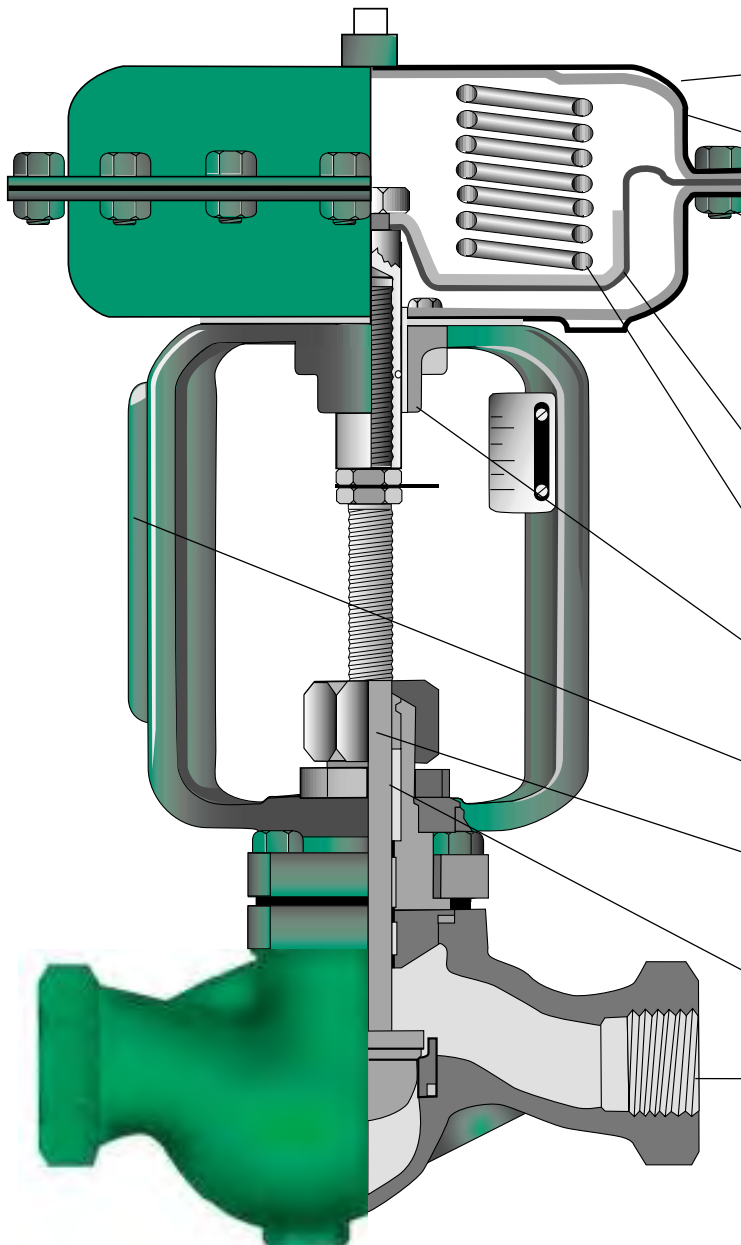


Applications

- 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

**Pressures to 1440 PSIG
Temperatures to 750°F**



High-thrust, Compact Actuator
offers the muscle required to positively position the plug in response to control signal

36 & 60 Inch Actuator
sizes match different operating conditions

Bolted Diaphragm Joint
for maximum strength, ease of maintenance and high-pressure tightness

Molded, Reinforced Rolling Diaphragm
provides dependable, accurate control

Corrosion-protected Multiple Springs
for lower hysteresis and positive shutoff with 3-15 psi signal

Low-friction Actuator Stem Guiding
for accurate repetitive positioning

Mounting Pad NEMUR 4 Compliant
drilled and tapped for accessories

Superfinished Stem
reduces friction, extends packing life

High Performance, Low Friction Packing
selections to meet your system requirements

High-capacity Streamlined Body
minimizes turbulence and pressure drop

**INTIMIDATOR TYPE J
FEATURES**



INTIMIDATOR TYPE J CONTROL VALVE

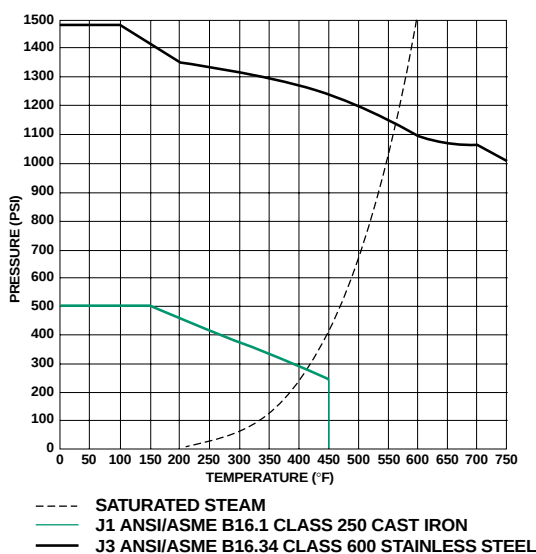
SIZES 1/2" - 2"
ANSI CLASS 150, 250/300, 600

- **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.

APPLICATION DATA

- Process control systems for food, pulp and paper, chemical, petrochemical & other industries
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PRESSURE/TEMPERATURE CHART



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.

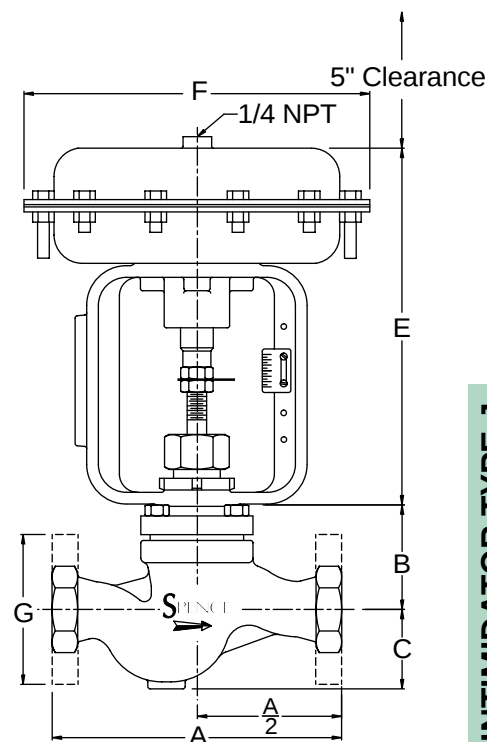
INTIMIDATOR TYPE J CONTROL VALVE

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
½	7⅝	8	2⅞ ₁₆	1⅞	9⅞	11⅞	9¼	11¼	3½	3¾	20½	36½	23½	39½
¾	7⅝	8⅞	2⅞ ₁₆	1⅞	9⅞	11⅞	9¼	11¼	3⅞	4⅞	20½	36½	25¾	41¾
1	7¾	8¾	2¾	2⅞	9⅞	11⅞	9¼	11¼	4¼	4⅞	22½	38¾	29	45¼
1½	9¼	9⅞	33/8	2⅞ ₁₆	9⅞	11⅞	9¼	11¼	5	6⅞	29¼	45½	40¼	57½
2	10½	11¼	3⅞ ₃₂	3⅞ ₁₆	9⅞	11⅞	9¼	11¼	6	6½	38¾	54¼	50¼	68¼

*Weights are approximate.

PRESSURE RECOVERY FACTORS

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

½		¾			1				1½			2		
¾	⅝	¾	⅝	⅞	¾	⅝	⅞	1¼	¾	1¼	1⅝	1¼	1¼	2¼
.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 = $\frac{3}{8}$
K = $\frac{1}{2}$
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