



**Maintenance-free  
soft seat  
flow measurement and  
regulating valves**

with internal thread  
ISO 7 / BS 21

**PN 16  
DN 3/8"-2"  
DN 10-50**

## Application

- Hot-water heating systems up to 150 °C to DIN 4751
- Air-conditioning systems

## Operating data

- Temperature range: -25 up to +150 °C
- Pressure range: up to  $\Delta p = 16$  bar

## Materials

- Body: bronze
- Further details, see materials table

## Design

- Y-pattern straight-way globe valve with internal thread
- 2 self-sealing measuring connections for direct pressure and flow measurement with BOATRONIC®-measuring computer
- Non-rising handwheel, non-rotating stem
- Digital travel position indicator with 40 settings and indication of full and 1/10 rotations, readable from above and below
- Locking device
- Lift stop
- Lead seal can be applied
- Double stem seal using two O-rings and adjustable gland
- Pressure tap with protective cap
- Handwheel: orange
- Free from asbestos

The valves meet the safety requirements of the Pressure Equipment Directive 97/23/EC (PED) of annex I for fluids of the group 2.

## Remarks

- For precise flow measurement, customers may borrow our PFM 2000 measuring computer (please contact us for details).
- Flow characteristics 7129.4 valid for flow from A to B and from B to A
- Operating instructions 0570.88

## On all enquiries/orders please specify

Flow measurement and regulating globe valves

1. BOA-Control® SAR to type series booklet 7129.1
2. PN 16
3. DN 10-50

The valves do not have a potential internal source of ignition and can be used in potentially explosive atmospheres, group II, category 2 (zones 1+21) and category 3 (zones 2+22) according to ATEX 94/9/EC.



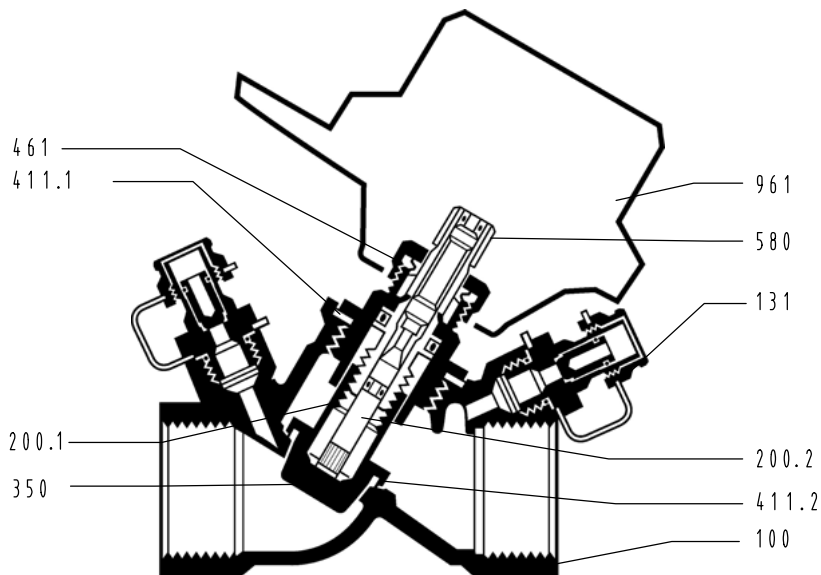
### Working pressures

Nominal pressure	Nominal size	Body pressure test	Seat leakage test with water	Working pressure
PN	DN	bar <sup>1)</sup>	bar <sup>2)</sup>	bar <sup>3)</sup>
16	3/8"-2"	24	16	16

<sup>1)</sup> DIN 3230-BQ (ISO 5208)

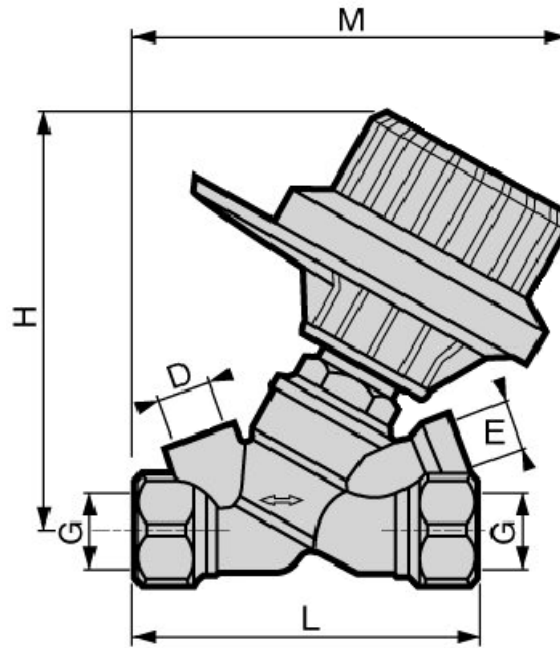
<sup>2)</sup> DIN 3230 BN/leak rate 1 (ISO 5208/Rate A)

<sup>3)</sup> up to 120 °C medium temperature



### Materials

Part no.	Name of part	Material	Remarks
100	Body	Bronze	
131	Connection branch	Brass	
200.1	Valve stem	Brass	
200.2	Memo stem	Cu Zn 40 Pb3	Free from dezincification
350	Cone	Cu Zn 36 Pb2 AS	
411.1	Sealing ring	EPDM	
411.2	Sealing ring	PTFE	Metallic gasket, with DN 3/8"
461	Gland packing	Brass	
580	Cap	Leaded red brass	
961	Handwheel	Polyamide 6-6 with 30% fibre glass	

**Dimensions**


PN	Dimensions (mm)							Weight approx. kg
	DN	G	D	E	L	H	M	
16	10	3/8"	1/4"	1/4"	88,5	104	106	0.630
	15	1/2"	1/4"	1/4"	88,5	104	106	0.581
	20	3/4"	1/4"	1/4"	95,5	104	112	0.629
	25	1"	1/4"	1/4"	96	108	116	0.852
	32	1"1/4	3/8"	1/4"	117	117	127	1.133
	40	1"1/2	3/8"	1/4"	125	122	133	1.243
	50	2"	3/8"	1/4"	149	126	146	1.992

**Installation instructions**

BOA-Control® flow measurement and regulating globe valves can be installed in supply and in return lines and in all positions. This permits fluid flow in both directions. It is, however, recommended to choose flow from A to B (marked on the valve body) for optimum valve setting.

**Please note:**

For safeguarding optimum measuring results, an inlet and outlet distance 15 x DN is recommended. The minimum length of the inlet section:

- downstream of a pump should be 10 x DN
- downstream of globe valves or fittings 5 x DN

Outlet distance at least 2 DN generally

Product features - to our Customers' Benefit

**Lift stop**

**Your benefit**

- After closing, the initial position can be adjusted

**Stem sealing by using an O-ring seal and an adjustable gland**

**Your benefit**

- Double sealing towards the environment

**Digital handwheel with 40 control positions with 1/10 rotation per notch**

**Your benefits**

- Readable from above and below
- Exact setting of flow
- Lift position can be read exactly

**Lead-seleable handwheel**

**Your benefit**

- Protection from unauthorized actuation

**PTFE-gasket**

**Your benefit**

- Guarantees 100% seat tightness

**Flow measurement possible in both directions**

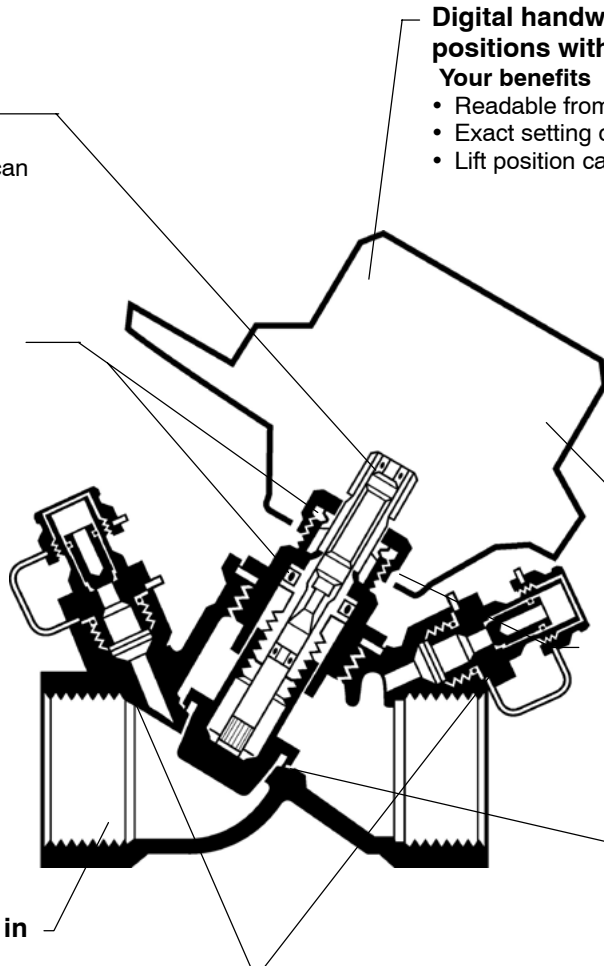
**Your benefit**

- Flow measurement also with reversed flow

**Connections for direct pressure measurement protected by a screw cap**

**Your benefits**

- Measurement of differential pressure
- Screw cap stops dirt entering
- Quick connection of measuring leads/hoses



Subject to technical modification without prior notice