

RA/RAC Bar Grille

Linear Bar Grille (RA)

■ Materials

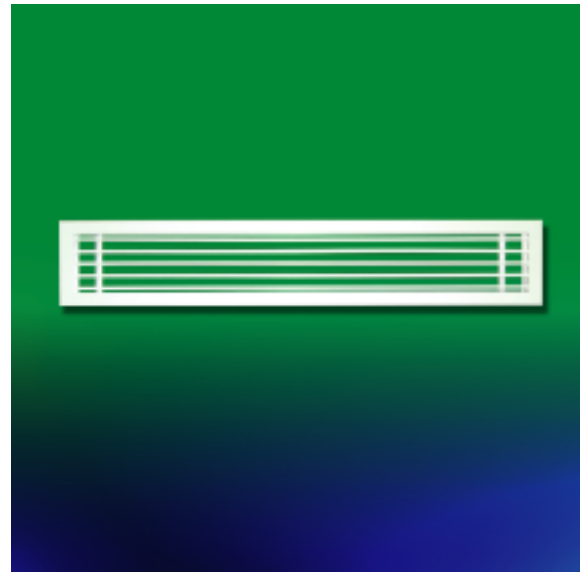
- RA-A Extruded aluminium A6063.

■ Features

- The bar grille air blades are fixed & not adjustable. Maximum single length is 2700m. Above this length, the grille will come in multiple section.
- The neck sizes (w) are proportional to the number of linear bar blades. Please refer to the following table.
- Two different types of linear bar face deflection angle are available.
- The bar grilles that come with plenum boxes are known as RAB.
- Approximately 65% free area.

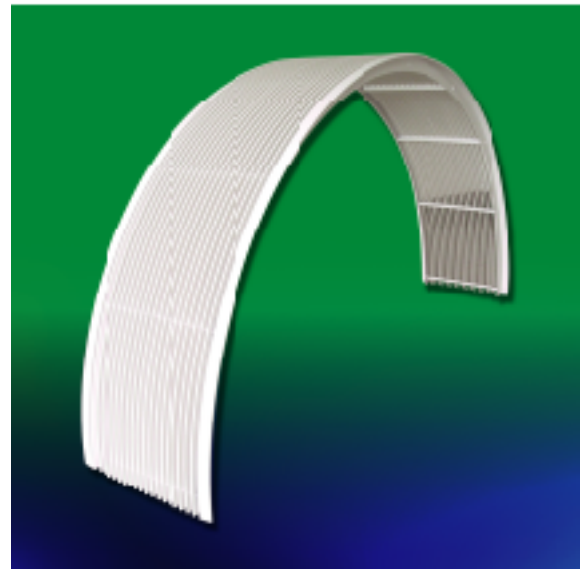
■ Surface Finish

- Baked white powder coat or natural anodized as standard.

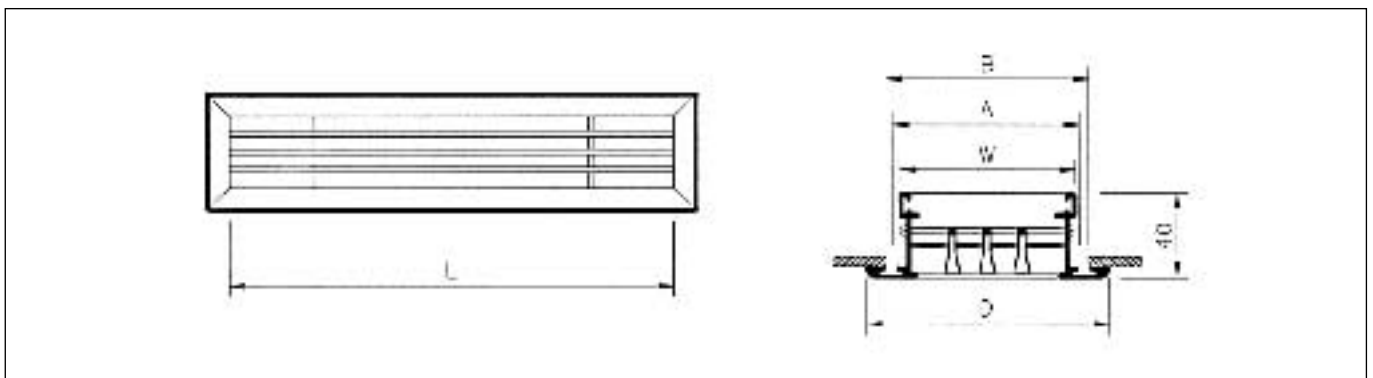


Curve Type Linear Bar Grille (RAC)

- The curved structure and aesthetic appearance of RAC make it perfect to be installed at the round column or curved wall.

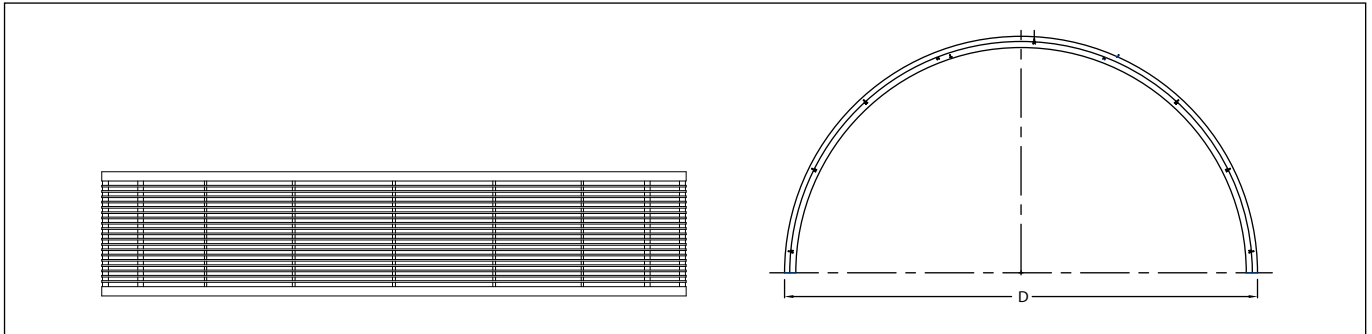


■ RA Construction Illustrations



RA/RAC Bar Grille

■ RAC Construction Illustrations



■ Bar Grille Vs Width Unit:mm

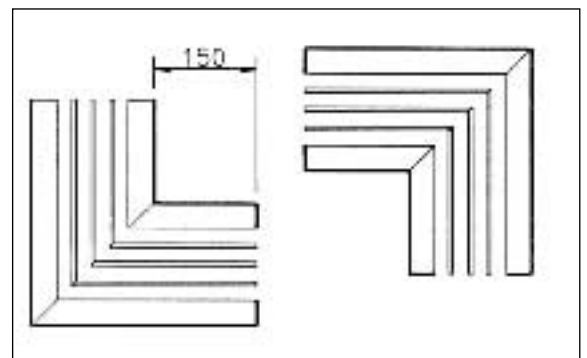
No.of Blade	2	3	4	5	6	7	8	10	12	14	16	18	20
Neck Width	45	60	75	90	105	120	135	165	195	225	255	285	315

■ RA/RAC Physical Dimension Unit:mm

Model	Materials	Thickness		L x W Neck Size	A Duct Size	B Wall Size	D Face Size	Order Key
		Frame	Blade					
RA-A	Extruded Aluminium A6063	1.0	4.5	L: To suit design Length W: Tosuit No. of Blade	L+10 W+10	L+15 W+15	L+29 W+29	$\frac{RA}{\text{Model}} - \frac{A}{\text{Materials}} + \frac{100}{\text{Accessories}} \times \frac{3}{W} - \frac{1}{H}$
RAC								

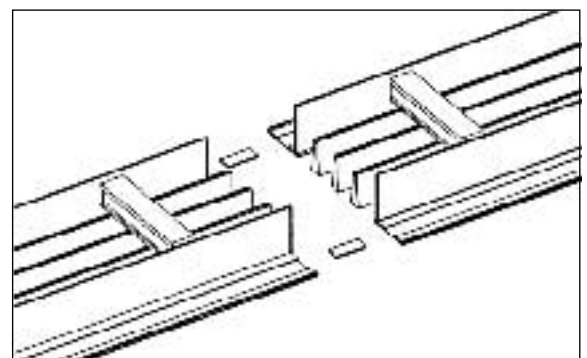
■ RA-A Linear Bar Grille

- 90° mitred corner sections for linear bar grilles are available.
- Joining strips are available for continuous installation of the mitred corner section & the linear bar grille.



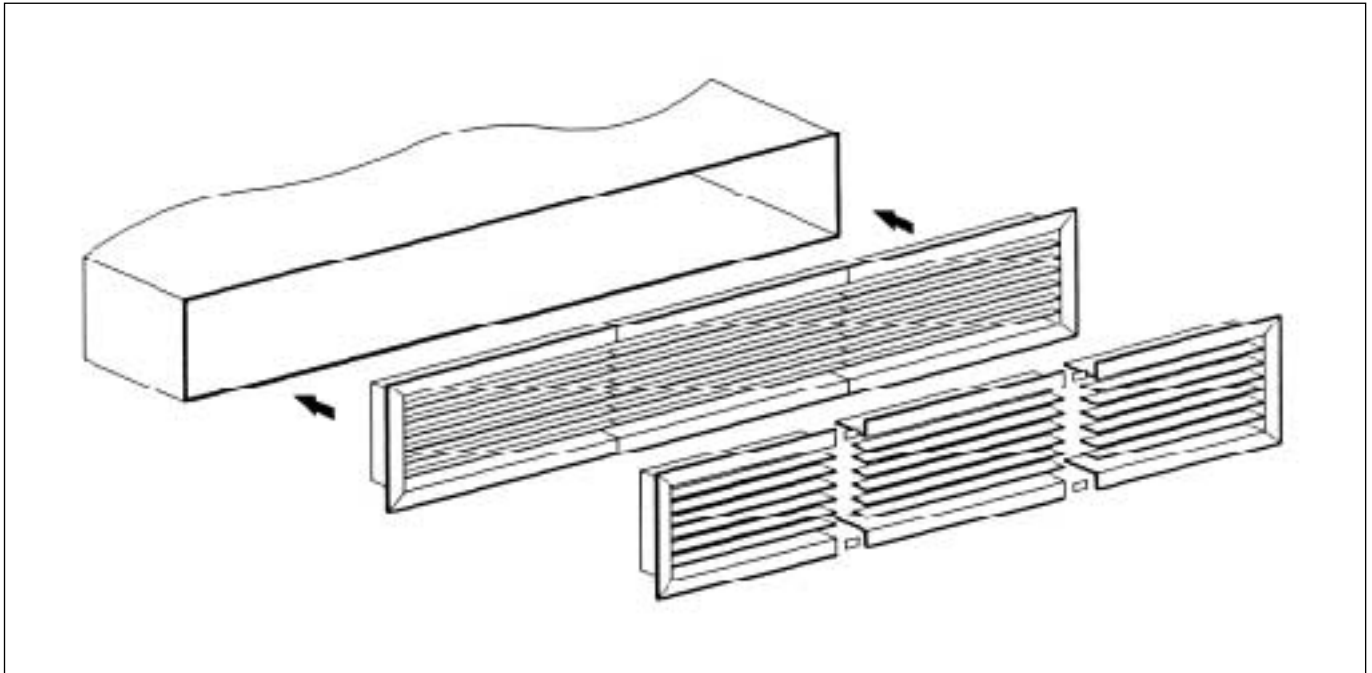
■ RA-A Linear Bar Grille

- Maximum length of a single linear bar grille is 2700mm. Above 2700mm, the grille will come in multiple section.
- Joining strips are available for multiple section of linear bar grille.



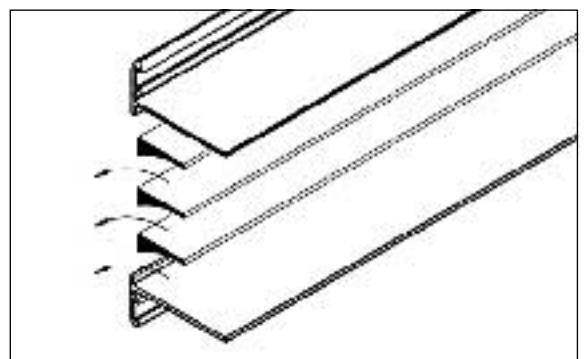
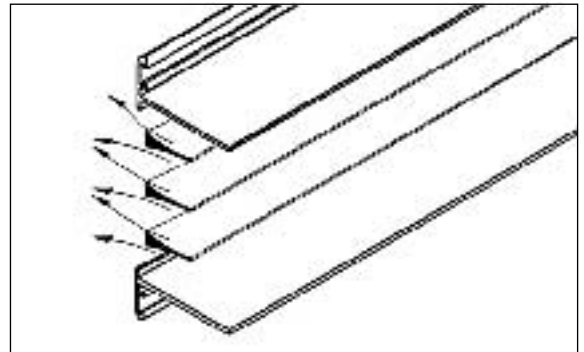
RA/RAC Bar Grille

■ RA-A Linear Bar Grille



■ RA-A Bar Deflection Angle

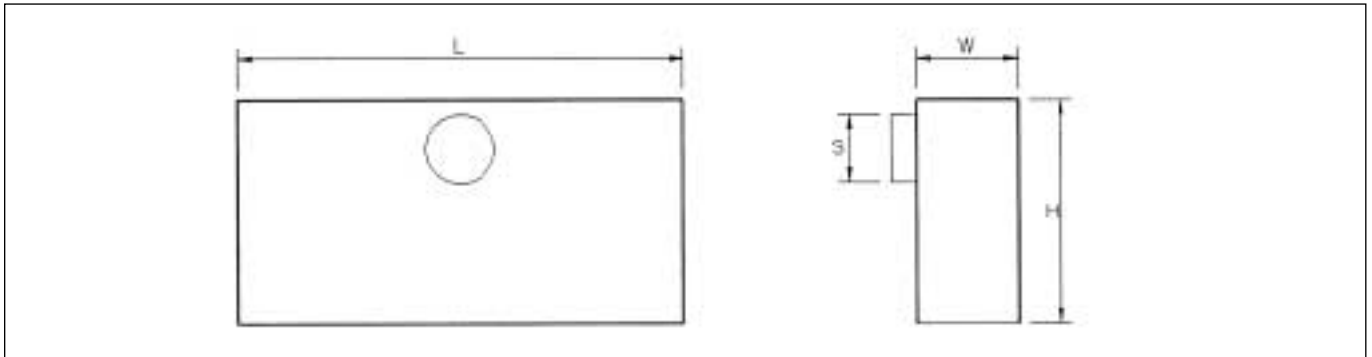
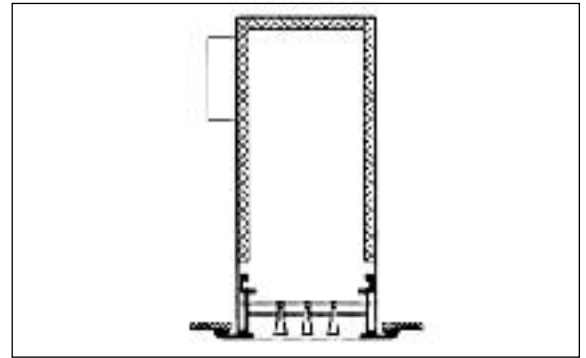
- Two different linear bar face deflection angles are available.
- Deflection for RA/RAC -1:0°
RA/RAC -2:15°



RA/RAC Bar Grille

■ Model RAB : RA Linear Bar Grille c/w Plenum Box.

- Plenum box is constructed of 0.5mm SPGC galvanized steel.
- Two types of insulation are available.
- External insulation: 25mm X 24kg/m² fiberglass wrapped with fiber-reinforced aluminium foil.(Optional)
- Internal insulation: 5mm thick PE foam.



■ RA/RAC Physical Dimension Unit:mm

L - Length of Plenum Box	W Width of Plenum Box	H Height of Plenum Box	S Inlet Size
Face length of linear diffuser	Neck width of linear diffuser W + 20	230	100ø~300ø oval shape

RA/RAC Bar Grille

■ RA/RAC -1 (0°) - Supply Performance Data

Neck Width (mm)	Neck Vel.(m/s)		1.0	1.5	2.0	2.5	3.0	3.5
	Tot. Press (mmAq)		0.4	0.6	0.9	1.6	2.2	3.0
45	CMH/M		162	243	324	405	486	567
	Throw (m)	Ceiling	0.3 - 0.3	1.2 - 1.2	2.1 - 2.1	2.7 - 3.0	3.3 - 3.6	4.2 - 4.8
		Wall	1.5 - 2.1	2.4 - 3.6	3.3 - 4.8	4.2 - 6.0	5.1 - 6.9	5.7 - 7.8
	NC		-	-	21	26	31	35
60	CMH/M		216	324	432	540	648	756
	Throw (m)	Ceiling	0.4 - 0.4	1.7 - 1.7	2.8 - 2.9	3.5 - 3.8	4.4 - 4.7	5.1 - 5.4
		Wall	1.9 - 2.6	2.8 - 4.0	4.0 - 5.3	4.9 - 6.5	5.6 - 7.4	6.6 - 8.6
	NC		-	-	20	25	30	34
75	CMH/M		270	405	540	675	810	945
	Throw (m)	Ceiling	0.8 - 0.8	2.3 - 2.3	3.4 - 3.5	4.3 - 4.6	5.3 - 5.6	6.1 - 6.6
		Wall	2.1 - 3.0	3.4 - 4.6	4.6 - 5.9	5.6 - 7.4	6.6 - 8.2	7.6 - 9.4
	NC		-	-	20	25	30	34
90	CMH/M		324	486	648	810	972	1134
	Throw (m)	Ceiling	0.9 - 0.9	2.7 - 2.7	3.9 - 3.9	4.8 - 5.1	6.0 - 6.3	6.9 - 7.2
		Wall	2.4 - 3.3	3.9 - 5.1	5.1 - 6.3	6.0 - 7.5	7.5 - 9.0	8.4 - 10.2
	NC		-	-	21	26	31	35
105	CMH/M		378	567	756	945	1134	1323
	Throw (m)	Ceiling	1.1 - 1.1	3.0 - 3.0	4.2 - 4.2	5.2 - 5.2	6.5 - 6.8	7.2 - 7.3
		Wall	2.8 - 3.7	4.2 - 5.4	5.5 - 6.8	6.5 - 8.0	8.0 - 9.5	8.9 - 10.7
	NC		-	-	21	26	31	35
120	CMH/M		432	648	864	1080	1296	1512
	Throw (m)	Ceiling	1.3 - 1.3	3.0 - 3.0	4.4 - 4.4	5.5 - 5.5	6.8 - 6.8	7.4 - 7.4
		Wall	3.2 - 4.1	4.4 - 5.6	5.9 - 7.1	6.8 - 8.3	8.3 - 9.8	9.4 - 11.2
	NC		-	-	21	26	31	35
135	CMH/M		486	729	972	1215	1458	1701
	Throw (m)	Ceiling	1.5 - 1.5	3.0 - 3.0	4.5 - 4.5	5.5 - 5.5	6.9 - 6.9	7.5 - 7.5
		Wall	3.6 - 4.5	4.8 - 6.0	6.0 - 7.2	7.2 - 8.7	8.7 - 10.2	9.9 - 11.7
	NC		-	-	22	27	32	36
165	CMH/M		594	891	1188	1485	1782	2079
	Throw (m)	Ceiling	1.8 - 1.8	3.3 - 3.3	4.8 - 4.8	6.1 - 6.1	7.5 - 7.7	8.2 - 8.2
		Wall	4.2 - 5.1	5.4 - 6.6	6.6 - 7.8	8.0 - 9.3	9.3 - 10.8	10.5 - 12.3
	NC		-	-	22	27	32	36
195	CMH/M		702	1053	1404	1755	2106	2457
	Throw (m)	Ceiling	2.0 - 2.0	3.5 - 3.5	5.0 - 5.0	6.3 - 6.3	7.8 - 7.9	8.5 - 8.5
		Wall	4.8 - 5.8	5.9 - 7.1	7.0 - 8.1	8.6 - 9.8	9.8 - 11.2	11.1 - 12.9
	NC		-	-	23	28	33	37
225	CMH/M		810	1215	1620	2025	2430	2835
	Throw (m)	Ceiling	2.3 - 2.3	3.8 - 3.8	5.2 - 5.2	6.6 - 6.6	8.0 - 8.0	8.8 - 8.8
		Wall	5.5 - 6.5	6.4 - 7.6	7.4 - 8.4	9.2 - 10.3	10.3 - 11.7	11.8 - 13.6
	NC		-	-	23	28	33	37
255	CMH/M		918	1377	1836	2295	2754	3213
	Throw (m)	Ceiling	2.6 - 2.6	4.0 - 4.0	5.4 - 5.4	6.9 - 6.9	8.2 - 8.2	9.0 - 9.0
		Wall	6.2 - 7.4	7.0 - 8.1	7.9 - 8.8	9.8 - 10.8	10.8 - 12.1	12.5 - 14.2
	NC		-	-	24	29	34	38
285	CMH/M		1026	1539	2052	2565	3078	3591
	Throw (m)	Ceiling	2.8 - 2.8	4.2 - 4.2	5.6 - 5.6	7.2 - 7.2	8.3 - 8.3	9.2 - 9.2
		Wall	7.1 - 8.3	7.6 - 8.7	8.3 - 9.1	10.5 - 11.3	11.3 - 12.6	13.3 - 15.0
	NC		-	-	24	29	34	38
315	CMH/M		1134	1701	2268	2835	3402	3969
	Throw (m)	Ceiling	3.1 - 3.1	4.5 - 4.5	5.9 - 5.9	7.5 - 7.5	8.5 - 8.5	9.5 - 9.5
		Wall	8.3 - 9.4	8.3 - 9.3	8.8 - 9.5	11.2 - 11.9	11.9 - 13.1	14.1 - 15.7
	NC		-	20	25	30	35	39

- Above performance data is also applicable for RAC with one meter curve length.
- Throw values are based on an entire section one meter long.
- Throw is based on terminal velocities of 0.5 m/s - 0.25 m/s respectively.
- NC value is based on a room absorption of 10 dB, re 10⁻¹² watts.
- Dash (-) in space indicates NC value less than 20.
- For return air application, Negative SP=0.75 x Tot. Press. NC=above plus 5.
- Corrected values for throw and NC value as the length changes.

Length (M)	0.5	01	1.5	2
NC	-2	0	+2	+3
Terminal Vel. 0.5m/s	0.8	1	1.1	1.2
Terminal Vel. 0.25m/s	0.9	1	1.15	1.2

Eg: When length is 2m, Throw: use a multiple of 1.2
NC: NC plus 3

RA/RAC Bar Grille

■ RA/RAC -2 (15°) - Supply Performance Data

Neck Width (mm)	Neck Vel. (m/s)		1.0	1.5	2.0	2.5	3.0	3.5
	Tot. Press (mmAq)		0.4	0.6	0.9	1.6	2.2	3.0
45	CMH/M		162	243	324	405	486	567
	Throw (m)	Ceiling	0.3 - 0.3	1.2 - 1.2	2.1 - 2.1	2.7 - 3.0	3.3 - 3.6	4.2 - 4.8
		Wall	1.5 - 2.1	2.4 - 3.6	3.3 - 4.8	4.2 - 6.0	5.1 - 6.9	5.4 - 7.5
	NC		-	-	26	31	36	40
60	CMH/M		216	324	432	540	648	756
	Throw (m)	Ceiling	0.4 - 0.4	1.6 - 1.6	2.6 - 2.8	3.4 - 3.7	4.5 - 4.8	5.2 - 5.7
		Wall	1.8 - 2.5	2.8 - 4.0	3.7 - 5.2	5.0 - 6.5	5.9 - 7.7	6.7 - 8.5
	NC		-	-	25	30	35	39
75	CMH/M		270	405	540	675	810	945
	Throw (m)	Ceiling	0.6 - 0.6	2.0 - 2.0	3.4 - 3.4	4.0 - 4.3	5.2 - 5.5	6.1 - 6.4
		Wall	2.0 - 2.9	3.2 - 4.4	4.4 - 5.8	5.3 - 6.9	6.4 - 8.1	7.5 - 9.3
	NC		-	-	25	30	35	39
90	CMH/M		324	486	648	810	972	1134
	Throw (m)	Ceiling	0.9 - 0.9	2.4 - 2.7	3.9 - 3.9	4.8 - 4.8	5.7 - 6.0	6.6 - 6.9
		Wall	2.4 - 3.3	3.6 - 4.8	5.1 - 6.3	5.7 - 7.2	7.2 - 8.7	8.1 - 9.9
	NC		-	-	26	31	36	40
105	CMH/M		378	567	756	945	1134	1323
	Throw (m)	Ceiling	1.1 - 1.1	2.6 - 2.7	4.2 - 4.2	5.0 - 5.1	6.2 - 6.5	7.1 - 7.2
		Wall	2.8 - 3.7	4.0 - 5.2	5.5 - 6.8	6.2 - 7.7	7.5 - 9.2	8.6 - 10.5
	NC		-	-	26	31	36	40
120	CMH/M		432	648	864	1080	1296	1512
	Throw (m)	Ceiling	1.3 - 1.3	2.8 - 2.8	4.3 - 4.3	5.3 - 5.3	6.6 - 6.7	7.4 - 7.4
		Wall	3.2 - 4.0	4.4 - 5.6	5.8 - 7.1	6.6 - 8.1	7.7 - 9.5	8.8 - 10.7
	NC		-	-	26	31	36	40
135	CMH/M		486	729	972	1215	1458	1701
	Throw (m)	Ceiling	1.5 - 1.5	3.0 - 3.0	4.5 - 4.5	5.4 - 5.4	6.9 - 6.9	7.5 - 7.5
		Wall	3.3 - 4.2	4.8 - 6.0	6.0 - 7.2	7.2 - 8.4	8.1 - 9.6	9.0 - 10.8
	NC		-	20	27	32	37	41
165	CMH/M		594	891	1188	1485	1782	2079
	Throw (m)	Ceiling	1.8 - 1.8	3.3 - 3.3	4.8 - 4.8	6.0 - 6.0	7.5 - 7.7	8.1 - 8.1
		Wall	3.6 - 4.5	5.4 - 6.6	6.6 - 7.8	7.9 - 9.0	8.5 - 10.1	9.6 - 11.4
	NC		-	20	27	32	37	41
195	CMH/M		702	1053	1404	1755	2106	2457
	Throw (m)	Ceiling	2.0 - 2.0	3.5 - 3.5	5.0 - 5.0	6.3 - 6.3	7.8 - 7.9	8.5 - 8.5
		Wall	3.9 - 4.8	6.0 - 7.1	7.0 - 8.2	8.5 - 9.5	8.8 - 10.4	10.0 - 11.7
	NC		-	22	28	33	38	42
225	CMH/M		810	1215	1620	2025	2430	2835
	Throw (m)	Ceiling	2.3 - 2.3	3.8 - 3.8	5.2 - 5.2	6.6 - 6.6	8.0 - 8.0	8.8 - 8.8
		Wall	4.3 - 5.2	6.7 - 7.7	7.4 - 8.6	9.2 - 9.9	9.2 - 9.9	10.4 - 12.1
	NC		-	22	28	33	38	42
255	CMH/M		918	1377	1836	2295	2754	3213
	Throw (m)	Ceiling	2.6 - 2.6	4.0 - 4.0	5.4 - 5.4	6.9 - 6.9	8.2 - 8.2	9.0 - 9.0
		Wall	4.7 - 5.5	7.4 - 8.3	7.9 - 9.0	10.0 - 10.4	9.6 - 11.0	10.8 - 12.5
	NC		-	23	29	34	39	43
285	CMH/M		1026	1539	2052	2565	3078	3591
	Throw (m)	Ceiling	2.8 - 2.8	4.2 - 4.2	5.6 - 5.6	7.2 - 7.2	8.3 - 8.3	9.2 - 9.2
		Wall	5.1 - 5.9	8.2 - 9.0	8.3 - 9.5	10.7 - 10.9	9.9 - 11.4	11.2 - 12.8
	NC		-	23	29	34	39	43
315	CMH/M		1134	1701	2268	2835	3402	3969
	Throw (m)	Ceiling	3.1 - 3.1	4.5 - 4.5	5.9 - 5.9	7.5 - 7.5	8.5 - 8.5	9.5 - 9.5
		Wall	5.5 - 6.3	9.1 - 9.7	8.8 - 10.0	11.6 - 11.5	10.3 - 11.7	11.7 - 13.2
	NC		-	25	30	35	40	44

- Above performance data is also applicable for RAC with one meter curve length.
- Throw values are based on an entire section one meter long.
- Throw is based on terminal velocities of 0.5 m/s - 0.25 m/s respectively.
- NC value is based on a room absorption of 10 dB, re 10⁻¹² watts.
- Dash (-) in space indicates NC value less than 20.
- For return air application, Negative SP=0.75 x Tot. Press. NC=above plus 5.
- Corrected values for throw and NC value as the length changes.

	NC	-2	0	+2	+3
Terminal Vel. 0.5m/s	0.8	1	1.1	1.2	
Terminal Vel. 0.25m/s	0.9	1	1.15	1.2	

Eg: When length is 2m, Throw: use a multiple of 1.2
NC: NC plus 3

RA/RAC Bar Grille

■ RA/RAC - Return Performance Data

Neck Width (mm)	Neck Vel. (m/s)	1.0	1.5	2.0	2.5	3.0	3.5
	Vel. Press (mmAq)	0.25	0.55	1.0	1.55	2.2	3.0
	Neg. SP. (mmAq)	0.3	0.5	0.7	1.2	1.7	2.3
45	CMH/M	162	243	324	405	486	567
	NC	-	-	24	29	34	38
60	CMH/M	216	324	432	540	648	756
	NC	-	-	23	28	33	37
75	CMH/M	270	405	540	675	810	945
	NC	-	-	23	28	33	37
90	CMH/M	324	486	648	810	972	1134
	NC	-	-	24	29	34	38
105	CMH/M	378	567	756	945	1134	1323
	NC	-	-	24	29	34	38
120	CMH/M	432	648	864	1080	1296	1512
	NC	-	-	24	29	34	38
135	CMH/M	486	729	972	1215	1458	1701
	NC	-	-	25	30	35	39
165	CMH/M	594	891	1188	1485	1782	2079
	NC	-	-	25	30	35	39
195	CMH/M	702	1053	1404	1755	2106	2457
	NC	-	21	26	31	36	40
225	CMH/M	810	1215	1620	2025	2430	2835
	NC	-	21	26	31	36	40
255	CMH/M	918	1377	1836	2295	2754	3213
	NC	-	22	27	32	37	41
285	CMH/M	1026	1539	2052	2565	3078	3591
	NC	-	22	27	32	37	41
315	CMH/M	1134	1701	2268	2835	3402	3969
	NC	-	22	28	33	38	42

- Above performance data is also applicable for RAC with one meter curve length.
- Throw values are based on an entire section one meter long.
- Throw is based on terminal velocities of 0.5 m/s - 0.25 m/s respectively.
- NC value is based on a room absorption of 10 dB, re 10⁻¹² watts.
- Dash (-) in space indicates NC value less than 20.
- Corrected values for throw and NC value as the length changes.

Length (M)	0.5	1	1.5	2
NC Correction	-2	0	+2	+3