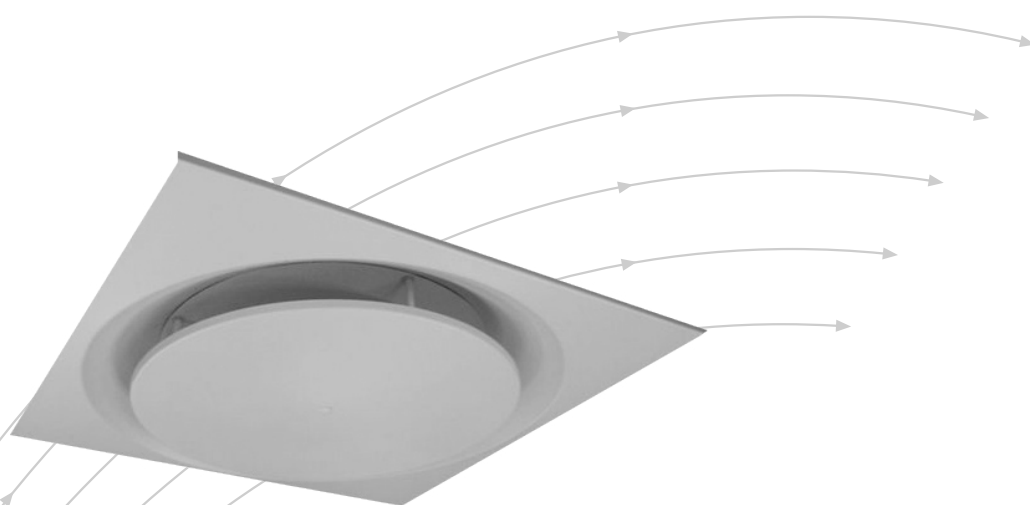


# Variable Volume Diffuser

Type DVV

Recommended for room height from 2.6m to 4.0m



# TROX<sup>®</sup> TECHNIK

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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 DVV 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 corner box.

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

Faceplate of main unit with onboard concealed temperature sensor



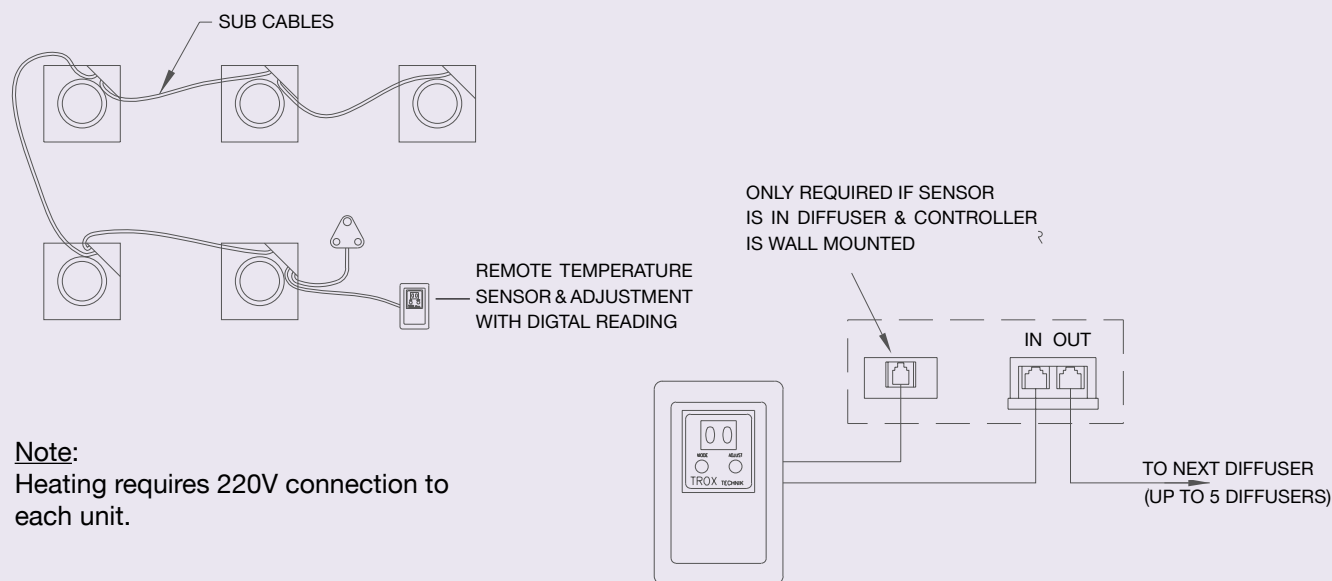
Modular plugs serve as connection between main units, controller, sub units and/or sensors.



# Typical Layout • Selection Data

## • Heater Limitations

Typical Connection Layout - without heaters.



**Note:**  
Heating requires 220V connection to each unit.

Power consumption: 10 VA

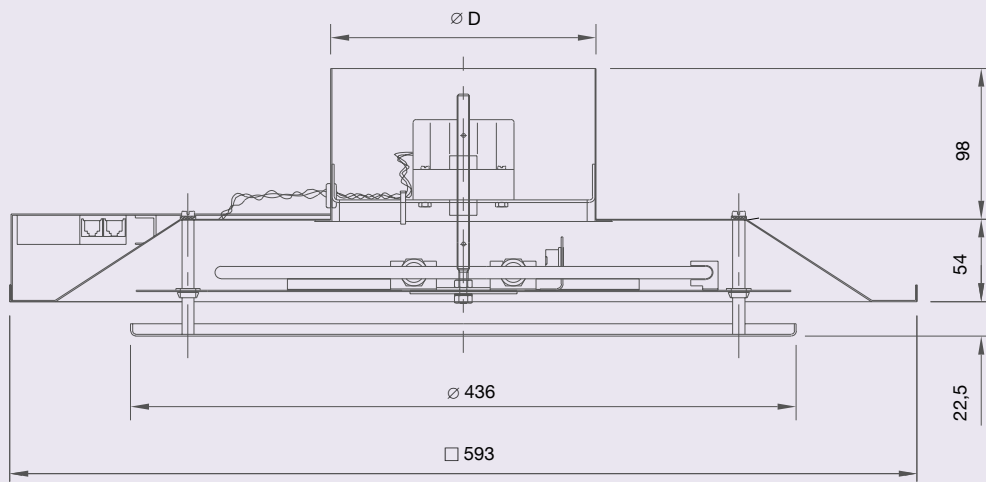
Selection Data – Size 600 DVV

Size	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	

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.

# Order Details



## Order Code DVV

DVV - M - 2 - R1 - A / 200 / 1500W / 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

P0 = Standard White VEP1595  
P0 = Standard White RAL9010

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

State colour spec

### Order Example:

Make: TROX

Order Details: DVV-M-2-R1-A/200/1500 Watts/0/P0/RAL 9010