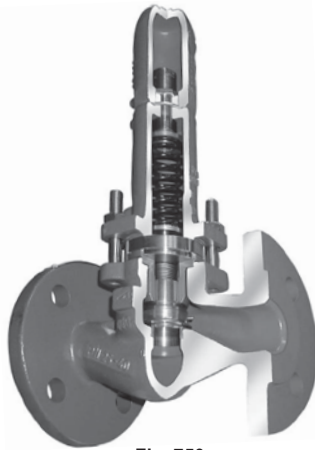
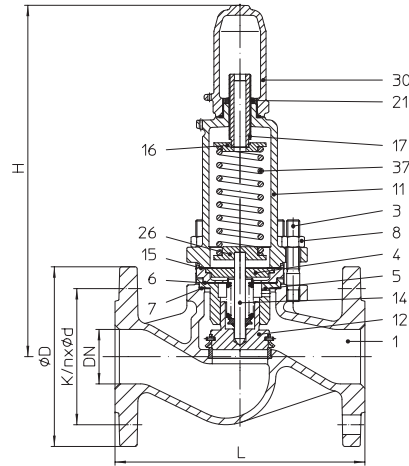


**Pressure Regulating Valve with bellows seal DN 25-100**
**Fig. 750**

**Fig. 750**

**Features:**

- Spring loaded
- Standard bellows seal
- Compact design
- Regulating plug
- Shaft plug guide
- Pressure ranges (bar) :
  - 0.5-1.5 bar / 1-3 bar / 2-5 bar / 4-10 bar
- Exact and easy equipment
- Proportional flow characteristic



Figure	Nom. pressure	Material	Nom. diameter
12.753	*PN 16	EN-JL1040	DN 25-100
22.753	*PN 16	EN-JS1049	DN 25-100
32.753	PN 16	1.0619+N	DN 25-100

\*DN 80 - PN 10

**Selection of possible applications**

- Liquids
- as and vapours
- Steam

Dimensions								
DN		25	32	40	50	65	80	100
Seat -	(mm)	27	31	41	51	66	81	101
Standard Kvs values	(m³/h)	3	5	10	20	22	29	45
Stroke	(mm)	2.5	2.5	4	5.5	7	8	10
H	(mm)	290	300	325	330	400	440	500
L	(mm)	160	180	200	230	290	310	350
Weight	(kg)	6.6	7.7	10.4	12.9	20.2	28.9	43.7
ØD	(mm)	115	140	150	165	185	200	220
ØK	(mm)	85	100	110	125	145	160	180
n x Ød	(mm)	4 x 14	4 x 18	4 x 18	4 x 18	4 x 18	8 x 18	8 x 18

Material				
Pos.	Description	PN 16 - 12.753	PN 16 - 22.753	PN 16 - 32.753
1	Body	EN-JL1040	EN-JS1049	1.0619+N
1.2	Seat	1.4021+QT		
3	Stud	1.7218		
4	Stem guide	1.4021+QT		
5	Guide housing	1.4021+QT		
6	Gasket*	CrNi laminated both sides with pure graphite		
7	Gasket*	CrNi laminated both sides with pure graphite		
8	Hexagon nut	1.1181		
11	Bonnet	EN-JL1040	EN-JS1049	
12	Plug unit*	1.4021+QT		
14	Stem unit*	1.4571		
15	Gasket*	CrNi laminated both sides with pure graphite		
16	Spring plate (top)	1.0037		
17	Adjusting screw	1.4021+QT		
21	Lock nut	1.0718+C		
26	Spring plate (bottom)	1.0037		
30	Cap, gastight	EN-JS1049		
37	Spring*	FDSICr		

\* Spare parts

\*last updated 10/16

Pressure Temperature Ratings acc. to DIN EN 1092-1/-2											
acc. to DIN 1092-2	PN	Temperature (°C)									
Material		-60 up to <-10	-10 up to 120	150	200	250	300	350	400	450	
EN-JL1040	16	-	16 bar	14.4 bar	12.8 bar	11.2 bar	9.6 bar	-	-	-	
EN-JS1049	16	on request	16 bar	15.5 bar	14.7 bar	13.9 bar	12.8 bar	11.2 bar	-	-	
acc. to DIN 1092-1	PN	Temperature (°C)									
Material		-60 up to <-10*	-10 up to 50	100	150	200	250	300	350	400	450
1.0619+N	25	12 bar	16 bar	14.9 bar	13.9 bar	12.4 bar	11.4 bar	10.3 bar	9.6 bar	9.2 bar	8.9 bar

Intermediate values for max. permissible operational pressure only above 120 °C / 100 °C can be determined by linear interpolation of the given temperature / pressure chart.  
 \*Studs and nuts made of A4-70 (at temperatures below -10 °C) Flangholes/-thickness tolerances acc. to DIN

Max. permissible back pressure p2 in bar (ü)									
DN		25	32	40	50	65	80	100	
Pressure range Δp0 in bar	Range Δp0 in bar	Max. permissible back pressure p2 in bar (ü)							
0.5 - 1.5	0.5	6.9	6.4	6.6	9.5	4.9	6.7	5.9	
	1	5.4	4.4	4.7	6.5	3.3	4.9	4.2	
	1.5	3.9	2.4	2.7	3.5	1.7	3.1	2.5	
1 - 3	1	10.6	11.2	9.9	14	7	7.7	6.8	
	2	7.6	7.2	6	10.4	3.8	4.2	3.5	
	3	4.6	3.2	2	6.8	0.5	0.6	0.1	
2 - 5	2	12	12	12	12	11.3	10.8	10.2	
	3	9.3	9.2	8.4	9.8	8.1	7.2	6.8	
	4	6.6	6.5	4.9	7.7	4.8	3.7	3.5	
	5	3.9	3.7	1.3	5.5	1.6	0.1	0.1	
4 - 10	4	8	8	8	8	8	8	8	
	6	5.7	5.7	5.7	5.7	5.7	5.7	5.7	
	8	3.3	3.3	3.3	3.3	3.3	3.3	3.3	
	10	1	1	1	1	1	1	1	

Δp0 = differential pressure ( set pressure p10 - back pressure p2)

### Necessary data

- Medium : BP Transcal N
- Temperature : 230 °C
- Flow Q : 25 m<sup>3</sup>/h
- Set pressure p10 : 2.5 bar(g)
- Opening pressure p1 : 3.1 bar (g)
- Back pressure p2 : 0.5 bar (g)

### 1. Differential set pressure

(small leakage, for selection see pressure ranges pt. 4)  
 Δp0 = p10 - p2 = 2.0 bar

### 2. Differential opening pressure

(needed full flow, sizing see pt.3)  
 Δp = p1 - p2 = 2.6 bar  
 Δp / ΔP0 = 1.3 (complies to 30% differential pressure raise)

### 3. Sizing

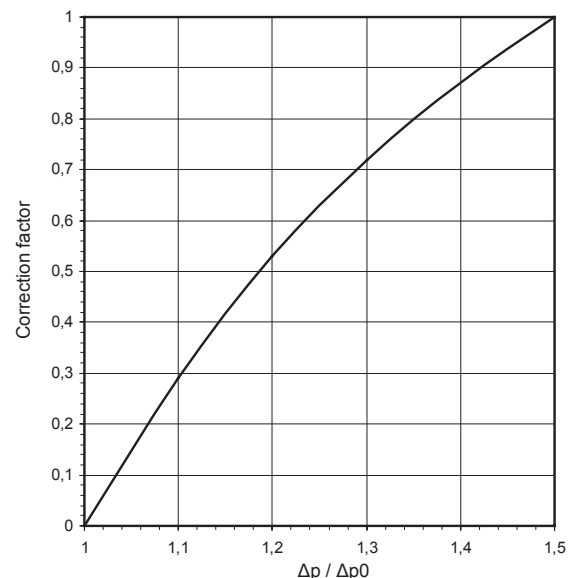
ARI-VASI program part, Check valves, with  
 p1 = 4.1 bar(a)  
 p2 = 1.5 bar(a)  
 Q = 25 m<sup>3</sup>/h  
**Result Kv = 13.29**

Diagram by Δp / Δp0 = 1.3  
**Result correction factor = 0.72**

Kvs = kv/0.72 = 18.5  
 Chosen out of catalogue table :  
**DN50 with Kvs = 20**

### 4. Selection of pressure range

The differential set pressure Δp0 (here 2.0 bar) gives the pressure range. When the pressure range overlaps one must always choose the lower range. In this case 1 - 3 bar is better than 2 - 5 bar.



### Please indicate when ordering

1. Figure-No.
2. Nominal diameter
3. Nominal pressure
4. Body material
5. Plug design
6. Kvs-value
7. Pressure range
8. Special design

\*last updated 10/16