

## Tartarini™ Floating Ball Valve

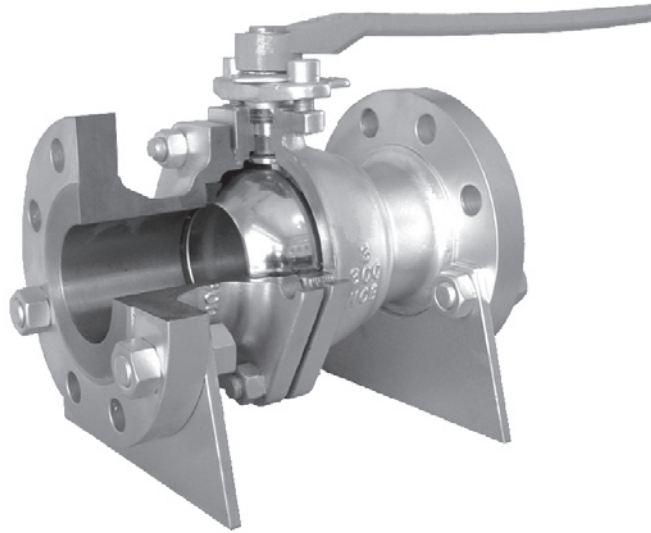


Figure 1. Tartarini™ Floating Ball Valve

### Introduction

Tartarini™ Floating Ball Valve is a general-purpose valve. It is used for long range oil and gas pipelines, petrochemical, oil refining, gas, metallurgy, chemical, food, and other related industries. Its primary function is to cut the flow along the pipeline.

### Features and Benefits

- **Advanced and Exclusive Seat Design**—The cone-shaped sealing surface feature of Tartarini Floating ball valve makes the sealing more reliable. Designs with various types of low friction seat materials are available.
- **Wrench with Valve Open/Close Indication**—The connection between the flat-head stem and indicator handle will never be stacked. The open-close indicator on the handle is always consistent with the valve's position.
- **Locking Device**—The valve is equipped with locking holes at the fully-open and fully-closed position to avoid unintended adjustment of the opening and closing of the valve.
- **Blow-off Proof Stem Construction**—The lower part of the stem is terraced and is installed at the lower internal part of the valve. This construction can avoid the stem blowing off from the valve and can provide metal-to-metal sealing in case of fire. See Figure 2.
- **Anti-static Design**—During operation of the valve, static electricity may accumulate on the ball. The special anti-static device transmits the gained static energy out during the opening and closing of the valve. It also guarantees a uniform potential in all the valve parts preventing sparks. See Figure 3.
- **Secondary metal-to-metal seal**—Body and cap connections are sealed by gaskets. To prevent leakage in cases of fire, high temperature, and oscillations, metal-to-metal sealing is observed. See Figure 4.
- **Fire-proof Design**—Every possible leaking part between the ball and body, stem and body, and middle flanges is designed to have metal-to-metal sealing that conforms to the fire-proof requirements of API 6FA or API 607. Graphite is used for packing and gaskets to provide sealing in case of severe fire conditions. See Figure 5.

# Bulletin: Floating Ball Valve

## Specifications

### Body Sizes

DN 25, 50, 80, 100, and 150 /  
1, 2, 3, 4, and 6-inches

### End Connections

CL150, CL300, and CL600<sup>(1)</sup>

### General Design Standard

Meets API608 / API6D standards

### Pressure-Temperature Rating

Meets ASME B16.34 standards

### Face-to-Face Dimensions

Meet ASME B16.10 standards

### Flange Type and Dimensions

Meet ASME B16.5 standards

### Construction Materials

Refer to Tables 1 and 2

### Inspections and Tests

Meet API598 / API6D standards

### Flow Coefficient (C<sub>v</sub> value)

Refer to Table 3

### Working Temperature

-20° to 60°C / -4° to 140°F

### Approximate Weights

Refer to Table 4

1. CL600 is available for DN 25 and 50 / 1 and 2-inch bodies only.

**Table 1. Construction Materials for Floating Ball Valve Forged Steel Body**

PART	CAST STEEL SERIES	NACE SERIES	STAINLESS STEEL SERIES		LF2 SERIES
	A105	A105N	A182-F304 / F304L	A182-F316 / F316L	A350LF2
Body	A105	A105N	A182-F304 / F304L	A182-F316 / F316L	A350LF2
Ball	A105+HCr	A105N+ENP	A182-F304 / F304L / +HCr (Nitriding)	A182-F316 / F316L / +HCr (Nitriding)	A350LF2+HCr
Stem	F6A / F304	F304 / 316	A182-F304 / F304L	A182-F316 / F316L	A182-F304
Seat	RPTFE ( <i>standard</i> ) / NYLON (High-pressure) / PPL (High-temperature)				
Packing	PTFE / PPL				
Gasket	PTFE / NYLON / PPL				
Bearing	PTFE / PPL				
Stud	A193-B7	A193-B7M	A193-B8	A193-B8 / B8M	A320-L7
Nut	A194-2H	A194-2HM	A194-8	A194-8 / 8M	A194-4

NOTES:  
1. All materials conform to ASTM specifications.  
2. Materials above are general valve design standards. Other materials not listed above may be provided. Please contact your local Sales Office for availability.

**Table 2. Construction Materials for Floating Ball Valve Cast Steel Body**

PART	CAST STEEL SERIES	NACE SERIES	STAINLESS STEEL SERIES		LCC, LCB SERIES
	WCB	WCB	CF8, CF3	CF8M, CF3M	LCC, LCB
Body	A216-WCB	A216-WCB	A351-CF8 / CF3	A351-CF8M / CF3M	A352-LCB / LCC
Ball	A105-1025+HCr	A105N+ENP	F304 / F304L	F316 / F316L	F304
Stem	F6A / F304	F304 / 316	A183-F304 / F304L	A182-F316 / F316L	A182-F304
Seat	RPTFE ( <i>standard</i> ) / NYLON (High-pressure) / PPL (High-temperature)				
Packing	PTFE / PPL				
Gasket	PTFE / NYLON / PPL				
Bearing	PTFE / PPL				
Stud	A193-B7	A193-B7M	A193-B8	A193-B8 / B8M	A320-L7
Nut	A194-2H	A194-2HM	A194-8	A194-8 / 8M	A194-4

NOTES:  
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**Table 3.**  $C_v$  Flow Coefficients

BODY SIZE		REDUCED BORE	FULL BORE
DN	Inch		
25	1	----	100
50	2	165	490
80	3	350	1160
100	4	550	2200
150	6	765	5100

**NOTE:**  $C_v$  indicates the gallons of water at 16°C / 60°F flowing through the valve bore in 0.069 bar / 6.9 KPa differential pressure.

**Table 4.** Approximate Weights

BODY SIZE		APPROXIMATE WEIGHTS					
		CL150		CL300		CL600	
DN	Inch	kg	Pounds	kg	Pounds	kg	Pounds
25	1	6.5	14	7	15	10	22
50	2	12	26	15	33	18	40
80	3	25	55	40	88	----	----
100	4	36	79	45	99	----	----
150	6	75	165	115	254	----	----

## Principle of Operation

The main function of floating ball valve is to cut off or allow the flow passage along the pipeline. It is manually operated using a hand lever which drives the ball to cut off or allow the flow passage. The valve is open when the hand lever is parallel with the flow passage or the pipeline. The valve is closed when the hand lever is perpendicular with the pipeline.

Rotate hand lever 90 degrees clockwise to close the valve and cut off the flow. Turn the hand lever 90 degrees counterclockwise to open the valve and allow the flow. When using handwheel as driving device, use the same rotational direction.

## Installation

Before installing the ball valve, thoroughly check the specifications stamped in the nameplate of the valve body and other documents that come with it. Make sure that it matches the specifications being ordered and is consistent with the installation requirements. Inspect the valve chamber and the sealing surface for any shipment damage and make sure that it is free

of any dirt or foreign material that may have collected during shipment. Use clean soft cloth to remove any dirt before installation.

Check if the operation of the valve's driving device moves freely from the fully open to fully closed position. Make sure that it is not jammed and its bolts and nuts are tight.

The ball valve is in the fully open position at the time of delivery. When installing the valve in the pipeline, make sure it is in the fully open position.

When installing large-diameter ball valve, place the valve on a separate platform to serve as a support in order to allow horizontal movement of the valve during installation. Do not let the pipeline bear the entire weight of the valve to avoid deformation of the pipeline.

The ball valve may be installed either horizontally or vertically and in any location. However, make sure that the valve can be accessed easily during maintenance, repair, and operation.

The valve can be flanged or welded to the pipeline. The customer can choose whether to connect both or either ends with bolts (flanged) or with weld.

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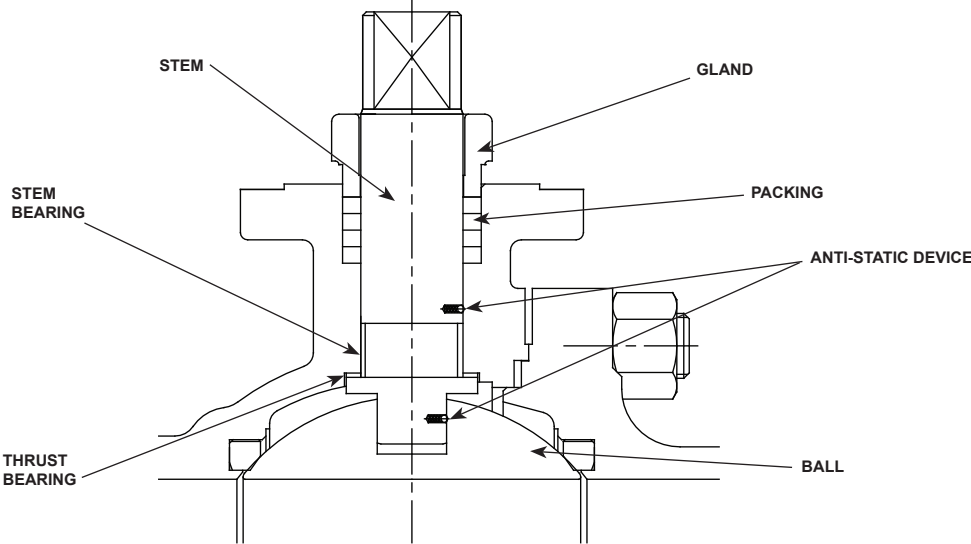


Figure 2. Stem Construction Assembly

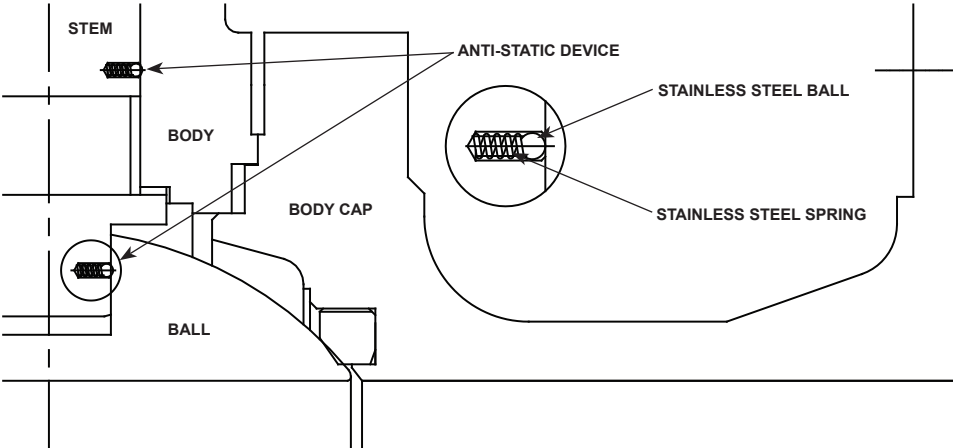
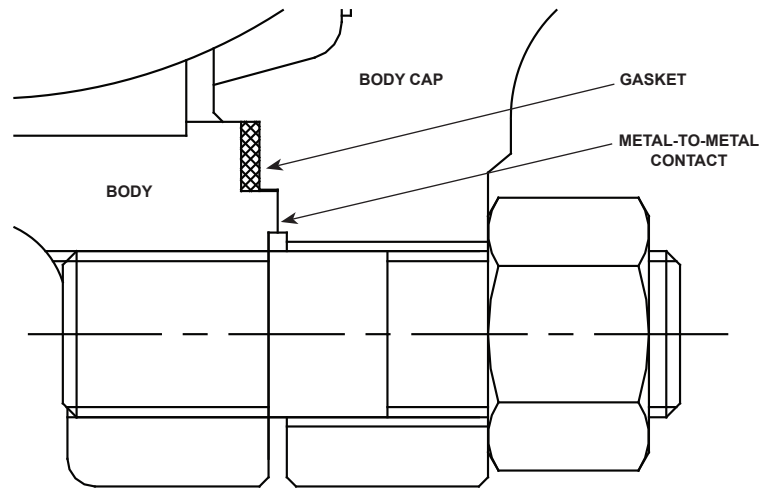
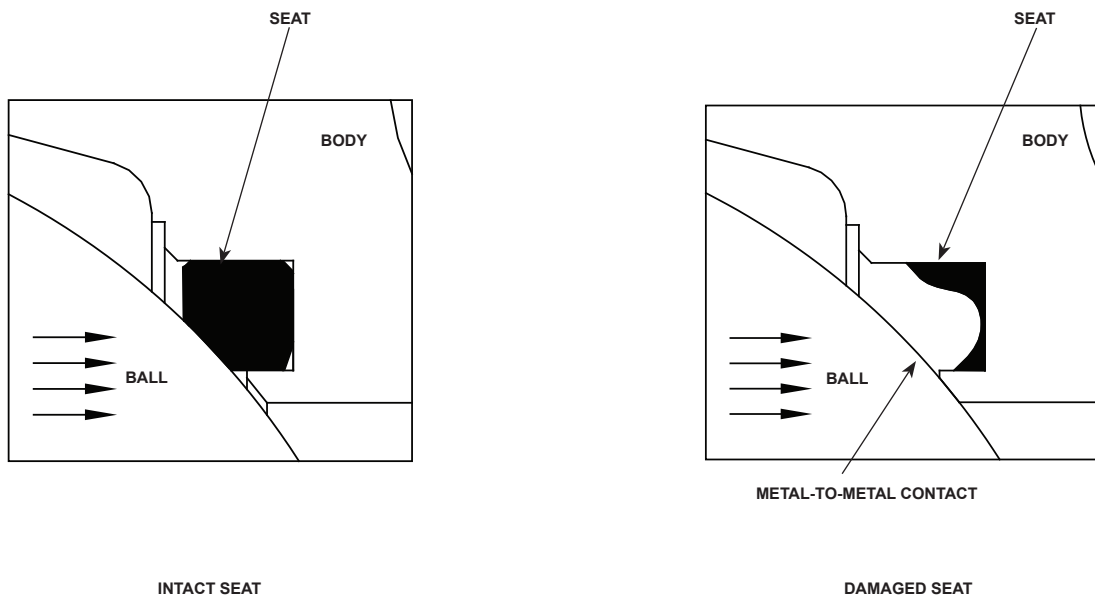


Figure 3. Anti-static Design

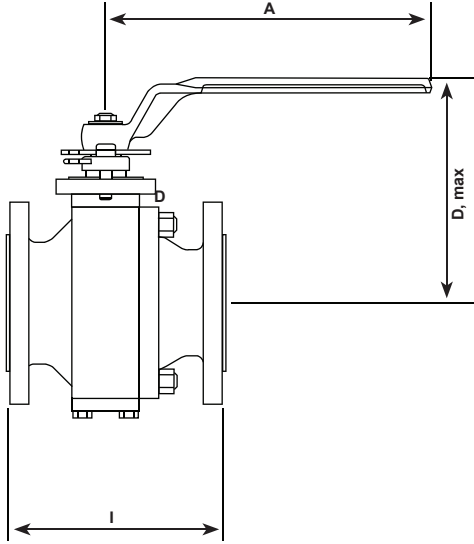


**Figure 4.** No Leakage Design

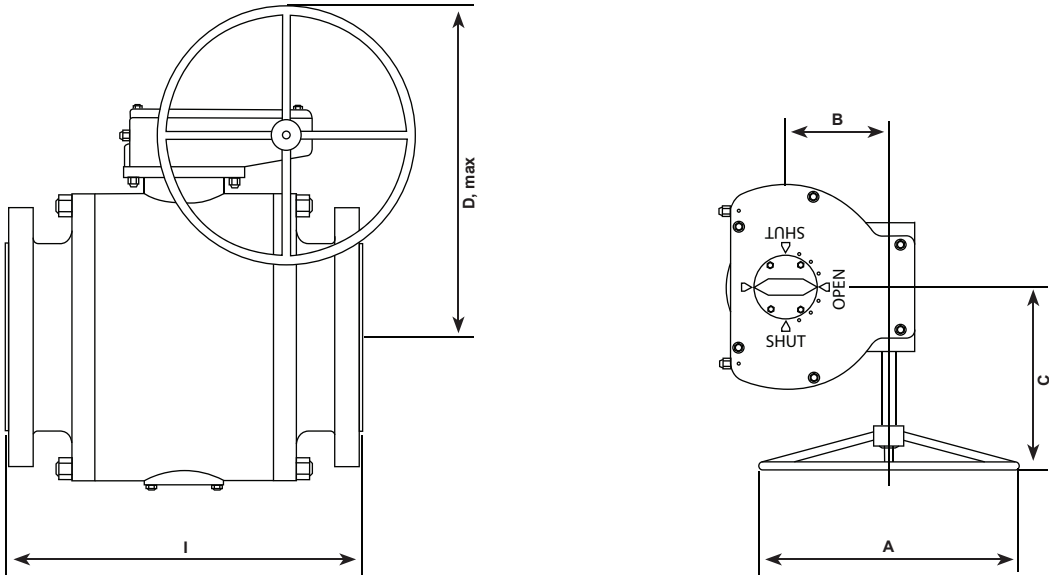


**Figure 5.** Fire-proof Design

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LEVER OPERATED



GEAR OPERATED

Figure 6. Dimensions

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**Table 5. Dimensions**

DIMENSIONS, mm / Inch																	
BODY SIZE		OPERATION	CL150					CL300					CL600				
DN	Inch		I	A	B	C	D, MAX	I	A	B	C	D, MAX	I	A	B	C	D, MAX
25	1	Lever	127 / 5.0	200 / 7.9	----	----	150 / 5.9	165 / 6.5	200 / 7.9	----	----	150 / 5.9	216 / 8.5	200 / 7.9	----	----	150 / 5.9
50	2	Lever	178 / 7.0	250 / 9.8	----	----	200 / 7.9	216 / 8.5	250 / 9.8	----	----	200 / 7.9	292 / 11.5	400 / 15.7	----	----	200 / 7.9
80	3	Gear	203 / 8.0	320 / 12.6	72 / 2.8	180 / 7.1	384 / 15.1	283 / 11.1	320 / 12.6	72 / 2.8	180 / 7.1	384 / 15.1	----	----	----	----	----
100	4	Gear	229 / 9.0	320 / 12.6	72 / 2.8	180 / 7.1	438 / 17.2	305 / 12.0	320 / 12.6	72 / 2.8	180 / 7.1	438 / 17.2	----	----	----	----	----
150	6	Gear	394 / 15.5	400 / 15.7	91 / 3.6	218 / 8.6	563 / 22.2	403 / 15.9	400 / 15.7	91 / 3.6	218 / 8.6	563 / 22.2	----	----	----	----	----

## Ordering Information

Refer to the Specifications section on page 2.  
 Carefully review each specification and construction feature, then complete the Ordering Guide.  
 Also, please complete the Specification Worksheet.  
 For special requirements in the construction, please contact your Local Sales Office.

## Ordering Guide

### Body Size (Select One)

- DN 25 / 1-inch\*\*\*
- DN 50 / 2-inch\*\*\*
- DN 80 / 3-inch\*\*\*
- DN 100 / 4-inch\*\*\*
- DN 150 / 6-inch\*\*\*

### End Connection Style (Select One)

- CL150\*\*\*
- CL300\*\*\*
- CL600\*\*\*

# Bulletin: Floating Ball Valve

Quick Order Guide	
***	Readily Available for Shipment
**	Allow Additional Time for Shipment
*	Special Order, Constructed from Non-Stocked Parts. Consult your local Sales Office for Availability.
Availability of the product being ordered is determined by the component with the longest shipping time for the requested construction.	

Specification Worksheet	
<b>Application:</b>	
Specific Use	_____
Line Size	_____
Gas Type and Specific Gravity	_____
Gas Temperature	_____
<b>Pressure:</b>	
Maximum Inlet Pressure ( $P_{1max}$ )	_____
Minimum Inlet Pressure ( $P_{1min}$ )	_____
Downstream Pressure Setting(s) ( $P_2$ )	_____
Maximum Flow ( $Q_{max}$ )	_____
<b>Performance Required:</b>	
Accuracy Requirements?	_____
Need for Extremely Fast Response?	_____
<b>Other Requirements:</b>	
_____	
_____	
_____	

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