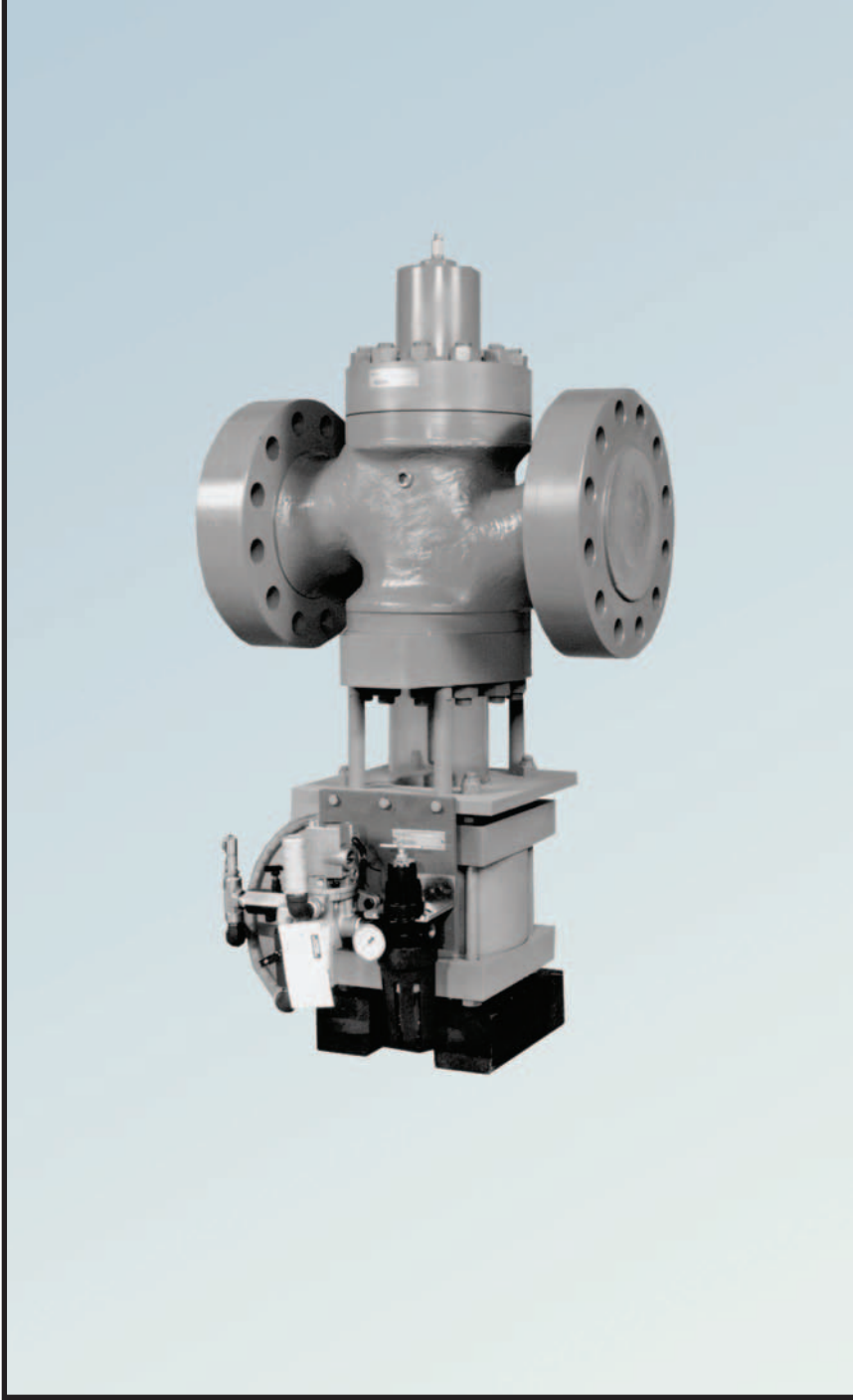
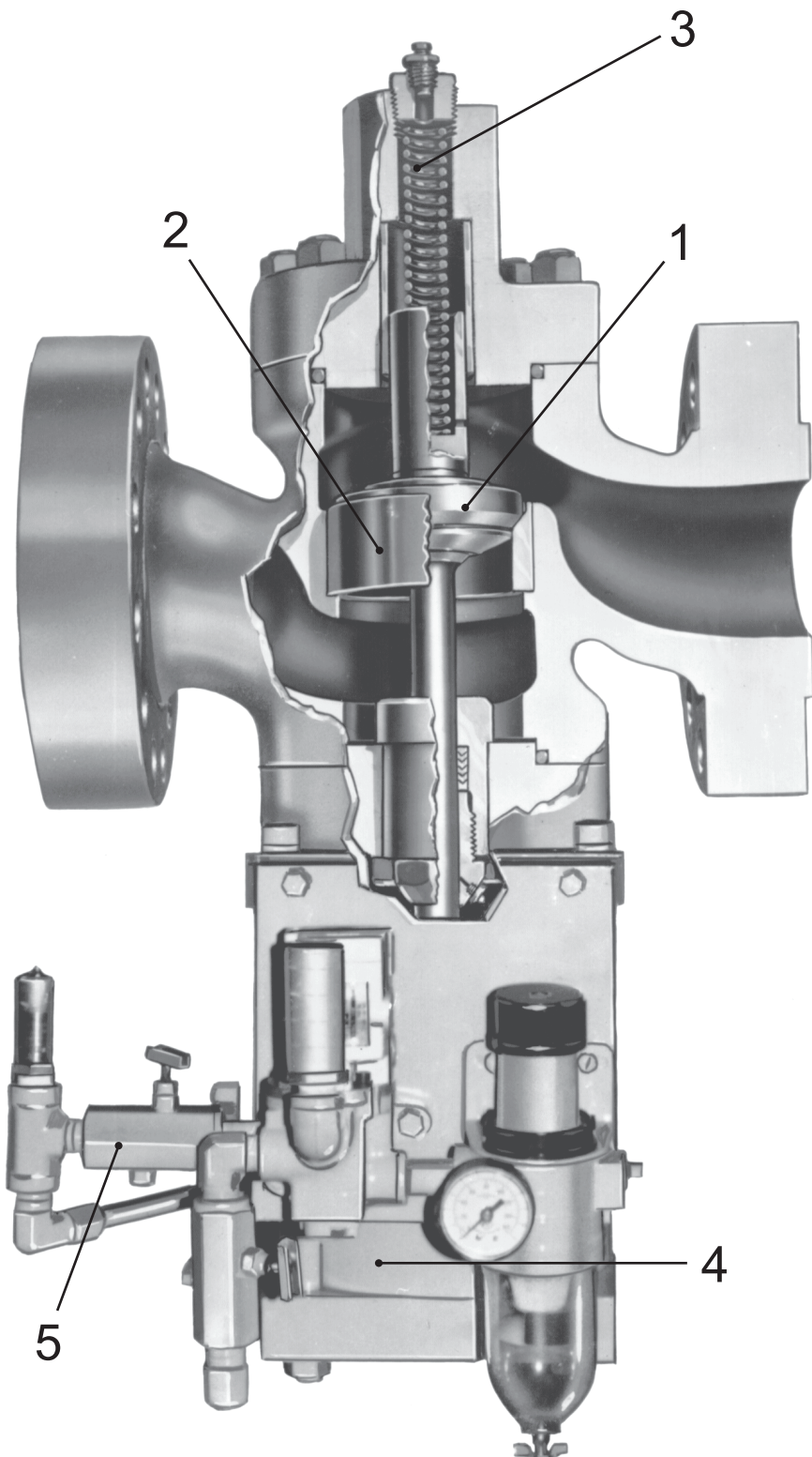


ACCUMULATOR SHUT-OFF VALVE

www.elwood.com





A stem-guided, stainless steel, poppet-type disc (Item 1) closes against the stainless steel seat (Item 2). Closing force is normally supplied by accumulator pressure acting on the valve disc; at very low accumulator pressure, such as is experienced when starting up, a stainless steel spring (Item 3) supplies sufficient pressure on the disc to ensure closure.

As the disc nears the seat on closing, a cushion is formed through control of the air flow out of the air cylinder (Item 4) by adjusting the speed control valve (Item 5). This cushion prevents damage to the valve when the pressure differential across the seat is great.

Once the valve has closed, air pressure to the cylinder alone will not open it. The pumps must be used to create pressure in the system equal to that in the accumulator. Only when this balanced condition exists can the valve be opened by pilot pressure. This prevents accidental opening of the valve, which could prove disastrous. As a final safety feature, only one static seal is exposed to accumulator pressure.

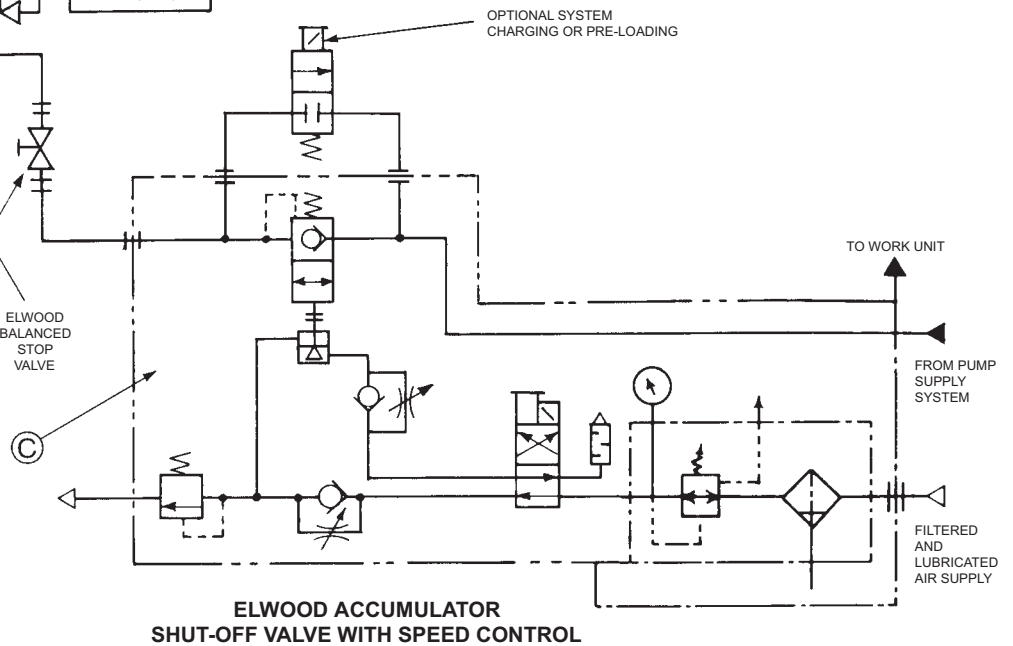
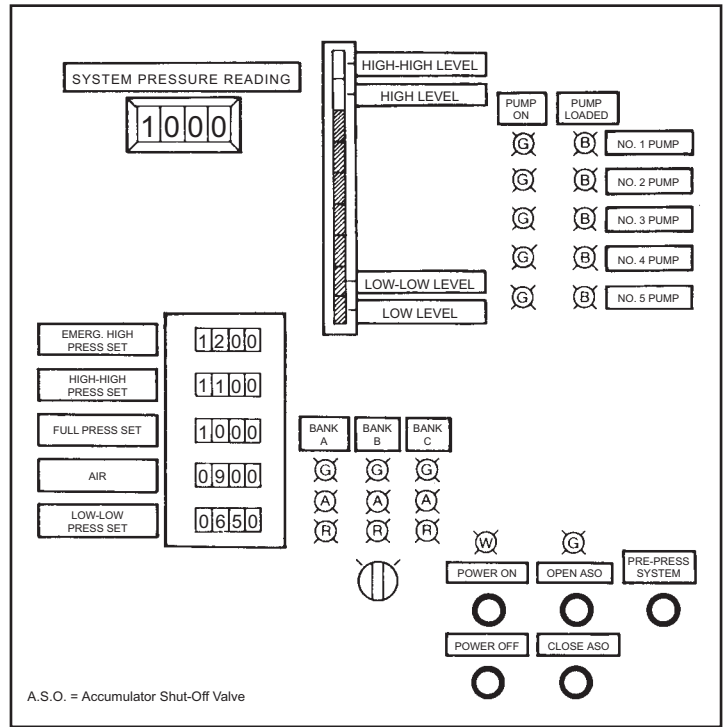
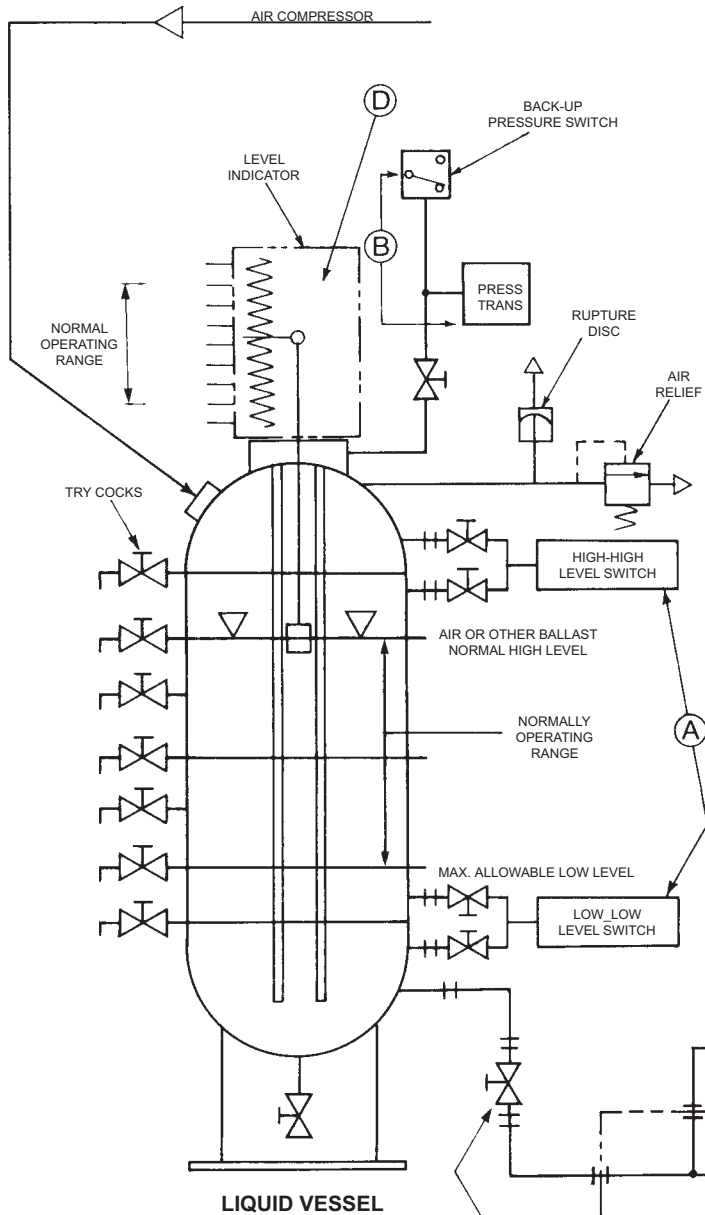
Elwood Shut-off Valve used in a Typical Accumulator System

No two installations need be exactly alike with regard to arrangement of pressure and liquid level devices. Elwood recommends, however, that both pressure and liquid method of control be used. A proper relationship of pressures and levels must be maintained at all times or complications will result. In the illustration at the right, one type of pressure sensing device and two types of level sensing devices are shown. The simplest combination involves float switches (A) and pressure control (B). The upper float switch opens on rising level to shut down pumps. The lower float switch opens on falling level to close the shut-off valve (C). The level control (D) will have sufficient switch contacts to load and unload the pumps, thus maintaining levels between normal low and normal high.

The level control (D) is, in effect, a level sensing device which receives its input signal from the height of the fluid in the bottle. A little more complicated than the float switch, it gives an output signal for all points of level within its range. This is necessary if remote indication or recording of level is required. Control of any components by means of switches can be arranged to suit the user's requirements.

Due to the fact that many variations and combinations of controls can be arranged, we suggest contacting the Elwood Engineering Department when a system is being planned.

Typical Installation of Elwood Shut-Off Valve

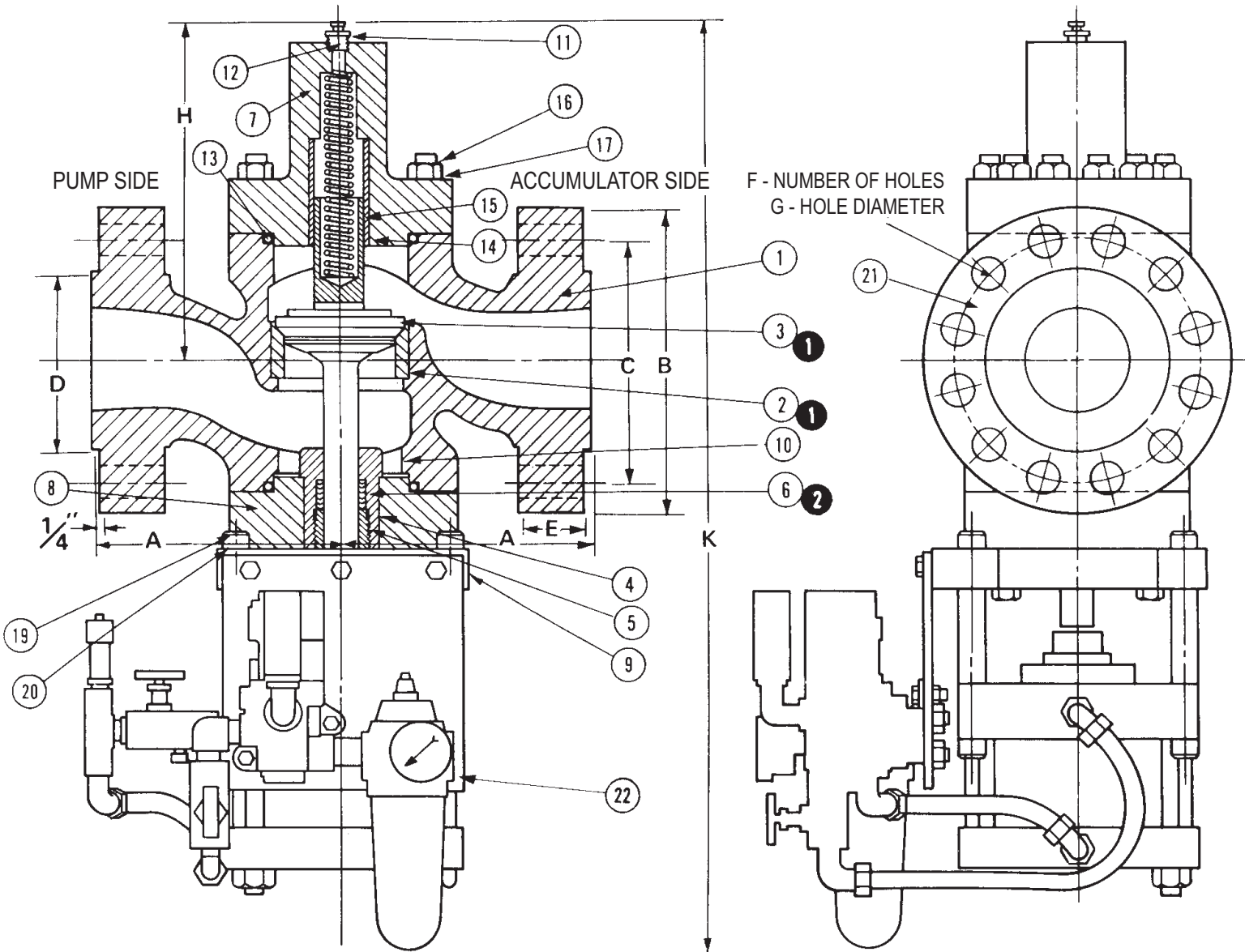


Dimensions are Subject to Change

● Recommended spare parts. Black circle gives number of spares recommended.

NOTE: Sizes available from ongoing stock orders are 3, 4 and 6", with relative flow ratings at 20 PSI pressure drop of 500, 700 and 1900 GPM. Both larger and smaller sizes are available as specials, along with forged-steel body designs for higher pressured.

OPTIONAL: Limit Switch arrangement indicating valve is in open or closed position.



DIMENSIONS								
SIZE	2"	2-1/2"	3"	4"	6"	8"	10"	12"
A	4-1/2	5-1/4	7-1/2	9-3/8	12-1/4	16-3/8	17-1/2	23
B	8-1/2	9-5/8	10-1/2	12-1/4	15-1/2	19	23	26-1/2
C	6-1/2	7-1/2	8	9-1/2	12-1/2	15-1/2	19	23-1/2
D	3-5/8	4-1/8	5	6-3/16	8-1/2	10-5/8	12-3/4	15
E	1-1/2	1-5/8	1-7/8	2-1/8	3-1/4	3-5/8	4-1/4	4-7/8
F	8	8	8	8	12	12	12	16
G	1	1-1/8	1-1/4	1-3/8	1-1/2	1-3/4	2	2-1/8
H	10	11	9-7/8	11-3/4	17-1/4	15 / 21-3/8	17 / 29 *	16 / 28 *
K	28	29	33-7/16	38-1/4	50-1/2	*	57	57
C.V. FACTOR	49	57	87	120	375	46	990	1100
VALVE NO.	4702	4702.5	4703	4704	4706	660	4710	4712
MAX. FLOW GPM (L/Min.)	290 (1100)	390 (1480)	620 (2350)	950 (3600)	2500 (9500)	4708 (17,820)	6500 (24,600)	8000 (30,000)

3 and 3.6K models with ASA Series 1500 flange faces. 6K models with ASA Series 2500 flange faces available, consult factory.

* Offset Accumulator / Pump Side Connection.

All Dimensions Are Subject To Change, Obtain Certified Drawing

PARTS LIST			
No. Rqd.	Item No.	Name of Parts	Material
1	1	Body	Cast Steel
1	2	Seat	H. Stainless Steel
1	3	Disc	H. Stainless Steel
1	4	Stuffing box	Bronze
1	5	Gland	Bronze
1	6	Chevron Packing	Composition
1	7	Top Cap	Cast Steel
1	8	Bottom Cap	Steel
1	9	Cylinder Plate	Steel
4	10	Spacers	Steel
1	11	Air Cock	Bronze
1	12	Reducing Bushing	Steel
2	13	"O" Ring	Composition
1	14	Bushing	Bronze
1	15	Spring	Stainless Steel
24	16	Stud	Steel
24	17	Hex Nut	Steel
4	18	Stop Nut	Steel
4	19	Bolt	Steel
4	20	Hex Nut	Steel
1	21	Taper Pipe Plug	Steel
1	22	Air Cylinder With Speed Control	

Refer to part numbers on nameplate when ordering parts.

Accumulator Shut-Off Valve Ordering Data

SIZE	MAX. FLOW GPM
4702 - 2"	290
4702 - 2.5"	390
4703 - 3"	620
4704 - 4"	950
4706 - 6"	2500
4708 - 8"	4000
4710 - 10"	6500
4712 - 12"	8000

FLANGE STYLE	
SR15	SR1500 FLANGE
SR25	SR2500 FLANGE
Alternate Flange Condulet Factory	

MAXIMUM SYSTEM OPERATING PRESSURE
EXAMPLE: 21 = 2100 PSI

MAXIMUM WORKING PRESSURE	
3.6K	3600 PSI (248 BAR)
4.5K	4500 PSI (310 BAR)
6K	6000 PSI (414 BAR)

SHOP AIR PRESSURE
EXAMPLE: 7 = 70 PSI

CODE NUMBER EXAMPLE: 4702 - 2" - 3.6K - SR15 - 21/7

INLINE FLANGE ORIENTATION IS STANDARD. CONSULT FACTORY FOR OTHER TYPES.

ANSI B 16.5 SERIES FLANGE FACE IS STANDARD. OTHER TYPES AVAILABLE, CONSULT FACTORY.

ACTUAL MAX. SYSTEM PRESSURE AND SHOP AIR PRESSURE MUST BE SUPPLIED : 21/7 SHOWN FOR EXAMPLE ONLY.

STANDARD: NON-STANDARD ITEMS AVAILABLE AT EXTRA COST.

Water Hydraulics - the first fluid

Elwood Fluid Power Group - Description and Brief Company History

The science of modern hydraulics actually began with water hydraulics some 200 years ago and the Elwood Company is one of the few component manufacturers still in existence today which is able to trace its origins right back to those early days.

In 1803, less than a decade after Joseph Bramah ushered in the era of modern hydraulics by patenting the first hydrostatic press, the R D Wood & Griffin Pipe Companies were established, manufacturing water valves and pipes. The Charles Elmes Engineering Works, which became the Elmes Press & Valve Company, was founded in 1851 and manufactured water valves, systems and presses.

These two companies existed independently until the early 1960's when they were purchased by the Nordberg Heavy Machinery Group of Milwaukee. Nordberg combined and expanded both product lines. New developments centered around the, at that time, new poppet valve technology and the extension of the spindle valve range. In 1972, the company Rex Chainbelt bought Nordberg Machinery Group, changing its name to Rexnord. Finally, in 1983, the Elwood Electronics Company purchased the Hydraulic Products Division of Rexnord, which subsequently became the Fluid Power Group of the Elwood Corporation.

At Elwood, we are very conscious of our heritage. Even today there is an occasional repair or parts inquiry for one of the old R D Wood valves. Now, as then, quality and robustness, and attention to the customer's needs are prime considerations.

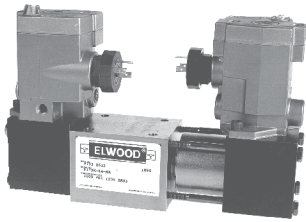
The Elwood Corporation is located south of Milwaukee, Wisconsin. Known as the Workshop of America, this area contains the heaviest concentration of specialist metal machining and processing industries in the United States, and provides almost all of the specialty needs of the Elwood product range right on our doorstep. Much of the American oil hydraulics industry can be found in this area too.

The Elwood Product line is designed for service on the HFA fluids (soluble oils, other water-based and low viscosity fluids) as well as water itself. The internal parts of valves are of stainless steel (heat treated where appropriate) and feature Viton seals and drop tight sealing designs. The key to increased performance and equipment reliability lies in this drop tight seal. The high flow velocities and contaminated fluids often found in water hydraulics systems are fatal for components with internal leaks. The resultant long service life is the main reason for our success in the harsh heavy industrial environment. Our success in the newer environmentally driven industries is due first of course to the fluid water itself, and secondly to the high level of control (for example 50 Hz servo technology) which we can offer for more sophisticated applications.

Elwood is a family owned business which continues to flourish and expand in the world market. Elwood's highly talented professional staff utilizes the latest in design technology to provide customers with the finest products available. Elwood products are world leaders and are covered by numerous US and foreign patents. Over the last 10 years, domestic and overseas sales have continued to grow on an annual basis, confirming our investment in modern water hydraulics.

Directional Control Valves Packed Spool 4-Way

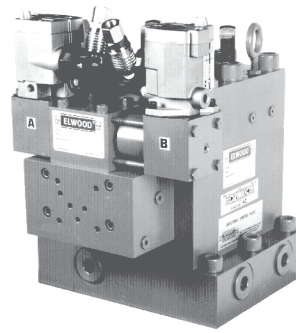
- Directional Valve for a Range of Applications
Up to 46 gpm, 32 gpm Nominal
- 3000 psi (207 bar) and 6000 psi (414 bar)



- Air Solenoid Operated
- 3-Position Spring Centered
- 2-Position Spring Offset
- 2-Position Momentary Contact

REQUEST BULLETIN 82

Directional Control Valves DIN Poppet Series 2-, 3- and 4-Way



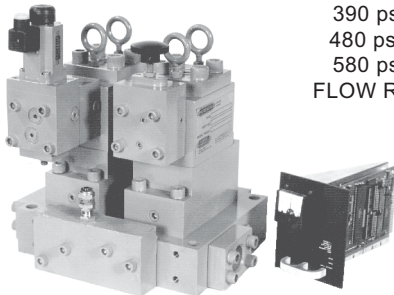
- Capacities to 1600 gpm (6057 l/min.)
- 3000 psi (207 bar), 4500 psi (310 bar) and 6000 psi (414 bar) Models Available
- Built-in Flow Control
- Manifold Mounted, NPT, Socket Weld or Flanged

REQUEST BULLETIN 395

Proportional Pressure Control System

CONTROLLED PRESSURE RANGES:

390 psi (27 bar) to 1500 psi (103 bar)
480 psi (33 bar) to 3000 psi (207 bar)
580 psi (40 bar) to 6000 psi (414 bar)
FLOW RATE: To 1000 gpm (3785 l/min.)



REQUEST BULLETIN 104

Modular Iso-Lock Valve

- Isolates Manifold Mounted Directional Control Valves.
- Reduces maintenance time - replace Directional Valves without depressurizing and draining hydraulic system.
- Single lever operation to close all four ports (P, T, A, B). Cylinders can remain under external load without having to be blocked.
- Lockable per OSHA safety standards.
- NFPA "DO"/CETOP and special mounting patterns available.



REQUEST BULLETIN 250

Accumulator Shut-off/Descaling

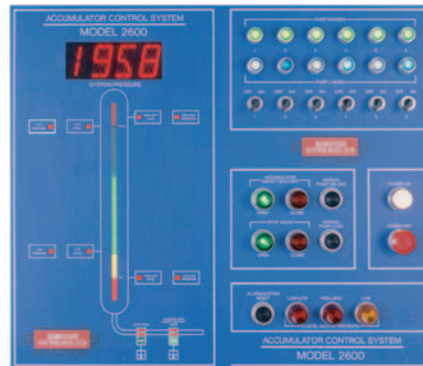


Capacities: 3000 psi (207 bar)
6000 psi (414 bar)
6000 gpm (22,710 l/min.)

Connection Sizes: 1-1/4" to 10"

A.S.O. Valves, Request Bulletin 102
Descaling Valves, Request Bulletin 396

Accumulator Control Panel



- Descaling
- Mill Systems
- Presses
- Controls
 - Level
 - Pressure
 - Pump Sequencing
 - Ballast Charging

Designed to Your Specifications

Request Bulletins 105 & 380

