	H	mesh thickness	kg/cad.
Fils 20 Mesh	800	x	400	22	2.0	4.7
	1000	x	500	22	2.0	7.0

5 YEARS OF WARRANTY AGAINST RUST AND MECHANICAL DAMAGES

Baseboard

Standard dimension mm	Thickness	kg/cad.
150 x 3000	2.5	9.6

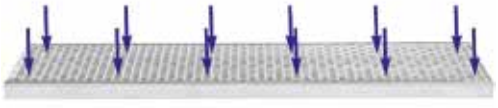


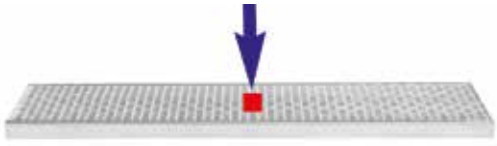
NOTES RELATED TO THE VERIFICATION OF LOAD CAPACITY OF STAIR TREADS AND LANDINGS

The text of Ministerial Decree dated 17/01/2018 (NTC 2018) states that the load conditions evenly distributed are necessary but not sufficient - it is always necessary to verify the concentrated load with the relevant and suitable footprint. Therefore, it is important to verify:

- the unit of measurement of certified loads
- loads the footprint measurement used to verify the concentrated load

	DISTRIBUTED VERTICAL LOADS (EVENLY DISTRIBUTED) RELATING TO STAIRS	**CONCENTRATED VERTICAL LOADS** (ON A FOTTPRINT **50x50 mm**) RELATING TO STAIRS
Walking Landing	**408** [Kg / m²] 4.00 [kN/m²]	**408** [Kg] 4.00 [kN]
Walking Landing	**510** [Kg / m²] 5.00 [kN/m²]	**510** [Kg] 5.00 [kN]
Alfa gratings	**50** [Kg / m²] 5.00 [kN/m²]	**120** [Kg] 5.00 [kN]

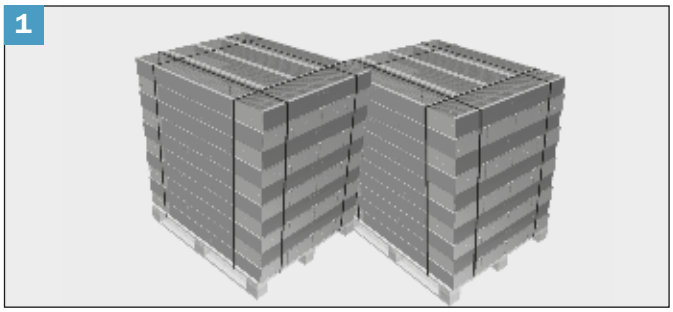




PRODUCT USE INFORMATION

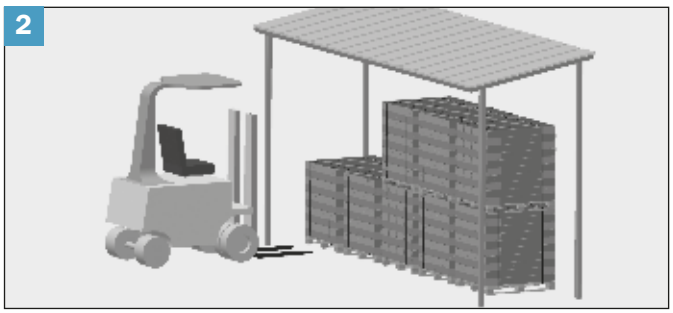
Instructions for transport, storage, fixing and products as usage according to the Consolidated Act on Construction

1



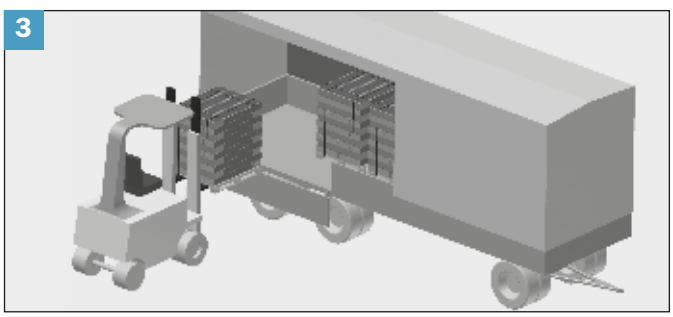
To make transport operations more efficient, we use single pallet storage layer by layer. Each pallet is strapped to ensure safety during loading and unloading processes.

2

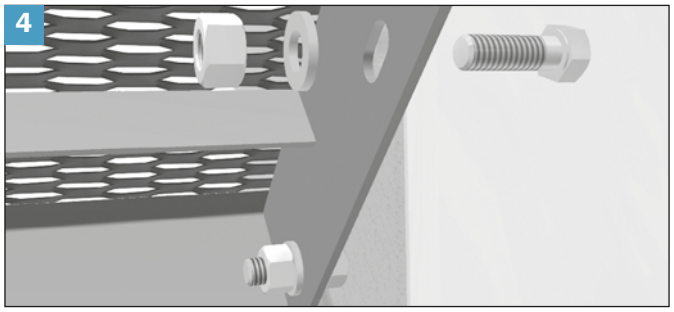


Up to a maximum of two pallets can be stacked for storage in a protected location.

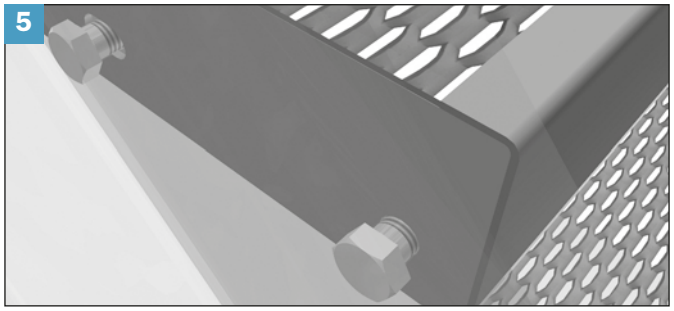
3



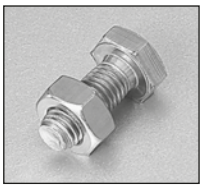
Is highly recommended to use a fork lift to handle correctly the stored products.



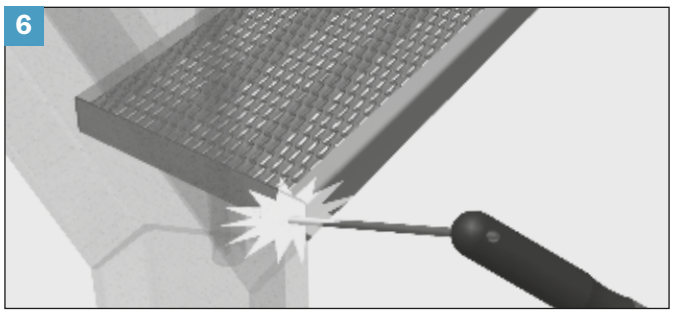
The Beta, Eco, Gamma, Sicurfils and Superfils steps are fitted by inserting them into the respective risers with anti-tamper attachment, obtained through bolting into the hole and slot provided to allow for the necessary flexibility in placement.



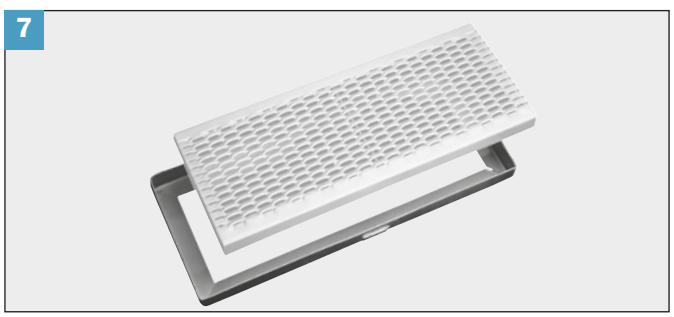
The relevant landings are placed in the appropriate positions.



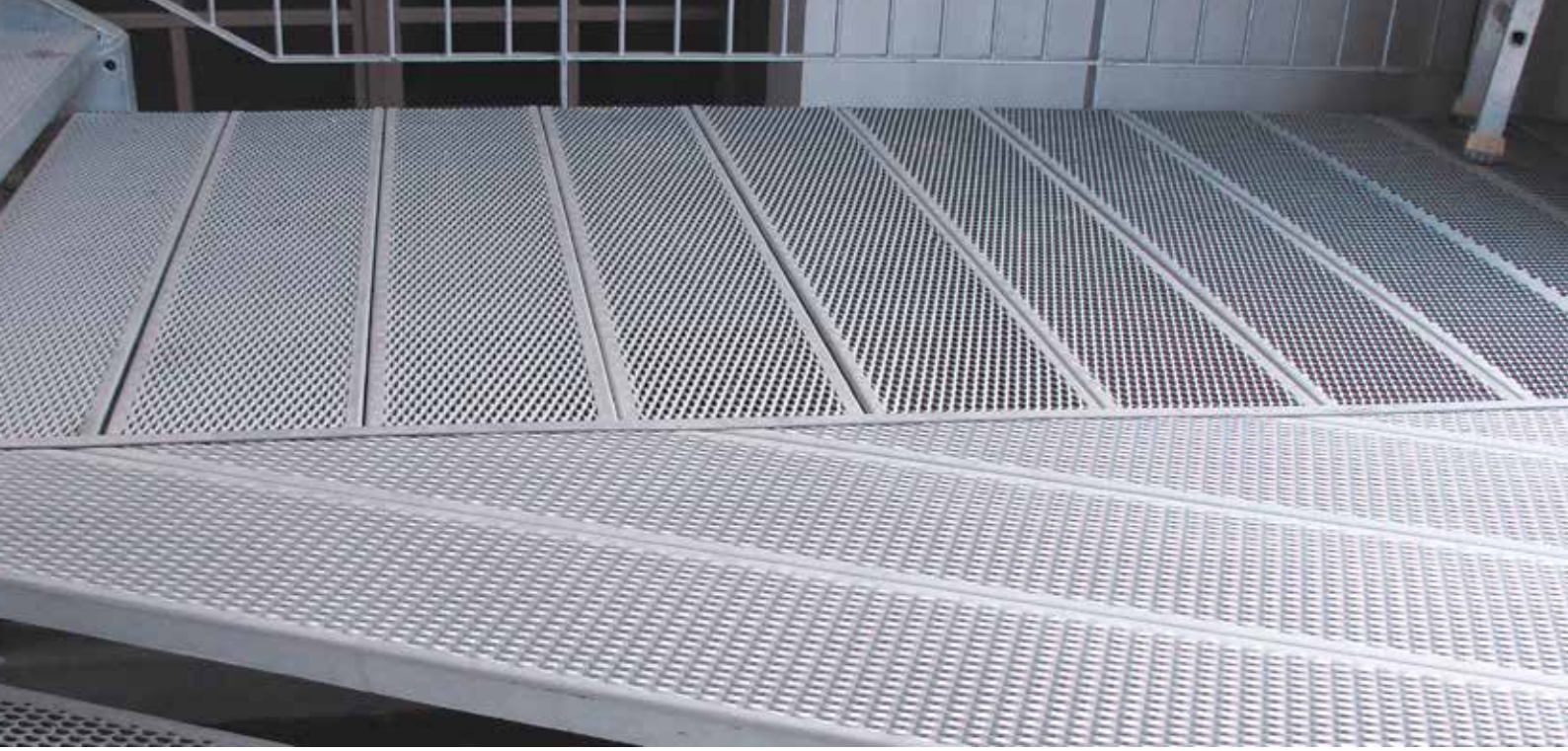
Bolt and nut M10 x 25 mm underhead (in hot-dip galvanised carbon steel or in AISI 304)



The **INDUSTRIA** step is fitted by soldering, as indicated on pages 79-81, according to in-house specification ST 117 Guidance on soldering specifications.



Upon request, the grates, manhole covers, and pedestrian manhole covers are housed in the appropriate location with the support frame.



Fils 21 Landings

landings

grilles

manhole covers/gully covers

GRIGLIOFILS Landing

Certified Landing

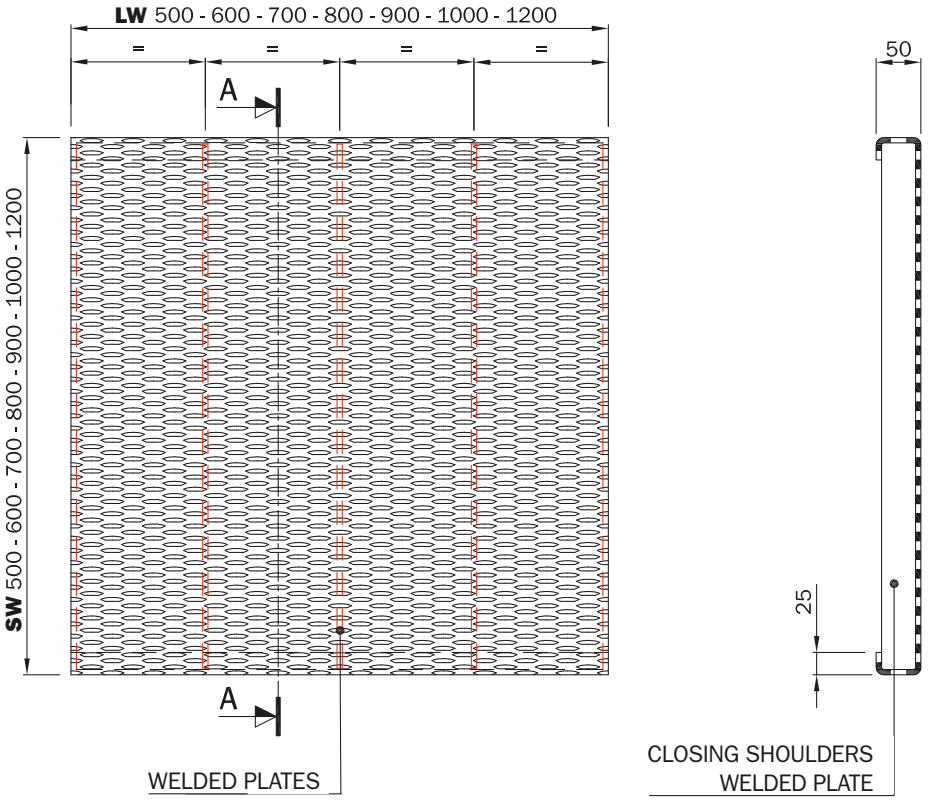
CAPACITY Kg/m² 510 DISTRIBUTED

CAPACITY KG 510 CONCENTRATED

CATEGORIES C3 - C4 - C5 - D2

The load categories are listed in table 3.1.II illustrating Technical Building Standards under Ministerial Decree dated 17/01/2018 (page 91)

LW 500 N° 1 cross-bars
LW 600 N° 1 cross-bars
LW 700 N° 1 cross-bars
LW 800 N° 2 cross-bars
LW 900 N° 3 cross-bars
LW 1000 N° 3 cross-bars
LW 1200 N° 3 cross-bars



Landing GRIGLIOFILS	LW	SW	H	Weight kg/each AC	Weight kg/each ACZ	Load capacity Kg/m² distributed	Load capacity Kg concentrated
	500	500	50/25	8.0	8.0	510	510
	600	600	50/25	10.5	11.6	510	510
	700	700	50/25	13.5	14.9	510	510
	800	800	50/25	18.0	19.8	510	510
	900	900	50/25	23.5	25.9	510	510
	1000	1000	50/25	27.6	30.4	510	510
	1200	1200	50/25	37.3	41.1	510	510

Values in mm.
We can make customized stair treads upon request.
AC - Carbon Steel
ACZ - Hot-dip galvanised Carbon Steel

Actual mesh dimensions

certified non-slip to Standard DIN 51130 R13 α > 35°

Reference Standard DIN 51130 (From page 42)

Fils 21 Mesh
LW 45 x SW 15 (13.4)▲ - w 5 x t 3 mm

▲ *actual SW*

The load categories are listed in table 3.1.II illustrating Technical Building Standards under Ministerial Decree dated 17/01/2018 (page 91)

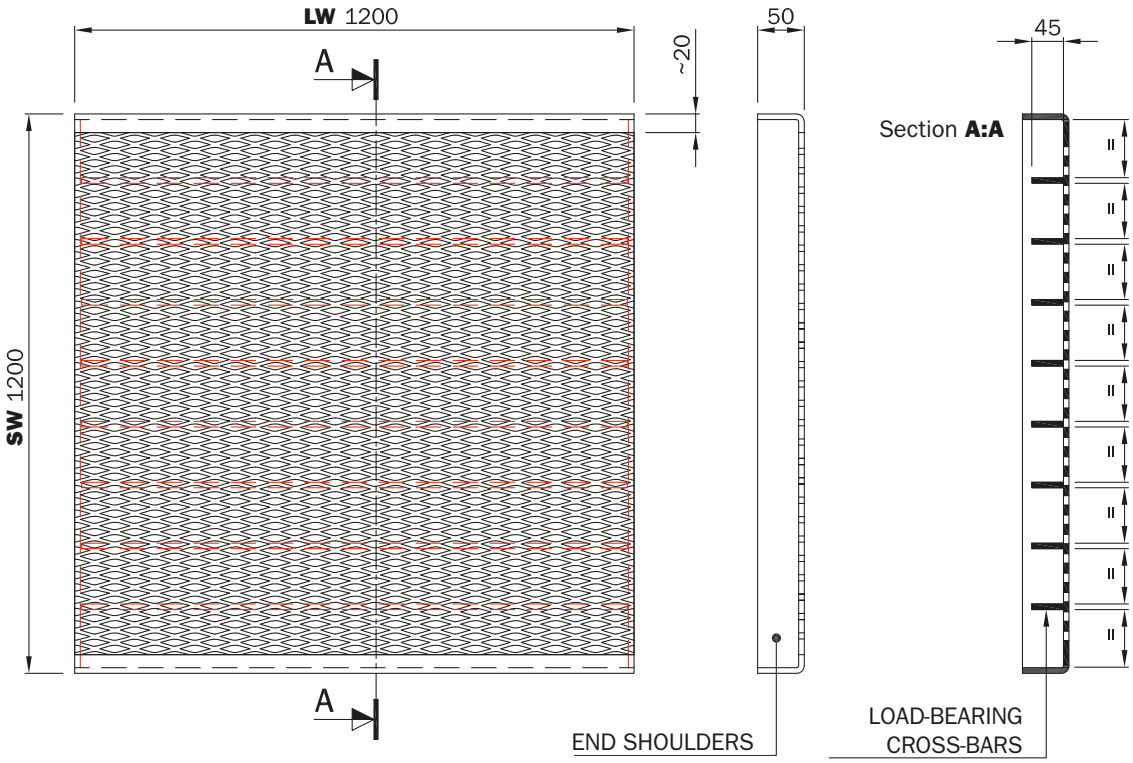
CAPACITY Kg/m² **408** DISTRIBUTED

CAPACITY KG **408** CONCENTRATED

CATEGORIES A - B1 - B2 - C1 - C2 - D1

BETA Landing

Certified Landing



Landing BETA	LW	SW	H	Weight kg/each AC	Weight kg/each ACZ	Load capacity Kg/m² distributed	Load capacity Kg concentrated
	1200	1200	50	40.0	43.0	408	408

Values in mm.
We can make customized stair treads upon request.
AC - Carbon Steel
ACZ - Hot-dip galvanised Carbon Steel

Actual mesh dimensions

Reference Standard DIN 51130 (From page 42)

Type 43 Mesh
LW 43 x SW 10 (13.3)▲ - w 3 x t 3 mm

▲ *actual SW*

ECO Landing

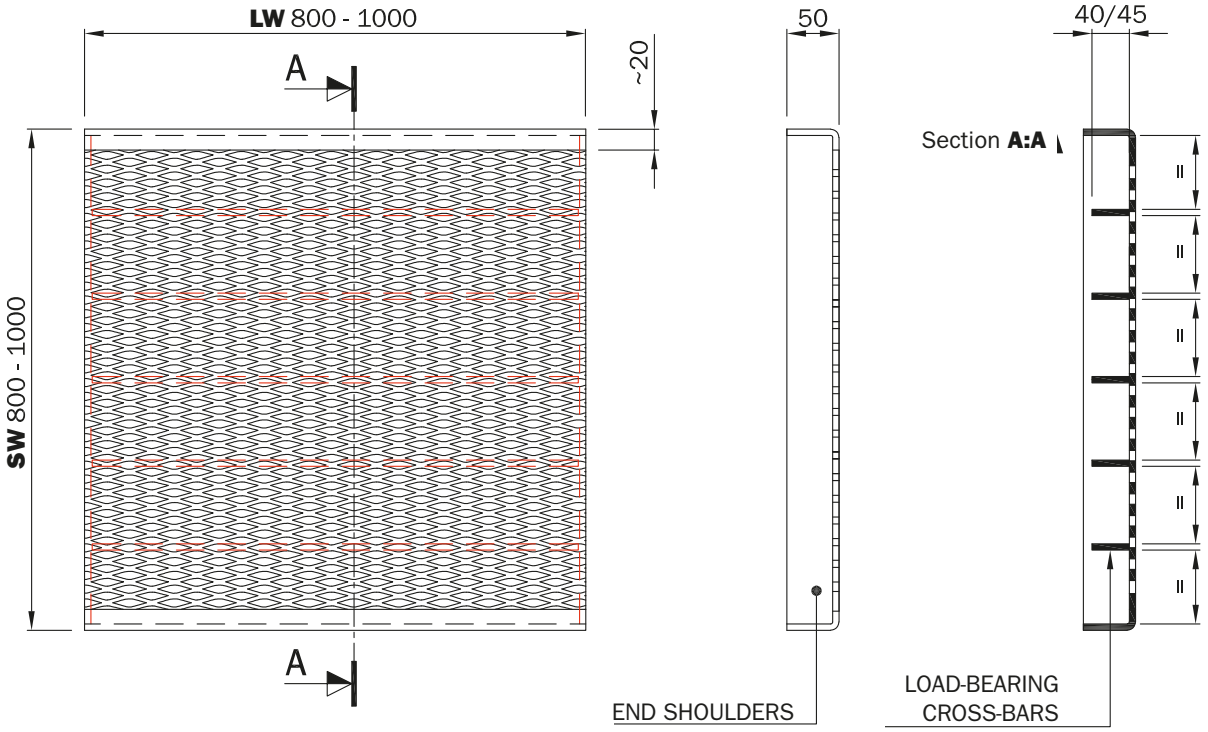
Certified Landing

CAPACITY Kg/m² **408** DISTRIBUTED

CAPACITY KG **408** CONCENTRATED

CATEGORIES
A - B1 - B2 - C1 - C2 - D1

The load categories are listed in table 3.1.II illustrating Technical Building Standards under Ministerial Decree dated 17/01/2018 (page 91)



Landing ECO	LW	SW	H	Weight kg/each AC	Weight kg/each ACZ	Load capacity Kg/m² distributed	Load capacity Kg concentrated
	800	800	50	23.5	25.9	408	408
	1000	1000	50	26.9	29.5	408	408

Values in mm.
We can make customized stair treads upon request.
AC - Carbon Steel
ACZ - Hot-dip galvanised Carbon Steel

Actual mesh dimensions

certified non-slip to Standard DIN 51130
R13
α > 35°

Reference Standard DIN 51130 (From page 42)

Type 43 Mesh
LW 43 x SW 10 (13.3)▲ - w 3 x t 3 mm

▲ *actual SW*

GAMMA Landing

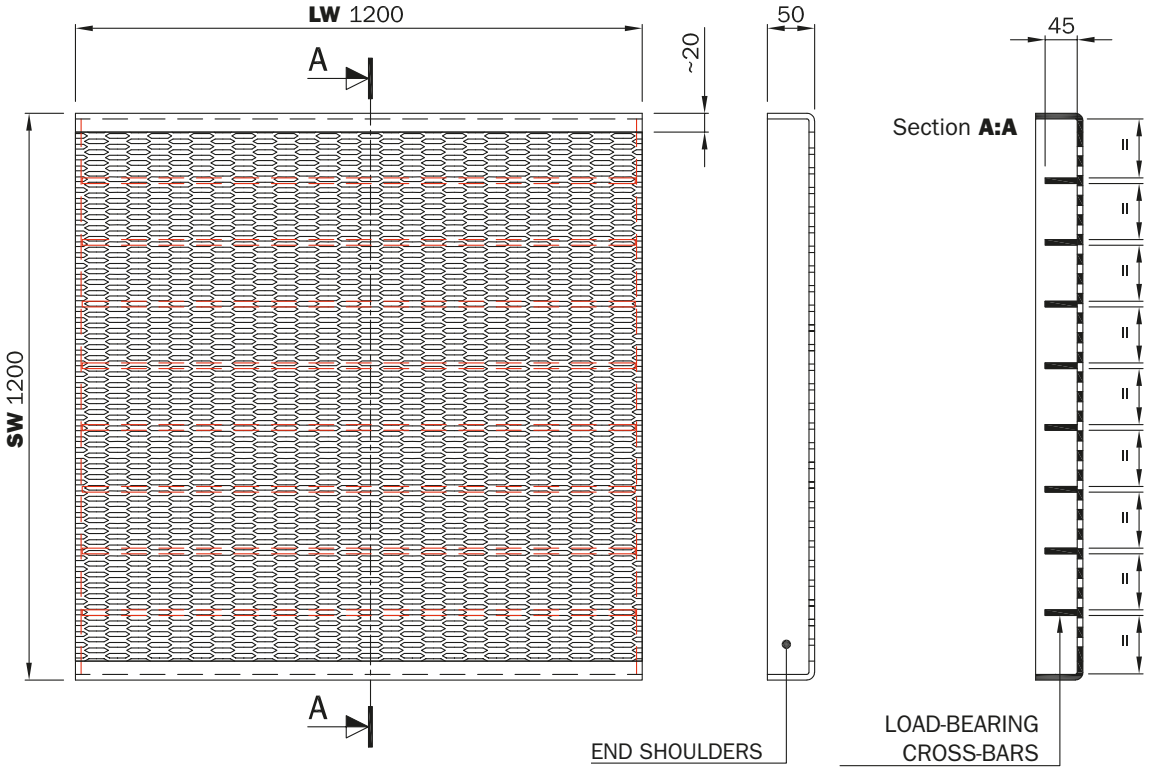
Certified Landing

The load categories are listed in table 3.1.II illustrating Technical Building Standards under Ministerial Decree dated 17/01/2018 (page 91)

CAPACITY Kg/m² **408** **DISTRIBUTED**

CAPACITY KG **408** **CONCENTRATED**

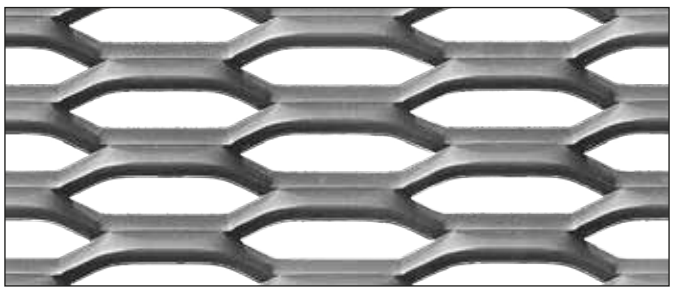
CATEGORIES
A - B1 - B2 - C1 - C2 - D1



Landing GAMMA	LW	SW	H	Weight kg/each AC	Weight kg/each ACZ	Load capacity Kg/m² distributed	Load capacity Kg concentrated
	1200	1200	50	40.0	44.0	408	408

Values in mm.
We can make customized stair treads upon request.
AC - Carbon Steel
ACZ - Hot-dip galvanised Carbon Steel

Actual mesh dimensions



Fils 20 Mesh
LW 45 x SW 15 (11.4)▲ - w 3.3 x t 2.5 mm

▲ *actual SW*

INDUSTRIA Landing

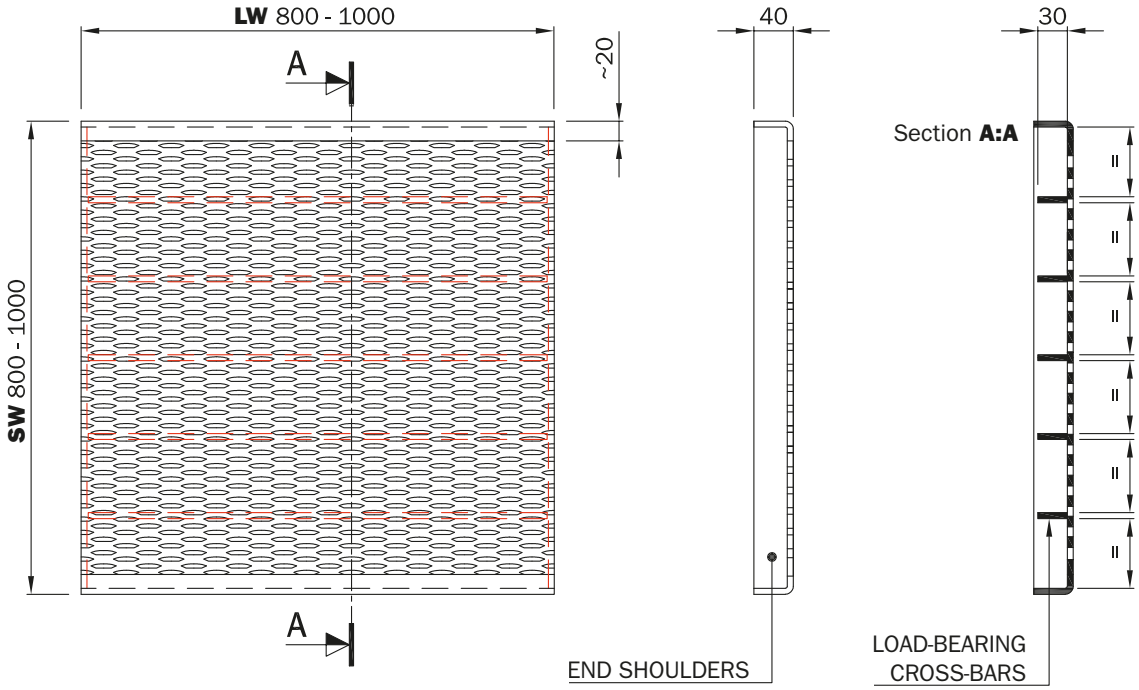
Certified Landing

CAPACITY Kg/m² 408 DISTRIBUTED

CAPACITY KG 408 CONCENTRATED

CATEGORIES
A - B1 - B2 - C1 - C2 - D1

The load categories are listed in table 3.1.II illustrating Technical Building Standards under Ministerial Decree dated 17/01/2018 (page 91)



Landing INDUSTRIA	LW	SW	H	Weight kg/each AC	Weight kg/each ACZ	Load capacity Kg/m² distributed	Load capacity Kg concentrated
	800	800	40	23.0	25.3	408	408
	1000	1000	40	37.0	40.7	408	408

Values in mm.
We can make customized stair treads upon request.
AC - Carbon Steel
ACZ - Hot-dip galvanised Carbon Steel

Actual mesh dimensions

certified non-slip to Standard DIN 51130
R13
α > 35°

Reference Standard DIN 51130 (From page 42)

Type 43 Mesh
LW 43 x SW 10 (13.3)▲ - w 3 x t 3 mm

▲ *actual SW*

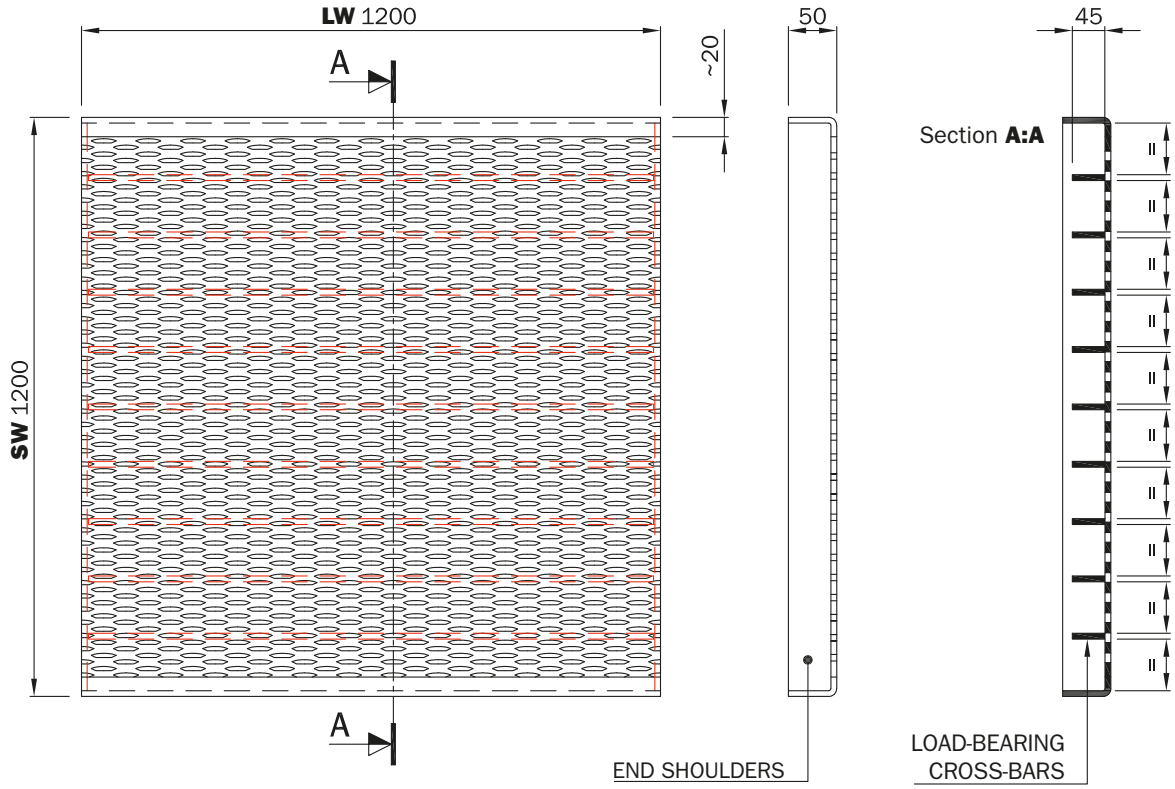
SICURFILS 4/5 Landing

Certified Landing

The load categories are listed in table 3.1.II illustrating Technical Building Standards under Ministerial Decree dated 17/01/2018 (page 91)

CAPACITY Kg/m²	CAPACITY KG
510	510
DISTRIBUTED	CONCENTRATED

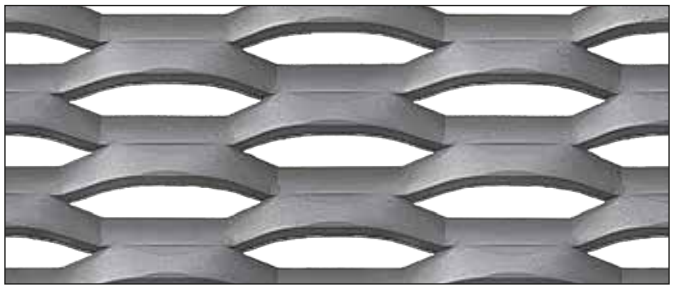
CATEGORIES
C3 - C4 - C5 - D2



Landing SICURFILS 4/5	LW	SW	H	Weight kg/each AC	Weight kg/each ACZ	Load capacity Kg/m² distributed	Load capacity Kg concentrated
	1200	1200	50	55.0	61.0	510	510

Values in mm.
We can make customized stair treads upon request.
AC - Carbon Steel
ACZ - Hot-dip galvanised Carbon Steel

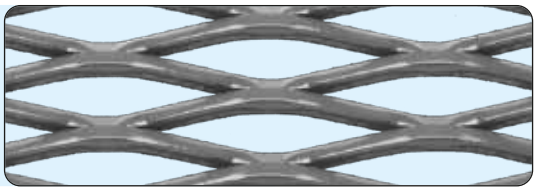
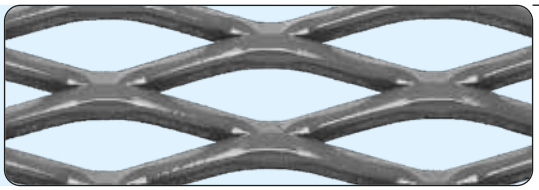
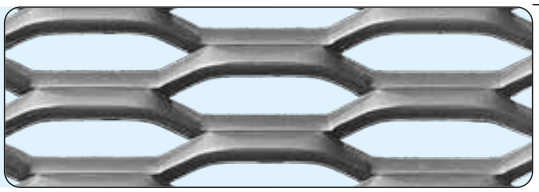
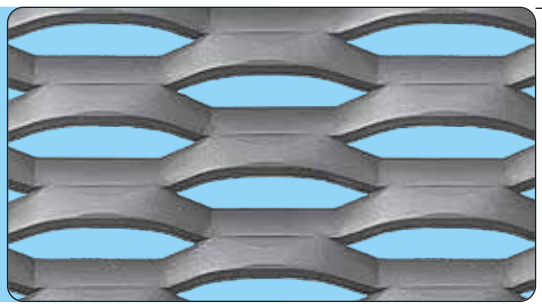
Actual mesh dimensions



Reference Standard DIN 51130 (From page 42)

Fils 21 Mesh
LW 45 x SW 15 (13.4)▲ - w 5 x t 3 mm

▲ *actual SW*

LANDING	MESH	SIZE mm
ECO Type 43 - t 3		LW 800 x SW 800 x H 50 LW 1000 x SW 1000 x H 50
BETA Type 43 - t 3		■ LW 1200 x SW 1200 x H 50
GAMMA Fils 20 - t 2.5		■ LW 1200 x SW 1200 x H 50
INDUSTRIA Fils 21 - t 3		LW 800 x SW 800 x H 40 LW 1000 x SW 1000 x H 40
SICURFILS 4/5 Fils 21 - t 3		■ LW 1200 x SW 1200 x H 50
GRIGLIOFILS Fils 21 - t 3		LW 500 x SW 500 x H 50/25 LW 600 x SW 600 x H 50/25 LW 700 x SW 700 x H 50/25 LW 800 x SW 800 x H 50/25 LW 900 x SW 900 x H 50/25 LW 1000 x SW 1000 x H 50/25 ■ LW 1200 x SW 1200 x H 50/25

■ also for safety stairs

VERTICAL LOAD DISTRIBUTED	VERTICAL LOAD CONCENTRATED	NON-SLIP COEFFICIENT DIRECTION ASCENT - DESCENT	ANTI-HEEL	ANTI-PANIC	FIXING
408 Kg/m²	408 Kg	R12 - R13			Support/join
408 Kg/m²	408 Kg	R12 - R13			Support/join
408 Kg/m²	408 Kg	R12 - R12	✔	✔	Support/join
408 Kg/m²	408 Kg	R13 - R13	✔	✔	Support/join
510 Kg/m²	510 Kg	R13 - R13	✔	✔	Support/join
510 Kg/m²	510 Kg	R13 - R13	✔	✔	Support/join

R 13 - R 13
R 12 - R 12
R 12 - R 13

CAPACITY Kg/m²	CAPACITY KG
408 DISTRIBUTED	408 CONCENTRATED

CATEGORIES A - B1 - B2 - C1 - C2 - D1

CAPACITY Kg/m²	CAPACITY KG
510 DISTRIBUTED	510 CONCENTRATED

CATEGORIES C3 - C4 - C5 - D2

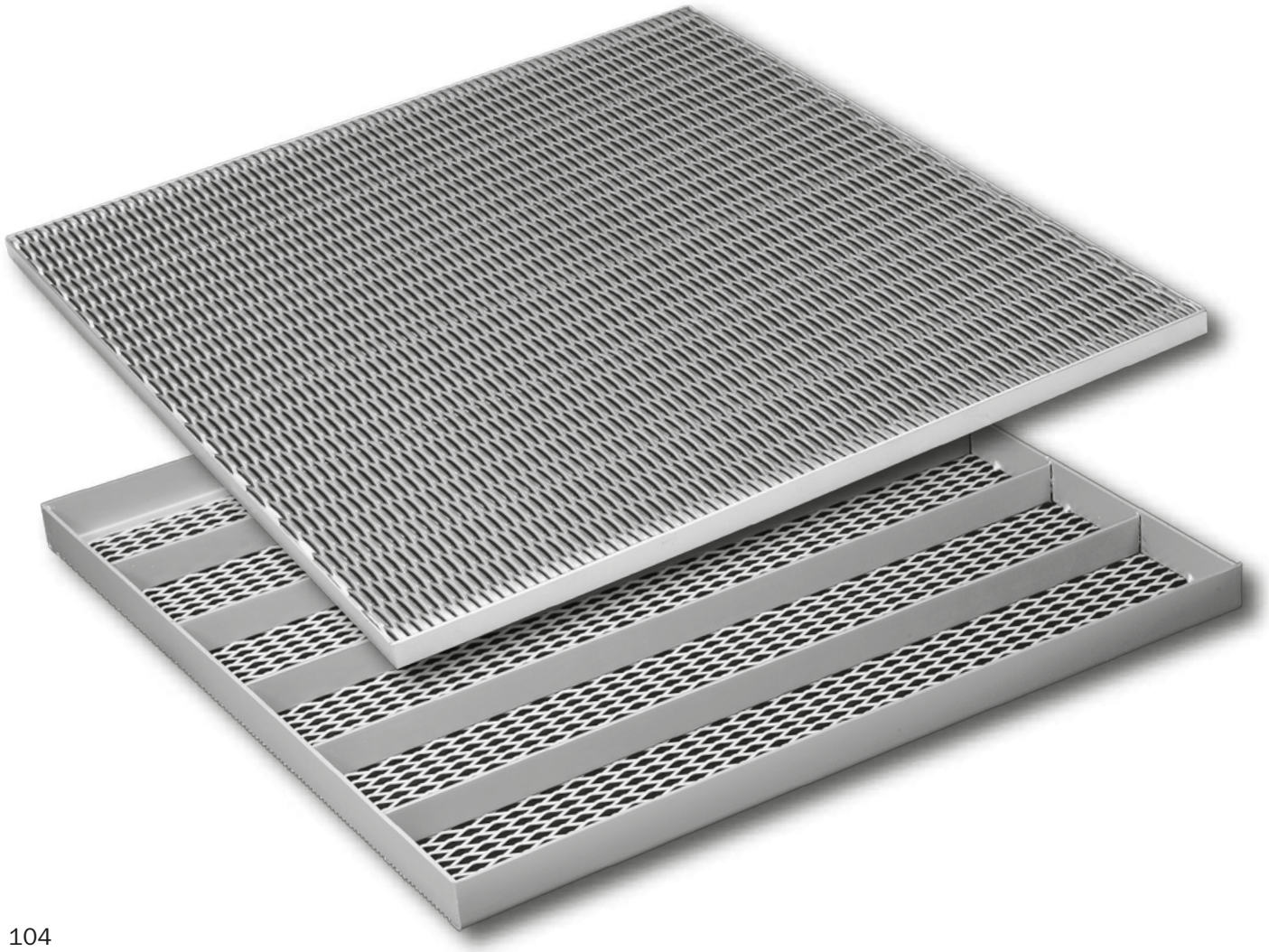
GRILLES WITH SUPPORT FRAMES

Grilles for cellars and hollow spaces

Our grilles are made from FILS expanded metal and come with a side frame and reinforcement plates of proportionate dimensions, ready to use.

There are different possible uses, in particular:

- wall cavity spaces
- inspection walkways
- civil and industrial walking surfaces
- ventilation outlets
- duct covers.



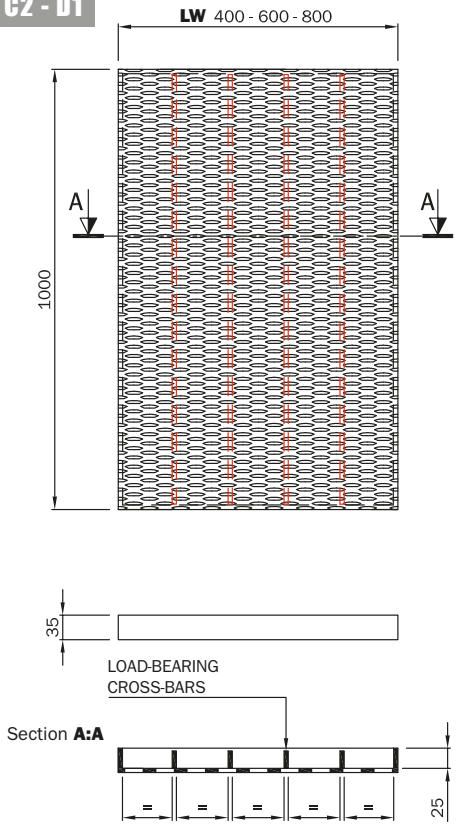
The load categories are listed in table 3.1.II illustrating Technical Building Standards under Ministerial Decree dated 17/01/2018 (page 91)

CAPACITY Kg/m² 408 DISTRIBUTED

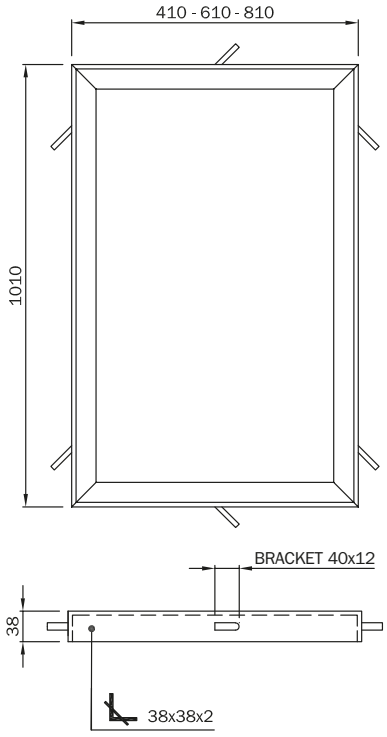
CAPACITY KG 408 CONCENTRATED

CATEGORIES A - B1 - B2 - C1 - C2 - D1

FILS/21 MESH



SUPPORT FRAME



Mesh	LW	SW	H	Weight kg/each AC	Weight kg/each ACZ	Load capacity Kg/m² distributed	Load capacity Kg concentrated
Fils 21	400 x	1000	35	/	19.0	408	408
t 3	600 x	1000	35	/	27.4	408	408
	800 x	1000	35	/	36.0	408	408
Frame	410 x	1010	38	/	3.2		
38x38x2	610 x	1010	38	/	3.6		
	810 x	1010	38	/	4.1		

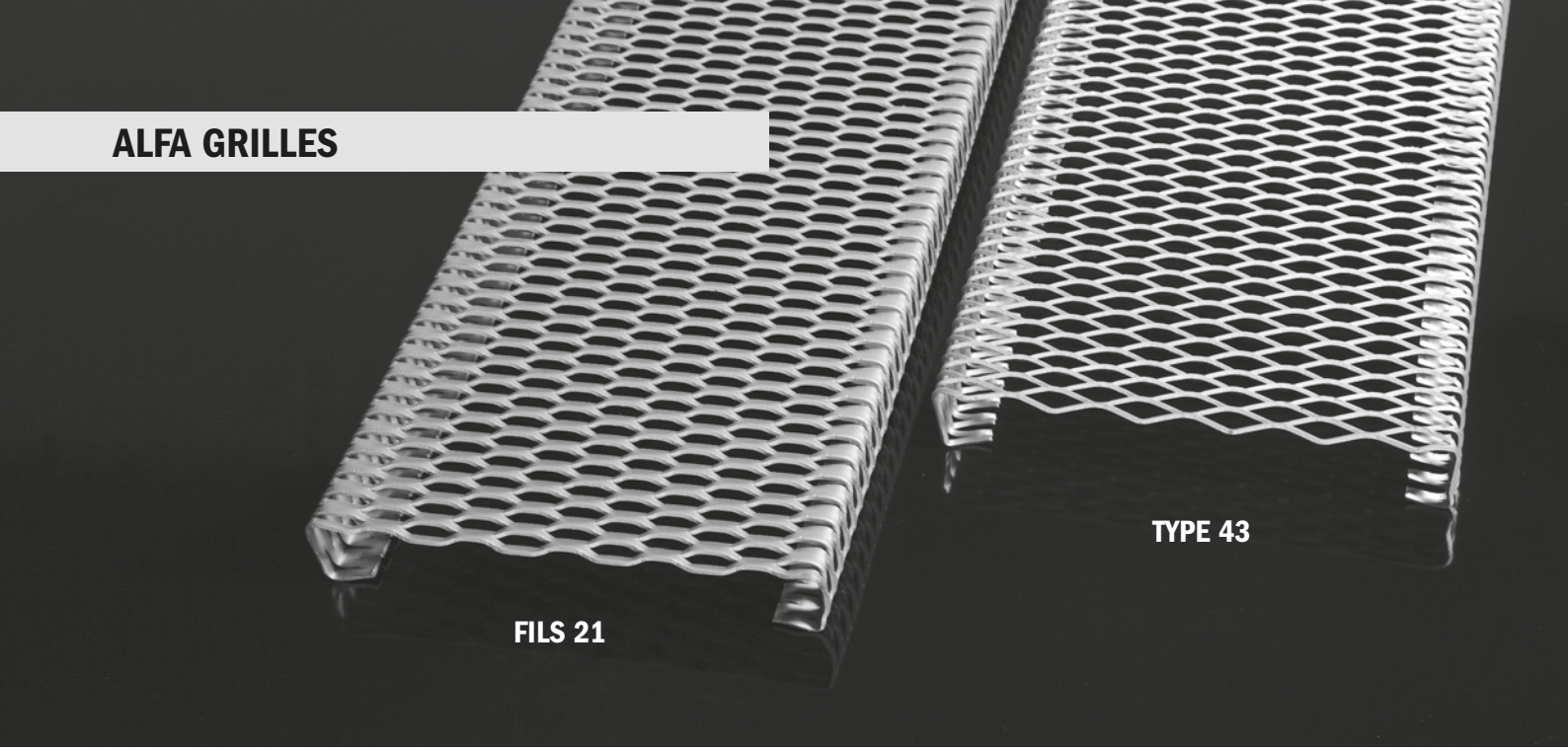
Values in mm.
We can make customized stair treads upon request.
AC - Carbon Steel
ACZ - Hot-dip galvanised Carbon Steel

Reference Standard DIN 51130 (From page 42)

Fils 21 Mesh
LW 45 x SW 15 (13.4)▲ - w 5 x t 17.5 mm

▲ *actual SW*

ALFA GRILLES

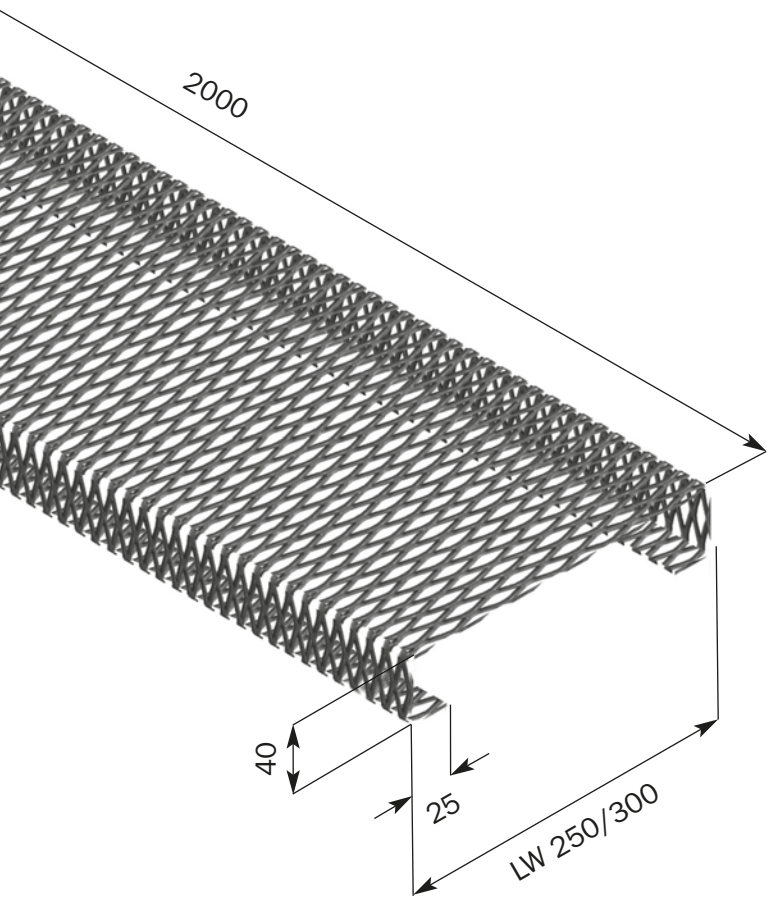


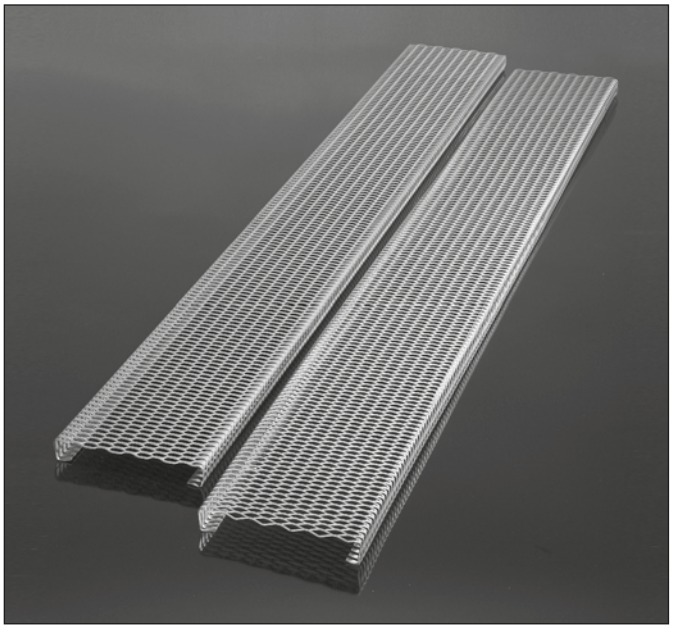
The ideal grille to create inspection and maintenance walkways for photovoltaic plants.
Material:
Hot-dip galvanised carbon steel

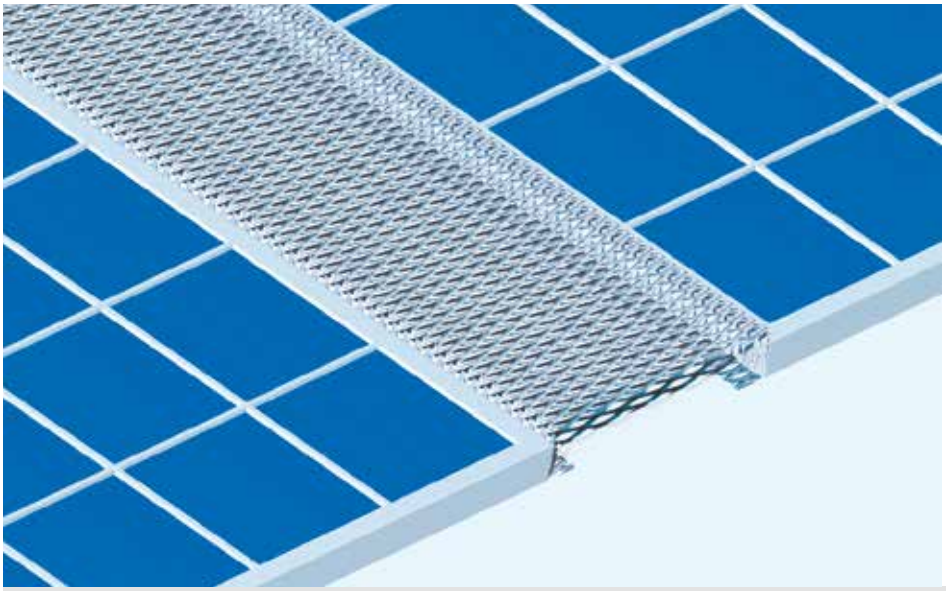
CAPACITY Kg/m²	CAPACITY KG
50	120
DISTRIBUTED	CONCENTRATED

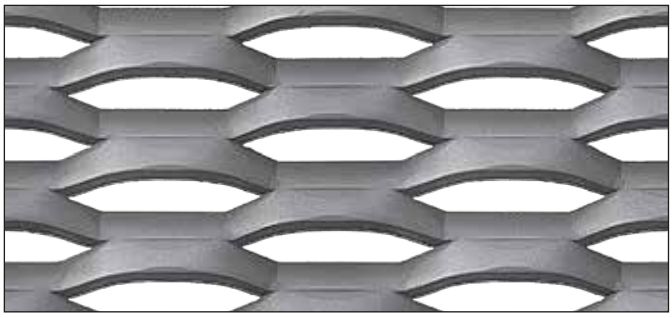
CATEGORY H

The load categories are listed in table 3.1.II illustrating Technical Building Standards under Ministerial Decree dated 17/01/2018 (page 91)





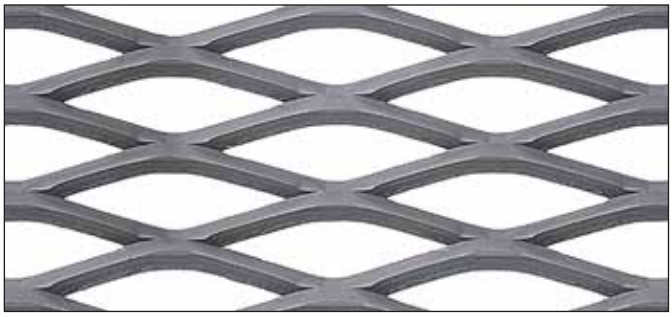




Fils 21 Mesh
LW 45 x SW 15 (13.4)▲ - w 5 x t 2.5 mm

▲ *actual SW*

Reference
Standard DIN 51130
(From page 42)



Type 43 Mesh
LW 43 x SW 10 (13.0)▲ - w 3 x t 2.5 mm

▲ *actual SW*

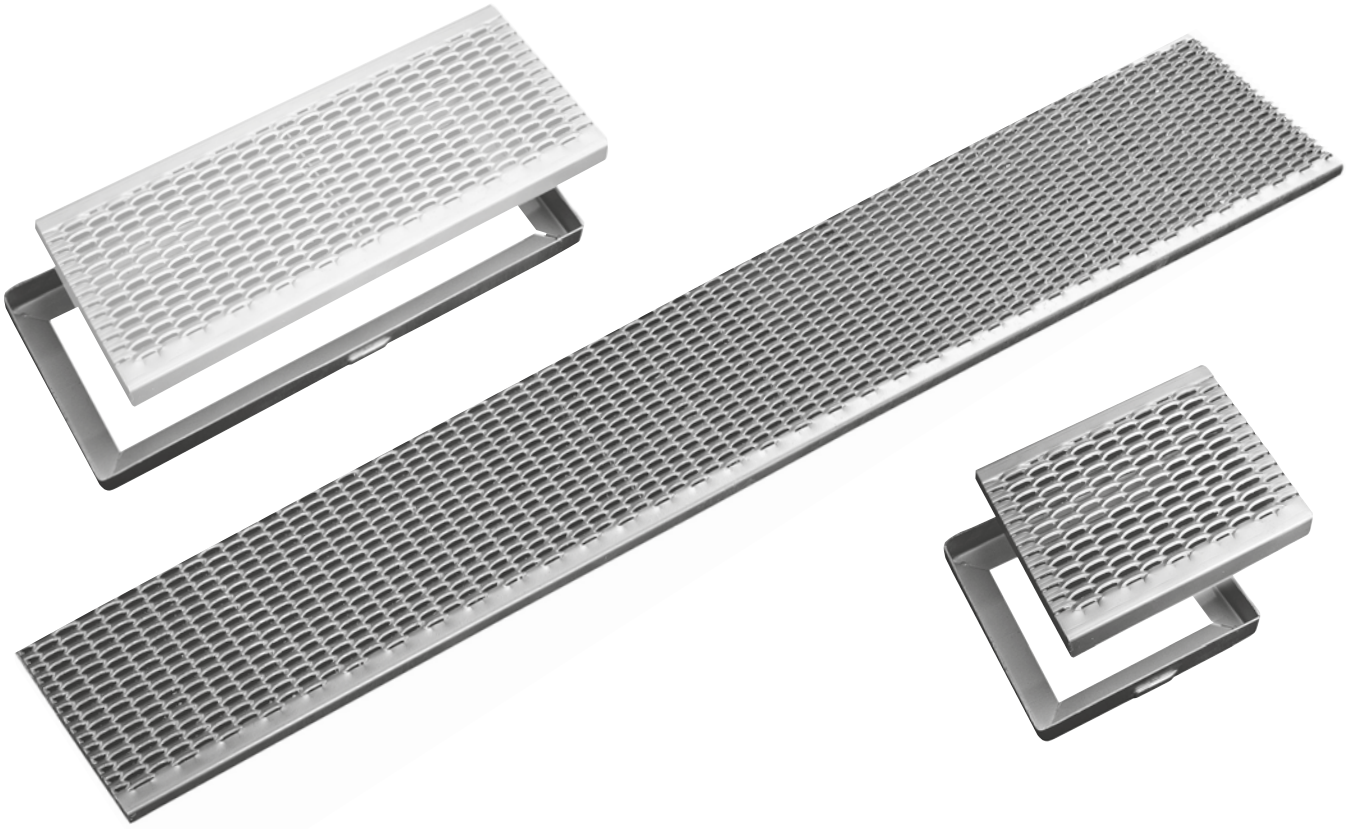
Reference
Standard DIN 51130
(From page 42)

MANHOLE COVERS - GULLY COVERS - COUNTERFRAME

Our **manhole** and **gully covers** are made from **FILS 21** expanded metal and come with a side frame and ready-to-use reinforcement plates of proportionate dimensions. **Manhole covers** can be used in various ways - they are suitable for covering manholes and for all types of ducts.

Gully covers are particularly suitable to cover water collection channels or shorter ventilation ducts.
All manhole covers and gully covers have **PEDESTRIAN CAPACITY.** They come with various benefits like heel-safe and slip resistance.

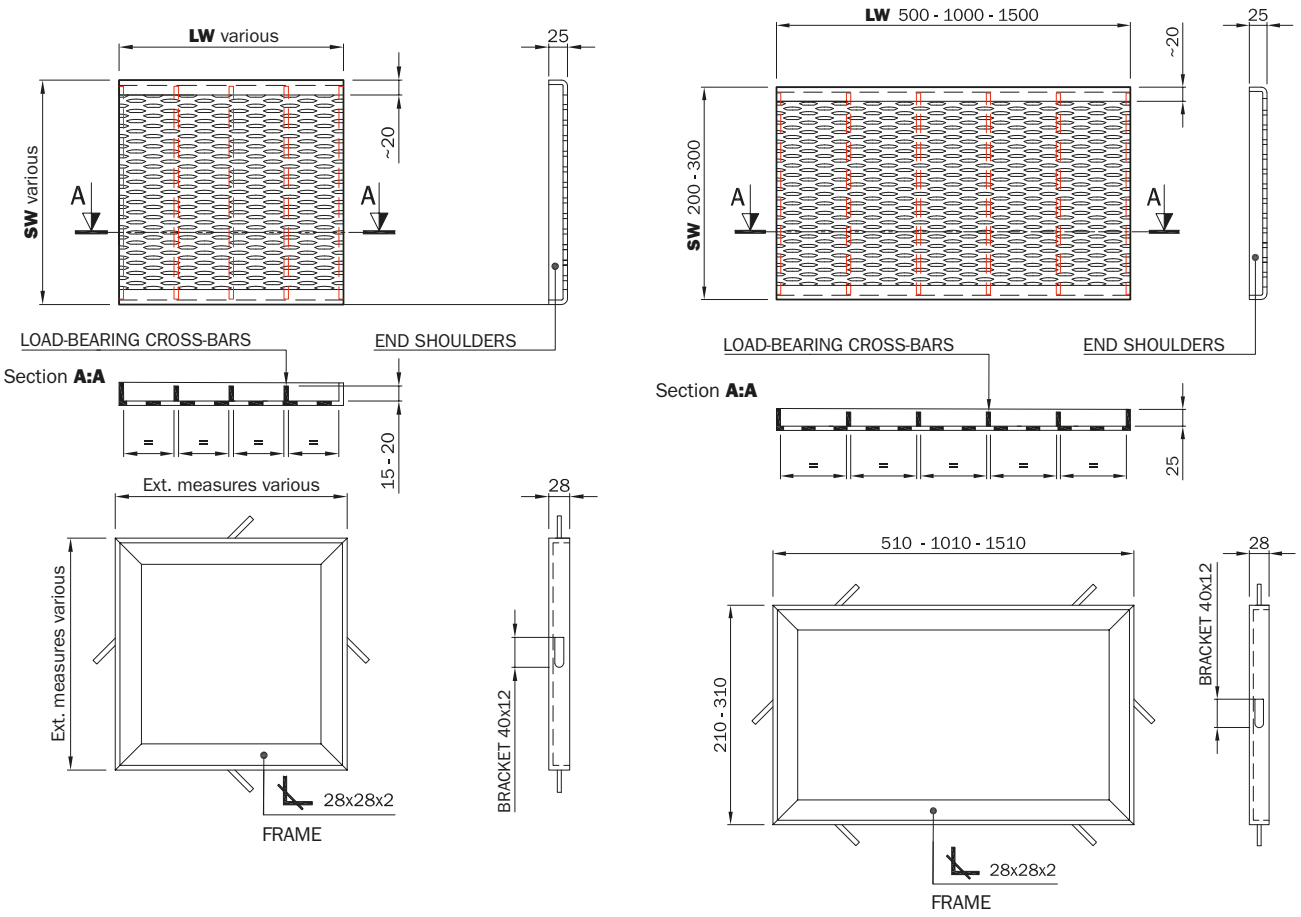
They let dirt, debris, snow (preventing ice) and water through.



Reference Standard DIN 51130 (From page 42)

Fils 21 Mesh
LW 45 x SW 15 (13.4)▲ - w 5 x w 3 mm

▲ *actual SW*



Manhole covers

Type	LW		SW	H	Weight kg/each AC	Weight kg/each ACZ	Load capacity Kg/m² distributed	Load capacity Kg concentrated
Fils 21	200	x	200	25	/	1.50	408	408
t 3	250	x	250	25	/	2.20	408	408
	300	x	300	25	/	3.00	408	408
	350	x	350	25	/	4.00	408	408
	400	x	400	25	/	5.00	408	408
	500	x	500	25	/	8.30	408	408
Frame	210	x	210	38	/	0.65		
28x28x2	260	x	260	38	/	0.80		
	310	x	310	38	/	0.95		
	360	x	360	38	/	1.10		
	410	x	410	38	/	1.35		
	510	x	510	38	/	1.70		

Gully covers

Type	LW		SW	H	Weight kg/each AC	Weight kg/each ACZ	Load capacity Kg/m² distributed	Load capacity Kg concentrated
Fils 21	500	x	200	25	/	3.10	408	408
t 3	1000	x	200	25	/	6.00	408	408
	1500	x	300	25	/	12.00	408	408
Frame	510	x	210	28	/	1.20		
28x28x2	1010	x	210	28	/	2.00		
	1510	x	310	28	/	3.00		

Values in mm.
We can make customized stair treads upon request.
AC - Carbon Steel ACZ - Hot-dip galvanised Carbon Steel

Ambasciata Mesh - Protech Line

Privacy Mesh - Protech Line

base system fencing

compatto system fencing

rapido system fencing

rete sicura net

Custom-made Fencing

Our expanded metal fencing comes in standard size or custom made.

Posts and bolts for full assembly are also supplied upon request, together with the panels.

FINISHES
Panels and posts can be supplied raw, hot-dip and painted with a polyester powder coating for outside with colours from RAL table.

MATERIALS
- carbon steel
- aluminium

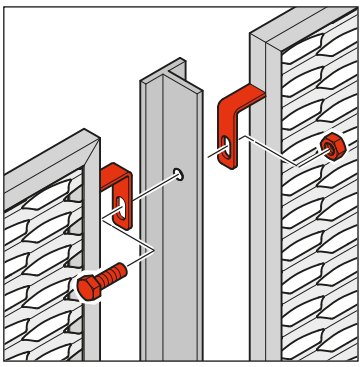
Ellisse Mesh
Ultra Limites Range

EF 400 Mesh
Ultra Limites Range

Available fencing models

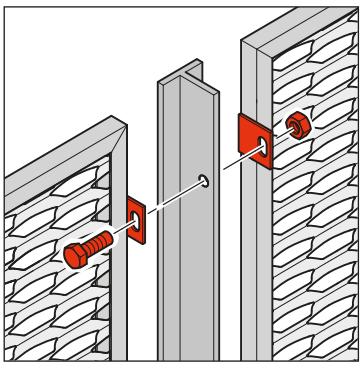
Our fencing can be fixed according to the BASE, COMPATTO and RAPIDO systems

BASE
FENCING SYSTEM



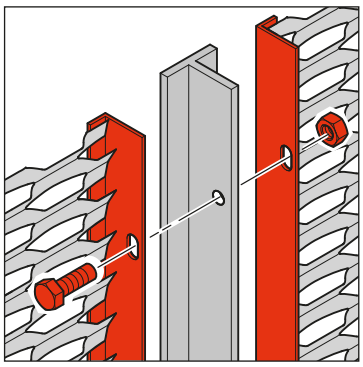
Panels framed with U profiles on all 4 sides. They come supplied with slotted **brackets** to be fastened to the posts.

COMPATTO
FENCING SYSTEM



Panels framed with U profiles on all 4 sides. They come supplied with slotted **plates** to be fastened to the posts.

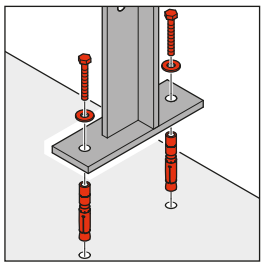
COMPATTO
FENCING SYSTEM



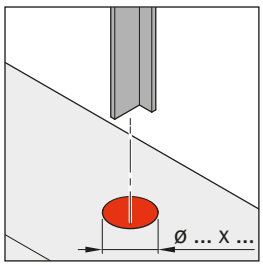
Panels unframed on 2 sides. They come supplied with s oldered and slotted **L-profiles** to be fastened to the posts.

Fastening to the base of the posts

All fencing can be fastened to the base as described below.



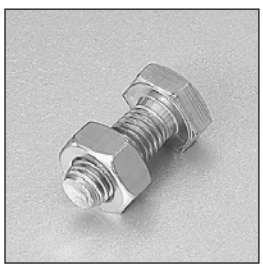
Fastening to the post bases with screw anchors.



Fastening to the base by inserting the post into the pre-cut hole and filling the empty space.

Fastening panels to posts

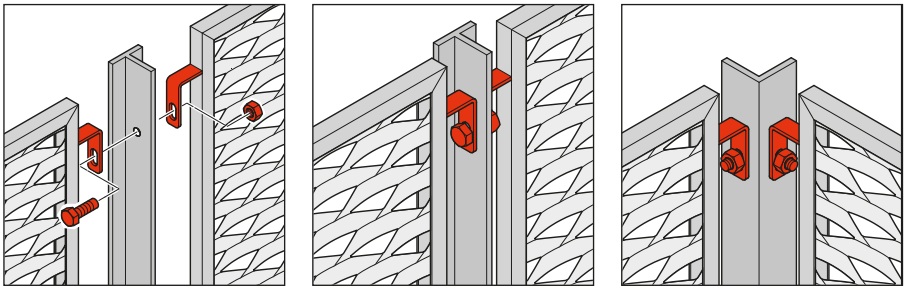
SPECIAL ANTI-THEFT BOLT
Bolt and nut M8 x 25 mm in AISI 304 steel

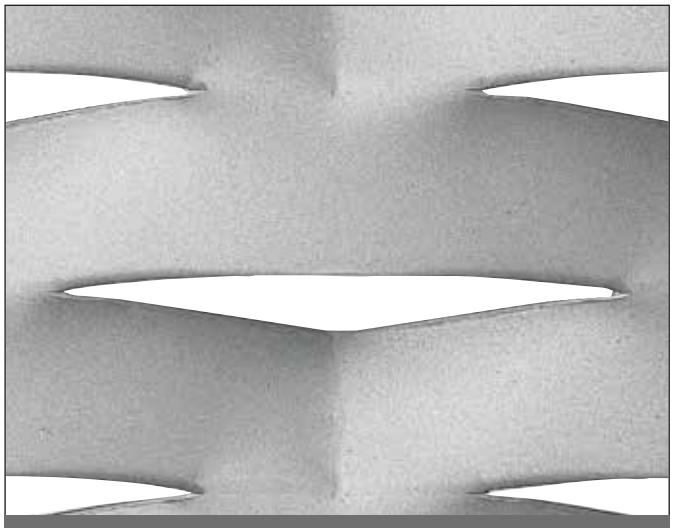


Bolt and nut M10 x 25 mm in hot-dip galvanised carbon steel or in AISI 304 steel

AMBASCIATA Fencing BASE System

The Ambasciata mesh in the AMBASCIATA fencing BASE System ensures a see-through or hiding effect. It completely blocks the inside view from outside while ensuring good visibility of the outside from the inside.

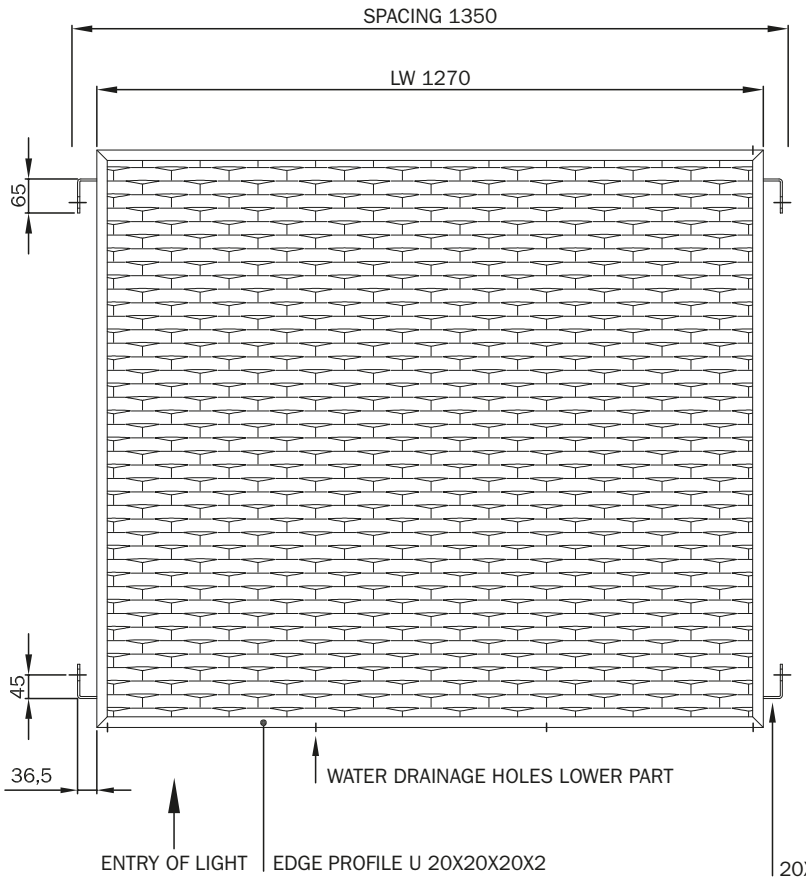


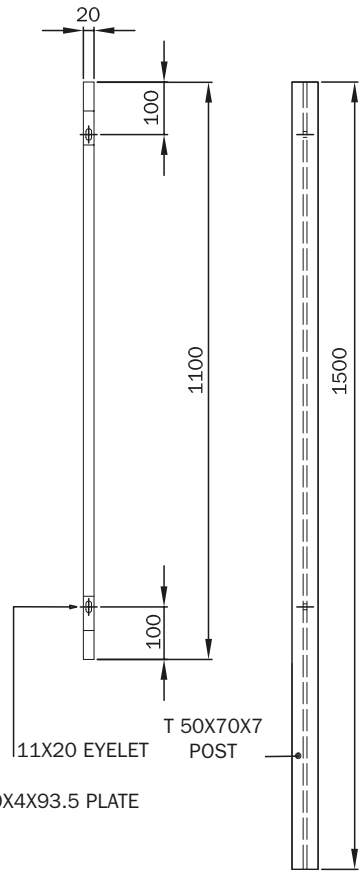


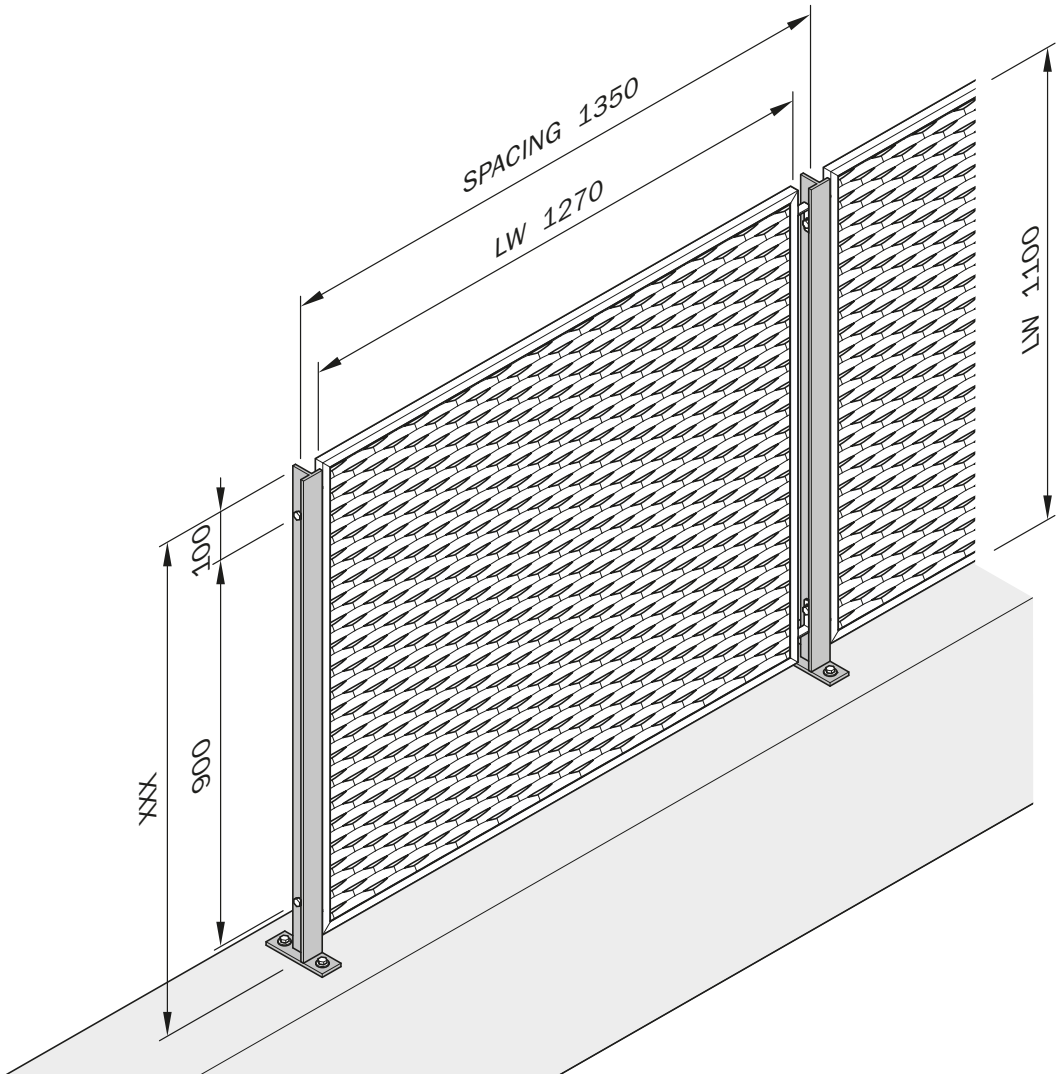
Actual dimensions of mesh
AMBASCIATA TYPE
LW 110 x SW 40 (52)▲ - w 24 x t 1.5 mm - (▲ *actual SW)*

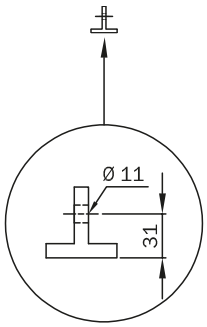
AMBASCIATA Panel	**mm**
Spacing	1350
Panel frame **LW**	1270
Panel frame **SW**	1100
T-post section	50 x 50 x 7
U-profile	20 x 20 x 20 x 2
Panel weight	kg 20.00

Notes on fastening to the base on page 113


SPACING 1350
LW 1270
65
45
36,5
WATER DRAINAGE HOLES LOWER PART
ENTRY OF LIGHT
EDGE PROFILE U 20X20X20X2

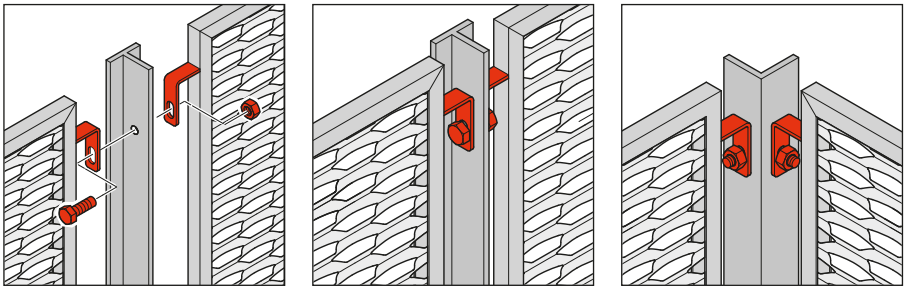

20
100
1100
100
1500
11X20 EYELET
T 50X70X7
POST
20X4X93.5 PLATE

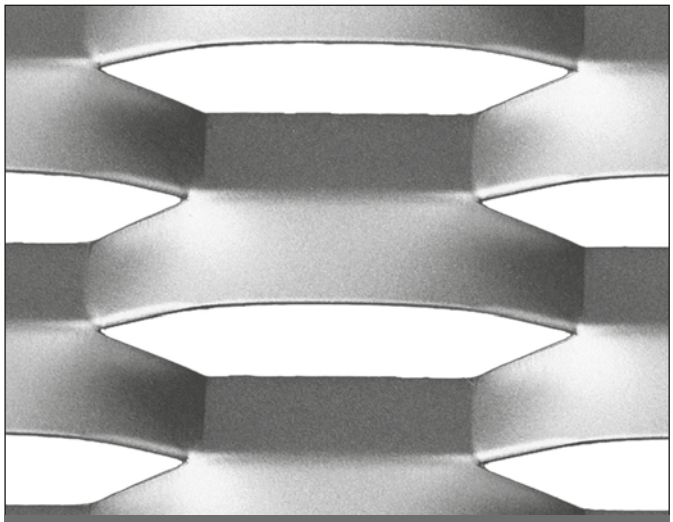

SPACING 1350
LW 1270
LW 1100
100
900
XXX


Ø 11
31

ESPERIA Fencing BASE System

Our new BASE System ESPERIA fencing has an elegant texture the mesh has a modern and original hexagonal geometry. The perfect view.

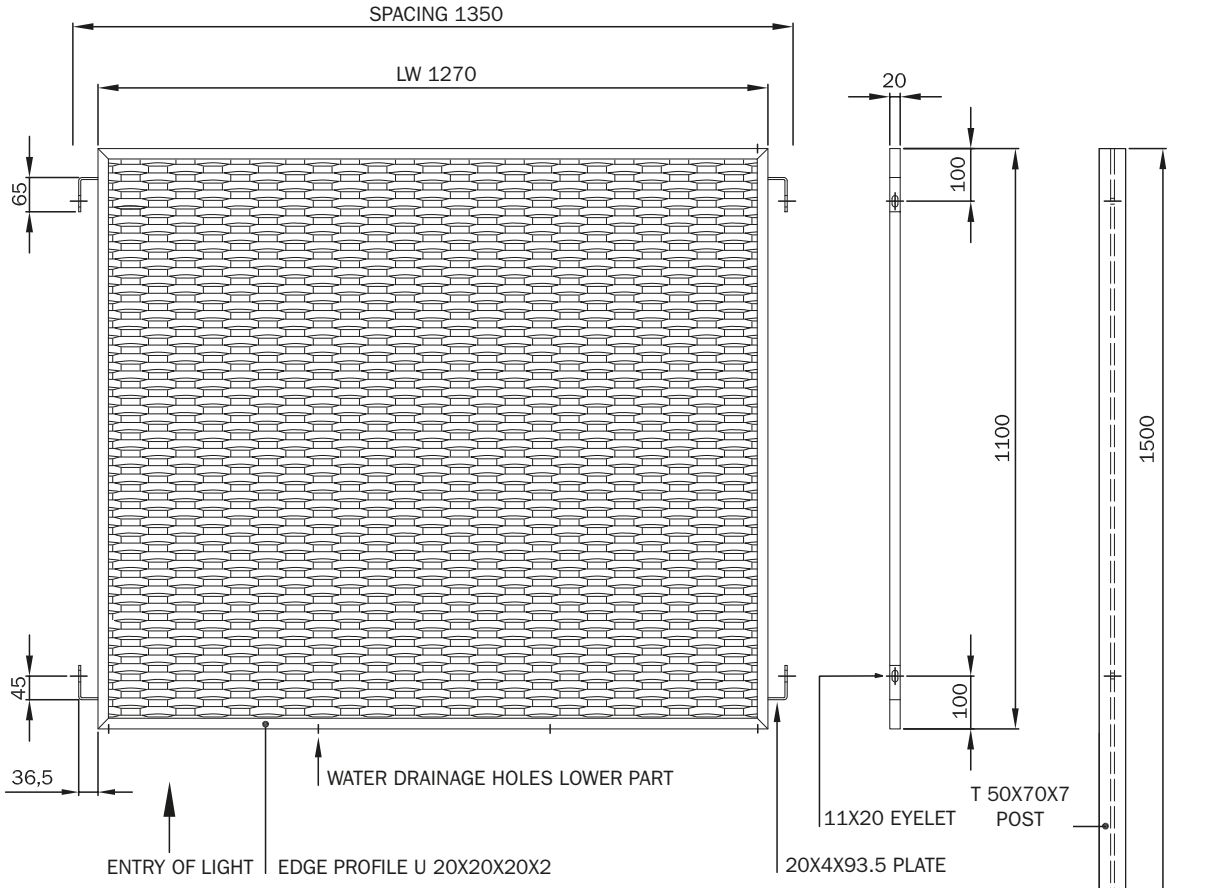


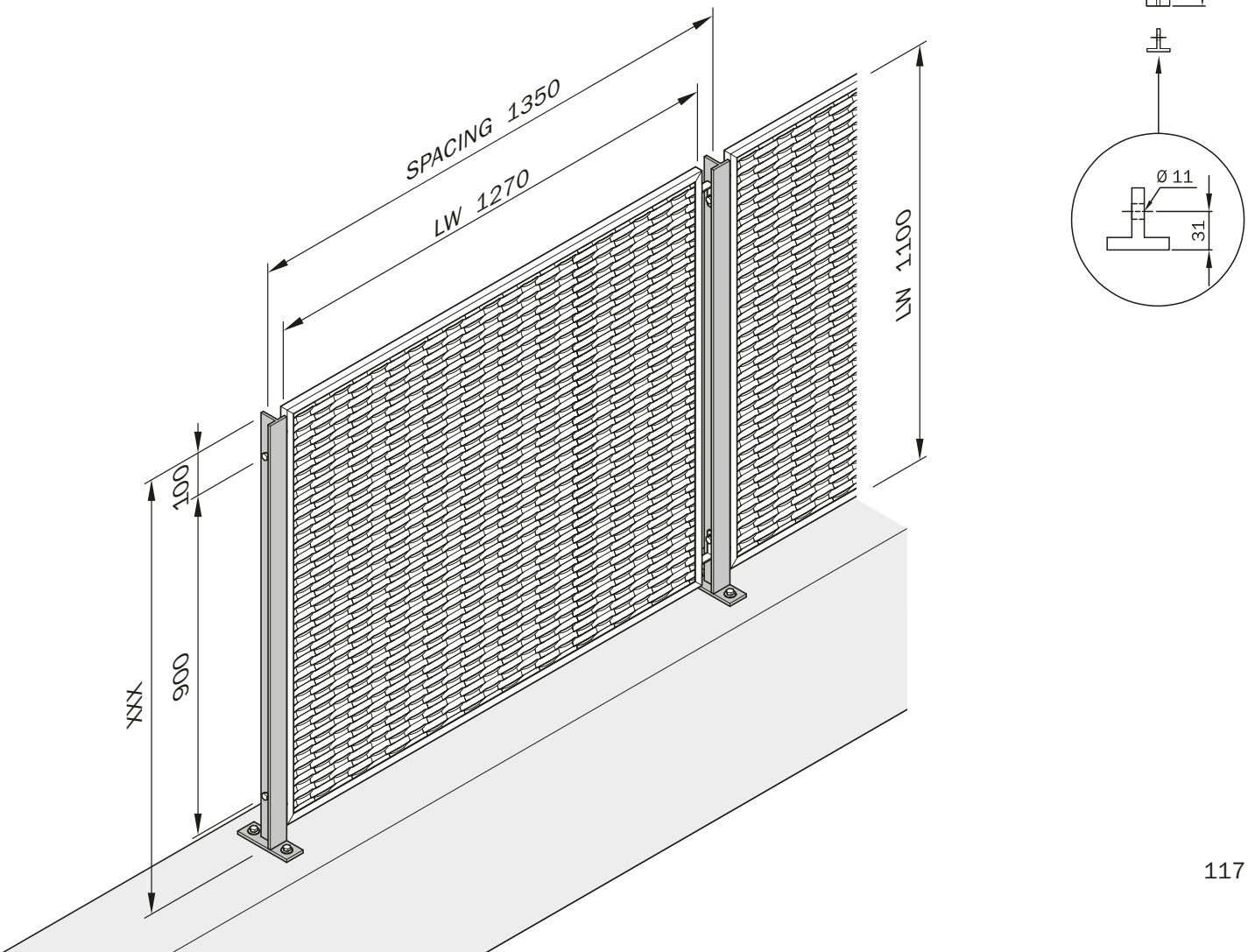


Actual dimensions of mesh
ESPERIA TYPE
LW 100 x SW 40 (34)▲ - w 15 x t 1.5 mm - (▲ *actual SW)*

ESPERIA Panel	**mm**
Spacing	1350
Panel frame **LW**	1270
Panel frame **SW**	1100
T-post section	50 x 50 x 7
U-profile	20 x 20 x 20 x 2
Panel weight	kg 20.00

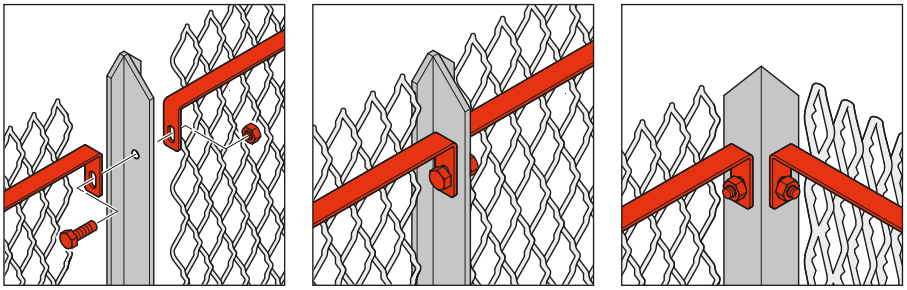
Notes on fastening to the base on page 113

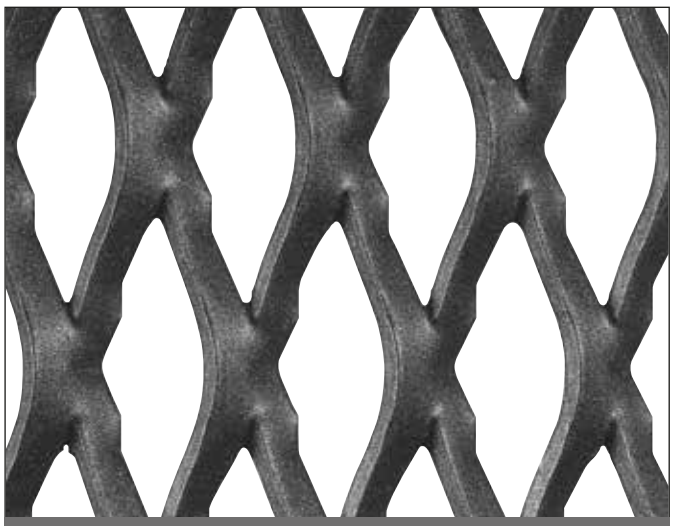

SPACING 1350
LW 1270
65
45
36,5
20
100
1100
1500
100
WATER DRAINAGE HOLES LOWER PART
ENTRY OF LIGHT
EDGE PROFILE U 20X20X20X2
11X20 EYELET
T 50X70X7
POST
20X4X93.5 PLATE


SPACING 1350
LW 1270
LW 1100
100
900
XXX
Ø 11
31

FACILE Fencing BASE System

Our BASE System FACILE fencing uses a particular “toothed” mesh arranged vertically.
The expanded mesh is welded to a lengthwise iron profile that forms a continuous fence, without space between one panel and the next.

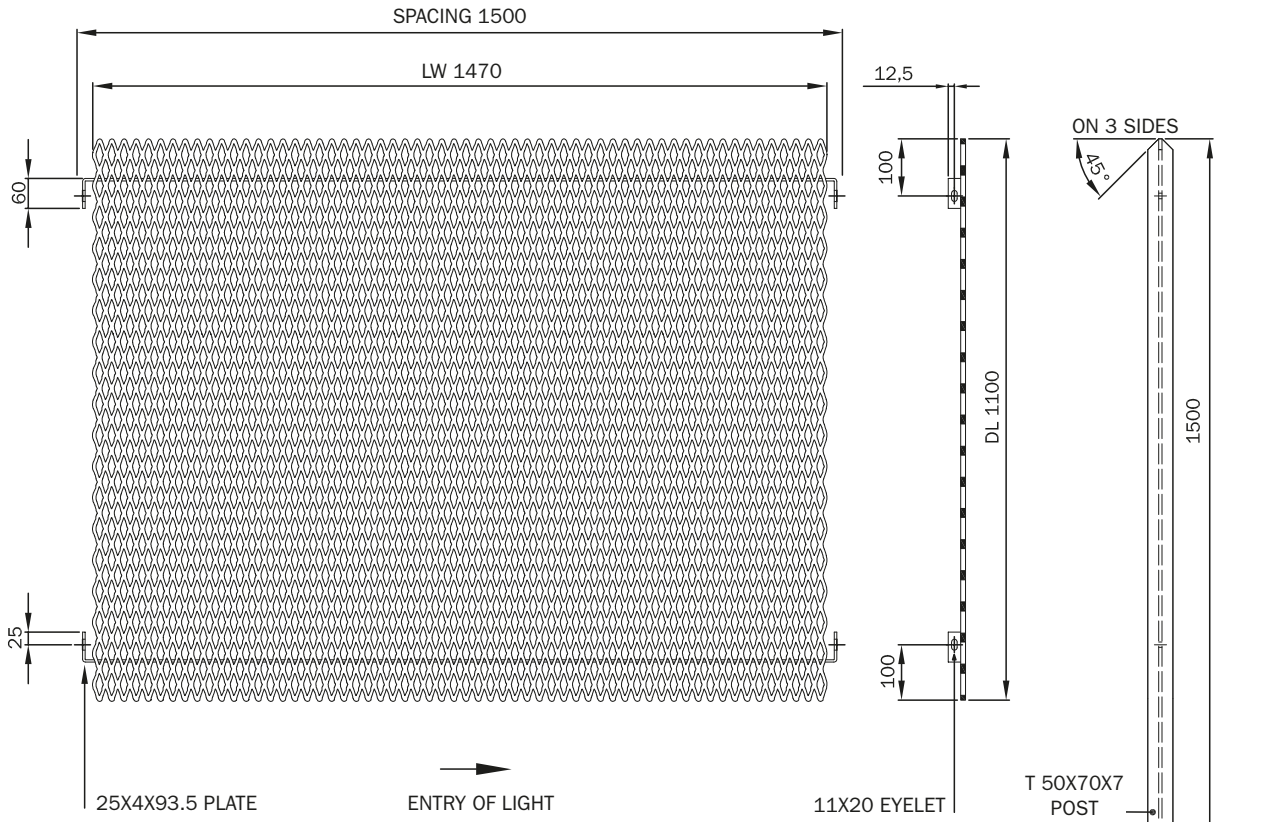


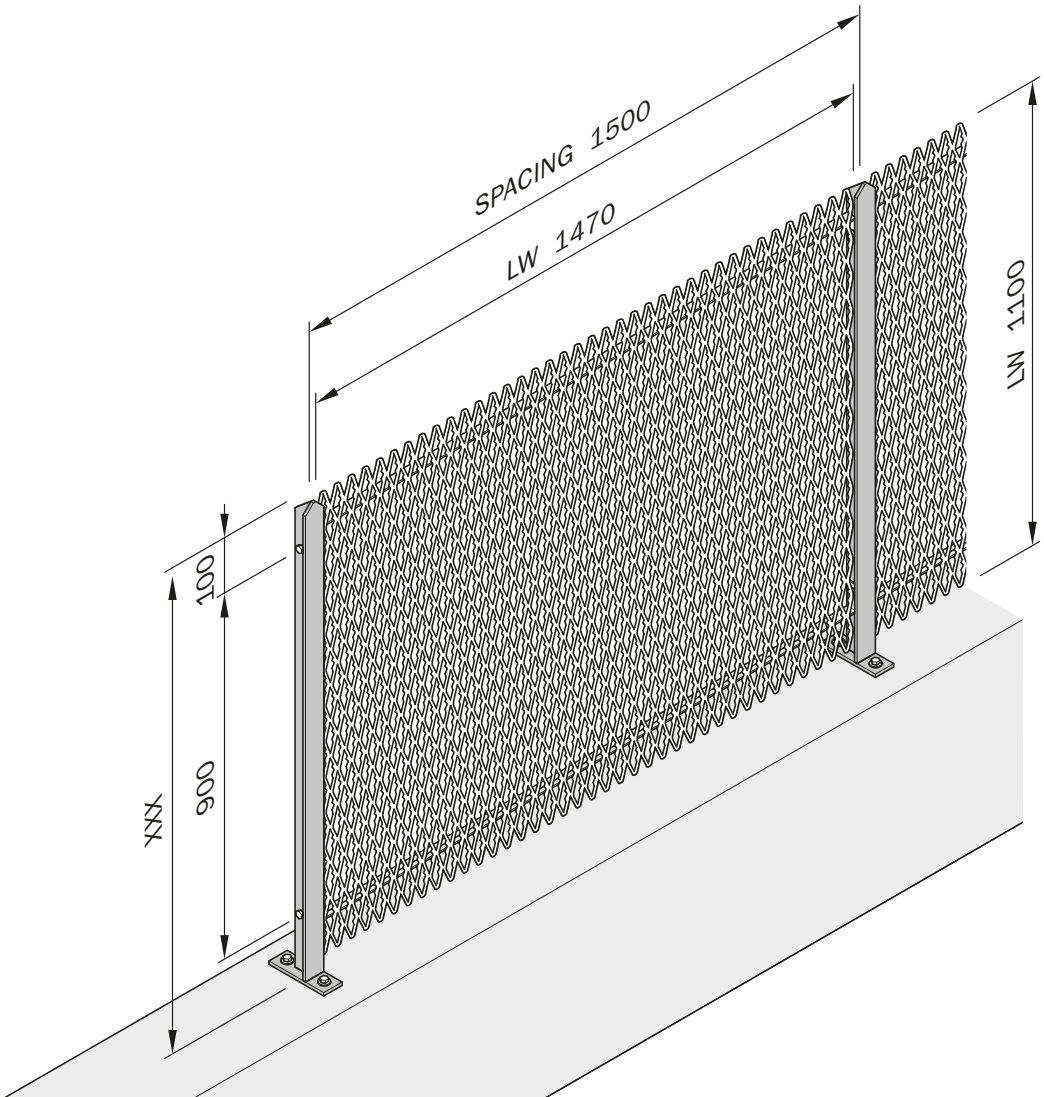


Actual dimensions of mesh
TYPE N. 97
LW 62.5 x SW 25 (25)▲ - w 6.2 x t 3 mm - *(▲ actual SW)*

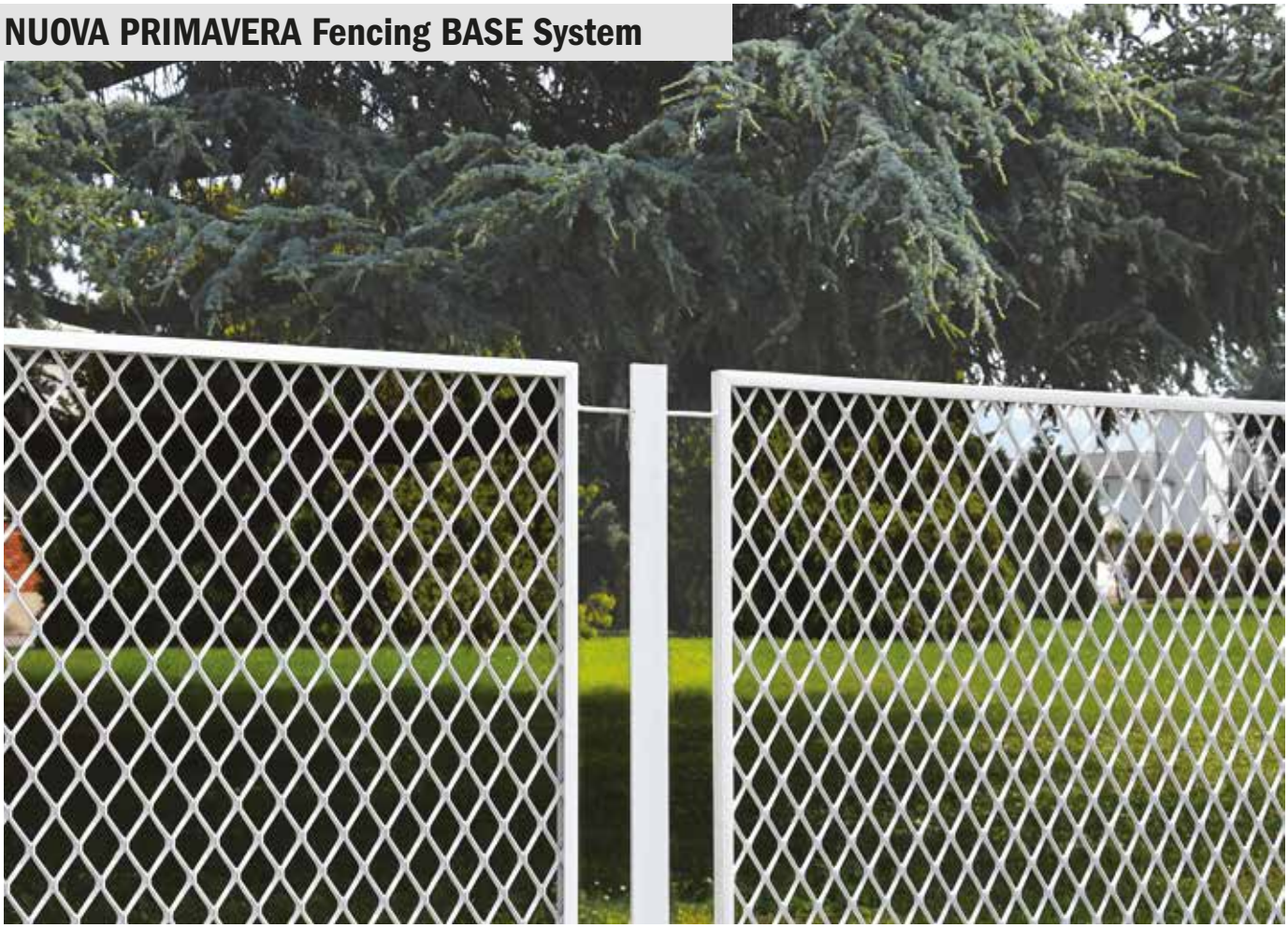
FACILE Panel	**mm**
Spacing	1500
Panel frame **LW**	1100
Panel frame **SW**	1100
T-post section	50 x 50 x 7
Point at 45°	20 x 20 x 20 x 2
Panel weight	kg 25.50

Notes on fastening to the base on page 113

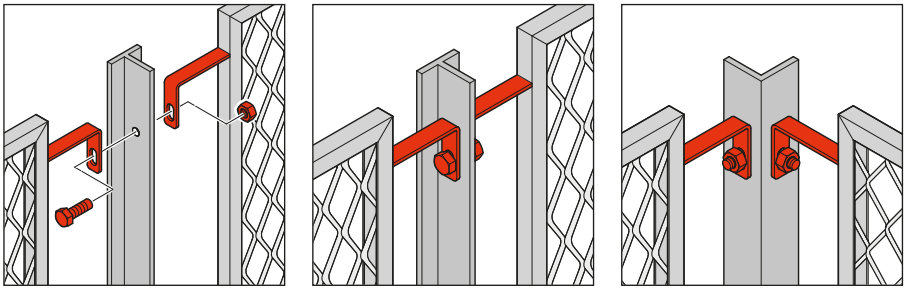

SPACING 1500
LW 1470
12,5
60
100
DL 1100
ON 3 SIDES
45°
1500
25
100
25X4X93.5 PLATE
ENTRY OF LIGHT
11X20 EYELET
T 50X70X7
POST
Ø 11
31

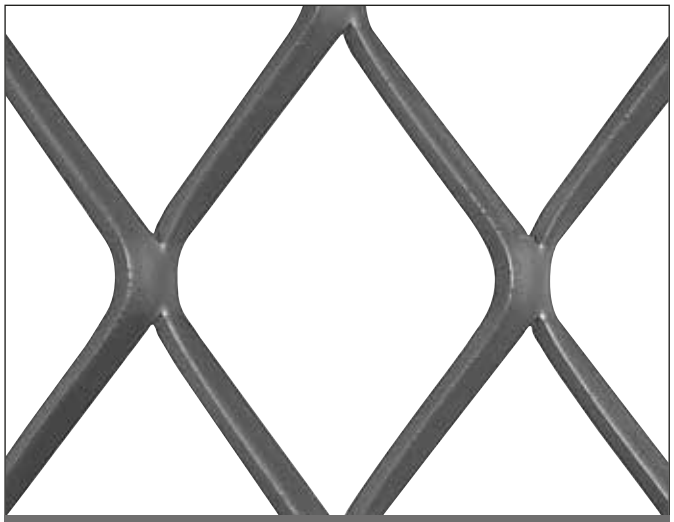

SPACING 1500
LW 1470
LW 1100
100
600
XXX

NUOVA PRIMAVERA Fencing BASE System



The BASE System NUOVA PRIMAVERA fencing stands out for its simple design. Its linear form means it can be placed in any environment.
It ensures robustness and optimum transparency.

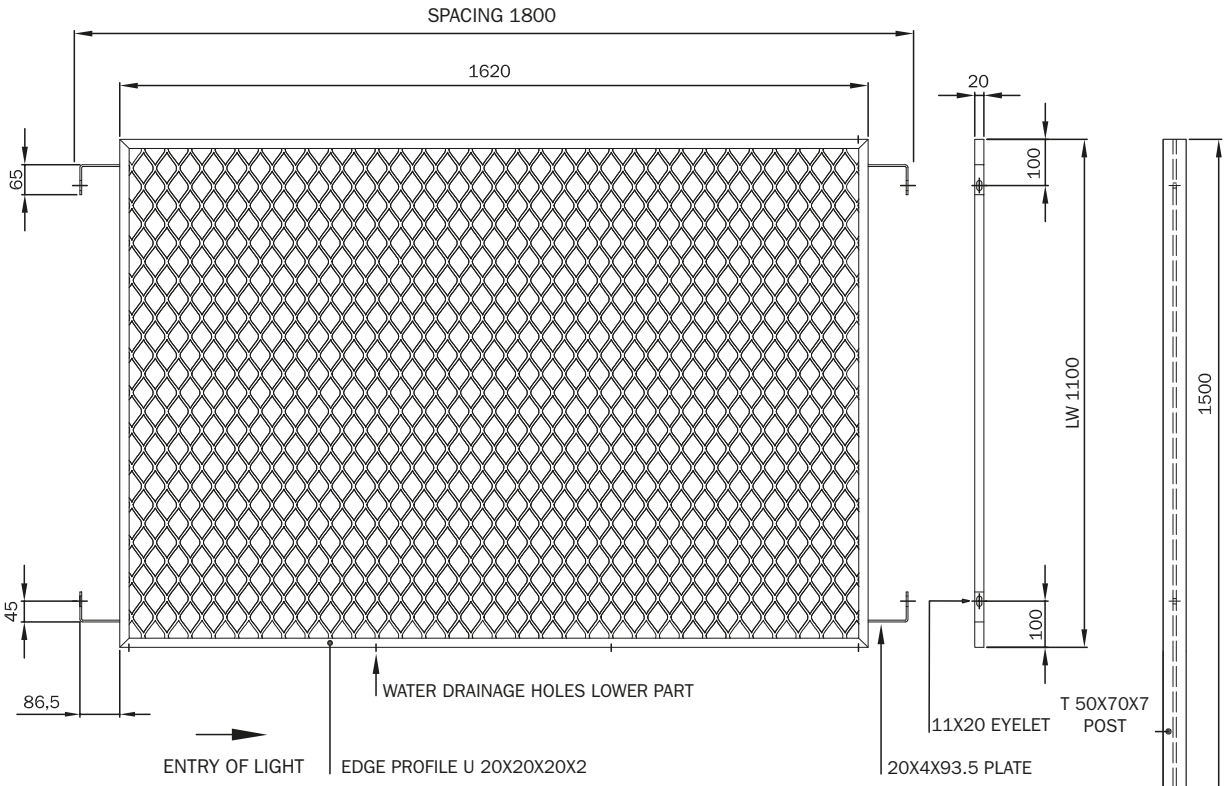


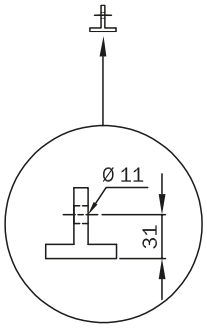


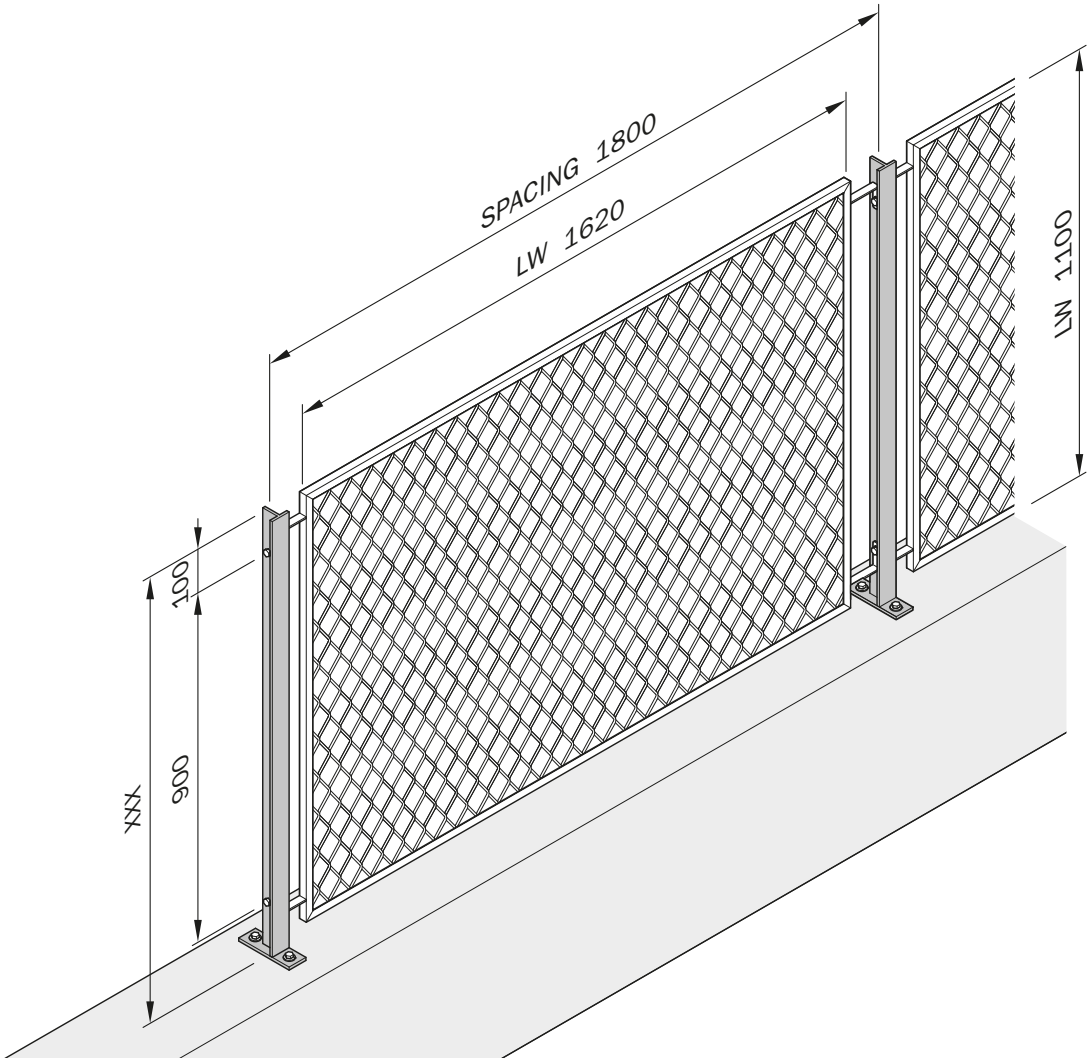
Actual dimensions of mesh
TYPE Q80
LW 80 x SW 52 (52)▲ - w 6 x t 3 mm - *(▲ actual SW)*

NUOVA PRIMAVERA Panel	**mm**
Spacing	1800
Panel frame **LW**	1100
Panel frame **SW**	1620
T-post section	50 x 50 x 7
U-profile	20 x 20 x 20 x 2
Panel weight	kg 17.00

Notes on fastening to the base on page 113

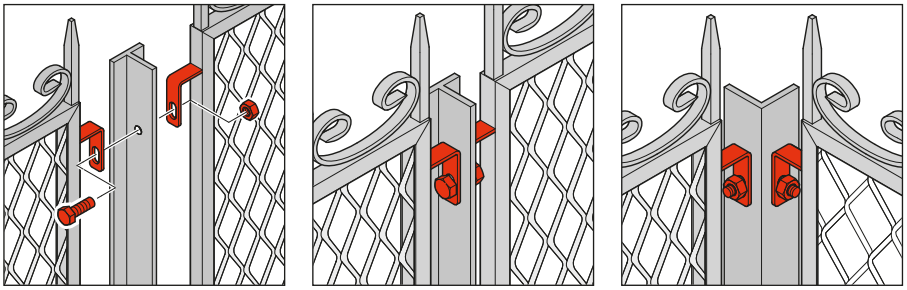

SPACING 1800
1620
20
65
100
LW 1100
1500
45
100
86,5
WATER DRAINAGE HOLES LOWER PART
T 50X70X7
POST
11X20 EYELET
ENTRY OF LIGHT
EDGE PROFILE U 20X20X20X2
20X4X93.5 PLATE

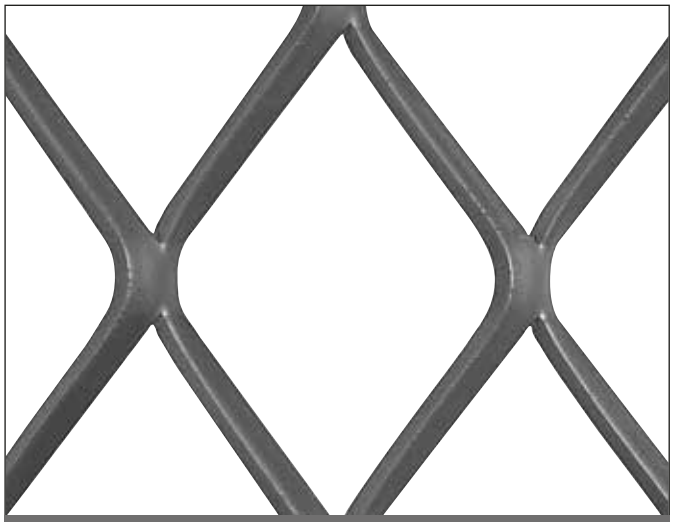

Ø 11
31


SPACING 1800
LW 1620
LW 1100
100
MAX
900

ROBERTA Fencing BASE System

The BASE System ROBERTA fencing is made with the same mesh as the Nuova Primavera and is embellished by a decorative wrought iron motif on the top.

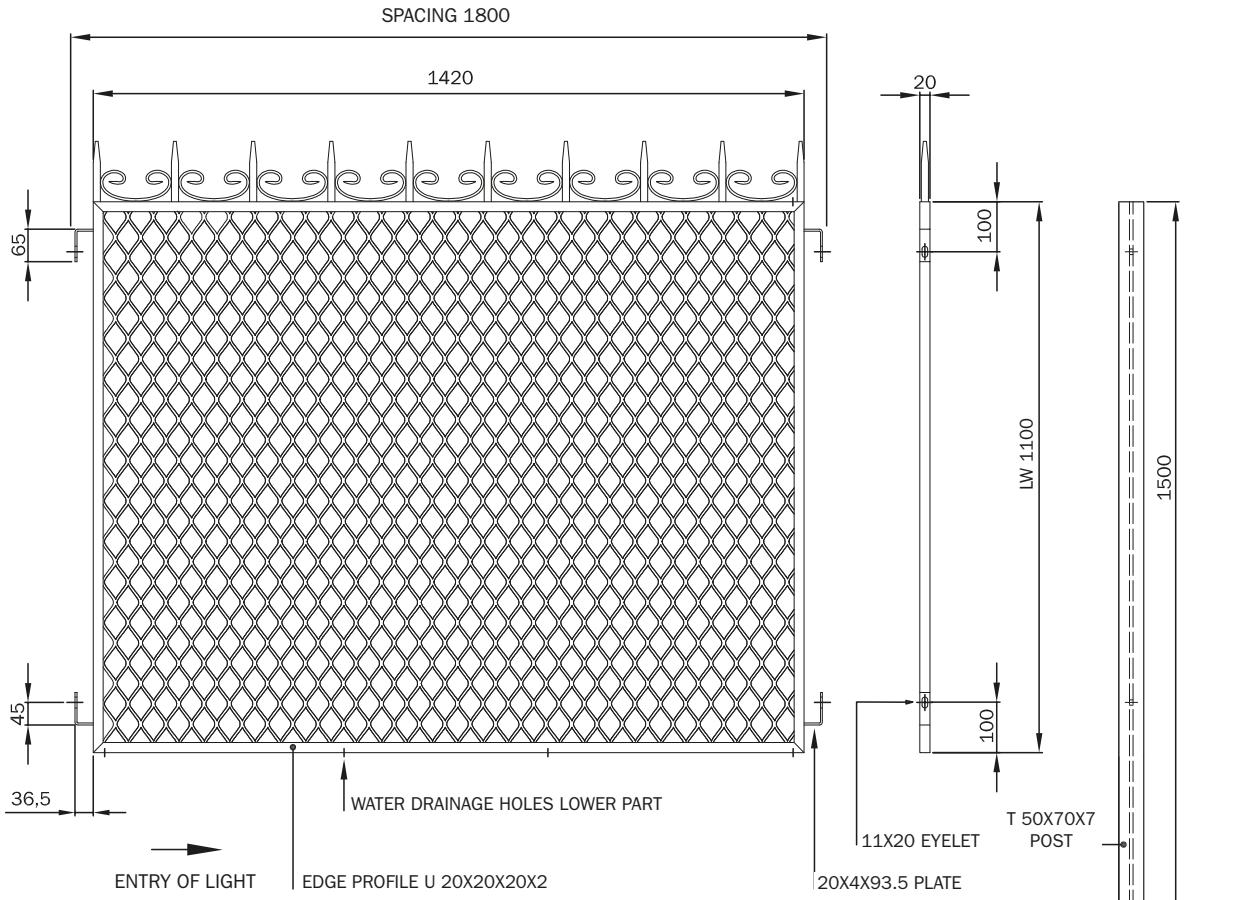


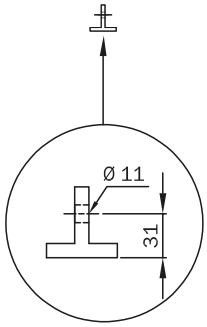


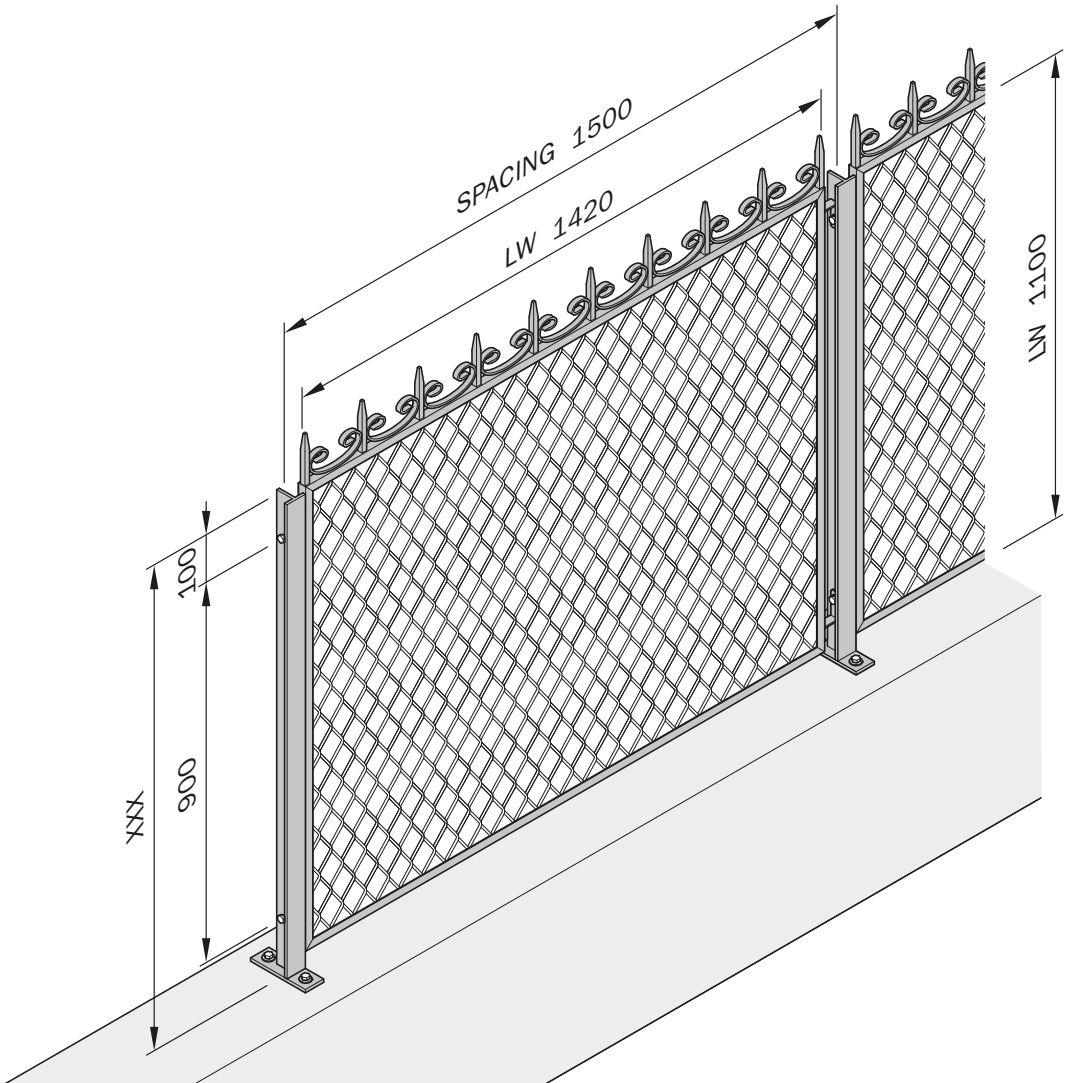
Actual dimensions of mesh
TYPE Q80
LW 80 x SW 52 (52)▲ - w 6 x t 3 mm - *(▲ actual SW)*

ROBERTA Panel	**mm**
Spacing	1500
Panel frame **LW**	1100
Panel frame **SW**	1420
T-post section	50 x 50 x 7
U-profile	20 x 20 x 20 x 2
Panel weight	kg 20.00

Notes on fastening to the base on page 113

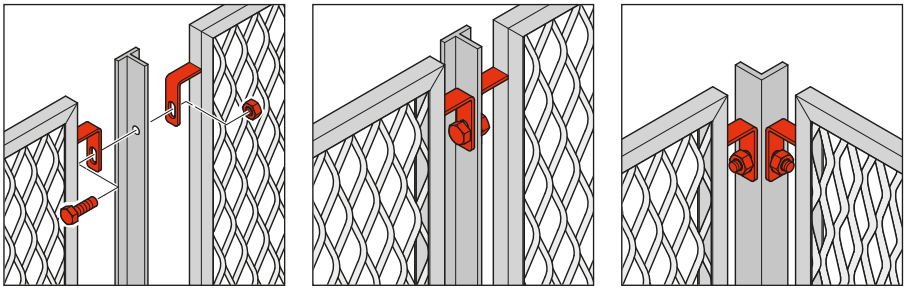

SPACING 1800
1420
20
65
100
LW 1100
1500
45
100
36,5
WATER DRAINAGE HOLES LOWER PART
11X20 EYELET
T 50X70X7
POST
ENTRY OF LIGHT
EDGE PROFILE U 20X20X20X2
20X4X93.5 PLATE

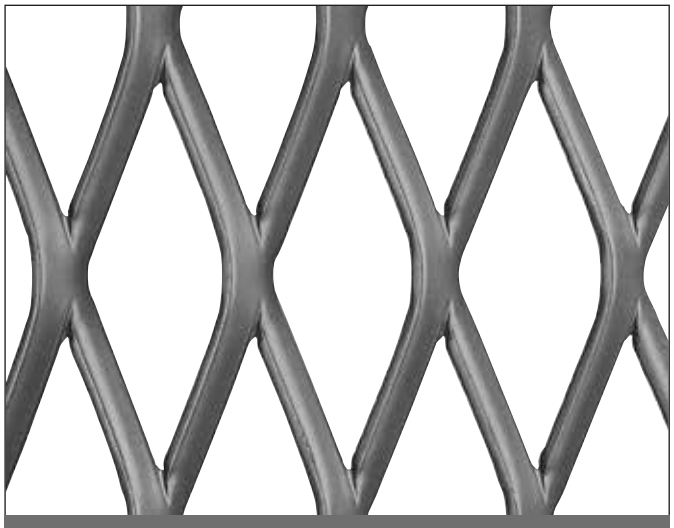

Ø 11
31


SPACING 1500
LW 1420
LW 1100
100
900
XXX

ROMBO Fencing BASE System

The BASE System ROMBO fencing is ideal to ensure optimum visibility in wide spaces such as parks, stop-off points, industrial complexes and storage spaces.

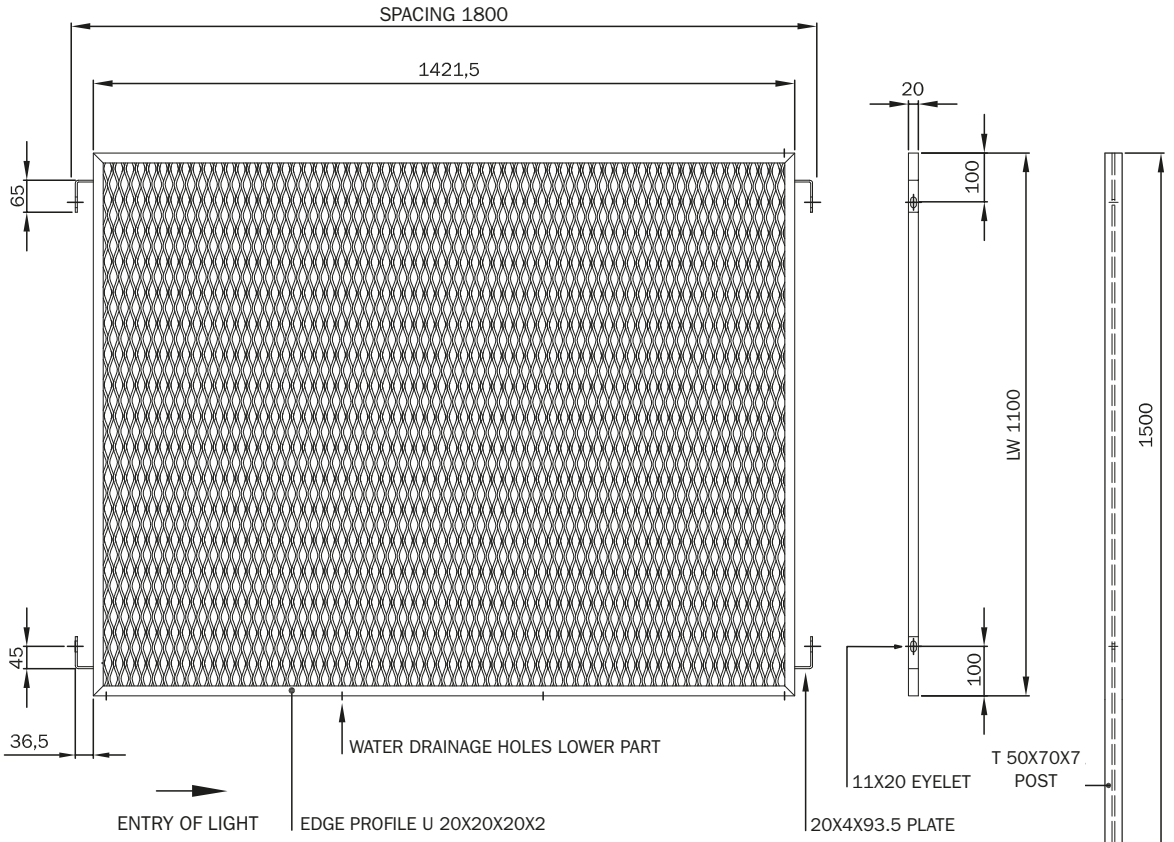


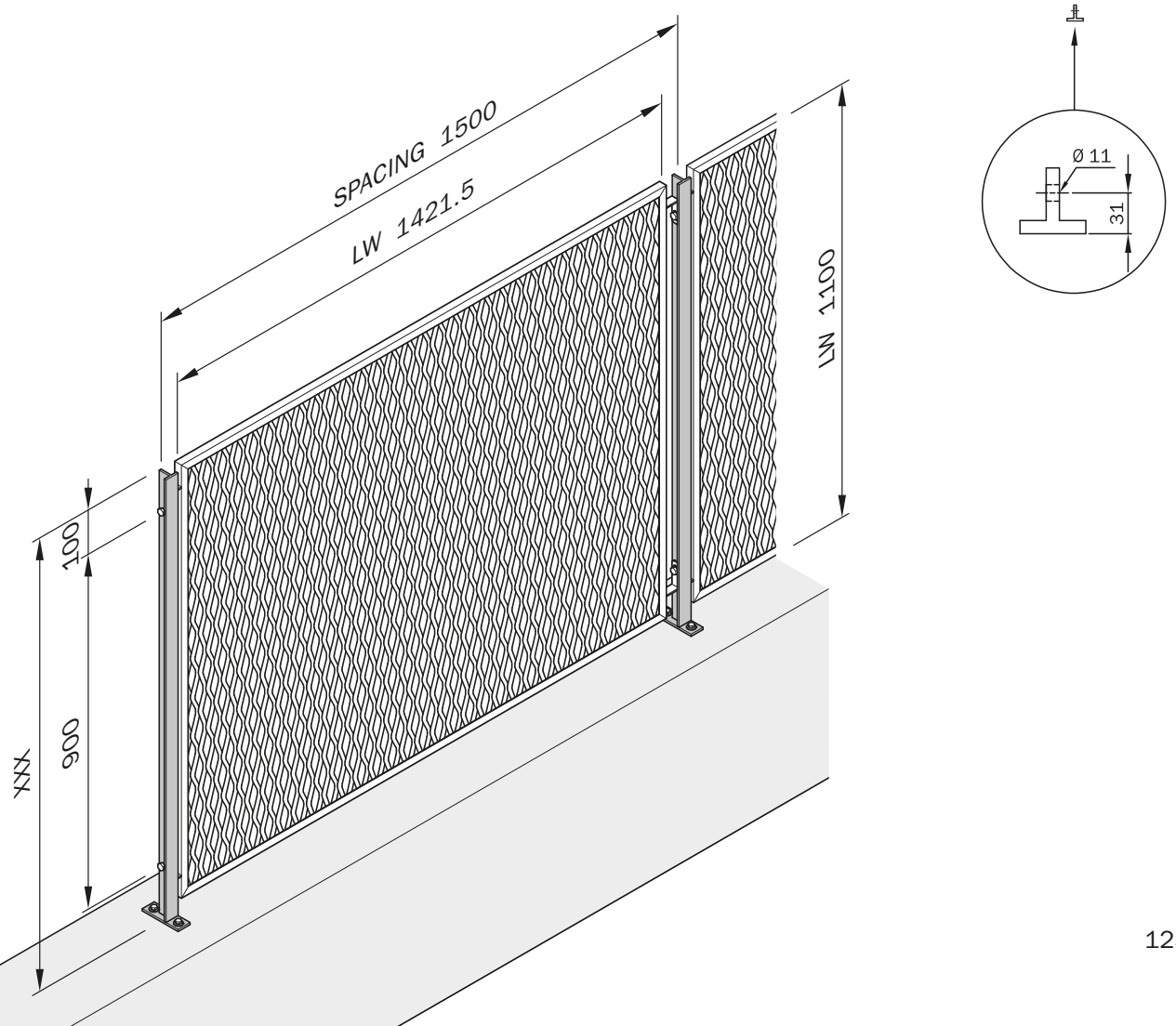


Actual dimensions of mesh
TYPE N 22
LW 62.5 x SW 20 (23.4)▲ - w 4.5 x t 3 mm - *(▲ actual SW)*

ROMBO Panel	**mm**
Spacing	1500
Panel frame **LW**	1100
Panel frame **SW**	1421.5
T-post section	50 x 50 x 7
U-profile	20 x 20 x 20 x 2
Panel weight	kg 18.00

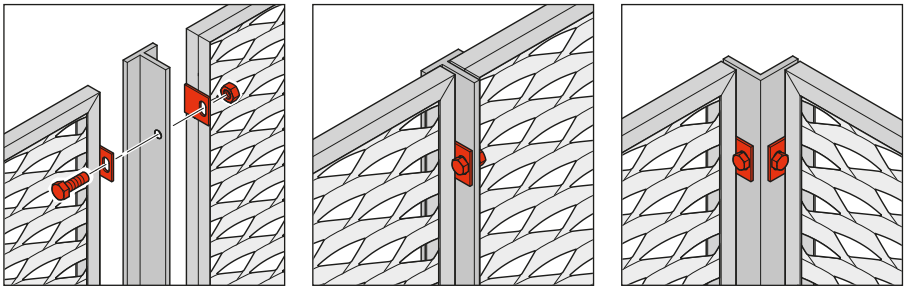
Notes on fastening to the base on page 113


SPACING 1800
1421,5
65
45
36,5
20
100
100
LW 1100
1500
WATER DRAINAGE HOLES LOWER PART
ENTRY OF LIGHT
EDGE PROFILE U 20X20X20X2
11X20 EYELET
T 50X70X7
POST
20X4X93.5 PLATE


SPACING 1500
LW 1421.5
LW 1100
100
900
XXX
Ø 11
31

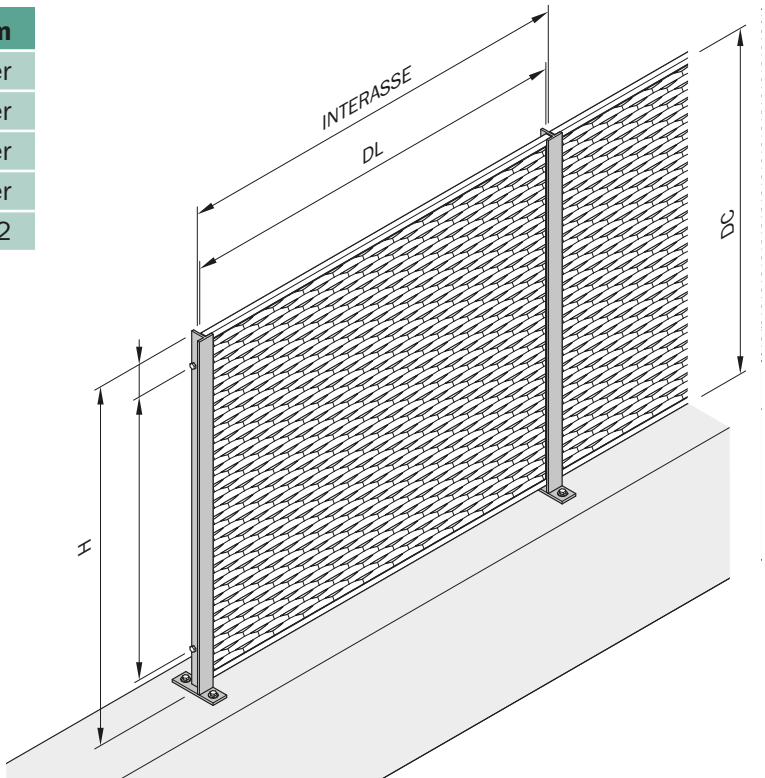
AMASCIATA Fencing COMPATTO System

Our COMPATTO System AMBASCIATA fencing ensures complete privacy, thanks to the close fastening of the panel to the post.
It still retains the inviting effect of the classic Ambasciata mesh.



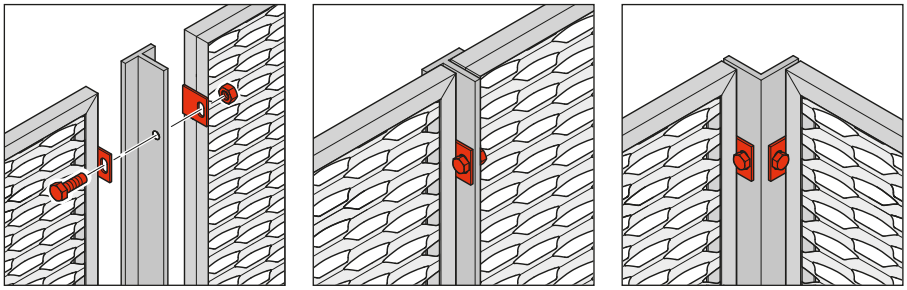
AMBASCIATA Panel	**mm**
Spacing	Made to order
Panel frame **LW**	Made to order
Panel frame **SW**	Made to order
T-post section	50 x 50 x 7 - H Made to order
U-profile	20 x 20 x 20 x 2

Notes on fastening to the base on page 113



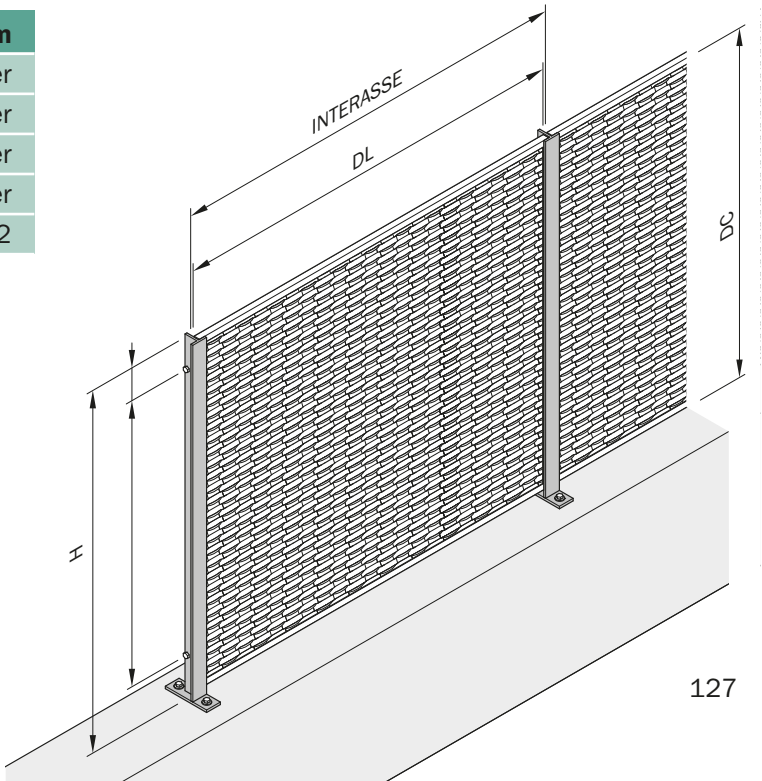
ESPERIA Fencing COMPATTO System

Our COMPATTO System ESPERIA fencing ensures complete privacy, thanks to the close fastening of the panel to the post.
The effect of the Esperia mesh ensures an on-trend aesthetic that is becoming increasingly popular.



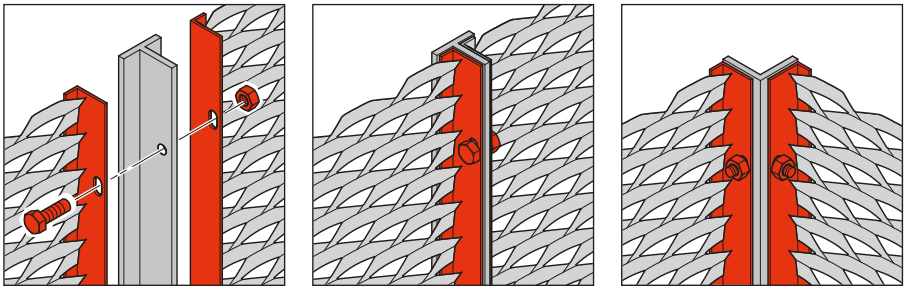
ESPERIA Panel	**mm**
Spacing	Made to order
Panel frame **LW**	Made to order
Panel frame **SW**	Made to order
T-post section	50 x 50 x 7 - H Made to order
U-profile	20 x 20 x 20 x 2

Notes on fastening to the base on page 113



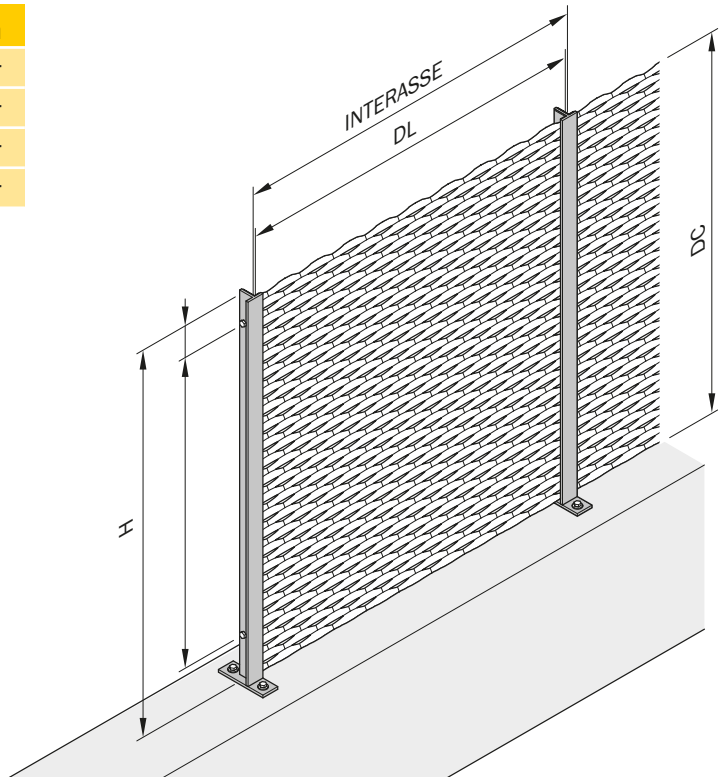
AMASCIATA Fencing RAPIDO System

The RAPIDO System AMBASCIATA fencing is lighter and more convenient and is suitable for outdoor fencing for residential or industrial buildings.



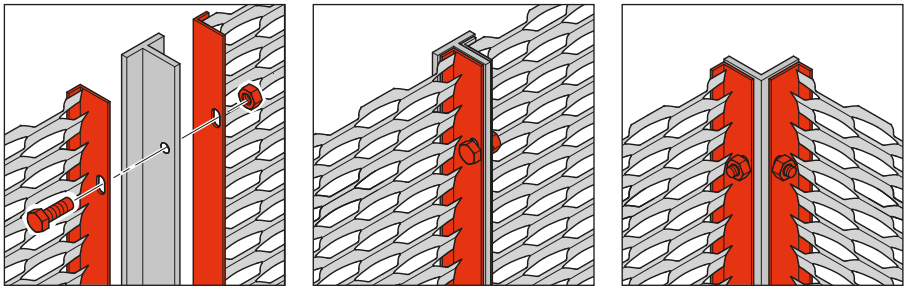
AMBASCIATA Panel		**mm**
Spacing		Made to order
Panel frame **LW**		Made to order
Panel frame **SW**		Made to order
T-post section	50 x 50 x 7 - H	Made to order

Notes on fastening to the base on page 113



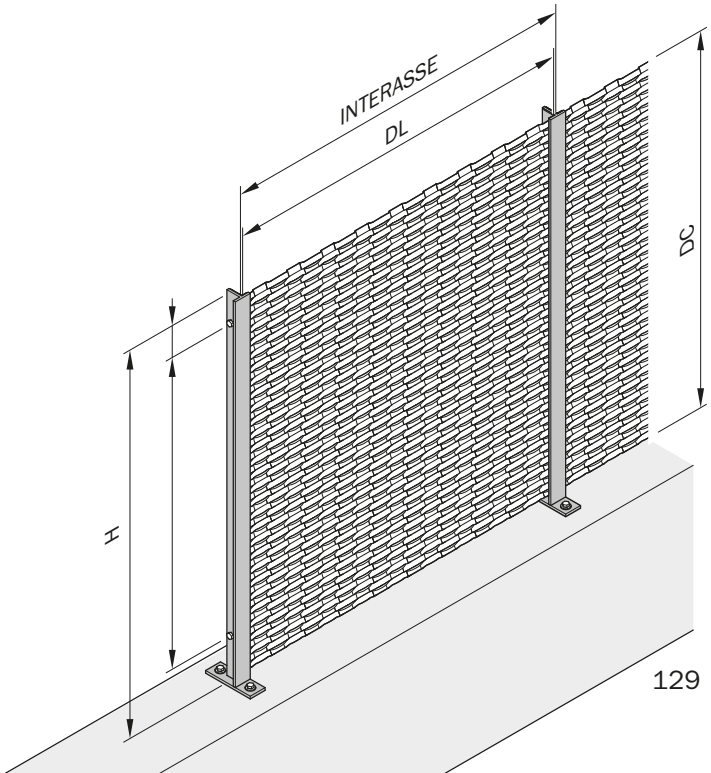
ESPERIA Fencing RAPIDO System

The RAPIDO System ESPERIA fencing is lighter and more convenient and is suitable for outdoor fencing for residential or industrial buildings.



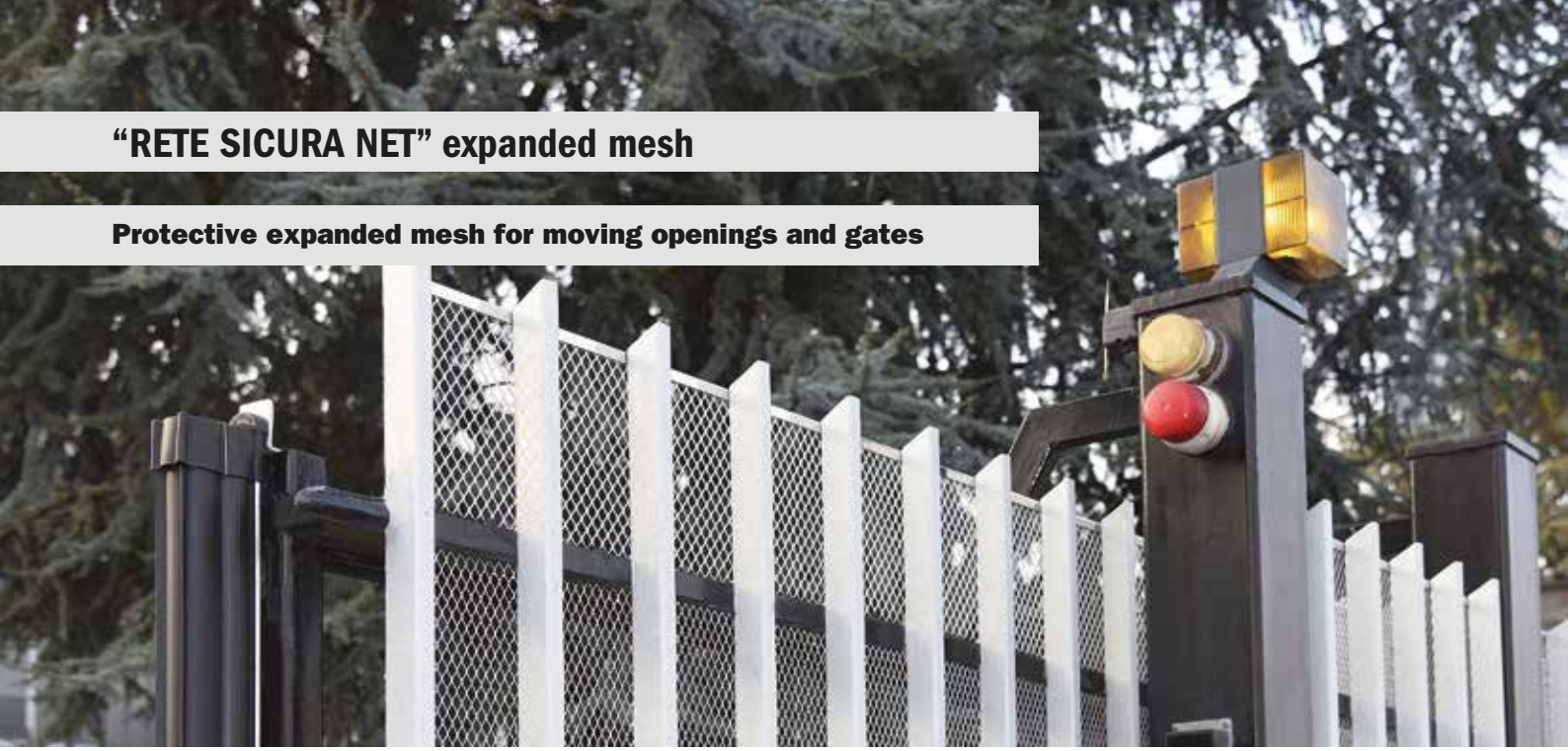
ESPERIA Panel		**mm**
Spacing		Made to order
Panel frame **LW**		Made to order
Panel frame **SW**		Made to order
T-post section	50 x 50 x 7 - H	Made to order

Notes on fastening to the base on page 113



“RETE SICURA NET” expanded mesh

Protective expanded mesh for moving openings and gates



RETE sicura® NET

Complies with UNI EN 12453/17

“Sicura Net” mesh your safety

A responsible choice that gives peace of mind to those who are in charge of security.

EUROPEAN REGULATIONS	**Industrial, commercial doors and gates and garage doors - Safety in the use of power-operated doors - Requirements and test methods**	**UNI EN 12453**
		SEPTEMBER 2017

Industrial, commercial and garage doors and gates - Safety in use of power-operated doors - Requirements and test methods

The standard specifies the safety-related requirements and testing methods for any type of power-operated door, gate or barrier to be installed in areas that are accessible and whose main intended use is to provide safe access to goods, vehicles and persons in industrial, commercial or residential buildings.

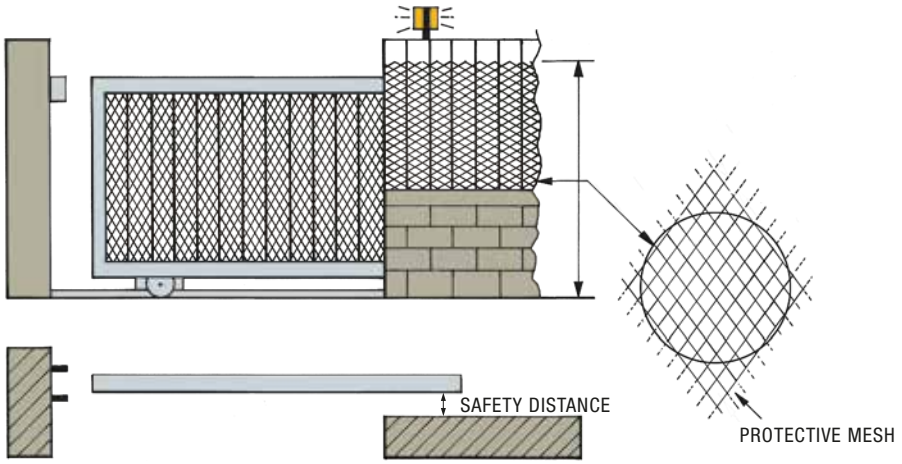
THE FIRST SAFETY MEASURE IS BEING CORRECTLY INFORMED

The new UNI EN 12453/17 regulation prescribes that the power-operated gate and the fixed part of the track must be fitted with mesh to protect against the risk of shearing.

The new standard, in table B.1 in Appendix B, page 29, states that the minimum size of the rectangular opening of the safety mesh must be <=18.5 mm.

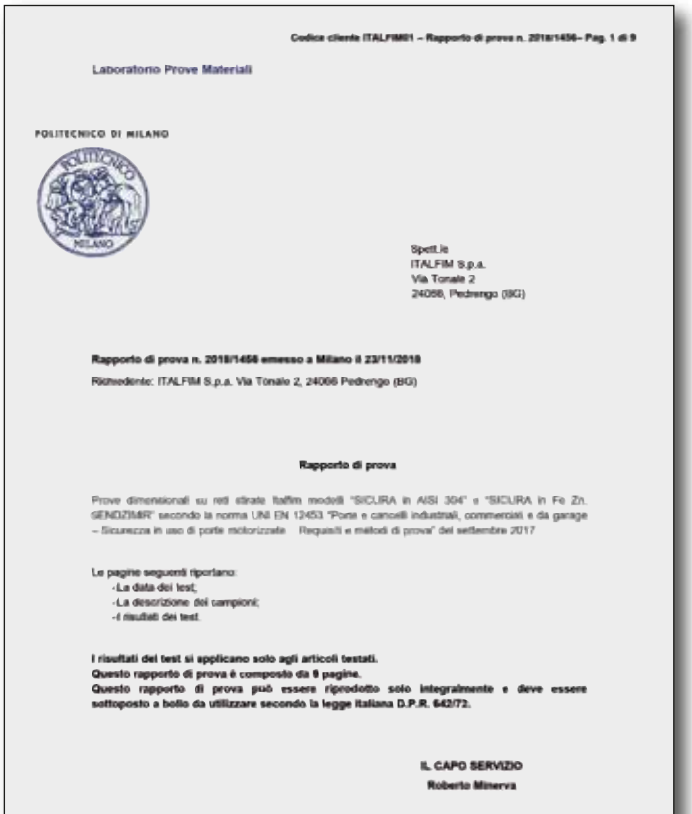
Table B.1 - Safety distances in relation to openings in fences

Openings in fences (mm) smallest dimensions of a rectangular opening	Safety distance (mm)
≤ 18,5	120
> 18,5 ≤ 29	300
> 29 ≤ 44	500
> 44 ≤ 100	850



The Milan Polytechnic laboratories certify that all analyses of dimensions relating to the opening of the **Sicura Net** mesh meet the requirements of the new standard UNI EN 12453/17.

In addition, the **Sicura Net** mesh does not allow even a 10 mm simulation sphere to pass through (equivalent to the size of a finger), as certified at the time by the TÜV laboratories.



Codice cliente ITALFIM01 – Rapporto di prova n. 2018/1456– Pag. 1 di 9

Laboratorio Prove Materiali

POLITECNICO DI MILANO

Spett.le
ITALFIM S.p.a.
Via Tonale 2
24066, Pedrengo (BG)

Rapporto di prova n. 2018/1456 emesso a Milano il 23/11/2018

Richiedente: ITALFIM S.p.a. Via Tonale 2, 24066 Pedrengo (BG)

Rapporto di prova

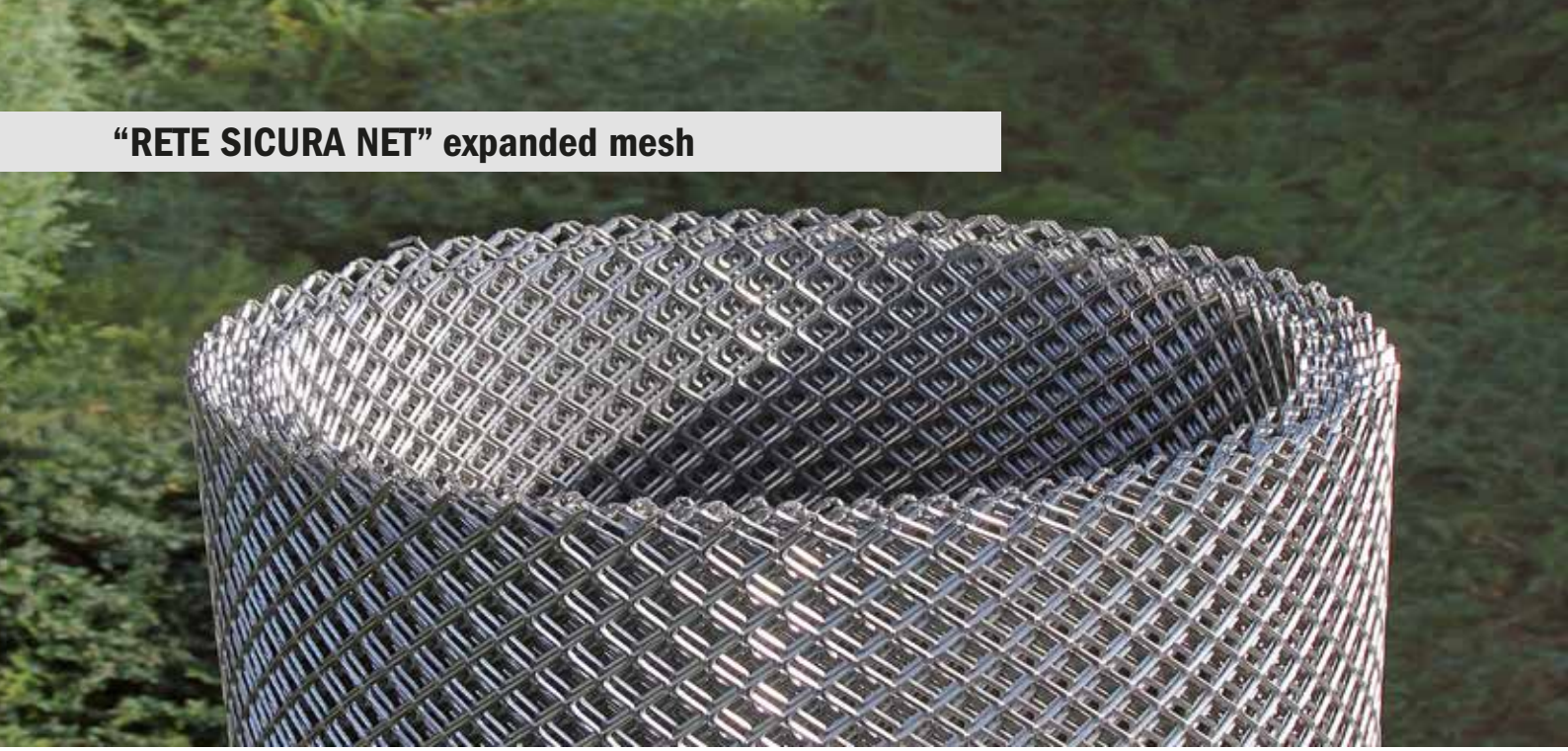
Prove dimensionali su reti sfilate Italfim modelli "SICURA in AISI 304" e "SICURA in Fe Zn SENDZIMIR" secondo la norma UNI EN 12453 "Porte e cancelli industriali, commerciali e da garage – Sicurezza in uso di porte motorizzate - Requisiti e metodi di prova" del settembre 2017

Le pagine seguenti riportano:
- La data dei test,
- La descrizione dei campioni;
- I risultati dei test.

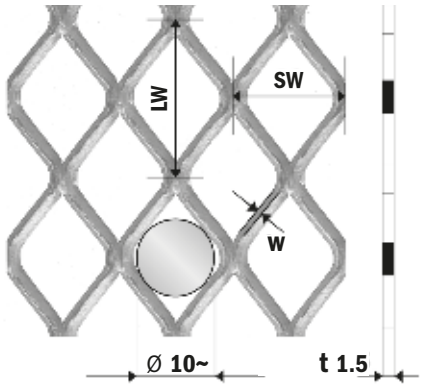
I risultati dei test si applicano solo agli articoli testati.
Questo rapporto di prova è composto da 9 pagine.
Questo rapporto di prova può essere riprodotto solo integralmente e deve essere sottoposto a bollo da utilizzare secondo la legge italiana D.P.R. 642/72.

IL CAPO SERVIZIO
Roberto Minerva

“RETE SICURA NET” expanded mesh



ACTUAL DIMENSIONS



TÜV technical report

MATERIALS

Sicura Net mesh is made in AISI 304 stainless steel and in Sendzimir galvanised carbon steel.

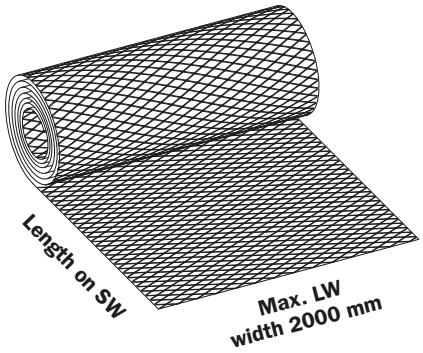
AISI 304 Stainless steel
Q 20 x 13.8 mm (LW x SW)
Material is corrosion resistant.

Sendzimir galvanised carbon steel
Q 20 x 13.9 mm (LW x SW) Material requires protective coating.

Legenda:
LW - Long way pitch
SW - Short way pitch
w - 1,5 mm strand widht
t - 1,5 mm thickness
ø - hole 10 mm recorded

FORMATS

Sicura Net mesh is available in rolls with the following widths: 1000, 1250, 1500, 2000 mm



THE SICURA NET MESH TO ENSURE PERSONAL SAFETY

DOES NOT BREAK

Robust and durable, “Sicura Net” mesh does not come apart and does not warp.

IS 100% ELECTRICAL

Contact with a single point of the mesh is sufficient to ground the "Sicura Net" mesh.

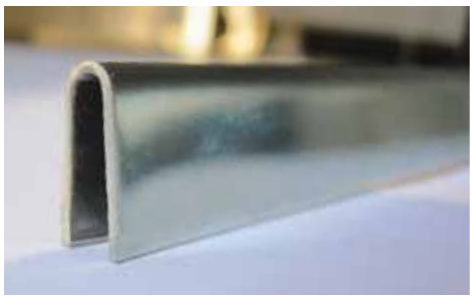
ENSURES OPTIMAL VISION

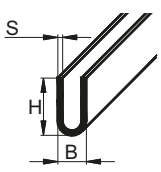
Guarantees good perspective visibility.

IS LEGALLY COMPLIANT

Can also be used in accident prevention, as set out in Italian Legislative Decree No. 81/08 (formerly 626/94).

The new UNI EN 12453/17 standard requires that sharp edges be avoided. U-profiles guarantee edging that is practical and flatter.





U-PROFILE FOR FINISHING					
Dimensions in mm			Material		Weight kg/m
B	H	S			
4	13.5	0.8		Sendzimir galvanised Carbon Steel	AISI 304 Steel	0.20
8	15	1.5	Carbon Steel	Sendzimir galvanised Carbon Steel		0.39

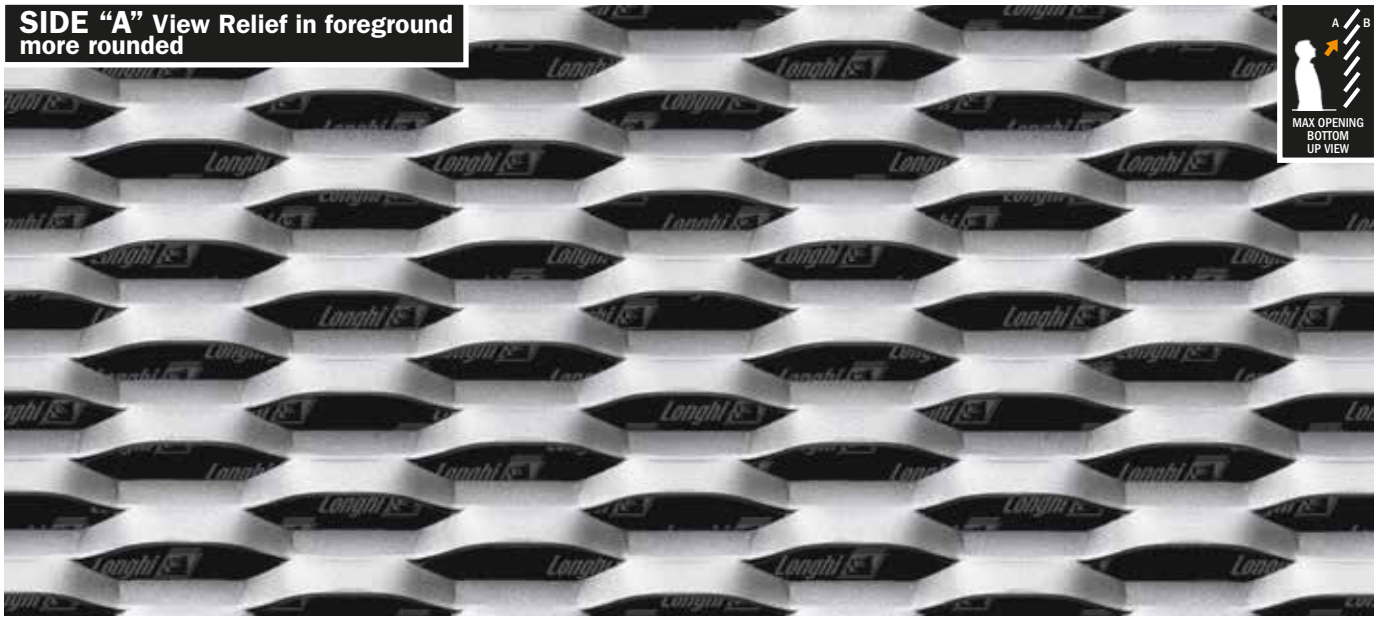
EF 400/1 Mesh - Ultra Limites Line

Delta Mesh - Protech Line

protech line

ultra limites line

SIDE "A" View Relief in foreground more rounded

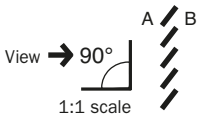


Type - LW x SW (SW actual) - w x t (mm)	Mild steel (kg/m²)		Available sheet size (mm)	Sheet thickness (mm)	% front open area
E 45 x 15 (13.4) - 5 x **1.5**	8.80	3.00	**LW** 1000 x **SW** 2000 **LW** 1250 x **SW** 2500 **LW** 1500 x **SW** 3000 **LW** 2000 - 2500 x **SW** 2000 Max	measured at the centre 7 (~) ◆	33.3 (~)
E 45 x 15 (13.4) - 5 x **2.0**	11.60	4.00			
E 45 x 15 (13.4) - 5 x **3.0**	17.50	6.00			

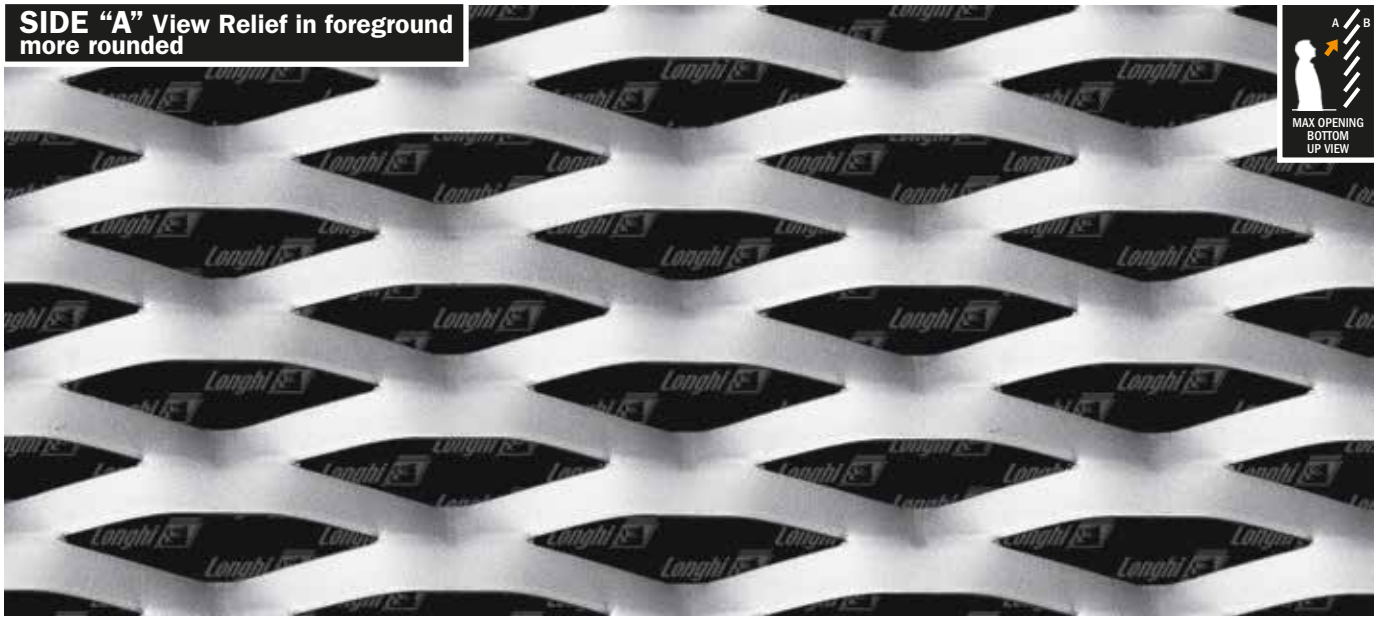
◆ Framing profiles: see page 149

Fils 21

E 45 x 15 (13.4) - 5 x t
TYPE | LW | SW NOMINAL | SW ACTUAL | w | t



SIDE "A" View Relief in foreground more rounded

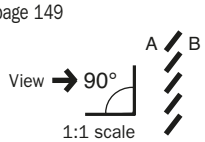


Type - LW x SW (SW actual) - w x t (mm)	Mild steel (kg/m²)	Aluminium (kg/m²)	Available sheet size (mm)	Sheet thickness (mm)	% front open area
R 62.5 x 20 (20) - 7.5 x **1.5**	9,00	3.00	**LW** 1000 x **SW** 2000 **LW** 1250 x **SW** 2500 **LW** 1500 x **SW** 3000 **LW** 2000 - 2500 x **SW** 2000 Max	measured at the centre 10 (~) ◆	36.2 (~)
R 62.5 x 20 (20) - 7.5 x **2.0**	12,00	4.00			
R 62.5 x 20 (20) - 7.5 x **3.0**	18,00	6.00			

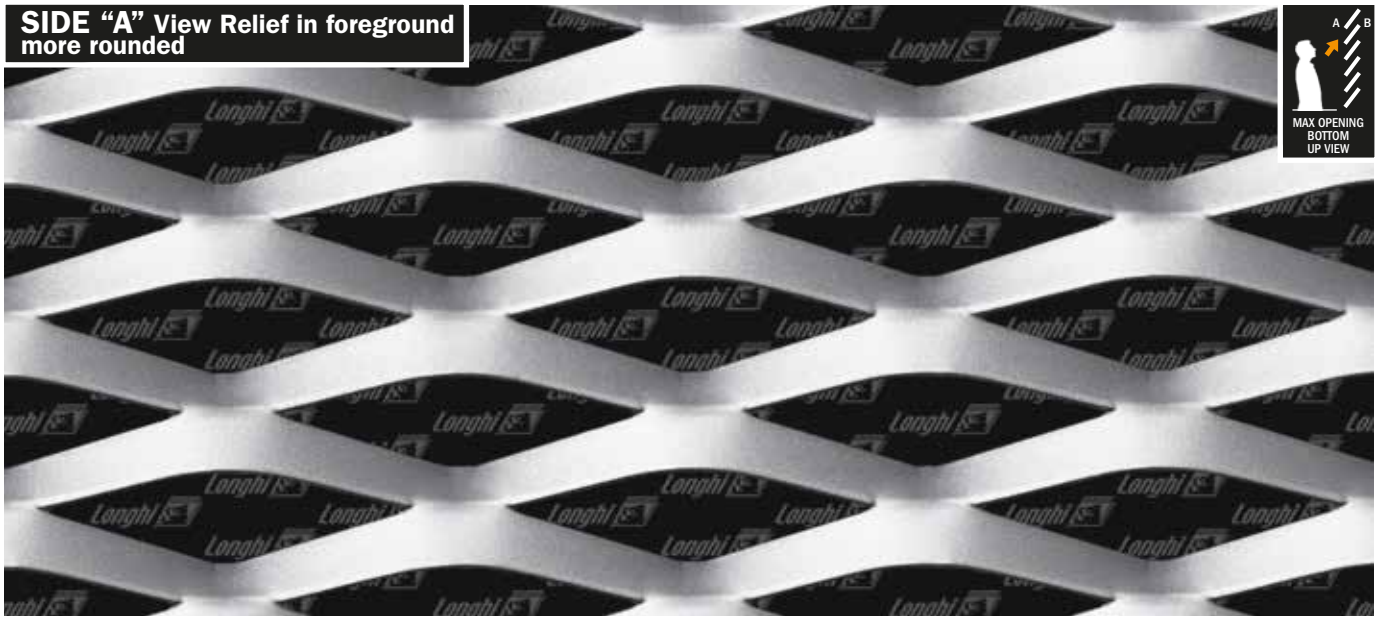
◆ Framing profiles: see page 149

Fils 5

R 62.5 x 20 (20) - 7.5 x t
TYPE | LW | SW NOMINAL | SW ACTUAL | w | t



SIDE "A" View Relief in foreground more rounded

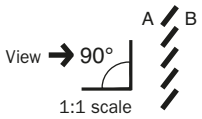


Type - LW x SW (SW actual) - w x t (mm)	Mild steel (kg/m²)	Aluminium (kg/m²)	Available sheet size (mm)	Sheet thickness (mm)	% front open area
R 62.5 x 20 (25.5) - 9.1 x **1.5**	8.20	2.70	**LW** 1000 x **SW** 2000 **LW** 1250 x **SW** 2500 **LW** 1500 x **SW** 3000 **LW** 2000 - 2500 x **SW** 2200 Max	measured at the centre 11 (~) ◆	42 (~)
R 62.5 x 20 (25.5) - 9.1 x **2.0**	11.00	3.60			

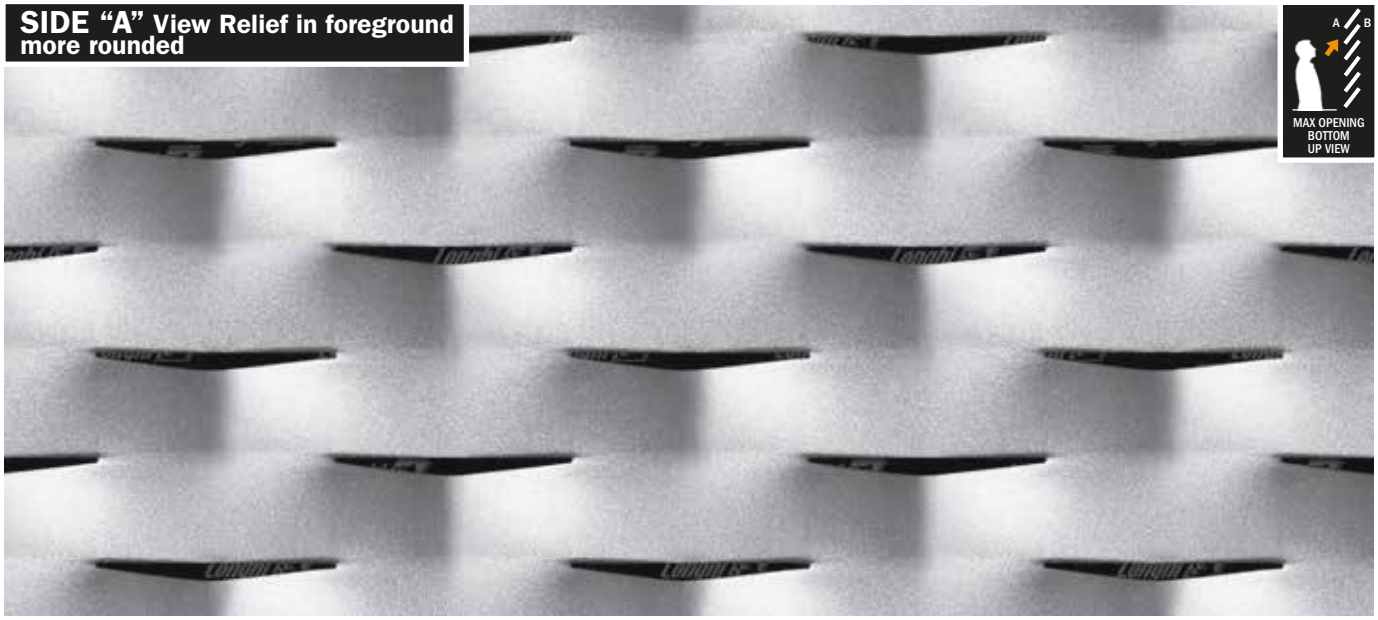
◆ Framing profiles: see page 149

Airport

R 62.5 x 20 (25.5) - 9.1 x t
TYPE | LW | SW NOMINAL | SW ACTUAL | w | t



SIDE "A" View Relief in foreground more rounded

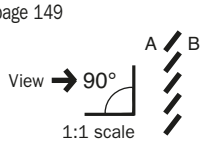


Type - LW x SW (SW actual) - w x t (mm)	Mild steel (kg/m²)	Aluminium (kg/m²)	Available sheet size (mm)	Sheet thickness (mm)	% front open area
R 62.5 x 20 (29) - 14 x **1.5**	11.70	3.90	**LW** 1000 x **SW** 2000 **LW** 1250 x **SW** 2500 **LW** 1500 x **SW** 3000 **LW** 2000 - 2500 x **SW** 1500 Max	measured at the centre 8 (~) ◆	5.3 (~)
R 62.5 x 20 (29) - 14 x **2.0**	15.60	5.20			

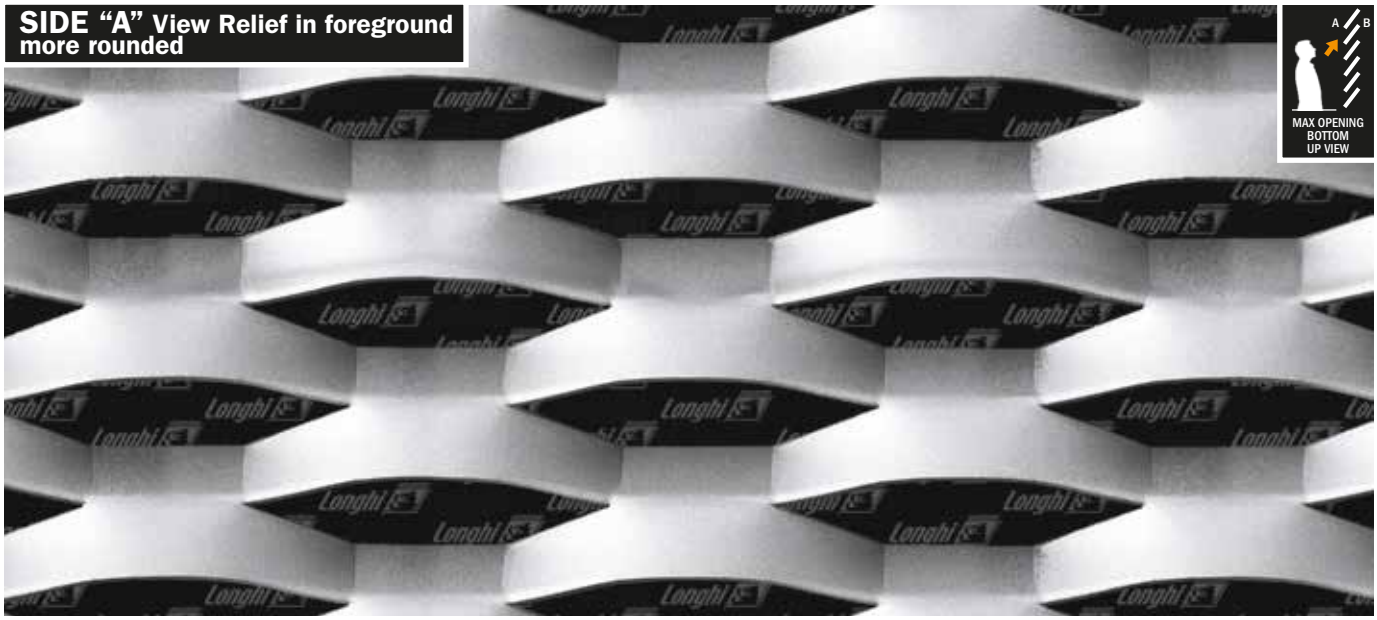
◆ Framing profiles: see page 149

Privacy

R 62.5 x 20 (29) - 14 x t
TYPE | LW | SW NOMINAL | SW ACTUAL | w | t



SIDE "A" View Relief in foreground more rounded

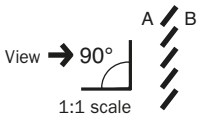


Type - LW x SW (SW actual) - w x t (mm)	Mild steel (kg/m²)		Available sheet size (mm)	Sheet thickness (mm)	% front open area
E 70 x 26 (26) - 10 x **1.5**	9.00	3.10	**LW** 1000 x **SW** 2000 **LW** 1250 x **SW** 2500 **LW** 1500 x **SW** 3000 **LW** 2000 - 2500 x **SW** 1800 Max	measured at the centre 11 (~) ◆	29 (~)
E 70 x 26 (26) - 10 x **2.0**	12.00	4.20			

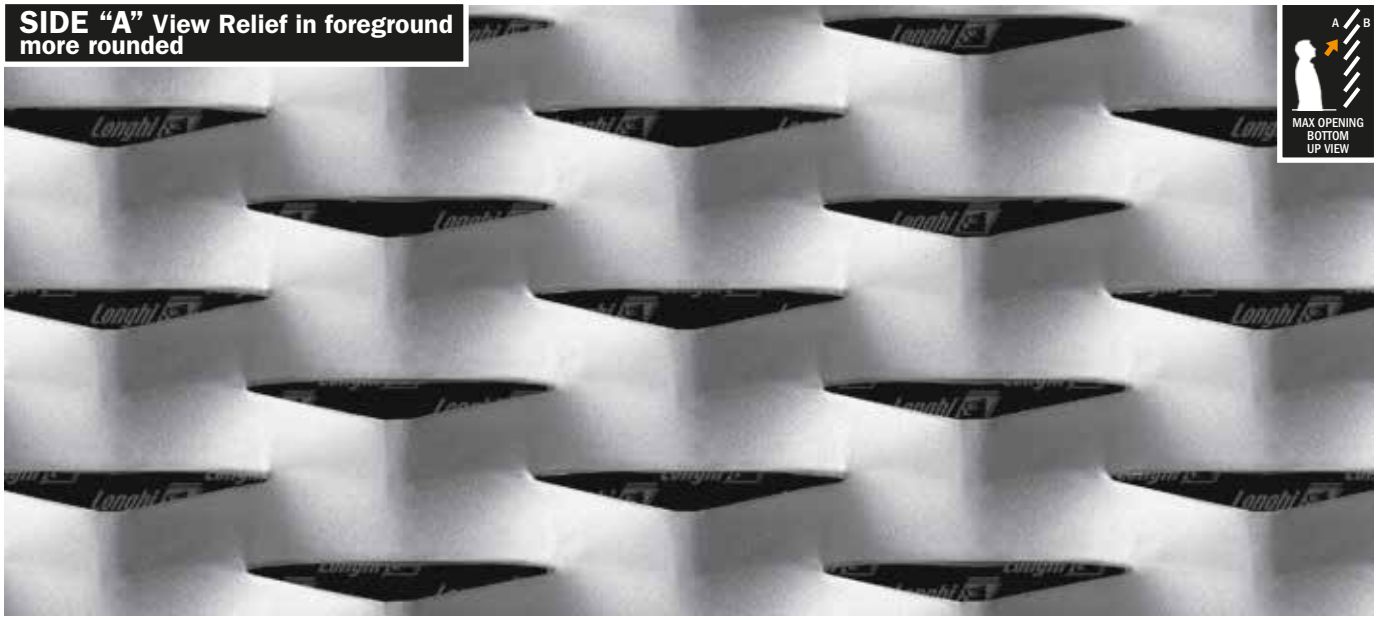
◆ Framing profiles: see page 149

Esedra

E 70 x 26 (26) - 10 x t
TYPE | LW | SW NOMINAL | SW ACTUAL | w | t



SIDE "A" View Relief in foreground more rounded

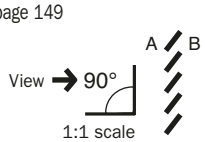


Type - LW x SW (SW actual) - w x t (mm)	Mild steel (kg/m²)	Aluminium (kg/m²)	Available sheet size (mm)	Sheet thickness (mm)	% front open area
R 76 x 31 (24) - 11 x **1.5**	10.60	3.60	**LW** 1000 x **SW** 2000 **LW** 1250 x **SW** 2500 **LW** 1500 x **SW** 3000 **LW** 2000 - 2500 x **SW** 1600 Max	measured at the centre 11 (~) ◆	13.3 (~)
R 76 x 31 (24) - 11 x **2.0**	14.10	4.70			

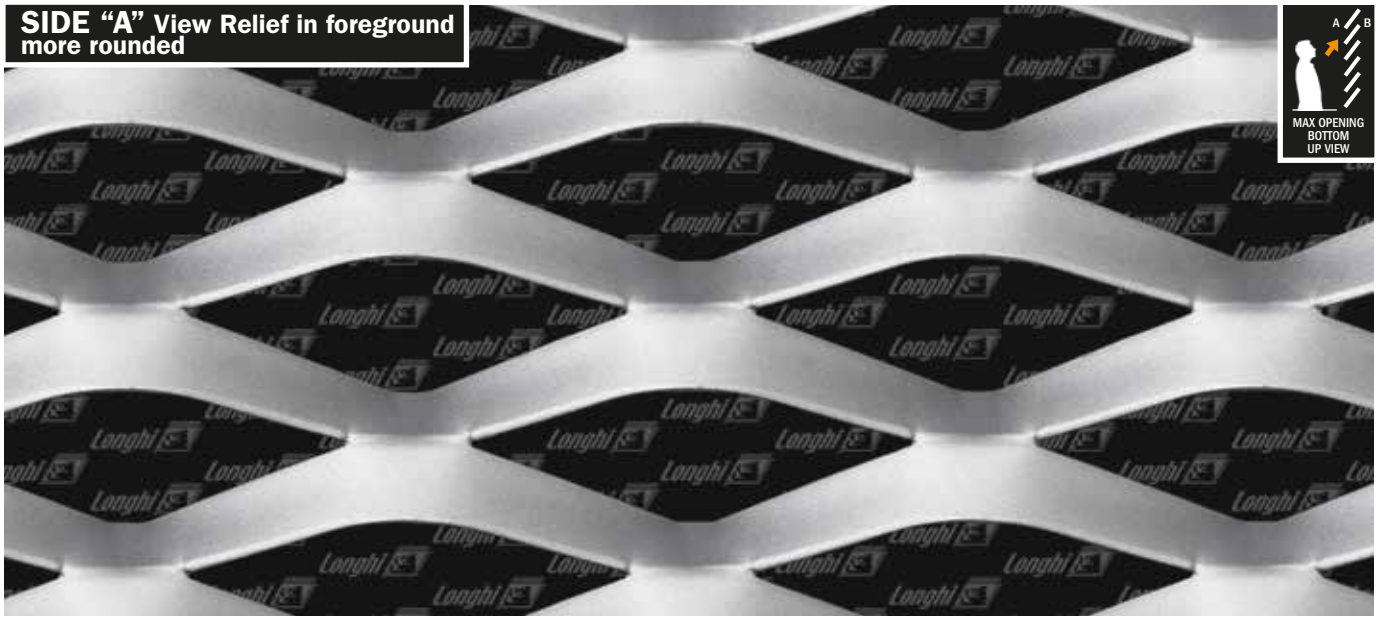
◆ Framing profiles: see page 149

Idea

R 76 x 31 (24) - 11 x t
TYPE | LW | SW NOMINAL | SW ACTUAL | w | t



SIDE "A" View Relief in foreground more rounded

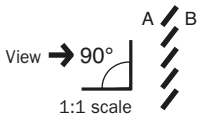


Type - LW x SW (SW actual) - w x t (mm)	Mild steel (kg/m²)	Aluminium (kg/m²)	Available sheet size (mm)	Sheet thickness (mm)	% front open area
R 76 x 31 (35) - 11 x **1.5**	7.80	2.60	**LW** 1000 x **SW** 2000 **LW** 1250 x **SW** 2500 **LW** 1500 x **SW** 3000 **LW** 2000 - 2500 x **SW** 2200 Max	measured at the centre 14 (~) ◆	42 (~)
R 76 x 31 (35) - 11 x **2.0**	10.20	3.40			

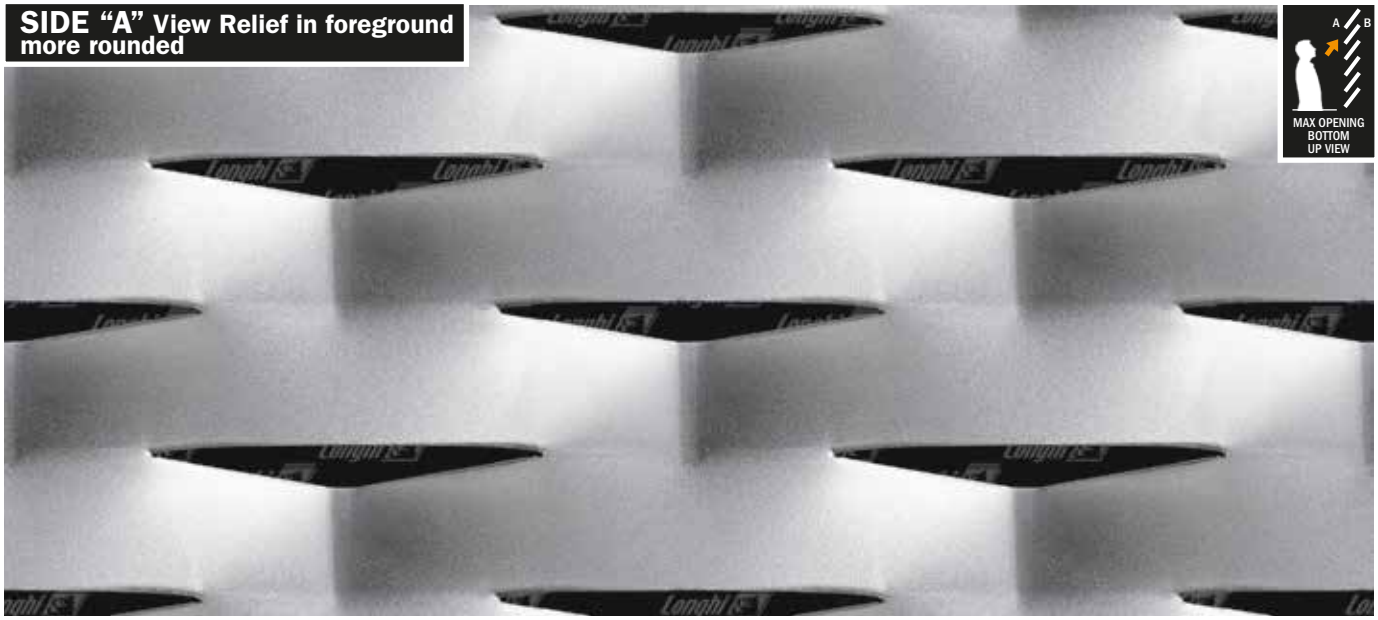
◆ Framing profiles: see page 149

Gate

R 76 x 31 (35) - 11 x t
TYPE | LW | SW NOMINAL | SW ACTUAL | w | t



SIDE "A" View Relief in foreground more rounded

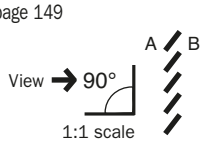


Type - LW x SW (SW actual) - w x t (mm)	Mild steel (kg/m²)	Aluminium (kg/m²)	Available sheet size (mm)	Sheet thickness (mm)	% front open area
R 90 x 30 (38) - 18 x **1.5**	11.00	3.60	**LW** 1000 x **SW** 2000 **LW** 1250 x **SW** 2500 **LW** 1500 x **SW** 3000 **LW** 2000 - 2500 x **SW** 1500 Max	measured at the centre 13 (~) ◆	10 (~)
R 90 x 30 (38) - 18 x **2.0**	14.60	4.80			

◆ Framing profiles: see page 149

Reserve

R 62.5 x 20 (29) - 14 x t
TYPE | LW | SW NOMINAL | SW ACTUAL | w | t

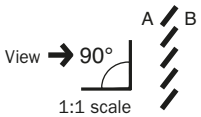


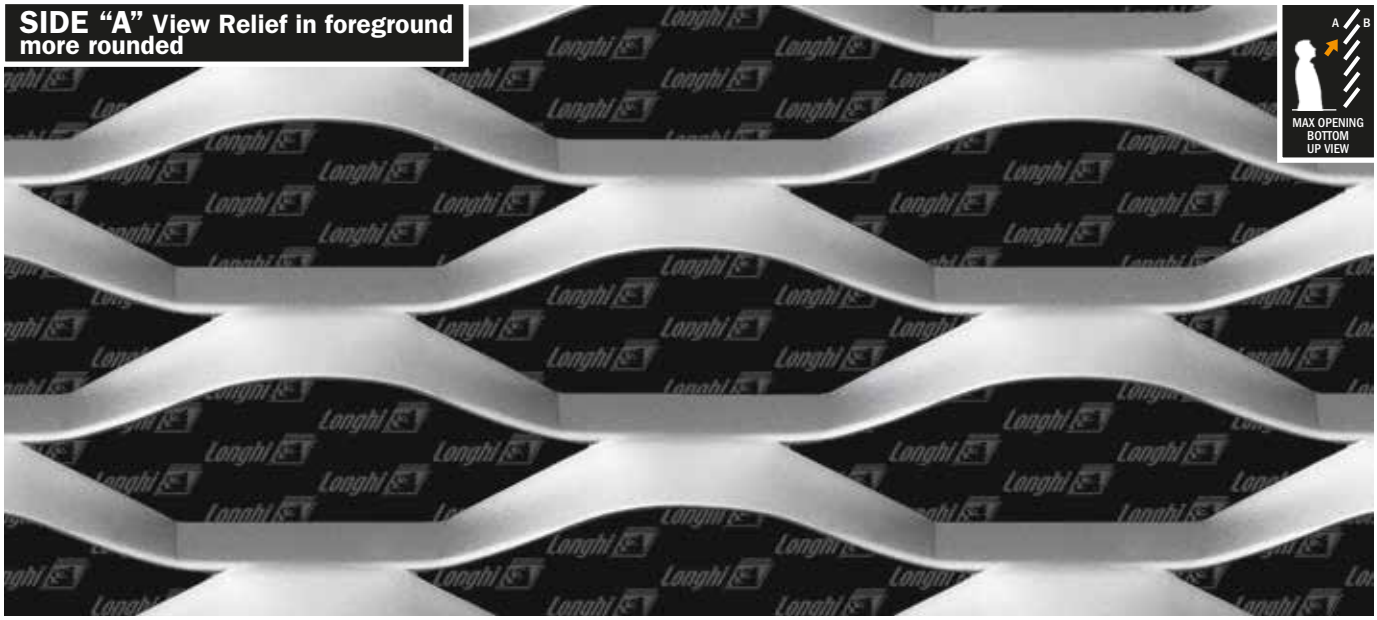
Type - LW x SW (SW actual) - w x t (mm)	Mild steel (kg/m²)		Available sheet size (mm)	Sheet thickness (mm)	% front open area
E 100 x 40 (15) - 4 x **2.0**	8.30	2.90	**LW** 1000 x **SW** 2000 **LW** 1250 x **SW** 2500 **LW** 1500 x **SW** 3000 **LW** 2000 - 2500 x **SW** 2500 Max	measured at the centre 7 (~) ◆	52 (~)
E 100 x 40 (15) - 4 x **3.0**	12.50	4.30			

◆ Framing profiles: see page 149

Greca

E 100 x 40 (15) - 4 x t
TYPE | LW | SW NOMINAL | SW ACTUAL | w | t



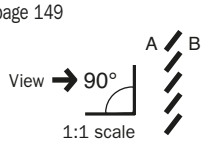


Type - LW x SW (SW actual) - w x t (mm)	Mild steel (kg/m²)	Aluminium (kg/m²)	Available sheet size (mm)	Sheet thickness (mm)	% front open area
E 100 x 40 (34) - 10 x **1.5**	6.90	2.30	**LW** 1000 x **SW** 2000 **LW** 1250 x **SW** 2500 **LW** 1500 x **SW** 3000 **LW** 2000 - 2500 x **SW** 2500 Max	measured at the centre 15 (~) ◆	51,5 (~)
E 100 x 40 (34) - 10 x **2.0**	9.30	3.10			

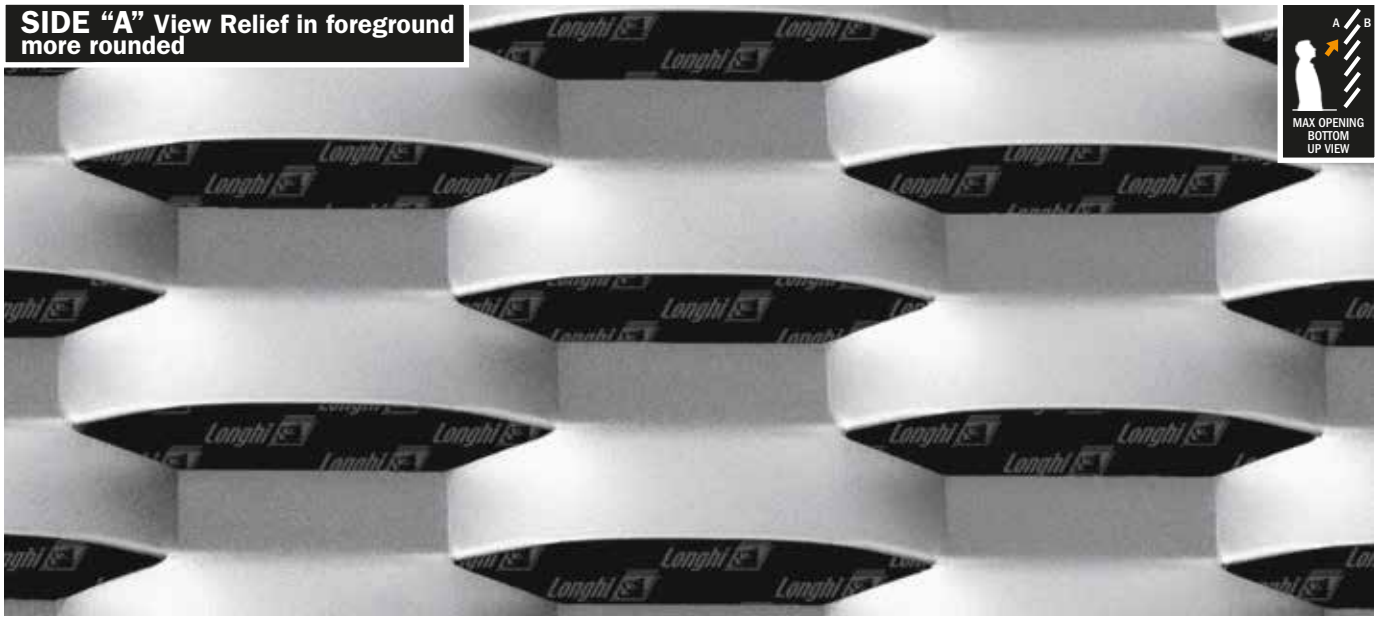
◆ Framing profiles: see page 149

Grafica

E 100 x 40 (34) - 10 x t
TYPE | LW | SW NOMINAL | SW ACTUAL | w | t



SIDE "A" View Relief in foreground more rounded

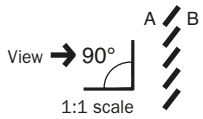


Type - LW x SW (SW actual) - w x t (mm)	Mild steel (kg/m²)	Aluminium (kg/m²)	Available sheet size (mm)	Sheet thickness (mm)	% front open area
E 100 x 40 (34) - 15 x **1.5**	10.30	3.40	**LW** 1000 x **SW** 2000 **LW** 1250 x **SW** 2500 **LW** 1500 x **SW** 3000 **LW** 2000 - 2500 x **SW** 1700 Max	measured at the centre 13 (~) ◆	23.3 (~)
E 100 x 40 (34) - 15 x **2.0**	13.70	4.50			

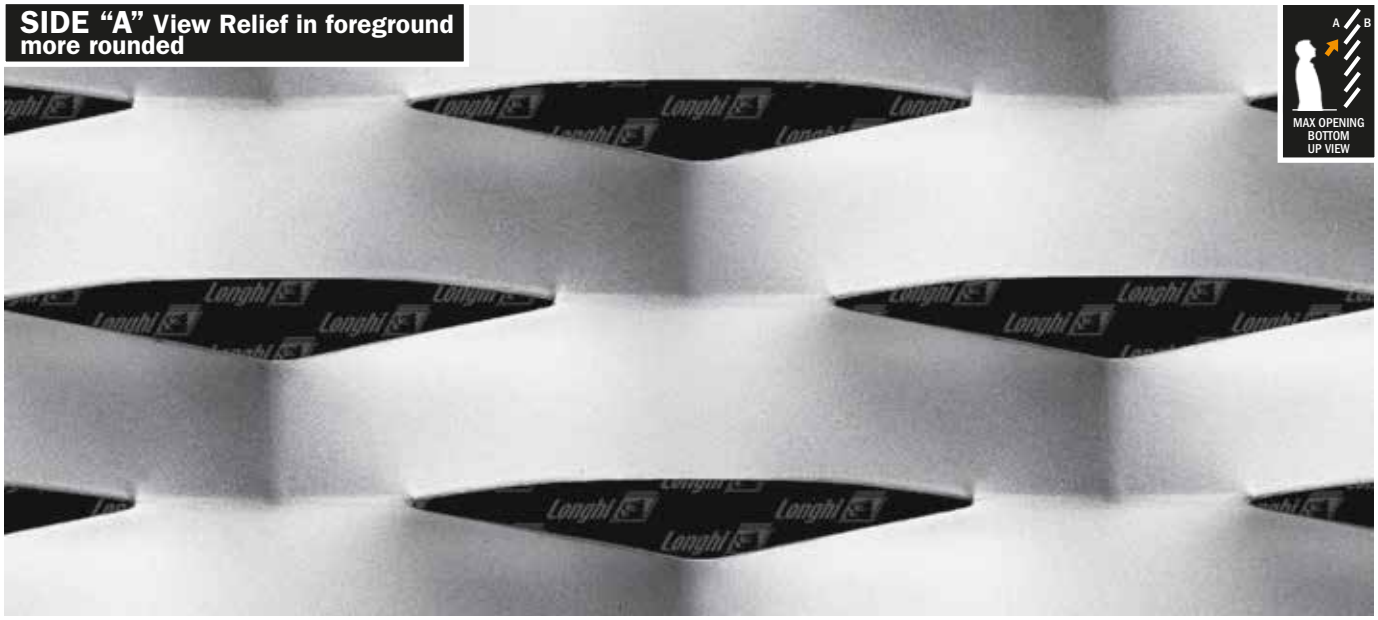
◆ Framing profiles: see page 149

Esperia

E 100 x 40 (34) - 15 x t
TYPE | LW | SW NOMINAL | SW ACTUAL | w | t



SIDE "A" View Relief in foreground more rounded

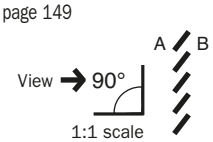


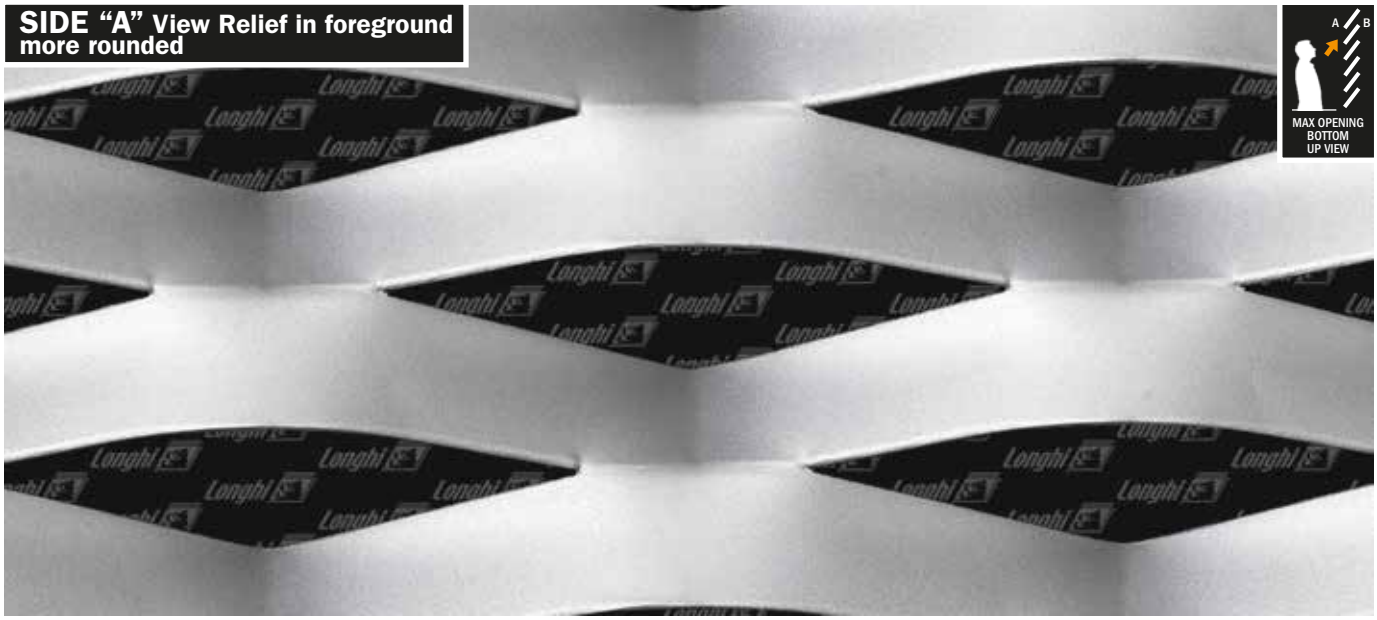
Type - LW x SW (SW actual) - w x t (mm)	Mild steel (kg/m²)	Aluminium (kg/m²)	Available sheet size (mm)	Sheet thickness (mm)	% front open area
R 110 x 40 (52) - 24 x **1.5**	10.60	3.60	**LW** 1000 x **SW** 2000 **LW** 1250 x **SW** 2500 **LW** 1500 x **SW** 3000 **LW** 2000 - 2500 x **SW** 1600 Max	measured at the centre 18 (~) ◆	16 (~)
R 110 x 40 (52) - 24 x **2.0**	14.10	4.70			
R 110 x 40 (52) - 24 x **3.0**	21.10	7.00			

◆ Framing profiles: see page 149

Ambasciata

R 110 x 40 (52) - 24 x t
TYPE | LW | SW NOMINAL | SW ACTUAL | w | t



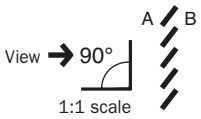


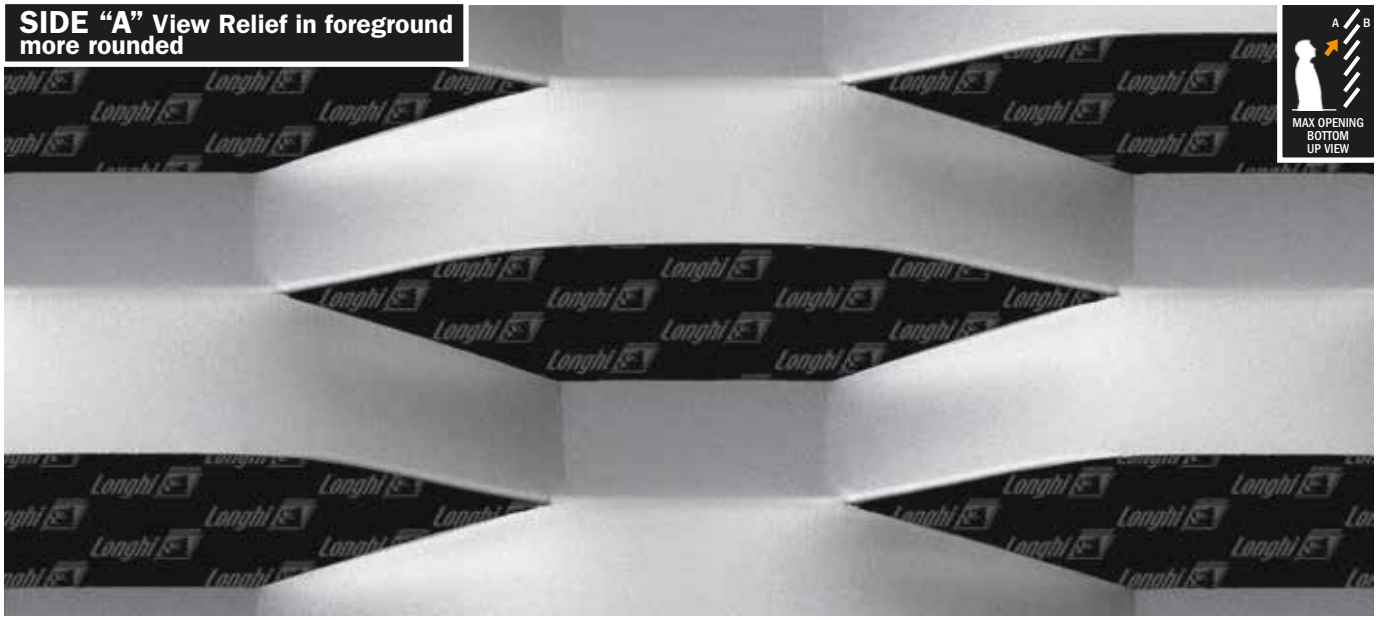
Type - LW x SW (SW actual) - w x t (mm)	Mild steel (kg/m²)		Available sheet size (mm)	Sheet thickness (mm)	% front open area
R 115 x 40 (48) - 20 x **1.5**	9.70	3.20	**LW** 1000 x **SW** 2000 **LW** 1250 x **SW** 2500 **LW** 1500 x **SW** 3000 **LW** 2000 - 2500 x **SW** 1800 Max	measured at the centre 21 (~) ◆	26 (~)
R 115 x 40 (48) - 20 x **2.0**	12.80	4.20			
R 115 x 40 (48) - 20 x **3.0**	19.30	6.40			

◆ Framing profiles: see page 149

Academy

R 115 x 40 (48) - 20 x t
TYPE | LW | SW NOMINAL | SW ACTUAL | w | t



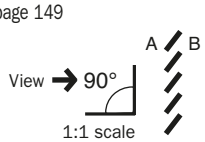


Type - LW x SW (SW actual) - w x t (mm)	Mild steel (kg/m²)	Aluminium (kg/m²)	Available sheet size (mm)	Sheet thickness (mm)	% front open area
E 150 x 56 (56) - 21.5 x **1.5**	9.30	3.10	**LW** 1000 x **SW** 2000 **LW** 1250 x **SW** 2500 **LW** 1500 x **SW** 3000 **LW** 2000 - 2500 x **SW** 1800 Max	measured at the centre 21 (~) ◆	29.8 (~)
E 150 x 56 (56) - 21.5 x **2.0**	12.40	4.20			

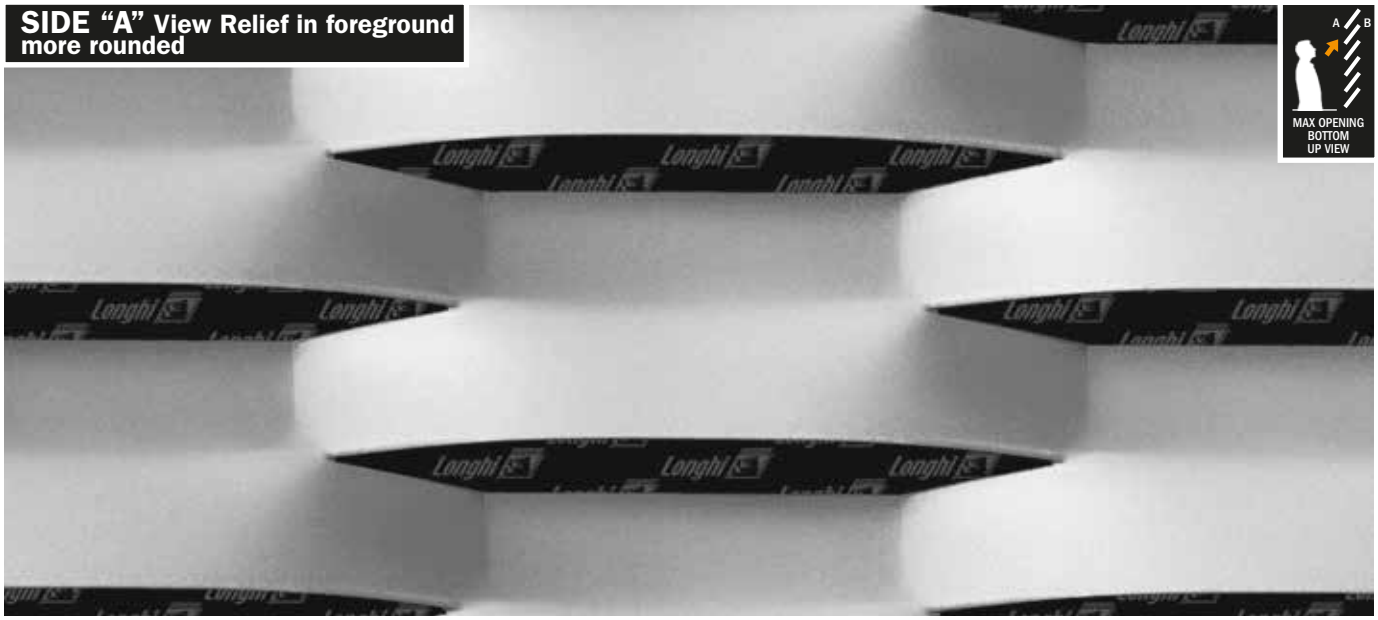
◆ Framing profiles: see page 149

Lucerna

E 150 x 56 (56) - 21.5 x t
TYPE | LW | SW NOMINAL | SW ACTUAL | w | t



SIDE "A" View Relief in foreground more rounded

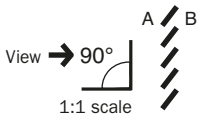


Type - LW x SW (SW actual) - w x t (mm)	Mild steel (kg/m²)	Aluminium (kg/m²)	Available sheet size (mm)	Sheet thickness (mm)	% front open area
E 160 x 40 (40) - 18 x **1.5**	10.80	3.60	**LW** 1000 x **SW** 2000 **LW** 1250 x **SW** 2500 **LW** 1500 x **SW** 3000 **LW** 2000 - 2500 x **SW** 1600 Max	measured at the centre 16 (~) ◆	15.4 (~)
E 160 x 40 (40) - 18 x **2.0**	14,40	4.80			

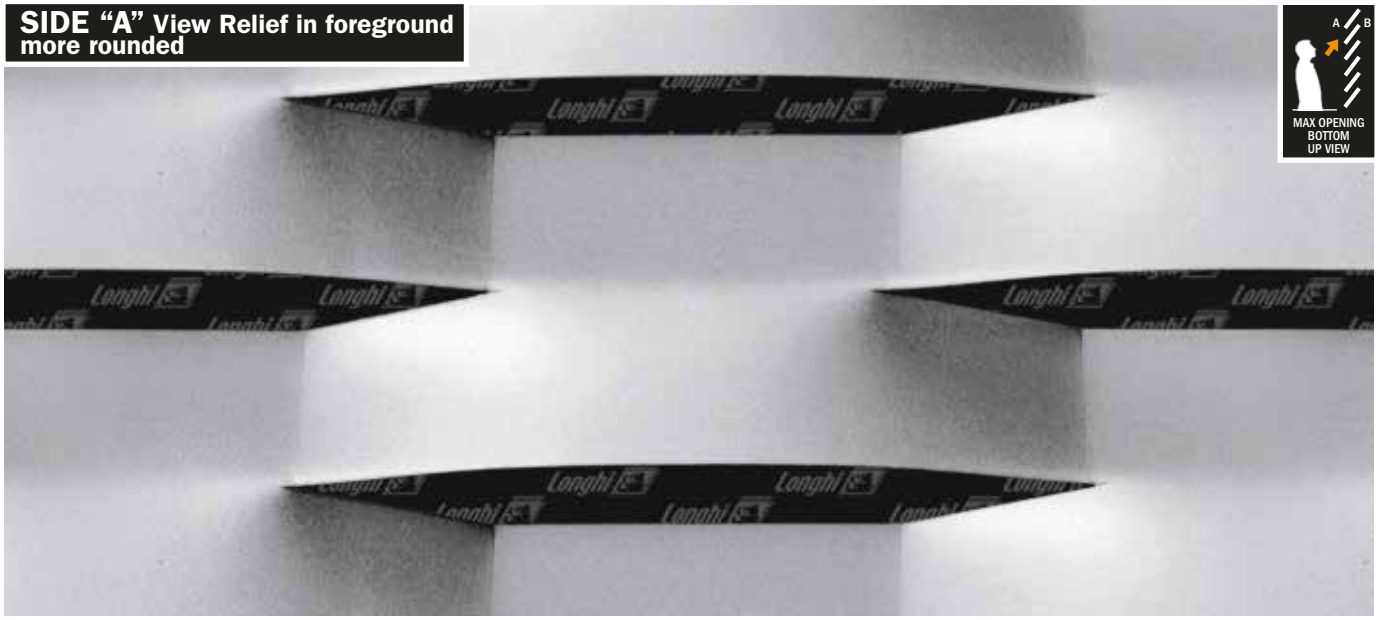
◆ Framing profiles: see page 149

College

E 100 x 40 (40) - 18 x t
TYPE | LW | SW NOMINAL | SW ACTUAL | w | t



SIDE "A" View Relief in foreground more rounded

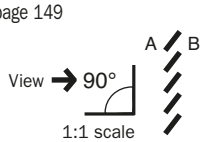


Type - LW x SW (SW actual) - w x t (mm)	Mild steel (kg/m²)	Aluminium (kg/m²)	Available sheet size (mm)	Sheet thickness (mm)	% front open area
E 160 x 40 (52) - 24 x **1.5**	10.80	3.60	**LW** 1000 x **SW** 2000 **LW** 1250 x **SW** 2500 **LW** 1500 x **SW** 3000 **LW** 2000 - 2500 x **SW** 1600 Max	measured at the centre 16 (~) ◆	15 (~)
E 160 x 40 (52) - 24 x **2.0**	14.40	4.80			
E 160 x 40 (52) - 24 x **3.0**	21.60	7.20			

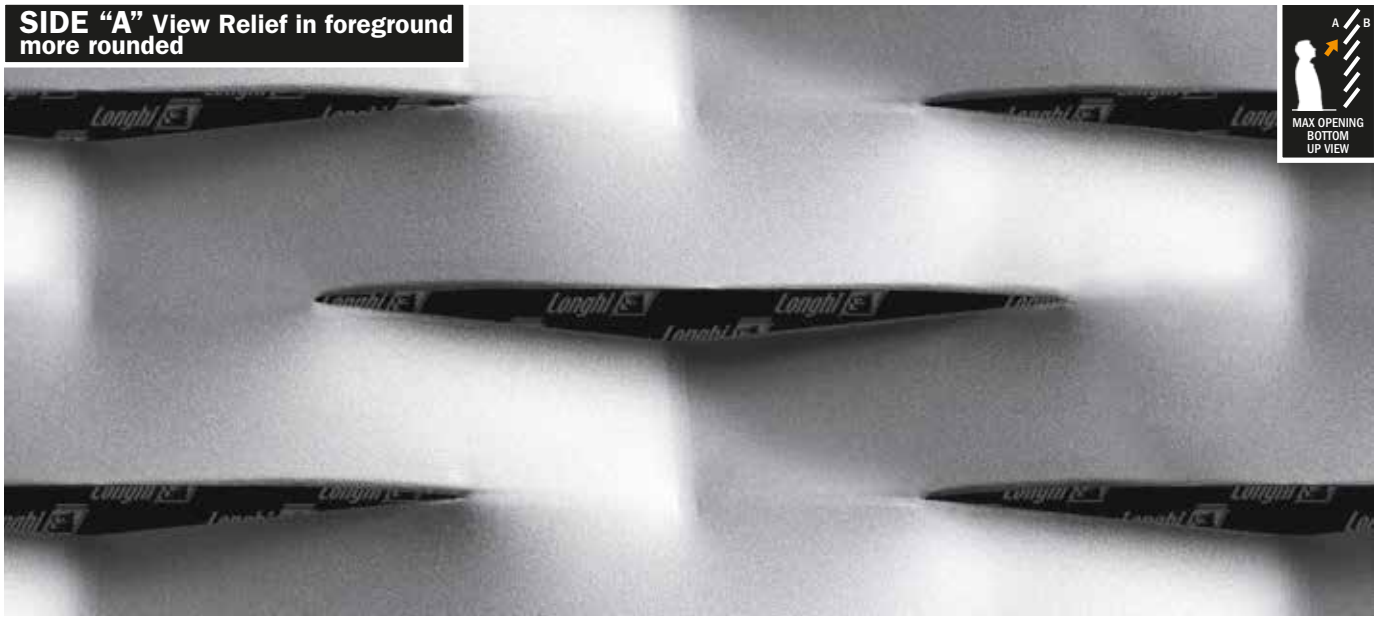
◆ Framing profiles: see page 149

Omega

E 160 x 40 (52) - 24 x t
TYPE | LW | SW NOMINAL | SW ACTUAL | w | t



SIDE "A" View Relief in foreground more rounded

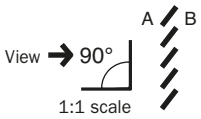


Type - LW x SW (SW actual) - w x t (mm)	Mild steel (kg/m²)		Available sheet size (mm)	Sheet thickness (mm)	% front open area
R 160 x 40 (52) - 24 x **1.5**	10.60	3.60	**LW** 1000 x **SW** 2000 **LW** 1250 x **SW** 2500 **LW** 1500 x **SW** 3000 **LW** 2000 - 2500 x **SW** 1600 Max	measured at the centre 18 (~) ◆	10.2 (~)
R 160 x 40 (52) - 24 x **2.0**	14.10	4.70			

◆ Framing profiles: see page 149

Sierra

R 160 x 40 (52) - 24 x t
TYPE | LW | SW NOMINAL | SW ACTUAL | w | t



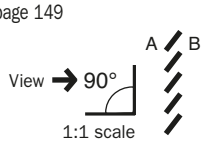
SIDE "A" View Relief in foreground more rounded

Type - LW x SW (SW actual) - w x t (mm)	Mild steel (kg/m²)	Aluminium (kg/m²)	Available sheet size (mm)	Sheet thickness (mm)	% front open area
E 200 x 65 (35) - 15 x **1.5**	10.10	/	**LW** 1000 x **SW** 2000 **LW** 1250 x **SW** 2500 **LW** 1500 x **SW** 3000 **LW** 2000 - 2500 x **SW** 1700 Max	measured at the centre 17 (~) ◆	20.5 (~)
E 200 x 65 (35) - 15 x **2.0**	13.50	4.60			
E 200 x 65 (35) - 15 x **3.0**	/	6.90			

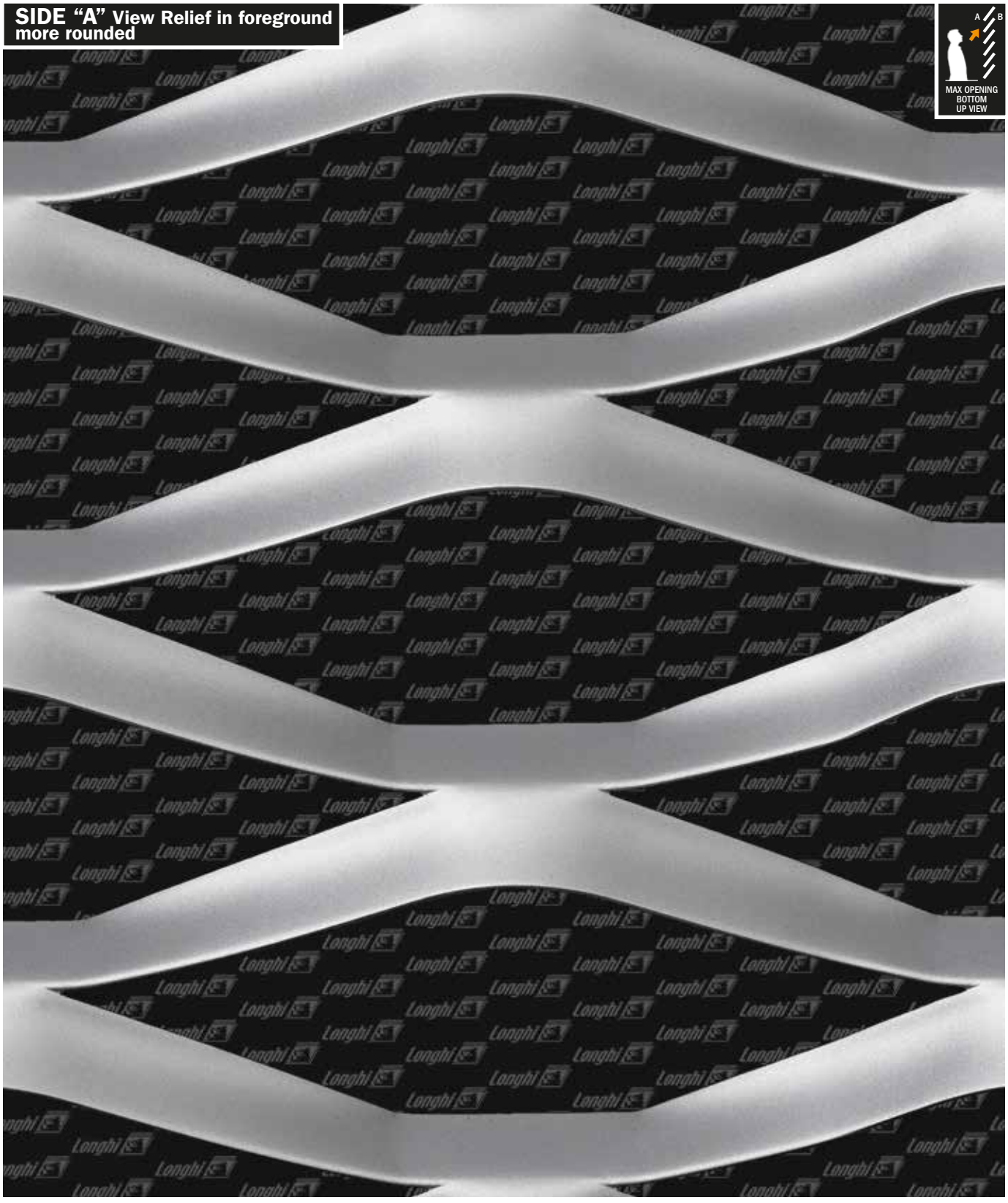
◆ Framing profiles: see page 149

Prisma

E 200 x 65 (35) - 15 x t
TYPE | LW | SW NOMINAL | SW ACTUAL | w | t



SIDE "A" View Relief in foreground more rounded

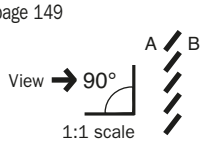


Type - LW x SW (SW actual) - w x t (mm)	Mild steel (kg/m²)	Aluminium (kg/m²)	Available sheet size (mm)	Sheet thickness (mm)	% front open area
E 200 x 65 (70) - 20.6 x **1.5**	7.20	2.40	**LW** 1000 x **SW** 2000 **LW** 1250 x **SW** 2500 **LW** 1500 x **SW** 3000 **LW** 2000 - 2500 x **SW** 2500 Max	measured at the centre 28 (~) ◆	56 (~)
E 200 x 65 (70) - 20.6 x **2.0**	9.30	3.10			
E 200 x 65 (70) - 20.6 x **3.0**	14.00	4.60			

◆ Framing profiles: see page 149

Stadium

E 200 x 65 (70) - 20.6 x t
TYPE | LW | SW NOMINAL | SW ACTUAL | w | t



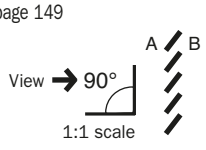
SIDE "A" View Relief in foreground more rounded

Type - LW x SW (SW actual) - w x t (mm)	Mild steel (kg/m²)	Aluminium (kg/m²)	Available sheet size (mm)	Sheet thickness (mm)	% front open area
R 200 x 75 (80) - 24 x **1.5**	7.10	2.40	**LW** 1000 x **SW** 2000 **LW** 1250 x **SW** 2500 **LW** 1500 x **SW** 3000 **LW** 2000 - 2500 x **LW** 2500 Max	measured at the centre 32 (~) ◆	52.3 (~)
R 200 x 75 (80) - 24 x **2.0**	9.40	3.20			
R 200 x 75 (80) - 24 x **3.0**	14.10	4.70			

◆ Framing profiles: see page 149

Coliseum

R 200 x 75 (80) - 24 x t
TYPE | LW | SW NOMINAL | SW ACTUAL | w | t



Phoenix

E 250 x 35 (35) - 15 x t
TYPE | LW | SW NOMINAL | SW ACTUAL | w | t

Type - LW x SW (SW actual) - w x t (mm)	Mild steel (kg/m²)	Aluminium (kg/m²)	Available sheet size (mm)	Sheet thickness (mm)	% front open area
E 250 x 35 (35) - 15 x **1.5**	10.10	3.50	Made to order	measured at the centre 18 (~) ◆	25 (~)
E 250 x 35 (35) - 15 x **2.0**	13.50	4.70			
E 250 x 35 (35) - 15 x **3.0**	20.20	7.00			

◆ Framing profiles: see page 149

Delta

R 250 x 90 (96) - 25 x t
TYPE | LW | SW NOMINAL | SW ACTUAL | w | t

Type - LW x SW (SW actual) - w x t (mm)	Mild steel (kg/m²)	Aluminium (kg/m²)	Available sheet size (mm)	Sheet thickness (mm)	% front open area
R 250 x 90 (96) - 25 x **1.5**	6.30	2.10	Made to order	measured at the centre 37 (~) ◆	59 (~)
R 250 x 90 (96) - 25 x **2.0**	8.40	2.80			
R 250 x 90 (96) - 25 x **3.0**	12.60	4.20			

◆ Framing profiles: see page 149

Estesa

R 270 x 100 (100) - 30 x t
TYPE | LW | SW NOMINAL | SW ACTUAL | w | t

Type - LW x SW (SW actual) - w x t (mm)	Mild steel (kg/m²)	Aluminium (kg/m²)	Available sheet size (mm)	Sheet thickness (mm)	% front open area
R 270 x 100 (100) - 30 x **1.5**	7.50	2.50	Made to order	measured at the centre 49 (~) ◆	52.8 (~)
R 270 x 100 (100) - 30 x **2.0**	10.00	3.40			
R 270 x 100 (100) - 30 x **3.0**	15.00	5.00			

◆ Framing profiles: see page 149

Vela 300

E 300 x 100 (100) - 28 x t
TYPE | LW | SW NOMINAL | SW ACTUAL | w | t

Type - LW x SW (SW actual) - w x t (mm)	Mild steel (kg/m²)	Aluminium (kg/m²)	Available sheet size (mm)	Sheet thickness (mm)	% front open area
E 300 x 100 (100) - 28 x **1.5**	6.60	2.30	Made to order	measured at the centre 42 (~) ◆	54.5 (~)
E 300 x 100 (100) - 28 x **2.0**	8.80	3.20			
E 300 x 100 (100) - 28 x **3.0**	/	4.60			

◆ Framing profiles: see page 149

Ultra Limites Line

Meridiana

E 350 x 120 (120) - 33 x t
TYPE | LW | SW NOMINAL | SW ACTUAL | w | t

Type - LW x SW (SW actual) - w x t (mm)	Mild steel (kg/m²)	Aluminium (kg/m²)	Available sheet size (mm)	Sheet thickness (mm)	% front open area
E 350 x 120 (120) - 33 x **2.0**	8.60	3.00	Made to order	measured at the centre 52 (~) ◆	59 (~)
E 350 x 120 (120) - 33 x **3.0**	12.90	4.50			

◆ Framing profiles: see page 149

Luna 400

T 400 x 140 (100) - 40 x t
TYPE | LW | SW NOMINAL | SW ACTUAL | w | t

Type - LW x SW (SW actual) - w x t (mm)	Mild steel (kg/m²)	Aluminium (kg/m²)	Available sheet size (mm)	Sheet thickness (mm)	% front open area
T 400 x 150 (100) - 40 x **2.0**	12.50	4.30	Made to order	measured at the centre 41 (~) ◆	27.5 (~)
T 400 x 150 (100) - 40 x **3.0**	18.70	6.50			

◆ Framing profiles: see page 149

Italy

R 400 x 140 (140) - 33 x t
TYPE | LW | SW NOMINAL | SW ACTUAL | w | t

Type - LW x SW (SW actual) - w x t (mm)	Mild steel (kg/m²)	Aluminium (kg/m²)	Available sheet size (mm)	Sheet thickness (mm) measured at the centre	% front open area
R 400 x 140 (140) - 33 x **2.0**	7.20	2.60	Made to order	53 (~) ◆	63 (~)
R 400 x 140 (140) - 33 x **3.0**	11.00	3.80			

◆ Framing profiles: see page 149

EF 400

R 400 x 140 (130) - 80 x t
TYPE | LW | SW NOMINAL | SW ACTUAL | w | t

Type - LW x SW (SW actual) - w x t (mm)	Mild steel (kg/m²)	Aluminium (kg/m²)	Available sheet size (mm)	Sheet thickness (mm) measured at the centre	% front open area
R 400 x 140 (180) - 80 x **2.0**		4.80	Made to order	72 (~) ◆	22 (~)
R 400 x 140 (180) - 80 x **3.0**		7.20			

◆ Framing profiles: see page 149

EF 400/1

R 400 x 140 (230) - 100 x t
TYPE | LW | SW NOMINAL | SW ACTUAL | w | t

Type - LW x SW (SW actual) - w x t (mm)	Mild steel (kg/m²)	Aluminium (kg/m²)	Available sheet size (mm)	Sheet thickness (mm) measured at the centre	% front open area
R 400 x 140 (230) - 100 x **2,0**		4,70	Made to order	76 (~) ◆	17 (~)
R 400 x 140 (230) - 100 x **3,0**		7,10			

◆ Framing profiles: see page 149

Opera 400

R 400 x 140 (305) - 150 x t
TYPE | LW | SW NOMINAL | SW ACTUAL | w | t

Type - LW x SW (SW actual) - w x t (mm)	Mild steel (kg/m²)	Aluminium (kg/m²)	Available sheet size (mm)	Sheet thickness (mm) measured at the centre	% front open area
E 400 x 140 (305) - 150 x **3.0**		8.00	Made to order	60 (~) ◆	5.5 (~)

◆ Framing profiles: see page 149

Ellisse 400

E 350 x 120 (320) - 33 x t
TYPE | LW | SW NOMINAL | SW ACTUAL | w | t

Type - LW x SW (SW actual) - w x t (mm)	Mild steel (kg/m²)	Aluminium (kg/m²)	Available sheet size (mm)	Sheet thickness (mm) measured at the centre	% front open area
T 400 x 140 (320) - 150 x **3.0**		7.60	Made to order	75 (~) ◆	6.5 (~)

◆ Framing profiles: see page 149

Arena 600

MISURAROSSA

E 650 x 300 (260) - 12 x t
TYPE | LW | SW NOMINAL | SW ACTUAL | w | t

Type - LW x SW (SW actual) - w x t (mm)	Mild steel (kg/m²)	Aluminium (kg/m²)	Available sheet size (mm)	Sheet thickness (mm) measured at the centre	% front open area
R 600 x 300 (260) - 120 x **2.0**		5.00	Made to order	75 (~) ◆	9 (~)
R 600 x 300 (260) - 120 x **3.0**		7.50			

◆ Framing profiles: see page 149

Alexa 800

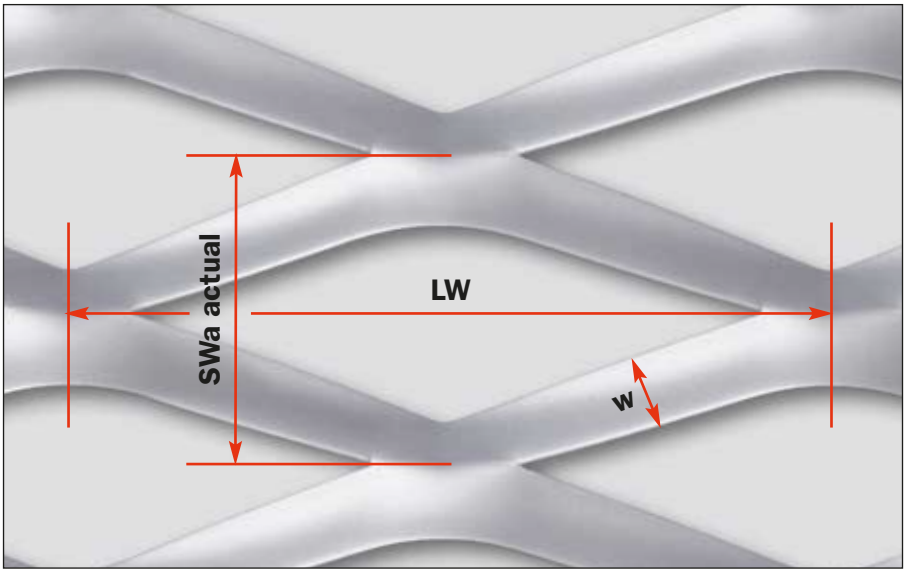
MISURAROSSA

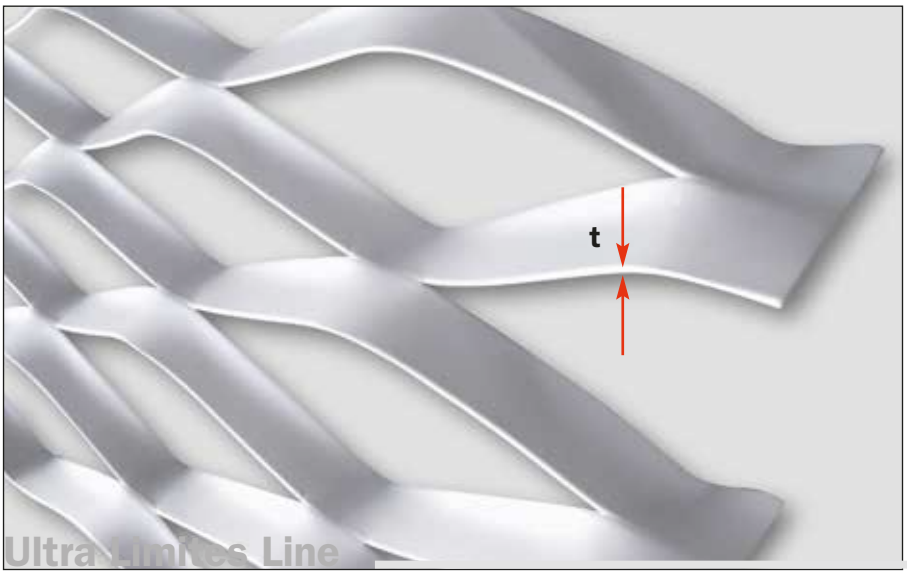
E 800 x 300 (207) - 10 x t
TYPE | LW | SW NOMINAL | SW ACTUAL | w | t

Type - LW x SW (SW actual) - w x t (mm)	Mild steel (kg/m²)	Aluminium (kg/m²)	Available sheet size (mm)	Sheet thickness (mm) measured at the centre	% front open area
E 800 x 300 (207) - 100 x **2.0**		5.30	Made to order	72 (~) ◆	11 (~)
E 800 x 300 (207) - 100 x **3.0**		7.90			

◆ Framing profiles: see page 149

PROTECH AND **ULTRA LIMITES** MESH SPECIFICATION





Ultra Limites Line

IMPORTANT NOTE
In order to dimension correctly the profile, it is recommendable to measure the sheet thickness along the perimeter.
The final sheet thickness at the perimeter may differ from the nominal value indicated on the data sheet.

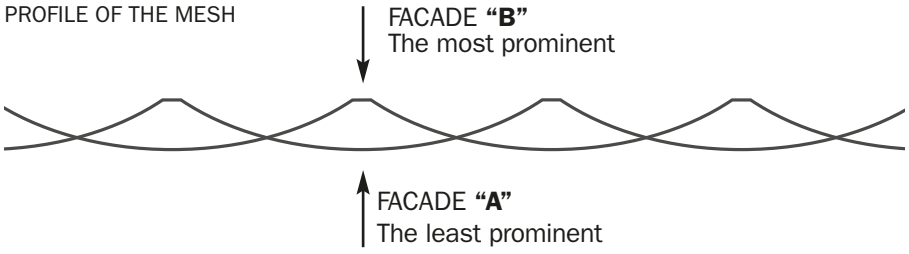
LEGEND

LW Long way pitch
SWn Short way pitch nominal
SWa Short way pitch actual
w strand widht
t thickness

EXAMPLE OF ID CODE FOR MESH **COLISEUM** DATA IN MM

R 200 x 75 (80) - 24 x t
TYPE | LW | SW NOMINAL | SW ACTUAL | w | t

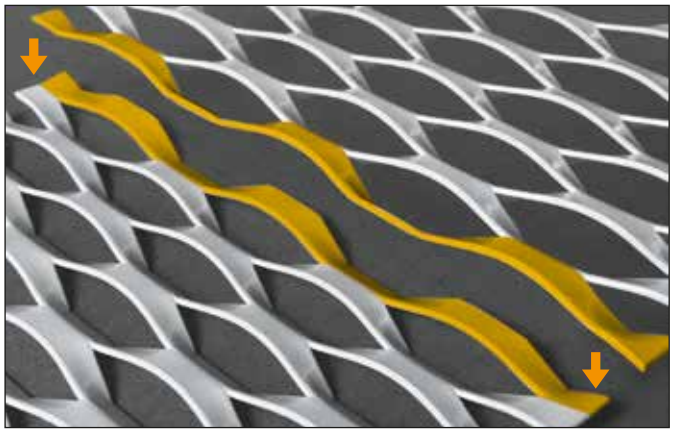
PROFILE OF THE MESH

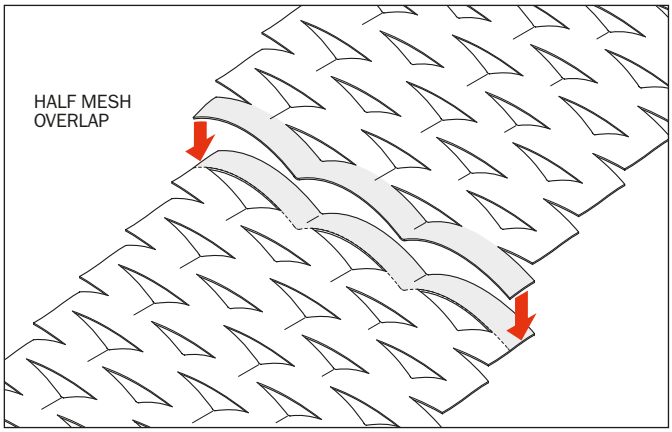


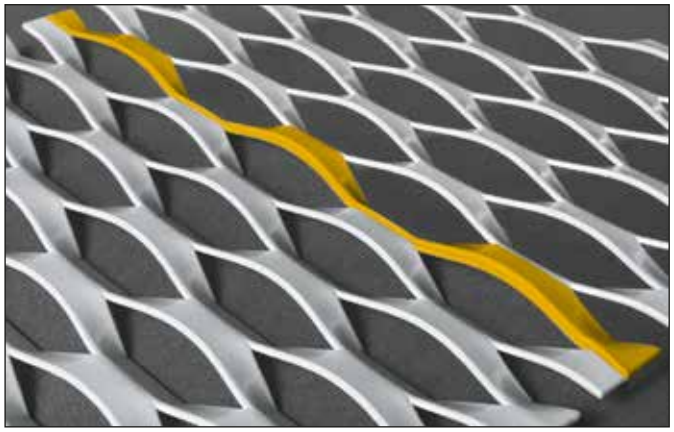
CHARACTERISTICS FOR USE IN MODULAR SOLUTIONS

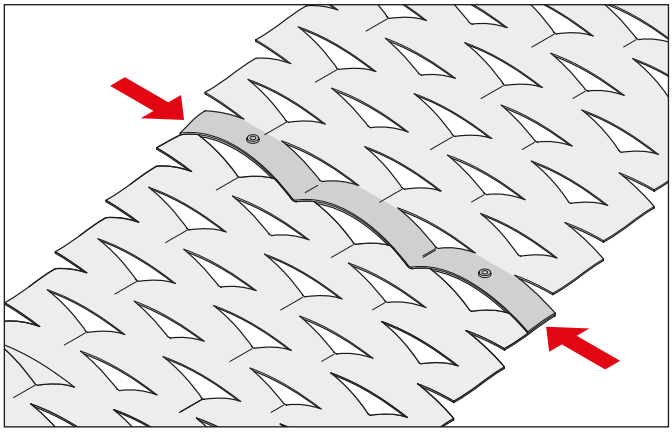
Surfaces of any shape and size can be created.
Expanded mesh can be cut, bent, and curved.
Panels are available in standard dimensions.
Panels built to measure are also available
on request.

HALF MESH OVERLAP - SIDE A

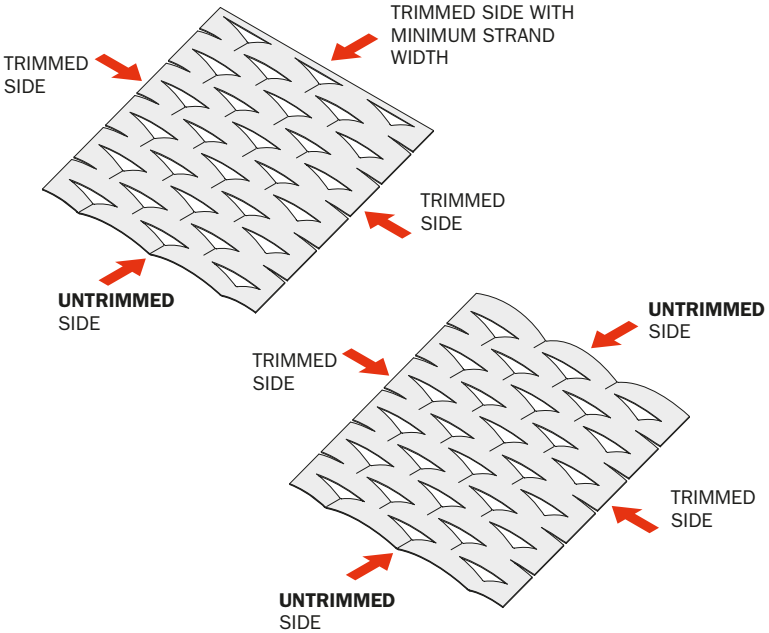


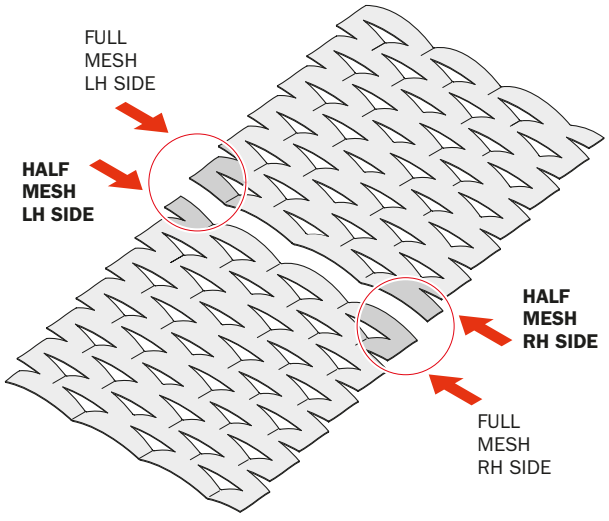




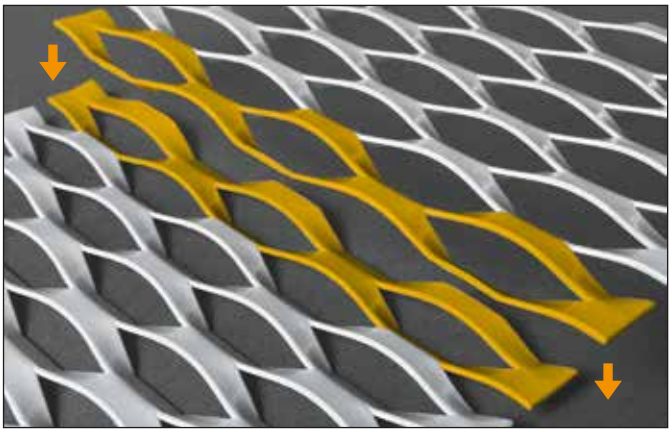


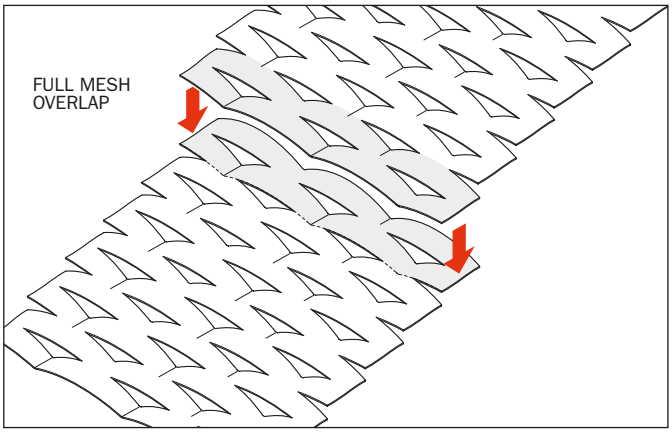
MESH TRIMMING

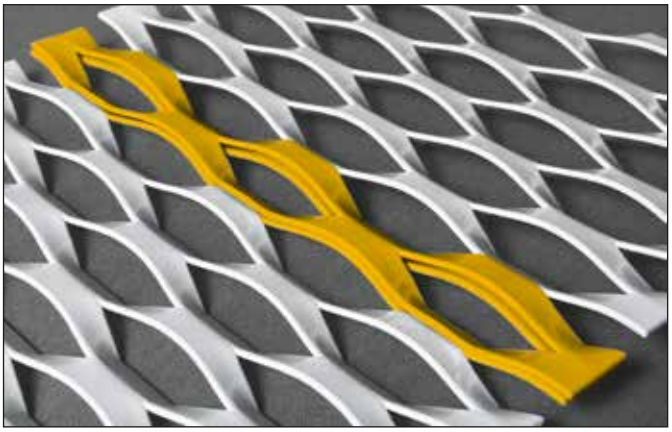


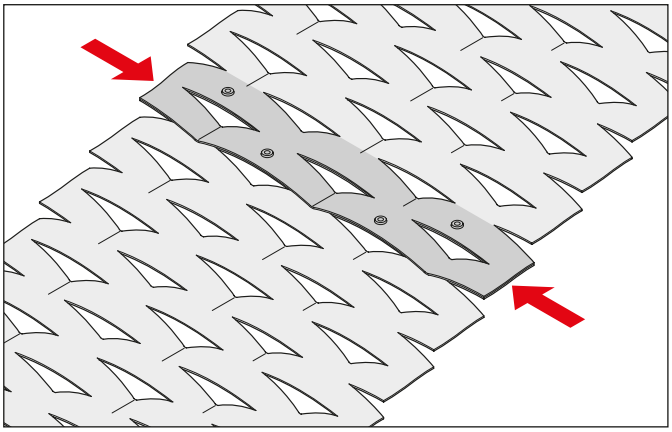


FULL MESH OVERLAP - SIDE A

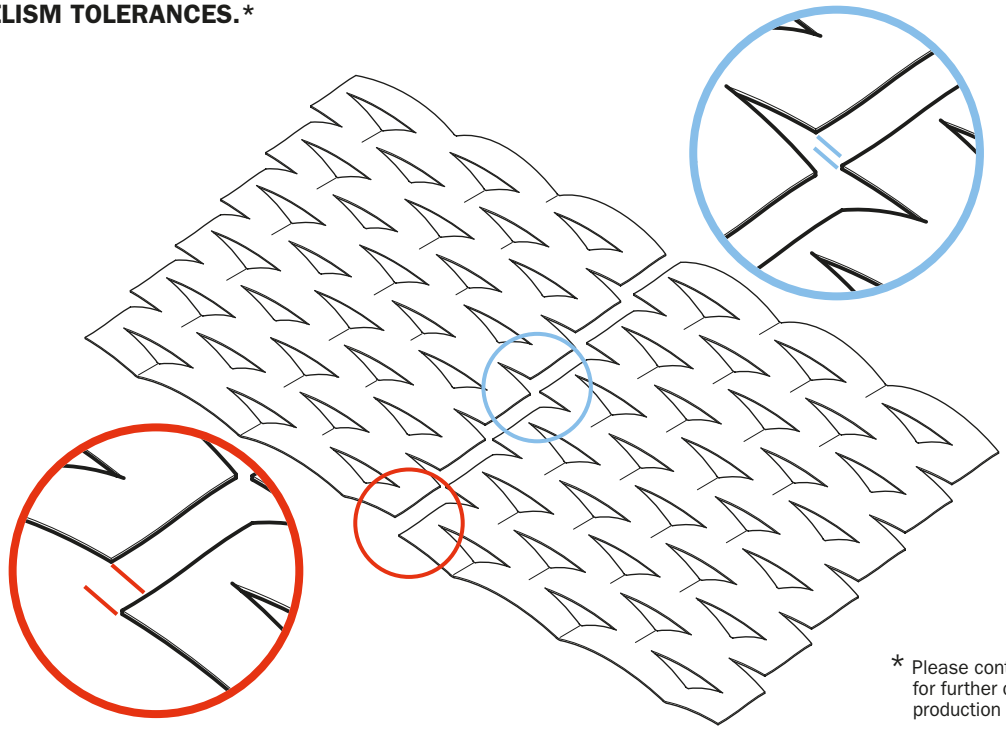




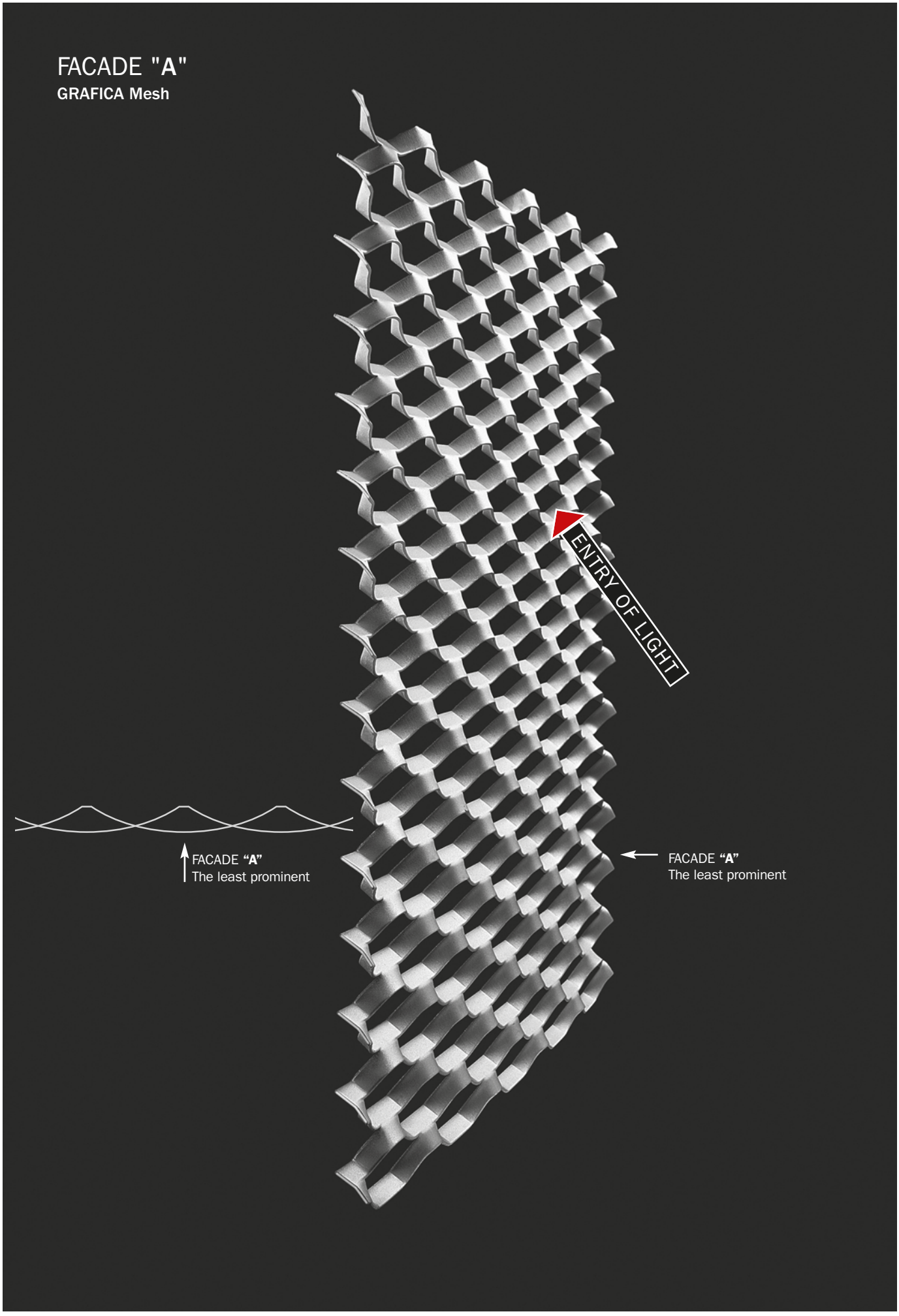




MESH PARALLELISM TOLERANCES.*



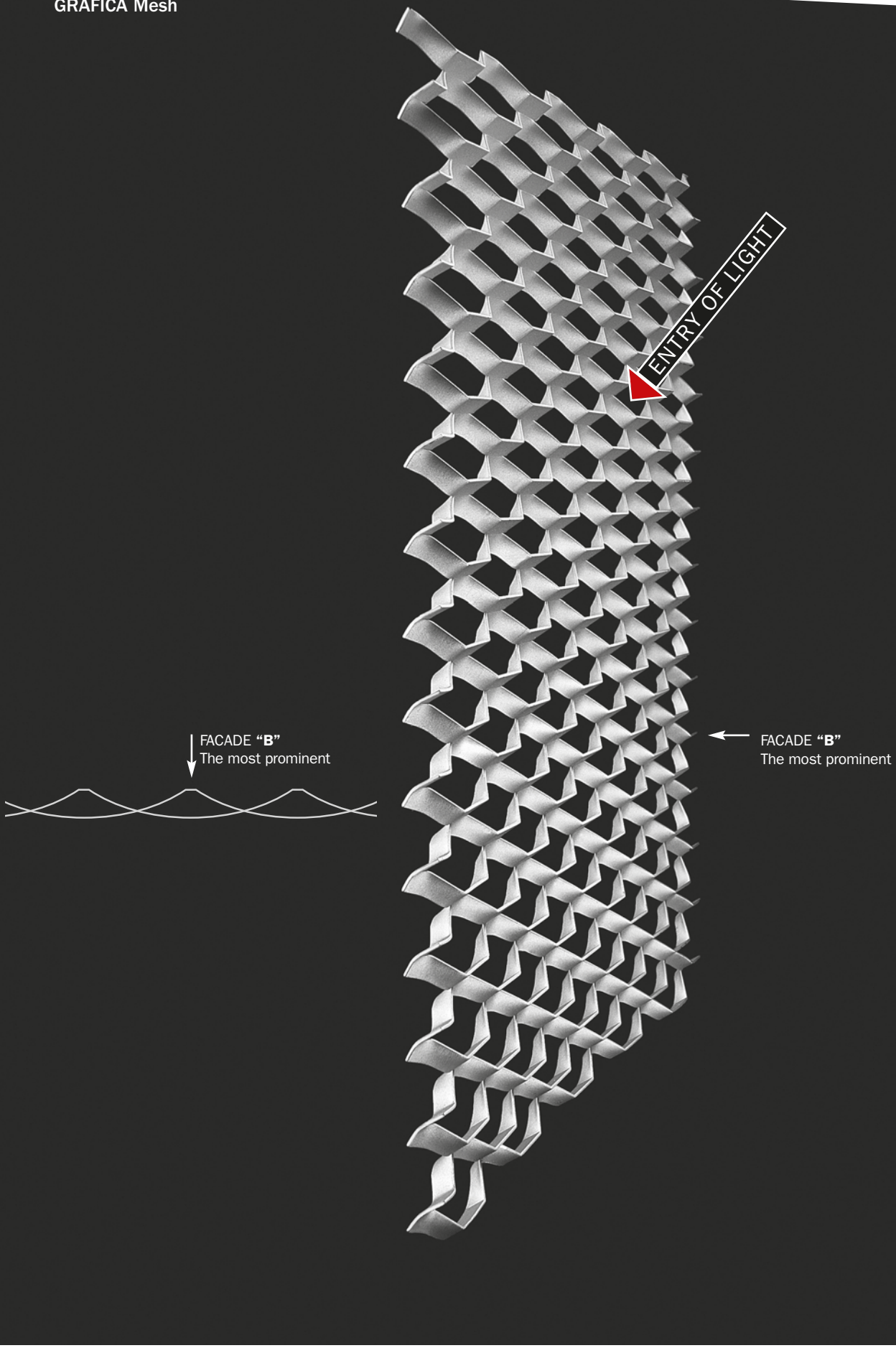
* Please contact our experts for further details about production tolerances


FACADE "A"
GRAFICA Mesh
ENTRY OF LIGHT
FACADE "A"
The least prominent
FACADE "A"
The least prominent

FACADE "B"

GRAFICA Mesh

linea protech



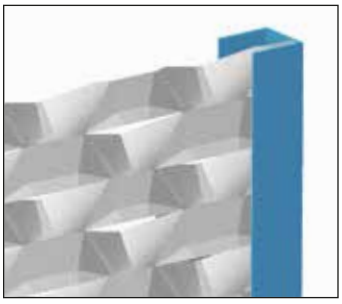
FIXING SUGGESTIONS

Expanded mesh can be fixed in a number of different ways.
Here are a few popular examples.
Panels can be trimmed and then framed in various profiles offering a protected edge to the material and allowing the panels to sit more uniformly side by side.

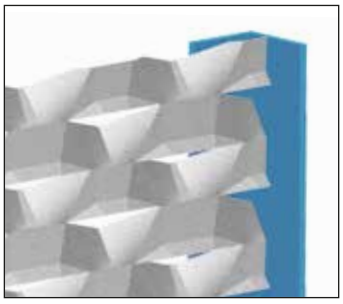
The mesh can then be fixed or welded to the substructure using various hooking systems depending on the specific design needs of your project.
The resulting modular solutions are highly flexible allowing you to decide the layout of your panels at will. Please contact us for further information.

Framing profiles

Dimensions of the framing profiles: see page 192

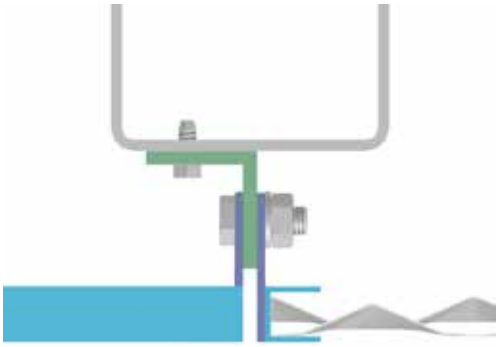


"**U**" section profile. Expanded mesh welded on the inside.

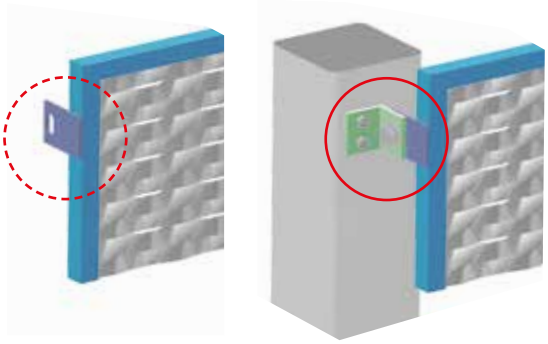


"L" section profile. The side of the frame is concealed.

Fixing system with plates

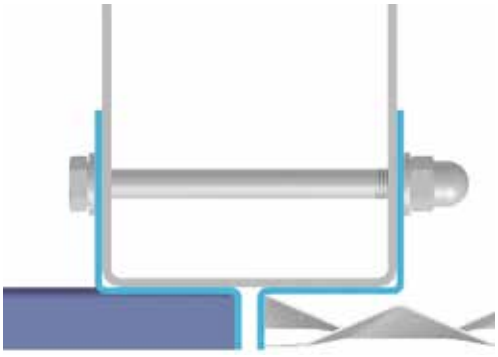


Top view Section

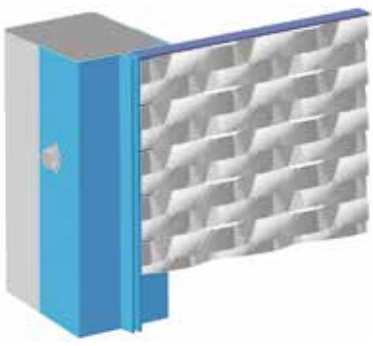


Fixing to supporting structure by plate and bracket. The mesh is welded to the profile frame.

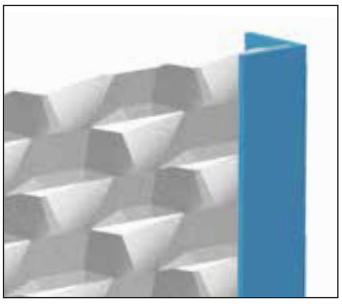
Fixing System with profiles



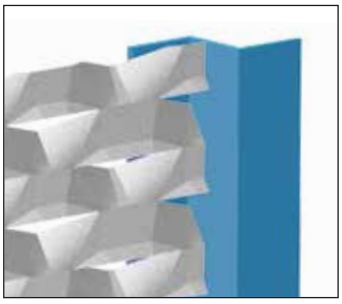
Top view Section



Fixing with continuous profile fixed to the supporting structure. The mesh is welded to the profile frame.

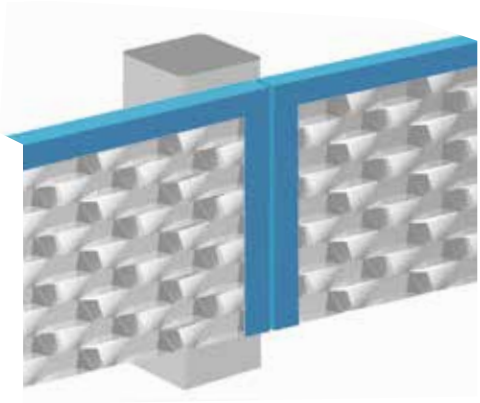


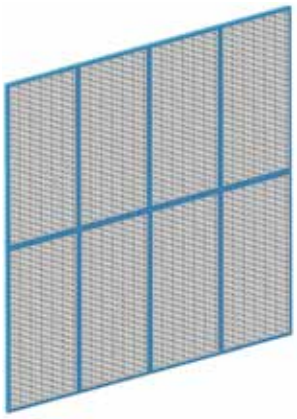
“**L**” section profile.
The side of the frame
is visible.

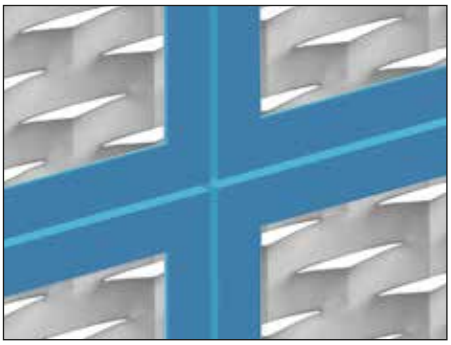


“**Z**” section profile.
Expanded mesh
welded on the inside.

Panel joining

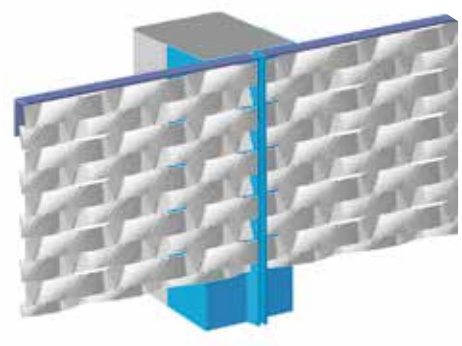


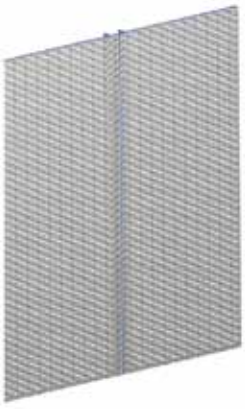


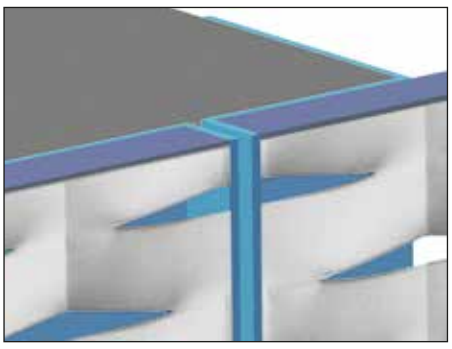


Modular positioning

Panel joining

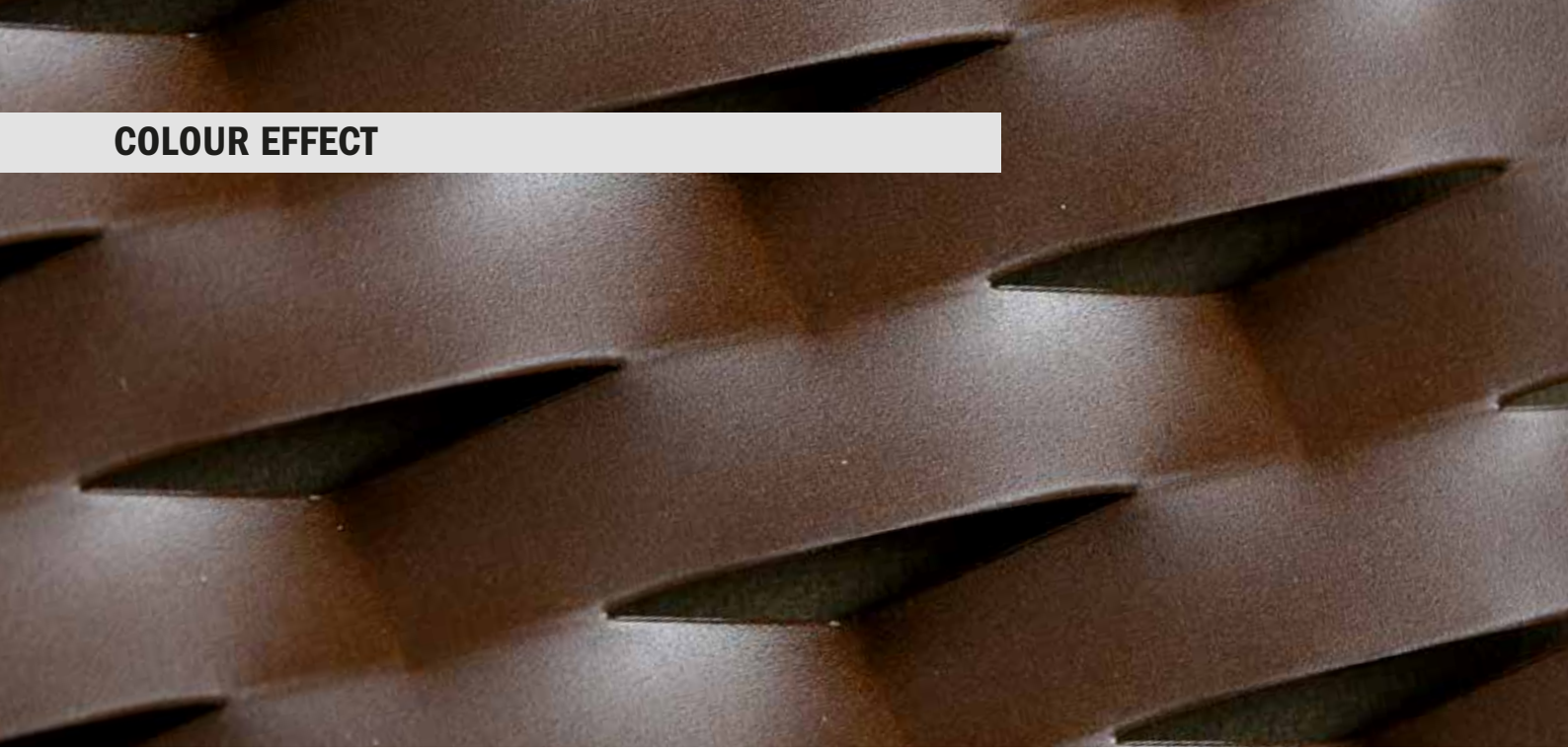






Modular positioning

COLOUR EFFECT

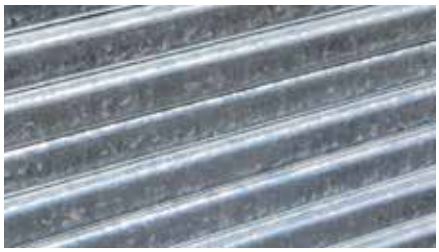


Ambasciata Mesh - Protech Line - Mars color with COR-TEN effect finish

Finishes guaranteed and certified against corrosion

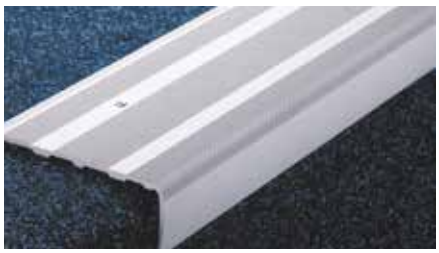
Constantly new visual effects for rational and creative design.

Hot-dip galvanizing



Hot-dip galvanizing is a surface coating treatment for the protection of metals based on the properties of molten zinc. A recently hot-dip galvanized surface is at first bright and shiny and then takes on a matte light color over time.

Anodizing

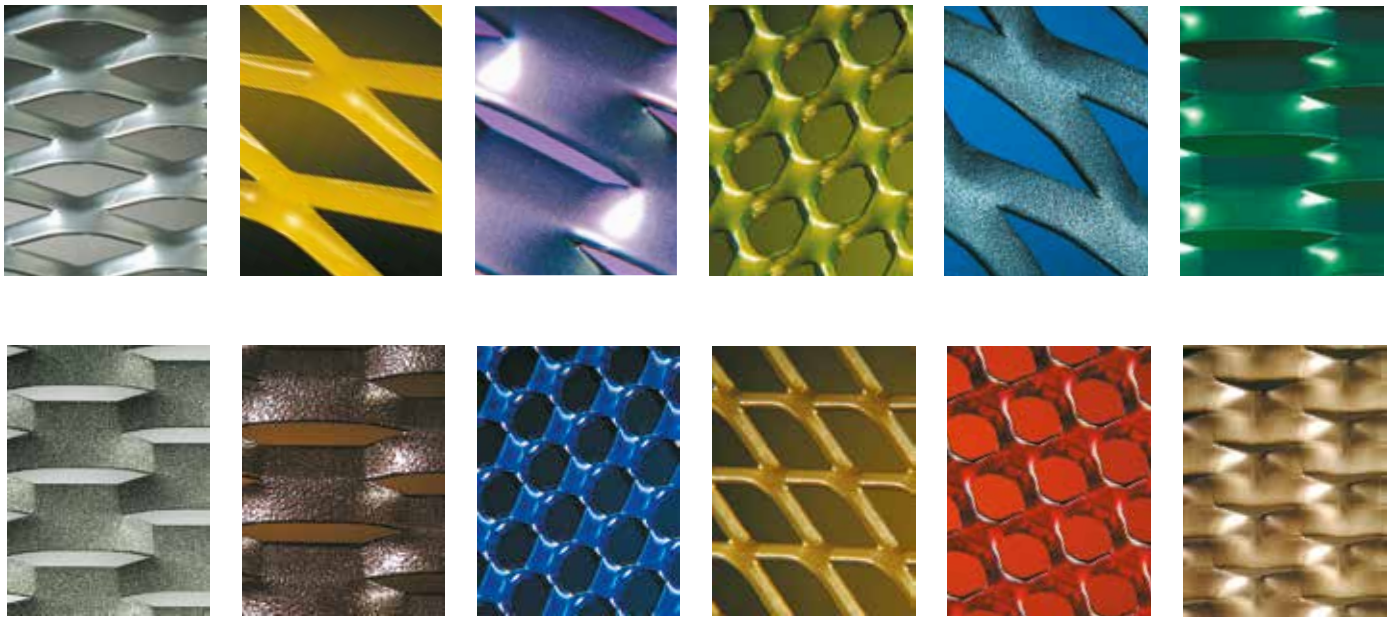


Anodizing is a chemical electric process performed in order to form a layer of oxide on the surface of articles in aluminum that provides protection against corrosion.

Powder coating

In addition to the vast range of colors that enriches the other choices made with personality, powder coating provides different types of protection against the corrosion of metals as required by their specific use. Different types of powder coating are available: epoxy resin, polyester, and epoxy-polyester coatin.

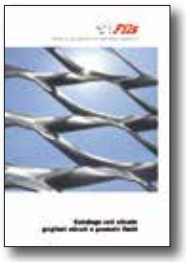
	CARBON STEEL + HOT DIP GALVANISING	CARBON STEEL + POWDER COATING FOR INDOOR	SENDZIMIR CARBON STEEL + POWDER COATING FOR INDOOR/OUTDOOR	ALUMINIUM + POWDER COATING FOR INDOOR/OUTDOOR	ALUMINIUM + ANODISING FOR INDOOR/OUTDOOR
Colour spectrum					
Corrosion resistance	★★★★	★★	★★★	★★★★★	★★★★



Communicating our passion for the expanded metal mesh

Updated information. To read and browse. The best business card of a Group operating in the expanded mesh market for more than 70 years.

Protech, Stiltech e Ultra Limites Meshes



Catalog General Fils

Catalog General Italfilm

Metall Handbook

Fences ALUMINUM

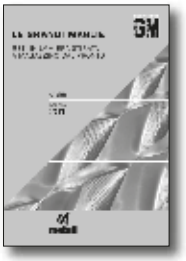
Focus Architecture

You drill them

Everything for architecture

New fences

Secure Network for gates in movement

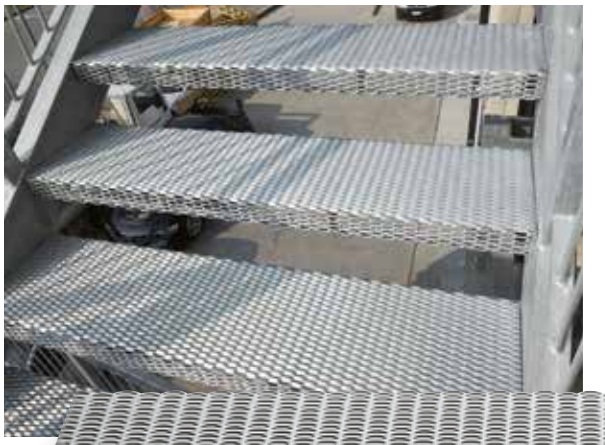


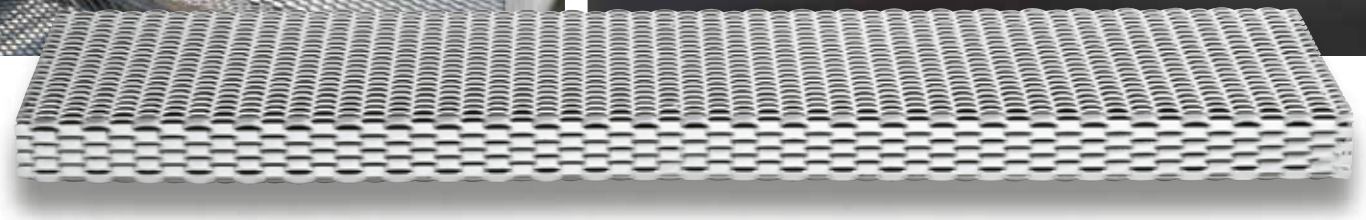
Great Meshes from ready

Stair treads and landings

Custom industry and workings of light carpentry





Fils S.p.A.
Fabbrica Italiana Lamiere Stirate
Società unipersonale soggetta
a direzione e coordinamento di L HOLDING S.r.l.

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