Red Valve®

CUT SHEET RV05.01-1
June 2025

KFD - Series D Flexgate Manual Knife Gate Valve

- High-quality, full-port valve
- Heavy-duty Stainless Steel gate
- Leak-proof elastomer packing gland
- Pneumatic, electric, hydraulic or manual actuation

The Series D Flexgate Manual Knife Gate Valve is built with a cast or fabricated body and features a heavy-duty stainless steel gate. Ductile iron cast bodies provide enhanced performance when external and internal factors require a less brittle and malleable material. Removable rubber cartridge seats on either side of the gate provide a bi-directional seal with excellent wear resistance. The seats are metal-reinforced and available in a wide variety of elastomers for abrasion resistance and chemical compatibility. A port at the base of the valve allows for flushing.

Series D Flexgate Knife Gate Valves provide a bi-directional shutoff. A heavy-duty top works is standard and the relatively simple design eliminates expensive overhauls, unscheduled shut downs and costly replacement parts. The only replacement parts are the cartridge seats and packing.

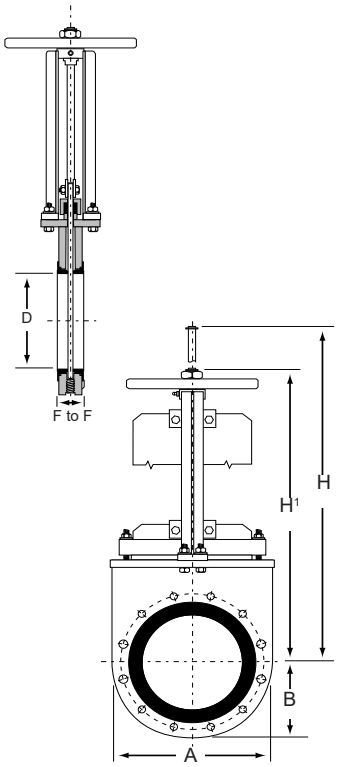
Series D Flexgate Valves size 3-12" are provided with standard handwheel mechanisms featuring cast iron handwheels, machined 303 Stainless Steel stems with yoke sleeves, and thrust washers designed to reduce operating torque. Series D Valves size 14" and larger feature fabricated (tubular) handwheels. It is recommended that manual Series D Valves 12" and larger be specified with a 4:1 bevel gear actuator to reduce rim pull. Pneumatic and electric operators are available.

Materials of Construction

- **Body:** 3-12" ductile cast iron; 14-30" cast iron; 36-42" fabricated steel
- **Gate:** 316 Stainless Steel, 17-4 pH, Hastelloy C-276
  Other materials are available, contact Red Valve.
- **Optional Gate Coating:** Polytetrafluoroethylene (PTFE)
- **Elastomers:** Ethylene Propylene Diene Terpolymer (EPDM), Acrylonitrile-Butadiene (NBR), Chloroprene (CR), Styrene Butadiene (SBR), Fluoro Rubber (FKM)
- **Drilled and tapped flanges:** ASME 150, ASME 300, ASME B16.1 125 cast flanges, AWWA C110 125 flanges, EN1092 PN 10, EN1092 PN 16.
  Other drill patterns available upon request.
- **Optional:** Extended stems and torque tubes, floorstands

Series D Flexgate Manual

VALVE SIZE D	DIMENSIONS in/mm							MAX. WORKING PRESSURE psi/kPa	
	LENGTH F to F	WIDTH A	HEIGHT B	HEIGHT CLOSED H[1]	HEIGHT OPEN H	HEIGHT PNEUMATIC ACTUATED	GATE THICKNESS	GATE MATERIAL	
								316	17-4 PH
3" 80mm	2.25 57	8.00 203	3.88 99	17.13 435	20.38 518		0.25 6	150 1030	150 1030
4" 100mm	2.25 57	9.25 235	4.75 121	18.25 464	22.63 575		0.25 6	150 1030	150 1030
6" 150mm	1.88 48	11.5 292	5.88 149	21.06 535	27.19 691		0.25 6	150 1030	150 1030
8" 200mm	2.88 73	14.00 356	7.00 178	26.56 675	34.56 878		0.50 13	150 1030	150 1030
10" 250mm	3.13 80	16.75 425	8.38 213	32.44 824	43.63 1108		0.50 13	150 1030	150 1030
12" 300mm	3.25 83	20.13 511	10.06 256	37.00 940	50.88 1292		0.50 13	100 690	150 1030
14" 350mm	3.25 83	21.50 546	11.00 279	43.63 1708	57.63 1464	CONSULT	0.56 14	100 690	150 1030
16" 400mm	3.75 95	24.00 610	12.50 218	47.50 1207	63.00 1600	FACTORY	0.68 17	100 690	150 1030
18" 450mm	3.75 95	25.75 654	13.25 337	52.63 1337	70.00 1778		0.75 19	100 690	150 1030
20" 500mm	4.63 118	27.50 699	13.75 349	57.94 1471	74.13 1883		0.88 22	100 690	150 1030
24" 600mm	4.75 121	32.50 826	16.00 406	66.69 1694	86.94 2208		1.00 25	100 690	150 1030
30" 750mm	5.00 127	38.75 984	19.00 483	88.63 2251	120.63 3064		1.13 29	75 520	125 860
36" 900mm	5.13 130	46.00 1168	23.00 584	96.00 2438	134.88 3435		1.25 32	75 520	125 860
42" 1050mm	5.13 130	53.00 1346	26.50 673	100.00 2540	137.25 3486		1.25 32	50 350	75 520



18" and smaller - installed length is .12" less than minimum F to F.
20" and larger - installed length is .25" less than minimum F to F.
48" and larger - consult factory.

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