Operating Instructions

for

Flow Restrictors

Model: REG

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2. Note

2.1 General

Before unpacking and commissioning the device, the operating instructions and the “General Safety Instructions” document must be read and followed carefully. The general safety instructions, the operating instructions, the data sheet as well as approvals and further information can be downloaded via the QR code on the device or under the respective product on www.kobold.com.

Due to technical changes, the device documentation available online may not always correspond to the product version you have purchased. If you need an instruction manual that corresponds to the purchased product version, you can request it from us free of charge by email (info.de@kobold.com) in PDF format, specifying the relevant invoice number and serial number. If you wish, the operating instructions can also be sent to you by post in paper form.

Operating instructions, data sheet, approvals and further information via the QR code on the device or via www.kobold.com

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 device should be used only when the entire machine fulfils the EU machinery directive.

2.2 Hazard warnings

The following instructions are intended to ensure your personal safety and to prevent damage to the product described or connected devices. Safety instructions and warnings to prevent danger to the life and health of users or maintenance personnel, or to prevent damage to property, are highlighted in this documentation using the symbols defined here. *The symbols and terms used have the following meaning in the documentation itself:*

Note

Is important information about the product, the handling of the product or the respective part of the documentation to which particular attention should be drawn.

Warning!

Indicates that death, serious injury or significant property damage can occur if proper precautions are not taken!

Caution!

Means that minor personal injury or property damage may occur if appropriate precautions are not taken!

as per PED 2014/68/EU
In acc. with Article 4 Paragraph (3), "Sound Engineering Practice", of the PED 2014/68/EU no CE mark.

3. Instrument Inspection

All 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:
- Flow Restrictors model: REG

4. Intended Use

Flawless operation of the device can only be guaranteed if all aspects in these operating instructions are adhered to.
The manufacturer assumes no responsibility for any damage resulting from improper use. The user assumes all responsibility for such usage.

5. Operating Principle

KOBOLD model REG flow restrictors serve to keep constant quantities of liquids in pipework systems. The REG rate regulators are ideally suited for the simple restriction of a preset value of throughputs of water or of liquids similar to water. The flow restrictors ensure an equilibrium, particularly in systems with many consumers and resulting pressure fluctuations caused by random flow conditions. In other words, the desired throughput is not exceeded.
Constant flow is achieved by two stainless steel spring plates that are crosswise mounted and riveted together. The gap between the spring-loaded stainless steel plate and the seal-surface is continuously varied as the differential pressure changes. As the differential pressure decreases, the gap widens, and it closes as the pressure increases, thus maintaining a constant flow volume through the device.

6. Mechanical Connection

Before installation:

- Remove all transport securing devices and make sure that there are no more packaging parts left in the device.
- Make sure that the permitted maximum operating pressures and temperatures for the device are not exceeded (see Technical Data.)
- Install the flow limiter into the piping without mechanical stress.
- Protect the measuring pipe against external damage.
- Avoid pressure surges in the measuring pipe e.g. by blocking the flow quickly.
- If possible, after mechanical installation, make sure that the connection between screw connection and pipe is tight and does not leak.
- Inlet and outlet run: the flow restrictor generally does not require any inlet and outlet runs.
  However, if a significant diameter reduction is necessary directly before or after the restrictor, an inlet and outlet section of ~ 3x DN must be set up.

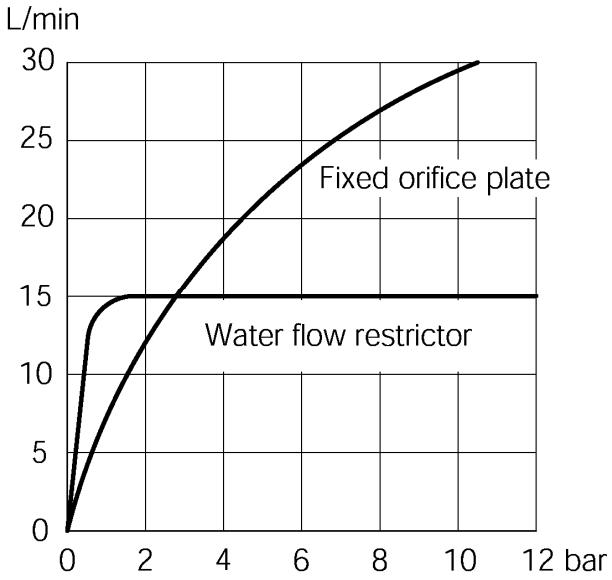
Note the direction of flow: Depending on the design, the REG are marked with a direction arrow or a label e.g. "IN".

Maximum tightening torques for process connection:

G ½	30 Nm
G ¾	30 Nm
G1	38 Nm

Warning! The differential pressure must not exceed 10 bar.

7. Differential Pressure Curve



8. Technical Information

Operating instructions, data sheet, approvals and further information via the QR code on the device or via www.kobold.com

9. Order Codes

Operating instructions, data sheet, approvals and further information via the QR code on the device or via www.kobold.com

10. Dimensions

Operating instructions, data sheet, approvals and further information via the QR code on the device or via www.kobold.com

11. Disposal

See “General Safety Instructions” - via the QR code on the device or via www.kobold.com

12. EU Declaration of Conformance

We, KOBOLD Messring GmbH, Nordring 22-24, 65719 Hofheim, Germany, declare under our sole responsibility that the product:

Flow Restrictors **Model: REG-...**

to which this declaration relates is in conformity with the following EU directives stated below:

EN IEC 63000:2018 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

Also, the following standards are fulfilled:

2011/65/EU **RoHS** (category 9)
2015/863/EU Delegated Directive (RoHS III)

Hofheim, 25 Sept 2023

H. Volz
General Manager

J. Burke
Compliance Manager

13. UK Declaration of Conformity

We, KOBOLD Messring GmbH, Nordring 22-24, 65719 Hofheim, Germany, declare under our sole responsibility that the product:

Flow Restrictors **Model: REG-...**

to which this declaration relates is in conformity with the following UK directives stated below:

S.I. 2012/3032 The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012

Also, the following standards are fulfilled:

BS EN IEC 63000:2018 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances.

Hofheim, 25 Sept 2023

H. Volz
General Manager

J. Burke
Compliance Manager