




Shut-off and control technology



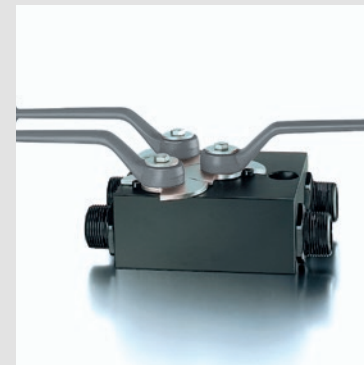
A line of ball valves and ideas



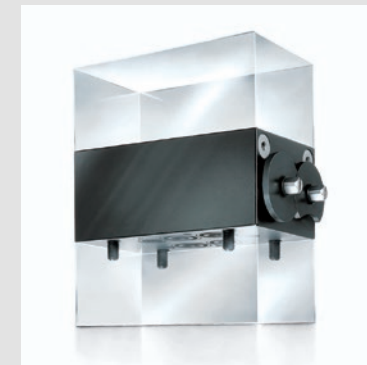
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Shut-off blocks with integrated bypass and safety-lock



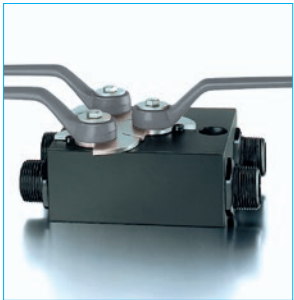
Sandwich plates



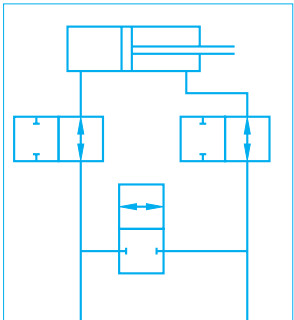
Accumulator safety blocks

Ball valve-function systems

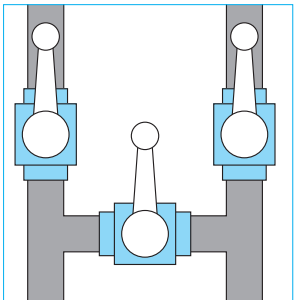
Shut-off blocks • technical information



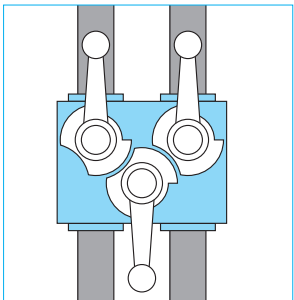
Shut-off blocks with integrated bypass and safety-lock



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.



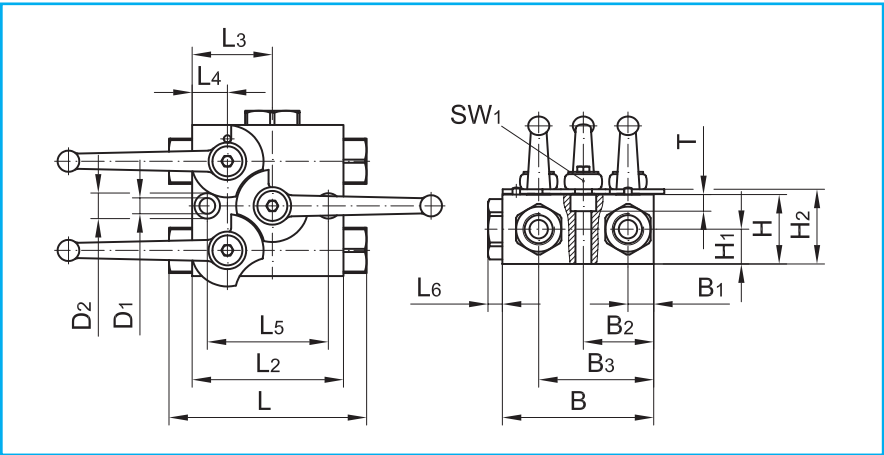
The previous situation:
Installation of separate ball valves in the piping system. Here a total of twelve pipe joints must be provided, using two tees. This is labor-intensive and thus expensive. In addition, the hazard of leaks rises with the number of joints.



Our solution for the problem:
Combining the three shut-off functions within 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 interlocks 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

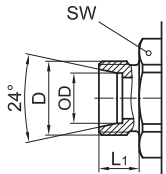


Handle included in delivery
For handles refer to "Attachments, accessories".
Please check pressure ratings of pipe fittings!
Also available with most other connections
Custom orders on request
All dimensions subject to change without notice
Dimensions in mm
Weight in kg
Pressure in bar

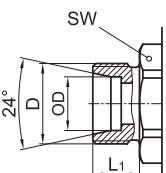
Body:	steel, black oxide
Ball:	steel, hard chrome plated
Stem:	steel, zinc plated
Ball seals:	POM
Stem seals:	NBR

Type of connection

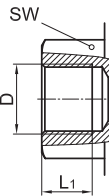
For cut (clamp) ring tube fittings
DIN 2353 light series
ISO 8434-1



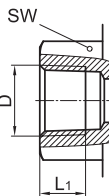
For cut (clamp) ring tube fittings
DIN 2353 heavy series
ISO 8434-1



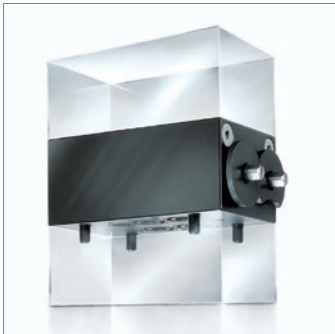
BSP-female thread
DIN EN ISO 228-1



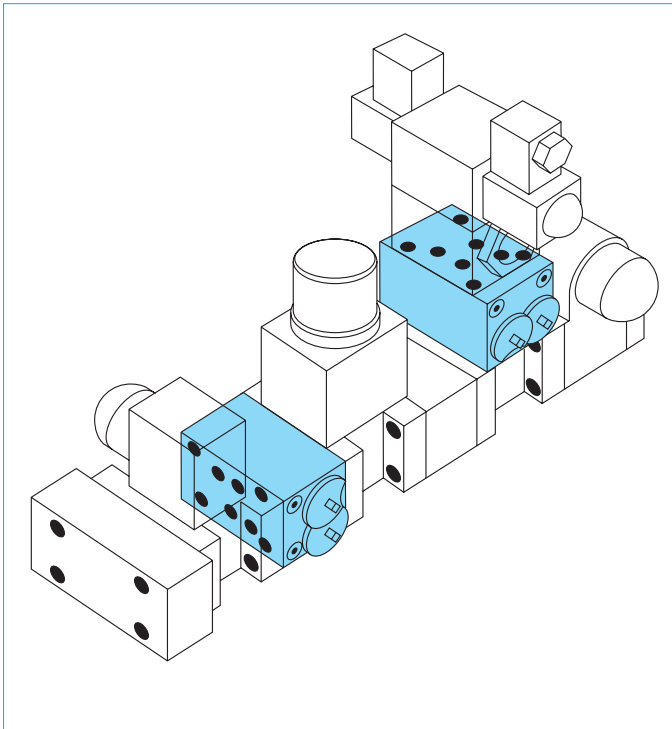
NPT-female thread
ANSI/ASME B1.20.1-1983



DN	Thread	OD	L	L1	L2	L3	L4	L5	L6	B	B1	B2	B3	H	H1	H2	D1	D2	T	SW	SW1	Handle Code	Weight	PN	Article-No.
10	M18 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	250 001
12	M22 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	250 002
20	M30 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	250 004
25	M36 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	250 005
10	M22 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	250 006
12	M24 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	250 007
20	M36 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	250 009
25	M42 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	250 010
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	250 011
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	250 012
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	250 014
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	250 015
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	250 016
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	250 017
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	250 018
25	1-11 1/2 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	250 019



Shut-off plates and sandwich elements for interconnected systems



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 aluminium 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 separately 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:

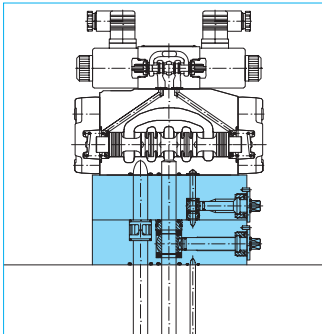
- full bore design causes no pressure drop
- significant reduction in hydraulic system downtime
- no need to drain fluid, bleed air or refill the system
- simplified start-up and maintenance due to the ease of changing flushing plates and directional valves
- pressure can be maintained in cylinders so that the supported 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 accidentally loosen the sandwich-plate

Applications:

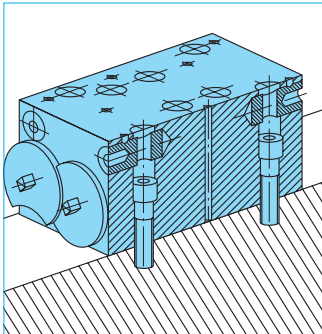
For liquid media as per the compatibility table in the technical data appendix

On request:

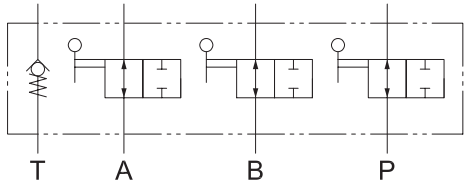
Limit switch, proximity switch, locking devices; also available in other materials and combinations



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

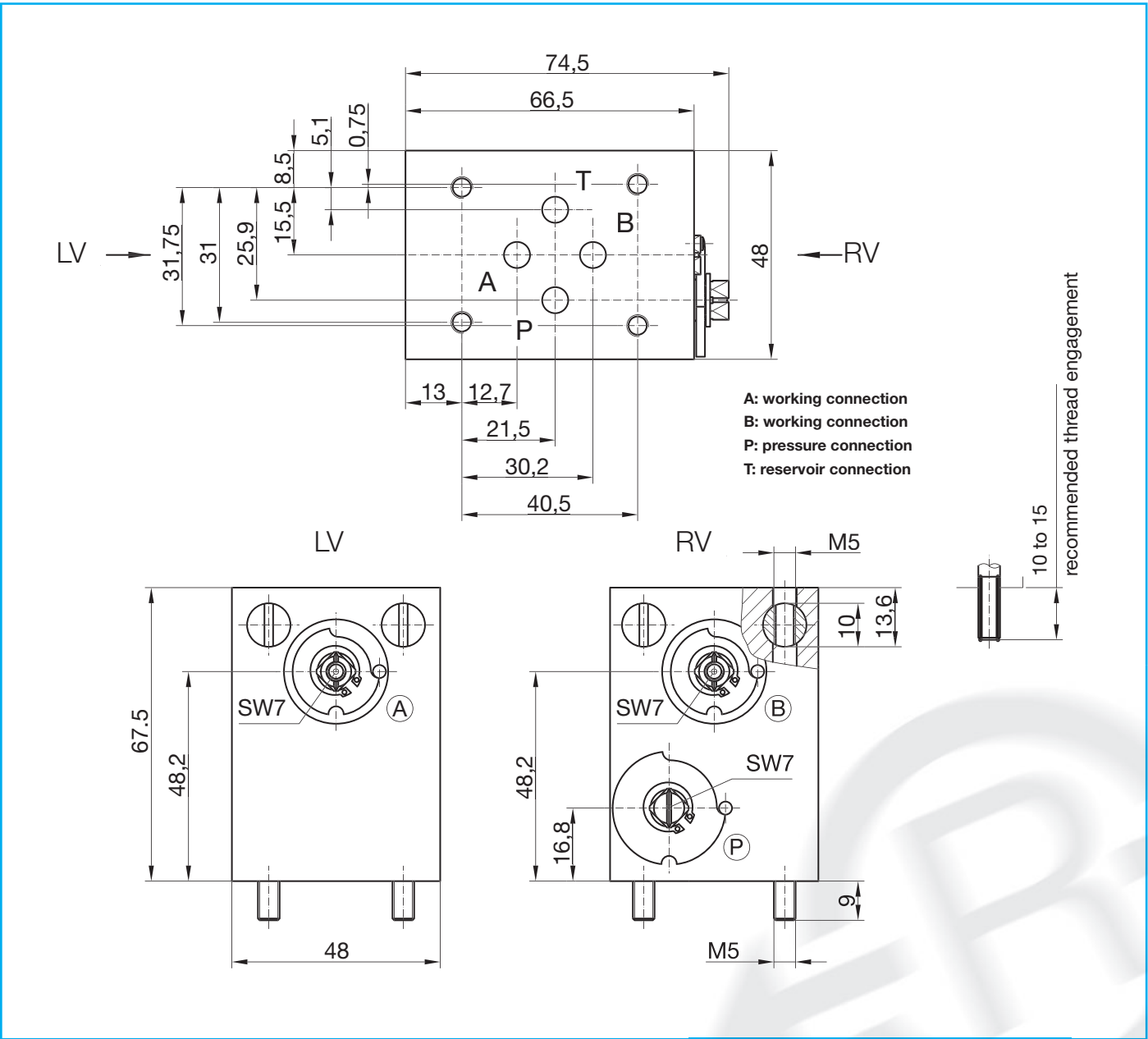
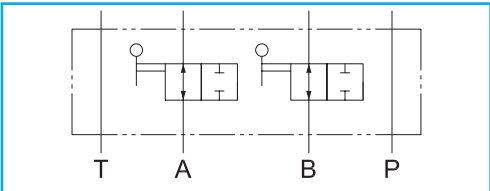


Repair setting:
Passages inside the sandwich plate shut-off; plate remains bolted to the hydraulic control block. Solenoid valve removed.



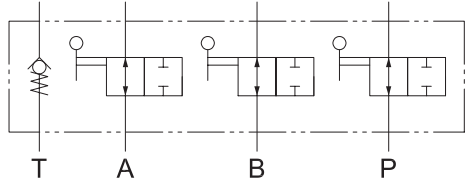
Article-No. 208 030

Weight: 1,55 kg
Opening pressure of check valve: approx. 0,3 bar
Drilling pattern to DIN 24340-A6 and ISO 4401-03-02-0-94
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

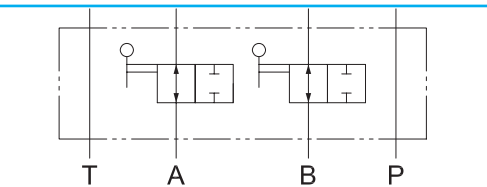
Sandwich plates · NG 10 · PN 315



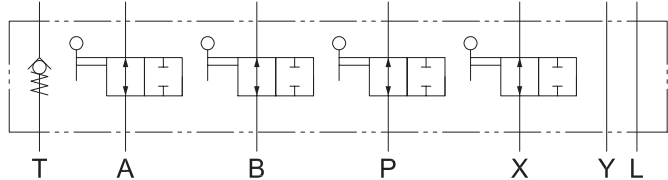
Article-No. 208 032

Weight: 4,45 kg
Opening pressure of check valve: approx. 0,3 bar
Drilling pattern to DIN 24340-A10 and ISO 4401-05-04-0-94

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



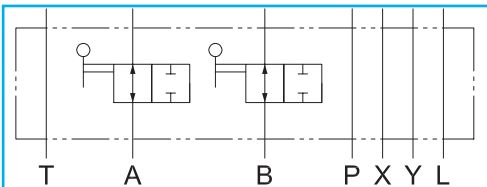
Sandwich plates · NG 16 · PN 315

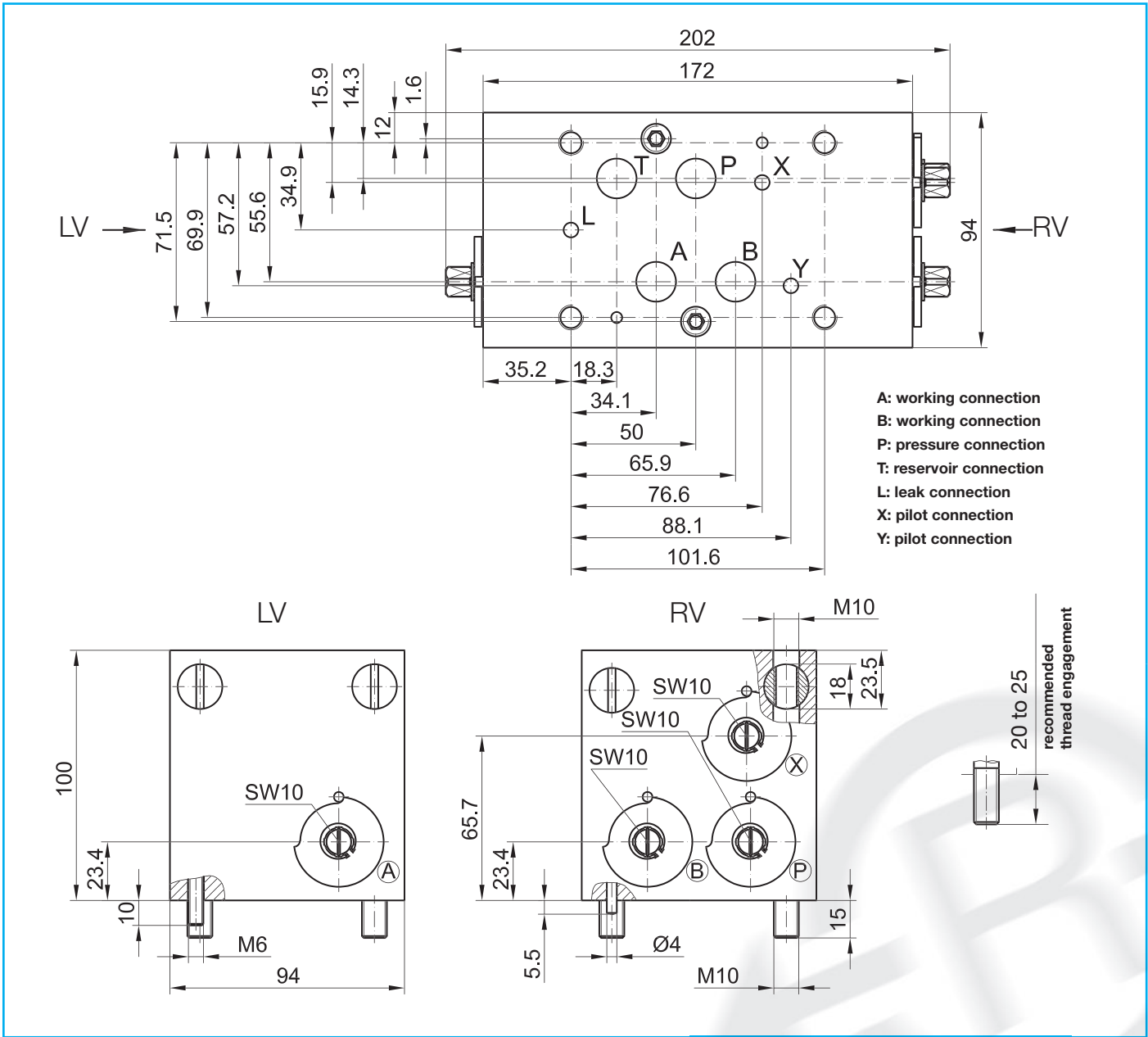
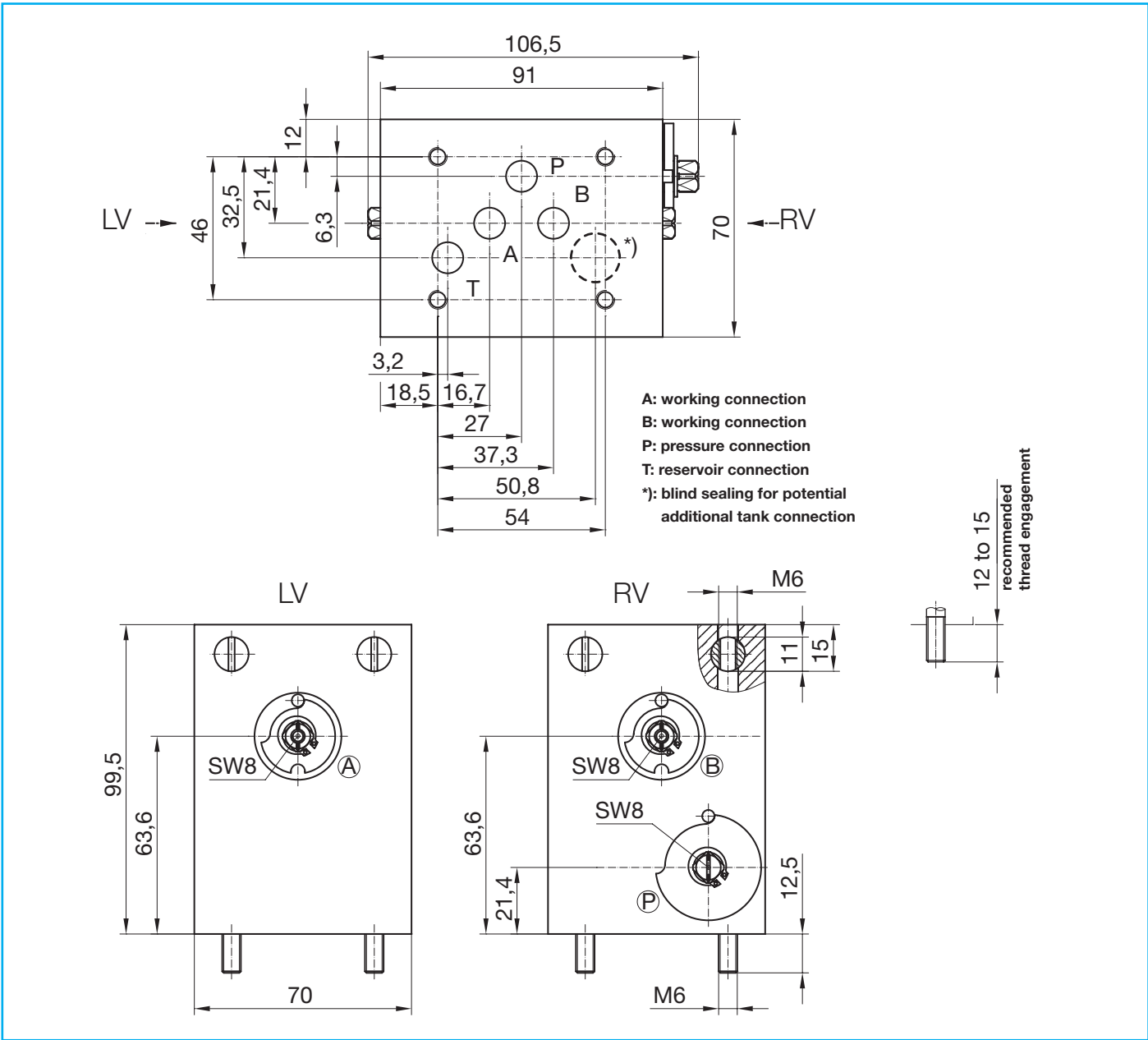


Article-No. 208 034

Weight: 11,7 kg
Opening pressure of check valve: approx. 0,3 bar
Drilling pattern to DIN 24340-A16 and ISO 4401-07-06-0-94

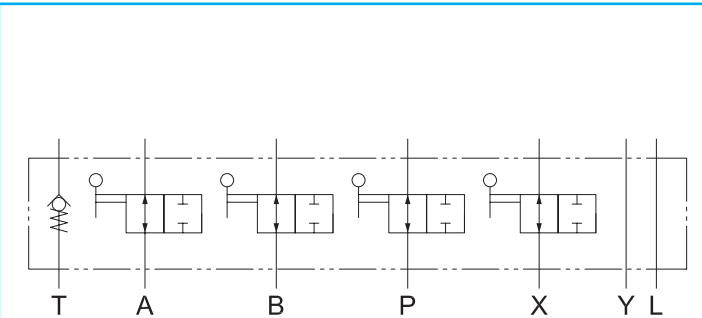
Custom orders on request
All dimensions subject to change without notice
Also available with blocking in A and B only
Dimension sheet on request, locking device retrofittable





Ball valve-function systems

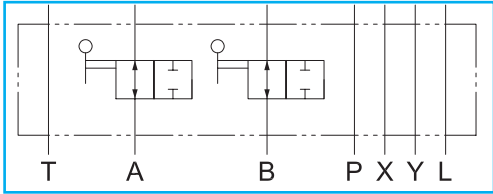
Sandwich plates · NG 25 · PN 315



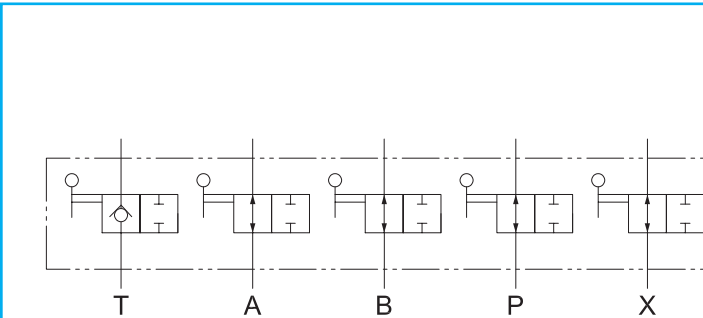
Article-No. 208 036

Weight: 25,4 kg
Opening pressure of check valve: approx. 0,3 bar
Drilling pattern to DIN 24340-A25 and ISO 4401-08-07-0-94

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



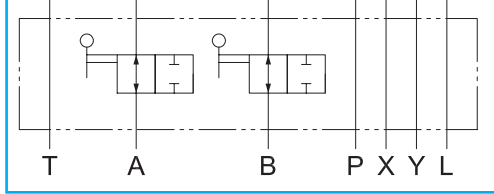
Sandwich plates · NG 32 · PN 315

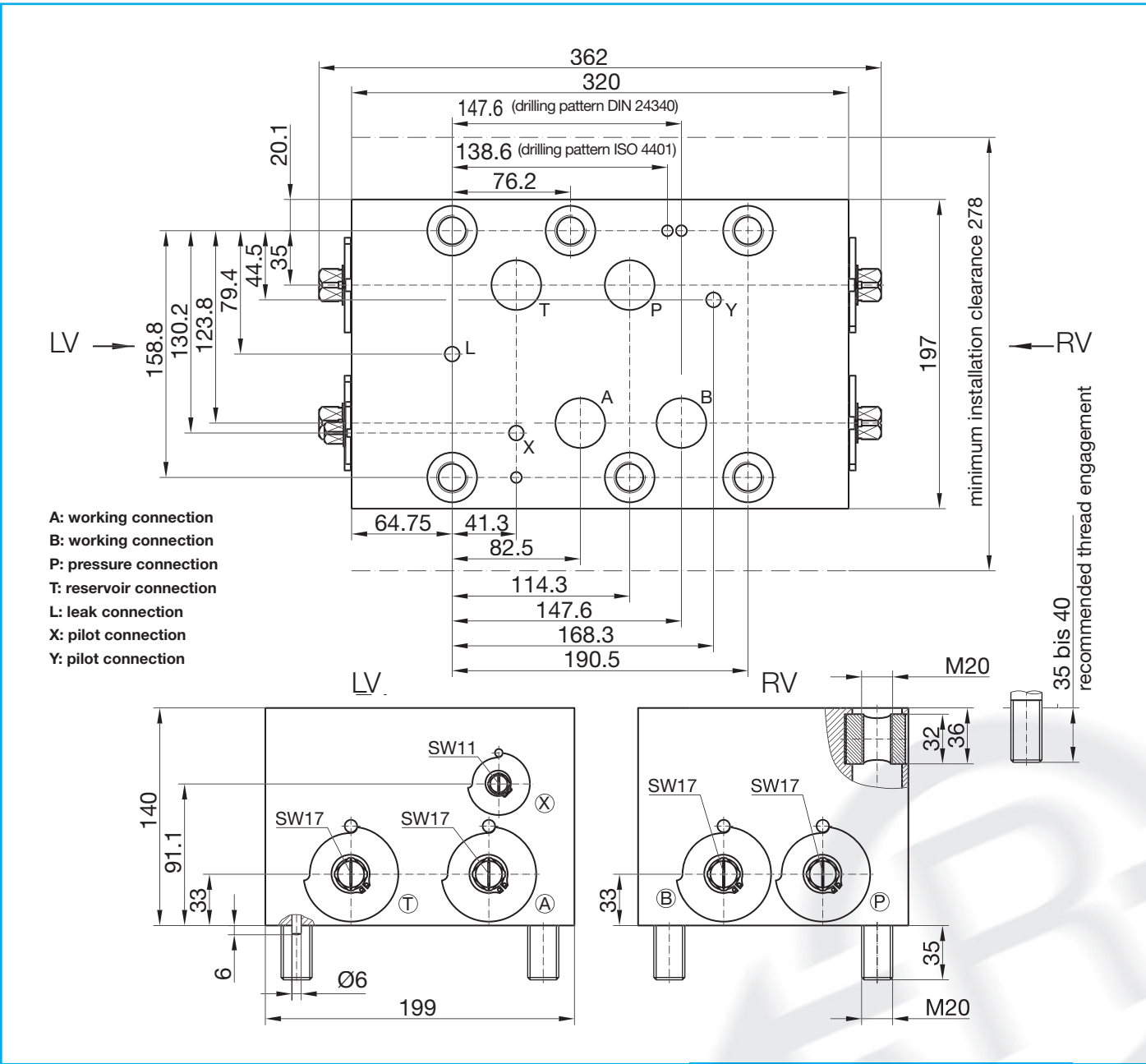
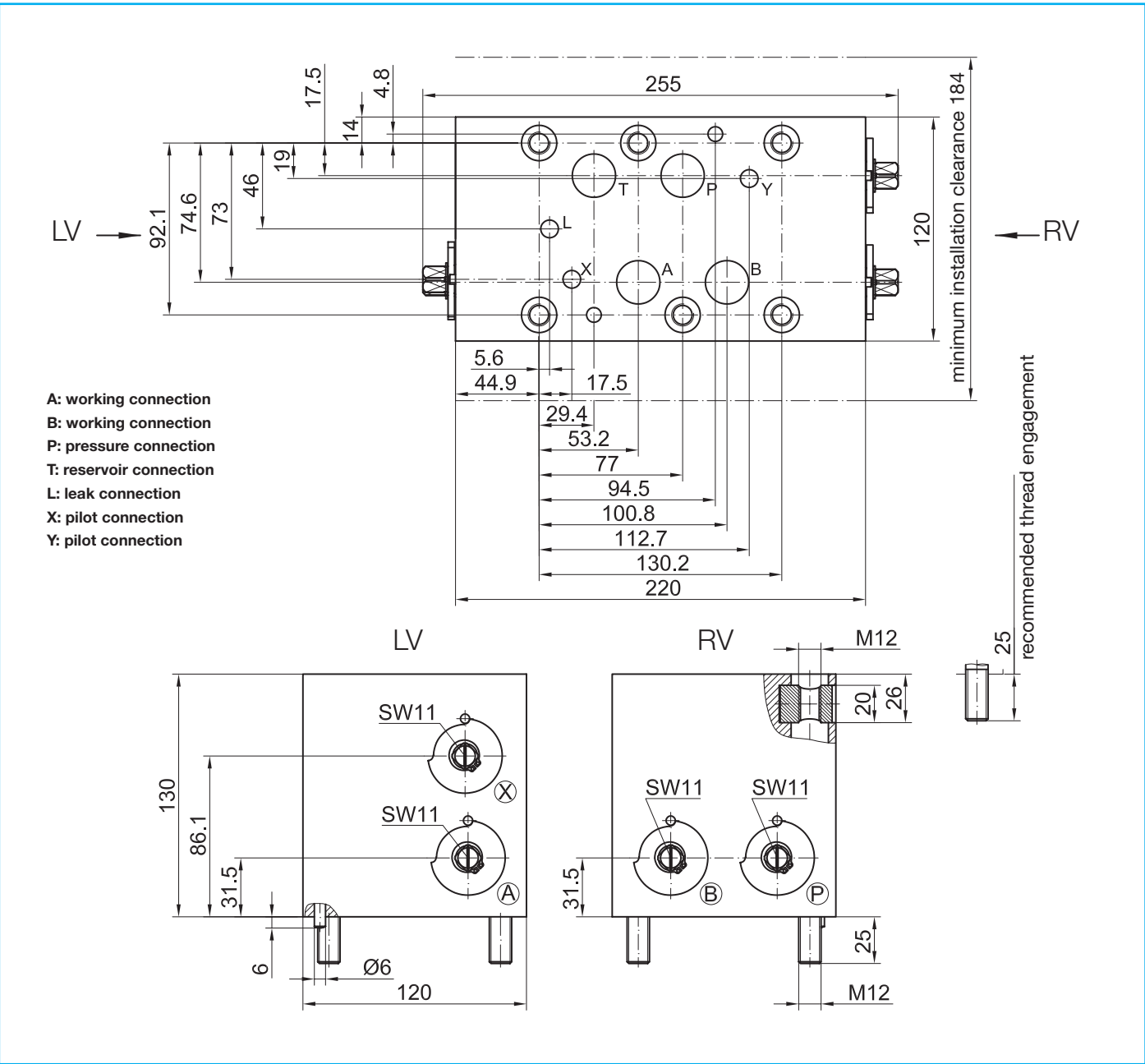


Article-No. 208 038

Weight: approx. 60 kg
Drilling pattern to DIN 24340-A32 and ISO 4401-10-08-0-94

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



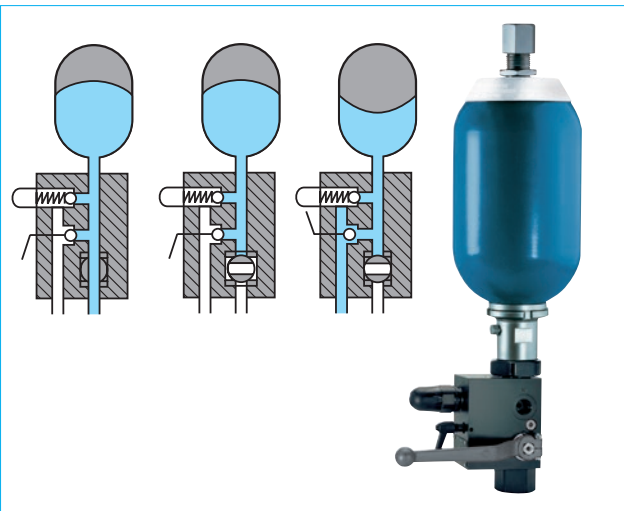


Ball valve-function systems

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



Locking device available



Easy orde guide:

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 = G 1/2 (DIN EN ISO 228-1)
G = G1 (DIN EN ISO 228-1)
H = G1 1/2 (DIN EN ISO 228-1)
J = 1/2-14NPT (ANSI/ASME B1.20.1-1983)
K = 1-11 1/2NPT (ANSI/ASME B1.20.1-1983)
L = 1 1/2-11 1/2NPT (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 = G 1/2 (DIN EN ISO 228-1)
G = G1 (DIN EN ISO 228-1)
H = G1 1/2 (DIN EN ISO 228-1)
J = 1/2-14NPT (ANSI/ASME B1.20.1-1983)
K = 1-11 1/2NPT (ANSI/ASME B1.20.1-1983)
L = 1 1/2-11 1/2NPT (ANSI/ASME B1.20.1-1983)
M = other threads

Adapter fitting for accumulator (S)

e.g. S010 = G 3/4A (DIN EN ISO 228-1) refer to table

Body material

1 = 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 electromagnetic 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

RS 10 F S010 1 1 N 300 E Y 1

Securing, isolating and depressurising hydraulic pressure accumulators:

Simple operation stands 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:

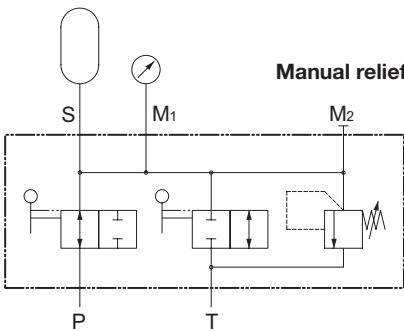
The modular design concept makes the safety block particularly economical and flexible to meet customer requirements. The body is assembled at the factory with adapter fittings in accordance with your order.

Applications/functions:

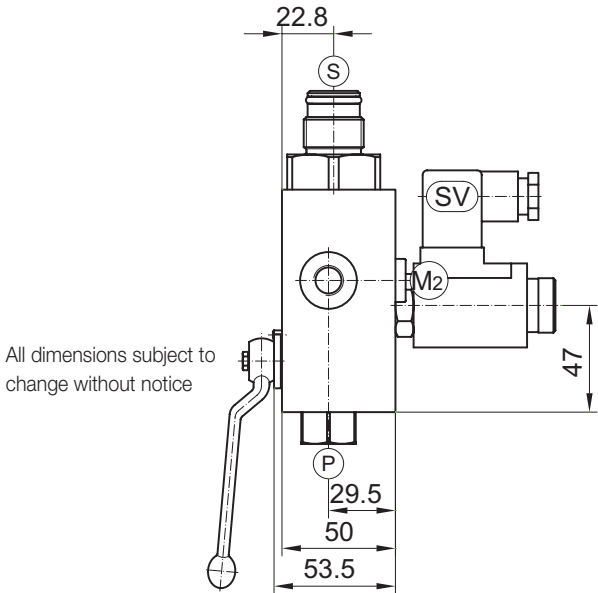
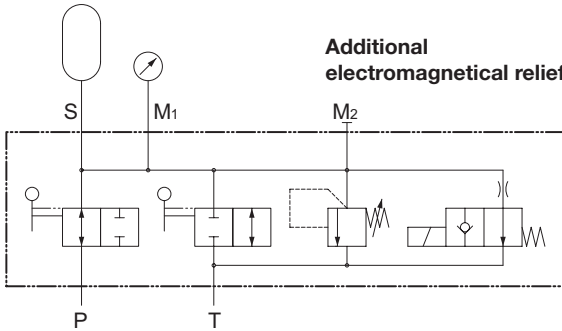
For liquid media as per the compatibility table in the technical data appendix

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

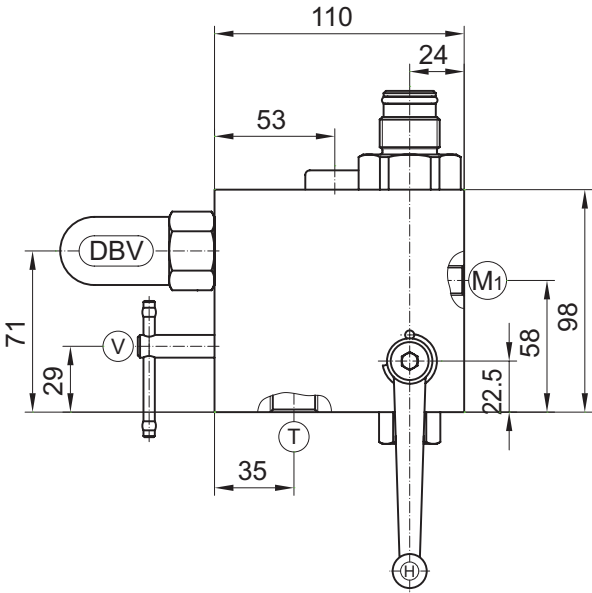
Accumulator safety blocks · with integrated 2-way ball valve type RSA



NG 10



All dimensions subject to change without notice



- P = Pump connection**
M-version 400 bar
E-version 350 bar
- T = Tank connection**
- S = Accumulator connection**
- M₁ = Test gauge connection**
G1/4 (DIN EN ISO 228-1)
- M₂ = 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

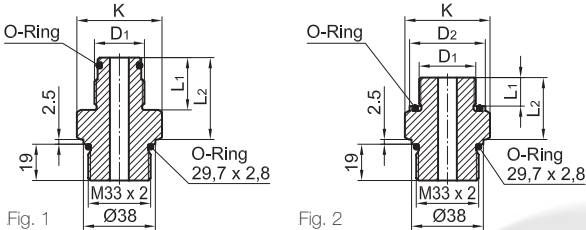


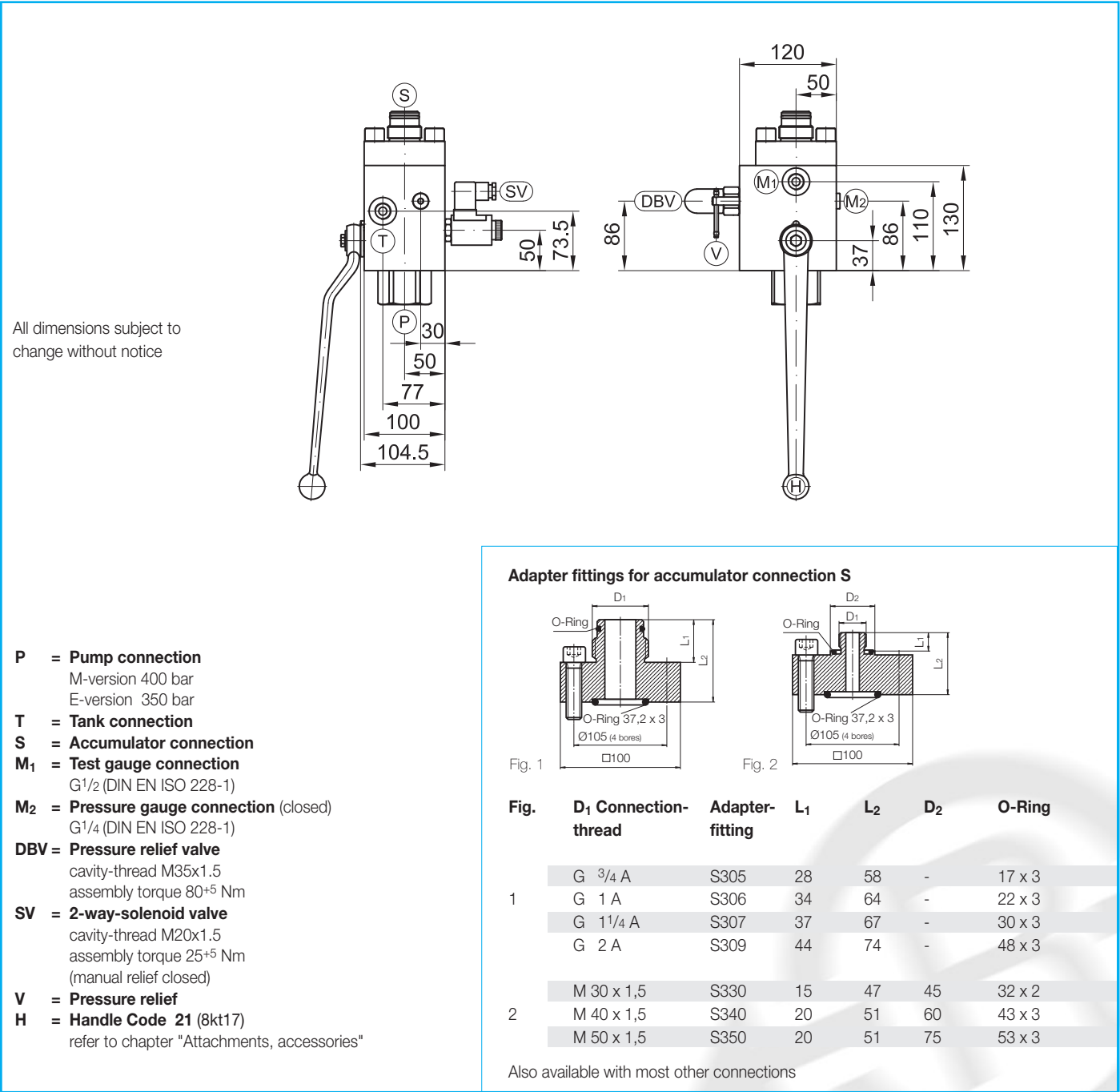
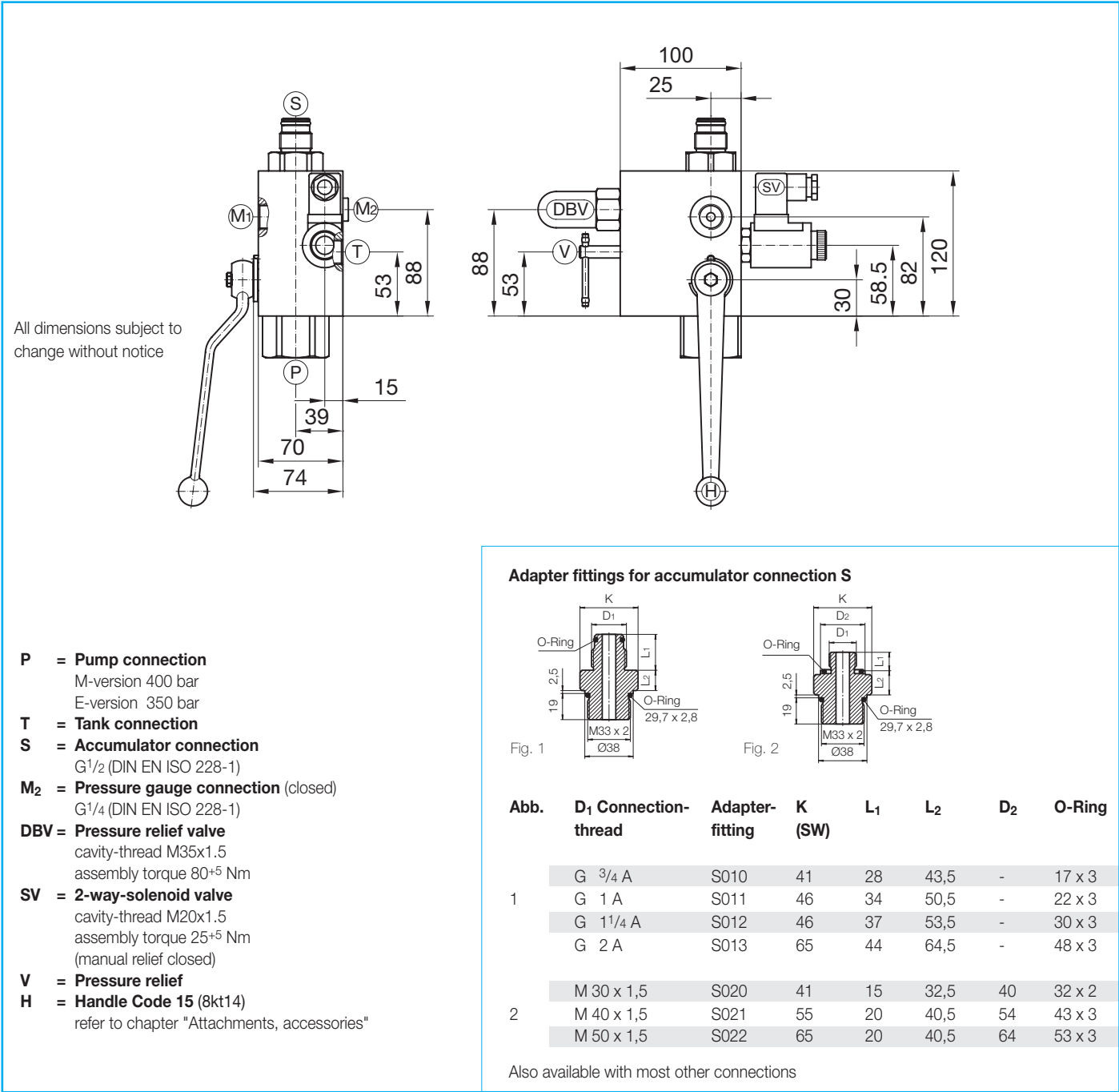
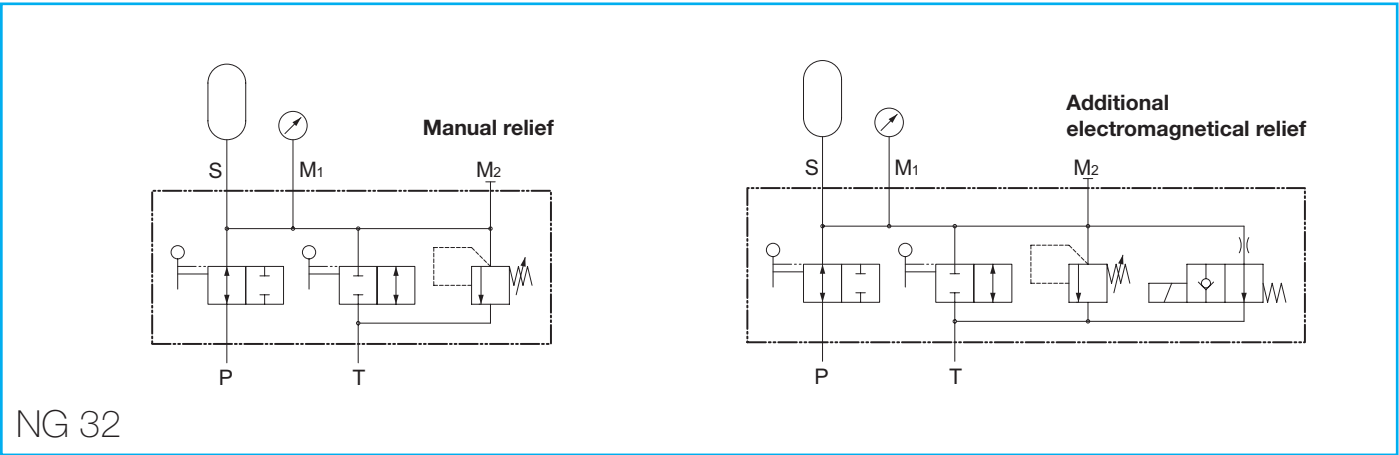
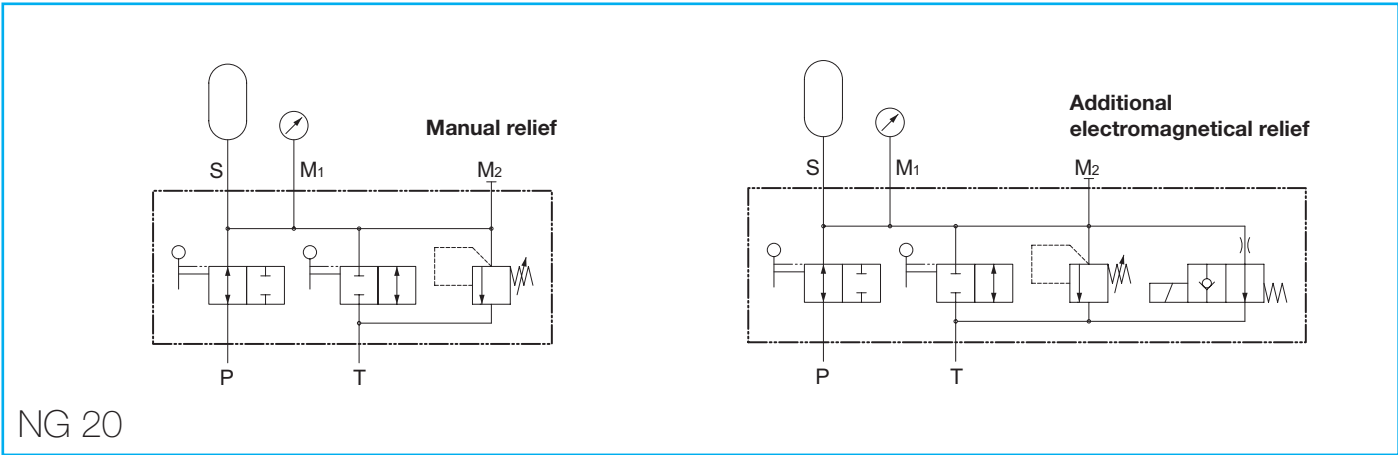
Fig.	D ₁ Connection-thread	Adapter-fitting	K (SW)	L ₁	L ₂	D ₂	O-Ring
1	G 3/4 A	S010	41	28	43,5	-	17 x 3
	G 1 A	S011	46	34	50,5	-	22 x 3
	G 1 1/4 A	S012	46	37	53,5	-	30 x 3
	G 2 A	S013	65	44	64,5	-	48 x 3
2	M 30 x 1,5	S020	41	15	32,5	40	32 x 2
	M 40 x 1,5	S021	55	20	40,5	54	43 x 3
	M 50 x 1,5	S022	65	20	40,5	64	53 x 3

Also available with most other connections

Ball valve-function systems

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

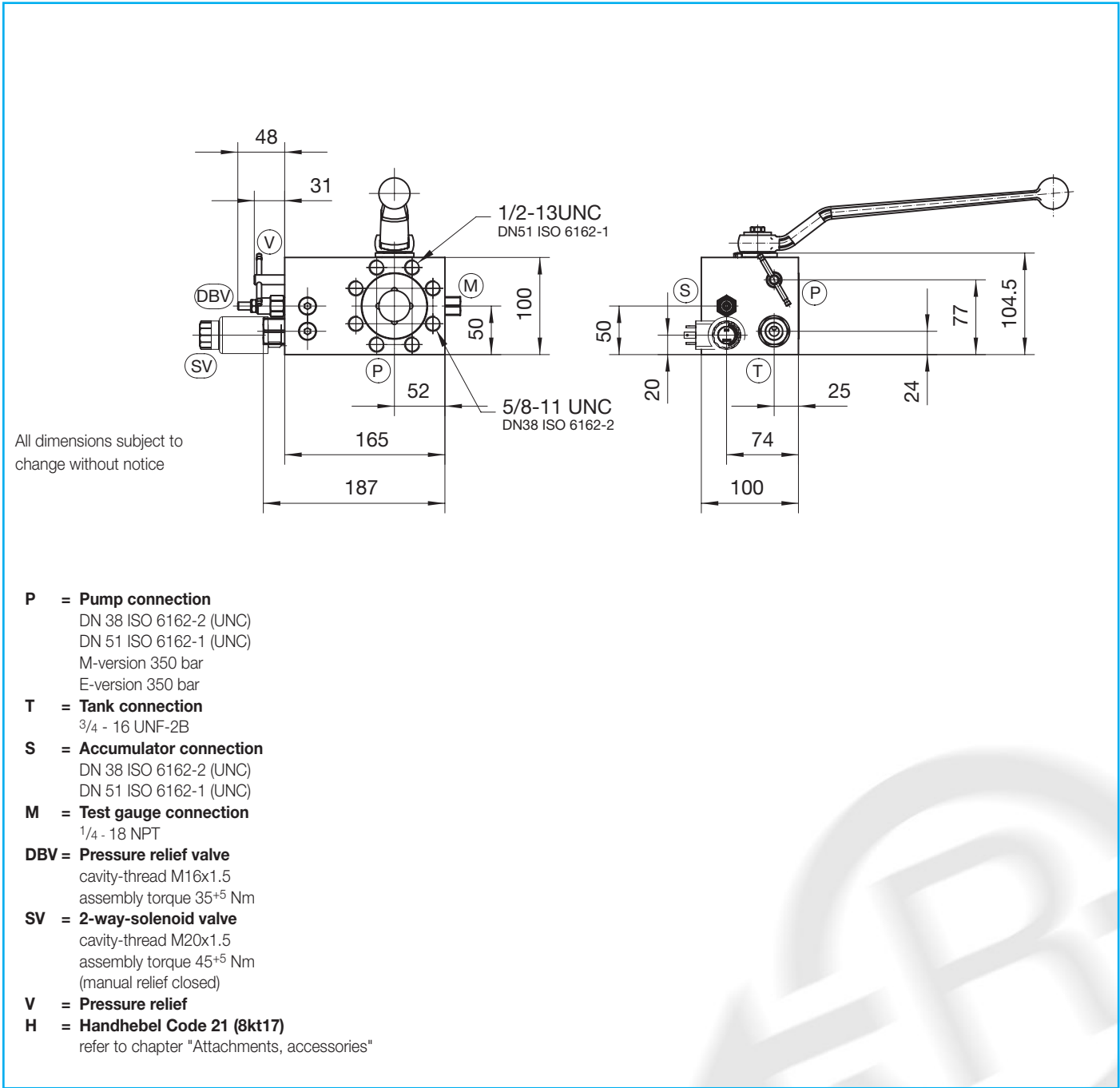
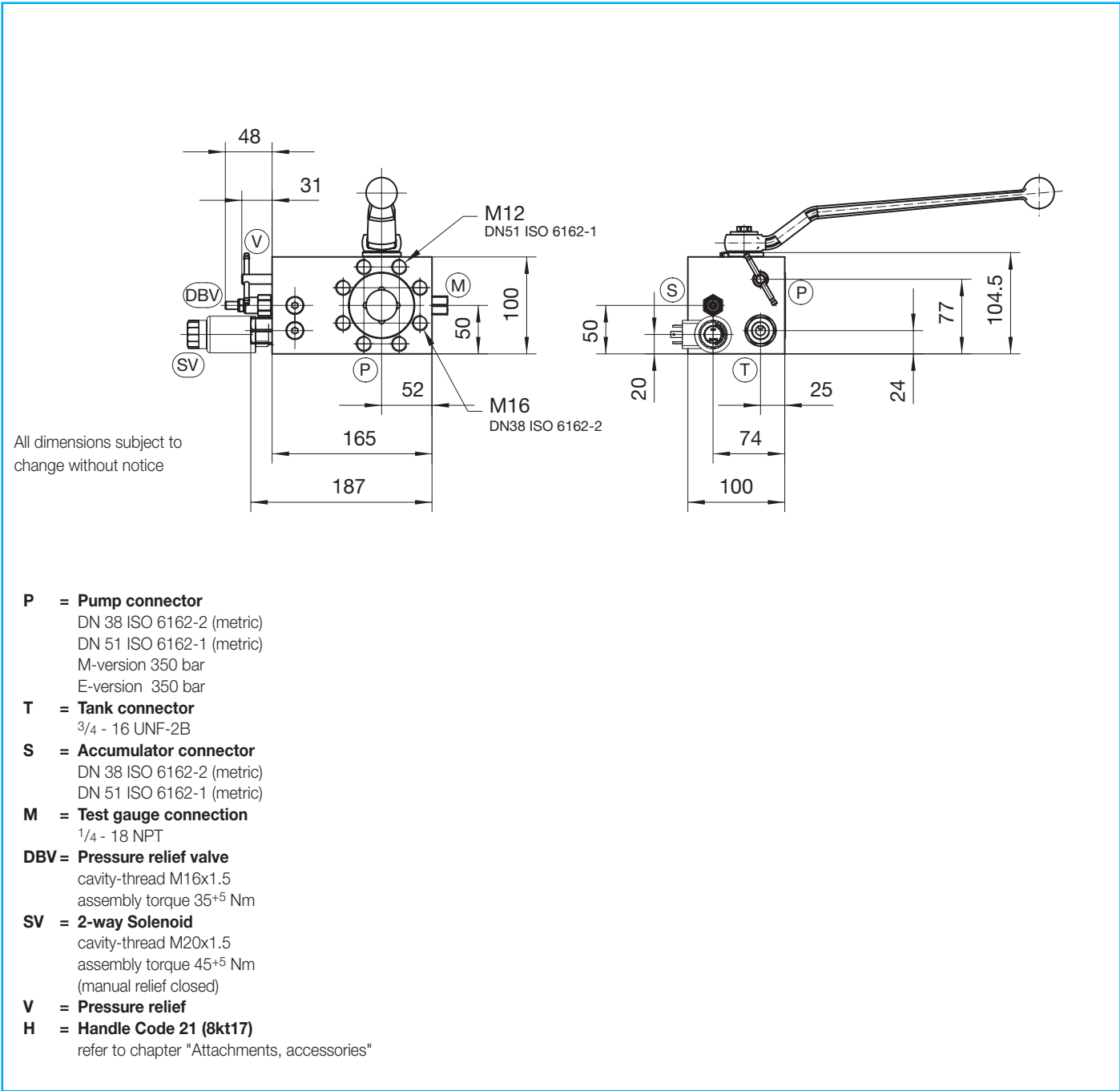
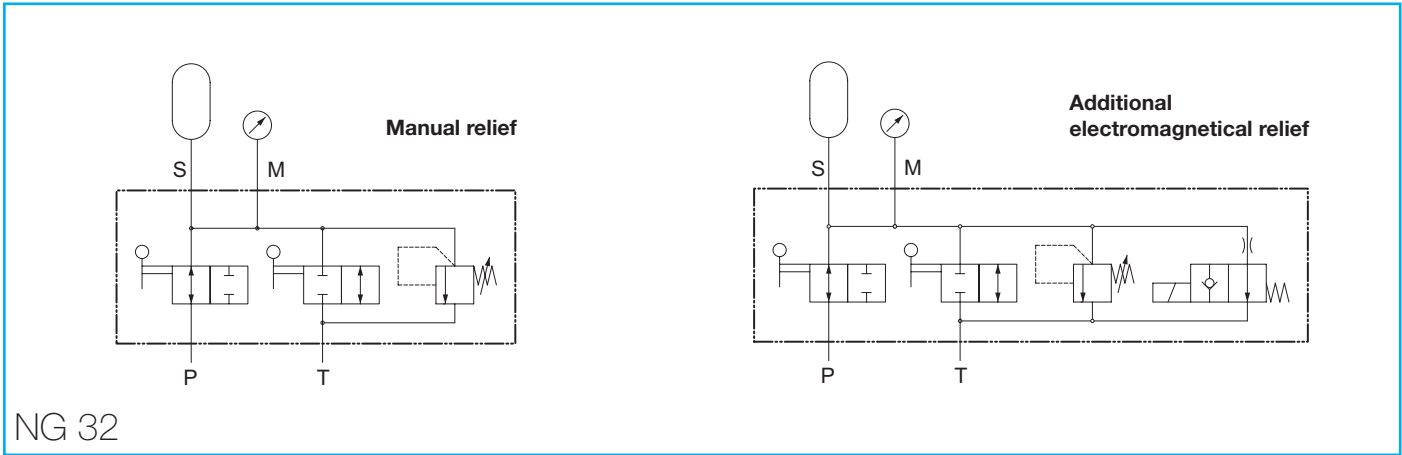
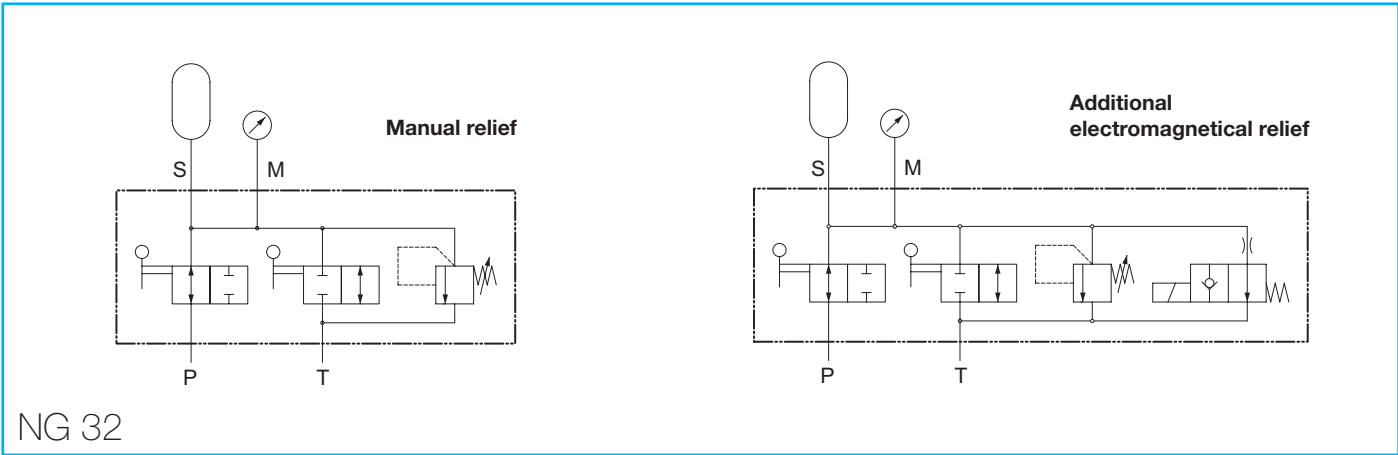
Accumulator safety blocks · with integrated 2-way ball valve type RSA



Ball valve-function systems

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

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

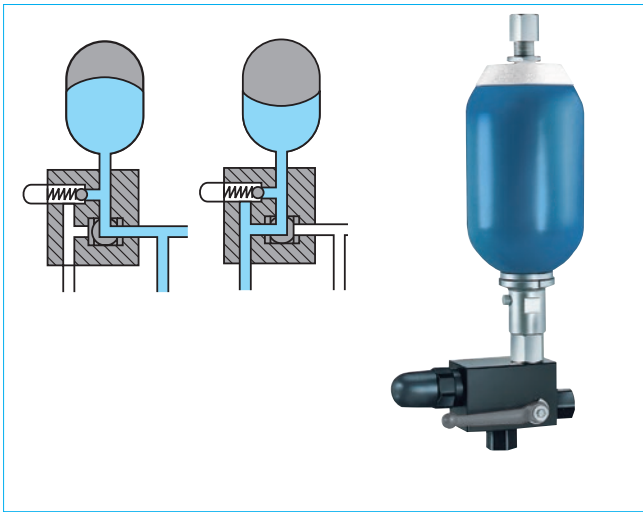


Ball valve-function systems

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



Locking device available



Securing, isolating and depressurizing hydraulic pressure accumulators:

Simple operation stands 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 relief of the accumulator – closed. The integrated 3-way ball valve ensures that 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 separate isolation of the accumulator is desired, refer to the "Accumulator 2-way safety block" information.

Flexibility thanks to a modular design:

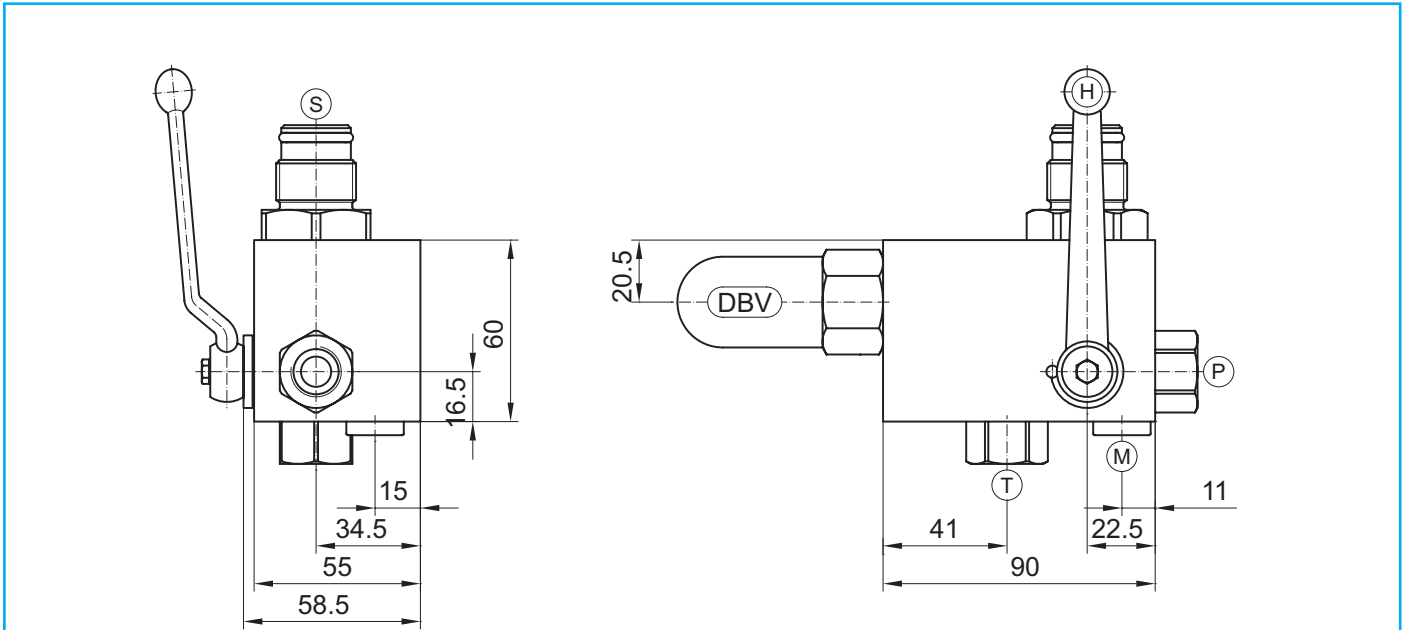
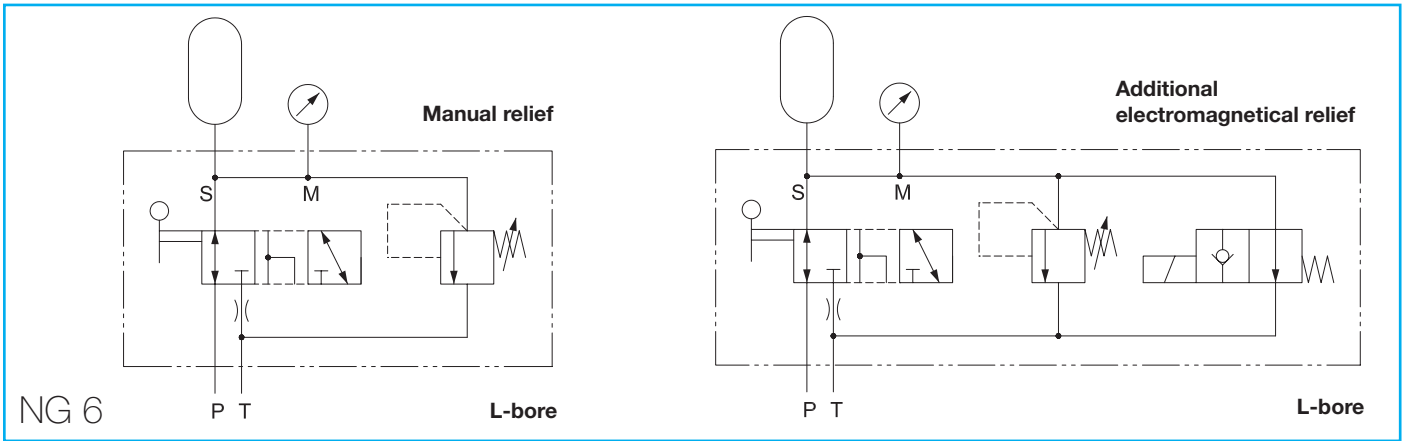
The modular design concept makes the connection block particularly economical and flexible to meet customer requirements. The body is assembled at the factory with adapter fittings in accordance with your order.

Applications/functions:

For liquid media as per the compatibility table in the technical data appendix
The accumulator safety blocks can be supplied with solenoid-operated relief valves if desired. Every body 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.

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

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



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)**
G 1/4 (DIN EN ISO 228-1)
- DBV = Pressure relief valve**
cavity-thread M28x1.5
assembly torque 50+5 Nm
- SV = 2-way Solenoid**
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

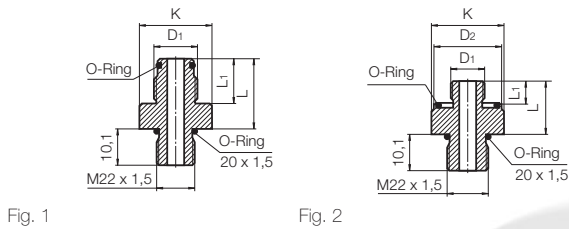
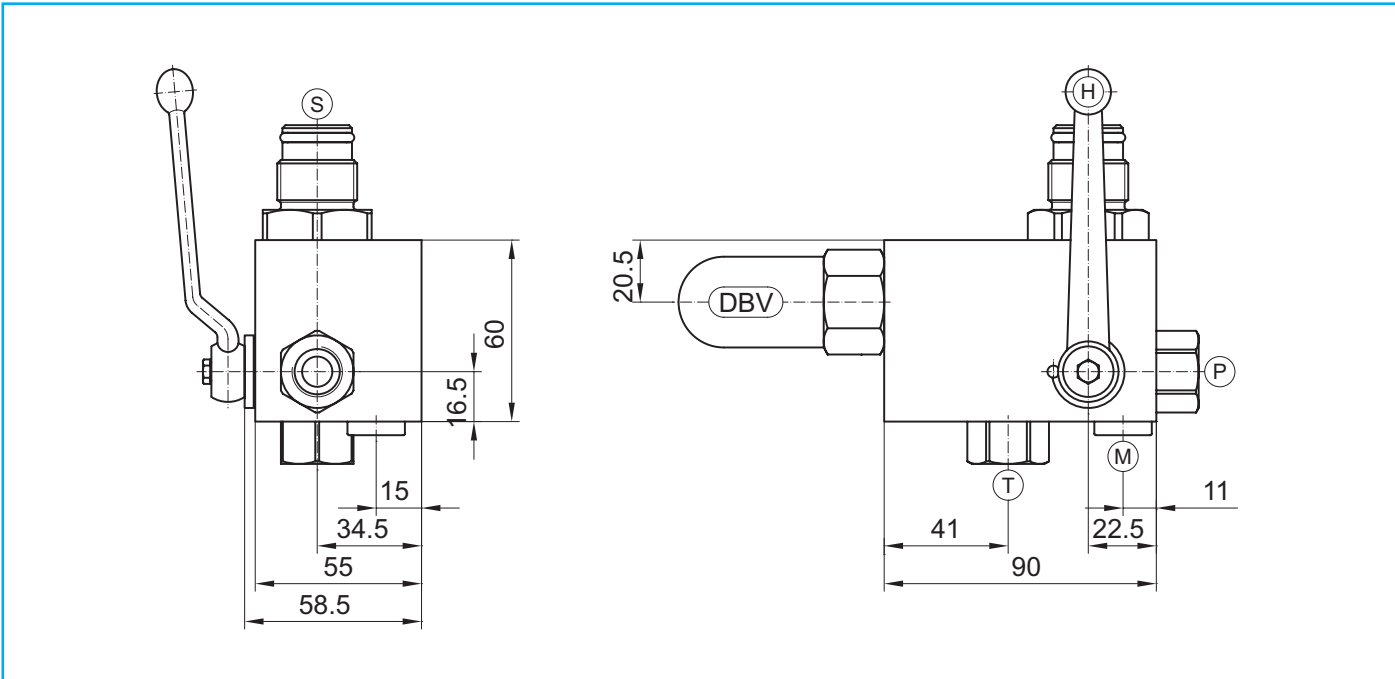
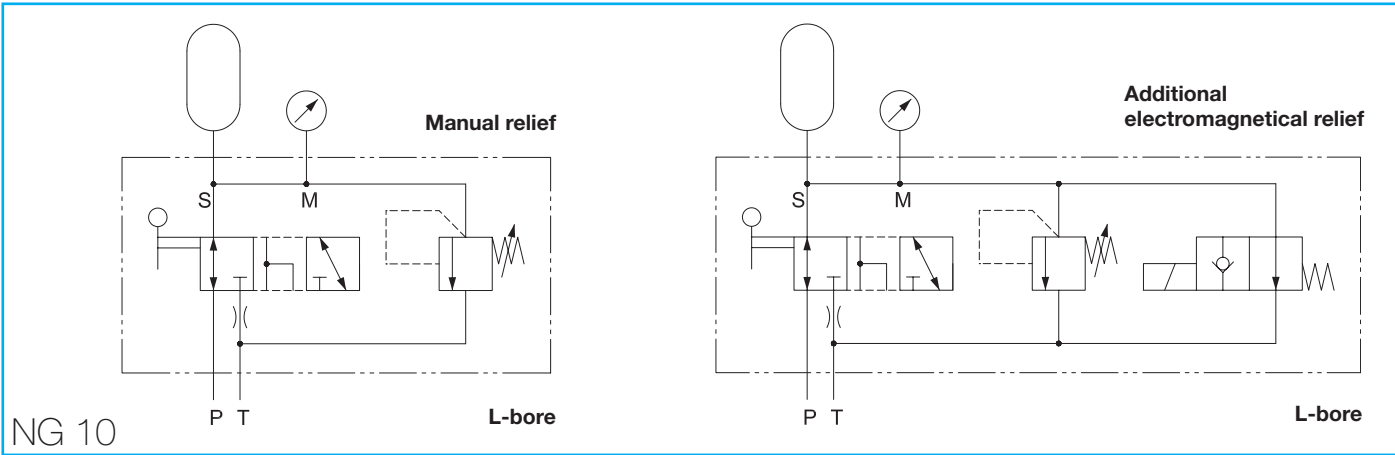


Fig.	D1 Connection-thread	Adapter-fitting	K (SW)	L	L1	D2	O-Ring
1	G 3/4 A	S 500	36	38	28	-	17 x 3
	G 1 A	S 501	41	44	34	-	22 x 3
	G 1 1/4 A	S 502	46	47	37	-	30 x 3
	G 2 A	S 503	65	54	44	-	48 x 3
2	M 30 x 1,5	S 550	41	25	15	40	32 x 2
	M 40 x 1,5	S 551	55	30	20	54	43 x 3
	M 50 x 1,5	S 552	65	30	20	64	53 x 3

Also available with most other connections

Ball valve-function systems

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



- 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)
G 1/4 (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)
- H** = Handle Code 13 (8kt8)
refer to chapter "Attachments, accessories"

Adapter fittings for accumulator connection S

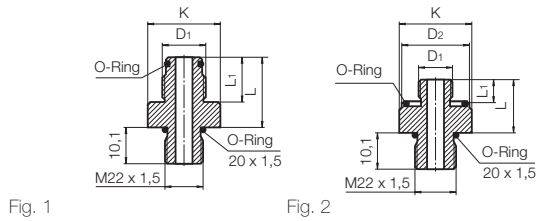
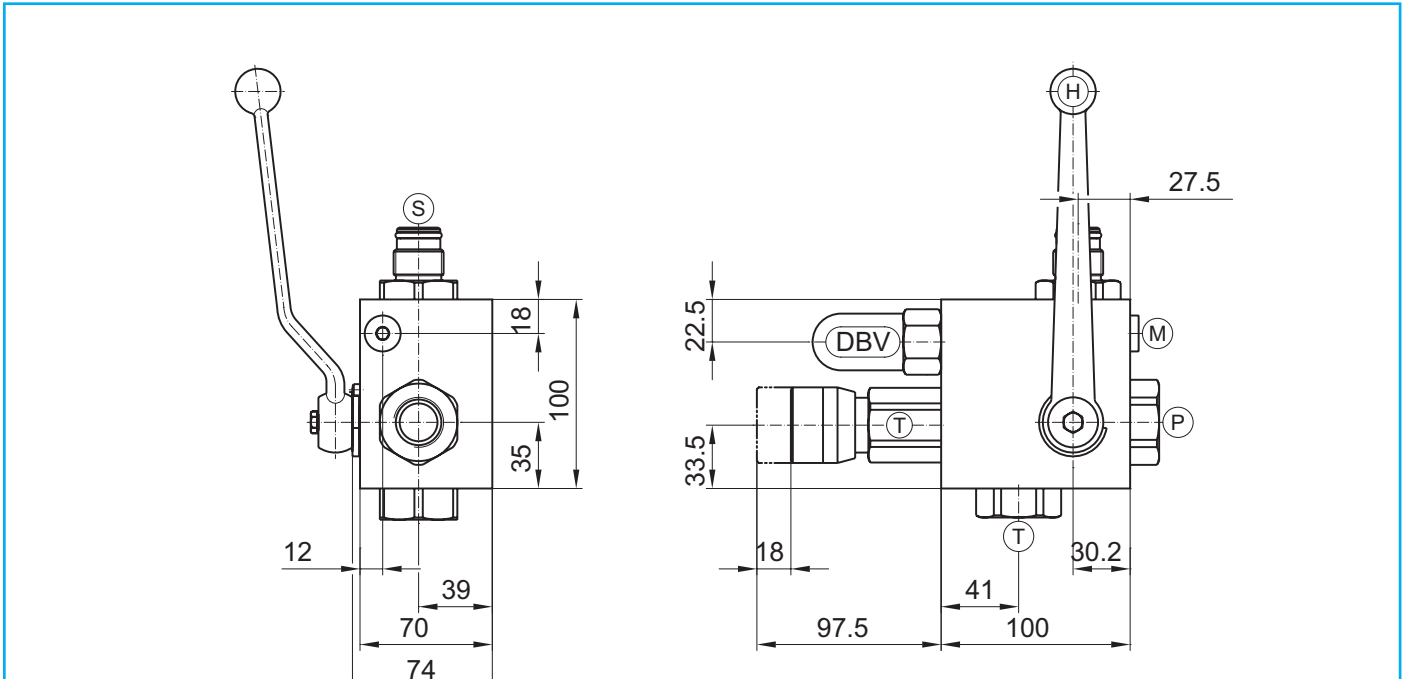
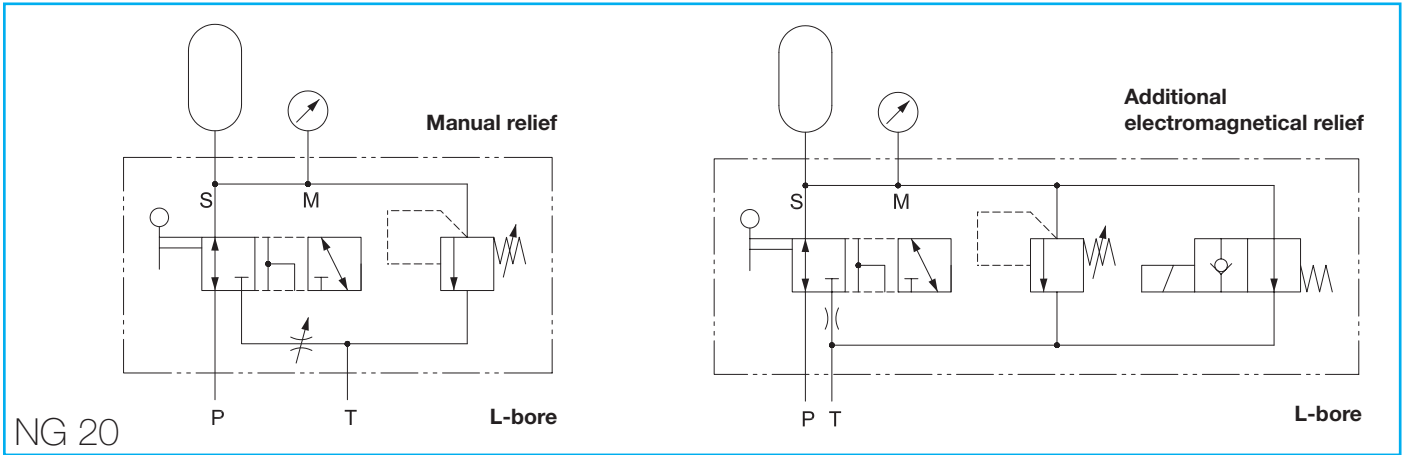


Fig.	D ₁ Connection-thread	Adapter-fitting	K (SW)	L	L ₁	D ₂	O-Ring
1	G 3/4 A	S 500	36	38	28	-	17 x 3
	G 1 A	S 501	41	44	34	-	22 x 3
	G 1 1/4 A	S 502	46	47	37	-	30 x 3
	G 2 A	S 503	65	54	44	-	48 x 3
2	M 30 x 1,5	S 550	41	25	15	40	32 x 2
	M 40 x 1,5	S 551	55	30	20	54	43 x 3
	M 50 x 1,5	S 552	65	30	20	64	53 x 3

Also available with most other connections

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



- All dimensions subject to change without notice
- EV** = Pressure relief valve
(selectively manually electromagnetical)
- P** = Pump connection
M-version 315 bar
E-version 315 bar
- T** = Tank connection
- S** = Accumulator connection
- M** = Pressure gauge connection (closed)
G 1/4 (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)
- H** = Handle Code 15 (8kt14)
refer to chapter "Attachments, accessories"

Adapter fittings for accumulator connection S

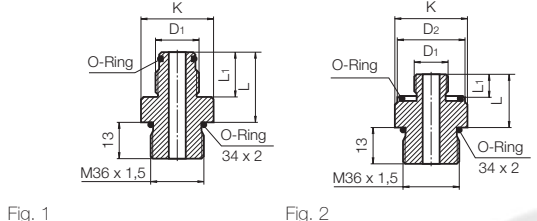
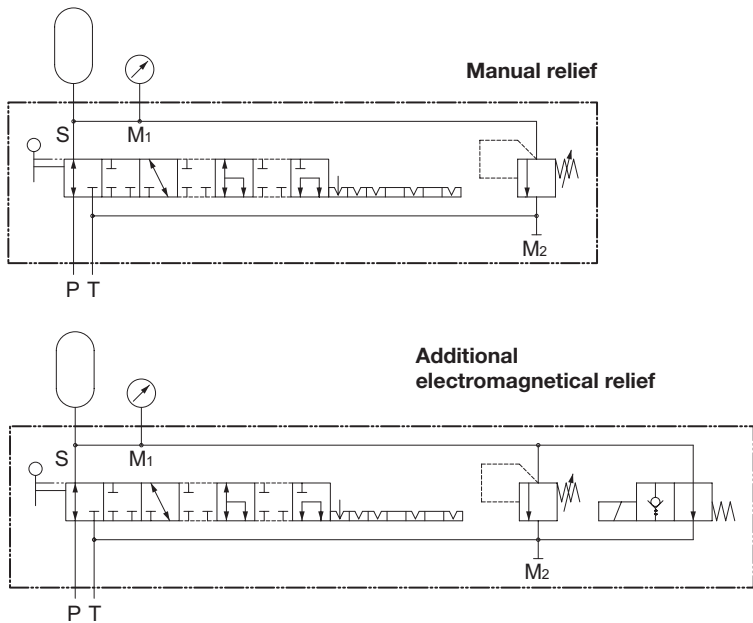


Fig.	D ₁ Connection-thread	Adapter-fitting	K (SW)	L	L ₁	D ₂	O-Ring
1	G 3/4 A	S 600	41	38	28	-	17 x 3
	G 1 A	S 601	41	44	34	-	22 x 3
	G 1 1/4 A	S 602	46	47	37	-	30 x 3
	G 2 A	S 603	65	54	44	-	48 x 3
2	M 30 x 1,5	S 650	41	25	15	40	32 x 2
	M 40 x 1,5	S 651	55	30	20	54	43 x 3
	M 50 x 1,5	S 652	65	30	20	64	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 operation 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:

Nominal size (NG) ball valve

10 = NG 10
20 = NG 20 (on request)
32 = NG 32 (on request)

Connection thread pump (P)

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

Connection thread tank (T)

A = M18x1.5 light series (ISO 8434-1)
B = M22x1.5 heavy series (ISO 8434-1)
C = G 3/8 (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 3/4A (DIN EN ISO 228 - 1) refer to table

Body material

1 = 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

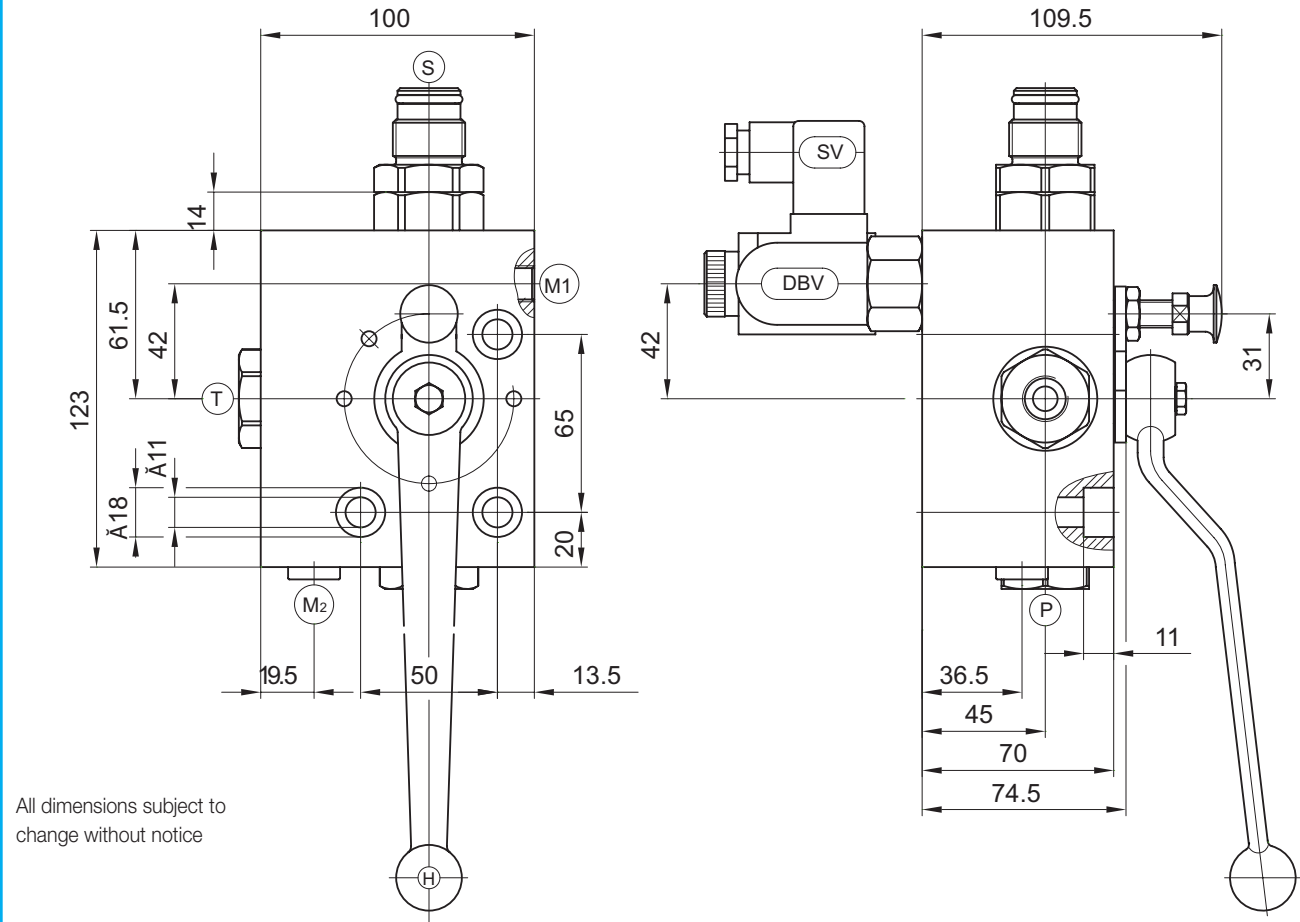
X = Delivered without solenoid valve
Y = open when de-energized
Z = closed when de-energized

Solenoid valve voltage

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

RSM 10 C C S500 1 1 N 250 E Y 1

NG 10



All dimensions subject to change without notice

- P = Pump connection**
M-version 400 bar
E-version 350 bar
- T = Tank connection**
- S = Accumulator connection**
- M₁ = Test gauge connection**
G 1/4 (DIN EN ISO 228-1)
- M₂ = Pressure gauge connection (closed)**
G 1/4 (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 (8k114)**
refer to chapter "Attachments, accessories"

Adapter fittings for accumulator connection S

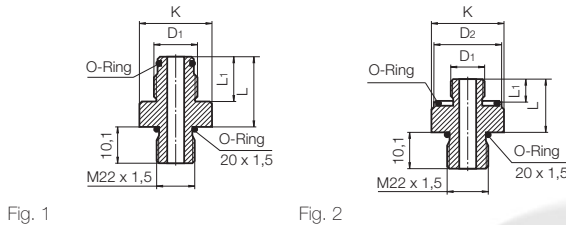


Fig.	D ₁ Connection-thread	Adapter-fitting	K (SW)	L	L ₁	D ₂	O-Ring
1	G 3/4 A	S 500	36	38	28	-	17 x 3
	G 1 A	S 501	41	44	34	-	22 x 3
	G 1 1/4 A	S 502	46	47	37	-	30 x 3
	G 2 A	S 503	65	54	44	-	48 x 3
2	M 30 x 1,5	S 550	41	25	15	40	32 x 2
	M 40 x 1,5	S 551	55	30	20	54	43 x 3
	M 50 x 1,5	S 552	65	30	20	64	53 x 3

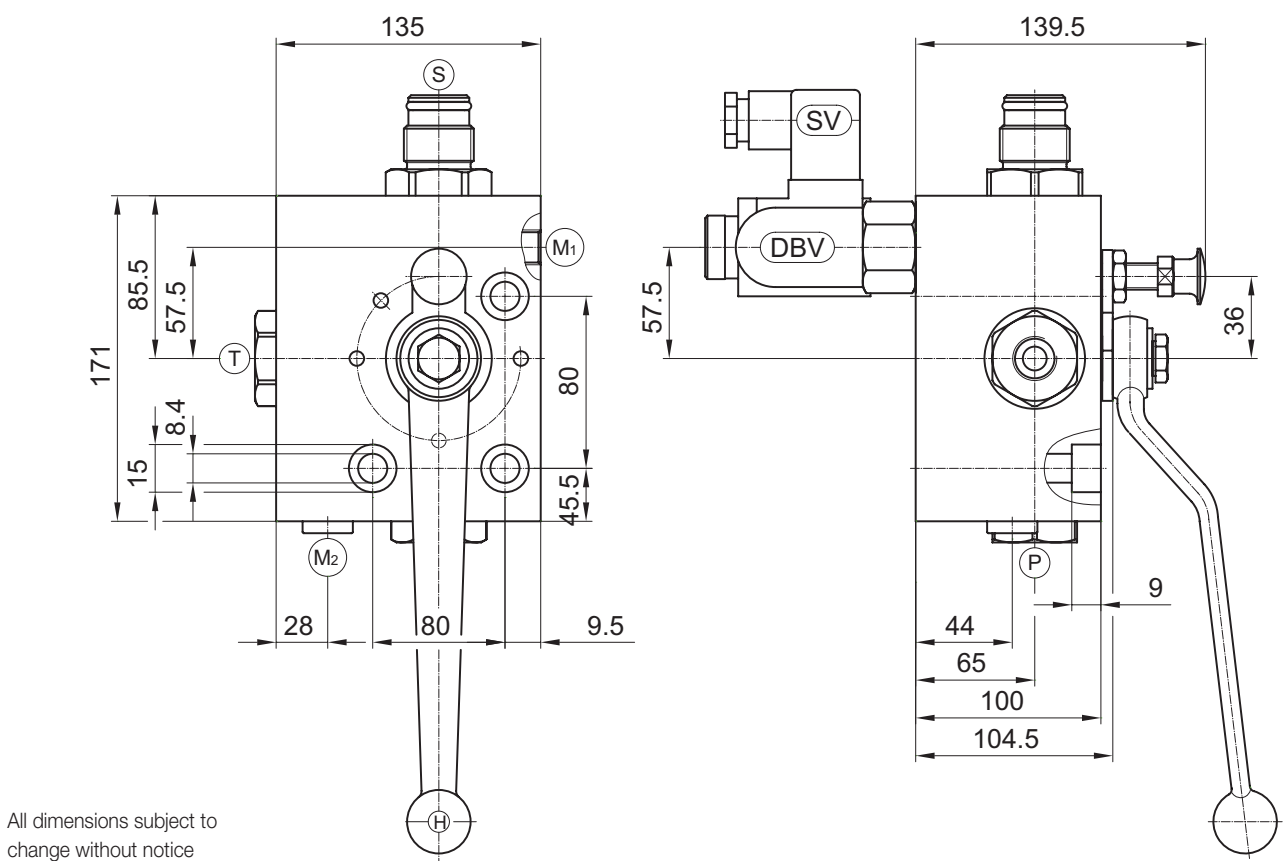
Also available with most other connections

Ball valve-function systems

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

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

NG 20



All dimensions subject to change without notice

NEW!

- P** = Pump connection
M-version 400 bar
E-version 350 bar
- T** = Tank connection
- S** = Accumulator connection
- M₁** = Test gauge connection
G 1/4 (DIN EN ISO 228-1)
- M₂** = Pressure gauge connection (closed)
G 1/4 (DIN EN ISO 228-1)
- DBV** = Pressure relief valve
cavity-thread M35 x 1.5
assembly torque 80⁺⁵ Nm
- SV** = 2-way-solenoid valve
cavity-thread M20 x 1.5
assembly torque 25⁺⁵ Nm
- H** = Handle Code 23 (8kt19)
refer to chapter "Attachments, accessories"

Adapter fittings for accumulator connection S

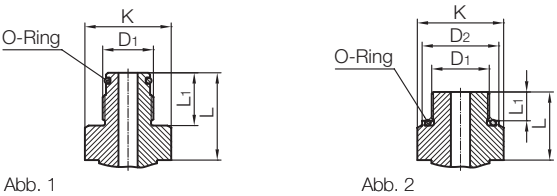
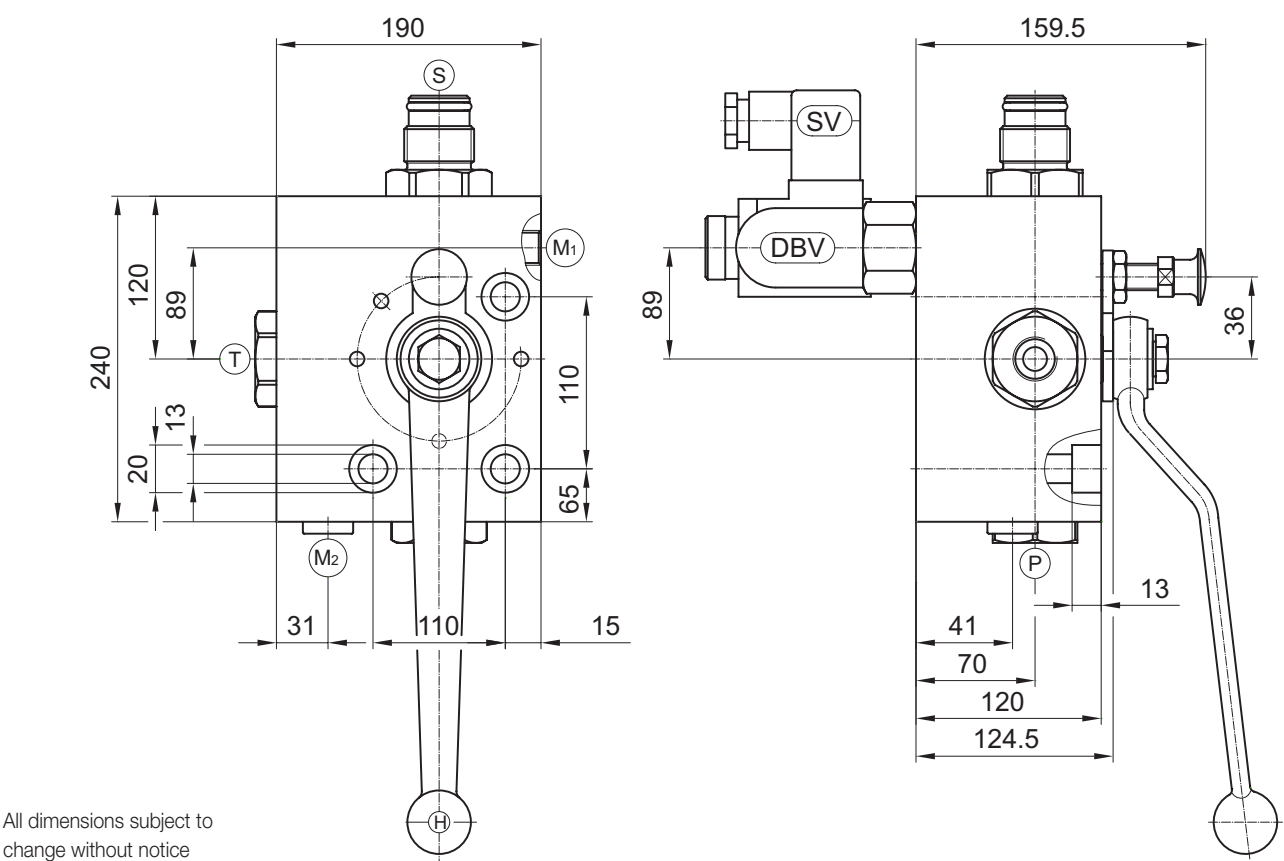


Fig.	D ₁ Connection-thread	Adapter-fitting	K (SW)	L	L ₁	D ₂	O-Ring
1	G 1 1/4 A	S 701	50	47	37	-	30 x 3
	G 2 A	S 702	65	54	44	-	48 x 3
2	M 40 x 1,5	S 751	60	30	20	54	43 x 3
	M 50 x 1,5	S 752	70	30	20	64	53 x 3

Also available with most other connections

NG 32



All dimensions subject to change without notice

NEW!

- P** = Pump connection
GM-version 400 bar
E-version 350 bar
- T** = Tank connection
- S** = Accumulator connection
- M₁** = Test gauge connection
G 1/4 (DIN EN ISO 228-1)
- M₂** = Pressure gauge connection (closed)
G 1/4 (DIN EN ISO 228-1)
- DBV** = Pressure relief valve
cavity-thread M35 x 1.5
assembly torque 80⁺⁵ Nm
- SV** = 2-way-solenoid valve
cavity-thread M20 x 1.5
assembly torque 25⁺⁵ Nm
- H** = Handle Code 23 (8kt19)
refer to chapter "Attachments, accessories"

Adapter fittings for accumulator connection S

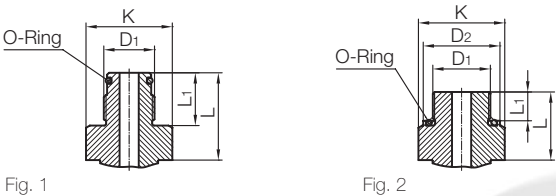


Fig.	D ₁ Connection-thread	Adapter-fitting	K (SW)	L	L ₁	D ₂	O-Ring
1	G 2 A	S 803	70	54	44	-	48 x 3
2	M 50 x 1,5	S 852	70	30	20	64	53 x 3

Also available with most other connections