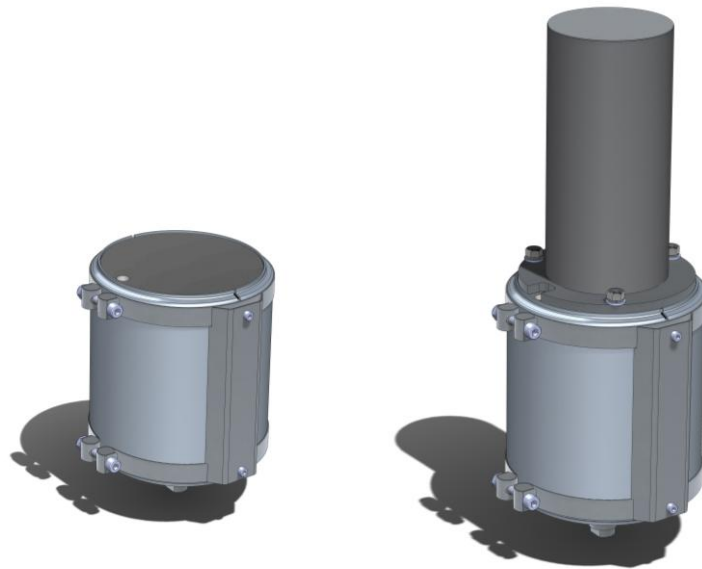


eDART actuators have proved themselves over many years in the field to be a reliable and cost effective actuator. eDART's unique rolled cover tube design eliminates the tie bars which reduces the size and weight of the actuator. The Piston has a double O-ring plus continuous PTFE wear strip. Furthermore the feedback system for the positioner is engineered to give linear response to the valve position and our biased spring options allow for fail action but are piped Double Acting (DA) for superior control – specifically designed to be used on modulating control applications.



## Material of Construction

- Plates – Mild Steel Galvanised
- Cover plate – 304 Stainless steel
- Cylinder tube – Glass Reinforced Plastic
- Shaft – EN57
- Guide Bush – Vesconite
- O-rings – Buna N
- Wear strip – PTFE

## Standard Sizes

Size	Code (maximum stroke [mm])	Notes
100	80	
160	105; 165	Spring Pack is only available in 105mm stroke
200	175; 250	Spring Pack is only available in 175mm stroke
250	280	Spring Pack is only available in 280mm stroke
300	350; 450	There are two standard strokes on this model
400	450	
550	550	
750	750	

- Double Acting Strokes can be customised and Biased Strokes can be reduced

## Options

- Double Acting (DA)
- Fail Retracted (FR)
- Fail Extended (FE)
- Stroke may be limited either with an internal hard stop or by shortening the barrel as required.
- Full Stainless-Steel construction for corrosion resistance

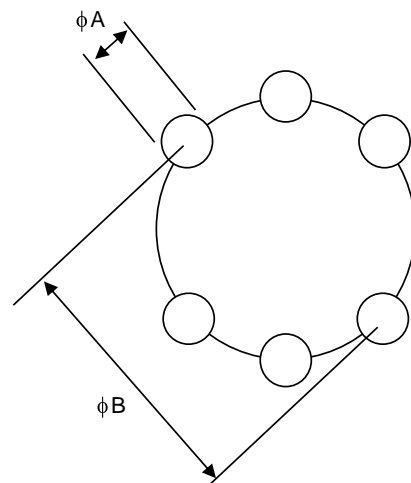
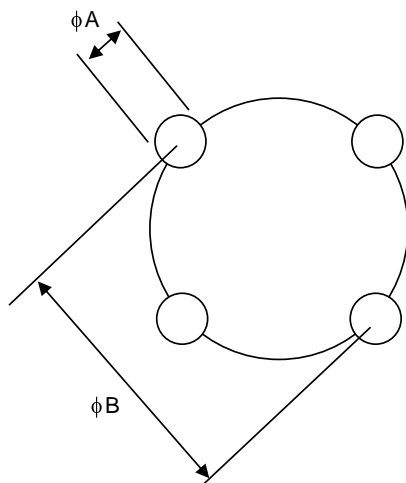
## Features

- Double piston seal and PTFE wear strip for reliably long service and reduced wear
- Variety of stroke lengths available
- Compact and robust design
- Self contained bias spring pack – welded pre-compressed safe design
- Anti-rotation device
- Stroke indicator

## Applications

- Pinch Valves
- Dart Valves
- Diaphragm Valves
- Knife Gate Valves
- Y-pattern Valves
- eDART Valves
- Dosing Valves
- Sluice Gate Control
- Third party valves

## Mounting Details

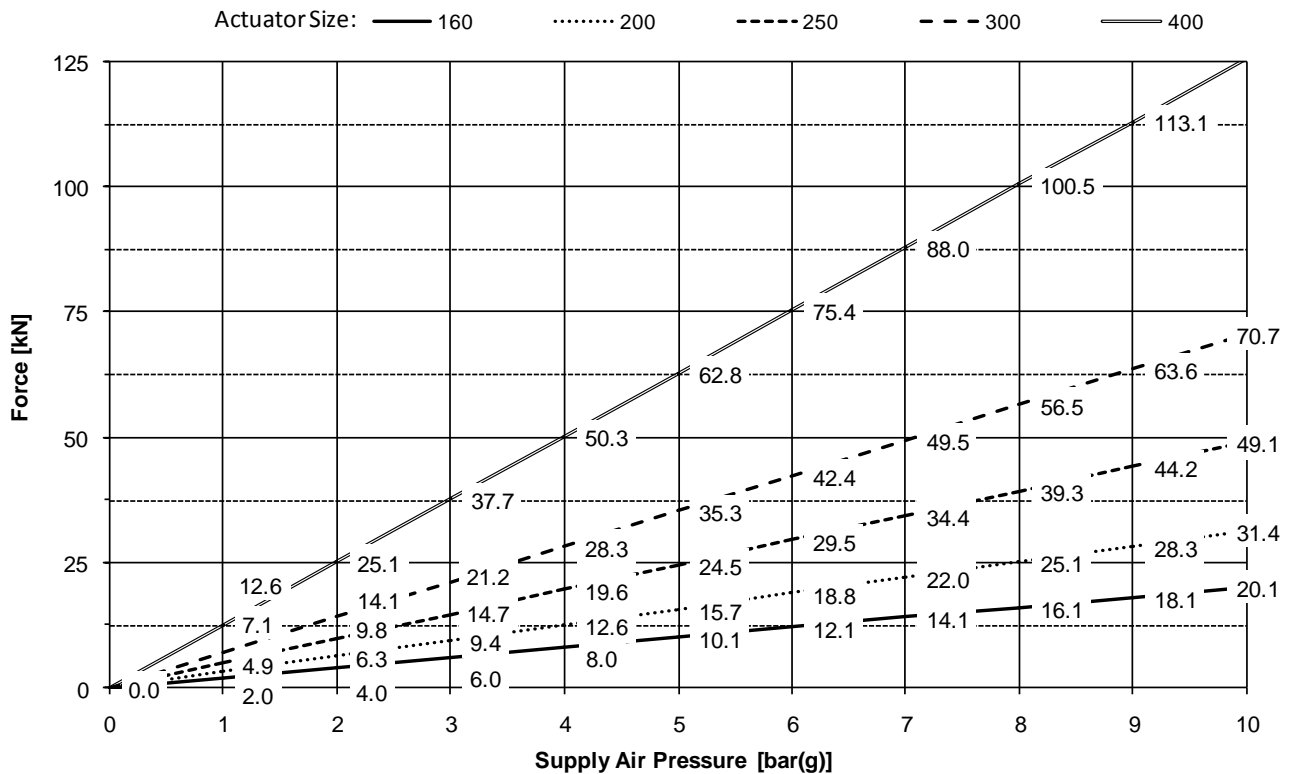


Size	A	øB
100	M12	80mm PCD
160	M12	120mm PCD
200	M12	150mm PCD
250	M12	200mm PCD
400	M16	250mm PCD

Size	A	øB
300	M12	200mm PCD

## Forces

**Actuator Force Chart**



## Free Air Required

The following table gives the free air required for each stroke of the actuator

Free Air [litres]	stroke	Actuator Working Pressure [bar]										
		0	1	2	3	4	5	6	7	8	9	10
160	105	0.0	2.1	4.2	6.3	8.3	10.4	12.5	14.6	16.7	18.8	20.8
	165	0.0	3.3	6.5	9.8	13.1	16.4	19.6	22.9	26.2	29.5	32.7
200	175	0.0	5.4	10.9	16.3	21.7	27.1	32.6	38.0	43.4	48.8	54.3
	250	0.0	7.8	15.5	23.3	31.0	38.8	46.5	54.3	62.0	69.8	77.5
250	280	0.0	13.6	27.1	40.7	54.3	67.8	81.4	95.0	109	122	136
300	350	0.0	24.4	48.8	73.2	97.7	122	146	171	195	220	244
	450	0.0	31.4	62.8	94.2	126	157	188	220	251	283	314
400	450	0.0	55.8	112	167	223	279	335	391	446	502	558

## Positioner Options

- Smart (HART, Profibus)
- Electro-Pneumatic (4-20mA)
- Pneumatic (20-100kPa)

eDART's preferred choice is the Power Genex Smart positioner and come standard as the positioner option.

## Remote Feedback

On the larger sizes of actuators (>400), remote feedback is offered. This may be one of two options:

- 4-20mA transducer
- internal Linear pot

both are directly compatible with the eDART Power Genex positioner and eliminate the unwieldiness of the mechanical feedback mechanisms at such large sizes.

## Air Springs

Volume tanks may be offered should a fail action using an air spring be required. In certain situations excess volume in the actuator can be used and will then be piped according to the following diagram.

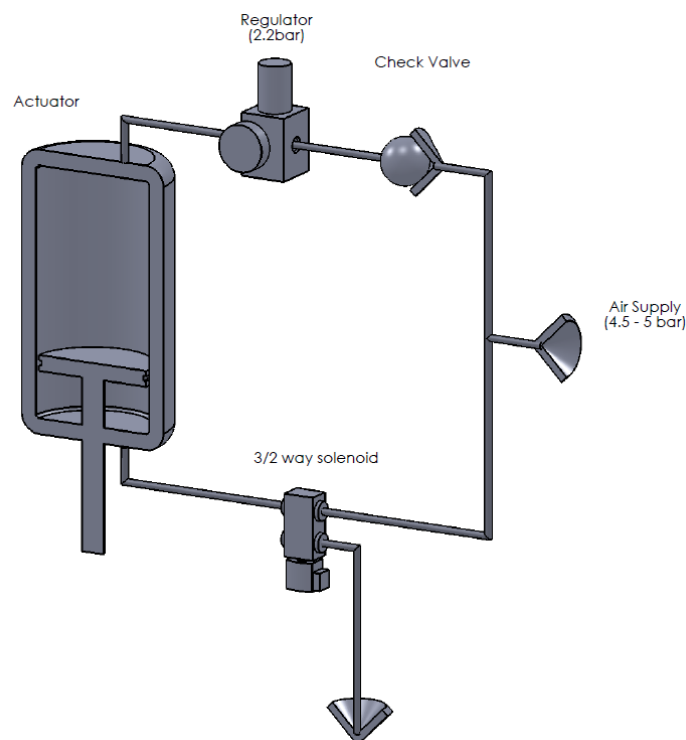


Figure 1: Fail Closed Air Spring Piping. Fail Open would be piped in the opposite sense.