RICKARD IN-LINE DUCT HEATER



DESCRIPTION

The Rickard VAV diffuser system can have electric inline duct heaters installed if additional heating is required for particular zones. By using them for offices that are typically colder than the building's average, it reduces the load on the central heating system.

Features

- Fitted between the main duct and diffuser flex duct.
- Reduces energy consumption by heating isolated cold zones instead of raising the AHU supply.
- Stepless proportional control.
- MLM and BMS compatible.
- Fitted with onboard triac heater controller as standard.
- Electronically adjustable output to ensure stratification does not occur.

Construction

Housing is of pressed galvanised sheetmetal wrapped with fire resistant 6mm insulation and a stainless steel foil membrane.

Heating element is of Incaloy material that does not glow red when energised. This is to prevent combustible materials igniting should they come into contact with the element.

Internal Thermal Protection

Integral thermal overload protection is fitted as standard

Wiring Diagram

Please refer enquiries to Fantech sales engineers.

Testing

Complies with AS/NZS 3102:2002 (See special note)

Special Note

The in-line duct heater requires a 3rd party air flow detection device to cut the power if air flow is not detected (not supplied with unit).

This is a mandatory safety feature to meet AS/NZS 3102:2002.

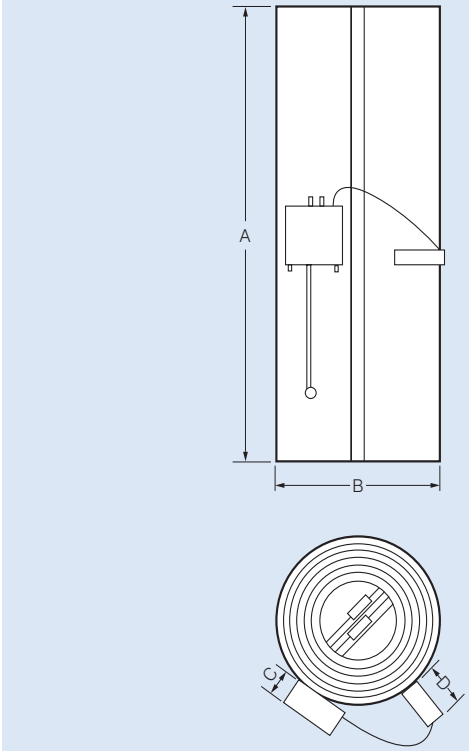
SUGGESTED SPECIFICATION

The duct heaters shall be of the Rickard in-line duct heater series as supplied by Fantech Pty Ltd and be of the model numbers shown on the schedule/drawings.

The inline duct shall be fitted between the main duct and diffuser flex duct. The housing shall be of pressed, galvanised sheetmetal wrapped with fire resistant 6mm insulation and a stainless steel foil membrane. It will use a heating element made from Incaloy material that does not glow red when energised. This is to prevent combustible materials igniting should they come into contact with the element.

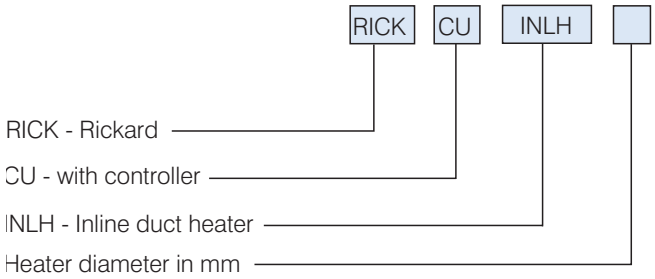
All models shall be fully tested to AS/NZS 3102:2002

DIMENSIONS



Model Number RICK-CU-INLH..	Dimensions, mm A	B	C	D
150	650	150	40	65
200		200		
250		250		
300		300		
350		350		

HOW TO ORDER



© FANTECH 2024

TECHNICAL DATA

Recommended Heater settings & sizing for a 15 °C Heat Rise @ 30% Open*

VSD\VCD

Pa	20			30			40			50			60			70		
	Heating Element			Heating Element			Heating Element			Heating Element			Heating Element			Heating Element		
Neck Size (mm)	Total kW	kW Setpoint	Set	Total kW	kW Setpoint	Set	Total kW	kW Setpoint	Set	Total kW	kW Setpoint	Set	Total kW	kW Setpoint	Set	Total kW	kW Setpoint	Set
150	0.75	0.35	47%	0.75	0.34	45%	0.75	0.50	67%	0.75	0.50	67%	0.75	0.60	80%	0.75	0.65	87%
200	1.25	0.60	48%	1.25	0.70	56%	1.25	0.75	60%	1.25	0.90	72%	1.25	1.00	80%	1.25	1.00	80%
250	1.50	0.85	57%	1.50	1.00	67%	1.50	1.15	77%	1.50	1.30	87%	1.50	1.40	93%	1.50	1.50	100%
300	2.00	1.00	50%	2.00	1.25	63%	2.00	1.50	75%	2.00	1.65	83%	2.00	1.75	88%	2.00	2.00	100%
350	2.50	1.30	52%	2.50	1.50	60%	2.50	1.85	74%	2.50	1.85	74%	2.50	2.25	90%	2.50	2.50	100%

Recommended Heater settings & sizing for a 15 °C Heat Rise @ 30% Open*

VSW

Pa	30			40			50			60			70		
	Heating Element			Heating Element			Heating Element			Heating Element			Heating Element		
Neck Size (mm)	Total kW	kW Setpoint	Set	Total kW	kW Setpoint	Set	Total kW	kW Setpoint	Set	Total kW	kW Setpoint	Set	Total kW	kW Setpoint	Set
150	0.75	0.35	47%	0.75	0.40	53%	0.75	0.45	60%	0.75	0.50	67%	0.75	0.55	73%
200	1.25	0.60	48%	1.25	0.70	56%	1.25	0.80	64%	1.25	0.85	68%	1.25	0.90	72%
250	1.50	0.75	50%	1.50	1.00	67%	1.50	1.10	73%	1.50	1.20	80%	1.50	1.30	87%
300	2.00	1.00	50%	2.00	1.20	60%	2.00	1.35	68%	2.00	1.50	75%	2.00	1.60	80%

Recommended Heater settings & sizing for a 15 °C Heat Rise @ 30% Open*

VLN1, 2 Slot, Pattern C

Pa	30			40			50			60			70		
	Heating Element			Heating Element			Heating Element			Heating Element			Heating Element		
Length (mm)	Total kW	kW Setpoint	Set	Total kW	kW Setpoint	Set	Total kW	kW Setpoint	Set	Total kW	kW Setpoint	Set	Total kW	kW Setpoint	Set
600	0.75	0.30	40%	0.75	0.35	47%	0.75	0.35	47%	0.75	0.4	53%	0.75	0.45	60%
900	1.25	0.45	36%	1.25	0.55	44%	1.25	0.60	48%	1.25	0.7	52%	1.25	0.70	56%
1200	1.50	0.65	43%	1.50	0.75	50%	1.50	0.80	53%	1.50	0.9	60%	1.50	1.00	67%
1500	2.00	0.85	43%	2.00	1.00	50%	2.00	1.10	55%	2.00	1.2	60%	2.00	1.30	65%

*To limit stratification in heating Rickard recommends that the heater outputs be limited to the values published in the tables above. The calculated values will ensure that the heat rise is no more than 15°C in VAV diffusers. Please note that these values are a guide and are calculated at 30% volume for VAV diffusers. By adjusting the diffuser damper position down, a smaller volume will create a larger heat rise and therefore increase the likelihood of stratification.

Total kW column - Indicates the maximum fitted heater size recommended
kW Setpoint column - Indicates the maximum heater setting recommended to achieve a 15°C (VAV) heat rise
Set column - Is the MLM Heater Output % value required to achieve a 15°C (VAV) heat rise.

© FANTECH 2024