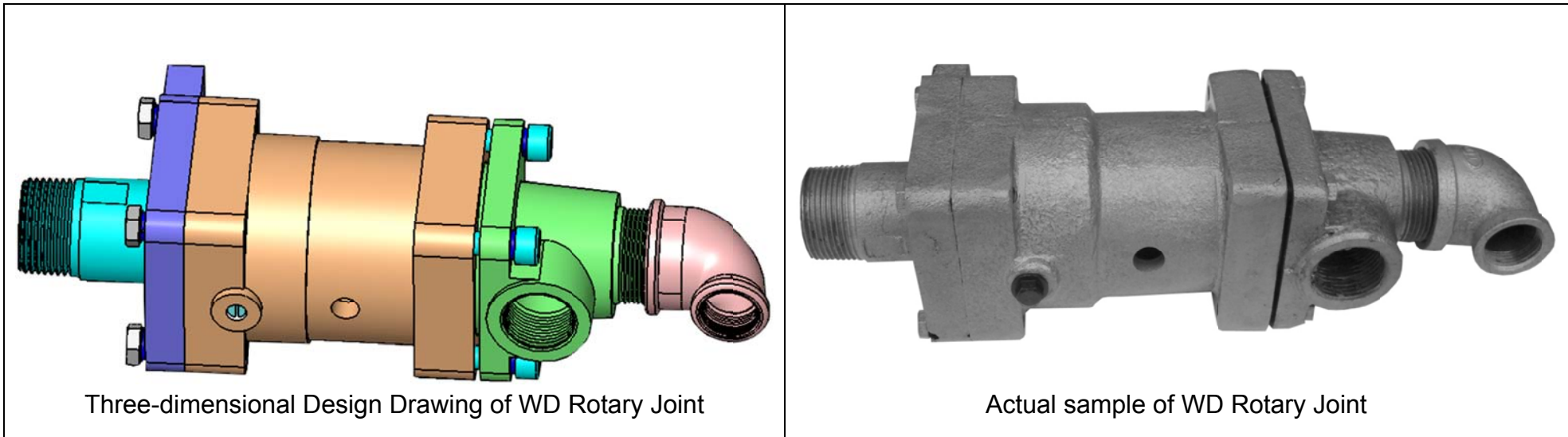


Tengzhou Freed Rotary Joint Ltd.

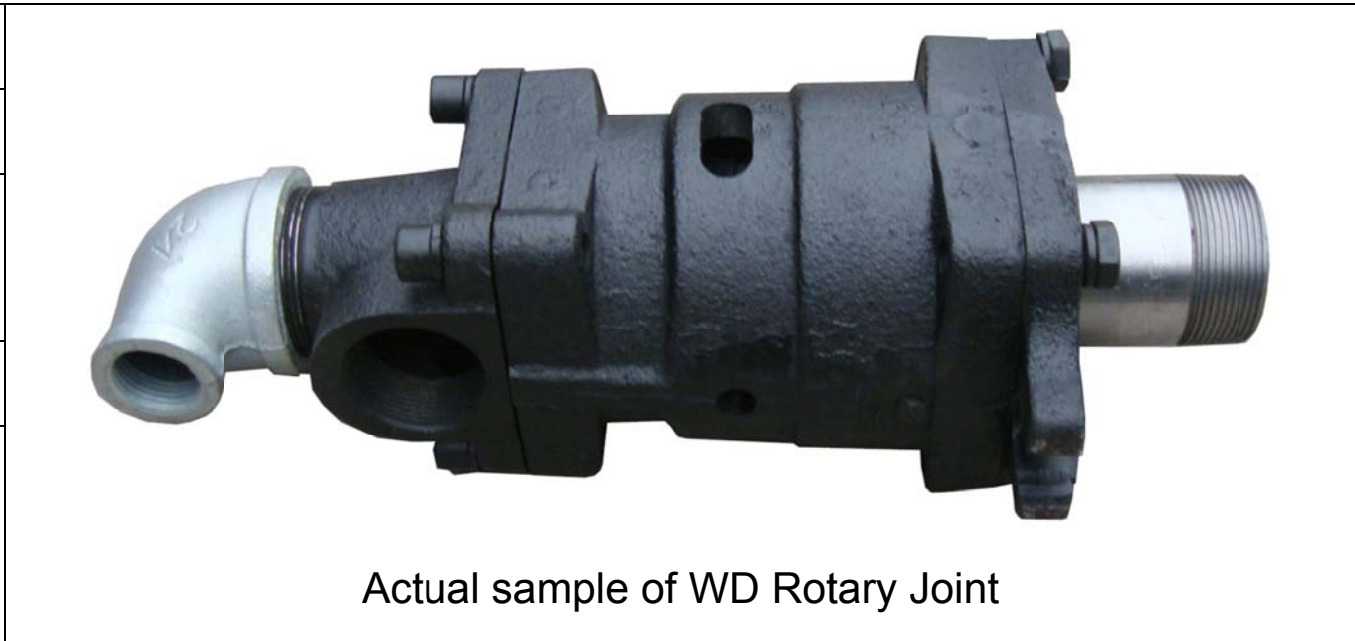
WD Rotary Joint Catalogue

Three-dimensional Design, CNC Machine



WD Rotary Joint

| |
|---|
| Operating Parameter |
| Max. pressure: 3.5 MPa (35bar) |
| Max. temperature: 100°C (standard) 200°C (special) |
| Max. Speed: 1000 RPM |
| Flow media: water, oil, air, hot water, hot oil, steam, etc. |



Note: Operating parameters vary depending on the application. Special condition and special model, contact us. Ordering the rotary joint over 100°C, please note the temperature.

WD Rotary Joint

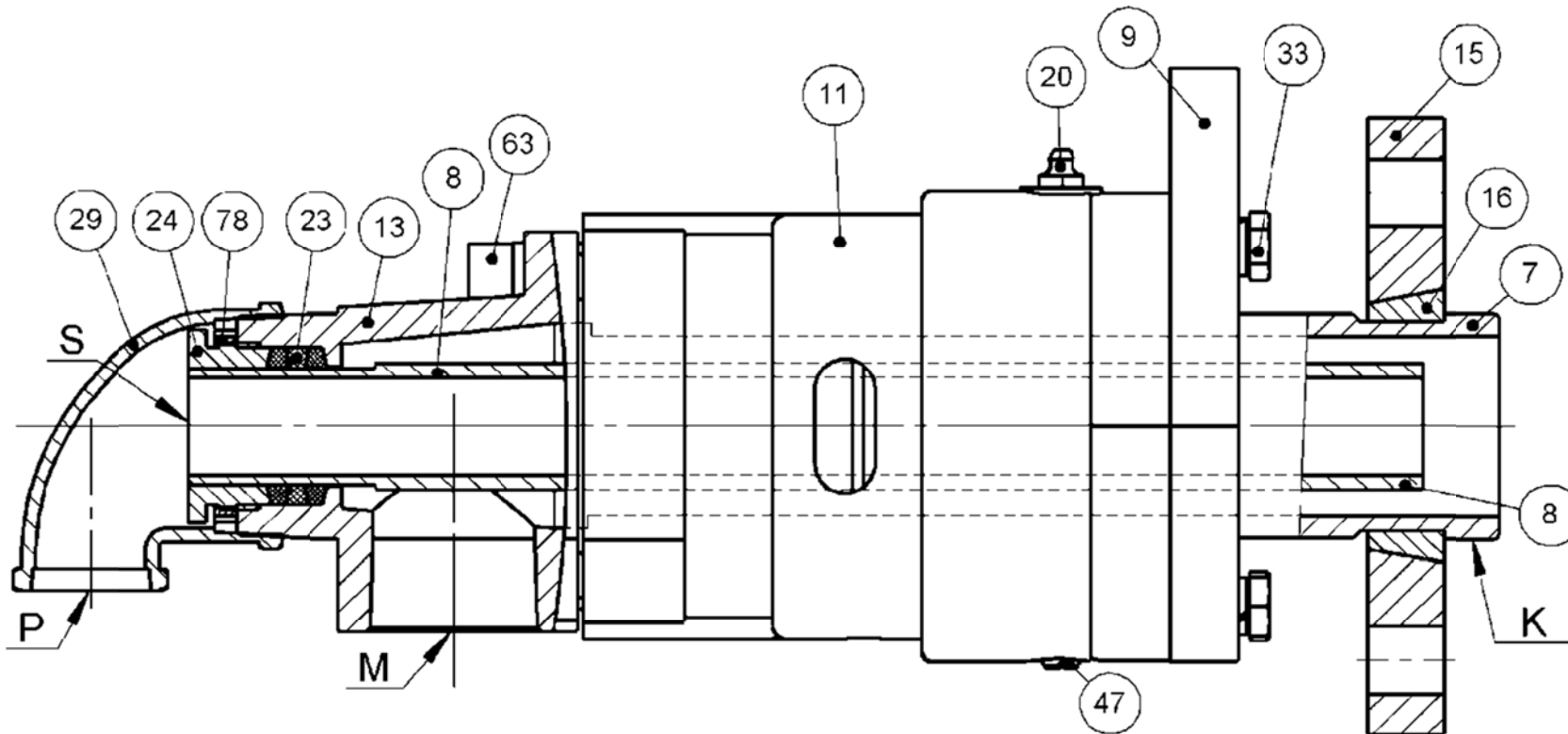


Figure 1 Assembly drawing for Dual Flow type WDSXF rotary joint with quick release flange

Part Name: 7.nipple (K), 8.internal pipe (user part), 9.wear plate, 11.body, 13.head, 15. quick release flange, 16.split wedge, 20.grease nipple, 23.packing, 24.packing gland, 29.elbow, 33.bolt, 47.screw, 63.bolt, 78.lock nut.

K—nipple inlet, M—pipe inlet, P—pipe inlet, S—internal pipe connection.

WD Rotary Joint

1. A seal ring in the internal side.
2. Two ball bearings are used in the WD rotary joint; WD rotary joint is a sort of internal supported rotary joint.
3. Inside spring supply the pressure for seal.
4. The material of seal is hardened, the service life is long.
5. When rotary joint is running, there is friction torque between seal face. When rotary joint is installed, the torque rod is need to stop, can use the lug of wear plate, or the pipe is connected in the M inlet.
6. Rotary joint is connected, the metal hose or rubber hose is recommended.
7. The nipple is connected in the journal of roller; the nipple is main running part.
8. There are view holes to view the condition of seal.

The note of WD rotary joint specification

| WD rotary joint specification: | | | | |
|--------------------------------|---|---|---------|--------------|
| WD | D | | 80 | → WDD80 |
| WD | D | F | 80 | → WDDF80 |
| WD | S | G | 80-40 | → WDSG80-40 |
| WD | S | G | F 80-40 | → WDSGF80-40 |
| WD | S | X | 80-40 | → WDSX80-40 |
| WD | S | X | F 80-40 | → WDSXF80-40 |

———— Nominal Diameter of internal pipe for dual flow, unit: mm.
 there is no internal pipe for single flow, not note.

———— Nominal Diameter of nipple, unit: mm.

———— connection of nipple .
 nipple with quick release flange , note letter: F,
 nipple with BSPT thread, not note.

———— the internal pipe connection of dual flow rotary joint.
 dual flow rotary joint with fixed internal pipe , note letter: G.
 dual flow rotary joint with rotating internal pipe , note letter: X.
 single flow rotary joint without internal pipe , not note.

———— rotary joint flow number.
 dual flow rotary joint, note letter: S,
 single flow rotary joint, note letter: D.

———— WD standard for WD rotary joint.

The note of WD rotary joint specification

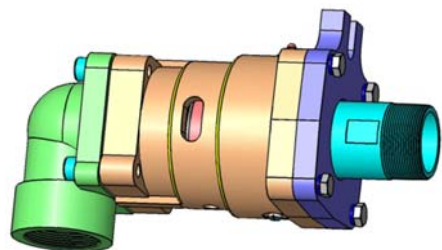
- WD rotary joint size as follow: DN10(3/8"), DN15 (1/2"), DN20 (3/4"), DN25 (1"), DN32 (1-1/4"), DN40 (1-1/2"), DN50 (2"), DN65 (2-1/2"), DN80 (3"), DN100 (4"). DN standard for Nominal Diameter . The metric size in the outside of parenthesis mapping ,the British size in the inside of parenthesis. The size of rotary joint is the size of nipple.
- request the direction of nipple thread and internal pipe, ordering, note LH or RH.
- The thread use BSPT thread, BSPT stand for British Standard Pipe Thread, the teeth of thread is 55 °.

WD rotary joint specification

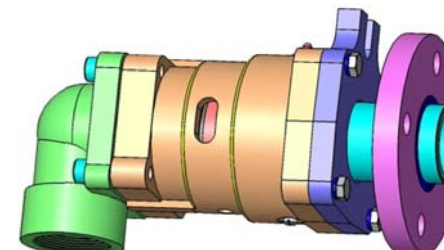
Type and size list

| size | | type | | | | | |
|------|--------|--------|---------|------------|-------------|------------|-------------|
| mm | inch | WDD | WDDF | WDSG | WDSGF | WDSX | WDSXF |
| 20 | 3/4" | WDD20 | WDDF20 | WDSG20-8 | WDSGF20-8 | WDSX20-8 | WDSXF20-8 |
| 25 | 1" | WDD25 | WDDF25 | WDSG25-10 | WDSGF25-10 | WDSX25-10 | WDSXF25-10 |
| 32 | 1-1/4" | WDD32 | WDDF32 | WDSG32-15 | WDSGF32-15 | WDSX32-15 | WDSXF32-15 |
| 40 | 1-1/2" | WDD40 | WDDF40 | WDSG40-20 | WDSGF40-20 | WDSX40-20 | WDSXF40-20 |
| 50 | 2" | WDD50 | WDDF50 | WDSG50-25 | WDSGF50-25 | WDSX50-25 | WDSXF50-25 |
| 65 | 2-1/2" | WDD65 | WDDF65 | WDSG65-32 | WDSGF65-32 | WDSX65-32 | WDSXF65-32 |
| 80 | 3" | WDD80 | WDDF80 | WDSG80-50 | WDSGF80-50 | WDSX80-40 | WDSXF80-40 |
| 100 | 4" | WDD100 | WDDF100 | WDSG100-65 | WDSGF100-65 | WDSX100-65 | WDSXF100-65 |

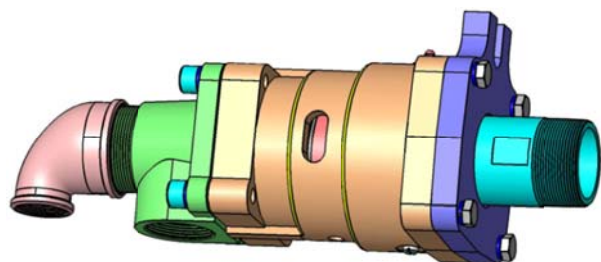
WD rotary joint surface



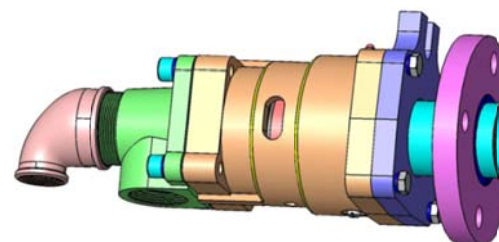
Type WDD、single flow、nipple with BSPT thread、rotary joint



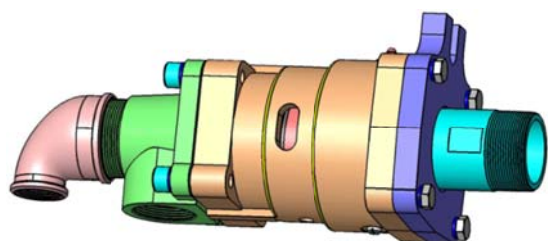
Type WDDF、single flow、nipple with quick release flange、rotary joint



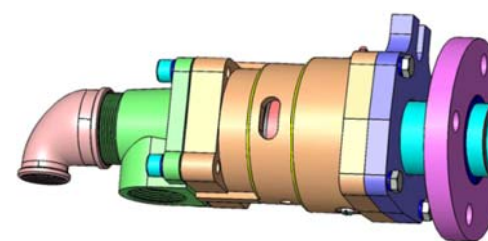
Type WDSG、dual flow、fixed internal pipe、nipple with BSPT thread、rotary joint



Type WDSGF、dual flow、fixed internal pipe、nipple with quick release flange、rotary joint



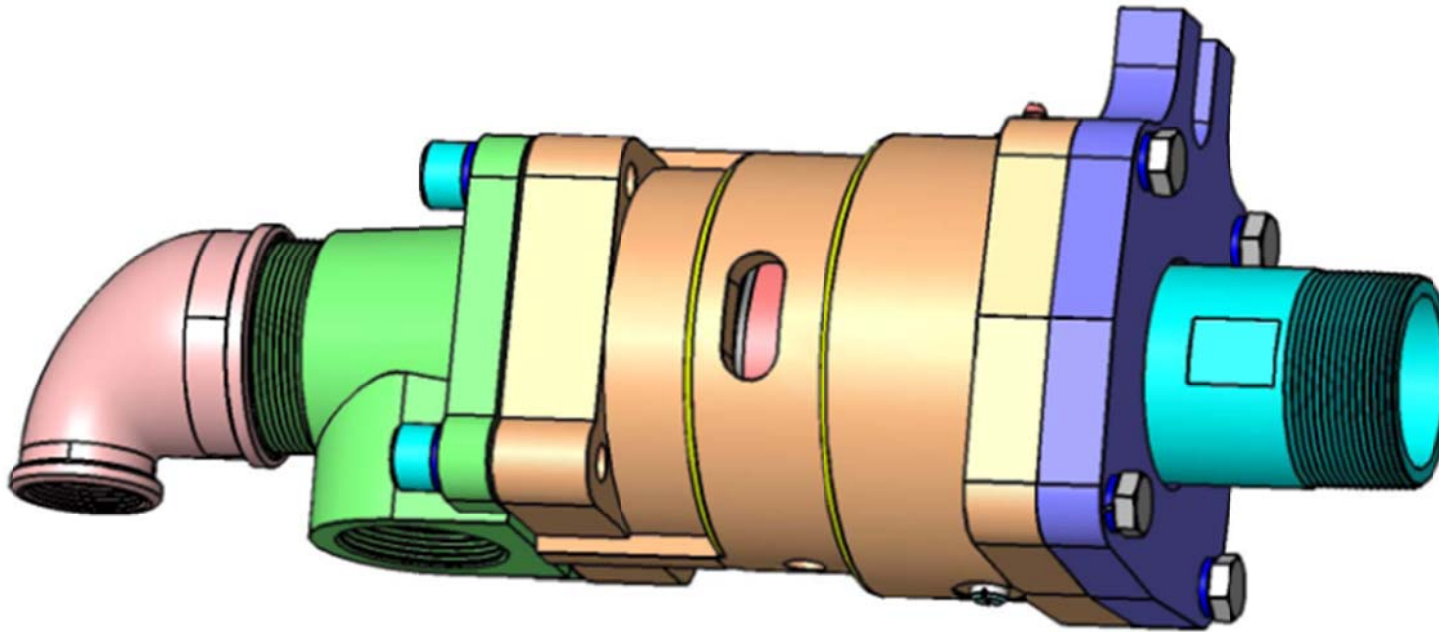
Type WDSX、dual flow、rotating internal pipe、nipple with BSPT thread、rotary joint



Type WDSXF、dual flow、rotating internal pipe、nipple with quick release flange、rotary joint

Ordering

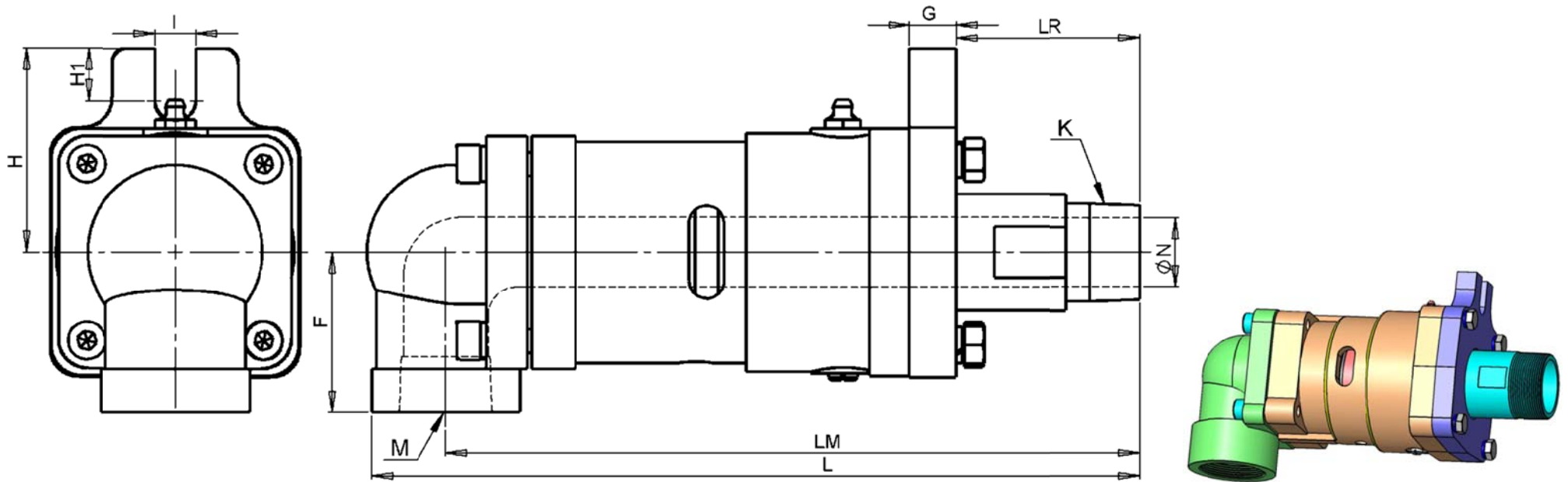
1. Ordering TYPE WD rotary joint, please supply the type and the direction of thread (if need). The direction of thread is reversed with the direction of the roller, so when the roller runs, fasten the thread of the nipple or internal pipe.
2. Ordering special product according to your special request.
3. BSPT stand for British Standard Pipe Thread, the teeth of thread is 55 °.



Download the catalogues, drawings and installation introductions of rotary joint from our web:

www.freedseal.com.

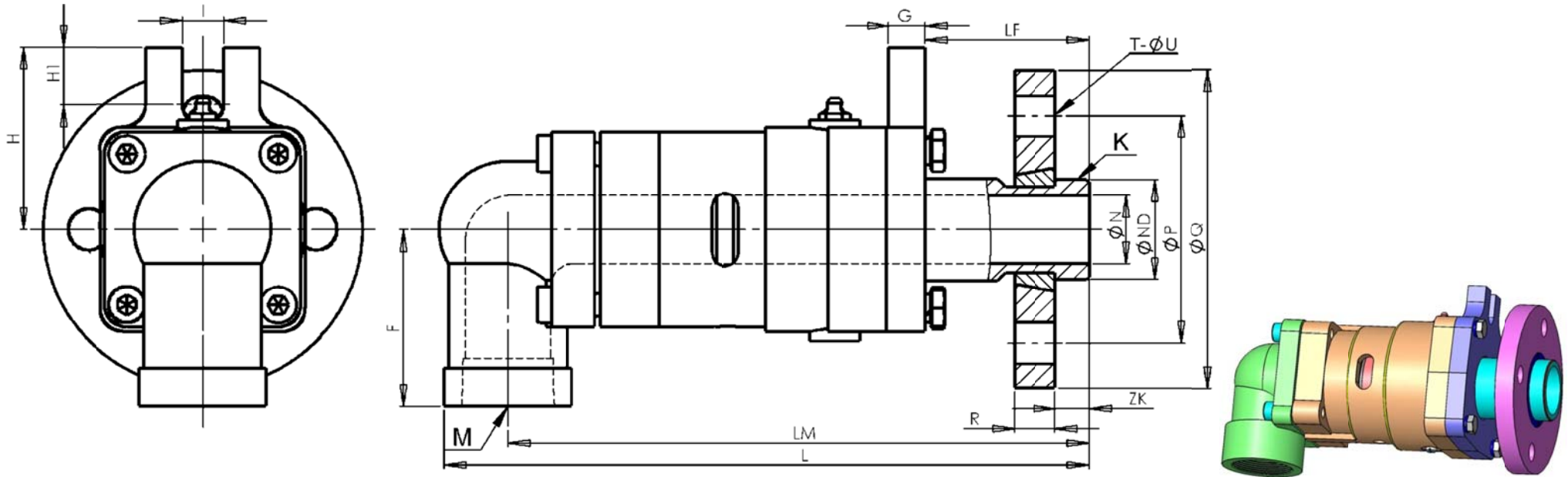
Dimension List: Type WDD、single flow、nipple with BSPT thread、rotary joint



| size | type | K | M | F | G | I | H | H1 | L | LM | LR | N |
|------|--------|--------|---------|-----|----|----|-----|----|-----|-----|-----|-----|
| 10 | WDD10 | R3/8 | Rc3/8 | 40 | 8 | 14 | 55 | 18 | 164 | 149 | 36 | 10 |
| 15 | WDD15 | R1/2 | Rc1/2 | 40 | 8 | 14 | 55 | 18 | 175 | 158 | 42 | 14 |
| 20 | WDD20 | R3/4 | Rc3/4 | 45 | 10 | 18 | 65 | 21 | 197 | 177 | 45 | 18 |
| 25 | WDD25 | R1 | Rc1 | 55 | 10 | 14 | 70 | 18 | 256 | 231 | 63 | 25 |
| 32 | WDD32 | R1-1/4 | Rc1-1/4 | 78 | 11 | 18 | 82 | 25 | 264 | 234 | 58 | 32 |
| 40 | WDD40 | R1-1/2 | Rc1-1/2 | 83 | 10 | 20 | 92 | 25 | 288 | 256 | 60 | 38 |
| 50 | WDD50 | R2 | Rc2 | 88 | 10 | 18 | 95 | 21 | 308 | 270 | 56 | 50 |
| 65 | WDD65 | R2-1/2 | Rc2-1/2 | 110 | 14 | 20 | 120 | 40 | 359 | 314 | 72 | 65 |
| 80 | WDD80 | R3 | Rc3 | 115 | 16 | 24 | 130 | 38 | 404 | 348 | 94 | 75 |
| 100 | WDD100 | R4 | Rc4 | 146 | 20 | 28 | 160 | 40 | 532 | 464 | 109 | 100 |

Note: request the direction of nipple thread, ordering, note LH or RH.

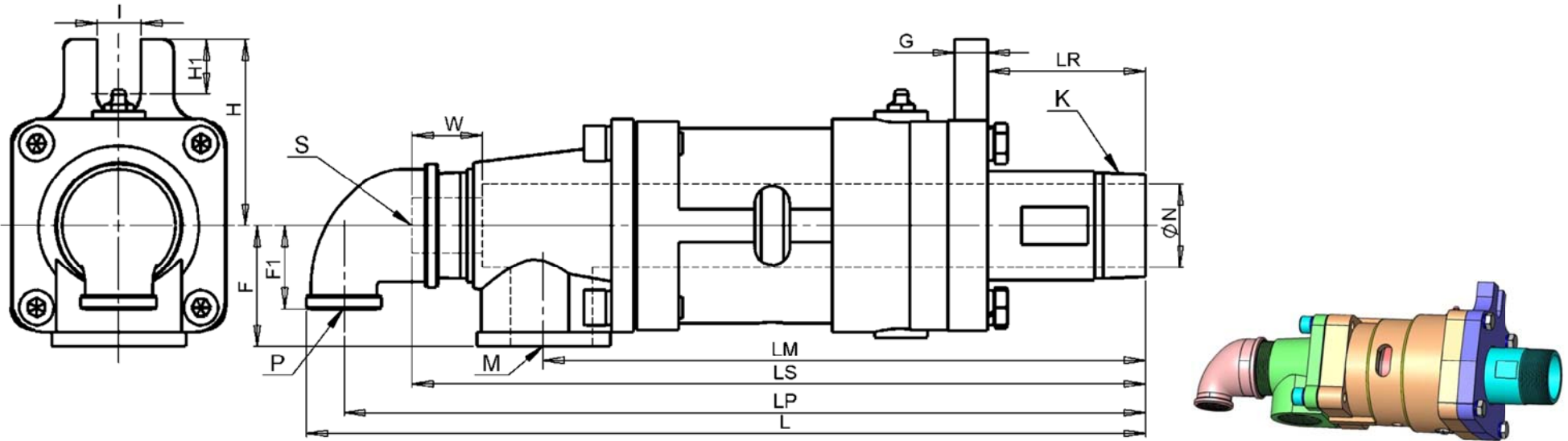
Dimension List: Type WDDF、single flow、nipple with quick release flange、rotary joint



| size | type | K | M | F | G | I | H | H1 | L | LM | LF | N | ND | P | Q | R | ZK | T | U |
|------|---------|-----------|---------|-----|----|----|-----|----|-----|-----|-----|-----|-----|-----|-----|----|----|---|----|
| 15 | WDDF15 | DN15PN16 | Rc1/2 | 40 | 8 | 14 | 55 | 18 | 185 | 170 | 57 | 10 | 26 | 65 | 95 | 14 | 8 | 4 | 14 |
| 20 | WDDF20 | DN20PN16 | Rc3/4 | 45 | 10 | 18 | 65 | 21 | 201 | 181 | 49 | 18 | 29 | 75 | 105 | 16 | 8 | 4 | 14 |
| 25 | WDDF25 | DN25PN16 | Rc1 | 55 | 10 | 14 | 70 | 18 | 257 | 232 | 64 | 25 | 40 | 85 | 115 | 16 | 10 | 4 | 14 |
| 32 | WDDF32 | DN32PN16 | Rc1-1/4 | 78 | 11 | 18 | 82 | 25 | 266 | 236 | 60 | 32 | 44 | 100 | 140 | 18 | 12 | 4 | 18 |
| 40 | WDDF40 | DN40PN16 | Rc1-1/2 | 83 | 10 | 20 | 92 | 25 | 299 | 267 | 71 | 38 | 49 | 110 | 150 | 18 | 12 | 4 | 18 |
| 50 | WDDF50 | DN50PN16 | Rc2 | 88 | 10 | 18 | 95 | 21 | 320 | 282 | 68 | 50 | 60 | 125 | 165 | 20 | 15 | 4 | 18 |
| 65 | WDDF65 | DN65PN16 | Rc2-1/2 | 110 | 14 | 20 | 120 | 40 | 359 | 314 | 72 | 65 | 75 | 145 | 185 | 20 | 18 | 4 | 18 |
| 80 | WDDF80 | DN80PN16 | Rc3 | 115 | 16 | 24 | 130 | 38 | 385 | 329 | 75 | 75 | 90 | 160 | 200 | 20 | 20 | 8 | 18 |
| 100 | WDDF100 | DN100PN16 | Rc4 | 146 | 20 | 28 | 160 | 40 | 532 | 464 | 109 | 100 | 118 | 180 | 220 | 22 | 22 | 8 | 18 |

Note: the tolerance of pilot dimension ϕND is $-0.10/-0.20$.

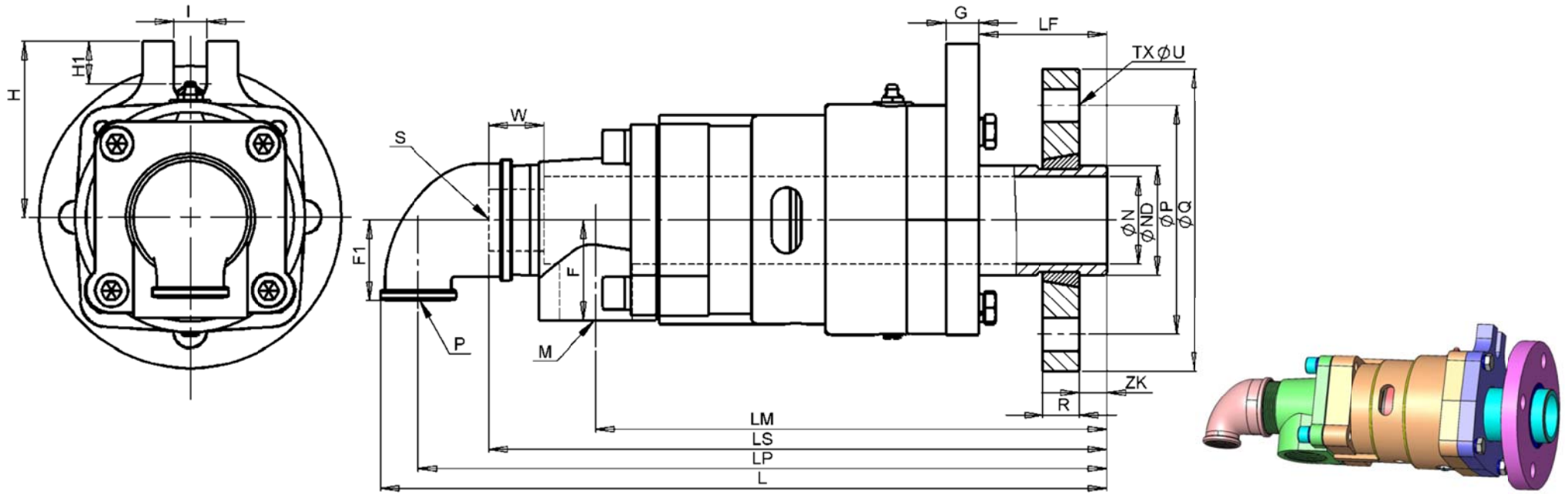
Dimension List: Type WDSG、dual flow、fixed internal pipe, nipple with BSPT thread、rotary joint



| size | type | K | M | P | S | F | F1 | G | I | H | H1 | L | LP | LS | W | LM | LR | N |
|------|------------|--------|---------|---------|--------|-----|----|----|----|-----|----|-----|-----|-----|----|-----|-----|-----|
| 15 | WDSG15-6 | R1/2 | Rc3/8 | Rc1/2 | G1/8 | 29 | 25 | 8 | 14 | 55 | 18 | 217 | 204 | 191 | 15 | 156 | 42 | 14 |
| 20 | WDSG20-8 | R3/4 | Rc1/2 | Rc1/2 | G1/4 | 34 | 30 | 10 | 18 | 65 | 21 | 244 | 229 | 215 | 15 | 175 | 45 | 18 |
| 25 | WDSG25-10 | R1 | Rc3/4 | Rc1/2 | G3/8 | 42 | 33 | 10 | 14 | 70 | 18 | 303 | 288 | 273 | 28 | 223 | 63 | 25 |
| 32 | WDSG32-15 | R1-1/4 | Rc1 | Rc1/2 | G1/2 | 44 | 38 | 11 | 18 | 82 | 25 | 311 | 294 | 279 | 25 | 224 | 58 | 32 |
| 40 | WDSG40-20 | R1-1/2 | Rc1-1/4 | Rc3/4 | G3/4 | 60 | 43 | 10 | 20 | 92 | 25 | 353 | 335 | 316 | 30 | 253 | 60 | 38 |
| 50 | WDSG50-25 | R2 | Rc1-1/2 | Rc1 | G1 | 54 | 51 | 10 | 18 | 95 | 21 | 358 | 338 | 317 | 35 | 254 | 56 | 50 |
| 65 | WDSG65-32 | R2-1/2 | Rc2 | Rc1-1/4 | G1-1/4 | 70 | 62 | 14 | 20 | 120 | 40 | 422 | 394 | 369 | 45 | 295 | 72 | 65 |
| 80 | WDSG80-50 | R3 | Rc2-1/2 | Rc2 | G2 | 75 | 72 | 16 | 24 | 130 | 38 | 501 | 465 | 433 | 38 | 338 | 94 | 75 |
| 100 | WDSG100-65 | R4 | Rc3 | Rc2-1/2 | G2-1/2 | 128 | 90 | 20 | 28 | 160 | 40 | 665 | 619 | 567 | 40 | 457 | 109 | 100 |

Note: request the direction of nipple thread and internal pipe, ordering, note LH or RH.

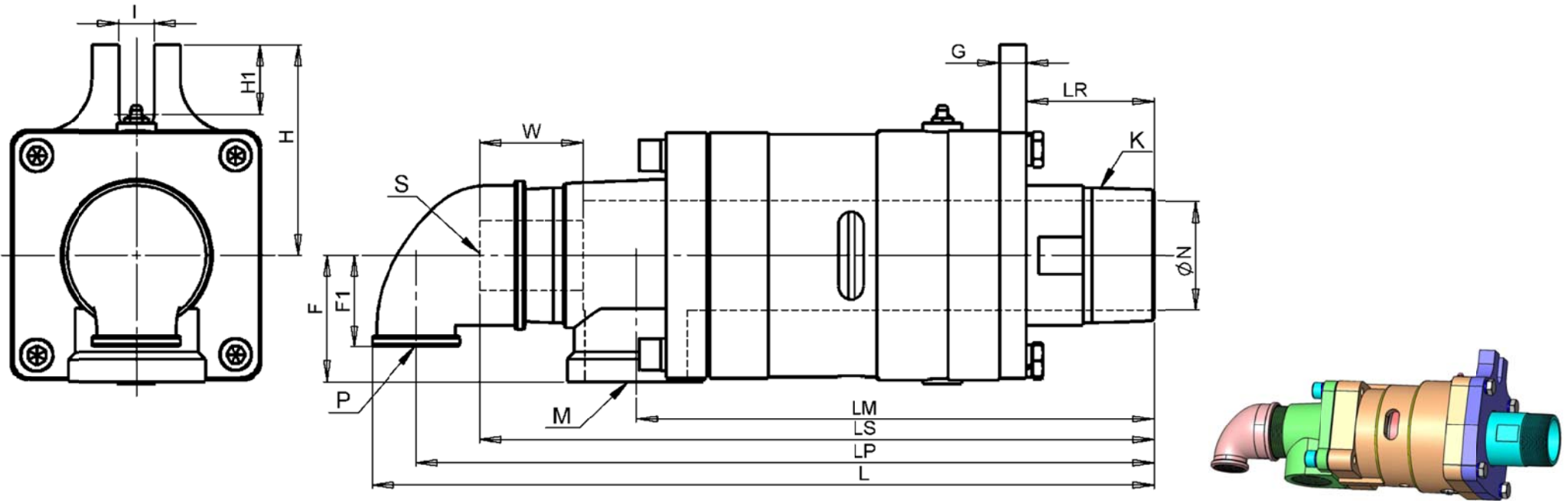
Dimension List: Type WDSGF、 dual flow、 fixed internal pipe、 nipple with quick release flange、 rotary joint



| size | type | M | P | S | F | F1 | G | I | H | H1 | L | LP | LS | W | LM | LF | N | ND | P | Q | R | ZK | T | U |
|------|-------------|---------|---------|--------|-----|----|----|----|-----|----|-----|-----|-----|----|-----|-----|-----|-----|-----|-----|----|----|---|----|
| 15 | WDSGF15-6 | Rc3/8 | Rc1/2 | G1/8 | 29 | 25 | 8 | 14 | 55 | 18 | 222 | 209 | 196 | 15 | 161 | 47 | 10 | 26 | 65 | 95 | 14 | 8 | 4 | 14 |
| 20 | WDSGF20-8 | Rc1/2 | Rc1/2 | G1/4 | 34 | 30 | 10 | 18 | 65 | 21 | 248 | 233 | 219 | 15 | 179 | 49 | 18 | 29 | 75 | 105 | 16 | 8 | 4 | 14 |
| 25 | WDSGF25-10 | Rc3/4 | Rc1/2 | G3/8 | 42 | 33 | 10 | 14 | 70 | 18 | 304 | 289 | 274 | 28 | 224 | 64 | 25 | 40 | 85 | 115 | 16 | 10 | 4 | 14 |
| 32 | WDSGF32-15 | Rc1 | Rc1/2 | G1/2 | 44 | 38 | 11 | 18 | 82 | 25 | 311 | 296 | 281 | 25 | 226 | 60 | 32 | 44 | 100 | 140 | 18 | 12 | 4 | 18 |
| 40 | WDSGF40-20 | Rc1-1/4 | Rc3/4 | G3/4 | 60 | 43 | 10 | 20 | 92 | 25 | 364 | 346 | 327 | 30 | 264 | 71 | 38 | 49 | 110 | 150 | 18 | 12 | 4 | 18 |
| 50 | WDSGF50-25 | Rc1-1/2 | Rc1 | G1 | 54 | 51 | 10 | 18 | 95 | 21 | 370 | 350 | 329 | 35 | 266 | 68 | 50 | 60 | 125 | 165 | 20 | 15 | 4 | 18 |
| 65 | WDSGF65-32 | Rc2 | Rc1-1/4 | G1-1/4 | 70 | 62 | 14 | 20 | 120 | 40 | 422 | 394 | 369 | 45 | 295 | 72 | 65 | 75 | 145 | 185 | 20 | 18 | 4 | 18 |
| 80 | WDSGF80-50 | Rc2-1/2 | Rc2 | G2 | 75 | 72 | 16 | 24 | 130 | 38 | 482 | 446 | 414 | 38 | 319 | 75 | 75 | 90 | 160 | 200 | 20 | 20 | 8 | 18 |
| 100 | WDSGF100-65 | Rc3 | Rc2-1/2 | G2-1/2 | 128 | 90 | 20 | 28 | 160 | 40 | 665 | 619 | 567 | 40 | 457 | 109 | 100 | 118 | 180 | 220 | 22 | 22 | 8 | 18 |

Note: the tolerance of pilot dimension ϕND is -0.10/-0.20. Request the direction of internal pipe, ordering, note LH or RH.

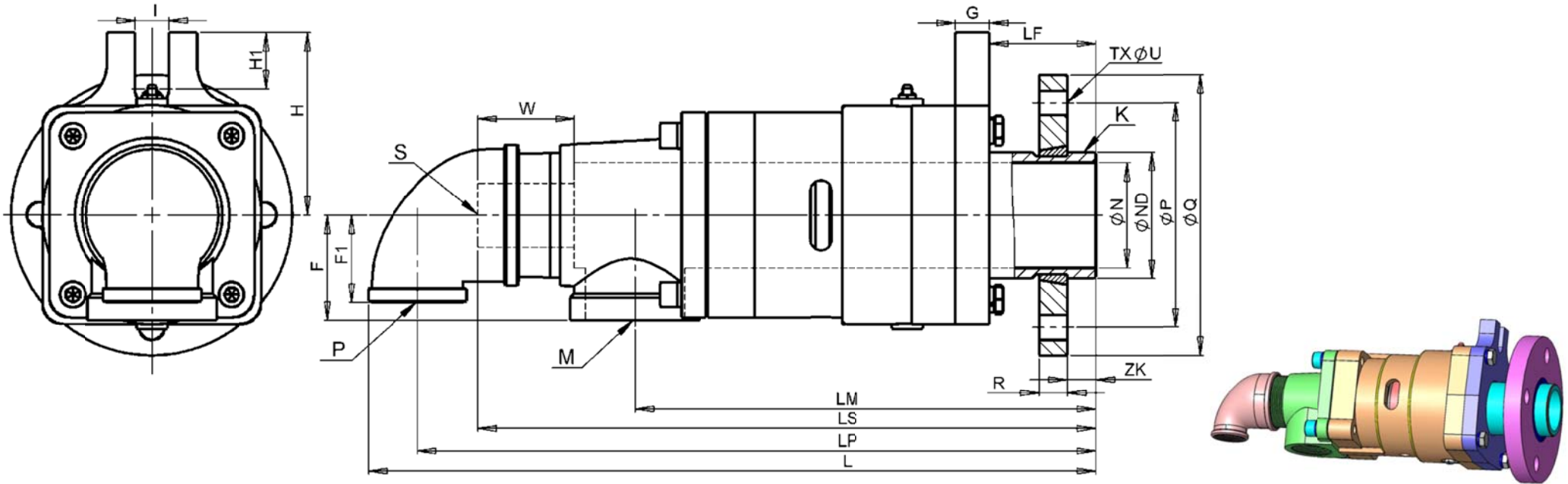
Dimension List: Type WDSX、 dual flow、 rotating internal pipe、 nipple with BSPT thread、 rotary joint



| size | type | K | M | P | S | F | F1 | G | I | H | H1 | L | LP | LS | W | LM | LR | N |
|------|------------|--------|---------|---------|----|-----|----|----|----|-----|----|-----|-----|-----|----|-----|-----|-----|
| 15 | WDSX15-6 | R1/2 | Rc3/8 | Rc1/2 | 10 | 29 | 25 | 8 | 14 | 55 | 18 | 217 | 204 | 191 | 15 | 156 | 42 | 14 |
| 20 | WDSX20-8 | R3/4 | Rc1/2 | Rc1/2 | 12 | 34 | 30 | 10 | 18 | 65 | 21 | 244 | 229 | 215 | 15 | 175 | 45 | 18 |
| 25 | WDSX25-10 | R1 | Rc3/4 | Rc1/2 | 16 | 42 | 33 | 10 | 14 | 70 | 18 | 303 | 288 | 273 | 28 | 223 | 63 | 25 |
| 32 | WDSX32-15 | R1-1/4 | Rc1 | Rc1/2 | 19 | 44 | 38 | 11 | 18 | 82 | 25 | 311 | 294 | 293 | 47 | 224 | 58 | 32 |
| 40 | WDSX40-20 | R1-1/2 | Rc1-1/4 | Rc3/4 | 25 | 60 | 43 | 10 | 20 | 92 | 25 | 353 | 335 | 328 | 48 | 253 | 60 | 38 |
| 50 | WDSX50-25 | R2 | Rc1-1/2 | Rc1 | 31 | 54 | 51 | 10 | 18 | 95 | 21 | 358 | 338 | 331 | 49 | 254 | 56 | 50 |
| 65 | WDSX65-32 | R2-1/2 | Rc2 | Rc1-1/4 | 40 | 70 | 62 | 14 | 20 | 120 | 40 | 422 | 394 | 383 | 59 | 295 | 72 | 65 |
| 80 | WDSX80-40 | R3 | Rc2-1/2 | Rc2 | 46 | 75 | 72 | 16 | 24 | 130 | 38 | 501 | 465 | 449 | 71 | 338 | 94 | 75 |
| 100 | WDSX100-65 | R4 | Rc3 | Rc2-1/2 | 73 | 128 | 90 | 20 | 28 | 160 | 40 | 665 | 619 | 567 | 40 | 457 | 109 | 100 |

Note: request the direction of nipple thread, ordering, note LH or RH.

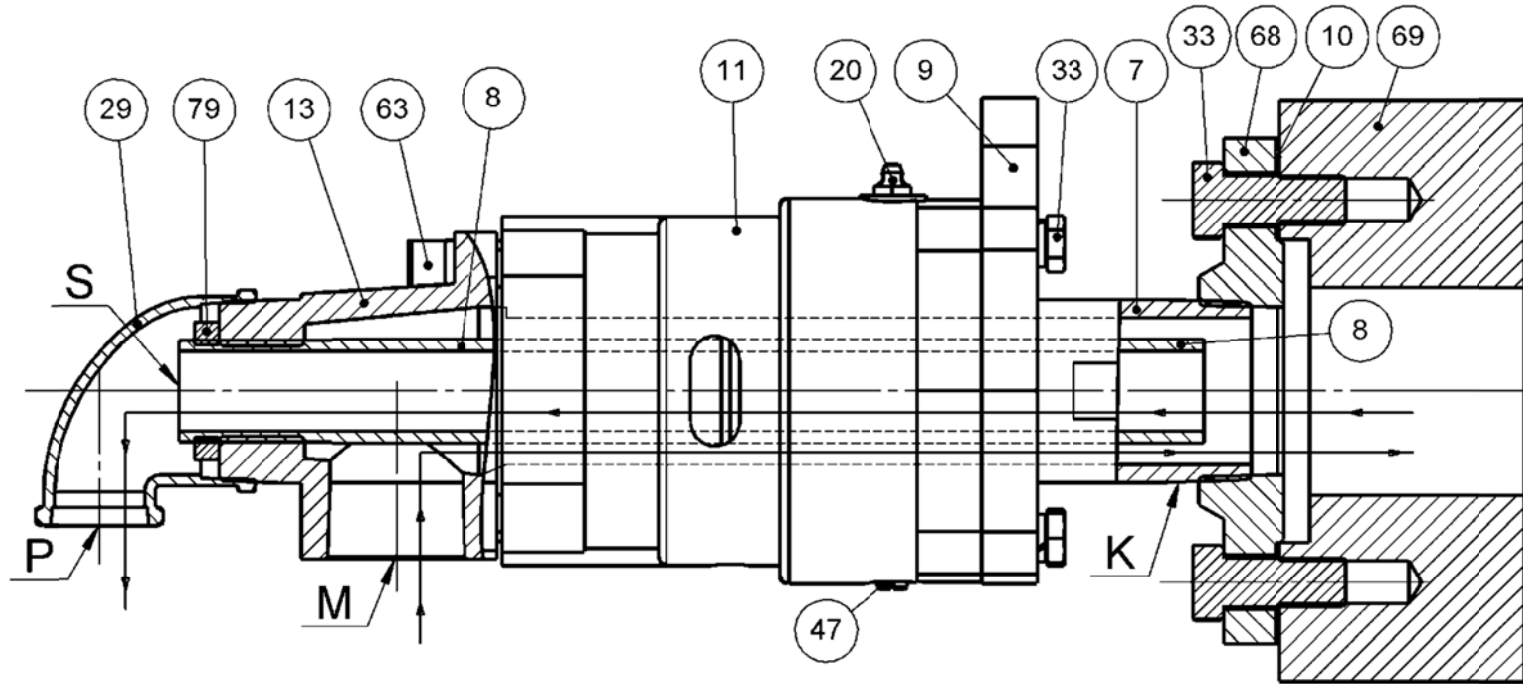
Dimension List: Type WDSXF、 dual flow、 rotating internal pipe、 nipple with quick release flange、 rotary joint



| Size | type | M | P | S | F | F1 | G | I | H | H1 | L | LP | LS | W | LM | LF | N | ND | P | Q | R | ZK | T | U |
|------|-------------|---------|---------|----|-----|----|----|----|-----|----|-----|-----|-----|----|-----|-----|-----|-----|-----|-----|----|----|---|----|
| 15 | WDSXF15-6 | Rc3/8 | Rc1/2 | 10 | 29 | 25 | 8 | 14 | 55 | 18 | 222 | 209 | 196 | 15 | 161 | 47 | 10 | 26 | 65 | 95 | 14 | 8 | 4 | 14 |
| 20 | WDSXF20-8 | Rc1/2 | Rc1/2 | 12 | 34 | 30 | 10 | 18 | 65 | 21 | 248 | 233 | 219 | 15 | 179 | 49 | 18 | 29 | 75 | 105 | 16 | 8 | 4 | 14 |
| 25 | WDSXF25-10 | Rc3/4 | Rc1/2 | 16 | 42 | 33 | 10 | 14 | 70 | 18 | 304 | 289 | 274 | 28 | 224 | 64 | 25 | 40 | 85 | 115 | 16 | 10 | 4 | 14 |
| 32 | WDSXF32-15 | Rc1 | Rc1/2 | 19 | 44 | 38 | 11 | 18 | 82 | 25 | 311 | 296 | 295 | 47 | 226 | 60 | 32 | 44 | 100 | 140 | 18 | 12 | 4 | 18 |
| 40 | WDSXF40-20 | Rc1-1/4 | Rc3/4 | 25 | 60 | 43 | 10 | 20 | 92 | 25 | 364 | 346 | 339 | 48 | 264 | 71 | 38 | 49 | 110 | 150 | 18 | 12 | 4 | 18 |
| 50 | WDSXF50-25 | Rc1-1/2 | Rc1 | 31 | 54 | 51 | 10 | 18 | 95 | 21 | 370 | 350 | 343 | 49 | 266 | 68 | 50 | 60 | 125 | 165 | 20 | 15 | 4 | 18 |
| 65 | WDSXF65-32 | Rc2 | Rc1-1/4 | 40 | 70 | 62 | 14 | 20 | 120 | 40 | 422 | 394 | 383 | 59 | 295 | 72 | 65 | 75 | 145 | 185 | 20 | 18 | 4 | 18 |
| 80 | WDSXF80-50 | Rc2-1/2 | Rc2 | 46 | 75 | 72 | 16 | 24 | 130 | 38 | 482 | 446 | 430 | 71 | 319 | 75 | 75 | 90 | 160 | 200 | 20 | 20 | 8 | 18 |
| 100 | WDSXF100-65 | Rc3 | Rc2-1/2 | 73 | 128 | 90 | 20 | 28 | 160 | 40 | 665 | 619 | 567 | 40 | 457 | 109 | 100 | 118 | 180 | 220 | 22 | 22 | 8 | 18 |

Note: the tolerance of pilot dimension ϕND is -0.10/-0.20.

installation introduction: Type WDSG、 dual flow、 fixed internal pipe, nipple with BSPT thread、 rotary joint

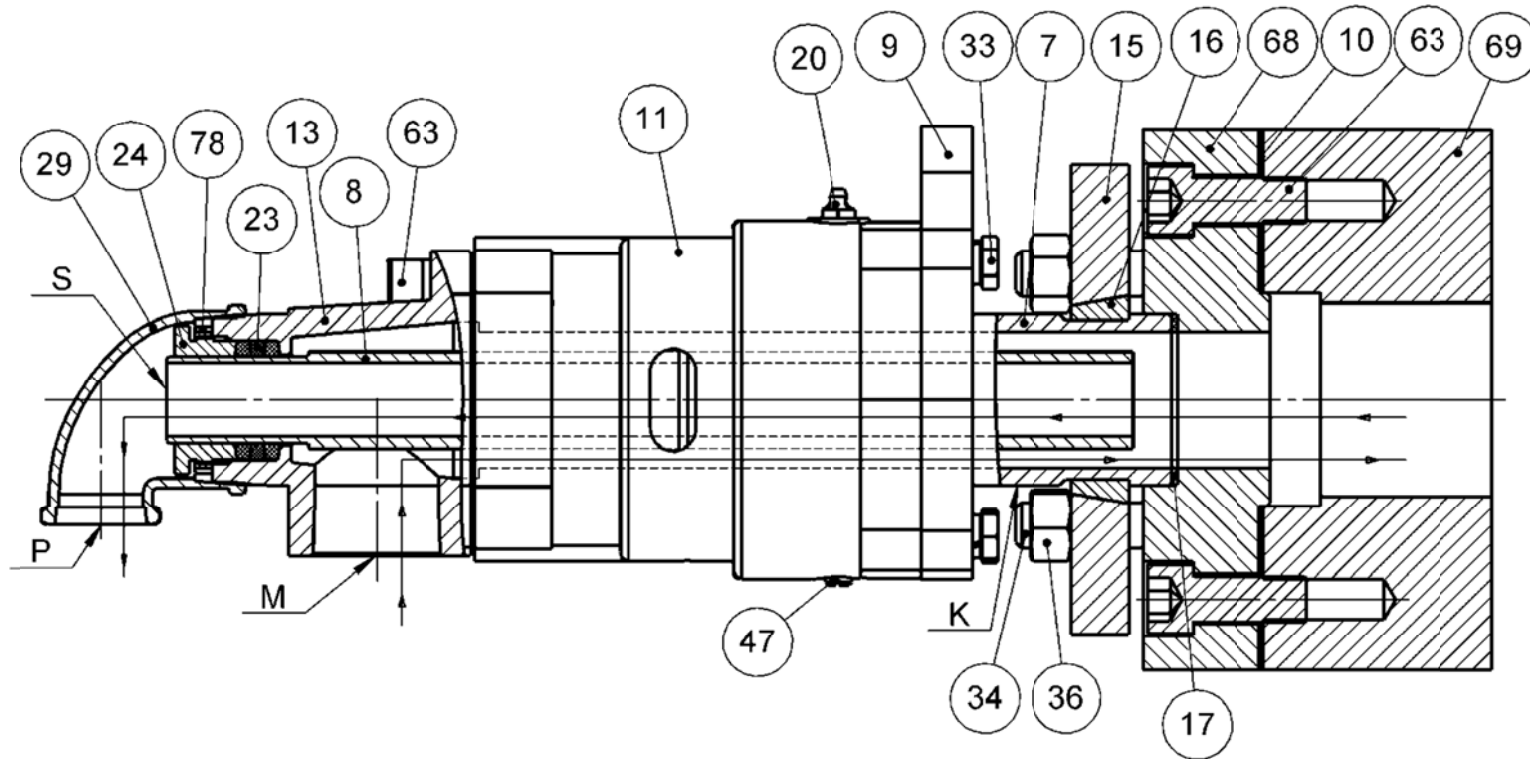


Type WDSG、 dual flow、 fixed internal pipe, nipple with BSPT thread、 rotary joint

Part Name: 7.nipple (K), 8.internal pipe (user part), 9.wear plate, 10.gasket, 11.body, 13.head, 20.grease nipple, 29.elbow, 33.bolt, 47.screw, 63.bolt, 68.adapter flange,69.journal of roller, 79.lock nut。

K—nipple inlet, M—pipe inlet, P—pipe inlet, S—internal pipe connection。

installation introduction: Type WDSXF、 dual flow、 rotating internal pipe、 nipple with quick release flange、 rotary joint

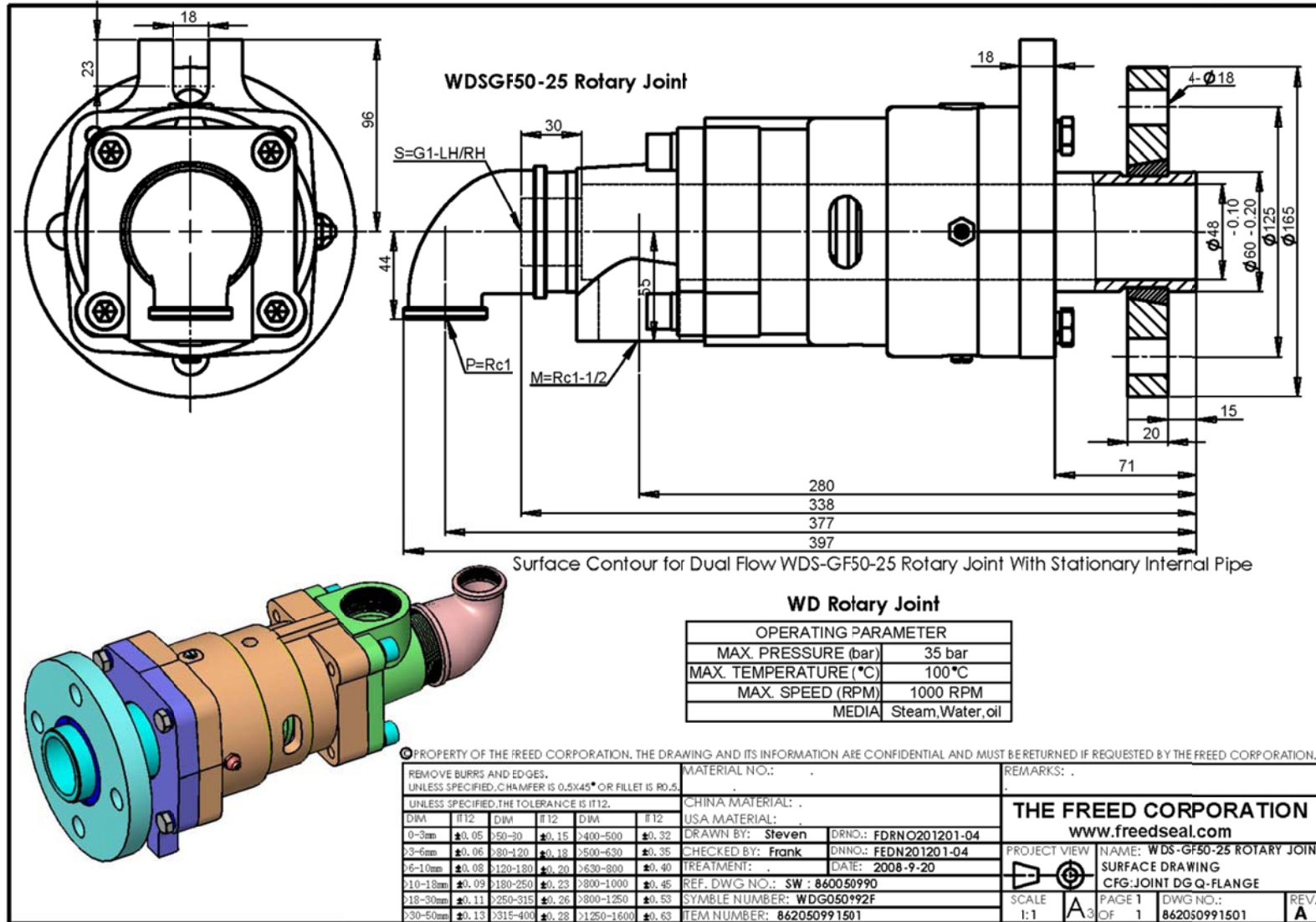


Type WDSXF、 dual flow、 rotating internal pipe、 nipple with quick release flange、 rotary joint

Part Name: 7.nipple (K), 8.internal pipe (user part), 9.wear plate, 10.gasket, 11.body, 13.head, 15. quick release flange, 16.split wedge, 17.copper washer, 20.grease nipple, 23.packing, 24.packing gland, 29.elbow, 33.bolt, 47.screw, 63.bolt, 69.journal of roller, 78.lock nut.

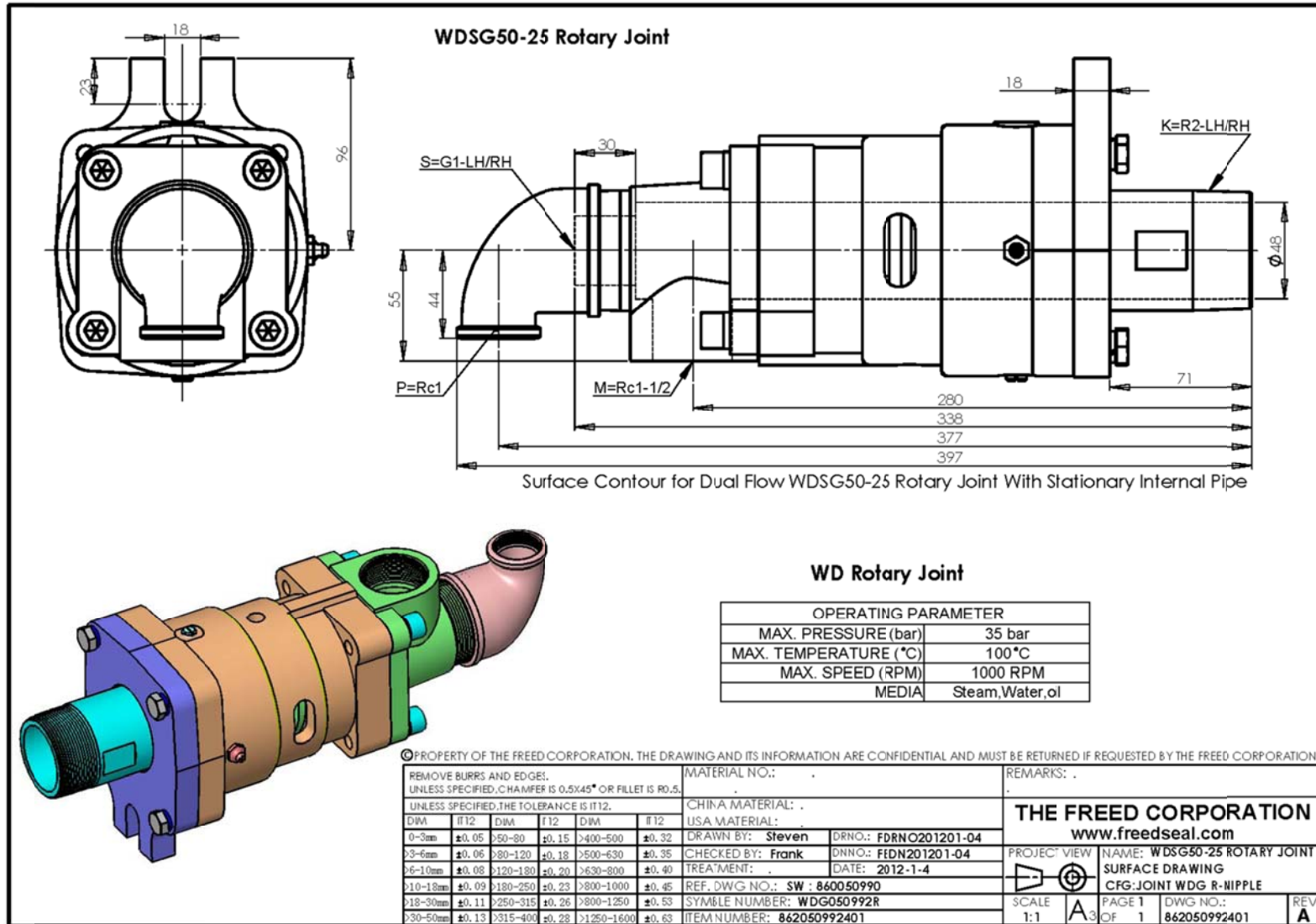
K—nipple inlet, M—pipe inlet, P—pipe inlet, S—internal pipe connection.

Drawings Sample of Freed rotary joint



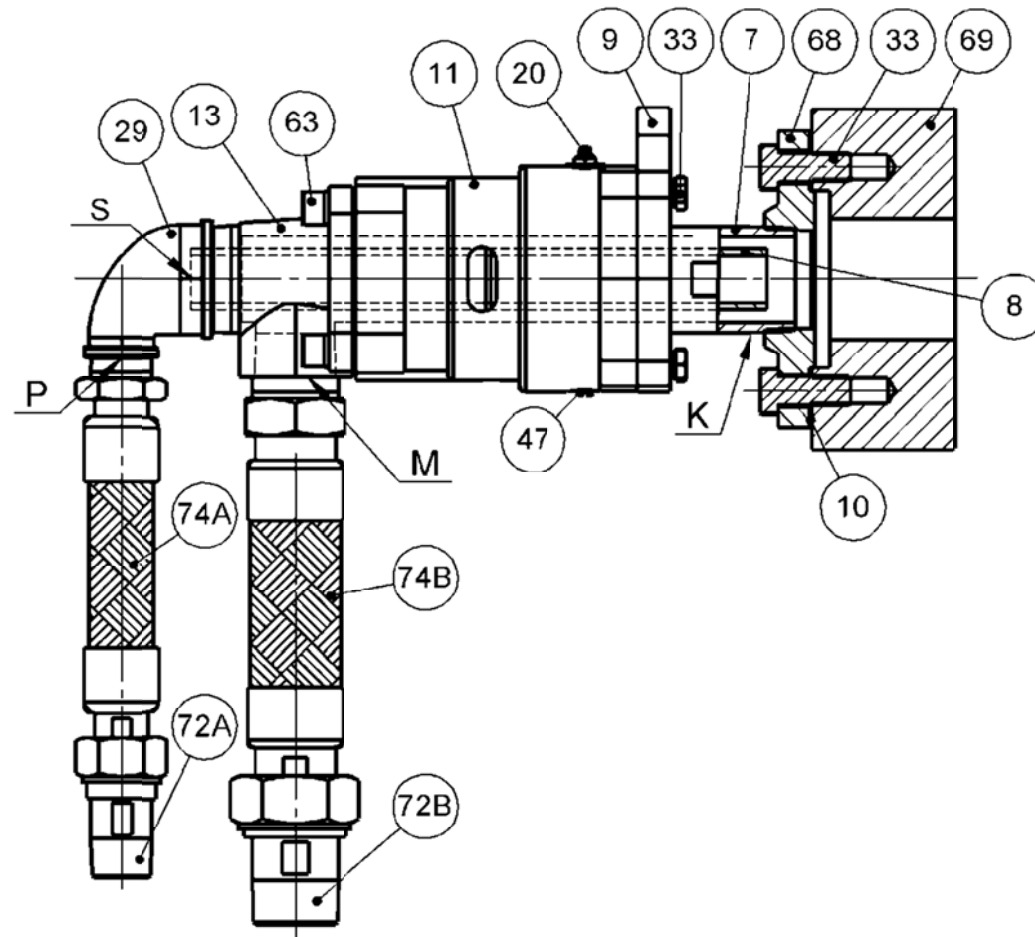
The drawings sample of Type WDSGF50-25、 dual flow、 fixed internal pipe、 nipple with quick release flange、 rotary joint

Drawings Sample of Freed rotary joint



The drawings sample of Type WDSG50-25、 dual flow、 fixed internal pipe、 nipple with BSPT thread、 rotary joint

**INSTALLATION INSTRUCTIONS
FOR TYPE WD ROTARY JOINTS**

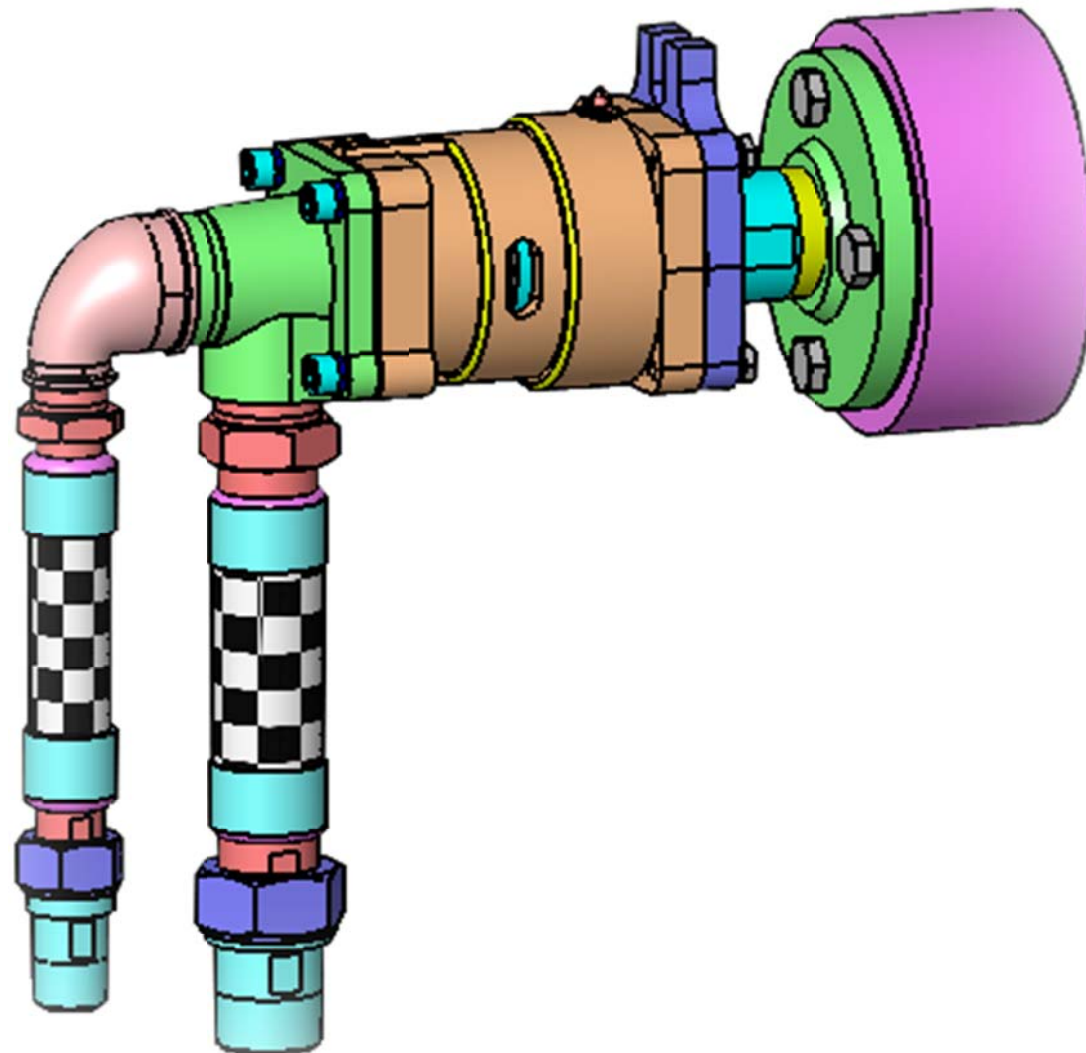


Type WDSG、 dual flow、 fixed internal pipe, nipple with BSPT thread、 rotary joint

Part Name: 7.nipple (K) , 8.internal pipe (user part) , 9.wear plate, 10.gasket, 11.body, 13.head, 20.grease nipple, 29.elbow, 33.bolt, 47.screw, 63.bolt, 68.adapter flange, 69.journal of roller, 72A.72B.swivel nipple, 74A.74B.metal hose.

K—nipple inlet, M—pipe inlet, P—pipe inlet, S—internal pipe connection.

**INSTALLATION INSTRUCTIONS
FOR TYPE WD ROTARY JOINTS**

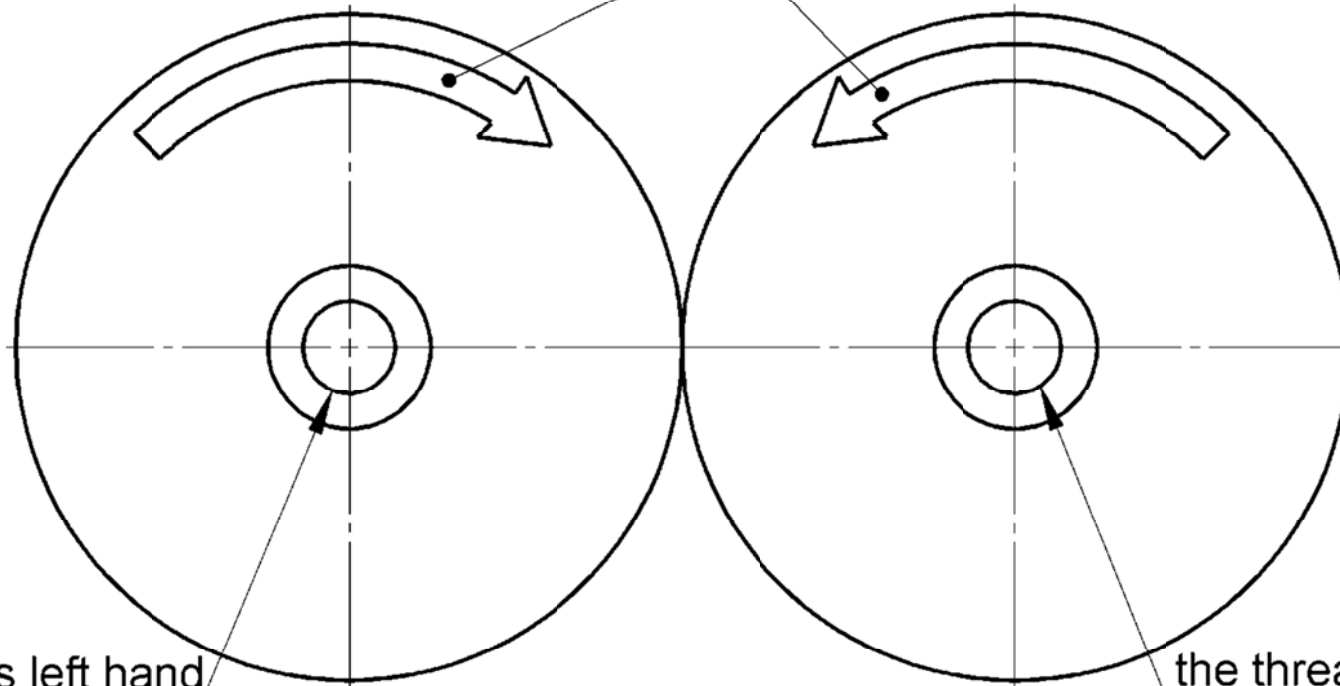


Three-dimensional Drawing of type WDSG Rotary Joint

Installation direction of rotary joint

roller: clockwise, dextrorotation
(the direction of right hand)

roller: anticlockwise, levorotation
(the direction of left hand)



the thread is left hand

the thread is right hand

face the surface of journal installed rotary joint, to determine the direction of the thread.

The direction of thread is reversed with the direction of the roller, so when the roller runs, fasten the thread of the nipple or internal pipe.

Contact Us

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