



1945 - 2020



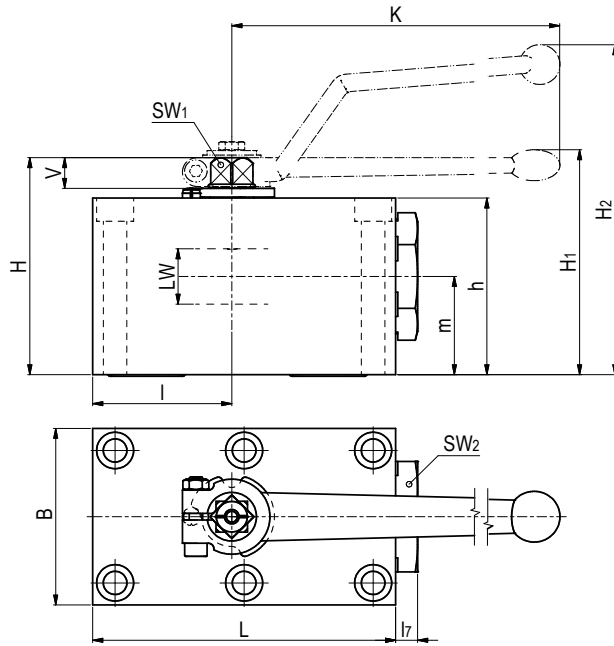
MHA ZENTGRAF
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CATALOG

Ball valve for manifold mounting Steel

PKH



AVAILABLE SIZES

DN6 - DN50 (1/4" to 2")

ACCESSORIES ON REQUEST

- Locking devices page 233
- Actuators 228 - 229
- Position switches on request
- Detent on request

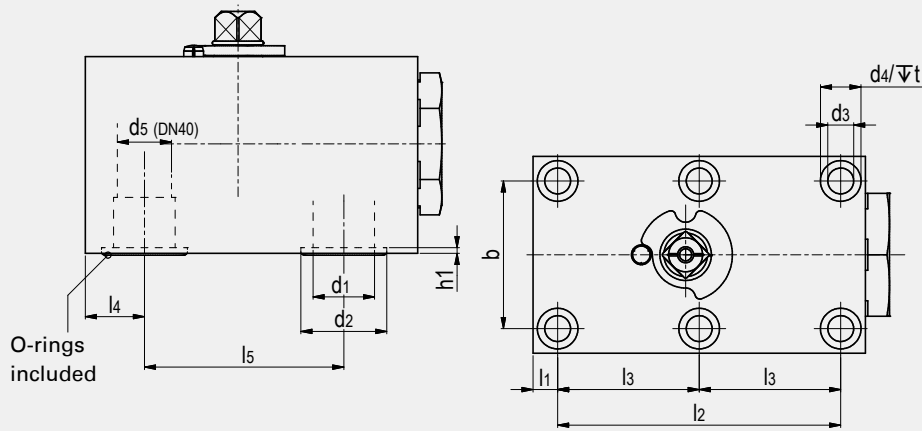
MATERIAL CODE DESCRIPTION

Materials	112A	1128
Body	Steel	Steel
Ball	Steel	Steel
Stem	Steel	Steel
Ball seats	POM	POM
O-rings	NBR	FPM
Tmin /Tmax	-20°C / 100°C	-20°C / 100°C

GENERAL DIMENSIONS

Type	I	L	I ₇	B	H	h	m	V	SW ₁	SW ₂	K	LW	H ₁	H ₂	Lever	Weight [Kg]
PKH-DN6	26	57	6	40	43	35	19,5	6	7	19	76	6	-	64	Zn	0,60
PKH-DN10	29	70	10	55	59	45	24,5	11	9	30	115	10	-	93	Zn	1,30
PKH-DN13	42,5	98	10	60	69	55	34	11	9	32	115	13	-	104	Zn	2,30
PKH-DN16	44	100	9,5	60	72,3	55	28	14	12	36	160	15	-	115	Al	3,75
PKH-DN20	51	117	10	70	88	70	37,5	14	14	46	200	20	92	-	Zn	3,92
PKH-DN25	62	135	10	80	98	80	44,5	14	14	50	200	25	102	-	Zn	5,68
PKH-DN32	75	165	11	100	121	100	54,5	17	17	70	320	32	130	-	Al	11,00
PKH-DN40	84,5	200	17	130	131	110	57	17	17	80	320	38	140	-	Al	18,78
PKH-DN50	106	240	15	150	150	129	71	17	17	90	320	48	159	-	Al	29,70

CONNECTION



CONNECTION DIMENSIONS

Type	l ₁	l ₂	l ₃	l ₄	l ₅	b	d ₁	d ₂	h ₁	d ₃	d ₄	t	d ₅	Dimension of screws (min) ⁽¹⁾	Torque of screws in Nm ⁽¹⁾	O-ring	ORDER CODE PER MATERIAL COMBINATION		
																	PN [bar]	112A	1128
PKH-DN6	8,5	35	-	8,5	35	27	6	11,8	1,9	6,5	10,5	6,8	-	4 x M6x40 - 12.9	14	7x2,5	500	22661*	28416*
PKH-DN10	7,5	55	-	10	44	40	9,5	14,9	1,9	8,4	13,5	8,5	-	4 x M8x50 - 12.9	35	10x2,5	500	28687*	15727*
PKH-DN13	7,5	83	41,5	16	58	45	13	24,9	1,9	8,4	13,5	8	-	6 x M8x60 - 12.9	35	20x2,5	420	29571*	29226*
PKH-DN16	8,5	83	41,5	16	58	45	16	24,9	1,9	8,4	13,5	9	-	6 x M8x60 - 12.9	35	20x2,5	400	on request	
PKH-DN20	10	97	48,5	20	69	51	20	28,3	2	10,5	16,5	10,5	-	6 x M10x80 - 12.9	70	23,47x2,62	420	29296*	29292*
PKH-DN25	10	115	57,5	24	81	60	25	34,9	2,3	10,5	16,5	10,5	-	6 x M10x90 - 12.9	70	29x3	420	28953*	26334*
PKH-DN32	12	136	68	29	96	78	32	39,3	2	13	19	12	-	6 x M12x110 - 12.9	110	34,59 x 2,62	420	59599	59600
PKH-DN40	28,5	112	56	28,5	112	95	38	47,7	2,3	16,5	25	19	36	6 x M16x120 - 12.9	300	42x3	420	28331*	31261*
PKH-DN50	38	136	68	38	136	112	48	59,8	2,3	21	31	21,5	-	6 x M20x140 - 12.9	600	54x3	420	28338*	32267*

*Article usually in stock.

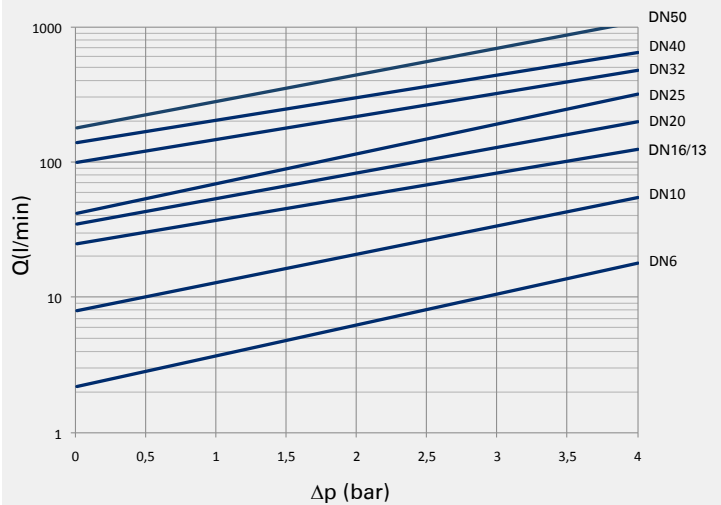
⁽¹⁾ Fixing screws not included.

We recommend screws as per ISO4762 (DIN 912).

The indicated property classes and torques represent our recommended guidelines at a friction coefficient of 14%.

Due to material availability the material code of the steel valves may vary from 112A (or 1128). DN6=1123 (or 1125), DN32=212A (or 2128), DN40-50=812A (or 8128). Material suitability for the application does not differ from 112A (or 1128).

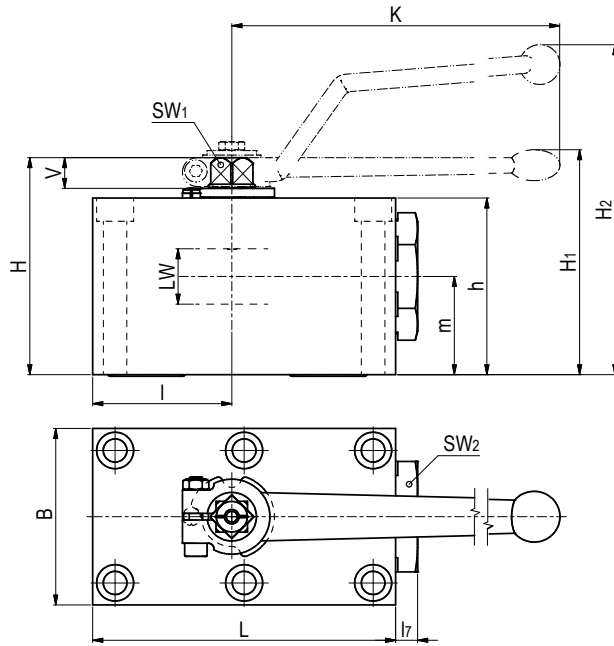
FLOW CHARACTERISTICS PKH



The flow values are measured with usage of hydraulic oil (spissitude 880 kg/m³) and the kinematic viscosity of 35 mm²/s.

Ball valve for manifold mounting Stainless Steel

PKH



AVAILABLE SIZES

DN6 - DN50 (1/4" to 2")

ACCESSORIES ON REQUEST

- Locking devices page 233
- Actuators 228 - 229
- Position switches on request
- Detent on request

MATERIAL CODE DESCRIPTION

Materials	442A	4428
Body	Stainless Steel	Stainless Steel
Ball	Stainless Steel	Stainless Steel
Stem	Stainless Steel	Stainless Steel
Ball seats	POM	POM
O-rings	NBR	FPM
Tmin /Tmax	-30°C / 100°C	-20°C / 100°C

GENERAL DIMENSIONS

Type	I	L	L ₇	B	H	h	m	V	SW ₁	SW ₂	K	LW	H ₁	H ₂	Lever	Weight [Kg]
PKH-DN6	26	57	6	40	43	35	19,5	6	7	19	76	6	-	64	Zn	0,60
PKH-DN10	29	70	10	55	59	45	24,5	11	9	30	115	10	-	93	Zn	1,30
PKH-DN13	42,5	98	10	60	69	55	34	11	9	32	115	13	-	104	Zn	2,32
PKH-DN20	51	117	10	70	88	70	37,5	14	14	46	200	20	92	-	Zn	4,02
PKH-DN25	62	135	10	80	98	80	44,5	14	14	50	200	25	102	-	Zn	5,70
PKH-DN32	75	165	11	100	121	100	54,5	17	17	70	320	32	130	-	Al	11,00
PKH-DN40	84,5	200	17	130	131	110	57	17	17	80	320	38	140	-	Al	18,78
PKH-DN50	106	240	15	150	150	129	71	17	17	90	320	48	159	-	Al	29,55

Ball valve for manifold mounting Stainless Steel

PKH

CONNECTION



CONNECTION DIMENSIONS

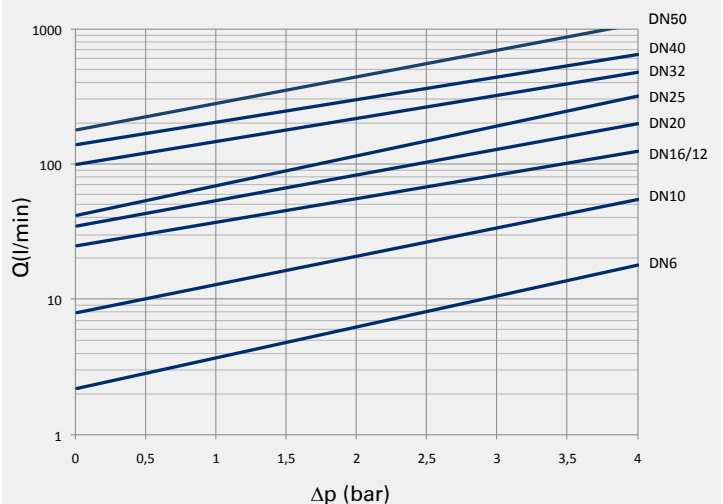
Type	l ₁	l ₂	l ₃	l ₄	l ₅	b	d ₁	d ₂	h ₁	d ₃	d ₄	t	d ₅	Dimension of screws (min) ⁽¹⁾	Torque of screws in Nm ⁽¹⁾	O-ring	ORDER CODE PER MATERIAL COMBINATION		
																	PN [bar]	442A	4428
PKH-DN6	8,5	35	-	8,5	35	27	6	11,8	1,9	6,5	10,5	6,8	-	4 x M6x40 - 12.9	14	7x2,5	500	21337	28244
PKH-DN10	7,5	55	-	10	44	40	9,5	14,9	1,9	8,4	13,5	8,5	-	4 x M8x50 - 12.9	35	10x2,5	500	10053	29747
PKH-DN13	7,5	83	41,5	16	58	45	13	24,9	1,9	8,4	13,5	8	-	6 x M8x60 - 12.9	35	20x2,5	420	25439	18041
PKH-DN20	10	97	48,5	20	69	51	20	28,3	2	10,5	16,5	10,5	-	6 x M10x80 - 12.9	70	23,47x2,62	420	28598	38365
PKH-DN25	10	115	57,5	24	81	60	25	34,9	2,3	10,5	16,5	10,5	-	6 x M10x90 - 12.9	70	29x3	420	33708	32060
PKH-DN32	12	136	68	29	96	78	32	39,3	2	13	19	12	-	6 x M12x110 - 12.9	110	34,59 x 2,62	420	59601	59602
PKH-DN40	28,5	112	56	28,5	112	95	38	47,7	2,3	16,5	25	19	36	6 x M16x120 - 12.9	300	42x3	420	36117	38367
PKH-DN50	38	136	68	38	136	112	48	59,8	2,3	21	31	21,5	-	6 x M20x140 - 12.9	600	54x3	420	38368	38369

⁽¹⁾ Fixing screws not included.

We recommend screws as per ISO4762 (DIN 912).

The indicated property classes and torques represent our recommended guidelines at a friction coefficient of 14%.

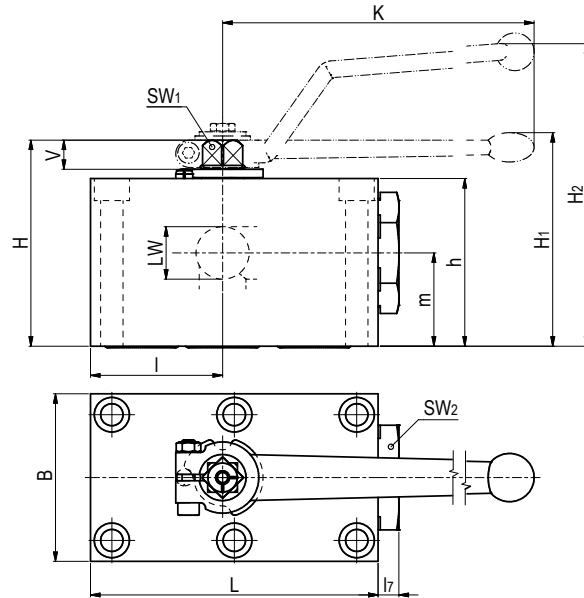
FLOW CHARACTERISTICS PKH



The flow values are measured with usage of hydraulic oil (spissitude 880 kg/m³) and the kinematic viscosity of 35 mm²/s.

Selector ball valve for manifold mounting Steel

PK3



AVAILABLE SIZES

DN6 - DN50 (1/4" to 2")

ACCESSORIES ON REQUEST

- Locking devices page 233
- Actuators 228 - 229
- Position switches on request
- Detent on request



Pressure inlet only from center port (port 2)!

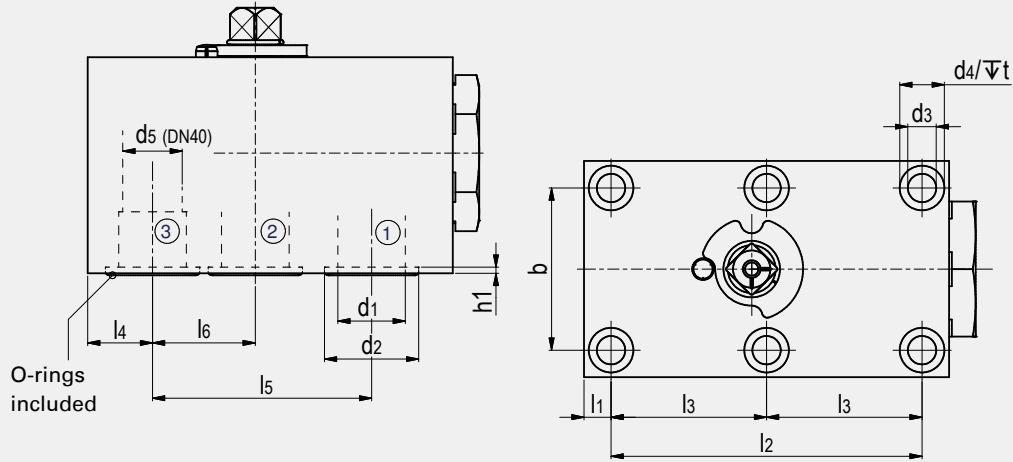
MATERIAL CODE DESCRIPTION

Materials	112A	1128
Body	Steel	Steel
Ball	Steel	Steel
Stem	Steel	Steel
Ball seats	POM	POM
O-rings	NBR	FPM
Tmin /Tmax	-20°C / 100°C	-20°C / 100°C
Porting pattern	L=SB58	L=SB58

GENERAL DIMENSIONS

Type	l	L	l ₇	B	H	h	m	V	SW ₁	SW ₂	K	LW	H ₁	H ₂	Lever	Weight [Kg]
PK3-DN6	26	57	6	40	43	35	19,5	6	7	19	76	5	-	64	Zn	0,60
PK3-DN10	29	70	10	55	59	45	24,5	11	9	30	115	10	-	93	Zn	1,30
PK3-DN13	42,5	98	10	60	69	55	34	11	9	32	115	13	-	104	Zn	2,30
PK3-DN20	51	117	10	70	88	70	37,5	14	14	46	200	20	92	-	Zn	3,90
PK3-DN25	62	135	10	80	98	80	44,5	14	14	50	200	25	102	-	Zn	5,70
PK3-DN32	75	165	11	100	121	100	54,5	16,5	17	70	320	30	130	-	Al	11,00
PK3-DN40	84,5	200	17	130	131	110	57	16,5	17	80	320	38	140	-	Al	18,70
PK3-DN50	106	240	15	150	150	129	71	16,5	17	90	320	48	159	-	Al	28,80

CONNECTION



CONNECTION DIMENSIONS

Type	l ₁	l ₂	l ₃	l ₄	l ₅	l ₆	b	d ₁	d ₂	h ₁	d ₃	d ₄	t	d ₅	Dimension of screws (min) ⁽¹⁾	Torque of screws in Nm ⁽¹⁾	O-ring	ORDER CODE PER MATERIAL COMBINATION		
																		PN [bar]	112A L=SB58	1128 L=SB58
PK3-DN6	8,5	35	-	8,5	35	17,5	27	6	11,8	1,9	6,5	10,5	6,8	-	4 x M6x40 - 12.9	14	7x2,5	500	25361	31404
PK3-DN10	7,5	55	-	10	44	19	40	9,5	14,9	1,9	8,4	13,5	8,5	-	4 x M8x50 - 12.9	35	10x2,5	500	26190	26727
PK3-DN13	7,5	83	41,5	16	58	26,5	45	13	24,9	1,9	8,4	13,5	8	-	6 x M8x60 - 12.9	35	20x2,5	420	23772	37544
PK3-DN20	10	97	48,5	20	69	31	51	20	28,3	2	10,5	16,5	10,5	-	6 x M10x80 - 12.9	70	23,47x2,62	420	29291	34743
PK3-DN25	10	115	57,5	24	81	38	60	25	34,9	2,3	10,5	16,5	10,5	-	6 x M10x90 - 12.9	70	29x3	420	28233	28970
PK3-DN32	12	136	68	29	96	46	78	32	39,3	2	13	19	12	-	6 x M12x110 - 12.9	110	34,59x2,62	420	59603	59604
PK3-DN40	28,5	112	56	28,5	112	56	95	38	47,7	2,3	16,5	25	19	36	6 x M16x120 - 12.9	300	42x3	420	33205	37546
PK3-DN50	38	136	68	38	136	68	112	48	59,8	2,3	21	31	21,5	-	6 x M20x140 - 12.9	600	54x3	420	28334	37547

⁽¹⁾ Fixing screws not included.

We recommend screws as per ISO4762 (DIN 912).

The indicated property classes and torques represent our recommended guidelines at a friction coefficient of 14%.

Due to material availability the material code of the steel valves may vary from 112A (or 1128). DN6=1123 (or 1125), DN32=212A (or 2128), DN40-50=812A (or 8128). Material suitability for the application does not differ from 112A (or 1128).

PORTING PATTERNS

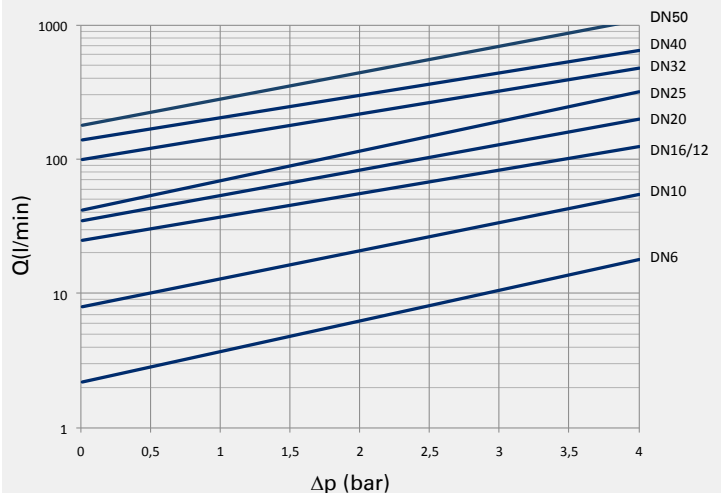


! Pressure inlet only from center port (port2)!

PK3 with cross-over flow
Operation 90°
L-bore

Further porting patterns
page 274 to 279

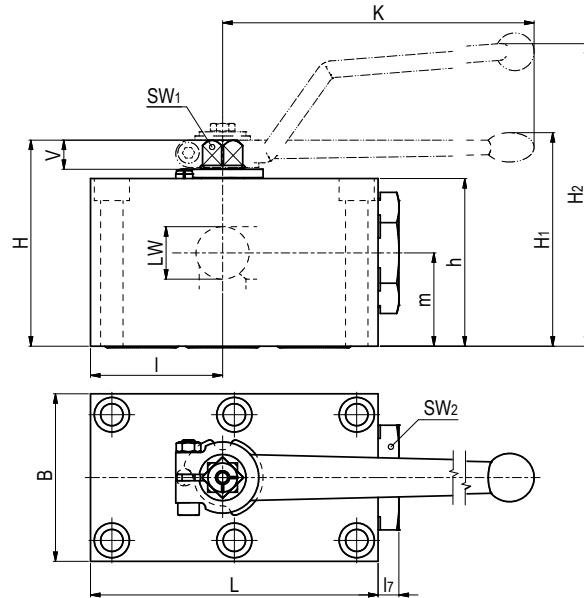
FLOW CHARACTERISTICS PK3



The flow values are measured with usage of hydraulic oil (spissitude 880 kg/m³) and the kinematic viscosity of 35 mm²/s.

Selector ball valve for manifold mounting Stainless Steel

PK3



AVAILABLE SIZES

DN6 - DN50 (1/4" to 2")

ACCESSORIES ON REQUEST

- Locking devices page 233
- Actuators 228 - 229
- Position switches on request
- Detent on request



Pressure inlet only from center port (port 2)!

MATERIAL CODE DESCRIPTION

Materials	442A	4428
Body	Stainless Steel	Stainless Steel
Ball	Stainless Steel	Stainless Steel
Stem	Stainless Steel	Stainless Steel
Ball seats	POM	POM
O-rings	NBR	FPM
Tmin /Tmax	-30°C / 100°C	-20°C / 100°C
Porting pattern	L=SB58	L=SB58

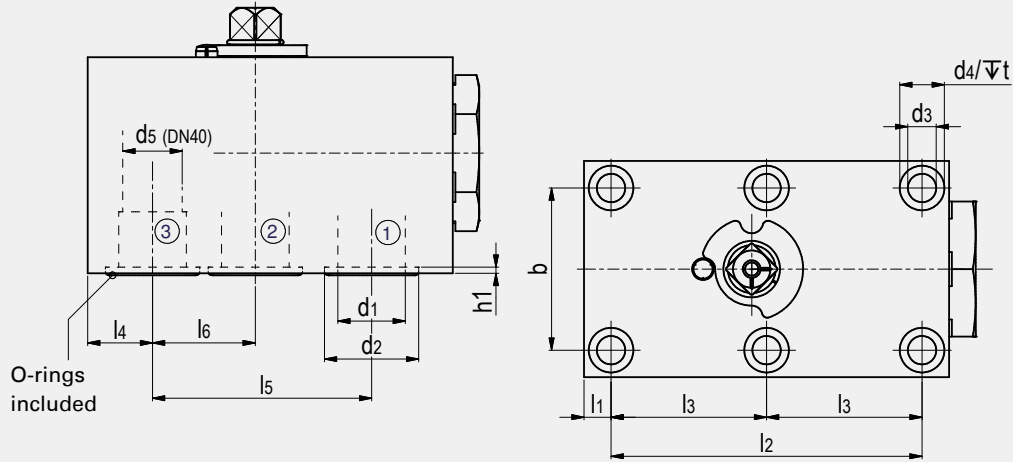
GENERAL DIMENSIONS

Type	I	L	L ₇	B	H	h	m	V	SW ₁	SW ₂	K	LW	H ₁	H ₂	Lever	Weight [Kg]
PK3-DN6	26	57	6	40	43	35	19,5	6	7	19	76	5	-	64	Zn	0,60
PK3-DN10	29	70	10	55	59	45	24,5	11	9	30	115	10	-	93	Zn	1,30
PK3-DN13	42,5	98	10	60	69	55	34	11	9	32	115	13	-	104	Zn	2,30
PK3-DN20	51	117	10	70	88	70	37,5	14	14	46	200	20	92	-	Zn	3,90
PK3-DN25	62	135	10	80	98	80	44,5	14	14	50	200	25	102	-	Zn	5,70
PK3-DN32	75	165	11	100	121	100	54,5	16,5	17	70	320	30	130	-	Al	11,00
PK3-DN40	84,5	200	17	130	131	110	57	16,5	17	80	320	38	140	-	Al	18,70
PK3-DN50	106	240	15	150	150	129	71	16,5	17	90	320	48	159	-	Al	28,80

Selector ball valve for manifold mounting Stainless Steel

PK3

CONNECTION



CONNECTION DIMENSIONS

Type	l ₁	l ₂	l ₃	l ₄	l ₅	l ₆	b	d ₁	d ₂	h ₁	d ₃	d ₄	t	d ₅	Dimension of screws (min) ⁽¹⁾	Torque of screws in Nm ⁽¹⁾	O-ring	ORDER CODE PER MATERIAL COMBINATION		
																		PN [bar]	442A L=SB58	4428 L=SB58
PK3-DN6	8,5	35	-	8,5	35	17,5	27	6	11,8	1,9	6,5	10,5	6,8	-	4 x M6x40 - 12.9	14	7x2,5	500	31909	38376
PK3-DN10	7,5	55	-	10	44	19	40	9,5	14,9	1,9	8,4	13,5	8,5	-	4 x M8x50 - 12.9	35	10x2,5	500	31914	38377
PK3-DN13	7,5	83	41,5	16	58	26,5	45	13	24,9	1,9	8,4	13,5	8	-	6 x M8x60 - 12.9	35	20x2,5	420	38370	38378
PK3-DN20	10	97	48,5	20	69	31	51	20	28,3	2	10,5	16,5	10,5	-	6 x M10x80 - 12.9	70	23,47x2,62	420	38371	38379
PK3-DN25	10	115	57,5	24	81	38	60	25	34,9	2,3	10,5	16,5	10,5	-	6 x M10x90 - 12.9	70	29x3	420	38372	38380
PK3-DN32	12	136	68	29	96	46	78	32	39,3	2	13	19	12	-	6 x M12x110 - 12.9	110	34,59x2,62	420	59605	59606
PK3-DN40	28,5	112	56	28,5	112	56	95	38	47,7	2,3	16,5	25	19	36	6 x M16x120 - 12.9	300	42x3	420	38374	38382
PK3-DN50	38	136	68	38	136	68	112	48	59,8	2,3	21	31	21,5	-	6 x M20x140 - 12.9	600	54x3	420	38375	38383

⁽¹⁾ Fixing screws not included.

We recommend screws as per ISO4762 (DIN 912).

The indicated property classes and torques represent our recommended guidelines at a friction coefficient of 14%.

PORTING PATTERNS

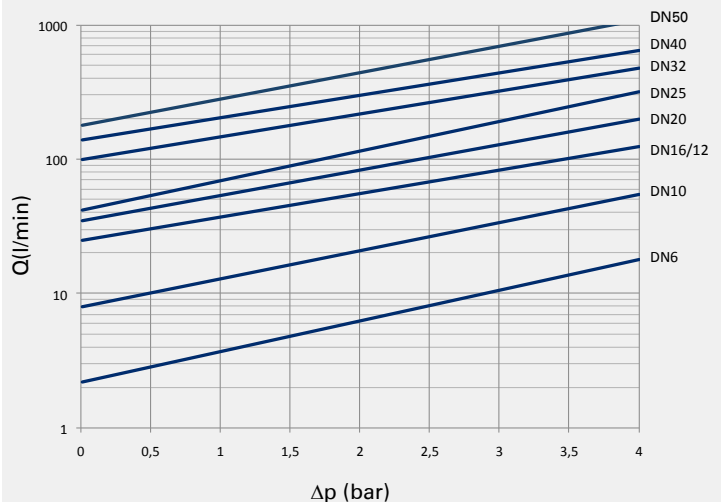


! Pressure inlet only from center port (port2)!

PK3 with cross-over flow
Operation 90°
L-bore

Further porting patterns
page 274 to 279

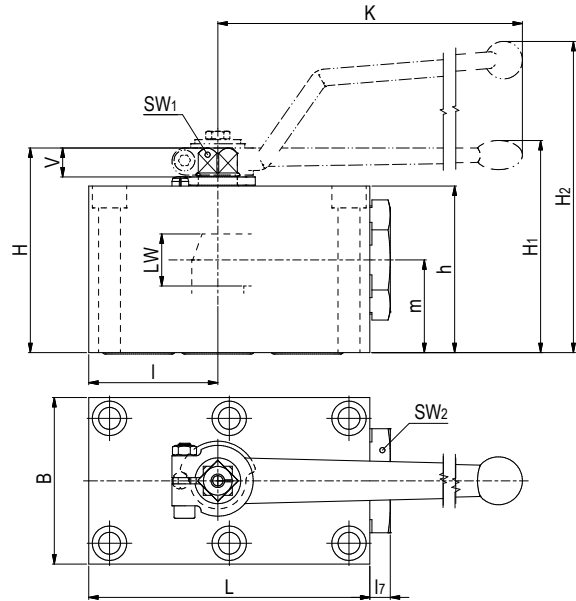
FLOW CHARACTERISTICS PK3



The flow values are measured with usage of hydraulic oil (spissitude 880 kg/m³) and the kinematic viscosity of 35 mm²/s.

Selector ball valve for manifold mounting Steel

PK3-S



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

AVAILABLE SIZES

DN6 - DN50 (1/4" to 2")

ACCESSORIES ON REQUEST

- Locking devices on request
- Actuators page 228 - 229
- Position switches on request
- Detent on request

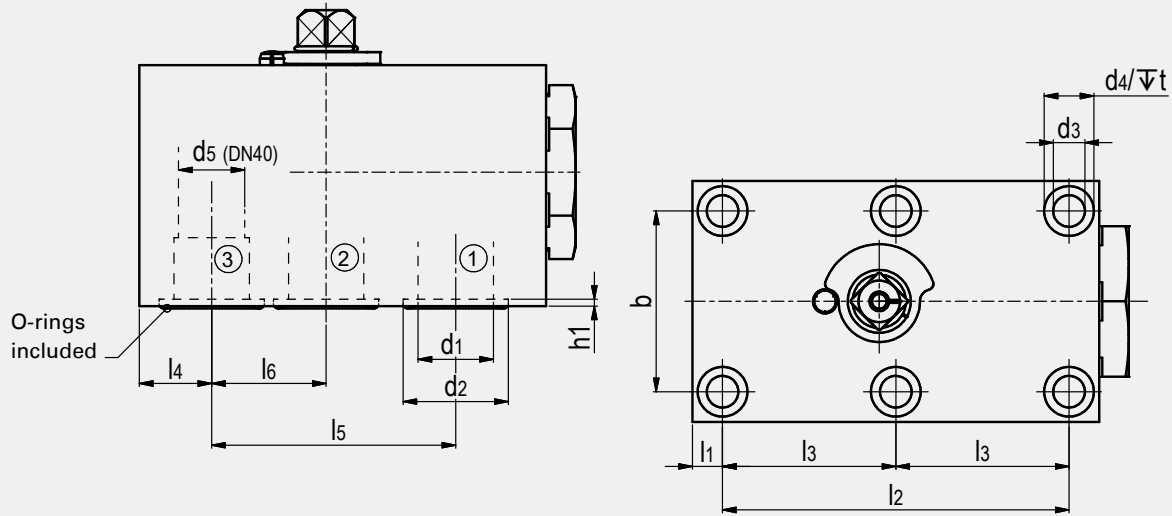
MATERIAL CODE DESCRIPTION

Materials	118A	1188
Body	Steel	Steel
Ball	Steel	Steel
Stem	Steel	Steel
Ball seats	POM	POM
O-rings	NBR	FPM
Tmin /Tmax	-20°C / 100°C	-20°C / 100°C
Porting pattern	L=SB57	L=SB57

GENERAL DIMENSIONS

Type	I	L	L ₇	B	H	h	m	V	SW ₁	SW ₂	K	LW	H ₁	H ₂	Lever	Weight [Kg]
PK3-S-DN6	26	57	6	40	43	35	19,5	6	7	19	76	5	-	64	Zn	0,60
PK3-S-DN10	34	75	10	55	59	45	24,5	11	9	30	115	10	-	93	Zn	1,40
PK3-S-DN13	42,5	98	10	60	69	55	34	11	9	32	115	13	-	104	Zn	2,30
PK3-S-DN20	51	117	10	70	88	70	37,5	14	14	46	200	20	92	-	Zn	3,90
PK3-S-DN25	62	135	10	80	98	80	44,5	14	14	50	200	25	102	-	Zn	5,65
PK3-S-DN32	75	165	11	100	121	100	54,5	16,5	17	70	320	30	130	-	Al	11,00
PK3-S-DN40	84,5	200	17	130	131	110	57	16,5	17	80	320	38	140	-	Al	18,70
PK3-S-DN50	106	240	15	150	150	129	71	16,5	17	90	320	48	159	-	Al	28,80

CONNECTION



CONNECTION DIMENSIONS

Type	l ₁	l ₂	l ₃	l ₄	l ₅	l ₆	b	d ₁	d ₂	h ₁	d ₃	d ₄	t	d ₅	Dimension of screws (min) ⁽¹⁾	Torque of screws in Nm ⁽¹⁾	O-ring	ORDER CODE PER MATERIAL COMBINATION		
																		PN [bar]	118A L=SB57	1188 L=SB57
PK3-S-DN6	8,5	35	-	8,5	35	17,5	27	6	11,8	1,9	6,5	10,5	6,8	-	4 x M6x40 - 12.9	14	7x2,5	250	26008	37548
PK3-S-DN10	12,5	55	-	15	44	19	40	9,5	14,9	1,9	8,4	13,5	8,5	-	4 x M8x50 - 12.9	35	10x2,5	500	26409	37549
PK3-S-DN13	7,5	83	41,5	16	58	26,5	45	13	24,9	1,9	8,4	13,5	8	-	6 x M8x60 - 12.9	35	20x2,5	400	36240	32019
PK3-S-DN20	10	97	48,5	20	69	31	51	20	28,3	2	10,5	16,5	10,5	-	6 x M10x80 - 12.9	70	23,47x2,62	315	33206	29760
PK3-S-DN25	10	115	57,5	24	81	38	60	25	34,9	2,3	10,5	16,5	10,5	-	6 x M10x90 - 12.9	70	29x3	315	26011	37553
PK3-S-DN32	12	136	68	29	96	46	78	32	39,3	2	13	19	12	-	6 x M12x110 - 12.9	110	34,59x2,62	420	58469	58470
PK3-S-DN40	28,5	112	56	28,5	112	56	95	38	47,7	2,3	16,5	25	19	36	6 x M16x120 - 12.9	300	42x3	420	29281	37551
PK3-S-DN50	38	136	68	38	136	68	112	48	59,8	2,3	21	31	21,5	-	6 x M20x140 - 12.9	600	54x3	420	26007	37552

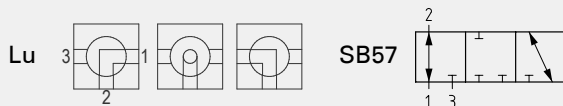
⁽¹⁾ Fixing screws not included.

We recommend screws as per ISO4762 (DIN 912).

The indicated property classes and torques represent our recommended guidelines at a friction coefficient of 14%.

Due to material availability the material code of the steel valves may vary from 118A (or 1188). DN6=1183 (or 1185), DN32-50=818A (or 8188). Material suitability for the application does not differ from 118A (or 1188).

PORTING PATTERNS

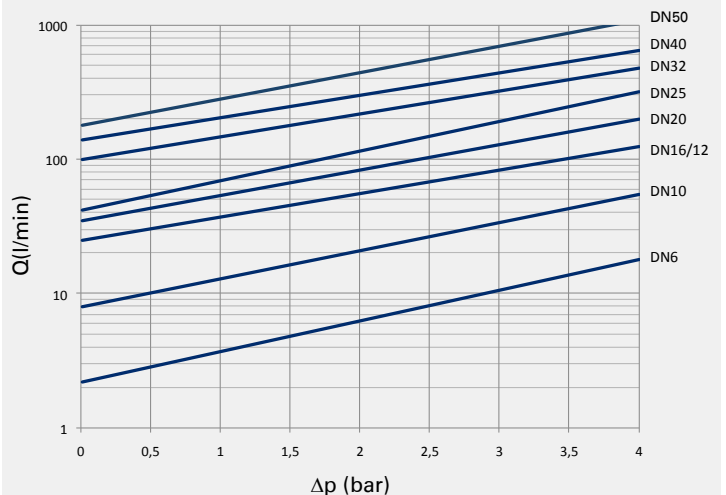


Pressure inlet possible from all ports!
Must be operated only at $\Delta P=0$ bar!

PK3-S with positive overlap
Operation 180°
L-bore

Further porting patterns
page 274 to 279

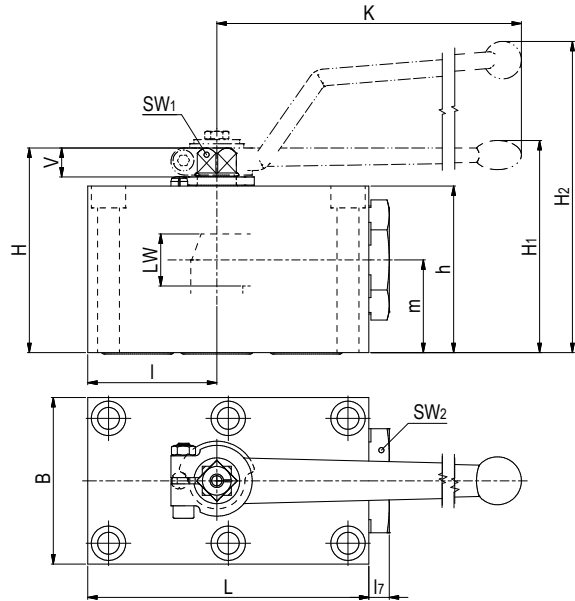
FLOW CHARACTERISTICS PK3-S



The flow values are measured with usage of hydraulic oil (spissitude 880 kg/m³) and the kinematic viscosity of 35 mm²/s.

Selector ball valve for manifold mounting Stainless Steel

PK3-S



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

AVAILABLE SIZES

DN6 - DN50 (1/4" to 2")

ACCESSORIES ON REQUEST

- Locking devices on request
- Actuators page 228 - 229
- Position switches on request
- Detent on request

MATERIAL CODE DESCRIPTION

Materials	448A	4488
Body	Stainless Steel	Stainless Steel
Ball	Stainless Steel	Stainless Steel
Stem	Stainless Steel	Stainless Steel
Ball seats	POM	POM
O-rings	NBR	FPM
Tmin /Tmax	-30°C / 100°C	-20°C / 100°C
Porting pattern	L=SB57	L=SB57

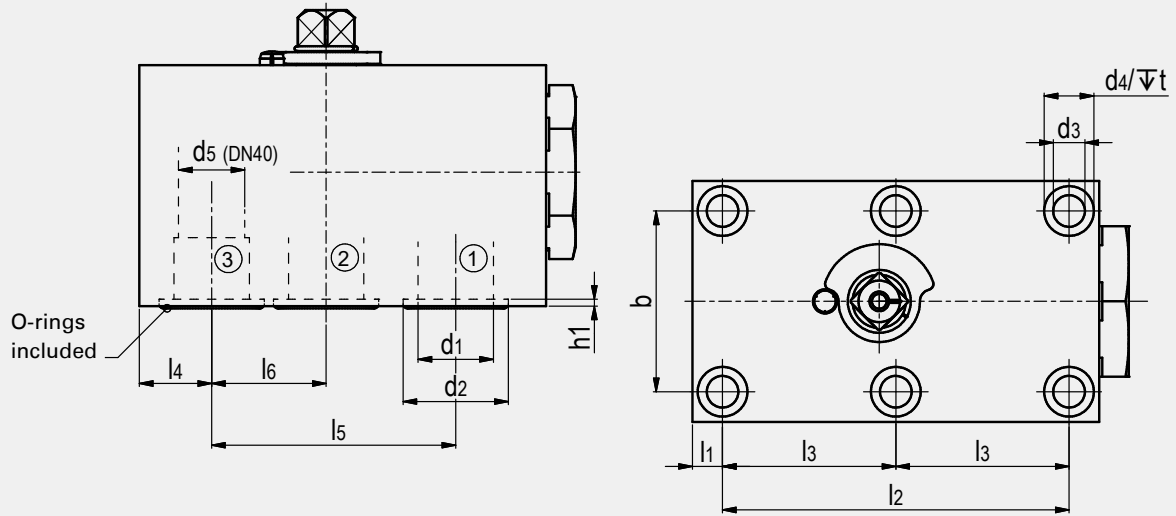
GENERAL DIMENSIONS

Type	I	L	I ₇	B	H	h	m	V	SW ₁	SW ₂	K	LW	H ₁	H ₂	Lever	Weight [Kg]
PK3-S-DN6	26	57	6	40	43	35	19,5	6	7	19	76	5	-	64	Zn	0,60
PK3-S-DN10	34	75	10	55	59	45	24,5	11	9	30	115	10	-	93	Zn	1,40
PK3-S-DN13	42,5	98	10	60	69	55	34	11	9	32	115	13	-	104	Zn	2,30
PK3-S-DN20	51	117	10	70	88	70	37,5	14	14	46	200	20	92	-	Zn	4,00
PK3-S-DN25	62	135	10	80	98	80	44,5	14	14	50	200	25	102	-	Zn	5,65
PK3-S-DN32	75	165	11	100	121	100	54,5	16,5	17	70	320	30	130	-	Al	11,00
PK3-S-DN40	84,5	200	17	130	131	110	57	16,5	17	80	320	38	140	-	Al	18,70
PK3-S-DN50	106	240	15	150	150	129	71	16,5	17	90	320	48	159	-	Al	28,80

Selector ball valve for manifold mounting Stainless Steel

PK3-S

CONNECTION



CONNECTION DIMENSIONS

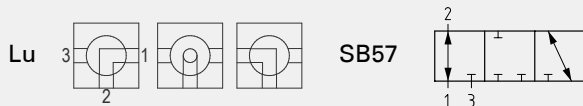
Type	l ₁	l ₂	l ₃	l ₄	l ₅	l ₆	b	d ₁	d ₂	h ₁	d ₃	d ₄	t	d ₅	Dimension of screws (min) ⁽¹⁾	Torque of screws in Nm ⁽¹⁾	O-ring	ORDER CODE PER MATERIAL COMBINATION		
																		PN [bar]	448A L=SB57	4488 L=SB57
PK3-S-DN6	8,5	35	-	8,5	35	17,5	27	6	11,8	1,9	6,5	10,5	6,8	-	4 x M6x40 - 12.9	14	7x2,5	250	38384	38385
PK3-S-DN10	12,5	55	-	15	44	19	40	9,5	14,9	1,9	8,4	13,5	8,5	-	4 x M8x50 - 12.9	35	10x2,5	500	29414	38386
PK3-S-DN13	7,5	83	41,5	16	58	26,5	45	13	24,9	1,9	8,4	13,5	8	-	6 x M8x60 - 12.9	35	20x2,5	400	31544	38387
PK3-S-DN20	10	97	48,5	20	69	31	51	20	28,3	2	10,5	16,5	10,5	-	6 x M10x80 - 12.9	70	23,47x2,62	315	38388	38389
PK3-S-DN25	10	115	57,5	24	81	38	60	25	34,9	2,3	10,5	16,5	10,5	-	6 x M10x90 - 12.9	70	29x3	315	38390	38391
PK3-S-DN32	12	136	68	29	96	46	78	32	39,3	2	13	19	12	-	6 x M12x110 - 12.9	110	34,59x2,62	420	58473	58474
PK3-S-DN40	28,5	112	56	28,5	112	56	95	38	47,7	2,3	16,5	25	19	36	6 x M16x120 - 12.9	300	42x3	420	38394	38395
PK3-S-DN50	38	136	68	38	136	68	112	48	59,8	2,3	21	31	21,5	-	6 x M20x140 - 12.9	600	54x3	420	38396	38397

⁽¹⁾ Fixing screws not included.

We recommend screws as per ISO4762 (DIN 912).

The indicated property classes and torques represent our recommended guidelines at a friction coefficient of 14%.

PORTING PATTERNS

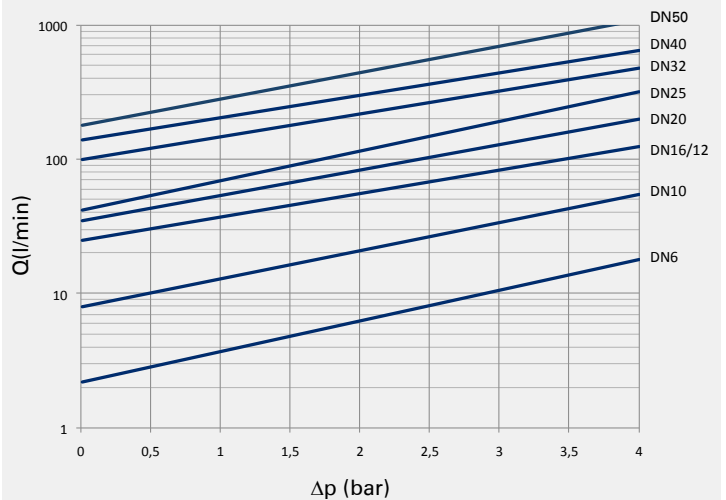


**Pressure inlet possible from all ports!
Must be operated only at ΔP=0bar!**

PK3-S with positive overlap
Operation 180°
L-bore

Further porting patterns
page 274 to 279

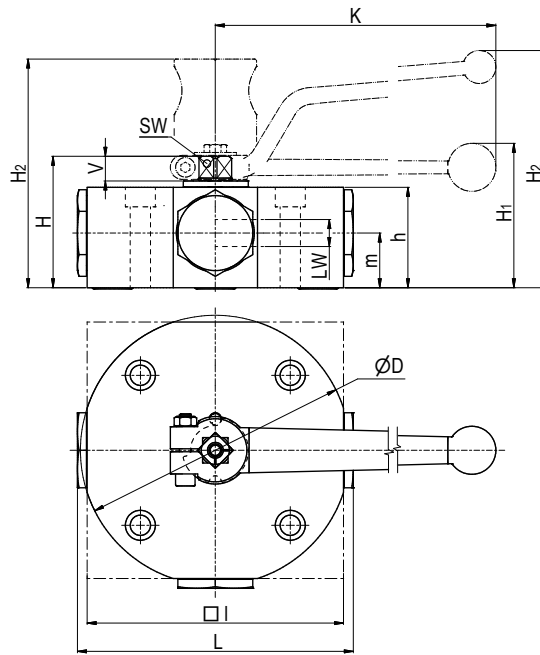
FLOW CHARACTERISTICS PK3-S



The flow values are measured with usage of hydraulic oil (spissitude 880 kg/m³) and the kinematic viscosity of 35 mm²/s.

Multiway ball valve for manifold mounting Steel

MPKH3



Manifold

AVAILABLE SIZES

DN6 - DN40 (1/4" to 1 1/2")

ACCESSORIES ON REQUEST



- Locking devices on request
- Actuators page 228 - 229
- Position switches on request

MATERIAL CODE DESCRIPTION



Materials	112A	112A	1128	1128
Body	Steel	Steel	Steel	Steel
Trunnion ball	Steel	Steel	Steel	Steel
Ball seats	POM	POM	POM	POM
O-rings	NBR	NBR	FPM	FPM
Tmin /Tmax	-20°C / 100°C	-20°C / 100°C	-20°C / 100°C	-20°C / 100°C
Porting pattern	L=SB01	T=SB02	L=SB01	T=SB02

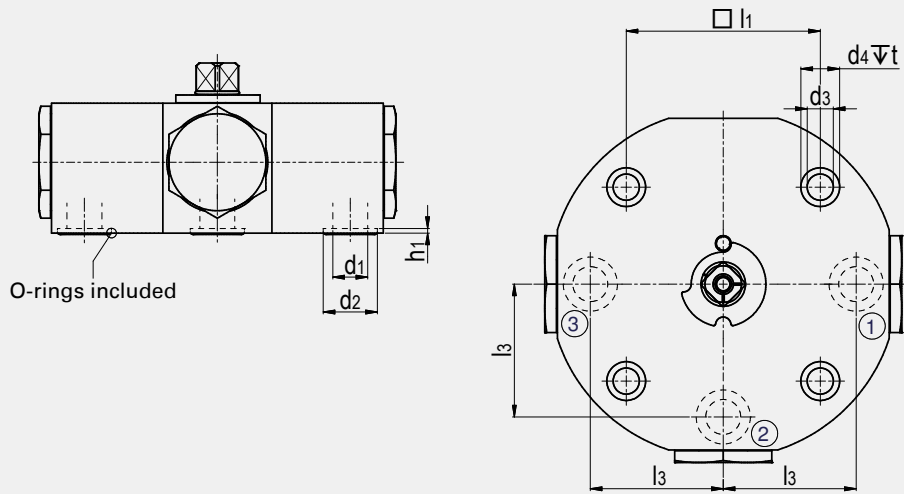
GENERAL DIMENSIONS



Type	LW _{LT}	I	L	D	H	h	m	V	SW	K	H ₁	H ₂	Lever	Weight [Kg]
MPKH3-DN6	5	90	102	-	58	40	22	13	12	160	-	101	Al	2,50
MPKH3-DN10	8	100	111	-	68	50	27	14	14	200	72	-	Zn	3,80
MPKH3-DN13	13	140	154	150	78	60	31	14	14	200	82	-	Zn	7,50
MPKH3-DN20	18	171	184	180	88	67	36,5	16,5	17	320	97	-	Al	12,50
MPKH3-DN25	23	205	225	215	96	75	40,5	16,5	17	320	106	-	Al	18,80
MPKH3-DN32	32	260	288	275	147	115	62	26	22	600	-	193	St ⁽¹⁾	49,60
MPKH3-DN40	38	301	332	315	156	125	65	25	22	600	-	204	St ⁽¹⁾	60,00

⁽¹⁾ Lever must be fixed centrally during operation. In case of vibration the lever may otherwise operate the valve by itself.

CONNECTION



CONNECTION DIMENSIONS

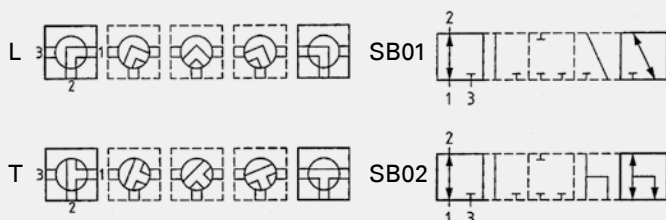
Type	l_1	l_3	d_1	d_2	h_1	O-ring	d_3	d_4	t	Dimension of screws (min)	Torque of screws in Nm
MPKH3-DN6	70	34,3	6	14	2	9x2,5	11	18	11	4 x M10 - 10.9	60
MPKH3-DN10	80	40,5	8	14,3	2	9,5x2,5	11	18	11	4 x M10 - 10.9	60
MPKH3-DN13	90	57,7	13	19,8	2	15x2,5	13,5	20	13	4 x M12 - 10.9	100
MPKH3-DN20	100	68,5	18	27,9	2,3	22x3	13,5	20	13	4 x M12 - 12.9	110
MPKH3-DN25	115	81	23	31,9	2,3	26x3	18	26	18	4 x M16 - 12.9	300
MPKH3-DN32	148,5	90	32	39,9	2,3	34x3	22	33	21,5	4 x M20 - 12.9	600
MPKH3-DN40	155,5	103	38	55,9	2,3	50x3	26	40	25,5	4 x M24 - 12.9	1000

ORDER CODE PER MATERIAL COMBINATION

PN [bar]	112A L=SB01	112A T=SB02	1128 L=SB01	1128 T=SB02
400	02342	31340	38458	38460
315	20302	20799	38459	38461
315	18160	38453	19044	38462
250	20305	38454	19045	38463
250	20307	38455	19048	38464
250	12632	38456	19049	38465
250	12633	38457	19076	38466

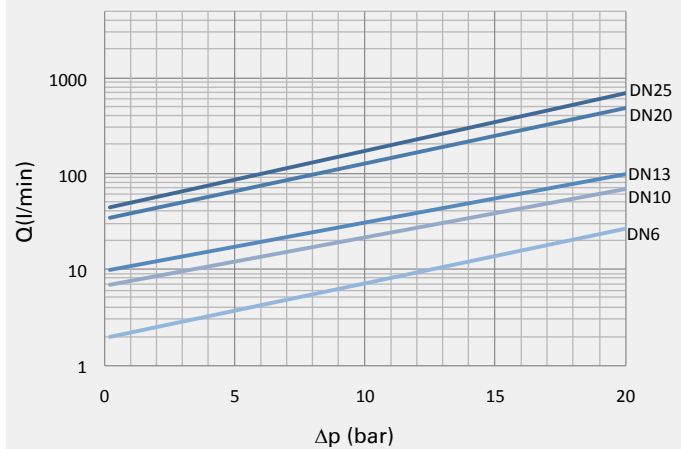
Due to material availability the material code of the steel valves may vary from 112A (or 1128). DN13-40=812A (or 8128). Material suitability for the application does not differ from 112A (or 1128).

PORTING PATTERNS



Further porting patterns page 274 to 279

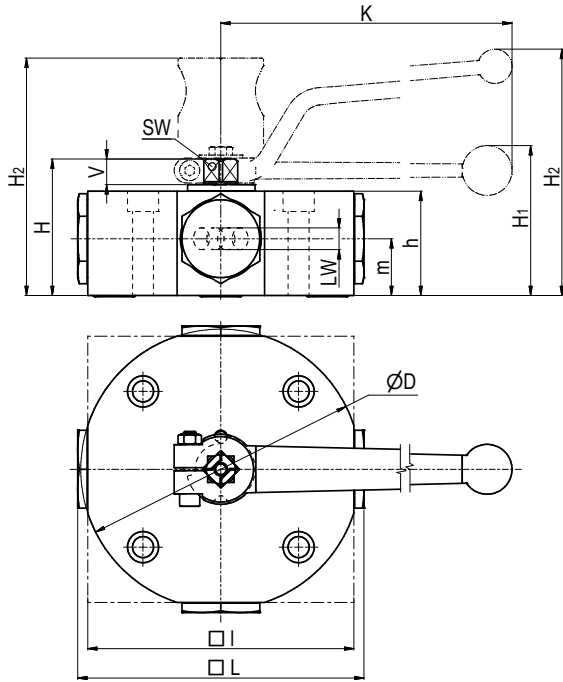
FLOW CHARACTERISTICS MPKH-L



The flow values are measured with usage of hydraulic oil (spissitude 880 kg/m³) and the kinematic viscosity of 35 mm²/s.

Multiway ball valve for manifold mounting Steel

MPKH4



Manifold

AVAILABLE SIZES

DN6 - DN40 (1/4" to 1 1/2")

ACCESSORIES ON REQUEST



- Locking devices on request
- Actuators page 228 - 229
- Position switches on request

MATERIAL CODE DESCRIPTION



Materials	112A	112A	1128	1128
Body	Steel	Steel	Steel	Steel
Trunnion ball	Steel	Steel	Steel	Steel
Ball seats	POM	POM	POM	POM
O-rings	NBR	NBR	FPM	FPM
Tmin /Tmax	-20°C / 100°C	-20°C / 100°C	-20°C / 100°C	-20°C / 100°C
Porting pattern	T=SB13	X=SB14	T=SB13	X=SB14

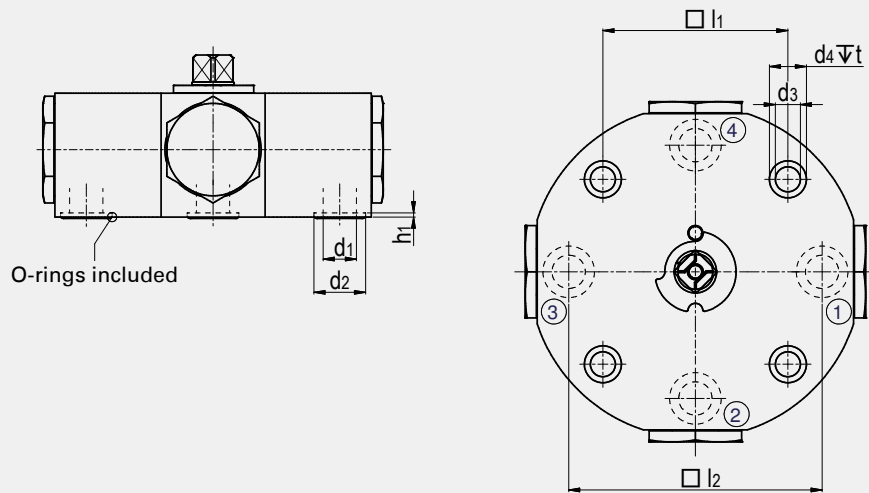
GENERAL DIMENSIONS



Type	LW _T	LW _x	I	L	D	H	h	m	V	SW	K	H ₁	H ₂	Lever	Weight [Kg]
MPKH4-DN6	5	4	90	102	-	58	40	22	13	12	160	-	101	Al	2,40
MPKH4-DN10	8	7	100	111	-	68	50	27	14	14	200	72	-	Zn	3,70
MPKH4-DN13	13	10	140	154	150	78	60	31	14	14	200	82	-	Zn	7,50
MPKH4-DN20	18	14	171	184	180	88	67	36,5	16,5	17	320	97	-	Al	12,00
MPKH4-DN25	23	17	205	225	215	96	75	40,5	16,5	17	320	106	-	Al	19,00
MPKH4-DN32	32	25	260	288	275	147	115	62	26	22	600	-	193	St ⁽¹⁾	56,60
MPKH4-DN40	38	32	301	332	315	156	125	65	25	22	600	-	204	St ⁽¹⁾	60,70

⁽¹⁾ Lever must be fixed centrally during operation. In case of vibration the lever may otherwise operate the valve by itself.

CONNECTION

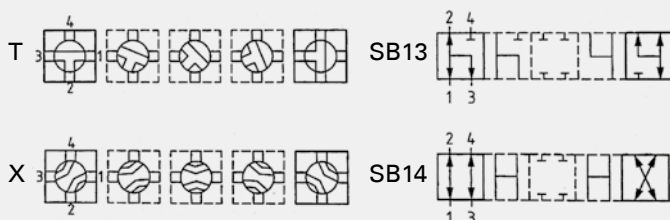


CONNECTION DIMENSIONS

Type	l ₁	l ₂	d ₁	d ₂	h ₁	O-ring	d ₃	d ₄	t	Dimension of screws (min)	Torque of screws in Nm	ORDER CODE PER MATERIAL COMBINATION				
												PN [bar]	112A T=SB13	112A X=SB14	1128 T=SB13	1128 X=SB14
MPKH4-DN6	70	68,6	6	14	2	9x2,5	11	18	11	4 x M10 - 10.9	60	400	30629	29141	38475	35624
MPKH4-DN10	80	81	8	14,3	2	9,5x2,5	11	18	11	4 x M10 - 10.9	60	315	38467	29140	38476	19172
MPKH4-DN13	90	115,4	13	19,8	2	15x2,5	13,5	20	13	4 x M12 - 10.9	100	315	22200	26983	38477	38482
MPKH4-DN20	100	137	18	27,9	2,3	22x3	13,5	20	13	4 x M12 - 12.9	110	250	38468	38471	38478	31163
MPKH4-DN25	115	162	23	31,9	2,3	26x3	18	26	18	4 x M16 - 12.9	300	250	11603	38472	38479	38483
MPKH4-DN32	148,5	180	32	39,9	2,3	34x3	22	33	21,5	4 x M20 - 12.9	600	250	38469	38473	38480	38484
MPKH4-DN40	155,5	206	38	55,9	2,3	50x3	26	40	25,5	4 x M24 - 12.9	1000	250	38470	38474	38481	38485

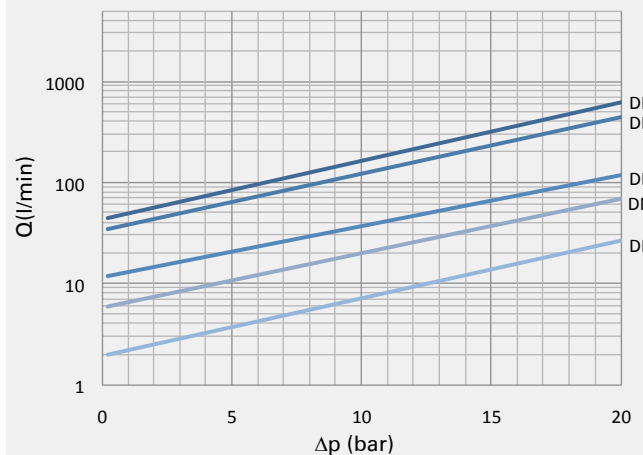
Due to material availability the material code of the steel valves may vary from 112A (or 1128). DN13-40=812A (or 8128). Material suitability for the application does not differ from 112A (or 1128).

PORTING PATTERNS



Further porting patterns page 274 to 279

FLOW CHARACTERISTICS MPKH-X/T



The flow values are measured with usage of hydraulic oil (spissitude 880 kg/m³) and the kinematic viscosity of 35 mm²/s.