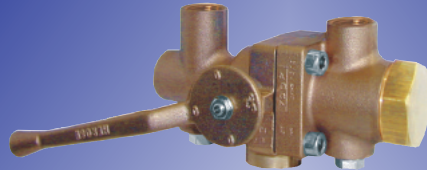


# Cryogenic Valves

*Ratermann Manufacturing, Inc. carries a range from bronze to stainless steel valves for your application.*



*Cryogenic  
Globe Valves*



*Divertor Valves*



## INDEX

### **Cryogenic Valves**

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## *Lockout*

To Secure your Dewars



For more  
*Lockout*  
Products  
available,  
please see  
Lockout  
section

**17A.**



*Safety and  
Thermal Reliefs*

*Globe  
Valves*



*Ball Valve*





**Manual Globe Valves**  
Bronze  
1/4" to 3"  
(6-80 mm)

This product range includes a full offering from bronze to complete stainless steel valves for many specialist industrial gas applications. These are available to 10" (250mm) and numerous options include long and short spindle valves, actuated valves, high-pressure valves, cylinder filling valves, bellows sealed valves, cluster assemblies, electronic grade valves etc. This range is used on numerous applications and mediums with many valves specifically designed for customer applications. Global contracts are in place to supply major customers within the industry.

This comprehensive range includes globe valves that have been extensively cycle tested by industrial gas leaders, and proven to have an extended operating life against industry standards.

## Cleaned for Oxygen Service

*Call Us with Your Specifications and We'll Help You Choose the Correct Valve for Your Application*



**Actuated Globe Valves**  
Bronze and Stainless Steel  
1/4" to 10"  
(6-250 mm)



**Large Globe Valves**  
Bronze and Stainless Steel  
4" to 10"  
(100-250 mm)

### Technical Data Cleaned for Oxygen Service

1/4" - 1 1/4" (6-32mm)	Screwed	High Pressure	2100psi (160 Bar)
1/4" - 3" (6-80mm)	Screwed/Weld Pipe/Flanged	Manual Valves	750psi (50 Bar)
1/4" - 10" (4-750mm)	Screwed/Weld Pipe/Flanged	Actuated Valves	750psi (50 Bar)
4" - 10" (100-250mm)	Flanged	Manual/ Actuated Valves	750psi (50 Bar)
1" - 2" (25-50mm)	Screwed/Weld	Cluster Valves	750psi (50 Bar)
1/4" - 2" (4-50mm)	Weld	Bellows Seated Valves	750psi (50 Bar)
1/4" - 1" (6-25mm)	Screwed	Filling Plant Valves	6000psi (400 Bar)



Bronze Globe Valve Socket Ends

SBT	Vendor Reference Number	To Order Part Number	Extension
1/2"	01311.1515.0010	GVMPB-B-A-ACAA	10 5/8"
1/2"	01311.1515.0020	GVMPB-B-B-ACAA	14 1/2"
3/4"	01311.2022.0020	GVMPB-D-B-ACAA	14 1/2"
1"	01311.2528.0010	GVMPB-E-A-ACAA	10 5/8"
1"	01311.2528.0020	GVMPB-E-B-ACAA	14 1/2"
1 1/2"	01311.4042.0010	GVMPB-G-A-ACAA	10 5/8"
1 1/2"	01311.4042.0020	GVMPB-G-B-ACAA	14 1/2"
2"	01311.5054.0010	GVMPB-H-A-ACAA	10 5/8"
2"	01311.5054.0020	GVMPB-H-B-ACAA	14 1/2"



Bronze Globe Valve with Stainless Steel Stubs

ST Stubbed	Vendor Reference Number	To Order Part Number	Extension
1/2"	01311.1521.0017	GVMSB-C-A-ACAA	10 5/8"
3/4"	01311.2026.0017	GVMSB-D-A-ACAA	10 5/8"
1"	01311.2533.0027	GVMSB-E-B-ACAA	14 1/2"
1 1/2"	01311.4048.0027	GVMSB-G-B-ACAA	14 1/2"
2"	01311.5060.0027	GVMSB-H-B-ACAA	14 1/2"



Bronze Globe Valve with Pipe Thread

NPT	Vendor Reference Number	To Order Part Number	Extension
1/2"	01315.0400.0016	GVMTB-C-A-ACAE	10 5/8"
3/4"	01315.0600.0016	GVMTB-D-A-ACAE	10 5/8"
1"	01315.1000.0016	GVMTB-E-A-ACAE	10 5/8"
1"	01315.1000.0026	GVMTB-E-B-ACAE	14 1/2"
1 1/2"	01315.1400.0026	GVMTB-G-B-ACAE	14 1/2"
2"	01315.2000.0026	GVMTB-H-B-ACAE	14 1/2"



Stainless Steel Globe Valve with Bronze Top Work – Socket Weld Connector for Stainless Steel Pipe

ST Bodied SW	Vendor Reference Number	To Order Part Number	Extension
1/2"	01321.1521.0014	GVMSB-C-A-ACBA	10 5/8"
3/4"	01321.2026.0014	GVMSB-D-A-ACBA	10 5/8"
1"	01321.2533.0014	GVMSB-E-A-ACBA	10 5/8"
1"	01321.2533.0024	GVMSB-E-B-ACBA	14 1/2"
1 1/2"	01321.4048.0014	GVMSB-H-A-ACBA	10 5/8"
1 1/2"	01321.4048.0024	GVMSB-H-B-ACBA	14 1/2"
2"	01321.5060.0024	GVMSB-I-B-ACBA	14 1/2"



Stainless Steel Globe Valve – Socket Weld Connection for Stainless Steel Pipes

Stainless SW	Vendor Reference Number	To Order Part Number	Extension
1/2"	01341.1521.0014	GVMSB-C-A-ACDA	10 5/8"
3/4"	01341.2026.0014	GVMSB-D-A-ACDA	10 5/8"
1"	01341.2533.0024	GVMSB-E-B-ACDA	14 1/2"
1 1/2"	01341.4048.0024	GVMSB-H-B-ACDA	14 1/2"
2"	01341.5060.0024	GVMSB-I-B-ACDA	14 1/2"

Bronze Globe Valve  
Female 130 NPT Thread Connection

NPT	Vendor Reference Number	To Order Part Number	Extension
1/2"	01305.0400.0006	GVNB-C-ACJE	non
3/4"	01305.0600.0006	GVNB-D-ACJE	non
1"	01305.1000.0006	GVNB-E-ACJE	non
1 1/2"	01305.1400.0006	GVNB-G-ACJE	non
2"	01305.2000.0006	GVNB-H-ACJE	non

# DIVERTOR & CRYO BALL VALVES

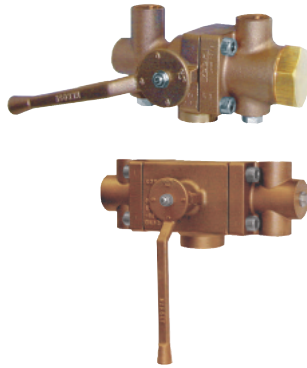


## Divertor Valves

Only valve worldwide that meets German approval test program ensuring tight shut off giving the same performance as a globe valve

- Life cycled by user to over 174 years service without leakage
- High pressure options
- CO2 option for 4 safeties
- Bellow sealed options
- 1" and 1 1/2" as standard, others are available

*"A valve that shuts tight!"*



## Most Common Divertor Valves

Size	Vendor Reference Number	To Order Part Number	Inlet	Outlet
0.787"	06510.2004.6620	DVBB-A-FEAJ	1"	1/2"
0.787"	06510.2006.6620	DVBB-B-FEAJ	1"	3/4"

Size	Vendor Reference Number	To Order Part Number	Inlet	Outlet
1.259"	06510.3214.6620	DVBB-F-FEAJ	1 1/2"	1"

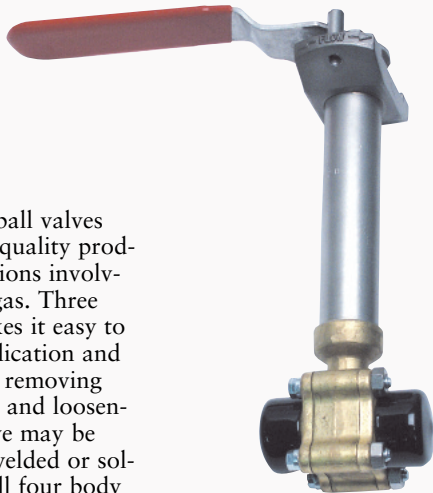
### APPLICATIONS:

Approved for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluormethan, carbon oxide, methane, ethane and ethylene.  
Working temperature: -196°C/-321°F (77K) up to +120°C/+248°F (393K)

## Cleaned for Oxygen Service

### Extended Bonnet Three Piece Cryogenic Ball Valve

Three piece cryogenic ball valves are high performance, quality products for tough applications involving all types of liquid gas. Three piece construction makes it easy to install, versatile in application and simple to maintain. By removing three of the body bolts and loosening the fourth, the valve may be swung out of line. In welded or soldered piping systems all four body bolts may be removed and the center section lifted out for maintenance or replacement.



Ball Valve

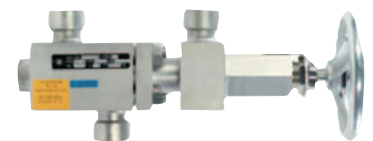
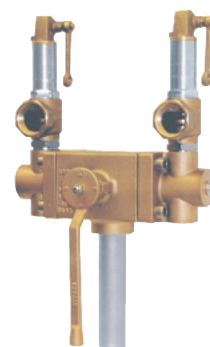
## Call for Other Models Available

### Technical Data

1/2" - 1 1/2" (12-40mm)	Screwed	Ball Diverters	720psi (48 Bar)
1/2" - 3" (12-500mm)	Screwed	Globe Diverters	720psi (45 Bar)
1/2" - 2" (12-50mm)	Flanged/ Screwed	CO2 Diverters	2400psi (160 Bar)
1/4" - 2" (6-50mm)	Weld	Bellow Sealed Diverters	720psi (48 Bar)
2" - 12" (50-200mm)	Flanged	Globe Diverters	600psi (40 Bar)

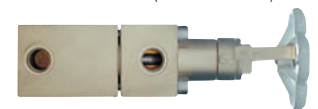
## Cryogenic Ball Valves

Part #	Inlet Connection	Outlet Connection	Body Material
CBV-B14	1/4" Female NPT	1/4" Female NPT	Brass
CBV-B38	3/8" Female NPT	3/8" Female NPT	Brass
CBV-B12	1/2" Female NPT	1/2" Female NPT	Brass
CBV-B34	3/4" Female NPT	3/4" Female NPT	Brass
CBV-B1	1" Female NPT	1" Female NPT	Brass
CBV-B112	1 1/2" Female NPT	1 1/2" Female NPT	Brass
CBV-B2	2" Female NPT	2" Female NPT	Brass
CBV-S14	1/4" Female NPT	1/4" Female NPT	316LSS
CBV-S38	3/8" Female NPT	3/8" Female NPT	316LSS
CBV-S12	1/2" Female NPT	1/2" Female NPT	316LSS
CBV-S34	3/4" Female NPT	3/4" Female NPT	316LSS
CBV-S1	1" Female NPT	1" Female NPT	316LSS
CBV-S112	1 1/2" Female NPT	1 1/2" Female NPT	316LSS
CBV-S2	2" Female NPT	2" Female NPT	316LSS



Globe Divertors  
Bronze and Stainless Steel

1/2" to 12" (12-300 mm)



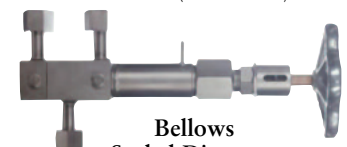
CO2 Divertors  
Stainless Steel

1/2" to 2" (12-50 mm)



Ball Divertors  
Bronze

1/2" to 1 1/2" (12-40 mm)



Bellows Sealed Divertors  
Stainless Steel

1/2" to 2" (12-50 mm)

# CRYOGENIC VALVES

## SHORT STEM CRYOGENIC SHUT-OFF VALVES

### Application

These valves are designed for use on portable cryogenic cylinders and other in-line shut-off valve applications.

### Features

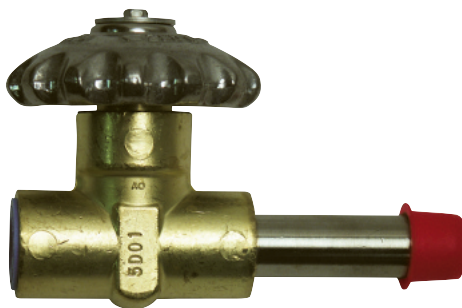
- Spring loaded stem seal automatically adjusts for any gasket wear, eliminating the need to constantly retighten the packing nut.
- Non-rising stem and low profile allow the valve to be opened and closed in tight areas and still provide easy access.
- Unique pressure-sealed moisture barrier helps prevent freeze up at cryogenic temperatures.
- Conical swivel seal design helps prevent seat assembly from over torquing.
- Cleaned for liquid oxygen service.
- Maximum working pressure is 600 PSI.
- Working temperature range is -320° to + 165°.

### Materials

- Body – Brass
- Bonnet – Brass
- Seal Disc – Kel-F®
- Stem Seal Gasket – Teflon
- Handwheel – Aluminum
- Spring – Stainless Steel
- Upper Stem – Brass
- Lower Stem – Mariganese Bronze



Pt # VR-38F38F



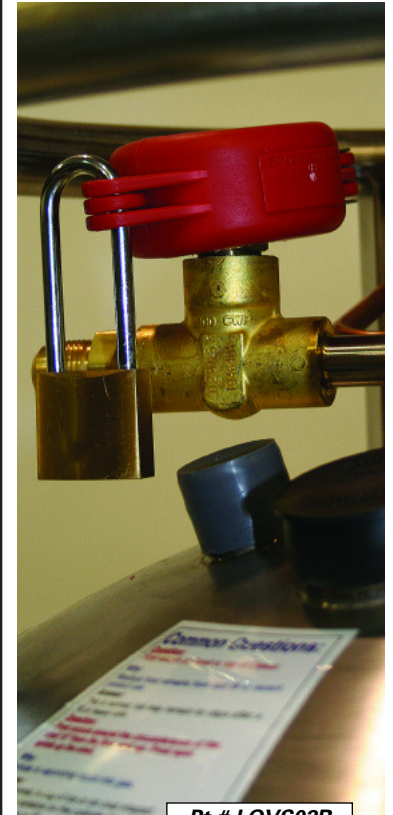
Pt # VR-38F338TB

### Short Stem Shut-off Valves

Part #	Inlet	Outlet	Orifice	Length of Valve	Height (Approx.) of Valve	Tube Length	CV Factor
VR-14F14F	1/4" FNPT	1/4" FNPT	.250	2 1/2"	2 3/4"	None	.72
VR-38F38F	3/8" FNPT	3/8" FNPT	.406	2 1/2"	2 3/4"	None	1.08
VR-12F12F	1/2" FNPT	1/2" FNPT	.406	2 1/2"	2 3/4"	None	1.10
VR-38F112TB	.675 Tube	3/8" FNPT	.406	2 1/2"	2 3/4"	1 1/2"	1.08
VR-38F218TB	.675 Tube	3/8" FNPT	.406	2 1/2"	2 3/4"	2 1/8"	1.08
VR-38F338TB	.675 Tube	3/8" FNPT	.406	2 1/2"	2 3/4"	3 3/8"	1.08

## Lockout

To Secure your Dewars



Pt # LOVS02R

For more *Lockout* Products available, please see Lockout section **17A**.

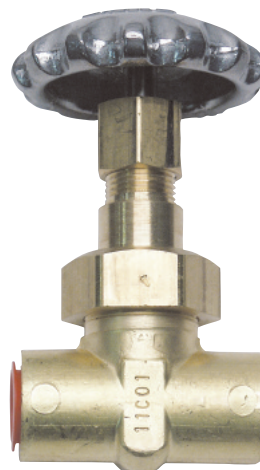
## EXTENDED STEM SHUT-OFF VALVES

### Applications

These retrofit kits can be used to convert short stem shut-off valves into extended stem style. The conversion can be done without removing the valve from your system. Available in two stem lengths. All kits are oxygen cleaned and packaged.

### Materials

- Bonnet Brass
- Seal Disc Kel-F®
- Handwheel Aluminum
- Packing Teflon
- Stem Stainless Steel
- Stem Seal Gasket Teflon



Part # VR-E4-38

### Extended Stem Shut-off Valves

Part #	Inlet Connection	Outlet Connection	Height
VR-E4-14	1/4" Female NPT	1/4" Female NPT	4"
VR-E4-38	3/8" Female NPT	3/8" Female NPT	4"
VR-E4-12	1/2" Female NPT	1/2" Female NPT	4"
VR-E65-14	1/4" Female NPT	1/4" Female NPT	6 1/2"
VR-E65-38	3/8" Female NPT	3/8" Female NPT	6 1/2"
VR-E65-12	1/2" Female NPT	1/2" Female NPT	6 1/2"

## EXTENDED STEM RETROFIT KITS

Used to convert short stem shut-off valves into extended stem style.



### Extended Stem Retrofit Kits

Part #	Description
VR-E4	4" Stem
VR-E65	6 1/2" Stem

# SAFETY VALVES

Type 06002, Type 06006

Valves – Cryogenic

Section

**21A**



**Cryogenic Safety Valves, angle type, brass, PN45, type tested TÜV-SV. 1048. D/G**

Standard safety valve,  
with carbon filled PTFE valve seal, open bonnet  
Outlet: female thread Rc 3/8 acc. to ISO 7/1  
“ cleaned and degreased for oxygen service ”

**Part No. 06002.X.0000**

**Part No. 06006.X.0000 (with lifting device)**

Inlet: male thread type R (BSPT) acc. to ISO 7/1

**Part No. 06002.X.2000**

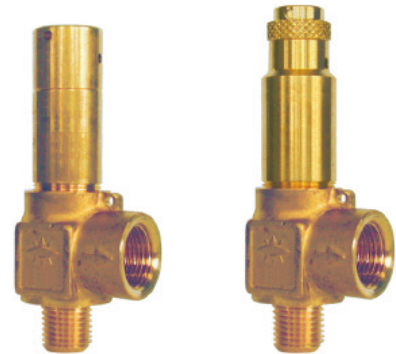
**Part No. 06006.X.2000 (with lifting device)**

Inlet: male thread type G (BSPP) acc. to ISO 228/1

**Part No. 06002.X.5000**

**Part No. 06006.X.5000 (with lifting device)**

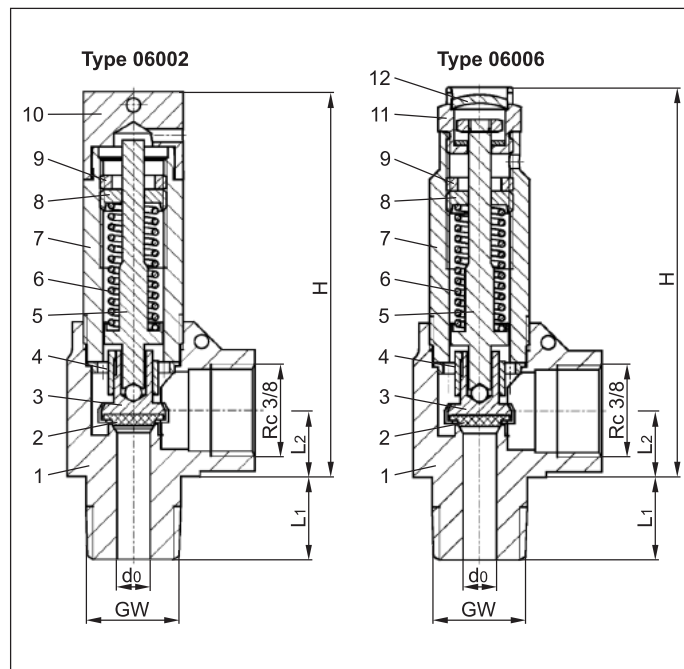
Inlet: male thread NPT acc. to ANSI B 1.20.1



## Applications:

Provided as safety device for protection against thermal expansion in pipeworks and parts of facilities.  
Approved for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluormethan, carbon oxide, methane, ethane and ethylene.  
Working temperature: -196°C / -321°F (77K) up to +150°C / +302°F (423K)

Materials	DIN EN	ASTM
1 Body	CW610N	B 111 UNS C28000
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	CW452K	B 103 UNS C51900
4 Guide plate	CC493K	B 505 UNS C93200
5 Stem	CW612N	B 283 UNS C37700
6 Spring	1.4571	A 276 Grade 316Ti
7 Bonnet	CW612N	B 283 UNS C37700
8 Spring clamp	CW612N	B 283 UNS C37700
9 Thread ring	CW612N	B 283 UNS C37700
10 Cap	CW612N	B 283 UNS C37700
11 Lifting device	CW612N	B 283 UNS C37700
12 Closing cap	CW507L	B 30 UNS C26800



**Essential:** Valves are delivered at a set pressure, therefore when ordering please confirm set pressure, medium and temperature.

Standard marking acc. to Pressure Equipment Directive 97/23/EC (PED).



Technical data	Type 06002			Type 06006				
	Nominal size	GW	1/4	3/8	1/2	1/4	3/8	1/2
Orifice	d <sub>0</sub>	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Dimension code	.X.	0200	0300	0400	0200	0300	0400	0400
Set pressure range	bar	1.0-45.0	1.0-45.0	1.0-45.0	1.0-45.0	1.0-45.0	1.0-45.0	1.0-45.0
Height	H	70	70	70	72	72	72	72
Length	L <sub>1</sub>	13	15	17	13	15	17	17
Length	L <sub>2</sub>	13	13	13	13	13	13	13
Weight	ca. kg	0.185	0.20	0.22	0.18	0.195	0.21	0.21
Coeff. of disch. from 3.0 bar	α <sub>w</sub>	0.42	0.42	0.42	0.42	0.42	0.42	0.42

Dimensions in mm.

**SAFETY VALVES**

Type 06002, Type 06006

**Discharge capacities**

Calculation of mass flow acc. to AD2000-Merkblatt A2

Medium:

Air in m<sup>3</sup>/h at 0°C and 1013.25 mbar**The capacity indicated below is for a fully opened valve.**d<sub>0</sub> - orificeA<sub>0</sub> - flow area

Set pressure in bar (ü)	GW	1/4	3/8	1/2
	d <sub>0</sub> (mm)	6.0	6.0	6.0
	A <sub>0</sub> (mm <sup>2</sup> )	28.3	28.3	28.3
	Medium	<b>Air</b>		
<b>1.0</b>		15.4	15.4	15.4
<b>2.0</b>		25.9	25.9	25.9
<b>3.0</b>		34.8	34.8	34.8
<b>4.0</b>		43.7	43.7	43.7
<b>5.0</b>		52.6	52.6	52.6
<b>6.0</b>		60.9	60.9	60.9
<b>7.0</b>		70.4	70.4	70.4
<b>8.0</b>		79.3	79.3	79.3
<b>9.0</b>		88.1	88.1	88.1
<b>10.0</b>		97.0	97.0	97.0
<b>12.0</b>		114.8	114.8	114.8
<b>14.0</b>		132.6	132.6	132.6
<b>16.0</b>		150.4	150.4	150.4
<b>18.0</b>		168.2	168.2	168.2
<b>20.0</b>		186.0	186.0	186.0
<b>22.0</b>		203.8	203.8	203.8
<b>24.0</b>		221.6	221.6	221.6
<b>26.0</b>		239.4	239.4	239.4
<b>28.0</b>		257.2	257.2	257.2
<b>30.0</b>		275.0	275.0	275.0
<b>32.0</b>		292.8	292.8	292.8
<b>34.0</b>		310.5	310.5	310.5
<b>36.0</b>		328.3	328.3	328.3
<b>38.0</b>		346.1	346.1	346.1
<b>40.0</b>		363.9	363.9	363.9
<b>42.0</b>		381.7	381.7	381.7
<b>45.0</b>		408.4	408.4	408.4

# SAFETY VALVES

Type 06388

Valves – Cryogenic

Section

**21A**



**Cryogenic Safety Valves, angle type, bronze, PN40, type tested TÜV-SV. 780. D/G**

Full lift safety valve,  
with carbon filled PTFE valve seal, closed bonnet  
“ cleaned and degreased for oxygen service ”

**Part No. 06388.X.0000**

Inlet: male thread type G (BSPP) acc. to ISO 228/1, Outlet: female thread type G (BSPP) acc. to ISO 228/1

**Part No. 06388.X.2000**

Inlet: male thread type R (BSPT) acc. to ISO 7/1, Outlet: female thread type G (BSPP) acc. to ISO 228/1

**Part No. 06388.X.5000**

Inlet: male thread NPT acc. to ANSI B 1.20.1, Outlet: female thread type G (BSPP) acc. to ISO 228/1

**Part No. 06388.X.6000**

Inlet: male thread NPT acc. to ANSI B 1.20.1, Outlet: female thread NPT acc. to ANSI B 1.20.1

Available options - on request only:

- Inletbody Item 2a in bronze
- external parts nickel plated

**Applications:**

Provided as safety device for protection against excessive pressure in stationary and moveable gas cylinders.

Approved for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluormethan, carbon oxide, methane, ethane and ethylene.

Working temperature: -196°C / -321°F (77K) up to +185°C / +365°F (458K)



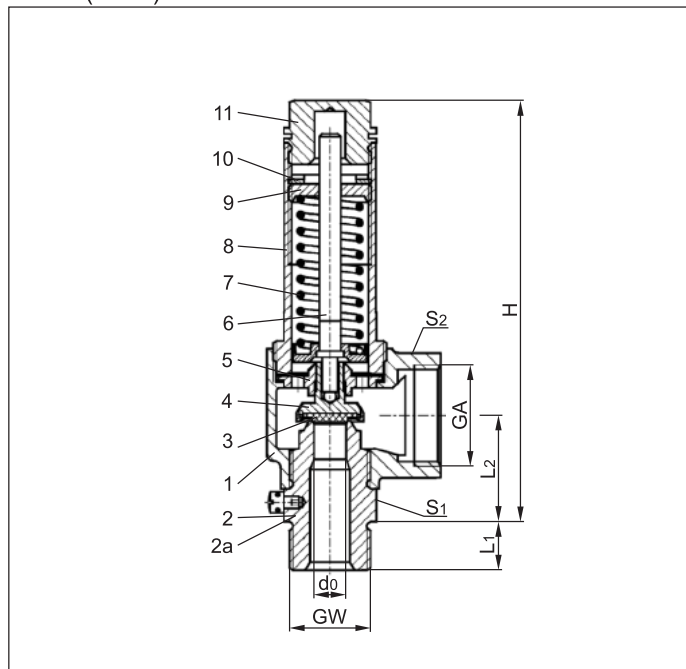
Materials	DIN EN	ASTM
1 Outlet body	CC491K	B 62 UNS C83600
2 Inlet body	1.4301	A 276 Grade 304
2a Inlet body	CW509L	B 111 UNS C28000
3 Valve seal	PTFE / Carbon filled (25%)	
4 Disc	CC493K	B 505 UNS C93200
5 Guide plate	CC493K	B 505 UNS C93200
6 Stem	CW453K	B 103 UNS C52100
7 Spring	1.4571	A 276 Grade 316Ti
8 Bonnet	1.4305	A 314 Grade 303
9 Spring clamp	CW612N	B 283 UNS C37700
10 Thread ring	CW612N	B 283 UNS C37700
11 Cap	CW612N	B 283 UNS C37700

**Essential:** Valves are delivered at a set pressure, therefore when ordering please confirm set pressure, medium and temperature.

Standard marking acc. to Pressure Equipment Directive 97/23/EC (PED).



Marking acc. to ASME Code Section VIII will only be carried out by written notice on purchase order.



Type 06388	Technical data							
Nominal size	GW	1/2	3/4	1	1-1/4	1-1/2	2	3
Orifice	d <sub>0</sub>	7.0	7.0	10.5	10.5	15.0	23.0	23.0
Dimension code	.X.	0704	0706	1004	1006	1510	2312	2314
Set pressure range	bar	3.3-40.0	3.3-40.0	2.9-40.0	2.9-40.0	2.9-40.0	2.0-40.0	2.0-40.0
Outlet	GA	1	1	1	1	1-1/4	2	2
Height	H	140	140	140	140	157	218	218
Length	L <sub>1</sub>	14	16	14	16	18	20	20
Length	L <sub>2</sub>	36	36	36	36	42	56	56
Wrench size across flats	S <sub>1</sub>	30	30	30	30	41	55	55
Wrench size across flats	S <sub>2</sub>	41	41	41	41	50	70	70
Weight	ca. kg	0.78	0.80	0.76	0.79	1.27	3.05	3.10
Coefficient of discharge	α <sub>w</sub>	0.82	0.82	0.58	0.58	0.5	0.62	0.62

Dimensions in mm.

# SAFETY VALVES

Type 06388



## Discharge capacities

Medium:

Air in m<sup>3</sup>/h at 0°C and 1013.25 mbar

Air in SCFM at 0°C and 1013.25 mbar

The capacity indicated below is for a fully opened valve.

d<sub>0</sub> - orifice

A<sub>0</sub> - flow area

### Calculation acc. to AD2000-Merkblatt A2

### Calculation acc. to ASME Code Section VIII

Set pressure in bar (ü)	GW	1/2	3/4	1	1-1/4	1-1/2	Set pressure in psig	GW	1/2	3/4	1	1-1/4	1-1/2
	d <sub>0</sub> (mm)	7.0	10.5	15.0	23.0			d <sub>0</sub> (inch)	0.276	0.414	0.591	0.907	
	A <sub>0</sub> (mm <sup>2</sup> )	38.48	86.6	176.63	415.27			rated slope	0.862	1.517	2.769	7.55	
Medium	Air in m <sup>3</sup> /h						Medium	Air in SCFM					
2.0	-	-	-	-	563	<b>50</b>	50	106	193	526			
2.9	-	144	253	737	<b>60</b>	70	122	223	609				
3.0	-	147	259	756	<b>70</b>	79	139	254	692				
3.3	100	159	279	814	<b>80</b>	89	156	284	775				
4.0	116	185	326	949	<b>90</b>	98	172	315	858				
5.0	140	223	392	1142	<b>100</b>	107	189	345	941				
6.0	164	260	458	1335	<b>110</b>	117	206	376	1025				
7.0	187	298	524	1528	<b>120</b>	126	223	406	1108				
8.0	211	335	590	1721	<b>130</b>	136	239	437	1191				
9.0	234	373	656	1913	<b>140</b>	145	256	467	1274				
10.0	258	411	722	2106	<b>150</b>	155	273	498	1357				
12.0	305	486	855	2492	<b>175</b>	179	314	574	1564				
14.0	353	561	987	2878	<b>200</b>	202	356	650	1772				
16.0	400	636	1119	3263	<b>225</b>	226	398	726	1980				
18.0	447	711	1252	3649	<b>250</b>	250	439	802	2187				
20.0	495	787	1384	4035	<b>275</b>	273	481	878	2395				
22.0	542	862	1516	4421	<b>300</b>	297	523	954	2602				
24.0	589	937	1649	4806	<b>325</b>	321	565	1031	2810				
26.0	636	1012	1781	5192	<b>350</b>	345	606	1107	3018				
28.0	684	1087	1913	5578	<b>375</b>	368	648	1183	3225				
30.0	731	1163	2046	5964	<b>400</b>	392	690	1259	3433				
32.0	778	1238	2178	6349	<b>425</b>	416	731	1335	3641				
34.0	825	1313	2310	6735	<b>450</b>	439	773	1411	3848				
36.0	873	1388	2442	7121	<b>500</b>	487	857	1564	4263				
38.0	920	1463	2575	7507	<b>550</b>	534	940	1716	4679				
40.0	967	1539	2707	7892	<b>580</b>	563	990	1807	4928				

# DIVERTOR & CHANGEOVER VALVES

Type 06510 – Divertor Valve

Valves – Cryogenic

Section

**21A**



## Cryogenic Divertor Valves, bronze, PN50

for the installation of two Safety Valves,  
provided for bursting disc connections,  
“ cleaned and degreased for oxygen service “

### Part No. 06510.X.0000

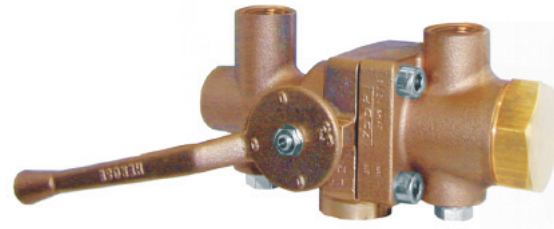
Female thread connection (G) acc. to ISO 7-Rp

### Part No. 06510.X.6000

Female thread connection NPT acc. to ANSI B 1.20.1

### Available options - on request only:

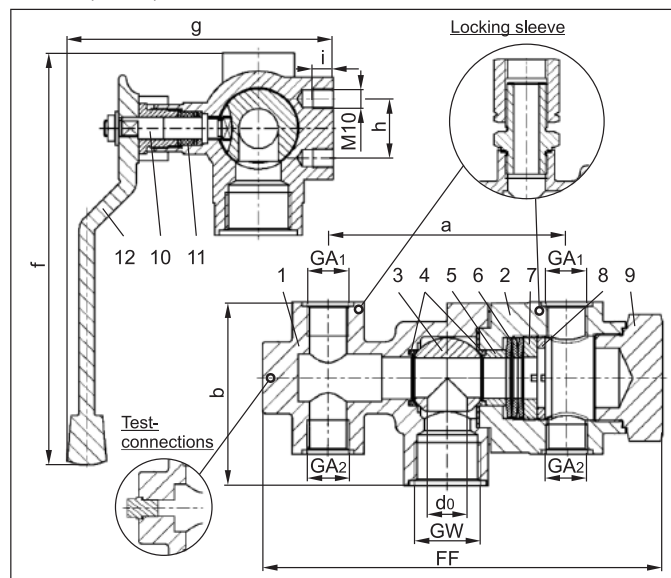
- two extra test connections 1/4" edgeways
- Inlet: female thread (GW) 1/2" or 3/4"
- Outlet GA1 with installed locking sleeve for easy positioning of safety valves
- Combination of different outlet threads GA1 - GA2



### Applications:

Approved for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluormethan, carbon oxide, methane, ethane and ethylene.  
Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body I	CC491K	B 62 UNS C83600
2 Body II	CC491K	B 62 UNS C83600
3 Ball	1.4301	A 276 Grade 304
4 Seat rings	PCTFE	
5 Bush	CW612N	B 283 UNS C37700
6 Spring plates	1.4310	A 276 Grade 302
7 Spring clamp	CW612N	B 283 UNS C37700
8 Thread ring	CW612N	B 283 UNS C37700
9 Plug	CW509L	B 111 UNS C28000
10 Stem	1.4301	A 276 Grade 304
11 Gland packing	Graphite / PTFE	
12 Lever	CC491K	B 62 UNS C83600



Marking acc. to Directive 99/36/EG (TPED) will only be carried out by written notice on purchase order.



Type 06510 – Standard design	Technical data	
Nominal size	DN	20
Dimension code	.X.	2004 2006
Flow diameter	d <sub>0</sub>	20
Inlet	GW	1
Outlet	GA <sub>1</sub>	1/2 3/4
Outlet	GA <sub>2</sub>	1/2 1/2
Face-to-face dimension	FF	201
Length	a	120
Height	b	92
Length	f	208
Length	g	134
Length	h	30
Thread depth	i	10
Weight	ca. kg	4.8 4.7
Kvs – Value, one side open	m <sup>3</sup> /h	7.7
Cv – Value, one side open	gal /min	9.2

Dimensions in mm.

**Important:** The valves must be fixed at the provided threads M10.

# DIVERTOR & CHANGEOVER VALVES

Type 06512 – Divertor Valve



**Cryogenic Divertor Valves, bronze, PN50**

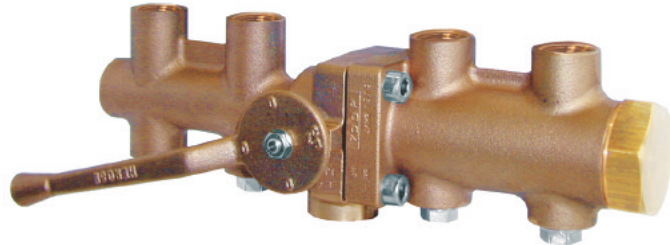
for the installation of four Safety Valves, provided for bursting disc connections, “ cleaned and degreased for oxygen service “

**Part No. 06512.X.0000**

Female thread connection (G) acc. to ISO 7-Rp

**Part No. 06512.X.6000**

Female thread connection NPT acc. to ANSI B 1.20.1



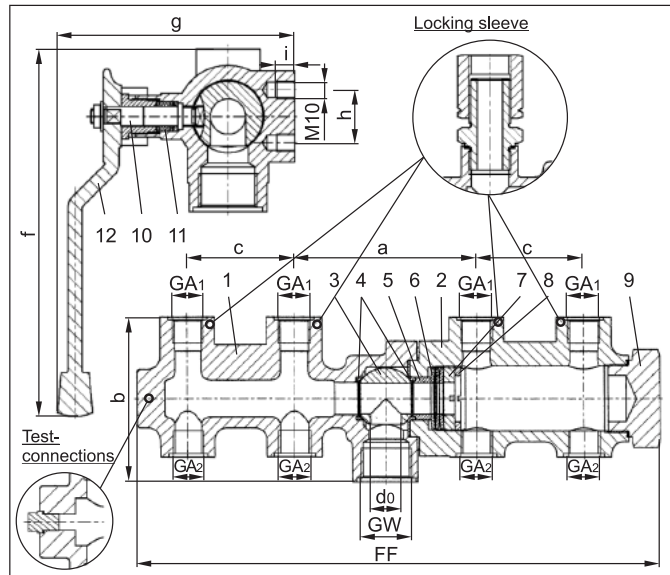
Available options - on request only:

- Inlet with union type braze or butt weld fitting
- two extra test connections 1/4" edgeways
- Inlet: female thread (GW) 1/2" or 3/4"
- Outlet GA1 with installed locking sleeve for easy positioning of safety valves
- Combination of different outlet threads GA1 - GA2

**Applications:**

Approved for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluormethan, carbon oxide, methane, ethane and ethylene.  
Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body I	CC491K	B 62 UNS C83600
2 Body II	CC491K	B 62 UNS C83600
3 Ball	1.4301	A 276 Grade 304
4 Seat rings	PCTFE	
5 Bush	CW612N	B 283 UNS C37700
6 Spring plates	1.4310	A 276 Grade 302
7 Spring clamp	CW612N	B 283 UNS C37700
8 Thread ring	CW612N	B 283 UNS C37700
9 Plug	CW509L	B 111 UNS C28000
10 Stem	1.4301	A 276 Grade 304
11 Gland packing	Graphite / PTFE	
12 Lever	CC491K	B 62 UNS C83600



Marking acc. to Directive 99/36/EG (TPED) will only be carried out by written notice on purchase order.

Type 06512 – Standard design	Technical data	
Nominal size	DN	20
Dimension code	.X.	2004
Flow diameter	d <sub>0</sub>	20
Inlet	GW	1
Outlet	GA <sub>1</sub>	1/2
Outlet	GA <sub>2</sub>	1/2
Face-to-face dimension	FF	345
Length	a	120
Height	b	107
Length	c	70
Length	f	223
Length	g	134
Length	h	30
Thread depth	i	10
Weight	ca. kg	7.2
Kvs – Value, one side open	m <sup>3</sup> /h	7.7
Cv – Value, one side open	gal /min	9.2

**Important:** The valves must be fixed at the provided threads M10.

Dimensions in mm.

# VALVES FOR CRYOGENIC SERVICE

Declaration of Conformity

Valves – Cryogenic

Section

**21A**



## Konformitätserklärung

/ Declaration of Conformity / Déclaration de Conformité

nach Druckgeräterichtlinie 97/23/EG & 99/36/EG

/ in acc. to the pressure equipment directive 97/23/EC & 99/36/EC / selon la directive des équipements sous pression 97/23/EC & 99/36/EC

HEROSE GMBH Elly-Heuss-Knapp-Str. 12  
 ARMATUREN UND METALLE D-23843 Bad Oldesloe / Germany

Name und Anschrift des Herstellers / name and adress of the manufacturer / Nom et adresse du constructeur

Armatur - Typ Valve Type Type de Robinet à Soupape	Nennweite Nominal size Diam. Nom.	Prüfbericht Nummer Test report No. Rapport N° du test	EG-Bauteilprüfnummer EC-type examination No. N° de contrôle
01301, 01305, 01331, 01335, 01351, 02401, 02431, 02451, 03331	DN10 – DN100	1837 P 0007/3/0025 1837 P 0005/5/0025	07 202 1837 Z 0007/3/0025
01302, 01332, 01352, 02402, 02432, 02452	DN10 – DN50	1837 P 0007/3/0026	07 202 1837 Z 0007/3/0026
01303, 01353, 02403, 02453, 03303, 03333	DN10 – DN100	1837 P 0007/3/0027 1837 P 0005/5/0027	07 202 1837 Z 0007/3/0027
01306, 01356, 02406, 02456	DN10 – DN50	1837 P 0007/3/0028	07 202 1837 Z 0007/3/0028
01311, 01315, 01321, 01325, 01341, 01345, 02411, 02421, 02441, 03321, 03341	DN10 – DN100	1837 P 0007/3/0029 1837 P 0005/5/0029	07 202 1837 Z 0007/3/0029
01312, 01322, 01342, 02412, 02422, 02442	DN10 – DN50	1837 P 0007/3/0030	07 202 1837 Z 0007/3/0030
01313, 01314, 01343, 02413, 02443, 03313, 03323, 03343	DN10 – DN100	1837 P 0007/3/0031 1837 P 0005/5/0031	07 202 1837 Z 0007/3/0031
01316, 01346, 02416, 02446	DN10 – DN50	1837 P 0007/3/0032	07 202 1837 Z 0007/3/0032
01361, 02471	DN10 – DN50	1837 P 0007/3/0033	07 202 1837 Z 0007/3/0033
01362, 02472	DN10 – DN50	1837 P 0007/3/0034	07 202 1837 Z 0007/3/0034
01363, 02473	DN10 – DN50	1837 P 0007/3/0035	07 202 1837 Z 0007/3/0035
01366, 02476	DN10 – DN50	1837 P 0007/3/0036	07 202 1837 Z 0007/3/0036
01371, 02481	DN10 – DN50	1837 P 0007/3/0037	07 202 1837 Z 0007/3/0037
01372, 02482	DN10 – DN50	1837 P 0007/3/0038	07 202 1837 Z 0007/3/0038
01373, 02483	DN10 – DN50	1837 P 0007/3/0039	07 202 1837 Z 0007/3/0039
01376, 02486	DN10 – DN50	1837 P 0007/3/0040	07 202 1837 Z 0007/3/0040
05411, 05412, 05413, 05414 05416, 05417, 05418, 05419	DN10 – DN80	1837 P 0002/5/0001	07 202 1837 Z 0002/5/0001 07 202 1837 Z 0002/5/0002
06510, 06511, 06512, 06513, 15510	DN20 – DN32	1837 P 0002/4/0041	07 202 1837 Z 0002/4/0041

Beschreibung des Druckgerätes / description of the pressure equipment / description des équipements sous pression  
 siehe Zertifikat / see certificate / voir certificat

Kategorie / categorie / catégorie IV-97/23/EG, 3-99/36/EG

angewandte Kategorie nach Artikel 3 Anhang II / applied category in acc. to article 3 annex II / catégorie appliquéé selon l'Article 3, Annexe II

Modul Module Module	Konformitätsbewertungsverfahren Conformity assessment procedures Procédures de Conformité	Bescheinigungsnummer certificate number N° de certificat
B	EG-Baumusterprüfung / EC type-examination / Type d'examen EC	siehe Tabelle / see table / voir tableau
D	Qualitätssicherung Produktion / quality control production / Production contrôle qualité	07 202 0111 Z 0003/0/0001

angewandte Konformitätsbewertungsverfahren nach Artikel 10 / conformity assessment procedures in acc. to article 10 / Procédures de conformité selon l'Article 10

TÜV CERT - Zertifizierungsstelle für Druckgeräte der TÜV NORD GRUPPE

Große Bahnstrasse 31, D-22525 Hamburg / Germany

Identifikations-Nr. / identification number / N° identification: **0045**

Name und Anschrift der benannten Stelle / name and adress of the notified body / Nom et adresse du bureau concerné

Der unterzeichnende Hersteller bescheinigt, dass Konstruktion, Herstellung und Prüfung dieses Druckgerätes den Anforderungen der Druckgeräterichtlinie entspricht.

The signing manufacturer confirms, that the design, manufacturing and inspection of this pressure equipment meet the requirements of the pressure equipment directive.  
 Le constructeur soussigné confirme, que la conception, fabrication et inspection des équipements sous pression est conforme aux exigences de la directive des équipements sous pression.

Angewandte harmonisierte Normen / applied harmonized standards / Normes standard d'harmonisation

Richtlinien: EN 1626; EN 1797; EN 12300

Directives : EN 1626; EN 1797; EN 12300

andere angewandte Normen oder technische Spezifikationen / other applied standards or technical rules / autres regles techniques ou standards appliqués

Norm / Standard: AD 2000 Merkblatt A4; TRG 253

01.10.2005

Datum / date / date

T. Cordes Leiter Qualitätsmanagement /

T. Cordes Quality control manager /

T. Cordes Directeur de l'assurance de la qualité

HEROSE GMBH  
 ARMATUREN UND METALLE  
 Elly-Heuss-Knapp-Strasse 12  
 23843 Bad Oldesloe

Stempel des Herstellers /

stamp of the manufacturer /

Tampon du fabricant

Anmerkung: Etwaige Änderungen an dem oben beschriebenen Erzeugnis lassen die Gültigkeit dieser Erklärung erlöschen.

Remarks: The validation of this declaration expire in the case of any modifications at the above mentioned product.

Remarques: La validité de cette déclaration est nulle, dans le cas d'une quelconque modification de se qui est mentionné plus haut.

**VALVES FOR CRYOGENIC SERVICE**

Type 01301 – Globe Valve

**Cryogenic-Globe and Globe/Check Valves, PN50**

Bronze body and topwork

"live loaded" gland packing

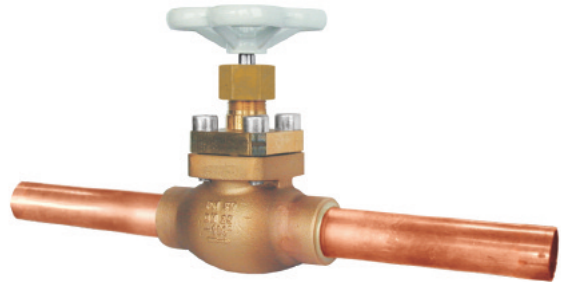
"cleaned and degreased for oxygen service "

**Part No. 01301.X.0008****Part No. 01301.X.5008 Globe/Check Valve**

Complete with brazed copper stubs acc. to DIN EN 12449

Available options - on request only:

- Valve with control disc (tapered design)

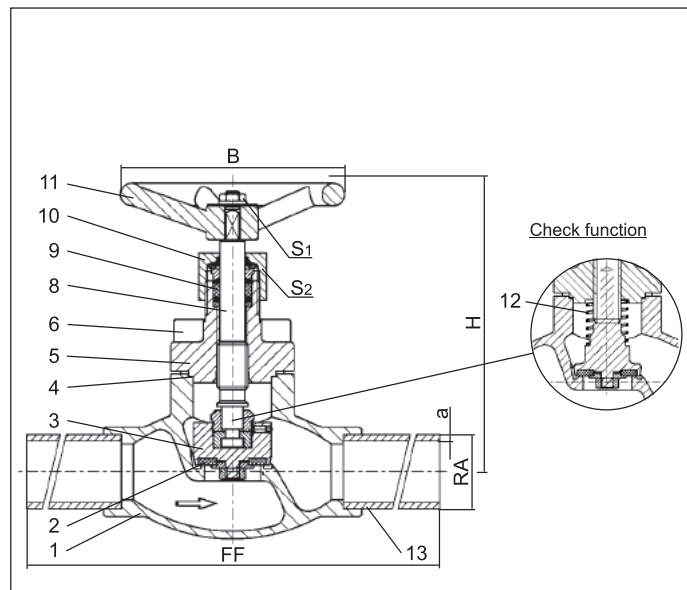
**Applications:**

Approved for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluoromethan, carbon oxide, methane, ethane and ethylene.

Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Recommended working temperature: -60°C / -76°F (213K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	CC491K	B 62 UNS C83600
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	CW612N	B 283 UNS C37700
4 Bonnet gasket	PTFE	
5 Headpiece	CC493K	B 505 UNS C93200
6 Bolts	1.4301/A2	A 194 B8
8 Stem	1.4301	A 276 Grade 304
9 Gland packing	Graphite / PTFE	
10 Gland nut	CW612N	B 283 UNS C37700
11 Handwheel	Aluminium alloy	
12 Spring	CW452K	B 103 UNS C51900
13 Copper stubs	CW024A	B 152



Standard marking acc. to Pressure Equipment Directive 97/23/EG (PED).



Marking acc. to Directive 99/36/EG (TPED) will only be carried out by written notice on purchase order.



Type 01301 – Standard design	Technical data								
Nominal size	DN	10	15	15	20	25	32	40	50
Dimension code	.X.	1012	1515	1518	2022	2528	3235	4042	5054
Face-to-face dimension	FF	360	385	385	385	415	415	420	460
Height	H	140	140	140	140	140	170	175	200
Outside pipe-Ø	RA	12.0	15.0	18.0	22.0	28.0	35.0	42.0	54.0
Wall thickness pipe	a	1.0	1.5	1.5	1.5	1.5	1.5	1.5	2.0
Handwheel-Ø	B	80	100	100	100	100	125	125	125
Wrench size across flats	S <sub>1</sub>	10	10	10	10	10	13	13	13
Wrench size across flats	S <sub>2</sub>	30	30	30	30	30	36	36	36
Weight	ca. kg	1.1	1.4	1.4	1.8	2.4	3.2	4.8	7.5
Kvs – Value	m <sup>3</sup> /h	2.2	4.3	4.3	6.7	11.5	12.1	22.6	37.1
Cv – Value	gal /min	2.6	5.0	5.0	7.8	13.4	14.1	26.3	43.2

Dimensions in mm.

# VALVES FOR CRYOGENIC SERVICE

Type 01301 – Globe Valve

Valves – Cryogenic

Section

**21A**



## Cryogenic-Globe and Globe/Check Valves, PN50

Bronze body and topwork

“live loaded” gland packing

“cleaned and degreased for oxygen service “

Part No. 01301.X.0007

Part No. 01301.X.5007 Globe/Check Valve

Complete with brazed stainless steel stubs acc. to DIN EN 10216-5 or ASTM A312

Available options - on request only:

- Valve with control disc (tapered design)



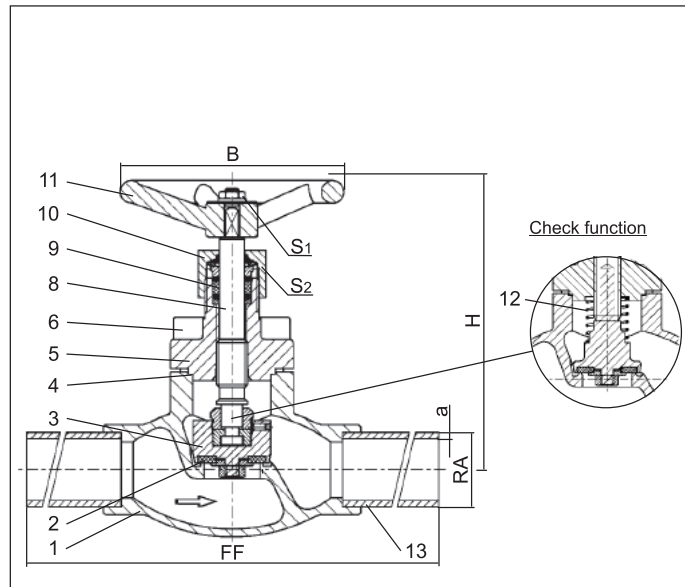
## Applications:

Approved for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluoromethane, carbon oxide, methane, ethane and ethylene.

Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Recommended working temperature: -60°C / -76°F (213K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	CC491K	B 62 UNS C83600
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	CW612N	B 283 UNS C37700
4 Bonnet gasket	PTFE	
5 Headpiece	CC493K	B 505 UNS C93200
6 Bolts	1.4301/A2	A 194 B8
8 Stem	1.4301	A 276 Grade 304
9 Gland packing	Graphite / PTFE	
10 Gland nut	CW612N	B 283 UNS C37700
11 Handwheel	Aluminium alloy	
12 Spring	CW452K	B 103 UNS C51900
13 Stainless steel stubs	1.4306	A 312 TP304L



Standard marking acc. to Pressure Equipment Directive 97/23/EG (PED).



Marking acc. to Directive 99/36/EG (TPED) will only be carried out by written notice on purchase order.



Type 01301 – Standard design	Technical data								
Nominal size	DN	10	10	15	20	25	32	40	50
Dimension code	.X.	1012	1017	1521	2027	2533	3242	4048	5060
Face-to-face dimension	FF	210	210	235	235	265	265	290	310
Height	H	140	140	140	140	140	170	175	200
Outside pipe-Ø DIN EN ISO 1127	RA	12.0	17.2	21.3	26.9	33.7	42.4	48.3	60.3
Wall thickness pipe DIN EN ISO 1127	a	1.0	2.3	2.6	2.9	3.2	3.2	3.6	3.6
Outside pipe -Ø ASTM A312	RA	-	17.15	21.34	26.67	33.4	42.16	48.26	60.33
Wall thickness pipe ASTM A312	a	-	S40	S10	S10	S10	S10	S10	S10
Handwheel-Ø	B	80	80	100	100	100	125	125	125
Wrench size across flats	S <sub>1</sub>	10	10	10	10	10	13	13	13
Wrench size across flats	S <sub>2</sub>	30	30	30	30	30	36	36	36
Weight	ca. kg	1.05	1.15	1.5	1.8	2.4	3.2	4.8	7.5
Kvs – Value	m <sup>3</sup> /h	2.2	2.2	4.3	6.7	11.5	12.1	22.6	37.1
Cv – Value	gal /min	2.6	2.6	5.0	7.8	13.4	14.1	26.3	43.2

Dimensions in mm.

# VALVES FOR CRYOGENIC SERVICE

Type 01305 – Globe Valve



**Cryogenic-Globe and Globe/Check Valves, PN50**

Bronze body and topwork

"live loaded" gland packing

"cleaned and degreased for oxygen service "

**Part No. 01305.X.0001**

**Part No. 01305.X.5001 Globe/Check Valve**

Female thread connection (G) acc. to ISO 7-Rp

**Part No. 01305.X.0006**

**Part No. 01305.X.5006 Globe/Check Valve**

Female thread connection NPT acc. to ANSI B 1.20.1

Available options - on request only:

- Female thread connection (R) acc. to ISO 7-Rc
- Valve with control disc (tapered design)



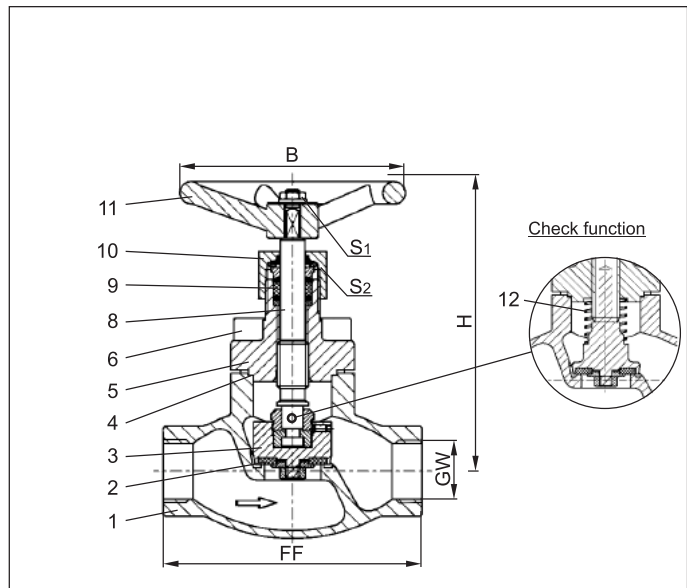
**Applications:**

Approved for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluormethan, carbon oxide, methane, ethane and ethylene.

Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Recommended working temperature: -60°C / -76°F (213K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	CC491K	B 62 UNS C83600
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	CW612N	B 283 UNS C37700
4 Bonnet gasket	PTFE	
5 Headpiece	CC493K	B 505 UNS C93200
6 Bolts	1.4301/A2	A 194 B8
8 Stem	1.4301	A 276 Grade 304
9 Gland packing	Graphite / PTFE	
10 Gland nut	CW612N	B 283 UNS C37700
11 Handwheel	Aluminium alloy	
12 Spring	CW452K	B 103 UNS C51900



Standard marking acc. to Pressure Equipment Directive 97/23/EG (PED).



Marking acc. to Directive 99/36/EG (TPED) will only be carried out by written notice on purchase order.



Type 01305 – Standard design	Technical data								
	Nominal size	DN	10	15	20	25	32	40	50
Thread size	GW	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Dimension code	.X.	0200	0300	0400	0600	1000	1200	1400	2000
Face-to-face dimension	FF	60	60	85	85	115	115	140	160
Height	H	140	140	140	140	140	170	175	200
Handwheel-Ø	B	80	80	100	100	100	125	125	125
Wrench size across flats	S <sub>1</sub>	10	10	10	10	10	13	13	13
Wrench size across flats	S <sub>2</sub>	30	30	30	30	30	36	36	36
Weight	ca. kg	1.0	1.0	1.3	1.7	2.0	2.8	4.2	6.7
Kvs – Value	m <sup>3</sup> /h	1.6	2.2	4.3	6.7	11.5	20.6	22.6	37.1
Cv – Value	gal /min	1.9	2.6	5.0	7.8	13.4	26.3	26.3	43.2

Dimensions in mm.

# VALVES FOR CRYOGENIC SERVICE

Type 01311 – Globe Valve

Valves – Cryogenic

Section

**21A**

## Cryogenic-Globe and Globe/Check Valves, PN50

Bronze body and topwork

“live loaded” gland packing

“cleaned and degreased for oxygen service “

**Part No. 01311.X.0010 (H=270mm)**

**Part No. 01311.X.0020 (H=370mm)**

**Part No. 01311.X.5010 (H=270mm) Globe/Check Valve**

**Part No. 01311.X.5020 (H=370mm) Globe/Check Valve**

Socket end for copper stubs acc. to DIN EN 12449 or ASTM B88

### Available options - on request only:

- Socket end for stainless steel stubs acc. to DIN EN ISO 1127
- Extension H up to 900mm
- Valve with control disc (tapered design)

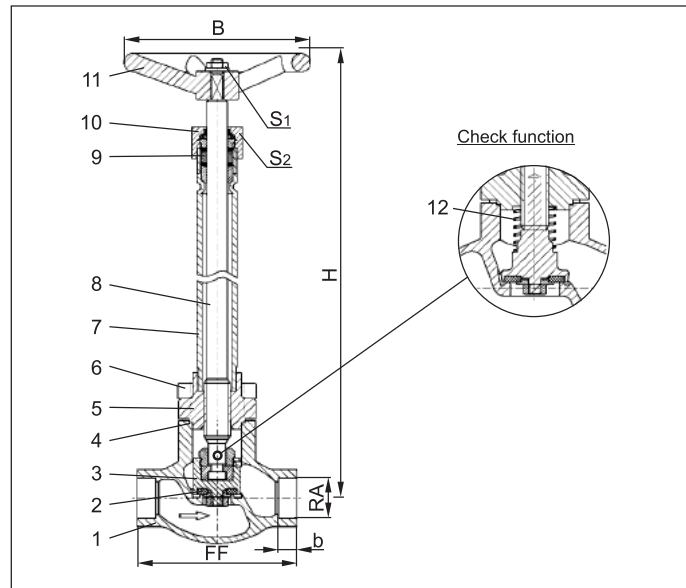
### Applications:

Approved for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluormethan, carbon oxide, methane, ethane and ethylene.

Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)



Materials	DIN EN	ASTM
1 Body	CC491K	B 62 UNS C83600
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	CW612N	B 283 UNS C37700
4 Bonnet gasket	PTFE	
5 Headpiece	CC493K	B 505 UNS C93200
6 Bolts	1.4301/A2	A 194 B8
7 Elongation tube	1.4541	A 213 TP 321
8 Stem	1.4301	A 276 Grade 304
9 Gland packing	Graphite / PTFE	
10 Gland nut	CW612N	B 283 UNS C37700
11 Handwheel	Aluminium alloy	
12 Spring	CW452K	B 103 UNS C51900



Standard marking acc. to Pressure Equipment Directive 97/23/EG (PED).



Marking acc. to Directive 99/36/EG (TPED) will only be carried out by written notice on purchase order.



Type 01311 – Standard design	Technical data							
Nominal size	DN	10	15	20	25	32	40	50
Dimension code	.X.	X=DNRA, Example: valve DN15 for copper pipe RAø18mm, X=1518						
Face-to-face dimension	FF	60	85	85	115	115	140	160
Height	H	270 mm oder 370 mm						
Outside pipe-Ø	RA	dependent on order						
Socket depth	b	6	6	8	8	10	13	20
Handwheel-Ø	B	80	100	100	100	125	125	125
Wrench size across flats	S <sub>1</sub>	10	10	10	10	13	13	13
Wrench size across flats	S <sub>2</sub>	30	30	30	30	36	36	36
Weight	ca. kg	1.4	1.7	2.1	2.4	3.3	4.7	7.2
Kvs – Value	m <sup>3</sup> /h	1.6	4.3	6.7	11.5	12.1	22.6	37.1
Cv – Value	gal /min	1.9	5.0	7.8	13.4	14.1	26.3	43.2

Dimensions in mm.

# VALVES FOR CRYOGENIC SERVICE

Type 01311 – Globe Valve



**Cryogenic-Globe and Globe/Check Valves, PN50**

Bronze body and topwork

“live loaded” gland packing

“ cleaned and degreased for oxygen service ”

**Part No. 01311.X.0018 (H=270mm)**

**Part No. 01311.X.0028 (H=370mm)**

**Part No. 01311.X.5018 (H=270mm) Globe/Check Valve**

**Part No. 01311.X.5028 (H=370mm) Globe/Check Valve**

Complete with copper stubs acc. to DIN EN 12449

Available options - on request only:

- Extension H up to 900mm
- Valve with control disc (tapered design)

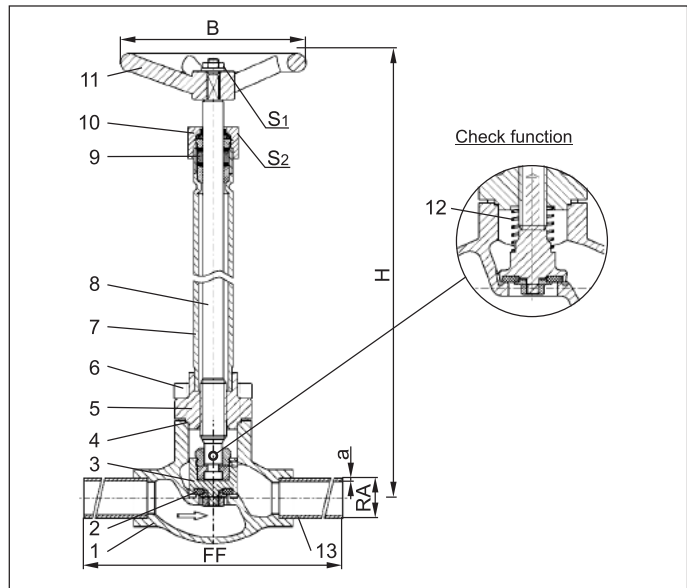


**Applications:**

Approved for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluoromethan, carbon oxide, methane, ethane and ethylene.

Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	CC491K	B 62 UNS C83600
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	CW612N	B 283 UNS C37700
4 Bonnet gasket	PTFE	
5 Headpiece	CC493K	B 505 UNS C93200
6 Bolts	1.4301/A2	A 194 B8
7 Elongation tube	1.4541	A 213 TP 321
8 Stem	1.4301	A 276 Grade 304
9 Gland packing	Graphite / PTFE	
10 Gland nut	CW612N	B 283 UNS C37700
11 Handwheel	Aluminium alloy	
12 Spring	CW452K	B 103 UNS C51900
13 Copper stubs	CW024A	B 152



Standard marking acc. to Pressure Equipment Directive 97/23/EG (PED).



Marking acc. to Directive 99/36/EG (TPED) will only be carried out by written notice on purchase order.



Type 01311 – Standard design	Technical data									
Nominal size	DN	10	15	15	20	25	32	40	50	
Dimension code	.X.	1012	1515	1518	2022	2528	3235	4042	5054	
Face-to-face dimension	FF	360	385	385	385	415	415	420	460	
Height	H	270 mm or 370 mm								
Outside pipe-Ø	RA	12.0	15.0	18.0	22.0	28.0	35.0	42.0	54.0	
Wall thickness pipe	a	1.0	1.5	1.5	1.5	1.5	1.5	1.5	2.0	
Handwheel-Ø	B	80	100	100	100	100	125	125	125	
Wrench size across flats	S <sub>1</sub>	10	10	10	10	10	13	13	13	
Wrench size across flats	S <sub>2</sub>	30	30	30	30	30	36	36	36	
Weight	ca. kg	1.5	1.9	1.9	2.4	2.8	3.7	5.2	7.8	
Kvs – Value	m <sup>3</sup> /h	2.2	4.3	4.3	6.7	11.5	12.1	22.6	37.1	
Cv – Value	gal /min	2.6	5.0	5.0	7.8	13.4	14.1	26.3	43.2	

Dimensions in mm.

# VALVES FOR CRYOGENIC SERVICE

## Type 01311 – Globe Valve

### Cryogenic-Globe and Globe/Check Valves, PN50

Bronze body and topwork

“live loaded” gland packing

“cleaned and degreased for oxygen service “

Part No. 01311.X.0017 (H=270mm)

Part No. 01311.X.0027 (H=370mm)

Part No. 01311.X.5017 (H=270mm) Globe/Check Valve

Part No. 01311.X.5027 (H=370mm) Globe/Check Valve

Complete with stainless steel stubs acc. to DIN EN 10216-5 or ASTM A312

#### Available options - on request only:

- Extension H up to 900mm
- Valve with control disc (tapered design)



#### Applications:

Approved for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluoromethane, carbon oxide, methane, ethane and ethylene.

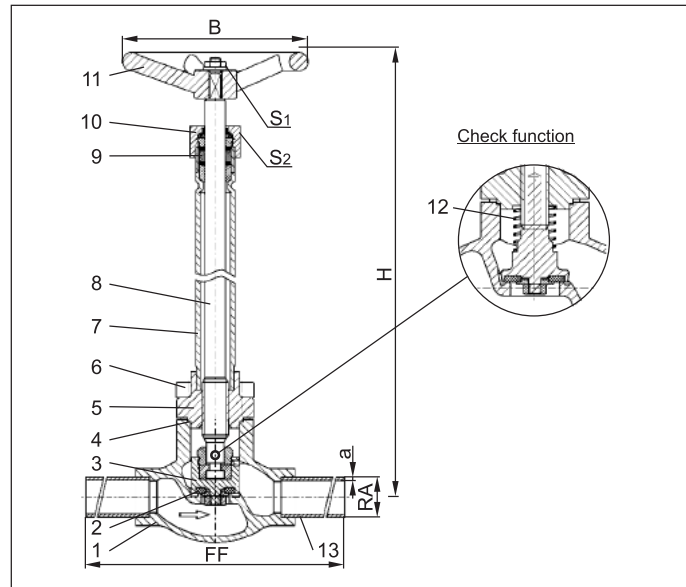
Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	CC491K	B 62 UNS C83600
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	CW612N	B 283 UNS C37700
4 Bonnet gasket	PTFE	
5 Headpiece	CC493K	B 505 UNS C93200
6 Bolts	1.4301/A2	A 194 B8
7 Elongation tube	1.4541	A 213 TP 321
8 Stem	1.4301	A 276 Grade 304
9 Gland packing	Graphite / PTFE	
10 Gland nut	CW612N	B 283 UNS C37700
11 Handwheel	Aluminium alloy	
12 Spring	CW452K	B 103 UNS C51900
13 Stainless steel stubs	1.4306	A 312 TP304L

Standard marking acc. to Pressure Equipment Directive 97/23/EG (PED).



Marking acc. to Directive 99/36/EG (TPED) will only be carried out by written notice on purchase order.



Type 01311 – Standard design	Technical data								
Nominal size	DN	10	10	15	20	25	32	40	50
Dimension code	.X.	1012	1017	1521	2027	2533	3242	4048	5060
Face-to-face dimension	FF	210	210	235	235	265	265	290	310
Height	H	270 mm or 370 mm							
Outside pipe-Ø DIN EN ISO 1127	RA	12.0	17.2	21.3	26.9	33.7	42.4	48.3	60.3
Wall thickness pipe DIN EN ISO 1127	a	1.0	2.3	2.6	2.9	3.2	3.2	3.6	3.6
Outside pipe-Ø ASTM A312	RA	-	17.15	21.34	26.67	33.4	42.16	48.26	60.33
Wall thickness pipe ASTM A312	a	-	S40	S10	S10	S10	S10	S10	S10
Handwheel-Ø	B	80	80	100	100	100	125	125	125
Wrench size across flats	S <sub>1</sub>	10	10	10	10	10	13	13	13
Wrench size across flats	S <sub>2</sub>	30	30	30	30	30	36	36	36
Weight	ca. kg	1.45	1.55	2.0	2.4	2.8	3.7	5.2	7.8
Kvs – Value	m <sup>3</sup> /h	2.2	2.2	4.3	6.7	11.5	12.1	22.6	37.1
Cv – Value	gal /min	2.6	2.6	5.0	7.8	13.4	14.1	26.3	43.2

Dimensions in mm.

# VALVES FOR CRYOGENIC SERVICE

Type 01315 – Globe Valve



**Cryogenic-Globe and Globe/Check Valves, PN50**

Bronze body and topwork  
 "live loaded" gland packing  
 "cleaned and degreased for oxygen service "

Part No. 01315.X.0011 (H=270mm)  
 Part No. 01315.X.0021 (H=370mm)  
 Part No. 01315.X.5011 (H=270mm) Globe/Check Valve  
 Part No. 01315.X.5021 (H=370mm) Globe/Check Valve  
 Female thread connection (G) acc. to ISO 7-Rp

Part No. 01315.X.0016 (H=270mm)  
 Part No. 01315.X.0026 (H=370mm)  
 Part No. 01315.X.5016 (H=270mm) Globe/Check Valve  
 Part No. 01315.X.5026 (H=370mm) Globe/Check Valve  
 Female thread connection NPT acc. to ANSI B 1.20.1

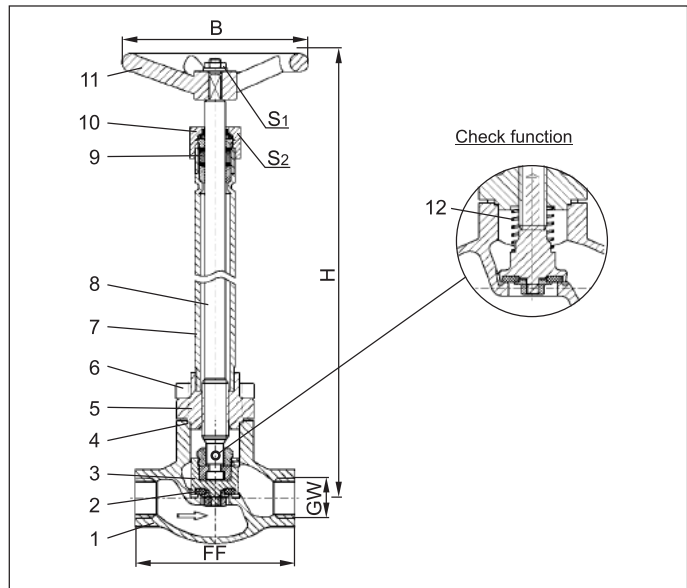
- Available options - on request only:
- Female thread connection (R) acc. to ISO 7-Rc
  - Extension H up to 900mm
  - Valve with control disc (tapered design)

**Applications:**

Approved for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluormethan, carbon oxide, methane, ethane and ethylene.  
 Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)



Materials	DIN EN	ASTM
1 Body	CC491K	B 62 UNS C83600
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	CW612N	B 283 UNS C37700
4 Bonnet gasket	PTFE	
5 Headpiece	CC493K	B 505 UNS C93200
6 Bolts	1.4301/A2	A 194 B8
7 Elongation tube	1.4541	A 213 TP 321
8 Stem	1.4301	A 276 Grade 304
9 Gland packing	Graphite / PTFE	
10 Gland nut	CW612N	B 283 UNS C37700
11 Handwheel	Aluminium alloy	
12 Spring	CW452K	B 103 UNS C51900



Standard marking acc. to Pressure Equipment Directive 97/23/EG (PED).



Marking acc. to Directive 99/36/EG (TPED) will only be carried out by written notice on purchase order.



Type 01315 – Standard design	Technical data									
Nominal size	DN	10	10	15	20	25	32	40	50	
Thread size	GW	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2	
Dimension code	.X.	0200	0300	0400	0600	1000	1200	1400	2000	
Face-to-face dimension	FF	60	60	85	85	115	115	140	160	
Height	H	270 mm or 370 mm								
Handwheel-Ø	B	80	80	100	100	100	125	125	125	
Wrench size across flats	S <sub>1</sub>	10	10	10	10	10	13	13	13	
Wrench size across flats	S <sub>2</sub>	30	30	30	30	30	36	36	36	
Weight	ca. kg	1.4	1.4	1.7	2.1	2.4	3.3	4.7	7.2	
Kvs – Value	m <sup>3</sup> /h	1.6	2.2	4.3	6.7	11.5	20.6	22.6	37.1	
Cv – Value	gal /min	1.9	2.6	5.0	7.8	13.4	26.3	26.3	43.2	

Dimensions in mm.

# VALVES FOR CRYOGENIC SERVICE

Type 05412 – Check Valve

Valves – Cryogenic

Section

**21A**



## Cryogenic-Check Valves, PN50

Bronze body and cap  
with spring, opening pressure ca. 0.1 bar  
" cleaned and degreased for oxygen service "

### Part No. 05412.X.0001

Socket end for copper stubs acc. to DIN EN 12449 or ASTM B88

### Available options - on request only:

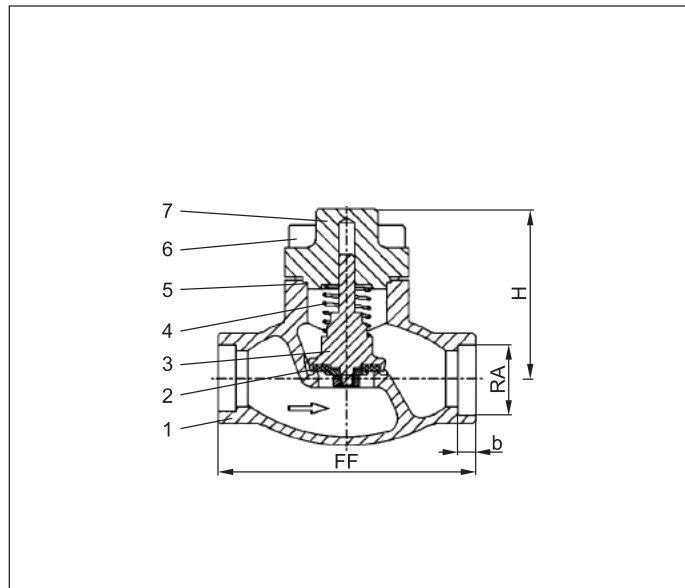
· Socket end for stainless steel stubs acc. to DIN EN ISO 1127



### Applications:

Approved for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluoromethan, carbon oxide, methane, ethane and ethylene.  
Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	CC491K	B 62 UNS C83600
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	CW612N	B 283 UNS C37700
4 Spring	CW452K	B 103 UNS C51900
5 Bonnet gasket	PTFE	
6 Bolts	1.4301/A2	A 194 B8
7 Cap	CC493K	B 505 UNS C93200



Standard marking acc. to Pressure Equipment Directive 97/23/EG (PED).



Marking acc. to Directive 99/36/EG (TPED) will only be carried out by written notice on purchase order.



Type 05412 – Standard design	Technical data							
Nominal size	DN	10	15	20	25	32	40	50
Dimension code	.X.	X=DNRA, Example: valve DN10 for copper pipe RAø12mm, X=1012						
Face-to-face dimension	FF	60	85	85	115	115	140	160
Height	H	70	70	72	75	85	95	95
Outside pipe-Ø	RA	dependent on order						
Socket depth	b	6	6	8	8	10	13	20
Weight	ca. kg	0.7	1.0	1.3	1.6	2.4	3.9	5.7
Kvs – Value	m <sup>3</sup> /h	1.6	4.3	6.7	11.5	12.1	22.6	37.1
Cv – Value	gal /min	1.9	5.0	7.8	13.4	14.1	26.3	43.2

Dimensions in mm.

# VALVES FOR CRYOGENIC SERVICE

Type 02411 – Globe Valve



## Cryogenic-Globe and Globe/Check Valves, PN50

Bronze body and topwork,  
 “live loaded” gland packing  
 “cleaned and degreased for oxygen service ”

Part No. 02411.X.0017 (H=270mm)

Part No. 02411.X.0027 (H=370mm)

Part No. 02411.X.5017 (H=270mm) Globe/Check Valve

Part No. 02411.X.5027 (H=370mm) Globe/Check Valve

Completed with union type butt weld fittings for stainless steel pipes  
 acc. to DIN EN ISO 1127 oder ASTM A312

### Available options - on request only:

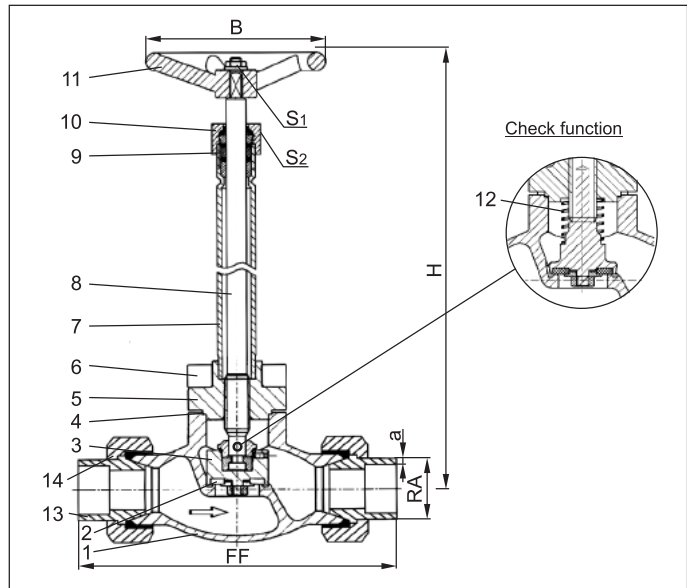
- Extension H up to 900mm
- Valve with control disc (tapered design)



### Applications:

Approved for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluormethan, carbon oxide, methane, ethane and ethylene.  
 Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	CC491K	B 62 UNS C83600
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	CW612N	B 283 UNS C37700
4 Bonnet gasket	PTFE	
5 Headpiece	CC493K	B 505 UNS C93200
6 Bolts	1.4301/A2	A 194 B8
7 Elongation tube	1.4541	A 213 TP 321
8 Stem	1.4301	A 276 Grade 304
9 Gland packing	Graphite / PTFE	
10 Gland nut	CW612N	B 283 UNS C37700
11 Handwheel	Aluminium alloy	
12 Spring	CW452K	B 103 UNS C51900
13 Weld fitting	1.4301	A 276 Grade 304
14 Union nut	CC493K	B 505 UNS C93200



Standard marking acc. to Pressure Equipment Directive 97/23/EG (PED).



Marking acc. to Directive 99/36/EG (TPED) will only be carried out by written notice on purchase order.



Type 02411 – Standard design	Technical data									
Nominal size	DN	10	10	20	20	32	32	40	50	
Dimension code	.X.	1012	1017	1521	2027	2533	3242	4048	5060	
Face-to-face dimension	FF	137	141	168	168	203	203	230	263	
Height	H	270 mm or 370 mm								
Outside pipe-Ø DIN EN ISO 1127	RA	12.0	17.2	21.3	26.9	33.7	42.4	48.3	60.3	
Wall thickness pipe DIN EN ISO 1127	a	1.0	2.3	2.6	2.0	3.2	2.0	3.6	3.6	
Outside pipe -Ø ASTM A312	RA	-	17.15	21.34	26.67	33.40	42.16	48.26	60.33	
Wall thickness pipe ASTM A312	a	-	S40	S10	S10	S10	S10	S10	S10	
Handwheel-Ø	B	80	80	100	100	125	125	125	125	
Wrench size across flats	S <sub>1</sub>	10	10	10	10	13	13	13	13	
Wrench size across flats	S <sub>2</sub>	30	30	30	30	36	36	36	36	
Weight	ca. kg	1.5	1.5	2.8	2.8	4.5	4.5	6.8	10.0	
Kvs – Value	m <sup>3</sup> /h	1.6	2.2	6.7	6.7	12.1	12.1	22.6	37.1	
Cv – Value	gal /min	1.9	2.6	7.8	7.8	14.1	14.1	26.3	43.2	

Dimensions in mm.

# VALVES FOR CRYOGENIC SERVICE

Type 05412 – Check Valve

Valves – Cryogenic  
Section  
**21A**

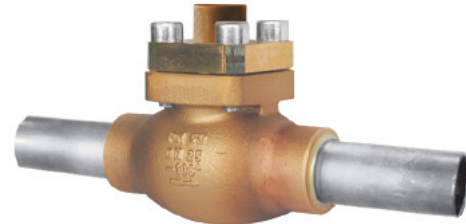


## Cryogenic-Check Valves, PN50

Bronze body and cap  
with spring, opening pressure ca. 0.1 bar  
“ cleaned and degreased for oxygen service ”

### Part No. 05412.X.0007

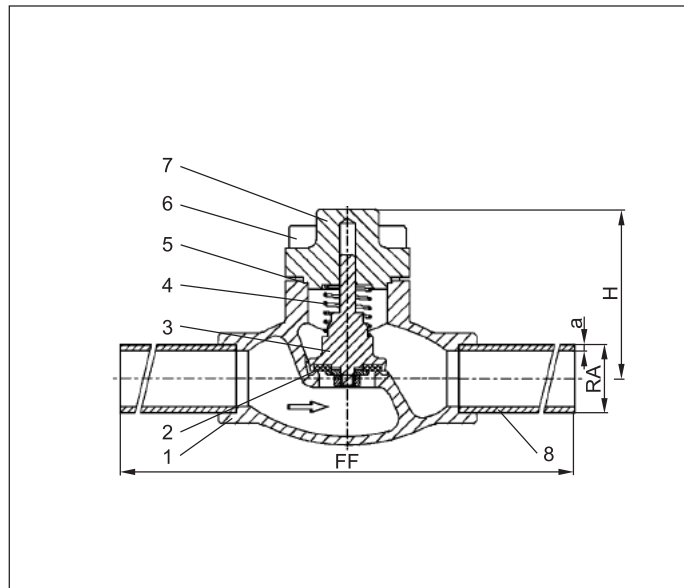
Complete with brazed stainless steel stubs acc. to DIN EN 10216-5 or ASTM A312



### Applications:

Approved for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluormethan, carbon oxide, methane, ethane and ethylene.  
Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	CC491K	B 62 UNS C83600
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	CW612N	B 283 UNS C37700
4 Spring	CW452K	B 103 UNS C51900
5 Bonnet gasket	PTFE	
6 Bolts	1.4301/A2	A 194 B8
7 Cap	CC493K	B 505 UNS C93200
8 Stainless steel stubs	1.4306	A 312 TP304L



Standard marking acc. to Pressure Equipment Directive 97/23/EG (PED).



Marking acc. to Directive 99/36/EG (TPED) will only be carried out by written notice on purchase order.



Type 05412 – Standard design	Technical data								
Nominal size	DN	10	15	20	25	32	40	50	
Dimension code	.X.	1012	1017	1521	2027	2533	3242	4048	5060
Face-to-face dimension	FF	210	210	235	235	265	265	290	310
Height	H	70	70	70	72	75	85	95	95
Outside pipe-Ø DIN EN ISO 1127	RA	12.0	17.2	21.3	26.9	33.7	42.4	48.3	60.3
Wall thickness pipe DIN EN ISO 1127	a	1.0	2.3	2.6	2.9	3.2	3.2	3.6	3.6
Outside pipe-Ø ASTM A312	RA	-	17.15	21.34	26.67	33.4	42.16	48.26	60.33
Wall thickness pipe ASTM A312	a	-	S40	S10	S10	S10	S10	S10	S10
Weight	ca. kg	0.8	0.8	1.1	1.4	2.0	2.8	4.5	6.5
Kvs – Value	m <sup>3</sup> /h	2.2	2.2	4.3	6.7	11.5	12.1	22.6	37.1
Cv – Value	gal /min	2.6	2.6	5.0	7.8	13.4	14.1	26.3	43.2

Dimensions in mm.

**VALVES FOR CRYOGENIC SERVICE**

Type 05413 – Check Valve

**Cryogenic-Check Valves, PN50**

Bronze body and cap

with spring, opening pressure ca. 0.1 bar

" cleaned and degreased for oxygen service "

**Part No. 05413.X.0001**

Female thread connection (G) acc. to ISO 7-Rp

**Part No. 05413.X.0006**

Female thread connection NPT acc. to ANSI B 1.20.1

Available options - on request only:

· Female thread connection (R) acc. to ISO 7-Rc

**Applications:**

Approved for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluoromethan, carbon oxide, methane, ethane and ethylene.

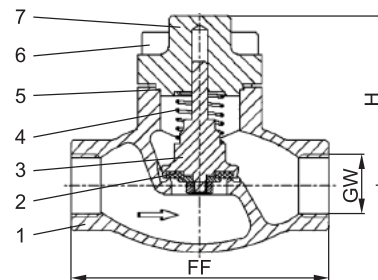
Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	CC491K	B 62 UNS C83600
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	CW612N	B 283 UNS C37700
4 Spring	CW452K	B 103 UNS C51900
5 Bonnet gasket	PTFE	
6 Bolts	1.4301/A2	A 194 B8
7 Cap	CC493K	B 505 UNS C93200

Standard marking acc. to Pressure Equipment Directive 97/23/EG (PED).



Marking acc. to Directive 99/36/EG (TPED) will only be carried out by written notice on purchase order.



Type 05413 – Standard design	Technical data								
	DN	10	10	15	20	25	32	40	50
Nominal size	DN	10	10	15	20	25	32	40	50
Thread size	GW	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Dimension code	.X.	0200	0300	0400	0600	1000	1200	1400	2000
Face-to-face dimension	FF	60	60	85	85	115	115	140	160
Height	H	70	70	70	72	75	85	95	95
Weight	ca. kg	0.7	0.7	1.0	1.3	1.6	2.4	3.9	5.7
Kvs – Value	m <sup>3</sup> /h	1.6	2.2	4.3	6.7	11.5	20.6	22.6	37.1
Cv – Value	gal /min	1.9	2.6	5.0	7.8	13.4	26.3	26.3	43.2

Dimensions in mm.

# VALVES FOR CRYOGENIC SERVICE

Type 08412 – Strainer

Valves – Cryogenic

Section

**21A**



## Cryogenic-Strainer, PN50

Bronze body and cap  
with strainer screen mesh size 0.25 mm  
" cleaned and degreased for oxygen service "

### Part No. 08412.X.0001

Socket end for copper stubs acc. to DIN EN 12449 or ASTM B88

#### Available options - on request only:

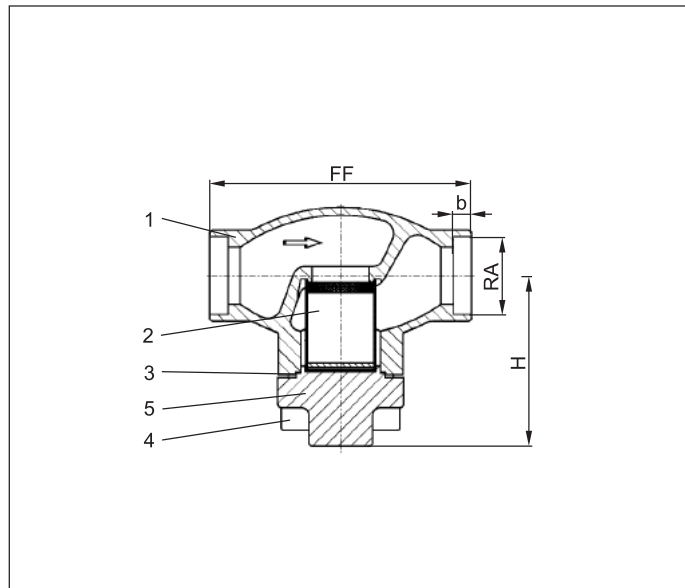
- Socket end for stainless steel stubs acc. to DIN EN ISO 1127
- other mesh sizes for strainer screen
- strainer screen item 2 in bronze



#### Applications:

Suitable for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluoromethan, carbon oxide, methane, ethane and ethylene.  
Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	CC491K	B 62 UNS C83600
2 Strainer screen	1.4301	A 240 Grade 304
3 Bonnet gasket	PTFE	
4 Bolts	1.4301/A2	A 194 B8
5 Cap	CC493K	B 505 UNS C93200



Standard marking acc. to Pressure Equipment Directive 97/23/EG (PED).



Marking acc. to Directive 99/36/EG (TPED) will only be carried out by written notice on purchase order.



Type 08412 – Standard design	Technical data							
Nominal size	DN	10	15	20	25	32	40	50
Dimension code	.X.	X=DNRA, Example: valve DN10 for copper pipe RAØ12mm, X=1012						
Face-to-face dimension	FF	60	85	85	115	115	140	160
Height	H	70	70	72	75	85	95	95
Outside pipe-Ø	RA	dependent on order						
Socket depth	b	6	6	8	8	10	13	20
Weight	ca. kg	0.6	0.8	0.9	1.2	1.8	3.1	4.7
Kvs – Value	m <sup>3</sup> /h	1.6	4.3	6.7	11.5	12.1	22.6	37.1
Cv – Value	gal /min	1.9	5.0	7.8	13.4	14.1	26.3	43.2

Dimensions in mm.

**VALVES FOR CRYOGENIC SERVICE**

Type 08412 – Strainer

**Cryogenic-Strainer, PN50**

Bronze body and cap

with strainer screen mesh size 0.25 mm

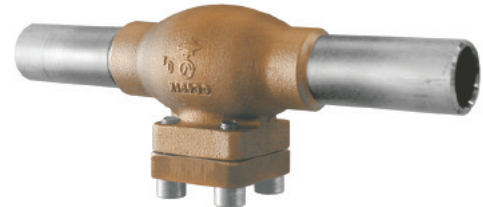
" cleaned and degreased for oxygen service "

**Part No. 08412.X.0007**

Complete with brazed stainless steel stubs acc. to DIN EN 10216-5 or ASTM A312

Available options - on request only:

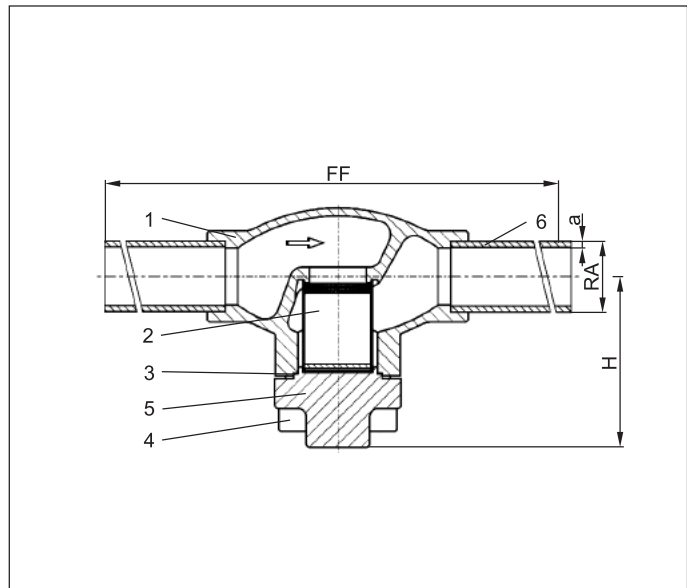
- other mesh sizes for strainer screen
- strainer screen item 2 in bronze

**Applications:**

Suitable for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluoromethan, carbon oxide, methane, ethane and ethylene.

Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	CC491K	B 62 UNS C83600
2 Strainer screen	1.4301	A 240 Grade 304
3 Bonnet gasket	PTFE	
4 Bolts	1.4301/A2	A 194 B8
5 Cap	CC493K	B 505 UNS C93200
6 Stainless steel stubs	1.4306	A 312 TP304L



Standard marking acc. to Pressure Equipment Directive 97/23/EG (PED).



Marking acc. to Directive 99/36/EG (TPED) will only be carried out by written notice on purchase order.



Type 08412 – Standard design	Technical data								
Nominal size	DN	10	10	15	20	25	32	40	50
Dimension code	.X.	1012	1017	1521	2027	2533	3242	4048	5060
Face-to-face dimension	FF	210	210	235	235	265	265	290	310
Height	H	70	70	70	72	75	85	95	95
Outside pipe-Ø DIN EN ISO 1127	RA	12.0	17.2	21.3	26.9	33.7	42.4	48.3	60.3
Wall thickness pipe DIN EN ISO 1127	a	1.0	2.3	2.6	2.9	3.2	3.2	3.6	3.6
Outside pipe-Ø ASTM A312	RA	-	17.15	21.34	26.67	33.4	42.16	48.26	60.33
Wall thickness pipe ASTM A312	a	-	S40	S10	S10	S10	S10	S10	S10
Weight	ca. kg	0.75	0.75	1.0	1.2	1.8	2.5	4.1	6.0
Kvs – Value	m <sup>3</sup> /h	2.2	4.3	4.3	6.7	11.5	12.1	22.6	37.1
Cv – Value	gal /min	2.6	5.0	5.0	7.8	13.4	14.1	26.3	43.2

Dimensions in mm.

# VALVES FOR CRYOGENIC SERVICE

Type 08413 – Strainer

Valves – Cryogenic

Section

**21A**



## Cryogenic-Strainer, PN50

Bronze body and cap  
with strainer screen mesh size 0.25 mm  
" cleaned and degreased for oxygen service "

### Part No. 08413.X.0001

Female thread connection (G) acc. to ISO 7-Rp

### Part No. 08413.X.0006

Female thread connection NPT acc. to ANSI B 1.20.1

### Available options - on request only:

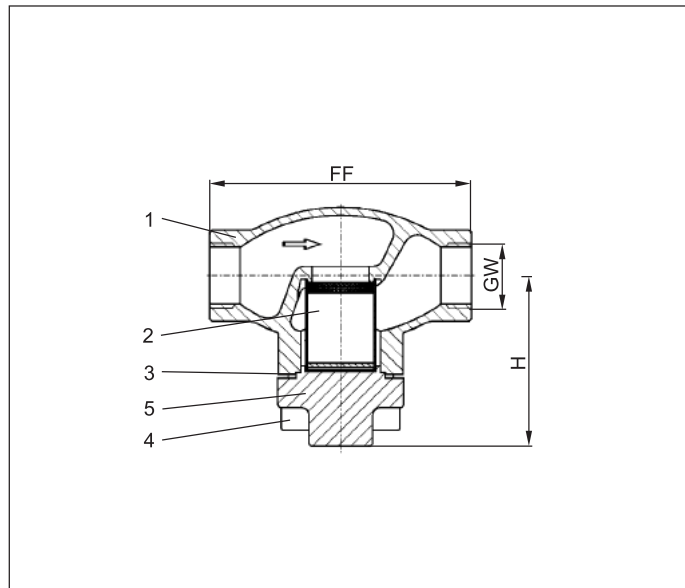
- Female thread connection (R) acc. to ISO 7-Rc
- other mesh sizes for strainer screen
- strainer screen item 2 in bronze



### Applications:

Suitable for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluoromethan, carbon oxide, methane, ethane and ethylene.  
Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	CC491K	B 62 UNS C83600
2 Strainer screen	1.4301	A 240 Grade 304
3 Bonnet gasket	PTFE	
4 Bolts	1.4301/A2	A 194 B8
5 Cap	CC493K	B 505 UNS C93200



Standard marking acc. to Pressure Equipment Directive 97/23/EG (PED).



Marking acc. to Directive 99/36/EG (TPED) will only be carried out by written notice on purchase order.



Type 08413 – Standard design	Technical data									
Nominal size	DN	10	10	15	20	25	32	40	50	
Thread size	GW	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2	
Dimension code	.X.	0200	0300	0400	0600	1000	1200	1400	2000	
Face-to-face dimension	FF	60	60	85	85	115	115	140	160	
Height	H	70	70	70	72	75	85	95	95	
Weight	ca. kg	0.6	0.6	0.8	0.9	1.2	1.8	3.1	4.7	
Kvs – Value	m <sup>3</sup> /h	1.6	2.2	4.3	6.7	11.5	20.6	22.6	37.1	
Cv – Value	gal /min	1.9	2.6	5.0	7.8	13.4	26.3	26.3	43.2	

Dimensions in mm.

# VALVES FOR CRYOGENIC SERVICE

Type 01321 – Globe Valve



**Cryogenic-Globe and Globe/Check Valves, PN50**

Stainless steel body and bronze topwork  
 “live loaded” gland packing  
 “cleaned and degreased for oxygen service ”

**Part No. 01321.X.001\* (H = 270mm)**

**Part No. 01321.X.002\* (H = 370mm)**

**Part No. 01321.X.501\* (H = 270mm) Globe/Check Valve**

**Part No. 01321.X.502\* (H = 370mm) Globe/Check Valve**

\*Butt weld connection for stainless steel pipes acc. to DIN EN ISO 1127 or ASTM A312

**Part No. 01321.X.0014 (H = 270mm)**

**Part No. 01321.X.0024 (H = 370mm)**

**Part No. 01321.X.5014 (H = 270mm) Globe/Check Valve**

**Part No. 01321.X.5024 (H = 370mm) Globe/Check Valve**

Socket weld connection for stainless steel pipes acc. to DIN EN ISO 1127 and ASTM A312



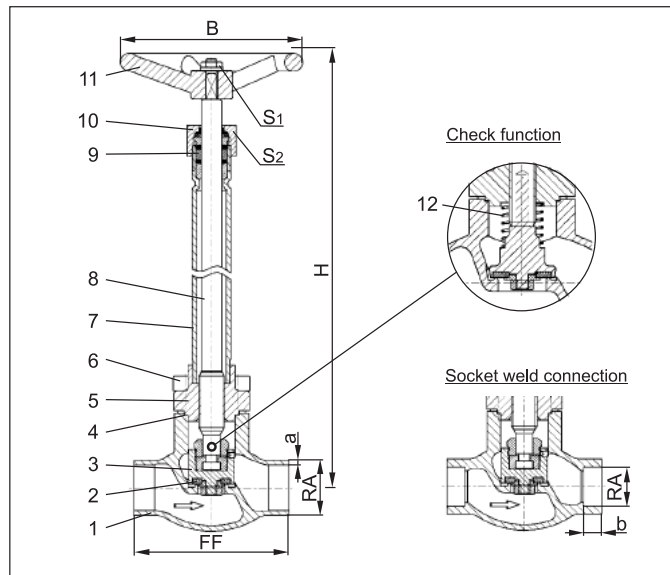
Available options - on request only:

- Welded stainless steel stubs acc. to DIN EN ISO 1127 or ASTM A312 - length FF + 150mm
- Extension H up to 900mm
- Valve with control disc (tapered design)

**Applications:**

Approved for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluormethan, carbon oxide, methane, ethane and ethylene.  
 Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	1.4308	A 351 CF8
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	CW612N	B 283 UNS C37700
4 Bonnet gasket	PTFE	
5 Headpiece	CC493K	B 505 UNS C93200
6 Bolts	1.4301/A2	A 194 B8
7 Elongation tube	1.4541	A 213 TP 321
8 Stem	1.4301	A 276 Grade 304
9 Gland packing	Graphite / PTFE	
10 Gland nut	CW612N	B 283 UNS C37700
11 Handwheel	Aluminium alloy	
12 Spring	CW452K	B 103 UNS C51900



Standard marking acc. to Pressure Equipment Directive 97/23/EG (PED).



Marking acc. to Directive 99/36/EG (TPED) will only be carried out by written notice on purchase order.



Type 01321 – Standard design	Technical data												
Nominal size	DN	10	15	15	20	25	32	40	40	50	65	80	100
Dimension code	.X.	1012	1517	1521	2026	2533	3238	4042	4048	5060	6570	8088	0114
Face-to-face dimension	FF	70	85	85	100	115	115	130	130	155	205	245	280
Height	H	270 mm or 370 mm											
Outside pipe-Ø DIN EN ISO 1127	RA	12.0	17.2	21.3	26.9	33.7	38.0	42.4	48.3	60.3	76.1	88.9	114.3
Wall thickness pipe DIN EN ISO 1127	a	1.0	1.6	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.6	3.2	6.0
Outside pipe -Ø ASTM A312	RA	13.72	17.15	21.34	26.67	33.40	-	42.16	48.26	60.33	73.03	88.90	114.3
Wall thickness pipe ASTM A312	a	S10	S40	S10	S10	S10	-	S10	S10	S10	S40	S10	S40
Socket depth	b	6	10	10	13	13	-	13	13	16	16	16	20
Handwheel-Ø	B	80	100	100	100	100	125	125	125	125	200	250	315
Wrench size across flats	S <sub>1</sub>	10	10	10	10	10	13	13	13	13	13	13	13
Wrench size across flats	S <sub>2</sub>	30	30	30	30	30	36	36	36	36	36	36	41
Weight	ca. kg	1.4	1.65	1.7	2.1	2.4	3.3	4.7	4.7	7.2	12.7	17.0	24.5
Kvs – Value	m <sup>3</sup> /h	1.6	3.8	4.3	6.7	11.5	14.0	20.6	22.6	37.1	71.1	104.0	t.b.c.
Cv – Value	gal /min	1.9	4.4	5.0	7.8	13.4	16.2	26.3	26.3	43.2	82.7	120.9	t.b.c.

Dimensions in mm.

# VALVES FOR CRYOGENIC SERVICE

Type 03321 – Globe Valve

Valves – Cryogenic

Section

**21A**



## Cryogenic-Globe and Globe/Check Valves, PN50

Stainless steel body and bronze topwork,  
"live loaded" gland packing  
"cleaned and degreased for oxygen service "

Part No. 03321.X.0012 (H = 270mm)

Part No. 03321.X.0022 (H = 370mm)

Part No. 03321.X.5012 (H = 270mm) Globe/Check Valve

Part No. 03321.X.5022 (H = 370mm) Globe/Check Valve

Flanged connection acc. to DIN EN 1092-1 PN40

Part No. 03321.X.0013 (H = 270mm)

Part No. 03321.X.0023 (H = 370mm)

Part No. 03321.X.5013 (H = 270mm) Globe/Check Valve

Part No. 03321.X.5023 (H = 370mm) Globe/Check Valve

Flanged connection acc. to ANSI B16.5 class 300

Available options - on request only:

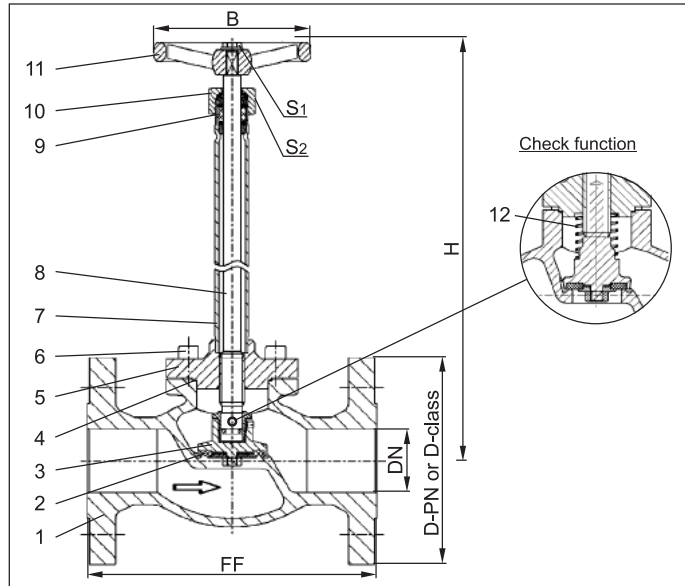
- Extension H up to 900mm
- Valve with control disc (tapered design)

## Applications:

Approved for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluoromethan, carbon oxide, methane, ethane and ethylene.  
Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)



Materials	DIN EN	ASTM
1 Body	1.4308	A 351 CF8
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	CW612N	B 283 UNS C37700
4 Bonnet gasket	PTFE	
5 Headpiece	CC493K	B 505 UNS C93200
6 Bolts	1.4301/A2	A 194 B8
7 Elongation tube	1.4541	A 213 TP 321
8 Stem	1.4301	A 276 Grade 304
9 Gland packing	Graphite / PTFE	
10 Gland nut	CW612N	B 283 UNS C37700
11 Handwheel	Aluminium alloy	
12 Spring	CW452K	B 103 UNS C51900



Standard marking acc. to Pressure Equipment Directive 97/23/EG (PED).



Marking acc. to Directive 99/36/EG (TPED) will only be carried out by written notice on purchase order.



Type 03321 – Standard design	Technical data						
Nominal size	DN	25	40	50	65	80	100
Dimension code - Flange EN 1092-1 PN40	.X.	0250	0400	0500	0650	0800	1000
Flange-Ø	D-PN	115	150	165	185	200	235
Dimension code - Flange ANSI B16.5 class 300	.X.	1000	1400	2000	2400	3000	4000
Flange-Ø	D-class	123.9	155.4	165	190.5	209.5	254
Face-to-face dimension	FF	160	200	230	290	310	350
Height	H	270 mm or 370 mm			370	370	370
Handwheel-Ø	B	100	125	125	200	250	315
Wrench size across flats	S <sub>1</sub>	10	13	13	13	13	13
Wrench size across flats	S <sub>2</sub>	30	36	36	36	36	41
Weight	ca. kg	4.9	9.7	13.3	21.1	28.0	43.2
Kvs – Value	m <sup>3</sup> /h	11.5	22.6	37.1	71.1	104.0	t.b.c.
Cv – Value	gal /min	13.4	26.3	43.2	82.7	120.9	t.b.c.

Dimensions in mm.

# VALVES FOR CRYOGENIC SERVICE

Type 01322 – Globe Valve Angle Type



## Cryogenic-Globe Valves Angle Type, PN50

Stainless steel body and bronze topwork  
 “live loaded” gland packing  
 “cleaned and degreased for oxygen service ”

**Part No. 01322.X.001\*** (H = 270mm)

**Part No. 01322.X.002\*** (H = 370mm)

\*Butt weld connection for stainless steel pipes acc. to DIN EN ISO 1127 or ASTM A312

**Part No. 01322.X.0014** (H = 270mm)

**Part No. 01322.X.0024** (H = 370mm)

Socket weld connection for stainless steel pipes acc. to DIN EN ISO 1127 and ASTM A312

Available options - on request only:

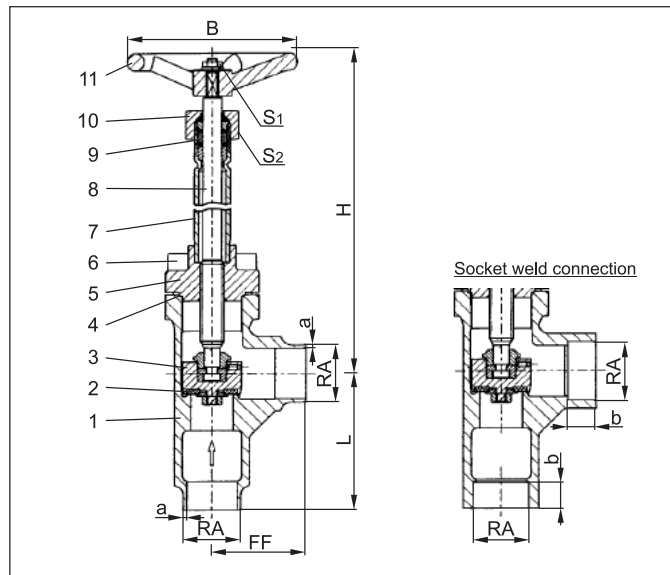
- Extension H up to 900mm
- Valve with control disc (tapered design)



### Applications:

Approved for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluormethan, carbon oxide, methane, ethane and ethylene.  
 Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	1.4308	A 351 CF8
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	CW612N	B 283 UNS C37700
4 Bonnet gasket	PTFE	
5 Headpiece	CC493K	B 505 UNS C93200
6 Bolts	1.4301/A2	A 194 B8
7 Elongation tube	1.4541	A 213 TP 321
8 Stem	1.4301	A 276 Grade 304
9 Gland packing	Graphite / PTFE	
10 Gland nut	CW612N	B 283 UNS C37700
11 Handwheel	Aluminium alloy	



Standard marking acc. to Pressure Equipment Directive 97/23/EG (PED).



Marking acc. to Directive 99/36/EG (TPED) will only be carried out by written notice on purchase order.



Type 01322 – Standard design	Technical data						
Nominal size	DN	15	20	25	32	40	50
Dimension code	.X.	1521	2026	2533	3242	4048	5060
Face-to-face dimension	FF	40	50	55	60	58	85
Height	H	270 mm or 370 mm					
Outside pipe-Ø DIN EN ISO 1127	RA	21.3	26.9	33.7	42.0	48.3	60.3
Wall thickness pipe DIN EN ISO 1127	a	2.0	2.0	2.0	2.0	2.0	2.0
Outside pipe -Ø ASTM A312	RA	21.34	26.67	33.40	-	48.26	60.33
Wall thickness pipe ASTM A312	a	S10	S10	S10	-	S10	S10
Socket depth	b	10	13	13	13	13	16
Handwheel-Ø	B	100	100	100	125	125	125
Length	L	50	65	80	80	90	90
Wrench size across flats	S <sub>1</sub>	10	10	10	13	13	13
Wrench size across flats	S <sub>2</sub>	30	30	30	36	36	36
Weight	ca. kg	1.4	1.6	2.2	4.0	4.3	6.5
Kvs – Value	m <sup>3</sup> /h	t.b.c.	t.b.c.	t.b.c.	t.b.c.	t.b.c.	t.b.c.
Cv – Value	gal /min	t.b.c.	t.b.c.	t.b.c.	t.b.c.	t.b.c.	t.b.c.

Dimensions in mm.

# VALVES FOR CRYOGENIC SERVICE

Type 05416 – Check Valve

Valves – Cryogenic

Section

**21A**



## Cryogenic-Check Valves, PN50

Stainless steel body and bronze cap  
with spring, opening pressure ca. 0.1 bar  
" cleaned and degreased for oxygen service "

### Part No. 05416.X.000\*

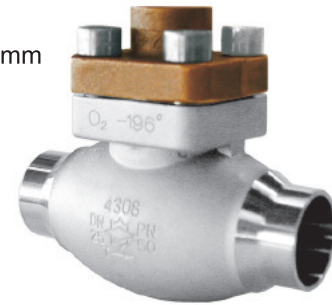
\*Butt weld connection for stainless steel pipes acc. to DIN EN ISO 1127 or ASTM A312

### Part No. 05416.X.0004

Socket weld connection for stainless steel pipes acc. to DIN EN ISO 1127 and ASTM A312

### Available options - on request only:

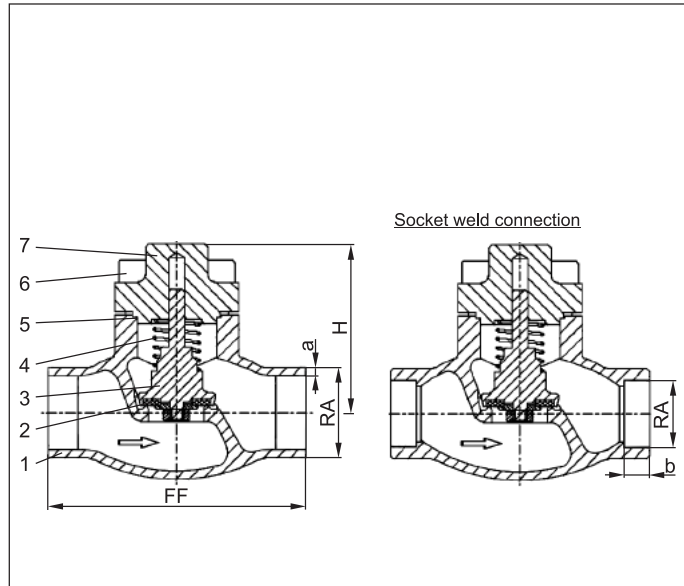
· Welded stainless steel stubs acc. to DIN EN ISO 1127 or ASTM A312 - length FF + 150mm



### Applications:

Approved for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluormethan, carbon oxide, methane, ethane and ethylene.  
Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	1.4308	A 351 CF8
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	CW612N	B 283 UNS C37700
4 Spring	CW452K	B 103 UNS C51900
5 Bonnet gasket	PTFE	
6 Bolts	1.4301/A2	A 194 B8
7 Cap	CC493K	B 505 UNS C93200



Standard marking acc. to Pressure Equipment Directive 97/23/EG (PED).



Marking acc. to Directive 99/36/EG (TPED) will only be carried out by written notice on purchase order.



Type 05416 – Standard design	Technical data												
Nominal size	DN	10	15	15	20	25	32	40	40	50	65	80	100
Dimension code	.X.	1012	1517	1521	2026	2533	3238	4042	4048	5060	6570	8088	0114
Face-to-face dimension	FF	70	85	85	100	115	115	130	130	155	205	245	280
Height	H	70	70	70	72	75	85	95	95	95	125	150	185
Outside pipe-Ø DIN EN ISO 1127	RA	12.0	17.2	21.3	26.9	33.7	38.0	42.4	48.3	60.3	76.1	88.9	114.3
Wall thickness pipe DIN EN ISO 1127	a	1.0	1.6	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.6	3.2	6.0
Outside pipe -Ø ASTM A312	RA	13.72	17.15	21.34	26.67	33.40	-	42.16	48.26	60.33	73.03	88.90	114.3
Wall thickness pipe ASTM A312	a	S10	S40	S10	S10	S10	-	S10	S10	S10	S40	S10	S40
Socket depth	b	6	10	10	13	13	-	13	13	16	16	16	20
Weight	ca. kg	0.7	0.95	1.0	1.3	1.6	2.4	3.9	3.9	5.7	9.6	14.6	20.0
Kvs – Value	m <sup>3</sup> /h	1.6	3.8	4.3	6.7	11.5	14.0	20.6	22.6	37.1	71.1	104.0	t.b.c.
Cv – Value	gal /min	1.9	4.4	5.0	7.8	13.4	16.2	26.3	26.3	43.2	82.7	120.9	t.b.c.

Dimensions in mm.

# VALVES FOR CRYOGENIC SERVICE

Type 05415 – Check Valve



**Cryogenic-Check Valves, PN50**

Stainless steel body and bronze cap  
with spring, opening pressure ca. 0.1 bar  
“ cleaned and degreased for oxygen service ”

**Part No. 05415.X.0001**

Female thread connection (G) acc. to ISO 7-Rp

**Part No. 05415.X.0006**

Female thread connection NPT acc. to ANSI B 1.20.1

Available options - on request only:

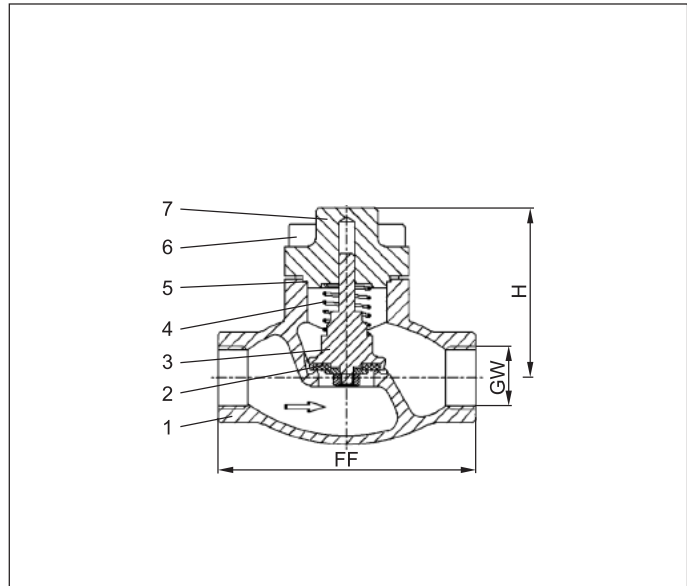
· Female thread connection (R) acc. to ISO 7-Rc



**Applications:**

Approved for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluormethan, carbon oxide, methane, ethane and ethylene.  
Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	1.4308	A 351 CF8
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	CW612N	B 283 UNS C37700
4 Spring	CW452K	B 103 UNS C51900
5 Bonnet gasket	PTFE	
6 Bolts	1.4301/A2	A 194 B8
7 Cap	CC493K	B 505 UNS C93200



Standard marking acc. to Pressure Equipment Directive 97/23/EG (PED).



Marking acc. to Directive 99/36/EG (TPED) will only be carried out by written notice on purchase order.



Type 05415 – Standard design	Technical data									
Nominal size	DN	10	10	15	20	25	40	40	50	
Thread size	GW	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2	
Dimension code	.X.	0200	0300	0400	0600	1000	1200	1400	2000	
Face-to-face dimension	FF	70	70	85	100	115	130	130	155	
Height	H	70	70	70	72	75	95	95	95	
Weight	ca. kg	0.7	0.7	1.0	1.3	1.6	3.9	3.9	5.7	
Kvs – Value	m <sup>3</sup> /h	1.6	2.2	4.3	6.7	11.5	20.6	22.6	37.1	
Cv – Value	gal /min	1.9	2.6	5.0	7.8	13.4	26.3	26.3	43.2	

Dimensions in mm.

# VALVES FOR CRYOGENIC SERVICE

Type 08414 – Strainer

Valves – Cryogenic

Section

**21A**



## Cryogenic-Strainer, PN50

Stainless steel body and bronze cap  
with strainer screen mesh size 0.25 mm  
" cleaned and degreased for oxygen service "

### Part No. 08414.X.000\*

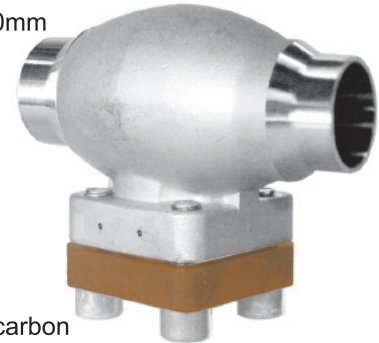
\*Butt weld connection for stainless steel pipes acc. to DIN EN ISO 1127 or ASTM A312

### Part No. 08414.X.0004

Socket weld connection for stainless steel pipes acc. to DIN EN ISO 1127 and ASTM A312

### Available options - on request only:

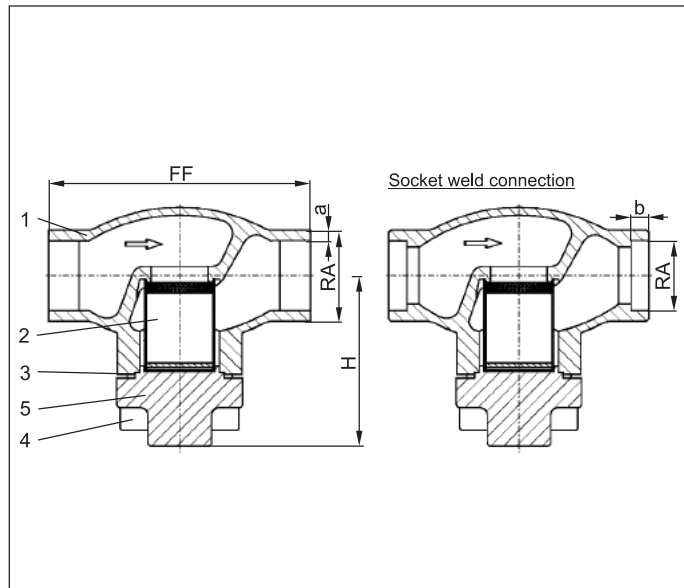
- Welded stainless steel stubs acc. to DIN EN ISO 1127 or ASTM A312 - length FF + 150mm
- other mesh sizes for strainer screen
- strainer screen item 2 in bronze



### Applications:

Suitable for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluoromethan, carbon oxide, methane, ethane and ethylene.  
Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	1.4308	A 351 CF8
2 Strainer screen	1.4301	A 240 Grade 304
3 Bonnet gasket	PTFE	
4 Bolts	1.4301/A2	A 194 B8
5 Cap	CC493K	B 505 UNS C93200



Standard marking acc. to Pressure Equipment Directive 97/23/EG (PED).



Marking acc. to Directive 99/36/EG (TPED) will only be carried out by written notice on purchase order.



Type 08414 – Standard design	Technical data													
Nominal size	DN	10	15	15	20	25	32	40	40	50	65	80	100	
Dimension code	.X.	1012	1517	1521	2026	2533	3238	4042	4048	5060	6570	8088	0114	
Face-to-face dimension	FF	70	85	85	100	115	115	130	130	155	205	245	280	
Height	H	70	70	70	72	75	85	95	95	95	125	150	185	
Outside pipe-Ø DIN EN ISO 1127	RA	12.0	17.2	21.3	26.9	33.7	38.0	42.4	48.3	60.3	76.1	88.9	114.3	
Wall thickness pipe DIN EN ISO 1127	a	1.0	1.6	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.6	3.2	6.0	
Outside pipe -Ø ASTM A312	RA	13.72	17.15	21.34	26.67	33.40	-	42.16	48.26	60.33	73.03	88.90	114.3	
Wall thickness pipe ASTM A312	a	S10	S40	S10	S10	S10	-	S10	S10	S10	S40	S10	S40	
Socket depth	b	6	10	10	13	13	-	13	13	16	16	16	20	
Weight	ca. kg	0.6	0.75	0.8	0.9	1.2	1.8	3.1	3.1	4.7	8.9	13.6	18.0	
Kvs – Value	m <sup>3</sup> /h	1.6	3.8	4.3	6.7	11.5	14.0	20.6	22.6	37.1	71.1	104.0	t.b.c.	
Cv – Value	gal /min	1.9	4.4	5.0	7.8	13.4	16.2	26.3	26.3	43.2	82.7	120.9	t.b.c.	

Dimensions in mm.

**VALVES FOR CRYOGENIC SERVICE**

Type 08415 – Strainer

**Cryogenic-Strainer, PN50**

Stainless steel body and bronze cap  
with strainer screen mesh size 0.25 mm  
" cleaned and degreased for oxygen service "

**Part No. 08415.X.0001**

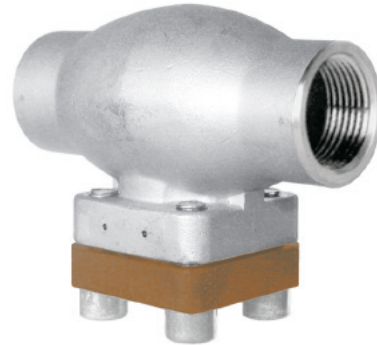
Female thread connection (G) acc. to ISO 7-Rp

**Part No. 08415.X.0006**

Female thread connection NPT acc. to ANSI B 1.20.1

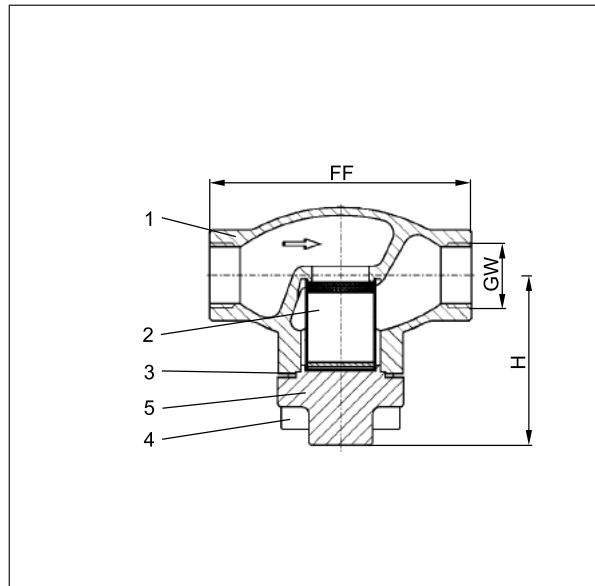
Available options - on request only:

- Female thread connection (R) acc. to ISO 7-Rc
- other mesh sizes for strainer screen
- strainer screen item 2 in bronze

**Applications:**

Suitable for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluoromethan, carbon oxide, methane, ethane and ethylene.  
Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	1.4308	A 351 CF8
2 Strainer screen	1.4301	A 240 Grade 304
3 Bonnet gasket	PTFE	
4 Bolts	1.4301/A2	A 194 B8
5 Cap	CC493K	B 505 UNS C93200



Standard marking acc. to Pressure Equipment Directive 97/23/EG (PED).



Marking acc. to Directive 99/36/EG (TPED) will only be carried out by written notice on purchase order.



Type 08415 – Standard design	Technical data									
Nominal size	DN	10	10	15	20	25	40	40	50	
Thread size	GW	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2	
Dimension code	.X.	0200	0300	0400	0600	1000	1200	1400	2000	
Face-to-face dimension	FF	70	70	85	100	115	130	130	155	
Height	H	70	70	70	72	75	95	95	95	
Weight	ca. kg	0.6	0.6	0.8	0.9	1.2	3.1	3.1	4.7	
Kvs – Value	m <sup>3</sup> /h	1.6	2.2	4.3	6.7	11.5	20.6	22.6	37.1	
Cv – Value	gal /min	1.9	2.6	5.0	7.8	13.4	26.3	26.3	43.2	

Dimensions in mm.

# VALVES FOR CRYOGENIC SERVICE

Type 01351 – Globe Valve

Valves – Cryogenic

Section

**21A**



## Cryogenic-Globe and Globe/Check Valves, PN50

Stainless steel body and topwork,  
“live loaded” gland packing  
“cleaned and degreased for oxygen service “

**Part No. 01351.X.000\***

**Part No. 01351.X.500\* Globe/Check Valve**

\*Butt weld connection for stainless steel pipes acc. to DIN EN ISO 1127 or ASTM A312

**Part No. 01351.X.0004**

**Part No. 01351.X.5004 Globe/Check Valve**

Socket weld connection for stainless steel pipes acc. to DIN EN ISO 1127 and ASTM A312

Available options - on request only:

- Welded stainless steel stubs acc. to DIN EN ISO 1127 or ASTM A312 - length FF + 150mm
- Valve with control disc (tapered design)



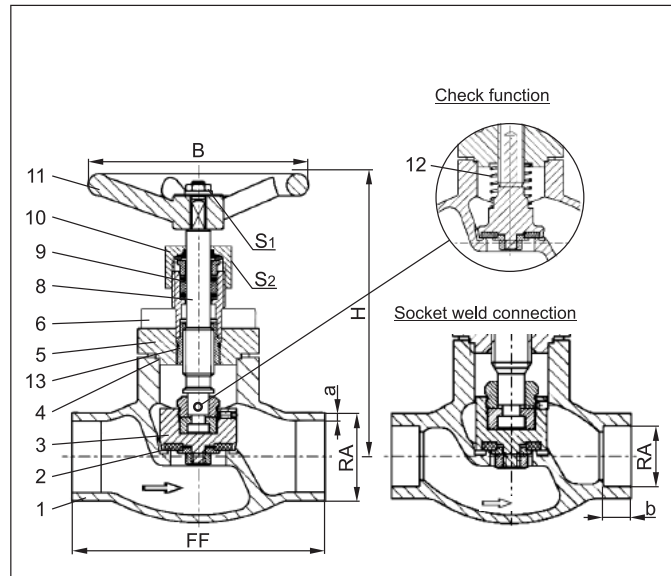
## Applications:

Approved for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluoromethan, carbon oxide, methane, ethane and ethylene.

Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Recommended working temperature: -60°C / -76°F (213K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	1.4308	A 351 CF8
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	1.4301	A 276 Grade 304
4 Bonnet gasket	PTFE	
5 Headpiece	1.4301	A 276 Grade 304
6 Bolts	1.4301/A2	A 194 B8
8 Stem	1.4301	A 276 Grade 304
9 Gland packing	Graphite / PTFE	
10 Gland nut	1.4305	A 276 Grade 303
11 Handwheel	Aluminium alloy	
12 Spring	1.4310	A 276 Grade 302
13 Bush	CW452K	B 130 Alloy A



Standard marking acc. to Pressure Equipment Directive 97/23/EG (PED).



Marking acc. to Directive 99/36/EG (TPED) will only be carried out by written notice on purchase order.



Type 01351 – Standard design	Technical data												
Nominal size	DN	10	15	15	20	25	32	40	40	50	65	80	100
Dimension code	.X.	1012	1517	1521	2026	2533	3238	4042	4048	5060	6570	8088	0114
Face-to-face dimension	FF	70	85	85	100	115	115	130	130	155	205	245	280
Height	H	140	140	140	140	140	170	175	175	200	230	280	320
Outside pipe-Ø DIN EN ISO 1127	RA	12.0	17.2	21.3	26.9	33.7	38.0	42.4	48.3	60.3	76.1	88.9	114.3
Wall thickness pipe DIN EN ISO 1127	a	1.0	1.6	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.6	3.2	6.0
Outside pipe-Ø ASTM A312	RA	13.72	17.15	21.34	26.67	33.40	-	42.16	48.26	60.33	73.03	88.90	114.3
Wall thickness pipe ASTM A312	a	S10	S40	S10	S10	S10	-	S10	S10	S10	S40	S10	S40
Socket depth	b	6	10	10	13	13	-	13	13	16	16	16	20
Handwheel-Ø	B	80	100	100	100	100	125	125	125	125	200	250	315
Wrench size across flats	S <sub>1</sub>	10	10	10	10	10	13	13	13	13	13	13	13
Wrench size across flats	S <sub>2</sub>	30	30	30	30	30	36	36	36	36	36	36	41
Weight	ca. kg	1.0	1.25	1.3	1.7	2.0	2.8	4.2	4.2	6.7	10.7	16.0	23.0
Kvs – Value	m <sup>3</sup> /h	1.6	3.8	4.3	6.7	11.5	14.0	20.6	22.6	37.1	71.1	104.0	t.b.c
Cv – Value	gal /min	1.9	4.4	5.0	7.8	13.4	16.2	26.3	26.3	43.2	82.7	120.9	t.b.c

Dimensions in mm.

# VALVES FOR CRYOGENIC SERVICE

Type 01355 – Globe Valve



**Cryogenic-Globe and Globe/Check Valves, PN50**

Stainless steel body and topwork,  
 "live loaded" gland packing  
 "cleaned and degreased for oxygen service "

**Part No. 01355.X.0001**

**Part No. 01355.X.5001 Globe/Check Valve**

Female thread connection (G) acc. to ISO 7-Rp

**Part No. 01355.X.0006**

**Part No. 01355.X.5006 Globe/Check Valve**

Female thread connection NPT acc. to ANSI B 1.20.1

Available options - on request only:

- Female thread connection (R) acc. to ISO 7-Rc
- Valve with control disc (tapered design)



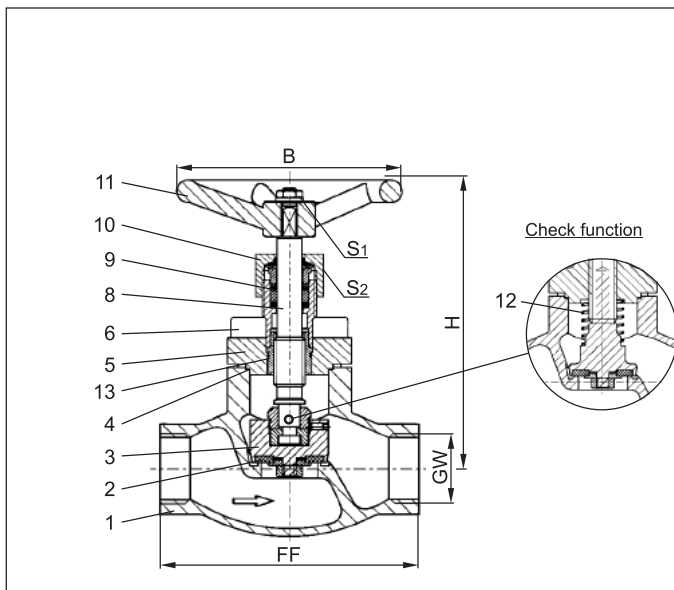
**Applications:**

Approved for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluoromethan, carbon oxide, methane, ethane and ethylene.

Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Recommended working temperature: -60°C / -76°F (213K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	1.4308	A 351 CF8
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	1.4301	A 276 Grade 304
4 Bonnet gasket	PTFE	
5 Headpiece	1.4301	A 276 Grade 304
6 Bolts	1.4301/A2	A 194 B8
8 Stem	1.4301	A 276 Grade 304
9 Gland packing	Graphite / PTFE	
10 Gland nut	1.4305	A 276 Grade 303
11 Handwheel	Aluminium alloy	
12 Spring	1.4310	A 276 Grade 302
13 Bush	CW452K	B 130 Alloy A



Standard marking acc. to Pressure Equipment Directive 97/23/EG (PED).



Marking acc. to Directive 99/36/EG (TPED) will only be carried out by written notice on purchase order.



Type 01355 – Standard design	Technical data									
Nominal size	DN	10	10	15	20	25	40	40	50	
Thread size	GW	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2	
Dimension code	.X.	0200	0300	0400	0600	1000	1200	1400	2000	
Face-to-face dimension	FF	70	70	85	100	115	130	130	155	
Height	H	140	140	140	140	140	175	175	200	
Handwheel-Ø	B	80	80	100	100	100	125	125	125	
Wrench size across flats	S <sub>1</sub>	10	10	10	10	10	13	13	13	
Wrench size across flats	S <sub>2</sub>	30	30	30	30	30	36	36	36	
Weight	ca. kg	1.0	1.0	1.3	1.7	2.0	4.2	4.2	6.7	
Kvs – Value	m <sup>3</sup> /h	1.6	2.2	4.3	6.7	11.5	20.6	22.6	37.1	
Cv – Value	gal /min	1.9	2.6	5.0	7.8	13.4	26.3	26.3	43.2	

Dimensions in mm.

# VALVES FOR CRYOGENIC SERVICE

## Type 01341 – Globe Valve

### Cryogenic-Globe and Globe/Check Valves, PN50

Stainless steel body and topwork,  
“live loaded” gland packing  
“cleaned and degreased for oxygen service “

Part No. 01341.X.001\* (H = 270mm)

Part No. 01341.X.002\* (H = 370mm)

Part No. 01341.X.501\* (H = 270mm) Globe/Check Valve

Part No. 01341.X.502\* (H = 370mm) Globe/Check Valve

\*Butt weld connection for stainless steel pipes acc. to DIN EN ISO 1127 or ASTM A312

Part No. 01341.X.0014 (H = 270mm)

Part No. 01341.X.0024 (H = 370mm)

Part No. 01341.X.5014 (H = 270mm) Globe/Check Valve

Part No. 01341.X.5024 (H = 370mm) Globe/Check Valve

Socket weld connection for stainless steel pipes acc. to DIN EN ISO 1127 and ASTM A312

#### Available options - on request only:

- Welded stainless steel stubs acc. to DIN EN ISO 1127 or ASTM A312 - length FF + 150mm
- Extension H up to 900mm
- Valve with control disc (tapered design)

#### Applications:

Approved for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluoromethan, carbon oxide, methane, ethane and ethylene.

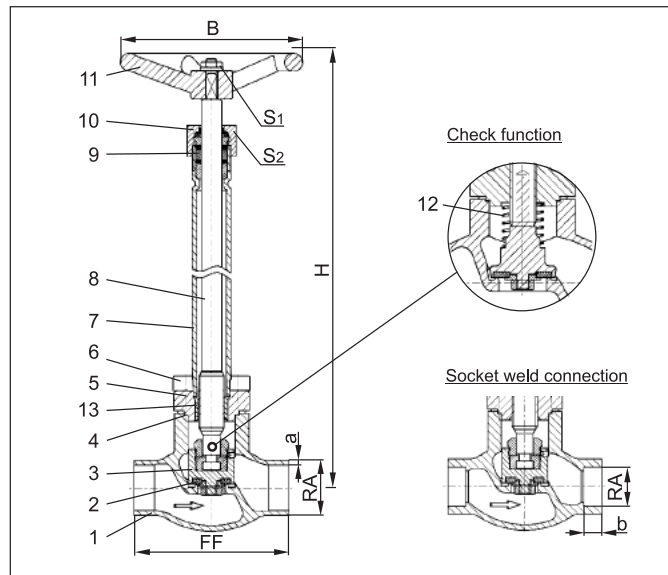
Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	1.4308	A 351 CF8
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	1.4301	A 276 Grade 304
4 Bonnet gasket	PTFE	
5 Headpiece	1.4301	A 276 Grade 304
6 Bolts	1.4301/A2	A 194 B8
7 Elongation tube	1.4541	A 213 TP 321
8 Stem	1.4301	A 276 Grade 304
9 Gland packing	Graphite / PTFE	
10 Gland nut	1.4305	A 276 Grade 303
11 Handwheel	Aluminium alloy	
12 Spring	1.4310	A 276 Grade 302
13 Bush	CW452K	B 103 Alloy A

Standard marking acc. to Pressure Equipment Directive 97/23/EG (PED).



Marking acc. to Directive 99/36/EG (TPED) will only be carried out by written notice on purchase order.



Type 01341 – Standard design	Technical data												
Nominal size	DN	10	15	15	20	25	32	40	40	50	65	80	100
Dimension code	.X.	1012	1517	1521	2026	2533	3238	4042	4048	5060	6570	8088	0114
Face-to-face dimension	FF	70	85	85	100	115	115	130	130	155	205	245	280
Height	H	270 mm or 370 mm											
Outside pipe-Ø DIN EN ISO 1127	RA	12.0	17.2	21.3	26.9	33.7	38.0	42.4	48.3	60.3	76.1	88.9	114.3
Wall thickness pipe DIN EN ISO 1127	a	1.0	1.6	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.6	3.2	6.0
Outside pipe -Ø ASTM A312	RA	13.72	17.15	21.34	26.67	33.40	-	42.16	48.26	60.33	73.03	88.90	114.3
Wall thickness pipe ASTM A312	a	S10	S40	S10	S10	S10	-	S10	S10	S10	S40	S10	S40
Socket depth	b	6	10	10	13	13	-	13	13	16	16	16	20
Handwheel-Ø	B	80	100	100	100	100	125	125	125	125	200	250	315
Wrench size across flats	S <sub>1</sub>	10	10	10	10	10	13	13	13	13	13	13	13
Wrench size across flats	S <sub>2</sub>	30	30	30	30	30	36	36	36	36	36	36	41
Weight	ca. kg	1.4	1.65	1.7	2.1	2.4	3.3	4.7	4.7	7.2	12.7	17.0	24.5
Kvs – Value	m <sup>3</sup> /h	1.6	3.8	4.3	6.7	11.5	14.0	20.6	22.6	37.1	71.1	104.0	t.b.c.
Cv – Value	gal /min	1.9	4.4	5.0	7.8	13.4	16.2	26.3	26.3	43.2	82.7	120.9	t.b.c.

Dimensions in mm.

# VALVES FOR CRYOGENIC SERVICE

Type 01345 – Globe Valve



**Cryogenic-Globe and Globe/Check Valves, PN50**

Stainless steel body and topwork,  
 “live loaded” gland packing  
 “cleaned and degreased for oxygen service ”

- Part No. 01345.X.0011 (H = 270mm)
- Part No. 01345.X.0021 (H = 370mm)
- Part No. 01345.X.5011 (H = 270mm) Globe/Check Valve
- Part No. 01345.X.5021 (H = 370mm) Globe/Check Valve
- Female thread connection (G) acc. to ISO 7-Rp
- Part No. 01345.X.0016 (H = 270mm)
- Part No. 01345.X.0026 (H = 370mm)
- Part No. 01345.X.5016 (H = 270mm) Globe/Check Valve
- Part No. 01345.X.5026 (H = 370mm) Globe/Check Valve
- Female thread connection NPT acc. to ANSI B 1.20.1

Available options - on request only:

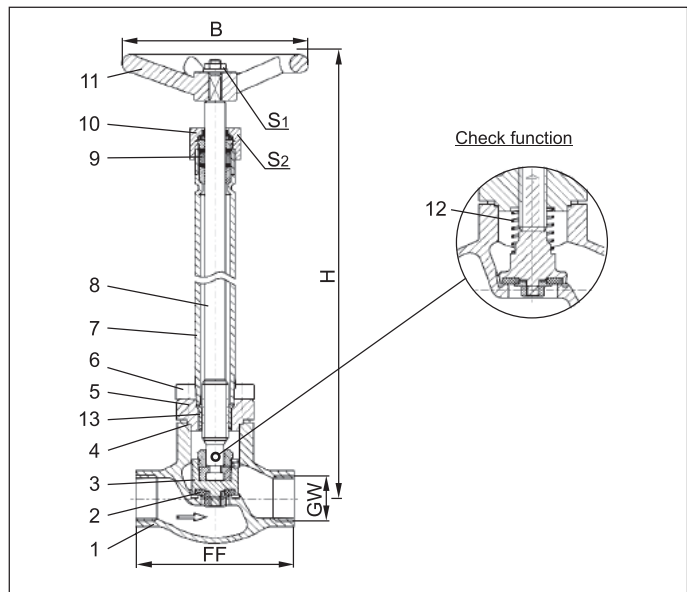
- Female thread connection (R) acc. to ISO 7-Rc
- Extension H up to 900mm
- Valve with control disc (tapered design)

**Applications:**

Approved for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluormethan, carbon oxide, methane, ethane and ethylene.  
 Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)



Materials	DIN EN	ASTM
1 Body	1.4308	A 351 CF8
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	1.4301	A 276 Grade 304
4 Bonnet gasket	PTFE	
5 Headpiece	1.4301	A 276 Grade 304
6 Bolts	1.4301/A2	A 194 B8
7 Elongation tube	1.4541	A 213 TP 321
8 Stem	1.4301	A 276 Grade 304
9 Gland packing	Graphite / PTFE	
10 Gland nut	1.4305	A 276 Grade 303
11 Handwheel	Aluminium alloy	
12 Spring	1.4310	A 276 Grade 302
13 Bush	CW452K	B 103 Alloy A



Standard marking acc. to Pressure Equipment Directive 97/23/EG (PED).



Marking acc. to Directive 99/36/EG (TPED) will only be carried out by written notice on purchase order.



Type 01345 – Standard design	Technical data								
Nominal size	DN	10	10	15	20	25	40	40	50
Thread size	GW	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Dimension code	.X.	0200	0300	0400	0600	1000	1200	1400	2000
Face-to-face dimension	FF	70	70	85	100	115	130	130	155
Height	H	270 mm or 370 mm							
Handwheel-Ø	B	80	80	100	100	100	125	125	125
Wrench size across flats	S <sub>1</sub>	10	10	10	10	10	13	13	13
Wrench size across flats	S <sub>2</sub>	30	30	30	30	30	36	36	36
Weight	ca. kg	1.4	1.4	1.7	2.1	2.4	4.7	4.7	7.2
Kvs – Value	m <sup>3</sup> /h	1.6	2.2	4.3	6.7	11.5	20.6	22.6	37.1
Cv – Value	gal /min	1.9	2.6	5.0	7.8	13.4	26.3	26.3	43.2

Dimensions in mm.

# VALVES FOR CRYOGENIC SERVICE

Type 01252 – Bellow Sealed Globe Valve

Valves – Cryogenic  
Section  
**21A**



## Cryogenic-Bellow Sealed Globe Valve, PN50

Stainless steel body and topwork,  
“live loaded” gland packing  
“cleaned and degreased for oxygen service ”

### Part No. 01252.X.002\*

\*Butt weld connection for stainless steel pipes acc. to DIN EN ISO 1127 or ASTM A312

### Part No. 01252.X.0024

Socket weld connection for stainless steel pipes acc. to DIN EN ISO 1127 and ASTM A312

### Available options - on request only:

- Welded stainless steel stubs acc. to DIN EN ISO 1127 or ASTM A312 - length FF + 150mm
- Extension H up to 900mm
- Valve with control disc (tapered design)



### Applications:

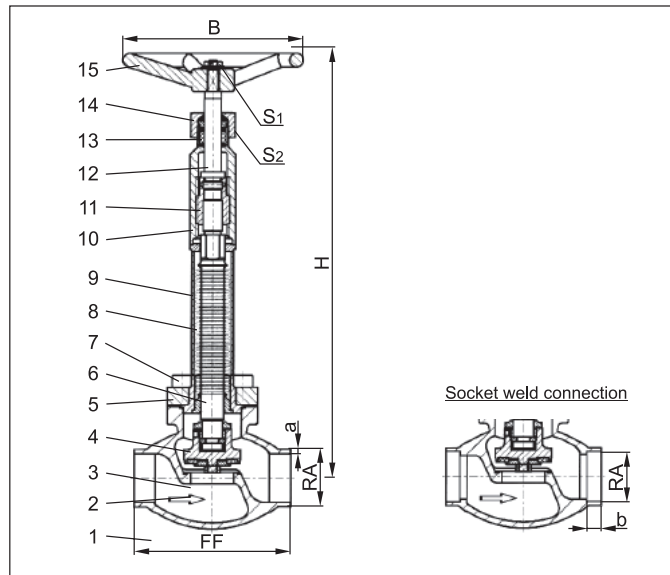
Approved for non-flammable and flammable vapours, gases and liquids  
Working temperature: -270°C / -454°F (3K) up to +225°C / +437°F (498K)

Leak rate:  $10^{-8}$  mbar ltr / sec outside  
 $10^{-6}$  mbar ltr / sec seat

Materials	DIN EN	ASTM
1 Body	1.4308	A 351 CF8
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	1.4301	A 276 Grade 304
4 Bonnet gasket	PTFE	
5 Headpiece	1.4301	A 276 Grade 304
6 Bellow stem	1.4571	A 276 Grade 321
7 Bolts	1.4301/A2	A 194 B8
8 Bellow	1.4571	A 276 Grade 321
9 Elongation tube	1.4541	A 213 TP 321
10 Upper part	1.4301	A 276 Grade 304
11 Bush	CW452K	B 103 Alloy A
12 Stem	1.4301	A 276 Grade 304
13 Gland packing	Graphite / PTFE	
14 Gland nut	1.4305	A 276 Grade 303
15 Handwheel	Aluminium alloy	

Standard marking acc. to Pressure Equipment Directive 97/23/EG (PED).

Marking acc. to Directive 99/36/EG (TPED) will only be carried out by written notice on purchase order.



Type 01252 – Standard design	Technical data									
Nominal size	DN	10	15	15	20	25	32	40	40	50
Dimension code	.X.	1012	1517	1521	2026	2533	3238	4042	4048	5060
Face-to-face dimension	FF	70	85	85	100	115	115	130	130	155
Height	H	370	370	370	370	370	370	370	370	370
Outside pipe-Ø DIN EN ISO 1127	RA	12.0	17.2	21.3	26.9	33.7	38.0	42.4	48.3	60.3
Wall thickness pipe DIN EN ISO 1127	a	1.0	1.6	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Outside pipe -Ø ASTM A312	RA	13.72	17.15	21.34	26.67	33.40	-	42.16	48.26	60.33
Wall thickness pipe ASTM A312	a	S10	S40	S10	S10	S10	-	S10	S10	S10
Socket depth	b	6	10	10	13	13	-	13	13	16
Handwheel-Ø	B	80	100	100	100	100	125	125	125	125
Wrench size across flats	S <sub>1</sub>	10	10	10	10	10	13	13	13	13
Wrench size across flats	S <sub>2</sub>	30	30	30	30	30	36	36	36	36
Weight	ca. kg	1.6	1.85	1.9	2.3	2.7	3.6	5.1	5.1	7.7
Kvs – Value	m <sup>3</sup> /h	1.6	3.8	4.3	6.7	11.5	14.0	20.6	22.6	37.1
Cv – Value	gal /min	1.9	4.4	5.0	7.8	13.4	16.2	26.3	26.3	43.2

Dimensions in mm.

# VALVES FOR CRYOGENIC SERVICE

Type 05414 – Check Valve



**Cryogenic-Check Valves, PN50**

Stainless steel body and cap  
with spring, opening pressure ca. 0.1 bar  
“ cleaned and degreased for oxygen service ”

**Part No. 05414.X.000\***

\*Butt weld connection for stainless steel pipes acc. to DIN EN ISO 1127 or ASTM A312

**Part No. 05414.X.0004**

Socket weld connection for stainless steel pipes acc. to DIN EN ISO 1127 and ASTM A312

Available options - on request only:

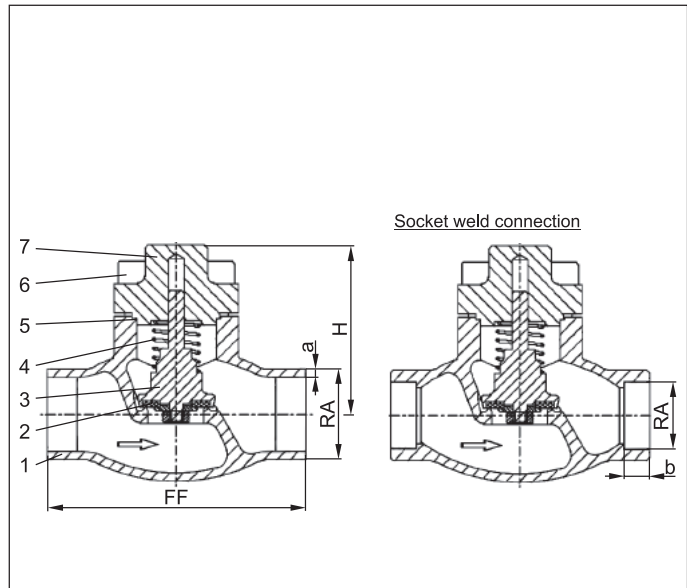
· Welded stainless steel stubs acc. to DIN EN ISO 1127 or ASTM A312 - length FF + 150mm



**Applications:**

Approved for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluormethan, carbon oxide, methane, ethane and ethylene.  
Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	1.4308	A 351 CF8
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	1.4301	A 276 Grade 304
4 Spring	1.4310	A 276 Grade 302
5 Bonnet gasket	PTFE	
6 Bolts	1.4301/A2	A 194 B8
7 Cap	1.4301	A 276 Grade 304



Standard marking acc. to Pressure Equipment Directive 97/23/EG (PED).



Marking acc. to Directive 99/36/EG (TPED) will only be carried out by written notice on purchase order.



Type 05414 – Standard design	Technical data												
Nominal size	DN	10	15	15	20	25	32	40	40	50	65	80	100
Dimension code	.X.	1012	1517	1521	2026	2533	3238	4042	4048	5060	6570	8088	0114
Face-to-face dimension	FF	70	85	85	100	115	115	130	130	155	205	245	280
Height	H	70	70	70	72	75	85	95	95	95	125	150	185
Outside pipe-Ø DIN EN ISO 1127	RA	12.0	17.2	21.3	26.9	33.7	38.0	42.4	48.3	60.3	76.1	88.9	114.3
Wall thickness pipe DIN EN ISO 1127	a	1.0	1.6	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.6	3.2	6.0
Outside pipe -Ø ASTM A312	RA	13.72	17.15	21.34	26.67	33.40	-	42.16	48.26	60.33	73.03	88.90	114.3
Wall thickness pipe ASTM A312	a	S10	S40	S10	S10	S10	-	S10	S10	S10	S40	S10	S40
Socket depth	b	6	10	10	13	13	-	13	13	16	16	16	20
Weight	ca. kg	0.7	0.95	1.0	1.3	1.6	2.4	3.9	3.9	5.7	9.6	14.6	20.0
Kvs – Value	m <sup>3</sup> /h	1.6	3.8	4.3	6.7	11.5	14.0	20.6	22.6	37.1	71.1	104.0	t.b.c.
Cv – Value	gal /min	1.9	4.4	5.0	7.8	13.4	16.2	26.3	26.3	43.2	82.7	120.9	t.b.c.

Dimensions in mm.

# VALVES FOR CRYOGENIC SERVICE

Type 05417 – Check Valve

Valves – Cryogenic

Section

**21A**



## Cryogenic-Check Valves, PN50

Stainless steel body and cap  
with spring, opening pressure ca. 0.1 bar  
" cleaned and degreased for oxygen service "

### Part No. 05417.X.0001

Female thread connection (G) acc. to ISO 7-Rp

### Part No. 05417.X.0006

Female thread connection NPT acc. to ANSI B 1.20.1

### Available options - on request only:

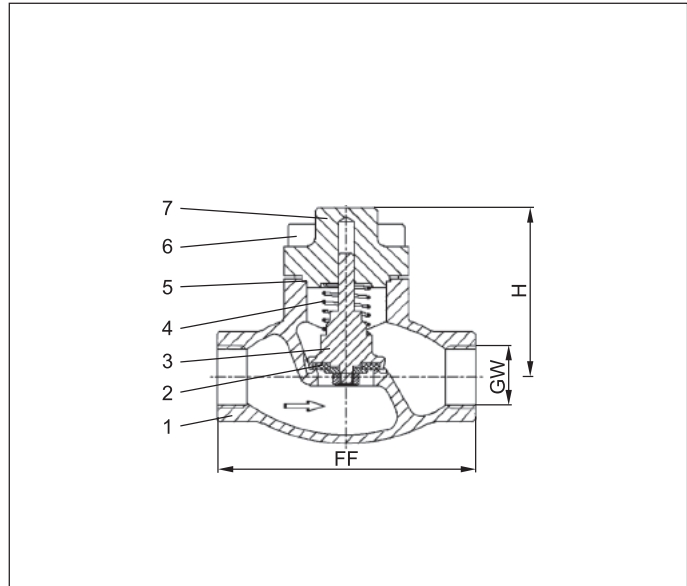
· Female thread connection (R) acc. to ISO 7-Rc



### Applications:

Approved for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluormethan, carbon oxide, methane, ethane and ethylene.  
Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	1.4308	A 351 CF8
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	1.4301	A 276 Grade 304
4 Spring	1.4310	A 276 Grade 302
5 Bonnet gasket	PTFE	
6 Bolts	1.4301/A2	A 194 B8
7 Cap	1.4301	A 276 Grade 304



Standard marking acc. to Pressure Equipment Directive 97/23/EG (PED).



Marking acc. to Directive 99/36/EG (TPED) will only be carried out by written notice on purchase order.



Type 05417 – Standard design	Technical data									
Nominal size	DN	10	10	15	20	25	40	40	50	
Thread size	GW	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2	
Dimension code	.X.	0200	0300	0400	0600	1000	1200	1400	2000	
Face-to-face dimension	FF	70	70	85	100	115	130	130	155	
Height	H	70	70	70	72	75	95	95	95	
Weight	ca. kg	0.7	0.7	1.0	1.3	1.6	3.9	3.9	5.7	
Kvs – Value	m <sup>3</sup> /h	1.6	2.2	4.3	6.7	11.5	20.6	22.6	37.1	
Cv – Value	gal /min	1.9	2.6	5.0	7.8	13.4	26.3	26.3	43.2	

Dimensions in mm.

# VALVES FOR CRYOGENIC SERVICE

Type 01313 – Actuated Globe Valve



**Cryogenic-Globe Valves with Pneumatic Actuator, PN50**

Bronze body and stainless steel topwork (internal parts bronze)

Actuator - air opens, spring closes or contrary

“live loaded” gland packing

“cleaned and degreased for oxygen service ” - the actuator is not cleaned and degreased for oxygen

**Part No. 01313.X.0010**

Socket end for copper stubs acc. to DIN EN 12449 or ASTM B88

Available accessories:

- Solenoid valve
- Limit switch
- Electropneumatic positioner etc.

Available options - on request only:

- Socket end for stainless steel pipes acc. to DIN EN ISO 1127
- Actuator “ cleaned and degreased for oxygen sevice ”
- Electric actuator
- Bellow sealed option

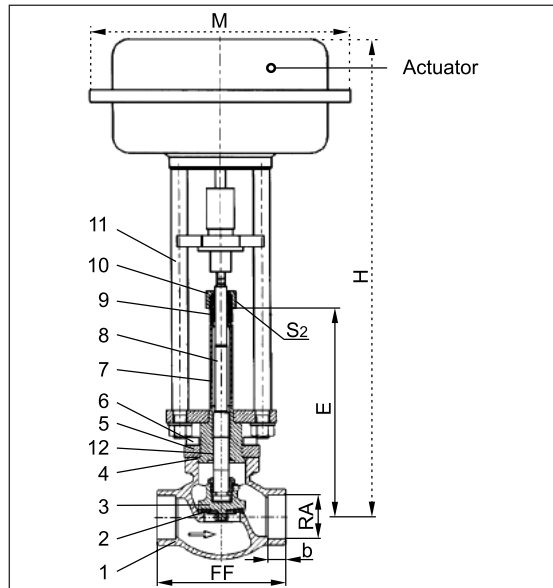


**Applications:**

Approved for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluormethan, carbon oxide, methane, ethane and ethylene.

Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	CC491K	B 62 UNS C83600
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	CW612N	B 283 UNS C37700
4 Bonnet gasket	PTFE	
5 Headpiece	1.4301	A 276 Grade 304
6 Bolts	1.4301/A2	A 194 B8
7 Elongation tube	1.4541	A 213 TP 321
8 Stem	1.4301	A 276 Grade 304
9 Gland packing	Graphite / PTFE	
10 Gland nut	CW612N	B 283 UNS C37700
11 Pillars	1.4301	A 276 Grade 304
12 Bush	CW452K	B 103 UNS C51900



Standard marking acc. to Pressure Equipment Directive 97/23/EG (PED).



Marking acc. to Directive 99/36/EG (TPED) will only be carried out by written notice on purchase order.



Type 01313 – Standard design	Technical data							
Nominal size	DN	10	15	20	25	32	40	50
Dimension code	.X.	X=DNRA, Example: valve DN15 for copper pipe RAø18mm, X=1518						
Face-to-face dimension	FF	60	85	85	115	115	140	160
Height	H	dependent on actuator						
Length	E	195	195	200	200	230	230	235
Outside pipe-Ø	RA	dependent on order						
Socket depth	b	6	6	8	8	10	13	20
Actuator-Ø	M	dependent on actuator						
Wrench size across flats	S <sub>2</sub>	30	30	30	30	36	36	36
Weight w/o actuator	ca. kg	1.6	2.3	2.7	3.1	4.3	6.2	9.2
Kvs – Value	m <sup>3</sup> /h	1.6	4.3	6.7	11.5	12.1	22.6	37.1
Cv – Value	gal /min	1.9	5.0	7.8	13.4	14.1	26.3	43.2

Dimensions in mm.

# VALVES FOR CRYOGENIC SERVICE

Type 03343 – Actuated Globe Valve

Valves – Cryogenic

Section

**21A**



## Cryogenic-Globe Valves with Pneumatic Actuator, PN50

Stainless steel body and topwork

Actuator - air opens, spring closes or contrary

“live loaded” gland packing

“cleaned and degreased for oxygen service” - the actuator is not cleaned and degreased for oxygen

### Part No. 03343.X.0012

Flanged connection acc. to DIN EN 1092-1 PN40

### Part No. 03343.X.0013

Flanged connection acc. to ANSI B16.5 class 300

### Available accessories:

- Solenoid valve
- Limit switch
- Electropneumatic positioner etc.

### Available options - on request only:

- Actuator - “cleaned and degreased for oxygen service”
- Electric actuator
- Bellow sealed option
- Valve with control disc (tapered design)

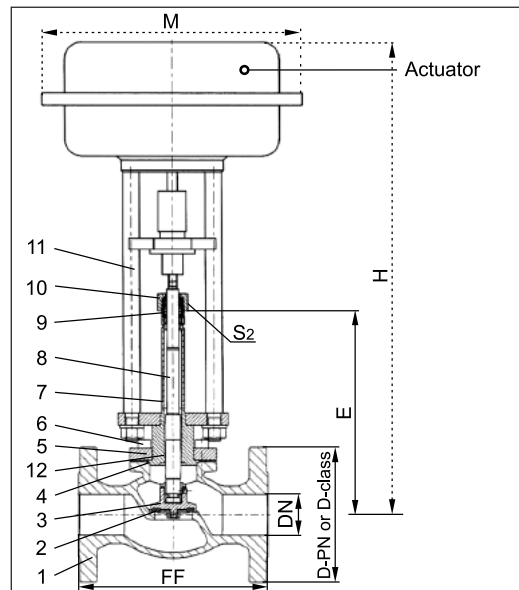
### Applications:

Approved for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluoromethan, carbon oxide, methane, ethane and ethylene.

Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)



Materials	DIN EN	ASTM
1 Body	1.4308	A 351 CF8
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	1.4301	A 276 Grade 304
4 Bonnet gasket	PTFE	
5 Headpiece	1.4301	A 276 Grade 304
6 Bolts	1.4301/A2	A 194 B8
7 Elongation tube	1.4541	A 213 TP 321
8 Stem	1.4301	A 276 Grade 304
9 Gland packing	Graphite / PTFE	
10 Gland nut	1.4305	A 276 Grade 303
11 Pillars	1.4301	A 276 Grade 304
12 Bush	CW452K	B 103 UNS C51900



Standard marking acc. to Pressure Equipment Directive 97/23/EG (PED).



Marking acc. to Directive 99/36/EG (TPED) will only be carried out by written notice on purchase order.



Type 03343 – Standard design	Technical data						
Nominal size	DN	25	40	50	65	80	100
Dimension code - Flange EN 1092-1 PN40	.X.	0250	0400	0500	0650	0800	1000
Flange-Ø	D-PN	115	150	165	185	200	235
Dimension code - Flange ANSI B16.5 class 300	.X.	1000	1400	2000	2400	3000	4000
Flange-Ø	D-class	123.9	155.4	165	190.5	209.5	254
Face-to-face dimension	FF	160	200	230	290	310	350
Height	H	dependent on actuator					
Length	E	200	230	235	300	300	300
Actuator-Ø	M	dependent on actuator					
Wrench size across flats	S <sub>2</sub>	30	36	36	36	36	41
Weight w/o actuator	ca. kg	5.4	11.2	15.3	23.6	31.0	46.8
Kvs – Value	m <sup>3</sup> /h	11.5	22.6	37.1	71.1	104.0	t.b.c.
Cv – Value	gal /min	13.4	26.3	43.2	82.7	120.9	t.b.c.

Dimensions in mm.



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