

---

**SERIES 950**

**UNIDIRECTIONAL KNIFE GATE VALVES**

2" to 12" 150psi (10bar)

14" to 24" 75psi (5bar)



# FEATURES & BENEFITS

## DESIGN FEATURES

Engineered for general purpose on/off service and isolation of clean, dirty, corrosive, abrasive, viscous and high temperature 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 Standard integral metal seat and optional replaceable zero leakage resilient seats.
- 6 Gate design ensures consistent alignment throughout the length of the stroke.
- 7 Unique body design with no dead pockets enables self-draining of valve.

## APPLICATIONS

### Wastewater

- > Slurry/Sludge Lines

### General Industrial

- > Pneumatic Conveyance
- > Raw & Treated Water
- > Water Conveyed Solids
- > Dry Media | Cement
- > Hot Gases

### Mining

- > Mineral Mining
- > Coal Washeries
- > Coal Preparation

### Pulp & Paper

- > Paper Stock
- > Liquor Services

### Power

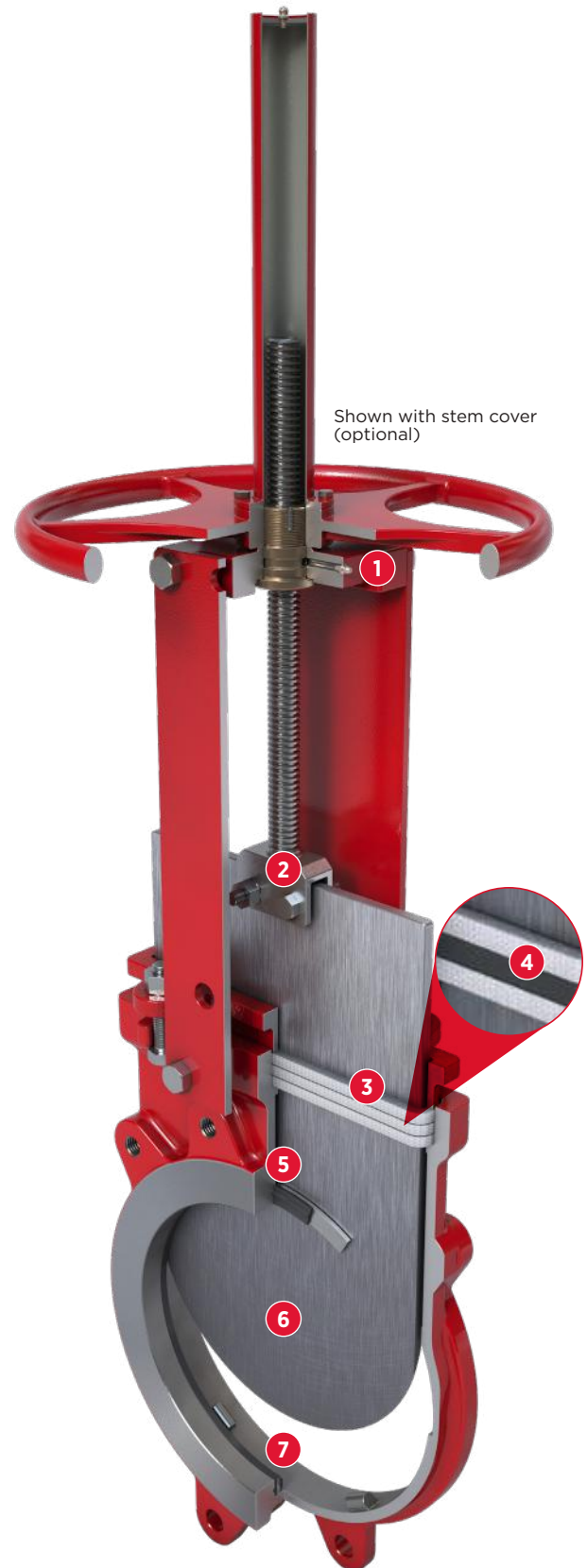
- > Fly Ash | Bottom Ash
- > Branch Lines

### Chemical

- > Pellets
- > Process Fluids & Chemicals
- > Petroleum Products

### Food & Beverage

- > Winery
- > Dairy Processing



Shown with replaceable resilient seat (optional)

Series 950 Semi Lug Style

**TECHNICAL SPECIFICATIONS**

<b>Size Range</b>	NPS 2 to 24 DN 50 to 600
<b>Body Style</b>	Single piece   Semi-Lug
<b>Pressure Rating</b>	2-12 150psi   50-300mm 10 bar 14-24 75psi   350-600mm 5 bar
<b>Drilling</b>	ASME B16.5 CL150
<b>Face to Face</b>	MSS SP-81
<b>Certification</b>	Canadian CRN, PED, ATEX
<b>Design Standard</b>	MSS SP-81
<b>Testing Standard</b>	MSS SP-151

**STANDARD CONSTRUCTION**

<b>Body</b>	DI
<b>Gate</b>	304
<b>Seat</b>	Integral
<b>Stem</b>	304
<b>Gland</b>	CS
<b>Packing</b>	PTFE Impregnated Synthetic Fiber
<b>Topworks</b>	CS

**GATE OPTIONS**

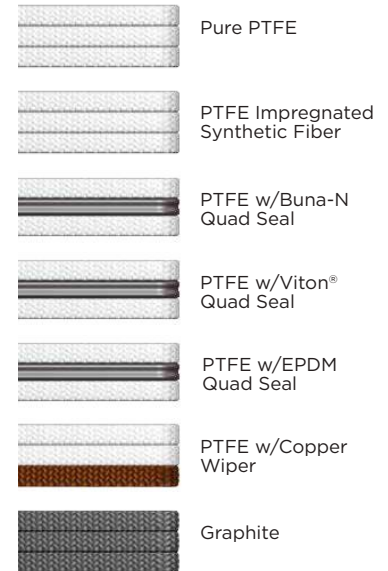
304, 316, 317 Stainless Steel
SAF 2507 Duplex
17-4PH Stainless Steel
Hastelloy® C
Monel®
Titanium

**BODY OPTIONS**

Carbon Steel (WCB)
CF8 Stainless Steel
CF8M Stainless Steel
CF3M Stainless Steel
SAF 2205 Duplex
SAF 2507 Duplex

**PACKING MAXIMUM TEMPERATURE RANGE**

<b>Pure PTFE</b>	500°F 260°C
<b>PTFE Impregnated Synthetic Fiber</b>	450°F 232°C
<b>PTFE w/Buna-N Quad Seal<sup>1</sup></b>	194°F 90°C
<b>PTFE w/Viton® Quad Seal<sup>1</sup></b>	392°F 200°C
<b>PTFE w/EPDM Quad Seal</b>	248°F 120°C
<b>PTFE w/Copper Wiper<sup>1</sup></b>	500°F 260°C
<b>Graphite</b>	1202°F 650°C



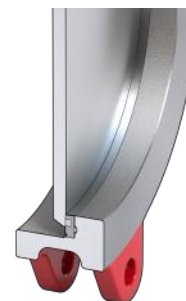
**NOTE** <sup>1</sup> Pure PTFE or PTFE Impregnated Synthetic Fiber can be used.

**SEAT OPTIONS**

Standard integral metal seat and optional replaceable zero leakage resilient seat.



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



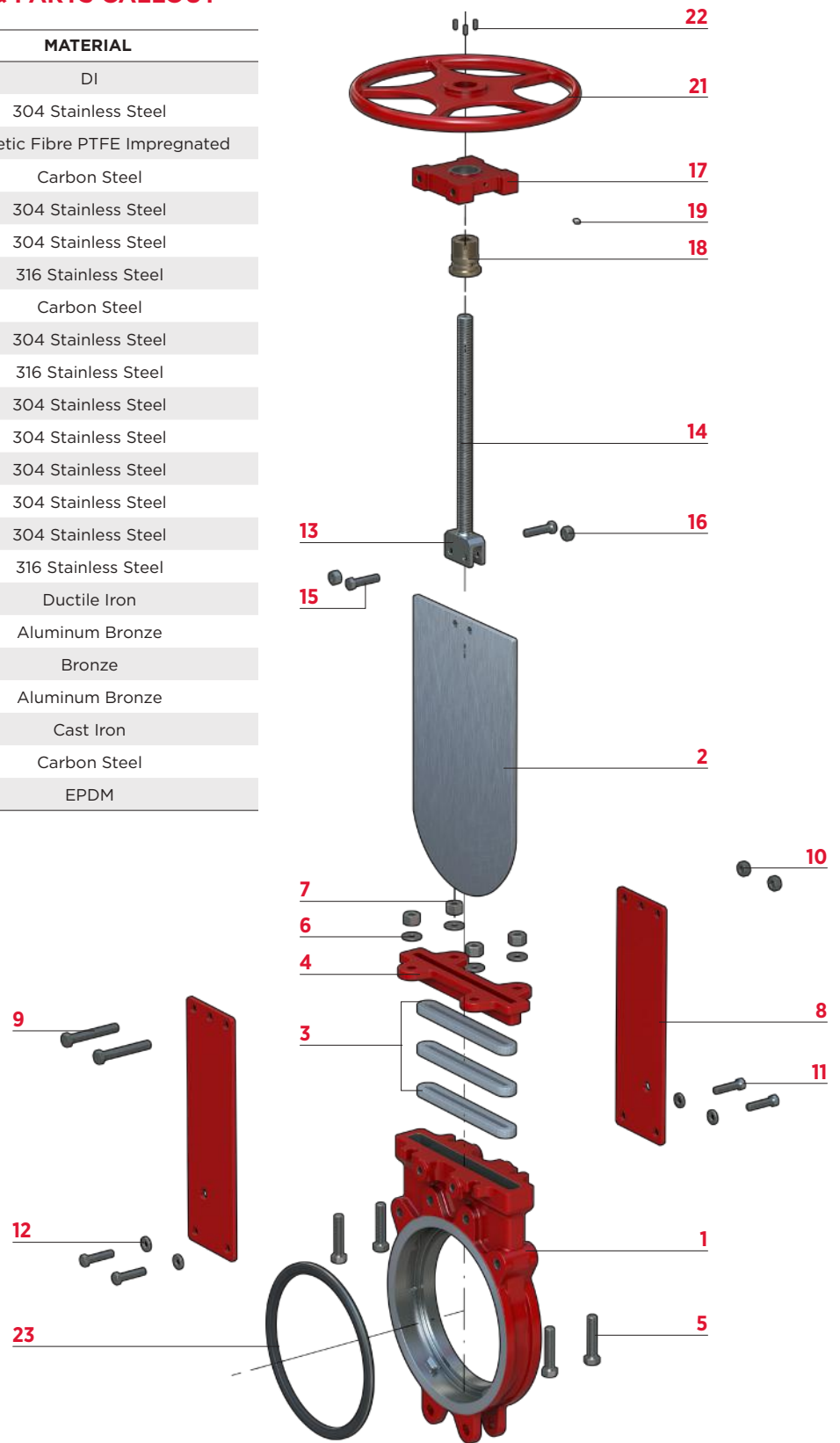
<b>PTFE w/Viton Back-up Ring**</b>	-235 to 392°F -148 to 200°C
------------------------------------	--------------------------------

\*\* Allowable seat leakage as per MSS SP-151 metal seated valves

# MATERIALS OF CONSTRUCTION

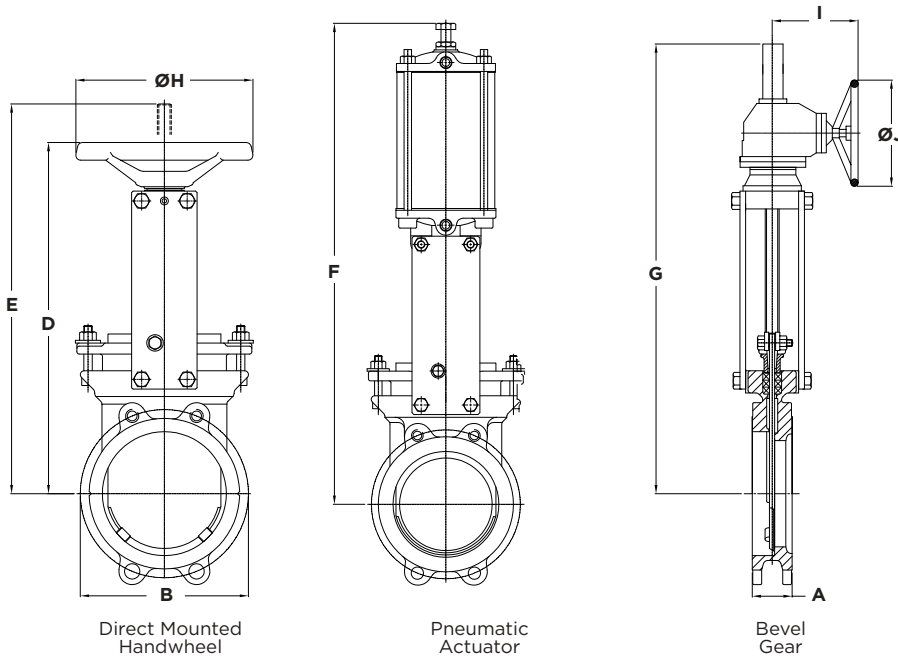
## MATERIAL SPECIFICATIONS & PARTS CALLOUT

ITEM	DESCRIPTION	MATERIAL
1	Body	DI
2	Gate	304 Stainless Steel
3	Packing Set	Synthetic Fibre PTFE Impregnated
4	Gland	Carbon Steel
5	Gland Bolt	304 Stainless Steel
6	Gland Washer	304 Stainless Steel
7	Gland Nut	316 Stainless Steel
8	Side Plate	Carbon Steel
9	Mounting Bolt (Top)	304 Stainless Steel
10	Mounting Nut (Top)	316 Stainless Steel
11	Mounting Bolt (Bottom)	304 Stainless Steel
12	Spring Washer	304 Stainless Steel
13	Clevis	304 Stainless Steel
14	Stem	304 Stainless Steel
15	Clevis Bolt	304 Stainless Steel
16	Clevis Nut	316 Stainless Steel
17	Collar	Ductile Iron
18	Yoke Sleeve	Aluminum Bronze
19	Grease Nipple	Bronze
20	Thrust Washer	Aluminum Bronze
21	Hand Wheel	Cast Iron
22	Socket Screw	Carbon Steel
23	Seat <sup>1</sup>	EPDM



**NOTE**

1 Optional replaceable resilient seat.



**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.)

DIMENSIONS (Inches)									
NPS	A	B*	D	E	F	G	ØH	I	ØJ
2	1.88	4.75	13.03	13.94	19.17	--	8.00	--	--
3	2.00	6.00	15.71	18.43	22.80	--	8.00	--	--
4	2.00	7.50	17.32	21.10	25.39	--	8.00	--	--
5	2.25	8.50	19.41	23.90	28.35	--	10.00	--	--
6	2.25	9.50	20.91	26.34	31.65	--	10.00	--	--
8	2.75	11.75	24.84	32.28	38.74	35.63	12.00	11.65	20.00
10	2.75	14.25	27.28	37.68	44.21	41.06	16.00	11.65	20.00
12	3.00	17.00	30.67	43.11	51.22	47.80	16.00	11.65	20.00
14	3.00	18.75	33.66	47.72	54.96	49.80	20.00	12.05	20.00
16	3.50	21.25	37.01	52.83	63.07	55.12	20.00	12.05	20.00
18	3.50	22.75	41.85	60.04	70.28	61.93	20.00	12.05	20.00
20	4.50	25.00	46.34	66.10	76.34	68.39	20.00	12.05	20.00
24	4.50	29.50	54.06	77.99	89.92	80.04	20.00	12.05	20.00

WEIGHT (lbs)		
HAND WHEEL	PNEUMATIC ACTUATOR	GEAR OPERATOR
20	35	--
29	44	--
35	55	--
53	84	--
55	88	--
79	132	99
132	220	179
176	324	198
254	418	298
324	496	397
408	584	463
573	805	650
672	937	772

DIMENSIONS (Millimeters)									
DN	A	B*	D	E	F	G	ØH	I	ØJ
50	48	120.7	331	354	487	--	203	--	--
80	51	152.4	399	468	579	--	203	--	--
100	51	190.5	440	536	645	--	203	--	--
125	57	215.9	493	607	720	--	254	--	--
150	57	241.3	531	669	804	--	254	--	--
200	70	298.5	631	820	984	905	305	296	508
250	70	362.0	693	957	1123	1043	406	296	508
300	76	431.8	779	1095	1301	1214	406	296	508
350	76	476.3	855	1212	1393	1265	508	306	508
400	89	539.8	940	1342	1602	1400	508	306	508
450	89	577.9	1063	1525	1785	1573	508	306	508
500	114	635.0	1177	1679	1939	1737	508	306	508
600	114	749.3	1373	1981	2284	2033	508	306	508

WEIGHT (kg)		
9	16	--
13	20	--
16	25	--
24	38	--
25	40	--
36	60	45
60	100	80
80	147	90
115	190	135
147	225	180
185	265	210
260	365	295
305	425	350

**OPTIONS & ACCESSORIES**

**ACTUATOR OPTIONS** | SHOWN IN RED



Direct Mounted Handwheel



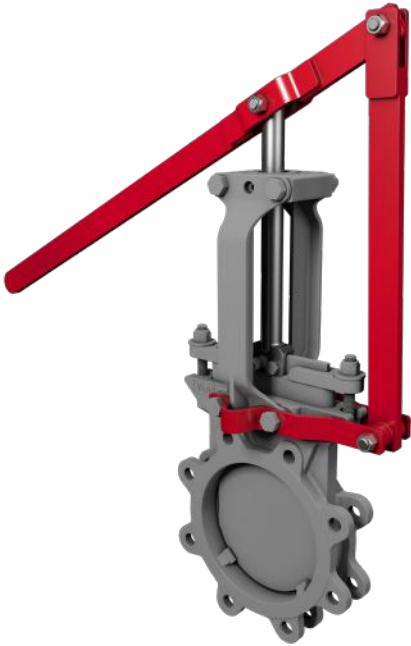
Bevel Gear Operator



Double Acting Pneumatic Actuator



Hydraulic Actuator



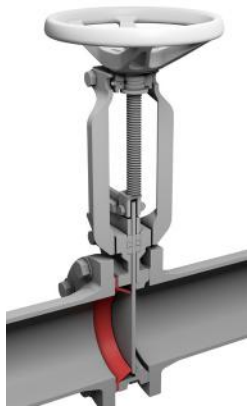
Lever



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



Positioner



Proximity Sensor



Bonnet



BRAY FLOW CONTROL SOLUTIONS ARE AVAILABLE FOR A VARIETY OF INDUSTRIES.

**ENERGY**

Mining  
Oil & Gas  
Power / FGD  
Nuclear Power

**WATER**

Water / Wastewater  
Ultra Pure Water  
Desalination  
Irrigation

**INDUSTRIAL**

Chemical  
Pulp & Paper  
Textile  
Marine

**INFRASTRUCTURE**

Beverage & Food  
Transportation  
Heating, Ventilation & Air Conditioning (HVAC)



**US HEADQUARTERS**

**Bray International, Inc.**  
13333 Westland East Blvd.  
Houston, Texas 77041  
Tel: 281.894.5454

**CHINA HEADQUARTERS**

**Bray Controls (ZheJiang) Co. Limited**  
98 GaoXin # 6 Road  
XiaoShan Economic & Development Zone  
HangZhou, ZheJiang 311231, P.R. China  
Tel: 86 571 8285 2200

**EUROPE HEADQUARTERS**

**Bray Armaturen & Antriebe Europa**  
Halskestraße 25  
47877 Willich  
Germany  
Tel: +49 2154 8875-0

**INDIA HEADQUARTERS**

**Bray Controls India Pvt. Ltd.**  
Plot No. H-18 & H-19  
SIPCOT Industrial Park  
Vallam Vadagal, Echoor Post  
Sriperumbudur Taluk  
Kancheepuram District  
Tami Nadu - 631 604  
Tel: +91-44-67170100



THE SMART CHOICE FOR FLOW CONTROL SINCE 1986.  
WITH MORE THAN 300 LOCATIONS WORLDWIDE,  
FIND A REPRESENTATIVE NEAR YOU AT **BRAY.COM**

All statements, technical information, and recommendations in this bulletin are for general use only. Consult Bray representatives or factory for the specific requirements and material selection for your intended application. The right to change or modify product design or product without prior notice is reserved. Patents issued and applied for worldwide.