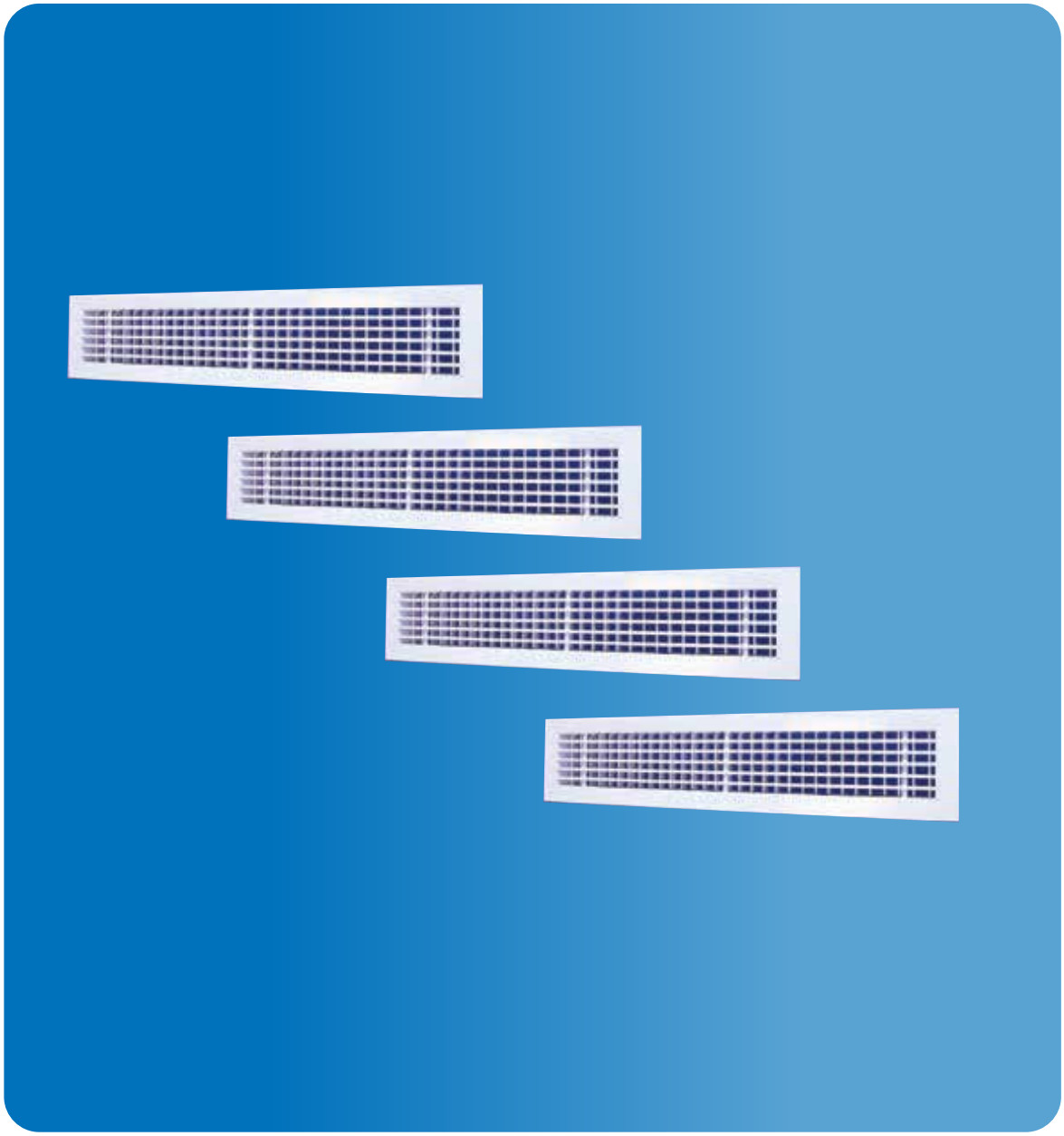
RIGID

LINEAR BAR GRILLES & REGISTERS



BRAVO MIDDLE EAST FZC

RIGID

LINEAR BAR GRILLES & REGISTERS

SALIENT FEATURES

Linear bar grilles are architecturally beautiful and robust in construction. They are suitable for supply and return air applications where the air volume requirements are medium and high. They are best suited for side wall mounting applications but they may be used in other applications like false ceiling, sill and floor mounting. Hospitals, shopping malls, auditoriums are typical applications of these bar grilles.

Material and construction:

Outer frame is extruded aluminium section (alloy 6063 – T6 temper) cut to length and joined at corners. Blades are made of extruded aluminium section(alloy 6063 –T6 temper) with multidirectional flow as shown in fig 10.2a,10.2b and 10.2c.Front horizontal blades are fixed type and rigid constructed and assembled in frame. The rear vertical blades are adjustable and assembled to the outer frame with nylon bushes for rattle free operation. Registers are supplied with opposed blade volume control dampers.

LINEAR BAR GRILLE MODELS

RBG-DDTB: This bar grille is supplied with front horizontal two way type fixed blades(fig 10.2a) and rear vertical adjustable blades(fig 10.1)
RBG-DDOB: This bar grille is supplied with front horizontal one way type fixed blades(fig 10.2b) and rear vertical adjustable blades(fig 10.1)
RBG-DDSB: This bar grille is supplied with front horizontal straight type fixed blades(fig 10.2c) and rear vertical adjustable blades(fig 10.1)

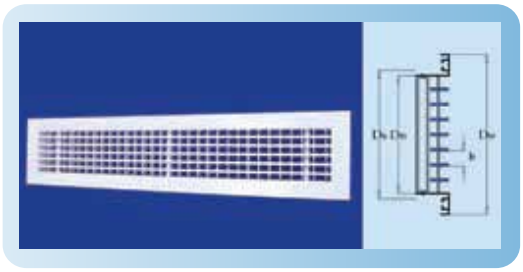


Fig. 10-1

RBG-DDTB RBG-DDOB RBG-DDSB

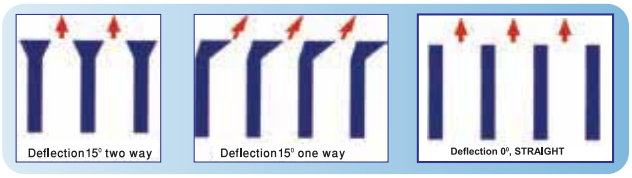


Fig. 10-2a Fig. 10-2b Fig. 10-2c

All the above grilles are available in single deflection models at customer's request. In all single deflection models grilles are supplied without rear vertical blades. Fig (10-3)

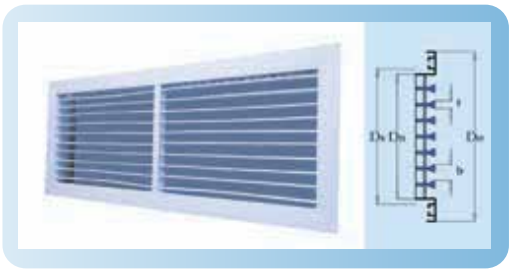


Fig. 10-3

Ds = Nominal grille size = Duct size
Dn = Neck size of grille = (Length-10) x (width-10) in millimetres
Do = Outer size of grille = (Length+60) x (width+60)
b = Blade pitch
t = Blade thickness

RIGID LINEAR BAR REGISTERS MODELS

RBR - DDTB: This bar grille is supplied with front horizontal two way type fixed blades(fig 10.2a) and rear vertical adjustable blades(fig 10.1)and an opposed blade damper to adjust inflow of supply air(fig 10.4)
RBR - DDOB: This bar grille is supplied with front horizontal one way type fixed blades(fig 10.2b) and rear vertical adjustable blades(fig 10.1))and an opposed blade damper to adjust inflow of supply air(fig 10.4)
RBR-DDSB:This bar grille is supplied with front horizontal straight type fixed blades(fig 10.2c) and rear vertical adjustable blades(fig 10.1))and an opposed blade damper to adjust inflow of supply air(fig 10.4)

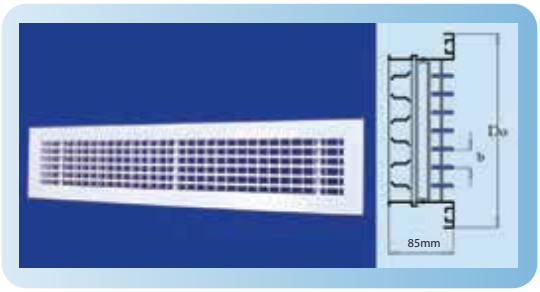


Fig. 10-4

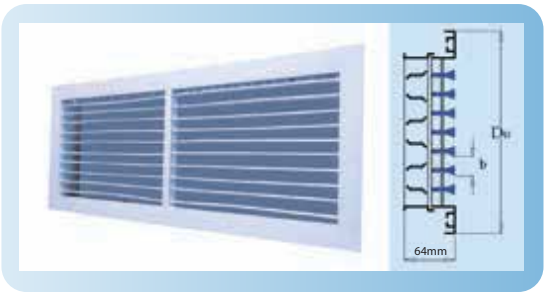


Fig. 10-5

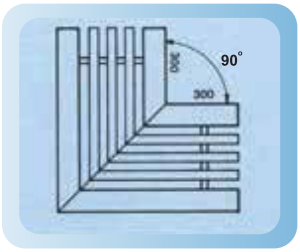
All the above registers are available in single deflection models at customer's request. In all single deflection models registers are supplied without rear vertical blades and supplied with opposed blade damper to adjust the inflow of supply air. Fig (10-5)

CURVED BAR GRILLE

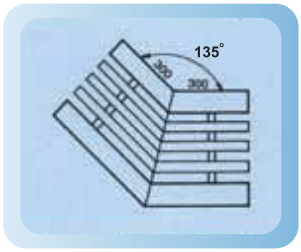
Curved bar grilles are available to fix on the walls only (vertical plane only). These bar grilles are not suitable to fix on the ceilings. Minimum radius of curvature is 1000mm.

CORNERS FOR USE WITH LINEAR BAR GRILLES / REGISTERS

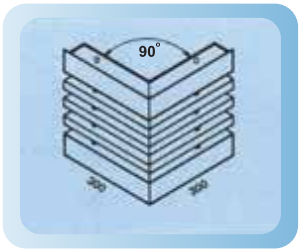
Ceiling mounted corners available in 90 deg and 135 deg as shown in Fig. 10-6



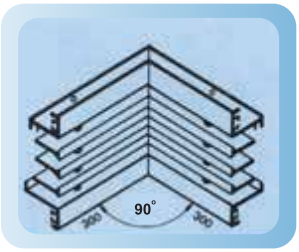
90deg corner ceiling mounted



135deg corner ceiling mounted



90deg external corner wall mounted



90deg internal corner wall mounted

Fig. 10-6

TABLE RIGID 5 SELECTION TABLE FOR LINEAR BAR GRILLES

LBG width mm	Air volume		Total pressure		Throw at terminal velocity of			Noise criteria
					0.75 m/s	0.5 m/s	0.25 m/s	
	LPS/m	CFM/ft	Pascals	mm of water	m	m	m	
100	50	32	1.0	0.1	1.0	2.5	3.3	<15
	100	65	4.5	0.5	2.0	3.5	4.5	<15
	150	97	10.0	1.0	3.5	4.0	5.8	<15
	200	129	17.0	1.7	4.0	5.0	6.8	20
	250	162	27.0	2.8	4.5	5.5	7.8	29
	300	194	39.0	4.0	5.0	6.0	8.5	33
150	50	32	0.7	0.1	0.8	2.0	3.0	<15
	100	65	2.5	0.3	1.8	3.2	4.5	<15
	150	97	6.0	0.6	3.2	3.8	5.5	<15
	200	129	11.0	1.1	4.0	4.8	6.5	18
	250	162	17.0	1.7	4.3	5.2	7.5	23
	300	194	24.0	2.4	4.8	6.0	8.0	25
	350	226	32.0	3.3	6.0	7.5	9.0	30
	400	259	43.0	4.4	6.5	7.5	10.0	35
200	50	32	0.5	0.1	0.5	2.0	3.0	<15
	100	65	2.0	0.2	1.5	3.0	4.0	<15
	150	97	4.5	0.5	3.0	3.5	5.5	<15
	200	129	7.0	0.7	3.5	4.8	6.3	<15
	250	162	11.0	1.1	4.0	5.0	7.0	15
	300	194	15.0	1.5	4.5	5.5	7.8	20
	350	226	21.0	2.1	5.5	7.0	9.0	26
	400	259	25.0	2.6	6.0	7.0	9.5	30
	450	291	31.0	3.2	6.5	7.5	10.0	33
250	150	97	3.5	0.4	2.5	3.0	5.0	<15
	200	129	6.0	0.6	3.0	4.0	6.0	<15
	250	162	10.0	1.0	4.0	4.5	6.8	<15
	300	194	14.0	1.4	4.0	5.0	7.5	18
	350	226	19.0	1.9	5.5	6.5	8.8	24
	400	259	25.0	2.6	5.8	6.6	9.0	27
	450	291	31.0	3.2	6.5	7.2	9.8	30
	500	323	39.0	4.0	7.0	8.0	10.5	34
300	200	129	5.0	0.5	1.5	3.0	5.3	<15
	250	162	8.0	0.8	3.0	4.0	6.0	<15
	300	194	11.5	1.2	3.5	4.5	7.0	<15
	350	226	17.0	1.7	5.0	6.2	8.5	21
	400	259	23.0	2.3	5.5	6.5	8.8	23
	450	291	31.0	3.2	6.0	7.0	9.5	27
	500	323	39.0	4.0	6.5	7.8	10.0	32

Noise criteria is based on 10dB room attenuation
Damper is fully open condition
Vertical blades are at 0° deflection
Data basis is 1000mm length of linear bar grill
Correction on NOISE CRITERIA for 2000mm length is +3
Correction on NOISE CRITERIA for 3000mm length is +5