

# Cast Iron Gate Valve Non-Rising Stem

**Weights:** 15kg - 1,280kg  
**Sizes:** DN 50 – 600  
**Class:** 125  
**Pressure:** PN14  
**Temperatures:** -10°C to 230°C



## Application

The Cast Iron Gate Valve Non-Rising Stem is a reliable and sturdy device that plays a crucial role in regulating the flow of fluids in pipelines. It is constructed using high-quality cast iron material, known for its strength and durability, making it suitable for various applications in industries such as oil and gas, water treatment, and chemical processing.

The key feature of a non-rising cast iron gate valve is its non-rising stem design. Unlike rising stem gate valves, which move vertically when operated, the non-rising stem design ensures that the valve's stem remains stationary during operation. The Cast Iron Non-Rising Stem Gate Valve offers excellent sealing performance and minimal friction loss. Its smooth and unobstructed flow path allows for efficient fluid flow, reducing pressure drop and enhancing system efficiency.

## Dimensions

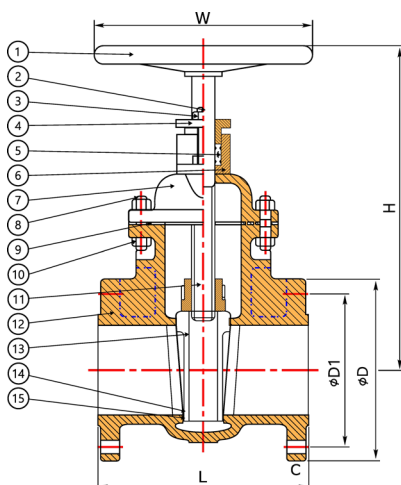
NPS	DN	L	φ D	φ D1	C	H	W	Kg
2	50	177	152	120	15.80	278	180	15
2.5	65	190	178	139	17.50	311	180	19
3	80	203	191	152	19.00	339	180	24
4	100	228	229	190	23.90	393	200	38
5	125	254	254	216	23.90	454	250	51
6	150	266	279	241	25.40	501	280	66
8	200	292	343	298	28.50	592	300	104
10	250	330	406	362	30.20	730	360	165
12	300	355	483	432	31.80	852	400	238
14	350	381	533	476	35.00	1,012	505	420
16	400	406	597	540	36.60	1,104	556	558
18	450	431	635	578	39.60	1,212	610	748
20	500	457	699	635	42.90	1,290	610	947
24	600	508	813	749	47.80	1,453	765	1280

## P/T Ratings

Valvetech's Pressure/Temperature Ratings according to ANSI B16.10

Temperature ° Celsius	-10°C to +65°C	100°C	120°C	140°C	150°C	160°C	200°C	230°C
Pressure Bar	13.8	12.7	12.1	11.6	11.4	10.8	9.8	8.6

## Diagram



#	Part	Material
1	Handwheel	Cast Iron ASTM A126 B
2	Yoke Sleeve	Cast Iron ASTM A126 B
3	Gland Bolt	ASTM A307
4	Gland Bolt Nut	ASTM A563
5	Gland	Ductile Iron A536 65-45-12
6	Buffing Box	13Cr SS
7	Gland Packing	Flexible Graphite
8	Bonnet Bolt	ASTM A307 B
9	Bonnet Bolt Nut	ASTM A563
10	Bonnet	Cast Iron ASTM A126 B
11	Bonnet Gasket	Graphite & Steel
12	Stem	13Cr SS
13	Body	Cast Iron ASTM A126 B
14	Disc Seat Ring	13Cr SS
15	Disc	ASTM A 126 B

## Specifications

### Models

VT68

### Body Material

Cast Iron

### Iron Grade

ASTM A126 B

### Stem Operation

Non-Rising

### Trim

13 Chrome Stainless Steel

### Drill Tables

Table 10, 16, D, ASA150

### Standards

Design Standard conforms to MSS SP-70

Flanges conform to ANSI B16.1

Face to Face conform to ANSI B16.10

### Services

Water, Oil, Gas, Steam

### Industries

Petrochemicals and Petroleum, Refineries, Primary Energy, Agriculture, Water Works, HVAC

### Priority Media

Acetylene, Borax, Butane Gas, Carbon Dioxide, Castor Oil, Caustic Soda, Detergents, Diesel Fuels, Hydraulic Oil, Linseed Oil, Nitrogen, Propane Gas, Steam, Tributyl Phosphate

### Inventory Code and Description

CIGATEVT68

CI GATE VALVE NRS 13CR SS TRIM FLANGED

Cast Iron Non-Rising Stem 13 Chrome

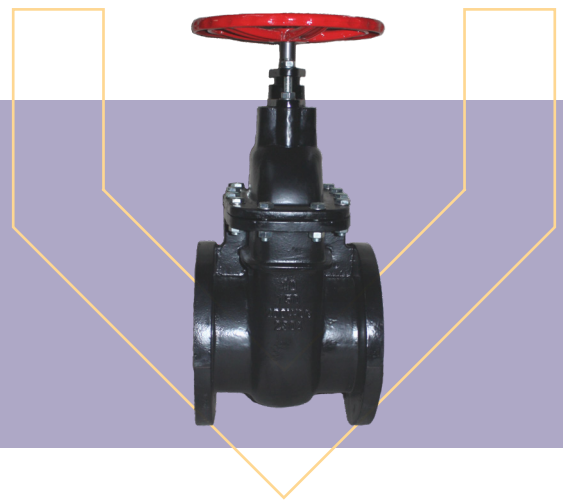
Stainless Steel Trim Class 125 Flanged

### Also Known As:

Insider Screw Valve, Rotational Stem Design Gate Valve, Non-Rising Stem Wedge Gate Valve, Sluice Valve

# Gate Valves

<b>Models:</b>	VT84N ; VT84 ; VT68N ; VT68 ; 201
<b>Class:</b>	150 ; 125
<b>Sizes:</b>	DN 50 – 600 ; DN 15 - 100
<b>Pressure:</b>	PN16; PN40
<b>Body Material:</b>	Ductile Iron ; Cast Iron ; Brass
<b>Temperatures:</b>	-10°C to 400°C ; -2°C to 120°C 14kg -
<b>Weights:</b>	870kg ; 250g - 6kg



## Specifications

### Services

Petrochemicals and Petroleum, Refineries, Primary Energy, Agriculture, Water Works, HVAC

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### Priority Media

Acetylene, Borax, Butane Gas, Carbon Dioxide, Castor Oil, Caustic Soda, Detergents, Diesel Fuels, Hydraulic Oil, Linseed Oil, Nitrogen, Propane Gas, Steam, Tributyl Phosphate

### Also Known As:

Insider Screw Valve (Non-Rising)  
Outside Screw and Yolk (OS+Y; Rising)  
Rotational Stem Design Gate Valve  
Non-Rising Stem Wedge Gate Valve  
Rising Stem Wedge Gate Valve  
Sluice Valve

## Gate Valve Details

A Gate Valve is used in On/Off applications that do not require throttling. Due to their heavy-duty design and casting, they can handle high temperatures and are durable under constant, lower pressures while media is able to flow in both directions.

## Application

When fully opened, the Gate Valve wedge disc is completely removed from the space within the valve, removing all resistance to the flow of media resulting in little pressure drop. Because there is the absence of any valve components within the tunnel when it is fully opened, high-viscosity slurries such as pulp and mining solids or sludge can travel through without obstruction, preventing blockages.

When the valve is fully closed, the disk-to-seal ring surface creates a 360° contact, which enables good sealing via the wedge. This means that very little or no leakage occurs across the disk, no matter the volume of media or the pressure behind it and the media can flow in both directions.

### Typical applications of Gate Valves include:

- **Isolation and Shutoff** in pipelines carrying fluids or gases as their design allows for a tight seal when fully closed, effectively stopping the flow of the medium through the pipeline
- **High-Pressure Systems** due to their sturdy construction and ability to provide a tight seal, making them suitable for use in pipelines where the pressure requirements are significant
- **On/Off Flow Control** as opposed to throttling as their primary strength lies in their ability to provide full flow or complete shutoff

### Advantages:

- **Unchanged dimensions** when open or closed, so the installation space is smaller if a Non-Rising Stem is used. A Rising Stem makes it easy to identify from a distance as to whether the valve is open or closed
- **High-temperature resistance** enables the valve to withstand elevated temperatures without significant degradation, warping or deterioration
- **Cheap and easy maintenance** due to their simplicity in design, making them one of the most common valves for industrial applications
- **Versatility in applications** provides for a wide range of fluids, including liquids, gases, and slurries making them suitable for every industry
- **Low pressure drop** and full flow provide a straight-through, unobstructed flow path when fully open, minimising pressure drop allowing for efficient and high-capacity fluid flow

### Common Industry Uses:

- Underground piping or buried installations
- Clean liquid and gasses, and Heating and Conditioning (HVAC)
- Potable water applications
- Wastewater, water treatment, and distribution systems
- Corrosive mediums such as diesel, petroleum and acids