

Guided V-Port Plugs in Globe Control Valves Series 1a und 1b

Application:

Optimal design of V-Port plugs in Pfeiffer globe Control valves. The plug replaces the standard parabolic plug for the following application:

- for beginning cavitation and flashing
- for a high pressure drop
- for different critical application

Performance:

The plugs are available for the following nominal sizes and flow data:

DN 25 / DN 1"	kvs 0,63 to ..10	glp / lin
DN 40 / DN 1 1/2"	kvs 4 to 21	glp / lin
DN 50 / DN 2"	kvs 6,3 to 35	glp / lin
DN 80 / DN 3"	kvs 16 to 80	glp / lin
DN 100 / DN 4"	kvs 25 to 160	glp / lin
DN 150 / DN 6"	kvs 40 to 300	glp / lin

Exact classification of the kvs-values to the nominal sizes of series 1a and 1b (see table 2).

The V-Port trims include the following items:

- Standard seat in material PTFE (exchangeable).
- V-Port plugs with one, two or three gaps incorporated into the surface (exchangeable)

Special designs:

- Seat and plug in special material such as: Anti-static PTFE-material, HDPE, Ceramic or other special material.

Principle of operation:

The flow of the valve is against the closing direction of the plug. The stream of the valve is divided unsymmetrical by the design of the plug. The plug is guided it's complete guide surface diameter into the seat bore and this prevents vibration of the plug.

General technical data:

Nominal size	DN 25 to DN 150
Leakage rate	Leakage rate A acc. to DIN EN 1226-1,P12 (Leakage rate 1 BO acc. to DIN 3230 Part 3)
Rangeability	50:1
Characteristic	equal percentage or linear

Table 1 – technical data



Fig. 1 V-Port plug in PTFE

Assignment of the kvs – values to series 1a and 1b:

Series	DN	1a					1b					
		25	40	50	80	100	150	25	40	50	80	100
kvs	Cv											
0.63	0.74	•										
1	1.2	•						•				
1.6	1.9	•						•				
2.5	2.9	•						•				
4	4.7	•	•					•	•			
6.3	7.4	•	•	•				•	•	•		
10	11.7	•	•	•				•	•	•		
16	18.7		•	•	•				•	•	•	
25	29			•	•	•				•	•	•
28	33			•						•		
30	35									•		
35	41			•								
40	47				•	•	•				•	•
63	74				•	•	•				•	•
80	94				•	•	•				•	•
100	117					•	•					•
125	146					•						•
150	176						•					
160	187					•						
260	304						•					
300	351						•					

Table 2 –kvs-Values