

# Introduction to Saunders EC Actuators

## HC4 Diaphragm Valves

The Saunders EC actuators are used as remote operation equipment for valves, either as a straightforward alternative to manual bonnet assemblies or as an integral part of a control system.

HC4/125/01/06.04

Modes of Operation		
Failsafe Closing	Failsafe Opening	Double Acting
Failsafe closing actuators close the valve against line pressure in the event of failure (or intended shutoff) of operating pressure to the actuator.	Failsafe opening actuators open the valve to allow line fluid to flow in the event of failure (or intended shutoff) of operating pressure to the actuator.	Operating pressure opens and closes the valve.
<b>Normal Use:</b> When valve is usually in the closed position (to avoid using a constant supply of operating pressure).	<b>Normal Use:</b> When valve is usually in the open position (to avoid using a constant supply of operating pressure).	<b>Normal Use:</b> When a failsafe mode is undesirable.
<b>Model Range:</b> EC 0.25" - 2.00" (DN8 - DN50); 87 psi (6 bar) spring 58 psi (4 bar) spring 29 psi (2 bar) spring (Not available in all sizes)	<b>Model Range:</b> EC 0.25" - 2.00" (DN8 - DN50)	<b>Model Range:</b> EC 0.25" - 2.00" (DN8 - DN50)

### Operation

The EC actuators can be operated using compressed air.

### Range

The EC range is split into three modes of operation: Failsafe Close, Failsafe Open and Double Acting. For the failsafe close EC there are three different spring packs.

### Compatibility

The EC actuators are suitable for use on the Weir type (A, AFP) valves as well as the Saunders' range of rubber diaphragms and PTFE faced diaphragms.

### Slotted EC actuators

There is a slotted version of the EC for customized AFP products, including Tank Bottom valves, ZDT & ZDL valves and diverter valves. This EC needs to be specified on an inquiry as a standard EC cannot be converted into a slotted EC.

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### Temperature Range

14°F - 212°F (-10 °C to +100 °C) ambient.  
 Autoclave max: 302°F (150 °C) (fluoroelastomer seals).

### Materials of Construction

The EC is manufactured by injection moulding in Polyethersulphone (PES). For details of the chemical resistance of PES please see data sheet HC4/122/01/06.04. Air and bonnet inserts are stainless steel.

### Air Connections

EC actuators are available with either 1/8" BSP or 1/8" NPT air connections.

### Accessories

The following accessories (which can be specified for hazardous areas) can be supplied with EC actuators:

- Limit travel stops
- Solenoid valves
- Module switch units
- Positioners
- Stayput relays

For further details regarding accessories please refer to the EC accessories data sheets.

