

ideal
diffusers

Rickard DCV Diffusers

ECD / ERD Series



Product Overview

The Rickard DCV Diffuser is an intelligent diffuser designed to continually regulate airflow based on the level of CO₂ in the occupied space. The variable geometry of the diffusers maintains the throw of air entering a space as the ventilation rate is reduced in accordance with demand, which helps maintain ventilation effectiveness inside a room. The diffusers are networked together with the supplied controls system that allows setup and commissioning to be done from one central computer (by others).

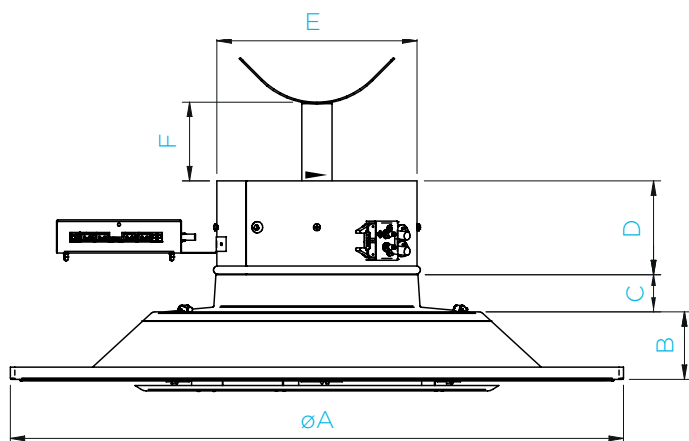
Construction

Diffusers are pressed from sheet steel construction and finished in a chip resistant epoxy powder coating. All internal components of non-metallic construction are moulded in fire retardant Makrolon glass reinforced plastic. The motors have been life cycle tested to the equivalent of 30 years' service.

Models

ECD - Square face, 595mm x 595mm overall for lay in tile replacement, neck sizes available: 150mm, 200mm, 250mm, 300mm, 350mm.

ERD - Round face 580mm diameter, to suit plasterboard ceilings, neck sizes available: 150mm, 200mm, 250mm, 300mm and 350mm.



Fixing

ECD - Lay-in tile replacement (flange for surface mounting) Direct duct connection via diffuser neck.

ERD - Round diffuser bayonet fixing to suit plasterboard ceiling.

Finish

PPC RAL9010 - 20% gloss White (Standard).

PPC RAL - Stock RAL colours available to order.

Accessories

Please specify the accessories on your order.

MCU - Master Communications Unit, used to connect/network up to 60 diffusers, enabling easy commissioning and flow rate measurement and commissioning.

PSU - Power Supply Unit, used to power up to 15 diffusers, available in 24V or 230V.

USB Module - Used to connect PSU to a computer, only needed if MCU not used.

Master Add On - Turns diffuser in to a master, required to connect CO₂ sensor.

Neck Size	A	B	C	D	øE	F
150	Square: 595 x 595 Round: 580	102	28	90	153	96
200		104	33		200	
250		100	34		250	
300		100	35		293	
350		106	43		346	

Dimensions in mm.

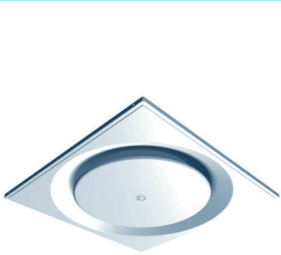

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Performance Data

Neck Size		Neck Total Pressure Pa					
		10	20	30	40	50	60
150	Airflow L/s	49	69	85	98	110	121
	Throw m	1.49	1.87	2.17	2.42	2.56	2.82
200	Airflow L/s	72	99	125	145	161	178
	Throw m	1.63	2.18	2.63	2.69	2.93	3.09
250	Airflow L/s	94	134	165	192	215	235
	Throw m	1.93	2.58	2.83	3.29	3.40	3.72
300	Airflow L/s	122	173	214	248	279	306
	Throw m	2.57	3.04	3.45	3.51	3.91	4.63
350	Airflow L/s	143	205	253	294	330	364
	Throw m	2.63	3.58	3.95	4.66	5.05	5.17

Throw data is taken 25mm below the ceiling on a line through the centre of the diffuser with the control disc fully open and an air velocity of 0.25 m/s.

Product Options

Product Code	Image	Description
ECD		Square tile replacer diffuser with circular cone
ECDBASIC		Square tile replacer diffuser without the airflow measuring adaptor
ERD		Round diffuser for plasterboard ceilings with circular cone
ERDBASIC		Round diffuser without the airflow measuring adaptor

Control Options

Part Number	Description
149-DCV-CO2	CO ₂ Sensor
RICK-OBCKIT	Master Add-on Module
RICK-MLMPS	Power Supply Unit 230V
RICK-MLMPS	Power Supply Unit 24V
RICK-CU-RICK	MCU2 RICKARD BMS
RICK-CU-BNIP	MCU2 BACNET TCP/IP BMS
RICK-CU-BNTP	MCU2 MSTP BMS
RICK-CU-LW	MCU2 LONWORKS BMS
RICK-CU-USB	USB Connection Module

Placing an order

When ordering, please use the product code and neck size.

Electronic	Product Options		Diffuser	Neck Size	Basic
E	C	Circular tile replacer	D	150, 200, 250, 300, 350	BASIC
	R	Round			

Example Product Code				
E	C	D	200	BASIC

*Model doesn't include flow measuring and commissioning.