

# Intermediate plate type NZZ

## Product documentation



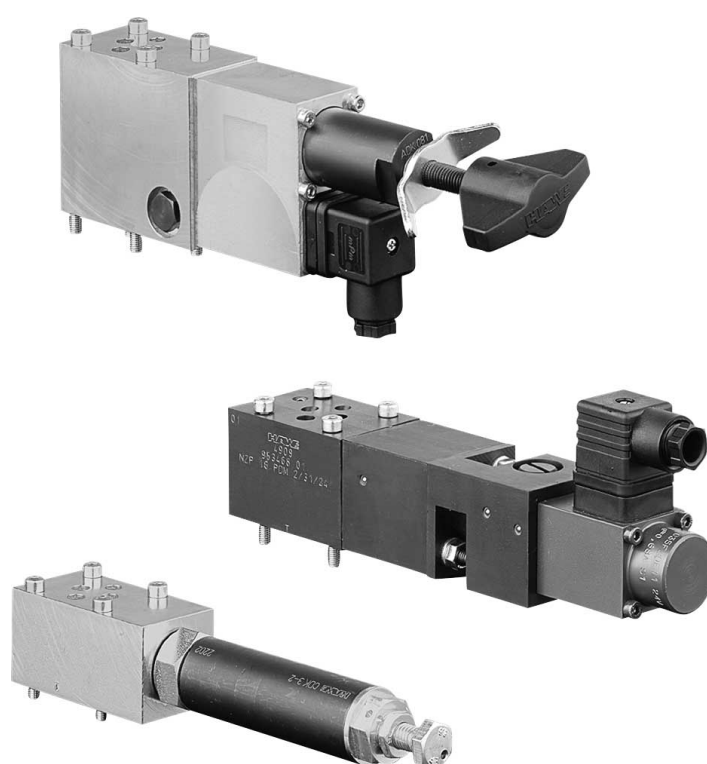
Hole pattern NG 6

Operating pressure  $p_{\max}$ :

500 bar

Flow rate  $Q_{\max}$ :

50 l/min



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Printing date / document generated on: 02.02.2018

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# 1 Overview of intermediate plate type NZP

The intermediate plates can be used to expand the functionality of directional valves with a hole pattern NG 6 according to DIN 24 340-A6.

## Features and benefits:

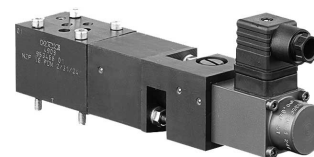
- Integrated combinations of different functions

## Intended applications:

- NG 6 valve banks

## Versions:

- Intermediate plates with throttle valves
- Intermediate plates with pressure reducing valves
- Intermediate plates with shock valves
- Intermediate plates with short-circuit valves
- Intermediate plates with directional valves
- Intermediate plates with load-holding valves
- Spacer plates



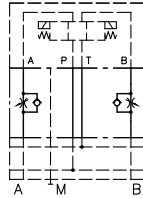
*Intermediate plates type NZP*

## 2 Available versions, main data

### 2.1 Intermediate plate with throttle valve type NZP 16 Q

Circuit symbol:

NZP 16 Q 22



Order coding example:

NZP 16 Q	2	2
	Throttle and throttle check valve at B	Table 2 Throttle version
	Throttle and throttle check valve at A	Table 2 Throttle version
Basic type	Table 1 Basic type	

**Table 1 Basic type**

Basic type	Description	Flow rate $Q_{\max}$ (lpm)	Pressure $p_{\max}$ (bar)
NZP 16 Q	Throttle and/or throttle check valve at A and/or B	50	500

Throttles and throttle check valves can be used together in any combination.

**Valve used:**

- Throttle and throttle check valve type CQ, CQR and CQV according to [D 7713](#)

The adjustment can be performed during operation (zero-leakage due to double spindle sealing).



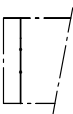

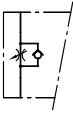
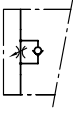
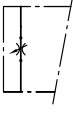
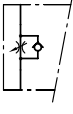
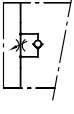
**Caution**

**Risk of injury if the device is operated outside the permitted pressure and flow rate ranges.**

Risk of minor injury

- Observe the permitted pressure and flow rate ranges of the directional valves being used.

**Table 2 Throttle version**

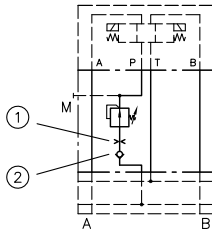
Coding	Designation	Circuit symbol
0	Not included, free passage (throttle can be retrofitted)	
1	Throttle (type CQ 2)	
2	Throttle check valve (P → A(B) free) - Outlet throttle (type CQV 2)	
3	Throttle check valve (A(B) → T free) - Inlet throttle (type CQR 2)	
4	Throttle with precision control range (type CQ 22)	
5	Throttle check valve (P → A(B)) - Outlet throttle with precision control range (type CQV 22)	
6	Throttle check valve (A(B) → T free) - Inlet throttle with precision control range (type CQR 22)	

## 2.2 Intermediate plate with pressure reducing valve

### 2.2.1 Pressure reducing valve type NZP 16 CZ, NZP 16 CZS, NZP 16 ACZ and NZP 16 BCZ

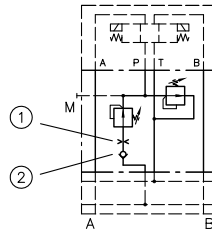
Circuit symbol:

NZP 16 CZ  
NZP 26 CZ



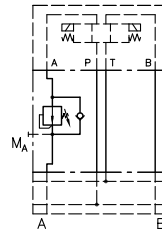
- 1 Orifice at P
- 2 Check valve at P

NZP 16 CZS

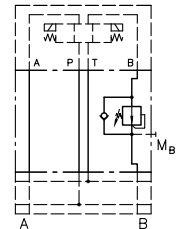


- 1 Orifice at P
- 2 Check valve at P

NZP 16 ACZ



NZP 16 BCZ



Order coding example:

NZP 16 CZ	08 R	/ 400	/ B 0,8 R
NZP 16 CZS	1	/ 220	/ C 250 R

Additional elements Table 37 Additional elements at P, see [Chapter 2.7, "Additional element"](#)

Pressure range and pressure setting for pressure-limiting valve Table 5 Pressure-limiting valve

Pressure setting

Pressure reducing valve with adjustment Table 4 Pressure reducing valve with adjustment

Basic type Table 3 Basic type

**Table 3 Basic type**

Basic type	Description	Flow rate $Q_{\max}$ (lpm)	Pressure $p_{\max}$ (bar)
NZP 16 CZ NZP 26 CZ	Pressure reducing valve at P Difference between NZP 16 and NZP 26: Position of the pressure reducing valve, see <a href="#">Chapter 4, "Dimensions"</a>	22	500
NZP 16 CZS	Pressure reducing valve at P, additional protection of the consumer side with a pressure-limiting valve	22	500
NZP 16 ACZ NZP 16 BCZ	Pressure reducing valve at A or B	22	500

Valve used:

- Pressure reducing valve type CDK according to [D 7745](#)



**Caution**

**Risk of injury if the device is operated outside the permitted pressure and flow rate ranges.**

Risk of minor injury

- Observe the permitted pressure and flow rate ranges of the directional valves being used.






**Table 4 Pressure reducing valve with adjustment**

Coding	Pressure range (bar)	Flow rate $Q_{max}$ (lpm)
08 *	50 – 450	12
1	30 – 300	
2	20 – 200	
5	15 – 130	
22	12 – 200	6
25	8 – 130	
52	50 – 200	22
55	30 – 130	
081 *	50 – 500	12
11	30 – 380	
21	20 – 250	
51	15 – 165	
221	12 – 250	6
251	8 – 165	
521	50 – 250	22
551	30 – 165	
X	Pressure reducing valve not included (can be retrofitted)	

\* Not for type NZP 16 LZ, NZP 16 ALZ, NZP 16 BLZ, NZP 16 LZY

**Adjustment**

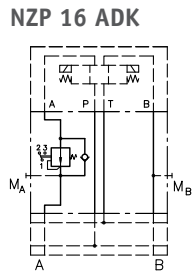
Coding	Description	Circuit symbol
No designation	Fixed, tool adjustable	
R	Manually adjustable, with lock nut	
H	Turn knob, lockable	

**Table 5 Pressure-limiting valve**

Coding	Pressure range (bar)
B	100 – 500
C	65 – 315
E	30 – 160
F	20 – 80

## 2.2.2 Pressure reducing valve with tracked pressure switch at A type NZP 16 ADK

Circuit symbol:



Order coding example:

NZP 16 ADK	08 R	/ 400	/ B 0,8 R	- M
				Line connector version Table 7 Line connector version
				Additional elements Table 37 Additional elements at P, see <a href="#">Chapter 2.7, "Additional element"</a>
				Pressure setting
				Pressure reducing valve with adjustment Table 4 Pressure reducing valve with adjustment, see <a href="#">Chapter 2.2.1, "Pressure reducing valve type NZP 16 CZ, NZP 16 CZS, NZP 16 ACZ and NZP 16 BCZ"</a>
				Basic type Table 6 Basic type

**Table 6 Basic type**

Basic type	Description	Flow rate $Q_{max}$ (lpm)	Pressure $p_{max}$ (bar)
NZP 16 ADK	Pressure reducing valve with tracked pressure switch at A	22	500

Valve used:

- Functional parts of pressure reducing valve type DK according to [D 7941](#)



**Caution**

**Risk of injury if the device is operated outside the permitted pressure and flow rate ranges.**

Risk of minor injury

- Observe the permitted pressure and flow rate ranges of the directional valves being used.

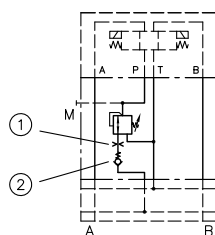
**Table 7 Line connector version**

Coding	Description	Version
X	Without line connector	Line connector DIN EN 175 301-803
G	With line connector	
L	With line connector with LED	
L5K L10K	With line connector with LED and 5 or 10 m cable	
M	With LED and connection thread M12x1 (in compliance with DESINA)	

## 2.2.3 Pressure reducing valve type NZP 16 LZ, NZP 16 ALZ and NZP 16 BLZ

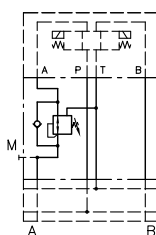
Circuit symbol:

NZP 16 LZ

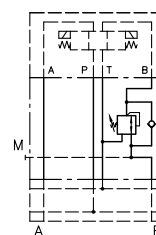


- 1 Orifice at P
- 2 Check valve at P

NZP 16 ALZ



NZP 16 BLZ



Order coding example:

NZP 16 LZ 1 R / 300 / B 0,8 R

**Additional elements** Table 37 Additional elements at P, see [Chapter 2.7, "Additional element"](#)

**Pressure setting**

**Pressure reducing valve with adjustment** Table 4 Pressure reducing valve with adjustment, see [Chapter 2.2.1, "Pressure reducing valve type NZP 16 CZ, NZP 16 CZS, NZP 16 ACZ and NZP 16 BCZ"](#)

**Basic type** Table 8 Basic type

**Table 8 Basic type**

Basic type	Description	Flow rate $Q_{\max}$ (lpm)	Pressure $p_{\max}$ (bar)
NZP 16 LZ	Pressure reducing valve with overpressure function at P	22	500
NZP 16 ALZ	Pressure reducing valve with overpressure function at A	22	500
NZP 16 BLZ	Pressure reducing valve with overpressure function at B	22	500

Valve used:

- Pressure reducing valve type CLK according to [D 7745 L](#)



**Caution**

**Risk of injury if the device is operated outside the permitted pressure and flow rate ranges.**

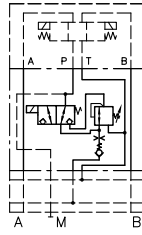
Risk of minor injury

- Observe the permitted pressure and flow rate ranges of the directional valves being used.

## 2.2.4 Connectible pressure reducing valve at P type NZP 16 LZY

Circuit symbol:

NZP 16 LZY



Order coding example:

NZP 16 LZY	1 R	/ 280	/ B 0,8 R	- X 24
				<b>Solenoid voltage</b> Table 22 Solenoid voltage, see <a href="#">Chapter 2.4.1, "Release valve P-T type NZP 16 BV"</a>
				<b>Additional elements</b> Table 37 Additional elements at P, see <a href="#">Chapter 2.7, "Additional element"</a>
				<b>Pressure setting</b>
				<b>Pressure reducing valve with adjustment</b> Table 4 Pressure reducing valve with adjustment, see <a href="#">Chapter 2.2.1, "Pressure reducing valve type NZP 16 CZ, NZP 16 CZS, NZP 16 ACZ and NZP 16 BCZ"</a>
<b>Basic type</b>	Table 9 Basic type			

### Table 9 Basic type

Basic type	Description	Flow rate $Q_{max}$ (lpm)	Pressure $p_{max}$ (bar)
NZP 16 LZY	Connectible pressure reducing valve with overpressure function at P	22	500

Valve used:

- Pressure reducing valve type CLK according to [D 7745 L](#)
- Functional parts of the directional seated valve of BVP 1 Z according to [D 7765](#)



#### Caution

**Risk of injury if the device is operated outside the permitted pressure and flow rate ranges.**

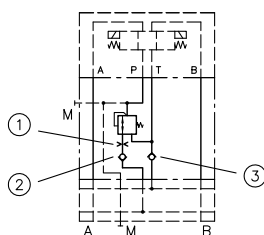
Risk of minor injury

- Observe the permitted pressure and flow rate ranges of the directional valves being used.

## 2.2.5 Pressure reducing valve type NZP 16 ADM

Circuit symbol:

NZP 16 ADM 2



- 1 Orifice at P
- 2 Check valve at P
- 3 Return pressure stop

Order coding example:

NZP 16 ADM 2 AR / ... / B 0,8 R S

**Additional elements at T** Table 38 Additional elements at T, see [Chapter 2.7, "Additional element"](#)

**Additional elements at P** Table 37 Additional elements at P, see [Chapter 2.7, "Additional element"](#)

**Pressure setting**

**Pressure-limiting valve** Table 11 Pressure-limiting valve

**Basic type** Table 10 Basic type

**Table 10 Basic type**

Basic type	Description	Flow rate $Q_{max}$ (lpm)	Pressure $p_{max}$ (bar)	Pressure $p_{max A, B}$ (bar)
NZP 16 ADM 2	Pressure reducing valve at P	25	315	250

Valve used:

- Functional parts of pressure reducing valve type ADM 2.. according to [D 7120](#)



**Caution**

**Risk of injury if the device is operated outside the permitted pressure and flow rate ranges.**

Risk of minor injury

- Observe the permitted pressure and flow rate ranges of the directional valves being used.

**Table 11 Pressure-limiting valve**

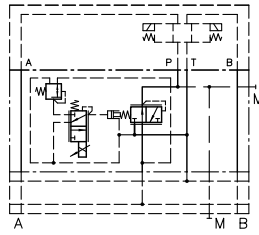
Coding	Pressure range (bar)
A	160 – 250
C	45 – 160
D	30 – 120
F	6 <sup>1)</sup> ... 55

<sup>1)</sup> Pressure can only be set to max. 10 lpm.

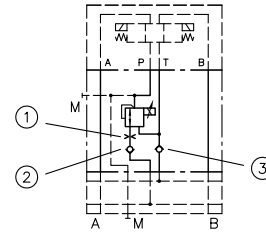
## 2.2.6 Proportional pressure-reducing valve type NZP 16 PDM

Circuit symbol:

**NZP 16 PDM 2**  
(detailed)



**NZP 16 PDM 2**  
(simplified)



- 1 Orifice
- 2 Check valve
- 3 Return pressure stop

Order coding example:

**NZP 16 PDM 2 - 41 / X 12 / B 0,8 R S**

**Additional elements at T** Table 38 Additional elements at T, see [Chapter 2.7, "Additional element"](#)

**Additional elements at P** Table 37 Additional elements at P, see [Chapter 2.7, "Additional element"](#)

**Solenoid voltage** Table 14 Solenoid voltage proportional valve

**Pressure range** Table 13 Pressure range

**Basic type** Table 12 Basic type

**Table 12 Basic type**

Basic type	Description	Flow rate $Q_{max}$ (lpm)	Pressure $p_{max}$ (bar)
NZP 16 PDM 2	Proportional pressure-reducing valve at P	25	450

Valve used:

- Functional parts of proportional pressure-reducing valve type PDM 2.. according to [D 7584/1](#)



**Caution**

**Risk of injury if the device is operated outside the permitted pressure and flow rate ranges.**

Risk of minor injury

- Observe the permitted pressure and flow rate ranges of the directional valves being used.

**Table 13 Pressure range**

Coding	Pressure range (bar)
-31	5 – 110
-32	5 – 180
-33	6 – 280
-34	7 – 350
-35	10 – 450
-41	5 – 45
-42	5 – 70
-43	5 – 110
-44	5 – 180

**Table 14 Solenoid voltage proportional valve**

Coding	Electrical connection	Nominal voltage	Protection class * (IEC 529)
X 12 X 24	(Coding G..., e.g. G 24, with line connector)	12 V DC 24 V DC	IP 65

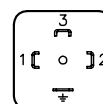
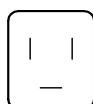
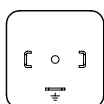
\* For correctly installed line connector

**Electrical connection for actuating solenoid**

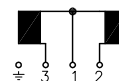
**Type NZP 16 PDM 2-3**  
DIN EN 175 301-803 A

**Type NZP 16 PDM 2-4**  
Industry standard contact gap 11 mm

**Type NZP 16 SDM 2**  
DIN EN 175 301-803 A



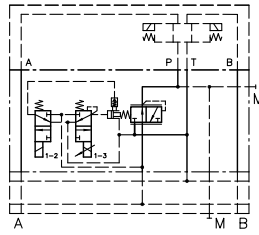
1 – 3 proportional pressure reducing valve  
1 – 2 directional seated valve (on/off)



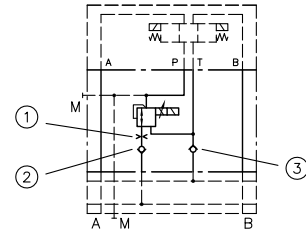
## 2.2.7 Proportional pressure-reducing valve at P type NZP 16 SDM

Circuit symbol:

**NZP 16 SDM 2**  
(detailed)



**NZP 16 SDM 2**  
(simplified)



- 1 Orifice
- 2 Check valve
- 3 Return pressure stop

Order coding example:

**NZP 16 SDM 2** **B** / X 24 / B 0,8 R S

**Additional elements at T** Table 38 Additional elements at T, see [Chapter 2.7, "Additional element"](#)

**Additional elements at P** Table 37 Additional elements at P, see [Chapter 2.7, "Additional element"](#)

**Solenoid voltage** Table 14 Solenoid voltage of proportional pressure-reducing valve, see [Chapter 2.2.6, "Proportional pressure-reducing valve type NZP 16 PDM"](#)

**Pressure range** Table 16 Pressure range

**Basic type** Table 15 Basic type



**Table 15 Basic type**

Basic type	Description	Flow rate $Q_{\max}$ (lpm)	Pressure $p_{\max}$ (bar)	Pressure $p_{\max A,B}$ (bar)
NZP 16 SDM 2	Proportional pressure-reducing valve at P	25	150	125

**Valve used:**

- Functional parts of proportional pressure-reducing valve type PDM 2.. according to [D 7584/1](#)

As well as the proportional pressure reducing function, the set piston has a mechanical clamp.

This is activated by switching off the magnet (1-2).

The setting of the operating pressure is maintained until the magnet (1-2) is energised and a proportional pressure adjustment (1-3) takes place.

It is possible to monitor the set pressure via a pressure gauge in port M.


**Caution**

**Risk of injury if the device is operated outside the permitted pressure and flow rate ranges.**

Risk of minor injury

- Observe the permitted pressure and flow rate ranges of the directional valves being used.

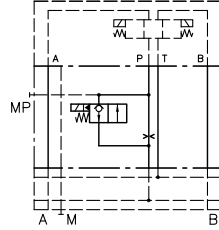
**Table 16 Pressure ranges**

Coding	Pressure range (bar)	Min. required pump pressure (bar)
A	6 – 60	65
B	9 – 92	80
G	8 – 80	80
E	12 – 125	80

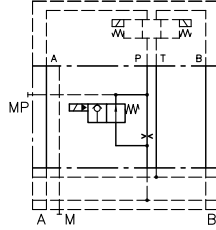
**2.3 Intermediate plate with randomly connectible 2nd speed type NZP 16 T and NZP 16 V**

Circuit symbol:

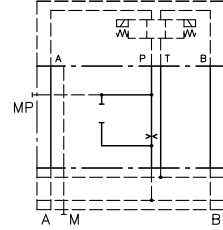
**NZP 16 V/P..  
NZP 16 VPG/P..**



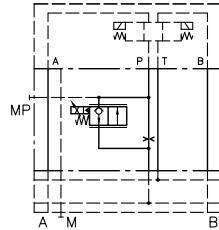
**NZP 16 S/P..  
NZP 16 SPG/P..**



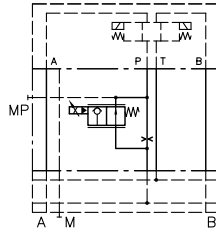
**NZP 16 X/P..**



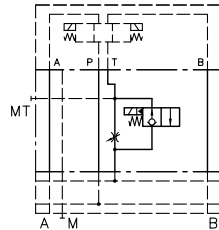
**NZP 16 VP/P..**



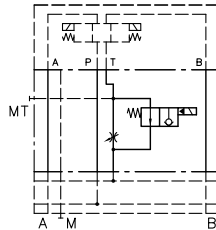
**NZP 16 SP/P..**



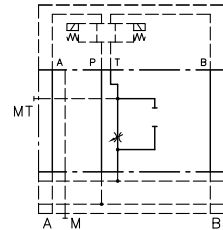
**NZP 16 TV/T..  
NZP 16 TVPG/T..**



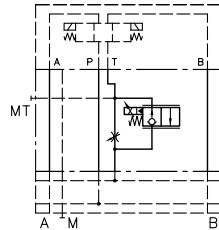
**NZP 16 TS/T..  
NZP 16 TSPG/T..**



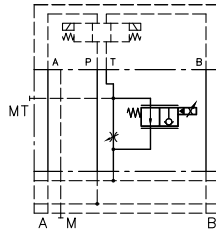
**NZP 16 TX/T..**



**NZP 16 TVP/T..**



**NZP 16 TSP/T..**



### Order coding examples:

NZP 16	V	/ P	B 1.0	- X 24
NZP 16T	VP	/ T	CQ 22	- WG 230

Solenoid voltage Table 20 Solenoid voltage

Orifices and throttles Table 19 Orifices and throttles

Basic type Table 17 Basic type

Connectible directional valve Table 18 Connectible directional valve

Basic type Table 17 Basic type

**Table 17 Basic type**

Basic type	Description	Flow rate Q <sub>max</sub> (lpm)	Pressure p <sub>max</sub> (bar)
NZP 16 ../P..	Valves at P	40	400
NZP 16T ../T..	Valves at T	40	400



**Caution**

**Risk of injury and possible material damage if operated outside the permitted pressure and flow rate ranges.**

- Observe the permitted pressure and flow rate ranges of the directional valves being used.
- Type NZP 16 T../T.. : Observe the permissible return pressure of the directional valve being used.

**Table 18 Connectible directional valve**

Coding	Description	Type
V	N/C contact – on/off	EM 21 V
S	N/O contact – on/off	EM 21 S
VP	N/C contact – proportional throttle	EMP 21 V
SP	N/O contact – proportional throttle	EMP 21 S
VPG	N/C contact – damped	EMP 21 VG
SPG	N/O contact – damped	EMP 21 SG
X	Without directional valve, hole blocked	

**Valve used:**

- Directional seated valve type EM 21 and EMP 21 according to [D 7490/1](#)

**Table 19 Orifices and throttles**

Coding	Comment	Circuit symbol				
B 0 B 0.3 B 0.4 B 0.5 B 0.8 B 1.0 B 1.5 B 1.8 B 2.0 B 2.5	Orifice with orifice diameter in mm Screwed in at P or T channel, channel locked for coding B 0	<table style="display: inline-table; vertical-align: middle;"> <tr> <td style="text-align: center;">B ..</td> <td style="text-align: center;">B 0</td> </tr> <tr> <td style="text-align: center;"></td> <td style="text-align: center;"></td> </tr> </table>	B ..	B 0		
B ..	B 0					
CQ 2	Throttle, adjustable (type CQ 2 according to <a href="#">D 7713</a> )					
CQ 22	Throttle with precision control range, adjustable (type CQ 22 according to <a href="#">D 7713</a> )					
None	For proportional throttles coding VP and SP					

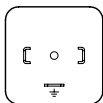
**Table 20 Solenoid voltage**

Coding	Electrical connection	Nominal voltage	Protection class * (IEC 529)	NZP 16.V NZP 16.S	NZP 16.VP NZP 16.SP NZP 16.VPG NZP 16.SPG
X 12 X 24 X 98 X 205	DIN EN 175 301-803 A (Coding G..., e.g. G 24, with line connector, coding L..., e.g. L 24, with LED in the line connector)	12 V DC	IP 65	●	●
WG 110 WG 230		24 V DC		●	●
		98 V DC		●	●
		205 V DC		●	●
M 24	M12x1	110 V AC 50/60 Hz 230 V AC 50/60 Hz	IP 67	●	●
		24 V DC			●

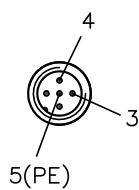
\* For correctly installed line connector

**Electrical connection for actuating solenoid**

G .., X .., L .., WG ..



M ..

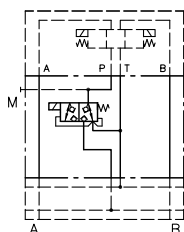


## 2.4 Intermediate plate with short-circuit valve and check valve

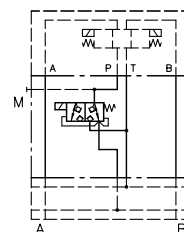
### 2.4.1 Release valve P-T type NZP 16 BV

Circuit symbol:

NZP 16 BV 1Z



NZP 16 BV 1Y



Order coding example:

NZP 16 BV 1Z / R S - X 24

Solenoid voltage Table 22 Solenoid voltage

Additional element at T Table 38 Additional elements at T, see [Chapter 2.7, "Additional element"](#)

Additional elements at P Table 37 Additional elements at P, see [Chapter 2.7, "Additional element"](#)

Basic type Table 21 Basic type

Table 21 Basic type

Basic type	Description	Flow rate $Q_{\max}$ (lpm)	Pressure $p_{\max}$ (bar)
NZP 16 BV 1Z	Release P → T (de-energised)	20	400
NZP 16 BV 1Y	Release P → T (energised)	20	400



#### Caution

Risk of injury if the device is operated outside the permitted pressure and flow rate ranges.

Risk of minor injury

- Observe the permitted pressure and flow rate ranges of the directional valves being used.

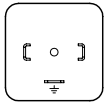
**Table 22 Solenoid voltage**

Coding	Electrical connection	Nominal voltage	Protection class * (IEC 529)	Pressure p <sub>max</sub> (bar)
X 12 X 24 X 98 X 205 WG 110 WG 230	DIN EN 175 301-803 A (Coding G..., e.g. G 24, with line connector, coding L..., e.g. L 24, with LEDs in the line connector) Coding WG with alternating rectifier in line connector	12 V DC 24 V DC 98 V DC 205 V DC 110 V AC 50/60 Hz 230 V AC 50/60 Hz	IP 65	400
XM 12 XM 24 XM 98 XM 205 WGM 110 WGM 230				250
M 24/8W	M12x1	24 V DC	IP 67	250
H 1/4	Hydraulic	Pilot pressure: p <sub>control</sub> = 24 – 400 bar		400

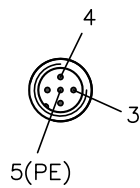
\* For correctly installed line connector

**Electrical connection for actuating solenoid**

G .., X .., L .., WG ..



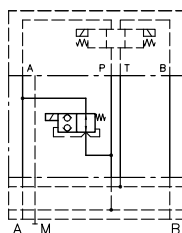
M ..



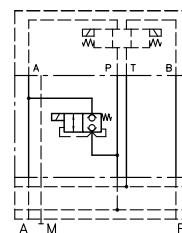
## 2.4.2 Short-circuit valve P-A type NZP 16 PBV

Circuit symbol:

NZP 16 PBV 1S



NZP 16 PBV 1R



Order coding example:

NZP 16 PBV 1S - X 24

**Solenoid voltage** Table 22 Solenoid voltage, see [Chapter 2.4.1, "Release valve P-T type NZP 16 BV"](#)

**Basic type** Table 23 Basic type

**Table 23 Basic type**

Basic type	Description	Flow rate $Q_{max}$ (lpm)	Pressure $p_{max}$ (bar)
NZP 16 PBV 1S	Short-circuit valve P → A N/O contact	20	400
NZP 16 PBV 1R	Short-circuit valve P → A N/C contact	20	400



**Caution**

**Risk of injury if the device is operated outside the permitted pressure and flow rate ranges.**

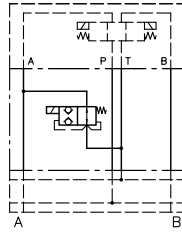
Risk of minor injury

- Observe the permitted pressure and flow rate ranges of the directional valves being used.

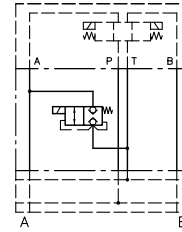
### 2.4.3 Short-circuit valve A-T type NZP 16 ATBV

Circuit symbol:

NZP 16 ATBV 1S



NZP 16 ATBV 1R



Order coding example:

NZP 16 ATBV 1S R S1 - X 24

**Solenoid voltage** Table 22 Solenoid voltage, see [Chapter 2.4.1, "Release valve P-T type NZP 16 BV"](#)

**Additional elements at T** Table 38 Additional elements at T, see [Chapter 2.7, "Additional element"](#)

**Additional elements at P** Table 37 Additional elements at P, see [Chapter 2.7, "Additional element"](#)

**Basic type** Table 24 Basic type

**Table 24 Basic type**

Basic type	Description	Flow rate $Q_{\max}$ (lpm)	Pressure $p_{\max}$ (bar)
NZP 16 ATBV 1S	Short-circuit valve A → T N/O contact	20	500
NZP 16 ATBV 1R	Short-circuit valve A → T N/C contact	20	500

Valve used:

- Directional seated valve type BVE1 according to [D 7921](#)



**Caution**

**Risk of injury if the device is operated outside the permitted pressure and flow rate ranges.**

Risk of minor injury

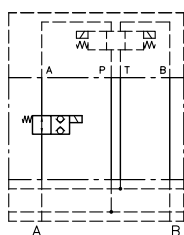
- Observe the permitted pressure and flow rate ranges of the directional valves being used.



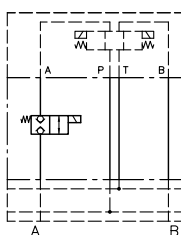
## 2.4.4 Check valve at A or B type NZP 16 BV 1A. and NZP 16 BV 1B.

Circuit symbol:

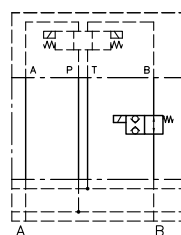
NZP 16 BV 1AS



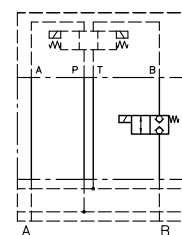
NZP 16 BV 1AR



NZP 16 BV 1BS



NZP 16 BV 1BR



Order coding example:

NZP 16 BV 1AS / R / ABO,7 BBO,6 / S - X 24

**Solenoid voltage** Table 22 Solenoid voltage, see [Chapter 2.4.1, "Release valve P-T type NZP 16 BV"](#)

**Additional elements at T** Table 38 Additional elements at T, see [Chapter 2.7, "Additional element"](#)

**Additional elements at A and/or B** Table 39 Additional elements at A and/or B, see [Chapter 2.7, "Additional element"](#)

**Additional elements at P** Table 37 Additional elements at P, see [Chapter 2.7, "Additional element"](#)

**Basic type** Table 25 Basic type

**Table 25 Basic type**

Basic type	Description	Flow rate Q <sub>max</sub> (lpm)	Pressure p <sub>max</sub> (bar)
NZP 16 BV 1AS	Check valve at A N/O contact	20	400
NZP 16 BV 1AR	Check valve at A N/C contact	20	400
NZP 16 BV 1BS	Check valve at B N/O contact	20	400
NZP 16 BV 1BR	Check valve at B N/C contact	20	400



**Caution**

Risk of injury if the device is operated outside the permitted pressure and flow rate ranges.

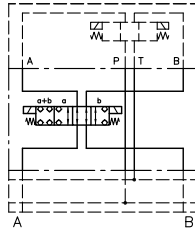
Risk of minor injury

- Observe the permitted pressure and flow rate ranges of the directional valves being used.

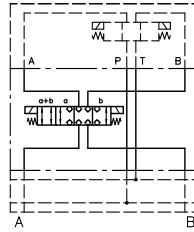
## 2.4.5 4/4-way directional valve type NZP 16 BV 1AS(R)-BS(R)

Circuit symbol:

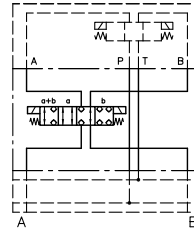
NZP 16 BV 1AS-BS



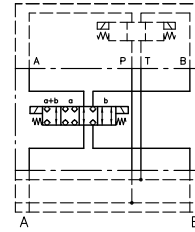
NZP 16 BV 1AR-BR



NZP 16 BV 1AR-BS



NZP 16 BV 1AS-BR



Order coding example:

NZP 16 BV 1AR-BR / R / ABO,7 BB0,6 / S - X 24

Solenoid voltage

Table 22 Solenoid voltage, see [Chapter 2.4.1, "Release valve P-T type NZP 16 BV"](#)

Additional elements at T

Table 38 Additional elements at T, see [Chapter 2.7, "Additional element"](#)

Additional elements at A and/or B

Table 39 Additional elements at A and/or B, see [Chapter 2.7, "Additional element"](#)

Additional elements at P

Table 37 Additional elements at P, see [Chapter 2.7, "Additional element"](#)

Basic type Table 26 Basic type

Table 26 Basic type

Basic type	Description	Flow rate $Q_{max}$ (lpm)	Pressure $p_{max}$ (bar)
NZP 16 BV 1AS-BS	De-energised, A and B open	20	400
NZP 16 BV 1AR-BR	De-energised, A and B closed	20	400
NZP 16 BV 1AR-BS	De-energised, A closed, B open	20	400
NZP 16 BV 1AS-BR	De-energised, A open, B closed	20	400



**Caution**

Risk of injury if the device is operated outside the permitted pressure and flow rate ranges.

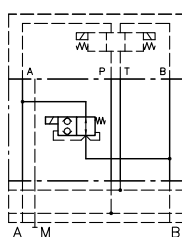
Risk of minor injury

- Observe the permitted pressure and flow rate ranges of the directional valves being used.

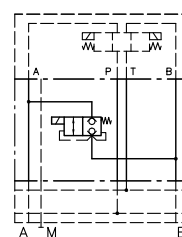
## 2.4.6 Short-circuit valve A-B type NZP 16 BV 1S and NZP 16 BV 1R

Circuit symbol:

NZP 16 BV 1S  
NZP 26 BV 1S



NZP 16 BV 1R  
NZP 26 BV 1R



Order coding example:

NZP 16 BV 1S	- X 24
NZP 26 BV 1R	- WG 230

**Solenoid voltage** Table 22 Solenoid voltage, see [Chapter 2.4.1, "Release valve P-T type NZP 16 BV"](#)

**Basic type** Table 27 Basic type

**Table 27 Basic type**

Basic type	Description	Flow rate $Q_{max}$ (lpm)	Pressure $p_{max}$ (bar)
NZP 16 BV 1S NZP 26 BV 1S	Short-circuit valve B - A N/O contact Difference between NZP 16 and NZP 26: Position of the pressure reducing valve, see <a href="#">Chapter 4, "Dimensions"</a>	20	400
NZP 16 BV 1R NZP 26 BV 1R	Short-circuit valve B - A N/C contact Difference between NZP 16 and NZP 26: Position of the solenoid, see <a href="#">Chapter 4, "Dimensions"</a>	20	400



**Caution**

**Risk of injury if the device is operated outside the permitted pressure and flow rate ranges.**

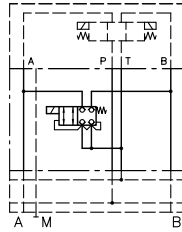
Risk of minor injury

- Observe the permitted pressure and flow rate ranges of the directional valves being used.

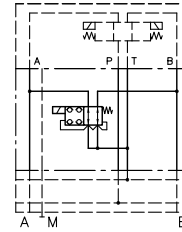
## 2.4.7 Release valve A/B-T type NZP 16 BV 1K and NZP 16 BV 1Q

Circuit symbol:

NZP 16 BV 1K



NZP 16 BV 1Q



Order coding example:

NZP 16 BV 1K	- X 24
NZP 16 BV 1Q	- WGM 230

**Solenoid voltage** Table 22 Solenoid voltage, see [Chapter 2.4.1, "Release valve P-T type NZP 16 BV"](#)

**Basic type** Table 28 Basic type

**Table 28 Basic type**

Basic type	Description	Flow rate $Q_{max}$ (lpm)	Pressure $p_{max}$ (bar)
NZP 16 BV 1K	Release valve Neutral position: A/B → T Closed	20	400
NZP 16 BV 1Q	Release valve Neutral position: A/B → T Open	20	400



**Caution**

**Risk of injury if the device is operated outside the permitted pressure and flow rate ranges.**

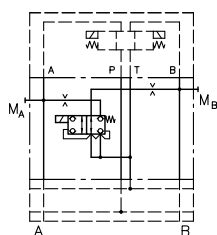
Risk of minor injury

- Observe the permitted pressure and flow rate ranges of the directional valves being used.

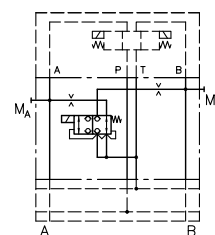
## 2.4.8 Pendulum valve A- or B-T type NZP 16 BV 1RS and NZP 16 BV 1SR

Circuit symbol:

NZP 16 BV 1RS



NZP 16 BV 1SR



Order coding example:

NZP 16 BV 1RS	- X 24
NZP 16 BV 1SR	- WGM 230

**Solenoid voltage** Table 22 Solenoid voltage, see [Chapter 2.4.1, "Release valve P-T type NZP 16 BV"](#)

**Basic type** Table 29 Basic type

**Table 29 Basic type**

Basic type	Description	Flow rate $Q_{max}$ (lpm)	Pressure $p_{max}$ (bar)
NZP 16 BV 1RS	Pendulum valve Neutral position: B → T	20	400
NZP 16 BV 1SR	Pendulum valve Neutral position: A → T	20	400



**Caution**

**Risk of injury if the device is operated outside the permitted pressure and flow rate ranges.**

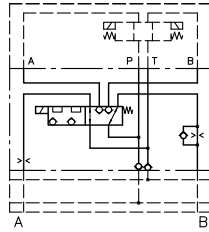
Risk of minor injury

- Observe the permitted pressure and flow rate ranges of the directional valves being used.

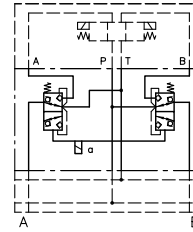
## 2.4.9 Quick shut-down valve type SK 7788 590

Circuit symbol:

Sk 7788 590



Detailed



Order coding example:

SK 7788 590	R	/ AB1/BBV2	/ S	- X 24
SK 7788 590				- H 1/4

**Solenoid voltage** Table 22 Solenoid voltage, see [Chapter 2.4.1, "Release valve P-T type NZP 16 BV"](#)

**Additional element at T** Table 38 Additional elements at T, see [Chapter 2.7, "Additional element"](#)

**Additional elements at A and/or B** Table 39 Additional elements at A and/or B, see [Chapter 2.7, "Additional element"](#)

**Additional elements at P** Table 37 Additional elements at P, see [Chapter 2.7, "Additional element"](#)

**Basic type** Table 30 Basic type

**Table 30 Basic type**

Basic type	Description	Flow rate $Q_P$ (lpm)	Pressure $p_{max}$ (bar)	
			A, B, P	T
SK 7788 590	Quick shut-down valve	20	400	50

$\Delta p$  at 20 lpm approx. 17 bar



**Caution**

**Risk of injury if the device is operated outside the permitted pressure and flow rate ranges.**

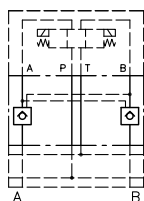
Risk of minor injury

- Observe the permitted pressure and flow rate ranges of the directional valves being used.

## 2.4.10 Releasable check valves at A and B type NZP 16 ADRH

Circuit symbol:

NZP 16 ADRH



Order coding example:

NZP 16 ADRH

Basic type Table 31 Basic type

Table 31 Basic type

Basic type	Description	Flow rate $Q_p$ (lpm)	Pressure $p_{max}$ (bar)
NZP 16 ADRH	Releasable check valves at A and B	50	350



### Caution

**Risk of injury if the device is operated outside the permitted pressure and flow rate ranges.**

Risk of minor injury

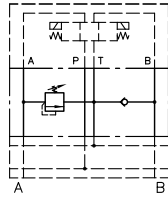
- Observe the permitted pressure and flow rate ranges of the directional valves being used.

## 2.5 Intermediate plate with shock valve or load-holding valve

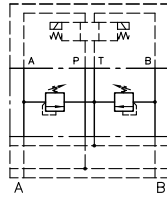
### 2.5.1 Shock valve type NZP 16 AN... etc.

Circuit symbol:

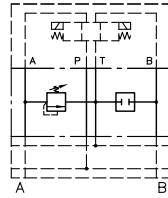
NZP 16 - AN...



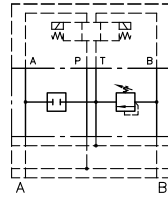
NZP 16 - A... B...



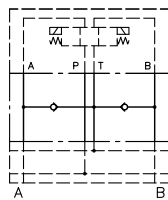
NZP 16 - A...



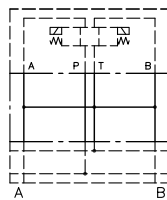
NZP 16 - B...



NZP 16 - ANBN



NZP 16 - AXBX



Order coding example:

NZP 16	A...	/ B...
NZP 16	AN...	

Shock valve at B with pressure setting (bar)

Shock valve at A with pressure setting (bar)

Basic type Table 32 Basic type



**Table 32 Basic type**

Basic type	Description	Flow rate Q <sub>max</sub> (lpm)	Pressure p <sub>max</sub> (bar)
NZP 16 AN ...	Shock valve at A Servo-suction valve at B	40	500
NZP 16 BN ...	Shock valve at B Servo-suction valve at A	40	500
NZP 16 A ... B ...	Shock valve at A and B	40	500
NZP 16 A ... NZP 16 B ...	Shock valve at A or B	40	500
NZP 16 ANBN	Servo-suction valve at A and B	40	500
NZP 16 AXBX	Free passage from A to T and B to T	(40)	(500)

**Valve used:**

- Pressure-limiting valve type MVK 4 according to [D 7000 E/1](#)


**Caution**

**Risk of injury if the device is operated outside the permitted pressure and flow rate ranges.**

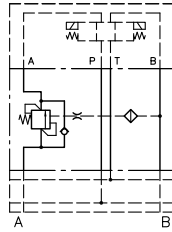
Risk of minor injury

- Observe the permitted pressure and flow rate ranges of the directional valves being used.

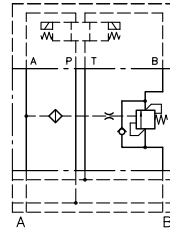
## 2.5.2 Load-holding valve type NZP 16 AL and NZP 16 BL

Circuit symbol:

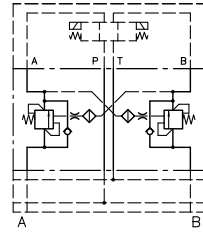
NZP 16 AL-...



NZP 16 BL-...



NZP 16 AL-... - BL-...



Order coding example:

NZP 16 AL	- A8	/250	V	- BL	- A8	/250	V
NZP 16 AL	- C4	/300					

Adjustment Table 35 Adjustment

Pressure setting

Flow rate / control behaviour Table 34 Flow rate

Adjustment Table 35 Adjustment

Pressure setting

Flow rate / control behaviour Table 34 Flow rate

Basic type Table 33 Basic type

**Table 33 Basic type**

Basic type	Description	Pressure p <sub>max</sub> (bar)
NZP 16 AL - ...	Load-holding valves at A	400
NZP 16 BL - ...	Load-holding valves at B	400
NZP 16 AL - ... - BL - ...	Load-holding valves at A and B	400

**Valve used:**

- Load-holding valve type LHT 2 according to [D 7918](#)


**Caution**

**Risk of injury if the device is operated outside the permitted pressure and flow rate ranges.**

Risk of minor injury

- Observe the permitted pressure and flow rate ranges of the directional valves being used.

**Table 34 Flow rate**

	Coding				
	A8	B8	C8	D8	E8
Control behaviour 1:8	A8	B8	C8	D8	E8
Control behaviour 1:4	A4	B4	C4	D4	E4
Recommended flow rate lpm	28	14	10	6	3

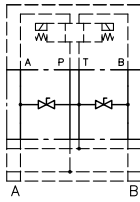
**Table 35 Adjustment**

Coding	Comment
-	Fixed
V	Adjustable

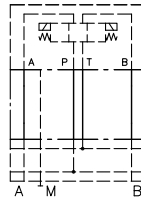
## 2.6 Spacer plate

Circuit symbol:

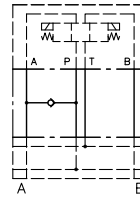
NZP 16 D



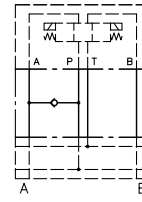
NZP 16 Z10



NZP 16 ZA RB



NZP 16 ZA RK



Order coding example:

NZP 16 D  
NZP 16 Z10 / B2,0 R / ABV 2,0

Additional elements at A and/or B

Table 39 Additional elements at A and/or B, see [Chapter 2.7, "Additional element"](#)

Additional elements at T

Table 38 Additional elements at T, see [Chapter 2.7, "Additional element"](#)

Additional elements at P

Table 37 Additional elements at P, see [Chapter 2.7, "Additional element"](#)

Basic type Table 36 Basic type

**Table 36 Basic type**

Basic type	Description
NZP 16 D	Drain valves at A/B → T
NZP 16 Z10	Intermediate plate 10 mm required for directional seated valves Type NBVP 16 ...- M 24 / 8W (Solenoid size)
NZP 16 ZA RB	Short-circuit direction P → A
NZP 16 ZA RK	Short-circuit direction A → P



**Note**

Additional elements only for type NZP 16 Z10.

## 2.7 Additional element

**Table 37 Additional element at P**

Coding	Comment
No designation	None
R *	Check valve (plug-in valve)
B 0.4	Orifice with orifice diameter in mm (Screw-in valve)
B 0.5	
B 0.6	
B 0.7	
B 0.8	
B 0.9	
B 1.0	
B 1.1 *	
B 1.2	
B 1.4 *	
B 1.5	
B 1.8 *	
B 2.0	
B 2.4 *	
B 2.5	
B 3.0 *	
B 3.5 *	
B 4.0 *	



### Note

- It is possible to combine the orifice and the check valve, e.g. /RB 1.0
- Options marked with \* not for type NZP 16 Z10

**Table 38 Additional element at T**

Coding	Comment
-	None
S	Return pressure stop (plug-in valve)
S1	Return pressure stop (plug-in valve) Opening pressure approx. 1 bar
S0.2	Return pressure stop (plug-in valve) Opening pressure approx. 0.2 bar
	Orifice with orifice diameter in mm (plug-in valve)
TB 0.3	∅ 0.3
TB 0.4	∅ 0.4
TB 0.5	∅ 0.5
TB 0.6	∅ 0.6
TB 0.7	∅ 0.7
TB 0.8	∅ 0.8
TB 0.9	∅ 0.9
TB 1.0	∅ 1.0
TB 1.2	∅ 1.2
TB 1.5	∅ 1.5
TB 2.0	∅ 2.0
TB 2.5	∅ 2.5


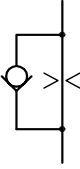
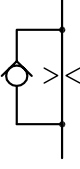


**Caution**

**Risk of injury and possible material damage if operated outside the permitted pressure and flow rate ranges.**

- Observe the permissible return pressure of the directional valve being used.

**Table 39 Additional element at A and/or B**

Coding		Comment	Circuit symbol	Diameter Ø mm
at A	at B			
AB 0.3	BB 0.3	Orifice A and/or B (Plug-in valve)		0.3
AB 0.4	BB 0.4			0.4
AB 0.5	BB 0.5			0.5
AB 0.6	BB 0.6			0.6
AB 0.7	BB 0.7			0.7
AB 0.8	BB 0.8			0.8
AB 0.9	BB 0.9			0.9
AB 1.0	BB 1.0			1.0
AB 1.2	BB 1.2			1.2
AB 1.5	BB 1.5			1.5
AB 2.0	BB 2.0			2.0
AB 2.5	BB 2.5	2.5		
ABV 0.6	BBV 0.6	Restrictor check valve at A and/or B to the consumer, throttling (Plug-in valve)		0.6
ABV 0.7	BBV 0.7			0.7
ABV 0.8	BBV 0.8			0.8
ABV 0.9	BBV 0.9			0.9
ABV 1.0	BBV 1.0			1.0
ABV 1.2	BBV 1.2			1.2
ABV 1.5	BBV 1.5			1.5
ABV 2.0	BBV 2.0	2.0		
ABR 0.6	BBR 0.6	Restrictor check valve at A and/or B to the consumer, open (Plug-in valve)		0.6
ABR 0.7	BBR 0.7			0.7
ABR 0.8	BBR 0.8			0.8
ABR 0.9	BBR 0.9			0.9
ABR 1.0	BBR 1.0			1.0
ABR 1.2	BBR 1.2			1.2
ABR 1.5	BBR 1.5			1.5
ABR 2.0	BBR 2.0	2.0		


**Note**

The versions ABR, BBR and ABV, BBV are structurally identical; installation position different.

## 3 Parameters

### 3.1 General

#### General information

<b>Designation</b>	Intermediate plate for hole pattern NG 6 according to DIN 24 340-A6
<b>Design</b>	Depending on type
<b>Model</b>	Depending on type
<b>User interface</b>	Main valve ZnNi; electrogalvanised solenoid
<b>Attachment</b>	Via through bore with the screws of the directional valve.  <div style="border: 1px solid black; padding: 5px;"> <p><b>i Note</b> For pressures above 400 bar, high-strength screws (property class 10.9 at minimum) must be used.</p> </div>
<b>Installation position</b>	As desired
<b>Hydraulic fluid</b>	Hydraulic oil: according to Part 1 to 3; ISO VG 10 to 68 according to DIN ISO 3448 Viscosity limits: min. approx. 4, max. approx. 1500 mm <sup>2</sup> /s opt. operation approx. 10... 500 mm <sup>2</sup> /s. Also suitable for biologically degradable hydraulic fluids type HEPG (polyalkylene glycol) and HEES (synthetic ester) at operating temperatures up to approx. +70°C.
<b>Cleanliness level</b>	<b>ISO 4406</b> <hr/> 21/18/15...19/17/13
<b>Temperatures</b>	Ambient: approx. -40 ... +80°C, Fluid: -25 ... +80°C, Note the viscosity range! Permissible temperature during start: -40°C (observe start-viscosity!), as long as the service temperature is at least 20K higher for the following operation. Biologically degradable pressure fluids: Observe manufacturer's specifications. By consideration of the compatibility with seal material not over +70°C.



**Characteristics**

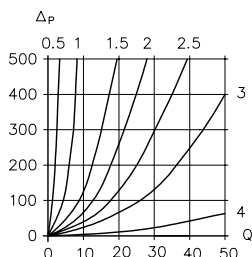
Oil viscosity approx. 60 mm<sup>2</sup>/s

Type NZP 16 Q...  
Type NZP 16 ../P CQ.  
Type NZP 16 T ../T CQ.

**Δp-Q characteristics**

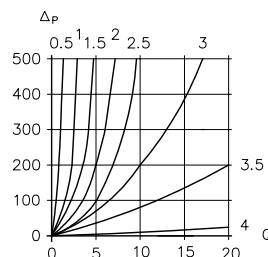
Throttled flow direction  
Reference values per revolution of the adjusting spindle  
Counted from the closed state

**Coding 1, 2, 3, CQ2**



Q flow rate (lpm); Δp flow resistance (bar)

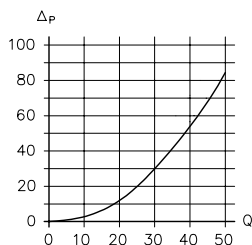
**Coding 4, 5, 6, CQ2**



Q flow rate (lpm); Δp flow resistance (bar)

Free flow direction

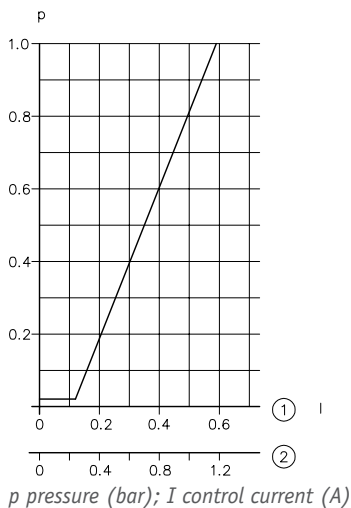
**Coding 2, 3, 5, 6**



Q flow rate (lpm); Δp flow resistance (bar)

**Type NZP 16 PDM**

**p/I characteristic**



p pressure (bar); I control current (A)

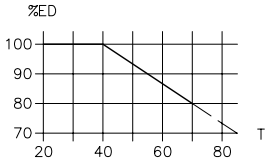
- 1 Control current I (A) at 24 V DC
- 2 Control current I (A) at 12 V DC

**Weight****Type**

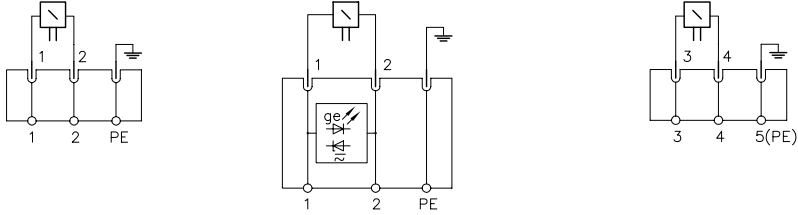
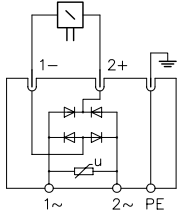
NZP 16 Q	= 0.8 kg
NZP 16 V(S, VP, SP)	= 1.4 kg
NZP 16 TV(S, VP, SP)	= 1.4 kg
NZP 16 CZ, NZP 26 CZ, NZP 16 LZ, NZP 16 ALZ, NZP 16 BLZ	= 1.7 kg
NZP 16 LZY	= 2.1 kg
NZP 16 ADK	= 1.7 kg
NZP 16 ACZ(BCZ)	= 1.7 kg
NZP 16 CZS	= 1.8 kg
NZP 16 ADM2	= 1.0 kg
NZP 16 PDM2	= 2.4 kg
NZP 16 SDM2	= 3.9 kg
NZP 16 BV..	= 1.4 kg
NZP 26 BV..	= 1.4 kg
NZP 16 PBV.., NZP 16 AT BV 1A(B)	= 1.4 kg
NZP 16 BV 1A.. - B..	= 1.7 kg
NZP 16 AL(BL)	= 1.0 kg
NZP 16 AL..BL..	= 1.2 kg
NZP 16 AN.., NZP 16 BN..	= 1.0 kg
NZP 16 AN.. BN..	= 1.2 kg
NZP 16 ANBN, NZP 16 AXBX	= 1.2 kg
NZP 16 Z10	= 0.2 kg
NZP 16 D	= 0.4 kg
NZP 16 ZA RB(RK)	= 0.4 kg
SK 7788 590	= 1.7 kg
NZP 16 ADRH	= 1.2 kg

## 3.2 Electrical


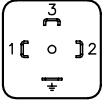

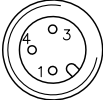
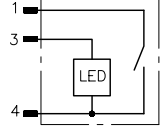
Nominal power $P_N$	12 V DC (X../XM..)	24 V DC (X../XM..)	98 V DC 110 V AC (WG../WGM..)	205 V DC 230 V AC (WG../WGM..)	24 V DC/ 8 watts	
	NZP 16 . V NZP 16 . S	21 W	21 W	21 W	21 W	--
NZP 16 . VP NZP 16 . SP NZP 16 . VPG NZP 16 . SPG	32 W	32 W	32 W	32 W	--	
NZP 16 . BV NZP 16 LZY	29 W / 26.5 W	28 W / 26.5 W	29 W / 25 W	30 W / 28 W	8 W	
NZP 16 PDM 2-3	22 W	22 W	--	--	--	
NZP 16 PDM 2-4	24 W	24 W	--	--	--	
NZP 16 SDM	--	21 W	--	--	--	
Limit current $I_N$	NZP 16 . V NZP 16 . S	1.75 A	0.89 A	0.2 A	0.1 A	--
NZP 16 . VP NZP 16 . SP NZP 16 . VPG NZP 16 . SPG	2.67 A	1.33 A	0.3 A	0.15 A	--	
NZP 16 . BV NZP 16 LZY	2.5 A	1.25 A	0.3 A	0.15 A	--	
NZP 16 PDM 2-3	1.8 A	0.88 A	--	--	--	
NZP 16 PDM 2-4	2.0 A	1.0 A	--	--	--	
NZP 16 SDM	--	0.9 A	--	--	--	
Nominal current $I_{limit}$	NZP 16 . VP NZP 16 . SP NZP 16 . VPG NZP 16 . SPG	1.87 A	0.93 A	--	--	--
NZP 16 PDM 2-3	1.25 A	0.68 A	--	--	--	
NZP 16 PDM 2-4	1.26 A	0.63 A	--	--	--	
NZP 16 SDM	--	0.63 A	--	--	--	
Switching times	<b>ON</b>		<b>OFF</b>			
NZP 16 . V NZP 16 . S	S: 150 ms, V: 50 ms		S: 50 ms, V: 150 ms			
NZP 16 . VP NZP 16 . SP	SP: 150 ms, VP: 50 ms		SP: 50 ms, VP: 150 ms			
NZP 16 . VPG NZP 16 . SPG	SPG, VPG approx. 5 – 10 times longer					
NZP 16 . BV NZP 16 LZY	50 – 60 ms		50 – 60 ms			
NZP 16 SDM	50 – 60 ms (1-2)		50 – 60 ms (1-2)			
For version WG.. approx. 2 – 3 times larger For version M24/8 W approx. 2 – 3 times larger						

Switching operations/h	Approx. 2000, to be seen as approximately evenly distributed
Insulation material class	F Contact temperature at 20° ambient temperature approx. 85 – 95°C (cladding). In adhering to the reference values for % duty cycle in operation, the permissible winding limit temperature of approx. 150°C according to insulation material class F is approximately reached as a steady-state temperature. The thermal load of the coil can be reduced by means of an economy circuit, for example (see <a href="#">Chapter 5.4, "Maintenance information"</a> ).
Relative duty cycle (ED) 100% ED (specification on the solenoid)	Reference value and restriction in operation  <i>T ambient temperature (°C); % ED duty cycle</i>
Protection class	Depending on actuating solenoid <a href="#">Chapter 2, "Available versions, main data"</a> Table 14, 20, 22
Electrical connection	Depending on actuating solenoid <a href="#">Chapter 2, "Available versions, main data"</a> Table 14, 20, 22

**Circuit diagrams**

DC voltage	<p><b>G ..</b>                      <b>L ..</b>                      <b>M..</b></p> <p><b>X ..</b></p> 
AC voltage	<p><b>WG 110, WG 230</b></p> 
Cut-off energy	Approx. <10 Ws of maximum reference value + approx. 10% from measurements at nominal voltage $U_N$
Dither frequency	50 – 150 Hz

## Electrical data for pressure switch for type NZP 16 ADK

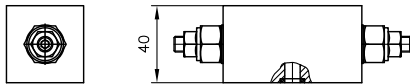
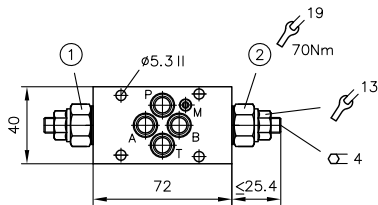
<b>Mechanical lifetime</b>	10 x 10 <sup>6</sup> switching cycles	
<b>Switching current</b>	<b>Nominal voltage U<sub>N</sub></b>	<b>Switching current (A)</b>
	12 V DC	5
	24 V DC	2
<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"><b>i</b></div> <div> <p><b>Note</b></p> <p>To ensure a safe contact, the current must not fall below certain minimum values: I<sub>min</sub>            (12 V DC) = 10 mA, I<sub>min</sub> (24 V DC) = 100 mA</p> </div> </div>		
<b>Line connector, electrical connection, protection class</b>	<b>Pressure switch</b>	
	DIN EN 175 301-803	M12x1
	IP 65 (according to IEC 529)	IP 67 (according to IEC 529)
	Normal position 1-3 Switching position 1-2	(LED indicator protected against polarity reversal) Switching position 1-4
	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">      </div> <div style="text-align: center;">          </div> </div>	

## 4 Dimensions

All dimensions in mm, subject to change.

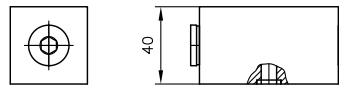
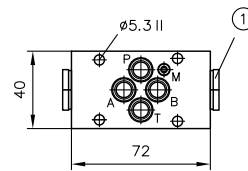
### 4.1 Intermediate plate with throttle valve type NZP 16 Q

#### Coding 1, 2, 3



- 1 Throttle in the A channel
- 2 Throttle in the B channel

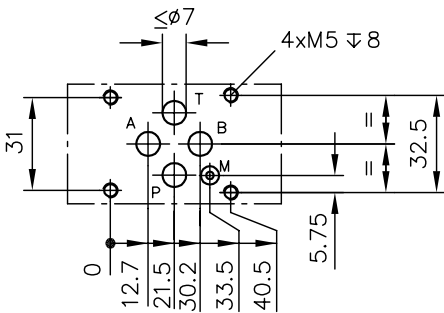
#### Coding 0



- 1 Tapped plug

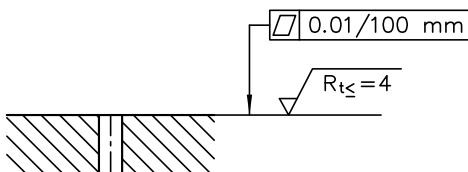
Port **M** suitable for combination with clamping modules type NSMD according to [D 7787](#)

#### Base plate hole pattern



Sealing of the ports:

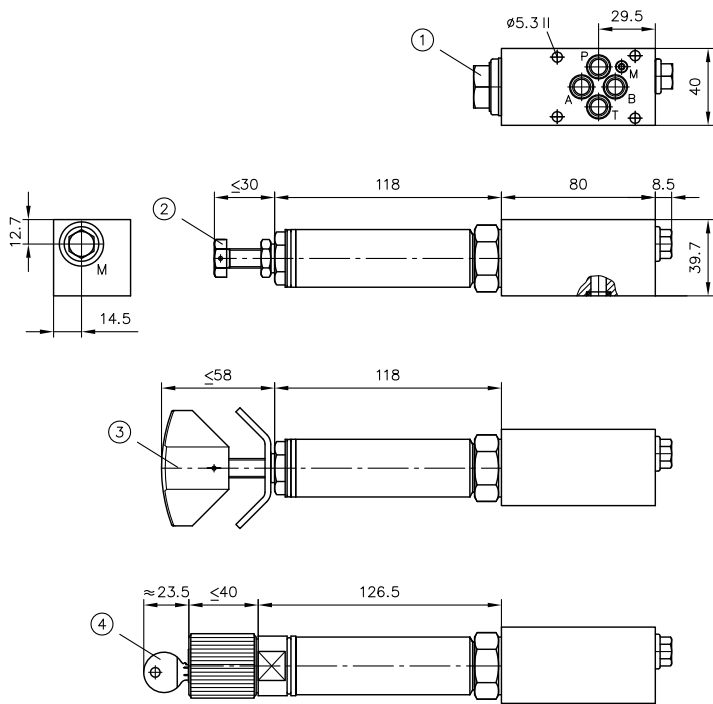
	O-ring
P, T, A, B	9.25x1.78 NBR 90 Sh
M	2.90x1.78 NBR 90 Sh



## 4.2 Intermediate plate with pressure reducing valve

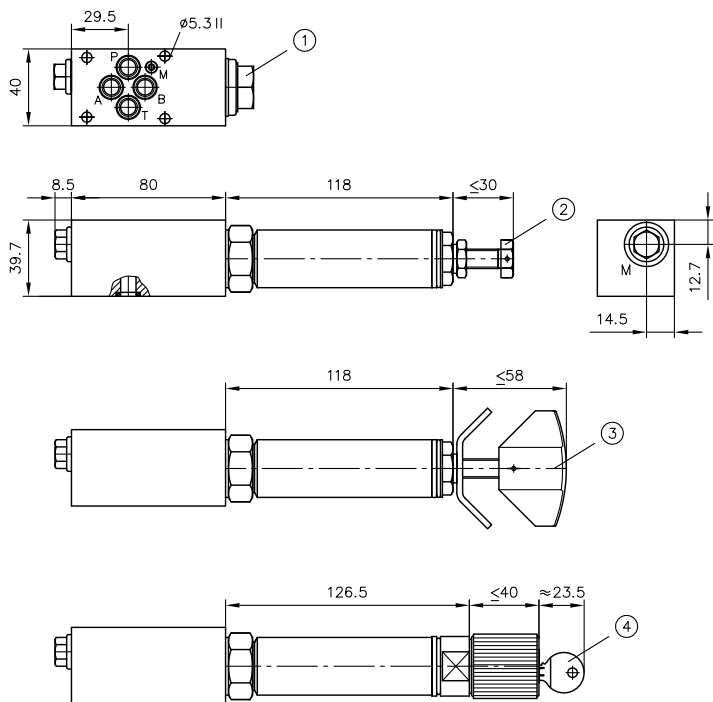
### 4.2.1 Pressure reducing valve type NZP.. CZ

#### NZP 16 CZ



- 1 Tapped plug for CZX
- 2 Fixed
- 3 Adjustable, coding R
- 4 Lockable, coding H

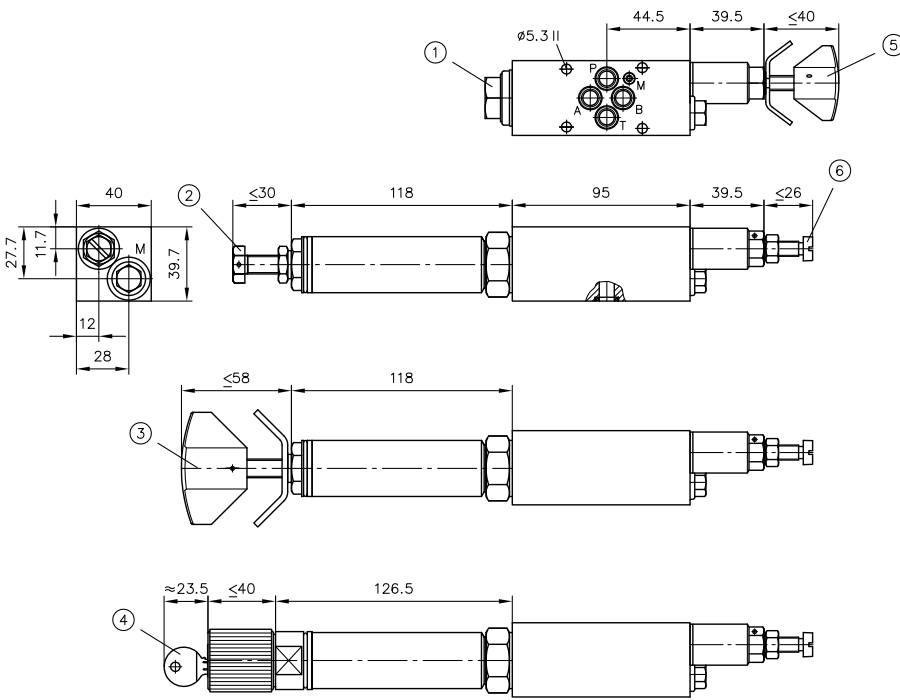
#### NZP 26 CZ



- 1 Tapped plug for CZX
- 2 Fixed
- 3 Adjustable, coding R
- 4 Lockable, coding H

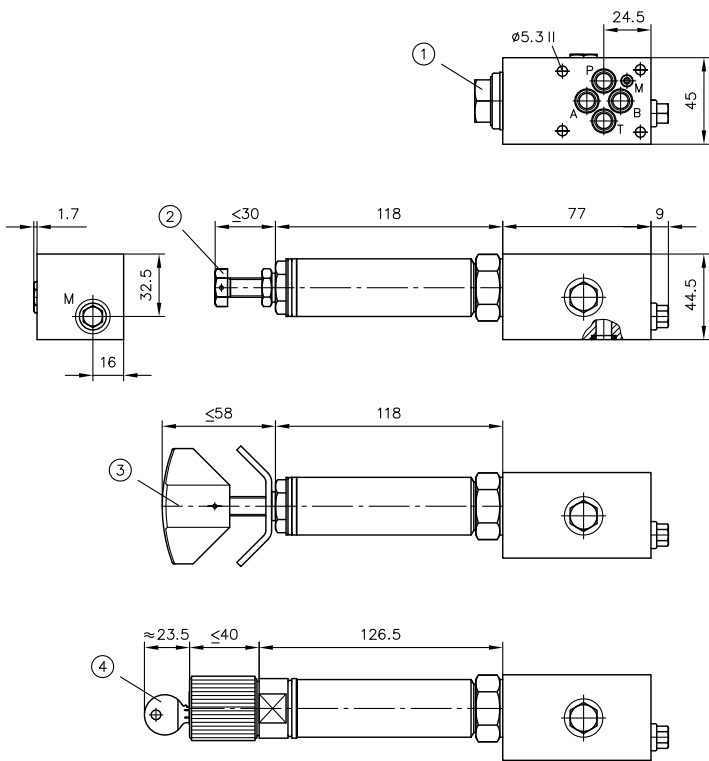
M = G 1/4

**NZP 16 CZS**



- 1 Tapped plug for CZSX
- 2 Fixed
- 3 Adjustable, coding R
- 4 Lockable, coding H
- 5 Adjustable, coding R
- 6 Fixed

**NZP 16 ACZ**

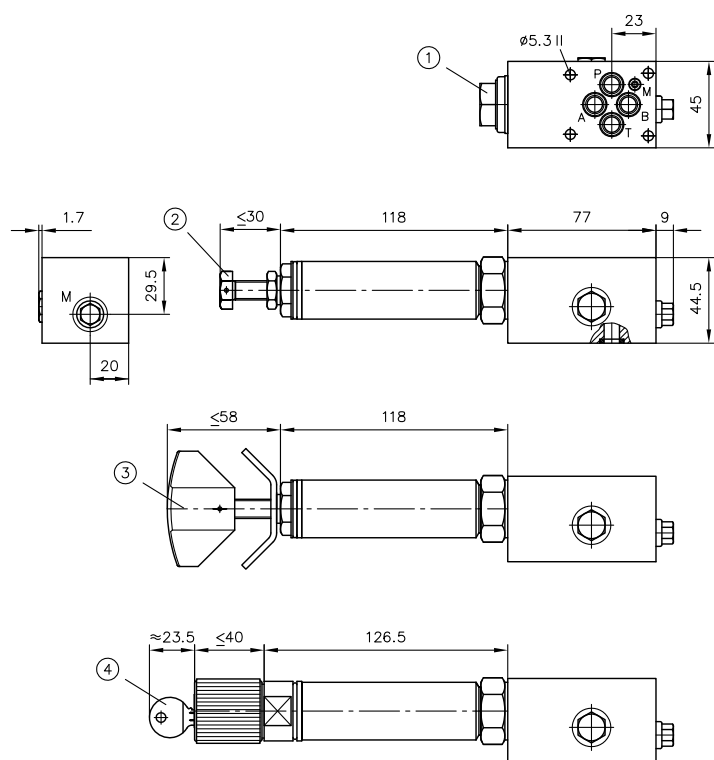


- 1 Tapped plug for ACZX
- 2 Fixed
- 3 Adjustable, coding R
- 4 Lockable, coding H

M = G 1/8



**NZP 16 BCZ**



- 1 Tapped plug for BCZX
- 2 Fixed
- 3 Adjustable, coding R
- 4 Lockable, coding H

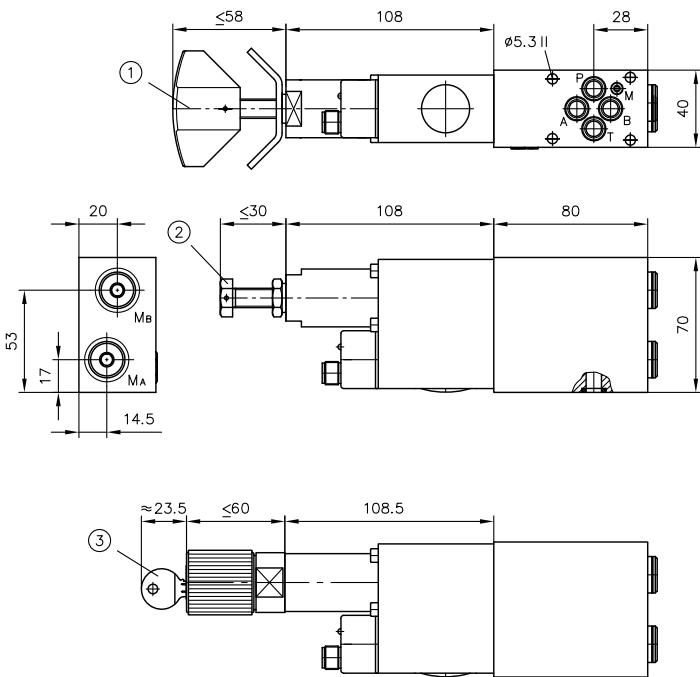
M = G 1/8



**Note**

Missing dimensions and hole pattern, see ["Intermediate plate with throttle valve type NZP 16 Q"](#).

## 4.2.2 Pressure reducing valve with tracked pressure switch at A type NZP 16 ADK



- 1 Adjustable, coding R
- 2 Fixed
- 3 Lockable, coding H

$M_A, M_B = G 1/4$

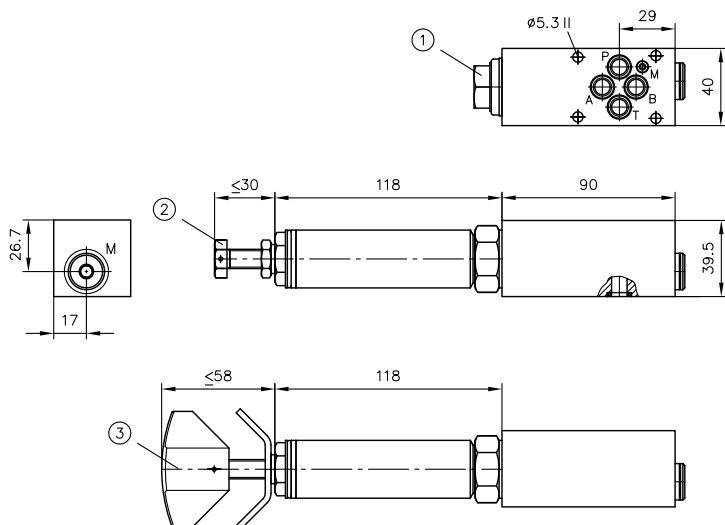


**Note**

Missing dimensions and hole pattern, see ["Intermediate plate with throttle valve type NZP 16 Q"](#).

### 4.2.3 Pressure reducing valve at P or A type NZP 16 LZ, NZP 16 ALZ and NZP 16 BLZ

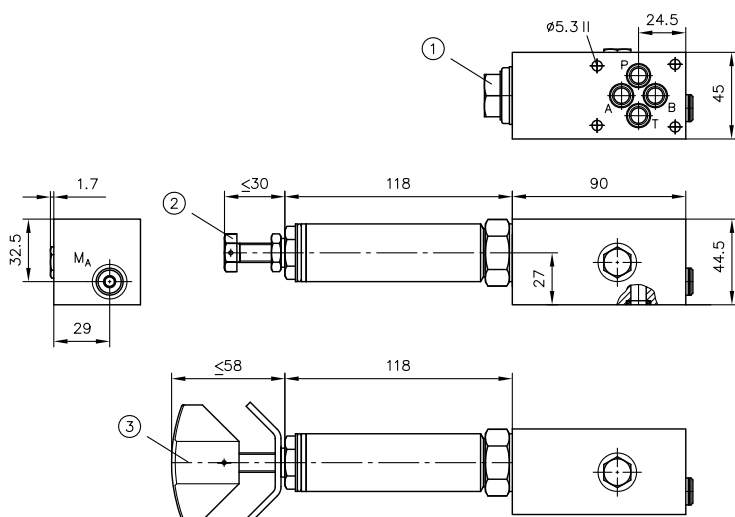
#### NZP 16 LZ



- 1 Tapped plug for LZX
- 2 Fixed
- 3 Adjustable, coding R

$M = G 1/4$

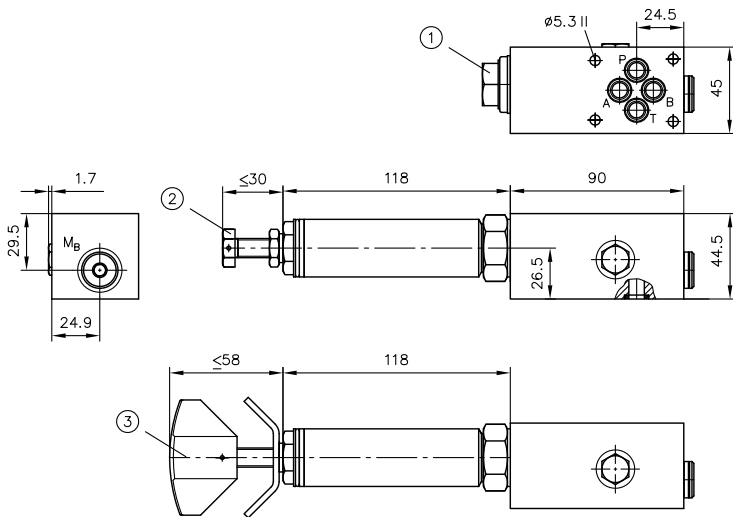
#### NZP 16 ALZ



- 1 Tapped plug for ALZX
- 2 Fixed
- 3 Adjustable, coding R

$M_A = G 1/8$

**NZP 16 BLZ**



- 1 Tapped plug for BLZX
- 2 Fixed
- 3 Adjustable, coding R

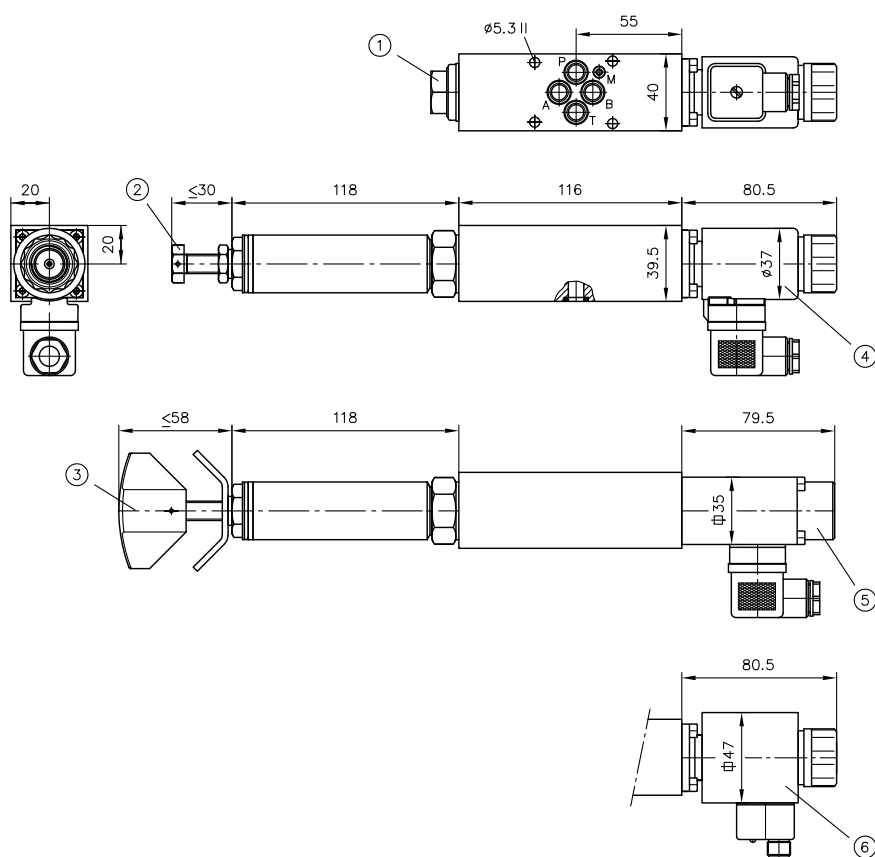
$M_B = G 1/4$



**Note**

Missing dimensions and hole pattern, see "[Intermediate plate with throttle valve type NZP 16 Q](#)".

#### 4.2.4 Connectible pressure reducing valve at P type NZP 16 LZY



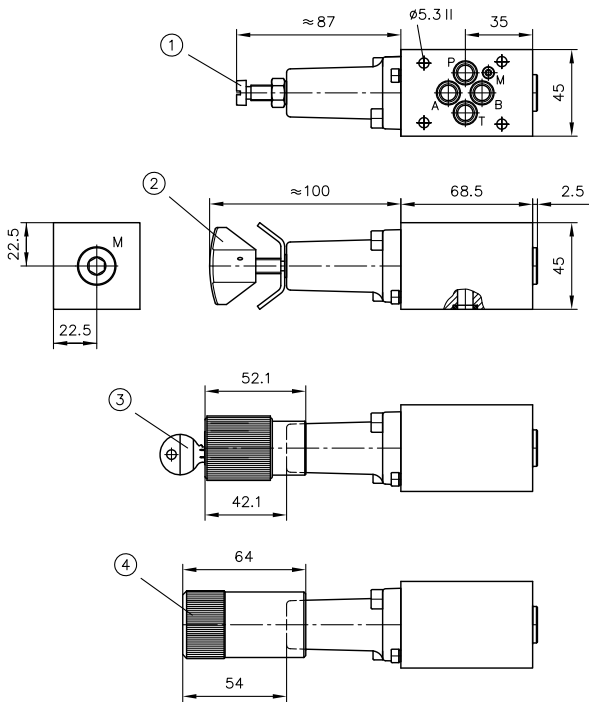
- 1 Tapped plug for LZYY
- 2 Fixed
- 3 Adjustable, coding R
- 4 Solenoid GM., WGM., XM..., can be turned in any direction
- 5 Solenoid G., WG., X..., can be assembled rotated by 4x90°
- 6 Solenoid M24/8W, can be turned in any direction



**Note**

Missing dimensions and hole pattern, see "[Intermediate plate with throttle valve type NZP 16 Q](#)".

## 4.2.5 Pressure reducing valve type NZP 16 ADM



- 1 Fixed
- 2 Adjustable, coding R
- 3 Lockable, coding H
- 4 Turn knob, coding V

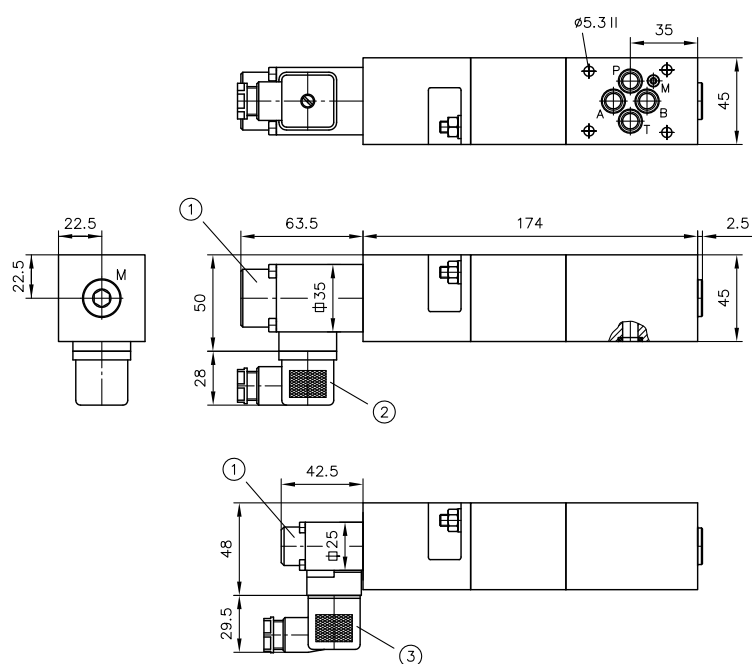
M = G 1/4



**Note**

Missing dimensions and hole pattern, see ["Intermediate plate with throttle valve type NZP 16 Q"](#).

## 4.2.6 Proportional pressure-reducing valve type NZP 16 PDM



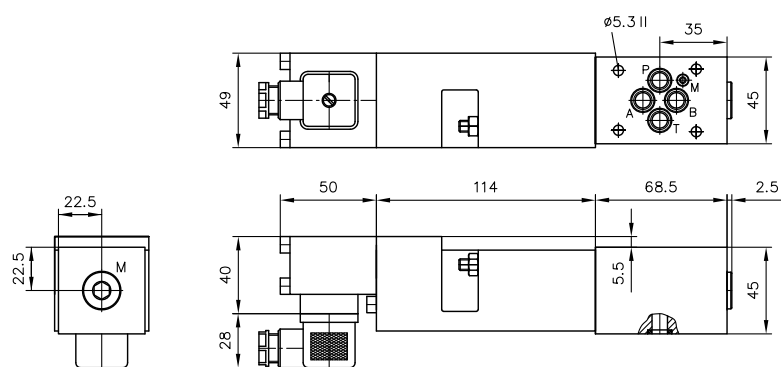
- 1 Solenoids can be assembled rotated by  $4 \times 90^\circ$
- 2 NZP 16 PDM 2-3...  
Male connector according to DIN EN 175 301-803 A
- 3 NZP 16 PDM 2-4...  
Male connector slim design (industry standard)

M = G 1/4

### **i** Note

Missing dimensions and hole pattern, see "[Intermediate plate with throttle valve type NZP 16 Q](#)".

## 4.2.7 Proportional pressure-reducing valve at P type NZP 16 SDM



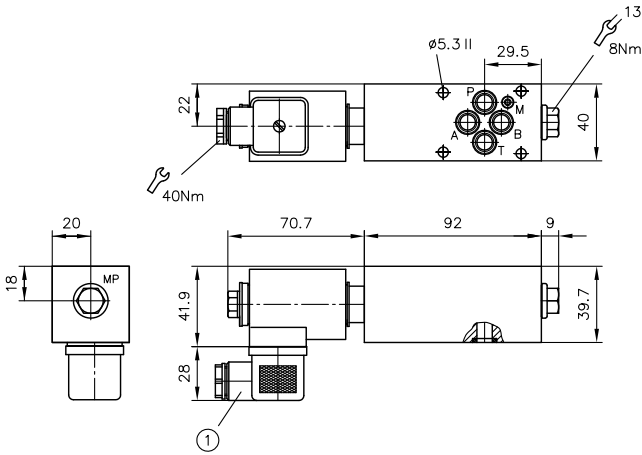
M = G 1/4

### **i** Note

Missing dimensions and hole pattern, see "[Intermediate plate with throttle valve type NZP 16 Q](#)".

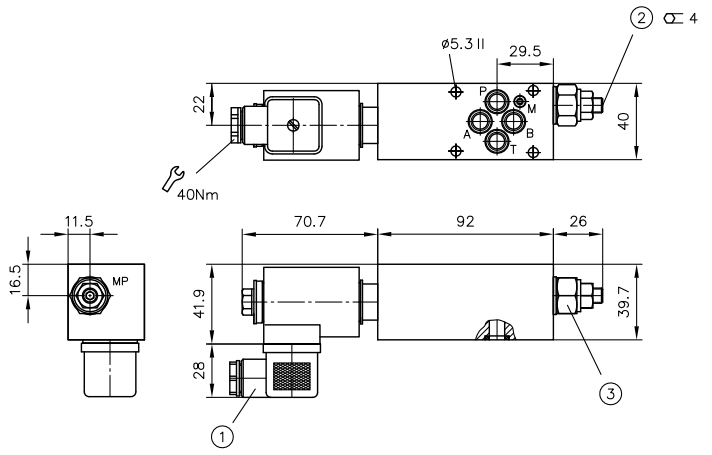
### 4.3 Intermediate plate with randomly connectible 2nd speed type NZP 16 T and NZP 16 V

#### NZP 16 V(S)/P..



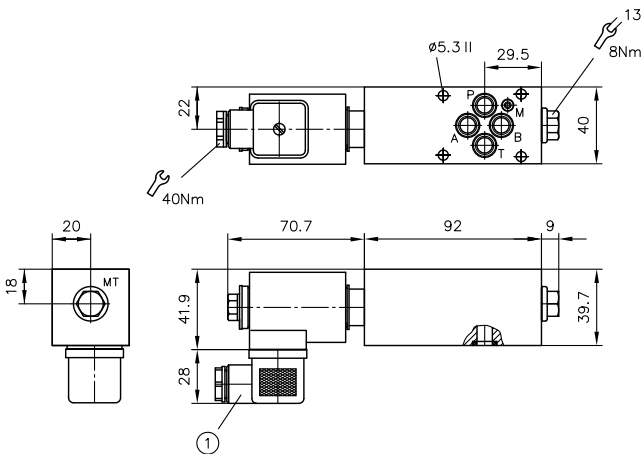
- 1 Solenoid can be turned in any direction

#### NZP 16 V(S)/PCQ..



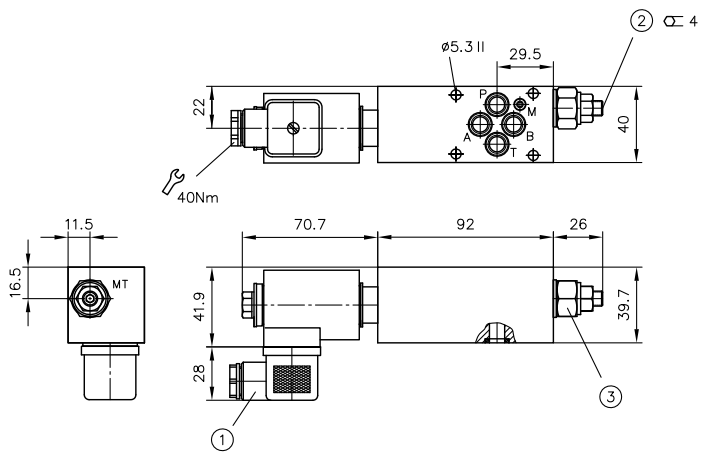
- 1 Solenoid can be turned in any direction
- 2 Hexagon socket
- 3 For version Q 20, maximum adjustment travel

#### NZP 16T V(S)/T..



- 1 Solenoid can be turned in any direction

#### NZP 16T V(S)/TCQ..



- 1 Solenoid can be turned in any direction
- 2 Hexagon socket
- 3 For version Q 20, maximum adjustment travel

MP, MT = G 1/4



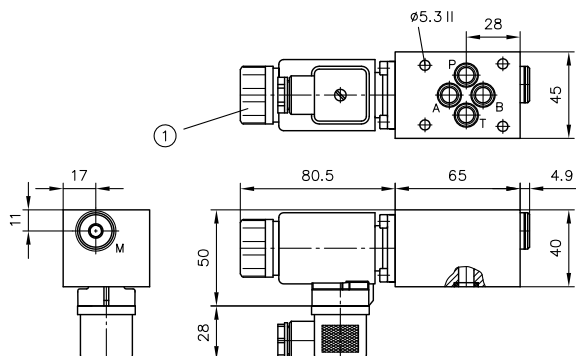
**Note**

Missing dimensions and hole pattern, see ["Intermediate plate with throttle valve type NZP 16 Q"](#).



## 4.4 Intermediate plate with short-circuit valve and check valve

### 4.4.1 Release valve P-T type NZP 16 BV 1Z, NZP 16 BV 1Y



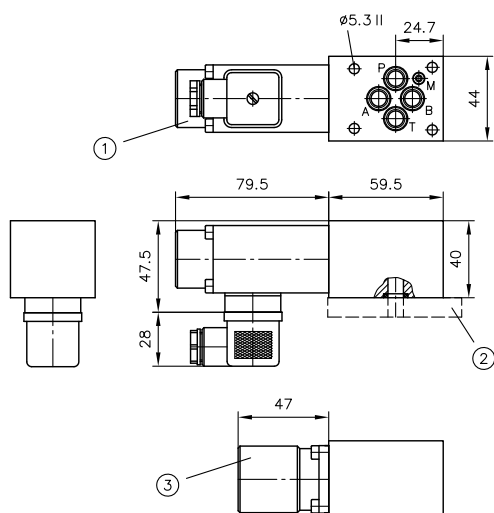
1 Solenoid GM..., WGM..., XM..., for other solenoid versions see [Chapter 4.2.4, "Connectible pressure reducing valve at P type NZP 16 LZ"](#)

M = G 1/4

**i Note**

Missing dimensions and hole pattern, see ["Intermediate plate with throttle valve type NZP 16 Q"](#).

### 4.4.2 Short-circuit valve P-A type NZP 16 PBV



1 Solenoid G..., WG..., X..., for other solenoid versions see [Chapter 4.2.4, "Connectible pressure reducing valve at P type NZP 16 LZ"](#)

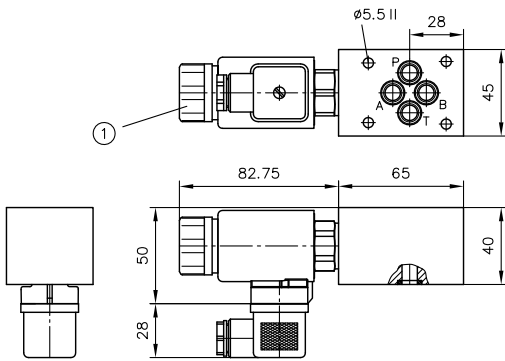
2 Spacer plate 10 mm, only for version with explosion-proof solenoids (coding - G 24 Ex)

3 Pneumatic actuation

**i Note**

Missing dimensions and hole pattern, see ["Intermediate plate with throttle valve type NZP 16 Q"](#).

### 4.4.3 Short-circuit valve A-T type NZP 16 ATBV



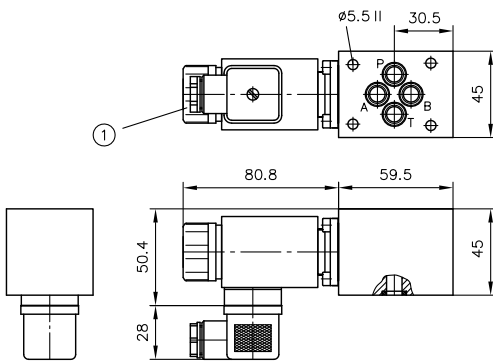
1 Solenoid GM..., WGM..., XM..., for other solenoid versions see [Chapter 4.2.4, "Connectible pressure reducing valve at P type NZP 16 LZV"](#)

**Note**

Missing dimensions and hole pattern, see ["Intermediate plate with throttle valve type NZP 16 Q"](#).

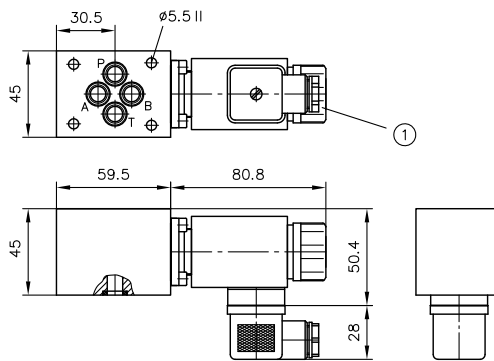
### 4.4.4 Check valve at A or B type NZP 16 BV 1A. and NZP 16 BV 1B.

#### NZP 16 BV 1AS(R)



1 Solenoid G..., WG..., X..., for other solenoid versions see [Chapter 4.2.4, "Connectible pressure reducing valve at P type NZP 16 LZV"](#)

#### NZP 16 BV 1BS(R)

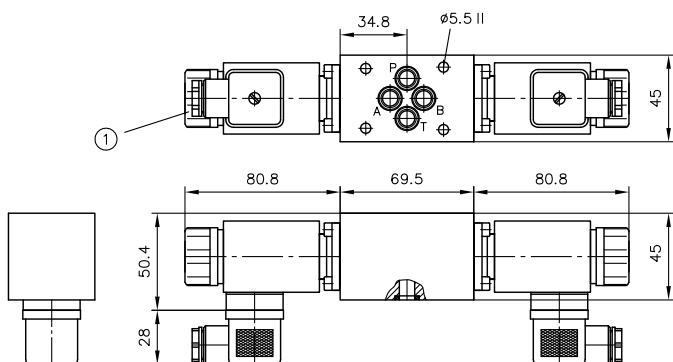


1 Solenoid G..., WG..., X..., for other solenoid versions see [Chapter 4.2.4, "Connectible pressure reducing valve at P type NZP 16 LZV"](#)

**Note**

Missing dimensions and hole pattern, see ["Intermediate plate with throttle valve type NZP 16 Q"](#).

#### 4.4.5 4/4-way directional valve type NZP 16 BV 1AS(R)-BS(R)



1 Solenoid G., WG., X., for other solenoid versions see [Chapter 4.2.4, "Connectible pressure reducing valve at P type NZP 16 LZY"](#)

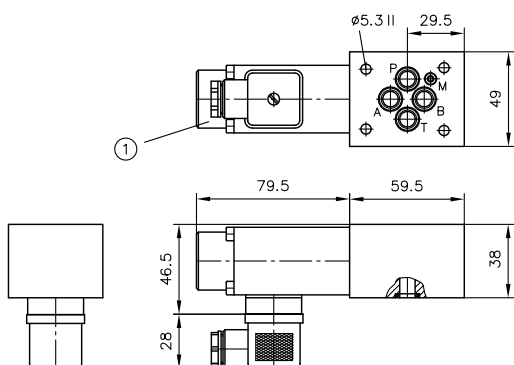


**Note**

Missing dimensions and hole pattern, see ["Intermediate plate with throttle valve type NZP 16 Q"](#).

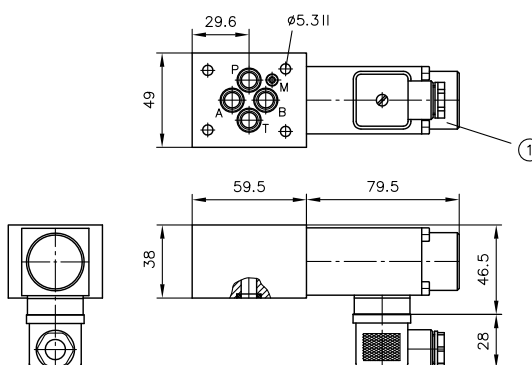
#### 4.4.6 Short-circuit valve A-B type NZP 16 BV 1S and NZP 16 BV 1R

NZP 16 BV 1S  
NZP 16 BV 1R



1 Solenoid G., WG., X., for other solenoid versions see [Chapter 4.2.4, "Connectible pressure reducing valve at P type NZP 16 LZY"](#)

NZP 26 BV 1S  
NZP 26 BV 1R



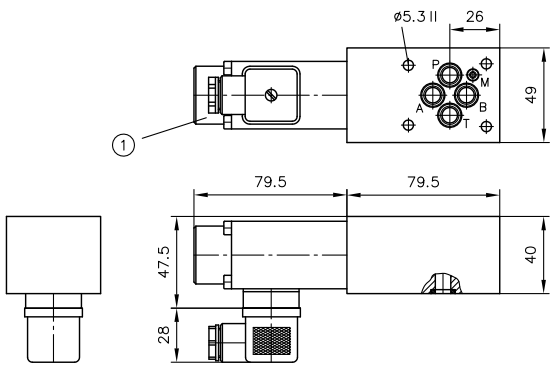
1 Solenoid G., WG., X., for other solenoid versions see [Chapter 4.2.4, "Connectible pressure reducing valve at P type NZP 16 LZY"](#)



**Note**

Missing dimensions and hole pattern, see ["Intermediate plate with throttle valve type NZP 16 Q"](#).

#### 4.4.7 Release valve A/B-T type NZP 16 BV 1K and NZP 16 BV 1Q



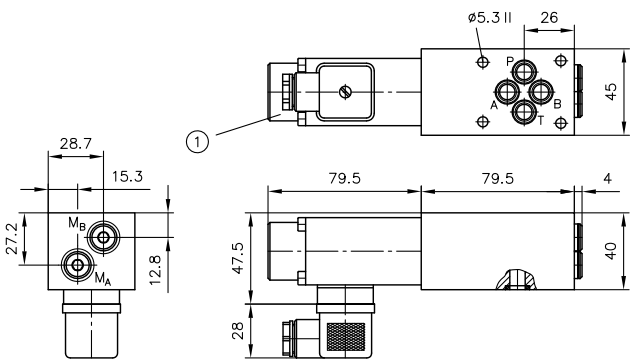
1 Solenoid G., WG., X., for other solenoid versions see [Chapter 4.2.4, "Connectible pressure reducing valve at P type NZP 16 LZ"](#)



**Note**

Missing dimensions and hole pattern, see ["Intermediate plate with throttle valve type NZP 16 Q"](#).

#### 4.4.8 Pendulum valve A or B-T type NZP 16 BV 1RS and NZP 16 BV 1SR



1 Solenoid G., WG., X., for other solenoid versions see [Chapter 4.2.4, "Connectible pressure reducing valve at P type NZP 16 LZ"](#)

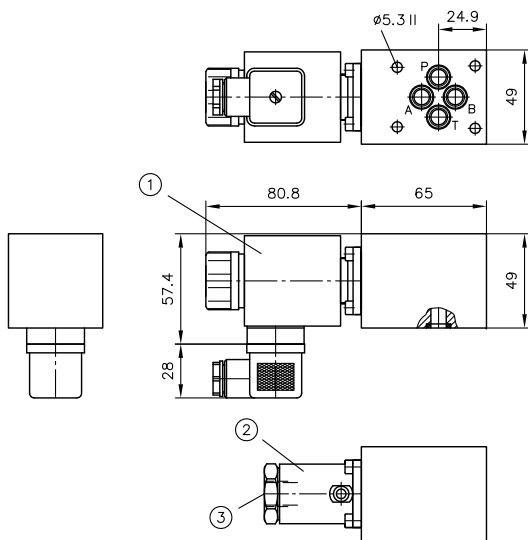
$M_A, M_B = G 1/8$



**Note**

Missing dimensions and hole pattern, see ["Intermediate plate with throttle valve type NZP 16 Q"](#).

#### 4.4.9 Quick shut-down valve type SK 7788 590



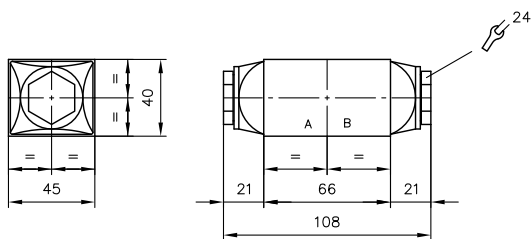
- 1 Electrical actuation
- 2 Hydraulic actuation
- 3 G 1/4



**Note**

Missing dimensions and hole pattern, see ["Intermediate plate with throttle valve type NZP 16 Q"](#).

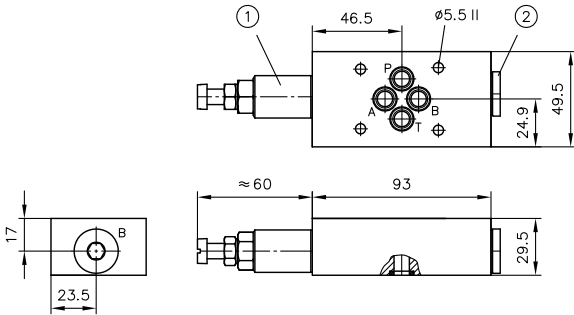
#### 4.4.10 Releasable check valves at A and B type NZP 16 ADRH



## 4.5 Intermediate plate with shock valve or load-holding valve

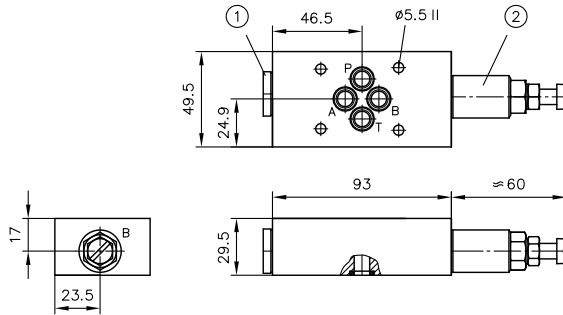
### 4.5.1 Shock valve type NZP 16 AN... etc.

NZP 16 AN...  
NZP 16 A...



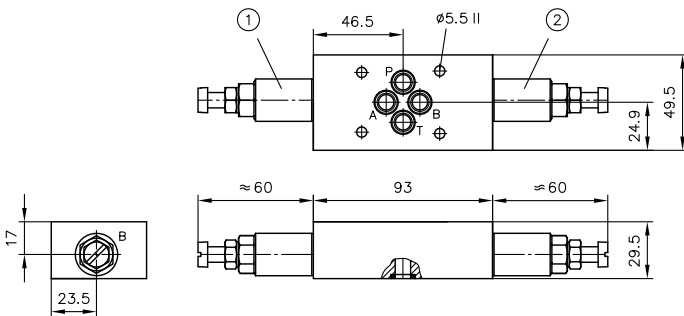
- 1 Pressure control valve in the A channel
- 2 Tapped plug

NZP 16 BN...  
NZP 16 B...



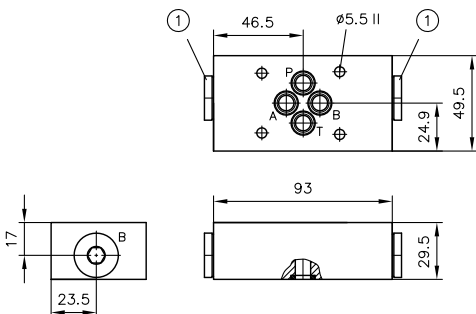
- 1 Tapped plug
- 2 Pressure control valve in the B channel

NZP 16 A... B...



- 1 Pressure control valve in the A channel
- 2 Pressure control valve in the B channel

NZP 16 ANBN  
NZP 16 AXBX



- 1 Tapped plug



**Note**

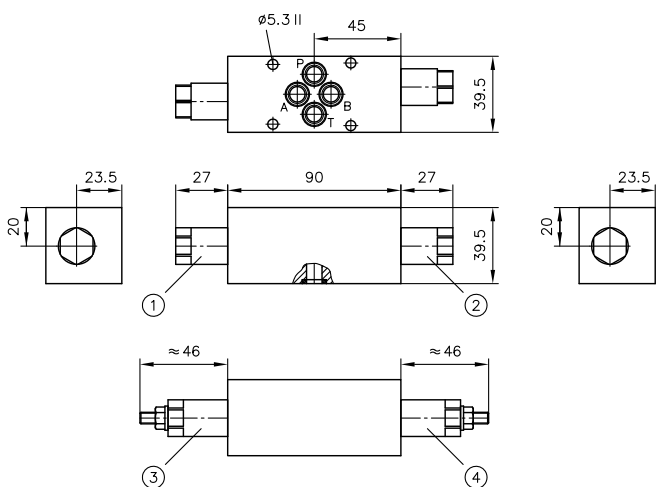
Missing dimensions and hole pattern, see ["Intermediate plate with throttle valve type NZP 16 Q"](#).

## 4.5.2 Load-holding valve type NZZ 16 AL and NZZ 16 BL

NZZ 16 AL ...

NZZ 16 BL ...

NZZ 16 AL - ... BL - ...



- 1 Omitted for type NZZ 16 BL
- 2 Omitted for type NZZ 16 AL
- 3 Omitted for type NZZ 16 BL ... V
- 4 Omitted for type NZZ 16 AL ... V

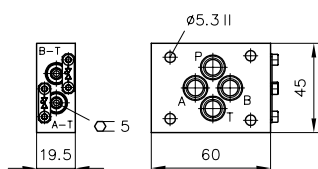


### Note

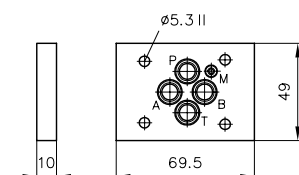
Missing dimensions and hole pattern, see "[Intermediate plate with throttle valve type NZZ 16 Q](#)".

## 4.6 Spacer plate

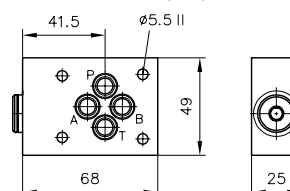
NZZ 16 D



NZZ 16 Z10



NZZ 16 ZA RB(RK)



### Note

Missing dimensions and hole pattern, see "[Intermediate plate with throttle valve type NZZ 16 Q](#)".

**5.1 Intended use**

This hydraulic component is exclusively intended for hydraulic applications (fluid engineering).

These hydraulic components meet high technical safety standards and regulations for fluid engineering and electrical engineering.

The user must observe the safety measures and warnings in this documentation.

**Essential requirements for the product to function correctly and safely:**

- All information in this documentation must be observed. This applies in particular to all safety measures and warnings.
- The product must only be assembled and put into operation by qualified personnel.
- The product must only be operated within the specified technical parameters. The technical parameters are described in detail in this documentation.
- The operating and maintenance manual of the specific complete system must also always be observed.

If the product can no longer be operated safely:

1. Remove the product from operation and mark it accordingly
- ✓ It is then not permissible to continue using or operating the product

**5.2 Assembly information**

The must only be installed in the complete system with standard and compliant connection components (screw fittings, hoses, pipes, etc.).

The hydraulic power pack must be shut down correctly prior to dismantling; this applies in particular to power packs with hydraulic accumulators.

**Danger**

**Risk to life caused by sudden movement of the hydraulic drives when dismantled incorrectly!**

Risk of serious injury or death.

- Depressurise the hydraulic system.
- Perform safety measures in preparation for maintenance.



## 5.3 Operating instructions

### Product configuration and setting the pressure and flow rate

The statements and technical parameters in this documentation must be strictly observed.  
The instructions for the complete technical system must also always be followed.



#### Note

- Read the documentation carefully before usage.
- The documentation must be accessible to the operating and maintenance staff at all times.
- Keep documentation up to date after every addition or update.



#### Caution

#### **Risk of injury on overloading components due to incorrect pressure settings!**

Risk of minor injury.

- Always monitor the pressure gauge when setting and changing the pressure.

### Purity and filtering of the hydraulic fluid

Fine contamination can significantly impair the function of the hydraulic component. Contamination can cause irreparable damage.

#### Examples of fine contamination include:

- Metal chips
- Rubber particles from hoses and seals
- Dirt due to assembly and maintenance
- Mechanical debris
- Chemical ageing of the hydraulic fluid



#### Note

Fresh hydraulic fluid from the drum does not always have the highest degree of purity. Under some circumstances the fresh hydraulic fluid must be filtered before use.

Pay attention to the cleanliness level of the hydraulic fluid in order to maintain faultless operation.  
(Also see cleanliness level in [Chapter 3, "Parameters"](#)).

## 5.4 Maintenance information

This product is largely maintenance-free.

Conduct a visual inspection at regular intervals, but at least once per year, to check if the hydraulic connections are damaged. If external leakages are found, shut down and repair the system.

Clean the device surface of dust deposits and dirt at regular intervals, but at least once per year.

## Further information

### Additional versions

- Directional seated valve type NG, NGW and others: D 7300 N
- Directional seated valve type NBVP 16: D 7765 N
- Directional spool valve type NSWP 2: D 7451 N
- Valve bank (nominal size 6) type BA: D 7788
- Valve bank (nominal size 6) type BNG: D 7788 BNG