





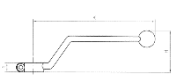




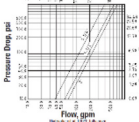



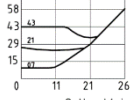


Valves, Ball and Check Reference Guide

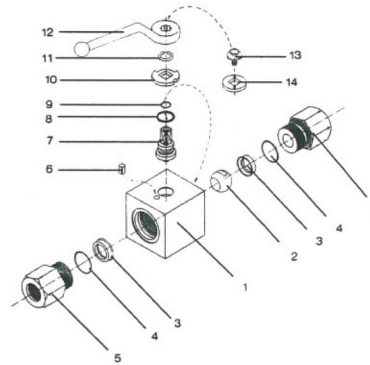
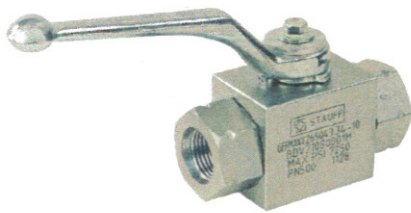
					
<p>Female NPT, SAE, BSP and ORFS Block Body BBV-2 Pages M1, M2, M3</p>	<p>Female NPT, SAE, BPS and ORFS Forged Body FBV-2 Pages M4, M5, M6</p>	<p>Split Flange SAE Code 61 (3000 PSI) Code 62 (6000 PSI) Block Body BBV-2-F Pages M7, M8</p>	<p>Split Flange SAE Code 61 (3000 PSI) Code 62 (6000 PSI) Forged Body BBV-2-F Pages M9, M10</p>	<p>Dual Pattern SAE Code 61 (3000 PSI) Code 62 (6000 PSI) BV-2-C36 Pages M11, M12</p>	<p>Flat Face ISO 6164 250/400/350 bar BV-2-ISO Pages M13, M14</p>
					
<p>Ball Valve Levers/Handles SW Page M15</p>	<p>Ball Valve Locking Devices LD Pages M16, M17, M18</p>	<p>Ball Valve Actuators and Limit Switches Page M19</p>	<p>Female NPT and SAE Low Pressure Ball Valve 2BVL Page M20</p>	<p>Check Valve Inline Female Thread 6C/3C Page M21</p>	<p>Check Valve Pressure Drop Charts Page M22</p>
					
<p>Check Valve Body Only, Retain Ring Style CV Page M23</p>	<p>Check Valve Assembly, Retain Ring Flange Style A/CV Page M24</p>	<p>Check Valve Retain Ring Style Performance Curves PSI - gal/min Page M25</p>	<p>Check Valve Retain Ring Style Performance Curves PSI - litre/min Page M26</p>		

Notes:

Please consult factory for the following:

1. Stainless Steel Ball Valves and Check Valves are available.
2. Other Styles and Sizes of Ball Valves are available such as 3-way, Multi-way and Manifold Mount.
3. Other Pneumatic or Electric Actuators, Limit Switches and Proximity Switches are available.

High-Pressure Block Body Ball Valve - Type BBV-2



List of Components

No.	Qty.	Description
1	1	Housing
2	1	Ball
3*	2	Seal
4*	2	Connector O-Ring
5	2	Connector
6	1	Stop Pin
7	1	Stem
8*	1	Thrust Ring
9*	1	Stem O-Ring
10	1	Cam Plate
11	1	Snap Ring
12	1	Lever
13	1	Stem Screw
14	1	Flow Indicator

Characteristics

Two-way high-pressure block body ball valves designed for use as on/off devices for hydraulic applications

Standard Construction

- Block body design for in-line assembly
- Supplied with off-set lever

Standard Materials

- Body: Carbon Steel, zinc/iron plated
- Ball: Carbon Steel, hard chrome-plated
- Stem: Carbon Steel
- Lever: Zinc (Sizes 02 to 08)
Aluminium (Size 10)
Carbon Steel (Sizes 12 to 24R)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

Standard Connections Styles / Sizes

- Female BSP thread (DIN ISO 2208)>G 1-1/2 BSP
- Female NPT thread (ANSI B1.20.1)>1-1/2-11-1/2 NPT
- Female UN/UNF thread (SAE J 514)>1-7/8-12 UN (1-1/2" SAE)
- Male ORFS Connection (ISO 8434-3)>1-11/16-12UN

Pressure Range

- Pressure range: up to 500 bar / 7250 PSI (depending on size and material combination of the ball valve)

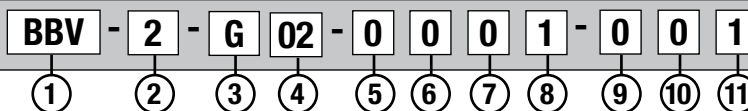
Temperature Range

- Operating temperature range: -20°C...+100°C / -4°F... +212°F

Options / Accessories

- Alternative lever designs / materials
- Locking devices
- Actuator packages
- Limit switches
- Stainless Steel body
- Stainless Steel ball and stem
- Special ball seat and O-ring materials available for lower/higher temperatures and more aggressive media
- Seal kits (including items marked by * in the above list)

Order Codes



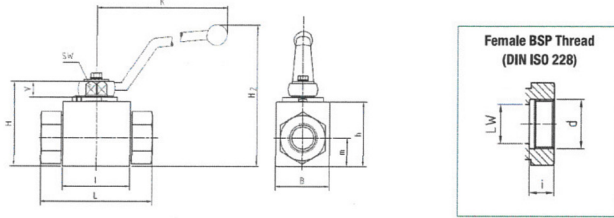
① Type High-Pressure Block Body Ball Valve BBV	⑥ Ball / Stem Material Ball: Carbon Steel, hard chrome-plated 0 Stem: Carbon Steel Ball / Stem: Stainless Steel V4A (AISI 316Ti) 1 Ball: Brass, hard chrome-plated 2 Stem: Carbon Steel Alternative materials / surface finishings are available upon request.	⑨ Manufacturing Code Manufacturing code for all connection Style M Manufacturing code for high-pressure version of connection styles G, N and U. H
② Number of Ports Two Ports (Two-Way Ball Valve) 2	⑦ Ball Seat Material Delrin® 0 Alternative materials are available upon request.	⑩ Lever Options Supplied with standard lever (according to table) - Supplied without lever 0 Alternative levers can be ordered separately.
③ Connection Style Female BSP Thread (DIN ISO 22B) G Female NPT Thread (ANSI B1.20.1) N Female UN/UNF Thread (SAE J 514) U Male ORFS Connection (ISO 8434-3) ORFS	⑧ O-Ring Material NBR (Buna-N®) 0 FKM (Viton®) 1 EPDM 3 Alternative materials are available upon request.	⑪ Accessories / Options Supplied without accessories - Supplied with Locking Device LD1 LD1 Supplied with Locking Device LD2 LD2 Supplied with Locking Device LD3 LD3 Supplied with Locking Device LD4 LD4
④ Connection Size Size (according to dimension table) for connection styles G, N, U and ORFS: 02 04 06 08 10 12 16 20R 24R Tube Size (according to dimension table)		
⑤ Body Material / Surface Finishing Carbon Steel, zinc/iron plated 0 Carbon Steel, zinc/nickel plated 8 Stainless Steel V4A (AISI 316Ti) 1 Alternative materials / surface finishings are available upon request.		

3D step models available upon request

3D step models available upon request

High-Pressure Block Body Ball Valve - Type BBV-2

Female BSP Thread (DIN ISO 228)



When ordering the standard option as indicated in the table below, the following materials will be supplied:

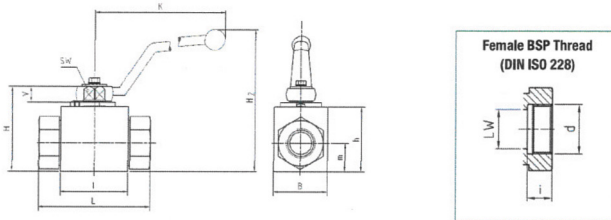
- Body, ball and stem: Carbon Steel
- Lever: Zinc (Sizes 02 to 08)
Aluminium (Size 10)
Carbon Steel (Sizes 12 to 24R)
- Ball Seat: Delrin® (POM)
- O-rings: FKM (Viton®)

Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)											Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)	
			LW	L	I	B	H	h	m	V	SW	K	I				H2
02	G 1/8 BSP	4	5	69	40	26	47	33	13,5	11	9	115	10	82	500	0,41	BBV-2-G02-8001-M
			.20	2.70	1.57	1.02	1.84	1.29	5.3	.43	.35	4.50	.39	3.23	7250	.90	
04	G 1/4 BSP	6	6	69	40	26	47	33	13,5	11	9	115	14	82	500	0,40	BBV-2-G04-8001-M
			.23	2.70	1.57	1.02	1.84	1.29	5.3	.43	.35	4.50	.55	3.23	7250	.88	
06	G 3/8 BSP	10	10	72	43	32	52	38	17,5	11	9	115	14	87	500	0,54	BBV-2-G06-8001-M
			.39	2.82	1.68	1.25	2.04	1.49	.69	.43	.35	4.50	.55	3.43	7250	1.19	
08	G 1/2 BSP	13	13	83	48	35	54	40	19	11	9	115	16,3	89	500	0,65	BBV-2-G08-8001-M
			.51	3.25	1.88	1.37	2.11	1.57	.74	.43	.35	4.50	.64	3.50	7250	1.43	
10	G 5/8 BSP	16	15	83	48	38	63	46	19	13	12	160	16	106	420	0,70	BBV-2-G10-8001-M
			.59	3.25	1.88	1.49	2.47	1.80	.74	.51	.47	6.26	.63	4.17	6000	1.54	
12	G 3/4 BSP	20	20	95	62	49	75	57	24,5	14	14	170	18	126	420	1,50	BBV-2-G12-8001-M
			.78	3.72	2.43	1.92	2.94	2.23	.96	.55	.55	6.69	.70	4.96	6000	3.31	
16	G 1 BSP	25	25	113	66	58	83	65	29,5	14	14	170	20	134	350	2,20	BBV-2-G16-8001-M
			.98	4.42	2.58	2.27	3.25	2.55	1.16	.55	.55	6.69	.78	5.28	5076	4.85	
16	G 1 BSP	25	25	113	74	70	88	70	34,5	14	14	170	20	139	500	3,10	BBV-2-G16-8001-H
			.98	4.42	2.91	2.76	3.46	2.76	1.36	.55	.55	6.69	.78	5.47	7250	6.83	
20R	G 1-1/4 BSP	25/32	25	120	66	58	83	65	29,5	14	14	170	22	134	315	2,30	BBV-2-G20R-8001-M
			.98	4.70	2.58	2.27	3.25	2.55	1.16	.55	.55	6.69	.86	5.28	4500	5.07	
24R	G 1-1/2 BSP	25/40	25	130	66	58	83	65	29,5	14	14	170	24	134	250	2,60	BBV-2-G24R-8001-M
			.98	5.09	2.58	2.27	3.25	2.55	1.16	.55	.55	6.69	.94	5.28	3600	5.73	

Please note the pressure ratings of the tube connections.

High-Pressure Block Body Ball Valve - Type BBV-2

Female NPT Thread (ANSI B1.20.1)



When ordering the standard option as indicated in the table below, the following materials will be supplied:

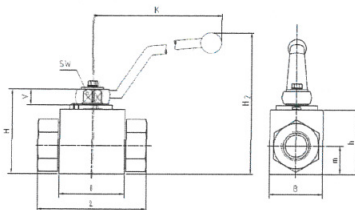
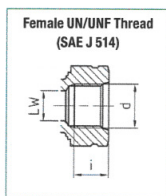
- Body, ball and stem: Carbon Steel
- Lever: Zinc (Sizes 02 to 08)
Carbon Steel (Sizes 12 to 24R)
- Ball Seat: Delrin® (POM)
- O-rings: FKM (Viton®)

Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)											Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)	
			LW	L	I	B	H	h	m	V	SW	K	I				H2
02	1/8-27 NPT	4	5	69	40	26	47	33	13,5	11	9	115	10,5	82	500	0,33	BBV-2-N02-8001-M
			.20	2.70	1.57	1.02	1.84	1.29	5.3	.43	.35	4.50	.41	3.23	7250	.66	
04	1/4-18 NPT	6	6	69	40	26	47	33	13,5	11	9	115	13,7	82	500	0,40	BBV-2-N04-8001-M
			.23	2.70	1.57	1.02	1.84	1.29	5.3	.43	.35	4.50	.54	3.23	7250	.88	
06	3/8-18 NPT	10	10	72	43	32	52	38	17,5	11	9	115	13,5	87	500	0,50	BBV-2-N06-8001-M
			.39	2.82	1.68	1.25	2.04	1.49	.69	.43	.35	4.50	.53	3.43	7250	1.10	
08	1/2-14 NPT	13	13	83	48	35	54	40	19	11	9	115	17	89	500	0,75	BBV-2-N08-8001-M
			.51	3.25	1.88	1.37	2.11	1.57	.74	.43	.35	4.50	.67	3.50	7250	1.65	
12	3/4-14 NPT	20	20	95	62	49	75	57	24,5	14	14	170	18,3	126	420	1,63	BBV-2-N12-8001-M
			.78	3.72	2.43	1.92	2.94	2.23	.96	.55	.55	6.69	.72	4.96	6000	3.57	
16	1-11-1/2 NPT	25	25	113	66	58	83	65	29,5	14	14	170	21,6	134	350	2,30	BBV-2-N16-8001-M
			.98	4.42	2.58	2.27	3.25	2.55	1.16	.55	.55	6.69	.85	5.28	5076	5.06	
16	1-11-1/2 NPT	25	25	113	74	70	88	70	34,5	14	14	170	20	139	500	3,16	BBV-2-N16-8001-H
			.98	4.42	2.91	2.76	3.46	2.76	1.36	.55	.55	6.69	.78	5.47	7250	6.97	
20R	1-1/4-11-1/2 NPT	25/32	25	120	66	58	83	65	29,5	14	14	170	22,1	134	315	2,51	BBV-2-N20R-8001-M
			.98	4.70	2.58	2.27	3.25	2.55	1.16	.55	.55	6.69	.87	5.28	4500	5.52	
24R	1-1/2-11-1/2 NPT	25/40	25	130	66	58	83	65	29,5	14	14	170	22,1	134	250	2,70	BBV-2-N24R-8001-M
			.98	5.09	2.58	2.27	3.25	2.55	1.16	.55	.55	6.69	.87	5.28	3600	5.94	

3D step models available upon request

High-Pressure Block Body Ball Valve - Type BBV-2

Female UN/UNF Thread (SAE J 514)



When ordering the standard option as indicated in the table below, the following materials will be supplied:

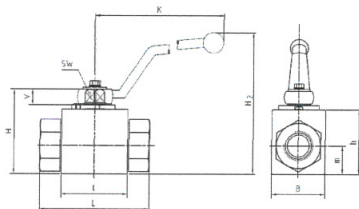
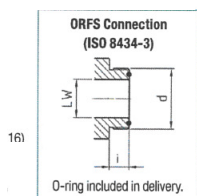
- Body, ball and stem: Carbon Steel
- Lever: Zinc (Sizes 04 to 08)
Carbon Steel (Sizes 12 to 24R)
- Ball Seat: Delrin® (POM)
- O-rings: FKM (Viton®)

Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)												Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)
			LW	L	I	B	H	h	m	V	SW	K	I	H2			
04	7/16-20 UNF (1/4" SAE)	6	6	69	40	26	47	33	13,5	11	9	115	14	82	500	0,40	BBV-2-U04-8001-M
			.23	2.70	1.57	1.02	1.84	1.29	5.3	.43	.35	4.50	.55	3.23	7250	.88	
06	9/16-18 UNF (3/8" SAE)	10	10	72	43	32	52	38	17,5	11	9	115	14	87	500	0,50	BBV-2-U06-8001-M
			.39	2.82	1.68	1.25	2.04	1.49	.69	.43	.35	4.50	.55	3.43	7250	1.10	
08	3/4-16 UNF (1/2" SAE)	13	13	83	48	35	54	40	19	11	9	115	16,3	89	500	0,70	BBV-2-U08-8001-M
			.51	3.25	1.88	1.37	2.11	1.57	.74	.43	.35	4.50	.64	3.50	7250	1.54	
12	1-1/16-12 UN (3/4" SAE)	20	20	95	62	49	75	57	24,5	14	14	170	18	126	420	1,50	BBV-2-U12-8001-M
			.78	3.72	2.43	1.92	2.94	2.23	.96	.55	.55	6.69	.70	4.96	6000	3.31	
16	1-5/16-12 UN (1" SAE)	25	25	113	66	58	83	65	29,5	14	14	170	20	134	350	2,20	BBV-2-U16-8001-M
			.98	4.42	2.58	2.27	3.25	2.55	1.16	.55	.55	6.69	.78	5.28	5076	4.85	
16	1-5/16-12 UN (1" SAE)	25	25	113	74	70	88	70	34,5	14	14	170	20	139	500	2,20	BBV-2-U16-8001-H
			.98	4.42	2.91	2.76	3.46	2.76	1.36	.55	.55	6.69	.78	5.47	7250	4.85	
20R	1-5/8-12 UN (1-1/4" SAE)	25/32	25	120	66	58	83	65	29,5	14	14	170	22	134	315	2,50	BBV-2-U20R-8001-M
			.98	4.70	2.60	2.28	3.27	2.56	1.16	.55	.55	6.69	.86	5.28	4500	5.50	
24R	1-7/8-12 UN (1-1/2" SAE)	25/40	25	130	66	58	83	65	29,5	14	14	170	24	134	315	2,61	BBV-2-U24R-8001-M
			.98	5.09	2.60	2.28	3.27	2.56	1.16	.55	.55	6.69	.94	5.28	4500	5.74	

Please note the pressure ratings of the tube connections.

High-Pressure Block Body Ball Valve - Type BBV-2

O-Ring Face Seal Connection - Male Thread (ISO 8434-3)



When ordering the standard option as indicated in the table below, the following materials will be supplied:

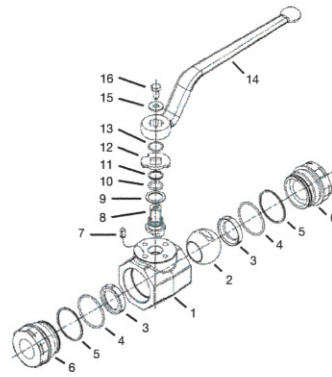
- Body, ball and stem: Carbon Steel
- Lever: Zinc (Sizes 04 to 08)
Aluminium (Size 10)
Carbon Steel (Sizes 12 and 16)
- Ball Seat: Delrin® (POM)
- O-rings: FKM (Viton®)

Size	Thread Size d	Dimensions (mm/in)												Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)	
		LW	L	I	B	H	h	m	V	SW	K	I	H2				O-ring
04	9/16-18 UNF	4,5	73	40	26	47	33	13,5	11	9	115	10	82	7,65x1,78	500	0,37	BBV-2-ORFS04-8001-M
		.18	2.87	1.57	1.02	1.84	1.29	5.3	.43	.35	4.50	.39	3.23	7250	.81		
06	11/16-16 UN	6,5	73	40	26	47	33	13,5	11	9	115	11	82	9,25x1,78	500	0,38	BBV-2-ORFS06-8001-M
		.26	2.87	1.57	1.02	1.84	1.29	5.3	.43	.35	4.50	.43	3.23	7250	.83		
08	13/1-16 UN	9,5	78	43	32	52	38	17,5	11	9	115	13	87	12,42x1,78	500	0,50	BBV-2-ORFS08-8001-M
		.37	3.07	1.68	1.25	2.04	1.49	.69	.43	.35	4.50	.51	3.43	7250	1.10		
10	1-14 UNS	12,5	90	48	35	54	40	19	14	9	115	15,5	89	15,60x1,78	420	0,61	BBV-2-ORFS10-8001-M
		.49	3.54	1.88	1.37	2.11	1.57	.74	.55	.35	4.50	.61	3.50	6000	1.34		
12	1-3/16-12 UN	15,5	98	48	35	63	40	19	14	12	160	17	106	18,77x1,78	420	0,80	BBV-2-ORFS12-8001-M
		.61	3.86	1.88	1.37	2.47	1.57	.74	.55	.47	6.26	.67	4.17	6000	1.76		
16	1-7/16-12 UN	20,5	111	62	49	88	57	24,5	14	14	170	17,5	126	23,52x1,78	315	1,55	BBV-2-ORFS16-8001-M
		.81	4.37	2.43	1.92	3.46	2.23	.96	.55	.55	6.69	.69	4.96	4500	3.41		
20	1-11/16-12 UN	26	120	66	58	83	65	29,5	14	14	170	17,5	134	29,87x1,78	315	2,10	BBV-2-ORFS20-8001-M
		1,02	4.72	2.58	2.27	3.27	2.55	1.16	.55	.55	6.69	.69	5.28	4500	4.63		

Please note the pressure ratings of the tube connections.

3D step models available upon request

High-Pressure Forged Body Ball Valve - Type FBV-2



List of Components

No .	Qty.	Description
1	1	Body
2	1	Ball
3*	2	Seal
4*	2	Connector O-Ring
5	2	Connector Back-Up Ring
6	2	Connector
7	1	Stop Pin
8*	1	Stem
9*	1	Thrust Ring
10	1	Stem O-Ring
11	1	Stem Back-Up Ring
12	1	Cam Plate
13	1	Snap Ring
14	1	Handle
15	1	Washer
16	1	Stem Bolt

Characteristics

Two-Way high-pressure forged body ball valves designed for use as on/off devices for hydraulic applications

Standard Construction

- Forged body design for in-line assembly
- Supplied with off-set lever

Standard Materials

- Body: Carbon Steel, zinc/iron plated
- Ball: Carbon Steel, hard chrome-plated
- Stem: Carbon Steel
- Lever: Carbon Steel
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

Standard Connections Styles / Sizes

- Female BSP thread (DIN ISO 228)>G 2 BSP
- Female NPT thread (ANSI B1.20.1)>2-11-1/2 NPT
- Female UN/UNF thread (SAE J 514)>2-1/2-12 UN (1-1/2" SAE)
- Male ORFS Connection (ISO 8434-3)>2-12UN
- 24° Cone Connection (DIN 2353 / ISO 8434-1)>42L
- 24° Cone Connection (DIN 2353 / ISO 8434-1)>38S

Pressure Range

- Pressure range: up to 420 bar / 6000 PSI (depending on size and material combination of the ball valve)

Temperature Range

- Operating temperature range: -20°C...+100°C / -4°F... +212°F

Options / Accessories

- Alternative lever designs / materials
- Locking devices
- Actuator packages
- Limit switches
- Additional assembling threads/holes
- Stainless Steel body
- Stainless Steel ball and stem
- Special ball seat and O-ring materials available for lower/higher temperatures and more aggressive media
- Seal kits (including items marked by * in the above list)

Order Codes



① Type

High-Pressure Forged Body Ball Valve **FBV**

② Number of Ports

Two Ports (Two-Way Ball Valve) **2**

③ Connection Style

Female BSP Thread (DIN ISO 22B) **G**
 Female NPT Thread (ANSI B1.20.1) **N**
 Female UN/UNF Thread (SAE J 514) **U**
 Male ORFS Connection (ISO 8434-3) **ORFS**

④ Connection Size

Size (according to dimension table) for connection styles G, N, U and B:
20 24 32
 Tube Size (according to dimension table) for 24° Cone Connection (Light Series): **35L**
 Tube Size (according to dimension table) for 24° Cone Connection (Light Series): **42L**
 Tube Size (according to dimension table) for 24° Cone Connection (Heavy Series): **38S**

⑤ Body Material / Surface Finishing

Carbon Steel, zinc/iron plated **0**
 Stainless Steel V4A (AISI 316Ti) **1**
 Alternative materials / surface finishings are available upon request.

⑥ Ball / Stem Material

Ball: Carbon Steel, hard chrome-plated **0**
 Stem: Carbon Steel
 Ball / Stem: Stainless Steel V4A (AISI 316Ti) **1**
 Ball: Brass, hard chrome-plated **2**
 Stem: Carbon Steel
 Alternative materials / surface finishings are available upon request.

⑦ Ball Seat Material

Delrin® **0**
 Alternative materials are available upon request.

⑧ O-Ring Material

NBR (Buna-N®) **0**
 FKM (Viton®) **1**
 Alternative materials are available upon request.

⑨ Manufacturing Code

Manufacturing code for all connection Style **M**

⑩ Lever Options

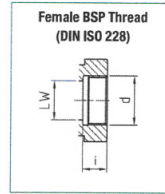
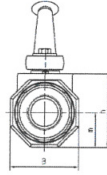
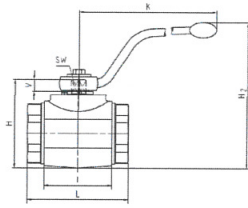
Supplied with standard lever (according to table) **-**
 Supplied without lever **0**
 Alternative levers can be ordered separately. Please see page 114 for further information.

⑪ Accessories / Options

Supplied without accessories **-**
 Supplied with Locking Device LD1 **LD1**
 Supplied with Locking Device LD2 **LD2**
 Supplied with Locking Device LD3 **LD3**
 Supplied with Locking Device LD4 **LD4**
 Supplied with Locking Device LD6 (US version) **LD6**

3D step models available upon request

High-Pressure Forged Body Ball Valve - Type FBV-2 Female BSP Thread (DIN ISO 228)



When ordering the standard option as indicated in the table below, the following materials will be supplied:

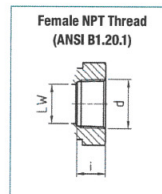
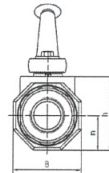
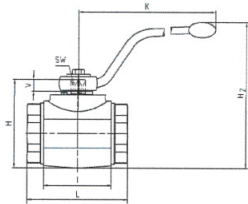
- Body, ball and stem: Carbon Steel
- Lever: Carbon Steel
- Ball Seat: Delrin® (POM)
- O-rings: FKM (Viton®)

Dimensions of stainless steel ball valves may vary!

Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)											Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)	
			LW	L	I	B	H	h	m	V	SW	K	I				H2
20	G 1-1/4 BSP	32	32	111	80	81	107	86	40,5	16,5	17	306	22	171	420	3,47	FBV-2-G20-0001-M
			1.26	4.37	3.15	3.19	4.21	3.39	1.59	.65	.67	12.05	.87	6.73	6000	7.63	
24	G 1-1/2 BSP	40	38	130	85	100	124	103	50	16,5	17	306	24	188	420	5,67	FBV-2-G24-0001-M
			1.50	5.12	3.35	3.94	4.88	4.06	1.97	.65	.67	12.05	.94	7.40	6000	12.47	
32	G 2 BSP	50	48	140	100	118	138	117	59	16,5	17	306	26	202	420	8,14	FBV-2-G32-0001-M
			1.89	5.51	3.94	4.65	2.43	4.61	2.32	.65	.67	12.05	1.02	7.96	6000	17.91	

Please note the pressure ratings of the tube connections.

High-Pressure Forged Body Ball Valve - Type FBV-2 Female NPT Thread (ANSI B1.20.1)



When ordering the standard option as indicated in the table below, the following materials will be supplied:

- Body, ball and stem: Carbon Steel
- Lever: Carbon Steel
- Ball Seat: Delrin® (POM)
- O-rings: FKM (Viton®)

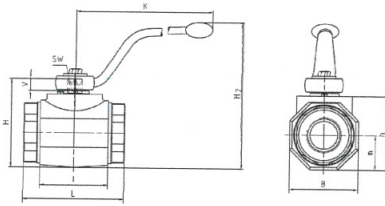
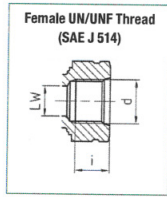
Dimensions of stainless steel ball valves may vary!

Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)											Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)	
			LW	L	I	B	H	h	m	V	SW	K	I				H2
20	G 1-1/4 BSP	32	32	111	80	81	107	86	40,5	16,5	17	306	22	171	420	3,47	FBV-2-N20-0001-M
			1.26	4.37	3.15	3.19	4.21	3.39	1.59	.65	.67	12.05	.87	6.73	6000	7.63	
24	G 1-1/2 BSP	40	38	130	85	100	124	103	50	16,5	17	306	24	188	420	5,67	FBV-2-N24-0001-M
			1.50	5.12	3.35	3.94	4.88	4.06	1.97	.65	.67	12.05	.94	7.40	6000	12.47	
32	G 2 BSP	50	48	140	100	118	138	117	59	16,5	17	306	26	202	420	8,14	FBV-2-N32-0001-M
			1.89	5.51	3.94	4.65	2.43	4.61	2.32	.65	.67	12.05	1.02	7.96	6000	17.91	

Please note the pressure ratings of the tube connections.

High-Pressure Forged Body Ball Valve - Type FBV-2

Female UN/UNF Thread (SAE J 514)



When ordering the standard option as indicated in the table below, the following materials will be supplied:

- Body, ball and stem: Carbon Steel
- Lever: Carbon Steel
- Ball Seat: Delrin® (POM)
- O-rings: FKM (Viton®)

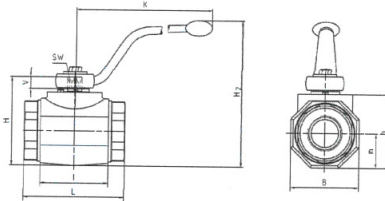
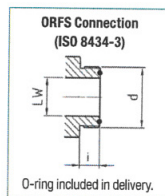
Dimensions of stainless steel ball valves may vary!

Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)												Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)
			LW	L	I	B	H	h	m	V	SW	K	I	H2			
20	1-5/8-12 UN (1-1/4" SAE)	32	30	111	80	81	107	86	40,5	16,5	17	306	20	171	420	3,52	FBV-2-U20-0001-M
			1.18	4.37	3.15	3.19	4.21	3.39	1.59	.65	.67	12.05	.79	6.73	6000	7.75	
24	1-7/8-12 UN (1-1/2" SAE)	40	38	130	85	100	124	103	50	16,5	17	306	20	188	420	5,69	FBV-2-U24-0001-M
			1.50	5.12	3.35	3.94	4.88	4.06	1.97	.65	.67	12.05	.79	7.40	6000	12.52	
32	2-1/2-12 UN (2" SAE)	50	45	140	100	118	138	117	59	16,5	17	306	20	202	420	8,14	FBV-2-U32-0001-M
			1.79	5.51	3.94	4.65	2.43	4.61	2.32	.65	.67	12.05	.79	7.96	6000	17.91	

Please note the pressure ratings of the tube connections.

High-Pressure Forged Body Ball Valve - Type FBV-2

O-Ring Face Seal Connection - Male Thread (ISO 8434-3)



When ordering the standard option as indicated in the table below, the following materials will be supplied:

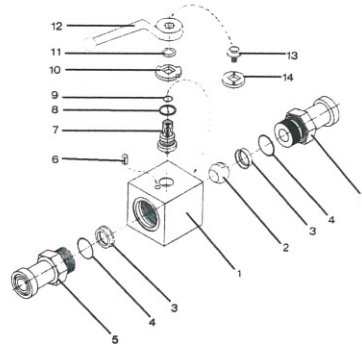
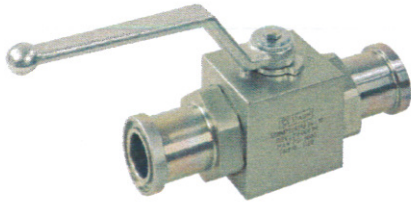
- Body, ball and stem: Carbon Steel
- Lever: Carbon Steel
- Ball Seat: Delrin® (POM)
- O-rings: FKM (Viton®)

Dimensions of stainless steel ball valves may vary!

Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)													Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)
			LW	L	I	B	H	h	m	V	SW	K	I	H2	O-ring			
20	2-12 UN	32	32	139	80	81	107	86	40,5	16,5	17	306	17,5	171	37,82x1,78	320	3,52	FBV-2-ORFS20-0001-M
			1.26	5.47	3.15	3.19	4.21	3.39	1.59	.65	.67	12.05	.69	6.73		4600	7.75	

Please note the pressure ratings of the tube connections.

High-Pressure Block Body Ball Valve - Type BBV-2-F



List of Components

No.	Qty.	Description
1	1	Housing
2	1	Ball
3*	2	Seal
4*	2	Connector O-Ring
5	2	Connector
6	1	Stop Pin
7	1	Stem
8*	1	Thrust Ring
9*	1	Stem O-Ring
10	1	Cam Plate
11	1	Snap Ring
12	1	Handle
13	1	Stem Screw
14	1	Flow Indicator

Characteristics

Two-way high-pressure block body ball valves designed for use as on/off devices for hydraulic applications

Standard Construction

- Block body design for in-line assembly
- Supplied with lever

Standard Materials

- Body: Carbon Steel, zinc/iron plated
- Ball: Carbon Steel, hard chrome-plated
- Stem: Carbon Steel
- Lever: Zinc (STAUFF Size 8)
Steel (STAUFF Size 12-16)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

Standard Connections Styles / Sizes

- 3000 PSI (code 61) SAE split flange connectors
- 6000 PSI (code 62) SAE split flange connectors

Standard and extended adapter lengths

Pressure Range

- Pressure range: up to 420 bar / 6000 PSI (depending on size and material combination of the ball valve)

Please note: The final maximum working pressure is determined by the flange and pipe/tubing rating.

Temperature Range

- Operating temperature range: -20°C...+100°C / -4°F... +212°F

Options / Accessories

- Flanges and flange kits
- Alternative lever designs / materials
- Locking devices
- Actuator packages
- Limit switches
- Additional assembling threads
- Stainless Steel body
- Stainless Steel ball and stem
- Special ball seat and O-ring materials available for lower/higher temperatures and more aggressive media
- Seal kits (including items marked by * in the above list)

Order Codes

BBV - 2 - F3 16 - 0 0 0 1 - M - -

① Type

High-Pressure Block Body Ball Valve **BBV**

② Number of Ports

Two Ports (Two-Way Ball Valve) **2**

③ Connection Style

3000 PSI (Code 61) SAE Split Flange Connectors (Standard Adapter Length) **F3**

3000 PSI (Code 61) SAE Split Flange Connectors (Extended Adapter Length) **F3X**

6000 PSI (Code 62) SAE Split Flange Connectors (Standard Adapter Length) **F6**

6000 PSI (Code 62) SAE Split Flange Connectors (Extended Adapter Length) **F6X**

④ Connection Size

Size (according to dimension table)

08	12	16
-----------	-----------	-----------

⑤ Body Material / Surface Finishing

Carbon Steel, zinc/iron plated **0**

Stainless Steel V4A (AISI 316Ti) **1**

Alternative materials are available upon request.

⑥ Ball / Stem Material

Ball: Carbon Steel, hard chrome-plated **0**
Stem: Carbon Steel

Ball / Stem: Stainless Steel V4A (AISI 316Ti) **1**

Alternative materials / surface finishings are available upon request.

⑦ Ball Seat Material

Delrin® **0**

Alternative materials are available upon request.

⑧ O-Ring Material

NBR (Buna-N®) **0**

FKM (Viton®) **1**

Alternative materials are available upon request.

⑨ Manufacturing Code

Manufacturing code for all connection Style **M**

Manufacturing code for high-pressure version of connection styles G, N and U. **H**

⑩ Lever Options

Supplied with standard lever (according to table) **-**

Supplied without lever **0**

Alternative levers can be ordered separately.

⑪ Accessories / Options

Supplied without accessories **-**

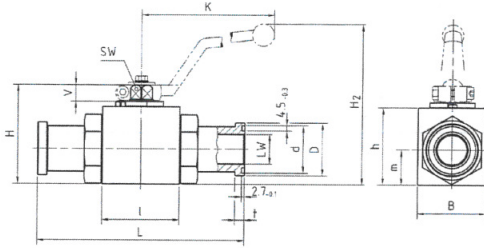
Supplied with Locking Device LD1 **LD1**

Supplied with Locking Device LD2 **LD2**

3D step models available upon request

High-Pressure Block Body Ball Valve - Type BBV-2-F3

3000 PSI SAE Split Flange Connection (ISO 6162-1)



When ordering the standard option as indicated in the table below, the following materials will be supplied:

- Body, ball and stem: Carbon Steel
- Lever: Zinc (Size 8)
Steel (Size 12-16)
- Ball Seat: Delrin® (POM)
- O-rings: FKM (Viton®)

3000 PSI Series (Code 61) - Standard Adaptor Length

Size	SAE Flange Size	Nom. Size DN	Dimensions (mm/in)													Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)	
			LW	L	I	B	H	h	m	V	SW	K	d'	D²	t³				H2
08	1/2	13	13	151	48	35	54	40	19	11	9	115	25,5	30,2	6,8	89	350	0,85	BBV-2-F308-0001-M
			.51	5.94	1.89	1.38	2.13	1.57	.75	.43	.35	4.53	1.00	1.19	.27	3.50	5000	1.87	
12	3/4	20	19	162	62	49	75	57	24,5	14	14	171	31,9	38,1	6,8	127	350	1,87	BBV-2-F312-0001-M
			.75	6.38	2.44	1.93	2.95	2.24	.96	.55	.55	6.73	1.26	1.50	.27	5	5000	4.11	
16	1	25	25	178	66	58	83	65	29,5	14	14	171	39,8	44,4	8,1	135	350	2,70	BBV-2-F316-0001-M
			.98	7.01	2.60	2.28	3.27	2.56	1.16	.55	.55	6.73	1.57	1.75	.32	5.31	5000	5.94	

3000 PSI Series (Code 61) - Extended Adaptor Length

Size	SAE Flange Size	Nom. Size DN	Dimensions (mm/in)													Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)	
			LW	L	I	B	H	h	m	V	SW	K	d'	D²	t³				H2
08	1/2	13	13	170	48	35	54	40	19	11	9	115	25,5	30,2	6,8	89	350	0,85	BBV-2-F3X08-0001-M
			.51	6.69	1.89	1.38	2.13	1.57	.75	.43	.35	4.53	1.00	1.19	.27	3.50	5000	1.87	
12	3/4	20	19	200	62	49	75	57	24,5	14	14	171	31,9	38,1	6,8	127	350	1,87	BBV-2-F3X12-0001-M
			.75	7.87	2.44	1.93	2.95	2.24	.96	.55	.55	6.73	1.26	1.50	.27	5	5000	4.11	
16	1	25	25	215	66	58	83	65	29,5	14	14	171	39,8	44,4	8,1	135	350	2,70	BBV-2-F3X16-0001-M
			.98	8.46	2.60	2.28	3.27	2.56	1.16	.55	.55	6.73	1.57	1.75	.32	5.31	5000	5.94	

Please note: the final maximum working pressure is determined by flange and pipe/tubing rating.

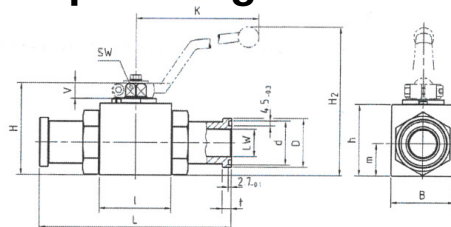
¹Dimension d: ±0,1mm/.004 in

²Dimension D: -0,2 mm/.008 in

³Dimension t: -0,2 mm/.008 in

High-Pressure Block Body Ball Valve - Type BBV-2-F6

6000 PSI SAE Split Flange Connection (ISO 6162-2)



When ordering the standard option as indicated in the table below, the following materials will be supplied:

- Body, ball and stem: Carbon Steel
- Lever: Zinc
- Ball Seat: Delrin® (POM)
- O-rings: FKM (Viton®)

6000 PSI Series (Code 62) - Standard Adaptor Length

Size	SAE Flange Size	Nom. Size DN	Dimensions (mm/in)													Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)	
			LW	L	I	B	H	h	m	V	SW	K	d'	D²	t³				H2
08	1/2	13	13	151	48	35	54	40	19	11	9	115	25,5	31,8	7,9	89	420	0,90	BBV-2-F608-0001-M
			.51	5.94	1.89	1.38	2.13	1.57	.75	.43	.35	4.53	1.00	1.25	.31	3.50	6000	1.98	
12	3/4	20	19	174	62	49	75	57	24,5	14	14	171	31,9	41,3	8,9	127	420	1,95	BBV-2-F612-0001-M
			.75	6.85	2.44	1.93	2.95	2.24	.96	.55	.55	6.73	1.26	1.63	.35	5	6000	4.29	
16	1	25	25	198	66	58	83	65	29,5	14	14	171	39,8	47,6	9,6	135	320	3,00	BBV-2-F616-0001-M
			.98	7.80	2.60	2.28	3.27	2.56	1.16	.55	.55	6.73	1.57	1.87	.38	5.31	4600	6.60	
16	1	25	25	206	74	70	88	70	34,5	14	14	171	39,8	47,6	9,6	140	420	3,00	BBV-2-F616-0001-M
			.98	8.11	2.91	2.76	3.46	2.76	1.36	.55	.55	6.73	1.70	1.87	.38	5.51	6000	6.60	

6000 PSI Series (Code 62) - Standard Adaptor Length

Size	SAE Flange Size	Nom. Size DN	Dimensions (mm/in)													Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)	
			LW	L	I	B	H	h	m	V	SW	K	d'	D²	t³				H2
08	1/2	13	13	180	48	35	54	40	19	11	9	115	25,5	31,8	7,9	89	420	1,00	BBV-2-F6X08-0001-M
			.51	7.09	1.89	1.38	2.13	1.57	.75	.43	.35	4.53	1.00	1.25	.31	3.50	6000	2.20	
12	3/4	20	19	200	62	49	75	57	24,5	14	14	171	31,9	41,3	8,9	127	420	2,10	BBV-2-F6X12-0001-M
			.75	7.87	2.44	1.93	2.95	2.24	.96	.55	.55	6.73	1.26	1.63	.35	5	6000	4.62	
16	1	25	25	250	66	58	83	65	29,5	14	14	171	39,8	47,6	9,6	135	320	3,15	BBV-2-F6X16-0001-M
			.98	9.84	2.60	2.28	3.27	2.56	1.16	.55	.55	6.73	1.57	1.87	.38	5.31	4600	6.93	
16	1	25	25	250	74	70	88	70	34,5	14	14	171	39,8	47,6	9,6	140	420	3,15	BBV-2-F6X16-0001-M
			.98	9.84	2.91	2.76	3.46	2.76	1.36	.55	.55	6.73	1.70	1.87	.38	5.51	6000	6.93	

Please note: the final maximum working pressure is determined by flange and pipe/tubing rating.

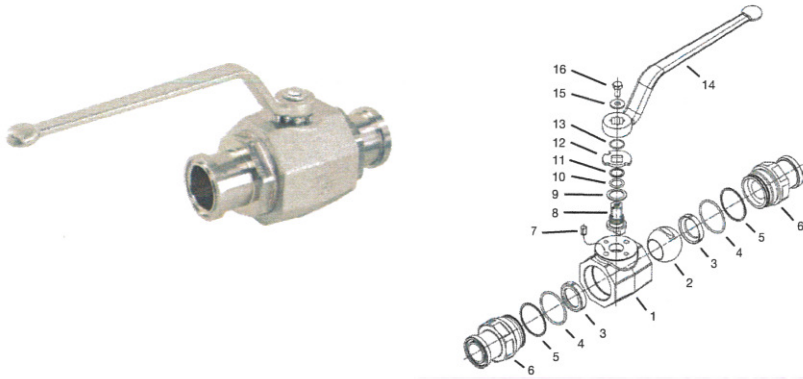
¹Dimension d: ±0,1mm/.004 in

²Dimension D: -0,2 mm/.008 in

³Dimension t: -0,2 mm/.008 in

3D step models available upon request

High-Pressure Forged Body Ball Valve - Type FBV-2-F



List of Components

No .	Qty.	Description
1	1	Body
2	1	Ball
3*	2	Seal
4*	2	Connector O-Ring
5*	2	Connector Back-Up Ring
6	2	Connector
7	1	Stop Pin
8	1	Stem
9*	1	Thrust Ring
10*	1	Stem O-Ring
11*	1	Stem Back-Up Ring
12	1	Cam Plate
13	1	Snap Ring
14	1	Handle
15	1	Washer
16	1	Stem Bolt

Characteristics

Two-Way high-pressure forged body ball valves designed for use as on/off devices for hydraulic applications

Standard Construction

- Forged body design for in-line assembly
- Supplied with off-set lever

Standard Materials

- Body: Carbon Steel, zinc/iron plated
- Ball: Carbon Steel, hard chrome-plated
- Stem: Carbon Steel
- Lever: Carbon Steel
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

Standard Connections Styles / Sizes

- 3000 PSI (code 61) SAE split flange connectors
- 6000 PSI (code 62) SAE split flange connectors
- Standard and extended adapter lengths

Pressure Range

- Pressure range: up to 420 bar / 6000 PSI (depending on size and material combination of the ball valve)

Please note: The final maximum working pressure is determined by the flange and pipe/tubing rating.

Temperature Range

- Operating temperature range: -20°C...+100°C / -4°F... +212°F

Options / Accessories

- Flanges and flange kits
- Alternative lever designs / materials
- Locking devices
- Actuator packages
- Limit switches
- Additional assembling threads
- Stainless Steel body
- Stainless Steel ball and stem
- Special ball seat and O-ring materials available for lower/higher temperatures and more aggressive media
- Seal kits (including items marked by * in the above list)

Order Codes

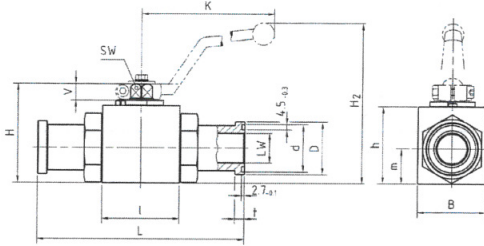
FBV - 2 - F3 20 - 0 0 0 1 - M - -

① Type High-Pressure Forged Body Ball Valve FBV	⑤ Body Material / Surface Finishing Carbon Steel, zinc/iron plated 0 Stainless Steel V4A (AISI 316Ti) 1 Alternative materials are available upon request.	⑨ Manufacturing Code Manufacturing code for all connection Style M
② Number of Ports Two Ports (Two-Way Ball Valve) 2	⑥ Ball / Stem Material Ball: Carbon Steel, hard chrome-plated 0 Stem: Carbon Steel Ball / Stem: Stainless Steel V4A (AISI 316Ti) 1 Alternative materials / surface finishings are available upon request.	⑩ Lever Options Supplied with standard lever (according to table) - Supplied without lever 0 Alternative levers can be ordered separately.
③ Connection Style 3000 PSI (Code 61) SAE Split Flange Connectors (Standard Adapter Length) F3 3000 PSI (Code 61) SAE Split Flange Connectors (Extended Adapter Length) F3X 6000 PSI (Code 62) SAE Split Flange Connectors (Standard Adapter Length) F6 6000 PSI (Code 62) SAE Split Flange Connectors (Extended Adapter Length) F6X	⑦ Ball Seat Material Delrin® 0 Alternative materials are available upon request.	⑪ Accessories / Options Supplied without accessories - Supplied with Locking Device LD1 LD1 Supplied with Locking Device LD2 LD2 Supplied with Locking Device LD6 (US version) LD6
④ Connection Size Size (according to dimension table) 20 24 32	⑧ O-Ring Material NBR (Buna-N®) 0 FKM (Viton®) 1 Alternative materials are available upon request.	

3D step models available upon request

High-Pressure Forged Body Ball Valve - Type FBV-2-F3

3000 PSI SAE Split Flange Connection (ISO 6162-1)



When ordering the standard option as indicated in the table below, the following materials will be supplied:

- Body, ball and stem: Carbon Steel
- Lever: Carbon Steel
- Ball Seat: Delrin® (POM)
- O-rings: FKM (Viton®)

Dimensions of stainless steel ball valves may vary!

3000 PSI Series (Code 61) - Standard Adaptor Length																		
Size	SAE Flange Size	Nom. Size DN	Dimensions (mm/in)													Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)
			LW	L	I	B	H	h	m	V	SW	K	d ¹	D ²	t ³			
20	1-1/4	32	30	191	80	81	107	86	40,5	16,5	17	306	44,6	50,8	8,1	280	4,22	FBV-2-F320-0001-M
			1.18	7.52	3.15	3.19	4.21	3.39	1.59	.65	.67	12.05	1.76	2.00	.32	4000	9.28	
24	1-1/2	40	38	231	85	100	124	103	50	16,5	17	306	54,1	60,3	8,1	210	6,54	FBV-2-F324-0001-M
			1.50	9.09	3.35	3.94	4.88	4.06	1.97	.65	.67	12.05	2.13	2.37	.32	5000	14.39	
32	2	50	48	232	100	118	138	117	59	16,5	17	306	63,6	71,4	9,6	210	9,29	FBV-2-F332-0001-M
			1.89	9.09	3.94	4.65	5.43	4.61	2.32	.65	.67	12.05	2.50	2.81	.38	5000	20.44	

3000 PSI Series (Code 61) - Extended Adaptor Length																		
Size	SAE Flange Size	Nom. Size DN	Dimensions (mm/in)													Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)
			LW	L	I	B	H	h	m	V	SW	K	d ¹	D ²	t ³			
20	1-1/4	32	30	275	80	81	107	86	40,5	16,5	17	306	44,6	50,8	8,1	280	5,15	FBV-2-F3X20-0001-M
			1.18	10.83	3.15	3.19	4.21	3.39	1.59	.65	.67	12.05	1.76	2.00	.32	4000	11.33	
24	1-1/2	40	38	320	85	100	124	103	50	16,5	17	306	54,1	60,3	8,1	210	7,20	FBV-2-F3X24-0001-M
			1.50	12.60	3.35	3.94	4.88	4.06	1.97	.65	.67	12.05	2.13	2.37	.32	5000	15.84	
32	2	50	48	323	100	118	138	117	59	16,5	17	306	63,6	71,4	9,6	210	11,50	FBV-2-F33X2-0001-M
			1.89	12.72	3.94	4.65	5.43	4.61	2.32	.65	.67	12.05	2.50	2.81	.38	5000	25.30	

Please note: the final maximum working pressure is determined by flange and pipe/tubing rating.

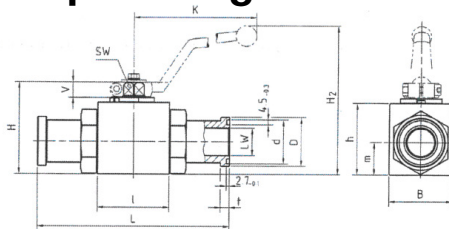
¹Dimension d: ±0,1mm/.004 in

²Dimension D: -0,2 mm/.008 in

³Dimension t: -0,2 mm/.008 in

High-Pressure Block Body Ball Valve - Type FBV-2-F6

6000 PSI SAE Split Flange Connection (ISO 6162-2)



When ordering the standard option as indicated in the table below, the following materials will be supplied:

- Body, ball and stem: Carbon Steel
- Lever: Zinc
- Ball Seat: Delrin® (POM)
- O-rings: FKM (Viton®)

Dimensions of stainless steel ball valves may vary!

6000 PSI Series (Code 62) - Standard Adaptor Length																		
Size	SAE Flange Size	Nom. Size DN	Dimensions (mm/in)													Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)
			LW	L	I	B	H	h	m	V	SW	K	d ¹	D ²	t ³			
20	1-1/4	32	30	223	80	81	107	86	40,5	16,5	17	306	44,6	54	10,4	420	4,72	FBV-2-F620-0001-M
			1.18	8.78	3.15	3.19	4.21	3.39	1.59	.65	.67	12.05	1.76	2.13	.41	6000	10.38	
24	1-1/2	40	38	281	85	100	124	103	50	16,5	17	306	54,1	63,5	12,7	420	7,49	FBV-2-F624-0001-M
			1.50	11.06	3.35	3.94	4.88	4.06	1.97	.65	.67	12.05	2.13	2.50	.50	6000	16.48	
32	2	50	48	316	100	118	138	117	59	16,5	17	306	63,6	79,4	12,7	420	11,39	FBV-2-F632-0001-M
			1.89	12.44	3.94	4.65	5.43	4.61	2.32	.65	.67	12.05	2.50	3.13	.50	6000	25.06	

6000 PSI Series (Code 62) - Standard Adaptor Length																		
Size	SAE Flange Size	Nom. Size DN	Dimensions (mm/in)													Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)
			LW	L	I	B	H	h	m	V	SW	K	d ¹	D ²	t ³			
20	1-1/4	32	30	322	80	81	107	86	40,5	16,5	17	306	44,6	54	10,4	420	5,55	FBV-2-F6X20-0001-M
			1.18	12.68	3.15	3.19	4.21	3.39	1.59	.65	.67	12.05	1.76	2.13	.41	6000	12.21	
24	1-1/2	40	38	380	85	100	124	103	50	16,5	17	306	54,1	63,5	12,7	420	7,65	FBV-2-F6X24-0001-M
			1.50	14.96	3.35	3.94	4.88	4.06	1.97	.65	.67	12.05	2.13	2.50	.50	6000	16.83	
32	2	50	48	385	100	118	138	117	59	16,5	17	306	63,6	79,4	12,7	420	12,00	FBV-2-F6X32-0001-M
			1.89	15.16	3.94	4.65	5.43	4.61	2.32	.65	.67	12.05	2.50	3.13	.50	6000	26.40	

Please note: the final maximum working pressure is determined by flange and pipe/tubing rating.

¹Dimension d: ±0,1mm/.004 in

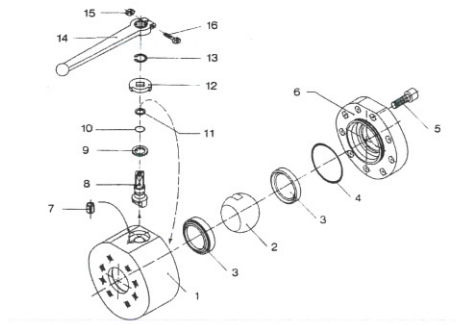
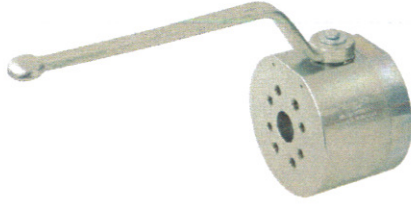
²Dimension D: -0,2 mm/.008 in

³Dimension t: -0,2 mm/.008 in



3D step models available upon request

High-Pressure Round Body Ball Valve - Type BV-2-C36



List of Components

No .	Qty.	Description
1	1	Housing
2	1	Ball
3*	2	Seat
4*	1	Cover O-Ring
5	7-9**	Cover Screws
6	1	Cover
7	1	Stop Pin
8	1	Stem
9*	1	Thrust Ring
10*	1	Stem O-Ring
11*	1	Back-Up Ring
12	1	Cam Plate
13	1	Snap Ring
14	1	Handle
15	1	Nut
16	1	Screw

** Depending on valve size

Characteristics

Two-Way high-pressure round body ball valves designed for use as on/off devices for hydraulic applications

Standard Construction

- Round body design for in-line assembly
- Designed for direct mount to reduce threads in fluid flow
- Supplied with off-set lever

Standard Materials

- Body: Carbon Steel, zinc/iron plated
- Ball: Carbon Steel, hard chrome-plated
- Stem: Carbon Steel
- Lever: Aluminium (STAUFF Size 08)
Carbon Steel (STAUFF Sizes 12 and 32)
Carbon Steel (STAUFF Sizes 40 and 48)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

Standard Connections Styles / Sizes

- 3000 PSI (code 61) direct SAE flange connection
- 6000 PSI (code 62) direct SAE flange connection
- Dual pattern: 3000 PSI (code 61) and 6000 PSI (code 62)
- Metric ISO and unified coarse (UNC) threads

Pressure Range

- Pressure range: up to 420 bar / 6000 PSI (depending on size and material combination of the ball valve)

Please note: The final maximum working pressure is determined by the flange and pipe/tubing rating.

Temperature Range

- Operating temperature range: -20°C...+100°C / -4°F... +212°F

Options / Accessories

- Flanges and flange kits
- Alternative lever designs / materials
- Locking devices
- Actuator packages
- Limit switches
- Special ball seat and O-ring materials available for lower/higher temperatures and more aggressive media
- Seal kits (including items marked by * in the above list)

Order Codes

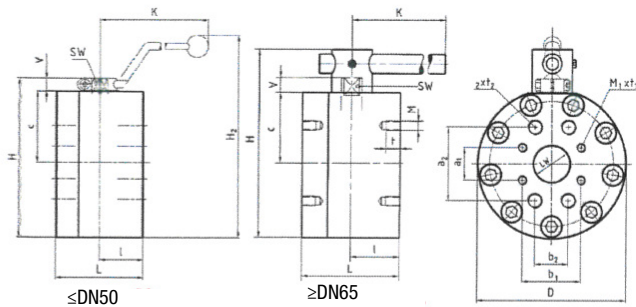
BV	-	2	-	C36	32	M	-	0	0	0	1	-	M	-	-
①		②		③	④	⑤		⑥	⑦	⑧	⑨		⑩	⑪	⑫

① Type High-Pressure Round Body Valve	BV	⑥ Body Material / Surface Finishing Carbon Steel, zinc/iron plated	0 Alternative materials are available upon request.	⑩ Manufacturing Code Manufacturing code for all connection styles	M
② Number of Ports Two Ports (Two-Way Ball Valve)	2	⑦ Ball / Stem Material Ball: Carbon Steel, hard chrome-plated Stem: Carbon Steel / Duplex (for Stauff Size 48)	0 Alternative materials / surface finishings are available upon request.	⑪ Lever Options Supplied with standard lever (according to table)	-
③ Connection Style 3000/6000 PSI (Code 61/62) SAE Direct Flange Connection	C36	⑧ Ball Seat Material Delrin® (POM)	0 Alternative materials are available upon request.	⑫ Accessories / Options Supplied without accessories	-
④ Connection Size STAUFF Size (according to dimension table)	08 12 16 20 24 32 40 48	⑨ O-Ring Material NBR (Buna-N®)	0	Supplied with Locking Device up to DN50	LD2
⑤ Thread Type Flange Connection with metric ISO Threads	M		1 Alternative materials are available upon request.	Supplied with Locking Device up to DN50	LD4
Flange Connection with Unified Coarse (UNC) Threads	U			Supplied with Locking Device from DN65	LD5
				Supplied with Locking Device LD7 (US version)	LD7

3D step models available upon request

High-Pressure Round Body Ball Valve - Type BV-2-C36

3000 /6000 PSI Flange Connection (ISO 6162-1/2)



When ordering the standard option as indicated in the table below, the following materials will be supplied:

- Body, ball and stem: Carbon Steel
- Lever: Aluminium (Size 08)
Carbon Steel (Sizes 12 and 32)
Carbon Steel (Sizes 40 and 48)
Delrin® (POM)
- Ball Seat: Delrin® (POM)
- O-rings: FKM (Viton®)

Dual Pattern - 3000/6000 PSI Series (Code 61/62) - Metric ISO Threads

Size	SAE Flange Size	Nom. Size DN	Dimensions (mm/in)															Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)			
			LW	L	I	D	H	c	V	K	SW	a1	b1	M1	t1	a2	b2				M2	t2	H2
08	1/2	15	15	75	35	88	88	31	13	160	12	17,5	38,1	M8	18	40,5	18,2	M8	18	132	420	2,96	BV-2-C3608M-0001-M
			.59	2.95	1.38	3.46	3.46	1.22	.51	6.30	.47	.69	1.50	.71	1.59	.72	.71	5.20	6000	6.51			
12	3/4	20	20	80	35	98	100	36,5	14	171	14	22,2	47,6	M10	18	50,8	23,8	M10	18	151	420	4,20	BV-2-C3612M-0001-M
			.79	3.15	1.38	3.86	3.94	1.44	.55	6.73	.55	.87	1.87	.71	2.00	.94	.71	5.94	6000	9.24			
16	1	25	25	88	38	118	113	39,5	14	171	14	27,8	57,2	M12	20	52,4	26,2	M10	20	164	420	6,00	BV-2-C3616M-0001-M
			.98	3.46	1.50	4.65	4.45	1.56	.55	6.73	.55	1.09	2.25	.79	2.06	1.03	.79	6.46	6000	13.20			
20	1-1/4	32	32	100	50	145	158	68	17	306	17	30,2	58,7	M10	20	66,6	31,8	M12	22	229	420	11,71	BV-2-C3620M-0001-M
			1.26	3.94	1.97	5.71	6.22	2.68	.67	12.05	.67	1.19	2.31	.79	2.62	1.25	.87	9.02	6000	25.76			
24	1-1/2	40	38	110	55	165	178	78	17	306	17	35,7	69,8	M12	20	79,4	36,5	M16	27	249	420	17,10	BV-2-C3624M-0001-M
			1.50	4.33	2.17	6.50	7.01	3.07	.67	12.05	.67	1.41	2.75	.79	3.13	1.44	1.06	9.80	6000	37.62			
32	2	50	48	116	58	198	210	94	17	306	17	42,9	77,8	M12	20	96,8	44,5	M20	28	281	420	24,60	BV-2-C3632M-0001-M
			1.89	4.57	2.28	7.80	8.27	3.70	.67	12.05	.67	1.69	3.06	.79	3.81	1.75	1.10	11.06	6000	54.12			
40	2-1/2	65	63	170	75	218	275	100	20	600	16	58,7	123,8	M24	41	88,9	50,8	M12	19	19	420	44,50	BV-2-C3640M-0001-M
			2.48	6.69	2.95	8.58	10.83	3.94	.79	23.62	.63	2.31	4.78	1.61	3.50	2.00	.75	6000	97.90				
48	3	80	76	170	79	258	315	114,5	26	600	19	71,4	152,4	M30	47	106,4	61,9	M16	24	24	420	60,40	BV-2-C3648M-0001-M
			2.99	6.69	3.11	10.16	12.40	4.51	1.02	23.62	.75	2.81	6.00	1.85	4.19	2.44	.95	6000	132.88				

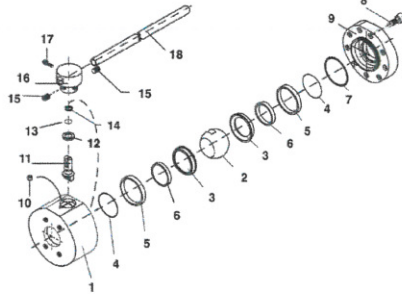
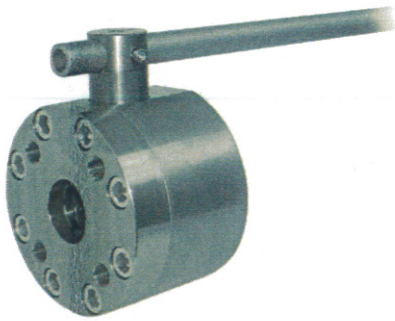
Dual Pattern - 3000/6000 PSI Series (Code 61/62) - Unified Coarse (UNC) Threads

Size	SAE Flange Size	Nom. Size DN	Dimensions (mm/in)															Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)			
			LW	L	I	D	H	c	V	K	SW	a1	b1	M1	t1	a2	b2				M2	t2	H2
08	1/2	15	15	75	35	88	88	31	13	160	12	17,5	38,1	5/16-18	18	40,5	18,2	5/16-18	18	132	420	2,96	BV-2-C3608U-0001-M
			.59	2.95	1.38	3.46	3.46	1.22	.51	6.30	.47	.69	1.50	UNC	.71	1.59	.72	UNC	.71	5.20	6000	6.51	
12	3/4	20	20	80	35	98	100	36,5	14	171	14	22,2	47,6	3/8-16	18	50,8	23,8	3/8-16	18	151	420	4,20	BV-2-C3612U-0001-M
			.79	3.15	1.38	3.86	3.94	1.44	.55	6.73	.55	.87	1.87	UNC	.71	2.00	.94	UNC	.71	5.94	6000	9.24	
16	1	25	25	88	38	118	113	39,5	14	171	14	27,8	57,2	7/16-14	20	52,4	26,2	3/8-16	20	164	420	6,00	BV-2-C3616U-0001-M
			.98	3.46	1.50	4.65	4.45	1.56	.55	6.73	.55	1.09	2.25	UNC	.79	2.06	1.03	UNC	.79	6.46	6000	13.20	
20	1-1/4	32	32	100	50	145	158	68	17	306	17	30,2	58,7	7/16-14	20	66,6	31,8	1/2-13	22	229	420	11,71	BV-2-C3620U-0001-M
			1.26	3.94	1.97	5.71	6.22	2.68	.67	12.05	.67	1.19	2.31	UNC	.79	2.62	1.25	UNC	.87	9.02	6000	25.76	
24	1-1/2	40	38	110	55	165	178	78	17	306	17	35,7	69,8	1/2-13	20	79,4	36,5	5/8-11	27	249	420	17,10	BV-2-C3624U-0001-M
			1.50	4.33	2.17	6.50	7.01	3.07	.67	12.05	.67	1.41	2.75	UNC	.79	3.13	1.44	UNC	1.06	9.80	6000	37.62	
32	2	50	48	116	58	198	210	94	17	306	17	42,9	77,8	1/2-13	20	96,8	44,5	3/4-10	28	281	420	24,60	BV-2-C3632U-0001-M
			1.89	4.57	2.28	7.80	8.27	3.70	.67	12.05	.67	1.69	3.06	UNC	.79	3.81	1.75	UNC	1.10	11.06	6000	54.12	

Please note: the final maximum working pressure is determined by flange and pipe/tubing rating.

Lever must be fixed in central position during operation. In case of vibration, the lever may otherwise operate the valve by itself.

High-Pressure Round Body Ball Valve - Type BV-2-ISO



List of Components

No .	Qty.	Description
1	1	Housing
2	1	Ball
3*	2	Seat
4*	2	O-Ring
5	2	Outer S/S Support Ring
6	2	Inner S/S Support Ring
7*	1	Cover O-Ring
8	9	Cover Bolts
9	1	Cover
10	1	Stop Screw
11	1	Stem
12*	1	Thrust Ring
13*	1	Stem O-Ring
14*	1	Back-up Ring
15	2	Set Screws
16	1	Stem/Handle Adaptor
17	1	Screw
18	1	Steel Handle

Characteristics

Two-Way high-pressure round body ball valves designed for use as on/off devices for hydraulic applications

Standard Construction

- Round body design for in-line assembly
- Machined parts for reduced torque operation
- Designed for direct mount to reduce threads in fluid flow
- Supplied with off-set lever

Standard Materials

- Body: Carbon Steel, zinc/iron plated
- Ball: Carbon Steel, hard chrome-plated
- Stem: Carbon Steel
- Lever: Aluminium (Nominal Size DN13)
Carbon Steel (Nominal Sizes DN19 and DN56)
Carbon Steel (Nominal Sizes DN63 and DN200)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

Standard Connections Styles / Sizes

- 250 bar / 3600 PSI series ISO 6164 flange connection
- 400 bar / 5800 PSI series ISO 6164 flange connection
- 350 bar / 5000 PSI series ISO 6164 flange connection
- Metric ISO and unified coarse (UNC) threads

Pressure Range

- Pressure range: up to 420 bar / 6000 PSI (depending on size and material combination of the ball valve)

Please note: The final maximum working pressure is determined by the flange and pipe/tubing rating.

Temperature Range

- Operating temperature range: -20°C...+100°C / -4°F... +212°F

Options / Accessories

- Alternative lever designs / materials
- Locking devices
- Actuator packages
- Limit switches
- Stainless Steel body
- Stainless Steel ball and stem
- Special ball seat and O-ring materials available for lower/higher temperatures and more aggressive media
- Seal kits (including items marked by * in the above list)

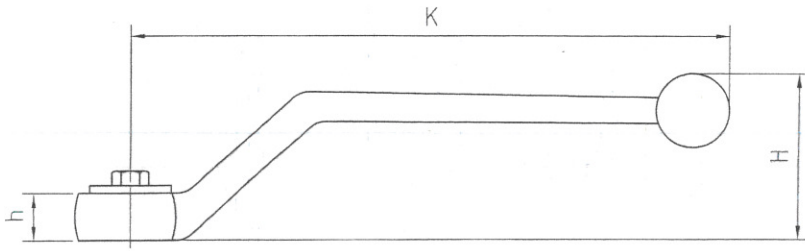
Order Codes

BV - 2 - ISO3 DN19 - 0 0 0 1 - M - -										
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪
Type High-Pressure Round Body Ball Valve	BV	Body Material / Surface Finishing Carbon Steel, zinc/iron plated	0	Manufacturing Code Manufacturing code for all connection Style	M	Lever Options Supplied with standard lever (according to table)	-	Accessories / Options Supplied without accessories	-	
Number of Ports Two Ports (Two-Way Ball Valve)	2	Stainless Steel V4A (AISI 316Ti)	1	Supplied without lever	0	Alternative levers can be ordered separately.		Supplied with Locking Device up to DN50	LD2	
Connection Style 250 bar / 3600 PSI Series ISO 6164 Flange Connection with Metric ISO Threads	ISO2	Alternative materials are available upon request.		Supplied with Locking Device up to DN50	LD4			Supplied with Locking Device up to DN65	LD5	
400 bar / 5800 PSI Series ISO 6164 Flange Connection with Metric ISO Threads	ISO4	Ball / Stem Material Ball: Carbon Steel, hard chrome-plated Stem: Carbon Steel (from DN63 on)	0	Supplied with Locking Device up to DN65 (US Version)	LD7					
350 bar / 5000 PSI Series ISO 6164 Flange Connection with Metric ISO Threads	ISO3	Ball / Stem: Stainless Steel V4A (AISI 316Ti)	1							
Connection Size Nominal Size DN		Alternative materials / surface finishings are available upon request.								
DN13 DN19 DN25 DN32 DN38 DN51		Ball Seat Material Delrin®	0							
DN56 DN63 DN80 DN100 DN125 DN150		Alternative materials are available upon request.								
DN200		O-Ring Material NBR (Buna-N®)	0							
		FKM (Viton®)	1							
		Alternative materials are available upon request.								

3D step models available upon request

Spare Parts / Accessories / Options

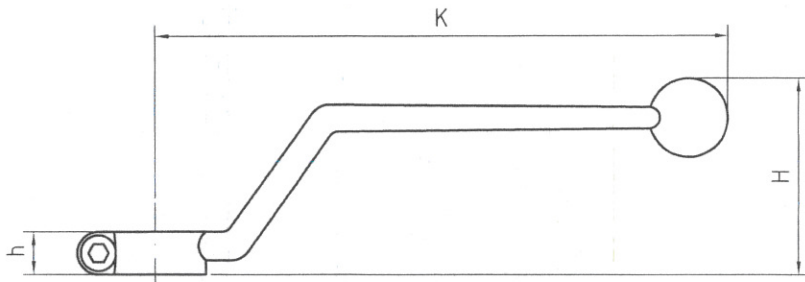
Levers



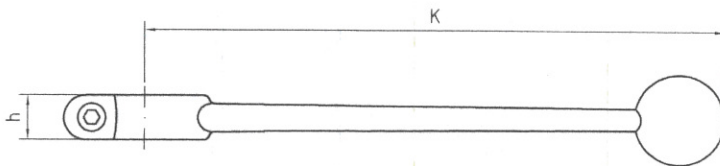
Zinc - Off-Set Design					
SW	Dimensions (mm/in)			Weight (kg/lbs)	Order Codes
	K	h	H		
7	80	6,5	30	0,03	Lever-SW7-ZNO
	3.15	.26	1.18	.07	
9	115	8,7	45	0,09	Lever-SW9-ZNO
	4.52	.34	1.77	.20	

Carbon Steel - Off-Set Design					
SW	Dimensions (mm/in)			Weight (kg/lbs)	Order Codes
	K	h	H		
7	80	6,5	30	0,05	Lever-SW7-CSO
	3.15	.26	1.18	.11	
9	115	9	47	0,09	Lever-SW9-CSO
	4.52	.35	1.85	.20	
14	170	12	64	0,23	Lever-SW14-CSO
	6.73	.47	2.52	.51	
17	306	17	80	0,66	Lever-SW17-CSO
	12.04	.69	3.15	1.45	

Stainless Steel V4A - Off-Set Design					
SW	Dimensions (mm/in)			Weight (kg/lbs)	Order Codes
	K	h	H		
7	60	6,5	22	0,04	Lever-SW7-W50
	2.36	.26	.87	.09	
9	115	9	47	0,10	Lever-SW9-W50
	4.52	.35	1.85	.22	
14	173	12	64	0,23	Lever-SW14-W50
	6.80	.47	2.52	.51	
17	227,5	15	90	0,66	SW17-W50
	8.96	.59	3.54	1.45	



Aluminium - Off-Set Design					
SW	Dimensions (mm/in)			Weight (kg/lbs)	Order Codes
	K	h	H		
12	160	12	55	0,07	Lever-SW12-ALO
	6.30	.47	2.17	.16	



Zinc - Straight Design				
SW	Dimensions (mm/in)		Weight (kg/lbs)	Order Codes
	K	h		
9	155	10	0,09	Lever-SW9-ZNS
	6.10	.29	.20	
14	200	14	0,22	Lever-SW14-ZNS
	7.87	.55	.48	

Aluminium - Straight Design				
SW	Dimensions (mm/in)		Weight (kg/lbs)	Order Codes
	K	h		
9	150	11	0,06	Lever-SW9-ALS
	5.91	.43	.13	
14	200	12	0,11	Lever-SW14-ALS
	7.87	.47	.24	
17	320	16	0,27	Lever-SW17-ALS
	12.60	.63	.59	

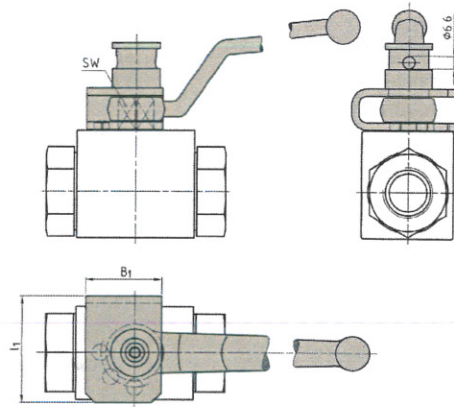
3D step models available upon request

Spare Parts / Accessories / Options

Locking Device - Type LD1

Dimensions / Order Codes

Nom. Size DN	SW	Dimensions (mm/in)		Order Codes	180° Operation
		B	L1		
4-13	9	9	25	LD1-SW09	LD1S-SW09
		.35	.98		
16	12	12	40	LD1-SW12	LD1S-SW12
		.47	1.57		
20-25	14	14	40	LD1-SW14	LD1S-SW14
		.55	1.57		
32-50	17	17	50	LD1-SW17	LD1S-SW17
		.67	1.97		



Characteristics

Locking kit consisting of shackle, sliding sleeve, link with screw and Steel lever.

Features

- Universal field-installed locking device
- High security: Cannot be dismantled when locked

Ordering Example: BBV-2-G10-0001-M-LD01

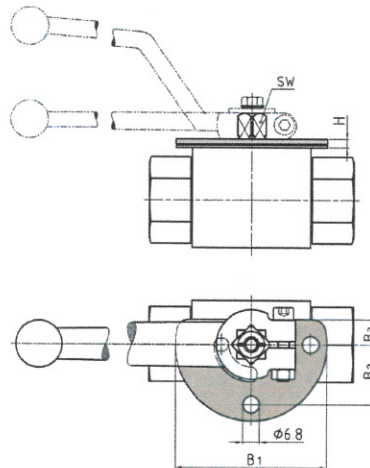
Suitability

Type	Description	Type	Description	Type	Description
BBV	Block Body Valve with Threaded Connections (SW 9-14)	FBV-2-F	Forged Body Valve with SAE Split Flange Connections (SW 17)	MCBVL-3	Block Body Valve (Two-Way Selector) for Manifold Mounting (SW 9-17)
FBV	Forged Body Valve with Threaded Connections (SW 17)	BBV	Block Body Valve with SAE Flange Connections (SW 9-14)	MCBVSL-3	Block Body Valve (Three-Way Selector) for Manifold Mounting (SW 9-17)
HBV	High Pressure Body Block Valve with Threaded Connections (SW 9-14)	FBV	Forged Body Valve with SAE Flange Connections (SW 17)	CBV	Block Body Valve (Three-Way Selector) with Threaded Connections (SW 9-17)
BBV-2-F	Block Body Valve with SAE Split Flange Connections (SW 9-14)	MBBV-2	High Pressure Body Block Valve with Threaded Connections (SW 9-14)	CBVS	Block Body Valve (Three-Way Selector) with Threaded Connections (SW 9-17)

Locking Device - Type LD2

Dimensions / Order Codes

Nom. Size DN	SW	Dimensions (mm/in)				Order Codes Individual Part
		H	B1	B2	B3	
4-8	9	3,5	61	24	10	LD2-SW09-DN4-8
		.14	2.41	.94	.39	
10-13	9	3,5	61	24	10	LD2-SW09-DN10-13
		.14	2.41	.94	.39	
16	12	4,5	64	25,5	12	LD2-SW12
		.18	2.52	1.00	.47	
20-25	14	4,5	84	35,5	14	LD2-SW14
		.18	3.31	1.40	.55	
32-50	17	4,5	136	61,5	15	LD2-SW17
		.18	5.35	2.42	.59	



Characteristics

Locking kit consisting of locking plate, stopping disk and ring.

Features

- Field-installed locking device
- Can be dismantled after disassembly of lever

Ordering Example: BBV-2-G10-0001-M-LD02

Suitability

Type	Description	Type	Description	Type	Description
BBV	Block Body Valve with Threaded Connections (SW 9-14)	BBV-2-F	Block Body Valve with SAE Split Flange Connections (SW 9-14)	CBV (≤DN25)	Block Body Valve (Three-Way Selector) with Threaded Connections
FBV	Forged Body Valve with Threaded Connections (SW 17)	FBV-2-F	Forged Body Valve with SAE Split Flange Connections (SW 17)	BV-2	Round Body Valve with Direct Flange Connections up to DN 50 (acc. to SAE, ISO, CETOP)

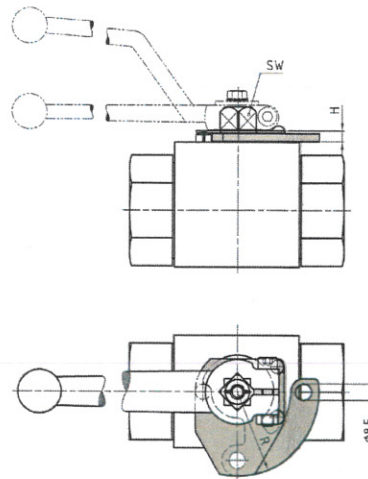
3D step models available upon request

Spare Parts / Accessories / Options

Locking Device - Type LD3

Dimensions / Order Codes

Nom. Size DN	SW	Dimensions (mm/in)	
		H	R
4-13	9	4	37
		.16	1.47
16	12	4,3	40
		.17	1.57
20-25	14	5,5	43,5
		.22	1.71
32-50	17	6	69,5
		.24	2.74



Characteristics

Only available in combination with suitable ball valve.

Features

- Factory-installed locking device
- High security: Cannot be dismantled when locked

Ordering Example: FBV-2-G20-0001-M-LD03

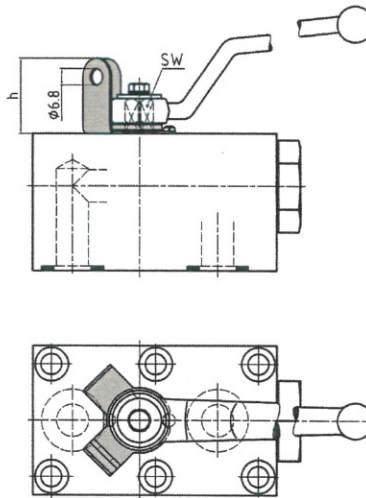
Suitability

Type	Description	Type	Description	Type	Description
BBV	Block Body Valve with Threaded Connections	FBV	Forged Body Valve with Threaded Connections	CBV (≤DN25)	Block Body Valve (Three-Way Selector) with Threaded Connections

Locking Device - Type LD3

Dimensions / Order Codes

SW	Dimensions (mm/in)	Order Codes 90° Operation	180° Operation
	H		
7	24	LD4-SW07-SS	LD4S-SW07-SS
	.94		
9*	28	LD4-SW09-SS	LD4S-SW09-SS
	1.10		
14*	34,5	LD4-SW14-SS	LD4S-SW14-SS
	1.36		
17	44	LD4-SW17-SS	LD4S-SW17-SS
	1.73		



Characteristics

Locking kit consisting of locking plate, stopping disk and ring.

Features

- Field-installed locking device
- Can be dismantled after disassembly of lever

Ordering Example: BBV-2-G10-0001-M-LD04

Suitability

Type	Description	Type	Description
BBV	Block Body Valve with Threaded Connections	MBBV-2	Block Body Valve (Two-Way Selector) for Manifold Mounting
FBV	Forged Body Valve with Threaded Connections	MCBVL-3	Block Body Valve (Three-Way Selector) for Manifold Mounting
HBV	High-Pressure Body Valve with Threaded Connections	MCBVSL-3	Block Body Valve (Three-Way Selector) for Manifold Mounting
BV-2-C	Round Body Valve with Direct SAE Flange Connections up to DN50	CBV	Block Body Valve (Three-Way Selector) with Threaded Connections
BV-2-ISO	Round Body Valve with ISO Flange Connections up to DN50	CBV	Block Body Valve (Three-Way Selector) with SAE Flange Connections
BV-2-CET	Round Body Valve with CETOP Flange Connections up to DN50	CBVS	Block Body Valve (Three-Way Selector) with Threaded Connections
		LBV	Block Body Valve (Three-Way Selector) with Threaded Connections
		TBV	Block Body Valve (Three-Way Selector) with Threaded Connections
		TBV	Block Body Valve (Four-Way Selector) with Threaded Connections
		XBV	Block Body Valve (Four-Way Selector) with Threaded Connections

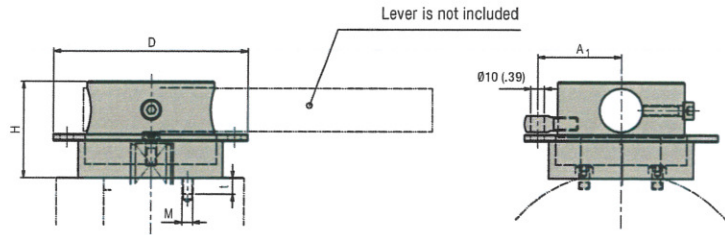
3D step models available upon request

Spare Parts / Accessories / Options

Locking Device - Type LD5

Dimensions

STAUFF Size	Dimensions (mm/in)				
	A1	D	H	M	t
40	62,5	145	71,5	M6	10
	2.46	5.71	2.81		.39
48	62,5	145	71,5	M8	12
	2.46	5.71	2.81		.47
64	67,5	155	74,5	M8	12
	2.66	6.10	2.93		.47
80	72,5	165	104,5	M8	12
	2.85	6.50	4.11		.47



Characteristics

Only available in combination with suitable ball valve.
Locking device requires modification in valve body.

Ordering Example: BV-2-C340U-0001-M-LD5

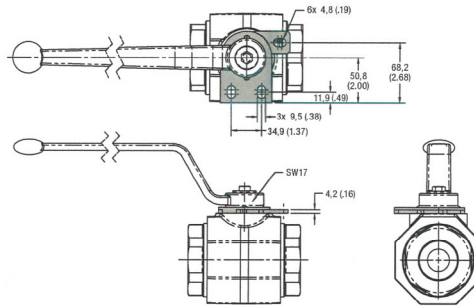
Suitability

Type	Description	Type	Description	Type	Description
BV-2-C	Round Body Valve with Direct SAE Flange Connections	BV-2-CET	Round Body Valve with Direct ISO 6164 Flange Connection	BV-2-ISO	Round Body Valve with Direct CETOP Flange Connection

Locking Device - Type LD6 US Version

Suitability

Type	Description
FBV	Forged Body Valve with Threaded Connections
FBV-2-F	Forged Body Valve with SAE Split Connections
FBV	Forged Body Valve with SAE Flange Connections



Characteristics

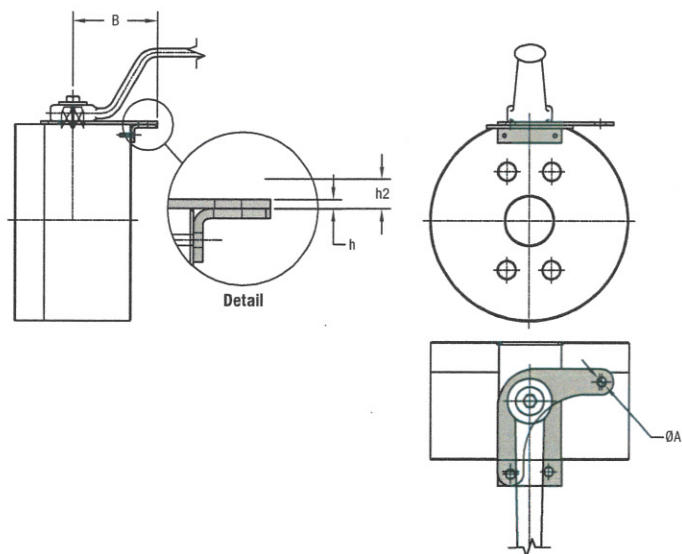
Only available in combination with suitable ball valve.

Ordering Example: FBV-2-G20-0001-M-LD6

Locking Device - Type LD7 US Version

Dimensions

STAUFF Size	Dimensions (mm/in)				
	SW	ØA	B	h	h2
08	12	8,5	59	2	/
		.33	2.32	.08	
12-16	14	8,5	64	2	/
		.33	2.52	.08	
20-32	17	9,5	83	2	/
		.37	3.27	.08	
40	16	9,5	102	3	/
		.37	4.01	.12	
48	19	9,5	93	/	27
		.37	3.66		
64	24	9,5	113	3	/
		.37	4.45	.12	
80	36	9,5	134	3	/
		.37	5.28	.12	



Suitability

Type	Description
BV-2-C	Round Body Valve with Direct SAE Flange Connections

Characteristics

Only available in combination with suitable ball valve.
Locking device requires modification in valve body.

Ordering Example: BV-2-C3632U-0001-M-L07

3D step models available upon request

Spare Parts / Accessories / Options

Double-Acting Pneumatic Actuators - Type AD

Single-Acting Pneumatic Actuators - Type AS

Electric Actuators - Type AE

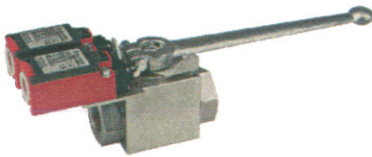


Most ball valves can be factory-mounted to compact and efficient pneumatic or electric actuators for both high-pressure and low-pressure applications.

The actuators feature simple, robust constructions and are suitable for applications with high cycle requirements.

Please note: The minimum air supply for pneumatic actuators is usually 5,5 bar / 80 PSI. They are designed for 90° open / close applications only and should not be used for valve throttling.

Limit / Proximity Switches



Limit Switches

Options / configurations available:

- SO** open
- SC** closed
- SOC** open/closed

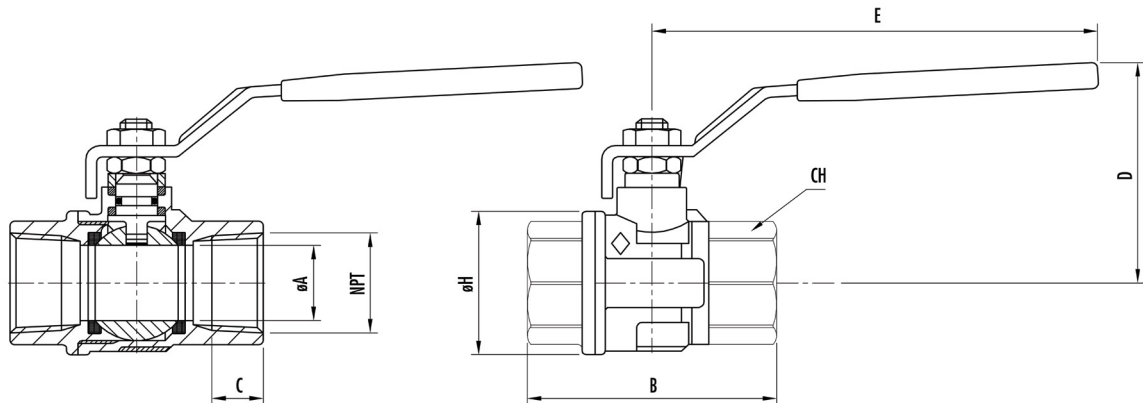
Proximity Switches

Options / configurations available:

- PO** open
- PC** closed
- POC** open/closed

Ball Valves

Low Pressure



2BVL Female Thread Ball Valve - Low Pressure

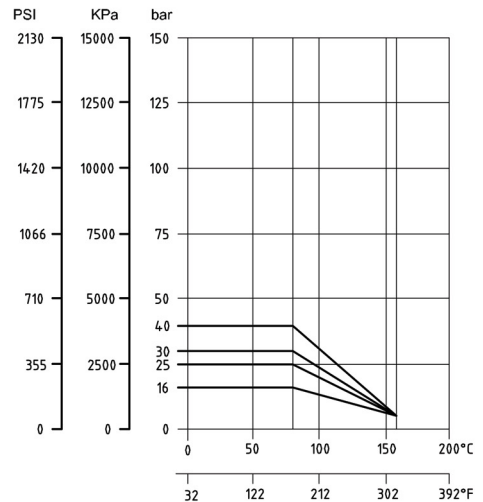
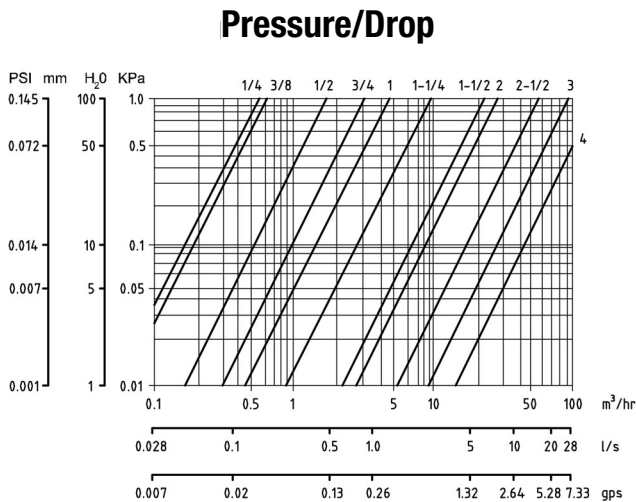
Size	NPT Ball Valve Part Number	SAE Ball Valve Part Number	Dimensions (in)						Cv	WT lbs/pc	Working Pressure PSI (bar)
			A	B	C	D	E	H			
1/4"	2BVL20-04-B*	2BVL21-04-B*	0.39	2.02	0.39	1.75	3.85	0.90	6.29	0.30	600 (40)
3/8"	2BVL20-06-B*	2BVL21-06-B*	0.39	2.02	0.40	1.75	3.85	0.90	6.99	0.28	600 (40)
1/2"	2BVL20-08-B*	2BVL21-08-B*	0.59	2.44	0.53	1.88	3.85	1.25	19.00	0.41	600 (40)
3/4"	2BVL20-12-B*	2BVL21-12-B*	0.78	2.71	0.55	2.28	4.80	1.53	34.42	0.67	600 (40)
1"	2BVL20-16-B*	2BVL21-16-B*	0.98	3.07	0.66	2.44	4.80	1.92	50.18	1.09	600 (40)
1-1/4"	2BVL20-20-B*	2BVL21-20-B*	1.25	3.42	0.68	3.07	6.02	2.32	103.70	2.01	600 (40)
1-1/2"	2BVL20-24-B*	2BVL21-24-B*	1.57	3.89	0.68	3.34	6.02	2.87	268.41	3.08	600 (40)
2"	2BVL20-32-B*	2BVL21-32-B*	1.96	4.33	0.69	3.79	6.37	3.38	309.20	4.18	600 (40)
2-1/2"	2BVL20-40-B*	2BVL21-40-B*	2.56	5.59	1.19	5.02	8.07	4.37	629.00	8.00	600 (40)
3"	2BVL20-48-B*	2BVL21-48-B*	3.15	6.45	1.31	5.45	8.07	5.35	1018.17	12.90	600 (40)
4"	2BVL20-64-B*	2BVL21-64-B*	3.94	7.60	1.55	6.34	10.23	6.35	1622.00	22.04	600 (40)

* Insert 'L' to indicate optional assembled locking device

Valves are full port

Buna seals (standard)

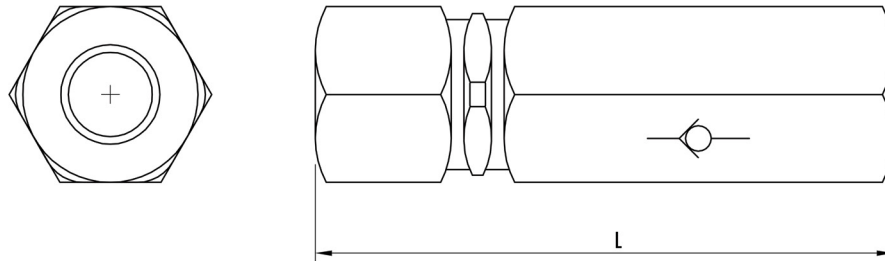
Pressure/Temperature Ratings



3D step models available upon request

Check Valves

Inline Female Thread - Poppet Style 3000-6000 PSI



6C/3C - Inline Check Valve - Female Threaded Port Style, Poppet Style Soft Seat - 3000-6000 PSI (210-420 bar)

Size	*Dimensions (in)		Cv	WT lbs/pc	Flow gpm	Working Pressure PSI (bar)
	L	HEX				
1/4"	2.82	0.75	0.45	0.29	3.00	6000 (420)
3/8"	3.38	1.12	1.80	0.81	8.00	6000 (420)
1/2"	3.73	1.25	3.40	1.20	12.00	6000 (420)
3/4"	4.91	1.62	7.40	2.05	20.00	6000 (420)
1"	6.07	1.88	9.50	3.40	30.00	6000 (420)
1-1/4"	5.76	2.00	12.30	3.75	90.00	3000 (210)
1-1/2"	6.51	2.50	16.15	7.80	125.00	3000 (210)
2"	7.28	3.25	21.80	13.00	175.00	3000 (210)

* Dimensions shown are for NPTF ported valves; for other end-fitting configurations - consult factory.

Complete Part Number

	Code	Valve Body	Port Size	Inlet	Outlet	Spring Pressure	Option
Valve Body	6000 PSI 1/4" - 1"	6C					
	3000 PSI 1-1/4" - 2"	3C					
Port Size	1/4"	4					
	3/8"	6					
	1/2"	8					
	3/4"	12					
	1"	16					
	*1-1/4"	20					
	*1-1/2"	24					
	*2"	32					
Thread Type	Female SAE	EF					
	Female NPTF	F					
	Female British Parallel BS 2779	RP					
Spring Pressure	5 PSI (.35 bar)	05					
	25 PSI (1.75 bar)	25					
	65 PSI (4.5 bar)	65					
Option	Buna	A					

* Only available in 3000 psi
Viton 'O' rings (standard)
For pressure/drop charts reference page p15
Part no. (Example): 6C - 4 - F - F - 05

Material:

Carbon Steel, Clear Zinc Dichromate Plated, (316 Stainless Steel Available)

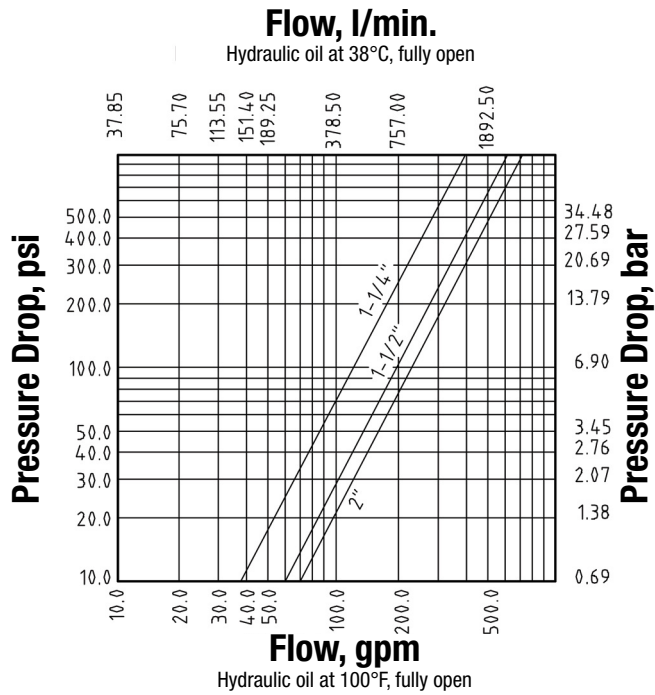
Note:

To order 316 stainless steel check valve insert S into the beginning of the assembly part number PART NO. (EXAMPLE): S 6C - 4 - F - F - 05
3D step models available upon request

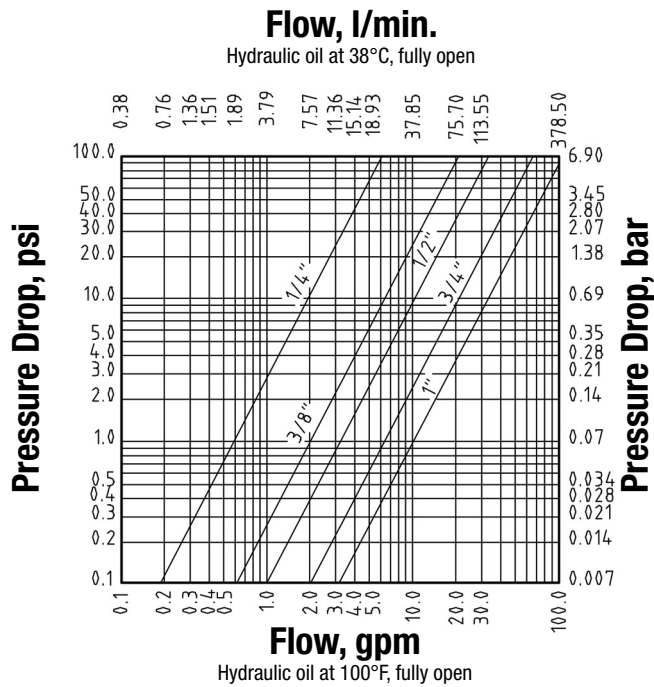
Check Valves

Pressure Drop Charts

3C 3000 PSI

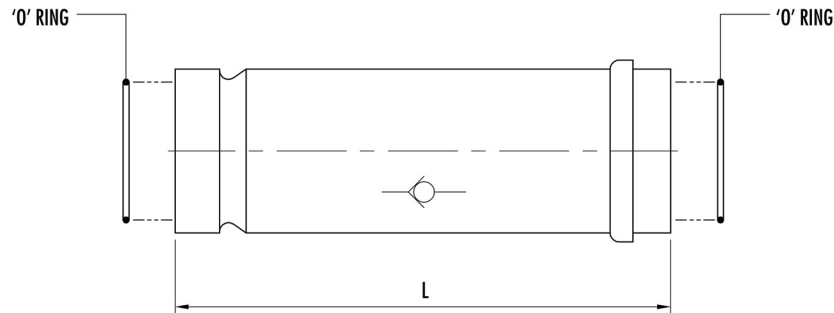


6C 6000 PSI



Check Valves

Retain Ring Flange Style - Body Only



CV - Check Valve Body - Poppet Style Complete with Buna 'O' Rings (Standard)

Size	Check Valve Part Number	*Dimensions (in)	"O" Ring (Buna) Part Number	WT lbs/pc	Working Pressure (Body Only) PSI (bar)
		L			
3/4"	CV-075-07-*	3.60	OR*-3-913	1.30	5000 (350)
1"	CV-100-07-*	4.40	OR*-3-916	1.67	5000 (350)
1-1/4"	CV-125-07-*	5.18	OR*-3-918	2.50	5000 (350)
1-1/2"	CV-150-07-*	5.76	OR*-3-924	4.25	5000 (350)
2"	CV-200-07-*	6.74	OR*-3-928	5.62	5000 (350)
2-1/2"	CV-250-07-*	7.14	OR*-2-232	8.99	5000 (350)
3"	CV-300-07-*	7.53	OR*-2-237	13.66	5000 (350)

* Insert 'V' to indicate optional viton 'O' rings

To order a complete check valve assembly reference page L14

Material:

Carbon Steel, Yellow Zinc Dichromate Plated, (Stainless Steel Available)

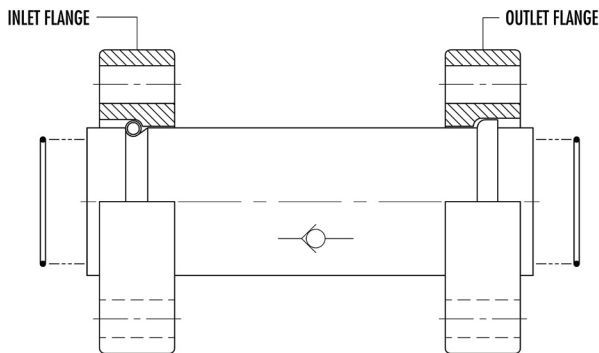
Opening Pressure

	PSI	(bar)
Standard	7	(0.5)
Optional	21	(1.5)
Optional	43	(3.0)

Check Valve Assembly

Complete Assembly Part Number

Typical A/CV Assembly



Complete Assembly Consists of:

- One (1) Check Valve Body - Poppet Style
- Two (2) Retain Ring Flanges
- One (1) Retain Ring
- Buna 'O' Rings (Standard)

		Code	A	CV	Valve Size	Inlet Flange	Outlet Flange	Opening Pressure	Options
Assembly		A							
Valve Body	Check Valve	CV							
Valve Size	3/4"	075							
	1"	100							
	1-1/4"	125							
	1-1/2"	150							
	2"	200							
	2-1/2"	250							
	3"	300							
Flange Type Carbon Steel Yellow Zinc Dicromate Plated	RFC34 SAE Code 61 W/Clearance Holes	FC34							
	*RFT34 SAE Code 61 W/Tapped Holes	FT34							
	RFC64 SAE Code 62 W/Clearance Holes	FC64							
	*RFT64 SAE Code 62 W/TappedHoles	FT64							
	*RFC74 ISO 6164 W/Clearance Holes	FC74							
Opening Pressure	7 PSI - Standard	07							
	21 PSI - Optional	21							
	43 PSI - Optional	43							
Options	Viton	V							

Opening Pressure		
	PSI	(bar)
Standard	7	(0.5)
Optional	21	(1.5)
Optional	43	(3.0)

* FTM34 and FTM64 for Metric Threads

For connection to hose use connector plate OCP (to be ordered seperately)

Part no. (Example): A/CV - 075 - FC64 - FT64 - 07

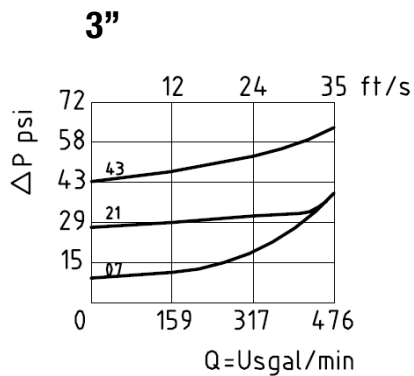
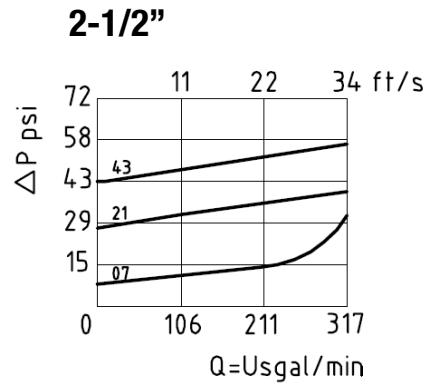
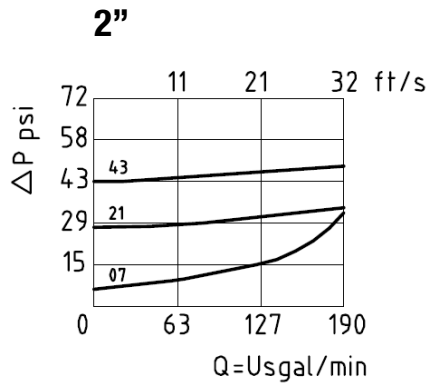
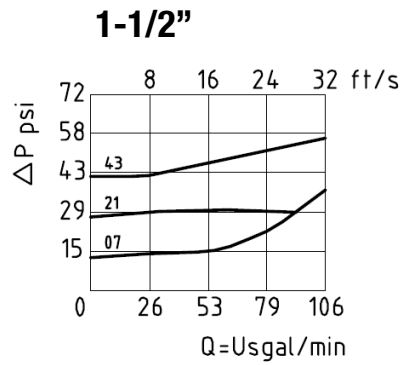
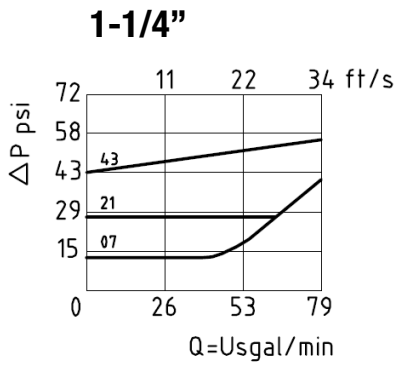
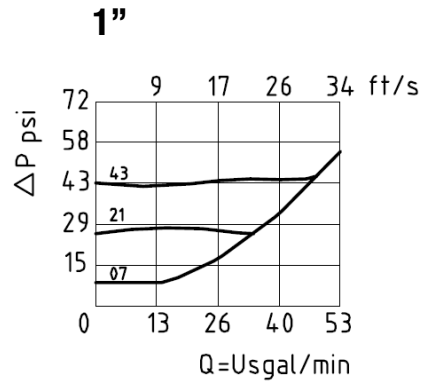
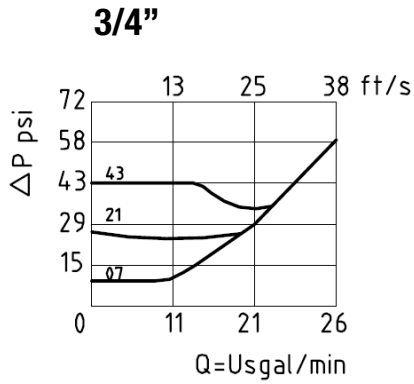
Assembly working pressure ratings are subject to the lesser of the flange or the valve check ratings

See reference page indicated above for pressure ratings

Other materials are available

Check Valve Retain Ring Flange Style

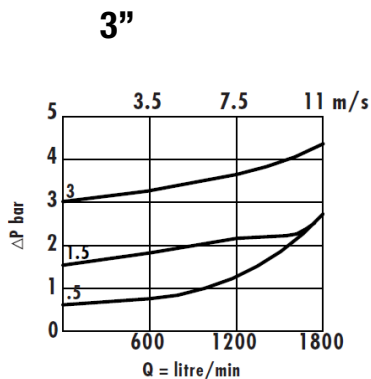
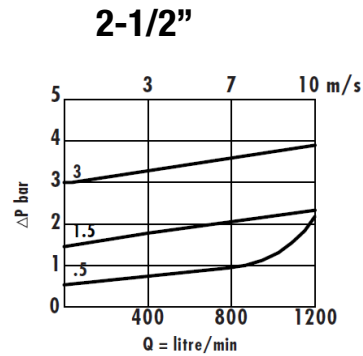
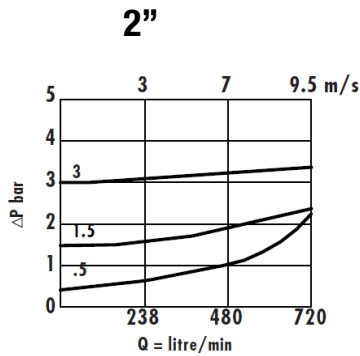
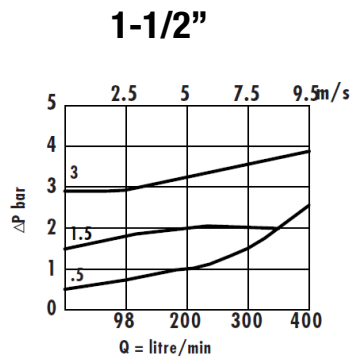
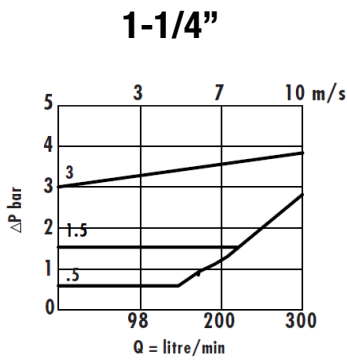
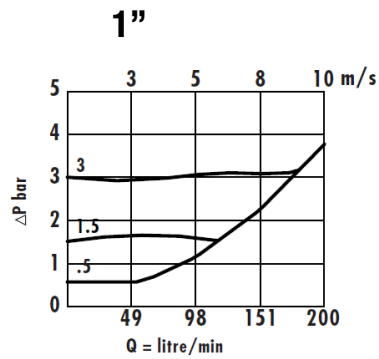
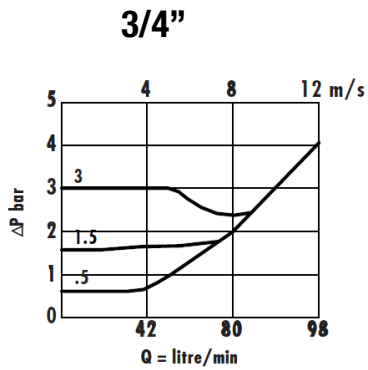
Performance Curves: Measured using oil at 190SUS and 122° F



3D step models available upon request

Check Valve Retain Ring Flange Style

Performance Curves: Measured using oil at 190SUS and 50° C



One Year Limited Warranty

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WARNING: Failure or improper selection or improper use of the products and/or systems described herein or related items can cause death, personal injury and property damage.

TMI® Worldwide Group of Companies



Global Headquarters

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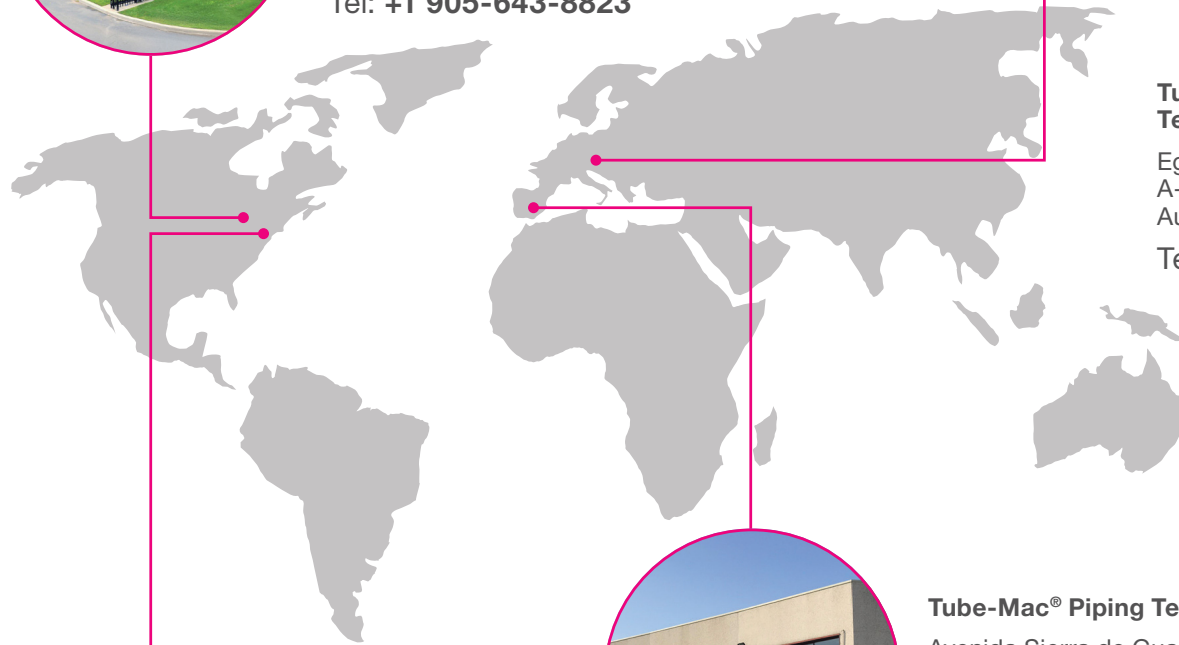
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