

Installation of the RV Valve

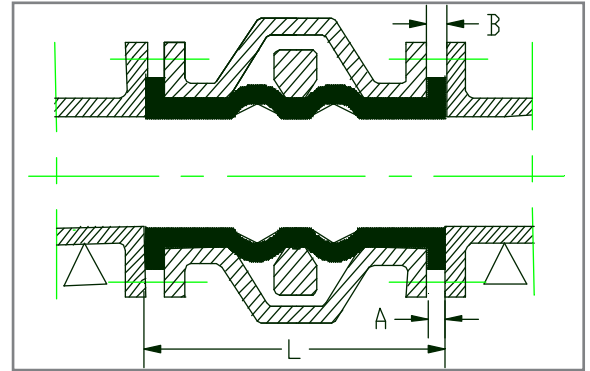
High Pressure Valve, PN25/40

Face to face dimensions

Face to face dimensions of RV Valves are according to the standards presented in Table 1.

Supporting and alignment

The pipe has to be supported from both sides of the valve. The distance difference between the flanges should be $A - B < \pm 2 \text{ mm}$.



Picture 1

DN	25	32	40	50	65	80	100	125	150	200	250	300
ISO 5752 table 6	165	178	190	216	241	283	305	381	403	502*	568	648*

Table 1. (* ASME B16.10 kurz)

Installation of the pipeline

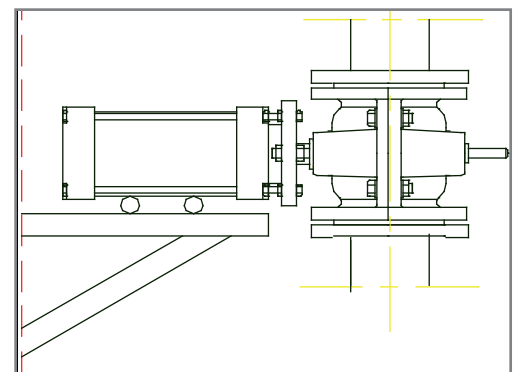
The flange of the tube functions as gasket between the valve body and the pipe line flanges. Torque all flange bolts in a star pattern; first to 50% of recommended values, and then to 100% of given values. Uneven torquing may damage the rubber flange. Recommended bolt torques are presented in the Table 2 for DIN **PN25** and **PN40** flange. Initially, torque the bolts to the recommended values. Open and close the valve several times with no line pressure. Re-check the bolt torques and re-torque the bolts to the proper value. Then introduce line pressure. If air or liquid leaks develop increase the recommended torque in increments of **5 Nm** until leaking ceases. Due to relaxation of the elastomer, flange seals and bolt torques should be inspected after few days.

DN	25	32	40	50	65	80	100	125	150	200	250	300
Thread, PN25	M12	M16	M16	M16	M16	M16	M20	M24	M24	M24	M27	M27
M / Nm	12	20	20	20	28	35	35	40	50	60	60	70
Thread, PN40	M12	M16	M16	M16	M16	M16	M20	M24	M24	M27	M30	M30
M / Nm	12	20	20	20	30	40	40	45	55	65	65	80

Table 2. Recommended flange bolt torques for RV Valve, PN25 (DIN 2655) and PN40 (DIN 2656). ISO metric standard bolts (slightly greased bolts).

Supporting the actuator

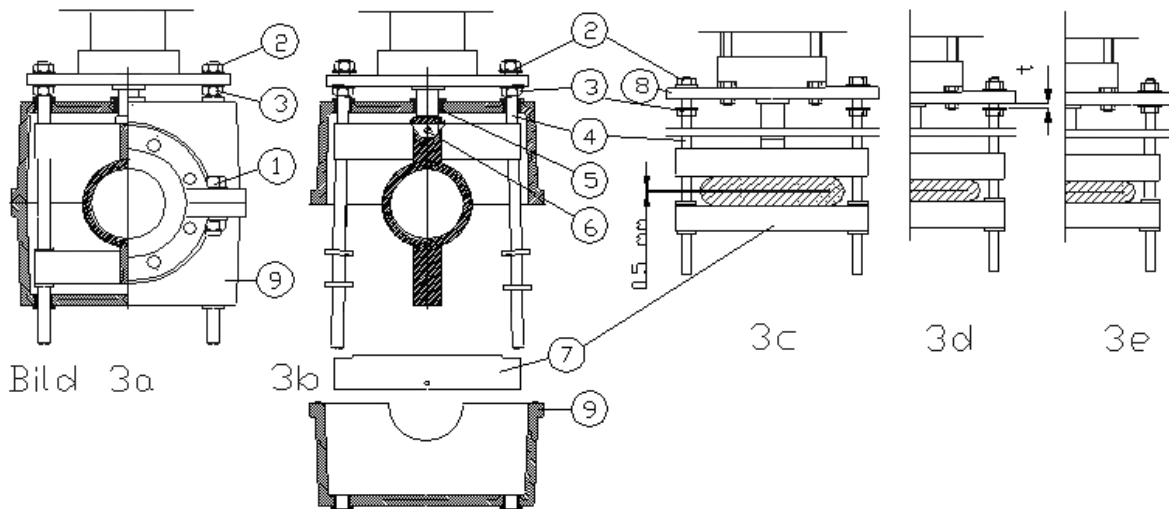
When a tandem pneumatic actuator or the pneumatic actuator with air spring is installed in a horizontal position, it is recommended that the actuator is supported as shown in Picture 2.



Picture 2

Technical changes kept in reserve.

Replacement of the tube and adjustment of the valve closure (pinch bars)



Replacement of the tube without adjusting the valve closure

(NOTE, the position of the nuts 2 is not changed or nut turned, nut 2 is locked with a set screw).

Detach the lower part of the valve body (9) from the pipe line by removing the lower flange bolts. (The valve can be also removed completely from the pipe line). Loose the nuts (3) in the pull bars (4). Loose the upper flange bolts so that the tube can be removed from the body/pipe. If the valve is equipped with the opening tags, open screws (6). Remove the lower pinch bar by spreading slightly the pull bars (4). Now the old tube can be removed and replaced with a new tube.

Adjustment of the valve closure

If the valve no longer closes entirely due to tube wear or if the position of the nuts (2) has been changed, the distance between the pinch bars has to be re-adjusted correctly to obtain proper sealing and to secure maximum life for the tube. When replacing the tube and proceed according to the instructions below.

First turn the nuts (2) to the upper end of the pull bars (4). Push the shaft of the actuator completely out. By turning nuts (2) adjust the distance between the pinch bars so that the gap inside the tube is 0.5 mm (picture 3c) and even. Use feeler gauge to measure the gap. Turn further nuts (2) equally that the light gap just disappears. Turn nuts (3) so that the distance (t) between the fixing plate (8) and the washer on the nut (3) is according to the table 3 below (picture 3d). Finally turn nuts (2) until the gap t is closed. The valve is now ready to be connected to the pipe line.

DN	25-80		100-200		250-350	
bar	10-25	25-40	10-25	25-40	10-25	25-40
t (mm)	4	6	5	7	6	8

Table 3. Distance (t) between the fixing plate (8) and the washer on the nut (3).

If the distance t is larger than indicated in table 3, the extra pressure may damage the tube prematurely. If the distance is smaller than indicated in the table, the pinch bars do not close the valve completely, and the valve may leak or wear out faster than normal. If the pinch bars are not parallel the premature damage of the tube causing a leak or abnormal wear of the tube may occur.

Technical changes kept in reserve.