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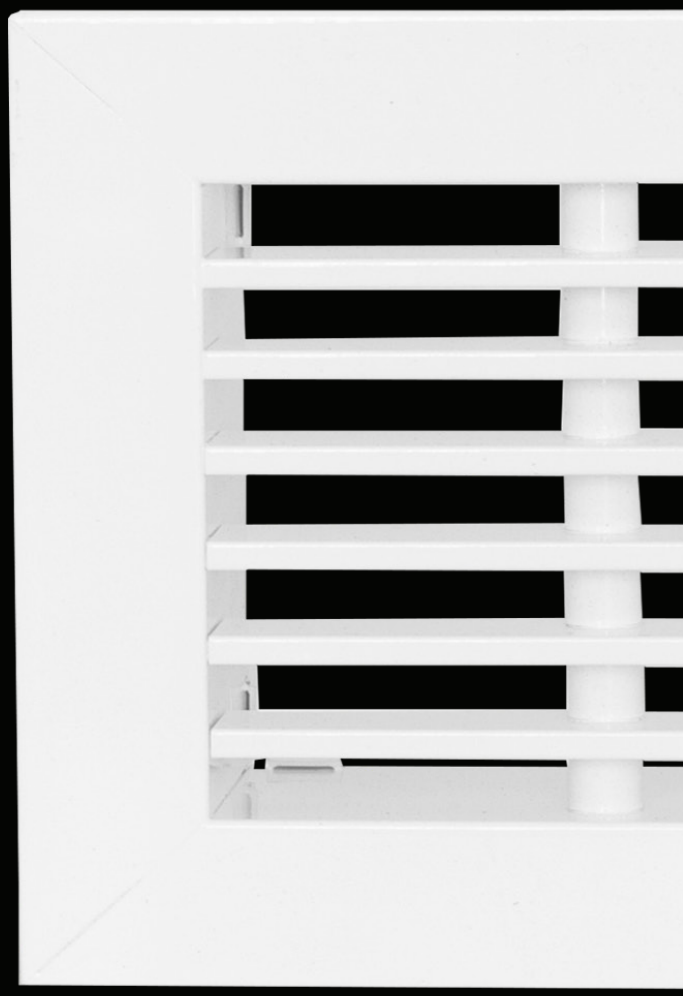


LINEAR BAR GRILLE
LBG-00

LINEAR BAR GRILLE
LBG-00

PRODUCT DESCRIPTION AND APPLICATION

Airfoil's Australian Made and designed Linear Bar Grille LBG-00, stands out as an architectural masterpiece and is highly sought after due to its aesthetic appeal. Crafted from top-quality aluminium extruded profiles, the LBG-00 can be customised to fit any size requirements. While commonly used for Supply Air Functions, it can also serve as an effective solution for Return Air applications.

One of its key features is the elegant 20mm x 3mm Flat Bar blades spaced at a standard 12mm pitch, providing a sleek and sophisticated look. The Zero Degree flat bar blade design ensures consistent airflow without deviations, maximizing horizontal throw capacity with a balanced airflow pattern towards the desired area.

The blades are supported by a round aluminium spaced tube system, enhancing strength and rigidity. These streamline blade systems are securely fixed to the grille's outer frame using a robust industrial rivet system.

With a slimline 25mm frame and a 50mm outer frame depth, the Linear Bar Grille LBG-00 offers a visually appealing design. It can be customised with powder-coating in a variety of colours upon request. This innovative product is perfect for both domestic and commercial settings where precise horizontal air distribution is essential.

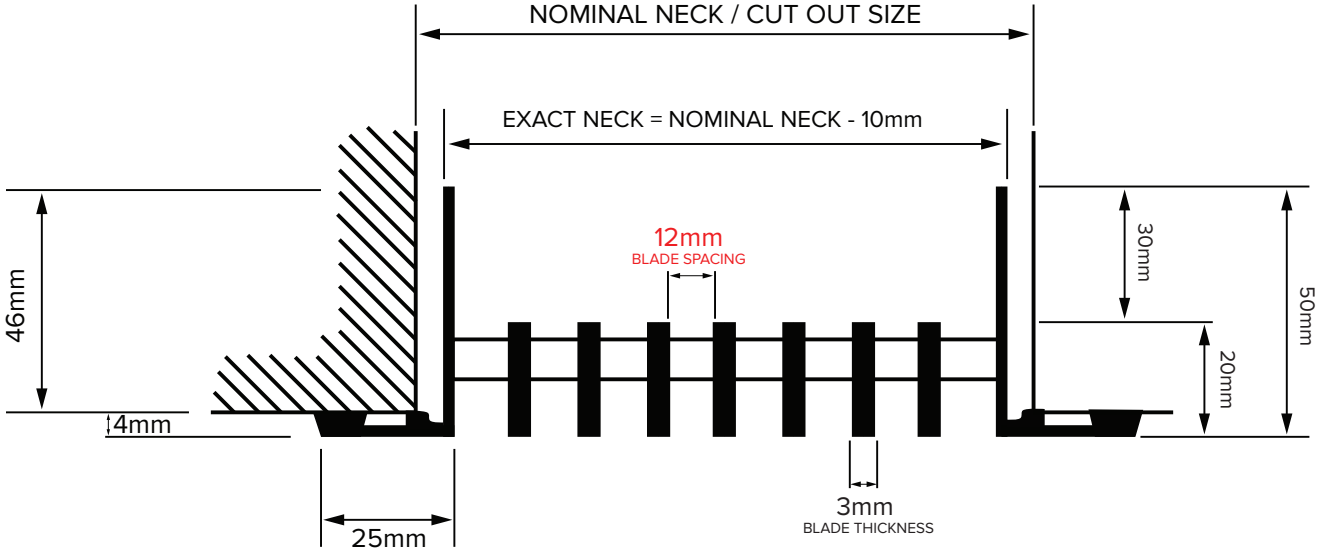
LINEAR BAR GRILLE
LBG-00

PRODUCT SPECIFICATIONS AND INFORMATION

- **Product ordering code – LBG-00**
- Australian Made and Designed
- Supply and Return Air application
- Aluminium Construction
- Manufactured to any size
- 25mm frame
- 50mm deep frame
- 20mm x 3mm blade
- 0° Flat Bar blade maximising horizontal throw capacity
- 12mm blade spacing as standard (alternate blade spacing available)
- Blades are held via an aluminium spaced tube supporting mullion
- Wall mounted installation
- Can be manufactured to suit a 90° mitred internal or external wall or ceiling corner
- Powder-coated standard white or in our Natural Anodised silver finish
- Special powder-coating colours available upon request
- Product suitable for all domestic and commercial settings where the even distribution of air is paramount
- Airfoil tested information available
- **The following metric performance data has been derived from exhaustive testing in elaborate laboratories of acoustic and vibrational engineers Louis A. Challis and Associates Proprietary Limited. Darling Street, Sydney 2000**

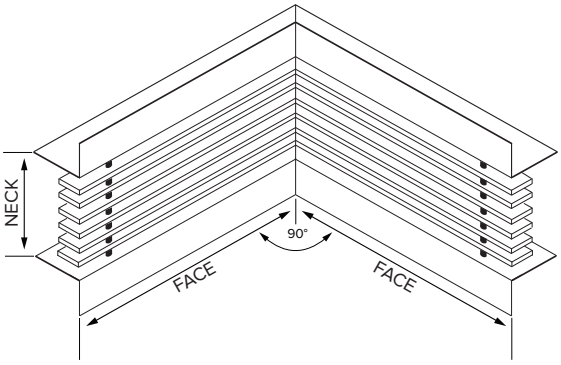
LINEAR BAR GRILLE
LBG-00

CROSS SECTIONAL DIAGRAM

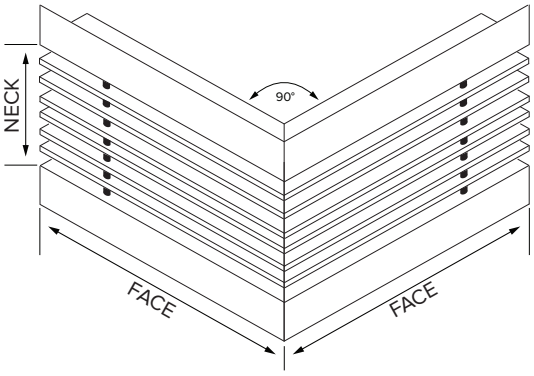


LINEAR BAR GRILLE
LBG-00

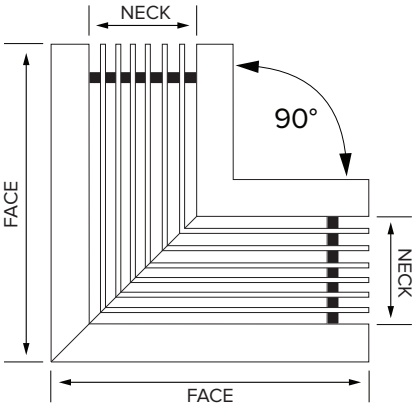
LINEAR BAR GRILLE MITRED OPTIONS



90° INTERNAL WALL CORNER

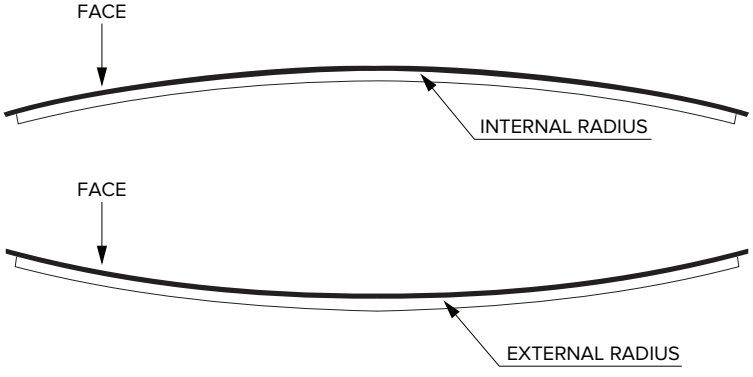


90° EXTERNAL WALL CORNER



90° MITRED CEILING CORNER

CURVED LINEAR BAR GRILLE RADIUS OPTION



LINEAR BAR GRILLE
LBG-00

PERFORMANCE DATA – SUPPLY AIR

Neck Size	Total Pressure (pa)	3	5	9	14	20	27	36	45
50mm	Lit/sec/metre	34	51	68	85	100	110	130	150
	Throw min/max (m)	1.2-2.4	2.1-4.3	3-5.8	3.9-7.2	4.8-8.4	5.7-9.4	6.3-10.1	6.6-10.8
	Noise Rating NR	-	14	15	21	26	30	34	37
75mm	Lit/sec/metre	58	89	110	140	170	200	230	270
	Throw min/max (m)	2.1-3.6	3.0-5.0	4.5-6.7	5.4-8.4	6.6-9.4	8.1-10.8	9.0-12.2	10.5-13.7
	Noise Rating NR	-	-	14	20	25	29	33	36
100mm	Lit/sec/metre	86	120	170	210	250	300	340	380
	Throw min/max (m)	2.7-3.8	4.5-6.0	5.7-7.7	7.2-9.1	9.0-10.8	9.9-12.2	10.8-13.4	12.6-15.4
	Noise Rating NR	-	-	15	21	26	30	34	37
150mm	Lit/sec/metre	130	210	270	340	410	480	550	620
	Throw min/max (m)	4.3-5.5	6.4-7.3	7.8-8.8	9.8-10.6	11.7-12.5	13.6-14.3	14.7-15	16.6-16.8
	Noise Rating NR	-	-	21	22	27	31	35	38

Sound values are based on a room absorption of 8 dB, re 10^{-12} watts for an active length of **3 metres.**
Horizontal Throw distances indicated are terminal velocities of 0.25 and 0.75 metres per second for an active length of **3 metres.** The following corrections for length should be made.

Active length in metres NR	0.3 *subtract 9*	0.6 *subtract 7*	1.2 *subtract 4*	2 *subtract 1*	3 *table value*	4 *add 1*	6 *add 3*
Throw at term vel. .075 Throw at term vel. .025	multiply throw by 0.3 multiply throw by 0.6		multiply throw by 0.7 multiply throw by 0.8		table values table values		

When used as a **Return Air Grille** the following corrections should be made.
1. NR value increases by 4.
2. Negative Static Pressure = Total Pressure (shown in the table) x 0.8

LINEAR BAR GRILLE
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PERFORMANCE DATA – SUPPLY AIR

Neck Size	Total Pressure (pa)	5	10	20	30	40	50	60	70
100mm	Lit/sec/metre	140	210	300	360	415	470	520	565
	Throw (m) 0.25m/s to 0.75m/s	3.3-5.9	4.4-7.2	6.4-9.6	7.8-11.5	9-13.5	10.5-15	12-15.5	13.5-16
	Noise Rating NR	<15	<15	28	32	37	40	44	46
150mm	Lit/sec/metre	230	320	460	575	670	750	820	900
	Throw (m) 0.25m/s to 0.75m/s	4.5-6.5	6-8	8.5-11.5	9.9-13	11-14.5	12-16	13.5-17	15-19
	Noise Rating NR	<15	<15	28	32	38	41	44	48
200mm	Lit/sec/metre	310	400	565	680	785	865	950	1020
	Throw (m) 0.25m/s to 0.75m/s	3.2-6.5	4.7-9.2	6.4-13	8.5-15.5	9-18.5	9.5-19.5	10.5-21	11.5-23
	Noise Rating NR	<15	28	37	40	43	46	47	50
250mm	Lit/sec/metre	425	530	760	920	1035	1150	1270	1400
	Throw (m) 0.25m/s to 0.75m/s	2.9-5.5	4.5-9	6.5-13	8-15.5	10.5-18.5	11-20	12-23	13-25
	Noise Rating NR	21	31	37	40	44	46	48	51
300mm	Lit/sec/metre	505	690	920	1210	1380	1550	1650	1820
	Throw (m) 0.25m/s to 0.75m/s	3.5-6.5	5.2-10	6.8-13.5	8.4-16.5	10.5-21	12-23	13-25	13.5-26
	Noise Rating NR	21	26	36	40	43	46	47	52
400mm	Lit/sec/metre	665	860	1150	1400	1625	1850	2025	2170
	Throw (m) 0.25m/s to 0.75m/s	3.5-6.5	5-10	8-15	9-17	11-21	12-24	13-26	14-28
	Noise Rating NR	21	26	36	40	43	46	47	52

Horizontal Throw distances indicated are terminal velocities of 0.25 and 0.75 metres per second for an active length of **1.2 metres.**

For Return or Exhaust air, Pressure drop and Noise levels may be calculated by using the following formula.
Static Pressure Drop - Return Air = Static Pressure (Pa) X 1.5 & NR Return Air = NR + 9