THE VALVE SPECIALISTS
OF SCANDINAVIA

MESON

General installation and operating manual for globe valves

IOM-011-GLV

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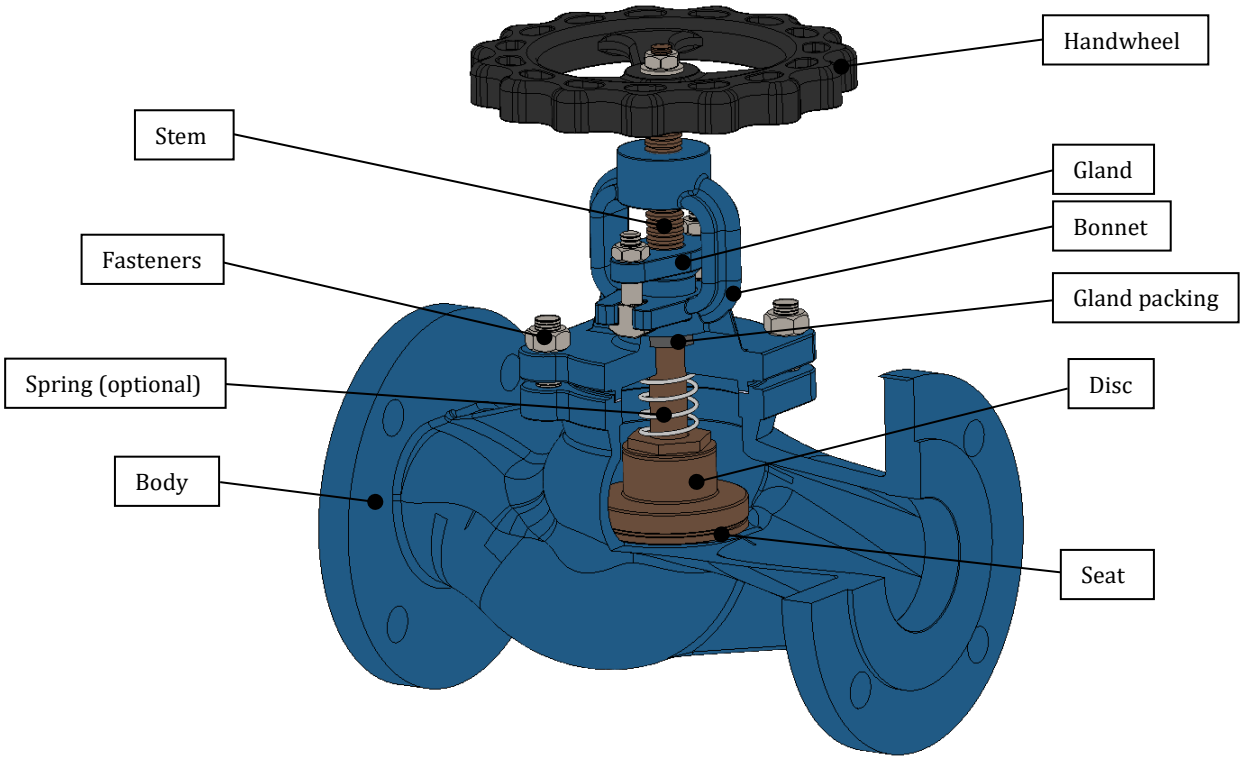

Handwheel
Stem
Gland
Bonnet
Fasteners
Gland packing
Spring (optional)
Disc
Body
Seat

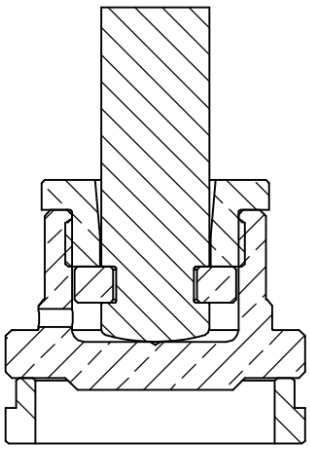
1. General information

This manual gives instructions on installation of the valves together with maintenance instructions and shall be read carefully before installation is started.

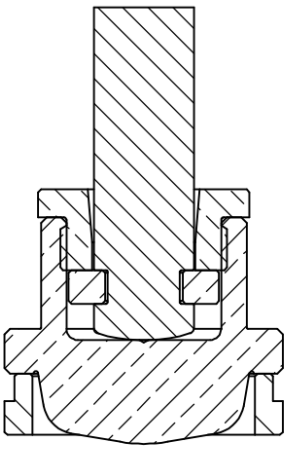
It is in the responsibility of the installer to ensure that the work is carried out in a satisfactorily manner, approved materials are used and that the installation meets applicable rules and regulations. Regional safety requirements must be applied and observed both at installation and maintenance as well as in repair work.

It is the installer/owners responsibility to define responsibility and competence of personnel for the installation and maintenance of the valves. In case of problems which cannot be solved from information in this manual the supplier of the valves shall be contacted.
The manufacturer reserves the right to introduce technical modifications at any time.

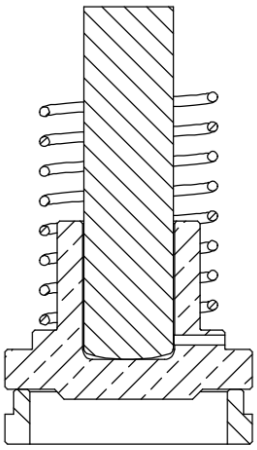
Globe valves are used for regulation of flow in a pipeline and are named from their spherical body shape. Our product portfolio covers a wide assortment of globe valves, with three types of discs:



Fixed disc



Regulating disc



SDNR disc

- Fixed disc, for basic shutoff applications also called SDSL, screw down screw lift.
- Regulating disc, with a spherical shape that makes it a better choice for regulating applications, allowing proportional flow contra opening position.
- Screw down non return disc (SDNR), is a check valve with manual shutoff option. The SDNR disc is available with or without spring, to give more options in terms of functions and mounting positions.

Remote indication for open/closed valve is available as an option, using micro switch or inductive sensor. In accordance with classification rules, our valves with screwed bonnets are secured against loosening when the valve is operated.

Meson offer globe valves in a variety of materials. Our main material groups are cast iron, ductile iron and cast steel, with internal parts in the same materials or stainless steel.
Our stainless steel group of globe valves have bodies as well as internal parts in stainless steel. Our bronze range covers materials such as RG5 or RG10, but are not limited these, and internal parts in bronze, brass or special brass. Choice of materials should always be done with thought on the piping system parameters and connecting parts to the valves.

2. Storage and transport

- The valves are delivered with plastic protection covers in both flange ends. The covers shall not be removed until the installation.
- Protect valve and other equipment against external forces.
  Valve hand wheels are not designed to take external forces e.g. they must not be used for as climbing aids or as connection of lifting gear.
- Lifting to be carried out by using suitable handling equipment.
- Weights of valves to be taken from data sheet.
- If the covers have been removed inspect the internals carefully for dirt before installation.
- The valves must be stored indoors well protected from dust and moisture.
- Long time storing must be done in warm warehouses to avoid corrosion attack on unprotected areas inside the valve.
- Do not damage the external coating during transportation and storing.

3. Installation

- Remove protecting covers for valve flanges.
- Check and compare pressure marked on valve with system pressure.
- Check flanges of valve and piping so that they match.
- Protect valve from dirt during the whole installation procedure.
- Check for dirt and foreign particles in valves and pipelines.
- Note installation positions with reference to flow and marking arrow on valve.
- Use only counter flanges and screws with correct dimensions.
- Centre gaskets between flanges.
- Avoid damaging forces on valve when pipeline is installed.
- Valve hand wheels and actuators are not designed to take external forces e.g. they must not be used for as climbing aids or as connection of lifting gear.
- Do not use tools to increase the torque on the hand wheel.
- Lifting to be carried out by using suitable handling equipment.
- Weight of equipment is to be taken from data sheet.
- Installation of the valve with stem vertical is preferable, but alternate positions can be accepted due to the type of valve.
- Keep stem threads and shaft free from paint.
- The valve is not designed for installation in heavy vibrating pipelines (close to main engines and generator engines). If this must be the case all precautions must be taken to prevent the valve from these vibrations.
- Touching valves operating at high media temperatures >50°C can cause injury. Affix warning notice or protective insulation as appropriate.
- Before putting a new plant into operation or restarting after repairs or modifications, always make sure that all works has been completed for the valves and other depending systems.
- Before putting a new plant into operation or restarting after repairs or modifications, verify gland bolt tightness, too loose bolts will cause leakage via gland packing.
- Operate the valve manually from Full Close to Full Open and Full open to Full Close. Ensure that there is no undue resistance or friction when operating.

4. Maintenance instruction

Never use hammer or similar action on valve for any reason.

For any assistance, please contact Meson AB or your supplier.

The valve is maintenance free but we recommend following to be checked at regular intervals.

Checkpoint	Checking Method	Weekly	When Overhaul
Leakage from Gland, Body, Flange gaskets	Occular	X	
Noise / Vibrations while operating the valve	Listen and Feel	X	
Clean area around stem from dirt	Occular	X	
Check for damages on stem surface	Occular	X	
Check condition of Disc Seat and Body Seat Ring	Occular		X
Check condition and wearness of threads	Occular		X

5. Trouble shooting

Occurance	Probable Reason	Action
Leakage through valve when fully closed	a. By-pass connection open (if provided)	a. Close By-pass valve
	b. Object between Body Ring and Disc Seat	b. Try to flush away the object by opening and closing the valve to create flow flushing. If this not succeeds, open flanged joint to reach the object and remove it manually.
	c. Worn out, Deformed or damaged seat ring	c. Replace valve
Leakage through Gland	a. Gland packing is loose	a. Tighten the Gland gradually and uniformly
	b. Old Gland packing rings, due for replacements	b. Replace the gland packing
Leakage through Body-Bonnet gasket	a. Bolts of Body-Bonnet fastening are loose	a. Tighten the fasteners gradually and uniformly.
	b. Old gaskets due for replacement	b. Replace the gaskets
Leakage through side flanges	a. Inadequate tightening of flanged joint	a. Re-tighten the flanged joint
	b. Damaged gasket	b. Replace gasket
	c. Parallel / Angular gap between valve and pipe flanges	c. Adjust gap between valve and pipe flanges
Noise / Vibrations while opening or closing the valve	Inadequately supported / Inadequately fixed piping / valve	Support / Fix upstream / downstream piping and valve (foundations bolt preferable)

6. Repair

6.1 Dismantling

The following points must be observed before dismantling the valve:

- Pressure less pipe system.
- Medium and valve must cool.
- Plant must be drained.
- Cleaning of the piping system in case of dangerous media.

6.2 Putting valve into operation after repair

Before the valve is put into operation, check that it is the right valve in its right position (material, pressure, temperature and direction of flow).
Residues in piping and valves (dirt, weld beads, etc.) inevitable lead to leakage.
Check remote control system function and operation directly on valve.
Regional safety instruction must be adhered to.
Touching valves operating at high media temperatures >50°C can cause injury.
Affix warning notice or protective insulation as appropriate.
Before putting a new plant into operation or restarting after repairs or modifications, always make sure that:

- All works has been completed for the valves and other depending systems.

7. Contacts

Your valves are designed and manufactured by:
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