

Cryogenic Valves

Series 241000 stainless steel angle valves

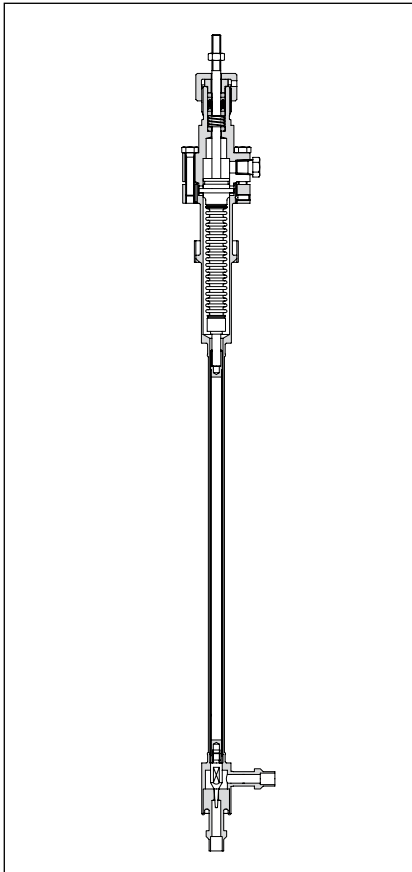
Description

Stainless steel low temperature valves for helium liquefaction and other air separation systems. Body and extension designed for vacuum insulation. Service temperature down to -270 °C (2 K).

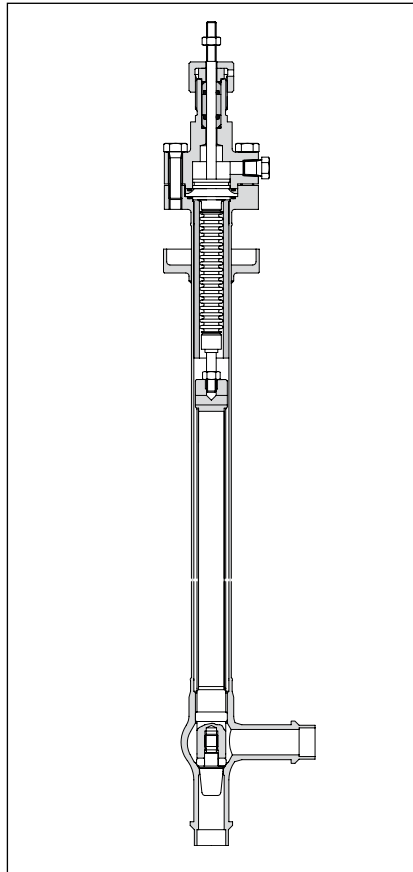


Technical Data

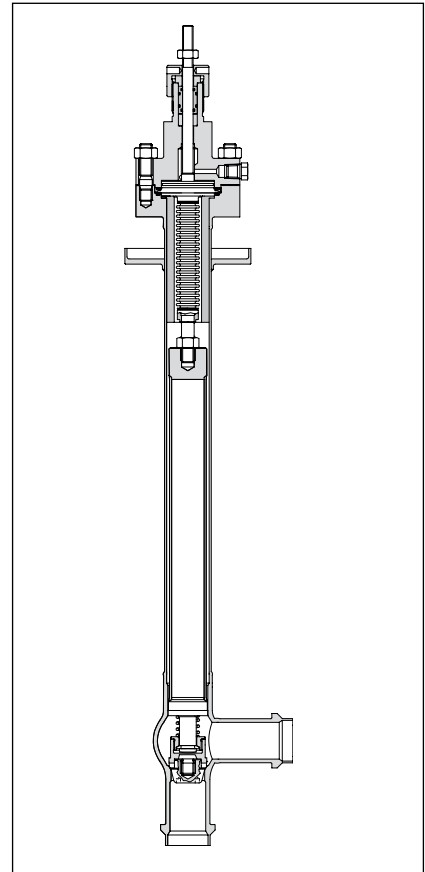
| | |
|-----------------------------------|---|
| Valve body style | Angle valve, special designs like offset, 3 - way on request |
| Characteristics | Equal %, Linear, On - Off |
| Seat leakage, standard | < 0,01% of rated k_{vs} -value, other requirements on request |
| Body | 1.4404 / 1.4435, alternative 1.4541 |
| Material for Plug / seat | WNR 1.4404 or 1.4541, optional Alloy 6, other materials on request |
| Soft seat | Plug with PCTFE-insert from k_{vs} 0.1. Vespel optional for higher sealing requirements |
| Packing | O-Rings, PTFE oxygen packing, V-Rings |
| Body gasket | O-Rings or PTFE between extension and bonnet |
| Extension | Extensions can be made in any length |
| Connections | Weld ends |
| k_{vs}-values | See table page 3 |
| Bellows seal | All valves available with bellows seal |
| Cover plate | Cover plates for vacuum sealing available in any size |



DN 4 / 6 / 8



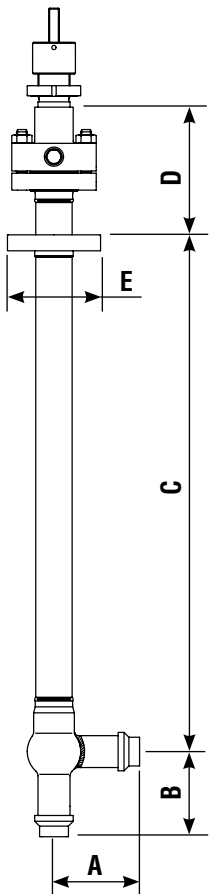
DN 8 - 15



DN 20 - 150

Dimensions [mm] and Weights [kg]

Valves with stainless steel bodies, PN 10 - 40 / ANSI Class 150 - 300



| DN | ANSI | A | B | C | D | E | Weld ends | Weight |
|------|--------|-----|-----|-----|-----|-----|-----------------------------|--------|
| 4 | 1/32" | 40 | 50 | 600 | 80 | 30 | As required by the customer | 0.8 |
| 6 | 1/4" | 40 | 50 | 600 | 80 | 30 | | 0.9 |
| 8 | 5/16" | 50 | 50 | 600 | 80 | 47 | | 1.0 |
| 10 | 3/8" | 50 | 50 | 600 | 80 | 47 | | 2.00 |
| 15 | 1/2" | 65 | 65 | 600 | 80 | 60 | | 2.50 |
| 20 | 3/4" | 80 | 80 | 600 | 120 | 80 | | 5.50 |
| 25 | 1" | 80 | 80 | 600 | 120 | 80 | | 6.00 |
| 32 | 1 1/4" | 100 | 100 | 600 | 120 | 100 | | 9.00 |
| 40 | 1 1/2" | 100 | 100 | 600 | 120 | 100 | | 10.50 |
| 50 | 2" | 120 | 120 | 600 | 129 | 110 | | 16.00 |
| 65 | 2 1/2" | 130 | 130 | 600 | 129 | 127 | | 22.50 |
| 80 | 3" | 155 | 155 | 600 | 139 | 150 | | 34.00 |
| 100 | 4" | 175 | 175 | 600 | 139 | 170 | | 46.50 |
| 125 | 5" | 220 | 220 | 600 | 139 | 216 | | 79.50 |
| 150 | 6" | 250 | 250 | 600 | 162 | 251 | | 109.00 |
| 150* | 6" * | 250 | 250 | 600 | 173 | 251 | 115.00 | |

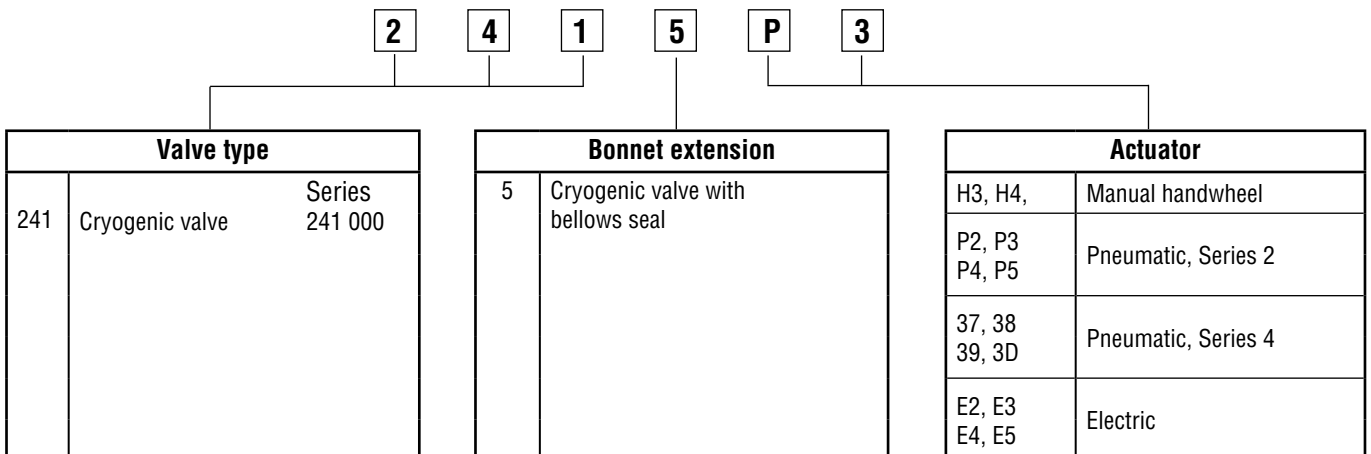
* With M24 connection

Standard K_{VS} -values

| Size DIN | 4 | 6 | 8 | 10 | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | K_{VS} -value* | Seat diameter (mm) | Rangeability** |
|--------------------|-------|------|-------|------|------|------|----|--------|--------|----|--------|----|-----|-----|-------|------------------|--------------------|----------------|
| Size ANSI | 1/32" | 1/4" | 5/16" | 3/8" | 1/2" | 3/4" | 1" | 1 1/4" | 1 1/2" | 2" | 2 1/2" | 3" | 4" | 5" | 6" | | | |
| Stroke (mm) | 10 | 10 | 10 | 10 | 10 | 20 | 20 | 20 | 20 | 40 | 40 | 40 | 60 | 60 | 60 | | | |
| Stem diameter (mm) | 6 | 6 | 6 | 6 | 6 | 10 | 10 | 10 | 10 | 16 | 16 | 16 | 16 | 16 | 16/24 | | | |
| | | | | | | | | | | | | | | | | 0.0010 | 2 | 25:1 |
| | | | | | | | | | | | | | | | | 0.0016 | 2 | 25:1 |
| | | | | | | | | | | | | | | | | 0.0025 | 2 | 25:1 |
| | | | | | | | | | | | | | | | | 0.004 | 2 | 25:1 |
| | | | | | | | | | | | | | | | | 0.0063 | 2 | 25:1 |
| | | | | | | | | | | | | | | | | 0.010 | 3 | 50:1 |
| | | | | | | | | | | | | | | | | 0.016 | 3 | 50:1 |
| | | | | | | | | | | | | | | | | 0.025 | 3 | 50:1 |
| | | | | | | | | | | | | | | | | 0.04 | 3 | 50:1 |
| | | | | | | | | | | | | | | | | 0.063 | 3 | 50:1 |
| | | | | | | | | | | | | | | | | 0.10 | 3 | 50:1 |
| | | | | | | | | | | | | | | | | 0.16 | 3 | 50:1 |
| | | | | | | | | | | | | | | | | 0.25 | 3 | 50:1 |
| | | | | | | | | | | | | | | | | 0.4 | 4,5 | 50:1 |
| | | | | | | | | | | | | | | | | 0.63 | 4,5 | 50:1 |
| | | | | | | | | | | | | | | | | 1.0 | 7,0 | 50:1 |
| | | | | | | | | | | | | | | | | 1.6 | 7,0 | 50:1 |
| | | | | | | | | | | | | | | | | 2.5/1.6 | 10 | 50:1 |
| | | | | | | | | | | | | | | | | 6.3/4 | 15 | 50:1 |
| | | | | | | | | | | | | | | | | 10/6.3 | 20 | 50:1 |
| | | | | | | | | | | | | | | | | 16/10 | 25 | 50:1 |
| | | | | | | | | | | | | | | | | 25/16 | 32 | 50:1 |
| | | | | | | | | | | | | | | | | 40/25 | 40 | 50:1 |
| | | | | | | | | | | | | | | | | 63/40 | 50 | 50:1 |
| | | | | | | | | | | | | | | | | 100/63 | 63 | 50:1 |
| | | | | | | | | | | | | | | | | 160/100 | 80 | 50:1 |
| | | | | | | | | | | | | | | | | 250/160 | 100 | 50:1 |
| | | | | | | | | | | | | | | | | 400/250 | 125 | 50:1 |
| | | | | | | | | | | | | | | | | 560/400 | 150 | 50:1 |

* $K_{VS} \leq 0,25 = K_V \times F_R$ acc. to IEC 534 (more information on request) **For calibrating conditions
 For soft seat $K_{VS} = 0.10$ to 1.6 the seat diameter is 10 mm.
 Further special engineered K_{VS} -values on request.

Valve Code



Regional Headquarters**Flowserve EMA**

Burrell Road, Hayward Heath
West Sussex, RH16 1TL
England
Telephone: +44 (0) 1444 314400
Facsimile: +44 (0) 144 3144401

Flowserve America

1350 N. Mt. Springs Prkwy.
Springville, UT 84663
USA
Telephone: +1 801 489 8611
Facsimile: +1 801 489 3719

Flowserve Asia

12 Tuas Avenue 20
638824
Republic of Singapore
Telephone: +65 862 3332
Facsimile: +65 862 4940

Main Sales Offices EMA (Europe, Middle East, Africa)**Flowserve France**

7 Avenue de la Libération
63300 Thiers Cedex
France
Telephone: +33 (0) 4 73 80 42 66
Facsimile: +33 (0) 4 73 80 14 24

Flowserve Switzerland

Allee du Quartz 1
CH-2300 La-Chaux-de Fonds
Switzerland
Telephone: +41 (0) 32 925 9700
Facsimile: +41 (0) 32 926 5422

Flowserve Germany

Manderscheidstr. 19
45141 Essen
Germany
Telephone: +49 (0) 201 8919 5
Facsimile: +49 (0) 201 8919 662

Flowserve Eastern Europe

12, av. du Québec
91965, Courtaboeuf Cedex
France
Telephone: +33 (0) 1 60 923 251
Facsimile: +33 (0) 1 60 923 299

Flowserve South Africa

Units 1 and 2
26, Imvuba Road, Sebenza Ext 6
Edenvale, Gauteng
Edenglen 1613
South Africa
Telephone: +27 11 609 2094
Facsimile: +27 11 609 3735

Flowserve Middle-East

C/O Saleh & Abdulaziz Abahsain
P.O. Box 209

Al Khobar 31952
Saudi Arabia
Telephone: 9663 857 3442
Facsimile: 9663 859 5284

Flowserve Austria

Kasernengasse 6

9500 Villach
Austria
Telephone: +43 (0) 424241 181-0
Facsimile: +43 (0) 424241 181 50/51

Flowserve Benelux

Van Leeuwenhoekweg 6

3225 LX Hellevoetsluis
The Netherlands
Telephone: +31 (0) 181 330044
Facsimile: +31 (0) 181 330040

Flowserve Italy

Via Prealpi, 30
Cormano (Milano)
Italy Spain
Telephone: +39 (0) 2663251
Facsimile: +39 (0) 26151863

Flowserve Spain

Luis Cabrera, 86-88
E-28002 Madrid
Portugal
Telephone: +34 9 15 152 032
Facsimile: +34 9 14 136 747

Flowserve Portugal

Av. Dr. Antunes Guimaraes, 1159
Porto 4100-082
Sweden
Telephone: +351 22 619 8770
Facsimile: +351 22 619 7575

Flowserve Scandinavia

Gelbgjutaregatan
58933 Linköping, Östergötland
Telephone: +46 13 316100
Facsimile: +46 13 136054