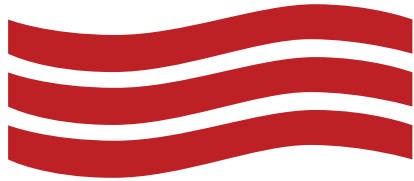


AIRFOIL



GRILLES
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FITTINGS

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 SAI GLOBAL



**SLIMLINE LINEAR BAR GRILLE
/ PLASTER MOUNTING FRAME
S-LBG-P-00**



SLIMLINE LINEAR BAR GRILLE / PLASTER MOUNTING FRAME S-LBG-P-00

PRODUCT DESCRIPTION AND APPLICATION

Proudly Australian-made and designed, the Slimline Linear Bar Grille with Plaster Mounting Frame by Airfoil is a premium architectural solution, combining functionality with striking aesthetics. Precision-engineered from high-quality aluminium extruded profiles, this grille can be custom-manufactured to suit a wide range of dimensions and applications.

Primarily designed for supply air functions, it also offers versatility as a return air option. Its defining feature is the sleek 10mm Slimline Flange, housing 20mm x 3mm flat bar blades set at a 12mm pitch. The zero-degree flat bar design ensures consistent airflow and maximum horizontal throw, delivering uniform air distribution across targeted spaces.

For strength and durability, the grille incorporates a streamlined blade system supported by a 12mm round aluminium spaced tube mullion, securely fixed to the inner frame with a heavy-duty industrial rivet system. Installation is fast and efficient thanks to its innovative two-stage system:

1. The clip-in Plaster Mounting Frame is fitted to the furring channel prior to the plasterboard construction
2. The Linear Bar Grille simply clicks into place, ensuring a secure, seamless finish.

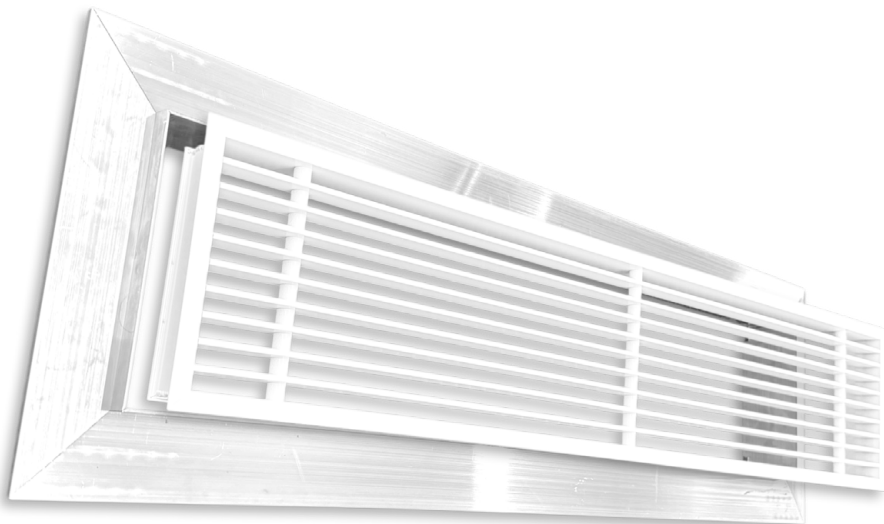
With its minimalist 10mm frame and 50mm plaster mounting depth, this Linear Bar Grille enhances interiors with a clean, refined look.

Additionally, S-LBG-P-00 is available in our standard white powder-coated colour, our Natural Anodised finish or can be powder-coated in a custom colour upon request. Optional sight-proof one-way mesh and black powder-coated spacers are available on request. This versatile architectural feature is suitable for diverse settings, both residential and commercial, where uniform horizontal air distribution is essential.

SLIMLINE LINEAR BAR GRILLE / PLASTER MOUNTING FRAME S-LBG-P-00

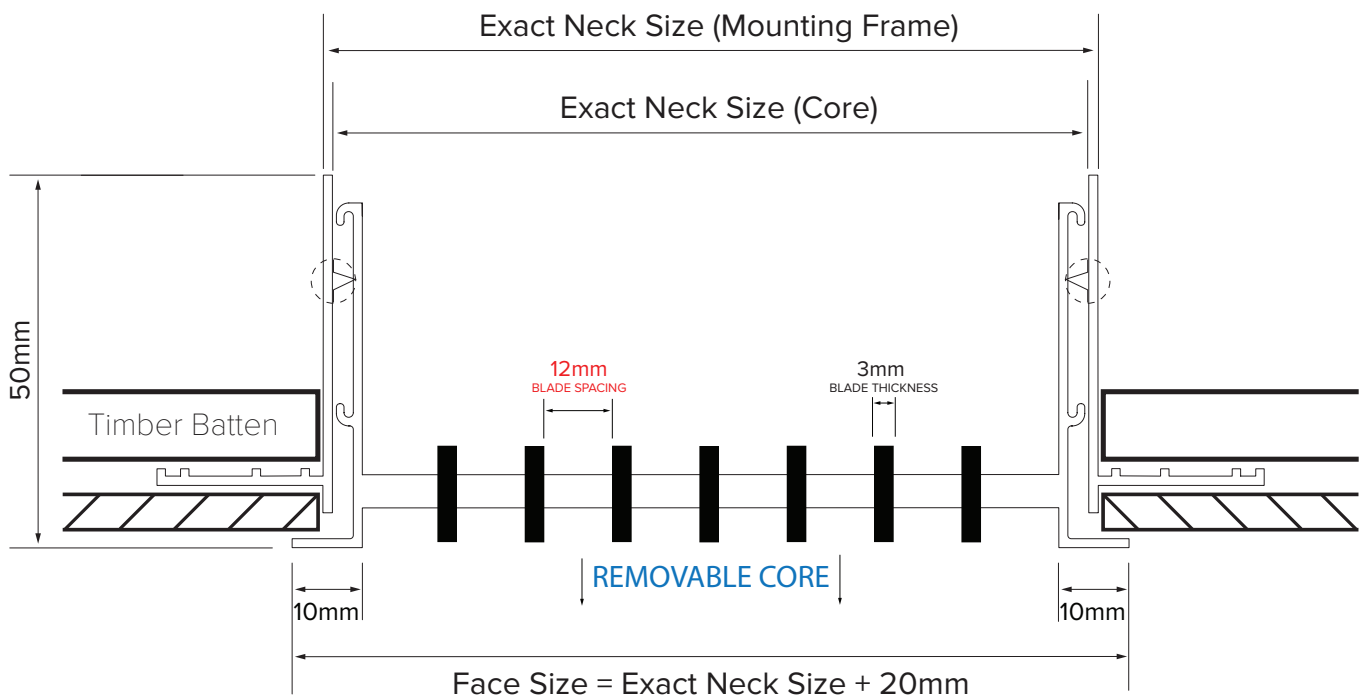
PRODUCT SPECIFICATIONS AND INFORMATION

- **Product ordering code – S-LBG-P-00**
- Australian Made and Designed
- Aluminium construction
- Clip in Plaster Mounting Frame
- Suitable for 13mm gyprock
- Easy installation
- Used for Supply and Return air applications
- Manufactured to any size
- Complete with Plaster Mounting Frame for easy installation and access
- Removable Core for cleaning and maintenance
- 10mm Slimline frame
- 50mm deep frame
- 20mm x 3mm blade
- Unique 0° flat 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
- Optional black one-way mesh available
- Optional black floating spacers available for architectural touch
- 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-**



SLIMLINE LINEAR BAR GRILLE / PLASTER MOUNTING FRAME S-LBG-P-00

CROSS SECTIONAL DIAGRAM



DISCLAIMER:

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SLIMLINE LINEAR BAR GRILLE / PLASTER MOUNTING FRAME S-LBG-P-00

DELUXE ARCHITECTURAL OPTIONS

Explore Airfoil's Exclusive Australian-Made and Designed "Deluxe Architectural Options", an unparalleled and luxurious addition to our Linear Bar Grille collection. These deluxe features elevate the simple Bar Grille into an architectural masterpiece, setting a new standard in grille manufacturing.

OPTION 1 – S-LBG-P-00 – BLACK SPACERS

Nestled within the core of the Slimline Linear Bar Grille are meticulously crafted aluminium spacers, spaced at a 12mm interval. This initial option presents the opportunity for individual aluminium spacers to be powder-coated in Satin Black. Against the backdrop of our White or Natural Anodised Silver bar grille blades, these exquisitely designed black spacers create the illusion that the blades are gracefully suspended within the grille's core.

OPTION 2 – S-LBG-P-00 – BLACK ONE WAY MESH

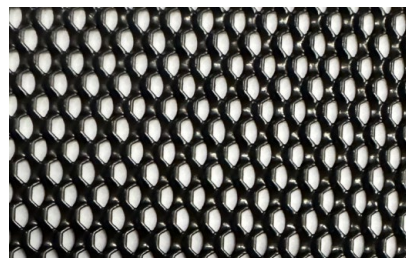
Furthermore, our Slimline Linear Bar Grille can be fitted with our sumptuous 0.6mm powder-coated Satin Black "Sight Proof One Way Mesh." This premium mesh, meticulously fitted to the rear of the grille, restricts visibility through the bar grille blades, offering both functionality and elegance.

OPTION 3 – S-LBG-P-00 – BLACK SPACERS AND BLACK ONE WAY MESH

For the ultimate refinement, the Slimline Linear Bar Grille can be adorned with "both" our premium Satin Black Spacers and our Satin Black One Way Mesh. The fusion of these deluxe features allows the bar grille blades to command attention, enhancing the illusion of architectural suspension within the grille. This combination epitomises opulence, contemporary design, and exclusivity, making it the premier choice, available exclusively from Airfoil.



12MM FLOATING BLACK SPACERS

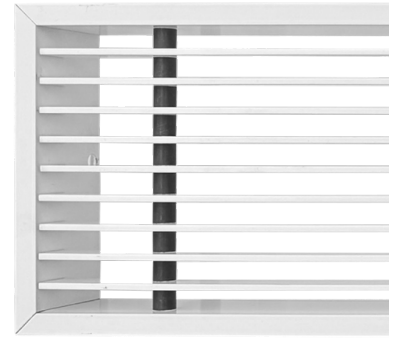
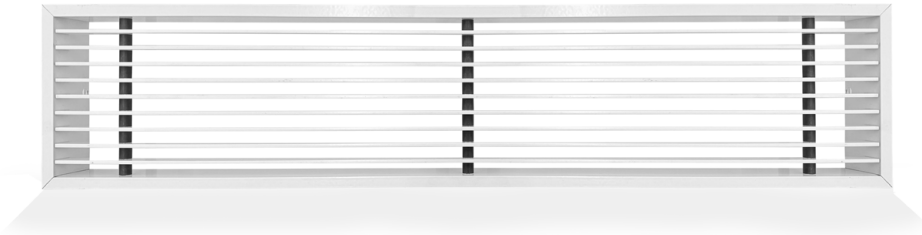


**BLACK ONE WAY MESH
23%-36% OPEN AREA**

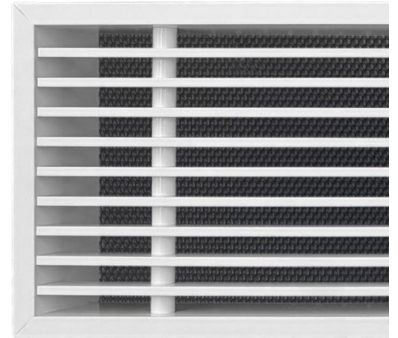
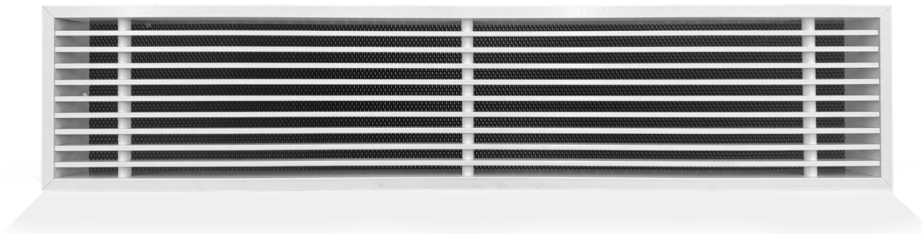
SLIMLINE LINEAR BAR GRILLE / PLASTER MOUNTING FRAME S-LBG-P-00

DELUXE ARCHITECTURAL OPTIONS – WHITE POWDER COATED

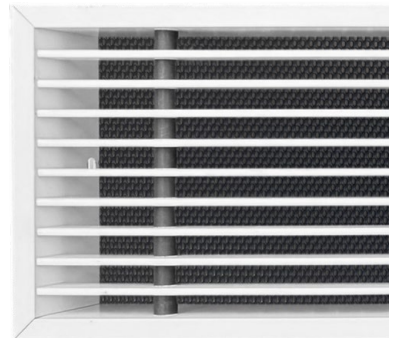
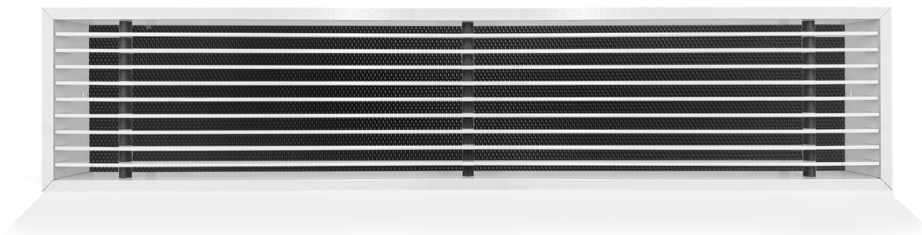
OPTION 1 – S-LBG-P-00 – BLACK SPACERS



OPTION 2 – S-LBG-P-00 – BLACK ONE WAY MESH



OPTION 3 – S-LBG-P-00 – BLACK SPACERS / BLACK ONE WAY MESH

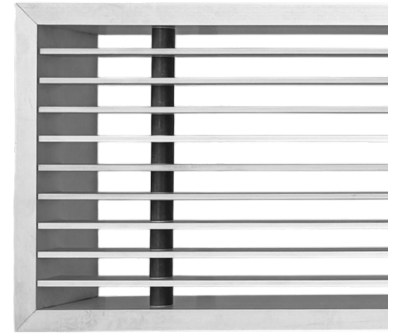
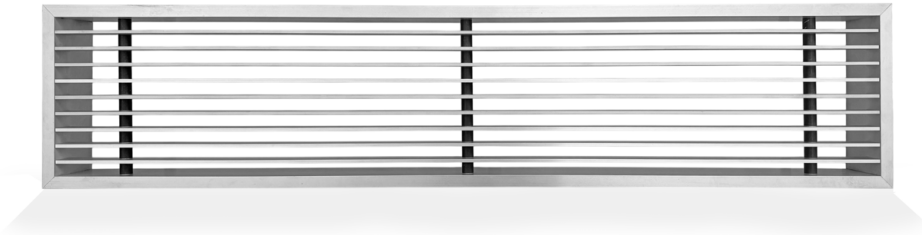


Our Slimline Linear Bar Grilles can be powder coated to any specific colour on request*

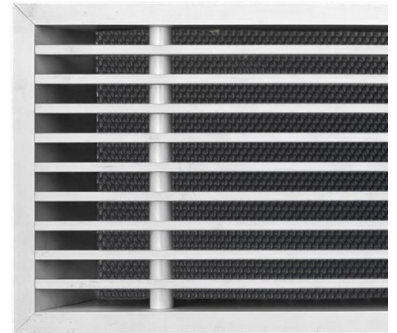
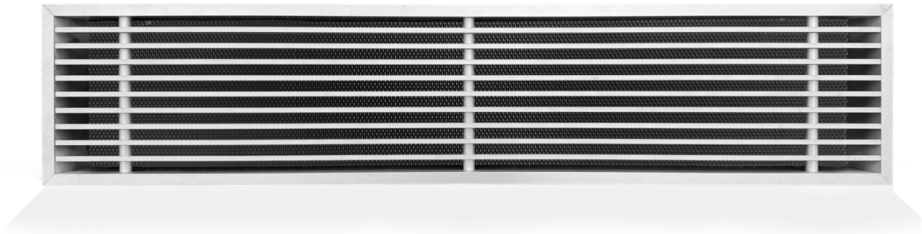
SLIMLINE LINEAR BAR GRILLE / PLASTER MOUNTING FRAME S-LBG-P-00

DELUXE ARCHITECTURAL OPTIONS – NATURAL ANODISED

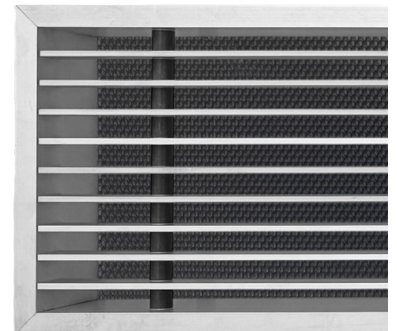
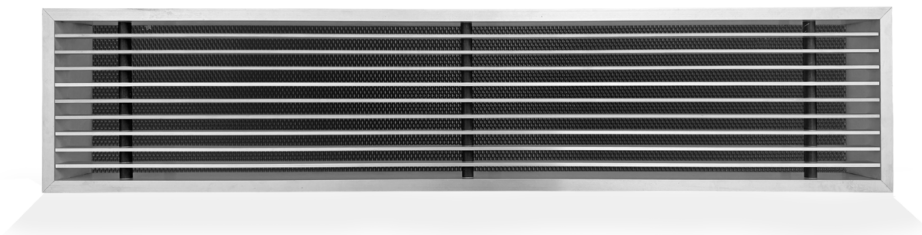
OPTION 1 – S-LBG-P-00 – BLACK SPACERS



OPTION 2 – S-LBG-P-00 – BLACK ONE WAY MESH



OPTION 3 – S-LBG-P-00 – BLACK SPACERS / BLACK ONE WAY MESH



SLIMLINE LINEAR BAR GRILLE / PLASTER MOUNTING FRAME S-LBG-P-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 | 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

SLIMLINE LINEAR BAR GRILLE / PLASTER MOUNTING FRAME S-LBG-P-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