

## TECHNICAL DATASHEET

**NEW!** REDUCING CO<sub>2</sub> EMISSION IMPACT ON ENVIRONMENT BY 11%

### SAUNDERS<sup>®</sup> P345 PNEUMATIC ACTUATOR

**CRANE**<sup>®</sup>

**v in** [www.cranecpe.com](http://www.cranecpe.com)

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The SAUNDERS<sup>®</sup> 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.

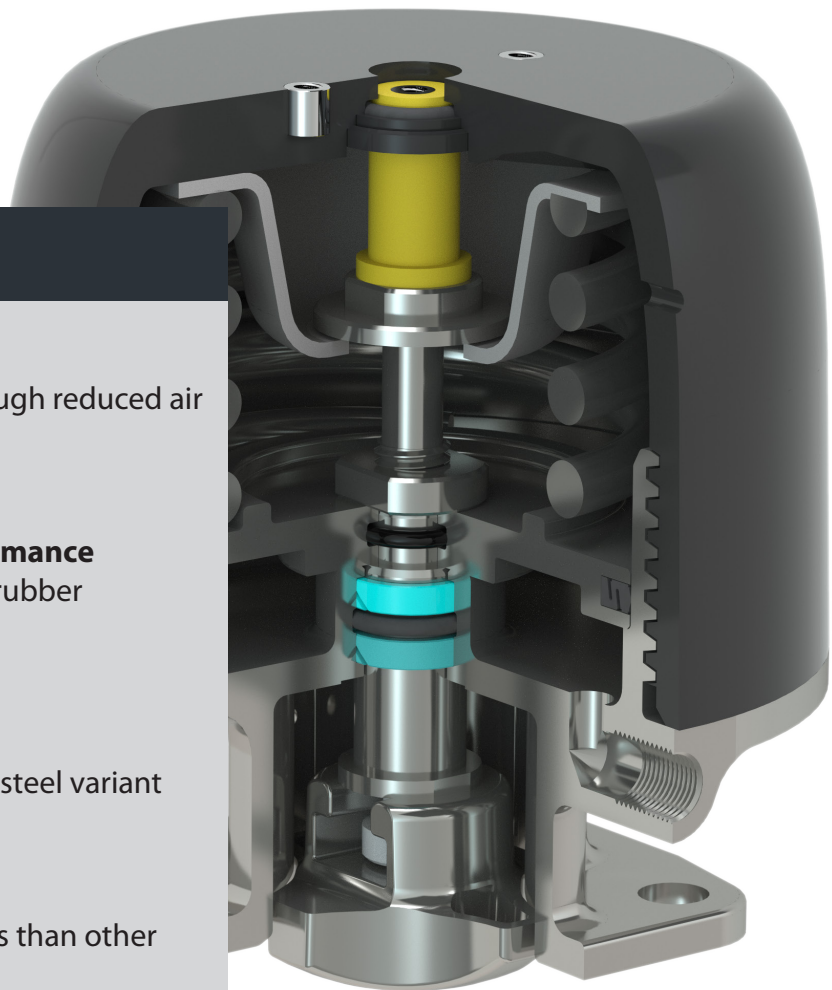
### Key Features

- **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%  $\Delta p$
- **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<sup>®</sup> 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.

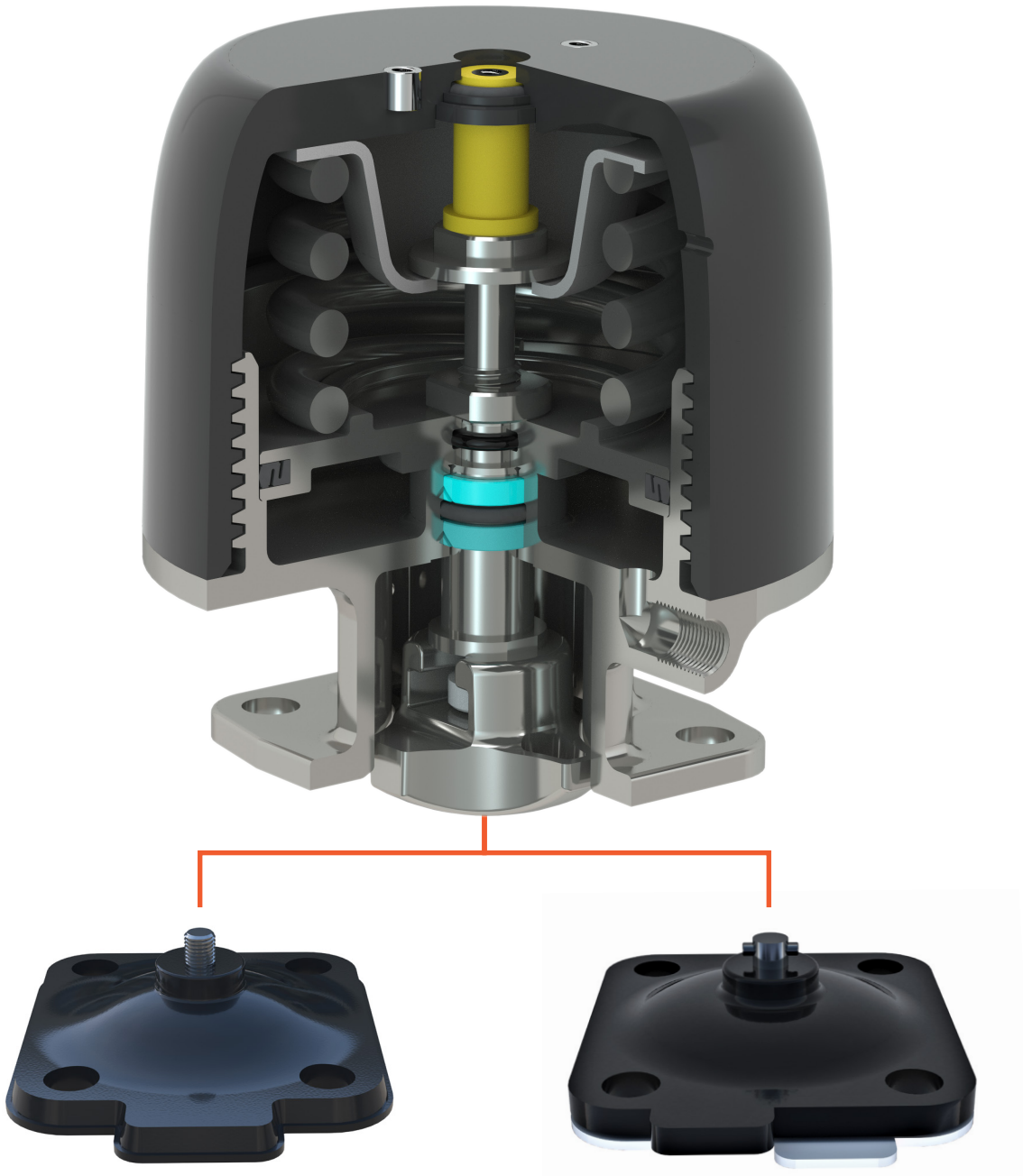
The P345 is a piston-type actuator that provides reliable performance, high cycle life, lower air consumption and more compact design versus diaphragm type actuators.

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.

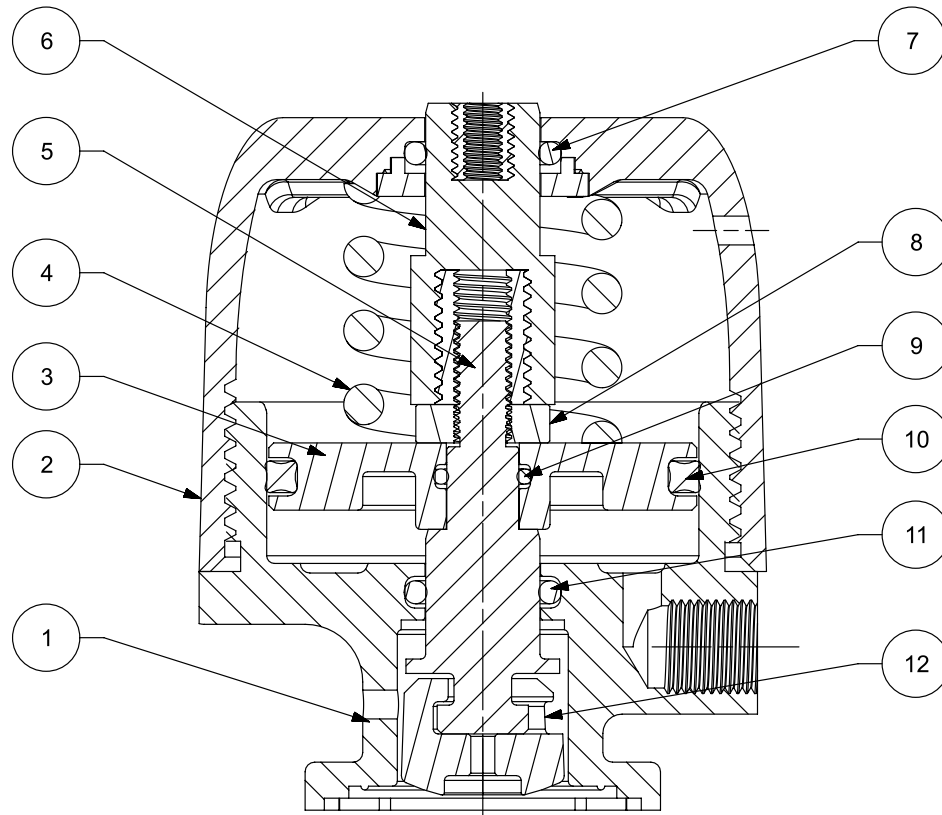


## SAUNDERS<sup>®</sup> P345 Key Features and Benefits

The SAUNDERS<sup>®</sup> 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.



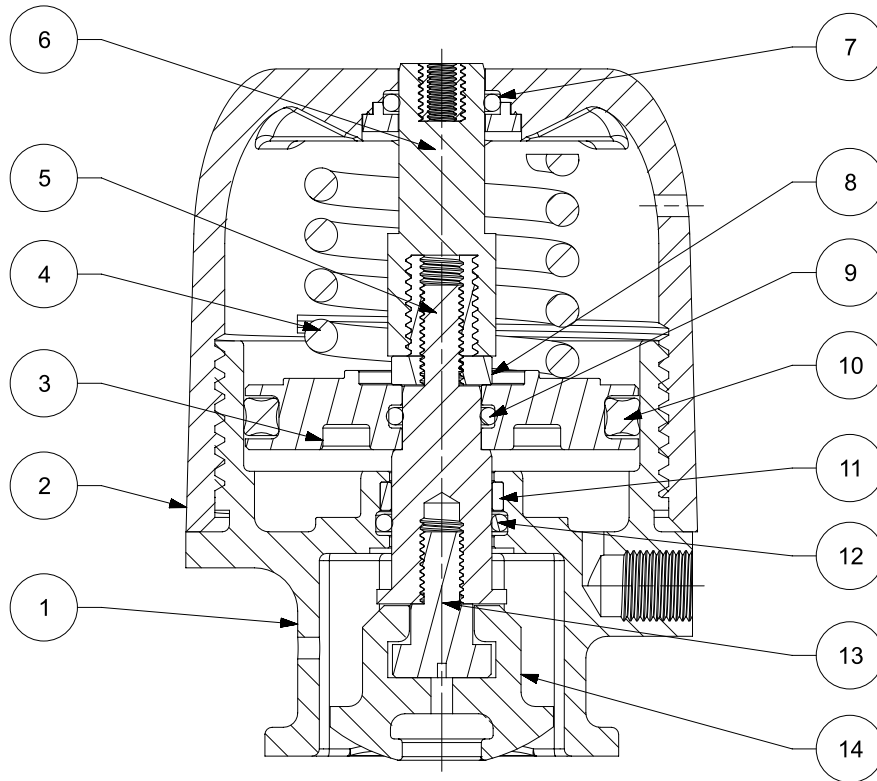
*Refer to the Installation, Operation, and Maintenance Manual for complete instructions on compressor conversion.*



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

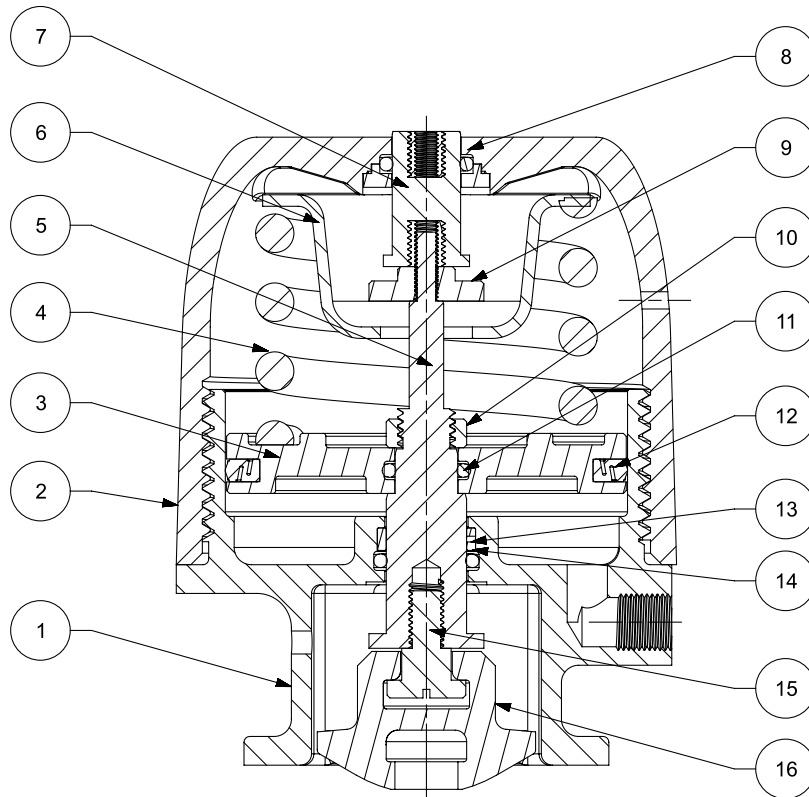
**SAUNDERS<sup>®</sup> P345**  
Materials of Construction (DN15)



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<sup>®</sup> P345**  
Materials of Construction (DN50)

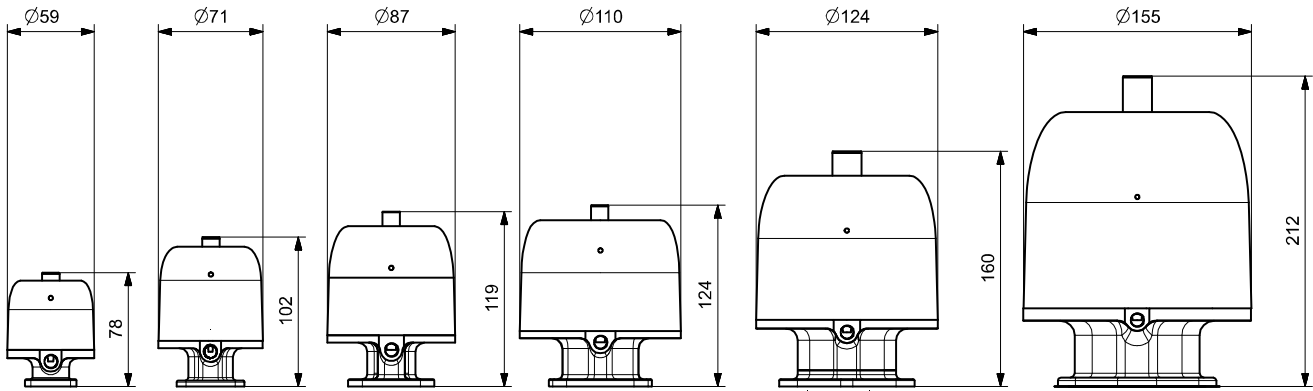


SECTION A-A

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<sup>®</sup> P345**  
Dimensions

**Dimensions**



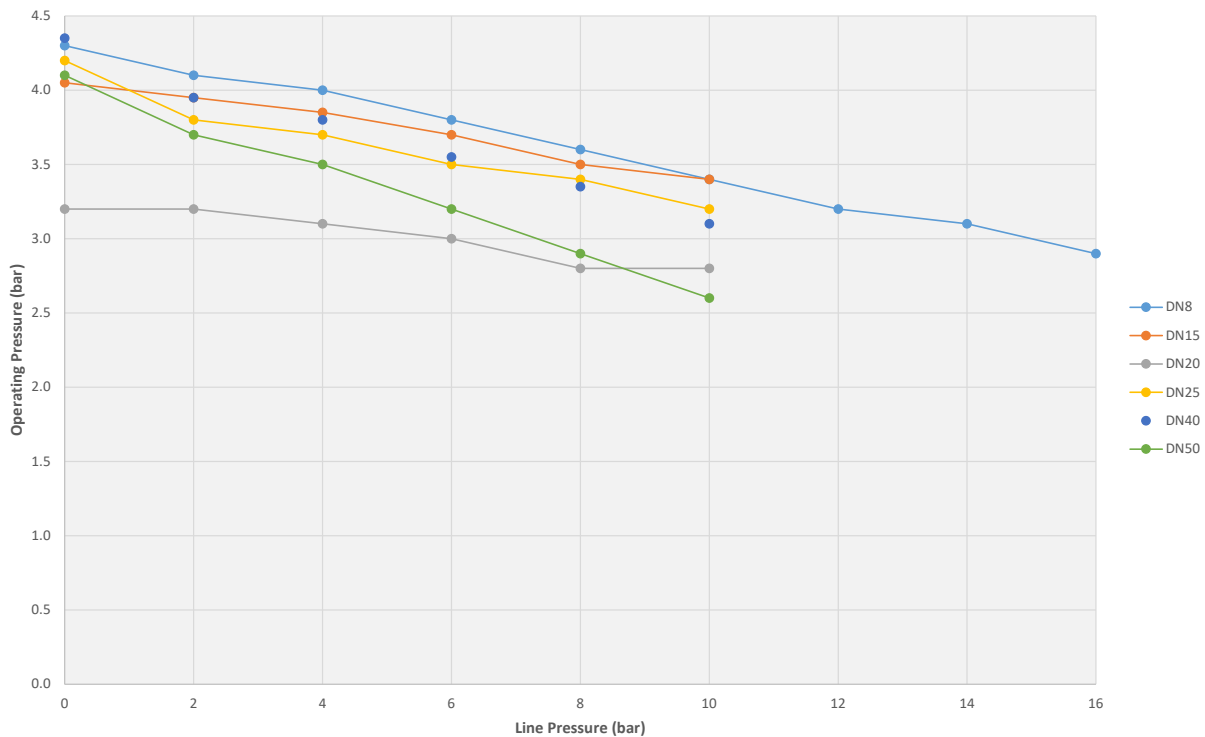
**SAUNDERS<sup>®</sup> P345 – Closure Performance**

Saunders <sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> 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

**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



**Available Accessories**

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



SAUNDERS<sup>®</sup> M-VUE

The SAUNDERS<sup>®</sup> M-VUE is an intelligent valve sensor designed specifically for aseptic diaphragm valve applications in the Life Science industry. SAUNDERS<sup>®</sup> 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<sup>®</sup> I-VUE

The SAUNDERS<sup>®</sup> 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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