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## Divex High Pressure Back Pressure Regulator

**The Divex Back Pressure Regulator protects the occupants of pressurized chambers breathing on Built In Breathing Systems (BIBS) by limiting the maximum pressure differential between the BIBS (person's lungs) and the ambient pressure outside the chamber.**

**Development & Performance:** Divex developed this purpose designed Back Pressure Regulator to improve performance, comply with and exceed National and International breathing performance guidelines, thus providing a safer alternative to standard industrial type back pressure regulators commonly used in the past.

The diving industry has nearly always used industrially available products and compromised upon performance and features.

Now there is no excuse!

**Diving Chamber Safety:** A BPR is fitted to the exhaust line of a chamber BIBS system to limit the maximum 'suction' (pressure differential between the inside and outside of a pressurized chamber) to which the diver's lungs may be subjected in the event of BIBS mask mechanical failure.

With a chamber at any depth greater than a few centimetres of water gauge, exposing the diver's lung to the external atmospheric pressure causes injury to the diver.

Even small pressure differentials between the lungs and the ambient pressure to which

exhaled breath is exhausted will result in life threatening lung damage.

To safely breath gas on a mask and dump the exhaled gas overboard, i.e. to the outside of the chamber, the reduction in pressure from that in the diver's lungs to atmospheric pressure must be safely reduced by one or more Back Pressure Regulators in series. The exhaust valve in the BIBS mask itself is the first BPR and, depending on the make and model of mask, may typically withstand pressure differentials of 20 msw (2 barg).

For breathing systems with pressure differentials in excess of 20 msw (2 barg) a second higher performing and more robust BPR must be fitted into the BIBS exhaust system. This second BPR should be able to tolerate the maximum pressure differential generated with the chamber at its maximum working depth.

The Divex BPR is rated for a maximum working depth of 450 msw (45 barg), which is also the maximum pressure differential pressure across the BPR inlet and outlet ports.

The BPR is fitted in the BIBS exhaust circuit either internal or external to the chamber. To avoid damage or failure of the BPR the top of the diaphragm must be exposed to the chamber internal pressure at all times, allowing automatic tracking of chamber pressure changes.

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Refer to the operating and maintenance manual for installation instructions.

The back pressure within the line between the outlet from the BIBS mask and the inlet to the BPR is adjustable from 0 msw to -40 msw below chamber pressure. Each BPR bias pressure is factory set to -20 msw.

### Specification

Pressure Adjustment	0-4 Bar
Inlet & Outlet Connections	1" NPT Female
Size	Max. Height 200mm Max. Width 130mm
Weight	2.2 kgs
Max. Operating Pressure	450 msw (45 Bar G)

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#### Divex Back Pressure Regulator

Order Code RP700

#### Outward Relieving Check Valve

Order Code RP700202

#### Inward Relieving Relief Valve

Order Code RP700203