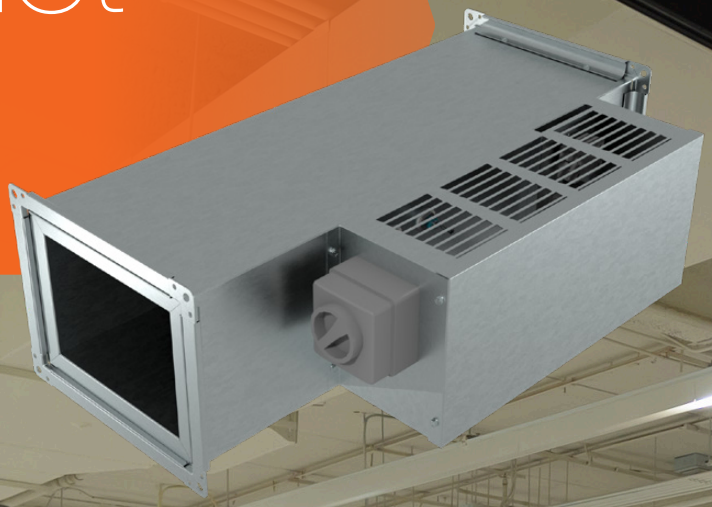
Electric Duct Heater



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EH

ELECTRIC DUCT HEATER

FEATURES

Safety

- Tested and certified to the latest electric duct heater standard AS/NZS 3102:2002 (certificate available on request)
- Disconnect isolation switch installed and fully wired to the internal components, ready for ease of connection on site
- Two manual resetting thermal cutout safety devices to prevent overheating
- On site wiring by others to allow for fan interlock connection for compliance with AS/NZS 3102:2002

Construction

- Duct casing 0.75mm galv. steel
- Non combustible insulation with low thermal conductivity to meet H1/VM3 and NCC requirements
- Finned heating elements comprising of 304SS fins and 309SS tube
- Easily accessible heating elements through the mounting plate (removable)
- Louvred electrical enclosure for adequate airflow to electrical components
- Electrical enclosure lid held by screws accessible from the sides for ease of access to electrical components

Installation

- Seismic certified to NZS 1170.5:2004 (optional extra)
- For New Zealand: 25mm Duct Flange connections on both ends of the heater (35mm for 600x400 size boxes).
- For Australia: 35mm Duct Flange connections on both ends of the boxes.
- For indoor use only

The Holyoake Electric Duct Heater is a redesigned solution that builds on proven Holyoake technology, integrating new advancements to deliver improved performance and reliability.

STANDARD COMPLIANCE

The heater is engineered to offer increased efficiency with reduced weight and enhanced insulating properties. Certified to **AS/NZS 3102:2002**, it meets stringent safety and performance standards, ensuring dependable operation across a wide range of applications.

TYPICAL APPLICATIONS

The Holyoake Electric Duct Heater can be installed as a supplementary heater within a duct run or in conjunction with the Holyoake HCV range of Variable Air Volume (VAV) boxes. It is suited for commercial and industrial applications where precise temperature control and space heating are required.

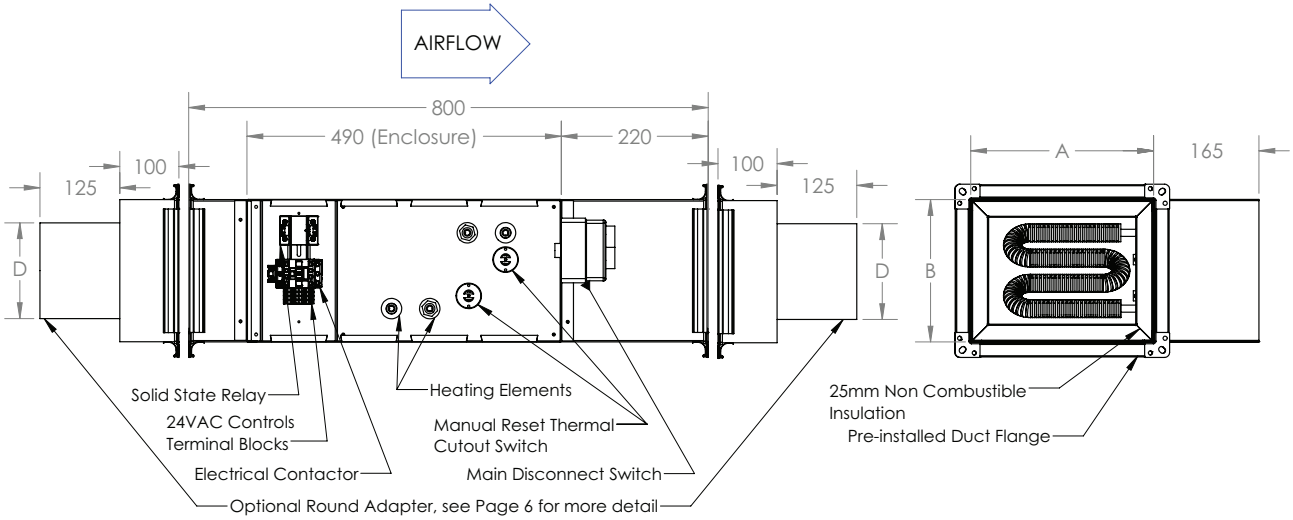
Applications include office buildings, hospitals, education facilities, and any HVAC system requiring controlled reheat or zone-based heating.

DESIGN AND PERFORMANCE

The heater is available in various box sizes, with multiple element configurations to provide a wide range of power ratings. Units are dimensionally consistent with previous models for simple retrofitting

Maximum heating capacities and air velocities are carefully calculated to maintain element sheath temperatures below critical limits, ensuring “black heat” conditions (≥400°C) cannot be reached. Minimum airflow rates are enforced to keep the system operating safely within the limits prescribed by **AS/NZS 3102:2002**.

PRODUCT INFORMATION - DIMENSIONS



Case Size (Inlet Diameter) (mm)	A (mm)	B (mm)	Available Heating Capacity (kW)	Min Airflow (L/s)	Max Airflo (mm)	Max Weight (kg)
100-150 (100)	286	223	1, 1.25, 2, 2.5	67	105	15
100-150 (125)	286	223	1, 1.25, 2, 2.5	67	166	15
100-150 (150)	286	223	1, 1.25, 2, 2.5	67	239	15
175-225 (175)	286	296	1, 1.25, 2, 2.5, 3, 3.75	95	343	19
175-225 (200)	286	296	1, 1.25, 2, 2.5, 3, 3.75	127	454	19
175-225 (225)	286	296	1, 1.25, 2, 2.5, 3, 3.75	160	574	19
250 (250)	428	296	1, 1.25, 1.5, 2, 2.5, 3, 3.75, 4.5, 6	205	733	23
300 (300)	428	369	1, 1.25, 1.5, 2, 2.5, 3, 3.75, 4.5, 6, 7.5, 9	300	1076	28
350 (350)	512	398	1, 1.25, 1.5, 2, 2.5, 3, 3.75, 4.5, 6, 7.5, 9, 12	420	1498	34
400 (400)	636	442	1, 1.25, 1.5, 2, 2.5, 3, 3.75, 4.5, 6, 7.5, 9, 12, 15	550	1976	39
600x400 (400)	965	442	1, 1.25, 1.5, 2, 2.5, 3, 3.75, 4.5, 6, 7.5, 9, 12, 15	1031	4000	45

*See HCV section for more detail

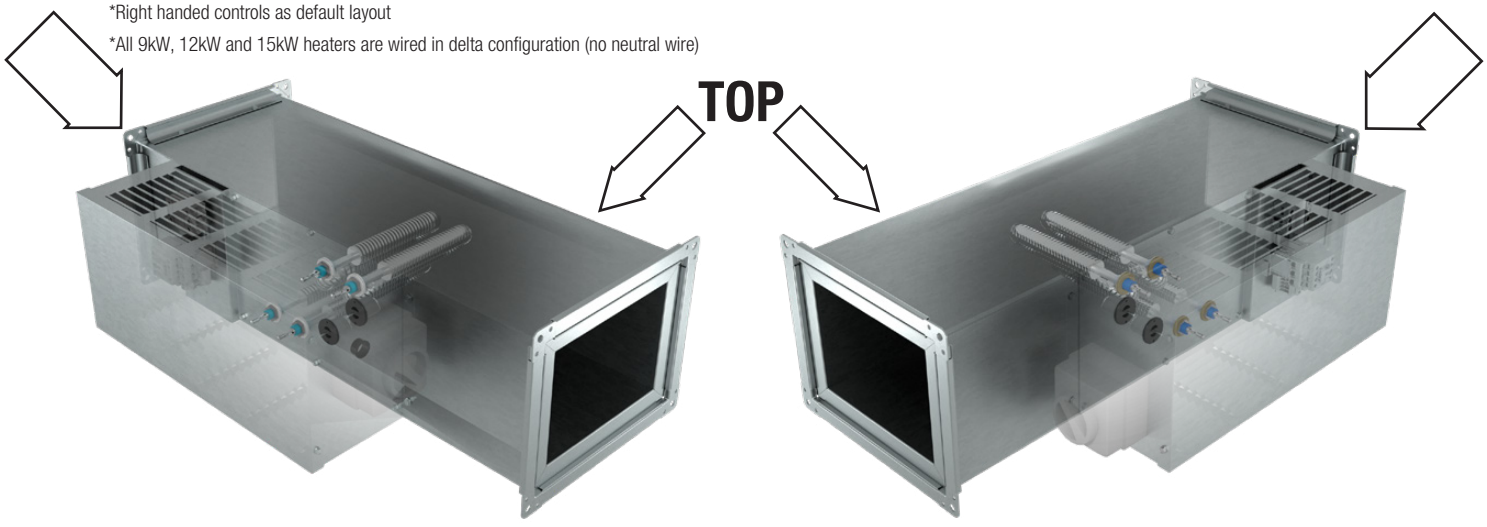
*All heaters with a capacity ≤ 3.75kW are default single phase (230V); >3.75kW are always 3 phase (400V)

*Inlet Diameter for Price Holyoake HCV Compatibility

*Ensure the design airflow and turn down airflow are above the minimum airflow stated per case size

*Right handed controls as default layout

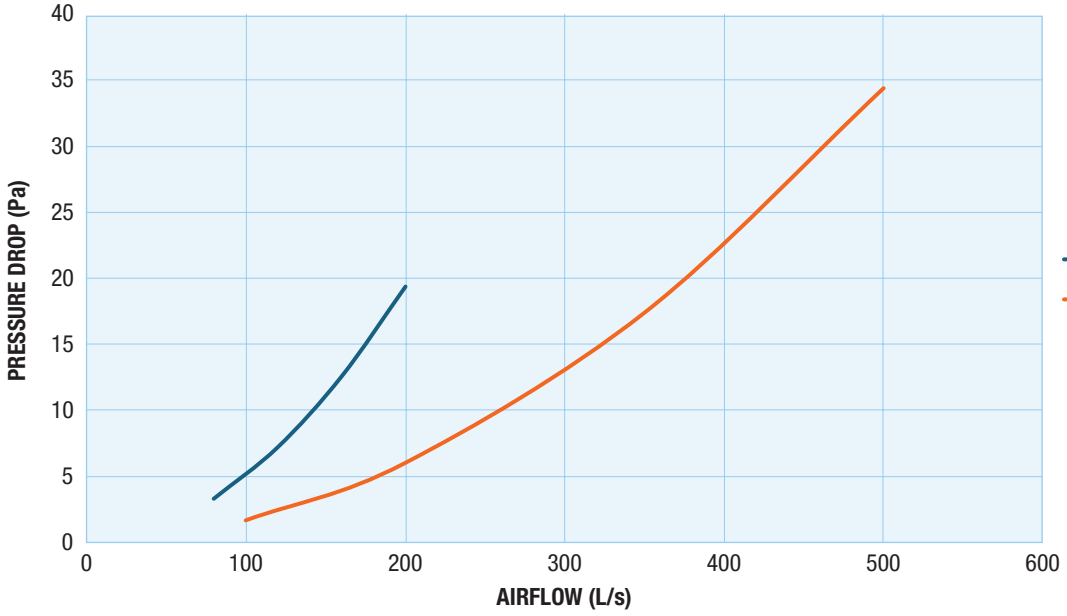
*All 9kW, 12kW and 15kW heaters are wired in delta configuration (no neutral wire)



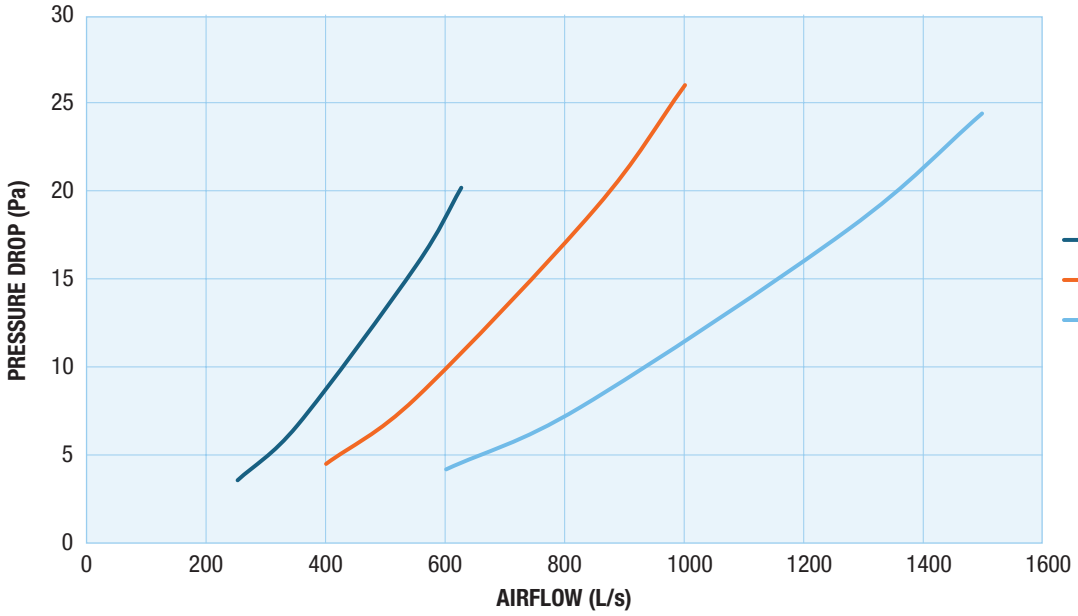
*Right Handed Controls

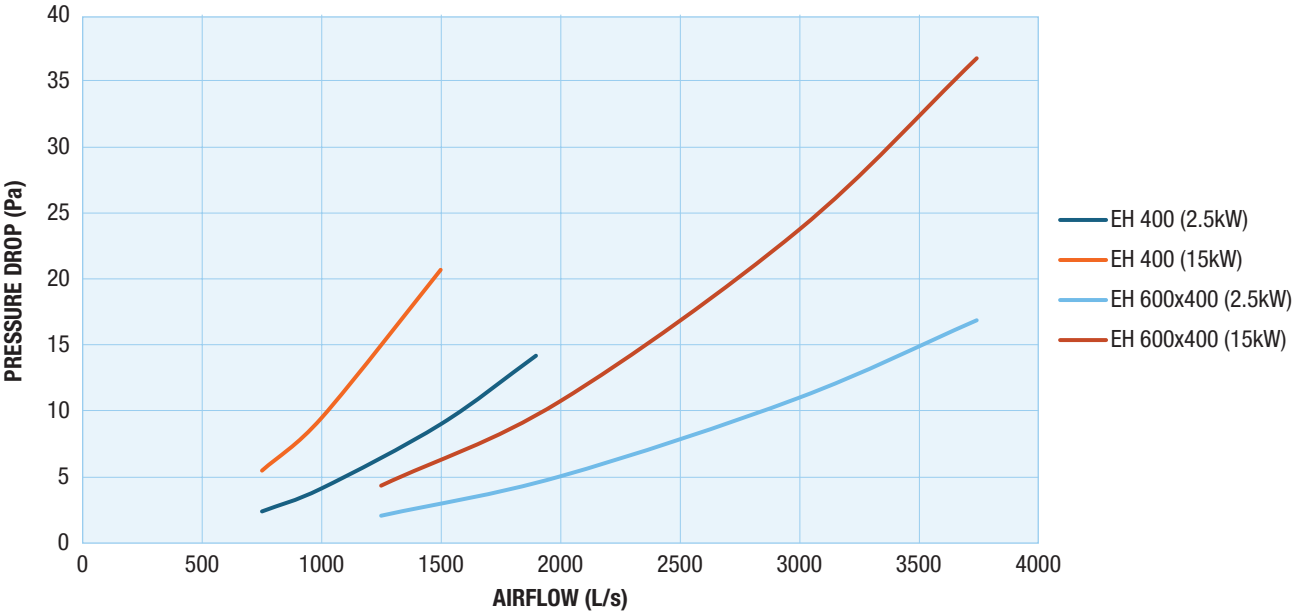
*Left Handed Controls

PERFORMANCE DATA - PRESSURE DROP

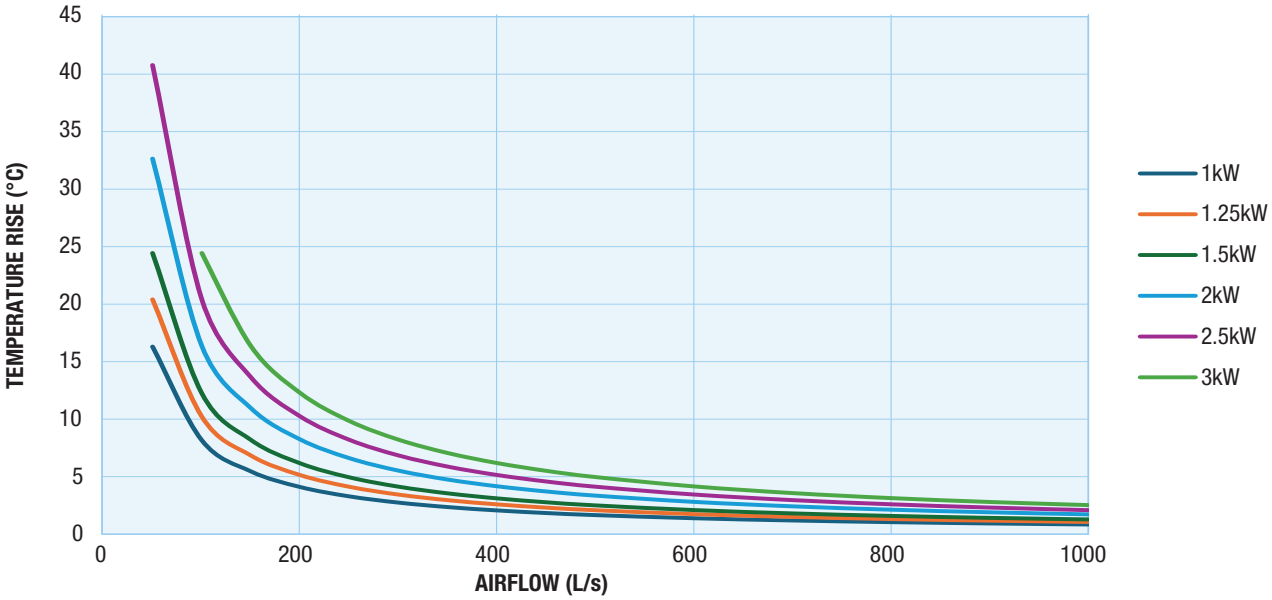


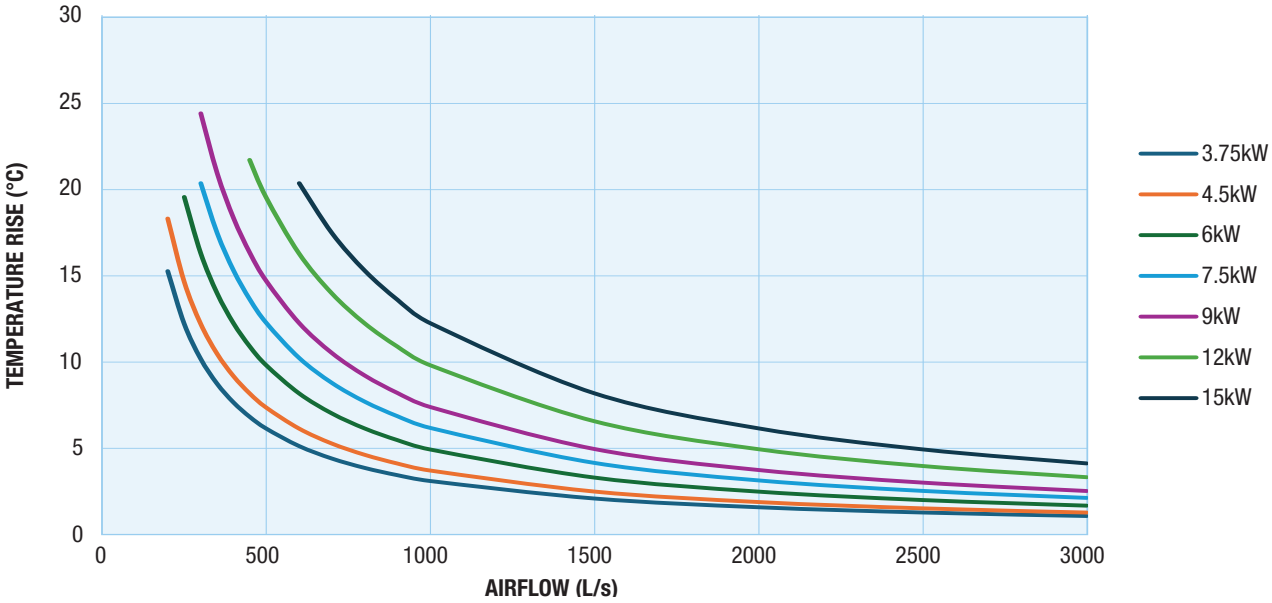
*Pressure drop shown for a single element only (except EH600x400 15kW with 3 elements)





PERFORMANCE DATA - TEMPERATURE RISE





EXAMPLE SELECTION:

FOR VARIABLE VOLUME

Design Airflow = 640 L/s

Turn down % = 50% = 320 L/s

ΔT = 10°C

From the table above, using airflow of 320 L/s and ΔT of 10 degrees the smallest kW rating is 3.75kW.

Check which box size has a kW option of 3.75 and ensure your design and turn down airflow are between the min and max airflow of the box.

Available options are Size 250 and 300.

You can further base your selection on pressure drop data if needed.

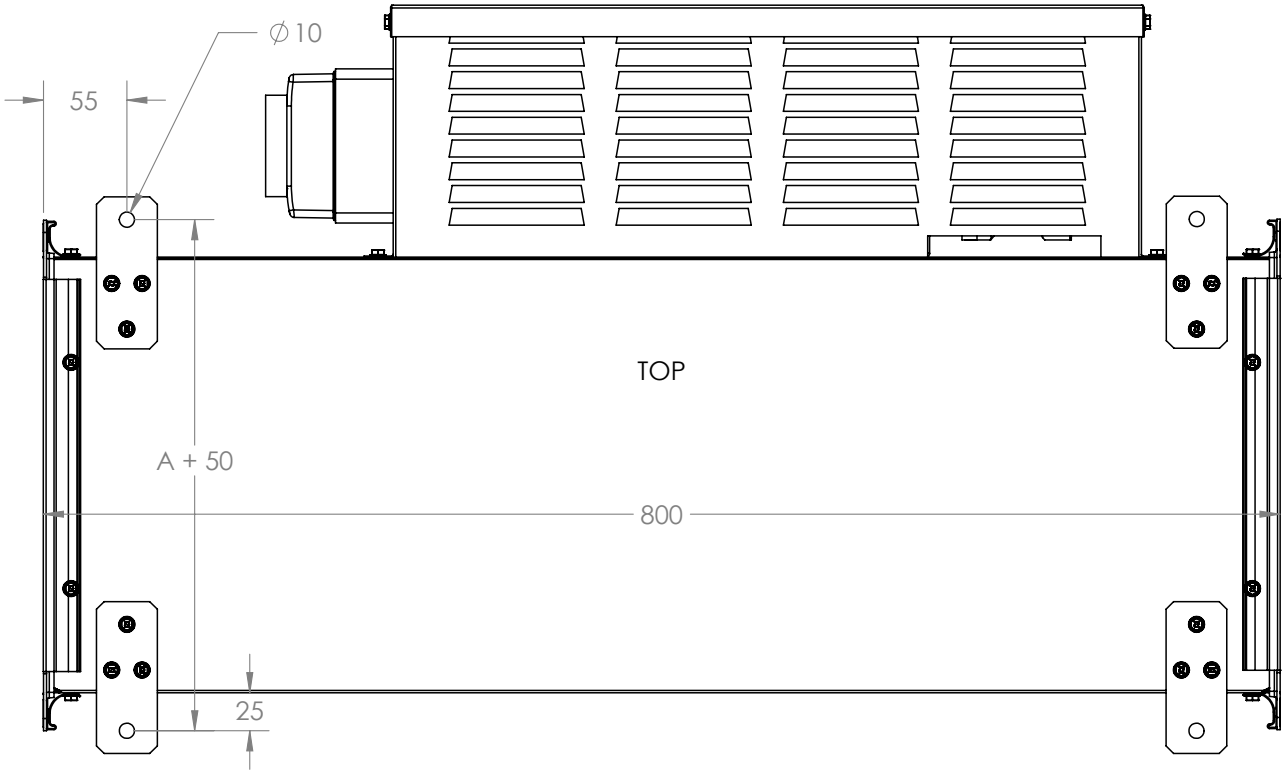
Selection made: EH.250.3750

FOR A CONSTANT VOLUME

Disregard the Turn down ratio and only use the design airflow.

OPTIONAL EXTRAS - SEISMIC CERTIFIED

Holyoake's range of electric duct heaters have all been tested and certified to NZS 1170.5:2004 To achieve this, 4 engineered mounting brackets will be installed on the top face of the electric heater. The brackets are designed to suit 10mm threaded rod securely fastened to the building. Spacing of the brackets can be found below.



RECTANGLE TO ROUND ADAPTER (RRA) - INSULATED

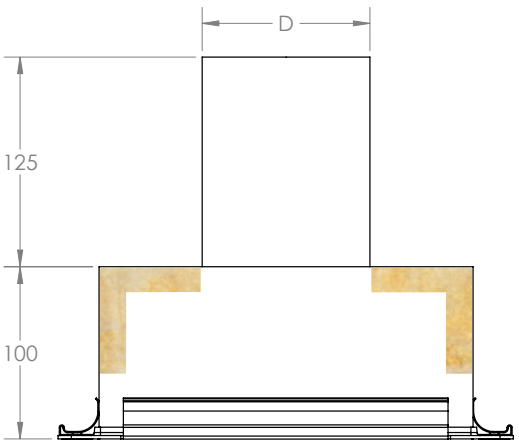
Holyoake's range of rectangle to round adapter (RRA) can be used on the inlet and outlet of the electric duct heater to suit existing round ducts.

Material: 0.55mm galvanised steel with 25mm polyester insulation.

RRAs will be provided with Duct Flange to suit the electric duct heater.

See below table for specified sizes

Case Size (Inlet Diameter)	D (mm)	W (mm)	H (mm)	Weight (Kg)
100-150	100	286	223	1
	125	286	223	
	150	286	223	
175-225	175	286	296	1
	200	286	296	
	225	286	296	
250	250	428	296	2
300	300	428	369	3
350	350	512	398	3
400	400	636	442	4
600x400 *	400	965	442	6



* Size 600x400 provided with 35mm Duct Flange. All other sizes have 25mm Duct Flange

Square to square adapter also available upon request. Specify the size needed with your sales representative.

For additional optional extras, please refer to the VAV Terminal - HCV Manual.

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