




Shut-off and control technology



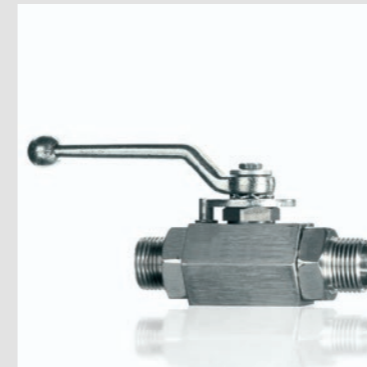
A line of ball valves and ideas



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2-way ball valves with test line connections (TK2)



Multi-way ball valves with floating ball for pressure gauges (TK4)



Directional ball valves for differential pressure transducers (TK5-TK7)

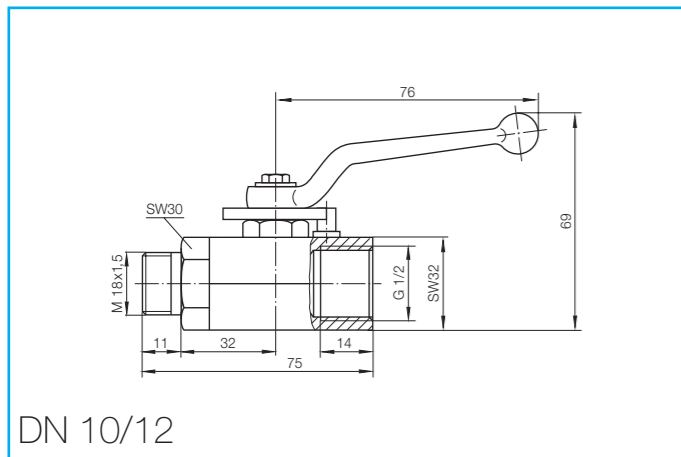


Test valves MBV 5000

Ball valves for instrumentation technology

2-way ball valves with test line connections (TK2)

Stainless steel · different connections



Stainless steel (1.4571 - or similar)
 Custom orders on request
 All dimensions subject to change without notice
 Dimensions in mm
 Pressure in bar

Body:	stainless steel
Ball:	stainless steel
Stem:	stainless steel
Ball seals:	PTFE
Stem seals:	PTFE

Type of connection

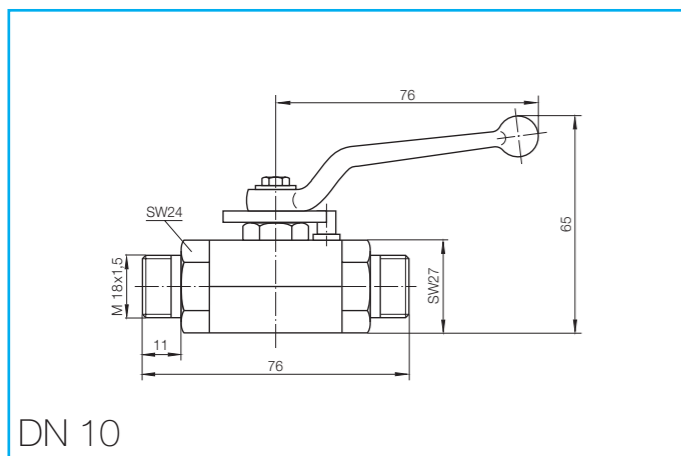
M 18 x 1,5	DIN 2353 light series ISO 8434-1 (with cut (clamp) ring and nut)
G 1/2	BSP female thread DIN EN ISO 228-1

Connections	PN	Article-No.
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M 18 x 1,5 / G 1/2	100	101 028
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2-way ball valves with test line connections (TK2)

Stainless steel · identical connections



Type of connection

M 18 x 1,5	DIN 2353 light series SO 8434-1 (with cut (clamp) ring and nut)
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Connections	PN	Article-No.
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M 18 x 1,5	100	101 030
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Ball valves for instrumentation technology

Multi-way ball-valves with floating ball for pressure gauges (TK4)

Technical information



3-way ball valve for connecting both a manometer and verification gauge

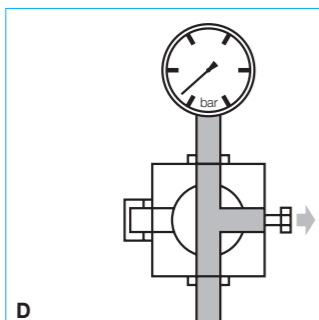
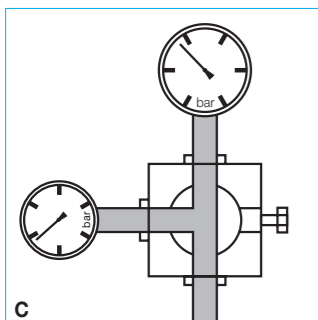
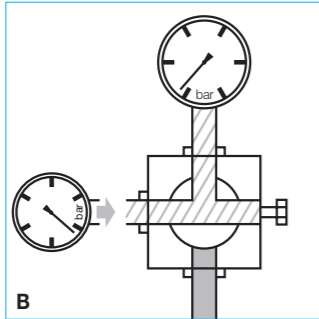
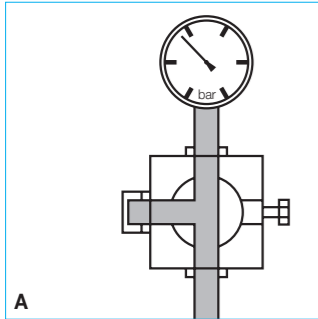


Advantages of the ball valve for the pressure gauge:

- highly visible operational position
- short cycle paths
- seats resistant to leakage over extended periods of time
- vibration-proof with DIN 16284 union nut (instead of coupling sleeve) used to mount the gauge
- no leakage in the normal operating position if the bleed screw is opened erroneously

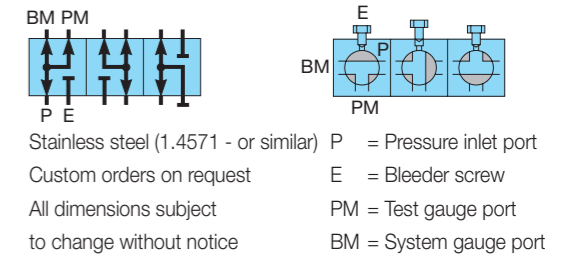
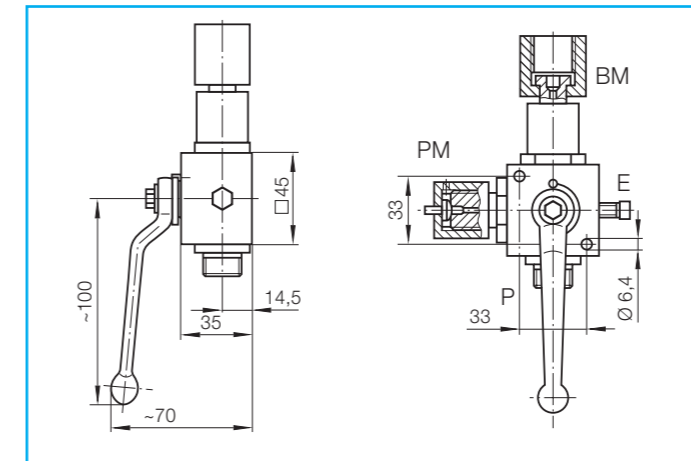
Operating functions:

- A Normal setting; system gauge is connected to the system
- B Bleeder position; system manometer can be checked for proper zeroing. A test gauge may be connected in addition.
- C Normal setting with test gauge connected.
- D Setting to vent the system and the pressure gauge to the atmosphere.



Multi-way ball-valves with floating ball for pressure gauges (TK4)

Stainless steel



Body:	stainless steel
Ball:	stainless steel
Stem:	stainless steel
Ball seals:	PTFE
Stem seals:	FKM

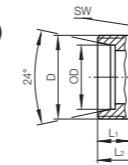
Connections

BM	PM	P
G 1/2	G 1/2	M 18 x 1,5
G 1/2	M 20 x 1,5	M 18 x 1,5
G 1/2	G 1/2	G 1/2
G 1/2	M 20 x 1,5	G 1/2

PN	Article-No.
100	101 072
100	101 074
100	101 076
100	101 078

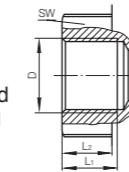
Connection

P
 For cut (clamp)
 ring tube
 fittings
 DIN 2353
 light series
 ISO 8434-1



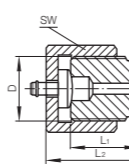
Thread D	OD	L1	L2	SW
M 18 x 1,5	12	11	15	24

P or PM
 BSP-female thread
 DIN EN ISO 228-1



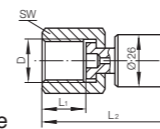
G 1/2	-	15	21	27
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PM
 Thread connection
 nipple with
 coupling sleeve
 meeting,
 DIN 16287-C



M 20 x 1,5	-	22	35	24
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BM
 Adapter with
 DIN 16284
 swivel nut
 connector
 nipple and
 spindle, for
 pressure gauge
 mounting
 bracket as per
 DIN 16271-B
 meter bracket
 DIN 16281



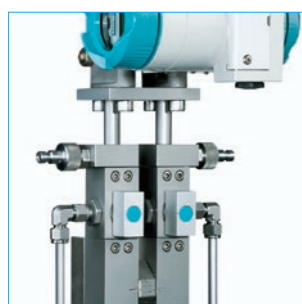
G 1/2	-	19	66	27
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Ball valves for instrumentation technology

Directional ball valves for differential pressure transducers (TK5 - TK7)

Technical information



Directional ball-valve for pressure differential measurement transducer with staple-lock connectors

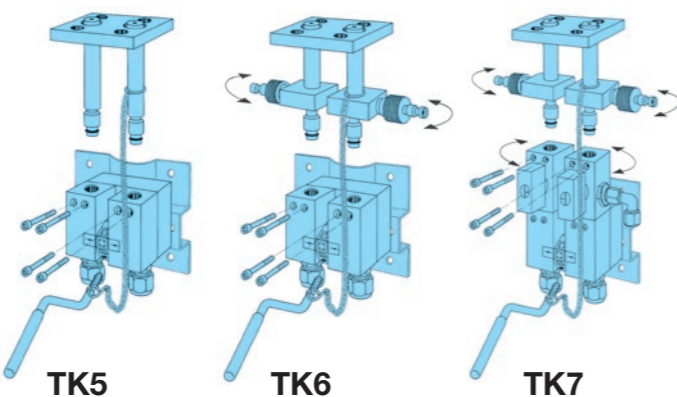


Modular design:

Directional ball valves with their modular system and staple-lock fittings offer great flexibility and trouble-free assembly. The advantages of these devices are tight seating, short actuation arcs, long service life and simple operation. All the ball valve switching functions - operational position, blocked position and zero-point test - are set with just a single operating lever.

Logical and clear schematic diagram symbols make it easy to identify the switching positions.

The TK5 basic unit comprises the divert unit and the connection flange to accept the measurement transducer. The TK6 features additional test connections and the TK7 has not only the test connections but additional blow-out ball valves.



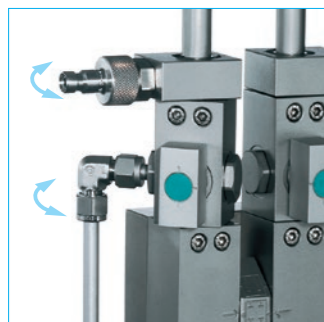
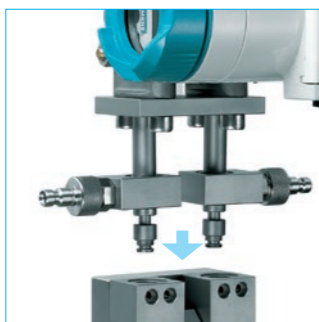
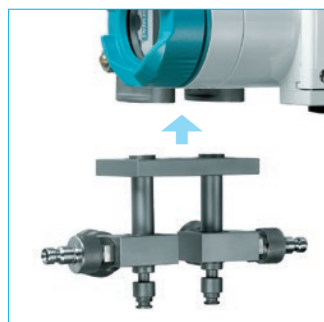
Installation is completed

The pressure gauge is first attached to the connector flange with just four screws. Then this preassembled unit slips into the ball valve body. This staple-lock joint not only saves time but is a real boon in tight spaces.

The connection flange and test connection form a unit in the TK6 and TK7 versions. The test connections are swivel-mounted, simple to use and designed for easy access. The TK7 ball valve features in addition a swivel-mounted blowout line for each of the process pressure lines.

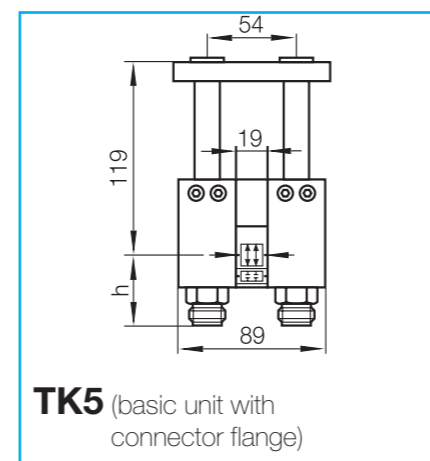
The sturdy bracket is used to mount the directional ball valve - either on a wall or on a pipe. This makes it possible to detach the gauge itself with the fitting remaining in the pipe circuit.

The valve unit is put in the "operational" position to prepare for cleaning; here the bores are aligned, giving clear passage all the way through the unit.

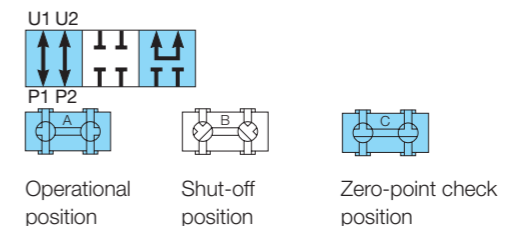


Directional ball valves for differential pressure transducers (TK5 - TK7)

Stainless steel



TK5 (basic unit with connector flange)

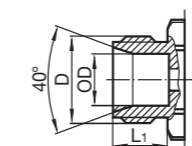


Stainless steel (material no. 1.4571 - or other stainless steels)
 Custom orders on request
 All dimensions subject to change without notice
 Dimensions in mm
 Pressure in bar

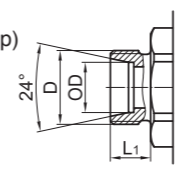
Body:	stainless steel	stainless steel
Ball:	stainless steel	stainless steel
Stem:	stainless steel	stainless steel
Ball seals:	PTFE	PTFE
Stem seals:	FKM	FKM

Connection P1/P2

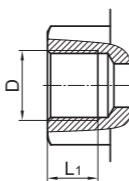
Swagelok pipe fitting



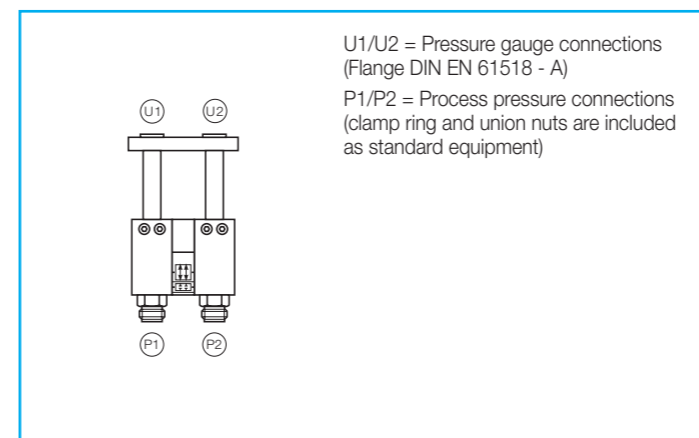
For cut (clamp) ring tube fittings DIN 2353 light series ISO 8434-1



BSP-female thread DIN EN ISO 228-1



Thread D	OD	L1	h	PN	Article-No.	For oxygen PN	Article-No.
3/4 - 20 UNEF	12	12	58	100	101 234	40	101 235
M 18 x 1,5	12	11	37	100	101 236	40	101 237
G 1/4	-	12	37	100	101 242	40	101 243



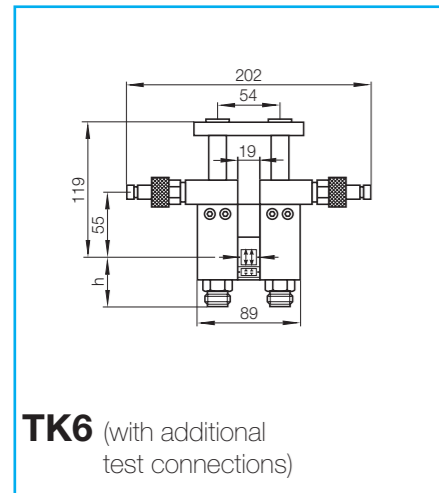
U1/U2 = Pressure gauge connections (Flange DIN EN 61518 - A)
 P1/P2 = Process pressure connections (clamp ring and union nuts are included as standard equipment)



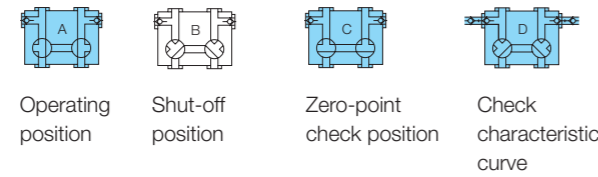
Ball valves for instrumentation technology

Directional ball valves for differential pressure transducers (TK5 - TK7)

Stainless steel



TK6 (with additional test connections)

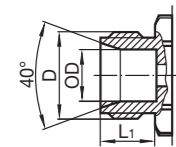


Stainless steel (material no. 1.4571 - or other stainless steels)
 Custom orders on request
 All dimensions subject to change without notice
 Dimensions in mm

Pressure	in bar	Body:	stainless steel	stainless steel
		Ball:	stainless steel	stainless steel
		Stem:	stainless steel	stainless steel
		Ball seals:	PTFE	PTFE
		Stem seals:	FKM	FKM

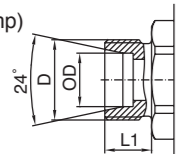
Connection P1/P2

Swagelok pipe fitting

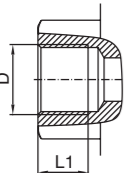


Connection P1/P2	Thread D	OD	L1	h	PN		For oxygen PN	
					Article-No.	Article-No.	Article-No.	Article-No.
Swagelok pipe fitting	3/4 - 20 UNEF	12	12	58	100	101 228	40	101 229
For cut (clamp) ring tube fittings DIN 2353 light series ISO 8434-1	M 18 x 1,5	12	11	37	100	101 238	40	101 239
BSP-female thread DIN EN ISO 228-1	G 1/4	-	12	37	100	101 244	40	101 245

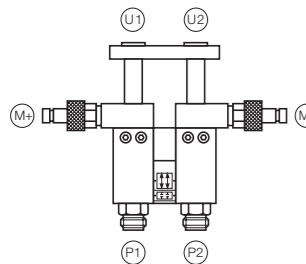
For cut (clamp) ring tube fittings DIN 2353 light series ISO 8434-1



BSP-female thread DIN EN ISO 228-1

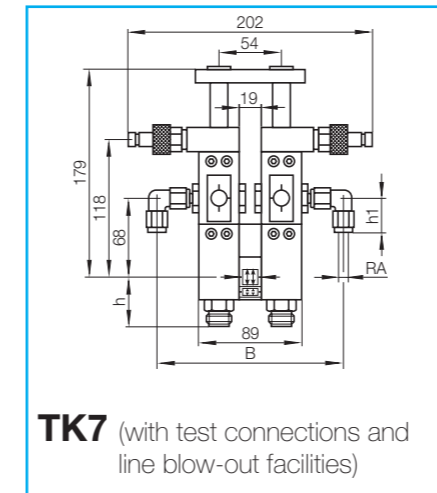


U1/U2 = Pressure gauge connections (Flange DIN EN 61518 - A)
 P1/P2 = Process pressure connections (clamp ring and union nuts are included as standard equipment)
 M+/M- = Test connections (closure nipple quick connection coupling)

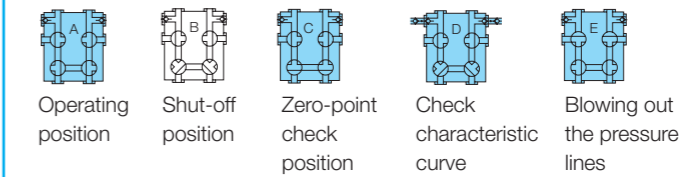
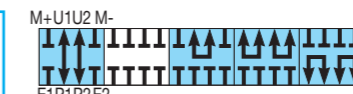


Directional ball valves for differential pressure transducers (TK5 - TK7)

Stainless steel



TK7 (with test connections and line blow-out facilities)

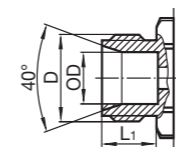


Stainless steel (material no. 1.4571 - or other stainless steels)
 Custom orders on request
 All dimensions subject to change without notice
 Dimensions in mm

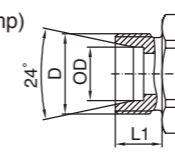
Pressure	in bar	Body:	stainless steel	stainless steel
		Ball:	stainless steel	stainless steel
		Stem:	stainless steel	stainless steel
		Ball seals:	PTFE	PTFE
		Stem seals:	FKM	FKM

Connection P1/P2

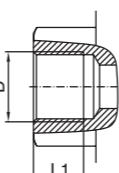
Swagelok pipe fitting



For cut (clamp) ring tube fittings DIN 2353 light series ISO 8434-1

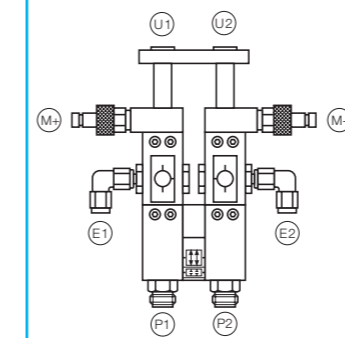


BSP-female thread DIN EN ISO 228-1

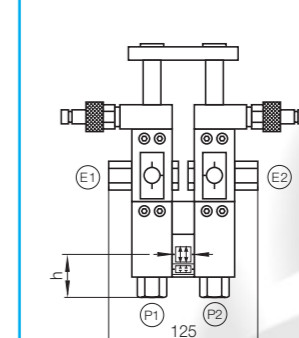


Connection P1/P2	Thread D	OD P1/P2	OD E1/E2	L1	h	h1	B	PN		For oxygen PN	
								Article-No.	Article-No.	Article-No.	Article-No.
Swagelok pipe fitting	3/4 - 20 UNEF	12	8	12	58	29	161	100	101 232	40	101 233
For cut (clamp) ring tube fittings DIN 2353 light series ISO 8434-1	M 18 x 1,5	12	8	11	37	29	164	100	101 240	40	101 241
BSP-female thread DIN EN ISO 228-1	G 1/4	-	-	12	37	-	-	100	101 246	40	101 247

U1/U2 = Pressure gauge connections (Flange DIN EN 61518 - A)
 P1/P2 = Process pressure connections (clamp ring and union nuts are included as standard equipment)
 M+/M- = Test connections (closure nipple quick connection coupling)
 E1/E2 = Blow-out connections (clamp ring and union nuts are included as standard equipment)

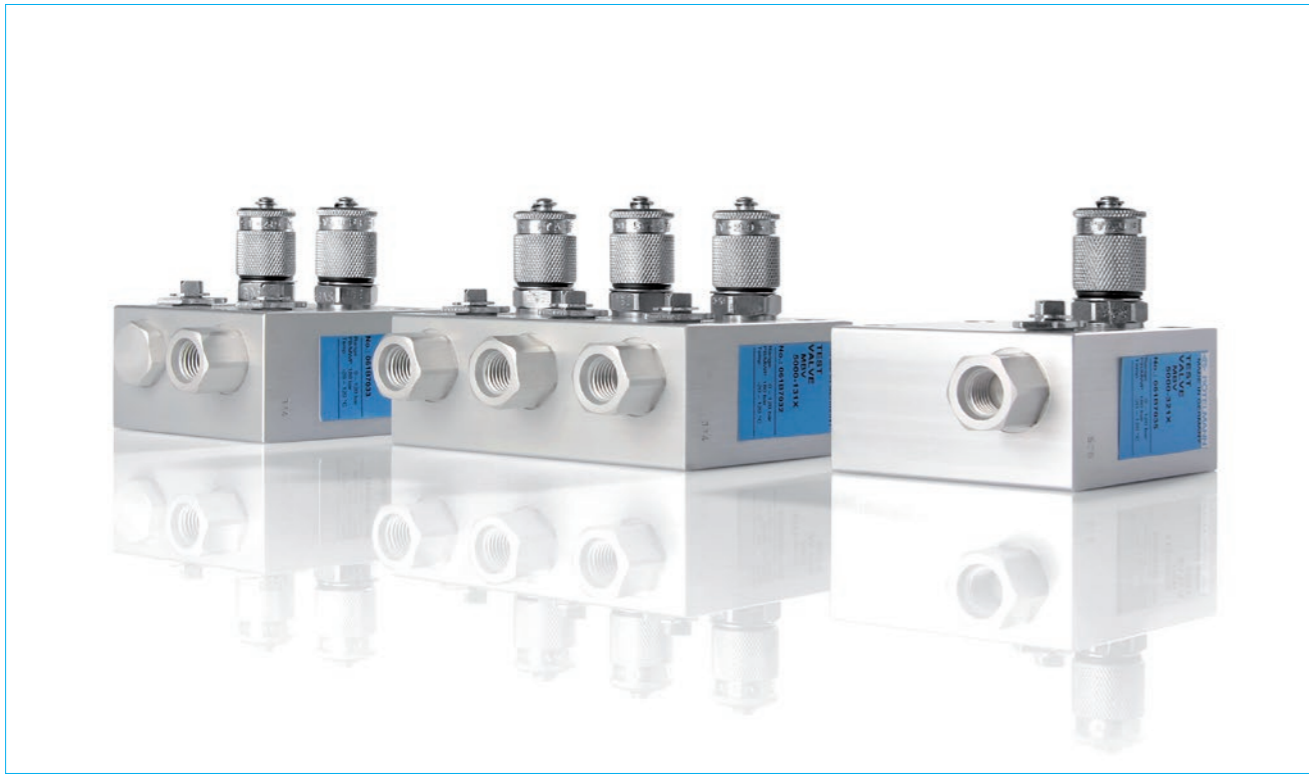


Design with BSP-female thread DIN EN ISO 228-1 at connections P1/P2 and E1/E2
 Elbows not available for connections E1/E2



Ball valves for instrumentation technology

Test valves MBV 5000



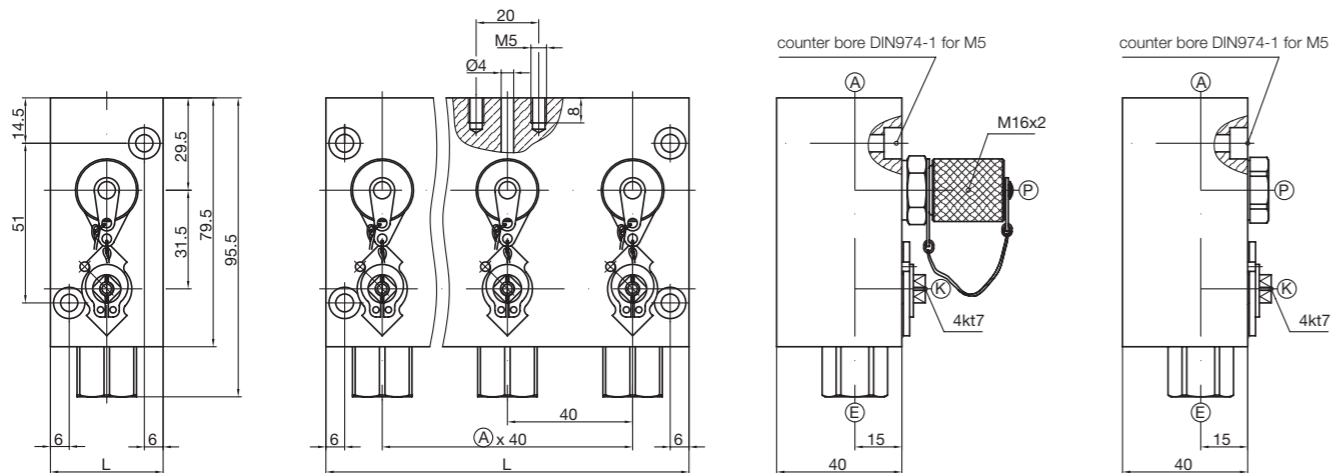
MBV 5000 is a block valve for applications mainly in maritime industrie, that has been designed in many different configurations.

Advantages:

- compact design
- light materials
- many configuration possibilities
- low installation costs
- fast and easy to operate

The valve meets the demands of fast installation, simple operation, easy connection to the test pressure as well as time-saving assembly. The block concept was developed to save space and weight and to reduce costs at the same time. The products are used in supervision, shut-down and diagnosis of engines, gear boxes, control elements, pumps, filters, compressors, and so on.

The concept is meeting the strict demands to maritime products and is according EU-directives.



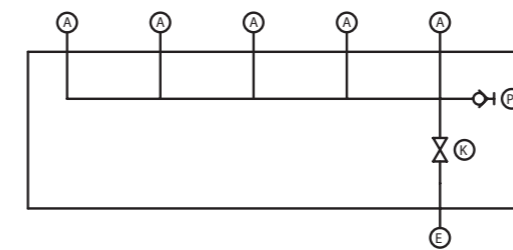
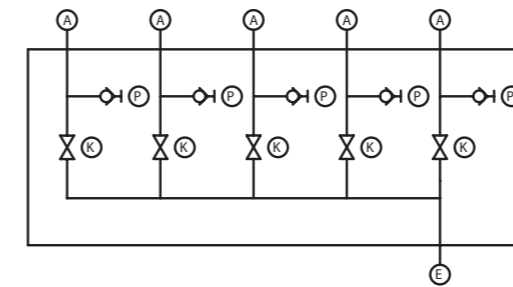
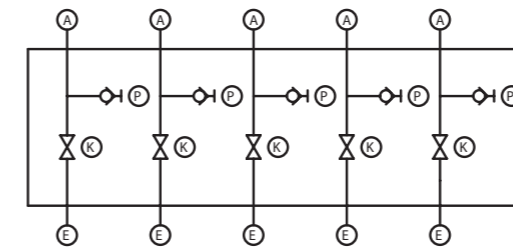
All dimensions subject to change without notice

Dimensions in mm

Weight in kg

Pressure in bar

Burst pressure:	250 bar
Operating pressure:	up to 120 bar
Operating temperature:	-20°C to 120°C
Ambient temperature:	-20°C to 120°C
Medium temperature:	-20°C to 120°C
Body:	aluminium
Connector:	aluminium
Ball:	1.4571
Sealing:	PEEK-FKM
Pressure connection:	inlet: G 1/4 outlet: flange - M5/8



Type	No. of outlets	Weight	L	Type-No.	Article-No.
1	1x	0,4	36	MBV5000-1111MK	206 201
				MBV5000-1101VS	206 202
1	2x	0,8	76	MBV5000-1211MK	206 203
				MBV5000-1201VS	206 204
1	3x	1,2	116	MBV5000-1311MK	206 205
				MBV5000-1301VS	206 206
1	4x	1,6	156	MBV5000-1411MK	206 207
				MBV5000-1401VS	206 208
1	5x	2,0	196	MBV5000-1511MK	206 209
				MBV5000-1501VS	206 210
2	2x	0,8	76	MBV5000-2211MK	206 211
				MBV5000-2201VS	206 212
2	3x	1,2	116	MBV5000-2311MK	206 213
				MBV5000-2301VS	206 214
2	4x	1,6	156	MBV5000-2411MK	206 215
				MBV5000-2401VS	206 216
2	5x	2,0	196	MBV5000-2511MK	206 217
				MBV5000-2501VS	206 218
3	2x	0,7	76	MBV5000-3211MK	206 219
				MBV5000-3201VS	206 220
3	3x	1,0	116	MBV5000-3311MK	206 221
				MBV5000-2301VS	206 222
3	4x	1,3	156	MBV5000-3411MK	206 223
				MBV5000-3401VS	206 224
3	5x	1,6	196	MBV5000-3511MK	206 225
				MBV5000-3501VS	206 226

MK= with test point, VS= with screw plug