

PARTS OF BPR



Spring BPR-R20

Diaphragm BPR-DPH



SPARE PARTS

DEGASSER SYSTEM SPARE PARTS

Part #	Name
BPR-DPH	Diaphragm
BPR-R20	Spring @20 psig

STANDARD WARRANTY

MANVIA warrants products manufactured and supplied by it, to be free from defects in workmanship and, to the extent materials are selected by Seller, to be free from defects in materials, for a period of twelve months from shipment.

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MA-BPR0r01

MANVIA BACKPRESSURE RELIEF VALVE BPR

INSTALLATION, OPERATION & MAINTENANCE MANUAL



⚠ CAUTION

CAUTION, indicates a hazardous situation which, if materialized, could result in material damage or a moderate injury.

⚠ DANGER

DANGER indicates a hazardous situation which, if materialized, could result in a serious injury and even in death.

SAFETY INFORMATION

Please pay attention to all Warnings and Cautions in this manual. Failure to do so could result in serious personal injury and/or equipment damage. It is mandatory to read the entire manual unpack, install or operate this product.

⚠ DANGER: Installation, operation and maintenance must only be carried out by suitably trained personnel and in accordance with this manual. Safety precautions must be taken to avoid the possibility of an accident when operating in conditions of high pressure and/or high temperature.

BPR SPECIFICATION

TECHNICAL SPECIFICATIONS	
Wetted parts:	SS 316 and VITON
Mounting:	Surface. (M-6)
Regulated Pressure:	Fixed @ 1.5 barg (22 psig).
Max. Temperature:	70 °C
Connections:	¼" NPTF
Size:	76 mm. diam. X 90 mm long
Weigth:	1 Kg. (2,2 lb)
Fluid:	liquid

Large area diaphragm design to keep constant pressure stable.

PRODUCT DESCRIPTION

The Backpressure Relief Valve is used to regulate upstream pressure in SWAS for analytical measurement sensors, maintain a constant inlet pressure before the analyzers which help stabilize the flow rate for each analyzer.

When some analyzers are installed parallel for a same sample source, the backpressure relief valve can provide constant inlet pressure which allows all analyzers to be able to be shut off at all times without varying the pressure and flow of the rest.

INSTALLATION

⚠ CAUTION: The necessary protective equipment must be used in order to avoid knocks, cuts and entrapments during installation. Follow this procedure for correct installation:

The BPR must be installed in according to process diagram below in parallel with the analyzers and with its outlet directly to atmosphere.

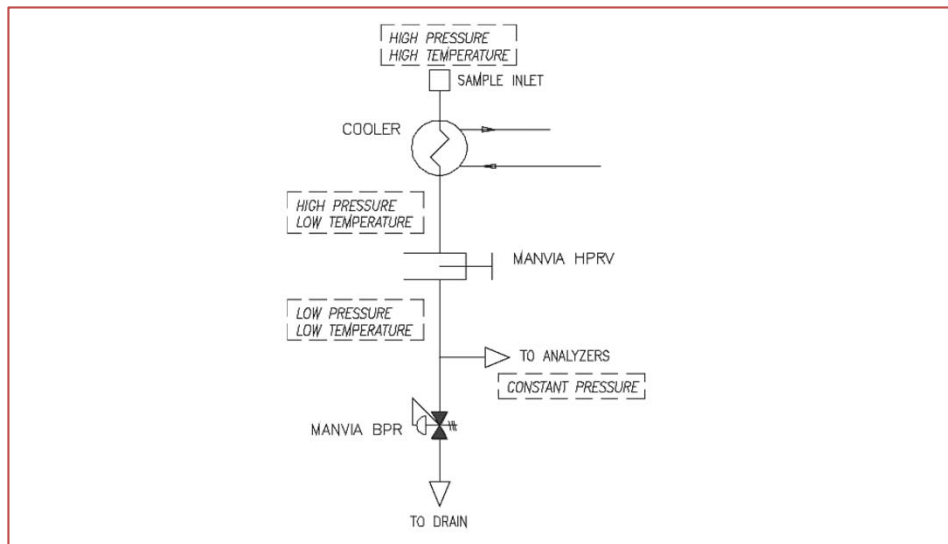
When sampling system works at high pressure and high temperature, almost components illustrated in process scheme will be needed. If not installed these components, BPR could fail, resulting in injury to persons or damage to other equipment.

As illustrated in the scheme below, the BPR only has to control pressure at 1.5 barg (22 psig) relieving a part of sample flow. Both connections on the BPR are ¼" NPTF and wetted materials are AISI 316 stainless steel and Viton®.

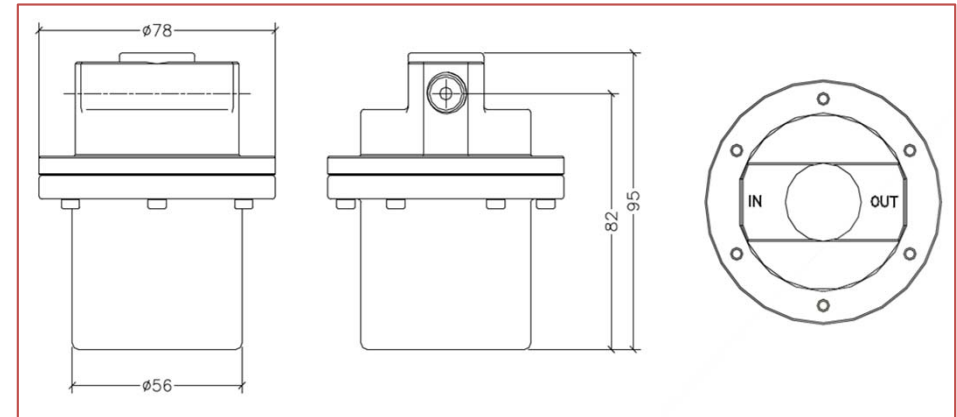
The BPR must be fixed to the panel using a M-6 screw located in the upper part of the cover.

⚠ Before start the installation of BPR, be sure that there is no high pressure or high temperature fluid inside the tubing to connect the BPR:

- ✓ It is advisable the use of corrosion resistant pipework suitable for the fluid being sampled in order to connect BPR to sampling stream.
- ✓ Keep the length of all tubing and pipes to a minimum, specially outlet tubing if installed.



DIMENSIONAL AND CONNECTION DRAWING



OPERATION BASIS

In normal operation, this valve must be open and sample must flow through it. When sample pressure is increased, the valve must open wider in order to maintain pressure at its adjust point and flow through the valve is increased. When sample pressure is reduced upstream, then the valve reduces the flow path orifice in order to maintain pressure and the flow is reduced. If pressure in stream is reduced below valve adjusting point, then no flow is observed at valve outlet connection and valve is not working.

MAINTENANCE

Maintenance of the BPR only consists on frequently cleaning and/or replacement of the diaphragm when pressure regulation is not accurate. Follow the instructions below to disassemble and reassemble the BPR in order to do maintenance:

DISASSEMBLY AND REASSEMBLY OF BPR

1. First of all, it is advisable to use a bench in order to fix the BPR and avoid unexpected movements or turns that can difficult the operation.
2. Remove alternatively three of the six screws around the spring housing flange which hold the spring housing to the body. In order to remove the screws it will be necessary to use an Allen key size 3.
3. Replace the three screws with three longer screws, tightening them until the screw heads bottom out on the body flange.
4. Remove the three remaining screws.
5. After loosen the long screws until compression is relieved from spring and is possible to see and remove if required, specially in case of diaphragm replacement.
6. In order to assemble the valve again, it will be necessary to tight the three long screws and then tight the other three screws.
7. Last, remove three long screws and tight three screws instead of them.