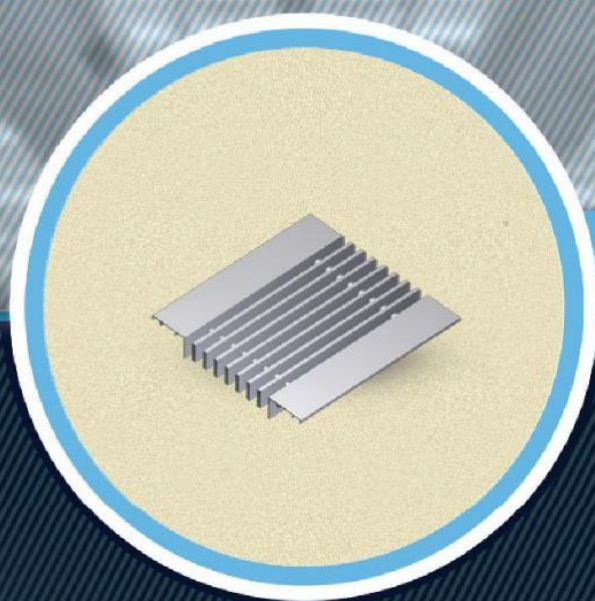


ALANDALOSIA

FOR AIR OUTLET



CATALOGUE **NO 7**

LINEAR BAR GRILL



Air Outlet

Andalosalog

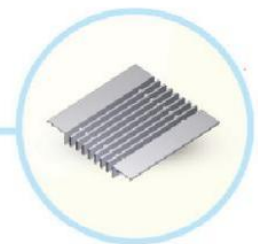
OUR PRODUCTS

SELECTION GUIDE

- 1- SQUARE CEILING DIFFUSER
- 2- ROUND CEILING DIFFUSER
- 3- SWIRL DIFFUSER
- 4- PERFORATED CEILING DIFFUSER
- 5- LINEAR SLOT DIFFUSER
- 6- LINEAR CEILING DIFFUSER

7- LINEAR BAR GRILL

- 8- REGISTER
- 9- FLOOR & PERFORATED FLOOR GRILL
- 10- TRANSFER GRILL
- 11- ACCESS PANEL
- 12- LOUVER
- 13- SAND TRAP LOUVER
- 14- JET NOZZLE
- 15- BALL JET NOZZLE
- 16- DRUM JET NOZZLE
- 17- DISC VALVE
- 18- NON RETURN DAMPER (SHUTTER)
- 19- VOLUME DAMPER
- 20- FIRE DAMPER
- 21- SMOKE DAMPER
- 22- DUCT ACCESS DOOR



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Air Outlet

Andalousia

INTERTEK

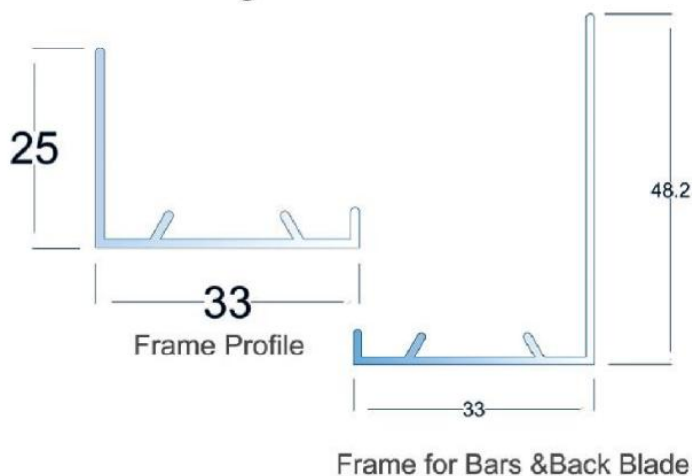
SPECIFICATION

MATERIAL

Extruded aluminium throughout.

FLANGES

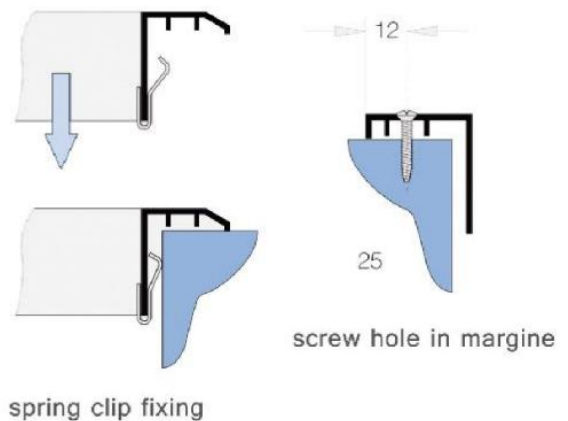
33mm flange



SIZES

Maximum single unit length 1800mm. Above this size linear runs are supplied in multiple units for butt joining, flange alignment strips are supplied to ensure continuous line appearance.

FIXING



MULLIONS

Formed from 8mm tubular aluminium at approx.

FINISH

Standard

White RAL 9010, or Silver RAL 9006 stove enamel.

Optional

See Ordering Information section for details.

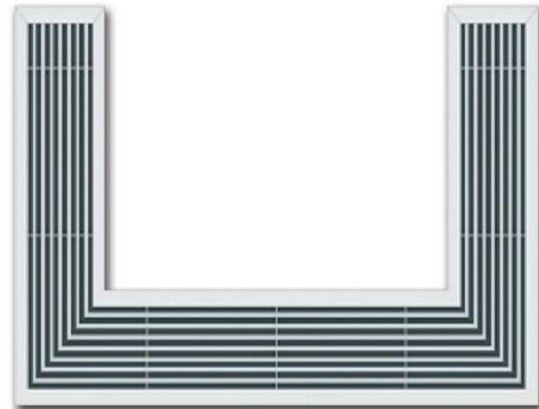
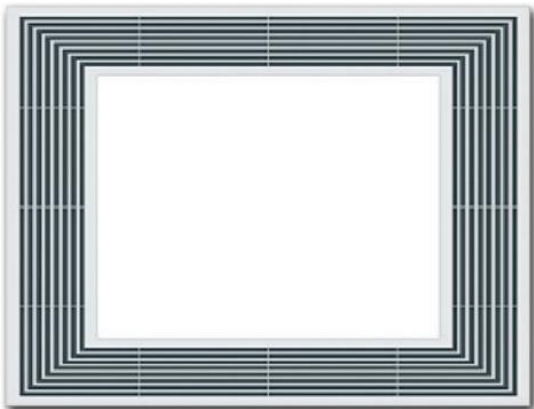
LINEAR BAR GRILL CLASSIFICATION

It may be classified into three types :

STRAIGHT BAR



MITRED CORNERS



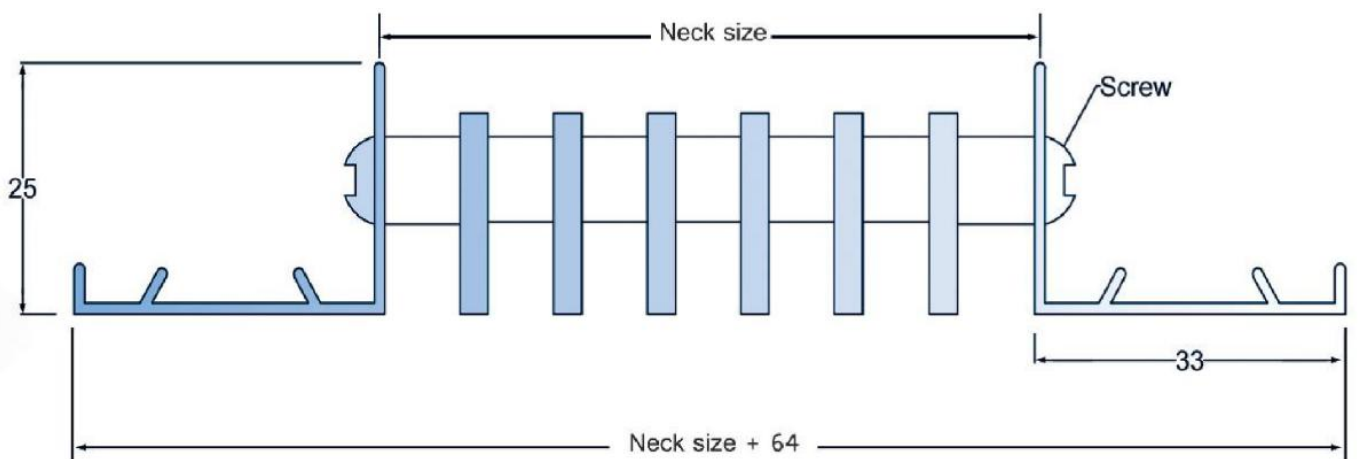
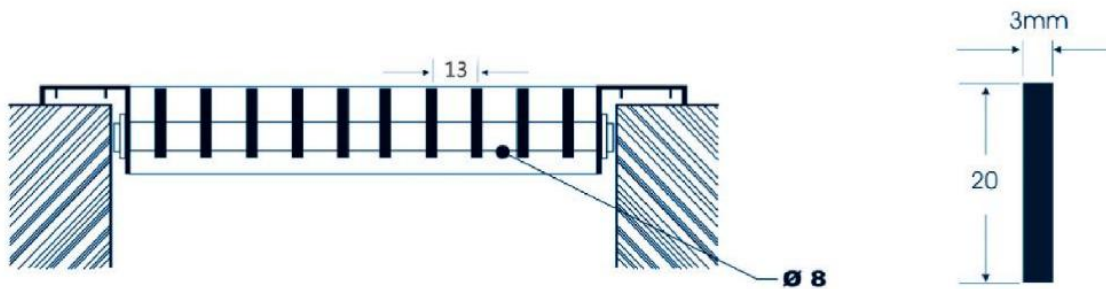
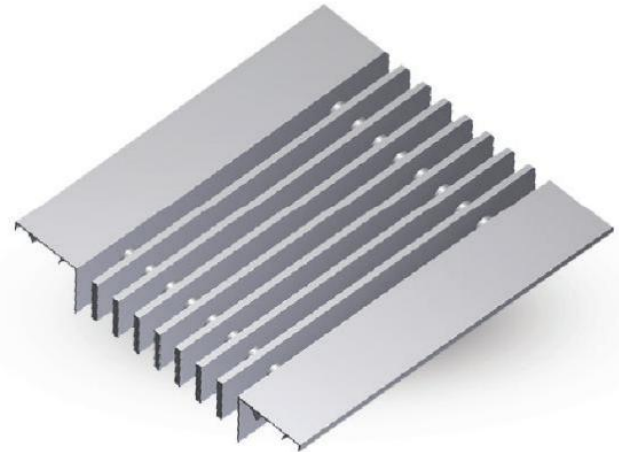
CURVED BAR



TYPE OF DEFLECTION

(1) 0° DEFLECTION

MODEL :



0° DEFLECTION WITH BACK BLADE

0°-13 mm spacing

Width (mm) Ak in m ²	Face Velocity	2.0	2.5	3.0	3.5	4.0	4.5	5.0
50 0.039	M ³ /Sec.	0.08	0.1	0.12	0.14	0.16	0.19	0.2
	CFM	169	213	255	297	339	381	423
	PS in mm H ₂ O	0.14	0.20	0.20	0.23	0.29	0.37	0.45
	Throw (Mt.)	2.7-4.1-5.6	3.5-4.4-6.2	4.1-5.1-7.1	4.5-5.5-7.9	4.9-5.8-8.2	5.4-6.4-9.4	5.4-6.8-9.7
	NC	<15	<15	<15	17	22	25	31
100 0.059	M ³ /Sec.	275	346	413	483	550	620	689
	CFM	0.13	0.164	0.196	0.228	0.26	0.293	0.326
	PS in mm H ₂ O	0.15	0.20	0.20	0.28	0.36	0.46	0.56
	Throw (Mt.)	3.5-4.6-7.1	4.1-5.3-7.8	4.8-5.9-8.5	5.3-6.3-9.2	5.8-7.2-10.1	6.4-8.1-11.4	6.9-8.6-12.5
	NC	<15	<15	15	18	23	27	32
150 0.078	M ³ /Sec.	373	466	559	653	745	838	932
	CFM	0.177	0.22	0.264	0.309	0.352	0.397	0.44
	PS in mm H ₂ O	0.15	0.19	0.23	0.33	0.42	0.54	0.65
	Throw (Mt.)	4.2-5.7-8.3	4.7-6.2-9.1	5.5-7-10.2	6.2-7.7-10.9	6.9-8.7-11.6	7.4-9.3-13.1	7.8-9.8-14.0
	NC	<15	<15	16	18	24	29	34
200 0.097	M ³ /Sec.	470	589	706	824	940	1059	1175
	CFM	0.222	0.278	0.334	0.389	0.443	0.499	0.556
	PS in mm H ₂ O	0.16	0.20	0.29	0.36	0.49	0.6	0.84
	Throw (Mt.)	4.6-6.2-9.0	5.3-6.9-10.1	6.4-7.8-11.3	7.1-8.5-12.3	7.9-9.5-13.1	8.4-10.4-14.5	9.0-11.0-15.9
	NC	<15	16	17	21	26	32	36
250 0.116	M ³ /Sec.	567	709	851	994	1135	1277	1420
	CFM	0.269	0.336	0.403	0.470	0.536	0.604	0.68
	PS in mm H ₂ O	0.19	0.23	0.32	0.40	0.53	0.71	0.87
	Throw (Mt.)	5.1-6.8-10	5.6-7.8-11	6.7-8.5-12.1	7.6-9.4-13.4	8.6-10.3-14.4	9.0-11.-15.9	9.6-11.9-17.5
	NC	<15	16	21	27	31	35	40
300 0.136	M ³ /Sec.	686	857	1029	1200	1372	1543	1715
	CFM	0.324	0.405	0.487	0.567	0.648	0.729	0.81
	PS in mm H ₂ O	0.19	0.28	0.33	0.44	0.59	0.78	0.94
	Throw (Mt.)	5.3-7.5-10.8	6.2-8.4-11.8	7.2-9.4-13.0	8.4-10.5-14.4	9.2-11.2-15.4	9.6-12.2-17.0	10.2-13-18.6
	NC	<15	18	25	30	33	37	42

- The above data is derived based on one meter long linear bar grille with damper in full open position
- Throw (meter) is measured for terminal velocities of 0.75, 0.5 & 0.25 m/sec.
- Face velocity is measured in m/sec.
- Static pressure (Ps) loss is in mm of H₂O.
- NC based on a room attenuation of 10 dB.

0° DEFLECTION WITHOUT BACK BLADE

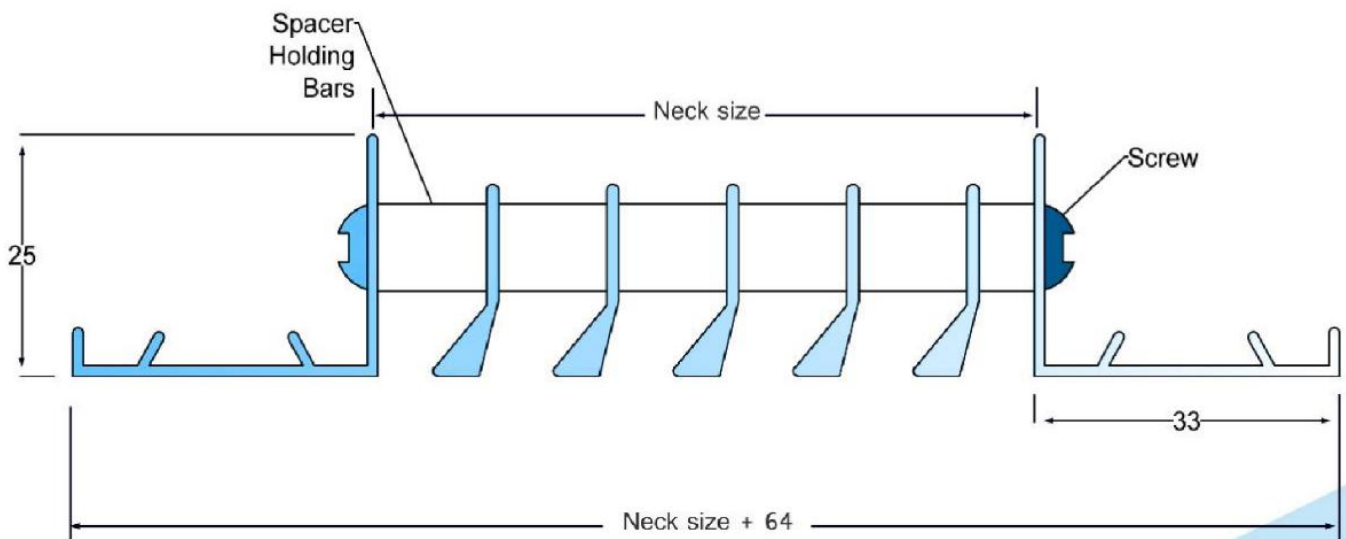
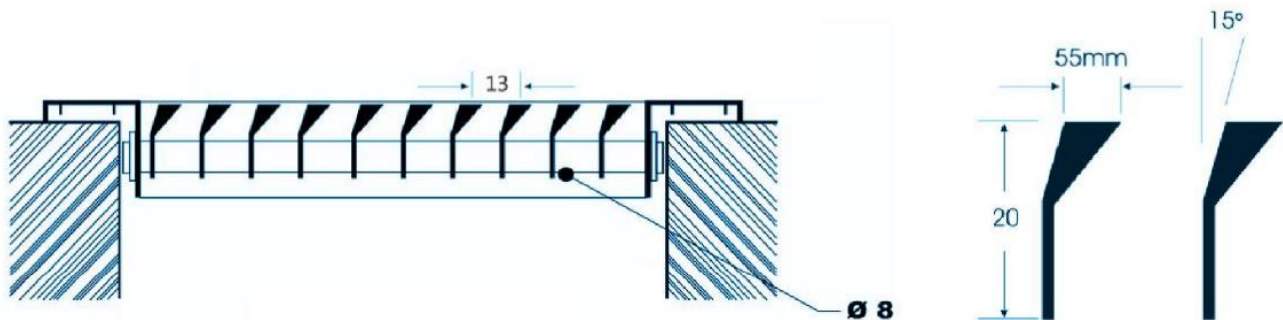
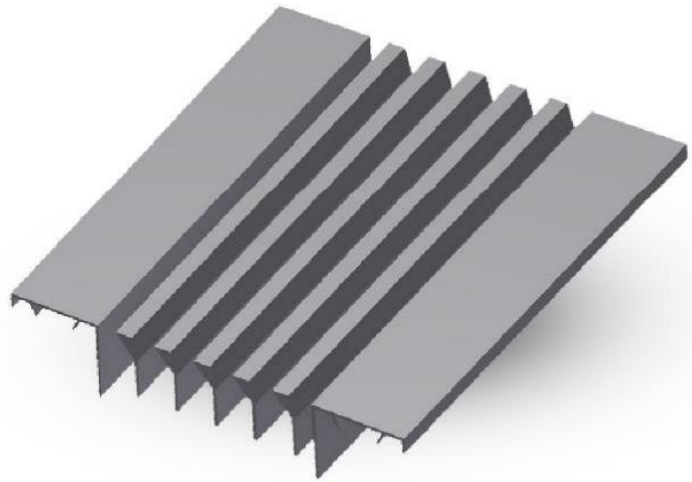
0°-13 mm spacing

Width (mm) Ak in m ²	Volume / Velocity / Pressure Drop & Noise Level						
50	M3/Sec.	0.157	0.197	0.236	0.276	0.315	0.354
	CFM	332	418	501	586	667	751
	PS in mm H ₂ O	0.43	0.70	1.00	1.38	1.83	2.24
	NC	<15	18	25	31	33	38
100	M3/Sec.	0.197	0.236	0.276	0.315	0.354	0.393
	CFM	418	501	586	667	751	833
	PS in mm H ₂ O	0.46	0.67	0.89	1.15	1.49	1.78
	NC	<15	18	24	31	34	36
150	M3/Sec.	0.236	0.276	0.315	0.354	0.393	0.472
	CFM	501	585	667	751	833	1000
	PS in mm H ₂ O	0.46	0.65	0.81	1.04	1.27	1.83
	NC	15	17	26	29	30	36
200	M3/Sec.	0.276	0.315	0.354	0.393	0.472	0.551
	CFM	586	667	751	833	1000	1168
	PS in mm H ₂ O	0.43	0.64	0.67	0.91	1.4	1.9
	NC	17	22	25	27	33	38
250	M3/Sec.	0.315	0.354	0.393	0.472	0.551	0.629
	CFM	667	751	833	1000	1168	1332
	PS in mm H ₂ O	0.43	0.57	0.66	0.94	1.28	1.67
	NC	19	22	23	29	33	36
300	M3/Sec.	0.354	0.393	0.472	0.551	0.629	0.708
	CFM	751	833	1000	1168	1330	1500
	PS in mm H ₂ O	0.46	0.58	0.69	0.99	1.32	1.7
	NC	20	22	24	29	36	40

- Data based on one meter unit length of the grille
- P_s – Static pressure loss is in mm of H₂O
- NC based on a room attenuation of 10 dB

(2) 15° ONE WAY DEFLECTION

MODEL :



15° ONE WAY DEFLECTION WITH BACK BLADE

0°-13 mm spacing

Width (mm) Ak in m ²	Face Velocity	2.0	2.5	3.0	3.5	4.0	4.5	5.0
50 0.040	M ³ /Sec.	0.08	0.1	0.12	0.15	0.17	0.19	0.2
	CFM	170	213	255	297	339	381	423
	PS in mm H ₂ O	0.15	0.20	0.21	0.26	0.32	0.40	0.5
	Throw (Mt.)	2.7-4.1-5.5	3.5-4.4-6.1	4.1-5.0-7.1	4.5-5.5-7.7	4.8-5.8-8.2	5.1-6.2-8.9	5.2-6.4-9.3
	NC	<15	<15	<15	17	22	25	31
100 0.066	M ³ /Sec.	0.14	0.164	0.196	0.228	0.26	0.293	0.326
	CFM	276	346	413	483	550	620	689
	PS in mm H ₂ O	0.15	0.20	0.22	0.3	0.39	0.5	0.6
	Throw (Mt.)	3.5-4.6-7.1	4.1-5.3-7.8	4.7-5.9-8.4	5.3-6.2-9.0	5.8-7.1-9.7	6.1-7.7-10.8	6.4-8.2-11.7
	NC	<15	<15	15	18	23	27	32
150 0.088	M ³ /Sec.	0.177	0.22	0.263	0.309	0.353	0.397	0.44
	CFM	373	466	558	653	746	838	932
	PS in mm H ₂ O	0.15	0.19	0.26	0.37	0.46	0.58	0.7
	Throw (Mt.)	4.2-5.7-8.3	4.7-6.2-9.1	5.4-6.8-10	6.0-7.6-10.6	6.7-8.5-11.5	7.1-8.9-12.5	7.4-9-313.2
	NC	<15	<15	16	19	24	29	34
200 0.111	M ³ /Sec.	0.223	0.278	0.334	0.390	0.443	0.499	0.556
	CFM	471	589	706	825	940	1059	1175
	PS in mm H ₂ O	0.19	0.21	0.33	0.38	0.52	0.66	0.10
	Throw (Mt.)	4.7-6.3-9.1	5.3-6.9-10.0	6.1-7.8-11.3	6.9-8.3-11.9	7.7-9.2-12.8	8.9-9-13.8	8.5-10.4-14.9
	NC	<15	16	17	22	26	32	36
250 0.134	M ³ /Sec.	0.269	0.336	0.403	0.470	0.537	0.604	0.68
	CFM	568	710	851	994	1135	1277	1420
	PS in mm H ₂ O	0.2	0.26	0.34	0.43	0.57	0.78	0.94
	Throw (Mt.)	5.1-6.8-11	5.6-7.8-11	6.6-8.3-11.8	7.6-9.3-12.8	8.4-10-14	8.5-10.5-15.1	9.1-12.3-16.4
	NC	<15	16	21	27	31	35	40
300 0.162	M ³ /Sec.	0.324	0.405	0.487	0.567	0.648	0.729	0.81
	CFM	686	857	1029	1200	1372	1543	1715
	PS in mm H ₂ O	0.2	0.3	0.36	0.48	0.64	0.84	1.01
	Throw (Mt.)	5.3-7.5-10.8	6.2-8.4-11.8	7.2-9.4-12	8.2-10.2-13.9	8.9-10.9-15	9.2-11.6-16.2	9.6-12.317.6
	NC	<15	18	25	29	33	37	42

- The above data is derived based on one meter long linear bar grille with damper in full open position
- Throw (meter) is measured for terminal velocities of 0.75, 0.5 & 0.25 m/sec.
- Face velocity is measured in m/sec.
- Static pressure (Ps) loss is in mm of H₂O.
- NC based on a room attenuation of 10 dB.

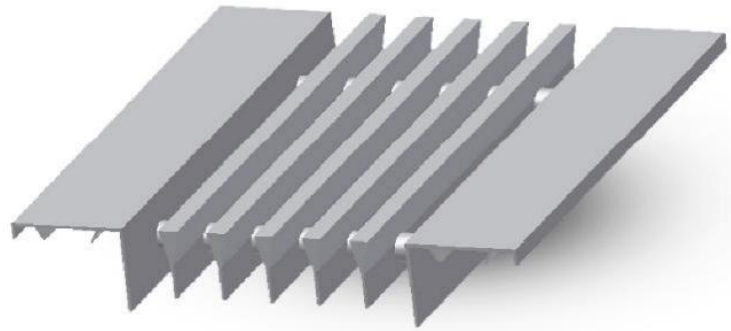
15° ONE WAY DEFLECTION WITHOUT BACK BLADE

0°-13 mm spacing

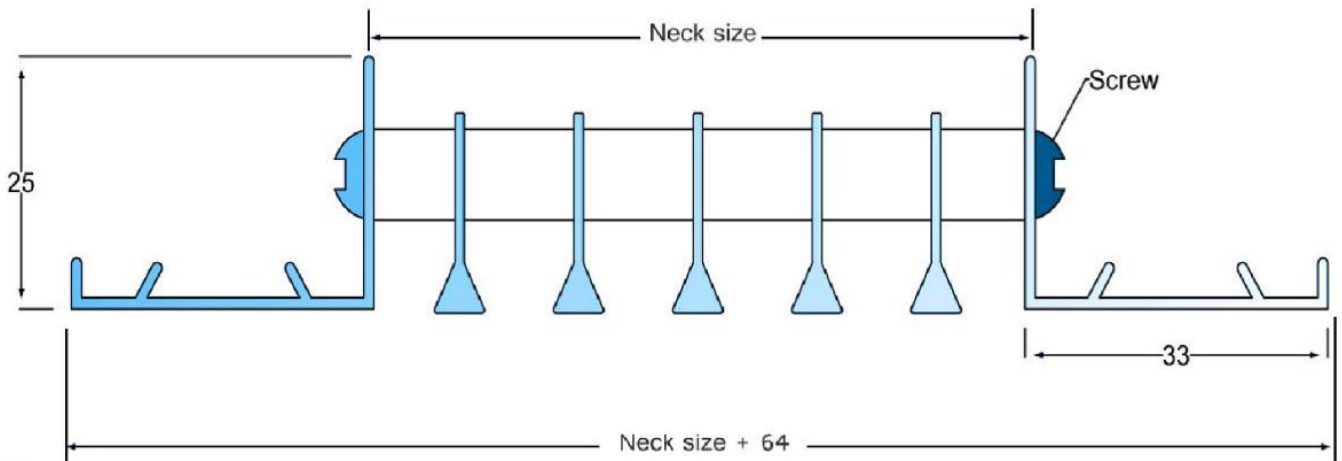
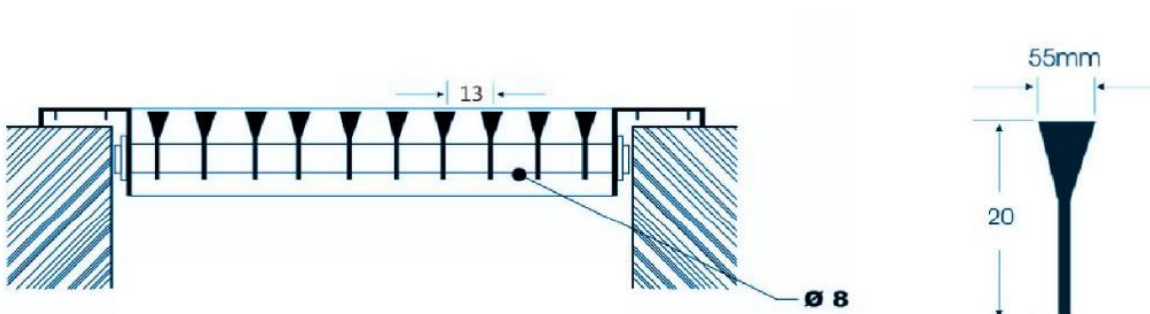
Width (mm) Ak in m ²	Volume / Velocity / Pressure Drop & Noise Level						
	50	CFM M/Sec. -PS in mm H ₂ O NC	332 0.157 0.46 <15	418 0.197 0.73 <18	501 0.236 1.04 25	586 0.276 1.43 31	667 0.315 1.89 32
100	CFM M/Sec. -PS in mm H ₂ O NC	418 0.197 0.49 <15	501 0.236 0.69 20	586 0.276 0.94 25	667 0.315 1.20 31	751 0.354 1.56 35	833 0.393 1.88 38
150	CFM M/Sec. -PS in mm H ₂ O NC	501 0.236 0.49 16	585 0.276 0.67 20	667 0.315 0.86 27	751 0.354 1.11 32	833 0.393 1.34 32	1000 0.472 1.92 37
200	CFM M/Sec. -PS in mm H ₂ O NC	586 0.276 0.46 17	667 0.315 0.64 23	751 0.354 0.79 26	833 0.393 0.99 30	1000 0.472 1.37 34	1168 0.551 1.86 39
250	CFM M/Sec. -PS in mm H ₂ O NC	667 0.315 0.45 19	751 0.354 0.59 23	833 0.393 0.71 24	1000 0.472 1.02 30	1168 0.551 1.37 34	1332 0.629 1.79 38
300	CFM M/Sec. -PS in mm H ₂ O NC	751 0.354 0.49 20	833 0.393 0.6 23	1000 0.472 0.74 25	1168 0.551 1.06 30	1333 0.629 1.45 37	1500 0.708 1.8 42

- The above data is derived based on one meter long linear bar grille without damper.
- Static pressure (Ps) loss is in mm of H₂O.
- NC based on a room attenuation of 10 dB.

(3) 15° TWO WAY DEFLECTION



MODEL :



15° TWO WAY DEFLECTION WITH BACK BLADE

0°-13 mm spacing

Width (mm) Ak in m ²	Face Velocity (M/Sec.)	2.0	2.5	3.0	3.5	4.0	4.5	5.0
50 0.039	M ³ /Sec.	0.078	0.098	0.117	0.137	0.156	0.176	0.195
	CFM	165	207	248	290	330	373	413
	PS in mm H ₂ O	0.15	0.21	0.21	0.25	0.32	0.4	0.51
	Throw (Mt.)	2.7-4.0-5.5	3.4-4.3-6.0	4.0-4.9-6.7	4.3-5.2-7.7	4.6-5.5-7.6	4.9-5.8-8.2	4.9-6.0-8.5
	NC	<15	<15	<15	16	22	25	30
100 0.059	M ³ /Sec.	0.118	0.149	0.178	0.208	0.236	0.267	0.295
	CFM	250	314	376	439	500	564	626
	PS in mm H ₂ O	0.15	0.22	0.22	0.3	0.40	0.52	0.61
	Throw (Mt.)	3.4-4.6-7.0	4.0-5.2-7.5	4.7-5.6-8.8	5.3-6.0-8.5	5.5-6.8-9.1	5.7-7.3-10	6.7-6.10.7
	NC	<15	<15	<15	17	22	27	31
150 0.078	M ³ /Sec.	0.157	0.196	0.235	0.273	0.312	0.351	0.40
	CFM	331	414	496	579	661	744	826
	PS in mm H ₂ O	0.15	0.22	0.26	0.37	0.47	0.59	0.72
	Throw (Mt.)	4.0-5.5-8.0	4.6-6.0-8.7	5.2-6.8-9.5	5.8-7.3-11	6.4-8-10.7	6.7-8.5-11.5	7.8-8-12.2
	NC	<15	<15	<15	17	24	28	33
200 0.097	M ³ /Sec.	0.195	0.244	0.292	0.338	0.389	0.438	0.486
	CFM	411	516	617	719	822	926	1028
	PS in mm H ₂ O	0.24	0.15	0.32	0.38	0.54	0.67	0.92
	Throw (Mt.)	5.2-6.8-9.8	2.7-4.0-5.5	6.1-7.6-10.7	6.6-8.0-11.4	7.4-8.8-11.9	7.7-9.5-12.9	8.1-9.9-13.7
	NC	<15	<15	16	22	27	32	36
250 0.116	M ³ /Sec.	0.233	0.30	0.349	0.406	0.465	0.523	0.59
	CFM	492	615	734	861	983	1106	1129
	PS in mm H ₂ O	0.2	0.26	0.34	0.43	0.59	0.77	0.95
	Throw (Mt.)	4.9-6.8-9.8	5.6-7.6-10.7	6.4-8.2-11.4	7.4-8.8-12.3	8.1-9.6-13.2	8.3-10-14	8.6-10.7-15
	NC	<15	<15	20	25	31	35	37
300 0.136	M ³ /Sec.	0.273	0.35	0.409	0.477	0.545	0.613	0.68
	CFM	577	721	865	1009	1153	1296	1440
	PS in mm H ₂ O	0.2	0.32	0.37	0.48	0.65	0.86	1.03
	Throw (Mt.)	5.3-7.4-10.8	6.1-9.2-12.6	7.8-1.12.3	7.9-9.9-13.1	8.6-10.4-15	8.9-11-15	9.1-11.6-16.2
	NC	<15	18	25	29	33	35	40

- The above data is derived based on one meter long linear bar grille with damper in full open position
- Throw (meter) is measured for terminal velocities of 0.75, 0.5 & 0.25 m/sec.
- Face velocity is measured in m/sec.
- Static pressure (Ps) loss is in mm of H₂O.
- NC based on a room attenuation of 10 dB.




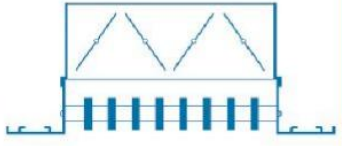
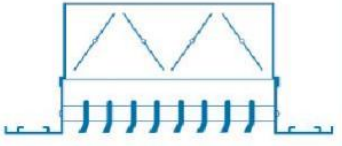
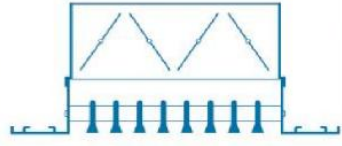



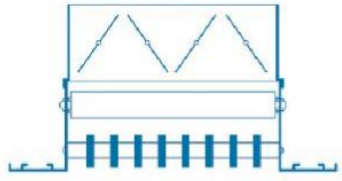
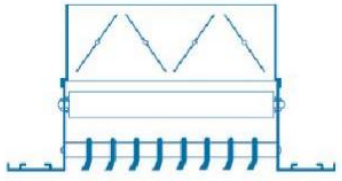
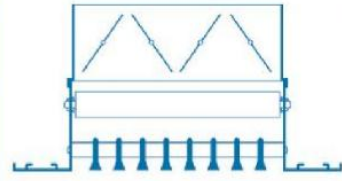
15° TWO WAY DEFLECTION WITH OUT BACK BLADE

0°-13 mm spacing

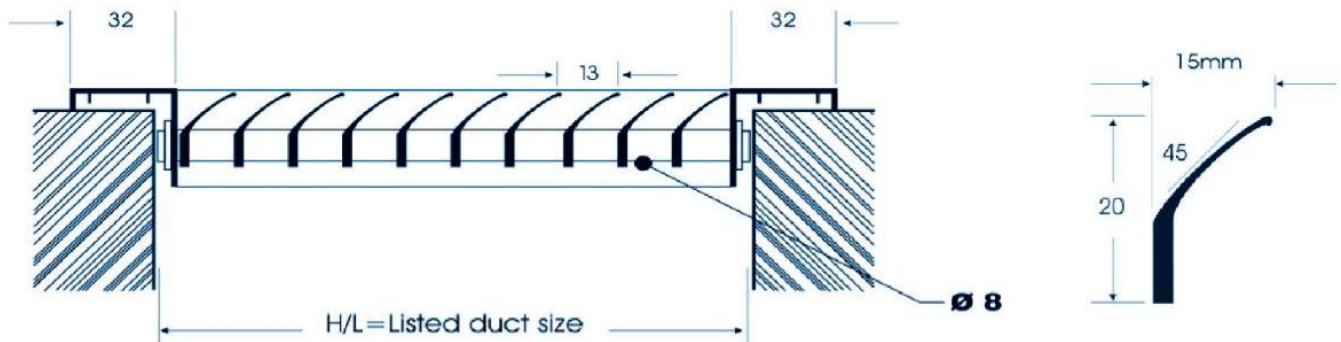
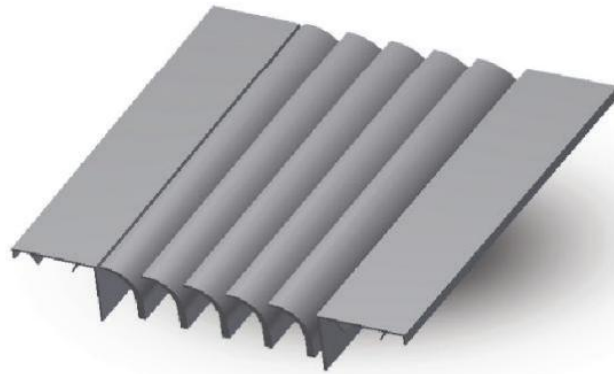
Width (mm) Ak in m ²	Volume / Velocity / Pressure Drop & Noise Level						
50	CFM	332	418	501	586	667	751
	M/Sec.	0.157	0.197	0.236	0.276	0.315	0.354
	-PS in mm	0.48	0.75	1.08	1.47	1.91	2.42
	H ₂ O	<15	18	26	32	36	42
	NC						
100	CFM	418	501	586	667	751	833
	M/Sec.	0.197	0.236	0.276	0.315	0.354	0.393
	-PS in mm	0.52	0.72	0.97	1.27	17	1.98
	H ₂ O	15	20	27	32	35	40
	NC						
150	CFM	501	585	667	751	833	1000
	M/Sec.	0.236	0.276	0.315	0.354	0.393	0.472
	-PS in mm	0.52	0.69	0.89	1.15	1.40	2.01
	H ₂ O	17	22	28	32	34	38
	NC						
200	CFM	586	667	751	833	1000	1168
	M/Sec.	0.276	0.315	0.354	0.393	0.472	0.551
	-PS in mm	0.49	0.64	0.82	0.99	1.42	1.92
	H ₂ O	16	23	26	32	35	40
	NC						
250	CFM	667	751	833	1000	1168	1332
	M/Sec.	0.315	0.354	0.393	0.472	0.551	0.629
	-PS in mm	0.48	0.62	0.74	1.07	1.46	1.9
	H ₂ O	19	23	25	31	35	40
	NC						
300	CFM	751	833	1000	1168	1333	1500
	M/Sec.	0.354	0.393	0.472	0.551	0.629	0.708
	-PS in mm	0.6	0.64	0.77	1.14	1.52	2.0
	H ₂ O	20	25	27	31	38	44
	NC						

- The above data is derived based on one meter long linear bar grille without damper.
- Static pressure (Ps) loss is in mm of H₂O.
- NC based on a room attenuation of 10 dB.

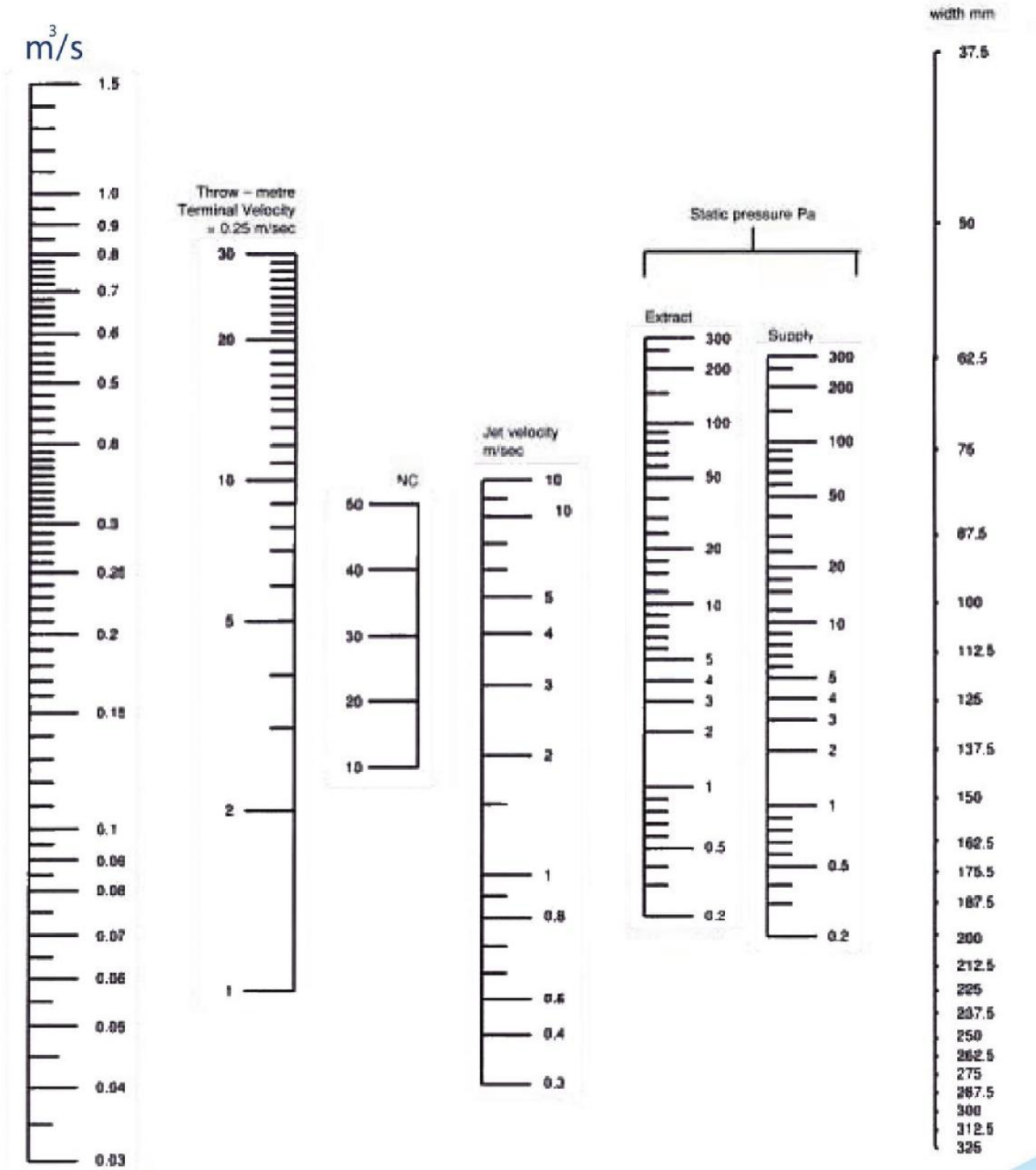
BAR DEFLECTIONS

STANDARD	DEFLECTION ANGLE		
	0° ONE WAY	15° ONE WAY	15° TWO WAY
MODEL			
WITHOUT BACK BLADE			
WITH DAMPER			
WITH BACK BLADE			
WITH BACK BLADE & DAMPER			

(4) CURVED BLADE DEFLECTION



SELECTION CHART

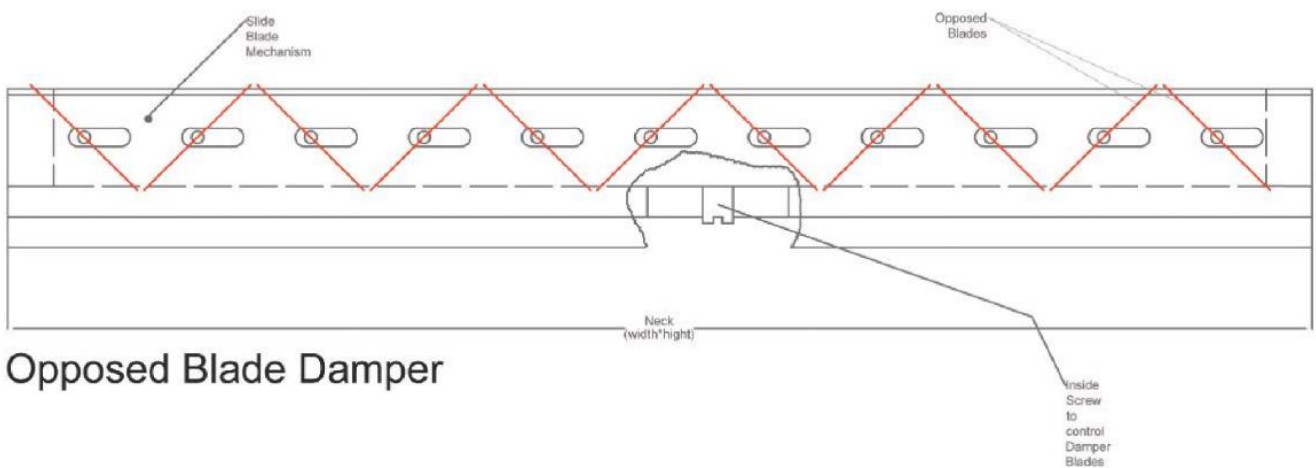


selection for 1 m length

ACCESSORIES

Damper with opposed blades

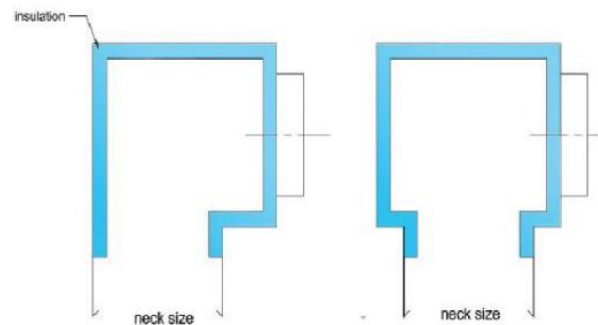
Depending on application characteristics, an opposed blade damper can be installed on the back side of the grille. This damper is a separate item which can be operated by its special tool from the face of the grille. Opposed blade dampers are manufactured from ETIAL-60 norm aluminium extruded profiles. To prevent reflection, they are painted RAL 9005 (matt black) as standard.



Opposed Blade Damper

Plenum Box

The plenum box is used to achieve optimum throw characteristics. It has the inlet either at the top or at one side. Depending on request, a damper can be installed at the inlet, which can be operated internally or externally (has to be specified with the order). The plenum boxes are made from 0.6 mm thick galvanized steel sheets and have 4 hanging brackets on their body. Optionally, a 6 mm thick acoustic foam can be laid inside the plenum box.



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