Know How Flow indicators

Sight glasses and flow indicators indicate media and flow conditions in pipeline systems and plant

Selection
Sight glasses are monitoring equipment without indicating mechanisms. Flow indicators have internal components that are set in motion by the flow.

Glasses
Sight glasses and flow indicators are supplied with one or two glasses. Two glasses enable the user to see through the medium. If the installation site is dark or if it is difficult to see the glass, a light may be fixed at the back which allows a better view of the flowing medium.

Glass qualities
Soda lime glass is used for temperatures up to 150 °C (see DIN 8902); in the case of alkaline media (boiler water) only up to 100 °C.
Maxos glass is used for temperatures up to 280 °C (see DIN 7080).

Flow direction
Our standard flow indicators are supplied for left-to-right flow; we also supply indicators for right-to-left flow at the customer´s request. Please state the required flow direction when ordering.

Operating limit
Flow indicators and flow meters have an operating limit. Below this limit the flow is insufficient to set the internal components in motion (see Data Sheet).

Indicator flag for one direction
Flow indicators with flag and reset spring for one flow direction are the most popular type and can be installed in any position. Soda lime glasses feature a graduated scale of lines from 1 to 10. This scale allows the flow volume to be gauged easily and quickly. In many simple applications this type of indicator may be used as an alternative to an expensive flow meter. For the smaller DN (up to G 1 / 25 mm) the indicating flag is supplied without a spring to allow it to indicate even small volumes. Vertical installation with flow from top to bottom, however, requires a spring.

Indicator flag for both directions
The centrally mounted flag is deflected towards the flow direction, thus indicating the direction of the flow. The position of the flag changes as the flow increases or decreases.

External indicator
For turbid or opaque liquids without magnetic contamination you should select a flow indicator with external pointer (Type 6.12). What has been said above under item “Indicator flag for one direction” applies to this type of indicator as well.

Ball-type indicator
The flow moves a ball from its rest position (at the bottom of the housing) to the top. This type of flow indicator must be installed vertically for flow from bottom to top.

Indicator with impeller
The flow causes the impeller to rotate. The speed of the impeller allows the flow volume to be gauged. Suitable for all installation positions as well as all pipeline flow speeds below 1 m/sec.

Resistance to media
The standard cover seal is not resistant to all media.

Installation
Please note the flow direction if you want to install a flow indicator with fixed direction of flow.

Operation
Flow indicators and sight glasses are quite simple units which do not require any special maintenance during operation. Dirty glasses should be cleaned and the cover seals renewed at the same time.

Maintenance
Remove the glass for cleaning. For reassembling the screws should be tightened evenly and diagonally using the specified torque, or the clamp ring seal tightened gently to avoid damaging the glass. We recommend that you keep a supply of replacement glasses.

Valves free of oil and grease or silicone
Please pay attention to order an fit only spares free of oil and grease resp. free of silicone.

Please consult our engineer if extreme operating conditions apply or whenever you are in doubt.

Notes on Safety, Operating Instruction etc. MUST be followed.