SA1/4/EN/3

Variable Volume Diffuser

Type RVV

Recommended for room height from 2.6m to 4.0m

TROX® TECHNIK

TROX (South Africa) (Pty) Ltd.
10 Wigford Road
Masons Mill
Pietermaritzburg

Tel. +27 (0)33 398 1006
Fax. +27 (0)33 398 1100
email : pmb@troxsa.co.za
Website: www.troxsa.co.za

Contents • Description • Typical Layout

Description

The TROX variable volume flat plate diffusers are ideal for both comfort air conditioning and industrial applications. The diffuser is for installation into plaster-board ceilings .

The TROX RVV 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).

Electronics and electrical parts are not exposed but covered with a sheet metal box.

The heater is optional. For heater capacities please refer to the table on page 3. The TROX RVV 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.

Modular plugs serve as connection between main units, controller, sub units and/or sensors.

The TROX RVV with heater (main & sub) is delivered with a 3m 220V connection cable and a 5m long cable to connect the diffusers with each other and with the controller (if wall mounted).

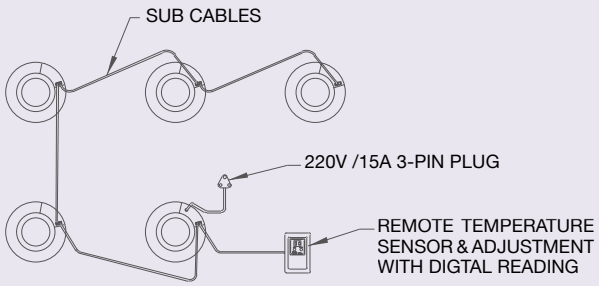
One controller can control up to 5 diffusers. Each set of diffusers controlled by one controller has one main and up to 4 sub units. If no heater is required the main unit is the only one that needs to be connected to the power supply either 24V or 220V. The main unit is the one with the sensor (if the sensor is required to be in the diffuser). All diffusers are supplied with modular sockets – these are used to connect the diffuser via the supplied cables. (see sketch).

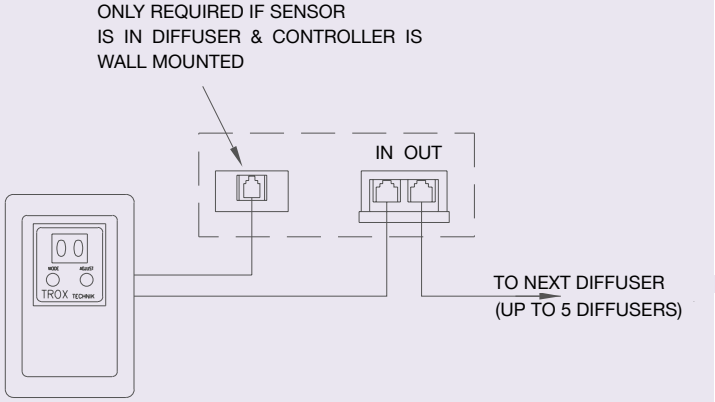
Materials

The diffuser body and faceplate are constructed from cold rolled black steel which are all phosphate treated and powder-coated textured white VEP 1595.

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

Typical Connection Layout - without heaters.





Note:
Heating requires 220V connection to each unit.

Power consumption: 10 VA

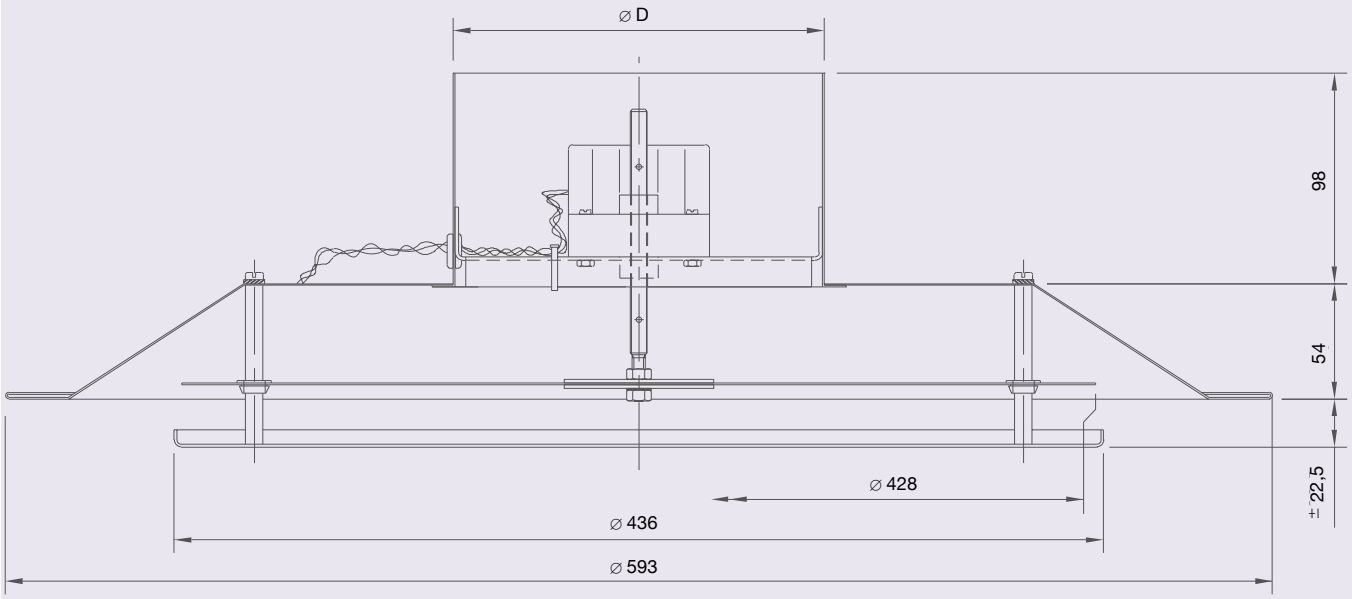
Selection Data • Dimensions • Installation Details

Selection Data – Size 600 RVV

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

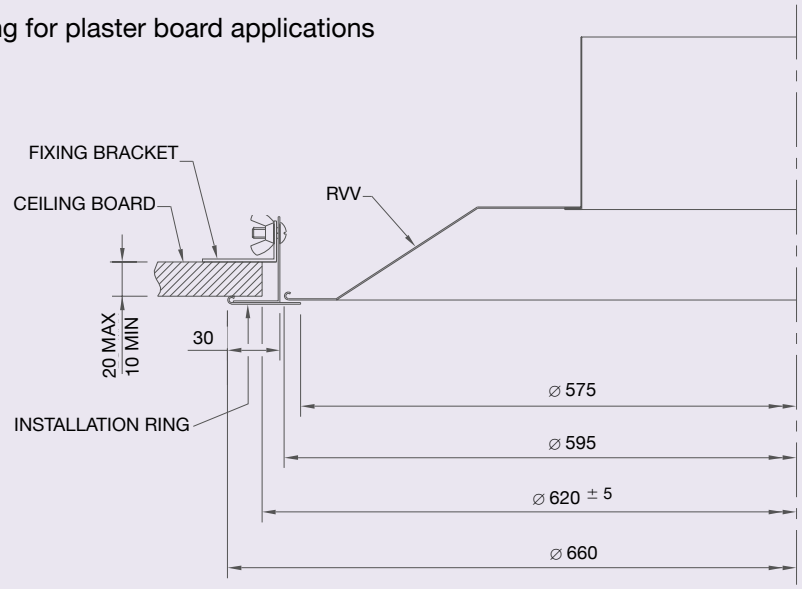
NC levels are determined from sound power level data by deducting 8 dB from each octave band for room attenuation. Throws given are the distance from the diffuser to the point where the jet velocity is reduced to 0.5m/s with the damper in the fully open position.

All units with heater will be fitted with auto klixons only as standard. Manual klixons can be fitted as an optional extra. Heater limitations based on 25% of the minimum stated volume flow rate above.



Installation Details • Order Details

Installation ring for plaster board applications



Order Code RVV

RVV - M - 2 - R1 - A / 200 / 1500W / 0 / 0 / P1 / RAL 9010

Main Unit M
Sub Unit S

Controller Type:
0 = None (ie other)
1 = 24v (Main) TROX Controller
2 = 220v (Main) TROX Controller
3 = Sub TROX Controller

Temperature Offset:
0 = None (ie sub unit)
F = Fitted to diffuser
Wall mounted options:
R1 = Adjuster only(sensor on diffuser)
R2 = Sensor only (adjuster on diffuser)
R3 = Adjuster & sensor

Auto Invert & Outlet Temp. control:
0 = None
A = Auto invert & outlet temp control

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

Heater Element on damper blade (optional):
500 W
750 W
1000 W
1500 W

0 = With auto klixon only (Standard)
1 = With auto + manual klixon

0 = without installation ring
1 = with installation ring

Installation Ring Seperate line item

P0 = Standard White VEP1595
P0 = Standard White RAL9010

State colour spec (if not Standard)

Order Example:
Make: TROX
Order Details: RVV-M-2-R1-A/200/1500Watts/0/0/P0/RAL 9010