

INSTALLATION AND MAINTENANCE INSTRUCTIONS

For Chemline P-Series Pneumatic Actuators

General:

The P series actuator is a double-opposed piston, double rack and pinion, quarter-turn operator.

The body and end caps are Polyamide plastic in the PP-Series, Rilsan-coated Aluminum in the PA and PG-Series, 316 stainless steel in the P3-Series and Xylan-coated Aluminum in the PH-Series.

This style of actuator has two opposed pistons with racks engaging with a single pinion on actuator shaft. Racks and pinion engage with massive teeth over the full length of the pinion, resulting in balanced forces with minimal backlash. The lower air port opens the actuator in a counter-clockwise direction and the upper port closes the actuator in a clockwise direction, looking from the top of the actuator.

Operating medium requirement:

1. The condition and quality of the compressed air supply to an actuator will affect the efficiency and the life of the seals, bearings and actuator in general. Actuators are to be used with clean, dry air, gas or non-aggressive fluids for satisfactory operation, although lubricated air is acceptable and fluids must be compatible with actuator internals and contain no suspended particles. Natural gas can also be used with the Rilsan-coated aluminum models.
2. We recommend installing a shutoff valve ahead of the actuator to allow the removal of the specific valve and actuator.
3. If air lubricators are used, the lubricant selected must be compatible with Nylon 66 (also known as Polyamide) and Nitrile (also known as Buna -N).
4. Factory assembled units are sized for operating air pressures of 60 psi minimum to 120 psi maximum. If lower air supply pressures are available, actuator/valve combination has to be resized.
5. Actuator operating environment temperature limits are -32°C to 90°C (-32°C to 265°C for the PH-Series).

Maintenance & Installation Instructions P Series Actuators cont.***Installation:***

1. Unpowered actuators are in their “normal” state and are mounted onto valves placed in their fail-safe state, resulting in “Normally-Closed” or “Normally-Open” assemblies. The flats and the ISO slot on the top output shaft, as well as the indicator knob, should be aligned or modified to indicate the valve position.
2. Remove the valve handle according to that valve’s maintenance manual.
3. On old-style multi-port valves, install the interference-fit saddle on/around the neck of the valve, tighten the set-screws, drop/tap the coupling into the hole in the saddle and onto the valve shaft, then mount the actuator with appropriate nuts/bolts/washers.
4. On Type-21/23 ball valves and Type-56/57 butterfly valves, center the mounting bracket on the ISO mounting pad, secure with nuts/bolts/washers, drop/tap the coupling onto the valve shaft and mount the actuator as above.
5. Test the actuator for alignment by cycling to the fully open and fully closed positions. Loosen mounting nuts and adjust if necessary, then retighten the nuts and retest for positioning. All nuts/bolts should be snug (hand-tight) but not excessively over-tightened.
6. If the mounted valve is installed other than straight up (actuator on top), the actuator should be supported separately in order to prevent side-loading, loosening of fasteners and increased pressure on the valve stem.

Maintenance:

‘P’ Series double rack and pinion actuators do not need any preventive maintenance. However, we recommend that you stock the spare parts listed below. Specify actuator model# and drawing part# or description when ordering. Refer to **ASSEMBLY DRAWING PPNA rev 0**. and proceed as follows:

- (1) One set of piston O-rings (7)
- (2) One set of end cap O-rings (6)
- (3) One set of output shaft O-rings (8 & 9)
- (4) Retaining ring shaft (10)
- (5) Flat Washer (11)

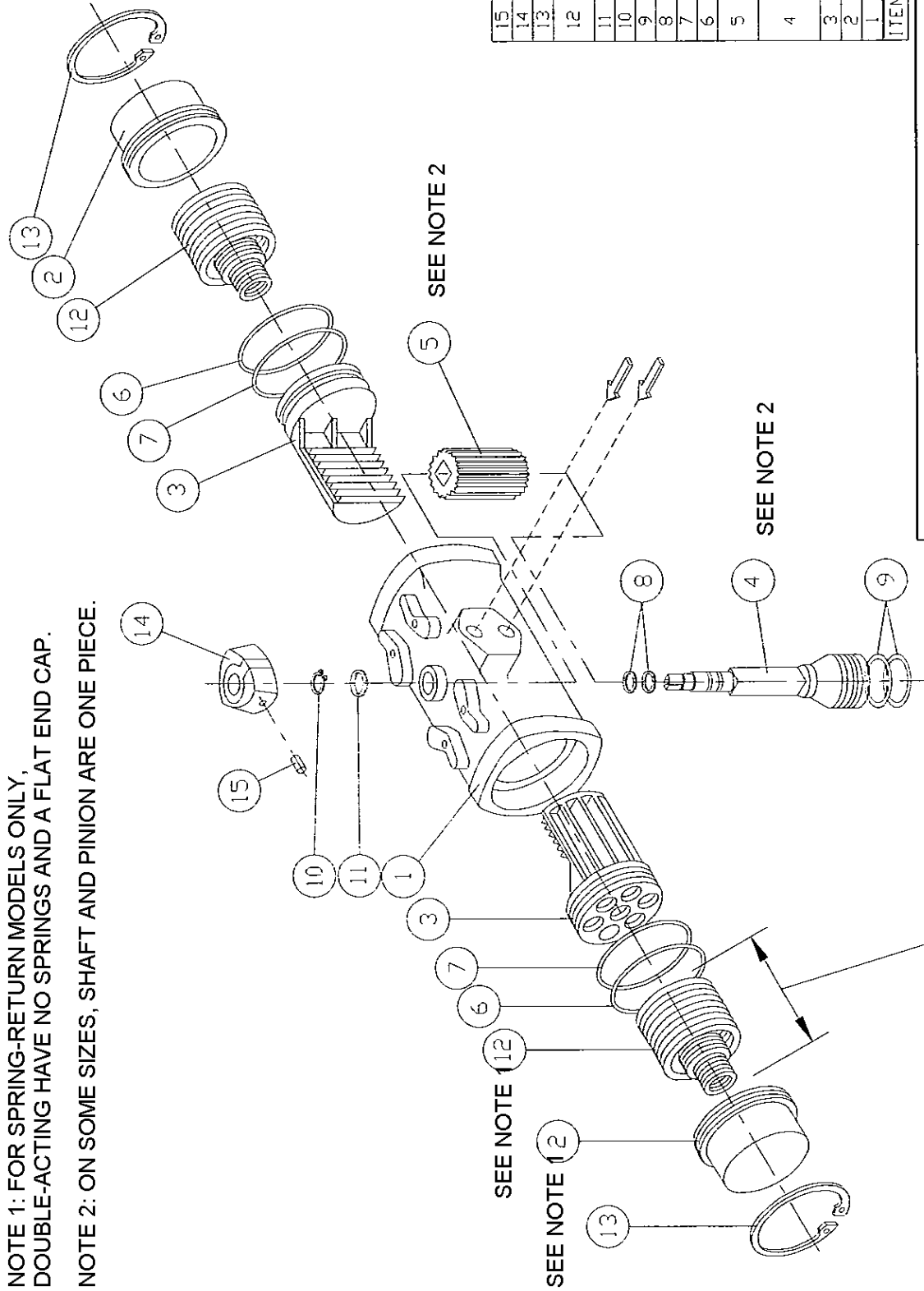
Maintenance & Installation Instructions P Series Actuators cont.

IMPORTANT - Extreme care should be taken when disassembling end caps on spring return models as they are under tension.

1. Isolate actuator from electrical power supply and compressed air supply. Remove from line.
2. Sandwich actuator lengthwise through end caps (2) in a hydraulic press or large vise. Remove end cap retaining ring (13) and gradually release hydraulic pressure, or open vise until springs are fully released.
3. To replace piston O-rings (7) and end cap O-rings (6), remove end cap (2), spring(s) (12) and O-rings (6 & 7).
4. To replace output shaft O-rings (8 & 9), retaining ring shaft (10) and flat washers (11), remove position indicator (14), lift up and replace retaining ring (10) and flat washer (11).
5. Pull down shaft (4) and/or pinion (5), remove and replace shaft top O-rings (8) and shaft bottom O-rings (9).
6. To reassemble, reinstall the shaft (4) and/or pinion (5), washer (11) and retaining ring (10). Sit the actuator on a benchtop with the air port/solenoid mounting pad side of the actuator body (1) facing you while the slotted top part of the shaft (4) is pointing up. Slide the pistons (3) into the body from either end so that the teeth on the left-hand piston face you while the teeth on the right-hand piston face away from you. Ensure that both sets of piston teeth face and engage the pinion/shaft, then turn the shaft clockwise, as seen from the top, to pull the pistons into the body. Confirm that both pistons bottom out against the shaft properly by checking that the slot on top of the actuator shaft is pointing end-to-end when the shaft can turn no further and by comparing the distance from both piston faces to the ends of the body. If pistons are not engaged identically, turn shaft counterclockwise to push out pistons and hold one or both pistons to skip pinion teeth, if applicable, and repeat until both pistons bottom out at the same time. This bottoming out simulates the 90-degree rotation that occurs when air is applied to the actuator. Proceed with spring installation, if applicable, then reverse steps 2, 3 and 4.

Periodic checks should be performed to ensure tightness of all fittings.

NOTE 1: FOR SPRING-RETURN MODELS ONLY,
DOUBLE-ACTING HAVE NO SPRINGS AND A FLAT END CAP.
NOTE 2: ON SOME SIZES, SHAFT AND PINION ARE ONE PIECE.



15	SET SCREW	1
14	POSITION INDICATOR	1
13	RETAINING RING (END CAP)	2
12	SPRING SET	1
11	FLAT WASHER	1
10	RETAINING RING (SHAFT)	1
9	O-RING (SHAFT BOTTOM)	2
8	O-RING (SHAFT TOP)	2
7	O-RING (PISTON)	2
6	O-RING (END CAP)	2
5	PINION	1
4	SHAFT	1
3	PISTON (WITH RACK)	2
2	END CAP	2
1	ACTUATOR BODY	1
ITEM	DESCRIPTION	QTY

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APPD DAVE HURLEY	9/4/01
PROD LEO LESTER	9/4/01
WO# / CO#	
FILE	

CHEMLINE PLASTICS

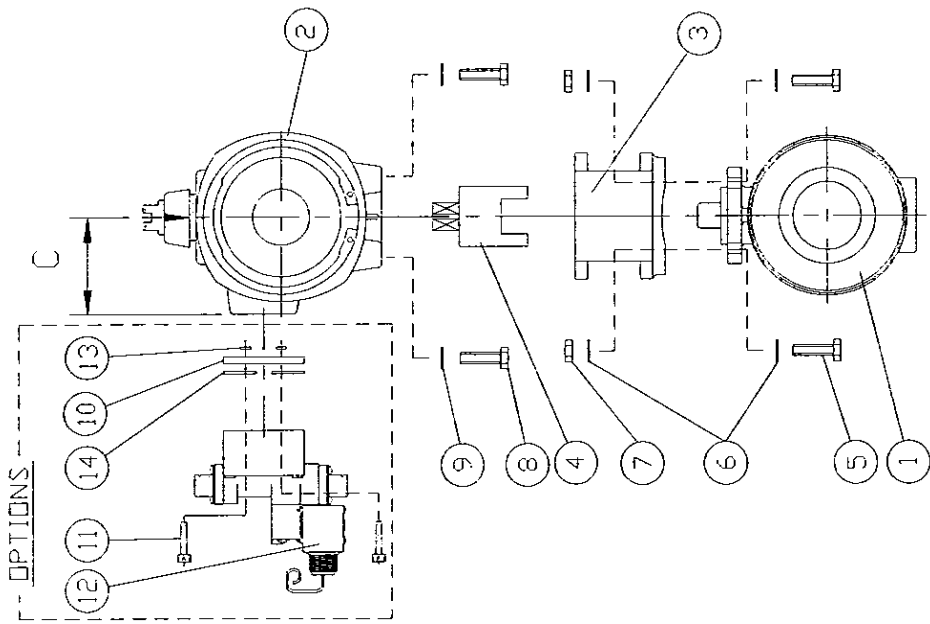
P-SERIES ACTUATOR EXPLODED VIEW

SIZE	A	DWG. NO.	1233	REV	A
SCALE	NTS	SHEET	1	OF	1

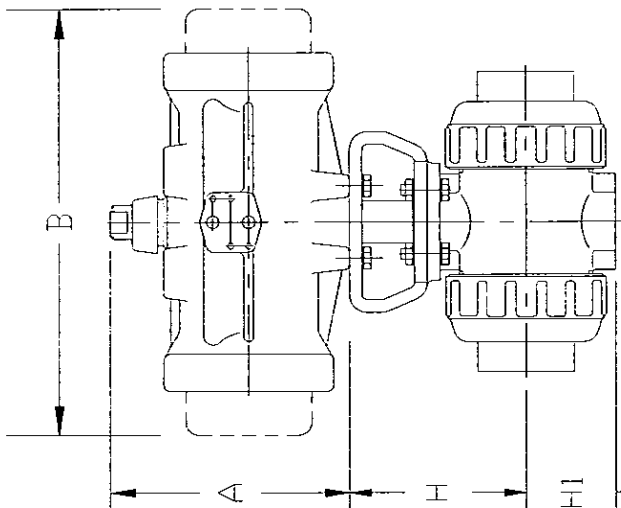
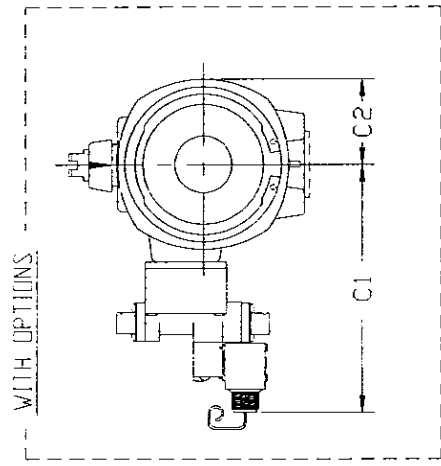
CONCENTRIC COMPRESSION
SPRING ON AIR-TO-SPRING
MODELS ONLY (BOTH ENDS)

UNIT: INCH

VALVE SIZE	A		B		C		C1		C2	
	A-A	A-S	A-A	A-S	A-A	A-S	A-A	A-S	A-A	A-S
1/2"	3.34	3.34	4.22	5.55	1.47	1.47	5.41	5.41	1.21	1.21
3/4"	3.34	3.34	4.22	5.55	1.47	1.47	5.41	5.41	1.21	1.21
1"	3.34	3.34	4.22	5.55	1.47	1.47	5.41	5.41	1.21	1.21
1-1/4"	3.34	3.34	4.22	5.55	1.47	1.47	5.41	5.41	1.21	1.21
1-1/2"	3.34	4.40	4.22	5.86	1.47	1.73	5.41	5.66	1.21	1.41
2"	3.34	5.00	4.22	7.64	1.47	1.97	5.41	5.89	1.21	1.85



ITEM	DESCRIPTION	MATERIAL	QTY
1	BALL VALVE TYPE 21	PVC, CPVC, PP, PVDF	1
2	ACTUATOR	GLASS FILLED POLYAMIDE STAINLESS STEEL (OPTION) RILSAN COATED CAST ALUMINUM (OPTION)	1
3	MOUNTING BRACKET	PPG	1
4	COUPLING	STAINLESS STEEL 303	1
5	BOLT (FOR 1/2" THRU 1-1/4" : M5.0x8-16LG) (FOR 1/2" THRU 1-1/4" : M6.0x1-20LG)	STAINLESS STEEL	4
6	FLAT WASHER (FOR 1/2" THRU 1-1/4" : M5.0) (FOR 1/2" THRU 1-1/4" : M6.0)	STAINLESS STEEL	8
7	NUT (FOR 1/2" THRU 1-1/4" : M5.0x8) (FOR 1/2" THRU 1-1/4" : M6.0x1)	STAINLESS STEEL	4
8	BOLT (FOR A79 (PW) USE M5.0x8-16LG) (FOR B79 (PO) USE M6.0x1-16LG) (FOR C79 (PI) USE M8.0x1.25-16LG)	STAINLESS STEEL	4
9	FLAT WASHER (M6.0)	STAINLESS STEEL	4
10	MOUNTING PLATE (OPTIONS)	ZYTEL	1
11	SCREW SOC HD (OPTIONS)	300SS	1
12	SOLENOID (ASCO) (OPTIONS)	ZYTEL	1
13	O-RING (OPTIONS)	NBR	2
14	GASKET (OPTIONS)	NBR	2



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APPD DAVE HURLEY	8/14/01
PROD LEO LESTER	8/14/01
WO#/CO#	
FILE	

CHEMLINE PLASTICS

BALL VALVE TYPE 21
PNEUMATIC ACT.
1/2" THRU 2"

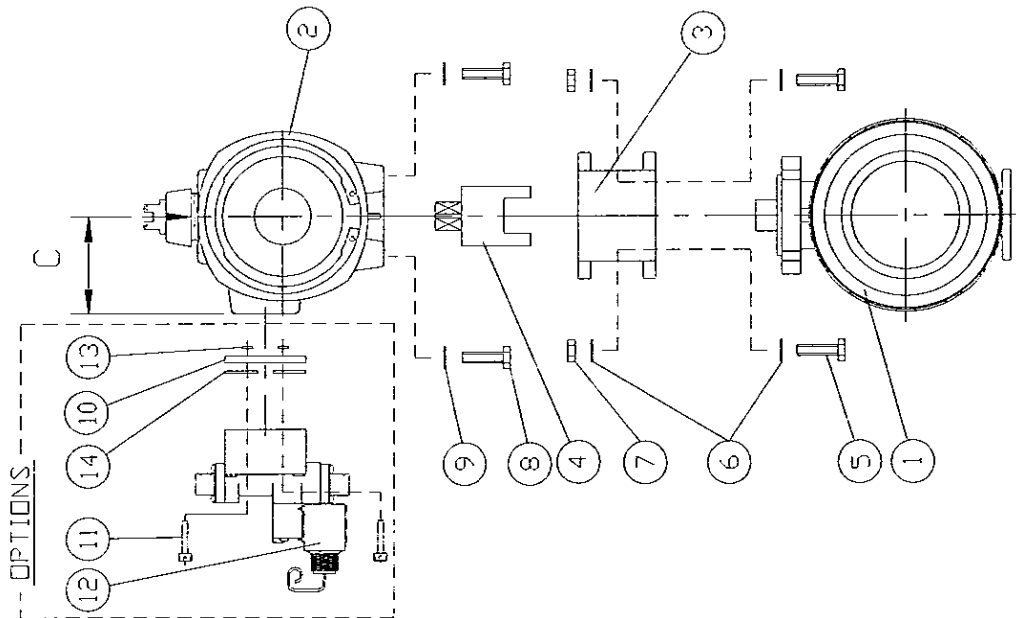
SIZE	A	DWG. NO.	0114BV	REV	A
SCALE	NTS	SHEET	1	OF	1

VALVE SIZE	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
H	2.76	3.01	3.29	3.64	3.98	4.43
H1	1.14	1.38	1.54	1.85	2.17	2.60

NOTE: The shape and appearance of assembly differ a little with nominal size compared to this drawing.

UNIT: INCH

VALVE SIZE	A			B			C			C1	C2
	A-A	A-S	A-A	A-S	A-A	A-S	A-A	A-S	A-A		
2-1/2"	5.00	5.00	7.00	8.74	1.97	1.97	5.89	5.89	1.85	1.85	
3"	5.00	6.49	7.00	11.49	1.97	2.56	5.89	6.48	1.85	2.36	
4"	6.49	6.49	9.21	11.49	2.56	2.56	6.48	6.48	2.36	2.36	



ITEM	DESCRIPTION	MATERIAL	QTY
14	GASKET (OPTIONS)	NBR	2
13	O-RING (OPTIONS)	NBR	2
12	SOLENOID (ASCO) (OPTIONS)	ZYTEL	1
11	SCREW SDC HD (OPTIONS)	300SS	1
10	MOUNTING PLATE (OPTIONS)	ZYTEL	1
9	FLAT WASHER (M5.0)	STAINLESS STEEL	4
8	BOLT (FOR A79 (PW) USE M5.0x8-16LG) (FOR B79 (PD) USE M6.0x1-16LG) (FOR C79 (P1) USE M8.0x1.25-16LG)	STAINLESS STEEL	4
7	NUT (FOR 2-1/2" AND 3" : M8.0x1.25) (FOR 4" : M10.0x1.50)	STAINLESS STEEL	4
6	FLAT WASHER (FOR 2-1/2" AND 3" : M8.0) (FOR 4" : M10.0)	STAINLESS STEEL	8
5	BOLT (FOR 2-1/2" AND 3" : M8.0x1.25-35LG) (FOR 4" : M10.0x1.50-40LG)	STAINLESS STEEL	4
4	COUPLING	STAINLESS STEEL 303	1
3	MOUNTING BRACKET	PPG	1
2	ACTUATOR	<input type="checkbox"/> GLASS FILLED POLYAMIDE <input type="checkbox"/> STAINLESS STEEL (OPTION) <input type="checkbox"/> RILSAN COATED CAST ALUMINUM (OPTION)	1
1	BALL VALVE TYPE 21	PVC, CPVC, PP, PVDF	1

CHEMLINE PLASTICS

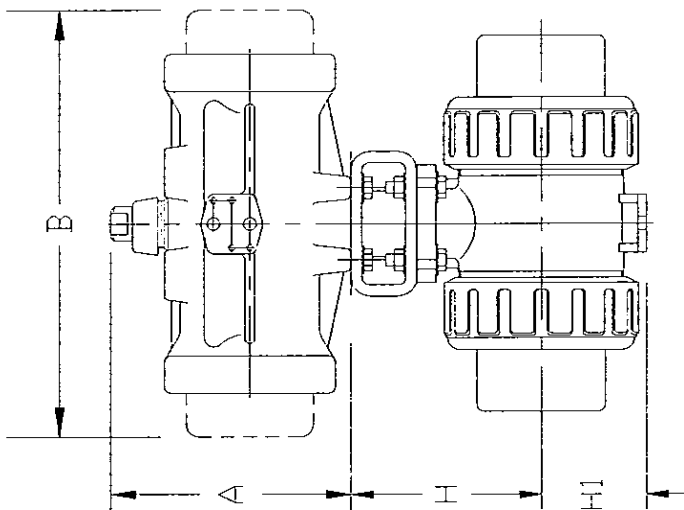
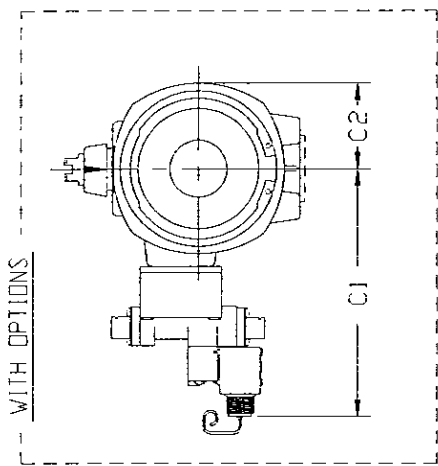
BALL VALVE TYPE 21
PNEUMATIC ACT.
2-1/2" THRU 4"

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APPD DAVE HURLEY	8/14/01
PROD LED LESTER	8/14/01
WO# / CO#	

SIZE	DWG. NO.	REV
A	0115BV	A

SCALE NTS SHEET 1 OF 1



UNIT: INCH

VALVE SIZE	2-1/2"	3"	4"
H	5.12	5.47	6.97
H1	2.83	3.35	4.33

NOTE. The shape and appearance of assembly differ a little with nominal size compared to this drawing.

DIMENSIONS TABLE

UNIT: inch

VALVE SIZE	A			B			C			C1			C2		
	A-A	A-S	A-A-S	A-A	A-S	A-A-S	A-A	A-S	A-A-S	A-A	A-S	A-A-S	A-A	A-S	A-A-S
1/2"	3.34	3.34	4.22	5.55	1.47	1.47	5.41	5.41	1.21	1.21	1.21	1.21	1.21	1.21	1.21
3/4"	3.34	3.34	4.22	5.55	1.47	1.47	5.41	5.41	1.21	1.21	1.21	1.21	1.21	1.21	1.21
1"	3.34	3.34	4.22	5.55	1.47	1.47	5.41	5.41	1.21	1.21	1.21	1.21	1.21	1.21	1.21
1-1/2"	3.34	3.34	4.40	4.22	5.96	1.47	1.73	5.41	5.66	1.21	1.41	1.41	1.41	1.41	1.41
2"	3.34	5.00	4.22	7.64	1.47	1.97	5.41	5.89	1.21	1.85	1.85	1.85	1.85	1.85	1.85
3"	5.00	6.49	7.00	11.49	1.97	2.56	5.89	6.48	1.85	2.36	2.36	2.36	2.36	2.36	2.36
4"	6.49	6.49	9.21	11.49	2.56	2.56	6.48	6.48	2.36	2.36	2.36	2.36	2.36	2.36	2.36

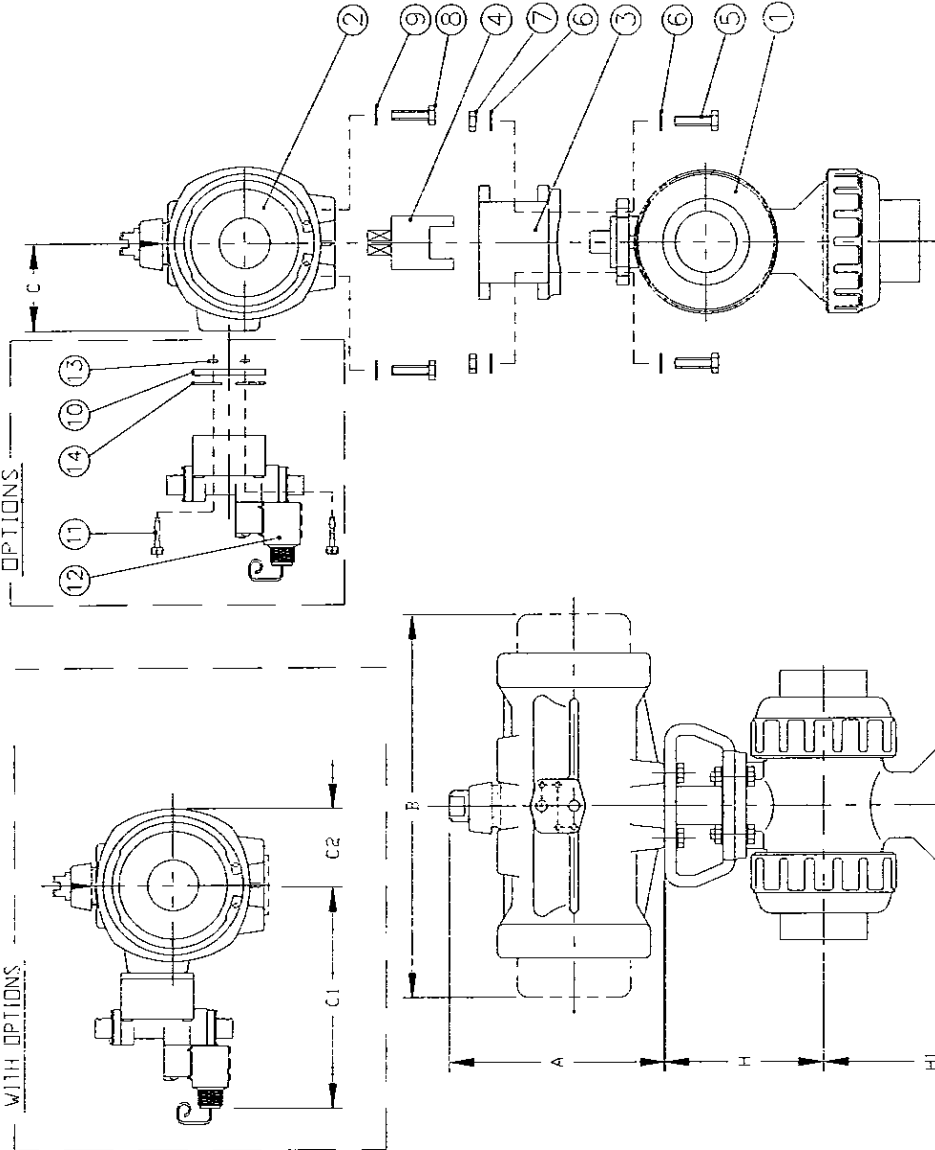
NOMINAL SIZE	FLANGED			THREADED			SOCKET			SPROCKET (BUTT END)				
	H	H1	L	H	H1	L	H	H1	L	H	H1	L		
1/2"	2.76	3.70	5.63	2.89	4.02	3.08	4.45	2.80	3.90	3.09	4.45	3.27	4.88	
3/4"	3.01	4.50	6.77	3.48	4.72	3.56	5.08	3.27	4.49	3.61	5.08	3.90	5.67	
1"	25	3.29	5.24	7.36	4.13	5.16	4.32	5.75	3.94	4.84	4.37	5.75	4.52	6.06
1 1/2"	40	3.98	6.50	8.35	5.53	6.42	5.21	7.24	5.16	5.83	5.85	7.24	6.02	6.85
2"	50	4.43	7.34	9.21	6.61	7.26	6.66	8.23	6.06	6.93	6.76	8.23	7.01	8.82
3"	80	5.47	10.06	11.97	9.25	10.39	9.59	11.0	8.82	9.68	11.1	10.18	11.61	
4"	100	6.97	12.01	14.65	11.72	14.17	11.58	13.90	10.98	12.20	14.37	11.85	12.72	

ITEM	DESCRIPTION	MATERIAL	QTY
14	GASKET (OPTIONS)	NBR	2
13	D-RING (OPTIONS)	NBR	2
12	SOLENOID (ASCD) (OPTIONS)	ZYTEL	1
11	SCREW SDC HD (OPTIONS)	STAINLESS STEEL	1
10	MOUNTING PLATE (OPTIONS)	ZYTEL	1
9	FLAT WASHER (M6.0)	STAINLESS STEEL	4
8	BOLT (FOR A79 (PA) USE M5.0x8-16L6) (FOR B79 (PD) USE M6.0x4-16L6) (FOR C79 (PT) USE M8.0x125-16L6)	STAINLESS STEEL	4
7	NUT (FOR 1/2" THRU 1-1/4" : M5.0x8) (FOR 1/2" THRU 2" : M6.0x1) (FOR 3" : M8.0x1.25) (FOR 4" : M10.0x1.50)	STAINLESS STEEL	4
6	FLAT WASHER (FOR 1/2" THRU 1-1/4" : M5.0) (FOR 1-1/2" THRU 2" : M6.0) (FOR 3" : M8.0) (FOR 4" : M10.0)	STAINLESS STEEL	8
5	BOLT (FOR 1/2" THRU 1" : M5.0x8-16L6) (FOR 1-1/2" THRU 2" : M6.0x1-25L6) (FOR 3" : M8.0x1.50-40L6) (FOR 4" : M10.0x1.50-40L6)	STAINLESS STEEL	4
4	COUPLING	STAINLESS STEEL 303	1
3	MOUNTING BRACKET	PPG	1
2	ACTUATOR	<input type="checkbox"/> GLASS FILLED POLYAMIDE <input type="checkbox"/> STAINLESS STEEL (OPTION) <input type="checkbox"/> SILICON COATED CAST ALUMINUM (OPTION)	1
1	MULTI-PORT BALL VALVE TYPE23	PVC, CPVC, PP, PVDF	1

CHEMLINE PLASTICS

TYPE 23 MULTI-PORT BALL VALVE 1/2" TO 4" WITH PNEUMATIC ACTUATOR

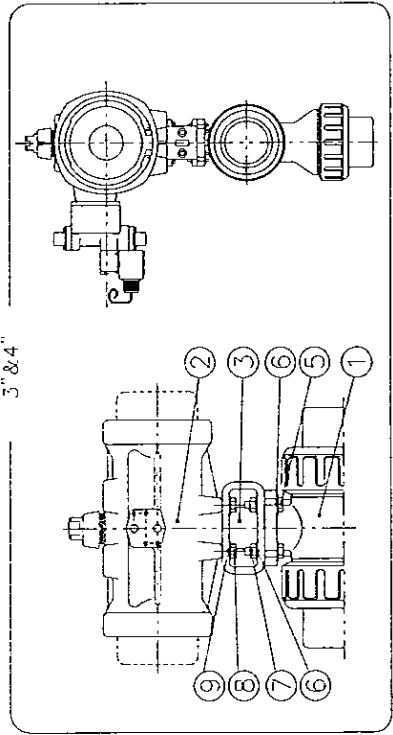
SCALE	NTS	SHEET 1	OF 1
SIZE	A	DWG. NO.	0139BV
REV	A		



NOTE: 1) THE SHAPE AND APPEARANCE OF ASSEMBLY DIFFER A LITTLE WITH NOMINAL SIZE COMPARED TO THIS DRAWING.
2) FOR DETAILED VALVE DIMENSIONS, REFER TO DWG. NO. 01268V, 01278V, 01288V.
L-PORT : DWG. NO. 01268V
DOUBLE L-PORT : DWG. NO. 01278V
CROSS PORT : DWG. NO. 01288V

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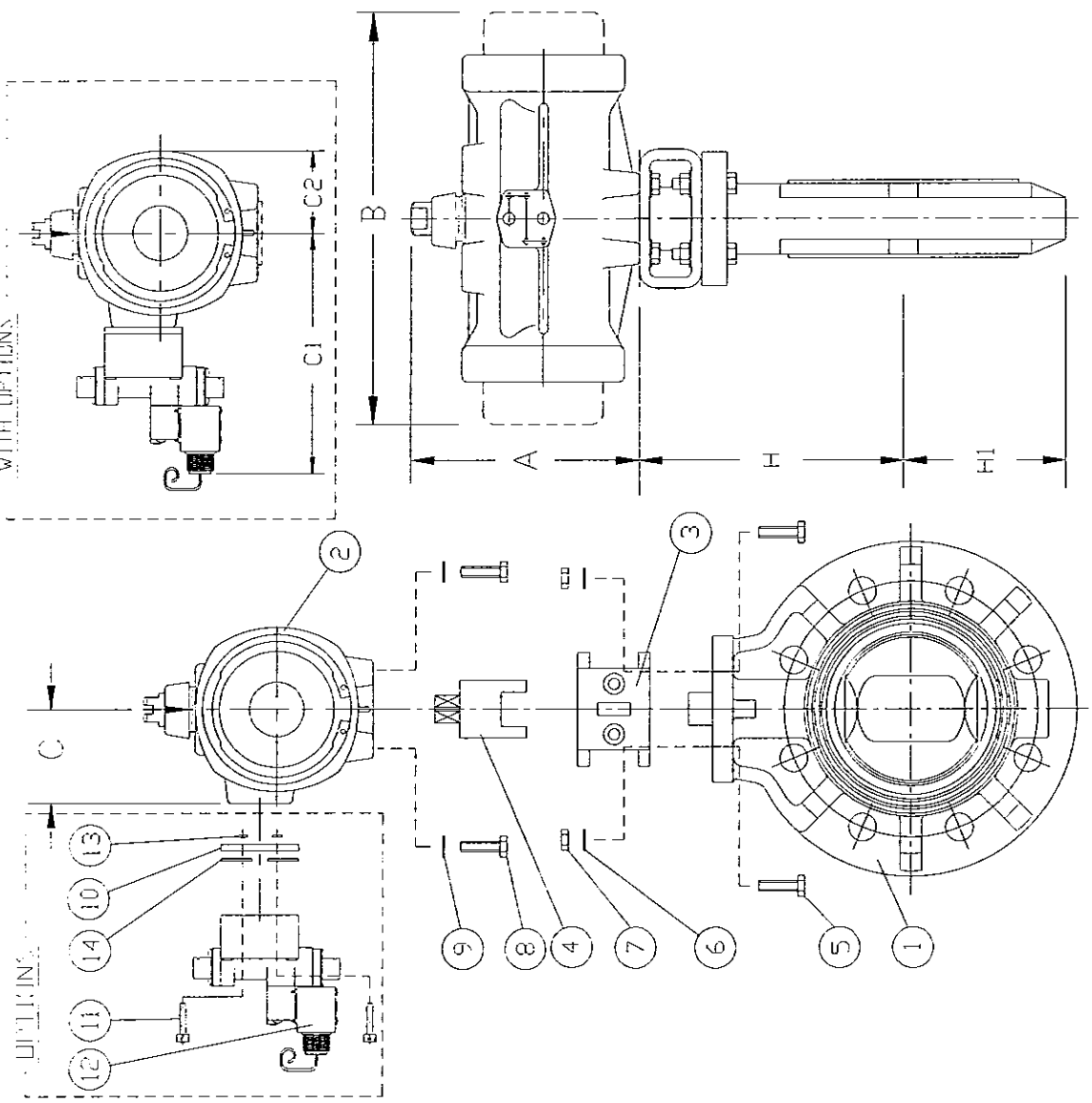
NAME	DATE
DR KENICHI MIYAZAKI	1/28/03
APPD DAVE HURLEY	1/28/03
PRD LEO LESTER	1/28/03
WO#/CO#	
FILE	



UNIT: INCH

WITH OPTIONS

VALVE SIZE	A	A-S	A-A	B	C	C1	C2
1-1/2"	4.40	5.00	4.92	8.74	1.73	5.66	1.41
2"	4.40	5.00	4.92	8.74	1.73	5.66	1.41
2-1/2"	4.40	5.00	4.92	8.74	1.73	5.66	1.41
3"	5.00	6.49	7.00	11.50	1.96	5.89	1.85
4"	5.00	6.49	7.00	11.50	1.96	5.89	1.85
5"	5.00	8.54	7.00	17.04	1.96	5.89	1.85
6"	6.49	8.54	9.21	17.04	2.55	6.48	2.36



ITEM	DESCRIPTION	MATERIAL	QTY
14	GASKET (OPTIONS)	NBR	2
13	O-RING (OPTIONS)	NBR	2
12	SOLENOID (ASCO) (OPTIONS)	ZYTEL	1
11	SCREW SDC HD (OPTIONS)	STAINLESS STEEL 303	1
10	MOUNTING PLATE (OPTIONS)	ZYTEL	1
9	FLAT WASHER (FOR BP79 : M6.0) (FOR CP79 AND DP79 : M8.0) (FOR E79 : M10.0)	STAINLESS STEEL	4
8	BOLT (FOR BP79 : M6.0x1.00-16LG) (FOR CP79 AND DP79 : M8.0x1.25-16LG) (FOR E79 : M10.0x1.50-20LG)	STAINLESS STEEL	4
7	NUT (FOR 1-1/2" THRU. 4" : M8.0x1.25) (FOR 6" : M10.0x1.50)	STAINLESS STEEL	4
6	FLAT WASHER (FOR 1-1/2" THRU. 4" : M8.0) (FOR 6" : M10.0)	STAINLESS STEEL	8
5	BOLT (FOR 1-1/2" THRU. 4" : M8.0x1.25-35LG) (FOR 6" : M10.0x1.50-40LG)	STAINLESS STEEL	4
4	COUPLING	STAINLESS STEEL 303	1
3	MOUNTING BRACKET	PPG	1
2	ACTUATOR	□ GLASS FILLED POLYAMIDE □ STAINLESS STEEL (OPTION) □ RULSAN COATED CAST ALUMINUM (OPTION)	1
1	BUTTERFLY VALVE TYPE 56	PVC, PP, PVDF	1

VALVE SIZE	1-1/2"	2"	2-1/2"	3"	4"	5"	6"
H	5.51	5.75	6.18	6.46	7.16	8.46	8.97
H1	2.95	3.27	3.66	3.94	4.53	5.00	5.63

NOTE: 1. The shape and appearance of assembly differ a little with nominal size compared to this drawing.
2. For 1-1/2" thru. 4" Mounting Bracket : F7 x F05.F07
For 5" and 6" Mounting Bracket : F10 x F07.F10

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NAME	DATE
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APPD DAVE HURLEY	10/11/01
PROD LED LESTER	10/11/01

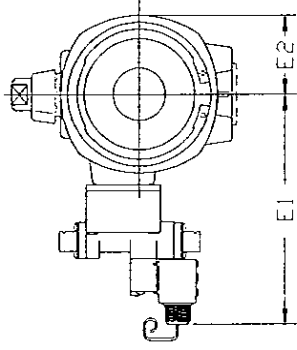
WO# / CO# _____
FILE _____

CHEMLINE PLASTICS

BUTTERFLY VALVE TYPE 56
PNEUMATIC ACT.
1-1/2" THRU 6"

SCALE: NTS _____ SHEET 1 OF 1

SIZE: A DWG. NO. 0204BF REV A



NOTE: ACTUATOR BODY IS CAST ALUMINUM WITH RILSAN (POLYAMIDE NYLON 11) COATING FOR VALVE SIZES 8 THROUGH 24 AIR-AIR AND 5 THROUGH 12 AIR-SPRING. ACTUATOR BODY IS AVAILABLE IN STAINLESS STEEL OR GLASS FILLED POLYAMIDE FOR VALVE SIZES 1 1/2 THROUGH 6 AIR-AIR AND 1 1/2 THROUGH 4 AIR-SPRING

No.	DESCRIPTION	MATERIAL	QTY
15	SOLENOID, ASCO (OPTIONS)	ZYTEL	1
14	SCREW, SDC HEAD (OPTIONS)	STAINLESS STEEL 303	2
13	PLATE MOUNTING (OPTIONS)	ZYTEL	1
12	O-RING (OPTIONS)	NBR	2
11	GASKET (OPTIONS)	NBR	2
10	ACTUATOR (SEE NOTE)	SERIES 79P	1
9	SHAFT ADAPTER	STAINLESS STEEL 303	1
8	FLAT WASHER	STAINLESS STEEL 303	4
7	SCREW	STAINLESS STEEL 303	4
6	NUT, HEX LOCKING	STAINLESS STEEL 303	4
5	WASHER, FLAT	STAINLESS STEEL 303	4
4	WASHER, FLAT	STAINLESS STEEL 303	4
3	SCREW	STAINLESS STEEL 303	4
2	MOUNTING BRACKET	STAINLESS STEEL 303	1
1	BUTTERFLY VALVE TYPE56	PVC, PP, PVDF	1

CHEMLINE PLASTICS

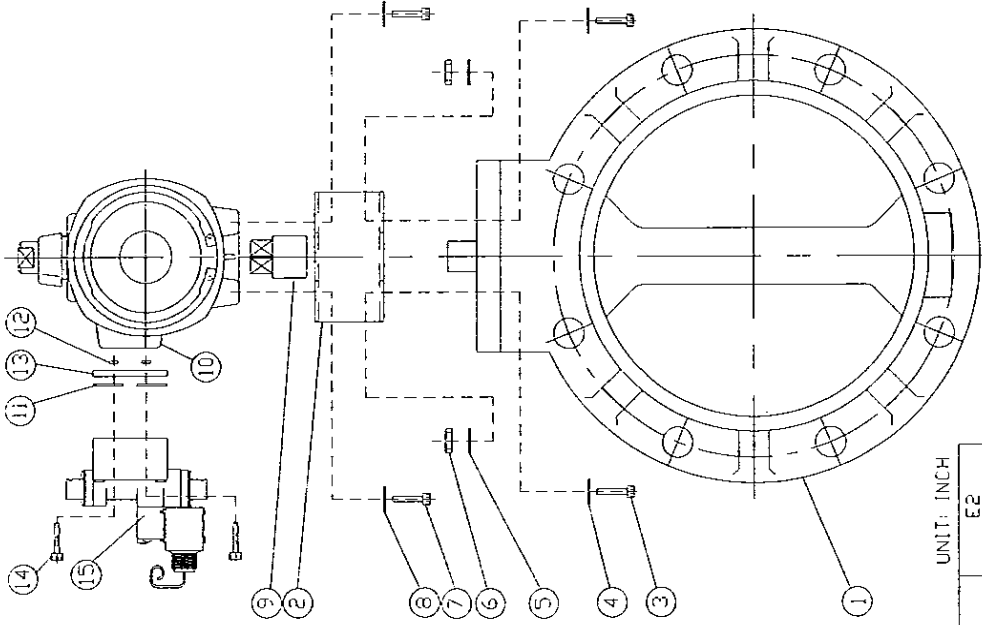
BUTTERFLY VALVE TYPE56
PNEUMATIC ACT.
1-1/2" THRU. 16"

SIZE A DWG. NO. 0167BF REV B

SCALE NTS SHEET 1 OF 1

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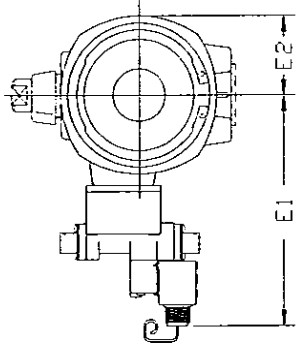
NAME	DATE
DR. KENICHI MIYAZAKI	9/6/01
APPD DAVE HURLEY	9/6/01
PROD LED LESTER	9/6/01
WO#/CO#	
FILE	



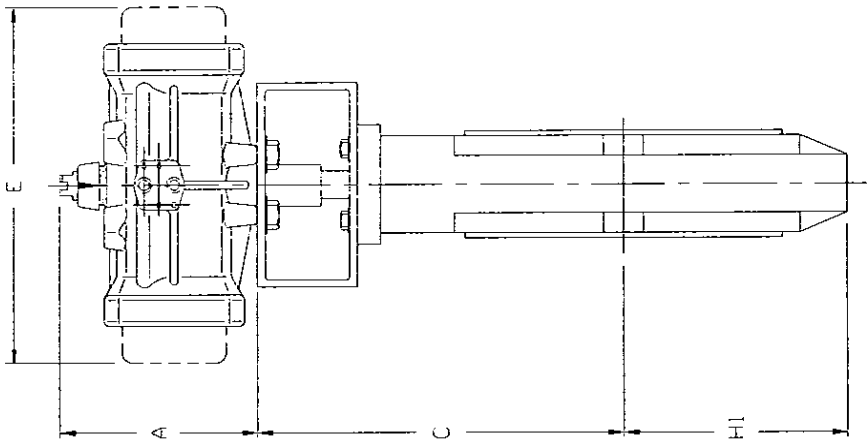
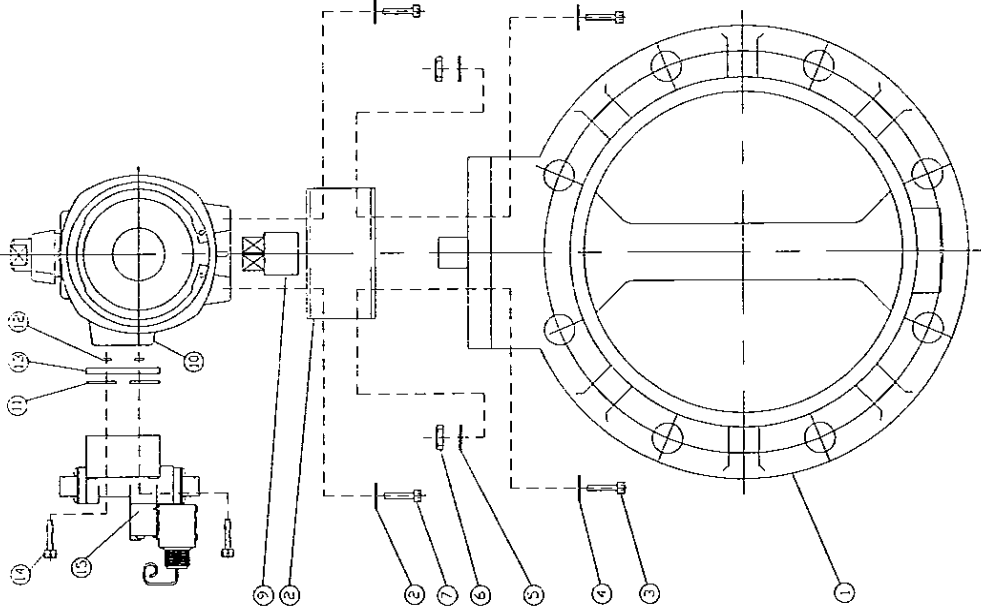
UNIT: INCH

VALVE SIZE	C		HI		A		E		E1		E2	
	A-A	A-S	A-A	A-S	A-A	A-S	A-A	A-S	A-A	A-S	A-A	A-S
1 1/2	5.50	2.95	4.40	5.00	4.92	8.74	6.02	6.25	6.25	1.41	1.85	
2	5.57	3.25	4.40	5.00	4.92	8.74	6.02	6.25	6.25	1.41	1.85	
2 1/2	6.08	3.66	4.40	5.00	4.92	8.74	6.02	6.25	6.25	1.41	1.85	
3	6.28	3.94	5.00	6.49	7.00	11.49	6.25	6.84	6.84	1.85	2.36	
4	6.56	4.53	5.00	6.49	7.00	11.49	6.25	6.84	6.84	1.85	2.36	
5	8.05	5.00	5.00	8.54	7.00	17.04	6.25	7.83	7.83	1.85	3.23	
6	9.01	5.63	6.49	8.54	9.21	17.04	6.84	7.83	7.83	2.36	3.23	
8	11.27	6.69	8.54	11.26	12.12	25.28	7.83	8.42	8.42	3.23	3.78	
10	12.46	7.99	8.54	13.07	12.12	20.83	7.83	9.41	9.41	3.23	4.76	
12	14.59	9.53	11.26	13.07	16.46	20.83	8.42	9.41	9.41	3.78	4.76	
14	14.81	10.24	11.26	15.47	16.46	22.44	8.42	11.84	11.84	3.78	6.75	
16	16.78	11.81	11.26	16.53	16.46	32.83	8.42	12.52	12.52	3.78	7.16	

NOTE: The shape and appearance of assembly differ a little with nominal size compared to this drawing.



NOTE: ACTUATOR BODY IS CAST ALUMINUM WITH RILSAN (POLYAMIDE NYLON 11) COATING FOR VALVE SIZES 18 THROUGH 24 AIR-AIR AND 12 AIR-SPRING.



No.	DESCRIPTION	MATERIAL	QTY
15	SOLENOID, ASCO (OPTIONS)	ZYTEL	1
14	SCREW, SDC HEAD (OPTIONS)	300SS	2
13	PLATE MOUNTING (OPTIONS)	ZYTEL	1
12	O-RING (OPTIONS)	NBR	2
11	GASKET (OPTIONS)	NBR	2
10	ACTUATOR (SEE NOTE)	SERIES 79P	1
9	SHAFT ADAPTER	300SS	1
8	WASHER, LOCK	300SS	4
7	SCREW	300SS	4
6	NUT, HEX LOCKING	300SS	4
5	WASHER, FLAT	300SS	4
4	WASHER, FLAT	300SS	4
3	SCREW	300SS	4
2	MOUNTING BRACKET	300SS	1
1	BUTTERFLY VALVE TYPE75	PVC, PP, PVDF	1

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NAME	DATE
DR KENICHI MIYAZAKI	9/6/01
APPD DAVE HURLEY	9/6/01
PROD LED LESTER	9/6/01
WO#/CO#	
FILE	

UNIT: INCH

VALVE SIZE	C	HI	A		E		E1		E2	
			A-A	A-S	A-A	A-S	A-A	A-S	A-A	A-S
18	17.57	12.40	11.26	16.53	16.46	32.83	8.42	12.52	3.78	7.16
20	18.75	13.78	13.07	16.53	17.09	32.83	9.41	12.52	4.76	7.16
24	21.31	16.02	13.07	16.53	17.09	32.83	9.41	12.52	4.76	7.16

NOTE: The shape and appearance of assembly differ a little with nominal size compared to this drawing.

CHEMLINE PLASTICS

BUTTERFLY VALVE TYPE75
PNEUMATIC ACT.
18" THRU. 24"

SIZE	A	DWG. NO.	1230	REV	A
SCALE	NTS	SHEET	1	OF	1