
SERIES 740

BIDIRECTIONAL KNIFE GATE VALVES

2" to 24" 150psi (10bar)

30" to 36" 100psi (7bar)



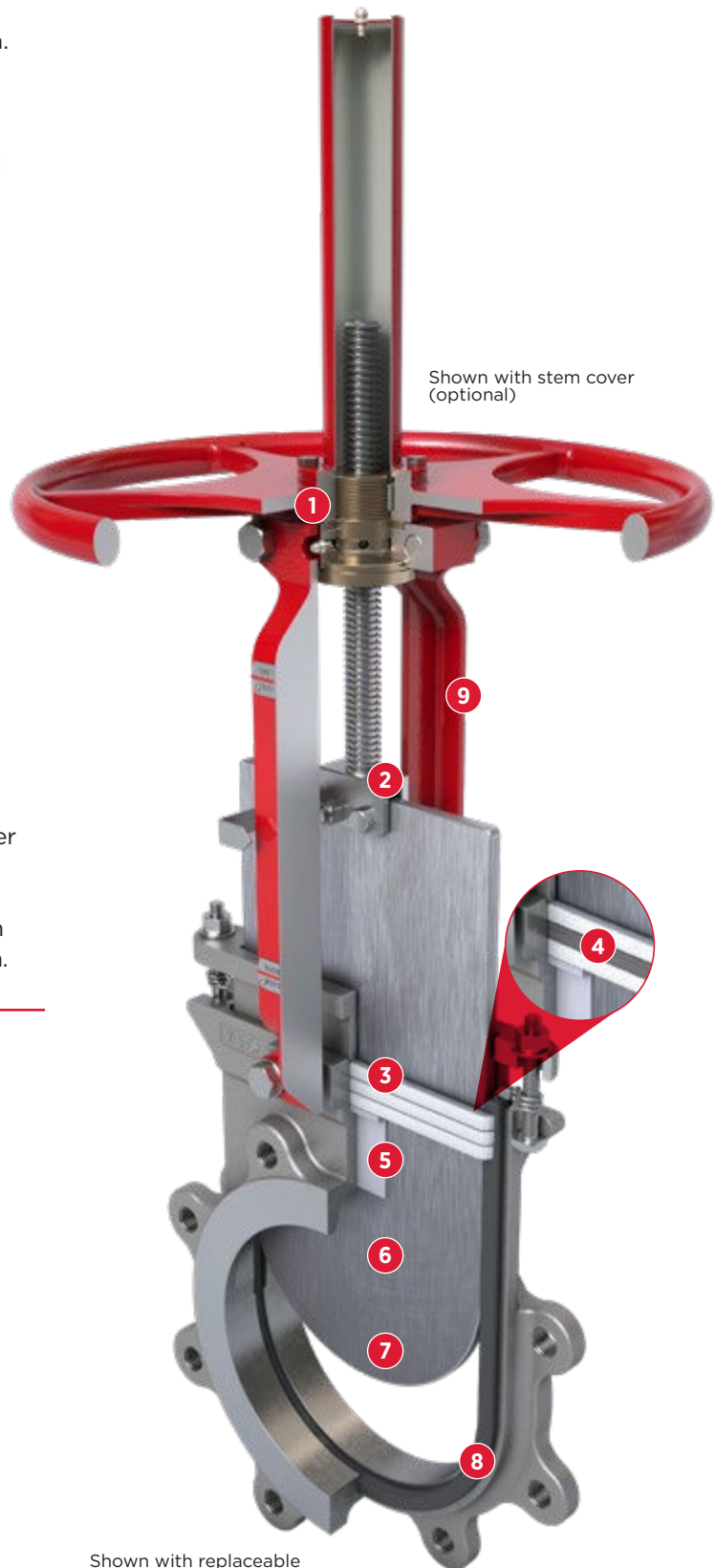
 **Bray**[®]

FEATURES & BENEFITS

DESIGN FEATURES

Engineered for bidirectional on/off service and isolation of clean, dirty, corrosive, or viscous media.

- 1 Topworks designed for easy, quick conversion between manual and pneumatic actuation. Manual valves include a lubricant injection port for continuous, smooth operation with minimal maintenance.
- 2 Clevis design and horizontal bolting stabilizes gate ensuring proper alignment.
- 3 Standard multi-layer square packing provides exceptional gland sealing.
- 4 Optional energized quad seal packing for enhanced gland sealing.
- 5 Chest liner for sizes up to 12" and PTFE anti-extrusion ring for sizes 14" and up.
- 6 Unrestricted flow path with minimal pressure drop achieved through full port valve design.
- 7 Gate design ensures consistent alignment throughout the length of the stroke.
- 8 Mechanically retained steel reinforced elastomer seat ensures bidirectional zero leakage shutoff.
- 9 Cast yoke superstructure ensures robustness in valve design for different operators/orientation.



Shown with stem cover (optional)

Shown with replaceable resilient seat

INDUSTRY APPLICATIONS

Pulp & Paper

- > Bleach Stock
- > Brown Stock Washers | Pump Isolation
- > Evaporators | Black Liquor
- > Paper Stock

General Industrial

- > Pneumatic Conveyance
- > Raw & Treated Water
- > Water Conveyed Solids

Power

- > Fly Ash Pneumatic Conveyance Crossover Valve

Wastewater

- > RAS Return Activated Sludge
- > Pump & Equipment Isolation

Chemical

- > Process Fluids
- > Pump & tank Isolation

Ethanol

- > Syrup Lines

Series 740 Lug Style

TECHNICAL SPECIFICATIONS

Size Range	NPS 2 to 36 DN 50 to 900
Body Style	Single Piece Lug
Pressure Rating	2-24 150psi 30-36 100psi 50-600mm 10 bar 750-900mm 7 bar
Drilling	ASME B16.5 CL150 ASME B16.47 CL150
Face to Face	MSS SP-81
Certification	CE/PED, Canadian CRN, AWWA C520 2019
Design Standard	MSS SP-81
Testing Standard	MSS SP-151

STANDARD CONSTRUCTION

Body	CF8 (304)	CF8M (316)
Gate	304	316
Seat	Buna-N	Buna-N
Stem	304	304
Gland	304	304
Packing	PTFE Impregnated Synthetic Fiber	PTFE Impregnated Synthetic Fiber
Topworks	Steel	Steel

GATE OPTIONS

316, 317 Stainless Steel
SAF 2507 Duplex
SAF 2205 Duplex
17-4PH Stainless Steel
Hastelloy® C
Monel®

BODY OPTIONS

CF3M Stainless Steel
SAF 2205 Duplex
SAF 2507 Duplex
Ductile Iron

PACKING MAXIMUM TEMPERATURE RANGE

Pure PTFE	500°F 260°C
PTFE Impregnated Synthetic Fiber	450°F 232°C
PTFE w/Buna-N Quad Seal¹	194°F 90°C
PTFE w/Viton® Quad Seal¹	392°F 200°C
PTFE w/EPDM Quad Seal	248°F 120°C

NOTE ¹ Pure PTFE or PTFE Impregnated Synthetic Fiber can be used.



Pure PTFE



PTFE Impregnated Synthetic Fiber



PTFE w/Buna-N Quad Seal



PTFE w/Viton® Quad Seal



PTFE w/EPDM Quad Seal

SEAT OPTIONS



Buna-N	-34 to 194°F -36 to 90°C
EPDM*	-65 to 248°F -54 to 120°C
Viton®	-15 to 392°F -26 to 200°C

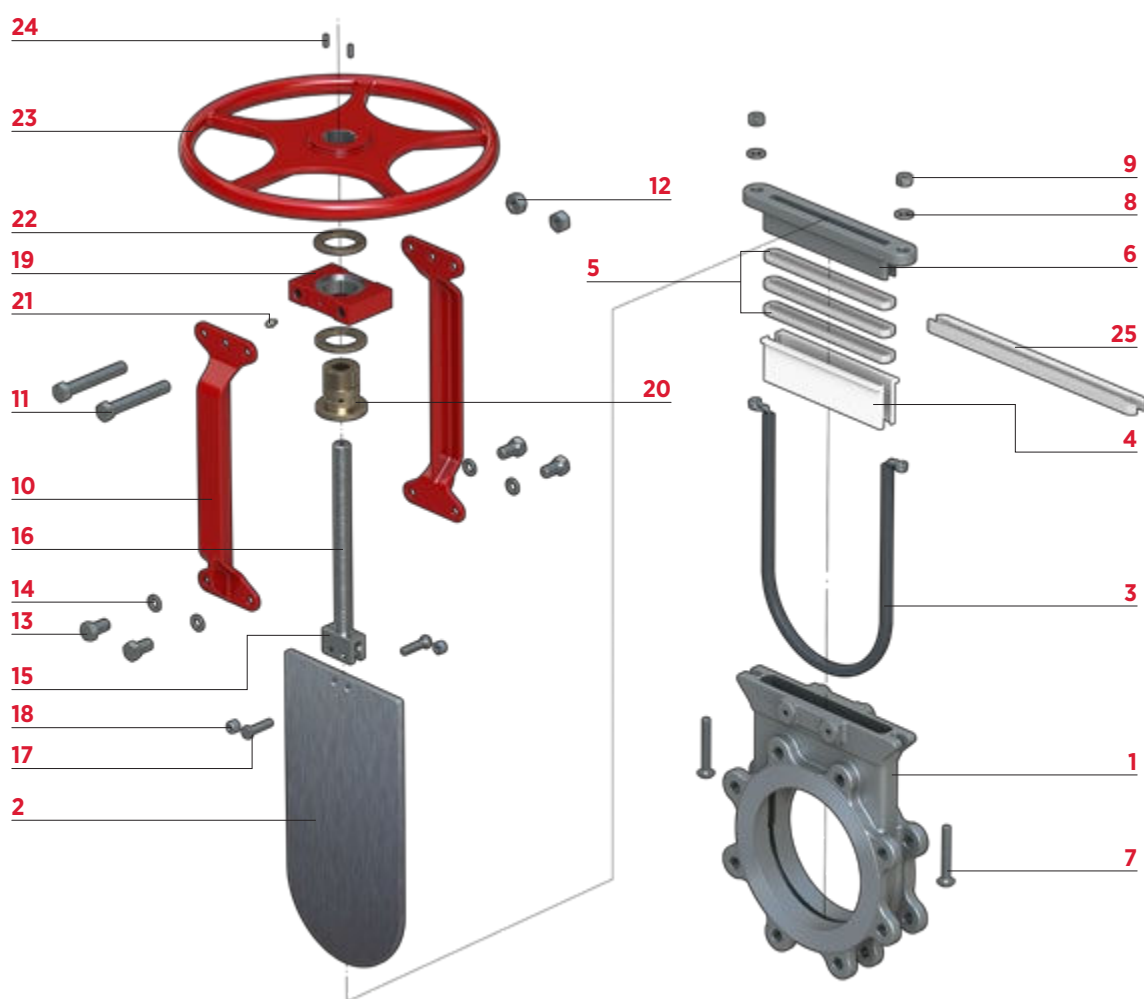
*When EPDM is selected as a seat material, "Pure PTFE packing with EPDM Quad Seal" shall be selected as packing material.

MATERIALS OF CONSTRUCTION

BILL OF MATERIALS & PARTS CALL OUT

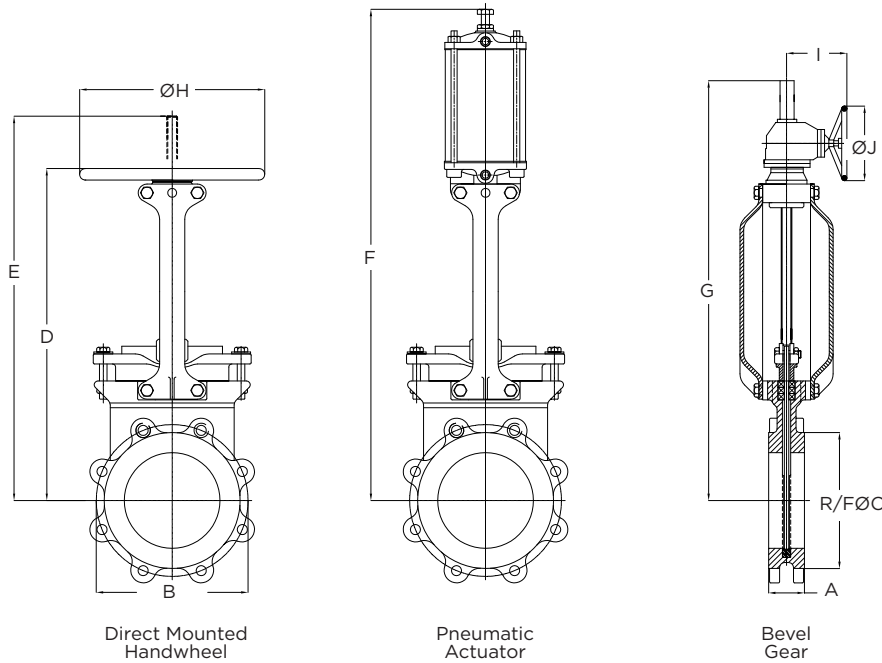
ITEM	DESCRIPTION	MATERIAL
1	Body	304 Stainless Steel
2	Gate	304 Stainless Steel
3	Seat	Buna-N
4	Chest Liner	R-TFE
5	Packing Set	PTFE Impregnated Synthetic Fiber
6	Gland	304 Stainless Steel
7	Gland Bolt	304 Stainless Steel
8	Gland Washer	304 Stainless Steel
9	Gland Nut	316 Stainless Steel
10	Yoke	Carbon Steel
11	Mounting Bolt (Top)	304 Stainless Steel
12	Mounting Nut (Top)	316 Stainless Steel
13	Mounting Bolt (Bottom)	304 Stainless Steel

ITEM	DESCRIPTION	MATERIAL
14	Spring Washer	304 Stainless Steel
15	Clevis	304 Stainless Steel
16	Stem	304 Stainless Steel
17	Clevis Bolt	304 Stainless Steel
18	Clevis Nut	316 Stainless Steel
19	Collar	Ductile Iron
20	Yoke Sleeve	Aluminum Bronze
21	Lubricant Port	Bronze
22	Needle Bearing	Bearing Steel
23	Hand Wheel	Cast Iron
24	Soc Screw	Carbon Steel
25	Anti-Extrusion Ring ¹	R-TFE



NOTE

1 Available in valves 14" or larger.



NOTE

- 1 Consult factory for hydraulic and electric actuator dimensions.
 - 2 Dimensions are approximate and subject to change. Consult factory for certified drawings.
- * In conformance with ASME B16.5, Class 150 for sizes NPS 2 (DN50) through NPS 24 (DN600) and per ASME B16.47 Series A for sizes > NPS 24.

DIMENSIONS (Inches)										
NPS	A	B*	R/FØC	D	E	F	G	ØH	I	ØJ
2	1.88	4.75	3.62	14.30	15.50	19.70	--	10.00	--	--
3	2.00	6.00	5.00	15.90	19.00	23.20	--	10.00	--	--
4	2.00	7.50	6.18	18.50	22.00	26.10	--	10.00	--	--
5	2.25	8.50	7.32	20.80	25.30	30.40	--	12.00	--	--
6	2.25	9.50	8.50	22.70	27.70	32.80	29.10	12.00	11.65	20.00
8	2.75	11.75	10.63	24.70	33.50	39.70	34.60	16.00	11.65	20.00
10	2.75	14.25	12.76	29.80	40.70	47.40	43.50	16.00	11.65	20.00
12	3.00	17.00	14.76	33.90	17.00	54.20	50.00	20.00	12.05	20.00
14	3.00	18.75	16.26	38.50	52.90	59.60	56.60	20.00	12.05	20.00
16	3.50	21.25	18.50	--	--	65.30	60.00	--	12.05	20.00
18	3.50	22.75	21.00	--	--	74.30	66.20	--	12.05	20.00
20	4.50	25.00	22.99	--	--	81.40	75.10	--	12.05	20.00
24	4.50	29.50	27.24	--	--	95.70	84.90	--	12.05	20.00
30	Contact factory for dimensions									
36	Contact factory for dimensions									

DIMENSIONS (Millimeters)										
DN	A	B*	R/FØC	D	E	F	G	ØH	I	ØJ
50	48	121	92	363	394	501	--	254	--	--
80	51	153	127	405	483	590	--	254	--	--
100	51	191	157	471	558	663	--	254	--	--
125	57	216	186	529	642	773	--	305	--	--
150	57	242	216	576	703	833	740	305	296	508
200	70	299	270	627	852	1009	878	406	296	508
250	70	362	324	756	1035	1204	1104	406	296	508
300	76	432	375	862	1193	137	1271	508	306	508
350	76	476	413	978	1344	1515	1437	508	306	508
400	89	540	470	--	--	1658	1523	--	306	508
450	89	578	534	--	--	1886	1681	--	306	508
500	114	635	584	--	--	2067	1907	--	306	508
600	114	750	692	--	--	2354	2157	--	306	508
750	Contact factory for dimensions									
900	Contact factory for dimensions									

WEIGHT (lbs)		
HAND WHEEL	PNEUMATIC ACTUATOR	GEAR OPERATOR
20	40	--
33	44	--
35	57	--
53	84	--
57	93	--
82	130	115
121	231	196
185	335	225
269	436	304
--	540	401
--	644	523
--	853	666
--	1063	1025
Contact factory		
Contact factory		

WEIGHT (kg)		
9	19	--
15	20	--
16	26	--
24	38	--
26	42	--
37	59	52
55	105	89
84	152	102
122	198	138
--	245	182
--	292	237
--	387	305
--	482	465
Contact factory		
Contact factory		

OPTIONS & ACCESSORIES

ACTUATOR OPTIONS | SHOWN IN RED



Direct Mounted Handwheel



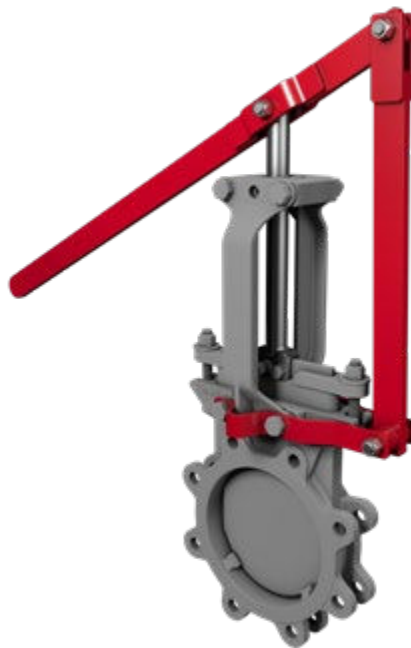
Bevel Gear Operator



Double Acting Pneumatic Actuator



Hydraulic Actuator



Lever



Electric Actuator

ADDITIONAL ACCESSORIES | SHOWN IN RED



Deflection Cone



Handwheel Lock Out



Pinned Lockout Open
& Closed



Pneumatic Failsafe



Non-Rising Stem



Gate Guard



Manual Override



Chain Wheel



Mechanical Limit Switch



Proximity Sensor

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