



KEYSTONE FABRICATED KNIFE GATE VALVES

FIGURE F17 AND F20

Standard and custom fabricated knife gates available in any weldable alloy and in many configurations

- F17 Resilient seated
- F20 Metal seated



FEATURES

- Fabrication provides flexibility of design for today's process industries.
- Valves are designed and built to your exact specifications.
- Round, square or rectangular ported.
- Uni-directional or bi-directional.
- Select from various materials of construction.
 - 304 S/S
 - 316 S/S
 - 317L S/S
 - 310 S/S
 - Hastelloy®
 - Alloy 20
 - Titanium
 - Monel®
 - 254SMO
- Other special materials or combinations are available to suit your application.
- NPS 2 to 24, 150 psi CWP.
- High or low pressure ratings available.
- MSS face-to-face standard to NPS 24.
- Minimum face-to-face or other dimensions available as desired.

GENERAL APPLICATION

- For severe service and specialty applications
- Pulp and paper
- Recycle paper
- Chemical
- Petrochemical
- Power
- Mining
- Wastewater

TECHNICAL DATA

Size range: NPS 2 - 24
Larger sizes available designed to suit application up to and including NPS 144

Pressure rating: 150 psi CWP

ADVANTAGES OF FABRICATION

Fully fabricated valve products give you flexibility of design and, in many instances, a more cost effective finished product. While fabrication may seem like the old way of doing things, it still has a major place in today's valve industry.

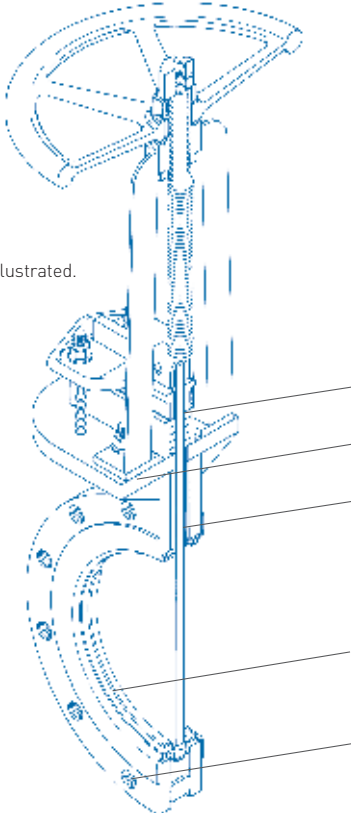
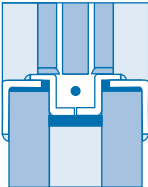
With a fabricated valve, the valve body flanges create a frame. This frame acts as an exoskeleton, surrounding and supporting the actual pressure vessel, the metal valve liner. While the liner is fully rated to the design pressure of the valve, excess weight or material found in a cast valve is unnecessary. If the application calls for the wetted parts to be hastelloy, the frame can be made from a less expensive alternative such as 316 S/S, with appreciable savings.

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FIGURE F17 AND F20

STANDARD F17 AND F20 FEATURES

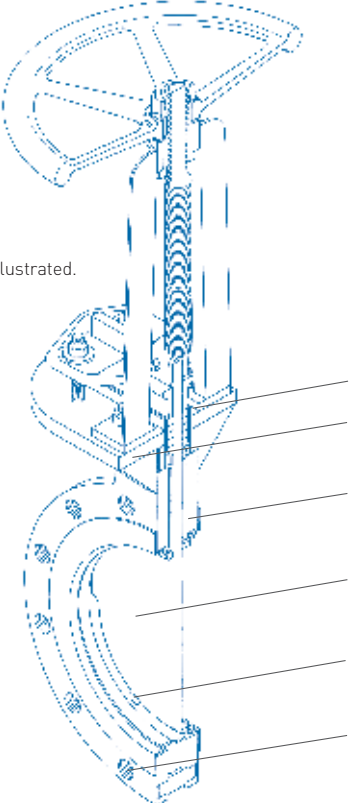
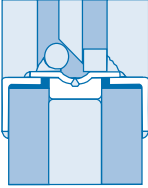
NOTE
F17 valve illustrated.

F17 has replaceable bi-directional perimeter mechanically retained resilient seat standard

- Multiple rows of AFPL or other packing
- Steel plate body and port flanges
- Smooth flowing die-formed body
- Full gate guides to assure proper seating
- Flanges drilled and tapped to ASME B16.5 150

NOTE
F20 valve illustrated.

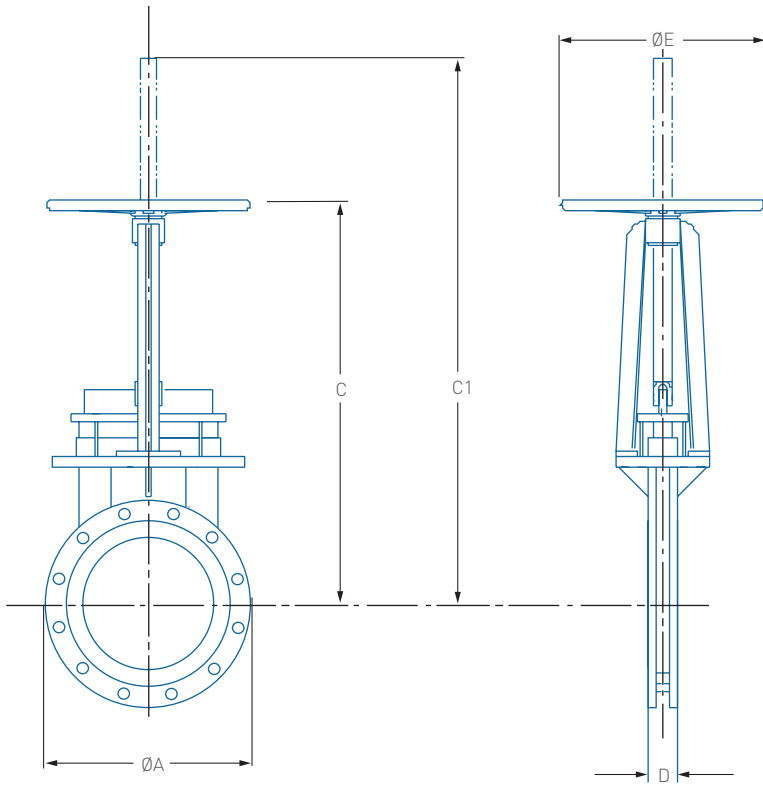



F20 has beveled gate to shear through solids, metal-to-metal seat is standard (O-ring available)

- Multiple rows of AFPL or other packing
- Steel plate body and port flanges
- Smooth flowing die-formed body
- Precision ground stainless steel gate for tight shut-off
- Multiple gate guides and wedges to assure proper seating
- Flanges drilled and tapped to ASME B16.5 150

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DIMENSIONS AND WEIGHTS, STANDARD ROUND-PORT VALVES (PER MSS-SP81)

Size NPS	ØA	C F17	C1 F17	C F20	C1 F20	ØE	D MSS	D MIN	Weight (lbs)
2	6.00	13.75	16.00	11.50	14.25	16.00	1.88	1.75	33
3	7.50	17.63	20.88	15.00	17.63	20.88	2.00	1.75	39
4	9.00	19.25	23.50	16.63	20.25	23.50	2.00	1.75	38
6	11.00	24.38	30.75	20.63	26.25	30.75	2.25	1.75	72
8	13.50	28.38	36.75	25.25	32.88	36.75	2.75	2.00	115
10	16.00	32.88	43.38	29.50	39.13	43.38	2.75	2.13	165
12	19.00	36.88	50.00	33.50	45.13	50.00	3.00	2.50	245
14	21.00	41.88	56.00	39.13	52.75	56.00	3.00	2.63	330
16	23.50	45.75	61.88	43.00	58.38	61.88	3.50	2.63	470
18	25.00	49.38	67.38	46.63	64.13	67.38	3.50	3.25	545
20	27.50	53.13	72.88	49.63	68.75	72.88	4.50	3.50	795
24	32.00	62.25	86.00	59.00	82.13	86.00	4.50	3.75	1081
30	38.75	77.38	107.00	74.75	103.75	107.00	*	*	2100
36	46.00	89.88	126.00	89.13	121.00	126.00	*	*	3200

Contact your sales representative for details on non-standard designs.

NOTES

- * NPS 30 ASME 50 design, F-F = 4"
- NPS 30 ASME 125 design = 4⁵/₈"
- NPS 36 ASME 50 design, F-F = 4¹/₄"
- NPS 36 ASME 125# design = 5³/₄"

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CODE OF MATERIAL

Item	A	B	C	D	F	H	K	Q
F17 seat	Hycar (std)	Hycar (std)	Hycar (std)	Hycar (std)	Hycar (std)	Hycar (std)	Hycar (std)	Hycar (std)
F20 seat	304	316	304	316	304	317L	317L	As specified
Wetted body parts	304	316	304	316	Carbon steel	317L	317L	As specified
Gate	304	316	304	316	304	317L	317L	As specified
Stem	304	304	304	304	304	304	304	304
Flange faces	304	316	304	316	Carbon steel	317L	317L	Same as wetted parts
Flanges/gussets	Carbon steel	Carbon steel	304	316	Carbon steel	Carbon steel	317L	As specified
Packing gland	Cast	Cast ductile	304 ductile	316	Cast	Cast ductile	317L ductile	As specified
Packing	AFPL	AFPL	AFPL	AFPL	AFPL	AFPL	AFPL	AFPL
Bolting	Plated	Plated steel	304 steel	304	Plated	Plated steel	304 steel	As specified
Yoke	Carbon	Carbon steel	304 steel	304	Carbon	Carbon steel	304 steel	As specified
Handwheel	Cast	Cast ductile	Cast ductile	Cast ductile	Cast ductile	Cast ductile	Cast ductile	Cast ductile

NOTE

AFPL, the standard packing, is an asbestos free PTFE impregnated synthetic packing suitable for services up to 500°F and a pH of 3-11. Other packings include PTFE (0-13 pH), food-grade PTFE and our AFPH for temperatures up to 1200°F.

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