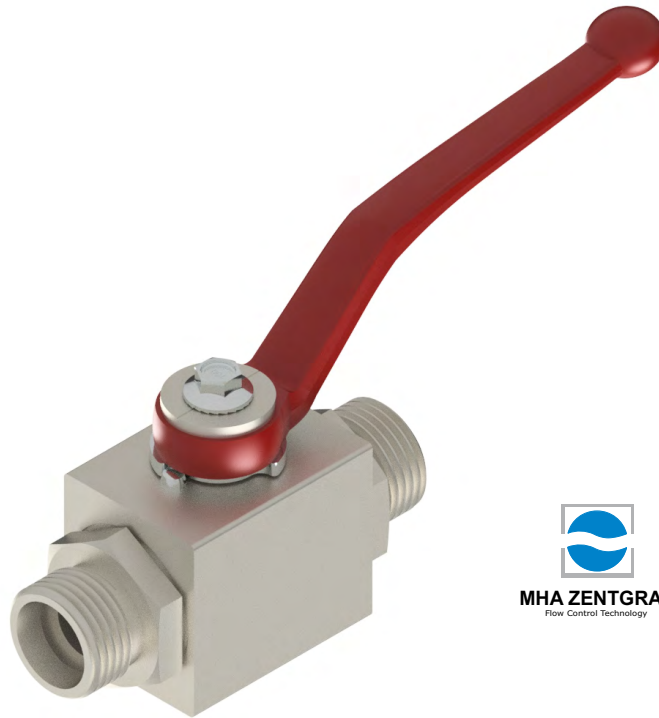


Ball Valve

BALL VALVE

Through MHA-Zentgraf representation in Brazil, GEPEF supplies ball valves for pressures up to 800 bar, temperatures up to 500°C, and nominal diameters up to 200 mm in several configurations (threaded, tube, flanged, dual and multiple ports, etc.).

The bodies of the ball valves supplied by GEPEF are manufactured by MHA-Zentgraf (Germany), and the adapters are produced under our own design and specification, in our machining facility, providing a wide range of adapters as well as versatility for the valves, including combinations of different end connections in the same valve.



Materials – Carbon Steel Valve

Body – Carbon Steel

Ball – Hardened Chrome

Connection – Carbon Steel

O-ring – NBR / Buna-N

Materials – Stainless Steel Valve

Body – AISI 316 Stainless Steel

Ball – AISI 316 Stainless Steel

Connection – AISI 316 Stainless Steel

O-ring – Viton

Seals and Operating Temperatures

NBR-Buna-N (-25°C to 100°C) (-13°F to +212°F) – (Standard)

(FKM) Viton (-15°C to 200°C) (-5°F to +392°F)

Surface Treatment

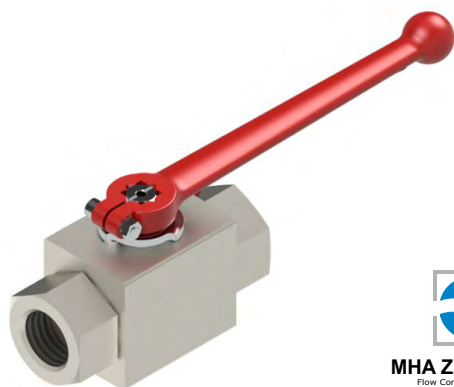
White Trivalent Zinc Plating (Cr VI Free)

Ball Seal

POM – Standard for carbon steel and stainless steel

Optional PTFE – Teflon

2-WAY BALL VALVE – BKH TYPE



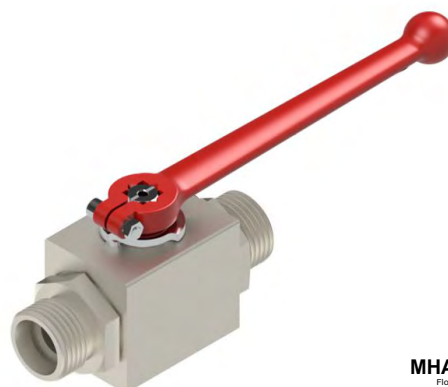
KH DN13-25 Female BSP, NPT and UNF

PN 250 - 500 Bar / 3625 - 7251 PSI

BSP - DIN ISO 228

NPT - ANSI B1.20.1

UNF - SAE J514



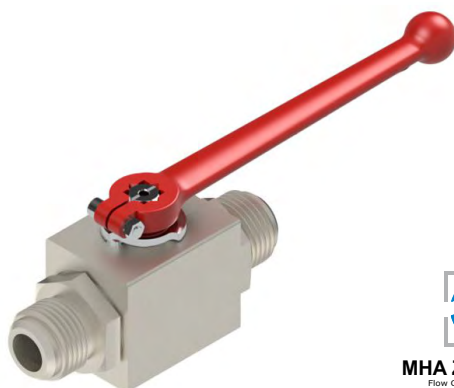
BKH DN13-25 Male Tube

PN 250 - 500 Bar / 3625 - 7251 PSI

Light Tube – DIN 2353L

Heavy Tube – DIN 2353S

ORFS - ISO 8434-3

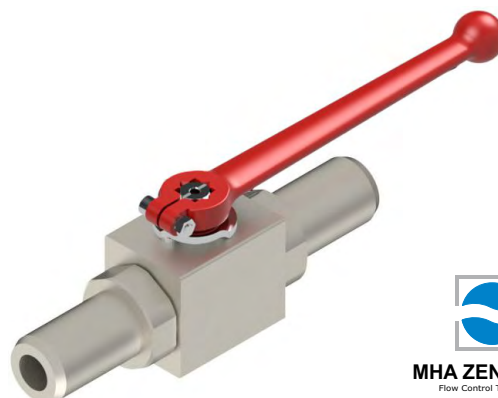


BKH DN13-25 Male JIC-SAE J514

PN 250 - 500 Bar / 3625 - 7251 PSI

UNF - SAE J514

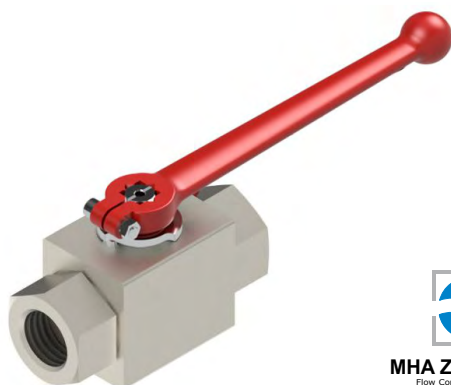
Consult Technical Department



BKH DN13-25-AS

Smooth Tube Nipple for Hose

PN 160 Bar / 2320 PSI

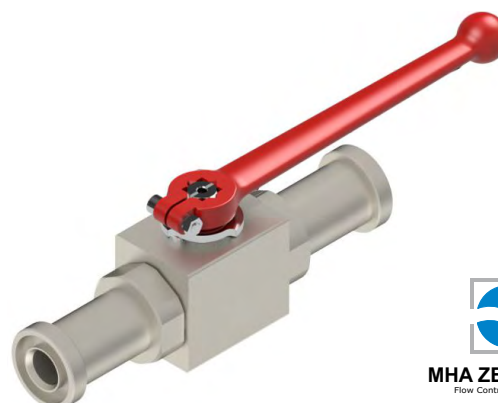


BKH DN13-25-SW

Socket Weld Connection

ASME B16.11

PN 350 - 420 Bar / 5076 - 6091 PSI



BKH DN13-25-SAE FS

Flange SAE Split Flange

PN 350 Bar / 5076 PSI

ISO 6162-1

PN 420 Bar / 6091 PSI

ISO 6162-2

2-WAY BALL VALVE – MKHP TYPE



MKHP DN32-50 – Female BSP, NPT and UNF Thread

PN 420 Bar / 6091 PSI

BSP - DIN ISO 228

NPT - ANSI B1.20.1

UNF - SAE J514



MKHP DN32-50 – Male Tube Thread

PN 420 Bar / 6091 PSI

Light Tube – DIN 2353L

Heavy Tube – DIN 2353S

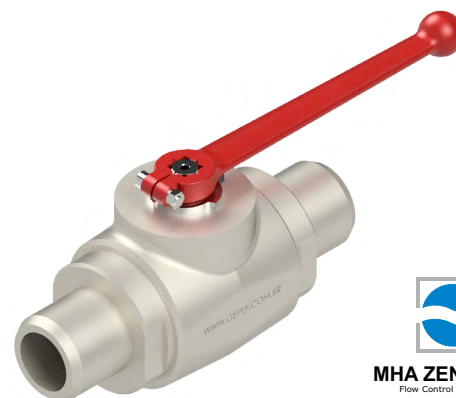


MKHP DN32-50-SW

Socket Weld Connection

ASME B16.11

PN 420 Bar / 6091 PSI



MKHP DN32-50-AS

Smooth Tube Nipple for Hose

PN 160 Bar / 2320 PSI



MKHP DN32-50 - SAE FS

SAE Split Flange

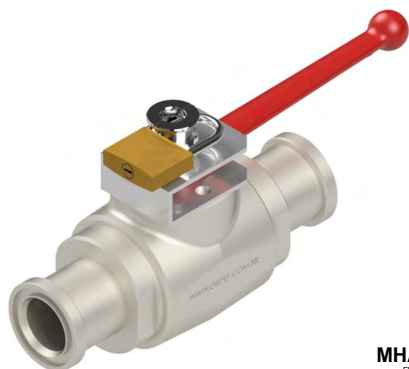
PN 350 Bar / 5076 PSI

ISO 6162-1

PN 420 Bar / 6091 PSI

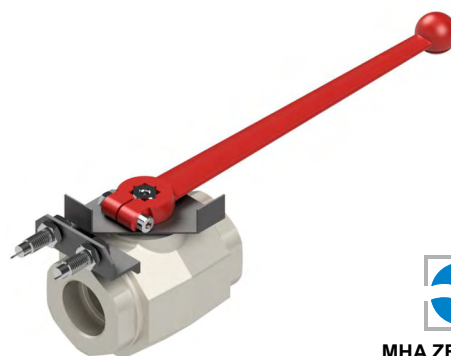
ISO 6162-2

BALL VALVE WITH ACCESSORIES



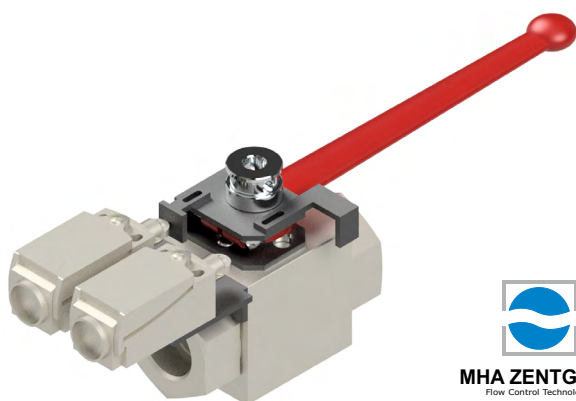
MHA ZENTGRAF
Flow Control Technology

Ball Valve with Padlock Locking Device



MHA ZENTGRAF
Flow Control Technology

Ball Valve with Inductive Sensor



MHA ZENTGRAF
Flow Control Technology

Ball Valve with Mechanical Limit Switch



MHA ZENTGRAF
Flow Control Technology

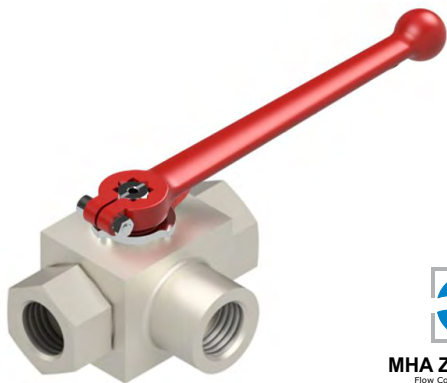
Ball Valve with Pneumatic Actuator



MHA ZENTGRAF
Flow Control Technology

Ball Valve for Panel Mounting

3-WAY BALL VALVE – BK3 TYPE

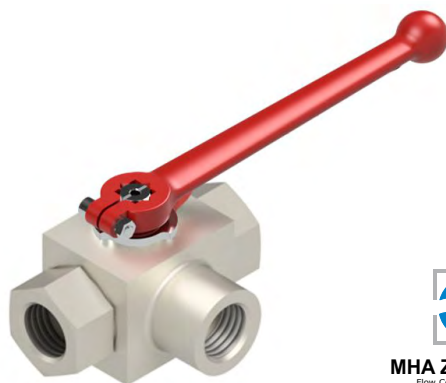


BK3 DN13-50 – Female BSP and NPT Thread

PN 315-500 Bar

BSP - DIN ISO 228

NPT - ANSI B1.20.1

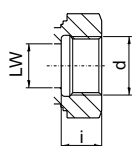
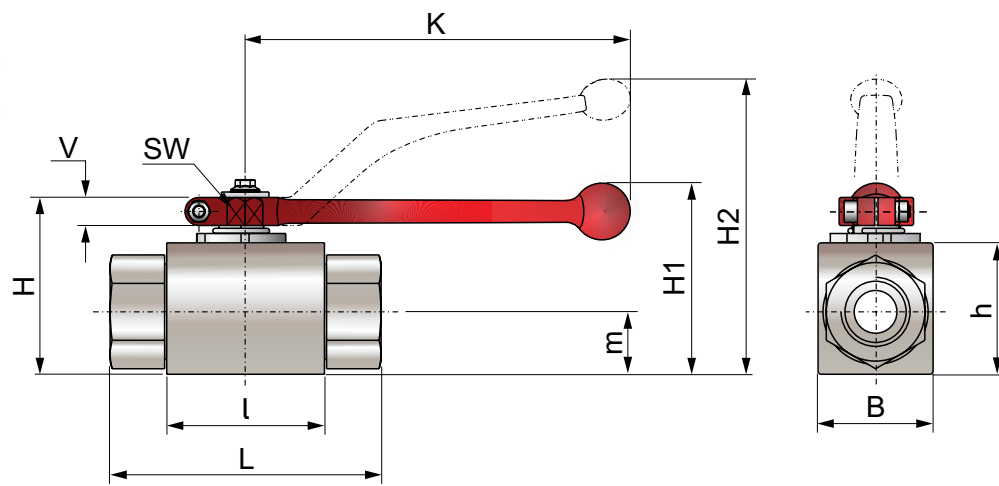


BK3-S DN13-50 – Female BSP and NPT Thread

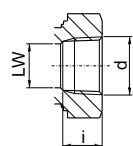
PN 315-500 Bar

BSP - DIN ISO 228

NPT - ANSI B1.20.1



DIN ISO 228



ANSI B1.20.1 NPT



MHA ZENTGRAF
Flow Control Technology

G BSP Thread / DIN 228 / NBR 8133

Type	DN/LW	L	l	B	H	h	m	V	SW	K	i	d	H1	H2	PN bar	Weight / Kg
BKH DN6 G1/4	6	69	40	26	47	33	13,5	11	9	115	14	G1/4	82	500	0,40	
BKH DN10 G3/8	10	72	43	32	52	38	17,5	11	9	115	14	G3/8	86	500	0,54	
BKH DN13 G1/2	13	83	48	35	54	40	19	11	9	115	16,3	G1/2	89	500	0,65	
BKH DN20 G3/4	20	95	62	49	75	57	24,5	14	14	200	18	G3/4	79	420	1,5	
BKH DN25 G1	25	113	66	58	83	65	29,5	14	14	200	20	G1	87	350	2,2	
BKH DN25 G1.1/4	25	120	66	58	83	65	29,5	14	14	200	22	G1 1/4	87	350	2,3	
BKH DN25 G1.1/2	25	130	66	58	83	65	29,5	14	14	200	24	G1 1/2	87	350	2,6	

NPT Thread / ANSI B1.20.1 / NBR 12912

Type	DN/LW	L	l	B	H	h	m	V	SW	K	i	d	H1	H2	PN bar	Weight / Kg
BKH DN6 1/4NPT	6	69	40	26	47	33	13,5	11	9	115	13,7	1/4NPT	82	500	0,40	
BKH DN10 3/8NPT	10	72	43	32	52	38	17,5	11	9	115	13,5	3/8NPT	86	500	0,55	
BKH DN13 1/2NPT	13	83	48	35	54	40	19	11	9	115	17	1/2NPT	89	500	0,75	
BKH DN20 3/4NPT	20	95	62	49	75	57	24,5	14	14	200	18,3	3/4NPT	79	420	1,63	
BKH DN25 1NPT	25	113	66	58	83	65	29,5	14	14	200	21,6	1NPT	87	350	2,3	
BKH DN25 1.1/4NPT	25	120	66	58	83	65	29,5	14	14	200	22,1	1 1/4NPT	87	350	2,51	
BKH DN25 1.1/2NPT	25	130	66	58	83	65	29,5	14	14	200	22,1	1 1/2NPT	87	250	2,7	

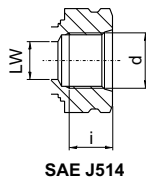
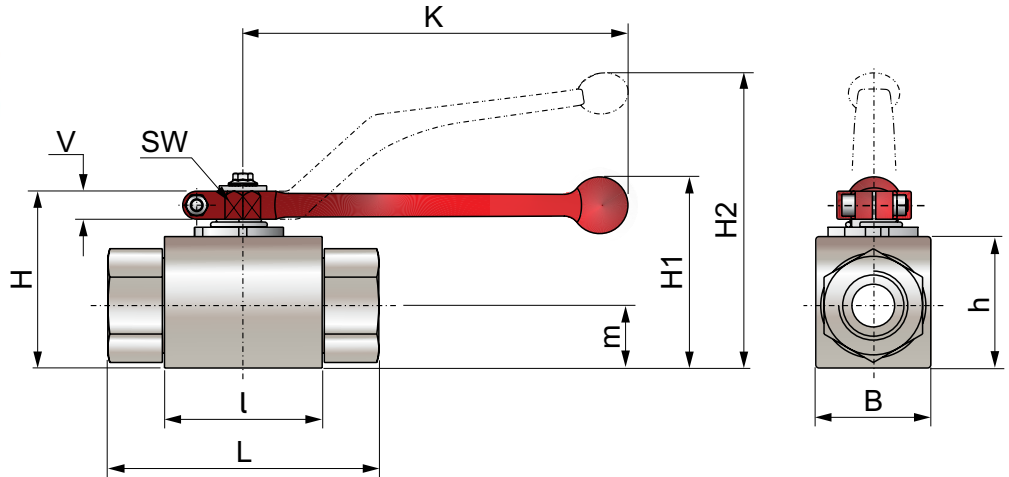
Coding Example:

BKH DN6 G1/4 (DN6 ball valve, carbon steel, with female G1/4BSP thread).

For AISI 316 material, add the letter I at the end of the code.

For Viton seals, add the letter V at the end of the code.

If another type of ball valve not listed in this catalog is required, please contact our technical department.



SAE J514



MHA ZENTGRAF
Flow Control Technology

UNF SAE J514 Thread

Type	DN/LW	L	l	B	H	h	m	V	SW	K	i	d	H1	H2	PN bar	Weight / Kg
BKH DN10 9/16 UNF	10	72	43	32	52	38	17,5	11	9	115	13	9/16"-18 UNF	86	500	0,50	
BKH DN13 3/4 UNF	13	83	48	35	54	40	19	11	9	115	15	3/4"-16 UNF	89	500	0,70	
BKH DN20 1.1/16 UNF	20	95	62	49	75	57	24,5	14	14	200	20	1.1/16"-12 UN	79	420	1,55	
BKH DN25 1.5/16 UNF	25	113	66	58	83	65	29,5	14	14	200	20	1.5/16"-12 UN	87	350	2,10	

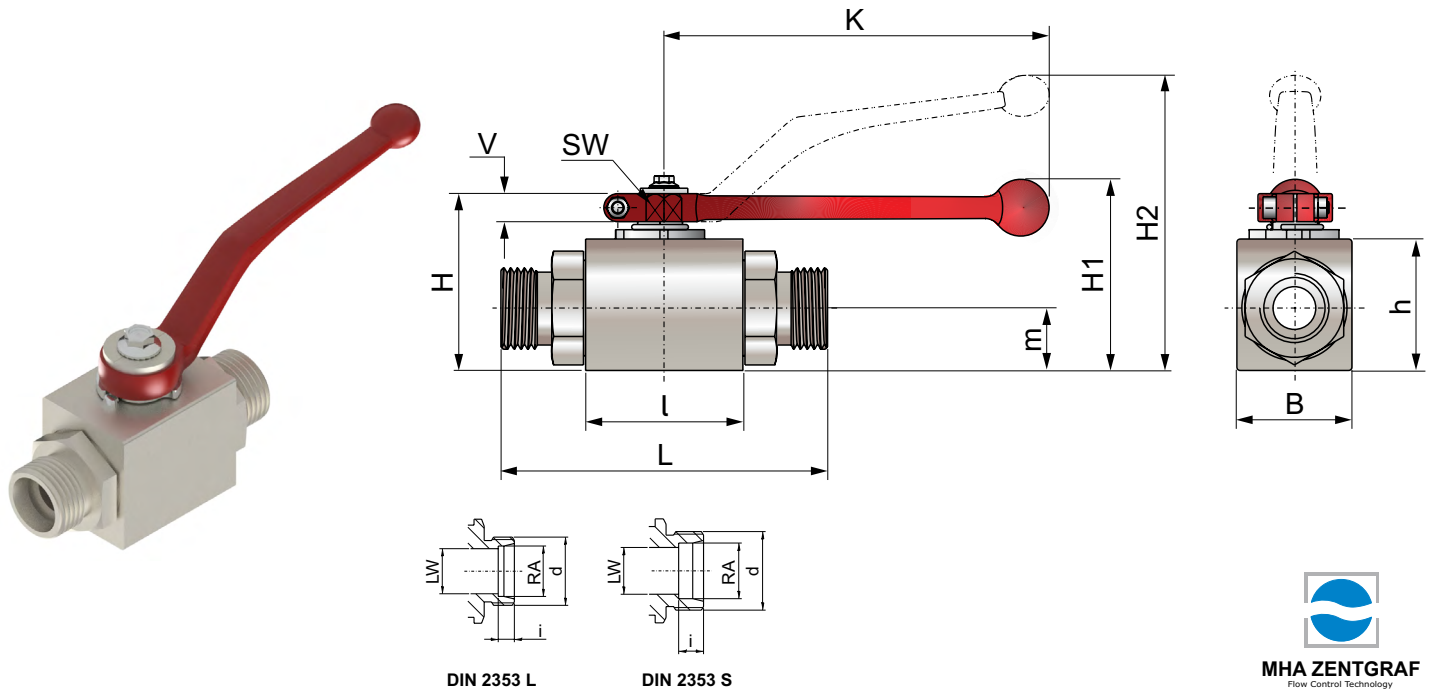
Coding Example:

BKH DN10 9/16" UNF (DN10 ball valve, carbon steel, with male 9/16"-18 UNF SAE J514 thread).

For AISI 316 material, add the letter **I** at the end of the code.

For Viton seals, add the letter **V** at the end of the code.

If another type of ball valve not listed in this catalog is required, please contact our technical department.



Light Series DIN 2353L Metric Thread

Type	DN	RA	LW	L	l	B	H	h	m	V	SW	K	i	d	H1	H2	PN bar	Weight / Kg
BKH DN6 6L	6	6	5	67	40	26	47	33	13,5	11	9	115	7	M12x1,5	82	500	0,38	
BKH DN6 8L	6	8	6	67	40	26	47	33	13,5	11	9	115	7	M14x1,5	82	500	0,38	
BKH DN6 10L	6	10	6	74	40	26	47	33	13,5	11	9	115	7	M16x1,5	82	500	0,38	
BKH DN10 12L	10	12	10	74	43	32	52	38	17,5	11	9	115	7	M18x1,5	86	500	0,50	
BKH DN13 15L	13	15	13	82	48	35	54	40	19	11	9	115	7	M22x1,5	89	500	0,61	
BKH DN13 18L	13	18	13	82	48	35	54	40	19	11	9	115	7,5	M26x1,5	89	500	0,60	
BKH DN20 22L	20	22	20	101	62	49	75	57	24,5	14	14	200	7,5	M30x2	79	420	1,49	
BKH DN25 28L	25	28	25	108	66	58	83	65	29,5	14	14	200	7,5	M36x2	87	350	2,0	
BKH DN25 35L	25	35	25	112	66	58	83	65	29,5	14	14	200	10,5	M45x2	87	350	2,12	
BKH DN25 42L	25	42	25	112	66	58	83	65	29,5	14	14	200	11	M52x2	87	350	2,27	

Heavy Series DIN 2353S Metric Thread

Type	DN	RA	LW	L	l	B	H	h	m	V	SW	K	i	d	H1	H2	PN bar	Weight / Kg
BKH DN6 8S	6	8	6	73	40	26	47	33	13,5	11	9	115	7	M16x1,5	82	500	0,38	
BKH DN6 10S	6	10	6	73	40	26	47	33	13,5	11	9	115	7,5	M18x1,5	82	500	0,38	
BKH DN6 12S	6	12	6	76	40	26	47	33	13,5	11	9	115	7,5	M20x1,5	82	500	0,38	
BKH DN10 14S	10	14	10	80	43	32	52	38	17,5	11	9	115	8	M22x1,5	86	500	0,50	
BKH DN13 16S	13	16	13	86	48	35	54	40	19	11	9	115	8,5	M24x1,5	89	500	0,61	
BKH DN13 20S	13	20	13	90	48	35	54	40	19	11	9	115	10,5	M30x2	89	500	0,60	
BKH DN20 25S	20	25	20	109	62	49	75	57	24,5	14	14	200	12	M36x2	79	420	1,55	
BKH DN25 30S	25	30	25	120	66	58	83	65	29,5	14	14	200	13,5	M42x2	87	350	2,10	
BKH DN25 38S	25	35	25	124	66	58	83	65	29,5	14	14	200	16	M52x2	87	350	2,30	

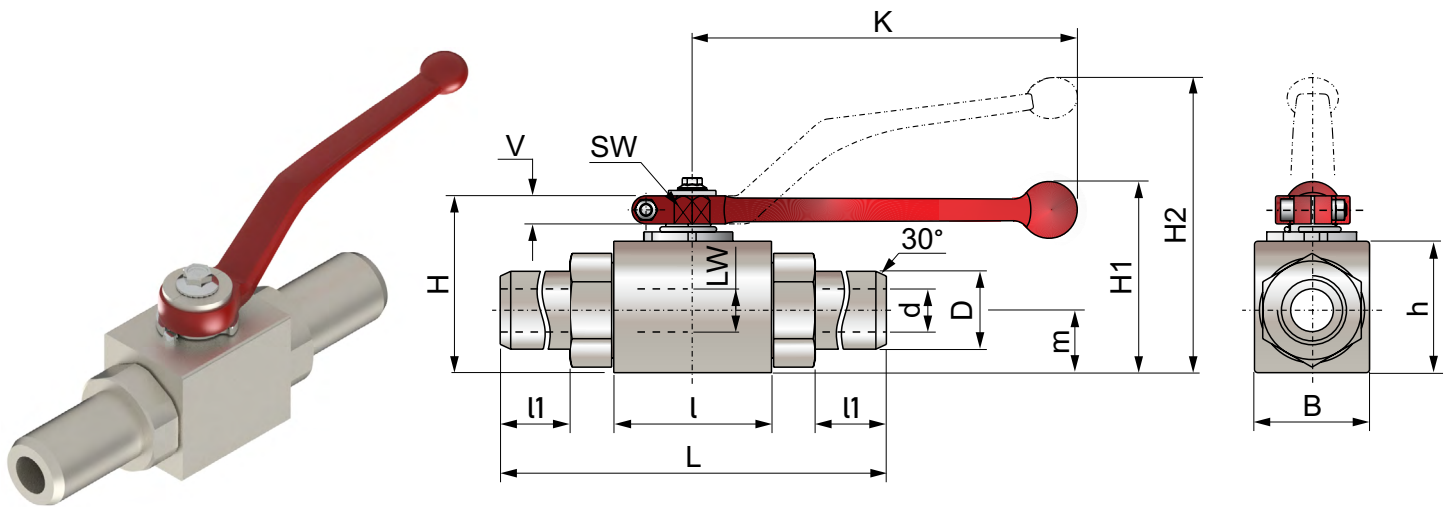
Coding Example:

BKH DN6 8S (DN6 ball valve, carbon steel, with male M16x1.5 - 8S DIN 2353 thread - Heavy Series).

For AISI 316 material, add the letter I at the end of the code.

For Viton seals, add the letter V at the end of the code.

If another type of ball valve not listed in this catalog is required, please contact our technical department.



BKH AS160

Type	DN	LW	L	l	B	H	h	m	V	SW	K	d	D	l1	H1	H2	PN bar	Weight / Kg
BKH DN10 AS160	10	10	150	43	32	52	38	17,5	11	9	115	10	17,2	42		86	160	0,64
BKH DN13 AS160	13	13	181	48	35	54	40	19	11	9	115	13	21,3	51		89	160	0,82
BKH DN20 AS160	20	20	200	62	49	75	57	24,5	14	14	200	20	26,9	48,5	79		160	1,85
BKH DN25 AS160	25	25	210	66	58	83	65	29,5	14	14	200	25	33,7	51,2	87		160	2,60

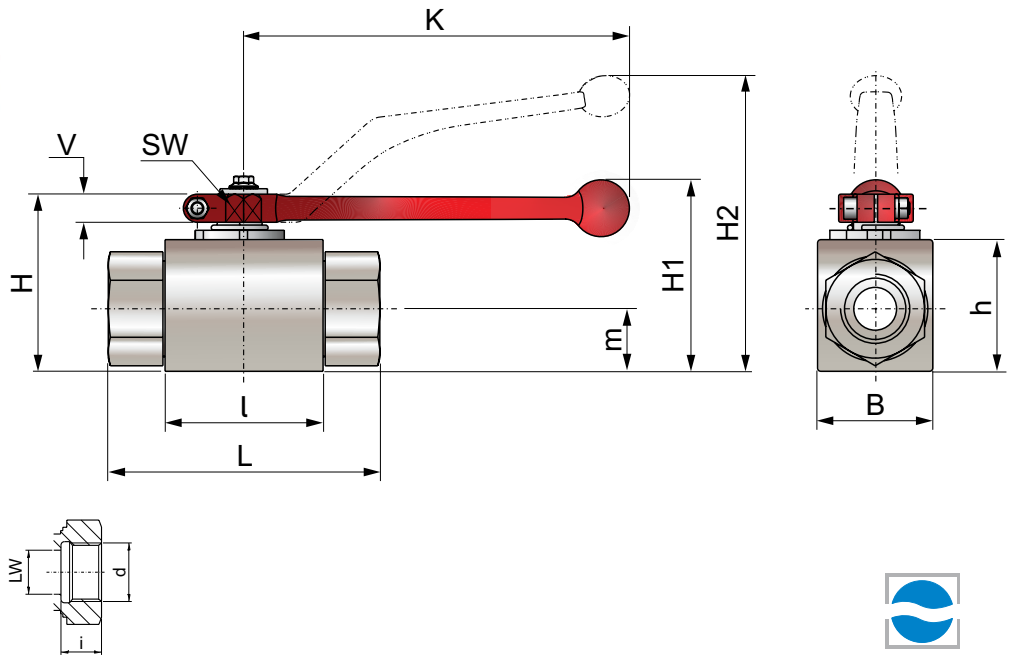
Coding Example:

BKH DN10 AS160 (DN10 ball valve, carbon steel, for AS160 welding).

For AISI 316 material, add the letter I at the end of the code.

For Viton seals, add the letter V at the end of the code.

If another type of ball valve not listed in this catalog is required, please contact our technical department.



BKH SW - Socket Weld SW - ASME B16.11

Type	DN	LW	L	l	B	H	h	m	V	SW	K	i	d	H1	H2	PN bar	Weight / Kg
BKH DN13 SW 1/2	13	13	83	48	35	54	40	19	11	9	115	9,5	21,8		86	410	0,65
BKH DN20 SW 3/4	20	20	95	62	49	75	57	24,5	14	14	200	12,5	27,4	79		410	1,50
BKH DN25 SW 1	25	25	113	66	58	83	65	29,5	14	14	200	12,5	33,8	87		350	2,20

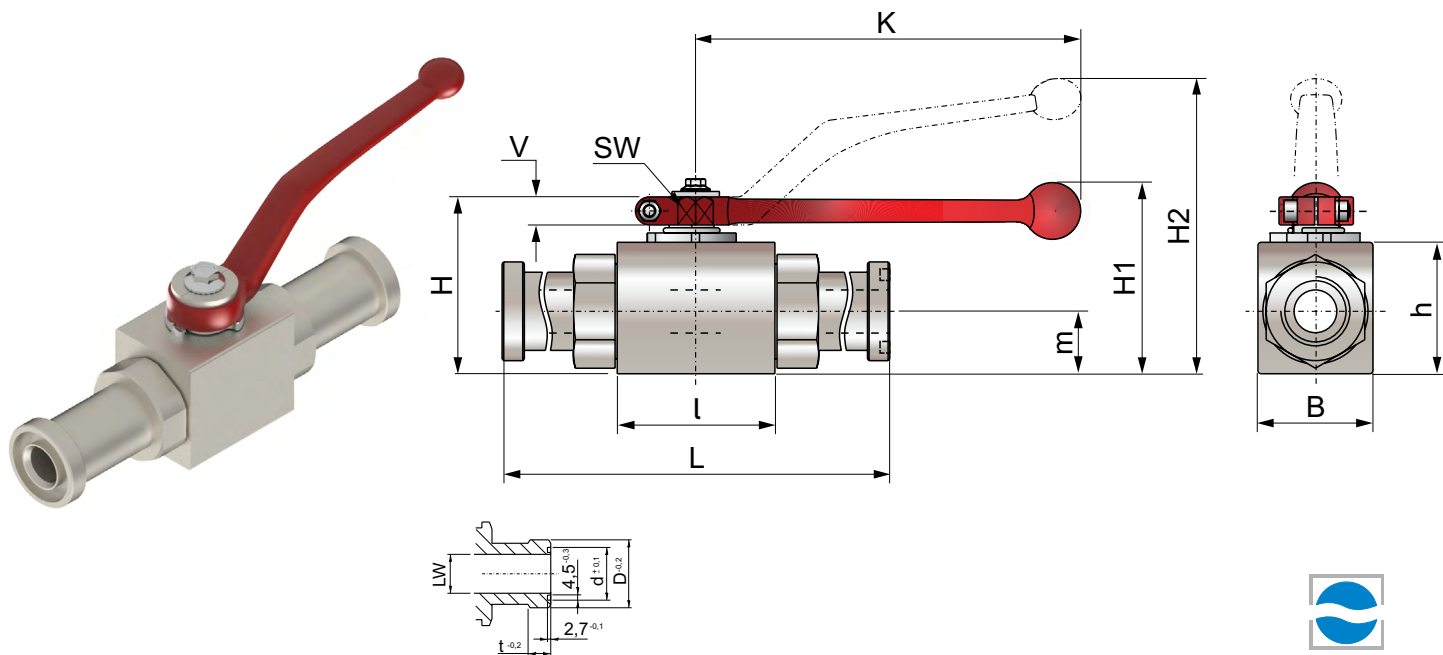
Coding Example:

BKH DN13 SW 1/2 (DN13 ball valve, carbon steel, for 1/2" socket weld - ASME B16.11).

For AISI 316 material, add the letter I at the end of the code.

For Viton seals, add the letter V at the end of the code.

If another type of ball valve not listed in this catalog is required, please contact our technical department.



Observe the pressure ratings of the connecting flanges.

ISO 6162-1																			
Type	DN	LW	L	l	B	H	h	m	V	SW	K	d±0,1	D-0,2	t-0,2	H1	H2	PN bar	Weight / Kg	
BKH DN13 SAE FS210	13	13	151	48	35	54	40	19	11	9	115	25,5	30,2	6,8		89	350	0,85	
BKH DN20 SAE FS210	20	19	162	62	49	75	57	24,5	14	14	200	31,9	38,1	6,8	79		350	1,87	
BKH DN25 SAE FS210	25	25	178	66	58	83	65	29,5	14	14	200	39,8	44,4	8,1	87		350	2,70	

Observe the pressure ratings of the connecting flanges.

ISO 6162-2																			
Type	DN	LW	L	l	B	H	h	m	V	SW	K	d±0,1	D-0,2	t-0,2	H1	H2	PN bar	Weight / Kg	
BKH DN13 SAE FS420	13	13	151	48	35	54	40	19	11	9	115	25,5	31,8	7,9		89	420	0,90	
BKH DN20 SAE FS420	20	19	174	62	49	75	57	24,5	14	14	200	31,9	41,3	8,9	79		420	2,00	
BKH DN25 SAE FS420	25	25	198	66	58	83	65	29,5	14	14	200	39,8	47,6	9,6	87		350	3,00	

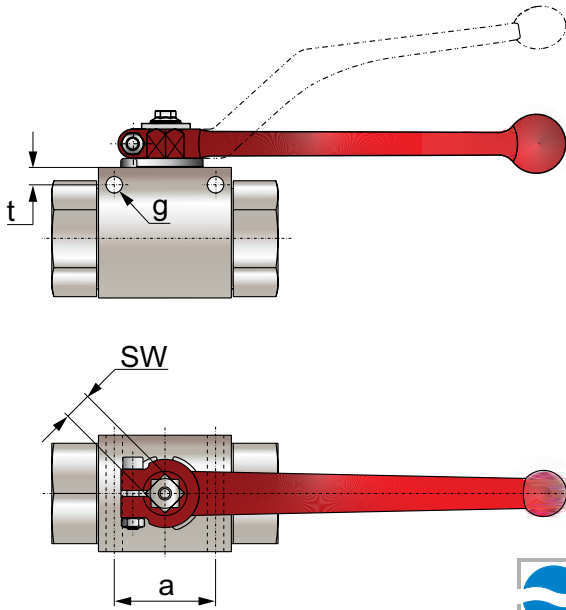
Coding Example:

BKH DN13 SAE FS210 (DN13 ball valve, carbon steel for SAE 210 ISO 6162-1 flange).

For AISI 316 material, add the letter I at the end of the code.

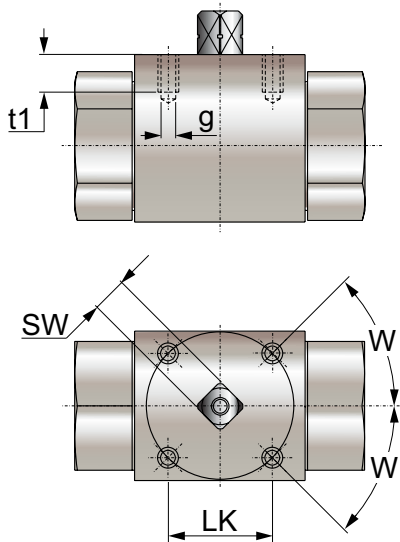
For Viton seals, add the letter V at the end of the code.

If another type of ball valve not listed in this catalog is required, please contact our technical department.



Mounting Holes

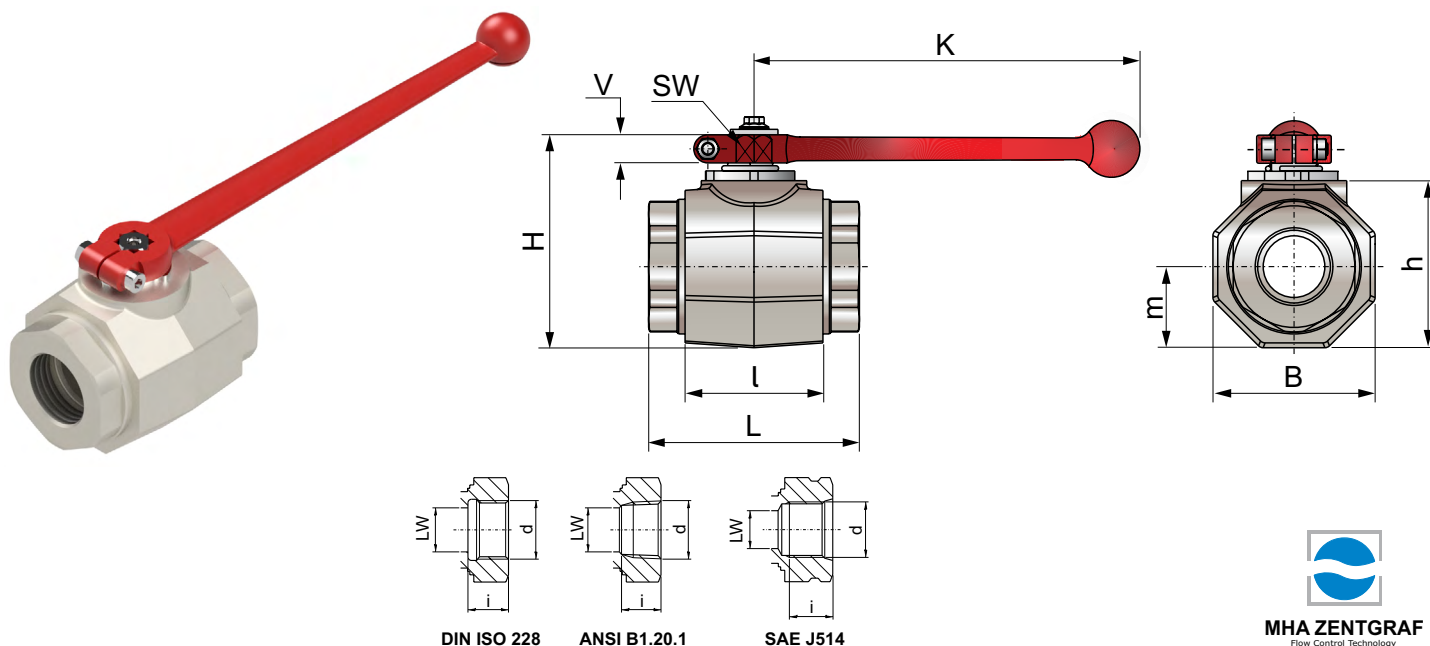
DN	SW	a	g	t
6	9	31	4,3	4,5
10	9	32	4,3	4
13	9	32	4,3	4
20	14	44	6,2	6
25	14	44	6,3	6



Mounting Threads According to ISO 5211

DN	SW	LK	g	t1	W	ISO 5211
6	9	36	M5	6	30**	(F03)*
10	9	36	M5	7	45°	F03
13	9	36	M5	6	45°	F03
20	14	50	M6	10	45°	F03
25	14	50	M6	10	45°	F03

*30° Does not correspond to ISO 5211 standard.



G BSP Thread / DIN 228 / NBR 8133

Type	DN	LW	L	l	B	H	h	m	V	SW	K	i	d	PN bar	Weight / Kg
MKHP420 DN32 G1.1/4	32	32	111	80	81	107	86	40,5	16,5	17	320	22	G1 1/4	420	3,5
MKHP420 DN40 G1.1/2	40	38	130	85	100	124	103	50	16,5	17	320	24	G1 1/2	420	5,7
MKHP420 DN50 G2	50	48	140	100	118	138	117	59	16,5	17	320	26	G2	420	8,2

NPT Thread / ANSI B1.20.1 / NBR 12912

Type	DN	LW	L	l	B	H	h	m	V	SW	K	i	d	PN bar	Weight / Kg
MKHP420 DN32 1.1/4 NPT	32	32	120	80	81	107	86	40,5	16,5	17	320	22,1	1.1/4 NPT	420	3,6
MKHP420 DN40 1.1/2 NPT	40	38	130	85	100	124	103	50	16,5	17	320	22,1	1.1/2 NPT	420	5,7
MKHP420 DN50 2 NPT	50	48	140	100	118	138	117	59	16,5	17	320	30,3	2 NPT	420	8,2

Female UNF Thread SAE J514

Type	DN	LW	L	l	B	H	h	m	V	SW	K	i	d	PN bar	Weight / Kg
MKHP420 DN32 1.5/8 UNF	32	30	111	80	81	107	86	40,5	16,5	17	320	20	1.5/8-12 UNF	420	3,6
MKHP420 DN40 1.7/8 UNF	40	38	130	85	100	124	103	50	16,5	17	320	20	1.7/8-12 UNF	420	5,7
MKHP420 DN50 2.1/2 UNF	50	45	140	100	118	138	117	59	16,5	17	320	20	2.1/2-12 UNF	420	8,0

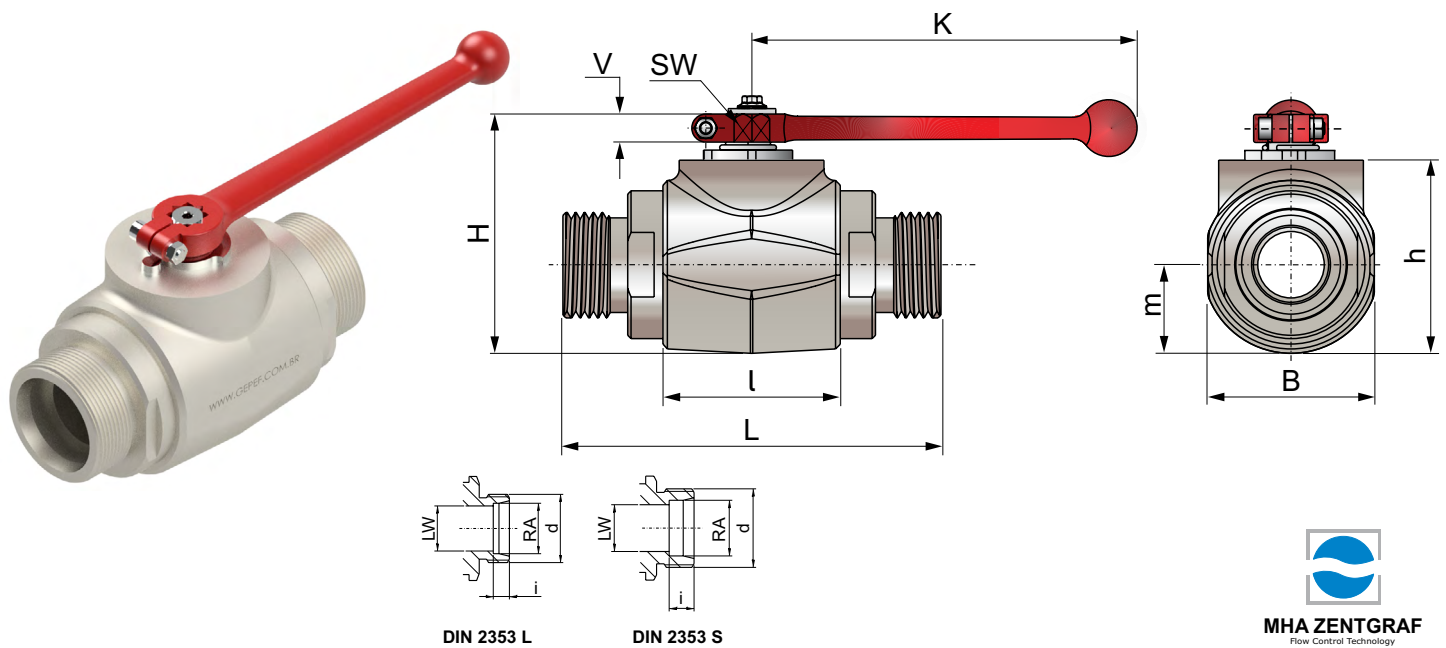
Coding Example:

MKHP420 DN32 G1.1/4 (DN32 ball valve, carbon steel with G1.1/4 BSP female thread).

For AISI 316 material, add the letter I at the end of the code.

For Viton seals, add the letter V at the end of the code.

If another type of ball valve not listed in this catalog is required, please contact our technical department.



Metric Thread DIN 2353L Light Series

Type	DN	RA	LW	L	B	H	h	m	V	SW	K	i	d	PN bar	Weight / Kg
MKHP420 DN32 35L	32	35	32	136	81	107	86	40,5	16,5	17	320	10,5	M45x2	420	3,6
MKHP420 DN40 42L	40	42	38	147	100	124	103	50	16,5	17	320	11	M52x2	420	5,6

Metric Thread DIN 2353S Heavy Series

Type	DN	RA	LW	L	l	B	H	h	m	V	SW	K	i	d	PN bar	Weight / Kg
MKHP420 DN32 38S	32	38	32	148	80	81	107	86	40,5	16,5	17	320	16	M52x2	420	3,8

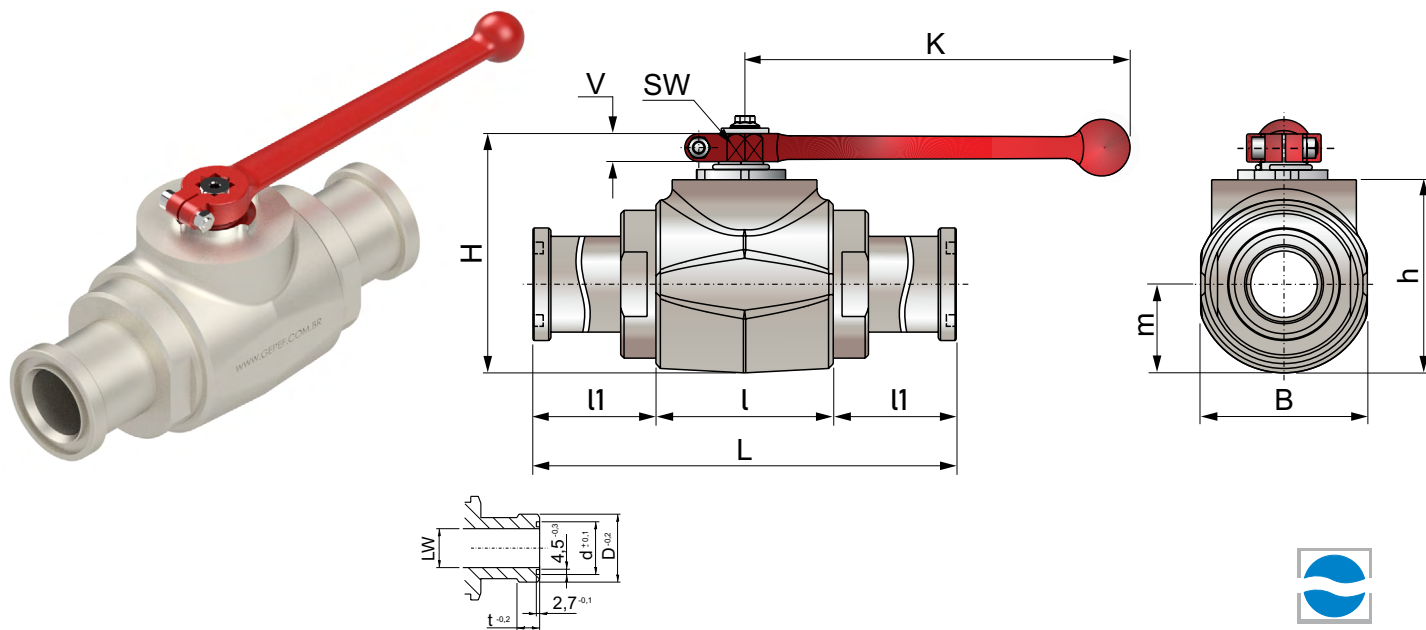
Coding Example:

MKHP420 DN40 1.7/8 UNF (DN40 ball valve, carbon steel with 1.7/8 UNF female thread).

For AISI 316 material, add the letter **I** at the end of the code.

For Viton seals, add the letter **V** at the end of the code.

If another type of ball valve not listed in this catalog is required, please contact our technical department.



Observe the pressure ratings of the connecting flanges.

ISO 6162-1 210 bar / 3000 PSI

Type	DN	LW	L	l	B	H	h	m	V	SW	K	d±0,1	D-0,2	t-0,2	PN bar	Weight / Kg
MKHP420 DN32 SAE FS210	32	30	191	80	81	107	86	40,5	16,5	17	320	44,6	50,8	8,1	280	4,3
MKHP420 DN40 SAE FS210	40	38	231	85	100	124	103	50	16,5	17	320	54,1	60,3	8,1	210	6,6
MKHP420 DN50 SAE FS210	50	48	231	100	118	138	117	59	16,5	17	320	63,6	71,4	9,6	210	9,3

Observe the pressure ratings of the connecting flanges.

ISO 6162-2 420 bar / 6000 PSI

Type	DN	LW	L	l	B	H	h	m	V	SW	K	d±0,1	D-0,2	t-0,2	PN bar	Weight / Kg
MKHP420 DN32 SAE FS420	32	30	223	80	81	107	86	40,5	16,5	17	320	44,6	54	10,4	420	4,8
MKHP420 DN40 SAE FS420	40	38	281	85	100	124	103	50	16,5	17	320	54,1	63,5	12,7	420	7,5
MKHP420 DN50 SAE FS420	50	48	316	100	118	138	117	59	16,5	17	320	63,6	79,4	12,7	420	11,4

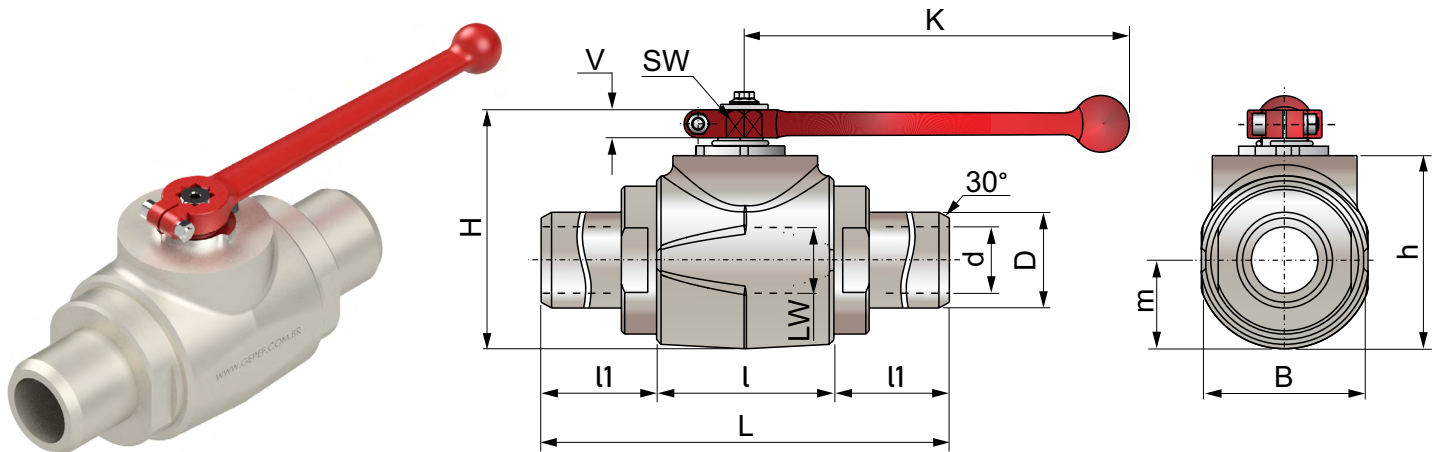
Coding Example:

MKHP420 DN40 FS210 (DN40 ball valve, carbon steel with SAE FS210 flange).

For AISI 316 material, add the letter I at the end of the code.

For Viton seals, add the letter V at the end of the code.

If another type of ball valve not listed in this catalog is required, please contact our technical department.



MKHP AS 160

Type	DN	LW	L	l	B	H	h	m	V	SW	K	d	D	PN bar	Weight / Kg
MKHP420 DN32 AS160	32	30	260	80	81	107	86	40,5	16,5	17	320	32,5	42,2	160	4,2
MKHP420 DN40 AS160	40	38	270	85	100	124	103	50	16,5	17	320	39,3	48,3	160	6,3
MKHP420 DN50 AS160	50	48	300	100	118	138	117	59	16,5	17	320	50	60,3	160	10,9

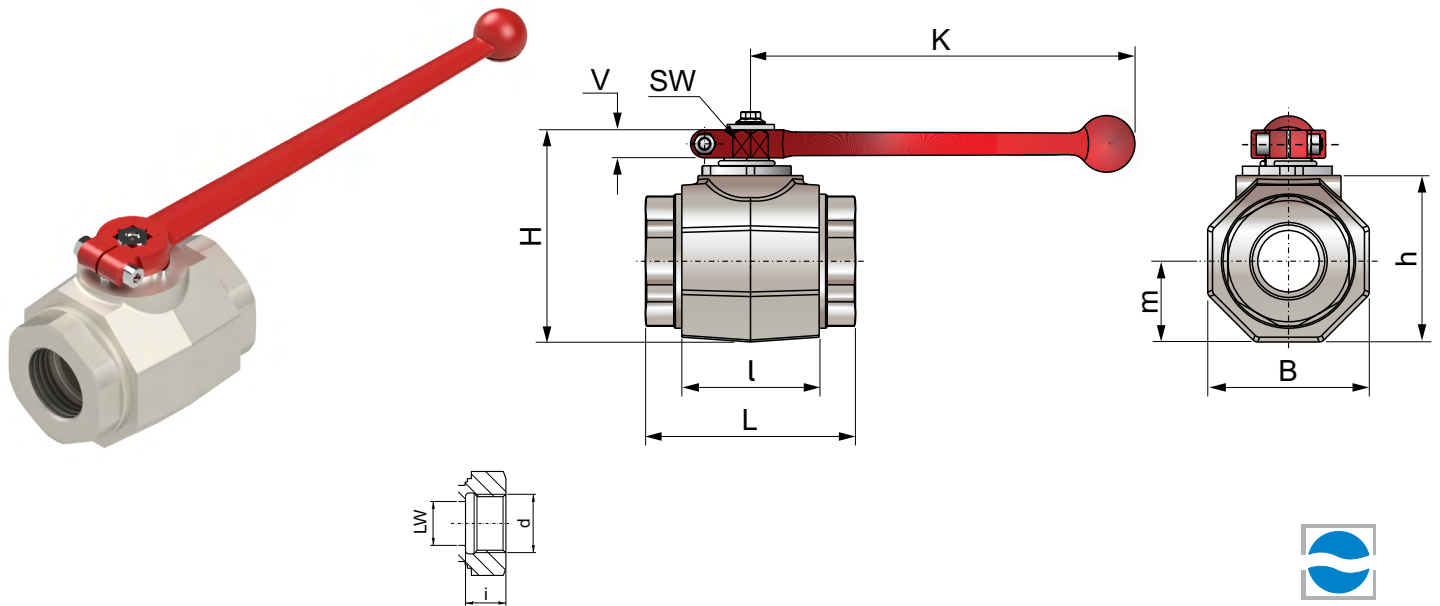
Coding Example:

MKHP420 DN40 AS160 (DN40 ball valve, AS160 carbon steel for welding).

For AISI 316 material, add the letter I at the end of the code.

For Viton seals, add the letter V at the end of the code.

If another type of ball valve not listed in this catalog is required, please contact our technical department.



MHA ZENTGRAF
Flow Control Technology

MKHP SW - SW Welding Fitting - ASME B16.11

Type	DN	LW	L	l	B	H	h	m	V	SW	K	i	d	PN bar	Weight / Kg
MKHP420 DN32 SW 1.1/4	32	32	111	80	81	107	86	40,5	16,5	17	320	12,5	42,9	420	3,5
MKHP420 DN40 SW 1.1/2	40	38	130	85	100	124	103	50	16,5	17	320	12,5	49	420	5,7
MKHP420 DN50 SW 2	50	48	140	100	118	138	117	59	16,5	17	320	16	61,4	420	8,2

Coding Example:

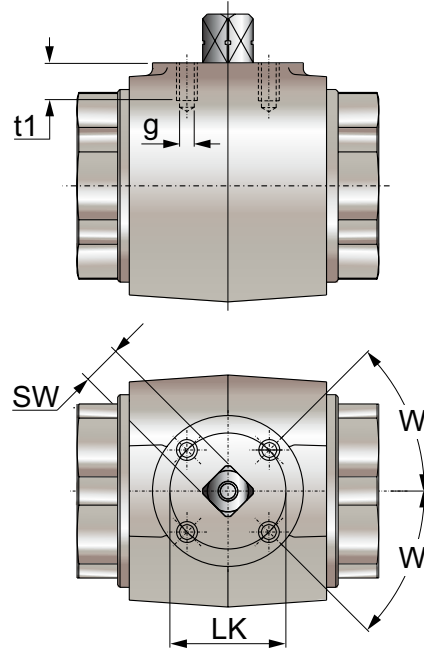
MKHP420 DN50 SW2 (DN50 ball valve, carbon steel for socket weld, SW ASME B16.11).

For AISI 316 material, add the letter I at the end of the code.

For Viton seals, add the letter V at the end of the code.

If another type of ball valve not listed in this catalog is required, please contact our technical department.

MKH Ball Valve for Panel Mount

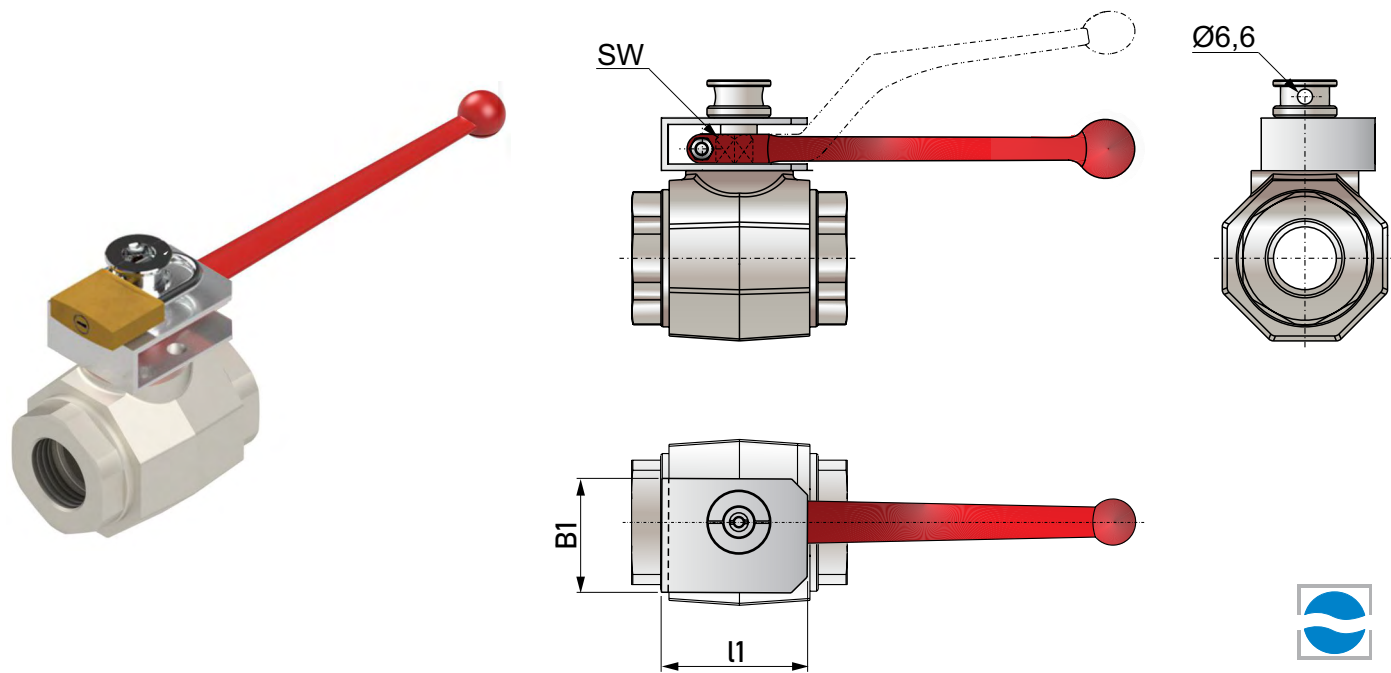


MHA ZENTGRAF
Flow Control Technology

Mounting Threads According to ISO 5211

DN	SW	LK	g	t1	W	ISO 5211
32	17	50	M6	8	45°	F05
40	17	50	M6	8	45°	F05
50	17	50	M6	8	45°	F05

Ball valve with padlock locking device.



Dimensions			
DN	SW	B1	l1
4-13	9	25	33
16	12	40	50
20-25	14	40	56
32-50	17	50	64

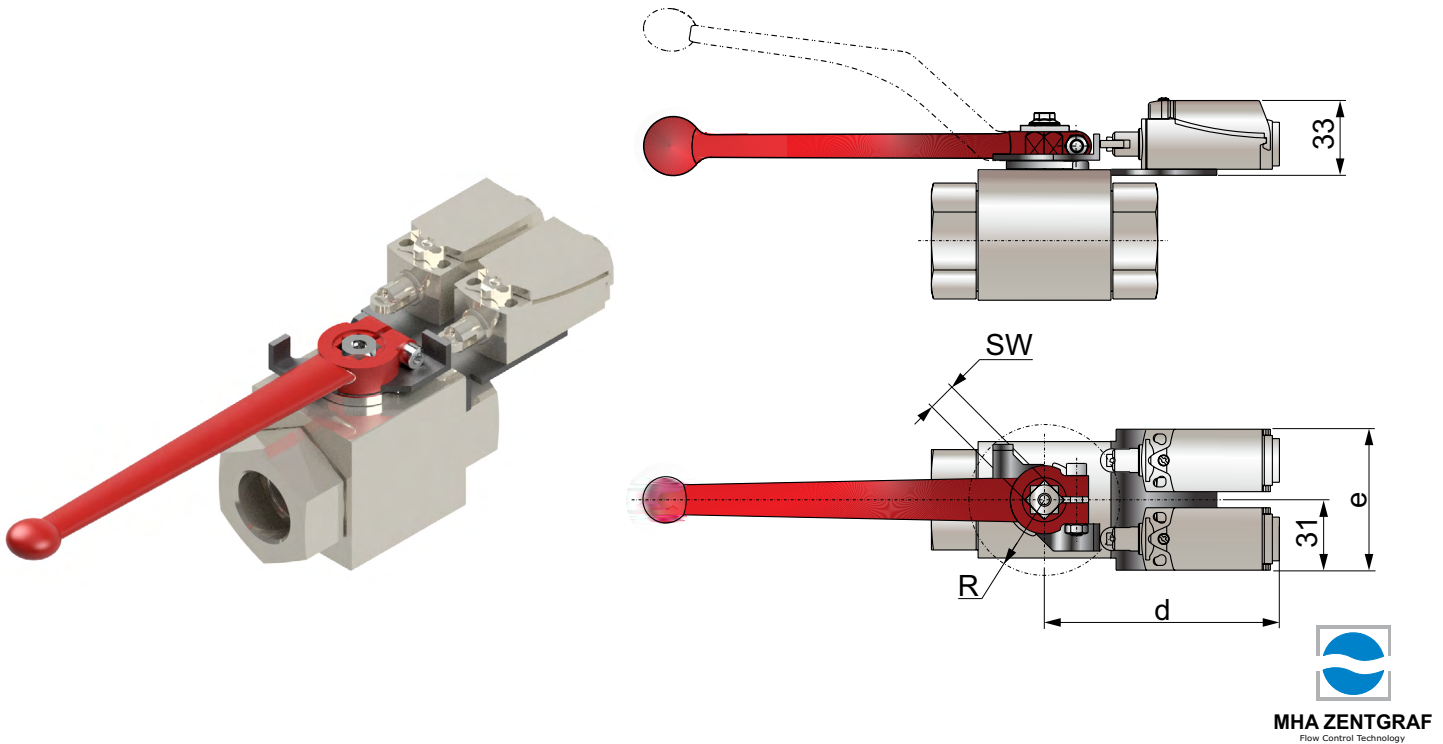
Universal locking device
Suitable for retrofit
Cannot be disassembled when locked
High protection against tampering and disassembly
Bent handle included in delivery

The assembly kits are valid for													
TIPO	BKH / BKHP500	MKHP420 AÇO	BKH-AS	MKHP-AS AÇO	BKH / BKHP-SAEFS	MKHP-SAEFS AÇO	BKH / BKHP-SAE	MKHP-SAE AÇO	BK3 / BK3-S	3KH	PKH	BKHP800	MKHP800

Coding Example:

MKHP420 DN50 SW2 LD (DN50 ball valve, carbon steel for socket weld SW ASME B16.11) padlock locking device.
 To add a padlock locking device, add the letters LD to the end of the code.

Ball Valve with Mechanical Limit Switch



Dimensions				
DN	SW	d	e	R
4-8	9	102	60	32
10	9	102	60	32
13	9	102	60	32
20	14	106	70	37,5
25	14	106	70	37,5
32-50	17	114	85	49

Mechanical limit switch properties

Housing material: Glass fiber reinforced thermoplastic

Protection type: IP66 according to VDE 470T1

NC / NO contact

Utilization category AC-15, Ue / Ie 240V / 3A

(DC use is also possible)

Cable entry: 1x M20x1.5

Ambient temperature: -30°C / +80°C

Specify the quantity of limit switches when requesting the order.

Standard: one sensor per valve.

The assembly kits are valid for

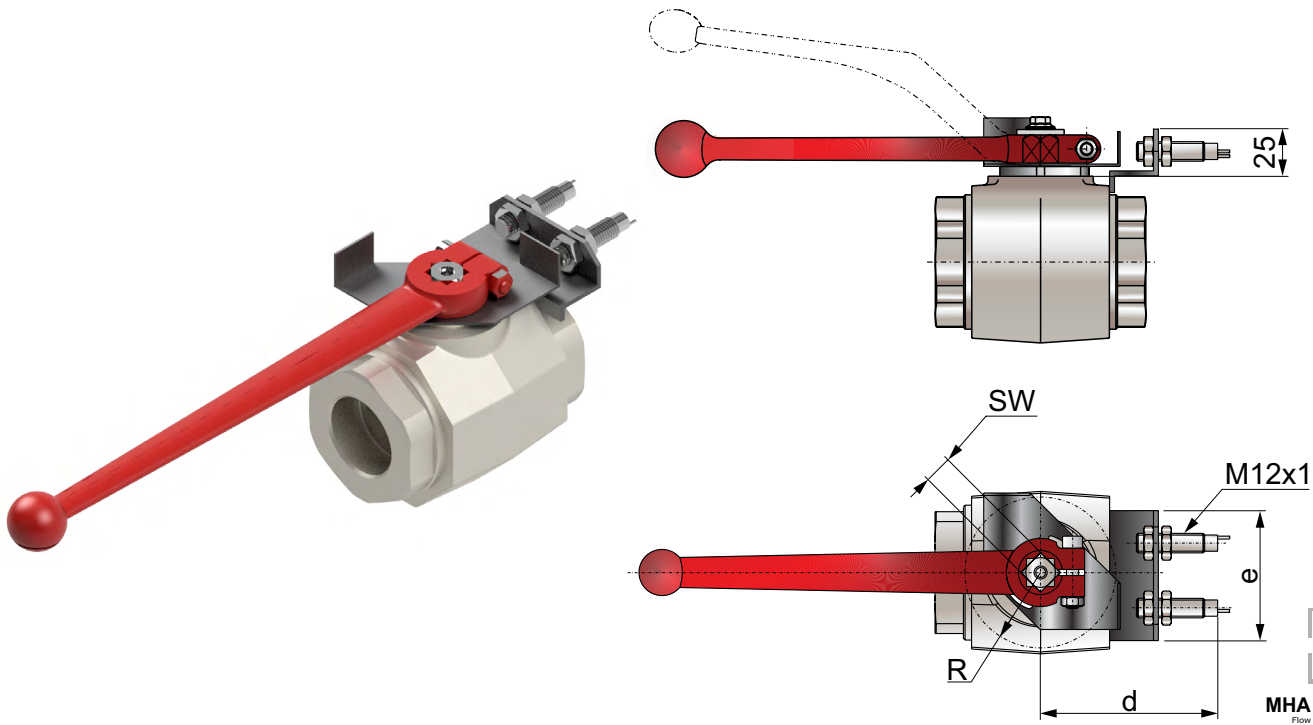
TIPO	BKH / BKHP 420	BKH-AS	MKHP420	MKHP-AS	BK3 / BK3-S
------	----------------	--------	---------	---------	-------------

Coding Example:

BKH DN13 SW 1/2 LSM (DN13 ball valve, carbon steel for 1/2" weld fitting - ASME B16.11) with mechanical limit switch.

To add a mechanical limit switch, add the letters LSM to the end of the code.

Ball Valve with Inductive Sensor



Dimensions				
DN	SW	d	e	R
4-8	9	54	55	32
10	9	54	55	32
13	9	54	55	32
20	14	58	64	37,5
25	14	58	64	37,5
32-50	17	66	80	49

Inductive sensor properties
Housing material: Nickel-plated brass
Active face material: PA 6.6
Mounting: non-flush
Proximity sensor according to NAMUR (DIN EN 60947-5-6)
Nominal sensing distance: 4 mm
(switching point 1.5 mA @ Un = 8 V and Ri = 1 kΩ)
Protection class: IP67
Rated voltage: DC 8 V / **operating voltage range:** DC 5 ... 25 V
Ambient temperature: -25 °C / +70 °C
Specify the quantity of limit switches when requesting the order.
Standard: one sensor per valve.

The assembly kits are valid for

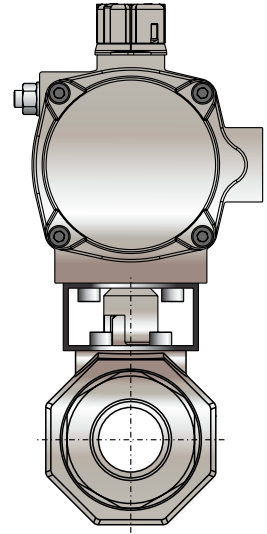
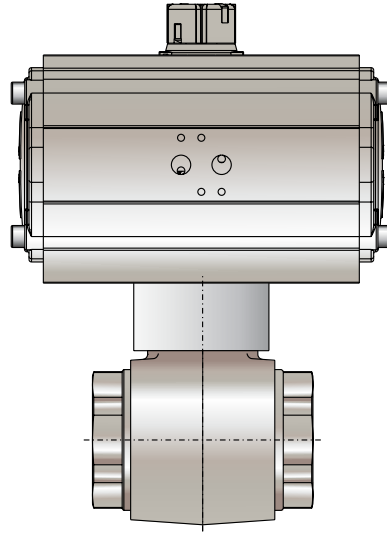
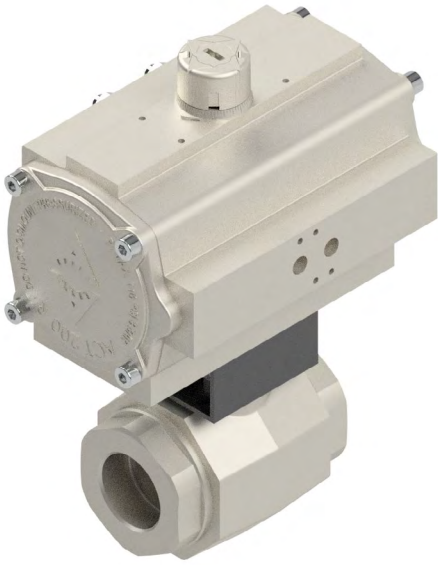
TIPO	BKH / BKHP 420	BKH-AS	MKHP420	MKHP-AS	BK3 / BK3-S
------	----------------	--------	---------	---------	-------------

Coding Example:

MKHP420 DN50 SW2 IPS (DN50 ball valve, carbon steel for socket weld SW ASME B16.11) with inductive sensors.

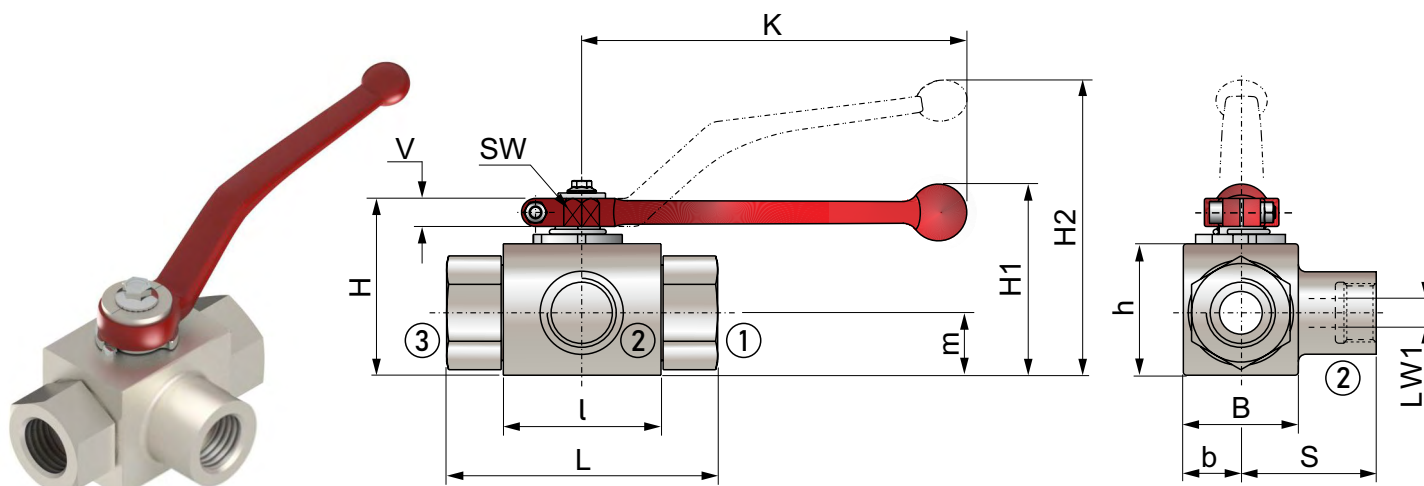
To add inductive sensors, add the letters IPS to the end of the code.


Ball Valve with Pneumatic Actuator



MHA ZENTGRAF
Flow Control Technology

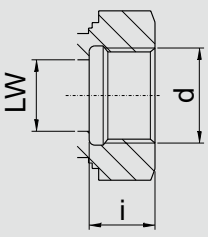
The sizing of the actuators is based on GEPEF's extensive experience. When making a request, it is absolutely necessary to specify the working pressure, service medium, and operating temperature so that we can configure the actuators for your application.

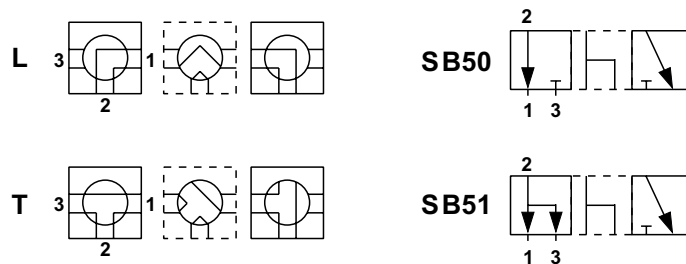



 Pressure input only through the central port (port 2)

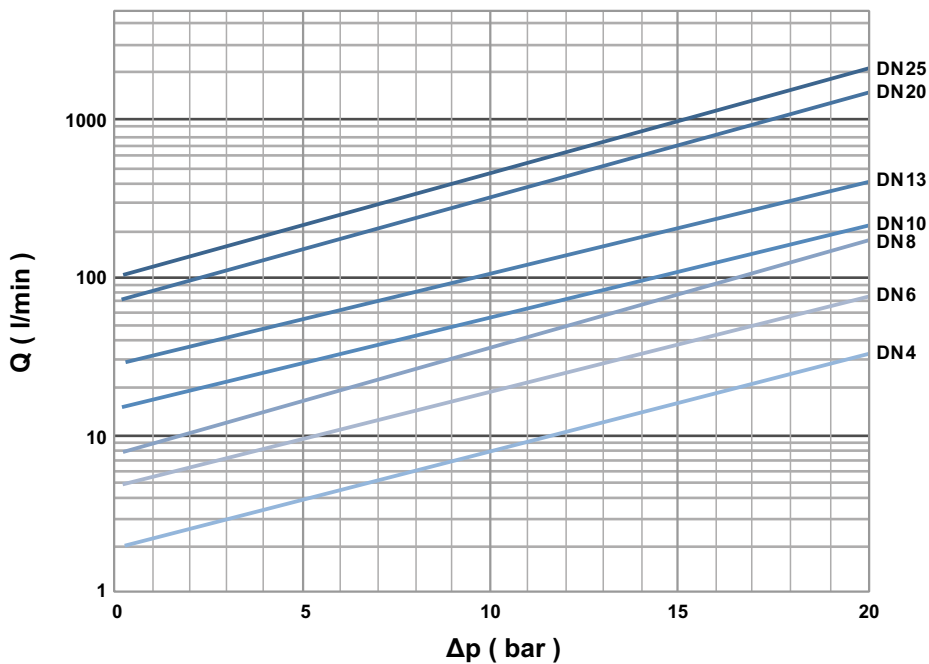


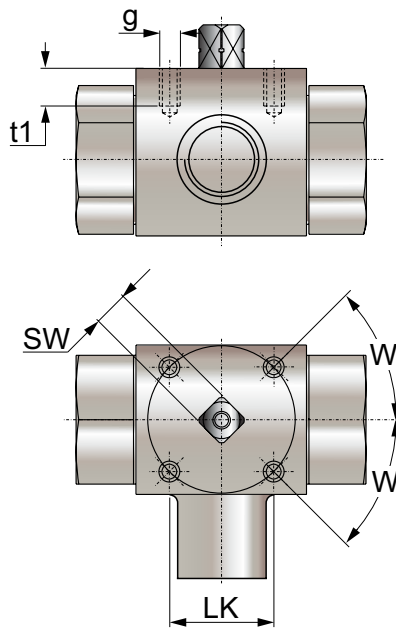
BK3												
Type	l	b	B	H	h	m	V	SW	K	H1	H2	Lever
BK3-DN6	40	13	29	47	33	13,5	11	9	115	-	82	Zn
BK3-DN8	40	13	29	47	33	13,5	11	9	115	-	82	Zn
BK3-DN10	43	16	35	52	38	17,5	11	9	115	-	86	Zn
BK3-DN13	48	17,5	38	54	40	19	11	9	115	-	89	Zn
BK3-DN20	62	24,5	52	75	57	24,5	14	14	200	79	-	Zn
BK3-DN25	66	29	61	83	65	29,5	14	14	200	87	-	Zn
BK3-DN32	81	39	-	106	84,5	39	16,5	17	320	115	-	Al
BK3-DN40	104	53	-	127	106	53	16,5	17	320	136	-	Al
BK3-DN50	118	58	116	137	116	58	16,5	17	320	146	-	Al

Thread	Dimensions								
Female Thread DIN ISO 228	Type	LW	L	S	LW1	i	d	PN (bar)	Weight / kg
	BK3-DN6-G1/4	6	69	34,5	6	14	G1/4	500	0,46
	BK3-DN10-G3/8	10	72	36	10	14	G3/8	500	0,60
	BK3-DN13-G1/2	13	83	41,5	13	16,3	G1/2	500	0,70
	BK3-DN13-G5/8	13	83	41,5	13	16	G5/8	500	0,70
	BK3-DN20-G3/4	20	95	47,5	20	18	G3/4	315	1,80
	BK3-DN25-G1	25	113	56,5	25	20	G1	315	2,40
	BK3-DN32-G1 1/4	30	111	55	30	22	G1 1/4	350	4,80
	BK3-DN40-G1 1/2	38	130	65	38	24	G1 1/2	350	8,90
	BK3-DN50-G2	48	150	75	48	26	G2	350	12,40



 Pressure input only through the central port (port 2)





Mounting Threads According to ISO 5211

DN	SW	LK	g	t1	w	ISO 5211
6	9	36	M5	6	30°*	(F03)*
10	9	36	M5	7	45°	F03
13	9	36	M5	6	45°	F03
20	14	50	M6	10	45°	F05
25	14	50	M6	10	45°	F05
25/32	14	50	M6	10	45°	F05
25/40	14	50	M6	10	45°	F05

*30° Does not correspond to ISO 5211 standard.

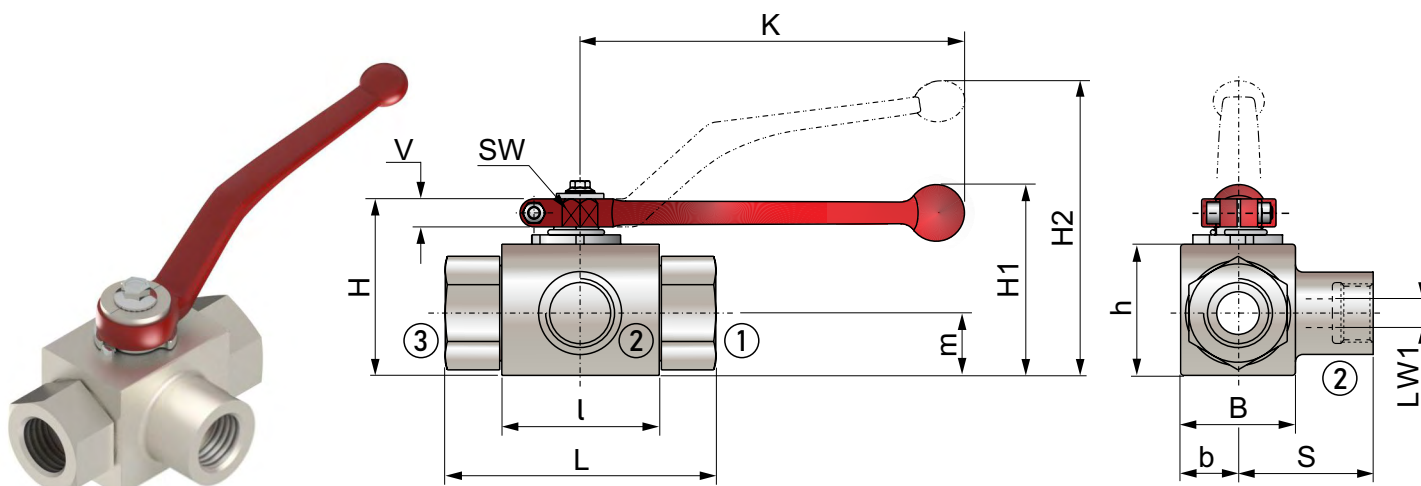
Coding Example:

BK3-DN20 G3/4 BSP (3-way ball valve DN20, carbon steel with G3/4 female thread).

For AISI 316 material, add the letter I at the end of the code.

For Viton seals, add the letter V at the end of the code.

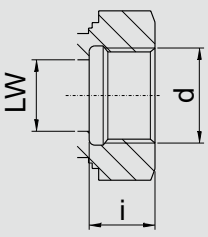
If another type of ball valve not listed in this catalog is required, please contact our technical department.

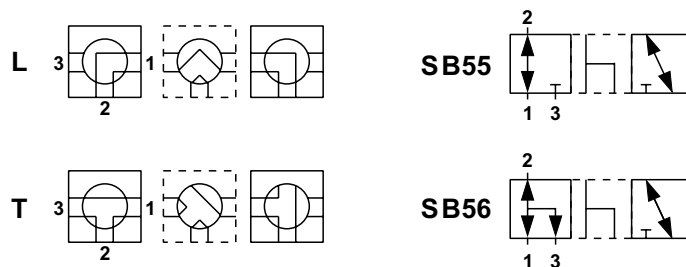


 Pressure input possible on all ports.

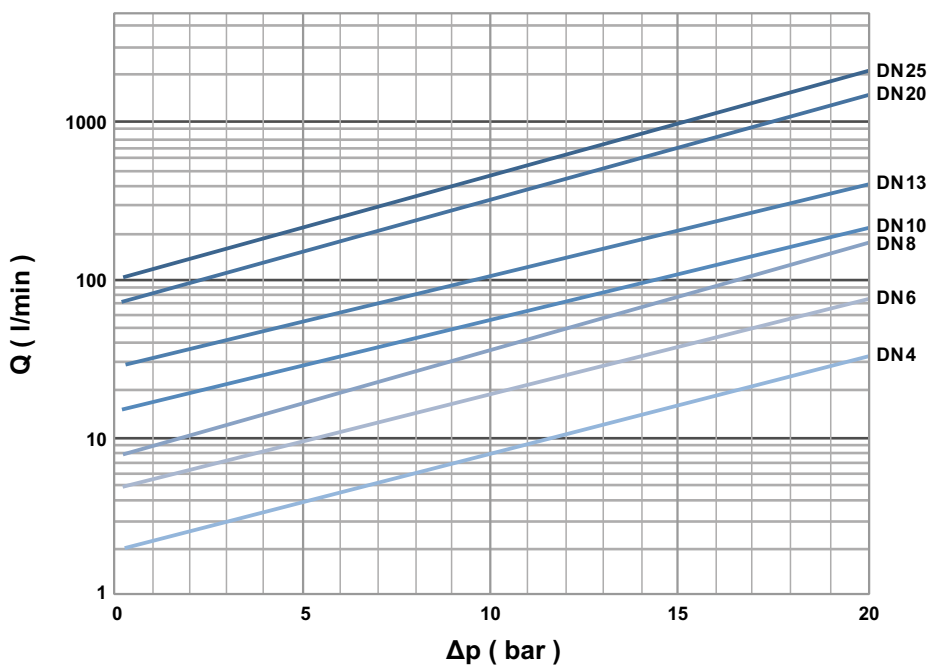


BK3-S												
Type	l	b	B	H	h	m	V	SW	K	H1	H2	Lever
BK3-S-DN6	40	13	29	47	33	13,5	11	9	115	-	82	Zn
BK3-S-DN8	40	13	29	47	33	13,5	11	9	115	-	82	Zn
BK3-S-DN10	43	16	35	52	38	17,5	11	9	115	-	86	Zn
BK3-S-DN13	48	17,5	38	54	40	19	11	9	115	-	89	Zn
BK3-S-DN20	62	24,5	52	75	57	24,5	14	14	200	79	-	Zn
BK3-S-DN25	66	29	61	83	65	29,5	14	14	200	87	-	Zn
BK3-S-DN32	81	39	-	106	84,5	39	16,5	17	320	115	-	Al
BK3-S-DN40	104	53	-	127	106	53	16,5	17	320	136	-	Al
BK3-S-DN50	118	58	116	137	116	58	16,5	17	320	146	-	Al

Thread	Dimensions								
Female Thread DIN ISO 228	Type	LW	L	S	LW1	i	d	PN (bar)	Weight / kg
	BK3-S-DN6-G1/4	6	69	34,5	6	14	G1/4	500	0,46
	BK3-S-DN10-G3/8	10	72	36	10	14	G3/8	500	0,60
	BK3-S-DN13-G1/2	13	83	41,5	13	16,3	G1/2	500	0,70
	BK3-S-DN13-G5/8	13	83	41,5	13	16	G5/8	500	0,70
	BK3-S-DN20-G3/4	20	95	47,5	20	18	G3/4	315	1,80
	BK3-S-DN25-G1	25	113	56,5	25	20	G1	315	2,40
	BK3-S-DN32-G1 1/4	30	111	55	30	22	G1 1/4	350	4,80
	BK3-S-DN40-G1 1/2	38	130	65	38	24	G1 1/2	350	8,90
	BK3-S-DN50-G2	48	150	75	48	26	G2	350	12,40



Pressure inlet possible at all ports
Must only be operated at $\Delta P = 0$ bar



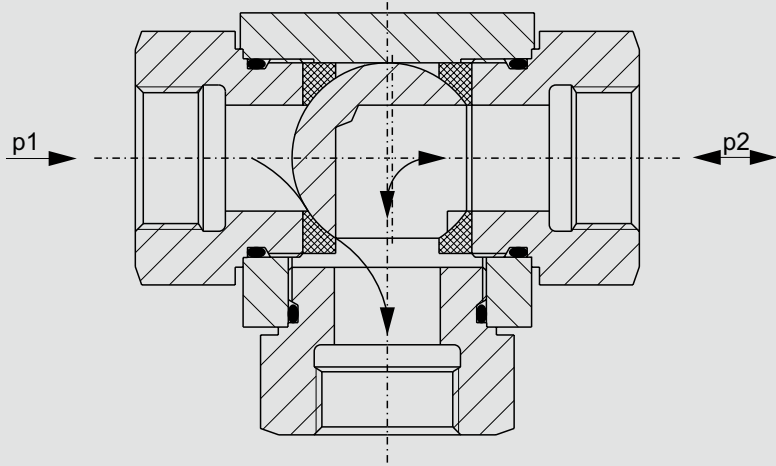
Ball valve sealing variations

3-way selector ball valve, type BK3

The selector ball valve has 2 seats and a floating ball.
If the shut-off port is pressurized and p_1 is higher than p_2 , the ball is being forced against the opposite sealing element. A gap forms and the ball valve is leaking.



Pressure inlet only from center port!

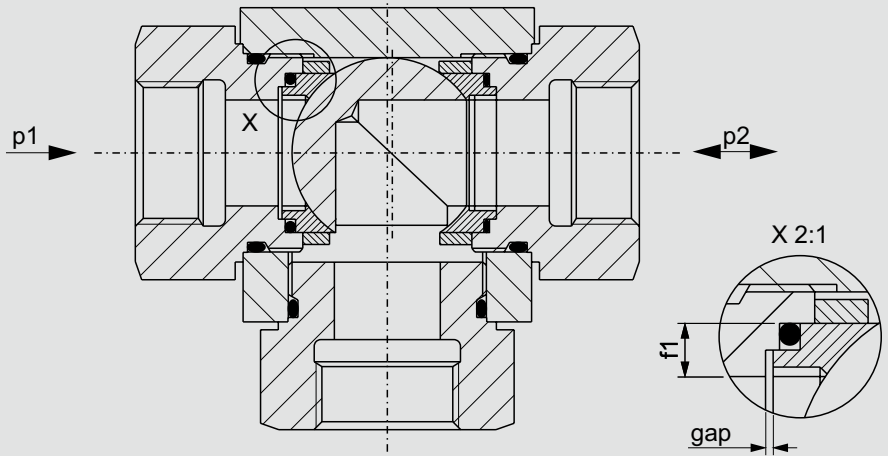


3-way selector ball valve, type BK3-S

The selector ball valve has 2 front side sealing seats and a floating ball.

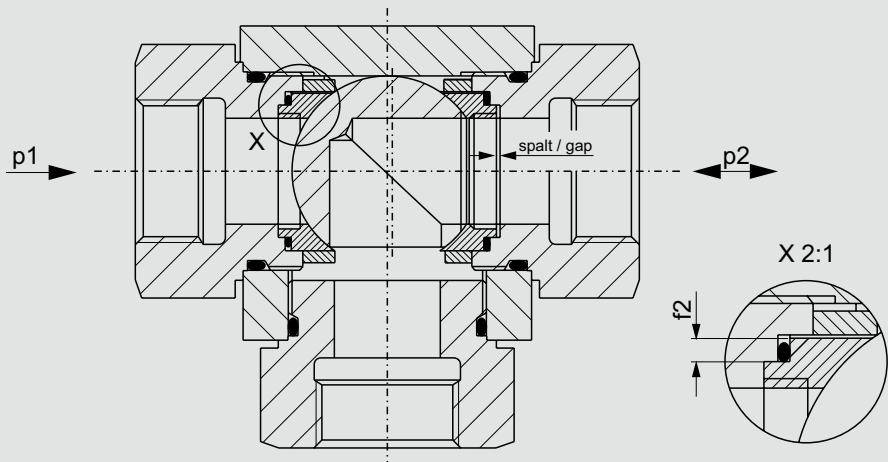
$p_1 > p_2$

Due to the forming of the ring surface, f_1' and the pressure (p_1 p_2) the left sealing element will be forced against the ball and consequently the sealing is achieved. The 'floating' ball moves against the right sealing surface - the ball valve remains sealed.

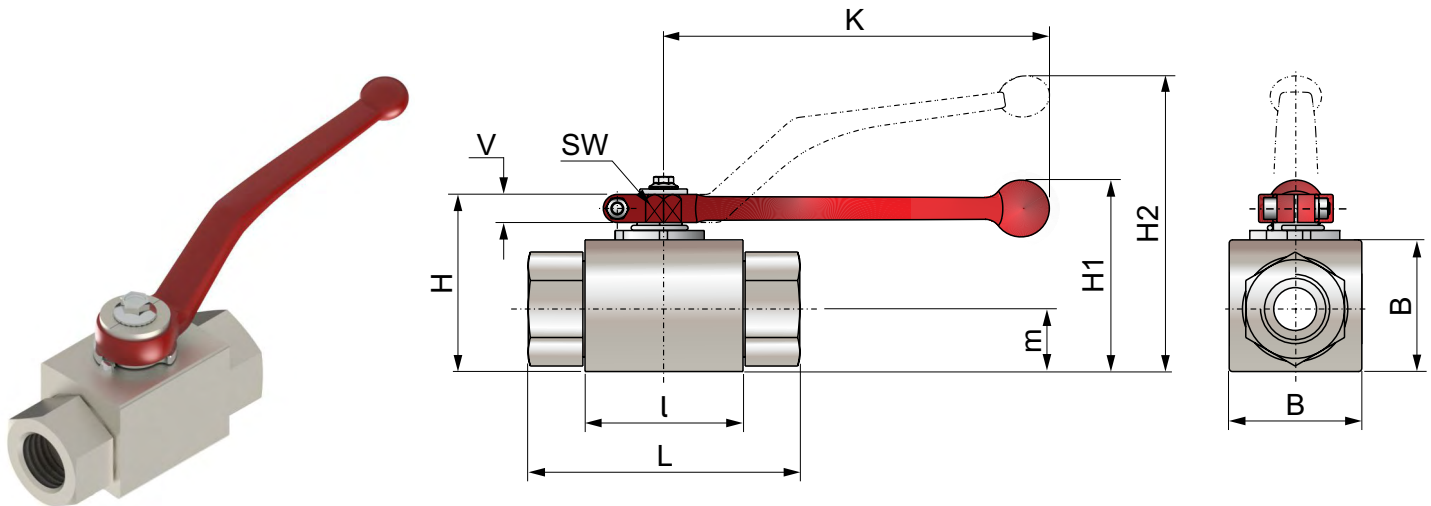


$p_1 > p_2$

Due to the ring surface, f_2' and the pressure ($p_2 - p_1$) the right sealing element will also be forced against the ball and consequently the sealing is achieved. The 'floating' ball moves against the left sealing surface - the ball valve remains sealed.



**Pressure inlet possible from all ports!
Must be operated only at $\Delta P = 0 \text{ bar}$!**



MHA ZENTGRAF
Flow Control Technology

BKHP800

Type	l	B	H	m	V	SW	K	H2	Lever
BKHP800-DN4	76	50	64	25	11	9	115	101	Steel
BKHP800-DN6	76	50	64	25	11	9	115	101	Steel
BKHP800-DN8	76	50	64	25	11	9	115	101	Steel
BKHP800-DN10	76	50	64	25	11	9	115	101	Steel
BKHP800-DN13	76	50	64	25	11	9	115	101	Steel
BKHP800-DN20	111	90	108	45	14	14	171	159	Steel
BKHP800-DN25	111	90	108	45	14	14	171	159	Steel

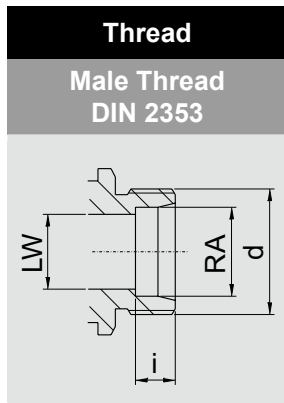
Coding Example:

BKHP800-DN10 (High-pressure ball valve).

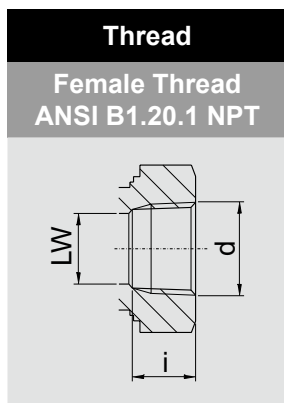
For AISI 316 material, add the letter I at the end of the code.

For Viton seals, add the letter V at the end of the code.

If another type of ball valve not listed in this catalog is required, please contact our technical department.




Dimensions								
Type	LW	RA	L	i	d	PN (bar)	Weight / kg	
BKHP800-DN4-8S	5	8	110	7	M16x1,5	800	1,60	
BKHP800-DN6-10S	6	10	114	7,5	M18x1,5	800	1,60	
BKHP800-DN8-12S	8	12	114	7,5	M20x1,5	800	1,64	
BKHP800-DN10-14S	13	14	114	8	M22x1,5	800	1,56	
BKHP800-DN13-16S	13	16	114	8,5	M24x1,5	800	1,58	
BKHP800-DN13-20S	13	20	118	10,5	M30x2	800	1,63	
BKHP800-DN20-25S	20	25	162	12	M36x2	800	7,31	
BKHP800-DN25-30S	25	30	166	13,5	M42x2		7,40	



Dimensions							
Type	LW	L	i	d	PN (bar)	Weight / kg	
BKHP800-DN6-1/4 NPT	6	130	13,7	1/4 NPT	800	1,92	
BKHP800-DN10-3/8 NPT	13	130	13,5	3/8 NPT	800	1,85	
BKHP800-DN13-1/2 NPT	13	130	17	1/2 NPT	800	1,79	
BKHP800-DN20-3/4 NPT	20	161	18,3	3/4 NPT	800	7,83	
BKHP800-DN25-1 NPT	25	164	21,6	1 NPT	800	7,68	




Manufacturing Facility


 + 55 15 3264-1222

 gepef@gepef.com.br


 www.gepef.com.br


 Avenida do Trabalhador, 1.680
ZIP Code 18552-100 - Boituva - SP
Brazil


Head Office & Operations Center


 Av. Antônio Ângelo Amadio 681
ZIP Code 18552-112 - Boituva - SP
Brazil

Branch Office – Belo Horizonte, MG – Brazil - Regional sales operations
for Minas Gerais and Brazil's Central-West Region

 + 55 31 3327-4459

 gepef-bh@gepef.com.br

 www.gepef.com.br

 Avenida Professor Mário Werneck, 300
(10th Floor – Room 1004 – Tower 2) – Estoril District
ZIP Code 30455-610 - Belo Horizonte - MG
Brazil