# UNIDIRECTIONAL KNIFE GATE VALVES



#### **OVERVIEW**

The Series 943 features a full lug and the Series 953 features a semi-lug, single piece cast body for demanding applications. The standard metal-to-metal seating is engineered for general purpose on/off service and isolation of clean, dirty, corrosive, abrasive, viscous, and high temperature media. Optional zero leakage resilient seats are available.

#### **SPECIFICATIONS**

Size Range	NPS 2 to 24   DN 50 to 600		
	943	953	
Pressure Rating	2-24 150psi   50-600mm 10 bar	2-10 150psi   50-250mm 10bar	
		12-16 90psi   300-400mm 6bar	
		18 75psi   450mm 5bar	
		20-24 60psi   500-600mm 4bar	
Body Style	Single Piece   Lug	Single Piece   Semi Lug	

#### INDUSTRY APPLICATIONS

Water/Wastewater

**General Industrial** 

Mining

Pulp & Paper

Power

Chemical

Food & Beverage

# **FEATURES**

- Inverted packing gland extends packing life and simplifies replacement.
- 2 Standard energized quad seal packing provides exceptional gland sealing.
- **3** Clevis design and horizontal bolting stabilizes gate ensuring proper alignment.
- 4 Standard metal seated, also available with optional unique self-locking RPTFE seat or replaceable O-Ring soft seat for high performance unidirectional sealing.
- 5 Adjustable gate guides provided to fine tune the gate-to-seat contact and assist with back pressure.
- 6 Cast in gate guides eliminating welding in the body and precision machined wedging for ultimate sealing.
- 7 Optimized body design is offered in both lugged and semi lugged design to maximize performance without unnecessary weight. Lugged body suitable for all mounting orientations including dead-end service.
- 8 Carbon steel, stainless steel, or alloy superstructure ensures robustness in valve design for different operators/orientation.
- 9 Optional replaceable deflection cone, available in Chrome Iron and Polyurethane, can be provided to protect the seat from abrasive media.





#### STANDARD CONSTRUCTION

	943	953
Body	CF8M (316)	Cast Iron
Gate	316	304
Seat	Integral Metal	Integral Metal
Stem	304	304
Gland	CF8	Ductile Iron
Packing	PTFE Impreganted Synthetic Fiber w/Quad Seal	PTFE Impreganted Synthetic Fiber w/Quad Seal
Topworks	Carbon Steel	Carbon Steel

## **DESIGN STANDARDS**

Flange Drilling	ASME B16.5 CL150	
Design Standard	<b>943</b>   MSS SP-81	953   Manufacturer Standard
Testing Standard	MSS SP-151	- Ctantaara

## **MATERIAL OPTIONS**

Body	943 - Carbon Steel (WCB)   CF8 Stainless Steel   CF3 Stainless Steel   CF3M Stainless Steel   CE3MN Duplex Steel (SS 2507)   CD3MN Duplex	
	953 - Ductile Iron	
Gate	304, 317 Stainless Steel   Hastelloy® C	
	SAF 2507 Duplex   Monel®	
	17-4PH Stainless Steel   Titanium	
Stem	316	
Packing	Pure PTFE   PTFE w/Buna-N Quad Seal	
	PTFE w/Viton Quad Seal   PTFE w/EPDM Quad Seal	
	PTFE w/Copper Wiper   Graphite	
Seat	NBR   EPDM   FKM   RTFE   UHMW	

## **ACTUATOR OPTIONS**

Direct Mounted Handwheel   Bevel Gear Operator   Lever	
Double Acting Pneumatic   Hydraulic   Electric	

#### **FEATURES - DETAILED**



Gate Guides



Inverted Packing Gland



Rigid U-Shaped Frame

### **DEFLECTION CONE**



Recommended for abrasive flow applications to direct the flow away from the seat.

## **SEAT OPTIONS**

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



Metal Seat



Soft Seat



PTFE Seat