

TECHNICAL DATASHEET

NEW! REDUCING CO₂ EMISSION IMPACT ON ENVIRONMENT BY 11%

SAUNDERS[®] P345 PNEUMATIC ACTUATOR

Contents

Materials of Construction..... Page 2

Dimensions.....Pages 3-4

Installation and Orientation.....Page 5

Actuator Selection/Performance Graphs.....Page 6 - 17

Product Coding/How to Order.....Pages 18-19



SAUNDERS® P345 Overview

The SAUNDERS® P345 piston actuator permits remote operation of the valve, either as an alternative to manual operation or as an integral part of a control system. The P345 is a compact, lightweight, piston-type pneumatic actuator which has been developed to deliver superior performance for sterile BioPharm applications.

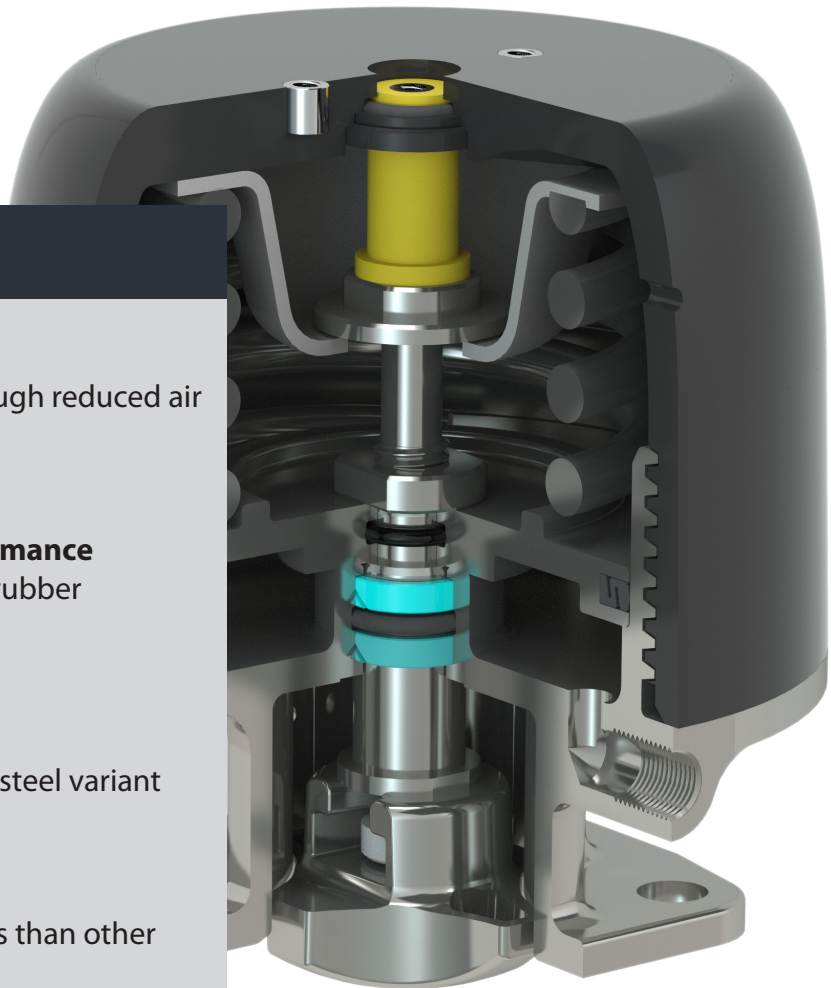
Key Features

- **4.5 Bar operating pressure**
Lower total cost of ownership through reduced air consumption
- **Industry leading closure performance**
8 bar (PTFE diaphragms) & 10 bar (rubber diaphragms) @100% Δp
- **Light weight construction**
25% Lighter compared to stainless steel variant
- **Eco-friendly**
At least 14 ton of co2 emissions less than other saunders actuators

The SAUNDERS® P345 housing is manufactured from a hybrid construction of polished 316 Stainless Steel and glass-filled Polyamide producing a robust design, a clean OD profile and an attractive appearance. It can withstand typical industry wash down regimes.

The P345 is a piston-type actuator that provides reliable performance, high cycle life, lower air consumption and more compact design versus diaphragm type actuators.

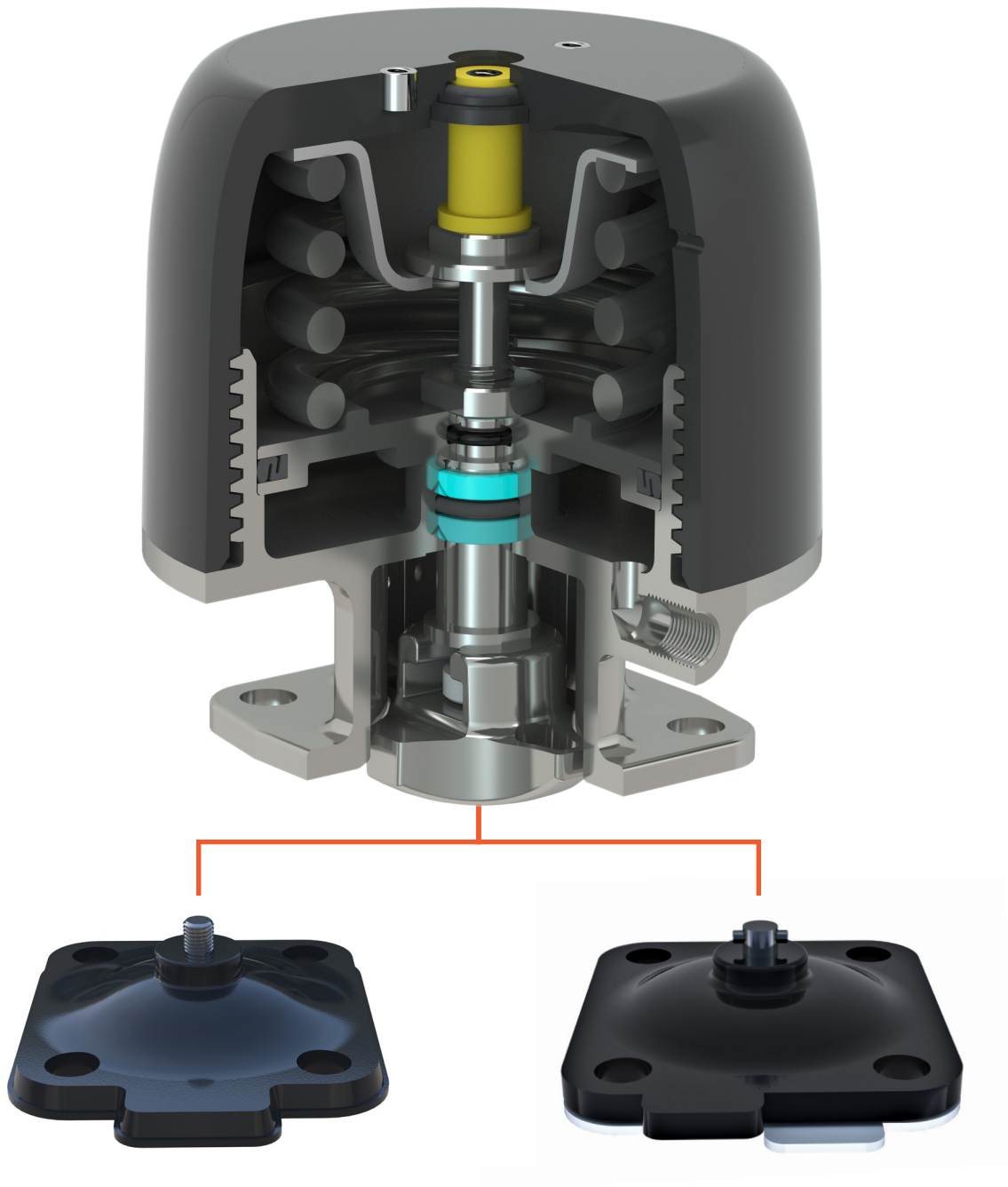
The modular design offers easy-change out of compressors to reduce inventory, and options for limiting travel and direct switch mount variations. All models have a bright yellow visual indicator as standard.



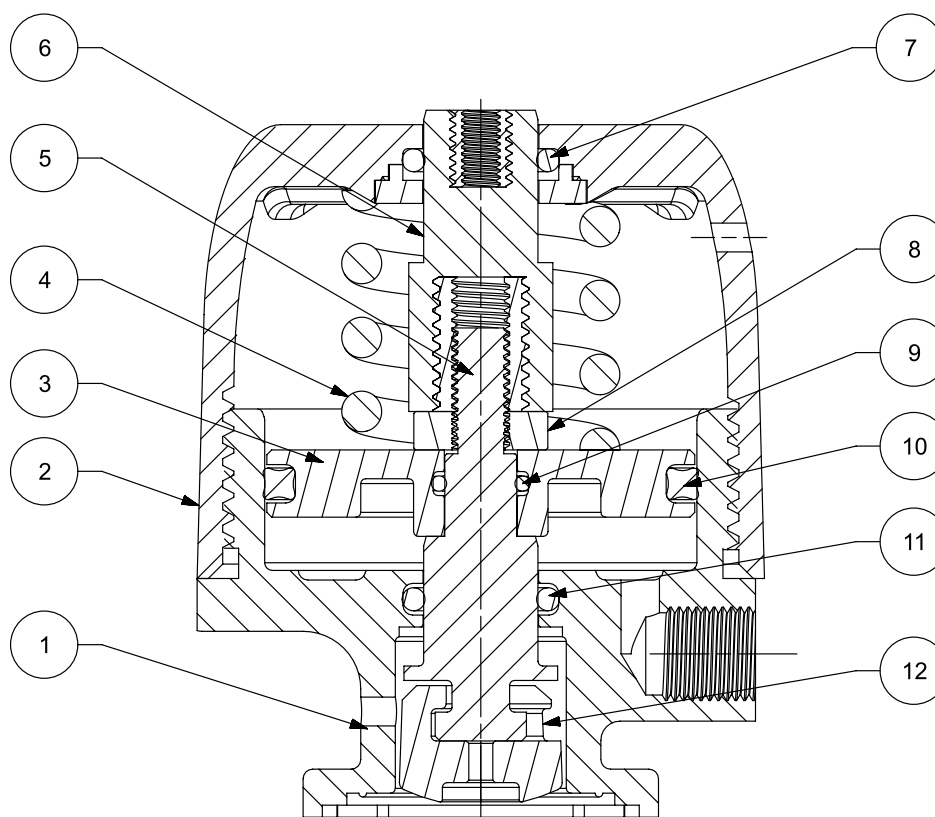
SAUNDERS® P345

Key Features and Benefits

The SAUNDERS® P345 has a unique compressor attachment that permits easy conversion of the compressor between rubber and PTFE diaphragms, minimizing the need to hold two sets of actuators in stock.

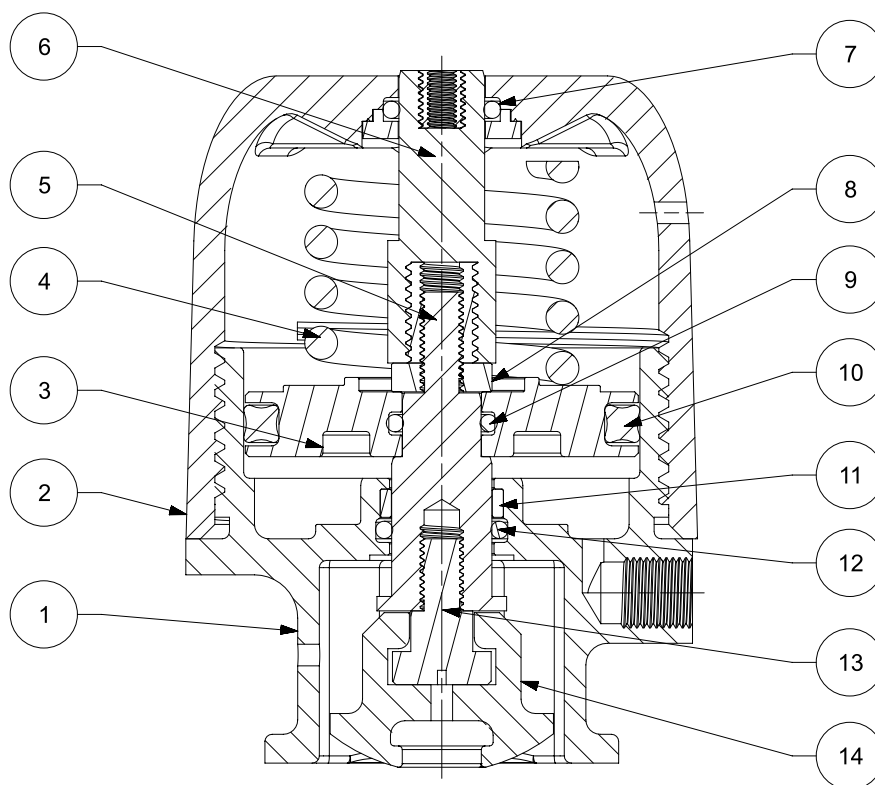


Refer to the Installation, Operation, and Maintenance Manual for complete instructions on compressor conversion.



SECTION A-A

Item	Description	Material	Qty
1	Bonnet	SS 1,4408	1
2	Cap	PPA	1
3	Piston	Aluminium LM9	1
4	Spring	Silicone Chrome IS4454 Grade 2D	1
5	Spindle	14,305	1
6	Indicator	HDPE	1
7	Cap 'O' Ring	Nitrile	1
8	Piston Locknut	SS 1,4057	1
9	Inner piston 'O' Ring	Nitrile	1
10	Piston Outer Seal	Viton	1
11	Bonnet 'O' Ring	Nitrile	1
12	Compressor	SS 1,308	1

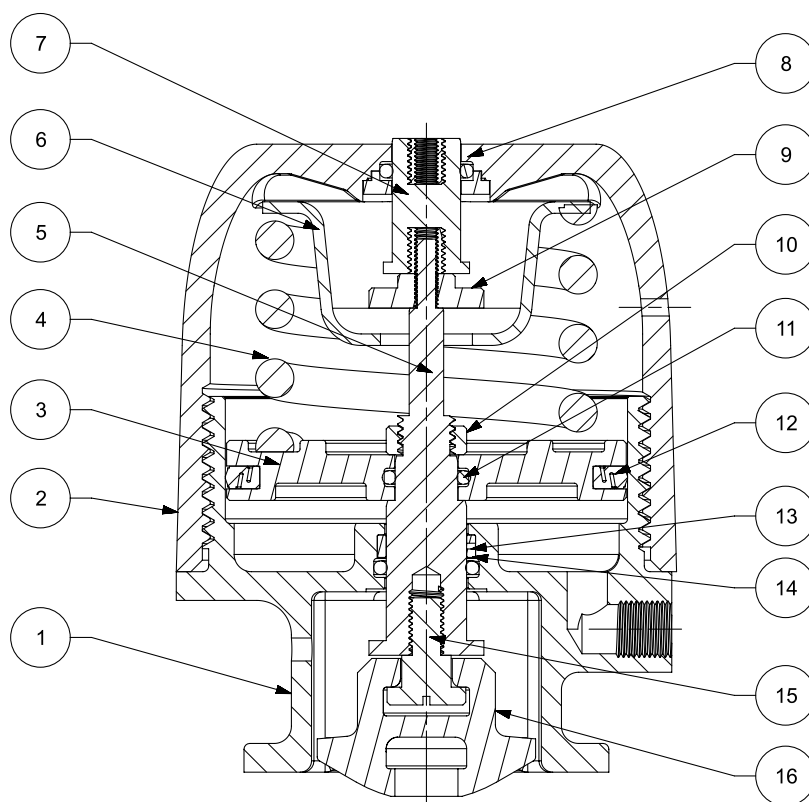


SECTION A-A

Item	Description	Material	Qty
1	Bonnet	SS 1.4408	1
2	Cap	PPA	1
3	Piston	Aluminium LM9	1
4	Spring	Silicon Chrome IS4454 Grade 2D	1
5	Spindle	SS1.4408	1
6	Indicator	HDPE	1
7	Cap 'O' Ring	Nitrile	1
8	Piston Locknut	SS 1.4057	1
9	Inner Piston 'O' Ring	Nitrile	1
10	Piston Outer Seal	Viton	1
11	Wear Ring	Orkot	1
12	Bonnet 'O' Ring	Nitrile	1
13	Spindle Adaptor	SS 1.4057	1
14	Compressor	SS 1.43308	1

SAUNDERS® P345

Materials of Construction (DN50)

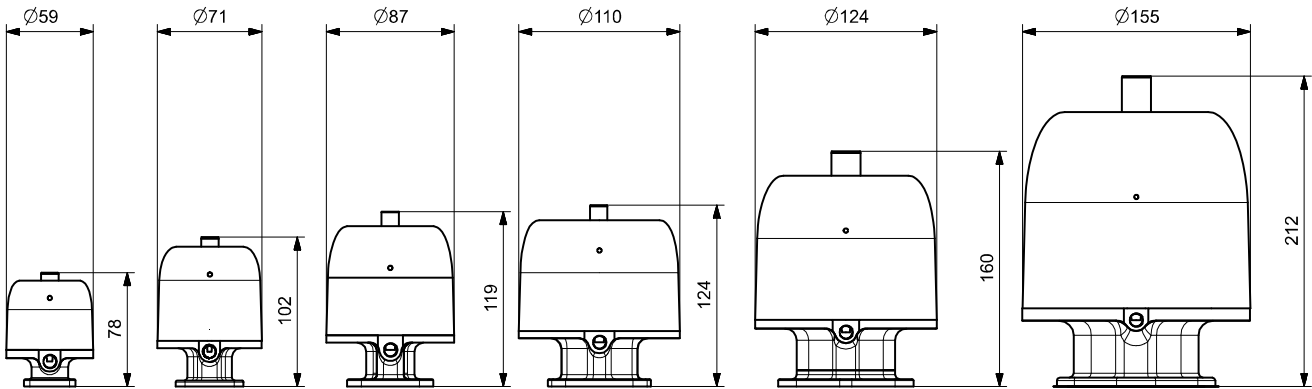


SECTION A-A

Item	Description	Material	Qty
1	Bonnet	Stainless Steel 1,4408	1
2	Cap Assembly	PPA	1
3	Piston	Aluminium LM9	1
4	Spring	Silicone Chrome IS 4454 Grade 2D	1
5	Spindle	Stainless Steel 1,4305	1
6	Upper Spring Plate	Stainless Steel 1,4404	1
7	Indicator	HDPE	1
8	Cap 'O' Ring	Nitrile	1
9	Spindle Locknut	SS 1,057	1
10	Piston Locknut	SS 1,4057	1
11	Inner Piston 'O' Ring	Nitrile	1
12	Piston Outer Seal	Viton	1
13	Wear Ring	Orkot	1
14	Bonnet 'O' Ring	Nitrile	1
15	Spindle Adaptor	SS 1,4057	1
16	Compressor	SS,4308	1

SAUNDERS® P345
Dimensions

Dimensions

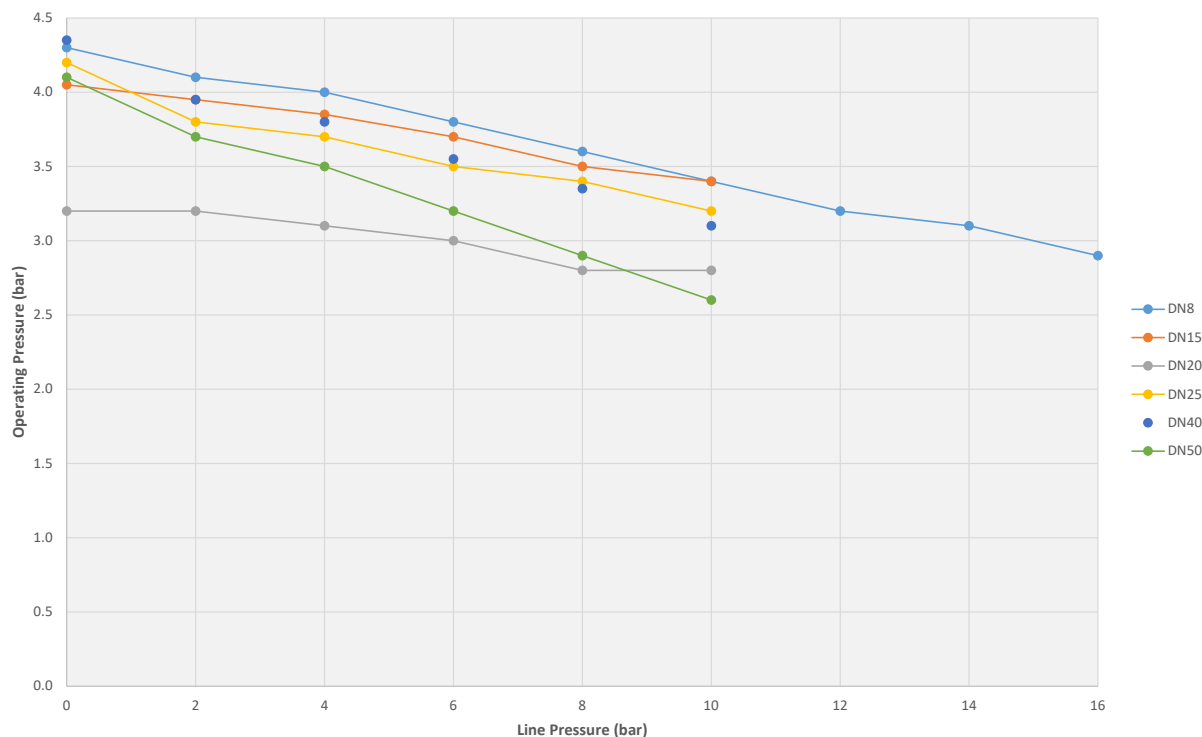


SAUNDERS® P345 – Closure Performance

Saunders® P345 (Spring-to-close) Actuator Closure Performance				
Size	Line Pressure*		Operating Pressure	Weight (Kg) / (lbs)
	PTFE	Rubber		
DN8 (0.25")	8 bar (116 psi)	10bar (145psi)	4.5bar (65psi)	0.4 / 0.9
DN15 (0.50")				0.8 / 1.8
DN20 (0.75")				1.3 / 2.9
DN25 (1.00")				1.8 / 4.0
DN40 (1.50")				3.0 / 6.6
DN50 (2.00")				6.1 / 13.2

The SAUNDERS® P345 Actuator has been designed and engineered to deliver optimum performance over the full range of operating conditions found in bioprocess plants. The diaphragm in a weir type diaphragm valve has a large wetted surface that is exposed to pressure in the process line. This means that line pressure has a large impact on required actuator opening and closing forces. The majority of applications produce pressure on one side of the weir only. This condition is typically called 100% pressure drop, or 100% ΔP. When this occurs, only half the wetted area of the diaphragm is exposed to line pressure.

Operating Characteristics



Note:

- DN8 is rated to 16 bar LP for rubber and PTFE diaphragms
- 8 bar LP is the maximum line pressure for PTFE diaphragms
- 10 bar LP is the maximum line pressure for rubber diaphragms

SAUNDERS® P345 – Technical Characteristics

Size Range

- DN8 (0.25") – DN50 (2.00")

Modes of Operation

- Spring-to-Close

Material of Construction

- Polymer Cover: Polyamide
- Bonnet: Stainless Steel

Temperature

- Max: 100°C (212°F)
- Min: -10°C (14°F)

Accessory Options

- SAUNDERS® VUE Sensors (direct mount)
- Limit Open Stop (Spring-to-Close mode)
- Positioners

Diaphragm Interchangeability

- Unique compressor design that permits easy conversion of the compressor between rubber and PTFE Diaphragms

Product Marking

- Catalogue Code
- Valve Size
- Mode of Operation
- Operating Pressure
- Date of Manufacturing

SAUNDERS[®] P345 Accessories

Marking

Each actuator is laser etched, containing the following information:

- Model
- Size
- Mode of Operation
- Operating Pressure
- Date of Manufacture
- QR Code Link to Crane CPE Product Website

Saunders the science inside		CRANE
Actuator Model	:	P345
Valve Size	:	DN8
Mode of Operation	:	Spring to Close
Operating Pressure	:	4.5 bar (Max. 6 bar)
Date of Manufacture	:	01/02/2022
 WARNING - Do Not Dissmante / Do Not Autoclave AVERTISSEMENT - Ne Pas Demonter / Ne Pas Autoclaver WARNUNG - Nicht Demontieren / Nicht Autoklavieren		

Available Accessories

- Position Feedback Switchboxes
- Positioners
- Adjustable Limit Open Stop
- Other accessories available on request



SAUNDERS[®] M-VUE

The SAUNDERS[®] M-VUE is an intelligent valve sensor designed specifically for aseptic diaphragm valve applications in the Life Science industry. SAUNDERS[®] M-VUE has been engineered to compensate for the behavior of diaphragm valves under multiple processing conditions including process, CIP, SIP and varying operating air supply.



SAUNDERS[®] I-VUE

The SAUNDERS[®] I-VUE is an Intelligent valve sensor delivering enhanced diagnostics to optimize plant efficiency and providing industry leading accuracy and reliability

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