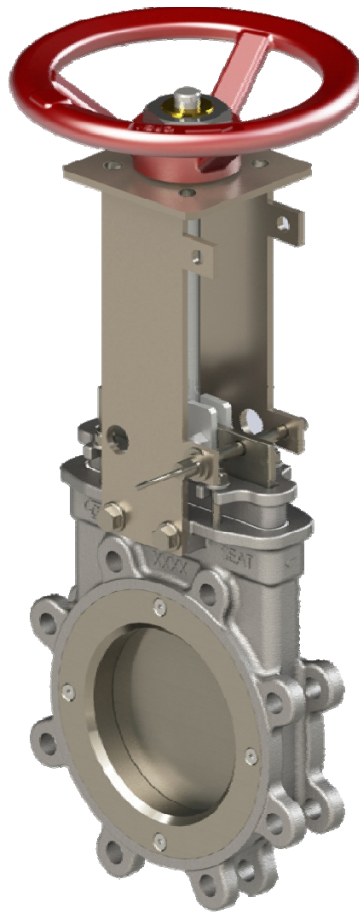


# KNIFE GATE VALVE



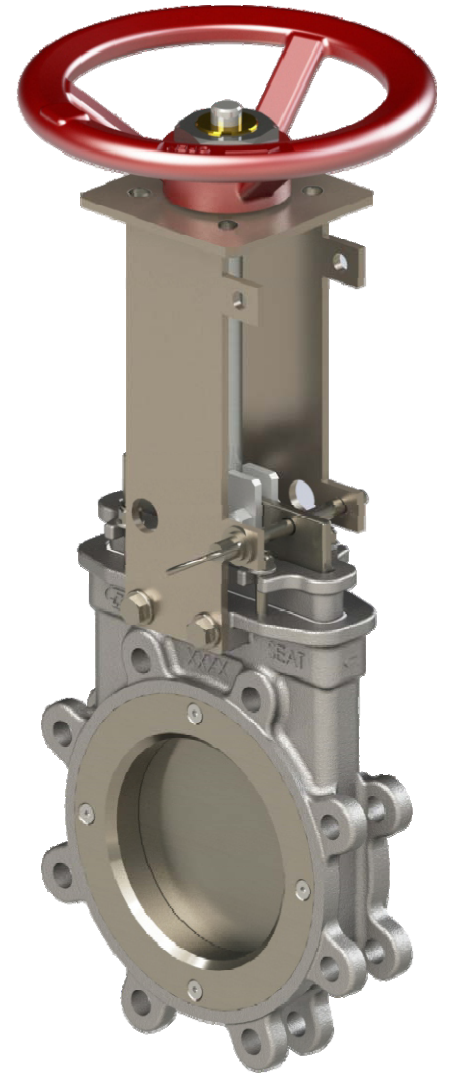
**KGBL SERIES**

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## General

Series KGBL Knife Gate Valve is a uni-directional valve designed for isolation application where Solid-Liquid mixes, corrosive, abrasive, viscous liquid, abrasive slurries, pulp stock and dry materials are involved.

The Series KGBL Valve features, the design of the body and seat ensures non-clogging shut off. The body is made of single casting, cast integral jam with no welding on pressure containing parts, to make it more even rugged. The design incorporates rigid fabricate yoke which will accommodate handwheel & pneumatic cylinder, raised face seat for positive sealing. Internal cast wedges and gate guides allows for tight shut off.



## Applications

- Pulp and Paper
- Power plants
- Mining
- Chemical plants
- Wastewater
- Food and Beverage, etc...

## Technical Specifications

Size	:	2" to 24"
End Style	:	Full Lugged Model 84U
Working Pressure	:	2" to 24" - 150 Psi (10 bar)
Standard flange connection	:	ANSI B16.5 (class 150) and others on request
Seat	:	Resilient Seat
Design conforms to	:	MSS SP-81
Actuation	:	Hand wheel / Chain wheel / Bevel Gear Electric / Pneumatic / Hydraulic



## Test Specifications

Body Shell Test	: As per MSS SP-81
Seat Leakage Test	: As per MSS SP-81

All valves are tested prior to shipping in accordance with the quality system standard followed by quality control department to meet international standards.

## Design Features

### **BODY:**

One piece integrally cast stainless steel body with reinforced ribs in larger diameters for Additional strength, Internal cast gate wedges and guides allows for tighter shutoff, the flow bore and internal design of the body ensures smooth flow without any restriction.

### **GATE:**

Stainless steel gate is standard unless specified by customer. Gates machined and polished for a greater sealing between the gate and packing. Bottom of the gate edge is machined to a bevel to cut through solids for a tighter seal in the closed position.

### **PACKING:**

Standard braided PTFE impregnated fiber with Viton (or) Nitrile wiper ring to ensure the tight sealing. Braided packing is available in a wide range of materials. Wiper ring provided to assist sealing during working and static conditions.

### **STEM:**

The standard stainless steel stem offers a long corrosion resistant life. As an optional feature for rising stem hand wheel actuators, stem protector can be provided for additional protection against dust.

### **ACTUATORS:**

All actuators supplied are interchangeable, and supplied with a standard mounting kit to allow for installation on site.

## Parts List for Knife Gate Valve

Sl. No	Part	Details		
1	Body	CF8M	CF8M	CG8M
2	Gate	SS 316	SS 316	SS 317
3	Resilient Seat	Viton		
4	Retainer Ring	CF8M		
5	Packing	PTFE Impreg. Syn. Fibre		
6	Wiper	Viton		
7	Packing Gland	CF8M	CF8M	CG8M
8	Clevis	SS 304		
9	Stem	SS 304		
10	Yoke	Carbon Steel	SS 304	SS 304
11	Stem Sleeve	SAE 660 Bronze		
12	Handwheel Key	Plated Steel		
13	Collar	Nylon		
14	Thrust Washer	Brass		
15	Handwheel	Ductile Iron		
16	Handwheel Nut	Plated Steel		
17	Lock Pin	SS 410 / 17.4 PH		

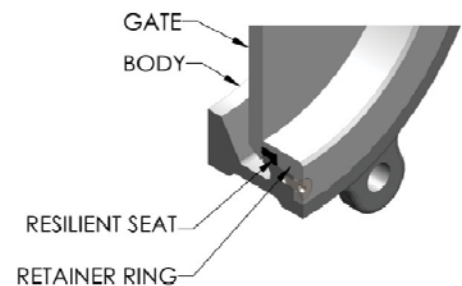
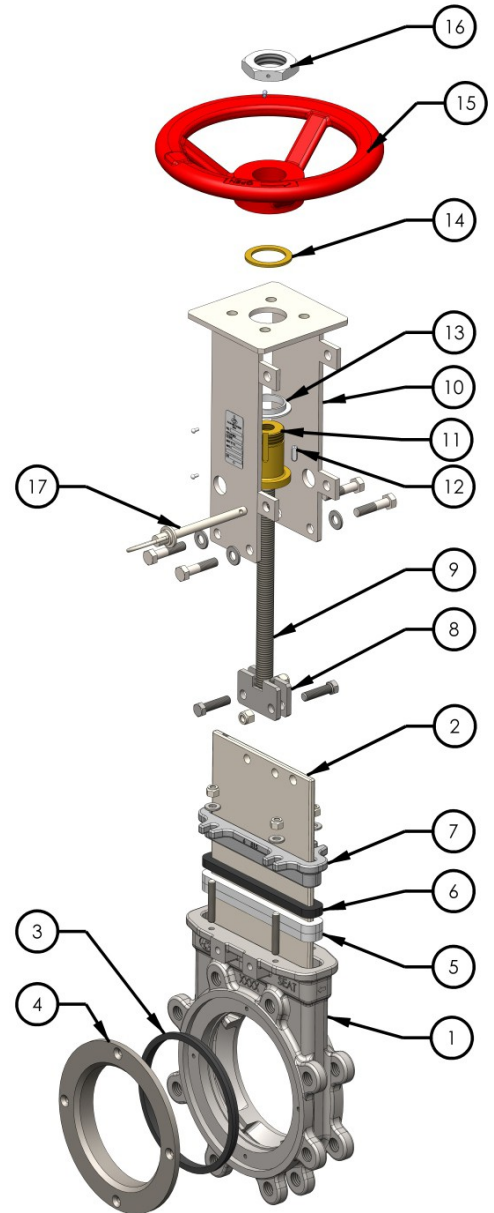
### OPTIONS:

- Body : WCB, CF8, CK20, CN7M, CN3MN, DUPLEX  
 Gate : SS304, SS310, 17-4PH, SS2205, AL6XN  
 Wiper : Nitrile  
 Clevis : SS 316  
 Collar : PTFE  
 Handwheel : Aluminum  
 Others on Request

### SEAT TYPE

#### Metal to Soft

- Zero Leakage
- Limited Temperature
- Replaceable seat Viton/EPDM



## Hand Wheel Actuation

## Dimension details

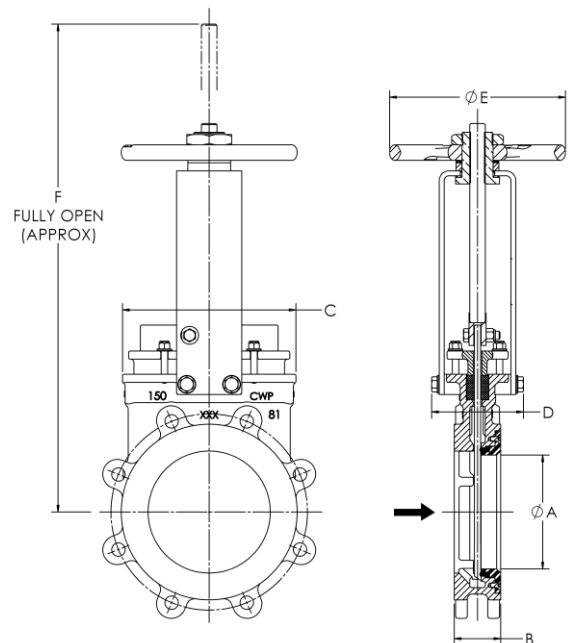
Available for valve sizes 2" to 24"

Standard hand wheel actuator

- Hand wheel
- Stem
- Stem sleeve
- Locking Device

Options:

- Chain wheel
- Non-Rising Stem
- Stem Protector



VALVE SIZE	ØA	B	C	D	ØE	F
2" 50	1.89 48.0	1.89 48.0	5.63 143.0	3.94 100.0	8.50 216.0	20.1 510.0
3" 80	3.15 80.0	2.01 51.0	6.77 172.0	3.94 100.0	8.50 216.0	23.4 595.0
4" 100	3.94 100.0	2.01 51.0	7.56 192.0	3.94 100.0	8.50 216.0	24.6 625.0
5" 125	4.92 125.0	2.24 57.0	7.56 192.0	4.53 115.0	8.50 216.0	27.6 700.0
6" 150	5.91 150.0	2.24 57.0	8.39 213.0	4.53 115.0	8.50 216.0	29.9 760.0
8" 200	7.87 200.0	2.76 70.0	10.94 278.0	5.31 135.0	10.00 254.0	36.4 925.0
10" 250	9.45 240.0	2.76 70.0	12.99 330.0	5.71 145.0	14.02 356.0	41.7 1060.0
12" 300	11.42 290.0	2.99 76.0	15.08 383.0	5.71 145.0	14.02 356.0	47.0 1195.0
14" 350	12.60 320.0	2.99 76.0	17.72 450.0	7.48 190.0	18.03 458.0	54.1 1375.0
16" 400	14.37 365.0	3.50 89.0	20.28 515.0	7.48 190.0	18.03 458.0	58.9 1495.0
18" 450	16.14 410.0	3.50 89.0	20.79 528.0	8.27 210.0	20.00 508.0	64.8 1645.0
20" 500	17.91 455.0	4.49 114.0	23.78 604.0	8.27 210.0	20.00 508.0	69.9 1775.0
24" 600	21.65 550.0	4.49 114.0	28.35 720.0	8.27 210.0	24.02 610.0	82.5 2095.0

## Gear Actuation

## Dimension details

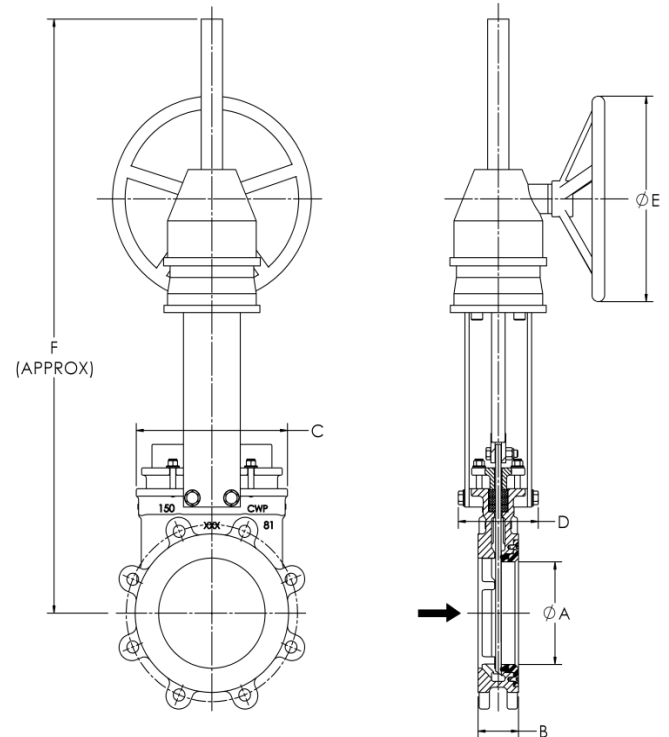
Available for valve sizes 8" to 24"  
Other sizes on request

Standard Bevel Gear Actuation:

- Stem
- Yoke
- Bevel Gear Actuator with Hand wheel
- Locking device

Options:

- Chain wheel
- Non-rising stem



VALVE SIZE	ØA	B	C	D	ØE	F
8" 200	7.87 200.0	2.76 70.0	10.94 278.0	5.31 135.0	11.81 300.0	33.07 840.0
10" 250	9.45 240.0	2.76 70.0	12.99 330.0	5.71 145.0	11.81 300.0	38.19 970.0
12" 300	11.42 290.0	2.99 76.0	15.08 383.0	5.71 145.0	15.75 400.0	44.69 1135.0
14" 350	12.60 320.0	2.99 76.0	17.72 450.0	7.48 190.0	15.75 400.0	50.39 1280.0
16" 400	14.37 365.0	3.50 89.0	20.28 515.0	7.48 190.0	19.69 500.0	55.12 1400.0
18" 450	16.14 410.0	3.50 89.0	20.79 528.0	8.27 210.0	19.69 500.0	61.02 1550.0
20" 500	17.91 455.0	4.49 114.0	23.78 604.0	8.27 210.0	19.69 500.0	66.34 1685.0
24" 600	21.65 550.0	4.49 114.0	28.35 720.0	8.27 210.0	19.69 500.0	78.94 2005.0

## Pneumatic Actuation

Available for valve size 2" to 24"

Standard pneumatic Actuation:

- Stainless steel barrels
- Stainless steel piston rod
- Cast or ductile iron or steel end cover
- Carbon steel protection cover
- Locking device

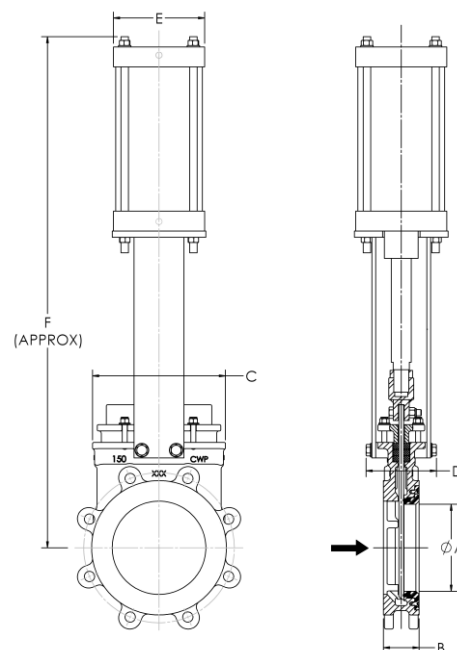
Supply air Pressure: Minimum 4 kg/cm<sup>2</sup>

Maximum 10 kg/cm<sup>2</sup>

Options:

- Air filter with regulators
- Solenoid valves
- Mechanical limit switch
- Proximity switch
- Manual override
- Fail safe systems

## Dimension details



VALVE SIZE	ØA	B	C	D	E	F	Cylinder: Dia/Stroke (Apx.)
2"	1.89	1.89	5.63	3.94	4.92	23.23	4 / 2.5
50	48.0	48.0	143.0	100.0	125.0	590.0	100 / 65
3"	3.15	2.01	6.77	3.94	4.92	26.57	4 / 3.5
80	80.0	51.0	172.0	100.0	125.0	675.0	100 / 90
4"	3.94	2.01	7.56	3.94	4.92	28.35	4 / 4.5
100	100.0	51.0	192.0	100.0	125.0	720.0	100 / 115
5"	4.92	2.24	7.56	4.53	6.10	32.48	5 / 5.5
125	125.0	57.0	192.0	115.0	155.0	825.0	125 / 140
6"	5.91	2.24	8.39	4.53	6.10	34.84	5 / 6.3
150	150.0	57.0	213.0	115.0	155.0	885.0	125 / 160
8"	7.87	2.76	10.94	5.31	7.09	40.75	6 / 8.8
200	200.0	70.0	278.0	135.0	180.0	1035.0	160 / 220
10"	9.45	2.76	12.99	5.71	9.45	48.62	8 / 10.8
250	240.0	70.0	330.0	145.0	240.0	1235.0	200 / 270
12"	11.42	2.99	15.08	5.71	9.45	54.33	8 / 12.8
300	290.0	76.0	383.0	145.0	240.0	1380.0	200 / 320
14"	12.60	2.99	17.72	7.48	11.42	62.60	10 / 14.9
350	320.0	76.0	450.0	190.0	290.0	1590.0	250 / 380
16"	14.37	3.50	20.28	7.48	11.42	67.13	10 / 16.9
400	365.0	89.0	515.0	190.0	290.0	1705.0	250 / 430
18"	16.14	3.50	20.79	8.27	13.58	72.44	12 / 18.9
450	410.0	89.0	528.0	210.0	345.0	1840.0	300 / 480
20"	17.91	4.49	23.78	8.27	13.58	77.56	12 / 20.9
500	455.0	114.0	604.0	210.0	345.0	1970.0	300 / 530
24"	21.65	4.49	28.35	8.27	13.58	89.96	12 / 24.8
600	550.0	114.0	720.0	210.0	345.0	2285.0	300 / 630

## Electric Actuation

## Dimension details

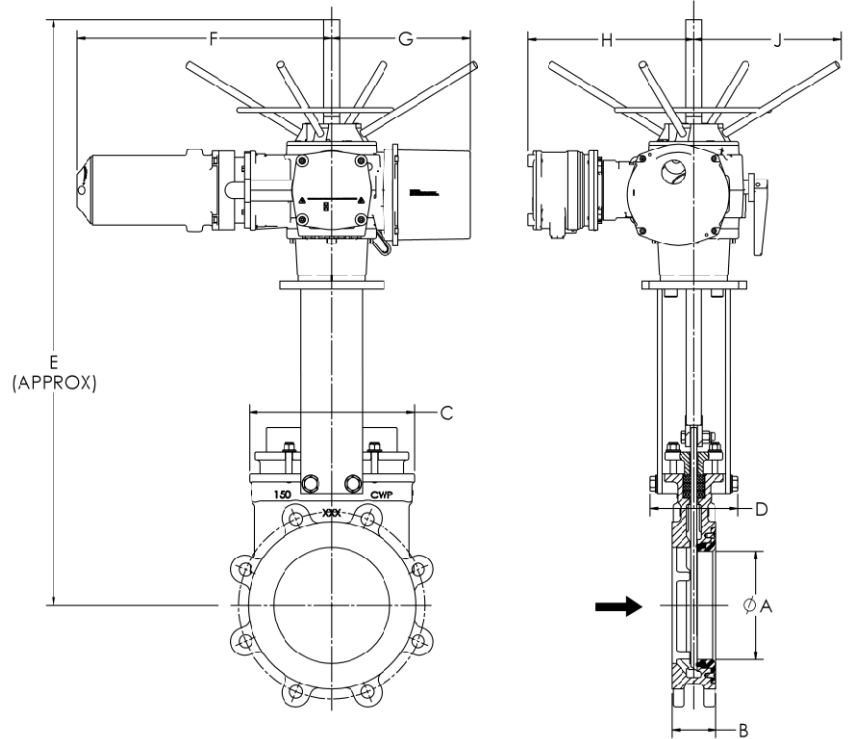
Available for valve size 2" to 24"

Standard Electric Actuation:

- Electric motor
- Manual emergency operation
- Limit switches (open/closed)
- Torque switches
- Rising stem Yoke
- Stem Protector
- Protection Cover

Option:

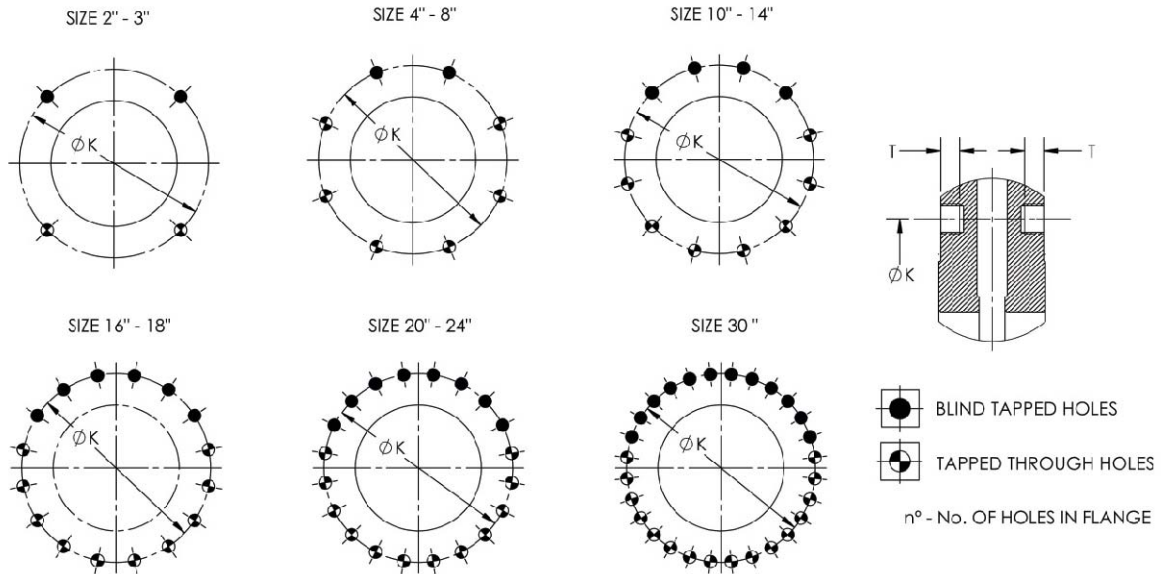
- Non-rising stem
- Mechanical Limits switch



VALVE SIZE	ØA	B	C	D	E	F	G	H	J
2" 50	1.89 48.0	1.89 48.0	5.63 143.0	5.31 135.0	20.47 520.0	13.78 350.0	12.60 320.0	11.81 300.0	7.09 180.0
3" 80	3.15 80.0	2.01 51.0	6.77 172.0	5.31 135.0	22.44 570.0	13.78 350.0	12.60 320.0	11.81 300.0	7.09 180.0
4" 100	3.94 100.0	2.01 51.0	7.56 192.0	3.94 100.0	23.62 600.0	13.78 350.0	12.60 320.0	11.81 300.0	7.09 180.0
5" 125	4.92 125.0	2.24 57.0	7.56 192.0	4.53 115.0	24.80 630.0	13.78 350.0	12.60 320.0	11.81 300.0	7.09 180.0
6" 150	5.91 150.0	2.24 57.0	8.39 213.0	4.53 115.0	27.17 690.0	13.78 350.0	12.60 320.0	11.81 300.0	7.09 180.0
8" 200	7.87 200.0	2.76 70.0	10.94 278.0	5.31 135.0	33.07 840.0	13.78 350.0	12.60 320.0	11.81 300.0	7.09 180.0
10" 250	9.45 240.0	2.76 70.0	12.99 330.0	5.71 145.0	38.19 970.0	13.78 350.0	12.60 320.0	11.81 300.0	7.09 180.0
12" 300	11.42 290.0	2.99 76.0	15.08 383.0	5.71 145.0	44.69 1135.0	13.78 350.0	12.60 320.0	11.81 300.0	7.09 180.0
14" 350	12.60 320.0	2.99 76.0	17.72 450.0	7.48 190.0	50.39 1280.0	13.78 350.0	12.60 320.0	11.81 300.0	7.09 180.0
16" 400	14.37 365.0	3.50 89.0	20.28 515.0	7.48 190.0	55.12 1400.0	21.65 550.0	13.78 350.0	13.78 350.0	8.86 225.0
18" 450	16.14 410.0	3.50 89.0	20.79 528.0	8.27 210.0	61.02 1550.0	21.65 550.0	13.78 350.0	13.78 350.0	8.86 225.0
20" 500	17.91 455.0	4.49 114.0	23.78 604.0	8.27 210.0	66.34 1685.0	21.65 550.0	13.78 350.0	13.78 350.0	8.86 225.0
24" 600	21.65 550.0	4.49 114.0	28.35 720.0	8.27 210.0	78.94 2005.0	25.59 650.0	13.78 350.0	14.96 380.0	12.20 310.0



## Flange and Bolting Details (ASME B 16.5 – Class 150)



Size: Inch / mm	K	n°	Thread	T	
2" 50	4.75 120.7	4	5/8-11 UNC	0.35 9.0	2 - 2
2 1/2" 65	5.50 139.7	4	5/8-11 UNC	0.35 9.0	2 - 2
3" 80	6.00 152.4	4	5/8-11 UNC	0.35 9.0	2 - 2
4" 100	7.50 190.5	8	5/8-11 UNC	0.50 12.7	2 - 6
6" 150	9.50 241.3	8	3/4-10 UNC	0.50 12.7	2 - 6
8" 200	11.75 298.5	8	3/4-10 UNC	0.50 12.7	2 - 6
10" 250	14.25 362	12	7/8-9 UNC	0.50 12.7	4 - 8
12" 300	17.00 431.8	12	7/8-9 UNC	0.50 12.7	4 - 8
14" 350	18.75 476.3	12	1-8 UNC	0.51 13.0	4 - 8
16" 400	21.25 539.8	16	1-8 UNC	0.51 13.0	6 - 10
18" 450	22.75 577.8	16	1 1/8 -7 UNC	0.51 13.0	6 - 10
20" 500	25.00 635	20	1 1/8 -7 UNC	0.98 25.0	8 - 12
24" 600	29.50 749.3	20	1 1/4 -7 UNC	0.98 25.0	8 - 12