



TECHNIKA

Outdoor grille

GR



Description

The rectangular outdoor grilles are used to install a ventilation system in buildings in combination with spiral, smooth or rectangular ducts. They are used to protect the air intake or exhaust duct against the ingress of animals or other foreign objects into the duct system. Outdoor grille prevents rain drops from entering the duct. To protect against dry snow, use hoods, because when there are gusts outside, and the velocity through the grilles is higher than 0.5 m/s, some snowflakes can get behind the grilles louvres. The grilles can be mounted externally through the frame or internally through the inner frame. Grill pitch grid is 68 mm. Main cartridges must be removed before attaching the frame to the designated slot.

Rectangular outdoor grilles made of galvanized sheet steel with a zinc content of 275 g / m² - corrosion class C2 / C3 (L) according to LST EN ISO 12944 standard. In order to ensure a higher class of corrosion resistance or to match the gratings to the architecture of the building, the grilles are painted. Painting is carried out using the colour control standard RAL. Outdoor grilles can be used at temperatures from -45 to +85 °C. Mesh size 12x12 mm. The grille should be removed to gain access to the duct. The external parts should be wiped with a damp cloth. The outdoor grille must be cleaned at least twice a year. For other dimensions and materials please contact UAB „MK Technika“ sales offices.

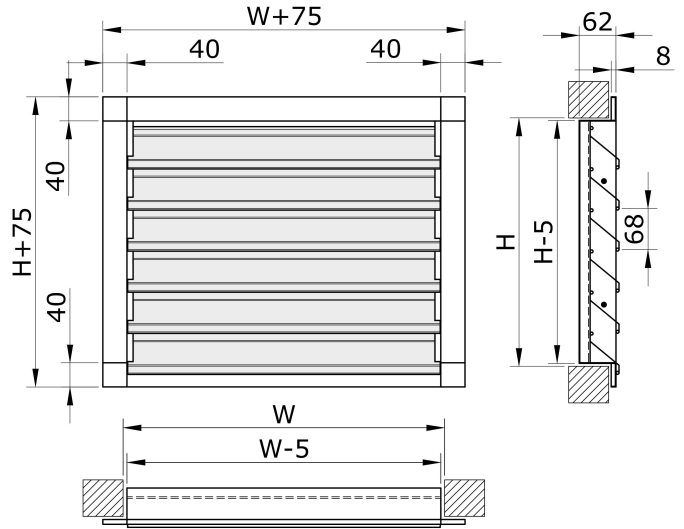
Ordering code

GR200300

Product _____
Size _____

Sample: GR200300 – made of galvanized steel outdoor grilles, dimension WxH - 200x300 mm.

Dimensions

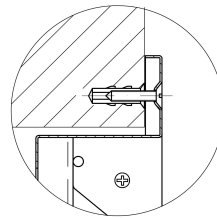


	W [mm]	H [mm]
Minimum dimension	200	200
Maximum dimension	2000	2000

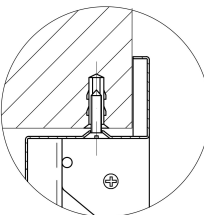
There are other odd dimensions for outdoor grilles. If required, very long grilles can be made by interconnecting them.

Weight formula [kg]	W [mm]	H [mm]
$m[\text{kg}] = 1,6 \cdot W[\text{m}] + 2,7 \cdot H[\text{m}] + 11 \cdot (W[\text{m}] \cdot H[\text{m}])$	From 200 up to 2000	From 200 up to 2000

Technical data



Outdoor grille installation through the outer frame, with visible screws on the facade. Ready-made holes can be ordered for painted grilles. Screws are not included. Note that the inner part of the grilles fixes from the inside, these screws need to be prepared for holes, if it is a fragment of a solid wall.



Installation of outdoor grilles through the inner part of the frame. Before installing, remove the cassette of grill, then screw in the grille inner frame and prepare the holes for the cassette screws. Screws are not included.

Outdoor grilles

GR

Technical data

H/W	Free area A_k (m ²)													
	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
200	0,021	0,032	0,042	0,053	0,064	0,074	0,085	0,095	0,106	0,116	0,127	0,138	0,148	0,159
300	0,037	0,055	0,074	0,092	0,110	0,129	0,147	0,165	0,184	0,202	0,221	0,239	0,257	0,276
400	0,052	0,079	0,105	0,131	0,157	0,183	0,209	0,236	0,262	0,288	0,314	0,340	0,366	0,393
500	0,068	0,102	0,136	0,170	0,204	0,238	0,272	0,306	0,340	0,374	0,408	0,442	0,476	0,510
600	0,084	0,125	0,167	0,209	0,251	0,292	0,334	0,376	0,418	0,459	0,501	0,543	0,585	0,626
700	0,099	0,149	0,198	0,248	0,297	0,347	0,396	0,446	0,496	0,545	0,595	0,644	0,694	0,743
800	0,115	0,172	0,229	0,287	0,344	0,401	0,459	0,516	0,574	0,631	0,688	0,746	0,803	0,860
900	0,130	0,195	0,261	0,326	0,391	0,456	0,521	0,586	0,651	0,717	0,782	0,847	0,912	0,977
1000	0,146	0,219	0,292	0,365	0,438	0,511	0,584	0,656	0,729	0,802	0,875	0,948	1,021	1,094
1100	0,161	0,242	0,323	0,404	0,484	0,565	0,646	0,727	0,807	0,888	0,969	1,050	1,130	1,211
1200	0,177	0,266	0,354	0,443	0,531	0,620	0,708	0,797	0,885	0,974	1,062	1,151	1,239	1,328
1300	0,193	0,289	0,385	0,482	0,578	0,674	0,771	0,867	0,963	1,060	1,156	1,252	1,349	1,445
1400	0,208	0,312	0,416	0,521	0,625	0,729	0,833	0,937	1,041	1,145	1,249	1,354	1,458	1,562
1500	0,224	0,336	0,448	0,560	0,671	0,783	0,895	1,007	1,119	1,231	1,343	1,455	1,567	1,679

Quick selection of outdoor grills

Dimensions of grill [mm], (A_k [m ²])		Air flow rate																			
		m3/h	100	150	200	250	300	350	400	500	600	700	800	900	1000	1250	1500	2000	2500	3500	
		l/s	28	42	56	69	83	97	111	139	167	194	222	250	278	347	417	556	694	972	
H=200	200x200 (0,021)	L_{WA} [dB(A)]	20	22	32	40	43														
		v_k [m/s]	1,3	2,0	2,6	3,3	3,9														
		p [Pa]	8	17	31	47	68														
	300x200 (0,032)	L_{WA} [dB(A)]		20	22	27	33	41	44												
		v_k [m/s]		1,3	1,7	2,2	2,6	3,1	3,5												
		p [Pa]		8	12	21	31	41	55												
	400x200 (0,042)	L_{WA} [dB(A)]			20	21	22	28	33	40	47										
		v_k [m/s]			1,3	1,6	2,0	2,3	2,6	3,3	3,9										
		p [Pa]			8	11	17	24	31	47	68										
	600x200 (0,064)	L_{WA} [dB(A)]					20	21	22	28	35	43	46	48							
		v_k [m/s]					1,3	1,5	1,7	2,2	2,6	3,1	3,5	3,9							
		p [Pa]					8	10	12	21	31	41	55	68							
	800x200 (0,085)	L_{WA} [dB(A)]							18	20	23	30	36	41	45	55					
		v_k [m/s]							1,3	1,6	2,0	2,3	2,6	3,0	3,3	4,1					
		p [Pa]							8	11	17	24	31	33	47	75					
	12000x200 (0,127)	L_{WA} [dB(A)]									20	24	28	31	34	43	49				
		v_k [m/s]									1,4	1,6	1,9	2,1	2,3	2,9	3,5				
		p [Pa]									9	11	15	19	24	37	55				

Terminology:

A_k – effective free area,

L_{WA} – sound power level,

v_k – effective face velocity,

p – total pressure loss.



TECHNIKA

Outdoor grills

GR

Technical data

Dimensions of grill [mm], (A _k [m ²])			Air flow rate																			
			m ³ /h	100	150	200	250	300	350	400	500	600	700	800	900	1000	1250	1500	2000	2500	3500	
			l/s	28	42	56	69	83	97	111	139	167	194	222	250	278	347	417	556	694	972	
H=300	300x300 (0,055)	L _{WA} [dB(A)]				18	20	24	28	35	40	45										
		v _k [m/s]				1,3	1,5	1,8	2,0	2,5	3,0	3,5										
		p [Pa]				8	10	14	17	28	33	55										
	400x300 (0,074)	L _{WA} [dB(A)]						18	21	27	33	37	42	47								
		v _k [m/s]						1,3	1,5	1,9	2,3	2,6	3,0	3,4								
		p [Pa]						8	10	15	24	31	33	53								
	600x300 (0,110)	L _{WA} [dB(A)]									18	21	27	31	35	38	45	53				
		v _k [m/s]									1,3	1,5	1,8	2,0	2,3	2,5	3,1	3,8				
		p [Pa]									8	10	14	17	24	27	43	64				
	800x300 (0,147)	L _{WA} [dB(A)]											20	24	27	31	38	43	54			
		v _k [m/s]											1,3	1,5	1,7	1,9	2,4	2,9	3,8			
		p [Pa]											8	10	12	15	26	37	64			
1200x300 (0,221)	L _{WA} [dB(A)]													18	20	26	32	40	50			
	v _k [m/s]													1,1	1,3	1,6	1,9	2,5	3,2			
	p [Pa]													6	8	12	15	27	46			
H=400	600x400 (0,157)	L _{WA} [dB(A)]									16	18	23	26	30	34	40	45				
		v _k [m/s]									1,1	1,2	1,4	1,6	1,8	2,2	2,7	3,5				
		p [Pa]									6	7	9	11	14	22	34	55				
	800x400 (0,209)	L _{WA} [dB(A)]											16	18	23	29	34	42	45			
		v _k [m/s]											1,1	1,2	1,4	1,7	2,0	2,7	3,4			
		p [Pa]											6	7	9	12	17	34	53			
	1000x400 (0,262)	L _{WA} [dB(A)]													19	23	29	35	43	51		
		v _k [m/s]													1,1	1,3	1,6	2,1	2,7	3,7		
		p [Pa]													6	8	12	19	34	61		
	1200x400 (0,314)	L _{WA} [dB(A)]														20	24	32	37	46		
		v _k [m/s]														1,1	1,3	1,8	2,2	3,1		
		p [Pa]														6	8	14	22	40		
H=600	500x600 (0,209)	L _{WA} [dB(A)]											16	18	20	29	33	42	51			
		v _k [m/s]											1,1	1,2	1,3	1,7	2,0	2,7	3,3			
		p [Pa]											6	7	8	12	17	34	47			
	800x600 (0,334)	L _{WA} [dB(A)]													19	21	31	37	48			
		v _k [m/s]													1,0	1,2	1,7	2,1	2,9			
		p [Pa]													5	7	12	19	26			
	1000x600 (0,418)	L _{WA} [dB(A)]														20	24	32	42			
		v _k [m/s]														1,0	1,3	1,7	2,3			
		p [Pa]														5	8	12	25			
	1200x600 (0,501)	L _{WA} [dB(A)]															20	25	38			
		v _k [m/s]															1,1	1,4	1,9			
		p [Pa]															6	9	16			

Description

Total A-weighted sound pressure level L_{PA} dB(A), obtained by mathematically adding the factor k to the desired noise at required distance x meters from the total sound power level L_{WA} dB(A).

$$L_{PA} = L_{WA} + k$$

x (m)	1	2	3	4	5	10	20
k (dB)	-5	-12	-15	-17	-19	-25	-30

Total A-weighted sound power level L_{WA} dB(A) in octaves, obtained by mathematically subtracting factor k to A-weighted sound power level L_{WA} dB(A).

$$L_{WAokt} = L_{WA} - k$$

GR	Sound power level in octaves							
	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Air intake	7	4	0	-2	-7	-13	-18	-16
Air outlet	-2	-2	-4	-5	-5	-6	-14	-21