

RESILIENT SEATED KNIFE GATE VALVE

The figure 60R is a wafer flat-face flanged, bi-directional knife gate valve. It is suitable for a wide range of industrial applications, including abrasive slurry services. The full port design has no internal obstructions and provides a “blind flange” shut off when closed. The basic simplicity and open design of the valve invites an extremely wide range of options and accessories that can be tailored to specific applications.

Features:

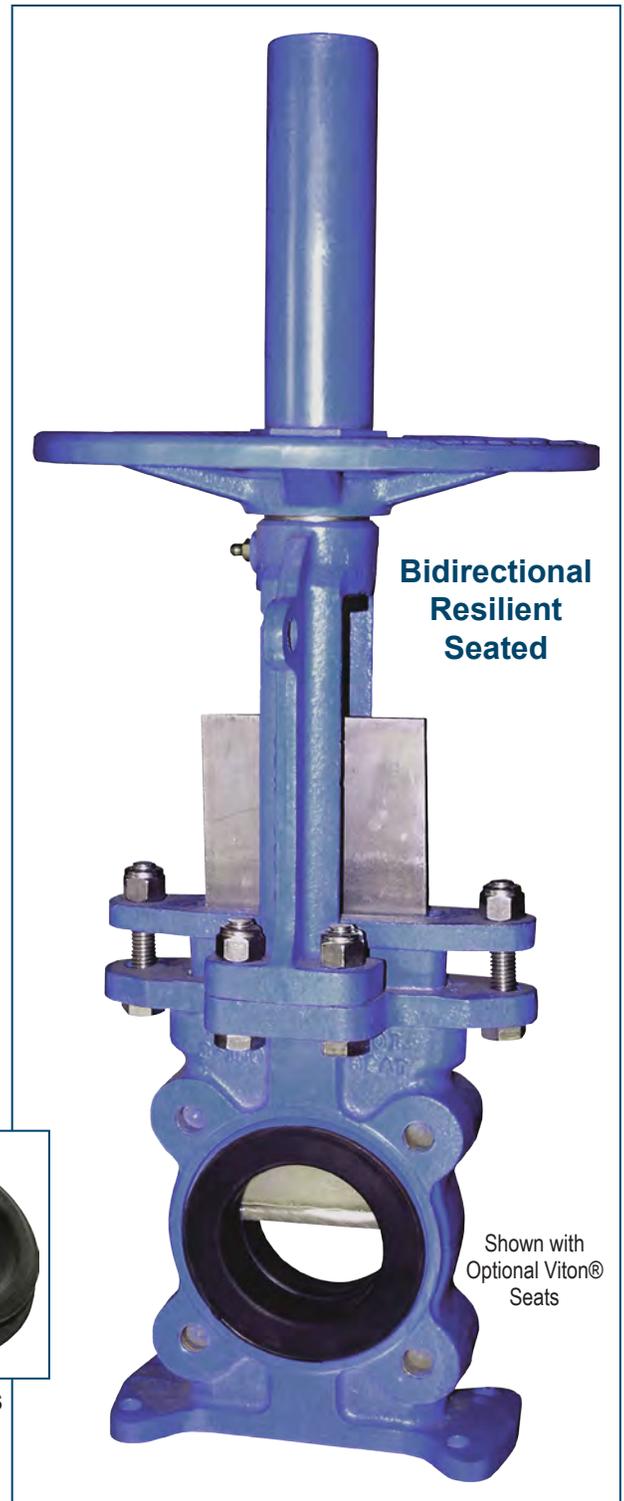
- Bidirectional Shutoff
- Replaceable “Pop In” Seats Install Easily with Valve in Open Position
- Economical Cast Body, Yoke, & Packing Gland
- Thrust Ball Bearing Yoke Bushing (6” & Larger)
- Gum Rubber Seat, Standard (Viton® optional)
- Bonnetless, Outside Screw & Yoke with Stem Cover and Stem Boot
- Bottom Splash Guard with Clean Out, Standard
- For Applications Up to 100 PSI CWP
- Available in sizes from 3” to 30”

Standards:

- Face-to-Face Design: MSS SP-81
- Flange Drilling: ANSI B16.5
- Shell Test: MSS SP-81
- Seat Test: Exceeds MSS SP-81

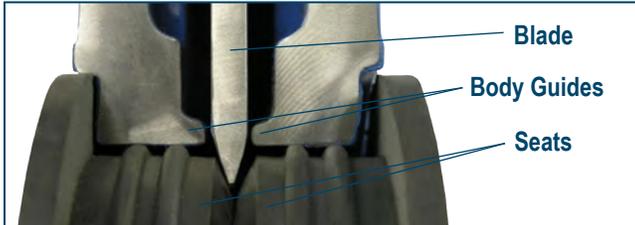


“Pop In” Resilient Seats



Design

The valve's sealing surface is between two thick resilient sleeves that are compressed into the valve housing. Two stainless steel stiffener rings are molded into the sleeves to locate it into the valve housing and to help the sleeves resist the high shearing forces present when the gate is driven between them. The body serves as an external guide to the knife gate blade. When in the open position, the stainless steel blade is completely withdrawn from the process flow and can be inspected, and replaced if necessary, without taking the valve out of service.



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
- Stem extensions in carbon and stainless steel
- Conversion to non-rising stem (NRS)
- Flush ports to clear suspended matter from the valve chest or seat pocket area
- Gate scraper
- Viton® seat

Contact FNW for knife gate valve options.

Seat Options

Type	Temperature Limit
Gum Rubber (Blue)	-22°F to 230°F
Viton® (Black)	14°F to 482°F

Note: Application temperature should be considered for selection of both seat and packing combinations.

Packing Options

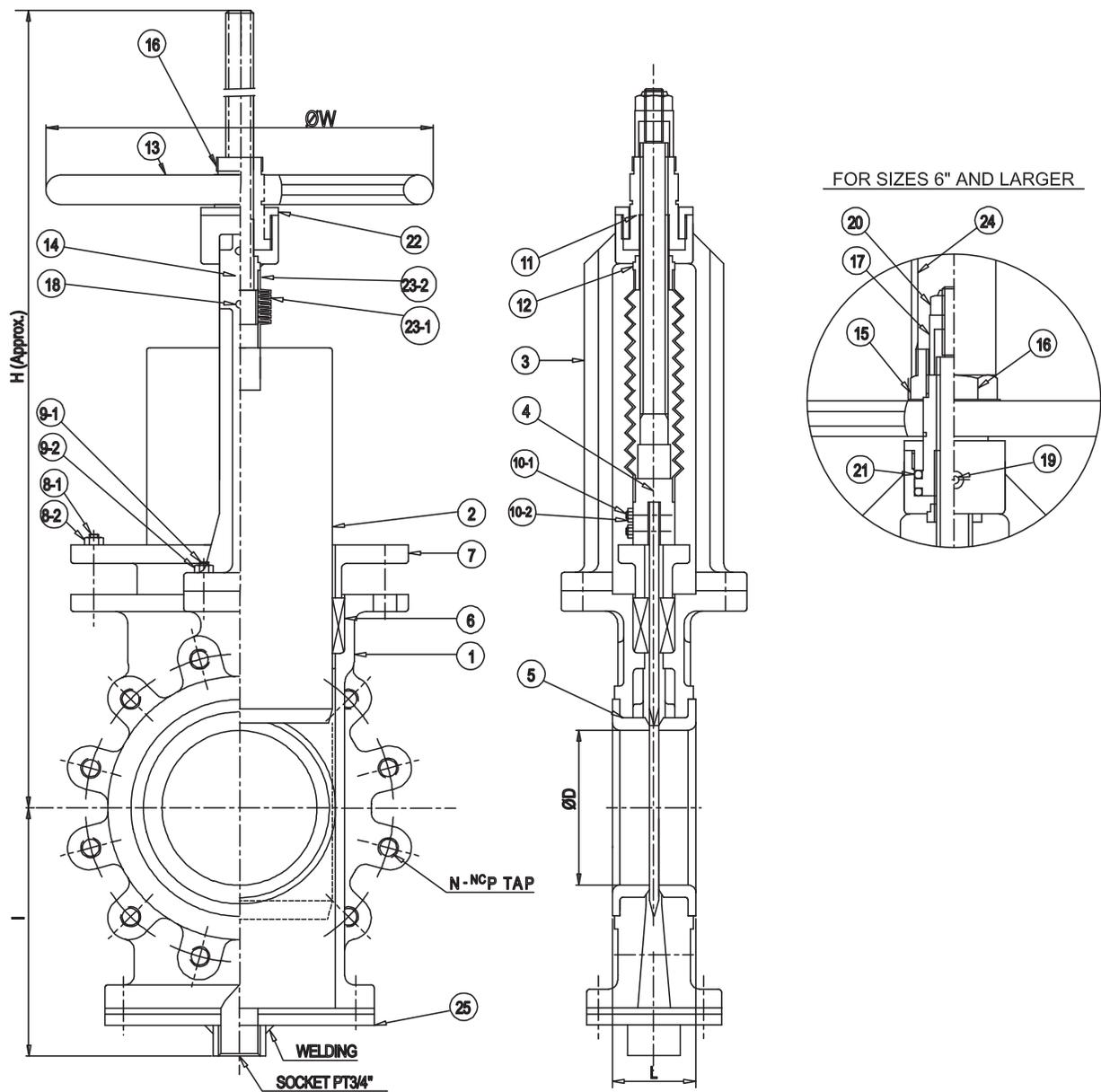
Type	Temperature Limit
PTFE Impregnated Fiber (Standard)	425°F
Pure TFE	425°F
TFE Fiber (Ultra)	500°F
Graphite Filament Yarn	1000°F

Standard Materials

Ref. No.	Description	Material	Qty	Remarks
1	Body	A216 WCB	1	
2	Blade	A240 316	1	
3	Yoke	A216 WCB	1	
4	Stem	A276 410	1	
5	Seat	GUM RUBBER	2	
6	Packing	PTFE Impregnated Fiber	1 Set	Non-Asbestos
7	Packing Gland	A216 WCB	1	30" is STEEL
8-1	Gland Bolt	STEEL	1 Set	
8-2	Gland Nut	STEEL	1 Set	Nylon Lock Nut
9-1	Yoke Bolt	STEEL	4	
9-2	Yoke Nut	STEEL	4	
10-1	Clevis Bolt	A193 B8	2	
10-2	Clevis Nut	A194 8	2	Nylon Lock Nut
11	Yoke Sleeve	BRASS	1	
12	Yoke Ring	A36	1	
13	Hand Wheel	A197	1	
14	Name Plate	ALUMINUM	1	
15	Lock Washer	A240 304	1	
16	Wheel Nut	BRASS	1	
17	Lock Cap	A276 304	1	
18	Rivet	ALUMINUM	2	
19	Grease Nipple	ASS'Y	1	
20	Lock Cap Nut	A194 8	1	Nylon Lock Nut
21	Thrust Ball Bearing	ASS'Y	1 Set	
22	Bearing Gland	A36	1	Tack Weld
23-1	Boot	GUM RUBBER	1	
23-2	Boot Clamp	A240 304	2	
24	Stem Cover	A120	1	
25	Bottom Cover	STEEL	1	

Flow Coefficients, Port Areas, & Weights

Size	Cv	Port Area (in ²)	Wt. (Lbs)
3	310	6.29	36
4	530	11.22	51
6	1,220	26.32	73
8	2,160	47.15	137
10	3,330	73.71	177
12	4,780	105.81	210
14	6,290	139.90	382
16	8,240	184.00	479
18	10,360	232.23	554
20	12,780	286.08	693
24	18,510	416.35	827
30	29,070	659.27	1,590



Dimensions (inches)

Size	ØD	H	I	L		ØW	N	ncp
				Min.	Max.			
3	2.83	23.78	5.12	2.00	2.28	9.84	4	5/8"-11
4	3.78	28.07	5.67	2.00	2.28	11.81	8	5/8"-11
6	5.79	35.63	7.36	2.25	2.52	11.81	8	3/4"-10
8	7.75	40.75	8.66	2.75	3.03	15.75	8	3/4"-10
10	9.69	48.78	10.04	2.75	3.03	15.75	12	7/8"-9
12	11.61	55.35	11.34	3.00	3.27	15.75	12	7/8"-9
14	13.35	64.76	12.44	3.00	3.27	19.69	12	1"-8
16	15.31	69.84	13.94	3.50	3.78	21.65	16	1"-8
18	17.20	76.65	15.35	3.50	3.78	21.65	16	1-1/8"-7
20	19.09	79.25	16.61	4.50	4.68	23.62	20	1-1/8"-7
24	23.03	92.48	18.98	4.50	4.68	23.62	20	1-1/4"-7
30	28.98	112.20	22.83	4.75	5.0	30.70	28	1-1/4"-7

Figure Number Matrix

FNW 60 R Size		
SIZE CODE		
3 = M	10 = 10	18 = 18
4 = P	12 = 12	20 = 20
6 = U	14 = 14	24 = 24
8 = X	16 = 16	30 = 30

Replacement Seats (Order Separately)

FNW 60 Material Size		
MATERIAL	SIZE CODE	
GR = Gum Rubber	3 = M	10 = 10
VI = Viton®	4 = P	12 = 12
	6 = U	14 = 14
	8 = X	16 = 16
	10 = 10	18 = 18
	12 = 12	20 = 20
	14 = 14	24 = 24
	16 = 16	30 = 30

**RESILIENT SEATED
KNIFE GATE VALVE**

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