



Instruction Manual & Spare Parts List

End Operated Vacuum Valves with Sliding Shaft Seal ISO, CONFLAT, ANSI Standard, & ANSI Large Port (LP) Flanges

Introduction:

The uncomplicated design of the End Operated Valves makes servicing very easy. Assembly and reassembly requires no special training or practice. There is only one way to put any part or assembly in place and there are no critical adjustments. The drawing inside shows the details of the stem seal and the no-scuff sealing gate action. The gate O-Ring seals in a motion perpendicular to the seat, without any scuffing or dragging of the O-Ring. The gate-carriage assembly is held securely in the open or closed positions by the air pressure in the cylinder. The operating air pressure should be regulated so that it is no more than 5 Kg/cm2 (71 psi) to help prevent damage inside the valve in case of an obstruction or hang up in the internal mechanism. This air pressure also helps minimize vibration when the gate-carriage assembly strikes the valve body at the end of the opening or closing stroke.

Disassembly:

To disassemble just remove the bolts from the bonnet flange and lift the actuator, bonnet plate, and gate-carriage assembly from the valve body. The body section can stay bolted in the vacuum system. To inspect or replace the piston cup disconnect one end of the plastic air line and remove the bolts from the air cylinder flange. Then carefully lift the air cylinder straight up from the bonnet plate until it has cleared the piston.

Spare Parts Numbers and Prices:

Scroll down for parts price lists according to model number and port size.

Valve Model	Port Size
END STD. 2	2" ANSI, 2" Port
END ISO 63	ISO 63mm
END LP 2	2" ANSI, 2 1/2"
END LP 3	3" ANSI, 4" Port
END STD 4	4" ANSI, 4" Port
END ISO 100	ISO-100 mm
END CF 6 IN. OD	6" O.D. X 4" Port
END LP 4	4" ANSI, 6" Port
END STD 6	6" ANSI, 6" Port
END ISO 160	ISO-100, 150-160mm
END CF 18 IN. OD	8" O.D. X 6" Port
END LP 6	6" ANSI, 8" Port
END STD 8	8" ANSI, 8" Port
END ISO 200	ISO-200mm Port
END CF 10	10" O.D. X 8" Dia.
END LP 8	8" ANSI, 10" Port
END STD 10	10" ANSI, 10" Port
END ISO 250	ISO-250mm Port
END CF 12	12" O.D. X 10" Dia.

Separate pages for valve sizes below according to date of manufacture:

Valves manufactured up to Oct. 31, 2005

Valves manufactured Nov. 1, 2005 & Later

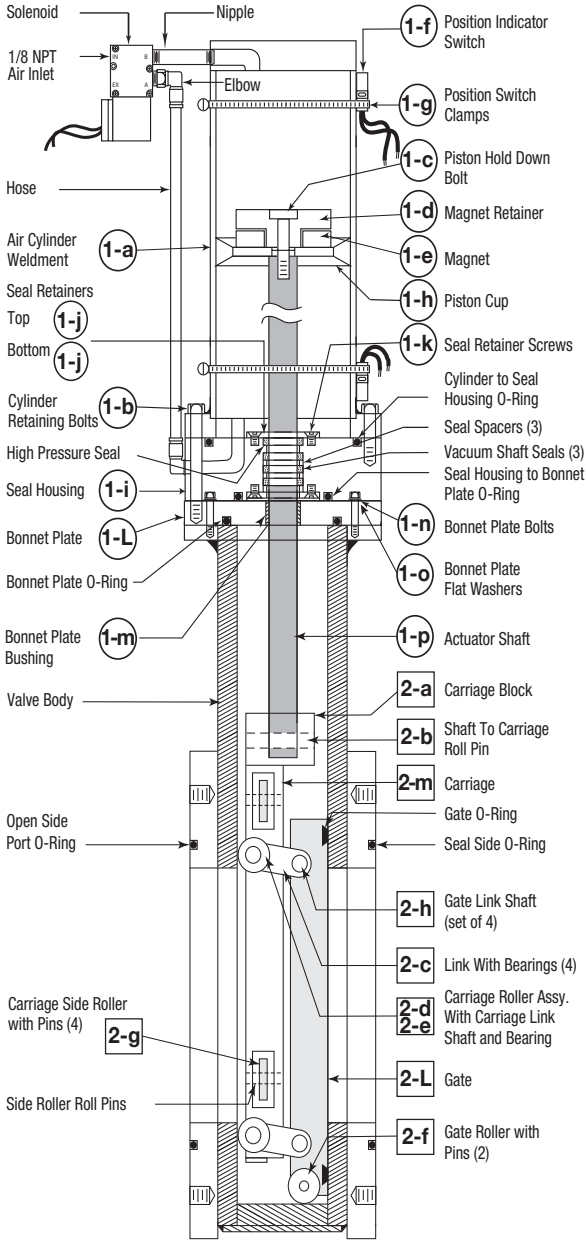
Valve Model	Port Size
END LP 10	10" ANSI, 12" PORT
END STD 12	12" ANSI, 12" PORT
END ISO 320	ISO-320MM PORT
END CF 14	14" O.D. X 12" DIA.

Valve Model

Port Size

END STD. 2
END ISO 63

2" ANSI, 2" Port
ISO 63mm

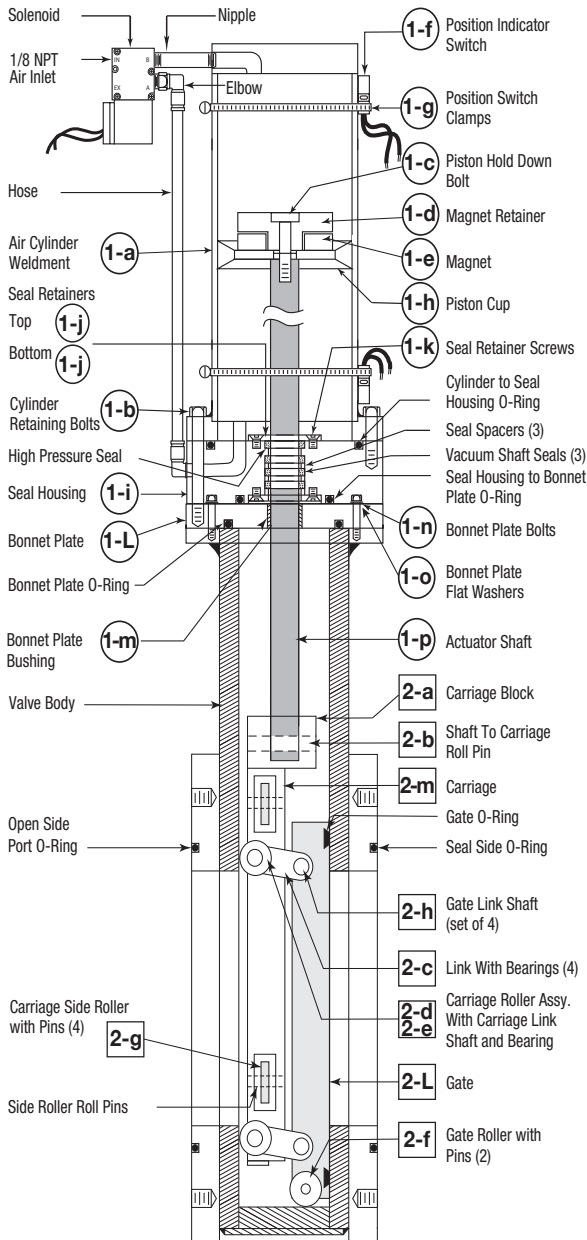


Typical End Operated Valve Detail

Description	Part Number/Price	
Clean, Test, Evaluate Valves Returned to Factory	CLEAN-TEST EVAL	\$145.00
Complete Shaft Seal & O-Ring Kit, without Flange & Piston Cup	X701EO100B	30.00
Shaft Seal Kit Only, 2 Quad Rings, 2 Spacers, 1 Wiper BUNA-N	X706EO116B	48.00
END STD 2" ANSI Flange O-Ring Only	X701238B	5.00
Complete Shaft Seal & O-Ring Kit, without Flange & Piston Cup	X701EO100V	80.00
Shaft Seal Kit only, 2 Quad Rings, 2 Spacers, 1 Wiper	X706EO116V	85.00
END STD 2" ANSI Flange O-Ring Only	X701238V	8.00
Complete Shaft Seal & O-Ring Kit, without Flange & Piston Cup	X701EO100S	80.00
Shaft Seal Kit not available in silicone	Not Available	
END STD 2" ANSI Flange O-Ring Only	X701238S	8.00
Valve Body (Contact Factory)	(Contact Factory)	
Solenoid	X703031	150.00
115 VAC	X703005	150.00
220 VAC	X134010	150.00
Solenoid Mounting Hardware Hose & Hose Fittings	X810866	24.00
1. COMPLETE ACTUATOR ASSEMBLY	X810233	823.00
1a. Cylinder Weldment	X740015M	312.00
1b. Cylinder Retaining Bolts (4) required, price shown each	X702045	2.00
1c. Piston Hold Down Bolt	X702014	3.00
1d. Magnet Retainer	X700463	56.00
1e. Magnet	X132003	40.00
1f. Position Indicator Switch (Reed Sensor)	X703016	90.00
1g. Clamps for Position Switch/Indicator	X703101	6.00
1h. Piston Cup	X205006	34.00
1j. Seal Retainers Top & Bottom (2 Required)	X700404	40.00
1k. Seal Retainer Screws (8) Required - (4) per Retainer, price ea.	X702055	2.00
1L. Bonnet Plate with Integral Seal Housing/Hub	X700138	227.00
1n. Bonnet Plate Bolts (2) Required, price ea.	X702220	2.00
1o. Bonnet Plate Bolt Flat Washers (2) Required, price ea.	X702250	1.00
1p. Actuator Shaft	X700245	200.00
2. GATE CARRIAGE ASSEMBLY WITH O-RING	X810541	943.00
2a. Carriage Block	X700136	55.00
2b. Shaft to Carriage Roll Pin	X702036	4.00
2c,d,e. Carriage Shaft, Roller & Link Assy. Bushings & Retaining Ring (4)	X806504	149.00
2f. Gate Roller with Pins Set (2 required)	X706102	29.00
2g. Carriage Side Rollers with Pins (set of 4 required / price is per set)	X706108	37.00
2h. Gate Link Shafts (4 Required)	X706110Rev1	66.00
2i. Spring (not shown)	X02LP138	13.00
2j. Retaining Ring Set	X706119	4.00
2k. Roll Pin Set of 6 (2 Gate, 2 Carriage)	X706105	6.00
2L. Gate	X700140	164.00
2m. Carriage	X700139	250.00

Valve Model
Port Size

END LP 2	2" ANSI, 2 1/2"
END LP 3	3" ANSI, 4" Port
END STD 3&4	4" ANSI, 4" Port
END ISO 100	ISO-100 mm
END CF 6 IN. OD	6" O.D. X 4" Port


Typical End Operated Valve Detail

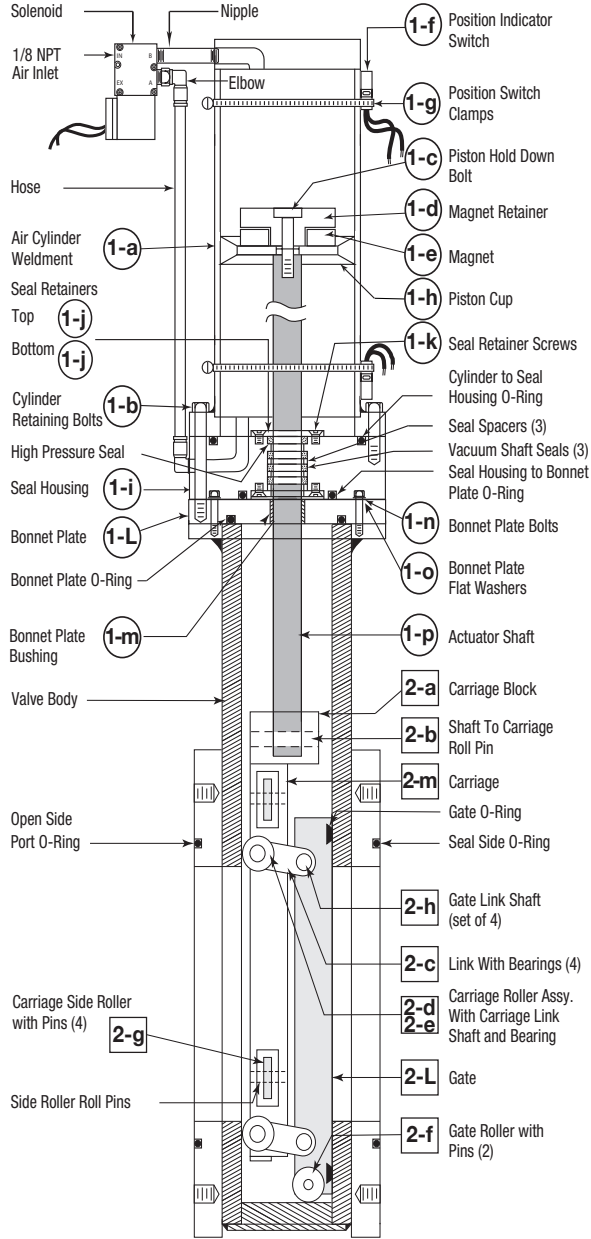
Description		Part Number/Price	
Clean, Test, Evaluate Valves Returned to Factory		CLEAN TEST EVAL	\$145.00
Complete Shaft Seal & O-Ring Kit, without Flange & Piston Cup	BUNA-N	X701EO200B	30.00
Shaft Seal Kit Only, 2 Quad Rings, 2 Spacers, 1 Wiper	BUNA-N	X706EO116B	48.00
END LP 2" ANSI Flange O-Ring Only	BUNA-N	X701239B	5.00
END LP 3" ANSI Flange O-Ring Only	BUNA-N	X701242B	5.00
END STD 4" ANSI Flange O-Ring Only	BUNA-N	X701256B	6.00
Complete Shaft Seal & O-Ring Kit, without Flange & Piston Cup	VITON	X701EO200V	78.00
Shaft Seal Kit only, 2 Quad Rings, 2 Spacers, 1 Wiper	VITON	X706EO116V	102.00
END LP 2" ANSI Flange O-Ring Only	VITON	X701239V	8.00
END LP 3" ANSI Flange O-Ring Only	VITON	X701242V	8.00
END STD 4" ANSI Flange O-Ring Only	VITON	X701256V	8.00
Complete Shaft Seal & O-Ring Kit, without Flange & Piston Cup	SILICONE	X701EO200S 54.	78.00
Shaft Seal Kit not available in silicone		N/A	N/A
END LP 2" ANSI Flange O-Ring Only	SILICONE	X701239S	8.00
END LP 3" ANSI Flange O-Ring Only	SILICONE	X701242S	8.00
END STD 4" ANSI Flange O-Ring Only	SILICONE	X701256S	8.00
Valve Body (Contact Factory)		(Contact Factory)	
Solenoid 26-24 VDC		X703031	150.00
26-115 VAC		X703005	150.00
26-220 VAC		X134010	150.00
Solenoid Mounting Hardware Hose & Hose Fittings		X810866	24.00
1. COMPLETE ACTUATOR ASSEMBLY		X810108	1320.00
1a. Cylinder Weldment		X740003	425.00
1b. Cylinder Retaining Bolts (4) required, price shown each		X702048	2.00
1c. Piston Hold Down Bolt		X702014	3.00
1d. Magnet Retainer		X700046	56.00
1e. Magnet		X132003	40.00
1f. Position Indicator Switch (Reed Sensor)		X703016	90.00
1g. Position Switch/Indicator Clamps		X703101	6.00
1h. Piston Cup		X205002	40.00
1i. Seal Housing		X700067	242.00
1j. Top & Bottom Seal Retainers (2 Required)		X700404	40.00
1k. Seal Retainer Screws (8) Required - (4) per Retainer, price ea.		X702055	2.00
1L. Bonnet Plate		X700241	276.00
1m. Bonnet Plate Bushing		X702142	18.00
1n. Bonnet Plate Bolts (8) Required, price ea.		X702016	2.00
1o. Bonnet Plate Bolt Flat Washers (8) Required, price ea.		X702250	1.00
1p. Actuator Shaft		X700048E	196.00
2. GATE CARRIAGE ASSEMBLY WITH O-RING		X810537	726.00
2a. Carriage Block		X700053	113.00
2b. Shaft to Carriage Roll Pin		X702036	4.00
2c,d,e. Carriage Shaft Roller and Link Assembly		X806500	149.00
2f. Gate Roller with Pins Set (2 required)		X706102	29.00
2g. Carriage Side Rollers with Pins (set of 4 required / price is per set)		X706108	37.00
2h. Gate Link Shafts (set of 4)		X706110Rev1	66.00
2i. Spring (not shown)		X706106	14.00
2j. Retaining Ring Set		X706119	4.00
2k. Roll Pin Set of 6 (2 Gate, 4 Carriage)		X810890	8.00
2l. Gate		X700051EX	332.00
2m. Carriage		X700052	330.00



Instruction Manual & Spare Parts List

End Operated Vacuum Valves with Sliding Shaft Seal

Valve Model	Port Size
END LP 4	4" ANSI, 6" Port
END STD 6	6" ANSI, 6" Port
END ISO 160	ISO-100, 150-160mm
END CF 18 IN. OD	8" O.D. X 6" Port



Description	Part Number/Price	
Clean, Test, Evaluate Valves Returned to Factory	CLEAN TEST EVAL	\$145.00
Complete Shaft Seal & O-Ring Kit, without Flange & Piston Cup	BUNA-N X701EO400B	35.00
Shaft Seal Kit Only, 2 Quad Rings, 2 Spacers, 1 Wiper	BUNA-N X706EO118B	54.00
END LP 4" & STD 6 ANSI Flange O-Ring Only	BUNA-N X701259B	6.00
Complete Shaft Seal & O-Ring Kit, without Flange & Piston Cup	VITON X701EO400V	114.00
Shaft Seal Kit only, 2 Quad Rings, 2 Spacers, 1 Wiper	VITON X706EO118V	101.00
END LP 4" & STD 6 ANSI Flange O-Ring Only	VITON X701259V	10.00
Complete Shaft Seal & O-Ring Kit, without Flange & Piston Cup	SILICONE X701EO400S	114.00
Shaft Seal Kit not available in silicone N/A	N/A	N/A
END LP 4" & STD 6 ANSI Flange O-Ring Only	SILICONE X701259S	10.00
Valve Body (Contact Factory)	(Contact Factory)	
Solenoid 26-24 VDC	X703031	150.00
26-115 VAC	X703005	150.00
26-220 VAC	X134010	150.00
Solenoid Mounting Hardware Hose & Hose Fittings	X810866	24.00
1. COMPLETE ACTUATOR ASSEMBLY	X810365	1380.00
1a. Cylinder Weldment	X740024	438.00
1b. Cylinder Retaining Bolts (4) required, price shown each	X702219	2.00
1c. Piston Hold Down Bolt	X702210	3.00
1d. Magnet Retainer	X700031	56.00
1e. Magnet	X132002	40.00
1f. Position Indicator Switch (Reed Sensor)	X703016	90.00
1g. Position Switch/Indicator Clamps	X703101	6.00
1h. Piston Cup	X205004	74.00
1i. Seal Housing	X700333	270.00
1j. Seal Retainers Top & Bottom (2 Required)	X700029	60.00
1k. Seal Retainer Screws (8) Required - (4) per Retainer, price ea.	X702055	2.00
1L. Bonnet Plate	X700242	240.00
1m. Bonnet Plate Bushing	X702142	15.00
1n. Bonnet Plate Bolts (8) Required, price ea.	X702016	2.00
1o. Bonnet Plate Bolt Flat Washers (8) Required, price ea.	X702250	1.00
1p. Actuator Shaft	X700316	198.00
2. COMPLETE GATE CARRIAGE ASSEMBLY WITH O-RING	X810364	932.00
2a. Carriage Block	X700019	118.00
2b. Shaft to Carriage Roll Pin	X702036	4.00
2c,d,e. Carriage Shaft Roller and Link Assembly	X806500Rev1	149.00
2f. Gate Roller with Pins Set (2 required)	X706202	54.00
2g. Carriage Side Rollers with Pins (set of 4 required / price is per set)	X706108Rev1	37.00
2h. Gate Link Shafts (set of 4)	X706110Rev1	66.00
2i. Spring (not shown)	X706206	14.00
2j. Retaining Ring Set	X706119	4.00
2k. Roll Pin Set of 6 (2 Gate, 4 Carriage)	X810890	8.00
2L. Gate	X04WA116	340.00
2m. Carriage	X700331Rev1	454.00

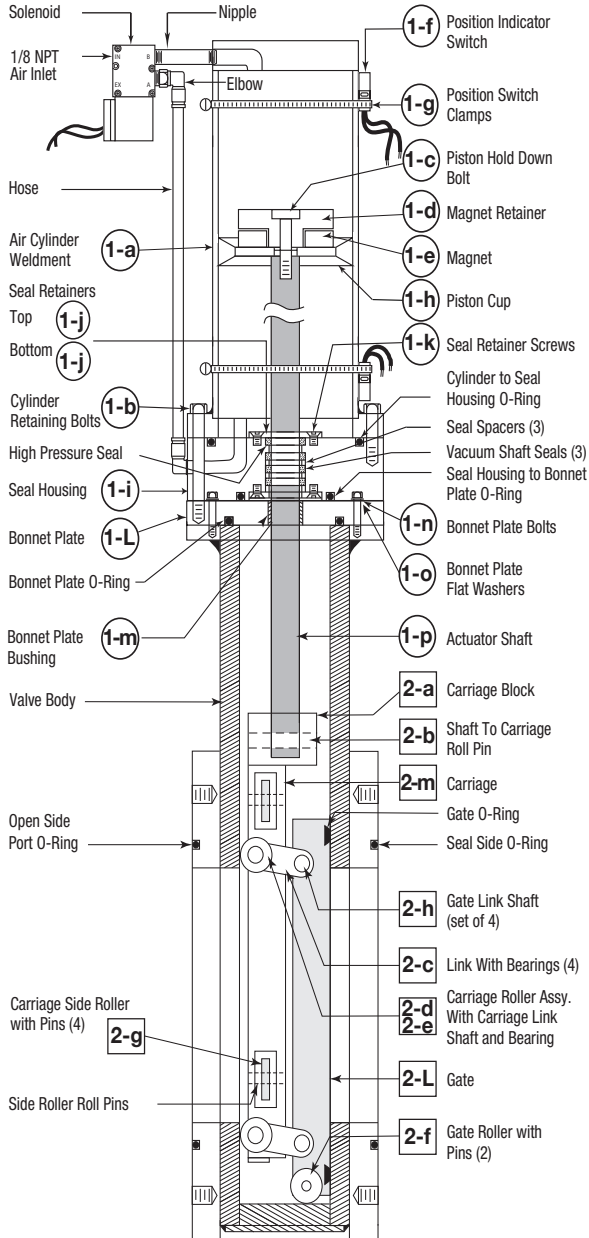
Typical End Operated Valve Detail

Valve Model

Port Size

END LP 6
END STD 8
END ISO 200
END CF 10

6" ANSI, 8" Port
8" ANSI, 8" Port
ISO-200mm Port
10" O.D. X 8" Dia.



Typical End Operated Valve Detail

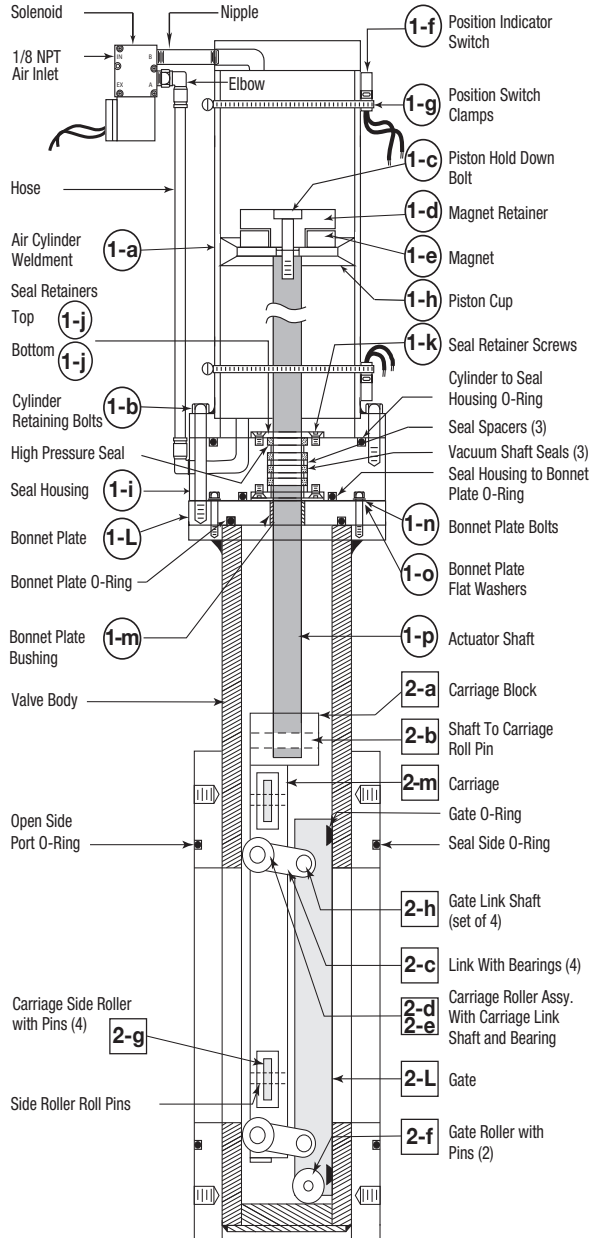
Description	Part Number/Price	
	Part Number	Price
Clean, Test, Evaluate Valves Returned to Factory	CLEAN TEST EVAL	\$235.00
Complete Shaft Seal & O-Ring Kit, without Flange & Piston Cup	BUNA-N X701EO600B	56.00
Shaft Seal Kit Only, 2 Quad Rings, 2 Spacers, 1 Wiper	BUNA-N X706EO118B	54.00
END LP 6" & STD 6 ANSI Flange O-Ring Only	BUNA-N X701267B	6.00
END LP 8" & STD 6 ANSI Flange O-Ring Only	BUNA-N X701447B	7.00
Complete Shaft Seal & O-Ring Kit, without Flange & Piston Cup	VITON X701EO600V	161.00
Shaft Seal Kit only, 2 Quad Rings, 2 Spacers, 1 Wiper	VITON X706EO118V	101.00
END LP 6" & STD 6 ANSI Flange O-Ring Only	VITON X701267V	14.00
END LP 8" & STD 6 ANSI Flange O-Ring Only	VITON X701447V	29.00
Complete Shaft Seal & O-Ring Kit, without Flange & Piston Cup	SILICONE X701EO600S	161.00
Shaft Seal Kit not available in silicone N/A	N/A	N/A
END LP 6" ANSI Flange O-Ring Only	SILICONE X701267S	14.00
END LP 8" ANSI Flange O-Ring Only	SILICONE X701447S	29.00
Valve Body (Contact Factory)		(Contact Factory)
Solenoid 26-24 VDC	X703031	150.00
26-115 VAC	X703005	150.00
26-220 VAC	X134010	150.00
Solenoid Mounting Hardware Hose & Hose Fittings	X810866	24.00
1. COMPLETE ACTUATOR ASSEMBLY	X810563	1542.00
1a. Cylinder Weldment	X740011	450.00
1b. Cylinder Retaining Bolts (6) required, price shown each	X702219	2.00
1c. Piston Hold Down Bolt	X702210	3.00
1d. Magnet Retainer	X700031	56.00
1e. Magnet	X132002	40.00
1f. Position Indicator Switch (Reed Sensor)	X703016	90.00
1g. Position Switch/Indicator Clamps	X703101	6.00
1h. Piston Cup	X205004	74.00
1i. Seal Housing	X700333	270.00
1j. Seal Retainers Top & Bottom (2 Required)	X700029	60.00
1k. Seal Retainer Screws (8) Required - (4) per Retainer, price ea.	X702055	2.00
1L. Bonnet Plate	6END110	311.00
1m. Bonnet Plate Bushing	X702254	25.00
1n. Bonnet Plate Bolts (8) Required, price ea.	X702016	2.00
1o. Bonnet Plate Bolt Flat Washers (8) Required, price ea.	X702250	1.00
1p. Actuator Shaft	X700202	212.00
2. COMPLETE GATE CARRIAGE ASSEMBLY WITH O-RING	X810562	942.00
2a. Carriage Block	X700019	118.00
2b. Shaft to Carriage Roll Pin	X702084	4.00
2c,d,e. Carriage Shaft Roller and Link Assembly	X806500	149.00
2f. Gate Roller with Pins Set (2 required)	X706302	47.00
2g. Carriage Side Rollers with Pins (set of 4 required / price is per set)	X706108	37.00
2h. Gate Link Shafts (set of 4)	X706110Rev1	66.00
2i. Spring (not shown)	X706306	28.00
2j. Retaining Ring Set	X706119	4.00
2k. Roll Pin Set of 6 (2 Gate, 4 Carriage)	X706205Rev1	9.00
2L. Gate	X406116	347.00
2m. Carriage	X700177	500.00

Valve Model

Port Size

END LP 8
END STD 10
END ISO 250
END CF 12

8" ANSI, 10" Port
10" ANSI, 10" Port
ISO-250mm Port
12" O.D. X 10" Dia.



Typical End Operated Valve Detail

Description	Part Number/Price	
	Part Number	Price
Clean, Test, Evaluate Valves Returned to Factory	CLEAN TEST EVAL	\$235.00
Complete Shaft Seal & O-Ring Kit, without Flange & Piston Cup	BUNA-N X701EO1000B	79.00
Shaft Seal Kit Only, 2 Quad Rings, 2 Spacers, 1 Wiper	BUNA-N X706EO118B	54.00
END LP 6" & STD 6 ANSI Flange O-Ring Only	BUNA-N X701275B	7.00
END LP 10" & STD 6 ANSI Flange O-Ring Only	BUNA-N X701453B	10.00
Complete Shaft Seal & O-Ring Kit, without Flange & Piston Cup	VITON X701EO1000V	194.00
Shaft Seal Kit only, 2 Quad Rings, 2 Spacers, 1 Wiper	VITON X706EO118V	101.00
END LP 8" & STD 6 ANSI Flange O-Ring Only	VITON X701275V	17.00
END LP 10" & STD 6 ANSI Flange O-Ring Only	VITON X701453V	48.00
Complete Shaft Seal & O-Ring Kit, without Flange & Piston Cup	SILICONE X701EO1000S	194.00
Shaft Seal Kit not available in silicone N/A	N/A	N/A
END LP 8" ANSI Flange O-Ring Only	SILICONE X701275S	17.00
END LP 10" ANSI Flange O-Ring Only	SILICONE X701453S	48.00
Valve Body (Contact Factory)		(Contact Factory)
Solenoid 26-24 VDC	X703031	150.00
26-115 VAC	X703005	150.00
26-220 VAC	X134010	150.00
Solenoid Mounting Hardware Hose & Hose Fittings		X810866 24.00
1. COMPLETE ACTUATOR ASSEMBLY	X810761STD	1710.00
1a. Cylinder Weldment	X740044	474.00
1b. Cylinder Retaining Bolts (6) required, price shown each	X702219	2.00
1c. Piston Hold Down Bolt	X702210	3.00
1d. Magnet Retainer	X700031	56.00
1e. Magnet	X132002	40.00
1f. Position Indicator Switch (Reed Sensor)	X703016	90.00
1g. Position Switch/Indicator Clamps	X703100	7.00
1e. Piston Cup	X205001	79.00
1f. Seal Housing	X700414	282.00
1g. Seal Retainers Top & Bottom (2 Required)	X700029	60.00
1h. Seal Retainer Screws (8) Required - (4) per Retainer, price ea.	X702055	2.00
1i. Bonnet Plate	10END110	330.00
1j. Bonnet Plate Bushing	X702254	25.00
1k. Bonnet Plate Bolts (12) Required, price ea.	X702018	2.00
1L. Bonnet Plate Bolt Flat Washers (12) Required, price ea.	X702250	1.00
1m. Actuator Shaft	X700050	185.00
2. GATE CARRIAGE ASSEMBLY WITH O-RING	X810762	1716.00
2a. Carriage Block	X700019	118.00
2b. Shaft to Carriage Roll Pin	X702084	4.00
2c,d,e. Carriage Shaft, Roller & Link Assy.	X806503	586.00
2f. Gate Roller with Pins Set (2 required)	X810536	56.00
2g. Carriage Side Rollers with Pins (set of 4 required / price is per set)	X706408	86.00
2h. Gate Link Shafts (set of 4)	X706410Rev1	190.00
2i. Spring (not shown)	X706406	37.00
2j. Retaining Ring Set	X706419	400
2k. Roll Pin Set of 6 (2 Gate, 4 Carriage)	X706405Rev1	8.00
2L. Gate	X700044	634.00
2m. Carriage	X700277	534.00

Valve Model

Port Size

Valves manufactured up to Oct. 31, 2005

END LP 10

10" ANSI, 12" Port

END STD 12

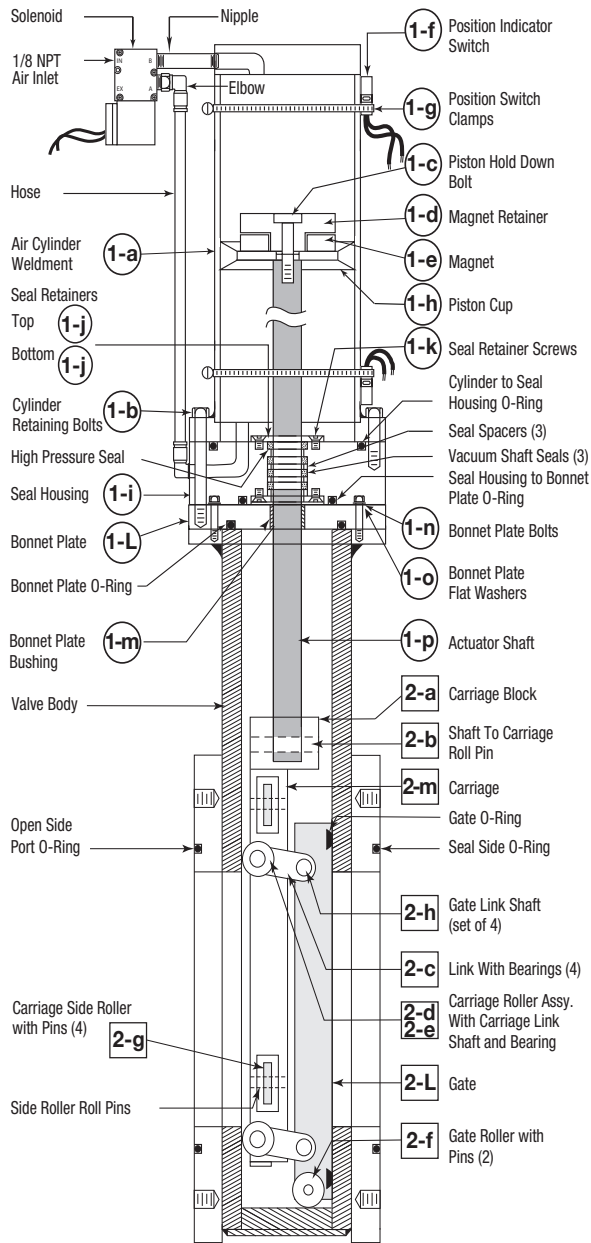
12" ANSI, 12" Port

END ISO 320

ISO-320mm Port

END CF 14

14" O.D. X 12" Dia.



Typical End Operated Valve Detail

Description	Part Number/Price	
Clean, Test, Evaluate Valves Returned to Factory	CLEAN TEST EVAL	\$270.00
Complete Shaft Seal & O-Ring Kit, without Flange & Piston Cup	BUNA-N X701EO1200B	92.00
Shaft Seal Kit Only, 2 Quad Rings, 2 Spacers, 1 Wiper	BUNA-N X706EO318B	58.00
END LP 10" ANSI Flange O-Ring Only	BUNA-N X701454B	11.00
END STD 12" ANSI Flange O-Ring Only	BUNA-N X701455B	11.00
Complete Shaft Seal & O-Ring Kit, without Flange & Piston Cup	VITON X701EO1200V	263.00
Shaft Seal Kit only, 2 Quad Rings, 2 Spacers, 1 Wiper	VITON X706EO318V	107.00
END LP 10" ANSI Flange O-Ring Only	VITON X701454V	48.00
END STD 12" ANSI Flange O-Ring Only	VITON X701455V	48.00
Complete Shaft Seal & O-Ring Kit, without Flange & Piston Cup	SILICONE X701EO1200S	263.00
Shaft Seal Kit not available in silicone	N/A	
END LP 10" ANSI Flange O-Ring Only	SILICONE X701454S	48.00
END STD 12" ANSI Flange O-Ring Only	SILICONE X701455S	48.00
Valve Body (Contact Factory)	(Contact Factory)	
Solenoid 24VDC	X703031	150.00
115 VAC	X703005	150.00
220 VAC	X134010	150.00
Solenoid Mounting Hardware Hose & Hose Fittings	X810866	24.00
1. COMPLETE ACTUATOR ASSEMBLY	X810618	1842.00
1a. Cylinder Weldment	X740020	587.00
1b. Cylinder Retaining Bolts (6) required, price shown each	X702219	2.00
1c. Piston Hold Down Bolt	X702210	3.00
1d. Magnet Retainer	X700031	56.00
1e. Magnet	X132002	40.00
1f. Position Indicator Switch (Reed Sensor)	X703016	90.00
1g. Position Switch/Indicator Clamps	X703100	7.00
1h. Piston Cup	X205007	84.00
1i. Seal Housing	X700294	330.00
1j. Seal Retainers Top & Bottom (2 Required)	X700135	60.00
1k. Seal Retainer Screws (8) Required - (4) per Retainer, price ea.	X702055	2.00
1L. Bonnet Plate	X700215	354.00
1m. Bonnet Plate Bushing	X702254	25.00
1n. Bonnet Plate Bolts (12) Required, price ea.	X701020	3.00
1o. Bonnet Plate Bolt Flat Washers (12) Required, price ea.	X702250	1.00
1p. Actuator Shaft	X700216	234.00
2. GATE CARRIAGE ASSEMBLY WITH O-RING	X810617	1782.00
2a. Carriage Block	X700019	118.00
2b. Shaft to Carriage Roll Pin	X702084	4.00
2c,d,e. Carriage Shaft, Roller & Link Assy.	X806503	586.00
2f. Gate Roller with Pins Set (2 required)	X810536	56.00
2g. Carriage Side Rollers with Pins (set of 4 required / price is per set)	X811070	86.00
2h. Gate Link Shafts (set of 4)	X706410Rev1	190.00
2i. Spring (not shown)	X706406	37.00
2j. Retaining Ring Set	X706419	4.00
2k. Roll Pin Set of 6 (2 Gate, 4 Carriage)	X706405Rev1	9.00
2L. Gate	X700269	634.00
2m. Carriage	X700228	558.00

Valve Model

Port Size

Valves manufactured Nov. 1, 2005 & Later

END LP 10

10" ANSI, 12" Port

END STD 12

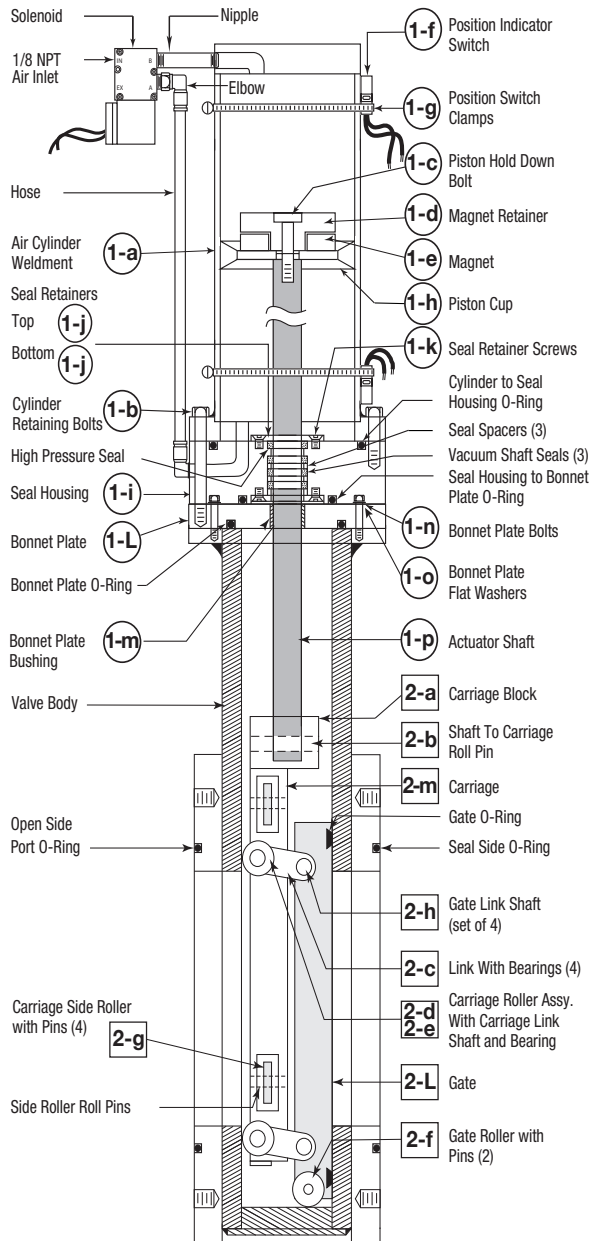
12" ANSI, 12" Port

END ISO 320

ISO-320mm Port

END CF 14

14" O.D. X 12" Dia.



Typical End Operated Valve Detail

Description	Part Number/Price	
	Part Number	Price
Clean, Test, Evaluate Valves Returned to Factory	CLEAN TEST EVAL.	\$270.00
Complete Shaft Seal & O-Ring Kit, without Flange & Piston Cup	BUNA-N X810749	92.00
Shaft Seal Kit Only, 2 Quad Rings, 2 Spacers, 1 Wiper	BUNA-N X810701	58.00
END LP 10" ANSI Flange O-Ring Only	BUNA-N X701454B	11.00
END STD 12" ANSI Flange O-Ring Only	BUNA-N X701455B	11.00
Complete Shaft Seal & O-Ring Kit, without Flange & Piston Cup	VITON X810749V	263.00
Shaft Seal Kit only, 2 Quad Rings, 2 Spacers, 1 Wiper	VITON X810702	107.00
END LP 10" ANSI Flange O-Ring Only	VITON X701454V	48.00
END STD 12" ANSI Flange O-Ring Only	VITON X701455V	48.00
Complete Shaft Seal & O-Ring Kit, without Flange & Piston Cup	SILICONE X810749S	263.00
Shaft Seal Kit not available in silicone N/A		N/A
END LP 10" ANSI Flange O-Ring Only	SILICONE X701454S	48.00
END STD 12" ANSI Flange O-Ring Only	SILICONE X701455S	48.00
Valve Body (Contact Factory)	(Contact Factory)	
Solenoid 26-24 VDC	X701031	150.00
26-115 VAC	X703005	150.00
26-220 VAC	X134010	150.00
Solenoid Mounting Hardware Hose & Hose Fittings	X810866	24.00
1. COMPLETE ACTUATOR ASSEMBLY	X810754	1842.00
1a. Cylinder Weldment	X740108	587.00
1b. Cylinder Retaining Bolts (8) required, price shown each	X702219	2.00
1c. Piston Hold Down Bolt	X702210	3.00
1d. Magnet Retainer	X700031Rev1	76.00
1e. Magnet	X132002	40.00
1f. Position Indicator Switch (Reed Sensor)	X703016	90.00
1g. Position Switch/Indicator Clamps	X703100	7.00
1h. Piston Cup	X205003	116.00
1i. Seal Housing	X700742	330.00
1j. Seal Retainer Top	X700126	60.00
1k. Seal Retainer Bottom	X700132	60.00
1L. Seal Retainer Screws (8) Required - (4) per Retainer, price ea.	X702141	2.00
1m. Bonnet Plate	X700743	354.00
1n. Bonnet Plate Bushing	X702254	25.00
1o. Bonnet Plate Bolts, Washers & Nut Set (12) ea. / price per set	X811075	30.00
1p. Actuator Shaft	X700748E	390.00
2. GATE CARRIAGE ASSEMBLY WITH O-RING	X810899	2130.00
2a. Carriage Block	X700816	118.00
2b. Shaft to Carriage Roll Pin	X702084	4.00
2c,d,e. Carriage Shaft, Roller & Link Assy.	X806503	586.00
2f. Gate Roller with Pins Set (2 required)	X810536	56.00
2g. Carriage Side Rollers with Pins (set of 4 required / price is per set)	X811070	86.00
2h. Gate Link Shafts (set of 4)	X706410Rev1	190.00
2i. Spring (not shown)	X706406	37.00
2j. Retaining Ring Set	X706419	4.00
2k. Roll Pin Set of 6 (2 Gate, 4 Carriage)	X706405Rev1	9.00
2L. Gate	X708228	762.00
2m. Carriage	X708227	582.00