

N320

Sizes 2" – 24"



Description

This heavy-duty globe valve complies with API and BS standards. The seat ring and wedge disc are precision-ground and lapped to achieve mirror-like finishes, ensuring optimal sealing surfaces. A plug-type disc is standard, with flat and regulating discs available upon request.

The heat-treated stainless steel stem features precision-machined ACME threads for extended service life. A machined backseat bushing provides a secondary metal-to-metal stem seal. The rising stem clearly indicates the valve's open/closed position, and the large-diameter handwheel allows for easy operation.

The yoke sleeve is constructed from austenitic ductile iron, offering excellent resistance to heat, corrosion, and wear. A two-piece, self-aligning gland bushing and gland flange prevent damage, reinforced by high-strength alloy steel stud bolts.

- **API 600, API 603, ASME B16.34, MSS SP-134, BS 6364, full port design**
- **Shell Design: ASME B16.34 (Valves – Flanged, Threaded, and Welding End)**
- **Flanged Ends: ANSI B16.5**
- **Face to Face: ANSI B16.10**
- **Testung: API 598**

Cryogenic Gate Valve API 600 Class 150-900

- **Bolted or welded bonnet design**
- **Hand and Gear Wheel Operated (Actuation Available)**
- **Extended bonnet to isolate the packing from the cryogenic fluid**
- **Flexible wedge with pressure relief vent**
- **Low emission design**
- **High-Pressure and High-Temperature Capabilities**



Beschreibung

Konstruiert nach API 6D und druckgeprüft gemäß API 598/EN 12266-1, bietet dieses robuste Flansch-Absperrventil hervorragende Langlebigkeit für anspruchsvolle industrielle Anwendungen, Kesselanlagen und raue Umgebungen. Das Ventil ist mit ANSI 150 Flanschen erhältlich und gewährleistet durch ein robustes Handrad eine maximale Lebensdauer.

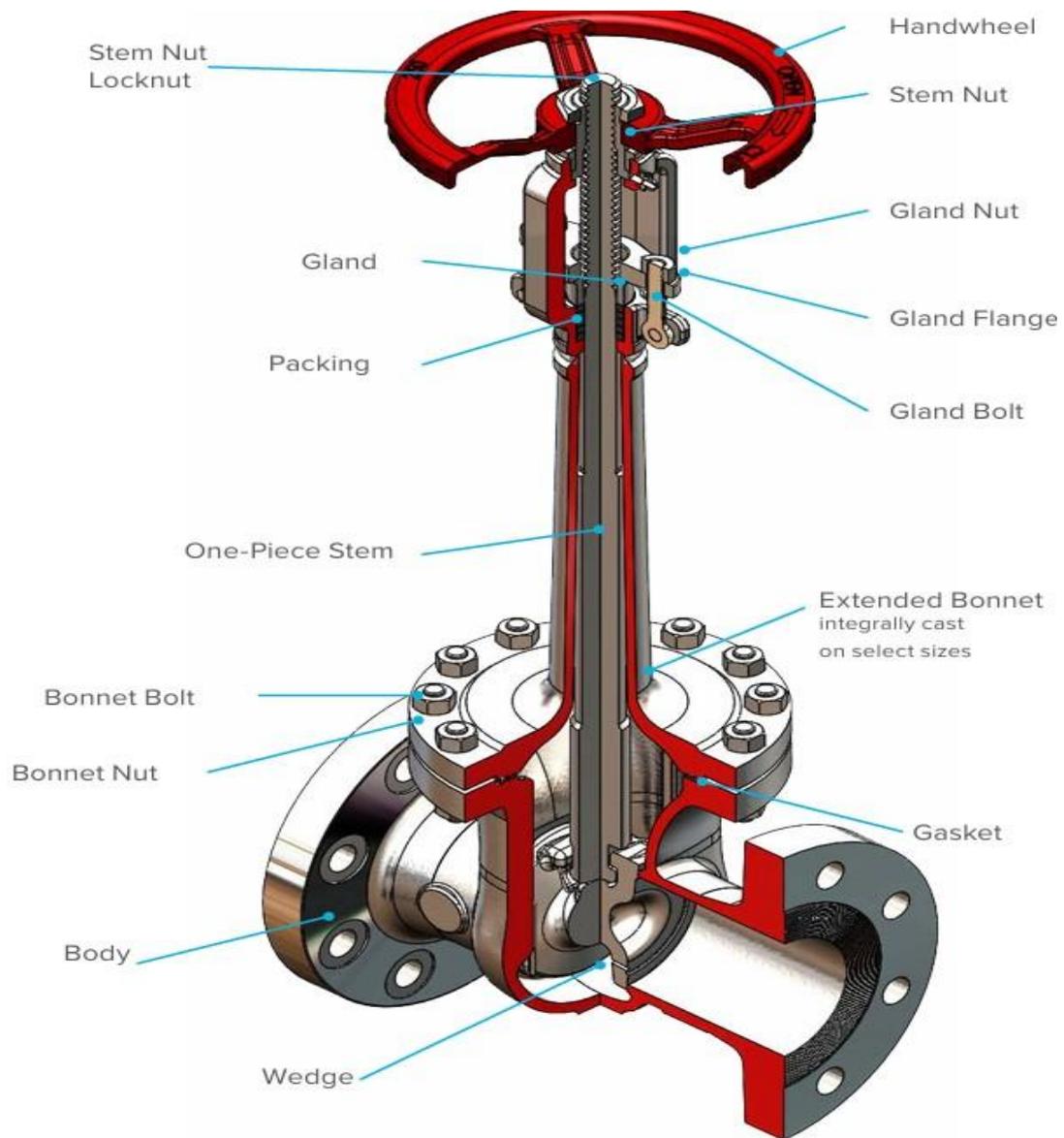


Description

Designed to API 6D and pressure tested according to API 598/EN 12266-1, this robust flanged gate valve offers exceptional durability for demanding industrial applications, boiler systems, and harsh environments. Available with ANSI 150 flanges, the valve ensures maximum service life through a sturdy handwheel.

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Cast Cryogenic Gate Valve



- Threaded, socket weld, butt weld ends class 150 thru 600
- Tested in accordance to API 598
- Flanged ends class 150 to class 1500
- Class 150–600
- Customizable bonnet extension
- Optional degrease, clean and seal to prevent contamination

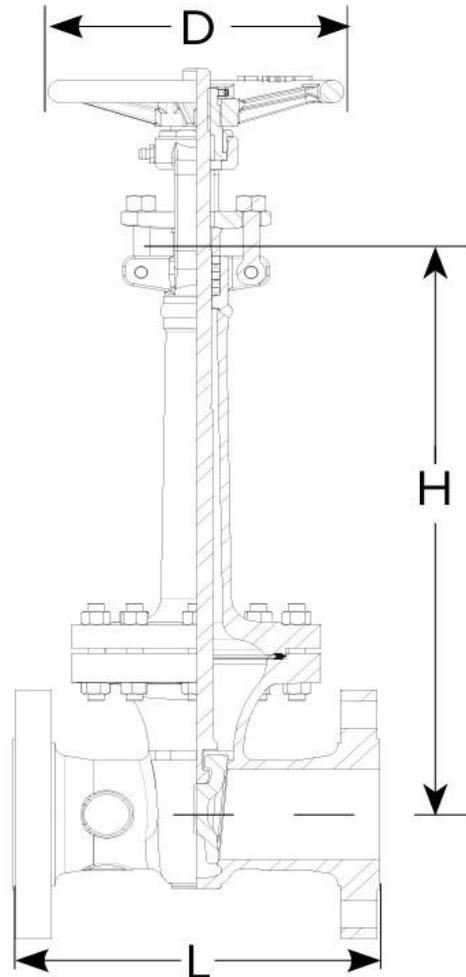
Material Design

Component	Common Materials	Remarks
Body & Bonnet	SS 304, SS 316, SS 316L, SS 347, SS 321	Corrosion resistance, strength at low temperatures
	Duplex Stainless Steel (SS 2205, SS 2507)	Higher strength and corrosion resistance
	Nickel Alloys (Inconel 625, Hastelloy, Monel 400)	Extreme cryogenic and aggressive environments
	LTCS (A352 LCB, LCC, LF2, LF3)	Used for less demanding cryogenic applications
Trim (Gate, Seat, Stem, Internals)	SS 316, SS 316L, SS 304, SS 347, SS 321	Common corrosion-resistant trims
	Monel K500, Monel 400	High corrosion resistance, especially for oxygen service
	Inconel 625	For extreme cryogenic applications
	Bronze / Aluminum-Bronze (ASTM B148 C95800)	Used in some specific cases
Stem & Packing	Extended Bonnet with SS Stem	Reduces heat transfer
	PTFE (Polytetrafluoroethylene) Packing	High-performance sealing at low temperatures
	Graphite Packing	Used in fire-safe designs
Sealing (Seats, Gaskets, O-Rings, Seals)	Soft Seat: PTFE, PCTFE (Kel-F), TFM	Tight shutoff at extremely low temperatures
	Metal Seat: Stellite-Coated SS, Inconel	Durable and wear-resistant
	Gaskets: Spiral Wound (SS 316 + Graphite/PTFE) or PTFE-Based	Maintains sealing integrity
Bolting	A320 Grade L7 / L7M	Cryogenic-grade bolting
	A193 B8 / B8M (SS 304 / 316)	Corrosion-resistant bolting

alloy materials used in cryogenic gate valves

Alloy Type	Material	Application & Benefits
Nickel-Based Alloys	Inconel 625	High strength, corrosion resistance, suitable for extreme cryogenic applications (LH2, LOX).
	Hastelloy C-22 / C-276	Used in highly corrosive cryogenic environments.
	Monel 400 / Monel K500	Preferred for LOX service due to its non-sparking and corrosion-resistant properties.
Stainless Steel Alloys	SS 304, SS 316, SS 316L	Commonly used for LNG, LN2, LOX due to good corrosion resistance and low-temperature strength.
	SS 321, SS 347	Stabilized stainless steel for better thermal stability at cryogenic temperatures.
	Duplex SS (2205, 2507)	Higher strength and better resistance to stress corrosion cracking. Suitable for LNG & industrial applications.
Low-Temperature Carbon Steel (LTCS)	ASTM A352 LCB, LCC, LF2, LF3	Used for moderate cryogenic applications (LNG) but not recommended for ultra-low temperatures below -196°C.
Cobalt & Aluminum-Bronze Alloys	Stellite (Cobalt-Based Alloy)	Used for hard-facing seats and gate surfaces for wear resistance in high-cycle applications.
	Aluminum-Bronze (ASTM B148 C95800)	Sometimes used for trim components where corrosion resistance is needed.

Cast Cryogenic GATE VALVES



150 LBS

SIZE	1/2"	3/4"	1"	1 1/2"	2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"
L	4.25	4.63	5.00	6.50	7.00	8.00	9.00	10.50	11.50	13.00	14.00	15.00	16.00	17.00	18.00	20.00
D	3.50	3.50	4.88	6.50	6.50	7.88	9.81	11.81	11.81	13.98	17.72	19.69	22.05	24.80	24.80	27.95
H	12	12	12	14	16	18	22	24	27	32	36	41	43	45	48	52
WT LBS	12	12	14	23	32	68	99	177	292	406	550	825	1,218	1,395	1,838	2,694

300 LBS

SIZE	½"	¾"	1"	1½"	2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"
L	5.50	6.00	6.50	7.50	8.50	11.12	12.00	15.88	16.50	18.00	19.75	30.00	33.00	36.00	39.00	45.00
D	4.88	4.88	6.50	7.50	7.50	9.81	9.81	14.19	16.75	17.72	17.72	19.69	19.69	24.80	24.80	27.95
H	12	12	12	14	16	18	22	24	27	32	36	41	43	45	48	52
WT LBS	15	17	22	35	48	84	123	230	373	699	1,005	1,523	2,046	2,748	3,457	5,048

600 LBS

SIZE	½"	¾"	1"	1½"	2"	3"	4"	6"	8"	10"
L	6.50	7.50	8.50	9.50	11.50	14.00	17.00	22.00	26.00	31.00
D	4.88	4.88	6.50	7.50	7.50	9.84	13.98	17.72	19.69	19.69
H	12	12	12	14	16	18	22	24	27	32
WT LBS	19	22	32	61	74	171	273	539	943	1,455

900 LBS

SIZE	3"	4"	6"	8"
L	15.00	18.00	24.00	29.00
D	13.98	13.98	19.69	24.80
H	18	22	24	27
WT LBS	257	401	751	1,327