

KEYSTONE FIGURE 951 KNIFE GATE VALVE

50 - 300MM

Wafer style, uni-directional knife gate valves.



FEATURES

- Compact design.
- Self-aligning gland box.
- One piece integral cast body and chest.
- Integral cast in gate wedges minimise flow obstructions.
- High quality gate finish for optimum sealing.
- Gate guides to support gate.
- Integral RTFE gate scraper.
- Complies with MSS SP-81 face-to-face dimensions.
- High flow rates with low pressure drops.
- All valves are pressure tested to MSS SP-81
- Maintenance friendly.

GENERAL APPLICATION

The Keystone K-Nife is designed for a wide range of applications such as:

- Pulp & paper
- Mining
- Effluent handling plants
- Chemical plants
- Food and beverage
- Fly ash handling plants
- Bulk conveying
- Corrosive environments

TECHNICAL DATA

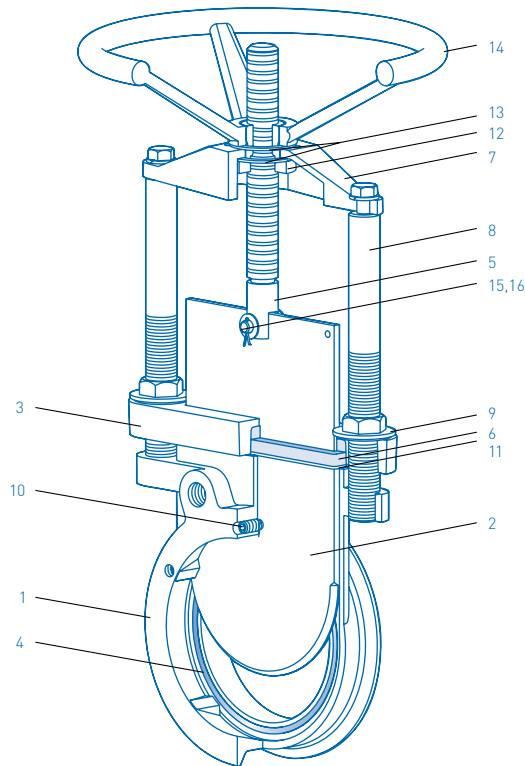
Size range: 50 - 300mm
 Temperature rating: 150°C RTFE seated
 150°C Viton seated
 Pressure rating: 1000 kPa (10 bar)
 @ cold working pressure (non-shock)



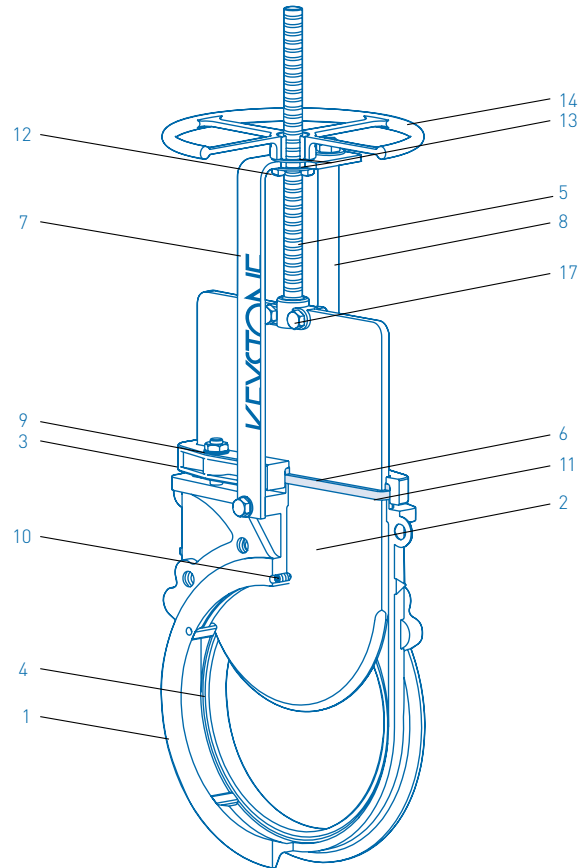
KEYSTONE

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NOTE: 50 - 200mm valve illustrated.



NOTE: 250 - 300mm valve illustrated.

PARTS LIST

No.	Description	Material
1	Body	S.G. Iron
2	Gate#	316 S/S*, SAF 2205
3	Gland box	S.G. Iron
4	Seat	RTFE, Metal or Viton
5	Spindle	304 S/S
6	Gland packing	K-LON•
7	Bridge (50 - 200mm) Upstand (250 - 300mm)	304 S/S Painted mild steel
8	Pillar	Painted mild steel
9	Glandbox washer	Nylon
10	Gate guide	S/S RTFE tipped
11	Gate scraper	RTFE
12	Handwheel nut	Leaded gunmetal
13	Thrust washer	Nylon
14	Handwheel	S/S (non-rising 250 - 300mm) or S.G Iron (rising 50 - 300mm)
15	Clevis pin (50 - 200mm)	304 S/S
16	Split pin (50 - 200mm)	304 S/S
17	Clevis (250 - 300mm)	304 S/S
18	All fasteners	304 S/S

OPTIONS

- F738 Pneumatic actuators
- Electric actuators
- Bevel gear operators
- Chainwheels
- F459 Quick acting levers (50 - 200mm)
- F791 Solenoid valves
- Limit switches
- F793 Positioners
- F493 Pneumatic failsafe
- Deflection cones
 - Chrome Iron
 - Polyurethane in sizes 50 - 300mm.
- Safety guards and shrouds

NOTE:

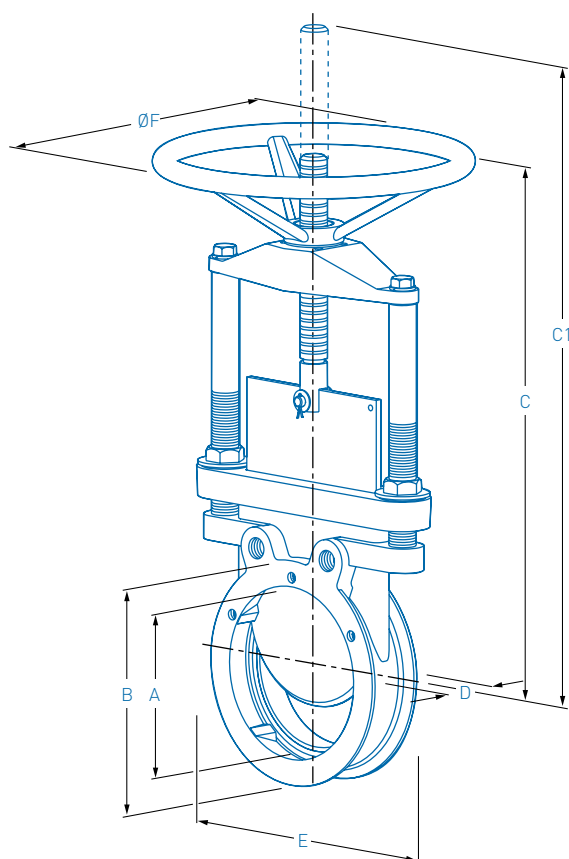
* 316 S/S gate is standard with S.G. Iron bodied valves.

Gate is PTFE coated when used with Viton seat.

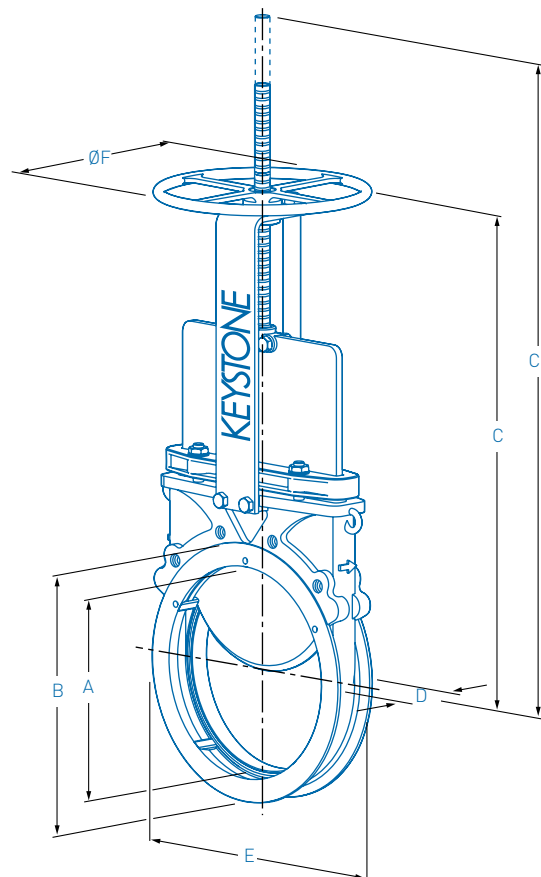
• Other packing materials available on request.

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NOTE: 50 - 200mm valve illustrated.



NOTE: 250 - 300mm valve illustrated.

DIMENSIONS (MM)

Valve size	A bore (downstream)	B	C Rising spindle (closed)	C1 Rising spindle (open)	Non - rising C	D	E	ØF	Nom. mass manual (kg)	Kv @ full open*
50	50	92	284	295	N/A	49	159	200	7	223
65	65	108	284	316	N/A	49	172	200	8	368
80	80	127	331	391	N/A	52	190	200	10	557
100	100	157	358	425	N/A	52	210	200	11	909
125	125	186	450	579	N/A	58	254	300	16	1416
150	150	212	487	580	N/A	58	285	300	20	2112
200	200	270	602	746	N/A	71	338	300	32	4065
250	248	326	726	908	693	71	326	400	46	6850
300	298	380	825	1057	792	76	418	400	71	9863

NOTE:

Dimension D = The face to face dimension

Dimension E = The maximum valve or upstand clearance dimension for installation.

*Kv = The flow rate of water in m³/hr that will pass through a valve with a differential pressure of 1 bar (100 kPa) @ 20°C

Cv = 1.155 Kv

Dimensions are nominal.

Larger sizes are available upon request

STANDARD SEAT DETAIL



RTFE seat



Metal seat

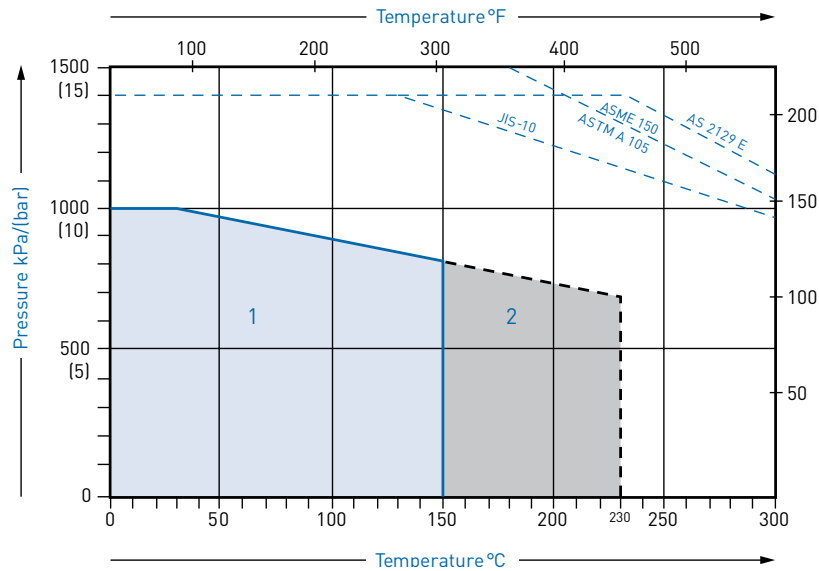


Viton seat

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PRESSURE/TEMPERATURE GRAPH



PRESSURE/TEMPERATURE RATINGS

RTFE seated

1000 kPa/(10 bar) @ 20°C
770 kPa/(7.7 bar) @ 150°C

Metal seated

1000 kPa/(10 bar) @ 20°C
700 kPa/(7 bar) @ 230°C

Viton seated

1000 kPa/(10 bar) @ 20°C
770 kPa/(7 bar) @ 150°C

- RTFE seated valve trim code numbers is 182.
Viton seated valve trim code number is 179
- S.G. Iron seated valve trim code number is 172.

TYPICAL SPECIFYING SEQUENCE

150	F951	172	AS 2129 E
Valve size	Figure number	Trim code	End connections

Size range: 50 - 300mm
Figure No: F951 - Wafer style rising spindle uni-directional valve.

Trim code	Body	Gate	Seat	Gland box	Bridge	Spindle	Packing
172*	S.G. Iron	316 S/S	S.G. Iron	S.G. Iron	Mild steel	304 S/S	K-LON
179*	S.G. Iron	316 S/S / PTFE#	Viton	S.G. Iron	Mild steel	304 S/S	K-LON
182*	S.G. Iron	316 S/S	RTFE	S.G. Iron	Mild steel	304 S/S	K-LON

NOTE:

Gates are 316 S/S, coated with PTFE.

Subject to material availability and delivery obligations, Pentair reserves the right to supply higher grade materials for any component, eg. 316 S/S in lieu of 304 S/S.

Non-rising spindle design is available upon request.

* 50 - 200mm bridge 304 S/S.

- | | | |
|----------------------------|---|---|
| End connections (to suit): | <ul style="list-style-type: none"> AS 2129, Table C,D,E metric threads ASME B16.5, Class 125 & 150 UNC threads BS 4504, PN 10 and 16 | <ul style="list-style-type: none"> JIS B2210, Table 5, 10 DIN 2501, Table 10, 16 ASME B16.5, Class 125 and 150 metric threads (for N.Z.) |
|----------------------------|---|---|

NOTE:

To minimise risk to personnel, Pentair recommend the use of purpose built guards and shrouds. Refer to the Pentair data sheet or consult factory for details.



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