



Model **DF2000** Control Valve



Figure 1 Dyna-Flo Model DF2000 with DFC Actuator

The Model DF2000 Control Valves are heavy duty globe style control valves used in all kinds of demanding oil and gas applications, from well head to gas plant and beyond.

The Model DF2000 control valves are post guided, single port valves that can be used for either throttling or on-off control of either liquids or gasses.

The actuator for the Model DF2000 valve is typically a Dyna-Flo model DFC or DFO linear actuator. These heavy duty actuators are spring return diaphragm style, and can be used with or without a valve positioner.

The Model DF2000 control valves are manufactured to a high level of quality specifications to ensure superior performance and customer satisfaction.

Features

Configuration

Globe valve with screwed-on bonnet, unbalanced, post-guided valve plug, screwed-in metal seat ring construction, and push-down-to close valve plug action.

Low Temperature Construction Standard

Grade LCC low temperature steel, rated to -50F (-45C), is standard for the valve body and bonnet.

Severe Service Capable

Constructions are available for service in very erosive applications using a valve plug with a tungsten carbide tip and a seat ring with a full-bore tungsten carbide insert.

Valve Sizes and Flange Ratings

The Model DF2000 is available in a 1" and 2" body size, with NPT, RF, or RTJ end connections, in ASME Class 150-2500.

Easy Maintenance

The screwed bonnet/body joint, and seat ring allow repair or maintenance with a minimum of tools.

Shut Off Capability

The standard shut off classification is ASME/ FCI Class IV. Class V is a readily available option.

Superior Construction

The latest in CNC manufacturing and the heavy duty design positively align the valve plug in the seat ring for high pressure drop applications.

NACE Service Capability is Standard

The standard construction materials comply with the recommendations of the National Association of Corrosion Engineers (NACE) MR0175, 2002.



Model DF2000 Control Valve

Table 1

Rated Inlet Pressure and Temperature

Valve Size	Body Type	Class [◇]	Temperature		Maximum Pressure	
			°F	°C	Psi	kPa
1 and 2 Inch	NPT	3750* (1500 ASME)	100	38	3,750	25,855
			450	232	3,425	23,615
		6250* (2500 ASME)	100	38	6,250	43,092
			450	232	5,710	39,369
* Indicates Working Class Pressure (Psig)	Flanged	150 ASME	100	38	290	1,999
			450	232	185	1,276
		300 ASME	100	38	750	5,171
			450	232	685	4,723
		600 ASME	100	38	1,500	10,342
			450	232	1,370	9,446
		1500 ASME	100	38	3,750	25,855
			450	232	3,425	23,615
		2500 ASME	100	38	6,250	43,092
			450	232	5,710	39,369

* Indicates Working Class Pressure (Psig)

◇ Indicates Class or Cold Working Pressure Limit

Specifications

Valve Size, Flange Ratings, and Connections

Size: 1" and 2" (Globe and Angle Body)
 Rating: ASME 150/300/600/900/1500/2500
 Connections: RF / RTJ / NPT

Rated Inlet Pressure and Temperature

Per ASME B16.34 - Latest Revision
 Also see Table 1

Maximum Allowable Pressure Drops

Flow-to-open: Capable of full rated pressure drops
 Flow-to-close: For more information contact your Dyna-Flo Sales Office

(See Tables 9 & 10)

Material Temperature Capabilities

LCC body (standard): -50 to 450°F (-45 to 232°C)
 CF8M body: -150 to 700°F (-101 to 371°C)

Construction Materials

See Figure 2 for valve diagram and keys
 See Table 2 for construction materials

Dimensions

Valve and Actuator assembly diagram - See figure 3
 Valve and Actuator assembly dimensions - See tables 13 - 17

Flow Direction

Up through seat ring and out past valve plug

Flow Characteristic

Equal Percentage, others available upon request.

Port, Yoke Boss Diameter, Stem Diameters, and Rated Travel

See Table 12

Valve Sizing Coefficients

Maximums by port size (Cv) - Globe Body

1/4"	1.64
3/8"	4.03
1/2"	6.82
3/4"	14.00
1"	23.70
1-1/4"	34.50

Detailed - See Table 3

Sizing Coefficients

Fail Close Actuator - See Table 9
 Fail Open Actuator - See Table 10

Valve Body and Actuator

Approximate Weights - See Table 11

Options

- Trim in Tungsten Carbide
- Anti-corrosion coating of internal body passage
- Live loaded low emission packing

For more information and other options contact your Dyna-Flo sales office.



Model **DF2000** Control Valve

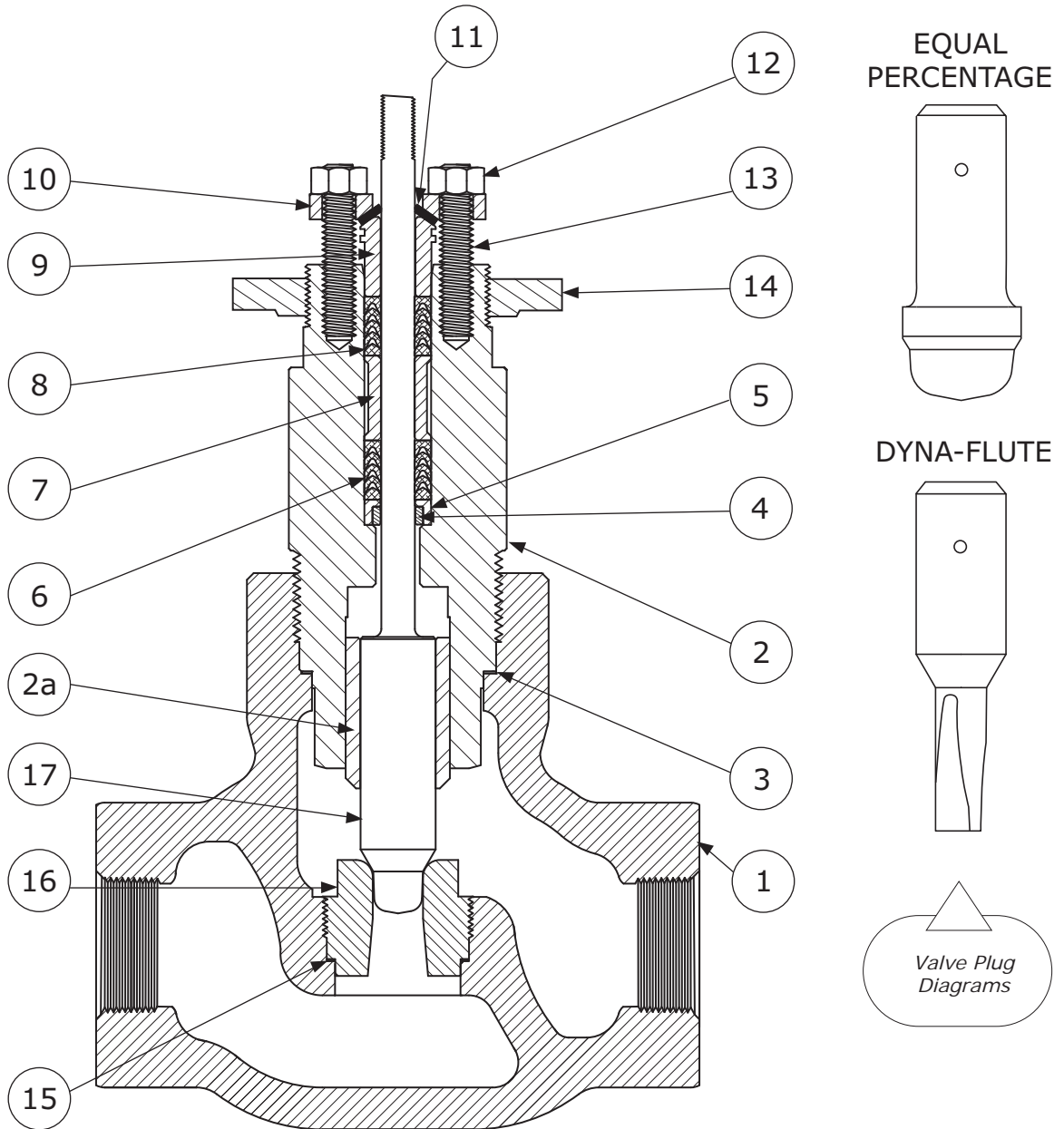


Figure 2
Valve Diagram With Keys



Model
DF2000 Control Valve

Table 2

Model DF2000 Standard Construction Materials

Key	Description	Material	
1	Body	A352 LCC	A351 CF8M
1a	Flanges	A350 LF2	A182 F316
2	Bonnet & Bushing Assembly	A352 LCC, A350 LF2, A182 F316	
2a	Bushing	S17400 PH DH1150	
3	Bonnet Gasket	S30400	
4	Lower Wiper	PTFE	
5	Packing Box Ring	S31600	
6, 8	Packing Set (2 Req'd)	PTFE	
7	Packing Spacer	S31600	
9	Packing Follower	S31600	
10	Packing Flange	Plated Steel	
11	Stem Wiper	Felt	
12	Packing Nut (2 Req'd)	SA-194-2H	
13	Packing Stud (2 Req'd)	SA-193-B7	
14	Yoke Nut	Zinc Plated Steel	
15	Seat Ring Gasket	S30400	
16*	Seat Ring	S31600 / CoCr-A	
17*	Plug / Stem Assembly	S31600 / CoCr-A & S20910	

*Other Options Available



Model
DF2000 Control Valve

Table 3

Model DF2000 Valve Sizing Coefficients, for Equal Percentage Trim
Flow Up

1 Inch Valve

Port Size		Percentage of Valve Travel									
		10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
1/4 Inch	C _V	0.08	0.115	0.164	0.224	0.315	0.45	0.641	0.921	1.28	1.64
	X _T	0.783	0.783	0.744	0.691	0.625	0.614	0.608	0.611	0.61	0.61
	F _L										0.87
3/8 Inch	C _V	0.155	0.260	0.407	0.596	0.858	1.21	1.65	2.22	3.00	4.03
	X _T	0.625	0.535	0.534	0.539	0.535	0.535	0.538	0.534	0.537	0.536
	F _L										0.84
1/2 Inch	C _V	0.272	0.435	0.63	0.91	1.29	1.83	2.56	3.64	5.07	6.50
	X _T	0.613	0.627	0.585	0.576	0.565	0.553	0.535	0.509	0.49	0.501
	F _L										0.80
3/4 Inch	C _V	0.482	0.774	1.24	1.96	2.90	4.12	5.87	8.15	10.8	12.2
	X _T	0.581	0.616	0.581	0.586	0.581	0.573	0.549	0.541	0.529	0.528
	F _L										0.80

2 Inch Valve

Port Size		Percentage of Valve Travel									
		10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
1/4 Inch	C _V	0.08	0.115	0.164	0.224	0.315	0.45	0.641	0.921	1.28	1.64
	X _T	0.783	0.783	0.744	0.691	0.625	0.614	0.608	0.611	0.61	0.610
	F _L										0.87
3/8 Inch	C _V	0.155	0.26	0.407	0.596	0.858	1.21	1.65	2.22	3.00	4.03
	X _T	0.625	0.535	0.534	0.539	0.535	0.535	0.538	0.534	0.537	0.536
	F _L										0.84
1/2 Inch	C _V	0.348	0.505	0.709	0.996	1.38	1.92	2.69	3.82	5.25	6.82
	X _T	0.613	0.627	0.585	0.576	0.565	0.553	0.535	0.509	0.49	0.501
	F _L										0.80
3/4 Inch	C _V	0.613	0.952	1.44	2.06	2.92	4.13	5.86	8.16	11.1	14.0
	X _T	0.581	0.616	0.581	0.586	0.581	0.573	0.549	0.541	0.529	0.528
	F _L										0.80
1 Inch	C _V	1.20	1.68	2.44	3.53	5.05	7.28	10.5	14.0	18.4	23.7
	X _T	0.517	0.569	0.559	0.542	0.544	0.54	0.507	0.508	0.507	0.508
	F _L										0.82
1-1/4 Inch	C _V	1.32	1.76	2.49	3.66	5.42	8.23	12.7	20.6	28.9	34.5
	X _T	0.521	0.563	0.548	0.534	0.498	0.503	0.553	0.528	0.524	0.579
	F _L										0.85

Relationships of Note: $C_1 = 39.76 \sqrt{X_T}$

$C_G = C_V C_1$

$K_M = F_L^2$



Model **DF2000** Control Valve

Table 4

Model DF2000 Valve Sizing Coefficients, for Equal Percentage Trim
Flow Down

1 Inch Valve

Port Size		Percentage of Valve Travel									
		10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
1/4 Inch	C _V	0.090	0.173	0.292	0.480	0.728	0.995	1.35	1.97	2.71	3.25
	X _T	0.576	0.379	0.270	0.200	0.155	0.144	0.148	0.130	0.128	0.151
	F _L										0.45
3/8 Inch	C _V	0.190	0.343	0.625	1.03	1.45	1.85	2.45	3.80	5.56	7.07
	X _T	0.515	0.356	0.220	0.150	0.151	0.179	0.192	0.164	0.164	0.164
	F _L										0.46
1/2 Inch	C _V	0.488	0.950	1.40	2.06	2.90	3.54	4.55	6.16	8.80	11.2
	X _T	0.225	0.136	0.125	0.111	0.111	0.144	0.175	0.185	0.180	0.185
	F _L										0.49
3/4 Inch	C _V	0.850	1.58	2.25	2.85	3.80	5.49	8.70	11.7	14.3	16.8
	X _T	0.195	0.140	0.167	0.238	0.288	0.291	0.242	0.260	0.316	0.370
	F _L										0.67

2 Inch Valve

Port Size		Percentage of Valve Travel									
		10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
1/4 Inch	C _V	0.095	0.178	0.351	0.544	0.740	0.998	1.35	1.97	2.70	3.20
	X _T	0.577	0.362	0.188	0.155	0.150	0.145	0.147	0.138	0.140	0.165
	F _L										0.50
3/8 Inch	C _V	0.255	0.444	0.735	1.09	1.45	1.85	2.46	3.80	5.60	7.07
	X _T	0.394	0.239	0.165	0.140	0.150	0.180	0.195	0.160	0.160	0.160
	F _L										0.45
1/2 Inch	C _V	0.640	1.02	1.55	2.20	2.90	3.55	4.62	7.15	9.88	12.0
	X _T	0.265	0.195	0.160	0.145	0.145	0.167	0.180	0.165	0.165	0.165
	F _L										0.46
3/4 Inch	C _V	1.04	1.70	2.22	2.86	3.82	5.50	8.70	13.1	17.3	21.2
	X _T	0.210	0.195	0.235	0.295	0.325	0.305	0.244	0.210	0.221	0.235
	F _L										0.55
1 Inch	C _V	2.05	2.91	3.60	4.30	5.70	8.70	13.0	20.0	26.7	31.8
	X _T	0.170	0.175	0.240	0.340	0.343	0.313	0.275	0.225	0.225	0.255
	F _L										0.54
1-1/4 Inch	C _V	1.70	2.30	3.30	4.70	6.75	10.5	17.5	26.0	35.0	44.8
	X _T	0.310	0.310	0.310	0.310	0.309	0.309	0.311	0.310	0.310	0.310
	F _L										0.60

Relationships of Note: $C_1 = 39.76 \sqrt{X_T}$

$C_6 = C_V C_1$

$K_M = F_L^2$



Model
DF2000 Control Valve

Table 5

Model DF2000 Valve Sizing Coefficients, for Equal Percentage Trim
Flow Up

1 Inch Valve

Port Size		Percentage of Valve Travel									
		10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
1/4 Inch	C _V	0.70	0.114	0.165	0.225	0.313	0.450	0.640	0.920	1.30	1.65
	X _T	0.785	0.785	0.745	0.693	0.625	0.615	0.610	0.612	0.611	0.612
	F _L										0.87
3/8 Inch	C _V	0.155	0.260	0.408	0.595	0.858	1.20	1.65	2.21	3.00	4.04
	X _T	0.625	0.535	0.535	0.540	0.535	0.535	0.536	0.532	0.535	0.535
	F _L										0.83
1/2 Inch	C _V	0.272	0.435	0.630	0.910	1.30	1.85	2.57	3.65	5.09	6.50
	X _T	0.672	0.645	0.640	0.590	0.590	0.585	0.585	0.555	0.525	0.550
	F _L										0.83
3/4 Inch	C _V	0.480	0.775	1.25	1.98	2.90	4.15	5.87	8.15	11.0	12.4
	X _T	0.570	0.600	0.525	0.472	0.490	0.520	0.536	0.505	0.485	0.630
	F _L										0.92

2 Inch Valve

1/4 Inch	C _V	0.069	0.115	0.165	0.225	0.315	0.450	0.640	0.920	1.28	1.65
	X _T	0.780	0.780	0.745	0.695	0.625	0.615	0.611	0.613	0.610	0.610
	F _L										0.86
3/8 Inch	C _V	0.155	0.261	0.410	0.595	0.858	1.20	1.65	2.22	3.00	4.05
	X _T	0.625	0.533	0.533	0.540	0.535	0.534	0.536	0.535	0.536	0.536
	F _L										0.84
1/2 Inch	C _V	0.347	0.505	0.710	0.990	1.37	1.90	2.70	3.81	5.25	6.80
	X _T	0.615	0.625	0.585	0.586	0.564	0.555	0.535	0.510	0.489	0.500
	F _L										0.80
3/4 Inch	C _V	0.612	0.950	1.45	2.05	2.93	4.13	5.88	8.15	11.0	14.1
	X _T	0.580	0.615	0.580	0.585	0.580	0.572	0.550	0.540	0.530	0.529
	F _L										0.81
1 Inch	C _V	1.20	1.70	2.45	3.52	5.05	7.26	10.5	14.0	18.5	23.5
	X _T	0.515	0.570	0.555	0.540	0.545	0.542	0.505	0.510	0.509	0.506
	F _L										0.80
1-1/4 Inch	C _V	1.30	1.75	2.50	3.65	5.40	8.25	12.9	20.8	29.0	34.5
	X _T	0.520	0.560	0.550	0.535	0.496	0.502	0.555	0.528	0.524	0.577
	F _L										0.87

Relationships of Note: $C_1 = 39.76 \sqrt{X_T}$

$C_G = C_V C_1$

$K_M = F_L^2$



Model **DF2000** Control Valve

Table 6

Model DF2000 Valve Sizing Coefficients, for Dyna-Flute Trim Globe Body (Flow Up)

1 and 2 Inch Valves - Total Travel 3/4 Inch (19 mm)

Port Size		Percentage of Valve Travel									
		10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
1/4 Inch 6.4 mm 1 Flute	C_v	0.0385	0.0454	0.0560	0.0717	0.0941	0.124	0.160	0.212	0.277	0.354
	X_T	0.778	0.734	0.690	0.651	0.640	0.635	0.637	0.634	0.632	0.656
	F_L	0.87									
1/4 Inch 6.4 mm 3 Flute	C_v	0.0562	0.0725	0.100	0.146	0.216	0.312	0.433	0.588	0.802	1.07
	X_T	0.692	0.648	0.639	0.625	0.600	0.586	0.597	0.613	0.620	0.624
	F_L	0.90									

Relationships of Note: $C_1 = 39.76 \sqrt{X_T}$ $C_6 = C_v C_1$ $K_M = F_L^2$

Table 7

Model DF2000 Valve Sizing Coefficients, for Dyna-Flute Trim Angle Body (Flow Down)

1 and 2 Inch Valves - Total Travel 3/4 Inch (19 mm)

Port Size		Percentage of Valve Travel									
		10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
1/4 Inch 6.4 mm 1 Flute	C_v	0.0312	0.0375	0.0470	0.0625	0.0875	0.125	0.172	0.245	0.330	0.405
	X_T	0.989	0.975	0.865	0.762	0.660	0.660	0.495	0.450	0.450	0.549
	F_L	0.79									
1/4 Inch 6.4 mm 3 Flute	C_v	0.0610	0.0900	0.135	0.212	0.310	0.430	0.570	0.785	1.11	1.41
	X_T	0.670	0.518	0.385	0.313	0.295	0.305	0.325	0.325	0.311	0.380
	F_L	0.68									

Relationships of Note: $C_1 = 39.76 \sqrt{X_T}$ $C_6 = C_v C_1$ $K_M = F_L^2$

Table 8

Model DF2000 Valve Sizing Coefficients, for Dyna-Flute Trim Angle Body (Flow Up)

1 and 2 Inch Valves - Total Travel 3/4 Inch (19 mm)

Port Size		Percentage of Valve Travel									
		10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
1/4 Inch 6.4 mm 1 Flute	C_v	0.0385	0.0454	0.0560	0.0717	0.0941	0.124	0.160	0.212	0.277	0.354
	X_T	0.778	0.734	0.690	0.651	0.640	0.635	0.637	0.634	0.632	0.656
	F_L	0.87									
1/4 Inch 6.4 mm 3 Flute	C_v	0.0562	0.0725	0.100	0.146	0.216	0.312	0.433	0.588	0.802	1.07
	X_T	0.692	0.648	0.639	0.625	0.600	0.586	0.597	0.613	0.620	0.624
	F_L	0.90									

Relationships of Note: $C_1 = 39.76 \sqrt{X_T}$ $C_6 = C_v C_1$ $K_M = F_L^2$



Model
DF2000 Control Valve

Table 9

Model DF2000 Fail Closed Actuator Maximum Shut-off Capabilities with DF2000 Valves 6 to 30 psig Signal, 35 Psig Supply

1 Inch Valve

Port Size	DFC Size 1069
Inches (mm)	Psig (kPag)
1/4 (6.4)	6250 (43,092) ²
3/8 (9.5)	6250 (43,092) ²
1/2 (12.7)	5750 (39,644) ⁴
3/4 (19.1)	2485 (17,133) ⁴

2 Inch Valve

Port Size	DFC Size 2069	DFC Size 2105	DFC Size 2156	DFC Size 3220
Inches (mm)	Psig (kPag)	Psig (kPag)	Psig (kPag)	Psig (kPag)
1/4 (6.4)	6250 (43,092) ²	6250 (43,092) ¹	6250 (43,092) ¹	-
3/8 (9.5)	6250 (43,092) ²	6250 (43,092) ¹	6250 (43,092) ¹	-
1/2 (12.7)	5750 (39,644) ⁴	6250 (43,092) ³	6250 (43,092) ³	-
3/4 (19.1)	2400 (16,547) ⁴	4100 (28,268) ⁵	6250 (43,092) ⁶	-
1 (25.4)	1325 (9,135) ⁴	2685 (18,512) ⁷	3900 (26,889) ⁶	5850 (40,334) ⁷
1-1/4 (31.8)	820 (5,653) ⁴	1689 (11,645) ⁷	2474 (17,057) ⁶	3655 (25,200) ⁷

NOTE - All the above actuator fail closed shut-off capabilities are Class IV. A higher shut-off may be achieved by using a higher bench set, contact your Dyna-Flo sales office for additional information.

Bench Set	Psi (kPa)
1	10-30 (68-207)
2	14-30 (97-207)
3	17-30 (117-207)
4	18-30 (124-207)
5	19-30 (131-207)
6	21-30 (145-207)
7	22-30 (152-207)



Model
DF2000 Control Valve

Table 10

Model DF2000 Fail Open Actuator Maximum Shut-off Capabilities with DF2000 Valves 6 to 30 psig Signal, 35 Psig Supply

1 Inch Valve

Port Size	DFO Size 1069
Inches (mm)	Psig (kPag)
1/4 (6.4)	6250 (43,092) ²
3/8 (9.5)	5500 (37,921) ²
1/2 (12.7)	4600 (37,716) ³
3/4 (19.1)	2000 (13,790) ³

2 Inch Valve

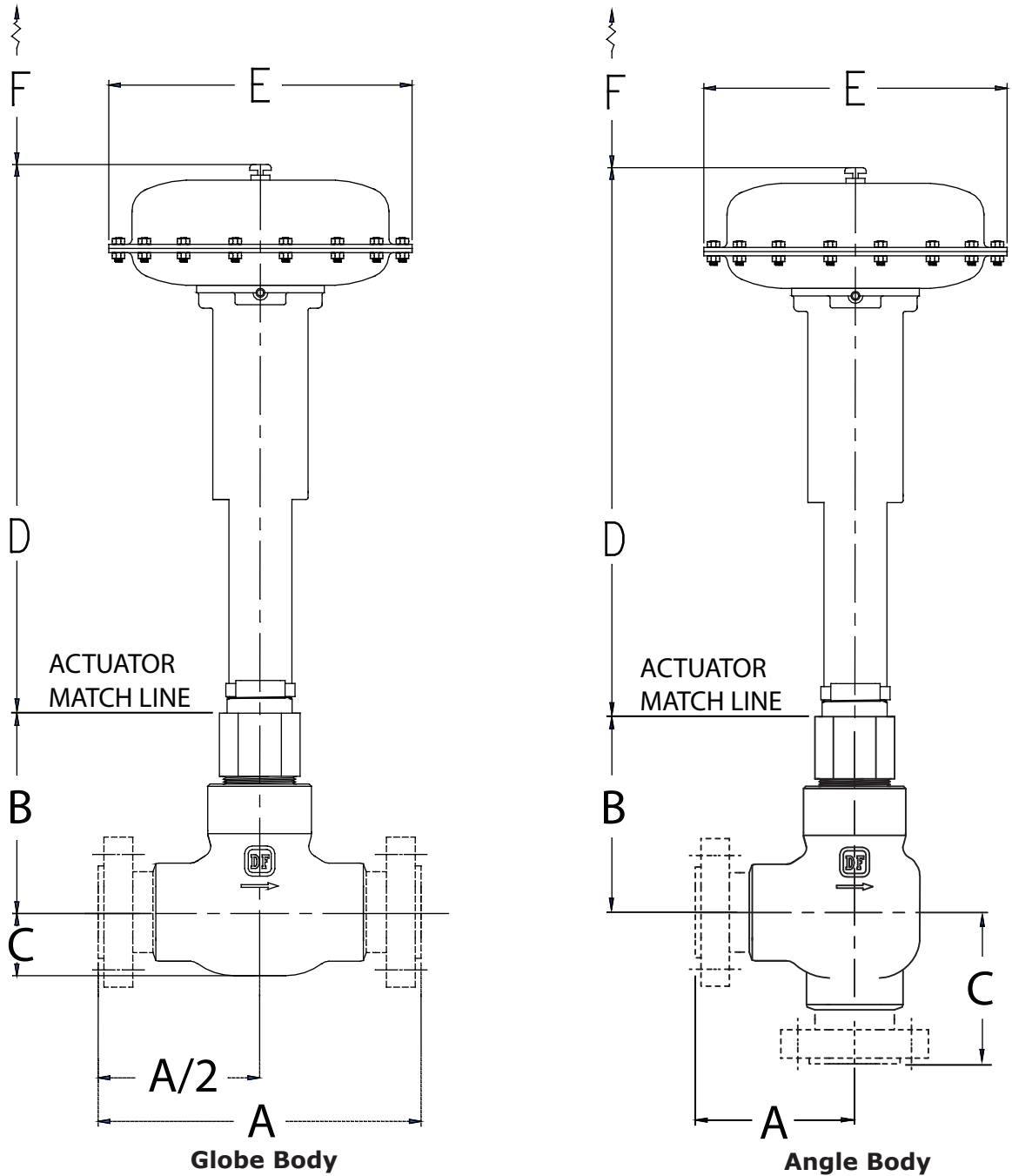
Port Size	DFO Size 2069	DFO Size 2105	DFO Size 2156	DFO Size 3220
Inches (mm)	Psig (kPag)	Psig (kPag)	Psig (kPag)	Psig (kPag)
1/4 (6.4)	6250 (43,092) ²	6250 (43,092) ²	6250 (43,092) ³	—
3/8 (9.5)	6250 (43,092) ⁴	6250 (43,092) ³	6250 (43,092) ³	—
1/2 (12.7)	3750 (25,855) ⁴	6250 (43,092) ³	6250 (43,092) ³	—
3/4 (19.1)	1950 (13,444) ⁴	4100 (25,268) ⁶	5700 (39,300) ⁵	6250 (43,092) ⁶
1 (25.4)	1050 (7,239) ⁴	2285 (15,754) ⁶	3300 (22,752) ⁵	5020 (34,611) ⁶
1-1/4 (31.8)	650 (4,481) ⁴	1425 (9,825) ⁶	2090 (14,410) ⁵	3175 (21,890) ⁶

NOTE - All the above actuator fail open shut-off capabilities are Class IV. A higher shut-off may be achieved by using a higher bench set, contact your Dyna-Flo sales office for additional information.

Bench Set	Psi (kPa)
1	6-26 (41-179)
2	6-22 (41-152)
3	6-19 (41-131)
4	6-18 (41-124)
5	6-15 (41-103)
6	6-14 (41-97)



Model **DF2000** Control Valve



Note: Valve with or without flanges. Model DFC Actuator Shown

Figure 3 Valve Actuator Schematic (Refer to Tables 13-17)



Model **DF2000** Control Valve

Table 11

Approximate Valve Body and Standard Actuator Assembly Weights - Pounds (Kilograms)

DF2000	Valve Only	DFC [DFO] 1069	DFC [DFO] 2069	DFC [DFO] 2105	DFC [DFO] 2156
1" NPT	25 (11)	73 (33) [65 (29)]	N/A	N/A	N/A
1" 150 to 600	45 (20)	93 (42) [85 (39)]	N/A	N/A	N/A
1" 900/1500	75 (34)	123 (56) [115 (52)]	N/A	N/A	N/A
2" NPT	75 (34)	N/A	125 (57) [126 (57)]	165 (75) [157 (71)]	196 (89) [182 (83)]
2" 150 to 600	95 (43)	N/A	145 (66) [146 (66)]	185 (84) [177 (80)]	216 (98) [202 (92)]
2" 900/1500	115 (52)	N/A	165 (75) [166 (75)]	205 (93) [197 (89)]	236 (107) [222 (101)]

Table 12

Model DF2000

Port Size, Yoke Boss Diameter, Stem Diameters, and Rated Travel - Inch (mm)

Valve Size	Port Diameter	Standard (inch / mm)			Optional (inch / mm)		
		Yoke Boss Diameter	Stem Diameter	Rated Travel	Yoke Boss Diameters	Stem Diameter	Rated Travel
1 Inch	1/4 (6.4)	2-1/8 (54)	3/8 (9.5)	3/4 (9.5)	2-13/16 (71)	1/2 (12.7)	3/4 (19)
	3/8 (9.5)						
	1/2 (12.7)						
	3/4 (19.1)						
2 Inch	1/4 (6.4)	2-13/16 (71)	1/2 (12.7)	3/4 (19)	3-9/16 (90)	3/4 (19)	3/4 (19)
	3/8 (9.5)						
	1/2 (12.7)						
	3/4 (19.1)						
	1 (25.4)						
	1-1/4 (31.8)						



Model
DF2000 Control Valve

Table 13

Model DF2000 Globe Body Dimensions - Inches (mm)

Valve Size	End Conneciton	A	C
1 Inch	NPT ASME 1500	6.62 (168)	1.81 (46)
	NPT ASME 2500	7.75 (197)	2.12 (54)
	150# RF	8.12 (206)	1.81 (46)
	300# RF	8.62 (219)	1.81 (46)
	300# RTJ	9.12 (232)	1.81 (46)
	600# RF	9.12 (232)	1.81 (46)
	600# RTJ	9.12 (232)	1.81 (46)
	900# and 1500# RF	10.00 (254)	1.81 (46)
	900# and 1500# RTJ	10.00 (254)	1.81 (46)
	2500# RF	12.12 (308)	2.12 (54)
	2500# RTJ	12.12 (308)	2.12 (54)
	2 Inch	NPT ASME 1500	9.00 (229)
NPT ASME 2500		10.50 (267)	3.25 (83)
150# RF		10.50 (267)	2.75 (70)
300# RF		10.50 (267)	2.75 (70)
600# RF		11.25 (286)	2.75 (70)
600# RTJ		11.38 (289)	2.75 (70)
900# and 1500# RF		12.12 (308)	2.75 (70)
900# and 1500# RTJ		12.25 (311)	2.75 (70)
2500# RF		15.38 (391)	3.25 (83)
2500# RTJ		15.50 (394)	3.25 (83)

Refer to Figure 3 *Valve Actuator Schematic*

Table 14

Model DF2000 Valve Body Dimensions Globe Body (Refer to Figure 3)

Valve		B Inch (mm)		
Size (inch)	End Connection (ASME Class)	Stem Diameter inch (mm)		
		3/8 (9.5)	1/2 (12.7)	3/8 (9.5)
1	NPT (1500 & 2500)	6.81 (173)	7.56 (192)	7.06 (179)
2	NPT (1500 & 2500)	---	8.56 (217)	8.38 (213)
1	RF & RTJ (150-300)	6.81 (173)	7.56 (192)	7.06 (179)
2	RF & RTJ (150-300)	---	8.56 (217)	8.38 (213)
1	RF & RTJ (900-2500)	6.75 (172)	7.50 (191)	7.00 (178)
2	RF & RTJ (900-2500)	---	8.50 (216)	8.31 (211)



Model **DF2000** Control Valve

Table 15

Model DF2000 Angle Body Dimensions - Inches (mm)

Valve Size	End Conneciton	A	C
1 Inch	NPT ASME 1500	3.00 (76)	3.50 (89)
	NPT ASME 2500	3.50 (89)	4.00 (102)
	300# RF	4.31 (109)	4.31 (109)
	300# RTJ	4.56 (116)	4.56 (116)
	600# RF	4.56 (116)	4.56 (116)
	600# RTJ	4.56 (116)	4.56 (116)
	900# and 1500# RF	5.00 (127)	5.00 (127)
	900# and 1500# RTJ	5.00 (127)	5.00 (127)
	2500# RF	6.06 (154)	6.06 (154)
	2500# RTJ	6.06 (154)	6.06 (154)
2 Inch	NPT ASME 1500	4.00 (102)	4.88 (124)
	NPT ASME 2500	4.50 (114)	5.12 (130)
	300# RF	6.12 (155)	6.12 (155)
	300# RTJ	6.44 (164)	6.44 (164)
	600# RF	6.50 (165)	6.50 (165)
	600# RTJ	6.56 (167)	6.56 (167)
	900# and 1500# RF	7.00 (178)	7.00 (178)
	900# and 1500# RTJ	7.06 (179)	7.06 (179)
	2500# RF	7.69 (195)	7.69 (195)
	2500# RTJ	7.75 (197)	7.75 (197)

Refer to Figure 3 Valve Actuator Schematic

Table 16

Model DF2000 Valve Body Dimensions Angle Body (Refer to Figure 3)

Valve		B Inch (mm)		
Size (inch)	End Connection (ASME Class)	Stem Diameter inch (mm)		
		3/8 (9.5)	1/2 (12.7)	3/8 (9.5)
1	NPT (1500 & 2500)	5.25 (133)	6.00 (152)	5.50 (140)
2	NPT (1500 & 2500)	---	6.38 (162)	6.19 (157)
1	RF & RTJ (150-300)	5.31 (135)	6.06 (154)	5.56 (141)
2	RF & RTJ (150-300)	---	6.44 (164)	6.25 (159)
1	RF & RTJ (900-2500)	5.31 (135)	6.06 (154)	5.56 (141)
2	RF & RTJ (900-2500)	---	6.44 (164)	6.25 (159)



Model
DF2000 Control Valve

Table 17

Model DFC and DFO Outline Dimensions - Inch (mm)

Actuator Size	D		E	F
	DFC	DFO		
1069	22.6 (574)	19.6 (498)	13.12 (333)	5.00 (127)
2069	23.4 (594)	21.6 (549)	13.12 (333)	6.88 (175)
2105	30.3 (770)	25.9 (658)	16.00 (406)	6.88 (175)
2156	29.4 (747)	25.8 (655)	18.62 (473)	6.88 (175)
3105	30.9 (785)	28.4 (721)	16.00 (406)	9.12 (232)
3156	30.9 (785)	28.4 (721)	18.62 (473)	9.12 (232)
3220	36.8 (935)	33.1 (841)	21.10 (536)	9.12 (232)



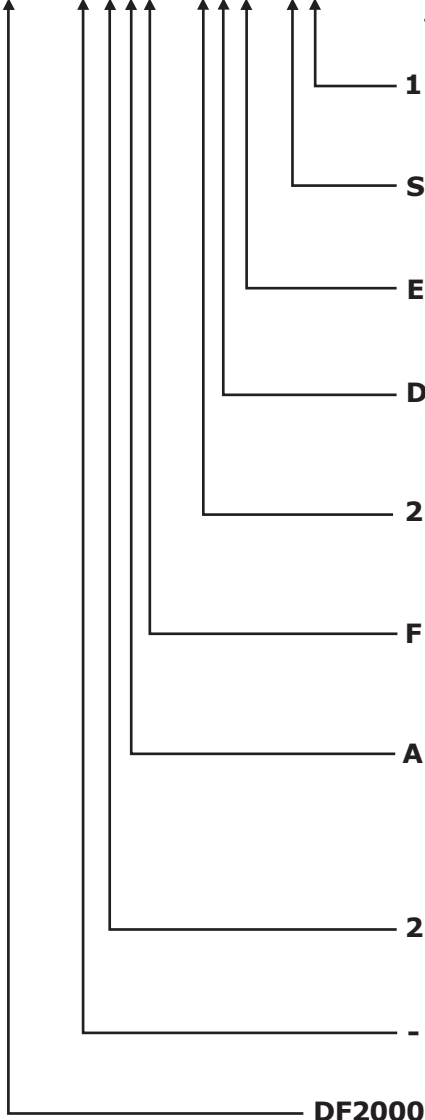
Model **DF2000** Control Valve

Dyna-Flo DF2000 Control Valve | Model Numbering System

Ordering Guide

Sample Part Number

DF2000 - 2AF - 2DE - S1



Code	Description
Shut Off Classification	
1	Class IV (Standard)
2	Class V (Optional)
Valve Trim Material	
S	S31600 / CoCr-A (standard) H S17400 DH 1150
T	Tungsten Carbide
Characteristic	
E	Equal Percent F Dyna-Flute (1 Flute)
T	Dyna-Flute (3 Flute)
Packing Style	
D	Double PTFE (standard) G Single Graphite
L	Live Loaded PTFE
Orifice Size	
2	1/4 Inch Port 6 3/4 Inch Port
3	3/8 Inch Port 8 1 Inch Port (2 Inch Body Only)
4	1/2 Inch Port 1 1-1/4 Inch Port (2 Inch Body Only)
Connection Style	
F	RF N NPT
J	RTJ
ASME Class / CWP	
A	150 Flanged D 900 / 1500 Flanged
B	300 Flanged E CWP 3750 NPT (ASME 1500)
C	600 Flanged F 2500 Flanged
N	CWP 6250 NPT (ASME 2500)
Body Size (Mounting Connection / Stem Size)	
1	1 Inch Body (2-1/8" / 3/8")
2	2 Inch Body (2-13/16 / 1/2")
3	2 Inch Body (3-9/16" / 3/4")
Body Material	
-	A352 LCC M A351 CF8M
Body Style	
DF2000	Globe DF2000A Angle

Note

Refer to Dyna-Flo's Sales Bulletin on type DFC and DFO diaphragm actuators for actuator sizing. Please contact your Dyna-Flo sales office for further information on any item.

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