Model **360** Control Valve

Figure 1 Model 360 Control Valve

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

Model 360 control valves are cage 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 Model 360 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.

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

Features

Sour Service Capability

Available in standard configurations that comply with NACE MR0175-2002.

Low Temperature Construction

LCC body material is standard on all Model 360 valves. Low temperature trim is a common option.

Versatility

A wide range of trim options including Low Noise and Anti Cavitation make the 360 our most versatile control valve.

Field Service Friendly

No special tools are required to change or inspect trim. Top access makes in-line service easy.

Pressure Drop Capabilities

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

Industrial High Quality External Coatings

Our standard industrial high quality external coatings provide long lasting resistance to the harshest environments.

Shut Off Capability

See Page 2.

Severe Temperature Options

Available configurations for ultra high and ultra low service.

Dyna-Flo Control Valve Services Ltd.
Edmonton, Alberta, CANADA
Website: www.dynaflo.com
Phone: 780 • 469 • 4000
Toll Free: 1 • 866 • 396 • 2356
Fax: 780 • 469 • 4035

Model
360 Control Valve

Specifications

Configurations

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

PTFE Seat and Metal Seat Available.

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

Sizes and Connection Styles

Models:	360
Size:	1”, 1-1/2”, 2”, 3”, 4”, 6”, 8”
Rating:	ASME 150 / 300 / 600
Connections:	RF / RTJ - All Sizes
	NPT - 1”, 1-1/2” and 2”

Maximum Inlet Temperature and Pressures

Flanged valves consistent with ASME 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 ASME / FCI 70.2
Metal Seated except those with Anti-Cavitation Trim: Standard Class IV. PTFE Seated: Standard Air Test. (maximum leakage 0.05 ML/min/psid/inch port diameter)
NOTE: Standard Air Test is a special non-ASME/FCL leakage class. Class V-VI options available. Consult Factory.

Dimensions

Valve and Actuator Outline Dimension Diagram
See Figure 1

Valve and Actuator Assembly Dimensions
See Table 2, 3, and 4.

Approximate Valve Body and Actuator Weights
See Table 6

Materials
The standard body material is LCC. The standard bonnet material is LF2 or LCC. CF8M (S31600) and WCC are options. See Table 5 for typical construction materials. See Table 7 for trim selections.

Cross-Section of the Model 360 Control Valves
See Figure 3

Port Diameters and Maximum Valve Plug Travel
See Table 1

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 11

Actuator Sizing

Fail Open Actuator
See Table 12

Fail Close Actuator
See Table 13

Service Application
See Table 7, 8, 9, and 10.

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Model 360 Control Valve

Table 1

Models 360
Port Diameters, Valve Plug Travel, Stem and Yoke Boss Diameters

Valve Size	Port Diameter		Max Valve Plug Travel		Standard Yoke Boss Diameter (YBD)			
					Stem		YBD	
	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

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.

Model 360 Control Valve

Table 2A

Valve Assembly (RF End Connection) with Standard Actuator Envelope Dimensions
(with common stem diameter) Inches (mm) (Refer to Figure 2)

Valve	End	Actuator	A	B	C*	D		E
Size (inch)	Connection	Size				DFO	DFC	
1	150	1069	7.25 (184)	2.38 (60)	5.00 (127)	24.6 (625)	27.60 (700)	13.12 (333)
	300	1069	7.75 (197)	2.38 (60)	5.00 (127)	24.6 (625)	27.60 (700)	13.12 (333)
	600	1069	8.25 (210)	2.38 (60)	5.00 (127)	24.6 (625)	27.60 (700)	13.12 (333)
	NPT	1069	8.25 (210)	2.38 (60)	5.00 (127)	24.6 (625)	27.60 (700)	13.12 (333)
1-1/2	150	1069	8.75 (222)	2.81 (71)	4.88 (124)	24.48 (622)	27.48 (697)	13.12 (333)
	300	1069	9.25 (235)	2.81 (71)	4.88 (124)	24.48 (622)	27.48 (697)	13.12 (333)
	600	1069	9.88 (251)	2.81 (71)	4.88 (124)	24.48 (622)	27.48 (697)	13.12 (333)
	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)
	NPT	2069	11.25 (286)	3.06 (78)	6.50 (165)	28.10 (714)	29.88 (759)	13.12 (333)
	NPT	2105	11.25 (286)	3.06 (78)	6.50 (165)	32.44 (824)	36.75 (933)	16.00 (406)
	NPT	2156	11.25 (286)	3.06 (78)	6.50 (165)	32.44 (824)	36.75 (933)	18.62 (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)	18.62 (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)	18.62 (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)	18.62 (460)
	600	3220	15.50 (394)	5.06 (129)	*	41.62 (1057)	45.30 (1151)	21.10 (536)
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)	*	47.85 (1216)	51.55 (1308)	21.10 (536)
	300	3220	22.38 (556)	7.50 (191)	*	47.85 (1216)	51.55 (1308)	21.10 (536)
	600	3220	24.00 (610)	7.50 (191)	*	47.85 (1216)	51.55 (1308)	21.10 (536)

*NOTE: 'C' dimensions (and 'D' dimensions) will vary depending on valve stem diameter, refer to Tables 4 & 5.

Model 360 Control Valve

Table 2B

Valve Assembly (RTJ End Connection) with Standard Actuator Envelope Dimensions
(with common stem diameter) Inches (mm) (Refer to Figure 2)

Valve	End	Actuator	A	B	C*	D		E
Size (inch)	Connection	Size				DFO	DFC	
1	150	1069	7.75 (197)	2.38 (60)	5.00 (127)	24.6 (625)	27.60 (700)	13.12 (333)
	300	1069	8.25 (210)	2.38 (60)	5.00 (127)	24.6 (625)	27.60 (700)	13.12 (333)
	600	1069	8.25 (210)	2.38 (60)	5.00 (127)	24.6 (625)	27.60 (700)	13.12 (333)
	NPT	1069	8.25 (210)	2.38 (60)	5.00 (127)	24.6 (625)	27.60 (700)	13.12 (333)
1-1/2	150	1069	9.25 (235)	2.81 (71)	4.88 (124)	24.48 (622)	27.48 (697)	13.12 (333)
	300	1069	9.75 (248)	2.81 (71)	4.88 (124)	24.48 (622)	27.48 (697)	13.12 (333)
	600	1069	9.88 (251)	2.81 (71)	4.88 (124)	24.48 (622)	27.48 (697)	13.12 (333)
	NPT	1069	9.88 (251)	2.81 (71)	4.88 (124)	24.48 (622)	27.48 (697)	13.12 (333)
2	150	2069	10.50 (267)	3.06 (78)	6.50 (165)	28.10 (714)	29.88 (759)	13.12 (333)
	150	2105	10.50 (267)	3.06 (78)	6.50 (165)	32.44 (824)	36.75 (933)	16.00 (406)
	300	2069	11.12 (282)	3.06 (78)	6.50 (165)	28.10 (714)	29.88 (759)	13.12 (333)
	300	2105	11.12 (282)	3.06 (78)	6.50 (165)	32.44 (824)	36.75 (933)	16.00 (406)
	600	2069	11.38 (289)	3.06 (78)	6.50 (165)	28.10 (714)	29.88 (759)	13.12 (333)
	600	2105	11.38 (289)	3.06 (78)	6.50 (165)	32.44 (824)	36.75 (933)	16.00 (406)
	NPT	2069	11.25 (286)	3.06 (78)	6.50 (165)	28.10 (714)	29.88 (759)	13.12 (333)
	NPT	2105	11.25 (286)	3.06 (78)	6.50 (165)	32.44 (824)	36.75 (933)	16.00 (406)
	NPT	2156	11.25 (286)	3.06 (78)	6.50 (165)	32.44 (824)	36.75 (933)	18.62 (406)
3	150	2069	12.25 (311)	3.81 (97)	7.50 (191)	29.06 (738)	30.90 (785)	13.12 (333)
	150	2105	12.25 (311)	3.81 (97)	7.50 (191)	33.44 (849)	37.75 (959)	16.00 (406)
	300	2069	13.12 (333)	3.81 (97)	7.50 (191)	29.06 (738)	30.90 (785)	13.12 (333)
	300	2105	13.12 (333)	3.81 (97)	7.50 (191)	33.44 (849)	37.75 (959)	16.00 (406)
	600	2069	13.38 (340)	3.81 (97)	7.50 (191)	29.06 (738)	30.90 (785)	13.12 (333)
	600	2105	13.38 (340)	3.81 (97)	7.50 (191)	33.44 (849)	37.75 (959)	16.00 (406)
4	150	2105	14.38 (365)	5.06 (129)	8.69 (221)	34.63 (880)	38.94 (989)	16.00 (406)
	150	2156	14.38 (365)	5.06 (129)	8.69 (221)	34.63 (880)	38.94 (989)	18.62 (460)
	300	2105	15.12 (384)	5.06 (129)	8.69 (221)	34.63 (880)	38.94 (989)	16.00 (406)
	300	2156	15.12 (384)	5.06 (129)	8.69 (221)	34.63 (880)	38.94 (989)	18.62 (460)
	600	2105	15.62 (397)	5.06 (129)	8.69 (221)	34.63 (880)	38.94 (989)	16.00 (406)
	600	2156	15.62 (397)	5.06 (129)	8.69 (221)	34.63 (880)	38.94 (989)	18.62 (460)
	600	3220	15.62 (397)	5.06 (129)	*	41.62 (1057)	45.30 (1151)	21.10 (536)
6	150	3156	18.25 (464)	5.50 (140)	9.88 (311)	38.18 (970)	40.80 (1036)	18.62 (473)
	150	3220	18.25 (464)	5.50 (140)	9.88 (311)	42.94 (1091)	46.63 (1184)	21.10 (536)
	300	3156	19.25 (489)	5.50 (140)	9.88 (311)	38.18 (970)	40.80 (1036)	18.62 (473)
	300	3220	19.25 (489)	5.50 (140)	9.88 (311)	42.94 (1091)	46.63 (1184)	21.10 (536)
	600	3156	20.12 (511)	5.50 (140)	9.88 (311)	38.18 (970)	40.80 (1036)	18.62 (473)
	600	3220	20.12 (511)	5.50 (140)	9.88 (311)	42.94 (1091)	46.63 (1184)	21.10 (536)
8	150	3220	21.88 (556)	7.50 (191)	*	47.85 (1216)	51.55 (1308)	21.10 (536)
	300	3220	23.00 (584)	7.50 (191)	*	47.85 (1216)	51.55 (1308)	21.10 (536)
	600	3220	24.12 (613)	7.50 (191)	*	47.85 (1216)	51.55 (1308)	21.10 (536)

*NOTE: 'C' dimensions (and 'D' dimensions) will vary depending on valve stem diameter, refer to Tables 4 & 5.

Model **360** Control Valve

Table 3

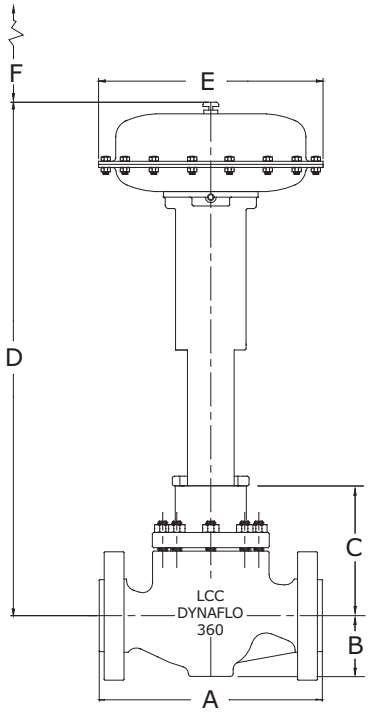
Valve Dimensions for Standard Bonnet Assembly - Inches (mm) (Refer to Figure 2)

Valve Size (Inch)	C		
	3/8 (9.5) Stem Diameter	**1/2 (12.7) Stem Diameter**	**3/4 (19.1) Stem Diameter**
1	5.00 (127)	5.88 (149)	—
1-1/2	4.88 (124)	5.75 (146)	—
2	—	6.50 (165)	6.38 (162)
3	—	7.50 (191)	7.38 (187)
4	—	8.69 (221)	8.56 (217)
6	—	—	9.88 (251)
8	—	—	*See Style 1 in Table 5

Table 4

Extension Bonnet Valve Dimensions - Inches (mm) (Refer to Figure 2)

Valve Size (Inch)	C					
	Stem Diameter Inch (mm)					
	Style 1 - Standard for 8 inch			**Style 2**		
	3/8 (9.5)	**1/2 (12.7)**	**3/4 (19.1)**	**3/8 (9.5)**	**1/2 (12.7)**	**3/4 (19.1)**
1	8.38 (213)	9.88 (251)	—	11.94 (303)	12.56 (319)	—
1-1/2	8.25 (210)	9.75 (248)	—	11.81 (300)	12.44 (316)	—
2	—	10.50 (267)	10.69 (272)	—	18.31 (465)	—
3	—	11.50 (292)	11.69 (297)	—	19.50 (495)	19.19 (487)
4	—	12.69 (322)	12.88 (327)	—	20.69 (526)	20.38 (518)
6	—	—	14.06 (357)	—	—	23.76 (604)
8	—	—	16.56 (421)	—	—	24.44 (621)



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*

Table 5

Typical Construction Materials

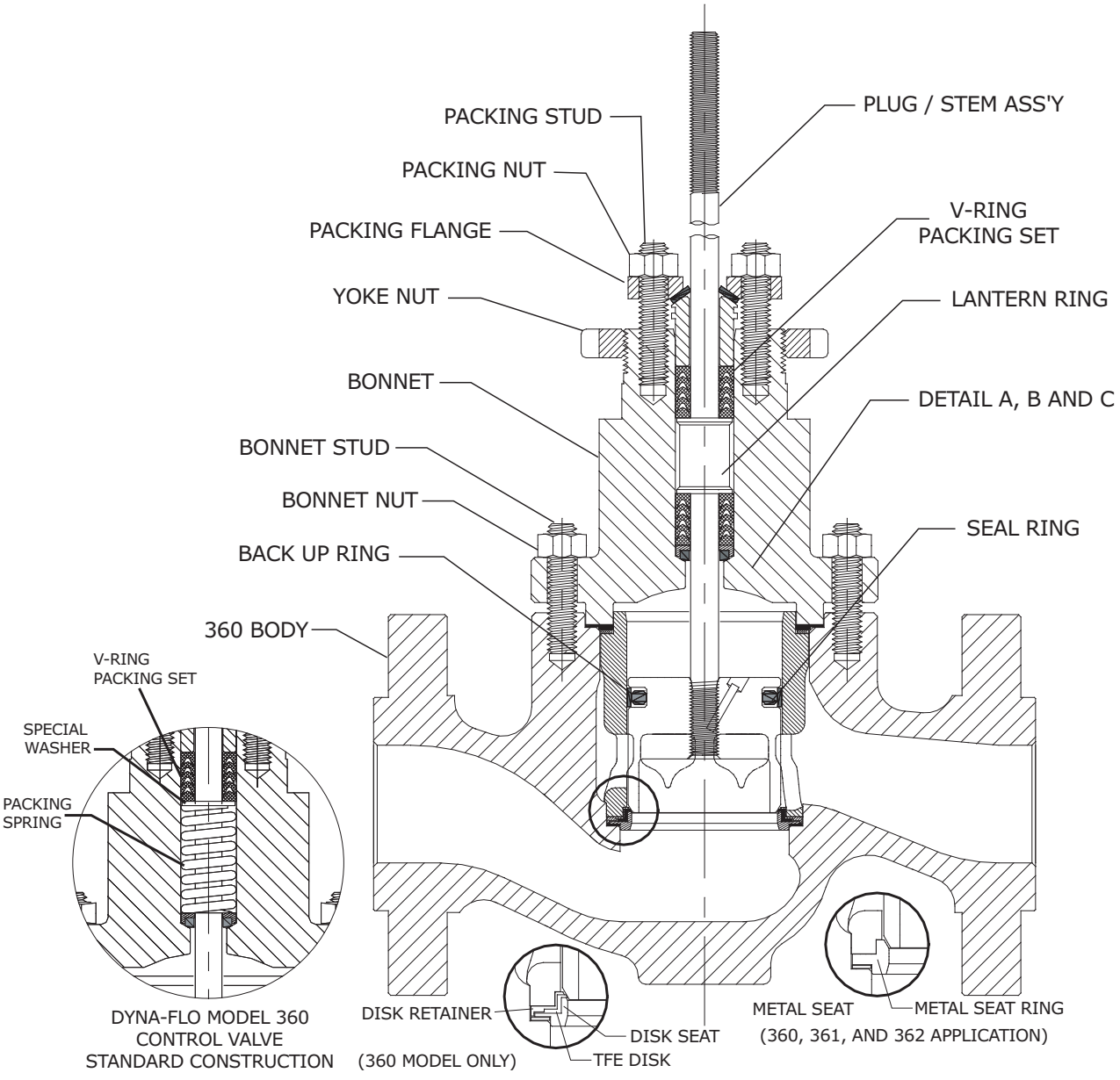
Part Description	Standard Construction	NACE Construction
BODY	SA352 Gr LCC	SA352 Gr LCC
	SA351 Gr CF8M*	SA351 Gr CF8M*
BONNET	SA350 LF2 / SA352 Gr LCC	SA350 LF2 / SA352 Gr LCC
	SA351 Gr CF8M*	SA351 Gr CF8M*
PACKING BOX RING	S31600	S31600
PACKING SPRING	S30400	N/A
LANTERN RING	-	S31600
SPECIAL WASHER	S30400	N/A
V-RING PACKING SET	PTFE	PTFE (Double)
PACKING FOLLOWER	S31600	S31600
STEM WIPER	FELT	FELT
CAGE	S17400	S17400 PH DH1150
DISK SEAT	S31600	S31600
DISK	PTFE	PTFE
DISK RETAINER	S31600	S31600
VALVE PLUG / STEM ASS'Y	S41600 PLUG/S20910 STEM	N/A
	S31600 PLUG/S20910 STEM*	S31600 PLUG/S20910 STEM
	S31600 - CoCr-A PLUG/S20910 STEM*	S31600 - CoCr-A PLUG/S20910 STEM*
SEAT RING	S41600	N/A
	S31600*	S31600
	S31600 - CoCr-A*	S31600 - CoCr-A*
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* (150-300 ASME Class)
	SA-193 B8M*	S17400 DH 1150 (600 ASME Class)
BONNET NUT	SA-194 2H	SA-194 2HM
SHIM	S31600	S31600
SPIRAL WOUND GASKET	S30400 / GRAPHITE	S30400 / GRAPHITE
GASKETS	GRAPHITE / S31600	GRAPHITE / S31600

* Optional construction material
  See Tables 8 to 11 for service limits

NOTE: S31600 ENC cages are available as special. Consult Dyna-Flo sales department.

Model **360** Control Valve

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



DYNA-FLO MODEL 360
CONTROL VALVE
NACE CONSTRUCTION

Table 6

Valve Body and Actuator Assembly Approximate Weights

Valve Size (inch)	Body Only lb (Kg)	With Fail Open Actuator Size	Assembly Weight 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)
2	85 (39)	DFO - 2069	136 (62)	DFC - 2069	135 (61)
		DFO - 2105	167 (76)	DFC - 2105	165 (75)
3	125 (57)	DFO - 2069	176 (80)	DFC - 2069	175 (78)
		DFO - 2105	207 (94)	DFC - 2105	215 (98)
4	170 (77)	DFO - 2105	252 (114)	DFC - 2105	260 (118)
		DFO - 2156	277 (126)	DFC - 2156	291 (132)
6	350 (159)	DFO - 3156	466 (211)	DFC - 3156	471 (214)
		DFO - 3220	585 (266)	DFC - 3220	604 (275)
8	900 (408)	DFO - 3220	1135 (515)	DFC - 3220	1154 (523)

Table 7

Trim Options

Trim Spec	Valve Plug	Stem	Cage	Seat Ring	Service
DA	S31600 / Tungsten Carbide	S20910	S17400 PH DH1150	S31600 / Tungsten Carbide	Corrosive / High Temp / NACE / Erosive
D0	S31600 / Tungsten Carbide	S20910	CoCr-A	S31600 / Tungsten Carbide	Corrosive / High Temp / NACE / Erosive
D1	S41600[2] (38 HRC)	S20910	S17400 PH (40 HRC)	S41600[2]	Standard / Non-corrosive / High Temp
D2	S31600 / CoCr-A Seat	S20910	S17400 DH1150[1]	S31600 / CoCr-A Hard Facing	Corrosive / NACE High Temperature
D3	S31600 / CoCr-A Seat & Guide	S20910	CoCr-A	S31600 / CoCr-A Hard Facing	Corrosive / High Temperature / Erosive
D4	S31600	S20910	S17400 PH (40 HRC)	S31600	General / Mild Corrosive
D5	S41600[2] (38 HRC)	S20910	S17400 PH (40 HRC)	S31600 / PTFE	Standard / Non-corrosive / Tight Shut off
D6	S31600 / CoCr-A Seat & Guide	S20910	S17400 PH (40 HRC)	S31600 / CoCr-A Hard Facing	Standard / Mild Corrosive / Mild Errosive
D7	S31600 / CoCr-A Seat & Guide	S20910	S17400 DH1150[1]	S31600 / CoCr-A Hard Facing	Corrosive / High Temp / NACE / Mild Erosive
D8	S31600	S20910	S17400 DH1150[1]	S31600	NACE / Corrosive
D9	S31600	S20910	S17400 DH1150[1]	S31600 / PTFE	NACE / Corrosive / Tight Shut off

Note:

1 - S31600 (ENC)* available by special request (*Electroless Nickel Coating).
2 - S41600 is limited to -20°F (-29°C).

Model 360 Control Valve

Table 8

Maximum Pressure / Temperature Ratings Psig (kPag)

Valve Body Material	ASME Class	Material Pressure Temperature Limitations		
		-50°F (-46°C)	-20°F (-29°C)	450°F (232°C)
LCC	150	290 (1,999)	—	185 (1,276)
	300	750 (5,171)	—	685 (4,723)
	600	1,500 (10,342)	—	1,370 (9,446)
CF8M	150	275 (1,896)	—	183 (1,262)
	300	720 (4,964)	—	498 (3,434)
	600	1,440 (9,928)	—	990 (6,826)
WCC	150	—	290 (1,999)	185 (1,276)
	300	—	750 (5,171)	685 (4,723)
	600	—	1,500 (10,342)	1,370 (9,446)

Table 9

Seal Ring and Backup Ring Temperature Limitations

Part Description	Temperature Limitation
PTFE Seal Ring	-100°F to 450°F (-73°C TO 232°C)
Nitrile Backup Ring	-30°F TO 200°F (-34°C TO 93°C)
Fluoroelastomer (Viton) Backup Ring	0°F TO 400°F (-18°C TO 204°C)
Ethylene Propylene Backup Ring	-40°F TO 450°F (-40°C TO 232°C)

Table 10

Model 360 Bonnet and Packing Selection

Bonnet Style	Packing Material	In-Body Process Temperature Limitations
Standard Bonnet: Standard for all valve sizes 1 through 6.	PTFE V-Ring	0°F to 450°F (-18°C to 232°C)
	Graphite (Ribbon/Filament)	0°F to 600°F (-18°C to 316°C)[2]
Extension Bonnet Style 1: Standard for all 8 inch valves, optional for valves 1 through 6 inch.	PTFE V-Ring	-50°F to 600°F (-46°C to 316°C)[2]
	Graphite (Ribbon/Filament)	
Extension Bonnet Style 2: Optional for 1 though 8 inch valve sizes.	PTFE V-Ring	-150°F to 600°F (-101°C to 316°C)[2]
	Graphite (Ribbon/Filament)	

1 The above temperatures assume the presence of an ambient temperature outside the valve body of 70°F (21°C) with no bonnet insulation. An extension bonnet may be required when operating valves in low temperatures to prevent damage that could occur from the formation of valve stem frost. Other limiting factors, such as trim material components, will have to be considered.

2 Consult Dyna-Flo for temperatures above 450°F (232°C).

NOTE: For temperatures above or below these standard temperatures consult Dyna-Flo.

Model 360 Control Valve

Table 11

Models 360 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%
FULL SIZED TRIM / PORT													
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	110	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: $C_1 = 39.76\sqrt{X_T}$ $C_G = C_V C_1$ $K_M = F_L^2$

Dyna-Flo Control Valve Services Ltd.
Edmonton, Alberta, CANADA
Website: www.dynaflo.com
Phone: 780 • 469 • 4000
Toll Free: 1 • 866 • 396 • 2356
Fax: 780 • 469 • 4035

Model 360 Control Valve

Table 12

Models 360 Valve Sizing Coefficients, Quick Opening Trim

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%
FULL SIZED TRIM / PORT													
1	1-5/16 (33)	3/4 (19)	C_V	4.86	9.39	13.4	16.8	18.9	20.2	21.0	21.8	21.9	22.0
			X_T	0.555	0.744	0.724	0.665	0.626	0.584	0.566	0.550	0.553	0.555
			F_L	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
1-1/2	1-7/8 (48)	3/4 (19)	C_V	7.78	14.4	20.5	26.7	32.0	36.5	39.4	41.3	42.7	44.0
			X_T	0.493	0.640	0.680	0.680	0.685	0.660	0.649	0.638	0.616	0.597
			F_L	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
2	2-5/16 (59)	1-1/8 (29)	C_V	13.4	26.8	39.8	51.2	62.8	70.6	73.7	75.6	76.8	77.6
			X_T	0.605	0.695	0.737	0.760	0.702	0.658	0.640	0.635	0.626	0.623
			F_L	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
3	3-7/16 (87)	1-1/2 (38)	C_V	27.1	52.2	77.8	99.5	124	140	148	154	158	161
			X_T	0.626	0.672	0.745	0.796	0.703	0.657	0.619	0.602	0.590	0.577
			F_L	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
4	4-3/8 (111)	2 (51)	C_V	37.7	75.0	125	162	193	220	238	247	251	251
			X_T	0.623	0.689	0.733	0.764	0.762	0.723	0.689	0.669	0.683	0.694
			F_L	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
6	7 (178)	2 (51)	C_V	73.6	150	232	306	353	389	416	441	451	460
			X_T	0.664	0.651	0.667	0.694	0.722	0.742	0.728	0.723	0.719	0.710
			F_L	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
8	8 (203)	2 (51)	C_V	80.2	188	290	389	480	554	615	658	705	744
			X_T	0.670	0.628	0.678	0.730	0.766	0.806	0.829	0.859	0.863	0.866
			F_L	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
8	8 (203)	3 (76)	C_V	135	290	434	550	639	706	759	807	840	863
			X_T	0.643	0.699	0.757	0.807	0.838	0.861	0.857	0.841	0.838	0.827
			F_L	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
REDUCED TRIM / PORT													
1-1/2	1-5/16 (33)	3/4 (19)	C_V	5.05	9.99	14.7	20.0	24.0	25.6	26.1	27.4	28.6	29.9
			X_T	0.803	0.904	0.946	0.872	0.838	0.848	0.872	0.831	0.795	0.756
			F_L	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
2	1-5/16 (33)	3/4 (19)	C_V	4.80	9.58	14.8	20.1	25.7	29.3	31.2	31.2	31.2	31.2
			X_T	0.578	0.733	0.695	0.698	0.665	0.689	0.735	0.791	0.805	0.805
			F_L	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
3	2-5/16 (59)	1-1/8 (29)	C_V	15.9	31.7	47.2	60.7	74.4	83.6	87.2	89.5	91.0	91.8
			X_T	0.718	0.838	0.889	0.905	0.842	0.784	0.763	0.760	0.744	0.744
			F_L	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
4	2-7/8 (73)	1-1/2 (38)	C_V	25.0	47.2	70.1	88.5	101	116	123	127	128	130
			X_T	0.707	0.879	0.948	0.988	0.956	0.875	0.851	0.834	0.840	0.834
			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	52.2	101	150	199	246	284	310	329	345	358
			X_T	0.774	0.763	0.770	0.778	0.763	0.760	0.717	0.699	0.707	0.690
			F_L	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87

Relationships of note: $C_1 = 39.76\sqrt{X_T}$ $C_G = C_V C_1$ $K_M = F_L^2$

Dyna-Flo Control Valve Services Ltd.
Edmonton, Alberta, CANADA
Website: www.dynaflo.com
Phone: 780 • 469 • 4000
Toll Free: 1 • 866 • 396 • 2356
Fax: 780 • 469 • 4035

Model 360 Control Valve

Table 13

Models 360 Valve Sizing Coefficients, Linear Trim

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%
FULL SIZED TRIM / PORT													
1	1-5/16 (33)	3/4 (19)	C_V	3.20	5.50	8.18	10.9	13.2	15.0	16.9	18.6	19.9	20.6
			X_T	0.340	0.644	0.494	0.509	0.532	0.580	0.610	0.629	0.628	0.636
			F_L	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
1-1/2	1-7/8 (48)	3/4 (19)	C_V	4.23	7.84	11.8	15.8	20.4	25.2	30.1	34.7	37.2	39.2
			X_T	0.656	0.709	0.758	0.799	0.738	0.729	0.708	0.686	0.683	0.656
			F_L	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
2	2-5/16 (59)	1-1/8 (29)	C_V	7.87	16.0	24.8	33.4	42.0	51.8	62.0	68.1	70.6	72.9
			X_T	0.641	0.720	0.728	0.767	0.793	0.754	0.683	0.658	0.652	0.638
			F_L	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
3	3-7/16 (87)	1-1/2 (38)	C_V	14.5	32.9	52.1	70.4	88.5	105	118	133	142	148
			X_T	0.671	0.699	0.697	0.720	0.733	0.718	0.707	0.650	0.630	0.620
			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	23.3	50.3	78.0	105	127	152	181	203	223	236
			X_T	0.690	0.714	0.720	0.731	0.764	0.757	0.748	0.762	0.732	0.688
			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	46.2	107	171	228	279	327	367	402	420	433
			X_T	0.656	0.727	0.744	0.781	0.802	0.800	0.784	0.758	0.755	0.740
			F_L	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
8	8 (203)	2 (51)	C_V	60.1	129	206	285	363	444	526	581	640	688
			X_T	0.704	0.721	0.657	0.650	0.683	0.713	0.740	0.801	0.821	0.839
			F_L	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
8	8 (203)	3 (76)	C_V	91.3	207	325	440	550	639	711	760	795	846
			X_T	0.651	0.624	0.676	0.746	0.786	0.803	0.823	0.836	0.843	0.807
			F_L	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
REDUCED TRIM / PORT													
1-1/2	1-5/16 (33)	3/4 (19)	C_V	2.91	5.70	9.05	12.5	15.6	18.5	21.0	23.9	26.8	29.1
			X_T	0.690	0.650	0.633	0.634	0.650	0.665	0.708	0.718	0.737	0.733
			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	3.52	6.36	9.92	13.3	16.5	19.7	22.7	25.6	29.3	33.3
			X_T	0.456	0.529	0.549	0.582	0.611	0.633	0.670	0.723	0.727	0.693
			F_L	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
3	2-5/16 (59)	1-1/8 (29)	C_V	8.05	16.8	26.7	37.5	49.0	61.4	73.8	85.3	94.7	102
			X_T	0.592	0.614	0.662	0.672	0.674	0.676	0.694	0.722	0.736	0.732
			F_L	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
4	2-7/8 (73)	1-1/2 (38)	C_V	9.77	22.6	37.2	51.8	65.7	77.5	87.5	97.9	107	113
			X_T	0.926	0.899	0.873	0.904	0.919	0.962	0.972	0.937	0.891	0.872
			F_L	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
6	4-3/8 (111)	2 (51)	C_V	16.7	38.6	65.4	93.7	123	156	194	244	290	322
			X_T	0.762	0.698	0.675	0.684	0.681	0.660	0.676	0.657	0.685	0.703
			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: $C_1 = 39.76\sqrt{X_T}$ $C_G = C_V C_1$ $K_M = F_L^2$

Model 360 Control Valve

Table 14

Models 360 Valve Sizing Coefficients, Low Noise 1 Trim

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%
FULL SIZED TRIM / PORT													
1	1-5/16 (33)	3/4 (19)	C_V	3.28	7.39	12.0	14.2	14.9	15.3	15.7	16.0	16.4	16.8
			X_T	0.581	0.605	0.617	0.644	0.764	0.790	0.809	0.813	0.795	0.768
1-1/2	1-7/8 (48)	3/4 (19)	C_V	2.62	7.42	13.9	20.8	23.1	24.2	24.9	25.4	26.1	26.7
			X_T	0.890	0.766	0.632	0.498	0.614	0.771	0.876	0.919	0.900	0.894
2	2-5/16 (59)	1-1/8 (29)	C_V	7.30	19.2	34.6	42.2	45.5	47.0	47.1	47.2	47.2	48.0
			X_T	0.604	0.467	0.318	0.387	0.526	0.689	0.843	0.899	0.940	0.938
3	3-7/16 (87)	1-1/2 (38)	C_V	16.5	40.3	70.8	88.0	92.1	90.7	90.3	92.6	95.6	99.1
			X_T	0.685	0.471	0.331	0.378	0.532	0.753	0.929	0.983	0.968	0.923
4	4-3/8 (111)	2 (51)	C_V	33.9	76.6	117	135	137	137	140	149	157	169
			X_T	0.607	0.385	0.352	0.467	0.682	0.887	0.977	0.958	0.921	0.811
6	7 (178)	2 (51)	C_V	55.8	125	196	245	270	286	297	308	323	338
			X_T	0.294	0.323	0.286	0.322	0.406	0.494	0.579	0.644	0.673	0.662
8[1]	8 (203)	3 (76)	C_V	100	226	337	436	502	581	641	655	659	681
			X_T	0.456	0.490	0.470	0.427	0.452	0.468	0.521	0.624	0.703	0.701
REDUCED TRIM / PORT													
1-1/2	1-5/16 (33)	3/4 (19)	C_V	3.12	7.36	13.0	18.5	20.7	21.4	21.8	23.1	23.9	25.2
			X_T	0.559	0.605	0.460	0.383	0.472	0.622	0.768	0.823	0.874	0.857
2	1-5/16 (33)	3/4 (19)	C_V	2.86	6.79	11.7	18.4	23.6	27.9	30.9	33.5	35.3	36.7
			X_T	0.672	0.755	0.547	0.386	0.358	0.377	0.398	0.431	0.470	0.483
3	2-5/16 (59)	1-1/8 (29)	C_V	8.15	19.0	33.2	47.6	60.8	72.1	81.8	90.1	97.4	103
			X_T	0.720	0.660	0.500	0.439	0.406	0.412	0.437	0.472	0.504	0.510
4	2-7/8 (73)	1-1/2 (38)	C_V	13.6	32.5	54.3	75.5	94.6	112	127	141	153	160
			X_T	0.674	0.480	0.374	0.344	0.345	0.354	0.370	0.385	0.407	0.428
8	8 (203)	4 (102)	C_V	142	303	428	542	611	652	669	689	700	726
			X_T	0.549	0.450	0.436	0.441	0.513	0.624	0.707	0.709	0.729	0.718

Relationships of note: $C_1 = 39.76\sqrt{X_T}$ $C_G = C_V C_1$ $K_M = F_L^2$

NOTE:

1 Travel restricted to 2.75 Inches (70 mm) with Class IV valve plug.

Table 15

Valve Bolting Temperature Limitations

Stud Material	Temperature Limitation
SA-193-B7 (Standard)	-50ºF to 900ºF (-46ºC TO 482ºC)
SA-193-B7M (NACE 150-300 ASME Class)	-50ºF TO 900ºF (-46ºC TO 482ºC)
SA-193-B8M (Stainless Steel Option)	-325ºF TO 1500ºF (-198ºC TO 816ºC)
S17400 DH 1150 (NACE 600 ASME Class)	-50ºF TO 650ºF (-46ºC TO 343ºC)
Nut Material	**Temperature Limitation**
SA-194-2H, SA-194-2HM & SA-194-8M	Not Limiting Factors

Model 360 Control Valve

Table 16

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

Valve Size (inch)	Actuator Size				
	DFO - 1069	DFO - 2069	DFO - 2105	DFO - 2156 / 3156	DFO - 3220
	Pressure Drop Psig (kPag)				
1	1,500 (10,342)[5]	—	—	—	—
1-1/2	1,500 (10,342)[5]	—	—	—	—
2	—	1,500 (10,342)[3]	1,500 (10,342)[4]	—	—
3	—	1,500 (10,342)[1]	1,500 (10,342)[3]	—	—
4*	—	—	1,500 (10,342)[3]	1,500 (10,342)[5]	—
6	—	—	—	1,500 (10,342)[2]	1,500 (10,342)[4]
8 (2" Travel)	—	—	—	1,500 (10,342)[3]	1,500 (10,342)[4]
8 (3" Travel)	—	—	—	—	1,500 (10,342)[2]

NOTE:

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

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

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 17

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

Valve Size (inch)	Actuator Size					
	DFC - 1069	DFC - 2069	DFC - 2105	DFC - 2156	DFC - 3220	DFC4 - 3220
	Pressure Drop Psig (kPag)					
1	1,500 (10,342)[3]	—	—	—	—	—
1-1/2	1,500 (10,342)[3]	—	—	—	—	—
2	—	1,500 (10,342)[4]	1,500 (10,342)[2]	—	—	—
3	—	—	1,500 (10,342)[4]	1,500 (10,342)[3]	—	—
4	—	—	750 (5,171)[3]	—	1,500 (10,342)[3Δ]	—
4*	—	—	1,500 (10,342)[1]	1,500 (10,342)[1]	—	—
6	—	—	—	—	1,500 (10,342)[5]	—
8 (2" Travel)	—	—	—	—	1,500 (10,342)[5]	—
8 (3" Travel)	—	—	—	—	—	1,500 (10,342)[6]

NOTE:

1 - 6—30 **2** - 8—30 **3** - 10—30 **4** - 12—30 **5** - 15—30 **6** - 14—26

***** Flow Up Capacity is 80% of Flow Down.
Δ For a 4" Valve with 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.

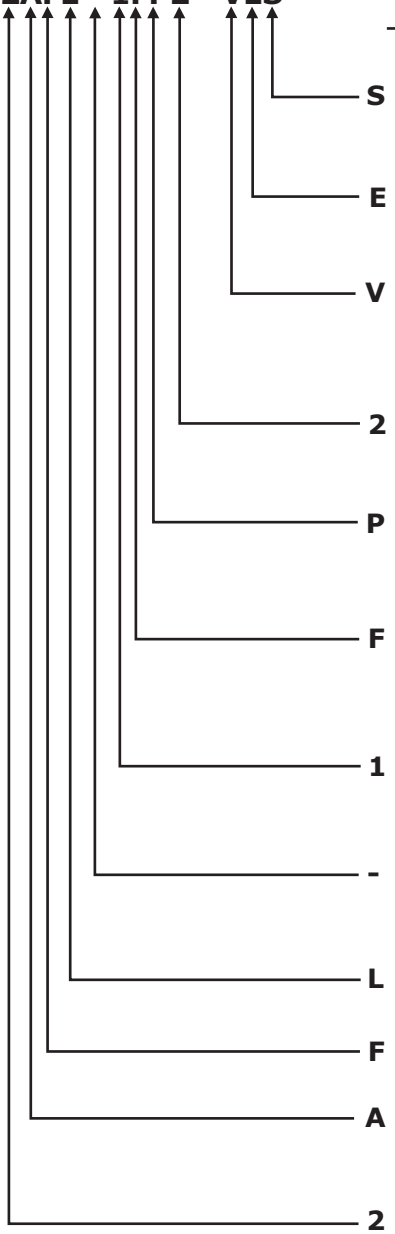
Model **360** Control Valve

Ordering Guide

Dyna-Flo Model 360 Control Valve | **Model Numbering System**

Sample Part Number

360 - 2AFL - 1FP2 - VES



Code	Description				
	Bonnet Style				
S	Standard	E	Style 1 Extension		
C	Cryogenic (Consult Dyna-Flo)	H	Style 2 Extension		
	Characteristic				
E	Equal Percentage	L	Linear	A	Anti-Cav 1 Stage
Q	Quick Open	N	Low Noise 1 (Consult Dyna-Flo)		
	Back-up Ring / Seal Ring				
V	Viton (Fluroelastomer)	N	Nitrile		
E	Ethylene Propylene	P	PTFE/Elgiloy Seal Ring (8")		
C	S31600 PTFE/Elgiloy Seal Ring	X	Special		
	Yoke Boss Size				
1	2-1/8"	2	2-13/16"		
3	3-9/16"	5	5"		
	Packing Style				
P	Spring Loaded PTFE V-ring	J	Double PTFE V-ring		
G	Graphite High Temp	L	Live Loaded (Graphite)		
T	Live Loaded (PTFE)				
	Port Size				
F	Full	R	Reduced		
	Trim Number				
1	D1	5	D5	9	D9
2	D2	6	D6	0	D0
3	D3	7	D7	A	DA
4	D4	8	D8		
	Bolting				
-	B7 / 2H (Standard)	A	B7M / 2HM(1)		
B	B8M / 8M	C	S17400 DH 1150 / 2HM(2)		
	Body Material				
L	LCC	W	WCC	M	CF8M
	Connection Style				
F	RF	J	RTJ	N	NPT
	ASME Rating				
A	150	B	300	C	600
	Valve Size				
1	1 inch	5	1-1/2 inch	6	6 inch
2	2 inch	3	3 inch	8	8 inch
4	4 inch				

NOTES: **1 - For ASME Class 150 and 300 only**
2 - For ASME Class 600 only

Dyna-Flo Control Valve Services Ltd.
Edmonton, Alberta, CANADA
Website: www.dynaflo.com
Phone: 780 • 469 • 4000
Toll Free: 1 • 866 • 396 • 2356
Fax: 780 • 469 • 4035