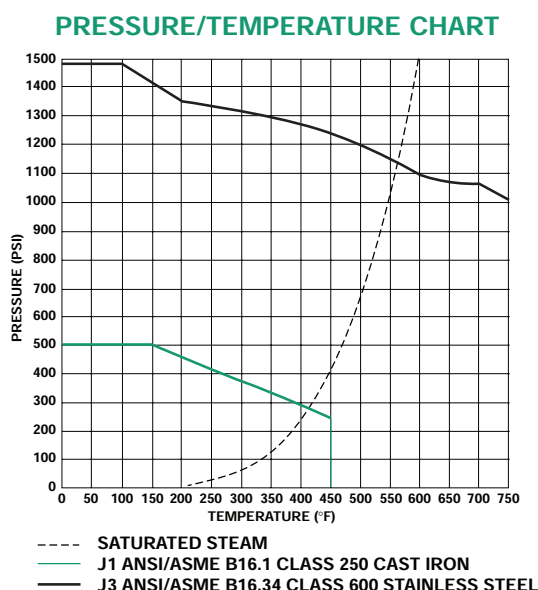




APPLICATION DATA

- Process control systems for food, pulp and paper, chemical, petrochemical & other industries
- HVAC systems
- Feed water and fuel system controls in boiler rooms
- Packaged systems (OEM) such as heat exchangers, water purification systems & vaporizer, metal cleaning and plating



INTIMIDATOR TYPE J CONTROL VALVE

SIZES 1/2" - 2"
ANSI CLASS 150, 250/300, 600

- **High Capacity Streamlined Body** reduces velocity and pressure loss.
- **Compact Design** for ease of installation.
- **Multiple Port Sizes** allows flexibility in sizing.
- **Stainless Steel Trim** for long life and corrosion resistance.
- **Super Polished, Extra Thick Stem** provides low friction and precise control.
- **Live Loaded V ring Packing** is self adjusting.
- **Slip-on Flanges** for flexibility in piping.
- **NEMUR 4 Mounting Pad** for accessories.

MODELS

- J1 — Cast Iron
- J3 — Stainless Steel*

OPTIONS

- 36 or 60 sq. in. actuators
- Soft Seats
- Moore, PMV, Eckardt Accessories
- Threaded or Flanged Connections
- Graphite or High Temperature Packing
- High Temperature 600°F and 750°F Construction

APPLICABLE CODES

- ANSI/ISA 70-2 Class IV & VI seat leakage
- NEMUR 4 mounting of accessories

PLUG CHARACTERISTICS

- 1/8" to 1/4" Port Sizes - Equal Percent, 50:1 flow rangeability
- 5/8" to 2-1/4" Port Sizes - Modified Equal Percent, 100:1 flow rangeability

Canadian Registration # OC 0591.9C

MAXIMUM RATED FLOW COEFFICIENTS* (Cv)

VALVE SIZE				
1/2	3/4	1	1 1/2	2
5.1	10.3	18.2	37	67

* Body is ANSI Class 600. Pressure rating may be limited by choice of flanges.

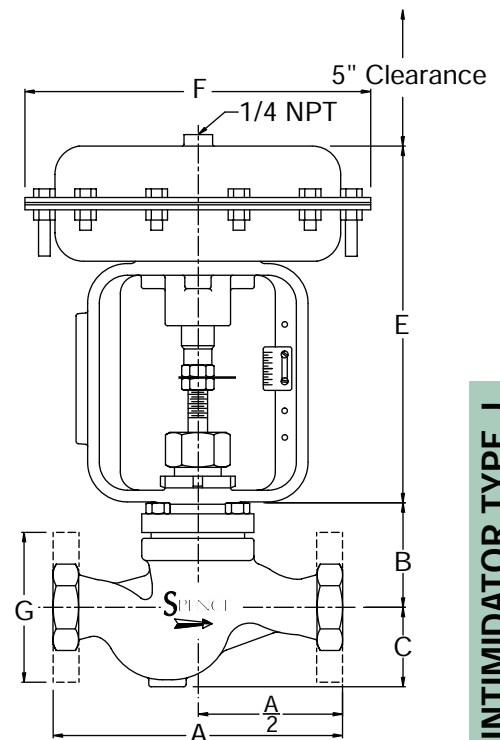
INTIMIDATOR TYPE J CONTROL VALVE

SPECIFICATION

The valve shall be single seated, top guided compact pneumatic globe control valve with a streamlined body. The actuator shall have all SS hardware with a maximum deadband of .3 PSIG. the valve trim shall be all 316SS with replaceable threaded seats for easy maintenance. Standard packing shall be spring loaded teflon V-Rings. Optional graphite or high temperature packings available. The valve seat leakage shall conform to ANSI/ISA 70-2 Class IV for metal seats and Class VI for teflon soft seats. The valve shall conform to NEMUR 4 for mounting of accessories.

MATERIALS OF CONSTRUCTION

Body	316 SS ASTM A351 CF8M
.....	Cast Iron ASTM A126 CL B
Seat Ring	316 SS ASTM A276 Cond A
Packing.....	PTFE V ring
.....	PTFE/Graphite
.....	Graphite
Plug & Stem Ass'y	316 SS ASTM A276 Cond A
Yoke.....	DI ASTM A536/Epoxy
Stem	303 SS ASTM A582
Diaphragm	Nitrile/Polyester
Piston.....	316 SS ASTM A743 Grd CF8
Spring	Music Wire ASTM A228
Actuator Housing	Steel SAE 1006-1008/Epoxy



INTIMIDATOR TYPE J
CONTROL VALVE

DIMENSIONS inches AND WEIGHTS pounds

Size	A		B	C	E		F		G (Flange Diameter)		Weights*			
	Scrd.	Flg.			36 in. ²	60 in. ²	36 in. ²	60 in. ²	150	300/600	Screwed		Flanged	
											36 in. ²	60 in. ²	36 in. ²	60 in. ²
1/2	7 5/8	8	2 11/16	1 7/8	9 7/8	11 7/8	9 1/4	11 1/4	3 1/2	3 3/4	20 1/2	36 1/2	23 1/2	39 1/2
3/4	7 5/8	8 1/8	2 11/16	1 7/8	9 7/8	11 7/8	9 1/4	11 1/4	3 7/8	4 5/8	20 1/2	36 1/2	25 3/4	41 3/4
1	7 3/4	8 1/4	2 3/4	2 1/8	9 7/8	11 7/8	9 1/4	11 1/4	4 1/4	4 7/8	22 1/2	38 3/4	29	45 1/4
1 1/2	9 1/4	9 7/8	33/8	2 11/16	9 7/8	11 7/8	9 1/4	11 1/4	5	6 1/8	29 1/4	45 1/2	40 1/4	57 1/2
2	10 1/2	11 1/4	3 9/16	3 5/16	9 7/8	11 7/8	9 1/4	11 1/4	6	6 1/2	38 3/4	54 1/4	50 1/4	68 1/4

*Weights are approximate.

PRESSURE RECOVERY FACTORS

For Gas: $X_T=0.7$, For F_L : See Chart

1/2		3/4			1				1 1/2			2		
1/4	5/8	1/4	5/8	7/8	1/4	5/8	7/8	1 1/4	7/8	1 1/4	1 3/4	1 1/4	1 3/4	2 1/4
.851	.79	.864	.82	.775	.869	.839	.805	.768	.843	.82	.782	.841	.811	.772

INTIMIDATOR ORDERING CODE

CODE SELECTION CHART

Model	Orifice	Size	Connections	Trim	Packing-	Actuator	Spring	Positioner	Posit. Set	Accessories	-	Inlet Pressure							
J	1	J	C	9	1	1 - 3	6	R	M	M	P	0	2	0	1 - 1	2	5		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Model - Position 1 & 2 J1 = Cast Iron J3 = Stainless
Orifice - Position 3 F = $\frac{1}{8}$ G = $\frac{3}{16}$ H = $\frac{1}{4}$ J = $\frac{5}{8}$ K = $\frac{7}{8}$ L = $1\frac{1}{4}$ M = $1\frac{3}{4}$ N = $2\frac{1}{4}$
Size - Position 4 C = $\frac{1}{2}$ D = $\frac{3}{4}$ E = 1 G = $\frac{1}{2}$ H = 2
Connections - Position 5 1 = 125/150 3 = 250/300 6 = 600# 9 = Threaded

Trim - Position 6 1 = Metal 2 = Soft
Packing - Position 7 1 = V-ring 2 = Graphite 3 = Hi-Temp
Actuator - Position 8 & 9 01 = None 36 = 36 sq. in. 60 = 60 sq. in.
Spring - Position 10 & 11 DC = 3-13 Dir 36 DD = 3-10 Dir 36 DE = 3-5 Dir 36 DF = 3-10 Dir 60* DG = 3-11 Dir 60 DH = 3-8 Dir 60 RC = 5-15 Rev 36 RD = 8-15 Rev 36 RE = 10-15 Rev 36 RG = 8-15 Rev 60 RH = 10-15 Rev 60 RJ = 11-15 Rev 60* RK = 20-60 Rev 60 RL = 20-60 Rev 60* RQ = 12-15 Rev 60

Positioner - Position 12 & 13 AA = None EI = Eckardt I/P EP = Eckardt P MI = Moore I/P MP = Moore P 4P = PMV P4 P 5I = PMV P5 I/P 5P = PMV P5 P
Positioner Set Position 14 & 15 01 = None 02 = 3-15/4-20 mA 03 = 3-9/4-12 mA 04 = 9-15/12-20 mA

Accessories - Position 16 & 17 01 = None 02 = Limit Switch, Mechanical 03 = Limit Switch, Proximity Switch 04 = Feedback Potentiometer 1K 05 = Feedback 4-20mA Posit. Trans
Inlet Pressure - Position 18, 19 & 20 ___ = Actual Setting

* $2\frac{1}{4}$ " port only.

INTIMIDATOR
ORDERING CODE

INTIMIDATOR SHUTOFF & CV TABLES

ACTUATOR SHUTOFF TABLE

PORT SIZE	ACTUATOR SIZE	BENCH RANGE	REVERSE SHUTOFF		BENCH RANGE	DIRECT SHUTOFF	
			3-15 PSI	0-20 PSI*		3-15 PSI	0-20 PSI
1/8	36	5 - 15	0 - 750	0 - 750	3 - 13	0 - 750	0 - 750
3/16, 1/4	36	5 - 15	0 - 250	0 - 750	3 - 13	0 - 250	0 - 750
5/8	36	5 - 15	—	0 - 50	3 - 10	0 - 300	0 - 750
		8 - 15	0 - 350	50 - 500	3 - 5	300 - 750	300 - 750
		10 - 15	350 - 550	500 - 750	—	—	—
7/8	36	8 - 15	0 - 200	0 - 300	3 - 10	0 - 150	0 - 350
		10 - 15	200 - 300	300 - 450	3 - 5	150 - 400	350 - 650
	60	8 - 15	0 - 500	0 - 700	3 - 11	0 - 300	0 - 600
		10 - 15	500 - 650	700 - 750	3 - 8	300 - 500	600 - 750
		12 - 15	650 - 750	—	—	—	—
1-1/4	36	—	—	—	3 - 10	0 - 150	0 - 300
		10 - 15	0 - 150	0 - 225	3 - 5	150 - 225	300 - 375
	60	8 - 15	0 - 200	0 - 300	3 - 11	0 - 150	0 - 350
		10 - 15	200 - 250	300 - 350	3 - 8	150 - 250	350 - 450
		12 - 15	250 - 300	350 - 400	—	—	—
		20 - 60**	—	0 - 750**	—	—	—
1-3/4	36	10 - 15	0 - 75	0 - 125	3 - 5	0 - 100	0 - 200
		8 - 15	0 - 75	0 - 125	3 - 11	0 - 100	0 - 200
	60	10 - 15	75 - 125	125 - 175	3 - 8	100 - 125	200 - 250
		12 - 15	125 - 175	175 - 225	—	—	—
		20 - 60**	—	0 - 375**	—	—	—
		—	—	—	—	—	—
2-1/4	60	11 - 15	0 - 100	0 - 125	3 - 10	0 - 50	0 - 100
		20 - 60**	—	0 - 225**	—	—	—

* Based on 20 psi air supply w/ EPC or Positioner

** Based on 60 psi air supply w/ EPC or Positioner

NOTES:

- 1) For pressures over 750 psi please consult factory
- 2) For direct configured actuators 60 psi air signal will achieve 750 psi shutoff except for 2.25 port which will achieve 650 psi shutoff
- 3) Do not exceed 60 psi air signal to actuator

ACTUATOR SELECTION

Select Actuator size and bench range that will accommodate require shut off with port size selected. Select reverse for air to open fail close applications, direct for air to close fail open applications.

Cv TABLE

SIZE	TRAVEL	PORT SIZE	PLUG CONTOUR	PERCENT OF TRAVEL										
				5	10	20	30	40	50	60	70	80	90	100
1/2	3/4	1/8	EP	0.002	0.003	0.006	0.011	0.021	0.032	0.042	0.052	0.062	0.072	0.08
		3/16	EP	0.004	0.008	0.014	0.021	0.03	0.045	0.063	0.095	0.145	0.25	0.5
		1/4	EP	0.03	0.04	0.07	0.12	0.18	0.25	0.36	0.49	0.7	1.1	1.5
		5/8	MEP	0.05	0.1	0.18	0.31	0.49	0.73	1.1	1.6	2.3	3.4	5.1
3/4	3/4	1/8	EP	0.002	0.003	0.006	0.011	0.021	0.032	0.042	0.052	0.062	0.072	0.08
		3/16	EP	0.004	0.008	0.014	0.021	0.03	0.045	0.063	0.095	0.145	0.25	0.5
		1/4	EP	0.03	0.04	0.07	0.12	0.18	0.25	0.36	0.49	0.7	1.1	1.5
		5/8	MEP	0.05	0.07	0.18	0.31	0.47	0.73	1.1	1.6	2.4	3.8	6
		7/8	MEP	0.07	0.19	0.58	1	1.3	1.9	2.5	3.8	5.7	8.7	10.3
1	3/4	5/8	MEP	0.04	0.07	0.16	0.31	0.54	0.79	1.1	1.8	2.2	4	6.2
		7/8	MEP	0.07	0.15	0.42	0.75	1.2	1.9	2.9	4.2	6.7	9.8	12.1
		1-1/4	MEP	0.09	0.27	0.63	1	1.4	3.2	5.3	7.5	11.5	15.6	18.2
1-1/2	3/4	7/8	MEP	0.11	0.21	0.54	0.89	1.4	1.9	2.7	3.9	6.4	10.1	13.2
		1-1/4	MEP	0.14	0.37	0.99	1.5	2.4	3.6	5.3	7.5	12.3	16.8	22
		1-3/4	MEP	0.41	0.85	2.4	4.3	6.4	9.9	15.7	22.7	29	34.2	37
2	3/4	1-1/4	MEP	0.14	0.37	0.99	1.5	2.4	3.6	5.3	7.5	12.3	17.3	23
		1-3/4	MEP	0.41	0.85	2.4	4.3	6.5	10	16	23	31	37	43
	1-1/16	2-1/4	MEP	0.75	1.5	3.5	6.5	10.5	15.5	26	39	50	60	67

INTIMIDATOR Cv & SHUTOFF TABLES

INTIMIDATOR SATURATED STEAM CAPACITY TABLE

(Lbs./Hr.)

INTIMIDATOR STEAM CAPACITY TABLE

Pressure (PSI)		Valve Size and Port																	
		1/2				3/4					1			1-1/2			2		
P1	P2	1/8	3/16	1/4	5/8	1/8	3/16	1/4	5/8	7/8	5/8	7/8	1-1/4	7/8	1-1/4	1-3/4	1-1/4	1-3/4	2-1/4
10	5	2	16	47	159	2	16	47	187	322	194	378	569	412	687	1156	719	1344	2094
	3	3	18	53	181	3	18	53	213	366	220	430	646	469	781	1314	817	1527	2380
15	10	3	17	52	177	3	17	52	208	357	215	419	630	457	762	1281	796	1489	2320
	7	3	21	62	212	3	21	62	250	429	258	503	757	549	915	1540	957	1789	2788
	5	4	22	67	229	4	22	67	269	463	278	543	817	593	988	1662	1033	1931	3009
20	15	3	19	56	192	3	19	56	226	387	233	455	685	497	828	1392	865	1617	2520
	10	4	25	74	253	4	25	74	297	510	307	599	902	654	1090	1833	1139	2130	3319
	7	4	27	81	275	4	27	81	324	555	334	652	981	712	1186	1995	1240	2319	3613
30	22	4	26	79	268	4	26	79	315	541	326	636	957	694	1156	1945	1209	2260	3522
	17	5	32	95	323	5	32	95	380	652	393	766	1153	836	1393	2343	1457	2723	4243
	10	6	36	108	369	6	36	108	434	744	448	874	1315	954	1590	2674	1662	3108	4842
40	25	6	38	113	384	6	38	113	452	775	467	911	1370	994	1656	2786	1732	3237	5044
	20	7	41	124	423	7	41	124	497	854	514	1003	1508	1094	1823	3067	1906	3564	5553
	3-0	8	47	141	480	8	47	141	564	969	583	1138	1711	1241	2069	3479	2163	4043	6300
50	35	7	42	125	424	7	42	125	498	855	515	1005	1511	1096	1827	3073	1910	3571	5564
	30	7	46	138	470	7	46	138	553	950	572	1116	1679	1217	2029	3413	2121	3966	6179
	25	8	49	148	505	8	49	148	594	1019	614	1198	1801	1307	2178	3662	2277	4256	6632
	6-0	9	55	166	564	9	55	166	663	1139	686	1338	2013	1460	2433	4091	2543	4755	7409
60	45	7	45	135	460	7	45	135	541	928	559	1090	1640	1189	1982	3334	2072	3874	6037
	40	8	50	151	513	8	50	151	604	1036	624	1217	1831	1328	2213	3722	2313	4325	6739
	35	9	54	163	554	9	54	163	652	1119	674	1315	1977	1434	2390	4020	2499	4672	7279
	9-0	10	64	191	648	10	64	191	763	1309	788	1538	2314	1678	2797	4704	2924	5466	8517
75	55	9	56	168	571	9	56	168	671	1153	694	1354	2036	1477	2462	4140	2574	4811	7497
	50	10	61	182	620	10	61	182	730	1253	754	1472	2214	1606	2677	4501	2798	5231	8151
	45	10	65	194	660	10	65	194	777	1334	803	1567	2356	1709	2848	4791	2978	5568	8675
	14-0	12	76	227	772	12	76	227	909	1560	939	1833	2757	1999	3332	5604	3484	6513	10148
100	75	11	70	210	715	11	70	210	841	1444	869	1697	2552	1851	3085	5188	3225	6029	9394
	60	13	83	249	847	13	83	249	996	1710	1029	2009	3021	2191	3652	6142	3818	7138	11122
	22-0	15	96	288	978	15	96	288	1151	1975	1189	2321	3491	2532	4219	7096	4411	8247	12850
125	100	13	78	234	797	13	78	234	938	1609	969	1891	2844	2063	3438	5782	3594	6719	10469
	75	16	101	303	1030	16	101	303	1212	2081	1252	2444	3676	2666	4444	7474	4646	8686	13534
	30-0	19	116	348	1182	19	116	348	1391	2388	1437	2805	4220	3060	5101	8578	5332	9969	15534
150	125	14	86	257	875	14	86	257	1029	1766	1063	2075	3121	2264	3773	6346	3945	7375	11491
	100	18	112	336	1142	18	112	336	1343	2306	1388	2709	4074	2955	4925	8283	5149	9626	14998
	38-0	22	136	407	1385	22	136	407	1629	2796	1683	3285	4941	3584	5973	10045	6244	11674	18190
175	150	15	92	275	936	15	92	275	1101	1890	1138	2221	3340	2422	4037	6790	4221	7891	12296
	125	20	122	367	1249	20	122	367	1469	2522	1518	2963	4457	3232	5387	9060	5632	10529	16406
	100	22	139	418	1421	22	139	418	1672	2870	1728	3372	5072	3678	6131	10311	6409	11983	18671
	46-0	25	155	466	1585	25	155	466	1865	3202	1927	3761	5657	4103	6838	11501	7149	13366	20826
200	150	21	131	392	1333	21	131	392	1569	2693	1621	3164	4759	3451	5752	9674	6014	11243	17518
	125	24	152	455	1549	24	152	455	1822	3127	1883	3674	5526	4008	6680	11235	6984	13056	20344
	54-0	28	175	525	1784	28	175	525	2098	3602	2168	4232	6365	4616	7694	12939	8043	15038	23431
225	175	22	139	417	1418	22	139	417	1669	2865	1724	3365	5062	3671	6119	10291	6397	11960	18635
	150	26	162	485	1649	26	162	485	1940	3331	2005	3913	5885	4268	7114	11964	7437	13904	21665
	63-0	31	194	583	1981	31	194	583	2330	4001	2408	4700	7069	5127	8545	14371	8933	16701	26023
250	200	23	147	441	1498	23	147	441	1762	3025	1821	3554	5345	3877	6461	10866	6755	12628	19676
	175	27	172	515	1751	27	172	515	2060	3536	2129	4154	6249	4532	7554	12704	7897	14764	23004
	150	30	189	566	1926	30	189	566	2266	3889	2341	4569	6872	4984	8307	13971	8685	16237	25300
	71-0	34	214	641	2179	34	214	641	2564	4401	2649	5170	7776	5640	9400	15808	9827	18372	28626

- It is recommended to keep valve outlet velocity below 30,000 ft./min.
- Capacities based on maximum Cv.

INTIMIDATOR SATURATED STEAM CAPACITY TABLE

(Kg./Hr.)

Pressure (bar)		Valve Size and Port																	
		1/2				3/4					1			1-1/2			2		
P1	P2	1/8	3/16	1/4	5/8	1/8	3/16	1/4	5/8	7/8	5/8	7/8	1-1/4	7/8	1-1/4	1-3/4	1-1/4	1-3/4	2-1/4
0.7	0.3	1	8	23	77	1	8	23	90	155	93	182	274	199	331	557	346	647	1008
	0.2	1	8	25	83	1	8	25	98	169	101	198	298	216	360	606	376	704	1097
1	0.7	1	7	22	75	1	7	22	88	151	91	178	267	194	323	543	337	631	983
	0.5	1	9	27	92	1	9	27	108	186	112	218	328	238	397	667	415	775	1208
	0.3	2	10	30	103	2	10	30	121	208	125	245	368	267	445	748	465	869	1354
1.5	1	2	10	31	104	2	10	31	123	211	127	247	372	270	450	756	470	879	1370
	0.7	2	12	37	124	2	12	37	146	251	151	295	444	322	536	902	561	1048	1633
	0.5	2	13	39	133	2	13	39	157	269	162	316	475	345	574	966	600	1122	1749
2	1.5	2	11	34	115	2	11	34	136	233	140	273	411	298	497	836	520	972	1514
	1.2	2	14	41	139	2	14	41	163	280	169	329	495	359	599	1007	626	1170	1823
	1	2	15	44	151	2	15	44	178	305	184	358	539	391	651	1095	681	1273	1983
3	2	3	18	53	179	3	18	53	211	362	218	425	639	464	773	1299	808	1510	2353
	1.5	3	20	60	205	3	20	60	241	414	249	487	732	531	885	1489	925	1730	2696
	1.3-0	4	23	68	231	4	23	68	272	467	281	549	826	599	998	1679	1044	1951	3040
3.5	3.0	2	14	42	143	2	14	42	169	289	174	340	511	371	618	1040	646	1208	1883
	2.0	3	22	65	221	3	22	65	260	446	268	524	788	571	952	1601	996	1861	2900
	1.0	4	24	73	249	4	24	73	293	503	303	591	889	645	1075	1808	1124	2101	3273
	1.4-0	4	25	76	259	4	25	76	304	523	315	614	923	670	1116	1877	1167	2181	3399
4	3.0	3	20	59	202	3	20	59	238	409	246	480	722	524	873	1468	912	1706	2657
	2.0	4	25	75	256	4	25	75	301	517	311	607	913	662	1104	1856	1154	2158	3362
	1.0	4	27	81	276	4	27	81	325	558	336	656	986	715	1192	2005	1246	2330	3631
	1.6-0	4	28	84	286	4	28	84	337	578	348	679	1021	741	1234	2076	1290	2413	3759
5	4.0	4	22	66	224	4	22	66	264	453	272	532	800	580	967	1625	1010	1889	2943
	3.0	5	28	85	290	5	28	85	341	585	352	687	1034	750	1250	2101	1306	2442	3805
	2.0	5	31	94	321	5	31	94	378	649	391	762	1146	831	1386	2331	1449	2708	4220
	1.9-0	5	33	100	341	5	33	100	401	688	414	808	1215	881	1469	2471	1536	2871	4474
7	5.0	5	34	102	345	5	34	102	406	698	420	820	1233	894	1490	2506	1558	2913	4538
	3.0	7	42	125	424	7	42	125	499	856	515	1006	1513	1097	1829	3075	1912	3574	5569
	1.6-0	7	44	132	449	7	44	132	529	908	546	1066	1604	1163	1939	3260	2027	3789	5904
9	7.0	6	38	115	392	6	38	115	462	793	477	931	1400	1016	1693	2847	1770	3309	5155
	5.0	8	49	147	500	8	49	147	589	1010	608	1187	1786	1295	2158	3630	2256	4219	6573
	2.1-0	9	55	164	557	9	55	164	656	1126	678	1322	1989	1442	2404	4043	2513	4699	7321
10	8.0	6	41	122	414	6	41	122	487	836	503	982	1478	1072	1786	3004	1867	3491	5439
	5.0	9	55	165	561	9	55	165	660	1132	682	1330	2001	1451	2419	4068	2529	4727	7366
	2.5-0	10	60	179	609	10	60	179	716	1230	740	1445	2173	1576	2627	4417	2746	5134	7999
12	10.0	7	44	133	451	7	44	133	530	910	548	1069	1608	1167	1944	3270	2033	3800	5921
	7.0	10	62	186	634	10	62	186	746	1280	771	1504	2262	1641	2735	4599	2859	5345	8328
	5.0	11	67	201	683	11	67	201	803	1379	830	1620	2437	1768	2946	4955	3080	5758	8972
	3.2-0	11	70	210	715	11	70	210	841	1444	869	1697	2552	1851	3085	5188	3225	6030	9395
14	10.0	10	63	189	644	10	63	189	757	1300	783	1527	2297	1666	2777	4670	2903	5427	8456
	7.0	12	75	225	766	12	75	225	901	1546	931	1817	2733	1982	3303	5555	3453	6456	10059
	3.8-0	13	80	241	820	13	80	241	965	1656	997	1946	2927	2123	3538	5950	3699	6915	10775
15	12.0	9	59	176	597	9	59	176	703	1207	726	1417	2132	1546	2577	4334	2694	5037	7849
	10.0	11	71	213	724	11	71	213	852	1462	880	1718	2584	1874	3123	5253	3265	6104	9511
	4.2-0	14	85	256	870	14	85	256	1024	1758	1058	2065	3106	2252	3754	6313	3925	7337	11432
17	15.0	8	53	158	536	8	53	158	630	1082	651	1271	1911	1386	2310	3885	2415	4515	7035
	12.0	12	76	229	778	12	76	229	915	1572	946	1846	2777	2014	3357	5645	3509	6561	10223
	10.0	14	85	255	868	14	85	255	1022	1754	1056	2060	3099	2248	3746	6300	3916	7322	11408
	4.8-0	15	96	287	975	15	96	287	1147	1969	1185	2314	3480	2524	4206	7075	4398	8222	12811

- It is recommended to keep valve outlet velocity below 30,000 ft./min.
- Capacities based on maximum Cv.

INTIMIDATOR STEAM
CAPACITY TABLE

INTIMIDATOR AIR CAPACITY TABLE

(SCFH)

INTIMIDATOR AIR CAPACITY TABLE

Pressure (PSI)		Valve Size and Port																	
		1/2				3/4					1			1-1/2			2		
P1	P2	1/8	3/16	1/4	5/8	1/8	3/16	1/4	5/8	7/8	5/8	7/8	1-1/4	7/8	1-1/4	1-3/4	1-1/4	1-3/4	2-1/4
10	5	48	300	901	3064	48	300	901	3605	6189	3725	7270	10936	7931	13219	22232	13820	25837	40258
	3	55	341	1023	3477	55	341	1023	4091	7023	4227	8250	12409	9000	15000	25227	15682	29318	45682
15	10	54	335	1005	3418	54	335	1005	4021	6904	4156	8110	12199	8847	14745	24799	15416	28821	44907
	7	64	403	1208	4106	64	403	1208	4831	8293	4992	9743	14655	10629	17714	29792	18519	34623	53948
	5	69	434	1303	4429	69	434	1303	5211	8945	5385	10508	15806	11464	19106	32133	19975	37344	58188
20	15	59	367	1100	3739	59	367	1100	4399	7552	4546	8872	13345	9678	16131	27129	16864	31528	49126
	10	77	482	1445	4914	77	482	1445	5781	9924	5973	11658	17535	12718	21196	35648	22160	41429	64552
	7	84	524	1572	5346	84	524	1572	6290	10797	6499	12684	19078	13837	23062	38786	24110	45075	70234
30	22	83	517	1552	5276	83	517	1552	6208	10656	6414	12519	18830	13657	22761	38280	23796	44488	69318
	17	100	623	1868	6350	100	623	1868	7470	12824	7719	15065	22660	16435	27391	46067	28636	53537	83419
	10	113	708	2124	7222	113	708	2124	8497	14586	8780	17135	25774	18693	31155	52398	32572	60895	94882
40	25	119	746	2239	7612	119	746	2239	8955	15373	9253	18059	27163	19701	32835	55222	34327	64177	99996
	20	131	820	2461	8367	131	820	2461	9844	16898	10172	19851	29859	21656	36094	60703	37734	70547	109922
	3-0	148	924	2773	9429	148	924	2773	11093	19043	11463	22371	33649	24405	40674	68407	42523	79500	123871
50	35	133	830	2489	8463	133	830	2489	9956	17091	10288	20078	30200	21903	36505	61395	38164	71351	111174
	30	147	920	2760	9384	147	920	2760	11040	18951	11408	22263	33487	24287	40478	68077	42318	79117	123275
	25	158	986	2958	10057	158	986	2958	11832	20312	12227	23862	35891	26031	43385	72966	45357	84798	132127
	6-0	175	1094	3281	11156	175	1094	3281	13124	22530	13562	26467	39810	28873	48122	80933	50310	94057	146555
60	45	145	906	2717	9238	145	906	2717	10868	18657	11231	21918	32967	23910	39850	67021	41662	77889	121362
	40	162	1010	3031	10306	162	1010	3031	12125	20814	12529	24452	36778	26674	44457	74769	46478	86894	135393
	35	174	1090	3270	11119	174	1090	3270	13081	22455	13517	26380	39679	28778	47963	80665	50143	93746	146070
	9-0	202	1263	3789	12882	202	1263	3789	15155	26017	15661	30563	45971	33342	55570	93459	58096	108614	169236
75	55	181	1133	3399	11558	181	1133	3399	13598	23343	14051	27422	41247	29915	49859	83853	52125	97451	151842
	50	197	1231	3692	12554	197	1231	3692	14769	25354	15262	29785	44800	32493	54154	91078	56616	105847	164925
	45	209	1309	3926	13349	209	1309	3926	15704	26959	16228	31670	47636	34549	57582	96843	60199	112547	175364
	14-0	243	1516	4549	15466	243	1516	4549	18195	31236	18802	36694	55193	40030	66717	112206	69749	130401	203183
100	75	230	1436	4309	14650	230	1436	4309	17235	29587	17810	34758	52281	37918	63196	106285	66069	123520	192462
	60	271	1696	5087	17295	271	1696	5087	20347	34928	21025	41032	61718	44763	74604	125471	77995	145817	227204
	22-0	310	1939	5817	19777	310	1939	5817	23267	39941	24042	46921	70576	51187	85311	143478	89189	166745	259811
125	100	259	1617	4850	16490	259	1617	4850	19400	33303	20046	39123	58846	42679	71132	119631	74365	139031	216630
	75	333	2082	6245	21232	333	2082	6245	24979	42881	25812	50375	75770	54954	91591	154039	95754	179018	278935
	30-0	378	2361	7084	24087	378	2361	7084	28338	48647	29282	57148	85958	62343	103906	174750	108629	203088	316440
150	125	285	1779	5338	18148	285	1779	5338	21350	36651	22062	43057	64763	46971	78285	131660	81843	153011	238412
	100	372	2328	6983	23742	372	2328	6983	27932	47950	28863	56330	84727	61450	102417	172247	107073	200179	311907
	38-0	445	2784	8352	28398	445	2784	8352	33409	57352	34523	67375	101341	73500	122500	206023	128068	239432	373068
175	150	309	1928	5785	19669	309	1928	5785	23140	39723	23911	46665	70191	50907	84846	142695	88702	165835	258394
	125	408	2551	7654	26024	408	2551	7654	30617	52559	31637	61744	92871	67357	112262	188804	117365	219421	341889
	100	466	2910	8729	29679	466	2910	8729	34917	59940	36080	70415	105914	76816	128027	215319	133847	250235	389902
	46-0	513	3207	9620	32708	513	3207	9620	38480	66058	39763	77602	116723	84657	141094	237295	147508	275775	429696
200	150	441	2758	8274	28130	441	2758	8274	33094	56812	34197	66740	100385	72807	121345	204080	126861	237174	369551
	125	508	3175	9526	32390	508	3175	9526	38105	65414	39376	76846	115587	83832	139720	234984	146071	273089	425511
	54-0	581	3629	10888	37019	581	3629	10888	43551	74763	45003	87829	132106	95813	159689	268567	166947	312119	486325
225	175	472	2950	8851	30094	472	2950	8851	35404	60778	36585	71399	107394	77890	129816	218328	135717	253732	395350
	150	548	3422	10266	34905	548	3422	10266	41065	70495	42434	82815	124564	90343	150572	253235	157416	294300	458560
	63-0	648	4051	12152	41317	648	4051	12152	48608	83444	50229	98027	147445	106938	178230	299751	186332	348359	542792
250	200	501	3131	9394	31941	501	3131	9394	37577	64507	38830	75781	113984	82670	137783	231726	144046	269303	419612
	175	584	3653	10959	37262	584	3653	10959	43837	75254	45298	88405	132973	96442	160736	270329	168043	314167	489515
	150	641	4008	12024	40881	641	4008	12024	48096	82564	49699	96993	145890	105810	176350	296589	184366	344685	537067
	71-0	716	4473	13420	45628	716	4473	13420	53680	92150	55469	108254	162828	118095	196825	331024	205771	384703	599421

- It is recommended to keep valve outlet velocity below 30,000 ft./min.
- Capacities based on maximum Cv.

INTIMIDATOR AIR CAPACITY TABLE

(M3/Hr.)

Pressure (bar)		Valve Size and Port																	
		1/2				3/4					1			1-1/2			2		
P1	P2	1/8	3/16	1/4	5/8	1/8	3/16	1/4	5/8	7/8	5/8	7/8	1-1/4	7/8	1-1/4	1-3/4	1-1/4	1-3/4	2-1/4
0.7	0.3	1.4	9.0	27	92	1.4	9.0	27	109	186	112	219	329	239	398	669	416	778	1212
	0.2	1.6	10	29	100	1.6	10	29	118	202	122	237	357	259	432	726	451	844	1315
1	0.7	1.4	8.9	27	90	1.4	8.9	27	106	183	110	214	323	234	390	656	408	762	1187
	0.5	1.7	11	33	111	1.7	11	33	131	224	135	263	396	287	479	805	500	936	1458
	0.3	2.0	12	37	125	2.0	12	37	147	252	151	295	444	322	537	904	562	1050	1636
1.5	1	2.0	12	37	127	2.0	12	37	150	257	155	302	454	329	549	923	573	1072	1671
	0.7	2.4	15	44	151	2.4	15	44	178	305	184	359	539	391	652	1097	682	1274	1986
	0.5	2.5	16	48	162	2.5	16	48	190	327	197	384	577	419	698	1174	730	1364	2125
2	1.5	2.2	14	42	142	2.2	14	42	167	286	172	336	505	366	611	1027	638	1194	1860
	1.2	2.7	17	50	170	2.7	17	50	200	344	207	404	607	441	734	1235	768	1435	2236
	1	2.9	18	54	184	2.9	18	54	216	371	223	436	655	475	792	1333	828	1549	2413
3	2	3.5	22	65	221	3.5	22	65	261	447	269	525	790	573	955	1607	999	1867	2909
	1.5	4.0	25	75	254	4.0	25	75	299	512	308	602	905	657	1095	1841	1144	2139	3333
	3-0	4.5	28	84	284	4.5	28	84	334	574	345	674	1014	735	1225	2060	1281	2395	3731
3.5	3.0	2.8	17	52	178	2.8	17	52	209	359	216	422	635	461	768	1291	803	1501	2338
	2.0	4.3	27	81	275	4.3	27	81	324	556	335	653	982	712	1187	1997	1241	2321	3616
	1.0	4.9	31	92	313	4.9	31	92	368	631	380	742	1116	809	1349	2268	1410	2636	4108
	4-0	5.0	31	94	320	5.0	31	94	376	646	389	758	1141	827	1379	2319	1442	2695	4200
4	3.0	4.0	25	75	254	4.0	25	75	299	513	309	602	906	657	1095	1842	1145	2141	3336
	2.0	5.1	32	95	323	5.1	32	95	380	652	393	766	1152	836	1393	2342	1456	2722	4242
	1.0	5.5	34	103	351	5.5	34	103	413	709	427	833	1253	909	1515	2547	1583	2960	4613
	6-0	5.6	35	104	355	5.6	35	104	418	717	431	842	1267	919	1531	2575	1601	2992	4662
5	4.0	4.4	28	83	283	4.4	28	83	333	571	344	671	1009	732	1220	2051	1275	2384	3714
	3.0	5.8	36	108	367	5.8	36	108	432	741	446	870	1309	949	1582	2661	1654	3093	4819
	2.0	6.4	40	120	409	6.4	40	120	481	826	497	970	1459	1058	1763	2965	1843	3446	5370
	9-0	6.7	42	125	426	6.7	42	125	501	860	518	1010	1520	1102	1837	3089	1920	3590	5594
7	5.0	6.9	43	130	442	6.9	43	130	521	894	538	1050	1579	1145	1909	3210	1995	3731	5813
	3.0	8.5	53	160	545	8.5	53	160	641	1100	662	1292	1944	1410	2350	3952	2457	4593	7157
	1.6-0	8.9	56	167	567	8.9	56	167	667	1145	689	1345	2024	1468	2446	4114	2557	4781	7450
9	7.0	8.0	50	149	507	8.0	50	149	597	1025	617	1204	1811	1313	2189	3681	2288	4278	6666
	5.0	10	63	190	645	10	63	190	759	1303	784	1531	2302	1670	2783	4680	2909	5439	8475
	2.1-0	11	70	209	709	11	70	209	834	1433	862	1683	2531	1836	3060	5146	3199	5981	9318
10	8.0	8.4	53	158	537	8.4	53	158	632	1085	653	1274	1916	1390	2316	3896	2422	4528	7055
	5.0	12	72	216	733	12	72	216	863	1481	891	1740	2617	1898	3163	5319	3307	6182	9632
	2.5-0	12	76	229	780	12	76	229	917	1575	948	1850	2783	2018	3364	5657	3517	6575	10244
12	10.0	9.3	58	174	592	9.3	58	174	696	1195	720	1404	2112	1532	2553	4294	2669	4990	7776
	7.0	13	81	244	829	13	81	244	976	1675	1008	1967	2959	2146	3577	6016	3740	6992	10894
	5.0	14	88	264	897	14	88	264	1055	1812	1091	2129	3202	2322	3870	6509	4046	7564	11786
	3.2-0	14	90	271	921	14	90	271	1084	1860	1120	2185	3287	2384	3973	6682	4154	7766	12100
14	10.0	13	83	250	849	13	83	250	999	1715	1032	2014	3030	2197	3662	6159	3829	7158	11153
	7.0	16	99	296	1006	16	99	296	1183	2031	1223	2386	3589	2603	4338	7296	4536	8480	13212
	3.8-0	17	104	313	1063	17	104	313	1250	2147	1292	2522	3793	2751	4585	7711	4793	8961	13963
15	12.0	12	78	233	791	12	78	233	930	1597	961	1876	2822	2047	3411	5737	3566	6667	10388
	10.0	15	94	281	957	15	94	281	1126	1932	1163	2270	3414	2476	4127	6942	4315	8067	12570
	4.2-0	18	111	333	1133	18	111	333	1333	2289	1378	2689	4044	2933	4888	8222	5111	9555	14888
17	15.0	11	70	209	711	11	70	209	837	1436	864	1687	2537	1840	3067	5158	3207	5995	9341
	12.0	16	101	304	1034	16	101	304	1216	2088	1257	2452	3689	2675	4459	7499	4662	8715	13579
	10.0	18	113	339	1152	18	113	339	1355	2326	1400	2732	4110	2981	4968	8355	5193	9709	15129
	4.8-0	20	125	375	1275	20	125	375	1500	2575	1550	3025	4550	3300	5500	9250	5750	10750	16751

- It is recommended to keep valve outlet velocity below 30,000 ft./min.
- Capacities based on maximum Cv.

INTIMIDATOR AIR
CAPACITY TABLE

INTIMIDATOR WATER CAPACITY TABLE

(G.P.M.)

INTIMIDATOR WATER CAPACITY TABLE

Pressure (PSI)		Valve Size and Port																	
		1/2				3/4					1			1-1/2			2		
P1	P2	1/8	3/16	1/4	5/8	1/8	3/16	1/4	5/8	7/8	5/8	7/8	1-1/4	7/8	1-1/4	1-3/4	1-1/4	1-3/4	2-1/4
10	5	0.18	1.1	3.4	11.4	0.18	1.1	3.4	13.4	23.0	13.9	27.1	40.7	29.5	49.2	82.7	51.4	96.2	150
	4	0.20	1.2	3.7	12.5	0.20	1.2	3.7	14.7	25.2	15.2	29.6	44.6	32.3	53.9	90.6	56.3	105	164
15	10	0.18	1.1	3.4	11.4	0.18	1.1	3.4	13.4	23.0	13.9	27.1	40.7	29.5	49.2	82.7	51.4	96.2	150
	7	0.23	1.4	4.2	14.4	0.23	1.4	4.2	17.0	29.1	17.5	34.2	51.5	37.3	62.2	105	65	122	190
	6	0.24	1.5	4.5	15.3	0.24	1.5	4.5	18.0	30.9	18.6	36.3	54.6	39.6	66.0	111	69	129	201
20	15	0.18	1.1	3.4	11.4	0.18	1.1	3.4	13.4	23.0	13.9	27.1	40.7	29.5	49.2	82.7	51.4	96.2	150
	10	0.25	1.6	4.7	16.1	0.25	1.6	4.7	19.0	32.6	19.6	38.3	57.6	41.7	69.6	117	72.7	136	212
	8	0.28	1.7	5.2	17.7	0.28	1.7	5.2	20.8	35.7	21.5	41.9	63.0	45.7	76.2	128	79.7	149	232
30	25	0.18	1.1	3.4	11.4	0.18	1.1	3.4	13.4	23.0	13.9	27.1	40.7	29.5	49.2	83	51.4	96	150
	20	0.25	1.6	4.7	16.1	0.25	1.6	4.7	19.0	32.6	19.6	38.3	57.6	41.7	69.6	117	72.7	136	212
	12	0.34	2.1	6.4	21.6	0.34	2.1	6.4	25.5	43.7	26.3	51.3	77.2	56.0	93.3	157	98	182	284
40	25	0.31	1.9	5.8	19.8	0.31	1.9	5.8	23.2	39.9	24.0	46.9	70.5	51.1	85.2	143	89.1	167	259
	20	0.36	2.2	6.7	22.8	0.36	2.2	6.7	26.8	46.1	27.7	54.1	81.4	59.0	98.4	165	103	192	300
	15	0.40	2.5	7.5	25.5	0.40	2.5	7.5	30.0	51.5	31.0	60.5	91.0	66.0	110	185	115	215	335
50	35	0.31	1.9	5.8	19.8	0.31	1.9	5.8	23.2	39.9	24.0	46.9	70.5	51.1	85.2	143	89.1	167	259
	30	0.36	2.2	6.7	22.8	0.36	2.2	6.7	26.8	46.1	27.7	54.1	81.4	59.0	98.4	165	103	192	300
	25	0.40	2.5	7.5	25.5	0.40	2.5	7.5	30.0	51.5	31.0	60.5	91.0	66.0	110	185	115	215	335
60	15	0.47	3.0	8.9	30.2	0.47	3.0	8.9	35.5	60.9	36.7	71.6	107.7	78.1	130	219	136	254	396
	45	0.31	1.9	5.8	19.8	0.31	1.9	5.8	23.2	39.9	24.0	46.9	70.5	51.1	85.2	143	89.1	167	259
	40	0.36	2.2	6.7	22.8	0.36	2.2	6.7	26.8	46.1	27.7	54.1	81.4	59.0	98.4	165	103	192	300
75	35	0.40	2.5	7.5	25.5	0.40	2.5	7.5	30.0	51.5	31.0	60.5	91.0	66.0	110	185	115	215	335
	25	0.47	3.0	8.9	30.2	0.47	3.0	8.9	35.5	60.9	36.7	71.6	107.7	78.1	130	219	136	254	396
	45	0.31	1.9	5.8	19.8	0.31	1.9	5.8	23.2	39.9	24.0	46.9	70.5	51.1	85.2	143	89.1	167	259
100	55	0.36	2.2	6.7	22.8	0.36	2.2	6.7	26.8	46.1	27.7	54.1	81.4	59.0	98.4	165	103	192	300
	50	0.40	2.5	7.5	25.5	0.40	2.5	7.5	30.0	51.5	31.0	60.5	91.0	66.0	110	185	115	215	335
	45	0.44	2.7	8.2	27.9	0.44	2.7	8.2	32.9	56.4	34.0	66.3	99.7	72.3	120	203	126	236	367
125	31	0.53	3.3	9.9	33.8	0.53	3.3	9.9	39.8	68.3	41.1	80.3	121	88	146	245	153	285	444
	75	0.40	2.5	7.5	25.5	0.40	2.5	7.5	30.0	51.5	31.0	60.5	91.0	66.0	110	185	115	215	335
	60	0.51	3.2	9.5	32.3	0.51	3.2	9.5	37.9	65.1	39.2	76.5	115	83.5	139	234	145	272	424
150	50	0.57	3.5	10.6	36.1	0.57	3.5	10.6	42.4	72.8	43.8	86	129	93	156	262	163	304	474
	100	0.40	2.5	7.5	25.5	0.40	2.5	7.5	30.0	51.5	31.0	60.5	91.0	66.0	110	185	115	215	335
	75	0.57	3.5	10.6	36.1	0.57	3.5	10.6	42.4	72.8	43.8	85.6	129	93.3	156	262	163	304	474
175	55	0.67	4.2	12.5	42.7	0.67	4.2	12.5	50.2	86.2	51.9	101	152	110	184	310	192	360	561
	125	0.40	2.5	7.5	25.5	0.40	2.5	7.5	30.0	51.5	31.0	60.5	91.0	66.0	110	185	115	215	335
	100	0.57	3.5	10.6	36.1	0.57	3.5	10.6	42.4	72.8	43.8	85.6	129	93.3	156	262	163	304	474
200	75	0.69	4.3	13.0	44.2	0.69	4.3	13.0	52.0	89	53.7	105	158	114	191	320	199	372	580
	150	0.40	2.5	7.5	25.5	0.40	2.5	7.5	30.0	51.5	31.0	60.5	91.0	66.0	110	185	115	215	335
	125	0.57	3.5	10.6	36.1	0.57	3.5	10.6	42.4	72.8	43.8	85.6	129	93.3	156	262	163	304	474
225	100	0.69	4.3	13.0	44.2	0.69	4.3	13.0	52.0	89.2	53.7	105	158	114	191	320	199	372	580
	75	0.80	5.0	15.0	51.0	0.80	5.0	15.0	60.0	103	62.0	121	182	132	220	370	230	430	670
	150	0.57	3.5	10.6	36.1	0.57	3.5	10.6	42.4	72.8	43.8	85.6	129	93.3	156	262	163	304	474
250	125	0.89	5.6	16.8	57.0	0.89	5.6	16.8	67.1	115	69.3	135	203	148	246	414	257	481	749
	200	0.57	3.5	10.6	36.1	0.57	3.5	10.6	42.4	72.8	43.8	85.6	129	93.3	156	262	163	304	474
	175	0.69	4.3	13.0	44.2	0.69	4.3	13.0	52.0	89.2	53.7	105	158	114	191	320	199	372	580
300	150	0.80	5.0	15.0	51.0	0.80	5.0	15.0	60.0	103	62.0	121	182	132	220	370	230	430	670
	125	0.89	5.6	16.8	57.0	0.89	5.6	16.8	67.1	115	69.3	135	203	148	246	414	257	481	749
	250	0.57	3.5	10.6	36.1	0.57	3.5	10.6	42.4	72.8	43.8	85.6	129	93.3	156	262	163	304	474
400	200	0.80	5.0	15.0	51.0	0.80	5.0	15.0	60.0	103	62.0	121	182	132	220	370	230	430	670
	175	1.1	6.6	19.8	67.5	1.1	6.6	19.8	79.4	136	82.0	160	241	175	291	489	304	569	886
	350	0.57	3.5	10.6	36.1	0.57	3.5	10.6	42.4	72.8	43.8	85.6	129	93.3	156	262	163	304	474
400	300	0.80	5.0	15.0	51.0	0.80	5.0	15.0	60.0	103	62.0	121	182	132	220	370	230	430	670
	175	1.2	7.5	22.5	76.5	1.2	7.5	22.5	90.0	155	93.0	182	273	198	330	555	345	645	1005

- It is recommended to keep valve outlet velocity below 30,000 ft./min.
- Capacities based on maximum Cv.

INTIMIDATOR WATER CAPACITY TABLE

(M3/Hr.)

Pressure (bar)		Valve Size and Port																	
		1/2				3/4					1			1-1/2			2		
P1	P2	1/8	3/16	1/4	5/8	1/8	3/16	1/4	5/8	7/8	5/8	7/8	1-1/4	7/8	1-1/4	1-3/4	1-1/4	1-3/4	2-1/4
0.7	0.5	0.03	0.2	0.6	2.0	0.03	0.2	0.6	2.3	4.0	2.4	4.7	7.0	5.1	8.5	14.3	8.9	16.6	25.9
	0.3	0.04	0.3	0.8	2.8	0.04	0.3	0.8	3.3	5.6	3.4	6.6	10.0	7.2	12.0	20.2	12.6	23.5	36.6
1	0.7	0.04	0.2	0.7	2.4	0.04	0.2	0.7	2.8	4.9	2.9	5.7	8.6	6.3	10.4	17.5	10.9	20.4	31.7
	0.5	0.05	0.3	0.9	3.1	0.05	0.3	0.9	3.7	6.3	3.8	7.4	11.1	8.1	13.5	22.6	14.1	26.3	41.0
	0.4	0.05	0.3	1.0	3.4	0.05	0.3	1.0	4.0	6.9	4.2	8.1	12.2	8.8	14.7	24.8	15.4	28.8	44.9
1.5	1	0.05	0.3	0.9	3.1	0.05	0.3	0.9	3.7	6.3	3.8	7.4	11.1	8.1	13.5	22.6	14.1	26.3	41.0
	0.7	0.06	0.4	1.2	3.9	0.06	0.4	1.2	4.6	8.0	4.8	9.4	14.1	10.2	17.0	28.6	17.8	33.3	51.8
	0.6	0.07	0.4	1.2	4.2	0.07	0.4	1.2	4.9	8.5	5.1	9.9	14.9	10.8	18.0	30.4	18.9	35.3	55.0
2	1.5	0.05	0.3	0.9	3.1	0.05	0.3	0.9	3.7	6.3	3.8	7.4	11.1	8.1	13.5	22.6	14.1	26.3	41.0
	1	0.07	0.4	1.3	4.4	0.07	0.4	1.3	5.2	8.9	5.4	10.5	15.7	11.4	19.0	32.0	19.9	37.2	57.9
	0.8	0.08	0.5	1.4	4.8	0.08	0.5	1.4	5.7	9.8	5.9	11.5	17.2	12.5	20.8	35.1	21.8	40.7	63.5
3	2	0.07	0.4	1.3	4.4	0.07	0.4	1.3	5.2	8.9	5.4	10.5	15.7	11.4	19.0	32.0	19.9	37.2	57.9
	1.5	0.08	0.5	1.6	5.4	0.08	0.5	1.6	6.4	10.9	6.6	12.8	19.3	14.0	23.3	39.2	24.4	45.5	71.0
	1.0	0.10	0.6	1.8	6.2	0.10	0.6	1.8	7.3	12.6	7.6	14.8	22.3	16.1	26.9	45.2	28.1	52.6	81.9
3.5	3	0.05	0.3	0.9	3.1	0.05	0.3	0.9	3.7	6.3	3.8	7.4	11.1	8.1	13.5	22.6	14.1	26.3	41.0
	2	0.08	0.5	1.6	5.4	0.08	0.5	1.6	6.4	10.9	6.6	12.8	19.3	14.0	23.3	39.2	24.4	45.5	71.0
	1.5	0.10	0.6	1.8	6.2	0.10	0.6	1.8	7.3	12.6	7.6	14.8	22.3	16.1	26.9	45.2	28.1	52.6	81.9
	1	0.11	0.7	2.1	7.0	0.11	0.7	2.1	8.2	14.1	8.5	16.5	24.9	18.0	30.1	50.6	31.4	58.8	91.6
4	3.5	0.05	0.3	0.9	3.1	0.05	0.3	0.9	3.7	6.3	3.8	7.4	11.1	8.1	13.5	22.6	14.1	26.3	41.0
	3	0.07	0.4	1.3	4.4	0.07	0.4	1.3	5.2	8.9	5.4	10.5	15.7	11.4	19.0	32.0	19.9	37.2	57.9
	2	0.10	0.6	1.8	6.2	0.10	0.6	1.8	7.3	12.6	7.6	14.8	22.3	16.1	26.9	45.2	28.1	52.6	81.9
	1.7	0.10	0.7	2.0	6.7	0.10	0.7	2.0	7.9	13.5	8.1	15.9	23.9	17.3	28.9	48.5	30.2	56.4	87.9
5	4	0.07	0.4	1.3	4.4	0.07	0.4	1.3	5.2	8.9	5.4	10.5	15.7	11.4	19.0	32.0	19.9	37.2	57.9
	3	0.10	0.6	1.8	6.2	0.10	0.6	1.8	7.3	12.6	7.6	14.8	22.3	16.1	26.9	45.2	28.1	52.6	81.9
	2.5	0.11	0.7	2.1	7.0	0.11	0.7	2.1	8.2	14.1	8.5	16.5	24.9	18.0	30.1	50.6	31.4	58.8	91.6
	2.2	0.12	0.7	2.2	7.4	0.12	0.7	2.2	8.7	14.9	9.0	17.5	26.3	19.1	31.8	53.5	33.3	62.2	97.0
6	5	0.07	0.4	1.3	4.4	0.07	0.4	1.3	5.2	8.9	5.4	10.5	15.7	11.4	19.0	32.0	19.9	37.2	57.9
	4	0.10	0.6	1.8	6.2	0.10	0.6	1.8	7.3	12.6	7.6	14.8	22.3	16.1	26.9	45.2	28.1	52.6	81.9
	3.5	0.11	0.7	2.1	7.0	0.11	0.7	2.1	8.2	14.1	8.5	16.5	24.9	18.0	30.1	50.6	31.4	58.8	91.6
8	6	0.10	0.6	1.8	6.2	0.10	0.6	1.8	7.3	12.6	7.6	14.8	22.3	16.1	26.9	45.2	28.1	52.6	81.9
	5	0.12	0.7	2.2	7.6	0.12	0.7	2.2	9.0	15.4	9.3	18.1	27.3	19.8	33.0	55.4	34.5	64.4	100
	4	0.14	0.9	2.6	8.8	0.14	0.9	2.6	10.4	17.8	10.7	20.9	31.5	22.8	38.0	64.0	39.8	74.4	116
10	8	0.10	0.6	1.8	6.2	0.10	0.6	1.8	7.3	12.6	7.6	14.8	22.3	16.1	26.9	45.2	28.1	52.6	81.9
	6	0.14	0.9	2.6	8.8	0.14	0.9	2.6	10.4	17.8	10.7	20.9	31.5	22.8	38.0	64.0	39.8	74.4	116
	5	0.15	1.0	2.9	9.9	0.15	1.0	2.9	11.6	19.9	12.0	23.4	35.2	25.5	42.5	71.5	44.5	83.1	130
12	10	0.10	0.6	1.8	6.2	0.10	0.6	1.8	7.3	12.6	7.6	14.8	22.3	16.1	26.9	45.2	28.1	52.6	81.9
	8	0.14	0.9	2.6	8.8	0.14	0.9	2.6	10.4	17.8	10.7	20.9	31.5	22.8	38.0	64.0	39.8	74.4	116
	6	0.17	1.1	3.2	10.8	0.17	1.1	3.2	12.7	21.8	13.1	25.6	38.6	28.0	46.6	78.4	48.7	91.1	142
	5	0.18	1.1	3.4	11.7	0.18	1.1	3.4	13.7	23.6	14.2	27.7	41.6	30.2	50.3	84.7	52.6	98.4	153
14	10	0.14	0.9	2.6	8.8	0.14	0.9	2.6	10.4	17.8	10.7	20.9	31.5	22.8	38.0	64.0	39.8	74.4	116
	8	0.17	1.1	3.2	10.8	0.17	1.1	3.2	12.7	21.8	13.1	25.6	38.6	28.0	46.6	78.4	48.7	91.1	142
	6	0.20	1.2	3.7	12.5	0.20	1.2	3.7	14.7	25.2	15.2	29.6	44.5	32.3	53.8	90.5	56.3	105	164
15	12	0.12	0.7	2.2	7.6	0.12	0.7	2.2	9.0	15.4	9.3	18.1	27.3	19.8	33.0	55.4	34.5	64.4	100
	10	0.15	1.0	2.9	9.9	0.15	1.0	2.9	11.6	19.9	12.0	23.4	35.2	25.5	42.5	71.5	44.5	83.1	130
	7	0.20	1.2	3.7	12.5	0.20	1.2	3.7	14.7	25.2	15.2	29.6	44.5	32.3	53.8	90.5	56.3	105	164
17	14	0.12	0.7	2.2	7.6	0.12	0.7	2.2	9.0	15.4	9.3	18.1	27.3	19.8	33.0	55.4	34.5	64.4	100
	12	0.15	1.0	2.9	9.9	0.15	1.0	2.9	11.6	19.9	12.0	23.4	35.2	25.5	42.5	71.5	44.5	83.1	130
	10	0.18	1.1	3.4	11.7	0.18	1.1	3.4	13.7	23.6	14.2	27.7	41.6	30.2	50.3	84.7	52.6	98.4	153
	9	0.20	1.2	3.7	12.5	0.20	1.2	3.7	14.7	25.2	15.2	29.6	44.5	32.3	53.8	90.5	56.3	105	164
20	17	0.12	0.7	2.2	7.6	0.12	0.7	2.2	9.0	15.4	9.3	18.1	27.3	19.8	33.0	55.4	34.5	64.4	100
	15	0.15	1.0	2.9	9.9	0.15	1.0	2.9	11.6	19.9	12.0	23.4	35.2	25.5	42.5	71.5	44.5	83.1	130
	9	0.23	1.4	4.3	14.6	0.23	1.4	4.3	17.2	29.5	17.8	34.7	52.2	37.9	63.1	106	66.0	123	192
27	20	0.18	1.1	3.4	11.7	0.18	1.1	3.4	13.7	23.6	14.2	27.7	41.6	30.2	50.3	84.7	52.6	98.4	153
	15	0.24	1.5	4.5	15.3	0.24	1.5	4.5	18.0	30.9	18.6	36.2	54.5	39.5	65.9	111	68.9	129	201
	12	0.27	1.7	5.0	17.1	0.27	1.7	5.0	20.1	34.5	20.8	40.5	61.0	44.2	73.7	124	77.0	144	224

- It is recommended to keep valve outlet velocity below 30,000 ft./min.
- Capacities based on maximum Cv.