



**BALL  
VALVES**



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## Way Ball Valves with Threaded Connections

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## Multi-Way Ball Valves with Threaded Connections

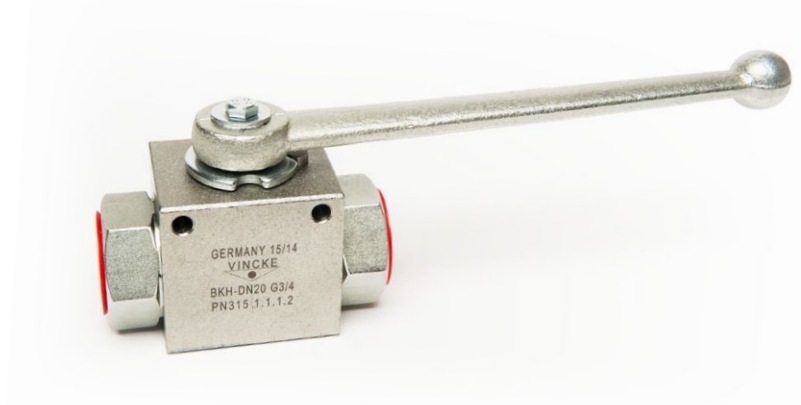
▶ 3KH	15
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## Way & 3-way Ball Valves with Locking Devices

▶ BKH - G1/2 - 1112	19
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## Valves

▶ Zinc alloy pressure crank handle	20
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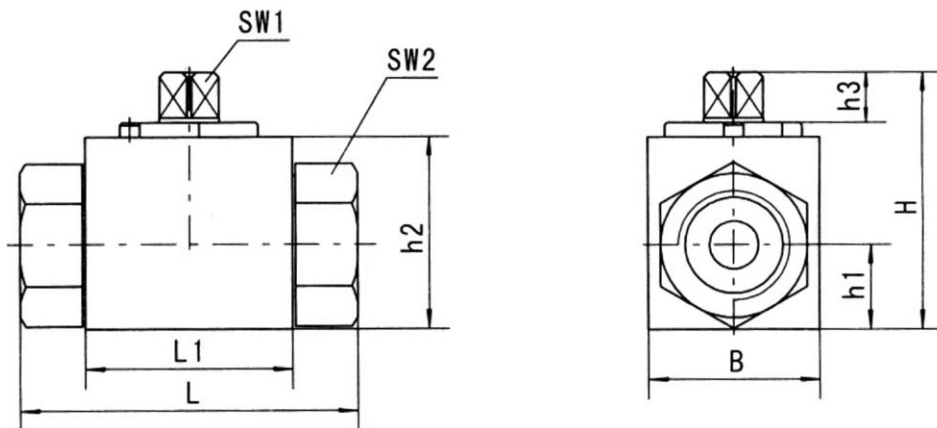


How To Order

BKH	G1"1/2	1	1	1	2
(1)	(2)	(3)	(4)	(5)	(6)

- (1) Model: BKH = 2 way ball valve
- (2) Thread size: e.g. G1/2
- (3) Block & connection material:
  - 1 = Carbon steel
  - 2 = Stainless steel 304
- (4) Ball & stem material:
  - 1 = Carbon steel
  - 2 = Stainless steel 304
- (5) Ball seat material:
  - 1 = POM 4 = PTFE
- (6) Connection & stem seal:
  - 2 = NBR 4 = FPM

Dimensions



## Order information

## ISO 228 Female

Model	DN	PN	LW	d1	i	L	L1	B	H	h1	h2	h3	SW1	SW2
BKH-G1/8	4	500	6	G1/8	10	69	37	28	44,5	13	32	8	9	22
BKH-G1/4	6	500	6	G1/4	14	69	37	28	44,5	13	32	8	9	22
BKH-G3/8	10	500	10	G3/8	14	72	42	32	52,5	17	40	8	9	27
BKH-G1/2	13	500	13	G1/2	16	83	48	35	52,5	17	40	8	9	30
BKH-G3/4	20	315	20	G3/4	18	95	60	48	72	24	57	12	14	41
BKH-G1"	25	315	25	G1"	20,5	113	65	57	82	28,5	64	12	14	50
BKH-G1"1/4	25	315	25	G1"1/4	22	120	65	60	82	28,5	64	12	14	55
BKH-G1"1/2	25	315	25	G1"1/2	22	120	65	60	82	28,5	64	12	14	55

## ANSI B1.20.1NPT Female

Model	DN	PN	LW	d1	i	L	L1	B	H	h1	h2	h3	SW1	SW2
BKH-1/8NPT	4	500	6	NPT1/8	10	69	37	28	44,5	13	32	8	9	22
BKH-1/4NPT	6	500	6	NPT1/4	14	69	37	28	44,5	13	32	8	9	22
BKH-3/8NPT	10	500	10	NPT3/8	14	72	42	32	52,5	17	40	8	9	27
BKH-1/2NPT	13	500	13	NPT1/2	16	83	48	35	52,5	17	40	8	9	30
BKH-3/4NPT	20	315	20	NPT3/4	18	95	60	48	72	24	57	12	14	41
BKH-1"NPT	25	315	25	NPT1"	20,5	113	65	57	82	28,5	64	12	14	50
BKH-1"1/4NPT	25	315	25	NPT1"1/4	22	120	65	60	82	28,5	64	12	14	55
BKH-1"1/2NPT	25	315	25	NPT1"1/2	22	120	65	60	82	28,5	64	12	14	55

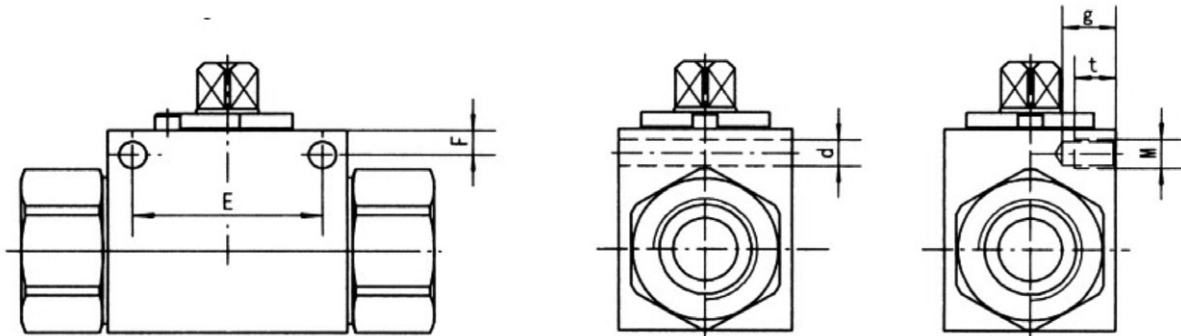
## Order information

## DIN 2353 Light series

Model	DN	PN	LW	RA	d1	i	L	L1	B	H	h1	h2	h3	SW1	SW2
BKH-06LR	4	500	4	6	M12x1,5	10	67	37	28	44,5	13	32	8	9	22
BKH-08LR	6	500	6	8	M14x1,5	10	67	37	28	44,5	13	32	8	9	22
BKH-10LR	8	500	8	10	M16x1,5	11	74	42	32	52,5	17	40	8	9	27
BKH-12LR	10	500	10	12	M18x1,5	11	74	42	32	52,5	17	40	8	9	27
BKH-15LR	13	500	13	15	M22x1,5	12	82	48	35	52,5	17	40	8	9	30
BKH-15LR	13	400	13	15	M22x1,5	12	82	47	38	63,5	19	46	11	12	32
BKH-18LR	13	500	13	18	M26x1,5	12	82	48	35	52,5	17	40	8	9	30
BKH-18LR	16	400	15	18	M26x1,5	12	82	47	38	63,5	19	46	11	12	32
BKH-22LR	20	315	19	22	M30x2	14	101	60	48	75	24	57	12	14	41
BKH-28LR	25	315	25	28	M36x2	14	108	65	57	82	28,5	64	12	14	50
BKH-35LR	25	315	25	35	M45x2	16	112	65	60	82	28,5	64	12	14	50

## DIN 2353 Heavy series

Model	DN	PN	LW	RA	d1	i	L	L1	B	H	h1	h2	h3	SW1	SW2
BKH-08SR	4	500	5	8	M16x1,5	12	73	37	28	44,5	13	32	8	9	22
BKH-10SR	6	500	6	10	M18x1,5	12	73	37	28	44,5	13	32	8	9	22
BKH-12SR	8	500	8	12	M20x1,5	12	76	42	32	52,5	17	40	8	9	27
BKH-14SR	10	500	10	14	M22x1,5	14	80	42	32	52,5	17	40	8	9	27
BKH-16SR	13	500	13	16	M24x1,5	14	86	48	35	52,5	17	40	8	9	30
BKH-16SR	13	400	13	16	M24x1,5	14	86	47	38	63,5	19	46	11	12	32
BKH-20SR	13	500	13	20	M30x2	16	90	48	35	52,5	17	40	8	9	32
BKH-20SR	16	400	15	20	M30x2	16	90	47	38	63,5	19	46	11	12	32
BKH-25SR	20	315	20	25	M36x2	18	109	60	48	75	24	57	12	14	41
BKH-30SR	25	315	25	30	M42x2	20	120	65	57	82	28,5	64	12	14	50
BKH-38SR	25	315	25	38	M52x2	22	124	65	60	82	28,5	64	12	14	55



Full Holes Dimensions

DN	E	F	d
4	26	5	4,5
6	26	5	4,5
10	32	5	6,5
13	37,5	4,8	6,5
16	37,5	5	6,5
20	45	6,5	6,5
25	55	6	6,7
25/32	55	6	6,7

Thread Holes Dimensions

DN	E	F	d	g	M
4	24	6	6,5	9	M6
6	24	6	6,5	9	M6
10	32	5,5	7	10	M6
13	36	6	8,5	11	M6
16	32	8	7	10,5	M10
20	45	7,5	12	15	M10
25	45	7,5	12	15	M10
25/32	45	7,5	12	15	M10





## Order information

## ISO 228 Female

Model	DN	PN	LW	d1	i	L	L1	B	H	h1	h2	h3	SW1	SW2
MKH-G1"1/4	32	315	30	G1"1/4	22	110	84	75	104,5	37,5	84	14	17	60
MKH-G1"1/2	40	315	38	G1"1/2	24	130	91	85	115,5	42,5	95	14	17	70
MKH-G2"	50	315	48	G2"	26	140	100	105	133	52,5	112,5	14	17	80

## ANSI B1.20.1NPT Female

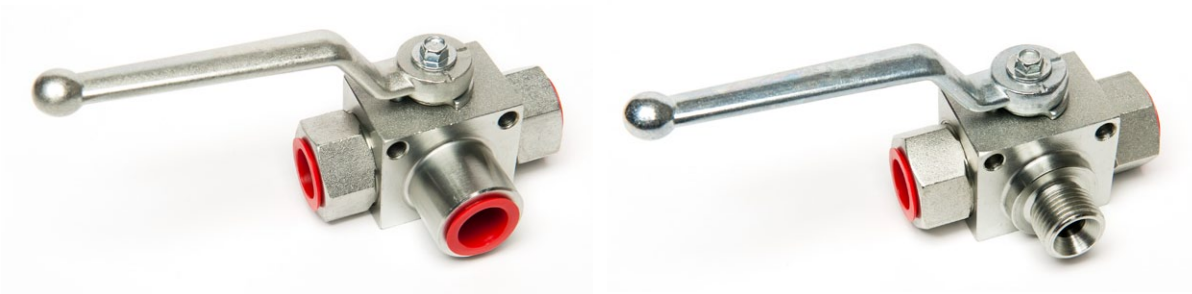
Model	DN	PN	LW	d1	i	L	L1	B	H	h1	h2	h3	SW1	SW2
MKH-1"1/4NPT	32	315	30	NPT1"1/4	22	110	84	75	104,5	37,5	84	14	17	60
MKH-1"1/2NPT	40	315	38	NPT1"1/2	24	130	91	85	115,5	42,5	95	14	17	70
MKH-2"NPT	50	315	48	NPT2"	26	140	100	105	133	52,5	112,5	14	17	80

## DIN 2353 Light series

Model	DN	PN	LW	RA	d1	i	L	L1	B	H	h1	h2	h3	SW1	SW2
MKH-35LR	32	315	30	35	M45x2	16	141	84	75	104,5	37,5	84	14	17	60
MKH-42LR	40	315	38	42	M52x2	16	162	91	85	115,5	42,5	95	14	17	70

## DIN 2353 Heavy series

Model	DN	PN	LW	RA	d1	i	L	L1	B	H	h1	h2	h3	SW1	SW2
MKH-38SR	32	315	30	38	M52x2	22	153	84	75	104,5	37,5	84	14	17	60



How To Order

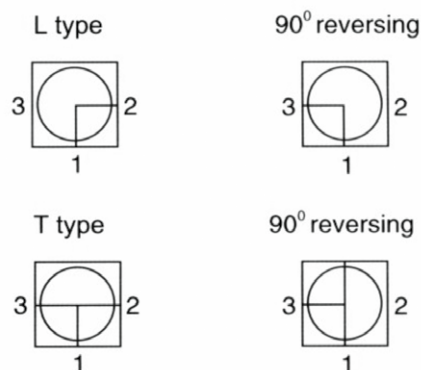
BK3	M	G1/2	L	1	1	1	2
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

(1)	Model:	BK3 = Square body
(2)	Third way:	without "M" = Female thread with "M" = Male thread
(3)	Thread size:	e.g. G1/2
(4)	Porting pattern:	See chart of porting pattern
(5)	Block & connection material:	1 = Carbon steel 2 = Stainless steel 304
(6)	Ball & stem material:	1 = Carbon steel 2 = Stainless steel 304
(7)	Ball seat material:	1 = POM 4 = PTFE
(8)	Connection & stem seal:	2 = NBR 4 = FPM

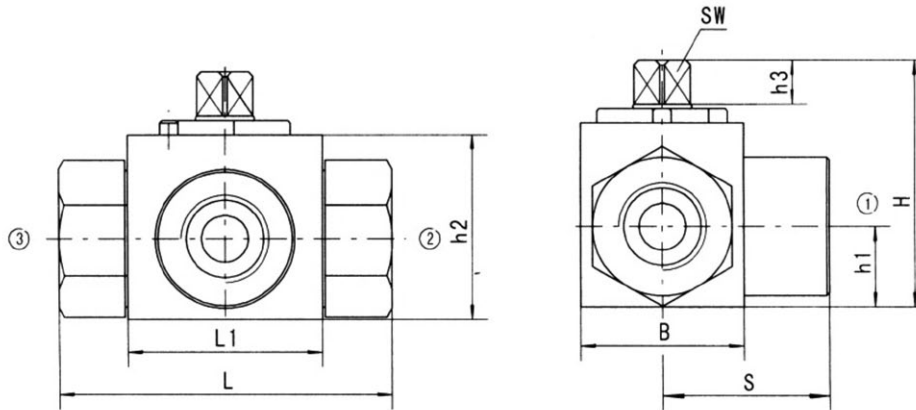
PORTING PATTERN (SEE CHART)

Hydraulic oil just can flow into valve through port "1", and the valve only can be sealed under the two situations:

- (1) Pressure at the closed port is zero:
- (2) Pressure at the closed port is lower than at the two open ports.



## Dimensions



## Order information

## ISO 228 Female

Model	DN	PN	LW	d1	i	L	L1	B	H	h1	h2	h3	SW1	SW2
BK3-G1/8	4	315	6	G1/8	10	69	37	28	44,5	13	32	8	9	35
BK3-G1/4	6	315	6	G1/4	14	69	37	28	44,5	13	32	8	9	35
BK3-G3/8	10	315	10	G3/8	14	72	42	32	52,5	17	40	8	9	36
BK3-G1/2	13	315	13	G1/2	16	83	48	35	52,5	17	40	8	9	42
BK3-G3/4	20	315	20	G3/4	18	95	60	48	75	24	57	12	14	49
BK3-G1"	25	315	25	G1"	20,5	113	65	57	82	28,5	64	12	14	56,5
BK3-G1"1/4	25	315	25	G1"1/4	22	120	65	60	82	28,5	64	12	14	60

## ANSI B1.20.1NPT Female

Model	DN	PN	LW	d1	i	L	L1	B	H	h1	h2	h3	SW1	SW2
BK3-1/8NPT	4	315	6	NPT1/8	10	69	37	28	44,5	13	32	8	9	35
BK3-1/4NPT	6	315	6	NPT1/4	14	69	37	28	44,5	13	32	8	9	35
BK3-3/8NPT	10	315	10	NPT3/8	14	72	42	32	52,5	17	40	8	9	36
BK3-1/2NPT	13	315	13	NPT1/2	16	83	48	35	52,5	17	40	8	9	42
BK3-3/4NPT	20	315	20	NPT3/4	18	95	60	48	75	24	57	12	14	49
BK3-1"NPT	25	315	25	NPT1"	20,5	113	65	57	82	28,5	64	12	14	56,5
BK3-1"1/4NPT	25	315	25	NPT1"1/4	22	120	65	60	82	28,5	64	12	14	60

## Order information

## DIN 2353 Light series

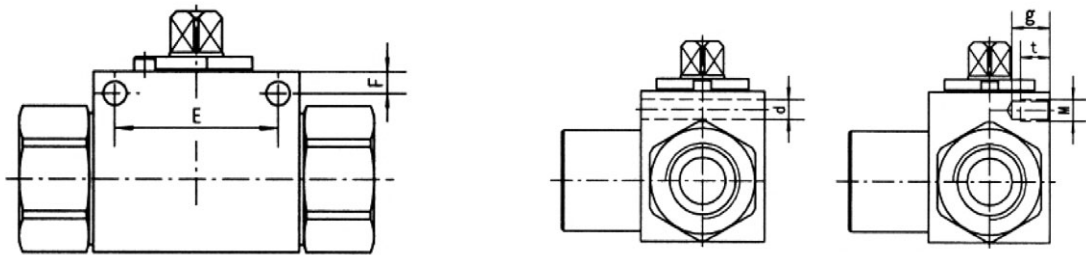
Model	DN	PN	LW		d1	i	L	L1	B	H	h1	h2	h3	SW1	SW2
BK3-06LR	4	315	4	6	M12x1,5	10	67	37	28	44,5	13	32	8	9	34,5
BK3-08LR	6	315	6	8	M14x1,5	10	67	37	28	44,5	13	32	8	9	34,5
BK3-10LR	8	315	8	10	M16x1,5	11	74	42	32	52,5	17	40	8	9	37
BK3-12LR	10	315	10	12	M18x1,5	11	74	42	32	52,5	17	40	8	9	37
BK3-15LR	13	315	13	15	M22x1,5	12	82	48	35	52,5	17	40	8	9	40
BK3-15LR	13	315	13	15	M22x1,5	12	82	47	38	63,5	19	46	11	12	40
BK3-18LR	13	315	13	18	M26x1,5	12	82	48	35	52,5	17	40	8	9	42
BK3-18LR	16	315	15	18	M26x1,5	12	82	47	38	63,5	19	46	11	12	42
BK3-22LR	20	315	19	22	M30x2	14	101	60	48	75	24	57	12	14	52
BK3-28LR	25	315	25	28	M36x2	14	108	65	57	82	28,5	64	12	14	54
BK3-35LR	25	315	25	35	M45x2	16	112	65	60	82	28,5	64	12	14	56

## DIN 2353 Heavy series

Model	DN	PN	LW		d1	i	L	L1	B	H	h1	h2	h3	SW1	SW2
BK3-08SR	4	315	5	8	M16x1,5	12	73	37	28	44,5	13	32	8	9	37
BK3-10SR	6	315	6	10	M18x1,5	12	73	37	28	44,5	13	32	8	9	37
BK3-12SR	8	315	8	12	M20x1,5	14	76	42	32	52,5	17	40	8	9	38
BK3-14SR	10	315	10	14	M22x1,5	14	80	42	32	52,5	17	40	8	9	40
BK3-16SR	13	315	13	16	M24x1,5	14	86	48	35	52,5	17	40	8	9	43,5
BK3-16SR	13	315	13	16	M24x1,5	14	86	47	38	63,5	19	46	11	12	43,5
BK3-20SR	13	315	13	20	M30x2	16	90	48	35	52,5	17	40	8	9	45,5
BK3-20SR	16	315	15	20	M30x2	16	90	47	38	63,5	19	46	11	12	45,5
BK3-25SR	20	315	20	25	M36x2	18	109	60	48	75	24	57	12	14	56
BK3-30SR	25	315	25	30	M42x2	20	120	65	57	82	28,5	64	12	14	60
BK3-38SR	25	315	25	38	M52x2	22	124	65	60	82	28,5	64	12	14	62

Dimensions

3-way Ball Valves with Mounting Holes

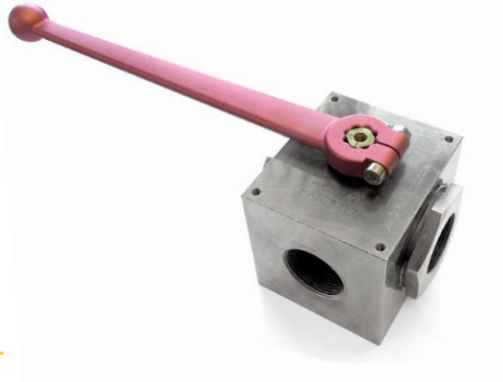


Full Holes Dimensions

DN	E	F	d
4	26	5	4,5
6	26	5	4,5
10	32	5	6,5
13	37,5	4,8	6,5
16	37,5	5	6,5
20	45	6,5	6,5
25	55	6	6,7
25/32	55	6	6,7

Thread Holes Dimensions

DN	E	F	d	g	M
4	24	6	6,5	9	M6
6	24	6	6,5	9	M6
10	32	5,5	7	10	M6
13	36	6	8,5	11	M6
16	32	8	7	10,5	M10
20	45	7,5	12	15	M10
25	45	7,5	12	15	M10
25/32	45	7,5	12	15	M10



How To Order

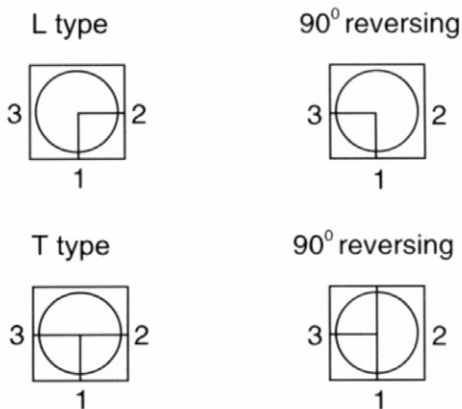
BK3-T	G"1/2	L	1	1	1	2
(1)	(2)	(3)	(4)	(5)	(6)	(7)

(1)	Model:	BK3-T = Square body
(2)	Thread size:	e.g. G1"1/2
(3)	Porting pattern:	See chart of porting pattern
(4)	Block & connection material:	1 = Carbon steel 2 = Stainless steel 304
(5)	Ball & stem material:	1 = Carbon steel 2 = Stainless steel 304
(6)	Ball seat material:	1 = POM 4 = PTFE
(7)	Connection & stem seal:	2 = NBR 4 = FPM

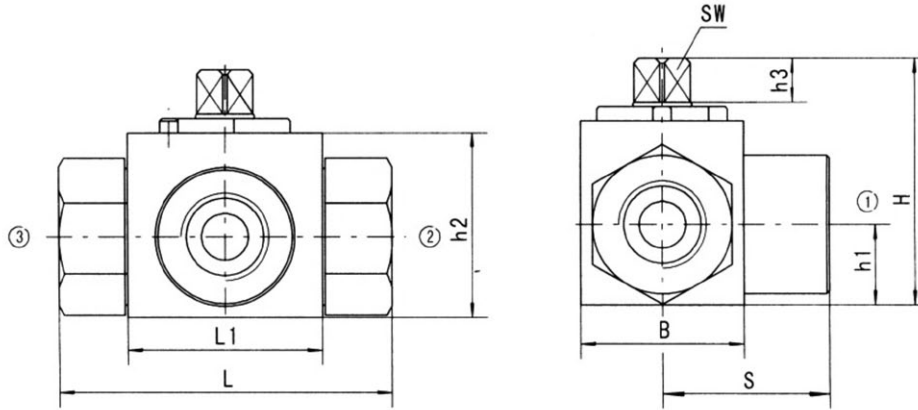
Porting pattern (See chart)

Hydraulic oil just can flow into valve through port "1", and the valve only can be sealed under the two situations:

- 1) Pressure at the closed port is zero:
- (2) Pressure at the closed port is lower than at the two open ports.



Dimensions



Order information

ISO 228 Female

Model	DN	PN	LW	d1	i	L	L1	B	H	h1	h2	h3	SW1	SW2
BK3-G1"1/4	32	315	30	G1"1/4	22	110	84	75	104,5	37,5	84	14	17	55
BK3-G1"1/2	40	315	38	G1"1/2	24	130	91	85	115,5	42,5	95	14	17	65
BK3-G2"	50	315	48	G2"	26	140	100	105	133	52,5	112,5	14	17	70

ANSI B1.20.1NPT Female

Model	DN	PN	LW	d1	i	L	L1	B	H	h1	h2	h3	SW1	SW2
BK3-1"1/4NPT	32	315	30	NPT1"1/4	22	110	84	75	104,5	37,5	84	14	17	55
BK3-1"1/2NPT	40	315	38	NPT1"1/2	24	130	91	85	115,5	42,5	95	14	17	65
BK3-2"NPT	50	315	48	NPT2"	26	140	100	105	133	52,5	112,5	14	17	70



How To Order

3KH G1/2 L 1 1 1 2 SB01  
 (1) (2) (3) (4) (5) (6) (7) (8)

- (1) Model: 3KH = 3 way ball valve  
4KH = 4 way ball valve

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- (2) Thread size or pipe outside diameter: A = Female thread ISO 228 (see Dimensions)  
B = Male thread JB984-77 (see Dimensions)  
C = Male thread DIN 2353 light series (see Dimensions)  
D = Male thread DIN 2353 heavy series (see Dimensions)

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- (3) Ball symbol 3KH-L; 3KH-T; 4KH-L; 4KH-T; 4KH-X

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- (4) Block & connection material: 1 = Carbon steel  
2 = Stainless steel

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- (5) Ball & stem material: 1 = Carbon steel  
2 = Stainless steel

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- (6) Ball seat material: 1 = POM

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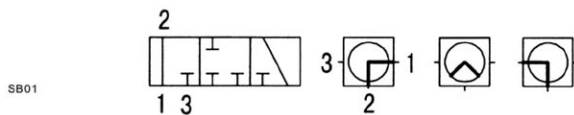
- (7) Connection & stem seal: 2 = NBR  
4 = FPM

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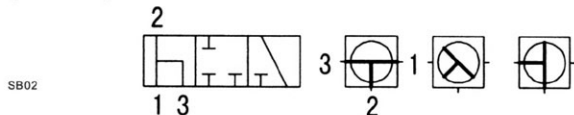
- (8) Porting pattern type: e.g. SB01 (see Porting pattern)

Porting pattern (See chart)

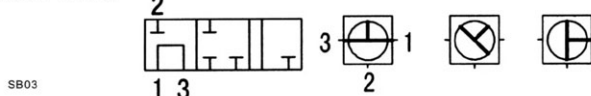
3 way ball valve L type 90° reversing , 45° closure



3 way ball valve L type 90° reversing , 45° closure



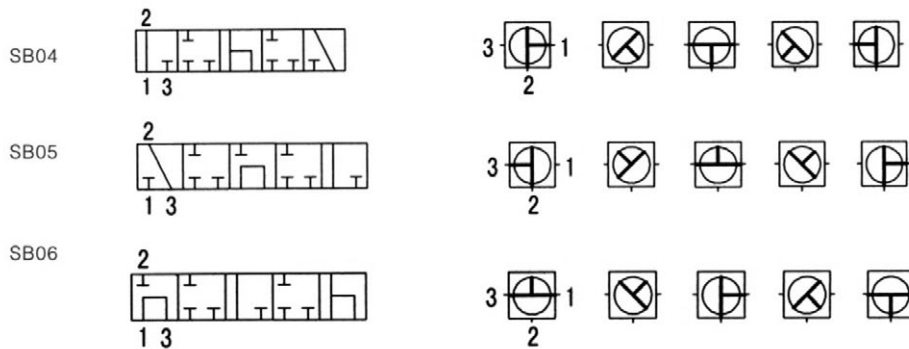
3 way ball valve T type 90° reversing





Porting pattern (See chart)

3 way ball valve T type 180° reversing



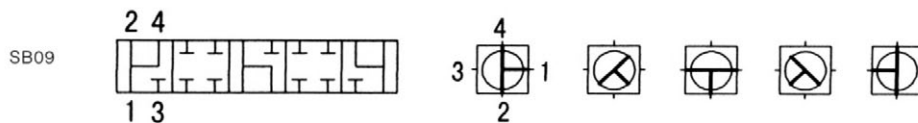
4 way ball valve T type 180° reversing



4 way ball valve T type 90° reversing



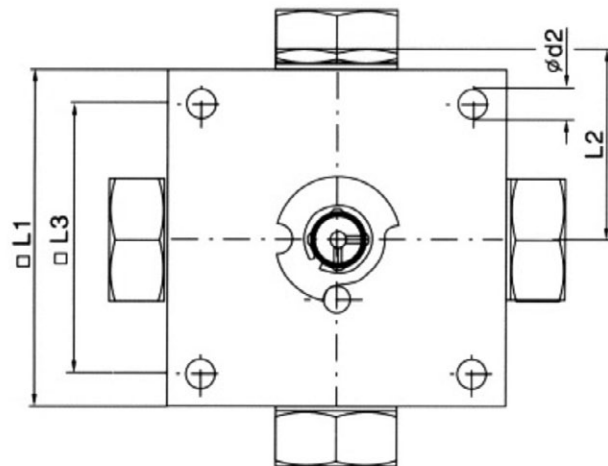
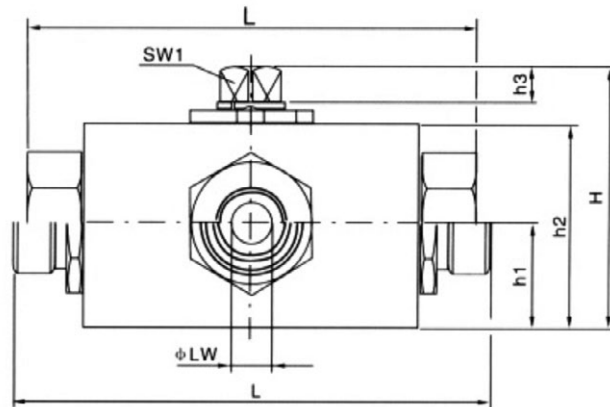
4 way ball valve T type 180° reversing



4 way ball valve X type 90° reversing



Dimensions



## Order information

## ISO 228 Female

Model	DN	PN	LW		RA	d1	i	I	L1	L2	L3	H	h1	h2	h3	d2	SW1	SW2
			L	T														
3KH/4KH-G1/8	4	500	5	5	4,5	G1/8	10	100	70	42,5	55	57	22	40	11	6,5	12	24
3KH/4KH-G1/4	6	500	5	5	4,5	G1/4	14	100	70	42,5	55	57	22	40	11	6,5	12	24
3KH/4KH-G3/8	10	500	9	9	6	G3/8	14	115	80	46	65	67,5	27	50	11,5	6,5	14	30
3KH/4KH-G1/2	13	500	12	12	10	G1/2	16	135	100	56	80	77,5	31	60	11,5	9	14	36
3KH/4KH-G3/4	20	500	18	18	14	G3/4	18	144	100	58	85	92	36	73	11,5	9	17	46

## DIN 2353 Light series

Model	DN	PN	LW		RA	d1	i	I	L1	L2	L3	H	h1	h2	h3	d2	SW1	SW2
			L	T														
3KH/4KH-06LR	4	500	5	5	4,5	M12x1,5	10	105	70	42,5	55	57	22	40	11	6,5	12	24
3KH/4KH-08LR	6	500	5	5	4,5	M14x1,5	10	105	70	42,5	55	57	22	40	11	6,5	12	24
3KH/4KH-10LR	8	500	9	9	6	M16x1,5	11	114	80	48	65	67,5	27	50	11,5	6,5	14	30
3KH/4KH-12LR	10	500	9	9	6	M18x1,5	11	114	80	48	65	67,5	27	50	11,5	6,5	14	30
3KH/4KH-15LR	12	500	12	12	10	M22x1,5	12	136	100	56	80	77,5	31	60	11,5	9	14	36
3KH/4KH-18LR	16	500	12	12	10	M26x1,5	12	136	100	56	80	77,5	31	60	11,5	9	14	36
3KH/4KH-22LR	20	500	18	18	14	M30x2	14	143	100	58	85	92	36	73	11,5	9	17	46

## DIN 2353 Heavy series

Model	DN	PN	LW		RA	d1	i	I	L1	L2	L3	H	h1	h2	h3	d2	SW1	SW2
			L	T														
3KH/4KH-08SR	4	500	5	5	4,5	M16x1,5	12	105	70	42,5	55	57	22	40	11	6,5	12	24
3KH/4KH-10SR	6	500	5	5	4,5	M18x1,5	12	105	70	42,5	55	57	22	40	11	6,5	12	24
3KH/4KH-12SR	8	500	9	9	6	M20x1,5	12	116	80	46	65	67,5	27	50	11,5	6,5	14	30
3KH/4KH-14SR	10	500	9	9	6	M22x1,5	14	120	80	46	65	67,5	27	50	11,5	6,5	14	30
3KH/4KH-16SR	12	500	12	12	10	M24x1,5	14	140	100	56	80	77,5	31	60	11,5	9	14	36
3KH/4KH-20SR	16	500	12	12	10	M30x2	16	144	100	56	80	77,5	31	60	11,5	9	14	36
3KH/4KH-25SR	20	500	18	18	14	M36x2	16	151	100	58	85	92	36	73	11,5	9	17	46



### How To Order

BKH - G1/2 - 1112  
(1)

DS9  
(2)

(1) Ball valve model:

BKH = 2 way ball valve

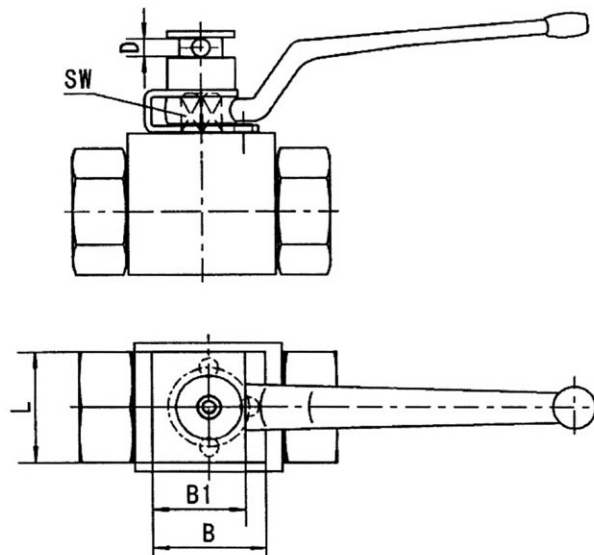
BK3 / BK3-M = 3 way ball valve

(2) Locking device size:

DS9 = DN04 - DN13

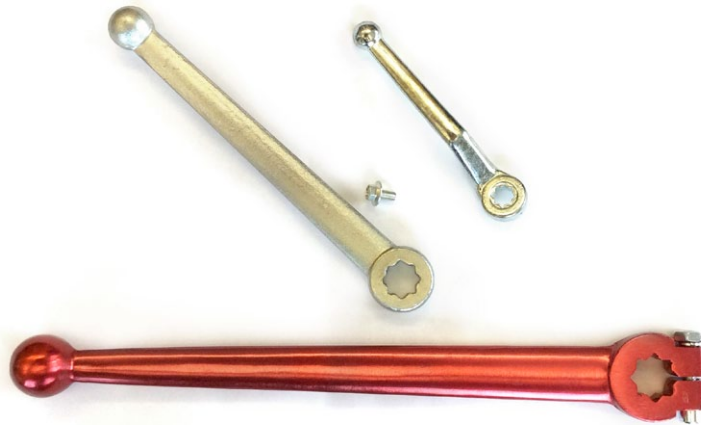
DS14 = DN20 - DN25

### Dimensions

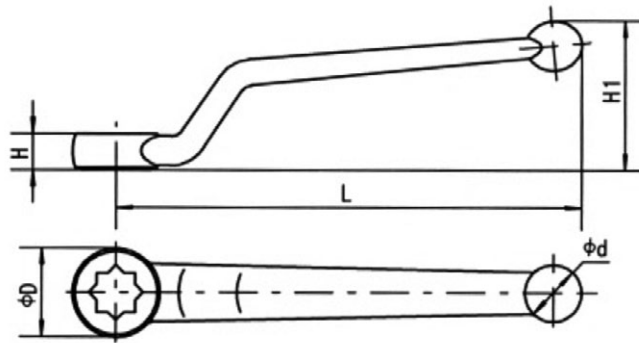


Model	DN	SW	D	L	B1	B
DS9	4 - 13	9	6	32	28	34
DS14	20 - 25	14	8	50	41	50
DS17	32 - 50	17	8	58	46	55

HANDLE

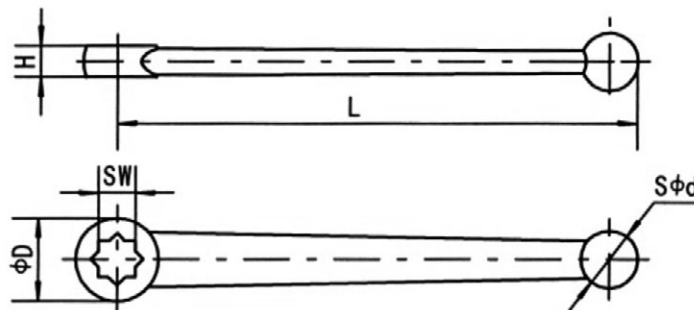


Zinc alloy pressure crank handle



Model	SW	L	H	H1	D	d	Hexbolt
HANDLE-9L	9	120	8,5	36	5	15	M5x8

Steel pressure straight handle



Model	SW	L	H	D	d	Hexbolt
HANDLE-14	14	200	13	32	24	M6x25
HANDLE-17	17	260	15	36	26	M6x30



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