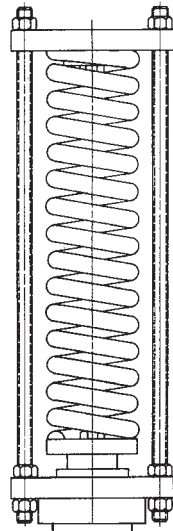
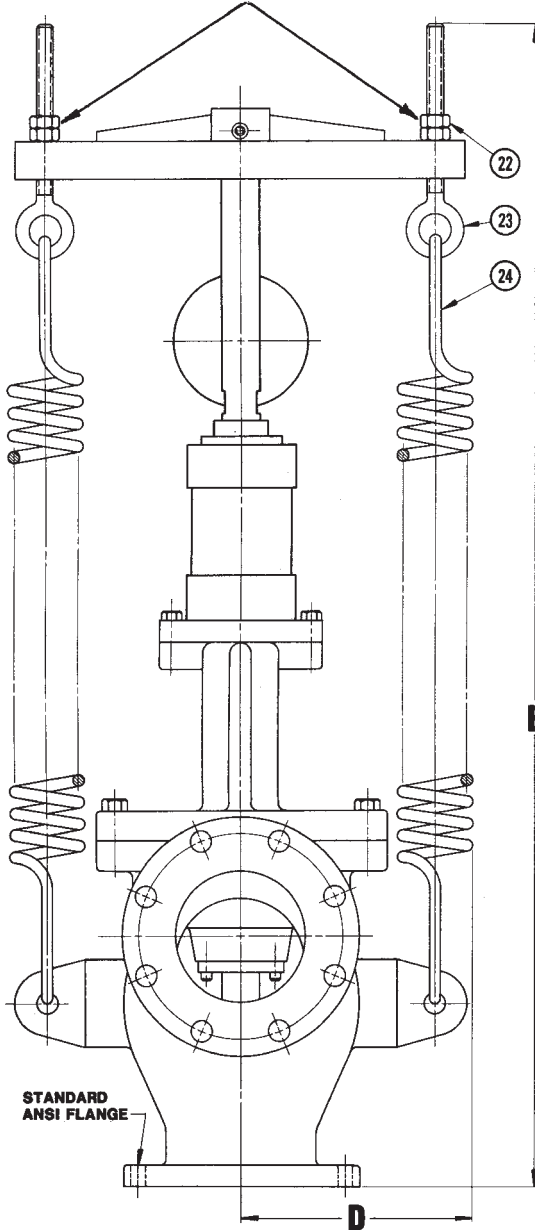


ANGLE SURGE RELIEF VALVE

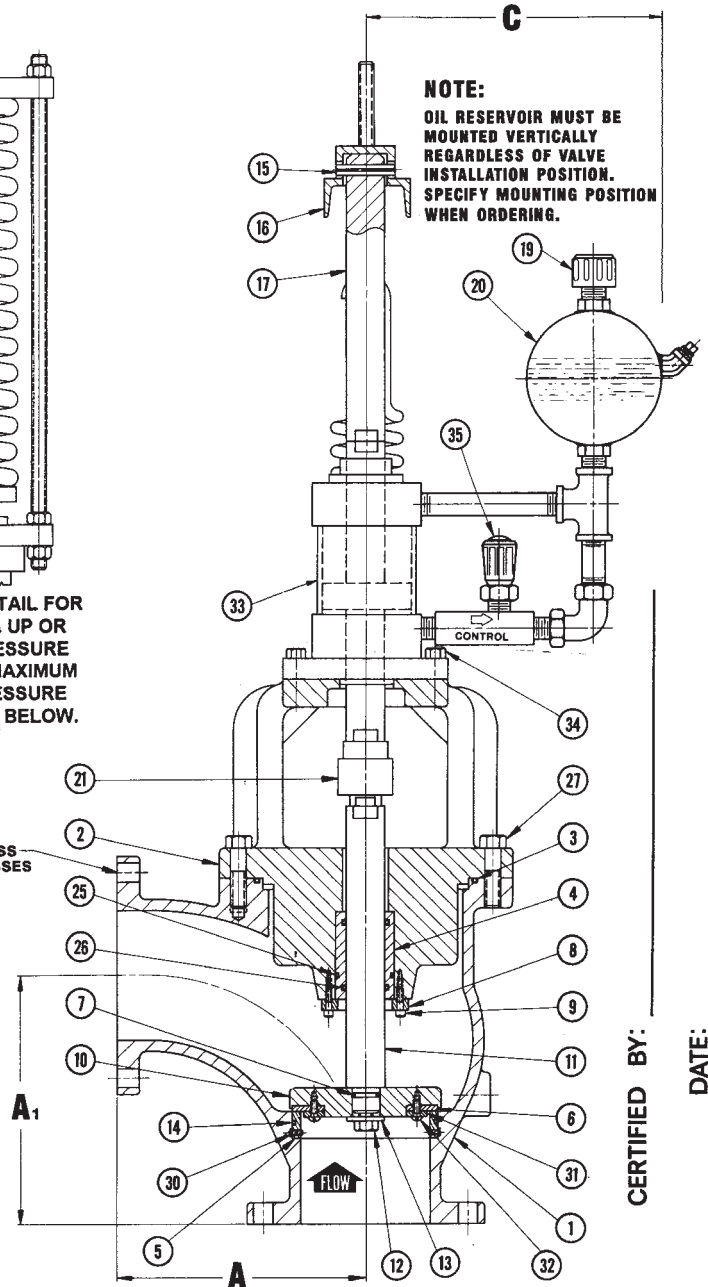
CAUTION: ADJUST BOTH SPRINGS SIMULTANEOUSLY.



* SPRING DETAIL FOR SIZES 10" & UP OR WHERE PRESSURE EXCEEDS MAXIMUM RELIEF PRESSURE PER TABLE BELOW.

B AT MAXIMUM PRESSURE SETTING

125 LB. CLASS FOR ALL CLASSES



NOTE:
OIL RESERVOIR MUST BE MOUNTED VERTICALLY REGARDLESS OF VALVE INSTALLATION POSITION. SPECIFY MOUNTING POSITION WHEN ORDERING.

CERTIFIED BY:

DATE:

VALVE SIZE	A	A ₁	B	C	D	ESTIMATED SHIPPING WEIGHT	* MAXIMUM RELIEF PRESSURE
2"	6½	6½	40¾	13½	7¾	225 LBS.	175 PSI.
2½"	7¾	7¾	40¾	14	6½	275 LBS.	175 PSI.
3"	9	9	52¾	14¼	6½	300 LBS.	175 PSI.
4"	10	10	54½	14½	9	400 LBS.	175 PSI.
6"	11½	11½	61	14½	11	500 LBS.	175 PSI.
8"	14	14	69½	16	13	550 LBS.	150 PSI.
10"	16½	16½	84	16½	11	650 LBS.	100 PSI.
12"	19	19	95	17	13	1100 LBS.	100 PSI.
14"	21½	21½	102	17	16	1600 LBS.	100 PSI.
16"	24	24	109	23	16½	1900 LBS.	100 PSI.

DET	DESCRIPTION	MATERIAL
1	BODY	CAST IRON ASTM A126 GR. B
2	COVER	DUCTILE IRON ASTM A536 GR. 65-45-12
3	COVER SEAL	BUNA-N
4	BUSHING	BRONZE SAE 660
5	BODY SEAT RING	AL. BRONZE ASTM B148-9C
6	DISC SEAT	BUNA-N
7	DISC SEAL	BUNA-N
8	BUSHING RETAINING RING	STEEL ASTM A519
9	BUSHING RETAINING SCREW	STAINLESS STEEL TYPE 304
10	DISC	STEEL ASTM A36
11	STEM	STAINLESS STEEL TYPE 303
12	DISC RETAINING SCREW	STAINLESS STEEL TYPE 18-8
13	DISC SCREW WASHER	STAINLESS STEEL TYPE 18-8
14	BODY SEAT SEAL	BUNA-N
15	SPRING YOKE RETAINING PIN	STEEL COMMERCIAL
16	SPRING YOKE	STEEL ASTM A36

DET	DESCRIPTION	MATERIAL
17	CONNECTING ROD	STEEL COLD FINISH 1042
19	AIR BREATHER CAP	STEEL COMMERCIAL
20	OIL RESERVOIR	STAINLESS STEEL TYPE 304
21	COUPLER	STEEL COMMERCIAL
22	EYE BOLT NUT	STEEL COMMERCIAL
23	EYE BOLT	STEEL ASTM A307
24	SPRING	STEEL MD OIL TEMPERATURE
25	BUSHING SEAL	BUNA-N
26	STEM SEAL	BUNA-N
27	COVER BOLTS	STEEL ASTM A307
30	BODY SEAT RETAINING SCREW	STAINLESS STEEL COMMERCIAL
31	DISC SEAT RETAINING RING	AL. BRONZE ASTM B148
32	DISC SEAT RING SCREW	STAINLESS STEEL COMMERCIAL
33	DASHPOT CYLINDER	STEEL COMMERCIAL
34	DASHPOT MOUNTING BOLT	STEEL ASTM A307
35	FLOW CONTROL VALVE	BRASS COMMERCIAL

* ALUMINUM BRONZE WITH MOLDED BUNA-N FOR SIZE 16".

RELIEF PRESSURE SETTING= _____ PSI

DATE
09-01-03



DRWG. NO.
S-3000

SPECIFICATIONS OTHER SIDE



SPECIFICATIONS

SERIES 3000 ANGLE SURGE RELIEF VALVE

The Angle Surge Relief Valve shall be heavily constructed cast iron body with a ductile iron cover/spacer to withstand severe shock conditions. The body shape shall be 90° angle pattern to permit side or downward discharge.

The cover/spacer shall provide an air gap between the surge valve and the hydraulic cylinder. The valve stem shall be connected to the hydraulic cylinder by means of a SELF-ALIGNING UNIVERSAL CONNECTOR to insure smooth positive opening without binding during shock opening of the valve.

The hydraulic cylinder shall be removeable from the valve, without dismantling or removing the valve from the line.

Closing speed shall be externally adjustable by means of a micrometer control valve.

The valve disc shall be normally closed against the system operating pressure by means of a spring or springs. When the system pressure exceeds the normal operating pressure by 10%, the Angle Surge Relief Valve shall open immediately to relieve the pressure surge and close slowly as the system pressure returns to normal, by means of the hydraulic cylinder. The hydraulic cylinder shall be capped on both ends (totally enclosed) to prevent dirt or dust from fouling up the cylinder operation. It shall be fitted with an atmospheric oil reservoir.

The shut-off pressure shall be set at the factory, but additional adjustments can be made in the field by increasing or decreasing the tension on the externally adjustable springs.

Valve exterior to be painted with Universal Primer as accepted by the FDA for use in contact with Potable Water.

All materials of construction shall be certified in writing to conform with A.S.T.M. specifications as follows:

Body	Cast Iron	ASTM A126 Gr. B
Cover/ spacer	Ductile iron	ASTM A536 Gr. 65-45-12
Body seat ring	Aluminum bronze	ASTM B148-9C
Disc seat	Buna-N	
Disc seat (16")	Aluminum bronze with molded Buna-N	
Disc	Steel	ASTM A36
Heavy duty hydraulic cylinder	Steel	

Valve to be APCO Series 3000 Angle Surge Relief Valve, as manufactured by Valve & Primer Corporation, Schaumburg, Illinois, U.S.A.