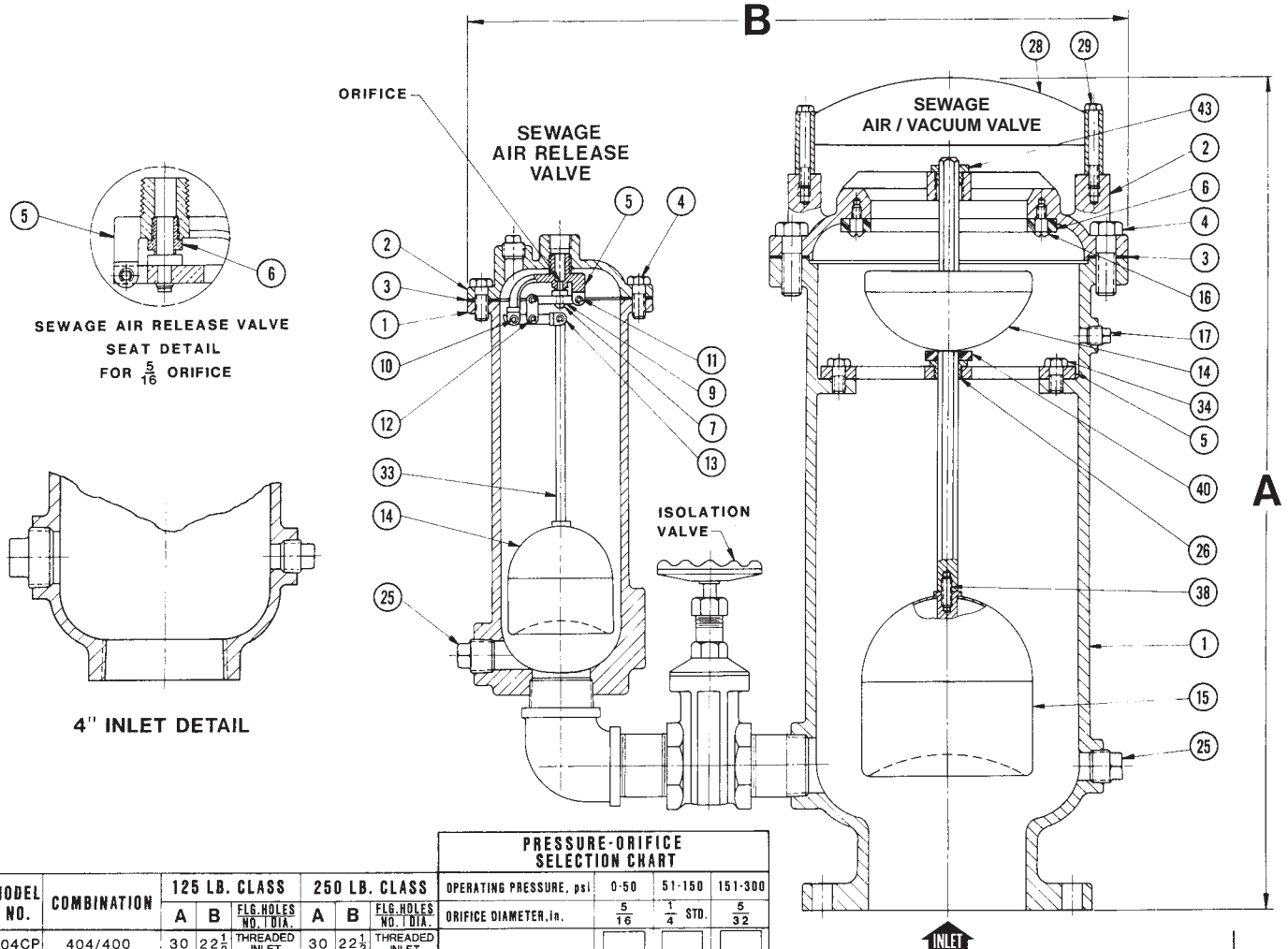


# CUSTOM COMBINATION SEWAGE AIR VALVES



**PRESSURE-ORIFICE SELECTION CHART**

VALVE SIZE	MODEL NO.	COMBINATION	125 LB. CLASS			250 LB. CLASS			OPERATING PRESSURE, psi			
			A	B	FLG. HOLES NO. DIA.	A	B	FLG. HOLES NO. DIA.	0-50	51-150	151-300	ORIFICE DIAMETER, in.
4"	404CP	404/400	30	22 1/2	8	30	22 1/2	8	5/16	1/4 STD.	5/32	
6"	406CP	406/400	32 1/2	25 1/4	8	32 1/2	25 1/4	12				
8"	408CP	408/400	36	28 3/4	8	36	28 3/4	12				
10"	410CP	410/400	41	31 1/2	12	41	31 1/2	16				
12"	412CP	412/400	47	36 1/2	12	47	36 1/2	16				
14"	414CP	414/400	51 1/2	40 1/2	12	51 1/2	40 1/2	20				

**SEWAGE AIR RELEASE VALVE**

DET.	DESCRIPTION	MATERIAL
1	BODY	CAST IRON ASTM A126 GR.B
2	COVER	CAST IRON ASTM A126 GR.B
3	COVER GASKET	LEXIDE (non-asbestos)
4	COVER BOLT	STEEL ASTM A307 GR. B
5	LEVERAGE FRAME	STAINLESS STEEL ASTM A351
6	SEAT (5/16 orifice only)	STAINLESS STEEL ASTM A276
7	NEEDLE	BUNA-N
9	NEEDLE LEVER	STAINLESS STEEL ASTM A351
10	LEVER PIN	STAINLESS STEEL ASTM A582
11	RETAINING RING	STAINLESS STEEL PH15-7MO
12	CONNECTING LINK	STAINLESS STEEL ASTM A276
13	FLOAT LEVER	STAINLESS STEEL ASTM A351
14	FLOAT *	STAINLESS STEEL ASTM A240
25	1" N.P.T. DRAIN PLUG	MALLEABLE IRON (COMM'L.)
33	FLOAT STEM	STAINLESS STEEL ASTM A213

\* CONCAVE FLOAT PATENTED  
 ○ AVAILABLE WITH 125 LB. FLANGED OR THREADED OUTLET

**SEWAGE AIR / VACUUM VALVE**

DET.	DESCRIPTION	MATERIAL
1	BODY	CAST IRON ASTM A126 GR.B
2	COVER ○	CAST IRON ASTM A126 GR.B
3	COVER GASKET	LEXIDE (non-asbestos)
4	COVER BOLT	STEEL ASTM A307 GR. B
5	GUIDE PLATE	STEEL 1018
6	SEAT	BUNA-N
14	UPPER FLOAT	STAINLESS STEEL ASTM A240
15	LOWER FLOAT *	STAINLESS STEEL ASTM A240
16	SEAT RETAINING SCREW	STAINLESS STEEL 18-8
17	1/2" N.P.T. PIPE PLUG	STEEL (COMM'L.)
25	1" N.P.T. DRAIN PLUG	MALLEABLE IRON (COMM'L.)
26	BOTTOM GUIDE BUSHING	STAINLESS STEEL ASTM A240
28	HOOD	STEEL AISI 1010
29	HOOD BOLT	STEEL ASTM A307 GR. B
34	GUIDE PLATE RET. SCREW	STAINLESS STEEL 18-8
38	FLOAT SET SCREW	STAINLESS STEEL 18-8
40	BUMPER	BUNA-N
43	TOP GUIDE BUSHING	STAINLESS STEEL ASTM A582

CERTIFIED BY:

DATE:

DATE  
09-01-03



DRWG. NO.  
S-400CP-1

SPECIFICATIONS OTHER SIDE

# APCO<sup>®</sup> SPECIFICATIONS

## SERIES 400CP-1 CUSTOM COMBINATION SEWAGE AIR VALVES

The Custom Combination Sewage Air Valve shall be dual function venting large volumes of air thru the large orifice and small pockets of air thru the small orifice before shutting off without spillage. Thereafter, while the air valve is pressurized, pockets of air collecting will be vented thru the small orifice automatically. Should vacuum develop in the force main the upper flat top float shall open the large orifice permitting large volumes of air to re-enter the force main to break the vacuum and prevent water column separation. When the force main returns to normal pressure, the Custom Combination Air Valve shall close without spillage. The upper flat top float shall be protected from vacuum impact by a Buna-N Bumper.

The Custom Combination Sewage Air Valve shall consist of an independent large orifice Air / Vacuum Valve with an independent small orifice Air Release Valve connected to its side. The small orifice air valve shall be separated from the large orifice air valve by a 2" solid bronze gate valve. The large orifice air valve shall incorporate one upper flat top float and one lower Concave\* stainless steel float, thereby maintaining an air gap between the bottom Concave\* float and upper flat top shut-off float.

The small orifice air valve shall have an internal compound lever mechanism including a long float stem with a stainless concave float threaded on 12" away from the mechanism, thereby maintaining an air gap between the float and the mechanism. The air gaps shall retard waste solids from clogging the upper shut-off float of the large orifice and the lever mechanism of the small orifice valve.

Both lower floats shall be heavily constructed stainless steel (hermetically sealed) having concave bottom impact areas to provide immediate resistance to flow and instant upward movement to shut off each discharge orifice without spilling.

The Air & Vacuum Valve inlet shall be 4" threaded or flanged 6" thru 14". The outlet shall be plain with hood or 125# flanged (Engineer to specify). The side connected Air Release Valve shall have a 2" NPT inlet and 1/2" NPT outlet. The small orifice shall be 1/4" diameter for operating (opening) pressure up to 150 psi and venting capacity of 90 CFFAM.

The manufacturer shall certify venting capacity and provide installation and maintenance manuals with each Custom Combination Sewage Air Valve.

Materials of construction shall be certified to conform with the following A.S.T.M. specifications as follows:

Body, cover	Cast iron	ASTM A126 Gr. B
Internal linkage	Stainless steel	Series 300
Float stem	Stainless steel	ASTM A213 T304
Floats Concave*PATENTED	Stainless steel	ASTM A240 T304
Needle-seat & bumper	Buna-N	Nitrile Rubber
Exterior Paint	Universal metal primer	

Note: Other materials available.

Valve to be APCO Series 400CP-1 Custom Combination Sewage Air Valves as manufactured by Valve & Primer Corporation, Schaumburg, Illinois, U.S.A.