

## High-Pressure Block Body Ball Valve - Type MCBVL-3

B



### Characteristics

Three-way high-pressure block body ball valves designed for use as three-way selectors (L-bore, 90° operation) for hydraulic applications

#### Standard Construction

- Block body design for manifold mounting
- Improved manifold design eliminates external piping and connectors
- Supplied with lever

#### Standard Materials

- Body: Carbon Steel, zinc/iron-plated
- Ball: Carbon Steel, hard chrome-plated
- Stem: Carbon Steel
- Lever: Zinc (STAUFF Sizes 04 to 08)  
Carbon Steel (STAUFF Sizes 20 to 12)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

#### Standard Connections Styles / Sizes

- Manifold mounting
- Either 4 or 6 mounting holes for added safety (bolts are not included in delivery)

#### Pressure inlet only from the center port!

#### Pressure Range

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

#### Temperature Range

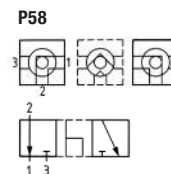
- Operating temperature range: -20 °C ... +100 °C / -4 °F ... +212 °F

#### Options / Accessories

- Alternative lever designs/materials (see page 114)
- Locking devices (see pages 115-117)
- Actuator packages (see page 118)
- Limit switches (see page 118)
- Stainless Steel body
- Stainless Steel ball and stem
- Special ball seat and O-ring materials available for lower/higher temperatures and more aggressive media

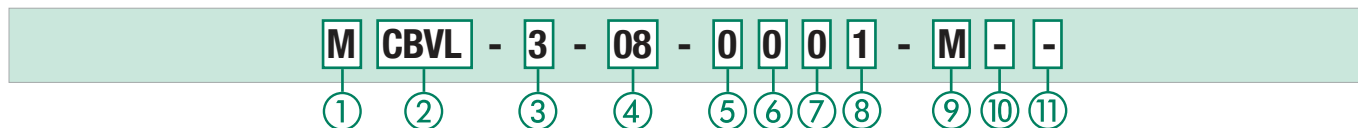
#### Porting Pattern

- Symbol: LLU
- Overlap: negative
- Operating: 90°



- Stop of end position:

### Order Codes



#### ① Connection Style

Manifold Mounting **M**

#### ② Type

Compact High-Pressure Block Body Ball Valve **CBVL**

#### ③ Number of Ports

Three Ports (Three-Way Ball Valve) **3**

#### ④ Connection Size

STAUFF Size (according to dimension table):  

04	06	08	12	16	20	24	32
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Please contact STAUFF for alternative connection sizes.

#### 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. Contact STAUFF for further information.

#### 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. Contact STAUFF for further information.

#### ⑦ Ball Seat Material

Delrin® (POM) **0**  
 PEEK **G**  
 Delrin® (POM) with Protection Ring against Erosion **H**

Alternative materials are available upon request. Contact STAUFF for further information.

#### ⑧ O-Ring Material

NBR (Buna-N®) **0**  
 FKM (Viton®) **1**  
 EPDM **3**  
 NBR (Buna-N®) for Low-Temperature Applications **X**

Alternative materials are available upon request. Contact STAUFF for further information.

#### ⑨ Manufacturing Code

Manufacturing code for all connection styles **M**

#### ⑩ Lever Options

Supplied with standard lever (according to table) **—**  
 Supplied without lever **O**

Alternative levers can be ordered separately. Please see page 114 for further information.

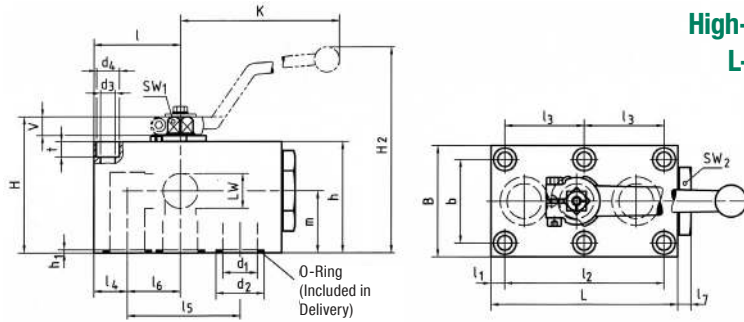
#### ⑪ Accessories / Options

Supplied without accessories **—**  
 Supplied with Locking Device LD1 **LD1**  
 Supplied with Locking Device LD4 **LD4**

Please see page 115-119 for further information and options.



## High-Pressure Block Body Ball Valve - Type MCBVL-3 L-Bore Three-Way Selector for Manifold Mounting



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 (STAUFF Sizes 04 to 08)  
Carbon Steel (STAUFF Sizes 12 to 32)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

**B**

### Pressure Inlet only from the Center Port - 90° Operation

STAUFF Size	Nominal Size DN	Dimensions (mm/in)																				Nom. Pressure (bar/psi)	Weight (kg/lbs)	Order Codes (Standard Option)			
		I	I1	I2	I3	I4	I5	I6	I7	L	B	b	H	h	m	V	SW1	SW2	K	LW	H2	d1	d2	h1			
04	6	26	8,5	35		8,5	35	17,5	6	57	40	27	43	35	19,5	6	7	19	80	6	67	6	11,8	1,9	500	0,60	MCBVL-3-04-0001-M
		1.02	.33	1.38		.33	1.38	.69	.24	2.24	1.57	1.06	1.69	1.38	.77	.24	.28	.75	3.15	.24	2.64	.24	.46	.07	7250	1.32	
06	10	29	7,5	55		10	44	19	10	70	55	40	59	45	24,5	11	9	30	115	10	93	9,5	14,9	1,9	500	1,30	MCBVL-3-06-0001-M
		1.14	.30	2.17		.39	1.73	.75	.39	2.76	2.17	1.57	2.32	1.77	.96	.43	.35	1.18	4.53	.39	3.66	.37	.59	.07	7250	2.86	
08	13	42,5	7,5	83	41,5	16	58	26,5	10	98	60	45	69	55	34	11	9	32	115	13	104	13	24,9	1,9	420	2,20	MCBVL-3-08-0001-M
		1.67	.30	3.27	1.63	.63	2.28	1.04	.39	3.86	2.36	1.77	2.72	2.17	1.34	.43	.35	1.26	4.53	.51	4.09	.51	.98	.07	6000	4.84	
12	20	51	10	97	48,5	20	69	31,5	10	117	70	51	88	70	37,5	14	14	46	171	20	139	20	29	2	420	3,90	MCBVL-3-12-0001-M
		2.01	.39	3.82	1.91	.79	2.72	1.24	.39	4.61	2.76	2.01	3.46	2.76	1.48	.55	.55	1.81	6.73	.79	5.47	.79	1.14	.08	6000	8.58	
16	25	62	10	115	57,5	24	81	38	10	135	80	60	98	80	44,5	14	14	50	171	25	149	25	34,9	2,3	420	5,65	MCBVL-3-16-0001-M
		2.44	.39	4.53	2.26	.94	3.19	1.50	.39	5.31	3.15	2.36	3.86	3.15	1.75	.55	.55	1.97	6.73	.98	5.87	.98	1.37	.09	6000	12.43	
20	32	75	12	136	68	29	96	46	10	165	100	78	121	100	54,5	16,5	17	65	306	32	192	32	40	2	420	11,10	MCBVL-3-20-0001-M
		2.95	.47	5.35	2.68	1.14	3.78	1.81	.39	6.50	3.94	3.07	4.76	3.94	2.15	.65	.67	2.56	12.05	1.26	7.56	1.26	1.57	.08	6000	24.42	
24	40	84,5	28,5	112	56	28,5	112	56	17	200	130	95	131	110	57	16,5	17	80	306	38	202	38	47,7	2,3	420	19,00	MCBVL-3-24-0001-M
		3.33	1.12	4.41	2.20	1.12	4.41	2.20	.67	7.87	5.12	3.74	5.16	4.33	2.24	.65	.67	3.15	12.05	1.50	7.95	1.50	1.88	.09	6000	41.80	
32	50	106	38	136	68	38	136	68	15	240	150	112	150	129	71	16,5	17	90	306	48	221	48	59,8	2,3	420	29,30	MCBVL-3-32-0001-M
		4.17	1.50	5.35	2.68	1.50	5.35	2.68	.59	9.45	5.91	4.41	5.91	5.08	2.80	.65	.67	3.54	12.05	1.89	8.70	1.89	2.35	.09	6000	64.46	

### Recommended Bolts, Tightening Torques and O-Rings

STAUFF Size	Nominal Size DN	Recommendations		Dimensions (mm/in)			Tightening Torque	O-Ring (Included in Delivery)
		Bolt (min)		d3	d4	t		
04	6	4 x M6 x 40 - 8.8		6,5	10,5	6,8	9 N·m	7x2,5
		4 x 1/4-20 x 1-1/2 UNC - Gr. 5		.26	.41	.27	10 ft·lb	
06	10	4 x M8 x 50 - 8.8		8,4	13,5	8,5	21 N·m	10x2,5
		4 x 5/16-18 x 2-1/2 UNC - Gr. 5		.33	.53	.33	10 ft·lb	
08	13	6 x M8 x 60 - 10.9		8,4	13,5	7	30 N·m	20x2,5
		6 x 5/16-18 x 2-1/2 UNC - Gr. 8		.33	.53	.28	29 ft·lb	
12	20	6 x M10 x 80 - 10.9		10,5	16,5	10,5	60 N·m	23,47x2,62
		6 x 3/8-16 x 3-1/4 UNC - Gr. 10		.41	.65	.41	58 ft·lb	
16	25	6 x M10 x 90 - 12.9		10,5	16,5	10,5	70 N·m	29x3
		6 x 3/8-16 x 3-1/2 UNC - Gr. 10		.41	.65	.41	58 ft·lb	
20	32	6 x M12 x 110 - 10.9		13	19	12	100 N·m	34,59x2,62
		6 x 7/16-14 x 4-1/2 UNC - Gr. 8		.51	.75	.47	70 ft·lb	
24	40	6 x M16 x 120 - 12.9		16,5	25	19	300 N·m	42x3
		6 x 5/8-11 x 5 UNC - Gr. 8		.65	.98	.75	170 ft·lb	
32	50	6 x M20 x 140 - 10.9		21	31	21,5	600 N·m	54x3
		6 x 3/4-10 x 5-1/2 UNC - Gr. 8		.83	1.22	.85	200 ft·lb	

#### Pressure inlet only from the center port!

Please note: Bolts are not included in delivery. We recommend to use socket cap screws according to ISO 4762 or ANSI / ASME B18.3 for installation.



## High-Pressure Block Body Ball Valve ■ Type MCBVSL-3



Pressure inlet possible  
from all ports!

## Characteristics

Three-way high-pressure block body ball valves designed for use as three-way selectors (L-bore, 180° operation) for hydraulic applications

## Standard Construction

- Block body design for manifold mounting
- Improved manifold design eliminates external piping and connectors
- Supplied with lever

## Standard Materials

- Body: Carbon Steel, zinc/iron-plated
- Ball: Carbon Steel, hard chrome-plated
- Stem: Carbon Steel
- Lever: Zinc (STAUFF Sizes 04 to 08)  
Carbon Steel (STAUFF Sizes 12 to 32)
- Ball seat: Delrin® (POM) Frontside Sealing
- O-rings: FKM (Viton®)

## Standard Connections Styles / Sizes

- Manifold mounting
- Either 4 or 6 mounting holes for added safety (bolts are not included in delivery)

**Pressure inlet possible from all ports!  
Must be operated without pressure!**

## Pressure Range

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

## Temperature Range

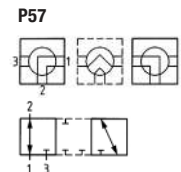
- Operating temperature range:  
-20 °C ... +100 °C / -4 °F ... + 212 °F

## Options / Accessories

- Alternative lever designs/materials (see page 114)
- Locking devices (see pages 115-117)
- Actuator packages (see page 118)
- Limit switches (see page 118)
- Stainless Steel body
- Stainless Steel ball and stem
- Special ball seat and O-ring materials available for lower/higher temperatures and more aggressive media

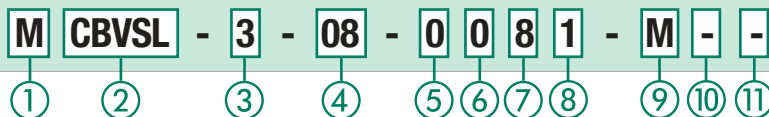
## Porting Pattern

- Symbol : LU
- Overlap: positive
- Operating: 180°



- Stop of end position:

## Order Codes



## ① Connection Style

Manifold Mounting **M**

## ② Type

Compact High-Pressure Block Body Ball Valve  
with Pressure Inlet Possible from all Ports **CBVSL**

## ③ Number of Ports

Three Ports (Three-Way Ball Valve) **3**

## ④ Connection Size

STAUFF Size (according to dimension table):  
**04 06 08 12 16 20 24 32**

Please contact STAUFF for alternative connection sizes.

## 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. Contact STAUFF for further information.

## 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. Contact STAUFF for further information.

## ⑦ Ball Seat Material

Delrin® (POM) Frontside Sealing **8**  
PEEK **G**  
Delrin® (POM) with  
Protection Ring against Erosion **H**

Alternative materials are available upon request.  
Contact STAUFF for further information.

## ⑧ O-Ring Material

NBR (Buna-N®) **0**  
FKM (Viton®) **1**  
EPDM **3**  
NBR (Buna-N®) for Low-Temperature Applications **X**

Alternative materials are available upon request.  
Contact STAUFF for further information.

## ⑨ Manufacturing Code

Manufacturing code for all connection styles **M**

## ⑩ Lever Options

Supplied with standard lever (according to table) **—**  
Supplied without lever **O**

Alternative levers can be ordered separately.  
Please see page 114 for further information.

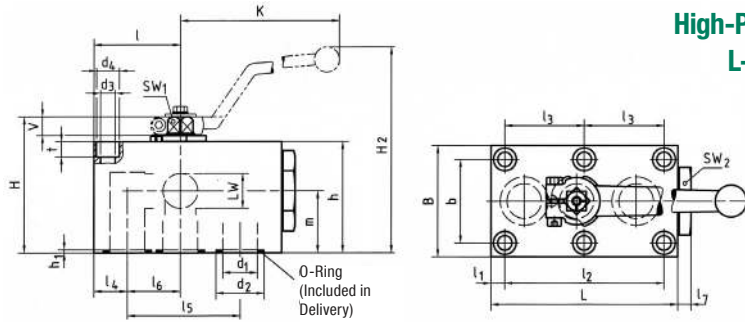
## ⑪ Accessories / Options

Supplied without accessories **—**  
Supplied with Locking Device LD1  
(not available for SW1 = 17 mm / .71 in) **LD1S**  
Supplied with Locking Device LD4 **LD4S**

Please see page 115-119 for further information and options.



## High-Pressure Block Body Ball Valve - Type MCBVSL-3 L-Bore Three-Way Selector for Manifold Mounting



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 (STAUFF Sizes 04 to 08)  
Carbon Steel (STAUFF Sizes 12 to 32)
- Ball seat: Delrin® (POM) Frontside Sealing
- O-rings: FKM (Viton®)

**B**

### Pressure Inlet possible from all Ports - 180° Operation

STAUFF Size	Nominal Size DN	Dimensions (mm/in)																			Nom. Pressure (bar/psi)	Weight (kg/lbs)	Order Codes (Standard Option)				
		I	I1	I2	I3	I4	I5	I6	I7	L	B	b	H	h	m	V	SW1	SW2	K	LW	H2	d1	d2	h1			
04	6	26	8,5	35		8,5	35	17,5	6	57	40	27	43	35	19,5	6	7	19	80	6	67	6	11,8	1,9	250	0,60	MCBVSL-3-04-0081-M
		1.02	.33	1.38		.33	1.38	.69	.24	2.24	1.57	1.06	1.69	1.38	.77	.24	.28	.75	3.15	.24	2.64	.24	.46	.07	3625	1.32	
06	10	29	7,5	55		10	44	19	10	70	55	40	59	45	24,5	11	9	30	115	10	93	9,5	14,9	1,9	500	1,30	MCBVSL-3-06-0081-M
		1.14	.30	2.17		.39	1.73	.75	.39	2.76	2.17	1.57	2.32	1.77	.96	.43	.35	1.18	4.53	.39	3.66	.37	.59	.07	7250	2.86	
08	13	42,5	7,5	83	41,5	16	58	26,5	10	98	60	45	69	55	34	11	9	32	115	13	104	13	24,9	1,9	400	2,20	MCBVSL-3-08-0081-M
		1.67	.30	3.27	1.63	.63	2.28	1.04	.39	3.86	2.36	1.77	2.72	2.17	1.34	.43	.35	1.26	4.53	.51	4.09	.51	.98	.07	5800	4.84	
12	20	51	10	97	48,5	20	69	31,5	10	117	70	51	88	70	37,5	14	14	46	171	20	139	20	29	2	315	3,90	MCBVSL-3-12-0081-M
		2.01	.39	3.82	1.91	.79	2.72	1.24	.39	4.61	2.76	2.01	3.46	2.76	1.48	.55	.55	1.81	6.73	.79	5.47	.79	1.14	.08	4500	8.58	
16	25	62	10	115	57,5	24	81	38	10	135	80	60	98	80	44,5	14	14	50	171	25	149	25	34,9	2,3	315	5,65	MCBVSL-3-16-0081-M
		2.44	.39	4.53	2.26	.94	3.19	1.50	.39	5.31	3.15	2.36	3.86	3.15	1.75	.55	.55	1.97	6.73	.98	5.87	.98	1.37	.09	4500	12.43	
20	32	75	12	136	68	29	96	46	10	165	100	78	121	100	54,5	16,5	17	65	306	32	192	32	40	2	420	11,10	MCBVSL-3-20-0081-M
		2.95	.47	5.35	2.68	1.14	3.78	1.81	.39	6.50	3.94	3.07	4.76	3.94	2.15	.65	.67	2.56	12.05	1.26	7.56	1.26	1.57	.08	6000	24.42	
24	40	84,5	28,5	112	56	28,5	112	56	17	200	130	95	131	110	57	16,5	17	80	306	38	202	38	47,7	2,3	420	19,00	MCBVSL-3-24-0081-M
		3.33	1.12	4.41	2.20	1.12	4.41	2.20	.67	7.87	5.12	3.74	5.16	4.33	2.24	.65	.67	3.15	12.05	1.50	7.95	1.50	1.88	.09	6000	41.80	
32	50	106	38	136	68	38	136	68	15	240	150	112	150	129	71	16,5	17	90	306	48	221	48	59,8	2,3	420	29,30	MCBVSL-3-32-0081-M
		4.17	1.50	5.35	2.68	1.50	5.35	2.68	.59	9.45	5.91	4.41	5.91	5.08	2.80	.65	.67	3.54	12.05	1.89	8.70	1.89	2.35	.09	6000	64.46	

### Recommended Bolts, Tightening Torques and O-Rings

STAUFF Size	Nominal Size DN	Recommendations		Dimensions (mm/in)			Tightening Torque	O-Ring (Included in Delivery)
		Bolt (min)		d3	d4	t		
04	6	4 x M6 x 40 - 8.8		6,5	10,5	6,8	9 N·m	7x2,5
		4 x 1/4-20 x 1-1/2 UNC - Gr. 5		.26	.41	.27	10 ft·lb	
06	10	4 x M8 x 50 - 8.8		8,4	13,5	8,5	21 N·m	10x2,5
		4 x 5/16-18 x 2-1/2 UNC - Gr. 5		.33	.53	.33	10 ft·lb	
08	13	6 x M8 x 60 - 10.9		8,4	13,5	7	30 N·m	20x2,5
		6 x 5/16-18 x 2-1/2 UNC - Gr. 8		.33	.53	.28	29 ft·lb	
12	20	6 x M10 x 80 - 10.9		10,5	16,5	10,5	60 N·m	23,47x2,62
		6 x 3/8-16 x 3-1/4 UNC - Gr. 10		.41	.65	.41	58 ft·lb	
16	25	6 x M10 x 90 - 12.9		10,5	16,5	10,5	70 N·m	29x3
		6 x 3/8-16 x 3-1/2 UNC - Gr. 10		.41	.65	.41	58 ft·lb	
20	32	6 x M12 x 110 - 10.9		13	19	12	100 N·m	34,59x2,62
		6 x 7/16-14 x 4-1/2 UNC - Gr. 8		.51	.75	.47	70 ft·lb	
24	40	6 x M16 x 120 - 12.9		16,5	25	19	300 N·m	42x3
		6 x 5/8-11 x 5 UNC - Gr. 8		.65	.98	.75	170 ft·lb	
32	50	6 x M20 x 140 - 10.9		21	31	21,5	600 N·m	54x3
		6 x 3/4-10 x 5-1/2 UNC - Gr. 8		.83	1.22	.85	200 ft·lb	

Pressure inlet possible from all ports!  
Must be operated without pressure!

Please note: Bolts are not included in delivery.  
We recommend to use socket cap screws according to ISO 4762 or ANSI / ASME B18.3 for installation.

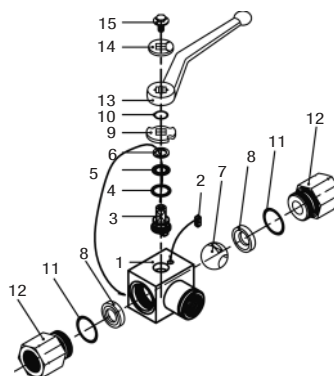


## High-Pressure Block Body Ball Valve - Type CBVL-3

B



Pressure inlet possible from center port!



### List of Components

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

### Characteristics

Compact three-way high-pressure block body ball valves designed for use as three-way selectors (L-bore, 90° operation) for hydraulic applications

#### Standard Construction

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

#### Standard Materials

- Body: Carbon Steel, zinc/iron-plated
- Ball: Carbon Steel, hard chrome-plated
- Stem: Carbon Steel
- Lever: Zinc (STAUFF Sizes 02 to 08)  
Carbon Steel (STAUFF Sizes 12 to 32)
- 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 NPT
- Female UN/UNF thread (SAE J 514) >2-1/2-12 UN (2" SAE)
- 24° Cone Connection (DIN 2353 / ISO 8434-1) >35L
- 24° Cone Connection (DIN 2353 / ISO 8434-1) >38S

#### Pressure inlet only from the center port!

#### 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

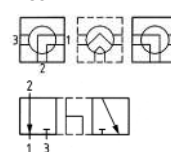
#### Options / Accessories

- Alternative lever designs/materials (see page 114)
- Locking devices (see pages 115-117)
- Actuator packages (see page 118)
- Limit switches (see page 118)
- Additional assembling threads / holes (see page 119)
- 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)

#### Porting Pattern

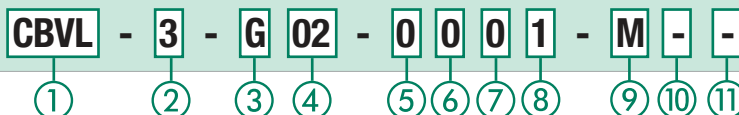
- Symbol : L
- Overlap: negative
- Operating: 90°

#### P50



- Stop of end position:

### Order Codes



#### ① Type

Compact High-Pressure Block Body Ball Valve **CBVL**

#### ② Number of Ports

Three Ports (Three-Way Ball Valve) **3**

#### ③ Connection Style

Female BSP Thread (DIN ISO 228) **G**  
 Female NPT Thread (ANSI B1.20.1) **N**  
 Female UN/UNF Thread (SAE J 514) **U**  
 24° Cone Connection (Light / Heavy Series) **—**

Please contact STAUFF for alternative connection styles.

#### ④ Connection Size

STAUFF Size (according to dimension table) for connection styles G, N and U:  
**02 04 06 08 12 16 20 24 32**  
 Tube Size (according to dimension table) for 24° Cone Connection (Light Series):  
**06L 08L 10L 12L 15L 18L 22L 28L 35L**  
 Tube Size (according to dimension table) for 24° Cone Connection (Heavy Series):  
**08S 10S 12S 14S 16S 20S 25S 30S 38S**

Please contact STAUFF for alternative connection sizes.

#### 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. Contact STAUFF for further information.

#### ⑥ Ball / Stem Material

Ball: Carbon Steel, hard chrome-plated **0**  
 Stem: Carbon Steel **0**  
 Ball / Stem: Stainless Steel V4A (AISI 316Ti) **1**

Alternative materials / surface finishings are available upon request. Contact STAUFF for further information.

#### ⑦ Ball Seat Material

Delrin® (POM) **0**

Alternative materials are available upon request. Contact STAUFF for further information.

#### ⑧ O-Ring Material

NBR (Buna-N®) **0**  
 FKM (Viton®) **1**  
 EPDM **3**

Alternative materials are available upon request. Contact STAUFF for further information.

#### ⑨ Manufacturing Code

Manufacturing code for all connection styles **M**

#### ⑩ Lever Options

Supplied with standard lever (according to table) **—**  
 Supplied without lever **O**

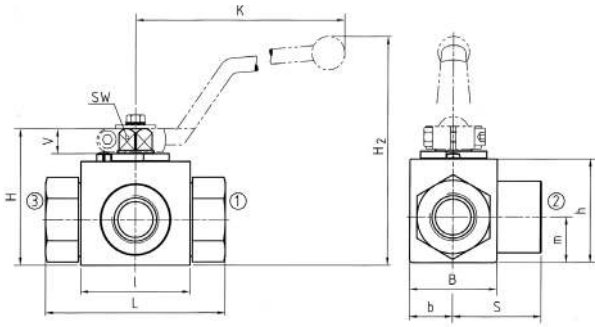
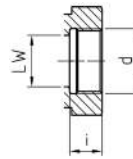
Alternative levers can be ordered separately. Please see page 114 for further information.

#### 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**

Please see page 115-119 for further information and options.



**zinc/nickel-plated**
**High-Pressure Block Body Ball Valve - Type CBVL-3  
L-Bore Three-Way Selector - Female BSP Thread (DIN ISO 228)**

**Female BSP Thread  
(DIN ISO 228)**


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

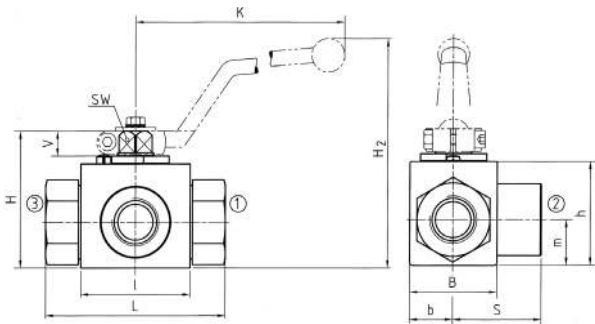
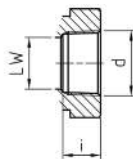
- Body, ball and stem: Carbon Steel
- Lever: Zinc (STAUFF Sizes 02 to 08)  
Carbon Steel (STAUFF Sizes 12 to 32)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

**Pressure Inlet only from the Center Port**

STAUFF Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)														Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Order Codes (Standard Option)
			LW	L	I	b	B	H	h	m	S	V	SW	K	i	H2			
02	G 1/8 BSP	4	5.20	69.272	40.157	13.51	29.114	47.185	33.130	13.5.53	34.5.136	11.43	9.35	115.4.53	10.39	82.3.23	500	.88	CBVL-3-G02-8001-M *
04	G 1/4 BSP	6	6.24	69.272	40.157	13.51	29.114	47.185	33.130	13.5.53	34.5.136	11.43	9.35	115.4.53	14.55	82.3.23	500	1.01	CBVL-3-G04-8001-M *
06	G 3/8 BSP	10	10.39	72.283	43.169	16.63	35.138	52.205	38.150	17.5.69	36.1.42	11.43	9.35	115.4.53	14.55	87.3.42	500	1.32	CBVL-3-G06-8001-M *
08	G 1/2 BSP	13	13.51	83.327	48.189	17.5.69	38.150	54.213	40.157	19.75	41.5.163	11.43	9.35	115.16.3	16.3.89	89.3.50	500	1.54	CBVL-3-G08-8001-M *
12	G 3/4 BSP	20	20.79	95.374	62.244	24.5.96	52.205	75.295	57.24.5	24.5.96	47.5.187	14.55	14.55	170.6.69	18.71	126.4.96	315	3.96	CBVL-3-G12-8001-M *
16	G 1 BSP	25	25.98	113.445	66.260	29.114	61.240	83.327	65.256	29.5.116	56.5.222	14.55	14.55	170.6.69	20.79	134.5.73	315	5.28	CBVL-3-G16-8001-M *
20	G 1-1/4 BSP	32	30.118	111.437	81.319	39.154	106.4.17	84.5.33	39.154	39.154	55.2.17	16.5.65	17.67	320.12.60	22.87	170.6.69	350	8.36	CBVL-3-G20-0001-M
24	G 1-1/2 BSP	40	38.150	130.104	104.53	53.209	127.5.00	106.53	65.209	65.209	65.209	16.5.65	17.67	320.12.60	24.94	191.7.52	350	13.64	CBVL-3-G24-0001-M
32	G 2 BSP	50	48.189	150.591	118.465	58.228	116.457	137.539	116.457	58.228	75.295	16.5.65	17.67	320.12.60	26.102	201.7.91	350	17.16	CBVL-3-G32-0001-M

Please note the pressure ratings of the tube connections.

\* Standard option zinc/nickel


**High-Pressure Block Body Ball Valve - Type CBVL-3  
L-Bore Three-Way Selector - Female NPT Thread (ANSI B1.20.1)**
**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 (STAUFF Sizes 02 to 08)  
Carbon Steel (STAUFF Sizes 12 to 32)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

**Pressure Inlet only from the Center Port**

STAUFF Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)														Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Order Codes (Standard Option)
			LW	L	I	b	B	H	h	K	S	V	SW	K	i	H2			
02	1/8 NPT	4	5.20	69.272	40.157	13.51	29.114	47.185	33.130	13.5.53	34.5.136	11.43	9.35	115.4.53	10.5.41	82.3.23	500	.88	CBVL-3-N02-0001-M
04	1/4 NPT	6	6.24	69.272	40.157	13.51	29.114	47.185	33.130	13.5.53	34.5.136	11.43	9.35	115.4.53	13.7.54	82.3.23	500	1.01	CBVL-3-N04-0001-M
06	3/8 NPT	10	10.39	72.283	43.169	16.63	35.138	52.205	38.150	17.5.69	36.1.42	11.43	9.35	115.4.53	13.5.53	87.3.42	500	1.32	CBVL-3-N06-0001-M
08	1/2 NPT	13	13.51	83.327	48.189	17.5.69	38.150	54.213	40.157	19.75	41.5.163	11.43	9.35	115.17.89	17.89	89.3.50	500	1.54	CBVL-3-N08-0001-M
12	3/4 NPT	20	20.79	95.374	62.244	24.5.96	52.205	75.295	57.24.5	24.5.96	47.5.187	14.55	14.55	170.6.69	18.3.72	126.4.96	315	3.96	CBVL-3-N12-0001-M
16	1 NPT	25	25.98	113.445	66.260	29.114	61.240	83.327	65.256	29.5.116	56.5.222	14.55	14.55	170.6.69	21.6.85	134.5.73	315	5.28	CBVL-3-N16-0001-M
20	1-1/4 NPT	32	30.118	111.437	81.319	39.154	106.4.17	84.5.33	39.154	39.154	55.2.17	16.5.65	17.67	320.12.60	22.1.87	170.6.69	350	8.36	CBVL-3-N20-0001-M
24	1-1/2 NPT	40	38.150	140.104	104.53	53.209	127.5.00	106.53	65.209	65.209	65.209	16.5.65	17.67	320.12.60	22.1.87	191.7.52	350	13.64	CBVL-3-N24-0001-M
32	2 NPT	50	48.189	150.591	118.465	58.228	116.457	137.539	116.457	58.228	75.295	16.5.65	17.67	320.12.60	30.2.119	201.7.91	350	17.16	CBVL-3-N32-0001-M

Please note the pressure ratings of the tube connections.



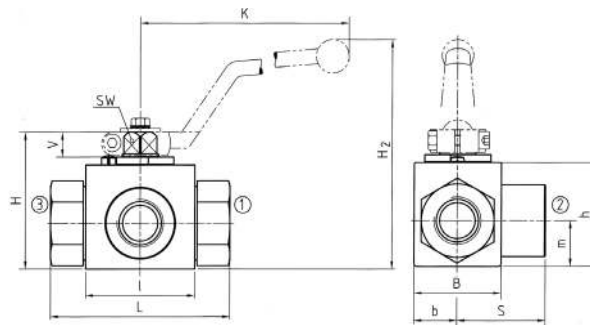
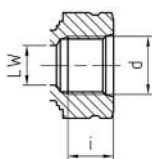


### High-Pressure Block Body Ball Valve - Type CBVL-3 L-Bore Three-Way Selector - Female UN/UNF Thread (SAE J 514)

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 (STAUFF Sizes 04 to 08)  
Carbon Steel (STAUFF Sizes 12 to 32)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

Female UN/UNF Thread (SAE J 514)



Pressure Inlet only from the Center Port

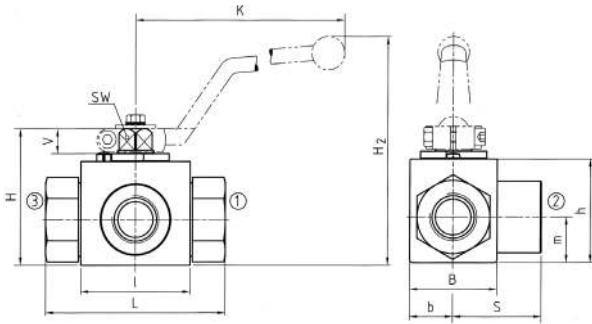
STAUFF Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)														Nom. Pressure (bar/psi)	Weight (kg/lbs)	Order Codes (Standard Option)
			LW	L	l	b	B	H	h	K	S	V	SW	K	i	H2			
04	7/16-20 UNF (1/4" SAE)	6	5	69	40	13	29	47	33	13,5	34,5	11	9	115	12	82	500	0,46	CBVL-3-U04-0001-M
			.20	2.72	1.57	.51	1.14	1.85	1.30	.53	1.36	.43	.35	4.53	.47	3.23	7250	1.01	
06	9/16-18 UNF (3/4" SAE)	10	10	72	43	16	35	52	38	17,5	36	11	9	115	13	87	500	0,60	CBVL-3-U06-0001-M
			.39	2.83	1.69	.63	1.38	2.05	1.50	.69	1.42	.43	.35	4.53	.51	3.42	7250	1.32	
08	3/4-16 UNF (1/2" SAE)	13	13	83	48	17,5	38	54	40	19	41,5	11	9	115	15	89	500	0,70	CBVL-3-U08-0001-M
			.51	3.27	1.89	.69	1.50	2.13	1.57	.75	1.63	.43	.35	4.53	.59	3.50	7250	1.54	
12	1-1/16-12 UN (3/4" SAE)	20	20	95	62	24,5	52	75	57	24,5	47,5	14	14	170	20	126	315	1,80	CBVL-3-U12-0001-M
			.79	3.74	2.44	.96	2.05	2.95	2.24	.96	1.87	.55	.55	6.69	.79	4.96	4500	3.96	
16	1-5/16-12 UN (1" SAE)	25	25	113	66	29	61	83	65	29,5	56,5	14	14	170	20	134	315	2,40	CBVL-3-U16-0001-M
			.98	4.45	2.60	1.14	2.40	3.27	2.56	1.16	2.22	.55	.55	6.69	.79	5.73	4500	5.28	
20	1-5/8-12 UN (1-1/4" SAE)	32	30	111	81	39		106	84,5	39	55	16,5	17	320	20	170	350	3,80	CBVL-3-U20-0001-M
			1.18	4.37	3.19	1.54		4.17	3.33	1.54	2.17	.65	.67	12.60	.79	6.69	5000	8.36	
24	1-7/8-12 UN (1-1/2" SAE)	40	38	130	104	53		127	106	53	65	16,5	17	320	20	191	350	6,20	CBVL-3-U24-0001-M
			1.50	5.12	4.09	2.09		5.00	4.17	2.09	2.56	.65	.67	12.60	.79	7.52	5000	13.64	
32	2-1/2-12 UN (2" SAE)	50	48	150	118	58	116	137	116	58	75	16,5	17	320	20	201	350	7,80	CBVL-3-U32-0001-M
			1.89	5.91	4.65	2.28	4.57	5.39	4.57	2.28	2.95	.65	.67	12.60	.79	7.91	5000	17.16	

Please note the pressure ratings of the tube connections.



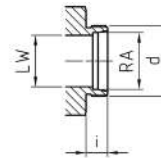
zinc/nickel-plated

**High-Pressure Block Body Ball Valve - Type CBVL-3  
L-Bore Three-Way Selector - 24° Cone Connection  
Light Series (DIN 2353 / ISO 8434-1)**



Union nuts and cutting rings are not included in delivery.

**24° Cone Connection  
(DIN 2353 / ISO 8434-1)**



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 (STAUFF Sizes 02 to 08)  
Carbon Steel (STAUFF Sizes 12 to 20R)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

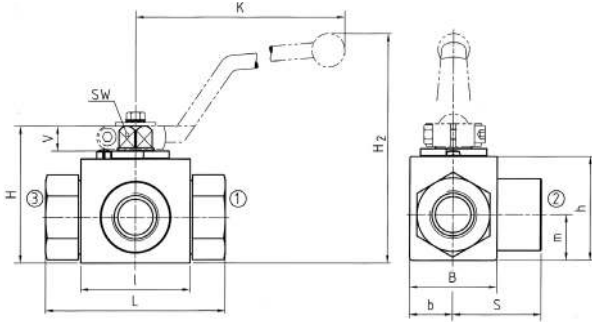
**Pressure Inlet only from the Center Port**

STAUFF Size	Tube/Thread Size d	Nominal Size DN	Dimensions (mm/in)																Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Order Codes (Standard Option)
			RA	LW	L	l	b	B	H	h	m	S	V	SW	K	i	H2				
02	06L / M12 x 1,5	4	6	5	67	40	13	29	47	33	13,5	33,5	11	9	115	10	82	500	0,30	CBVL-3-06L-8001-M	
			.24	.20	2.64	1.57	.51	1.14	1.85	1.30	.53	1.32	.43	.35	4.53	.39	3.23	7250	.66		
04	08L / M14 x 1,5	6	8	6	67	40	13	29	47	33	13,5	33,5	11	9	115	10	82	500	0,40	CBVL-3-08L-8001-M	
			.31	.24	2.64	1.57	.51	1.14	1.85	1.30	.53	1.32	.43	.35	4.53	.39	3.23	7250	.88		
05	10L / M16 x 1,5	8	10	6	74	40	13	29	47	33	13,5	34,5	11	9	115	11	82	500	0,40	CBVL-3-10L-8001-M	
			.39	.24	2.91	1.57	.51	1.14	1.85	1.30	.53	1.36	.43	.35	4.53	.43	3.23	7250	.88		
06	12L / M18 x 1,5	10	12	10	74	43	16	35	52	38	17,5	36,5	11	9	115	11	87	500	0,50	CBVL-3-12L-8001-M	
			.47	.39	2.91	1.69	.63	1.38	2.05	1.50	.69	1.44	.43	.35	4.53	.43	3.42	7250	1.10		
08	15L / M22 x 1,5	13	15	13	82	48	17,5	38	54	40	19	41,5	11	9	115	12	89	500	0,65	CBVL-3-15L-8001-M	
			.59	.51	3.23	1.89	.69	1.50	2.13	1.57	.75	1.63	.43	.35	4.53	.47	3.50	7250	1.43		
08	18L / M26 x 1,5	13	18	13	82	48	17,5	38	54	40	19	41,5	11	9	115	12	89	500	0,69	CBVL-3-18L-8001-M	
			.71	.51	2.23	1.89	.69	1.50	2.13	1.57	.75	1.63	.43	.35	4.53	.47	3.50	7250	1.52		
12	22L / M30 x 2	20	22	20	101	62	24,5	52	75	57	24,5	48	14	14	170	14	126	315	1,50	CBVL-3-22L-8001-M	
			.87	.79	3.98	2.44	.96	2.05	2.95	2.24	.96	1.89	.55	.55	6.69	.55	4.96	4500	3.30		
16	28L / M36 x 2	25	28	25	108	66	29	61	83	65	29,5	54	14	14	170	14	134	315	2,10	CBVL-3-28L-8001-M	
			1.10	.98	4.25	2.60	1.14	2.40	3.27	2.56	1.16	2.13	.55	.55	6.69	.55	5.73	4500	4.62		
20R	35L / M45 x 2	25/32	35	25	112	66	29	61	83	65	29,5	56	14	14	170	16	134	315	2,50	CBVL-3-35LDN25-8001-M	
			1.38	.98	4.41	2.60	1.14	2.40	3.27	2.56	1.16	2.20	.55	.55	6.69	.63	5.73	4500	5.50		

Please note the pressure ratings of the tube connections.

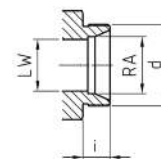
zinc/nickel-plated

**High-Pressure Block Body Ball Valve - Type CBVL-3  
L-Bore Three-Way Selector - 24° Cone Connection  
Heavy Series (DIN 2353 / ISO 8434-1)**



Union nuts and cutting rings are not included in delivery.

**24° Cone Connection  
(DIN 2353 / ISO 8434-1)**



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 (STAUFF Sizes 02 to 08)  
Carbon Steel (STAUFF Sizes 12 to 20R)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

**Pressure Inlet only from the Center Port**

STAUFF Size	Tube/Thread Size d	Nominal Size DN	Dimensions (mm/in)																Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Order Codes (Standard Option)
			RA	LW	L	l	b	B	H	h	m	S	V	SW	K	i	H2				
02	08S / M16 x 1,5	4	8	5	73	40	13	29	47	33	13,5	34,5	11	9	115	12	82	500	0,42	CBVL-3-08S-8001-M	
			.31	.20	2.87	1.57	.51	1.14	1.85	1.30	.53	1.36	.43	.35	4.53	.47	3.23	7250	.92		
04	10S / M18 x 1,5	6	10	6	73	40	13	29	47	33	13,5	34,5	11	9	115	12	82	500	0,43	CBVL-3-10S-8001-M	
			.39	.24	2.87	1.57	.51	1.14	1.85	1.30	.53	1.36	.43	.35	4.53	.47	3.23	7250	.95		
05	12S / M20 x 1,5	8	12	6	76	40	13	29	47	33	13,5	34,5	11	9	115	12	82	500	0,44	CBVL-3-12S-8001-M	
			.47	.24	2.99	1.57	.51	1.14	1.85	1.30	.53	1.36	.43	.35	4.53	.47	3.23	7250	.97		
06	14S / M22 x 1,5	10	14	10	80	43	16	35	52	38	17,5	36,5	11	9	115	14	87	500	0,50	CBVL-3-14S-8001-M	
			.55	.39	3.15	1.69	.63	1.38	2.05	1.50	.69	1.43	.43	.35	4.53	.55	3.42	7250	1.10		
08	16S / M24 x 1,5	13	16	13	86	48	17,5	38	54	40	19	43	11	9	115	14	89	500	0,65	CBVL-3-16S-8001-M	
			.63	.51	3.39	1.89	.69	1.50	2.13	1.57	.75	1.69	.43	.35	4.53	.55	3.50	7250	1.43		
08	20S / M30 x 2	13	20	13	90	48	17,5	38	54	40	19	43	11	9	115	16	89	500	0,70	CBVL-3-20SDN13-8001-M	
			.79	.51	3.54	1.89	.69	1.50	2.13	1.57	.75	1.69	.43	.35	4.53	.63	3.50	7250	1.54		
12	25S / M36 x 2	20	25	20	109	62	24,5	52	75	57	24,5	48	14	14	170	18	126	315	1,70	CBVL-3-25S-8001-M	
			.98	.79	4.29	2.44	.96	2.05	2.95	2.24	.96	1.89	.55	.55	6.69	.71	4.96	4500	3.74		
16	30S / M42 x 2	25	30	25	120	66	29	61	83	65	29,5	57,5	14	14	170	20	134	315	2,40	CBVL-3-30S-8001-M	
			1.18	.98	4.72	2.60	1.14	2.40	3.27	2.56	1.16	2.26	.55	.55	6.69	.79	5.73	4500	5.28		
20R	38S / M52 x 2	25/32	38	25	124	66	29	61	83	65	29,5	57,5	14	14	170	22	134	315	2,80	CBVL-3-38SDN25-8001-M	
			1.50	.98	4.88	2.60	1.14	2.40	3.27	2.56	1.16	2.26	.55	.55	6.69	.87	5.73	4500	6.16		

Please note the pressure ratings of the tube connections.



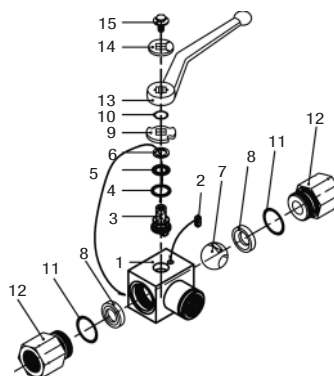


## High-Pressure Block Body Ball Valve - Type CBVT-3

B



Pressure inlet possible from center port!



### List of Components

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

### Characteristics

Compact three-way high-pressure block body ball valves designed for use as three-way selectors (T-bore, 90° operation) for hydraulic applications

#### Standard Construction

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

#### Standard Materials

- Body: Carbon Steel, zinc/iron-plated
- Ball: Carbon Steel, hard chrome-plated
- Stem: Carbon Steel
- Lever: Zinc (STAUFF Sizes 02 to 08)  
Carbon Steel (STAUFF Sizes 12 to 32)
- 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 NPT
- Female UN/UNF thread (SAE J 514) >2-1/2-12 UN (2" SAE)
- 24° Cone Connection (DIN 2353 / ISO 8434-1) >35L
- 24° Cone Connection (DIN 2353 / ISO 8434-1) >38S

#### Pressure inlet only from the center port!

#### 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 (see page 114)
- Locking devices (see pages 115-117)
- Actuator packages (see page 118)
- Limit switches (see page 118)
- Additional assembling threads / holes (see page 119)
- 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)

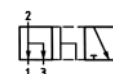
#### Porting Pattern

- Symbol: T
- Overlap: negative
- Operating: 90°

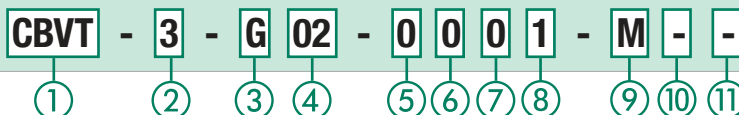
P51



- Stop of end position:



### Order Codes



#### ① Type

Compact High-Pressure Block Body Ball Valve **CBVT**

#### ② Number of Ports

Three Ports (Three-Way Ball Valve) **3**

#### ③ Connection Style

Female BSP Thread (DIN ISO 228) **G**  
 Female NPT Thread (ANSI B1.20.1) **N**  
 Female UN/UNF Thread (SAE J 514) **U**  
 24° Cone Connection (Light / Heavy Series) **—**

Please contact STAUFF for alternative connection styles.

#### ④ Connection Size

STAUFF Size (according to dimension table) for connection styles G, N and U:  
**02 04 06 08 12 16 20 24 32**  
 Tube Size (according to dimension table) for 24° Cone Connection (Light Series):  
**06L 08L 10L 12L 15L 18L 22L 28L 35L**  
 Tube Size (according to dimension table) for 24° Cone Connection (Heavy Series):  
**08S 10S 12S 14S 16S 20S 25S 30S 38S**

Please contact STAUFF for alternative connection sizes.

#### 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. Contact STAUFF for further information.

#### ⑥ Ball / Stem Material

Ball: Carbon Steel, hard chrome-plated **0**  
 Stem: Carbon Steel **0**  
 Ball / Stem: Stainless Steel V4A (AISI 316Ti) **1**

Alternative materials / surface finishings are available upon request. Contact STAUFF for further information.

#### ⑦ Ball Seat Material

Delrin® (POM) **0**

Alternative materials are available upon request. Contact STAUFF for further information.

#### ⑧ O-Ring Material

NBR (Buna-N®) **0**  
 FKM (Viton®) **1**  
 EPDM **3**

Alternative materials are available upon request. Contact STAUFF for further information.

#### ⑨ Manufacturing Code

Manufacturing code for all connection styles **M**

#### ⑩ Lever Options

Supplied with standard lever (according to table) **—**  
 Supplied without lever **0**

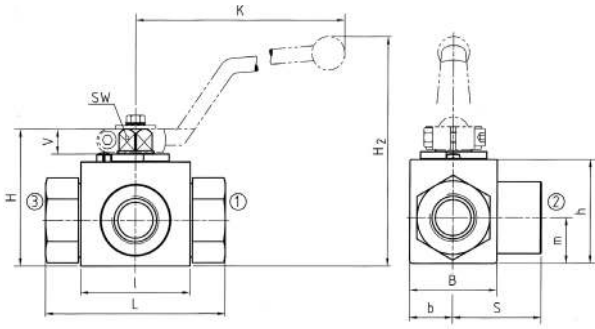
Alternative levers can be ordered separately. Please see page 114 for further information.

#### 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**

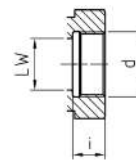
Please see page 115-119 for further information and options.





### High-Pressure Block Body Ball Valve ■ Type CBVT-3 T-Bore Three-Way Selector ■ Female BSP Thread (DIN ISO 228)

#### Female BSP Thread (DIN ISO 228)



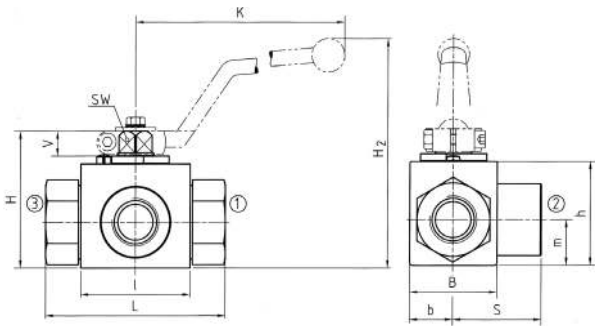
When ordering the standard option as indicated in the table below, the following materials will be supplied:

- Body, ball and stem: Carbon Steel
- Lever: Zinc (STAUFF Sizes 02 to 08)  
Carbon Steel (STAUFF Sizes 12 to 32)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

#### Pressure Inlet only from the Center Port

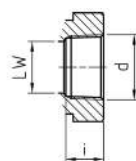
STAUFF Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)														Nom. Pressure (bar/psi)	Weight (kg/lbs)	Order Codes (Standard Option)
			LW	L	l	b	B	H	h	m	S	V	SW	K	i	H2			
02	G 1/8 BSP	4	5.20	69.272	40.157	13.51	29.114	47.185	33.130	13.5.53	34.5.136	11.43	9.35	115.4.53	10.39	82.3.23	500.7250	0.40.88	CBVT-3-G02-0001-M
04	G 1/4 BSP	6	6.24	69.272	40.157	13.51	29.114	47.185	33.130	13.5.53	34.5.136	11.43	9.35	115.4.53	14.55	82.3.23	500.7250	0.46.1.01	CBVT-3-G04-0001-M
06	G 3/8 BSP	10	10.39	72.283	43.169	16.63	35.138	52.2.05	38.1.50	17.5.69	36.1.42	11.43	9.35	115.4.53	14.55	87.3.42	500.7250	0.60.1.32	CBVT-3-G06-0001-M
08	G 1/2 BSP	13	13.51	83.3.27	48.1.89	17.5.69	38.1.50	54.2.13	40.1.57	19.7.5	41.5.1.63	11.43	9.35	115.4.53	16.3.64	89.3.50	500.7250	0.70.1.54	CBVT-3-G08-0001-M
12	G 3/4 BSP	20	20.79	95.3.74	62.2.44	24.5.96	52.2.05	75.2.95	57.2.24	39.96	55.1.87	11.43	14.55	170.6.69	18.71	126.4.96	315.4500	1.80.3.96	CBVT-3-G12-0001-M
16	G 1 BSP	25	25.98	113.4.45	66.2.60	29.1.14	61.2.40	83.3.27	65.2.56	29.5.1.16	56.5.2.22	14.55	14.55	170.6.69	20.79	134.5.73	315.4500	2.40.5.28	CBVT-3-G16-0001-M
20	G 1-1/4 BSP	32	30.1.18	111.4.37	81.3.19	39.1.54	116.4.17	116.3.33	39.1.54	39.5.2.17	55.16.5	17.65	17.65	320.12.60	22.87	170.6.69	350.5000	3.80.8.36	CBVT-3-G20-0001-M
24	G 1-1/2 BSP	40	38.1.50	130.5.12	104.4.09	53.2.09	127.5.00	106.4.17	53.2.09	65.2.56	65.16.5	17.65	17.65	320.12.60	24.94	191.7.52	350.5000	6.20.13.64	CBVT-3-G24-0001-M
32	G 2 BSP	50	48.1.89	150.5.91	118.4.65	58.2.28	116.4.57	137.5.39	116.4.57	58.2.28	75.2.95	17.65	17.65	320.12.60	26.1.02	201.7.91	350.5000	7.80.17.16	CBVT-3-G32-0001-M

Please note the pressure ratings of the tube connections.



### High-Pressure Block Body Ball Valve ■ Type CBVT-3 T-Bore Three-Way Selector ■ Female NPT Thread (ANSI B1.20.1)

#### 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 (STAUFF Sizes 02 to 08)  
Carbon Steel (STAUFF Sizes 12 to 32)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

#### Pressure Inlet only from the Center Port

STAUFF Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)														Nom. Pressure (bar/psi)	Weight (kg/lbs)	Order Codes (Standard Option)
			LW	L	l	b	B	H	h	K	S	V	SW	K	i	H2			
02	1/8 NPT	4	5.20	69.272	40.157	13.51	29.114	47.185	33.130	13.5.53	34.5.136	11.43	9.35	115.4.53	10.5.41	82.3.23	500.7250	0.40.88	CBVT-3-N02-0001-M
04	1/4 NPT	6	6.24	69.272	40.157	13.51	29.114	47.185	33.130	13.5.53	34.5.136	11.43	9.35	115.4.53	13.7.54	82.3.23	500.7250	0.46.1.01	CBVT-3-N04-0001-M
06	3/8 NPT	10	10.39	72.283	43.169	16.63	35.138	52.2.05	38.1.50	17.5.69	36.1.42	11.43	9.35	115.4.53	13.5.53	87.3.42	500.7250	0.60.1.32	CBVT-3-N06-0001-M
08	1/2 NPT	13	13.51	83.3.27	48.1.89	17.5.69	38.1.50	54.2.13	40.1.57	19.7.5	41.5.1.63	11.43	9.35	115.4.53	17.89	89.3.50	500.7250	0.70.1.54	CBVT-3-N08-0001-M
12	3/4 NPT	20	20.79	95.3.74	62.2.44	24.5.96	52.2.05	75.2.95	57.2.24	39.96	55.1.87	11.43	14.55	170.6.69	18.3.72	126.4.96	315.4500	1.80.3.96	CBVT-3-N12-0001-M
16	1 NPT	25	25.98	113.4.45	66.2.60	29.1.14	61.2.40	83.3.27	65.2.56	29.5.1.16	56.5.2.22	14.55	14.55	170.6.69	21.6.85	134.5.73	315.4500	2.40.5.28	CBVT-3-N16-0001-M
20	1-1/4 NPT	32	30.1.18	120.4.72	81.3.19	39.1.54	127.5.00	127.4.17	39.1.54	39.5.2.17	55.16.5	17.65	17.65	320.12.60	22.1.87	170.6.69	350.5000	3.80.8.36	CBVT-3-N20-0001-M
24	1-1/2 NPT	40	38.1.50	140.5.51	104.4.09	53.2.09	127.5.00	106.4.17	53.2.09	65.2.56	65.16.5	17.65	17.65	320.12.60	22.1.87	191.7.52	350.5000	6.20.13.64	CBVT-3-N24-0001-M
32	2 NPT	50	48.1.89	150.5.91	118.4.65	58.2.28	116.4.57	137.5.39	116.4.57	58.2.28	75.2.95	17.65	17.65	320.12.60	30.2.1.19	201.7.91	350.5000	7.80.17.16	CBVT-3-N32-0001-M

Please note the pressure ratings of the tube connections.

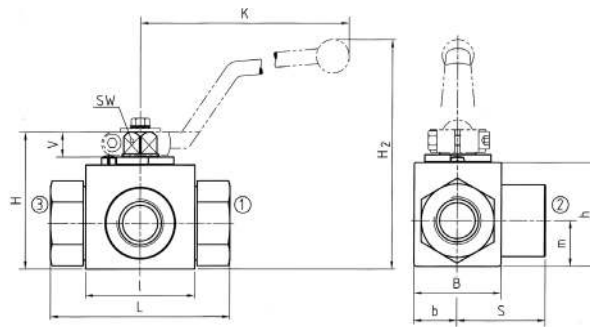
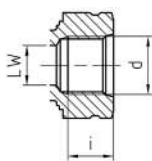


### High-Pressure Block Body Ball Valve - Type CBVT-3 T-Bore Three-Way Selector - Female UN/UNF Thread (SAE J 514)

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 (STAUFF Sizes 04 to 08)  
Carbon Steel (STAUFF Sizes 12 to 32)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

Female UN/UNF Thread (SAE J 514)

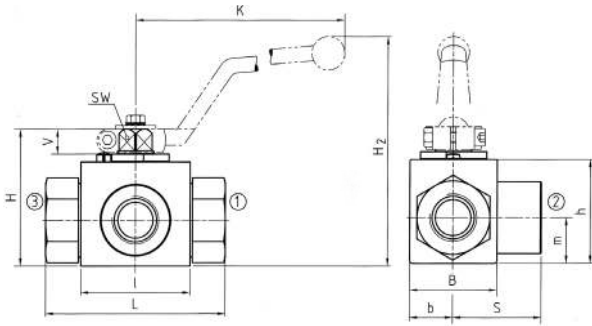


Pressure Inlet only from the Center Port

STAUFF Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)														Nom. Pressure (bar/psi)	Weight (kg/lbs)	Order Codes (Standard Option)
			LW	L	l	b	B	H	h	K	S	V	SW	K	i	H2			
04	7/16-20 UNF (1/4" SAE)	6	5	69	40	13	29	47	33	13,5	34,5	11	9	115	12	82	500	0,46	CBVT-3-U04-0001-M
			.20	2.72	1.57	.51	1.14	1.85	1.30	.53	1.36	.43	.35	4.53	.47	3.23	7250	1.01	
06	9/16-18 UNF (3/4" SAE)	10	10	72	43	16	35	52	38	17,5	36	11	9	115	13	87	500	0,60	CBVT-3-U06-0001-M
			.39	2.83	1.69	.63	1.38	2.05	1.50	.69	1.42	.43	.35	4.53	.51	3.42	7250	1.32	
08	3/4-16 UNF (1/2" SAE)	13	13	83	48	17,5	38	54	40	19	41,5	11	9	115	15	89	500	0,70	CBVT-3-U08-0001-M
			.51	3.27	1.89	.69	1.50	2.13	1.57	.75	1.63	.43	.35	4.53	.59	3.50	7250	1.54	
12	1-1/16-12 UN (3/4" SAE)	20	20	95	62	24,5	52	75	57	24,5	47,5	14	14	170	20	126	315	1,80	CBVT-3-U12-0001-M
			.79	3.74	2.44	.96	2.05	2.95	2.24	.96	1.87	.55	.55	6.69	.79	4.96	4500	3.96	
16	1-5/16-12 UN (1" SAE)	25	25	113	66	29	61	83	65	29,5	56,5	14	14	170	20	134	315	2,40	CBVT-3-U16-0001-M
			.98	4.45	2.60	1.14	2.40	3.27	2.56	1.16	2.22	.55	.55	6.69	.79	5.73	4500	5.28	
20	1-5/8-12 UN (1-1/4" SAE)	32	30	111	81	39		106	84,5	39	55	16,5	17	320	20	170	350	3,80	CBVT-3-U20-0001-M
			1.18	4.37	3.19	1.54		4.17	3.33	1.54	2.17	.65	.67	12.60	.79	6.69	5000	8.36	
24	1-7/8-12 UN (1-1/2" SAE)	40	38	130	104	53		127	106	53	65	16,5	17	320	20	191	350	6,20	CBVT-3-U24-0001-M
			1.50	5.12	4.09	2.09		5.00	4.17	2.09	2.56	.65	.67	12.60	.79	7.52	5000	13.64	
32	2-1/2-12 UN (2" SAE)	50	48	150	118	58	116	137	116	58	75	16,5	17	320	20	201	350	7,80	CBVT-3-U32-0001-M
			1.89	5.91	4.65	2.28	4.57	5.39	4.57	2.28	2.95	.65	.67	12.60	.79	7.91	5000	17.16	

Please note the pressure ratings of the tube connections.

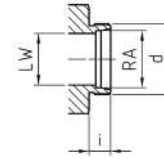




Union nuts and cutting rings are not included in delivery.

### High-Pressure Block Body Ball Valve ■ Type CBVT-3 T-Bore Three-Way Selector ■ 24° Cone Connection Light Series (DIN 2353 / ISO 8434-1)

**24° Cone Connection  
(DIN 2353 / ISO 8434-1)**



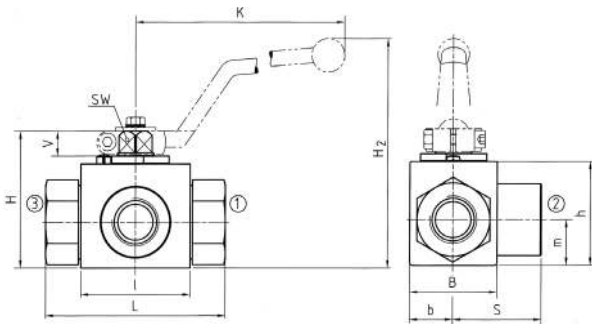
When ordering the standard option as indicated in the table below, the following materials will be supplied:

- Body, ball and stem: Carbon Steel
- Lever: Zinc (STAUFF Sizes 02 to 08)  
Carbon Steel (STAUFF Sizes 12 to 20R)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

#### Pressure Inlet only from the Center Port

STAUFF Size	Tube/Thread Size d	Nominal Size DN	Dimensions (mm/m)														Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Order Codes (Standard Option)	
			RA	LW	L	l	b	B	H	h	m	S	V	SW	K	i	H2			
02	06L / M12 x 1,5	4	6	5	67	40	13	29	47	33	13,5	33,5	11	9	115	10	82	500	0,30	CBVT-3-06L-0001-M
			.24	.20	2.64	1.57	.51	1.14	1.85	1.30	.53	1.32	.43	.35	4.53	.39	3.23	7250	.66	
04	08L / M14 x 1,5	6	8	6	67	40	13	29	47	33	13,5	33,5	11	9	115	10	82	500	0,40	CBVT-3-08L-0001-M
			.31	.24	2.64	1.57	.51	1.14	1.85	1.30	.53	1.32	.43	.35	4.53	.39	3.23	7250	.88	
05	10L / M16 x 1,5	8	10	6	74	40	13	29	47	33	13,5	34,5	11	9	115	11	82	500	0,40	CBVT-3-10L-0001-M
			.39	.24	2.91	1.57	.51	1.14	1.85	1.30	.53	1.36	.43	.35	4.53	.43	3.23	7250	.88	
06	12L / M18 x 1,5	10	12	10	74	43	16	35	52	38	17,5	36,5	11	9	115	11	87	500	0,50	CBVT-3-12L-0001-M
			.47	.39	2.91	1.69	.63	1.38	2.05	1.50	.69	1.44	.43	.35	4.53	.43	3.42	7250	1.10	
08	15L / M22 x 1,5	13	15	13	82	48	17,5	38	54	40	19	41,5	11	9	115	12	89	500	0,65	CBVT-3-15L-0001-M
			.59	.51	3.23	1.89	.69	1.50	2.13	1.57	.75	1.63	.43	.35	4.53	.47	3.50	7250	1.43	
08	18L / M26 x 1,5	13	18	13	82	48	17,5	38	54	40	19	41,5	11	9	115	12	89	500	0,69	CBVT-3-18L-0001-M
			.71	.51	2.23	1.89	.69	1.50	2.13	1.57	.75	1.63	.43	.35	4.53	.47	3.50	7250	1.52	
12	22L / M30 x 2	20	22	20	101	62	24,5	52	75	57	24,5	48	14	14	170	14	126	315	1,50	CBVT-3-22L-0001-M
			.87	.79	3.98	2.44	.96	2.05	2.95	2.24	.96	1.89	.55	.55	6.69	.55	4.96	4500	3.30	
16	28L / M36 x 2	25	28	25	108	66	29	61	83	65	29,5	54	14	14	170	14	134	315	2,10	CBVT-3-28L-0001-M
			1.10	.98	4.25	2.60	1.14	2.40	3.27	2.56	1.16	2.13	.55	.55	6.69	.55	5.73	4500	4.62	
20R	35L / M45 x 2	25/32	35	25	112	66	29	61	83	65	29,5	56	14	14	170	16	134	315	2,50	CBVT-3-35LDN25-0001-M
			1.38	.98	4.41	2.60	1.14	2.40	3.27	2.56	1.16	2.20	.55	.55	6.69	.63	5.73	4500	5.50	

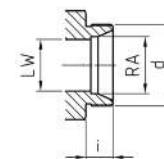
Please note the pressure ratings of the tube connections.



Union nuts and cutting rings are not included in delivery.

### High-Pressure Block Body Ball Valve ■ Type CBVT-3 T-Bore Three-Way Selector ■ 24° Cone Connection Heavy Series (DIN 2353 / ISO 8434-1)

**24° Cone Connection  
(DIN 2353 / ISO 8434-1)**



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 (STAUFF Sizes 02 to 08)  
Carbon Steel (STAUFF Sizes 12 to 20R)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

#### Pressure Inlet only from the Center Port

STAUFF Size	Tube/Thread Size d	Nominal Size DN	Dimensions (mm/m)														Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Order Codes (Standard Option)	
			RA	LW	L	l	b	B	H	h	m	S	V	SW	K	i	H2			
02	08S / M16 x 1,5	4	8	5	73	40	13	29	47	33	13,5	34,5	11	9	115	12	82	500	0,42	CBVT-3-08S-0001-M
			.31	.20	2.87	1.57	.51	1.14	1.85	1.30	.53	1.36	.43	.35	4.53	.47	3.23	7250	.92	
04	10S / M18 x 1,5	6	10	6	73	40	13	29	47	33	13,5	34,5	11	9	115	12	82	500	0,43	CBVT-3-10S-0001-M
			.39	.24	2.87	1.57	.51	1.14	1.85	1.30	.53	1.36	.43	.35	4.53	.47	3.23	7250	.95	
05	12S / M20 x 1,5	8	12	6	76	40	13	29	47	33	13,5	34,5	11	9	115	12	82	500	0,44	CBVT-3-12S-0001-M
			.47	.24	2.99	1.57	.51	1.14	1.85	1.30	.53	1.36	.43	.35	4.53	.47	3.23	7250	.97	
06	14S / M22 x 1,5	10	14	10	80	43	16	35	52	38	17,5	36,5	11	9	115	14	87	500	0,50	CBVT-3-14S-0001-M
			.55	.39	3.15	1.69	.63	1.38	2.05	1.50	.69	1.43	.43	.35	4.53	.55	3.42	7250	1.10	
08	16S / M24 x 1,5	13	16	13	86	48	17,5	38	54	40	19	43	11	9	115	14	89	500	0,65	CBVT-3-16S-0001-M
			.63	.51	3.39	1.89	.69	1.50	2.13	1.57	.75	1.69	.43	.35	4.53	.55	3.50	7250	1.43	
08	20S / M30 x 2	13	20	13	90	48	17,5	38	54	40	19	43	11	9	115	16	89	500	0,70	CBVT-3-20SDN13-0001-M
			.79	.51	3.54	1.89	.69	1.50	2.13	1.57	.75	1.69	.43	.35	4.53	.63	3.50	7250	1.54	
12	25S / M36 x 2	20	25	20	109	62	24,5	52	75	57	24,5	48	14	14	170	18	126	315	1,70	CBVT-3-25S-0001-M
			.98	.79	4.29	2.44	.96	2.05	2.95	2.24	.96	1.89	.55	.55	6.69	.71	4.96	4500	3.74	
16	30S / M42 x 2	25	30	25	120	66	29	61	83	65	29,5	57,5	14	14	170	20	134	315	2,40	CBVT-3-30S-0001-M
			1.18	.98	4.72	2.60	1.14	2.40	3.27	2.56	1.16	2.26	.55	.55	6.69	.79	5.73	4500	5.28	
20R	38S / M52 x 2	25/32	38	25	124	66	29	61	83	65	29,5	57,5	14	14	170	22	134	315	2,80	CBVT-3-38SDN25-0001-M
			1.50	.98	4.88	2.60	1.14	2.40	3.27	2.56	1.16	2.26	.55	.55	6.69	.87	5.73	4500	6.16	

Please note the pressure ratings of the tube connections.



## High-Pressure Block Body Ball Valve - Type CBVL-3-C

B



### Characteristics

Compact three-way high-pressure block body ball valves designed for use as three-way selectors (L-bore, 90° operation) for hydraulic applications

#### Standard Construction

- Block body design for in-line assembly
- Compact diverter style
- 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

- 6000 PSI (code 62) direct SAE flange connection
- Metric ISO and unified coarse (UNC) threads

#### Pressure inlet only from the center port!

#### 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 flange and pipe/tubing rating.**

#### Temperature Range

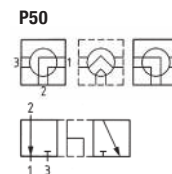
- Operating temperature range: -20 °C ... +100 °C / -4 °F ... + 212 °F

#### Options / Accessories

- Flanges and flange kits (see catalogue STAUFF Flanges)
- Alternative lever designs/materials (see page 114)
- Locking devices (see pages 115-117)
- Actuator packages (see page 118)
- Limit switches (see page 118)
- Stainless Steel body
- Stainless Steel ball and stem
- Special ball seat and O-ring materials available for lower/higher temperatures and more aggressive media

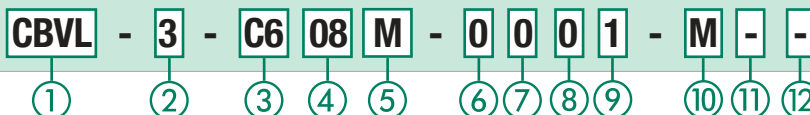
#### Porting Pattern

- Symbol : L
- Overlap: negative
- Operating: 90°



- Stop of end position:

### Order Codes



#### ① Type

Compact High-Pressure Block Body Ball Valve **CBVL**

#### ② Number of Ports

Three Ports (Three-Way Ball Valve) **3**

#### ③ Connection Style

6000 PSI (Code 62)  
SAE Direct Flange Connection **C6**

Please contact STAUFF for alternative connection styles.

#### ④ Connection Size

STAUFF Size (according to dimension table):  
**08 12 16 20 24 32**

Please contact STAUFF for alternative connection sizes.

#### ⑤ Thread Type

Flange Connection with Metric ISO Threads **M**  
Flange Connection with Unified Coarse (UNC) Threads **U**

#### ⑥ Body Material / Surface Finishing

Carbon Steel, zinc/iron-plated **0**  
Stainless Steel V4A (AISI 316Ti) **1**

Alternative materials / surface finishings are available upon request. Contact STAUFF for further information.

#### ⑦ 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. Contact STAUFF for further information.

#### ⑧ Ball Seat Material

Delrin® (POM) **0**

Alternative materials are available upon request. Contact STAUFF for further information.

#### ⑨ O-Ring Material

NBR (Buna-N®) **0**  
FKM (Viton®) **1**  
EPDM **3**

Alternative materials are available upon request. Contact STAUFF for further information.

#### ⑩ Manufacturing Code

Manufacturing code for all connection styles **M**

#### ⑪ Lever Options

Supplied with standard lever (according to table) **—**  
Supplied without lever **O**

Alternative levers can be ordered separately. Please see page 114 for further information.

#### ⑫ Accessories / Options

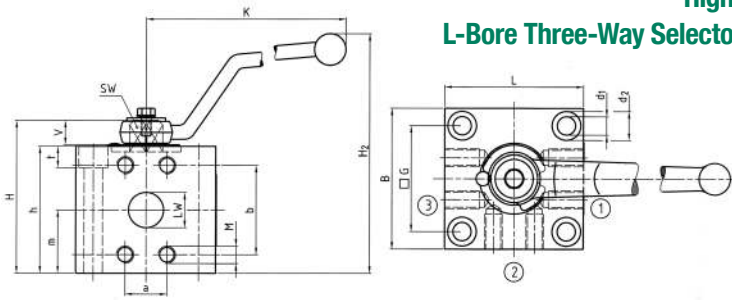
Supplied without accessories **—**  
Supplied with Locking Device LD4 **LD4**

Please see page 115-119 for further information and options.





## High-Pressure Block Body Ball Valve - Type CBVL-3-C L-Bore Three-Way Selector - 6000 PSI SAE 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: Carbon Steel
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

B

### 6000 PSI Series (Code 62) - Metric ISO Threads

STAUFF Size	SAE Flange Size	Nominal Size DN	Dimensions (mm/in)													Nom. Pressure (PSI)	Weight (kg/lbs)	Order Codes (Standard Option)				
			LW	L	B	H	h	m	V	SW	K	a	b	M								
08	1/2	13	13	70	70	63	56	28	11	9	115	18,2	40,5	M8	43	8,5	13,5	9	101	420	2,00	CBVL-3-C608M-0001-M
			.51	2.76	2.76	2.48	2.20	1.10	.43	.35	4.53	.72	1.59		1.69	.33	.53	.35	3.98	6000	4.40	
12	3/4	20	20	80	80	87	72	36	14	14	170	23,8	50,8	M10	60	10,5	16,5	11	137	420	3,40	CBVL-3-C612M-0001-M
			.79	3.15	3.15	3.43	2.83	1.42	.55	.55	6.69	.94	2.00		2.36	.41	.65	.43	5.39	6000	7.48	
16	1	25	25	94	94	96	81	42	14	14	170	27,8	57,2	M12	70	10,5	16,5	11	147	420	5,40	CBVL-3-C616M-0001-M
			.98	3.70	3.70	3.78	3.19	1.65	.55	.55	6.69	1.09	2.25		2.76	.41	.65	.43	5.79	6000	11.88	
20	1-1/4	32	30	100	100	117	100	50,5	16,5	17	306	31,8	66,6	M12	76	13	19	13	181	420	6,80	CBVL-3-C620M-0001-M
			1.18	3.94	3.94	4.61	3.94	1.99	.65	.67	12.05	1.25	2.62		2.99	.51	.75	.51	7.13	6000	14.96	
24	1-1/2	40	32	110	110	136	115	55	16,5	17	306	36,5	79,4	M16	84	13	19	13	193	420	10,20	CBVL-3-C624M-0001-M
			1.26	4.33	4.33	5.35	4.53	2.17	.65	.67	12.05	1.44	3.13		3.31	.51	.75	.51	7.60	6000	22.44	
32	2	50	48	135	135	147	135	67,5	16,5	17	306	44,5	96,8	M20	108	13	19	13	211	420	18,50	CBVL-3-C632M-0001-M
			1.89	5.31	5.31	5.79	5.31	2.66	.65	.67	12.05	1.75	3.81		4.25	.51	.75	.51	8.31	6000	40.70	

### 6000 PSI Series (Code 62) - Unified Coarse (UNC) Threads

STAUFF Size	SAE Flange Size	Nominal Size DN	Dimensions (mm/in)													Nom. Pressure (PSI)	Weight (kg/lbs)	Order Codes (Standard Option)				
			LW	L	B	H	h	m	V	SW	K	a	b	M								
08	1/2	13	13	70	70	63	56	28	11	9	115	18,2	40,5	5/16-18 UNC	43	8,5	13,5	9	101	420	2,00	CBVL-3-C608U-0001-M
			.51	2.76	2.76	2.48	2.20	1.10	.43	.35	4.53	.72	1.59		1.69	.33	.53	.35	3.98	6000	4.40	
12	3/4	20	20	80	80	87	72	36	14	14	170	23,8	50,8	3/8-16 UNC	60	10,5	16,5	11	137	420	3,40	CBVL-3-C612U-0001-M
			.79	3.15	3.15	3.43	2.83	1.42	.55	.55	6.69	.94	2.00		2.36	.41	.65	.43	5.39	6000	7.48	
16	1	25	25	94	94	96	81	42	14	14	170	27,8	57,2	7/16-14 UNC	70	10,5	16,5	11	147	420	5,40	CBVL-3-C616U-0001-M
			.98	3.70	3.70	3.78	3.19	1.65	.55	.55	6.69	1.09	2.25		2.76	.41	.65	.43	5.79	6000	11.88	
20	1-1/4	32	30	100	100	117	100	50,5	16,5	17	306	31,8	66,6	1/2-13 UNC	76	13	19	13	181	420	6,80	CBVL-3-C620U-0001-M
			1.18	3.94	3.94	4.61	3.94	1.99	.65	.67	12.05	1.25	2.62		2.99	.51	.75	.51	7.13	6000	14.96	
24	1-1/2	40	32	110	110	136	115	55	16,5	17	306	36,5	79,4	5/8-11 UNC	84	13	19	13	193	420	10,20	CBVL-3-C624U-0001-M
			1.26	4.33	4.33	5.35	4.53	2.17	.65	.67	12.05	1.44	3.13		3.31	.51	.75	.51	7.60	6000	22.44	
32	2	50	48	135	135	147	135	67,5	16,5	17	306	44,5	96,8	3/4-10 UNC	108	13	19	13	211	420	18,50	CBVL-3-C632U-0001-M
			1.89	5.31	5.31	5.79	5.31	2.66	.65	.67	12.05	1.75	3.81		4.25	.51	.75	.51	8.31	6000	40.70	

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

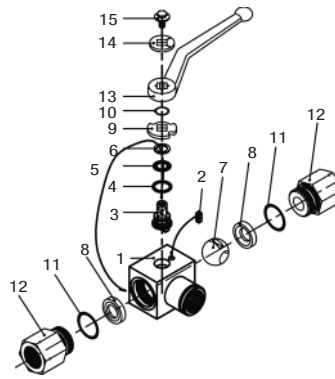


## High-Pressure Block Body Ball Valve - Type CBVSL-3

B



Pressure inlet possible from all ports!



### List of Components

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

### Characteristics

Compact three-way high-pressure block body ball valves designed for use as three-way selectors (L-bore, 90° operation) for hydraulic applications

#### Standard Construction

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

#### Standard Materials

- Body: Carbon Steel, zinc/iron-plated
- Ball: Carbon Steel, hard chrome-plated
- Stem: Carbon Steel
- Lever: Zinc (STAUFF Sizes 02 to 08)  
Carbon Steel (STAUFF Sizes 12 to 32)
- Ball seat: Delrin® (POM) Frontside Sealing
- 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 NPT
- Female UN/UNF thread (SAE J 514) >2-1/2-12 UN (2" SAE)
- 24° Cone Connection (DIN 2353 / ISO 8434-1) >35L
- 24° Cone Connection (DIN 2353 / ISO 8434-1) >38S

**Pressure inlet possible from all ports!**  
**Must be operated without pressure!**

#### 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

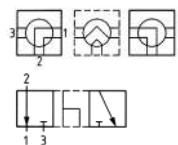
#### Options / Accessories

- Alternative lever designs/materials (see page 114)
- Locking devices (see pages 115-117)
- Actuator packages (see page 118)
- Limit switches (see page 118)
- Additional assembling threads / holes (see page 119)
- 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)

#### Porting Pattern

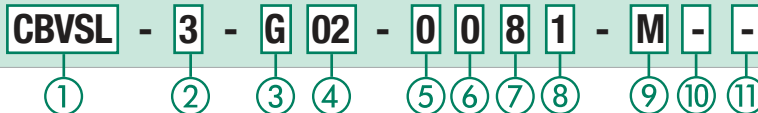
- Symbol: L
- Overlap: negative
- Operating: 90°

P55



- Stop of end position:

### Order Codes



#### ① Type

Compact High-Pressure Block Body Ball Valve with Pressure Inlet Possible from all Ports **CBVSL**

#### ② Number of Ports

Three Ports (Three-Way Ball Valve) **3**

#### ③ Connection Style

Female BSP Thread (DIN ISO 228) **G**  
Female NPT Thread (ANSI B1.20.1) **N**  
Female UN/UNF Thread (SAE J 514) **U**  
24° Cone Connection (Light / Heavy Series) **—**

Please contact STAUFF for alternative connection styles.

#### ④ Connection Size

STAUFF Size (according to dimension table) for connection styles G, N and U:

**02 04 06 08 12 16 20 24 32**

Tube Size (according to dimension table) for 24° Cone Connection (Light Series):

**06L 08L 10L 12L 15L 18L 22L 28L 35L**

Tube Size (according to dimension table) for 24° Cone Connection (Heavy Series):

**08S 10S 12S 14S 16S 20S 25S 30S 38S**

Please contact STAUFF for alternative connection sizes.

#### 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. Contact STAUFF for further information.

#### ⑥ Ball / Stem Material

Ball: Carbon Steel, hard chrome-plated **0**  
Stem: Carbon Steel **0**  
Ball / Stem: Stainless Steel V4A (AISI 316Ti) **1**

Alternative materials / surface finishings are available upon request. Contact STAUFF for further information.

#### ⑦ Ball Seat Material

Delrin® (POM) Frontside Sealing **8**

Alternative materials are available upon request. Contact STAUFF for further information.

#### ⑧ O-Ring Material

NBR (Buna-N®) **0**  
FKM (Viton®) **1**  
EPDM **3**

Alternative materials are available upon request. Contact STAUFF for further information.

#### ⑨ Manufacturing Code

Manufacturing code for all connection styles **M**

#### ⑩ Lever Options

Supplied with standard lever (according to table) **—**  
Supplied without lever **O**

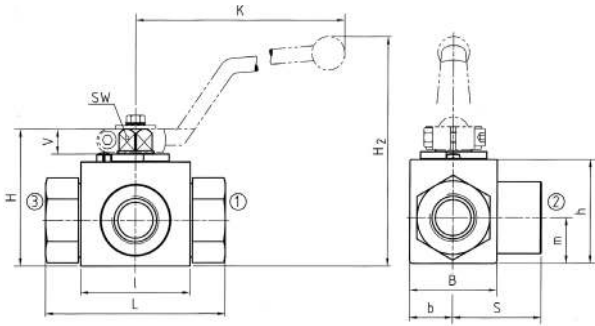
Alternative levers can be ordered separately. Please see page 114 for further information.

#### ⑪ Accessories / Options

Supplied without accessories **—**  
Supplied with Locking Device LD1 **LD1**  
Supplied with Locking Device LD4 **LD4**

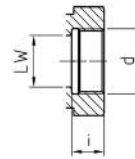
Please see page 115-119 for further information and options.





### High-Pressure Block Body Ball Valve ▪ Type CBVSL-3 L-Bore Three-Way Selector ▪ Female BSP Thread (DIN ISO 228)

#### Female BSP Thread (DIN ISO 228)



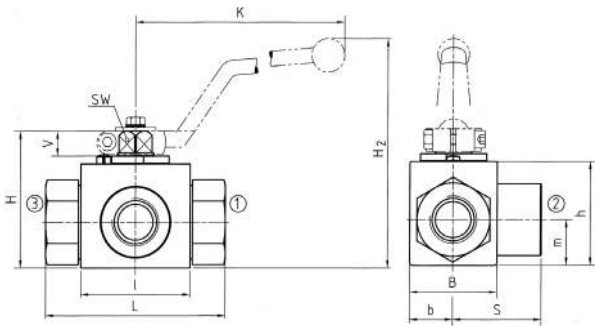
When ordering the standard option as indicated in the table below, the following materials will be supplied:

- Body, ball and stem: Carbon Steel
- Lever: Zinc (STAUFF Sizes 02 to 08)  
Carbon Steel (STAUFF Sizes 12 to 32)
- Ball seat: Delrin® (POM) Frontside Sealing
- O-rings: FKM (Viton®)

#### Pressure Inlet possible from all Ports

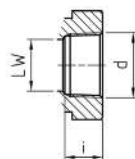
STAUFF Size	Thread Size d	Nominal Size DN	Dimensions (mm/m)														Nom. Pressure (bar/psi)	Weight (kg/lbs)	Order Codes (Standard Option)
			LW	L	l	b	B	H	h	m	S	V	SW	K	i	H2			
02	G 1/8 BSP	4	5.20	69.272	40.157	13.51	29.114	47.185	33.130	13.5.53	34.5.136	11.43	9.35	115.4.53	10.39	82.3.23	500.7250	0.40.88	CBVSL-3-G02-0081-M
04	G 1/4 BSP	6	6.24	69.272	40.157	13.51	29.114	47.185	33.130	13.5.53	34.5.136	11.43	9.35	115.4.53	14.55	82.3.23	500.7250	0.46.1.01	CBVSL-3-G04-0081-M
06	G 3/8 BSP	10	10.39	72.283	43.169	16.63	35.138	52.2.05	38.1.50	17.5.69	36.1.42	11.43	9.35	115.4.53	14.55	87.3.42	500.7250	0.60.1.32	CBVSL-3-G06-0081-M
08	G 1/2 BSP	13	13.51	83.3.27	48.1.89	17.5.69	38.1.50	54.2.13	40.1.57	19.7.5	41.5.1.63	11.43	9.35	115.4.53	16.3.64	89.3.50	315.4500	0.70.1.54	CBVSL-3-G08-0081-M
12	G 3/4 BSP	20	20.79	95.3.74	62.2.44	24.5.96	52.2.05	75.2.95	57.2.24	39.96	55.1.87	14.55	14.55	170.6.69	18.71	126.4.96	315.4500	1.80.3.96	CBVSL-3-G12-0081-M
16	G 1 BSP	25	25.98	113.4.45	66.2.60	29.1.14	61.2.40	83.3.27	65.2.56	29.5.1.16	56.5.2.22	14.55	14.55	170.6.69	20.79	134.5.73	315.4500	2.40.5.28	CBVSL-3-G16-0081-M
20	G 1-1/4 BSP	32	30.1.18	111.4.37	81.3.19	39.1.54	116.4.17	116.3.33	39.1.54	55.2.17	55.2.17	17.65	17.65	320.12.60	22.87	170.6.69	350.5000	3.80.8.36	CBVSL-3-G20-0081-M
24	G 1-1/2 BSP	40	38.1.50	130.5.12	104.4.09	53.2.09	127.5.00	127.4.17	106.2.09	53.2.56	65.2.56	17.65	17.65	320.12.60	24.94	191.7.52	350.5000	6.20.13.64	CBVSL-3-G24-0081-M
32	G 2 BSP	50	48.1.89	150.5.91	118.4.65	58.2.28	116.4.57	137.5.39	116.4.57	58.2.28	75.2.95	17.65	17.65	320.12.60	26.1.02	201.7.91	350.5000	7.80.17.16	CBVSL-3-G32-0081-M

Please note the pressure ratings of the tube connections.



### High-Pressure Block Body Ball Valve ▪ Type CBVSL-3 L-Bore Three-Way Selector ▪ Female NPT Thread (ANSI B1.20.1)

#### 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 (STAUFF Sizes 02 to 08)  
Carbon Steel (STAUFF Sizes 12 to 32)
- Ball seat: Delrin® (POM) Frontside Sealing
- O-rings: FKM (Viton®)

#### Pressure Inlet possible from all Ports

STAUFF Size	Thread Size d	Nominal Size DN	Dimensions (mm/m)														Nom. Pressure (bar/psi)	Weight (kg/lbs)	Order Codes (Standard Option)
			LW	L	l	b	B	H	h	K	S	V	SW	K	i	H2			
02	1/8 NPT	4	5.20	69.272	40.157	13.51	29.114	47.185	33.130	13.5.53	34.5.136	11.43	9.35	115.4.53	10.5.41	82.3.23	500.7250	0.40.88	CBVSL-3-N02-0081-M
04	1/4 NPT	6	6.24	69.272	40.157	13.51	29.114	47.185	33.130	13.5.53	34.5.136	11.43	9.35	115.4.53	13.7.54	82.3.23	500.7250	0.46.1.01	CBVSL-3-N04-0081-M
06	3/8 NPT	10	10.39	72.283	43.169	16.63	35.138	52.2.05	38.1.50	17.5.69	36.1.42	11.43	9.35	115.4.53	13.5.53	87.3.42	500.7250	0.60.1.32	CBVSL-3-N06-0081-M
08	1/2 NPT	13	13.51	83.3.27	48.1.89	17.5.69	38.1.50	54.2.13	40.1.57	19.7.5	41.5.1.63	11.43	9.35	115.4.53	17.89	89.3.50	315.4500	0.70.1.54	CBVSL-3-N08-0081-M
12	3/4 NPT	20	20.79	95.3.74	62.2.44	24.5.96	52.2.05	75.2.95	57.2.24	39.96	55.1.87	14.55	14.55	170.6.69	18.3.72	126.4.96	315.4500	1.80.3.96	CBVSL-3-N12-0081-M
16	1 NPT	25	25.98	113.4.45	66.2.60	29.1.14	61.2.40	83.3.27	65.2.56	29.5.1.16	56.5.2.22	14.55	14.55	170.6.69	21.6.85	134.5.73	315.4500	2.40.5.28	CBVSL-3-N16-0081-M
20	1-1/4 NPT	32	30.1.18	120.4.72	81.3.19	39.1.54	127.5.00	127.4.17	106.2.09	53.2.56	65.2.56	17.65	17.65	320.12.60	22.1.87	170.6.69	350.5000	3.80.8.36	CBVSL-3-N20-0081-M
24	1-1/2 NPT	40	38.1.50	140.5.51	104.4.09	53.2.09	127.5.00	127.4.17	106.2.09	53.2.56	65.2.56	17.65	17.65	320.12.60	22.1.87	191.7.52	350.5000	6.20.13.64	CBVSL-3-N24-0081-M
32	2 NPT	50	48.1.89	150.5.91	118.4.65	58.2.28	116.4.57	137.5.39	116.4.57	58.2.28	75.2.95	17.65	17.65	320.12.60	30.2.1.19	201.7.91	350.5000	7.80.17.16	CBVSL-3-N32-0081-M

Please note the pressure ratings of the tube connections.

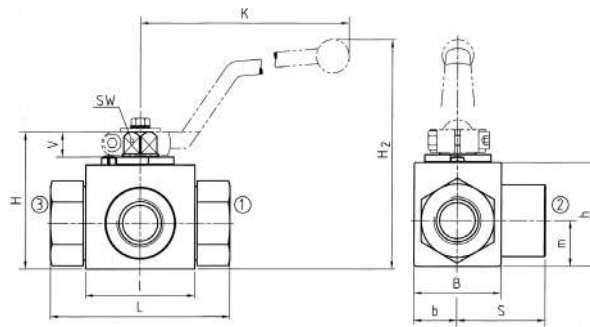
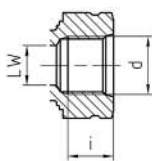


## High-Pressure Block Body Ball Valve - Type CBVSL-3 L-Bore Three-Way Selector - Female UN/UNF Thread (SAE J 514)

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 (STAUFF Sizes 04 to 08)  
Carbon Steel (STAUFF Sizes 12 to 32)
- Ball seat: Delrin® (POM) Frontside Sealing
- O-rings: FKM (Viton®)

Female UN/UNF Thread  
(SAE J 514)

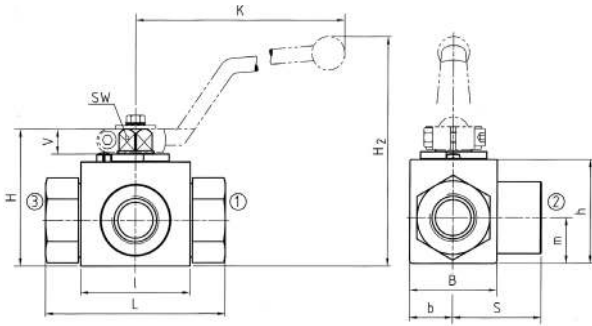


Pressure Inlet possible from all Ports

STAUFF Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)														Nom. Pressure (bar/psi)	Weight (kg/lbs)	Order Codes (Standard Option)
			LW	L	l	b	B	H	h	K	S	V	SW	K	i	H2			
04	7/16-20 UNF (1/4" SAE)	6	5	69	40	13	29	47	33	13,5	34,5	11	9	115	12	82	500	0,46	CBVSL-3-U04-0081-M
			.20	2.72	1.57	.51	1.14	1.85	1.30	.53	1.36	.43	.35	4.53	.47	3.23	7250	1.01	
06	9/16-18 UNF (3/8" SAE)	10	10	72	43	16	35	52	38	17,5	36	11	9	115	13	87	500	0,60	CBVSL-3-U06-0081-M
			.39	2.83	1.69	.63	1.38	2.05	1.50	.69	1.42	.43	.35	4.53	.51	3.42	7250	1.32	
08	3/4-16 UNF (1/2" SAE)	13	13	83	48	17,5	38	54	40	19	41,5	11	9	115	15	89	315	0,70	CBVSL-3-U08-0081-M
			.51	3.27	1.89	.69	1.50	2.13	1.57	.75	1.63	.43	.35	4.53	.59	3.50	4500	1.54	
12	1-1/16-12 UN (3/4" SAE)	20	20	95	62	24,5	52	75	57	24,5	47,5	14	14	170	20	126	315	1,80	CBVSL-3-U12-0081-M
			.79	3.74	2.44	.96	2.05	2.95	2.24	.96	1.87	.55	.55	6.69	.79	4.96	4500	3.96	
16	1-5/16-12 UN (1" SAE)	25	25	113	66	29	61	83	65	29,5	56,5	14	14	170	20	134	315	2,40	CBVSL-3-U16-0081-M
			.98	4.45	2.60	1.14	2.40	3.27	2.56	1.16	2.22	.55	.55	6.69	.79	5.73	4500	5.28	
20	1-5/8-12 UN (1-1/4" SAE)	32	30	111	81	39		106	84,5	39	55	16,5	17	320	20	170	350	3,80	CBVSL-3-U20-0081-M
			1.18	4.37	3.19	1.54		4.17	3.33	1.54	2.17	.65	.67	12.60	.79	6.69	5000	8.36	
24	1-7/8-12 UN (1-1/2" SAE)	40	38	130	104	53		127	106	53	65	16,5	17	320	20	191	350	6,20	CBVSL-3-U24-0081-M
			1.50	5.12	4.09	2.09		5.00	4.17	2.09	2.56	.65	.67	12.60	.79	7.52	5000	13.64	
32	2-1/2-12 UN (2" SAE)	50	48	150	118	58	116	137	116	58	75	16,5	17	320	20	201	350	7,80	CBVSL-3-U32-0081-M
			1.89	5.91	4.65	2.28	4.57	5.39	4.57	2.28	2.95	.65	.67	12.60	.79	7.91	5000	17.16	

Please note the pressure ratings of the tube connections.

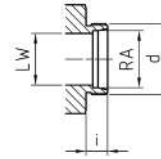




Union nuts and cutting rings are not included in delivery.

### High-Pressure Block Body Ball Valve - Type CBVSL-3 L-Bore Three-Way Selector - 24° Cone Connection Light Series (DIN 2353 / ISO 8434-1)

**24° Cone Connection  
(DIN 2353 / ISO 8434-1)**



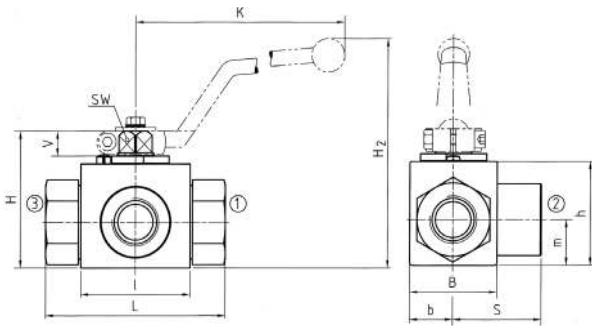
When ordering the standard option as indicated in the table below, the following materials will be supplied:

- Body, ball and stem: Carbon Steel
- Lever: Zinc (STAUFF Sizes 02 to 08)  
Carbon Steel (STAUFF Sizes 12 to 20R)
- Ball seat: Delrin® (POM) Frontside Sealing
- O-rings: FKM (Viton®)

**Pressure Inlet possible from all Ports**

STAUFF Size	Tube/Thread Size d	Nominal Size DN	Dimensions (mm/m)														Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Order Codes (Standard Option)	
			RA	LW	L	l	b	B	H	h	m	S	V	SW	K	i	H2			
02	06L / M12 x 1,5	4	6 .24	5 .20	67 2.64	40 1.57	13 .51	29 1.14	47 1.85	33 1.30	13,5 .53	33,5 1.32	11 .43	9 .35	115 4.53	10 .39	82 3.23	500 7250	0,30 .66	CBVSL-3-06L-0081-M
04	08L / M14 x 1,5	6	8 .31	6 .24	67 2.64	40 1.57	13 .51	29 1.14	47 1.85	33 1.30	13,5 .53	33,5 1.32	11 .43	9 .35	115 4.53	10 .39	82 3.23	500 7250	0,40 .88	CBVSL-3-08L-0081-M
05	10L / M16 x 1,5	8	10 .39	6 .24	74 2.91	40 1.57	13 .51	29 1.14	47 1.85	33 1.30	13,5 .53	34,5 1.36	11 .43	9 .35	115 4.53	11 .43	82 3.23	500 7250	0,40 .88	CBVSL-3-10L-0081-M
06	12L / M18 x 1,5	10	12 .47	10 .39	74 2.91	43 1.69	16 .63	35 1.38	52 2.05	38 1.50	17,5 .69	36,5 1.44	11 .43	9 .35	115 4.53	11 .43	87 3.42	500 7250	0,50 1.10	CBVSL-3-12L-0081-M
08	15L / M22 x 1,5	13	15 .59	13 .51	82 3.23	48 1.89	17,5 .69	38 1.50	54 2.13	40 1.57	20,5 .75	41,5 1.63	11 .43	9 .35	115 4.53	12 .47	89 3.50	315 4500	0,65 1.43	CBVSL-3-15L-0081-M
08	18L / M26 x 1,5	13	18 .71	13 .51	82 2.23	48 1.89	17,5 .69	38 1.50	54 2.13	40 1.57	20,5 .75	41,5 1.63	11 .43	9 .35	115 4.53	12 .47	89 3.50	315 4500	0,69 1.52	CBVSL-3-18L-0081-M
12	22L / M30 x 2	20	22 .87	20 .79	101 3.98	62 2.44	24,5 .96	52 2.05	75 2.95	57 2.24	24,5 .96	48 1.89	14 .55	14 .55	170 6.69	14 .55	126 4.96	315 4500	1,50 3.30	CBVSL-3-22L-0081-M
16	28L / M36 x 2	25	28 1.10	25 .98	108 4.25	66 2.60	29 1.14	61 2.40	83 3.27	65 2.56	29,5 1.16	54 2.13	14 .55	14 .55	170 6.69	14 .55	134 5.73	315 4500	2,10 4.62	CBVSL-3-28L-0081-M
20R	35L / M45 x 2	25/32	35 1.38	25 .98	112 4.41	66 2.60	29 1.14	61 2.40	83 3.27	65 2.56	29,5 1.16	56 2.20	14 .55	14 .55	170 6.69	16 .63	134 5.73	315 4500	2,50 5.50	CBVSL-3-35LDN25-0081-M

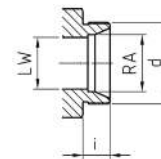
Please note the pressure ratings of the tube connections.



Union nuts and cutting rings are not included in delivery.

### High-Pressure Block Body Ball Valve - Type CBVSL-3 L-Bore Three-Way Selector - 24° Cone Connection Heavy Series (DIN 2353 / ISO 8434-1)

**24° Cone Connection  
(DIN 2353 / ISO 8434-1)**



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 (STAUFF Sizes 02 to 08)  
Carbon Steel (STAUFF Sizes 12 to 20R)
- Ball seat: Delrin® (POM) Frontside Sealing
- O-rings: FKM (Viton®)

**Pressure Inlet possible from all Ports**

STAUFF Size	Tube/Thread Size d	Nominal Size DN	Dimensions (mm/m)														Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Order Codes (Standard Option)	
			RA	LW	L	l	b	B	H	h	m	S	V	SW	K	i	H2			
02	08S / M16 x 1,5	4	8 .31	5 .20	73 2.87	40 1.57	13 .51	29 1.14	47 1.85	33 1.30	13,5 .53	34,5 1.36	11 .43	9 .35	115 4.53	12 .47	82 3.23	500 7250	0,42 .92	CBVSL-3-08S-0081-M
04	10S / M18 x 1,5	6	10 .39	6 .24	73 2.87	40 1.57	13 .51	29 1.14	47 1.85	33 1.30	13,5 .53	34,5 1.36	11 .43	9 .35	115 4.53	12 .47	82 3.23	500 7250	0,43 .95	CBVSL-3-10S-0081-M
05	12S / M20 x 1,5	8	12 .47	6 .24	76 2.99	40 1.57	13 .51	29 1.14	47 1.85	33 1.30	13,5 .53	34,5 1.36	11 .43	9 .35	115 4.53	12 .47	82 3.23	500 7250	0,44 .97	CBVSL-3-12S-0081-M
06	14S / M22 x 1,5	10	14 .55	10 .39	80 3.15	43 1.69	16 .63	35 1.38	52 2.05	38 1.50	17,5 .69	36,5 1.43	11 .43	9 .35	115 4.53	14 .55	87 3.42	500 7250	0,50 1.10	CBVSL-3-14S-0081-M
08	16S / M24 x 1,5	13	16 .63	13 .51	86 3.39	48 1.89	17,5 .69	38 1.50	54 2.13	40 1.57	20,5 .75	43 1.69	11 .43	9 .35	115 4.53	14 .55	89 3.50	315 4500	0,65 1.43	CBVSL-3-16S-0081-M
08	20S / M30 x 2	13	20 .79	13 .51	90 3.54	48 1.89	17,5 .69	38 1.50	54 2.13	40 1.57	20,5 .75	43 1.69	11 .43	9 .35	115 4.53	16 .63	89 3.50	315 4500	0,70 1.54	CBVSL-3-20SDN13-0081-M
12	25S / M36 x 2	20	25 .98	20 .79	109 4.29	62 2.44	24,5 .96	52 2.05	75 2.95	57 2.24	24,5 .96	48 1.89	14 .55	14 .55	170 6.69	18 .71	126 4.96	315 4500	1,70 3.74	CBVSL-3-25S-0081-M
16	30S / M42 x 2	25	30 1.18	25 .98	120 4.72	66 2.60	29 1.14	61 2.40	83 3.27	65 2.56	29,5 1.16	57,5 2.26	14 .55	14 .55	170 6.69	20 .79	134 5.73	315 4500	2,40 5.28	CBVSL-3-30S-0081-M
20R	38S / M52 x 2	25/32	38 1.50	25 .98	124 4.88	66 2.60	29 1.14	61 2.40	83 3.27	65 2.56	29,5 1.16	57,5 2.26	14 .55	14 .55	170 6.69	22 .87	134 5.73	315 4500	2,80 6.16	CBVSL-3-38SDN25-0081-M

Please note the pressure ratings of the tube connections.



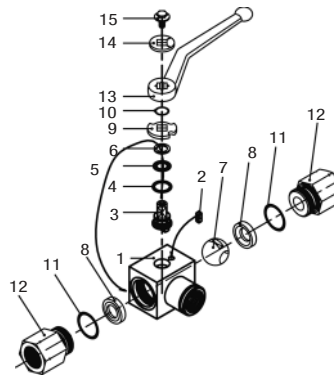


## High-Pressure Block Body Ball Valve - Type CBVST-3

### List of Components



Pressure inlet possible from all ports!



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

### Characteristics

Compact three-way high-pressure block body ball valves designed for use as three-way selectors (T-bore, 90° operation) for hydraulic applications

#### Standard Construction

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

#### Standard Materials

- Body: Carbon Steel, zinc/iron-plated
- Ball: Carbon Steel, hard chrome-plated
- Stem: Carbon Steel
- Lever: Zinc (STAUFF Sizes 02 to 08)  
Carbon Steel (STAUFF Sizes 12 to 32)
- Ball seat: Delrin® (POM) Frontside Sealing
- 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 NPT
- Female UN/UNF thread (SAE J 514) >2-1/2-12 UN (2" SAE)
- 24° Cone Connection (DIN 2353 / ISO 8434-1) >35L
- 24° Cone Connection (DIN 2353 / ISO 8434-1) >38S

**Pressure inlet possible from all ports!**  
**Must be operated without pressure!**

#### 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 (see page 114)
- Locking devices (see pages 115-117)
- Actuator packages (see page 118)
- Limit switches (see page 118)
- Additional assembling threads / holes (see page 119)
- 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)

#### Porting Pattern

- Symbol: T
- Overlap: negative
- Operating: 90°

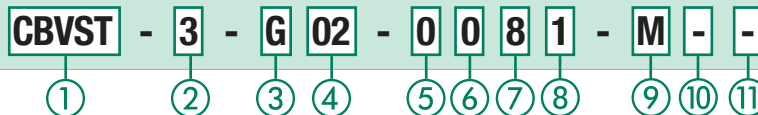
P56



- Stop of end position:



### Order Codes



#### ① Type

Compact High-Pressure Block Body Ball Valve with Pressure Inlet Possible from all Ports **CBVST**

#### ② Number of Ports

Three Ports (Three-Way Ball Valve) **3**

#### ③ Connection Style

Female BSP Thread (DIN ISO 228) **G**  
 Female NPT Thread (ANSI B1.20.1) **N**  
 Female UN/UNF Thread (SAE J 514) **U**  
 24° Cone Connection (Light / Heavy Series) **—**

Please contact STAUFF for alternative connection styles.

#### ④ Connection Size

STAUFF Size (according to dimension table) for connection styles G, N and U:

**02 04 06 08 12 16 20 24 32**

Tube Size (according to dimension table) for 24° Cone Connection (Light Series):

**06L 08L 10L 12L 15L 18L 22L 28L 35L**

Tube Size (according to dimension table) for 24° Cone Connection (Heavy Series):

**08S 10S 12S 14S 16S 20S 25S 30S 38S**

Please contact STAUFF for alternative connection sizes.

#### 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. Contact STAUFF for further information.

#### 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. Contact STAUFF for further information.

#### ⑦ Ball Seat Material

Delrin® (POM) Frontside Sealing **8**

Alternative materials are available upon request. Contact STAUFF for further information.

#### ⑧ O-Ring Material

NBR (Buna-N®) **0**  
 FKM (Viton®) **1**  
 EPDM **3**

Alternative materials are available upon request. Contact STAUFF for further information.

#### ⑨ Manufacturing Code

Manufacturing code for all connection styles **M**

#### ⑩ Lever Options

Supplied with standard lever (according to table) **—**  
 Supplied without lever **O**

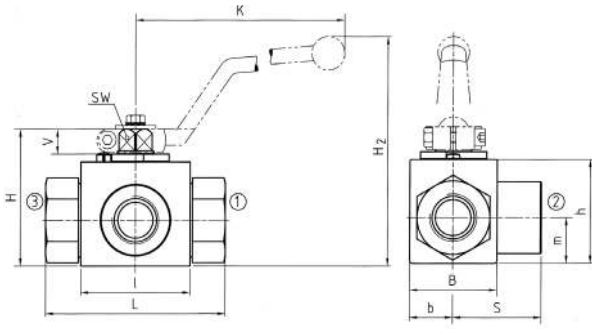
Alternative levers can be ordered separately. Please see page 114 for further information.

#### ⑪ Accessories / Options

Supplied without accessories **—**  
 Supplied with Locking Device LD1 **LD1**  
 Supplied with Locking Device LD4 **LD4**

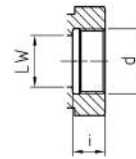
Please see page 115-119 for further information and options.





### High-Pressure Block Body Ball Valve ▪ Type CBVST-3 T-Bore Three-Way Selector ▪ Female BSP Thread (DIN ISO 228)

#### Female BSP Thread (DIN ISO 228)



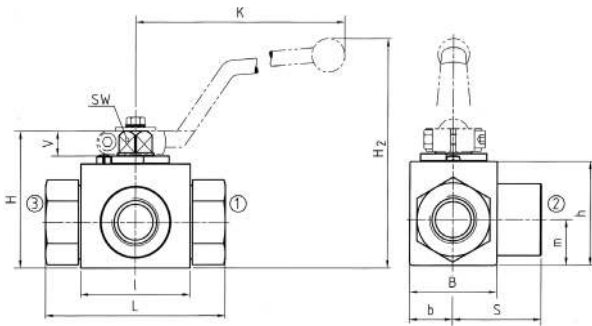
When ordering the standard option as indicated in the table below, the following materials will be supplied:

- Body, ball and stem: Carbon Steel
- Lever: Zinc (STAUFF Sizes 02 to 08)  
Carbon Steel (STAUFF Sizes 12 to 32)
- Ball seat: Delrin® (POM) Frontside Sealing
- O-rings: FKM (Viton®)

#### Pressure Inlet possible from all Ports

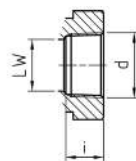
STAUFF Size	Thread Size d	Nominal Size DN	Dimensions (mm/m)														Nom. Pressure (bar/psi)	Weight (kg/lbs)	Order Codes (Standard Option)
			LW	L	l	b	B	H	h	m	S	V	SW	K	i	H2			
02	G 1/8 BSP	4	5 .20	69 2.72	40 1.57	13 .51	29 1.14	47 1.85	33 1.30	13,5 .53	34,5 1.36	11 .43	9 .35	115 4.53	10 .39	82 3.23	500 7250	0,40 .88	CBVST-3-G02-0081-M
04	G 1/4 BSP	6	6 .24	69 2.72	40 1.57	13 .51	29 1.14	47 1.85	33 1.30	13,5 .53	34,5 1.36	11 .43	9 .35	115 4.53	14 .55	82 3.23	500 7250	0,46 1.01	CBVST-3-G04-0081-M
06	G 3/8 BSP	10	10 .39	72 2.83	43 1.69	16 .63	35 1.38	52 2.05	38 1.50	17,5 .69	36 1.42	11 .43	9 .35	115 4.53	14 .55	87 3.42	500 7250	0,60 1.32	CBVST-3-G06-0081-M
08	G 1/2 BSP	13	13 .51	83 3.27	48 1.89	17,5 .69	38 1.50	54 2.13	40 1.57	19 .75	41,5 1.63	11 .43	9 .35	115 4.53	16,3 .64	89 3.50	315 4500	0,70 1.54	CBVST-3-G08-0081-M
12	G 3/4 BSP	20	20 .79	95 3.74	62 2.44	24,5 .96	52 2.05	75 2.95	57 2.24	24,5 .96	47,5 1.87	14 .55	14 .55	170 6.69	18 .71	126 4.96	315 4500	1,80 3.96	CBVST-3-G12-0081-M
16	G 1 BSP	25	25 .98	113 4.45	66 2.60	29 1.14	61 2.40	83 3.27	65 2.56	29,5 1.16	56,5 2.22	14 .55	14 .55	170 6.69	20 .79	134 5.73	315 4500	2,40 5.28	CBVST-3-G16-0081-M
20	G 1-1/4 BSP	32	30 1.18	111 4.37	81 3.19	39 1.54	39	106 4.17	84,5 3.33	39 1.54	55 2.17	16,5 .65	17 .67	320 12.60	22 .87	170 6.69	350 5000	3,80 8.36	CBVST-3-G20-0081-M
24	G 1-1/2 BSP	40	38 1.50	130 5.12	104 4.09	53 2.09	53	127 5.00	106 4.17	53 2.09	65 2.56	16,5 .65	17 .67	320 12.60	24 .94	191 7.52	350 5000	6,20 13.64	CBVST-3-G24-0081-M
32	G 2 BSP	50	48 1.89	150 5.91	118 4.65	58 2.28	116 4.57	137 5.39	116 4.57	58 2.28	75 2.95	16,5 .65	17 .67	320 12.60	26 1.02	201 7.91	350 5000	7,80 17.16	CBVST-3-G32-0081-M

Please note the pressure ratings of the tube connections.



### High-Pressure Block Body Ball Valve ▪ Type CBVST-3 T-Bore Three-Way Selector ▪ Female NPT Thread (ANSI B1.20.1)

#### 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 (STAUFF Sizes 02 to 08)  
Carbon Steel (STAUFF Sizes 12 to 32)
- Ball seat: Delrin® (POM) Frontside Sealing
- O-rings: FKM (Viton®)

#### Pressure Inlet possible from all Ports

STAUFF Size	Thread Size d	Nominal Size DN	Dimensions (mm/m)														Nom. Pressure (bar/psi)	Weight (kg/lbs)	Order Codes (Standard Option)
			LW	L	l	b	B	H	h	K	S	V	SW	K	i	H2			
02	1/8 NPT	4	5 .20	69 2.72	40 1.57	13 .51	29 1.14	47 1.85	33 1.30	13,5 .53	34,5 1.36	11 .43	9 .35	115 4.53	10,5 .41	82 3.23	500 7250	0,40 .88	CBVST-3-N02-0081-M
04	1/4 NPT	6	6 .24	69 2.72	40 1.57	13 .51	29 1.14	47 1.85	33 1.30	13,5 .53	34,5 1.36	11 .43	9 .35	115 4.53	13,7 .54	82 3.23	500 7250	0,46 1.01	CBVST-3-N04-0081-M
06	3/8 NPT	10	10 .39	72 2.83	43 1.69	16 .63	35 1.38	52 2.05	38 1.50	17,5 .69	36 1.42	11 .43	9 .35	115 4.53	13,5 .53	87 3.42	500 7250	0,60 1.32	CBVST-3-N06-0081-M
08	1/2 NPT	13	13 .51	83 3.27	48 1.89	17,5 .69	38 1.50	54 2.13	40 1.57	19 .75	41,5 1.63	11 .43	9 .35	115 4.53	17 .67	89 3.50	315 4500	0,70 1.54	CBVST-3-N08-0081-M
12	3/4 NPT	20	20 .79	95 3.74	62 2.44	24,5 .96	52 2.05	75 2.95	57 2.24	24,5 .96	47,5 1.87	14 .55	14 .55	170 6.69	18,3 .72	126 4.96	315 4500	1,80 3.96	CBVST-3-N12-0081-M
16	1 NPT	25	25 .98	113 4.45	66 2.60	29 1.14	61 2.40	83 3.27	65 2.56	29,5 1.16	56,5 2.22	14 .55	14 .55	170 6.69	21,6 .85	134 5.73	315 4500	2,40 5.28	CBVST-3-N16-0081-M
20	1-1/4 NPT	32	30 1.18	120 4.72	81 3.19	39 1.54	39	106 4.17	84,5 3.33	39 1.54	55 2.17	16,5 .65	17 .67	320 12.60	22,1 .87	170 6.69	350 5000	3,80 8.36	CBVST-3-N20-0081-M
24	1-1/2 NPT	40	38 1.50	140 5.51	104 4.09	53 2.09	53	127 5.00	106 4.17	53 2.09	65 2.56	16,5 .65	17 .67	320 12.60	22,1 .87	191 7.52	350 5000	6,20 13.64	CBVST-3-N24-0081-M
32	2 NPT	50	48 1.89	150 5.91	118 4.65	58 2.28	116 4.57	137 5.39	116 4.57	58 2.28	75 2.95	16,5 .65	17 .67	320 12.60	30,2 1.19	201 7.91	350 5000	7,80 17.16	CBVST-3-N32-0081-M

Please note the pressure ratings of the tube connections.

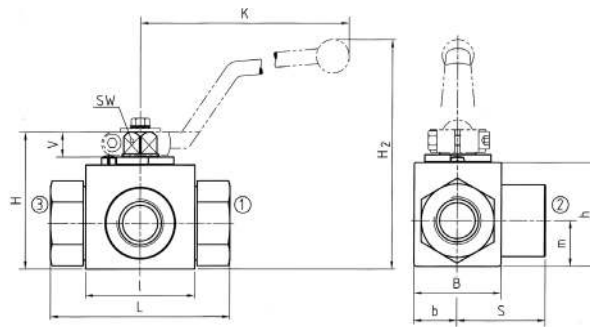
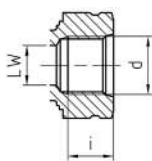


### High-Pressure Block Body Ball Valve - Type CBVST-3 T-Bore Three-Way Selector - Female UN/UNF Thread (SAE J 514)

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 (STAUFF Sizes 04 to 08)  
Carbon Steel (STAUFF Sizes 12 to 32)
- Ball seat: Delrin® (POM) Frontside Sealing
- O-rings: FKM (Viton®)

Female UN/UNF Thread (SAE J 514)

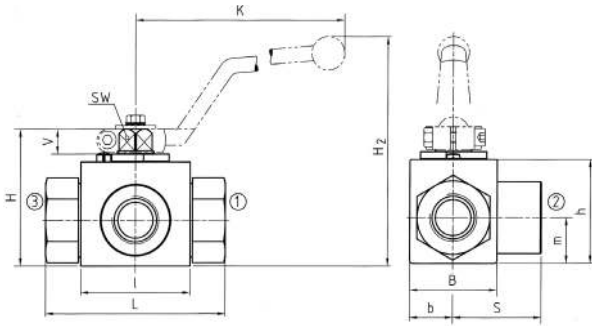


Pressure Inlet possible from all Ports

STAUFF Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)														Nom. Pressure (bar/psi)	Weight (kg/lbs)	Order Codes (Standard Option)
			LW	L	l	b	B	H	h	K	S	V	SW	K	i	H2			
04	7/16-20 UNF (1/4" SAE)	6	5	69	40	13	29	47	33	13,5	34,5	11	9	115	12	82	500	0,46	CBVST-3-U04-0081-M
			.20	2.72	1.57	.51	1.14	1.85	1.30	.53	1.36	.43	.35	4.53	.47	3.23	7250	1.01	
06	9/16-18 UNF (3/8" SAE)	10	10	72	43	16	35	52	38	17,5	36	11	9	115	13	87	500	0,60	CBVST-3-U06-0081-M
			.39	2.83	1.69	.63	1.38	2.05	1.50	.69	1.42	.43	.35	4.53	.51	3.42	7250	1.32	
08	3/4-16 UNF (1/2" SAE)	13	13	83	48	17,5	38	54	40	19	41,5	11	9	115	15	89	315	0,70	CBVST-3-U08-0081-M
			.51	3.27	1.89	.69	1.50	2.13	1.57	.75	1.63	.43	.35	4.53	.59	3.50	4500	1.54	
12	1-1/16-12 UN (3/4" SAE)	20	20	95	62	24,5	52	75	57	24,5	47,5	14	14	170	20	126	315	1,80	CBVST-3-U12-0081-M
			.79	3.74	2.44	.96	2.05	2.95	2.24	.96	1.87	.55	.55	6.69	.79	4.96	4500	3.96	
16	1-5/16-12 UN (1" SAE)	25	25	113	66	29	61	83	65	29,5	56,5	14	14	170	20	134	315	2,40	CBVST-3-U16-0081-M
			.98	4.45	2.60	1.14	2.40	3.27	2.56	1.16	2.22	.55	.55	6.69	.79	5.73	4500	5.28	
20	1-5/8-12 UN (1-1/4" SAE)	32	30	111	81	39		106	84,5	39	55	16,5	17	320	20	170	350	3,80	CBVST-3-U20-0081-M
			1.18	4.37	3.19	1.54		4.17	3.33	1.54	2.17	.65	.67	12.60	.79	6.69	5000	8.36	
24	1-7/8-12 UN (1-1/2" SAE)	40	38	130	104	53		127	106	53	65	16,5	17	320	20	191	350	6,20	CBVST-3-U24-0081-M
			1.50	5.12	4.09	2.09		5.00	4.17	2.09	2.56	.65	.67	12.60	.79	7.52	5000	13.64	
32	2-1/2-12 UN (2" SAE)	50	48	150	118	58	116	137	116	58	75	16,5	17	320	20	201	350	7,80	CBVST-3-U32-0081-M
			1.89	5.91	4.65	2.28	4.57	5.39	4.57	2.28	2.95	.65	.67	12.60	.79	7.91	5000	17.16	

Please note the pressure ratings of the tube connections.

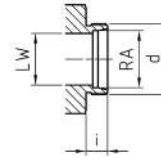




Union nuts and cutting rings are not included in delivery.

### High-Pressure Block Body Ball Valve - Type CBVST-3 T-Bore Three-Way Selector - 24° Cone Connection Light Series (DIN 2353 / ISO 8434-1)

**24° Cone Connection  
(DIN 2353 / ISO 8434-1)**



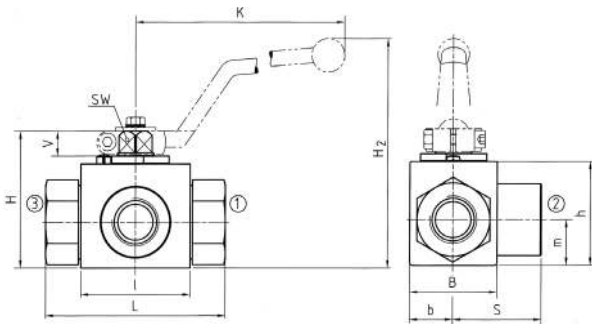
When ordering the standard option as indicated in the table below, the following materials will be supplied:

- Body, ball and stem: Carbon Steel
- Lever: Zinc (STAUFF Sizes 02 to 08)  
Carbon Steel (STAUFF Sizes 12 to 20R)
- Ball seat: Delrin® (POM) Frontside Sealing
- O-rings: FKM (Viton®)

**Pressure Inlet possible from all Ports**

STAUFF Size	Tube/Thread Size d	Nominal Size DN	Dimensions (mm/m)														Nom. Pressure (bar/psi)	Weight (kg/lbs)	Order Codes (Standard Option)	
			RA	LW	L	l	b	B	H	h	m	S	V	SW	K	i	H2			
02	06L / M12 x 1,5	4	6	5	67	40	13	29	47	33	13,5	33,5	11	9	115	10	82	500	0,30	CBVST-3-06L-0081-M
			.24	.20	2.64	1.57	.51	1.14	1.85	1.30	.53	1.32	.43	.35	4.53	.39	3.23	7250	.66	
04	08L / M14 x 1,5	6	8	6	67	40	13	29	47	33	13,5	33,5	11	9	115	10	82	500	0,40	CBVST-3-08L-0081-M
			.31	.24	2.64	1.57	.51	1.14	1.85	1.30	.53	1.32	.43	.35	4.53	.39	3.23	7250	.88	
05	10L / M16 x 1,5	8	10	6	74	40	13	29	47	33	13,5	34,5	11	9	115	11	82	500	0,40	CBVST-3-10L-0081-M
			.39	.24	2.91	1.57	.51	1.14	1.85	1.30	.53	1.36	.43	.35	4.53	.43	3.23	7250	.88	
06	12L / M18 x 1,5	10	12	10	74	43	16	35	52	38	17,5	36,5	11	9	115	11	87	500	0,50	CBVST-3-12L-0081-M
			.47	.39	2.91	1.69	.63	1.38	2.05	1.50	.69	1.44	.43	.35	4.53	.43	3.42	7250	1.10	
08	15L / M22 x 1,5	13	15	13	82	48	17,5	38	54	40	19	41,5	11	9	115	12	89	315	0,65	CBVST-3-15L-0081-M
			.59	.51	3.23	1.89	.69	1.50	2.13	1.57	.75	1.63	.43	.35	4.53	.47	3.50	4500	1.43	
08	18L / M26 x 1,5	13	18	13	82	48	17,5	38	54	40	19	41,5	11	9	115	12	89	315	0,69	CBVST-3-18L-0081-M
			.71	.51	2.23	1.89	.69	1.50	2.13	1.57	.75	1.63	.43	.35	4.53	.47	3.50	4500	1.52	
12	22L / M30 x 2	20	22	20	101	62	24,5	52	75	57	24,5	48	14	14	170	14	126	315	1,50	CBVST-3-22L-0081-M
			.87	.79	3.98	2.44	.96	2.05	2.95	2.24	.96	1.89	.55	.55	6.69	.55	4.96	4500	3.30	
16	28L / M36 x 2	25	28	25	108	66	29	61	83	65	29,5	54	14	14	170	14	134	315	2,10	CBVST-3-28L-0081-M
			1.10	.98	4.25	2.60	1.14	2.40	3.27	2.56	1.16	2.13	.55	.55	6.69	.55	5.73	4500	4.62	
20R	35L / M45 x 2	25/32	35	25	112	66	29	61	83	65	29,5	56	14	14	170	16	134	315	2,50	CBVST-3-35LDN25-0081-M
			1.38	.98	4.41	2.60	1.14	2.40	3.27	2.56	1.16	2.20	.55	.55	6.69	.63	5.73	4500	5.50	

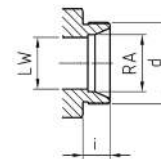
Please note the pressure ratings of the tube connections.



Union nuts and cutting rings are not included in delivery.

### High-Pressure Block Body Ball Valve - Type CBVST-3 T-Bore Three-Way Selector - 24° Cone Connection Heavy Series (DIN 2353 / ISO 8434-1)

**24° Cone Connection  
(DIN 2353 / ISO 8434-1)**



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 (STAUFF Sizes 02 to 08)  
Carbon Steel (STAUFF Sizes 12 to 20R)
- Ball seat: Delrin® (POM) Frontside Sealing
- O-rings: FKM (Viton®)

**Pressure Inlet possible from all Ports**

STAUFF Size	Tube/Thread Size d	Nominal Size DN	Dimensions (mm/m)														Nom. Pressure (bar/psi)	Weight (kg/lbs)	Order Codes (Standard Option)	
			RA	LW	L	l	b	B	H	h	m	S	V	SW	K	i	H2			
02	08S / M16 x 1,5	4	8	5	73	40	13	29	47	33	13,5	34,5	11	9	115	12	82	500	0,42	CBVST-3-08S-0081-M
			.31	.20	2.87	1.57	.51	1.14	1.85	1.30	.53	1.36	.43	.35	4.53	.47	3.23	7250	.92	
04	10S / M18 x 1,5	6	10	6	73	40	13	29	47	33	13,5	34,5	11	9	115	12	82	500	0,43	CBVST-3-10S-0081-M
			.39	.24	2.87	1.57	.51	1.14	1.85	1.30	.53	1.36	.43	.35	4.53	.47	3.23	7250	.95	
05	12S / M20 x 1,5	8	12	6	76	40	13	29	47	33	13,5	34,5	11	9	115	12	82	500	0,44	CBVST-3-10S-0081-M
			.47	.24	2.99	1.57	.51	1.14	1.85	1.30	.53	1.36	.43	.35	4.53	.47	3.23	7250	.97	
06	14S / M22 x 1,5	10	14	10	80	43	16	35	52	38	17,5	36,5	11	9	115	14	87	500	0,50	CBVST-3-14S-0081-M
			.55	.39	3.15	1.69	.63	1.38	2.05	1.50	.69	1.43	.43	.35	4.53	.55	3.42	7250	1.10	
08	16S / M24 x 1,5	13	16	13	86	48	17,5	38	54	40	19	43	11	9	115	14	89	315	0,65	CBVST-3-16S-0081-M
			.63	.51	3.39	1.89	.69	1.50	2.13	1.57	.75	1.69	.43	.35	4.53	.55	3.50	4500	1.43	
08	20S / M30 x 2	13	20	13	90	48	17,5	38	54	40	19	43	11	9	115	16	89	315	0,70	CBVST-3-20SDN13-0081-M
			.79	.51	3.54	1.89	.69	1.50	2.13	1.57	.75	1.69	.43	.35	4.53	.63	3.50	4500	1.54	
12	25S / M36 x 2	20	25	20	109	62	24,5	52	75	57	24,5	48	14	14	170	18	126	315	1,70	CBVST-3-25S-0081-M
			.98	.79	4.29	2.44	.96	2.05	2.95	2.24	.96	1.89	.55	.55	6.69	.71	4.96	4500	3.74	
16	30S / M42 x 2	25	30	25	120	66	29	61	83	65	29,5	57,5	14	14	170	20	134	315	2,40	CBVST-3-30S-0081-M
			1.18	.98	4.72	2.60	1.14	2.40	3.27	2.56	1.16	2.26	.55	.55	6.69	.79	5.73	4500	5.28	
20R	38S / M52 x 2	25/32	38	25	124	66	29	61	83	65	29,5	57,5	14	14	170	22	134	315	2,80	CBVST-3-38SDN25-0081-M
			1.50	.98	4.88	2.60	1.14	2.40	3.27	2.56	1.16	2.26	.55	.55	6.69	.87	5.73	4500	6.16	

Please note the pressure ratings of the tube connections.

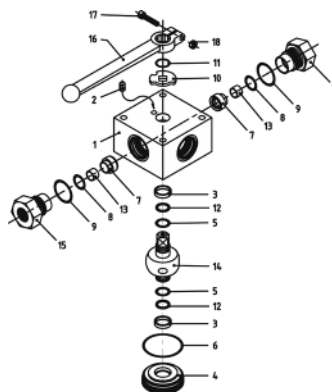


## High-Pressure Block Body Ball Valve - Type LBV-3

B



Pressure inlet possible from all ports!



### List of Components

No.	Qty.	Description
1	1	Body
2	1	Stop Pin
3*	2	Bearing
4	1	Trunnion Retainer
5*	2	Trunnion O-Ring
6*	1	Retainer O-Ring
7*	3	Ball Seat
8*	3	Seat O-Ring
9*	3	Connector O-Ring
10	1	Cam Plate
11	1	Snap Ring
12*	2	Trunnion Back Up Ring
13	3	Seat Support
14	1	Trunnion Ball
15	3	Connector
16	1	Handle
17	1	Handle Bolt

### Characteristics

Three-way high-pressure block body ball valves designed for use as three-way selectors (L-bore, 90° operation) for hydraulic applications

#### Standard Construction

- Block body design for in-line assembly
- Multi-way valve with trunnion-style ball
- Supplied with lever

#### Standard Materials

- Body: Carbon Steel, zinc/iron-plated
- Ball: Carbon Steel, hard chrome-plated
- Stem: Carbon Steel
- Lever: Aluminium (STAUFF Sizes 02 and 04)  
Carbon Steel (STAUFF Sizes 06 to 24R)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

#### Standard Connections Styles / Sizes

- Female BSP thread (DIN ISO 228) >G 1-1/2 BSP
- Female NPT thread (ANSI B1.20.1) >1-1/2 NPT
- Female UN/UNF thread (SAE J 514) >1-5/16-12 UN (1" SAE)
- 24° Cone Connection (DIN 2353 / ISO 8434-1) >35L
- 24° Cone Connection (DIN 2353 / ISO 8434-1) >38S

#### Pressure loaded seats at all ports!

#### 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 (see page 114)
- Locking devices (see pages 115-117)
- Actuator packages (see page 118)
- Limit switches (see page 118)
- 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)

#### Porting Pattern

- Symbol: L
- Overlap: positive
- Operating: 90°

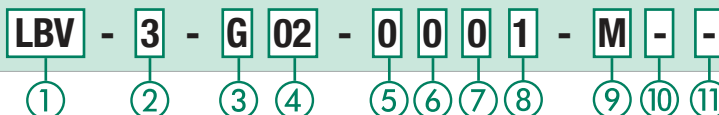
P01



- Stop of end position:

Please see pages 120-121 for alternative porting patterns.

### Order Codes



#### ① Type

Multi-Way L-Bore Ball Valve **LBV**

#### ② Number of Ports

Three Ports (Three-Way Ball Valve) **3**

#### ③ Connection Style

Female BSP Thread (DIN ISO 228) **G**  
 Female NPT Thread (ANSI B1.20.1) **N**  
 Female UN/UNF Thread (SAE J 514) **U**  
 24° Cone Connection (Light / Heavy Series) **—**

Please contact STAUFF for alternative connection styles.

#### ④ Connection Size

STAUFF Size (according to dimension table) for connection styles G, N and U:  
**02 04 06 08 10 12 16 20R 24R**  
 Tube Size (according to dimension table) for 24° Cone Connection (Light Series):  
**06L 08L 10L 12L 15L 18L 22L 28L 35L**  
 Tube Size (according to dimension table) for 24° Cone Connection (Heavy Series):  
**08S 10S 12S 14S 16S 20S 25S 30S 38S**

Please contact STAUFF for alternative connection sizes.

#### 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. Contact STAUFF for further information.

#### 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. Contact STAUFF for further information.

#### ⑦ Ball Seat Material

Delrin® (POM) **0**

Alternative materials are available upon request. Contact STAUFF for further information.

#### ⑧ O-Ring Material

NBR (Buna-N®) **0**  
 FKM (Viton®) **1**  
 EPDM **3**

Alternative materials are available upon request. Contact STAUFF for further information.

#### ⑨ Manufacturing Code

Manufacturing code for all connection styles **M**

#### ⑩ Lever Options

Supplied with standard lever (according to table) **—**  
 Supplied without lever **O**

Alternative levers can be ordered separately. Please see page 114 for further information.

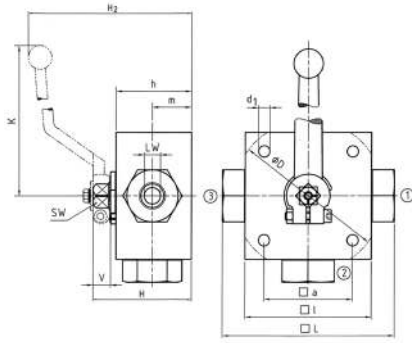
#### ⑪ Accessories / Options

Supplied without accessories **—**  
 Supplied with Locking Device LD4 **LD4**

Please see page 115-119 for further information and options.

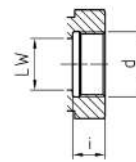






### High-Pressure Block Body Ball Valve ■ Type LBV-3 L-Bore Three-Way Selector ■ Female BSP Thread (DIN ISO 228)

#### Female BSP Thread (DIN ISO 228)



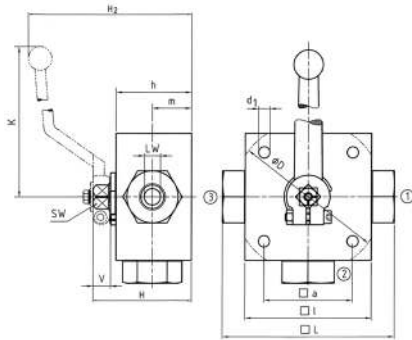
When ordering the standard option as indicated in the table below, the following materials will be supplied:

- Body, ball and stem: Carbon Steel
- Lever: Aluminium (STAUFF Sizes 02 and 04)  
Carbon Steel (STAUFF Sizes 06 to 24R)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

**B**

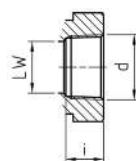
STAUFF Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)													Nom. Pressure (bar/psi)	Weight (kg/lbs)	Order Codes (Standard Option)	
			LW	L	D	l	a	H	h	m	K	V	SW	i	d1				H2
02	G 1/8 BSP	4	5	100	70	55	58	40	22	160	14	12	10	6,5	101	500	1,60	LBV-3-G02-0001-M	
			.20	3.94		2.76	2.17	2.28	1.57	.87	6.30	.55	.47	.39	.26	3.98	7250		3.52
04	G 1/4 BSP	6	5	100	70	55	58	40	22	160	14	12	14	6,5	101	500	1,60	LBV-3-G04-0001-M	
			.20	3.94		2.76	2.17	2.28	1.57	.87	6.30	.55	.47	.55	.26	3.98	7250		3.52
06	G 3/8 BSP	10	8	115	80	65	68	50	27	171	14	14	14	6,5	119	500	2,70	LBV-3-G06-0001-M	
			.31	4.53		3.15	2.56	2.68	1.97	1.06	6.73	.55	.55	.55	.26	4.69	7250		5.94
08	G 1/2 BSP	13	13	136	100	80	78	60	31	171	14	14	16,3	9	129	400	4,90	LBV-3-G08-0001-M	
			.51	5.35		3.94	3.15	3.07	2.36	1.22	6.73	.55	.55	.64	.35	5.08	5800		10.78
10	G 5/8 BSP	16	13	139	100	80	78	60	31	171	14	14	18	9	129	400	4,90	LBV-3-G10-0001-M	
			.51	5.47		3.94	3.15	3.07	2.36	1.22	6.73	.55	.55	.71	.35	5.08	5800		10.78
12	G 3/4 BSP	20	18	154	138	113	85	88	67	36,5	306	16,5	17	18	8,5	159	315	6,70	LBV-3-G12-0001-M
			.71	6.06	5.43	4.45	3.35	3.46	2.64	1.44	12.05	.65	.67	.71	.33	6.26	4500	14.74	
16	G 1 BSP	25	23	172	138	119	85	103	82	47,5	306	16,5	17	20	8,5	174	315	8,30	LBV-3-G16-0001-M
			.91	6.77	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.79	.33	6.85	4500	18.26	
20R	G 1-1/4 BSP	25/32	23	180	138	119	85	103	82	47,5	306	16,5	17	22	8,5	174	315	8,50	LBV-3-G20R-0001-M
			.91	7.09	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.87	.33	6.85	4500	18.70	
24R	G 1-1/2 BSP	25/40	23	180	138	119	85	103	82	47,5	306	16,5	17	24	8,5	174	250	8,50	LBV-3-G24R-0001-M
			.91	7.09	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.94	.33	6.85	3600	18.70	

Please note the pressure ratings of the tube connections.



### High-Pressure Block Body Ball Valve ■ Type LBV-3 L-Bore Three-Way Selector ■ Female NPT Thread (ANSI B1.20.1)

#### 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: Aluminium (STAUFF Sizes 02 and 04)  
Carbon Steel (STAUFF Sizes 06 to 24R)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

STAUFF Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)													Nom. Pressure (bar/psi)	Weight (kg/lbs)	Order Codes (Standard Option)	
			LW	L	D	l	a	H	h	m	K	V	SW	i	d1				H2
02	1/8 NPT	4	5	100	70	55	58	40	22	160	14	12	10,5	6,5	101	500	1,60	LBV-3-N02-0001-M	
			.20	3.94		2.76	2.17	2.28	1.57	.87	6.30	.55	.47	.41	.26	3.98	7250		3.52
04	1/4 NPT	6	5	100	70	55	58	40	22	160	14	12	13,7	6,5	101	500	1,60	LBV-3-N04-0001-M	
			.20	3.94		2.76	2.17	2.28	1.57	.87	6.30	.55	.47	.54	.26	3.98	7250		3.52
06	3/8 NPT	10	8	115	80	65	68	50	27	171	14	14	13,5	6,5	119	500	2,80	LBV-3-N06-0001-M	
			.31	4.53		3.15	2.56	2.68	1.97	1.06	6.73	.55	.55	.53	.26	4.69	7250		6.16
08	1/2 NPT	13	13	136	100	80	78	60	31	171	14	14	17	9	129	400	5,20	LBV-3-N08-0001-M	
			.51	5.35		3.94	3.15	3.07	2.36	1.22	6.73	.55	.55	.67	.35	5.08	5800		11.44
12	3/4 NPT	20	18	154	138	113	85	88	67	36,5	306	16,5	17	18,3	8,5	159	315	6,80	LBV-3-N12-0001-M
			.71	6.06	5.43	4.45	3.35	3.46	2.64	1.44	12.05	.65	.67	.72	.33	6.26	4500	14.96	
16	1 NPT	25	23	172	138	119	85	103	82	47,5	306	16,5	17	21,6	8,5	174	315	8,50	LBV-3-N16-0001-M
			.91	6.77	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.85	.33	6.85	4500	18.70	
20R	1-1/4 NPT	25/32	23	180	138	119	85	103	82	47,5	306	16,5	17	22,1	8,5	174	315	8,80	LBV-3-N20R-0001-M
			.91	7.09	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.87	.33	6.85	4500	19.36	
24R	1-1/2 NPT	25/40	23	180	138	119	85	103	82	47,5	306	16,5	17	22,1	8,5	174	250	8,80	LBV-3-N24R-0001-M
			.91	7.09	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.87	.33	6.85	3600	19.36	

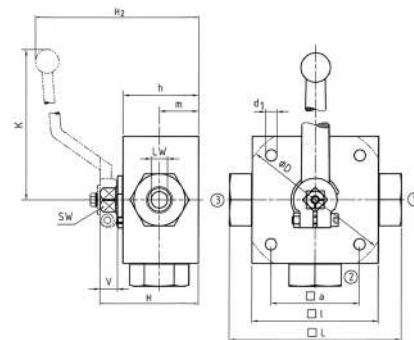
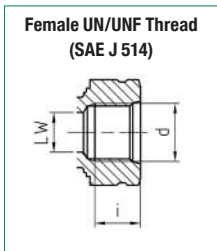
Please note the pressure ratings of the tube connections.



### High-Pressure Block Body Ball Valve - Type LBV-3 L-Bore Three-Way Selector - Female UN/UNF Thread (SAE J 514)

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

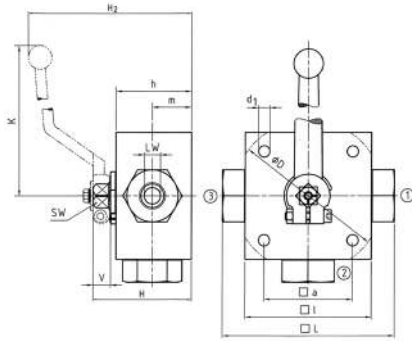
- Body, ball and stem: Carbon Steel
- Lever: Aluminium (STAUFF Size 04)  
Carbon Steel (STAUFF Sizes 06 and 24R)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)



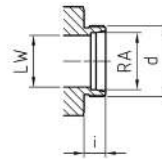
STAUFF Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)														Nom. Pressure ( <sup>bar</sup> /PSI)	Weight (kg/lbs)	Order Codes (Standard Option)	
			LW	L	D	l	a	H	h	m	K	V	SW	i	d1	H2				
04	7/16-20 UNF (1/4" SAE)	6	5	100	/	70	55	58	40	22	160	14	12	14	6,5	101	500	1,60	LBV-3-U04-0001-M	
			.20	3.94		2.76	2.17	2.28	1.57	.87	6.30	.55	.47	.55	.26	3.98	7250	3.52		
06	9/16-18 UNF (3/4" SAE)	10	8	115	/	80	65	68	50	27	171	14	14	14	6,5	119	500	2,80	LBV-3-U06-0001-M	
			.31	4.53		3.15	2.56	2.68	1.97	1.06	6.73	.55	.55	.55	.26	4.69	7250	6.16		
08	3/4-16 UNF (1/2" SAE)	13	13	144	/	100	80	78	60	31	171	14	14	14	16,3	9	129	400	5,20	LBV-3-U08-0001-M
			.51	5.67		3.94	3.15	3.07	2.36	1.22	6.73	.55	.55	.64	.35	5.08	5800	11.44		
12	1-1/16-12 UN (3/4" SAE)	20	18	164	138	113	85	88	67	36,5	306	16,5	17	18	8,5	159	315	6,80	LBV-3-U12-0001-M	
			.71	6.46	5.43	4.45	3.35	3.46	2.64	1.44	12.05	.65	.67	.71	.33	6.26	4500	14.96		
16	1-5/16-12 UN (1" SAE)	25	23	180	138	119	85	103	82	47,5	306	16,5	17	20	8,5	174	315	8,50	LBV-3-U16-0001-M	
			.91	7.09	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.79	.33	6.85	4500	18.70		

Please note the pressure ratings of the tube connections.





Union nuts and cutting rings are not included in delivery.

**24° Cone Connection  
(DIN 2353 / ISO 8434-1)**


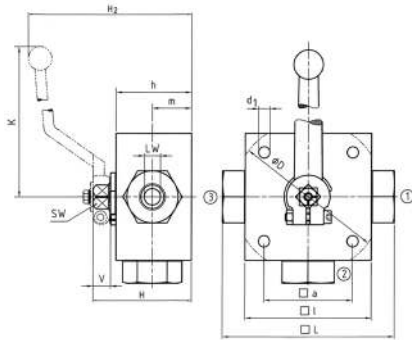
When ordering the standard option as indicated in the table below, the following materials will be supplied:

- Body, ball and stem: Carbon Steel
- Lever: Aluminium (STAUFF Sizes 02 and 04)  
Carbon Steel (STAUFF Sizes 05 to 20R)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

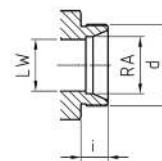
**B**

STAUFF Size	Tube/Thread Size d	Nominal Size DN	Dimensions (mm/m)														Nom. Pressure (bar/psi)	Weight (kg/lbs)	Order Codes (Standard Option)	
			RA	LW	L	D	l	a	H	h	m	K	V	SW	i	d1	H2			
02	06L / M12 x 1,5	4	6	5	105	70	55	58	40	22	160	14	12	10	6,5	101	500	1,60	LBV-3-06L-0001-M	
			.24	.20	4.13		2.76	2.17	2.28	1.57	.87	6.30	.55	.47	.39	.26	3.98	7250		3.52
04	08L / M14 x 1,5	6	8	5	105	70	55	58	40	22	160	14	12	10	6,5	101	500	1,80	LBV-3-08L-0001-M	
			.31	.20	4.13		2.76	2.17	2.28	1.57	.87	6.30	.55	.47	.39	.26	3.98	7250		3.96
05	10L / M16 x 1,5	8	10	8	114	80	65	68	50	27	171	14	14	11	6,5	119	500	2,60	LBV-3-10L-0001-M	
			.39	.31	4.49		3.15	2.56	2.68	1.97	1.06	6.73	.55	.55	.43	.26	4.69	7250		5.72
06	12L / M18 x 1,5	10	12	8	114	80	65	68	50	27	171	14	14	11	6,5	119	500	2,60	LBV-3-12L-0001-M	
			.47	.31	4.49		3.15	2.56	2.68	1.97	1.06	6.73	.55	.55	.43	.26	4.69	7250		5.72
08	15L / M22 x 1,5	13	15	13	137	100	80	78	60	31	171	14	14	12	9	129	400	4,70	LBV-3-15L-0001-M	
			.59	.51	5.39		3.94	3.15	3.07	2.36	1.22	6.73	.55	.55	.47	.35	5.08	5800		10.34
10	18L / M26 x 1,5	16	18	18	137	113	85	88	67	36,5	171	16,5	17	12	8,5	129	400	4,70	LBV-3-18LDN16-0001-M	
			.71	.71	5.39		4.45	3.35	3.46	2.64	1.44	6.73	.65	.67	.47	.33	5.08	5800		10.34
12	22L / M30 x 2	20	22	23	152	138	119	85	103	82	47,5	306	16,5	17	14	8,5	159	315	6,60	LBV-3-22L-0001-M
			.87	.91	5.98	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.55	.33	6.26	4500	14.52	
16	28L / M36 x 2	25	28	23	166	138	119	85	103	82	47,5	306	16,5	17	14	8,5	174	315	8,00	LBV-3-28L-0001-M
			1.10	.91	6.54	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.55	.33	6.85	4500	17.60	
20R	35L / M45 x 2	25/32	35	23	170	138	119	85	103	82	47,5	306	16,5	17	16	8,5	174	315	8,12	LBV-3-35LDN25-0001-M
			1.38	.91	6.69	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.63	.33	6.85	4500	17.86	

Please note the pressure ratings of the tube connections.



Union nuts and cutting rings are not included in delivery.

**24° Cone Connection  
(DIN 2353 / ISO 8434-1)**


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

- Body, ball and stem: Carbon Steel
- Lever: Aluminium (STAUFF Sizes 02 and 04)  
Carbon Steel (STAUFF Sizes 05 to 20R)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

STAUFF Size	Tube/Thread Size d	Nominal Size DN	Dimensions (mm/m)														Nom. Pressure (bar/psi)	Weight (kg/lbs)	Order Codes (Standard Option)	
			RA	LW	L	D	l	a	H	h	m	K	V	SW	i	d1	H2			
02	08S / M16 x 1,5	4	8	5	105	70	55	58	40	22	160	14	12	12	6,5	101	500	1,60	LBV-3-08S-0001-M	
			.31	.20	4.13		2.76	2.17	2.28	1.57	.87	6.30	.55	.47	.26	3.98	7250	3.52		
04	10S / M18 x 1,5	6	10	5	105	70	55	58	40	22	160	14	12	12	6,5	101	500	1,80	LBV-3-10S-0001-M	
			.39	.20	4.13		2.76	2.17	2.28	1.57	.87	6.30	.55	.47	.26	3.98	7250	3.96		
05	12S / M20 x 1,5	8	12	8	116	80	65	68	50	27	171	14	14	12	6,5	119	500	2,60	LBV-3-12S-0001-M	
			.47	.31	4.57		3.15	2.56	2.68	1.97	1.06	6.73	.55	.55	.47	.26	4.69	7250		5.72
06	14S / M22 x 1,5	10	14	8	120	80	65	68	50	27	171	14	14	14	6,5	119	500	2,60	LBV-3-14S-0001-M	
			.55	.31	4.72		3.15	2.56	2.68	1.97	1.06	6.73	.55	.55	.55	.26	4.69	7250		5.72
08	16S / M24 x 1,5	13	16	13	141	100	80	78	60	31	171	14	14	14	9	129	400	4,70	LBV-3-16S-0001-M	
			.63	.51	5.55		3.94	3.15	3.07	2.36	1.22	6.73	.55	.55	.55	.35	5.08	5800		10.34
10	20S / M30 x 2	16	20	18	145	113	85	88	67	36,5	171	16,5	17	16	8,5	129	400	4,70	LBV-3-20S-0001-M	
			.79	.71	5.71		4.45	3.35	3.46	2.64	1.44	6.73	.65	.67	.63	.33	5.08	5800		10.34
12	25S / M36 x 2	20	25	23	160	138	119	85	103	82	47,5	306	16,5	17	18	8,5	159	315	6,60	LBV-3-25S-0001-M
			.98	.91	6.30	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.71	.33	6.26	4500	14.52	
16	30S / M42 x 2	25	30	23	176	138	119	85	103	82	47,5	306	16,5	17	20	8,5	174	315	8,00	LBV-3-30S-0001-M
			1.18	.91	6.93	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.79	.33	6.85	4500	17.60	
20R	38S / M52 x 2	25/32	38	23	180	138	119	85	103	82	47,5	306	16,5	17	22	8,5	174	315	8,12	LBV-3-38SDN25-0001-M
			1.50	.91	7.09	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.87	.33	6.85	4500	17.86	

Please note the pressure ratings of the tube connections.

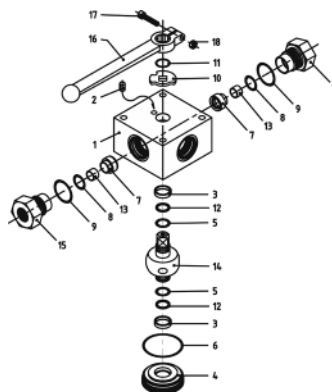


## High-Pressure Block Body Ball Valve - Type TBV-3

B



Pressure inlet possible from all ports!



### List of Components

No.	Qty.	Description
1	1	Body
2	1	Stop Pin
3*	2	Bearing
4	1	Trunnion Retainer
5*	2	Trunnion O-Ring
6*	1	Retainer O-Ring
7*	3	Ball Seat
8*	3	Seat O-Ring
9*	3	Connector O-Ring
10	1	Cam Plate
11	1	Snap Ring
12*	2	Trunnion Back Up Ring
13	3	Seat Support
14	1	Trunnion Ball
15	3	Connector
16	1	Handle
17	1	Handle Bolt

### Characteristics

Three-way high-pressure block body ball valves designed for use as three-way selectors (T-bore, 90° operation) for hydraulic applications

#### Standard Construction

- Block body design for in-line assembly
- Multi-way valve with trunnion-style ball
- Supplied with lever

#### Standard Materials

- Body: Carbon Steel, zinc/iron-plated
- Ball: Carbon Steel, hard chrome-plated
- Stem: Carbon Steel
- Lever: Aluminium (STAUFF Sizes 02 and 04)  
Carbon Steel (STAUFF Sizes 06 to 24R)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

#### Standard Connections Styles / Sizes

- Female BSP thread (DIN ISO 228) >G 1-1/2 BSP
- Female NPT thread (ANSI B1.20.1) >1-1/2 NPT
- Female UN/UNF thread (SAE J 514) >1-5/16-12 UN (1" SAE)
- 24° Cone Connection (DIN 2353 / ISO 8434-1) >35L
- 24° Cone Connection (DIN 2353 / ISO 8434-1) >38S

#### Pressure loaded seats at all ports!

#### 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 (see page 114)
- Locking devices (see pages 115-117)
- Actuator packages (see page 118)
- Limit switches (see page 118)
- 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)

#### Porting Pattern

- Symbol : T
- Overlap: positive
- Operating: 90°

P02

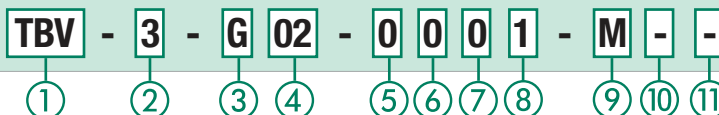


- Stop of end position:



Please see pages 120-121 for alternative porting patterns.

### Order Codes



#### ① Type

Multi-Way T-Bore Ball Valve **TBV**

#### ② Number of Ports

Three Ports (Three-Way Ball Valve) **3**

#### ③ Connection Style

Female BSP Thread (DIN ISO 228) **G**  
 Female NPT Thread (ANSI B1.20.1) **N**  
 Female UN/UNF Thread (SAE J 514) **U**  
 24° Cone Connection (Light / Heavy Series) **—**

Please contact STAUFF for alternative connection styles.

#### ④ Connection Size

STAUFF Size (according to dimension table) for connection styles G, N and U:  
**02 04 06 08 10 12 16 20R 24R**  
 Tube Size (according to dimension table) for 24° Cone Connection (Light Series):  
**06L 08L 10L 12L 15L 18L 22L 28L 35L**  
 Tube Size (according to dimension table) for 24° Cone Connection (Heavy Series):  
**08S 10S 12S 14S 16S 20S 25S 30S 38S**

Please contact STAUFF for alternative connection sizes.

#### 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. Contact STAUFF for further information.

#### 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. Contact STAUFF for further information.

#### ⑦ Ball Seat Material

Delrin® (POM) **0**

Alternative materials are available upon request. Contact STAUFF for further information.

#### ⑧ O-Ring Material

NBR (Buna-N®) **0**  
 FKM (Viton®) **1**  
 EPDM **3**

Alternative materials are available upon request. Contact STAUFF for further information.

#### ⑨ Manufacturing Code

Manufacturing code for all connection styles **M**

#### ⑩ Lever Options

Supplied with standard lever (according to table) **—**  
 Supplied without lever **O**

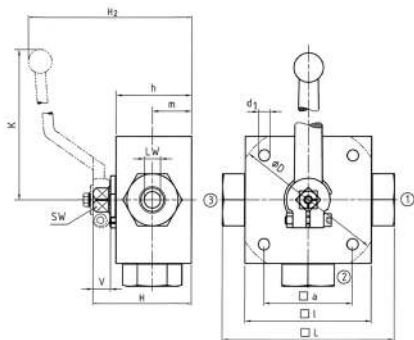
Alternative levers can be ordered separately. Please see page 114 for further information.

#### ⑪ Accessories / Options

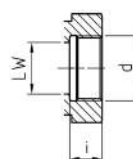
Supplied without accessories **—**  
 Supplied with Locking Device LD4 **LD4**

Please see page 115-119 for further information and options.





### High-Pressure Block Body Ball Valve ■ Type TBV-3 T-Bore Three-Way Selector ■ Female BSP Thread (DIN ISO 228)

**Female BSP Thread  
(DIN ISO 228)**


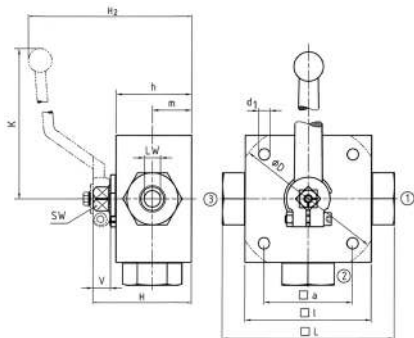
When ordering the standard option as indicated in the table below, the following materials will be supplied:

- Body, ball and stem: Carbon Steel
- Lever: Aluminium (STAUFF Sizes 02 and 04)  
Carbon Steel (STAUFF Sizes 06 to 24R)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

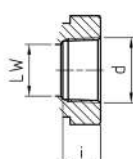
**B**

STAUFF Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)													Nom. Pressure (bar/psi)	Weight (kg/lbs)	Order Codes (Standard Option)	
			LW	L	D	l	a	H	h	m	K	V	SW	i	d1				H2
02	G 1/8 BSP	4	5	100	70	55	58	40	22	160	14	12	10	6,5	101	500	1,60	TBV-3-G02-0001-M	
			.20	3.94		2.76	2.17	2.28	1.57	.87	6.30	.55	.47	.39	.26	3.98	7250		3.52
04	G 1/4 BSP	6	5	100	70	55	58	40	22	160	14	12	14	6,5	101	500	1,60	TBV-3-G04-0001-M	
			.20	3.94		2.76	2.17	2.28	1.57	.87	6.30	.55	.47	.55	.26	3.98	7250		3.52
06	G 3/8 BSP	10	8	115	80	65	68	50	27	171	14	14	14	6,5	119	500	2,70	TBV-3-G06-0001-M	
			.31	4.53		3.15	2.56	2.68	1.97	1.06	6.73	.55	.55	.55	.26	4.69	7250		5.94
08	G 1/2 BSP	13	13	136	100	80	78	60	31	171	14	14	16,3	9	129	400	4,90	TBV-3-G08-0001-M	
			.51	5.35		3.94	3.15	3.07	2.36	1.22	6.73	.55	.55	.64	.35	5.08	5800		10.78
10	G 5/8 BSP	16	13	139	100	80	78	60	31	171	14	14	18	9	129	400	4,90	TBV-3-G10-0001-M	
			.51	5.47		3.94	3.15	3.07	2.36	1.22	6.73	.55	.55	.71	.35	5.08	5800		10.78
12	G 3/4 BSP	20	18	154	138	113	85	88	67	36,5	306	16,5	17	18	8,5	159	315	6,70	TBV-3-G12-0001-M
			.71	6.06	5.43	4.45	3.35	3.46	2.64	1.44	12.05	.65	.67	.71	.33	6.26	4500	14.74	
16	G 1 BSP	25	23	172	138	119	85	103	82	47,5	306	16,5	17	20	8,5	174	315	8,30	TBV-3-G16-0001-M
			.91	6.77	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.79	.33	6.85	4500	18.26	
20R	G 1-1/4 BSP	25/32	23	180	138	119	85	103	82	47,5	306	16,5	17	22	8,5	174	315	8,50	TBV-3-G20R-0001-M
			.91	7.09	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.87	.33	6.85	4500	18.70	
24R	G 1-1/2 BSP	25/40	23	180	138	119	85	103	82	47,5	306	16,5	17	24	8,5	174	250	8,50	TBV-3-G24R-0001-M
			.91	7.09	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.94	.33	6.85	3600	18.70	

Please note the pressure ratings of the tube connections.



### High-Pressure Block Body Ball Valve ■ Type TBV-3 T-Bore Three-Way Selector ■ Female NPT Thread (ANSI B1.20.1)

**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: Aluminium (STAUFF Sizes 02 and 04)  
Carbon Steel (STAUFF Sizes 06 to 24R)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

STAUFF Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)													Nom. Pressure (bar/psi)	Weight (kg/lbs)	Order Codes (Standard Option)	
			LW	L	D	l	a	H	h	m	K	V	SW	i	d1				H2
02	1/8 NPT	4	5	100	70	55	58	40	22	160	14	12	10,5	6,5	101	500	1,60	TBV-3-N02-0001-M	
			.20	3.94		2.76	2.17	2.28	1.57	.87	6.30	.55	.47	.41	.26	3.98	7250		3.52
04	1/4 NPT	6	5	100	70	55	58	40	22	160	14	12	13,7	6,5	101	500	1,60	TBV-3-N04-0001-M	
			.20	3.94		2.76	2.17	2.28	1.57	.87	6.30	.55	.47	.54	.26	3.98	7250		3.52
06	3/8 NPT	10	8	115	80	65	68	50	27	171	14	14	13,5	6,5	119	500	2,80	TBV-3-N06-0001-M	
			.31	4.53		3.15	2.56	2.68	1.97	1.06	6.73	.55	.55	.53	.26	4.69	7250		6.16
08	1/2 NPT	13	13	136	100	80	78	60	31	171	14	14	17	9	129	400	5,20	TBV-3-N08-0001-M	
			.51	5.35		3.94	3.15	3.07	2.36	1.22	6.73	.55	.55	.67	.35	5.08	5800		11.44
12	3/4 NPT	20	18	154	138	113	85	88	67	36,5	306	16,5	17	18,3	8,5	159	315	6,80	TBV-3-N12-0001-M
			.71	6.06	5.43	4.45	3.35	3.46	2.64	1.44	12.05	.65	.67	.72	.33	6.26	4500	14.96	
16	1 NPT	25	23	172	138	119	85	103	82	47,5	306	16,5	17	21,6	8,5	174	315	8,50	TBV-3-N16-0001-M
			.91	6.77	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.85	.33	6.85	4500	18.70	
20R	1-1/4 NPT	25/32	23	180	138	119	85	103	82	47,5	306	16,5	17	22,1	8,5	174	315	8,80	TBV-3-N20R-0001-M
			.91	7.09	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.87	.33	6.85	4500	19.36	
24R	1-1/2 NPT	25/40	23	180	138	119	85	103	82	47,5	306	16,5	17	22,1	8,5	174	250	8,80	TBV-3-N24R-0001-M
			.91	7.09	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.87	.33	6.85	3600	19.36	

Please note the pressure ratings of the tube connections.



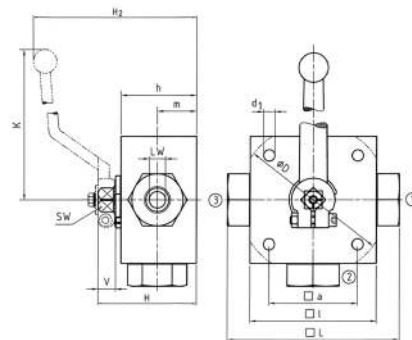
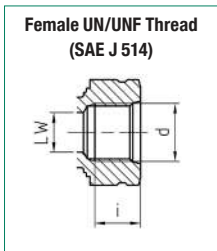


### High-Pressure Block Body Ball Valve - Type TBV-3 T-Bore Three-Way Selector - Female UN/UNF Thread (SAE J 514)

B

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

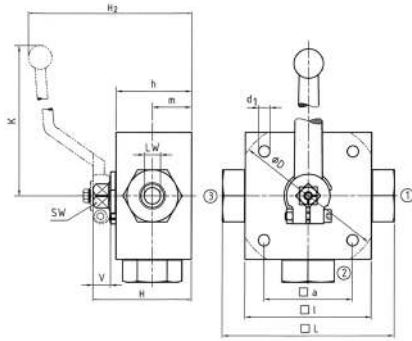
- Body, ball and stem: Carbon Steel
- Lever: Aluminium (STAUFF Size 04)  
Carbon Steel (STAUFF Sizes 06 and 16)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)



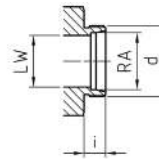
STAUFF Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)													Nom. Pressure ( <sup>bar</sup> /PSI)	Weight (kg/lbs)	Order Codes (Standard Option)	
			LW	L	D	l	a	H	h	m	K	V	SW	i	d1				H2
04	7/16-20 UNF (1/4" SAE)	6	5	100	70	55	58	40	22	160	14	12	14	6,5	101	500	1,60	TBV-3-U04-0001-M	
			0,20	3,94		2,76	2,17	2,28	1,57	0,87	6,30	0,55	0,47	0,55	0,26	3,98	7250		3,52
06	9/16-18 UNF (3/8" SAE)	10	8	115	80	65	68	50	27	171	14	14	14	6,5	119	500	2,80	TBV-3-U06-0001-M	
			0,31	4,53		3,15	2,56	2,68	1,97	1,06	6,73	0,55	0,55	0,55	0,26	4,69	7250		6,16
08	3/4-16 UNF (1/2" SAE)	13	13	144	100	80	78	60	31	171	14	14	14	16,3	9	129	400	5,20	TBV-3-U08-0001-M
			0,51	5,67		3,94	3,15	3,07	2,36	1,22	6,73	0,55	0,55	0,64	0,35	5,08	5800	11,44	
12	1-1/16-12 UN (3/4" SAE)	20	18	164	138	113	85	88	67	36,5	306	16,5	17	18	8,5	159	315	6,80	TBV-3-U12-0001-M
			0,71	6,46	5,43	4,45	3,35	3,46	2,64	1,44	12,05	0,65	0,67	0,71	0,33	6,26	4500	14,96	
16	1-5/16-12 UN (1" SAE)	25	23	180	138	119	85	103	82	47,5	306	16,5	17	20	8,5	174	315	8,50	TBV-3-U16-0001-M
			0,91	7,09	5,43	4,69	3,35	4,06	3,23	1,87	12,05	0,65	0,67	0,79	0,33	6,85	4500	18,70	

Please note the pressure ratings of the tube connections.





Union nuts and cutting rings are not included in delivery.

**24° Cone Connection  
(DIN 2353 / ISO 8434-1)**


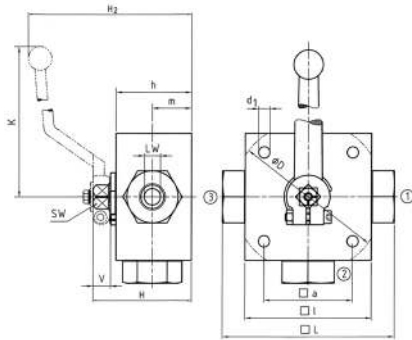
When ordering the standard option as indicated in the table below, the following materials will be supplied:

- Body, ball and stem: Carbon Steel
- Lever: Aluminium (STAUFF Sizes 02 and 04)  
Carbon Steel (STAUFF Sizes 05 to 20R)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

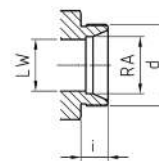
**B**

STAUFF Size	Tube/Thread Size d	Nominal Size DN	Dimensions (mm/m)														Nom. Pressure (bar/psi)	Weight (kg/lbs)	Order Codes (Standard Option)	
			RA	LW	L	D	l	a	H	h	m	K	V	SW	i	d1	H2			
02	06L / M12 x 1,5	4	6	5	105	/	70	55	58	40	22	160	14	12	10	6,5	101	500	1,60	TBV-3-06L-0001-M
			.24	.20	4.13		2.76	2.17	2.28	1.57	.87	6.30	.55	.47	.39	.26	3.98	7250	3.52	
04	08L / M14 x 1,5	6	8	5	105	/	70	55	58	40	22	160	14	12	10	6,5	101	500	1,80	TBV-3-08L-0001-M
			.31	.20	4.13		2.76	2.17	2.28	1.57	.87	6.30	.55	.47	.39	.26	3.98	7250	3.96	
05	10L / M16 x 1,5	8	10	8	114	/	80	65	68	50	27	171	14	14	11	6,5	119	500	2,60	TBV-3-10L-0001-M
			.39	.31	4.49		3.15	2.56	2.68	1.97	1.06	6.73	.55	.55	.43	.26	4.69	7250	5.72	
06	12L / M18 x 1,5	10	12	8	114	/	80	65	68	50	27	171	14	14	11	6,5	119	500	2,60	TBV-3-12L-0001-M
			.47	.31	4.49		3.15	2.56	2.68	1.97	1.06	6.73	.55	.55	.43	.26	4.69	7250	5.72	
08	15L / M22 x 1,5	13	15	13	137	/	100	80	78	60	31	171	14	14	12	9	129	400	4,70	TBV-3-15L-0001-M
			.59	.51	5.39		3.94	3.15	3.07	2.36	1.22	6.73	.55	.55	.47	.35	5.08	5800	10.34	
10	18L / M26 x 1,5	16	18	18	137	/	113	85	88	67	36,5	171	16,5	17	12	8,5	129	400	4,70	TBV-3-18LDN16-0001-M
			.71	.71	5.39		4.45	3.35	3.46	2.64	1.44	6.73	.65	.67	.47	.33	5.08	5800	10.34	
12	22L / M30 x 2	20	22	23	152	138	119	85	103	82	47,5	306	16,5	17	14	8,5	159	315	6,60	TBV-3-22L-0001-M
			.87	.91	5.98	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.55	.33	6.26	4500	14.52	
16	28L / M36 x 2	25	28	23	166	138	119	85	103	82	47,5	306	16,5	17	14	8,5	174	315	8,00	TBV-3-28L-0001-M
			1.10	.91	6.54	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.55	.33	6.85	4500	17.60	
20R	35L / M45 x 2	25/32	35	23	170	138	119	85	103	82	47,5	306	16,5	17	16	8,5	174	315	8,12	TBV-3-35LDN25-0001-M
			1.38	.91	6.69	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.63	.33	6.85	4500	17.86	

Please note the pressure ratings of the tube connections.



Union nuts and cutting rings are not included in delivery.

**24° Cone Connection  
(DIN 2353 / ISO 8434-1)**


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

- Body, ball and stem: Carbon Steel
- Lever: Aluminium (STAUFF Sizes 02 and 04)  
Carbon Steel (STAUFF Sizes 05 to 20R)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

STAUFF Size	Tube/Thread Size d	Nominal Size DN	Dimensions (mm/m)														Nom. Pressure (bar/psi)	Weight (kg/lbs)	Order Codes (Standard Option)	
			RA	LW	L	D	l	a	H	h	m	K	V	SW	i	d1	H2			
02	08S / M16 x 1,5	4	8	5	105	/	70	55	58	40	22	160	14	12	12	6,5	101	500	1,60	TBV-3-08S-0001-M
			.31	.20	4.13		2.76	2.17	2.28	1.57	.87	6.30	.55	.47	.47	.26	3.98	7250	3.52	
04	10S / M18 x 1,5	6	10	5	105	/	70	55	58	40	22	160	14	12	12	6,5	101	500	1,80	TBV-3-10S-0001-M
			.39	.20	4.13		2.76	2.17	2.28	1.57	.87	6.30	.55	.47	.47	.26	3.98	7250	3.96	
05	12S / M20 x 1,5	8	12	8	116	/	80	65	68	50	27	171	14	14	12	6,5	119	500	2,60	TBV-3-12S-0001-M
			.47	.31	4.57		3.15	2.56	2.68	1.97	1.06	6.73	.55	.55	.47	.26	4.69	7250	5.72	
06	14S / M22 x 1,5	10	14	8	120	/	80	65	68	50	27	171	14	14	14	6,5	119	500	2,60	TBV-3-14S-0001-M
			.55	.31	4.72		3.15	2.56	2.68	1.97	1.06	6.73	.55	.55	.55	.26	4.69	7250	5.72	
08	16S / M24 x 1,5	13	16	13	141	/	100	80	78	60	31	171	14	14	14	9	129	400	4,70	TBV-3-16S-0001-M
			.63	.51	5.55		3.94	3.15	3.07	2.36	1.22	6.73	.55	.55	.55	.35	5.08	5800	10.34	
10	20S / M30 x 2	16	20	18	145	/	113	85	88	67	36,5	171	16,5	17	16	8,5	129	400	4,70	TBV-3-20S-0001-M
			.79	.71	5.71		4.45	3.35	3.46	2.64	1.44	6.73	.65	.67	.63	.33	5.08	5800	10.34	
12	25S / M36 x 2	20	25	23	160	138	119	85	103	82	47,5	306	16,5	17	18	8,5	159	315	6,60	TBV-3-25S-0001-M
			.98	.91	6.30	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.71	.33	6.26	4500	14.52	
16	30S / M42 x 2	25	30	23	176	138	119	85	103	82	47,5	306	16,5	17	20	8,5	174	315	8,00	TBV-3-30S-0001-M
			1.18	.91	6.93	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.79	.33	6.85	4500	17.60	
20R	38S / M52 x 2	25/32	38	23	180	138	119	85	103	82	47,5	306	16,5	17	22	8,5	174	315	8,12	TBV-3-38SDN25-0001-M
			1.50	.91	7.09	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.87	.33	6.85	4500	17.86	

Please note the pressure ratings of the tube connections.

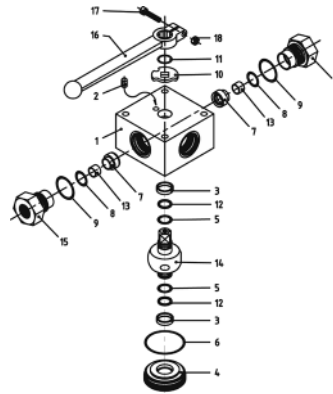


## High-Pressure Block Body Ball Valve - Type TBV-4

B



Pressure inlet possible from all ports!



### List of Components

No.	Qty.	Description
1	1	Body
2	1	Stop Pin
3*	2	Bearing
4	1	Trunnion Retainer
5*	2	Trunnion O-Ring
6*	1	Retainer O-Ring
7*	4	Ball Seat
8*	4	Seat O-Ring
9*	4	Connector O-Ring
10	1	Cam Plate
11	1	Snap Ring
12*	2	Trunnion Back Up Ring
13	4	Seat Support
14	1	Trunnion Ball
15	4	Connector
16	1	Handle
17	1	Handle Bolt

### Characteristics

Four-way high-pressure block body ball valves designed for use as 4-way selectors (T-bore, 90° operation) for hydraulic applications

#### Standard Construction

- Block body design for in-line assembly
- Multi-way valve with trunnion-style ball
- Supplied with lever

#### Standard Materials

- Body: Carbon Steel, zinc/iron-plated
- Ball: Carbon Steel, hard chrome-plated
- Stem: Carbon Steel
- Lever: Aluminium (STAUFF Sizes 02 and 04)  
Carbon Steel (STAUFF Sizes 06 to 24R)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

#### Standard Connections Styles / Sizes

- Female BSP thread (DIN ISO 228) >G 1-1/2 BSP
- Female NPT thread (ANSI B1.20.1) >1-1/2 NPT
- Female UN/UNF thread (SAE J 514) >1-5/16-12 UN (1" SAE)
- 24° Cone Connection (DIN 2353 / ISO 8434-1) >35L
- 24° Cone Connection (DIN 2353 / ISO 8434-1) >38S

#### Pressure loaded seats at all ports!

#### 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 (see page 114)
- Locking devices (see pages 115-117)
- Actuator packages (see page 118)
- Limit switches (see page 118)
- 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)

#### Porting Pattern

- Symbol : T
- Overlap: positive
- Operating: 90°

P13

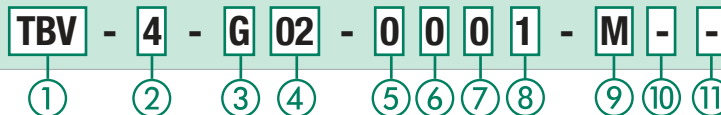


- Stop of end position:



Please see pages 120-121 for alternative porting patterns.

### Order Codes



#### ① Type

Multi-Way T-Bore Ball Valve **TBV**

#### ② Number of Ports

Four Ports (Four-Way Ball Valve) **4**

#### ③ Connection Style

Female BSP Thread (DIN ISO 228) **G**  
 Female NPT Thread (ANSI B1.20.1) **N**  
 Female UN/UNF Thread (SAE J 514) **U**  
 24° Cone Connection (Light / Heavy Series) **—**

Please contact STAUFF for alternative connection styles.

#### ④ Connection Size

STAUFF Size (according to dimension table) for connection styles G, N and U:  
**02 04 06 08 10 12 16 20R 24R**  
 Tube Size (according to dimension table) for 24° Cone Connection (Light Series):  
**06L 08L 10L 12L 15L 18L 22L 28L 35L**  
 Tube Size (according to dimension table) for 24° Cone Connection (Heavy Series):  
**08S 10S 12S 14S 16S 20S 25S 30S 38S**

Please contact STAUFF for alternative connection sizes.

#### 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. Contact STAUFF for further information.

#### 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. Contact STAUFF for further information.

#### ⑦ Ball Seat Material

Delrin® (POM) **0**

Alternative materials are available upon request. Contact STAUFF for further information.

#### ⑧ O-Ring Material

NBR (Buna-N®) **0**  
 FKM (Viton®) **1**  
 EPDM **3**

Alternative materials are available upon request. Contact STAUFF for further information.

#### ⑨ Manufacturing Code

Manufacturing code for all connection styles **M**

#### ⑩ Lever Options

Supplied with standard lever (according to table) **—**  
 Supplied without lever **O**

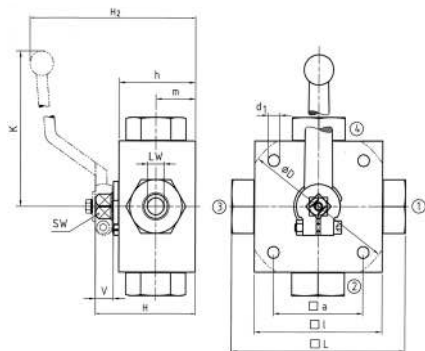
Alternative levers can be ordered separately. Please see page 114 for further information.

#### ⑪ Accessories / Options

Supplied without accessories **—**  
 Supplied with Locking Device LD4 **LD4**

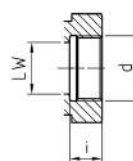
Please see page 115-119 for further information and options.





### High-Pressure Block Body Ball Valve ▀ Type TBV-4 T-Bore Four-Way Selector ▀ Female BSP Thread (DIN ISO 228)

#### Female BSP Thread (DIN ISO 228)



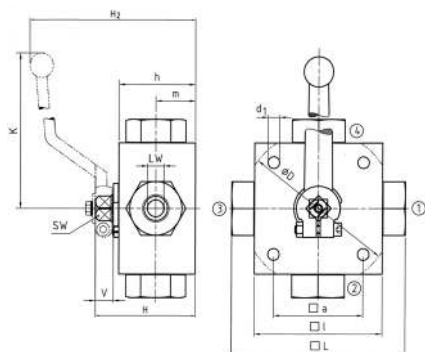
When ordering the standard option as indicated in the table below, the following materials will be supplied:

- ▀ Body, ball and stem: Carbon Steel
- ▀ Lever: Aluminium (STAUFF Sizes 02 and 04)  
Carbon Steel (STAUFF Sizes 06 to 24R)
- ▀ Ball seat: Delrin® (POM)
- ▀ O-rings: FKM (Viton®)

**B**

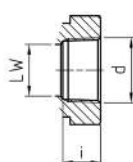
STAUFF Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)													Nom. Pressure (bar/psi)	Weight (kg/lbs)	Order Codes (Standard Option)	
			LW	L	D	I	a	H	h	m	K	V	SW	i	d1				H2
02	G 1/8 BSP	4	5	100	70	55	58	40	22	160	14	12	10	6,5	101	500	1,60	TBV-4-G02-0001-M	
			.20	3.94		2.76	2.17	2.28	1.57	.87	6.30	.55	.47	.39	.26	3.98	7250		3.52
04	G 1/4 BSP	6	5	100	70	55	58	40	22	160	14	12	14	6,5	101	500	1,60	TBV-4-G04-0001-M	
			.20	3.94		2.76	2.17	2.28	1.57	.87	6.30	.55	.47	.55	.26	3.98	7250		3.52
06	G 3/8 BSP	10	8	115	80	65	68	50	27	171	14	14	14	6,5	119	500	2,80	TBV-4-G06-0001-M	
			.31	4.53		3.15	2.56	2.68	1.97	1.06	6.73	.55	.55	.55	.26	4.69	7250		6.16
08	G 1/2 BSP	13	13	136	100	80	78	60	31	171	14	14	16,3	9	129	400	4,90	TBV-4-G08-0001-M	
			.51	5.35		3.94	3.15	3.07	2.36	1.22	6.73	.55	.55	.64	.35	5.08	5800		10.78
10	G 5/8 BSP	16	13	139	100	80	78	60	31	171	14	14	18	9	129	400	4,90	TBV-4-G10-0001-M	
			.51	5.47		3.94	3.15	3.07	2.36	1.22	6.73	.55	.55	.71	.35	5.08	5800		10.78
12	G 3/4 BSP	20	18	154	138	113	85	88	67	36,5	306	16,5	17	18	8,5	159	315	6,80	TBV-4-G12-0001-M
			.71	6.06	5.43	4.45	3.35	3.46	2.64	1.44	12.05	.65	.67	.71	.33	6.26	4500	14.96	
16	G 1 BSP	25	23	172	138	119	85	103	82	47,5	306	16,5	17	20	8,5	174	315	8,50	TBV-4-G16-0001-M
			.91	6.77	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.79	.33	6.85	4500	18.70	
20R	G 1-1/4 BSP	25/32	23	180	138	119	85	103	82	47,5	306	16,5	17	22	8,5	174	315	8,80	TBV-4-G20R-0001-M
			.91	7.09	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.87	.33	6.85	4500	19.36	
24R	G 1-1/2 BSP	25/40	23	180	138	119	85	103	82	47,5	306	16,5	17	24	8,5	174	250	8,80	TBV-4-G24R-0001-M
			.91	7.09	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.94	.33	6.85	3600	19.36	

Please note the pressure ratings of the tube connections.



### High-Pressure Block Body Ball Valve ▀ Type TBV-4 T-Bore Four-Way Selector ▀ Female NPT Thread (ANSI B1.20.1)

#### 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: Aluminium (STAUFF Sizes 02 and 04)  
Carbon Steel (STAUFF Sizes 06 to 24R)
- ▀ Ball seat: Delrin® (POM)
- ▀ O-rings: FKM (Viton®)

STAUFF Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)													Nom. Pressure (bar/psi)	Weight (kg/lbs)	Order Codes (Standard Option)	
			LW	L	D	I	a	H	h	m	K	V	SW	i	d1				H2
02	1/8 NPT	4	5	100	70	55	58	40	22	160	14	12	10,5	6,5	101	500	1,60	TBV-4-N02-0001-M	
			.20	3.94		2.76	2.17	2.28	1.57	.87	6.30	.55	.47	.41	.26	3.98	7250		3.52
04	1/4 NPT	6	5	100	70	55	58	40	22	160	14	12	13,7	6,5	101	500	1,60	TBV-4-N04-0001-M	
			.20	3.94		2.76	2.17	2.28	1.57	.87	6.30	.55	.47	.54	.26	3.98	7250		3.52
06	3/8 NPT	10	8	115	80	65	68	50	27	171	14	14	13,5	6,5	119	500	2,80	TBV-4-N06-0001-M	
			.31	4.53		3.15	2.56	2.68	1.97	1.06	6.73	.55	.55	.53	.26	4.69	7250		6.16
08	1/2 NPT	13	13	136	100	80	78	60	31	171	14	14	17	9	129	400	4,90	TBV-4-N08-0001-M	
			.51	5.35		3.94	3.15	3.07	2.36	1.22	6.73	.55	.55	.67	.35	5.08	5800		10.78
12	3/4 NPT	20	18	154	138	113	85	88	67	36,5	306	16,5	17	18,3	8,5	159	315	6,80	TBV-4-N12-0001-M
			.71	6.06	5.43	4.45	3.35	3.46	2.64	1.44	12.05	.65	.67	.72	.33	6.26	4500	14.96	
16	1 NPT	25	23	172	138	119	85	103	82	47,5	306	16,5	17	21,6	8,5	174	315	8,50	TBV-4-N16-0001-M
			.91	6.77	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.85	.33	6.85	4500	18.70	
20R	1-1/4 NPT	25/32	23	180	138	119	85	103	82	47,5	306	16,5	17	22,1	8,5	174	315	8,80	TBV-4-N20R-0001-M
			.91	7.09	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.87	.33	6.85	4500	19.36	
24R	1-1/2 NPT	25/40	23	180	138	119	85	103	82	47,5	306	16,5	17	22,1	8,5	174	250	8,80	TBV-4-N24R-0001-M
			.91	7.09	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.87	.33	6.85	3600	19.36	

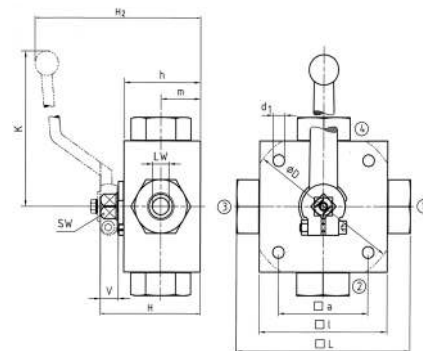
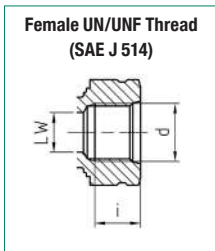
Please note the pressure ratings of the tube connections.



## High-Pressure Block Body Ball Valve - Type TBV-4 T-Bore Four-Way Selector - 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: Aluminium (STAUFF Size 04)  
Carbon Steel (STAUFF Sizes 06 and 16)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

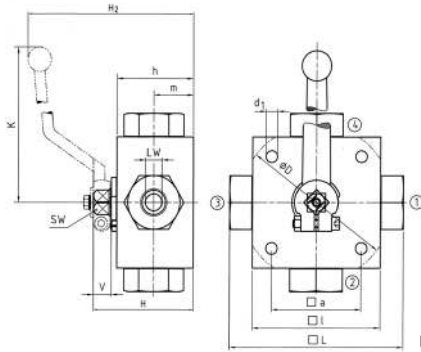


STAUFF Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)													Nom. Pressure ( <sup>bar</sup> /PSI)	Weight (kg/lbs)	Order Codes (Standard Option)	
			LW	L	D	l	a	H	h	m	K	V	SW	i	d1				H2
04	7/16-20 UNF (1/4" SAE)	6	5	100	70	55	58	40	22	160	14	12	14	6,5	101	500	1,60	TBV-4-U04-0001-M	
			0,20	3,94		2,76	2,17	2,28	1,57	0,87	6,30	0,55	0,47	0,55	0,26	3,98	7250		3,52
06	9/16-18 UNF (3/8" SAE)	10	8	115	80	65	68	50	27	171	14	14	14	6,5	119	500	2,80	TBV-4-U06-0001-M	
			0,31	4,53		3,15	2,56	2,68	1,97	1,06	6,73	0,55	0,55	0,55	0,26	4,69	7250		6,16
08	3/4-16 UNF (1/2" SAE)	13	13	144	100	80	78	60	31	171	14	14	14	16,3	9	129	400	5,20	TBV-4-U08-0001-M
			0,51	5,67		3,94	3,15	3,07	2,36	1,22	6,73	0,55	0,55	0,64	0,35	5,08	5800	11,44	
12	1-1/16-12 UN (3/4" SAE)	20	18	164	138	113	85	88	67	36,5	306	16,5	17	18	8,5	159	315	6,80	TBV-4-U12-0001-M
			0,71	6,46	5,43	4,45	3,35	3,46	2,64	1,44	12,05	0,65	0,67	0,71	0,33	6,26	4500	14,96	
16	1-5/16-12 UN (1" SAE)	25	23	180	138	119	85	103	82	47,5	306	16,5	17	20	8,5	174	315	8,50	TBV-4-U16-0001-M
			0,91	7,09	5,43	4,69	3,35	4,06	3,23	1,87	12,05	0,65	0,67	0,79	0,33	6,85	4500	18,70	

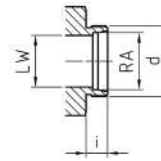
Please note the pressure ratings of the tube connections.







Union nuts and cutting rings are not included in delivery.

**24° Cone Connection  
(DIN 2353 / ISO 8434-1)**


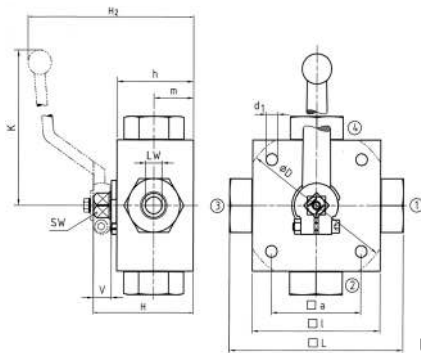
When ordering the standard option as indicated in the table below, the following materials will be supplied:

- Body, ball and stem: Carbon Steel
- Lever: Aluminium (STAUFF Sizes 02 and 04)  
Carbon Steel (STAUFF Sizes 05 to 20R)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

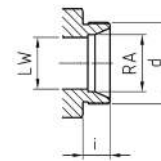
**B**

STAUFF Size	Tube/Thread Size d	Nominal Size DN	Dimensions (mm/m)														Nom. Pressure (bar/psi)	Weight (kg/lbs)	Order Codes (Standard Option)	
			RA	LW	L	D	l	a	H	h	m	K	V	SW	i	d1	H2			
02	06L / M12 x 1,5	4	6	5	105	70	55	58	40	22	160	14	12	10	6,5	101	500	1,60	TBV-4-06L-0001-M	
			.24	.20	4.13		2.76	2.17	2.28	1.57	.87	6.30	.55	.47	.39	.26	3.98	7250		3.52
04	08L / M14 x 1,5	6	8	5	105	70	55	58	40	22	160	14	12	10	6,5	101	500	1,80	TBV-4-08L-0001-M	
			.31	.20	4.13		2.76	2.17	2.28	1.57	.87	6.30	.55	.47	.39	.26	3.98	7250		3.96
05	10L / M16 x 1,5	8	10	8	114	80	65	68	50	27	171	14	14	11	6,5	119	500	2,60	TBV-4-10L-0001-M	
			.39	.31	4.49		3.15	2.56	2.68	1.97	1.06	6.73	.55	.55	.43	.26	4.69	7250		5.72
06	12L / M18 x 1,5	10	12	8	114	80	65	68	50	27	171	14	14	11	6,5	119	500	2,60	TBV-4-12L-0001-M	
			.47	.31	4.49		3.15	2.56	2.68	1.97	1.06	6.73	.55	.55	.43	.26	4.69	7250		5.72
08	15L / M22 x 1,5	13	15	13	137	100	80	78	60	31	171	14	14	12	9	129	400	4,70	TBV-4-15L-0001-M	
			.59	.51	5.39		3.94	3.15	3.07	2.36	1.22	6.73	.55	.55	.47	.35	5.08	5800		10.34
10	18L / M26 x 1,5	16	18	18	137	113	85	88	67	36,5	171	16,5	17	12	8,5	129	400	4,70	TBV-4-18LDN16-0001-M	
			.71	.71	5.39		4.45	3.35	3.46	2.64	1.44	6.73	.65	.67	.47	.33	5.08	5800		10.34
12	22L / M30 x 2	20	22	23	152	138	119	85	103	82	47,5	306	16,5	17	14	8,5	159	315	6,60	TBV-4-22L-0001-M
			.87	.91	5.98	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.55	.33	6.26	4500	14.52	
16	28L / M36 x 2	25	28	23	166	138	119	85	103	82	47,5	306	16,5	17	14	8,5	174	315	8,00	TBV-4-28L-0001-M
			1.10	.91	6.54	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.55	.33	6.85	4500	17.60	
20R	35L / M45 x 2	25/32	35	23	170	138	119	85	103	82	47,5	306	16,5	17	16	8,5	174	315	8,12	TBV-4-35LDN25-0001-M
			1.38	.91	6.69	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.63	.33	6.85	4500	17.86	

Please note the pressure ratings of the tube connections.



Union nuts and cutting rings are not included in delivery.

**24° Cone Connection  
(DIN 2353 / ISO 8434-1)**


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

- Body, ball and stem: Carbon Steel
- Lever: Aluminium (STAUFF Sizes 02 and 04)  
Carbon Steel (STAUFF Sizes 05 to 20R)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

STAUFF Size	Tube/Thread Size d	Nominal Size DN	Dimensions (mm/m)														Nom. Pressure (bar/psi)	Weight (kg/lbs)	Order Codes (Standard Option)	
			RA	LW	L	D	l	a	H	h	m	K	V	SW	i	d1	H2			
02	08S / M16 x 1,5	4	8	5	105	70	55	58	40	22	160	14	12	12	6,5	101	500	1,60	TBV-4-08S-0001-M	
			.31	.20	4.13		2.76	2.17	2.28	1.57	.87	6.30	.55	.47	.47	.26	3.98	7250		3.52
04	10S / M18 x 1,5	6	10	5	105	70	55	58	40	22	160	14	12	12	6,5	101	500	1,80	TBV-4-10S-0001-M	
			.39	.20	4.13		2.76	2.17	2.28	1.57	.87	6.30	.55	.47	.47	.26	3.98	7250		3.96
05	12S / M20 x 1,5	8	12	8	116	80	65	68	50	27	171	14	14	12	6,5	119	500	2,60	TBV-4-12S-0001-M	
			.47	.31	4.57		3.15	2.56	2.68	1.97	1.06	6.73	.55	.55	.47	.26	4.69	7250		5.72
06	14S / M22 x 1,5	10	14	8	120	80	65	68	50	27	171	14	14	14	6,5	119	500	2,60	TBV-4-14S-0001-M	
			.55	.31	4.72		3.15	2.56	2.68	1.97	1.06	6.73	.55	.55	.55	.26	4.69	7250		5.72
08	16S / M24 x 1,5	13	16	13	141	100	80	78	60	31	171	14	14	14	9	129	400	4,70	TBV-4-16S-0001-M	
			.63	.51	5.55		3.94	3.15	3.07	2.36	1.22	6.73	.55	.55	.55	.35	5.08	5800		10.34
10	20S / M30 x 2	16	20	18	145	113	85	88	67	36,5	171	16,5	17	16	8,5	129	400	4,70	TBV-4-20S-0001-M	
			.79	.71	5.71		4.45	3.35	3.46	2.64	1.44	6.73	.65	.67	.63	.33	5.08	5800		10.34
12	25S / M36 x 2	20	25	23	160	138	119	85	103	82	47,5	306	16,5	17	18	8,5	159	315	6,60	TBV-4-25S-0001-M
			.98	.91	6.30	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.71	.33	6.26	4500	14.52	
16	30S / M42 x 2	25	30	23	176	138	119	85	103	82	47,5	306	16,5	17	20	8,5	174	315	8,00	TBV-4-30S-0001-M
			1.18	.91	6.93	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.79	.33	6.85	4500	17.60	
20R	38S / M52 x 2	25/32	38	23	180	138	119	85	103	82	47,5	306	16,5	17	22	8,5	174	315	8,12	TBV-4-38SDN25-0001-M
			1.50	.91	7.09	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.87	.33	6.85	4500	17.86	

Please note the pressure ratings of the tube connections.

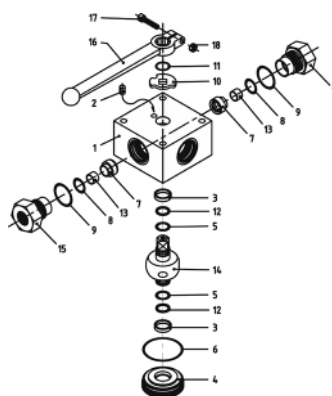


## High-Pressure Block Body Ball Valve - Type XBV-4

B



Pressure inlet possible from all ports!



### List of Components

No.	Qty.	Description
1	1	Body
2	1	Stop Pin
3*	2	Bearing
4	1	Trunnion Retainer
5*	2	Trunnion O-Ring
6*	1	Retainer O-Ring
7*	4	Ball Seat
8*	4	Seat O-Ring
9*	4	Connector O-Ring
10	1	Cam Plate
11	1	Snap Ring
12*	2	Trunnion Back Up Ring
13	4	Seat Support
14	1	Trunnion Ball
15	4	Connector
16	1	Handle
17	1	Handle Bolt

### Characteristics

Four-way high-pressure block body ball valves designed for use as 4-way selectors (double L-bore, 90° operation with closed position) for hydraulic applications

#### Standard Construction

- Block body design for in-line assembly
- Multi-way valve with trunnion-style ball
- Supplied with lever

#### Standard Materials

- Body: Carbon Steel, zinc/iron-plated
- Ball: Carbon Steel, hard chrome-plated
- Stem: Carbon Steel
- Lever: Aluminium (STAUFF Sizes 02 and 04)  
Carbon Steel (STAUFF Sizes 06 to 24R)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

#### Standard Connections Styles / Sizes

- Female BSP thread (DIN ISO 228) >G 1-1/2 BSP
- Female NPT thread (ANSI B1.20.1) >1-1/2 NPT
- Female UN/UNF thread (SAE J 514) >1-5/16-12 UN (1" SAE)
- 24° Cone Connection (DIN 2353 / ISO 8434-1) >35L
- 24° Cone Connection (DIN 2353 / ISO 8434-1) >38S

#### Pressure loaded seats at all ports!

#### Pressure Range

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

#### Temperature Range

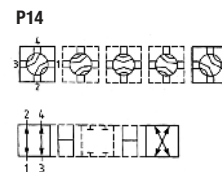
- Operating temperature range: -20 °C ... +100 °C / -4 °F ... + 212 °F

#### Options / Accessories

- Alternative lever designs/materials (see page 114)
- Locking devices (see pages 115-117)
- Actuator packages (see page 118)
- Limit switches (see page 118)
- 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)

#### Porting Pattern

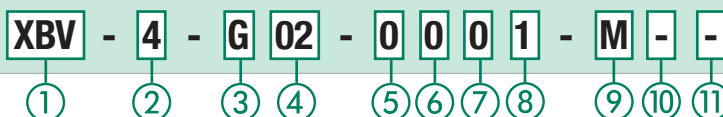
- Symbol : X
- Overlap: negative
- Operating: 90° with closed position



- Stop of end position:

Please see pages 120-121 for alternative porting patterns.

### Order Codes



#### ① Type

Multi-Way Double L-Bore Ball Valve **XBV**

#### ② Number of Ports

Four Ports (Four-Way Ball Valve) **4**

#### ③ Connection Style

Female BSP Thread (DIN ISO 228) **G**  
 Female NPT Thread (ANSI B1.20.1) **N**  
 Female UN/UNF Thread (SAE J 514) **U**  
 24° Cone Connection (Light / Heavy Series) **—**

Please contact STAUFF for alternative connection styles.

#### ④ Connection Size

STAUFF Size (according to dimension table) for connection styles G, N and U:  
**02 04 06 08 10 12 16 20R 24R**  
 Tube Size (according to dimension table) for 24° Cone Connection (Light Series):  
**06L 08L 10L 12L 15L 18L 22L 28L 35L**  
 Tube Size (according to dimension table) for 24° Cone Connection (Heavy Series):  
**08S 10S 12S 14S 16S 20S 25S 30S 38S**

Please contact STAUFF for alternative connection sizes.

#### 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. Contact STAUFF for further information.

#### 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. Contact STAUFF for further information.

#### ⑦ Ball Seat Material

Delrin® (POM) **0**

Alternative materials are available upon request. Contact STAUFF for further information.

#### ⑧ O-Ring Material

NBR (Buna-N®) **0**  
 FKM (Viton®) **1**  
 EPDM **3**

Alternative materials are available upon request. Contact STAUFF for further information.

#### ⑨ Manufacturing Code

Manufacturing code for all connection styles **M**

#### ⑩ Lever Options

Supplied with standard lever (according to table) **—**  
 Supplied without lever **O**

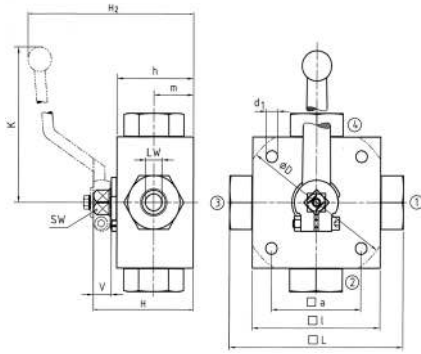
Alternative levers can be ordered separately. Please see page 114 for further information.

#### ⑪ Accessories / Options

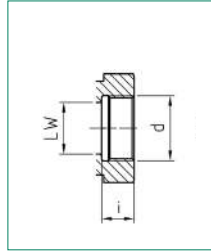
Supplied without accessories **—**  
 Supplied with Locking Device LD4 **LD4**

Please see page 115-119 for further information and options.





### High-Pressure Block Body Ball Valve ▪ Type XBV-4 Double L-Bore Four-Way Selector ▪ Female BSP Thread (DIN ISO 228)



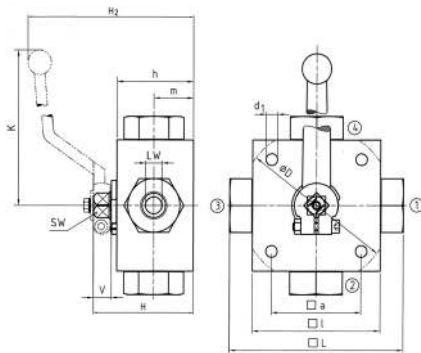
When ordering the standard option as indicated in the table below, the following materials will be supplied:

- Body, ball and stem: Carbon Steel
- Lever: Aluminium (STAUFF Sizes 02 and 04)  
Carbon Steel (STAUFF Sizes 06 to 24R)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

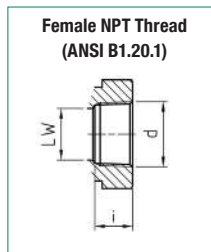
**B**

STAUFF Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)													Nom. Pressure (bar/psi)	Weight (kg/lbs)	Order Codes (Standard Option)	
			LW	L	D	l	a	H	h	m	K	V	SW	i	d1				H2
02	G 1/8 BSP	4	4	100	70	55	58	40	22	160	14	12	10	6,5	101	500	1,60	XBV-4-G02-0001-M	
			.16	3.94	2.76	2.17	2.28	1.57	.87	6.30	.55	.47	.39	.26	3.98	7250	3.52		
04	G 1/4 BSP	6	4	100	70	55	58	40	22	160	14	12	14	6,5	101	500	1,60	XBV-4-G04-0001-M	
			.16	3.94	2.76	2.17	2.28	1.57	.87	6.30	.55	.47	.55	.26	3.98	7250	3.52		
06	G 3/8 BSP	10	7	115	80	65	68	50	27	171	14	14	14	6,5	119	500	2,80	XBV-4-G06-0001-M	
			.28	4.53	3.15	2.56	2.68	1.97	1.06	6.73	.55	.55	.55	.26	4.69	7250	6.16		
08	G 1/2 BSP	13	10	136	100	80	78	60	31	171	14	14	16,3	9	129	400	4,90	XBV-4-G08-0001-M	
			.39	5.35	3.94	3.15	3.07	2.36	1.22	6.73	.55	.55	.64	.35	5.08	5800	10.78		
10	G 5/8 BSP	16	10	139	100	80	78	60	31	171	14	14	18	9	129	400	4,90	XBV-4-G10-0001-M	
			.39	5.47	3.94	3.15	3.07	2.36	1.22	6.73	.55	.55	.71	.35	5.08	5800	10.78		
12	G 3/4 BSP	20	14	154	138	113	85	88	67	36,5	306	16,5	17	18	8,5	159	315	6,80	XBV-4-G12-0001-M
			.55	6.06	5.43	4.45	3.35	3.46	2.64	1.44	12.05	.65	.67	.71	.33	6.26	4500	14.96	
16	G 1 BSP	25	17	172	138	119	85	103	82	47,5	306	16,5	17	20	8,5	174	315	8,50	XBV-4-G16-0001-M
			.67	6.77	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.79	.33	6.85	4500	18.70	
20R	G 1-1/4 BSP	25/32	17	180	138	119	85	103	82	47,5	306	16,5	17	22	8,5	174	315	8,80	XBV-4-G20R-0001-M
			.67	7.09	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.87	.33	6.85	4500	19.36	
24R	G 1-1/2 BSP	25/40	17	180	138	119	85	103	82	47,5	306	16,5	17	24	8,5	174	250	8,80	XBV-4-G24R-0001-M
			.67	7.09	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.94	.33	6.85	3600	19.36	

Please note the pressure ratings of the tube connections.



### High-Pressure Block Body Ball Valve ▪ Type XBV-4 Double L-Bore Four-Way Selector ▪ 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: Aluminium (STAUFF Sizes 02 and 04)  
Carbon Steel (STAUFF Sizes 06 to 24R)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

STAUFF Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)													Nom. Pressure (bar/psi)	Weight (kg/lbs)	Order Codes (Standard Option)	
			LW	L	D	l	a	H	h	m	K	V	SW	i	d1				H2
02	1/8 NPT	4	4	100	70	55	58	40	22	160	14	12	10,5	6,5	101	500	1,60	XBV-4-N02-0001-M	
			.16	3.94	2.76	2.17	2.28	1.57	.87	6.30	.55	.47	.41	.26	3.98	7250	3.52		
04	1/4 NPT	6	4	100	70	55	58	40	22	160	14	12	13,7	6,5	101	500	1,60	XBV-4-N04-0001-M	
			.16	3.94	2.76	2.17	2.28	1.57	.87	6.30	.55	.47	.54	.26	3.98	7250	3.52		
06	3/8 NPT	10	7	115	80	65	68	50	27	171	14	14	13,5	6,5	119	500	2,80	XBV-4-N06-0001-M	
			.28	4.53	3.15	2.56	2.68	1.97	1.06	6.73	.55	.55	.53	.26	4.69	7250	6.16		
08	1/2 NPT	13	10	136	100	80	78	60	31	171	14	14	17	9	129	400	4,90	XBV-4-N08-0001-M	
			.39	5.35	3.94	3.15	3.07	2.36	1.22	6.73	.55	.55	.67	.35	5.08	5800	10.78		
12	3/4 NPT	20	14	154	138	113	85	88	67	36,5	306	16,5	17	18,3	8,5	159	315	6,80	XBV-4-N12-0001-M
			.55	6.06	5.43	4.45	3.35	3.46	2.64	1.44	12.05	.65	.67	.72	.33	6.26	4500	14.96	
16	1 NPT	25	17	172	138	119	85	103	82	47,5	306	16,5	17	21,6	8,5	174	315	8,50	XBV-4-N16-0001-M
			.67	6.77	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.85	.33	6.85	4500	18.70	
20R	1-1/4 NPT	25/32	17	180	138	119	85	103	82	47,5	306	16,5	17	22,1	8,5	174	315	8,80	XBV-4-N20R-0001-M
			.67	7.09	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.87	.33	6.85	4500	19.36	
24R	1-1/2 NPT	25/40	17	180	138	119	85	103	82	47,5	306	16,5	17	22,1	8,5	174	250	8,80	XBV-4-N24R-0001-M
			.67	7.09	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.87	.33	6.85	3600	19.36	

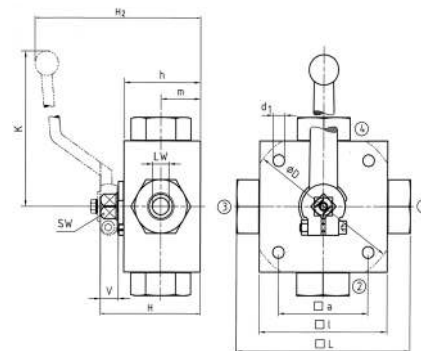
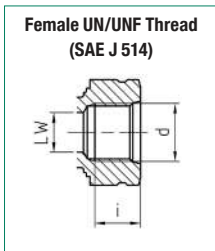
Please note the pressure ratings of the tube connections.



## High-Pressure Block Body Ball Valve - Type XBV-4 Double L-Bore Four-Way Selector - Female UN/UNF Thread (SAE J 514)

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

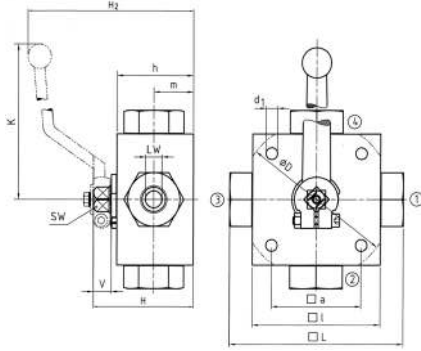
- Body, ball and stem: Carbon Steel
- Lever: Aluminium (STAUFF Size 04)  
Carbon Steel (STAUFF Sizes 06 and 16)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)



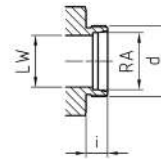
STAUFF Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)													Nom. Pressure ( <sup>bar</sup> /PSI)	Weight (kg/lbs)	Order Codes (Standard Option)	
			LW	L	D	l	a	H	h	m	K	V	SW	i	d1				H2
04	7/16-20 UNF (1/4" SAE)	6	4	100	70	55	58	40	22	160	14	12	14	6,5	101	500	1,60	XBV-4-N04-0001-M	
			.16	3,94		2,76	2,17	2,28	1,57	0,87	6,30	0,55	0,47	0,55	0,26	3,98	7250		3,52
06	9/16-18 UNF (3/8" SAE)	10	7	115	80	65	68	50	27	171	14	14	14	6,5	119	500	2,80	XBV-4-N06-0001-M	
			.28	4,53		3,15	2,56	2,68	1,97	1,06	6,73	0,55	0,55	0,55	0,26	4,69	7250		6,16
08	3/4-16 UNF (1/2" SAE)	13	10	144	100	80	78	60	31	171	14	14	14	16,3	9	129	400	5,20	XBV-4-N08-0001-M
			.39	5,67		3,94	3,15	3,07	2,36	1,22	6,73	0,55	0,55	0,64	0,35	5,08	5800	11,44	
12	1-1/16-12 UN (3/4" SAE)	20	14	164	138	113	85	88	67	36,5	306	16,5	17	18	8,5	159	315	6,80	XBV-4-N12-0001-M
			.55	6,46	5,43	4,45	3,35	3,46	2,64	1,44	12,05	0,65	0,67	0,71	0,33	6,26	4500	14,96	
16	1-5/16-12 UN (1" SAE)	25	17	180	138	119	85	103	82	47,5	306	16,5	17	20	8,5	174	315	8,50	XBV-4-N16-0001-M
			.67	7,09	5,43	4,69	3,35	4,06	3,23	1,87	12,05	0,65	0,67	0,79	0,33	6,85	4500	18,70	

Please note the pressure ratings of the tube connections.





Union nuts and cutting rings are not included in delivery.

**24° Cone Connection  
(DIN 2353 / ISO 8434-1)**


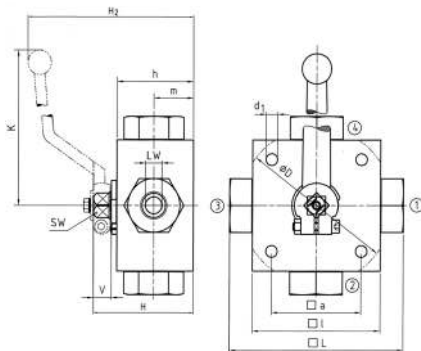
When ordering the standard option as indicated in the table below, the following materials will be supplied:

- Body, ball and stem: Carbon Steel
- Lever: Aluminium (STAUFF Sizes 02 and 04)  
Carbon Steel (STAUFF Sizes 05 to 20R)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

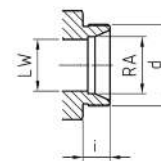
**B**

STAUFF Size	Tube/Thread Size d	Nominal Size DN	Dimensions (mm/in)														Nom. Pressure (bar/psi)	Weight (kg/lbs)	Order Codes (Standard Option)	
			RA	LW	L	D	l	a	H	h	m	K	V	SW	i	d1	H2			
02	06L / M12 x 1,5	4	6	4	105	70	55	58	40	22	160	14	12	10	6,5	101	500	1,60	XBV-4-06L-0001-M	
			.24	.16	4.13		2.76	2.17	2.28	1.57	.87	6.30	.55	.47	.39	.26	3.98	7250		3.52
04	08L / M14 x 1,5	6	8	4	105	70	55	58	40	22	160	14	12	10	6,5	101	500	1,80	XBV-4-08L-0001-M	
			.31	.16	4.13		2.76	2.17	2.28	1.57	.87	6.30	.55	.47	.39	.26	3.98	7250		3.96
05	10L / M16 x 1,5	8	10	7	114	80	65	68	50	27	171	14	14	11	6,5	119	500	2,60	XBV-4-10L-0001-M	
			.39	.28	4.49		3.15	2.56	2.68	1.97	1.06	6.73	.55	.55	.43	.26	4.69	7250		5.72
06	12L / M18 x 1,5	10	12	7	114	80	65	68	50	27	171	14	14	11	6,5	119	500	2,60	XBV-4-12L-0001-M	
			.47	.28	4.49		3.15	2.56	2.68	1.97	1.06	6.73	.55	.55	.43	.26	4.69	7250		5.72
08	15L / M22 x 1,5	13	15	10	137	100	80	78	60	31	171	14	14	12	9	129	400	4,70	XBV-4-15L-0001-M	
			.59	.39	5.39		3.94	3.15	3.07	2.36	1.22	6.73	.55	.55	.47	.35	5.08	5800		10.34
10	18L / M26 x 1,5	16	18	10	137	113	85	88	67	36,5	171	16,5	17	12	8,5	129	400	4,70	XBV-4-18LDN16-0001-M	
			.71	.39	5.39		4.45	3.35	3.46	2.64	1.44	6.73	.65	.67	.47	.33	5.08	5800		10.34
12	22L / M30 x 2	20	22	14	152	138	119	85	103	82	47,5	306	16,5	17	14	8,5	159	315	6,60	XBV-4-22L-0001-M
			.87	.55	5.98	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.55	.33	6.26	4500	14.52	
16	28L / M36 x 2	25	28	17	166	138	119	85	103	82	47,5	306	16,5	17	14	8,5	174	315	8,00	XBV-4-28L-0001-M
			1.10	.67	6.54	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.55	.33	6.85	4500	17.60	
20R	35L / M45 x 2	25/32	35	17	170	138	119	85	103	82	47,5	306	16,5	17	16	8,5	174	315	8,12	XBV-4-35LDN25-0001-M
			1.38	.67	6.69	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.63	.33	6.85	4500	17.86	

Please note the pressure ratings of the tube connections.



Union nuts and cutting rings are not included in delivery.

**24° Cone Connection  
(DIN 2353 / ISO 8434-1)**


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

- Body, ball and stem: Carbon Steel
- Lever: Aluminium (STAUFF Sizes 02 and 04)  
Carbon Steel (STAUFF Sizes 05 to 20R)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

STAUFF Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)														Nom. Pressure (bar/psi)	Weight (kg/lbs)	Order Codes (Standard Option)	
			RA	LW	L	D	l	a	H	h	m	K	V	SW	i	d1	H2			
02	08S / M16 x 1,5	4	8	4	105	70	55	58	40	22	160	14	12	12	6,5	101	500	1,60	XBV-4-08S-0001-M	
			.31	.16	4.13		2.76	2.17	2.28	1.57	.87	6.30	.55	.47	.47	.26	3.98	7250		3.52
04	10S / M18 x 1,5	6	10	4	105	70	55	58	40	22	160	14	12	12	6,5	101	500	1,80	XBV-4-10S-0001-M	
			.39	.16	4.13		2.76	2.17	2.28	1.57	.87	6.30	.55	.47	.47	.26	3.98	7250		3.96
05	12S / M20 x 1,5	8	12	7	116	80	65	68	50	27	171	14	14	12	6,5	119	500	2,60	XBV-4-12S-0001-M	
			.47	.28	4.57		3.15	2.56	2.68	1.97	1.06	6.73	.55	.55	.47	.26	4.69	7250		5.72
06	14S / M22 x 1,5	10	14	7	120	80	65	68	50	27	171	14	14	14	6,5	119	500	2,60	XBV-4-14S-0001-M	
			.55	.28	4.72		3.15	2.56	2.68	1.97	1.06	6.73	.55	.55	.55	.26	4.69	7250		5.72
08	16S / M24 x 1,5	13	16	10	141	100	80	78	60	31	171	14	14	14	9	129	400	4,70	XBV-4-16S-0001-M	
			.63	.39	5.55		3.94	3.15	3.07	2.36	1.22	6.73	.55	.55	.55	.35	5.08	5800		10.34
10	20S / M30 x 2	16	20	10	145	113	85	88	67	36,5	171	16,5	17	16	8,5	129	400	4,70	XBV-4-20S-0001-M	
			.79	.39	5.71		4.45	3.35	3.46	2.64	1.44	6.73	.65	.67	.63	.33	5.08	5800		10.34
12	25S / M36 x 2	20	25	14	160	138	119	85	103	82	47,5	306	16,5	17	18	8,5	159	315	6,60	XBV-4-25S-0001-M
			.98	.55	6.30	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.71	.33	6.26	4500	14.52	
16	30S / M42 x 2	25	30	17	176	138	119	85	103	82	47,5	306	16,5	17	20	8,5	174	315	8,00	XBV-4-30S-0001-M
			1.18	.67	6.93	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.79	.33	6.85	4500	17.60	
20R	38S / M52 x 2	25/32	38	17	180	138	119	85	103	82	47,5	306	16,5	17	22	8,5	174	315	8,12	XBV-4-38SDN25-0001-M
			1.50	.67	7.09	5.43	4.69	3.35	4.06	3.23	1.87	12.05	.65	.67	.87	.33	6.85	4500	17.86	

Please note the pressure ratings of the tube connections.

