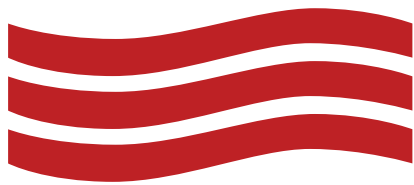


# AIRFOIL

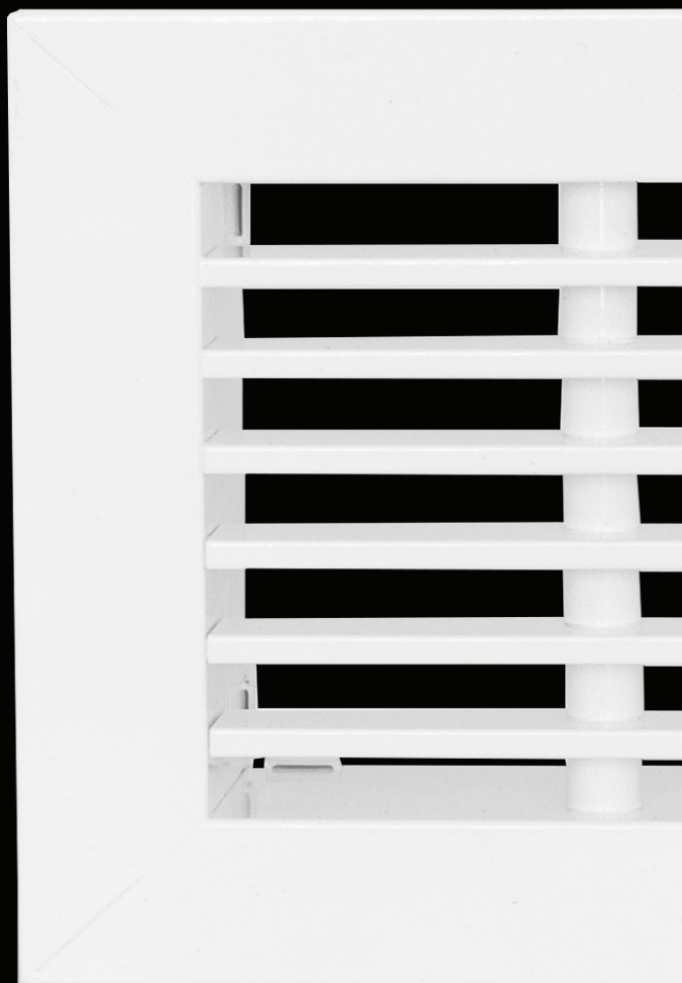


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**LINEAR BAR GRILLE**  
**LBG-15**



## LINEAR BAR GRILLE LBG-15

### PRODUCT DESCRIPTION AND APPLICATION

Airfoil's Australian Made and designed Linear Bar Grille LBG-15 stands as an architectural marvel and represents Airfoil's pinnacle in aesthetics and demand. Crafted from premium aluminium extruded profiles, the LBG-15 boasts unparalleled versatility, with customisable sizing to suit any requirement. While commonly utilised for Supply Air Functions, it also excels in Return Air applications.

At its core, the Linear Bar Grille LBG-15 showcases a refined 20mm blade, meticulously spaced at our standard 12mm pitch. This distinctive feature includes a 15° kick integrated into each blade, optimising its horizontal throw capacity while maintaining a balanced airflow pattern across the designated area.

The streamlined blade system is supported by a round aluminium spaced tube, ensuring robustness and stability. Secured to the grille's outer frame through a robust industrial riveting system, this arrangement guarantees structural integrity.

With its sleek 25mm frame, complemented by a depth of 50mm, the LBG-15 exudes an attractive aesthetic. Custom powder-coating options are available upon request, further enhancing its architectural appeal. This versatile grille finds its ideal application in both domestic and commercial settings, where precise horizontal air distribution is paramount.

## LINEAR BAR GRILLE LBG-15

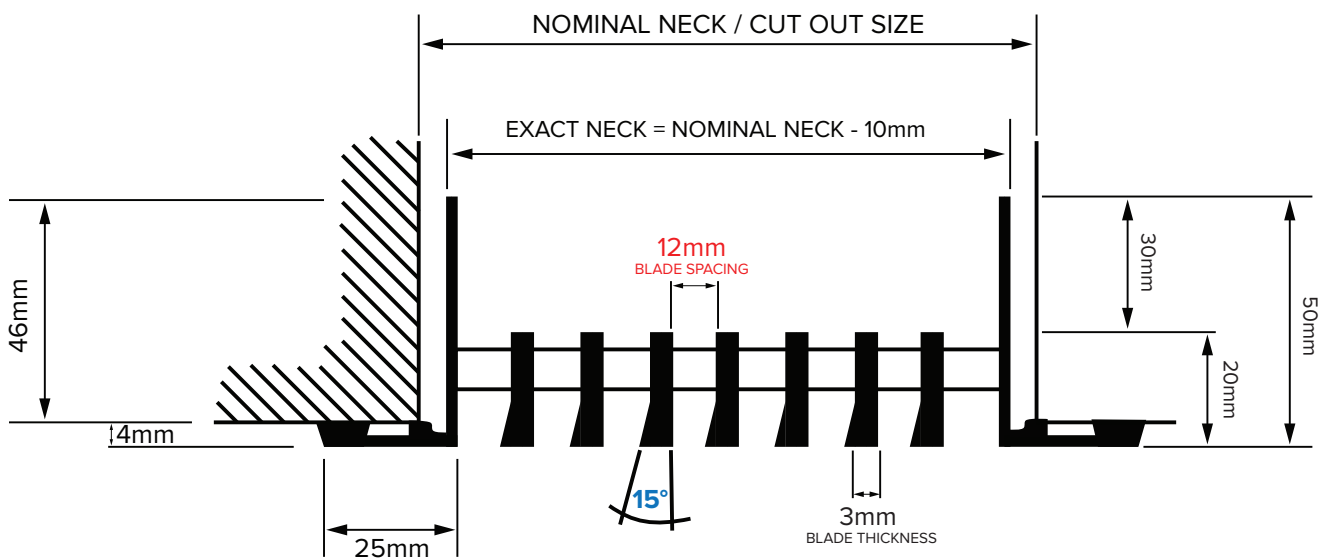
### PRODUCT SPECIFICATIONS AND INFORMATION

- **Product ordering code – LBG-15**
- Australian Made and Designed
- Supply and Return Air application
- Aluminium Construction
- Manufactured to any size
- 25mm frame
- 50mm deep frame
- 20mm x 3mm blade
- Unique 15° kick bar grille 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-15

### CROSS SECTIONAL DIAGRAM

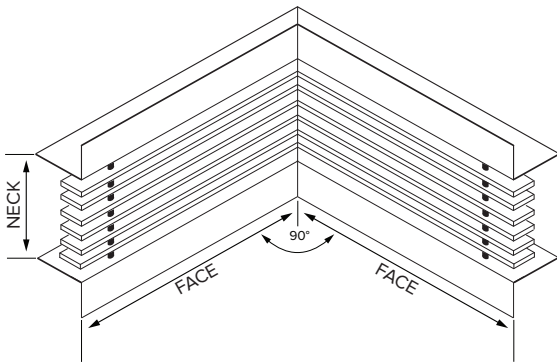


#### DISCLAIMER:

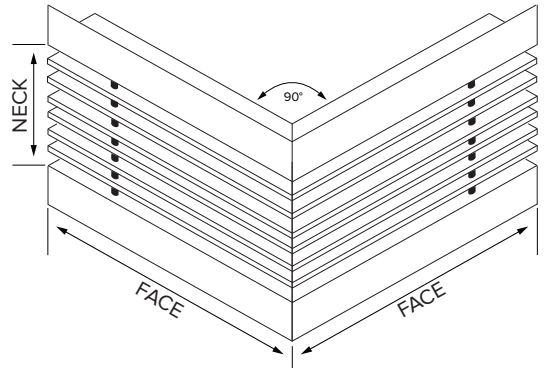
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## LINEAR BAR GRILLE LBG-15

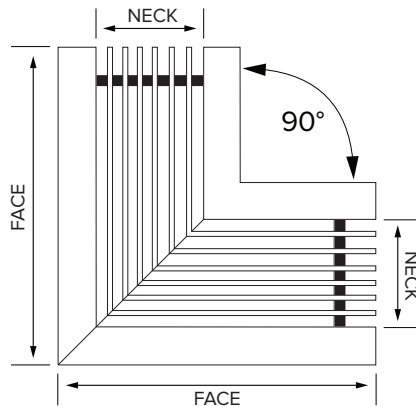
### LINEAR BAR GRILLE MITRED OPTIONS



90° INTERNAL WALL CORNER

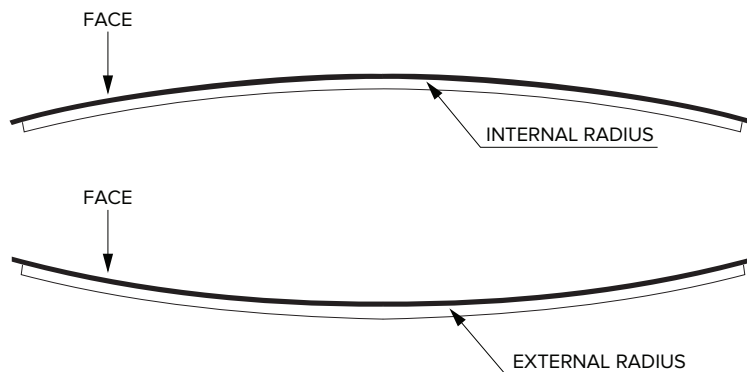


90° EXTERNAL WALL CORNER



90° MITRED CEILING CORNER

### CURVED LINEAR BAR GRILLE RADIUS OPTION



## LINEAR BAR GRILLE LBG-15

### PERFORMANCE DATA – SUPPLY AIR

Neck Size	Total Pressure (pa)	3	5	9	14	20	27	36	45
50mm	Lit/sec/metre	34	52	69	86	100	130	150	170
	Throw min/max (m)	1.2-2.4	2.1-4.3	3-5.8	3.9-7.2	4.8-8.4	5.4-9.1	6.3-9.8	6.6-10.8
	Noise Rating NR	-	14	22	28	33	38	42	46
75mm	Lit/sec/metre	57	86	110	140	170	200	230	250
	Throw min/max (m)	1.8-3.1	3.0-5.0	4.5-6.5	5.4-7.9	6.6-9.4	8.1-10.8	9.0-12	10.5-13.4
	Noise Rating NR	-	-	20	26	31	36	40	44
100mm	Lit/sec/metre	86	120	160	200	240	280	320	360
	Throw min/max (m)	2.7-3.8	3.9-5.8	5.7-7.7	6.6-8.6	8.4 - 10.6	9.9-12.0	10.5-13.4	11.7-14.4
	Noise Rating NR	-	13	21	27	32	37	41	45
150mm	Lit/sec/metre	130	200	260	330	400	460	520	600
	Throw min/max (m)	4.3-5.2	6.4-7.3	7.8-8.8	9.8-10.2	11.4-11.8	12.2-13.2	13.2-14.3	15.2-15.7
	Noise Rating NR	-	13	21	27	32	37	41	45

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	multiply throw by 0.3		multiply throw by 0.7		table values		
Throw at term vel. .025	multiply throw by 0.6		multiply throw by 0.8		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 LBG-15

### 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**