

**Operating Instructions
for
Ball Type Flow Indicator**

Model: DKB



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2. Note

Please read these operating instructions before unpacking and putting the unit into operation. Follow the instructions precisely as described herein.

The devices are only to be used, maintained and serviced by persons familiar with these operating instructions and in accordance with local regulations applying to Health & Safety and prevention of accidents.

When used in machines, the measuring unit should be used only when the machines fulfil the EWG-machine guidelines.

as per PED 97/23/EG

In acc. with Article 3 Paragraph (3), "Sound Engineering Practice", of the PED 97/23/EC no CE mark.

Diagram 8, Pipe, Group 1 dangerous fluids

3. Instrument Inspection

Instruments are inspected before shipping and sent out in perfect condition.

Should damage to a device be visible, we recommend a thorough inspection of the delivery packaging. In case of damage, please inform your parcel service / forwarding agent immediately, since they are responsible for damages during transit.

Scope of delivery:

The standard delivery includes:

- Ball Type Flow Indicator model: DKB
- Operating Instructions

4. Regulation Use

Any use of the Ball Type Flow Indicator, model: DKB, which exceeds the manufacturers specification may invalidate its warranty. Therefore, any resulting damage is not the responsibility of the manufacturer. The user assumes all risk for such usage.

5. Operating Principle

During flow the plastic ball heaves out of its seat and indicates a flow movement in the pipeline. If the flow stops the ball will fall back into its seat.

6. Mechanical Connection

Before installation

- Remove all transport restraints and make sure that none of the packing remains in the instrument.
- Make sure that the maximum allowed operating pressures and service temperatures are not exceeded (see 7. Technical Information)
- Mount the Flow Indicator horizontally with the glass dome on top and tension-free into the pipe.
- Avoid water hammer in the measuring tube e.g. caused through a sudden shut off the flow.
- If possible, check after mechanical installation that the threaded joint/pipe connection is tight.

7. Technical Information

DKB-11...

Housing:	brass (MS-58)
Glass dome:	Borosilicate glass
Ball:	POM
Sealing:	EPDM
Rings:	brass (MS-58)
Screws:	st. steel

DKB-21...

Housing:	brass (MS-58)
Glass dome:	Borosilicate glass
Ball:	PTFE
Sealing:	FPM
Rings:	brass (MS-58)
Screws:	st. steel

Connection

G 1/8 R06	G 1/4 R08	G 3/8 R10	G 1/2 R15	G 3/4 R20	G1 R25
1/8" NPT N06	1/4" NPT N08	3/8" NPT N10	1/2" NPT N15	3/8" NPT N20	1" NPT N25

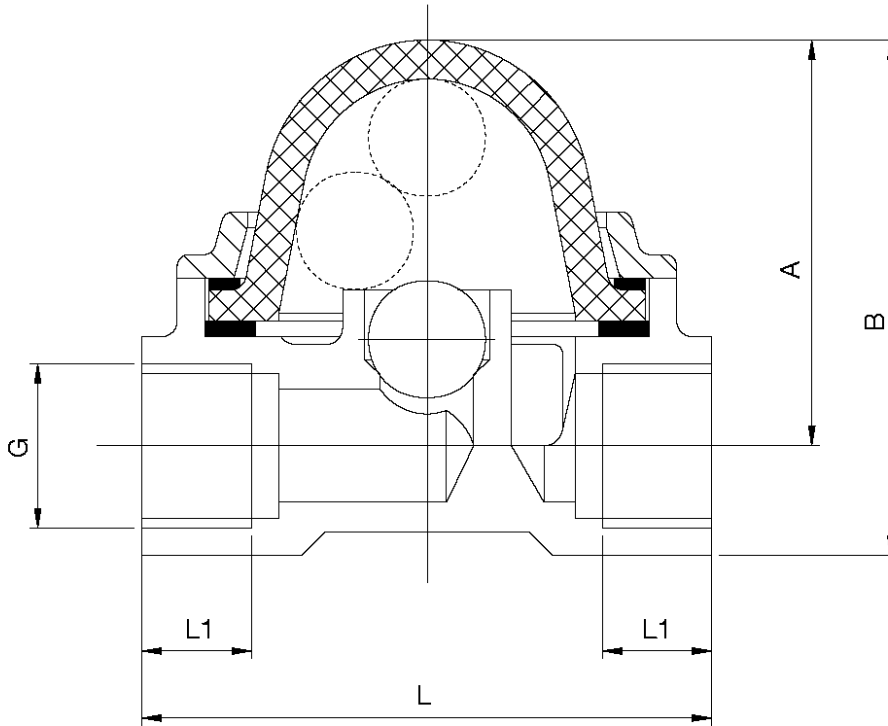
8. Order Codes

Order example: **DKB-1101H R06**

Indication range		Model		Connection	
l/min water	ΔP^* (bar)	DKB-11..	DKB-21..	G-thread	NPT-thread
0.05 - 15	1	DKB-1101H..	DKB-2101H..	R06	N06
0.05 - 20	1	DKB-1102H..	DKB-2102H..	R08	N08
0.06 - 45	1	DKB-1103H..	DKB-2103H..	R10	N10
0.07 - 50	1	DKB-1104H..	DKB-2104H..	R15	N15
0.18 - 105	0.5	DKB-1105H..	DKB-2105H..	R20	N20
0.14 - 105	0.5	DKB-1106H..	DKB-2106H..	R25	N25

* max. flow

9. Dimensions



Model	P _{max}	t _{max}	G	NPT	L1	L	A	B	Weight kg
DKB-..01H	6 bar	120°C	G 1/8	1/8"	8	56	41	50	0.3
DKB-..02H	6 bar	120°C	G 1/4	1/4"	10	56	41	50	0.28
DKB-..03H	6 bar	120°C	G 3/8	3/8"	14	73	53	67	0.57
DKB-..04H	6 bar	120°C	G 1/2	1/2"	14	73	53	67	0.54
DKB-..05H	6 bar	120°C	G 3/4	3/4"	16	109	72	94	1.41
DKB-..06H	6 bar	120°C	G 1	1"	18	109	72	94	1.30