BD | Derivative booster

Product description

The Derivative Booster (model **BD**) is used in conjunction with a positioner on a control valve to increase stroking speed on pneumatic double acting actuators. It has been designed to exhaust one actuator chamber and pressurize the other at the same time. In this way, a short stroking time in one direction can be achieved using just one device. This item is activated by the exhaust flow of the positioner.

Advantages

- **Unique simultaneously chamber charge and exhaust**
  Design to exhaust one chamber and simultaneously charge the other one.
  Number of accessories can be reduced because standard device works only on one chamber.
  Derivative booster works on both at the same time.
- **Safety - more sensibility - more accuracy**
  Regulation screw not ejectable by internal air pressure.
  Regulation screw accurate and lockable.
  Two adjusting screws: one to adjust the activation (Switch ON positioner flow level) and the other one to adjust the deactivation (Switch OFF positioner flow level).
- **Unique metal piston design**
  Without deformable diaphragm.
- **Collectable exhaust**
  (For silencer/protection/check valve).
  Suitable for SL exhaust protection system.
- **Compact design**
  Compact dimensions compared with high CV available.
- **CV limiter device**
  Available as an option.
- **Charge/exhaust ratio**
  The optimal selected CV ratio between exhaust and charge is 2.
  This ratio optimizes speed increase without compromising modulating stability.
- **Pilot CV**
  Derivative booster can be piloted by positioner with CV between 0,3 to 1.
  For ON/OFF execution derivative booster can be piloted with a minimum CV 0,3.

Key features

Suitable for

- Standard, Offshore, Sandstorm, copper free ambient condition
- Double acting actuators
- Low and high ambient temperature

Exclusive manifold mounting system. It is a special **STI** application to connect our accessories. Fittings or nipples are not necessary as the connection is achieved using machined connection faces with sealing o'ring.
This system saves time for assembly, reduces cost on items such as fittings, reducing inventory and the shortened dimensions save space.

Technical specifications

ALUMINUM
Manifold mounting

STAINLESS
STEEL 316
Manifold mounting

Housing materials
- Anodized aluminum
- Stainless steel 316

CV max
- Inlet = 4,5
- Outlet = 9

Operating temperature*
- -20°C / +70°C
- -40°C / +70°C available on request
- -20°C / +85°C available on request

Operating pressure
- P min = 2,5 bar
- P max = 7 bar
- Design pressure = 10 bar

Feeding connections
- Manifold mounting

Output connections
- Manifold mounting

Pilot signal connection
- 1/2" NPT

Weight
- Aluminum = 4 kg
- Stainless steel 316 = 11 kg

(*) Lower or higher temperature available on request.

Dimensional drawing