# DEUBLIN®

Engineered for Performance

# ROTATING UNIONS

water steam air hydraulic hot oil vacuum coolant custom applications

www.deublin.com

# Selection Chart for *DEUBLIN* Rotating Unions

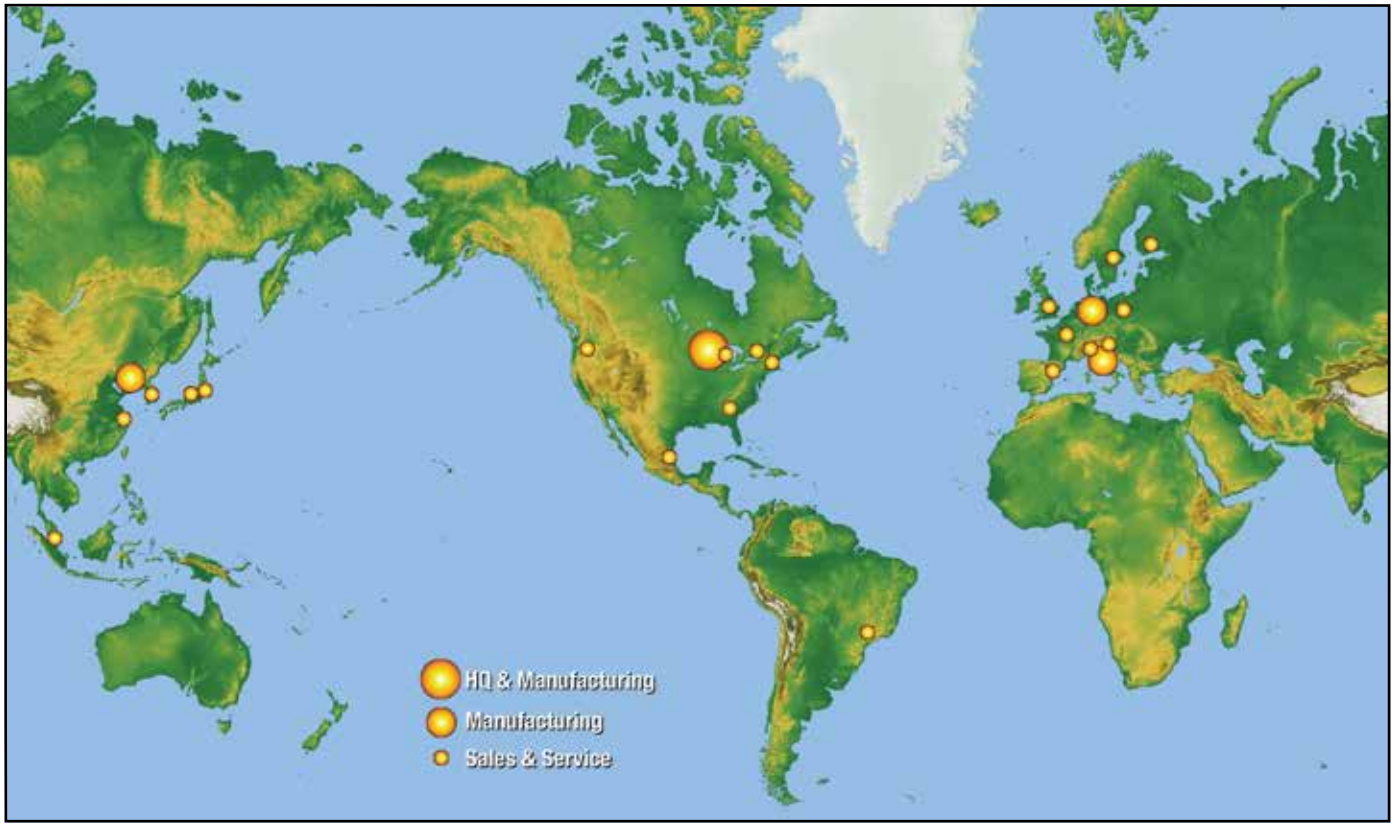
| Size | Series | Max. Operating Data PSI | Temp. °F | Speed RPM | Description | Passages | Pages |
|---|---|---|---|---|---|---|---|
| **Water & Hot Oil up to 250°F *** | | | | | | | **6-21** |
| 3/8" - 2" | 55 | 750 | 250 | 3,500 | General Purpose | 1 or 2 | 6 - 10 |
| 3/8" - 2" | 57 | 150 | 200 | 3,500 | Water Service | 1 or 2 | 7 - 10 |
| 2 1/2" | 755 | 200 | 250 | 750 | General Purpose | 1 or 2 | 11 |
| 3" | 857 | 150 | 250 | 500 | Water Service | 1 or 2 | 12 - 13 |
| 3/8" - 1" | 54 | 1,800 | 200 | 3,500 | 316 Stainless Steel | 1 | 14 |
| 3/8" | 927 | 4,000 | 200 | 2,000 | Water Service High Pressure | 1 | 15 |
| 1/2" - 3/4" | 22 | 1,500 | 250 | 250 | Water Service Car Wash | 1 | 15 |
| 2" - 4" | 6000 | 150 | 250 | 750 | Water Service Cartridge Seal | 1 or 2 | 16 - 19 |
| 5" | F127 | 150 | 250 | 750 | Water Service | 1 or 2 | 20 |
| 3/4" - 1 1/2" | 2400 | 150 | 250 | 100 | Water Service Continuous Casters | 1 or 2 | 21 |
| **Steam & Hot Oil up to 450°F *** | | | | | | | **22-30** |
| 3/8" - 1/2" | N Steam | 250 | 400 | 750 | Single Bearing Spherical Seal | 1 or 2 | 22 |
| 3/8" - 1/2" | N Hot Oil | 100 | 450 | 750 | Single Bearing Spherical Seal | 1 or 2 | 22 |
| 3/4" - 2" | 9000 Steam | 150 | 365 | 400 | Single Bearing Spherical Seal | 1 or 2 | 23 - 25 |
| 1 1/2" | HPS Steam | 250 | 400 | 400 | Dual Bearing Spherical Seal | 2 | 26 |
| 3/4" - 2" | H Steam | 150 | 365 | 400 | Dual Bearing Spherical Seal | 1 or 2 | 27 - 30 |
| 2 1/2" - 5" | H Steam | 150 | 365 | 180 | Dual Bearing Spherical Seal | 1 or 2 | 27 - 30 |
| 3/4" - 2" | H Hot Oil | 100 | 450 | 400 | Dual Bearing Spherical Seal | 1 or 2 | 27 - 30 |
| 2 1/2" - 5" | H Hot Oil | 100 | 450 | 350 | Dual Bearing Spherical Seal | 1 or 2 | 27 - 30 |
| 3/4" - 2" | Type C Hot Oil | 100 | 450 | 400 | Dual Bearing Spherical Seal | 1 or 2 | ** |
| **Air & Hydraulic** | | | | | | | **31-45** |
| 1/8" - 3/8" | 1005, 1102, 1115 | 1,000 | 250 | 3,500 | Standard Applications | 1 | 31 - 32 |
| 1/2" | 1205, 2200 | 1,000 | 250 | 3,500 | Standard Applications | 1 | 31 - 32 |
| 3/4" - 1 1/2" | 250, 355, 452 | 1,000 | 250 | 3,500 | Standard Applications | 1 | 33 |
| 1/8" - 3/8" | 1005, 1102, 1115 | 1,000 | 250 | 3,500 | In-the-shaft Mounted | 1 | 34 |
| 1/4" - 1/2" | AP | 5,700 | 200 | 1,500 | High Pressure High Speed | 1 | 35 |
| 1/4" - 1 1/2" | D | 6,400 | 120 | 20 | High Pressure Low Speed or Swivel | 1 | 36 |
| 3/8" X 2 | 1500 | 150 | 250 | 1,500 | DEU-PLEX Air | 2 | 37 |
| 1/4" X 2 | 2620 | 2,000 | 160 | 12,000 | DEU-PLEX Air & Hyd Oil | 2 | 38 - 39 |
| 1/2" X 2 | 1590 | 150 | 250 | 1,500 | DEU-PLEX Air | 2 | 40 |
| 1/2" X 2 | 1579 | 1,000 | 250 | 1,500 | DEU-PLEX Hyd Oil | 2 | 40 |
| 3/8" - 1/2" X 4 | 1379, 1479 | 3,600 | 175 | 250 | Multi Media 4 Pass | 4 | 41 |
| 1/4" - 1/2" | 17,21 | 3,000 | 250 | 250 | Low Speed Air & Hyd Oil | 1 | 42 |
| 1/4" X 1/2" | 2117 | 3,000 | 250 | 250 | Low Speed Tandem Air & Hyd Oil | 2 | 43 |
| 1/4"-1/2"-3/4" X 2 | 1690, 1790, 1890 | 3,000 | 250 | 250 | DEU-PLEX Low Speed | 2 | 44 - 45 |
| 1/4" X 3/4" X 3 | 1890 | 3,000 | 250 | 250 | Triple Passage | 3 | 45 |
| **Coolant (Wider range of products featured in Coolant Union Catalog)** | | | | | | | **46-51** |
| 3/8" | 1117 | 2,000 | 160 | 20,000 | Bearingless | 1 | 46 |
| 3/8" | 1129 | 2,000 | 160 | 20,000 | Bearingless ("Pop-Off") High Speed | 1 | 47 |
| 3/16" | 1101 | 1,500 | 160 | 15,000 | Standard Applications High Speed | 1 | 48 |
| 3/8" | 1116 | 1,000 | 160 | 12,000 | Standard Applications | 1 | 49 |
| 1/4" - 3/8" | 1109 | 1,500 | 160 | 20,000 | Dry-run ("Pop-Off") High Speed | 1 | 50 |
| 3/8" | 902 | 1,000 | 160 | 10,000 | Dry-run ("Pop-Off") | 1 | 51 |
| **Unions for Special Applications *** | | | | | | | **52-53** |
| 1/8" - 1" | 1005, 468, 981 | 750 | 250 | 3,500 | Water, Oil Rig, Clutch & Brake | 1 to 3 | 52 |
| 1/4" - 3/8" | 1102, 1115, 882 | 150 | 250 | 3,500 | Central Tire Inflation | 1 or 2 | 52 |
| Custom | 7000 / 7100 | 3,000 | 250 | 5,000 | Around The Shaft | | 53 |

*** Attention!** For applications exceeding indicated limits, contact DEUBLIN. Indicate media, size, speed (RPM), pressure, temperature and connection specifications.

** Download PDF from website

**- Subject to technical and dimensional changes without notice.**

# DEUBLIN KEEPS THE WORLD ROTATING




Since 1945, Deublin has grown from a small garage shop to the world's largest manufacturer of rotating unions. Today, Deublin's international headquarters is located in Waukegan, Illinois, with manufacturing facilities, sales offices and warehouses located in 17 countries on four continents.

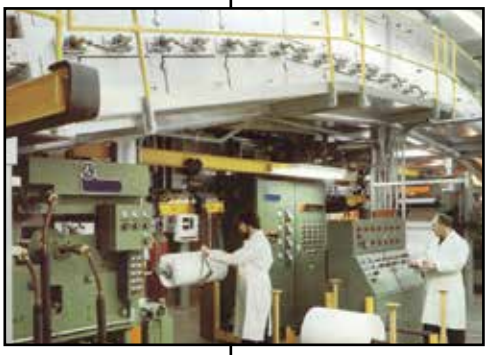
Our worldwide distribution network allows end users all over the world to specify Deublin unions when purchasing equipment made in another country. We're manufacturers ourselves, so we understand the importance of fast response time to keep your manufacturing process rolling. Wherever you're located, Deublin has a stocking distributor nearby to meet your requirements—quickly.

## UNIQUE REQUIREMENTS DEMAND CUSTOM UNIONS

Rotating unions must accommodate a broad range of materials, viscosities, temperatures, pressures and speeds. That's why the Deublin product line offers over 500 standard unions, over 3,000 separate models.

Even this extensive line cannot meet all the specialized needs required by our customers. That's why we manufacture an ever-growing line of custom unions to meet individual manufacturers' particular requirements. In many instances, we can adapt or convert an existing union and offer a cost-effective solution to meet your exact specifications.

# A ROTATING UNION FOR EVERY APPLICATION



Rotating unions are used in many manufacturing processes to cool, heat or transfer fluid (pneumatic or hydraulic) power. Typical rotating unions feature deep groove ball bearings to support the rotating component against the stationary component, and balanced, precision-engineered mechanical seals to seal the media flow. Deublin rotating unions vary for each application, depending on design, bearing type, construction and material required.

In 1989, the Deublin product line was expanded to include steam joints and siphon systems for paper machine dryer cans.

Here are just some of the industries that rely on Deublin for their unique rotating union needs:

- ALUMINUM
- AUTOMOTIVE
- CAN MAKING
- CAR WASH EQUIPMENT
- CHEMICAL/PETROCHEMICAL/REFINERY
- CONSTRUCTION EQUIPMENT
- DISTILLERIES/BREWERIES
- FARM EQUIPMENT
- FLOOR & WALL COVERINGS
- FOOD PROCESSING MACHINERY
- GLASS MANUFACTURING
- INSULATION
- LAUNDRY EQUIPMENT
- LUMBER & WOODWORKING
- MACHINE TOOL
- MARINE
- MINING
- PAPER
  - CONVERTING PLANTS
  - CORRUGATING
  - PULP & PAPERBOARD
  - ROOFING
- PETROLEUM
- PLASTICS
- PRINTING
  - BUSINESS FORMS
  - FLEXOGRAPHIC
  - WEB OFFSET
- RUBBER
- STEEL
- TEXTILE
- TIRES
- TRUCKING

***DEUBLIN'S*** state-of-the-art manufacturing facilities are strategically located worldwide, and feature the latest CNC technologies including multi-axis/multi-function, robotic interfaces, single point threading and cylindrical grinding.

These advanced machining techniques and proprietary processes allow Deublin to achieve the most precise tolerances in the industry, and ensure superior union performance and service life.

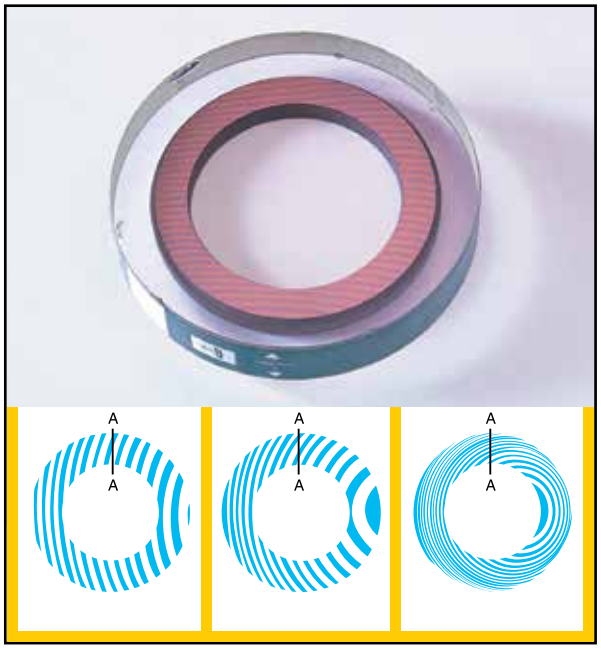
# WE TREAT PRECISION AS AN EXACT SCIENCE

## PRECISION

A rotating union must be capable of containing high pressures while rotating at very high speeds. Smooth, easy rotation can only be achieved by exactly mating the seal faces to minimize friction.

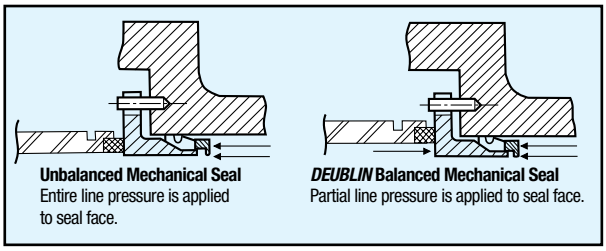
Precision and tight tolerances are critical in the micro lapping of seal faces. All Deublin seals are micro lapped to an optical flatness within 2 light bands or 0.000023" utilizing proprietary lapping machinery and compounds. This level of precision is essential for dependable leak-proof operation.

Housings are machined on multi-axis twin-spindle lathes to obtain the necessary part-to-part precision. Rotors and other parts are turned on automatic bar machines to ensure true-running rotating unions without any wobble. This assures extended service life.




## BALANCED MECHANICAL SEAL

The greater the pressure on a rotating seal face, the greater the friction, torque and wear on the union. That's why Deublin rotating unions feature "balanced mechanical seals." With this technology, the thrust load or seal face contact pressure is kept to a minimum regardless of media pressure. This reduces wear, resulting in longer seal life. The spring-loaded seal is keyed so that it cannot rotate or creep, which can cause premature failure in secondary seals, resulting in a leaking union.



**Unbalanced Mechanical Seal**
Entire line pressure is applied to seal face.

***DEUBLIN* Balanced Mechanical Seal**
Partial line pressure is applied to seal face.

## EXTENDED LIFE SEALING

Responding to ever-increasing speeds and pressures, Deublin pioneered Extended Life Sealing (E.L.S.). E.L.S. rotating unions offer outstanding performance under the toughest conditions, and can extend service life two to four times, depending on the severity of the application. E.L.S. unions use advanced materials such as tungsten carbide and silicon carbide to provide the best possible seal solution for the application.

Where reliability is of prime importance, E.L.S. should be specified to protect against contaminants and resist wear caused by rust, scale, chips and other harmful abrasives.

## PROFESSIONAL SERVICE AROUND THE WORLD

At Deublin, our service is as reliable as our products. Given the importance of rotating unions to your equipment's performance, our products have to be reliable. To provide you local and emergency service, we have a worldwide service network consisting of wholly-owned subsidiaries and authorized distribution network.

Whether you need a spare part, a new product, technical advice, or help with an ongoing design project, our experienced customer service representatives and engineers are always available to provide immediate assistance.

For all your rotating union requirements—no matter how unique or complex—you can rely on Deublin.

## NUMBER SYSTEM

DEUBLIN ordering numbers for standard rotating unions consist of 2, 3 or 4 number groups. Each group describes a particular characteristic feature such as application, seal combination or rotor connection (refer to ordering example).

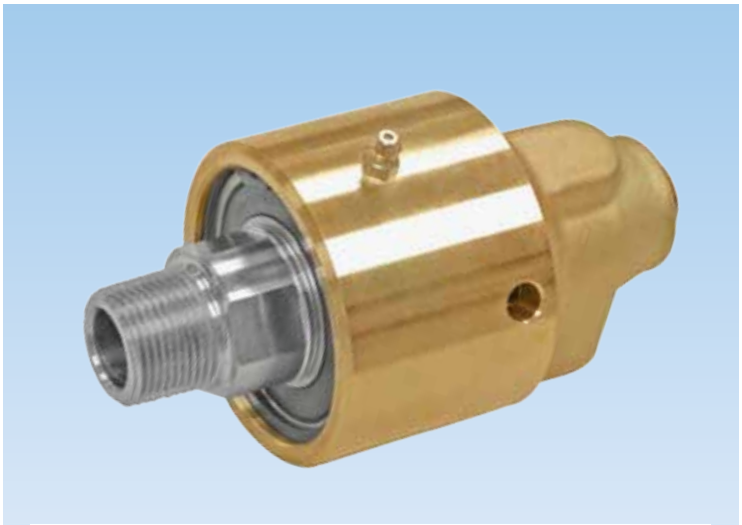
Rebuilding and repair kit numbers differ from their respective rotating union numbers by the insertion of a letter (B or C). The letter B stands for a rebuilding kit, and the letter C for a repair kit (refer to ordering example).

**ORDERING EXAMPLE:**

255-000-284681
- 255 — model / series / size
- 000 — seal combination
- 28 — rotor
- 4681 — elbow for duoflow design

255-000B284 — Service kit Plus

257-000C — Service kit



# DEUBLIN

## General Purpose 55 Series Unions

- Monoflow and duoflow design
- Self-supported rotating union
- Radial housing connection
- Balanced mechanical seal
- 3 vent holes
- Forged brass housing
- Stainless steel rotor
- Special options: threaded vent holes, low torque design
- Lubrication Guide page 55

## Operating Data

| | | | |
|---|---|---|---|
| Maximum Water Pressure | Model 55-555 | 750 PSI | 50 bar |
| Maximum Water Pressure | Model 655 | 600 PSI | 41 bar |
| Maximum Saturated Steam Pressure (Intermittent) | | 15 PSI | 1 bar |
| Maximum Hot Oil Pressure | | 100 PSI | 6.6 bar |
| Maximum Speed NPT Threads | Model 55-555 | 1,500 RPM | 1,500/min |
| | Model 655 | 750 RPM | 750/min |
| Maximum Speed Straight Threads | | | |
| | Model 55-255 | 3,500 RPM | 3,500/min |
| | Model 355 | 3,000 RPM | 3,000/min |
| | Model 525-555 | 2,500 RPM | 2,500/min |
| | Model 655 | 750 RPM | 750/min |
| Maximum Temperature | 250°F | >250°F consult ***DEUBLIN*** | |

**Seal Combinations**

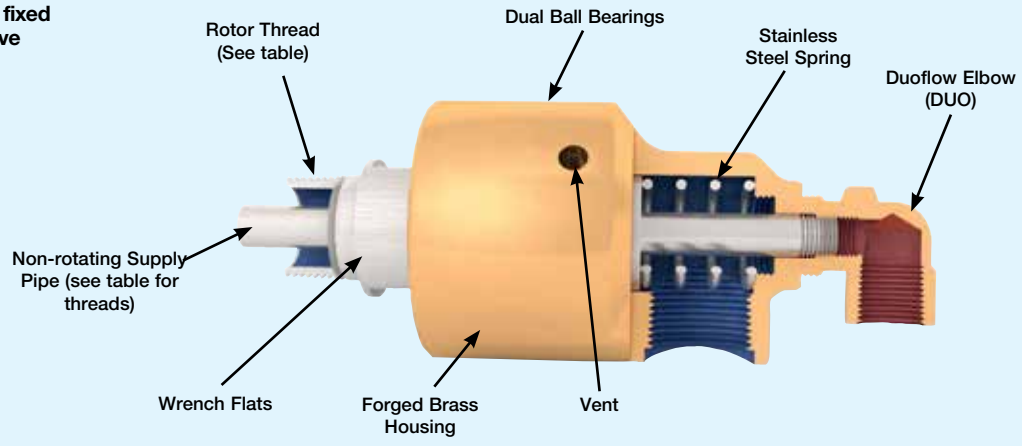
- Carbon Graphite/Bronze for water - Standard
- Carbon Graphite/Ceramic for hot oil, hot water and saturated steam - Optional
- Multi-purpose applications

**Seal Combination - E.L.S.**

- Tungsten Carbide/Ceramic for severe conditions (poor water quality), max. temperature 200°F

| Torque Ratings 55 Series | | |
|---|---|---|
| **Size** | **ft.lbs** | **Nm** |
| 55 | ¼ | 0.34 |
| 155 | ⅓ | 0.50 |
| 255 | ½ | 0.68 |
| 355 | 1⅓ | 1.80 |
| 525 | 1⅓ | 1.80 |
| 555 | 2½ | 3.40 |
| 655 | 3 | 4.07 |

**Illustration shows duoflow with fixed supply pipe. Monoflow units have pipe plugs instead of an elbow.**



# DEUBLIN

## 57 Series with Silicon Carbide Seals, for Water Service

- Monoflow and duoflow design
- Self-supported rotating union
- Radial housing connection
- Balanced mechanical seal
- Keyed rotor seal
- Easy and quick replacement of sealing components (rotor seal, floating seal)
- Ball bearings lubricated for life
- For poor water quality (E.L.S.)
- 3 vent holes
- Forged brass housing
- Stainless steel rotor
- Special options: threaded vent holes

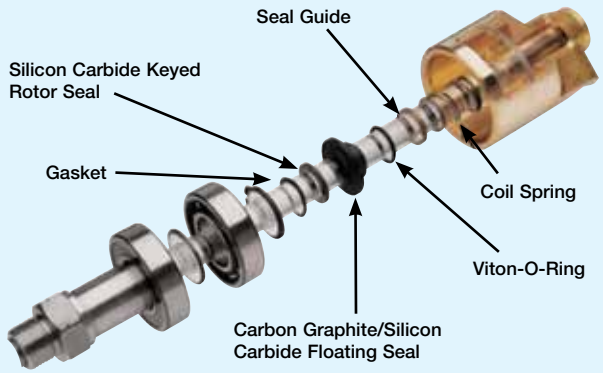
## Operating Data

| | | | |
|---|---|---|---|
| Maximum Water Pressure | | 150 PSI | 10 bar |
| Maximum Speed NPT Threads | Model 57-557 | 1,500 RPM | 1,500/min |
| | Model 657 | 750 RPM | 750/min |
| Maximum Speed Straight Threads | | | |
| | Model 57-257 | 3,500 RPM | 3,500/min |
| | Model 357 | 3,000 RPM | 3,000/min |
| | Model 527-557 | 2,500 RPM | 2,500/min |
| | Model 657 | 750 RPM | 750/min |
| Maximum Water Temperature | | 200°F | >200°F consult ***DEUBLIN*** |

**Seal Combination**
- Carbon Graphite/Silicon Carbide - Standard

**Seal Combination - E.L.S.**
- Silicon Carbide/Silicon Carbide for severe conditions (poor water quality)

| Torque Ratings 57 Series | | |
|---|---|---|
| **Size** | **ft.lbs** | **Nm** |
| 57 | ¼ | 0.25 |
| 157 | ⅓ | 0.50 |
| 257 | ¾ | 1.00 |
| 357 | 1½ | 2.00 |
| 527 | 1½ | 2.20 |
| 557 | 2¼ | 2.90 |
| 657 | 3½ | 4.50 |




## Union Repair

The 57 Series is designed for quick, easy replacement of both Floating Seal and the Rotor Seal.

The "57's" seal is seated in a keyed counter bore at the rotor's end. The worn seal simply lifts out and the new one drops right in. Since the entire rotor does not need to be replaced or relapped, the repair is fast, easy and on the spot. As you only replace the seals, the repair cost is very economical.

For Ordering Number of Repair Kit see page 5.

## 55 & 57 Series Monoflow Union Specifications

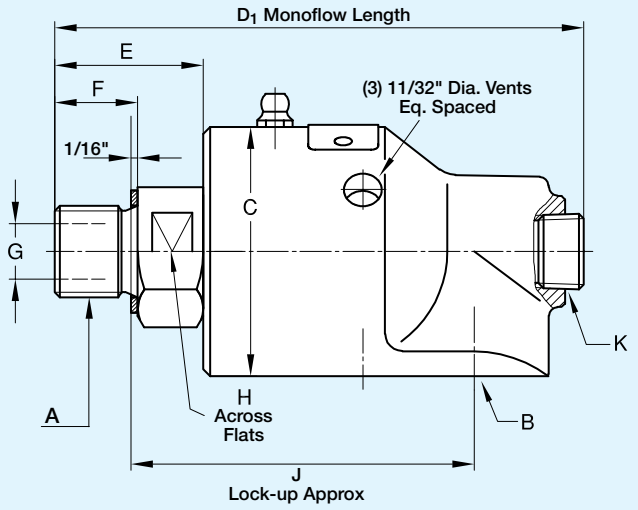


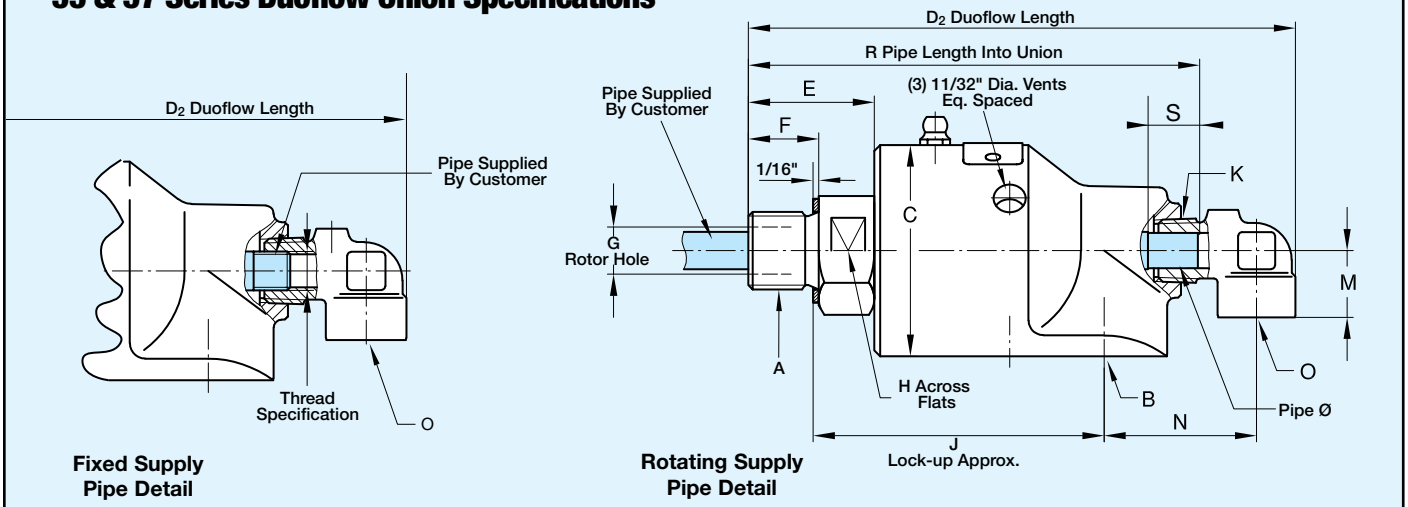

**Chart Instructions**
Select Union Size and Rotor Thread. Follow this line to opposite page to find Duoflow Elbow Specifications. Add Duoflow Elbow Suffix to the end of the Ordering Number.

**† Recessed O-Ring in Rotor End in Place of Copper Gasket**

| B Port NPT | Ordering Number | | | | A* Rotor Thread | C | $D_1$ | $D_2$ | E | F | G | H** | J |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 55 Series All Purpose | 55 Series E.L.S. | 57 Series Water Service | 57 Series E.L.S. | | | | | | | | | |
| 3/8" | 55-000-001 | 55-147-151 | 57-000-001 | 57-050-001 | 3/8"NPT RH | 1 3/4" | 3 15/16" | 4 13/16" | 1" | 5/8" | 3/8" | 22 | 2 11/16" |
| | 55-000-002 | 55-147-152 | 57-000-002 | 57-050-002 | 3/8" NPT LH | | | | | | | | |
| | 55-000-003 | 55-147-149 | 57-000-003 | 57-050-003 | 5/8"-18 UNF RH | 1 3/4" | 3 15/16" | 4 13/16" | 1" | 5/8" | 3/8" | 22 | 2 1/2" |
| | 55-000-004 | 55-147-150 | 57-000-004 | 57-050-004 | 5/8"-18 UNF LH | | | | | | | | |
| | 55-000-094 | 55-147-192 | 57-000-094 | 57-050-094 | G3/8" (BSP) RH | 44.5 | 102 | 123 | 26 | 16 | 9.5 | 22 | 63 |
| | 55-000-095 | 55-147-193 | 57-000-095 | 57-050-095 | G3/8" (BSP) LH | | | | | | | | |
| 1/2" | 155-000-001 | 155-208-113 | 157-000-001 | 157-050-001 | 1/2" NPT RH | 2 1/4" | 4 13/16" | 5 7/8" | 1 7/16" | 7/8" | 1/2" | 30 | 3 1/2" |
| | 155-000-002 | 155-208-114 | 157-000-002 | 157-050-002 | 1/2" NPT LH | | | | | | | | |
| | 155-000-021 | 155-208-185 | 157-000-021 | 157-050-021 | 3/4"-16 UNF RH | 2 1/4" | 4 11/16" | 5 3/4" | 1 5/16" | 3/4" | 1/2" | 30 | 3 1/16" |
| | 155-000-022 | 155-208-229 | 157-000-022 | 157-050-022 | 3/4"-16 UNF LH | | | | | | | | |
| | 155-000-151 | 155-208-252 | 157-000-151 | 157-050-151 | G1/2" (BSP) RH | 57.2 | 120 | 148 | 34 | 19 | 12.7 | 30 | 78 |
| | 155-000-152 | 155-208-253 | 157-000-152 | 157-050-152 | G1/2" (BSP) LH | | | | | | | | |
| 3/4" | 255-000-020 | 255-052-255 | 257-000-020 | 257-050-020 | 3/4" NPT RH | 2 7/8" | 5 9/16" | 6 3/4" | 1 7/16" | 7/8" | 1 1/16" | 32 | 4 1/16" |
| | 255-000-021 | 255-052-256 | 257-000-021 | 257-050-021 | 3/4" NPT LH | | | | | | | | |
| | 255-000-003 | 255-052-258 | 257-000-135† | 257-050-135† | 1"-14 UNS RH | 2 7/8" | 5 7/16" | 6 5/8" | 1 5/16" | 3/4" | 21/32" | 32 | 3 11/16" |
| | 255-000-027 | 255-052-257 | 257-000-136† | 257-050-136† | 1"-14 UNS LH | | | | | | | | |
| | 255-000-284 | 255-052-445 | 257-000-284 | 257-050-284 | G3/4" (BSP) RH | 73 | 138 | 168 | 34 | 19 | 17.5 | 36 | 94 |
| | 255-000-285 | 255-052-446 | 257-000-285 | 257-050-285 | G3/4" (BSP) LH | | | | | | | | |
| 1" | 355-000-002 | 355-064-186 | 357-000-002 | 357-050-002 | 1" NPT RH | 3 1/4" | 6 13/16" | 8 5/16" | 1 15/16" | 1 1/8" | 1" | 36 | 4 11/16" |
| | 355-000-003 | 355-064-187 | 357-000-003 | 357-050-003 | 1" NPT LH | | | | | | | | |
| | 355-000-019 | 355-064-328 | 357-000-019 | 357-050-019 | 1 1/2"-12 UNF RH | 3 1/4" | 6 13/16" | 8 5/16" | 1 15/16" | 1 1/8" | 1" | 36 | 4 1/4" |
| | 355-000-074 | 355-064-329 | 357-000-074 | 357-050-074 | 1 1/2"-12 UNF LH | | | | | | | | |
| | 355-000-222 | 355-064-378 | 357-000-222 | 357-050-222 | G1" (BSP) RH | 83 | 166 | 204 | 42 | 21.5 | 22.2 | 36 | 108 |
| | 355-000-223 | 355-064-379 | 357-000-223 | 357-050-223 | G1" (BSP) LH | | | | | | | | |
| 1 1/4" | 525-000-001 | 525-097-043 | 527-000-001 | 527-050-001 | 1 1/4" NPT RH | 3 9/16" | 7 9/16" | 9 3/8" | 2 3/16" | 1 1/8" | 1 1/4" | 46 | 5 1/4" |
| | 525-000-002 | 525-097-044 | 527-000-002 | 527-050-002 | 1 1/4" NPT LH | | | | | | | | |
| | 525-000-026 | 525-097-095 | 527-000-026 | 527-050-026 | 1 3/4"-12 UN RH | 3 9/16" | 7 9/16" | 9 3/8" | 2 3/16" | 1 3/16" | 1 1/4" | 46 | 4 11/16" |
| | 525-000-027 | 525-097-096 | 527-000-027 | 527-050-027 | 1 3/4"-12 UN LH | | | | | | | | |
| | 525-000-054 | 525-097-122 | 527-000-054 | 527-050-054 | G1 1/4" (BSP) RH | 90.5 | 191 | 234 | 54 | 27 | 30.2 | 46 | 119 |
| | 525-000-055 | 525-097-123 | 527-000-055 | 527-050-055 | G1 1/4" (BSP) LH | | | | | | | | |
| 1 1/2" | 555-000-001 | 555-033-154 | 557-000-001 | 557-050-001 | 1 1/2" NPT RH | 4 1/4" | 8 1/2" | 10 5/16" | 2 7/16" | 1 3/16" | 1 1/2" | 55 | 6" |
| | 555-000-002 | 555-033-160 | 557-000-002 | 557-050-002 | 1 1/2" NPT LH | | | | | | | | |
| | 555-000-395 | 555-033-399 | 557-000-395 | 557-050-395 | 2"-12 UN RH | 4 1/4" | 8 7/8" | 10 11/16" | 2 13/16" | 1 1/8" | 1 1/2" | 55 | 5 13/16" |
| | 555-000-396 | 555-033-382 | 557-000-396 | 557-050-396 | 2"-12 UN LH | | | | | | | | |
| | 555-000-198 | 555-033-288 | 557-000-198 | 557-050-198 | G1 1/2" (BSP) RH | 108 | 225 | 268 | 71 | 29 | 35 | 55 | 147 |
| | 555-000-199 | 555-033-289 | 557-000-199 | 557-050-199 | G1 1/2" (BSP) LH | | | | | | | | |
| 2" | 655-500-116 | 655-502-116 | 657-000-116 | 657-050-116 | 2" NPT RH | 4 5/8" | 10 1/16" | 11 3/4" 12 7/16" | 3" | 1 1/2" | 1 7/8" | 60 | 7" |
| | 655-500-117 | 655-502-117 | 657-000-117 | 657-050-117 | 2" NPT LH | | | | | | | | |
| | 655-500-124 | 655-502-124 | 657-000-124 | 657-050-124 | G2" (BSP) RH | 117 | 246 | 289 | 65 | 28.6 | 47 | 60 | 164 |
| | 655-500-125 | 655-502-125 | 657-000-125 | 657-050-125 | G2" (BSP) LH | | | | | | | | |

*Metric threads and other thread sizes are available. Contact factory for further information. For 2", 2½", 3", 4" and 5" capacity unions refer to pages 11-13 and 16-20. **Metric

# 55 & 57 Series Duoflow Union Specifications



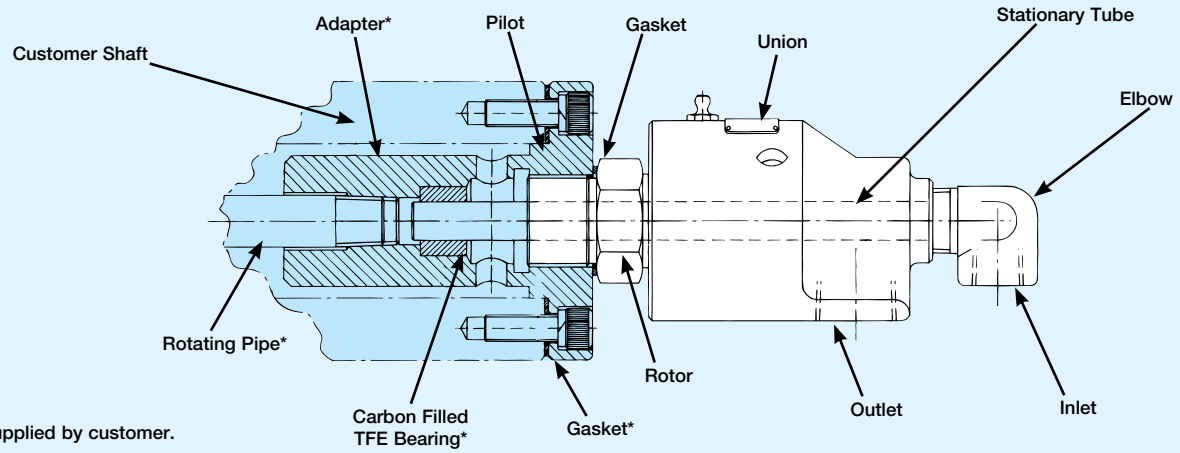

**For Description See Page 10**

| Fixed Supply Pipe | | | Fixed Supply Tube | | | Rotating Supply Pipe | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Elbow Suffix | Thread | R | Elbow Suffix | Tube OD | R | Elbow Suffix | Pipe Size | Pipe Dia. | S | R | K NPT | M | N | O NPT | Shpg. Wt. |
| — | — | — | -030 | .250" | 4 3/16" | — | — | — | — | — | 1/4" | 11/16" | 1 3/8" | 1/4" | 2# |
| — | — | — | -030 | .250" | 4 3/16" | — | — | — | — | — | 1/4" | 11/16" | 1 3/8" | 1/4" | 2# |
| -120 | M6X1 | 98.5 | — | — | — | — | — | — | — | — | 1/4" | 18 | 35 | 1/4" | 0.9 Kg |
| -012 | 1/8" NPT | 4 3/4" | -061 | .375" | 5 7/16" | — | — | — | — | — | 3/8" | 11/16" | 1 1/2" | 3/8" | 3# |
| -012 | 1/8" NPT | 4 3/4" | -061 | .375" | 5 5/16" | -061 | 1/8" | .371" .370" | 1 3/16" | 5" | 3/8" | 11/16" | 1 1/2" | 3/8" | 3# |
| -199 | G1/8" (BSP) | 117 | — | — | — | -471 | — | 9.93 9.90 | 30 | 127 | 3/8" | 18 | 38 | 3/8" | 1.4 Kg |
| -043 | 1/4" NPT | 5 1/4" | -075 | .500" | 5 13/16" | — | — | — | — | — | 1/2" | 1" | 1 3/4" | 1/2" | 5# |
| -044 | 1/8" NPT | 5 1/8" | -026 | .437" | | | | | | | | | | | |
| -043 | 1/4" NPT | 5 1/8" | -075 | .500" | 5 13/16" | -075 | 1/4" | .496" .495" | 1 1/4" | 5 11/16" | 1/2" | 1" | 1 3/4" | 1/2" | 5# |
| -044 | 1/8" NPT | 5" | -026 | .437" | | | | | | | | | | | |
| -368 | G1/4" (BSP) | 136.5 | — | — | — | -681 | — | 12.95 12.90 | 31 | 146.5 | 1/2" | 26 | 45 | 1/2" | 2.3 Kg |
| -367 | G1/8" (BSP) | 132.5 | | | | | | | | | | | | | |
| -083 | 3/8" NPT | 7 1/16" | -163 | .625" | 7 1/8" | — | — | — | — | — | 3/4" | 1 1/16" | 2 5/16" | 1/2" | 8# |
| -084 | 1/4" NPT | 7" | | | | | | | | | | | | | |
| -083 | 3/8" NPT | 7 1/16" | -163 | .625" | 7 1/8" | -163 | 3/8" | .621" .619" | 1 1/4" | 7" | 3/4" | 1 1/16" | 2 5/16" | 1/2" | 8# |
| -084 | 1/4" NPT | 7" | | | | | | | | | | | | | |
| -255 | G3/8" (BSP) | 162 | — | — | — | -347 | — | 15.95 15.90 | 31 | 175 | 3/4" | 27 | 59 | 1/2" | 3.6 Kg |
| -007 | 1/2" NPT | 8 1/8" | -104 | .750" | 8 1/4" | — | — | — | — | — | 1" | 1 3/8" | 2 13/16" | 3/4" | 10# |
| -007 | 1/2" NPT | 8 1/8" | -104 | .750" | 8 1/4" | -104 | 1/2" | .745" .743" | 1 1/2" | 8 3/16" | 1" | 1 3/8" | 2 13/16" | 3/4" | 10# |
| -079 | G1/2" (BSP) | 185.5 | — | — | — | -237 | — | 21.94 21.89 | 38 | 201.5 | 1" | 35 | 72 | 3/4" | 4.5 Kg |
| -013 | 3/4" NPT | 8 13/16" | -263 | 1.000" | 9 1/8" | — | — | — | — | — | 1 1/4" | 1 1/2" | 3 1/16" | 3/4" | 16# |
| -036 | 1/2" NPT | 8 3/4" | | | | | | | | | | | | | |
| -013 | 3/4" NPT | 9 3/16" | -263 | 1.000" | 9 1/2" | -144 | 3/4" | 1.000" .998" | 1 3/4" | 9 5/16" | 1 1/4" | 1 1/2" | 3 1/16" | 3/4" | 16# |
| -036 | 1/2" NPT | 9 1/8" | | | | | | | | | | | | | |
| -221 | G3/4" (BSP) | 222 | — | — | — | -468 | — | 25.91 25.81 | 44 | 244 | 1 1/4" | 38 | 78 | 3/4" | 7.2 Kg |
| -013 | 3/4" NPT | 10 1/4" | -263 | 1.000" | 10 5/8" | — | — | — | — | — | 1 1/4" | 1 1/2" | 3 1/16" | 3/4" | 17# |
| -183 | 1" NPT | 10 3/8" | | | | | | | | | | 1 3/4" | 3 1/2" | 1" | |
| -221 | G3/4" (BSP) | 243 | — | — | — | -468 | — | 25.91 25.81 | 44 | 250 | 1 1/4" | 38 | 78 | 3/4" | 7.7 Kg |

# Duoflow Supply Pipe Installations

Deublin water service unions can be adapted for Duoflow applications where a single media is circulated through and around the supply pipe. Duoflow elbows are available in 3 styles to accept a variety of different supply systems. The guidelines shown below should be carefully considered. A poorly designed supply system can contribute to premature union failure.

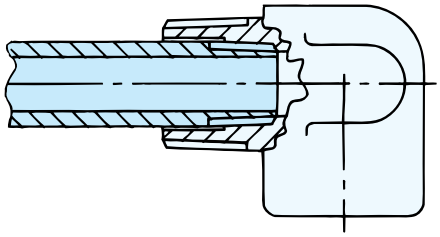
Where long pipes or high speeds are required, an adapter should be used to avoid transmitting stresses from heavy pipes, cascading water or vibrations to the union. A typical adapter is illustrated.




*Supplied by customer.

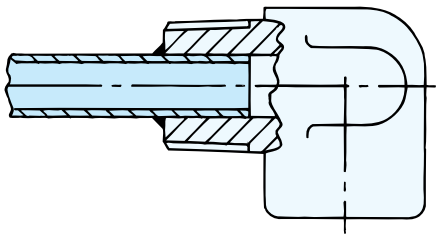
## Threaded Pipe

The largest threaded supply pipe achieves the maximum flow rates available for a particular size union. Stresses at the pipe thread can cause breakage allowing the pipe to fall into the roll. For this reason pipe lengths longer than 4 union lengths (4 x D1) and rotational speeds above 1000 RPM should be avoided.



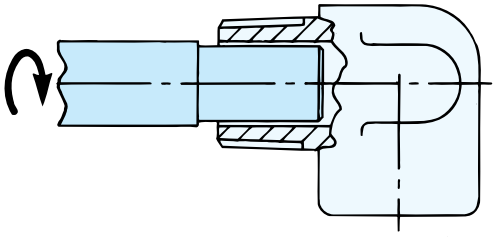
## Fixed Tube

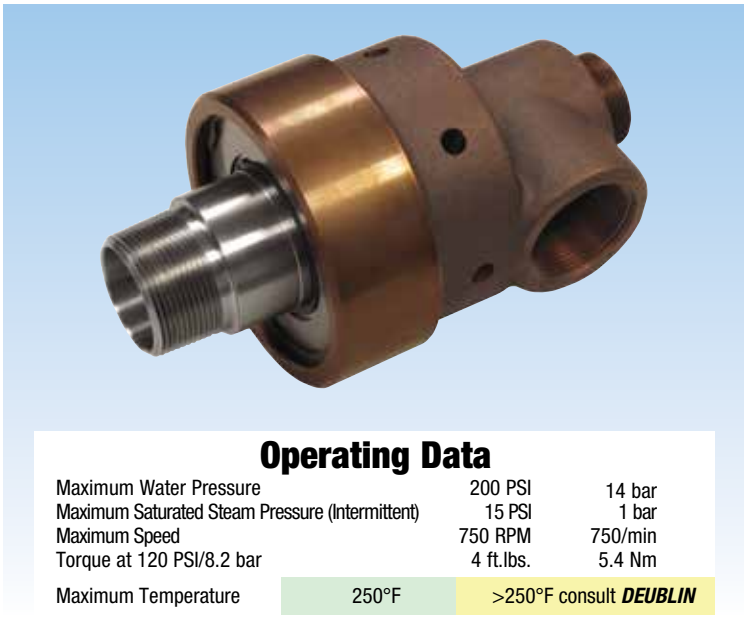
Thin wall stainless steel tube silver soldered into the Duoflow elbow produces the strongest, lightest weight assembly. The thinner wall sections allow greater flow rates than the threaded pipe. Maximum flow rates are obtained with the largest tube available for a given size union. Tube length is usually limited to 6 union lengths (6 x D1). Speeds to 3500 RPM are possible.



## Rotating Pipe

Rotating pipes are fastened internally to rotate with the roll. The Duoflow elbow helps to support the pipe and restrict crosstalk between passages. The pipe must be straight and concentric to the center line to avoid excessive loading of the union. The union must also have a rotor with a straight thread (Example 1"-14" UNS) rather than a tapered pipe thread to assure concentricity. Rotational speeds above 1000 RPM should be avoided.





# DEUBLIN

## 2½" Field Repairable All Purpose Unions

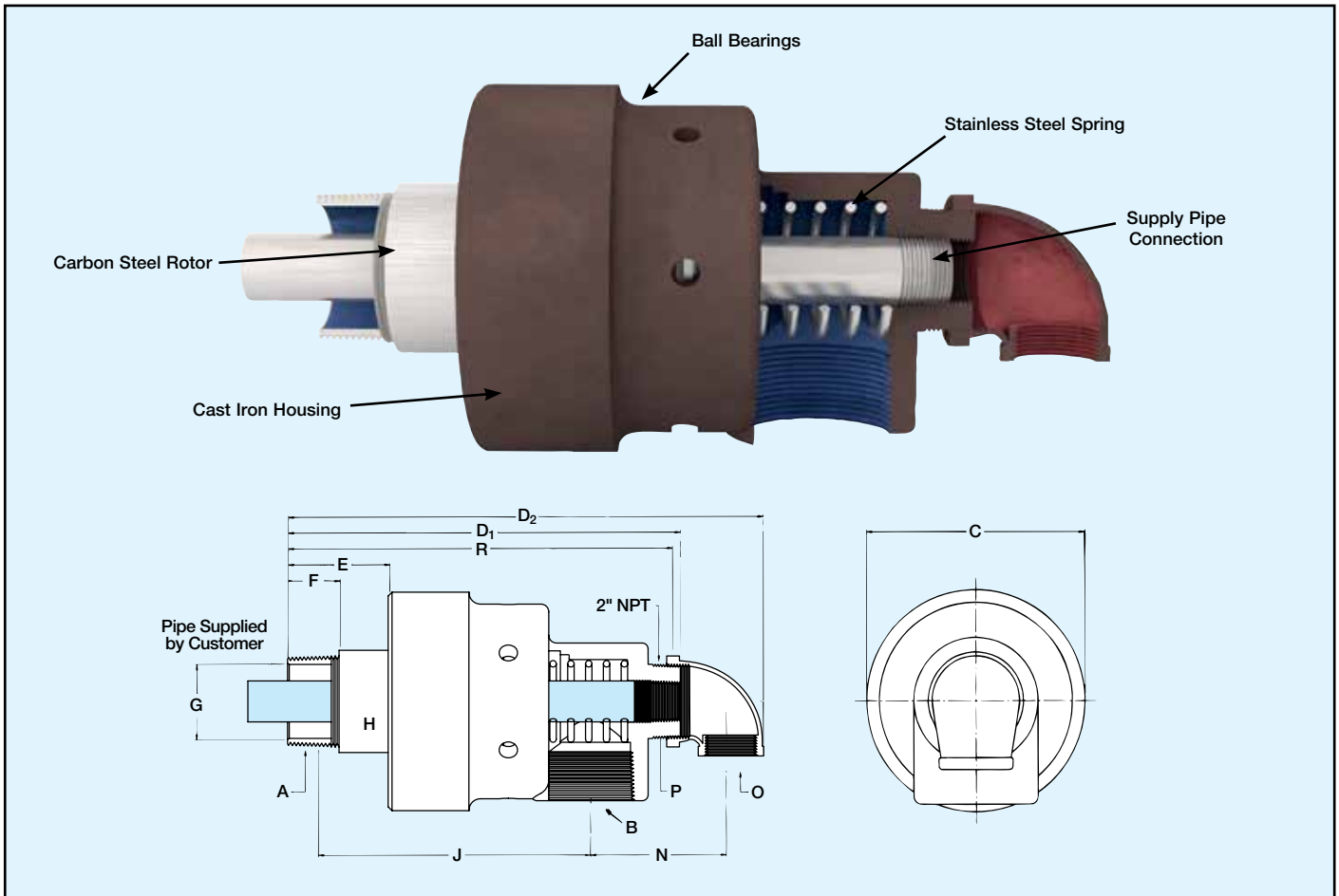
- Monoflow and duoflow design
- Self-supported rotating union
- Radial housing connection
- Balanced mechanical seal
- 3 vent slots
- Cast iron housing - standard
  Cast iron housing nickel-plated - optional
- Steel rotor
- Lubrication Guide page 55

### Operating Data

| | | |
|---|---|---|
| Maximum Water Pressure | 200 PSI | 14 bar |
| Maximum Saturated Steam Pressure (Intermittent) | 15 PSI | 1 bar |
| Maximum Speed | 750 RPM | 750/min |
| Torque at 120 PSI/8.2 bar | 4 ft.lbs. | 5.4 Nm |
| Maximum Temperature | 250°F | >250°F consult ***DEUBLIN*** |

**Seal Combination**
- Carbon Graphite/Tungsten Carbide - Standard

**Seal Combination - E.L.S.**
- Tungsten Carbide/Ceramic for severe conditions (poor water quality), max. temperature 200°F




| B Port NPT | Ordering Number* All Purpose | Ordering Number* E.L.S. | A Rotor Thread | C Dia. | $D_1$ | $D_2$ | E | F | G Rotor Hole | H Dia. | J Lock-up | N | O NPT | P NPT | R | Shpg. Wt. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2½" | 755-700-413-117 | 755-701-413-117 | 2½" NPT RH | 7" | 13½" | 15" | 3¼" | 1⅞" | 2⅜" | 3⅜₂" | 8⅝" | 4¼" | 1¼" | 1" | 12⅛" | 44# |
| | 755-700-415-117 | 755-701-415-117 | 2½" NPT LH | | | | | | | | | | | | | |
| 2½" | 755-700-330-117 | 755-701-330-117 | G2½" (BSP) RH | 178 | 343 | 381 | 82.5 | 38.1 | 60.3 | 83.3 | 207 | 108 | 1¼" | 1" | 308 | 20 Kg |
| | 755-700-411-117 | 755-701-411-117 | G2½" (BSP) LH | | | | | | | | | | | | | |
| 2½" | 755-702-413-139 | 755-703-413-139 | 2½" NPT RH | 7" | 13½" | 15¼" | 3¼" | 1⅞" | 2⅜" | 3⅜₂" | 8⅝" | 4⅜" | 1½" | ** 1½" | 12⅛" | 44# |
| | 755-702-415-139 | 755-703-415-139 | 2½" NPT LH | | | | | | | | | | | | | |

* Monoflow unions can be specified by omitting the -117 or -139 suffix. Flange rotor available upon request. Duoflow rotating pipe models available upon request.
** For recirculating water service (equal in and out flow) use 1½" supply pipe.

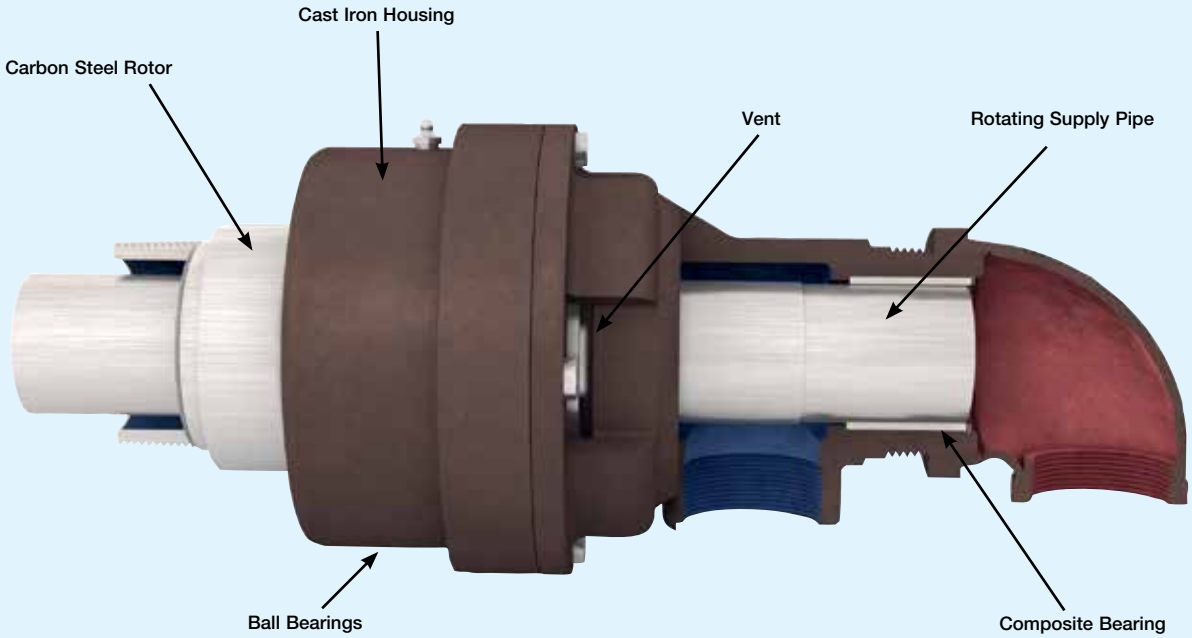
# DEUBLIN

## 3" Union for Rubber and Plastic Application

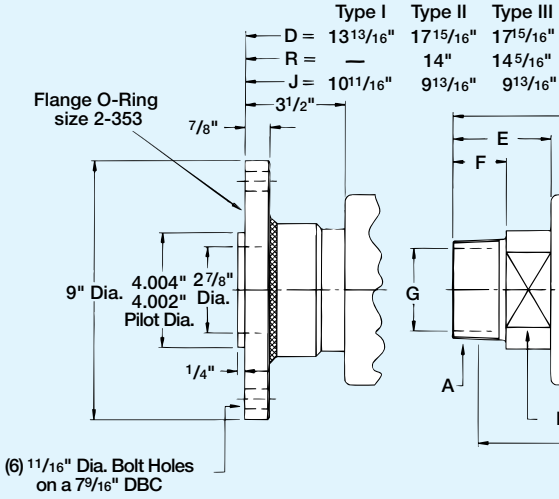
- Monoflow and duoflow design
- Self-supported rotating union
- Radial housing connection
- Balanced mechanical seal
- Seal combination:
  Carbon Graphite/Tungsten Carbide
- Full-media flow
- Easy and quick replacement of sealing components (rotor seal, floating seal)
- Vented housing
- Cast iron housing - standard
- Steel rotor
- Lubrication Guide page 55

## Operating Data

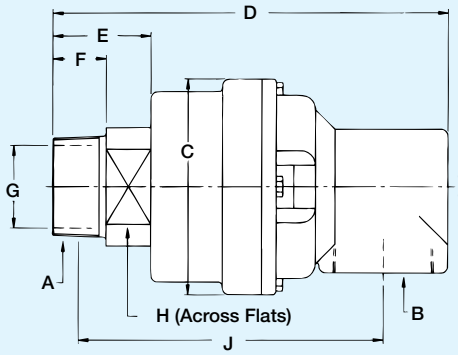
| | | | |
|---|---|---|---|
| Maximum Water Pressure | | 150 PSI | 10 bar |
| Maximum Saturated Steam Pressure (Intermittent) | | 15 PSI | 1 bar |
| Maximum Speed | | 500 RPM | 500/min |
| Torque @ 150 PSI/10bar | | 6 ft.lbs | 8.2 Nm |
| Maximum Water Temperature | 250°F | >250°F consult ***DEUBLIN*** | |



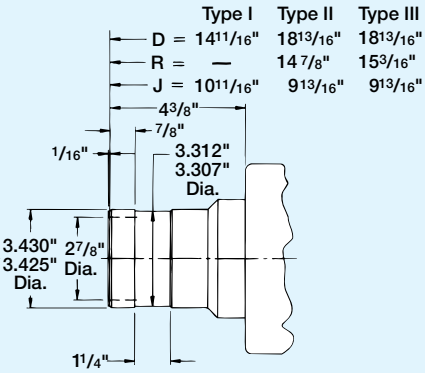
# 857 Series Specifications



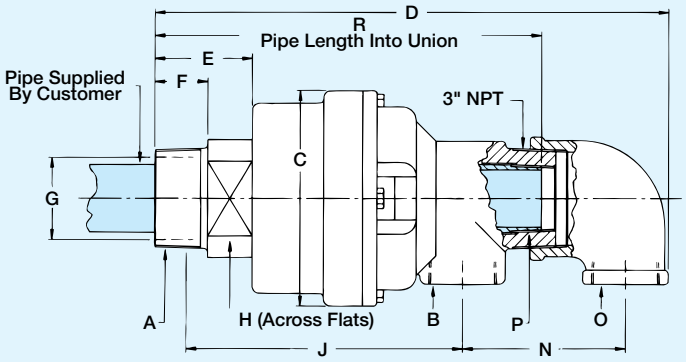

**857-132 Flanged Rotor Detail**



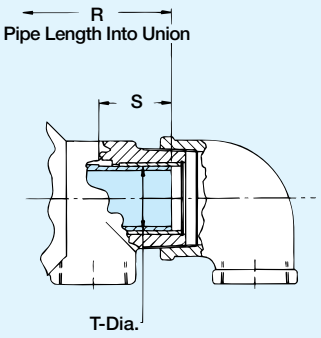

**Type I**
**Monoflow**




**857-128 Quick Connect Rotor Detail**




**Type II**
**Duoflow Fixed Pipe**




**Type III**
**Duoflow Rotating Pipe**

| B Port NPT | | Ordering Number | A Rotor Thread | | C Dia. | D | E | F | G | H* | J | N | O NPT | P NPT | R | S | T | Shpg. Wt. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Type I | 3" | 857-000-101 | 3" NPT | RH | 7 1/2" | 13 3/4" | 3 7/16" | 1 7/8" | 2 7/8" | 100 | 10 9/16" | - | - | - | - | - | - | 50# |
| | | 857-000-102 | 3" NPT | LH | | | | | | | | | | | | | | |
| | | 857-000-118 | G3" (BSP) | RH | 190 | 344 | 83 | 44 | 73 | 100 | 244 | - | - | - | - | - | - | 23 Kg |
| | | 857-000-119 | G3" (BSP) | LH | | | | | | | | | | | | | | |
| Type II | 2" | 857-001-101 | 3" NPT | RH | 7 1/2" | 17 7/8" | 3 7/16" | 1 7/8" | 2 7/8" | 100 | 9 3/4" | 5 11/16" | 2" | 2" | 13 15/16" | - | - | 55# |
| | | 857-001-102 | 3" NPT | LH | | | | | | | | | | | | | | |
| | | 857-001-118 | G3" (BSP) | RH | 190 | 451 | 83 | 44 | 73 | 100 | 228 | 144 | 2" | 2" | 351 | - | - | 25 Kg |
| | | 857-001-119 | G3" (BSP) | LH | | | | | | | | | | | | | | |
| Type III | 2" | 857-002-101 | 3" NPT | RH | 7 1/2" | 17 7/8" | 3 7/16" | 1 7/8" | 2 7/8" | 100 | 9 3/4" | 5 11/16" | 2" | - | 14 1/4" | 2 3/4" | 2.308" | 55# |
| | | 857-002-102 | 3" NPT | LH | | | | | | | | | | | | | 2.302" | |
| | | 857-002-118 | G3" (BSP) | RH | 190 | 451 | 83 | 44 | 73 | 100 | 228 | 144 | 2" | - | 355 | 70 | 58.62 | 25 Kg |
| | | 857-002-119 | G3" (BSP) | LH | | | | | | | | | | | | | 58.47 | |

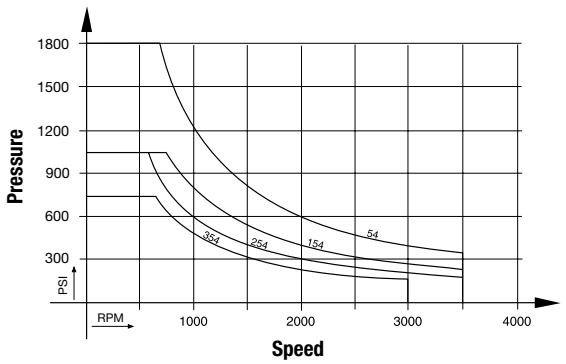
*Metric

# DEUBLIN
## Stainless Steel Unions

- Monoflow and duoflow (available) design
- Self-supported rotating union
- Radial or axial (available) housing connection
- Wetted parts made of 316 stainless steel
- Suitable for the food, chemical & pharmaceutical industries
- Full-media flow

**Seal Combination**
- Carbon Graphite/Ceramic - Standard

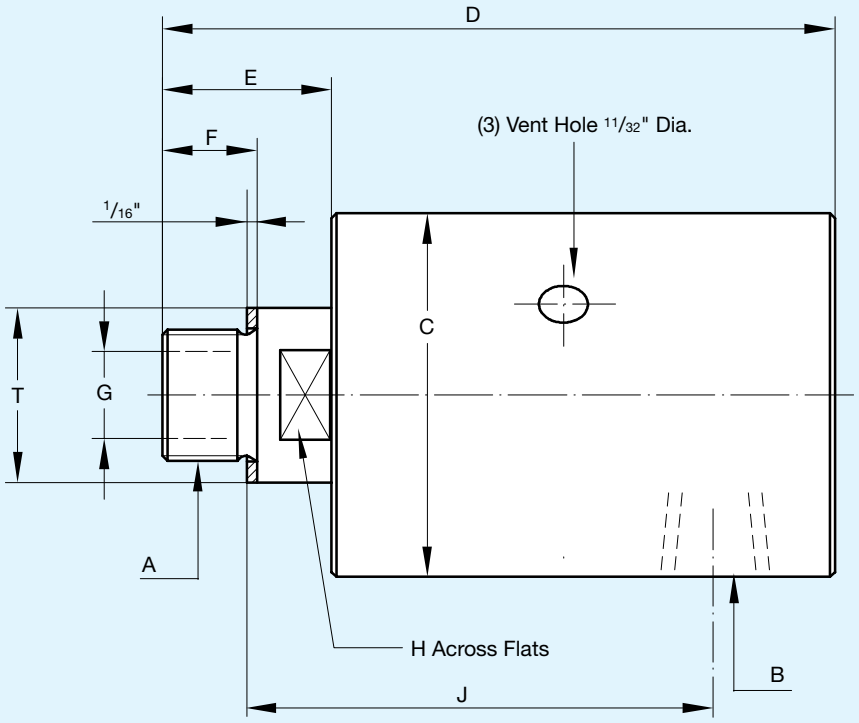
**Seal Combination - E.L.S.**
- Tungsten Carbide/Ceramic




## Operating Data

| | | |
|---|---|---|
| Maximum Pressure and Maximum Speed | See Diagram | |
| Maximum Speed NPT | 1,500 RPM | 1,500/min |
| Maximum Temperature | 200°F | >200°F consult ***DEUBLIN*** |

(Temperatures above 160°F pressure should not exceed 150 PSI (10 bar) and media must be in liquid form.)




| B Port NPT | Ordering Number: Standard Model | Ordering Number: E.L.S. Model | A Rotor Thread | C Dia. | D | E | F | G | H* | J | T | Shpg. Wt. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3/8" | 54-050-117 | 54-051-112 | 3/8" NPT RH | 1 15/16" | 4" | 1 1/16" | 5/8" | 3/8" | 19 | 3" | 7/8" | 1 1/2# |
| | 54-050-178 | 54-051-110 | G3/8" (BSP) RH | 49 | 101 | 26 | 16 | 9.5 | 19 | 71.5 | 22 | 1.1 Kg |
| 1/2" | 154-050-117 | 154-051-112 | 1/2" NPT RH | 2 1/2" | 4 15/16" | 1 7/16" | 7/8" | 1/2" | 24 | 3 3/4" | 1 3/16" | 2# |
| | 154-050-178 | 154-051-110 | G1/2" (BSP) RH | 64 | 123 | 34 | 19 | 12.7 | 24 | 89 | 30 | 1.8 Kg |
| 3/4" | 254-050-117 | 254-051-112 | 3/4" NPT RH | 2 7/8" | 5 7/16" | 1 15/32" | 7/8" | 1 1/16" | 30 | 4 1/16" | 1 3/8" | 5 3/4# |
| | 254-050-178 | 254-051-110 | G3/4" (BSP) RH | 73 | 135 | 34 | 19 | 17.5 | 30 | 98 | 35 | 2.6 Kg |
| 1" | 354-050-117 | 354-051-112 | 1" NPT RH | 3 11/16" | 6 9/16" | 1 15/16" | 1 1/8" | 1" | 36 | 4 7/8" | 1 25/32" | 11 1/4# |
| | 354-050-178 | 354-051-110 | G1" (BSP) RH | 94 | 161 | 43 | 22 | 25 | 36 | 117 | 45 | 5.1 Kg |

Note: 1¼" & 1½" available. *Metric

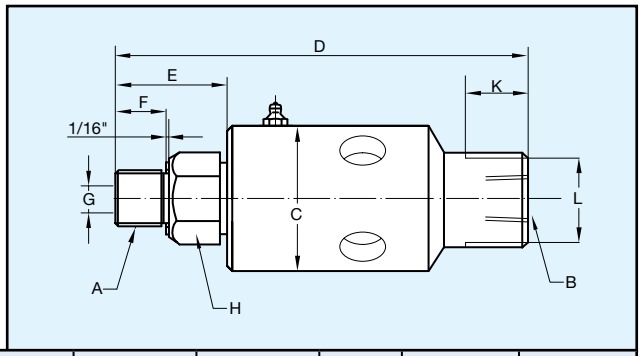
# DEUBLIN

## Model 927 High Pressure / Low Torque Water Union

- Monoflow design
- Self-supported rotating union
- Axial housing connection
- Balanced mechanical seal
- Seal combination: Tungsten Carbide/Tungsten Carbide
- Slinger and vents protect bearings
- Low torque design
- Stainless steel housing and rotor

### Operating Data

| | | |
|---|---|---|
| Maximum Water Pressure | 4,000 PSI | 276 bar |
| Maximum Speed | 2,000 RPM | 2,000/min |
| Maximum Flow | 4 GPM | 15 L/min |
| Maximum Temperature | 200°F | 90°C |




| B Port NPT | Ordering Number | A Rotor Thread | C | D | E | F | G Rotor Hole | H* Across Flats | K | L Across Flats | Shpg. Wt. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3/8" | 927-150-151 | 3/4"-16 UNF RH | 2 1/4" | 5 5/8" | 1 9/16" | 3/4" | 3/16" | 30 | 1" | 1 1/4" | 3# |
| | 927-150-152 | 3/4"-16 UNF LH | | | | | | | | | |

# DEUBLIN

## Model 22 Car Wash Union

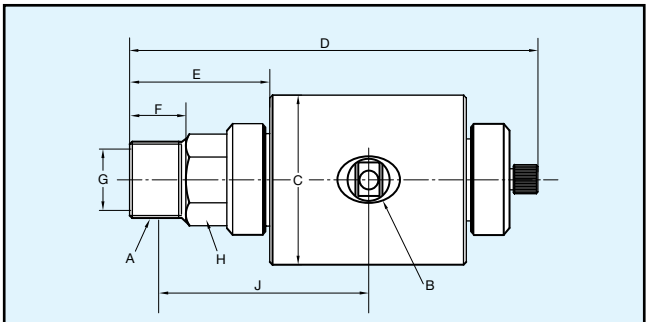
- Monoflow design
- Self-supported rotating union
- Radial housing connection
- Seal combination: Silicon Carbide/Silicon Carbide
- Stainless steel housing and rotor

### Operating Data

| | | |
|---|---|---|
| Maximum Water Pressure** | 1,500 PSI | 105 bar |
| Maximum Speed** | 250 RPM | 250/min |
| Maximum Temperature | 250°F | 121°C |

** Union is designed for continuous operation at either maximum speed or maximum pressure. If operating conditions are close to maximum pressure and speed simultaneously, consult ***DEUBLIN***.

**(Not suitable for overhead boom.)**




| B Port NPT | Ordering Number | A Rotor Thread | C | D | E | F | G Rotor Hole | H* Across Flats | J Approx. Lock-up | Shpg. Wt. |
|---|---|---|---|---|---|---|---|---|---|---|
| 3/4" | 22-001-101 | 1/2" NPT RH | 2 3/4" | 5 9/16" | 1 7/8" | 11/16" | 1/2" | 30 | 2 11/16" | 4 3/4# |
| 3/4" | 22-001-102 | 1/2" NPT LH | | | | | | | | |
| 3/4" | 22-001-103 | 3/4" NPT RH | 2 3/4" | 5 3/4" | 2 1/16" | 7/8" | 1/2" | 30 | 2 7/8" | 4 3/4# |
| 3/4" | 22-001-104 | 3/4" NPT LH | | | | | | | | |

*Metric

# *DEUBLIN*

## 2", 2½", 3" & 4" Cartridge Water Unions

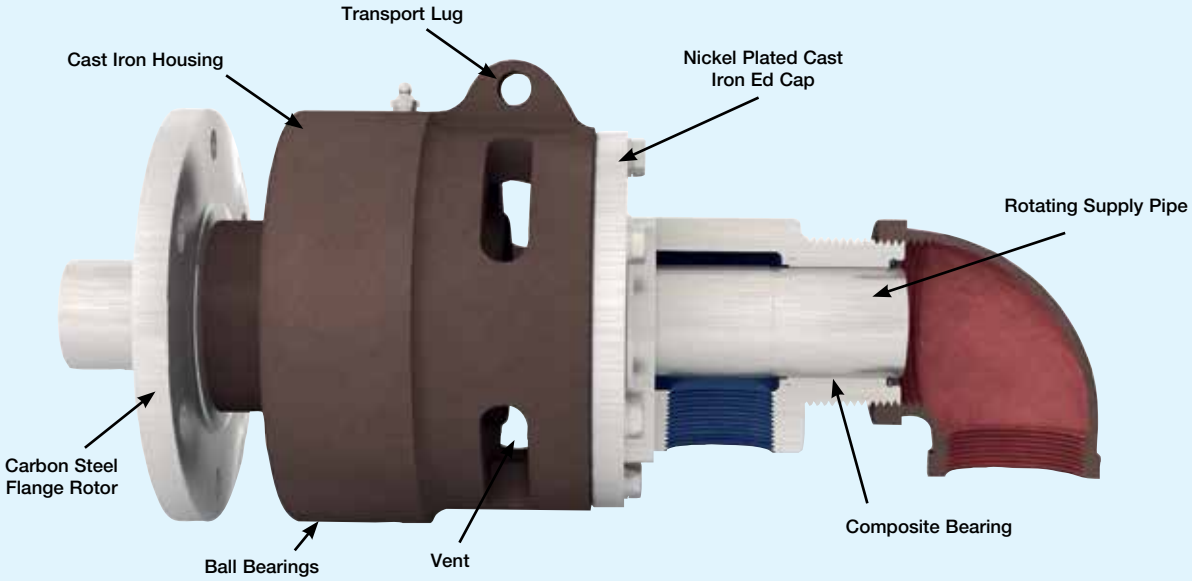
- Monoflow and duoflow design
- Self-supported rotating union
- Radial housing connection
- Balanced mechanical seal
- Steel-banded floating seal
- Easy and quick replacement of sealing components
- Full-media flow
- Vent slots
- Cast iron housing
- Steel rotor flanged/threaded
- Lubrication Guide page 55

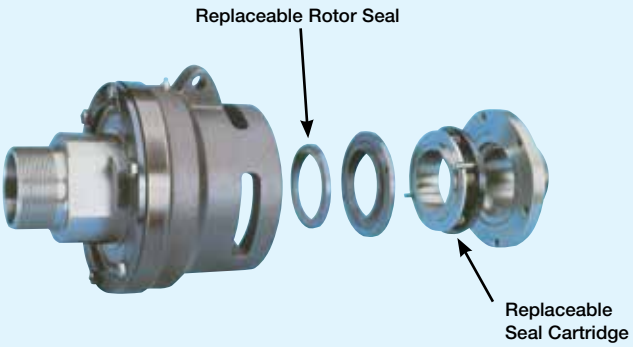
## Operating Data

| | | | |
|---|---|---|---|
| Maximum Water Pressure | | 150 PSI | 10 bar |
| Maximum Speed | | 750 RPM | 750/min |
| Torque for | Model 6200 | 4 ft.lbs | 5.4 Nm |
| | Model 6250 | 7 ft.lbs | 9.5 Nm |
| | Model 6300 | 8 ft.lbs | 10.9 Nm |
| | Model 6400 | 10 ft.lbs | 13.6 Nm |
| Maximum Temperature | | 250°F | >250°F consult ***DEUBLIN*** |

**Seal Combination**
- Carbon Graphite/Tungsten Carbide - Standard

**Seal Combination - E.L.S.**
- Silicon Carbide/Tungsten Carbide for severe conditions (poor water quality), max. temperature 200°F



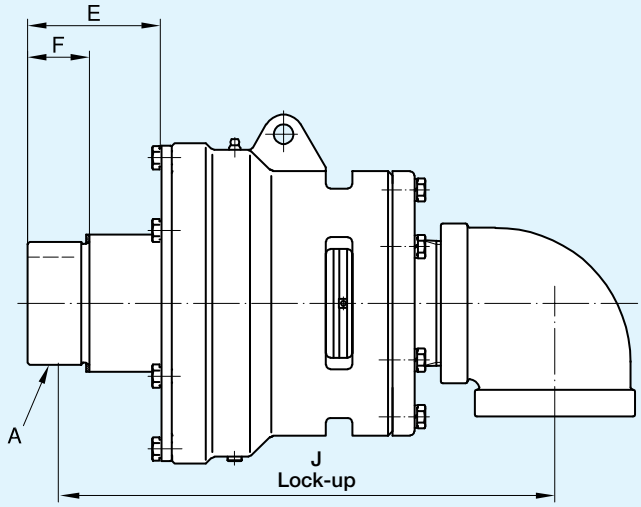




### *DEUBLIN* Exclusive On-The-Machine Repair Cartridge

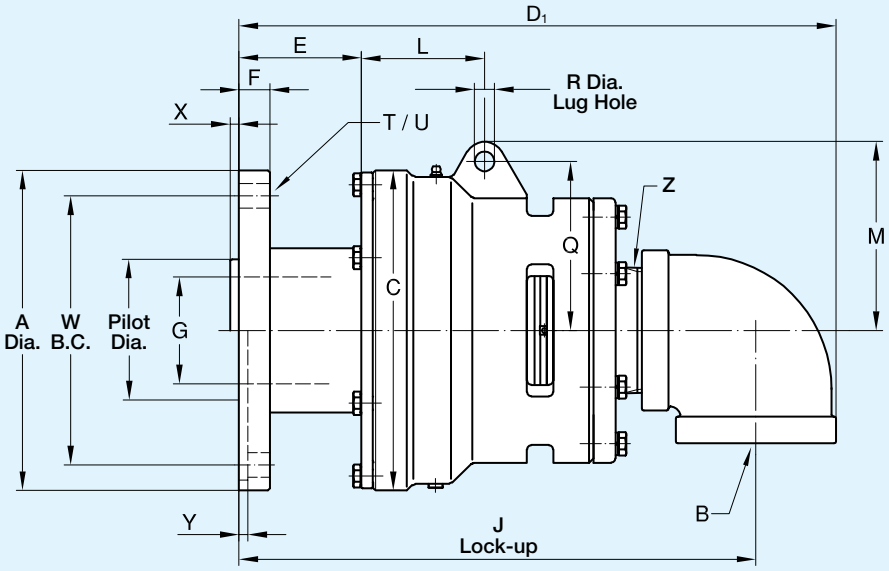
Seals are replaced quickly and easily. There's no need to remove hose connections or use special tools. Make sure the system is cold and pressureless! Simply remove 6 hex bolts and end cap, then remove floating seal cartridge and rotor seal face and replace with new seals. Rotor seal is keyed and sealed to the rotor with a built-in O-Ring. Replace end cap, hex bolts and safety wire. Detailed instructions available from ***DEUBLIN***.

# Monoflow Rotating Union

## Threaded Rotor




## Flanged Rotor



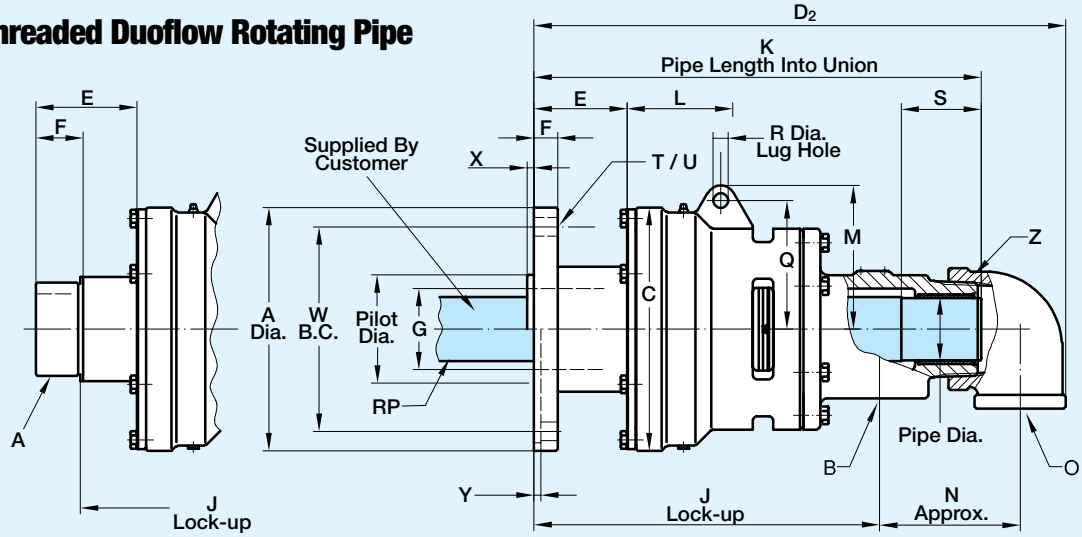

**Flanged O-Ring**
(supplied by *DEUBLIN*) for:

| Model | O-Ring Size |
|---|---|
| 6200 | 2-343 Viton |
| 6250 | 2-343 Viton |
| 6300 | 2-353 Viton |
| 6400 | 2-361 Viton |

| B Port NPT | Ordering Number Standard | Ordering Number E.L.S. | A Rotor Thread | C | $D_1$ | E | F | G | J | L | M | Q | R | T | U | W | Pilot Dia. | X | Y | Z NPT | Shpg. Wt. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2" | 6200-001-123 | 6200-016-123 | 2" NPT RH | 5¼" | 12" | 2 15/16" | 1½" | 1⅞" | 9⅝" | 2⅞" | 3 9/16" | 3 1/16" | ½" | – | – | – | – | – | – | 2" | 21# |
| | 6200-001-135 | 6200-016-135 | 2" NPT LH | | | | | | | | | | | | | | | | | | |
| | 6200-001-137 | 6200-016-137 | G2"(BSP) RH | 133 | 295 | 63.5 | 28.6 | 47 | 228 | 73 | 90 | 78 | 12.7 | – | – | – | – | – | – | 2" | 9.5 Kg |
| | 6200-001-139 | 6200-016-139 | G2"(BSP) LH | | | | | | | | | | | | | | | | | | |
| | 6200-001-115 | 6200-016-115 | 9" O.D. FLANGE | 5¼" | 12" | 3¼" | 1" | 1⅞" | 10¼" | 2⅞" | 3 9/16" | 3 1/16" | ½" | 4 | 1 1/16" | 6⅜" | 8.317" 8.315" | – | ¼" | 2" | 32# |
| 2½" | 6250-001-115 | 6250-018-115 | 2½"NPT RH | 7" | 14⅝" | 3¼" | 1⅞" | 2⅜" | 12" | 3¾" | 4 7/16" | 3⅞" | 9/16" | – | – | – | – | – | – | 2½" | 44½# |
| | 6250-001-119 | 6250-018-119 | 2½"NPT LH | | | | | | | | | | | | | | | | | | |
| | 6250-001-121 | 6250-018-121 | G2½"(BSP) RH | 178 | 371 | 82.5 | 38.1 | 60 | 290 | 95 | 113 | 98 | 14.3 | – | – | – | – | – | – | 2½" | 20.2 Kg |
| | 6250-001-123 | 6250-018-123 | G2½"(BSP) LH | | | | | | | | | | | | | | | | | | |
| | 6250-001-300 | 6250-018-300 | 9" O.D. FLANGE | 7" | 15" | 3⅝" | 1" | 2⅜" | 12 15/16" | 3¾" | 4 7/16" | 3⅞" | 9/16" | 4 | 1 1/16" | 6⅜" | 8.317" 8.315" | – | ¼" | 2½" | 59# |
| 3" | 6300-001-157 | 6300-015-157 | 3" NPT RH | 9" | 17 3/16" | 3⅞" | 1⅞" | 2⅞" | 14" | 3 7/16" | 5 5/16" | 4¾" | 9/16" | – | – | – | – | – | – | 3" | 98# |
| | 6300-001-158 | 6300-015-158 | 3" NPT LH | | | | | | | | | | | | | | | | | | |
| | 6300-001-161 | 6300-015-161 | G3"(BSP) RH | 229 | 433 | 95 | 44.4 | 73 | 335 | 87 | 135 | 121 | 14.3 | – | – | – | – | – | – | 3" | 45.5 Kg |
| | 6300-001-162 | 6300-015-162 | G3"(BSP) LH | | | | | | | | | | | | | | | | | | |
| | 6300-001-103 | 6300-015-103 | 9" O.D. FLANGE | 9" | 16¾" | 3 7/16" | ⅞" | 3" | 14½" | 3 7/16" | 5 5/16" | 4¾" | 9/16" | 6 | 1 1/16" | 7 9/16" | 4.004" 4.002" | ¼" | – | 3" | 113# |
| 4" | 6400-030-330 | 6400-042-330 | 10⅞" O.D. FLANGE | 11" | 19" | 3" | ⅞" | 4" | 16⅜" | 3¾" | 6⅛" | 5¼" | ⅝" | 6 | 13/16" | 9" | 4.749" 4.746" | .300 | – | 4" | 156# |

Note: Threaded Rotors Not For Calender Service.

## Flanged/Threaded Duoflow Rotating Pipe



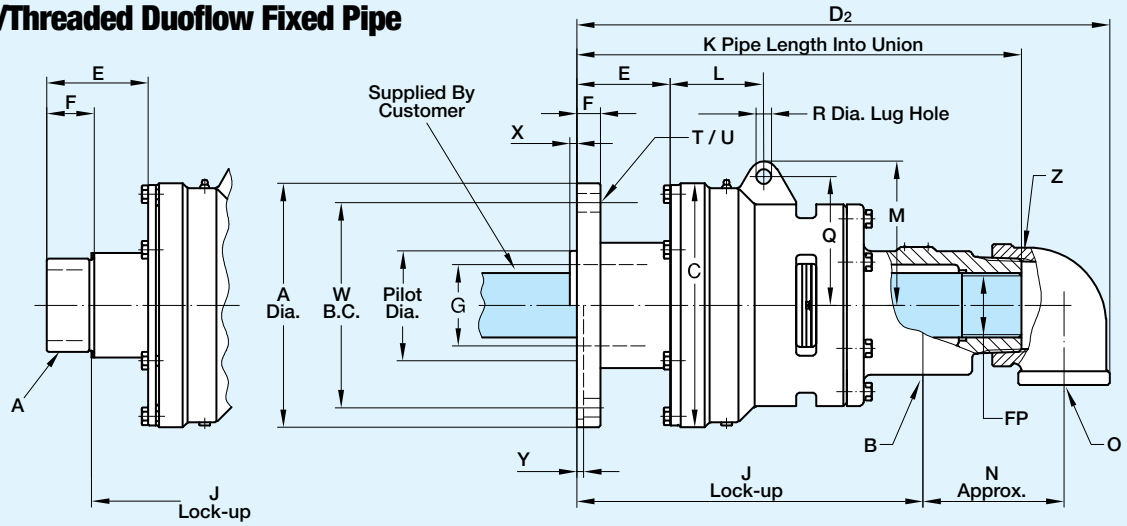

### Duoflow Rotating Pipe Models

| B & O Port NPT | Standard | E.L.S. | A | C | $D_2$ | E | F | G | J | K | L |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (2) x 1" | 6200-002-123 | 6200-030-123 | 2" NPT RH | 5¼" | 12⅞" | 2 15/16" | 1½" | 1⅞" | 8" | 10⅝" | 2⅞" |
| | 6200-002-135 | 6200-030-135 | 2" NPT LH | | | | | | | | |
| | 6200-002-137 | 6200-030-137 | G2" (BSP) RH | 133 | 314 | 63.5 | 28.6 | 47 | 189 | 260 | 73 |
| | 6200-002-139 | 6200-030-139 | G2" (BSP) LH | | | | | | | | |
| | 6200-002-115 | 6200-030-115 | 9" O.D FLANGE. | 5¼" | 13 3/16" | 3¼" | 1" | 1⅞" | 8⅝" | 10 15/16" | 2⅞" |
| (2) x 1½" | 6250-002-115 | 6250-030-115 | 2½" NPT RH | 7" | 15⅞" | 3¼" | 1⅞" | 2⅜" | 9¾" | 13⅝" | 3¾" |
| | 6250-002-119 | 6250-030-119 | 2½" NPT LH | | | | | | | | |
| | 6250-002-121 | 6250-030-121 | G2½" (BSP) RH | 178 | 403 | 82.5 | 38.1 | 60 | 228.6 | 346 | 95 |
| | 6250-002-123 | 6250-030-123 | G2½" (BSP) LH | | | | | | | | |
| | 6250-002-300 | 6250-030-300 | 9" O.D. FLANGE | 7" | 16¼" | 3⅝" | 1" | 2⅜" | 10 9/16" | 13⅝" | 3¾" |
| (2) x 2" | 6300-002-157 | 6300-030-157 | 3" NPT RH | 9" | 20" | 3⅞" | 1⅞" | 2⅞" | 12¼" | 16⅜" | 3 7/16" |
| | 6300-002-158 | 6300-030-158 | 3" NPT LH | | | | | | | | |
| | 6300-002-161 | 6300-030-161 | G3" (BSP) RH | 229 | 505 | 95 | 44.4 | 73 | 288.9 | 412 | 87 |
| | 6300-002-162 | 6300-030-162 | G3" (BSP) LH | | | | | | | | |
| | 6300-002-103 | 6300-030-103 | 9" O.D. FLANGE | 9" | 19 9/16" | 3 7/16" | ⅞" | 3" | 12¾" | 16" | 3 7/16" |
| (2) x 2½" | 6400-031-330 | 6400-051-330 | 10⅞" O.D. FLANGE | 11" | 21⅜" | 3" | ⅞" | 4" | 13¾" | 17½" | 3¾" |

### Duoflow Fixed Pipe Models

| B & O Port NPT | Standard | E.L.S. | A | C | $D_2$ | E | F | G | J | K | L |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (2) x 1" | 6200-011-123 | 6200-040-123 | 2" NPT RH | 5¼" | 12⅞" | 2 15/16" | 1½" | 1⅞" | 8" | 10⅛" | 2⅞" |
| | 6200-011-135 | 6200-040-135 | 2" NPT LH | | | | | | | | |
| | 6200-013-137 | 6200-020-137 | G2" (BSP) RH | 133 | 314 | 63.5 | 28.6 | 47 | 189 | 246 | 73 |
| | 6200-013-139 | 6200-020-139 | G2" (BSP) LH | | | | | | | | |
| | 6200-011-115 | 6200-040-115 | 9" O.D. FLANGE | 5¼" | 13 3/16" | 3¼" | 1" | 1⅞" | 8⅝" | 10 1/16" | 2⅞" |
| (2) x 1½" | 6250-006-115 | 6250-040-115 | 2½" NPT RH | 7" | 15⅞" | 3¼" | 1⅞" | 2⅜" | 9¾" | 13" | 3¾" |
| | 6250-006-119 | 6250-040-119 | 2½" NPT LH | | | | | | | | |
| | 6250-025-121 | 6250-035-121 | G2½" (BSP) RH | 178 | 403 | 82.5 | 38.1 | 60 | 228.6 | 330 | 95 |
| | 6250-025-123 | 6250-035-123 | G2½" (BSP) LH | | | | | | | | |
| | 6250-006-300 | 6250-040-300 | 9" O.D. FLANGE | 7" | 16¼" | 3⅝" | 1" | 2⅜" | 10 9/16" | 13⅜" | 3¾" |
| (2) x 2" | 6300-006-157 | 6300-040-157 | 3" NPT RH | 9" | 20" | 3⅞" | 1⅞" | 2⅞" | 12¼" | 16 1/16" | 3 7/16" |
| | 6300-006-158 | 6300-040-158 | 3" NPT LH | | | | | | | | |
| | 6300-025-161 | 6300-035-161 | G3" (BSP) RH | 229 | 505 | 95 | 44.4 | 73 | 288.9 | 404 | 87 |
| | 6300-025-162 | 6300-035-162 | G3" (BSP) LH | | | | | | | | |
| | 6300-006-103 | 6300-040-103 | 9" O.D. FLANGE | 9" | 19 9/16" | 3 7/16" | ⅞" | 3" | 12¾" | 16 | 3 7/16" |
| (2) x 2½" | 6400-024-330 | 6400-054-330 | 10⅞" O.D. FLANGE | 11" | 21⅜" | 3" | ⅞" | 4" | 13¾" | 17" | 3¾" |

## Flanged/Threaded Duoflow Fixed Pipe




| M | N | O NPT | Pipe Dia. | RP | Q | R | S | T | U | W | Pilot Dia. | X | Y | Z NPT | Shpg. Wt. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 9/16" | 3 3/8" | 1" | 1.245" 1.240" | 1" | 3 1/16" | 1/2" | 1 1/2" | – | – | – | – | – | – | 2" | 29# |
| 90 | 86 | 1" | 31.62 31.49 | 1" | 78 | 12.7 | 38 | – | – | – | – | – | – | 2" | 13.2 Kg |
| 3 9/16" | 3 3/8" | 1" | 1.245" 1.240" | 1" | 3 1/16" | 1/2" | 1 1/2" | 4 | 11/16" | 6 3/8" | 8.317" 8.315" | – | 1/4" | 2" | 40# |
| 4 7/16" | 4 1/16" | 1 1/2" | 1.867" 1.865" | 1 1/2" | 3 7/8" | 9/16" | 1 5/8" | – | – | – | – | – | – | 2 1/2" | 55 1/2# |
| 113 | 103 | 1 1/2" | 47.42 47.37 | 1 1/2" | 98 | 14.3 | 41 | – | – | – | – | – | – | 2 1/2" | 25.2 Kg |
| 4 7/16" | 4 1/16" | 1 1/2" | 1.867" 1.865" | 1 1/2" | 3 7/8" | 9/16" | 1 5/8" | 4 | 11/16" | 6 3/8" | 8.317" 8.315" | – | 1/4" | 2 1/2" | 70# |
| 5 5/16" | 5 3/16" | 2" | 2.308" 2.302" | 2" | 4 3/4" | 9/16" | 2 3/4" | – | – | – | – | – | – | 3" | 105# |
| 135 | 132 | 2" | 58.62 58.47 | 2" | 121 | 14.3 | 70 | – | – | – | – | – | – | 3" | 47.7 Kg |
| 5 5/16" | 5 3/16" | 2" | 2.308" 2.302" | 2" | 4 3/4" | 9/16" | 2 3/4" | 6 | 11/16" | 7 9/16" | 4.004" 4.002" | 1/4" | – | 3" | 120# |
| 6 1/8" | 5 3/4" | 2 1/2" | 2.745" 2.742" | 2 1/2" | 5 1/4" | 5/8" | 2 1/2" | 6 | 13/16" | 9" | 4.749" 4.746" | .300" | – | 4" | 168# |

| M | N | O NPT | FP | Q | R | T | U | W | Pilot Dia. | X | Y | Z NPT | Shpg. Wt. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 9/16" | 3 3/8" | 1" | 1" NPT | 3 1/16" | 1/2" | – | – | – | - | – | – | 2" | 29# |
| 90 | 86 | 1" | G1 (BSP) | 78 | 12.7 | – | – | – | – | – | – | 2" | 13.2 Kg |
| 3 9/16" | 3 3/8" | 1" | 1" NPT | 3 1/16" | 1/2" | 4 | 11/16" | 6 3/8" | 8.317" 8.315" | – | 1/4" | 2" | 40# |
| 4 7/16" | 4 1/16" | 1 1/2" | 1 1/2" NPT | 3 7/8" | 9/16" | – | – | – | – | – | – | 2 1/2" | 55 1/2# |
| 113 | 103 | 1 1/2" | G1 1/2" (BSP) | 98 | 14.3 | – | – | – | – | – | – | 2 1/2" | 25.2 Kg |
| 4 7/16" | 4 1/16" | 1 1/2" | 1 1/2" NPT | 3 7/8" | 9/16" | 4 | 11/16" | 6 3/8" | 8.317" 8.315" | – | 1/4" | 2 1/2" | 70# |
| 5 5/16" | 5 3/16" | 2" | 2" NPT | 4 3/4" | 9/16" | – | – | – | – | – | – | 3" | 105# |
| 135 | 132 | 2" | G2" (BSP) | 121 | 14.3 | – | – | – | – | – | – | 3" | 47.7 Kg |
| 5 5/16" | 5 3/16" | 2" | 2" NPT | 4 3/4" | 9/16" | 6 | 11/16" | 7 9/16" | 4.004" 4.002" | 1/4" | – | 3" | 120# |
| 6 1/8" | 5 3/4" | 2 1/2" | 2 1/2" NPT | 5 1/4" | 5/8" | 6 | 13/16" | 9" | 4.749" 4.746" | .300" | – | 4" | 168# |

# DEUBLIN

## F Series 5" Water Union

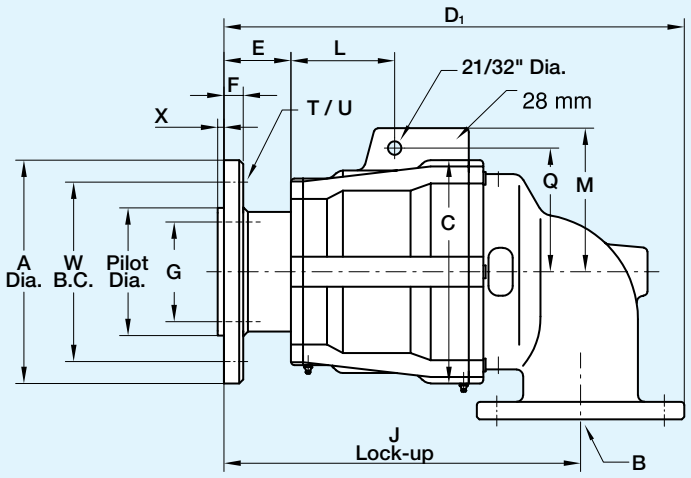
- Monoflow and duoflow design
- Self-supported rotating union
- Balanced mechanical seal
- Seal combination:
  Carbon Graphite/Tungsten Carbide
- Two widely-spaced ball bearings
- Labyrinth seal protects bearings
- Cast iron housing
- High corrosion resistant
- Steel flanged rotor
- On-the-machine seal replacement capability
- Inlet/outlet flange:
  standard ANSI
  optional DIN, JIS
- Special designs up to 12" available upon request

## Operating Data

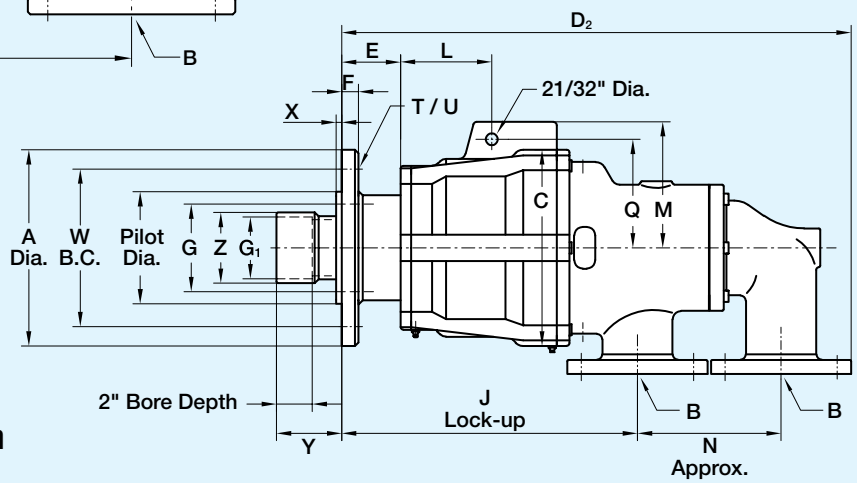
| | | |
|---|---|---|
| Maximum Water Pressure* | 230 PSI | 16 bar |
| Maximum Speed* | 1,000 RPM | 1,000/min |
| Maximum Temperature | 250°F | >250°F consult ***DEUBLIN*** |

*Union is designed for continuous operation at either maximum speed or maximum pressure. If operating conditions are close to maximum pressure and speed simultaneously, consult ***DEUBLIN***.

### Monoflow Rotating Union




### Duoflow Rotating Union

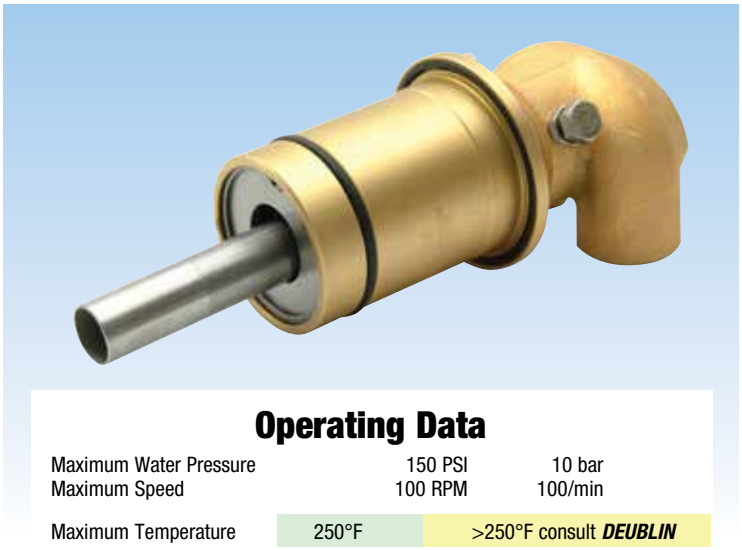



### Monoflow Union

| B Port | Ordering No. | A | C | $D_1$ | E | F | G | J | L | M | Q | T | U | W | X | Pilot Dia. | Shpg. Wt. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5" ANSI | F127-011-200 | 11" | 11" | 23" | 3 11/32" | 1" | 4 29/32" | 17 29/32" | 5 1/8" | 7 3/32" | 6 1/32" | 6 | 23/32" | 8 27/32" | 5/16" | 6.295" 6.291" | 220# |

### Duoflow Union

| B Port | Ordering No. | A | C | $D_2$ | E | F | $G_1$ | J | L | M | N | Q | T | U | W | X | Y | Z | Pilot Dia. | Shpg. Wt. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (2) 3" ANSI | F127-023-204-701 | 11" | 11" | 28 1/2" | 3 11/32" | 1" | 3.480" 3.476" | 16 21/32" | 5 1/8" | 7 3/32" | 8" | 6 1/32" | 6 | 23/32" | 8 27/32" | 5/16" | 3 21/32" | 3 31/32" | 6.295" 6.291" | 264# |



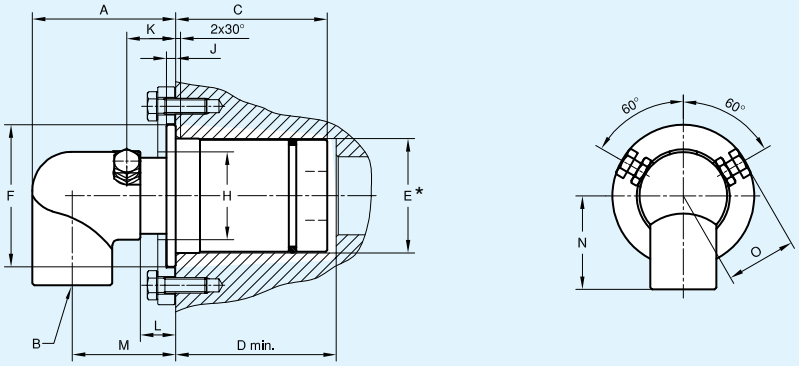
# DEUBLIN
## 2400 Series Rotating Union

- Monoflow and duoflow design
- In-the-shaft mounted
- Self-supported rotating union
- Flanged housing or mounted with retaining plate
- Balanced mechanical seal
- Seal combination:
  Silicon Carbide/Silicon Carbide
- Brass housing and elbow
- Stainless steel rotor and supply pipe
- Engineered sleeve bearing
- Full-media flow
- Easily field repairable

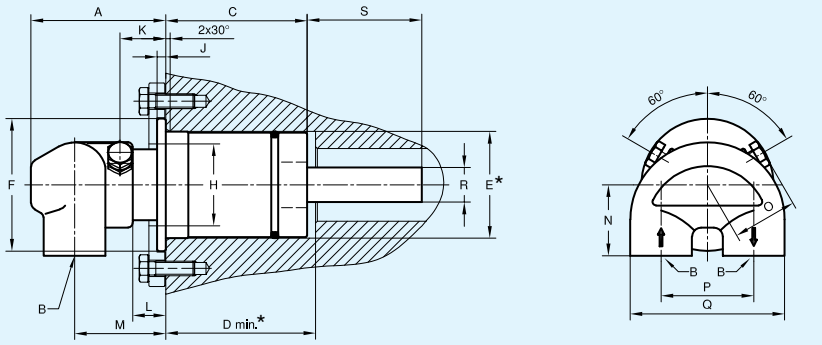
## Operating Data

| | | |
|---|---|---|
| Maximum Water Pressure | 150 PSI | 10 bar |
| Maximum Speed | 100 RPM | 100/min |
| Maximum Temperature | 250°F | >250°F consult ***DEUBLIN*** |

## Monoflow Rotating Union




## Duoflow Rotating Union




| | B Port | Ordering Number | A | C | D* | E Ø* | F Ø | H Ø | J | K | L | M | N | O | P | Q | R Ø | S | Shpg. Wt. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Monoflow | 3/4" NPT | 2420-001-125 | 2 21/64" | 2 3/8" | 2 7/16" | 1.825 1.815 | 2 5/16" | 1 15/16" | 3/16" | 1 1/32" | 3/4" | 1 21/32" | 1 13/16" | 1 7/16" | – | – | – | – | 1 1/2# |
| | G3/4" (BSP) | 2420-001-139 | 59 | 60 | 62 | 46.35 46.10 | 59 | 49 | 5 | 26 | 19 | 42 | 46 | 36 | – | – | – | – | .7 Kg |
| | 1" NPT | 2425-001-281 | 2 15/16" | 3 1/16" | 3 1/4" | 2.323 2.313 | 2 7/8" | 1 7/16" | 3/16" | 1 1/32" | 3/4" | 2 1/8" | 1 13/16" | 1 9/16" | – | – | – | – | 3 1/2# |
| | G1" (BSP) | 2425-001-172 | 75 | 78 | 83 | 59.00 58.75 | 73 | 36 | 5 | 26 | 19 | 54 | 46 | 39 | – | – | – | – | 1.6 Kg |
| Duoflow | 3/4" NPT | 2420-001-135-180 | 2 15/16" | 2 3/8" | 2 7/16" | 1.825 1.815 | 2 5/16" | 1 15/16" | 3/16" | 1 1/32" | 3/4" | 2" | 1 17/32" | 1 7/16" | 2" | 3 11/32" | .511 .510 | 1 15/16" | 2# |
| | G3/4" (BSP) | 2420-001-141-180 | 75 | 60 | 62 | 46.35 46.10 | 59 | 49 | 5 | 26 | 19 | 51 | 39 | 36 | 51 | 85 | 13.00 12.95 | 49 | .9 Kg |
| | 3/4" NPT | 2425-001-283-180 | 2 15/16" | 3 1/16" | 3 1/4" | 2.323 2.313 | 2 7/8" | 1 7/16" | 3/16" | 1 1/32" | 3/4" | 2" | 1 17/32" | 1 9/16" | 2" | 3 11/32" | .748 .746 | 2 1/2" | 4# |
| | G3/4" (BSP) | 2425-001-177-180 | 75 | 78 | 83 | 59.00 58.75 | 73 | 36 | 5 | 26 | 19 | 51 | 39 | 39 | 51 | 85 | 19.00 18.94 | 63.5 | 1.8 Kg |
| | 1" NPT | 2440-001-301-254 | 3 7/8" | 3 7/16" | 3 11/16" | 2.805 2.795 | 3 3/8" | 2" | 3/16" | 1 1/32" | 3/4" | 2 11/16" | 1 11/16" | 1 13/16" | 2 1/2" | 4 1/8" | 1.130 1.125 | 1 7/8" | 9# |
| | G1" (BSP) | 2440-001-306-254 | 98 | 87 | 94 | 71.25 71.00 | 86 | 51 | 5 | 26 | 19 | 68 | 43 | 46 | 64 | 105 | 28.70 28.58 | 48 | 4 Kg |

*Denotes Shaft Dimension

# DEUBLIN

## N Series Steam and Hot Oil Unions

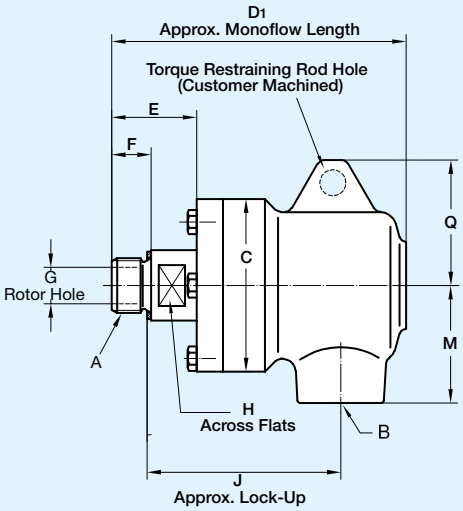
- Monoflow design: N10
- Monoflow and duoflow design: N12
- Self-supported rotating union
- Large carbon graphite bearing
- Pressurized spherical carbon graphite seal
- Cast iron housing
- Stainless steel rotor

## Operating Data

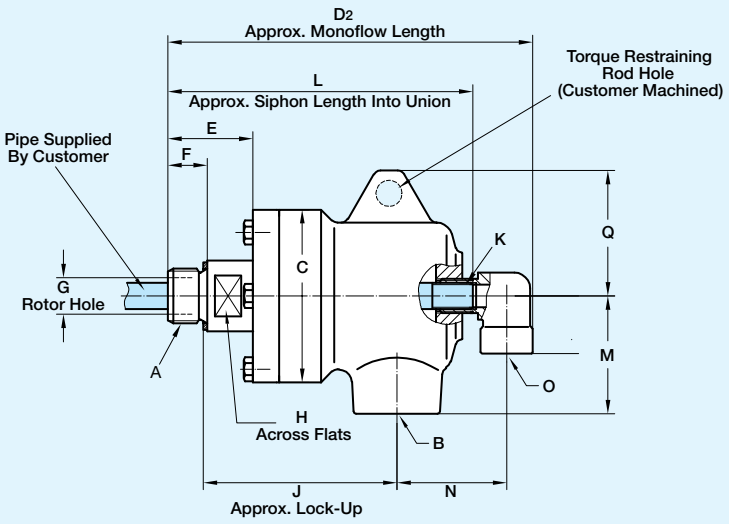
| | | |
|---|---|---|
| Maximum Steam Pressure*** | 250 PSI | 17 bar |
| Maximum Steam Temperature | 400°F | 200°C |
| Maximum Hot Oil Pressure*** | 100 PSI | 7 bar |
| Maximum Speed*** | 750 RPM | 750/min |
| Maximum Hot Oil Temperature | 450°F | 232°C |

*** Union is designed for continuous operation at either maximum speed or maximum pressure. If operating conditions are close to maximum pressure and speed simultaneously, consult ***DEUBLIN***.

## Monoflow Union

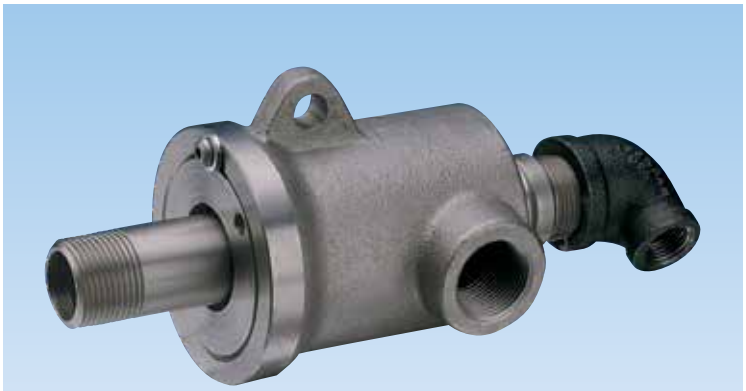



## Duoflow Union




| | B Port NPT | Ordering Number: Steam Service | Ordering Number: Hot Oil 450°F Max. | A Rotor Thread | C Dia. | $D_1$ | $D_2$ | E | F | G Rotor Hole | H** | J* | K | L* | M | N | O | Q | Shpg. Wt. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Monoflow | 3/8" | N10-020-214 | N10-021-214 | 3/8" NPT RH | 2 3/8" | 4 1/8" | – | 1 7/32" | 19/32" | 13/32" | 17 | 3" | – | – | 1 9/16" | – | – | 1 21/32" | 2.4# |
| | | N10-020-215 | N10-021-215 | 3/8" NPT LH | | | | | | | | | | | | | | | |
| | | N10-020-210 | N10-021-210 | G3/8"(BSP) RH | 60 | 105 | – | 31 | 15 | 10 | 17 | 68.5 | – | – | 40 | – | – | 42 | 1.1 Kg |
| | | N10-020-211 | N10-021-211 | G3/8"(BSP) LH | | | | | | | | | | | | | | | |
| | 1/2" | N12-020-214 | N12-021-214 | 1/2" NPT RH | 2 19/32" | 4 7/16" | – | 1 9/32" | 19/32" | 9/16" | 22 | 3 1/8" | – | – | 1 25/32" | – | – | 1 29/32" | 3.1# |
| | | N12-020-215 | N12-021-215 | 1/2" NPT LH | | | | | | | | | | | | | | | |
| | | N12-020-210 | N12-021-210 | G1/2"(BSP) RH | 66 | 112.5 | – | 32.5 | 15 | 14 | 22 | 74 | – | – | 45 | – | – | 48 | 1.4 Kg |
| | | N12-020-211 | N12-021-211 | G1/2"(BSP) LH | | | | | | | | | | | | | | | |
| Duoflow | 1/2" | N12-022-214-701 | N12-023-214-701 | 1/2" NPT RH | 2 19/32" | – | 5 1/2" | 1 9/32" | 19/32" | 9/16" | 22 | 3 1/8" | 1/8"NPT | 4 19/32" | 1 25/32" | 1 21/32" | 1/4"NPT | 1 29/32" | 3.1# |
| | | N12-022-215-701 | N12-023-215-701 | 1/2" NPT LH | | | | | | | | | | | | | | | |
| | | N12-022-210-701 | N12-023-210-701 | G1/2"(BSP) RH | 66 | – | 139.5 | 32.5 | 15 | 14 | 22 | 74 | 1/8"NPT | 116.5 | 45 | 42 | 1/4"NPT | 48 | 1.4 Kg |
| | | N12-022-211-701 | N12-023-211-701 | G1/2"(BSP) LH | | | | | | | | | | | | | | | |

*Dimensions for NPT Rotor Threads are from Wrench Tight Engagement. **Metric



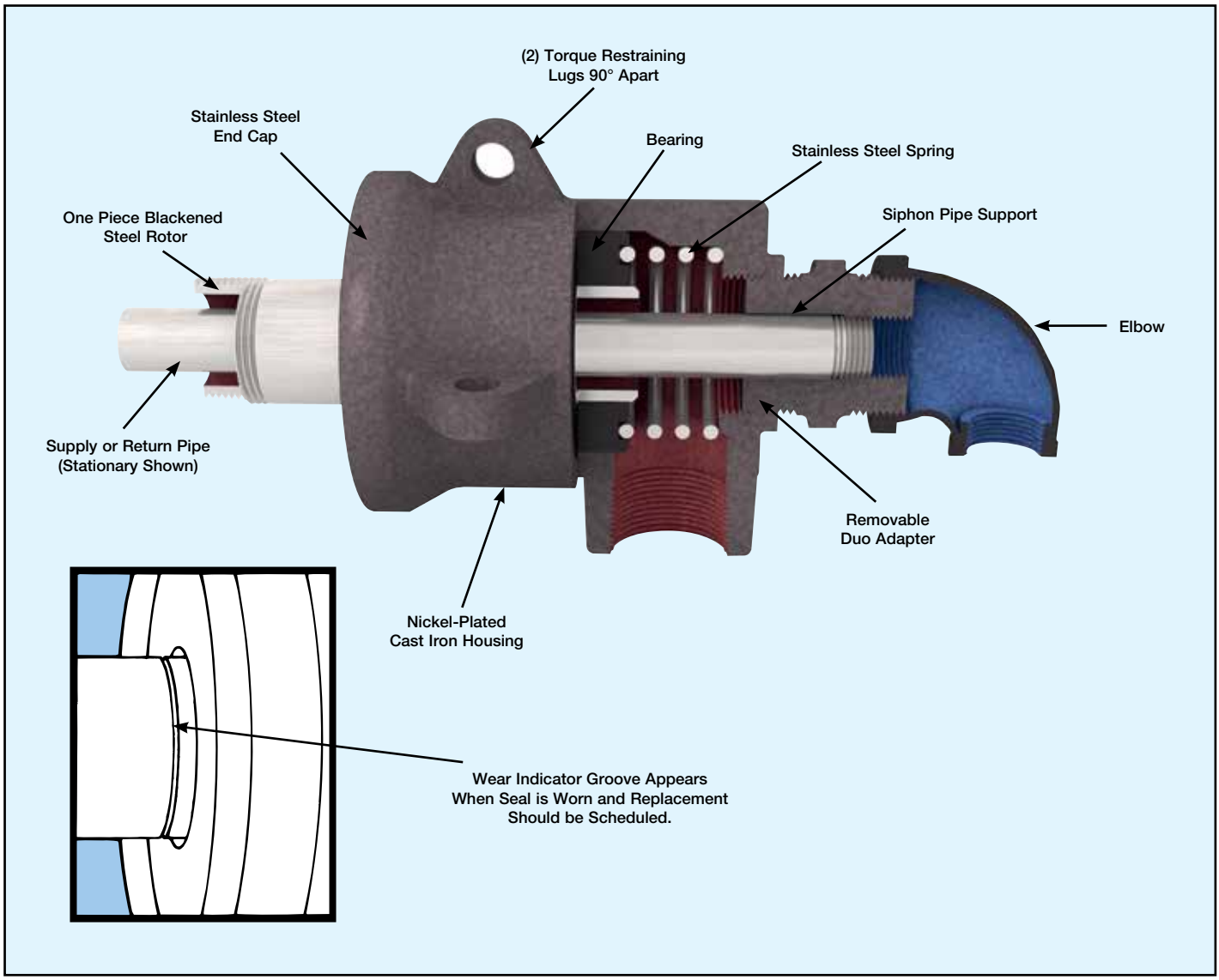
# DEUBLIN
## 9000 Series Steam Unions

- Monoflow and duoflow design
- Self-supported rotating union
- Spherical Carbon Graphite seal
- Seal wear indicator allows preventive maintenance
- 2 torque lugs on the housing
- Nickel-plated cast iron housing
- Steel rotor blackened for steam service

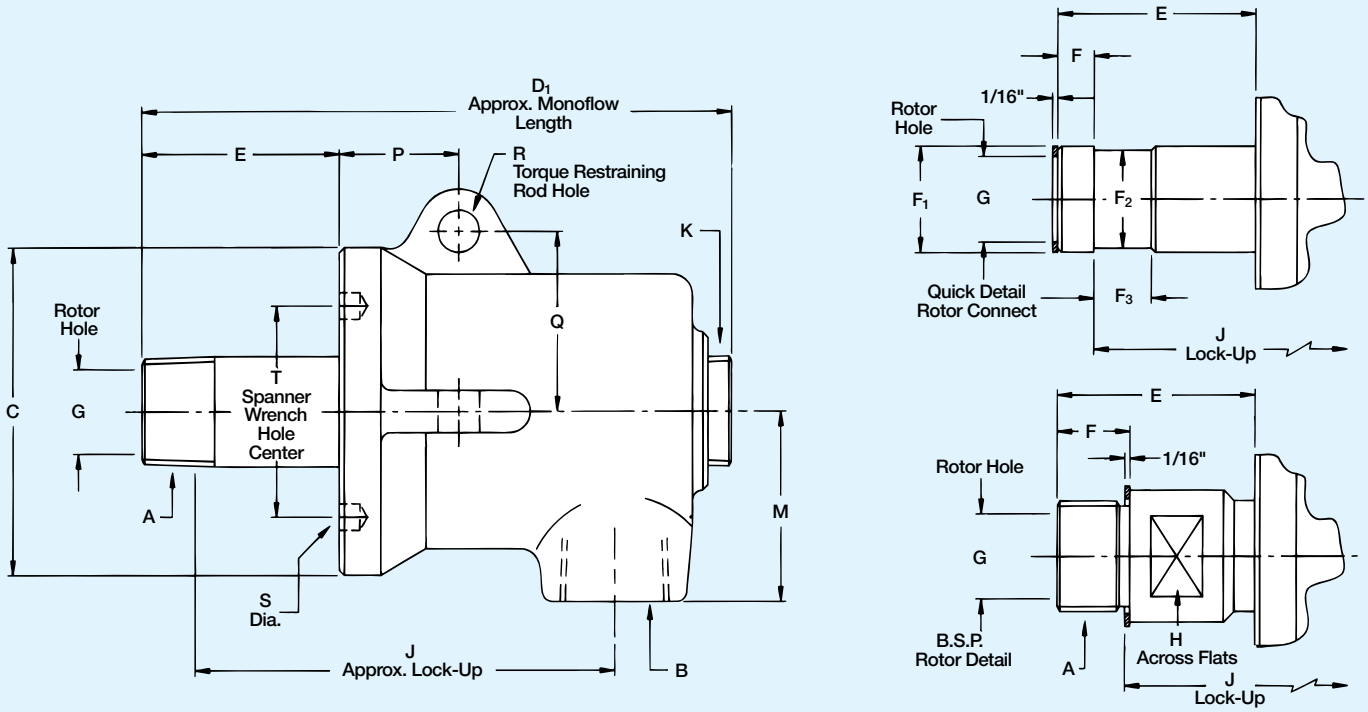
## Operating Data

| | | |
|---|---|---|
| Maximum Saturated Steam Pressure* | 150 PSI | 10 bar |
| Maximum Saturated Steam Temperature | 365°F | 185°C |
| Maximum Hot Oil Pressure* | 100 PSI | 7 bar |
| Maximum Speed* | 400 RPM | 400/min |
| Maximum Hot Oil Temperature | 450°F | 232°C |

* Union is designed for continuous operation at either maximum speed or maximum pressure. If operating conditions are close to maximum pressure and speed simultaneously, consult ***DEUBLIN***.



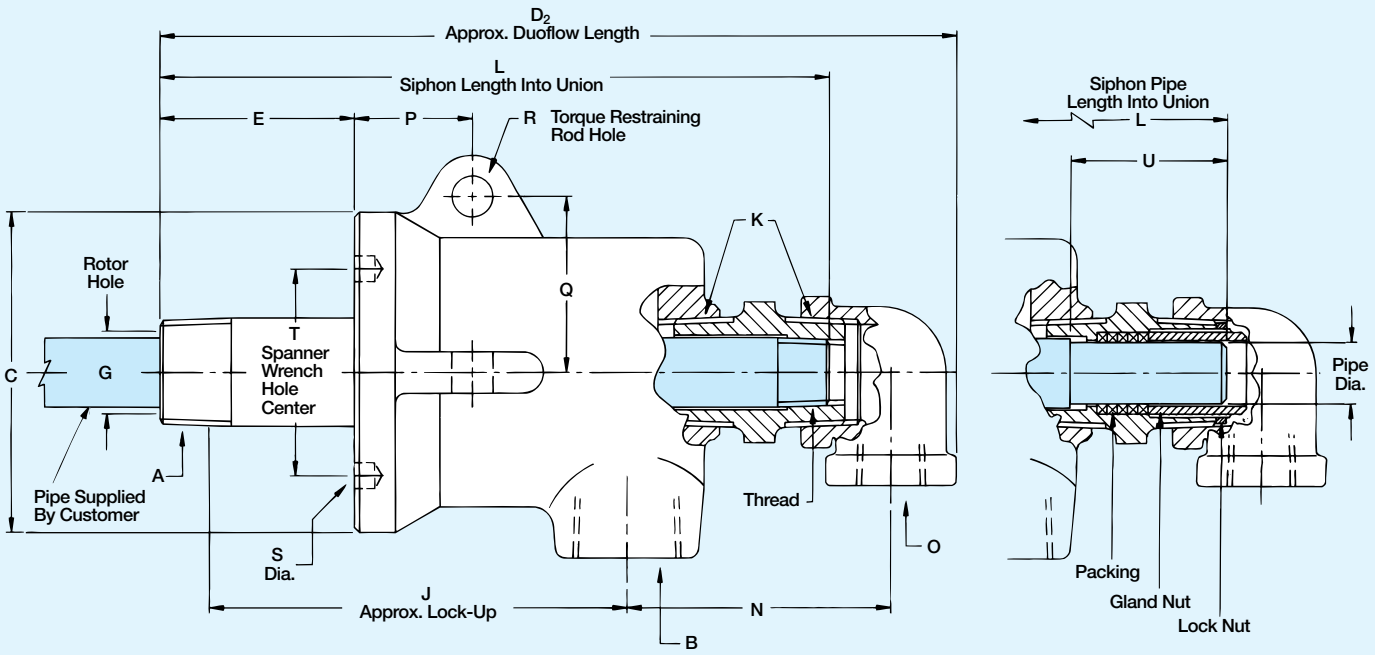
# 9000 Series Monoflow Union Specifications




Hot Oil Service – Use Type C. Download PDF from website

| B Port | Ordering Number Steam Service | A Rotor Thread | C | $D_1$ | $D_2$ | E | F | $F_1$ | $F_2$ | $F_3$ | G | H* | J | K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ¾" NPT | 9075-001-106 | ¾" NPT RH | 3 7/16" | 6" | 8 5/8" | 1 7/8" | – | – | – | – | 21/32" | – | 4 9/16" | 1" NPT |
| | 9075-001-107 | ¾" NPT LH | | | | | | | | | | | | |
| | 9075-001-117 | QUICK CONNECT | 3 7/16" | 6" | 8 5/8" | 1 7/8" | 7/16" | 1.025 1.020 | .955 .950 | 11/16" | 21/32" | – | 4½" | 1" NPT |
| G¾" (BSP) | 9075-008-110 | G¾" (BSP) RH | 87 | 153 | 219 | 48 | 19 | – | – | – | 16.6 | 25 | 108 | G1" |
| | 9075-008-111 | G¾" (BSP) LH | | | | | | | | | | | | |
| 1" NPT | 9100-001-103 | 1" NPT RH | 3 13/16" | 7¼" | 9 7/8" | 2 3/8" | – | – | – | – | 1" | – | 5 3/8" | 1" NPT |
| | 9100-001-109 | 1" NPT LH | | | | | | | | | | | | |
| | 9100-001-121 | QUICK CONNECT | 3 13/16" | 7¼" | 9 7/8" | 2 3/8" | 7/16" | 1.274 1.269 | 1.216 1.211 | 11/16" | 1" | – | 5 7/16" | 1" NPT |
| G1" (BSP) | 9100-008-113 | G1" (BSP) RH | 97 | 184 | 251 | 60 | 22 | – | – | – | 25 | 32 | 128 | G1" |
| | 9100-008-112 | G1" (BSP) LH | | | | | | | | | | | | |
| 1¼" NPT | 9125-001-109 | 1¼" NPT RH | 4 7/16" | 8⅛" | 11⅛" | 2½" | – | – | – | – | 1¼" | – | 5 7/8" | 1½" NPT |
| | 9125-001-110 | 1¼" NPT LH | | | | | | | | | | | | |
| | 9125-001-126 | QUICK CONNECT | 4 7/16" | 7 7/8" | 10 7/8" | 2¼" | ½" | 1.615 1.610 | 1.562 1.557 | ¾" | 1¼" | – | 5 7/8" | 1½" NPT |
| G1¼" (BSP) | 9125-008-118 | G1¼" (BSP) RH | 112 | 206 | 282 | 64 | 25 | – | – | – | 32 | 38 | 138 | G1½" |
| | 9125-008-119 | G1¼" (BSP) LH | | | | | | | | | | | | |
| 1½" NPT | 9150-001-103 | 1½" NPT RH | 5¼" | 9" | 12 5/8" | 2½" | – | – | – | – | 1½" | – | 6 5/8" | 1½" NPT |
| | 9150-001-104 | 1½" NPT LH | | | | | | | | | | | | |
| | 9150-001-117 | QUICK CONNECT | 5¼" | 9" | 12 5/8" | 2½" | ½" | 1.865 1.860 | 1.775 1.770 | 7/8" | 1½" | – | 6 5/8" | 1½" NPT |
| G1½" (BSP) | 9150-008-113 | G1½" (BSP) RH | 133 | 229 | 320 | 64 | 28 | – | – | – | 38 | 46 | 154 | G1½" |
| | 9150-008-114 | G1½" (BSP) LH | | | | | | | | | | | | |
| 2" NPT | 9200-001-102 | 2" NPT RH | 6 3/32" | 10 1/16" | 13 7/16" | 2 5/8" | – | – | – | – | 1 15/16" | – | 7 5/32" | 1½" NPT |
| | 9200-001-111 | 2" NPT LH | | | | | | | | | | | | |
| | 9200-001-121 | QUICK CONNECT | 6 3/32" | 10 7/16" | 13 3/16" | 3" | 5/8" | 2.320 2.315 | 2.230 2.225 | 7/8" | 1 15/16" | – | 7 7/16" | 1½" NPT |
| G2" (BSP) | 9200-008-117 | G2" (BSP) RH | 154 | 255 | 341 | 67 | 30 | – | – | – | 49 | 60 | 166 | G1½" |
| | 9200-008-118 | G2" (BSP) LH | | | | | | | | | | | | |

# 9000 Series Duoflow Union Specifications




## Fixed Siphon Detail

## Rotating Siphon Detail

| P | Q | R | S | T | Fixed Siphon | | | Rotating Siphon | | | | | M | N | O | Shpg. Wt. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Elbow Suffix | Thread | L | Elbow Suffix | Pipe Size | Pipe Dia. | U | L | | | | |
| 1½" | 1 15/16" | 15/32" | 17/64" | 2¼" | -400 | ¼" NPT | 7¼" | -402 | ¼" | .500" .495" | 2" | 7¼" | 2" | 2⅜" | ½" NPT | 8# |
| 1½" | 1 15/16" | 15/32" | 17/64" | 2¼" | -400 | ¼" NPT | 7¼" | -402 | ¼" | .500" .495" | 2" | 7¼" | 2" | 2⅜" | ½" NPT | 8# |
| 38 | 49 | 12 | 7 | 57 | -600 | G¼" (BSP) | 181 | -620 | ¼" | 13.0 12.9 | 51 | 175 | 51 | 60 | G½" (BSP) | 3.6 Kg |
| 1½" | 2⅛" | 17/32" | 5/16" | 2½" | -400 | ¼" NPT | 8" | -403 | ⅜" | .663" .657" | 2" | 8⅜" | 2¼" | 3 5/16" | ½" NPT | 10# |
| | | | | | -401 | ⅜" NPT | | | | | | | | | | |
| 1½" | 2⅛" | 17/32" | 5/16" | 2½" | -400 | ¼" NPT | 8" | -403 | ⅜" | .663" .657" | 2" | 8⅜" | 2¼" | 3 5/16" | ½" NPT | 10# |
| | | | | | -401 | ⅜" NPT | | | | | | | | | | |
| 38 | 54 | 13.5 | 8 | 63 | -600 | G¼" (BSP) | 210 | -620 | ⅜" | 16.0 15.9 | 51 | 206 | 57 | 84 | G½" (BSP) | 4.5 Kg |
| | | | | | -601 | G⅜" (BSP) | | | | | | | | | | |
| 1⅝" | 2⅜" | 17/32" | 11/32" | 3" | -400 | ½" NPT | 8¾" | -402 | ½" | .809" .803" | 2⅜" | 9¾" | 3" | 3⅞" | ¾" NPT | 15# |
| 1⅝" | 2⅜" | 17/32" | 11/32" | 3" | -400 | ½" NPT | 8½" | -402 | ½" | .809" .803" | 2⅜" | 9½" | 3" | 3⅞" | ¾" NPT | 15# |
| 42 | 60 | 13.5 | 8.7 | 76 | -600 | G½" (BSP) | 238 | -620 | ½" | 20.0 19.9 | 60 | 230 | 76 | 98 | G¾" (BSP) | 6.8 Kg |
| 2 3/16" | 2⅞" | 21/32" | 11/32" | 3½" | -400 | ½" NPT | 10½" | -403 | ¾" | .997" .991" | 2½" | 11 9/16" | 3½" | 4⅝" | ¾" NPT | 25# |
| | | | | | -401 | ¾" NPT | | | | | | | | | | |
| 2 3/16" | 2⅞" | 21/32" | 11/32" | 3½" | -400 | ½" NPT | 10½" | -403 | ¾" | .997" .991" | 2½" | 11 9/16" | 3½" | 4⅝" | ¾" NPT | 25# |
| | | | | | -401 | ¾" NPT | | | | | | | | | | |
| 55 | 73 | 16.7 | 8.7 | 89 | -600 | G½" (BSP) | 262 | -621 | ¾" | 26.0 25.9 | 63 | 255 | 89 | 117 | G¾" (BSP) | 11.5 Kg |
| | | | | | -601 | G¾" (BSP) | | | | | | | | | | |
| 2 7/16" | 3 7/16" | 5/8" | – | – | -400 | ½" NPT | 10⅞" | -403 | ¾" | .997" .991" | 2½" | 12⅝" | 3 7/16" | 5" | ¾" NPT | 31# |
| | | | | | -401 | ¾" NPT | | | | | | | | | | |
| 2 7/16" | 3 7/16" | 5/8" | – | – | -400 | ½" NPT | 11¼" | -403 | ¾" | .997" .991" | 2½" | 13" | 3 7/16" | 5" | ¾" NPT | 31# |
| | | | | | -401 | ¾" NPT | | | | | | | | | | |
| 62 | 87 | 16 | – | – | -600 | G½" (BSP) | 284 | -621 | ¾" | 26.0 25.9 | 63 | 276 | 87 | 127 | G¾" (BSP) | 14 Kg |
| | | | | | -601 | G¾" (BSP) | | | | | | | | | | |

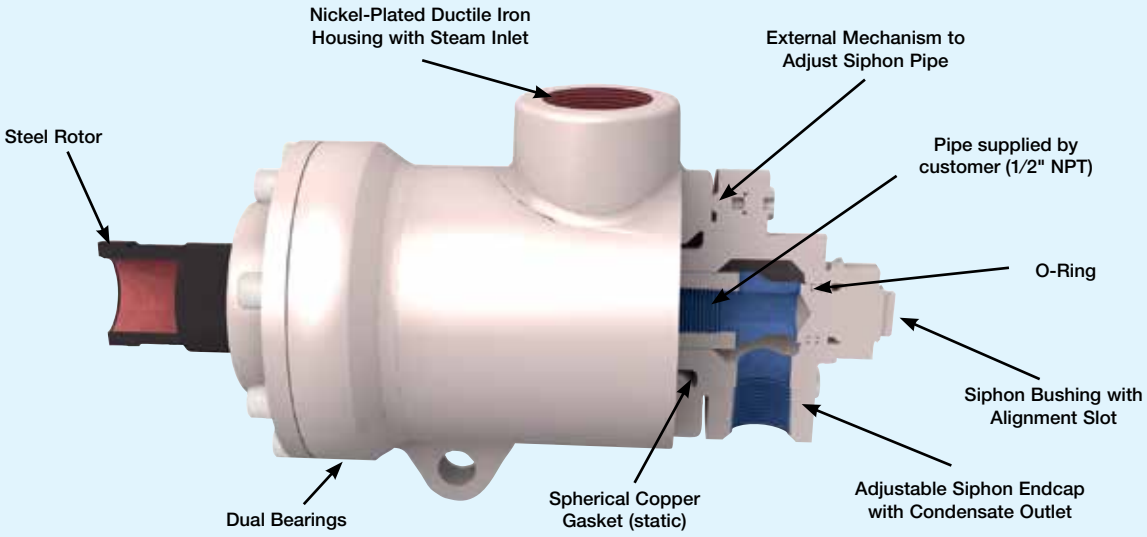
# DEUBLIN

## HPS Series for High Pressure Steam Service in Corrugators

- Monoflow and duoflow design
- Self-supported rotating union
- Seals and bearings made of special Carbon Graphite
- Convex seal ring better suited to handle mechanical and thermal shock
- External mechanism to adjust siphon pipe through end cap
- Nickel-plated front and rear end cap
- Nickel-plated ductile iron housing
- Stainless steel spring
- Heavy duty steel rotor design
- Dual bearings for extended service life

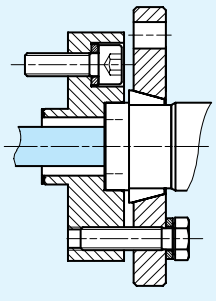
## Operating Data

| | | |
|---|---|---|
| Maximum Saturated Steam Pressure | 250 PSI | 17 bar |
| Maximum Speed | 400 RPM | 400/min |
| Maximum Temperature | 400°F | 200°C |



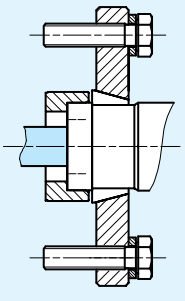

### Flange Adapter Kits

1¼"

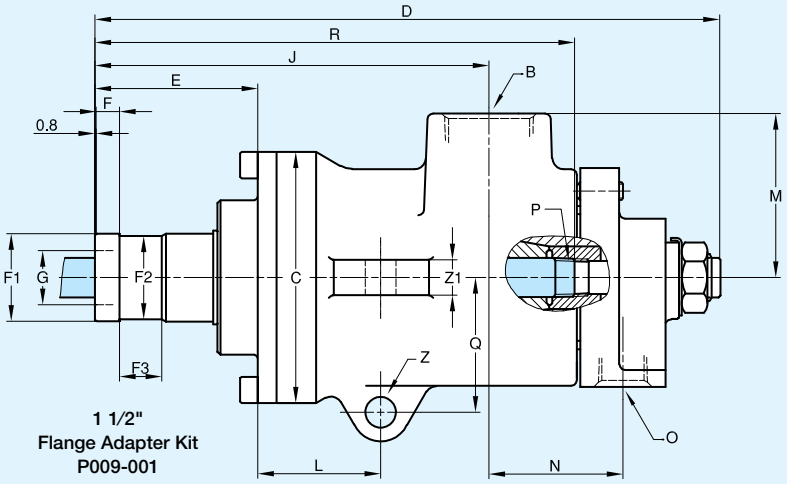


P009-003

2"



P009-002




1 1/2" Flange Adapter Kit P009-001

| B Port NPT | O Port NPT | Ordering No. | C Ø | D | E | F | F1 Ø | F2 | F3 | G Ø | J | L | M | N | P | Q | R | Z Ø | Z1 | Shpg. Wt. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1½" | ¾" | C15D-004-02-3A | 5⅜" | 13⅜" | 3 15/32" | ½" | 1.870" 1.868" | 1.779" 1.775" | 29/32" | 1 5/16" | 8 13/32" | 2⅝" | 3½" | 2⅞" | ½"NPT | 2⅞" | 10¼" | 21/32" | 13/16" | 37# |

# DEUBLIN

## H Series Steam and Hot Oil Unions

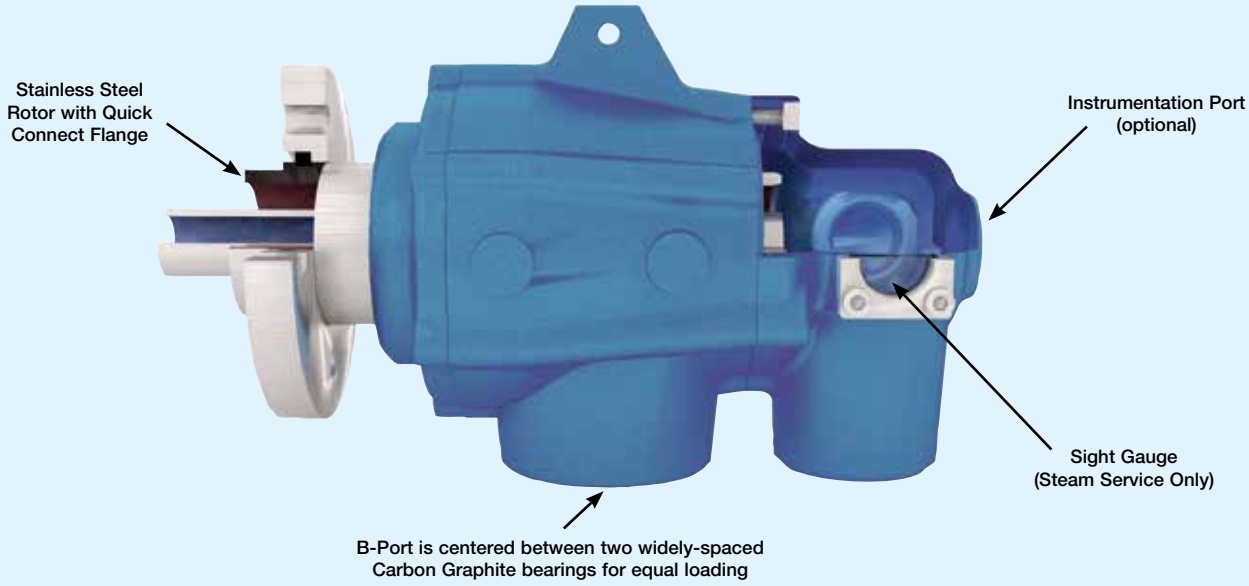
- Monoflow and duoflow design
- Self-supported rotating union
- Convex seal ring better suited to handle mechanical and thermal shock
- Two widely-spaced graphite bearings
- H57 - H127 optional with sight glasses in the end cap for visual inspection of condensate removal
- Seal wear indicator allows preventive maintenance
- Flanged or threaded rotor available
- Cast iron housing
- Stainless steel rotor
- For steam and hot oil applications in paper, plastic and textile industries and open gear paper machines

### Operating Data 3/4" – 2"

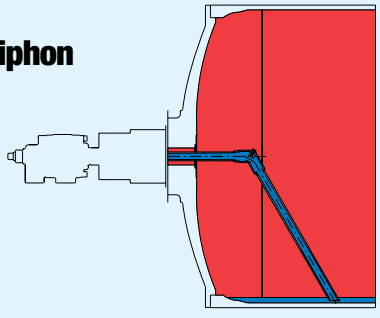
| | | |
|---|---|---|
| Maximum Saturated Steam Pressure | 150 PSI | 10 bar |
| Maximum Speed Saturated Steam Service | 400 RPM | 400/min |
| Maximum Saturated Steam Temperature | 365°F | 185°C |
| Maximum Hot Oil Pressure | 100 PSI | 7 bar |
| Maximum Speed Hot Oil Service | 400 RPM | 400/min |
| Maximum Hot Oil Temperature | 450°F | 232°C |

### Operating Data 2 1/2" – 5"

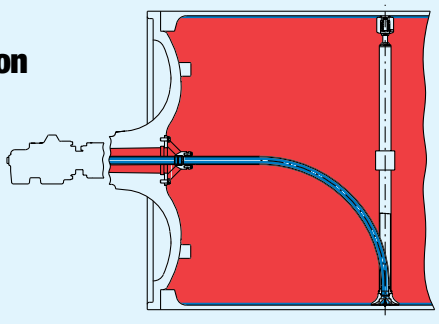
| | | |
|---|---|---|
| Maximum Saturated Steam Pressure | 150 PSI | 10 bar |
| Maximum Speed Saturated Steam Service | 180 RPM | 180/min |
| Maximum Saturated Steam Temperature | 365°F | 185°C |
| Maximum Hot Oil Pressure | 100 PSI | 7 bar |
| Maximum Speed Hot Oil Service | 350 RPM | 350/min |
| Maximum Hot Oil Temperature | 450°F | 232°C |




### Example for Stationary Siphon System

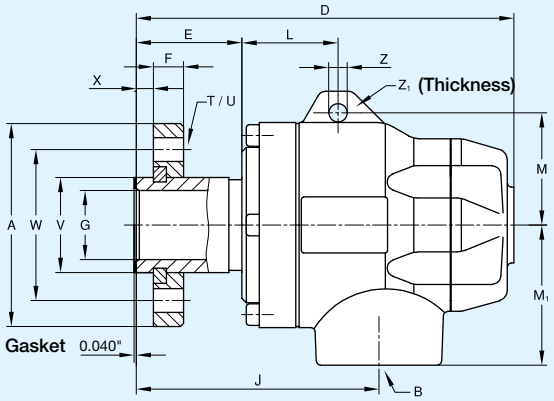


### Example for Rotating Siphon System

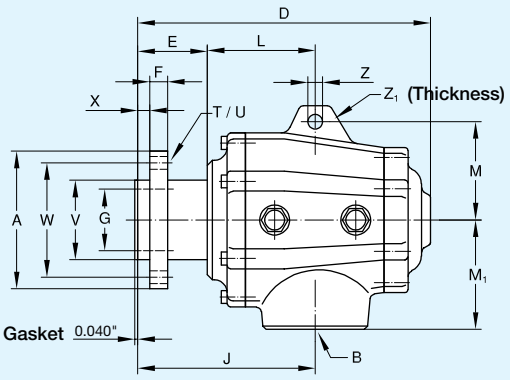


# Monoflow Rotating Union

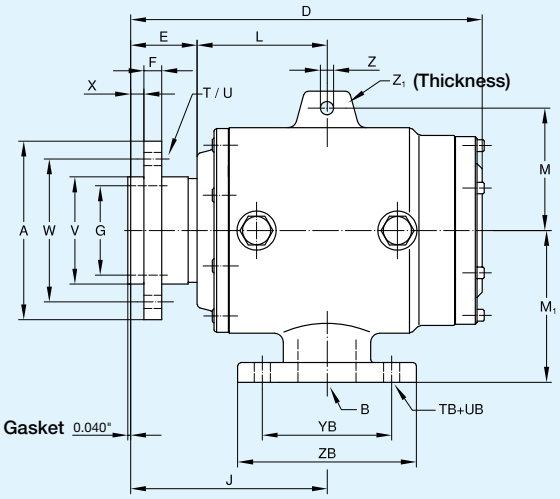
## Models Size H20 – H40




## Models Size H57 – H87




## Models Size H107 and H127




## Monoflow Rotating Unions

| Size | B Port | Monoflow | A | D | E | F | G | J | L | M | $M_1$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ¾" | ¾" NPT | H20 | 2 23/32" | 5 1/2" | 1 9/16" | 15/32" | 23/32" | 3 3/4" | 2 5/16" | 1 25/32" | 1 31/32" |
| 1" | 1" NPT | H25 | 3 1/16" | 6 1/2" | 1 27/32" | 15/32" | 31/32" | 3 31/32" | 1 23/32" | 1 31/32" | 2 3/8" |
| 1¼" | 1¼" NPT | H32 | 3 11/16" | 6 7/8" | 1 15/16" | 9/16" | 1 1/4" | 4 7/16" | 1 3/4" | 2 1/16" | 2 9/16" |
| 1½" | 1½" NPT | H40 | 3 29/32" | 8 1/32" | 2 13/32" | 9/16" | 1 1/2" | 5 3/8" | 2" | 2 3/4" | 2 15/16" |
| 2" | 2" NPT | H57 | 4 3/16" | 10 5/32" | 2 13/32" | 9/16" | 1 27/32" | 5 15/16" | 3 17/32" | 3 9/32" | 3 3/4" |
| 2½" | 2½" NPT | H67 | 5 7/16" | 11 13/16" | 2 3/4" | 23/32" | 2 7/16" | 7 1/32" | 4 9/32" | 3 29/32" | 4 11/32" |
| 3" | 3" NPT | H87 | 5 29/32" | 12 27/32" | 2 21/32" | 23/32" | 3" | 7 13/32" | 4 23/32" | 4 17/32" | 4 23/32" |
| 4" | 4" ANSI | H107 | 7 7/8" | 15 1/2" | 3" | 25/32" | 3 15/16" | 8 21/32" | 5 21/32" | 5 13/32" | 6 11/16" |
| 5" | 5" ANSI | H127 | 11 1/32" | 18 5/16" | 3 11/32" | 15/16" | 4 15/16" | 10 13/16" | 7 15/32" | 6 7/32" | 8 21/32" |

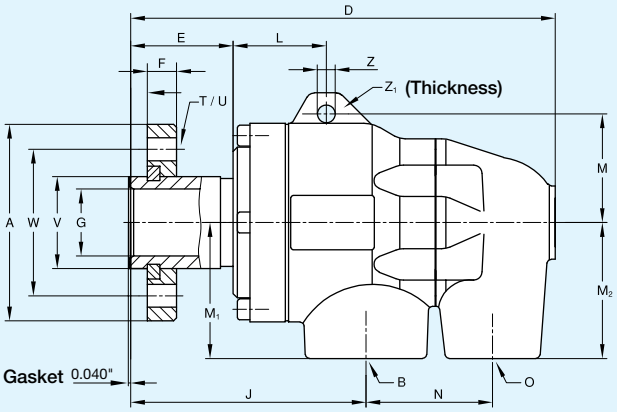
## Duoflow Rotating Unions

| Size | B Port | O Port | Duoflow E-R-S | A | D | E | F | G | J | L | M | $M_1$ | $M_2$ | N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ¾" | ¾" NPT | ½" NPT | H20 | 2 23/32" | 7 11/16" | 1 9/16" | 15/32" | 23/32" | 3 3/4" | 2 5/16" | 1 25/32" | 1 31/32" | 1 3/16" | 3 3/8" |
| 1" | 1" NPT | ½" NPT | H25 | 3 1/16" | 8 21/32" | 1 27/32" | 15/32" | 31/32" | 3 31/32" | 1 23/32" | 1 31/32" | 2 3/8" | 1 3/16" | 4 3/32" |
| 1¼" | 1" NPT | ¾" NPT | H32 | 3 11/16" | 8" | 1 15/16" | 9/16" | 1 1/4" | 4 7/16" | 1 3/4" | 2 1/16" | 2 9/16" | 2 9/16" | 2 3/8" |
| 1½" | 1¼" NPT | 1" NPT | H40 | 3 29/32" | 9 21/32" | 2 13/32" | 9/16" | 1 1/2" | 5 3/8" | 2" | 2 3/4" | 2 15/16" | 2 15/16" | 2 13/16" |
| 2" | 1½" NPT | 1¼" NPT | H57 | 4 3/16" | 11 15/16" | 2 13/32" | 9/16" | 1 27/32" | 5 15/16" | 3 17/32" | 3 9/32" | 3 3/4" | 3 3/4" | 3 13/16" |
| 2½" | 2" NPT | 1½" NPT | H67 | 5 7/16" | 14 1/8" | 2 3/4" | 23/32" | 2 7/16" | 7 1/32" | 4 9/32" | 3 29/32" | 4 11/32" | 4 11/32" | 4 29/32" |
| 3" | 2½" NPT | 2" NPT | H87 | 5 29/32" | 15 19/32" | 2 21/32" | 23/32" | 3" | 7 13/32" | 4 23/32" | 4 17/32" | 4 23/32" | 4 23/32" | 5 3/4" |
| 4" | 3" ANSI | 2½"ANSI | H107 | 7 7/8" | 22 5/32" | 3" | 25/32" | 3 15/16" | 8 21/32" | 5 21/32" | 5 13/32" | 6 11/16" | 6 11/16" | 9 7/8" |
| | 2½"ANSI | 2½"ANSI | H107* | 7 7/8" | 22 5/32" | 3" | 25/32" | 3 15/16" | 8 21/32" | 5 21/32" | 5 13/32" | 6 11/16" | 6 11/16" | 9 7/8" |
| 5" | 4" ANSI | 2½"ANSI | H127 | 11 1/32" | 24 5/16" | 3 11/32" | 15/16" | 4 15/16" | 10 13/16" | 7 15/32" | 6 7/32" | 8 21/32" | 8 21/32" | 9 27/32" |
| | 3" ANSI | 3" ANSI | H127* | 11 1/32" | 24 19/32" | 3 11/32" | 15/16" | 4 15/16" | 10 13/16" | 7 15/32" | 6 7/32" | 8 21/32" | 8 21/32" | 9 27/32" |

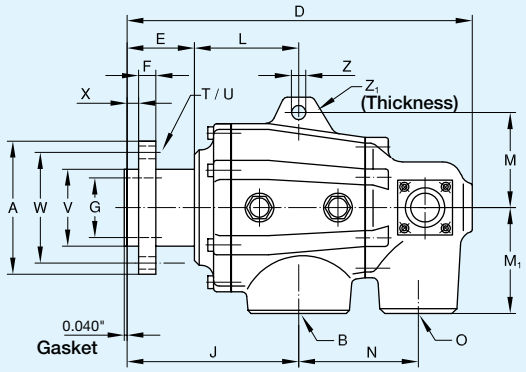
*Hot Oil Design

# Duoflow Rotating Union

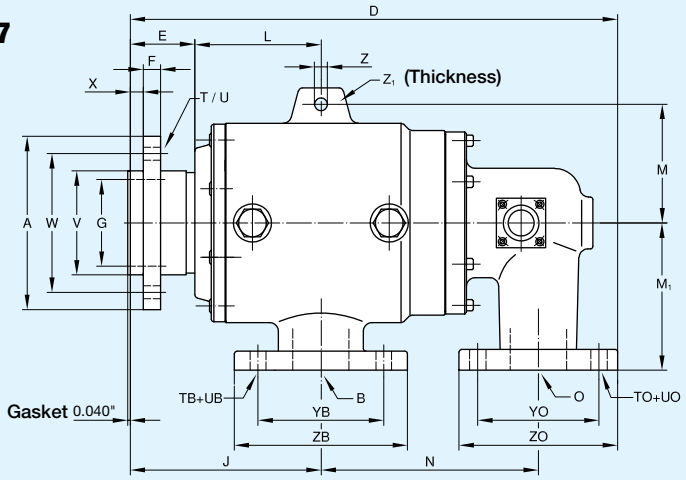
## Models Size H20 – H40




## Models Size H57 – H87




## Models Size H107 and H127



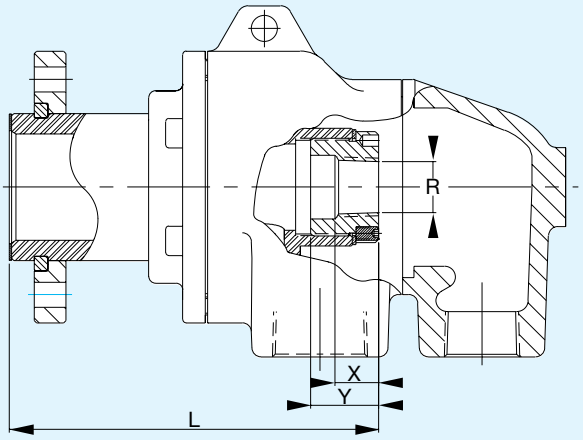

| T | U | TB | UB | V* | W | X | YB | ZB | Z | $Z_1$ | Size |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 x 90° | 3/8" | – | – | 1.181 | 1 31/32" | 1/4" | – | – | 9/32" | 5/16" | **3/4"** |
| 4 x 90° | 3/8" | – | – | 1.417 | 2 3/8" | 9/32" | – | – | 9/32" | 7/16" | **1"** |
| 4 x 90° | 7/16" | – | – | 1.732 | 2 3/4" | 5/16" | – | – | 11/32" | 5/16" | **1 1/4"** |
| 4 x 90° | 7/16" | – | – | 2.047 | 3 1/16" | 13/32" | – | – | 7/16" | 13/32" | **1 1/2"** |
| 4 x 90° | 7/16" | – | – | 2.559 | 3 3/4" | 13/32" | – | – | 1/2" | 19/32" | **2"** |
| 4 x 90° | 1/2" | – | – | 3.149 | 4 17/32" | 15/32" | – | – | 19/32" | 25/32" | **2 1/2"** |
| 4 x 90° | 1/2" | – | – | 3.740 | 4 15/16" | 15/32" | – | – | 19/32" | 1" | **3"** |
| 6 x 60° | 19/32" | 8 x 45° | 3/4" | 4.724 | 6 5/16" | 19/32" | 7 1/2" | 8 21/32" | 19/32" | 1" | **4"** |
| 6 x 60° | 23/32" | 8 x 45° | 7/8" | 6.299 | 8 27/32" | 19/32" | 8 1/2" | 9 27/32" | 19/32" | 1" | **5"** |

| T | U | TB | UB | TO | UO | V* | W | X | YB | ZB | YO | ZO | Z | $Z_1$ | Size |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 x 90° | 3/8" | – | – | – | – | 1.181 | 1 31/32" | 1/4" | – | – | – | – | 9/32" | 5/16" | **3/4"** |
| 4 x 90° | 3/8" | – | – | – | – | 1.417 | 2 3/8" | 9/32" | – | – | – | – | 9/32" | 7/16" | **1"** |
| 4 x 90° | 7/16" | – | – | – | – | 1.732 | 2 3/4" | 5/16" | – | – | – | – | 11/32" | 5/16" | **1 1/4"** |
| 4 x 90° | 7/16" | – | – | – | – | 2.047 | 3 1/16" | 13/32" | – | – | – | – | 7/16" | 13/32" | **1 1/2"** |
| 4 x 90° | 7/16" | – | – | – | – | 2.559 | 3 3/4" | 13/32" | – | – | – | – | 1/2" | 19/32" | **2"** |
| 4 x 90° | 1/2" | – | – | – | – | 3.149 | 4 17/32" | 15/32" | – | – | – | – | 19/32" | 25/32" | **2 1/2"** |
| 4 x 90° | 1/2" | – | – | – | – | 3.740 | 4 15/16" | 15/32" | – | – | – | – | 19/32" | 1" | **3"** |
| 6 x 60° | 19/32" | 4 x 90° | 3/4" | 4 x 90° | 3/4" | 4.724 | 6 5/16" | 19/32" | 6" | 7 7/8" | 5 1/2" | 7 9/32" | 19/32" | 1" | **4"** |
| 6 x 60° | 19/32" | 4 x 90° | 3/4" | 4 x 90° | 3/4" | 4.724 | 6 5/16" | 19/32" | 5 1/2" | 7 9/32" | 5 1/2" | 7 9/32" | 19/32" | 1" | |
| 6 x 60° | 23/32" | 8 x 45° | 3/4" | 4 x 90° | 3/4" | 6.299 | 8 27/32" | 19/32" | 7 1/2" | 8 21/32" | 5 1/2" | 7 9/32" | 19/32" | 1" | **5"** |
| 6 x 60° | 23/32" | 4 x 90° | 3/4" | 4 x 90° | 3/4" | 6.299 | 8 27/32" | 19/32" | 6" | 7 7/8" | 6" | 7 7/8" | 19/32" | 1" | |

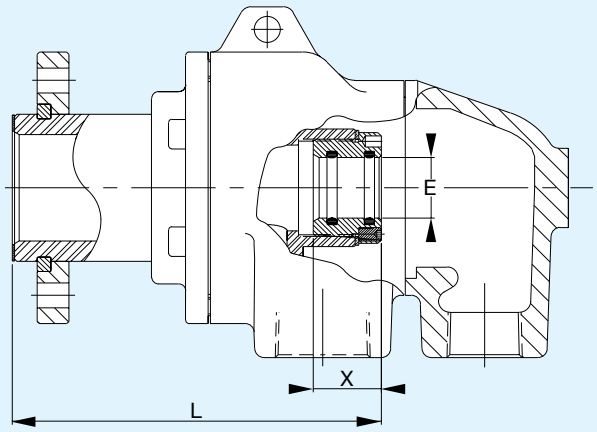
*Tolerance +.000 to -.003 depending on size.

# Duoflow Central Pipe Specifications

### Rotating Central Pipe
**R For rotating siphon (steam inlet pipe); the inner pipe is connected by means of a threaded bushing that screws into the rotor.**



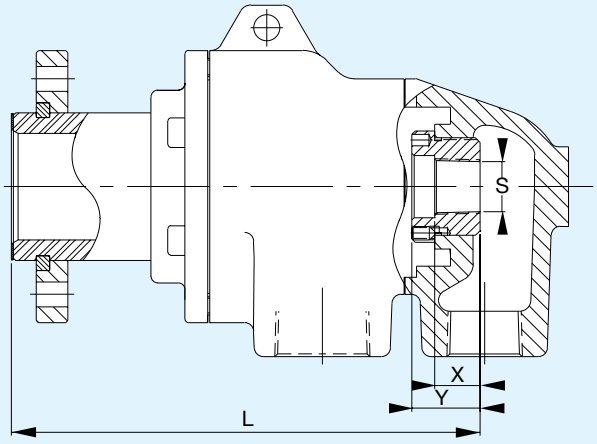

### Rotating Central Pipe Axial Movement
**E For a rotating siphon capable of axial movement; a sliding connection is made between the bushing and the central pipe to allow for the thermal expansion of the central pipe.**



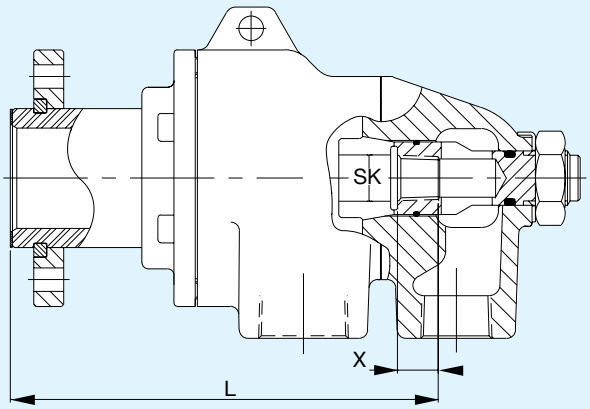

| Model | L | X | Y | Optional Pipe Sizes "R" |
|---|---|---|---|---|
| H20 | 4 19/32" | 19/32" | 25/32" | 1/8" - 1/4" NPT |
| H25 | 5 1/4" | 19/32" | 25/32" | 1/4" - 3/8" NPT |
| H32 | 5 25/32" | 25/32" | 1" | 3/8" - 1/2" NPT |
| H40 | 6 7/8" | 1" | 1 3/16" | 1/2" - 1" NPT |
| H57 | 9 3/16" | 1" | 1 3/8" | 1/2" - 1 1/4" NPT |
| H67 | 10 3/4" | 1" | 1 3/8" | 1/2" - 1 1/2" NPT |
| H87 | 11 13/16" | 1" | 1 9/16" | 1" - 2" NPT |
| H107 | 14 3/4" | 1 25/32" | 2 3/8" | 1" - 3" NPT |
| H127 | 18 1/8" | 1 25/32" | 2 3/8" | 1 1/4" - 4" NPT |

| Model | L | X | Optional Pipe Sizes "E" |
|---|---|---|---|
| H20 | 4 19/32" | 25/32" | 1/8" - 1/4" |
| H25 | 5 1/4" | 25/32" | 1/4" - 3/8" |
| H32 | 5 25/32" | 1" | 3/8" - 1/2" |
| H40 | 6 7/8" | 1 3/16" | 1/2" - 1" |
| H57 | 9 3/16" | 1 3/8" | 1/2" - 1 1/4" |
| H67 | 10 3/4" | 1 3/8" | 1/2" - 1 1/2" |
| H87 | 11 13/16" | 1 9/16" | 1" - 2" |
| H107 | 14 3/4" | 2 3/8" | 1" - 3" |
| H127 | 18 1/8" | 2 3/8" | 1 1/4" - 4" |

### Stationary Central Pipe
**S For fixed siphons; the pipe is connected by means of a threaded bushing that screws into the end cap.**




### Stationary Central Pipe
**SK For stationary fixed siphons; the central pipe is supported in the end cap and connected by means of an external bolt to the end cap.**




| Model | L | X | Y | Optional Pipe Sizes "S" |
|---|---|---|---|---|
| H20 | 5 13/32" | 7/16" | 5/8" | 1/8" - 1/4" NPT |
| H25 | 6 5/16" | 7/16" | 25/32" | 1/4" - 3/8" NPT |
| H32 | 6 25/32" | 19/32" | 1" | 3/8" - 1/2" NPT |
| H40 | 8 1/8" | 25/32" | 1 5/16" | 1/2" - 1" NPT |
| H57 | 9 7/8" | 1" | 1 9/16" | 1/2" - 1 1/4" NPT |
| H67 | 11 15/16" | 1 3/16" | 1 9/16" | 1/2" - 1 1/2" NPT |
| H87 | 13" | 1 3/8" | 1 31/32" | 1" - 2" NPT |
| H107 | – | – | – | – |
| H127 | – | – | – | – |

| Model | L | X | Optional Pipe Sizes "SK" |
|---|---|---|---|
| H57 | 8 31/32" | 1 3/16" | 1/2" - 3/4" |
| H67 | 10 7/8" | 1 3/16" | 3/4" - 1" |
| H87 | 11 19/32" | 1 3/16" | 1" - 1 1/4" |
| H107 | 14 3/4" | 2 3/8" | 1" - 1 1/4" |
| H127 | 18 1/8" | 2 3/8" | 1 1/4" - 1 1/2" |

**Adjustable Siphons Available**
**Consult *DEUBLIN***

# DEUBLIN

## ⅛" to ½" Air-Hydraulic Unions

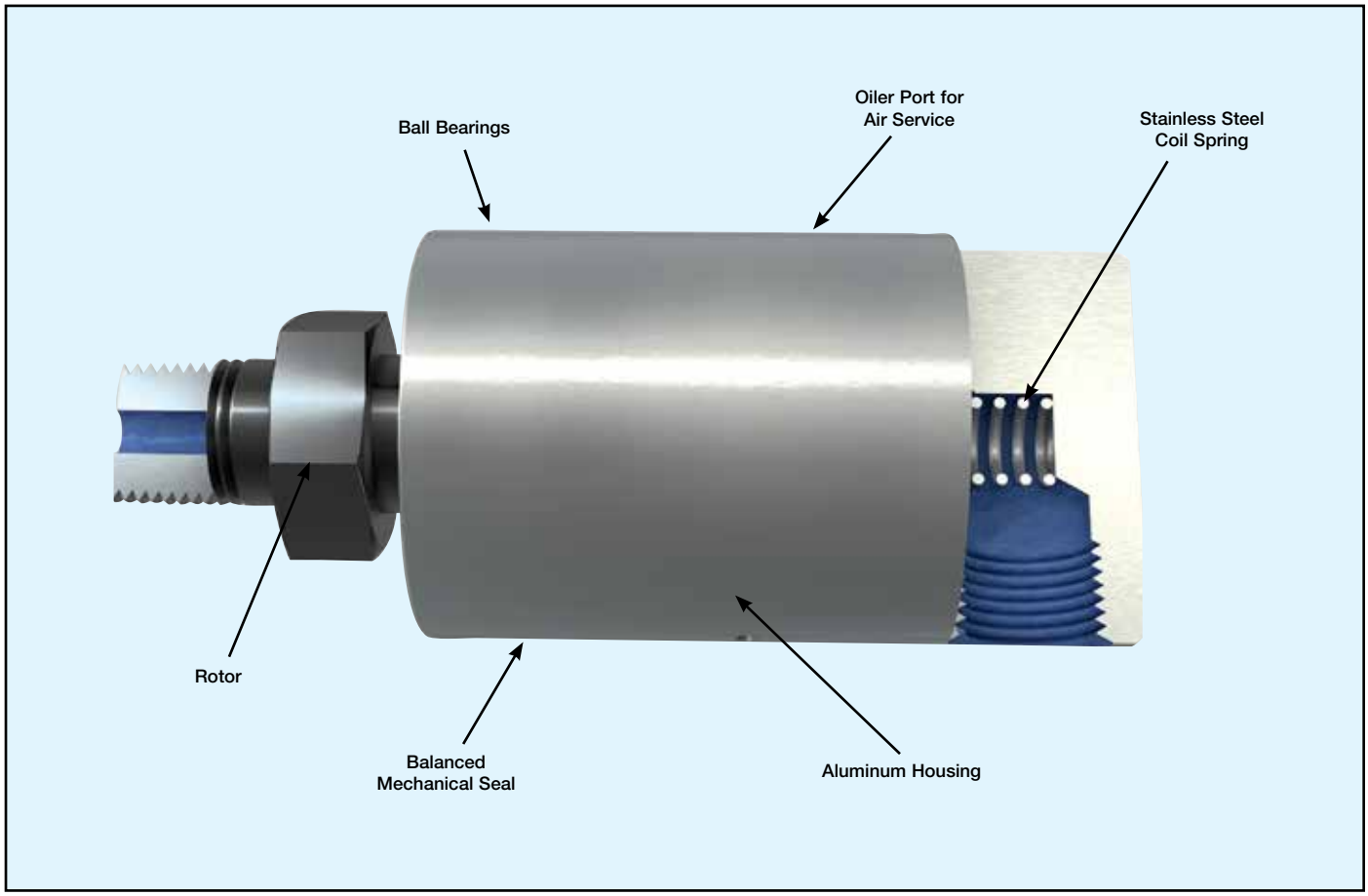
- Monoflow design
- Self-supported rotating union
- Radial housing connection
- Balanced mechanical seal
- Seal combinations:
  Carbon Graphite/Hardened Tool Steel or
  Carbon Graphite/Silicon Carbide
- Felt oiler in seal cavity for air service
- Oiler for relubrication (3 - 5 drops/month)
- Low torque
- Weight-optimized design
- Aluminum housing
- Bearings lubricated for life

## Operating Data

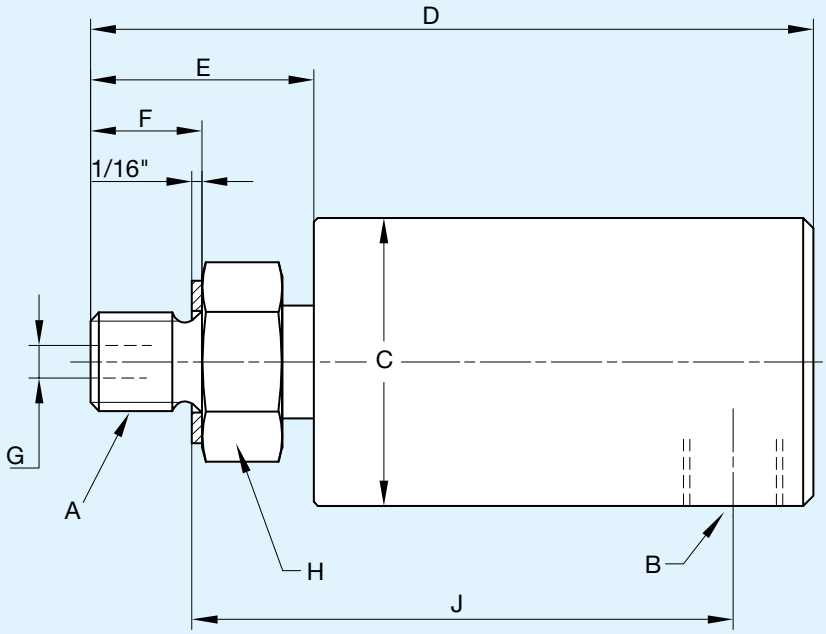
| | | |
|---|---|---|
| Maximum Air Pressure | 150 PSI | 10 bar |
| Maximum Vacuum | 28" Hg | 6.7 kPa |
| Maximum Hydraulic Pressure | | |
| Model 1005 | 1,000 PSI | 70 bar |
| Model 1102 | 1,000 PSI | 70 bar |
| Model 1115 | 500 PSI | 34 bar |
| Model 1205 | 750 PSI | 50 bar |
| Model 2200* | 1,000 PSI | 70 bar |
| Maximum Speed NPT Threads | 1,500 RPM | 1,500/min |
| Maximum Speed Straight Threads | 3,500 RPM | 3,500/min |
| Maximum Temperature | 250°F | 120°C |

* Union is designed for continuous operation at either maximum speed or maximum pressure. If operating conditions are close to maximum pressure and speed simultaneously, consult ***DEUBLIN***.

See next page for dimensional data.

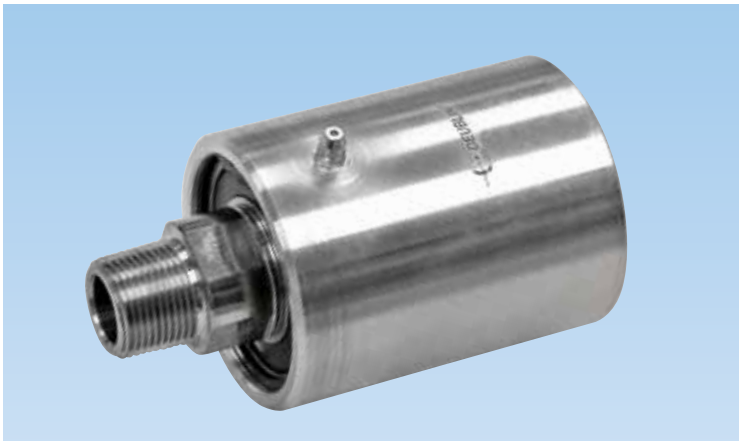


## Monoflow Rotating Union




| B Port NPT | Ordering No. Model | A Rotor Thread | C Dia. | D | E | F | G Rotor Hole | H* Across Flats | J Lock-up | Shpg. Wt. |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/8" | 1005-020-019 | 3/8"-24 UNF RH | 1 1/8" | 2 13/16" | 7/8" | 1/2" | 1/8" | 17 | 2 1/16" | 1/2# |
| | 1005-020-039 | 3/8"-24 UNF LH | | | | | | | | |
| | 1005-020-038 | 1/8" NPT RH | | | | | | | | |
| | 1005-020-037 | M10x1 RH | 28.5 | 71 | 22 | 11 | 3.2 | 17 | 54 | .2 Kg |
| | 1005-020-049 | G1/4" (BSP) RH | 28.5 | 71 | 22 | 13 | 3.2 | 17 | 52 | .2 Kg |
| 1/4" | 1102-070-029 | 5/8"-18 UNF RH | 1 5/8" | 3 3/16" | 1 1/8" | 5/8" | 1/4" | 22 | 2 1/4" | 1# |
| | 1102-070-079 | 5/8"-18 UNF LH | | | | | | | | |
| | 1102-070-081 | 1/4" NPT RH | 1 5/8" | 3 3/16" | 1 1/8" | 5/8" | 1/4" | 22 | 2 15/32" | 1# |
| | 1102-070-082 | 1/4" NPT LH | | | | | | | | |
| | 1102-070-103 | G1/4" (BSP) RH | 41.2 | 81 | 29 | 13 | 6.4 | 22 | 60 | .4 Kg |
| | 1102-070-104 | G1/4" (BSP) LH | | | | | | | | |
| 3/8" | 1115-000-001 | 5/8"-18 UNF RH | 1 23/32" | 3 15/16" | 1 1/16" | 5/8" | 3/8" | 24 | 2 27/32" | 1 1/2# |
| | 1115-000-017 | 5/8"-18 UNF LH | | | | | | | | |
| | 1115-000-002 | 3/8" NPT RH | 1 23/32" | 3 15/16" | 1 1/16" | 5/8" | 3/8" | 24 | 3 1/8" | 1 1/2# |
| | 1115-000-018 | 1/4" NPT RH | | | | | | | | |
| | 1115-000-205 | G3/8" (BSP) RH | 43.6 | 100 | 27 | 16.6 | 8.7 | 24 | 71.4 | .7 Kg |
| | 1115-000-200 | M16x2 RH | 43.6 | 100 | 27 | 16 | 8.7 | 24 | 72.2 | .7 Kg |
| 1/2" | 1205-000-003 | 1/2" NPT RH | 2 1/4" | 4 9/16" | 1 7/16" | 7/8" | 1/2" | 30 | 3 1/2" | 1 1/2# |
| | 1205-000-004 | 1/2" NPT LH | | | | | | | | |
| | 1205-000-019 | 3/4" NPT RH | 2 1/4" | 4 9/16" | 1 7/16" | 7/8" | 5/8" | 30 | 3 15/32" | 1 1/2# |
| | 1205-000-020 | 3/4" NPT LH | | | | | | | | |
| | 1205-000-039 | 3/4"-16 UNF RH | 2 1/4" | 4 7/16" | 1 5/16" | 3/4" | 1/2" | 30 | 3 1/16" | 1 1/2# |
| | 1205-000-025 | 3/4"-16 UNF LH | | | | | | | | |
| | 1205-000-001 | 1"-14 UNS RH | 2 1/4" | 4 13/32" | 1 9/32" | 3/4" | 5/8" | 36 | 3 1/32" | 1 1/2# |
| | 1205-000-002 | 1"-14 UNS LH | | | | | | | | |
| | 1205-000-012 | G1/2" (BSP) RH | 57.1 | 113 | 33.3 | 19 | 12.7 | 30 | 77.7 | .7 Kg |
| | 1205-000-013 | G1/2" (BSP) LH | | | | | | | | |
| | 1205-000-021 | G3/4" (BSP) RH | 57.1 | 112 | 32.5 | 19 | 15.8 | 36 | 77 | .7 Kg |
| | 1205-000-022 | G3/4" (BSP) LH | | | | | | | | |
| 1/2" | 2200-000-096 | 1/2" NPT RH | 2 7/8" | 4 15/16" | 1 7/16" | 7/8" | 1/2" | 32 | 3 3/4" | 3# |
| | 2200-000-097 | 1/2" NPT LH | | | | | | | | |
| | 2200-000-098 | 3/4" NPT RH | 2 7/8" | 4 15/16" | 1 7/16" | 7/8" | 11/16" | 32 | 3 3/4" | 3# |
| | 2200-000-099 | 3/4" NPT LH | | | | | | | | |
| | 2200-000-003 | 1"-14 UNS RH | 2 7/8" | 4 13/16" | 1 5/16" | 3/4" | 21/32" | 32 | 3 7/16" | 3# |
| | 2200-000-027 | 1"-14 UNS LH | | | | | | | | |
| | 2200-000-102 | G3/4" (BSP) RH | 73 | 121 | 34 | 19 | 17.5 | 36 | 88 | 1.4 Kg |
| | 2200-000-103 | G3/4" (BSP) LH | | | | | | | | |

*Metric



# DEUBLIN

## ¾" to 1½" Air-Hydraulic Unions

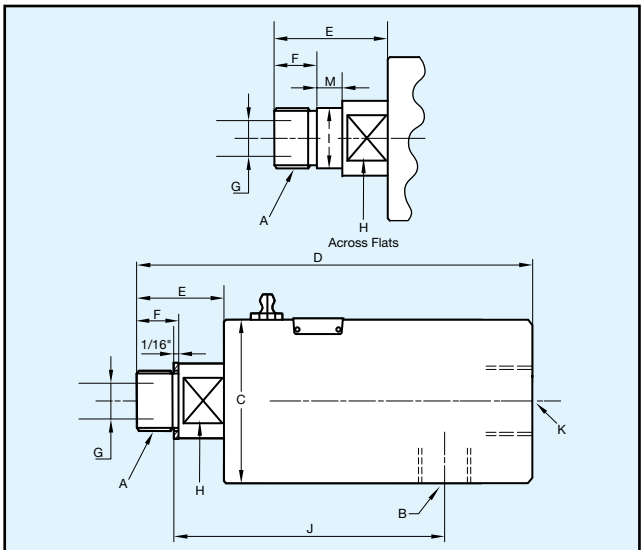
- Monoflow design
- Self-supported rotating union
- Radial housing connection
- Balanced mechanical seal
- Seal combinations:
  Carbon Graphite/Hardened Tool Steel or
  Carbon Graphite/Ceramic
- Felt oiler in seal cavity for air service
- Oiler for relubrication (3 - 5 drops/month)
- Low torque
- Aluminum housing
- Stainless steel or steel rotor (respective of model)
- Lubrication Guide page 55

## Operating Data

| | | |
|---|---|---|
| Maximum Air Pressure | 150 PSI | 10 bar |
| Maximum Vacuum 28" Hg | 6.7 kPa | |
| Maximum Hydraulic Pressure | | |
| Model 250-094 | 1,000 PSI | 70 bar |
| Model 355-021 | 1,000 PSI | 70 bar |
| Model 452-000 | 750 PSI | 50 bar |
| Maximum Speed NPT Threads | 1,500 RPM | 1,500/min |
| Maximum Speed Straight Threads | | |
| Model 250-094 | 3,500 RPM | 3,500/min |
| Model 355-021 | 3,000 RPM | 3,000/min |
| Model 452-000 | 2,500 RPM | 2,500/min |
| Maximum Temperature | 250°F | 120°C |

Union is designed for continuous operation at either maximum speed or maximum pressure. If operating conditions are close to maximum pressure and speed simultaneously, consult ***DEUBLIN***.

To indicate union with additional "K" port with
½" NPT: Order Number 250-979-RTR
¾" NPT: Order Number 355-305-RTR
1¼" NPT: Order Number 452-001-RTR




| B Port NPT | Ordering No. Model | A Rotor Thread | | C | D | E | F | G Rotor Hole | H* Across Flats | I Pilot Dia. | J Lock-up | M | Shpg. Wt. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ¾" | 250-094-020 | ¾" NPT | RH | 2⅞" | 5⅛" | 1⁷⁄₁₆" | ⅞" | 1¹⁄₁₆" | 32 | – | 4¹⁄₁₆" | – | 3½# |
| | 250-094-021 | ¾" NPT | LH | | | | | | | | | | |
| | 250-094-002 | 1"-14 UNS | RH | 2⅞" | 5" | 1⁵⁄₁₆" | ¾" | 2¹⁄₃₂" | 32 | – | 3¹¹⁄₁₆" | – | 3½# |
| | 250-094-027 | 1"-14 UNS | LH | | | | | | | | | | |
| | 250-094-016 | 1"-14 UNS (PLT) | RH | 2⅞" | 5¹³⁄₁₆" | 2⅛" | ¾" | ⅝" | 41 | 1.2480" 1.2478" | 4" | ½" | 3½# |
| | 250-094-017 | 1"-14 UNS (PLT) | LH | | | | | | | | | | |
| | 250-094-284 | G¾" (BSP) | RH | 73 | 128 | 34 | 19 | 17.5 | 36 | – | 94 | – | 1.6 Kg |
| | 250-094-285 | G¾" (BSP) | LH | | | | | | | | | | |
| | 250-094-012 | M22x1.5 (PLT) | RH | 73 | 122 | 28 | 14 | 14.3 | 36 | 26.992 26.979 | 87.5 | 3 | 1.6 Kg |
| | 250-094-013 | M22x1.5 (PLT) | LH | | | | | | | | | | |
| 1" | 355-021-002 | 1" NPT | RH | 3¼" | 6¾₁₆" | 1¹⁵⁄₁₆" | 1⅛" | 1" | 36 | – | 4¹³⁄₁₆" | – | 4½# |
| | 355-021-003 | 1" NPT | LH | | | | | | | | | | |
| | 355-021-019 | 1½"-12 UNF | RH | 3¼" | 6¾₁₆" | 1¹⁵⁄₁₆" | 1⅛" | 1" | 36 | – | 4¼" | – | 4½# |
| | 355-021-074 | 1½"-12 UNF | LH | | | | | | | | | | |
| | 355-021-016 | 1½"-12 UNF (PLT) | RH | 3¼" | 6⁹⁄₁₆" | 2⁵⁄₁₆" | 1" | 1" | 36 | 1.5610" 1.5605" | 4³⁄₁₆" | ½" | 4½# |
| | 355-021-017 | 1½"-12 UNF (PLT) | LH | | | | | | | | | | |
| | 355-021-222 | G1" (BSP) | RH | 82.6 | 150 | 42 | 21 | 22.2 | 38 | – | 108 | – | 2.1 Kg |
| | 355-021-223 | G1" (BSP) | LH | | | | | | | | | | |
| 1½" | 452-000-001 | 1½" NPT | RH | 4¼" | 7¹¹⁄₁₆" | 2⁷⁄₁₆" | 1³⁄₁₆" | 1½" | 55 | – | 5¹³⁄₁₆" | – | 9.5# |
| | 452-000-002 | 1½" NPT | LH | | | | | | | | | | |
| | 452-000-395 | 2"-12 UN | RH | 4¼" | 8¹⁄₁₆" | 2¹³⁄₁₆" | 1⅛" | 1½" | 55 | – | 5⅝" | – | 9.5# |
| | 452-000-396 | 2"-12 UN | LH | | | | | | | | | | |
| | 452-000-029 | 1¾"-12 UN | RH | 4¼" | 8⁷⁄₁₆" | 3³⁄₁₆" | ⅞" | 1¼" | 55 | – | 6¼" | – | 9.5# |
| | 452-000-109 | 1¾"-12 UN | LH | | | | | | | | | | |
| | 452-000-198 | G1½" (BSP) | RH | 108 | 205 | 72 | 29 | 35 | 55 | – | 143 | – | 4.5 Kg |
| | 452-000-199 | G1½" (BSP) | LH | | | | | | | | | | |

*Metric

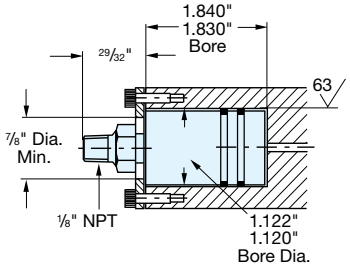
# Deublin In-The-Shaft Mounted Unions

## Model 1005-000-038 ⅛" Capacity—for Air or Hyd. Oil

Available with 1005 rotors shown on page 32. To meet the specifications of engineering designs requiring minimum overhang. Deublin can provide unions which can be mounted within the shaft. With these models, the only extensions beyond the end of the shaft are the supply line connections.

**Operating Data**

| | | |
|---|---|---|
| Maximum Air Pressure | 150 PSI | 10 bar |
| Maximum Hydraulic Pressure* | 1,000 PSI | 70 bar |
| Maximum Speed* | 3,500 RPM | 3,500/min |
| Maximum Temperature | 250°F | 120°C |

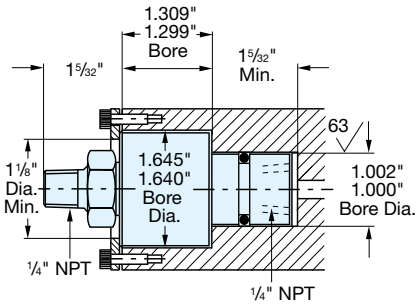



## Model 1102-025-081 ¼" Capacity—for Air or Hyd. Oil

Available with 1102 rotors shown on page 32.
Also available with hub mount for CTIS.
See page 52.

**Operating Data**

| | | |
|---|---|---|
| Maximum Air Pressure | 150 PSI | 10 bar |
| Maximum Hydraulic Pressure* | 1,000 PSI | 70 bar |
| Maximum Speed* | 3,500 RPM | 3,500/min |
| Maximum Temperature | 250°F | 120°C |

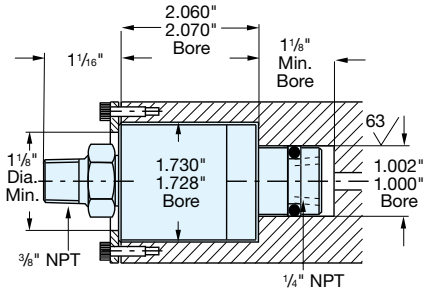



## Model 1115-130-002 ⅜" Capacity—for Air or Hyd. Oil

Available with 1115 rotors shown on page 32.

**Operating Data**

| | | |
|---|---|---|
| Maximum Air Pressure | 150 PSI | 10 bar |
| Maximum Hydraulic Pressure | 500 PSI | 35 bar |
| Maximum Speed | 3,500 RPM | 3,500/min |
| Maximum Temperature | 250°F | 120°C |

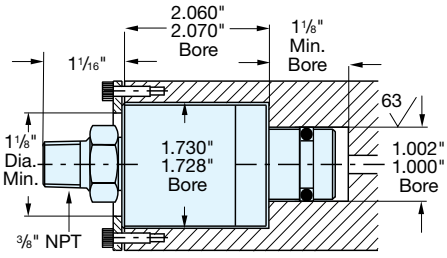



## Model 1116-319-248 ⅜" Capacity—for Hydraulic Oil

This model contains E.L.S. seals of silicon carbide to silicon carbide for long life on abrasive applications. Do not run dry.

**Operating Data**

| | | |
|---|---|---|
| Maximum Hydraulic Pressure* | 1,000 PSI | 70 bar |
| Maximum Speed* | 3,500 RPM | 3,500/min |
| Maximum Temperature | 250°F | 120°C |




* Union is designed for continuous operation at either maximum speed or maximum pressure.
If operating conditions are close to maximum pressure and speed simultaneously, consult ***DEUBLIN***.

# DEUBLIN

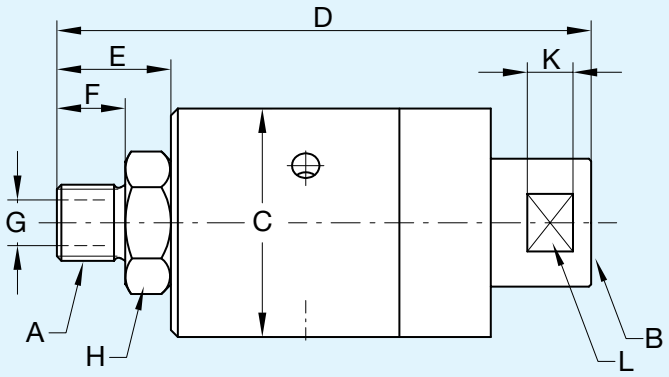
## AP Series High Pressure High Speed Unions

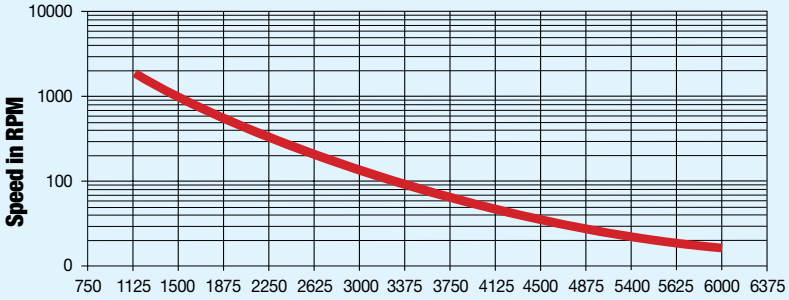
- Monoflow design
- Self-supported rotating union
- Seal combination: Tungsten Carbide/Tungsten Carbide
- Double row ball bearing; lubricated for life
- Vent holes
- Steel housing nickel-plated
- Stainless steel end cap and rotor
- All parts in media contact are stainless steel and corrosion resistant
- Designed for high pressure and high speed

## Operating Data

| | | |
|---|---|---|
| Maximum Hydraulic/Water Pressure* | 5,700 PSI | 400 bar |
| Maximum Speed* | 1,500 RPM | 1,500/min |
| Maximum Temperature | 200°F | 90°C |

* Operation at maximum pressure combined with maximum speed should be avoided. For optional performance, refer to graph. If operating conditions are marginal, consult ***DEUBLIN***.




| B Inlet Port | Ordering Number | A Rotor Thread | | C | D | E | F | G Rotor Hole | H* Across Flats | K | L Across Flats | Shpg. Wt. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1/4" NPT | AP8-011-214 | 1/4" NPT | RH | 1 31/32" | 4 19/32" | 1" | 19/32" | 9/32" | 27 | 13/32" | 1" | 1.5# |
| | AP8-011-215 | 1/4" NPT | LH | | | | | | | | | |
| G1/4" (BSP) | AP8-010-210 | G1/4" (BSP) | RH | 50 | 117 | 25 | 15 | 7 | 27 | 10 | 25 | .7 Kg |
| | AP8-010-211 | G1/4" (BSP) | LH | | | | | | | | | |
| 3/8" NPT | AP10-011-214 | 3/8" NPT | RH | 1 31/32" | 4 19/32" | 1" | 19/32" | 13/32" | 27 | 13/32" | 1" | 1.5# |
| | AP10-011-215 | 3/8" NPT | LH | | | | | | | | | |
| G3/8" (BSP) | AP10-010-210 | G3/8" (BSP) | RH | 50 | 117 | 25 | 15 | 10 | 27 | 10 | 25 | .7 Kg |
| | AP10-010-211 | G3/8" (BSP) | LH | | | | | | | | | |
| 1/2" NPT | AP12-011-214 | 1/2" NPT | RH | 1 31/32" | 4 13/16" | 1 3/16" | 25/32" | 15/32" | 27 | 13/32" | 1" | 2# |
| | AP12-011-215 | 1/2" NPT | LH | | | | | | | | | |
| G1/2" (BSP) | AP12-010-210 | G1/2" (BSP) | RH | 50 | 122 | 30 | 20 | 12 | 27 | 10 | 25 | 1 Kg |
| | AP12-010-211 | G1/2" (BSP) | LH | | | | | | | | | |

*Metric

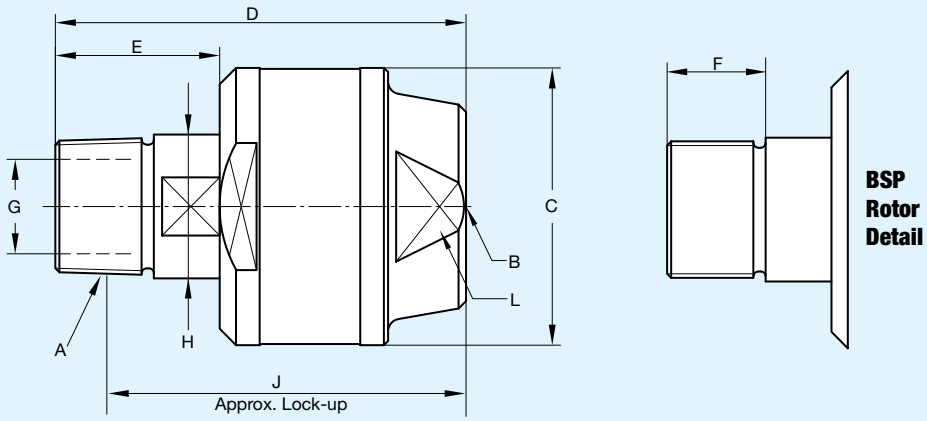
# DEUBLIN

## D Series High Pressure Swivel Low Speed Rotating Unions

- Monoflow design
- For hydraulic oil and water
- For swivel applications and high pressure media
- Steel housing and end cap
- Stainless steel rotor
- Self-supported rotating union
- Can be adapted for other media

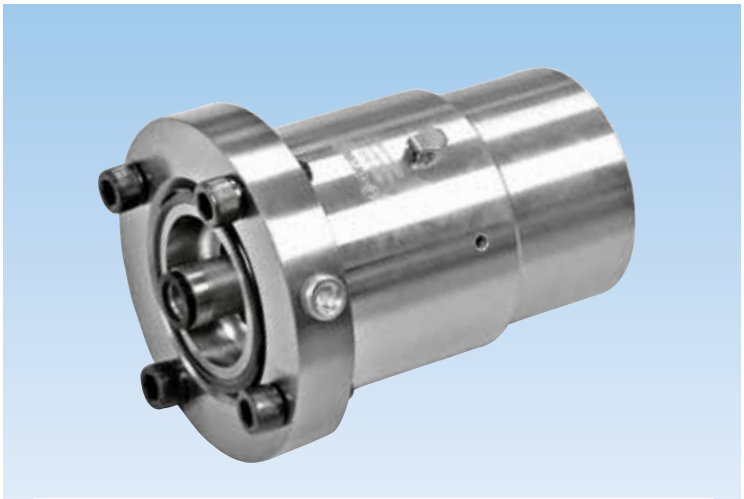
## Operating Data

| | | |
|---|---|---|
| Maximum Hydraulic/Water Pressure | 6,400 PSI | 450 bar |
| Maximum Speed | 20 RPM | 20/min |
| Maximum Temperature | 250°F | 120°C |




| B Inlet Port | Ordering Number | A Rotor Connections | | C | D | E | F | G Rotor Hole | H* Across Flats | J Lock-up | L Across Flats | Shpg. Wt. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1/4" NPT | D8-004-214 | 1/4" NPT | RH | 1 9/16" | 2 11/16" | 1" | 19/32" | 9/32" | 12 | 2 5/16" | 15/16" | 3/4# |
| | D8-004-215 | 1/4" NPT | LH | | | | | | | | | |
| G1/4" (BSP) | D8-003-210 | G1/4" (BSP) | RH | 40 | 68 | 25 | 15 | 7 | 12 | 53 | 24 | .3 Kg |
| | D8-003-211 | G1/4" (BSP) | LH | | | | | | | | | |
| 3/8" NPT | D10-004-214 | 3/8" NPT | RH | 1 3/4" | 2 3/4" | 1" | 25/32" | 13/32" | 14 | 2 3/8" | 1 3/32" | 7/8# |
| | D10-004-215 | 3/8" NPT | LH | | | | | | | | | |
| G3/8" (BSP) | D10-003-210 | G3/8" (BSP) | RH | 44 | 70 | 25 | 15 | 10 | 14 | 55 | 28 | .4 Kg |
| | D10-003-211 | G3/8" (BSP) | LH | | | | | | | | | |
| 1/2" NPT | D12-004-214 | 1/2" NPT | RH | 2 7/32" | 3 7/32" | 1 1/4" | 25/32" | 15/32" | 22 | 2 23/32" | 1 1/2" | 1 3/4# |
| | D12-004-215 | 1/2" NPT | LH | | | | | | | | | |
| G1/2" (BSP) | D12-003-210 | G1/2" (BSP) | RH | 56 | 82 | 32 | 20 | 12 | 22 | 62 | 38 | .8 Kg |
| | D12-003-211 | G1/2" (BSP) | LH | | | | | | | | | |
| 3/4" NPT | D20-004-214 | 3/4" NPT | RH | 2 7/16" | 3 17/32" | 1 11/32" | 25/32" | 23/32" | 27 | 3" | 1 21/32" | 2 1/4# |
| | D20-004-215 | 3/4" NPT | LH | | | | | | | | | |
| G3/4" (BSP) | D20-003-210 | G3/4" (BSP) | RH | 62 | 90 | 34 | 20 | 18 | 27 | 70 | 42 | 1.0 Kg |
| | D20-003-211 | G3/4" (BSP) | LH | | | | | | | | | |
| 1" NPT | D25-004-214 | 1" NPT | RH | 2 11/16" | 3 15/16" | 1 19/32" | 15/16" | 29/32" | 32 | 3 1/4" | 1 7/8" | 2 3/4# |
| | D25-003-215 | 1" NPT | LH | | | | | | | | | |
| G1" (BSP) | D25-003-210 | G1" (BSP) | RH | 68 | 100 | 40 | 24 | 23 | 32 | 76 | 48 | 1.3 Kg |
| | D25-003-211 | G1" (BSP) | LH | | | | | | | | | |
| 1 1/4" NPT | D32-004-214 | 1 1/4" NPT | RH | 3 5/32" | 4 1/4" | 1 11/16" | 1" | 1 3/16" | 42 | 3 9/16" | 2 9/32" | 4 1/4# |
| | D32-004-215 | 1 1/4" NPT | LH | | | | | | | | | |
| G1 1/4" (BSP) | D32-003-210 | G1 1/4" (BSP) | RH | 80 | 108 | 43 | 25 | 30 | 42 | 83 | 58 | 1.9 Kg |
| | D32-003-211 | G1 1/4" (BSP) | LH | | | | | | | | | |
| 1 1/2" NPT | D40-004-214 | 1 1/2" NPT | RH | 3 15/32" | 4 15/32" | 1 23/32" | 1 1/32" | 1 1/2" | 46 | 3 13/16" | 2 7/16" | 6 1/2# |
| | D40-004-215 | 1 1/2" NPT | LH | | | | | | | | | |
| G1 1/2" (BSP) | D40-003-210 | G1 1/2" (BSP) | RH | 88 | 114 | 44 | 26 | 38 | 46 | 88 | 62 | 3.0 Kg |
| | D40-003-211 | G1 1/2" (BSP) | LH | | | | | | | | | |

*Metric



# DEUBLIN

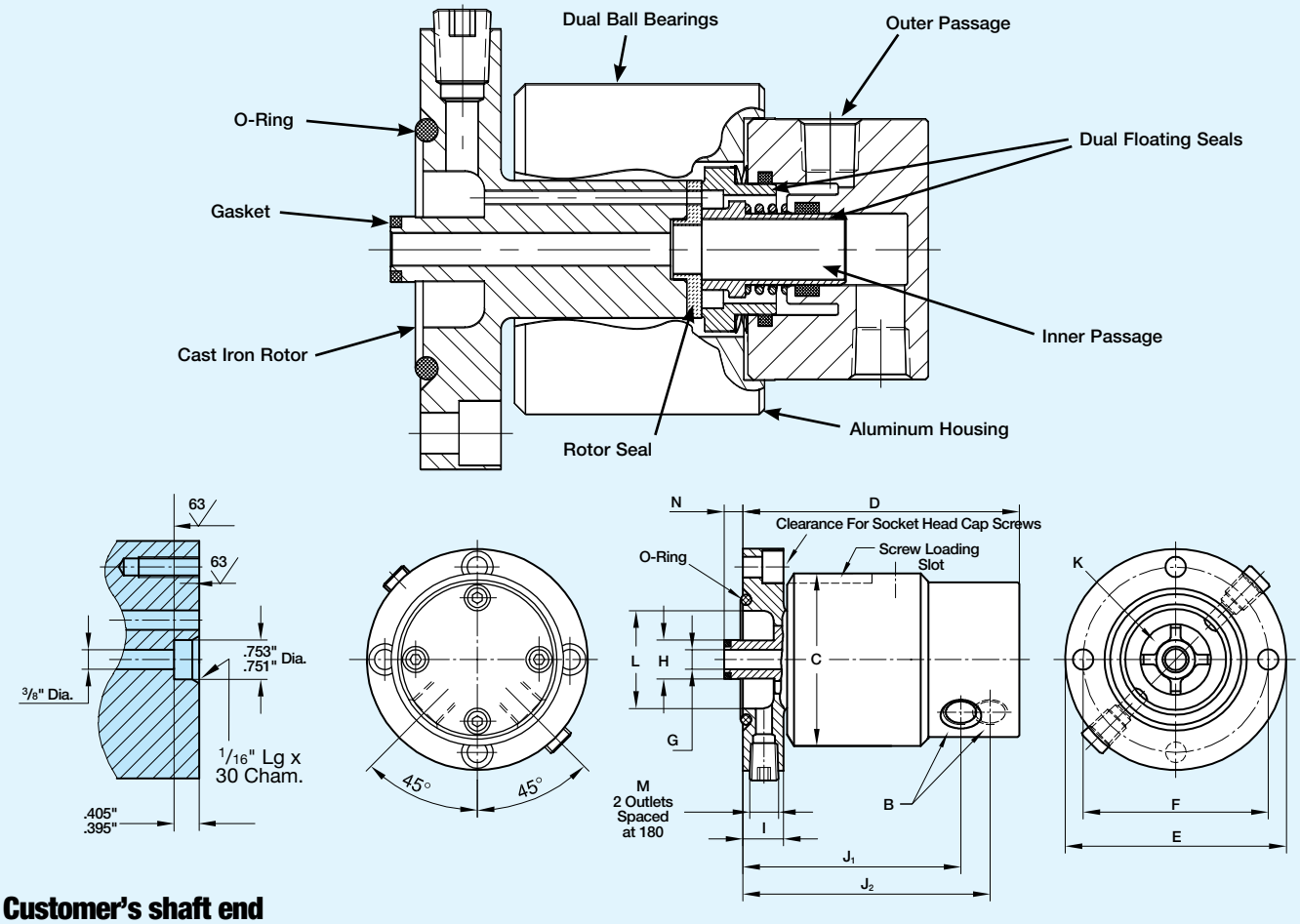
## Deu-Plex Air Unions

- Duoflow design
- Self-supported rotating union
- Flanged rotor
- Radial housing connections
- Low torque
- Balanced mechanical seals
- Seal combination: Carbon Graphite/Cast Iron
- Full-media flow
- Aluminum housing
- Cast iron rotor
- Oil cup (3-5 drops/month)

## Operating Data

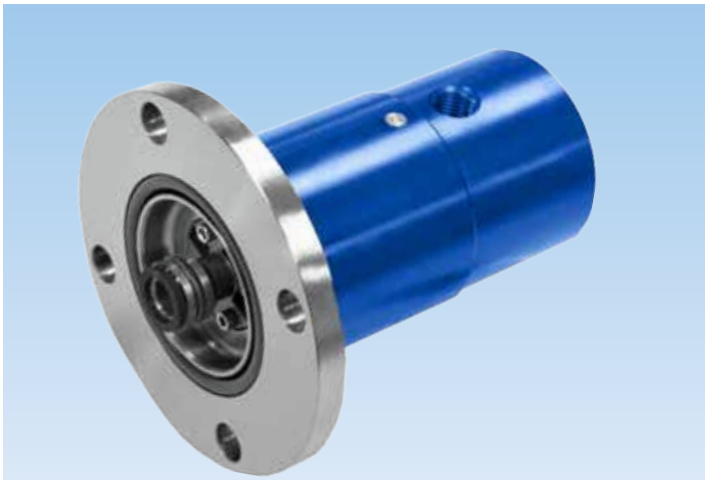
| | | |
|---|---|---|
| Maximum Air Pressure | 150 PSI | 10 bar |
| Maximum Vacuum | 28" Hg | 6.7 kPa |
| Maximum Speed | 1,500 RPM | 1,500/min |
| Maximum Temperature | 250°F | 120°C |

Only one passage should be pressurized at a time.




### Customer's shaft end

| B Port NPT | Ordering No. Model | C | D | E Pilot | F Bolt Circle | G Area | H | I | $J_1$ | $J_2$ | K Area | L | M Tap | N | Screw | Shpg. Wt. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (2) x 3/8" | 1500-000 | 3 5/16" | 5 1/4" | 4.250" 4.249" | 3 9/16" | .1105in² | .750" .748" | 3/4" | 4 1/8" | 4 11/16" | .2304in² | 1 7/8" | 1/4" NPT | 7/16" | 3/8"-16 | 7# |
| | 1500-250 | 84 | 133 | 107.95 107.92 | 90.5 | 71mm² | 19.05 19.00 | 19 | 105 | 119 | 150mm² | 48 | 1/4" NPT | 11.1 | M10 | 3.2 Kg |



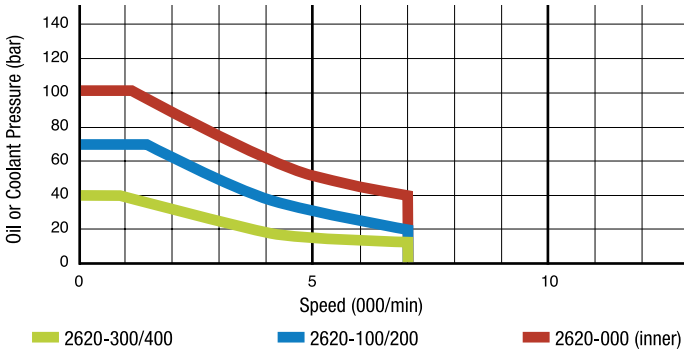
# DEUBLIN

## 2620 Series 2-Passage Rotating Unions for Various Media

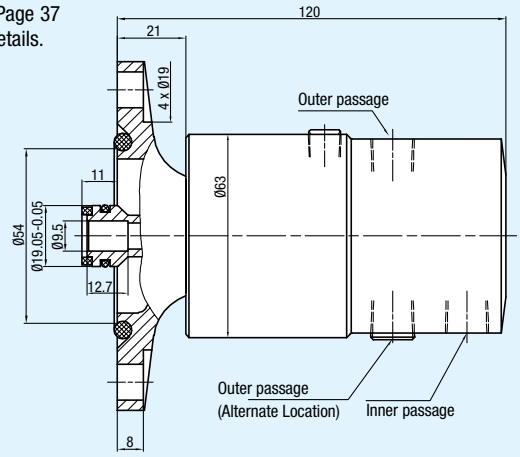
- Two independent passages for applications such as clamping and unclamping
- Balanced mechanical seals for each passage provide long life and reduced torque even at maximum pressure
- Closed seals provide continuous containment of media
- Dual precision ball bearings for smooth operation
- Labyrinth protection for ball bearings
- Mountings options are compatible with *DEUBLIN* 2520 or 1579 series unions

## Operating Data

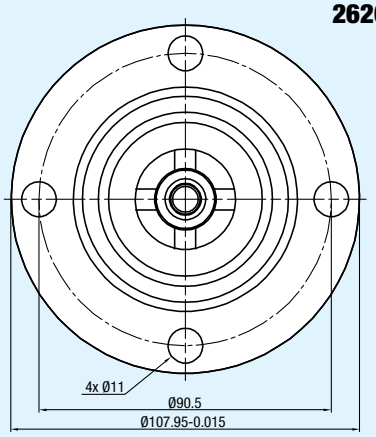
| | | |
|---|---|---|
| Media | See table | |
| Filtration | ISO 4406 Class 17/15/12, max. 60 micron | |
| Maximum Speed | 7,000 min$^{-1}$ | 7,000 rpm |
| Maximum Pressure | See table | |
| Maximum Flow | 69 l/min | 18.2 gpm (per passage) |
| Maximum Temperature | 160°F | 71°C |




Note: Refer to Page 37 for mounting details.




**2620-XXX-252 shown**

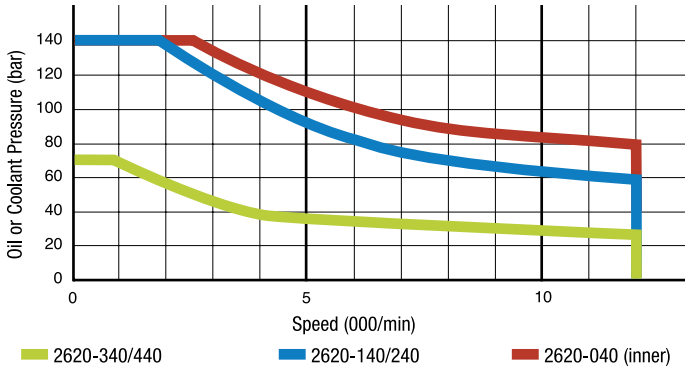



| | With Ø 108 mm flanged rotor | | With Ø 88 mm flanged rotor | | | With Ø 81 mm flanged rotor | | Inner Passage | | Outer Passage | | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ordering Number | Supply Connections Inner and Outer Passage | Ordering Number | Supply Connections Inner Passage | Supply Connections Outer Passage | Ordering Number | Supply Connections Inner and Outer Passage | Media | Max. Pressure {bar} | Media | Max. Pressure {bar} | |
| | 2620-000-252 | 1/4 NPT | 2620-002-940 | G1/4" | G1/4" | 2620-000-157 | 1/4 NPT | Hydraulic oil | 100 | Hydraulic oil | 30 | |
| | 2620-100-252 | 1/4 NPT | 2620-102-940 | G3/8" | G1/8" | 2620-100-157 | 1/4 NPT | Hydraulic oil | 70 | Air | 6 | Air seals may be lubricated through oil cup or by using oiled air. |
| | 2620-120-252 | 1/4 NPT | 2620-122-940 | G3/8" | G1/8" | 2620-120-157 | 1/4 NPT | Hydraulic oil | 70 | Air | 10 | |
| | 2620-200-252 | 1/4 NPT | 2620-202-940 | G3/8" | G1/8" | 2620-200-157 | 1/4 NPT | Coolant | 70 | Air | 6 | |
| | 2620-220-252 | 1/4 NPT | 2620-222-940 | G3/8" | G1/8" | 2620-220-157 | 1/4 NPT | Coolant | 70 | Air | 10 | |
| | 2620-300-252 | 1/4 NPT | 2620-302-940 | G1/4" | G1/4" | 2620-300-157 | 1/4 NPT | Air | 6 | Hydraulic oil | 40 | Air seals require no external lubrication. |
| | 2620-320-252 | 1/4 NPT | 2620-322-940 | G1/4" | G1/4" | 2620-320-157 | 1/4 NPT | Air | 10 | Hydraulic oil | 40 | |
| | 2620-400-252 | 1/4 NPT | 2620-402-940 | G1/4" | G1/4" | 2620-400-157 | 1/4 NPT | Air | 6 | Coolant | 40 | |
| | 2620-420-252 | 1/4 NPT | 2620-422-940 | G1/4" | G1/4" | 2620-420-157 | 1/4 NPT | Air | 10 | Coolant | 40 | |
| | 2620-500-252 | 1/4 NPT | 2620-502-940 | G3/8" | G1/8" | 2620-500-157 | 1/4 NPT | Air | 6 | Air | 6 | Consult *DEUBLIN* regarding maximum speed. |
| | 2620-520-252 | 1/4 NPT | 2620-522-940 | G3/8" | G1/8" | 2620-520-157 | 1/4 NPT | Air | 10 | Air | 10 | |

# DEUBLIN

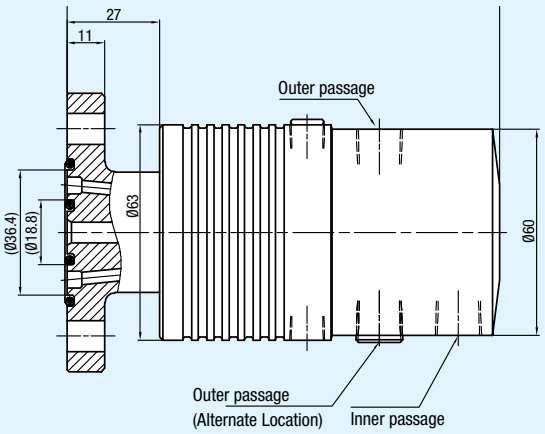
## 2620 Series 2-Passage Rotating Unions for Various Media

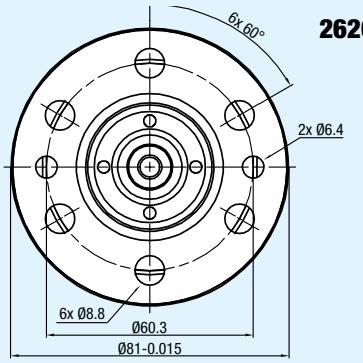
- Two independent passages for applications such as clamping and unclamping, work piece sensing, and cooling
- Balanced mechanical seals for each passage provide long life and reduced torque even at maximum pressure
- Closed seals provide continuous containment of media
- Dual precision ball bearings for smooth operation
- Labyrinth protection for ball bearings
- Mountings options are compatible with *DEUBLIN* 2520 or 1579 series unions




## Operating Data

| | | |
|---|---|---|
| Media | See table | |
| Filtration | ISO 4406 Class 17/15/12, max. 60 micron | |
| Maximum Speed | 12,000 min-1 | 12,000 rpm |
| Maximum Pressure | See table | |
| Maximum Flow | 69 l/min | 18.2 gpm (per passage) |
| Maximum Temperature | 71°C | 160°F |




**2620-XXX-157 shown**

| | With Ø 108 mm flanged rotor | | With Ø 88 mm flanged rotor | | | With Ø 81 mm flanged rotor | | Inner Passage | | Outer Passage | | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ordering Number | Supply Connections Inner and Outer Passage | Ordering Number | Supply Connections Inner Passage | Supply Connections Outer Passage | Ordering Number | Supply Connections Inner and Outer Passage | Media | Max. Pressure {bar} | Media | Max. Pressure {bar} | |
| | 2620-040-252 | 1/4 NPT | 2620-042-940 | G1/4" | G1/4" | 2620-040-157 | 1/4 NPT | Hydraulic oil | 140 | Hydraulic oil | 70 | |
| | 2620-140-252 | 1/4 NPT | 2620-142-940 | G3/8" | G1/8" | 2620-140-157 | 1/4 NPT | Hydraulic oil | 140 | Air | 6 | Air seals may be lubricated through oil cup or by using oiled air. |
| | 2620-160-252 | 1/4 NPT | 2620-162-940 | G3/8" | G1/8" | 2620-160-157 | 1/4 NPT | Hydraulic oil | 140 | Air | 10 | |
| | 2620-240-252 | 1/4 NPT | 2620-242-940 | G3/8" | G1/8" | 2620-240-157 | 1/4 NPT | Coolant | 140 | Air | 6 | |
| | 2620-260-252 | 1/4 NPT | 2620-262-940 | G3/8" | G1/8" | 2620-260-157 | 1/4 NPT | Coolant | 140 | Air | 10 | |
| | 2620-340-252 | 1/4 NPT | 2620-342-940 | G1/4" | G1/4" | 2620-340-157 | 1/4 NPT | Air | 6 | Hydraulic oil | 70 | Air seals require no external lubrication. |
| | 2620-360-252 | 1/4 NPT | 2620-362-940 | G1/4" | G1/4" | 2620-360-157 | 1/4 NPT | Air | 10 | Hydraulic oil | 70 | |
| | 2620-440-252 | 1/4 NPT | 2620-442-940 | G1/4" | G1/4" | 2620-440-157 | 1/4 NPT | Air | 6 | Coolant | 70 | |
| | 2620-460-252 | 1/4 NPT | 2620-462-940 | G1/4" | G1/4" | 2620-460-157 | 1/4 NPT | Air | 10 | Coolant | 70 | |

# DEUBLIN

## Deu-Plex Air and Hydraulic Unions

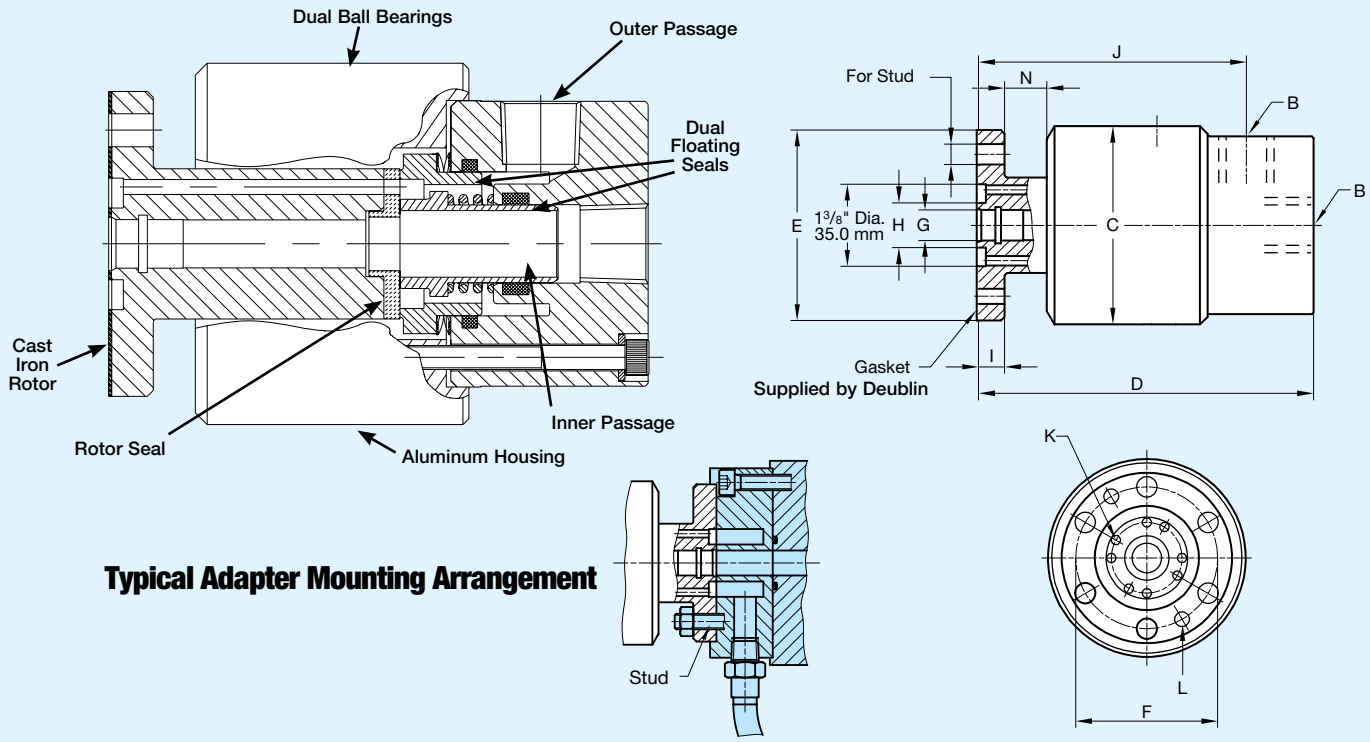
- Duoflow design
- Self-supported rotating union
- Flanged rotor
- Balanced mechanical seals
- Seal combination for 1590: Carbon Graphite/Ceramic
- Seal combinations for 1579: Carbon Graphite/Ceramic - standard Tungsten Carbide/Ceramic - E.L.S.
- Full-media flow
- Aluminum housing
- Cast iron rotor
- Oil cup (3-5 drops/month for 1590)

## Operating Data

| | | |
|---|---|---|
| Maximum Air Pressure (1590)* | 150 PSI | 10 bar |
| Maximum Hydraulic Pressure (1579)** | 1,000 PSI | 70 bar |
| Maximum Vacuum (1590) | 28" Hg | 6.7 kPa |
| Maximum Speed | 1,500 RPM | 1,500/min |
| Maximum Temperature | 250°F | 120°C |

* Only one passage should be pressurized at a time.

**Operation at maximum pressure combined with maximum speed should be avoided. Pressure rating is for inner passage only. Contact ***DEUBLIN*** if outer passage or both passages are pressurized.




**Typical Adapter Mounting Arrangement**

| B Port NPT | Ordering No. | Media | C | D | E Pilot | F Bolt Circle | G Area | H | I | J | K Area | L Dowel | N | Stud | Shpg. Wt. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (2) x ½" | 1590-000 | Air | 3 5/16" | 5 19/32" | 3.189" 3.187" | 2 3/8" | .1964in² | ¾" | 7/16" | 4 7/16" | .1536in² | ¼" | ⅝" | 5/16" | 7# |
| | | | 84 | 142 | 81.00 80.95 | 60.3 | 126mm² | 19 | 11 | 113 | 100mm² | 6.3 | 15.8 | M8 | 3.2 Kg |
| | 1579-000 STD | Hydraulic Oil | 3 5/16" | 5 19/32" | 3.189" 3.187" | 2 3/8" | .1964in² | ¾" | 7/16" | 4 7/16" | .1536in² | ¼" | ⅝" | 5/16" | 7# |
| | | | 84 | 142 | 81.00 80.95 | 60.3 | 126mm² | 19 | 11 | 113 | 100mm² | 6.3 | 15.8 | M8 | 3.2 Kg |
| | 1579-041 ELS | Hydraulic Oil | 3 5/16" | 5 19/32" | 3.189" 3.187" | 2 3/8" | .1964in² | ¾" | 7/16" | 4 7/16" | .1536in² | ¼" | ⅝" | 5/16" | 7# |
| | | | 84 | 142 | 81.00 80.95 | 60.3 | 126mm² | 19 | 11 | 113 | 100mm² | 6.3 | 15.8 | M8 | 3.2 Kg |

# DEUBLIN

## 4-Passage Multi-Purpose, Multi-Media Unions

- 4-passage design
- Self-supported rotating union
- Flanged rotor
- Drain passage prevents interpassage leakage
- Special seals
- Hardened sealing surface
- Brass housing
- Stainless steel rotor
- Widely spaced ball bearings to withstand side load
- 5-passage available

A drain port is provided to collect leakage under normal operation. A vent is provided between ports 2 and 3 to allow use with two medias eliminating cross contamination.

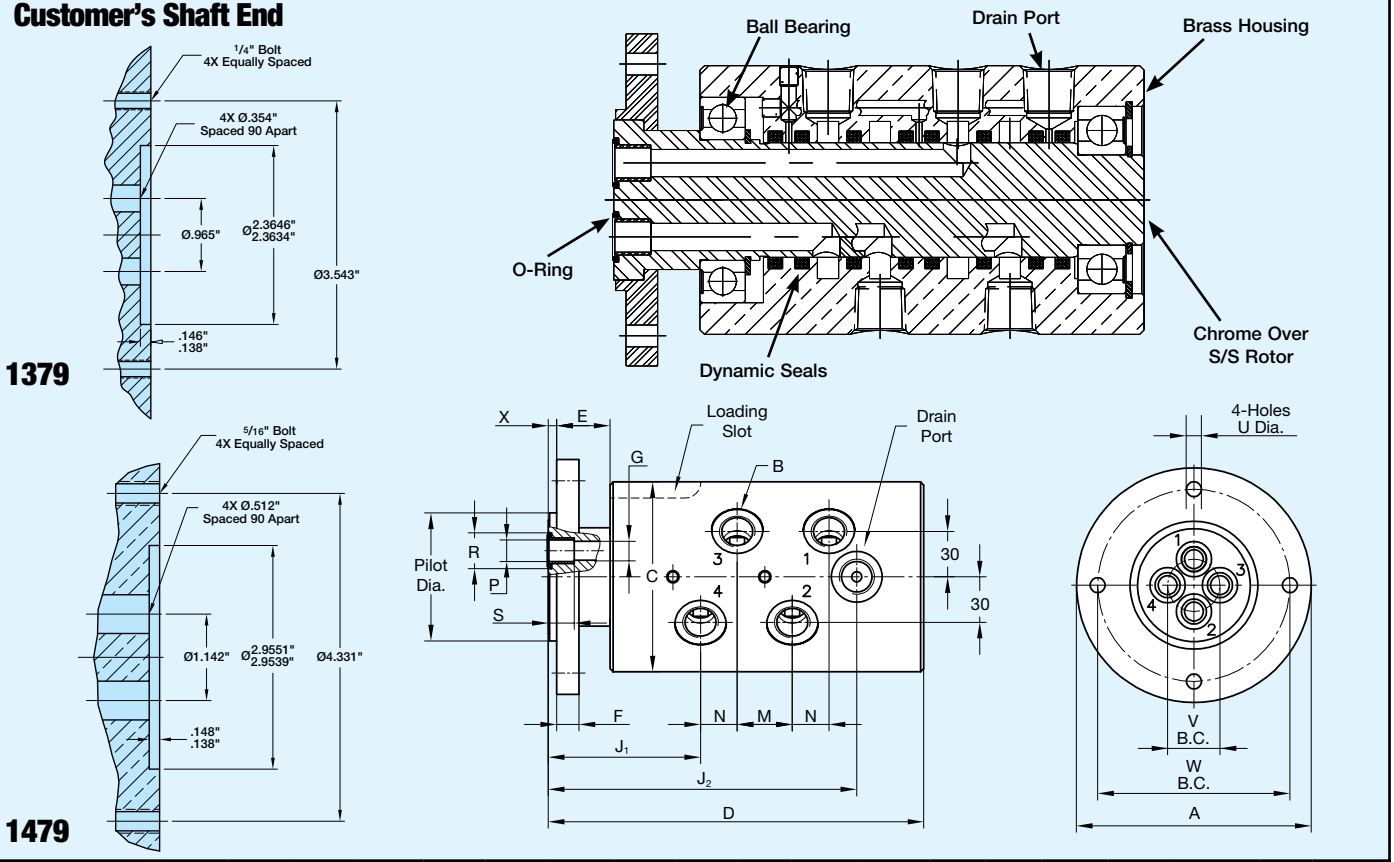
Example: Air in 1 & 2 and hydraulic oil in 3 & 4.

### Operating Data

| | | |
|---|---|---|
| Maximum Air Pressure* | 150 PSI | 10 bar |
| Maximum Hydraulic Pressure* | 850 PSI | 60 bar |
| Maximum Vacuum | 28" Hg | 6.7 kPa |
| Maximum Speed | 250 RPM | 250/min |
| Maximum Temperature | 175°F | >175°F consult ***DEUBLIN*** |
| Slow speed or turnable applications not exceeding 10 RPM | | |
| Maximum Hydraulic Pressure | 3,600 PSI | 250 bar |

* Operating conditions vary depending on the application and must be adjusted so as not to exceed the maximum union housing temperature rating of 195°F.

**Customer's Shaft End**




| B Port | Order No. Model | A Dia. | C Dia. | D | E | F | G Dia. | $J_1$ Lock-up | $J_2$ | M | N | P Dia. | R Dia. | S | U Dia. | V B.C. Dia. | W B.C. Dia. | Pilot Dia. | X | Shpg. Wt. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (4) x 3/8" NPT | 1379-460 | 4 21/64" | 3 1/2" | 6 15/16" | 1" | 13/32" | 23/64" | 2 27/32" | 5 19/32" | 1 1/32" | 23/32" | .4744" .4724" | .660" .655" | 1/2" | 9/32" | 31/32" | 3.543 | 2.3622" 2.3614" | 5/32" | 16.7# |
| (4) x G3/8" (BSP) | 1379-160 | 110 | 89 | 176 | 25 | 10.5 | 9 | 72 | 142 | 26 | 18 | 12.05 12.00 | 16.75 16.65 | 12 | 7.2 | 24.5 | 90 | 60.000 59.981 | 4 | 7.6 Kg |
| (4) x 1/2" NPT | 1479-400 | 5 1/8" | 4 1/4" | 7 31/32" | 1" | 17/32" | 1/2" | 3 3/16" | 6 21/32" | 1 7/32" | 29/32" | .5910" .5905" | .778" .773" | 19/32" | 11/32" | 1 9/64" | 4.331 | 2.953" 2.952" | 5/32" | 28# |
| (4) x G1/2" (BSP) | 1479-100 | 130 | 108 | 202 | 25 | 13.5 | 13 | 81 | 169 | 32 | 23 | 15.05 15.00 | 19.75 19.65 | 15 | 9 | 29 | 110 | 75.000 74.981 | 4 | 12.7 Kg |

# DEUBLIN

## Low Speed Air, Hydraulic, Brake Fluid Unions

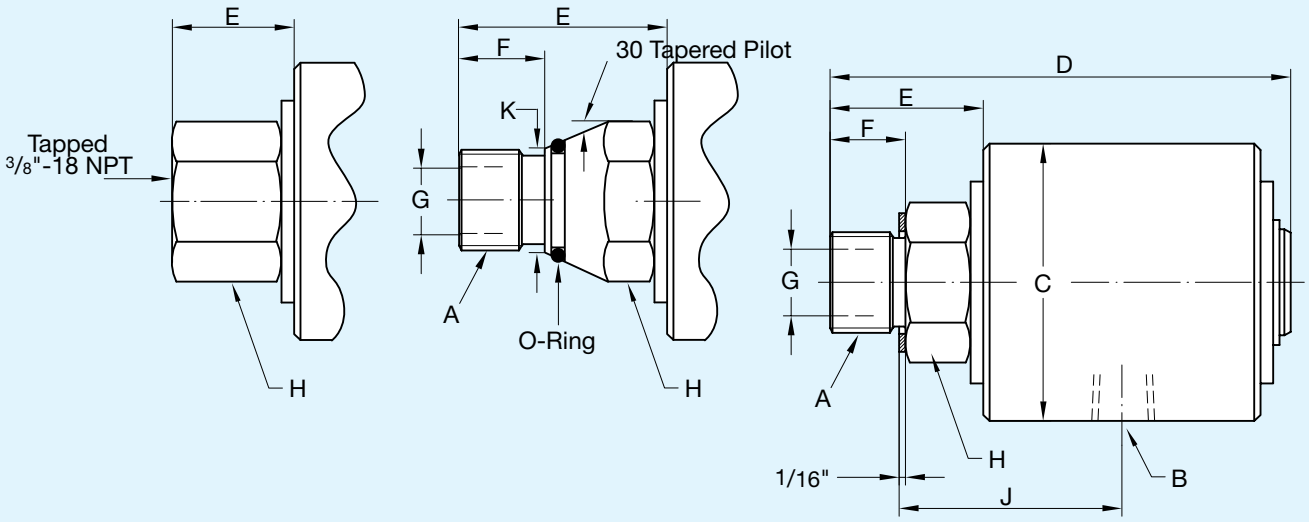
- Monoflow design
- Self-supported rotating union
- Steel rotor nickel-plated
- Special bearing
- Aluminum housing

## Operating Data

| | | |
|---|---|---|
| Maximum Air Pressure | 150 PSI | 10 bar |
| Maximum Vacuum | 28" Hg | 6.7 kPa |
| Maximum Hydraulic Pressure* | 3,000 PSI | 207 bar |
| Maximum Speed* | 250 RPM | 250/min |
| Maximum Temperature | 250°F | 120°C |

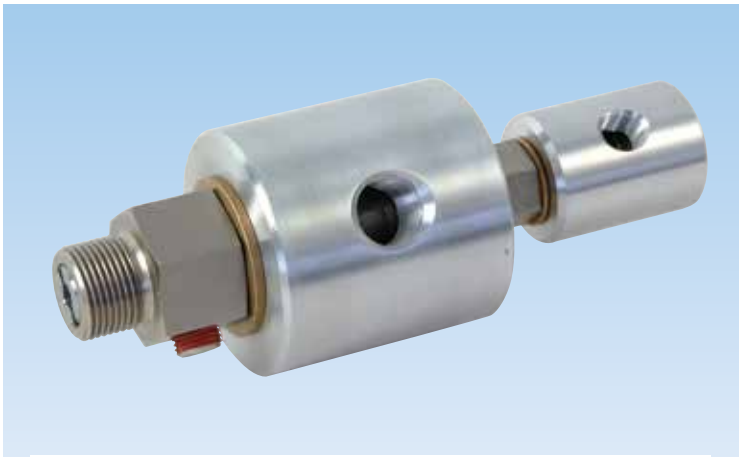
* Union is designed for continuous operation at either maximum speed or maximum pressure. If operating conditions are close to maximum pressure and speed simultaneously, consult ***DEUBLIN***.

**-045 Rotor** **-023 & -048 Rotors**




| B Port NPT | Ordering Number: Air-Hydraulic-Vacuum | Ordering Number: Brake Fluid | A Rotor Thread | | C | D | E | F | G Rotor Hole | H* Across Flats | J Lock-up | K | Shpg. Wt. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ¼" | 17-025-012 | 17-086-012 | 5/8"-18 UNF | RH | 1½" | 3¼" | 1⅛" | ⅝" | 5/16" | 22 | 1 17/32" | - | ½# |
| | 17-025-041 | 17-086-041 | ⅜" NPT | RH | 1½" | 3¼" | 1⅛" | ⅝" | 5/16" | 22 | 1 25/32" | - | ½# |
| | 17-025-045 | 17-086-045 | ⅜" NPT (FEM) | RH | 1½" | 2 15/16" | 13/16" | - | 5/16" | 22 | 1 13/32" | - | ½# |
| | 17-025-023 | 17-086-023 | 5/8"-18 UNF T.PLT. | RH | 1½" | 3 15/32" | 1 11/32" | ⅝" | 5/16" | 22 | - | ⅝" | ½# |
| | 17-025-039 | 17-086-039 | G⅜" (BSP) | RH | 38 | 83.3 | 28.5 | 16.6 | 8 | 22 | 39 | - | .3 Kg |
| | 17-025-046 | 17-086-046 | M16 x 2 | RH | 38 | 83.3 | 28.5 | 15.8 | 8 | 22 | 39 | - | .3 Kg |
| | 17-025-048 | 17-086-048 | M16x2 T.PLT. | RH | 38 | 89 | 35 | 15.8 | 8 | 22 | - | 15.8 | .3 Kg |
| ½" | 21-001-109 | 21-063-109 | 1"-14 UNS | RH | 2¾" | 4 9/16" | 1½" | ¾" | ⅝" | 36 | 2¼" | - | 2½# |
| | 21-001-101 | 21-063-101 | ¾" NPT | RH | 2¾" | 4 11/16" | 1⅝" | ⅞" | ⅝" | 36 | 2 19/32" | - | 2½# |
| | 21-001-122 | 21-063-122 | G¾" (BSP) | RH | 70 | 116 | 38 | 19 | 15.8 | 36 | 57 | - | 1.2 Kg |
| | 21-001-121 | 21-063-121 | M22 x 1.5 | RH | 70 | 111 | 33 | 14.2 | 12.7 | 36 | 57 | - | 1.2 Kg |

*Metric



# DEUBLIN

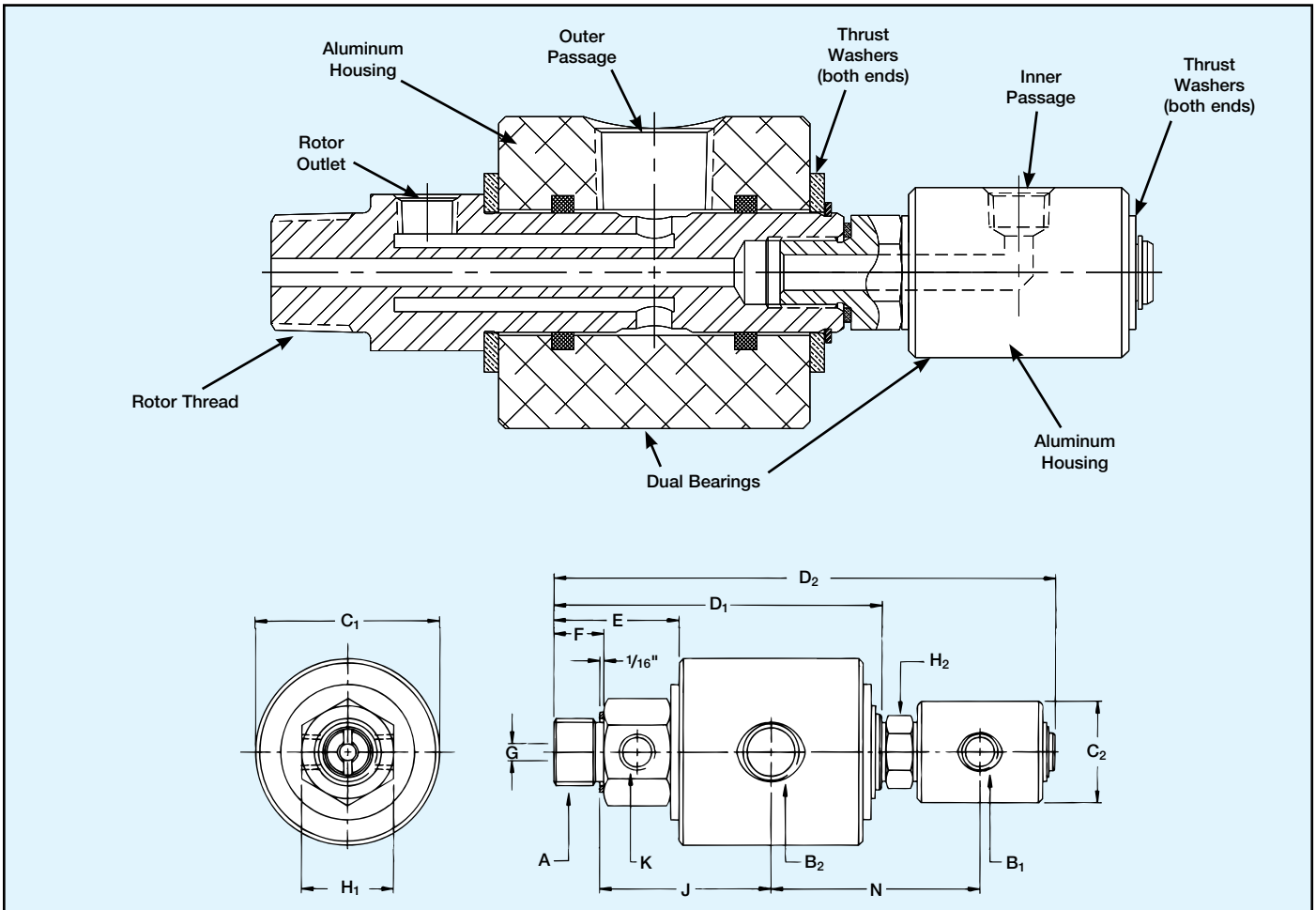
## Tandem Air, Hydraulic, Brake Fluid Dual Passage Unions

- Duoflow (Tandem) design
- Self-supported rotating union
- No interpassage leakage on the duoflow design
- Steel rotor nickel-plated
- Special bearing
- Aluminum housing

## Operating Data

| | | |
|---|---|---|
| Maximum Air Pressure | 150 PSI | 10 bar |
| Maximum Vacuum | 28" Hg | 6.7 kPa |
| Maximum Hydraulic Pressure* | 3,000 PSI | 207 bar |
| Maximum Speed* | 250 RPM | 250/min |
| Maximum Temperature | 250°F | 120°C |

* Union is designed for continuous operation at either maximum speed or maximum pressure. If operating conditions are close to maximum pressure and speed simultaneously, consult ***DEUBLIN***.




| Inlet Ports NPT | Ordering Number | | A Rotor Thread | $C_1$ | $C_2$ | $D_1$ | $D_2$ | E | F | G | $H_1$* Across Flats | $H_2$* Across Flats | J Lock-Up | K Tap NPT | N Lock-up | Shpg. Wt. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Air-Hydraulic-Vacuum | Brake Fluid | | | | | | | | | | | | | | |
| $B_1$ $B_2$ ¼" ½" | 2117-001-109 | 2117-018-136 | ¾" NPT RH | 2¾" | 1½" | 4 63/64" | 7 11/16" | 1 15/16" | ⅞" | ¼" | 36 | 22 | 2⅞" | ¼" | 3 3/16" | 3# |
| | 2117-001-103 | 2117-018-113 | 1"-14 UNS RH | 2¾" | 1½" | 4 59/64" | 7 11/16" | 1⅞" | 11/16" | ¼" | 36 | 22 | 2 9/16" | ¼" | 3 3/16" | 3# |
| | 2117-001-105 | 2117-018-137 | G¾" (BSP) RH | 70 | 38 | 124 | 195 | 47 | 17 | 6 | 36 | 22 | 65 | ¼" | 81 | 1.4 Kg |

*Metric

# DEUBLIN

## Deu-Plex Low Speed Air-Hydraulic Unions

- Duoflow design
- Self-supported rotating union
- Composite bearing
- Vent holes between passages
- Special seals
- Hardened sealing surface
- Aluminum housing
- Steel rotor

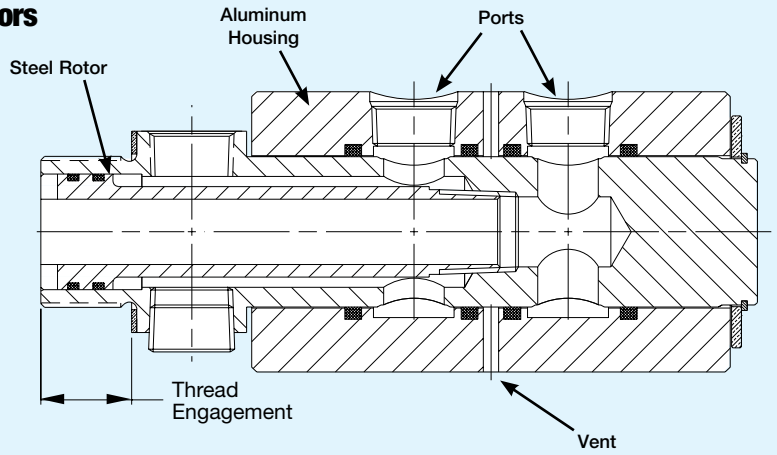
**Optional:**
- Tandem model as triple-passage design

## Operating Data

| | | | |
|---|---|---|---|
| Maximum Air Pressure | | 150 PSI | 10 bar |
| Maximum Vacuum Pressure | | 28" Hg | 6.7 kPa |
| Maximum Hydraulic Pressure* | | 3,000 PSI | 207 bar |
| Maximum Speed* | | 250 RPM | 250/min |
| Torque for | Model 1690 | 7 ft.lbs | 9.5 Nm |
| | Model 1790 | 18 ft.lbs | 24 Nm |
| | Model 1890 | 22 ft.lbs | 29.8 Nm |
| Maximum Temperature | | 250°F | 120°C |

* Union is designed for continuous operation at either maximum speed or maximum pressure. If operating conditions are close to maximum pressure and speed simultaneously, consult ***DEUBLIN***.

### Models with inner rotors




### Models without inner rotors can be used for coaxial feed applications as shown below.

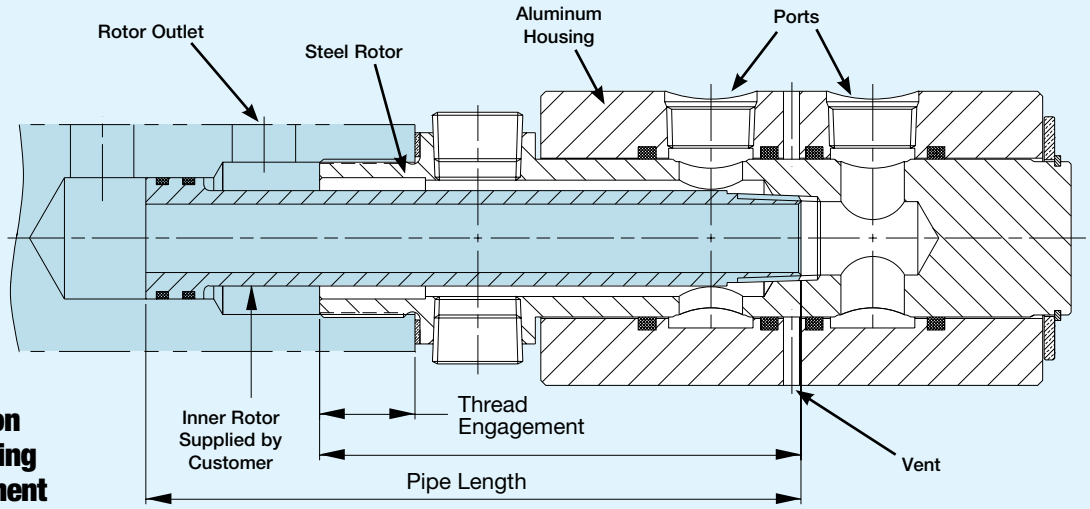
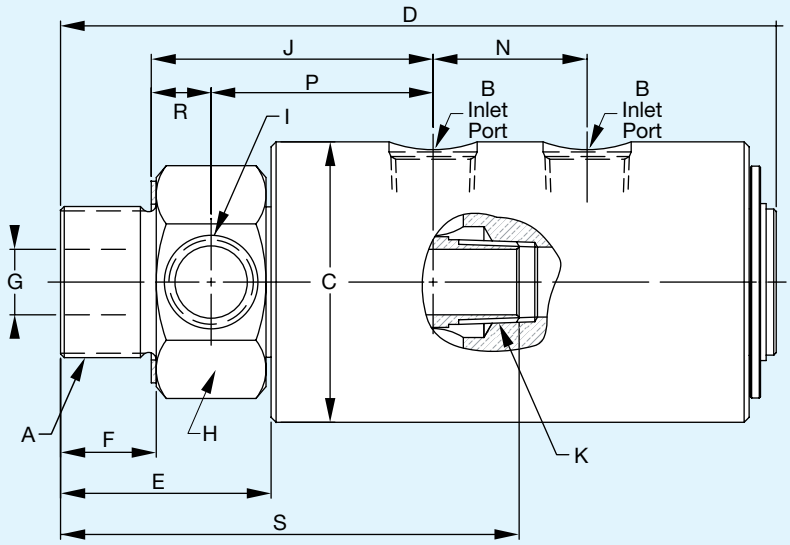



**Illustration of mounting arrangement**

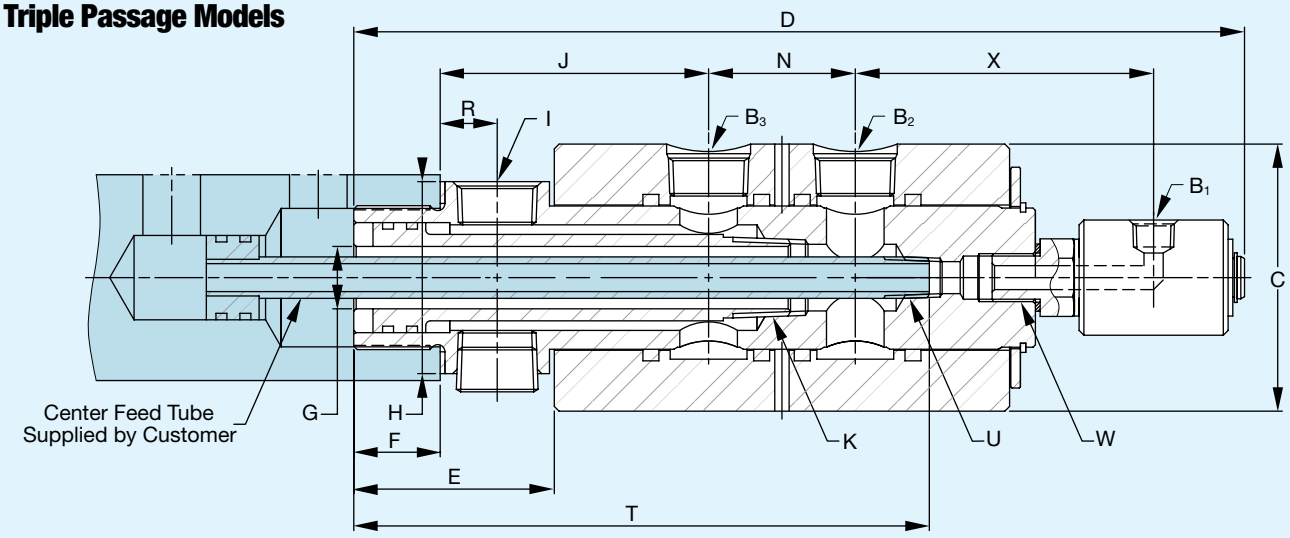
## Double Passage Models




*These models are supplied without inner rotors.

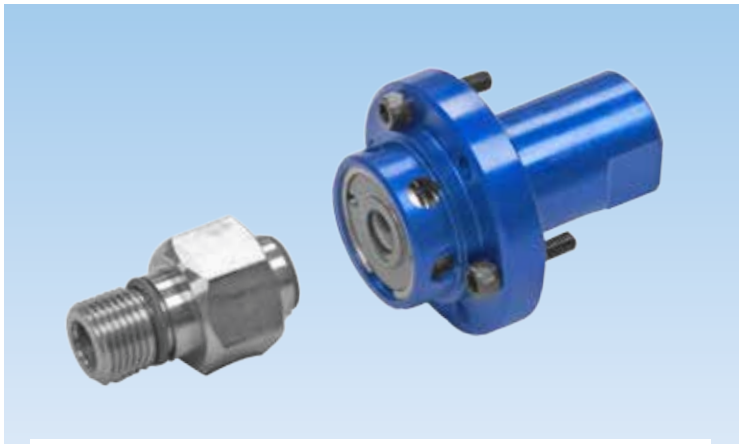
| B Port NPT | Ordering No. Model | A Rotor Thread | C Dia. | D | E | F | G Rotor ID | H** Across Flats | I Tap NPT | J Lock-up | K Tap NPT | N | P | R | S | Shpg Wt. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (2) x ¼" | 1690-000-115 | 1" NPT RH | 2 5/8" | 5 7/8" | 2 3/16" | 1 1/8" | 5/16" | 46 | ¼" | 2 5/8" | ¼" | 1 5/32" | 1 11/16" | ½" | – | 3½# |
| | 1690-000-102* | 1" NPT RH | 2 5/8" | 5 7/8" | 2 3/16" | 1 1/8" | 11/16" | 46 | ¼" | 2 5/8" | ¼" | 1 5/32" | 1 11/16" | ½" | 3 25/32" | 3½# |
| | 1690-000-168 | G1" (BSP) RH | 66.6 | 150 | 55.5 | 18 | 7.9 | 46 | ¼" | 67.8 | ¼" | 29.4 | 42.9 | 17 | – | 1.6 Kg |
| | 1690-000-105* | G1" (BSP) RH | 66.6 | 150 | 55.5 | 18 | 17.4 | 46 | ¼" | 67.8 | ¼" | 29.4 | 42.9 | 17 | 96 | 1.6 Kg |
| (2) x ½" | 1790-001-113 | 1¼" NPT RH | 3" | 8 3/16" | 2 15/32" | 1 1/8" | 5/8" | 50.8 | ½" | 3 3/4" | ½" | 1 21/32" | 2 5/8" | 5/8" | – | 6½# |
| | 1790-001-101* | 1¼" NPT RH | 3" | 8 3/16" | 2 15/32" | 1 1/8" | 1 1/16" | 50.8 | ½" | 3 3/4" | ½" | 1 21/32" | 2 5/8" | 5/8" | 5 1/16" | 6½# |
| | 1790-001-114 | G1¼" (BSP) RH | 76 | 208 | 63 | 28 | 16 | 50.8 | ½" | 84.2 | ½" | 42 | 67 | 15.5 | – | 3 Kg |
| | 1790-001-112* | G1¼" (BSP) RH | 76 | 208 | 63 | 28 | 27 | 50.8 | ½" | 84.2 | ½" | 42 | 67 | 15.5 | 129 | 3 Kg |
| (2) x ¾" | 1890-100 | 1½" NPT RH | 3½" | 8 7/8" | 2 5/8" | 1 3/16" | 13/16" | 63.5 | ¾" | 4 3/32" | ¾" | 1 29/32" | 2 3/4" | 11/16" | – | 9¾# |
| | 1890-110* | 1½" NPT RH | 3½" | 8 7/8" | 2 5/8" | 1 3/16" | 1 3/8" | 63.5 | ¾" | 4 3/32" | ¾" | 1 29/32" | 2 3/4" | 11/16" | 5 13/16" | 9¼# |
| | 1890-060 | G1½" (BSP) RH | 88.9 | 225.4 | 66.6 | 30.2 | 20.6 | 63.5 | ¾" | 91.3 | ¾" | 48.4 | 69.8 | 17.5 | – | 4.4 Kg |
| | 1890-063* | G1½" (BSP) RH | 88.9 | 225.4 | 66.6 | 30.2 | 34.9 | 63.5 | ¾" | 91.3 | ¾" | 48.4 | 69.8 | 17.5 | 147.6 | 4.2 Kg |

## Triple Passage Models




| Inlet Ports NPT | Ordering No. Model | A Rotor Thread | C | D | E | F | G Rotor Hole | H** Across Flats | I Tap NPT | J Lock-up | K Tap NPT | N | P | R | T | U Tap NPT | W Tap | X | Shpg. Wt. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $B_1$ $B_2$ $B_3$ ¼" ¾" ¾" | 1890-116 | 1½" NPT RH | 3½" | 11 17/32" | 2 5/8" | 1 3/16" | 13/16" | 63.5 | ¾" | 4 3/32" | ¾" | 1 29/32" | 2 13/16" | 11/16" | 7½" | ¼" | 5/8"-18 UNF, RH | 3 7/8" | 10¾# |
| | 1890-064 | G1½" (BSP) RH | 88.9 | 293 | 66.6 | 30.2 | 20.6 | 63.5 | ¾" | 89 | ¾" | 48.4 | 69.8 | 17.5 | 190 | ¼" | 5/8"-18 UNF, RH | 97.6 | 4.9 Kg |

**Metric



# DEUBLIN

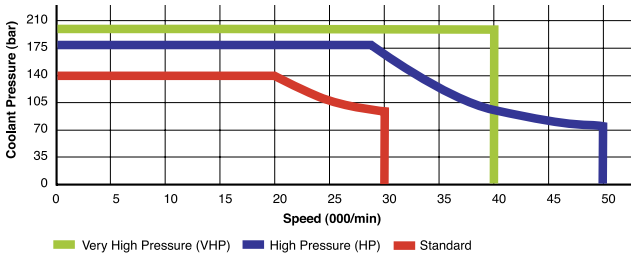
## 1117 Series Bearingless "Closed Seal" Rotating Unions for Continuous Coolant Service

- Single passage for coolant or MQL
- Closed seals for transfer line and similar applications
- Full-flow design has no obstructions to trap chips or debris
- Balanced mechanical seals made from silicon carbide for long life even under difficult operating conditions
- Compact size can be adapted for custom installations
- Anodized aluminum housing resists corrosion

## Operating Data

| | | | |
|---|---|---|---|
| Media | Water-based Coolant | | |
| Filtration | ISO 4406 Class 17/15/12, max. 60 micron | | |
| Maximum Speed | See chart | | |
| Maximum Pressure | See chart | | |
| Maximum Flow | 82 l/min | 21.6 gpm | Standard |
| | 24.3 l/min | 6.4 gpm | High Pressure (HP) |
| | 2.7 l/min | 0.7 gpm | Very High Pressure (VHP) |
| Maximum Temperature | 160°F | 71°C | |

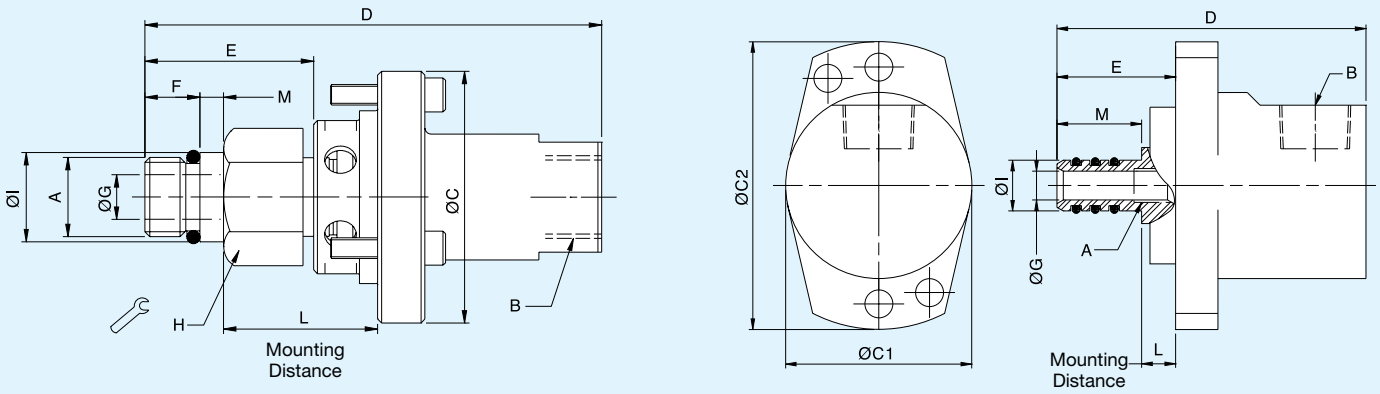
**DO NOT RUN DRY**




**Axial Connection**

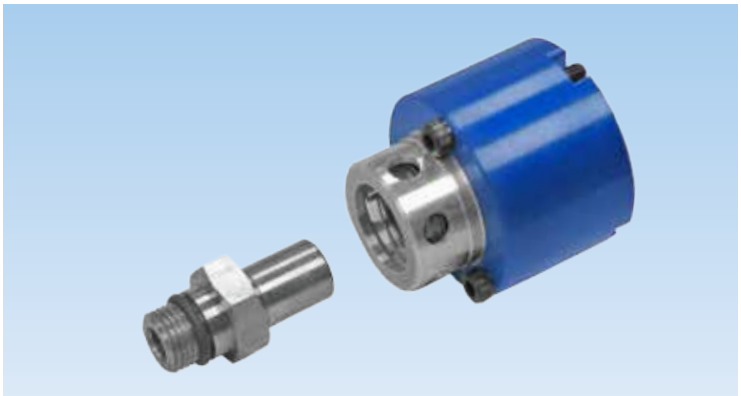
**Spindle Tolerance Requirements: Refer to Page 51 or Consult DEUBLIN**

**Radial Connection**




| | | Ordering Number | B Supply Connection | C Overall Diameter | D Overall Length | L Mounting Distance | A Rotor Connection | E Rotor Length | G Bore Diameter | H* Across Flats | I Pilot Diameter | M Pilot Length | Max Speed (rpm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Standard | Radial | 1117-706 | G 3/8" | 44 | 72 | 7.5 / 7.0 | 12 f7 | 21 | 7 | NA | 11.984 / 11.966 | 20 | 10,000[A] |
| | | 1117-711 | 3/8" NPT | 44 x 68 | 73 | 8.0 / 7.5 | 12 f7 | 28 | 7 | NA | 11.984 / 11.966 | 20 | 10,000[A] |
| | | 1117-792 | G 3/8" | 44 | 72 | 7.5 / 7.0 | 12 f7 | 21 | 7 | NA | 11.984 / 11.966 | 20 | 30,000 |
| | Axial Connection | 1117-002-110 | 3/8" NPT | 51 | 95 | 31.7 / 30.5 | 5/8"-18 UNF RH | 37 | 9 | 24 | 0.6555" / 0.6553" | 5 | 30,000 |
| | | 1117-002-111 | 3/8" NPT | 51 | 95 | 31.7 / 30.5 | 5/8"-18 UNF LH | 37 | 9 | 24 | 0.6555" / 0.6553" | 5 | 30,000 |
| | | 1117-002-116 | 3/8" NPT | 51 | 92 | 31.7 / 30.5 | M16 x 1.5 LH | 34 | 9 | 24 | 17.993 / 17.988 | 5 | 30,000 |
| | | 1117-058-116 | G 3/8" | 51 | 92 | 31.7 / 30.5 | M16 x 1.5 LH | 34 | 9 | 24 | 17.993 / 17.988 | 5 | 30,000 |
| | | 1117-028-374 | 20 h5 | 40 | 63 | 25 | M12 x 1.25 LH | 28 | 6 | 17 | 12.994 / 12.989 | 6 | 46,000 |
| | | 1117-789 | 25 f7 | 36 x 52 | 56 | 23.7 / 23.3 | 12 f7 | 28 | 7 | NA | 11.984 / 11.996 | 20 | 30,000 |
| HP | | 1117-490-493 | 3/8" PT | 54 | 105 | 39.6 / 38.6 | M12 x 1.25 LH | 40 | 5 | 18 | 14.000 / 13.995 | 5 | 50,000 |
| VHP | | 1117-063-294 | G 1/4" | 51 | 92 | 31.7 / 30.5 | M16 x 1.5 LH | 34 | 5 | 24 | 17.993 / 17.988 | 5 | 40,000 |

**Note A:** Union includes integral lip seal for added spindle protection. *Metric



# DEUBLIN

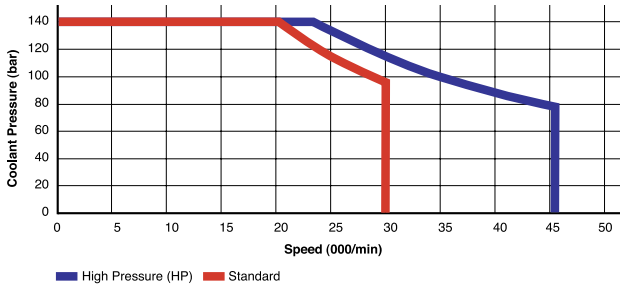
## 1129 Series Bearingless Pop-Off™ Rotating Unions for Coolant Service

- Single passage for coolant or MQL
- Patented Pop-Off™ technology allows unlimited dry running without media pressure
- Pop-Off stroke of 0.7-3.0 mm compensates for thermal expansion of spindle during extended operation as well as variations in drawbar position
- Full-flow design has no obstructions to trap chips or debris
- Balanced mechanical seals made from silicon carbide for long life even under difficult operating conditions
- Anodized aluminum housing resists corrosion

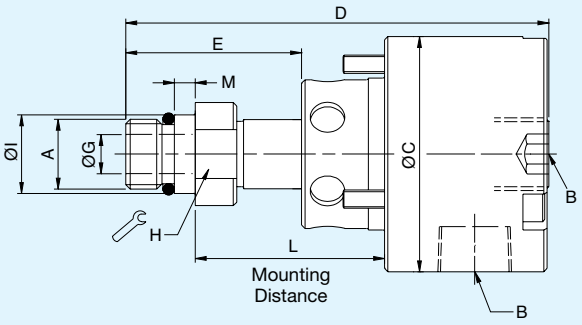
## Operating Data

| | | | |
|---|---|---|---|
| Media | Water-based Coolant | | |
| | MQL (oil mist) up to 10 bar (145 psi) | | |
| Filtration | ISO 4406 Class 17/15/12, max. 60 micron | | |
| Maximum Speed | 30,000 $min^{-1}$ | 30,000 rpm | Standard |
| | 40,000 $min^{-1}$ | 46,000 rpm | High Pressure (HP) |
| Maximum Pressure | 140 bar | 2,030 psi | |
| Maximum Flow | 24.3 l/min | 6.4 gpm | |
| 1129-016-301 | 53.0 l/min | 14.0 gpm | |
| Maximum Temperature | 160°F | 71°C | |

NO AIR PRESSURE WITH ROTATION

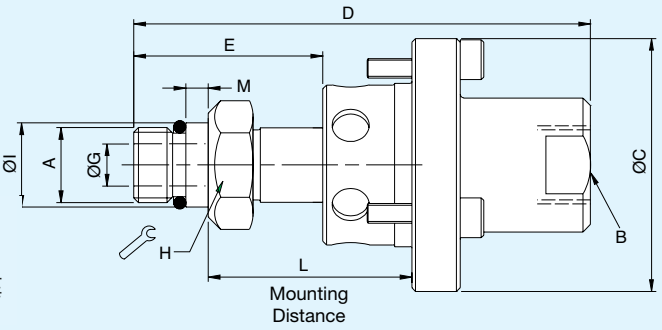



**Dual Connection**




**Spindle Tolerance Requirements:**
**Refer to Page 51 or Consult DEUBLIN**


**Axial Connection**




| | | Ordering Number | B Supply Connection | C Overall Diameter | D Overall Length | L Mounting Distance | A Rotor Connection | E Rotor Length | G Bore Diameter | H Across Flats | I Pilot Diameter | M Pilot Length | Max Speed (rpm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Standard | Dual Connection | 1129-033-301 | G 3/8" | 54 | 97 | 44.0 / 43.0 | M16 x 1.5 LH | 40 | 9 | 24 | 17.993 / 17.988 | 5 | 30,000 |
| | | 1129-033-327 | G 3/8" | 54 | 94 | 39.6 / 38.6 | M12 x 1.25 LH | 37 | 6 | 18 | 14.000 / 13.995 | 5 | 30,000 |
| | | 1129-050-301 | G 3/8" | 54 | 101 | 44.0 / 43.0 | M16 x 1.5 LH | 40 | 9 | 24 | 17.993 / 17.988 | 5 | 30,000 |
| | | 1129-859-731 | G 3/8" | 54 | 106 | 39.2 / 38.8 | M12 x 1.25 LH | 37 | 5 | 18 | 14.000 / 13.995 | 5 | 30,000 |
| | Axial Connection | 1129-016-301 | 3/8" PT | 54 | 97 | 44.0 / 43.0 | M16 x 1.5 LH | 40 | 9 | 24 | 17.993 / 17.988 | 5 | 30,000 |
| | | 1129-036-301 | 3/8" PT | 54 | 98 | 44.0 / 43.0 | M16 x 1.5 LH | 40 | 9 | 24 | 17.993 / 17.988 | 5 | 30,000 |
| | | 1129-036-327 | 3/8" PT | 54 | 94 | 39.6 / 38.6 | M12 x 1.25 LH | 37 | 6 | 18 | 14.000 / 13.995 | 5 | 30,000 |
| | | 1129-039-301 | 3/8" PT | 54 | 97 | 44.0 / 43.0 | M16 x 1.5 LH | 40 | 9 | 24 | 17.993 / 17.988 | 5 | 30,000 |
| | | 1129-730-731 | G 3/8" | 54 | 94 | 39.2 / 38.8 | M12 x 1.25 LH | 37 | 5 | 18 | 14.000 / 13.995 | 5 | 30,000 |
| | | 1129-927-929 | G 3/8" | 54 | 101 | 39.2 / 38.8 | M14 x 1.5 LH | 37 | 7 | 24 | 14.494 / 14.489 | 5 | 30,000 |
| | | 1129-330-331 | 30 mm Counterbore | 48 | 72 | 37.5 | M12 x 1 LH | 28 | 6 | 22.2 | 13.000 / 12.992 | 7 | 20,000 |
| | | 1129-330-342 | 30 mm Counterbore | 48 | 72 | 37.5 | M12 x 1 RH | 28 | 6 | 22.2 | 13.000 / 12.992 | 7 | 20,000 |
| HP | | 1129-052-137 | 20 mm Counterbore | 40 | 68 | 25 | M12 x 1.25 LH | 28 | 6 | 17 | 13.000 / 12.995 | 6 | 46,000 |

# DEUBLIN

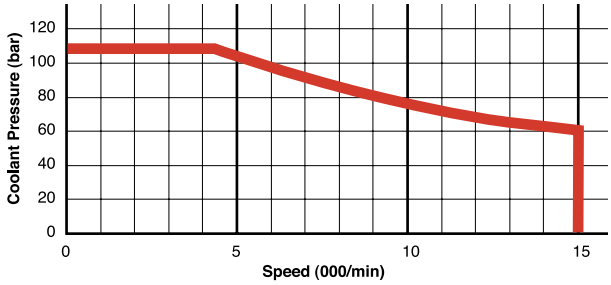
## 1101 Series "Closed Seal" Rotating Unions for Continuous Coolant Service

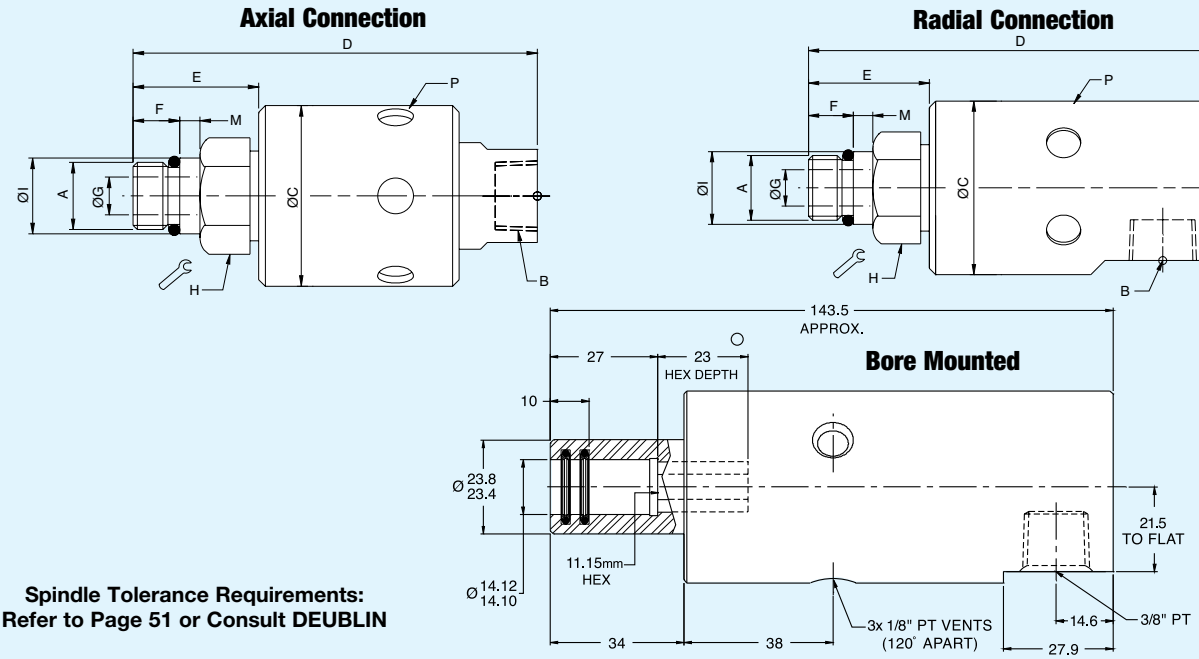
- Single passage for coolant or MQL
- Closed seals for transfer line and similar applications
- Full-flow design has no obstructions to trap chips or debris
- Bearing-supported with threaded rotor for easy installation
- Deep groove radial ball bearings for smooth operation
- Labyrinth system and large vents to protect ball bearings
- Balanced mechanical seals made from silicon carbide for long life even under difficult operating conditions
- Anodized aluminum housing resists corrosion

## Operating Data

| | | |
|---|---|---|
| Media | Water-based Coolant<br>MQL (oil mist) up to 10 bar (145 psi) | |
| Filtration | ISO 4406 Class 17/15/12,<br>max. 60 micron | |
| Maximum Speed | 15,000 $min^{-1}$ | 15,000 rpm |
| Maximum Pressure | 105 bar | 1,520 psi |
| Maximum Flow | 20 l/min | 5.3 gpm |
| Maximum Temperature | 160°F | 71°C |

DO NOT RUN DRY




**Spindle Tolerance Requirements:**
**Refer to Page 51 or Consult DEUBLIN**

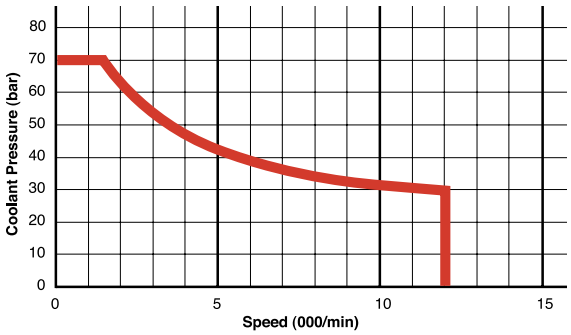
| | Ordering Number | B Supply Connection | C Overall Diameter | D Overall Length | P Vent Size (6 X 60°) | A Rotor Connection | E Rotor Length | F Thread Length | G Bore Diameter | H* Across Flats | I Pilot Diameter | M Pilot Length |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Axial Connection | 1101-235-238 | 3/8" NPT | 43 | 100 | 9 | 5/8"-18 UNF LH | 33 | 14 | 6 | 24 | 0.6555" / 0.6553" | 5 |
| | 1101-235-239 | 3/8" NPT | 43 | 100 | 9 | 5/8"-18 UNF RH | 33 | 14 | 6 | 24 | 0.6555" / 0.6553" | 5 |
| | 1101-235-343 | 3/8" NPT | 43 | 97 | 9 | M16 x 1.5 LH | 30 | 11 | 6 | 24 | 17.993 / 17.988 | 5 |
| | 1101-235-424 | 3/8" NPT | 43 | 93 | 9 | M10 x 1 LH | 27 | 11 | 3.2 | 24 | 10.994 / 10.989 | 3 |
| | 1101-359-343 | G 3/8" | 43 | 102 | 9 | M16 x 1.5 LH | 30 | 11 | 6 | 24 | 17.993 / 17.988 | 5 |
| | 1101-620-343 | 3/8" NPT | 43 | 96 | 9 | M16 x 1.5 LH | 30 | 11 | 6 | 24 | 17.993 / 17.988 | 5 |
| Radial | 1101-195-343 | G 3/8" | 43 | 97 | 9 | M16 x 1.5 LH | 30 | 11 | 6 | 24 | 17.993 / 17.988 | 5 |
| | 1101-615-598[A] | 3/8" PT | 49 | 144 | 3 x 1/8" PT | 14 mm female hex | 34 | NA | 6 | NA | 14.122 / 14.097 | 27 |

**Note A:** This union is a bore-mounted design. *Metric

# DEUBLIN

## 1116 Series "Closed Seal" Rotating Unions for Continuous Coolant Service

- Single passage for coolant or MQL
- Closed seals for transfer line and similar applications
- Full-flow design has no obstructions to trap chips or debris
- Bearing-supported with threaded rotor for easy installation
- Deep groove radial ball bearings for smooth operation
- Labyrinth system and large vents to protect ball bearings
- Balanced mechanical seals made from silicon carbide for long life even under difficult operating conditions
- Anodized aluminum housing resists corrosion

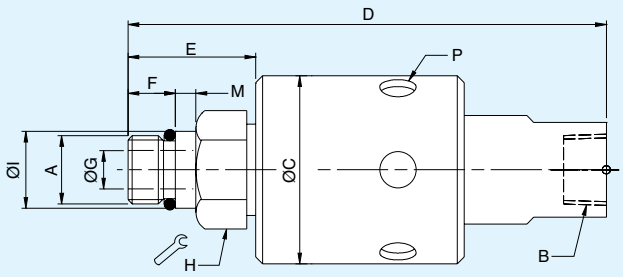



## Operating Data

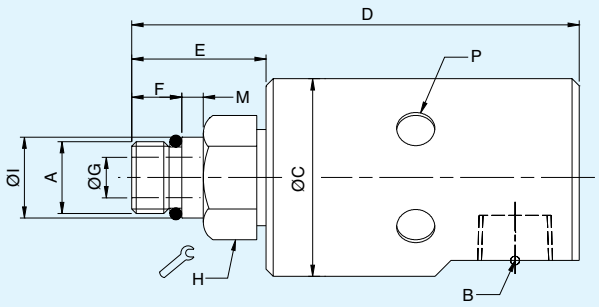
| | | |
|---|---|---|
| Media | Water-based Coolant<br>MQL (oil mist) up to 10 bar (145 psi) | |
| Filtration | ISO 4406 Class 17/15/12,<br>max. 60 micron | |
| Maximum Speed | 12,000 $min^{-1}$ | 12,000 rpm |
| Maximum Pressure | 70 bar | 1,015 psi |
| Maximum Flow | 82 l/min | 21.6 gpm |
| Maximum Temperature | 160°F | 71°C |

**DO NOT RUN DRY**

### Axial Connection




### Radial Connection




**Spindle Tolerance Requirements:**
**Refer to Page 51 or Consult DEUBLIN**

| | Ordering Number | B Supply Connection | C Overall Diameter | D Overall Length | P Vent Size (6 X 60°) | A Rotor Connection | E Rotor Length | F Thread Length | G Bore Diameter | H* Across Flats | I Pilot Diameter | M Pilot Length |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Axial Connection | 1116-048-064 | 1/4" NPT | 44 | 115 | 9 | 5/8"-18 UNF RH | 33 | 14 | 9 | 24 | 0.6555" / 0.6553" | 5 |
| | 1116-048-463 | 1/4" NPT | 44 | 112 | 9 | M16 x 1.5 LH | 30 | 11 | 9 | 24 | 17.993 / 17.988 | 5 |
| | 1116-485-463 | G 1/4" | 44 | 112 | 9 | M16 x 1.5 LH | 30 | 11 | 9 | 24 | 17.993 / 17.988 | 5 |
| | 1116-580-343 | 3/8" PT | 44 | 112 | 9 | M12 x 1.25 LH | 30 | 11 | 6 | 24 | 13.994 / 13.989 | 5 |
| | 1116-600-059 | 3/8" NPT | 44 | 115 | 9 | 5/8"-18 UNF LH | 33 | 14 | 9 | 24 | 0.6555" / 0.6550" | 5 |
| | 1116-600-463 | 3/8" NPT | 44 | 112 | 9 | M16 x 1.5 LH | 30 | 11 | 9 | 24 | 17.993 / 17.988 | 5 |
| | 1116-610-463 | G 3/8" | 44 | 112 | 9 | M16 x 1.5 LH | 30 | 11 | 9 | 24 | 17.993 / 17.988 | 5 |
| Radial Connection | 1116-090-059 | 3/8" NPT | 44 | 106 | 9 | 5/8"-18 UNF LH | 33 | 14 | 9 | 24 | 0.6555" / 0.6553" | 5 |
| | 1116-090-064 | 3/8" NPT | 44 | 106 | 9 | 5/8"-18 UNF RH | 33 | 14 | 9 | 24 | 0.6555" / 0.6553" | 5 |
| | 1116-090-463 | 3/8" NPT | 44 | 103 | 9 | M16 x 1.5 LH | 30 | 11 | 9 | 24 | 17.993 / 17.988 | 5 |
| | 1116-516-463[A] | G 3/8" | 44 | 102 | 9 | M16 x 1.5 LH | 30 | 11 | 9 | 24 | 17.993 / 17.988 | 5 |
| | 1116-555-463 | G 3/8" | 44 | 103 | 9 | M16 x 1.5 LH | 30 | 11 | 9 | 24 | 17.993 / 17.988 | 5 |

**Note A:** Also suitable for Cutting Oil and Air. *Metric

# DEUBLIN

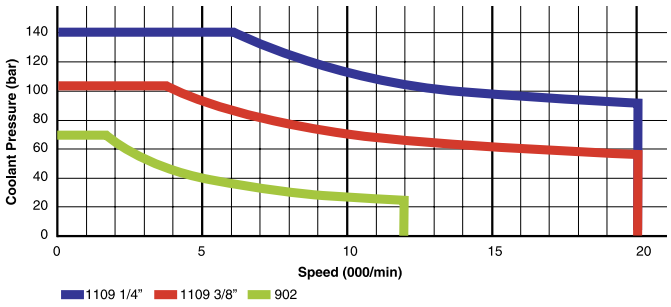
## 1109 Series Pop-Off™ Rotor-Mounted Rotating Unions for Coolant Service with Dry Running

- Single passage for coolant or MQL
- Patented Pop-Off™ technology allows unlimited dry running without media pressure
- Full-flow design has no obstructions to trap chips or debris
- Bearing-supported with threaded rotor for easy installation
- Dual ABEC 7 (ISO class P4) angular contact ball bearings
- Labyrinth system and large vents to protect ball bearings
- Balanced mechanical seals made from silicon carbide for long life even under difficult operating conditions
- Anodized aluminum housing resists corrosion

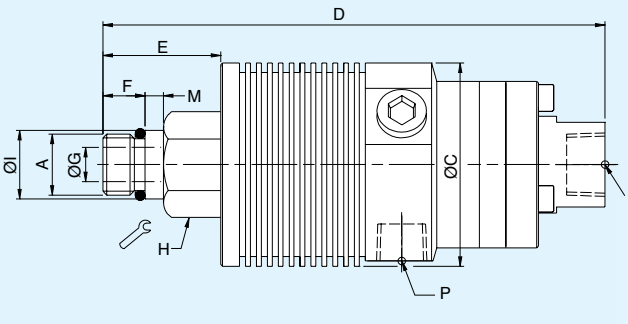
## Operating Data

| | | | |
|---|---|---|---|
| Media | Water-based Coolant<br>MQL (oil mist) up to 10 bar (145 psi) | | |
| Filtration | ISO 4406 Class 17/15/12,<br>max. 60 micron | | |
| Maximum Speed | 20,000 $min^{-1}$ | 20,000 rpm | |
| Maximum Pressure | See chart | | |
| Maximum Flow | 82 l/min | 21.6 gpm | Standard |
| | 24.3 l/min | 6.4 gpm | High Pressure (HP) |
| Maximum Temperature | 160°F | 71°C | |

NO AIR PRESSURE WITH ROTATION

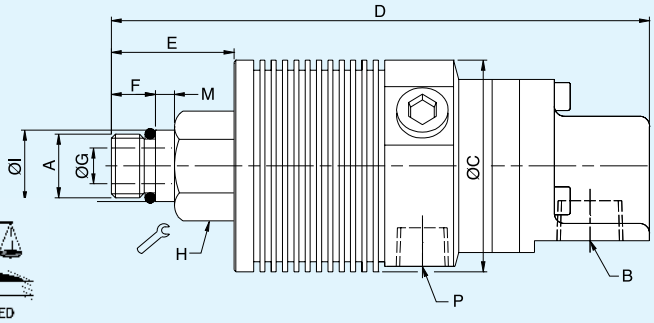



### Axial Connection




PATENTED

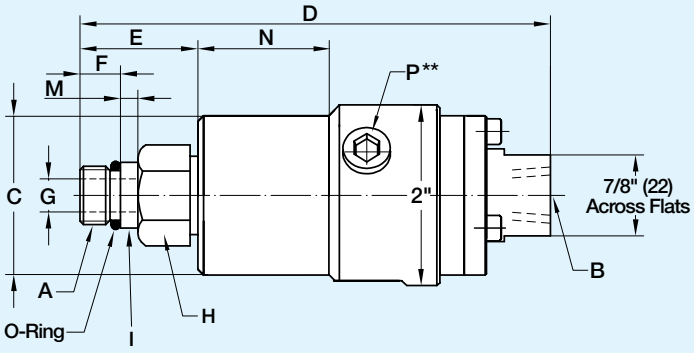
### Radial Connection



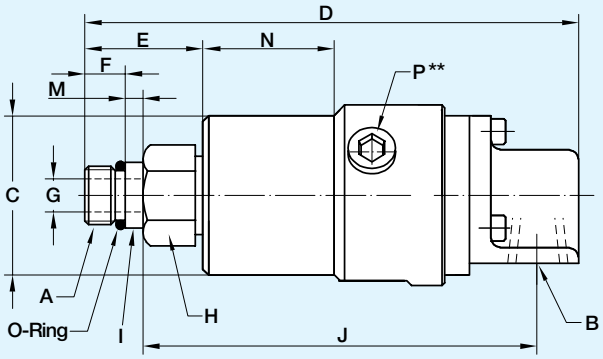

| | Ordering Number | B Supply Connection | C Overall Diameter | D Overall Length | P Vent Size (3 X 120°) | A Rotor Connection | E Rotor Length | F Thread Length | G Bore Diameter | H* Across Flats | I Pilot Diameter | M Pilot Diameter |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Standard | 1109-011-165 | 3/8" NPT Axial | 53 | 132 | 1/4" NPT | 5/8"-18 UNF LH | 34 | 11 | 9 | 24 | 0.6555" / 0.6553" | 5 |
| | 1109-021-188 | G 3/8" Axial | 53 | 129 | G 1/4" | M16 x 1.5 LH | 31 | 11 | 9 | 24 | 17.993 / 17.988 | 5 |
| | 1109-041-188 | 3/8" PT Axial | 53 | 129 | 1/4" PT | M16 x 1.5 LH | 31 | 11 | 9 | 24 | 17.993 / 17.988 | 5 |
| | 1109-010-165 | 3/8" NPT Radial | 53 | 138 | 1/4" NPT | 5/8"-18 UNF LH | 34 | 11 | 9 | 24 | 0.6555" / 0.6553" | 5 |
| | 1109-020-188 | G 3/8" Radial | 53 | 135 | G 1/4" | M16 x 1.5 LH | 31 | 11 | 9 | 24 | 17.993 / 17.988 | 5 |
| | 1109-040-188 | 3/8" PT Radial | 53 | 135 | 1/4" PT | M16 x 1.5 LH | 31 | 11 | 9 | 24 | 17.993 / 17.988 | 5 |
| High Pressure | 1109-014-196 | 1/4" NPT Axial | 53 | 132 | 1/4" NPT | 5/8"-18 UNF LH | 34 | 11 | 9 | 24 | 0.6555" / 0.6553" | 5 |
| | 1109-024-212 | G 1/4" Axial | 53 | 129 | G 1/4" | M16 x 1.5 LH | 31 | 11 | 9 | 24 | 17.993 / 17.988 | 5 |
| | 1109-044-212 | 1/4" PT Axial | 53 | 129 | 1/4" PT | M16 x 1.5 LH | 31 | 11 | 9 | 24 | 17.993 / 17.988 | 5 |
| | 1109-013-196 | 1/4" NPT Radial | 53 | 138 | 1/4" NPT | 5/8"-18 UNF LH | 34 | 11 | 9 | 24 | 0.6555" / 0.6553" | 5 |
| | 1109-023-212 | G 1/4" Radial | 53 | 135 | G 1/4" | M16 x 1.5 LH | 31 | 11 | 9 | 24 | 17.993 / 17.988 | 5 |
| | 1109-043-212 | 1/4" PT Radial | 53 | 135 | 1/4" PT | M16 x 1.5 LH | 31 | 11 | 9 | 24 | 17.993 / 17.988 | 5 |

*Metric

## Axial Connection



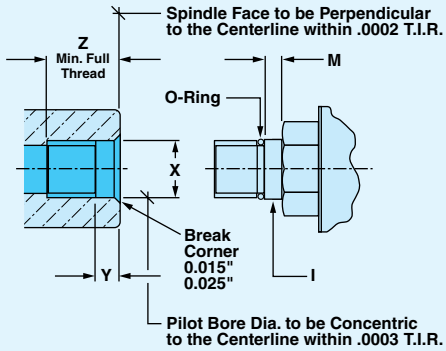

## Radial Connection




| | B Port | Ordering Number | A Rotor Thread | C Dia. | D | E | F | G Rotor Hole | H* Across Flats | I Pilot Dia. | J | M | N | P 3 x 120° | Shpg. Wt. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AXIAL | 3/8" NPT | 902-111-165 | 5/8"-18 UNF LH | 1.723" 1.722" | 5 7/32" | 1 13/32" | 7/16" | 11/32" | 24 | .6555" .6553" | – | 3/16" | 1½" | ¼" NPT | 1½# |
| | G3/8" (BSP) | 902-121-188 | M16 x 1.5 LH | 43.760 43.735 | 129 | 32 | 11 | 9 | 24 | 17.993 17.988 | – | 5 | 38 | G¼"(BSP) | .6 Kg |
| RADIAL | 3/8" NPT | 902-110-165 | 5/8"-18 UNF LH | 1.723" 1.722" | 5 15/32" | 1 13/32" | 7/16" | 11/32" | 24 | .6555" .6553" | 4⅛" | 3/16" | 1½" | ¼" NPT | 1½# |
| | G3/8" (BSP) | 902-120-188 | M16 x 1.5 LH | 43.760 43.735 | 135 | 32 | 11 | 9 | 24 | 17.993 17.988 | 105 | 5 | 38 | G¼" (BSP) | .6 Kg |

*Metric. **Two of the three tapped holes are to be plugged. The third tapped hole is to be used as drain at 6 o'clock position.

## Deublin Coolant Unions Installation




| Rotor Pilot | | Spindle End | | |
|---|---|---|---|---|
| I | M | X | Y | Z |
| 6555" 6553" | 3/16" | .6560" .6556" | 9/32" | 13/16" |
| 17.993 17.988 | 5 | 18.000 17.995 | 7 | 17 |

## Installation Instructions:

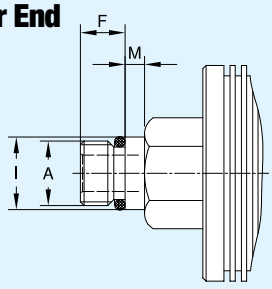
***DEUBLIN*** Coolant Unions are manufactured to precise tolerances for smooth running without vibration or wobble. A critical factor is the accuracy of the spindle end to which the rotor connects. The interface must adhere to the DEUBLIN specifications.

**Attention!**

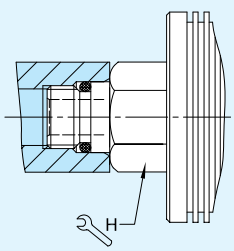
To prevent flooding of bearings, ensure that the drain is continuously sloping downward.

Please refer to "Instructions of Hose Installation" on page 54.

### Rotor End



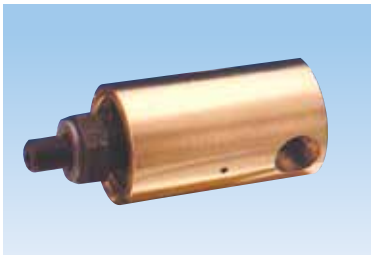

### Installed Rotor



# Unions for Special Applications

## Model 1005-113-063 1/8" NPT, R.H. Rotor Threads
## Model 1005-113-110 5/16"-24 UNF, R.H. Rotor Threads

### ⅛" Capacity



### for water service

**Operating Data**

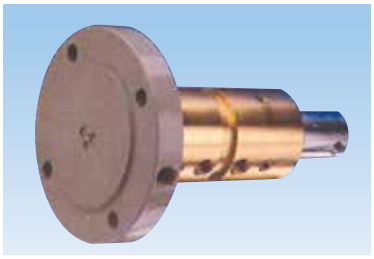
| | | |
|---|---|---|
| Max. Water Pressure | 750 PSI | 52 bar |
| Max. Speed NPT | 1,500 RPM | 1,500/min |
| Max. Speed Straight Thread | 3,500 RPM | 3,500/min |
| Maximum Temp. | 250°F | 120°C |

This is a small union designed for minimum water flow where space is a problem. The seals are Carbon Graphite-to-Stainless Steel. It has the same dimensions as Model 1005-020-038 on page 32.

---

## Model 468-250 Flanged Rotor

### ¼" x ⅜" x ⅜" Capacity



### for clutch and brake service

**Operating Data**

| | | |
|---|---|---|
| Max. Water Pressure | 150 PSI | 10 bar |
| Max. Air Pressure | 150 PSI | 10 bar |
| Max. Speed | 1,500 RPM | 1,500/min |
| Maximum Temp. | 250°F | 120°C |

This 3-passage union was designed to cool and activate clutches and brakes. The (2) 3/8" water passages supply and return water for cooling. The 1/4" capacity air union is tandem mounted to prevent interpassage leakage between the air and water passages. Contact Deublin Engineering Department for complete specifications.

---

## Model 981-300 2"-12 UN R.H. Rotor Threads

### ½" x 1" Capacity

### for oil rig service

**Operating Data**

| | | |
|---|---|---|
| Max. Water Pressure | 150 PSI | 10 bar |
| Max. Air Pressure | 150 PSI | 10 bar |
| Max. Hyd. Pressure | 500 PSI | 33.3 bar |
| Max. Speed | 350 RPM | 350/min |
| Maximum Temp. | 250°F | 120°C |

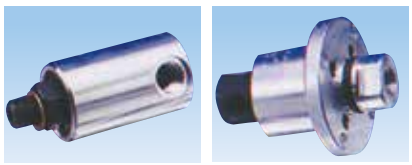
This 2-passage union was designed to cool and actuate Drum Brakes on Oil Rigs. It has a 1" water and 1/2" air passage. The water passage has a cartridge seal that can be repaired on the machine. The 981-300 union can also be used on many other Air/Hydraulic applications. Contact Deublin Engineering Department for complete specifications.

---

## For Central Tire Inflation Systems (CTIS)

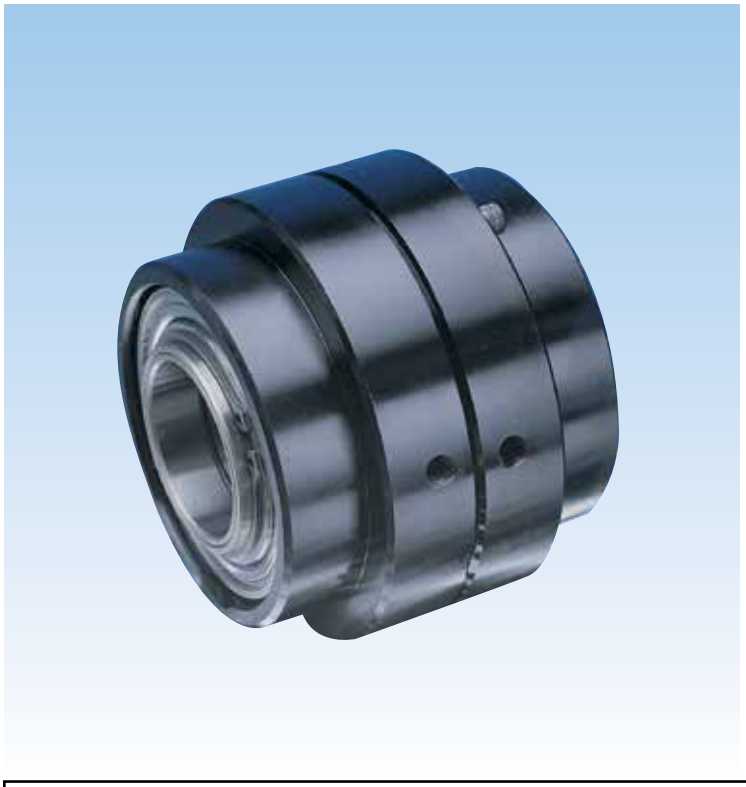
**Model 882, 2-passage union.** 1/8" pilot capacity and 5/16's supply air capacity. Operating data: Maximum air pressure 150 psi, max temperature 250°F, max speed 450 RPM. This 2-passage model was designed to be used where a wheel valve is required. The O-Ringed union body can be installed in the solid axle and air lines connected to the rotor head.

Deublin has developed a number of hub-mounted unions specifically designed to accommodate the passage of air between a vehicle's stationary axles and its wheels. This allows tire pressure to be varied from inside the vehicle's cab, and is already very popular in the logging industry and on military vehicles. The ability to vary the air pressure allows the driver to adjust pressure for the surface being traveled. Lower pressure with a broader footprint is suitable for soft terrain. Higher pressures and a smaller footprint is suitable for higher speed highway travel.



**Model 1115-000-001.** 11/32" capacity, maximum pressure150 psi. max temperature 250°F, maximum speed 3,500 RPM. This model union is most commonly used when converting a vehicle to the CTIS system. The male thread can be attached to the solid axle and the supply air from the body to the tire. Shaft mounted conversions of this design are available, and illustrated on Page 34.

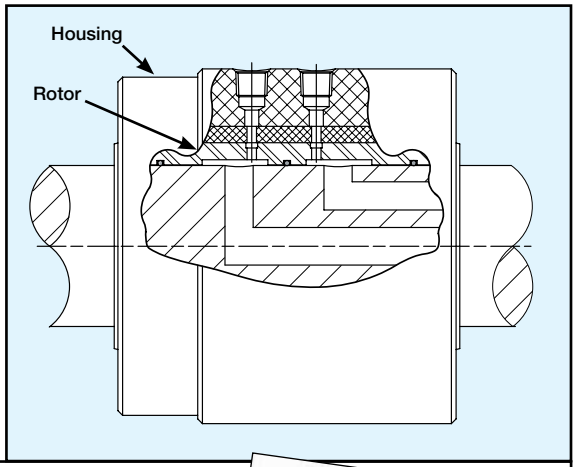
**Model 1102-025-001-004.** 1/4" capacity. Operating data 150 psi, max temperature 250°F, maximum speed 3,500 RPM. The 1102 can be partially mounted within the shaft by using the four holes in the flange, which reduces the overhanging length. The 1102 is not shown, however an in-shaft version is illustrated on Page 34.



# DEUBLIN

## Around-The-Shaft Unions for Air or Hydraulic Service

- Single or multi-passage
- "Controlled leakage" can be vented or channeled to reservoir
- Available for shafts up to 8"
- Capable of handling high speed and pressure
- Custom designed for specific application




## Deublin Rotating Unions for Continuous Casting Machines in the Steel Industry

Deublin has been a major supplier to the steel industry for over 45 years and has worked closely with the people who design, manufacture and operate Continuous Casting Equipment worldwide. We have a separate catalog which features the 2400 Series. With its dependable, long-wearing mechanical seals, the 2400 Series can change the way you think about rotating union maintenance.


## Deublin-Sint Steam Joints and Siphon Systems for the Paper Making Industry

Deublin has a complete line of steam inducing and condensate removal products designed specifically for the papermaking industry. These products are contained in a dedicated catalog. This line features the revolutionary FS Series Steam Joint with the Deltasint Stationary Siphon System designed and proven for today's high-speed paper machine's dryer sections.


## Deublin Rotating Unions for Coolant Applications

Whether CNC machining centers or automotive transfer lines, Deublin offers the broadest range of rotating union solutions for continuous through-the-spindle coolant applications. State-of-the-art features include silicon carbide seals, and dry running capability with or without pressure.

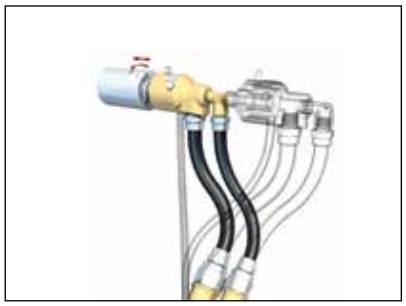
# Flexible Hose Installation Instructions for DEUBLIN Rotating Unions


**1** Mount housing in a bench vise and install hose.


**2** Install rotating union into machine.


**3** Connect flexible hose to supply line.

## Examples of Flexible Hose Installation



## Important

The DEUBLIN ROTATING UNION is a precision-made piece of equipment and should be handled accordingly. It is a rotating sealing device – not just a plumbing union. Improper use could result in premature leakage or failure. While Deublin Unions are of the highest quality and precision, they are "wear and tear" items. It is important that they are periodically inspected and, as seals wear out, the rotating union must be replaced or repaired to avoid the consequence of leakage.

Deublin Unions should never be used for applications other than specified in the catalog. For applications other than stated in the catalog, Deublin Engineering Department should be contacted for recommendations.

These instructions are provided by Deublin as general guidelines. They do not contain exhaustive information about the installation, use or maintenance of unions. Purchasers and users of Deublin Unions should be certain that they have reviewed Deublin's catalog and have sufficient experience and training in the use of unions before attempting installation or use of Deublin's products. The principal responsibility for the safe and effective use of Deublin Unions rests with the user and its employees. Deublin will provide, upon request, whatever assistance it can to advise users about the use of its products and about any difficulties or problems which are brought to its attention.

**WARNING** DEUBLIN unions should not be used to convey flammable media (flash point ≤ 140°F or 60°C) as leakage may result in explosions or fires. DEUBLIN unions should be used in accordance with standard safety guidelines for the media, and in a well-ventilated area. The use of our product on hazardous or corrosive media is strictly forbidden.

## Factory Testing

All DEUBLIN ROTATING UNIONS are factory tested under pressure before shipment. This thorough check assures that each Deublin Union is completely leakproof.

Deublin Rotating Unions can be installed with fullest confidence that it will operate to your complete satisfaction.

# Warranty

For a period of one year from the date of shipment, Deublin warrants that the products sold by it are free from defects in material and workmanship. The liability of Deublin is expressly limited to the replacement or rebuilding of any article, or part thereof, proven defective, when returned to the Deublin Company, transportation prepaid within a reasonable time after the termination of the 365-day warranty period.

This warranty is void if the product is dismantled, modified, altered, or damaged from improper maintenance, side-loading, excessive temperature, abrasive or chemical action, or other abuse.

No representative, agent or employee of Deublin has any authority to modify the terms of this warranty. Deublin will not be responsible for any consequential or resulting damage which may be claimed to have occurred through the sale or use of such products or parts, thereof, which might be defective.

There are no warranties which extend beyond the description contained under this heading, express or implied, including warranties of fitness for a particular purpose.

# Repair Service

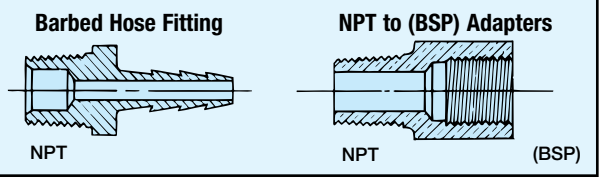
All Deublin rotating unions can be returned to the factory for professional rebuilding. Unions are refurbished to an "as new" condition and carry a New Union Warranty to ensure optimum performance. Contact Deublin Customer Service to arrange repair service.

Unions can be field serviced with rebuilding kits, which are available for most Deublin rotating unions. These kits include seals, rotors and ball bearings. Where field service is essential, Deublin Cartridge Water Unions or 57 Series should be specified.

# Installation

No exterior bracing should be used to prevent the housing of a ball bearing type union from rotating. To compensate for any eccentricities occurring from installation, it is imperative that a flexible connection be used. DO NOT PIPE SOLID. Use a 45-degree elbow and pipe union on the riser, making certain there is a slight curve in the hose. Do not install hose taut.

**To facilitate adapting the housing inlet (Port "B") to your equipment we suggest the following:**




# Relubrication

| Model | Amount of Grease (oz.) |
|---|---|
| 55 | .12 |
| 155 | .20 |
| 255 | .35 |
| 355 | .35 |
| 525 | .42 |
| 555 | .64 |
| 655 | .64 |
| 755 | 1.50 |
| 6200 | .64 |
| 6250 | 1.50 |
| 6300 | 2.40 |
| 6400 | 3.20 |

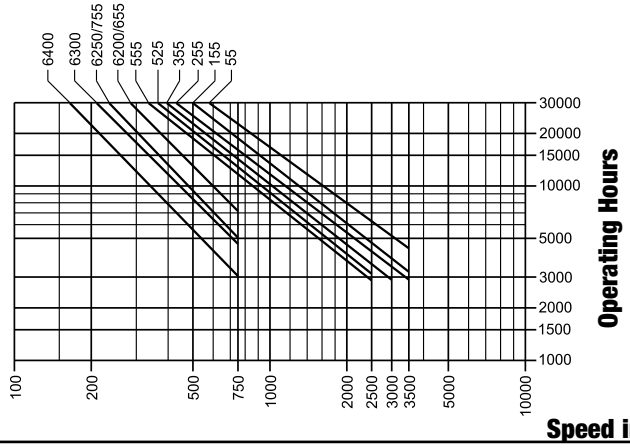
For catalog models with grease fittings, use Chevron SRI 2.

# Relubrication Interval

**Light Service**

Temperatures up to 165°F

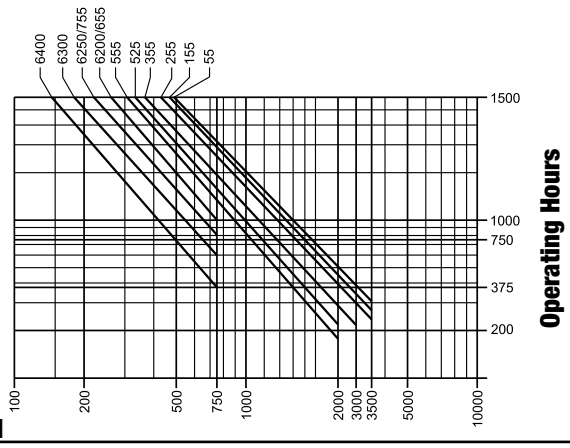
little, if any, vibration or moisture (humidity)




**Moderate Service**

Temperatures 165°F – 250°F

some vibration and moisture present



Since its establishment in 1945, Deublin has consistently adhered to a policy of producing the best product of its kind in the market. The result of this policy has been constant growth through the years. For this progress we are grateful to our many loyal customers. We cordially invite you to visit our modern manufacturing facilities in Waukegan, Illinois; Mainz, Germany; Monteveglio, Italy; and Dalian, China.

Sincerely,

Donald L. Deubler
Chairman of the Board

Global Headquarters in Waukegan, Illinois, U.S.A.

Mainz, Germany

Monteveglio, Italy

Dalian, China

DEUBLIN®
Engineered for Performance

**Deublin products & services are available throughout the world.**

**www.deublin.com**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