

# Accumulator safety block

**RE 50128/07.10**  
Replaces: 03.08

1/20

## Type 0532VAW

Nominal diameter DN20; DN32  
 Component series A1  
 Maximum operating pressure 330 bar [4800 psi]



H7559\_d

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## Features

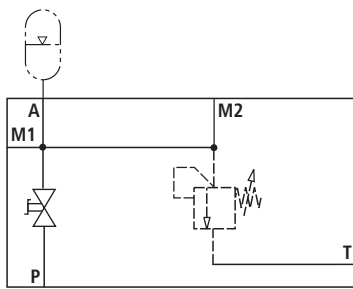
- Ready for connection
- Manual or electro-magnetic unloading
- Large number of variants
- Compact design

Information on available spare parts:  
[www.boschrexroth.com/spc](http://www.boschrexroth.com/spc)

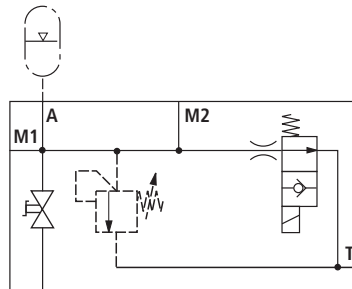


## Standard types DN20

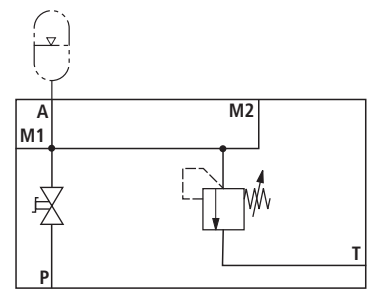
### Symbols



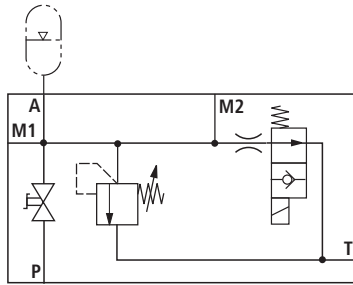
Symbol 1



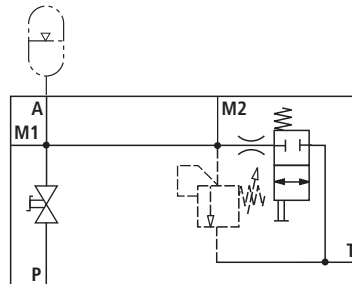
Symbol 2



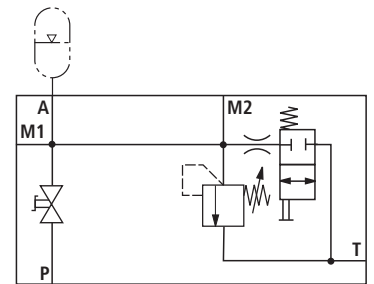
Symbol 3



Symbol 4



Symbol 8

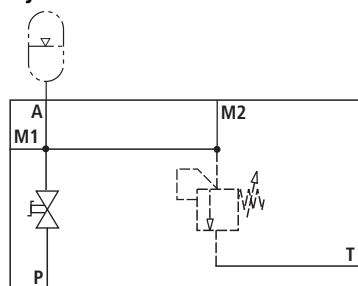


Symbol 10

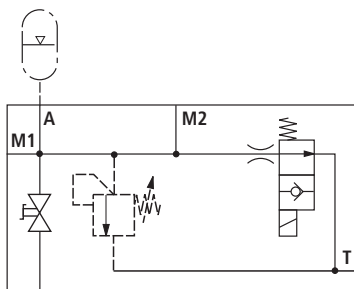
Symbol	Set pressure of the pressure relief valve in bar [psi]	Maximum securable delivery volume l/min [gpm]	Denomination	Material no.
1	–	–	0532VAW20/1/FKM/-/-/Z/00/-/-/A1	0532015120
2	–	–	0532VAW20/2/FKM/-/-/Z/03/G/24/00/A1	0532015121
3	50 [730]	40 [10.56]	0532VAW20/3/FKM/050/D/Z/00/-/-/A1	R901192665
3	70 [1015]	50 [13.20]	0532VAW20/3/FKM/070/D/Z/00/-/-/A1	0532015123
3	100 [1450]	100 [26.40]	0532VAW20/3/FKM/100/D/Z/00/-/-/A1	0532015125
3	140 [2030]	100 [26.40]	0532VAW20/3/FKM/140/D/Z/00/-/-/A1	0532015127
3	160 [2320]	100 [26.40]	0532VAW20/3/FKM/160/D/Z/00/-/-/A1	0532015129
3	211 [3060]	100 [26.40]	0532VAW20/3/FKM/211/D/Z/00/-/-/A1	0532015131
3	250 [3625]	130 [34.32]	0532VAW20/3/FKM/250/D/Z/00/-/-/A1	0532015133
3	280 [4060]	130 [34.32]	0532VAW20/3/FKM/280/D/Z/00/-/-/A1	0532015137
3	330 [4800]	150 [39.60]	0532VAW20/3/FKM/330/D/Z/00/-/-/A1	0532015135
4	70 [1015]	50 [13.20]	0532VAW20/4/FKM/070/D/Z/03/G/24/00/A1	0532015122
4	100 [1450]	100 [26.40]	0532VAW20/4/FKM/100/D/Z/03/G/24/00/A1	0532015124
4	160 [2320]	100 [26.40]	0532VAW20/4/FKM/160/D/Z/03/G/24/00/A1	0532015126
4	211 [3060]	100 [26.40]	0532VAW20/4/FKM/211/D/Z/03/G/24/00/A1	0532015128
4	250 [3625]	130 [34.32]	0532VAW20/4/FKM/250/D/Z/03/G/24/00/A1	0532015130
4	280 [4060]	130 [34.32]	0532VAW20/4/FKM/280/D/Z/03/G/24/00/A1	0532015134
4	330 [4800]	150 [39.60]	0532VAW20/4/FKM/330/D/Z/03/G/24/00/A1	0532015132
8	–	–	0532VAW20/8/FKM/-/-/Z/01/-/-/A1	0532015139
10	211 [3060]	100 [26.40]	0532VAW20/10/FKM/211/K/Z/01/-/-/A1	R901131132
10	330 [4800]	150 [39.60]	0532VAW20/10/FKM/330/K/Z/01/-/-/A1	R901174602

## Standard types DN32

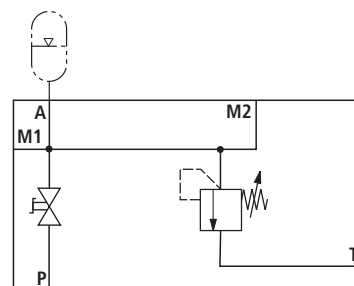
### Symbols



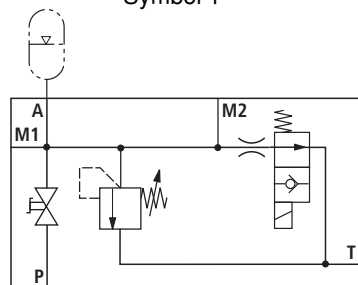
Symbol 1



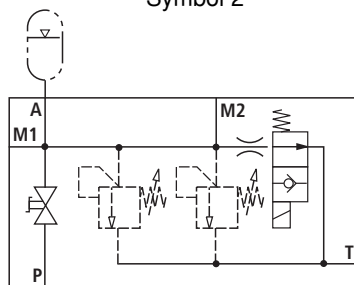
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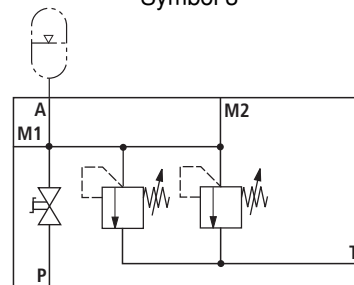
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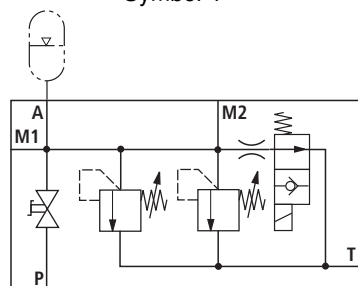
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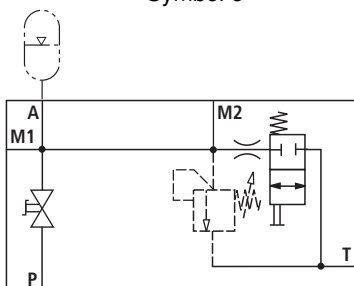
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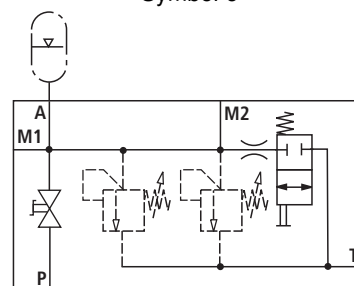
Symbol 6



Symbol 7



Symbol 8



Symbol 9

Symbol	Set pressure of the pressure relief valve in bar [psi]	Maximum securable delivery volume l/min [gpm]	Denomination	Material no.
1	-	-	0532VAW32/1/FKM/-/Z/00/-/A1	0532016051
2	-	-	0532VAW32/2/FKM/-/Z/03/G/24/00/A1	0532016050
3	211 [3060]	100 [26.40]	0532VAW32/3/FKM/211/D/Z/00/-/A1	0532016053
3	330 [4800]	150 [39.60]	0532VAW32/3/FKM/330/D/Z/00/-/A1	0532016055
4	160 [2320]	100 [26.40]	0532VAW32/4/FKM/160/D/Z/03/G/24/00/A1	0532016054
4	211 [3060]	100 [26.40]	0532VAW32/4/FKM/211/D/Z/03/G/24/00/A1	0532016056
4	330 [4800]	150 [39.60]	0532VAW32/4/FKM/330/D/F/03/G/24/00/A1	0532016060
4	330 [4800]	150 [39.60]	0532VAW32/4/FKM/330/D/Z/03/G/24/00/A1	0532016058
5	-	-	0532VAW32/5/FKM/-/Z/03/G/24/00/A1	0532016052
7	211 [3060]	200 [52.80]	0532VAW32/7/FKM/211/DK/F/03/G/24/00/A1	0532016070
7	250 [3625]	260 [68.63]	0532VAW32/7/FKM/250/DK/F/03/G/24/00/A1	0532016072
7	330 [4800]	300 [79.20]	0532VAW32/7/FKM/330/DK/F/03/G/24/00/A1	R901166828
8	-	-	0532VAW32/8/FKM/-/Z/01/-/A1	0532016061
9	-	-	0532VAW32/9/FKM/-/F/01/-/A1	R901115110
9	-	-	0532VAW32/9/FKM/-/Z/01/-/A1	0532016063

## Function

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The accumulator safety block is used for safety, isolating and unloading functions in hydraulic accumulators.

It meets the requirements and safety regulations according to the Technical rules for pressure containers (TRB 403 and/or TRB 404).

The connection between the accumulator safety block and the accumulator is established by means of an accumulator adapter. An optional, additional electrically operated 2 way valve (normally open) allows for the automatic unloading of the accumulator upon shut-down or "emergency stop function".

By means of the pressure relief valve, the accumulator is protected from inadmissible overpressure.

The **pressure relief valve** must **not assume control tasks!**

Care must be taken that the distance between the pressure set at the pressure relief valve and the operating pressure is sufficient. Responding of the pressure relief valve is to be prevented as far as possible.

**Technical data** (For applications outside these parameters, please consult us!)**general**

Direct operated pressure relief valve	Type	0532VAW...													
Weight	Nominal diameter	20						32							
	DN														
	Symbol	1	2	3	4	8	10	1	2	3	4	5	7	8	9
	kg	4.4	4.7	4.8	5.6	4.6	4.5	13.8	14.3	15.2	14.7	14.2	14.4	14.4	14.3
	[lbs]	9.7	10.3	10.5	12.3	10.1	9.9	30.3	31.4	33.4	32.3	31.2	31.6	31.6	31.4
Installation position	Any														
Ambient temperature range	°C, [°F]	-15 to +80 [5 to 176]													

**hydraulic**

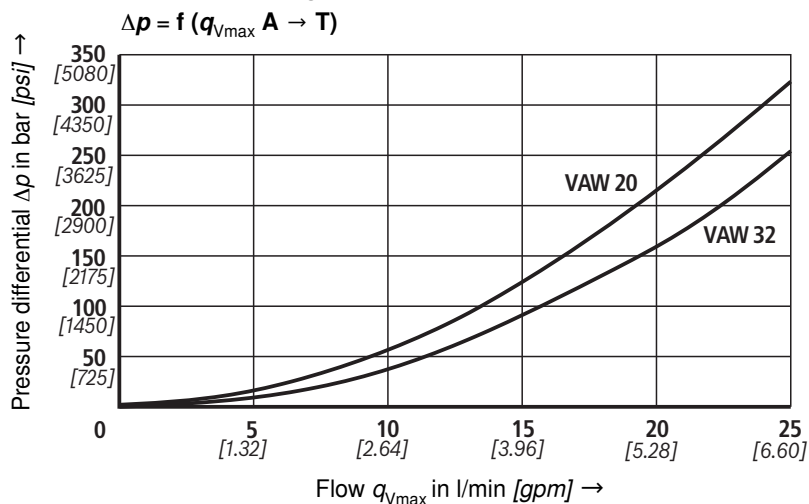
Maximum operating pressure	bar [psi]	330 [4800]
Maximum, securable flow	l/min [gpm]	See page 3 and 4
$\Delta p$ -Q characteristic curve	See page 6 and 7	
Hydraulic fluid	Mineral oil (HL, HLP) according to DIN 51524 and flame-resistant fluids according to DIN 24320	
Hydraulic fluid temperature range	°C, [°F]	-15 to +80 [5 to 176]
Seal material	FKM seals	
Viscosity range	mm <sup>2</sup> /s	12 to 380
Maximum permitted degree of contamination of the hydraulic fluid - cleanliness class according to ISO 4406 (c)	Class 20/18/15 <sup>1)</sup>	

**electrical**

Voltage type	Direct voltage	
Available voltages	U	V
Protection class according to VDE 0470-1 (DIN EN 60529), DIN 40050-9	Version K4	IP 65 with mating connector mounted and locked

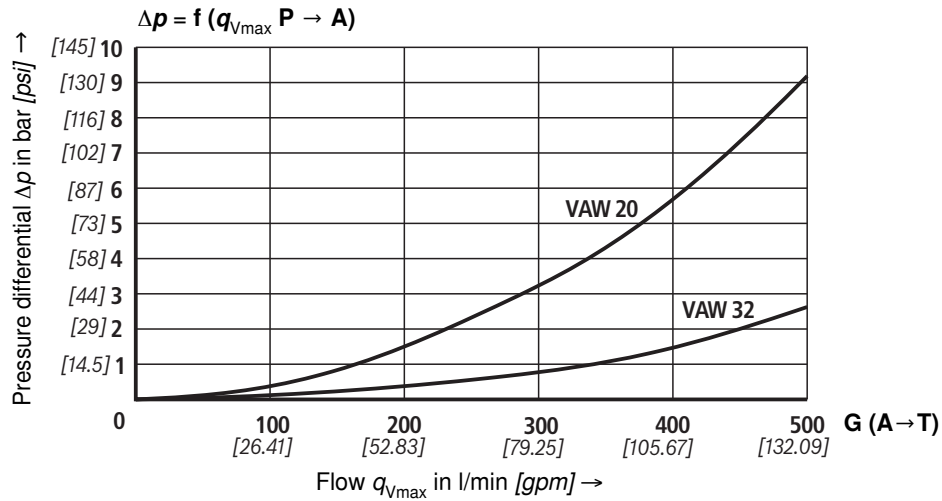
<sup>1)</sup> The cleanliness classes specified for the components must be adhered to in hydraulic systems. Effective filtration prevents faults and at the same time increases the service life of the components.

For selecting the filters, see data sheets RE 50070, RE 50076, RE 50081, RE 51400, RE 51421, RE 51422, RE 51418, RE 51419, RE 51424 and RE 51425.

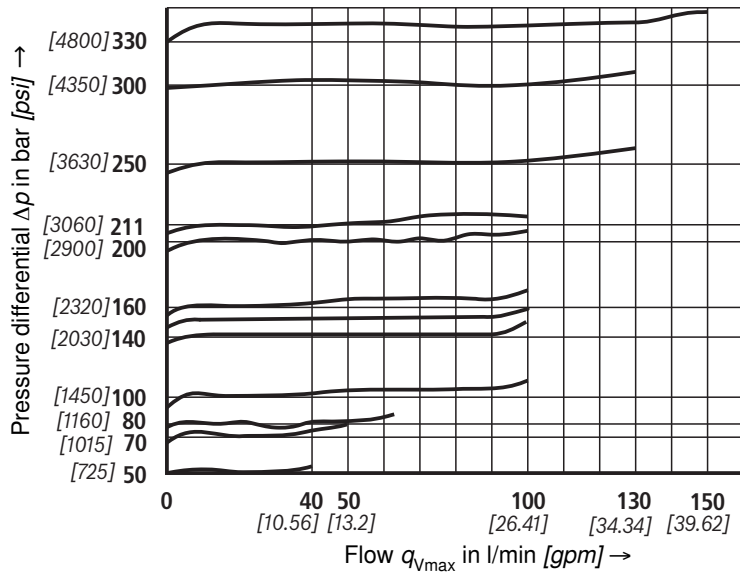
**Characteristic curves** (measured with  $\nu = 35 \text{ mm}^2/\text{s}$  and  $\vartheta = 50 \text{ °C}$  [122 °F])**Flow accumulator via unloading valve to the tank**

**Characteristic curves** (measured with  $v = 35 \text{ mm}^2/\text{s}$  and  $\vartheta = 50 \text{ }^\circ\text{C}$  [122 °F])

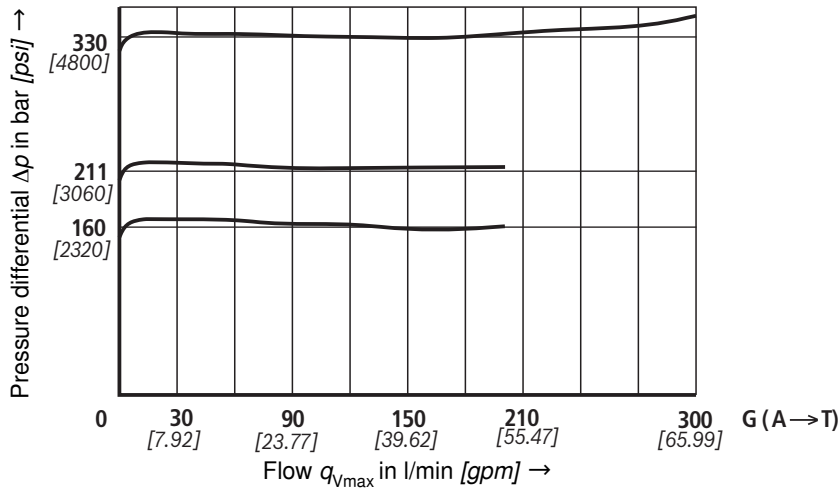
Flow from the pump to the accumulator



**Maximum securable delivery volume of the pressure relief valve applies to only one DB valve**

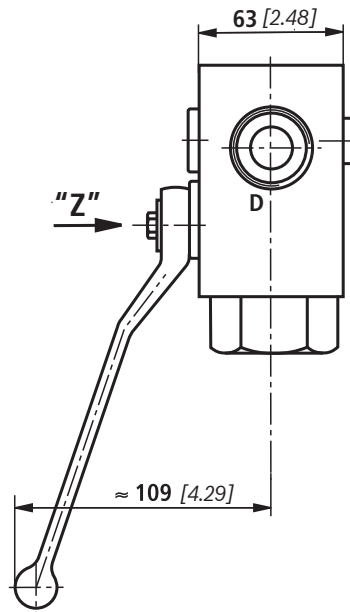
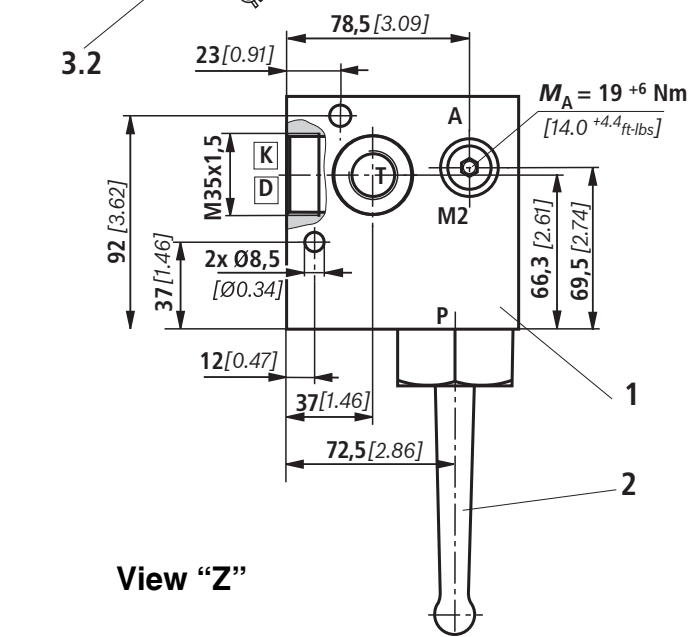
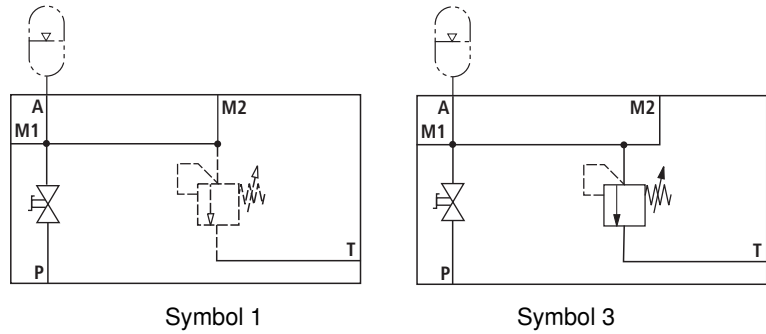
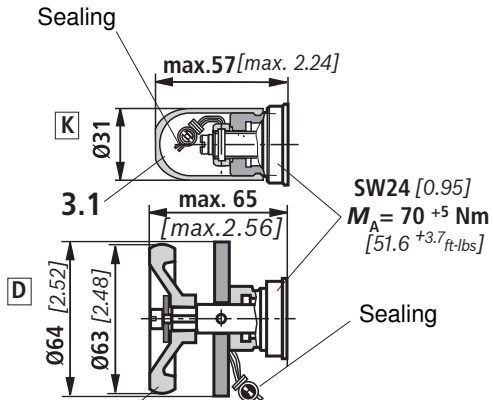


**Maximum securable delivery volume of the pressure relief valve applies to two DB valves**

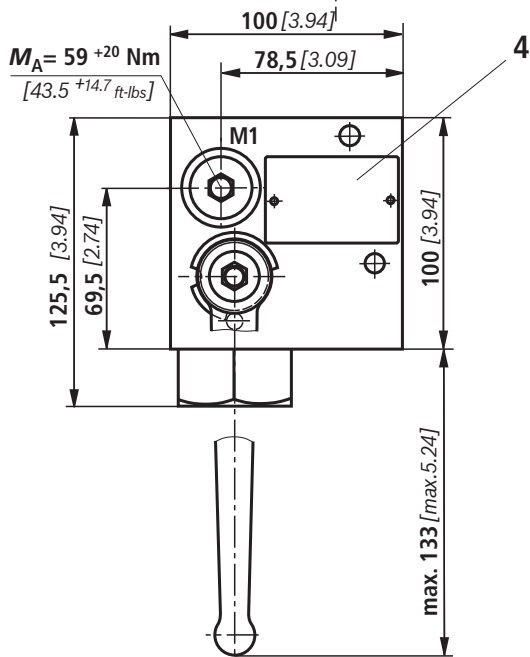


**Unit dimensions:** Type 0532VAW20...DN 20, (dimensions in mm [inch])

**Switching symbol 1 and 3**



**View "Z"**



- 1 Block
- 2 System shut-off cock
- 3.1 Pressure relief valve, adjustment type "K" with spindle and protective cap; sealed
- 3.2 Pressure relief valve, adjustment type "D" with hand wheel and manual unloading; sealed
- 4 Name plate

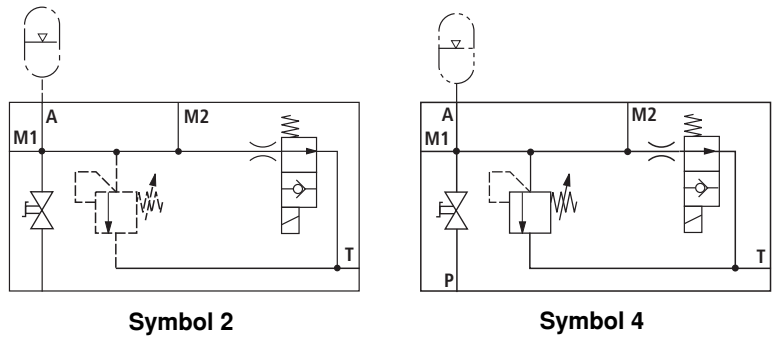
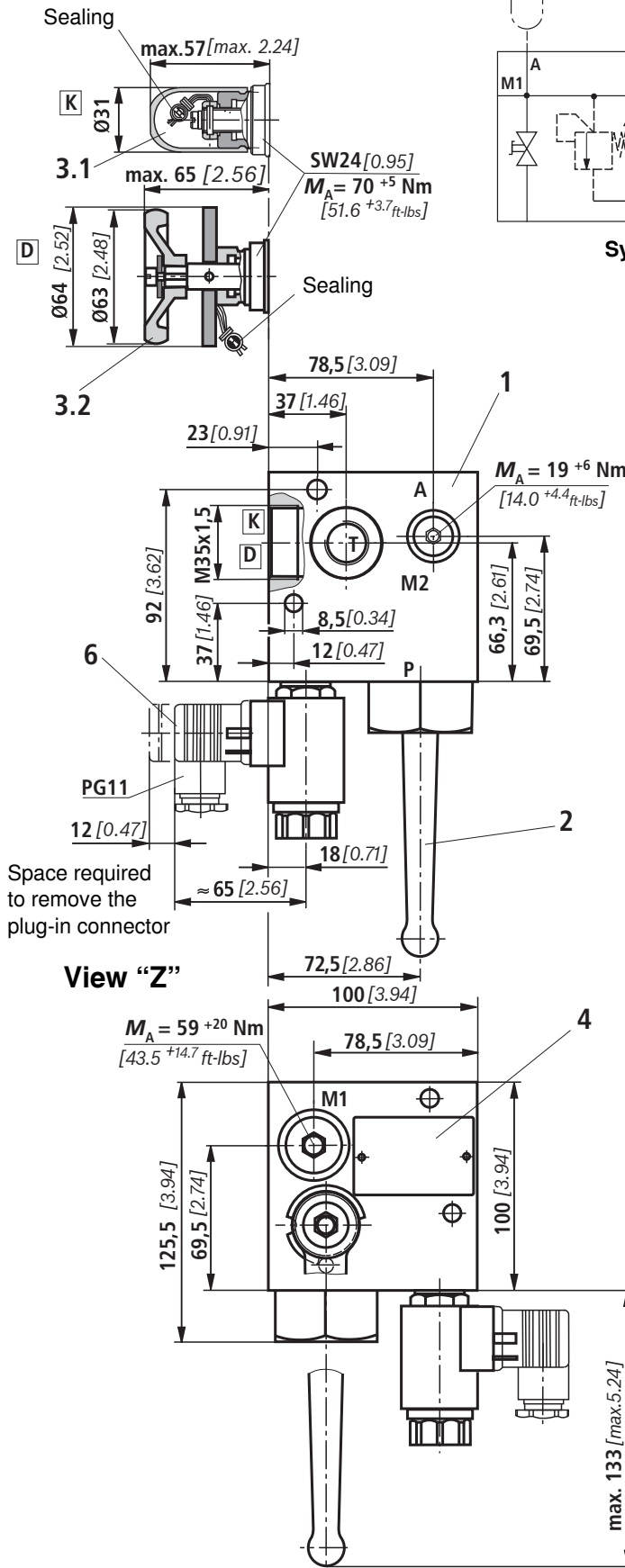
Connection thread		BSP
M1	Measuring port	G1/2
M2	Measuring port	G1/4
P	Pump connection	G1
T	Tank port	G1/2
A	Accumulator port	M33 x 2 <sup>1)</sup>

<sup>1)</sup> Port DIN EN ISO 9974-1



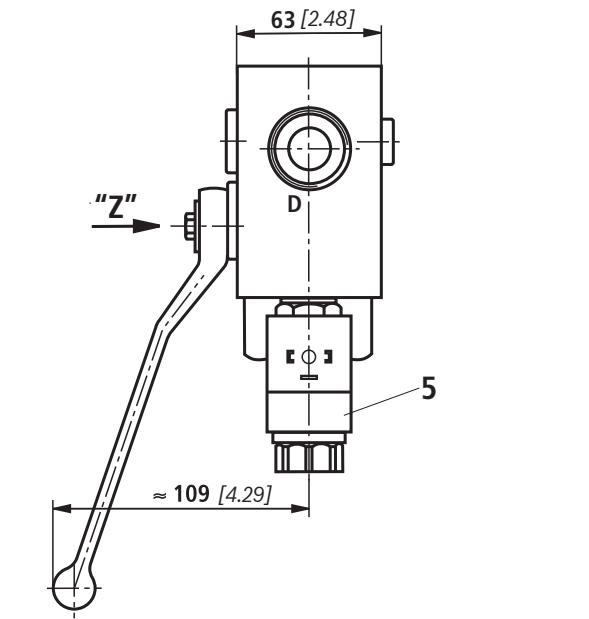
**Unit dimensions: Type 0532VAW20 ...DN20 (dimensions in mm [inch])**

**Switching symbol 2 and 4**



**Symbol 2**

**Symbol 4**



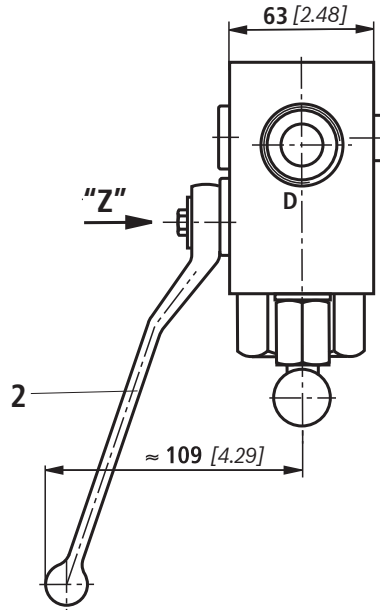
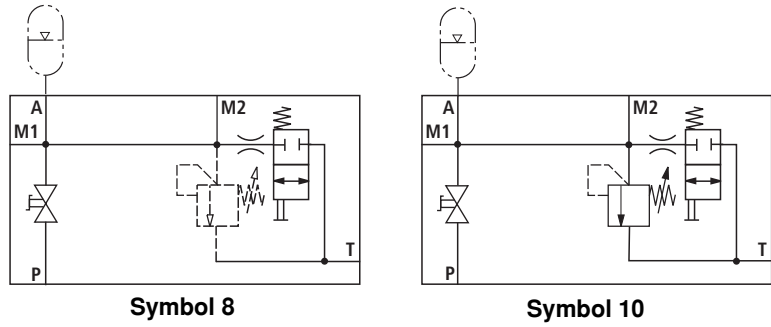
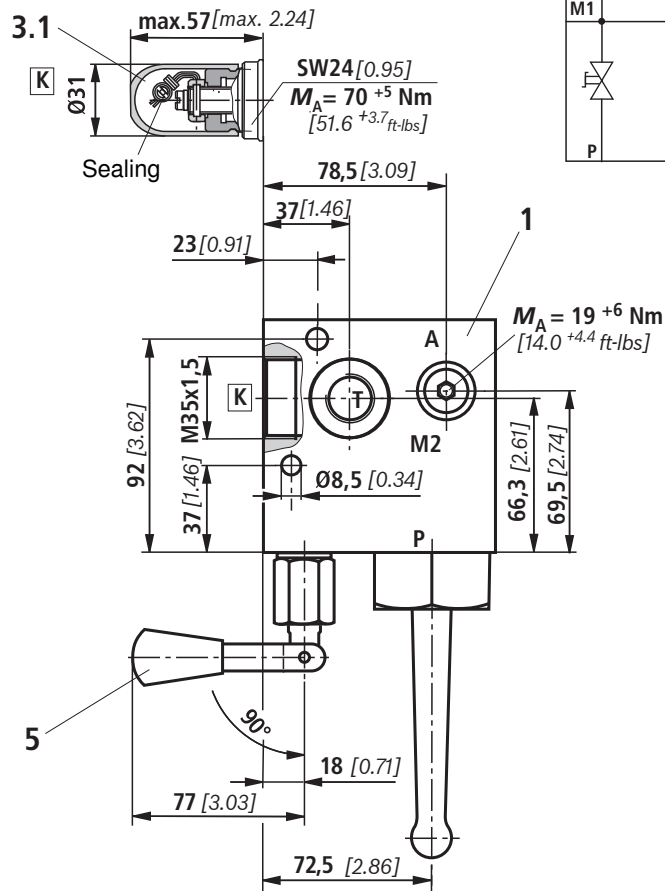
- 1 Block
- 2 System shut-off cock
- 3.1 Pressure relief valve, adjustment type "K" with spindle and protective cap; sealed
- 3.2 Pressure relief valve, adjustment type "D" with hand wheel and manual unloading; sealed
- 4 Name plate
- 5 Electro-magnetic unloading
- 6 Mating connectors included in the scope of delivery

Connection thread		BSP
M1	Measuring port	G1/2
M2	Measuring port	G1/4
P	Pump connection	G1
T	Tank port	G1/2
A	Accumulator port	M33 x 2 <sup>1)</sup>

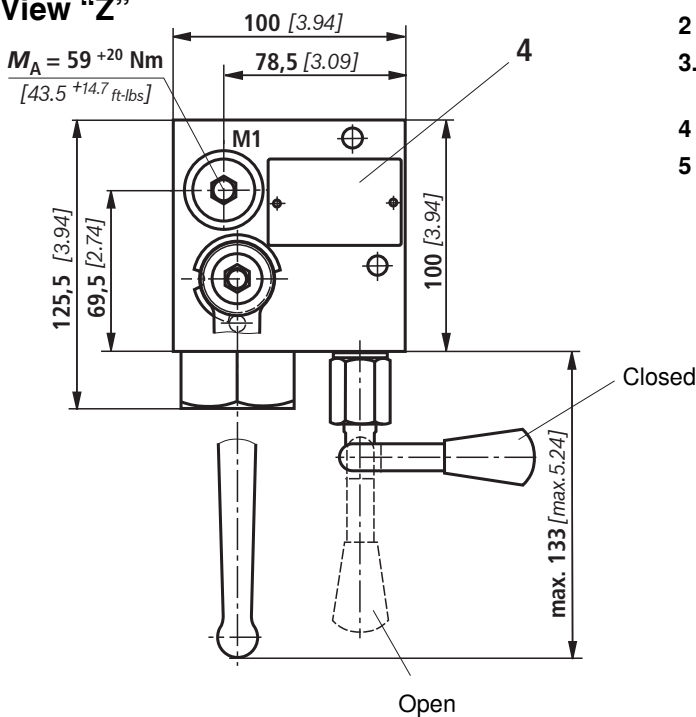
1) Port DIN EN ISO 9974-1

**Unit dimensions:** Type 0532VAW20...DN 20, (dimensions in mm [inch])

**Switching symbol 8 and 10**



**View "Z"**



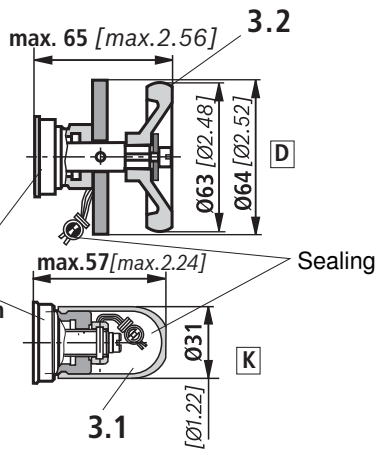
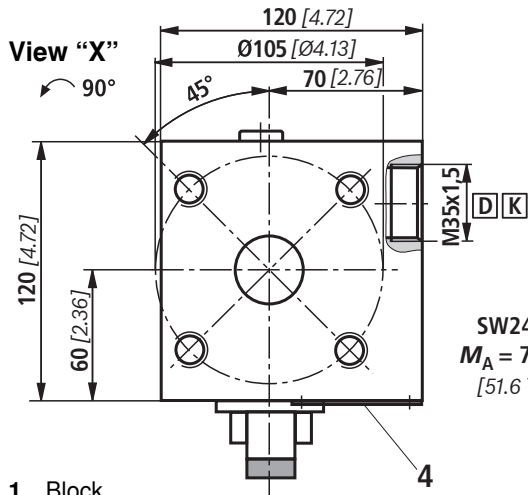
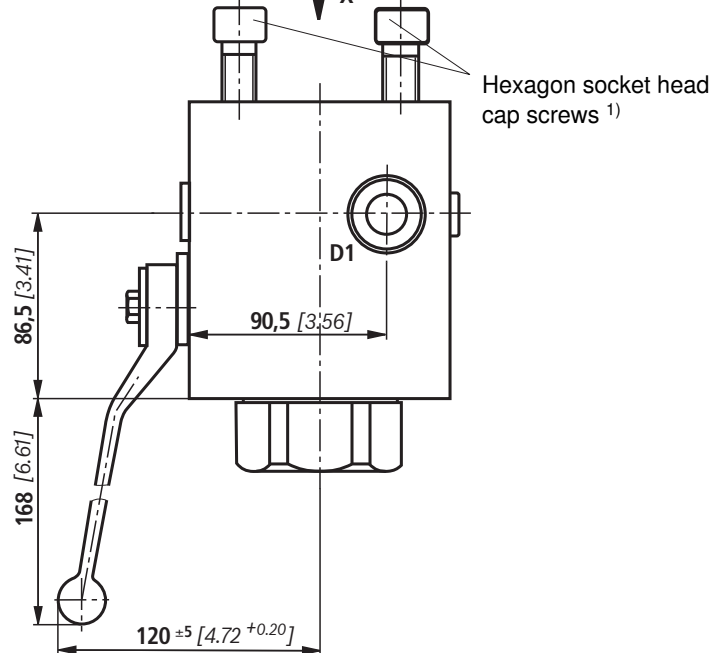
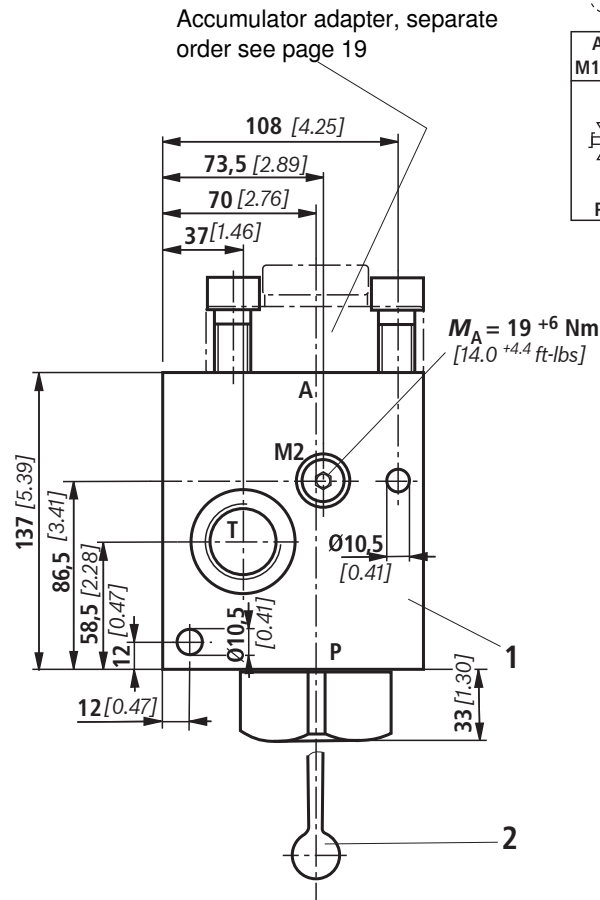
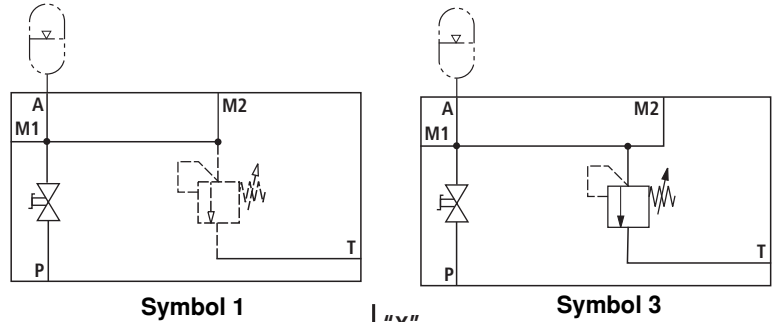
- 1 Block
- 2 System shut-off cock
- 3.1 Pressure relief valve, adjustment type "K" with spindle and protective cap; sealed
- 4 Name plate
- 5 Manual unloading

Connection thread		BSP
M1	Measuring port	G1/2
M2	Measuring port	G1/4
P	Pump connection	G1
T	Tank port	G1/2
A	Accumulator port	M33 x 2 <sup>1)</sup>

1) Port DIN EN ISO 9974-1

**Unit dimensions:** Type 0532VAW32...DN 32, (dimensions in mm [inch])

**Switching symbol 1 and 3**



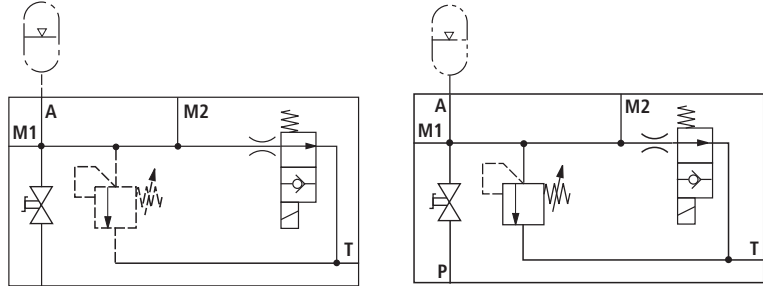
- 1 Block
- 2 System shut-off cock
- 3.1 Pressure relief valve, adjustment type "K" with spindle and protective cap; sealed
- 3.2 Pressure relief valve, adjustment type "D" with hand wheel and manual unloading; sealed
- 4 Name plate

1) 4 x ISO 4762- M16 x 45-10.9  
Tightening torque  $M_A = 250 \pm 10 \text{ Nm}$  [184.0 ±7.4 ft-lbs]

Connection thread		BSP
M1	Measuring port	G1/2
M2	Measuring port	G1/4
P	Pump connection	G1 1/2
T	Tank port	G1
A	Accumulator port	Page 19

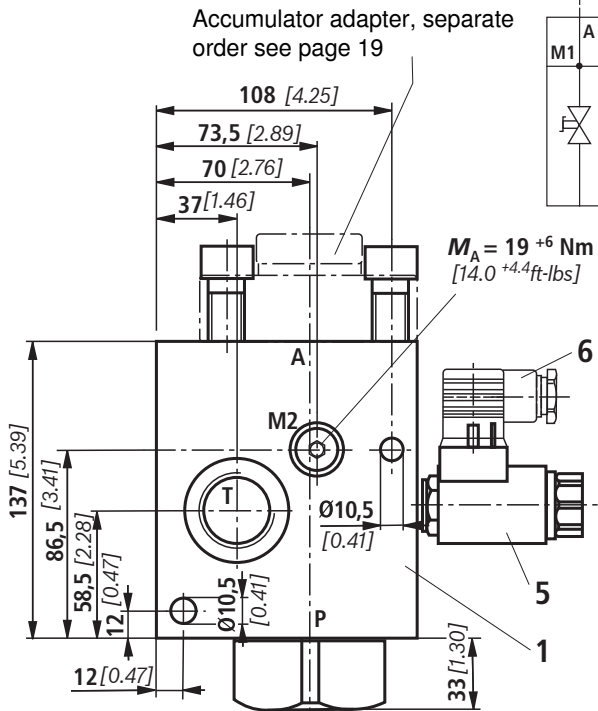
**Unit dimensions: Type 0532VAW32...DN 32, (dimensions in mm [inch])**

**Switching symbol 2 and 4**



**Symbol 2**

**Symbol 4**



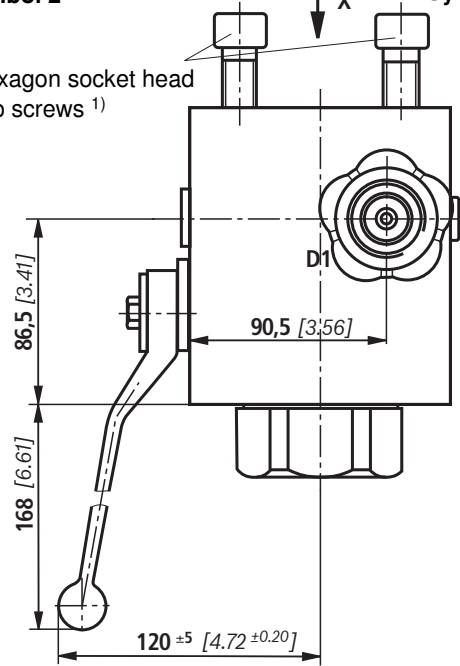
Accumulator adapter, separate order see page 19

$M_A = 19^{+6} \text{ Nm}$   
[14.0 +4.4 ft-lbs]

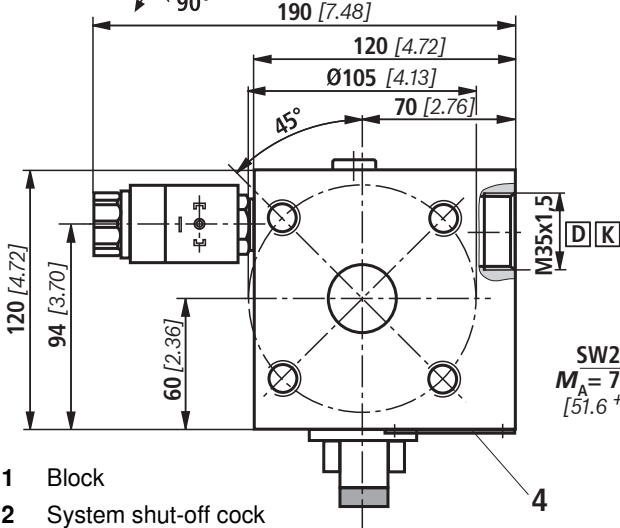
**Symbol 2**

**Symbol 4**

Hexagon socket head cap screws <sup>1)</sup>

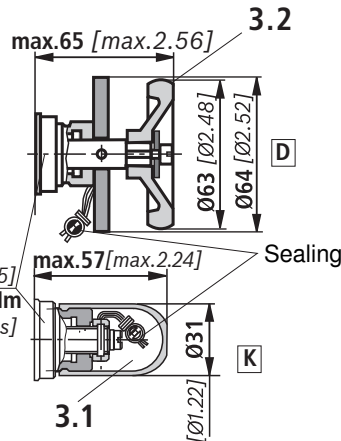


**View "X"**  
90°



- 1 Block
- 2 System shut-off cock
- 3.1 Pressure relief valve, adjustment type "K" with spindle and protective cap; sealed
- 3.2 Pressure relief valve, adjustment type "D" with hand wheel and manual unloading; sealed
- 4 Name plate
- 5 Electro-magnetic unloading
- 6 Mating connectors, included in the scope of delivery

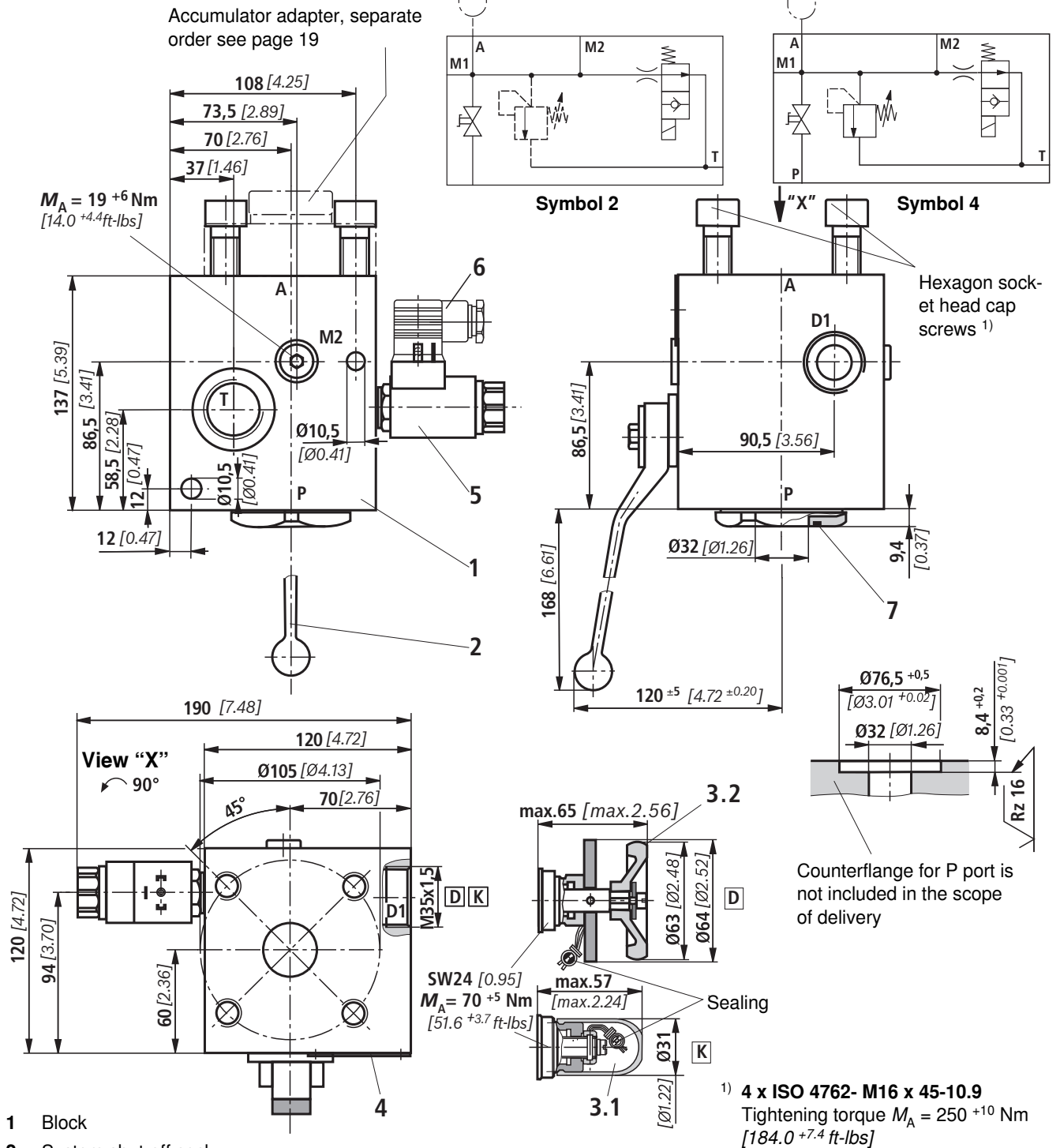
<sup>1)</sup> 4 x ISO 4762- M16 x 45-10.9  
Tightening torque  $M_A = 250^{+10} \text{ Nm}$  [184.0 +7.4 ft-lbs]



Connection thread		BSP
M1	Measuring port	G1/2
M2	Measuring port	G1/4
P	Pump	G1 1/2
T	Tank	G1
A	Accumulator	Page 19

**Unit dimensions: Type 0532VAW32...DN 32, (dimensions in mm [inch])**

**Switching symbol 2 and 4**

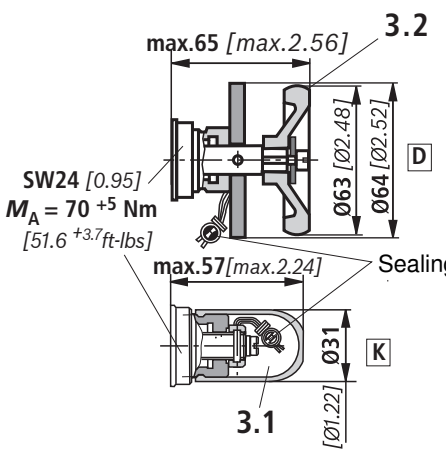
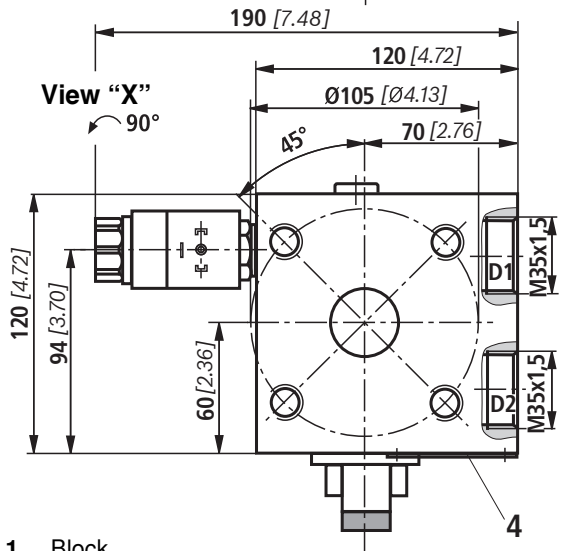
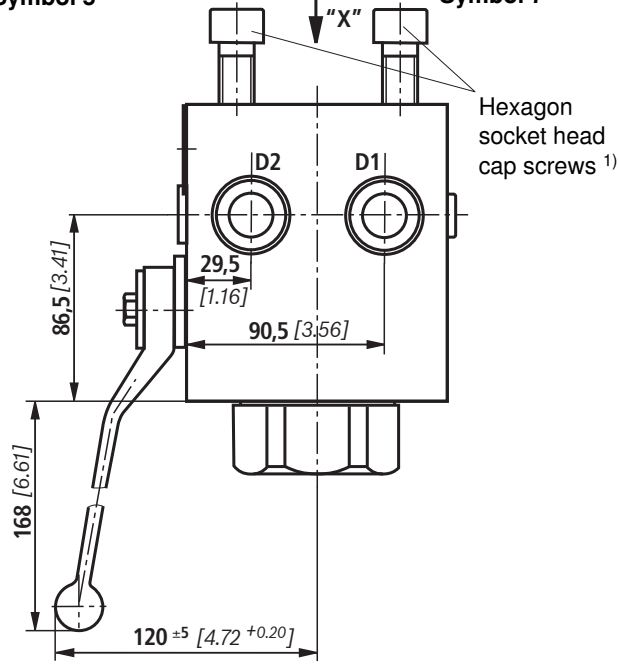
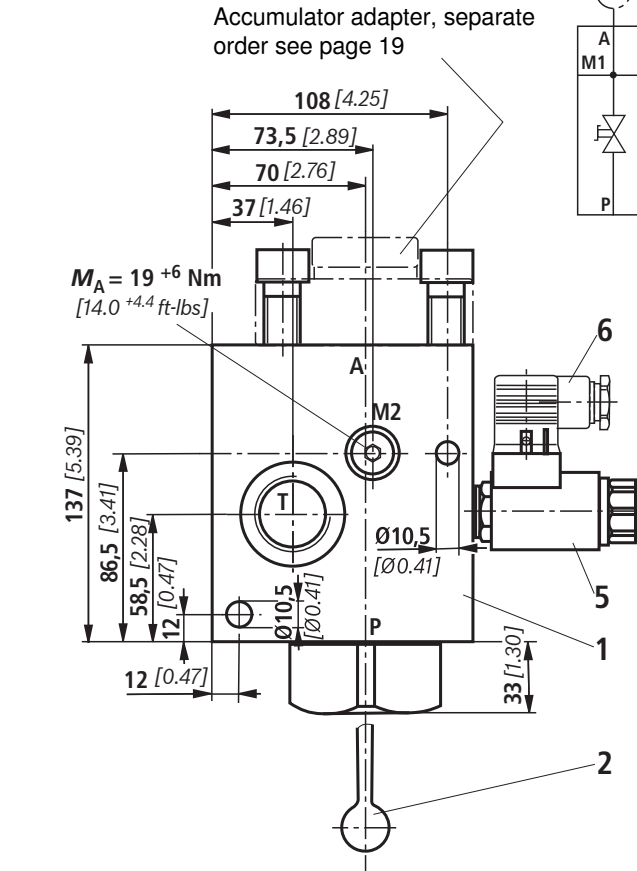
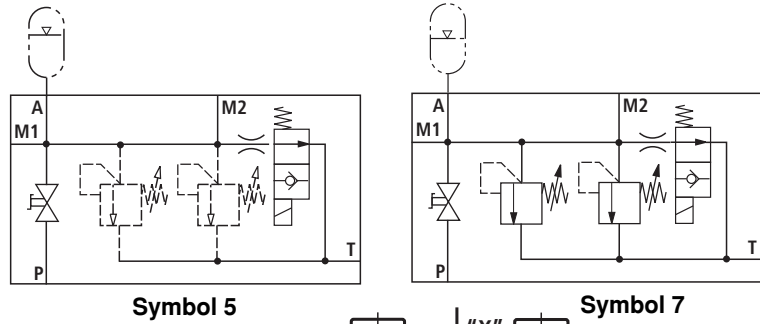


- 1 Block
- 2 System shut-off cock
- 3.1 Pressure relief valve, adjustment type "K" with spindle and protective cap; sealed
- 3.2 Pressure relief valve, adjustment type "D" with hand wheel and manual unloading; sealed
- 4 Name plate
- 5 Electro-magnetic unloading
- 6 Mating connectors, included in the scope of delivery
- 7 Seal ring Ø40 x 3

Connection thread	BSP
M1	Measuring port G1/2
M2	Measuring port G1/4
P	Pump (flange) TK = Ø98; 4 x M16
T	Tank port G1
A	Accumulator port Page 19

**Unit dimensions:** Type 0532VAW32...DN 32, (dimensions in mm [inch])

**Switching symbol 5 and 7**



1) 4 x ISO 4762-M16 x 45-10.9  
Tightening torque  
 $M_A = 250^{+10}$  Nm  
[184.0<sup>+7.4</sup> ft-lbs]

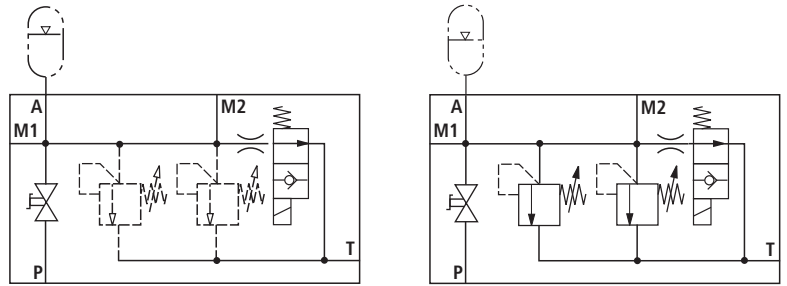
- 1 Block
- 2 System shut-off cock
- 3.1 Pressure relief valve, adjustment type "K" with spindle and protective cap; sealed
- 3.2 Pressure relief valve, adjustment type "D" with hand wheel and manual unloading; sealed
- 4 Name plate
- 5 Electro-magnetic unloading
- 6 Mating connectors, included in the scope of delivery

Connection thread		BSP
M1	Measuring port	G1/2
M2	Measuring port	G1/4
P	Pump connection	G1 1/2
T	Tank port	G1
A	Accumulator port	Page 19

**Unit dimensions: Type 0532VAW32...DN 32, (dimensions in mm [inch])**

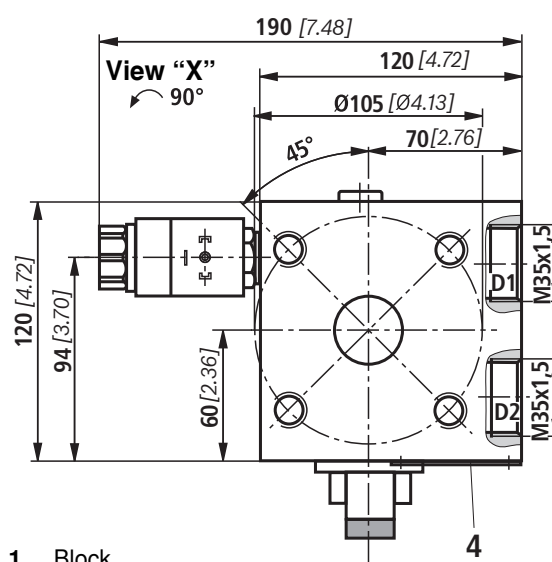
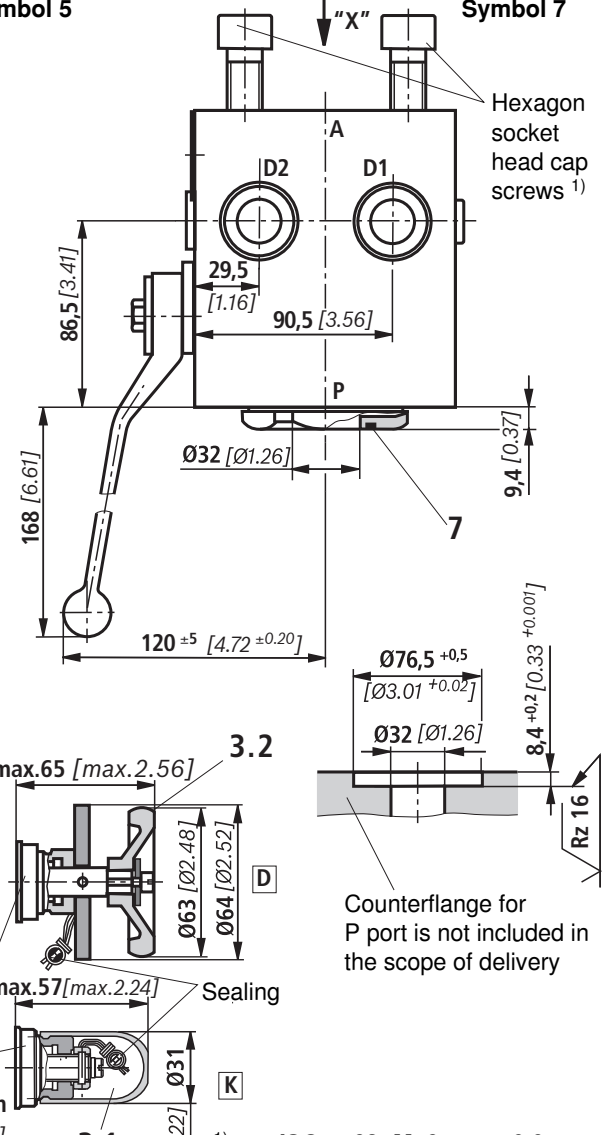
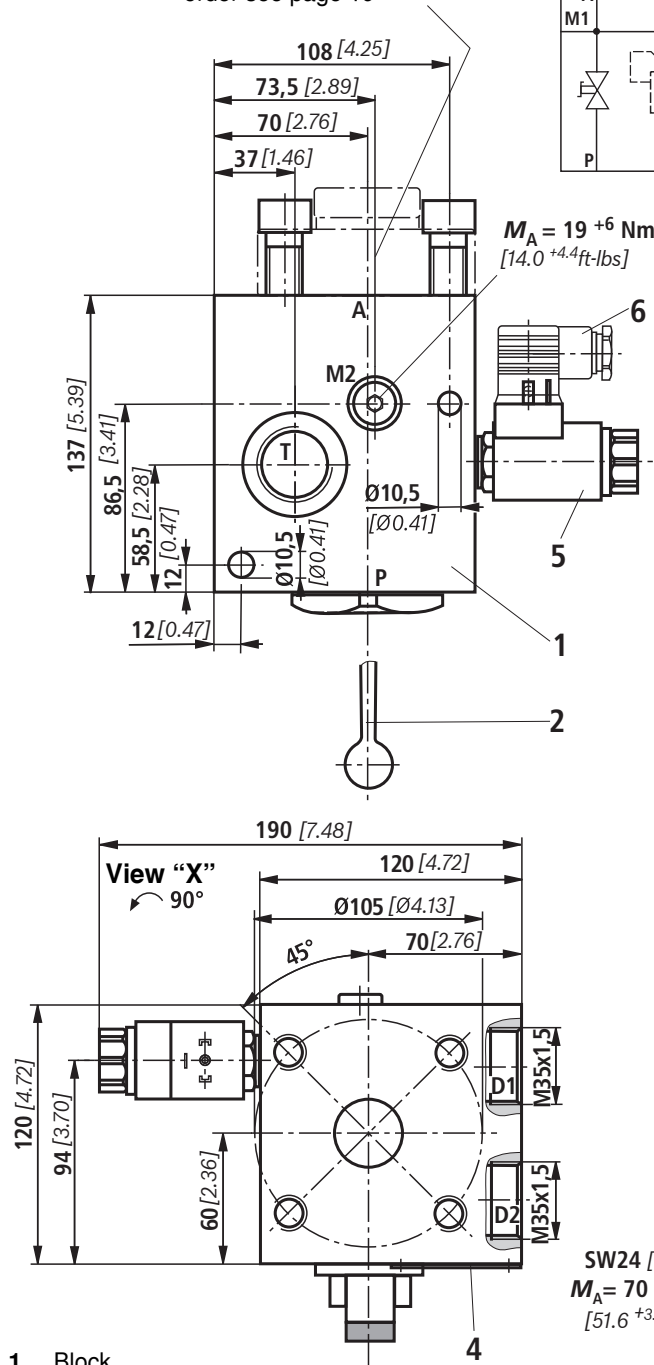
**Switching symbol 5 and 7**

Accumulator adapter, separate order see page 19



Symbol 5

Symbol 7



- 1 Block
- 2 System shut-off cock
- 3.1 Pressure relief valve, adjustment type "K" with spindle and protective cap; sealed
- 3.2 Pressure relief valve, adjustment type "D" with hand wheel and manual unloading; sealed
- 4 Name plate
- 5 Electro-magnetic unloading
- 6 Mating connectors, included in the scope of delivery
- 7 Seal ring Ø40 x 3

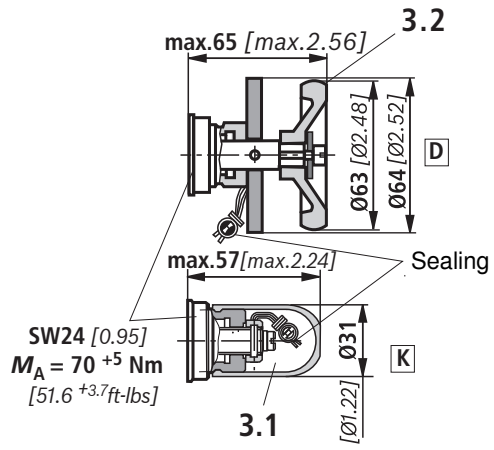
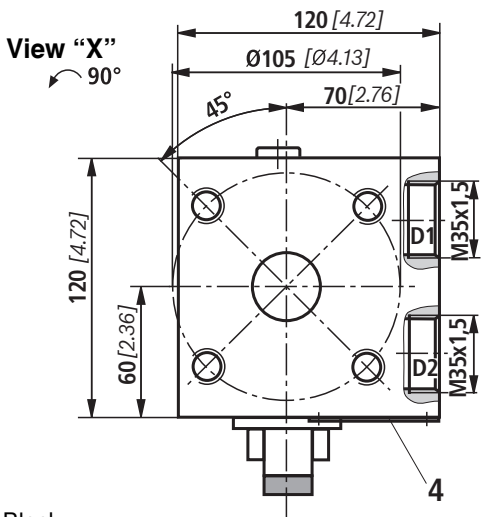
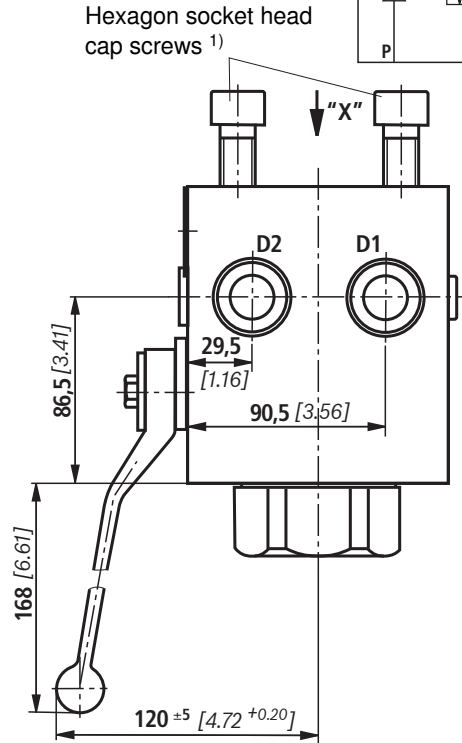
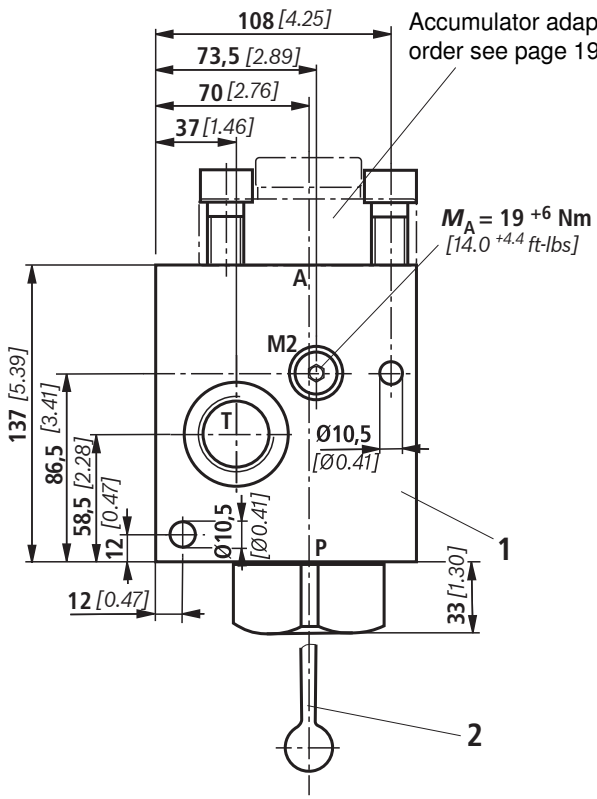
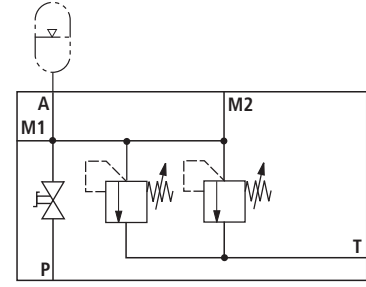
SW24 [0.95]  
 $M_A = 70 \pm 5 \text{ Nm}$   
 [51.6 ±3.7 ft-lbs]

1) 4 x ISO 4762- M16 x 45-10.9  
 Tightening torque  $M_A = 250 \pm 10 \text{ Nm}$   
 [184.0 ±7.4 ft-lbs]

Connection thread		BSP
M1	Measuring port	G1/2
M2	Measuring port	G1/4
P	Pump (flange)	TK = Ø98; 4 x M16
T	Tank port	G1
A	Accumulator port	Page 19

**Unit dimensions:** Type 0532VAW32...DN 32, (dimensions in mm [inch])

**Switching symbol 6**



- 1 Block
- 2 System shut-off cock
- 3.1 Pressure relief valve, adjustment type "K" with spindle and protective cap; sealed
- 3.2 Pressure relief valve, adjustment type "D" with hand wheel and manual unloading; sealed
- 4 Name plate

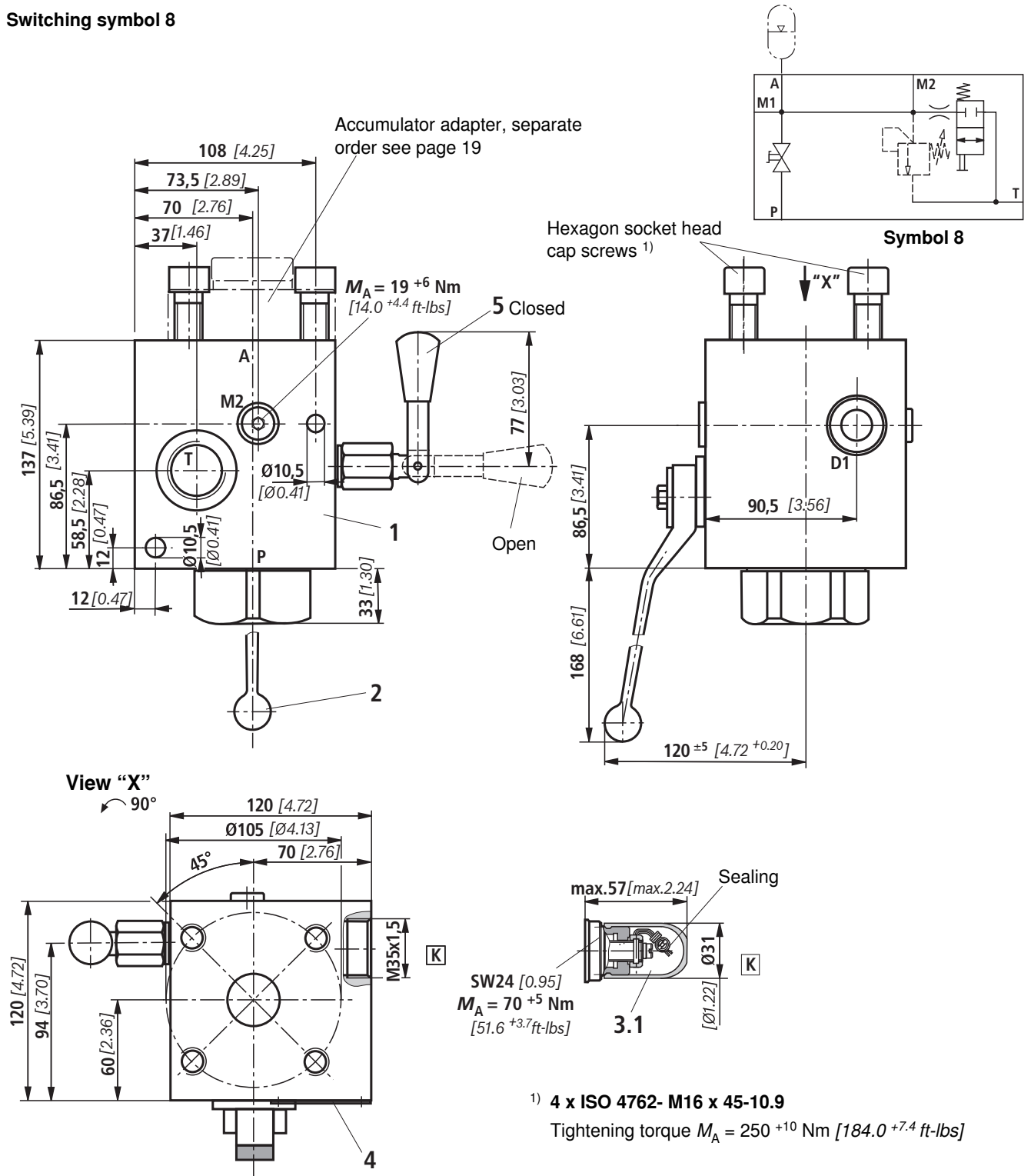
1) **4 x ISO 4762- M16 x 45-10.9**  
Tightening torque  $M_A = 250 \text{ }^{+10} \text{ Nm}$  [184.0  $^{+7.4}$  ft-lbs]

Connection thread		BSP
M1	Measuring port	G1/2
M2	Measuring port	G1/4
P	Pump connection	G1 1/2
T	Tank port	G1
A	Accumulator port	Page 19



**Unit dimensions:** Type 0532VAW32...DN 32, (dimensions in mm [inch])

**Switching symbol 8**



- 1 Block
- 2 System shut-off cock
- 3.1 Pressure relief valve, adjustment type "K" with spindle and protective cap; sealed
- 4 Name plate
- 5 Manual unloading

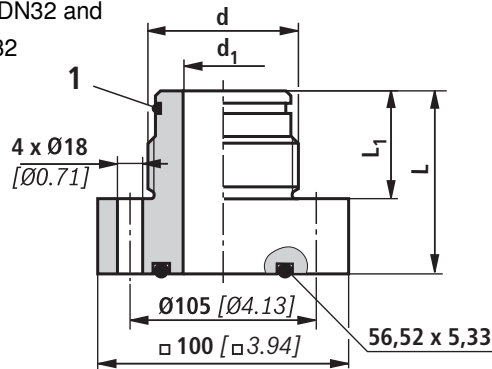
Connection thread		BSP
M1	Measuring port	G1/2
M2	Measuring port	G1/4
P	Pump connection	G1 1/2
T	Tank port	G1
A	Accumulator port	Page 19



**Accessories: Accumulator adapter BSP thread (dimensions in mm [inch])**

Accumulator adapter for Type 0352VAW32..., max. operating pressure 330 bar [4800 psi]

Type: S307V/G1 1/4-DN32 and  
S309V/G2-DN32







Scope of delivery comprises 4 hexagon socket head cap screws **ISO 4762 - M16 x 45 - 10.9**

1) For more information on the accumulator adapter Type S307 and S309 please refer to AB22-18

1 Seal ring, see table

Short designation	Accumulator adapter 1)	Material no.	d	d <sub>1</sub>	L	L <sub>1</sub>	Seal ring
S307	S307V/G1 1/4-DN32	<b>R900085303</b>	G1 1/4	20	67	37	Ø30.00 x 3.00
S309	S309V/G2-DN32	<b>R900545858</b>	G 2	32	73	43	Ø48.00 x 3.00

**Accessories: Pressure relief valve**

Set pressure of the pressure relief valve in bar [psi]	Adjustment type at the pressure relief valve		Maximum securable delivery volume l/min [gpm]	Material no. (Seal material FKM)
	Hand wheel	Spindle with protective cap		
50 [730]			40 [10.56]	0532004200
70 [1015]			50 [13.20]	0532004201
100 [1450]			100 [26.40]	0532004202
120 [1740]			100 [26.40]	0532004211
140 [2030]			100 [26.40]	0532004203
160 [2320]			100 [26.40]	0532004204
200 [3480]			100 [26.40]	0532004209
211 [3060]			100 [26.40]	0532004205
250 [3625]			130 [34.32]	0532004206
280 [4060]			130 [34.32]	0532004210
300 [4350]			130 [34.32]	0532004207
330 [4800]			150 [39.60]	0532004208
50 [730]				
70 [1015]	50 [13.20]	0532004103		
80 [1160]	60 [15.84]	0532004111		
100 [1450]	100 [26.40]	0532004104		
120 [1740]	100 [26.40]	0532004114		
140 [2030]	100 [26.40]	0532004107		
160 [2320]	100 [26.40]	0532004105		
180 [2610]	100 [26.40]	0532004113		
200 [3480]	100 [26.40]	0532004110		
211 [3060]	100 [26.40]	0532004100		
250 [3625]	130 [34.32]	0532004106		
260 [3770]	130 [34.32]	0532004115		
280 [4060]	130 [34.32]	0532004112		
300 [4350]	130 [34.32]	0532004101		
330 [4800]	150 [39.60]	0532004108		

## Safety instructions: Type tested safety valves Type 0532VA according to pressure equipment – directive 97/23/EC

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- Before ordering a type tested safety valve, it must be observed that with the desired **response pressure  $p$**  the maximum admissible **flow  $q_{Vmax}$**  of the safety valve is higher than the maximum possible flow of the system of the accumulator to be secured.

In this connection, the corresponding regulations are to be observed!

- According to **PED 97/23/EC**, the increase in the system pressure due to the flow must not be larger than 10 % of the set response pressure (see component marking).

The maximum admissible flow specified in the component marking  **$q_{Vmax}$**  must not be exceeded.

Discharge lines of safety valves must end in a non-dangerous manner. In the discharge system, the accumulation of fluids must not be possible (see AD2000 sheet A2).

### Application instructions must be observed!

- In the plant, the response pressure specified in the part marking is set.
- The maximum admissible flow specified in the part marking applies to applications without backpressure in the discharge line (port T).
- By removing the lead seal at the safety valve, the approval according to PED becomes void!
- Basically, the requirements of the pressure equipment directive and of data sheet AD2000 sheet A2 have to be observed!
- We recommend securing type tested safety valves against in admissible removal from the screw-in housing/block by wiring and sealing with the housing/block (bore available in the adjustment device).

### Attention!

Due to the increasing flow, the system pressure increases by the backpressure in the discharge line (port T). (Observe AD2000 sheet A2, section 6.3!)

For this increase in system pressure caused by the flow not exceeding the value of 10 % of the set response pressure, the admissible flow has to be reduced depending on the backpressure in the discharge line (port T) (see diagram page 6 and 7).