



## 360 Series Control Valve



**Figure 1** 360 Series Control Valve

The 360 Series control valves (Figure 1) are heavy-duty globe style control valves. These valves are used in all kinds of demanding applications, including oil and gas production and chemical process industries.

The 360 Series control valves are cage, or top guided, single port valves that can be used for either throttling or on-off control of either liquids or gasses.

The standard actuator for the 360 Series valve is a Dyna-Flo model DFC or DFO linear actuator. These heavy-duty actuators are spring return diaphragm style, and can be used for throttling or on-off service, with or without a valve positioner.

The 360 Series control valves are manufactured to a high level of quality specifications to ensure superior performance and customer satisfaction.

### Features

#### Valve Sizes and Connections

The 360 Series control valves are available in 1", 1-1/2", 2", 3", 4", 6" and 8" sizes with ANSI 150, 300 or 600 Raised Face (RF) or Ring Joint (RTJ) flanges. NPT ends are available for the 1" and 1-1/2" Model 360.

#### Low Temperature Construction Standard

The 360 Series use LCC body material, and internals rated to -50° F (-46° C).

#### High Temperature Option

The standard temperature rating of 450°F (232° C) can be extended to 850° F (454° C), with options available for higher temperatures.

#### Cryogenic Service Option

Optional materials and trim details make the 360 Series a standard solution for ultra low temperatures.

#### Pressure Drop Capabilities

The 360 Series control valves can shut off against inlet pressures equal to the ASME B16.34 rating.

#### Sour Gas Service Capability

There are standard construction materials that comply with the recommendations of the National Association of Corrosion Engineers (NACE) MR0175.

#### Shut Off Capability

Shut off options are available from ANSI / FCI Class II to Class V.

#### Flow Characteristic Selections

Equal percentage flow characteristic cages are standard. Linear, quick-opening, and custom flow curves are available.



## 360 Series Control Valve

### Specifications

#### Configurations

The 360 Series control valves are high capacity single port, globe style valves, with a bolted type valve bonnet. The standard valve plug action is push down to close.

See Table 1

Consult your Dyna-Flo sales office for other available configurations.

#### Sizes and Connection Styles

Models 360, 361, 362

Size: 1", 1-1/2", 2", 3", 4", 6", 8"

Rating: ANSI 150 / 300 / 600

Connections: RF / RTJ All Sizes  
NPT 1" and 1-1/2"

#### Maximum Inlet Temperature and Pressures

Flanged valves consistent with ANSI Class rating as per ASME B16.34, unless limited by either material pressure or temperature limitations.

#### Maximum Pressure Drops

Maximum pressure drop is the same as maximum inlet pressure unless otherwise rated by a specific trim construction.

#### Standard Shut-off Classifications

In accordance with ANSI / FCI 70.2

-360 Series - Standard Class V

-361 Series - Standard Class II

-362 Series - Standard Class IV

See Table 1 for Optional Shut-off capability

#### Dimensions

##### Valve and Actuator Outline Dimension Diagram

See Figure 2

##### Valve and Actuator Assembly Dimensions

See Table 3 and Table 4

#### Approximate Valve Body and Actuator Weights

See Table 11

#### Materials

The standard body material is LCC. The standard bonnet material is LF2 or LCC. CF8M (316 SST) is an option. See Table 5 for typical construction materials. See Tables 6 and 7 for trim selections.

#### Cross-Section of 360 Series Control Valves

See Figure 3

#### Flow Characteristics

Standard cage is equal percent. Other cages are available upon request. 360 and 361 control valves normally flow down. 362 control valves normally flow up.

#### Port Diameters and Maximum Valve Plug Travel

See Table 2

#### Packing Type

The Standard packing is PTFE V-ring. Live-loaded low emission, graphite and other packing arrangements are available.

#### Valve Sizing Coefficients

See Table 8

#### Actuator Sizing

##### Fail Open Actuator

See Table 9

##### Fail Close Actuator

See Table 10

#### Trim Style Service Application

See Table 7



## 360 Series Control Valve

**Table 1**

**Valve Design Configurations**

Valve Model	Size (inch)	Shut Off Capabilities	Valve Plug	Seal Ring	Guide	Seat
360	1 - 8	Class V or	Balanced	Carbon / PTFE	Cage	316 SST / PTFE
		Optional Class IV	Balanced	Carbon / PTFE	Cage	Metal
361	1 - 8	Class II	Balanced	Single Graphite	Cage	Metal
	3 - 8	Optional Class III	Balanced	Single Graphite	Cage	Metal
	4 - 8	Optional Class IV	Balanced	Multiple Graphite	Cage	Metal
362	1 - 4	Class IV or	Unbalanced	None	Cage	Metal
		Optional Class V	Unbalanced	None	Cage	Metal

**Table 2**

**Models 360, 361, 362**

Port Diameters, Valve Plug Travel, Stem and Valve Mounting Connection Sizes

**Stem And Valve Mounting Connection (VMC)**

Valve Size	Port Diameter		Max Valve Plug Travel		Standard			
					Stem		VMC	
	Inch	mm	Inch	mm	Inch	mm	Inch	mm
1" Full Port	1-5/16	33	3/4	19	3/8	9.5	2-1/8	54
1 1/2" Full Port	1-7/8	33	3/4	19	3/8	9.5	2-1/8	54
2" Full Port	2-5/16	59	1-1/8	19	1/2	12.7	2-13/16	71
3" Full Port	3-7/16	87	1-1/2	38	1/2	12.7	2-13/16	71
4" Full Port	4-3/8	111	2	51	1/2	12.7	2-13/16	71
6" Full Port	7	178	2	51	3/4	19	3-9/16	91
8" Full Port	8	203	3	76	3/4	19	3-9/16	91
1 1/2" Reduced Port	1-5/16	33	3/4	19	3/8	9.5	2-1/8	54
2" Reduced Port	1-5/16	33	3/4	19	1/2	12.7	2-13/16	71
3" Reduced Port	2-5/16	59	1-1/8	29	1/2	12.7	2-13/16	71
4" Reduced Port	2-7/8	73	1-1/2	38	1/2	12.7	2-13/16	71
6" Reduced Port	4-3/8	111	2	51	3/4	19	3-9/16	91

**NOTE:** The 8" valve comes with either a 2" or 3" travel valve cage.



# 360 Series Control Valve

**Table 3**

**1" to 4" Valve Assembly with Actuator Envelope Dimensions**  
 Inches (mm)  
 (Refer to Figure 2)

Valve Size (inch)	End Connection	Actuator Size	A	B	C	D		E
						DFO	DFC	
1	150#	1046	7.25 (184)	2.38 (60)	5.00 (127)	22.3 (566)	23.80 (605)	11.38 (289)
	150#	1069	7.25 (184)	2.38 (60)	5.00 (127)	24.6 (625)	27.60 (700)	13.12 (333)
	300#	1046	7.75 (197)	2.38 (60)	5.00 (127)	22.3 (566)	23.80 (605)	11.38 (289)
	300#	1069	7.75 (197)	2.38 (60)	5.00 (127)	24.6 (625)	27.60 (700)	13.12 (333)
	600#	1046	8.25 (210)	2.38 (60)	5.00 (127)	22.3 (566)	23.80 (605)	11.38 (289)
	600#	1069	8.25 (210)	2.38 (60)	5.00 (127)	24.6 (625)	27.60 (700)	13.12 (333)
	NPT	1046	8.25 (210)	2.38 (60)	5.00 (127)	22.3 (566)	23.80 (605)	11.38 (289)
	NPT	1069	8.25 (210)	2.38 (60)	5.00 (127)	24.6 (625)	27.60 (700)	13.12 (333)
1-1/2	150#	1046	8.75 (222)	2.81 (71)	4.88 (124)	22.18 (536)	23.68 (602)	11.38 (289)
	150#	1069	8.75 (222)	2.81 (71)	4.88 (124)	24.48 (622)	27.48 (697)	13.12 (333)
	300#	1046	9.25 (235)	2.81 (71)	4.88 (124)	22.18 (536)	23.68 (602)	11.38 (289)
	300#	1069	9.25 (235)	2.81 (71)	4.88 (124)	24.48 (622)	27.48 (697)	13.12 (333)
	600#	1046	9.75 (248)	2.81 (71)	4.88 (124)	22.18 (536)	23.68 (602)	11.38 (289)
	600#	1069	9.75 (248)	2.81 (71)	4.88 (124)	24.48 (622)	27.48 (697)	13.12 (333)
	NPT	1046	9.88 (251)	2.81 (71)	4.88 (124)	22.18 (536)	23.68 (602)	11.38 (289)
	NPT	1069	9.88 (251)	2.81 (71)	4.88 (124)	24.48 (622)	27.48 (697)	13.12 (333)
2	150#	2069	10.00 (254)	3.06 (78)	6.50 (165)	28.10 (714)	29.88 (759)	13.12 (333)
	150#	2105	10.00 (254)	3.06 (78)	6.50 (165)	32.44 (824)	36.75 (933)	16.00 (406)
	300#	2069	10.50 (267)	3.06 (78)	6.50 (165)	28.10 (714)	29.88 (759)	13.12 (333)
	300#	2105	10.50 (267)	3.06 (78)	6.50 (165)	32.44 (824)	36.75 (933)	16.00 (406)
	600#	2069	11.25 (286)	3.06 (78)	6.50 (165)	28.10 (714)	29.88 (759)	13.12 (333)
	600#	2105	11.25 (286)	3.06 (78)	6.50 (165)	32.44 (824)	36.75 (933)	16.00 (406)
3	150#	2069	11.75 (299)	3.81 (97)	7.50 (191)	29.06 (738)	30.90 (785)	13.12 (333)
	150#	2105	11.75 (299)	3.81 (97)	7.50 (191)	33.44 (849)	37.75 (959)	16.00 (406)
	300#	2069	12.50 (318)	3.81 (97)	7.50 (191)	29.06 (738)	30.90 (785)	13.12 (333)
	300#	2105	12.50 (318)	3.81 (97)	7.50 (191)	33.44 (849)	37.75 (959)	16.00 (406)
	600#	2069	13.25 (337)	3.81 (97)	7.50 (191)	29.06 (738)	30.90 (785)	13.12 (333)
	600#	2105	13.25 (337)	3.81 (97)	7.50 (191)	33.44 (849)	37.75 (959)	16.00 (406)
4	150#	2105	13.88 (353)	5.06 (129)	8.69 (221)	34.63 (880)	38.94 (989)	16.00 (406)
	150#	2156	13.88 (353)	5.06 (129)	8.69 (221)	34.63 (880)	38.94 (989)	18.12 (460)
	300#	2105	14.50 (368)	5.06 (129)	8.69 (221)	34.63 (880)	38.94 (989)	16.00 (406)
	300#	2156	14.50 (368)	5.06 (129)	8.69 (221)	34.63 (880)	38.94 (989)	18.12 (460)
	600#	2105	15.50 (394)	5.06 (129)	8.69 (221)	34.63 (880)	38.94 (989)	16.00 (406)
	600#	2156	15.50 (394)	5.06 (129)	8.69 (221)	34.63 (880)	38.94 (989)	18.12 (460)

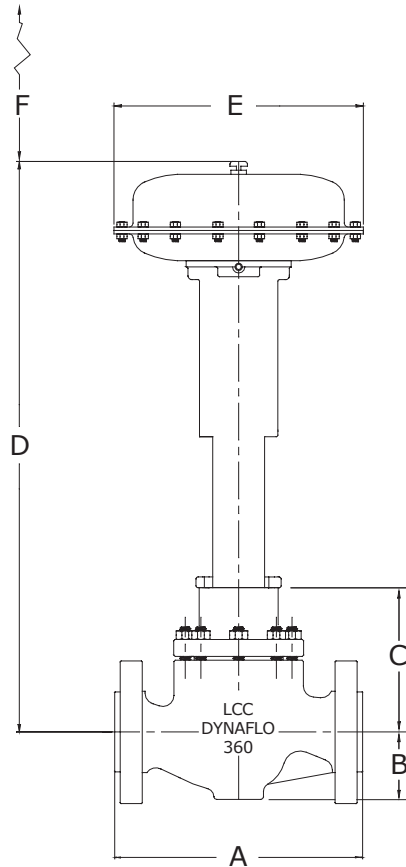


# 360 Series Control Valve

**Table 4**

**6" & 8" Valve Assembly with Actuator Envelope Dimensions**  
 Inches (mm)  
 (Refer to Figure 2)

Valve	End	Actuator	A	B	C	D		E
Size (inch)	Connection	Size				DFO	DFC	
6	150#	3156	17.75 (451)	5.50 (140)	9.88 (311)	38.18 (970)	40.80 (1036)	18.62 (473)
	150#	3220	17.75 (451)	5.50 (140)	9.88 (311)	42.94 (1091)	46.63 (1184)	21.10 (536)
	300#	3156	18.62 (473)	5.50 (140)	9.88 (311)	38.18 (970)	40.80 (1036)	18.62 (473)
	300#	3220	18.62 (473)	5.50 (140)	9.88 (311)	42.94 (1091)	46.63 (1184)	21.10 (536)
	600#	3156	20.00 (508)	5.50 (140)	9.88 (311)	38.18 (970)	40.80 (1036)	18.62 (473)
	600#	3220	20.00 (508)	5.50 (140)	9.88 (311)	42.94 (1091)	46.63 (1184)	21.10 (536)
8	150#	3220	21.38 (543)	7.50 (191)	14.75 (375)	47.85 (1216)	51.55 (1308)	21.10 (536)
	300#	3220	22.38 (556)	7.50 (191)	14.75 (375)	47.85 (1216)	51.55 (1308)	21.10 (536)
	600#	3220	24.00 (610)	7.50 (191)	14.75 (375)	47.85 (1216)	51.55 (1308)	21.10 (536)



**F Dimension:**  
 1", 1-1/2" Valve  
 5.00" (127 mm)  
 2", 3", 4" Valve  
 6.88" (175 mm)  
 6", 8" Valve  
 9.12" (232 mm)

**Figure 2** Valve Assembly with Fail Closed Actuator Outline Dimensions



# 360 Series Control Valve

**Table 5**

**Typical Construction Materials**

Part Description	Standard Construction	NACE Construction
BODY	SA352 Gr LCC	SA352 Gr LCC
	SA351 Gr CF8M*	SA351 Gr CF8M*
BONNET	SA350 LF2 / SA352 Gr LCC	SA350 LF2 / SA352 Gr LCC
	SA351 Gr CF8M*	SA351 Gr CF8M*
PACKING BOX RING	316 SST	316 SST
PACKING SPRING	304 SST	N/A
LANTERN RING	-	316 SST
SPECIAL WASHER	304 SST	N/A
V-RING PACKING SET	PTFE	PTFE (Double)
PACKING FOLLOWER	316 SST	316 SST
STEM WIPER	FELT	FELT
CAGE	17-4PH SST	17-4PH SST DH1150
DISK SEAT	316 SST	316 SST
DISK	PTFE	PTFE
DISK RETAINER	316 SST	316 SST
VALVE PLUG / STEM ASS'Y	416 SST PLUG/NITRONIC 50 STEM	N/A
	316 SST PLUG/NITRONIC 50 STEM*	316 SST PLUG/NITRONIC 50 STEM
	316 SST-ALLOY 6 PLUG/NITRONIC 50 STEM*	316 SST-ALLOY 6 PLUG/NITRONIC 50 STEM*
SEAT RING	416 SST	N/A
	316 SST*	316 SST
	316-ALLOY 6*	316-ALLOY 6*
SEAL RING	CARBON / PTFE	CARBON / PTFE
BACKUP RING	VITON / EPDM*	VITON / EPDM*
PACKING FLANGE	CARBON STEEL-PLATED	CARBON STEEL-PLATED
PACKING NUT	SA-194 2H	SA-194 2H
PACKING STUD	SA-193 B7	SA-193 B7
BONNET STUD	SA-193 B7	SA-193 B7M*
	17-4PH SST*	17-4PH SST*
BONNET NUT	SA-194 2H	SA-194 2HM

\* Optional construction material

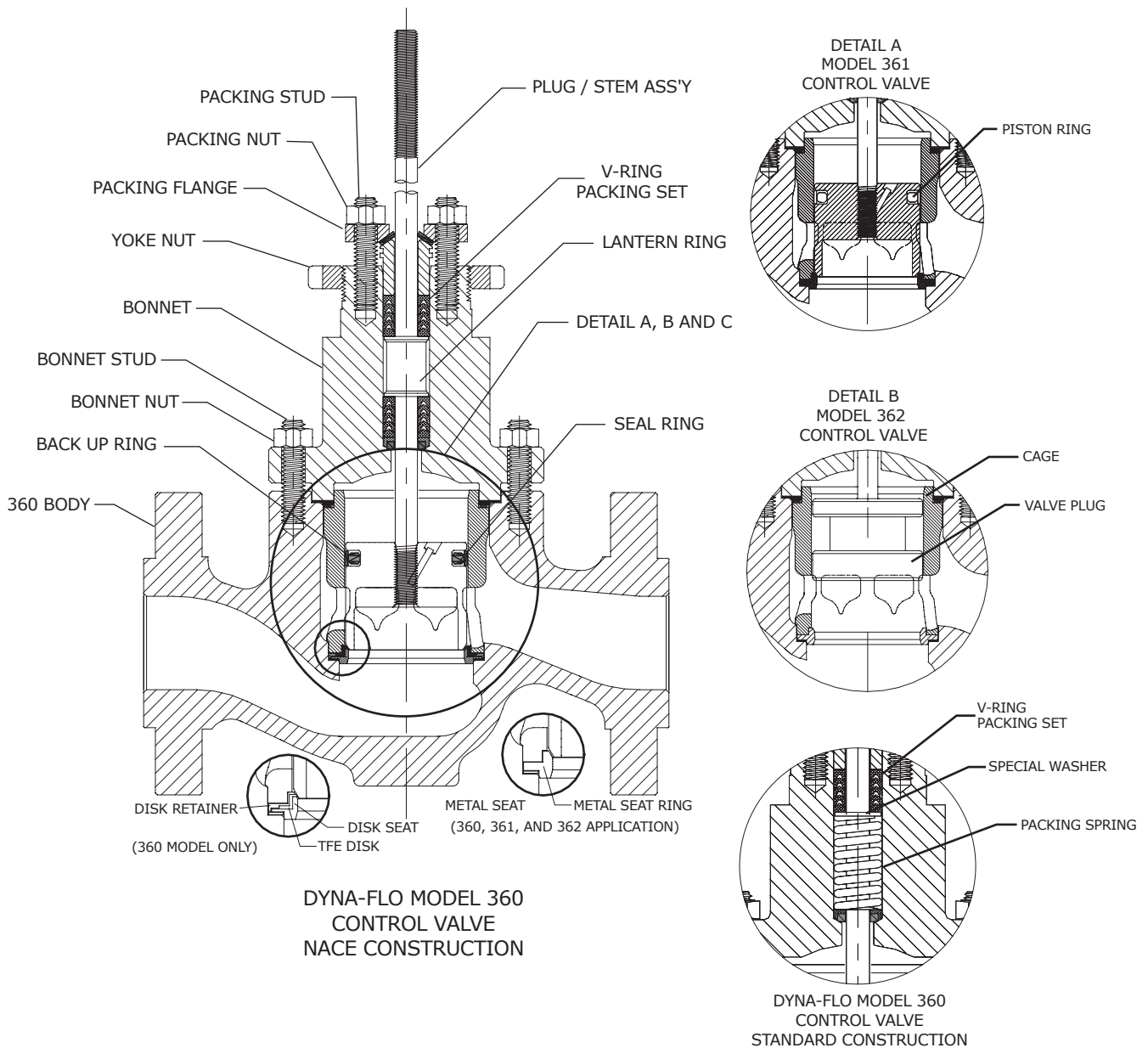
See tables 6 & 7 for service limits

NOTE: 316 ENC cages are available as special. Consult Dyna-Flo sales department.



# 360 Series Control Valve

**Figure 3** Cross-section of 360 Series Control Valve with Trim Details





## 360 Series Control Valve

**Table 6**

**Trim Options**

Trim Spec	Model	Valve Plug	Stem	Cage	Seat Ring	Service
D1	360, 361, 362	416 SST (38 HRC)	Nitronic 50	17-4 PH SST (40 HRC)	416 SST	Standard / Non-corrosive / High Temp
D2	360, 361, 362	316 SST / Alloy 6 Seat	Nitronic 50	17-4 DH1150 SST <sup>1</sup>	316 SST / Alloy 6 Hard Facing	Corrosive / NACE High Temperature
D3	360, 361, 362	316 SST / Alloy 6 Seat & Guide	Nitronic 50	Alloy 6	316 SST / Alloy 6 Hard Facing	Corrosive / High Temperature / Erosive
D4	360, 361, 362	316 SST	Nitronic 50	17-4 PH SST (40 HRC)	316 SST	General / Mild Corrosive
D5	360, 362	416 SST (38 HRC)	Nitronic 50	17-4 PH SST (40 HRC)	316 SST / PTFE	Standard / Non-corrosive / Shut off
D6	360, 361, 362	316 SST / Alloy 6 Seat & Guide	Nitronic 50	17-4 PH SST (40 HRC)	316 SST / Alloy 6 Hard Facing	Standard / Mild Corrosive Mild Erosive
D7	360, 361, 362	316 SST / Alloy 6 Seat & Guide	Nitronic 50	17-4 DH1150 SST <sup>1</sup>	316 SST / Alloy 6 Hard Facing	Corrosive / High Temp / NACE / Mild Erosive
D8	360, 361, 362	316 SST	Nitronic 50	17-4 DH1150 SST <sup>1</sup>	316 SST	NACE / Corrosive
D9	360, 362	316 SST	Nitronic 50	17-4 DH1150 SST <sup>1</sup>	316 SST / PTFE	NACE / Corrosive / Shut off

**Note:**

1 - 316 SST (ENC)\* available by special request (\*Electroless Nickel Coating)

**Table 7**

**Trim Style Service Application**

Trim Spec	Shut Off Class by Model			Maximum Pressure Drop (psig) @ 100 F	Maximum Pressure Drop (psig) @ 400 F	Minimum Temperature °F (°C)	Minimum Temperature °F (°C)
	360	361	362				
D1	IV	II	IV	1500	1400	-20 (-29)	650 (343)
D2	IV	II	IV	1440	1000	-325 (-198) <sup>1</sup>	300 (149)
D3	IV	II	IV	1500	1400	-20 (-29)	650 (343)
D4	IV	II	IV	1500	1400	-50 (-46)	410 (210)
D5	V	N/A	VI	1440	300	-20 (-29)	400 (204)
D6	IV	II	IV	1480	1380	-50 (-46)	650 (343)
D7	IV	II	IV	1240	1000	-325 (-198) <sup>1</sup>	650 (343)
D8	IV	II	IV	1440	300	-325 (-198) <sup>1</sup>	400 (204)
D9	V	N/A	V	1440	300	-100 (-73)	400 (204)

**NOTE:**

1 - - Special body processing required





# 360 Series Control Valve

**Table 8**

**Models 360 & 361 Valve Sizing Coefficients, Equal Percentage Trim, Flow Down**

Valve Size	Port	Travel	Co-efficient	Percentage of Valve Travel									
Inches	Inches (mm)	Inches (mm)		10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
<b>FULL SIZED TRIM / PORT</b>													
1	1-5/16 (33)	3/4 (19)	$C_v$	0.783	1.54	2.20	2.89	4.21	5.76	7.83	10.9	14.1	17.2
			$X_T$	0.77	0.61	0.59	0.94	0.67	0.69	0.74	0.76	0.73	0.67
			$F_L$	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
1-1/2	1-7/8 (48)	3/4 (19)	$C_v$	1.52	2.63	3.87	5.41	7.45	11.2	17.4	24.5	30.8	35.8
			$X_T$	0.77	0.61	0.59	0.67	0.67	0.69	0.74	0.76	0.73	0.67
			$F_L$	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
2	2-5/16 (59)	1-1/8 (29)	$C_v$	1.66	2.93	4.66	6.98	10.8	16.5	25.4	37.3	50.7	59.7
			$X_T$	0.83	0.83	0.77	0.73	0.69	0.68	0.70	0.74	0.69	0.69
			$F_L$	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
3	3-7/16 (87)	1-1/2 (38)	$C_v$	4.32	7.53	10.9	17.1	27.2	43.5	66.0	97.0	120	136
			$X_T$	0.77	0.71	0.68	0.64	0.62	0.60	0.66	0.69	0.67	0.68
			$F_L$	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
4	4-3/8 (111)	2 (51)	$C_v$	5.85	11.6	18.3	30.2	49.7	79.7	125	171	205	224
			$X_T$	0.73	0.65	0.64	0.65	0.63	0.63	0.67	0.74	0.74	0.72
			$F_L$	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
6	7 (178)	2 (51)	$C_v$	12.9	25.8	43.3	67.4	104	162	239	316	368	394
			$X_T$	0.69	0.68	0.68	0.71	0.70	0.72	0.74	0.74	0.78	0.78
			$F_L$	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
8	8 (203)	2 (51)	$C_v$	18.5	38.0	58.4	86.7	130	189	268	371	476	567
			$X_T$	0.73	0.62	0.60	0.59	0.58	0.59	0.59	0.61	0.67	0.72
			$F_L$	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
8	8 (203)	3 (76)	$C_v$	27.0	58.1	105	188	307	478	605	695	761	818
			$X_T$	0.64	0.65	0.64	0.61	0.64	0.62	0.73	0.81	0.80	0.81
			$F_L$	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86

**REDUCED TRIM / PORT**

1-1/2	1-5/16 (33)	3/4 (19)	$C_v$	1.12	1.56	2.22	3.10	4.27	6.17	9.0	13.1	18.2	23.1
			$X_T$	0.82	0.86	0.82	0.70	0.72	0.68	0.67	0.64	0.65	0.70
			$F_L$	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
2	1-5/16 (33)	3/4 (19)	$C_v$	0.92	1.42	2.09	2.84	4.11	5.83	8.58	12.8	18.5	24.3
			$X_T$	0.78	0.74	0.74	0.71	0.72	0.71	0.71	0.64	0.62	0.65
			$F_L$	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
3	2-5/16 (59)	1-1/8 (29)	$C_v$	1.75	3.11	4.77	7.07	10.7	17.0	27.9	41.5	58.0	70.7
			$X_T$	0.94	0.84	0.80	0.76	0.74	0.64	0.53	0.61	0.63	0.70
			$F_L$	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
4	2-7/8 (73)	1-1/2 (38)	$C_v$	3.82	7.65	11.4	16.9	25.5	38.2	60.5	85.7	105	112
			$X_T$	0.75	0.70	0.69	0.67	0.64	0.63	0.59	0.64	0.74	0.81
			$F_L$	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
6	4-3/8 (111)	2 (51)	$C_v$	5.40	10.1	15.8	26.7	45.2	71.2	11.0	169	232	274
			$X_T$	0.83	0.83	0.74	0.65	0.63	0.61	0.61	0.61	0.63	0.70
			$F_L$	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88

**Relationships of note:**

$$C_1 = 39.76 \sqrt{X_T}$$

$$C_G = C_V C_1$$

$$K_M = F_L^2$$

\*Please contact Dyna-Flo for Model 362 Valve Sizing Coefficients & Linear or Quick Opening Coefficients



## 360 Series Control Valve

**Table 9**

**Fail Open (DFO) Actuator Shut Off Capabilities for Model 360 Control Valve**  
**Model 360, Full Sized Trim, Flow Down**  
 PTFE Seat - Class V Shut Off  
 35 psig Supply Pressure

Valve Size (inch)	Actuator Size				
	DFO - 1069	DFO - 2069	DFO - 2105	DFO - 2156 / 3156	DFO - 3220
<b>Pressure Drop psig (kPag)</b>					
1	1,500 (10,342) <sup>5</sup>	N/A	N/A	N/A	N/A
1-1/2	1,500 (10,342) <sup>5</sup>	N/A	N/A	N/A	N/A
2	N/A	1,500 (10,342) <sup>3</sup>	1,500 (10,342) <sup>4</sup>	N/A	N/A
3	N/A	1,500 (10,342) <sup>1</sup>	1,500 (10,342) <sup>3</sup>	N/A	N/A
4*	N/A	N/A	1,500 (10,342) <sup>3</sup>	1,500 (10,342) <sup>5</sup>	N/A
6	N/A	N/A	N/A	1,500 (10,342) <sup>2</sup>	1,500 (10,342) <sup>4</sup>
8 (2" Travel)	N/A	N/A	N/A	1,500 (10,342) <sup>3</sup>	1,500 (10,342) <sup>4</sup>
8 (3" Travel)	N/A	N/A	N/A	N/A	1,500 (10,342) <sup>2</sup>

**NOTE:**

**1** - 6-14                      **2** - 6-17                      **3** - 6-18                      **4** - 6-21                      **5** - 6-22

\* Use DFO-2156 for 4" and DFO-3156 for 6" and 8".

N/A represents a non-standard valve actuator combination.

For shut off capabilities on other models please consult your Dyna-Flo sales office. A higher shut off may be achieved by using a higher bench set, contact your Dyna-Flo sales office for further information.

**Table 10**

**Fail Closed (DFC) Actuator Shut Off Capabilities for Model 360 Control Valve**  
**Model 360, Full Sized Trim, Flow Down**  
 PTFE - Class V Shut Off  
 35 psig Supply Pressure

Valve Size (inch)	Actuator Size				
	DFC - 1069	DFC - 2069	DFC - 2105	DFC - 2156	DFC - 3220
<b>Pressure Drop psig (kPag)</b>					
1	1,500 (10,342) <sup>3</sup>	N/A	N/A	N/A	N/A
1-1/2	1,500 (10,342) <sup>3</sup>	N/A	N/A	N/A	N/A
2	N/A	1,500 (10,342) <sup>4</sup>	1,500 (10,342) <sup>2</sup>	N/A	N/A
3	N/A	N/A	1,500 (10,342) <sup>4</sup>	1,500 (10,342) <sup>3</sup>	N/A
4	N/A	N/A	750 (5,171) <sup>3</sup>	1,050 (7,240) <sup>4</sup>	1,500 (10,342) <sup>3A</sup>
4*	N/A	N/A	1,500 (10,342) <sup>1</sup>	1,500 (10,342) <sup>1</sup>	N/A
6	N/A	N/A	N/A	N/A	1,500 (10,342) <sup>5</sup>
8 (2" Travel)	N/A	N/A	N/A	N/A	1,500 (10,342) <sup>5</sup>
8 (3" Travel) <sup>o</sup>	N/A	N/A	N/A	N/A	1,500 (10,342) <sup>5</sup>

**NOTE:**

**1** - 6-30                      **2** - 8-30                      **3** - 10-30                      **4** - 12-30                      **5** - 15-30

\* Flow Up Capacity is 80% of Flow Down.

o A DFC4-3220 has 4" of travel with a 1,500 (10,342)<sup>6</sup> pressure drop.

Δ For a 4" Model DFC-3220 an oversized stem (3/4") and bonnet is required.

N/A represents a non-standard valve actuator combination

For shut off capabilities on other models please consult your Dyna-Flo sales office. A higher shut off may be achieved by using a higher bench set, contact your Dyna-Flo sales office for further information.



## 360 Series Control Valve

**Table 11**

**Valve Body and Actuator Assembly Approximate Weights**

Valve Size (inch)	Body Only lb (Kg)	With Fail Open Actuator Size	Assembly Wt. WT / lb (Kg)	With Fail Closed Actuator Size	Assembly Weight lb (Kg)
1	30 (14)	DFO - 1069	70 (32)	DFC - 1069	78 (26)
1-1/2	45 (20)	DFO - 1069	85 (39)	DFC - 1069	93 (42)
	85 (39)	DFO - 2069	136 (62)	DFC - 2069	135 (61)
2		DFO - 2105	167 (76)	DFC - 2105	165 (75)
	125 (57)	DFO - 2069	176 (80)	DFC - 2069	175 (78)
3		DFO - 2105	207 (94)	DFC - 2105	215 (98)
	170 (77)	DFO - 2105	252 (114)	DFC - 2105	220 (100)
4		DFO - 2156	277 (126)	DFC - 2156	291 (132)
	350 (159)	DFO - 3156	457 (208)	DFC - 3156	471 (214)
6		DFO - 3220	(585 (266)	DFC - 3220	604 (275)
	900 (408)	DFO - 3220	1135 (515)	DFC - 3220	1154 (523)

### ***Our Commitment of Quality***

Dyna-Flo is committed to continuous improvement. All efforts have been taken to maximize the accuracy of this information. Without notification, product specifications and designs may be modified at any time. The issue of this document is for information only, and does not imply suitability, a warranty, or guarantee for a specific service.



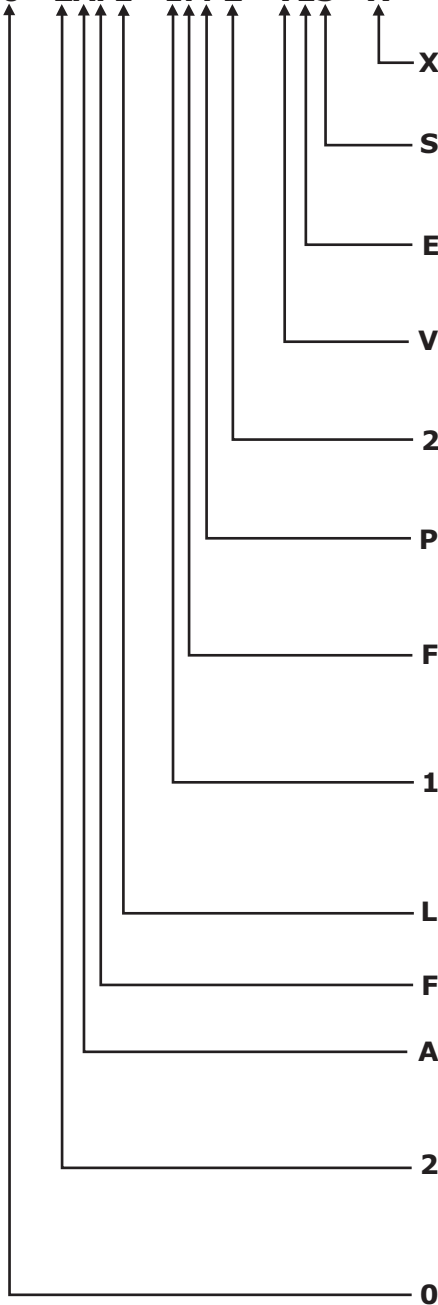
# 360 Series Control Valve

Ordering Guide

## Dyna-Flo 360 Series Control Valve | Model Numbering System

Sample Part Number

**360 - 2AFL - 1FP2 - VES - X**



Code	Description
<b>X</b>	Special
<b>Bonnet Style</b>	
<b>S</b>	Standard
<b>C</b>	Cryogenic
<b>E</b>	Extension
<b>X</b>	Special
<b>Characteristic</b>	
<b>E</b>	Equal Percentage
<b>Q</b>	Quick Open
<b>L</b>	Linear
<b>N</b>	Noise 1
<b>Back-up Ring (360 only)</b>	
<b>V</b>	Viton
<b>E</b>	Ethylene Propylene
<b>N</b>	Nitrile
<b>X</b>	Special
<b>Yoke Boss Size</b>	
<b>1</b>	2-1/8"
<b>3</b>	3-9/16"
<b>2</b>	2-13/16"
<b>5</b>	5"
<b>Packing Style</b>	
<b>P</b>	Spring Loaded PTFE V-ring
<b>G</b>	Graphite High Temp
<b>T</b>	Live Loaded (PTFE)
<b>D</b>	Double PTFE V-ring
<b>L</b>	Live Loaded (Graphite)
<b>Port Size</b>	
<b>F</b>	Full
<b>R</b>	Reduced
<b>Trim Number</b>	
<b>1</b>	D1
<b>2</b>	D2
<b>3</b>	D3
<b>4</b>	D4
<b>5</b>	D5
<b>6</b>	D6
<b>7</b>	D7
<b>8</b>	D8
<b>9</b>	D9
<b>Body Material</b>	
<b>L</b>	LCC
<b>W</b>	WCC
<b>M</b>	CF8M
<b>Connection Style</b>	
<b>F</b>	RF
<b>J</b>	RTJ
<b>N</b>	NPT
<b>ASME Rating</b>	
<b>A</b>	150
<b>B</b>	300
<b>C</b>	600
<b>Valve Size</b>	
<b>1</b>	1 inch
<b>2</b>	2 inch
<b>4</b>	4 inch
<b>8</b>	8 inch
<b>5</b>	1-1/2 inch
<b>3</b>	3 inch
<b>6</b>	6 inch
<b>Valve Model</b>	
<b>0</b>	Style 360
<b>1</b>	Style 361
<b>2</b>	Style 362