



Poppet valve TV0



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Poppet Valve Model TVO

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Poppet Valve Model TVO

Description

The round poppet valve TVO, for return air, has an aerodynamically shaped valve cone, which gives it good properties with respect to noise level, pressure loss and air volume. The air diffuser is designed for ceiling or wall mounting and available in sizes for duct connections of between Ø 100 - Ø 200 mm. Its design and a Moltoprene seal prevent soiling of ceiling and walls. The air diffuser is made of polypropylene, a recyclable plastic that withstands temperatures of up to 100°C. This material is also resistant to the majority of chemicals in low concentrations. As standard, the poppet valve is delivered in white colour and with a galvanised mounting ring.

The air diffuser can be wiped off with a mild cleaning agent.

Construction

Mounting ring

- Galvanised sheet steel

Front frame

- Polypropylene, colour similar to RAL 9010 (white)

Threaded spindle

- steel

Quantity adjustment plate

- Polypropylene, colour similar to RAL 9010 (white)

Accessories

Panelled cover plate (-PA)

- Sheet steel with integrated mounting ring made of sheet steel painted to RAL 9010 (white)

Saddle bracket (-SA)

- Galvanised sheet steel with integrated mounting ring of galvanised sheet steel.

Fastening

Valve fastening

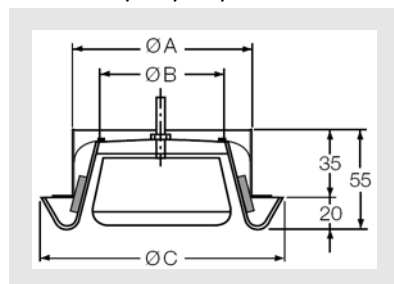
- On the mounting ring with spring fastening (standard)

Poppet Valve Model TVO

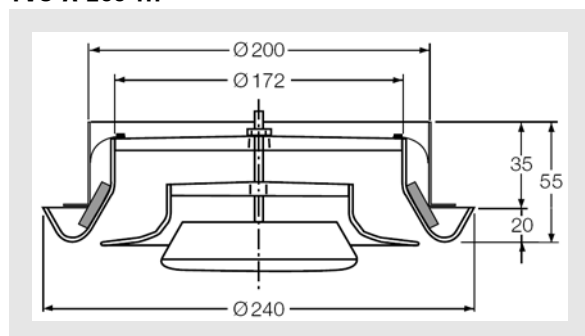
Models and dimensions

Dimensions

TVO-A-100/125/150/160-...



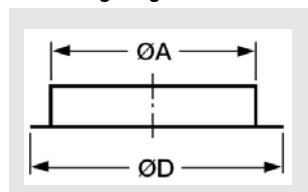
TVO-A-200-...



Available sizes TVO-A-...

NW	øA	øB	øC	Weight (kg)
100	100	70	145	0,12
125	125	95	160	0,15
150	160	115	195	0,20
160				
200	200	172	240	0,34

Mounting ring

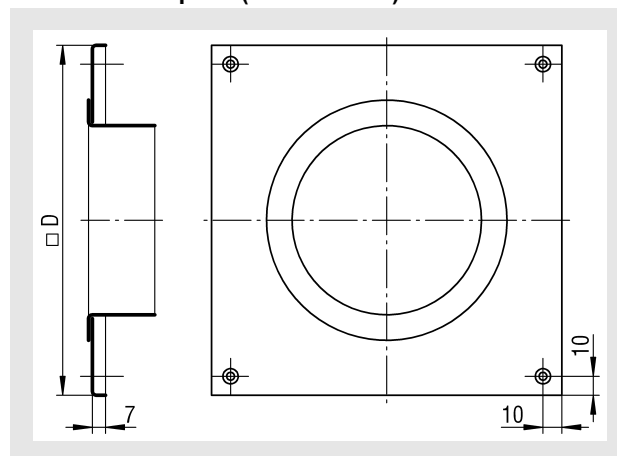


Available sizes of mounting ring

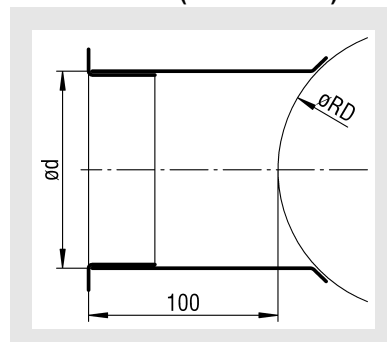
NW	øD	øA	Ceiling opening ø	Weight (kg)
100	127	100	110	0,09
125	152	125	135	0,11
150	177	150	160	0,13
160	187	160	170	0,15
200	227	200	210	0,18

Dimensions of accessories

Panelled cover plate (TVO-A-...-PA)



Saddle bracket (TVO-A-...-SA)



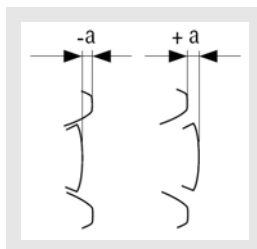
Available sizes TVO-A-...-PA/SA

NW	□D	ød	øRD
100	185	102	150
125	210	127	175
150	285	152	200
160	285	162	200
200	285	202	250

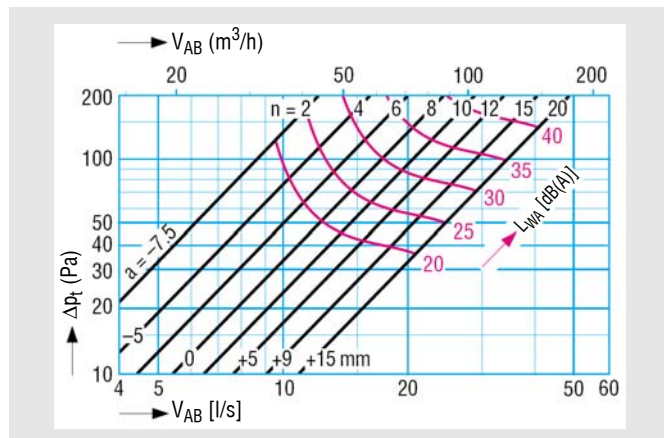
Poppet Valve Model TVO

Technical data

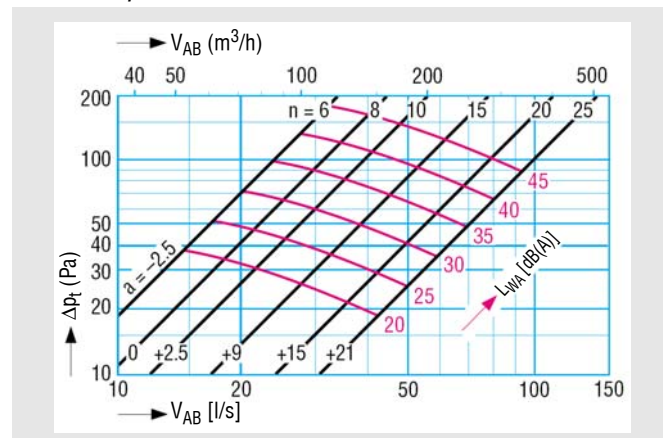
Pressure loss and noise level



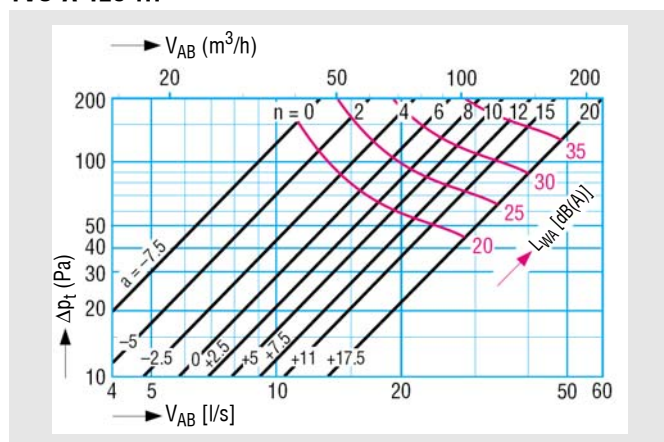
TVO-A-100-...



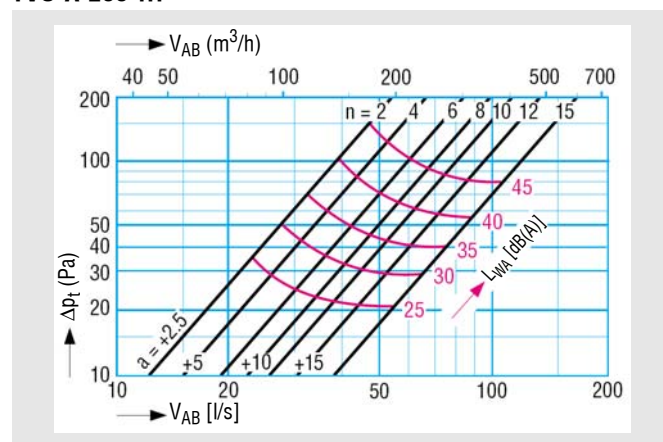
TVO-A-150/160-...



TVO-A-125-...



TVO-A-200-...



Poppet Valve Model TVO

Sound power level L_W

NW	L_W (dB)							
	f_m (Hz)							
	63	125	250	500	1000	2000	4000	8000
100	-7	-6	-6	-4	-2	-1	-4	-11
125	-6	-5	-3	-4	-2	-1	-4	-13
150	1	2	1	-1	1	-4	-9	-18
160								
200	1	2	4	0	-1	-4	-10	-18

Legend

V_{AB} (m ³ /h)	=	Return air volume
V_{AB} [l/s]	=	Return air volume
Δp_t (Pa)	=	Pressure loss
Δp_m (Pa)	=	Pressure loss at the sensor
L_{WA} [dB(A)]	=	A-weighted sound power level
L_W (dB)	=	sound power level
D_e (dB)	=	Insertion loss
f_m (Hz)	=	Octave centre frequency
NW (mm)	=	Nominal value
a (mm)	=	Gap in mm when loosening
n (-)	=	Number of revolutions

Insertion loss D_e

NW	D_e (dB)							
	f_m (Hz)							
	63	125	250	500	1000	2000	4000	8000
100	22	21	15	13	11	10	6	9
125	21	19	13	11	10	10	7	9
150	20	16	12	10	9	10	8	8
160								
200	17	12	7	5	4	4	7	5

Setting k factor

The cone is tightened or loosened by the number of revolutions required to obtain the gap width in mm that corresponds to the desired pressure loss and the desired volumetric flow according to the diagram. To check the pressure loss, remove the plug at the front and introduce a suitable sensor into the test port.

$$V_{AB} = k \sqrt{\Delta p_m}$$

NW	a (mm)						k factor
	-7,5	-5	0	+5	+10	+15	
100	0,83	1,09	1,46	2,00	2,28	2,69	
125	0,85	1,11	1,63	2,15	2,41	3,45	

NW	a (mm)						k factor
	-2,5	0	+5	+10	+15	+20	
150	2,02	2,63	3,93	4,53	6,08	7,56	
160							
200	-	3,47	4,61	5,97	6,60	7,66	

Poppet Valve Model TVO

TVO order code

01	02	03	04	05	06
Type	Type of air	Nominal width	Material	Mounting	Accessories
Example					
TVO-	-A	-100	-KU	-FM	-00

All fields must be filled when ordering

Sample

TVO-A-100-KU-FM-00

Poppet valve type TVO with mounting ring | For exhaust air |
Nominal size 100mm | Plastic PP, colour similar to 9010 | With
spring fastening | Without accessories

Order details

01 - Type

TVO = Poppet valve, type TVO with mounting ring

02 - Type of air

A = for return air

03 - Nominal width

100 = Nominal width 100 mm

125 = Nominal width 125 mm

150 = Nominal width 150 mm

160 = Nominal width 160 mm

200 = Nominal width 200 mm

04 - Material

KU = Plastic PP, similar to RAL colour 9010

05 - Mounting

FM = Spring fastening (standard)

06 - Accessories

00 = Without accessories (standard)

PA = Panelled cover plate, made of steel, painted to RAL
9010 (mounting ring is firmly fitted to the panelled
cover plate)

SA = Saddle bracket, made of galvanised sheet steel
(mounting ring is firmly fitted to the saddle bracket).

Poppet Valve Model TVO

Specification texts

Poppet valve for return air, comprising a round front frame made of plastic colour similar to RAL 9010 (white) and circumferential cellular seal. With adjustable quantity control plate made of plastic and similar to RAL 9010 (white) to control the air volume. For ceiling assembly or wall mounting. Counter nut to ensure the air volume setting and threaded spindle made of steel. Mounting ring made of galvanised sheet steel. Mounting with springs on front frame.

Product: SCHAKO **type TVO**

Accessories:

- Panelled cover plate (-PA) made from sheet steel, with integrated mounting ring, painted to RAL 9010 (white).
- Saddle bracket (-SA) with integrated mounted ring made of galvanised sheet steel.