AIRFOIL

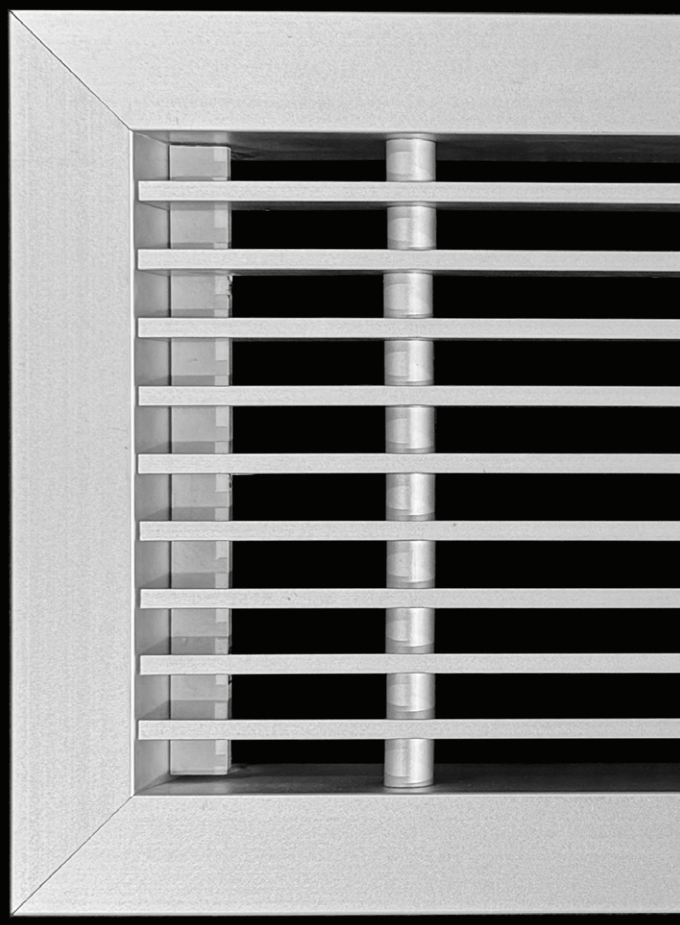
GRILLES
DUCT
FITTINGS

making it happen sooner...

AUSTRALIAN MADE
AND OWNED

Quality System™

Quality
Endorsed
Company
ISO 9001
SAI GLOBAL



WALK ON FLOOR GRILLE
BGF-00

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PRODUCT DESCRIPTION AND APPLICATION

Airfoil's Australian Made and designed Walk-On Floor Grille BGF-00 serves both supply and return air functions with seamless efficiency when installed on the floor. Crafted with precision from premium-grade aluminium, the Floor Grille stands as a testament to durability, boasting an impressive weight capacity of up to 150kg. Featuring a 50mm Deep frame with a unique 25mm return angle for easy installation.

The 0° flat bar blades are securely held in place by a robust 20mm x 12mm x 3mm welded angle, fortified further by intersecting security rods meticulously bolted to the frame. This meticulous construction not only guarantees stability but also enhances the grille's resilience to withstand the rigors of everyday use.

For applications requiring return air functionality, the option to incorporate a filter ensures the purity of the air distribution system, maintaining an environment of pristine cleanliness.

In addition to its functional superiority, the Walk-On Floor Grille (BGF-00) also excels in aesthetic appeal. Available in a myriad of finishes, including a powder-coat in any Dulux colour or a Natural Anodised option, it seamlessly integrates into any design scheme. Its sleek, contemporary appearance effortlessly marries form with function, elevating the ambiance of any space while embodying exceptional strength and style.

WALK ON FLOOR GRILLE
BGF-00

PRODUCT SPECIFICATIONS AND INFORMATION

- **Product ordering code – BGF-00**
- Australian Made and Designed
- Supply and Return Air application
- Aluminium Construction
- Floor installation
- Manufactured to any size
- 25mm frame
- 50mm deep frame
- 20mm x 3mm blades
- 0° Flat Bar blade maximising horizontal throw capacity
- 150kg weight capacity
- 12mm blade spacing as standard (alternate blade spacing available)
- Blades are held by robust 20mm x 12mm x 3mm welded angle
- Optional filter available
- 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**

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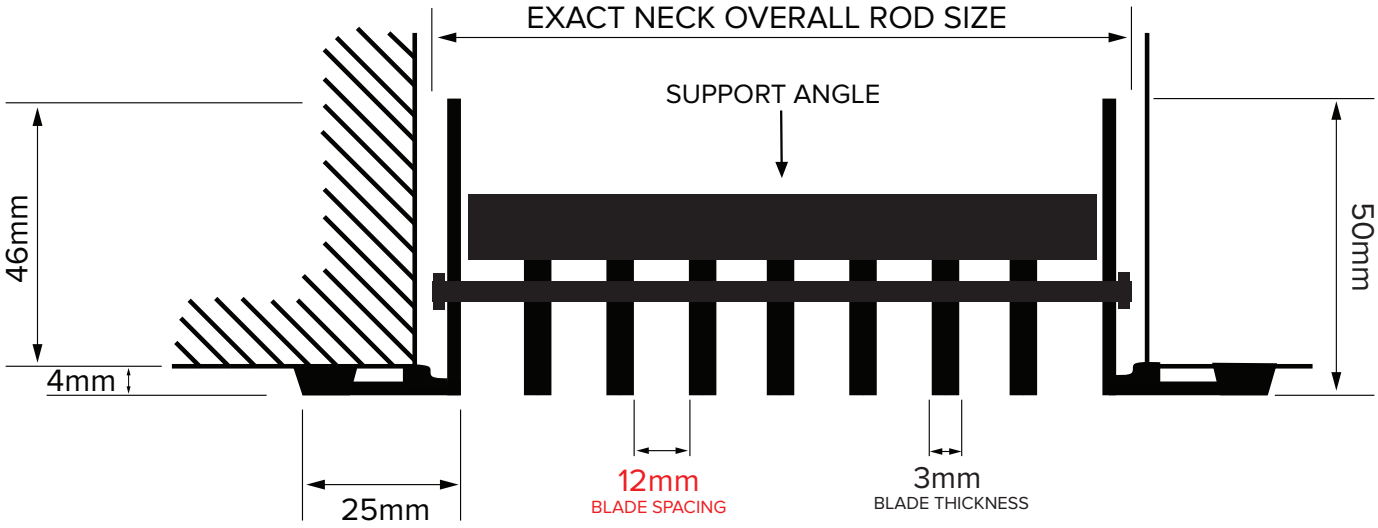
CROSS SECTIONAL DIAGRAM



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WALK ON FLOOR GRILLE
BGF-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

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BGF-00

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