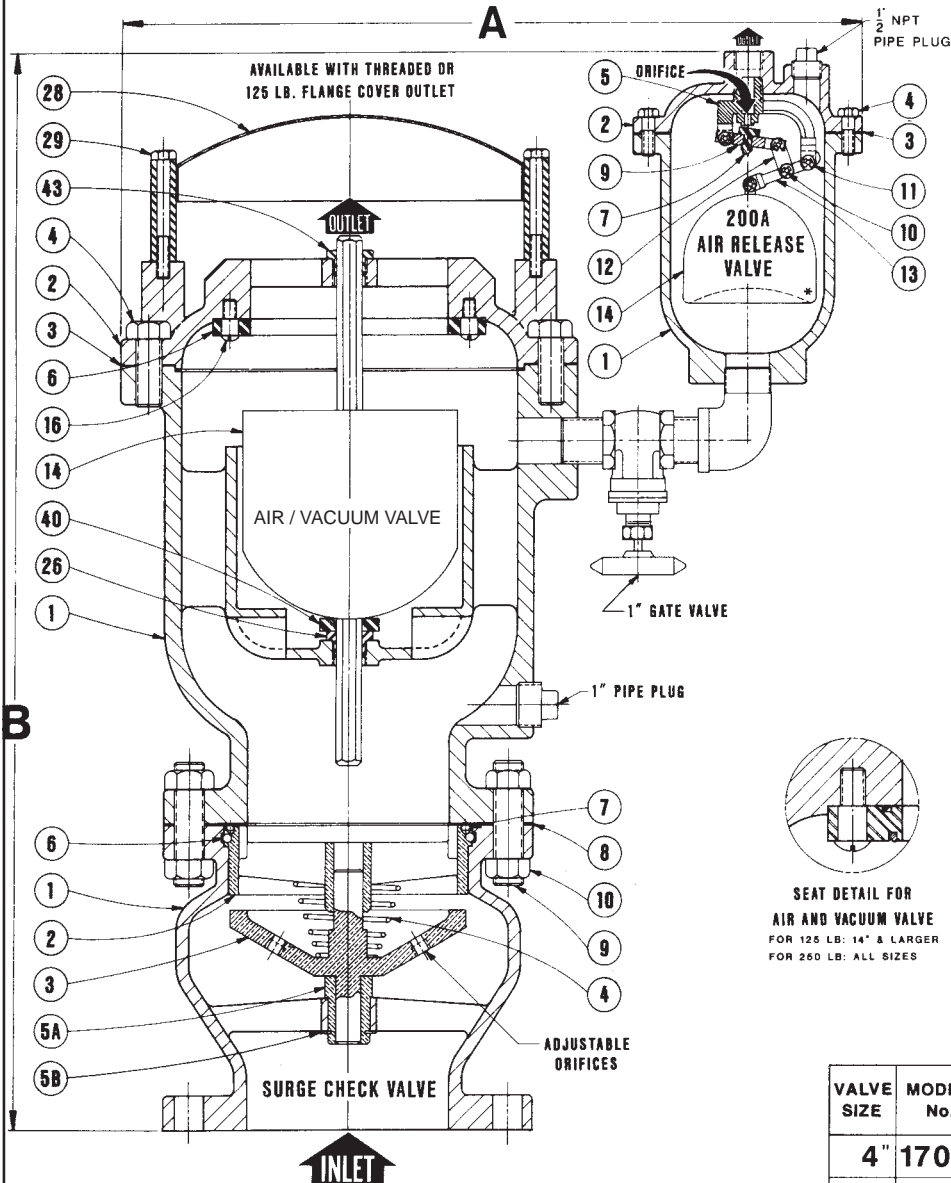


# SLOW CLOSING AIR / VACUUM VALVE with AIR RELEASE VALVE



### 200A AIR RELEASE VALVE

DET.	DESCRIPTION	MATERIAL
1	BODY	CAST IRON ASTM A126 Gr. B
2	COVER	CAST IRON ASTM A126 Gr. B
3	GASKET	LEXIDE (NON-ASBESTOS)
4	COVER BOLT	STEEL ASTM A307 Gr. B
5	LEVERAGE FRAME	DELRIN D4181
7	NEEDLE	BUNA-N
9	NEEDLE LEVER	DELRIN D4181
10	LEVER PIN	STAINLESS STEEL ASTM A582 T303
11	RETAINING RING	STAINLESS STEEL 15-7Mo
12	CONNECTING LINK	NYLON
13	FLOAT LEVER	DELRIN D4181
14	FLOAT*	STAINLESS STEEL ASTM A240 T304

**CONCAVE FLOAT\***  
**PAT. PENDING**

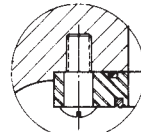
### AIR / VACUUM VALVE

DET.	DESCRIPTION	MATERIAL
1	BODY	CAST IRON ASTM A126 Gr. B
2	COVER	BRONZE ASTM 584
3	GASKET	BRONZE ASTM 584
4	COVER BOLT	STEEL ASTM A307 Gr. B
6	SEAT 1	BUNA-N
14	FLOAT	STAINLESS STEEL ASTM A240 T304
16	SEAT SCREW	STAINLESS STEEL ASTM A582 T303
26	FLOAT GUIDE BUSHING	STAINLESS STEEL ASTM A582 T303
28	HOOD	H. R. S.
29	HOOD SCREW	STEEL ASTM A307 Gr. B
40	BUMPER	BUNA-N
43	FLOAT GUIDE BUSHING	STAINLESS STEEL ASTM A582 T303

\* STAINLESS STEEL WITH BUNA-N SEAL FOR 14" & LARGER ON 125 LB. AND FOR ALL SIZES ON 250 LB. CLASS.

### SURGE CHECK VALVE

DET.	DESCRIPTION	MATERIAL
1	BODY	CAST IRON ASTM A126 Gr. B
2	SEAT	BRONZE ASTM B584
3	PLUG	BRONZE ASTM B584
4	SPRING	STAINLESS STEEL ASTM A276 T316
5A	BUSHING	BRASS ASTM B16 C36000
5B	RETAINING RING	STAINLESS STEEL 15-7Mo
6	RETAINING BALL	STAINLESS STEEL ASTM A276 T440
7	SEAT RETAINING SCREW	STAINLESS STEEL 18-8
8	GASKET	LEXIDE (NON-ASBESTOS)
9	STUD	STEEL AISI 1018
10	NUT	STEEL ASTM A307 Gr. B



**SEAT DETAIL FOR  
AIR AND VACUUM VALVE**  
FOR 125 LB: 14" & LARGER  
FOR 250 LB: ALL SIZES

CERTIFIED BY: \_\_\_\_\_

DATE: \_\_\_\_\_

VALVE SIZE	MODEL No.	COMBINATION	A	B	
				125 LB. 3/16 ORIFICE	250 LB. 5/32 ORIFICE
4"	1704	1604 / 152 / 200A	19 1/2	27 1/2	28
6"	1706	1606 / 153 / 200A	22 3/4	31 7/8	32 1/4
8"	1708	1608 / 154 / 200A	25 1/2	34 5/8	35 1/2
10"	1710	1610 / 155 / 200A	27 7/8	38 7/8	39 1/2
12"	1712	1612 / 156 / 200A	32 7/8	45 7/8	45 7/8
14"	1714	1614 / 157 / 200A	41 7/8	45 5/8	45 5/8
16"	1716	1616 / 158 / 200A	45 1/2	49 3/4	49 3/4
18"	1718	1618 / 159 / 200A	42	52 7/8	52 7/8
20"	1720	1620 / 160 / 200A	46	60 3/4	60 3/4
24"	1724	1624 / 162 / 200A	48	72 1/8	72 1/8

DATE  
**09-01-03**



DRWG. NO.  
**S-1700**

SPECIFICATIONS OTHER SIDE

# APCO<sup>®</sup> SPECIFICATIONS

## SERIES 1700 SLOW CLOSING AIR / VACUUM VALVE WITH AIR RELEASE VALVE

The Slow Closing Air / Vacuum Valve shall have three (3) independent valves bolted together. The Air / Vacuum Valve must have all stainless steel float guided on both ends with stainless steel shafts. The Air / Vacuum Valve seat must be Buna-N to insure drop tight closure. The Buna-N seat shall be fastened to the cover with stainless steel screws in a manner to prevent distortion of the seat. The float shall be guided at both ends with stainless steel bushings.

The valve cover shall have a male lip designed to fit into the body register for accurate alignment of the float into the Buna-N seat. The valve cover shall have a threaded or flanged outlet connection.

The Surge Check Valve shall be bolted to the inlet of the Air / Vacuum Valve and consist of a body, seat, disc and compression spring. A surge check unit shall operate on the interphase between the kinetic energy and relative velocity flows of air and water. After air passes through the water rushes into the surge check and the disc starts to close, reducing the rate of flow of water into the air valve by means of throttling orifices in the disc to prevent water hammer in the Air Valves. The surge check orifices must be adjustable type for regulation in the field to suit operating conditions.

The Air Release Valve shall be side connected to the upper valve, but separated with a bronze shut-off valve for isolation purposes. The internal mechanism shall be the compound lever type to permit the valve to open under pressure to vent pockets of entrapped air as they accumulate. The compound mechanism shall be activated by a stainless steel concave float\* to lift the Buna-N needle to shut off the Air Release orifice.

The Slow Closing Air / Vacuum Valve shall have been flow tested in the field, substantiated by test data to show reduction of surge pressure in the valve.

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

Both air valve covers & bodies and surge check body	Cast Iron	ASTM A126 Gr. B
<b>*Floats (Air Release Valve)</b>		
<b>Concave*</b>	Stainless Steel	ASTM A240 T304
Surge check seat & disc	Bronze	ASTM 584
Air valve seat & needle	Buna-N	
Air Valve mechanism	Delrin	D4181
Spring	Stainless Steel	ASTM A276 T316
Exterior paint	Universal Primer	FDA Approved for Potable Water Contact

**\* Float design may vary on certain sizes**

Valve to be APCO Series 1700 Slow Closing Air / Vacuum Valve with Air Release Valve, as manufactured by Valve & Primer Corporation, Schaumburg, Illinois, U.S.A.