

C-Values TV , TVS, TVR, TVM and TVA

Size	TV /TVR/TVS	TVM-cold	TVM-tot.	TVA
10	6.1 ¹⁾			
12	9.7	9.7	16.8	9.0
16	15.9	15.9	29.1	15.2
20	25.5	25.5	44	24.2
25	39	39	61	38
31	65			63
40	106			103

1) TVR only

C-Values TVJ/TVT

B x H mm	C	B x H mm	C	B x H mm	C
200 x 100	14.8	400 x 400	146	700 x 700	415
300 x 100	21.2	500 x 400	183	800 x 700	469
400 x 100	28.8	600 x 400	212	900 x 700	535
500 x 100	35	700 x 400	239	1000 x 700	597
600 x 100	44	800 x 400	281	800 x 800	543
200 x 200	30	900 x 400	320	900 x 800	636
300 x 200	45	1000 x 400	359	1000 x 800	681
400 x 200	60	500 x 500	207	900 x 900	720
500 x 200	75	600 x 500	234	1000 x 900	786
600 x 200	90	700 x 500	284	1000 x 1000	904
700 x 200	107	800 x 500	318		
800 x 200	120	900 x 500	361		
300 x 300	75	1000 x 500	409		
400 x 300	100	600 x 600	297		
500 x 300	137	700 x 600	344		
600 x 300	147	800 x 600	396		
700 x 300	174	900 x 600	461		
800 x 300	207	1000 x 600	508		
900 x 300	228				
1000 x 300	254				

Measuring the Effectiv Pressure Δp_e



- ① Remove test point cap and replace after measurement
- ② Manometer

Transducer Curve

The transducers are calibrated in the Trox works such that the transducer output signal shown on the curve agrees with the actual volume flows. This setting is sealed. If the transducers are tested, the differential pressure must be measured at the differential pressure sensor. If the measuring lines contain T-pieces, a manometer can be connected. If the transducer has no T-piece at the effectiv pressure sensor, parallel measurement is not possible. In this case, the actuator must be locked in position (release wiring, program manual operation etc). After measuring the transducer output voltage, the tubes are carefully removed from the transducer connections and the effectiv pressure measured. The volume flow is calculated according to the formula below.

$$\dot{V}_{l/s} = C \cdot \sqrt{\Delta p_e} \quad \text{in l/s}$$

$$\dot{V}_{m^3/h} = C \cdot \sqrt{\Delta p_e} \cdot 3.6 \quad \text{in m}^3/\text{h}$$

$\dot{V}$: volume flow

Δp_e : measured effectiv pressure in Pa

C : constant for air density $\varsigma = 1.2 \text{ kg/m}^3$

The accuracy for the measurement is $\pm 7 \%$ (for TVM_{total} $\pm 12 \%$).

If the minimum requirements given in the leaflets for the flow conditions are not observed, this tolerance will be greater.

Volume Flow Adjustment

The volume flow limit value can be changed, depending on controller type, by adjusting setting knobs with percentage scales, manual operation devices or by computer. For analogue controllers, the adjustment accuracy can be increased if the transducer signal is measured and the volume flow set according to the voltage curve. Ensure that the controller will actually control at $V_{\min}$ or $V_{\max}$ and that the system pressure is adequate. The DDC controller parameters are reprogrammed using a laptop P.C. or through the network via the central computer.