

**BLAZE**

Resilient Seat NRS Gate Valve

Model : BT 5101 - 200 / 250

Description:

The BT 5101 - 200 / 250 NRS Resilient Seated Gate Valve is designed for dependable isolation in fire protection and water distribution systems. Featuring a fully encapsulated EPDM wedge and triple O-ring stem sealing, the valve provides bubble-tight shut-off, low operating torque and long-term leak-free performance. The Non-Rising Stem (NRS) design is ideal for installations where vertical space is limited. Manufactured from high-quality ductile iron and protected with an internal and external Fusion Bonded Epoxy (FBE) coating, the valve offers excellent corrosion resistance and extended service life.

Specifications :

Size	DN350 - DN600 (14" - 24")
Maximum Working Pressure	250 psi for 14" to 18" 200 psi for 20" to 24"
Approvals	FM 1120 / 1130 Approved, UL 262 Listed
Design Standard	AWWA C515
End Connection	Standard Supply ANSI Class 150 RF / Grooved to AWWA C606 Standard. *ANSI Class 125 / PN16 RF Flange Optional
Face to Face Dimensions	ANSI/ASME B16.10, EN558-1 series 3
Temperature Range	0° C to 80°C (32°F to 176°F)
Coating	Fusion Bonded Epoxy Coating in accordance with ANSI / AWWA C550. Average Coating Thickness 250 Microns
Wedge	Ductile-Iron Wedge, EPDM Encapsulated.

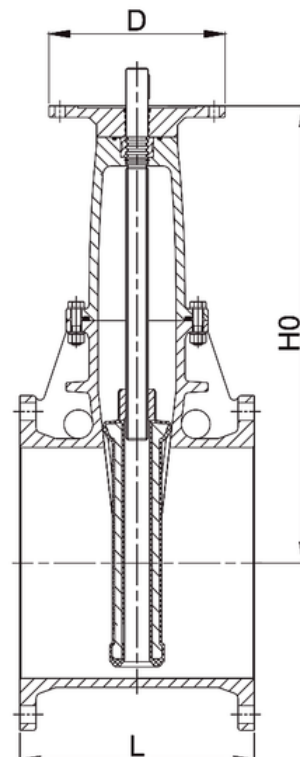


Options :

- Stainless Steel Fasteners: A2-70 or A4-70.
- BUNA-S (SBR) available for Fracking Waste Water / Special Applications
- Without Post Flange and with handwheel.
- Other Flange Types available upon request.

Dimensions:

Order Code	Size	L (mm/inch)	H0 (mm/inch)	D (mm/inch)
BT-5101-350-250-RF	14"	381 / 15.0"	727 / 28.6"	305 / 12.0"
BT-5101-400-250-RF	16"	406 / 16.0"	792 / 31.2"	305 / 12.0"
BT-5101-450-250-RF	18"	432 / 17.0"	907 / 35.7"	305 / 12.0"
BT-5101-500-200-RF	20"	457 / 18.0"	992 / 39.1"	305 / 12.0"
BT-5101-600-200-RF	24"	508 / 20.0"	1122 / 44.2"	305 / 12.0"

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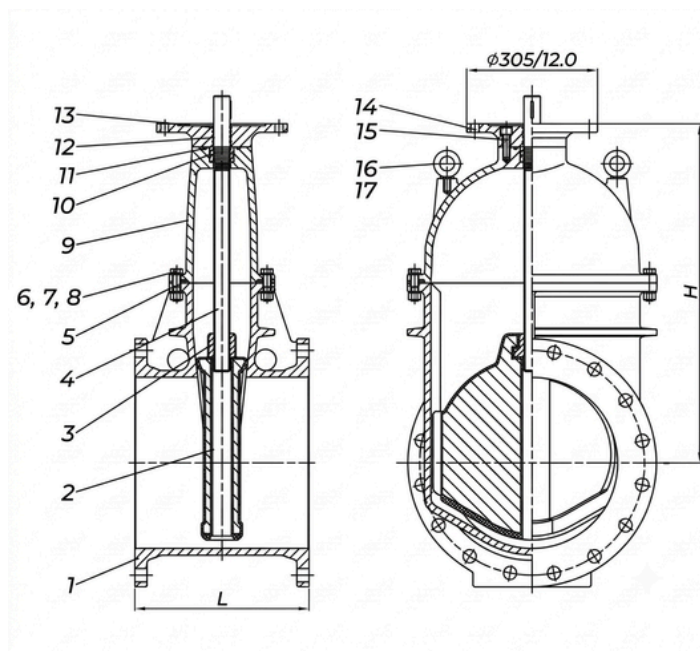


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Material Specification :

Item	Part Name	Material	ASTM Specification
1	Body	Ductile Iron	A536 Grade 65-45-12
2	Wedge	Ductile Iron Fully Encapsulated with EPDM	
3	Wedge Nut	Bronze	B148 C95200
4	Stem	Stainless Steel	A276 Type 304
5	Gasket	Rubber	D2000 EPDM
6	Bolt	Carbon Steel	A307 Class B
7	Washer	Stainless Steel	A276 Type 304
8	Nut	Carbon Steel	A307 Class B -
9	Bonnet	Ductile Iron	A536 Grade 65-45-12
10	Thrust Collar	Bronze	B148 C95200
11	O-Ring	Rubber	D2000 NBR
12	O-Ring	Rubber	D2000 NBR
13	Dustproof Ring	Rubber	D2000 NBR
14	Post Flange	Ductile Iron	A536 Grade 65-45-12
15	Screw	Carbon Steel	A307 Class B
16	Eye Bolt	Carbon Steel	A307 Class B
17	Washer	Stainless Steel	A276 Type 304

Layout and Siting :

The location of the valve should be considered during the system design stage to ensure adequate access for operation, inspection, maintenance and repair.

The valve and adjoining pipework must be adequately supported to prevent external loads or pipeline stresses from being transferred to the valve body. Large or heavy valves may require independent supports or anchorage.

The valve may be installed in the following orientations:

- Horizontal pipework with the stem in the vertical position.
- Vertical pipework with the stem in the horizontal position.

Note: The valve should not be installed in horizontal pipework with the stem in the horizontal position, as this may impair shut-off performance.

For end-of-line applications where the valve is normally kept closed and operated infrequently, it is recommended that the operating mechanism is fitted with a locking device or that a blanking flange is installed on the downstream side for additional safety.

Installation :

- 1.Before installation, verify that the identification plate and valve body markings correspond with the system requirements and valve specification.
- 2.Handle the valve with care. Do not allow dirt, debris or foreign material to enter the valve through the end ports, and avoid excessive force during lifting, installation or operation.
- 3.Remove all protective packaging and end caps immediately before installation.
- 4.Ensure the valve and adjoining pipework are adequately supported to prevent external loads or pipeline stresses from being transferred to the valve body.
- 5.Never lift or carry the valve by the stem. Use appropriate lifting equipment and approved lifting points.

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6. Before fitting the valve, ensure the pipework is clean and free from dirt, scale and other foreign material. Inspect the valve interior and flange faces for cleanliness and damage. Do not install the valve if any defects that could affect sealing are found.
7. Fit a gasket suitable for the operating pressure, temperature and service conditions. Ensure the gasket is clean and free from damage before installation.
8. Align the pipe flanges accurately before assembly. Apply a suitable lubricant to the bolt threads where required and tighten the flange bolts gradually using a criss-cross (cross-over) sequence to ensure even gasket compression and prevent flange distortion.
9. Confirm that all flange bolts are of the correct size, length and material, and that every bolt hole is fitted with the appropriate fastener.
10. Upon completion of the installation, remove any dust or debris from the valve and surrounding equipment before placing the system into service.

Operation :

Open the valve by turning the operating nut in the direction indicated by the arrow until it reaches the fully open position. To close the valve, turn the operating nut in the opposite direction until it reaches the fully closed position.

The valve is designed for fully open or fully closed operation only and should not be used for throttling or regulating flow.

Note: Temperature changes may affect valve operation. A valve closed at high temperature may become difficult to open after cooling due to contraction of the components. Likewise, a valve closed at ambient temperature may become difficult to operate if the fluid temperature increases, causing thermal expansion of the stem and tighter seating of the wedge.

Maintenance :

Before carrying out any maintenance, ensure the valve is fully isolated from the system, depressurised and at ambient temperature. Always use appropriate tools and equipment, and follow all applicable site safety procedures.

Where maintenance work may generate sparks, ensure the work area is free from combustible dust and that a suitable risk assessment has been completed before work begins.

Inspect the valve regularly for signs of wear, corrosion or damage. In corrosive environments, periodically check the wall thickness of the valve body and bonnet. If the wall thickness has been reduced by 25% or more, the valve should be replaced to ensure continued safe operation.

A planned maintenance programme should be implemented to identify any deterioration or abnormal operating conditions before they affect valve performance.

Bonnet Gasket Replacement :

- Isolate and drain the valve before starting work.
- Fully open the valve.
- Remove the bonnet bolts and lift off the bonnet assembly together with the wedge.
- Replace the bonnet gasket with a new gasket.
- Reassemble the bonnet, ensuring the wedge guides are correctly aligned with the body guides.
- Tighten the bonnet bolts evenly using a criss-cross sequence to ensure uniform gasket compression.

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