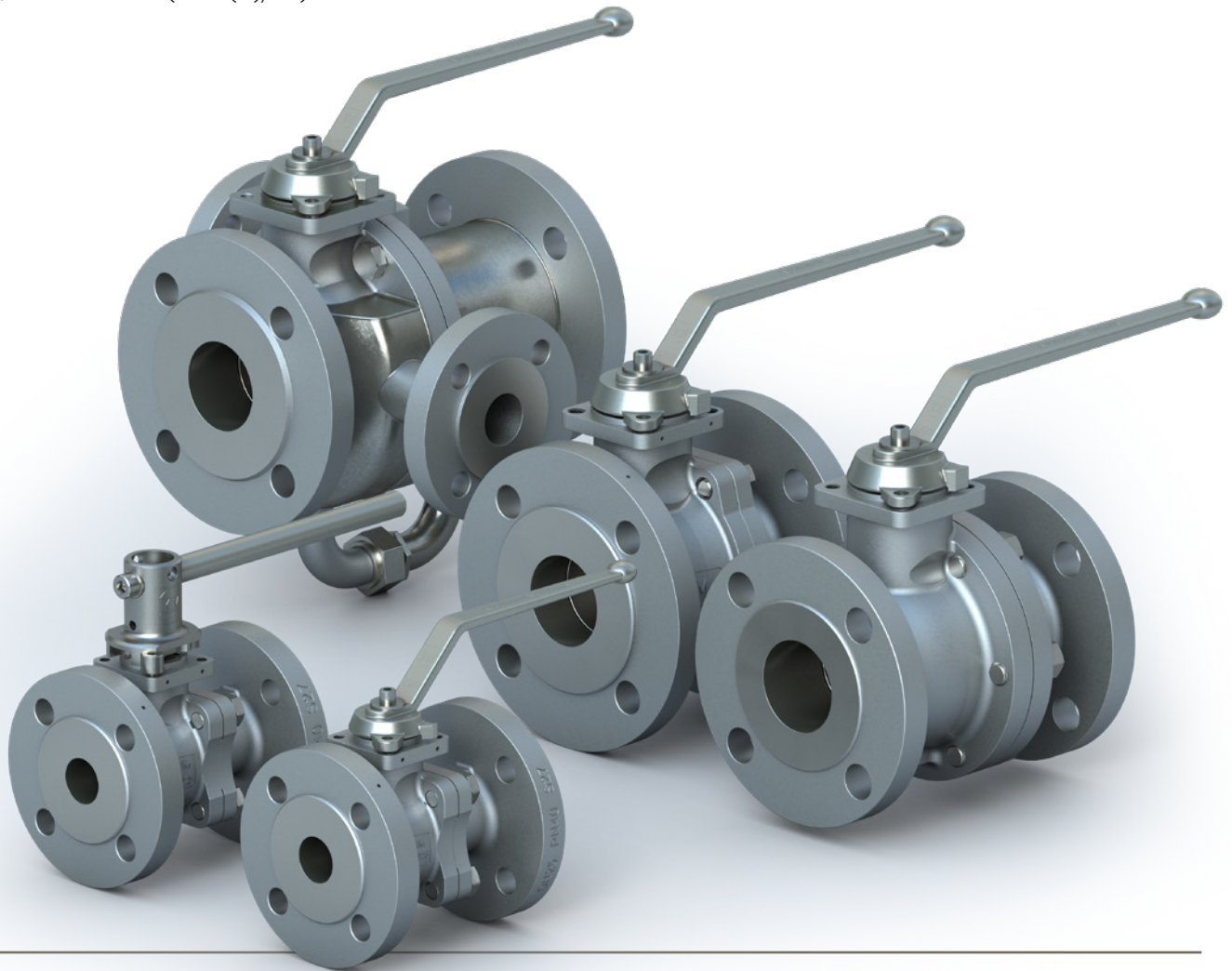

KM20/21 FLANGED BALL VALVES

TECHNICAL SALES MANUAL

| | |
|---------|------------------|
| KM21-T | (KM-TXST/TAST) |
| KM21-O | (KM-OXST/OAST) |
| KM20-A | (KM-TX-AS/TA-AS) |
| KM20-H | (KM-TX-H) |
| KM20-HT | (KM-X(A)/HT) |



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Disclaimer

This is a working translation from the English language version.
 In the event of conflict with the English language version, the English language version shall prevail.

TECHNICAL DATA

OVERVIEW

Kugelhahn Müller flanged ball valves feature maintenance-free and durable adjustable live-loaded PTFE stem sealing or O-Ring sealing system with certified low emission packing. This design has proven to ensure an extreme long service life and meets the highest quality requirements in the Chemical Industry worldwide.

A wide range of accessories and special materials enable high flexibility and ensure customer requirements.



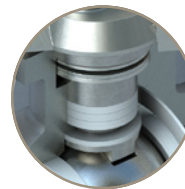
APPLICATIONS

- > Chemical gases
- > Chemical fluids
- > Petrochemicals
- > Food & Beverage (FDA)
- > Pharmaceutical
- > Water and Wastewater treatment

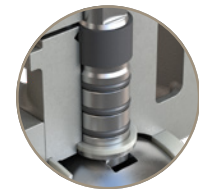
MEDIA

- > Acids
- > Alkalis
- > Corrosive Chemicals
- > Gases
- > Hydrogen
- > Oxygen
- > Water

PTFE PACKING



O-RING SEALING



SPECIFICATIONS

| | |
|-----------------------------------|------------------------|
| Size Range | DN 15 to 200 |
| Temperature Range | PTFE: -60°C to 200°C |
| | O-Ring: -25°C to 200°C |
| Maximum Operating Pressure | 40 bar |
| Body Style | Two-piece flanged |
| Port | Full Port |
| Tightness Test | EN 12266-1 Rate A |

DESIGN STANDARDS

| | |
|--------------------------|--|
| Valve Design | EN 12569 EN 593 NE 167 |
| Material Standard | EN 16668 AD2000 W0 |
| Food Contact | EC 1935 |
| Marking | EN 19 DIN EN IEC 61406* DIN 91406* |
| Top Flange | ISO 5211 NE 14 |
| Flange Drilling | EN 1092-1 PN 10, 16, 25, 40 |
| Face-to-Face | EN 558 Series 1 Series 27 |
| Testing Standard | EN 12266-1 |

NOTES

- 1 Other flange patterns are available on request.
- 2 Customer specification and standards on request.
- * AutoID available shortly.

MATERIAL OPTIONS

| | |
|----------------|-----------------------------|
| Body | Carbon Steel (EN 1.0619) |
| | Stainless Steel (EN 1.4408) |
| Ball | Stainless Steel (EN 1.4408) |
| | Stainless Steel (EN 1.4404) |
| Stem | Stainless Steel (EN 1.4462) |
| Seat | PTFE/25% GFR |
| | PTFE/50% VA |
| | Virgin PTFE (FDA) |
| Packing | PTFE |
| | Viton® (FKM) |

NOTES

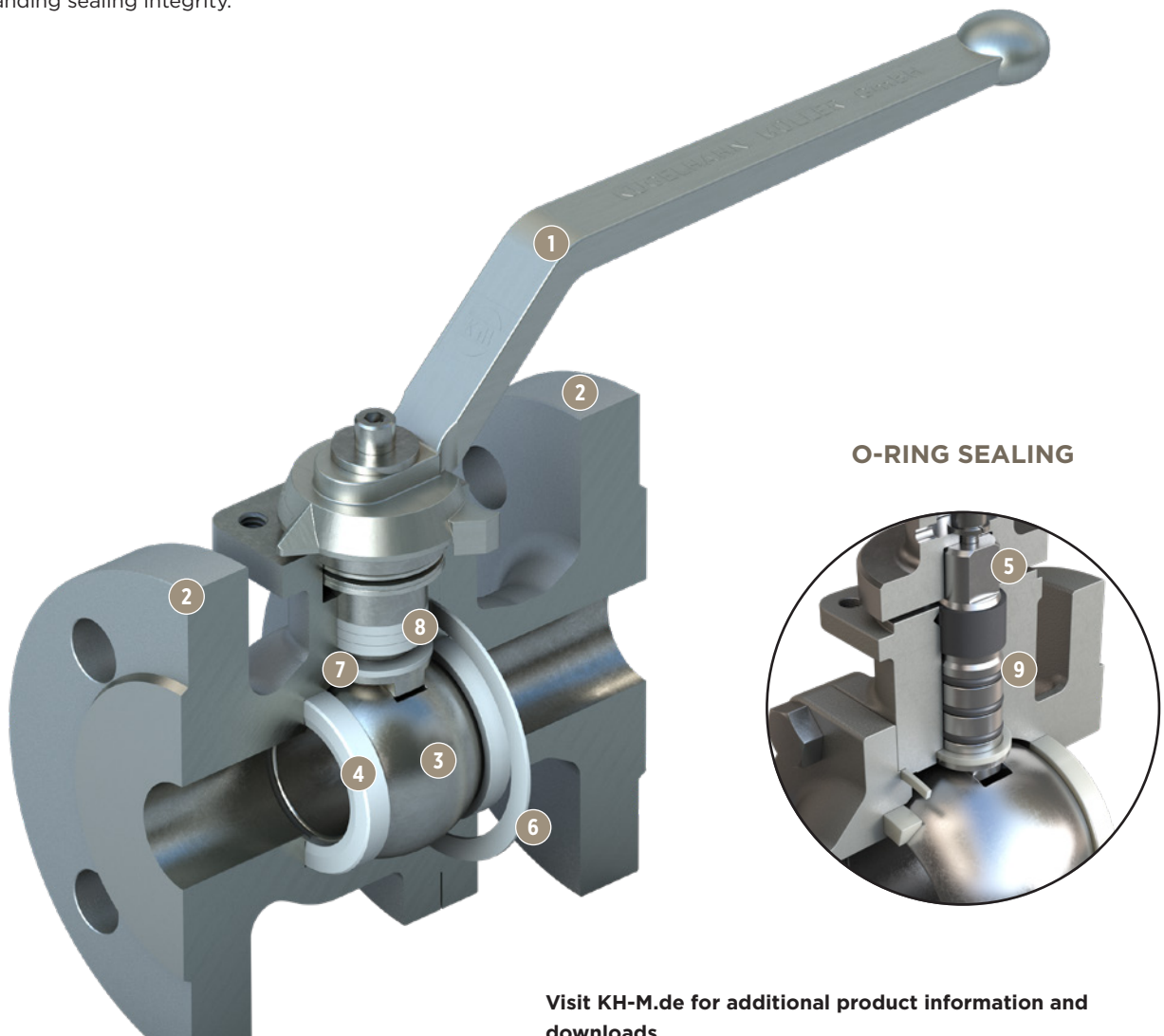
- 1 Other materials are available on request.

CERTIFICATIONS AND APPROVALS

| | |
|-------------------------------------|----------------------------------|
| Declaration of Conformity | CE UKCA |
| Pressure Equipment Directive | 2014/68/EU PE(S)R |
| Machinery Directive | 2006/42/EC |
| Atmospheric Explosion | ATEX 2014/34/EU |
| Fugitive Emissions | ISO 15848-1 TA Luft VDI 2440 |
| AutoID / ID Link | DIN 91406 / IEC 61406 |
| Safety Integrity Level | IEC 61508 Parts 1-2 and 4-7:2010 |
| Fire-Safe (optional) | ISO 10494 API 607 |

FEATURES & BENEFITS

- 1 **HAND LEVER:** Stainless steel lockable hand lever with a position indicator.
- 2 **BODY / END CAP:** Robust two-piece body design suitable for heavy-duty applications in multiple industries. A wide range of flange connections are available.
- 3 **BALL:** Floating full bore design made of polished stainless steel.
- 4 **SEAT:** Seat design ensures bidirectional zero-leakage sealing under all pressure and temperature conditions.
- 5 **STEM:** Heavy-duty, blowout-proof stem with “Double D” connection according to ISO 5211 for mounting of various hand levers, adapters, actuators and stem extensions.
- 6 **BODY SEAL:** Chambered body seal design to ensure outstanding sealing integrity.
- 7 **STEM PACKING:** Custom designed high integrity stem packing arrangement that combines a self-adjusting primary and secondary seal in order to ensure consistent torque and highest possible tightness according to ISO 15848-1.
- 8 **PTFE PACKING:** The PTFE sealing system features a preloaded Belleville spring design with the benefit of optional re-adjustment.
- 9 **O-RING PACKING:** The O-Ring sealing system features an O-Ring arrangement of at least three O-Rings.



Visit KH-M.de for additional product information and downloads.

OPTIONS

SERIES KM01 STAINLESS STEEL HAND LEVER



Stainless steel lockable hand lever with a position indicator.

SERIES KM01 HAND LEVER WITH DOUBLE TRAVEL STOP



This solid hand lever features a double travel stop and can be extended modularly.

SERIES KM02 STEM EXTENSION SVM



The modular stem extension allows several extensions to be built on top of each other and offers easy mounting of already installed ball valves. The stop does not have to be dismantled.

SERIES KM12 STEM EXTENSION SVA



The closed stem extension (H=100mm) made of stainless steel allows the assembly of a bridge and coupling for automation. A manual lever assembly is also possible.

AUTOMATION BRACKETS AND COUPLERS



The bracket with ISO 5211 drilling pattern is milled flat on both sides. The Face-to-Face is cutted according to EN 15081. The coupling has a position indicator.

SAFETY LOCKABLE HANDLE



A lockable handle used to lock the valve in closed and/or open position is optionally available.

Opening or closing is only possible after removal of the padlock*.

VALVE SELECTION

VALVE PART NUMBERING SYSTEM

Select one code from each category to build a complete valve order number.

KM21-XXXX-1XXXX-XXX

| SERIES KM | | SIZE XXXX | | BASE NUMBER 1XXXX | | TRIM' XXX | | |
|-----------------------------|------------------------|--------------|-----|----------------------|-----------------------------------|--------------|---------|-----------------------------|
| Code | Body Style | Code | DN | Code | Description | Code | Item | Material |
| KM20/ KM21 | PTFE | M015 | 15 | 11001 | O-Ring, Series 1, PN16 | 001 | Body | Carbon Steel (EN 1.0619) |
| | O-Ring | M040 | 40 | 11002 | PTFE, Series 1, PN16 | | Ball | Stainless Steel (EN 1.4404) |
| | ASME PTFE | M050 | 50 | 11003 | O-Ring, Series 27, PN16 | | Stem | Stainless Steel (EN 1.4462) |
| | Heat Jacket PTFE | M065 | 65 | 11004 | PTFE, Series 27, PN16 | | Seat | PTFE / 25% glass |
| | High Temperature 280°C | M080 | 80 | 11005 | O-Ring, Series 1, PN40 | | Packing | PTFE |
| | | M100 | 100 | 11006 | PTFE, Series 1, PN40 | 002 | Body | Stainless Steel (EN 1.4408) |
| | | M125 | 125 | 11007 | O-Ring, Series 27, PN40 | | Ball | Stainless Steel (EN 1.4404) |
| | | M150 | 150 | 11008 | PTFE, Series 27, PN40 | | Stem | Stainless Steel (EN 1.4462) |
| | | M200 | 200 | 11009 | O-Ring, Series 1, PN16 (4 holes) | | Seat | PTFE / 25% glass |
| | | | | 11010 | PTFE, Series 1, PN16 (4 holes) | | Packing | PTFE |
| | | | | 11011 | O-Ring, Series 27, PN16 (4 holes) | 003 | Body | Carbon Steel (EN 1.0619) |
| | | | | 11012 | PTFE, Series 27, PN16 (4 holes) | | Ball | Stainless Steel (EN 1.4404) |
| | | | | 11013 | O-Ring, Series 27, PN10 | | Stem | Stainless Steel (EN 1.4462) |
| | | | | 11014 | PTFE, Series 27, PN10 | | Seat | PTFE / 50% glass |
| | | | | 11015 | PTFE, Series 27, PN40 (PN25/16) | | Packing | PTFE |
| | | | | 11016 | O-Ring, Series 27, PN25 | 004 | Body | Stainless Steel (EN 1.4408) |
| | | | | 11017 | PTFE, Series 27, PN25 | | Ball | Stainless Steel (EN 1.4404) |
| | | | | 11018 | O-Ring, Series 3, Cl.150 | | Stem | Stainless Steel (EN 1.4462) |
| | | | | 11019 | PTFE, Series 3, Cl.150 | | Seat | PTFE / 50% glass |
| | | | | 11020 | O-Ring, Series 12, Cl.150 | | Packing | PTFE |
| | | | | 11021 | PTFE, Series 12, Cl.150 | | | |
| | | | | 11022 | O-Ring, Series 4, Cl.300 | | | |
| | | | | 11023 | PTFE, Series 4, Cl.300 | | | |

NOTES:

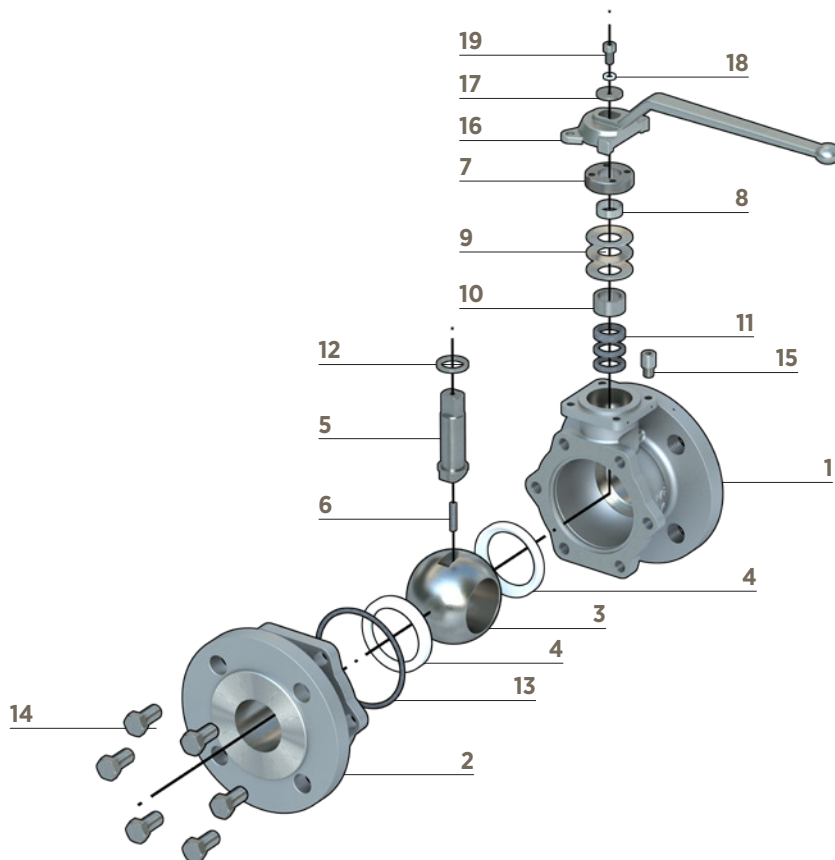
For a complete list of standard materials and descriptions, refer to MATERIALS OF CONSTRUCTION.

Other materials are available, please contact Kugelhahn Müller for additional information.

EXAMPLE

KM21-M025-11008-002

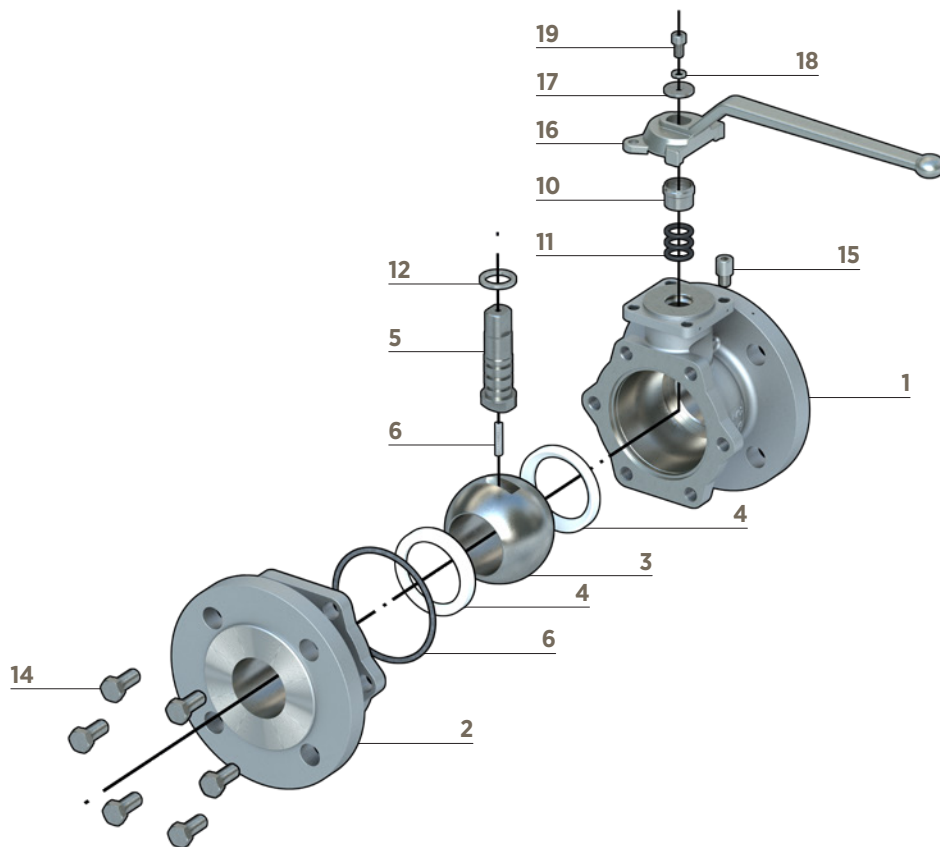
- > Stainless Steel Flange Ball Valve KM21 DN 25 PN 40 with PTFE body
- > According to Directive (PED) 2014/68/EU, Two-piece body, full port
- > Flange drilling: EN 1092-1
- > Design: EN 12516-2
- > Face-to-Face: EN 558 Series 27
- > Material:
 - Body: 1.4408
 - Ball: 1.4404
 - Stem: 1.4462
 - Packing: PTFE



| ITEM | DESCRIPTION | MATERIAL |
|------|-------------------|---|
| 1 | Body | Stainless Steel (EN 1.4408) Carbon Steel (EN 1.0619) |
| 2 | End Cap | Stainless Steel (EN 1.4408) Carbon Steel (EN 1.0619) |
| 3 | Ball | Stainless Steel (EN 1.4404, EN 1.4408) |
| 4 | Seat | PTFE Virgin, PTFE / 25% glass, PTFE / 50% Stainless Steel |
| 5 | Stem | Stainless Steel (EN 1.4462) |
| 6 | Loading Spring | Stainless Steel (EN 1.4310) |
| 7 | Gland Retainer | Stainless Steel (EN 1.4404) |
| 8 | Guide Bush | PTFE / 15% Carbon Fiber |
| 9 | Belleville Washer | Stainless Steel (EN 1.4310) |
| 10 | Packing Gland | Stainless Steel (EN 1.4404) |
| 11 | Stem Packing | PTFE |
| 12 | Thrust Washer | PTFE |
| 13 | Body Gasket | PTFE |
| 14 | Body Screw | Stainless Steel (A4-70) |
| 15 | Travel Stop Bolt | Stainless Steel (EN 1.4305) |
| 16 | Hand Lever | Stainless Steel (EN 1.4308) |
| 17 | Washer | Stainless Steel (A4) |
| 18 | Spring Washer | Stainless Steel (A4) |
| 19 | Cap Screw | Stainless Steel (A4-70) |

NOTES

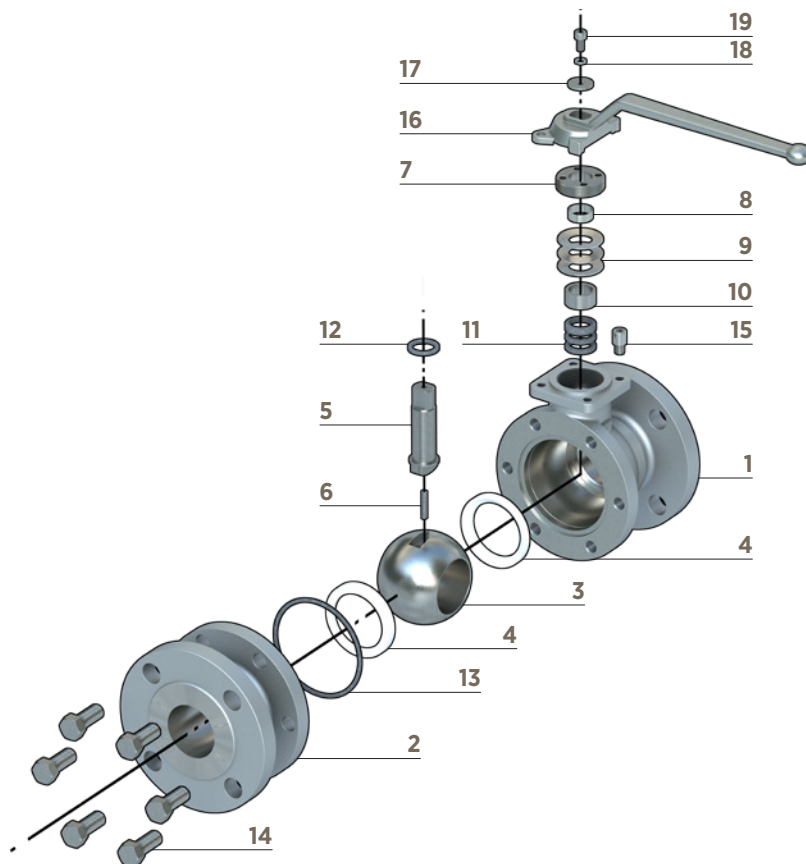
- 1 Material specifications provided for reference only, and are subject to change without notice.
- 2 Additional materials available upon request.



| ITEM | DESCRIPTION | MATERIAL |
|------|------------------|---|
| 1 | Body | Stainless Steel (EN 1.4408) Carbon Steel (EN 1.0619) |
| 2 | End Cap | Stainless Steel (EN 1.4408) Carbon Steel (EN 1.0619) |
| 3 | Ball | Stainless Steel (EN 1.4404, EN 1.4408) |
| 4 | Seat | PTFE Virgin, PTFE / 25% glass, PTFE / 50% Stainless Steel |
| 5 | Stem | Stainless Steel (EN 1.4462) |
| 6 | Loading Spring | Stainless Steel (EN 1.4310) |
| 8 | Guide Bush | PTFE / 15% Carbon Fiber |
| 11 | O-Ring | FKM |
| 12 | Thrust Washer | PTFE |
| 13 | Body Gasket | PTFE |
| 14 | Body Screw | Stainless Steel (A4-70) |
| 15 | Travel Stop Bolt | Stainless Steel (EN 1.4305) |
| 16 | Hand Lever | Stainless Steel (EN 1.4308) |
| 17 | Washer | Stainless Steel (A4) |
| 18 | Spring Washer | Stainless Steel (A4) |
| 19 | Cap Screw | Stainless Steel (A4-70) |

NOTES

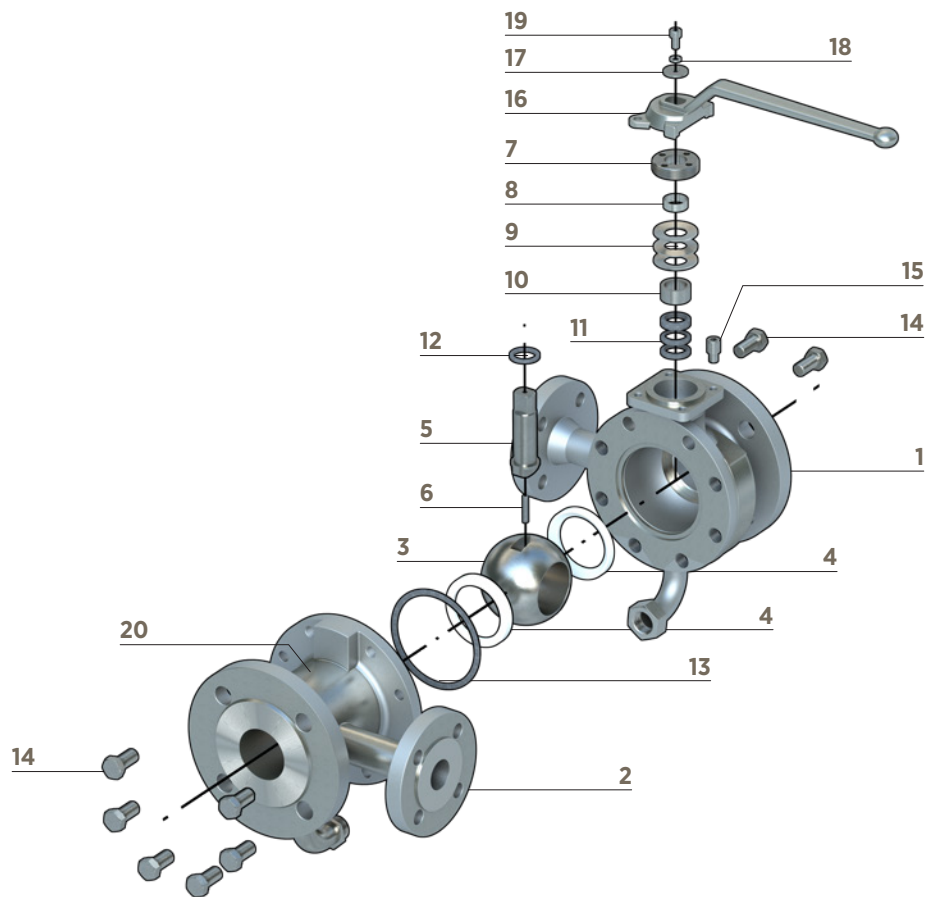
- 1 Material specifications provided for reference only, and are subject to change without notice.
- 2 Additional materials available upon request.



| ITEM | DESCRIPTION | MATERIAL |
|------|-------------------|--|
| 1 | Body | Stainless Steel (ASTM A351 Gr. CF8M) Carbon Steel (ASTM A216 Gr. WCB) |
| 2 | End Cap | Stainless Steel (ASTM A351 Gr. CF8M) Carbon Steel (ASTM A216 Gr. WCB) |
| 3 | Ball | Stainless Steel (EN 1.4404, EN 1.4408) |
| 4 | Seat | PTFE Virgin, PTFE / 25% glass, PTFE / 50% Stainless Steel |
| 5 | Stem | Stainless Steel (EN 1.4462) |
| 6 | Loading Spring | Stainless Steel (EN 1.4310) |
| 7 | Gland Retainer | Stainless Steel (EN 1.4404) |
| 8 | Guide Bush | PTFE / 15% Carbon Fiber |
| 9 | Belleville Washer | Stainless Steel (EN 1.4310) |
| 10 | Packing Gland | Stainless Steel (EN 1.4404) |
| 11 | Stem packing | PTFE |
| 12 | Thrust Washer | PTFE |
| 13 | Body Gasket | PTFE |
| 14 | Body Screw | Stainless Steel (A4-70) |
| 15 | Travel Stop Bolt | Stainless Steel (EN 1.4305) |
| 16 | Hand Lever | Stainless Steel (EN 1.4308) |
| 17 | Washer | Stainless Steel (A4) |
| 18 | Spring Washer | Stainless Steel (A4) |
| 19 | Cap Screw | Stainless Steel (A4-70) |

NOTES

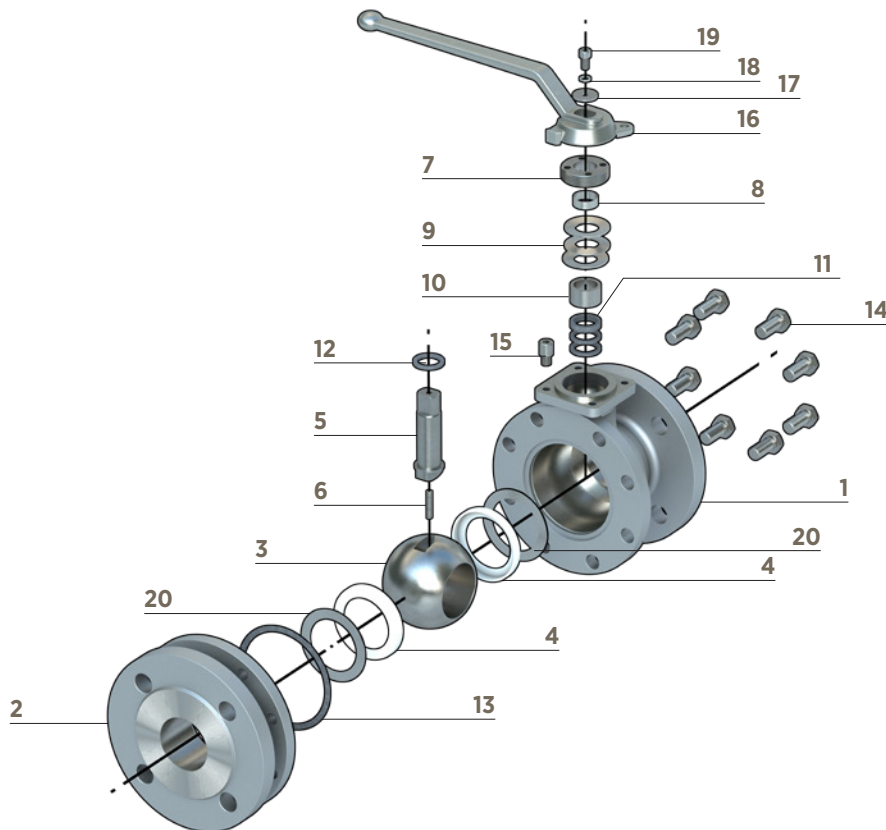
- 1 Material specifications provided for reference only, and are subject to change without notice.
- 2 Additional materials available upon request.



| ITEM | DESCRIPTION | MATERIAL |
|------|-------------------|---|
| 1 | Body | Stainless Steel (EN 1.4408) Carbon Steel (EN 1.0619) |
| 2 | End Cap | Stainless Steel (EN 1.4408) Carbon Steel (EN 1.0619) |
| 3 | Ball | Stainless Steel (EN 1.4404, EN 1.4408) |
| 4 | Seat | PTFE Virgin, PTFE / 25% glass, PTFE / 50% Stainless Steel |
| 5 | Stem | Stainless Steel (EN 1.4462) |
| 6 | Loading Spring | Stainless Steel (EN 1.4310) |
| 7 | Gland Retainer | Stainless Steel (EN 1.4404) |
| 8 | Guide Bush | PTFE / 15% Carbon Fiber |
| 9 | Belleville Washer | Stainless Steel (EN 1.4310) |
| 10 | Packing Gland | Stainless Steel (EN 1.4404) |
| 11 | Stem Packing | PTFE |
| 12 | Thrust Washer | PTFE |
| 13 | Body Gasket | PTFE |
| 14 | Body Screw | Stainless Steel (A4-70) |
| 15 | Travel Stop Bolt | Stainless Steel (EN 1.4305) |
| 16 | Hand Lever | Stainless Steel (EN 1.4308) |
| 17 | Washer | Stainless Steel (A4) |
| 18 | Spring Washer | Stainless Steel (A4) |
| 19 | Cap Screw | Stainless Steel (A4-70) |
| 20 | Heat Jacket | Stainless Steel (EN 1.4404, EN 1.4571) |

NOTES

- 1 Material specifications provided for reference only, and are subject to change without notice.
- 2 Additional materials available upon request.



| ITEM | DESCRIPTION | MATERIAL |
|------|-------------------|---|
| 1 | Body | Stainless Steel (EN 1.4408) Carbon Steel (EN 1.0619) |
| 2 | End Cap | Stainless Steel (EN 1.4408) Carbon Steel (EN 1.0619) |
| 3 | Ball | Stainless Steel (EN 1.4404, EN 1.4408) |
| 4 | Seat | Stainless Steel / Graphite (1.4571) |
| 5 | Stem | Stainless Steel (EN 1.4462) |
| 6 | Loading Spring | Stainless Steel (EN 1.4310) |
| 7 | Gland Retainer | Stainless Steel (EN 1.4404) |
| 8 | Guide Bush | PTFE / 15% Carbon Fiber |
| 9 | Belleville Washer | Stainless Steel (EN 2.4668) |
| 10 | Packing Gland | Stainless Steel (EN 1.4404) |
| 11 | Stem Packing | Graphite |
| 12 | Thrust Washer | Graphite |
| 13 | Body Gasket | Graphite |
| 14 | Body Screw | Stainless Steel (A4-70) |
| 15 | Travel Stop Bolt | Stainless Steel (EN 1.4305) |
| 16 | Hand Lever | Stainless Steel (EN 1.4308) |
| 17 | Washer | Stainless Steel (A4) |
| 18 | Spring Washer | Stainless Steel (A4) |
| 19 | Cap Screw | Stainless Steel (A4-70) |
| 20 | Ball Seat Gasket | Graphite |

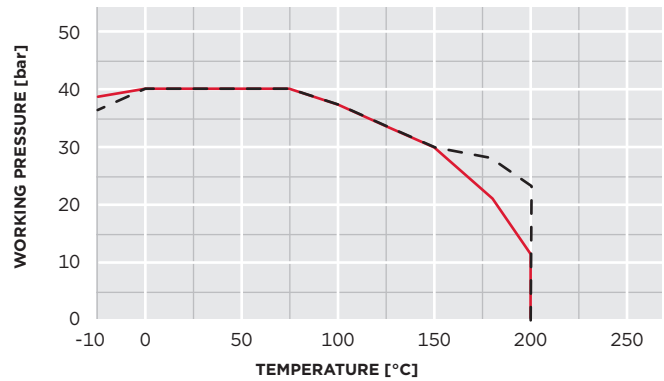
NOTES

- 1 Material specifications provided for reference only, and are subject to change without notice.
- 2 Additional materials available upon request.

PRESSURE/TEMPERATURE | CARBON STEEL

DN 15 to 50 | PN 40

| Temperature | PTFE 25 % ¹ | PTFE 50 % ² |
|-------------|------------------------|------------------------|
| °C | bar | bar |
| -10 | 38 | 36 |
| 50 | 40 | 40 |
| 100 | 37 | 37 |
| 125 | 34 | 34 |
| 150 | 30 | 30 |
| 180 | 22 | 28 |
| 200 | 12 | 24 |

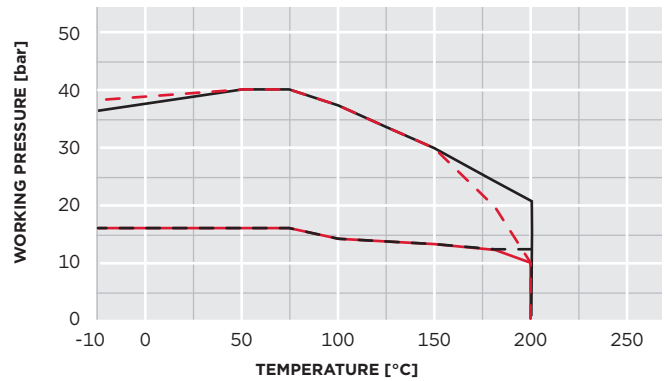


LEGEND (bar/°C)

- Carbon Steel / PTFE - 25% glass fiber reinforced
- - - Carbon Steel / PTFE - 50% stainless steel powder reinforced

DN 65 to 200

| Temperature | PN 16 | | PN 40 | |
|-------------|------------------------|------------------------|------------------------|------------------------|
| | PTFE 25 % ¹ | PTFE 50 % ² | PTFE 25 % ¹ | PTFE 50 % ² |
| °C | bar | bar | bar | bar |
| -10 | 16 | 38 | 16 | 36 |
| 50 | 16 | 40 | 16 | 40 |
| 100 | 15 | 37 | 15 | 37 |
| 125 | 14,5 | 34 | 14,5 | 34 |
| 150 | 14 | 30 | 14 | 30 |
| 180 | 13,5 | 20 | 13 | 25 |
| 200 | 10 | 10 | 13 | 21 |



LEGEND (bar/°C)

- Carbon Steel / PTFE - 25% (PN 16)
- - - Carbon Steel / PTFE - 50% (PN 16)
- - - Carbon Steel / PTFE - 25% glass (PN 40)
- Carbon Steel / PTFE - 50% (PN 40)

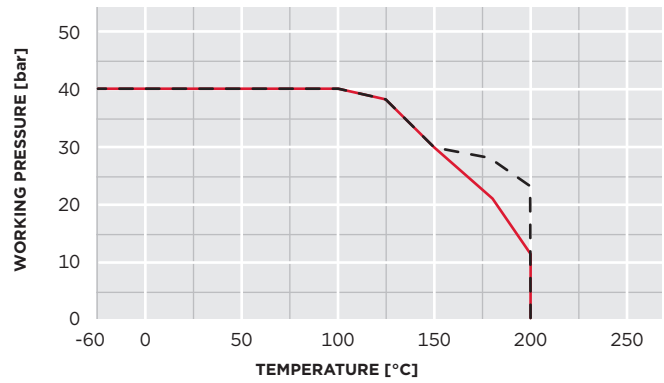
NOTES

- 1 Max. temperature: seat material PTFE/25% glass fiber reinforced or 3EO EN 1092
- 2 Max. temperature: seat material PTFE/50% stainless steel powder reinforced or 3EO EN 1092
- 3 Min. temperature for 1.0619: -10°C, according to AD2000, W5

PRESSURE/TEMPERATURE | STAINLESS STEEL

DN 15 to 50 | PN 40

| Temperature | PTFE 25 % ¹ | PTFE 50 % ² |
|------------------|------------------------|------------------------|
| °C | bar | bar |
| -60 ³ | 40 | 40 |
| -25 | 40 | 40 |
| 50 | 40 | 40 |
| 100 | 40 | 40 |
| 125 | 38 | 38 |
| 150 | 30 | 30 |
| 180 | 22 | 28 |
| 200 | 12 | 24 |

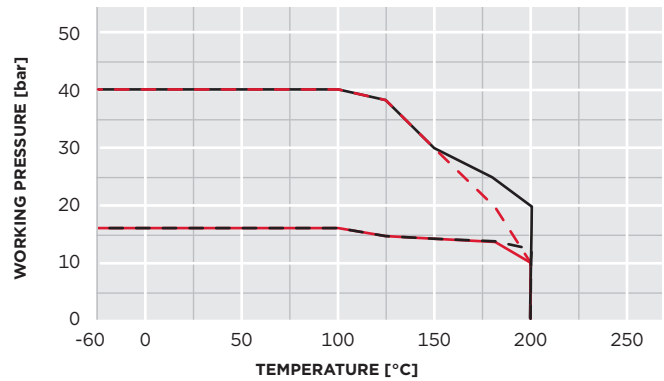


LEGEND (bar/°C)

- Stainless Steel / PTFE - 25% glass
- - - Stainless Steel / PTFE - 50% glass

DN 65 to 200

| Temperature | PN 16 | | PN 40 | |
|------------------|------------------------|------------------------|------------------------|------------------------|
| | PTFE 25 % ¹ | PTFE 50 % ² | PTFE 25 % ¹ | PTFE 50 % ² |
| °C | bar | bar | bar | bar |
| -60 ³ | 16 | 40 | 16 | 40 |
| -25 | 16 | 40 | 16 | 40 |
| 50 | 16 | 40 | 16 | 40 |
| 100 | 16 | 40 | 16 | 40 |
| 125 | 15 | 38 | 15 | 38 |
| 150 | 14,5 | 30 | 14,5 | 30 |
| 180 | 14 | 20 | 14 | 25 |
| 200 | 10 | 10 | 13,5 | 20 |



LEGEND (bar/°C)

- Stainless Steel / PTFE - 25% glass (PN 16)
- - - Stainless Steel / PTFE - 50% glass (PN 16)
- - - Stainless Steel / PTFE - 25% glass (PN 40)
- Stainless Steel / PTFE - 50% glass (PN 40)

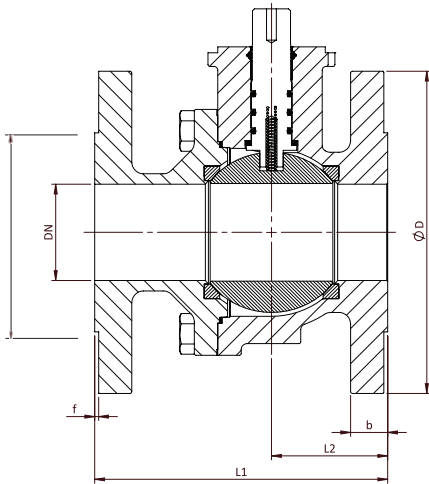
NOTES

1 Temperature range (min/max) limited by seat material used: PTFE/25% glass fiber reinforced or EN 1092. 14E0

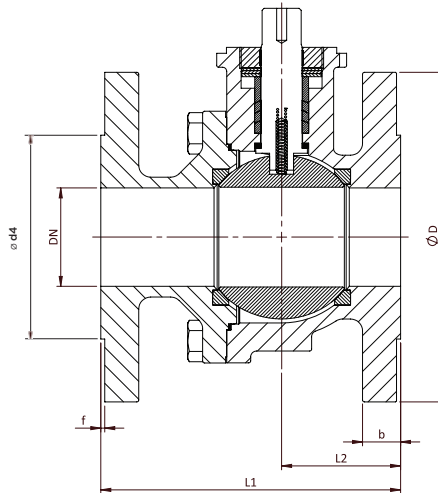
2 Temperature range (min/max) limited by seat material used: PTFE/50% stainless steel powder reinforced or EN 1092. 14E0

DIMENSIONS & WEIGHTS | KM21

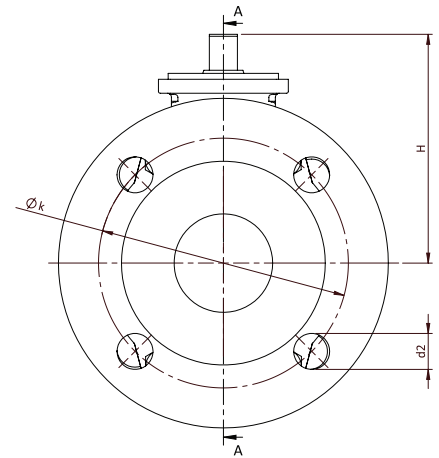
KM21-O (KM-OXST/OAST)
KM21-T (KM-TXST/TAST)



KM21-O (O-RING)



KM21-T (PTFE)



DIMENSIONS (mm)

WEIGHTS (Kg)

| DN | PN | L1' | | | | ØD | Øk | Ød4 | b | r | Screws | | | O-Ring | | PTFE | |
|-----|-----|-----|-----|-------|-------|-----|-----|-----|----|---|--------|--------|----|--------|------|------|------|
| | | S1 | S27 | L2 | H | | | | | | Qty | Thread | d2 | S1 | S27 | S1 | S27 |
| 15 | 40 | 130 | 115 | 47 | 70.5 | 95 | 65 | 45 | 16 | 2 | 4 | M12 | 14 | 3.0 | 2.9 | 3.0 | 2.9 |
| 25 | 40 | 160 | 125 | 52 | 70.5 | 115 | 85 | 68 | 18 | 2 | 4 | M12 | 14 | 4.2 | 3.9 | 4.2 | 3.9 |
| 40 | 40 | 200 | 140 | 62.5 | 106.5 | 150 | 110 | 88 | 18 | 3 | 4 | M16 | 18 | 8.2 | 7.8 | 8.2 | 7.8 |
| 50 | 40 | 230 | 150 | 59.5 | 114.5 | 165 | 125 | 102 | 20 | 3 | 4 | M16 | 18 | 11.5 | 10.6 | 11.5 | 10.6 |
| 65 | 16 | 290 | 170 | 67 | 126.5 | 185 | 145 | 122 | 18 | 3 | 8 | M16 | 18 | 15.6 | 14.0 | 15.6 | 14.0 |
| 65 | 40 | 290 | 170 | 67 | 126.5 | 185 | 145 | 122 | 22 | 3 | 8 | M16 | 18 | 17.6 | 16.1 | 17.6 | 16.1 |
| 80 | 16 | 310 | 180 | 72.5 | 155 | 200 | 160 | 138 | 20 | 3 | 8 | M16 | 18 | 20.1 | 19.8 | 20.1 | 19.8 |
| 80 | 40 | 310 | 180 | 79.5 | 155 | 200 | 160 | 138 | 24 | 3 | 8 | M16 | 18 | 26.8 | 24.7 | 26.8 | 24.7 |
| 100 | 16 | 350 | 190 | 84.5 | 171 | 220 | 180 | 158 | 20 | 3 | 8 | M16 | 18 | 31.4 | 27.5 | 31.4 | 27.5 |
| 100 | 40 | 350 | 190 | 90.5 | 171 | 235 | 190 | 162 | 24 | 3 | 8 | M20 | 22 | 41.2 | 36.5 | 41.2 | 36.5 |
| 150 | 16 | - | 350 | 174.5 | 257.5 | 285 | 240 | 212 | 22 | 3 | 8 | M20 | 22 | - | 81.5 | - | 81.5 |
| 150 | 40 | - | 350 | 174.5 | 257.5 | 300 | 250 | 218 | 28 | 3 | 8 | M24 | 26 | - | 98.0 | - | 98.0 |
| 200 | 10 | - | 400 | 202.5 | 280.5 | 340 | 295 | 268 | 24 | 3 | 8 | M20 | 22 | - | 96.5 | - | 96.5 |
| 200 | 16 | - | 400 | 202.5 | 280.5 | 340 | 295 | 268 | 24 | 3 | 12 | M20 | 22 | - | 96.5 | - | 96.5 |
| 200 | 25 | - | 400 | 202.5 | 280.5 | 360 | 310 | 278 | 30 | 3 | 12 | M24 | 26 | - | 150 | - | 150 |
| 200 | 400 | - | 400 | 202.5 | 280.5 | 375 | 320 | 285 | 34 | 3 | 12 | M27 | 30 | - | 150 | - | 150 |

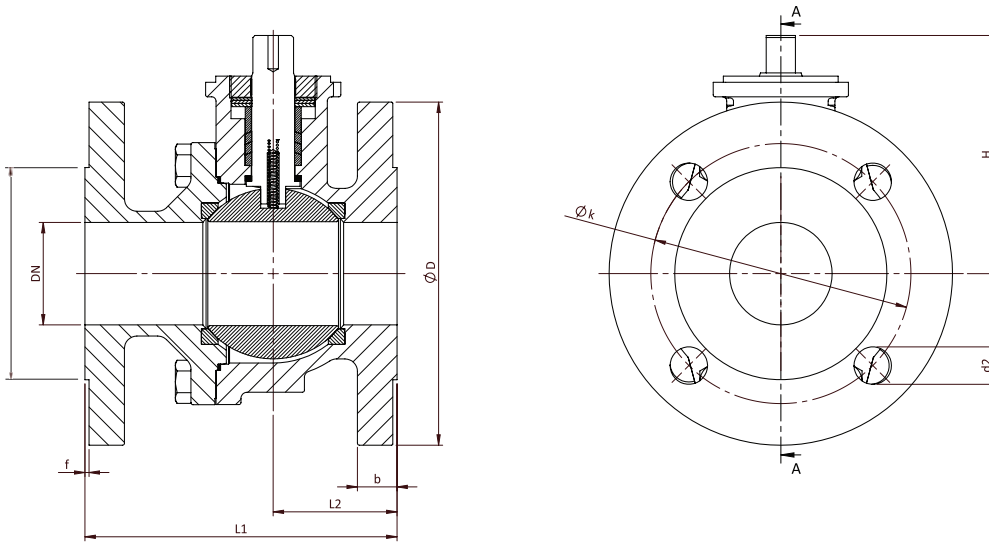
NOTES

1 L1 according to EN 558 Series 1 and 27.

> This dimensional sheet is no technical drawing and is solely for reference. Subject to change without notice.
SRD-KM-8001;8002

DIMENSIONS & WEIGHTS | KM20-A (ASME)

KM20-A (KM-TX-AS/TA-AS)



DIMENSIONS (mm)

WEIGHTS (Kg)

| NPS | Class | L1 ¹ | | | | H | ØD | Øk | Ød4 | b | r | Screws | | | | |
|-------|-------|-----------------|-----|-------|-------|-------|-------|-------|------|-----|---|-----------|--------|------|------|----|
| | | S3 | S4 | L2 | | | | | | | | Qty | Thread | d2 | S3 | S4 |
| 1/2 | 150 | 108 | - | 52 | 70.5 | 88.9 | 60.5 | 35.1 | 12.5 | 1.6 | 4 | 1/2" - 13 | 15.7 | 1.7 | - | |
| 1/2 | 300 | - | 140 | 57 | 70.5 | 95.2 | 66.5 | 35.0 | 14.2 | 1.6 | 4 | 1/2" - 13 | 15.7 | - | 2.5 | |
| 3/4 | 150 | 117 | - | 47 | 70.5 | 98.6 | 69.9 | 42.9 | 14.5 | 1.6 | 4 | 1/2" - 13 | 15.7 | CF | - | |
| 3/4 | 300 | - | 152 | 64.5 | 70.5 | 117.3 | 82.6 | 42.9 | 17.0 | 1.6 | 4 | 5/8" - 11 | 19.1 | - | CF | |
| 1 | 150 | 127 | - | 52 | 70.5 | 108.0 | 79.2 | 50.8 | 14.2 | 1.6 | 4 | 1/2" - 13 | 15.7 | 3.7 | - | |
| 1 | 300 | - | 165 | 57 | 70.5 | 124.0 | 88.9 | 50.8 | 17.5 | 1.6 | 4 | 5/8" - 11 | 19.1 | - | 5.1 | |
| 1 1/2 | 150 | 165 | - | 70 | 106.5 | 127.0 | 98.6 | 73.2 | 17.5 | 1.6 | 4 | 1/2" - 13 | 15.7 | 8.1 | - | |
| 1 1/2 | 300 | - | 190 | 75 | 106.5 | 155.4 | 114.3 | 73.2 | 20.6 | 1.6 | 4 | 3/4" - 10 | 22.4 | - | 10.5 | |
| 2 | 150 | 178 | - | 76.5 | 114.5 | 152.4 | 120.7 | 91.9 | 19.1 | 1.6 | 4 | 5/8" - 11 | 19.1 | 11.5 | - | |
| 2 | 300 | - | 216 | 82.5 | 114.5 | 165.1 | 127.0 | 91.9 | 22.4 | 1.6 | 8 | 5/8" - 11 | 19.1 | - | 13.5 | |
| 3 | 150 | 203 | - | 92.5 | 155 | 190.5 | 152.4 | 127.0 | 23.9 | 1.6 | 4 | 5/8" - 11 | 19.1 | 24.4 | - | |
| 3 | 300 | - | 283 | 92.5 | 155 | 209.6 | 168.1 | 127.0 | 28.4 | 1.6 | 8 | 3/4" - 10 | 22.4 | - | 29.2 | |
| 4 | 150 | 229 | - | 102.5 | 171 | 228.6 | 190.5 | 157.2 | 23.9 | 1.6 | 8 | 5/8" - 11 | 19.1 | 34.6 | - | |
| 4 | 300 | - | 305 | 102.5 | 171 | 254.0 | 200.2 | 152.2 | 31.8 | 1.6 | 8 | 3/4" - 10 | 22.4 | - | 43.5 | |
| 6 | 150 | 394* | - | 196.5 | 257.5 | 279.4 | 241.3 | 215.9 | 25.0 | 1.6 | 8 | 3/4" - 10 | 22.4 | 88 | - | |

NOTES

1 L1 according to EN 558 Series 3 and 4.

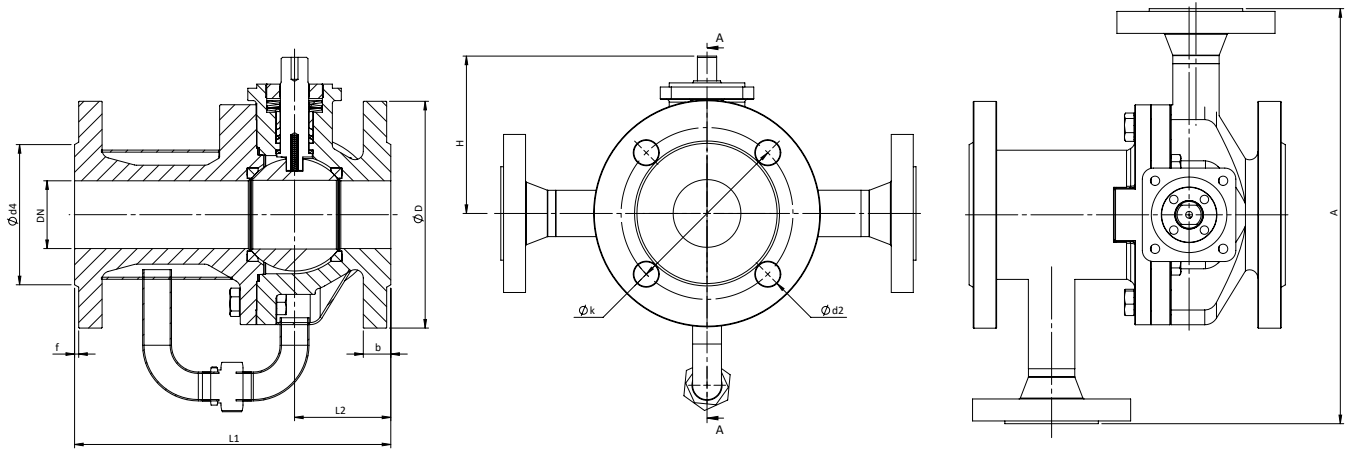
* Special: S12

> This dimensional sheet is no technical drawing and is solely for reference. Subject to change without notice.

SRD-KM-8007

DIMENSIONS & WEIGHTS | KM20-H (HEAT JACKET)

KM20-H (KM-TX-H)



DIMENSIONS² (mm)

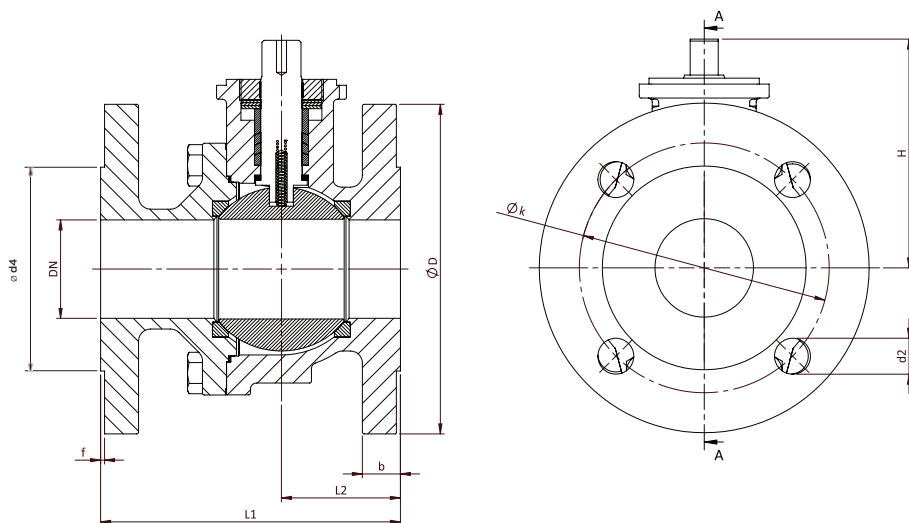
WEIGHTS (Kg)

| DN | PN | L1' | | | Screws | | | | | | | | | |
|-----|----|-----|------|-------|--------|-----|-----|----|---|-----|--------|----|------|--|
| | | S1 | L2 | H | ØD | Øk | Ød4 | b | r | Qty | Thread | d2 | S1 | |
| 15 | 40 | 130 | 47 | 70.5 | 95 | 65 | 45 | 16 | 2 | 4 | M12 | 14 | 3.8 | |
| 25 | 40 | 160 | 52 | 70.5 | 115 | 85 | 68 | 18 | 2 | 4 | M12 | 14 | 5.1 | |
| 40 | 40 | 200 | 69.5 | 106.5 | 150 | 110 | 88 | 18 | 3 | 4 | M16 | 18 | 10.7 | |
| 50 | 40 | 230 | 70 | 114.5 | 165 | 125 | 102 | 20 | 3 | 4 | M16 | 18 | 15.5 | |
| 65 | 16 | 290 | 80 | 126.5 | 185 | 145 | 122 | 18 | 3 | 4 | M16 | 18 | 22.5 | |
| 65 | 40 | 290 | 80 | 126.5 | 185 | 145 | 122 | 22 | 3 | 8 | M16 | 18 | 24.1 | |
| 80 | 16 | 310 | 86 | 155 | 200 | 160 | 138 | 20 | 3 | 8 | M16 | 18 | 26.0 | |
| 80 | 40 | 310 | 86 | 155 | 200 | 160 | 138 | 24 | 3 | 8 | M16 | 18 | 31.0 | |
| 100 | 16 | 350 | 94.5 | 171 | 220 | 180 | 158 | 20 | 3 | 8 | M16 | 18 | 38.8 | |
| 100 | 40 | 350 | 94.5 | 171 | 235 | 190 | 162 | 24 | 3 | 8 | M20 | 22 | 44.5 | |

NOTES

- 1 A Dimension by agreement.
 - 2 DN 15 + DN 25 Heat Jacket Flange DN 15
DN 40 - DN 100 Heat Jacket Flange DN 25
 - 3 L1 according to EN 558 Series 1.
- > This dimensional sheet and dimensions are based on the KM20-T and is not technical drawing, as the heating jacket are designed according to customer specification and will therefore vary. Dimensions subject to change without notice.
SRD-KM-8005

KM20-HT (KM-X(A)/HT)



DIMENSIONS (mm)

WEIGHTS (Kg)

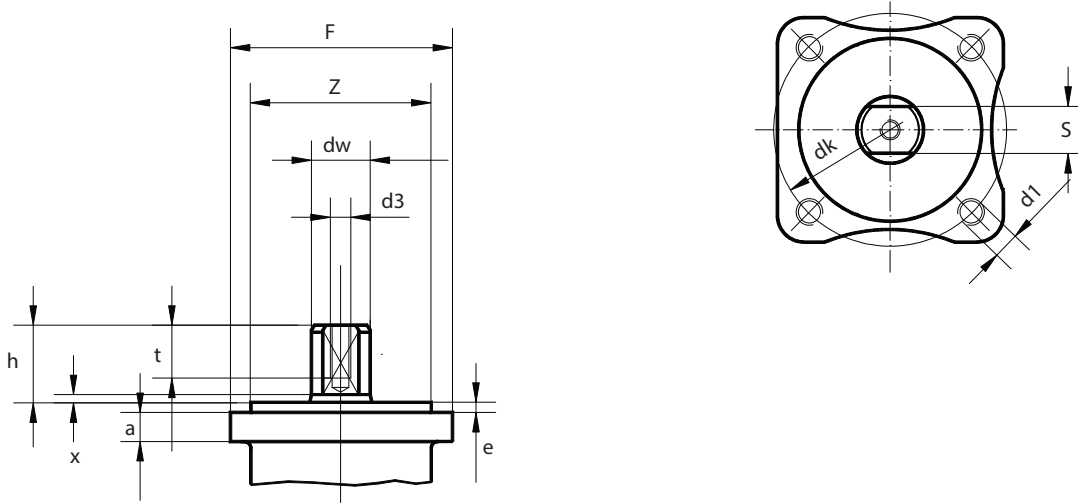
| DN | PN | L1' | | | | H | ØD | Øk | Ød4 | b | r | Screws | | | | |
|-----|----|-----|-----|------|-------|-----|-----|-----|-----|---|---|--------|--------|------|------|-----|
| | | S1 | S27 | L2 | | | | | | | | Qty | Thread | d2 | S1 | S27 |
| 15 | 40 | 130 | 115 | 47 | 70.5 | 95 | 65 | 45 | 16 | 2 | 4 | M12 | 14 | 3.8 | 3.6 | |
| 25 | 40 | 160 | 125 | 52 | 70.5 | 115 | 85 | 68 | 18 | 2 | 4 | M12 | 14 | 5.1 | 4.8 | |
| 40 | 40 | 200 | 140 | 69.5 | 106.5 | 150 | 110 | 88 | 18 | 3 | 4 | M16 | 18 | 10.7 | 9.4 | |
| 50 | 40 | 230 | 150 | 70 | 114.5 | 165 | 125 | 102 | 20 | 3 | 4 | M16 | 18 | 15.5 | 13.4 | |
| 65 | 16 | 290 | 170 | 80 | 126.5 | 185 | 145 | 122 | 18 | 3 | 4 | M16 | 18 | 22.5 | 19.1 | |
| 65 | 40 | 290 | 170 | 80 | 126.5 | 185 | 145 | 122 | 22 | 3 | 8 | M16 | 18 | 24.1 | 20.3 | |
| 80 | 16 | 310 | 180 | 86 | 155 | 200 | 160 | 138 | 20 | 3 | 8 | M16 | 18 | 26.0 | 23.0 | |
| 80 | 40 | 310 | 180 | 86 | 155 | 200 | 160 | 138 | 24 | 3 | 8 | M16 | 18 | 31.0 | 26.1 | |
| 100 | 16 | 350 | 190 | 94.5 | 171 | 220 | 180 | 158 | 20 | 3 | 8 | M16 | 18 | 38.8 | 31.7 | |
| 100 | 40 | 350 | 190 | 94.5 | 171 | 235 | 190 | 162 | 24 | 3 | 8 | M20 | 22 | 44.5 | 36.4 | |

NOTES

1 L1 according to EN 558 Series 1 and 27.

> This dimensional sheet is no technical drawing and is solely for reference. Subject to change without notice.
SRD-KM-8005;8006

ISO 5211

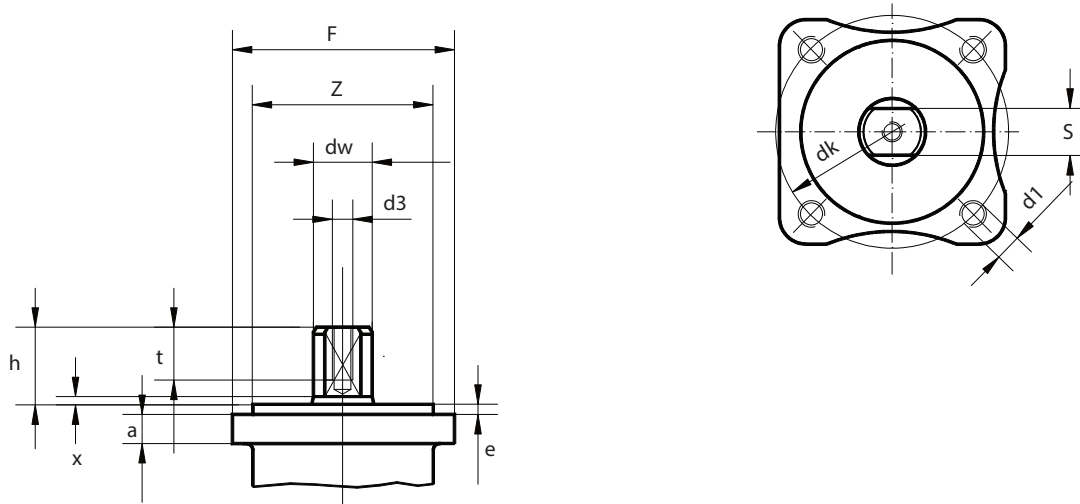


DIMENSIONS (mm)

| DN | NPS | F | dk | d1 | Z | a | h | x | e | Stem Ø | | d3 | t | ISO |
|-----|-------|-----|-----|-----|----|----|------|-----|---|--------|----|-----|----|-----|
| | | | | | | | | | | dw | S | | | |
| 15 | 1/2 | 50 | 50 | M6 | 35 | 8 | 13.5 | 1.5 | 3 | 13.5 | 10 | M5 | 10 | F05 |
| 20 | 3/4 | 50 | 50 | M6 | 35 | 8 | 13.5 | 1.5 | 3 | 13.5 | 10 | M5 | 10 | F05 |
| 25 | 1 | 50 | 50 | M6 | 35 | 8 | 13.5 | 1.5 | 3 | 13.5 | 10 | M5 | 10 | F05 |
| 32 | - | 50 | 50 | M6 | 35 | 8 | 13.5 | 1.5 | 3 | 13.5 | 10 | M5 | 10 | F05 |
| 40 | 1 1/2 | 68 | 70 | M8 | 55 | 9 | 19.5 | 1.5 | 3 | 19.5 | 14 | M6 | 12 | F07 |
| 50 | 2 | 68 | 70 | M8 | 55 | 9 | 19.5 | 1.5 | 3 | 19.5 | 14 | M6 | 12 | F07 |
| 65 | - | 68 | 70 | M8 | 55 | 9 | 19.5 | 1.5 | 3 | 19.5 | 14 | M6 | 12 | F07 |
| 80 | 3 | 96 | 102 | M10 | 70 | 10 | 27 | 2 | 3 | 28 | 20 | M10 | 15 | F10 |
| 100 | 4 | 96 | 102 | M10 | 70 | 10 | 27 | 2 | 3 | 28 | 20 | M10 | 15 | F10 |
| 150 | 6 | 110 | 125 | M12 | 85 | 12 | 37.5 | 2.5 | 3 | 36 | 28 | M12 | 20 | F12 |

HINWEISE

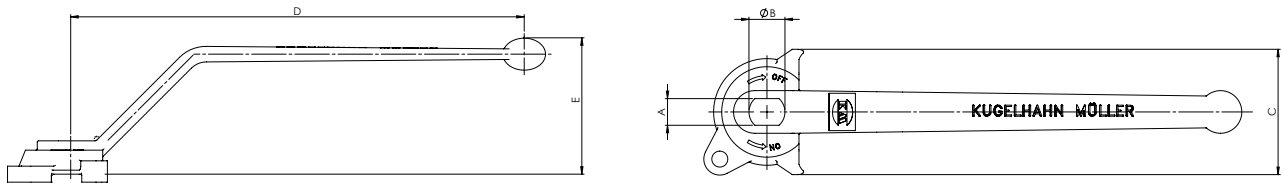
> Torque specifications available on request.

ASSEMBLY DIMENSIONS | KM21
ISO 5211

DIMENSIONS (mm)

| DN | PN | F | dk | Stem Ø | | | | | | | | t | ISO | |
|-----|-------|-----|-----|--------|-----|----|------|-----|---|------|----|-----|-----|-----|
| | | | | d1 | Z | a | h | x | e | dw | S | | | d3 |
| 15 | 10-40 | 47 | 50 | M6 | 35 | 5 | 13.5 | 1.5 | 3 | 13.5 | 10 | M5 | 10 | F05 |
| 25 | 10-40 | 47 | 50 | M6 | 35 | 5 | 13.5 | 1.5 | 3 | 13.5 | 10 | M5 | 10 | F05 |
| 40 | 10-40 | 65 | 70 | M8 | 55 | 7 | 19.5 | 1.5 | 3 | 19.5 | 14 | M6 | 12 | F07 |
| 50 | 10-40 | 65 | 70 | M8 | 55 | 7 | 19.5 | 1.5 | 3 | 19.5 | 14 | M6 | 12 | F07 |
| 65 | 16 | 65 | 70 | M8 | 55 | 7 | 19.5 | 1.5 | 3 | 19.5 | 14 | M6 | 12 | F07 |
| 65 | 40 | 67 | 70 | M8 | 55 | 7 | 19.5 | 1.5 | 3 | 19.5 | 14 | M6 | 12 | F07 |
| 80 | 10-40 | 92 | 102 | M10 | 70 | 8 | 27 | 2 | 3 | 28 | 20 | M10 | 15 | F10 |
| 100 | 10-40 | 92 | 102 | M10 | 70 | 8 | 27 | 2 | 3 | 28 | 20 | M10 | 15 | F10 |
| 150 | 10-40 | 110 | 125 | M12 | 85 | 12 | 37.5 | 2.5 | 3 | 36 | 26 | M12 | 20 | F12 |
| 200 | 10-40 | 135 | 140 | M16 | 100 | 14 | 37.5 | 2.5 | 3 | 36 | 26 | M12 | 20 | F14 |

DIMENSIONS & WEIGHTS | HAND LEVER

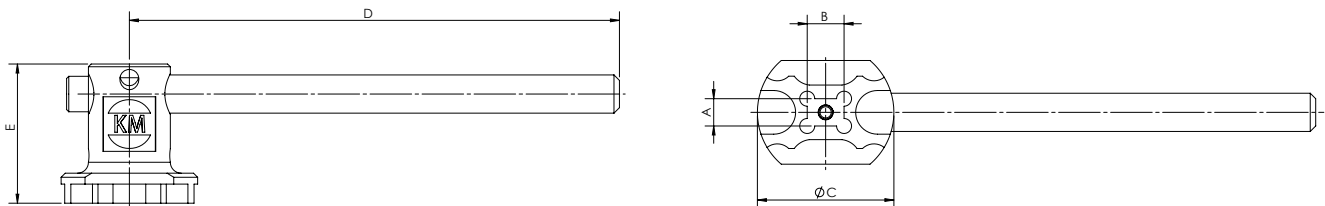
KM01-S (STANDARD)



DIMENSIONS (mm)

| DN | A | B | C | D | E | Weight |
|----|----|------|----|-----|----|--------|
| | | | | | | Kg |
| 15 | 10 | 13.5 | 47 | 170 | 52 | 0.2 |
| 25 | 10 | 13.5 | 17 | 170 | 52 | 0.2 |
| 40 | 14 | 19.5 | 62 | 230 | 54 | 0.7 |
| 50 | 14 | 19.5 | 62 | 230 | 54 | 0.7 |
| 65 | 14 | 19.5 | 62 | 230 | 54 | 0.7 |

KM01-M (MODULAR)

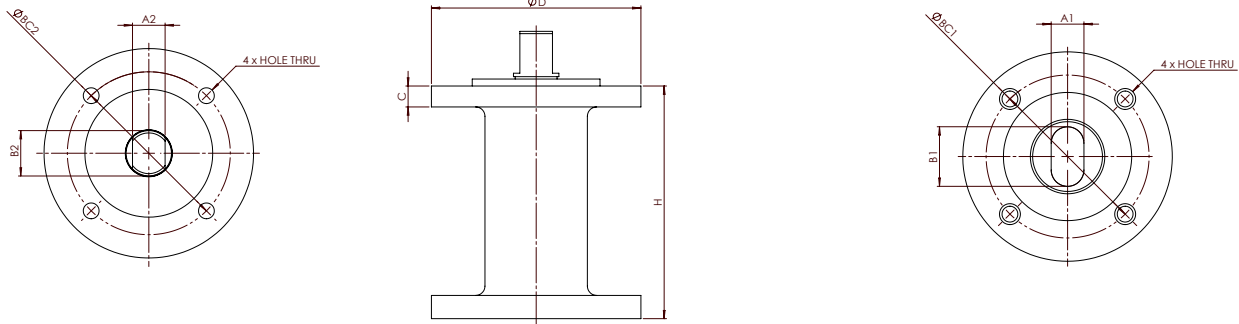


DIMENSIONS (mm)

| DN | A | B | C | D | E | Weight |
|-----|----|------|------|-------|----|--------|
| | | | | | | Kg |
| 15 | 10 | 13.5 | 50 | 179.5 | 51 | 0.4 |
| 25 | 10 | 13.5 | 50 | 179.5 | 51 | 0.4 |
| 40 | 14 | 19.5 | 69.5 | 242 | 52 | 0.9 |
| 50 | 14 | 19.5 | 69.5 | 242 | 52 | 0.9 |
| 65 | 14 | 19.5 | 69.5 | 242 | 52 | 0.9 |
| 80 | 20 | 28 | 102 | 475.5 | 71 | 2.3 |
| 100 | 20 | 28 | 102 | 475.5 | 71 | 2.3 |

DIMENSIONS & WEIGHTS | STEM EXTENSION

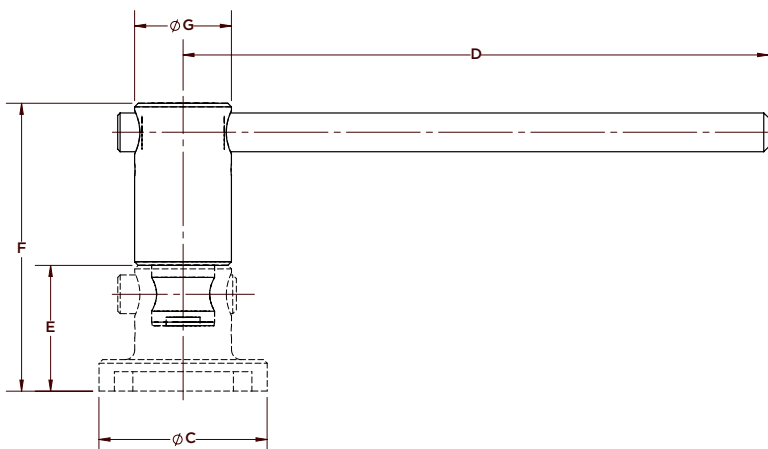
KM12-SVA: STEM EXTENSION



DIMENSIONS (mm)

| DN | A1 | B1 | ØBC1 | C | ØD | H | A2 | B2 | ØBC2 | Weight |
|-----|-----|------|------|----|-----|-----|----|------|------|--------|
| | | | | | | | | | | Kg |
| 15 | 10 | 18.6 | 50 | 10 | 64 | 100 | 10 | 13.5 | 50 | 1.0 |
| 25 | 010 | 18.6 | 50 | 10 | 64 | 100 | 10 | 13.5 | 50 | 1.0 |
| 40 | 14 | 25.6 | 70 | 10 | 90 | 100 | 14 | 19.5 | 70 | 1.7 |
| 50 | 14 | 25.6 | 70 | 10 | 90 | 100 | 14 | 19.5 | 70 | 1.7 |
| 65 | 14 | 25.6 | 70 | 10 | 90 | 100 | 14 | 19.5 | 70 | 1.7 |
| 80 | 20 | 37 | 102 | 10 | 125 | 100 | 20 | 28 | 102 | 3.3 |
| 100 | 20 | 37 | 102 | 10 | 125 | 100 | 20 | 28 | 102 | 3.3 |

KM02-SVM: STEM EXTENSION (MODULAR)



DIMENSIONS (mm)

| DN | ØC | D | E | F | ØG | Weight |
|-----|------|-------|----|-----|----|--------|
| | | | | | | Kg |
| 15 | 50 | 179.5 | 51 | 118 | 30 | 0.3 |
| 25 | 50 | 179.5 | 51 | 118 | 30 | 0.3 |
| 40 | 69.5 | 242 | 52 | 117 | 40 | 0.6 |
| 50 | 69.5 | 242 | 52 | 117 | 40 | 0.6 |
| 65 | 69.5 | 242 | 52 | 117 | 40 | 0.6 |
| 80 | 102 | 475.5 | 71 | 125 | 56 | 0.9 |
| 100 | 102 | 475.5 | 71 | 125 | 56 | 0.9 |

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