

MP47-Z-BPR150

Analytical Diaphragm Pump Series MP®

Version MP47-Z-BPR150
with integrated bypass pre-pressure control

Special Features

- With integrated bypass pre-pressure control
- Corrosion-resistant
- 100 % lubricant-free
- Gas-tight
- Maintenance-free
- Long service life

Application

The diaphragm pump MP47-Z-BPR150 is suitable for 100 % oil-free conveying of corrosive gases under changing pressure conditions. Its performance and design are specially designed for the problems encountered in analytical technology. The pump is gas-tight and maintenance-free.

Description

All sample-contacting parts of the diaphragm pump MP47-Z-BPR150 are made of PTFE, PVDF and Viton® or Kalrez®. The pump, which operates absolutely lubricant-free, ensures that the conveyed gas remains analytically pure. A special diaphragm and valve system guarantees maintenance-free operation and a long service life. The pump is available for 230 V or 115 V power supply.

In analytical technology, when conveying gases via filters, there is always the problem that filters become clogged during the continuous operating time. This causes an increase in the differential pressure above the filter, which results in a higher required suction pressure for the downstream pump. This, in turn, results in a decrease in the set flow rate.

To avoid this negative influence, the M&C diaphragm pump MP47-Z-BPR150 has a fully-fledged bypass pressure control integrated into the pump head. Irrespective of the variable inlet pressure, the bypass pre-pressure control keeps the pressure in the pump outlet and the resulting adjustable flow rate constant.

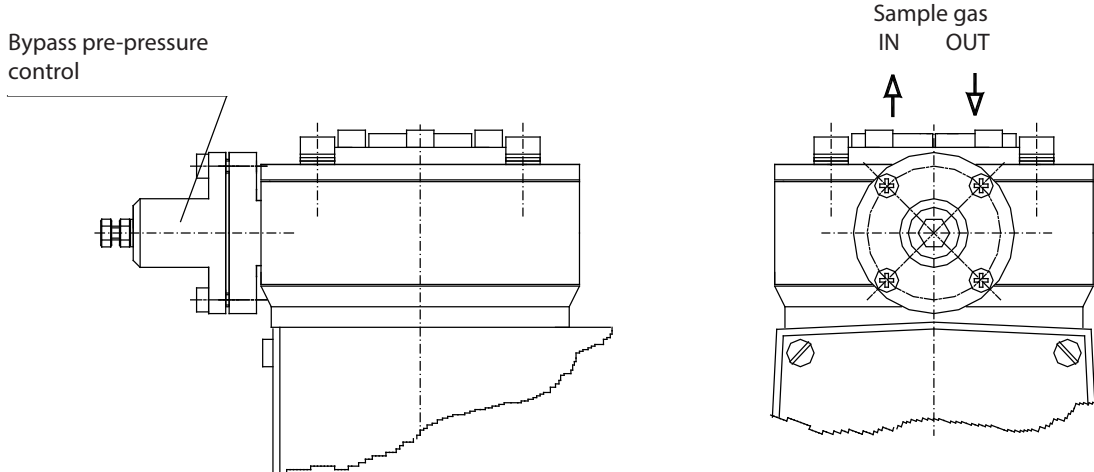
The inlet pressure may vary for example from 0.46 bar abs. to 1.1 bar abs. at a flow rate of 250 NI/h. The outlet pressure is factory-set to 200 mbar overpressure (adjustable up to 300 mbar).

Diaphragm Pump	MP47-Z-BPR150 -Viton®, 230 V	MP47-Z-BPR150 -Viton®, 115 V	MP47-Z-BPR150 -Kalrez®, 230 V	MP47-Z-BPR150 -Kalrez®, 115V
Part No.	02P1160	02P1160a	02P1165	02P1165a
Voltage	230 V/50 Hz	115 V/60Hz	230 V/50 Hz	115 V/60 Hz
Material of sample-contacting parts	PTFE, PVDF, Viton®		PTFE, PVDF, Kalrez®	
Protection class	IP20 - DIN 40050			
Pump capacity max.	6.5 NI/min* in the range of adjustment (outlet pressure)			
Operating pressure max.*	1.1 bar abs.			
Operating pressure min.**	0.46 bar abs. for 250 NI/h/0.62 bar abs. for 400 NI/h (outlet pressure 1.2 bar abs.)			
Outlet pressure	1.15 to 1.3 bar abs./at works 1.2 bar abs.			
Gas temperature	-30 to +80 °C [-22 to 176 °F]			
Ambient temperature	-10 to +40 °C [14 to 104 °F]			
Storage temperature	-15 to +60 °C [5 to 140 °F]			
Power consumption	110 W			
Current consumption	0.75 A	1.7 A	0.75 A	1.7 A
Gas connections	G 1/4" i DIN ISO 228/1			
Electrical standard	EN 61010 part 1			
Weight	4.6 kg [≈ 10.1 lbs]			

* The maximum operating pressure at which the pump still delivers a constant outlet pressure and thus a constant sample gas volume flow.
 ** The minimum operating pressure that still guarantees a constant pump capacity is changing according to the necessary gas volume flow adjusted downstream of the pump and to the outlet pressure adjusted via the pressure control. The lower the necessary gas volume flow and the outlet pressure, the lower is the minimum possible operating pressure that still guarantees a constant outlet pressure and therefore a constant sample gas volume flow.

Viton® and Kalrez® are registered trademarks used by the company DuPont Performance Elastomers (USA).
 Please note: NI/h and NI/min refer to the German standard DIN 1343 and are based on these standard conditions: 0 °C [32 °F], 1013 mbar.

Pump head with integrated bypass pre-pressure control



Dimensions

