

ONYX VALVE

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CAUT

ONYX VALVE



"Fluid Handling Specialists"

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# Automated Valves

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### Series GSS

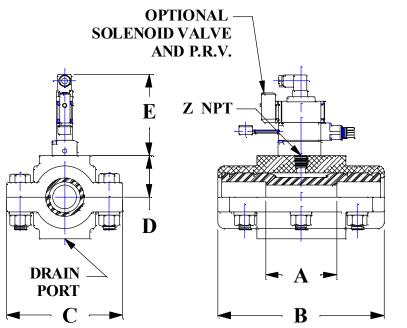
#### Full Round, Direct Air Operated, Enclosed Construction, Slip-On Connection

- Clog resistant full round opening
- Light weight cast aluminum housing
- Slip-on pipe connection. No threads, grooves, or flanges
- Low pressure drop
- No packing
- Drop tight closure
- Simple operation, rubber sleeve is the only moving part.

**Applications:** Ideal for controlling abrasive, viscous and corrosive fluids including wastewater, mine slurries, chemicals, cement, pulp stock, powder and pellets.

**Operation:** The GSS consists of a rubber sleeve inside a full

round cast aluminum bonnet assembly. Injecting compressed air into the bonnet assembly causes the rubber sleeve to collapse, blocking flow through the valve. When the pressure is released, the resiliency of the rubber sleeve reopens the valve.



**Specifications:** 

Aluminum housing

#### **Options:**

- Epoxy paint
- Sleeve elastomer
- Bolt-on pact solenoid valve is a 4-way, 5-port solenoid with weatherproof coil and manual override.
- PRV (with solenoid valve)
- I/P transducer for modulating service

#### All dimensions are in inches.

SIZE	1/4	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
А	2.00	2.38	3.12	3.00	3.50	4.25	5.50	7.00	8.00	10.00
В	4.75	5.50	6.00	7.00	8.25	10.00	11.50	14.00	16.00	20.00
С	3.62	4.00	4.25	4.87	5.31	5.56	7.18	7.81	9.12	10.31
D	1.18	1.37	1.56	1.75	2.00	2.18	2.56	3.06	3.50	4.43
E		4.62				6.8	32			8.00
Z					1/4 NPT					3/8 NPT
Wt, lb	1.5	2	3	5	7	11	15	21	25	44
P Max					35 psi	30 psi	25 psi			

### Series **GSF**

#### Full Round, Flange Connection, Enclosed Construction, Direct Air Operated

- Clog resistant full round opening
- Low pressure drop
- No packing
- Drop tight closure
- Simple operation, rubber sleeve is the only moving part.

**Applications:** Ideal for controlling abrasive, viscous and corrosive fluids including wastewater, mine slurries, chemicals, cement, pulp stock, powder and pellets.

**Operation:** The GSF consists of a rubber sleeve inside a full round cast iron bonnet assembly. Injecting compressed air into the bonnet assembly causes the rubber sleeve to collapse, blocking flow through the valve. When the pressure is released, the resiliency of the rubber sleeve reopens the valve.



### 

#### Specifications:

- Flanges: ANSI STD B-16, 125 lbs
- Housing: Cast Iron ASTM A48, Class 35

#### **Options:**

•

- Epoxy paint
- Sleeve elastomer
- Bolt-on pact solenoid valve is a 4-way,
   5-port solenoid with weatherproof coil and manual override.
- PRV (with solenoid valve)
- I/P transducer for modulating service

SIZE	1	1.25	1.5	2	2.5	3	4	5	6	8	10	12	14	
А	4.00	4.31	4.75	5.25	5.75	6.00	8.00	10.00	12.00	16.00	20.00	24.00	28.00	
В	4.62	4.87	5.37	6.37	7.00	7.50	9.25	10.62	12.25	14.50	16.87	20.00	22.50	
С	2.12	2.37	2.50	3.06	3.56	3.81	4.62	5.62	7.00	8.37	10.25	11.75	13.00	
D		4.62				6.8	82	-	-	8.00				
Z			1/4	NPT				1/2 NPT	,	3/4 NPT				
WT	12	13	15	23	32	36	64	85	120	205	300	540	620	
AIR *	0.02	0.03	0.05	0.08	0.13	0.14	0.37	0.66	1.10	2.50	4.60	10.00	17.00	
Р		90	psi	75 psi			65 psi			55	psi	50	psi	

All dimensions are in inches.

\* Unit of Measure =  $ft^3/cycle$ 

\* Air consumption per cycle at STP using 90 psi air.

## Series GSD

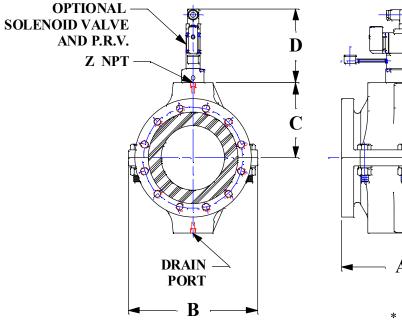
#### Full Round, Flange Connection, Enclosed Construction, Direct Air Operated

### The GSD is the same valve as the GSF except it has a double thick rubber sleeve.

- Clog resistant full round opening
- Low pressure drop
- No packing
- Drop tight closure
- Simple operation, rubber sleeve is the only moving part.

**Applications:** Ideal for abrasive, viscous and corrosive fluids including wastewater, mine slurries, chemicals, cement, pulp stock, powder and pellets.

**Operation:** The GSF consists of a rubber sleeve inside a full round cast iron bonnet assembly. Injecting compressed air into the bonnet assembly causes the rubber sleeve to collapse, blocking flow through the valve. When the pressure is released, the resiliency of the rubber sleeve reopens the valve.



All dimensions are in inches.



#### Specifications:

- Flanges: ANSI STD B-16, 125 lbs
- Housing: Cast Iron ASTM A48, Class 35

#### **Options:**

- Epoxy paint
- Sleeve elastomer
  - Bolt-on pact solenoid valve is a 4-way,
    5-port solenoid with weatherproof coil and manual override.
- PRV (with solenoid valve)
- I/P transducer for modulating service
- \* Unit of Measure =  $ft^3/cycle$

\* Air consumption per cycle at STP using 90 psi air.

SIZE	1 1-1/4 1-1/2	2 2-1/2	3	4	5	6	8	10	12
FLANGE	2	3	4	5	6	8	10	12	14
Α	5.25	6.00	8.00	10.00	12.00	16.00	20.00	24.00	28.00
В	6.37	7.50	9.25	10.62	12.25	14.50	16.87	20.00	22.50
С	3.06	3.81	4.62	5.62	7.00	8.37	10.25	11.75	13.00
D		6.82					8.	00	
Z	1/4 NP'	Г		1/2 NPT		3/4 1	NPT	1 N	РТ
WT	23	36	64	85	120	205	300	540	620
AIR *	0.08 Max 0.14		0.37	0.66	1.10	2.50	4.60	10.00	17.00
Р	90 psi	75psi 65 psi			55 psi 50 psi			psi	

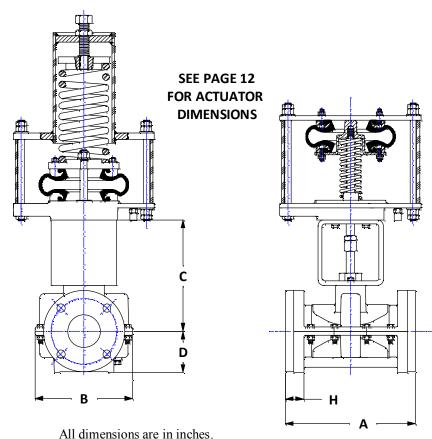
## Series CAR

#### Full Round, Single Pinch, Enclosed Construction, Pneumatically Operated

- Clog resistant full round opening.
- Low pressure drop
- No packing
- Drop tight closure
- On/Off or throttling service
- Fail Open or Fail Closed pneumatic actuators
- Long lasting compression molded sleeve

**Applications:** Ideal for automatic control of abrasive, viscous, and corrosive fluids including wastewater, mine slurry, chemicals, cement, pulp, powder and pellets.

**Operation:** A full round pneumatically operated valve with the maintenance free Onyx Actuator. The actuator uses a spring for reliable fail-open (PFO) or fail-closed (PFC) operation in a range of sizes. It does not require lubricated air.





#### **Specifications:**

- Flanges: ANSI STD. 125/150 lbs
- Housing: Cast iron, ASTM A48, Class 35
- Stem: 303 stainless steel
- Yoke: Carbon steel
- Actuator: Cast iron/PVC

- Epoxy paint
- Sleeve elastomer
- 316 stainless steel stem
- ANSI STD 300 lbs. Flange
- Secondary containment package
- Auxiliary hand wheel
- Positioners
- Solenoid valves
- Limit switches

SIZE	1/2	3/4	1	1-1/2	2	2-1/2	3	4
А	4.25	5.50	5.50	6.50	7.00	7.50	12.00	13.87
В	3.75	3.87	4.75	5.25	6.25	9.25	9.00	13.50
С	4.93	5.06	9.34	9.62	10.00	14.00	14.25	15.56
D	1.93	2.00	2.18	2.56	3.06	3.56	3.81	4.62
Н	0.69	0.75	0.84	0.97	1.12	1.25	1.69	1.68
P Max			200 psi				175 psi	
Wt, lb	10	12	15	21	27	35	47	110

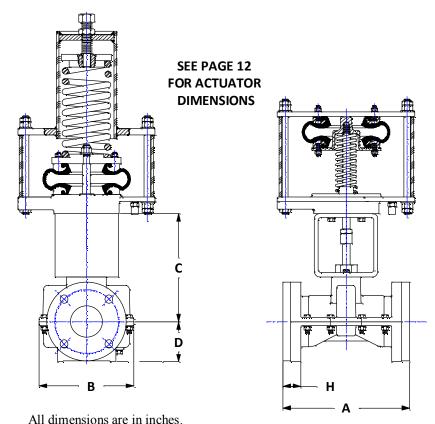
## Series CAP

#### Pre-Pinched, Single Pinch, Enclosed Construction, Pneumatically Operated

- Low pressure drop
- No packing
- Drop tight closure
- On/Off or throttling service
- Linear throttling characteristic
- Fail Open or Fail Closed pneumatic actuators
- Long lasting compression molded sleeve

**Applications:** Ideal for automatic control of abrasive, viscous, and corrosive fluids including wastewater, mine slurry, chemicals, cement, pulp, powder and pellets.

**Operation:** A pre-pinched pneumatically operated valve with the maintenance free Onyx Actuator. The actuator uses a spring for reliable fail-open (PFO) or fail-closed (PFC) operation in a range of sizes. It does not require lubricated air.





#### **Specifications:**

- Flanges: ANSI STD. 125/150 lbs
- Housing: Cast iron, ASTM A48, Class 35
- Stem: 303 stainless steel
- Yoke: Carbon steel
- Actuator: Cast iron/PVC

- Epoxy paint
- Sleeve elastomer
- 316 stainless steel stem
- ANSI STD 300 lbs. Flange
- Secondary containment package
- Auxiliary hand wheel
- Positioners
- Solenoid valves
- Limit switches

SIZE	4	6	8	10	12	14	16	18	20	24
Α	9.00	17.75	21.37	26.50	29.00	28.00	32.00	36.00	40.00	48.00
В	13.50	20.12	22.75	26.25	32.00	34.37	34.37	43.75	50.50	60.50
С	15.56	17.68	21.43	22.50	26.68	27.68	33.12	34.12	42.65	45.25
D	4.62	5.75	7.00	8.25	9.75	13.68	16.12	17.12	19.65	22.25
I	1.31	1.87	1.62	1.81	2.25	2.75	3.37	3.37	3.50	3.50
P Max		150 psi		100 psi						
Wt, lb	90	150	350	550	800	1,000	1,700	2,000	3,000	4,300

### Series DAC

#### Full Round, Dual Pinch, Enclosed Construction, Pneumatically Operated

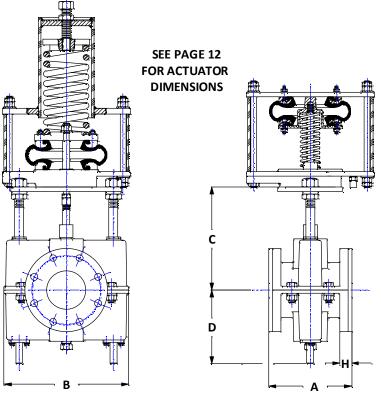
- Clog resistant full round opening.
- Low pressure drop
- No packing
- Drop tight closure
- On/Off or throttling service
- Fail Open or Fail Closed pneumatic actuators

#### Specifications:

- Flanges: ANSI STD 125/150 lbs
- Housing: Cast iron, ASTM A48, class 35 (valve sizes up to 10") Ductile iron, ASTM 65-45-12 (valve sizes 12" and up)
- Stem & guide rods:

303 stainless steel

• Pinch bars: Ductile iron, ASTM 65-45-12





- Sleeve elastomer
- Epoxy paint
- ANSI STD 300 lbs flange
- 316 stainless steel stem
- Secondary containment package
- Positioners
- Solenoid valves
- Limit switches

SIZE	2	3	4	6, SH.	6, LG.	8	10	12	14	16	18	20	24	30
Α	7.00	8.00	9.00	10.50	17.75	21.37	26.50	29.00	28.00	32.00	36.00	40.00	48.00	60.00
В	8.50	11.00	13.50	20	.12	22.75	26.25	32.00	34.37	40.50	43.75	50.50	60.50	78.00
С	10.06	11.81	14.81	20	.00	23.12	25.68	29.87	32.37	38.12	41.12	47.00	52.00	70.00
D	5.25	6.56	8.00	11	.62	14.62	16.68	20.12	22.18	26.50	28.50	32.15	35.00	40.00
Н	1.12	1.	31	1.	1.87		1.81	2.25	2.75	3.3	37	3.50	3.50	4.50
P Max	200	175		150	) psi		100	psi			75	psi		
Wt, lb	40	80	103	250	300	450	650	800	1,000	1,700	2,000	3,000	4,300	N/A

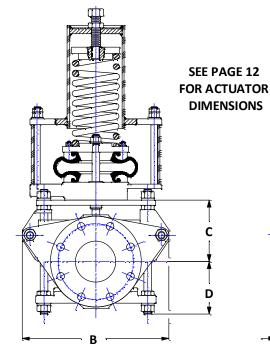
### Series DAO

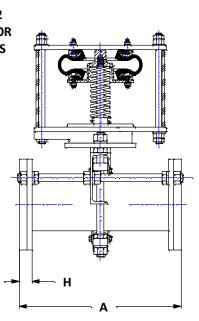
#### Full Round, Dual Pinch, Open Frame Construction, Pneumatically Operated

- Available in Full Round or Pre-Pinched construction.
- Light weight
- Low pressure drop
- Drop tight closure
- On/Off or throttling service
- Fail Open or Fail Closed pneumatic actuators

#### Specifications:

- Flanges: ANSI STD 125/150 lbs
- Stem & Guide rods:
  - 303 stainless steel







#### **Options:**

- Epoxy paint
- Sleeve elastomer
- Valve length
- 316 stainless steel stem
- Positioners
- Solenoid valves
- Limit switches

<u>Warning</u>! Open frame valves have no provision for containing process fluid during a sleeve failure; fluid may erupt unexpectedly from the valve. Do not use an open frame valve for fluids that are hot, acidic, flammable or toxic. Otherwise, serious injury may result.

SIZE	1	1-1/2	2	2-1/2	3	4	5	6	8	10	12	14	16	18	20
A-S	4.00	4.75	5.25	5.75	6.00	8.00	10.00	10.50	16.00	20.00	24.00	28.00	32.00	36.00	40.00
A-M	5.50	6.00	7.00	7.50	8.00	9.00	15.00	12.00	21.37	26.50	29.00		N	I/A	
A-L	6.00	6.50	8.00	10.00	12.00	12.00	18.00	18.00	24.00	30.00	36.00	42.00	45.00	54.00	60.00
A-XL			N/A			16.00	20.00	24.00	32.00	40.00	48.00	N/A	48.00	N	Ά
В	6.50	7.37	9.25	11.37	11.37	14.50	18.12	21.37	24.25	27.75	33.75	36.00	40.00	43.95	47.25
С	4.94	5.19	5.04	6.12	6.12	8.31	12.48	11.00	15.39	17.46	21.75	23.38	31.25	26.56	30.87
D	2.75	2.71	3.21	3.50	3.75	5.18	6.84	5.50	8.18	9.25	11.37	12.25	16.67	12.50	16.67
H	.81	.53	.62	1.06	1.12	1.25	1.50	1.50	1.12	1.25	1.50	1.75	2.00	2.00	2.75
P Max		150 psi				100 psi			75 psi				50 psi		
Wt, Lb.	15	16	30	35	47	75	100	130	180	300	420	540	980	1,100	1,200

#### All dimensions are in inches.

### Series CER

#### Full Round, Single Pinch, Enclosed Construction, Electric Actuator Operated

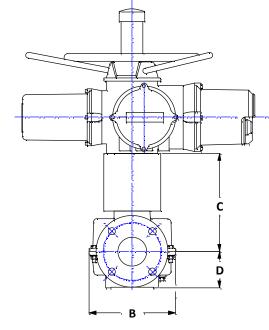
- Low pressure drop
- No packing
- Drop tight closure
- On/Off or throttling service
- Long lasting compression molded sleeve

**Applications:** Ideal for automatic control of abrasive, viscous, and corrosive fluids including wastewater, mine slurry, chemicals, cement, pulp, powder and pellets.

**Operation:** The **CER** is a full round, single pinch electric operated valves. An electric motor drives a single pinch bar from the top against the rubber sleeve to pinch off flow.

**Construction:** Actuators are available with single and 3-phase motors. All electric actuators are supplied with an auxiliary hand wheel. 3-phase actuators come with reversing contactors, power supply, limit and torque switches, push buttons, selector switches and pilot lights.





#### Specifications:

- Flanges: ANSI STD 125/150 lbs.
- Housing: Cast iron, ASTM A48, Class 35
- Stem & Pinch bar: 303 stainless steel
- Bearing: Bronze alloy

#### **Options:**

- Epoxy paint
- Sleeve elastomer
- ANSI STD 300lbs. Flange
- 316 stainless steel stem
- Secondary containment package
- Positioners
- Limit switches

SIZE	1/2	3/4	1	1-1/2	2	2-1/2	3	4
Α	4.25	5.50	5.50	6.50	7.00	7.50	12.00	13.87
В	3.75	3.87	4.75	5.25	6.25	9.25	9.00	13.50
С	4.93	5.06	7.34	7.62	7.00	10.00	10.25	12.56
D	1.93	2.00	2.18	2.56	3.06	3.56	3.81	4.62
Н	0.69	0.75	0.84	0.97	1.12	1.25	1.69	1.68
P Max			200 psi				175 psi	
Wt, Lb	10	12	15	21	27	35	47	100

Δ

All dimensions are in inches.

### Series CEP

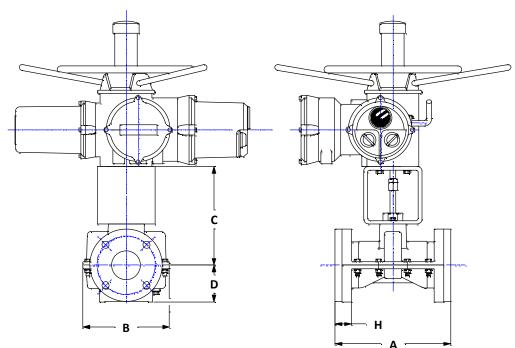
#### Pre-Pinched, Single Pinch, Enclosed Construction, Electric Actuator Operated

- Low pressure drop
- No packing
- Drop tight closure
- On/Off or throttling service
- Long lasting compression molded sleeve

**Applications:** Ideal for automatic control of abrasive, viscous, and corrosive fluids including wastewater, mine slurry, chemicals, cement, pulp, powder and pellets.

**Operation:** The **CEP** is a pre-pinched on centerline, single pinch electric operated valves. An electric motor drives a single pinch bar from the top against the rubber sleeve to pinch off flow.

**Construction:** Actuators are available with single and 3-phase motors. All electric actuators come with auxiliary hand wheel. 3-phase actuators come with reversing contactors, power supply, limit and torque switches, push buttons, selector switches and pilot lights.





#### **Specifications:**

- Flanges: ANSI STD 125/150 lbs.
- Housing: Cast iron, ASTM A48, Class 35
- Stem & Pinch bar: 303 stainless steel
- Bearing: Bronze alloy

- Epoxy paint
- Sleeve elastomer
- ANSI STD 300lbs. flange
- 316 stainless steel stem
- Secondary containment package
- Positioners
- Limit switches

SIZE	4	6	8	10	12	14	16	18	20	24
А	9.00	17.75	21.37	26.50	29.00	28.00	32.00	36.00	40.00	48.00
В	13.5	20.12	22.75	26.25	32.00	34.37	40.50	43.75	50.50	60.50
С	10.56	12.68	17.43	20.50	22.68	23.68	28.12	29.12	37.65	42.25
D	4.62	5.75	7.00	8.25	9.75	13.68	16.12	17.12	19.65	22.25
Н	1.31	1.87	1.61	1.81	2.25	2.75	3.37	3.37	3.50	3.50
P Max		150 psi					100 psi			
Wt, Lb	90	150	350	550	800	1,000	1,700	2,000	3,000	4,300

All dimensions are in inches.

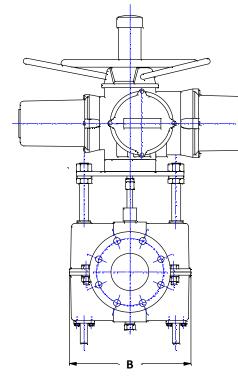
### Series DEC

#### Full Round, Dual Pinch, Enclosed Construction, Electric Actuator Operated

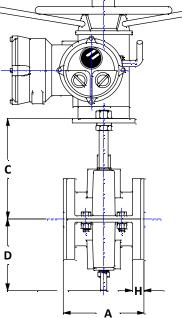
- Clog resistant full round opening
- Low pressure drop
- No packing
- Drop tight closure
- High efficiency stainless steel ACME stem for easy operation
- Complete motorized actuator includes starters, power supply, limit switches, auxiliary Hand wheel, push buttons and selector switch
- Valves come fully assembled, calibrated and tested for plug & play operation.

**Applications:** Ideal for abrasive, viscous and corrosive fluids including wastewater, mine slurries, chemicals, cement, pulp stock, powder and pellets.

**Operation:** The DEC is a full round dual pinch valve. The electric motor rotates a bronze nut that drives a pair of pinch bars against the rubber sleeve pinching off flow at centerline.



All dimensions are in inches.



#### **Specifications:**

- Flange: ANSI STD 125/150 lbs.
  - Housing: Cast iron, ASTM A48, class 35 (valve sizes up to 10") Ductile iron, ASTM 65-45-12 (valve sizes 12" and up)
  - Stem & guide rods:
    - 303 stainless steel
  - Pinch bars: Ductile iron, ASTM 65-45-12

- Epoxy paint
- Sleeve elastomer
- ANSI STD 300 lbs flange
- 316 stainless steel
- Secondary containment package
- Positioners
- Limit switches

SIZE	2	3	4	6, SH.	6, LG.	8	10	12	14	16	18	20	24	30
Α	7.00	8.00	9.00	10.50	17.75	21.37	26.50	29.00	28.00	32.00	36.00	40.00	48.00	60.00
В	8.50	11.00	13.50	20	.12	22.75	26.25	32.00	34.37	40.50	43.75	50.50	54.00	78.00
С	10.06	7.37	9.37	12	.43	15.37	23.18	28.25	30.10	35.91	38.87	44.39	52.00	70.00
D	5.25	6.56	8.00	11	.62	14.62	16.68	20.12	22.18	26.50	28.50	32.15	35.00	40.00
H	1.12	1.	31	1.	87	1.62	1.81	2.25	2.75	3.3	37	3.50	4.00	4.50
P Max	200	175		150	) psi		100	psi			75	psi		
Wt, lb	40	80	103	250	300	450	650	800	1,000	1,700	2,000	3,000	4,300	N/A

# PNEUMATIC ACTUATORS

#### Pneumatic Fail Open and Fail Closed Actuators

- No Lubrication Required
- No piston Rings to Replace, Ever.
- No Wiper Rings
- Fail Safe Spring Return Operation
- Low Friction
- Zero Leakage
- Low Air Consumption
- On / Off or Modulating Service
- Rugged Cast Iron Base
- 303 Stainless Steel Stem
- PVC Cover Tube

These actuators provide outstanding performance in harsh environments. They are available in seven different sizes to match valve thrust and stroke requirements.

**Construction:** The heart of the Onyx actuator is a Firestone Air-Stroke® rubber suspension bag and spring. These air bags are typically used as suspension elements in trucks and buses, with a track record of years of dependable service under adverse conditions. Combining an air bag actuator with a spring provides simple, rugged, dependable actuation.

#### **DURABLE FOR LONG LIFE**

Airstroke actuators are a further application of Firestone's time proven Airide springs for truck and bus suspensions. Long life and durability proven in millions of miles of heavy-duty suspension use under adverse environmental conditions.

#### NO MAINTENANCE OR LUBRICATION REQUIRED

#### NO PISTON

Airstroke actuators have no piston or sliding seals. This allows for the design of Airstroke actuators into applications where dirt or grit would destroy the seals on conventional cylinders.

#### FRICTION FREE FOR IMMEDIATE RESPONSE

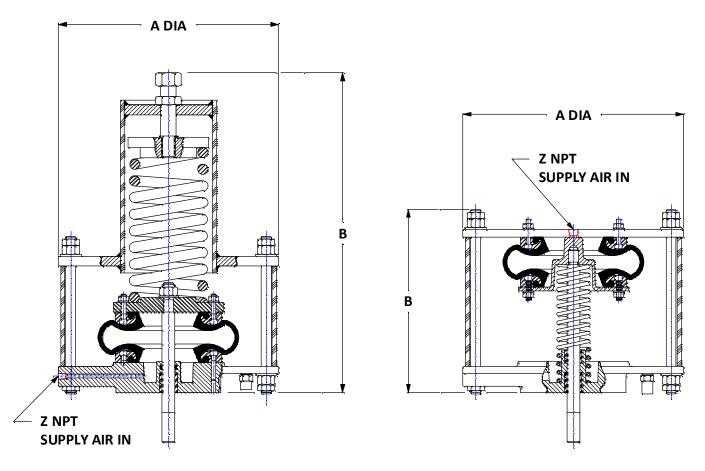
Since Airstroke actuators have no sliding seals, there is no breakaway friction as with conventional cylinders, making them ideally suited for operation with modulating positioners.





# **PFO & PFC ACTUATORS**

ACTUATOR WEIGHTS AND DIMENSIONS (All dimensions are in inches and weights are in lbs.)



#### **PFC ACTUATOR**

**PFO ACTUATOR** 

SIZE	8	12	21	30	36	40	70	80	120	200		
A DIA	7.50	11.00	11.18	13.56	14.74	19.06	16.37	19.75	23.68	31.75		
B (PFC)	10.37	22.12	27.37	34.62	37.12	62.37	50.12	52.62	59.50	N/A		
B (PFO)	7.15	9.12	11.00	13.00	16.	25	18.50	18.50	24.50	34.93		
Z NPT		1/	'4		3/	′8	1/2					
WEIGHT (PFC)	25	45	70	156	226	300	355	385	450	N/A		
WEIGHT (PFO)	20	40	46	75	119	130	140	145	200	880		

### VALVE SIZING COEFFICIENTS

		CAR				САР	DAC			САР		DAC
valve	port	Cv	1			Pre-	Full			Pre-		Full
	full	12				Pinch	Round			Pinch		Round
1/2	0.37	9		Valve	port	full	Cv	valve	port	Cv		Cv
	0.25	4			full	944	1133		full	8550		10260
			ĺ		3.0	460	552		12	5764		6917
	full	32		4	2.5	186	203	14	10	3351		4021
3/4	0.50	14			2.0	120	144		8	1837		2204
	0.37	8			1.5	51	61		6	943		1132
	full	42			full	1364	1637		full	11200		13440
	0.75	31		5	4.0	714	857		14	7745	┨┠	9294
1	0.62	28			3.0	287	344	16	12	5004		6005
	0.50	18			2.5	163	196		10	3002		3602
	0.37	6			2.0	94	113		8	1711		2053
	full	86			full	1843	2212		full	14300		17160
	1.00	35			5.0	1180	1416		16	10344		12413
1.5	0.75	18		6	4.0	567	680	18	14	6710		8052
	0.62	12			3.0	280	336		12	4500		5400
	0.50	11			2.5	152	182		10	2790		3348
					2.0	91	109		8	1632		1958
	-					_	-		-			
	full	170			full	3040	3648		full	17600		21120
	1.50	79			6.0	1436	1723		18	13400		16080
2	1.00	30		8	5.0	832	1000	20	16	9125		10950
	0.75	17			4.0	460	553		14	6000		7200
	0.50	8			3.0	233	280		12	4166		4999
					2.5	143	172		10	2650		3180
						1	-		1			
	full	346			full	4520	5424		full	26100		31320
2.5	2.00	156			8.0	2534	3040		20	15120		18144
	1.50	70		10	6.0	1149	1379	24	18	10830		12996
	1.00	29			5.0	800	960		16	7536		9043
	0.75	18			4.0	420	504		14	5167		6200
	0.50	10			3.0	208	250		12	3780		4536
									10	2475	L	2970
	0 11				0 11	(100	7(00		0.11	10500		51000
3	full	576			full	6400	7680		full	42500		51000
	2.50	293		10	10	3936	4723	20	24	21250		25500
	2.00	148		12	8.0	2057	2468	30	20	12000		14400
	1.50	66			6.0	1003	1203		18	8900		10680
	1.00	29			4.0	402	482		16	6461		7753



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**Onyx Valve Co.** manufactures high standard quality replacement sleeves for various applications and many other popular brands.

With competitive pricing and fast delivery, our replacement sleeves gives you the best option to fight abrasive, corrosive and volatile fluids and slurries.

#### Hand wheel operated pinch valves are

available with bevel gears, ball screw jacks, and with stem extenders for buried service. It is also available in open frame and fully enclosed configurations.





**Smart Box 3** is designed to ensure the progressing cavity pumps within operating limits and further protects the pumps from damages caused by following factors;

- High pressure over the design limits can stall or burn out the motor.
- Run dry conditions interrupt the flow of liquids that is needed to dissipate heat, melting the stator.
- Seal flush failure burns up the shaft seal causing the stuffing box to leak.

**Smart Box 3** is not only easy to use, but versatile enough to combine with **Onyx Pressure Sensors** to process viscous fluids, suspended solids, abrasive,