



brands you trust.



Saunders[®] S360 Actuator
DN8-DN100 (0.25" to 4.00")

CRANE[®]

Crane ChemPharma & Energy

www.cranecpe.com

Saunders® S360 Actuator Overview

The Saunders® S360 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 S360 is a compact, lightweight, piston-type pneumatic actuator which has been developed to deliver superior performance for sterile BioPharm applications.

Key Features

- 1 **Modular range delivers compact dimensional envelope to reduce dead-leg between associated valves and optimises system design.**
- 2 **Maintenance free piston technology provides powerful closure performance.**
- 3 **Smooth corrosion resistant profile optimises cleanability.**



The Saunders® S360 housing is manufactured from polished 316 Stainless Steel producing a robust design, a clean OD profile and an attractive appearance. It can withstand typical industry wash down regimes.

The S360 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 two different spring-to-close versions; the S360 Lite with compact, lightweight design for typical applications and the S360 Power for maximum high pressure duty or for severe closure applications.

The S360 range also includes normally open, double acting, and options for limiting travel and direct switch mount variations. All models have a bright yellow visual indicator as standard.



Saunders® S360 Actuator Features and Benefits

Easy Compressor Change

The Saunders® S360 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.

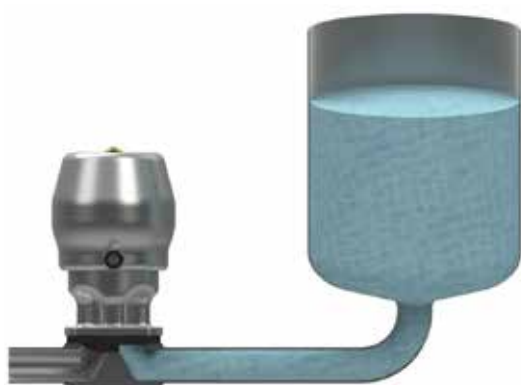


Refer to the Installation, Operation, and Maintenance Manual for complete instructions on 360° rotation and compressor conversion.

Saunders® S360 Actuator Typical Applications

The Saunders® S360 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.



100% Pressure Drop
line-pressure is on one side of weir
only

This is the most common service
condition.

The force on the diaphragm is greatest when there is pressure on both upstream and downstream sides of the weir. This condition is generally called 0% pressure drop, or 0% ΔP . When this occurs the total wetted area of the diaphragm is exposed to line pressure. This is not a common condition in BioPharm applications.



0% Pressure Drop
line-pressure is on both sides of
weir

Maximum force is working
against actuator.

Please contact Saunders® directly or review actuator sizing charts and data sheets for additional information regarding actuator selection. Technical information, sizing charts, and datasheets can be accessed or downloaded at www.cranebiopharm.com.

Saunders® S360 Actuator Technical Specifications

Modular Design

The Saunders® S360 modular range delivers optimum dimensional envelope and closure performance. There are two different normally closed versions available; the S360 Lite and S360 Power actuator that delivers industry leading closure performance and allows complete flexibility to suit a wide range of pressure and flow conditions.



Saunders® S360 Lite

The S360 Lite range provides standard closure for normally closed applications in a very compact, lightweight package and is ideal for most applications. The S360 Lite fits into tight piping arrays – and its compact size can even help reduce block valve design and is available through sizes DN8 – DN100 (0.25" – 4.00").



DN8
(0.25")

DN 15
(0.50")

DN20
(0.75")

DN25
(1.00")

DN40
(1.50")

DN50
(2.00")

DN65
(2.50")

DN80
(3.00")

DN100
(4.00")

Closure Performance (Saunders® S360 Lite Normally Closed)

Size	Line Pressure		Control Pressure	Weight
	PTFE	Rubber		
DN8 (0.25")	16bar (232psi)	16bar (232psi)	6bar (87psi)	0.5kg (1.1lbs)
DN15 (0.50")	8bar (116 psi)	10bar (145 psi)	6bar (87psi)	1.0kg (2.3lbs)
DN20 (0.75")	8bar (116 psi)	10bar (145 psi)	6bar (87psi)	1.9kg (4.3lbs)
DN25 (1.00")	8bar (116 psi)	10bar (145 psi)	6bar (87psi)	2.6kg (5.6lbs)
DN40 (1.50")	8bar (116 psi)	10bar (145 psi)	6bar (87psi)	3.3kg (7.7lbs)
DN50 (2.00")	8bar (116 psi)	10bar (145 psi)	6bar (87psi)	6.0kg (13.4lbs)
DN65 (2.50")	8bar (116 psi)	10bar (145 psi)	6bar (87psi)	16.5kg (36.4lbs)
DN80 (3.00")	8bar (116 psi)	10bar (145 psi)	6bar (87psi)	32kg (70.6lbs)
DN100 (4.00")	8bar (116 psi)	10bar (145 psi)	6bar (87psi)	33.5kg (73.9lbs)

All pressures are gauge pressures. Line pressure values were determined with pressure on one side of the weir only. This condition is called 100% pressure drop, or 100% ΔP. Information on line pressure applied to both upstream and downstream sides of the weir is available on request.

Saunders® S360 Actuator Technical Specifications

Saunders® S360 Power

The Saunders® S360 Power range offers higher operating closure performance in a compact package for high operating pressure or atypical closing conditions with high pressure on both sides of the weir. The S360 Power normally closed actuator is available through sizes DN15 – DN50 (0.50" – 2.00").



Closure Performance (Saunders® S360 Power Normally Closed)				
Size	Line Pressure		Control Pressure	Weight
	PTFE	Rubber		
DN15 (0.50")	16bar (232psi)	16bar (232psi)	6bar (87psi)	1.1kg (2.4lbs)
DN20 (0.75")	16bar (232psi)	16bar (232psi)	6bar (87psi)	2.5kg (5.5lbs)
DN25 (1.00")	16bar (232psi)	16bar (232psi)	6bar (87psi)	2.6kg (5.7lbs)
DN40 (1.50")	16bar (232psi)	16bar (232psi)	6bar (87psi)	5.3kg (11.7lbs)
DN50 (2.00")	16bar (232psi)	16bar (232psi)	6bar (87psi)	8.8kg (19.4lbs)

All pressures are gauge pressures. Line pressure values were determined with pressure on one side of the weir only. This condition is called 100% pressure drop, or 100% ΔP. Information on line pressure applied to both upstream and downstream sides of the weir is available on request.

The Saunders® S360 actuator is also available in normally open and double acting modes of operation through sizes DN8 – DN100 (0.25" – 4.00"). Please refer to Saunders® data sheets for additional information on S360 normally closed and double acting variants. Technical information, sizing charts, and datasheets can be accessed or downloaded at www.saundersS360.com.

PDF dimensional drawings, 2D AutoCAD, and 3D IGES Files of the Saunders® S360 actuator are available at www.SaundersDrawings.com.

Saunders® S360 Actuator Accessories



Marking

Identification label adhered to actuator and contains the following:

- Valve Size
- Model Identification
- Maximum Air Supply

Available Accessories

- Position Feedback
- Adjustable Limit Open and Close Stop
- Valve Positioners
- Other Accessories on Request



DN100 S360

*Available with Limit Open Stop on request



Direct Mount M-VUE



Direct Mount I-VUE

Visit www.saundersS360.com for additional information on other Saunders® products, including technical datasheets, drawing library, and product selection tools.





Crane ChemPharma & Energy
Crane Process Flow Solutions Ltd.
Grange Road,
Cwmbran, Gwent NP44 3XX UK
Phone: + 44-1633-486666
Fax: + 44-1633-486777
www.cranecpe.com

CRANE

Crane Process Flow Solutions Ltd.
9860 Johnson Rd,
Montgomery TX, 77316
Phone: (936) 588-8360
Fax: (936) 588-8302

brands you trust.



COMPAC-NOZ

CRANE

DEPA

ELRO **DUO-CHEK**



KROMBACH
ARMATUREN

NOZ-CHEK



RESISTOFLEX



Saunders
the science inside

STOCKHAM

UNI-CHEK

WESTLOCK
CONTROLS

Wta

XOMOX

Crane Co., and its subsidiaries cannot accept responsibility for possible errors in catalogues, brochures, other printed materials, and website information. Crane Co. reserves the right to alter its products without notice, including products already on order provided that such alteration can be made without changes being necessary in specifications already agreed. All trademarks in this material are property of the Crane Co. or its subsidiaries. The Crane and Crane brands logotype, in alphabetical order, (ALOYCO®, CENTER LINE®, COMPAC-NOZ®, CRANE®, DEPA®, DUO-CHEK®, ELRO®, FLOWSEAL®, JENKINS®, KROMBACH®, NOZ-CHEK®, PACIFIC VALVES®, RESISTOFLEX®, REVO®, SAUNDERS®, STOCKHAM®, UNI-CHEK®, WESTLOCK CONTROLS®, WTA®, and XOMOX®) are registered trademarks of Crane Co. All rights reserved.