SAMAMAT

KNIFE GATE VALVE

KGBM & KGBS SERIES

General

Series KGBM & Series KGBS bonnet Knife Gate Valves are a uni-directional valves designed for isolation application where Solid-Liquid mixes, corrosive, abrasive, viscous liquid, abrasive slurries, pulp stock and dry materials are involved.

The Bonnet is cast or fabricated depending on valve size and pressure rating of the valve. Sealing to atmosphere is achieved using a round gland sealing arrangement on top of the bonnet. This assures very tight sealing which is not normally feasible on standard knife gate valves with a large rectangular packing area.

Bonnet valves are generally used for buried services where backfill covers the valve and also suitable for application requiring a high level of gland tightness such as dangerous and toxic gases. The bonnet also prevents internal corrosion from fluid handled.

Flush ports also provided to clean the bonnet periodically. Purging can be made with air, steam, liquids, etc. depending on the fluidhandled.

Application

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

Technical Specifications

Size	: 6” to 24”
End Style	: Full Lugged
Working Pressure	: 2” to 24” - 150 Psi (10 bar)
Standard flange connection	: ANSI B16.5 (class 150) and others onrequest
Seat	: Metal / Resilient
Design conforms to	: MSS SP-81

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. 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.

FOR VALVE PACKING:

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

FOR BONNET PACKING:

Standard braided PTFE impregnated fiber packing provided on top of the bonnet to ensure the very tight sealing to atmosphere.

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 from dust collection on the stem.

ACTUATORS:

Hand wheel operators can be easily replaced with gear operator or pneumatic actuator or electric actuator and valves can be supplied with a standard mounting kit to allow for installation on site.

Options

Throttling:

V port or Pentagonal port design can be provided for valve throttling application to control the flow. Selection of the port and angle based on flow media and application. Please consult Technical Team for port and angle selection.

Flush ports:

Allow for cleaning of solids trapped within the body cavities that can obstruct the flow or prevent the valve from closing. Purging can be made with air, steam, liquids, etc. depending on the fluid handled.

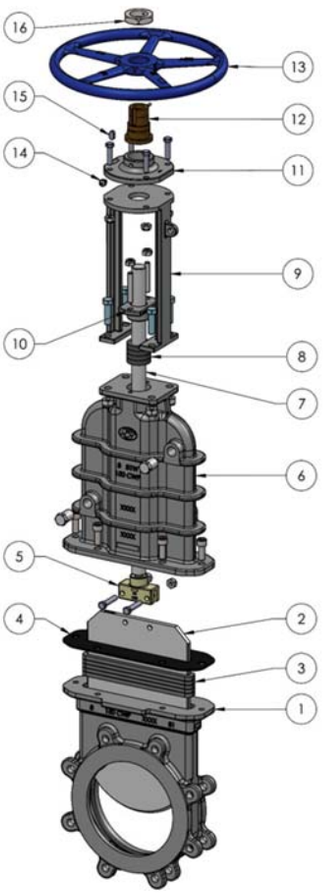
Surface Treatments:

Valve components can be protected or coated for a longer life expectancy, depending on application and the service conditions.

- The epoxy coating on all non stainless steel components and electrostatically applied making them Corrosion resistant with a high quality surface finish.
- Gates can be provided with different coatings to improve wear and corrosion resistance, non-adherence properties etc.
- Please consult Technical Team for coating or surface treatment for special application.

Parts List for Bonneted Knife Gate Valve

Sl. No.	Part	Details
1	Body	CF8 / CF8M / CG8M
2	Gate	SS 304 / 316 / 317
3	Packing (Body)	PTFE Imp. Syn. Fibre
4	Gasket	Non-Asbestos
5	Clevis	CF8
6	Bonnet	CF8 / CF8M / CG8M
7	Stem	SS 304
8	Packing (Bonnet)	PTFE Imp. Syn. Fibre
9	Yoke	CF8 / WCB / DI
10	Bonnet Gland	CF8 / CF8M / CG8M
11	Sleeve Housing	CF8 / WCB / DI
12	Stem sleeve	SAE 660
13	Hand wheel	DI
14	Grease Nipple	Plated Steel
15	Hand wheel Key	Plated Steel
16	Hand wheel Nut	Plated Steel



Options

Manual Actuation

- Hand wheel
- Chain wheel
- Bevel Gear

Automatic Actuation

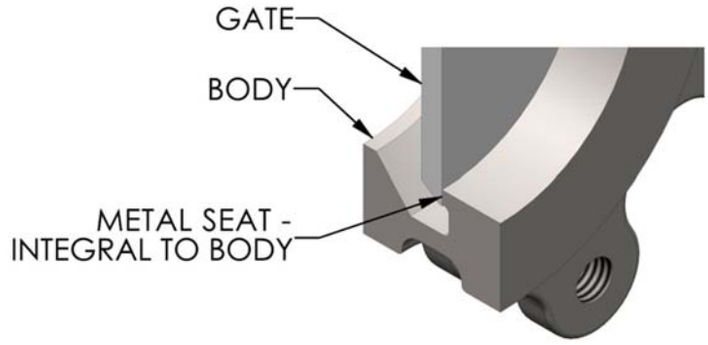
- Electric actuation
- Pneumatic actuation
- Hydraulic actuation

- Actuator manualoverride
- Limit Switches
- Proximity Switches
- Solenoid valves
- Air filterregulators
- Locking device

Seat Type

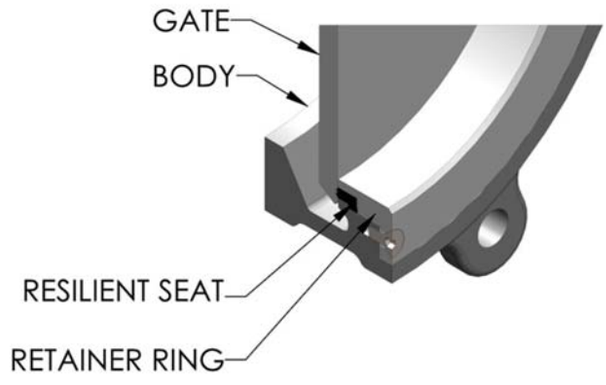
Metal to Metal - KGBM series

- High temperature
- High density media application
- When full tightness is not required



Metal to Soft - KGBS series

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



SAMAMAT

Hand Wheel Actuation

Dimension details

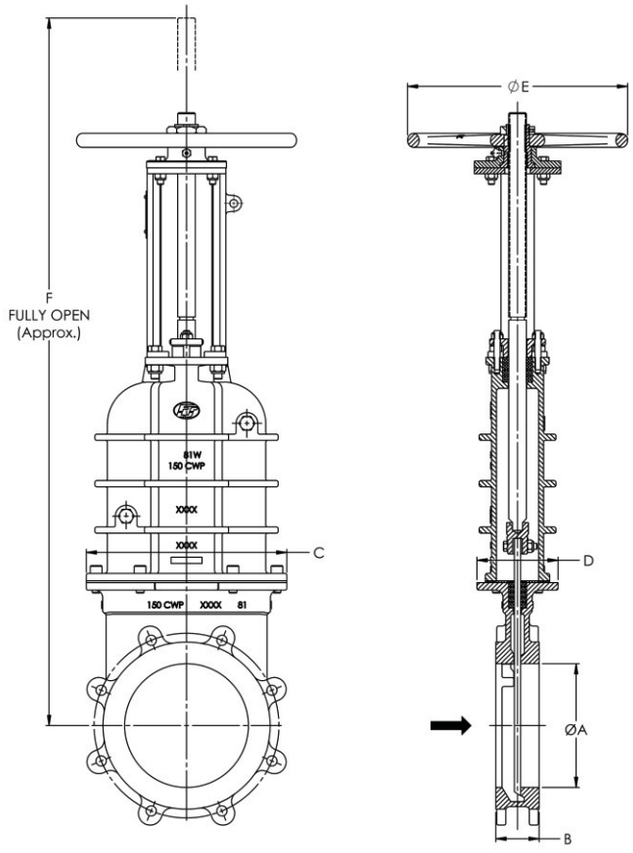
Available for valve sizes 6” to 24”

Standard hand wheel actuator

- Hand wheel
- Stem
- Stem sleeve

Options:

- Chain wheel
- Non-rising Stem
- Stem Protector
- Locking Device



Size: Inch / mm	A	B	C	D	E	F
6"	6.00	2.25	10.7	5.2	14.0	37.2
150	150.0	57.2	273	131	356	945
8"	8.00	2.75	12.7	5.2	14.0	47.4
200	200.0	70.0	324	131	356	1205
10"	10.00	2.75	15.0	5.3	18.0	56.1
250	250.0	70.0	383	135	458	1425
12"	11.4	3.00	17.0	5.6	18.0	62.6
300	290.0	76.2	432	143	458	1590
14"	12.6	3.00	18.5	6.4	20.0	71.9
350	320.0	76.2	470	162	508	1825
16"	14.4	3.50	21.2	8.0	20.0	78.3
400	365.0	89.0	540	205	508	1990
18"	16.1	3.50	23.3	7.5	24.0	94.0
450	410.0	89.0	591	191	610	2385
20"	18.7	4.50	26.0	7.5	24.0	108.2
500	475.0	114.3	661	191	610	2750
24"	22.6	4.50	30.0	7.5	30.0	128.0
600	575.0	114.3	762	216	762	3250

Gear Actuation

Available for valve sizes 6” to 24”

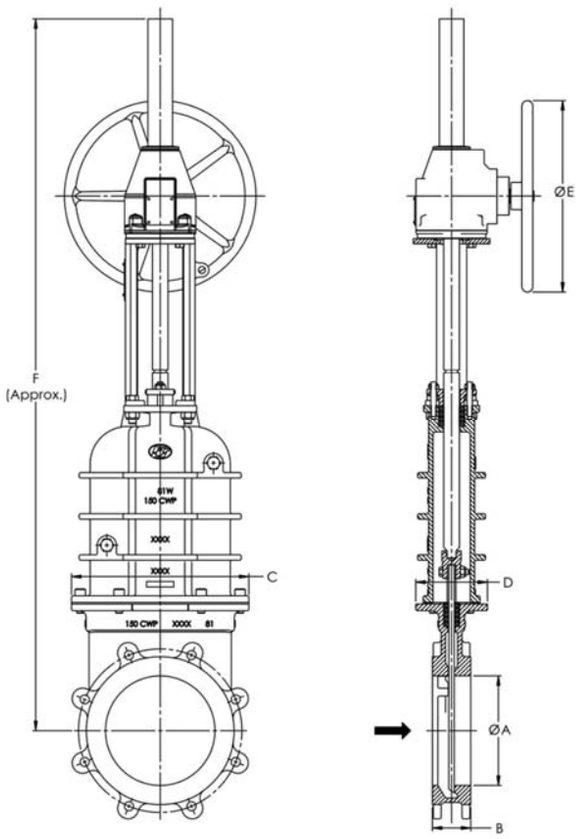
Standard Bevel Gear Actuation:

- Stem
- Yoke
- Bevel Gear Actuator with Hand wheel

Options:

- Chain wheel
- Non-rising stem
- Locking device

Dimension details



Size: Inch / mm	A	B	C	D	E	F
6" 150	6.00 150.0	2.25 57.2	10.7 273	5.2 131	11.8 300	40.7 1035
8" 200	8.00 200.0	2.75 70.0	12.7 324	5.2 131	11.8 300	49.6 1260
10" 250	10.00 250.0	2.75 70.0	15.0 383	5.3 135	11.8 300	60.6 1540
12" 300	11.4 290.0	3.00 76.2	17.0 432	5.6 143	15.7 400	69.7 1770
14" 350	12.6 320.0	3.00 76.2	18.5 470	6.4 162	15.7 400	76.4 1940
16" 400	14.4 365.0	3.50 89.0	21.2 540	8.0 205	19.7 500	84.3 2140
18" 450	16.1 410.0	3.50 89.0	23.3 591	7.5 191	19.7 500	95.3 2420
20" 500	18.7 475.0	4.50 114.3	26.0 661	7.5 191	19.7 500	105.7 2685
24" 600	22.6 575.0	4.50 114.3	30.0 762	7.5 216	19.7 500	125.0 3175

SAMAMAT

Pneumatic Actuation

Available for valve size 6” to 24”

Standard pneumatic Actuation:

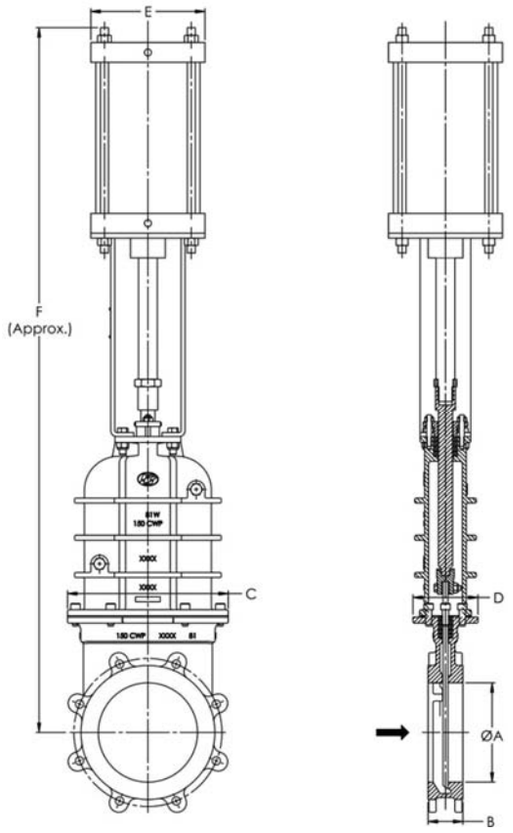
- Stainless steel Barrels
- Stainless steel Piston Rod
- Cast or ductile iron or steel End Cover

Supply air Pressure : Minimum 4 kg/cm^2
: Maximum 10 kg/cm^2

Options:

- Air filter with regulators
- Solenoid valves
- Mechanical limitswitch
- Proximity switch
- Manual override
- Fail safe systems
- Locking device

Dimension details



Size: Inch / mm	A	B	C	D	E	F	Cylinder: Dia/Stroke
6"	6.00	2.25	10.7	5.2	6.5	44.5	4 / 2.5
150	150.0	57.2	273	131	165	1130	100 / 65
8"	8.00	2.75	12.7	5.2	9.1	53.9	4 / 3.5
200	200.0	70.0	324	131	230	1370	100 / 90
10"	10.00	2.75	15.0	5.3	10.8	66.3	4 / 4.5
250	250.0	70.0	383	135	274	1685	100 / 115
12"	11.4	3.00	17.0	5.6	13.2	75.8	5 / 5.5
300	290.0	76.2	432	143	335	1925	125 / 140
14"	12.6	3.00	18.5	6.4	15.2	83.5	5 / 6.3
350	320.0	76.2	470	162	385	2120	125 / 160
16"	14.4	3.50	21.2	8.0	15.2	91.3	6 / 8.8
400	365.0	89.0	540	205	385	2320	160 / 220
18"	16.1	3.50	23.3	7.5	17.1	92.0	8 / 10.8
450	410.0	89.0	591	191	435	2335	200 / 270
20"	18.7	4.50	26.0	7.5	17.1	103.1	8 / 12.8
500	475.0	114.3	661	191	435	2620	200 / 320
24"	22.6	4.50	30.0	8.5	19.1	119.7	10 / 14.9
600	575.0	114.3	762	216.0	485	3040	250 / 280

Electric Actuation

Available for valve size 6” to 24”

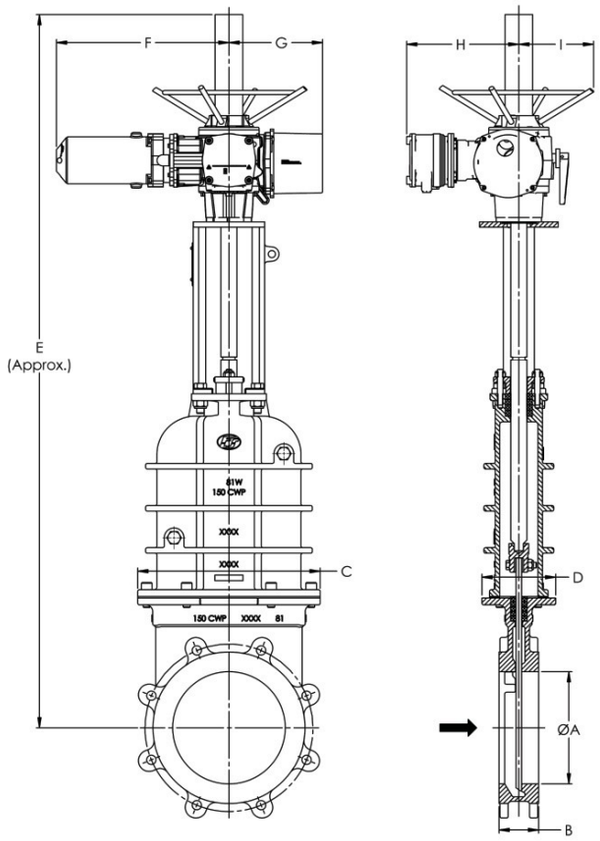
Standard Electric Actuation:

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

Option:

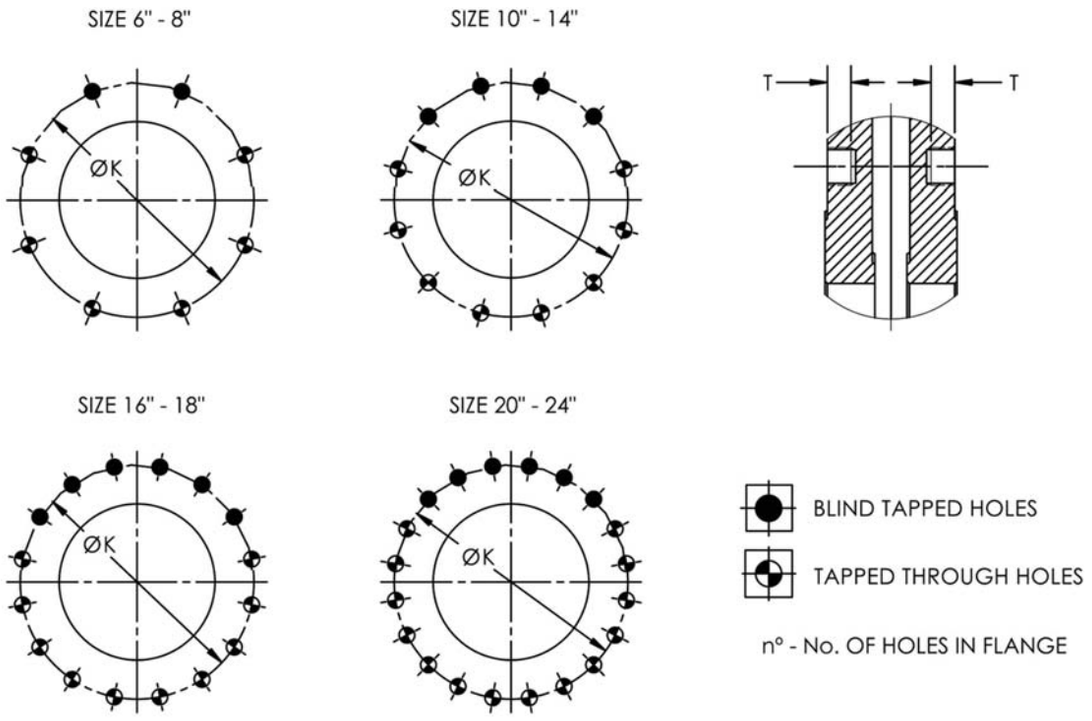
- Non-rising stem
- Mechanical Limits switch

Dimension details



Size: Inch / mm	A	B	C	D	E	F	G	H	J
6"	6.00	2.25	10.7	5.2	47.4	13.8	12.6	11.8	7.1
150	150.0	57.2	273	131	1205	350	320	300	180
8"	8.00	2.75	12.7	5.2	56.5	13.8	12.6	11.8	7.1
200	200.0	70.0	324	131	1435	350	320	300	180
10"	10.00	2.75	15.0	5.3	67.0	13.8	12.6	11.8	7.1
250	250.0	70.0	383	135	1700	350	320	300	180
12"	11.4	3.00	17.0	5.6	75.8	13.8	12.6	11.8	7.1
300	290.0	76.2	432	143	1925	350	320	300	180
14"	12.6	3.00	18.5	6.4	81.9	13.8	12.6	11.8	7.1
350	320.0	76.2	470	162	2080	350	320	300	180
16"	14.4	3.50	21.2	8.0	94.9	21.7	13.8	13.8	8.9
400	365.0	89.0	540	205	2410	550	350	350	225
18"	16.1	3.50	23.3	7.5	104.3	21.7	13.8	13.8	8.9
450	410.0	89.0	591	191	2650	550	350	350	225
20"	18.7	4.50	26.0	7.5	116.5	21.7	13.8	13.8	8.9
500	475.0	114.3	661	191	2960	550	350	350	225
24"	22.6	4.50	30.0	7.5	133.8	25.6	13.8	15.0	12.2
600	575.0	114.3	762	216.0	3400	650	350	380	310

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



Size: Inch / mm	K	nº	Thread	T	●●
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

SAMAMAT FLOW CONTROL L.L.C.
P.O. Box: 96047, Ware House No.: 6,
Plot No.: 597-4904, Dubai Investments Park 2,
Dubai, U.A.E
Phone : +971 4 884 2212
Fax : +971 4 884 2213
Email: info@samamatuae.com
Web: www.samamatuae.com