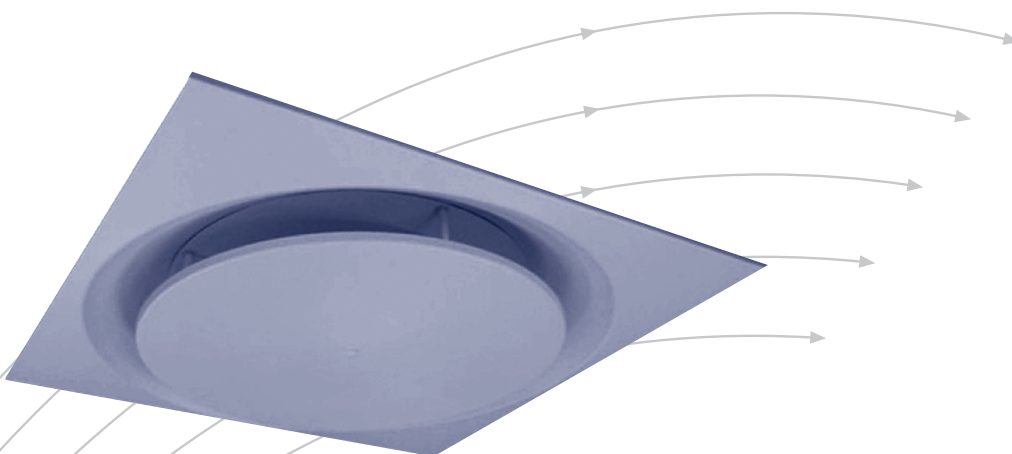


Variable Volume Diffuser

- Type XPV - Q and R (Plate Type)
- Recommended for room height from 2.6 m to 4.0 m



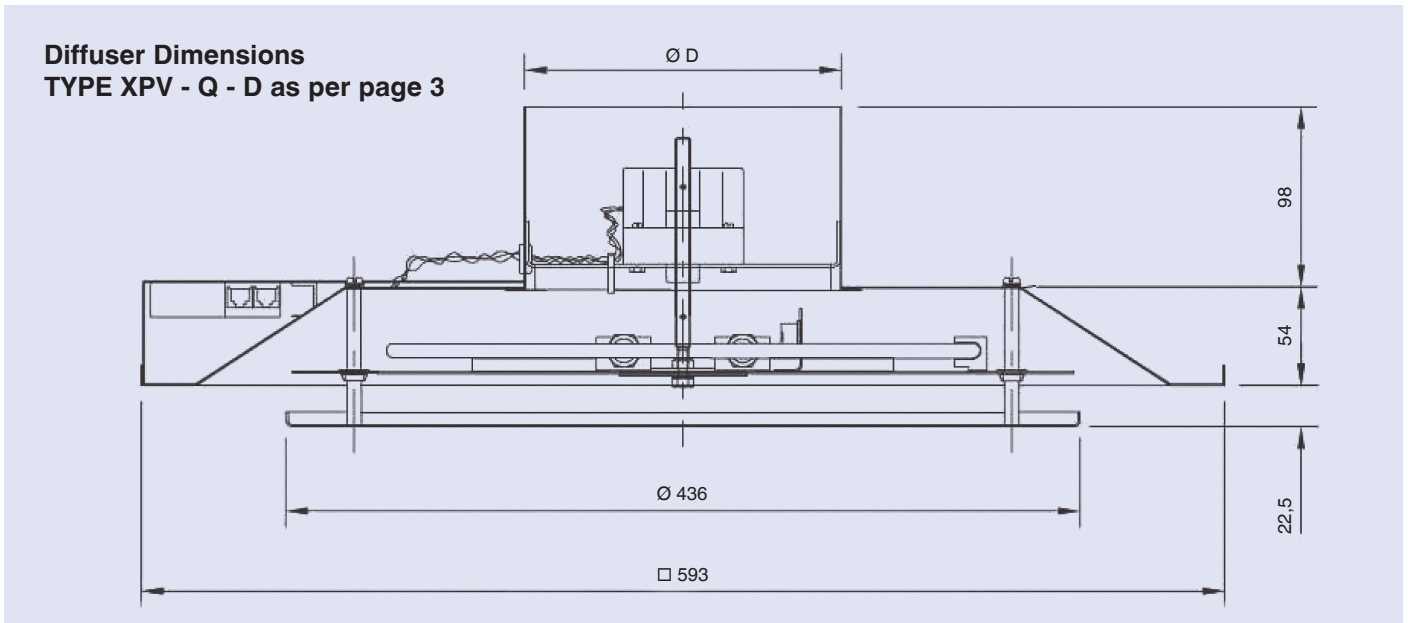
TROX[®] TECHNIK

The art of handling air

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Description

The TROX variable volume flat plate diffuser is ideal for both comfort air conditioning and industrial applications. The diffuser is for drop-in installation into suspended ceilings.

The TROX XPV diffuser is an electronically operated unit incorporating rate aided proportional air volume and heater control. It automatically regulates the room temperature which is measured with a sensor either in the diffuser or in the wall mounted unit. According to the thermal demands in the room the controller moves the damper by means of a push/pull actuator and stainless steel spindle or cycles the heater until the room temperature reaches the set point adjusted on the controller by the user (if wall mounted).

Each diffuser has a sub or slave card mounted to the diffuser. The heater is optional. For heater capacities please refer to the table on page 3. The TROX XPV with heater is protected against over-heating (in case there is too little air flow) via an automatic thermal switch (Klixon).

This ensures that the surface temperature stays within the safe range required by the SABS. Additionally we can offer a manual Klixon that has to be reset once the surface temperature rises above a certain temperature.

The TROX XPV with heater is delivered with a 3 m 220 V connection cable and a 6m long RJ12 cable to connect the diffusers with each other and with the controller.

Diffusers are supplied as sub/slave units, these are connected to a single control module and this is connected to a wall mounted finger touch two button thermostat. The transformer is sized according to the number of diffusers connected to a master up to a maximum of 20.

The control modules are standalone, LonWorks and BACNet compatible.

The thermostat is in an elegant enclosure compatible with a standard 2x4 draw-box. It is supplied with 2 button (MK2) or 3 button (MK3) options.

Materials

The diffuser body and faceplate are constructed from cold rolled black steel which is all phosphate treated and powdercoated textured white RAL9016.

This process will provide corrosion resistance protection to the product based on a 500-hour salt-spray test.

Selection Data and Layout

Selection Data – Size 600 VAV XP - Q and R

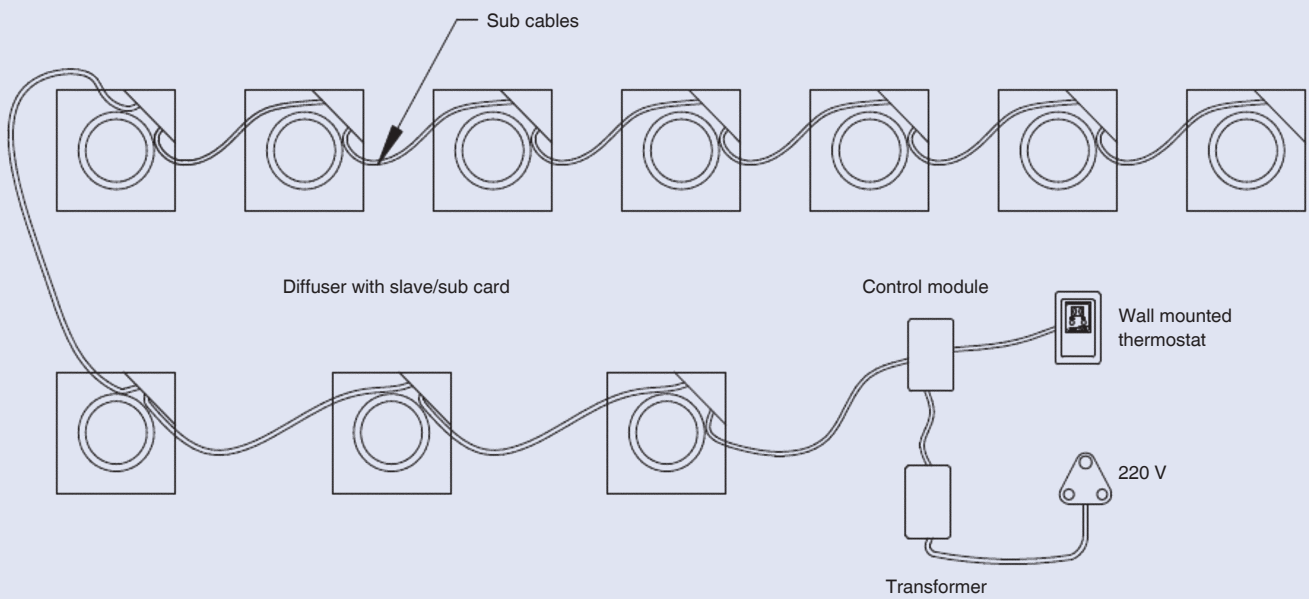
Size D	Reading	Spigot Total Pressure (Pa)				Maximum Heater Capacity (W)
		30	50	70	90	
150	FLOW RATE (l/s)	62	91	105	125	750
	THROW (m)	1.0	1.5	1.7	2.1	
	N.C. LEVEL	-	26	30	35	
175	FLOW RATE (l/s)	76	106	128	146	1 000
	THROW (m)	1.2	1.7	2.1	2.4	
	N.C. LEVEL	-	30.5	34	37	
200	FLOW RATE (l/s)	101	135	163	184	1 500
	THROW (m)	1.6	2.2	2.5	2.7	
	N.C. LEVEL	23	33	37	40	
250	FLOW RATE (l/s)	158	194	227	247	1 500
	THROW (m)	1.7	2.0	2.3	2.6	
	N.C. LEVEL	28	33	38	41	
300	FLOW RATE (l/s)	217	272	309	348	1 500
	THROW (m)	2.2	2.6	3.0	3.3	
	N.C. LEVEL	29	34	38	43	
350	FLOW RATE (l/s)	249	315	382	420	1 500
	THROW (m)	2.4	3.4	3.9	4.4	
	N.C. LEVEL	32	34	40	45	

Selection Data and Layout

NC levels are determined from sound power level data by deducting 8 dB from each octave band for room attenuation. Throws given are the distance from the diffuser to the point where the jet velocity is reduced to 0.5m/s with the damper in the fully open position.

All units with heater will be fitted with auto klixons only as standard. Manual klixons can be fitted as an optional extra.

Diagram layout of diffusers type Q and R

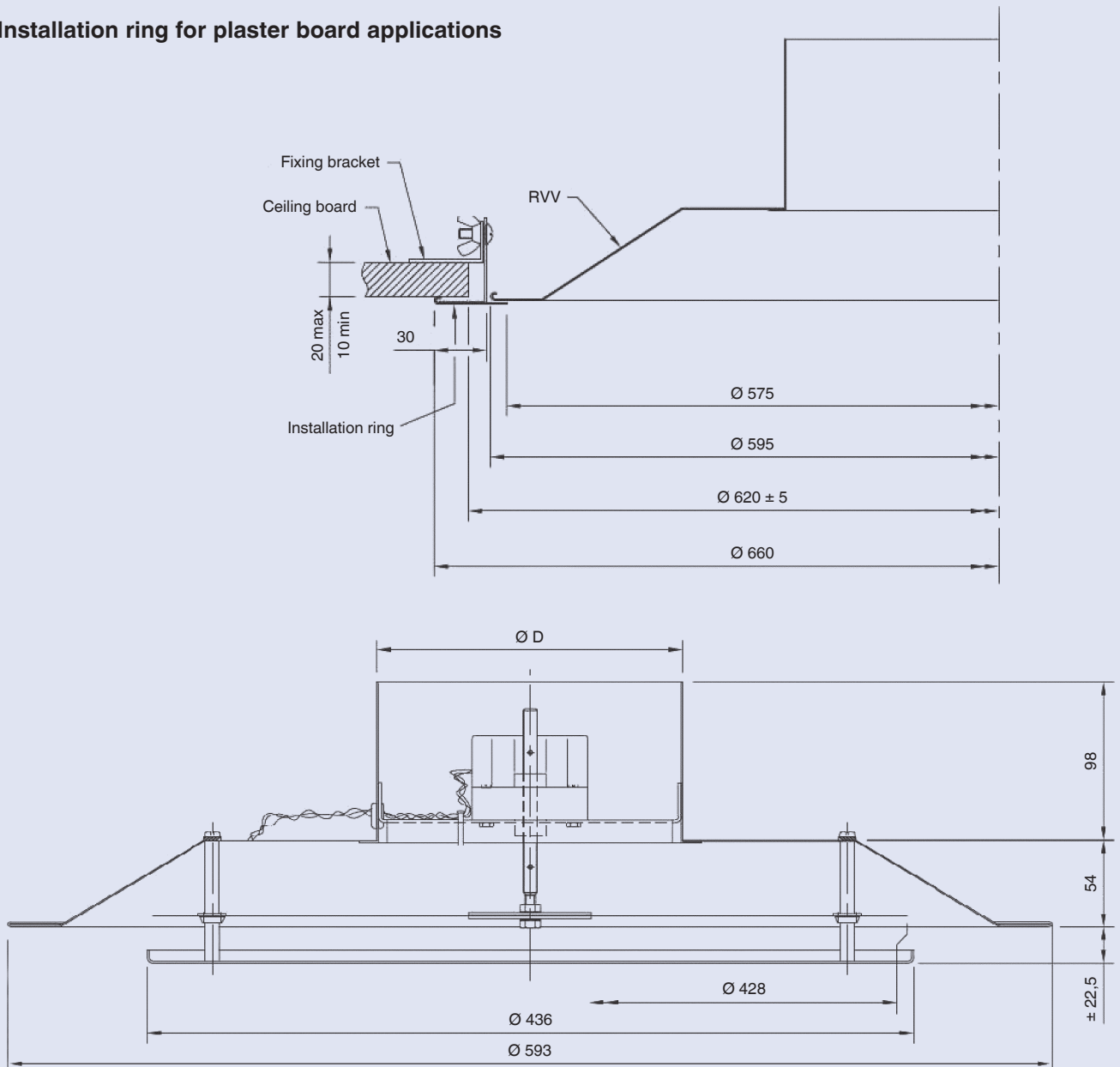


Plaster Board Installation

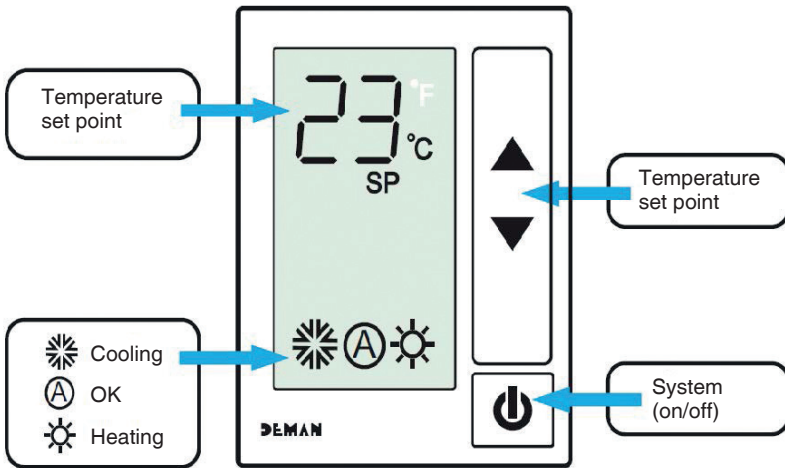
For installations in plaster board the diffuser is supplied round and can be installed into an installation ring. The installation ring is supplied separate and is fixed by means of "L" brackets to the plaster board. Once in place the diffuser lays into the ring, similar to that of a standard ceiling T for the square diffuser.

Diffuser Dimensions TYPE XPV - R - D as per page 3

Installation ring for plaster board applications

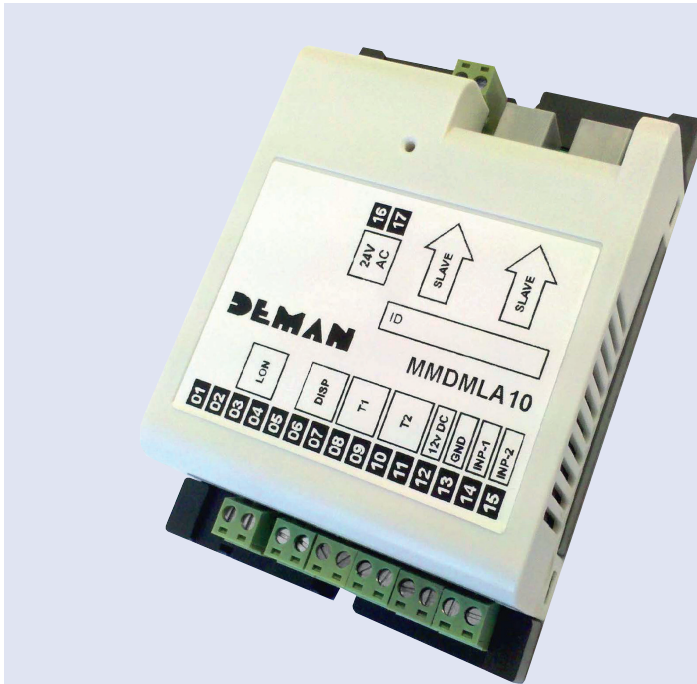


Controls



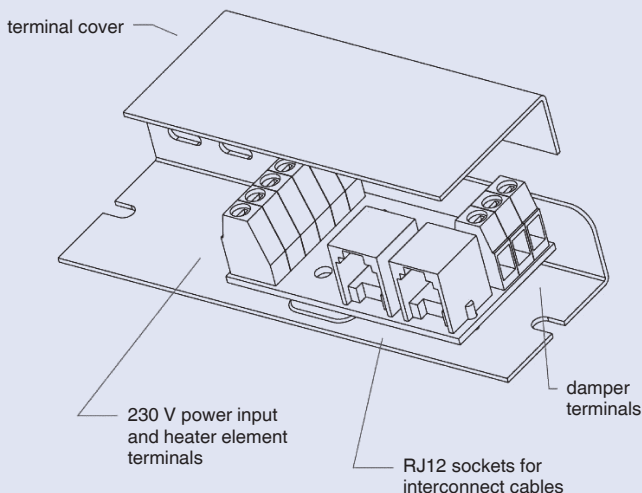
Interface (Wall) Unit

- Temperature set point
- Built in room temperature sensor
- Elegant enclosure fits 2x4 draw-boxes
- Diagnostic display modes for commissioning and maintenance



Master Control (fire retardant ABS)

- Pre-set temperature set point or use with MK2A81 wall control
- Inputs for return and supply air temperature
- Input for occupancy sensor
- Power Supply to unit: 24V AC
- Cabling to slave diffusers: 6way RJ12 plugs
- MMDM-A10 – Stand Alone
- MMDMLA10 – LON Network
- MMDMBA10 – BACnet Network
- MMDMSA10 – Local Network



Slave Units

- Enclosure – aluminium
- Fitted to each diffuser
- Cabling: RJ12 between diffuser

Order Code for Stand Alone

TM - A / 0 or 1 / 0 or 1 / 0 or 1

0 = no auto inverse 0 = without mount
1 = with auto inverse 1 = with mount

0 = no RA sensor
1 = with RA sensor

TM - SA - Local Network

Order Code for LON

TM - LA / 0 or 1 / 0 or 1 / 0 or 1

0 = no auto inverse 0 = without mount
1 = with auto inverse 1 = with mount

0 = no RA sensor
1 = with RA sensor

Order Code for Bacnet

TM - BA / 0 or 1 / 0 or 1 / 0 or 1

0 = no auto inverse 0 = without mount
1 = with auto inverse 1 = with mount

0 = no RA sensor
1 = with RA sensor

Order Code for Wall Thermostat / Interface

MK2 or MK3 / 0 or 1

MK2 = two button 0 = without 6 meter cable
MK3 = three button 1 = with 6 meter cable

Order Code for Transformer

T10VA / 0 or 1 / 0 or 1

10 VA = 5 Diffusers 0 = without 6 m cable
20 VA = 10 Diffusers 1 = with 6 m cable
50 VA = 20 Diffusers 0 = without plug top
1 = with plug top

Order Code for XPV Diffuser

XPV-Q or XPV-R / 1 or 0 / 200 / TSA1 or TSA2 / watts / 1 or 2 / 1 or 0 / P0 or P1 / RAL ...

Q = Square
R = Round

0 = without ring
1 = with ring

Spigot
Diam:
150 (148)
175 (173)
200 (198)
250 (248)
300 (298)
350 (348)

TSA1 = without heating
TSA2 = with heating

Element
(optional):
0 = None
500 watts
1000 watts
1500 watts

1 = auto klixon only
2 = auto and manual

P0 = Standard White RAL9016
P0 = Standard White RAL9010
P1 = Powder Coated to RAL...

1 = with 6m cable
0 = without 6 m cable

Order Example

Make: TROX

Transformer

Details: T25 - VA - 1 - 1

Wall Mounted Thermostat

Details: MK2 - 1

Controller

Details: TM - A / 0 / 0 / 1

Diffuser

Details: XPV - Q / 0 / 250 / TSA2 / 1000w / 1 / 1 / P0 / RAL9016

