

STAINLESS STEEL HIGH PERFORMANCE RESILIENT SEATED KNIFE GATE VALVE

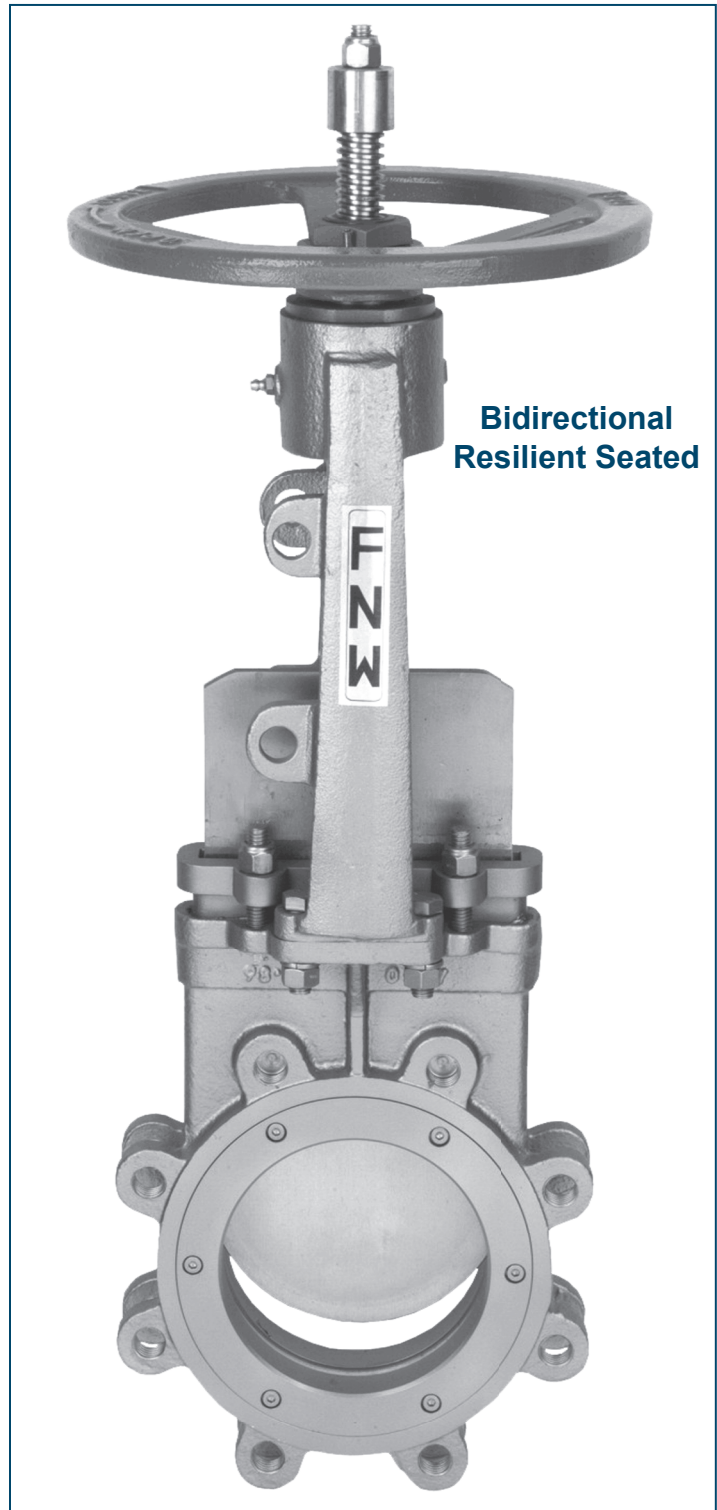
The figure 2000B is an all cast stainless steel body and yoke with investment cast packing follower. Reminiscent of high performance butterfly valves that utilize a retaining ring to secure the valve seat, the dual seat, bidirectional shut off of the 2000B is a unique design that performs in many applications not typical of knife gate valves.

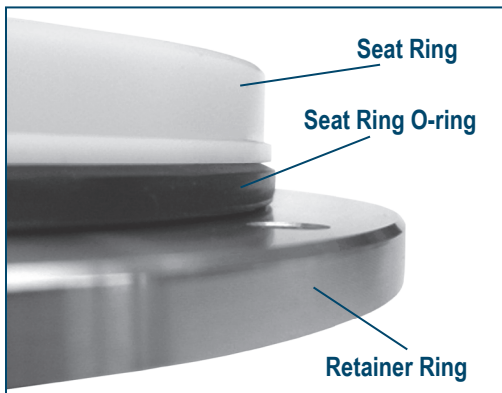
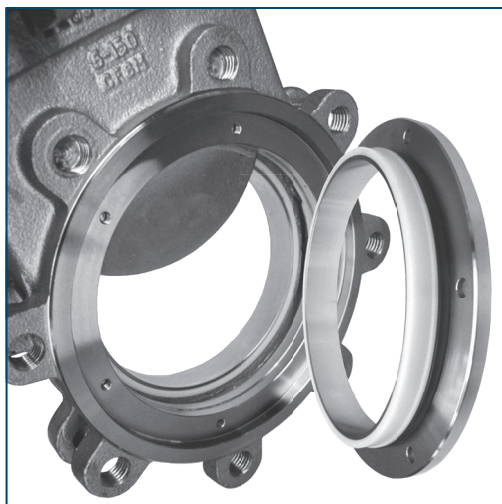
Features:

- Flex Teflon Seats for Positive Shut Off at Minimal Line Pressure
- Bidirectional Shut off
- Cast Stainless Steel Body, Yoke and Packing Gland
- Thrust Ball Bearing Yoke Bushing (6" & Larger)
- Ductile Iron Handwheel
- Bonnetless, Outside Screw & Yoke
- Rising Stem
- Meets MSS SP-81 Specification for 150 PSI CWP
- Cast Lugs in Yoke for Lockout in Closed Position or Optional Open Position (Lock Bar is Optional)
- Smooth Flow, Non-clogging Seat Design
- Available in sizes from 2" to 24"

Standards:

- Design: MSS SP-81
- Flange Drilling: ANSI B16.5
- Shell Test: MSS SP-81
- Seat Test: Exceeds MSS SP-81
- Material: ASME B16.34





Flex Teflon Seats

The FNW figure 2000B utilizes a seating design that provides positive shut off in both directions, even at low pressure differentials. Similar to high performance butterfly valve designs, the figure 2000B uses mechanically retained seat rings to hold the seats in place. The RTFE seats are carried on the retainer rings and are pre-compressed with o-rings to provide sealing pressure against the knife blade. These o-rings also act as the seal between the body and seat rings. Seat material can easily be replaced without disturbing the valve packing. This seat configuration also improves the longevity of the seat as it is not directly in the flow path.

Seat Rings

Made of RTFE, the seat rings are secured in place by an integral locator lip around its circumference, fitted into the valve body. Dual rings insure shut off in both directions.

Seat Ring O-ring

Behind each seat ring is a hefty EPDM o-ring. This o-ring not only provides sealing, but also maintains pressure behind the seat ring, ensuring a tight shut off.

Retainer Ring

Holding the seat rings and o-rings in place are the retainer rings. These heavy stainless steel rings make replacing the seats and o-ring quick and easy.

Options

FNW Valve Company offers many options and modifications for valves. These include, but are not limited to:

- Actuation including ratchets, chain wheels, AWWA nuts, gear-operators, pneumatic & hydraulic cylinders, and electric actuators
- Packing options for pH and temperature requirements
- Back seat stops for low ΔP or reverse operation applications, or to prevent knife blade deflection
- V-ports for reduced plugging in metering applications
- Stem extensions in carbon and stainless steel
- Conversion to non-rising stem (NRS)
- Deflection cones in Ni-Hard and HDPE for added seat and gate protection in abrasive services
- Flush ports to clear suspended matter from the valve chest or seat pocket area
- Quick opening levers
- Gate scraper

Contact FNW for knife gate valve options.

Packing Options

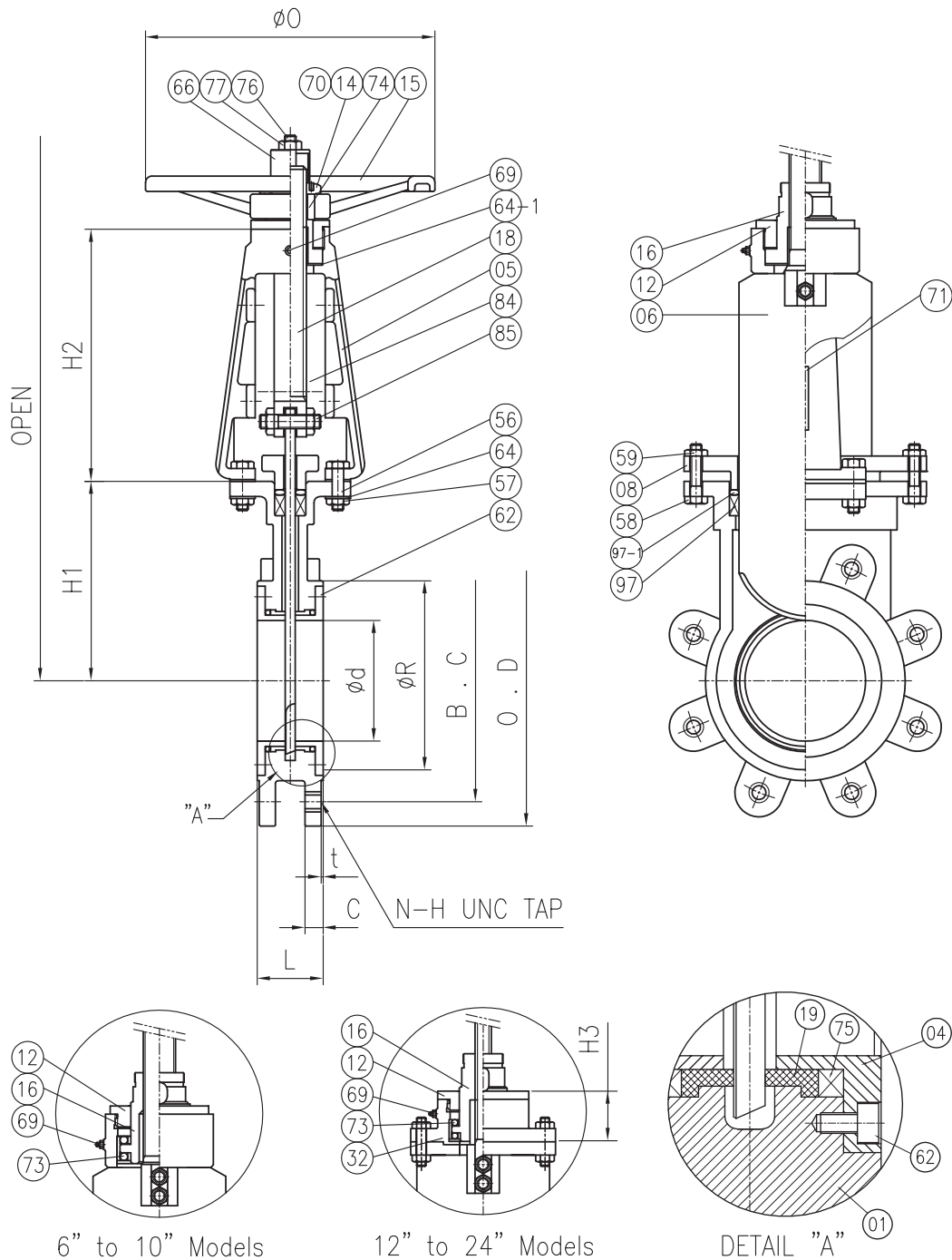
Type	Temperature Limit
PTFE Impregnated Fiber (Standard)	425°F
Pure TFE	425°F
TFE Fiber (Ultra)	500°F
Graphite Filament Yarn	1000°F

Figure Number Matrix

FNW 2000BT Size		
SIZE CODE		
2 = K	8 = X	18 = 18
2-1/2 = L	10 = 10	20 = 20
3 = M	12 = 12	24 = 24
4 = P	14 = 14	
6 = U	16 = 16	

Flow Coefficients, Port Areas, & Weights

Size	Cv	Port Area (in ²)	Wt. (Lbs)
2	195	2.69	17.75
2-1/2	320	3.97	20.25
3	500	5.98	25.5
4	1,100	10.98	34.5
6	3,200	25.59	64
8	5,400	43.92	97
10	7,900	70.1	153
12	10,700	102.38	223
14	13,800	132.67	256
16	17,000	166.64	382
18	20,000	214.75	428
20	24,000	268.67	613
24	31,000	395.29	783



Dimensions (inches)

Size	L	ϕd	Open	H1	H2	H3	O	Flange						
								O.D.	B.C.	ϕR	C	t	N	H
2	1.88	1.85	14.75	4.21	5.49	-	7.09	6.00	4.75	3.62	0.50	0.06	4	5/8 - 11
2-1/2	2.00	2.25	16.17	4.72	5.94	-	7.09	7.00	5.50	4.19	0.50	0.06	4	5/8 - 11
3	2.00	2.76	18.18	5.00	6.67	-	7.87	7.50	6.00	5.00	0.50	0.06	4	5/8 - 11
4	2.00	3.74	21.65	6.10	7.81	-	9.84	9.00	7.50	6.19	0.50	0.06	8	5/8 - 11
6	2.25	5.71	29.88	7.42	12.26	-	11.81	11.00	9.50	8.50	0.63	0.06	8	3/4 - 10
8	2.75	7.48	36.95	9.76	14.54	-	13.78	13.50	11.75	10.62	0.63	0.06	8	3/4 - 10
10	2.75	9.45	44.06	11.93	17.00	-	15.75	16.00	14.25	12.75	0.75	0.06	12	7/8 - 9
12	3.00	11.42	50.75	14.09	16.93	3.24	17.72	19.00	17.00	15.00	0.75	0.06	12	7/8 - 9
14	3.00	13.00	57.11	15.47	19.94	3.48	19.68	21.00	18.75	16.25	0.81	0.06	12	1 - 8
16	3.50	14.57	64.95	18.11	22.28	3.67	21.65	23.50	21.25	18.50	0.88	0.06	16	1 - 8
18	3.50	16.54	70.65	19.92	24.19	3.67	21.65	25.00	22.75	21.00	0.94	0.06	16	1-1/8 - 7
20	4.50	18.50	77.17	22.36	27.18	3.67	21.65	27.50	25.00	23.00	1.00	0.06	20	1-1/8 - 7
24	4.50	22.40	90.18	26.30	31.31	3.67	21.65	32.00	29.50	27.25	1.00	0.06	20	1-1/4 - 7

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Standard Materials

Ref. No.	Description	Material	Qty	Remarks
01	Body	A351 CF8M	1	
04	Retainer	A351 CF8M	2	
05	Yoke	A351 CF8	1	
06	Knife	A240 316	1	
08	Gland Flange	A351 CF8M	1	
12	Sleeve Gland	A351 CF8	1	
14	Wheel Nut	A351 CF8	1	
15	Handwheel	A536 65-45-12	1	
16	Yoke Sleeve	A439 D2C	1	
18	Stem	A182 F304	1	
19	Seat Ring	RTFE	2	
38	Sleeve Box	A351 CF8	1	12 - 24" Sizes Only
56	Yoke Bolt	A193 B8	1 Set	
57	Yoke Nut	A194 8	1 Set	
58	Gland Bolt	A193 B8	1 Set	
59	Gland Nut	A194 8	1 Set	
62	Seat Ring Bolt	A193 B8M	1 Set	
64	Washer	A276 304	1 Set	
66	Stopper	A182 F304	1	
69	Grease Nipple	A307 Gr. B	1	Cr. Plating
70	Set Screw	A193 B8	1	
71	Name Plate	A240 304	1	
73	Bearing	Ass'y	2	6 - 24" Sizes Only
74	Key	A108 1045	2	
75	O-ring	EPDM	2	
76	Stopper Bolt	A193 B8	1	
77	Stopper Nut	A194 8	1	
84	Pin Bolt	A193 B8	1	
85	Pin Nut	A194 8	1	
86	Sleeve Box Bolt	A193 B8	1 Set	12 - 24" Sizes Only
87	Sleeve Box Nut	A194 8	1 Set	12 - 24" Sizes Only
97	Packing	PTFE	1 Set	PTFE Impregnated Fiber
97-1	Packing / Wiper Seal	EPDM	1	