

High Quality
Quick Delivery
Competitive Price

KMC BALL VALVES

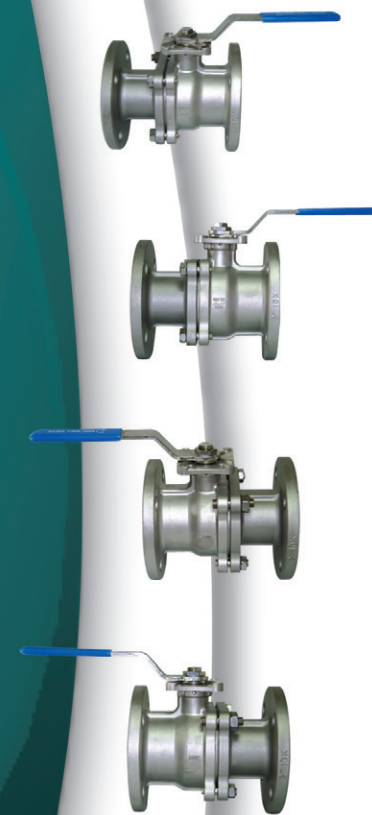
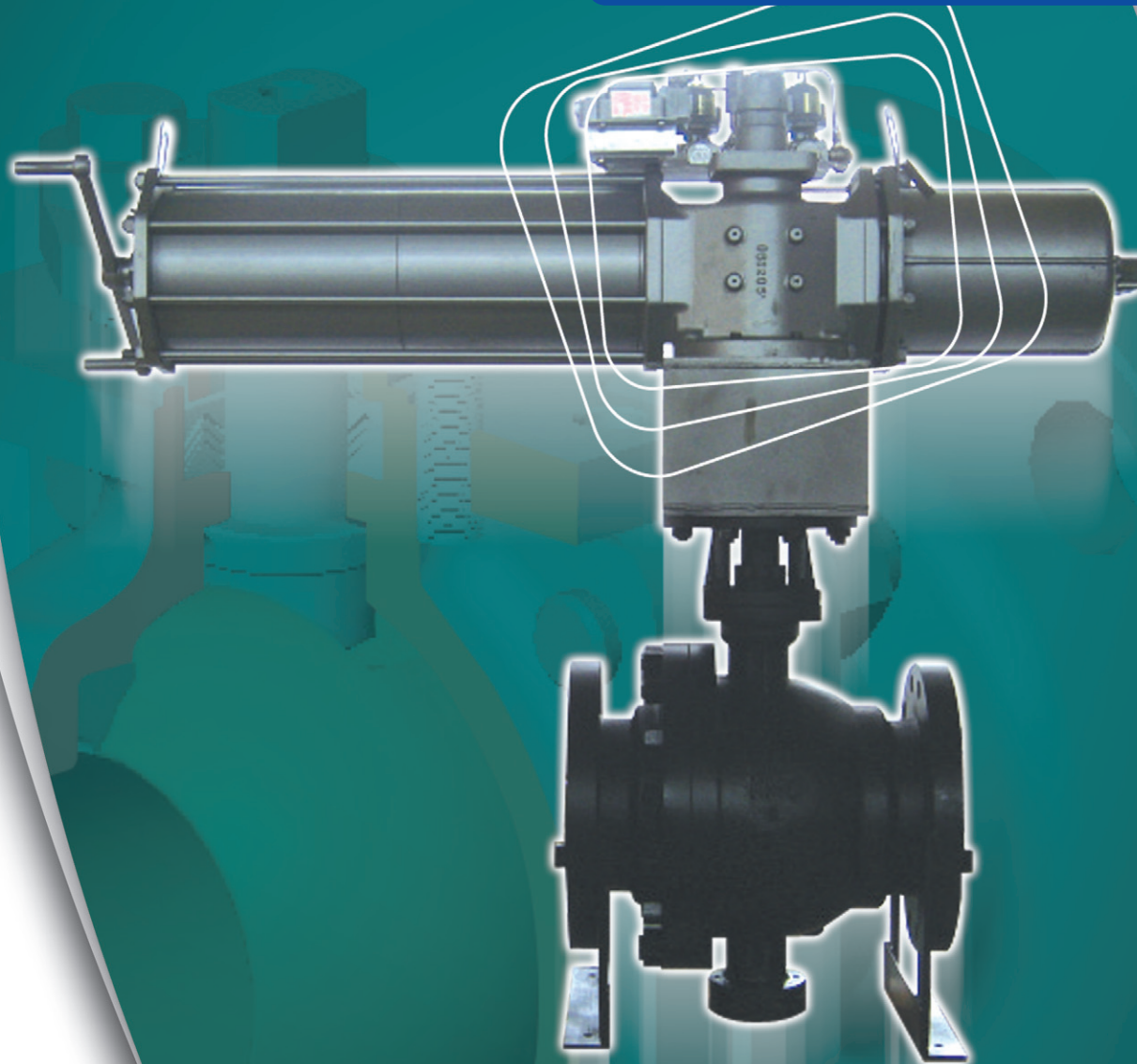
*2-PIECE FLANGE END
 BALL VALVES*



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2 Piece Side Entry and Screw end Ball Valves

General Information

This catalogue introduces KMC's ball valve type "2 Piece Side Entry" and "Screw end." Basic technical specifications are also included.

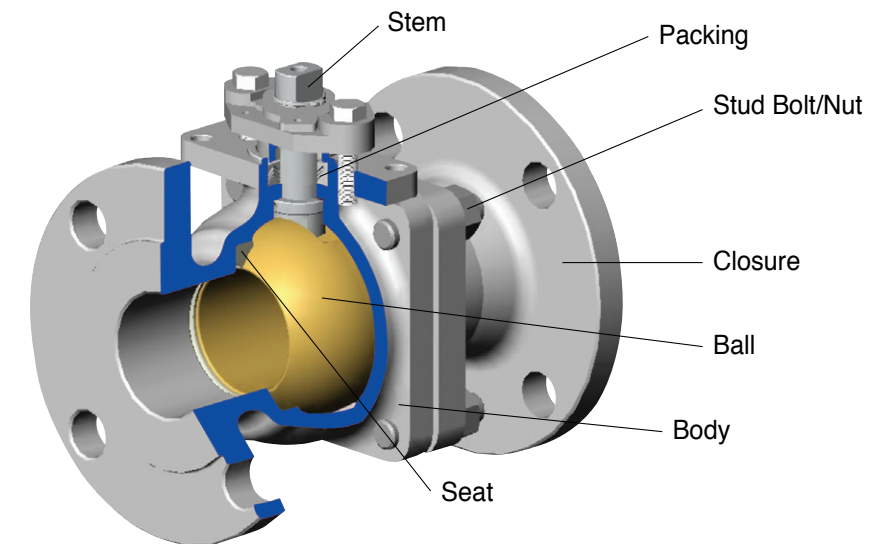
These valves have been developed to meet all the requirements for pipeline services in open/close operating position according to API Spec. 6D. The material, design and operating requirements, such as temperature, type of fluid, pressure, etc., described in this catalogue, are basic specifications only, and these may be altered upon customer's requirements.

KMC manufactures high quality ball valves to various standards and specifications. Our products are used in gas transmission, district heating pipelines, offshore platforms, oil fields, chemical plants, and so on, and are highly regarded by our customers.

We are confident that KMC ball valves will be used all over the world where quality and reliability cannot be compromised. KMC can deliver its products on time and its prices are competitive as well.

Material Specification

Pressure Class : KS 10K / 20K, ANSI Class 150 / 300, PN16 / PN25 / PN40
Size Range : 15A to 300A, 1/2" to 12", DN15 to DN300



- API 6D(USA)
- ISO 9001/KS A9001 (TUV-Germany)
- FIRE SAFETY (Velosi-United Kingdom)
- FFI (Germany)
- CE(BV-France)
- GOST(Russia)
- P(Sweden)
- NT(Korea)

Materials of Construction

| Material | WCB | | CF8 | | | CF3 | | CF8M | | CF3M | |
|---------------|-----------------------|------|-----|------|------|------|------|------|------|------|------|
| Parts | WCB | CF8 | CF3 | CF8M | CF3M | CF3 | CF8M | CF3M | CF8M | CF3M | CF3M |
| Body/ Closure | WCB | CF8 | CF3 | CF8M | CF3M | CF3 | CF8M | CF3M | CF8M | CF3M | CF3M |
| Body Gasket | PTFE*1 | | | | | | | | | | |
| Ball | CF8 | CF8M | CF8 | CF3 | CF8M | CF3M | CF3 | CF8M | CF3M | CF8M | CF3M |
| Stem | 304 | 316 | 304 | 304L | 316 | 316L | 304L | 316L | 316 | 316L | 316L |
| Seat | TFEG (Glass Filled)*2 | | | | | | | | | | |
| Packing | PTFE*1 | | | | | | | | | | |
| Stud Bolt | B7 | | | | | B8 | | | | | |
| Nut | 2H | | | | | 8F | | | | | |

*1 Fire safe : Graphite
*2 Option : TFEC(Carbon Filled), TFGR(Graphite Filled), TFCF(Carbon Fiber), Virgin PTFE, PEEK, Nylon

Applicable Standards

| Description | KS STD | ANSI STD | Remarks |
|-----------------------------|----------|-------------|---------|
| FACE - to - FACE Dimensions | KS B2308 | ANSI B16.10 | |
| End Flange Dimensions | KS B1511 | ANSI B16.5 | |
| Body min Thickness | KS B2308 | ANSI B16.34 | |



2 Piece Side Entry and Screw end Ball Valves

Features

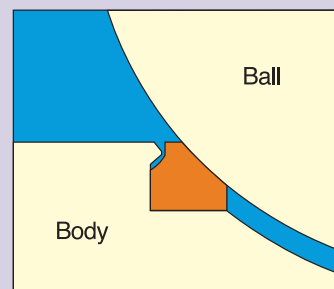
Seat / Seal Design

Unique ACTI-Seal Seat design uses a lip seal principle for efficient sealing at all pressures from zero to the maximum rated positive or negative pressure.

This design seals with a minimum and nearly uniform torque requirement. The seat seals are pre-loaded against the ball on assembly to provide shut off at low pressures. At higher pressures, the ball is forced against the seat and provides a positive seal to maximum rated pressures.

The generous lip section of the seat is added assurance (Before fire) of long and efficient seat life.

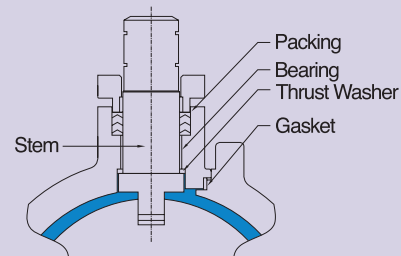
BEFORE FIRE



Stem Seal and Bearing

All ball valves incorporate a PTFE bearing to absorb any radial loading on the valve stem. A PTFE thrust bearing is also provided to reduce friction due to axial loading. Packing utilizes multiple "V" Shaped PTFE rings ; tightening the gland nut spreads each ring and creates a multiple seal between the stem and body. The simple gland adjustment also allows compensation for operational wear. BLOW-OUT PROOF STEM & SEAL FEATURES stem packing spreads the rings and improves the seal by increasing the stress on the rings-prohibiting leakage and minimizing maintenance.

BLOW-OUT PROOF STEM & SEAL FEATURES



Ball

One of the most important components in any ball valve is the ball itself. The sphericity and surface finish of the ball are directly related to the life of the valve, its pressure holding capability and the operating torque.

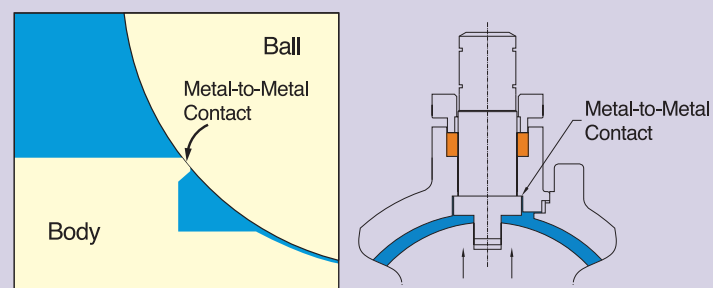
For these reasons, KMC designed special production equipment to produce balls that have a sphericity of ± 0.008 " and a 4RMS surface finish.

Fire-Safe API-607

One of many requirements of today's industries, is that ball valves must have a metal to metal seal in case the nonmetallic seal is destroyed by fire or other means.

It provides assurance to the user handling flammable or hazardous fluids that should the non-metallic seal be destroyed, the ball valve will stop the flow of material until a new seal is installed.

AFTER FIRE



Seat Performance Data

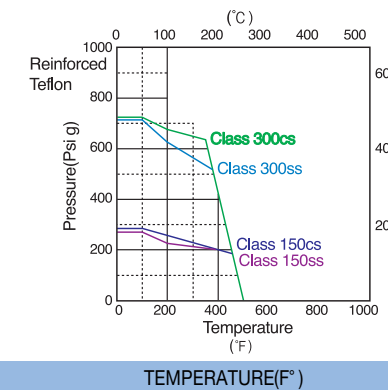
TFE

General application seat material, exhibiting lowest operating torque and excellent resistance to chemical attack.

RTFE

Most commonly specified seat material, and used as the basis for published torque valves. Maintains the excellent chemical resistance of unfilled teflon(TFE) with increased resistance to wear and abrasion resulting in longer life.

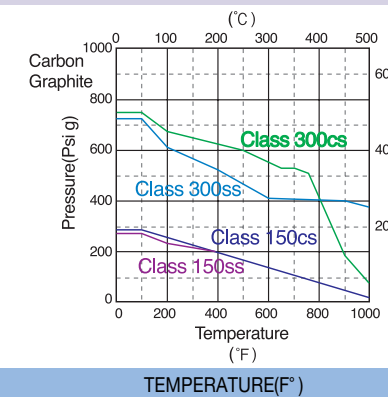
REINFORCED TEFLON



Carbon Graphite

Designed for high temperature applications. Maximum service temperature is limited to 759°F in oxidizing applications. This seat like all hard seat materials, does not necessarily provide "bubble tight" shut-off. Most test standards have allowable leakage rates or list "classes" of shut-off for this type of seat. Be aware of the system design requirements when specifying this or any hard sea.

CARBON-GRAPHITE

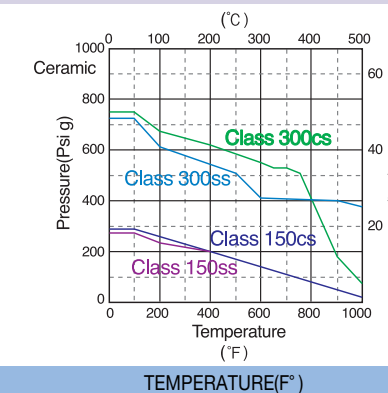


Ceramic

Working in conjunction with a ceramic ball, this seat out performs all other materials in throttling and abrasive applications. It possesses excellent chemical resistance.

Cost is very high, and unless experience dictates its use, other alternatives should be evaluated first. This seat like all hard seat materials does not necessarily provide "bubble tight" shut-off. Most test standards have a allowable leakage rates or list "classes" of shut-off for this type of seat. Be aware of the system design requirements when specifying this or any rigid seat.

CERAMIC





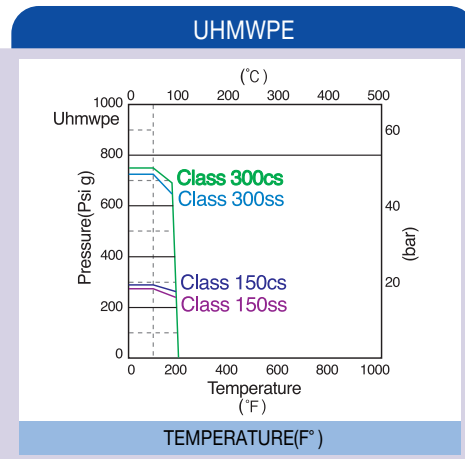
2 Piece Side Entry and Screw end Ball Valves



UHMWPE

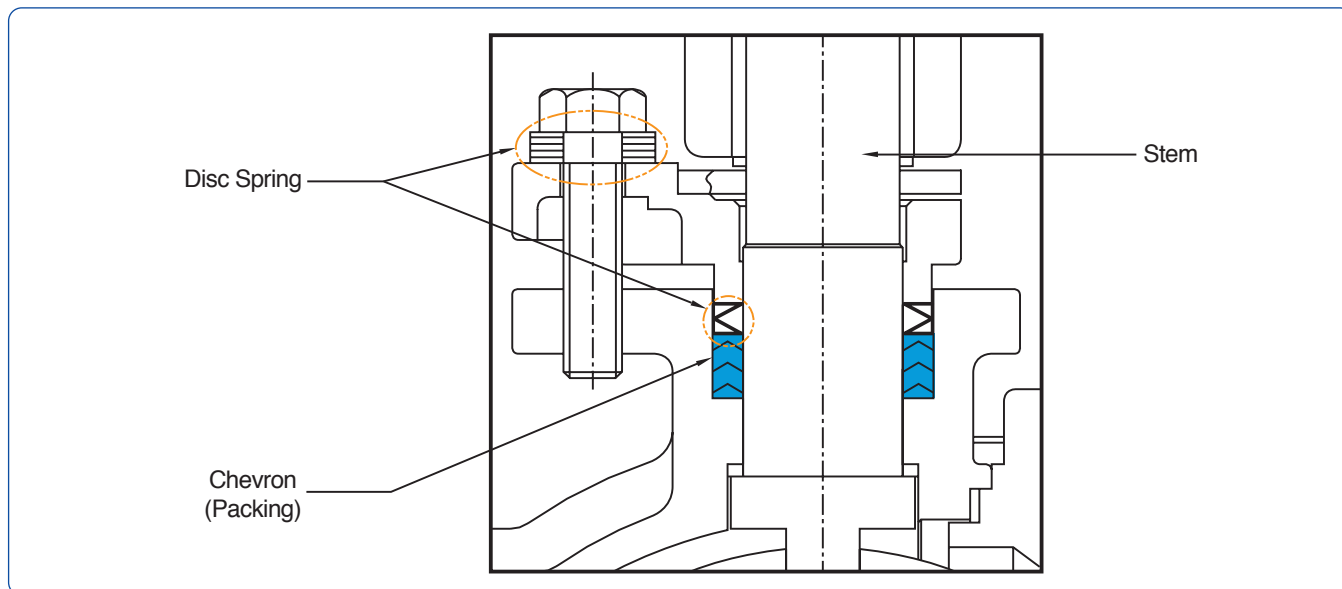
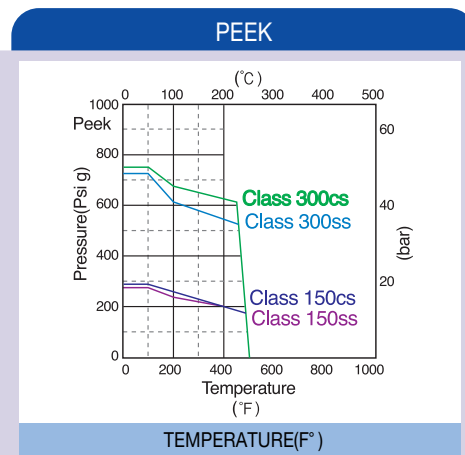
Ultra High Molecular Weight Polyethylene offers good abrasion resistance, making it suitable for use in high solids or slurry applications. These seats are completely confined by a metallic seatholder enhancing their performance in abrasive.

This seat is frequently specified in services like fluorine off-gassing and even the slightest amount is objectionable. UHMWPE should be used with caution in the presence of solvents, and the operating torque can be expected to be 30% higher than that of the teflon based seat materials.



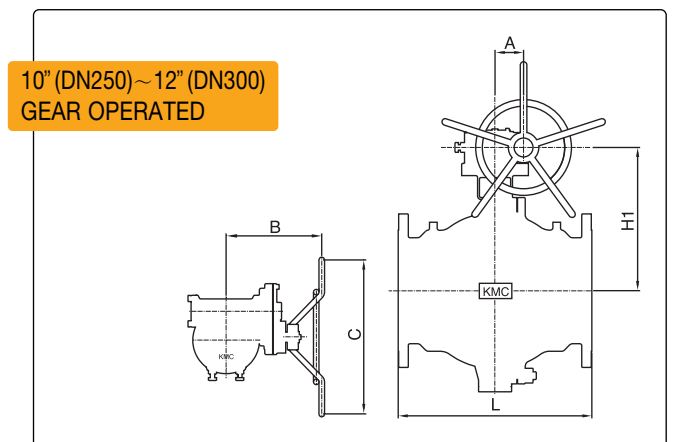
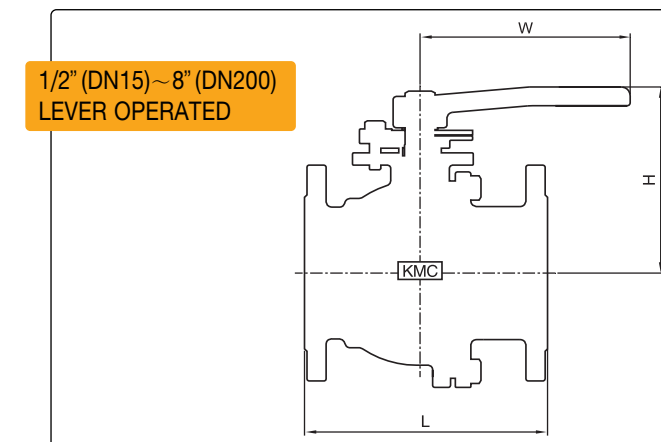
PEEK

PEEK (Poly Ether Ether Ketone) offers a high strength alternative to RTFE, resistant to creep and cold flow. This seat offers good abrasion resistance. Higher in cost, this material offers similar chemical resistance to TFE but should be checked on application. Operating torque tends to be 40% higher than RTFE.



DOUBLE LIVE LOADED STEM & CHEVRON PACKING

Outline Dimensions



KS 10K

UNIT : (MM)

| Valve Size inch (DN) | L | H | H1 | W | A | B | C | Weight (kg) |
|-------------------------|-----|-----|-----|------|----|-----|-----|-------------|
| 1/2 (15) | 108 | 71 | — | 130 | — | — | — | 2,3 |
| 3/4 (20) | 117 | 73 | — | 130 | — | — | — | 2,5 |
| 1 (25) | 127 | 80 | — | 160 | — | — | — | 3,6 |
| 1-1/4 (32) | 140 | 82 | — | 160 | — | — | — | 5,4 |
| 1-1/2 (40) | 165 | 117 | — | 230 | — | — | — | 6,8 |
| 2 (50) | 178 | 124 | — | 230 | — | — | — | 10 |
| 2-1/2 (65) | 190 | 166 | — | 400 | — | — | — | 16 |
| 3 (80) | 203 | 176 | — | 400 | — | — | — | 20 |
| 4 (100) | 229 | 206 | — | 460 | — | — | — | 38 |
| 5 (125) | 356 | 223 | — | 460 | — | — | — | 50 |
| 6 (150) | 394 | 291 | 422 | 1000 | 10 | 216 | 210 | 62 |
| 8 (200) | 457 | 357 | 517 | 1500 | 10 | 216 | 210 | 131 |
| 10 (250) | 533 | — | 575 | — | 15 | 355 | 310 | 270 |
| 12 (300) | 610 | — | 635 | — | 15 | 355 | 310 | 470 |

How to Specify

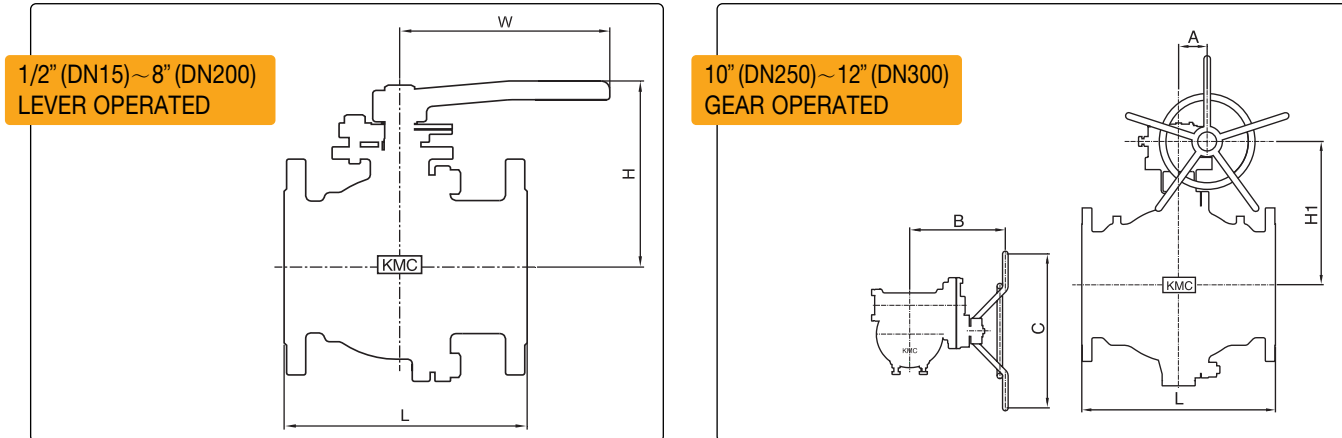
| Bore Design | Pressure Class | End Connection | Material | | | Operator | Option |
|-------------------------------|---|----------------------|--|---|--|---|--|
| | | | Body | Ball | Seat | | |
| - Full Bore - Regular Bore | - KS 10K - KS 20K - ANSI 150 - ANSI 300 - PN 16 - PN 25 - PN 40 | - RF FLG - FF FLG | - WCB (SCPH2) - LCB (SCPL1) - CF8 (SCS13A) - CF8M (SCS14A) - CF3 (SCS19A) - CF3M (SCS16A) - Other Material | - CF8 (SCS13A) - CF8M(SCS14A) - CF3 (SCS19A) - CF3M (SCS16A) - Other Material | - Glass Filled PTFE (TFEG) - Carbon Filled PTFE (TFEC) - Graphite Filled PTFE (TFGR) - Virgin PTFE - Carbon Fiber PTFE (TFCF) - PEEK - Nylon - Other Material | - Bare Stem - Wrench - Gear - Actuator | - Fire Safe - Vacuum Service - NACE - Extended STEM |



2 Piece Side Entry and Screw end Ball Valves



Outline Dimensions



KS 20K

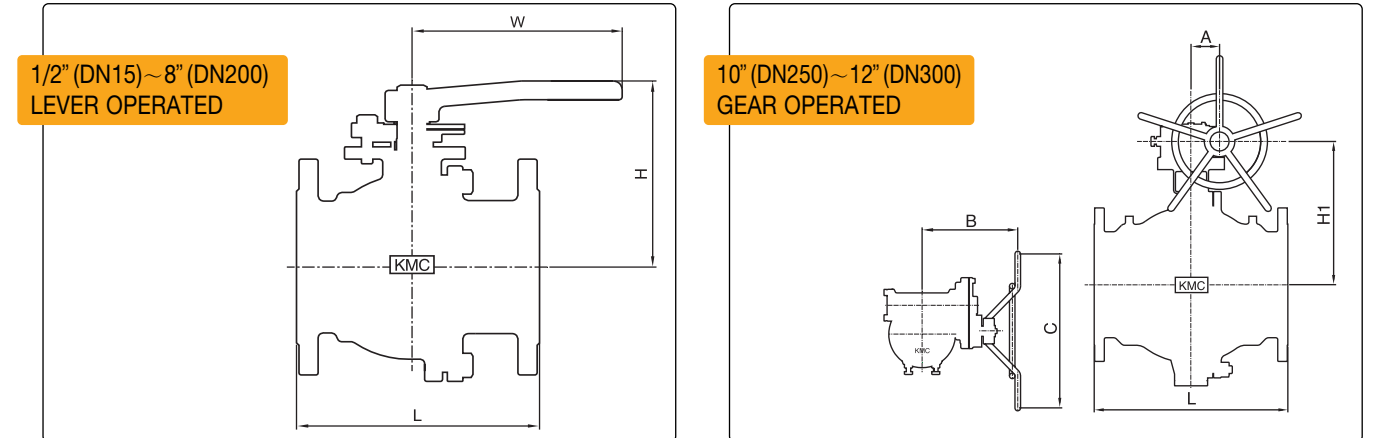
UNIT : (MM)

| Valve Size inch (DN) | L | H | H1 | W | A | B | C | Weight (kg) |
|-------------------------|-----|-----|-----|------|----|-----|-----|-------------|
| 1/2 (15) | 140 | 71 | — | 130 | — | — | — | 2.5 |
| 3/4 (20) | 152 | 73 | — | 130 | — | — | — | 3.6 |
| 1 (25) | 165 | 80 | — | 160 | — | — | — | 5.9 |
| 1-1/4 (32) | 178 | 82 | — | 160 | — | — | — | 7.7 |
| 1-1/2 (40) | 190 | 117 | — | 230 | — | — | — | 9.5 |
| 2 (50) | 216 | 124 | — | 230 | — | — | — | 15 |
| 2-1/2 (65) | 241 | 166 | — | 400 | — | — | — | 25 |
| 3 (80) | 283 | 176 | — | 400 | — | — | — | 30 |
| 4 (100) | 305 | 206 | — | 460 | — | — | — | 47 |
| 5 (125) | 381 | 223 | — | 460 | — | — | — | 60 |
| 6 (150) | 403 | 291 | 422 | 1000 | 10 | 216 | 210 | 82 |
| 8 (200) | 502 | 357 | 517 | 1500 | 10 | 216 | 210 | 150 |
| 10 (250) | 568 | — | 575 | — | 15 | 355 | 310 | 310 |
| 12 (300) | 648 | — | 635 | — | 15 | 355 | 310 | 540 |

How to Specify

| Bore Design | Pressure Class | End Connection | Material | | | Operator | Option |
|-------------------------------|---|----------------------|--|---|--|---|--|
| | | | Body | Ball | Seat | | |
| - Full Bore - Regular Bore | - KS 10K - KS 20K - ANSI 150 - ANSI 300 - PN 16 - PN 25 - PN 40 | - RF FLG - FF FLG | - WCB (SCPH2) - LCB (SCPL1) - CF8 (SCS13A) - CF8M (SCS14A) - CF3 (SCS19A) - CF3M (SCS16A) - Other Material | - CF8 (SCS13A) - CF8M(SCS14A) - CF3 (SCS19A) - CF3M (SCS16A) - Other Material | - Glass Filled PTFE (TFEG) - Carbon Filled PTFE (TFEC) - Graphite Filled PTFE (TFGR) - Virgin PTFE - Carbon Fiber PTFE (TFCF) - PEEK - Nylon - Other Material | - Bare Stem - Wrench - Gear - Actuator | - Fire Safe - Vacuum Service - NACE - Extended STEM |

Outline Dimensions



ANSI 150 Class

UNIT : (MM)

| Valve Size inch (DN) | L | H | H1 | W | A | B | C | Weight (kg) |
|-------------------------|-----|-----|-----|------|----|-----|-----|-------------|
| 1/2 (15) | 108 | 71 | — | 130 | — | — | — | 2.3 |
| 3/4 (20) | 117 | 73 | — | 130 | — | — | — | 2.5 |
| 1 (25) | 127 | 80 | — | 160 | — | — | — | 3.6 |
| 1-1/4 (32) | 140 | 82 | — | 160 | — | — | — | 5.4 |
| 1-1/2 (40) | 165 | 117 | — | 230 | — | — | — | 6.8 |
| 2 (50) | 178 | 124 | — | 230 | — | — | — | 10 |
| 2-1/2 (65) | 190 | 166 | — | 400 | — | — | — | 16 |
| 3 (80) | 203 | 176 | — | 400 | — | — | — | 20 |
| 4 (100) | 229 | 206 | — | 460 | — | — | — | 38 |
| 5 (125) | 356 | 223 | — | 460 | — | — | — | 50 |
| 6 (150) | 394 | 291 | 422 | 1000 | 10 | 216 | 210 | 62 |
| 8 (200) | 457 | 357 | 517 | 1500 | 10 | 216 | 210 | 131 |
| 10 (250) | 533 | — | 575 | — | 15 | 355 | 310 | 270 |
| 12 (300) | 610 | — | 635 | — | 15 | 355 | 310 | 470 |

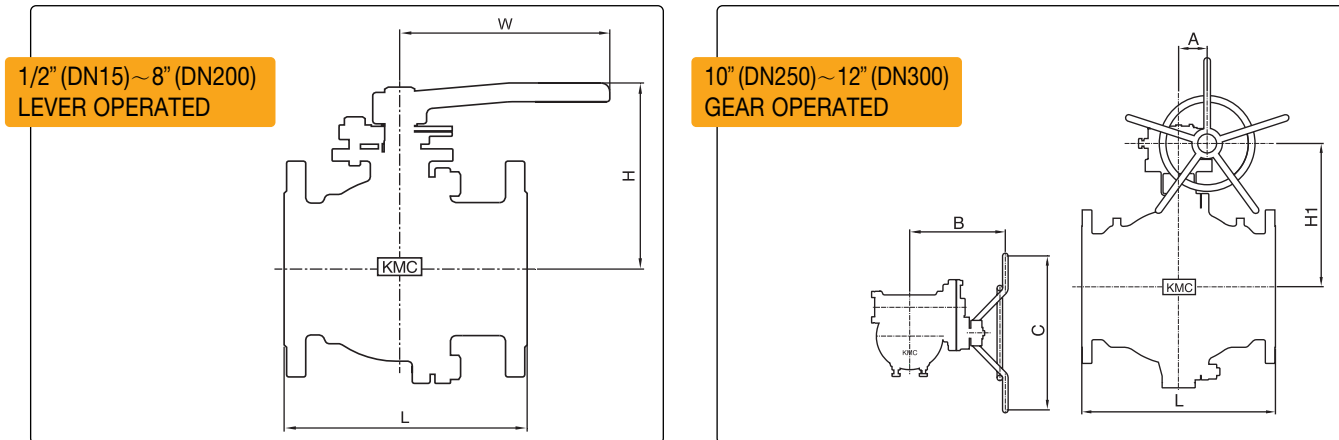
How to Specify

| Bore Design | Pressure Class | End Connection | Material | | | Operator | Option |
|-------------------------------|---|----------------------|--|---|--|---|--|
| | | | Body | Ball | Seat | | |
| - Full Bore - Regular Bore | - KS 10K - KS 20K - ANSI 150 - ANSI 300 - PN 16 - PN 25 - PN 40 | - RF FLG - FF FLG | - WCB (SCPH2) - LCB (SCPL1) - CF8 (SCS13A) - CF8M (SCS14A) - CF3 (SCS19A) - CF3M (SCS16A) - Other Material | - CF8 (SCS13A) - CF8M(SCS14A) - CF3 (SCS19A) - CF3M (SCS16A) - Other Material | - Glass Filled PTFE (TFEG) - Carbon Filled PTFE (TFEC) - Graphite Filled PTFE (TFGR) - Virgin PTFE - Carbon Fiber PTFE (TFCF) - PEEK - Nylon - Other Material | - Bare Stem - Wrench - Gear - Actuator | - Fire Safe - Vacuum Service - NACE - Extended STEM |



2 Piece Side Entry and Screw end Ball Valves

Outline Dimensions



ANSI 300 Class

UNIT : (MM)

| Valve Size inch (DN) | L | H | H1 | W | A | B | C | Weight (kg) |
|-------------------------|-----|-----|-----|------|----|-----|-----|-------------|
| 1/2 (15) | 140 | 71 | — | 130 | — | — | — | 2,5 |
| 3/4 (20) | 152 | 73 | — | 130 | — | — | — | 3,6 |
| 1 (25) | 165 | 80 | — | 160 | — | — | — | 5,9 |
| 1-1/4 (32) | 178 | 82 | — | 160 | — | — | — | 7,7 |
| 1-1/2 (40) | 190 | 117 | — | 230 | — | — | — | 9,5 |
| 2 (50) | 216 | 124 | — | 230 | — | — | — | 15 |
| 2-1/2 (65) | 241 | 166 | — | 400 | — | — | — | 25 |
| 3 (80) | 283 | 176 | — | 400 | — | — | — | 30 |
| 4 (100) | 305 | 206 | — | 460 | — | — | — | 47 |
| 5 (125) | 381 | 223 | — | 460 | — | — | — | 60 |
| 6 (150) | 403 | 291 | 422 | 1000 | 10 | 216 | 210 | 82 |
| 8 (200) | 502 | 357 | 517 | 1500 | 10 | 216 | 210 | 150 |
| 10 (250) | 568 | — | 575 | — | 15 | 355 | 310 | 310 |
| 12 (300) | 648 | — | 635 | — | 15 | 355 | 310 | 540 |

How to Specify

| Bore Design | Pressure Class | End Connection | Material | | | Operator | Option |
|-------------------------------|---|----------------------|--|---|--|---|--|
| | | | Body | Ball | Seat | | |
| - Full Bore - Regular Bore | - KS 10K - KS 20K - ANSI 150 - ANSI 300 - PN 16 - PN 25 - PN 40 | - RF FLG - FF FLG | - WCB (SCPH2) - LCB (SOPL1) - CF8 (SCS13A) - CF8M (SCS14A) - CF3 (SCS19A) - CF3M (SCS16A) - Other Material | - CF8 (SCS13A) - CF8M(SCS14A) - CF3 (SCS19A) - CF3M (SCS16A) - Other Material | - Glass Filled PTFE (TFEG) - Carbon Filled PTFE (TFEC) - Graphite Filled PTFE (TFGR) - Virgin PTFE - Carbon Fiber PTFE (TFCF) - PEEK - Nylon - Other Material | - Bare Stem - Wrench - Gear - Actuator | - Fire Safe - Vacuum Service - NACE - Extended STEM |

Screwed Ball Valves

Option : Weld end or screw end connections are alternative.

| SIZE DN | D | D1 | PT | L | | H | B |
|------------|----|------|--------|-------|-------|----|-----|
| | | | | KS10K | KS20K | | |
| DN15 | 12 | 29,0 | 1/2" | 58 | 61 | 49 | 93 |
| DN 20 | 15 | 32,2 | 3/4" | 64 | 68 | 54 | 110 |
| DN 25 | 20 | 40,5 | 1" | 80 | 85 | 67 | 135 |
| DN 32 | 25 | 47,6 | 1-1/4" | 86 | 96 | 68 | 135 |
| DN 40 | 32 | 60,0 | 1-1/2" | 98 | 100 | 68 | 165 |
| DN 50 | 40 | 72,5 | 2" | 113 | 127 | 84 | 165 |

Materials & Specifications

- Body : A351-CF8M, A216-WCB
Ball : A351-CF8M
Seat : R-PTFE
- Size
DN15(1/2") ~ DN50(2")
- Pressure
10K(PN16) ~ 20K(PN25)
ANSI Class 150~300
- Temperature
-29°C(-20°F) ~ 200°C(392°F)
- Ends
Socket Weld, But Weld, Screwed
- Operator
Lever Handle
- Service
Heat exchanger, Steel plant, Gas, Air, Water, Oil, Chemical, Freezer system, etc.

Advantages of KMC Screw Ball Valve

- Easy installation
- Reliable materials by precise casting
- Simple design & high quality in sealing
- Excellent corrosion resistance for chemical
- Alternative end connection design

Certificated for Gas Valve by KGSC