



Excellence Every Time Every Where

GATE VALVE



Index

1. Company Overview	1
2. Introduction & USPs.....	1
3. Product Offering.....	2
4. Material of Construction.....	2
5. Actuator Options.....	3
6. Design & Construction Features.....	4
7. Product Dimensions & Schematics.....	5
8. Flow Performance	5
9. Pressure Vs Temperature.....	6
10. Torque Table.....	6
11. Standards & Certifications	7

1. Company Overview

Anante Controls India Pvt. Ltd. was founded in 2024 with a singular vision: to become a customer-first, problem-solving force in the valve industry. The company is the brainchild of Mr. Anant Randhave, a seasoned expert with over two decades of hands-on experience in quality assurance and control across multiple valve manufacturing companies.

Throughout his 20+ year career, Mr. Randhave built a reputation as a reliable problem-solver—someone who could not only identify root causes in the most complex flow control systems but also drive long-term solutions that enhanced performance, safety, and reliability. He has worked with a wide range of valves—gate, globe, check, ball, butterfly, and control valves—serving industries such as oil & gas, petrochemicals, water treatment, power, and general manufacturing.

His deep involvement in New Product Development (NPD) projects sharpened his ability to tackle tough design and functionality challenges, often bridging the gap between customer expectations and shop-floor realities. Customers and internal stakeholders alike trusted his insights, not just because of his technical acumen, but because of his genuine desire to help them succeed.

With a burning passion to go beyond the boundaries of traditional QA roles, Mr. Randhave envisioned a company that would not just manufacture valves—but solve problems. That vision became reality with the establishment of Anante Controls India Pvt. Ltd. The company was built on a foundation of strong technical knowledge, relentless customer focus, and a commitment to quality without compromise.

2. Introduction & USPs

Anante Control Gate Valves are designed for reliable shutoff performance in a wide range of industrial applications. The valves are engineered in both forged and cast constructions, ensuring suitability across pressure classes, temperature ranges, and process conditions. Each valve is manufactured to international standards, combining precision engineering, robust metallurgy, and safety compliance.

These gate valves offer bi-directional sealing with low operating torque, ensuring bubble-tight shutoff even under high differential pressures. Advanced manufacturing ensure consistent performance in demanding applications across oil & gas, power, chemical, water, and food & pharma industries.

Comprehensive Range: Available in forged (½”–2”) and cast (2”–36”) construction for complete line coverage.

High Integrity Design: Conforms to API 600 / API 602 / API 6D / ASME B16.34 / BS EN 12266.

Durable Sealing System: Offers both soft and metal seated options for precise shutoff.

Wide Material Spectrum: Carbon steel, alloy steel, and stainless-steel grades with optional overlay (Stellite, Inconel, Monel, Alloy 625).

Actuation Flexibility: Suitable for manual, gear-operated, pneumatic, or electric actuators.

Safety & Reliability: Certified for Fire Safe, ATEX, SIL, and NACE MRO175 compliance.

Enhanced Corrosion Protection: Fusion Bonded Epoxy (FBE) coating and hard-facing for extended service life.

Versatile Applications: Ideal for isolation in oil & gas, petrochemical, chemical, water treatment, power, and process plants.

3. Product Offering

Anante Control provides a complete range of Gate Valves engineered to deliver dependable isolation and zero-leakage performance across diverse industrial sectors. The product portfolio includes both forged and cast construction, covering a comprehensive spectrum of sizes, pressure ratings, materials, and end connections to meet global process requirements.

All gate valves are designed in accordance with API, ASME, BS EN, and other international standards, ensuring consistent performance, safety, and interchangeability. This catalog details our Standard Product Range. For requirements involving larger sizes, higher pressure classes, or customized specifications, please contact the manufacturer directly.

Forged Gate Valve				
Size	Pressure Class			
1/2"	800	900	1500	2500
3/4"	800	900	1500	2500
1"	800	900	1500	2500
1.5"	800	900	1500	2500
2"	800	900	1500	2500

Cast Gate Valve Flange and Weld End						
Size	Pressure Class					
2"	150	300	600	900	1500	2500
3"	150	300	600	900	1500	2500
4"	150	300	600	900	1500	2500
5"	150	300	600	900	1500	2500
6"	150	300	600	900	1500	2500
8"	150	300	600	900	1500	
10"	150	300	600	900	1500	
12"	150	300	600			



4. Material of Construction

Anante Control Gate Valves are manufactured using high-grade materials selected based on service conditions, pressure rating, temperature, and media compatibility. Each material combination ensures optimum strength, corrosion resistance, and pressure retention, meeting the requirements of API 600 / API 602 / API 6D / ASME B16.34 / BS EN 12266.

Both forged and cast designs are available in a wide range of metallurgies suitable for standard, corrosive,

and high-temperature applications. Optional hard-facing and overlay (Stellite, Inconel, or Monel) are offered for extended life in abrasive or corrosive media.

Body MOC	Seat MOC	Stem MOC	Application
ASTM A105	410 SS / 410 SS + Stellite	410 SS	General hydrocarbon and utility service at moderate pressure
ASTM A216 WCB	410 SS / 410 SS + HF	410 SS	Oil & gas pipelines, refinery isolation, and water systems
ASTM A217 WC6	410 SS + HF / Stellite 6	410 SS / 17-4 PH	Steam and high-temperature service up to 540°C
ASTM A217 WC9	410 SS + Stellite 6	410 SS / 17-4 PH	Power and petrochemical service, superheated steam
ASTM A352 LCB / LCC	410 SS / 316 SS	410 SS / 316 SS	Low-temperature hydrocarbons and cryogenic lines
ASTM A351 CF8	304 SS / 304 SS + Stellite	304 SS	Mildly corrosive media and moderate temperatures
ASTM A351 CF8M	316 SS / 316 SS + HF / Stellite	316 SS	Highly corrosive service, seawater, chemical processing
ASTM A182 F11	410 SS / 410 SS + HF	410 SS	High-pressure hydrocarbon service up to 500°C
ASTM A182 F22	410 SS / 410 SS + Stellite	410 SS	Steam and high-pressure power plant service
ASTM A351 CN7M	Alloy 20 / Stellite	Alloy 20	Sulphuric acid and oxidizing chemical environments
ASTM A494 CW12MW	Hastelloy C / Stellite	Hastelloy C	Acids, chlorides, and strong reducing environments
ASTM A182 F44 / F51 / F55	Duplex SS / Stellite	Duplex SS	Seawater, desalination, and chloride stress conditions
Inconel 625 / 718	Inconel / Stellite	Inconel 625 / 718	Sour gas, offshore, and severe corrosion service
Monel 400 / K500	Monel / HF Overlay	Monel	Caustic soda, alkali service, marine and brine systems

Overlay & Coating Options

- Hard-Facing: Stellite 6 / Stellite 21 / Colmonoy / Chromium Carbide

- External Protection: Fusion Bonded Epoxy (FBE) / Epoxy-Polyurethane
- Optional Enhancements: Electroless Nickel Plating / NACE MR0175-compliant trims
- Corrosion-Resistant Overlays: Inconel 625 / Inconel 718 / Monel 400

5. Actuator Options

Anante Control's Gate Valves can be equipped with a wide range of manual and automated actuation systems to suit diverse operating environments and control requirements. Each actuation option is designed to ensure smooth operation, minimal torque effort, and reliable shutoff even under high-pressure differential conditions. All actuators are mounted with standard ISO 5211 drilling patterns, allowing easy interchangeability and retrofit capability. The selection of actuator type depends on the valve size, pressure class, service media, and operating frequency.

Actuator Type	Operation Principle	Size Range	Typical Application
Manual Handwheel	Direct mechanical rotation of stem through threaded stem nut	Up to 6"	General isolation service, low-frequency operation
Bevel Gear Operator	Worm and gear mechanism for torque multiplication	6" and above	High-torque valves, infrequent operation
Pneumatic Actuator	Air pressure-operated piston or diaphragm	4" – 24"	Process automation, quick operation cycles
Hydraulic Actuator	Hydraulic pressure-driven piston for high torque output	6" – 36"	High-pressure, subsea, or remote installations
Electric Actuator	Electric motor-driven stem operation	4" – 36"	Automated systems, SCADA/DCS integration
Electro-Hydraulic Actuator	Electric-hydraulic combination for critical operations	8" and above	Safety-critical, emergency shutdown (ESD)

6. Design & Construction Features

Anante Control Gate Valves are designed and manufactured in accordance with API 600 / API 602 / API 6D / ASME B16.34 / BS EN 12266 to ensure zero-leakage shutoff, high durability, and reliable operation under demanding industrial conditions. Both forged and cast constructions are available, optimized for different pressure ratings, temperature ranges, and process requirements.

Each valve is engineered with precision machining, hard-facing, and controlled tolerances to guarantee long service life and minimum maintenance.

Design Type: Rising Stem, Outside Screw & Yoke (OS&Y) construction for positive stem visibility and easy lubrication.

Sealing Mechanism: Bi-directional sealing through precision lapped seat and wedge interface; available in soft or metal-to-metal sealing.

Seat Design: Renewable or integral seat rings, with optional hard-facing (Stellite / Inconel / Colmonoy) for extended life.

Wedge Type: One-piece flexible wedge design to compensate for thermal expansion and body seat misalignment, ensuring tight shutoff.

Stem Design: Non-rotating rising stem with precision ACME threads for smooth operation and minimized wear.

Bonnet Type: Bolted bonnet for pressure classes up to 1500#; pressure seal bonnet available for 900# and above on request.

Body-Bonnet Joint: Spiral wound or RTJ gasket ensuring leak-tight pressure retention; male-female or tongue-and-groove configuration as per class rating.

Packing: Graphite or PTFE packing with optional lantern ring; ensures zero fugitive emission per API 624 / ISO 15848.

Back Seat: Integral metal-to-metal back seat arrangement in bonnet to permit stem packing replacement under pressure (Class 300 & above).

Yoke Sleeve: Ductile iron or bronze alloy yoke sleeve, self-lubricating type for smooth operation.

Bearing Arrangement: Thrust bearings provided in large sizes to reduce operating torque and ensure smooth operation.

Stem Nut & Fasteners: Manufactured from bronze or stainless steel; all fasteners conform to ASTM A193 / A194 standards.

Forged Construction Features (½" – 2")

- Compact, high-pressure design suitable for 150# to 2500# classes.
- Forged one-piece body minimizes leak paths and enhances strength.
- Socket Weld, Screwed, Flanged, and Butt Weld Ends available.
- Precision-ground stem threads for reduced friction and extended service life.
- Designed as per API 602 / ASME B16.34 / ISO 15761.

6.3 Cast Construction Features (2" – 36")

- Rugged cast body and bonnet designed to meet API 600 / API 6D pressure standards.
- Full bore opening ensures unobstructed flow with minimal pressure drop.
- Flexible wedge accommodates minor body

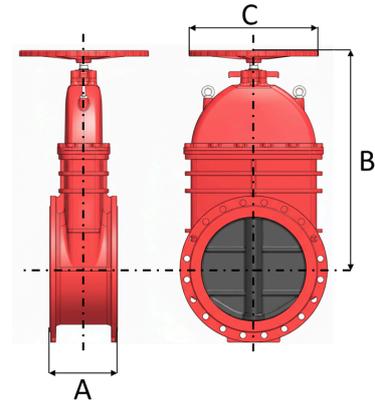
distortion and thermal expansion.

- Renewable seat rings screwed or welded as per service requirement.
- RTJ, RF, or BW end connections available for Class 150 to 1500.
- Optional gear, pneumatic, hydraulic, or electric actuation.

7. Product Dimensions

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Class 150						
Size	Flange End			Butweld End		
	A	B	C	A	B	C
2"	178	320	200	216	320	200
3"	203	390	300	282	390	300
4"	229	445	350	305	445	350
6"	267	550	350	403	550	350
8"	292	755	400	419	755	400
10"	330	890	450	457	890	450
12"	356	955	GB	502	955	GB

Class 300						
Size	Flange End			Butweld End		
	A	B	C	A	B	C
2"	216	315	195	216	315	195
3"	282	385	245	282	385	245
4"	305	440	345	305	440	345
6"	403	590	395	403	590	395
8"	419	755	445	419	755	445
10"	457	915	GB	457	915	GB
12"	502	1020	GB	502	1020	GB

Class 600						
Size	Flange End			Butweld End		
	A	B	C	A	B	C
2"	292	310	195	292	310	195
3"	356	365	295	356	365	295
4"	432	435	395	432	435	395
6"	559	635	445	559	635	445
8"	660	755	445	660	755	445
10"	787	955	GB	787	955	GB
12"	838	995	GB	838	995	GB

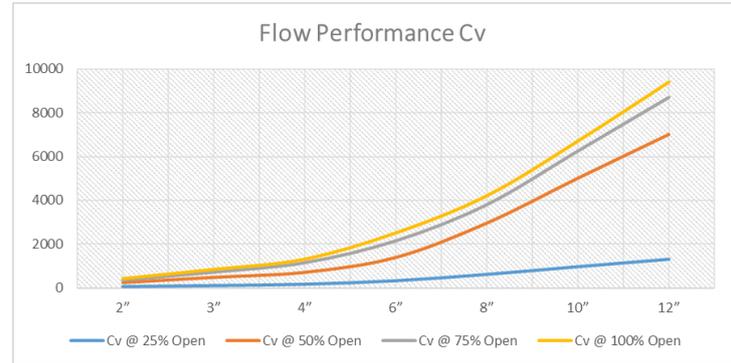
8. Flow Performance

Anante Control Gate Valves are designed with a full-bore, straight-through flow path to ensure minimal pressure drop and low turbulence across the valve.

The rising stem, flexible wedge design provides a smooth and unobstructed flow in the fully open position, resulting in excellent flow efficiency comparable to a straight pipe of the same size.

Each valve undergoes hydrostatic and pneumatic testing per API 598 / BS EN 12266, and its flow coefficients (Cv values) are derived from actual test data and reference standards for comparable through-conduit designs.

Size	Cv @ 25%	Cv @ 50%	Cv @ 75%	Cv @ 100%
2"	50	230	350	410
3"	100	470	720	830
4"	160	700	1150	1300
6"	320	1380	2150	2500
8"	610	2950	3800	4200
10"	960	5000	6250	6700
12"	1300	7000	8700	9400



9. Pressure vs Temperature

Anante Control Gate Valves are designed and tested in accordance with ASME B16.34, API 600 / 602 / 6D, and BS EN 12266 standards. The valves are rated for continuous operation across a wide temperature range, ensuring structural integrity and leak-free performance under varying process conditions.

Each material has a defined Pressure-Temperature Rating, which specifies the maximum allowable working pressure (MAWP) at a given temperature. The following tables provide reference values for Cast and Forged Steel Gate Valves across major pressure classes.

ASTM A105 Forged Gate Valve (Temp. in °C and Pressure in bar)						
Pressure Class	Temperature					
	-29 to 38	100	200	300	400	500
150	19.6	17	13.7	10.8	8.1	5.4
300	51	47	42	38	35	32
600	102	94	84	76	70	64
900	153	141	127	114	105	96
1500	255	235	212	191	175	160
2500	425	392	353	318	290	265

ASTM A216 WCB Cast Gate Valve (Temp. in °C and Pressure in bar)						
Pressure Class	Temperature					
	-29 to 38	100	200	300	400	500
150	19.6	17	13.7	10.8	8.1	5.4
300	51.1	47.2	42.3	38.5	35.5	32.6
600	102.1	94.4	84.7	77	71	65.1
900	153.2	141.6	127	115.5	106.5	97.7
1500	255.3	236	211.7	192.6	177.4	162.8

10. Torque

Anante Control Gate Valves are designed to operate with low and uniform torque across the full stroke due to precision machining, proper stem-thread geometry, and smooth wedge-seat engagement. The following torque values are indicative of average seating and unseating torques required under clean water service at ambient conditions.

Actual torque may vary depending on:

- Line pressure differential
- Frequency of operation
- Medium viscosity or solids content
- Type of seat (metal or soft)
- Stem lubrication condition

11. Standards & Certifications

Anante Control's Gate Valves are designed, manufactured, and tested in strict accordance with international codes and standards to ensure safety, reliability, and interchangeability across a wide range of industrial applications. Each valve is manufactured under a robust Quality Management System (ISO 9001:2015) certified to global standards, ensuring consistent performance, traceability, and long-term service reliability.

Design & Manufacturing Standards		
Standard	Test Type	Scope of Testing
API 598	Valve Inspection & Pressure Test	Shell, Seat, and Back Seat Test
BS EN 12266-1	Pressure Test	Leakage Rate & Tightness Classes
API 6FA / API 607	Fire Test for Valves	Fire Safe Qualification
API 624 / ISO 15848-1	Fugitive Emission Test	Low Emission Qualification
NACE MR0175 / ISO 15156	Sulfide Stress Cracking	Sour Service Material Compliance
ISO 5209	Marking and Pressure Test	Product Verification
PED 2014/68/EU	Pressure Equipment	CE Marking Compliance
ATEX 2014/34/EU	Equipment for Explosive	Explosion-Proof Certification (on

Testing and Inspection Standards		
Standard	Test Type	Scope of Testing
API 598	Valve Inspection & Pressure Test	Shell, Seat, and Back Seat Test
BS EN 12266-1	Pressure Test	Leakage Rate & Tightness Classes
API 6FA / API 607	Fire Test for Valves	Fire Safe Qualification
API 624 / ISO 15848-1	Fugitive Emission Test	Low Emission Qualification
NACE MR0175 / ISO 15156	Sulfide Stress Cracking Resistance	Sour Service Material Compliance
ISO 5209	Marking and Pressure Test	Product Verification
PED 2014/68/EU	Pressure Equipment Directive	CE Marking Compliance
ATEX 2014/34/EU	Equipment for Explosive Atmospheres	Explosion-Proof Certification (on



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