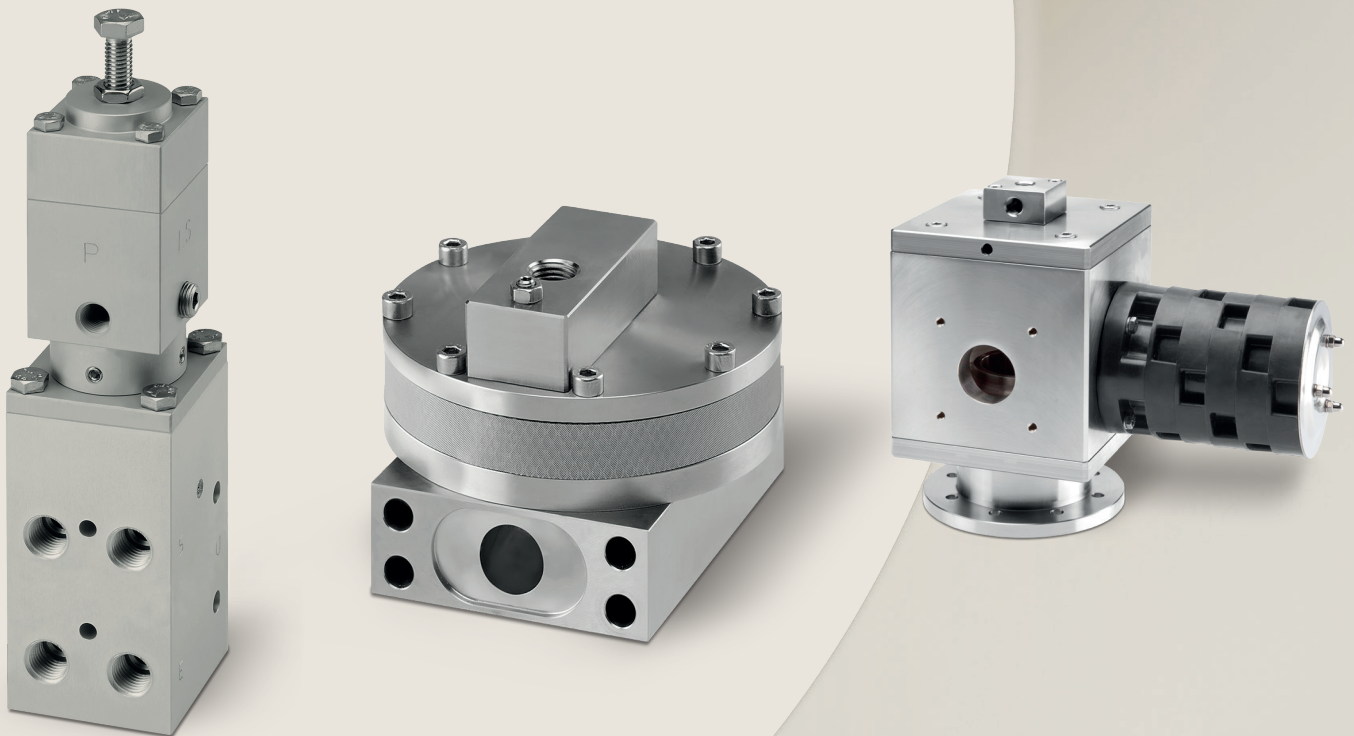


# Process Automation

IMI STI

Accessories



Breakthrough  
engineering for  
a better world

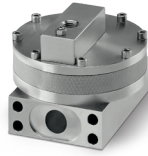
# Accessories

## Contents

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AL: Air-lock 101 Device



AV: Volume Booster



BD: Derivative Booster



BV: Big Volume Booster



BW: Ultra High Capacity Booster



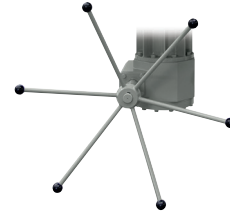
CF: Fast Commutator



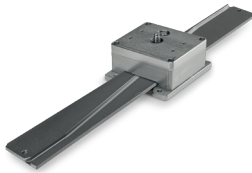
CO: 3-Way Pneumatic Operating Valve



CS: Quick Exhaust



GR: Manual Override



MC : Motion Converter



SAR : Snap Acting Relay



SL: Exhaust Protection System



TP: Pneumatic Pressure Switch



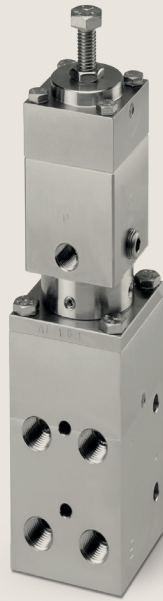
UD: Derivative Unit



2030: Electronic Position Transmitter



2130: Limit switch



AL

## Air-lock Device

The Air-Lock pressure static device is composed of a TP Pneumatic pressure switch combined with 2 x 3 way valves ND 1/4" in a single body. The Air-Lock pressure static device is mounted on pneumatic actuators when they need to be isolated from control devices (for example: positioners or electro-pneumatic distributors) in the event air pressure falls below the pre-determined operating safety point. The Air-Lock device consists mainly of a pneumatic pressure switch with an adjustable set point. This device synchronously drives the 2 x 3 way valves. The switching device operates immediately, even in the case of a gradual air-pressure decrease to the set value. The device will automatically reset after a failure when the line pressure is 1 bar greater than set pressure, to avoid instability around the device set point.

**Product features**

Suitable for:  
Standard, offshore, sandstorm  
and copper-free ambient  
conditions.

Single and double acting  
actuators.  
Low and high ambient  
temperature.

Exclusive STI design for double  
3 way valve in one body, to  
reduce assembly time, space  
and cost.

**Technical specifications**

Materials  
Anodized aluminium  
Stainless steel 316

Pilot signal connection  
1/8" NPT

Output connections  
1/4" NPT

Operating temperature\*  
-20°C to 70°C  
-40°C to 70°C  
-20°C to 85°C

CV max  
Inlet = 1  
Outlet = 1

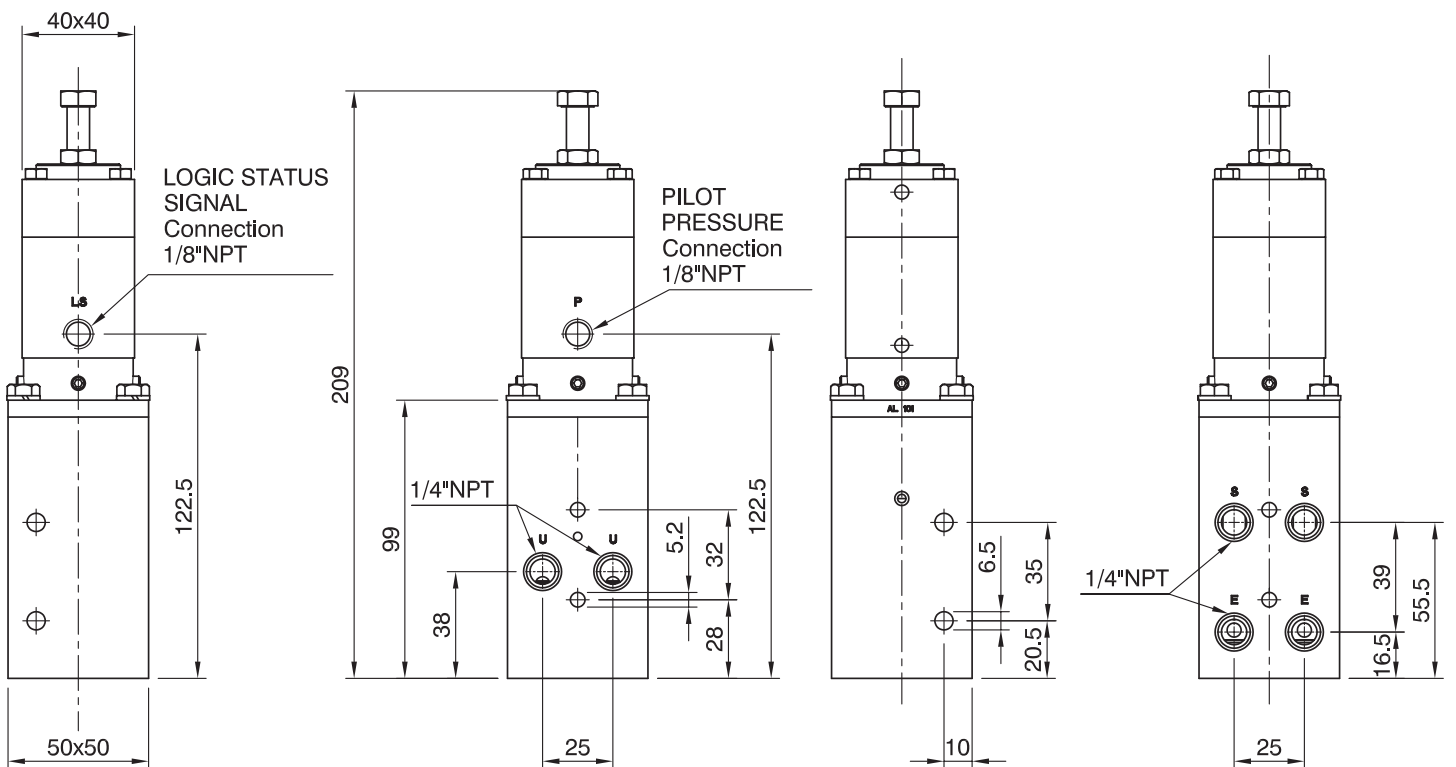
Weight  
Aluminium = 1kg  
Stainless steel 316 = 2.5kg

Feeding connections  
1/4" NPT

Operating pressure  
Design = 10 bar  
Operating = 7 bar  
Minimum operating = 2 bar

\* Lower or higher temperature  
available on request.

**Dimensional drawing**



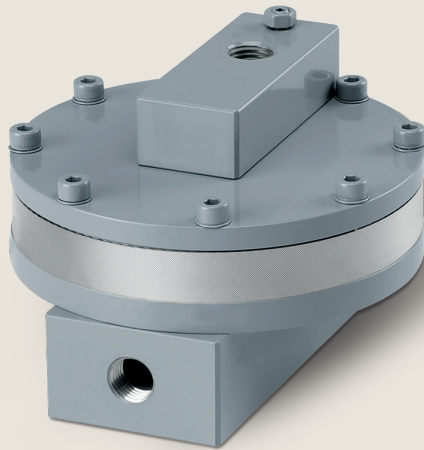
**Benefits**

Accurate pressure setting.  
Set screw lockable with nut.

Insensitive to vibrations.  
Reset hysteresis with  
established safety.

Synchronous drive for set  
pressure group + 2 x 3 way  
valve in one body.

Small dimension and light  
weight.



AV

## Volume Booster

The Volume Booster (model AV), available sizes 1/4" and 3/4", is designed to meet high speed control valve applications. It produces a high volume boosting action and contains an integral stabilizing by-pass valve controlled by a screwdriver adjustment in the body. By opening this valve it is possible improve the stability of the pneumatic circuit made up of a positioner, volume booster(s) and actuator.

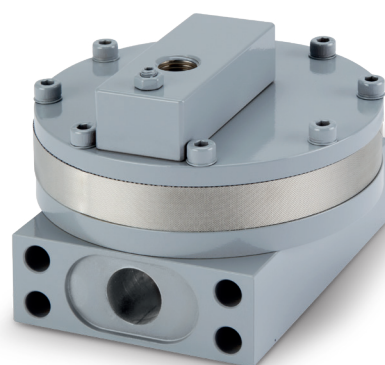
## Product features

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.

Suitable for standard, offshore, sandstorm and copper-free ambient conditions.

Single and double acting actuators.

Low and high ambient temperature.



AV 1/4" aluminium manifold mounting.

## Technical specifications - AV 1/4"

Housing materials  
Painted RAL 7001 aluminium  
Stainless steel 316

Operating temperature\*  
-20°C to 70°C  
-40°C to 70°C  
-20°C to 85°C

Diaphragm material  
Elastomeric reinforced fabric

Pilot signal connection  
1/4" NPT

CV max  
Inlet = 1  
Outlet = 1

Operating pressure  
P min = 3 bar  
P max = 7 bar  
Design pressure = 10 bar

Output connections  
Manifold mounting  
1/4" NPT

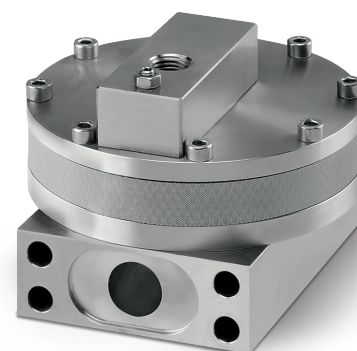
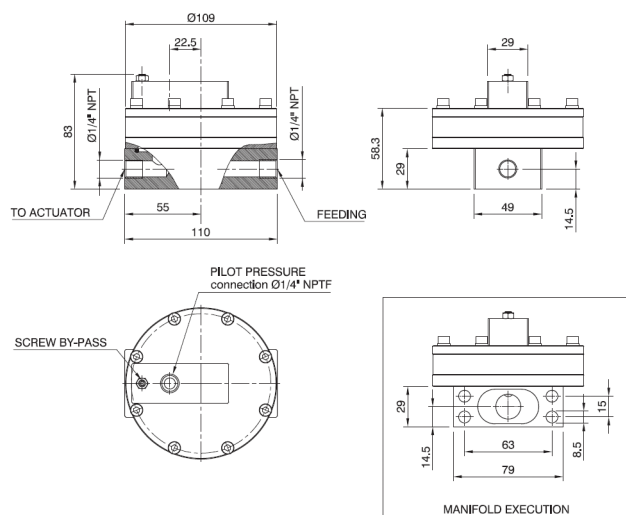
Feeding connections  
1/4" NPT

Options  
Collected exhaust  
Silencer

Weight  
Aluminium = 1.2kg  
Stainless steel 316 = 3.3kg

\* Lower or higher temperature available on request

## Dimensional drawing - AV 1/4"



AV 1/4" stainless steel 316 manifold mounting.

## Technical specifications-r AV 3/4"

Housing materials  
Painted RAL 7001 aluminium  
Stainless steel 316

Operating temperature\*  
-20°C to 70°C  
-40°C to 70°C  
-20°C to 85°C

Diaphragm material  
Elastomeric reinforced fabric

Pilot signal connection  
1/4" NPT

CV max  
Inlet = 4.5  
Outlet = 3

Operating pressure  
P min = 3 bar  
P max = 7 bar  
Design pressure = 10 bar

Output connections  
Manifold mounting  
3/4" NPT

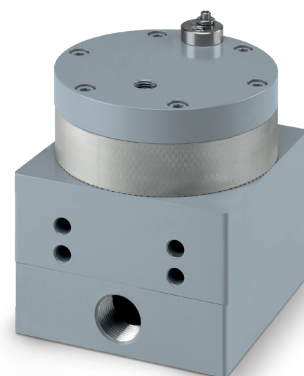
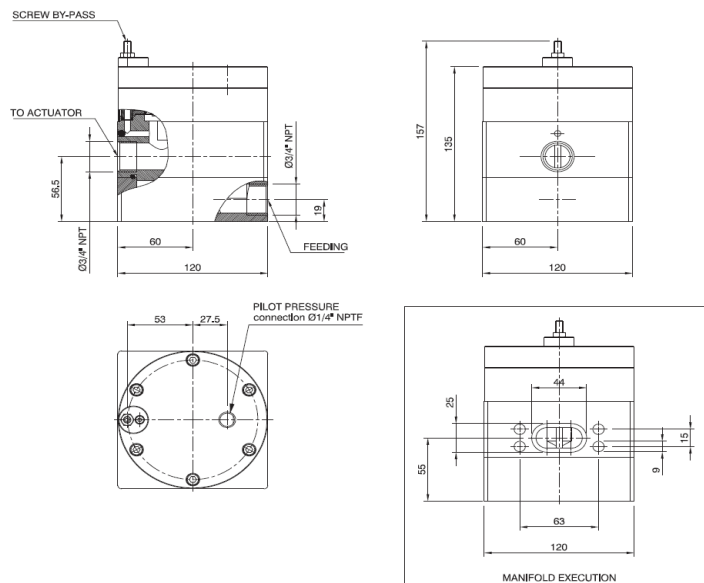
Feeding connections  
3/4" NPT

Options  
Collected exhaust  
Silencer

Weight  
Aluminium = 4kg  
Stainless steel 316 = 10.3kg

\* Lower or higher temperature available on request

## Dimensional drawing - AV 3/4"



AV 3/4" aluminium.

## Benefits

The regulation screw cannot be ejected by the internal air pressure. The regulation screw is accurate and lockable.

The exhaust is protected by double differentiated mesh.

Suitable for one air connection to feed both volume boosters on a double acting actuator.

Less leakage, more repeatability. Using a conical plug seat with controlled deformation for elastomeric air-tight.



BD

## Derivative Booster

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.

### Product features

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.

Suitable for:  
 Standard, offshore, sandstorm and copper-free ambient conditions  
 Double acting actuators.  
 Low and high ambient temperature.

### Technical specifications

Housing materials  
 Anodised aluminium  
 Stainless steel 316

Operating pressure  
 P min = 2.5 bar  
 P max = 7 bar  
 Design pressure = 10 bar

Feeding connections  
 Manifold mounting

Operating temperature\*  
 -20°C to 70°C  
 -40°C to 70°C  
 -20°C to 85°C

CV max  
 Inlet = 4.5  
 Outlet = 9

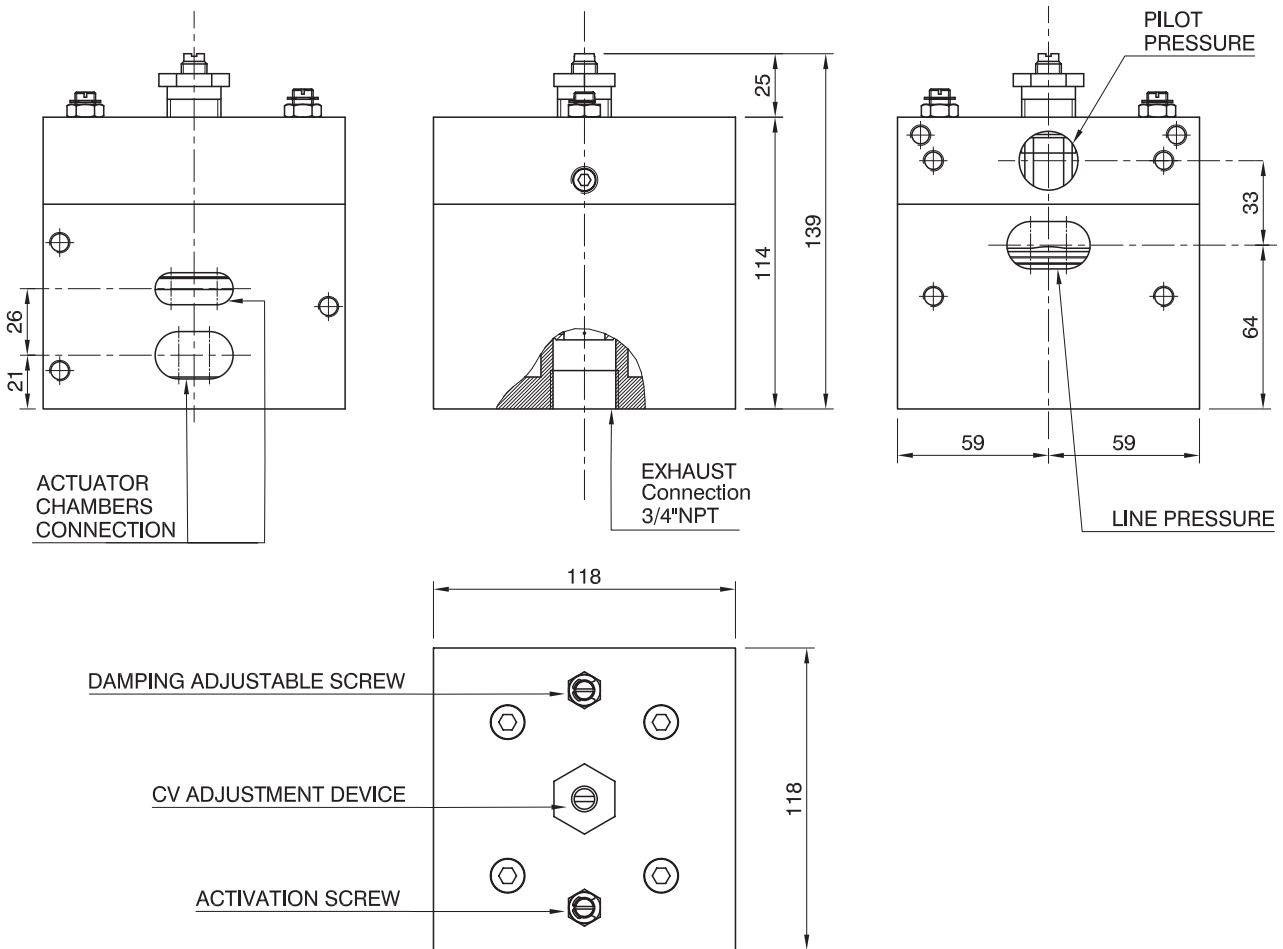
Weight  
 Aluminium = 4kg  
 Stainless steel 316 = 11kg

Pilot signal connection  
 1/2" NPT

Output connections  
 Manifold mounting

\* Lower or higher temperature available on request

### Dimensional drawing



---

## Benefits

The design exhausts one chamber and simultaneously charges the other one. The number of accessories can be reduced because the standard device works only on one chamber. The derivative booster works on both at the same time.

The regulation screw cannot be ejected 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 with high-integrity diaphragm.

Collectable exhaust. (Silencer/protection/check valve). Suitable for SL exhaust protection system

Compact dimensions compared with other high CV options available.

CV limiter devices available as an option.

The optimal selected CV ratio between exhaust and charge is 2. This ratio optimizes the increase in speed without compromising modulating stability.

The derivative booster can be piloted by positioner with CV between 0.3 to 1. For ON/OFF execution, the derivative booster can be piloted with a minimum CV 0.3.



BV

## Big Volume Booster

The Big Volume Booster (model BV) is designed to meet high speed control applications. It produces a high volume boosting action and contains an integral stabilizing by-pass valve, adjusted by a screwdriver turning the adjustment screw in the body. By opening this valve it is possible to improve the stability of the positioner – volume booster – actuator circuit.

BV was specifically designed to be piloted by a high CV positioner (such as our FT Positioner).

## Product features

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.

Suitable for:  
Standard, offshore, sandstorm and copper-free ambient conditions.  
Single and double acting actuators.  
Low and high ambient temperature.

## Technical specification

Housing materials  
Painted RAL 7001 aluminium  
Stainless steel 316

CV max  
Inlet = 8  
Outlet = 8

Operating temperature\*  
-20°C to 70°C  
-40°C to 70°C  
-20°C to 85°C

Output connections  
Manifold mounting

Pilot signal connection  
1/2" NPT

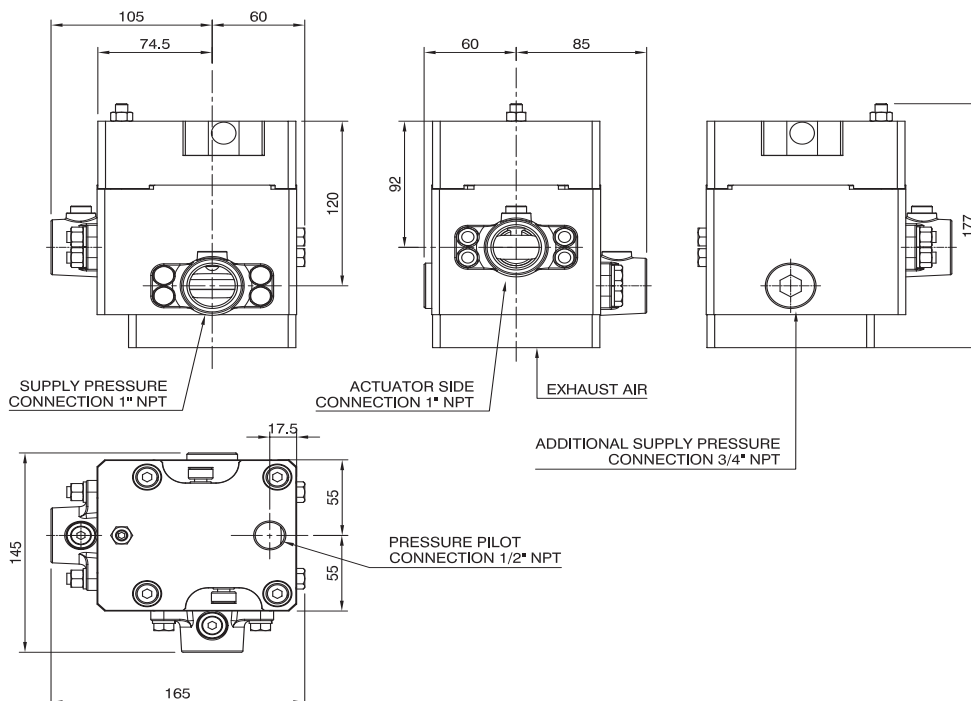
Feeding connections  
Manifold mounting

Operating pressure  
P min = 2.5 bar  
P max = 7 bar  
Design pressure = 10 bar

Weight  
Aluminium = 5kg  
Stainless steel 316 = 12.5kg

\* Lower or higher temperature available on request.

## Dimensional drawing



## Benefits

Regulation screw is not ejectable by internal air pressure. Regulation screw is accurate and lockable.

Unique high value of CV in one device.  
**Unique metal piston design** without deformable diaphragm.

Collectable exhaust (For silencer/protection/check valve).

Compact dimensions compared with other high CV options available.



BW

## Ultra High Capacity Booster

The Ultra High Capacity Booster (model BW) is designed to meet high volume boosting requirements. The volume booster contains two activation regulators, one for supply amplification adjustment and the other for exhaust amplification adjustment.

**Product features**

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.

Suitable for:  
 Standard, offshore, sandstorm and copper-free ambient conditions  
 Single and double acting actuators.  
 Low and high ambient temperature.

**Technical specifications**

Housing materials  
 Painted RAL 7001 aluminium  
 Stainless steel 316

Exhaust port  
 Manifold exhaust interface  
 STI dedicated exhaust protection system model SL

Output connections  
 Manifold mounting

Operating temperature\*  
 -20°C to 70°C  
 -40°C to 70°C  
 -20°C to 85°C

Operating pressure  
 P min = 2.5 bar  
 P max = 7 bar  
 Design pressure = 10 bar

Feeding connections  
 2 connections (1" NPT + 3/4" NPT)  
 Manifold mounting and 1"NPT

Pilot signal connection  
 1/2" NPT

CV max  
 Inlet = 16  
 Outlet = 20

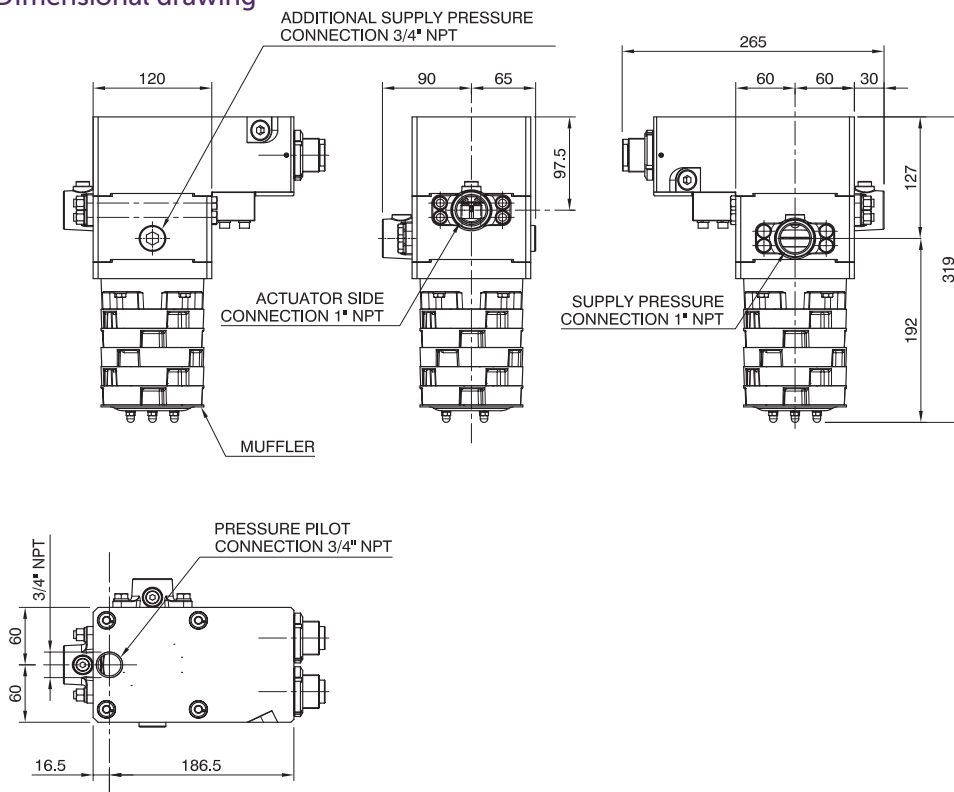
Weight  
 Aluminium = 5kg  
 Stainless steel 316 = 12.5kg

\* Lower or higher temperature available on request.



Stainless steel 316 manifold mounting

**Dimensional drawing**



**Benefits**

Regulation screw is not ejectable by internal air pressure. Regulation screw is accurate and lockable.

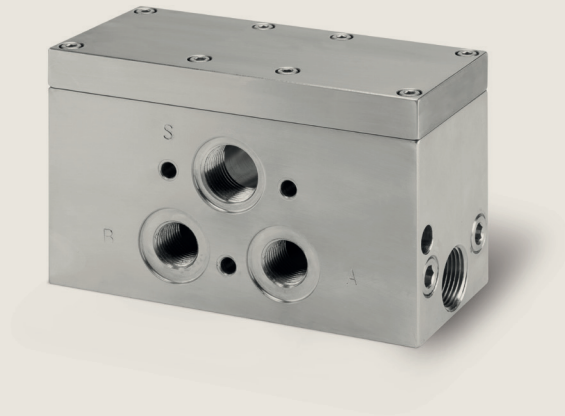
Separate and independent amplification setting for supply and exhaust, making tuning easier to perform.

**Unique metal piston design**  
 Without deformable diaphragm.

Compact dimensions compared with other high CV options available.

Collectable exhaust (For silencer/protection/check valve).

Unique high value of CV in one device.



CF

## Fast Commutator

The Fast Commutator (CF) is designed to be combined with two 3-way valves providing a shared pilot conduit. This accessory is designed to operate with a pilot pressure greater than 2 bar while still maintaining a perfect seal on the seats of up to 8 bar. As the pilot fluid goes to work on moving a single membrane, switching speed is maximised.

**Product features**

This exclusive manifold mounting system is a specially designed STI application for connecting our accessories. Fittings or nipples are not necessary as the connection is achieved using machined connection faces with a sealing 'o' ring. This system saves assembly time, reduces cost on other items such as fittings, inventory and the reduced dimensions save space.

Suitable for:  
 Standard, offshore, sandstorm and copper-free ambient conditions  
 Double acting actuators  
 Low and high ambient temperature

Designed to work with FT positioner only or in conjunction with BV/BW boosters (see dedicated brochures).

Optional integrated Piezo solenoid valve for fail freeze function.

SIL certified.

Constituted by two 3-way valves having the pilot conduit in common.

Up to 3 units can be mounted on the same positioner to achieve multiple functions:  
 Quick open  
 Quick close  
 Lock in place



Stainless steel 316 manifold mounting with Piezo valve.

**Technical specifications**

Materials  
 Anodized aluminum  
 Stainless steel 316

CV max  
 Inlet = 3  
 Outlet = 3

Operating temperature\*  
 -20°C to +70°C  
 -40°C to +70°C  
 -20°C to +85°C  
 -25°C to +60°C with Piezo valve

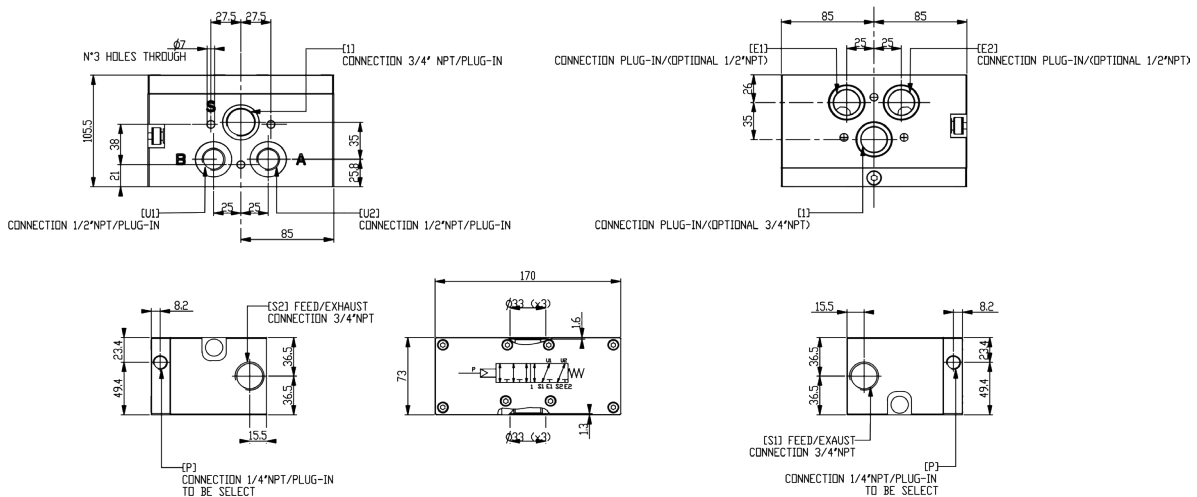
Operating pressure  
 P min = 2.5 bar  
 P max = 7 bar  
 Design pressure = 10 bar

Port size  
 Pilot signal = 1/2" NPT  
 Other = 3/4" NPT or manifold mounting

Weight  
 Aluminium = 3 kg  
 Aluminium with Piezo = 3.5 kg  
 Stainless steel 316 = 8 kg  
 Stainless steel 316 with Piezo = 8.5 kg

\* Lower or higher temperatures available on request

**Dimensional drawing**



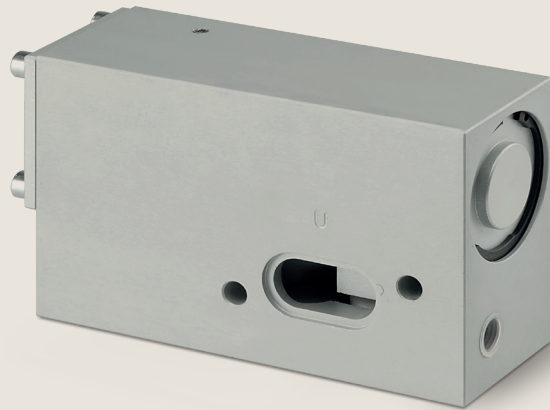
**Benefits**

Compact dimensions.

Without deformable diaphragm.

Can save cost over some bigger 3-way valves even if SIL rating required.

Switching will be very fast even if piloted by low CV solenoid valve.



CO

## 3-Way Pneumatic Operating Valve

The 3-Way Pneumatic Operating Valve (model CO) is pilot operated, and designed for high flow applications. The 3-way valve is available in sizes  $\frac{1}{4}$ ",  $\frac{1}{2}$ ", 1",  $1\frac{1}{2}$ " and 2". The valve can be used in one or more synchronous units piloted by a pneumatic pressure switch or solenoid valve (or both) in order to achieve safety, trip or shut down function.

**Product features**

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.

Suitable for:  
Standard, offshore, sandstorm and copper-free ambient conditions.  
Single and double acting actuators.  
Low and high ambient temperature.

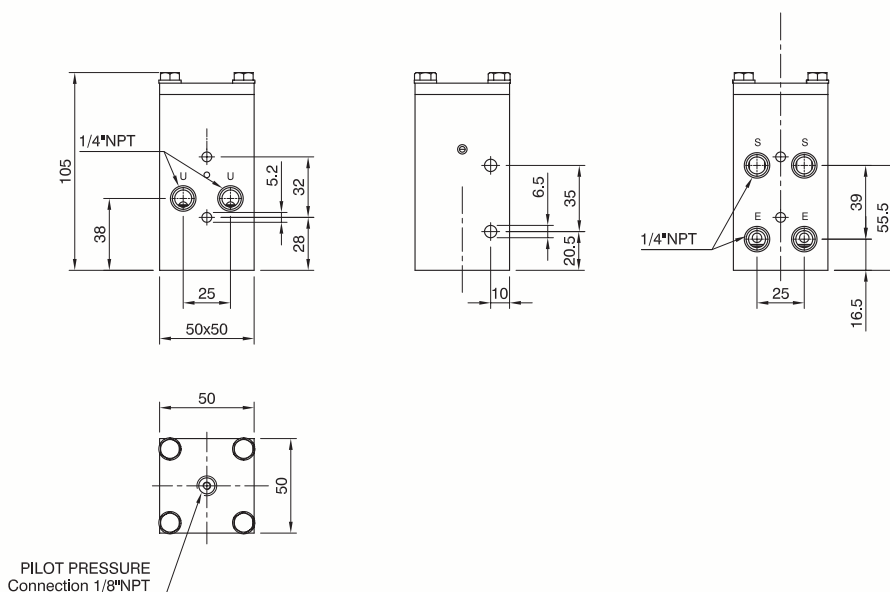


**Technical specifications**

|                               | 1/4"   | 1/2"   | 1"   | 1 1/2"   | 2"   |
|-------------------------------|--|--|--|--|--|
| <b>Materials</b>              | Anodized aluminum<br>Stainless steel 316                     | Anodized aluminum<br>Stainless steel 316                     | Anodized aluminum<br>Stainless steel 316                           | Painted RAL 7001<br>aluminium<br>Stainless steel 316                   | Painted RAL 7001<br>aluminium                                      |
| <b>CV max</b>                 | Inlet = 1<br>Outlet = 1                                      | Inlet = 2.5<br>Outlet = 2.5                                  | Inlet = 6.5<br>Outlet = 6.5  | Inlet = 10.5<br>Outlet = 13  | Inlet = 45<br>Outlet = 45  |
| <b>Port size</b>              | Pilot signal = 1/8" NPT<br>Others = 1/4" NPT                 | Pilot signal = 1/8" NPT<br>Others = 1/2" NPT                 | Pilot signal = 1/4" NPT<br>Others = 1" NPT or<br>manifold mounting | Pilot signal = 1/4" NPT<br>Others = 1 1/2" NPT or<br>manifold mounting | Pilot signal = 1/4" NPT<br>Others = 2" NPT or<br>manifold mounting |
| <b>Operating pressure</b>     | P min = 2.5 bar<br>P max = 7 bar<br>Design pressure = 10 bar | P min = 2.5 bar<br>P max = 7 bar<br>Design pressure = 10 bar | P min = 2.5 bar<br>P max = 7 bar<br>Design pressure = 10 bar       | P min = 2.5 bar<br>P max = 7 bar<br>Design pressure = 10 bar           | P min = 2.5 bar<br>P max = 7 bar<br>Design pressure = 10 bar       |
| <b>Operating temperature*</b> | -20°C / +70°C<br>-40°C / +70°C<br>-20°C / +85°C              | -20°C / +70°C<br>-40°C / +70°C<br>-20°C / +85°C              | -20°C / +70°C<br>-40°C / +70°C<br>-20°C / +85°C                    | -20°C / +70°C<br>-40°C / +70°C<br>-20°C / +85°C                        | -20°C / +70°C<br>-40°C / +70°C<br>-20°C / +85°C                    |
| <b>Weight</b>                 | Aluminum = 0.5 kg<br>Stainless steel 316 =<br>1.7 kg         | Aluminum = 1 kg<br>Stainless steel 316 =<br>1.5 kg           | Aluminum = 2.2 kg<br>Stainless steel 316 =<br>5.1 kg               | Aluminum = 4.5 kg<br>Stainless steel 316 =<br>10 kg                    | Aluminum = 4.5 kg  |

\* Lower or higher temperatures available on request.

**Dimensional drawing - CO 1/4"**

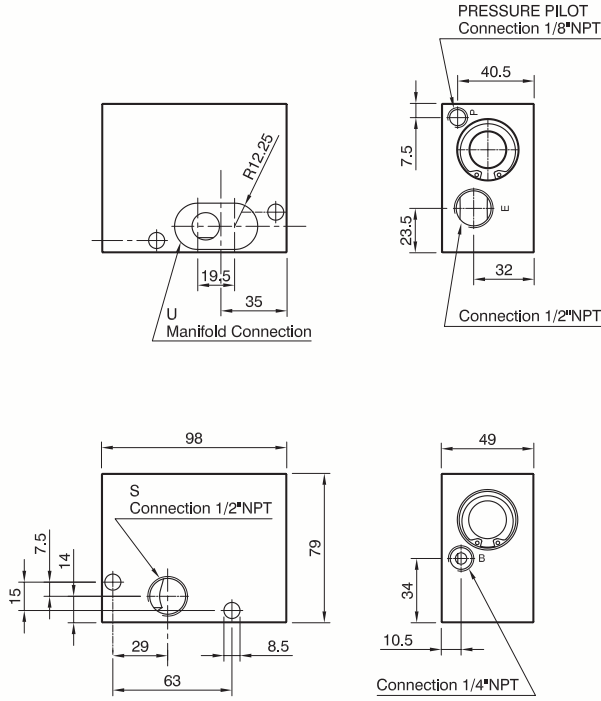


CO 1/4" aluminium.



CO 1/4" stainless steel 316.

Dimensional drawing - CO 1/2"

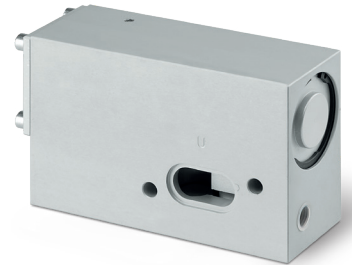
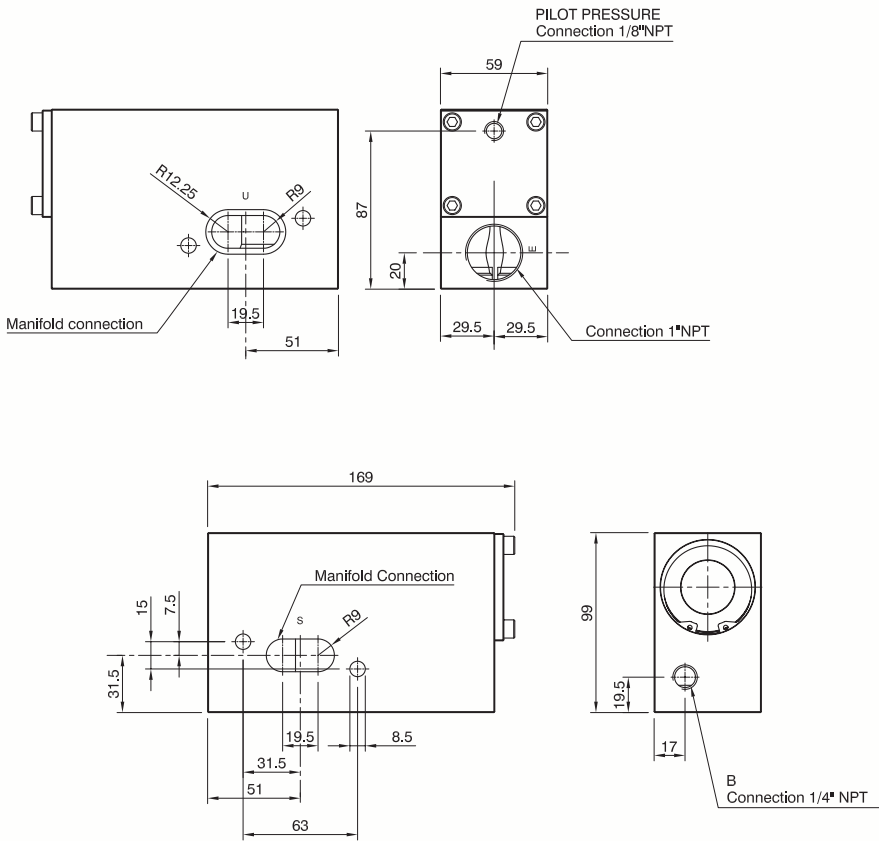


CO 1/2" stainless steel 316 manifold mounting.



CO 1/2" aluminium manifold mounting.

Dimensional drawing - CO 1"

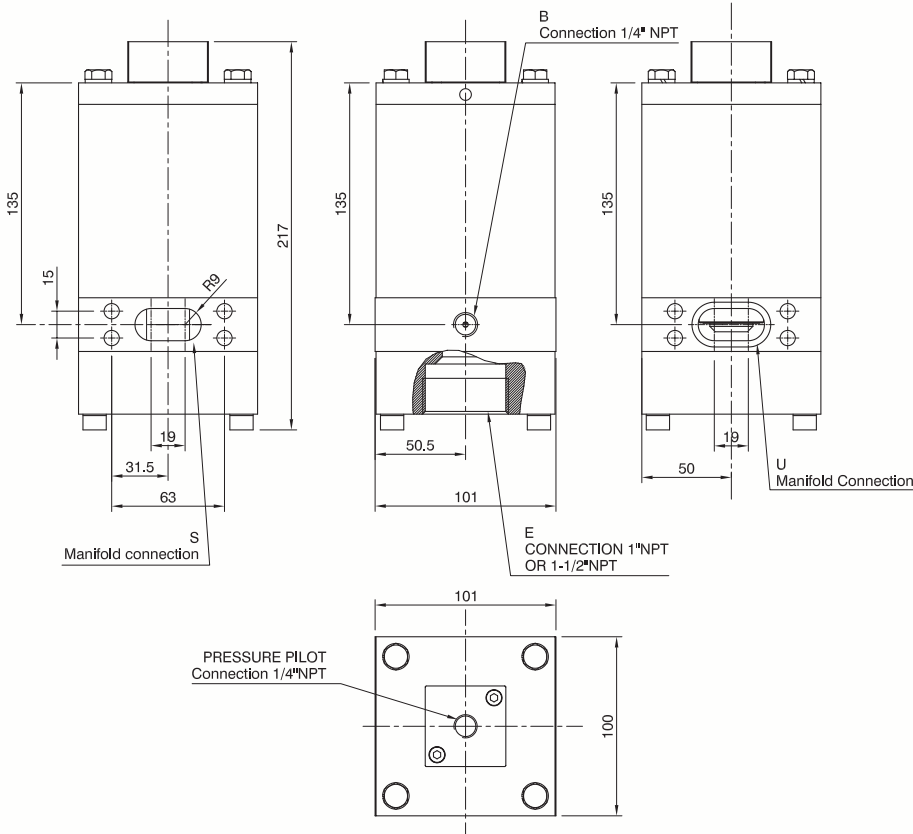


CO 1" aluminium manifold mounting.



CO 1" stainless steel manifold mounting.

Dimensional drawing - CO 1" 1/2

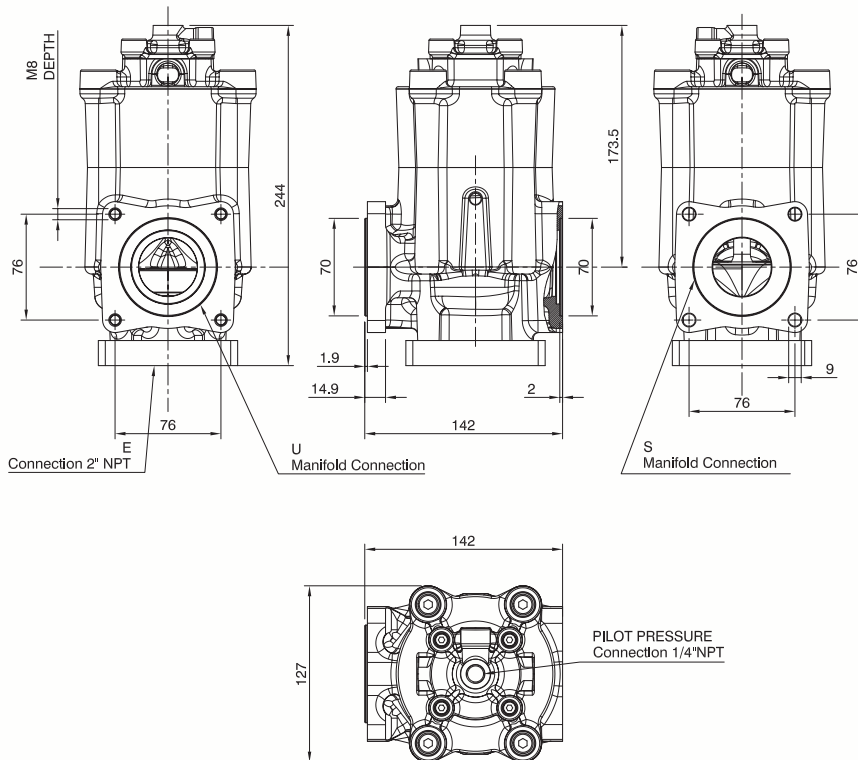


CO 1" 1/2" aluminium manifold mounting.



CO 1" 1/2" stainless steel 316 manifold mounting.

Dimensional drawing - CO 2"

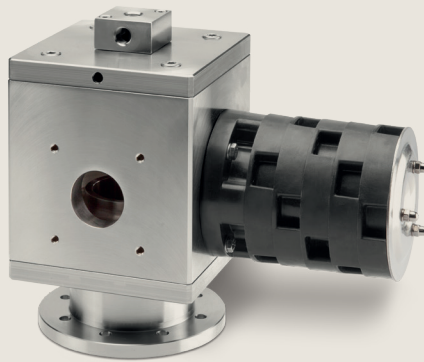


CO 2" aluminium manifold mounting.

Benefits

Without deformable diaphragm.

Switching will be very fast even if piloted by low CV solenoid valve.



CS

## Quick Exhaust

The Quick Exhaust (model CS) is a two-way valve used for on/off movement (trip or fail) to fully exhaust the connected chamber of the actuator. When this device is pilot operated and mounted on a modulating actuator it allows quick exhausting of the connected chamber, even when piloted by a small CV device.

**Product features**

Suitable for:  
Standard, offshore,  
sandstorm or copper-free  
ambient conditions.

Single and double acting  
actuators.  
Low and high ambient  
temperature.

**Technical specifications**

Housing materials  
Anodised aluminium  
Stainless steel 316

Actuator connections  
Dedicated flange

CV max  
Inlet = 60  
Outlet = 20

Operating temperature\*  
-20°C to 70°C  
-40°C to 70°C  
-20°C to 85°C

Operating pressure  
P min = 2.5 bar  
P max = 7 bar  
Design pressure = 10 bar

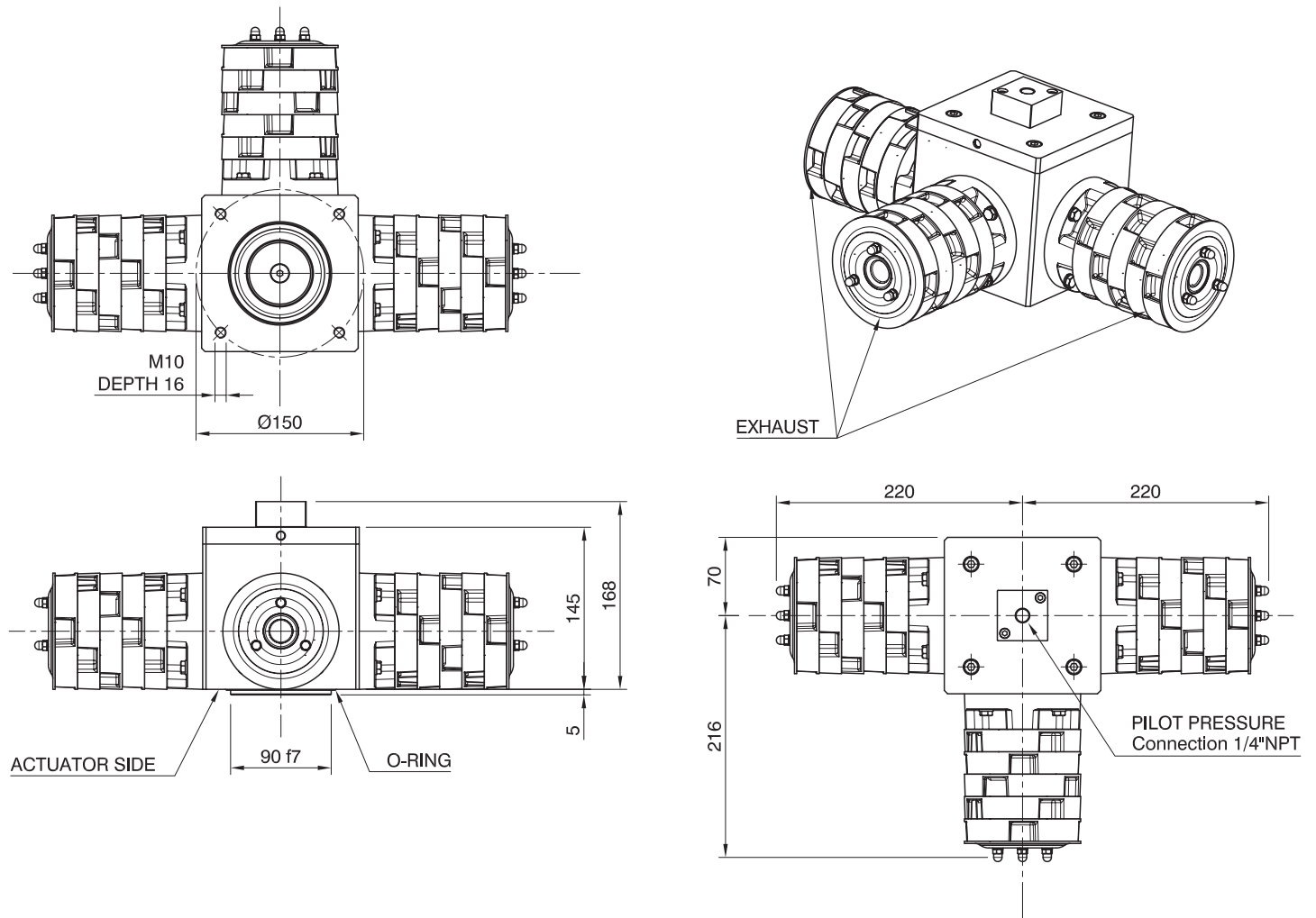
Exhaust connections  
Dedicated to SL

Pilot signal connection  
1/4" NPT

Weight  
Aluminium = 5kg  
Stainless steel 316 = 12.5kg

\* Lower or higher temperature available on request.

**Dimensional drawing**

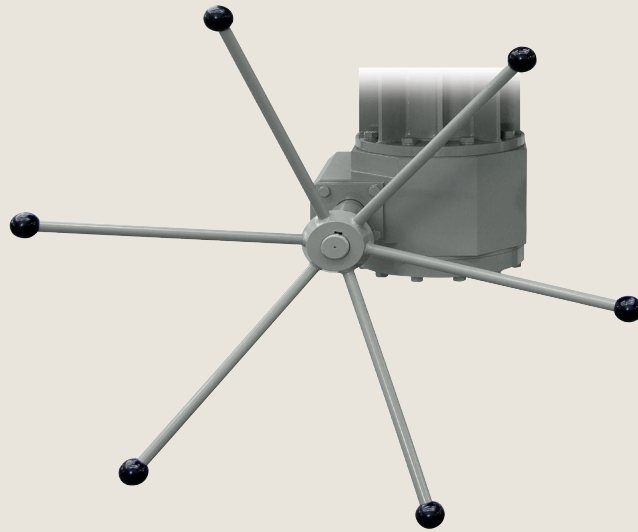


**Benefits**

Compact design.  
Big exhaust CV (up to 60).  
Metal piston operated  
(diaphragm free).

Flange mounted on actuator  
cap.  
Suitable for internal actuator  
damper.

Suitable for SL exhaust  
protection system (from 1  
to 3 max SL) depending on  
exhaust flow requirement.



# GR

## Manual Override

The Manual Override (model GR) is designed to manually move the actuator stem using a handwheel. The internal gear is mounted on ball bearings for high efficiency and for long operating life. All STI actuators may be equipped with a manual override to allow operation of the control element when instrument air is not available and the actuator has to be operated manually. Several sizes are available according to the actuator required. For STI actuators series SCV the gear box is mounted between the actuator and the yoke, for the SC series it is mounted on the actuator stem cap side. The manual override can be used as an adjustable retraction stroke limiter. A specific version can be direct mounted to operate a valve where no actuator is installed.

**Product features**

Suitable for standard, offshore, sandstorm and copper-free ambient conditions.

Single and double acting actuators.

Low and high ambient temperature.

**Technical specifications**

**Housing materials**

- GR 1 = Painted aluminium
- GR 2 = Painted aluminium
- GR 2.5 = Painted cast iron
- GR 3 = Painted carbon steel

**Operating temperature\***

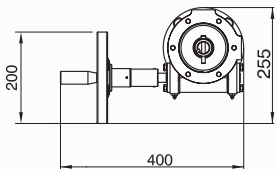
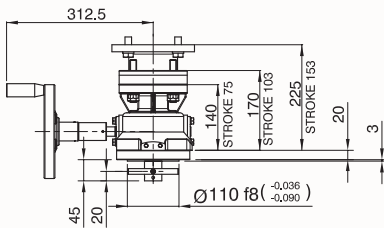
- 20°C to 70°C
- 40°C to 70°C
- 20°C to 85°C

\* Lower or higher temperature available on request.

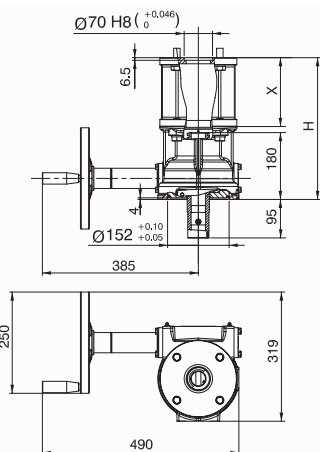


Optional adjustable thrust limiter.

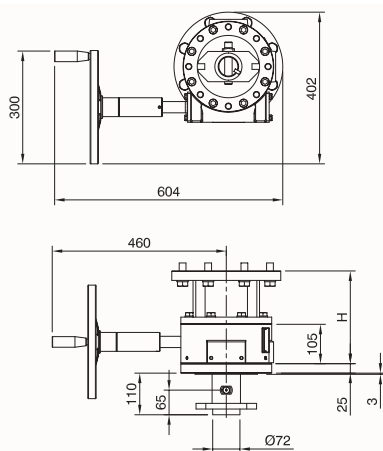
**Dimensional drawing**



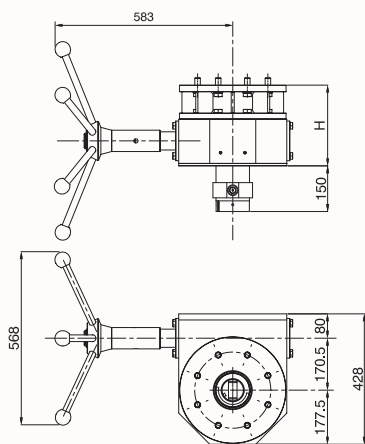
| GR 1   | Stroke | Weight (kg) | H (mm) | X (mm) |
|--------|--------|-------------|--------|--------|
| GR_153 | 153.0  | 22          | 225    | -      |
| GR_103 | 103.0  | 17          | 170    | -      |
| GR_75  | 75.0   | 14          | 140    | -      |



| GR 2   | Stroke | Weight (kg) | H (mm) | X (mm) |
|--------|--------|-------------|--------|--------|
| GR_605 | 605    | 57          | 690    | 520    |
| GR_555 | 555    | 55          | 640    | 470    |
| GR_505 | 505    | 53          | 590    | 420    |
| GR_455 | 455    | 51          | 540    | 370    |
| GR_405 | 405    | 49          | 490    | 320    |
| GR_355 | 355    | 47          | 440    | 270    |
| GR_305 | 305    | 45          | 390    | 220    |
| GR_255 | 255    | 43          | 340    | 170    |
| GR_205 | 205    | 40          | 300    | -      |
| GR_153 | 153    | 38          | 247    | -      |
| GR_103 | 103    | 32          | 180    | -      |



| GR 2.5 | Stroke | Weight (kg) | H (mm) | X (mm) |
|--------|--------|-------------|--------|--------|
| GR_103 | 103    | 71          | 245    | -      |
| GR_153 | 153    | 75          | 295    | -      |
| GR_205 | 205    | 78          | 347    | -      |
| GR_255 | 255    | 82          | 397    | -      |
| GR_305 | 305    | 85          | 447    | -      |
| GR_355 | 355    | 88          | 497    | -      |
| GR_405 | 405    | 91          | 547    | -      |
| GR_455 | 455    | 94          | 597    | -      |
| GR_505 | 505    | 97          | 647    | -      |
| GR_555 | 555    | 100         | 697    | -      |
| GR_605 | 605    | 103         | 747    | -      |
| GR_655 | 655    | 106         | 797    | -      |



| GR 3   | Stroke | Weight (kg) | H (mm) | X (mm) |
|--------|--------|-------------|--------|--------|
| GR_505 | 505    | 240         | 667    | -      |
| GR_455 | 455    | 226         | 617    | -      |
| GR_405 | 405    | 230         | 567    | -      |
| GR_355 | 355    | 225         | 517    | -      |
| GR_305 | 305    | 220         | 467    | -      |
| GR_255 | 255    | 215         | 417    | -      |
| GR_205 | 205    | 209         | 367    | -      |
| GR_153 | 153    | 204         | 315    | -      |
| GR_103 | 103    | 199         | 265    | -      |

**Benefits**

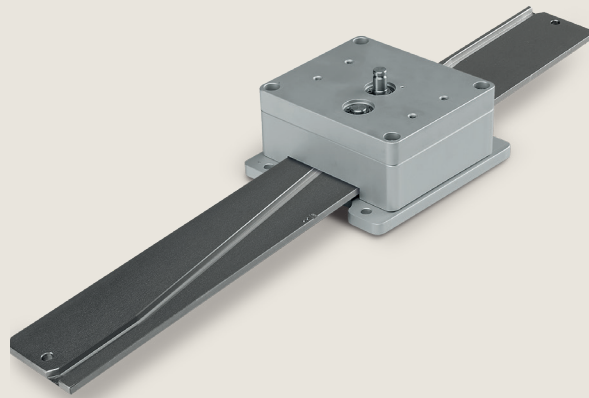
Internal gear mounted on ball bearings to minimize operator effort and long operation life.

Available with sandstorm design with stem and main screw bellows.

Available to lock movement in any position to keep valve in any required position.

Available with adjustable thrust limiter.

Available with mechanical chain transmission of the manual override for remote operator access.



MC

## Motion Converter

The Motion Converter (model MC) is suitable for the easy installation of rotary positioners on linear actuators. The device is available with an adjustable and changeable coupling kit to connect with different positioners or accessories. The coupling kit is designed to avoid radial forces on the mounted accessories (such as positioners, position transmitters or limit switches mounted into a box). The conversion from linear actuator and valve stem movement to rotary movement is made with a lever mechanism designed to minimize the linearity error in a simple, robust construction in a small box. The motion converter removes the imprecise effect of a traditional system lever/pin arrangement. In a traditional feedback arrangement on valves with small stroke lengths, performance is lost due to the short linear stroke of the actuator/valve stem. This problem is removed when the MC device is used.

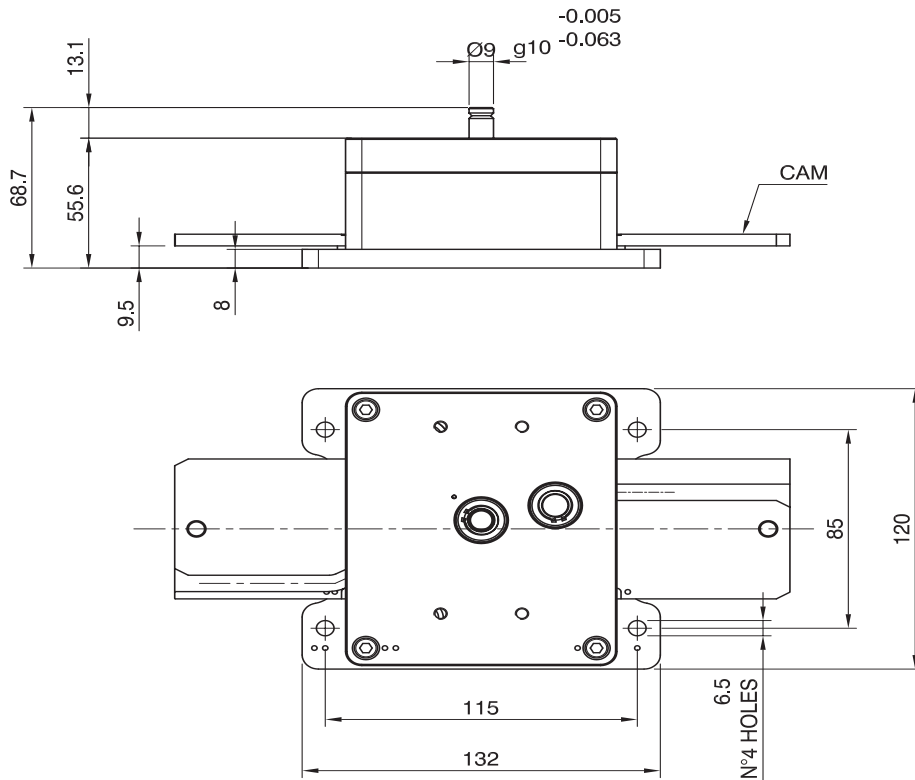
**Product features**

- Suitable for standard, offshore, sandstorm and copper free ambient conditions.
- Low and high ambient temperature.
- Single and double acting actuators.
- Suitable for linear actuators.

**Technical specifications**

|  |  |  |
|--|--|--|
| Housing materials<br>Anodised aluminium<br>Stainless steel 316 | Pilot signal connection<br>1/4" NPT                | Weight<br>Aluminium = 1.2kg<br>Stainless steel 316 = 2.7kg |
| Operating temperature*<br>-40°C to 120°C                       | Output angle<br>90°                                | * Lower or higher temperature available on request         |
| Minimum stroke cam std<br>>70mm                                | Linearity error<br>1.1% for stroke up to 90 -> 400 |  |

**Dimensional drawing**



**Benefits**

- No exposed long/arm/lever moving during actuator stroke.
- Robust construction not affected by dust, ice, temperature and other contaminants.
- 90° exit angle.
- Backlash recovery system.
- Small dimensions are not affected by the length of the actuator stroke.
- Self cleaning system.
- No noise during operation.
- Maintenance free.
- Significant reduction in linearity error when compared with the best ever/arm/pin system (50% less than the next best system available in the market).
- Adaptable at every stroke in the field.



# SAR

## Snap Acting Relay

The Snap Acting Relay (model SAR) is a narrow-band pneumatic controller with an adjustable setpoint. Pressure in the input chamber opposes the load on the adjusting spring. Whenever this input pressure exceeds the spring setting, the input signal seat will be closed and the open supply seat will allow full supply pressure to pass directly to the output. Conversely, whenever the input pressure is below the spring setting, the supply seat will be closed and the signal seat will be open. The output, in this case, will be equal to the signal. Generally used for the input signal of pneumatic controlled positioners.

**Product features**

Suitable for standard, offshore, sandstorm and copper-free ambient conditions.

Single and double acting actuators.

Low and high ambient temperatures.

**Technical specifications**

Housing materials  
Anodised aluminium

Pilot signal connection  
1/8" NPT

Output connections  
1/4" NPT

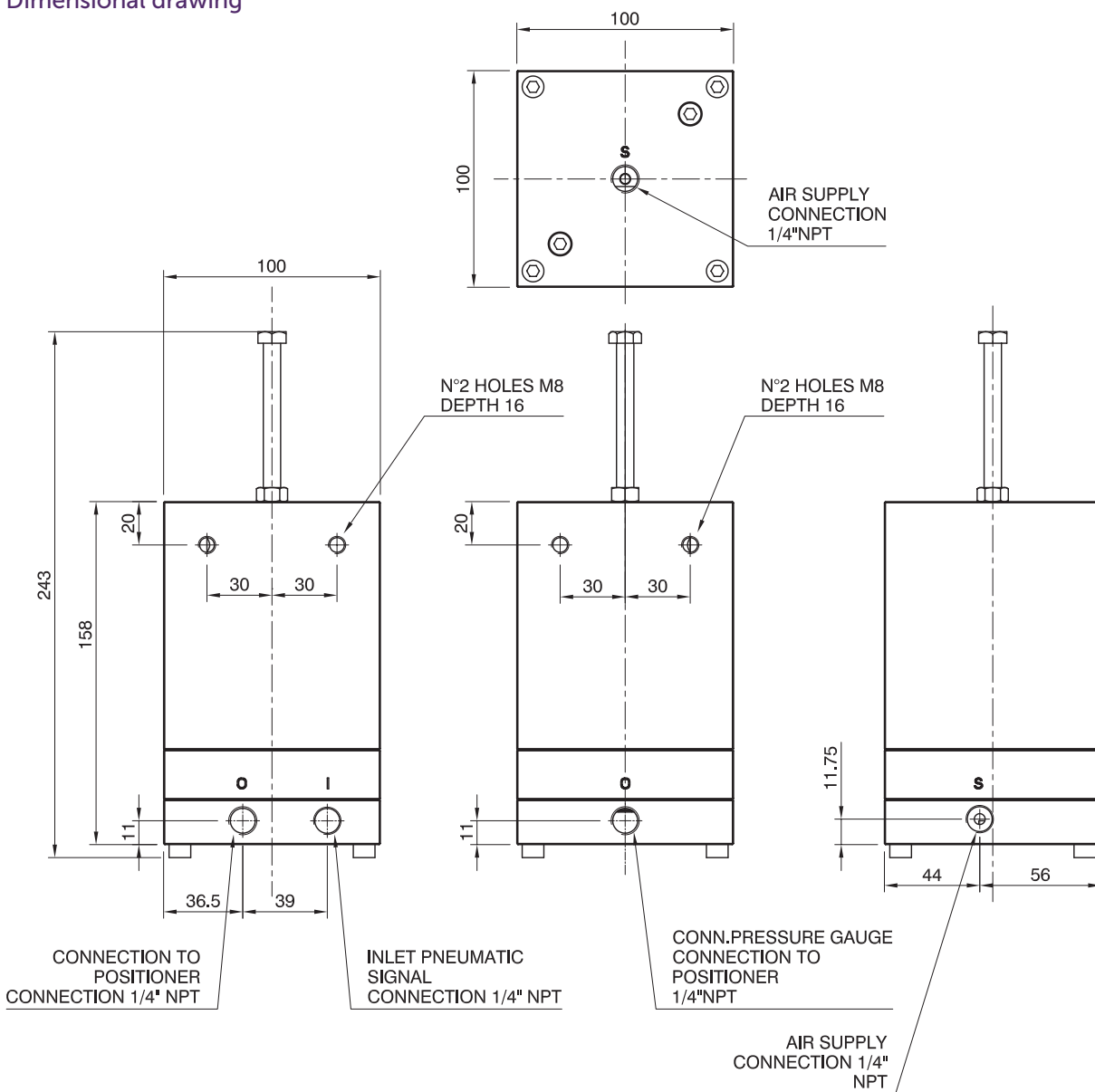
Operating temperature  
-20°C to 70°C

Operating pressure  
P min = 1.4 bar  
P max = 2.5 bar  
Design pressure = 10 bar

Weight  
4 kg

Feeding connections  
1/4" NPT

**Dimensional drawing**



**Benefits**

Compact design.

Lockable adjusting screw.

Adjusting screw safety design.

Precise switching pressure and low hysteresis.



Silencer (3 elements)

SL

## Exhaust Protection System

The Exhaust Protection System (model SL) has excellent exhaust and silencing characteristics with minimal resistance to air flow. In addition, it has an integral check valve that enables the maximum IP protection. This product is made with special polymeric material which is compliant with ATEX directives for use in an explosive atmosphere. The exhaust protection system is designed to incorporate a very low back-pressure, ensuring a very high exhaust flow.

**Product features**

Suitable for standard, offshore, sandstorm and copper-free ambient conditions.

Single and double acting actuators.

Low and high ambient temperatures.

**Technical specifications**

Housing materials  
Stainless steel 316 + Antistatic polymeric

CV max  
3 elements = CV 40  
5 elements = CV 50

Weight  
3 elements = 0.8 kg  
5 elements = 1.2 kg

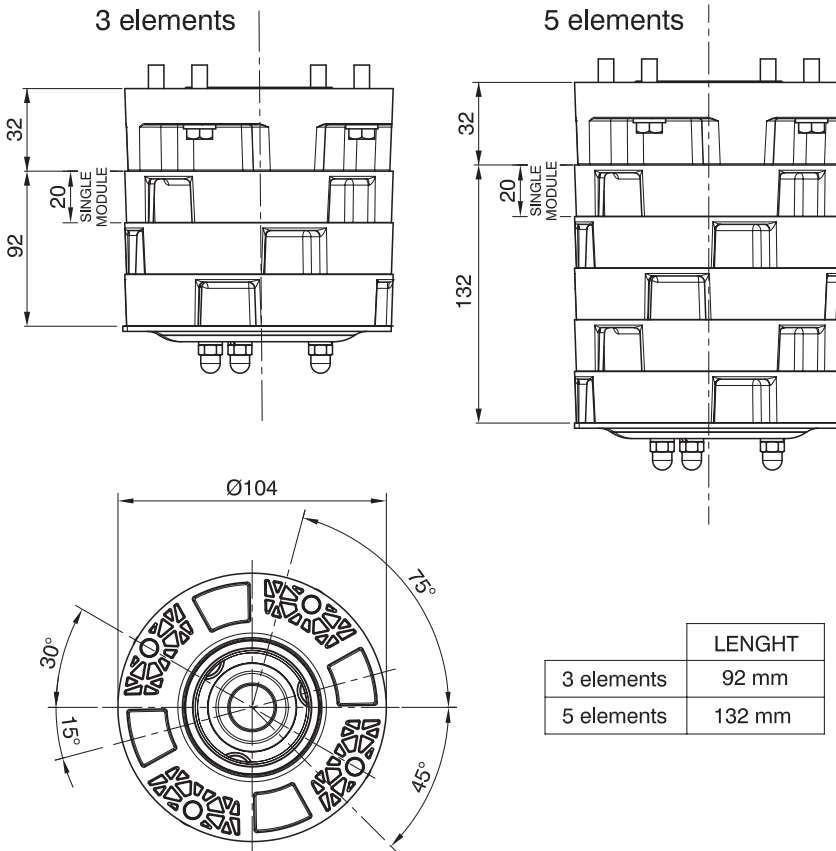
Operating temperature  
-40°C to 85°C

Design pressure  
10 bar

Connections  
Flange mounted

IP protection  
IP 65

**Dimensional drawing**



Silencer (5 elements).

**Benefits**

High exhaust flow.

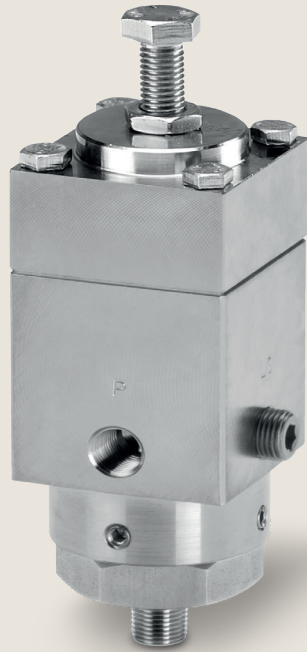
The dissipation of exhaust flow energy is through a cage labyrinth system. This is self cleaning and therefore minimises clogging.

Includes an integral check valve that maintains a very low back-pressure to permit quick opening. This allows high dynamic movement and the check valve will close immediately the when the exhaust flow stops.

Where the SL system is installed the internal check valve also protects devices from dust or other materials when there is no exhaust flow.

The special design of the labyrinth allows installation in any orientation, minimizing the ingress or storage of water into the SL system.

Made of stainless steel and plastic material suitable for use in hazardous areas (To ATEX standard).



TP

## Pneumatic Pressure Switch

The Pneumatic Pressure Switch (model TP) device has been designed to drive lock-up devices to the safety shut down position in the event supply air pressure falls below the operating safety value. The switching value is easily adjustable and the device allows maintainers to set the switching pressure required to activate the switch in the safety/shut down function. The switching device operates immediately, even in the case of a gradual air-pressure decrease to the set value. The device will automatically reset after a failure, when the line pressure is 1 bar greater than set pressure to avoid instability around the device set point.

### Product features

Standard, offshore, sandstorm and copper-free ambient condition.

Single and double acting actuators.

Low and high ambient temperature.

### Technical specifications

Housing materials  
Anodized aluminum  
Stainless steel 316

Pilot signal connection  
1/8" NPT

Output connections  
Fig 1: 1/8" NPT  
Fig 2: 1/8" NPT, 1/4" NPT

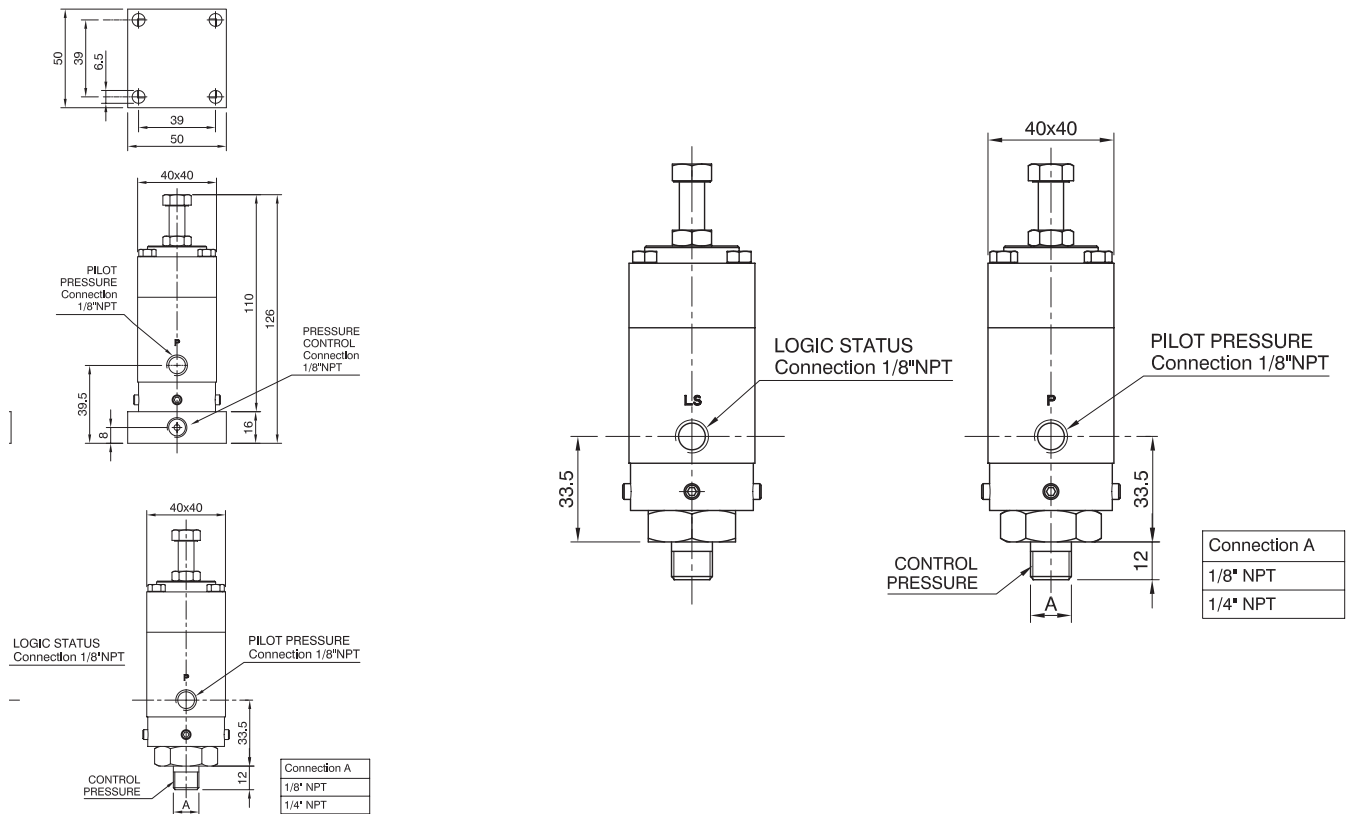
Operating temperature\*  
-20°C / +70°C  
-40°C / +70°C available on request  
-20°C / +85°C available on request

Operating pressure  
P min = 2 bar  
P max = 7 bar  
Design pressure = 10 bar

Weight  
Aluminum = 0.4 kg  
Stainless steel 316 = 0.8 kg

\* Lower or higher temperature available on request

### Dimensional drawing



### Benefits

Accurate pressure setting.  
Set screw lockable with nut.

Insensitive to vibrations.  
Small dimensions and light weight allows mounting on lock-up 3 way valve.

Reset hysteresis with established safety.



UD

## Derivative Unit

The Derivative Unit (model UD) is a specific device to amplify the exhaust. The regulating system is specifically designed for modulation and allows an accurate calibration (tuning) to maximize speed without compromising the stability of the actuator. Designed to be used with precision and easy tuning in control systems (amplification of exhaust positioner flow) and also for on/off systems.

**Product features**

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.

Standard, offshore, sandstorm, copper free ambient condition.

Single and double acting actuators.

Low and high ambient temperature.

**Technical specification**

Housing materials  
Anodized aluminium  
Stainless steel 316

Pilot signal connection  
1/2" NPT

Actuator connections  
Manifold mounting  
1/2" NPT

Operating temperature\*  
-20°C to 70°C  
-40°C to 70°C  
-20°C to 85°C

CV max  
Exhaust = 3.8

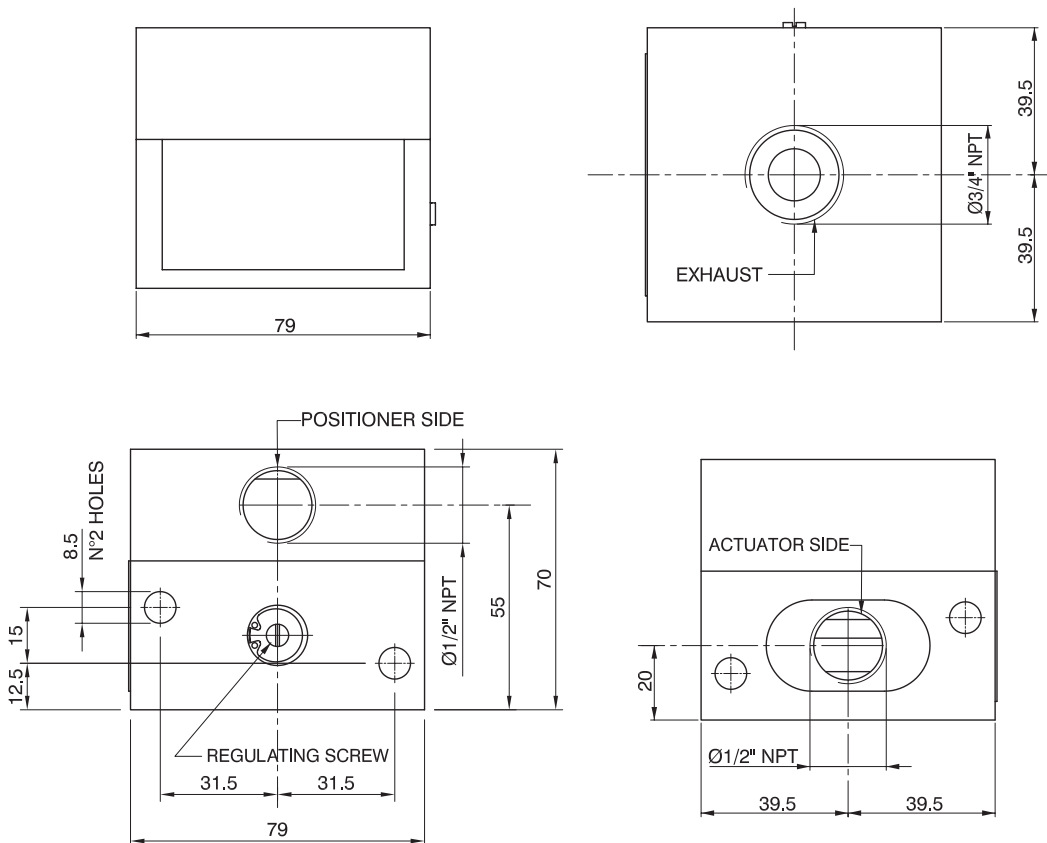
Weight  
Aluminium = 1kg  
Stainless steel 316 = 2.7kg

Exhaust connections  
3/4" NPT

Operating pressure  
P min = 3 bar  
P max = 7 bar  
Design pressure = 10 bar

\* Lower or higher temperature available on request.

**Dimensional drawing**



**Benefits**

High sensitivity.

The specific design allows for accurate regulation of activation on modulating systems.

Activation system available in 2 versions for pilot.

CV flow between 0.1 and 0.8 and for pilot CV flow between 0.8 and 2.5.

High exhaust CV.

Collectable exhaust ND 3/4" NPT.

Regulation system available to modulate exhaust CV between 0 and 3.8.

Adjustable every 90° actuator connection design.

Full tight zero leakage.

Regulation screw cannot be ejected by internal air pressure.



# 2030

## Electronic Position Transmitter

The Electronic Position Transmitter (model 2030) is suitable for installation on quarter turn and linear actuators. It has been designed to meet various industrial application requirements, for example on-board pneumatic actuators. The enclosure has the capability to house a wide range of either mechanical or inductive limit switches (up to 4). A shaft with a manually-adjustable cam is used for accurate and easy setting of the limit switches which are pre-wired to a terminal strip.

**Product features**

Suitable for standard, offshore, sandstorm, copper free ambient conditions.

Single and double acting actuators.

Low and high ambient temperatures.

Quarter turn and linear actuators.

Designed to be coupled with STI motion converter device.

**Technical specifications**

Housing materials  
Painted RAL 9005 aluminium  
Stainless steel 316 (without limit switches)

Operating temperature  
-40°C to 85°C

Accuracy (\*)  
<0.5% (including linearity, repeatability and hysteresis)

Loop supply effect (\*)  
<0.2% on the full supply range

Protection degree IP66

Temperature drift (\*)  
<0.3% every 10°C

Response time  
<0.2 seconds

Output  
4-20 mA (passive loop)

Operating angle  
30° - 90°

Action  
Direct or reverse locally configurable by a simple switch

Supply range  
12 to 32 Vdc, reverse polarity protected

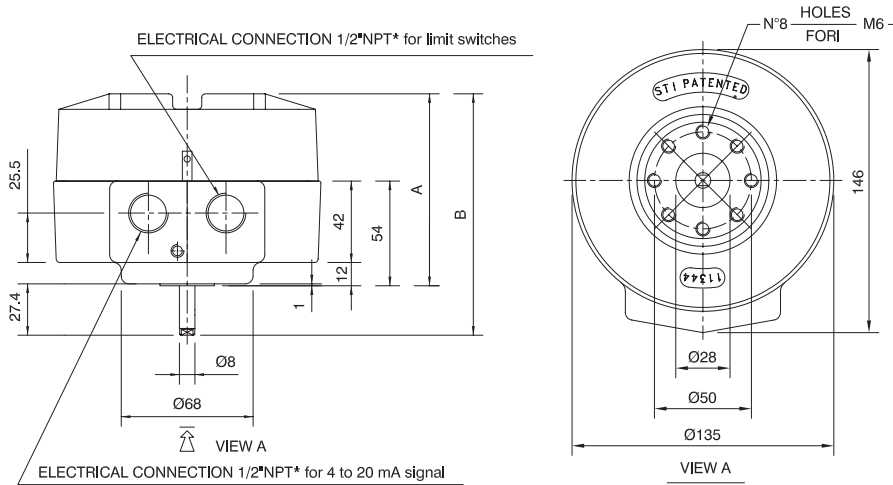
Zero and span adjustment  
Locally adjustable with screw driver

Weight  
TR aluminium = 1.6 kg  
TR + LS aluminium = 2.2 kg  
TR stainless steel 316 = 5 kg

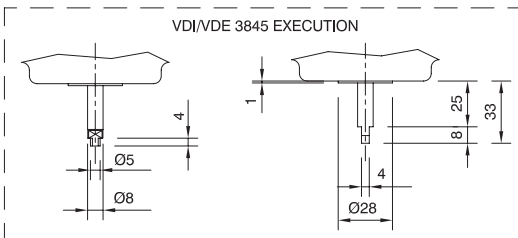
Hazardous area certification: ATEX  
EExd II 2 G EEx d IIC T6.

CE and EMC certifications.

**Dimensional drawing**



Position transmitter without limit switches (stainless steel 316).



|   | POSITION TRANSMITTER ONLY<br>2030 SERIES |                        | POSITION TRANSMITTER AND/OR LIMIT SWITCHES<br>2030 or 2130 SERIES |                        |
|---|--|------------------------|---|------------------------|
|   | STD SHAFT                                | VDI/VDE 3845 EXECUTION | STD SHAFT   | VDI/VDE 3845 EXECUTION |
| A | 99                                       | 99                     | 150   | 150                    |
| B | 125.4                                    | 131                    | 176.4   | 182                    |

\* : M20x1.5 execution is also available

**Benefits**

Contactless sensor.

Easily configurable for 30-90° angles.

Direct or reverse action.

Explosion proof version.

Position transmitter / Position transmitter + Limit switch version available.

Available with integrated limit switches.



# 2130

## Limit Switch

The Limit Switch (model 2130) is suitable for installation on rotary motion. It has been designed to meet various industrial application requirements, for example on board pneumatic actuators. The enclosure has the capability to house a wide range of either mechanical or inductive limit switches. A shaft with manually-adjustable cam is used for accurate and easy setting of the limit switches, which are prewired to a terminal strip.

**Product features**

Suitable for standard, offshore, sandstorm, copper free ambient conditions.

Single and double acting actuators.

Low and high ambient temperatures.

**Technical specifications**

Housing materials  
Painted RAL 9005 aluminium

Operating temperature  
-40°C to 85°C

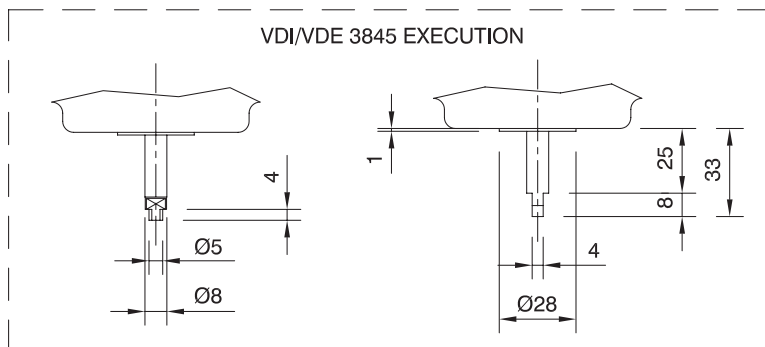
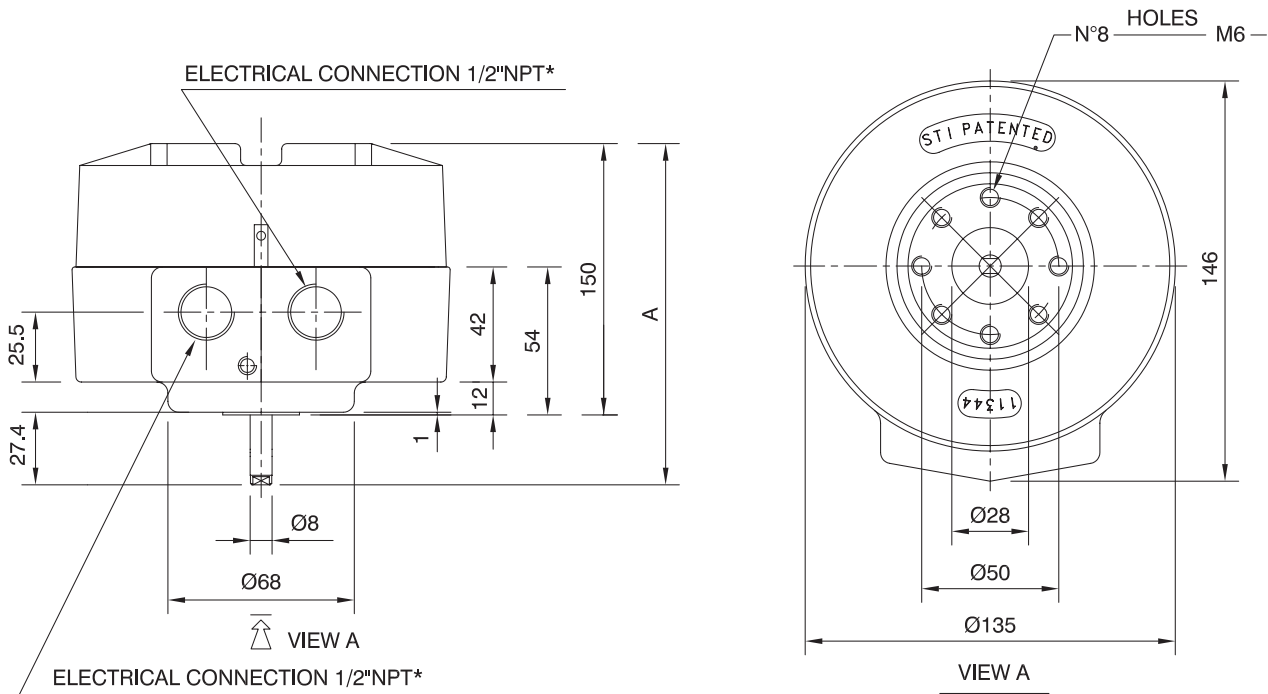
Hazardous area certification: ATEX  
EExd II 2 G EEx d IIC T6.

Weight  
2.2 kg

HProtection degree IP66

CE and EMC certifications.

**Dimensional drawing**



| POSITION TRANSMITTER AND/OR LIMIT SWITCHES 2030 or 2130 SERIES |           |                        |
|--|-----------|------------------------|
|  | STD SHAFT | VDI/VDE 3845 EXECUTION |
| A  | 176.4     | 182                    |

\* : M20x1.5 execution is also available

**Benefits**

- Up to 4 limit switches.
- Mechanical or Inductive limit switch.
- Gold plated limit switch option available.
- Easy adjustable independent cam for switch position adjustment.
- Easy access, robust terminal board suitable for 2.5mm<sup>2</sup> wires.

# Process Automation

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