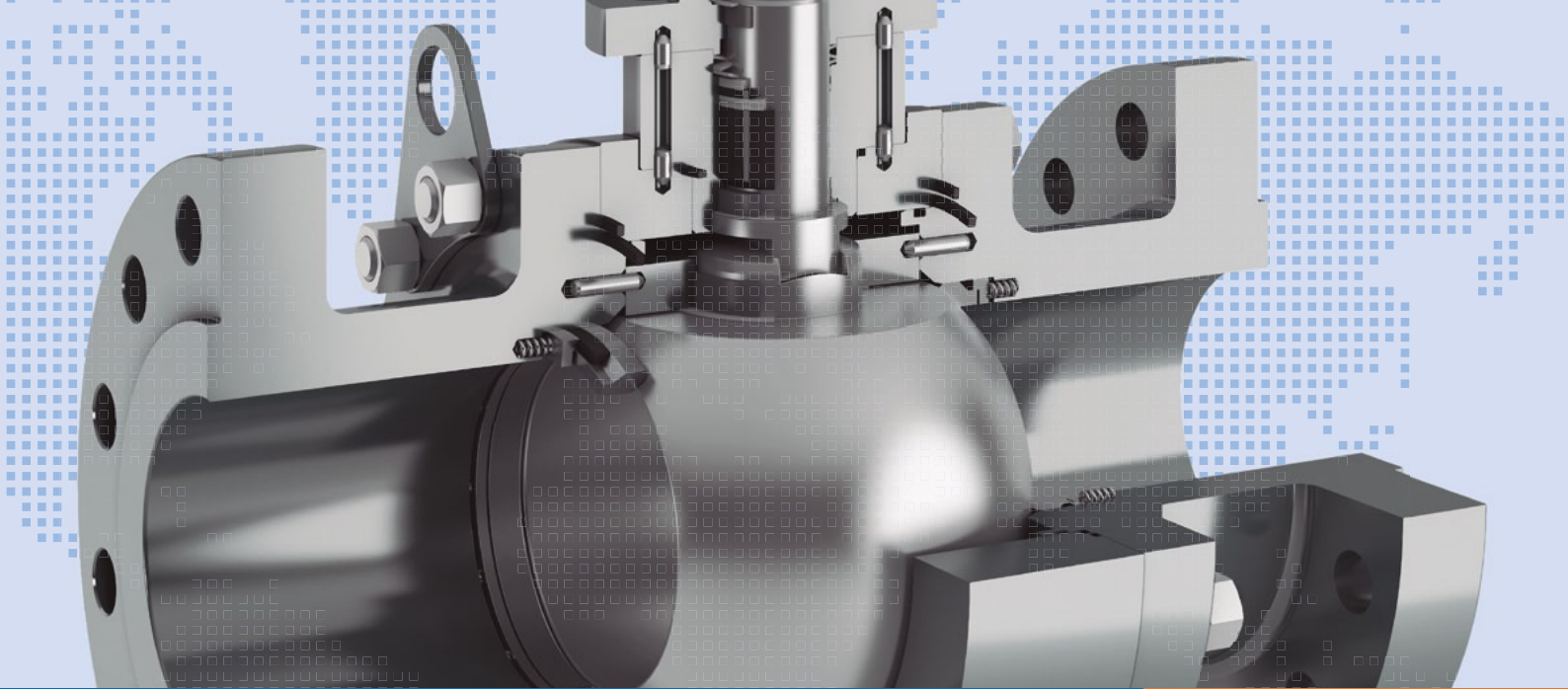


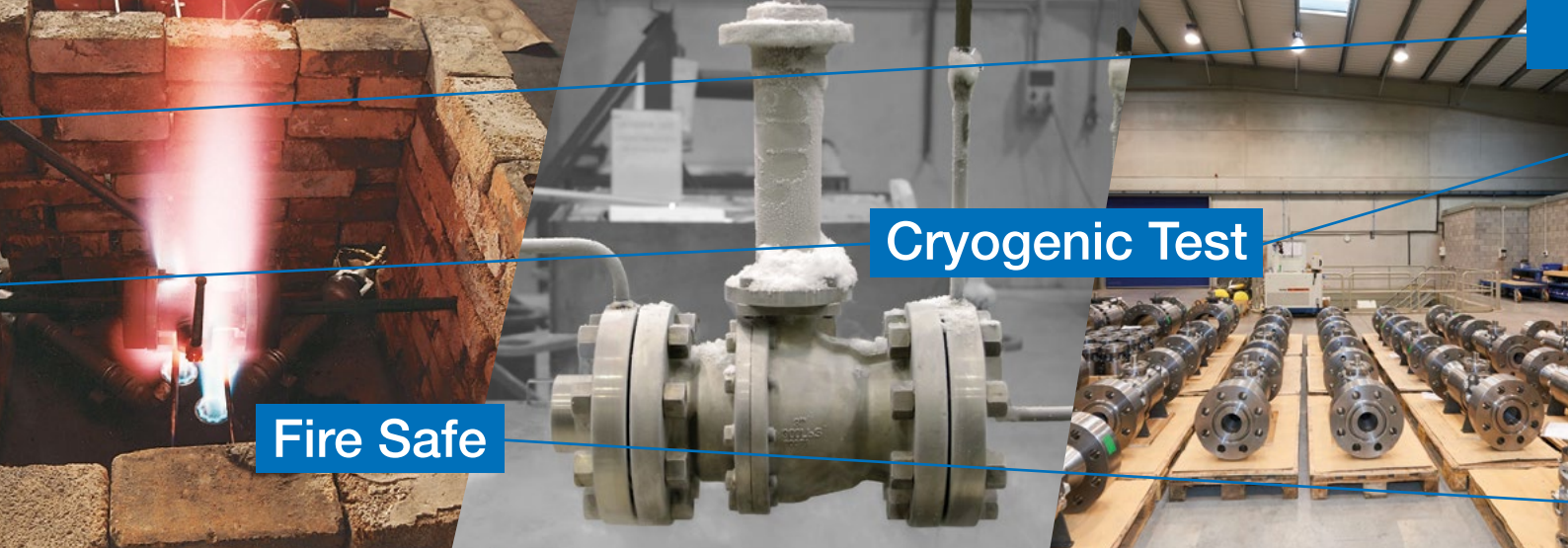


**Ball valves**

**Metal**  
**SEATED**



**Pekos**  
V A L V E S



**Fire Safe**

**Cryogenic Test**

## Certifications and tests

### Certificates of the company

|                             |                                                                 |
|-----------------------------|-----------------------------------------------------------------|
| <b>ISO 14001</b> .....      | Enviromental Management System                                  |
| <b>ISO 9001</b> .....       | Quality Management system                                       |
| <b>API Monogram</b> .....   | API Q1 & API-6D                                                 |
| <b>ISO 45001:2018</b> ..... | Design, assembly and management of manufacturing of ball valves |

### Certificates of the product

|                                               |                                                                                                                     |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| <b>DNV</b> .....                              | Type approval                                                                                                       |
| <b>Lloyd's Register</b> .....                 | Fire Safe & Type Approval                                                                                           |
| <b>TÜV A352.09 AD Merkblatt A4</b> .....      | Design of the valves                                                                                                |
| <b>TA - Luft ISO 15848-1 + VDI 2440</b> ..... | Stem tightness for gas emissions                                                                                    |
| <b>Helium -40 °C</b> .....                    | Leeds University test                                                                                               |
| <b>Directive 2014/68/EU</b> .....             | Pressure equipment directive (CE marking)                                                                           |
| <b>Directive 2014/34/EU</b> .....             | ATEX- directive - (  II2GD c T-) |
| <b>BS 6364</b> .....                          | Valves for Cryogenic Service                                                                                        |
| <b>EN 161 / EN 23553 / EN 16678</b> .....     | Automatic shut-off valves for Gas / Oil burners and equipment                                                       |
| <b>EAC</b> .....                              | TR CU 010 - TR CU 012 - TR CU 032                                                                                   |
| <b>Sanitary approval (Russian)</b> .....      | Food processing and Pharmaceutical industry                                                                         |
| <b>IEC 61508</b> .....                        | SIL3 CAPABLE                                                                                                        |
| <b>UKR SEPRO</b> .....                        | Ukraine Certificate                                                                                                 |
| <b>DVGW-EN 13774</b> .....                    | Valves for gas distribution with MOP 16 bar                                                                         |
| <b>API 6D Monogram</b> .....                  | Certiycate N° 6D-0363                                                                                               |
| <b>NSF International</b> .....                | ANSI 372                                                                                                            |

### Some Company Approvals

- Repsol-YPF (Spain)
- Al Furat Petroleum (Syria)
- Sasol Technology (South Africa)
- EGPC (Egypt)
- China Petroleum (China)
- OMV / Petrom
- Borealis
- Solvay
- Qatar Petroleum (Qatar)
- Petroleum Development Oman (PDO)
- KUWAIT Oil Co. (KOC)
- Zadco (UAE)
- National Iranian Oil Engineering & Construction Co (Irán)
- ADENOC
- INOVYN / INEOS
- Neste

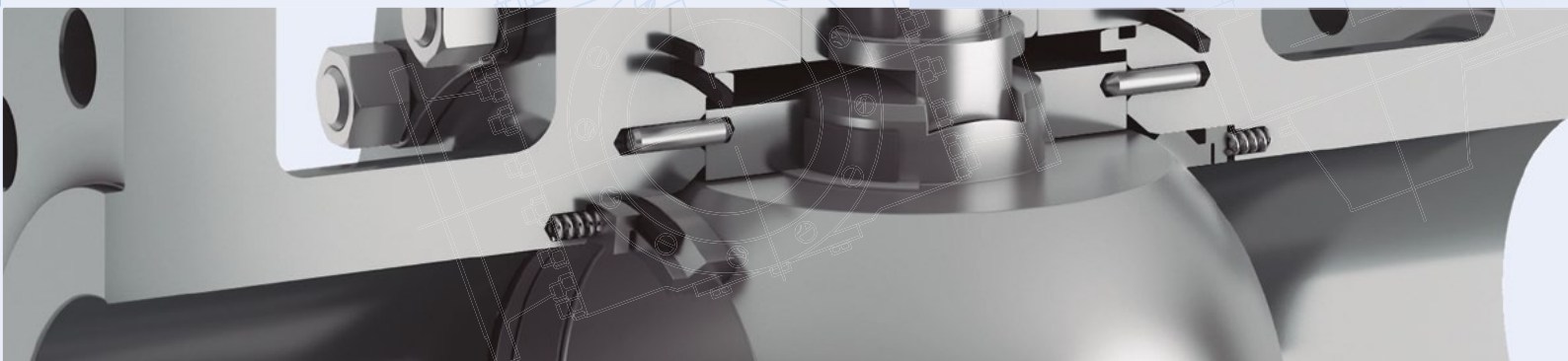


## General features

- Floating Ball / Trunnion
- Split body/ End Entry/ Top Entry
- Full / Reduced bore
- Bidirectional
- Self-cavity pressure relief
- Zero Leakage Class VI according to ANSI FCI 70-02 upon request.
- Spring loaded seat
- Anti Blow out stem
- Antistatic device
- DBB /DiB
- Auto adjustable packing

## Standards

- Top flange ISO5211
- Flanges ASME B16.5, EN 1092-1
- Face to face ANSI B16.10, EN 558
- Testing API 598, API 6D, BS6755-1, EN-12266, ISO 5208, ANSI FCI 70-02
- Design API 6D, B16.34, EN-12516, ISO 17292
- Materials according to NACE MR0175
- Leakage Class V Standard according to ANSI FCI 70-02



## COATING MATERIALS

### Chrome Carbide (CrC)

Chrome Carbide is the standard coating for Pekos ball valves, is well suited to very high temperature gas or liquid applications and has excellent resistance to wear, erosion and corrosive media. It has certain limitations in chlorine services and wet sulfur.

### Hard Chromium (HCr)

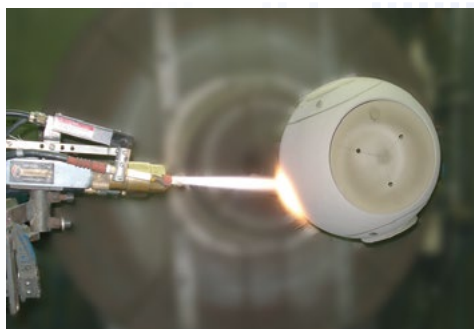
Hard Chromium is suited to a wide range of applications in liquids and gases. It is limited to moderate pressures and temperatures. HCr is not suitable for strong acids and fluids with high chloride content.

### Tungsten Carbide (WC-Co)

Tungsten Carbide is very resistant to wear and erosion from slurries, powders, muds. It works well in cryogenic applications, hydrocarbon gases and liquids, oxygen and dry gas services. It has limitations in corrosive services and condensates.

### Cobalt Based Alloy

Cobalt based coating (Stellite) provide a excellent mechanical wear resistance, superior corrosion resistance and a good performance in high temperature (up to 535°C). Stellite is used in a lot of applications in pulp and paper industries and reyning applications.



Coating



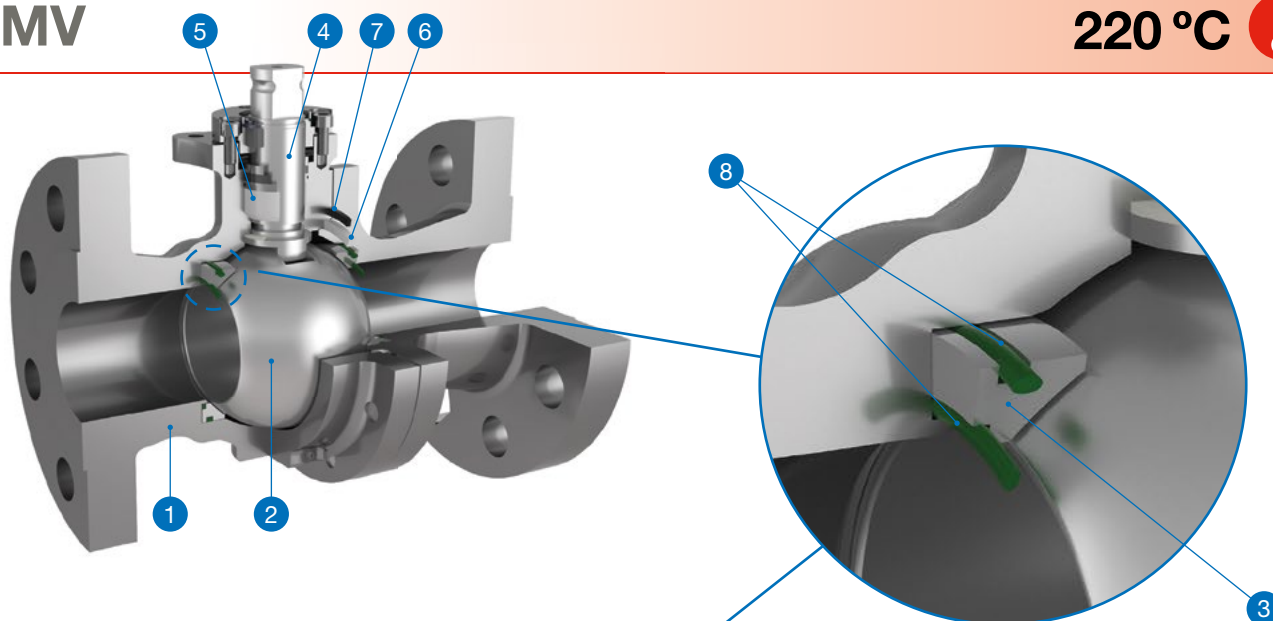
Grinding



## FLOATING

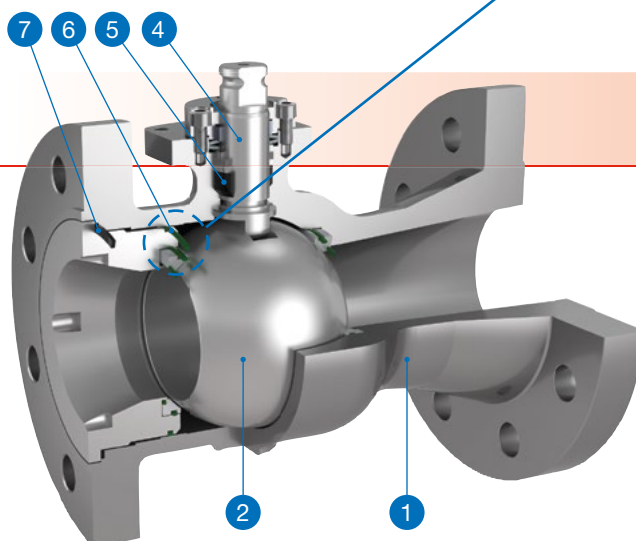
### ZMV

220 °C 



### ZMVRB

220 °C 



### Standard Materials

| Item | Description  | ZMV & ZMVRB (ANSI)* |                 | ZMV (DIN)*        |                 |
|------|--------------|---------------------|-----------------|-------------------|-----------------|
|      |              | Carbon steel        | Stainless steel | Carbon steel      | Stainless steel |
| 1    | Body         | A216 WCC/A352 LCC   | A351 CF8M       | 1.0619/1.6220     | 1.4408          |
| 2    | Ball         | CF8M+Cr-Carbide     |                 | 1.4408+Cr-Carbide |                 |
| 3    | Seats        | AISI 316+Cr-Carbide |                 | 1.4401+Cr-Carbide |                 |
| 4    | Stem         | XM-19               |                 | XM-19             |                 |
| 5    | Stem packing | RPTFE               |                 | RPTFE             |                 |
| 6    | Body seal 1  | RPTFE / FKM         |                 | RPTFE             |                 |
| 7    | Body seal 2  | Graphite            |                 | Graphite          |                 |
| 8    | O-ring       | FKM                 |                 | FKM               |                 |

\* Other material construction for different service upon request

### Range

#### ZMV

| SIZE        | RATING      |
|-------------|-------------|
| DN 15 - 50  | PN 63 - 100 |
| DN 15 - 125 | PN 25 - 40  |
| DN 15 - 200 | PN 10 - 16  |
| 1/2" - 2"   | Class 600   |
| 1/2" - 4"   | Class 300   |
| 1/2" - 8"   | Class 150   |

#### ZMVRB

| SIZE       | RATING    |
|------------|-----------|
| 1/2" - 6"  | Class 300 |
| 1/2" - 10" | Class 150 |

### GENERAL FEATURES

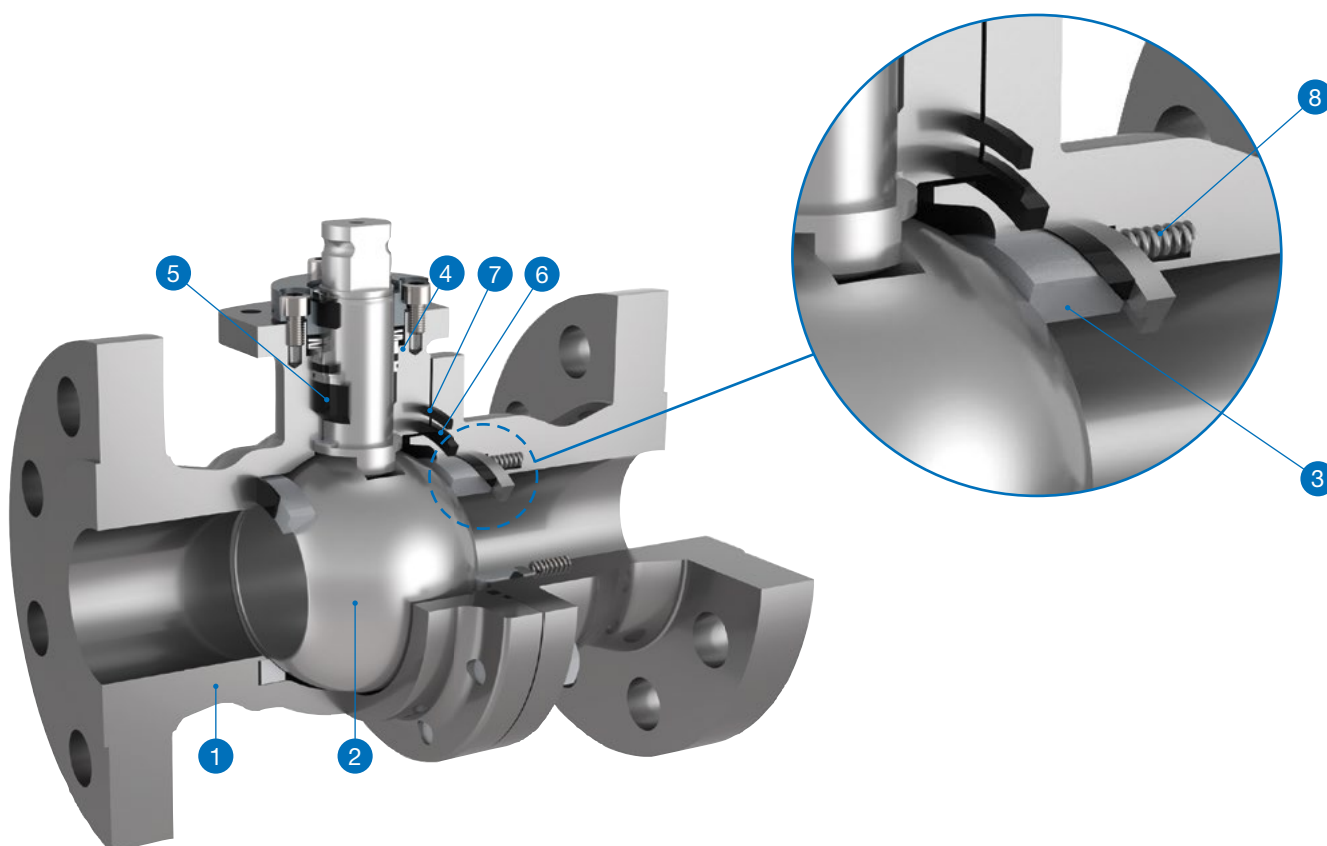
- Floating ball.
- Full / Reduced bore.
- Split / One piece body.
- Bidirectional.
- Anti blow out stem.
- Auto-adjustable packing.
- Anti static device.
- Self-cavity pressure relief.
- Seat with O-rings.
- Leakage Class V, upon request Class VI

## FLOATING

## ZMS

**400 °C** 

**Up to 640°C**  
with F Stem Extension 



### Standard Materials

| Item | Description  | ANSI*               |                 | DIN*              |                 |
|------|--------------|---------------------|-----------------|-------------------|-----------------|
|      |              | Carbon steel        | Stainless steel | Carbon steel      | Stainless steel |
| 1    | Body         | A216 WCC / A352LCC  | A351 CF8M       | 1.0619 / 1.6220   | 1.4408          |
| 2    | Ball         | CF8M+Cr-Carbide     |                 | 1.4408+Cr-Carbide |                 |
| 3    | Seats        | AISI 316+Cr-Carbide |                 | 1.4401+Cr-Carbide |                 |
| 4    | Stem         | XM-19               |                 | XM-19             |                 |
| 5    | Stem packing | Graphite            |                 | Graphite          |                 |
| 6    | Body seal 1  | Graphite            |                 | Graphite          |                 |
| 7    | Body seal 2  | Graphite            |                 | Graphite          |                 |
| 8    | Spring Seat  | Inconel X750        |                 | Inconel X750      |                 |

\* Other material construction for different service upon request

### Range

| ZMS         |             |
|-------------|-------------|
| SIZE        | RATING      |
| DN 15 - 50  | PN 63 - 100 |
| DN 15 - 125 | PN 25 - 40  |
| DN 15 - 200 | PN 10 - 16  |
| 1/2" - 2"   | Class 600   |
| 1/2" - 4"   | Class 300   |
| 1/2" - 8"   | Class 150   |

### GENERAL FEATURES

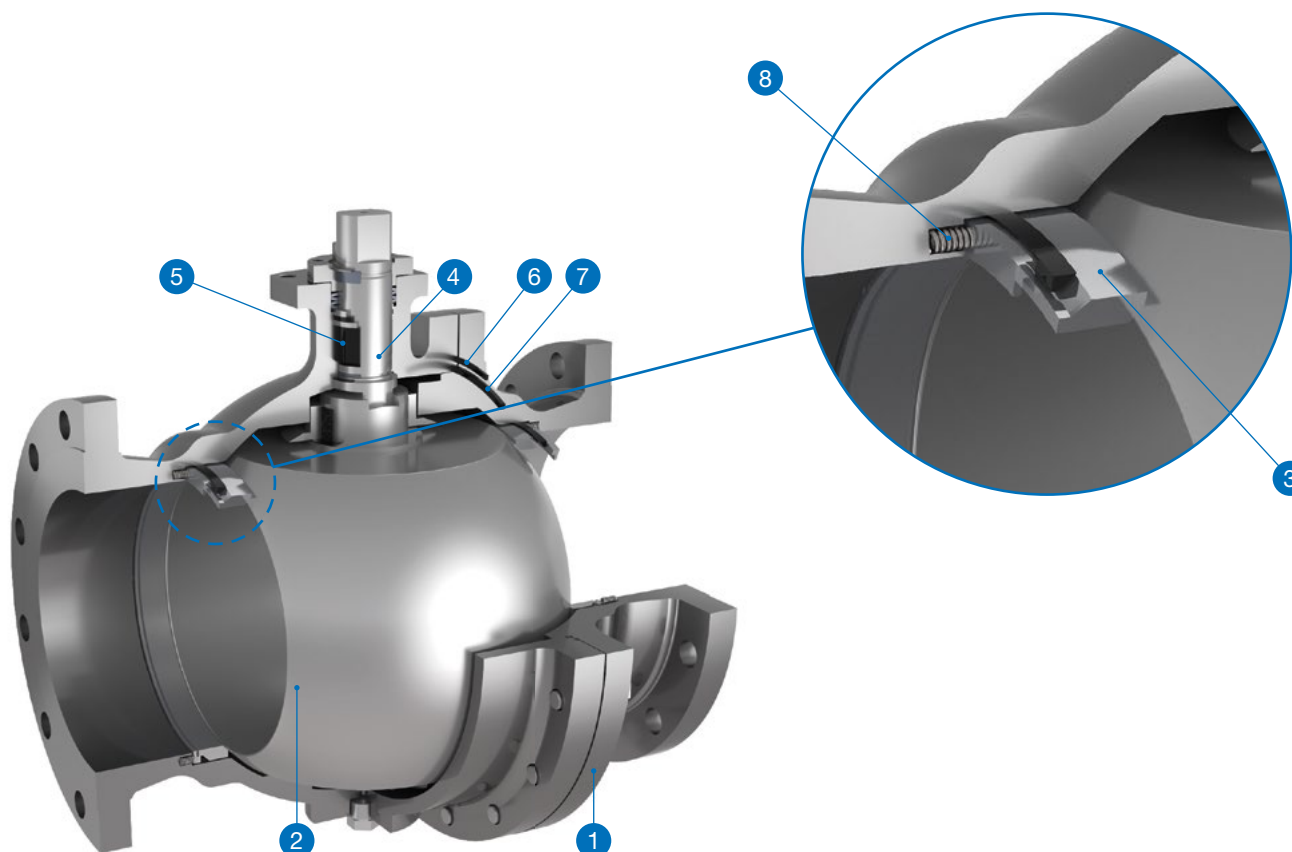
- Floating ball.
- Full bore.
- Split body.
- Bidirectional.
- Anti blow out stem.
- Auto-adjustable packing.
- Anti static device.
- Self-cavity pressure relief.
- Spring loaded seat / Floating.
- Leakage Class V, upon request Class VI

## FULL TRUNNION 2 PCS

### ZGMS

**400 °C** 

**Up to 640°C**  
with F Stem Extension



### Standard Materials

| Item | Description  | ANSI*               |                 | DIN*              |                 |
|------|--------------|---------------------|-----------------|-------------------|-----------------|
|      |              | Carbon steel        | Stainless steel | Carbon steel      | Stainless steel |
| 1    | Body         | A216WCC / A352 LCC  | A351 CF8M       | 1.0619 / 1.6620   | 1.4408          |
| 2    | Ball         | CF8M+Cr-Carbide     |                 | 1.4408+Cr-Carbide |                 |
| 3    | Seats        | AISI 316+Cr-Carbide |                 | 1.4401+Cr-Carbide |                 |
| 4    | Stem         | XM-19               |                 | XM-19             |                 |
| 5    | Stem packing | Graphite            |                 | Graphite          |                 |
| 6    | Body seal 1  | Graphite            |                 | Graphite          |                 |
| 7    | Body seal 2  | Graphite            |                 | Graphite          |                 |
| 8    | Spring Seat  | Inconel X750        |                 | Inconel X750      |                 |

\* Other material construction for diferent service upon request

### Range

#### ZGMS

| SIZE         | RATING    |
|--------------|-----------|
| DN40-200     | PN10-40   |
| DN40-300     | PN10-16   |
| 1 1/2" - 8"  | Class 300 |
| 1 1/2" - 12" | Class 150 |

### GENERAL FEATURES

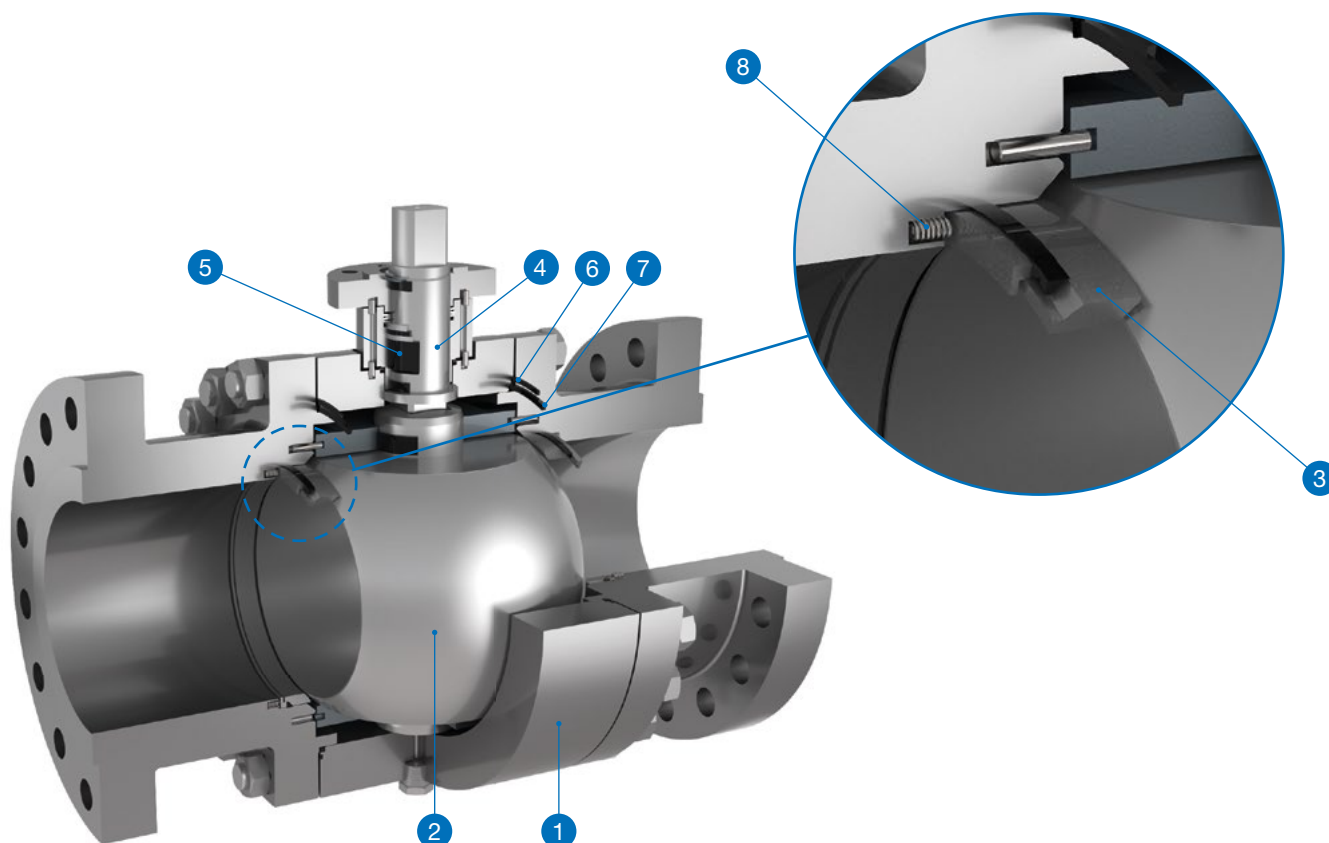
- Trunnion / DBB
- Bidirectional.
- Antistatic device.
- Leakage Class V, upon request Class VI
- Split body.
- Anti blow out stem.
- Self-cavity pressure relief.
- Spring loaded seats.
- Full bore.
- Auto-adjustable packing.

## FULL TRUNNION 3 PCS

### ZGKMS / ZGKMSRB

**400 °C** 

**Up to 640°C**  
with F Stem Extension 



#### Standard Materials

| Item | Description  | ANSI*                                |                 | DIN*                    |                 |
|------|--------------|--------------------------------------|-----------------|-------------------------|-----------------|
|      |              | Carbon steel                         | Stainless steel | Carbon steel            | Stainless steel |
| 1    | Body         | A105/A350 LF2                        | A182 F316       | 1.0352                  | 1.4401          |
| 2    | Ball         | F316 + Cr-Carbide/XM-19 + Cr-Carbide |                 | 1.4401+Cr-Carbide/XM-19 |                 |
| 3    | Seats        | F316 + Cr-Carbide/XM-19 + Cr-Carbide |                 | 1.4401+Cr Carbide       |                 |
| 4    | Stem         | XM-19                                |                 | XM-19                   |                 |
| 5    | Stem packing | Graphite                             |                 | Graphite                |                 |
| 6    | Body seal 1  | Graphite                             |                 | Graphite                |                 |
| 7    | Body seal 2  | Graphite                             |                 | Graphite                |                 |
| 8    | Spring Seat  | Inconel X750                         |                 | Inconel X750            |                 |

\* Other material construction for diferent service upon request

#### Range

| ZGKMS        |                  |
|--------------|------------------|
| SIZE         | RATING           |
| DN 15 - 300  | PN 320 - 400     |
| DN 15 - 500  | PN 160 - 250     |
| DN 15 - 1050 | PN 10 - 100      |
| 1/2" - 12"   | Class 2500       |
| 1/2" - 20"   | Class 900 - 1500 |
| 1/2" - 42"   | Class 150 - 600  |

#### GENERAL FEATURES

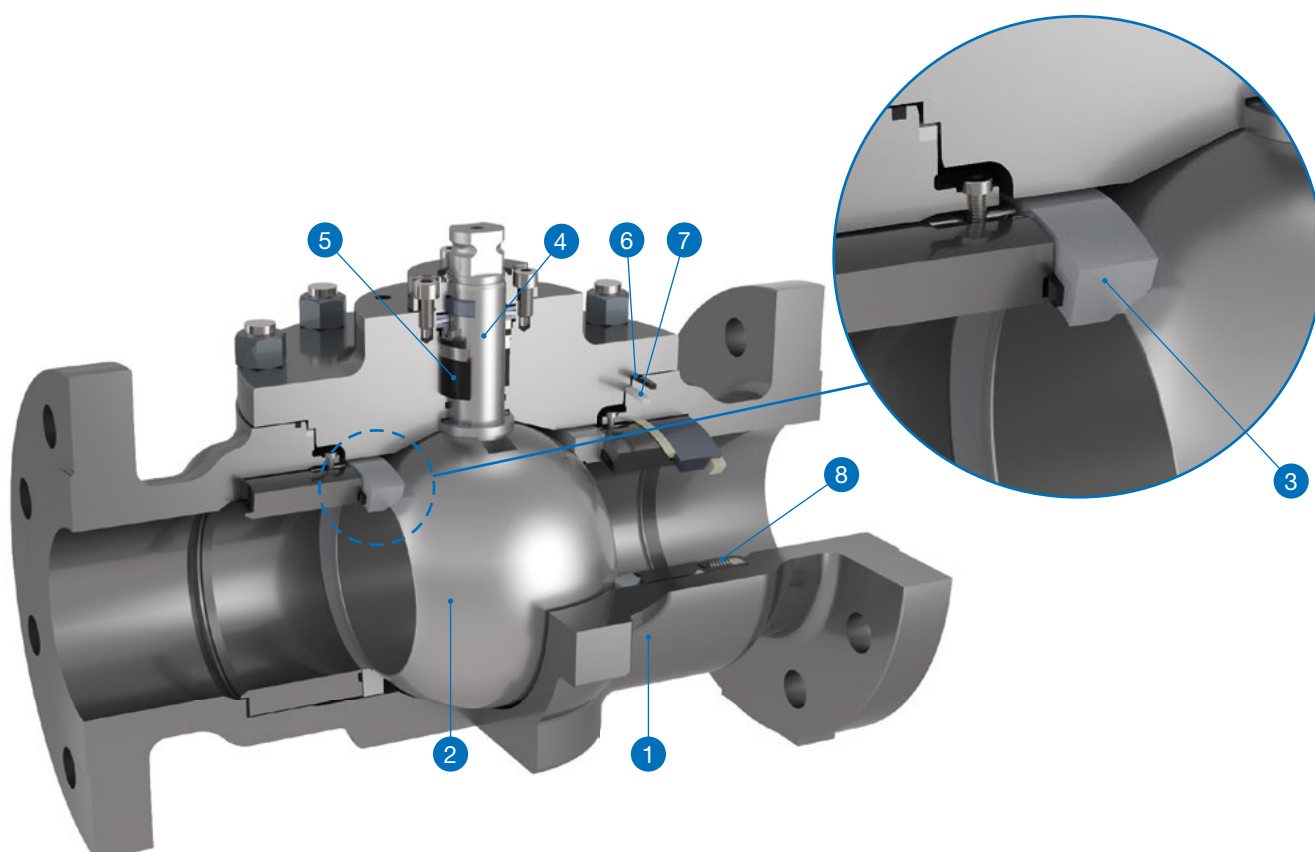
- Trunnion / DBB
- 3 Pieces body.
- Full / Reduced bore.
- Bidirectional.
- Anti blow out stem.
- Auto-adjustable packing.
- Antistatic device.
- Self-cavity pressure relief.
- Spring loaded seats.
- Leakage Class V, upon request Class VI

## TOP ENTRY FLOATING

### ZTEMS / ZTEMSRB

**400 °C** 

**Up to 640°C**  
with F Stem Extension 



#### Standard Materials

| Item | Description  | ANSI*                 |                 | DIN*                 |                 |
|------|--------------|-----------------------|-----------------|----------------------|-----------------|
|      |              | Carbon steel          | Stainless steel | Carbon steel         | Stainless steel |
| 1    | Body         | A216 WCC / A352 LCC   | A351 CF8M       | 1.0619 / 1.6620      | 1.4408          |
| 2    | Ball         | F316 + Cr carbide     |                 | 1.4401 + Cr. Carbide |                 |
| 3    | Seats        | AISI 316 + Cr Carbide |                 | 1.4401 + Cr. Carbide |                 |
| 4    | Stem         | XM-19                 |                 | XM-19                |                 |
| 5    | Stem packing | Graphite              |                 | Graphite             |                 |
| 6    | Body seal 1  | Graphite              |                 | Graphite             |                 |
| 7    | Body seal 2  | Graphite              |                 | Graphite             |                 |
| 8    | Spring Seat  | Inconel X750          |                 | Inconel X750         |                 |

\* Other material construction for different service upon request

#### Range

##### ZTEMS

| SIZE      | RATING      |
|-----------|-------------|
| DN15-50   | PN 63 - 100 |
| DN15-100  | PN 16 - 40  |
| 1/2" - 2" | Class 600   |
| 1/2" - 4" | Class 300   |
| 1/2" - 8" | Class 150   |

#### GENERAL FEATURES

- Floating Ball.
- Top Entry.
- Full / Reduced bore.
- Bidirectional.
- Anti blow out stem.
- Auto-adjustable packing.
- Antistatic device.
- Self-cavity pressure relief.
- Allows in-line maintenance.
- Spring loaded seats.
- Leakage Class V, upon request Class VI

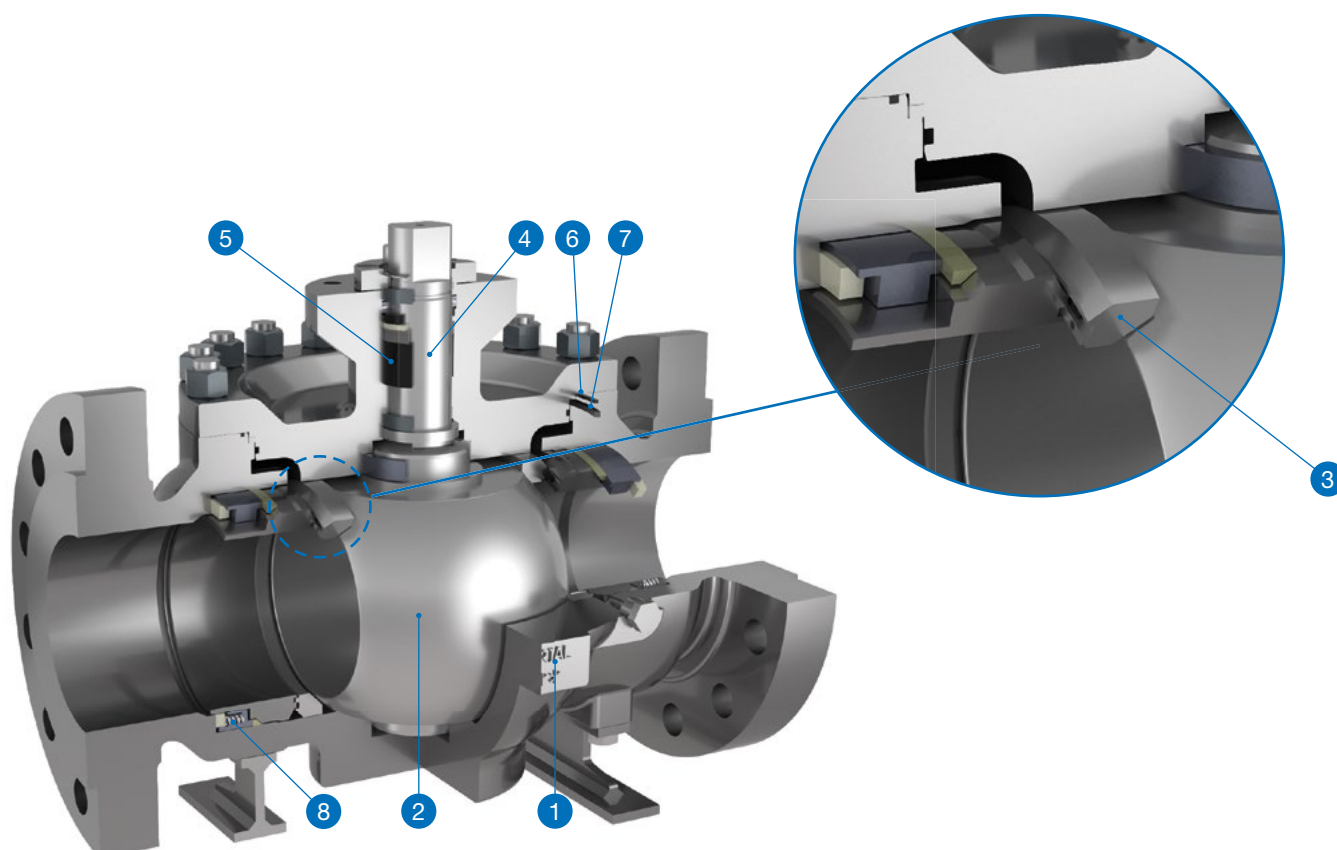


## TOP ENTRY FULL TRUNNION

### ZTEGMS / ZTEGMSRB

**400 °C** 

**Up to 640°C**  
with F Stem Extension 



#### Standard Materials

| Item | Description  | ANSI*                  |                 | DIN*                 |                 |
|------|--------------|------------------------|-----------------|----------------------|-----------------|
|      |              | Carbon steel           | Stainless steel | Carbon steel         | Stainless steel |
| 1    | Body         | A216WCC/ A352 LCC      | A351 CF8M       | 1.0619/1.6620        | 1.4408          |
| 2    | Ball         | F316 + Cr. Carbide     |                 | 1.4401 + Cr. Carbide |                 |
| 3    | Seats        | AISI 316 + Cr. Carbide |                 | 1.4401 + Cr. Carbide |                 |
| 4    | Stem         | XM-19                  |                 | XM-19                |                 |
| 5    | Stem packing | Graphite               |                 | Graphite             |                 |
| 6    | Body seal 1  | Graphite               |                 | Graphite             |                 |
| 7    | Body seal 2  | Graphite               |                 | Graphite             |                 |
| 8    | Spring Seat  | Inconel X750           |                 | Inconel X750         |                 |

\* Other material construction for different service upon request

#### Range

| ZTEGMS      |                |
|-------------|----------------|
| SIZE        | RATING         |
| DN80 - 1050 | PN 10-100      |
| DN80 - 500  | PN 160-250     |
| DN80 - 300  | PN 320-400     |
| 3" - 12"    | Class 2500     |
| 3" - 20"    | Class 900-1500 |
| 3" - 42"    | Class 150-600  |

#### GENERAL FEATURES

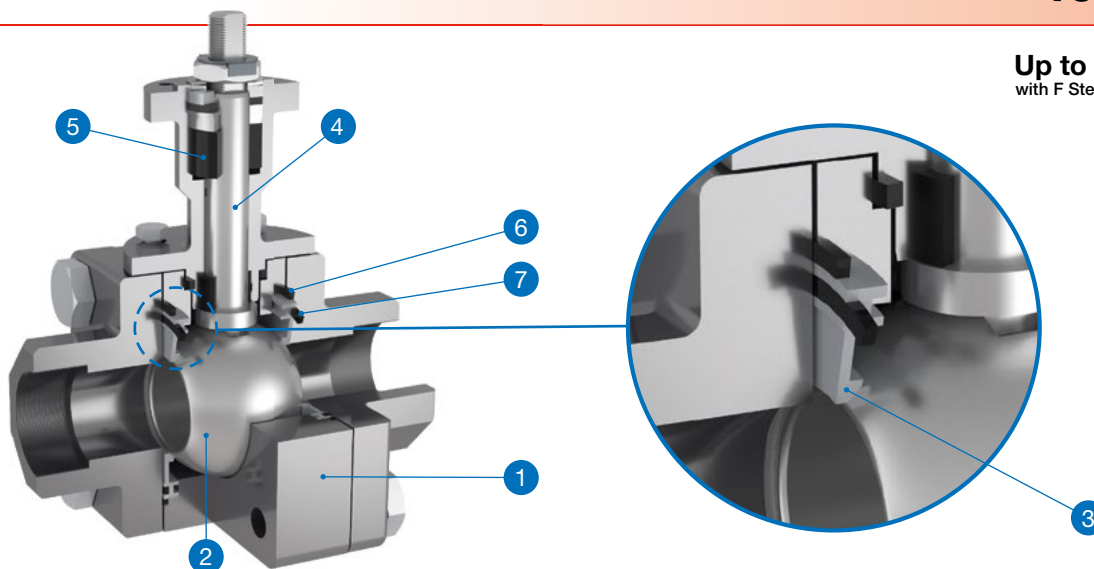
- Top Entry.
- Trunnion / DBB
- Full / Reduced Bore.
- Bidirectional.
- Anti blow out stem.
- Auto-adjustable packing.
- Antistatic device.
- Self-cavity pressure relief.
- Allows in-line maintenance.
- Spring loaded seats.
- Leakage Class V, upon request Class VI

## 3 PCS

### ZKMS / ZKMSRB

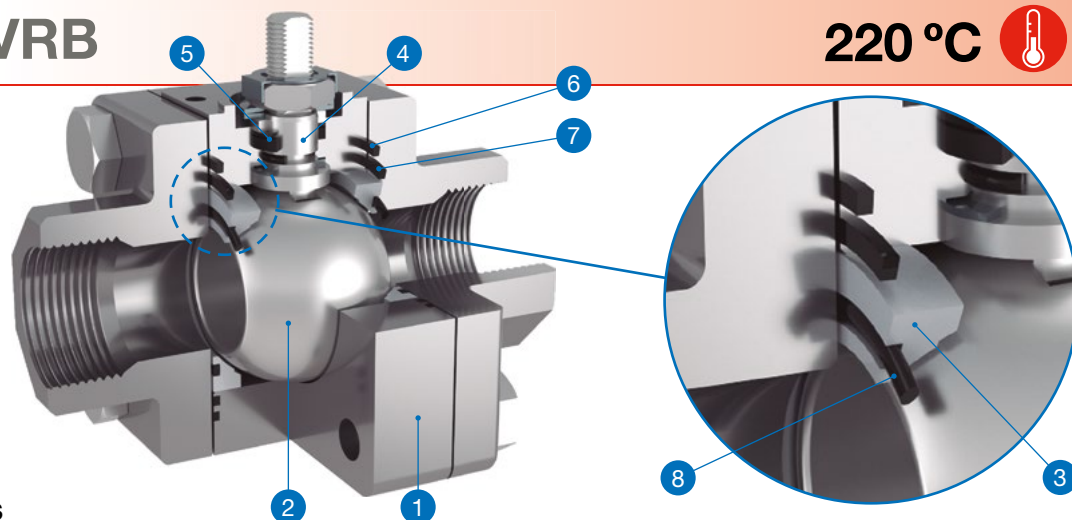
**400 °C** 

**Up to 640°C**  
with F Stem Extension



### KMV / KMVRB

**220 °C** 



#### Standard Materials

| Item | Description  | ZKMS*          |                 | ZKMV*                   |                 |
|------|--------------|----------------|-----------------|-------------------------|-----------------|
|      |              | Carbon steel   | Stainless steel | Carbon steel            | Stainless steel |
| 1    | Body         | A182 F316/316L | A105/A350 LF2   | A182 F316/316L          | A105/A350 LF2   |
| 2    | Ball         | F316/F316L     |                 | F316/F316L + Cr-Carbide |                 |
| 3    | Seats        | AISI 316 + F51 |                 | AISI 316 + Cr-Carbide   |                 |
| 4    | Stem         | XM-19          |                 | XM-19                   |                 |
| 5    | Stem packing | Graphite       |                 | Graphite                |                 |
| 6    | Body seal 1  | Graphite       |                 | RPTFE                   |                 |
| 7    | Body seal 2  | Graphite       |                 | Graphite                |                 |
| 8    | O-ring       | —              |                 | FKM                     |                 |

\* Other material construction for different service upon request

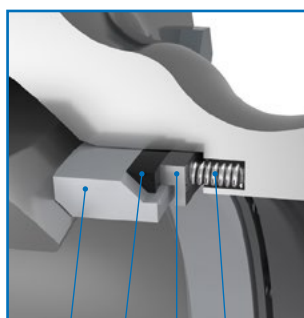
#### Range

| SIZE      | RATING    |
|-----------|-----------|
| 1/4" - 1" | Class 800 |
| 1/4" - 4" | Class 150 |

#### GENERAL FEATURES

- 3 PCS Body
- Full / Reduced bore.
- Bidirectional.
- Antistatic device.
- Anti blow out stem.
- Auto-adjustable packing.
- Self-cavity pressure relief.
- Spring loaded seats.
- Leakage Class V, upon request Class VI

## SEATS MODELS

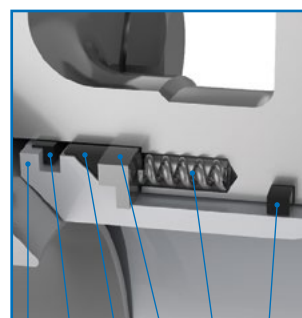


### Spring Loaded

High Temperature

| Item | Description |
|------|-------------|
| 108  | Seat Seal   |
| 45   | Spring Seat |
| 47   | Metal Seat  |
| 48   | Ring Seat   |

47 108 48 45

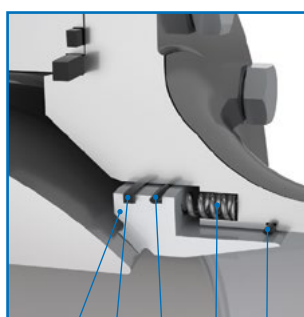


### Protected

Dust Proof

| Item | Description |
|------|-------------|
| 47   | Metal Seat  |
| 46c  | Seat Seal 3 |
| 46b  | Seat Seal 2 |
| 46a  | Seat Seal 1 |
| 45   | Spring Seat |
| 44b  | Ring Seat   |

47 46b 46a 44b 45 46c

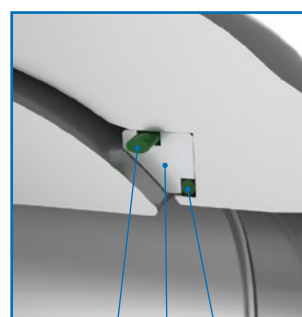


### Protected and Scraper

Sticky Material

| Item | Description |
|------|-------------|
| 108  | Seat Seal 2 |
| 47   | Metal Seat  |
| 46   | Seat Seal 1 |
| 45   | Spring Seat |

47 46 108 45 108



### Pulp & Paper

Max. Temp: FKM up to 220°C  
Max. Temp: FKM up to 327°C

| Item | Description        |
|------|--------------------|
| 108  | O-ring Seat        |
| 48   | O-ring spring Seat |
| 47   | Metal Seat         |

108 47 48

## STEM EXTENSIONS



### Simple F

- Length 150 mm.
- Only Lever Operated.
- No Stem Packing.
- No gasket between valve & Stem extension.
- Manufactured from bar material.



### Standard

- Length 150mm.
- Top Flange ISO 5211
- No Stem Packing.
- No gasket between valve & Stem extension.
- Stem guide seal on top.
- Housing in cast material.



### Security F

- High Temperature & Low emission
- Length 150 mm.
- Top Flange ISO 5211
- Stem Packing on Top, no packing in valve.
- Gasket between valve & Stem extension.

Up to 640°C



### Security F with Fugitive Detector (F1)

- High Temperature & Low emission
- Length 150 mm.
- Top Flange ISO 5211
- Double stem packing
- Gasket between valve & stem extension.
- Grease injector or fugitive detector between the two packings in the stem extension.

Up to 640°C



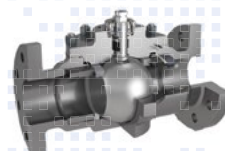
# Metal SEATED



**FLOATING  
ZMV**



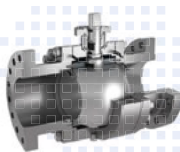
**FULL TRUNNION  
2PCS ZGMS**



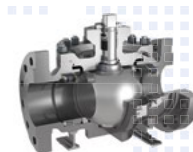
**TOP ENTRY  
FLOATING ZTEMS**



**FLOATING  
ZMVRB**



**FULL TRUNNION  
3PCS ZGKMS**



**TOP ENTRY FULL  
TRUNNION ZTEGMS**



**FLOATING  
ZMS**



**3PCS  
ZKMS**



**3PCS  
KMV**



[www.pekos.es](http://www.pekos.es)

Sales & Headquarters: Rec del Molinar, 9-P-I. El Circuit  
08160 Montmeló (Barcelona) - Spain  
Tel. (+34) 93 568 92 56 - [pekos@pekos.es](mailto:pekos@pekos.es)

Member of



[www.pekosgroup.eu](http://www.pekosgroup.eu)