

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



Single-seated Globe Valve Type 3222 N

Application

Control valves for heating, ventilation and air-conditioning, especially suitable for local heat supply networks and large heating networks

DN 15 · PN 16

Version **up to 120 °C** ¹⁾ (version for treated water)

Version **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 sealing
- Force-locking connection between valve and actuator

Versions

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

Note

Further control valves with fail-safe action - also type tested - for heating systems available (see Information Sheet T 5800 EN)

Accessories

- Threaded ends G 1/2, welding ends, soldering ends (d_i = 15 or 18 mm)
- Intermediate insulating piece (1990-1712)

¹⁾ For variable operated local heat supply networks or district heating networks

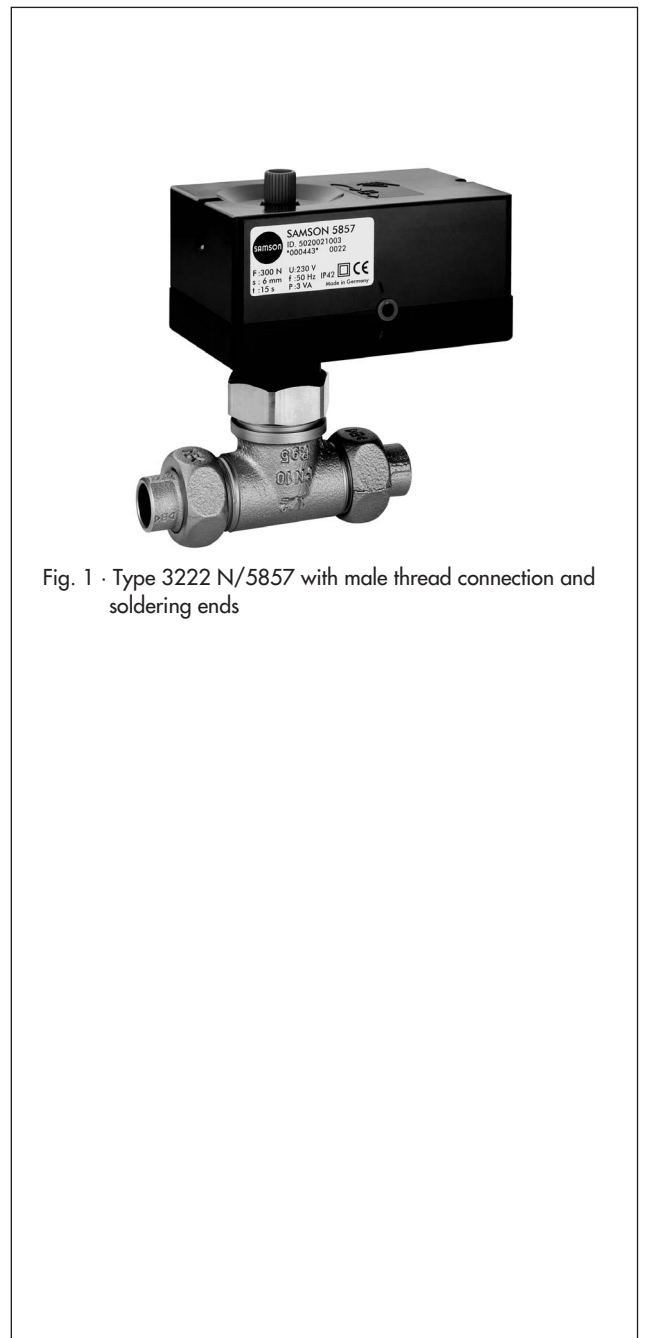


Fig. 1 · Type 3222 N/5857 with male thread connection and soldering ends

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) moves 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 pipe-lines.

Electric actuator

The Type 5857 Electric Actuator can either be controlled using a three-stepping point signal or, in the version with positioner, with continuous signals which can be adjusted in ranges from 0 to 20 mA or 0 to 10 V.

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

- **T 5857 EN:** Type 5857 Electric Actuator

Controllers with electric actuators

The actuator consists of a digital controller which is integrated into the electric actuator housing. Type 5757 is suitable for domestic hot water heating, whereas Type 5757-7 is suited for heating and cooling applications. They are controlled by continuous signals which can be adjusted in ranges from 0 to 20 mA or 0 to 10 V.

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

- **T 5757 EN:** Type 5757 Controller with Electric Actuator for domestic hot water heating
- **T 5757-7 EN:** Type 5757-7 Controller with Electric Actuator 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. Additionally, it must be ensured that the maximum permissible ambient temperature is not exceeded.

Ordering text

Control Valve Type:

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

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

Further specifications for electric actuator

- Control signal: three-stepping point signal, continuous (positioner)

Accessories

- End connections: threaded ends G 1/2, welding ends, soldering ends
- Intermediate insulating piece (1990-1712): yes, no

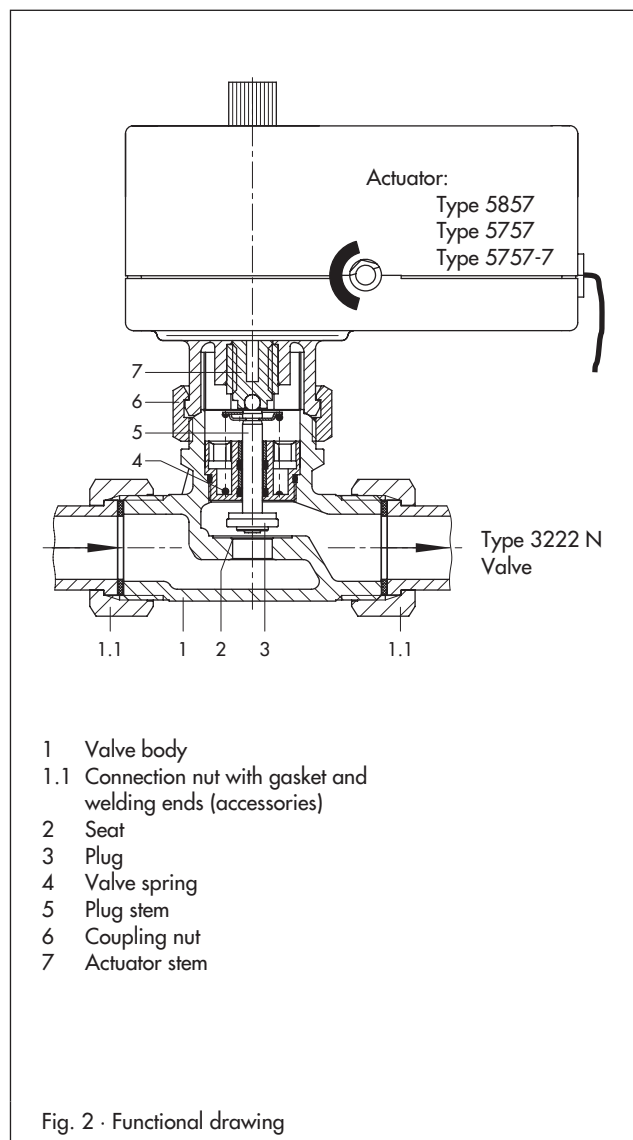


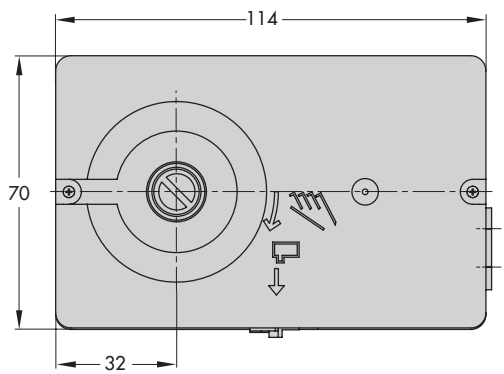
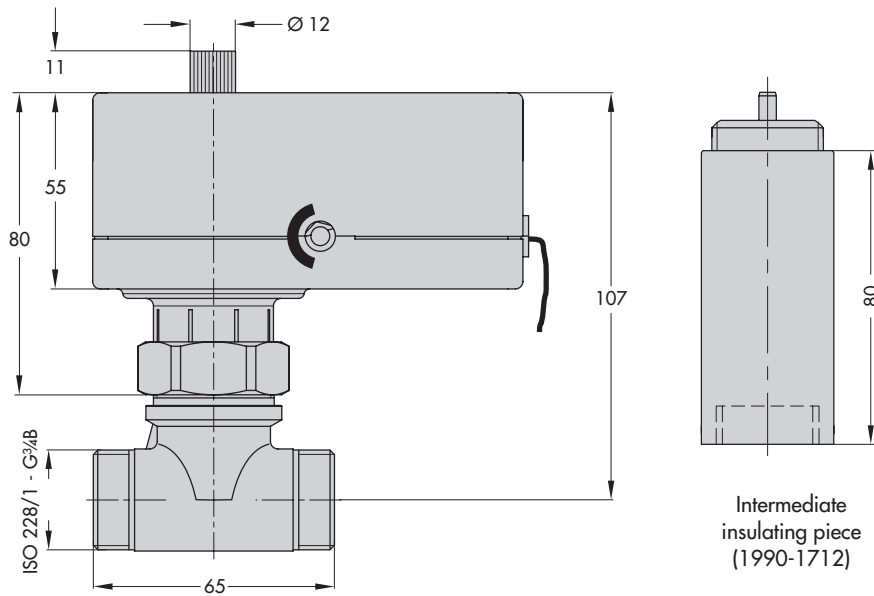
Table 1 · Technical data (all pressures stated in bar)

Type 3222 N Globe Valve	
Nominal size	DN 15
Connection	ISO 228/1-G ¾ B
Type of end connections (optional)	Threaded ends G ½ · Welding ends · Soldering ends
Nominal pressure	PN 16
K _{V5} coefficient Standard version Special version	2.5 0.25 · 0.4 · 0.63 · 1 · 1.6
Valve travel	6 mm
Characteristic	Equal percentage
Pressure balancing	None
Max. perm. differential pressure Δp	6 bar
Type of sealing K _{V5} ≤ 1 K _{V5} = 1.6 and 2.5	With metal sealing With soft sealing
Leakage rate acc. to DIN EN 60534-4	Class I (0.05 % of the K _{V5} coefficient)
Max. permissible temperature	120 °C
Max. permissible medium temperature Treated water Non-flammable gases	120 °C 80 °C
z value	0.43

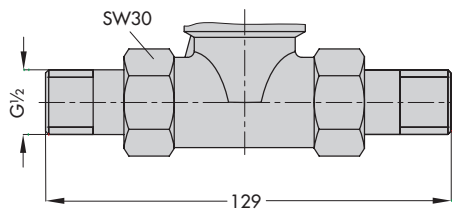
Table 2 · Materials (material number acc. to DIN EN)

Type 3222 N Valve		
Valve body	CW602N (brass)	
Plug	Up to K _{V5} = 1	1.4305
	K _{V5} = 1.6, 2.5	1.4305 with EPDM sealing ring
Plug stem	1.4305	
Seat	Up to K _{V5} = 1	1.4305
	K _{V5} = 1.6, 2.5	CW602N (brass)
Valve spring	1.4310 K	
Welding ends	1.0254 (St 37)	
Threaded ends	Brass	
Soldering ends	CC491K (red casting brass, Rg 5)	
Intermediate insulating piece (1990-1712)	1.4305, CW617N (brass), PTFE, EPDM, FPM	

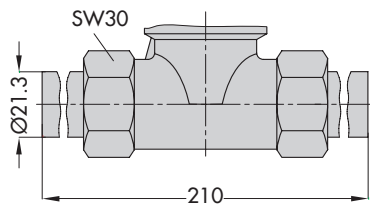
Dimensions in mm



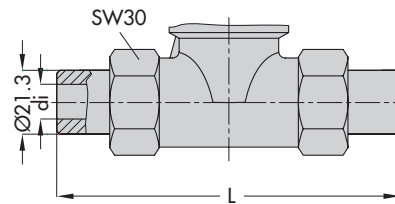
Type 3222 N/5857
 Type 3222 N/5757
 Type 3222 N/5757-7



Version with threaded ends



Version with welding ends



Version with soldering ends

Weight

Valve body without actuator: 0.3 kg
 Valve body with actuator: 0.5 kg

Soldering ends - Dimensions in mm

Inside Ø di	15	18
Length L	107	103

Fig. 3 - Dimensions and weights

Specifications subject to change without notice.

