

AEGIS®

BFV SERIES



**Fully Lined High Performance Butterfly
Valves Engineered for Industries' Most
Hazardous & Corrosive Services**



AEGIS FLOW TECHNOLOGIES



WWW.AEGISVALVES.COM

BIO-TECHNOLOGY - CHEMICAL - CHLOR ALKALI - PETROCHEMICAL - PHARMACEUTICAL - PULP & PAPER - SEMICONDUCTOR
PHARMACEUTICAL - PULP & PAPER - SEMICONDUCTOR - BIO-TECHNOLOGY - CHEMICAL - CHLOR ALKALI - PETROCHEMICAL

BFV Valve	Standard Features	Optional Features
Application	Reliable Isolation & Control of Extremely Corrosive Liquids and Gases	
Conforming Standards	API 609, API 598, ASME B16.5, ASME B16.34/42, MSS SP-25 & MSS SP-68	
Size	1" - 42"	
Body	A-395 Ductile Iron	
Lining	Paraflon®	UHMPE, PDVF
External Coating	Epoxy	
Temperature	-40°F to 450°F (PFA)	0° F to 275°F (PVDF)
Process Sealing	Gas Tested, Bubble Tight per API 598/EN 12266-1-P12 Leakage Rate A	
Stem Sealing	Patent Pending Dynamically Loaded Mechanical Shaft Sealing System	
Max Pressure Rating	250 PSI	
Connection Type	ASME 150# Flanged	PN 6, PN 10, PN 16
Control Characteristics	Equal Percentage	
Flow Direction	Bidirectional	

Design Features

- Patent Pending Three Point Shaft Sealing System
- Chlorine Institute Pamphlet 6 Conformance
- Superior Permeation and Cold Flow Resistance
- Mechanically Locked Valve Linings/Full Vacuum Rating
- Enhanced 360° Radially Loaded Elastomeric Energizers
- Spherically Molded & Machined Disc/Liner
- PTFE Coated, Permanently Lubricated Bearings
- ATEX Group II, Explosive Surrounding Conformance Design
- Bi-directional Zero Leakage
- One Piece, Blow-out Proof Disc and Stem Design
- ISO 5211 Actuator Mounting
- Stainless Steel Lockable Lever Handles
- Low Operating Torque
- Conditional Life Time Shaft Seal Guarantee
- TA Luft VDI 2440 Section 5.2.6.4 Certified
- Environmentally Safe, Maintenance Free Design

Chlorine and HCL Valves

AEGIS' BFV SERIES high performance lined butterfly valves are **ideally** suited for the stringent performance requirements demanded with isolating and controlling wet and dry **chlorine gas** as well as **hydrochloric acid**. Valves for these hazardous chemicals are thoroughly cleaned, dried and packaged per our factory procedures and conform to **Chlorine Institute Pamphlet 6** requirements. Our environmentally safe, mechanical shaft sealing technology and **Paraflon®** body lining, offers industries using these highly regulated chemicals unparalleled performance and reliability.

Safety Stem Seal

AEGIS' BFV SERIES valves are designed to offer long-term maintenance-free security against the harmful affects of fugitive emissions. Our patent pending, innovative stem sealing system has revolutionized the performance benchmark for lined butterfly valves and has established a new standard for safety and reliability!

Applications

AEGIS' BFV SERIES valves are routinely specified for hazardous services such as:

- Acetic Acid
- Alcohols
- Anolyte
- Brine
- Bromine
- Caustic
- Catholyte
- Chlorine Gas
- Chlorine Condensate
- Chlorinated Brine
- Chlorinated Organics
- Chlorine Dioxide
- Chlorinated Solvents
- Chlorosulfonic Acid
- Deionized Water
- Ethylene Dichloride
- Ferric Chloride
- Hydrobromic Acid
- Hydrochloric Acid
- Hydrofluoric Acid
- Hydrogen Peroxide
- Nitric Acid
- Oleum
- Phosgene Gas
- Phosphoric Acid
- Sodium Hypochlorite
- Sulfuric Acid
- Spent Acid
- Vinyl Chloride Monomer
- Triethanolamine



1 ISO 5211 Mounting Flange

Facilitates direct mounting of actuators and manual gear operators

2 High Quality Bolting

ASTM A193-B7 (Standard), Alloy 20 and C276 options

3 External Corrosion Protection

Provided by a 3 part, highly corrosion resistant epoxy paint system

4 Zero Leakage Performance

Our enhanced 360° radially loaded elastomeric energizer transfers uniform sealing forces to the entire circumference of our Paraflon® liner.

5 Atmospheric Seals

Oversized pressed fit Delrin bushings with inner and outer Viton® seals

6 Dynamically Loaded Shaft Seal

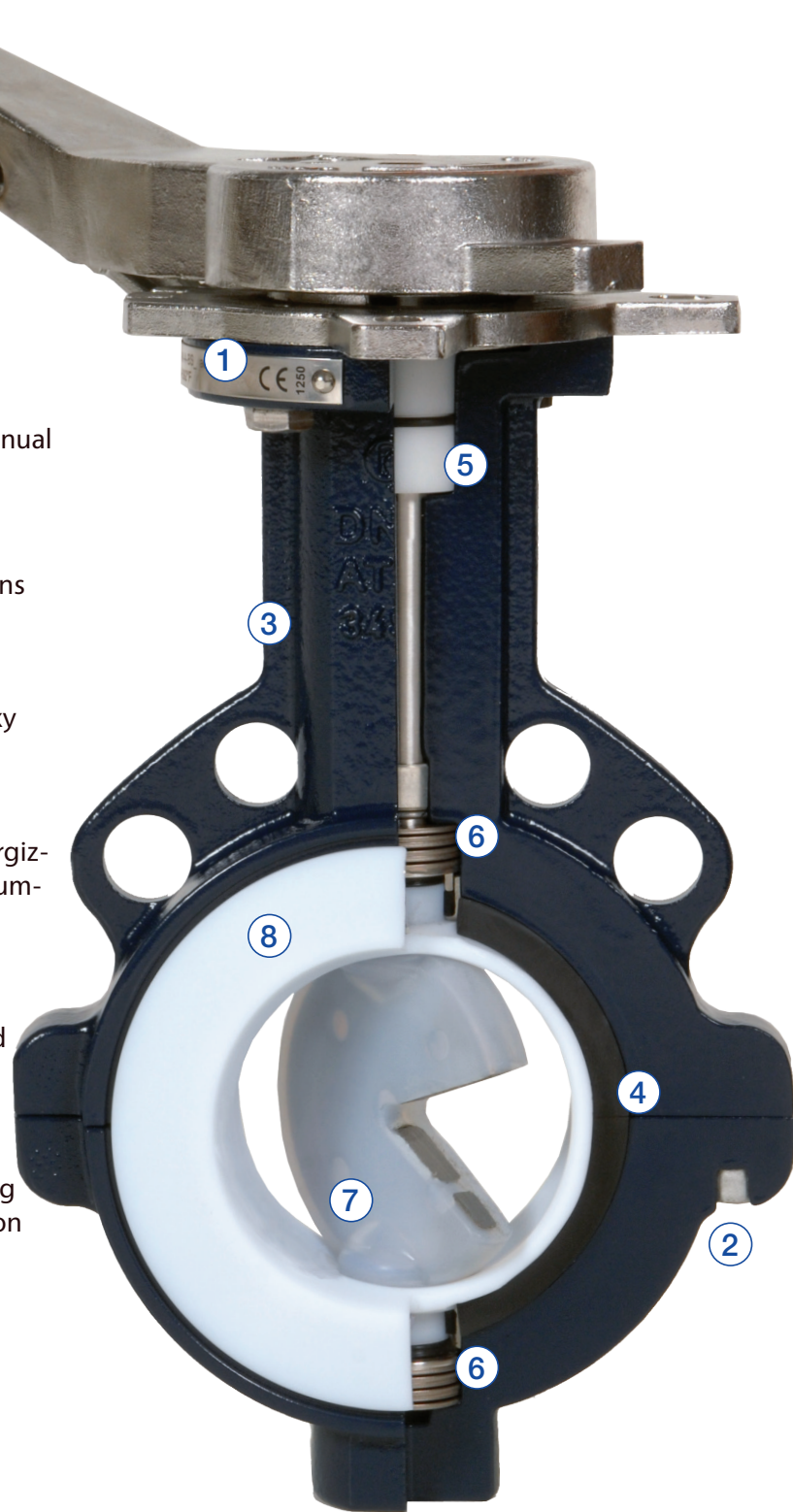
Patent pending, three point mechanical shaft sealing system ensures world class, environmental protection

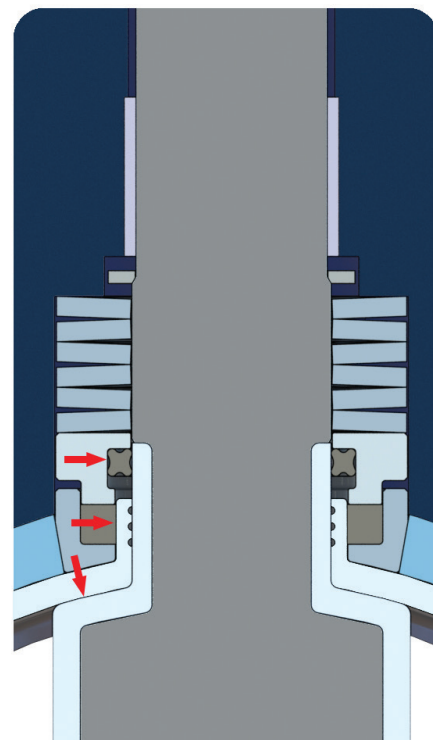
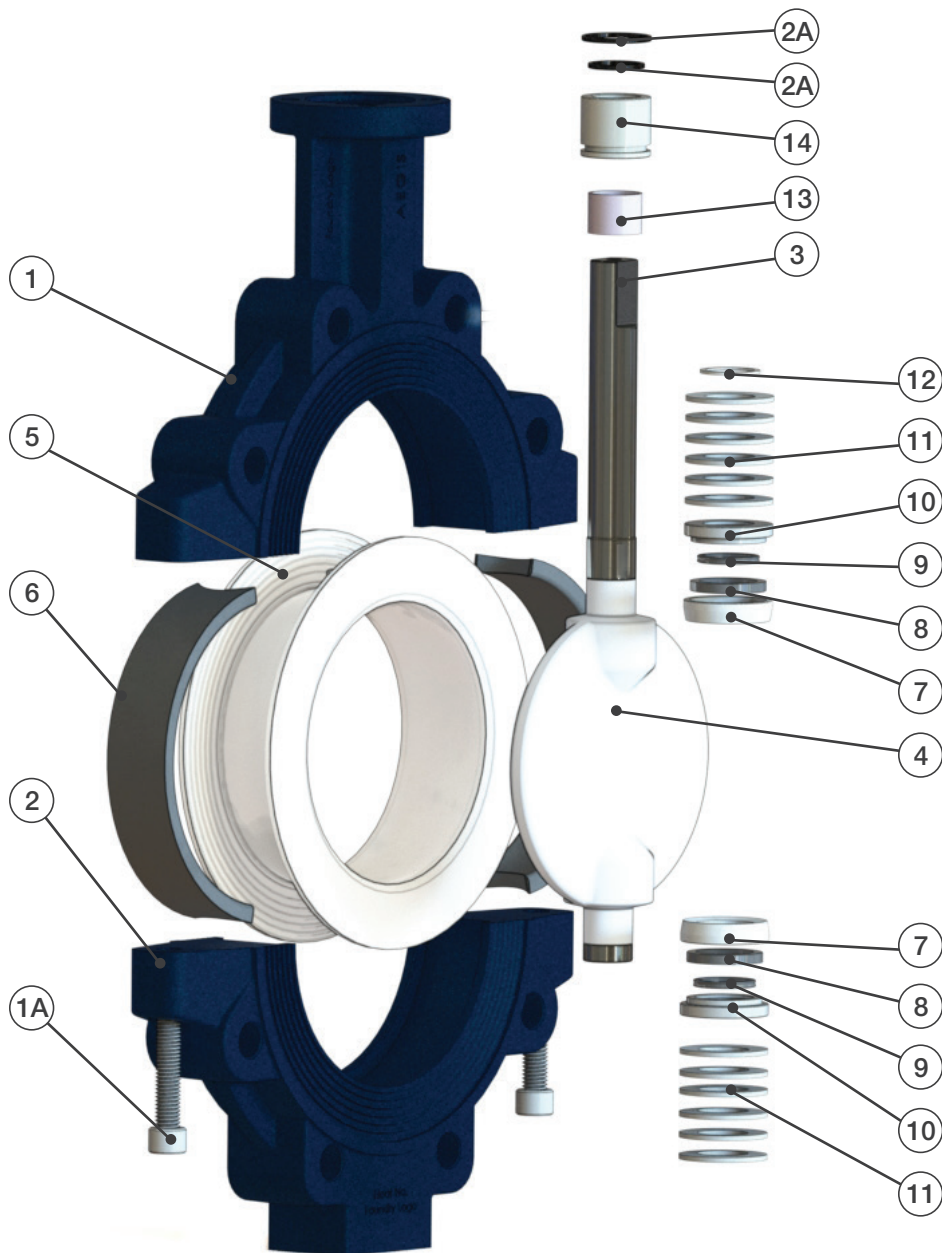
7 Robust PFA Lining

Minimum 3mm thick, spherically molded, machined and inter-locked to the metal disc core

8 Paraflon® Liner

Spherically molded and machined, features superior permeation resistance and physical properties





AEGIS' BFV SERIES
Mechanical Shaft Seal
Patent Pending

Item #	Description	Std. Material
1	Upper Body	A395 DI
2	Lower Body	A395 DI
3	Disc Core	Duplex 2205/304 SS
4	Disc Lining	PFA
5	Valve Liner	Paraflon®
6	Elastomeric Energizer	Viton
7	Pusher	316SS
8	Elastomeric Energizer	Viton

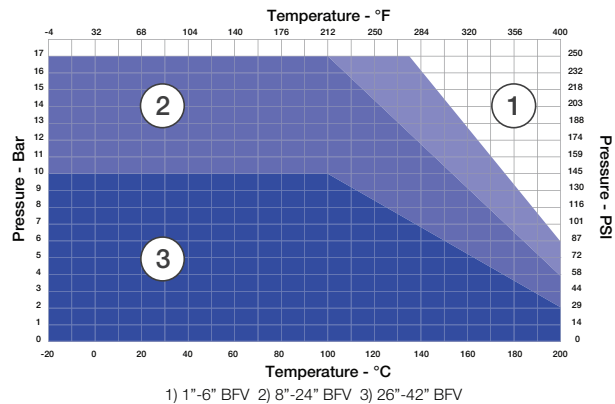
Item #	Description	Std. Material
9	Tertiary Stem Seal	Viton
10	Top Pusher	316SS
11	Belleville Springs	AISI 6150
12	Retaining Ring	316SS
13	Shaft Bushing	PTFE/Carbon Steel
14	Top Bushing	Delrin
1A	Body Bolts	A193 B7
2A	Top Bushing O-rings	Viton



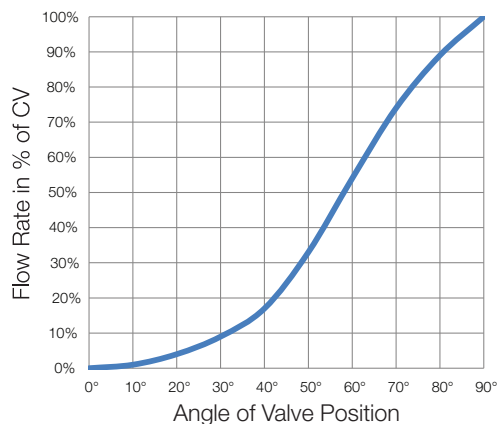
Valve Size	CV Values Based on Degrees Open and Valve Size							
	20°	30°	40°	50°	60°	70°	80°	90°
1"	4	6	10	19	30	41	55	62
1-1/2"	7	16	31	55	83	116	150	171
2"	9	22	46	77	116	164	215	241
3"	20	43	89	162	235	332	434	518
4"	27	64	130	219	353	530	657	807
6"	83	178	320	534	876	1,314	1,677	2,067
8"	130	311	629	1,075	1,625	2,498	3,320	4,180
10"	232	466	944	1,568	2,177	3,270	4,932	6,087
12"	352	703	1,344	2,297	3,600	5,356	8,054	9,740
14"	466	877	1,567	2,433	3,895	6,148	9,701	11,834
16"	675	1,310	2,001	3,252	5,614	8,852	12,500	15,460
18"	915	1,697	3,070	5,303	8,610	12,700	16,870	20,520
20"	1,227	2,231	4,104	7,368	11,224	16,251	21,430	24,800
24"	1,796	3,043	5,915	10,498	16,060	23,277	29,998	34,670
26"	1,796	3,043	5,915	10,498	16,060	23,277	29,998	34,670
30"	2,516	5,661	10,693	20,757	33,966	46,546	55,981	62,900
36"	3,747	8,431	15,925	30,912	50,584	69,319	83,370	93,674
42"	5,046	11,354	21,446	41,630	68,121	93,351	112,274	126,150

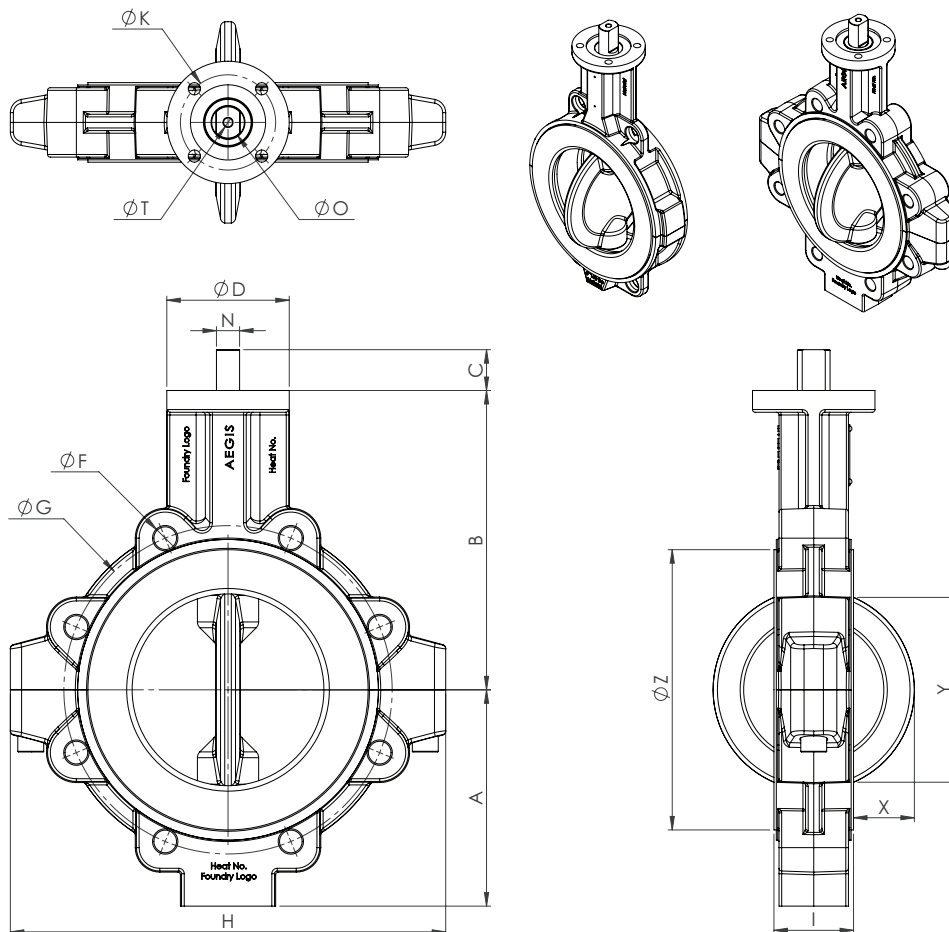
Valve Size	Break Torque		Max Allowable Shaft Torque			
			Stainless Steel		Titanium Gr. 2	
	N-m	In-Lb	N-m	In-Lb	N-m	In-Lb
1"	12	106	112	991	75	664
1-1/2"	26	230	112	991	75	664
2"	31	274	159	1,407	105	929
3"	54	478	159	1,407	105	929
4"	72	637	335	2,965	222	1,965
6"	132	1,168	600	5,310	400	3,540
8"	200	1,770	456	4,036	300	2,655
10"	334	2,956	664	5,877	470	4,160
12"	400	3,540	664	5,877	470	4,160
14"	540	4,779	1,225	10,842	875	7,744
16"	600	5,310	1,225	10,842	875	7,744
18"	720	6,373	2,900	25,667	2,050	18,144
20"	780	6,904	2,900	25,667	2,050	18,144
24"	979	8,665	6,070	53,724	4,300	38,058
26"	979	8,665	6,070	53,724	4,300	38,058
30"	2,200	19,472	10,375	91,826	7,320	64,787
36"	2,970	26,287	10,375	91,826	7,320	64,787
42"	3,960	35,049	10,375	91,826	7,320	64,787

Pressure - Temperature Diagram



Flow Curve





Valve Size	A	B	C	ϕD	H	ϕG	N x ϕF	I	ϕK	ϕJ	N	ϕO	ϕT	X	Y	ϕZ	ϕ Disc
1"	1.81	3.70	0.75	2.56	3.86	3.13	4 x 1/2"-13 UNC	1.61	1.97	4 x .275	.354*	0.51	1/4"-UNC	0.00	0.47	2.05	0.98
1-1/2"	1.77	3.74	0.75	2.56	4.72	3.87	4 x 1/2"-13 UNC	1.69	2.76	4 x .350	.433*	0.55	1/4"-UNC	0.04	0.51	2.99	1.77
2"	2.13	5.12	0.75	3.54	5.75	4.75	4 x 5/8"-11 UNC	1.69	2.76	4 x .350	.433*	0.55	1/4"-UNC	0.16	1.02	3.39	1.97
3"	3.94	6.89	0.75	3.54	6.89	6.00	4 x 5/8"-11 UNC	1.89	2.76	4 x .350	.433*	0.63	1/4"-UNC	0.59	2.40	4.88	3.07
4"	4.80	7.09	0.98	3.54	9.45	7.50	8 x 5/8"-11 UNC	2.13	2.76	4 x .350	.551*	0.71	1/4"-UNC	0.91	3.27	6.02	3.90
6"	6.26	8.66	1.18	3.54	12.99	9.50	8 x 3/4"-10 UNC	2.24	2.76	4 x .350	.669*	0.94	5/16"-UNC	1.81	5.39	8.11	5.83
8"	6.30	9.45	1.02	4.92	14.57	11.75	8 x 3/4"-10 UNC	2.44	4.02	4 x .433	0.748	0.94	5/16"-UNC	2.64	7.28	10.24	7.68
10"	7.95	10.63	1.18	4.92	17.95	14.25	12 x 7/8"-9 UNC	2.76	4.02	4 x .433	0.866	1.18	5/16"-UNC	3.46	9.25	12.13	9.65
12"	9.25	11.81	1.18	4.92	20.87	17.00	12 x 7/8"-9 UNC	3.15	4.02	4 x .433	0.866	1.18	5/16"-UNC	4.25	11.18	14.69	11.61
14"	10.63	12.99	1.46	5.91	22.83	18.75	12 x 1"-8 UNC	3.74	4.92	4 x .510	1.063	1.42	5/16"-UNC	4.80	12.76	16.30	13.31
16"	11.77	14.37	1.46	5.91	25.20	21.25	16 x 1"-8 UNC	4.13	4.92	4 x .510	1.063	1.57	5/16"-UNC	5.59	14.72	18.31	15.28
18"	13.39	15.75	1.97	6.89	26.77	22.75	16 x 1-1/8"-7 UNC	4.61	5.51	4 x .670	1.417	1.97	5/16"-UNC	6.34	16.61	20.28	17.24
20"	14.17	17.13	1.97	6.89	29.53	25.00	20 x 1-1/8"-7 UNC	5.08	5.51	4 x .670	1.417	1.97	5/16"-UNC	7.01	18.43	22.44	19.09
24"	16.54	20.08	2.52	8.27	34.25	29.50	20 x 1-1/4"-7 UNC	6.06	6.50	4 x .826	1.811	2.36	3/8"-UNC	8.43	22.20	26.46	23.03
26"	20.07	16.85	2.52	8.27	36.61	31.75	24 x 1-1/4"-7 UNC	6.06	6.50	4 x .826	1.811	2.36	3/8"-UNC	8.43	22.20	30.50	23.03
30"	23.94	23.94	2.20	11.81	40.94	36.00	28 x 1-1/4"-7 UNC	6.06	10.00	8 x .670	2.165	2.83	3/8"-UNC	11.38	28.19	33.50	28.82
32"	24.80	24.80	2.20	11.81	43.70	38.50	28 x 1-1/2"-6 UNC	6.06	10.00	8 x .670	2.165	2.83	3/8"-UNC	12.36	30.20	35.20	30.79
36"	26.93	26.93	2.20	11.81	48.50	42.75	32 x 1-1/2"-6 UNC	6.06	10.00	8 x .670	2.165	2.83	3/8"-UNC	14.17	33.86	40.00	34.41
40"	30.35	30.35	2.20	11.81	52.95	47.25	36 x 1-1/2"-6 UNC	6.06	10.00	8 x .670	2.165	2.83	3/8"-UNC	16.30	38.19	43.35	38.66
42"	30.24	30.24	2.20	11.81	55.20	49.50	36 x 1-1/2"-6 UNC	6.06	10.00	8 x .670	2.165	3.15	3/8"-UNC	17.32	40.24	46.06	40.71

*Stem profile = Double D





ENVIROBox



**ELECTRO-PNEUMATIC
POSITIONER**



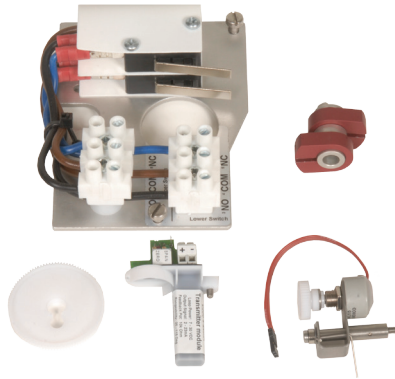
**PNEUMATIC
POSITIONER**



**DIGITAL
POSITIONER**



PRESSURE REGULATOR



FEEDBACK MODULE



POSITION INDICATOR



ORDERING INFORMATION



1	Size
	1" - 42"

2	Disc
P	PFA
C	PFA/AS
V	PVDF
E	ECTFE
S	316SS
F	316SS Polished
T	Titanium
H	Hastelloy

3	Liner
T	Paraflon®
C	Paraflon®/AS
P	PTFE
U	UHMPE
X	ETFE

4	Elastomer
V	Viton
S	Silicone
E	EPDM

5	Body
G	A395 Ductile Iron
S	Stainless Steel
C	Carbon Steel

6	Body Style
L	Lug
W	Wafer

7	Class
A	ANSI 150#
B	DIN PN 6
C	DIN PN 10
D	DIN PN 16

8	Operator
BS	Bare Shaft
LH	Hand Lever
MG	Manual Gear
DA	Double Acting Actuator
FC	Fail Closed Actuator
FO	Fail Open Actuator

9	Accessories
A1	Pneumatic Positioner
A2	Electro-Pneumatic Positioner
A3	Proximity Switch Box
A4	Mico Limit Switch
A5	Solenoid Valve
A6	Filter Regulator w/ Gauge
A7	Manual Override

9	Cleaning
C1	Chlorine
C2	UPW
C3	Oxygen

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Aegis Flow Technologies L.L.C.
6041 Industrial Dr. - 70734
Geismar, LA USA - 225-673-9990

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