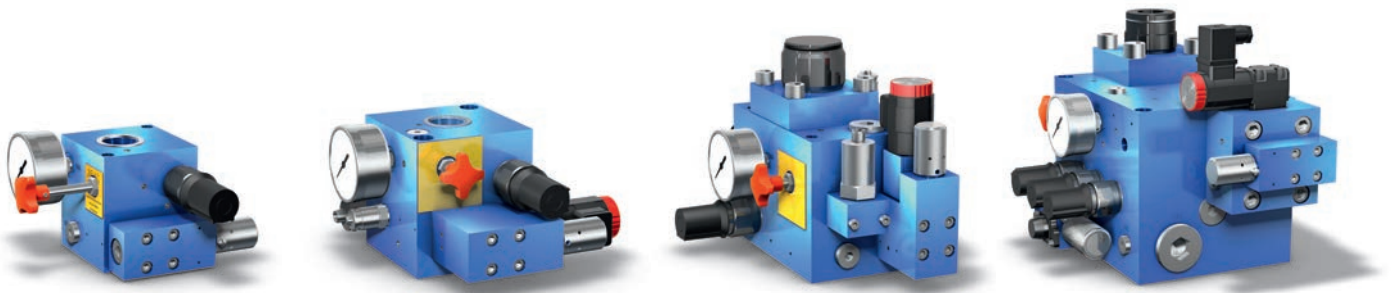


# Hydraulic accumulator charging units

## Product data sheet



### Advantages

- + Reduced energy consumption of the hydraulic system
- + Reduced installed electrical power
- + Low project planning effort
- + Easy installation and commissioning
- + High availability

## Design and function

Accumulator charging units are compact functional elements used to control the storage of hydraulic energy in hydraulic accumulators. The required system pressure is monitored hydraulically and kept at the selected pressure level by means of smooth switching operations. Low power losses enable an

energetically optimized supply system that, even with reduced drive power, permits the extraction of high peak powers. All functional and safety-relevant components are integrated in the unit. The compact block design reduces the amount of piping required to a minimum.

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## Product features

Features	Advantages	Benefits
Temporary storage of hydraulic energy in hydraulic accumulators	<ul style="list-style-type: none"> <li>The hydraulic system is more energy efficient</li> <li>Energy consumption drops by up to 50% compared to operation without an accumulator</li> </ul>	<ul style="list-style-type: none"> <li><b>+ You reduce your energy costs, which results in a lower total cost of ownership (TCO)</b></li> </ul>
	<ul style="list-style-type: none"> <li>Motor and pump are designed only for the average energy demand</li> </ul>	<ul style="list-style-type: none"> <li><b>+ The procurement costs for the hydraulic system are lower</b></li> </ul>
Standardized accumulator charging circuit with very few components and modular design	<ul style="list-style-type: none"> <li>This keeps the planning effort associated with system integration low</li> <li>A large number of designs and sizes are available</li> </ul>	<ul style="list-style-type: none"> <li><b>+ Quick and simple system integration reduces your development times and costs</b></li> </ul>
	<ul style="list-style-type: none"> <li>Commissioning is simple</li> </ul>	<ul style="list-style-type: none"> <li><b>+ Commissioning is quick and low-cost</b></li> </ul>
Hydraulic control of the switching operations by a piloted, specially matched pressure control valve	<ul style="list-style-type: none"> <li>Switching operations are smooth</li> <li>No pressure spikes occur in the system</li> </ul>	<ul style="list-style-type: none"> <li><b>+ All your hydraulic system components will have a longer service life</b></li> <li><b>+ Noise emissions are low</b></li> </ul>
	<ul style="list-style-type: none"> <li>Switching operations are highly precise</li> </ul>	<ul style="list-style-type: none"> <li><b>+ The force curves for the actuator are very precise and the parts produced are high quality</b></li> </ul>
	<ul style="list-style-type: none"> <li>Switching operations are highly dynamic</li> </ul>	<ul style="list-style-type: none"> <li><b>+ A quick cycle design results in high productivity</b></li> </ul>

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# Hydraulic accumulator charging unit SLE 00

## Features

- Integration of all function and safety-relevant components
- Compact design, simple start-up, problem-free handling
- High availability, robust and proven function components
- Optimized power consumption results in reduced heat emission to the hydraulic system

## Options

- Electrical accumulator discharge/unpressurized electric motor start-up
- Pressure switch for additional system pressure monitoring

## Technical data

### General

<b>Mounting method</b>	2 x M6x105
<b>Connection of port</b>	see connection size
<b>Mounting position</b>	mountable in any position
<b>Ambient temperature</b>	-5 to +50 °C

### Hydraulic

<b>Pump flow rate</b>	30 l/min
<b>Operating pressure</b>	max. 315 bar
<b>Hydraulic oil temperature</b>	-5 to +70 °C
<b>Viscosity range</b>	10 to 300 mm <sup>2</sup> /s
<b>Pressure steps</b>	20-45 bar; 45-80 bar; 80-120 bar; 120-175 bar; 175-250 bar; 250-315 bar
<b>Switching hysteresis</b>	5%; 10%; 15%; 20%

### Electric

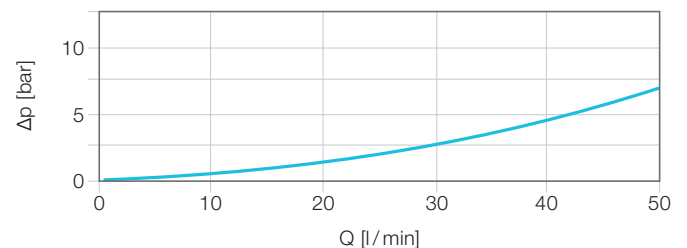
<b>System of protection</b>	IP65 with valve plug connected DIN 40050
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## Hydraulic accumulator charging unit SLE 00

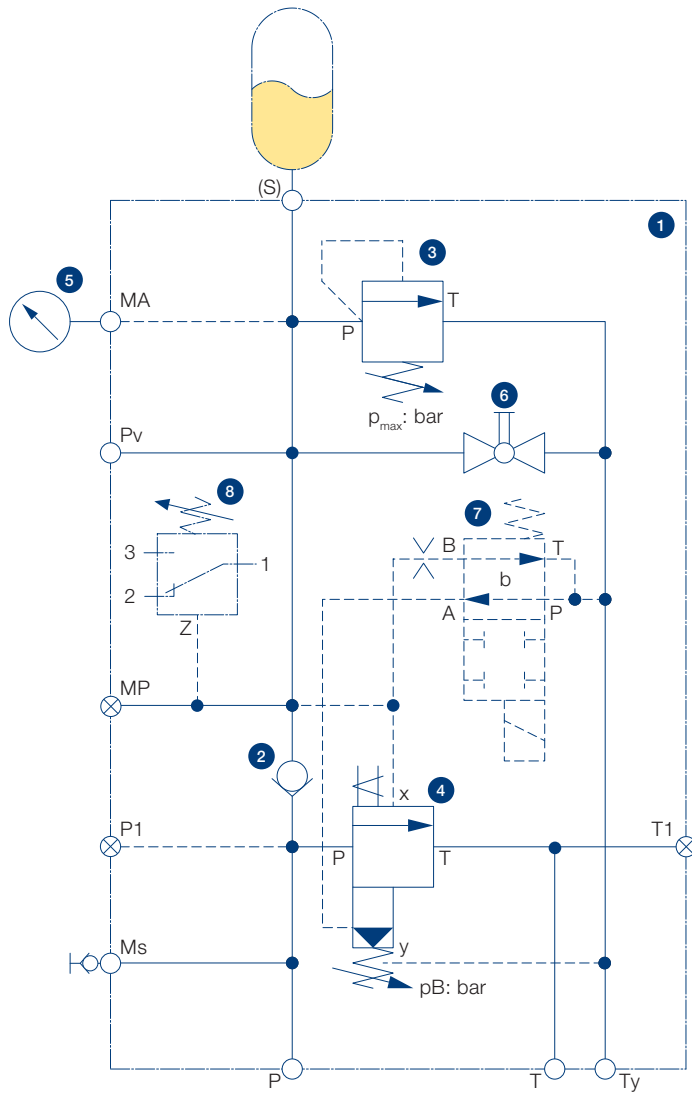


## Characteristic curve by-pass pressure P-T

for hydraulic oil 35 mm<sup>2</sup>/s, 50 °C

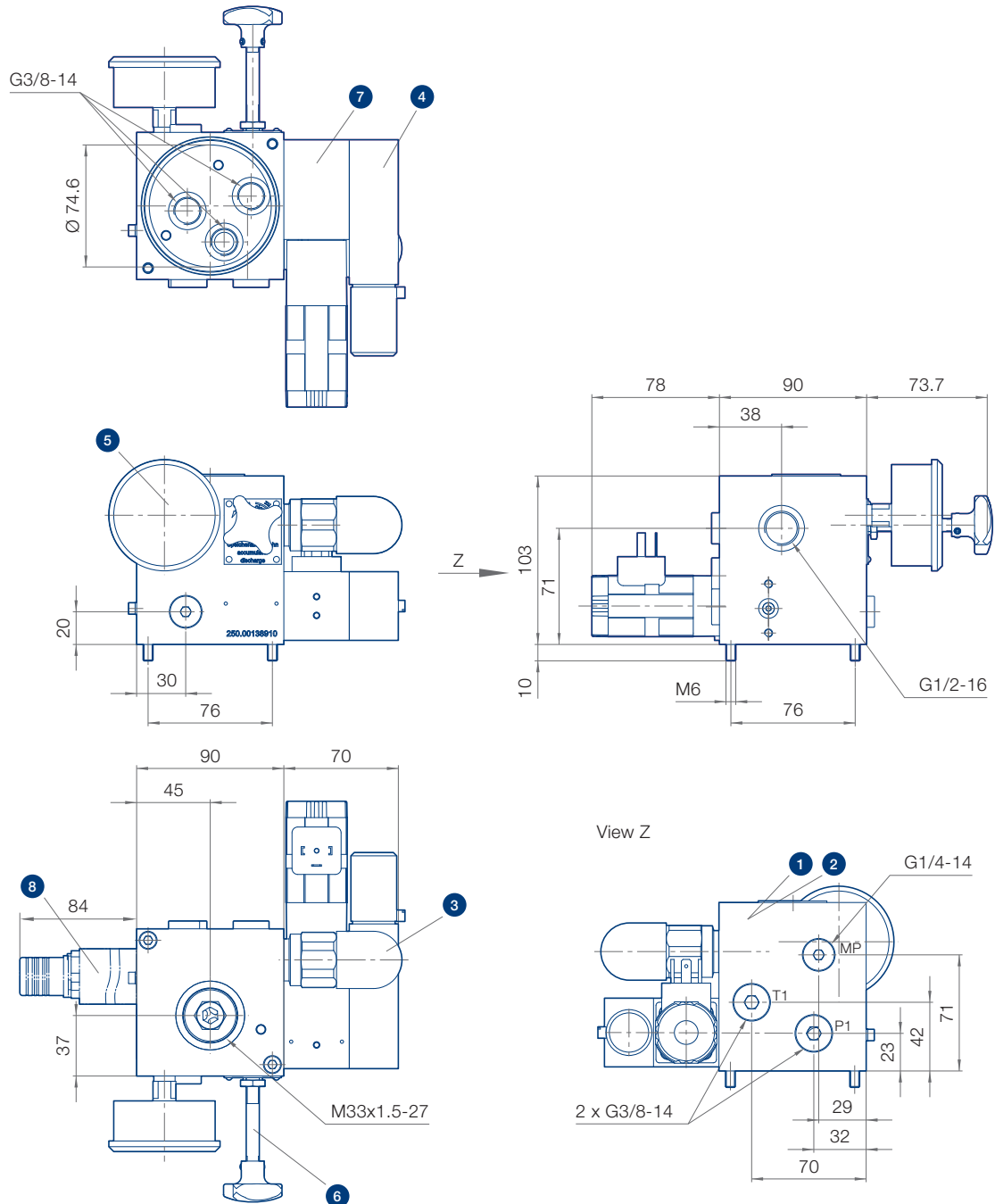


## Hydraulic circuit



- 1 Accumulator charging main block
- 2 Check valve
- 3 Safety valve (type checked)
- 4 Accumulator charging valve
- 5 Pressure gauge
- 6 Accumulator discharge (manual)
- 7 Option: electrical accumulator discharge
- 8 Option: pressure switch for system pressure

## Dimensional drawing

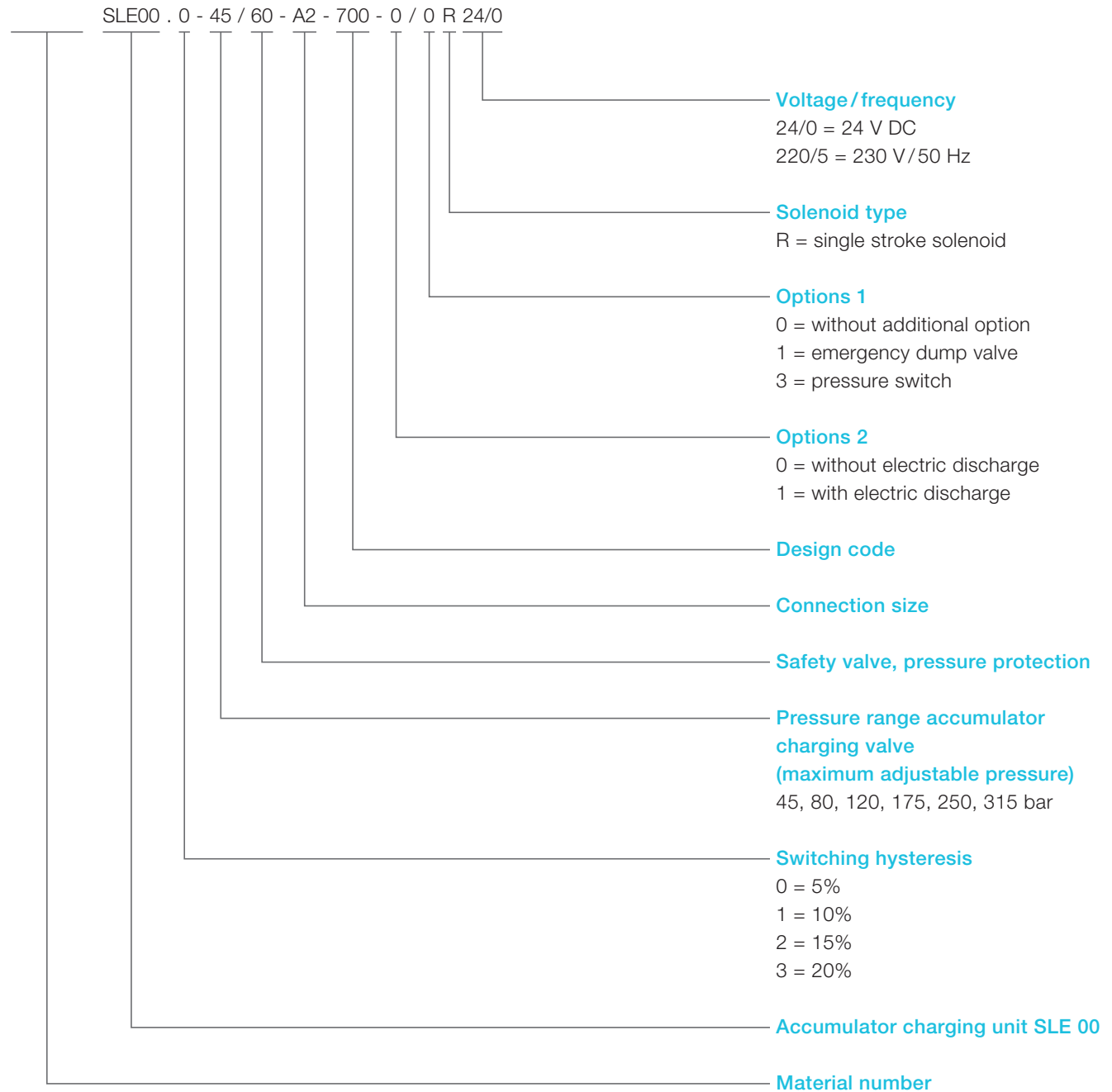


- ① Accumulator charging main block
- ② Check valve
- ③ Safety valve (type checked)
- ④ Accumulator charging valve

- ⑤ Pressure gauge
- ⑥ Accumulator discharge (manual)
- ⑦ Option: electrical accumulator discharge
- ⑧ Option: pressure switch for system pressure

All dimensions in mm

## Type code



## Connection size A2

<b>P from pump</b>	P/P1	G3/8
<b>P to consumer</b>	PV	G1/2
<b>T by-pass</b>	T/T1	G3/8
<b>T control oil</b>	Ty	G3/8
<b>Accumulator</b>	S	M33x1.5

# Hydraulic accumulator charging unit SLE 02

## Features

- Integration of all function and safety-relevant components
- Compact design, simple start-up, problem-free handling
- High availability, robust and proven function components
- Optimized power consumption results in reduced heat emission to the hydraulic system

## Options

- Electrical accumulator discharge/unpressurized electric motor start-up
- Pressure switch for additional system pressure monitoring
- Emergency dump valve

## Technical data

### General

**Mounting method** 2 x M10x125

**Connection of port** see connection size

**Mounting position** mountable in any position

**Ambient temperature** -5 to +50 °C

### Hydraulic

**Pump flow rate** 75 l/min

**Operating pressure** max. 315 bar

**Hydraulic oil temperature** -5 to +70 °C

**Viscosity range** 10 to 300 mm<sup>2</sup>/s

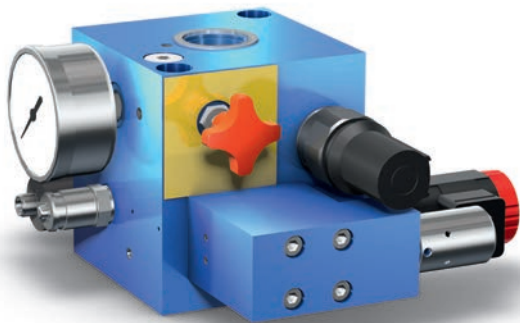
**Pressure steps** 20-45 bar; 45-80 bar;  
80-120 bar; 120-175 bar;  
175-250 bar; 250-315 bar

**Switching hysteresis** 5%; 10%; 15%; 20%

### Electric

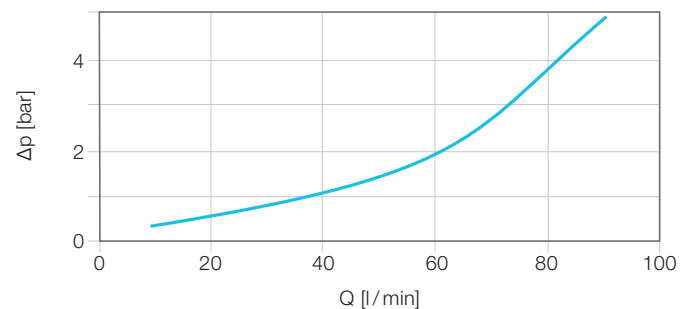
**System of protection** IP65 with valve plug connected  
DIN 40050

## Hydraulic accumulator charging unit SLE 02



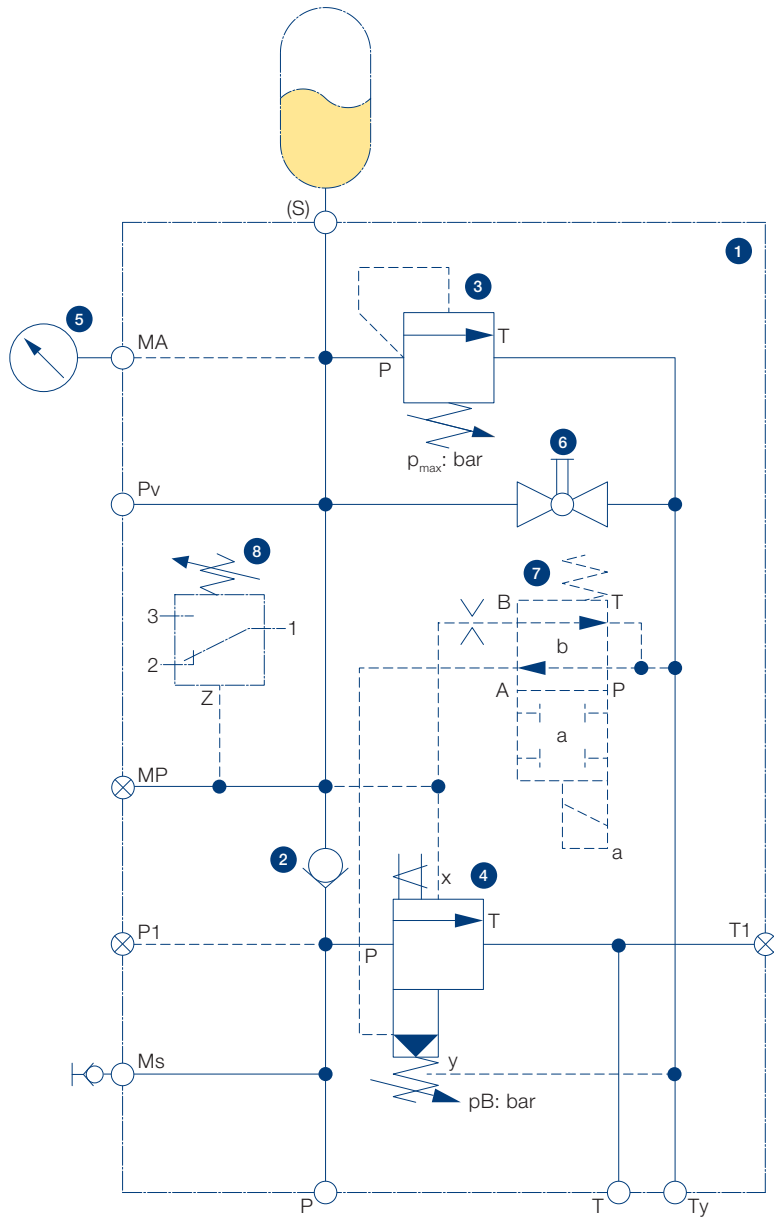
## Characteristic curve by-pass pressure P-T

for hydraulic oil 35 mm<sup>2</sup>/s, 50 °C



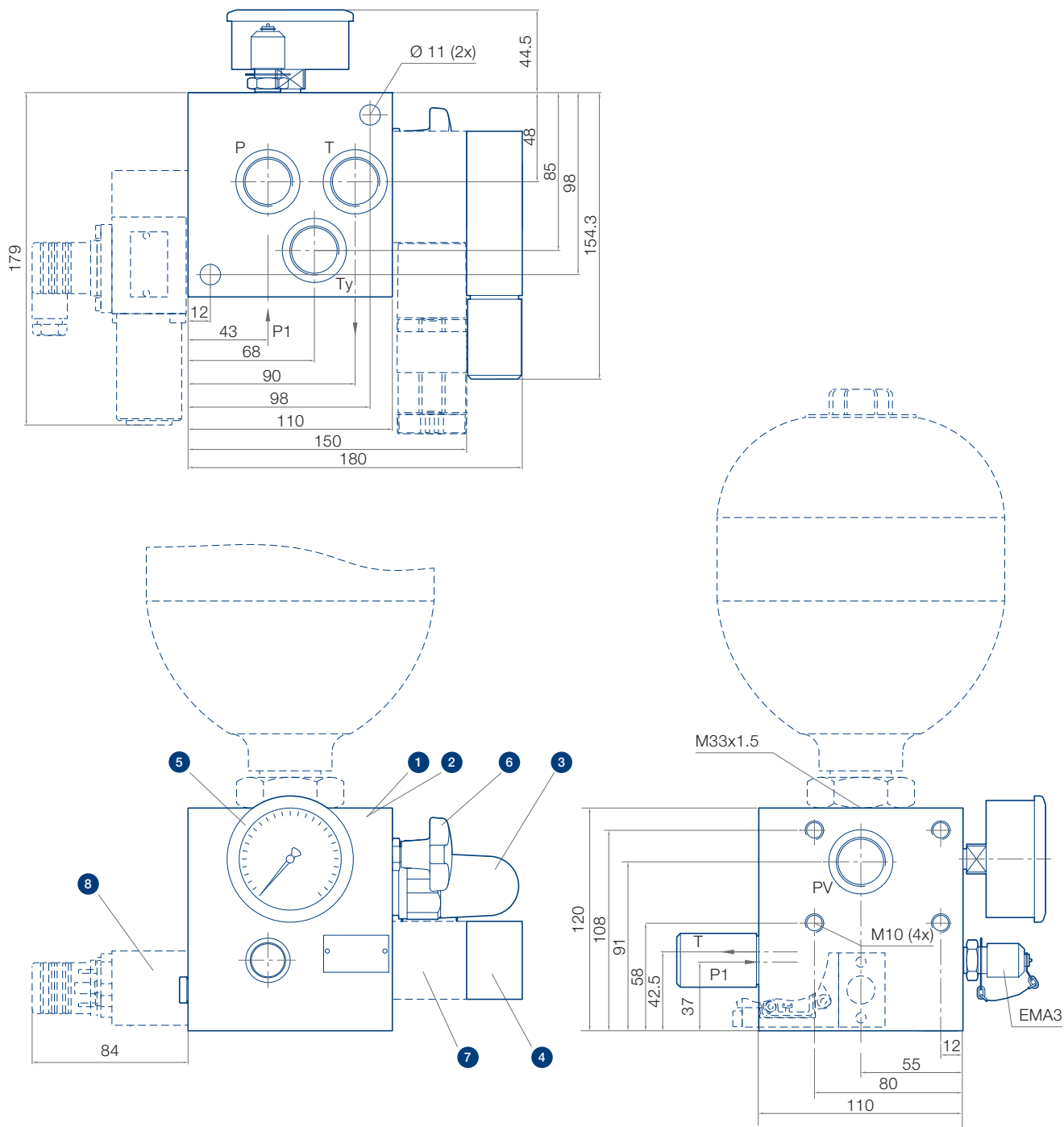


## Hydraulic circuit



- 1 Accumulator charging main block
- 2 Check valve
- 3 Safety valve (type checked)
- 4 Accumulator charging valve
- 5 Pressure gauge
- 6 Accumulator discharge (manual)
- 7 Option: electrical accumulator discharge
- 8 Option: pressure switch for system pressure

## Dimensional drawing

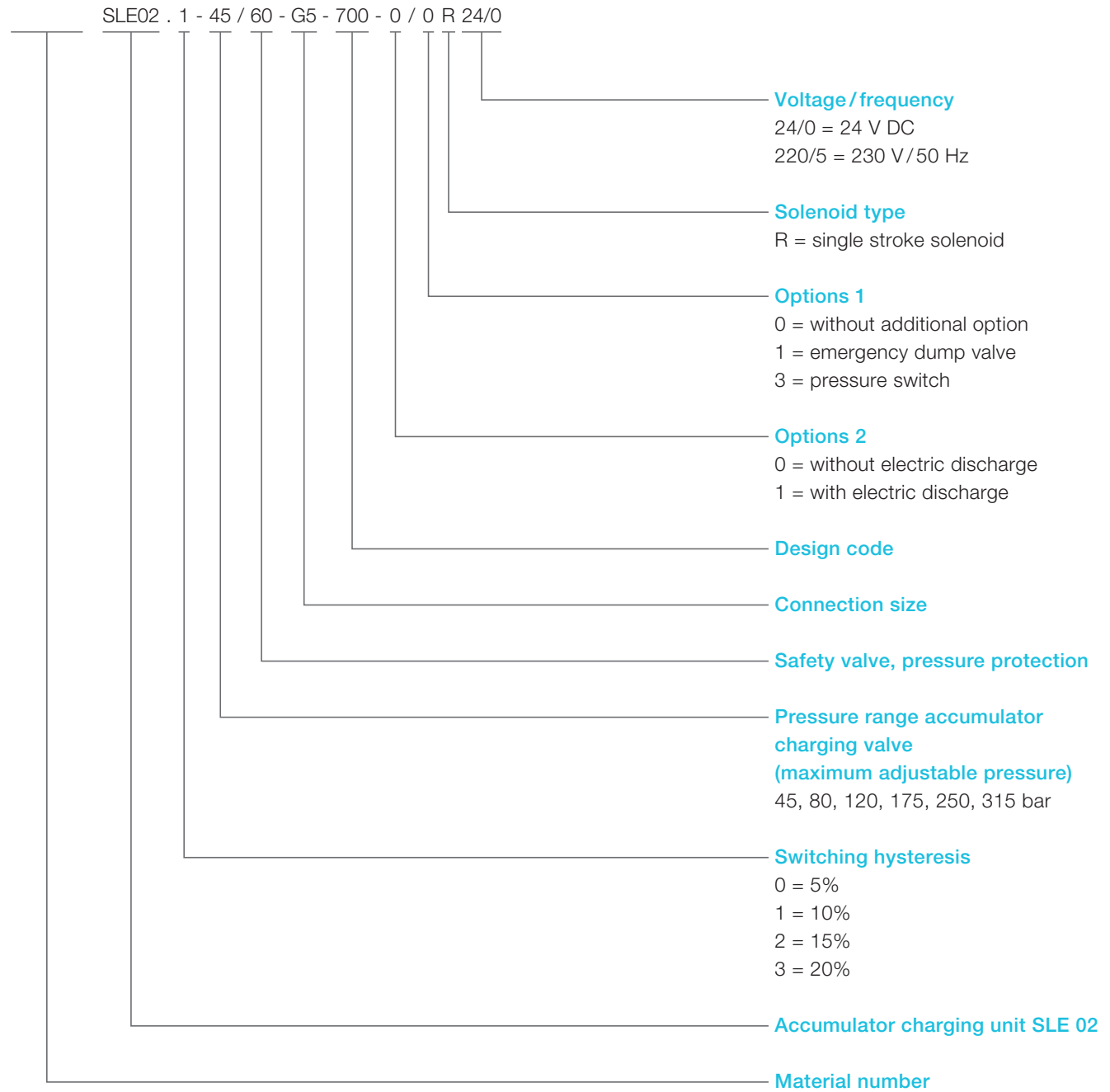


- 1 Accumulator charging main block
- 2 Check valve
- 3 Safety valve (type checked)
- 4 Accumulator charging valve

- 5 Pressure gauge
- 6 Accumulator discharge (manual)
- 7 Option: electrical accumulator discharge
- 8 Option: pressure switch for system pressure

All dimensions in mm

## Type code



## Connection size G5

<b>P from pump</b>	P/P1	G3/4
<b>P to consumer</b>	PV	G3/4
<b>T by-pass</b>	T/T1	G3/4
<b>T control oil</b>	Ty	G3/4
<b>Accumulator</b>	S	M33x1.5

# Hydraulic accumulator charging unit SLE 40

## Features

- Integration of all function and safety-relevant components
- Compact design, simple start-up, problem-free handling
- High availability, robust and proven function components
- Optimized power consumption results in reduced heat
- Emission to the hydraulic system

## Options

- Electrical accumulator discharge/unpressurized electric motor start-up
- Pressure switch for additional system pressure monitoring
- External control pressure connection
- Emergency stop blocking valve

## Technical data

### General

**Mounting** 4 x M10x140

**Connection of port** see connection size

**Mounting position** mountable in any position

**Ambient temperature** -5 to +50 °C

### Hydraulic

**Pump delivery** up to 140 l/min  
(depending on pressure range)

**Operating pressure** max. 315 bar

**Oil temperature** -10 to +70 °C

**Viscosity range** 10 to 300 mm<sup>2</sup>/s

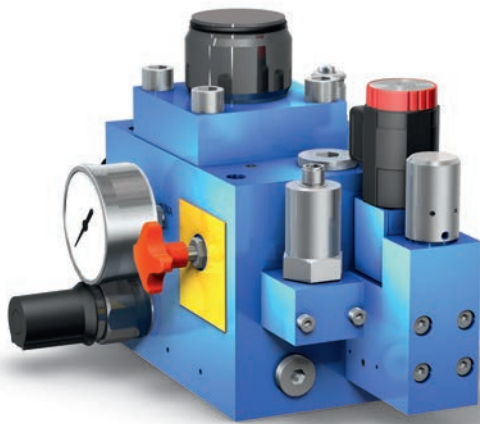
**Pressure steps** 20-45 bar; 45-80 bar;  
80-120 bar; 120-175 bar;  
175-250 bar; 250-315 bar

**Switching hysteresis** 5%; 10%; 15%; 20%

### Electric

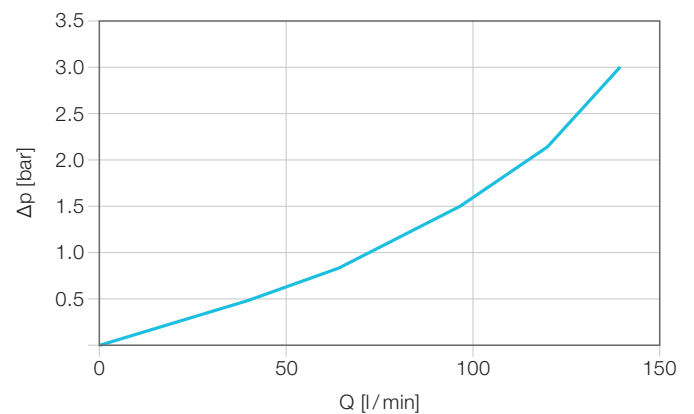
**System of protection** IP65 with valve plug connected  
DIN 40050

## Hydraulic accumulator charging unit SLE 40

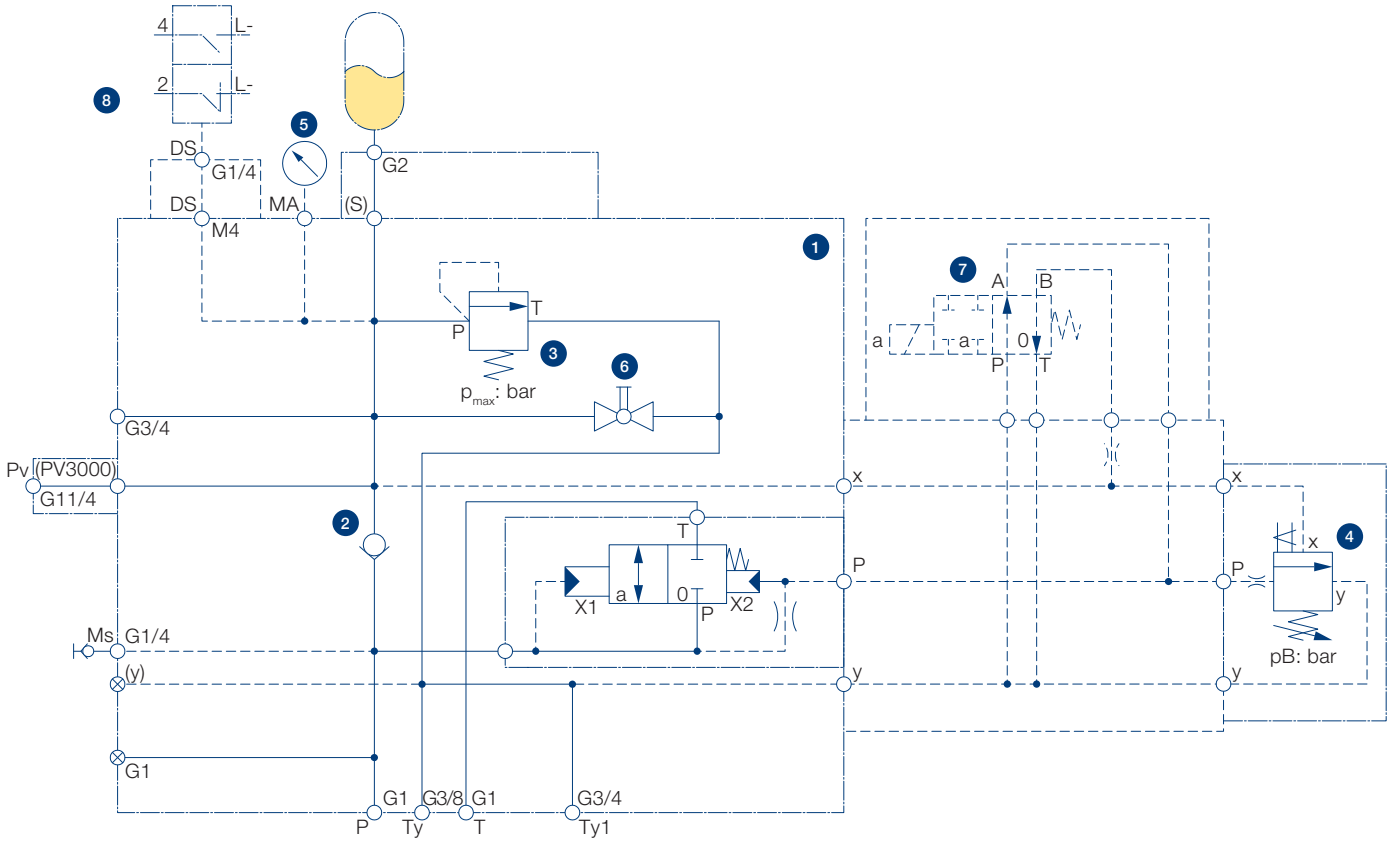


## Characteristic curve by-pass pressure P-T

for hydraulic oil 35 mm<sup>2</sup>/s, 50 °C

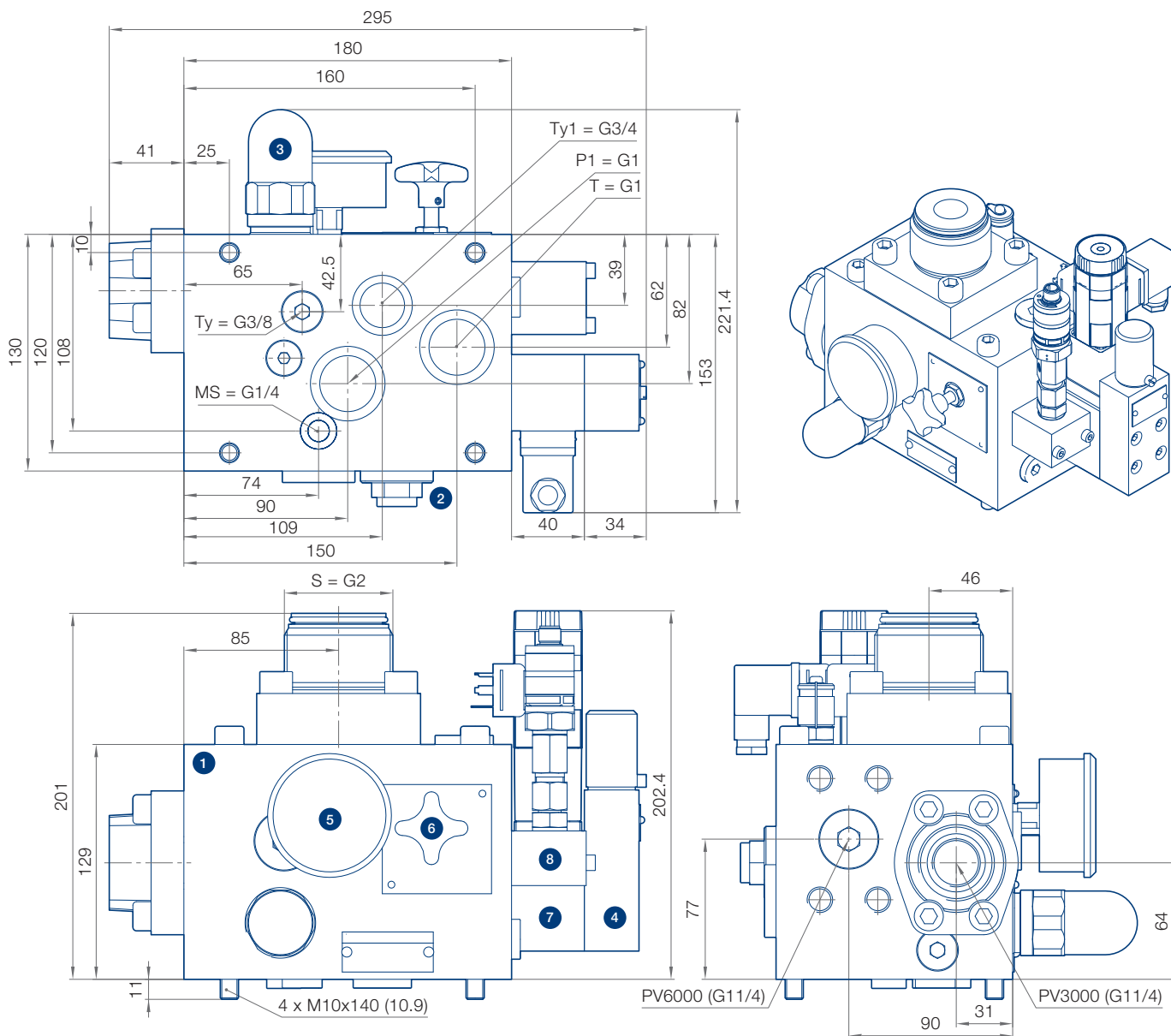


## Hydraulic circuit



- |   |                                 |   |   |
|---|---------------------------------|---|---|
| 1 | Accumulator charging main block | 5 | Pressure gauge                              |
| 2 | Check valve                     | 6 | Accumulator discharge (manual)              |
| 3 | Safety valve (type checked)     | 7 | Option: electrical accumulator discharge    |
| 4 | Accumulator charging valve      | 8 | Option: pressure switch for system pressure |

## Dimensional drawing



- |                                   |   |
|-----------------------------------|---|
| ① Accumulator charging main block | ⑤ Pressure gauge                              |
| ② Check valve                     | ⑥ Accumulator discharge (manual)              |
| ③ Safety valve (type checked)     | ⑦ Option: electrical accumulator discharge    |
| ④ Accumulator charging valve      | ⑧ Option: pressure switch for system pressure |

All dimensions in mm

## Type code

SLE40 . 1 - 175 / 210 - S 2 - 715 - 1 / 5 R 24/0

### Voltage / frequency

24/0 = 24V DC

220/5 = 230V/50Hz

### Solenoid

#### Options 1

0 = without

1 = emergency shut off directional control valve

2 = seat directional control valve

3 = pressure switch

4 = pressure sensor

5 = pressure switch electronically

#### Options 2

0 = without electric discharge

1 = with electric discharge

### Design code

#### Accumulator connection

00 = cover plate

0 = without accumulator connection

1 = G1¼ external thread

2 = G2 external thread

3 = M40x1.5 external thread

4 = M50x1.5 external thread

5 = M33x1.5 internal thread

6 = G2 external thread and G1 internal thread

7 = G1¼ internal thread

8 = G1½ external thread and G¼ internal thread

### PV connection

S = PV-connection low pressure (PV 3000)

<175 bar, standard G1¼

H = PV-connection high pressure (PV 6000)

>175 bar, standard G1¼

### Pressure range safety valve

### Pressure range accumulator charging valve (maximum adjustable pressure)

45, 80, 120, 175, 250, 315 bar

### Switching hysteresis

0 = 5%

1 = 10%

2 = 15%

3 = 20%

4 = 7.5%

### Accumulator charging unit SLE 40

### Material number

# Hydraulic accumulator charging unit SLE 80

## Features

- Integration of all function and safety-relevant components
- Compact design, simple start-up, problem-free handling
- High availability, robust and proven function components
- Optimized power consumption results in reduced heat emission to the hydraulic system

## Options

- Electrical accumulator discharge/unpressurized electric motor start-up
- Pressure switch for additional system pressure monitoring
- External control pressure port

## Technical data

### General

**Mounting** 4 x M10x180 DIN 912

**Connection of port** Mounting plate

**Mounting position** mountable in any position

**Ambient temperature** -25 to +50 °C

### Hydraulic

**Pump delivery** up to 400 l/min

**Operating pressure** max. 315 bar

**Oil temperature** -5 to +70 °C

**Viscosity range** 10 to 300 mm<sup>2</sup>/s

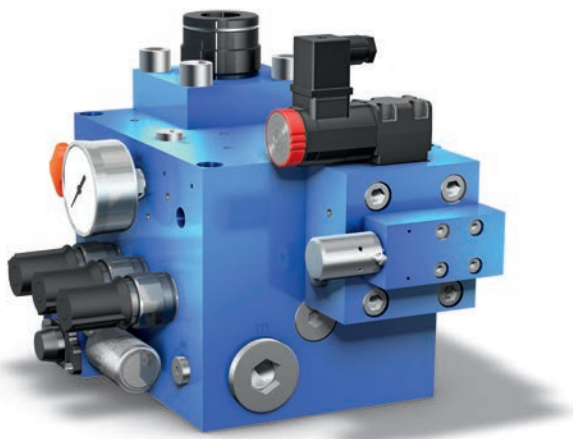
**Pressure steps** 20-45 bar; 45-80 bar;  
80-120 bar; 120-175 bar;  
175-250 bar; 250-315 bar

**Switching hysteresis** 5%; 10%; 15%; 20%

### Electric

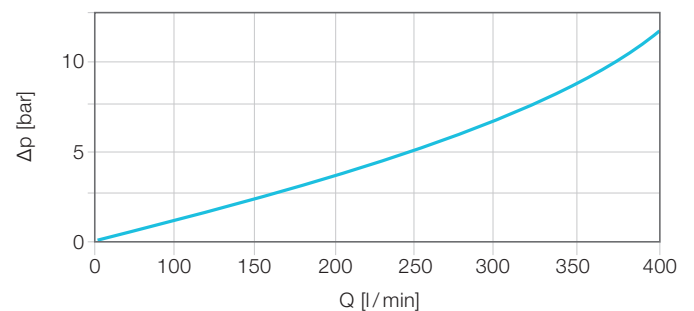
**System of protection** IP65 with valve plug connected  
DIN 40050

## Hydraulic accumulator charging unit SLE 80



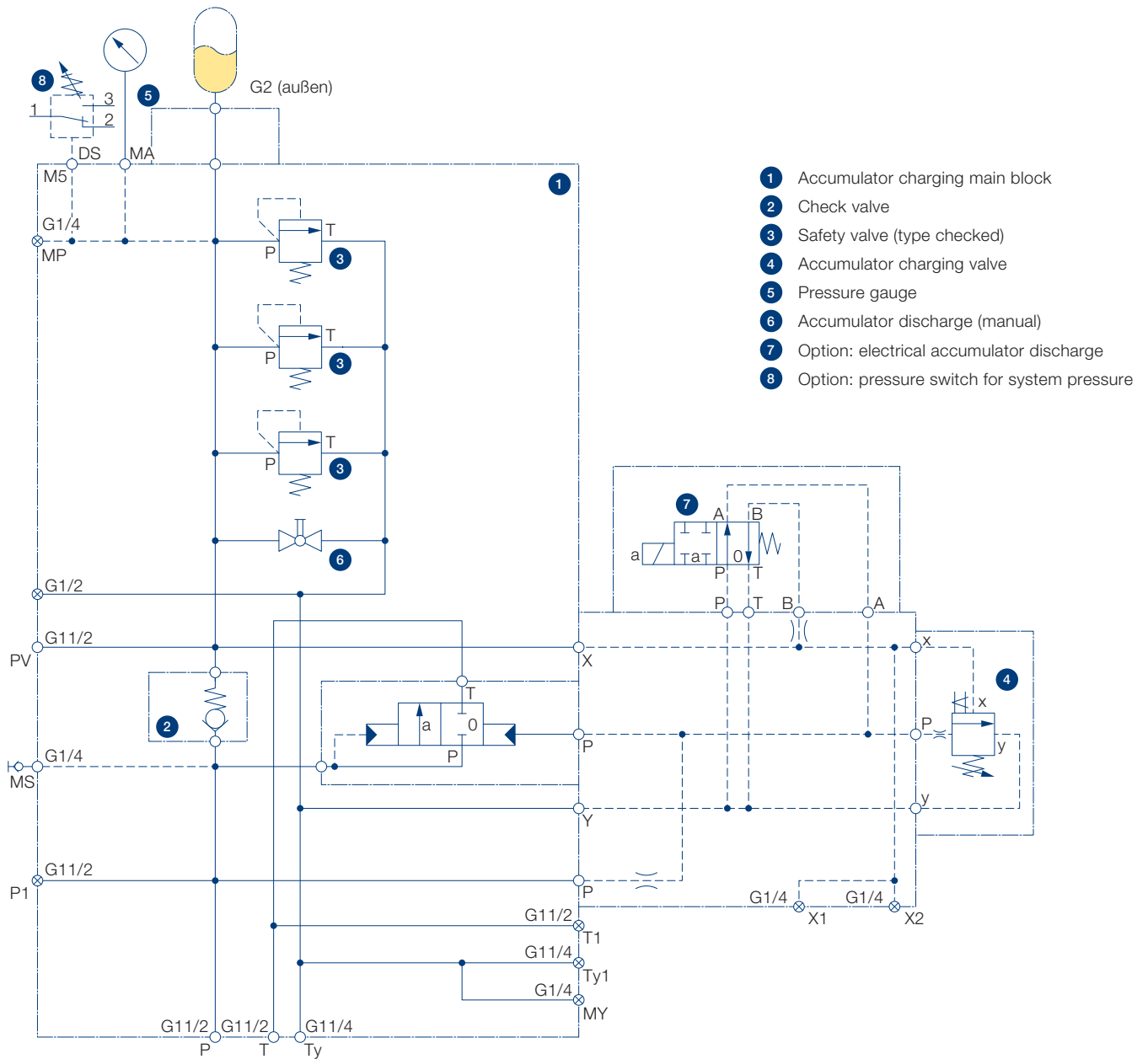
## Characteristic curve by-pass pressure P-T

for hydraulic oil 35 mm<sup>2</sup>/s, 50 °C

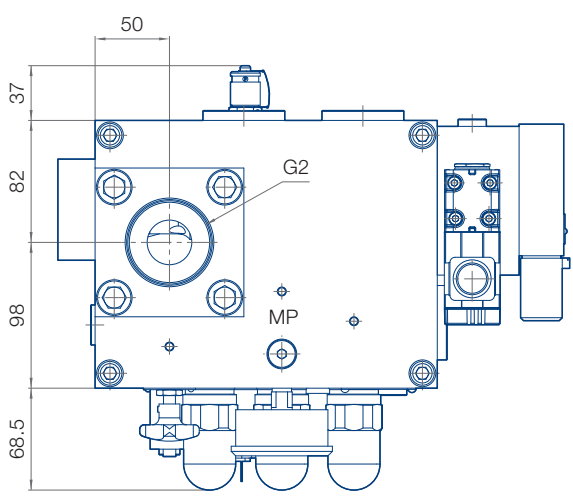
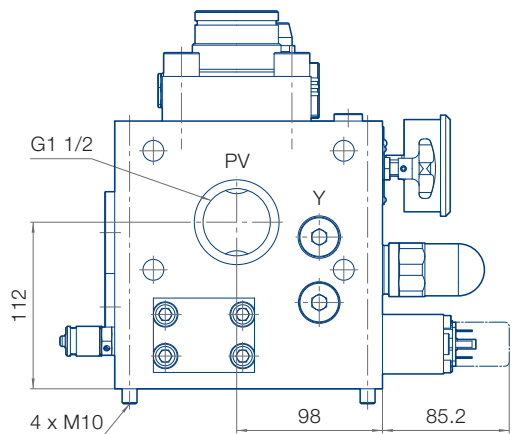
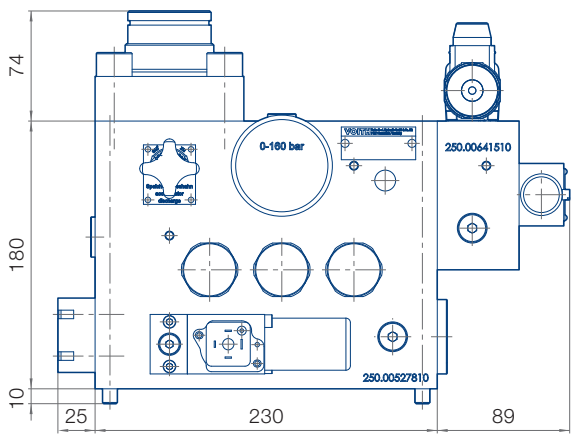
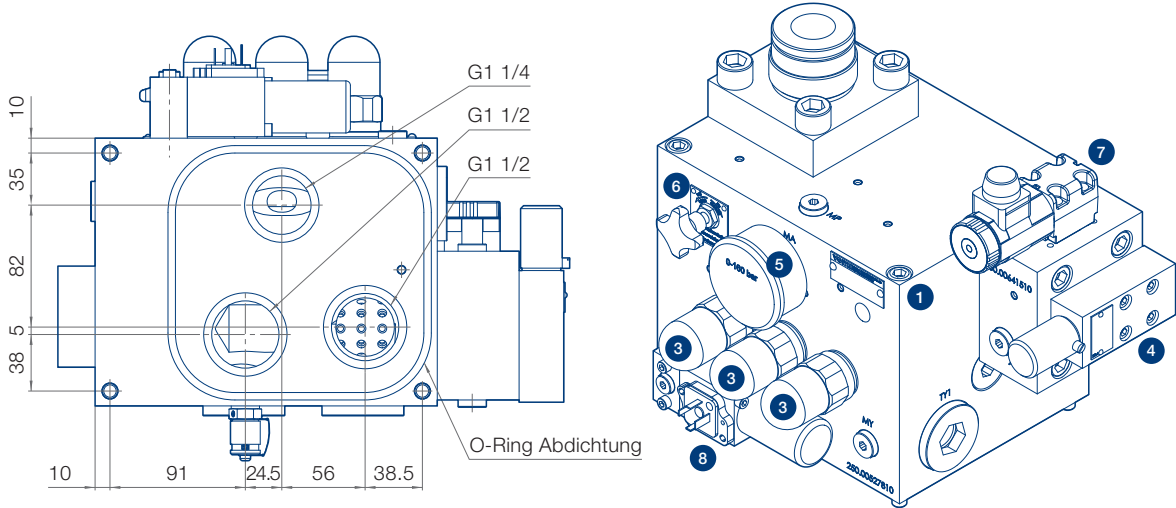




## Hydraulic circuit



Dimensional drawing



- 1 Accumulator charging main block
- 2 Check valve
- 3 Safety valve (type checked)
- 4 Accumulator charging valve
- 5 Pressure gauge
- 6 Accumulator discharge (manual)
- 7 Option: electrical accumulator discharge
- 8 Option: pressure switch for system pressure

All dimensions in mm

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## Type code

SLE80 . 0 - 080 / 210 - S2 - 700 - 1 / 3 L 24/0

**Voltage/frequency**

24/0 = 24V DC

220/5 = 230V/50Hz

**Port**

L = NG 4, ISO 4401

E = NG 6, ISO 4401

**Options 1**

0 = without option

3 = pressure switch VTHL

4 = pressure switch PN

5 = pressure switch PK

**Options 2**

0 = without electric discharging

1 = with electric discharging

**Design code**

**Accumulator connection size**

S2 = G2 outside

00 = without accumulator

**Pressure range safety valve**

**Max. pressure accumulator charging valve**

**Switching hysteresis**

0 = 5%

1 = 10%

2 = 15%

3 = 20%

**Accumulator charging unit SLE 80**

**Material number**

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**VOITH**