



Rovalve

Fully rated, bonneted knife gate, for critical services in a variety of industries.

Features

- Fully rated, totally enclosed bonnet.
- Stem-packed design is easier to maintain and provides an excellent atmospheric barrier.
- Can be built for fully buried service.
- Made with cast 304, 316 and 317 solid cast stainless steel body or fabricated from any alloy.
- Precision machined seat with multiple gate guides provides tight one-way shutoff.
- Meets MSS-SP81 leakage requirements, not to exceed 40 cc per inch per minute at 40 PSI.
- Beveled gate cuts through solids.
- Full operation, leakage and cycling tests.
- Certified test reports on request.

Full Range of Operators and Accessories:

- Handwheel (standard)
- Bevel gear
- Lock-Pin for open, closed or both
- Air/Hydraulic/Spring cylinders
- Electric motor operators
- Control accessories
- Extension stems, floorstands, stem guides

Advantage Rovalve Knife Gates

Knife gate valves are especially suited for today's process industries. Designed to shutoff liquids, slurries and solids, they are extremely cost effective and offer several advantages over plug valves, butterfly valves and ball valves.

Rovalve knife gate valves feature a round, unobstructed port which allows more GPM with less wear on the port and seat areas when compared to other valve types. Difficult mediums such as pulp stock, fly ash, sludge and limestone slurries flow through with low pressure drop and minimal valve wear.



General Applications

- For severe service and specialty applications
- Pulp and paper
- Waste water
- Chemical
- Power

Technical data

- Size range : DN50 - DN600
150 PSI CWP
- : Designed and tested to MSS-SP81
- : Above DN600 designed to suit application including sizes through DN3600

Rovalve Figure 220 Bonneted Knife Gate Valve DN50 thru DN600

Specification

Bonneted knife gate valve, 150 psi design for 150 psi CWP, cast stainless steel one piece body with fabricated fully rated, pressure retaining bonnet. Body to have face-to-face per MSS-SP81 with seating provided by a machined metal seat for tight shut-off in one direction with gate guides and seating wedges adequate to withstand full reverse pressure without damage with gate in fully closed position and lug style port flanges drilled and tapped to ANSI B16.5/150 with machined raised gasket faces. Gate to be stainless steel finish ground or machined with 45° bevel. Bonnet to be fabricated from heavy plate and sheet with the wetted parts the same material as the cast body complete with carbon steel or better bonnet flanges and external stiffeners. To prevent atmospheric leakage, the bonnet features an adjustable packing assembly consisting of multiple layers of braided ASBESTOS FREE TEFLON® IMPREGNATED SYNTHETIC or equal packing around valve stem evenly compressed by a cast stainless steel one-piece packing gland. Valve is equipped with a manual handwheel operator assembly featuring a cast ductile iron handwheel, a heavy-duty foot mounted yoke with an acid resistant bronze stem nut and a stainless steel rising stem the same material as the body. All nonferrous exterior surfaces shall be painted to Tyco standard. Specify **Rovalve Figure 220**.

Code of Material

Item	A	B	C	D	F	H	K
Seat	304	316	304	316	304	317L	317L
Wetted body & bonnet parts*	304	316	304	316	Carbon steel	317L	317L
Gate	304	316	304	316	304	317L	317L
Stem	304	316	304	316	304	317L	317L
Flange faces	304	316	304	316	Carbon steel	317L	317L
Flanges/ Gussets	Carbon steel	Carbon steel	304	316	Carbon steel	Carbon steel	317L
Packing gland	316	316	316	316	316	316	317L
Packing	AFPL	AFPL	AFPL	AFPL	AFPL	AFPL	AFPL
Bolting	Plated steel	Plated steel	304	304	Plated steel	Plated steel	304
Yoke	Carbon steel	Carbon steel	304	304	Carbon steel	Carbon steel	304
Handwheel	Cast ductile	Cast ductile	Cast ductile	Cast ductile	Cast ductile	Cast ductile	Cast ductile

AFPL is an asbestos free Teflon® impregnated synthetic packing suitable for services up to 500° F and a pH of 3-11, other packings are available.

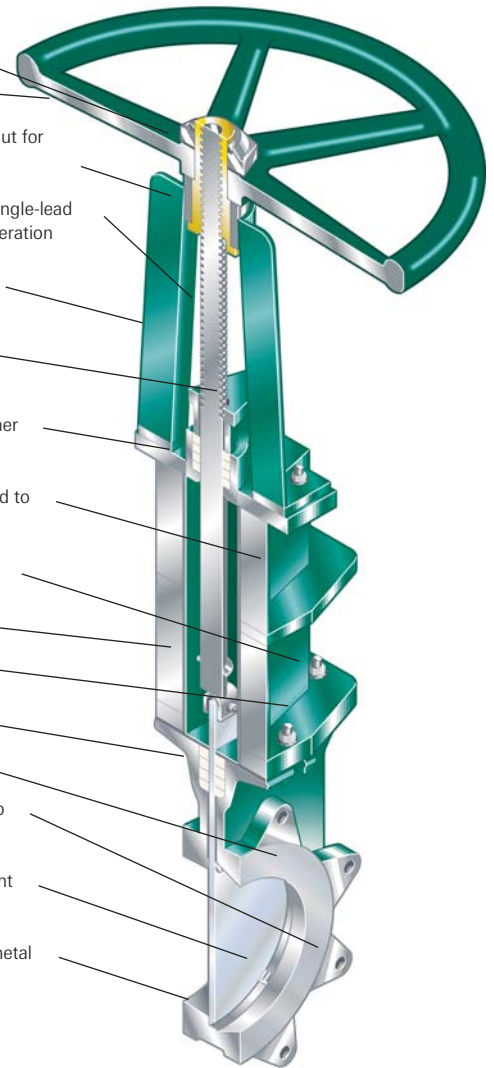
C_v Values

Sizes	Area of Opening (cm)	Flow in GPM of Water (1 psi Pressure Drop)
50	20	288
80	46	649
100	81	1154
150	183	2596
200	324	4618
250	506	6605
300	729	9561
350	941	12686
400	1217	14878
450	1551	18391
500	1926	21424
600	2797	30852

Dimensions and Weights

Size	A	B	C	D	E	Weight
50	304.8	152.40	47.63	543.05	609.60	30
80	304.8	190.50	50.80	543.05	609.60	31
100	304.8	228.60	50.80	612.90	704.85	35
150	304.8	279.40	57.15	758.95	901.70	49
200	304.8	342.90	69.85	917.70	1111.25	85
250	406.4	406.40	69.85	1047.75	1292.35	114
300	406.4	482.60	76.20	1212.85	1511.30	161
350	508.0	533.40	76.20	1466.85	1813.05	198
400	508.0	596.90	88.90	1625.60	2025.65	263
450	508.0	635.00	88.90	1778.00	2222.50	299
500	508.0	698.50	114.30	1882.90	2368.55	368
600	508.0	812.80	114.30	2219.45	2806.70	521

- Self-locking retaining nut
- Cast iron handwheel
- Acid-resistant bronze stem nut for smooth operation
- Heavy cross-section stem, single-lead Acme threads for ease of operation
- Heavy-duty yoke provides greater strength
- Heavy reinforced cast SS packing gland
- Multiple rows of AFPL or other packing
- Heavy-duty bonnet fully rated to 150 psi CWP
- Locknuts used on all bolting
- Internal backseat
- Steel-plate bonnet flange
- Internal gate wiper
- Machined gasket faces
- Flanges drilled and tapped to ANSI B16.5/150
- Full gate guides for consistent shut-off
- Beveled gate and metal-to-metal seat for tight one-way seals. (O-Ring available)



* Sizes DN50 thru DN600 use a solid cast stainless steel body with a fabricated bonnet; fully fabricated versions feature a smooth-flowing die-formed body.

