AEGIS®

HPCV Series

High Performance Chlorine Service Ball Valves Engineered for Environmentally Safe, Zero Leakage Performance

ASSOCIATE CHLORINE INSTITUTE MEMBERS

ABS Quality Evaluations, Inc. ★ Management System Certification ★

ISO 9001:2008

HPCV Valve	Standard Features	Optional Features
Application	Reliable Isolation & Control of Extremely Hazardous Liquids and Gas	
Conforming Standards	ASME B16.5, B16.10, B16.34, API 598, Chlorine Institue Pamphlet #6	
Size	1/2" - 10"	
Body	A-352 LCC	A494 M35-1, A351 CF8M
Ball/Stem	Hastelloy C276	316SS, Inconel 600, M400
External Coating	3 Component Epoxy Paint	
ANSI Class Rating	150#, 300#	600#
Process Sealing	Gas Tested Bubble Tight per API 598/EN 12266-1/P12 Leakage Rate A	
Stem Sealing	Mechanical Shaft Sealing System with Leak Detection Port	
Face to Face Dimension	150# & 300# Ball Valve	300# Globe Valve
Temperature Rating	-150°F to 500°F	
Control Characteristics	Equal Percentage	
Flow Direction	Bi-directional	Uni-directional (Vented Ball)
Cleaning Preparation	Chlorine Cleaned	Oxygen Cleaned

Design Features

- One Piece Body Design
- Extended Welded Body/Bonnet Construction
- TA Luft VDI 2440 Section 5.2.6.4 Certified
- Bi-directional Paraflon® Self Relieving Seats
- Fugitive Emissions Monitoring Port
- Chlorine Institute Pamphlet 6 and 57 Conformance
- Blow-out Proof Stem
- Lockable Lever Handles
- ISO 5211 Actuator Mounting
- Double-D Stem Profile
- Low Torque
- GVF (ANSI 300# Globe Valve)

Chlorine and HCL Valves

AEGIS' HPCV SERIES high integrity ball valves feature the most advanced technology available for isolating and controlling industries' most hazardous process liquids and gases. Engineered to exceed industry's pertinent standards and Method 21 requirements of the Clean Air Act, the HPCV valves incorporate design and sealing technologies that are essential in assuring reliable long term performance and environmental protection. **AEGIS' HPCV SERIES** are routinely specified to satisfy the stringent safety requirements associated with processing and handling Dry Liquid Chlorine and Anhydrous HCL.

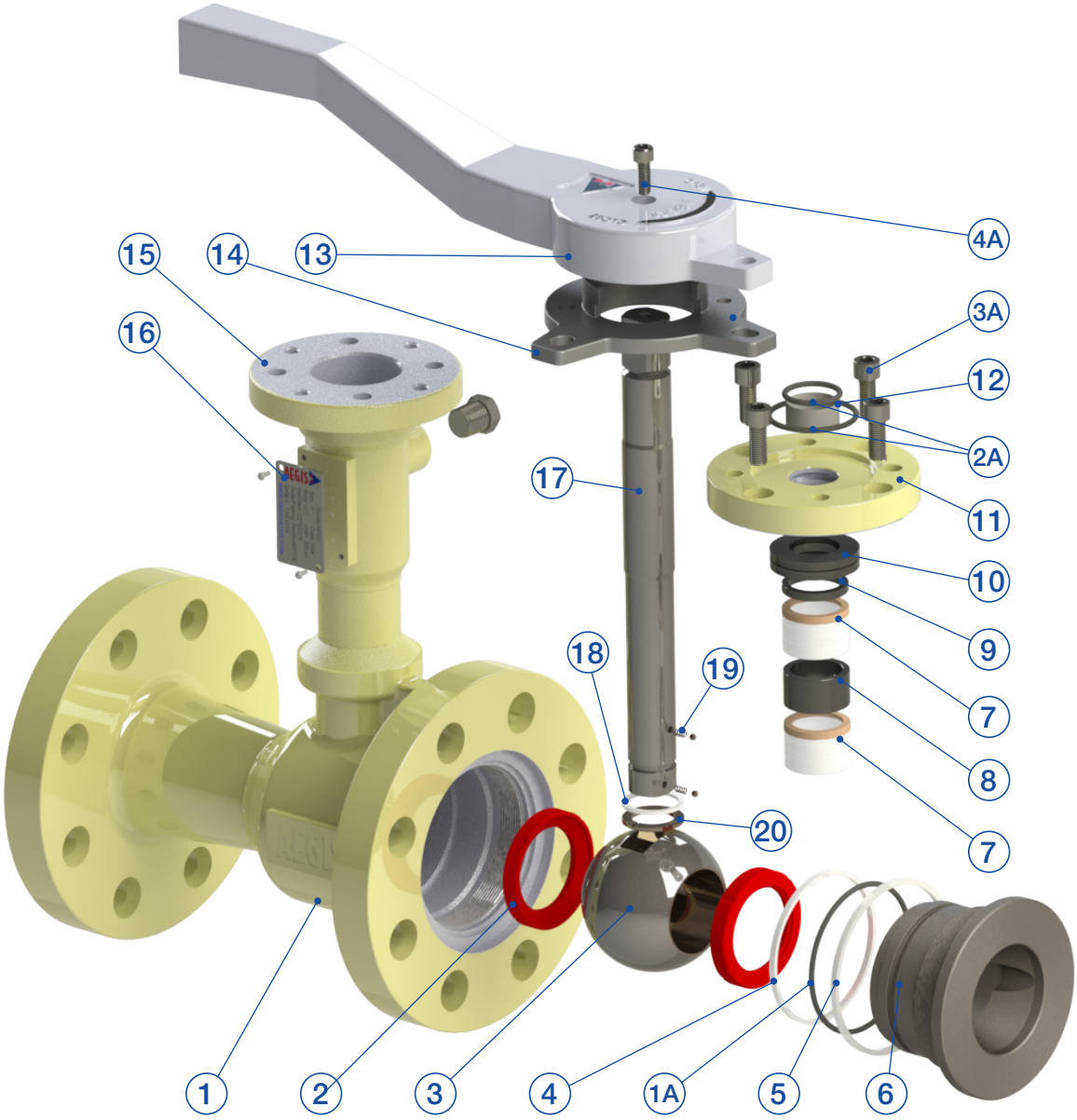
Safety Stem Seal

AEGIS' HPCV SERIES valves are designed to offer long-term maintenance-free security against the harmful effects of fugitive emissions. The stem seal incorporates a double set of live loaded virgin PTFE packing system with environmental o-ring seals for the bonnet and shaft.

Applications

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

- Ammonia
- Chlorine
- Ethylene Oxide
- Nitric Acid
- Anhydrous HCL
- Chlorine TriFluoride
- Fluorine
- Sulfur Chloride
- Anhydrous HF
- Chlorinated Solvents
- Isocyanates
- Phosgene
- Bromine
- Ethylene Dichloride
- Metal Alkyls
- Vinyl Chloride Monomer



Item #	Description	Std. Material	Item #	Description	Std. Material
1	Body	LCC*	13	Hand Lever (HL)	CF8
2	Seat	Paraflon®	14	HL Lockout Flange	CF8
3	Ball	C276**	15	Bonnet	LCC*
4	2nd Body Seal	Virgin PTFE	16	Serial Nameplate	316SS
5	3rd Body Seal	Virgin PTFE	17	Stem	C276**
6	Body Insert	2205 Duplex**	18	Axial Thrust Washer	Virgin PTFE
7	Packing set	Virgin PTFE	19	Ground Ball and Spring	C276
8	Lantern Ring	316SS	20	Split Retaining Rings	C276
9	Packing Pusher	316SS	1A	Body O-ring	Viton
10	Belleville Washers	302SS	2A	Top Cover O-rings	Viton
11	Top Cover Flange	316SS	3A	Socket Head Capscrews	316SS
12	Stem Bushing	Technopolymer	4A	Socket Head Capscrews	316SS

• Low temperature carbon steel bodies should only be used if the process media contains <30 ppm moisture.

Available Options: *: CF8M, M35-1, CW12MW, **: 316SS, M400

1 Heavy Duty SS Lockable Handle
Designed to withstand aggressive environments and provides a safe, accurate and reliable means of operating and locking out the valve

2 Atmospheric Seals
Radially loaded Viton O-rings isolates the mechanical shaft seals from external contaminants

3 ISO 5211 Mounting Flange
Allows easy assembly and direct mounting of actuators and gear operators

4 Extended Bonnet
Isolates the stem seals from the effects of large process temperature differentials and facilitates operation when valves are mounted in insulated piping

5 Dynamically Loaded Stem Seal
Environmentally secure design featuring live loaded PTFE Chevron Packing

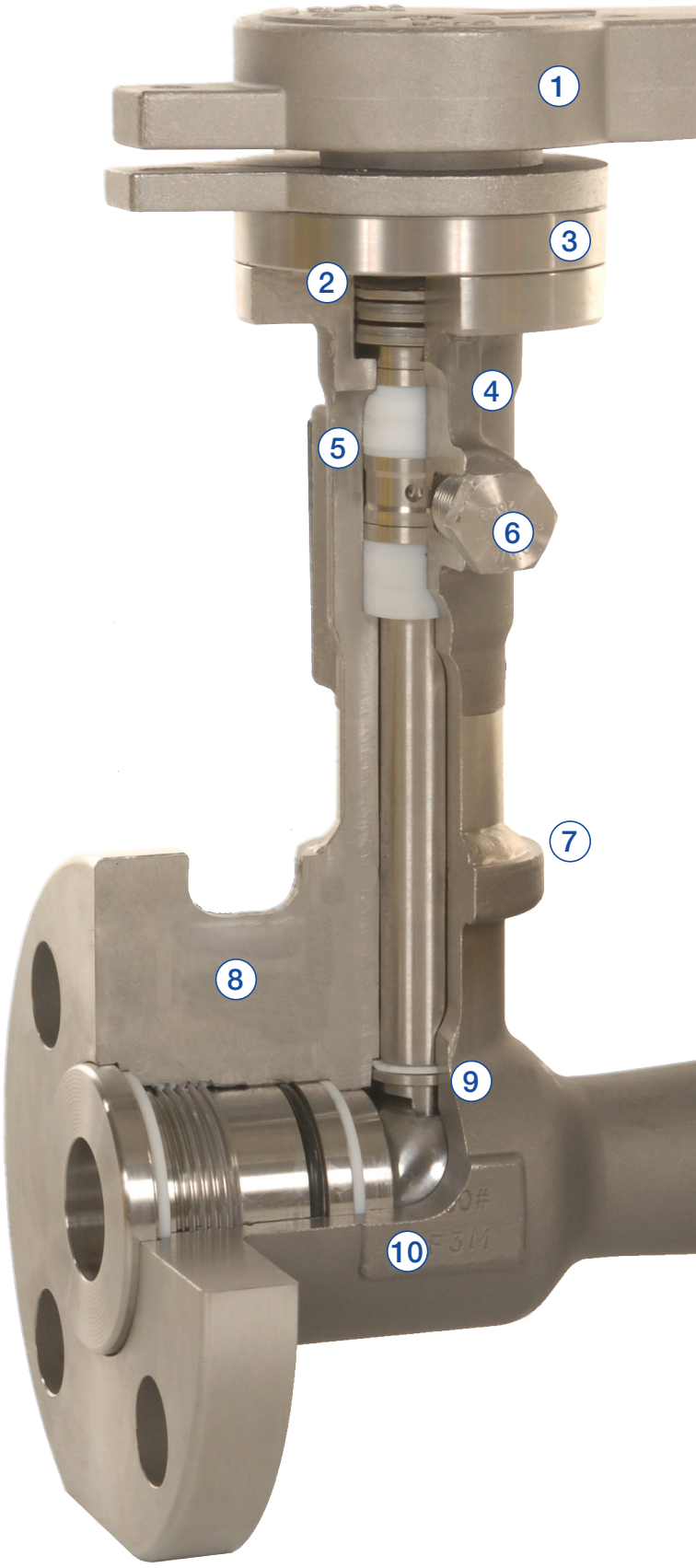
6 Monitoring Port
Facilitates monitoring the stem sealing system

7 High Integrity CNC Welded Connection
Certified GTAW welding processes performed by computer equipment

8 High Integrity Level Two Casting
Domestically sourced, minimum level two quality

9 Blowout Proof Stem
Stem is secured in place by heavy duty retaining rings

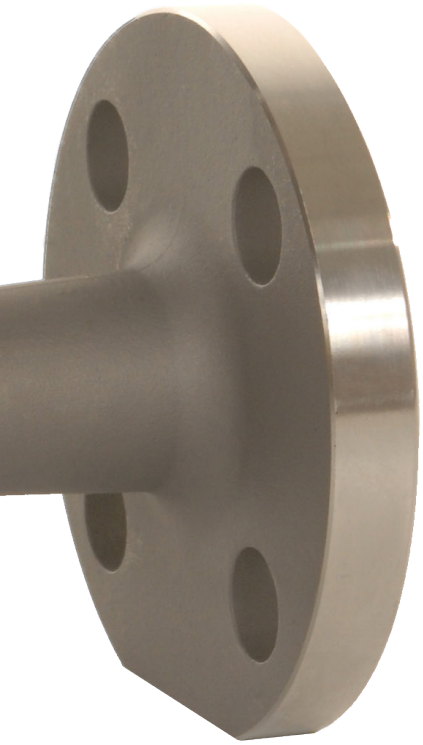
10 Chambered Self Relieving Seats
Securely anchored and energized onto the sealing surface of the ball

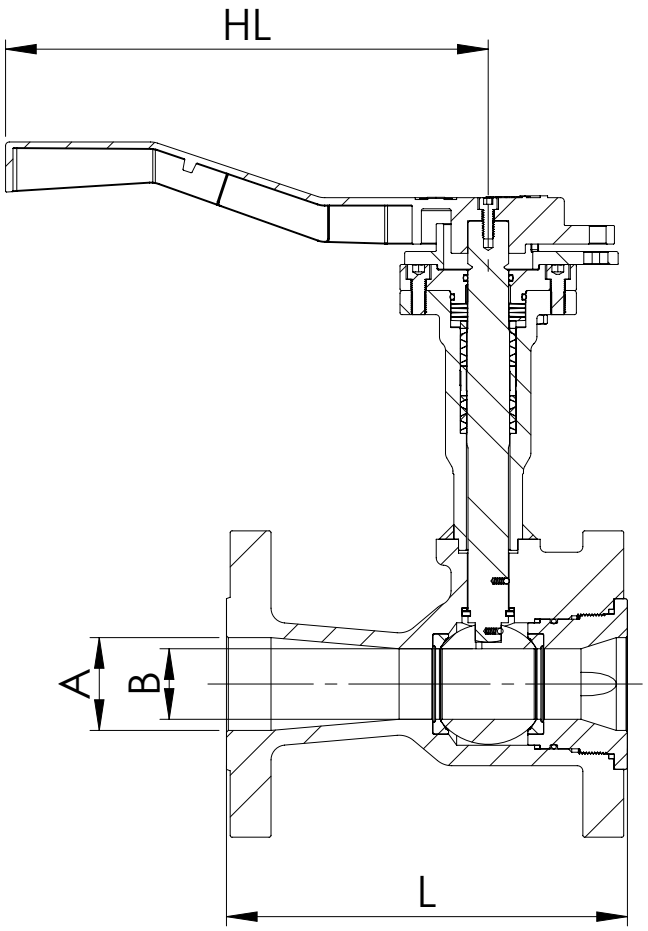


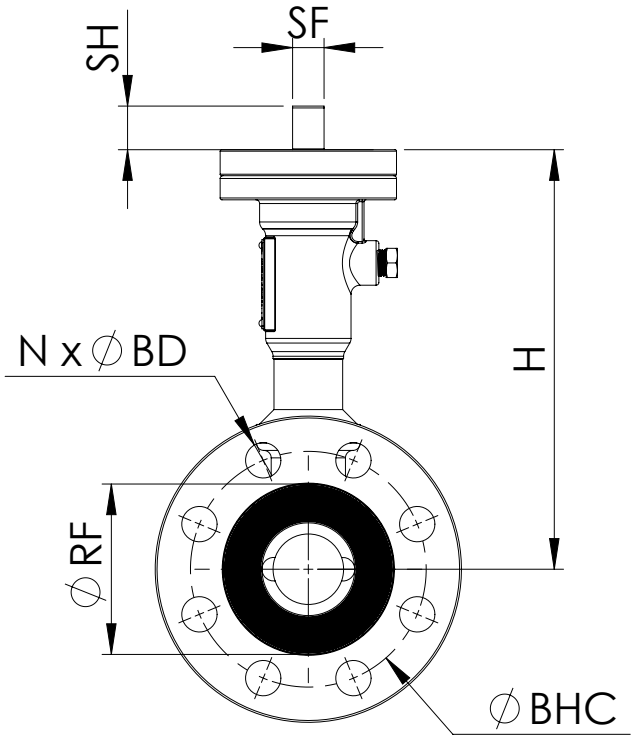
AEGIS HPCV Series

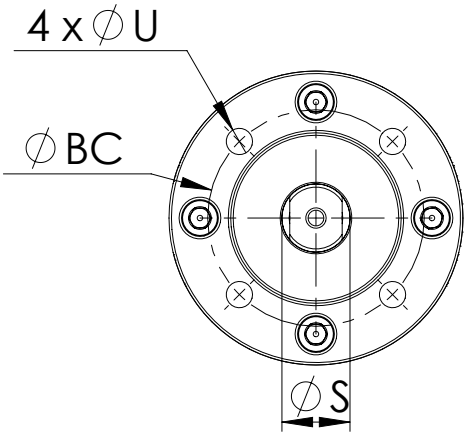
Engineered for Performance and Reliability in Industries Most Hazardous Processes

- **ISO 9001:2008 Certified**
  Aegis Flow Technologies is ISO 9001:2008 certified
- **Chlorine Cleaned**
  All HPCV Chlorine service valves are cleaned, tested, dried and packaged in accordance with Chlorine Institute Pamphlet #6 specifications.
- **Comprehensive Manufacturing and Testing**
  All components are manufactured using modern computer-aided design Software as well as CNC machining centers. Each valve is subject to the following tests prior to assigning its serial numbered identification tag:
  - Shell Test in accordance with ASTM B16.34
  - Seat Test in accordance with API 598
  - Ultraviolet Black light test to assure chlorine cleaning
  - Torque testing
  - Seat Test according to API 598 - Bubble tight
- **Fugitive Emissions Testing**
  Valves have been subjected to rigourous cycle testing with helium to ensure compliance with demanding industrial standards such as TA-Luft and the Clean Air Act.
- **Traceability**
  Every valve is assigned an individual serial numbered stainless steel tag after successfully completing all testing requirements. This unique serial number enables total traceability to Mill and Test Certification for the life of the valve.
- **Positive Material Identification**
  Is performed on critical components and allows complete traceability
- **External Corrosion Protection**
  All carbon steel body valves are protected by a 3 part highly corrosion resistant epoxy paint.









Valve Size	CV	Break Torque (in-lb)	Run Torque (in-lb)
1/2"	10	82	34
3/4"	19	87	37
1"	45	124	62
1-1/2"	125	223	112
2"	175	310	170
3"	370	750	450
4"	800	1260	700
6"	1050	1970	1160
8"	3200	4436	2560
10"	3900	8364	4900

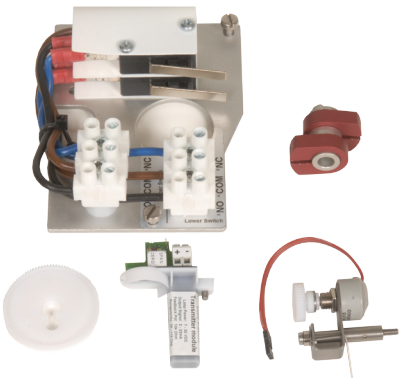
Valve Size	A	B	150# Class			300# Class			300# GV	H	HL	øS	SF	SH	RF	øBC	4xøU
			L	BHC	NxøBD	L	BHC	NxøBD	L								
1/2"	0.50	0.50	4.25	2.38	4 x 5/8"	5.50	2.63	4 x 5/8"	6.00	6.28	7.87	0.56	0.433	0.75	1.38	1.97	0.28
3/4"	0.75	0.50	4.62	2.75	4 x 5/8"	6.00	3.25	4 x 3/4"	7.00	6.28	7.87	0.56	0.433	0.75	1.70	1.97	0.28
1"	1.00	0.75	5.00	3.13	4 x 5/8"	6.50	3.50	4 x 3/4"	8.00	6.87	7.87	0.56	0.433	0.75	2.00	1.97	0.28
1-1/2"	1.50	1.18	6.50	3.88	4 x 5/8"	7.50	4.50	4 x 7/8"	9.00	8.70	10.23	0.87	0.669	0.93	3.00	2.75	0.34
2"	2.00	1.50	7.00	4.75	4 x 3/4"	8.50	5.00	8 x 3/4"	10.50	8.90	10.23	0.87	0.669	0.93	3.62	2.75	0.34
3"	3.00	2.45	8.00	6.00	4 x 3/4"	11.12	6.63	8 x 7/8"	12.50	10.75	13.38	1.11	0.866	1.23	5.00	4.01	0.44
4"	4.00	3.00	9.00	7.50	8 x 3/4"	12.00	7.88	8 x 7/8"	14.00	11.25	13.38	1.11	0.866	1.23	6.25	4.01	0.44
6"	6.00	3.70	10.50	9.50	8 x 7/8"	15.88	10.63	12 x 7/8"	17.50	11.89	13.38	1.11	0.866	1.23	8.50	4.01	0.44
8"	8.00	5.70	11.50	11.75	8 x 7/8"	16.50	13.00	12 x 1"	22.00	14.25	MG	1.65	1.220	1.96	10.62	5.51	0.70
10"	10.00	7.40	13.00	14.25	12 x 1"	18.00	15.25	16x1-1/8"	24.50	14.50	MG	1.65	1.220	1.96	12.75	5.51	0.70

Electro-Pneumatic Positioner

Pneumatic Positioner

Digital Positioner

Pressure Regulator



Feedback Module

Position Indicator

Ordering Information

1	Size
	1/2"
	3/4"
	1"
	1-1/2"
	2"
	3"
	4"
	6"
	8"
	10"

2	Class
V1	150#
V2	300#
V3	600#
V4	300# GVF

3	Body
B1	A350 LF2
B2	A351 CF8M
B3	A216 WCB
B4	A352 LCC*
B5	A352 LC3
B6	A744 CN7M
B7	A494 M35-1
B8	CW12MW C276

*Denotes standard

4	Stem
M1	Hastelloy C276*
M2	Hastelloy C22
M3	Hastelloy C4
M4	Monel K500
M6	Inconel 600
M7	316SS
M8	2205 Duplex
M9	Other

5	Ball
K1	Hastelloy C276*
K2	Hastelloy C22
K3	Hastelloy C4
K4	Monel K500
K6	Inconel 600
K7	316SS
K8	2205 Duplex
K9	Other

6	Seats
S1	Paraflon®*
S2	PTFE
S3	RPTFE
S4	PEEK
S5	UHMPE
S6	25% CFPTFE

7	Packing
P1	PTFE*
P2	Graphoil
P3	Other

8	Cleaning
CL	Chlorine*
CX	Peroxide
CO	Oxygen

9	Operator
BS	Bare Shaft
HL	Hand Lever*
MG	Manual Gear
DA	Double Acting Acutator
FC	Fail Closed Acutator
FO	Fail Open Actuator

10	Accessories
PS	Proximity Switch
MS	Micro Switch
PP	Pneumatic Positioner
EP	Electro-Pneumatic Positioner
PD	Digital Positioner
PR	Pressure Regulator
SV	Solenoid Valve

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