



2" Model 2266



1/2" – 1-1/2" Model 2266

## MODEL 2266

### Pneumatic Control Valve

The Model 2266 is a low cost globe-style control valve for plant utility and process applications. It incorporates linear control characteristic for smooth throttling action on pressure, temperature and liquid level control. With a TFE seat it provides reliable shut-off for on-off applications. Sizes are 1/2", 3/4", 1", 1-1/2" and 2" (DN15, 20, 25, 40 and 50).

### FEATURES

- Quick change trim
- Linear or quick opening flow characteristics
- Metal seat or TFE soft seat
- Stainless steel trim
- Full size or reduced orifice trim
- Field reversible fail safe action

### APPLICATIONS

The Model 2266 is capable of handling air, gases, water, steam and cryogenic fluids.

## GENERAL SPECIFICATIONS

**Sizes:** 1/2", 3/4", 1", 1-1/2" and 2"  
(DN15, 20, 25, 40 and 50).

**Body Rating:** 250# ANSI B16.15 for bronze bodies.

**End Connections:** NPT female pipe thread.

**Maximum Inlet Pressures:** Up to 400 psig (27.6 Barg). See Table 5.

**Pressure Drop:** Metal & soft seat, up to 400 psid (27.6 Bard). See Table 1.

**Working Temperatures:** Standard: -20 to +400°F (-29 to +204°C).  
Option-5: -325 to +150°F (-198 to +66°C).  
See Table 5.

**Fail Safe Action:** The valves are easily converted from fail close to fail open.

**Seat Leakage:** Meets ANSI/FCI 70-2, Class II with metal seat. Class VI with TFE soft seat.

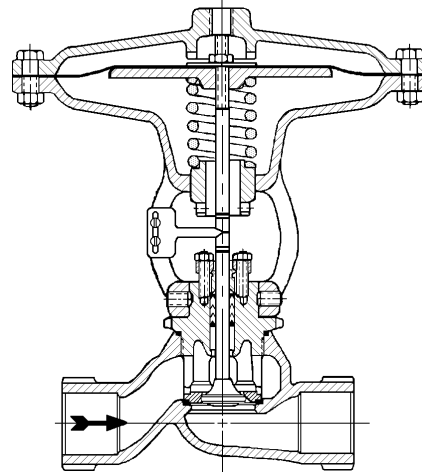
**Rangeability:** 50:1

**Inherent Flow Characteristic:** Linear. The flow characteristic of the trim is produced by the machined contour of the seat ring, rather than the plug. See Opt-90 for Quick Opening.

**Flow Coefficients:** See Tables 2 and 3.

**Bench Set/Instrument Pressures:**

Nominal "SIG" psig (Barg)	Action	Bench Set psig (Barg)	"Air Supply" psig (Barg)
3-15 (.21-1.03)	ATO-FC	5-15 (.34-1.03)	20 (1.4)
	ATC-FO	3-13 (.21-.90)	
3-15 (.21-1.03) with P/P Posit.	ATO-FC	5-15 (.34-1.03)	20 (1.4)
		10-30 (.69-2.07)	35 (2.4)
	ATC-FO	3-13 (.21-.90)	20 (1.4)
		6-26 (.41-1.79)	35 (2.4)
6-30 (.41-2.07)	ATO-FC	10-30 (.69-2.07)	35 (2.4)
	ATC-FO	6-26 (.41-1.79)	



**FIGURE 1**

1-1/2" Model 2266 — Metal Seat, Fail Close Action

## BODY SUB-ASSEMBLY SPECIFICATIONS

**Body / Bonnet Material:** Bronze – ASTM B62 – all sizes.

**Trims:** Standard construction uses trim S2 or S4. See Table 4 for materials. The TFE soft seat includes metal to metal contact to prevent excessive compression of the TFE.

**Stem:** 5/16" (7.9 mm) diameter on 1/2"-1" (DN15, 20) valves. 3/8" (9.5 mm) diameter on 1-1/2" and 2" (DN 40, 50) valves.

**Cage:** Bronze on 1/2"-1-1/2" (DN15-40) body size (integral with bonnet). 316 SST standard on 2" (DN50) body size; brass made from barstock on 2" (DN50) body size with trim MB4 and MB7.

**Guide Bushing:** Phosphor bronze.

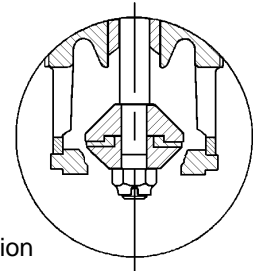
**Packing:** TFE V-Ring.

**Packing Follower:** Brass.

**Gaskets:** Seat ring – Fluorogold (TFE derivative) is standard.  
Bonnet – TFE O-ring is standard.

**Bonnet Bolting:** Screwed bonnet, no bolts, on 1/2" – 1-1/2" (DN15-40) valves. GR. B7 studs and Gr. 2H nuts standard on 2" (DN50) valves.

**Packing Flange Bolting:** Type 18-8 SST studs and nuts.



**FIGURE 2**

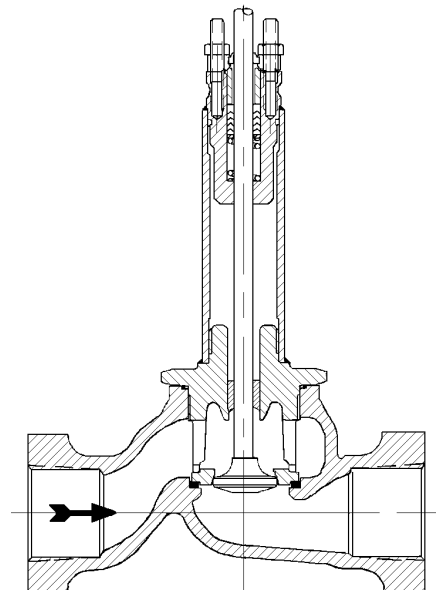
TFE Seating — Fail Open Action

## ACTUATOR SUB-ASSEMBLY SPECIFICATIONS

<b>Action:</b>	Increasing loading pressure pushes stem down.	<b>Clearance Volume:</b>	12 cu. in. on Model 27 actuator. 28 cu. in. on Model 50 actuator.
<b>Actuator:</b>	Model 27 used on 3/4", 1" and 1-1/2" (DN20, 25, and 40) valves. Model 50 used on 2" (DN50) valves.	<b>Volumetric Displacement:</b>	9.3 cu. in. on Model 27 actuator. 36 cu. in. on Model 50 actuator.
<b>Working Temperature:</b>	-20 to +180°F. (-28 to +83°C.)	<b>Diaphragm:</b>	Neoprene with nylon insert.
		<b>Diaphragm Case and Yoke:</b>	Cast iron (ASTM A126) on 1/2"–1-1/2" (DN 15–40) valves. Cast iron yoke and steel diaphragm cases on 2" (DN50) valves.

## OPTION SPECIFICATIONS

<b>Option-5:</b>	<u>CRYOGENIC CONSTRUCTION.</u> For cryogenic service on oxygen and other fluids. Includes SST column, special TFE bonnet and seat ring gaskets, and Live Loaded TFE packing. Available in TFE seats (S7, MB7) or metal seat (S6). A 5" (127 mm) extension column is used with 1/2" – 1-1/2" (DN15 – 40) valves on gaseous service. A 12" (305 mm) extension column is used on 1/2" – 1" (DN15 – 25) valves on liquid service. A 15" (381 mm) extension column can be used on 1-1/2" (DN25) valves on liquid service; it can also be used on 2" (DN50) valves for <u>both</u> liquid and gaseous service. Cleaned and packaged for oxygen service per Cashco cleaning specification #S-1134. Applicable temperature range -325° to 150°F (-195° to 66°C).	<b>Option -55:</b>	<u>SPECIAL CLEANING.</u> Cleaned per Cashco Specification #S-1134. With properly selected materials, cleanliness level suitable for oxygen service.
		<b>Option -90:</b>	<u>QUICK OPENING CHARACTERISTIC.</u> Alternate trim characteristic. Quick opening is available on 3/4", 1" and 1-1/2" (DN20, 25 and 40) valves. <u>METAL SEAT ONLY.</u> See Table 3 for Cv's.
<b>Option-12:</b>	<u>REDUCED ORIFICE.</u> For reducing the maximum flow rate, or for handling higher pressure drops than the standard orifice will handle. Not available with Option -90, quick opening trim.		
<b>Option -15:</b>	<u>STELLITED TRIM.</u> Stellite is applied to 316 SST seat ring and plug, metal to metal seats.		



**FIGURE 3**  
1-1/2" Model 2266-5 — Fail Close Action

## ACCESSORY SPECIFICATIONS

**764P or 764PD Pressure Controller:** Pressure controller for controlling pressure between vacuum and 2500 psig. The 764PD variation is for differential pressure applications between 1 and 100 psi differential. Unit is nipple mounted on the actuator. When a positioner is used, the 764P is bracket mounted.

**Positioner:** 1/2" – 1-1/2" (DN 15–40) VALVES - Top Mounted:  
Moore Products pneumatic positioner, Model 73N12F is top mounted on 1/2"–1-1/2" (DN15–40) valves. 3-15 (.21-1.03 Barg), 3-9 (.21-.62 Barg) or 9-15 (.62-1.03 Barg) psig instrument signal, direct or reverse action.

2" (DN50) VALVES - Yoke Mounted:  
General. All feedback linkage exposed to elements of SST materials. Aluminum housing with corrosion resistant polyurethane paint. Standard with 2-gauge cluster. Pneumatic output load as required by actuator bench range. Adjustable zero, stroke, gain and damping settings. Field reversible action. Dedicated airset recommended.

P/P Pneumatic. Model 9540L. Accepts 3-15 psig (0.2-1.0 Barg) or 2-way split ranges 3-9 or 9-15 psig (0.2-0.6 or 0.6-1.0 Barg) input signals. Plastic cover with see-through panel to view internal gauges.

I/P Electro-Pneumatic. Model 9520L. Accepts 4-20 mA or 2-way split ranges 4-12 or 12-20 mA input signals. NEMA 3 enclosure, intrinsically safe. FM approved. Gauges mounted on external gauge block.

**Air Tubing:** Standard instrument air tubing and fittings are Imperial-Eastman "Impolene" thermoplastic tubing with brass fittings.

**Air Supply Regulator:** Model 5100P is bracket mounted to the diaphragm case. 1/4" NPT inlet and outlets. A 1-1/2" diameter supply pressure gauge is included.

**Solenoid Valve:** Standard Brass: Available in standard weatherproof model or explosion-proof model. Brass body, 1/4" female NPT connections. Nipple mounted to actuator casing. 120 VAC, 60 Hz power supply.

Gen. Purpose: ASCO #8320G176.  
X-Proof: ASCO #EF8320G176.

Alternate SST: Similar to standard brass unit, except with 303 SST body.

Gen. Purpose: ASCO #8320G201.  
X-Proof: ASCO #EF8320G201.

Standard installation vents actuator and drives valve to fail-safe position upon loss of electrical power.

**Position Indicating Switch:** 1/2" - 1-1/2" VALVES - One or two Proximity probe-type magnetic switches Go Systems "Series 70". Contains one SPDT switch, two amps @ 240 VAC, 50 ma @ 24 VDC.

Standard – Explosion Proof. For "hazardous locations"; Class 1, Division 1, Groups A, B, C and D. (UL listed.)

Valve Action	W/Positioner	WO/Positioner	
	Switch #2-Lower Trip Position *	Switch #1-Upper Trip Position *	Switch #2-Lower Trip Position
ATO-FC	100% Open	Closed	100% Open
ATC-FO	Closed	100% Open	Closed

\* The "upper" switch is NOT available when a top mounted handwheel or P/P positioner is supplied

2" VALVES - One or two yoke mounted rotary trip switch(s); contains 1-SPDT switch. Switch rating is 15A @ 125, 250 or 480 VAC. UL rating L96. Up to two switch units may be mounted per valve.

Standard. Microswitch #OP-AR. NEMA 4 enclosure.

Explosion Proof. Microswitch #EX-AR. For "hazardous locations"; NEMA 7, Class 1, Groups C & D; NEMA 9, Class II, Groups E, F and G.

**Top Mounted Handwheel Assembly:** Overrides the actuator spring force to stroke the valve. Iron handwheel, stainless steel handwheel screw, bronze bonnet and Buna-N O-ring stem seal. Not available on 1/2" thru 1-1/2" body sizes when a P/P positioner or an "upper" position indicating switch is supplied.

## TECHNICAL SPECIFICATIONS

**TABLE 1**  
MAXIMUM PRESSURE DROP  
METAL OR TFE SEAT

Valve Size	Model 2266 – Full Port					Model 2266-12 – Reduced Port				
	Orifice Size	Actuator Bench Set				Orifice Size	Actuator Bench Set			
		3-13 psig (barg) Fail Open	5-15 psig (barg) Fail Close	6-26 psig (barg) Fail Open	10-30 psig (barg) Fail Close		3-13 psig (barg) Fail Open	5-15 psig (barg) Fail Close	6-26 psig (barg) Fail Open	10-30 psig (barg) Fail Close
1/2" – 1" (DN15–25)	3/4"	300 (20.69)	200 (13.79)	400 (27.59)	400 (27.59)	1/2"	400 (27.59)	400 (27.59)	400 (27.59)	400 (27.59)
1-1/2" (DN40)	1-3/16"	100 (6.9)	50 (3.45)	150 (10.35)	180 (12.42)	3/4"	300 (20.7)	200 (13.8)	400 (27.59)	400 (27.59)
2" (DN50)	1-15/16"	70 (4.83)	40 (2.76)	100 (6.9)	120 (8.28)	1-11/16"	100 (6.9)	50 (3.45)	140 (9.66)	160 (11.04)

**TABLE 2**  
FLOW COEFFICIENTS  
LINEAR CHARACTERISTIC – CV @ 10% TRAVEL INCREMENTS  
METAL OR COMPOSITION SOFT SEAT DESIGN

Flow-to-Open       $F_L$  Factor = 0.90

Valve Size Inch (mm)	Port Size	Orifice Size Inch (mm)	Minimum Cont. Cv	Cv at 10% Increments										
				10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	
1/2" (DN15)	Full	0.750 (19.0)	0.13	0.3	0.9	1.7	2.6	3.5	4.3	5.1	5.9	6.0	<b>6.1</b>	
	Opt-12 Red.	0.500 (12.7)	0.07	0.2	0.6	0.9	1.1	1.4	1.8	2.4	2.9	3.2	<b>3.4</b>	
3/4" (DN20)	Full	0.750 (19.0)	0.16	0.3	1.0	1.8	2.8	3.8	4.9	6.3	7.5	8.1	<b>8.4</b>	
	Opt-12 Red.	0.500 (12.7)	0.07	0.2	0.6	0.9	1.1	1.4	1.8	2.4	2.9	3.3	<b>3.5</b>	
1" (DN25)	Full	0.750 (19.0)	0.19	0.3	1.1	2.0	3.1	4.0	5.3	6.9	8.4	9.2	<b>9.5</b>	
	Opt-12 Red.	0.500 (12.7)	0.07	0.2	0.6	0.9	1.1	1.4	1.8	2.5	3.0	3.4	<b>3.6</b>	
1-1/2" (DN40)	Full	1.187 (30.2)	.38	0.6	2.1	3.7	5.4	7.6	10.0	12.4	14.8	16.8	<b>19.3</b>	
	Opt-12 Red.	.750 (19.0)	.19	0.4	1.1	2.0	2.9	3.9	5.4	7.2	8.4	9.2	<b>9.5</b>	
2" (DN50)	Full	1.937 (49.2)	.91	2.8	7.2	12.3	19.8	27.7	34.2	38.2	40.4	42.0	<b>45.3</b>	
	Opt-12 Red.	1.687 (42.9)	.62	1.8	4.6	8.0	10.8	13.8	16.0	18.6	21.8	25.9	<b>30.7</b>	

**TABLE 3**  
FLOW COEFFICIENTS  
QUICK OPENING CHARACTERISTIC – CV @ 10% TRAVEL INCREMENTS  
METAL SEAT DESIGN ONLY

Flow-to-Open       $F_L$  Factor = 0.90

Valve Size Inch (mm)	Port Size	Orifice Size Inch (mm)	Minimum Cont. Cv	Cv at 10% Increments										
				10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	
3/4" (DN20)	Full	0.750 (19.0)	.16	2.1	4.3	5.6	6.2	6.8	7.3	7.8	8.0	8.3	<b>8.4</b>	
1" (DN25)	Full	0.750 (19.0)	.20	2.4	4.5	5.9	6.9	7.7	8.3	8.8	9.2	9.5	<b>10.0</b>	
1-1/2" (DN40)	Full	1.187 (30.2)	.40	3.7	6.2	9.9	12.0	14.0	15.7	17.2	18.5	19.7	<b>20.0</b>	

**TABLE 4**  
TRIM MATERIAL COMBINATIONS

Part	Trim Materials					
	Standard 2266			Cryogenic 2266-5 — with Extension Column		
	S2	S4	MB4	S6	S7	MB7
Plug/Stem	316/316 SST	--	--	316/316 SST	--	--
Seat Ring	303 SST	303 SST	Brass	303 SST	303 SST	Brass
Guide Bushing	Phos. Bronze	Phos. Bronze	Phos. Bronze	Phos. Bronze	Phos. Bronze	Phos. Bronze
Seat Ring Gasket	Fluorogold	Fluorogold	Fluorogold	Fluorogold	Fluorogold	Fluorogold
Bonnet Gasket	TFE	TFE	TFE	Spring Loaded TFE	Spring Loaded TFE	Spring Loaded TFE
Stem	--	316 SST	Monel	--	316 SST	Monel
Adaptors	--	303 SST	Brass	--	303 SST	Brass
Castle Nut	--	18-8 SST	Brass	--	18-8 SST	Brass
Cotter Pin	--	18-8 SST	Brass	--	18-8 SST	Brass
Seat Disc	--	TFE	TFE	--	TFE	TFE

**TABLE 5**  
MAXIMUM INLET PRESSURE

Body Material	Size	Inlet Pressure		Temperature	
		psig	(Barg)	°F	(°C)
Bronze	All	400	(27.6)	-20 to +150	(-28.6 to +66)
		250	(17.2)	-20 to +400	(-28.6 to +204)
Bronze, Opt-5 Cryo.	All	400	(27.6)	-325 to +150	(-198 to +66)

## APPLICATION AND SELECTION

The following procedure will help determine a suitable selection for an application. Consult Cashco area representative for assistance in sizing.

### STEP 1.

**FIVE KNOWNs.** The following minimal parameters/information must be available before a selection procedure can begin:

- Service Fluid - What is it? Liquid or gas? SG (std. cond.).
- Inlet Pressure -  $P_1$  (upstream pressure).
- Outlet Pressure -  $P_2$  (downstream pressure). How much can  $P_2$  vary as flow varies?
- Desired capacity - Cv, GPM, SCFH; minimum & maximum.
- Fluid temperature -  $T_1$ , SG (actual).

### STEP 2.

**CAPACITY.** Using the knowns from Step 1, calculate the maximum and minimum Cv required.

Example: Max Cv Req'd. = 13.5 Cv  
Min Cv Req'd. = 1.5 Cv

For throttling service the max. Cv required should be between 60-85% of the selected valve's Max. Cv Available.

Example: Max Cv Req'd.  
 $13.5 \div 0.6 = 22.5$  Cv  
 $13.5 \div 0.85 = 15.9$  Cv

Select a body/orifice size that will be less than 22.5 Cv Available, but greater than 15.9 Cv Available.

Example: Preliminary selections – Full Port - 1-1/2" body size with 20 Cv Available.

Reduced Port – No choice available in the 15.9-22.5 Max Cv Req'd. range.

Selection - 1-1/2" body size with full port.

### STEP 3.

**RANGEABILITY.** Check the Min Cv Available for the selection of Step 2.

Rangeability = 50:1

Max Cv Avail. = 20 Cv

Min Cv Avail. =  $20Cv \div 50 = 0.4$  Cv

Ensure that the Min Cv Available is less than the calculated Min Cv Required of Step 2:

0.4 Min Cv Available < 1.5 Min Cv Req'd.

1-1/2" full port selection is OK.

### STEP 4.

**FAILURE ACTION.** Consider the process related safety conditions to determine if the valve should "fail open" or "fail close" upon:

- loss of air supply pressure
- loss of electric power \*
- loss of both supply air and electric power \*

\* Requires 3-way solenoid valve.

### STEP 5.

**INLET PRESSURE.** Ensure that the actual design inlet temperature limits do not exceed the limits established in Table 5. Only bronze bodies may be used in cryogenic service.

### STEP 6.

**PRESSURE DROP.** Maximum pressure drop ( $\Delta P$ ) is normally experienced at shutoff flow. Knowing the maximum  $\Delta P$  and desired failure position, go to Table 1 to see if the valve body/orifice size selected is adequate with a 3-13 or 5-15 psig (.21-.90 or .34-1.03 Barg) actuator bench set. If these bench sets provide inadequate  $\Delta P$  capability, use a 6-26 or 10-30 psig (.41-1.79 or .69-2.07 Barg) actuator bench set. (Note: If a 6-26 or

10-30 psig (.41-1.79 or .69-2.07 Barg) bench set is selected, a 2:1 signal booster may be required).

service is linear. An Option -90 selection will allow use of quick-opening characteristic for ON-OFF applications.

**STEP 7.** MATERIALS. Select the desired trim from Table 4. Consider the use of Option -15, stellite seating surfaces for S2 trim if subjected to shutoff or low flow at  $\Delta P > 150$  psid conditions in steam service for extended periods of time. Consider leakage rate.

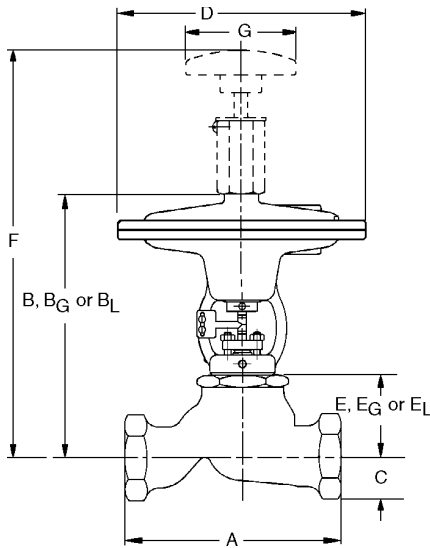
**STEP 9.** ACCESSORIES. Consider use of various valve installed accessories:

- P/P positioner
- I/P positioner, 2" size only
- Position indicating switches
- Manual handwheel
- Solenoid valve

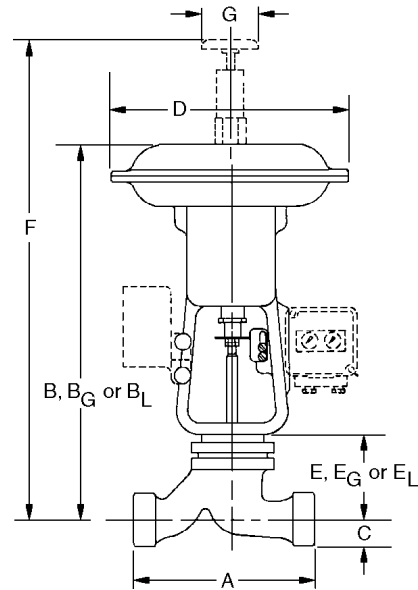
**STEP 8.** CHARACTERISTIC. Standard trim form for throttling or ON-OFF

**STEP 10.** PRODUCT CODE. Go to the back of this bulletin and develop the required "product code".

### DIMENSIONS AND WEIGHT



1/2" – 1-1/2" Size with Model 27 Actuator



2" Size with Model 50 Actuator

#### English Units – In. & lbs.

Body Size	Standard							Cryogenic				Weight <sup>1</sup>
	A	B	C	D	E	F	G	Gas Service		Liquid Service		
								B <sub>G</sub>	E <sub>G</sub>	B <sub>L</sub>	E <sub>L</sub>	
1/2" – 1"	4.31	9.06	1.63	9.00	2.25	14.22	4.0	14.00	7.25	21.75	14.25	20 lbs.
1-1/2"	7.88	9.81	1.56	9.00	3.00	14.97	4.0	14.77	7.96	24.77	17.96	25 lbs.
2"	9.38	16.68	1.69	10.50	3.68	24.50	4.0	33.09	20.09	33.09	20.09	42 lbs.

<sup>1</sup> For Opt-5 Cryogenic Construction, add 5 lbs.

#### Metric Units – mm & kg

Body Size	Standard							Cryogenic				Weight <sup>1</sup>
	A	B	C	D	E	F	G	Gas Service		Liquid Service		
								B <sub>G</sub>	E <sub>G</sub>	B <sub>L</sub>	E <sub>L</sub>	
DN15–25	110	230	41	229	57	361	102	336	184	552	362	9 kg.
DN40	200	249	40	229	76	380	102	375	202	629	456	11 kg.
DN50	238	424	43	267	94	622	102	840	510	840	510	19 kg.

<sup>1</sup> For Opt-5 Cryogenic Construction, add 2.3 kgs.

TABLE 3

PORT SIZE	CHARACTER	OPTIONS	SEAT DESIGNS		Available Sizes	CODE	
			METAL	TFE SOFT		STD FLOW DIR-FTO	REV.FLOW DIR-FTC
FULL	LINEAR	—	√	√	ALL	<b>10</b>	—
FULL & STELL.	LINEAR	-15	√	—	ALL	<b>1A</b>	—
RED.	LINEAR	-12	√	√	ALL	<b>20</b>	—
RED. & STELL.	LINEAR	-12+15	√	—	ALL	<b>2A</b>	—
FULL (Q.O.)	QUICK OPENING	-90	√	—	3/4" to 1-1/2"	<b>80</b>	<b>30</b>

TABLE 2

CONSTRUCTION	Applicable Sizes	Option	Trim Desig.	Seat Design	CODE
Standard	All	—	S2	METAL	<b>5</b>
		—	S4	TFE-SOFT	<b>6</b>
		—	MB4	TFE-SOFT	<b>7</b>
Standard: Special Clean (Clean to Spec. #S-1134)	All	-55	S2	METAL	<b>8</b>
		-55	S4	TFE-SOFT	<b>9</b>
		-55	MB4	TFE-SOFT	<b>G</b>
*Cryogenic with 5" Column for Gas. Special Clean (Clean to Spec. #S-1134)	1/2"	-5	S6	METAL	<b>A</b>
	to 1-1/2"	-5	S7	TFE-SOFT	<b>B</b>
*Cryogenic with 12" Column for Liquid. Special Clean (Clean to Spec. #S-1134)	1/2"	-5	MB7	TFE-SOFT	<b>D</b>
	to 1"	-5	S6	METAL	<b>K</b>
*Cryogenic with 15" Column for Liquid. Special Clean (Clean to Spec. #S-1134)	1-1/2"	-5	S7	TFE-SOFT	<b>L</b>
	1"	-5	MB7	TFE-SOFT	<b>E</b>
*Cryogenic with 15" Column for Liquid and Gas. Special Clean (Clean to Spec. #1134)	2"	-5	S6	METAL	<b>M</b>
		-5	S7	TFE-SOFT	<b>N</b>
		-5	MB7	TFE-SOFT	<b>P</b>
		-5	S6	METAL	<b>T</b>
		-5	S7	TFE-SOFT	<b>U</b>
		-5	MB7	TFE-SOFT	<b>F</b>

TABLE 4

ACTUATOR			HANDWHEEL *	
Action	Fail Position	Bench Range (psig)	W/O CODE	WITH CODE
ATO	CLOSE	5-15	<b>5</b>	<b>E</b>
ATO	CLOSE	10-30	<b>6</b>	<b>F</b>
ATC	OPEN	3-13	<b>7</b>	<b>G</b>
ATC	OPEN	6-26	<b>8</b>	<b>H</b>

\* Manual Handwheel & Pneumatic Posit. are not available together on same unit on sizes 1/2" thru 1-1/2". 2" may utilize both. Consult Tech Bulletin for allowable pressure drop.

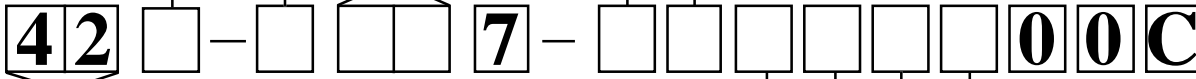
TABLE 5

NO POSITIONER					CODE
I/P-Electro-Pneu. Positioner *	CODE w/Airset	CODE w/o Airset	P/P-Pneumatic Positioner √	CODE w/Airset	CODE w/o Airset
Direct 4-20 ma	<b>A</b>	<b>G</b>	Direct 3-15 psig	<b>1</b>	<b>R</b>
Reverse 20-4 ma	<b>B</b>	<b>H</b>	Reverse 15-3psig	<b>2</b>	<b>S</b>
Direct Split Range 4-12 ma	<b>C</b>	<b>J</b>	Direct Split Range 3-9 psig	<b>5</b>	<b>V</b>
Direct Split Range 12-20 ma	<b>D</b>	<b>K</b>	Direct Split Range 9-15 psig	<b>6</b>	<b>W</b>
Reverse Split Range 12-4 ma	<b>E</b>	<b>L</b>	Reverse Split Range 15-9 psig	<b>7</b>	<b>Y</b>
Reverse Split Range 20-12 ma	<b>F</b>	<b>M</b>	Reverse Split Range 9-3 psig	<b>8</b>	<b>Z</b>

NOTES: (1) Airset supplied w/gauge. Select range in Table 8.  
 (2) On sizes 1/2", 3/4", 1" & 1-1/2", the Moore Positioner is utilized; the 2" size utilizes Models 9520L(I/P) & 9540L(P/P).  
 \* I/P Positioner NOT AVAILABLE on 1/2", 3/4", 1" or 1-1/2" sizes.  
 √ P/P positioner supplied, is not available with either manual handwheel or "upper" position limit switch for 1/2" thru 1-1/2" sizes.

TABLE 1

BODY				
Size	Material	STD. CODE	CRYO. CODE	
1/2"	BR	<b>A</b>	<b>H</b>	
3/4"	BR	<b>1</b>	<b>J</b>	
1"	BR	<b>2</b>	<b>R</b>	
1-1/2"	BR	<b>3</b>	<b>S</b>	
2"	BR	<b>4</b>	<b>M</b>	



**MODEL "2266" GLOBE-STYLE CONTROL VALVE**

TABLE 6

SPECIAL CONSTRUCTION	CODE
NONE	<b>X</b>
TUBING	CODE
NONE (NO Positioner, airset, solenoid, etc.)	<b>0</b>
STD-Impolene Tubing Brass Fittings	<b>1</b>
Copper Tubing, Brass Fittings	<b>2</b>
SST Tubing & Fittings	<b>3</b>

When ordering a valve per one of Cashco's special drawings, the code "X" and the 5-digit number following override all other options. Otherwise, proceed with the following tables.

TABLE 8

AIRSET RANGE	CODE
NO AIRSET	<b>0</b>
3-13, 5-15 Bench Set (0-30 psig range)	<b>A</b>
6-26, 10-30 Bench Set (0-60 psig range)	<b>B</b>

NOTE: Airset equipped w/gauge.

TABLE 7

POSITION LIMIT SWITCHES						
APPLIC. SIZES	MFGR/ MODEL	TYPE	NO. OF SWITCH UNITS *	TRIP POSITIONS	W/ATO ACTUATOR	W/ATC ACTUATOR
ALL	NONE	—	0	NONE	<b>0</b>	<b>0</b>
1/2" Thru 1-1/2"	GO SYSTEMS "SERIES 70" 73-13528-A1	General Purpose	1	Plug Full Open	<b>D</b>	<b>G</b> √
			1	Plug Closed	<b>E</b> √	<b>H</b>
			2	Plug Closed & Plug Full Open	<b>F</b> √	<b>J</b> √
1/2" Thru 1-1/2"	GO SYSTEMS "SERIES 70" 73-13523-A1	Magnetic Proximity X-Proof	1	Plug Full Open	<b>4</b>	<b>7</b> √
			1	Plug Closed	<b>5</b> √	<b>8</b>
			2	Plug Closed & Plug Full Open	<b>6</b> √	<b>9</b> √
					<b>CODE **</b>	
2"	Microswitch #OP-AR	Rotary Trip; NEMA4	1	Plug Closed	<b>1</b>	
			1	Plug Full Open	<b>2</b>	
			2	Plug Closed & Plug Full Open	<b>3</b>	
	Microswitch #EX-AR	Rotary Trip; NEMA7 X-Proof	1	Plug Closed	<b>A</b>	
			1	Plug Full Open	<b>B</b>	
			2	Plug Closed & Plug Full Open	<b>C</b>	

\* Each "switch unit" contains 1-SPDT switch. If using positioner on 3/4"-1-1/2" size, 1 switch available, either plug closed or full open.

\*\* Code independent of actuator action

√ "Upper" switch not available when supplied with P/P positioner or manual handwheel.

TABLE 9

ACCESSORIES	CODE
NONE (other than indicated on this Coder Sheet)	<b>0</b>
VALVE MTD ACCESSORIES Any of the following: 3-Way Solenoid Valve Bracket mounted 764P Pressure Controller Extra Airset(s) I/P Transducer Lockup Valve	<b>9</b>

NOTE: Use of a "9" code requires that a "99 Coder" Sheet be completed.

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