RÖTELMANN

Shut-off and control technology

A line of **ball valves and ideas**

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Product overview

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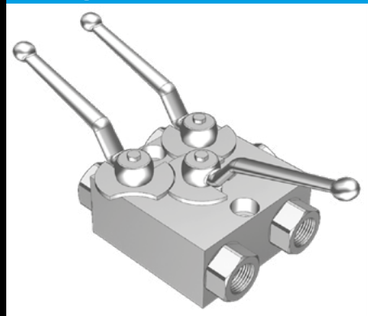
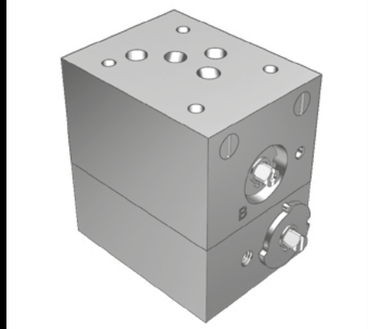
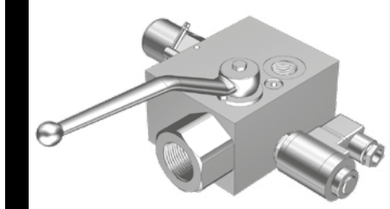


Sandwich plates

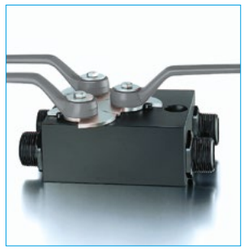


Accumulator safety blocks

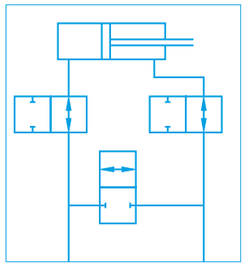


Ball valve function systems

Shut-off blocks · technical information



Shut-off blocks with integrated bypass and safety-lock

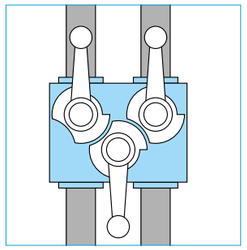


Application/function:

For liquid and oily media as per the compatibility table in the technical data appendix; for insertion upline of actuator cylinders with the capability to both block the cylinder feed lines and to short-circuit them.

The previous situation:

Installation of seperate ball valves in the piping system. Here a total of twelve pipe joints must be provided. using two tees. This is labor intensive and thus expensive. In addition. the hazard of leaks rises with the number of joints.



Our solution for the problem:

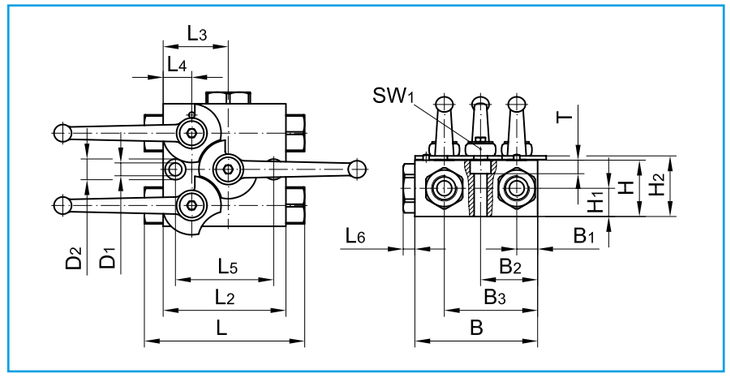
Combining the three shut-off functions with a single block by incorporating three ball valve assemblies. Only four pipe connections need to be made. A certain sequence in operation is achieved by cam inter-locks on the ball valves:

1. block the rod end
2. open the bypass
3. block the piston end

Advantages:

- clear design and user-friendly arrangement
- quick assembly with a reduced number of pipe connections
- reduced hazard of leaks
- mutual interlocks for the valves give a specific operating sequence and prevent any pressure intensification in the rod end of the cylinder
- switches can be attached

Shut-off blocks · steel · DN 10 - DN 25

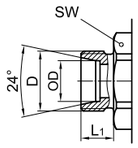


Handle included in delivery
For handles refer to "Attachments, accessories"
Please check pressure ratings of pipe fittings!
Also available with most other connections
Custom orders on request
All dimensions subject to change without notice
Dimensions in mm | Weight in kg | Pressure in bar

Body:	steel, black oxide
Ball:	steel, hard chrome plated
Stem:	steel, zinc nickel plated
Ball seals:	POM
Stem seals:	NBR

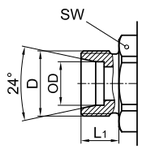
Connection

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



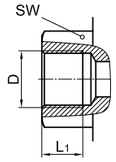
DN	Thread D	OD	L	L_1	L_2	L_3	L_4	L_5	L_6	B	B_1	B_2	B_3	H	H_1	H_2	D_1	D_2	T	SW	SW_1	Handle code	Weight	PN	Article no.
10	M 18 x 1.5	12	120	11	90	51.0	22.8	60	6.5	90	20.7	45.7	70.7	40	19.5	43.5	8.4	15	9	24	8	13	1.9	500	250001
12	M 22 x 1.5	15	132	12	100	53.0	23.5	80	9.5	100	17.0	46.5	76.0	46	23.0	49.5	10.5	17	11	30	10	14	3.2	500	250002
20	M 30 x 2	22	149	14	110	66.5	29.0	90	12.0	125	23.0	60.0	97.0	62	31.0	68.5	10.5	17	11	41	14	15	5.5	400	250004
25	M 36 x 2	28	173	14	135	76.6	32.6	115	6.5	147	27.8	71.8	115.8	68	34.0	74.5	10.5	17	11	50	14	15	8.3	400	250005

For cut (clamp) ring tube fitting DIN 2353 heavy series ISO 8434-1



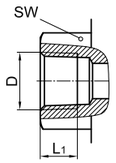
10	M 22 x 1.5	14	126	14	90	51.0	22.8	60	6.5	90	20.7	45.7	70.7	40	19.5	43.5	8.4	15	9	24	8	13	1.9	500	250006
12	M 24 x 1.5	16	136	14	100	53.0	23.5	80	9.5	100	17.0	46.5	76.0	46	23.0	49.5	10.5	17	11	30	10	14	3.2	500	250007
20	M 36 x 2	25	157	18	110	66.5	29.0	90	12.0	125	23.0	60.0	97.0	62	31.0	68.5	10.5	17	11	41	14	15	5.5	400	250009
25	M 42 x 2	30	185	20	135	76.6	32.6	115	6.5	147	27.8	71.8	115.8	68	34.0	74.5	10.5	17	11	50	14	15	8.3	400	250010

BSP-female thread DIN EN ISO 228-1



10	G 3/8	-	118	14	90	51.0	22.8	60	6.5	90	20.7	45.7	70.7	40	19.5	43.5	8.4	15	9	24	8	13	1.9	500	250011
12	G 1/2	-	131	15	100	53.0	23.5	80	9.5	100	17.0	46.5	76.0	46	23.0	49.5	10.5	17	11	30	10	14	3.2	500	250012
20	G 3/4	-	143	18	110	66.5	29.0	90	12.0	125	23.0	60.0	97.0	62	31.0	68.5	10.5	17	11	41	14	15	5.5	400	250014
25	G 1	-	178	18	135	76.6	32.6	115	6.5	147	27.8	71.8	115.8	68	34.0	74.5	10.5	17	11	50	14	15	8.3	400	250015

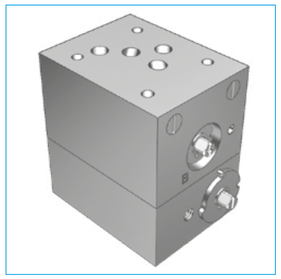
NPT-female thread ANSI/ASME B1.20.1-1983



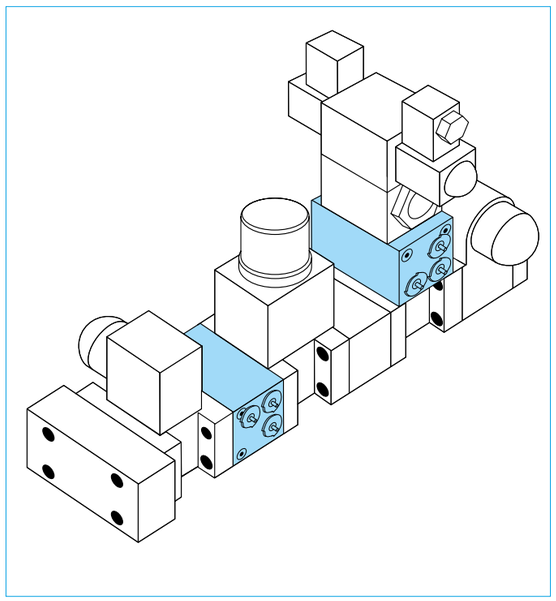
10	3/8 - 18 NPT	-	118	10.3	90	51.0	22.8	60	6.5	90	20.7	45.7	70.7	40	19.5	43.5	8.4	15	9	24	8	13	1.9	500	250016
12	1/2 - 14 NPT	-	131	13.6	100	53.0	23.5	80	9.5	100	17.0	46.5	76.0	46	23.0	49.5	10.5	17	11	30	10	14	3.2	500	250017
20	3/4 - 14 NPT	-	143	14.1	110	66.5	29.0	90	12.0	125	23.0	60.0	97.0	62	31.0	68.5	10.5	17	11	41	14	15	5.5	400	250018
25	1 - 11½ NPT	-	178	16.8	135	76.6	32.6	115	6.5	147	27.8	71.8	115.8	68	34.0	74.5	10.5	17	11	50	14	15	8.3	400	250019

Ball valve function systems

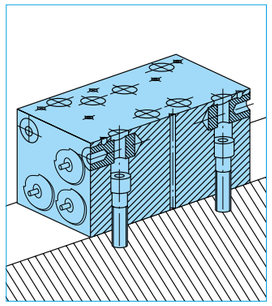
Sandwich plates · technical information



Shut-off plates and sandwich elements for interconnected systems



Operation setting:
Sandwich plate with the solenoid valve mounted valve on top



Repair setting:
Passages inside the sandwich plate shut-off; plate remains bolted to the hydraulic control block. Solenoid valve removed.

The previous situation:
The large number of control elements means large systems susceptible to malfunctions. If, for example a solenoid valve at the central hydraulic system for an aluminum rolling mill failed, the controlled component would have to be operated manually or production would have to be suspended to change the valve.

This replacement makes it necessary to depressurize the system, to prop up external loads which cylinders are supporting and to drain the fluid from the riser lines to the cylinder. Once the solenoid valve has been changed, the lines will have to be refilled and bled.

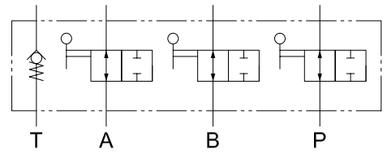
Our solution for the problem:
With the use of our sandwich-plate, which is bolted seperately to the control block, all the channels through the plate can be blocked and the directional-control valve can be replaced without having to depressurize or drain lines and without affecting the other control units on the same block. All channels are open during normal operation. The operating handle can be removed to prevent unauthorized actuation.

Advantages:
- full bore design causes no pressure drop
- significant reduction in hydraulic system downtime
- no need to drain fluid, bleed air or refill the system
- simplified start-up and maintainance due to the ease of changing flushing plates and directional valves
- pressure can be maintained in cylinders so that the support loads do not need to be shored up
- standard mounting and porting patterns allow retrofit without rework
- proprietary design increases safety by utilizing separate mechanically isolated bolts for mounting the sandwich-plate and directional valve; removing the directional valve cannot accidently loosen the sandwich-plate

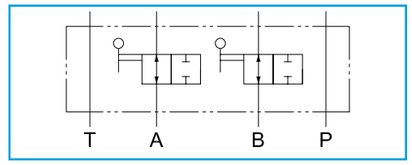
Applications:
For liquid media as per the compability table in the technical data appendix

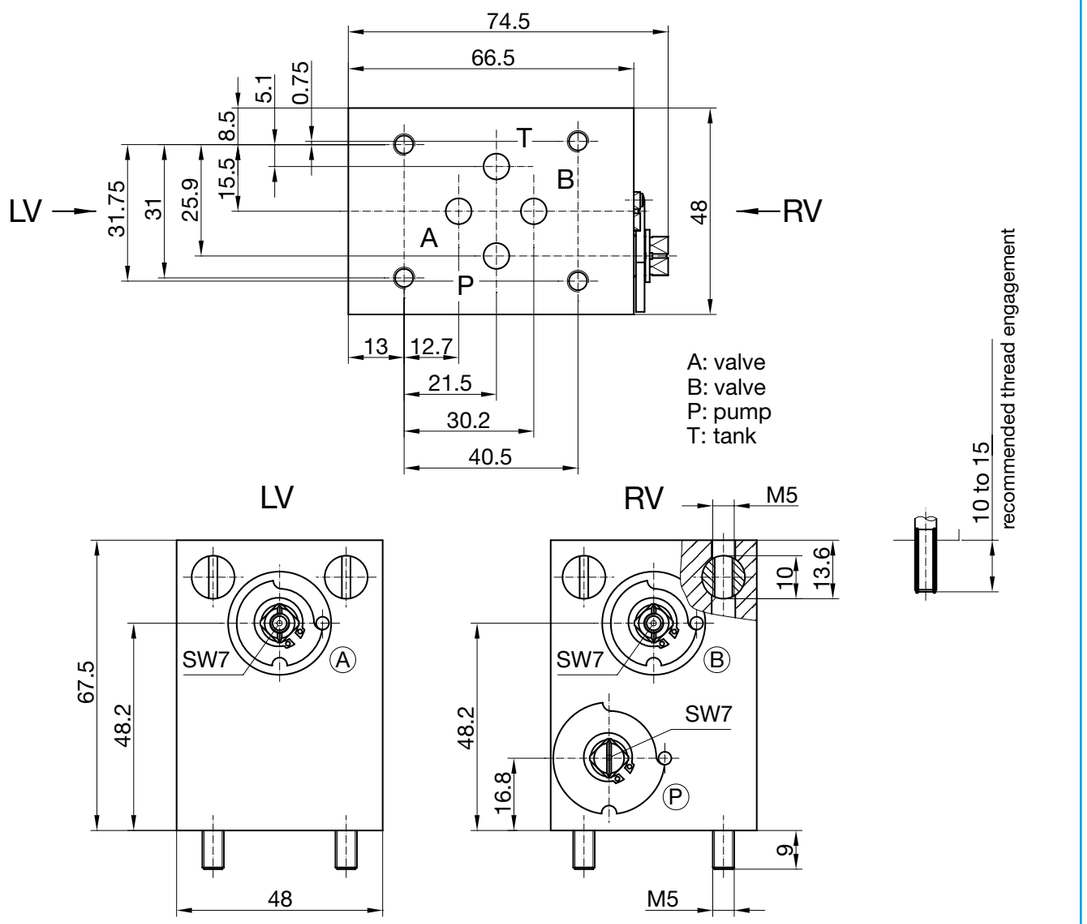
On request:
Limit switch, proximity switch, locking devices; also available in other materials and combinations

Sandwich plates · NG 6 · PN 315



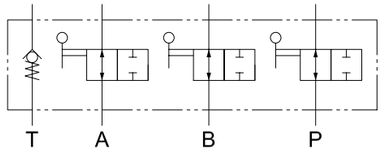
Article no. 208030
Steel/POM-NBR
Weight: 1.55 kg
Opening pressure of check valve: approx. 0.3 bar
Drilling pattern to DIN 24340-A6 and ISO 4401-03-02-0-05
Custom orders on request
All dimensions subject to change without notice
Also available with blocking in A and B only
Dimension sheet on request, locking device retrofittable



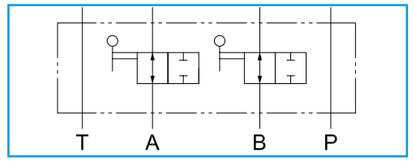


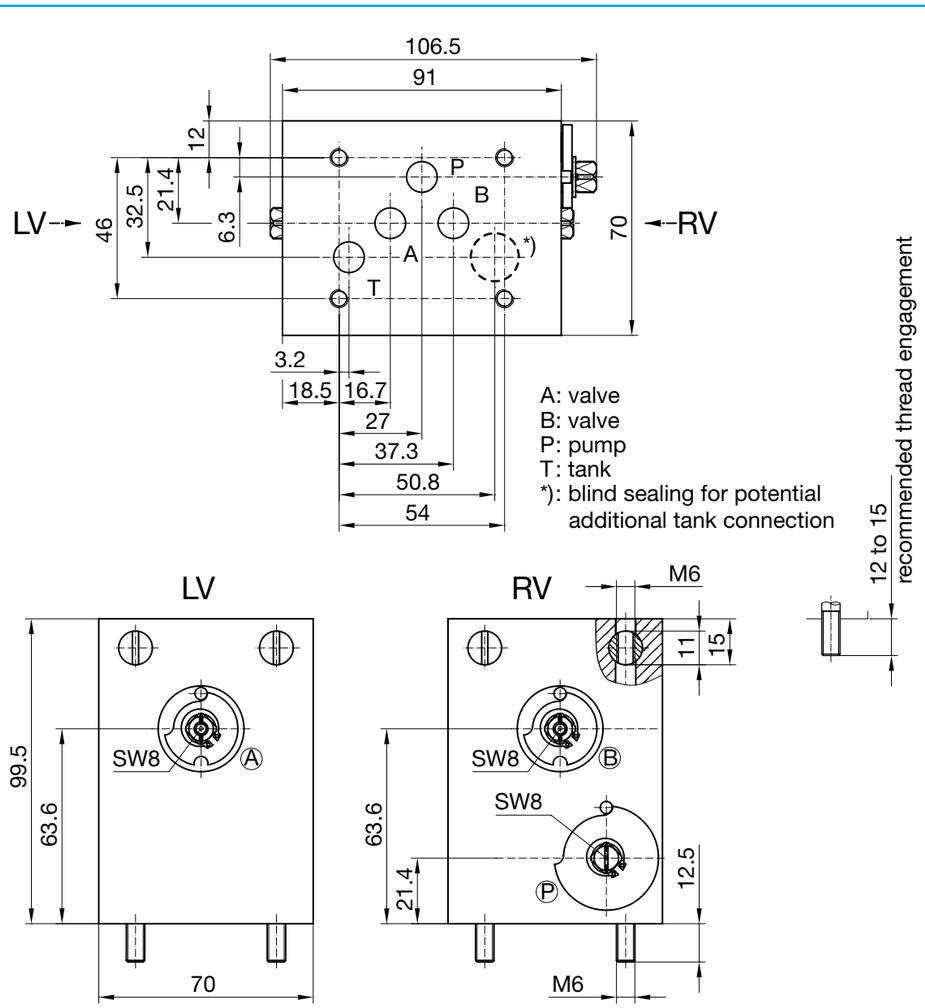
Ball valve function systems

Sandwich plates · NG 10 · PN 315

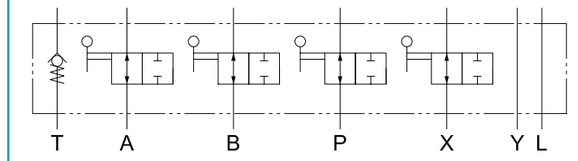


Article no. 208032
Steel/POM-NBR
Weight: 4.45 kg
Opening pressure of check valve: approx. 0.3 bar
Drilling pattern to DIN 24340-A10 and
ISO 4401-05-04-0-05
Custom orders on request
All dimensions subject to change without notice
Also available with blocking in A and B only
Dimension sheet on request, locking device retrofittable

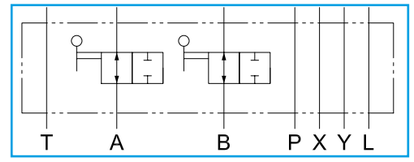


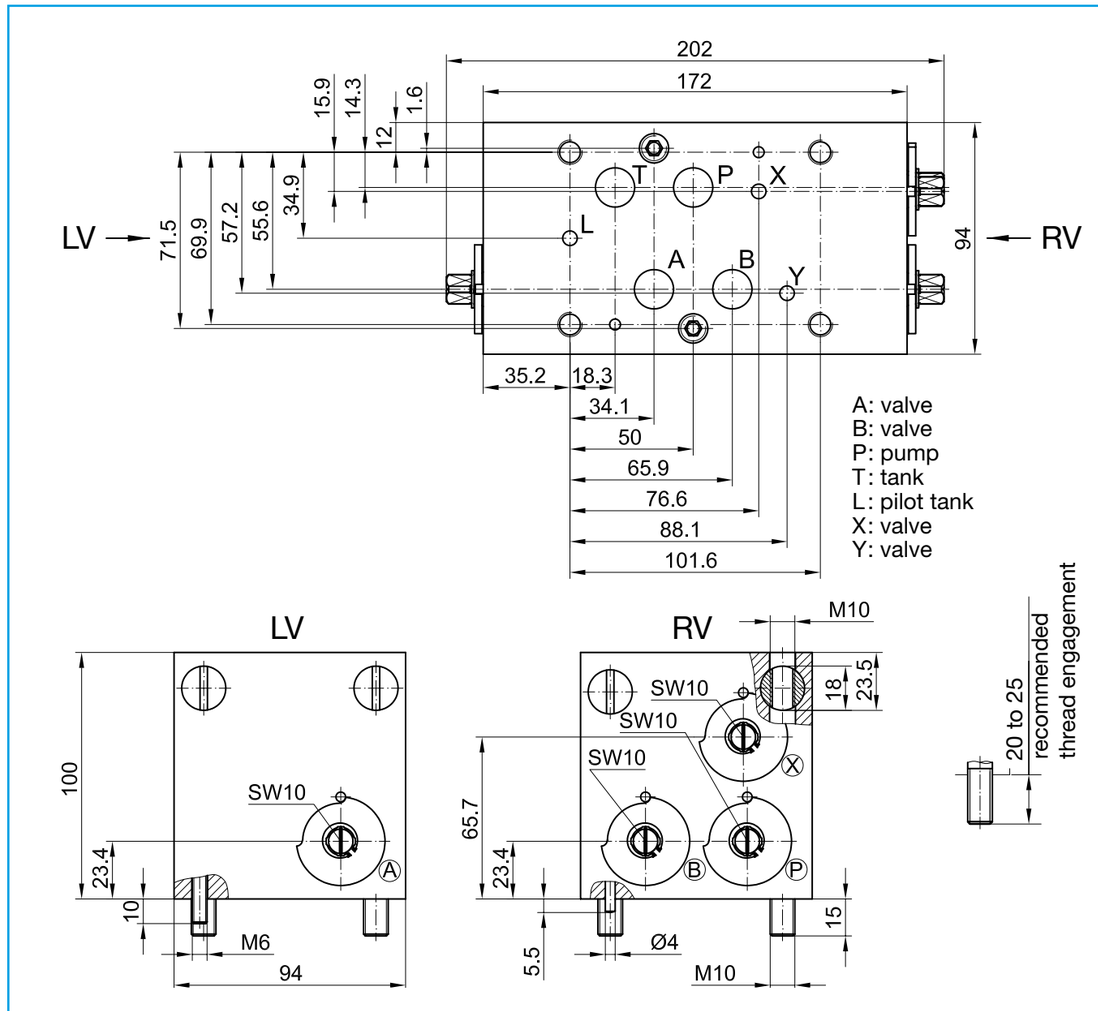


Sandwich plates · NG 16 · PN 315



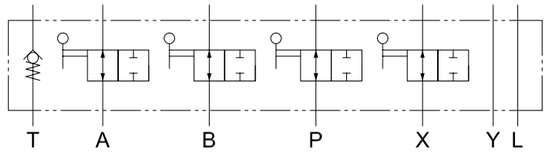
Article no. 208034
Steel/POM-NBR
Weight: 11.7 kg
Opening pressure of check valve: approx. 0.3 bar
Drilling pattern to DIN 24340-A16 and
ISO 4401-07-06-0-05
Custom orders on request
All dimensions subject to change without notice
Also available with blocking in A and B only
Dimension sheet on request, locking device retrofittable



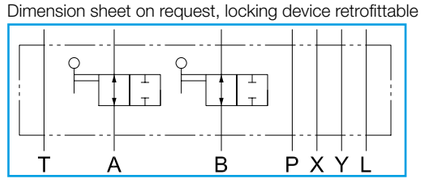


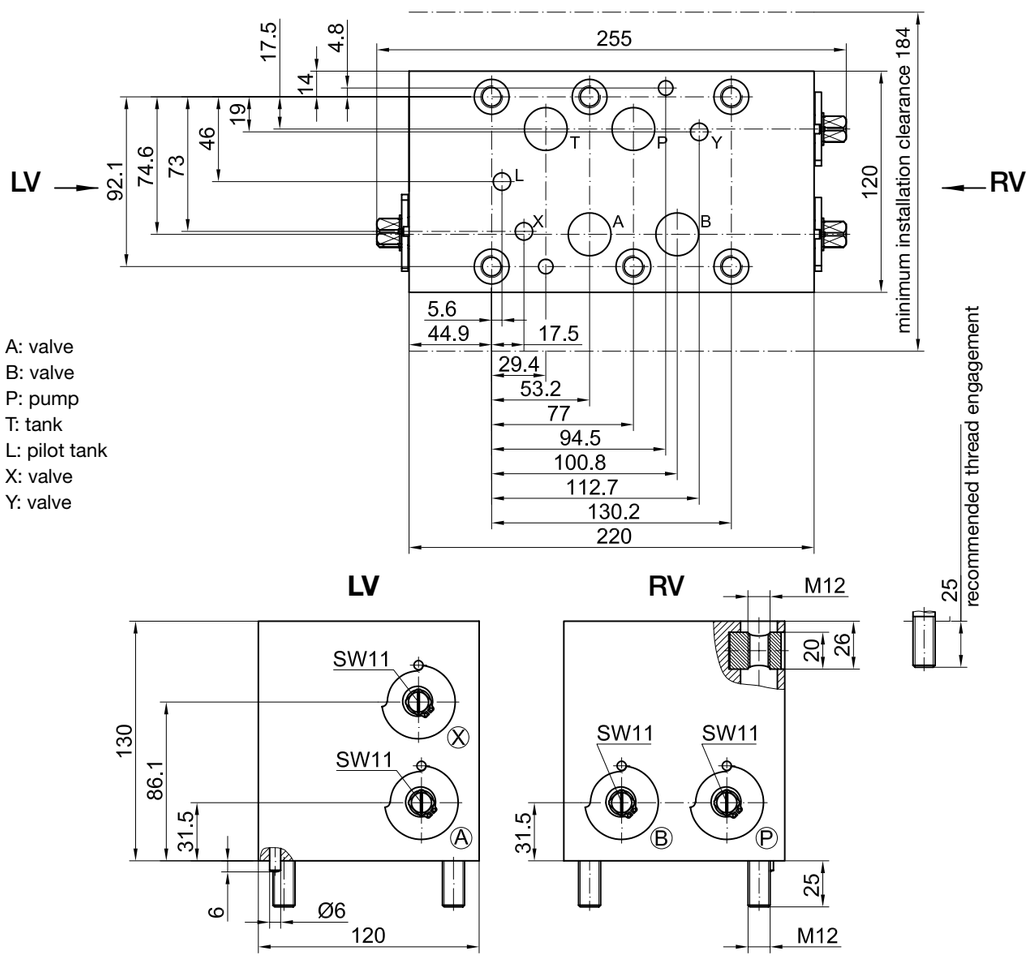
Ball valve function systems

Sandwich plates · NG 25 · PN 315

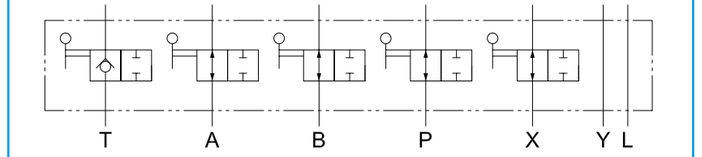


Article no. 208036
Steel/POM-NBR
Weight: 25.4 kg
Opening pressure of check valve: approx. 0.3 bar
Drilling pattern to DIN 24340-A25 and
ISO 4401-08-07-0-05
Custom orders on request
All dimensions subject to change without notice
Also available with blocking in A and B only
Dimension sheet on request, locking device retrofittable

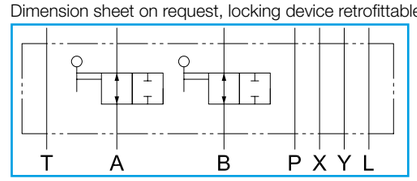


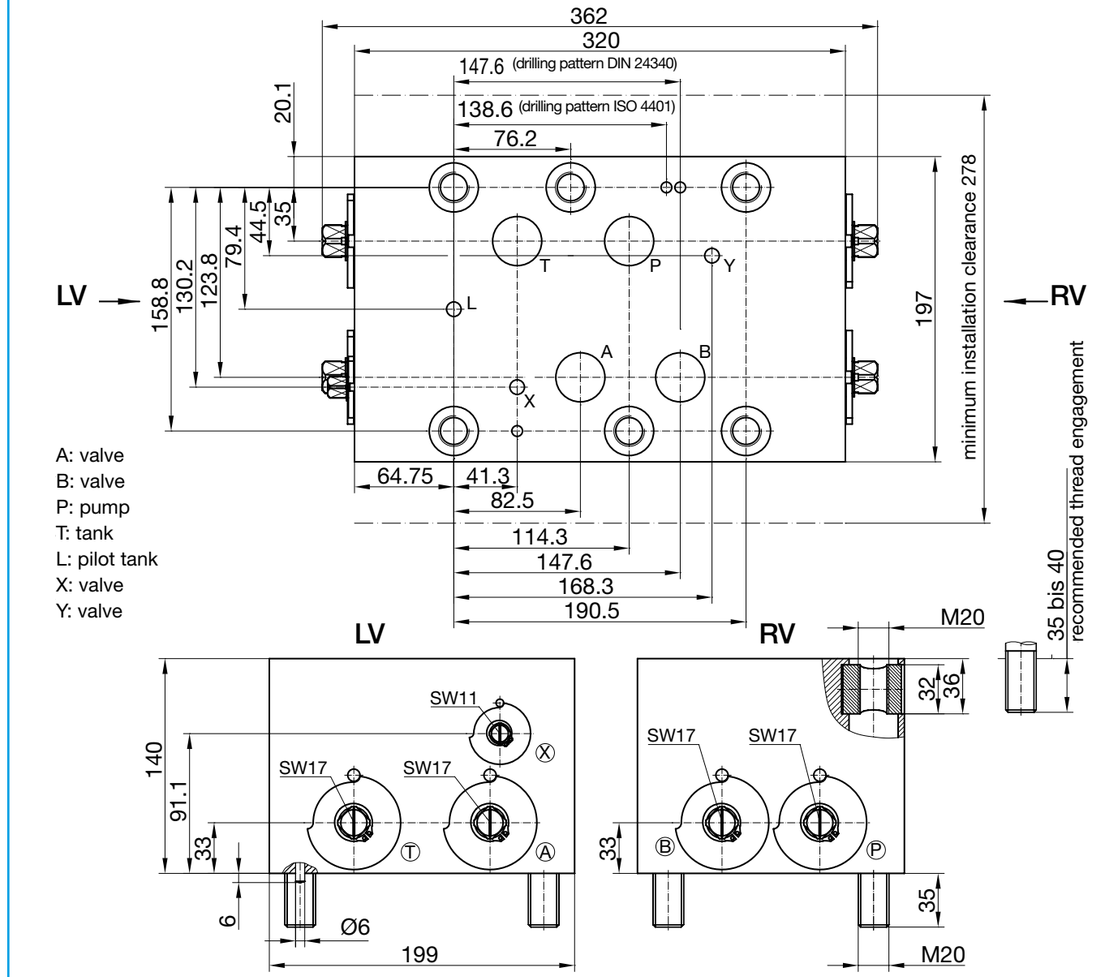


Sandwich plates · NG 32 · PN 315



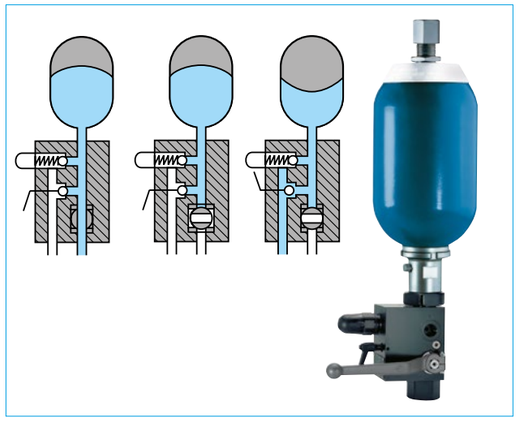
Article no. 208038
Steel/POM-NBR
Weight: approx. 60 kg
Opening pressure of check valve: approx. 0.3 bar
Drilling pattern to DIN 24340-A32 and
ISO 4401-10-08-0-05
Custom orders on request
All dimensions subject to change without notice
Also available with blocking in A and B only
Dimension sheet on request, locking device retrofittable





Ball valve function systems

Accumulator safety blocks · with integrated 2-way ball valve type RSA · technical information



Locking device available

Easy orde guide: RSA 10 F F S010 1 1 N 300 E Y 1

Nominal size (NG) ball valve
10 = NG 10
20 = NG 20
32 = NG 32

Connection thread pump (P)
A = M22x1.5 light series (ISO 8434-1)
B = M36x2 light series (ISO 8434-1)
C = M52x2 light series (ISO 8434-1)
D = M24x1.5 heavy series (ISO 8434-1)
E = M42x2 heavy series (ISO 8434-1)
F = G1/2 (DIN EN ISO 228-1)
G = G1 (DIN EN ISO 228-1)
H = G1 1/2 (DIN EN ISO 228-1)
J = 1/2 - 14 NPT (ANSI/ASME B1.20.1-1983)
K = 1 - 11 1/2 NPT (ANSI/ASME B1.20.1-1983)
L = 1 1/2 - 11 1/2 NPT (ANSI/ASME B1.20.1-1983)
M = other threads

Connection thread tank (T)
A = M22x1.5 light series (ISO 8434-1)
B = M36x2 light series (ISO 8434-1)
C = M52x2 light series (ISO 8434-1)
D = M24x1.5 heavy series (ISO 8434-1)
E = M42x2 heavy series (ISO 8434-1)
F = G1/2 (DIN EN ISO 228-1)
G = G1 (DIN EN ISO 228-1)
H = G1 1/2 (DIN EN ISO 228-1)
J = 1/2 - 14 NPT (ANSI/ASME B1.20.1-1983)
K = 1 - 11 1/2 NPT (ANSI/ASME B1.20.1-1983)
L = 1 1/2 - 11 1/2 NPT (ANSI/ASME B1.20.1-1983)
M = other threads

Adapter fitting for accumulator (S)
e.g. S010 = G3/4A (DIN EN ISO 228-1) refer to Fig.1

Body material
1 = Steel
2 = Stainless steel
4 = other material

Sealing material (elastomer)
1 = NBR
2 = FKM
3 = EPDM
5 = other material

Pressure relief valve (DBV)
N = without approval
T = with TÜV-approval
X = Delivered without pressure limiter valve

opening pressure
300 = e.g. 300 bar
000 = Delivered without pressure limiter valve

Relief
M = manual
E = manual and electromagnetic
V = prepared for electromagnetical relief

Solenoid valve design
X = Delivered without solenoid valve
Y = open when de-energized
Z = closed when de-energized

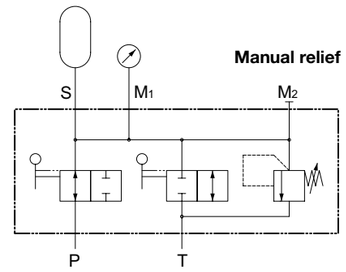
Solenoid valve voltage
0 = Delivered without solenoid valve
1 = 24 V DC
2 = 230 V DC
3 = other

Securing, isolating and depressuring hydraulic pressure accumulators:
Simple operation standards for absolute operational safety. Depending on the position of the handle, the passage from the system to the accumulator will be opened or closed. The accumulator block can be kept pressurised with the valve in the closed status (battery configuration). The accumulator can be relieved manually with the integrated valve. - Refer to "3-way accumulator safety blocks" if automatic relief is desired.

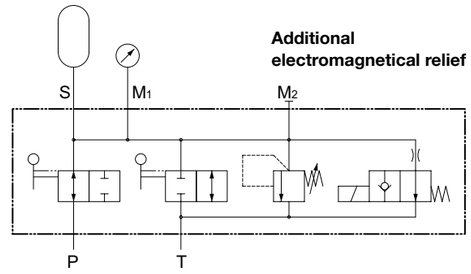
Flexibility thanks to a modular design:
The modular design concept makes the safety block particularly economical and flexible to meet customer requirements. The body is assembled at the factory with adapter fittings in accordance with your order.

Applications/functions:
For liquid media as per the compability table in the technical data appendix.

The accumulator safety blocks can be supplied with solenoid-operated relief valves as desired. Every block is equipped with the connections required for retrofitting.

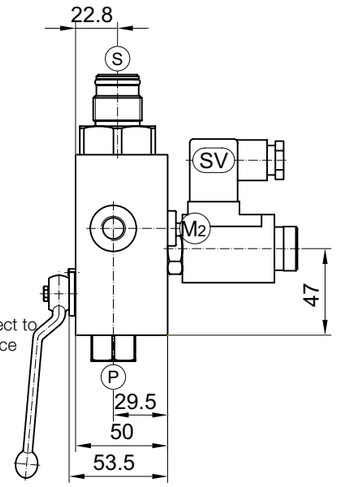


Manual relief

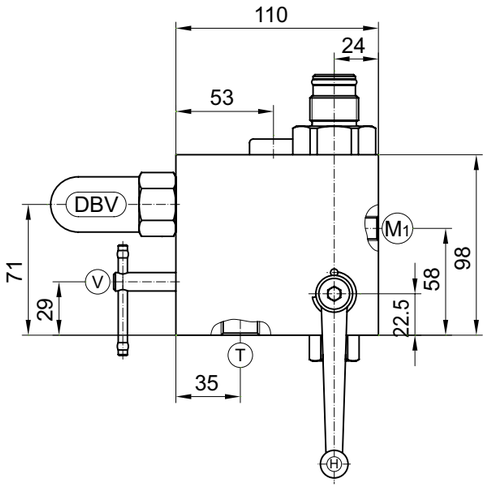


Additional electromagnetical relief

NG 10



All dimensions subject to change without notice



P = Pump connection
M-version 400 bar
E-version 350 bar

T = Tank connection
G1/2 (DIN EN ISO 228-1)

S = Accumulator connection

M_1 = Test gauge connection
G1/4 (DIN EN ISO 228-1)

M_2 = Pressure gauge connection (closed)
G1/4 (DIN EN ISO 228-1)

DBV= Pressure relief valve
cavity-thread M28x1.5
assembly torque 50^{+5} Nm

SV = 2-way-solenoid valve
cavity thread M20x1.5
assembly torque 25^{+5} Nm
(manual relief closed)

V = Pressure relief

H = Handle code 13 (8kt8)
refer to chapter "Attachments, accessories"

Adapter fittings for accumulator connection S

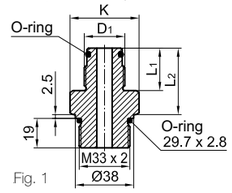


Fig. 1

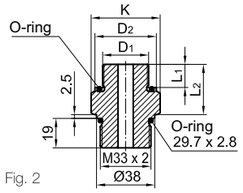


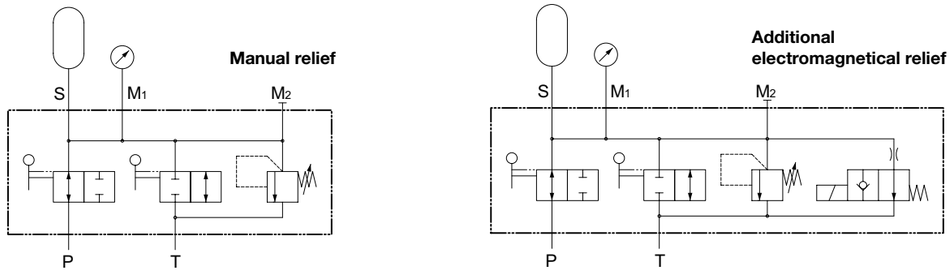
Fig. 2

Fig.	D1 Connection thread	Adapter-fitting	K (SW)	L1	L2	D2	O-ring
1	G 3/4 A	S010	41	28	43.5	-	17 x 3
	G 1 A	S011	46	34	50.5	-	22 x 3
	G 1 1/4 A	S012	46	37	53.5	-	30 x 3
	G 2 A	S013	65	44	64.5	-	48 x 3
2	M 30 x 1.5	S020	41	15	32.5	40	32 x 2
	M 40 x 1.5	S021	55	20	40.5	54	43 x 3
	M 50 x 1.5	S022	65	20	40.5	64	53 x 3

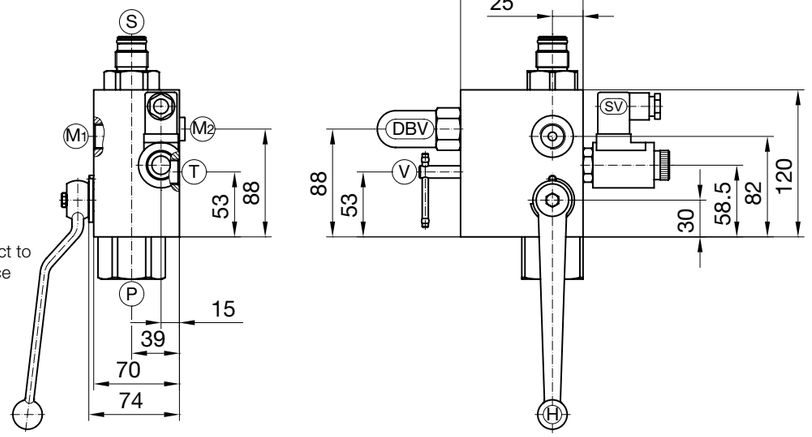
Also available with most other connectors

Ball valve function systems

Accumulator safety blocks · with integrated 2-way ball valve type RSA



NG 20



All dimensions subject to change without notice

P = Pump connection
M-version 420 bar
E-version 350 bar
T = Tank connection
S = Accumulator connection
G1/2 (DIN EN ISO 228-1)
M_2 = Pressure gauge connection (closed)
G1/4 (DIN EN ISO 228-1)
DBV= Pressure relief valve
cavity thread M35x1.5
assembly torque 80^{+5} Nm
SV = 2-way-solenoid valve
cavity thread M20x1.5
assembly torque 25^{+5} Nm
(manual relief closed)
V = Pressure relief
H = Handle code 15 (8kt14)
refer to chapter "Attachments, accessories"

Adapter fittings for accumulator connection S

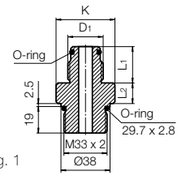


Fig. 1

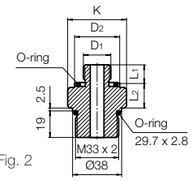
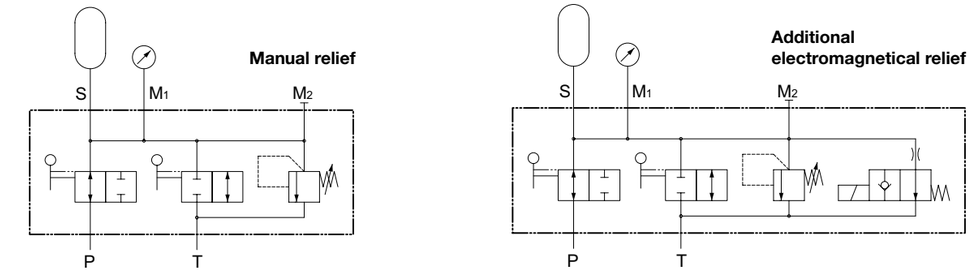


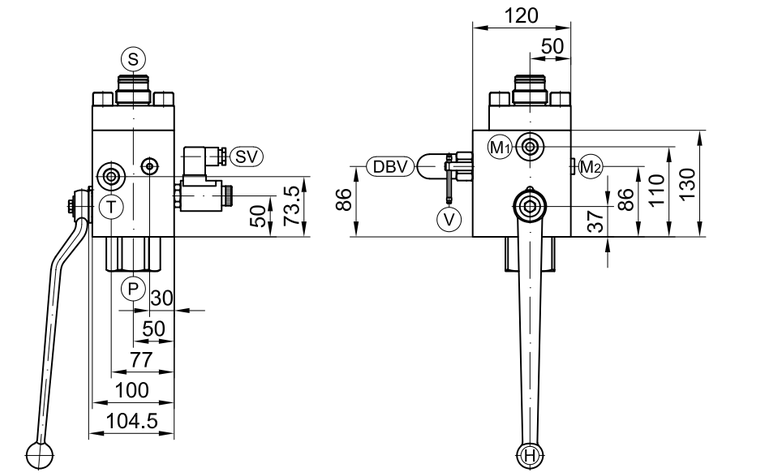
Fig. 2

Fig.	D1 Connection thread	Adapter-fitting	K (SW)	L1	L2	D2	O-ring
1	G 3/4 A	S010	41	28	43.5	-	17 x 3
	G 1 A	S011	46	34	50.5	-	22 x 3
	G 1¼ A	S012	46	37	53.5	-	30 x 3
	G 2 A	S013	65	44	64.5	-	48 x 3
2	M 30 x 1.5	S020	41	15	32.5	40	32 x 2
	M 40 x 1.5	S021	55	20	40.5	54	43 x 3
	M 50 x 1.5	S022	65	20	40.5	64	53 x 3

Also available with most other connections



NG 32



All dimensions subject to change without notice

P = Pump connection
M-version 420 bar
E-version 350 bar
T = Tank connection
S = Accumulator connection
M_1 = Test gauge connection
G1/2 (DIN EN ISO 228-1)
M_2 = Pressure gauge connection (closed)
G1/4 (DIN EN ISO 228-1)
DBV= Pressure relief valve
cavity thread M35x1.5
assembly torque 80^{+5} Nm
SV = 2-way-solenoid valve
cavity thread M20x1.5
assembly torque 25^{+5} Nm
(manual relief closed)
V = Pressure relief
H = Handle code 21 (8kt17)
refer to chapter "Attachments, accessories"

Adapter fittings for accumulator connection S

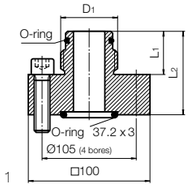


Fig. 1

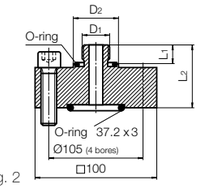


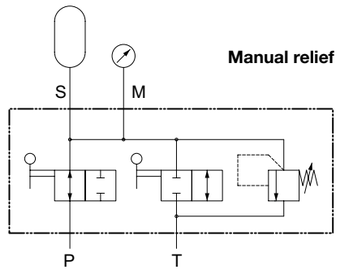
Fig. 2

Fig.	D1 Connection thread	Adapter-fitting	L1	L2	D2	O-ring
1	G 3/4 A	S305	28	58	-	17 x 3
	G 1 A	S306	34	64	-	22 x 3
	G 1¼ A	S307	37	67	-	30 x 3
	G 2 A	S309	44	74	-	48 x 3
2	M 30 x 1.5	S330	15	47	45	32 x 2
	M 40 x 1.5	S340	20	51	60	43 x 3
	M 50 x 1.5	S350	20	51	75	53 x 3

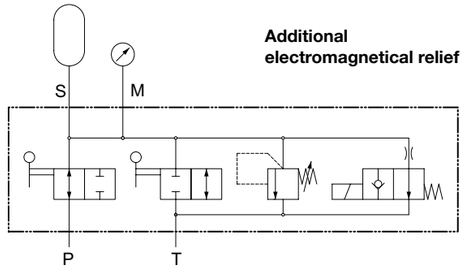
Also available with most other connections

Ball valve function systems

Accumulator safety blocks · with integrated 2-way ball valve type RSA

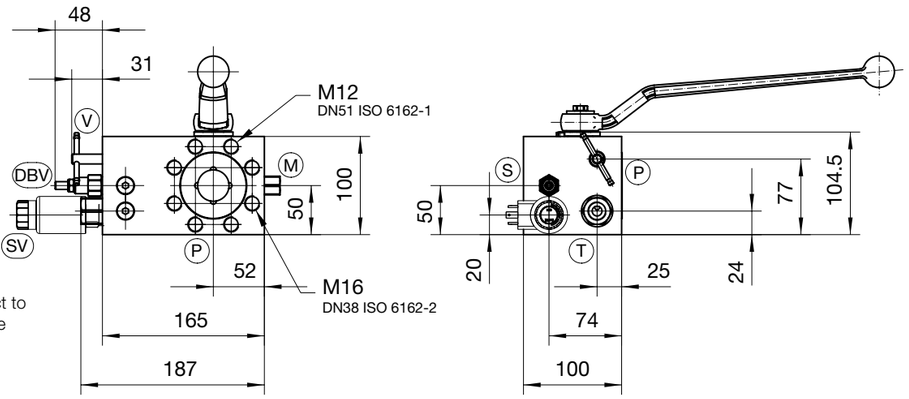


Manual relief



Additional electromagnetical relief

NG 32



All dimensions subject to change without notice

P = Pump connector
DN 38 ISO 6162-2 (metric)
DN 51 ISO 6162-1 (metric)
M-version 350 bar
E-version 350 bar

T = Tank connector
3/4 - 16 UNF-2B

S = Accumulator connector
DN 38 ISO 6162-2 (metric)
DN 51 ISO 6162-1 (metric)

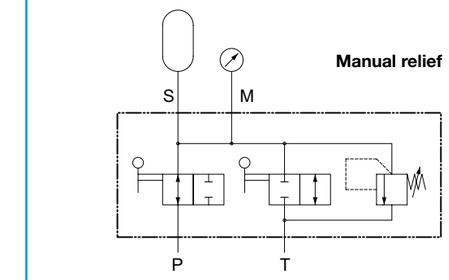
M = Test gauge connection
1/4 - 18 NPT

DBV= Pressure relief valve
cavity thread M16x1.5
assembly torque 35^{+5} Nm

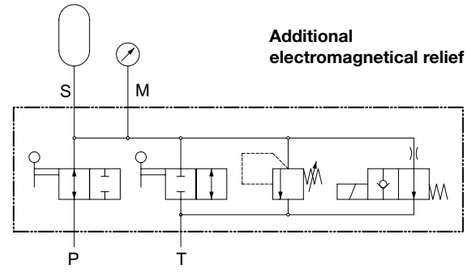
SV = 2-way Solenoid
cavity thread M20x1.5
assembly torque 45^{+5} Nm
(manual relief closed)

V = Pressure relief

H = Handle code 21 (8kt17)
refer to chapter "Attachments, accessories"

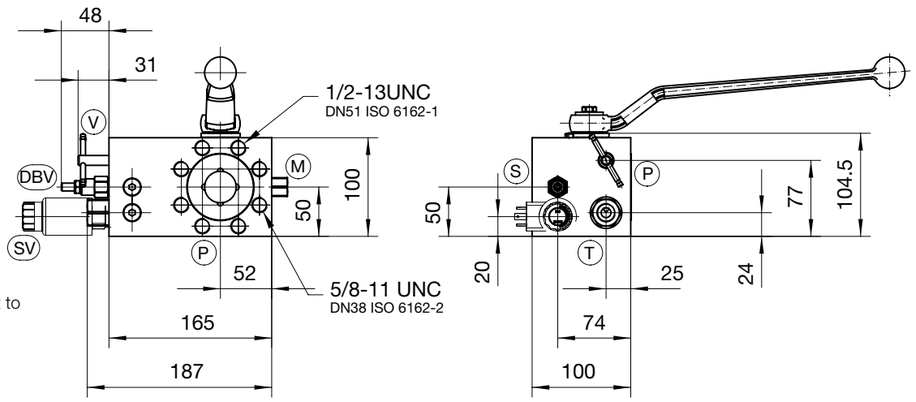


Manual relief



Additional electromagnetical relief

NG 32



All dimensions subject to change without notice

P = Pump connection
DN 38 ISO 6162-2 (metric)
DN 51 ISO 6162-1 (metric)
M-version 350 bar
E-version 350 bar

T = Tank connection
3/4 - 16 UNF-2B

S = Accumulator connection
DN 38 ISO 6162-2 (UNC)
DN 51 ISO 6162-1 (UNC)

M = Test gauge connection
1/4 - 18 NPT

DBV= Pressure relief valve
cavity thread M16x1.5
assembly torque 35^{+5} Nm

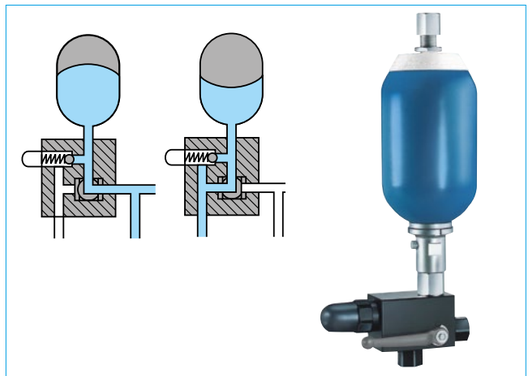
SV = 2-way-solenoid valve
cavity thread M20x1.5
assembly torque 45^{+5} Nm
(manual relief closed)

V = Pressure relief

H = Handle code 21 (8kt17)
refer to chapter "Attachments, accessories"

Ball valve function systems

Accumulator safety blocks · with integrated 3-way ball valve type RSK · technical information



Securing, isolating and depressuring hydraulic pressure accumulators:
Simple operation standards for absolute operational safety. Depending on the position of the handle, the passage from the system to the accumulator will be opened or - with simultaneous reflied of the accumulator - closed. The integrated 3-way ball valve ensures the system will be blocked off and the accumulator pressure relieved with just a single motion; this eliminates the need for an additional relief valve. If seperate isolation of the accumulator is desired, refer to the "Accumulator 2-way safety block" information.

Flexibility thanks to a modular design:
The modular design concept makes the connection block particularly economical and flexible to meet customer requirements. The body is assembled at the factory with adapter fittings in accordance with your order.

Applications/functions:
For liquid media as per the compability table in the technical data appendix.

The accumulator safety blocks can be supplied with solenoid-operated relief valves as desired. Every block is equipped with the fittings required for retrofitting. When connected to large-volume accumulators the safety block can be ordered with a choke integrated into the bypass line.

Locking device available

Easy order guide: **RSK 10 E E S500 1 1 L N 300 E Y 1**

Nominal size (NG) ball valve
6 = NG 6
10 = NG 10
20 = NG 20

Connection thread pump (P)
A = M18x1.5 light series (ISO 8434-1)
B = M30x2 light series (ISO 8434-1)
C = M22x1.5 heavy series (ISO 8434-1)
D = M36x2 heavy series (ISO 8434-1)
E = G 3/8 (DIN EN ISO 228-1)
F = G 3/4 (DIN EN ISO 228-1)
G = 3/8 - 18 NPT (ANSI/ASME B1.20.1-1983)
H = 3/4 - 14 NPT (ANSI/ASME B1.20.1-1983)
J = other thread

Connection thread tank (T)
A = M18x1.5 light series (ISO 8434-1)
B = M30x2 llight series (ISO 8434-1)
C = M22x1.5 heavy series (ISO 8434-1)
D = M36x2 heavy series (ISO 8434-1)
E = G 3/8 (DIN EN ISO 228-1)
F = G 3/4 (DIN EN ISO 228-1)
G = 3/8 - 18 NPT (ANSI/ASME B1.20.1-1983)
H = 3/4 - 14 NPT (ANSI/ASME B1.20.1-1983)
J = other thread

Adapter fitting for accumulator (S)
e.g. S500 = G 3/4A (DIN EN ISO 228-1) refer to Fig.1

Body material
1 = Steel
2 = Stainless steel
4 = other material

Sealing material (elastomer)
1 = NBR
2 = FKM
3 = EPDM
5 = other material

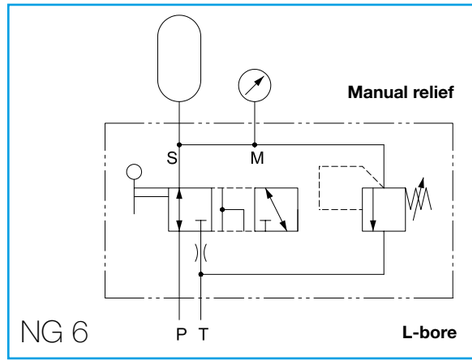
Ball-bore
L = L-shaped bore
T = T-shaped bore

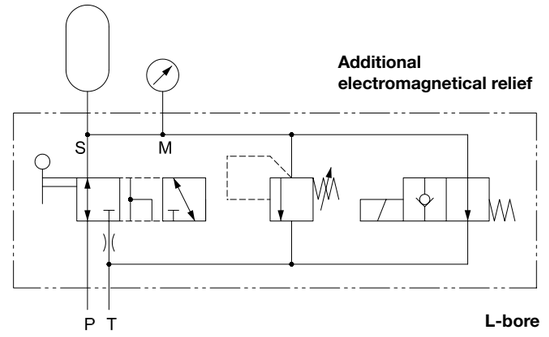
Pressure relief valve (DBV)
N = without approval
T = with TÜV-approval
X = Delivered without pressure limiter valve
opening pressure
300 = e.g. 300 bar
000 = Delivered without pressure limiter valve

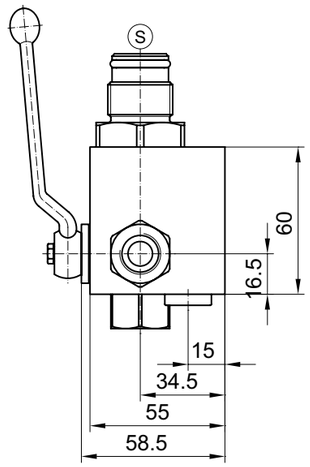
Relief
M = manual
E = manual and electromagnetic
V = prepared for electromagnetical relief

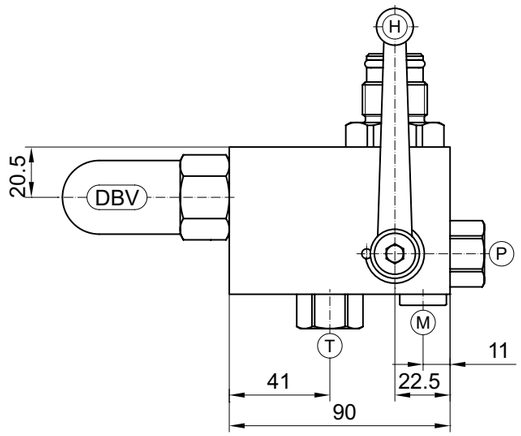
Solenoid valve design
X = Delivered without solenoid valve
Y = open when de-energized
Z = closed when de-energized

Solenoid valve voltage
0 = Delivered without solenoid valve
1 = 24 V DC
2 = 230 V DC
3 = other









All dimensions subject to change without notice

P = Pump connection
M-version 420 bar
E-version 350 bar
T = Tank connection
S = Accumulator connection
M = Pressure gauge connection (closed)
G1/4 (DIN EN ISO 228-1)
DBV= Pressure relief valve
cavity thread M28x1.5
assembly torque 50^{+5} Nm
SV = 2-way-solenoid valve
manifold mounting
drilling pattern ISO 4401-03-02-0-94
(DIN 24340-A6)
H = Handle code 13 (8kt8)
refer to chapter "Attachments, accessories"

Adapter fittings for accumulator connection S

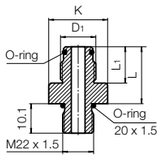


Fig. 1

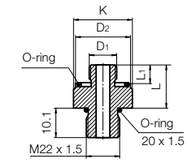


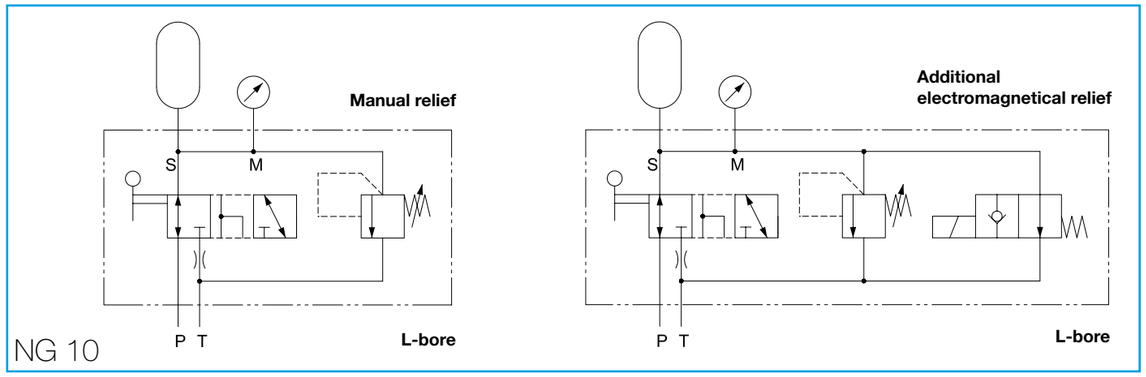
Fig. 2

Fig.	D1 Connection thread	Adapter-fitting	K (SW)	L	L1	D2	O-ring
1	G 3/4 A	S500	36	38	28	-	17 x 3
	G 1 A	S501	41	44	34	-	22 x 3
	G 1¼ A	S502	46	47	37	-	30 x 3
	G 2 A	S503	65	54	44	-	48 x 3
2	M 30 x 1.5	S550	41	25	15	40	32 x 2
	M 40 x 1.5	S551	55	30	20	54	43 x 3
	M 50 x 1.5	S552	65	30	20	64	53 x 3

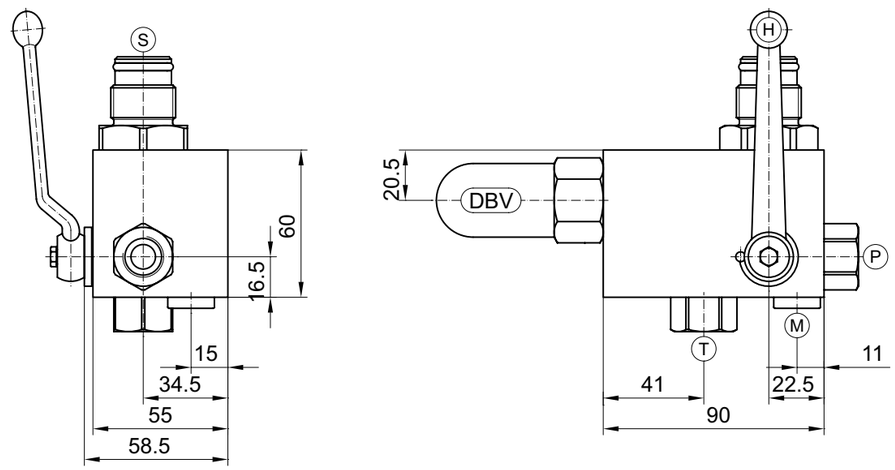
Also available with most other connections

Ball valve function systems

Accumulator safety blocks · with integrated 3-way ball valve type RSK



NG 10



All dimensions subject to change without notice

P = Pump connection
M-version 500 bar
E-version 350 bar
T = Tank connection
S = Accumulator connection
M = Pressure gauge connection (closed)
G1/4 (DIN EN ISO 228-1)
DBV= Pressure relief valve
cavity thread M35x1.5
assembly torque 80^{+5} Nm
SV = 2-way-solenoid valve
manifold mounting
drilling pattern ISO 4401-03-02-0-94
(DIN 24340-A6)
V = Pressure relief
H = Handle code 13 (8kt8)
refer to chapter "Attachments, accessories"

Adapter fittings for accumulator connection S

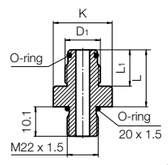


Fig. 1

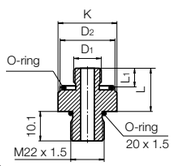
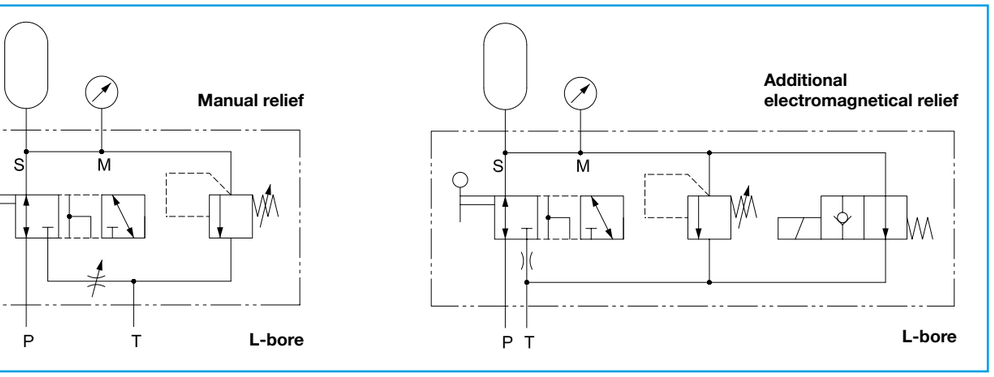


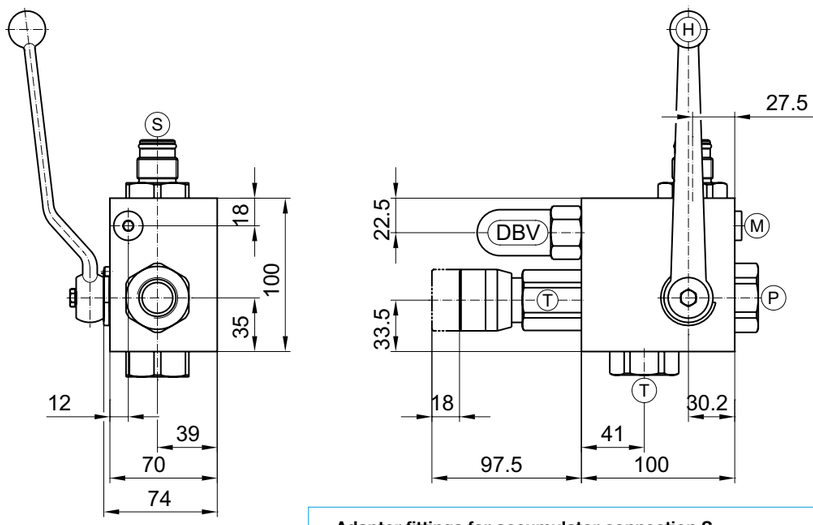
Fig. 2

Fig.	D1 Connection thread	Adapter-fitting	K (SW)	L	L1	D2	O-ring
1	G 3/4 A	S500	36	38	28	-	17 x 3
	G 1 A	S501	41	44	34	-	22 x 3
	G 1¼ A	S502	46	47	37	-	30 x 3
	G 2 A	S503	65	54	44	-	48 x 3
2	M 30 x 1.5	S550	41	25	15	40	32 x 2
	M 40 x 1.5	S551	55	30	20	54	43 x 3
	M 50 x 1.5	S552	65	30	20	64	53 x 3

Also available with most other connections



NG 20



All dimensions subject to change without notice

P = Pump connection
M-version 420 bar
E-version 315 bar
T = Tank connection
S = Accumulator connection
M = Pressure gauge connection (closed)
G1/4 (DIN EN ISO 228-1)
DBV= Pressure relief valve
cavity thread M35x1.5
assembly torque 80^{+5} Nm
SV = 2-way-solenoid valve
manifold mounting
drilling pattern ISO 4401-03-02-0-94
(DIN 24340-A6)
V = Pressure relief
H = Handle code 15 (8kt14)
refer to chapter "Attachments, accessories"

Adapter fittings for accumulator connection S

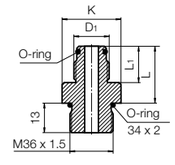


Fig. 1

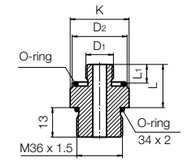


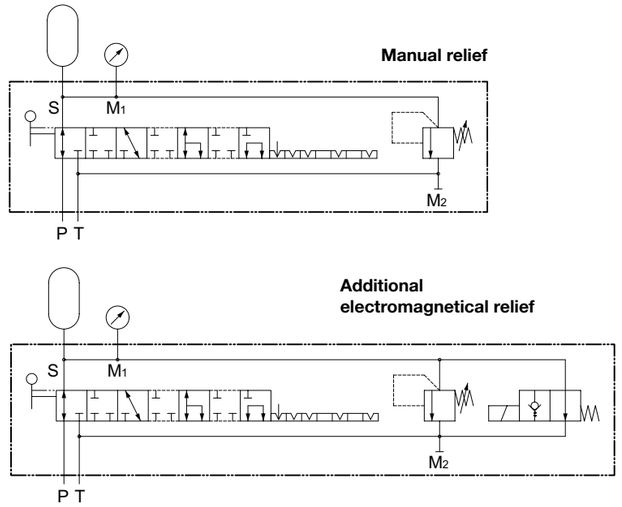
Fig. 2

Fig.	D1 Connection thread	Adapter-fitting	K (SW)	L	L1	D2	O-ring
1	G 3/4 A	S600	36	38	28	-	17 x 3
	G 1 A	S601	41	44	34	-	22 x 3
	G 1¼ A	S602	46	47	37	-	30 x 3
	G 2 A	S603	65	54	44	-	48 x 3
2	M 30 x 1.5	S650	41	25	15	40	32 x 2
	M 40 x 1.5	S651	55	30	20	54	43 x 3
	M 50 x 1.5	S652	65	30	20	64	53 x 3

Also available with most other connections

Ball valve function systems

Accumulator safety blocks · with integrated 3-way ball valve type RSM · technical information



The multifunctional accumulator safety block RSM from Roetelmann unites all advantages of the already known 2- and 3-way pressure accumulator blocks and does provide additional functions, as well.

The opreation of the RSM accumulator safety block now is extraordinary simple, but still safe, as it is effected by just one handle and a respective detent. The T-bore avoids any pressure drop during the working position.

The following functions are provided:
- working position with a direct passage to the accumulator
- total closing of all ports, the pressure is kept in the accumulator
- relief of the accumulator to the tank
- total connection of all ports for filling the system
- depressurised circulation from the pump to the tank

Resulting from this great variety of functions, additional valves and ball valves are not necessary and therefore can be saved. As this principle was not known until now, the multifunctional accumulator safety block has been patented respectively.

Custom orders on request.

Locking device available

Easy order guide: **RSM 10 C C S500 1 1 N 250 E Y 1**

Nominal size (NG) ball valve
10 = NG 10
20 = NG 20
32 = NG 32

Connection thread pump (P)
A = M18x1.5light series (ISO 8434-1)
B = M22x1.5heavy series (ISO 8434-1)
C = G3/8 (DIN EN ISO 228-1)
D = 3/8 - 18 NPT (ANSI/ASME B1.20.1-1983)
E = other thread

Connection thread tank (T)
A = M18x1.5light series (ISO 8434-1)
B = M22x1.5heavy series (ISO 8434-1)
C = G3/8 (DIN EN ISO 228-1)
D = 3/8 - 18 NPT (ANSI/ASME B1.20.1-1983)
H = other thread

Adapter fitting for accumulator (S)
e.g. S500 = G 3/8A (DIN EN ISO 228 – 1) refer to Fig.1

Body material
1 = Steel
2 = Stainless steel
4 = other material

Sealing material (elastomer)
1 = NBR
2 = FKM
3 = EPDM
5 = other material

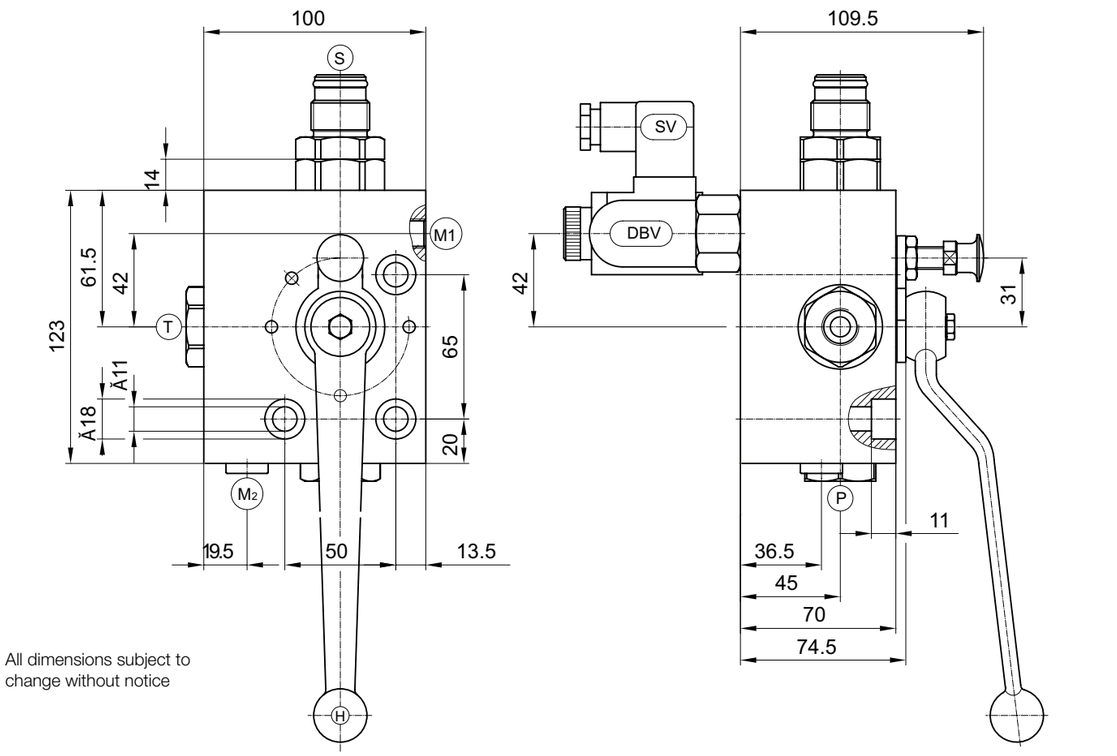
Pressure relief valve (DBV)
N = without approval
T = with TÜV-approval
X = Delivered without pressure limiter valve
opening pressure
250 = e.g. 250 bar
000 = Delivered without pressure limiter valve

Relief
M = manual
E = manual and electromagnetic
V = prepared for electromagnetical relief

Solenoid valve design
X = Delivered without solenoid valve
Y = open when de-energized
Z = closed when de-energized

Solenoid valve voltage
0 = Delivered without solenoid valve
1 = 24 V DC
2 = 230 V DC
3 = other

NG 10



All dimensions subject to change without notice

P = Pump connection
M-version 420 bar
E-version 350 bar
T = Tank connection
S = Accumulator connection
M_1 = Test gauge connection
G1/4 (DIN EN ISO 228-1)
M_2 = Pressure gauge connection (closed)
G1/4 (DIN EN ISO 228-1)
DBV= Pressure relief valve
cavity thread M28x1.5
assembly torque 50^{+5} Nm
SV = 2-way-solenoid valve
cavity thread M20x1.5
assembly torque 25^{+5} Nm
H = Handle code 15 (8kt14)
refer to chapter "Attachments, accessories"

Adapter fittings for accumulator connection S

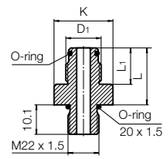


Fig. 1

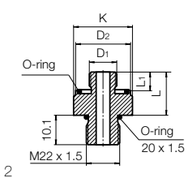


Fig. 2

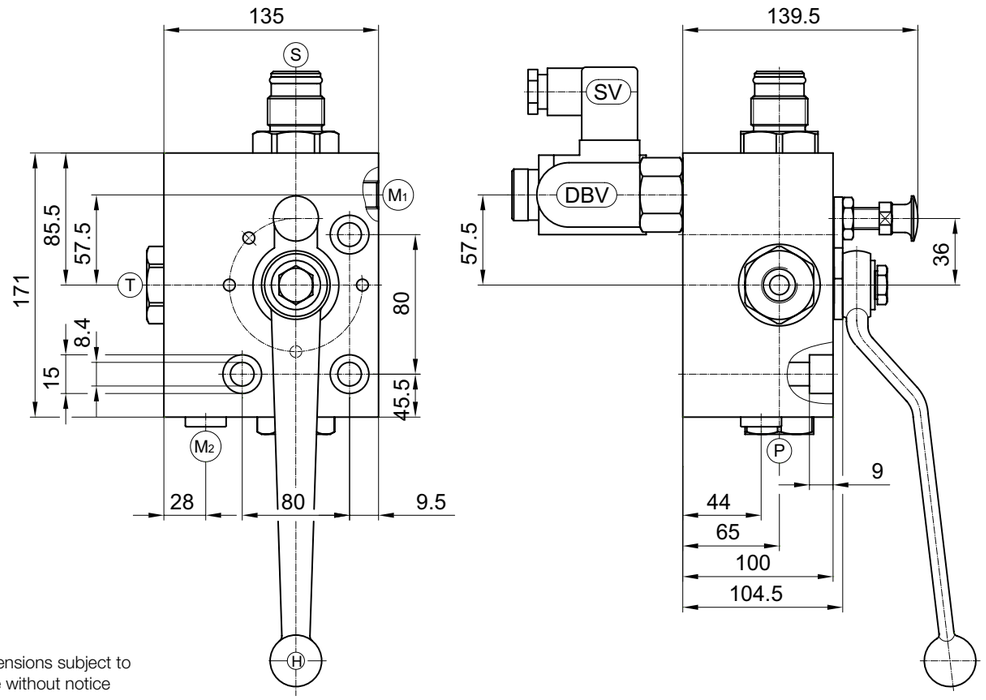
Fig.	D_1 Connection thread	Adapter-fitting	K (SW)	L	L_1	D_2	O-ring
1	G 3/4 A	S500	36	38	28	-	17 x 3
	G 1 A	S501	41	44	34	-	22 x 3
	G 1¼ A	S502	46	47	37	-	30 x 3
	G 2 A	S503	65	54	44	-	48 x 3
2	M 30 x 1.5	S550	41	25	15	40	32 x 2
	M 40 x 1.5	S551	55	30	20	54	43 x 3
	M 50 x 1.5	S552	65	30	20	64	53 x 3

Also available with most other connections

Ball valve function systems

Accumulator safety blocks · with integrated 3-way ball valve type RSM

NG 20



All dimensions subject to change without notice

P = Pump connection
M-version 420 bar
E-version 350 bar
T = Tank connection
S = Accumulator connection
M_1 = Test gauge connection
G1/4 (DIN EN ISO 228-1)
M_2 = Pressure gauge connection (closed)
G1/4 (DIN EN ISO 228-1)
DBV= Pressure relief valve
cavity thread M35x1.5
assembly torque 50^{+5} Nm
SV = 2-way-solenoid valve
cavity thread M20x1.5
assembly torque 25^{+5} Nm
H = Handle code 23 (8kt19)
refer to chapter "Attachments, accessories"

Adapter fittings for accumulator connection S

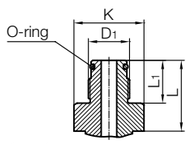


Abb. 1

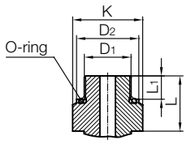
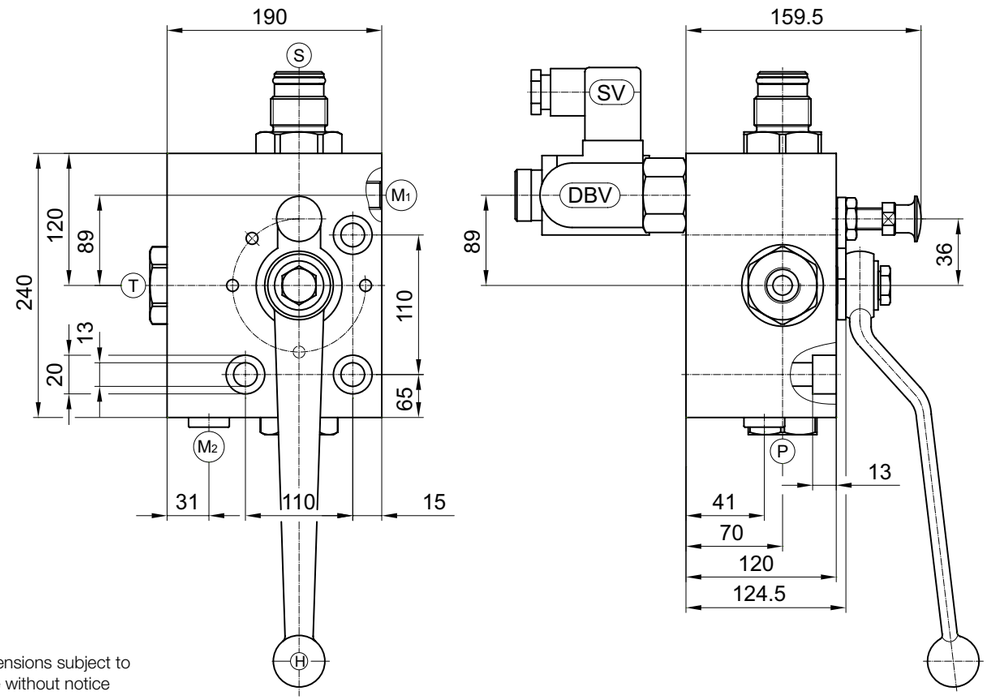


Abb. 2

Fig.	D1 Connection thread	Adapter-fitting	K (SW)	L	L1	D2	O-ring
1	G 1¼ A	S701	50	47	37	-	30 x 3
	G 2 A	S702	65	54	44	-	48 x 3
2	M 40 x 1.5	S751	60	30	20	54	43 x 3
	M 50 x 1.5	S752	70	30	20	64	53 x 3

Also available with most other connections

NG 32



All dimensions subject to change without notice

P = Pump connection
M-version 420 bar
E-version 350 bar
T = Tank connection
S = Accumulator connection
M_1 = Test gauge connection
G1/4 (DIN EN ISO 228-1)
M_2 = Pressure gauge connection (closed)
G1/4 (DIN EN ISO 228-1)
DBV= Pressure relief valve
cavity thread M35x1.5
assembly torque 50^{+5} Nm
SV = 2-way-solenoid valve
cavity thread M20x1.5
assembly torque 25^{+5} Nm
H = Handle code 23 (8kt19)
refer to chapter "Attachments, accessories"

Adapter fittings for accumulator connection S

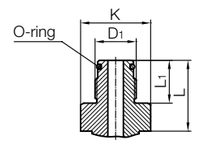


Fig. 1

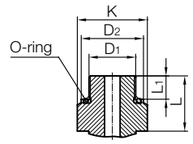


Fig. 2

Fig.	D1 Connection thread	Adapter-fitting	K (SW)	L	L1	D2	O-ring
1	G 2 A	S803	70	54	44	-	48 x 3
2	M 50 x 1.5	S852	70	30	20	64	53 x 3

Also available with most other connections