

D-FC Hydraulic Gate Valve

D-FC hydraulic gate valves are modeled after the OEM Model FC hydraulic gate valve. All dimensions are interchangeable with the original Model FC.

- DOYLES D-FC hydraulic gate valve is available with a manual closing and locking screw.
- Adjusting nut in the blind cylinder head absorbs the overload or test pressures applied to the opening side of the valve, preventing the pressure from reaching the stem.
- Cylinder head allows the piston to cover the exhaust port before the end of the stroke. This arrangement provides enough damping to protect the valve from shock loading.
- The overload or test pressures applied to the closing side of the cylinder are absorbed by the piston bottoming out against the packing gland of the stem.
- The tail rod and the operating stem have back seating shoulders to allow changing the stem packing while the valve is under pressure.
- Cylinder-operated valves have a special body containing a stuffing box through which a tail rod passes from the gate. The tail rod serves the following purposes:
 - Acts as a pressure balance for the stem which connects the gate to the operating piston.
 - Compensates for the volume displaced by the operating stem.
 - Guaranteed to be 100% interchangeable with the OEM model.
- DOYLES D-FC hydraulic gate valves meet or exceeds API 6A standards.

D-FC Hydraulic Gate Valve

Bill of Material

Item	Part Number	QTY	Description
1	19937-03D	1	Handwheel
2	19106-01D	1	Bearing Cap
3	1120-1030	2	Fitting, Grease
4	1620-1184	1	O-Ring, Standard
5	1520-1007	4	Bearing, Race
6	1520-1001	2	Bearing, Needle Thrust
7	1620-1105	1	O-Ring
8	3020-1009	1	Pin
9	20871-01D	1	Stem Adapter
10	20874-01D	1	Packing Gland
11	1620-1306	1	U-Packing
12	2620-1005	8	Nut, Heavy Hex
13	2820-1207	8	Stud, Tap End
14	33297-05-01D	1	Bonnet, Type
15	1120-1011	1	Fitting, Check Valve
16	1101-0008	1	Fitting, Grease
17	19141-07D	1	Gasket, Bonnet
18	29381-01-99D	1	Operating Stem
19	694493-01D	1	Gate
20	611404-01D	2	Retainer Plate
21	44844-06D	2	Seat
22	610500-23D	4	Seal Ring
23	630691-01D	2	Body Bushing
24	694811-01D	2	Gate Guide
25	5620-1022	1	Body, Manual

Gate Valve Critical Dimensions 3000 PSI

DESCRIPTION	2 1/16"	2 9/16"	3 1/8"	4 1/16"	6 1/8"
(A) ENE TO END, THREADED	10 5/8"	(10.625")	12 3/8"	(12.375")	13 5/8"
(A) END TO END, FLANGED	14 5/8"	(14.625")	16 5/8"	(16.625")	17 1/8"
(B) EXTREME WIDTH OF BODY	6 3/4"	(6.750")	7 5/8"	(7.625")	7 1/2"
© CENTER OF BORE TO TOP OF STEM ADAPTER	13"	33 13/16"	(33.8125")	16 13/16"	(16.8125")
(D) CENTER OF BORE TO BOTTOM OF BODY	5 5/8"	(5.625")	6 1/2"	(6.500")	7 3/8"
(E) CENTER OF BORE TO TOP OF HANDWHEEL RIM	15 3/8"	(15.375")	16 1/8"	(16.375")	19 1/16"
(F) HANDWHEEL OD	14"	14"	14"	18 1/2"	24"
NUMBER OF TURNS TO FULLY OPEN OR CLOSE +/- 1/4	12 1/2	15 1/4	18 1/4	23 1/2	33 1/2
WEIGHT FLANGED	180lb	249lb	282lb	450lb	910lb
WEIGHT THREADED	130lb	185lb	210lb		

Gate Valve Critical Dimensions 5000 PSI

DESCRIPTION	2 1/16"	2 9/16"	3 1/8"	4 1/16"	6 1/8"
(A) ENE TO END, THREADED	10 5/8"	(10.625")	12 3/8"	(12.375")	13 5/8"
(A) END TO END, FLANGED	14 5/8"	(14.625")	16 5/8"	(16.625")	18 5/8"
(B) EXTREME WIDTH OF BODY	7"	8 3/16"	(8.1875")	9 1/4"	(9.250")
© CENTER OF BORE TO TOP OF STEM ADAPTER	15 1/8"	(15.125")	15 15/16"	(15.9375")	16 13/16"
(D) CENTER OF BORE TO BOTTOM OF BODY	5 5/8"	(5.625")	6 1/2"	(6.500")	7 3/8"
(E) CENTER OF BORE TO TOP OF HANDWHEEL RIM	17 3/8"	(17.375")	18 1/8"	(18.125")	19 1/16"
(F) HANDWHEEL OD	14"	14"	18 1/2"	18 1/2"	24"
NUMBER OF TURNS TO FULLY OPEN OR CLOSE +/- 1/4	12 1/2	15 1/4	18 1/4	23 1/2	33 1/2
WEIGHT - FLANGED	182lb	255lb	360lb	545lb	1090lb
WEIGHT - THREADED	130lb	185lb	210lb		

Gate Valve Critical Dimensions 10,000 PSI

DESCRIPTION	1 13/16"	2 1/16"	2 9/16"	3 1/16"	4 1/16"
(A) END TO END, FLANGED	18 1/4"	(18.250")	20 1/2"	(20.500")	22 1/4"
(B) EXTREME WIDTH OF BODY	9 1/16"	(9.0625")	9 3/8"	(9.375")	9 13/16"
© CENTER	10 1/4"	(10.250")	12 13/16"	(12.8125")	17 1/8"

OF BORE TO TOP OF STEM ADAPTER| 15 1/8" (15.125")| 15 1/8" (15.125")| 15 13/16" (15.8125")| 16 7/8" (16.875")| 19 11/16" (19.6875")| 45 1/8" (45.125")| |(D) CENTER OF BORE TO BOTTOM OF BODY| 5 3/4" (5.750")| 5 7/8" (5.875")| 6 13/16" (6.8125")| 8 1/16" (8.0625")| 10 1/16" (10.0625")| 14 3/4" (14.750")| |(E) CENTER OF BORE TO TOP OF HANDWHEEL RIM| 17 3/8" (17.375")| 17 3/8" (17.375")| 18 1/8" (18.125")| 18 1/16" (18.0625")| 20 15/16" (20.9375")| 55 5/8" (55.625")| |(F) HANDWHEEL OD| 14" | 18 1/2" | 18 1/2" | 24" | 24" | 44" | |NUMBER OF TURNS TO FULLY OPEN OR CLOSE +/- 1/4| 12 1/2| 12 1/2| 15 1/4| 18 1/4| 23 1/2| 43 1/8| |WEIGHT| 270lb| 275lb| 485lb| 680lb| 1057lb| 3500lb|

Gate Valve Critical Dimensions 15,000 PSI

DESCRIPTION | 1 13/16" | 2 1/16" | 2 9/16" | 3 1/16" | 4 1/16" |
 (A) END TO END, FLANGED| 18" | 19" | 21" | 23 9/16" (23.5625")| 29" |
 (B) EXTREME WIDTH OF BODY| 9 7/8" (9.875")| 9 7/8" (9.875")| 11 1/2" (11.500")| 13 9/16" (13.5625")| 21" | |© CENTER OF BORE TO TOP OF STEM ADAPTER| 15 1/8" (15.125")| 15 1/8" (15.125")| 17 3/16" (17.1875")| 20 15/16" (20.9375")| 22 13/16" (22.8125")| |(D) CENTER OF BORE TO BOTTOM OF BODY| 5 7/8" (5.875")| 6 1/8" (6.125")| 7 5/16" (7.3125")| 9 1/4" (9.250")| 10 3/16" (10.1875")| |(E) CENTER OF BORE TO TOP OF HANDWHEEL RIM| 17 3/8" (17.375")| 17 3/8" (17.375")| 19 9/16" (19.5625")| 22 3/16" (22.1875")| 24 1/16" (24.0625")| |(F) HANDWHEEL OD| 18 1/2" | 18 1/2" | 18 1/2" | 24" | 24" | |NUMBER OF TURNS TO FULLY OPEN OR CLOSE +/- 1/4| 12 1/2| 12 1/2| 15 3/4| 15 1/4| 29 1/4 | |WEIGHT| 275lb| 350lb| 800lb| 1065lb| 1300lb|