

# Pneumatic Piston Actuator

## Type 3275

SAMSON

### Application

Double-acting pneumatic piston actuator for the Type 3241 DWA Valve Series

**Actuator area** 314, 490 and 804 cm<sup>2</sup>  
**Rated travel** 15 to 30 mm

The actuators are mainly used with Type 3241 Valves in pressure swing adsorption systems and are characterized by

- Small overall height
- Powerful thrust due to the supply pressure of max. 6 bar
- Low friction
- Temperature range from -30 to 80 °C

The actuator is fixed to a yoke which is designed to hold a pneumatic or electropneumatic positioner.

This type of direct attachment has the following advantages:

- Tight and accurate linkage
- Adjustments are not affected during transport
- Travel pick-off protected against touching and external influences, meeting the requirements of the German Accident Prevention Regulations (VBG 5).
- Easy pneumatic connection between actuator and positioner

### Versions

- **Type 3275** · Pneumatic Piston Actuator (Fig. 1), effective diaphragm area 314 cm<sup>2</sup>
- **Type 3275** · Pneumatic Piston Actuator, effective actuator area 490 cm<sup>2</sup>
- **Type 3275** · Pneumatic Piston Actuator, effective actuator area 804 cm<sup>2</sup>

### Additional versions

- Higher travel ranges on request



Fig. 1 · Type 3275 Piston Actuator with integrated positioner and solenoid valve mounted on Type 3241 DWA Valve

## Principle of operation

The piston (6) of the actuator is pressurized with the supply air via the two connections (G<sup>3/8</sup>" or G<sup>1/2</sup>").

The double-acting piston actuator does not have a defined fail-safe action due to the missing spring assemblies.

**Table 1 · Technical data**

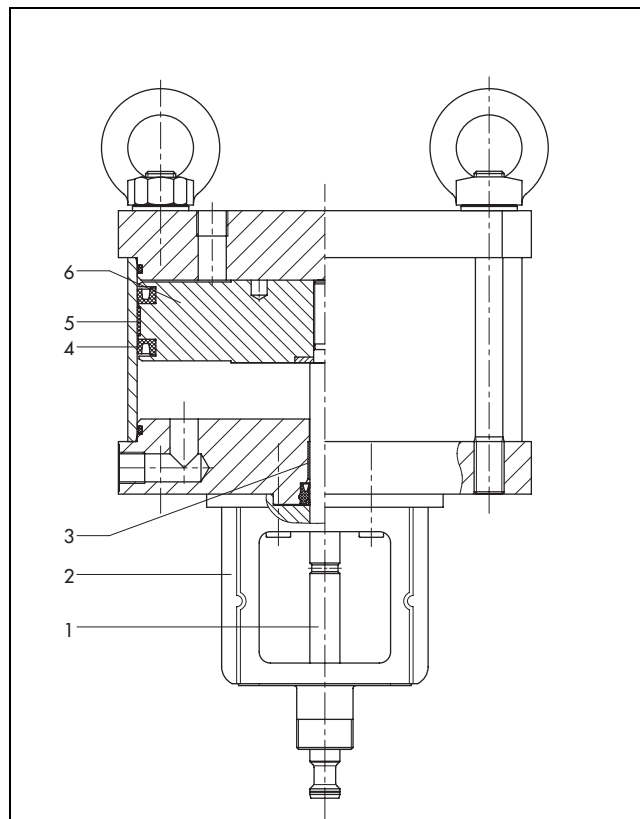
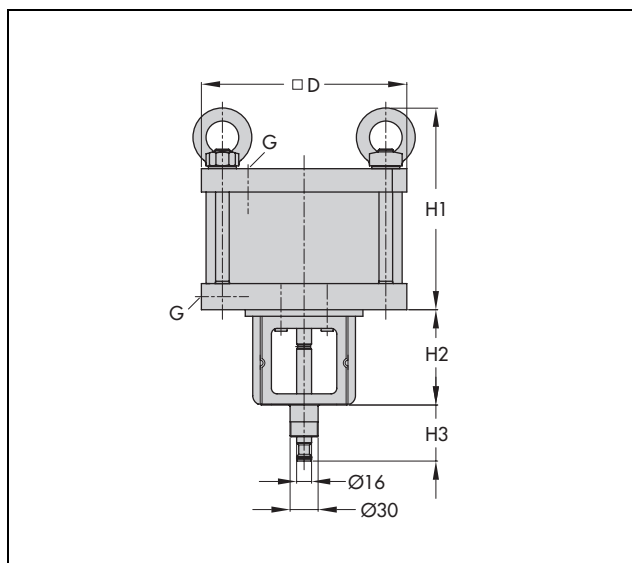
Version	Type	3275					
		314		490		804	
Actuator area	cm <sup>2</sup>	314		490		804	
Supply pressure	max.	6 bar		6 bar		6 bar	
Rated travel	mm	15	30	15	30	15	30
Travel volume	cm <sup>3</sup>	471	942	735	1470	1206	2412
Air connection		G <sup>3/8</sup>		G <sup>1/2</sup>		G <sup>1/2</sup>	
Max. perm. leakage (t ≥ 0 °C)		50 cm <sup>3</sup> /min		58 cm <sup>3</sup> /min		70 cm <sup>3</sup> /min	
Perm. temperature range for continuous operation		-30 to 80 °C					

**Table 2 · Materials** (WN = Material Number acc. to DIN)

Cylinder tube	3.3206, anodized
Bonnet/bottom section	3.3547, anodized
Piston bearing strip	PTFE
Piston rod	1.4548.4
Piston rod guide	Iglidur
Ring nut	C 15 / A2E
Yoke	1.0460
Seals	NBR/PU

**Table 3 · Dimensions and weights**

Actuator	Type	3275					
		314		490		804	
Effective area	cm <sup>2</sup>	314		490		804	
Rated travel	mm	15	30	15	30	15	30
Travel volume	cm <sup>3</sup>	471	942	735	1470	1206	2412
□-D	mm	220		270		350	
H1 incl. lifting ring	mm	201		220		223	
H2	mm	102		102		102	
H3 (rod retracted)	mm	60		60		60	
Air connection		G <sup>3/8</sup>		G <sup>1/2</sup>		G <sup>1/2</sup>	
Weight	kg	10		17		21	



### Legend

- 1 Piston rod
- 2 Yoke for direct attachment of positioner/limit switch
- 3 Plain bearing
- 4 Seal
- 5 Piston bearing strip
- 6 Piston

Fig. 2 · Type 3275 Piston Actuator

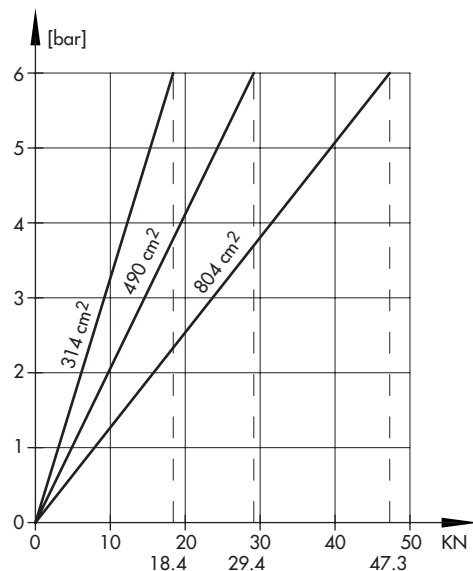


Fig. 3 · Force diagram for Type 3275 Piston Actuator

Specifications subject to change without notice.

