

KEYSTONE FIGURE 952 KNIFE GATE VALVE

50 - 600MM

Lugged style, uni-directional knife gate valves.



FEATURES

- Compact design.
- Self-aligning gland box.
- Both S.G. Iron and 316 S/S valves available. (depending on valve size)
- One piece integral cast body, chest and lugs.
- Integral cast in gate wedges minimise flow obstructions.
- High quality gate finish for optimum sealing.
- High flow rates with low pressure drops.
- Integral RTFE gate scraper.
- Gate guides to support gate.
- A range of seat options available.
- Complies with MSS SP-81 face-to-face dimensions.
- 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 & beverage
- Fly ash handling plants
- Bulk conveying
- Corrosive environments

TECHNICAL DATA

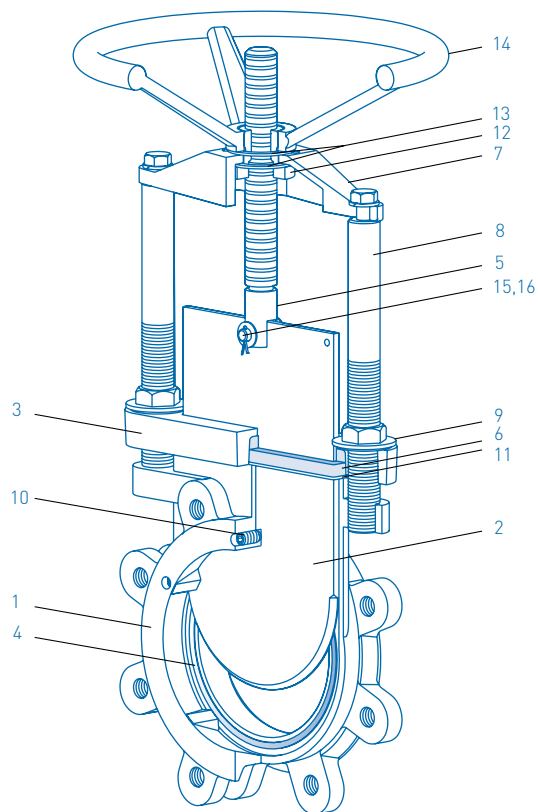
Size range: 50 - 600mm
 Temperature rating: 150°C RTFE seated
 150°C Viton seated
 230°C 316 S/S seated
 230°C S.G. Iron seated
 Pressure rating: 1000 kPa (10 bar)
 @ cold working pressure
 (non-shock rating)



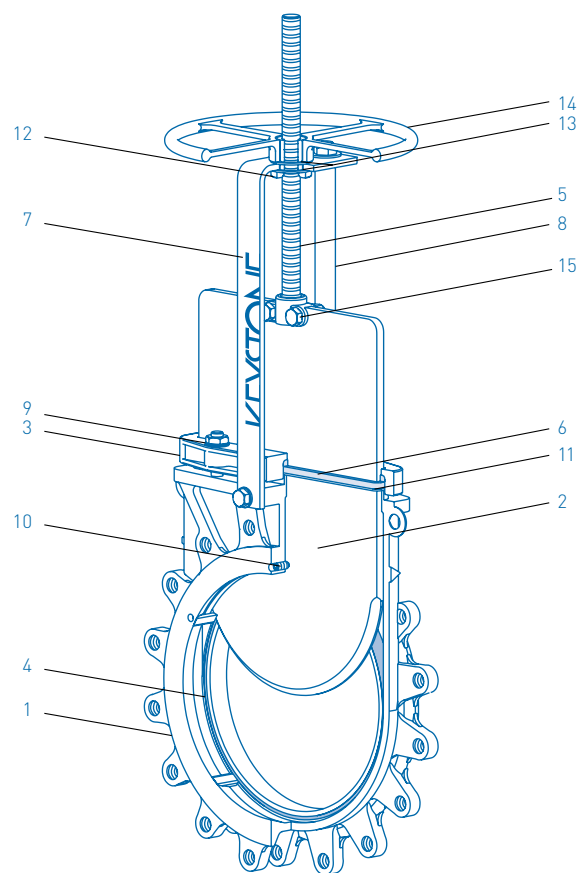
KEYSTONE

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NOTE: 50 - 200mm valve illustrated.



NOTE: 250 - 600mm valve illustrated.

PARTS LIST

No.	Description	Material
1	Body	316 S/S or S.G. Iron
2	Gate#	316 S/S, SAF 2205 or SAF2507
3	Gland box	304 S/S or 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 - 600mm)	304 S/S Painted mild steel
8	Pillar	304 S/S or 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) or S.G. Iron (rising)
15	Clevis pin	304 S/S
16	Split pin	304 S/S
17	All fasteners	304 S/S

NOTE:

Gate is PTFE coated when used with Viton seat.

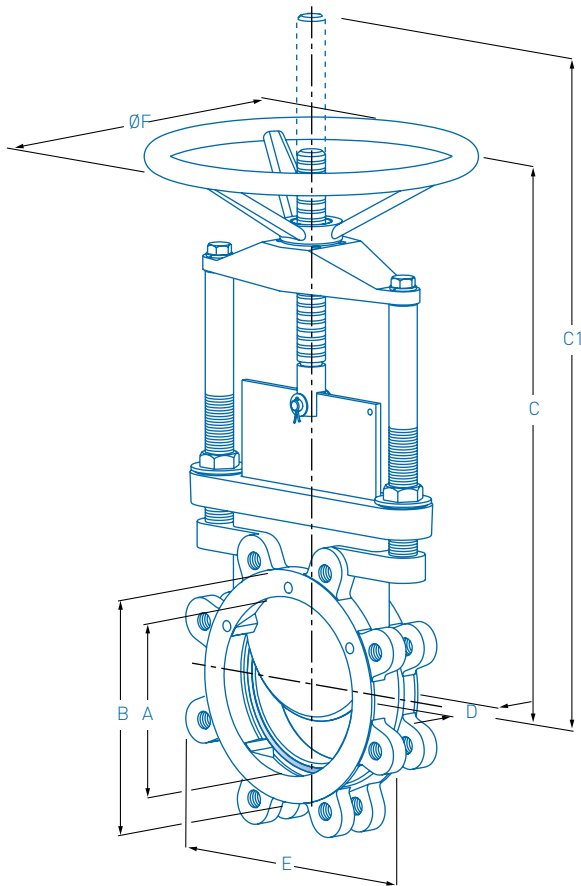
• Other packing materials available on request.

OPTIONS

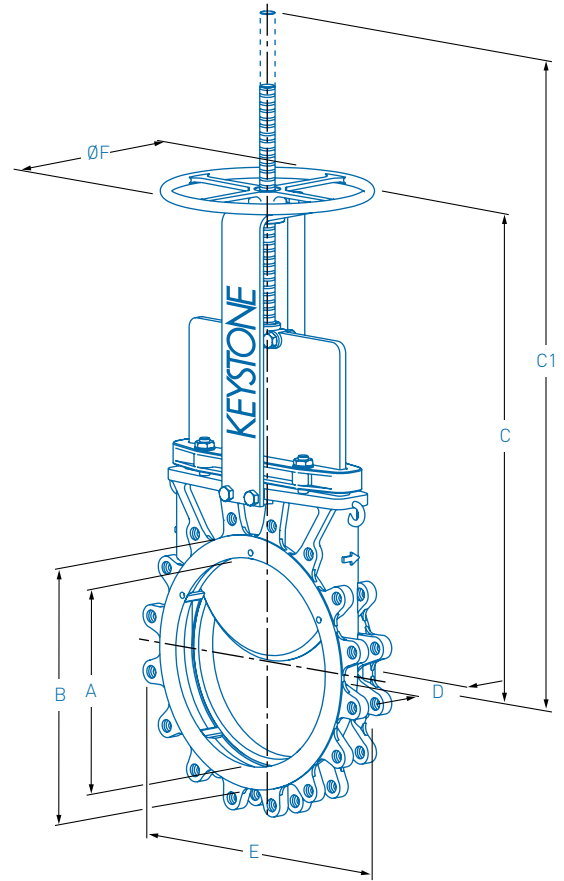
- F738 Pneumatic actuators
- Electric actuators
- Bevel gear operators
- Chainwheels
- F459 Quick acting lever (50 - 200mm)
- F791 Solenoid valves
- Limit switches
- F793 Positioners
- F493 Pneumatic failsafe
- Deflection cones
 - Chrome Iron
 - Polyurethane (50 - 300mm)
- Safety guards and shrouds

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NOTE: 50 - 200mm valve illustrated.
Number of lugs is dependent upon flange drilling.



NOTE: 250 - 600mm valve illustrated.
Number of lugs is dependent upon flange drilling.

DIMENSIONS (MM)

Valve size	A bore (downstream)	B	C		C	D	E	ØF	Nom. mass manual (kg)	Kv @ full open*
			Rising spindle (closed)	C1 (open)						
50	50	92	264	295	N/A	49	159	200	7	223
65	65	108	284	316	N/A	49	177	200	8	368
80	80	127	324	391	N/A	52	192	200	10	557
100	100	157	358	425	N/A	52	222	200	12	909
125	125	186	450	519	N/A	58	256	300	18	1416
150	150	212	487	579	N/A	58	285	300	22	2112
200	200	270	602	746	N/A	71	325	300	34	4065
250	250	326	726	908	693	71	406	400	47	6850
300	300	380	825	1057	793	76	474	400	74	9863
350	330	452	881	1144	848	76	520	400	93	11858
400	378	480	968	1281	935	89	584	400	121	15590
450	425	540	1095	1450	1084	89	628	600	170	20165
500	475	585	1192	1598	1181	114	696	600	212	25117
600	571	692	1400	1881	1369	114	822	600	312	36896

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

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STANDARD SEAT DETAIL



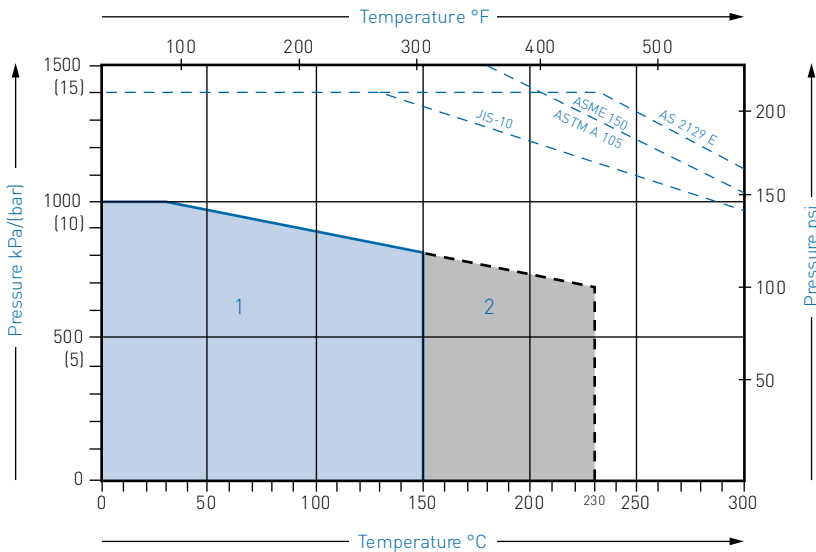
PRESSURE/TEMPERATURE RATINGS

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

PRESSURE/TEMPERATURE GRAPH



- RTFE seated valve trim code numbers are 176 & 177.
 Viton seated valve trim code number is 180
- Metal - S.G. Iron seated valve trim code number is 170, 172.
 - 316 S/S seated valve trim code numbers are 170, 171.
 - 304 S/S seated valve trim code number is 185.

TYPICAL SPECIFYING SEQUENCE

250	F952	170	AS 2129 E
Valve size	Figure number	Trim code	End connections

Size range: 50 - 600mm
 Figure No: F952 - Lugged style rising and non rising spindle uni-directional valve.

- NOTE:**
- * Gates are 316 S/S, coated with PTFE.
 - Available in sizes 350 - 600mm only.
 - Non-rising spindle design available upon request.

Trim code	Body	Gate	Seat	Gland box	Bridge	Spindle	Packing
172•	S.G. Iron	316 S/S	S.G. Iron	S.G. Iron	S.G. Iron	304 S/S	K-LON
182•	S.G. Iron	316 S/S	RTFE	S.G. Iron	S.G. Iron	304 S/S	K-LON
170	316 S/S	316 S/S	316 S/S	304 S/S	304 S/S	304 S/S	K-LON
171	316 S/S	316 S/S	316 S/S	S.G. Iron	S.G. Iron	304 S/S	K-LON
176	316 S/S	316 S/S	RTFE	304 S/S	304 S/S	304 S/S	K-LON
177	316 S/S	316 S/S	RTFE	S.G. Iron	S.G. Iron	304 S/S	K-LON
180	316 S/S	316 S/S/PTFE*	Viton	304 S/S	304 S/S	304 S/S	K-LON

- 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.

- End connections (to suit):
- AS 2129, Table C,D,E metric threads
 - ASME B16.5, Class 125 & 150 UNC threads
 - BS 4504, PN 10 and 16
 - JIS B2210, Table 5, 10
 - DIN 2501, Table 10, 16
 - ASME B16.5, Class 125 and 150 metric threads (for N.Z.)



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