

Hideaway^{SH}



In-line **Centrifugal Fans**

Hideaway SH - In-Line

Features & Benefits



The Hideaway SH is a range of duct mounted in-line centrifugal fans designed specifically for installations where space is at a premium and noise levels are an important design criteria.

- 6 standard sizes from 100mm to 315mm.
- Air volume flow rates of up to 0.33 m³/sec.
- Static pressures of up to 500 Pa.
- Motors are external rotor, protected to IP44 with Class B Insulation.
- Single inlet backward curved impellers.
- Low noise levels.
- Suitable for ambient operating temperatures of up to 50° C.
- Easy to install.
- Overcomes space restraints.
- Fully speed controllable.
- Robust galvanised sheet steel housing, acoustically lined.
- Extensive range of stock is available.
- Suitable for ducted extract or supply systems.
- Low profile.

Features & Benefits

Design appeal - Ideal for very shallow ceiling voids and / or where space is at a premium.

Low noise – Each unit is acoustically lined, therefore the breakout noise levels are low.

Ease of installation – All models are designed for direct connection to standard diameter flexible or rigid circular ducting with 50 mm long spigots for ease of connection.

Performance – The single inlet, single width backward curved centrifugal impellers are directly driven by an external rotor motor, designed to be non overloading and provide high performance characteristics.

Easy maintenance – Access to the fan and motor is by an easily removable panel for maintenance when required.

Material Strength - A robust, yet lightweight unit with a galvanised sheet steel casing which is lined with flame retardant acoustic lining on the inlet for improved sound capabilities.

Reliability – Motors have sealed for life bearings.

Mounting – Each unit is supplied with integral mounting brackets.

Motor protection – All SH units have integral thermal overload protection which prevents the motor from overheating.

Tested to the very latest standards – SH units are tested to ISO 5801:1997 (airside performance) and to BS 848 Pt 2:1985 (sound performance) at Elta Fans own test facility, meaning accurate, up to date information on performance and noise data that can be relied upon.

Quality assurance – All units are designed and manufactured with procedures as defined in BS EN ISO 9001: 2000.

Warranty – Each SH has a 12 month warranty.

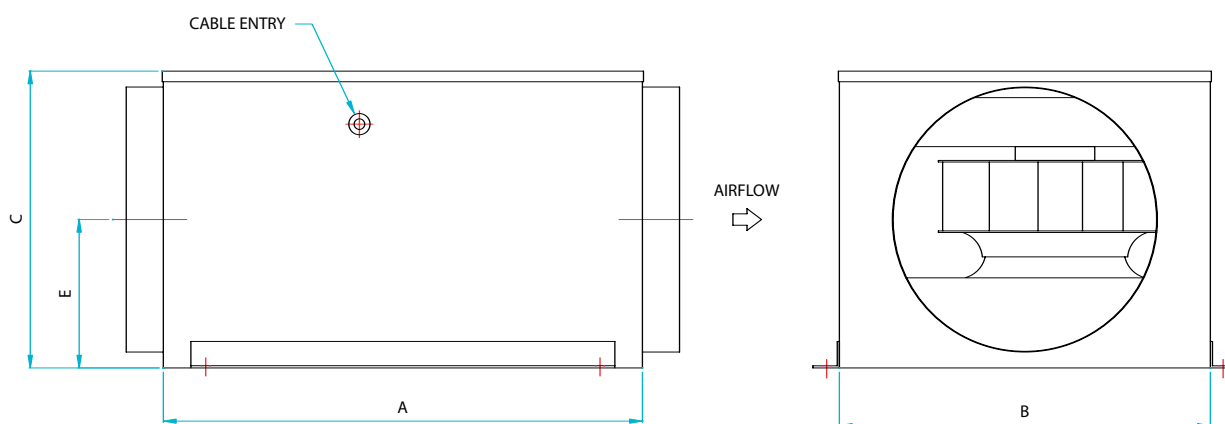
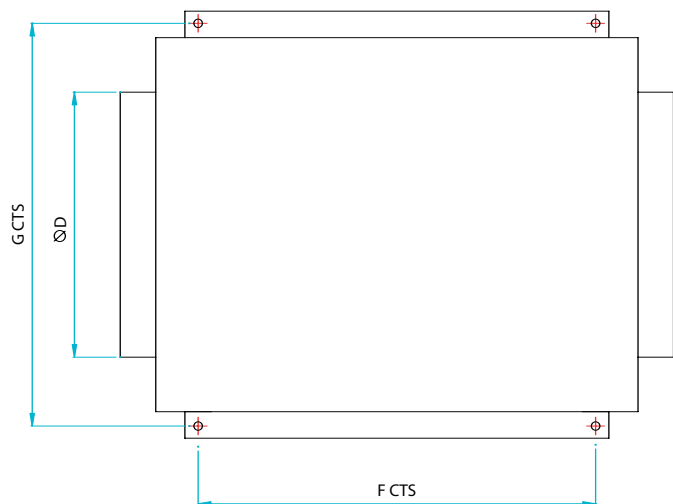
Full accessory range - Speed controllers, fast clamps, electric heater batteries, silencers, panel filters, flexible connectors and non return dampers.

Applications

Bathroom and kitchen extract in apartments, hotels, residential properties, libraries and offices.

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Dimensional Data



| Product Code | A | B | C | D | E | F | G | Weight kg |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----------|
| SH100A-L | 400 | 300 | 166 | 100 | 83 | 320 | 270 | 10 |
| SH125A-L | 400 | 300 | 166 | 125 | 83 | 320 | 270 | 10 |
| SH150A-L | 400 | 300 | 182 | 150 | 91 | 320 | 270 | 11 |
| SH200A-L | 427 | 350 | 230 | 200 | 115 | 347 | 320 | 14 |
| SH250A-L | 452 | 350 | 280 | 250 | 140 | 372 | 320 | 16 |
| SH315A-L | 430 | 400 | 340 | 315 | 170 | 350 | 370 | 20 |

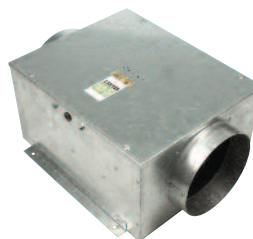
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Accessories



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Performance & Electrical Data



SINGLE Phase - 220V-240V / 50Hz

| Product Code | Speed r/min | Airflow m ³ /s @ Static Pressure Pa. | | | | | | | | | | Motor Electrical Data | | | Speed Control | In-Duct Sound Level dBA @ 3m | Breakout Sound Level dBA @ 3m |
|--------------|-------------|-------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------------------|---------|-------------|---------------|------------------------------|-------------------------------|
| | | 0 | 50 | 100 | 150 | 200 | 250 | 300 | 400 | 500 | 600 | FLC Amps | SC Amps | Input Watts | | | |
| SH100A-L | 2450 | 0.070 | 0.064 | 0.056 | 0.051 | 0.048 | 0.041 | 0.030 | 0.008 | | | 0.34 | 0.51 | 0.075 | EL21 | 39 | 36 |
| SH125A-L | 2350 | 0.115 | 0.096 | 0.082 | 0.068 | 0.056 | 0.045 | 0.028 | | | 0.34 | 0.51 | 0.077 | EL21 | 41 | 35 | |
| SH150A-L | 2380 | 0.117 | 0.103 | 0.092 | 0.078 | 0.063 | 0.048 | 0.030 | | | 0.35 | 0.51 | 0.078 | EL21 | 41 | 37 | |
| SH200A-L | 2750 | 0.185 | 0.175 | 0.162 | 0.150 | 0.137 | 0.121 | 0.105 | 0.088 | 0.070 | 0.58 | 1.40 | 0.130 | EL21 | 47 | 38 | |
| SH250A-L | 2500 | 0.246 | 0.230 | 0.210 | 0.191 | 0.173 | 0.152 | 0.130 | 0.110 | 0.085 | 0.70 | 1.30 | 0.160 | EL21 | 53 | 47 | |
| SH315A-L | 2150 | 0.330 | 0.300 | 0.270 | 0.238 | 0.208 | 0.180 | 0.155 | 0.130 | 0.110 | 0.070 | 0.87 | 1.30 | 0.200 | EL21 | 53 | 44 |

Sound levels are average spherical free field values at 50% peak pressure for comparative purposes only.

Silencer Data

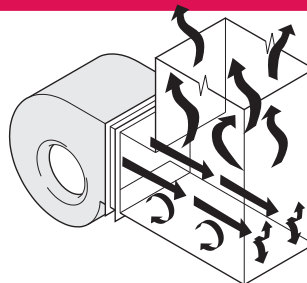
| Product Code | dBA Attenuation | | | |
|--------------|-----------------|------|------|-------|
| | 300L | 600L | 900L | 1200L |
| SH100A-L | -14 | -20 | -26 | -28 |
| SH125A-L | -11 | -17 | -22 | -25 |
| SH150A-L | -11 | -17 | -21 | -23 |
| SH200A-L | -10 | -15 | -19 | -22 |
| SH250A-L | -11 | -15 | -18 | -21 |
| SH315A-L | -12 | -14 | -17 | -19 |

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Bends on fan discharge

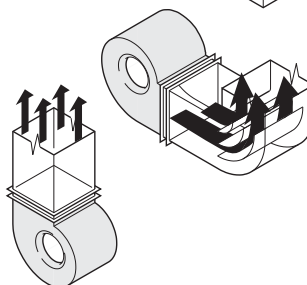
DO NOT!

Air moves faster at the outside of the fan housing and is not evened out before striking the abrupt bend. A very high pressure loss results.



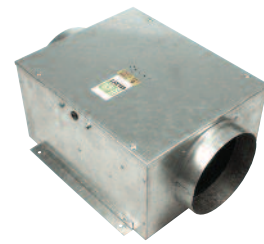
DO!

Improved discharge arrangement with radiused bends and splitters or different fan mounting position will reduce system losses. Bends should 'rotate' in the same direction as the impeller.



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Sound Data



SH - SINGLE Phase

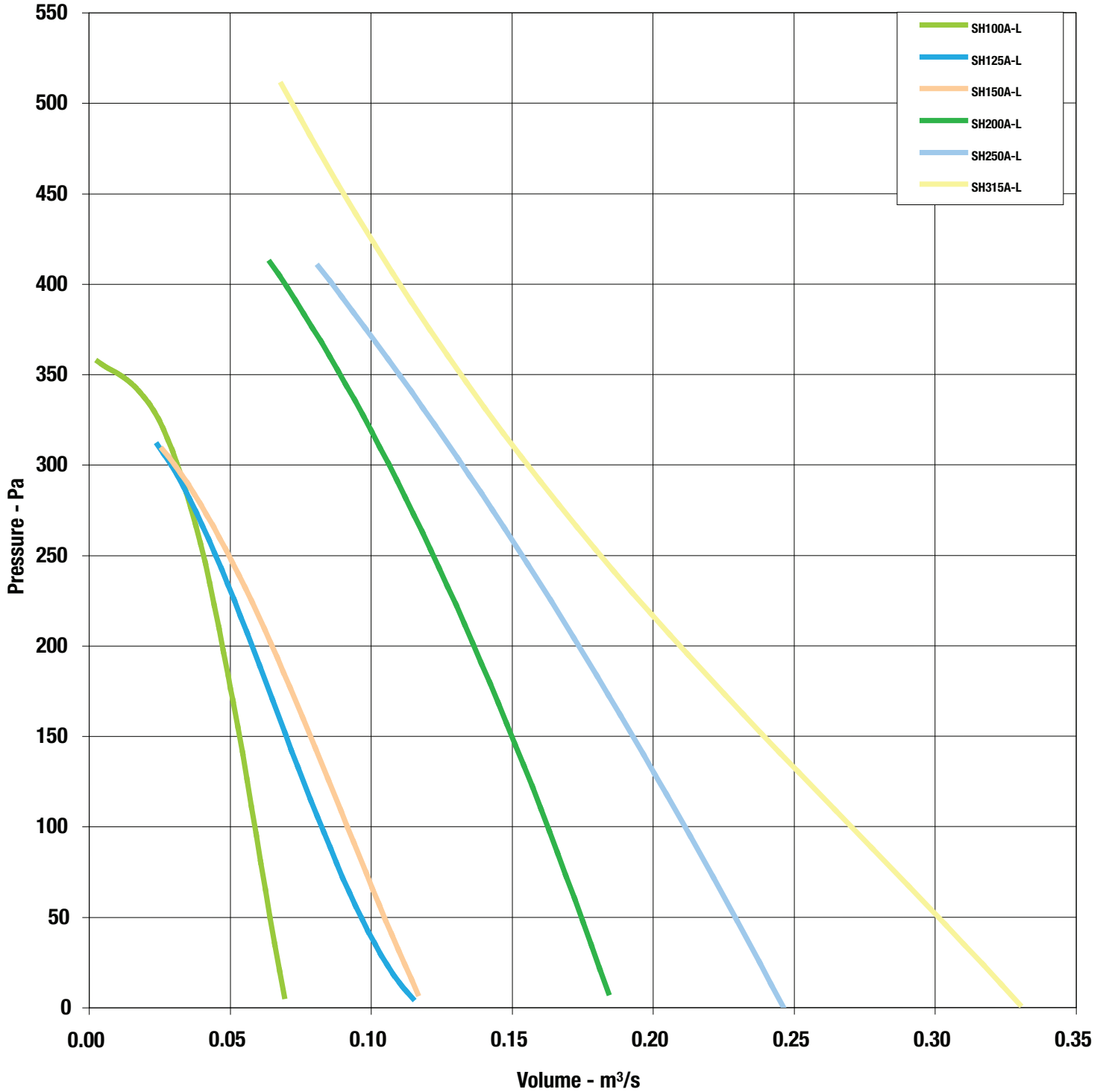
| Product Code | 63Hz | 125Hz | 250Hz | 500Hz | 1kHz | 2kHz | 4kHz | 8kHz | dBA @ 3m |
|--------------|------|-------|-------|-------|------|------|------|------|----------|
| SH100A-L | 59 | 61 | 61 | 62 | 47 | 44 | 37 | 30 | 39 |
| SH125A-L | 60 | 60 | 66 | 63 | 49 | 46 | 41 | 33 | 41 |
| SH150A-L | 60 | 61 | 64 | 62 | 52 | 49 | 45 | 37 | 41 |
| SH200A-L | 67 | 70 | 72 | 68 | 58 | 53 | 50 | 48 | 47 |
| SH250A-L | 69 | 74 | 78 | 74 | 64 | 60 | 58 | 56 | 53 |
| SH315A-L | 67 | 73 | 76 | 73 | 64 | 63 | 61 | 58 | 53 |

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Performance Curves



SH Range

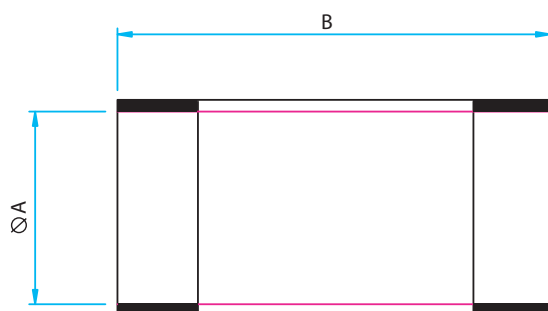


Hideaway SH - In-Line Accessories



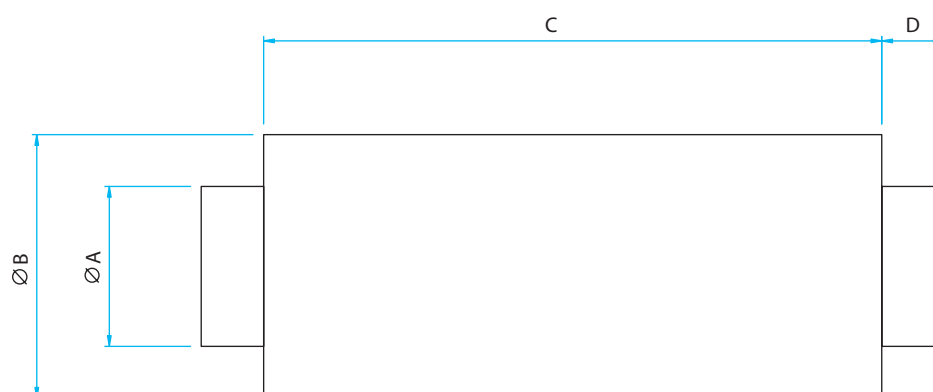
Flexible Connectors

- Fix directly onto spigot
- Provides flexible connection between fan and accessory or duct
- PVC coated polyester with galvanised sheet steel



| Product Code | Fan Dia. A | B | Weight kg |
|---------------|------------|-----|-----------|
| 018-0100-FLEX | 100 | 150 | 0.2 |
| 018-0125-FLEX | 125 | 150 | 0.2 |
| 018-0150-FLEX | 150 | 150 | 0.2 |
| 018-0200-FLEX | 200 | 150 | 0.3 |
| 018-0250-FLEX | 250 | 150 | 0.4 |
| 018-0315-FLEX | 315 | 150 | 0.5 |

Silencers



- For information on silencers and an explanation of the data, see p74
- Pre-galvanised sheet steel with perforated steel lining
- Infill of glass tissue faced high density mineral wool
- For saturated or other special applications please refer to Elta

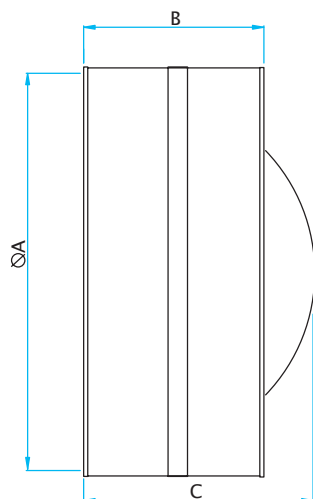
| Product Code | Fan Dia. | A | B | C 1 | C 2 | C 3 | C 4 | D | Weight kg | | | |
|--------------|----------|-----|-----|-----|-----|-----|------|----|-----------|------|------|------|
| | | | | | | | | | 1 | 2 | 3 | 4 |
| 068-0100-JF* | 100 | 98 | 204 | 300 | 600 | 900 | 1200 | 40 | 2.5 | 4.6 | 6.7 | 8.7 |
| 068-0125-JF* | 125 | 123 | 230 | | | | | | 2.9 | 5.4 | 7.8 | 10.2 |
| 068-0150-JF* | 150 | 148 | 255 | | | | | | 3.4 | 6.1 | 8.9 | 11.6 |
| 068-0200-JF* | 200 | 198 | 305 | | | | | | 4.2 | 7.6 | 11.0 | 14.5 |
| 068-0250-JF* | 250 | 248 | 355 | | | | | | 5.0 | 9.1 | 13.2 | 17.3 |
| 068-0315-JF* | 315 | 313 | 420 | | | | | | 6.1 | 11.1 | 16.1 | 21.0 |

* Add 1, 2, 3 or 4 depending on length required.

Hideaway SH - In-Line Accessories



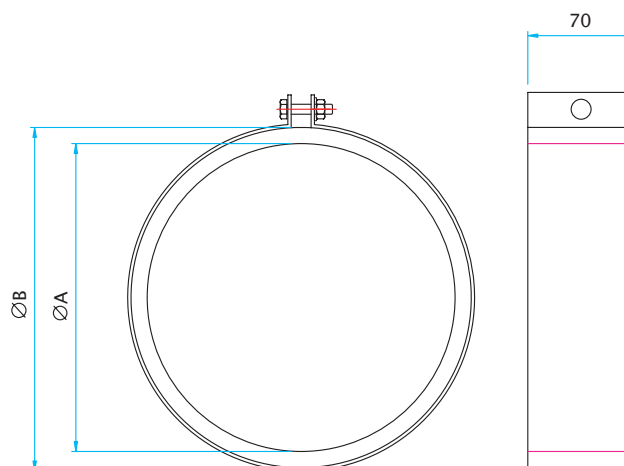
Non Return Dampers



- Prevents reverse flow of air when fan not operating
- Galvanised sheet steel case
- Spring operated, aluminium sheet blades

| Product Code | Fan Dia. A | B | C | Weight kg |
|----------------|------------|-----|-----|-----------|
| 018-100-DAMPER | 100 | 90 | 100 | 0.2 |
| 018-125-DAMPER | 125 | 90 | 100 | 0.3 |
| 018-150-DAMPER | 150 | 90 | 110 | 0.3 |
| 018-200-DAMPER | 200 | 125 | 150 | 0.6 |
| 018-250-DAMPER | 250 | 125 | 190 | 0.6 |
| 018-315-DAMPER | 315 | 125 | 210 | 1.3 |

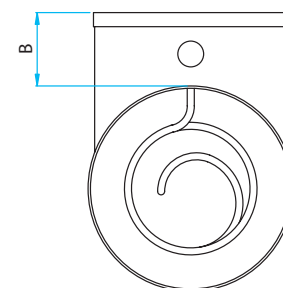
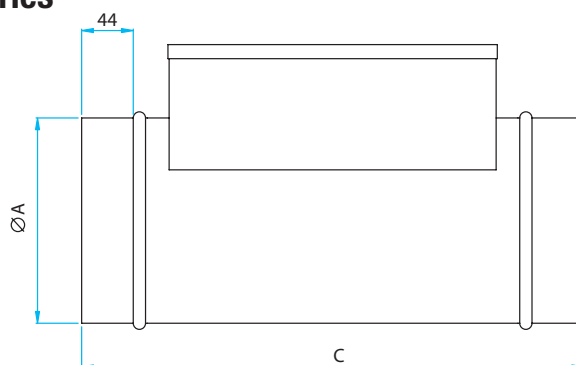
Fast Clamps



| Product Code | Fan Size | A | B | Weight kg |
|---------------|----------|-----|-----|-----------|
| 018-100-CLAMP | 100 | 92 | 116 | 0.25 |
| 018-125-CLAMP | 125 | 117 | 141 | 0.29 |
| 018-150-CLAMP | 150 | 142 | 166 | 0.33 |
| 018-200-CLAMP | 200 | 192 | 216 | 0.42 |
| 018-250-CLAMP | 250 | 242 | 266 | 0.49 |
| 018-315-CLAMP | 315 | 307 | 331 | 0.59 |

- For quick connection of spigotted fans to circular duct or accessories
- Galvanised steel circular duct clamp with foam lining

Electric Heater Batteries



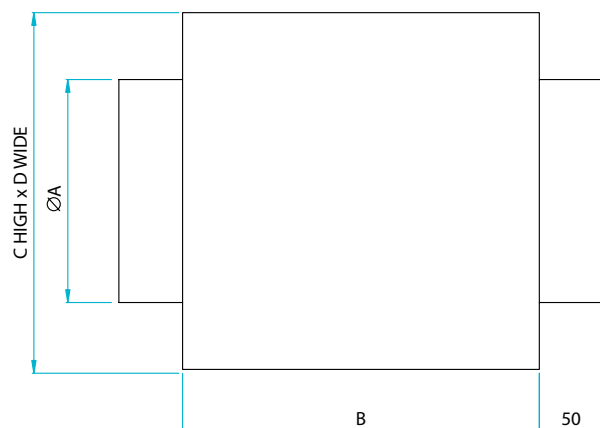
| Product Code | kW | Stage | Phase | Air Flow @ m3/s | | A | B | C | Weight kg |
|------------------|------|-------|-------|-----------------|-------|-----|----|-----|-----------|
| | | | | Min | Max | | | | |
| 018-0100-HEAT-1 | 0.75 | 1 | 1 | 0.016 | 0.047 | 100 | 55 | 400 | 2 |
| 018-0125-HEAT-1 | 1.0 | 1 | 1 | 0.025 | 0.074 | 125 | 80 | 400 | 2 |
| 018-0150-HEAT-1 | 1.5 | 1 | 1 | 0.035 | 0.106 | 150 | 80 | 400 | 3 |
| 018-0200-HEAT-1 | 2.0 | 1 | 1 | 0.063 | 0.189 | 200 | 80 | 400 | 4 |
| 018-0250-HEAT-1 | 3.0 | 1 | 1 | 0.098 | 0.295 | 250 | 80 | 400 | 4 |
| 018-0315-HEA-1/3 | 4.5 | 3/1 | 1/3 | 0.156 | 0.468 | 315 | 80 | 400 | 5 |

- Safe and clean heating
- Max exit temperature is 40°C at 70% RH
- Galvanised sheet steel case
- Elements are nickel chromium wire insulated by compacted magnesium oxide powder within a stainless steel or incoloy tube and sealed by ceramic bead and silicon sealant
- Air velocity min 2m/s, max 6m/s
- Fitted with manual reset high temperature cutout

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Panel Filters



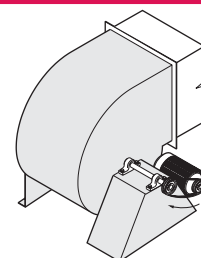
- Galvanised steel casing
- Filter media to BS EN 779 rating G3 with 85% arrestance
- Filter access with removable panel

| Product Code | Fan Dia. A | B | C | D | Weight kg |
|-----------------|------------|-----|-----|-----|-----------|
| 018-0100-FILT-P | 100 | 155 | 200 | 200 | 2 |
| 018-0125-FILT-P | 125 | 155 | 200 | 200 | 2 |
| 018-0150-FILT-P | 150 | 155 | 250 | 250 | 2 |
| 018-0200-FILT-P | 200 | 155 | 250 | 250 | 2 |
| 018-0250-FILT-P | 250 | 200 | 300 | 300 | 3 |
| 018-0315-FILT-P | 315 | 300 | 440 | 440 | 8 |

Motor Position

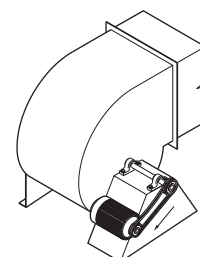
DO NOT!

Belt leaving motor pulley is less taut than upper length and the slight sag will reduce arc of contact on the drive pulley.



DO!

Arrangement with the maximum arc of contact of the drive pulley where energy is applied, reduces belt squeal at start-up and improves efficiency. Most important aspect is that the motor is accessible and to ensure belts are correctly tensioned and aligned.





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