

Balancing and Shut-off Valve

## BOA-Control SAR

PN 16  
DN 10-50  
NPS  $\frac{3}{8}$ "-2"

### Type Series Booklet



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Type Series Booklet BOA-Control SAR

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## Control and Measurement Valves

### Balancing and Shut-off Valves to DIN/EN

# BOA-Control SAR



#### Main applications

- Hot-water heating systems
- Air-conditioning systems

#### Fluids handled

- Water
- Water/glycol mixtures
- Other fluids on request.

#### Operating data

##### Operating properties

Characteristic	Value
Nominal pressure	PN 16
Nominal size	DN 10 - 50
Nominal size	NPS 3/8" - 2"
Max. permissible pressure [bar]	16
Min. permissible temperature [°C]	-25
Max. permissible temperature [°C]	+150

#### Body materials

##### Overview of available materials

Material	Temperature limit
Bronze	≤ 150 °C

#### Design details

##### Design

- Y-pattern straight-way globe valve with female screwed ends

- 2 self-sealing measuring connections for direct pressure measurement and flow measurement with PFM 2000 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
- Travel stop
- Lead-sealable
- Double stem seal by two O-rings and adjustable gland
- Pressure measurement connection branches with protective cap
- Handwheel colour: orange
- The valves satisfy the safety requirements of Annex I of the European Pressure Equipment Directive 2014/68/EU (PED) for fluids in Group 2.

#### Product benefits

- Flow rate can be adjusted precisely and read from above and below, due to digital handwheel with top/bottom display and 40 control positions.
- PTFE joint ring ensures tight shut-off for life.
- Hydraulically optimised body for high flow rates.
- Double sealing to atmosphere as stem is sealed by O-ring and back-up gland packing.

#### Related documents

- For precise flow measurement we recommend our PFM 2000 measuring computer (available for hire, please contact KSB for details)

#### Information/documents

Document	Reference number
Flow characteristics	7129.4
Operating manual	0570.88

#### Purchase order specifications

Please specify the following information in all enquiries or purchase orders:

1. Type
2. Nominal pressure
3. Nominal size
4. Reference number

### Pressure/temperature ratings

Test pressure and operating pressure

PN	DN	Shell test	Leak test (seat)	Permissible operating pressure <sup>1)</sup>
		With water		
		Tests P10 and P11 to DIN EN 12266-1 [bar]	Test P12, leakage rate A to DIN EN 12266-1 [bar]	-25 to +150 °C [bar]
16	3/8" -2" (10-50)	24	17,6	16

### Materials

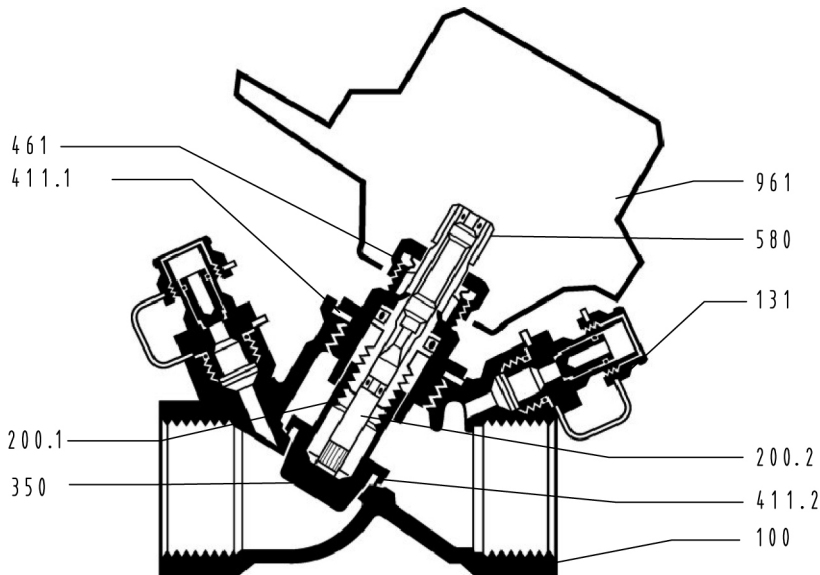


Fig. 1: BOA-Control SAR

Overview of available materials

Part No.	Description	Material	Note
100	Body	Bronze	-
131	Pressure measurement connection branch	Brass	-
200.1	Valve stem	Brass	-
200.2	Memo stem	Cu Zn 40 Pb3	Dezincification-free
350	Valve disc	Cu Zn 36 Pb2 AS	-
411.1	Joint ring	EPDM	-
411.2	Joint ring	EPDM	Metal gasket, for DN 3/8"
461	Gland packing	Brass	-
580	Cap	Leaded red brass	-
961	Handwheel	Polyamide 6-6 with 30 % glass fibre	-

1) Static load

### Dimensions and weights

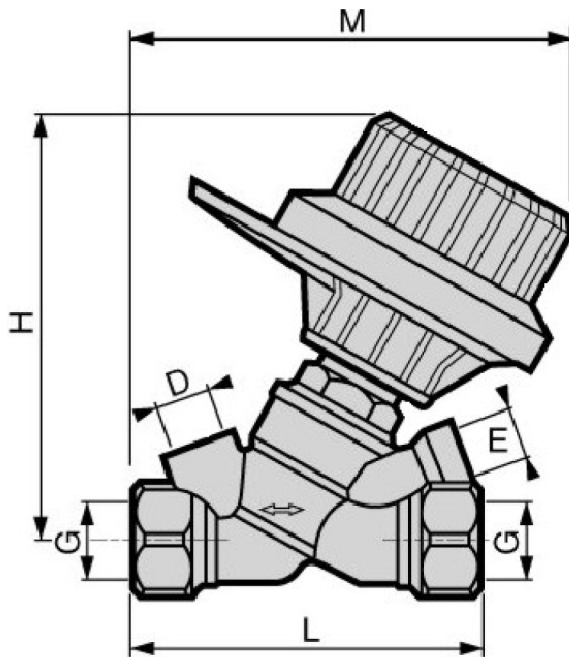


Fig. 2: BOA-Control SAR

Dimensions [mm] and weights [kg]

PN	DN	G	D	E	L	H	M	[kg]
16	10	3/8"	1/4"	1/4"	88,5	104	106	0,6
	15	1/2"	1/4"	1/4"	88,5	104	106	0,6
	20	3/4"	1/4"	1/4"	95,5	104	112	0,6
	25	1"	1/4"	1/4"	96	108	116	0,9
	32	1 1/4"	3/8"	1/4"	117	117	127	1,1
	40	1 1/2"	3/8"	1/4"	125	122	133	1,2
	50	2"	3/8"	1/4"	149	126	146	2

### Installation instructions

BOA-Control SAR balancing and shut-off valves can be installed in supply lines as well as return lines, and in any position. This allows fluid flow in both directions. However, flow direction from A to B (marked on the valve body) is recommended to achieve an optimum valve setting.

**i** For optimum measuring results, a stabilisation distance of 15 x DN is recommended both upstream and downstream of the valve.

However, a minimum upstream stabilisation distance of

- 10 x DN downstream of a pump, and
- 5 x DN downstream of valves and fittings should be provided.

General minimum downstream stabilisation distance: 2 x DN

**i** For adjusting BOA-Control SAR, customers may borrow our PFM 2000 measuring computer. Please contact us for details.





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