

# Types 3222 N/5857, 3222 N/5757-3, 3222 N/5757-7 Electric Control Valves



## Single-seated Type 3222 N Globe Valve

### Application

Control valves for HVAC, particularly suitable for local heat supply and large heating networks

**DN 15 · PN 16**

Temperatures **up to 120 °C** (version for treated water) <sup>1)</sup>

Temperatures **up to 80 °C** (version for non-flammable gases)



### Special features

- Single-seated globe valve
- Type 3222 N Globe Valve with male thread connection and threaded ends, welding ends or soldering ends
- Metal or soft seal
- Force-locking connection between valve and actuator

### Versions

Electric control valve		
Type 3222 N/5857	PN 16	DN 15
Electric control valve with electric actuator with process controller for domestic hot water heating		
Type 3222 N/5757-3	PN 16	DN 15
Electric control valve with electric actuator with process controller for heating and cooling applications		
Type 3222 N/5757-7	PN 16	DN 15

### Note

Further control valves with fail-safe action (also tested according to DIN EN 14597) for heating systems available (see Information Sheet ► T 5800).

### Accessories

- Threaded ends G 1/2, welding ends, soldering ends (d<sub>i</sub> = 15 or 18 mm)
- Intermediate insulating piece (1990-1712)

<sup>1)</sup> For variable operated local heat supply networks or district heating networks



**Fig. 1:** Type 3222 N/5857 with male thread connection and soldering ends

## Principle of operation

The medium flows through the single-seated globe valve in the direction indicated by the arrow. The position of the plug (3) determines the flow rate across the area released between plug and valve seat (2).

The linear actuating force is transmitted directly over the actuator stem (7) to the plug stem (5). When the actuator stem extends, the valve plug (3) is moved in the closing direction. The plug stem follows the actuator stem owing to the force of the valve spring (4) as the actuator stem retracts, causing the valve to open.

The valve (1) and actuator have a force-locking connection. An intermediate insulating piece is available for insulated pipes.

## Electric actuator

The Type 5857 Electric Actuator can be controlled by three-step signals, or, in the version with positioner, with signals from 0/4 to 20 mA or 0/2 to 10 V.

Refer to the data sheet for more details on the electric actuator:

► **T 5857:** Type 5857 Electric Actuator

## Electric actuators with process controllers

Electric actuators with process controllers are **a combination of an electric actuator and a digital process controller**. The TROVIS 5757-3 Actuator is suitable for domestic hot water heating, whereas TROVIS 5757-7 is suited for heating and cooling applications.

Refer to the data sheets for more details on the electric actuators with process controller:

► **T 5757:** TROVIS 5757-3 Electric Actuator with Process Controller for domestic hot water heating

► **T 5757-7:** TROVIS 5757-7 Electric Actuator with Process Controller for heating and cooling applications

## Installation of the control valve

Any mounting position may be used, however, the actuator may not be installed in a suspended position.

If the control valve is to be insulated, the actuator and the coupling nut must not be insulated as well. Make sure the permissible ambient temperature is not exceeded. If necessary, an intermediate insulating piece must be used. Do not insulate it over 25 mm.

## Ordering text

Control Valve Type:

3222 N/5857,  3222 N/5757-3,  3222 N/5757-7

- Kvs coefficient: ...
- Type of sealing:  metal seal,  soft seal
- Version:  for treated water,  for non-flammable gases

Further specifications on the electric actuator

- Control:  three-step signal,  positioner

Accessories

- Type of connection:  threaded ends G ½,  welding ends,  soldering ends
- Intermediate insulating piece (1990-1712)  yes,  no

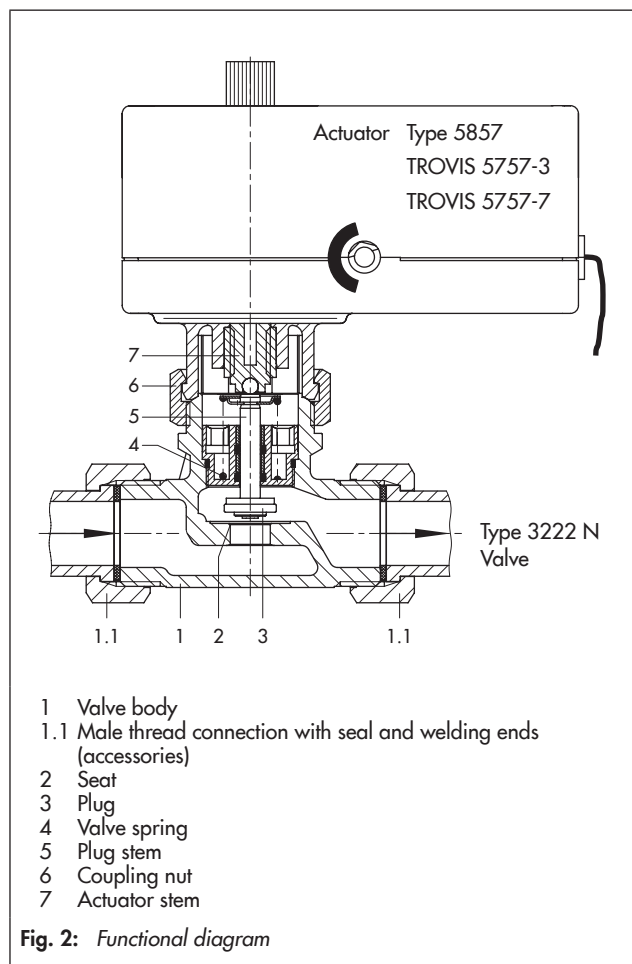


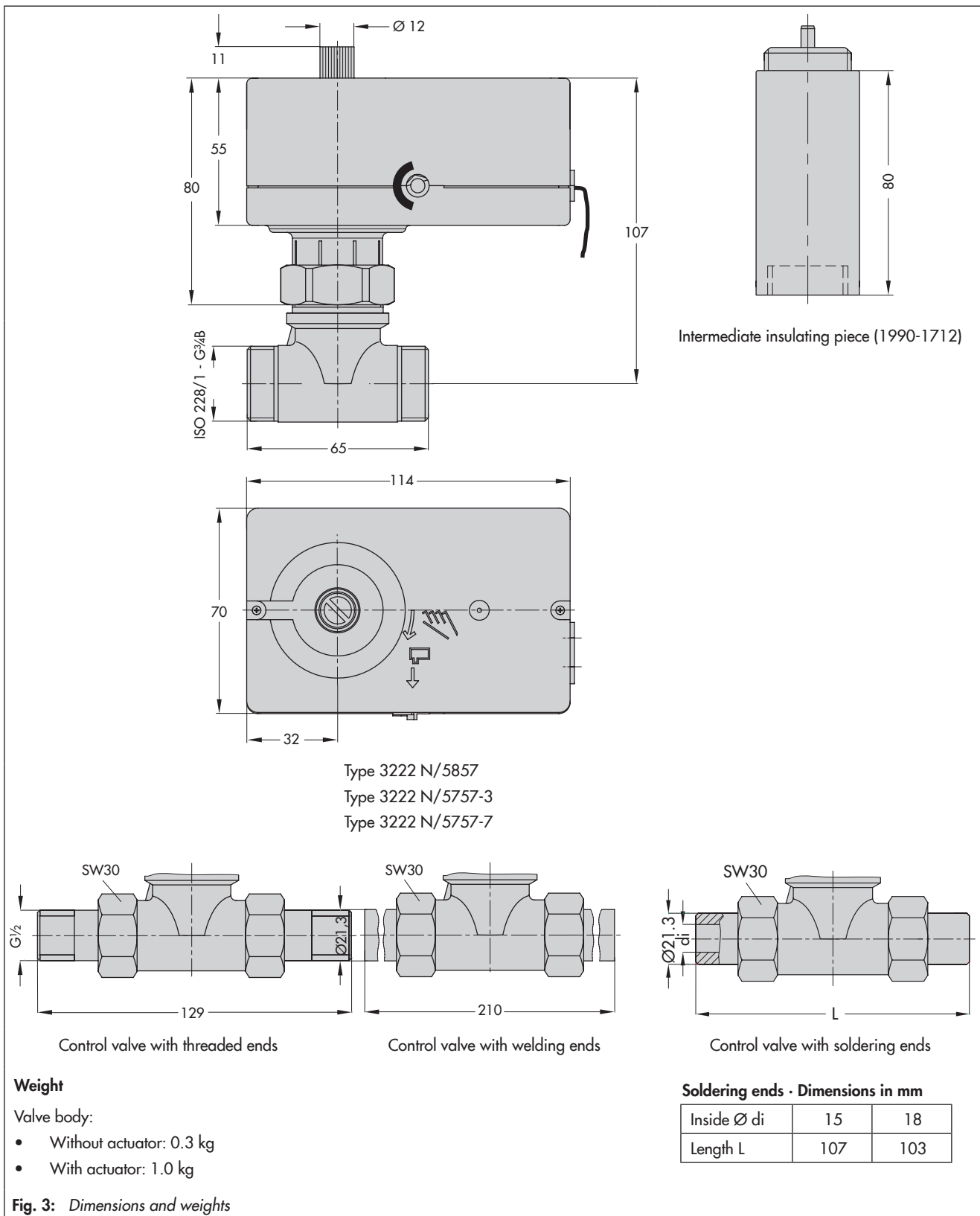
Fig. 2: Functional diagram

**Table 1:** Technical data · All pressures in bar (gauge)

Single-seated Type 3222 N Globe Valve		
Nominal size		DN 15
Connection		ISO 228/1-G ¾ B
End connections (optional)		Threaded ends G ½ · Welding ends · Soldering ends
Nominal pressure		PN 16
K <sub>VS</sub> coefficient	Standard	2.5
	Special version	0.25 · 0.4 · 0.63 · 1 · 1.6
Valve travel		6 mm
Characteristic		Equal percentage
Pressure balancing		None
Max. permissible differential pressure Δp		6 bar
Type of sealing	K <sub>VS</sub> ≤ 1	Metal seal
	K <sub>VS</sub> = 1.6 and 2.5	Soft seal
Leakage class according to IEC 60534-4		Class I (≤0.05 % of K <sub>VS</sub> coefficient)
Compliance		<b>CE · EAC</b>
Max. permissible temperature		120 °C
Max. permissible medium temperature	Treated water	120 °C
	Non-flammable gases	80 °C
z value		0.43

**Table 2:** Materials · Material numbers according to DIN EN

Single-seated Type 3222 N Globe Valve		
Valve body		CW602N (brass)
Plug	Up to K <sub>VS</sub> = 1	1.4305
	K <sub>VS</sub> = 1.6 and 2.5	1.4305 with EPDM seal
Plug stem		1.4305
Seat	Up to K <sub>VS</sub> = 1	CW602N (brass)
	K <sub>VS</sub> = 1.6 and 2.5	CW602N (brass)
Valve spring		1.4310 K
Welding ends		1.0254 (St 37)
Threaded ends		Brass
Soldering ends		CC491K (red brass, Rg 5)
Intermediate insulating piece (1990-1712)		1.4305, CW617N (brass), PTFE, EPDM, FPM



Specifications subject to change without notice



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