



Product Overview

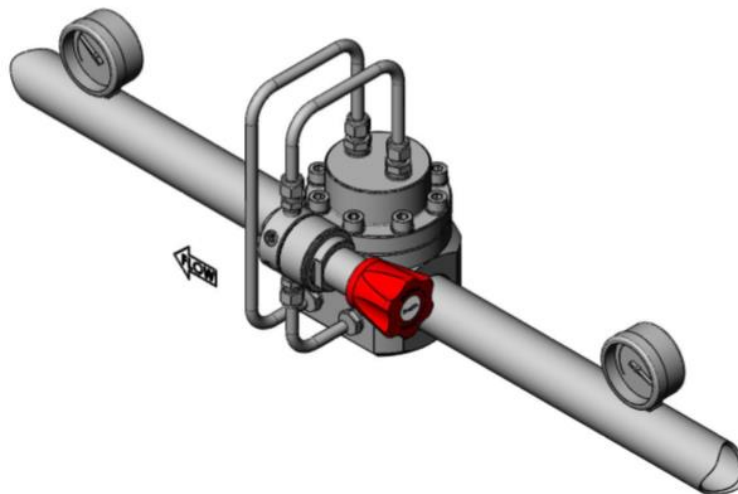
MAHER™ The DH Series (30 and 40) are dome-loaded pressure-reducing regulators designed for the regulation of high pressure, high flow gases and liquids. Note that seat seal material selection can limit the regulator operational pressure at elevated temperatures.

Features

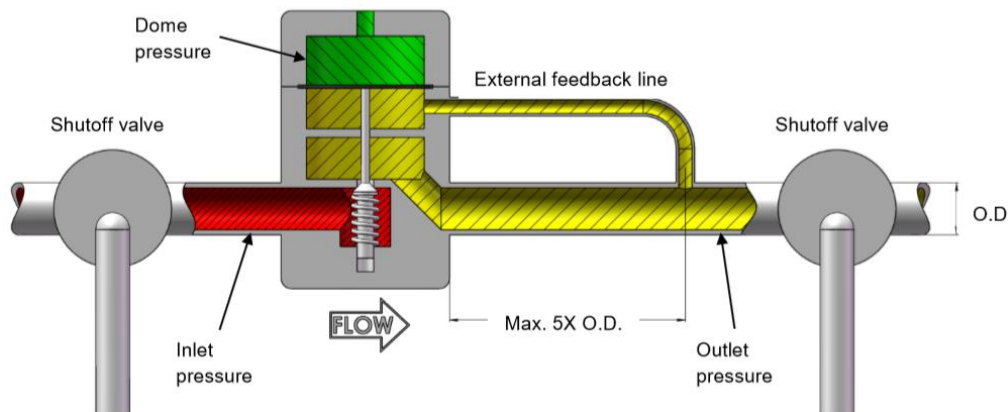
- Bolted construction
- Stainless steel as standard
- Fully serviceable
- Diaphragm sensing
- Balanced poppet
- Pilot regulator
- Dynamic regulation
- Internal or External feedback to main regulator

Product Description

The dome pressure of the regulator controls the outlet pressure. There are several methods available for supplying and controlling the dome pressure. Internal Feedback is the most common type of these Series. In this setup the dome-loaded regulator comes supplied with a pilot regulator connected to the regulator body.



In External Feedback the feedback comes from a connection at a specified distance downstream the body to provide a more accurate and stable regulation of the outlet pressure (Following Figure).



- The external feedback line is to be connected in a turbulence-free zone in the downstream piping, at a maximum distance of 5x the outside diameter of the downstream tubing/piping
- The tube size of the external feedback should be 3/8 in. or 1/2 in. or the metric equivalent.

Specifications

The Specifications section lists the general specifications. The following information is stamped on the body of the equipment: Flange Size and facing, Setting Pressure, Body Material, Orifice size and manufacturers data.

Item	Specification	Description
1	Connection Flange Size(NPS)	3,4 - RTJ or RF
2	Pressure Setting(bar)	20 to 200
3	Inlet Pressure(bar)	Up to 255
4	Operational Temperature(C)	-20 to 80
5	Body Material	304 Stainless steel, 316 Stainless steel
6	Trim Material	304 Stainless steel, 316 Stainless steel
7	Diaphragm Material	NBR, FKM, EPDM
9	O-Ring Material	NBR, FKM, EPDM
10	Packaging	Wooden Box

- Custom design specifications including flange size, setting pressure and material Acc. To Request could be manufactured.

Disassembly and Troubleshooting

- The following instructions describe how to fully disassemble the regulator for the purposes of maintenance and repair.

- Only disassemble the regulator as far as is required to replace the components supplied in the maintenance kit.

- Discard all components being replaced.

1- Remove the feed tube (28), dome tube (30), bleed tube (27), and pilot regulator (29)

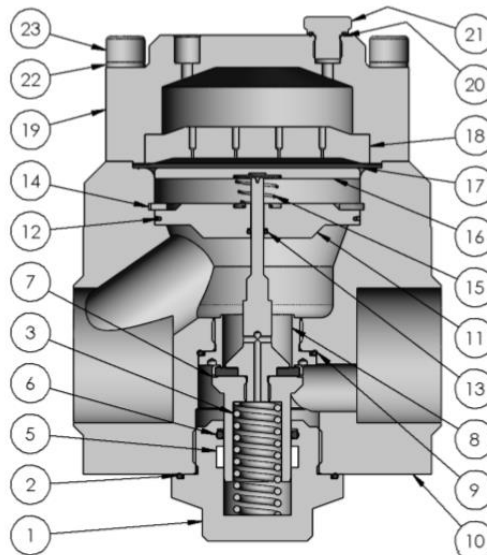
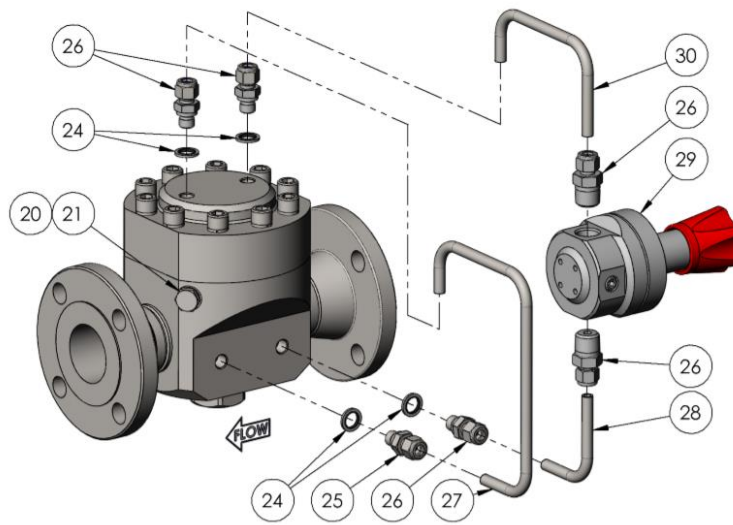
2- Remove the body plug (1), poppet spring (3), and poppet (7) from the body (10)

3- Remove the body plug O-ring (2), poppet O-ring (6) and, if present, poppet backup ring (4) and guide ring (5) from the body plug (1) and poppet (7)

4-Using the seat insertion tool, remove the seat (8) and seat O-ring (9)

5-Remove the cap screws (23) to remove the dome (19), dome plate (18), diaphragm (17), and diaphragm plate (16)

6-Remove the retaining ring (14) to remove the body plate (11). For external feedback regulators remove the inner (13) and outer (12) body plate O-rings.

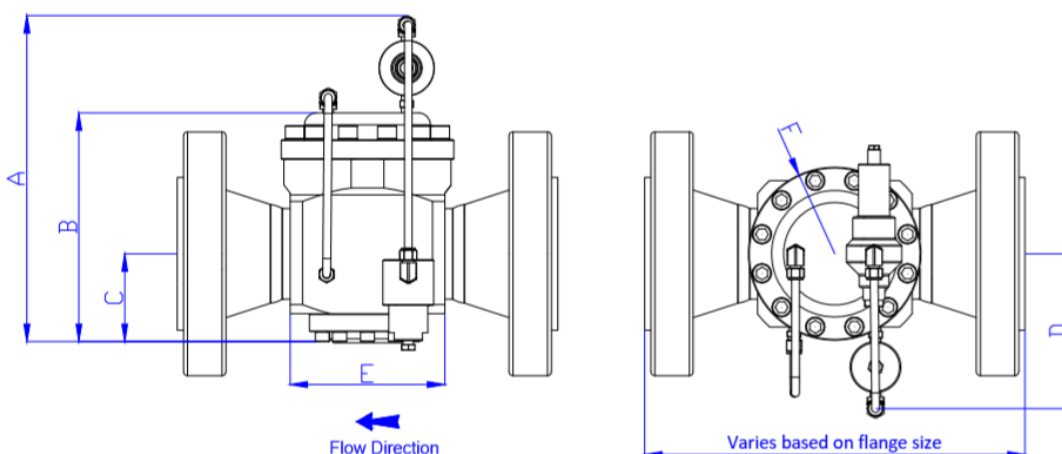


Symptom	Cause	Remedy
The outlet pressure creeps up, without adjusting dome pressure.	A damaged poppet or seat.	Replace the poppet and/or seat.
Leakage around the body plug.	A damaged O-ring.	Replace the O-ring.
Leakage between the body and the dome.	A damaged diaphragm.	Replace the diaphragm.
	Insufficient torque on the cap screws.	Tighten the cap screws
Controlled pressure drops off sharply even when the flow is within regulator capabilities.	The system filter element is clogged.	Replace the system filter.
The required outlet pressure cannot be reached.	The inlet pressure to the regulator is not high enough.	Ensure that the inlet pressure to the regulator is equal to or greater than the desired set pressure.

The outlet pressure rises too much when going from a dynamic to a static situation.	There is too much flow in the dynamic situation.	A larger regulator or parallel regulator is required. Review application flow capacity and contact your local authorized sales and service center.
The outlet pressure does not drop when the pressure in the dome is lowered.	The regulator is non-venting.	A shutoff valve in the outlet line must be opened to reduce the outlet pressure.
The outlet pressure has changed without adjusting the dome pressure.	Changes to the inlet pressure may result in changes to the outlet pressure.	Maintain a constant inlet pressure to the regulator. See "Points of Attention Before Operation" about dependency.
	Changes to the flow may result in changes to the outlet pressure.	Maintain a constant flow through the regulator. See "Points of Attention Before Operation" about droop.
No pressure regulation occurs with an external feedback regulator.	The outlet line has not been connected to the external feedback port.	Connect the outlet line to the external feedback port. See "External Feedback" for installation details.

Overall Dimensions

Series	Connection Size(NPS)	Dimension(mm)					
		A	B	C	D	E	F
DH30	3	310	243	85	150	190	216
DH40	4	356	290	111	150	250	216



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