



BR 01a and BR 01b · Guided V-Port Plugs
DIN and ANSI Version



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 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)

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

Table 1: Performance

Nominal size		Flow data kvs	Characteristic
DN	NPS		
25	1	0,63 to 10	equal percentage / linear
40	1½	4 to 21	equal percentage / linear
50	2	6,3 to 35	equal percentage / linear
80	3	16 to 80	equal percentage / linear
100	4	25 to 160	equal percentage / linear
150	6	25 to 300	equal percentage / linear

For the exact classification of the kvs and Cv values to the nominal sizes of the respective series, see Tables 3 and 4.

Special designs

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



Fig. 1: V-port plug

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 its complete guide surface diameter into the seat bore and this prevents vibration of the plug.

Table 2: Technical data

Nominal size	DN 25 to 150 / NPS1 to 6
Leakage rate	Leakage rate A acc. to DIN EN 1226-1,P12 (Leakage rate 1 BO acc. to DIN 3230 Part 3)
Rentability	30 : 1

Table 3: kvs / Cv - Values assigned to BR 1a

Flow data		Nominal size					
kvs	Cv	DN 25 / NPS1	DN 40 / NPS1½	DN 50 / NPS2	DN 80 / NPS 3	DN 100 / NPS4	DN 150 / NPS6
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		•	•	•		
21	24.6		•				
25	29			•	•	•	•
35	41			•			
40	47				•	•	•
63	74				•	•	•
80	94				•	•	
85	99.5				• ¹⁾		
100	117					•	•
125	146					•	
150	176					•	•
300	351						•

¹⁾ nur linear

Table 4: kvs / Cv - Values assigned to BR 1b

Flow data		Nominal size				
kvs	Cv	DN 25 / NPS1	DN 40 / NPS1½	DN 50 / NPS2	DN 80 / NPS3	DN 100 / NPS4
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			•		
40	47				•	•
63	74				•	•
80	94				•	•
100	117					•
125	146					•