



PRODUCT CATALOG

Gratings
Stairtreads
Profiled surfaces
GRP gratings
Perforated sheets
Metal grids
Staircases

2018



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🌐 www.metal-disain.com

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"Thank you very much that you have opened a catalog of our company.

If you made this decision, it is mean that you trust us and we will do our best, that you want to open it again.

Our desire is to help people and organizations achieve maximum productivity and efficiency in their business. Since year 2000, indeed thanks to you as well, our customers and competitors, we have accumulated a lot of experiences in that direction. With a great pleasure, we will continue to share invaluable information with you. If you're satisfied with our work, than we do it knowingly. If you are well, that means we have similar feelings. It is important to understand, that modern pace of life dictates new rules and new business condition.

Therefore, we always try to be at the highest level, so that you, our customers have the opportunity to sit in the front row!"

Sincerely yours,

Team Metal-Disain Ltd

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Introduction

Metal and plastic gratings are products for the multi-purpose usage, which are used to close openings, as well as to cover different surfaces.

Mostly the gratings and the products made of them are used to cover pedestrian traffic areas, and also as decorator elements of buildings' facades, or as sun-screening and view-limiting constructions.

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Durability

The design specialty of the foot gratings allows them to endure both heavy distributed loads, and load points of big trucks' wheels.

Ease of mounting

Any type of the foot gratings is easily mounted with the special fastening elements supplied together with the gratings.

Durability to external agencies

The main protection methods against the corrosion of black metal gratings are hot dip galvanizing and painting. In the case of chemically aggressive environments or severe sea conditions, it is possible to use materials such as aluminum, stainless steel, and plastic.

High slip-resistance

Both the metal gratings, and the plastic ones have different types of slip-protection – many kinds of teeth, grooves, and a special sand coating.

Design and aesthetics

We have more than 10 years' experience of the grating products' manufacturing and application. Also, we offer a wide range of services from the design and manufacturing to the installation of both our ready products, and constructions of small and average size.

Our warehouse also has a wide range of standard goods, such as grating panels, mounts, grating stairs etc.

The background of the slide is a black and white photograph of an industrial manufacturing process. On the left, a large machine with multiple rollers is processing a long sheet of metal. On the right, a finished grating product is shown, consisting of a grid of parallel bars. The left side of the slide is overlaid with a semi-transparent red triangle.

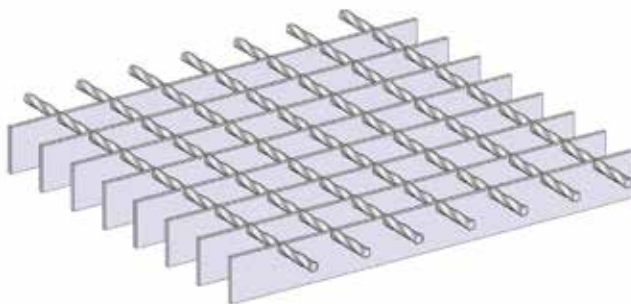
Gratings

- Press welded gratings
- Press locked gratings
- Heavy duty gratings
- Full gratings
- Offshore gratings and louvre gratings
- Fastening
- Framing
- Design and technical information

Press welded gratings PW

This type of a grating is used most frequently for service platforms and production platforms. The bearing bars and the twisted square cross bars are cut to grating size before the cross bars are locked into the bearing bars at a pressure of 1000 kN and – simultaneously – electrically welded with 2500 KVA. into one unit.

In combination with welded cross bars, bearing bars make for high torsion rigidity. The welded grating is produced in compliance with the European standard DIN 24537. One of the main materials used in manufacturing of the welded grating is steel St.37 or St.52. Nevertheless, it is possible to produce the grating also from stainless steels V2A (1.4301), V4A (1.4571).



Load table

The values shown have been calculated for maximum admissible load rating on the basis of a load carrying area of 200 x 200 mm and a bearing bar spacing of 34.3 mm.

Conversion factor for kg into kN: 1 kN - 100 kg, 10 kN - 1 tonne.

Bearing bar (mm)											
2	3	4	5								
				20							
				25							
				30							
				35							
				40							
				45							
				50							
				60							

Standard Mesh Spacing											
Bearing bar						Binding bar					
17,15	x					38,1	50,8	76,2			
20,77	x		24			38,1	50,8				
30,15	x		24				50,8	76,2	101,6		
34,3	x	19,25	24			38,1	50,8	76,2			
41,45	x		24				50,8		101,6		



Point load in kN



Uniformly distributed load in kN per sq. m.



Light duty



Medium duty



Vehicle access: trucks up to 3 tonnes in overall weight.



Vehicle access: trucks up to 9 tonnes in overall weight.



Vehicle access: trucks up to 30 tonnes in overall weight.

Support width (clearance between the rests)

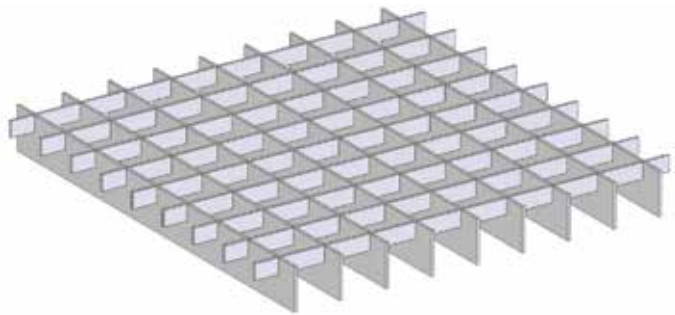
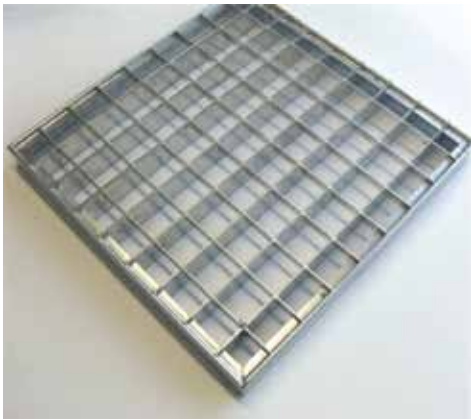
mm			300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
Thickness		Width																		
2	25	T	5,35	3,56	2,67	2,14	1,78	1,53	1,33	1,07	0,88	0,74	0,63	0,54	0,47	0,41	0,37	0,33	0,29	0,26
		P	86,37	48,58	31,09	21,59	15,86	11,96	8,4	6,12	4,6	3,54	2,79	2,23	1,81	1,49	1,25	1,05	0,89	0,77
	30	T	7,64	5,09	3,82	3,06	2,55	2,18	1,91	1,7	1,52	1,27	1,08	0,93	0,81	0,71	0,63	0,56	0,5	0,45
		P	124,37	69,96	44,77	31,09	22,84	17,49	13,82	10,58	7,95	6,12	4,81	3,85	3,13	2,58	2,15	1,81	1,54	1,32
	35	T	10,31	6,87	5,15	4,12	3,44	2,95	2,58	2,29	2,06	1,87	1,7	1,46	1,27	1,12	0,99	0,88	0,79	0,71
		P	169,29	95,22	60,94	42,32	31,09	23,81	18,81	15,24	12,59	9,72	7,65	6,12	4,98	4,1	3,42	2,88	2,45	2,1
	40	T	13,36	8,91	6,68	5,35	4,45	3,82	3,34	2,97	2,67	2,43	2,23	2,06	1,89	1,66	1,47	1,31	1,17	1,06
		P	221,11	124,37	79,6	55,28	40,61	31,09	24,57	19,9	16,45	13,82	11,41	9,14	7,43	6,12	5,1	4,3	3,66	3,13
	50	T	20,56	13,71	10,28	8,22	6,85	5,87	5,14	4,57	4,11	3,74	3,43	3,16	2,94	2,74	2,57	2,42	2,25	2,03
		P	345,48	194,33	124,37	86,37	63,46	48,58	38,39	31,09	25,7	21,59	18,4	15,86	13,82	11,96	9,97	8,4	7,14	6,12
3	25	T	8,02	5,35	4,01	3,21	2,67	2,29	2	1,61	1,33	1,11	0,95	0,81	0,71	0,62	0,55	0,49	0,44	0,4
		P	129,56	72,88	46,64	32,39	23,8	17,93	12,6	9,18	6,9	5,31	4,18	3,35	2,72	2,24	1,87	1,57	1,34	1,15
	30	T	11,46	7,64	5,73	4,58	3,82	3,27	2,87	2,55	2,27	1,91	1,62	1,4	1,21	1,07	0,94	0,84	0,75	0,68
		P	186,56	104,94	67,16	46,64	34,27	26,24	20,73	15,87	11,92	9,18	7,22	5,78	4,7	3,87	3,23	2,72	2,31	1,98
	35	T	15,46	10,31	7,73	6,19	5,15	4,42	3,87	3,44	3,09	2,81	2,55	2,2	1,91	1,68	1,48	1,32	1,19	1,07
		P	253,93	142,84	91,41	63,48	46,64	35,71	28,21	22,85	18,89	14,58	11,47	9,18	7,47	6,15	5,13	4,32	3,67	3,15
	40	T	20,04	13,36	10,02	8,02	6,68	5,73	5,01	4,45	4,01	3,64	3,34	3,08	2,83	2,49	2,2	1,96	1,76	1,59
		P	331,66	186,56	119,4	82,92	60,92	46,64	36,85	29,85	24,67	20,73	17,12	13,71	11,14	9,18	7,66	6,45	5,48	4,7
	50	T	30,84	20,56	15,42	12,34	10,28	8,81	7,71	6,85	6,17	5,61	5,14	4,74	4,41	4,11	3,86	3,63	3,38	3,05
		P	518,22	291,5	186,56	129,56	95,18	72,88	57,58	46,64	38,55	32,39	27,6	23,8	20,73	17,93	14,95	12,6	10,71	9,18
	60	T	43,66	29,11	21,83	17,46	14,55	12,47	10,92	9,7	8,73	7,94	7,28	6,72	6,24	5,82	5,46	5,14	4,85	4,6
		P	746,24	419,76	268,65	186,56	137,06	104,94	82,92	67,16	55,51	46,64	39,74	34,27	29,85	26,24	23,24	20,73	18,51	15,87
4	30	T	15,28	10,19	7,64	6,11	5,09	4,37	3,82	3,4	3,03	2,54	2,16	1,86	1,62	1,42	1,26	1,12	1,01	0,91
		P	248,75	139,92	89,55	62,19	45,69	34,98	27,64	21,16	15,89	12,24	9,63	7,71	6,27	5,17	4,31	3,63	3,08	2,64
	35	T	20,62	13,75	10,31	8,25	6,87	5,89	5,15	4,58	4,12	3,75	3,4	2,93	2,55	2,24	1,98	1,76	1,58	1,43
		P	338,57	190,45	121,89	84,64	62,19	47,61	37,62	30,47	25,18	19,44	15,29	12,24	9,95	8,2	6,84	5,76	4,9	4,2
	40	T	26,73	17,82	13,36	10,69	8,91	7,64	6,68	5,94	5,35	4,86	4,45	4,11	3,77	3,31	2,93	2,61	2,34	2,12
		P	442,22	248,75	159,2	110,55	81,22	62,19	49,14	39,8	32,89	27,64	22,83	18,28	14,86	12,24	10,21	8,6	7,31	6,27
	45	T	33,57	22,38	16,78	13,43	11,19	9,59	8,39	7,46	6,71	6,1	5,59	5,16	4,8	4,48	4,14	3,69	3,31	2,99
		P	559,68	314,82	201,48	139,92	102,8	78,71	62,19	50,37	41,63	34,98	29,81	25,7	21,16	17,43	14,53	12,24	10,41	8,93
	50	T	41,12	27,41	20,56	16,45	13,71	11,75	10,28	9,14	8,22	7,48	6,85	6,33	5,87	5,48	5,14	4,84	4,51	4,07
		P	690,96	388,67	248,75	172,74	126,91	97,17	76,77	62,19	51,39	43,19	36,8	31,73	27,64	23,91	19,94	16,79	14,28	12,24
	60	T	58,21	38,81	29,11	23,29	19,4	16,63	14,55	12,94	11,64	10,58	9,7	8,96	8,32	7,76	7,28	6,85	6,47	6,13
		P	994,99	559,68	358,2	248,75	182,75	139,92	110,55	89,55	74,01	62,19	52,99	45,69	39,8	34,98	30,99	27,64	24,68	21,16
5	30	T	19,1	12,74	9,55	7,64	6,37	5,46	4,78	4,25	3,79	3,18	2,7	2,33	2,02	1,78	1,57	1,4	1,26	1,13
		P	310,93	174,9	111,94	77,73	57,11	43,73	34,55	26,44	19,87	15,3	12,04	9,64	7,84	6,46	5,38	4,53	3,86	3,31
	35	T	25,77	17,18	12,89	10,31	8,59	7,36	6,44	5,73	5,15	4,69	4,25	3,66	3,18	2,8	2,47	2,21	1,98	1,78
		P	423,21	238,06	152,36	105,8	77,73	59,51	47,02	38,09	31,48	24,3	19,11	15,3	12,44	10,25	8,55	7,2	6,12	5,25
	40	T	33,41	22,27	16,7	13,36	11,14	9,55	8,35	7,42	6,68	6,07	5,57	5,14	4,72	4,14	3,67	3,27	2,93	2,64
		P	552,77	310,93	199	138,19	101,53	77,73	61,42	49,75	41,12	34,55	28,53	22,84	18,57	15,3	12,76	10,75	9,14	7,84
	50	T	51,4	34,27	25,7	20,56	17,13	14,69	12,85	11,42	10,28	9,35	8,57	7,91	7,34	6,85	6,43	6,05	5,64	5,08
		P	863,7	485,83	310,93	215,93	158,64	121,46	95,97	77,73	64,24	53,98	46	39,66	34,55	29,89	24,92	20,99	17,85	15,3
	60	T	72,77	48,51	36,38	29,11	24,26	20,79	18,19	16,17	14,55	13,23	12,13	11,2	10,4	9,7	9,1	8,56	8,09	7,66
		P	1243,73	699,6	447,74	310,93	228,44	174,9	138,19	111,94	92,51	77,73	66,23	57,11	49,75	43,73	38,73	34,55	30,84	26,44

Press locked gratings PL

This type of gratings is preferable for all kinds of surfaces and facades. It is especially suitable for pedestrian and traffic areas.

During production the cross bar is inserted in the notches of the bearing bar and press locked into a stable structure at a pressure of 5,000 kN. The edge of the press locked gratings is banded either with T-shaped special section or flat bar. Press locked gratings are produced in compliance with the European standard DIN 24537. One of the main materials used in manufacturing of the pressed grating is steel St.37 or St.52. Nevertheless, it is possible to produce the grating also from stainless steels V2A (1.4301), V4A (1.4571) or aluminum AlMg3.

Optionally, other materials can be used.



Load table

The values shown have been calculated for maximum admissible load rating (deflection 1/200). The basis of a load carrying area of 200 x 200 mm and a bearing bar spacing of 33.3 mm. To avoid trip up points the maximum deflection should not exceed 4 mm. The size of the cells on a light gap results from the relevant division of the cells and the used thicknesses of materials.

Spacing of 33,3x33,3 / bearing bar 3 mm / cross bar 2 mm - clearance 30,3x 31,3 (In the trade, it is usually called - 30x30).

Conversion factor for kg into kN: 1 kN - 100 kg, 10 kN - 1 tonne.

Bearing bar		Cross bar		Framing	
20		10		T20/20	
25	25	10		T25/25	
30	30	10		T30/30	
35	35	10		T35/35	
40	40	10		T40/40	
45	45	10		T45/45	
50	50	10		T50/50	
60	60	10		T60/60	
	70	20		70	
	80	20		80	
	90	20		90	
	100	20		100	



Point load in kN



Uniformly distributed load in kN per sq. m.



Light duty



Medium duty



Vehicle access: trucks up to 3 tonnes in overall weight.



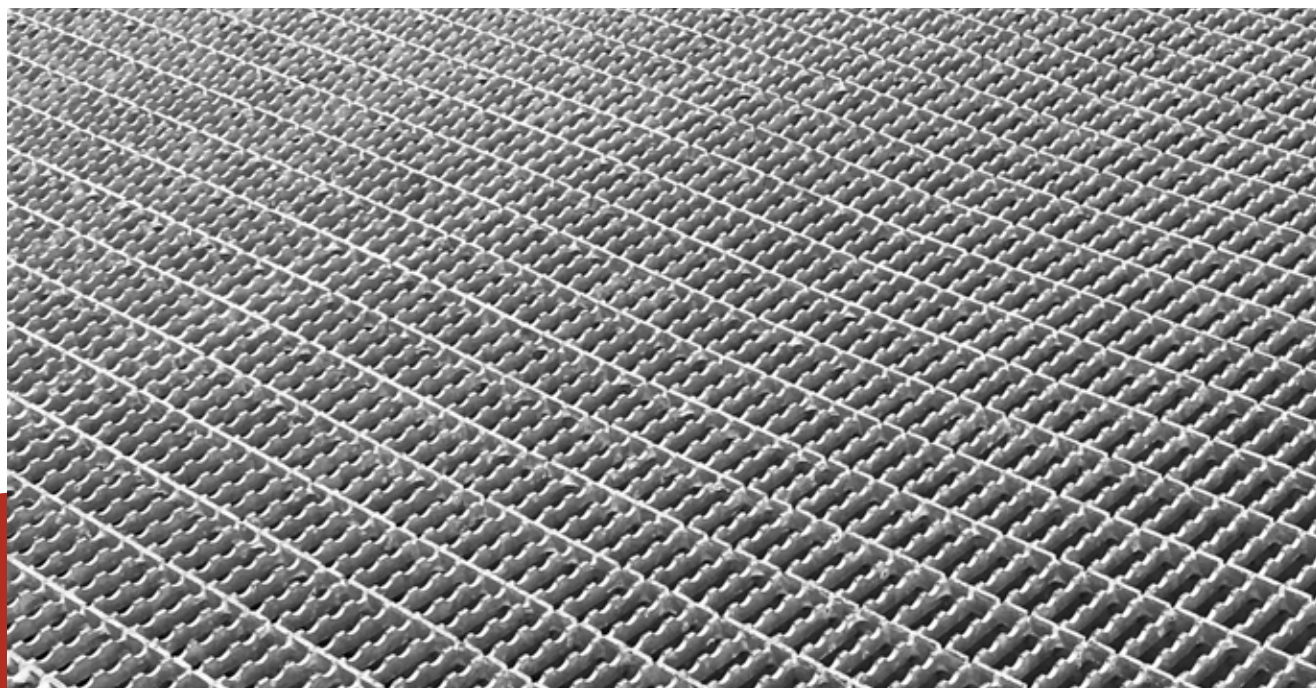
Vehicle access: trucks up to 9 tonnes in overall weight.



Vehicle access: trucks up to 30 tonnes in overall weight.

Standard Mesh Spacing

Bearing bar				Cross bar			
11,1	x	11,1		22,2	33,3		
21	x		21		33,3		
22,2	x	11,1		22,2	33,3	44,4	66,6
33,3	x	11,1	16,65	21	22,2	33,3	66,6
44,4	x	11,1		22,2		44,4	
55,5	x				33,3		55,5
66,6	x				33,3		66,6



Support width (clearance between the rests)

mm			300	400	500	600	700	800	900	1000	1100
Thickness Width											
2	20	T	3,58	2,39	1,79	1,43	1,19	0,91	0,71	0,58	0,47
		P	51,2	28,8	18,43	12,8	9,4	6,3	4,42	3,23	2,42
	25	T	5,55	3,7	2,78	2,22	1,85	1,59	1,38	1,11	0,92
		P	80	45	28,8	20	14,69	11,25	8,64	6,3	4,73
	30	T	7,92	5,28	3,96	3,17	2,64	2,26	1,98	1,76	1,57
		P	115,2	64,8	41,47	28,8	21,16	16,2	12,8	10,37	8,18
	35	T	10,68	7,12	5,34	4,27	3,56	3,05	2,67	2,37	2,14
		P	156,8	88,2	56,45	39,2	28,8	22,05	17,42	14,11	11,66
	40	T	13,82	9,22	6,91	5,53	4,61	3,95	3,46	3,07	2,76
		P	204,8	115,2	73,73	51,2	37,62	28,8	22,76	18,43	15,23
	50	T	21,19	14,13	10,6	8,48	7,06	6,05	5,3	4,71	4,24
		P	320	180	115,2	80	58,78	45	35,56	28,8	23,8
3	25	T	8,33	5,55	4,16	3,33	2,78	2,38	2,07	1,67	1,38
		P	120	67,5	43,2	30	22,04	16,88	12,96	9,45	7,1
	30	T	11,88	7,92	5,94	4,75	3,96	3,4	2,97	2,64	2,36
		P	172,8	97,2	62,21	43,2	31,74	24,3	19,2	15,55	12,27
	35	T	16,02	10,68	8,01	6,41	5,34	4,58	4	3,56	3,2
		P	235,2	132,3	84,67	58,8	43,2	33,08	26,13	21,17	17,49
	40	T	20,74	13,82	10,37	8,29	6,91	5,92	5,18	4,61	4,15
		P	307,2	172,8	110,59	76,8	56,42	43,2	34,13	27,65	22,85
	50	T	31,79	21,19	15,89	12,72	10,6	9,08	7,95	7,06	6,36
		P	480	270	172,8	120	88,16	67,5	53,33	43,2	35,7
	60	T	44,95	29,96	22,47	17,98	14,98	12,84	11,24	9,99	8,99
		P	691,2	388,8	248,83	172,8	126,96	97,2	76,8	62,21	51,41
4	30	T	15,85	10,56	7,92	6,34	5,28	4,53	3,96	3,52	3,14
		P	230,4	129,6	82,94	57,6	42,32	32,4	25,6	20,74	16,36
	35	T	21,36	14,24	10,68	8,54	7,12	6,1	4,75	4,75	4,27
		P	313,6	176,4	112,9	78,4	57,6	44,1	34,84	28,22	23,33
	40	T	27,65	18,43	13,82	11,06	9,22	7,9	6,91	6,14	5,53
		P	409,6	230,4	147,46	102,4	75,23	57,6	45,51	36,86	30,47
	45	T	34,68	23,12	17,34	13,87	11,56	9,91	8,67	7,71	6,94
		P	518,4	291,6	186,62	129,6	95,22	72,9	57,6	46,66	38,56
	50	T	42,38	28,26	21,19	16,95	14,13	12,11	10,6	9,42	8,48
		P	640	360	230,4	160	117,55	90	71,11	57,6	47,6
	60	T	59,93	39,95	29,96	23,97	19,98	17,12	14,98	13,32	11,99
		P	921,6	518,4	331,78	230,4	169,27	129,6	102,4	82,94	68,55
5	70	T	79,97	53,31	39,98	31,99	26,66	22,85	19,99	17,77	15,99
		P	1254,4	705,6	451,58	313,6	230,4	176,4	139,38	112,9	93,3
	80	T	102,36	68,24	51,18	40,94	34,12	29,25	25,59	22,75	20,47
		P	1638,4	921,6	589,82	409,6	300,93	230,4	182,04	147,46	121,86
	90	T	127,06	84,71	63,53	50,82	42,35	36,3	31,76	28,24	25,41
		P	2073,6	1166,4	746,5	518,4	380,87	291,6	230,4	186,62	154,23
	30	T	19,81	13,2	9,9	7,92	6,6	5,66	4,95	4,4	3,93
		P	288	162	103,68	72	52,9	40,5	32	25,92	20,45
	35	T	26,7	17,8	13,35	10,68	8,9	7,63	6,67	5,93	5,34
		P	392	220,5	141,12	98	72	55,13	43,56	35,28	29,16
	40	T	34,56	23,04	17,28	13,82	11,52	9,87	8,64	7,68	6,91
		P	512	288	184,32	128	94,04	72	56,89	46,08	38,08
	50	T	52,98	35,32	26,49	21,19	17,66	15,14	13,25	11,77	10,6
		P	800	450	288	200	200	112,5	88,89	72	59,5
	60	T	74,91	49,94	37,45	29,96	24,97	21,4	18,73	16,65	14,98
		P	1152	648	414,72	288	211,59	162	128	103,68	85,69
	70	T	99,96	66,64	49,98	39,98	33,32	28,56	24,99	22,21	19,99
		P	1568	882	564,48	392	288	220,5	174,22	141,12	116,63
	80	T	127,95	85,3	63,97	51,18	42,65	36,56	31,99	28,43	25,59
		P	2048	1152	737,28	512	376,16	288	227,56	184,32	152,33
	90	T	158,82	105,88	79,41	63,53	52,94	45,38	39,71	35,29	31,76
		P	2592	1458	933,12	648	476,08	364,5	288	233,28	192,79
	100	T	192	128	96	76,8	64	54,86	48	42,67	38,4
		P	3200	1800	1152	800	587,76	450	355,56	288	238,02
	110	T	232,32	154,88	116,16	92,93	77,44	66,38	58,08	51,63	46,46
		P	3872	2178	1393,92	968	711,18	544,5	430,22	348,48	288
	120	T	276,48	184,32	138,24	110,59	92,16	78,99	69,12	61,44	55,3
		P	4608	2592	1658,88	1152	846,37	648	512	414,72	342,74
	130	T	324,48	216,32	162,24	129,79	108,16	92,71	81,12	72,11	64,9
		P	5408	3042	1946,88	1352	993,31	760,5	600,89	486,72	402,25
	140	T	376,32	250,88	188,16	150,53	125,44	107,52	94,08	83,63	75,26
		P	6272	3528	2257,92	1568	1152	882	696,89	564,48	466,51
	150	T	432	288	216	172,8	144	123,43	108	96	86,4
		P	7200	4050	2592	1800	1322,45	1012,5	800	648	535,54

Support width (clearance between the rests)

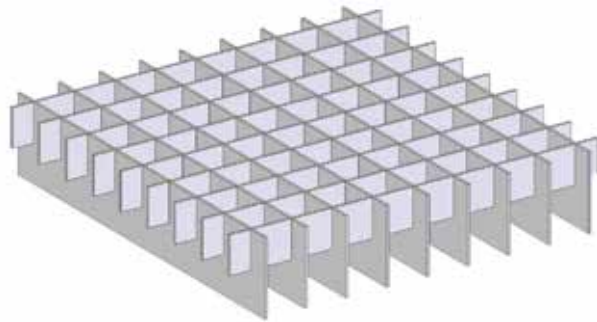
mm		1200		1300		1400		1500		1600		1700		1800		1900		2000	
Thickness	Width																		
2	20	T	0,4	0,34	0,29	0,25	0,22	0,2	0,18	0,16	0,14								
		P	1,87	1,47	1,18	0,96	0,79	0,66	0,55	0,47	0,4								
	25	T	0,77	0,65	0,56	0,49	0,43	0,38	0,34	0,3	0,27								
		P	3,65	2,87	2,3	1,87	1,54	1,28	1,08	0,92	0,79								
	30	T	1,32	1,12	0,96	0,84	0,74	0,65	0,58	0,52	0,47								
		P	6,3	4,96	3,97	3,23	2,66	2,22	1,87	1,59	1,36								
	35	T	1,94	1,76	1,52	1,32	1,16	1,03	0,91	0,82	0,74								
		P	9,8	7,87	6,3	5,12	4,22	3,52	2,96	2,52	2,16								
	40	T	2,51	2,3	2,13	1,95	1,71	1,52	1,35	1,21	1,09								
		P	12,8	10,91	9,4	7,65	6,3	5,25	4,42	3,76	3,23								
	50	T	3,85	3,53	3,26	3,03	2,83	2,65	2,49	2,32	2,1								
		P	20	17,04	14,69	12,8	11,25	9,97	8,64	7,35	6,3								
3	25	T	1,15	0,98	0,84	0,73	0,65	0,57	0,51	0,46	0,41								
		P	5,47	4,3	3,44	2,8	2,31	1,92	1,62	1,38	1,18								
	30	T	1,98	1,68	1,45	1,26	1,11	0,98	0,87	0,78	0,71								
		P	9,45	7,43	5,95	4,84	3,99	3,32	2,8	2,38	2,04								
	35	T	2,91	2,64	2,27	1,98	1,74	1,54	1,37	1,23	1,11								
		P	14,7	11,8	9,45	7,68	6,33	5,28	4,45	3,78	3,24								
	40	T	3,77	3,46	3,19	2,93	2,57	2,28	2,03	1,82	1,64								
		P	19,2	16,36	14,11	11,47	9,45	7,88	6,64	5,64	4,84								
	50	T	5,78	5,3	4,89	4,54	4,24	3,97	3,74	3,49	3,14								
		P	30	25,56	22,04	19,2	16,88	14,95	12,96	11,02	9,45								
	60	T	8,17	7,49	6,91	6,42	5,99	5,62	5,29	4,99	4,73								
		P	43,2	36,81	31,74	27,65	24,3	21,53	19,2	17,23	15,55								
70	T	10,9	10	9,23	8,57	8	7,5	7,06	6,66	6,31									
	P	58,8	50,1	43,2	37,63	33,08	29,3	26,13	23,45	21,17									
4	30	T	2,63	2,24	1,93	1,68	1,47	1,3	1,16	1,04	0,94								
		P	12,6	9,91	7,93	6,45	5,32	4,43	3,73	3,17	2,72								
	35	T	3,88	3,52	3,03	2,64	2,32	2,05	1,83	1,64	1,48								
		P	19,6	15,74	12,6	10,24	8,44	7,04	5,93	5,04	4,32								
	40	T	4,61	4,61	4,25	3,9	3,43	3,03	2,7	2,43	2,19								
		P	25,6	21,81	18,81	15,29	12,6	10,5	8,85	7,52	6,45								
	45	T	6,31	5,78	5,34	4,95	4,62	4,28	3,82	3,42	3,09								
		P	32,4	27,61	23,8	20,74	17,94	14,96	12,6	10,71	9,19								
	50	T	7,71	7,06	6,52	6,05	5,65	5,3	4,99	4,65	4,19								
		P	40	34,08	29,39	25,6	22,5	19,93	17,28	14,7	12,6								
	60	T	10,9	9,99	9,22	8,56	7,99	7,49	7,05	6,66	6,31								
		P	57,6	49,08	42,32	36,86	32,4	28,7	25,6	22,98	20,74								
70	T	14,54	13,33	12,3	11,42	10,66	10	9,41	8,89	8,42									
	P	78,4	66,8	57,6	50,18	44,1	39,06	34,84	31,27	28,22									
5	80	T	18,61	17,06	15,75	14,62	13,65	12,79	12,04	11,37	10,77								
		P	102,4	87,25	75,23	65,54	57,6	51,02	45,51	40,85	36,86								
	90	T	23,1	21,18	19,55	18,15	16,94	15,88	14,95	14,12	13,37								
		P	129,6	110,43	95,22	82,94	72,9	64,58	57,6	51,7	46,66								
	30	T	3,29	2,8	2,41	2,1	1,84	1,63	1,45	1,3	1,18								
		P	15,75	12,39	9,92	8,06	6,64	5,54	4,67	3,97	3,4								
	35	T	4,85	4,4	3,79	3,3	2,9	2,56	2,28	2,05	1,85								
		P	24,5	19,67	15,75	12,81	10,55	8,8	7,41	6,3	5,4								
	40	T	6,28	5,76	5,32	4,88	4,28	3,79	3,38	3,03	2,73								
		P	32	27,27	23,51	19,11	15,75	13,13	11,06	9,41	8,06								
	50	T	9,63	8,83	8,15	7,57	7,06	6,62	6,23	5,81	5,24								
		P	50	42,6	36,73	32	28,13	24,91	21,6	18,37	15,75								
60	T	13,62	12,48	11,52	10,7	9,99	9,36	8,81	8,32	7,89									
	P	72	61,35	52,9	46,08	40,5	35,88	32	28,72	25,92									
70	T	18,17	16,66	14,28	14,28	13,33	12,5	11,76	11,11	10,52									
	P	98	83,5	72	62,72	55,13	48,83	43,56	39,09	35,28									
80	T	23,26	21,32	19,68	18,28	17,06	15,99	15,05	14,22	13,47									
	P	128	109,07	94,04	81,92	72	63,78	56,89	51,06	46,08									
90	T	28,88	26,47	24,43	22,69	21,18	19,85	18,69	17,65	16,72									
	P	162	138,04	119,02	103,68	91,13	80,72	72	64,62	58,32									
100	T	34,91	32	29,54	27,43	25,6	24	22,59	21,33	20,21									
	P	200	170,41	146,94	128	112,5	99,65	88,89	79,78	72									
110	T	42,24	38,72	35,74	33,19	30,98	29,04	27,33	25,81	24,45									
	P	242	206,2	177,8	154,88	136,13	120,58	107,56	96,53	87,12									
120	T	50,27	46,08	42,54	39,5	36,86	34,56	32,53	30,72	29,1									
	P	288	245,4	211,59	184,32	162	143,5	128	114,88	103,68									
130	T	59	54,08	49,92	46,35	43,26	40,56	38,17	36,05	34,16									
	P	338	288	248,33	216,32	190,13	168,42	150,22	134,83	121,68									
140	T	68,42	62,72	57,9	53,76	50,18	47,04	44,27	41,81	39,61									
	P	392	334,01	288	250,88	220,5	195,32	174,22	156,37	141,12									
150	T	78,55	72	66,46	61,71	57,6	54	50,82	48	45,47									
	P	450	383,43	330,61	288	253,13	224,22	200	179,5	162									

Heavy duty gratings

Heavy duty gratings are press locked gratings. The bearing bars and the cross bars are inter-locked with one another and then processed at a pressure of 12,000 kN.

Due to their high stability and safety, heavy duty gratings are used where large support widths and high wheel loads are required.

The grating is produced in compliance with the European standard DIN 1072. Heavy duty gratings can be also produced in stainless-steel.



Load table

If the gratings you order are for vehicular use, you must give us details in advance - wheel load, load carrying area, clear span and direction of travel so that we can calculate the grating flooring.

The values shown have been calculated for maximum permissible load rating on the basis of the relevant load carrying area and bearing bar spacing of 50 mm.

Conversion factor for kg into kN: 1 kN - 100 kg, 10 kN - 1 tonne.

Bearing bar		Cross bar	
Thickness	Width	Thickness	Width
8	80	6	15
	90		25
	100		25
	110		25
	120		25
	130		25
	140		40
	150		40
10	80	8	40
	90		40
	100		40
	110		40
	120		40
	130		40
	140		40
	150		40
12	100	10	40
	110		40
	120		40
	130		40
	140		40
	150		40
	160		40
	170		40
	180		40



Point load in kN



Vehicle access: trucks up to 3 tonnes in overall weight.



Vehicle access: trucks up to 9 tonnes in overall weight.



Vehicle access: trucks up to 30 tonnes in overall weight.



Vehicle access: trucks up to 60 tonnes in overall weight.

Standard Mesh Spacing				
Bearing bar		Cross bar		
25	x	50		100
50	x	50		100
75	x	50	75	100
100	x	50	75	100

Bearing bar length max. 2500 mm

Support width (clearance between the rests)

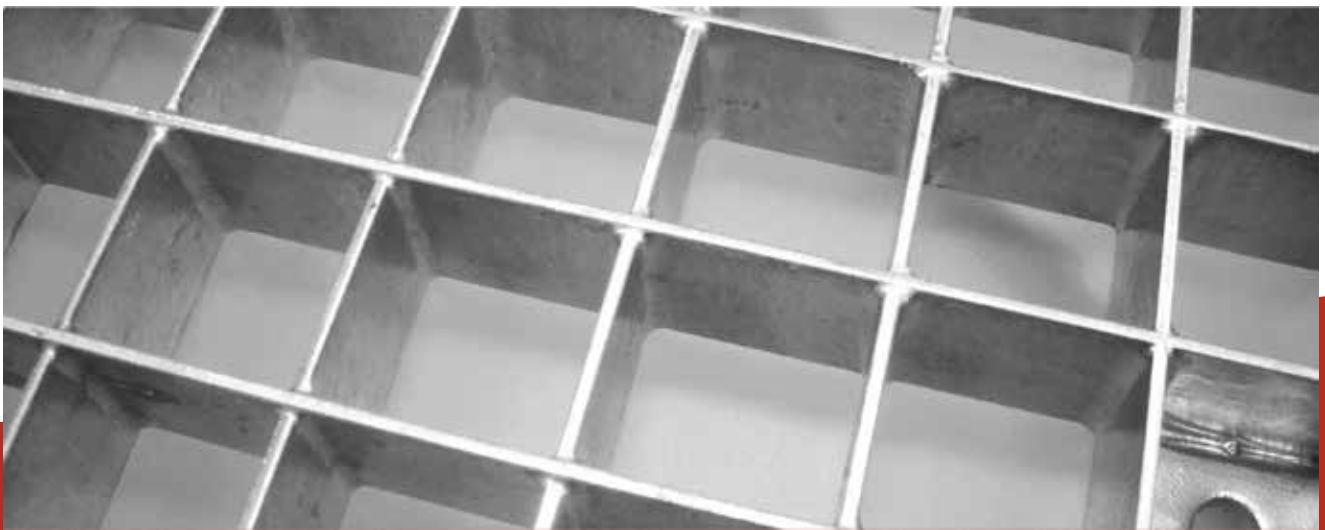
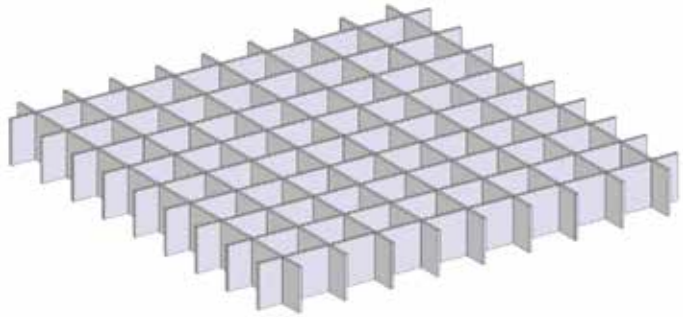
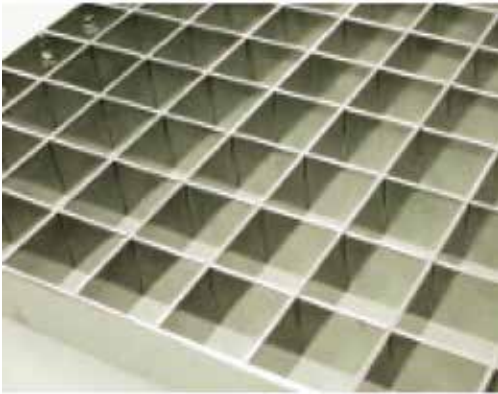
mm			300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
Thickness	Width																			
8	80	T	163,84	122,88	81,92	61,44	43,12	36,68	31,92	27,31	24,58	22,34	20,48	18,9	17,55	16,38	15,36	14,46	13,65	12,92
	90	T	207,36	155,52	124,42	103,68	62,21	51,84	40,39	35,75	32,07	28,28	25,92	23,93	22,22	20,74	19,44	18,3	17,28	16,37
	100	T	256	192	153,6	128	76,8	64	54,86	44,14	39,59	35,89	32,82	30,24	27,43	25,6	24	22,59	21,33	20,21
	110	T	309,76	232,32	185,86	154,88	116,16	77,44	66,38	58,08	51,63	43,42	39,71	36,59	33,92	31,61	29,04	27,33	25,81	24,45
	120	T	368,64	276,48	221,18	184,32	138,24	110,59	78,99	69,12	61,44	55,3	50,27	43,54	40,36	37,62	35,22	33,11	31,24	29,1
	130	T	432,64	324,48	259,58	216,32	162,24	129,79	108,16	81,12	72,11	64,9	59	54,08	47,37	44,15	41,34	38,86	36,66	34,7
	140	T	501,76	376,32	301,06	250,88	188,16	150,53	125,44	107,52	83,63	75,26	68,42	62,72	57,9	53,76	50,18	45,07	42,52	40,25
	150	T	576	432	345,6	288	216	172,8	144	123,43	108	86,4	78,55	72	66,46	61,71	57,6	54	50,82	46,2
10	80	T	204,8	153,6	122,88	102,4	61,44	51,2	39,9	35,31	31,67	27,93	25,6	23,63	21,94	20,48	19,2	18,07	17,07	16,17
	90	T	259,2	194,4	155,52	129,6	77,76	64,8	55,54	44,69	40,08	36,34	33,23	30,61	27,77	25,92	24,3	22,87	21,6	20,46
	100	T	320	240	192	160	120	80	68,57	60	53,33	44,86	41,03	37,8	35,04	32,65	30,57	28,24	26,67	25,26
	110	T	387,2	290,4	232,32	193,6	145,2	116,16	82,97	72,6	64,53	58,08	52,8	45,73	42,39	39,51	36,99	34,78	32,81	31,06
	120	T	460,8	345,6	276,48	230,4	172,8	138,24	115,2	86,4	76,8	69,12	62,84	57,6	53,17	47,02	44,03	41,39	39,05	36,96
	130	T	540,8	405,6	324,48	270,4	202,8	162,24	135,2	115,89	101,4	81,12	73,75	67,6	62,4	57,94	54,08	50,7	45,83	43,38
	140	T	627,2	470,4	376,32	313,6	235,2	188,16	156,8	156,8	117,6	104,53	85,53	78,4	72,37	67,2	62,72	58,8	55,34	52,27
	150	T	720	540	432	360	270	216	180	154,29	135	108	108	90	83,08	77,14	72	67,5	63,53	60
12	100	T	384	288	230,4	192	144	115,2	82,29	72	64	57,6	52,36	45,35	42,04	39,18	36,69	34,49	32,54	30,8
	110	T	464,64	348,48	278,78	232,32	174,24	139,39	116,16	87,12	77,44	69,7	63,36	58,08	53,61	47,41	44,39	41,73	39,38	37,27
	120	T	552,96	414,72	331,78	276,48	207,36	165,89	138,24	118,49	103,68	82,94	75,4	69,12	63,8	59,25	55,3	51,84	46,86	44,36
	130	T	648,96	486,72	389,38	324,48	243,36	194,69	162,24	139,06	121,68	108,16	88,49	81,12	74,88	69,53	64,9	60,84	57,26	54,08
	140	T	752,64	564,48	451,58	376,32	282,24	225,79	188,16	161,28	141,12	125,44	112,9	102,63	86,84	80,64	75,26	70,56	66,41	62,72
	150	T	864	648	518,4	432	324	259,2	216	185,14	162	144	129,6	117,82	108	92,57	86,4	81	76,24	72
	160	T	983,04	737,28	589,82	491,52	368,64	294,91	245,76	210,65	184,32	163,84	147,46	134,05	122,88	113,43	105,33	92,16	86,74	81,92
	170	T	1109,76	832,32	665,86	554,88	416,16	332,93	277,44	237,81	208,08	184,96	166,46	151,33	138,72	128,05	118,9	110,98	104,04	92,48
		1244,16	933,12	746,5	622,08	466,56	373,25	311,04	266,61	233,28	207,36	186,62	169,66	155,52	143,56	133,3	124,42	116,64	109,78	

Full gratings FC

Full gratings are press locked gratings with bearing bars and cross bars of equal height and which have been notched up to half of their height. The bearing bars are the ones with the notches on the top.

Full gratings are used for escape and window balconies but they can also be used as a sun shield, as a building exterior, as a honeycomb ceiling, as a ventilation grille and as parapet railings. Full gratings are available in steel, stainless steel or aluminium.

Optionally, other materials can be used.



Load table

Conversion factor for kg into kN: 1 kN - 100 kg, 10 kN - 1 tonne.

Standard Mesh Spacing

Bearing bar		Binding bar	
11,1	x	33,3	
22,2	x	22,2	33,3
33,3	x	11,1	22,2
44,4	x	22,2	44,4
66,6	x		66,6

Bearing bar		Cross bar		Framing	
25	25	25	25	25	25
30	30	30	30	30	30
35	35	35	35	35	35
40	40	40	40	40	40
45	45	45	45	45	45
50	50	50	50	50	50
60	60	60	60	60	60
70	70	70	70	70	70
80	80	80	80	80	80
90	90	90	90	90	90
100	100	100	100	100	100



Point load in kN



Uniformly distributed load in kN per sq. m.



No pedestrian access – snow load only.



Maintenance staff access only minimum 1 kN individual load.



Normal pedestrian access minimum 1.5 kN individual load and 3.5 kN area load.



Escape route for pedestrian access minimum 2.0 kN individual load and 5.0 kN area load.

Support width (clearance between the rests)

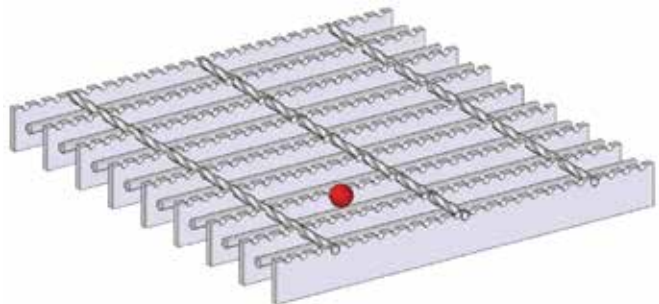
mm		300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1700	2000	2500	
Thickness	Width																	
2	30	T	2,16	1,62	1,54	1,49	1,45	1,36	1,06	0,85	0,73	0,61	0,51	0,44	0,38	0,26	0,16	0,08
		P	49,06	27,6	17,66	12,26	9,01	5,85	3,65	2,39	1,64	1,15	0,84	0,62	0,47	0,29	0,15	0,06
	35	T	2,94	2,21	2,1	2,02	1,97	1,93	1,68	1,35	1,16	0,96	0,81	0,69	0,6	0,41	0,25	0,13
		P	66,77	37,56	24,04	16,69	12,26	9,28	5,79	3,8	2,6	1,83	1,33	0,99	0,75	0,46	0,24	0,1
	40	T	3,85	2,88	2,74	2,64	2,58	2,52	2,48	2,01	1,73	1,44	1,21	1,03	0,89	0,61	0,38	0,19
		P	87,22	49,06	31,4	21,8	16,02	12,26	8,65	5,68	3,88	2,74	1,99	1,48	1,12	0,68	0,35	0,15
	45	T	4,87	3,65	3,47	3,35	3,26	3,19	3,14	2,86	2,46	2,04	1,72	1,47	1,27	0,87	0,54	0,27
		P	110,38	62,09	39,74	27,6	20,27	15,52	12,26	8,08	5,52	3,9	2,83	2,1	1,6	0,97	0,51	0,21
	50	T	6,01	4,51	4,28	4,13	4,02	3,94	3,88	3,83	3,38	2,8	2,36	2,02	1,74	1,2	0,74	0,38
		P	136,28	76,65	49,06	34,07	25,03	19,16	15,14	11,08	7,57	5,35	3,88	2,89	2,19	1,33	0,69	0,28
	60	T	8,65	6,49	6,17	5,95	5,79	5,68	5,59	5,52	5,75	4,85	4,08	3,49	3,01	2,07	1,27	0,65
		P	196,24	110,38	70,65	49,06	36,04	27,6	21,8	17,66	13,08	9,24	6,71	4,99	3,78	2,29	1,2	0,49
3	30	T	3,24	2,43	2,31	2,23	2,17	2,04	1,59	1,27	1,1	0,91	0,77	0,65	0,56	0,39	0,24	0,12
		P	73,59	41,39	26,49	18,4	13,52	8,77	5,47	3,59	2,45	1,73	1,26	0,93	0,71	0,43	0,22	0,09
	35	T	4,42	3,31	3,15	3,04	2,96	2,9	2,52	2,02	1,74	1,44	1,22	1,04	0,9	0,62	0,38	0,19
		P	100,16	56,34	36,06	25,04	18,4	13,92	8,69	5,7	3,9	2,75	2	1,48	1,13	0,68	0,36	0,15
	40	T	5,77	4,33	4,11	3,97	3,86	3,79	3,73	3,01	2,6	2,15	1,81	1,55	1,34	0,92	0,56	0,29
		P	130,82	73,59	47,1	32,71	24,03	18,4	12,98	8,51	5,81	4,11	2,98	2,22	1,68	1,02	0,53	0,22
	45	T	7,3	5,48	5,2	5,02	4,89	4,79	4,72	4,29	3,7	3,07	2,58	2,21	1,91	1,31	0,8	0,41
		P	165,57	93,14	59,61	41,39	30,41	23,28	18,4	12,12	8,28	5,85	4,24	3,16	2,39	1,45	0,76	0,31
	50	T	9,01	6,76	6,42	6,2	6,04	5,92	5,82	5,75	5,07	4,21	3,54	3,03	2,61	1,8	1,1	0,56
		P	204,41	114,98	73,59	51,1	37,55	28,75	22,71	16,63	11,36	8,02	5,82	4,33	3,28	1,99	1,04	0,43
	60	T	12,98	9,73	9,25	8,92	8,69	8,52	8,38	8,27	7,63	7,27	6,12	5,23	4,52	3,1	1,91	0,98
		P	294,35	165,57	105,97	73,59	54,07	41,39	32,71	26,49	19,62	13,86	10,06	7,48	5,68	3,44	1,8	0,74

Off shore gratings OSP

Off -shore gratings were originally developed for use on off shore oil rigs. Basically it is a press welded grating which has been strengthened by round bars welded beneath the twisted cross bars and in the same direction as the bearing bars.

OSP grating has a mesh spacing of 38.28 mm x 101.6 mm. The additional $\varnothing 7$ mm bar welded to the underside of the twist bars, is designed to prevent a $\varnothing 15$ mm test ball from falling through. The OSP range can be manufactured from 25 x 2 mm up to 60 x 5 mm bearing bars. The main materials used for the production of the off shore grating are steel St.37 or St.52.

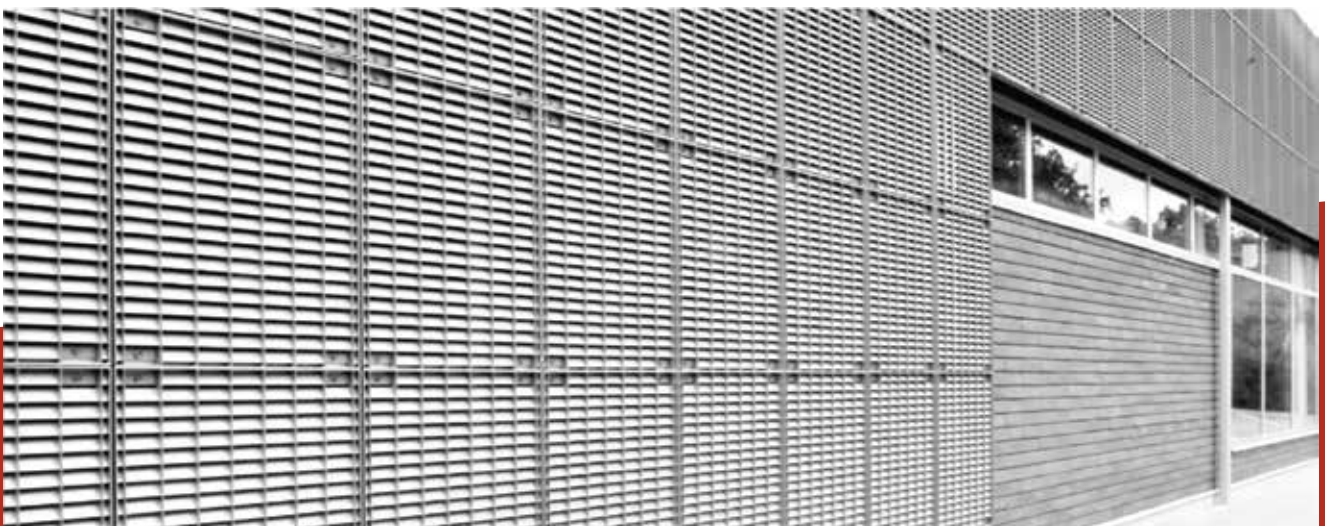
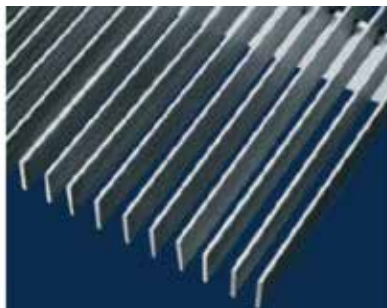
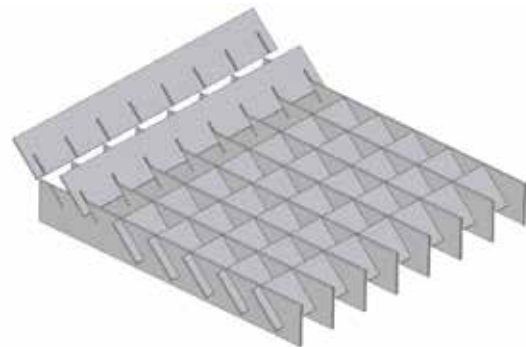
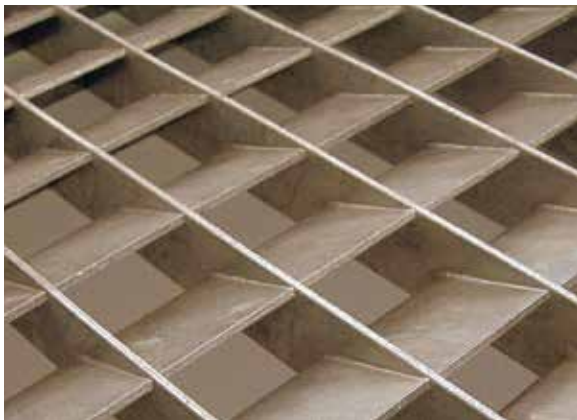
It is possible to produce the grating from stainless steels as well.



Louvre gratings LGP

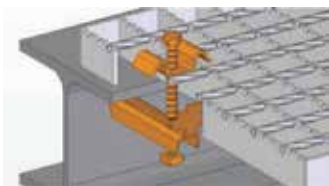
Louvre gratings will always find a use wherever people don't want other people to look through – on bridges, facades, walkways, plugs for openings, cooling ducts and air channels, balconies with sun shield function and building exteriors.

The louvers can have both plain planks, and curved ones.



Fasteners

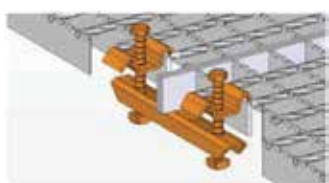
Advisable usage of the fastener – 4 pcs/m². When ordering it is necessary to indicate the fastener type and the grating's type used.



Standard fastener from four parts STD4.
Upper M-clamp, hexagon screw, clamp lower part, square nut.



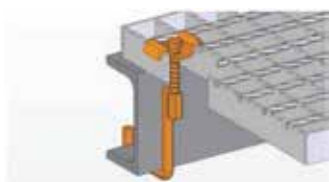
Fastener with a self-tapper.
Upper M-clamp, self-crew.



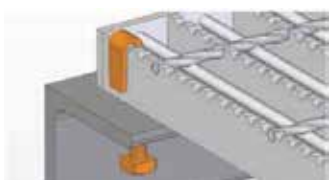
Double clamp.
2 Upper M-clamp, 2 hexagon screw, double clamp lower part, 2 square nut.



Fixings with a disc and self-screw.
Disc upper clamp, self-tapping screw.



Fixing for the beam channel with a hook.
Upper M-clamp, hexagon screw, hook made of a round bar with the long nut welded to it.



Fixing for the bearing bar.
J-hook with thread, square nut.



Framings

The press welded and press locked gratings can be produced both without framing, and with different types of framing on the gratings' perimeter.



Framing with a strip as high as the grating itself.



Height of a framing strip is 5 mm less than the grating itself.



Framing with a kick plate 100 mm higher than the grating's surface.



Framing with a higher strip in order to achieve the grating's certain height.



Framing with an angle.

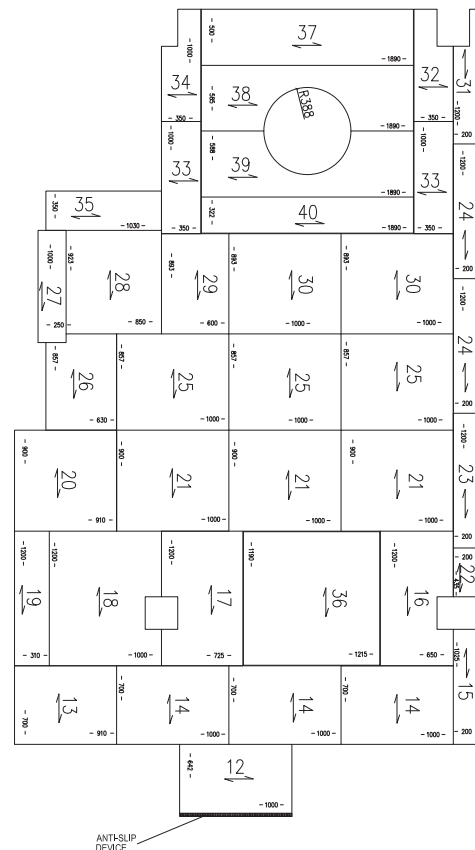
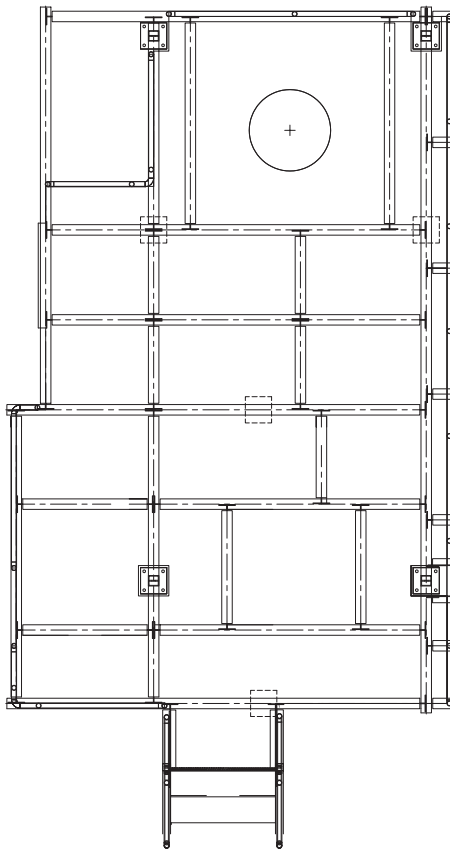


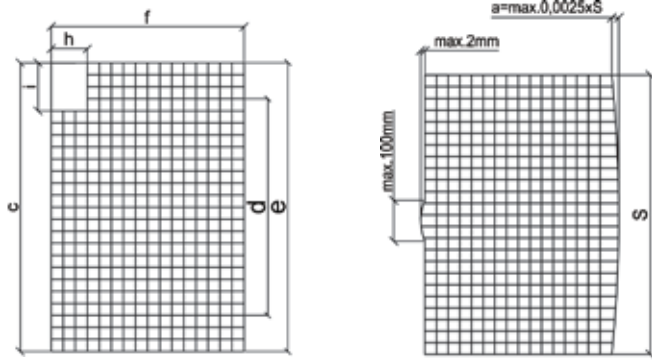
Framing with a special cut-out of the grating's corners.



Design and technical information

The vital issue of designing is solved by our company's experienced engineers, who will select the optimum type of the grating, based upon the operation conditions, offer a suitable division of gratings, develop the specification and connection layouts.





Deviation on length and width:

$c, f = -4/+0$ mm

Tolerance of a cell step:

$d = -4/+4$ mm

(at measuring more than 10 steps).

Technological cut-out:

$h; i = -0/+8$ mm.

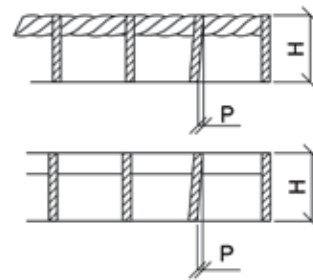
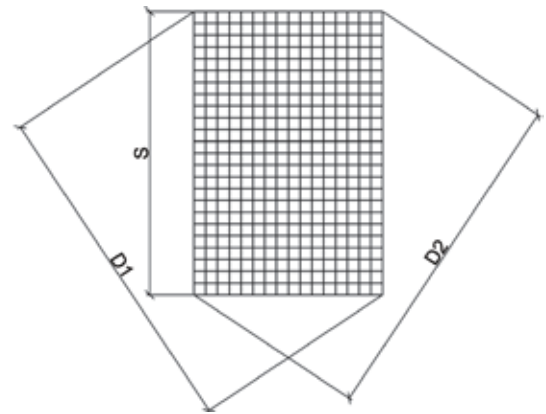


Deviation from the surface within the grating:

Maximum deviation 5 mm
for gratings ~ 300 x 300 mm - maximum 2 mm

Maximum the difference between diagonals:

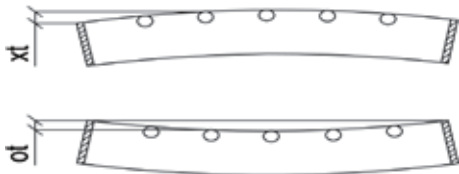
D1-D2 is equal to $0.012 \times S$ (max. side length)



Deviation of carrier bars from vertical:

$p \text{ max.} = 0,1 \times H$, but not more than 3 mm.

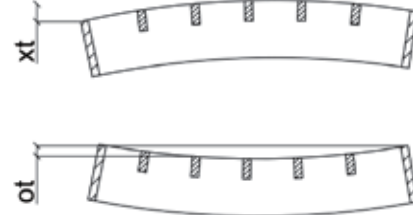
Tolerances of bearing bar:



$xt \text{ max.} = 1/150$ of strip's length;
at sizes > 450 mm
- not more than 8 mm;
at sizes < 450 mm
- not more than 3 mm.

$ot \text{ max.} = 1/200$ of strip's length;
at sizes > 600 mm
- not more than 8 mm;
at sizes < 600 mm
- not more than 3 mm.

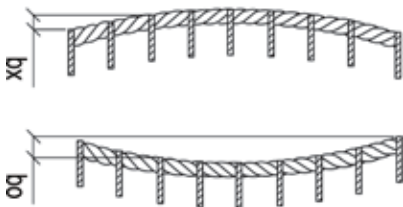
Tolerances of bearing bar:



$xt \text{ max.} = 1/150$ of strip's length;
at sizes > 450 mm
- not more than 8 mm;
at sizes < 450 mm
- not more than 3 mm.

$ot \text{ max.} = 1/200$ of strip's length;
at sizes > 600 mm
- not more than 8 mm;
at sizes < 600 mm
- not more than 3 mm.

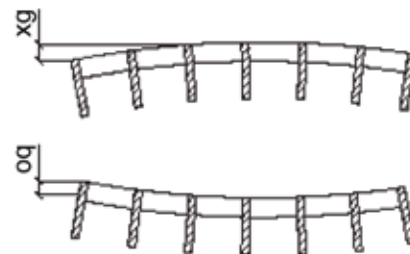
Tolerances of cross bar:



$xq \text{ max.} = 1/150$ of strip's length;
at sizes > 450 mm
- not more than 8 mm;
at sizes < 450 mm
- not more than 3 mm

$oq \text{ max.} = 1/200$ of strip's length;
at sizes > 600 mm
- not more than 8 mm;
at sizes < 600 mm
- not more than 3 mm.

Tolerances of cross bar:



$xq \text{ max.} = 1/150$ of strip's length;
at sizes > 450 mm
- not more than 8 mm;
at sizes < 450 mm
- not more than 3 mm

$oq \text{ max.} = 1/200$ of strip's length;
at sizes > 600 mm
- not more than 8 mm;
at sizes < 600 mm
- not more than 3 mm.



Stair- treads

- Types of Stairtreads
- Installation dimensions

Stairtreads

The stairtreads are produced with the same technology as the welded and press locked gratings. They get the end plate framing made of a strip with special holes for installation on the stair construction, as well as the frontal anti-slip safety nosing. The stairtreads are produced in compliance with the European standard DIN 24531. They are made of steel, stainless steel, and aluminum. Optionally, other materials can be used as well.



The stairtread made of flat grating, without the frontal safety nosing.



The stairtread made of serrated grating, without the frontal safety nosing.



The stairtread made of flat grating, with the frontal safety nosing.



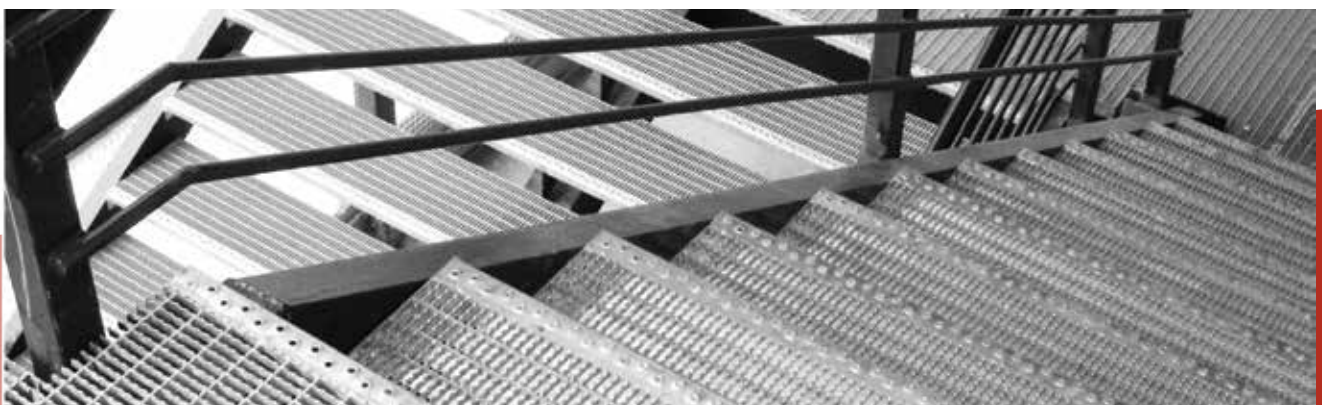
The stairtread made of serrated grating, with the frontal safety nosing.



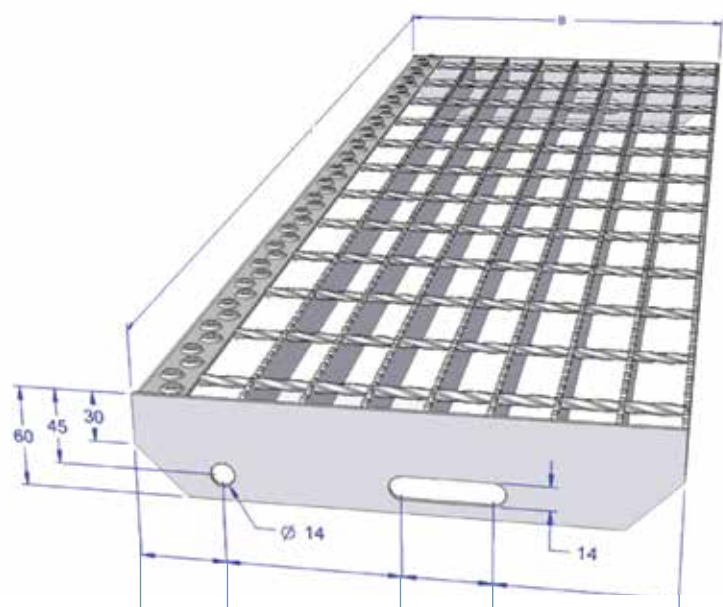
The stairtread with high anti-slip protection, which are generally used in the marine and offshore industries. Protection against falling of a ball with diameter 15 mm.



The stairtread made of flat grating, with the frontal safety nosing and kick plate.

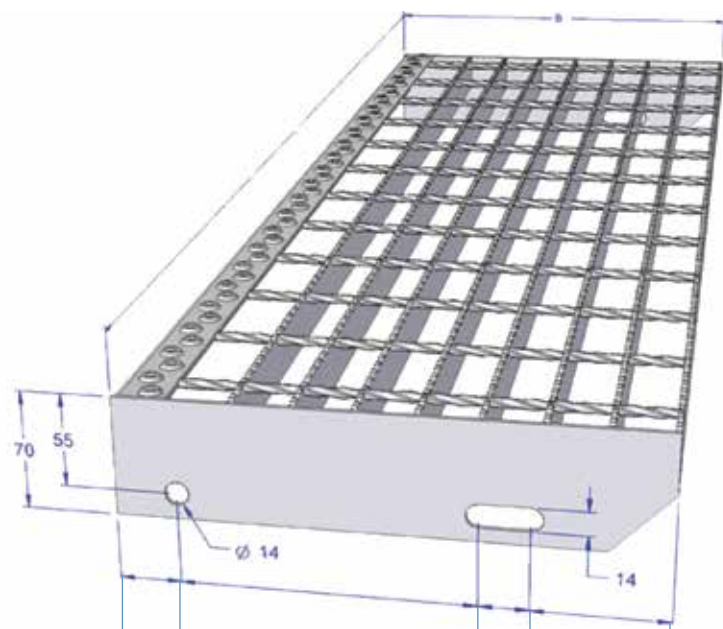


Scandinavia FIN



Standard stairtread width (B), mm				
130	50	25	25	30
160	50	35	40	35
200	50	50	50	50
230	50	70	50	60
260	50	80	50	80
300	50	100	50	100
350	50	105	50	145
400	50	200	50	100
500	50	300	50	50

European DIN 24531 DE



Standard stairtread width (B), mm				
150	35	60	30	25
170	35	75	28	30
200	35	75	28	62
240	35	105	28	72
270	35	135	28	72
305	35	165	28	77
350	35	210	28	77

Profiled surfaces

Profiled surfaces

For profiled panels typical good water and breathable, non-slip surface and resistance to stress. Profiles are made from different materials and different designs.

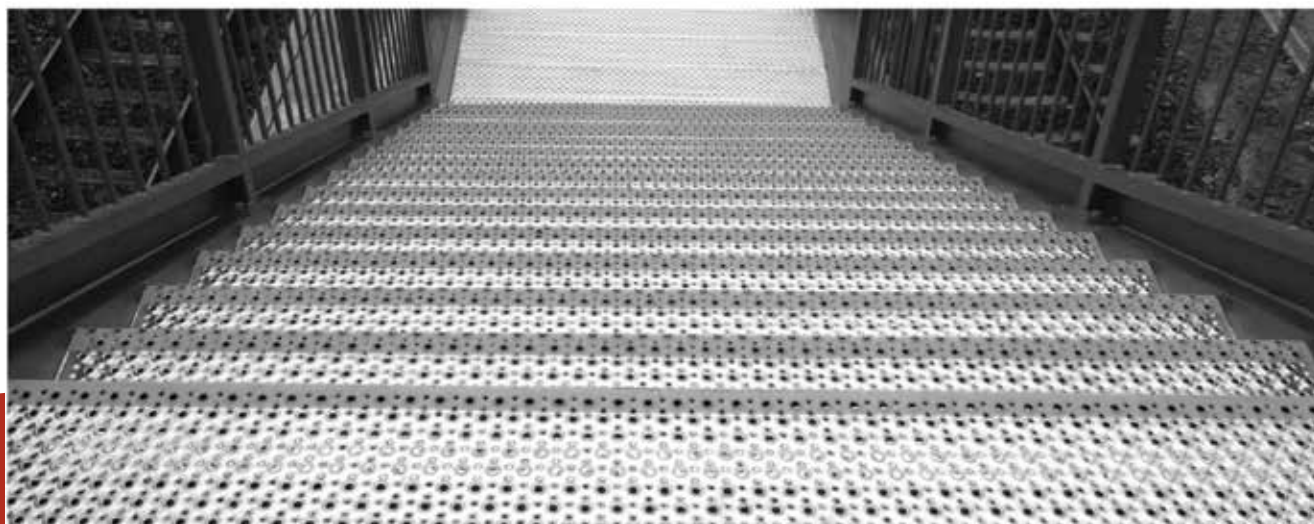
Profiled panels are used where you want to cover, subjected to high pedestrian load, providing safe and an extended surface with good appearance, facilities, and civic and social values.

The pannels are using to produce treads for common stairs and spiral stairs. Additional information is available in menu sections.



FORMSTEP
excellent anti-skid surface,
extruded holes on top and
bottom sides. The panels
are produced in different
formats.

Type:	FORMSTEP® - exelent anti-skid surface, extruded holes on top and bottom sides.The panels are produced in different formats.							
Properties:	- exelent anti-skidsurface							
	- common using							
	- good sink of fluid							
Material:	Steel 2-3 mm				- hot dip galvanizing			
	Aluminium				- anodizing			
	Stainless steel 2-2,5 mm				- etching			
Size of panels:	Height mm		Width mm					
	40	120	180	240	300	360	420	
	50	120	180	240	300	360	420	
	75	120	180	240	300	360	420	
	100	120	180	240	300	360	420	
Lenght of panels:	Standart size L=6000 mm or custom size.							





STEPBLOC
anti-skid surface with
perforation curved up.

Type:	STEPBLOC® - anti-skid surface with perforation curved to up.							
Upper holes:	46x14 mm/ c-c 58 mm							
Bottom holes:	-							
Properties:	- transparency 37%							
	- exelent steadines to sliding							
	- suitable for outdoor using and in wet environment							
	- good sink of fluid							
	- transparency and unhindered passage of air							
Material:	Steel 2-3 mm				- hot dip galvanizing			
	Aluminium 3 mm				- anodizing			
	Stainless steel 2-2,5 mm				- etching			
Size of panels:	Height mm	Width mm						
	30	-	-	240	300	360	-	-
	40	120	180	240	300	360	420	480
	50	120	180	240	300	360	420	480
	75	120	180	240	-	-	-	-
Lenght of panels:	Standart size L=4020 mm or custom size. Max. lenght L=6000 mm							



STEPCLAIR
anti-skid surface,
extruded holes on top
and bottom sides.

Type:	STEPCLAIR® - anti-skid surface, extruded holes on top and bottom sides.							
Upper holes:	d=4,5 mm/ c-c 45 mm							
Bottom holes:	d=18 mm/ c-c 45 mm							
Properties:	- transparency 30%							
	- estetic appearance							
	- good steadiness to sliding							
	- good surface to walk							
	- good sink of fluid							
Material:	Steel 2-3 mm				- hot dip galvanizing			
	Aluminium 3 mm				- anodizing			
	Stainless steel 2-2,5 mm				- etching			
Size of panels:	Height mm	Width mm						
	30	182	240	298	-	356	414	-
	50	182	240	298	330	356	414	475
	75	182	240	298	-	356	-	-
	100	182	240	298	-	-	-	-
Lenght of panels:	Standart size L=4020 mm or custom size. Max. lenght L=6000 mm							



STEPHUIT
anti-skid surface,
extruded holes on top.

Type:	STEPHUIT® - anti-skid surface, extruded holes on top and bottom sides.							
Upper holes:	d=4,5 mm/ c-c 45 mm							
Bottom holes:	d=8 mm/ c-c 45 mm							
Properties:	- exelent steadiness to sliding							
	- estetic appearance							
	- good surface to walk							
	- low transparency (important for stair treads)							
	- good sink of fluid							
Material:	Steel 2-3 mm				- hot dip galvanizing			
	Aluminium 3 mm				- anodizing			
	Stainless steel 2-2,5 mm				- etching			
Size of panels:	Height mm	Width mm						
	30	182	240	298	-	356	414	-
	50	182	240	298	330	356	414	475
	75	182	240	298	-	356	-	-
	100	182	240	298	-	-	-	-
Lenght of panels:	Standart size L=4005 mm or custom size. Max. lenght L=6030mm							



ADERSTEP
anti-skid surface,
extruded holes on top.

Type:	ADERSTEP® - anti-skid surface, extruded holes on top							
Upper holes:	d=4,5 mm/ c-c 45 mm							
Bottom holes:	-							
Properties:	- exelent steadiness to sliding							
	- estetic appearance							
	- good surface to walk							
	- low transparency (important for stair treads)							
	- good sink of fluid							
Material:	Steel 2-3 mm				- hot dip galvanizing			
	Aluminium 3 mm				- anodizing			
	Stainless steel 2-2,5 mm				- etching			
Size of panels:	Height mm	Width mm						
	30	182	240	298	-	356	414	-
	50	182	240	298	330	356	414	475
	75	182	240	298	-	356	-	-
	100	182	240	298	-	-	-	-
Lenght of panels:	Standart size L=4005 mm or custom size. Max. lenght L=6030mm							



AIRSTEP
smooth surface with
holes curved to bottom.

Type:	AIRSTEP® - smooth surface with holes curved to bottom.							
Upper holes:	-							
Bottom holes:	d=18 mm/ c-c 45 mm							
Properties:	- transparency 30%							
	- smooth surface, is using for carts and containers on wheels							
	- transparency and unhindered passage of air							
	- good sinnk of fluid							
Material:	Steel 2-3 mm				- hot dip galvanizing			
	Aluminium 3 mm				- anodizing			
	Stainless steel 2-2,5 mm				- etching			
Size of panels:	Height mm	Width mm						
	30	182	240	298	-	356	414	-
	50	182	240	298	330	356	414	475
	75	182	240	298	-	356	-	-
	100	182	240	298	-	-	-	-
Lenght of panels:	Standart size L=4005 mm or custom size. Max. lenght L=6030mm							



BOSTEP
closed surface, with
extrusion squares in the
form of pyramids.

Type:	BOSTEP® - closed surface, with extrusion squares in the form of pyramids.							
Upper bump:	12x12 mm/ c-c 19,3 mm							
Bottom bump:	-							
Properties:	- opacity - easy to clean							
Material:	Steel 2-3 mm				- hot dip galvanizing			
	Aluminium 3 mm				- anodizing			
	Stainless steel 2-2,5 mm				- etching			
Size of panels:	Height mm	Width mm						
	50	182	240	298	-	356	414	475
	75	182	240	298	-	356	-	-
	100	182	240	298	-	-	-	-
Lenght of panels:	Standart size L=4020 mm or custom size. Max. lenght L=6000 mm							



STEP PLUS
anti-skid surface,
extruded holes on top
and bottom sides.

Type:	STEP PLUS® - anti-skid surface, extruded holes on top and bottom sides.							
Upper holes:	d=4,5 mm/ c-c 25 mm							
Bottom holes:	width 19 mm							
Properties:	- anti-skid surface							
	- unhindered passage of fluid and air							
	- high load-carrying capacity, can withstand light vehicles							
Material:	Steel 2-3 mm				- hot dip galvanizing			
	Stainless steel 2-2,5 mm				- etching			
Size of panels:	Height mm				Width mm			
	30	-	-	250	300	-	-	-
	50	125	200	250	300	-	-	-
	75	125	200	250	300	-	-	-
	100	125	200	250	300	-	-	-
Length of panels:	Standart size L=4020 mm or custom size. Max. length L=6000 mm							



STEPLARM
suletud pind,
sissepressitud reljeefiga.

Type:	STEPLARM® - closed surface with extruded relief, corrugated.							
Upper bump:	8x46 mm/ c-c 58 mm							
Bottom bump:	-							
Properties:	- completely opaque - easy to clean							
Material:	Steel 2-3 mm				- hot dip galvanizing			
	Aluminium 3 mm				- anodizing			
	Stainless steel 2-2,5 mm				- etching			
Size of panels:	Height mm	Width mm						
	50	182	240	298	-	356	414	475
	75	182	240	298	-	356	-	-
	100	182	240	298	-	-	-	-
Length of panels:	Standart size L=4020 mm or custom size. Max. lenght L=6000 mm							



A black and white photograph of an industrial facility, likely a water treatment plant, featuring large pipes and walkways made of GRP (Glass Reinforced Plastic) gratings. A large red diagonal overlay covers the right side of the image, serving as a background for the title text.

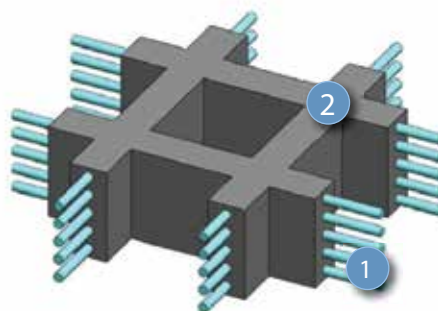
GRP gratings

GRP gratings

Coloring pigments: The molded-in color is made by even fi xing of pigment and resin and will not fade or require painting. The spectrum of colors for coloring is according to RAL color system.

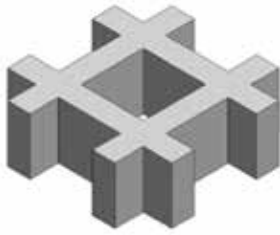
The grating consists of three main components:

1. Fiberglass (30%)
 2. Resin (70%)
- Coloring pigments (as part of resin – 2).



Type of glass	Description	Application
E-glass	Excellent wet out ability ensures a strong bond between the resin and glass dreading exceptional mechanical and anticorrosion properties.	For environments requiring high strength and corrosion resistance.
C-glass	Excellent wet out ability ensures a strong bond between the resin and glass creating exceptional mechanical and acid resistant properties.	For environments without alkali corrosion.





ECONOM STANDART (ECO-NFR, RAL 9006 Grey):

Orthophthalic Polyester resin. It is applied in corrosion medium.

Application: Environments with serious corrosion issues.

Operating temperature -60°C/+110°C.



Econom non fire (RAL 7040 Grey):

Orthophthalic Polyester resin with a non-flammable component.

Provides deboosting combustion and stability to influencing chemical agents.

Application: Environments with serious corrosion requiring better flame resistance.

Operating temperature -60°C/+110°C.



Iso non fire (RAL 6010 Green):

Isophthalic Polyester resin with a non-flammable component, for applications in a hostile environment.

Application: For use in the environments of middle concentration inorganic acid, inorganic alkali, etc.

Operating temperature -60°C/+110°C.



Food non fire (RAL 7035 Light Grey):

Isophthalic Polyester resin with a non-flammable component for a food-processing industry and animal industries.

Application: Often used in food plants or water treatment plants.

Operating temperature -60°C/+110°C.



Vinyl non fire (RAL 2002 Red):

Vilyn Ester resin with a non-flammable component for application in a hostile environment.

Application: For use in water/ wastewater or air-ageing applications, light industrial application and in the wave zone areas of offshore platforms where the environment is moderate. It still offers superior performance to traditional flooring products such as steel, aluminum and wood and is the most economical resin available.

Operating temperature -60°C/+100°C.

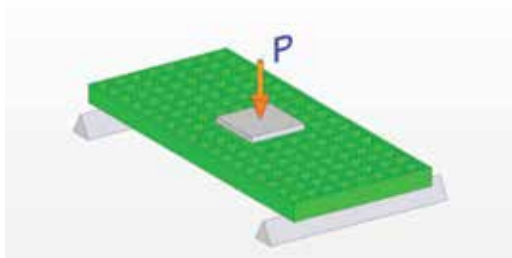


Phenol non fire (RAL 9004 Black):

Phenolic resin with a non-flammable component, which one provides a heat of exploitation, slows down combustion and has a low index of a smoke formation.

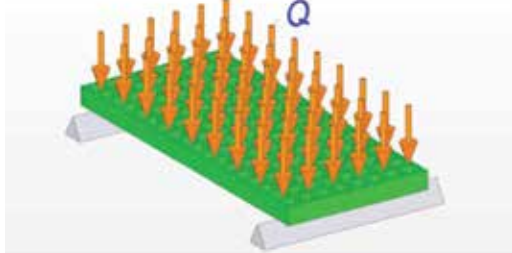
Application: For use in areas where fire resistance, low smoke, and low toxic fumes are critical e. g. offshore applications.

Operating temperature -60°C/+180°C.



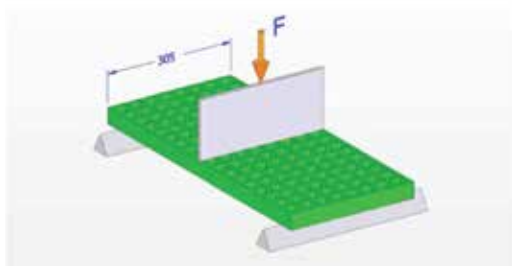
Concentrated load

There are data of the concentrated load data causing a deflection of 1% at a certain span. The load is applied at the centre of a full panel, which is supported on two sides. Gratings supported on 3 or 4 sides will have less deflection. This table is only valid for the uncut panels. In case other deflections are specified, just multiply the specified percentage deflection with the 1% load data.



Uniform load

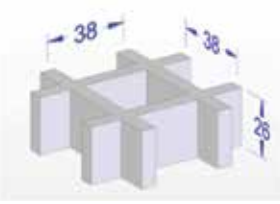
There are data of uniform load data for two sides supported grating at a certain span: the given data is for a deflection of 1 % the max. recommended load ultimate capacity. This data is also valid for panels which are cut. In case other deflections are specified, just multiply the specified percentage deflection with the 1% load data to determine the max. load. To calculate the deflections at max. recommended and ultimate capacity the same calculation method can be used . Deflection is proportional with load.



Line load

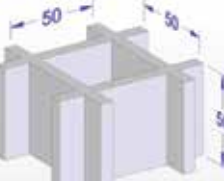
The data in this table gives a 1% deflection for a wide strip of 305 mm width. The load is applied at the centre of this strip. This data will be used to determine the deflection on cutted panels for concentrated loads, supported on two sides . For gratings with a larger width, the load can easily be calculated by multiplying the width with the given load, divided by 305 mm. Using special clips to connect the unsupported gratings together, will reduce deflection.

Load tables

Sizes (mm)	Support width (mm)	Concentrated load (kg)		Uniform load [kg/m ²]			Line load (kg/305 mm)
		1% deviation	1% deviation	Recommended maximum		Ultimate load	
				ECONOM STANDART, ECONOM NON FIRE, ISO NON FIRE, FOOD NON FIRE	VINYL NON FIRE	1% deviation	
Mesh: 38x38 mm Height: 26 mm 	300	1136	7347	7956	15545	34800	506
	400	738	3214	4478	8746	19744	288
	500	529	1693	2868	5598	12721	186
	600	402	1002	1992	3888	8882	130
	700	319	644	1464	2857	6556	96
	800	261	438	1121	2187	5039	74
	900	219	313	886	1728	3996	59
	1000	187	231	718	1400	3247	48
	1100	162	176	594	1157	2691	40
	1200	141	137	499	972	2267	33
	1300	116	109	425	829	1936	26
	1400	96	88	367	714	1673	-
	1500	81	72	319	622	1461	-

Sizes (mm)	Support width (mm)	Concentrated load (kg)	Uniform load [kg/m ²]				Line load (kg/305 mm)
		1% deviation	1% deviation	Recommended maximum		Ultimate load	1% deviation
				ECONOM STANDART, ECONOM NON FIRE, ISO NON FIRE, FOOD NON FIRE	VINYL NON FIRE	1% deviation	
Mesh: 19x19 mm Height: 30 mm 	300	1400	14844	13379	26141	58519	865
	400	998	6664	7989	15602	35223	518
	500	767	3581	5356	10455	23759	348
	600	619	2155	3863	7539	17223	251
	700	517	1403	2931	5717	13121	191
	800	441	968	2307	4499	10366	150
Mesh: 38x38 mm Height: 30 mm 	900	384	697	1868	3642	8421	122
	950	361	600	1695	3306	7655	111
	1000	339	520	1546	3015	6992	101
	1100	303	399	1304	2541	5910	85
	1200	274	313	1115	2174	5069	73
	1300	249	250	966	1883	4401	63
	1400	229	204	846	1649	3862	55

Sizes (mm)	Support width (mm)	Concentrated load (kg)	Uniform load [kg/m ²]				Line load (kg/305 mm)
		1% deviation	1% deviation	Recommended maximum		Ultimate load	1% deviation
				ECONOM STANDART, ECONOM NON FIRE, ISO NON FIRE, FOOD NON FIRE	VINYL NON FIRE	1% deviation	
Mesh: 38x38 mm Height: 38 mm 	300	2190	26809	14278	38807	61369	1288
	400	1533	10599	8031	21830	37082	758
	500	1162	5163	5139	13971	25088	502
	600	927	2867	3569	9703	18231	359
	700	765	1744	2622	7129	13918	270
	800	648	1135	2007	5458	11016	211
	900	560	776	1586	4312	8963	170
	1000	492	552	1285	3493	7453	140
	1100	437	406	1062	2887	6307	117
	1200	389	305	892	2426	5416	100
	1300	325	217	760	2067	4708	86
	1400	275	182	655	1782	4135	75
	1500	236	146	571	1553	3664	66

Sizes (mm)	Support width (mm)	Concentrated load (kg)	Uniform load [kg/m ²]				Line load (kg/305 mm)
		1% deviation	1% deviation	Recommended maximum		Ultimate load	1% deviation
				ECONOM STANDART, ECONOM NON FIRE, ISO NON FIRE, FOOD NON FIRE	VINYL NON FIRE	1% deviation	
Mesh: 50x50 mm Height: 50 mm 	300	2734	46840	31583	31583	54419	2618
	400	2077	18922	17766	17766	37886	1593
	500	1677	9371	11371	11371	26722	1084
	600	1409	5278	7897	7897	20091	791
	700	1216	3247	5802	5802	15786	606
	800	1070	2132	4442	4442	12810	481
	900	956	1472	3510	3510	10654	393
	1000	864	1056	2843	2843	9035	328
	1100	789	782	2350	2350	7784	278
	1200	720	590	1974	1974	6793	239
	1300	616	423	1682	1682	5994	208
	1400	533	357	1451	1451	5337	183
	1500	466	287	1264	1264	4791	163

Perforated sheets

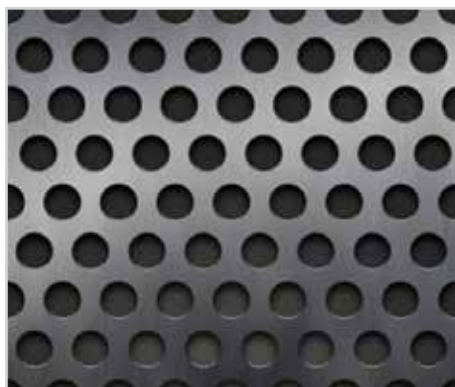
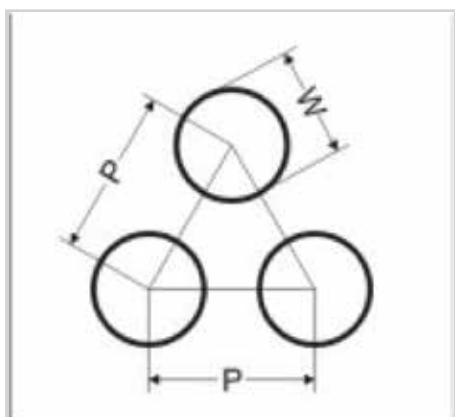
- Round diagonal perforation
- Round straight perforation
- Square perforation
- Design perforation

Round perforation

In Europe the perforated sheet metal has been used for a long time both for interior, and exterior finishing. In Estonia the perforated steel has been used for more than 10 years. This material can be used as a good alternative to the ordinary sheet metal.

All the goods provide the unlimited possibilities of their usage both indoors, and outdoors. They can be used in the furniture production, at home offices, as fences, elements of industrial equipment, sound barriers etc.

Round holes staggered pitch (RT/RV)



Holes dimensions:

W= min 1,1 mm - max 30,0 mm.

Pitch:

P= min 2,0 mm - max 40,0 mm.

Material:

Raw steel:

S235JRG2; DC 01; DD 11

Galvanized steel

Aluminium:

AlMg 3; Al 99.5 hh; AlMg I PVC coated on one side

Stainless steel:

AISI 304; AISI 304 polished; AISI 316 L;

AISI 316 Ti; AISI 321; SFCu

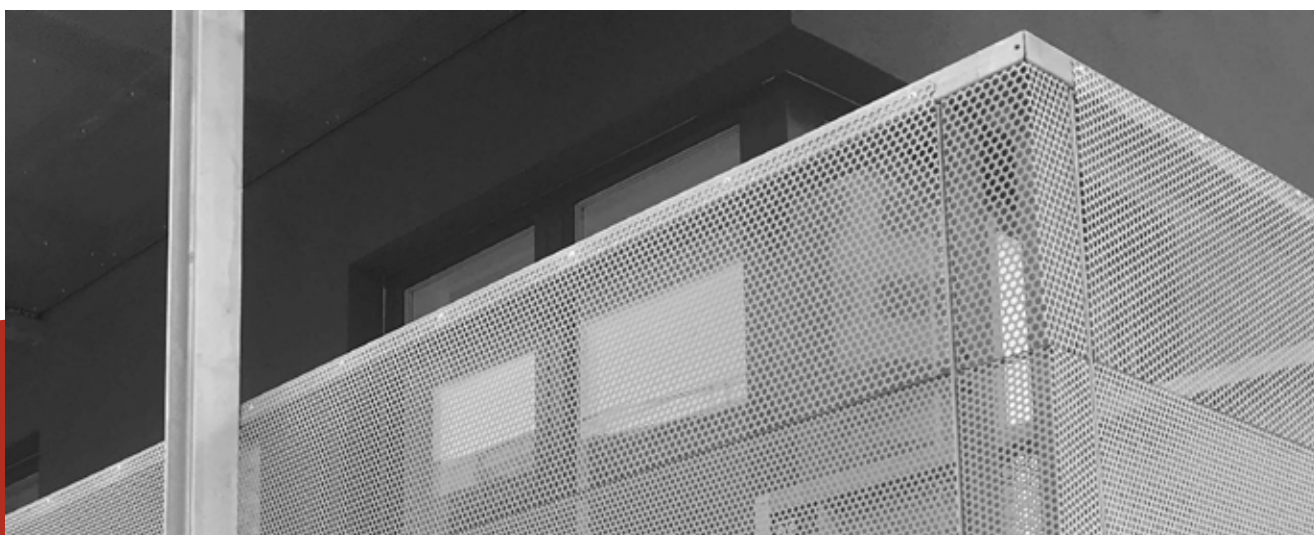
Thickness of the material:

0,75 - 8,0 mm

Standard sheet dimensions:

1000x2000 mm, 1250x2500 mm, 1500x3000 mm.

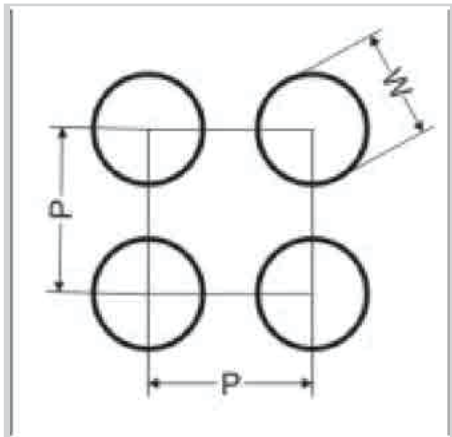
Special dimensions – special order.



Production program for perforated sheets RV

Hole	Step	Thickness	Small size	Middle size	Large size	Space
mm	mm	mm	1000 x 2000 mm	1250 x 2500 mm	1500 x 3000 mm	%
1.1	2	0.75 - 1.00	x			27.44
1.5	2.5	0.75 - 1.50	x	x		32.65
1.5	3	1.00 - 1.50	x	x		22.68
2	3	1.00	x	x		40.31
2	3.5	0.75 - 2.00	x	x	x	29.62
2.5	4	1.00 - 2.00	x	x	x	35.43
3	4	1.00 - 2.00	x	x	x	51.02
3	5	0.75 - 3.00	x	x	x	32.65
3	6	1.00 - 2.00	x	x	x	22.68
4	5	1.00	x	x		58.03
4	6	0.70 - 3.00	x	x	x	40.31
4	8	1.00 - 2.00	x	x	x	22.68
5	6	1.00	x			62.99
5	7	1.00 - 2.00	x	x	x	46.28
5	8	0.70 - 4.00	x	x	x	35.43
5	9	1.00 - 5.00	x	x	x	27.99
6	8	1.00	x	x	x	51.02
6	9	1.00 - 3.00	x	x	x	40.31
7	10	1.00	x			44.44
8	10	1.00 - 2.00	x	x	x	58.05
8	11	1.00 - 2.00	x	x	x	47.97
8	12	1.00 - 4.00	x	x	x	40.31
8	16	6.00	x			22.68
10	12	1.00 - 2.00	x	x	x	62.99
10	13	1.00	x	x	x	53.67
10	13.5	1.00 - 2.00	x	x	x	49.76
10	14	1.00 - 2.00	x	x	x	46.28
10	15	1.00 - 5.00	x	x	x	40.31
10	18	1.00 - 8.00	x	x	x	27.99
12	16	1.00 - 4.00	x	x	x	51.02
12	20	1.00 - 3.00	x	x	x	32.65
15	21	1.00 - 3.00	x	x	x	46.28
16	20	1.00 - 2.00	x	x	x	58.05
20	28	1.00 - 4.00	x	x	x	46.28
30	40	1.00 - 3.00	x	x	x	51.02

Round holes square pitch (RU-RG)



Holes dimensions:

W= min 4,5mm - max 48,5mm.

Pitch:

P= min 15,0mm - max 20,0mm.

Material:

Raw steel:

S235JRG2; DC 01; DD 11

Galvanized steel

Aluminium:

AlMg 3; Al 99.5 hh; AlMg I PVC coated on one side

Stainless steel:

AISI 304; AISI 304 polished; AISI 316 L; AISI 316 Ti;

AISI 321; SFCu

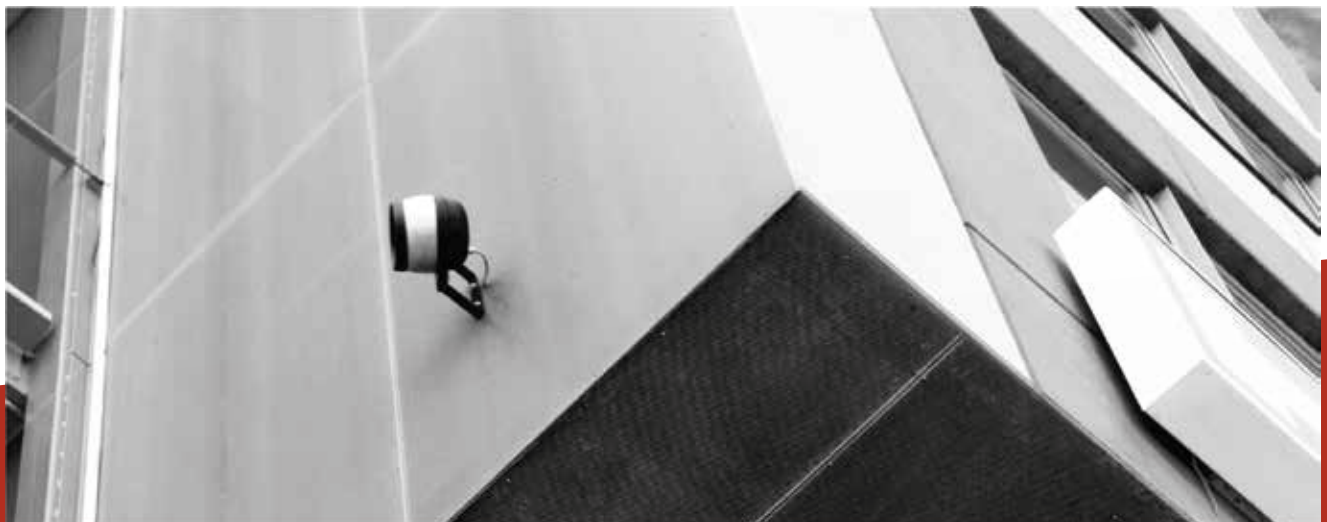
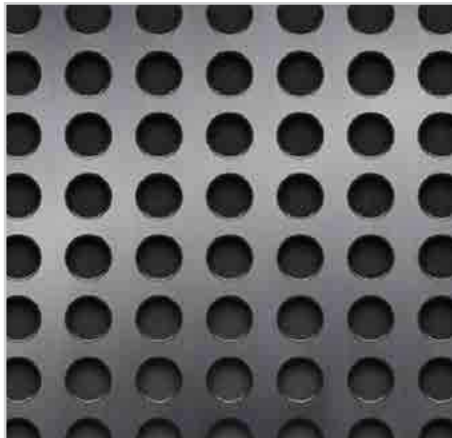
Thickness of the material:

1,0 - 3,0 mm

Standard sheet dimensions:

1000x2000 mm, 1250x2500 mm, 1500x3000 mm.

Special dimensions – special order.

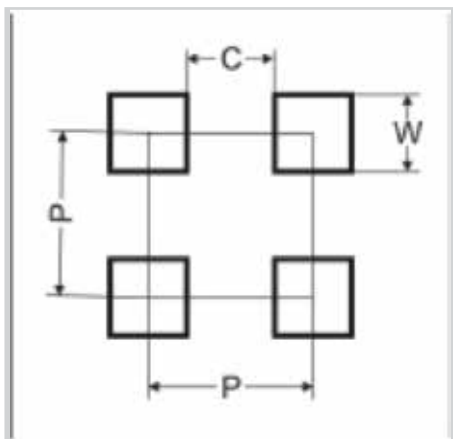


Production program for perforated sheets RU

Hole	Step	Thickness	Small size	Middle size	Large size	Space
mm	mm	mm	1000 x 2000 mm	1250 x 2500 mm	1500 x 3000 mm	%
4.5	15	1.00	x	x	x	7.07
		1.50	x	x	x	7.07
		2.00	x	x	x	7.07
		3.00	x	x	x	7.07
5	10	1.00	x	x	x	19.63
		1.50	x	x	x	19.63
		2.00	x	x	x	19.63
		3.00	x	x	x	19.63
5	15	1.00	x	x	x	8.72
		1.50	x	x	x	8.72
		2.00	x	x	x	8.72
5	25	1.00	x	x	x	3.14
		1.50	x	x	x	3.14
		2.00	x	x	x	3.14
		3.00	x	x	x	3.14
8	17.32	1.00	x	x	x	16.75
		1.50	x	x	x	16.75
		2.00	x	x	x	16.75
		3.00	x	x	x	16.75
10	15	1.00	x	x	x	34.88
		1.50	x	x	x	34.88
		2.00	x	x	x	34.88
		3.00	x	x	x	34.88
10	20.78	1.00	x	x	x	18.18
		1.50	x	x	x	18.18
		2.00	x	x	x	18.18
		3.00	x	x	x	18.18
10	25.98	1.00	x	x	x	11.63
		1.50	x	x	x	11.63
		2.00	x	x	x	11.63
		3.00	x	x	x	11.63
12	27.72	1.00	x	x	x	14.71
		1.50	x	x	x	14.71
		2.00	x	x	x	14.71
		3.00	x	x	x	14.71
15	36.38	1.00	x	x	x	13.35
		1.50	x	x	x	13.35
		2.00	x	x	x	13.35
		3.00	x	x	x	13.35
20	48.5	1.00	x	x	x	13.35
		1.50	x	x	x	13.35
		2.00	x	x	x	13.35
		3.00	x	x	x	13.35

Square perforation

Square holes square pitch (CU-QG)



Holes dimensions:

W= min 3,0 mm - max 25,0 mm.

W= min 3,0 mm - max 25,0 mm.

Pitch:

P= min 5,0 mm - max 70,0 mm.

Material:

Raw steel:

S235JRG2; DC 01; DD 11

Galvanized steel

Aluminium:

AlMg 3; Al 99.5 hh; AlMg I PVC coated on one side

Stainless steel:

AISI 304; AISI 304 polished; AISI 316 L; AISI 316 Ti;

AISI 321; SFCu

Thickness of the material:

1,0 - 3,0 mm

Standard sheet dimensions:

1000x2000 mm, 1250x2500 mm, 1500x3000 mm.

Special dimensions – special order.

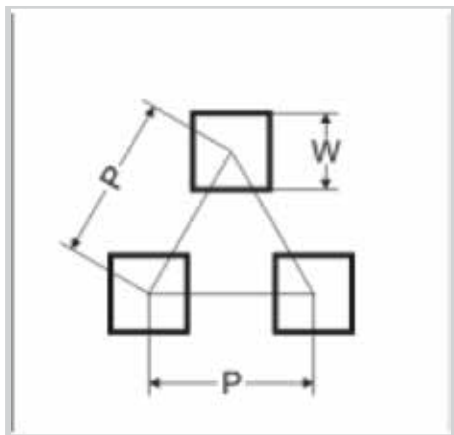


Production program for perforated sheets QG

Hole	Step	Thickness	Small size	Middle size	Large size	Space
mm	mm	mm	1000 x 2000 mm	1250 x 2500 mm	1500 x 3000 mm	%
3	5	1.00	x			36.00
4	7	1.00 - 1.50	x	x	x	32.65
5	7	1.00 - 2.00	x	x	x	51.02
5	8	1.00 - 3.00	x	x	x	39.06
5	16	1.00 - 3.00	x	x	x	9.77
6	9	1.00 - 2.00	x	x	x	44.44
7	10	1.00	x	x		49.00
8	10	1.00 - 2.00	x	x	x	64.00
8	11	1.00 - 2.00	x	x	x	52.90
8	12	1.00 - 2.00	x	x	x	44.44
8	24	1.00 - 3.00	x	x	x	11.11
9.2	34	1.00 - 2.00	x	x	x	7.32
10	12	1.00 - 2.00	x	x	x	69.44
10	14	1.00 - 3.00	x	x	x	51.02
10	15	1.00 - 3.00	x	x	x	44.44
10	30	1.00 - 3.00	x	x	x	11.11
15	20	1.00 - 3.00	x	x	x	56.25
15	40	1.00 - 3.00	x	x	x	14.06
15	60	1.00 - 3.00	x	x	x	6.25
20	25	1.00 - 3.00	x	x	x	64.00
20	50	1.00 - 3.00	x	x	x	16.00
25	30	1.00 - 3.00	x	x	x	69.44
25	35	1.00 - 3.00	x	x	x	51.02
25	70	1.00 - 3.00	x	x	x	12.76
30	70	1.00 - 3.00	x	x	x	18.37
40	60	1.00 - 3.00	x	x	x	44.44
50	100	1.00 - 3.00	x			25.00

Design perforation

Square holes staggered pitch (CT-QV)



Holes dimensions:

W= min 3,0 mm - max 25,0 mm.

W= min 3,0 mm - max 25,0 mm.

Pitch:

P= min 5,0 mm- max 70,0 mm.

Material:

Raw steel:

S235JRG2; DC 01; DD 11

Galvanized steel

Aluminium:

AlMg 3; Al 99.5 hh; AlMg I PVC coated on one side

Stainless steel:

AISI 304; AISI 304 polished; AISI 316 L; AISI 316 Ti;

AISI 321; SFCu

Thickness of the material:

1,0 - 3,0 mm

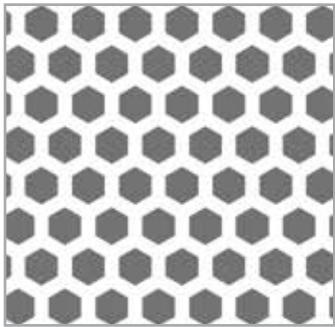
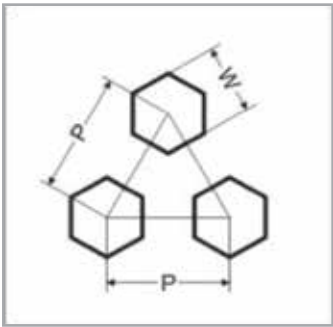
Standard sheet dimensions:

1000x2000mm, 1250x2500mm, 1500x3000mm.

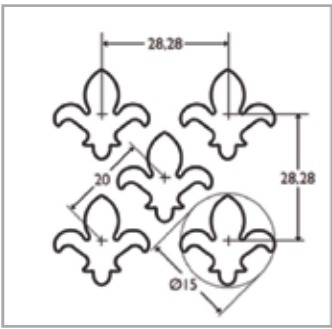
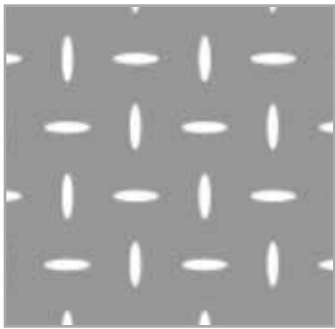
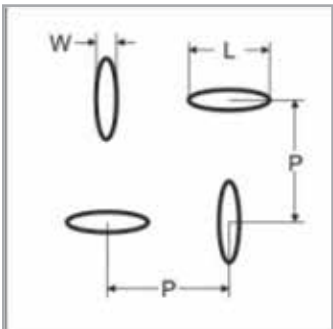
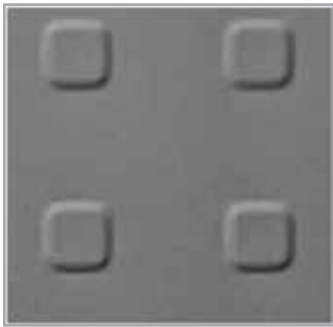
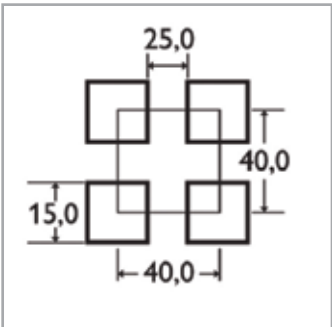
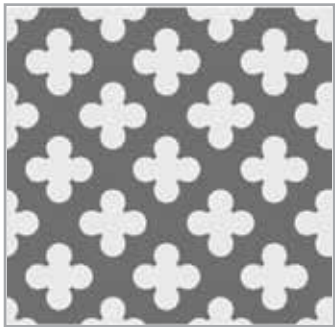
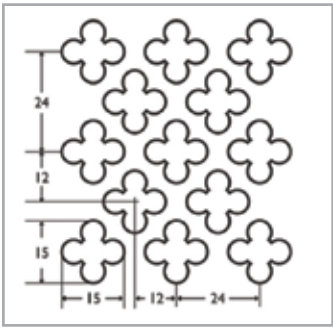
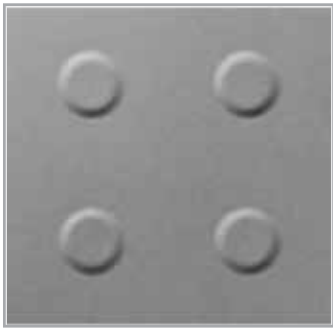
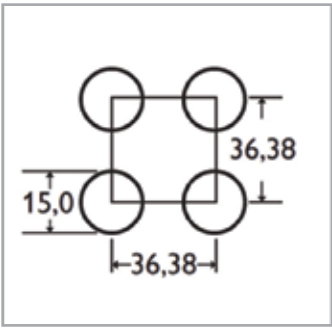
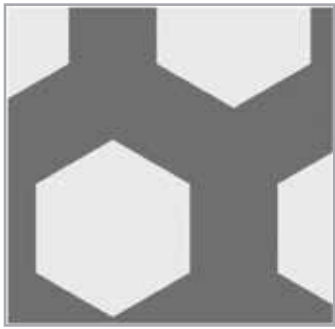
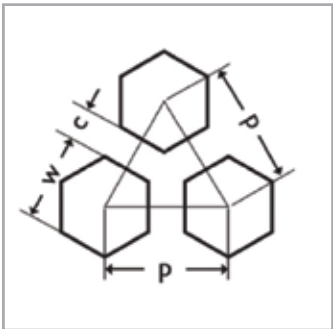
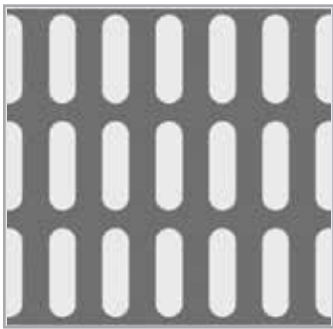
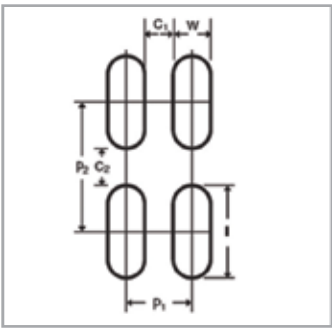
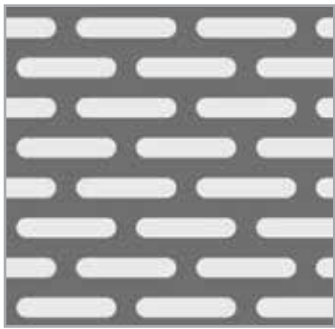
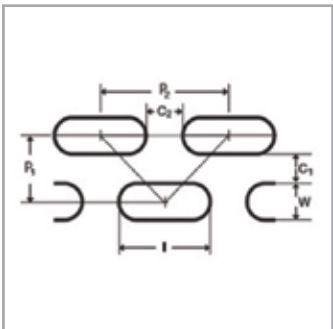
Special dimensions – special order.



Design perforation



Hexagonal holes staggered pitch (HT)
 Slotted holes staggered pitch (LR)
 Decorative sheets.
 Textured sheets.
 Arabica, Rhomb, Wave, EVH, RE, No 152, Lily





Metal grids

- Welded grids
- Woven grids
- Expanded grids

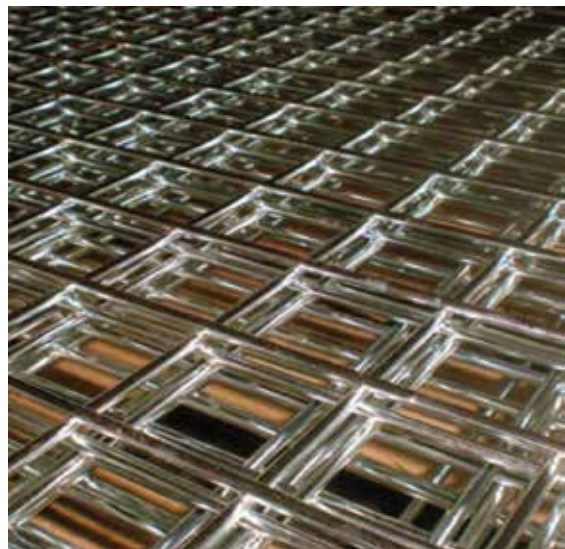
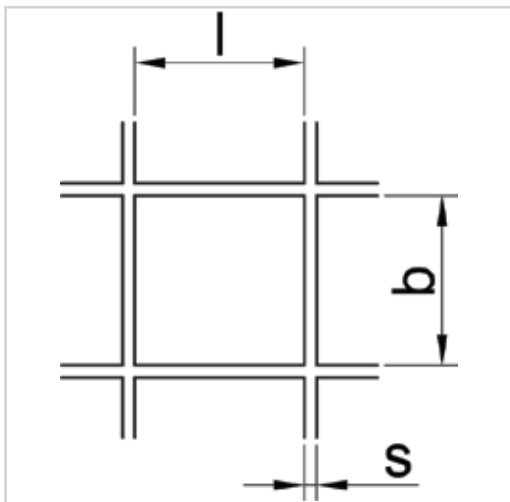
Welded Grids

We offer the most widespread sheet metal grids: the welded grids, woven grids, cut-through and stretched grids, as well as some sorting and filtering grids.

The sheet grids are a suitable material for the production of fences, room dividers, gates, staircase safeguards, window grills and other elements of the furniture and interior.

As their material we use raw steel, stainless steel, acid-resistant steel, and aluminum.

Coating: Hot dip galvanizing, galvanizing, painting.



Mesh		Rod	Sheet size		Weight
B mm	L mm	ø mm	B mm	L mm	kg/m2
20	20	2.5	1000 x 2000 1250 x 2500 1500 x 2000 1500 x 3000 2000 x 3000		4.1
		3.0			5.8
		4.0			10.4
30	30	2.5			2.7
		3.0			3.9
		4.0			7.0
		5.0			10.9
40	40	2.5			2.1
		3.0			3.0
		4.0			5.3
		5.0			8.3
		6.0			11.9
50	50	2.5			1.7
		3.0			2.4
		4.0			4.3
		5.0			6.7
		6.0			9.6
60	60	3.0			2.0
		4.0			3.6
		5.0			5.6
		6.0			8.1
70	70	3.0			1.8
		4.0			3.1
		5.0			4.9
		6.0			7.0
80	80	3.0			1.5
		4.0			2.7
		5.0			4.3
		6.0			6.2
100	100	3.0			1.3
		4.0			2.2
		5.0			3.5
		6.0			5.0

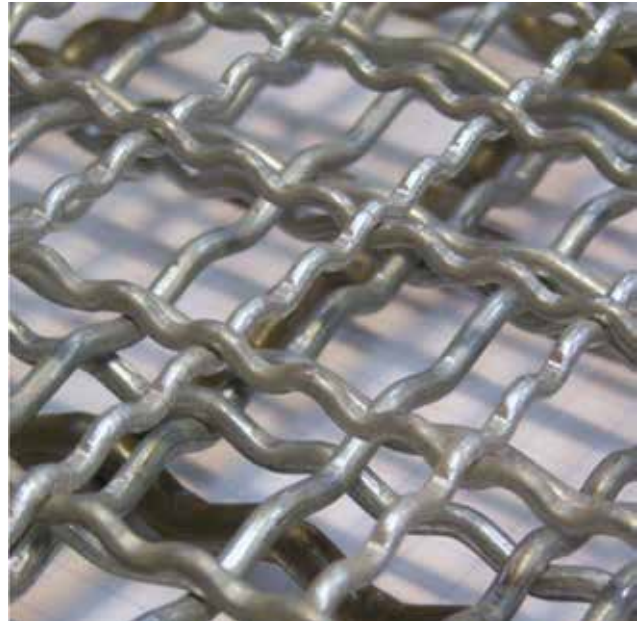
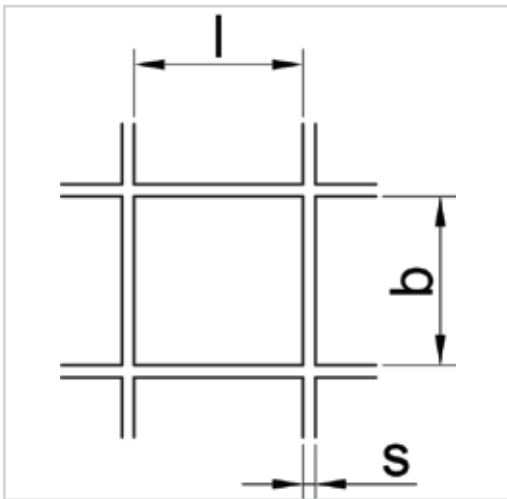
Woven grids

Material:

Steel, stainless steel, AluZn.

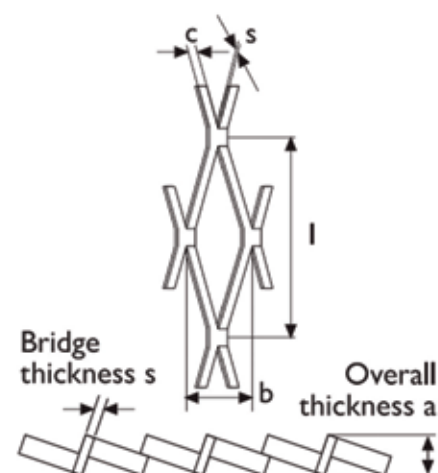
Coating:

Hot dip galvanizing, galvanizing, painting.

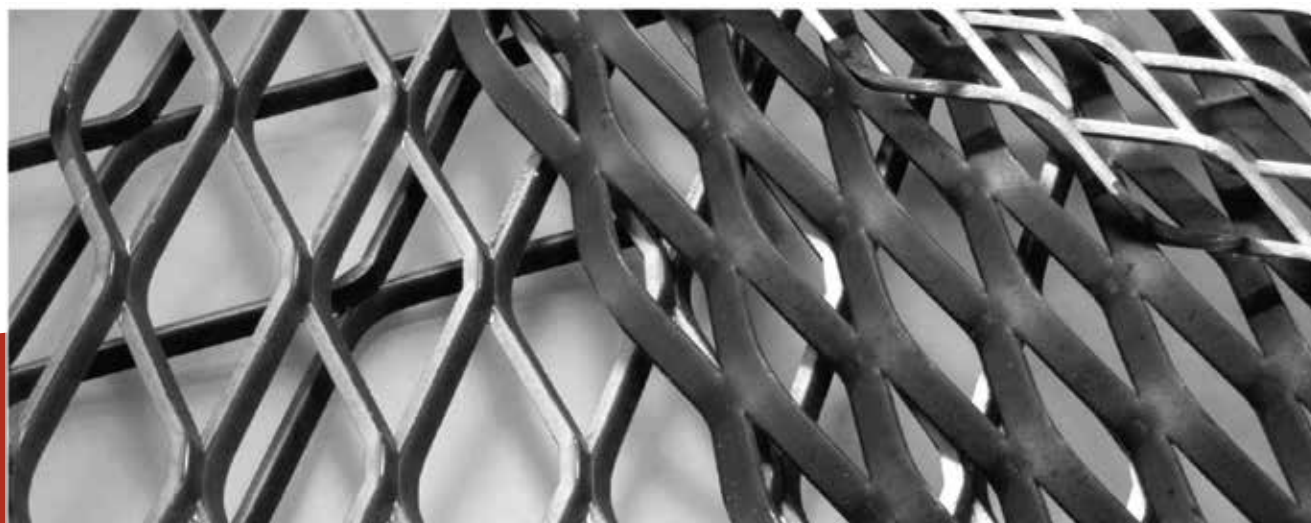


Material	Mesh		Rod	Sheet size		Weight
	B mm	L mm	ø mm	B mm	L mm	kg/m2
Steel						
	11	11	2.0	1000	2000	4.3
	21	21	2.5	1000	2000	3.6
				2000	3000	3.6
	31	31	3.0	1000	2000	3.5
				1250	2500	3.5
				2000	3000	3.5
	42	42	4.0	1000	2000	4.5
				1250	2500	4.5
				1500	3000	4.5
				2000	3000	4.5
	52	52	4.0	1000	2000	4.6
	52	52	5.0	2000	3000	5.7
Dip galvanized steel						
	11	11	2.0	1000	2000	4.3
	21	21	2.5	1000	2000	3.6
				1500	3000	3.6
	31	31	3.0	1000	2000	3.5
				2000	3000	3.5
	42	42	4.0	1000	2000	4.5
				1250	2500	4.5
				2000	3000	4.5
	52	52	5.0	2000	3000	5.7
Stainless steel (AISI 304)						
	11	11	2.0	1000	2000	4.5
	21	21	2.5	1000	2000	3.6
	31	31	3.0	1000	2000	3.5
				1250	2500	3.5
	42	42	4.0	1000	2000	4.5
				1250	2500	4.5
	52	52	5.0	1000	2000	5.7

Expanded grids



Type	Sheet size		Mesh (center)		Space		Bridge		Sheet thickness	Weight	Space	Application	
	B mm	L mm	Lenght/B mm	Width/L mm	Lenght/B mm	Width/L mm	Thikness mm	Overall thikness mm	mm	kg/m2	%		
Flattened net													
P1,5/2,5 L	2000	1000	69	27	56	18	1,5	2,5	2	2,5	82	Technical and decoration covers, s stronger covers, furniture	
	2000	1500											
	P23 L	2000	1250	69	27	54	18	2	3	3	4		77
	P2,5/4 L	2000	1000	69	27	54	18	2,5	4	3,5	6		73
	P36 L	1250	2000	69	27	52	13	3	6	4,5	10		55
R1,5/2,5 L	2000	1000	42	17	31	10	1,5	2,5	3,5	3,5	66		
Fine net													
V1/1,4	2000	1000	30	12,5	25	13	1	1,4	2,5	1,5	82	Ventilation and air cleaning systems, quick barbecues	
	V1/1,4zn	1250	2000	30	12,5	25	13	1	1,4	2,5	1,5		82
	R1/1,4	1250	2000	42	17	34	14	1	1,4	2,5	1,3		87
Stainless steel													
V1,5/2RV	2000	*)	30	12,5	22	10	1,5	2	5	4,1	68	Food and chemistry industry, aggressive environment	
	V22RV	1000	*)	30	12,5	22	10	2	2	5	5,4		67
	P1,5/2RV	2000	*)	69	27	56	22	1,5	2	5,5	2		79
	P22RV	1000	rulla	69	27	56	22	2	2	5,5	2,7		79
	P23RV	2000	*)	69	27	56	21	2	3	6	4,3		77
	P38RV	1000	*)	69	27	50	14	3	8	14	13,5		48
	800	*)											
Aluminium													
V22AL	2000	*)	30	12,5	22	11	2	2	5	1,8	67	Light decorative net, ventilation	
	V24AL	2000	*)	30	12,5	21	10	2	4	5	3,6		58
P34AL	2000	*)	69	27	52	20	3	4	10	2,6	75	Protection grid for railings and vertical surfaces	
P46AL	2000	*)	69	27	48	15	4	6	13	6,2	51	Floors of ships and lifting systems	
P58AL	2000	*)	69	27	48	15	5	8	14	9,5	44		
	1000	*)											



Type	Sheet size		Mesh (center)		Space		Bridge		Sheet thickness	Weight	Space	Application
	B mm	L mm	Lenght/B mm	Width/L mm	Lenght/B mm	Width/L mm	Thikness mm	Overall thikness mm	mm	kg/m2	%	
Regular nets, mild steel												
A34	2000	1500	137	70	124	67	3	4	10	2,8	90	Fencing, gates, light partitions and gratings
	2000	2000										
	1500	1500										
A36	2000	1500	137	70	120	64	3	6	13	4,2	85	Security grids and bars, gratings, stronger gates and partitions
A46	2000	1500	137	70	118	62	4	6	13	5,7	83	
T33	2000	1000	100	34	82	30	3	3	6	4,3	80	Fencing, gates, light partitions and gratings, hanging ceilings
	2500	1250										
P23	2000	1250	69	27	56	22	2	3	6	4,1	77	Protecting covers, elements of interior, scaffolds, hanging ceilings, elevators, partitions of vans
P2,5/4	2000	1500	69	27	50	20	2,5	4	8	6	73	
	2000	1000										
	1250	2000										
S33	1250	2000	62	28	46	20	3	3	6	5,4	70	
	1000	2000										
K22	2000	1000	52	25	42	22	2	2	4	2,5	78	Protecting covers, elements of interior, hanging ceilings, elevators, partitions of vans
R1,5/2	2000	1000	42	17	33	14	1,5	2	4	2,8	74	
	2000	1200										
R22	2000	1000	42	17	32	14	2	2	5	3,7	71	
	2000	1200										
R2,5/3	2000	1000	42	17	30	12	2,5	3	6	6,5	65	Protecting covers, elements of interior, passenger elevators, hanging ceilings
	2000	1500										
R33	1000	2000	42	17	30	12	3	3	8	8,3	59	
V1,5/2	2000	1000	30	12,5	22	12	1,5	2	4	3,8	72	
	2000	1200										
V22	2000	1000	30	12,5	22	11	2	2	5	5	67	Protecting covers, elements of interior, passenger elevators, hanging ceilings
	2000	1200										
V23	2000	1000	30	12,5	20	10	2	3	6	7,5	60	
	2000	1200										
Bearing net												
T56	1000	2000	100	34	76	26	5	6	11	14,3	60	Terminals, stairs, bridges, walkways, floors and covers of light trailers, front panels of timber trailers
	1200	2000										
	1500	2000										
T58	1000	3000	100	34	75	25	5	8	17	19	54	
P38	1250	2000	69	27	50	14	3	8	14	13,5	48	
	1000	2000										Terminals, stairs, bridges, walkways, feet-cleaning mats
P48	1000	2000	69	27	45	13	4	8	14	18,8	46	
	1000	2500										
R36	1000	2000	42	17	25	9	3	6	10	16,6	32	Narrow light stairs, bridges
	1250	2000										
P36	1250	2000	69	27	50	18	3	6	11	10,1	55	
R3/4,5	1250	2000	42	17	28	11	3	4,5	9	12,5	48	Narrow light stairs, bridges
V2,5/4	1250	2000	30	12,5	20	9	2,5	4	7	10,8	46	



Stair- cases

- Spiral staircases
- Straight staircases
- Railings

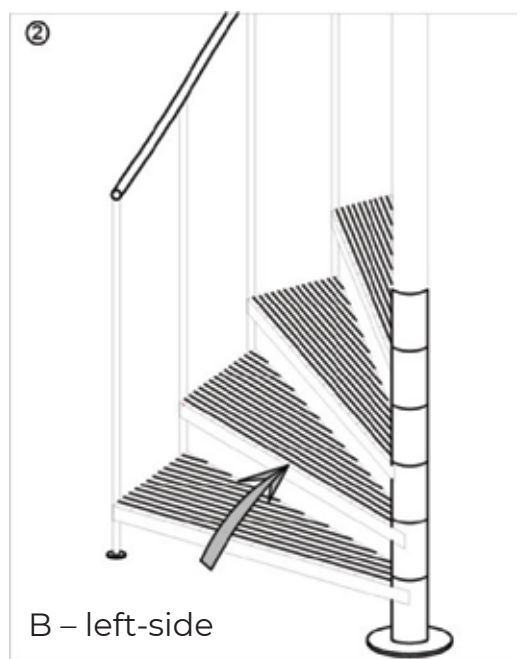
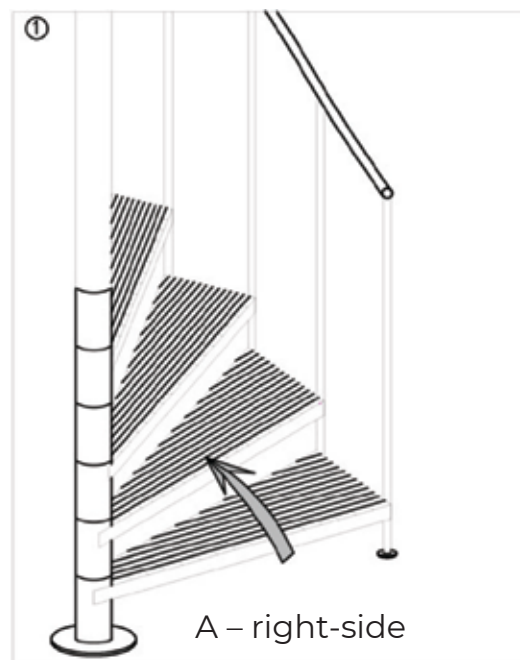
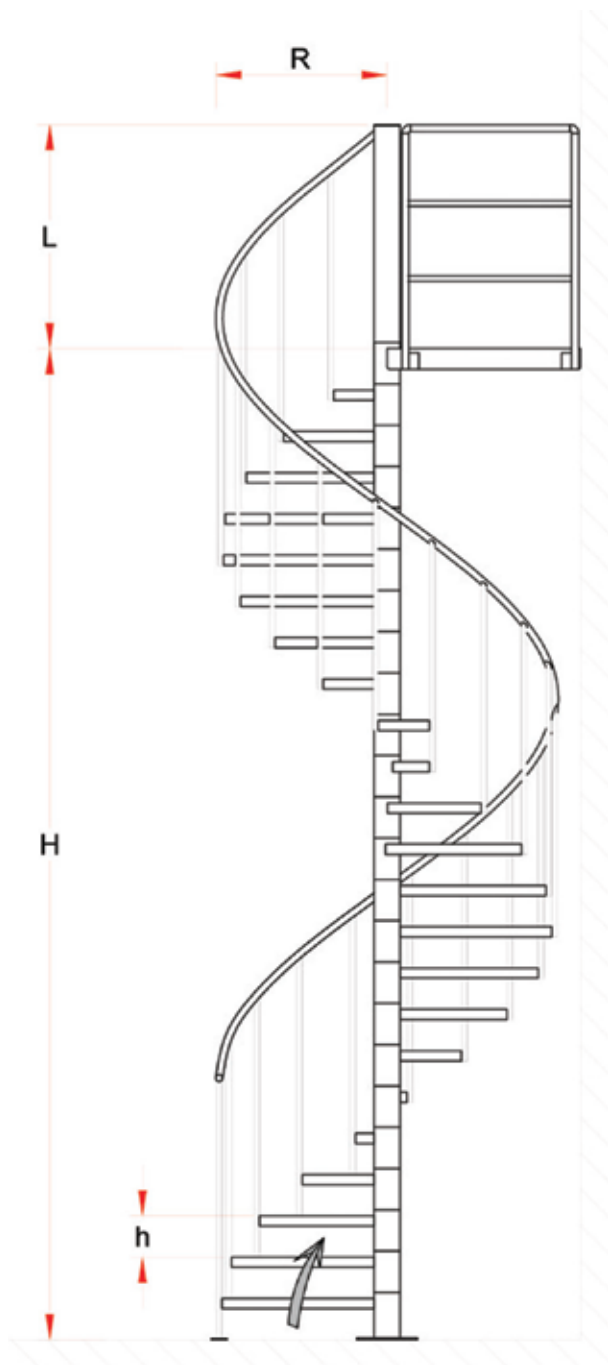
Spiral staircases

Produced by Metal-Disain OU metal spiral staircases are mainly used as an escape, and are suitable for manufacturing plants and warehouses, industrial buildings, retail stores, office complexes and so on.

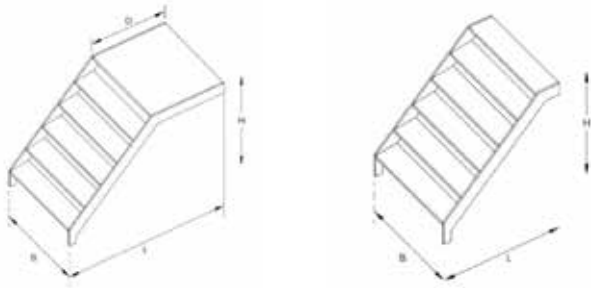
Keerdtrepi konstruktsioon on järgmine:

- **Base flange** – the flange with holes for installation the stairs to the basement.
- **Central tube** – made for the full height of the stair or from several parts connected to each other. Standard tubes are: $\varnothing 88,9$ mm; $\varnothing 101,6$ mm; $\varnothing 114,3$ mm; $\varnothing 127,0$ mm.
- **Stairtread** – standard stairtread is made from the grating with inwelded sleeve. Grating type: press welded grating (mesh 34x76 mm), press locked grating (mesh 33x66 mm), chequered plate.
- **Railing** – produced from the round tube, which are fixed to the ends of the stair-treads through the bolt connection. Rack of the rails are tube $\varnothing 26,9$ mm, handrail tube $\varnothing 33,7$ mm or $\varnothing 42,4$ mm.
- **Protective cage** - made for the full height of the stairs or in a height of 2100 mm from the ground. Depending on the diameter and height of the stair construction of the cage is produced from a angle or pipe coated with welded mesh.
- **Platform** – the same material like on the stairtreads. The dimension of the platform is usually bigger than the stair radius.
- **Material and Processing** - Steel S235JR, galvanizing, painted steel, stainless steel.





Straight staircases



Design of the straight staircase:

The beams are made of curved stairs from the profile:

- Height of 140 ÷ 220 mm
- Width: 50 ÷ 60 mm

In case of the short ladder, beams are made of a strip 150 ÷ 180 mm $\neq$ 8 mm.

Stairtreads are made from gratings, chequered plate or nets.

Railings are standard forms height of 900 ÷ 1200 mm. Platform – the same material like on the stairtreads.

Material and Processing - Steel S235JR, galvanizing, painted steel, stainless steel.



Railings



A1

Frame and railing:

Pipe $\varnothing 33,7$ mm – $\varnothing 42,4$ mm

Filling:

Pipe $\varnothing 26,9$ mm – $\varnothing 42,4$ mm

Collision plate 100 – 130 mm



B1

Frame and railing:

Pipe $\varnothing 33,7$ mm – $\varnothing 42,4$ mm

Filling:

Pipe $\varnothing 26,9$ mm – $\varnothing 42,4$ mm



D1

Frame and railing:

Pipe $\varnothing 33,7$ mm – $\varnothing 42,4$ mm

Filling:

Pipe $\varnothing 26,9$ mm – $\varnothing 33,7$ mm



K40

Railing:

Pipe $\varnothing 33,7$ mm – $\varnothing 42,4$ mm (or AISI $\varnothing 40$ mm)

Vertical poles:

Pipe 40x40 mm

Filling:

Pipe $\varnothing 12$ mm tai square 12x12 mm



E1

Frame and railing:

Pipe $\varnothing 33,7$ mm – $\varnothing 42,4$ mm

Filling:

Pipe $\varnothing 12$ mm or square 12x12 mm



F1

Frame and railing:

Pipe $\varnothing 33,7$ mm – $\varnothing 42,4$ mm

Filling:

Pipe $\varnothing 26,9$ mm – $\varnothing 33,7$ mm



M1

Railing:

Pipe $\varnothing 33,7$ mm – $\varnothing 42,4$ mm (or AISI $\varnothing 40$ mm)

Vertical poles:

Pipe 40x40 mm

Filling:

Rod $\varnothing 12$ mm või nelikant 12x12 mm

Certificates



CERTIFICATE OF CONFORMITY OF FACTORY PRODUCTION CONTROL

This certificate is issued to:

Manufacturer: Metal Disain OÜ
Visase 12
11415 Tallinn
Estonia

In compliance with *Regulation 305/2011/EU of the European Parliament and of the Council of 9 March 2011* (the Construction Products Regulation or CPR), this certificate applies to the construction product:

Fabricated Steel Components for use in Building & Construction up to EXC 2

This certificate attests that all provisions concerning the assessment and verification of constancy of performance and the performances described in Annex ZA of the standard(s)

EN 1090-1: 2009+A1: 2011 Execution of Steel Structures and Aluminium Structures - Part 1: Requirements for Conformity Assessment of Structural Components

under system 2+ are applied and that the products fulfil all the prescribed requirements set out above.

The attached Schedule, of the same date, details the manufacturing location(s), harmonised product standard and product parameters and shall form a part of this certificate.

This Certificate will remain valid as long as the test methods and/or factory production control requirements included in the harmonised standard, used to assess the performance of the declared characteristics, do not change, and the product, and the manufacturing conditions in the plant are not modified significantly.

Certificate No: 0038/CPR/LTQ6020618

Original Approval: 27 June 2014

Current Certificate: 27 June 2017

Expiry Date: 26 June 2020

LRV Notified Body Number 0038


Simon J Bradley on behalf of Lloyd's Register Verification

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LRV/ECD/CPR/2+/June_2014/Rev.1

Certificates



CERTIFICATE OF CONFORMITY OF FACTORY PRODUCTION CONTROL NO.: 0038/CPR/LTQ6020618 SCHEDULE

Manufacturer: Metal Disain OÜ
Visase 12
11415 Tallinn
Estonia

Location and Products

Visase 12 , 11415
Tallinn
Estonia

Standard, Grade and Size

Fabricated steel components for use in building &
construction
(excluding design responsibility)

BS EN 1090-2: 2008 + A1: 2011 up to EXC 2

Parent material groups:

Steel Material Groups 1(1.1,1.2 & 1.4) to Table 14
EN1090-2

Welding and allied Processes (ISO 4063)

MAG (135)

Responsible Welding Coordinator(s):

Viktor Kuprijanov

Qualifications:

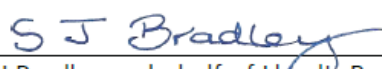
Diploma Tallinn University of Technology

CE marking method : 3b

Schedule Issue: 02

Date of Schedule Issue: 27 June 2017

LRV Notified Body Number 0038


Simon J Bradley on behalf of Lloyd's Register Verification

1 of 1

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LRV/ECD/CPR/2+/June_2014/Rev.1

Some of our references

1.	MetsaWood plywood factory	Estonia, March 2018
2.	Omniva logistikakeskus	Estonia, February 2018
3.	Kärneri 6 apartment building	Estonia, January 2018
4.	Muuga harbour	Estonia, January 2018
5.	Tallinn Zoo, (new polar bear house)	Estonia, November 2017
6.	Simuna Ivax OÜ-fishfarm	Estonia, October 2017
7.	Nautica center	Estonia, October 2017
8.	Kindergarden Pihlaka 10	Estonia, October 2017
9.	School Punane 69 Evakuatsioonitrepp	Estonia, October 2017
10.	Elering Office building	Estonia, September 2017
11.	Kilpilahti Powerplant	Finland, September 2017
12.	Vana Kalamaja Gümnaasium	Estonia, August 2017
13.	Tartu Lõunakeskus	Estonia, April 2017
14.	Maarjamäe Estonian History museum	Estonia, March 2017
15.	Doll Theatre	Estonia, May 2016
16.	Eesti Energia 300MW power plant	Estonia 2013
17.	VKG Petroter 2 oil plant	Estonia 2013
18.	LKAB WGC plant	Sweden 2013
19.	Karlstadt bio boiler	Sweden 2013
20.	Narva Oil Shale Plant (Enefit 280)	Estonia 2010-2012
21.	Military facilities for North-Eastern Regional Defence Command	2012
22.	Stockholm Arena	Sweden 2011-2012
23.	Airport Pulkovo passenger terminal	Russia 2012
24.	Iru Combined heat and power plant	Estonia 2012
25.	Toholampi & Joutseno Combined heat and power plant	Finland 2012
26.	Virtsu & Kuivastu ramp	Estonia 2010-2012
27.	DHL logistic center	Finland 2012
28.	Offshore vessel Skandi Aker	Estonia 2011
29.	Skoghall mill	Sweden 2011
30.	Kyröskoski Combined heat and power plant	Finland 2011
31.	Sochi ski jump platforms	Russia 2011
32.	Stockmann warehouse Moscow	Russia 2011
33.	Norshore 1 platforms	Estonia 2011
34.	Maryland steel platforms	Australia 2010
35.	Väro mill	Sweden 2009
36.	Holmenkollen ski jump	Norway 2009
37.	Itella logistic center	Estonia 2008
38.	Rocca al Mare shopping center	Estonia 2008
39.	Oil tanker Vedrey Tora	Estonia 2007
40.	Botnia S.A. Fray Bentos	Uruguay 2005





Car Park facade



Rocca Al Mare shopping centre facade



Narva Oil Shale Plant (Enefit 280)



Central Bus Station Tallinn



Tallinn Kaubamaja facade



Eesti Energia 300MW power plant



Spiral stair
Kehtna



Maxima shop facade



State Hermitage Museum
Saint Petersburg



Sikupilli shopping centre facade



Tallinn University fencing



Electrical substation facade
protection



Stockholm arena



Convection gratings



Coil terminal
Saint Petersburg



Foot nets



Wood design



Wood protection design



Design fence railing



Delta Plaza Tallinn car park facade



Holmenkollen Ski Jump Norway

Notes

Notes

[illegible]



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METAL **DISAIN**