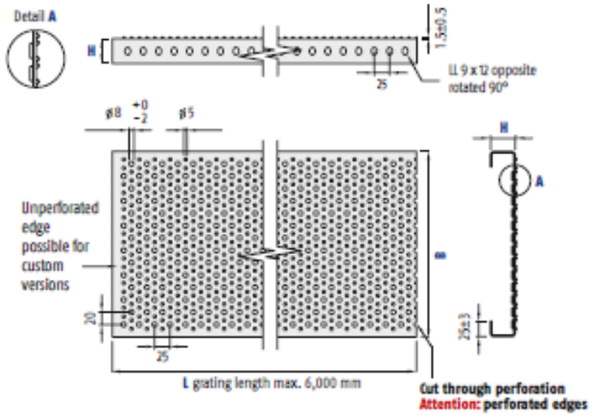


Characteristic
Graepel-Garden has both upward and downward formations. The surface of Graepel-Garden consists of pearled upward embossments (diameter of 5 mm) and debossed holes (diameter of 8 mm) that are arranged in staggered rows. The open area for standard grating widths is approximately 9 %. This perforation offers a certain anti-skid effect and displacement as well as a good drainage effect. The maximum embossed field is 430 mm.

Application
The term "Graepel-Garden" refers to its possible application in the private and public sectors. This perforation is especially suitable as covering for surfaces and platforms where a certain anti-skid effect and drainage are required, e.g. at the transition from outside to inside on balconies and terraces. Graepel-Garden can also be used in the industrial sector.

As this perforation is also good for barefoot walking, the stainless steel version is suitable e.g. for use in swimming pools or as edging for basins. Steps are also available with Graepel-Garden perforation.

Options
- This perforation is program controllable. Thus, individual embossments can be created.
- The standard edge perforation may be omitted.

Dimensions		Graepel-Garden
Material thickness	DD 11 raw DD 11 hot-dip galvanized | DX 51 D pre-galvanized Stainless steel EN AW-5754	2.0 | 2.5 mm 2.0 | 2.5 mm 2.0 | 2.5 mm 2.0 | 2.5 mm
Dimensions	**Lengths (L)** up to Length divider **Standard grating widths[1] (B)** DD 11 | DX 51 D | Stainless steel | EN AW-5754 Width divider **Heights (H)**	6,000 mm 25 mm 120 to 440 mm in steps of 20 mm 20 mm 40 | 50 | 75 mm

[1] Other dimensions on request.

Anti-slip values		
Material	Evaluation of anti-slip	Displacement
DD 11 hot-dip galvanized	R 10	V 10
Stainless steel	R 10	V 10
EN AW-5754	R 10	V 10

Further details on the perforation on our website

Weight per meter for Graepel-Garden for material thickness D [in kg/m]

Grating width	2.0						2.5					
	DD 11**/ Stainless steel Height [mm]			EN AW-5754 Height [mm]			DD 11**/ stainless steel Height [mm]			EN AW-5754 Height [mm]		
[mm]	40	50	75	40	50	75	40	50	75	40	50	75
120	3.6	3.9	4.7	1.2	1.3	1.6	4.4	4.8	5.8	1.5	1.6	2.0
180	4.2	4.5	5.3	1.4	1.7	1.9	5.1	5.5	6.5	1.6	1.9	2.2
240	4.8	5.1	5.9	1.6	2.0	2.2	5.9	6.3	7.3	1.8	2.2	2.5
300	5.4	5.7	6.5	1.9	2.3	2.6	6.6	7.0	8.0	2.0	2.4	2.8

Legend
* Available only up to a length of 3,000 mm
** Values also apply for DX 51 D
*** For gratings smaller than 200 mm, the lump load is added to the neighboring gratings corresponding to the portion of the load area.
■ | ■ | ■ | ■ = Color coding for load values of stock items

	H [mm]	D [mm]	Uniformly distributed load: Replacement load Fq [in kN] for uniformly distributed load (numerical values apply for single grating) Support length L [mm] 500	750	1000	1250	1500	1750	2000	2250	2500	2750	3000	Concentrated load: Load Fq [in kN] for concentrated load (numerical values apply for single grating) Support length L [mm] 500	750	1000	1250	1500	1750	2000	2250	2500	2750	3000
DDn, DX 51 D	40	2.0	6.581	4.388	3.291	2.633	2.194	1.762	1.349	1.066	0.863	0.714	0.600	4.113	2.531	1.828	1.431	1.175	0.997	0.847	0.669	0.541	0.447	0.376
	40	2.5	7.858	5.239	3.929	3.143	2.619	2.105	1.612	1.273	1.031	0.852	0.716	4.911	3.022	2.183	1.708	1.403	1.191	1.012	0.799	0.647	0.534	0.449
	50	2.0	9.165	6.110	4.583	3.666	3.055	2.619	2.291	1.830	1.482	1.225	1.029	5.728	3.525	2.546	1.992	1.637	1.389	1.206	1.066	0.929	0.768	0.645
	50	2.5	11.017	7.345	5.509	4.407	3.672	3.148	2.754	2.201	1.783	1.473	1.238	6.886	4.237	3.060	2.395	1.967	1.669	1.450	1.281	1.118	0.923	0.775
	75	2.0	17.007	11.338	8.503	6.803	5.669	4.859	4.252	3.779	3.401	3.092	2.794	10.629	6.541	4.724	3.697	3.037	2.577	2.238	1.978	1.772	1.604	1.466
	75	2.5	20.646	13.764	10.323	8.258	6.882	5.899	5.161	4.588	4.129	3.754	3.393	12.904	7.941	5.735	4.488	3.687	3.128	2.717	2.401	2.151	1.948	1.780
EN AW-5754	40	2.0	4.941	2.933	1.650	1.056	0.733	0.539	0.412	0.326	0.264	0.218	0.183	3.088	1.896	1.051	0.668	0.462	0.339	0.259	0.204	0.166	0.137	0.115
	40	2.5	5.892	3.500	1.968	1.260	0.875	0.643	0.492	0.389	0.315	0.260	0.219	3.682	2.262	1.254	0.797	0.552	0.404	0.309	0.244	0.197	0.163	0.137
	50	2.0	6.912	4.608	2.844	1.820	1.264	0.929	0.711	0.562	0.455	0.376	0.316	4.320	2.659	1.812	1.152	0.797	0.584	0.447	0.352	0.285	0.236	0.198
	50	2.5	8.301	5.534	3.417	2.187	1.519	1.116	0.854	0.675	0.547	0.452	0.380	5.188	3.193	2.177	1.384	0.957	0.702	0.536	0.423	0.343	0.283	0.238
	75	2.0	12.927	8.618	6.463	4.974	3.454	2.538	1.943	1.535	1.244	1.028	0.864	8.079	4.972	3.591	2.810	2.178	1.596	1.220	0.963	0.780	0.644	0.541
	75	2.5	15.682	10.455	7.841	6.037	4.192	3.080	2.358	1.863	1.509	1.247	1.048	9.801	6.032	4.356	3.409	2.643	1.937	1.481	1.169	0.946	0.782	0.656
Stainless steel	40	2.0	7.208	4.805	3.604	2.883	2.398	1.762	1.349	1.066	0.863	0.714	0.600	4.505	2.772	2.002	1.567	1.287	1.092	0.847	0.669	0.541	0.447	0.376
	40	2.5	8.607	5.738	4.303	3.443	2.865	2.105	1.612	1.273	1.031	0.852	0.716	5.379	3.310	2.391	1.871	1.537	1.304	1.012	0.799	0.647	0.534	0.449
	50	2.0	10.038	6.692	5.019	4.015	3.346	2.868	2.316	1.830	1.482	1.225	1.029	6.274	3.861	2.788	2.182	1.793	1.521	1.321	1.148	0.929	0.768	0.645
	50	2.5	12.067	8.044	6.033	4.827	4.022	3.448	2.785	2.201	1.783	1.473	1.238	7.542	4.641	3.352	2.623	2.155	1.828	1.588	1.381	1.118	0.923	0.775
	75	2.0	18.626	12.418	9.313	7.451	6.209	5.322	4.657	4.139	3.725	3.325	2.794	11.641	7.164	5.174	4.049	3.326	2.822	2.451	2.166	1.940	1.757	1.606
	75	2.5	22.612	15.075	11.306	9.045	7.537	6.461	5.653	5.025	4.522	4.038	3.393	14.132	8.697	6.281	4.916	4.038	3.426	2.975	2.629	2.355	2.133	1.949

Lump load	Maximum possible lump load F [in kN] (numerical values apply for DD n)	
	Load area 200 x 200 mm	
Grating width B [mm]	Material thickness [mm]	
	2.0	2.5
120***	3.03	4.24
150***	1.53	2.14
240	0.99	1.39
300	0.77	1.08

Note concerning lump load
The values are calculated for gratings which are supported over their whole length. For a given span width, the values stated in this lump load table must not exceed those given in the concentrated load table.

For **EN AW-5754**, the values in the table must be multiplied by a factor of **0,74**.

Available at short notice from stock				L = 3,000 mm	L = 6,000 mm
Material	H [mm]	D [mm]	B [mm]	Order number	Order number
DD11 raw	40	2.5	120*	60 3200 0031 001	
	40	2.5	180	60 3200 0032 001	60 3200 0032 601
	40	2.5	240	60 3200 0033 001	60 3200 0033 601
	40	2,5	300	60 3200 0034 001	60 3200 0034 601
DD11 hot-dip galvanized	40	2.5	120*	60 3200 0031 002	
	40	2.5	180	60 3200 0032 002	60 3200 0032 602
	40	2.5	240	60 3200 0033 002	60 3200 0033 602
	40	2.5	300	60 3200 0034 002	60 3200 0034 602
Aluminum EN AW-5754	40	2.5	240	60 3200 0033 003	60 3200 0033 603
	40	2.5	300	60 3200 0034 003	60 3200 0034 603
Stainless steel Material no. 1.4404	40	2.0	240*	60 3200 0035 007	
	40	2.0	300*	60 3200 0036 007	

Conversion of the replacement load Fq from the table into a distributed load Q

$$Q = \frac{10^6 \times F_q}{B \times L}$$

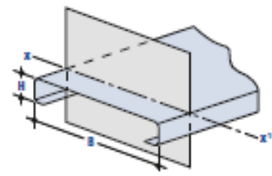
with:
Q = Distributed load for a grating [kN/m²]
Fq = Replacement load from table with reference to the support width [kN]
B = Grating width [mm]
L = Support length [mm]

Order information
The gratings are available up to **a length of 6,000 mm.**

Upon request, the gratings are cut to length. Please specify the required length when ordering. Please take account of the length divider of 25 mm.

Hot-dip galvanized gratings are hot-dip galvanized after sawing to ensure optimum corrosion protection.

Moments of inertia and section modulus
Grating cross-sections (axis X-X)



Note: Only the unperforated area of the two sides is taken into account for the static cross section values for the longitudinal direction of the grating *(shaded area)*.

Bend height H [mm]	Material thickness D [mm]	Moment of inertia I_x [mm⁴]	Minimum section modulus W_x [mm³]
40	2.0	66917.92	2928.32
	2.5	79936.89	3496.52
50	2.0	114875.61	4077.95
	2.5	138157.47	4902.10
75	2.0	311818.16	7566.96
	2.5	378690.44	9186.11