

## HYDRAULIC ADAPTERS & ACCESSORIES



### STEEL ADAPTERS

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## WORKING PRESSURE

The tables on the following pages list the recommended working pressure for a variety of hydraulic fittings made in accordance with certain industry standards. Many factors such as impulse, vibration, mechanical shock, and improper assembly may affect the integrity of the fitting connection.

We recommend sufficient testing be conducted to ensure that performance levels will be safe and satisfactory, especially if installed in systems operating at elevated pressures or in severe conditions. Working pressure ratings are capable of a 4 to 1 minimum burst. All steel fittings meet or exceed the minimum SAE pressure ratings. Always consider application and maximum pressure requirements when selecting fittings.

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## METHODS FOR INSTALLING FITTINGS

There are three methods for installing a fitting:

- Torque wrench
- Flats From Wrench Resistance
- Turns From Finger Tight

For Flare and NPSM Fittings, we recommend the flats from wrench resistance method be used whenever possible.

The differences in material, plating, and surface finish impacts the coefficient of friction when installing or connecting fittings. To minimize these variances, we recommend that fitting connections are lubricated when installed. Connections that are lubricated provide a more accurate installation torque, which results in fewer leaks.

---

## USING A TORQUE WRENCH

The torque values given in the tables on the following pages are for reference purposes only based on industry standard practice and for low carbon steel mating with steel/iron components. Actual torque values may need to be adjusted due to variances described above.

SAE recommends always making a wet (lubricated) installation or connection to reduce friction on moving parts, O-rings, and variances in material and plating. The torque values in these tables are based off SAE values using a .17 coefficient of friction as per SAE J2593. Many hydraulic leaks are a result of over-torque, which causes excessive deformation of material or exceeds the yield strength of the material, which may reduce the load or clamping force between seal contacts.

If more than one value or range is given, use the lower value first and increase only if required. Over-torquing can damage a fitting or mating component.

## TECHNICAL INFORMATION

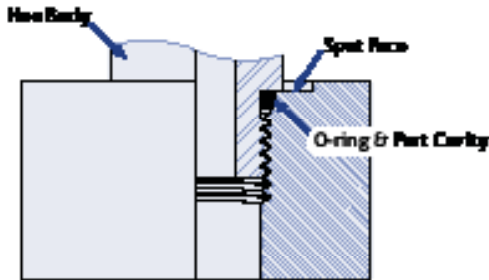
## HYDRAULIC ADAPTER

### SAE O-Ring Boss Port Specifications

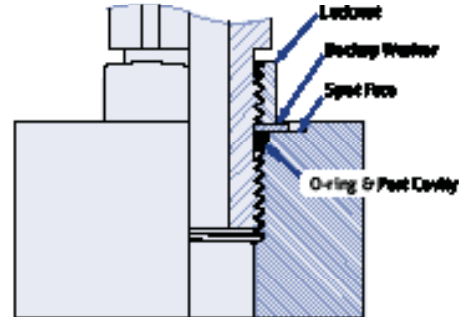
O-ring Boss ports (ORB) provide a seal by trapping the fitting's O-ring inside a port cavity. When a fitting is installed into the port, the O-ring is trapped between the fitting body hex or washer and port cavity.

Straight fittings include a hex, and sometimes an additional cylindrical shoulder below the hex and above the threads, to trap the O-ring in the port cavity.

Elbow and Tee fittings require a backup washer and a locknut above the O-ring on the threaded stud to permit a 360° orientation of the fitting around the port.



Straight SAE ORB



Adjustable SAE ORB

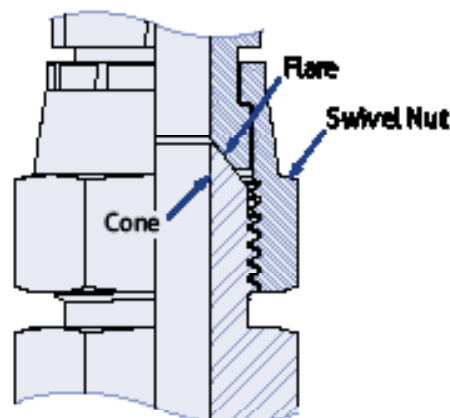
The following table lists the specifications for SAE O-Ring Boss Ports.

| SAE O-Ring Boss Specifications                                                                            |           |           |                                                  |                     |                         |                                                  |                     |                         |
|-----------------------------------------------------------------------------------------------------------|-----------|-----------|--------------------------------------------------|---------------------|-------------------------|--------------------------------------------------|---------------------|-------------------------|
| Dash Size                                                                                                 | Tube Size | Thread    | SAE-ORB to JIC and Pipe Fittings*                |                     |                         | SAE-ORB to ORFS Fittings**                       |                     |                         |
|                                                                                                           |           |           | Torque                                           | Working Pressure    |                         | Torque                                           | Working Pressure    |                         |
|                                                                                                           |           |           | Adjustable & Non-Adjustable<br>(ft-lbs) +25% -0% | Adjustable<br>(psi) | Non-Adjustable<br>(psi) | Adjustable & Non-Adjustable<br>(ft-lbs) +25% -0% | Adjustable<br>(psi) | Non-Adjustable<br>(psi) |
| 02                                                                                                        | 1/8       | 5/16-24   | 6                                                | 4500                | 4500                    | -                                                | -                   | -                       |
| 03                                                                                                        | 3/16      | 3/8-24    | 7                                                | 4500                | 4500                    | 7                                                | 5800                | 9100                    |
| 04                                                                                                        | 1/4       | 7/16-20   | 13                                               | 4500                | 4500                    | 15                                               | 5800                | 9100                    |
| 05                                                                                                        | 5/16      | 1/2-20    | 18                                               | 4500                | 4500                    | 18                                               | 5800                | 9100                    |
| 06                                                                                                        | 3/8       | 9/16-18   | 22                                               | 3600                | 4500                    | 26                                               | 5800                | 9100                    |
| 08                                                                                                        | 1/2       | 3/4-16    | 37                                               | 3600                | 4500                    | 52                                               | 5800                | 9100                    |
| 10                                                                                                        | 5/8       | 7/8-14    | 44                                               | 2900                | 3600                    | 74                                               | 5800                | 9100                    |
| 12                                                                                                        | 3/4       | 1-1/16-12 | 70                                               | 2900                | 3600                    | 125                                              | 5800                | 5800                    |
| 14                                                                                                        | 7/8       | 1-3/16-12 | 92                                               | 2300                | 2900                    | 158                                              | 5800                | 5800                    |
| 16                                                                                                        | 1         | 1-5/16-12 | 111                                              | 2300                | 2900                    | 199                                              | 4500                | 5800                    |
| 20                                                                                                        | 1 1/4     | 1-5/8-12  | 147                                              | 1800                | 2300                    | 210                                              | 3600                | 3600                    |
| 24                                                                                                        | 1 1/2     | 1-7/8-12  | 155                                              | 1800                | 2300                    | 273                                              | 2900                | 3600                    |
| 32                                                                                                        | 2         | 2-1/2-12  | 221                                              | 1450                | 1800                    | -                                                | -                   | -                       |
| * = Light duty studs included on JIC, NPTF and NPSM fittings per SAE J1926/3 & J514                       |           |           |                                                  |                     |                         |                                                  |                     |                         |
| ** = Heavy duty studs included on ORFS fittings per SAE J1926/2 & J1453                                   |           |           |                                                  |                     |                         |                                                  |                     |                         |
| Note: Torque values are for wet torque and are allowed up to 25% the listed value according to SAE J2593. |           |           |                                                  |                     |                         |                                                  |                     |                         |

## JIC Adapter Specifications

Male flared fittings include a conical nose with external threads for clamping.

A flared fitting or tube assembly is tightened against the cone with a swivel nut. By forcing the flare against the cone during the torquing process, the nose cone is slightly deformed and meshes to create a metal to metal seal between the flare and the cone.



The following table lists the specifications for JIC adapters.

| JIC Specifications |           |           |                  |                            |                     |                      |                                       |
|--------------------|-----------|-----------|------------------|----------------------------|---------------------|----------------------|---------------------------------------|
| Dash Size          | Tube Size | Thread    | Working Pressure |                            | Torque              |                      |                                       |
|                    |           |           | Male<br>(psi)    | Female Swivel Nut<br>(psi) | JIC Rigid<br>(FFWR) | JIC Swivel<br>(FFWR) | Bulkhead Locknut<br>(ft-lbs) +25% -0% |
| 02                 | 1/8       | 5/16-24   | 5000             | 5000                       | 1/4 - 1/2           | 2                    | 4                                     |
| 03                 | 3/16      | 3/8-24    | 5000             | 5000                       | 1/4 - 1/2           | 2                    | 6                                     |
| 04                 | 1/4       | 7/16-20   | 5000             | 4500                       | 1/4 - 1/2           | 2                    | 10                                    |
| 05                 | 5/16      | 1/2-20    | 5000             | 4000                       | 1/4 - 1/2           | 2                    | 13                                    |
| 06                 | 3/8       | 9/16-18   | 5000             | 4000                       | 1/4 - 1/2           | 2                    | 16                                    |
| 08                 | 1/2       | 3/4-16    | 4500             | 4000                       | 1/4 - 1/2           | 2                    | 27                                    |
| 10                 | 5/8       | 7/8-14    | 3500             | 3000                       | 1/4 - 1/2           | 1 1/2                | 32                                    |
| 12                 | 3/4       | 1-1/16-12 | 3500             | 3000                       | 1/4 - 1/2           | 1 1/2                | 52                                    |
| 14                 | 7/8       | 1-3/16-12 | 3000             | 2500                       | 1/4 - 1/2           | 1 1/2                | 66                                    |
| 16                 | 1         | 1-5/16-12 | 3000             | 2500                       | 1/4 - 1/2           | 1 1/2                | 85                                    |
| 20                 | 1 1/4     | 1-5/8-12  | 2500             | 2000                       | 1/4 - 1/2           | 1                    | 111                                   |
| 24                 | 1 1/2     | 1-7/8-12  | 2000             | 1500                       | 1/4 - 1/2           | 1                    | 114                                   |
| 32                 | 2         | 2-1/2-12  | 1500             | 1125                       | 1/4 - 1/2           | 1                    | 162                                   |

Values are per SAE J514

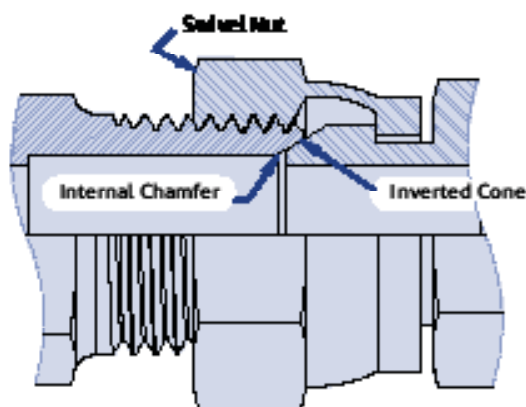
## TECHNICAL INFORMATION

## HYDRAULIC ADAPTER

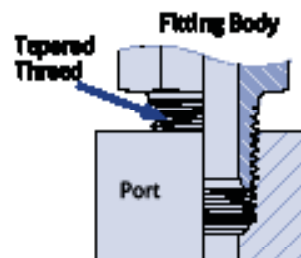
### Pipe & Pipe Swivel Adapter Specifications

NPSM fittings include an inverted 60° cone inside an internally threaded swivel union nut. Male NPTF fittings that have a 30° internal chamfer that make a 60° inverted cone, will mate with NPSM swivel unions.

**NOTE: THE MATING MALE THREADS MUST INCLUDE AN INSIDE CHAMFER ON THE END OF THE FITTING THAT MATES WITH THE INVERTED CONE. THREADS ARE FOR CLAMPING FORCE ONLY AND THE SEALING OCCURS ON A SMALL RADIAL SECTION BETWEEN THE MALE FITTING INTERNAL CHAMFER AND THE SWIVEL UNION INVERTED CONE.**



**NPTF & NPSM Union**



**NPT & NPTF Assembly**

NPT and NPTF pipe threads seal by wedging the tapered threads through deformation into each other. Both of these threads require thread sealants to complete a seal.

The following table lists the specifications for NPT, NPTF, and NPSM Pipe adapters.

| NPT, NPTF, and NPSM Pipe Specifications |              |                  |                           |                        |               |                   |
|-----------------------------------------|--------------|------------------|---------------------------|------------------------|---------------|-------------------|
| Dash Size                               | Thread Size  | Major OD* (inch) | Working Pressure          |                        | Torque        |                   |
|                                         |              |                  | NPT, NPTF Male and Female | NPSM Female Swivel Nut | NPT, NPTF     | NPSM Swivel Union |
|                                         |              |                  | (psi)                     | (psi)                  | (TFFT)        | (FFWR)            |
| 02                                      | 1/8-27       | .405             | 5000                      | 5000                   | 2-3           | 2                 |
| 04                                      | 1/4-18       | .540             | 4000                      | 5000                   | 2-3           | 2                 |
| 06                                      | 3/8-18       | .675             | 3000                      | 4000                   | 2-3           | 2                 |
| 08                                      | 1/2-14       | .84              | 3000                      | 3500                   | 2-3           | 2                 |
| 12                                      | 3/4-14       | 1.050            | 2500                      | 2250                   | 2-3           | 2                 |
| 16                                      | 1-11 1/2     | 1.315            | 2000                      | 2000                   | 1 1/2 - 2 1/2 | 1 1/2             |
| 20                                      | 1 1/4-11 1/2 | 1.660            | 1150                      | 1625                   | 1 1/2 - 2 1/2 | 1 1/2             |
| 24                                      | 1 1/2-11 1/2 | 1.900            | 1000                      | 1250                   | 1 1/2 - 2 1/2 | 1 1/2             |
| 32                                      | 2-11 1/2     | 2.375            | 1000                      | 1125                   | 1 1/2 - 2 1/2 | 1 1/2             |

Values are per SAE J514 & J2593

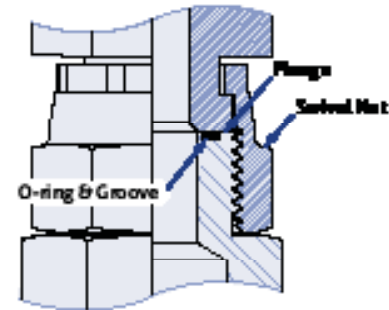
**NPT, NPTF, and NPSM Pipe Specifications**

## O-ring Face Seal Adapter Specifications

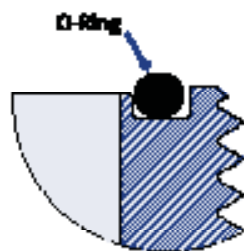
O-ring face seal fittings include a precision groove in the face of the male fitting. Sealing occurs when an O-ring is trapped in the groove by a smooth flat flange that is clamped against the face with a nut or nut and sleeve. The flat flange may be formed or brazed onto the end of a tube, or is machined on a fitting.

There are two SAE groove types:

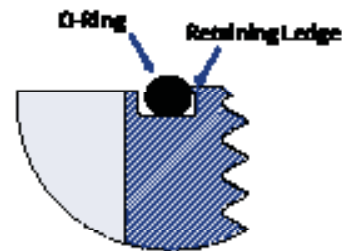
- Type A: The original style A O-ring has no retaining ledge.
- Type B: The Type B groove has a retaining ledge (half dovetail) that improves O-ring retention. The Type B style is more commonly found and is a design improvement over the Type A.



ORFS Fitting Assembly



Detail View of Cross Section of Groove Type A



View of Groove Type B

The following table lists the specifications for O-ring Face Seal adapters.

| ORFS Specifications |           |             |                  |                            |                                    |                                       |           |             |
|---------------------|-----------|-------------|------------------|----------------------------|------------------------------------|---------------------------------------|-----------|-------------|
| Dash Size           | Tube Size | Thread Size | Working Pressure |                            | Torque                             |                                       |           |             |
|                     |           |             | Male<br>(psi)    | Female Swivel Nut<br>(psi) | Male & Female<br>(ft-lbs) +25% -0% | Bulkhead Locknut<br>(ft-lbs) +25% -0% | Tube Nuts | Swivel Nuts |
| 04                  | 1/4       | 9/16-18     | 6000             | 6000                       | 18                                 | 16                                    | 1/4-1/2   | 1/2-3/4     |
| 06                  | 3/8       | 11/16-16    | 6000             | 6000                       | 29                                 | 22                                    | 1/4-1/2   | 1/2-3/4     |
| 08                  | 1/2       | 13/16-16    | 6000             | 6000                       | 41                                 | 29                                    | 1/4-1/2   | 1/2-3/4     |
| 10                  | 5/8       | 1-14        | 6000             | 6000                       | 44                                 | 44                                    | 1/4-1/2   | 1/2-3/4     |
| 12                  | 3/4       | 1-3/16-12   | 6000             | 6000                       | 66                                 | 66                                    | 1/4-1/2   | 1/3-1/2     |
| 16                  | 1         | 1-7/16-12   | 6000             | 5000                       | 92                                 | 92                                    | 1/4-1/2   | 1/3-1/2     |
| 20                  | 1 1/4     | 1-11/16-12  | 4000             | 4000                       | 125                                | 111                                   | 1/4-1/2   | 1/3-1/2     |
| 24                  | 1 1/2     | 2-12        | 4000             | 3000                       | 147                                | 125                                   | 1/4-1/2   | 1/3-1/2     |

Note: Values are per SAE J2593 & J1453

Torque values are for wet installation of steel components. Reduce torque values for softer material components.

ORFS Specifications

## BSPT, BSPP and Metric Adapter Specifications

BSPT and Metric tapered threads install and work in the same manner as NPT and NPTF.

Male BSPP fittings include an inverted 60° cone inside an internally threaded swivel union nut. Male BSPP fittings that have a 30° internal chamfer that make a 60° inverted cone, will mate with Female BSPP swivel unions.

**NOTE: THE MATING MALE THREADS MUST INCLUDE AN INSIDE CHAMFER ON THE END OF THE FITTING THAT MATES WITH THE INVERTED CONE. THREADS ARE FOR CLAMPING FORCE ONLY AND THE SEALING OCCURS ON A SMALL RADIAL SECTION BETWEEN THE MALE FITTING INTERNAL CHAMFER AND THE SWIVEL UNION INVERTED CONE.**

DIN swivel unions have a 24° inverted cone and may be installed into DIN bite-ring compression fittings. To provide enhanced performance, an O-ring is sometimes included in the cone of some DIN swivel unions.

British Standard Pipe Parallel (BSPP) and Metric Parallel threaded ports do not include a port cavity like the O-ring Boss or ISO 6149 port. Instead, an O-ring sits on top of the spot face or external surface and is surrounded by a metal retaining ring or other retaining component to trap the O-ring between the fitting hex, body, and spot face.

Elbow and Tee fittings have a locknut, backup washer, O-ring and retaining washer to permit 360° orientation around the axis of the port.

The following table lists the specifications for **BSPP & BSPT Adapters**

| BSPP & BSPT Specifications |             |                                 |                   |               |
|----------------------------|-------------|---------------------------------|-------------------|---------------|
| Dash Size                  | BSPT & BSPP |                                 | Torque            |               |
|                            | THREAD SIZE | MAJOR OD <sup>o</sup><br>(inch) | BSPP Swivel Union | BSPT          |
| 02                         | 1/8-28      | 0.383                           | 2                 | 2-3           |
| 04                         | 1/4-19      | 0.518                           | 2                 | 2-3           |
| 06                         | 3/8-19      | 0.656                           | 2                 | 2-3           |
| 08                         | 1/2-14      | 0.825                           | 2                 | 2-3           |
| 10                         | 5/8-14      | 0.929                           | 2                 | 2-3           |
| 12                         | 3/4-14      | 1.041                           | 2                 | 2-3           |
| 16                         | 1-11        | 1.309                           | 1 1/2             | 1 1/2 - 2 1/2 |
| 20                         | 1 1/4-11    | 1.650                           | 1 1/2             | 1 1/2 - 2 1/2 |
| 24                         | 1 1/2-11    | 1.882                           | 1 1/2             | 1 1/2 - 2 1/2 |
| 32                         | 2-11        | 2.347                           | 1 1/2             | 1 1/2 - 2 1/2 |

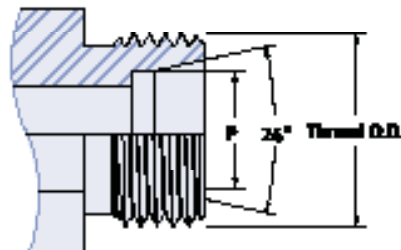
The following table lists the specifications for **Metric Adapters**

| Metric DIN 3852-1 Threads   |                     |
|-----------------------------|---------------------|
| Dash Size                   | THREAD SIZE<br>(mm) |
| 08                          | 8 x 1.0             |
| 10                          | 10 x 1.0            |
| 12                          | 12 x 1.5            |
| 14                          | 14 x 1.5            |
| 16                          | 16 x 1.5            |
| 18                          | 18 x 1.5            |
| 20                          | 20 x 1.5            |
| 22                          | 22 x 1.5            |
| 24                          | 24 x 1.5            |
| 26                          | 26 x 1.5            |
| 27                          | 27 x 2.0            |
| 30                          | 30 x 2.0            |
| 33                          | 33 x 2.0            |
| 39                          | 39 x 2.0            |
| 42                          | 42 x 2.0            |
| 48                          | 48 x 2.0            |
| 60                          | 60 x 2.0            |
| Values are from DIN 3852-1. |                     |

## Metric Compression Tube Adapter Specifications (DIN L, &amp; S)

You can use a metric compression tube adapter with different types of fitting connections that use a metric tube size. The DIN figure to the right shows the cross sectional cut of a DIN connection. The Tube size dimension is P. The thread size is the Thread O.D.

*DIN Standard 2353*



**DIN Identification**

The following table lists the specifications for DIN L adapters

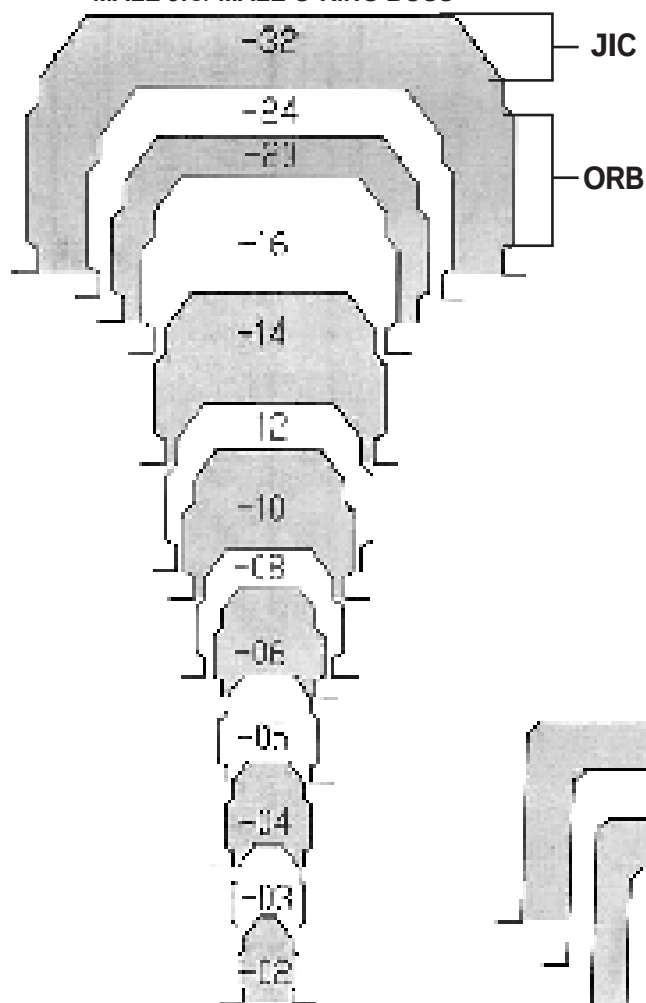
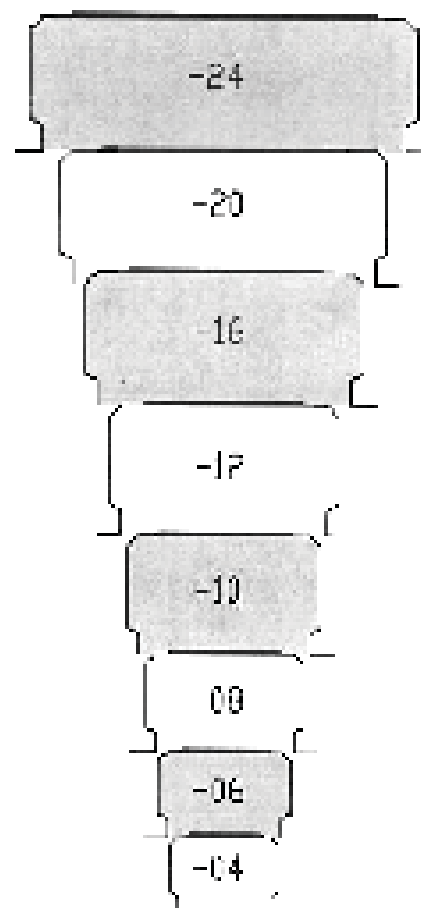
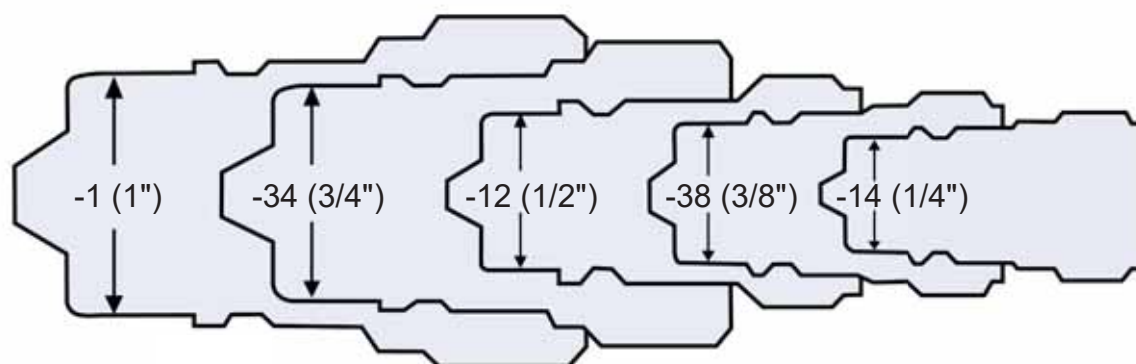
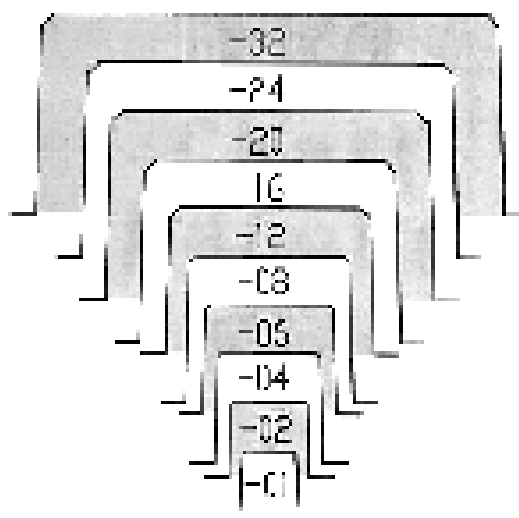
| DIN S                      |             |              |          |
|----------------------------|-------------|--------------|----------|
| Metric Tube O.D. Size      | Thread O.D. | Tube (P)ilot | Pressure |
| (mm)                       | (mm)        | (mm)         | (psi)    |
| 6                          | 14 x 1.5    | 6            | 9000     |
| 8                          | 16 x 1.5    | 8            | 9000     |
| 10                         | 18 x 1.5    | 10           | 9000     |
| 12                         | 20 x 1.5    | 12           | 9000     |
| 14                         | 22 x 1.5    | 14           | 5800     |
| 16                         | 24 x 1.5    | 16           | 5800     |
| 20                         | 30 x 2.0    | 20           | 5800     |
| 25                         | 36 x 2.0    | 25           | 5800     |
| 30                         | 42 x 2.0    | 30           | 3600     |
| 38                         | 52 x 2.0    | 38           | 3600     |
| *Meets standard ISO 8434-1 |             |              |          |

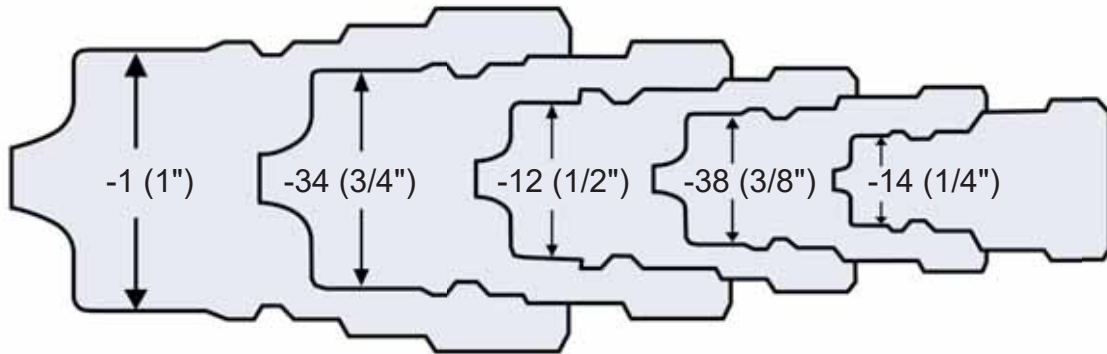
The following table lists the specifications for DIN S adapters

| DIN L                      |             |              |          |
|----------------------------|-------------|--------------|----------|
| Metric Tube O.D. Size      | Thread O.D. | Tube (P)ilot | Pressure |
| (mm)                       | (mm)        | (mm)         | (psi)    |
| 6                          | 12 x 1.5    | 6            | 3600     |
| 8                          | 14 x 1.5    | 8            | 3600     |
| 10                         | 16 x 1.5    | 10           | 3600     |
| 12                         | 18 x 1.5    | 12           | 3600     |
| 15                         | 22 x 1.5    | 15           | 3600     |
| 18                         | 26 x 1.5    | 18           | 2300     |
| 22                         | 30 x 2.0    | 22           | 2300     |
| 28                         | 36 x 2.0    | 28           | 1500     |
| 35                         | 45 x 2.0    | 35           | 1500     |
| 42                         | 52 x 2.0    | 42           | 1500     |
| *Meets standard ISO 8434-1 |             |              |          |

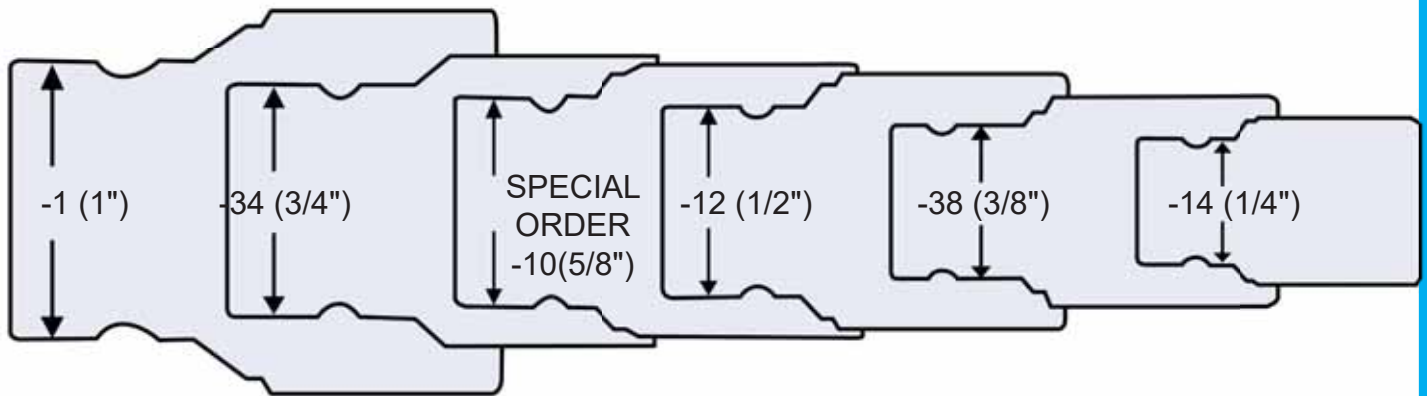
# **PROFILE SIZE CHART**

# **HYDRAULIC ADAPTER**

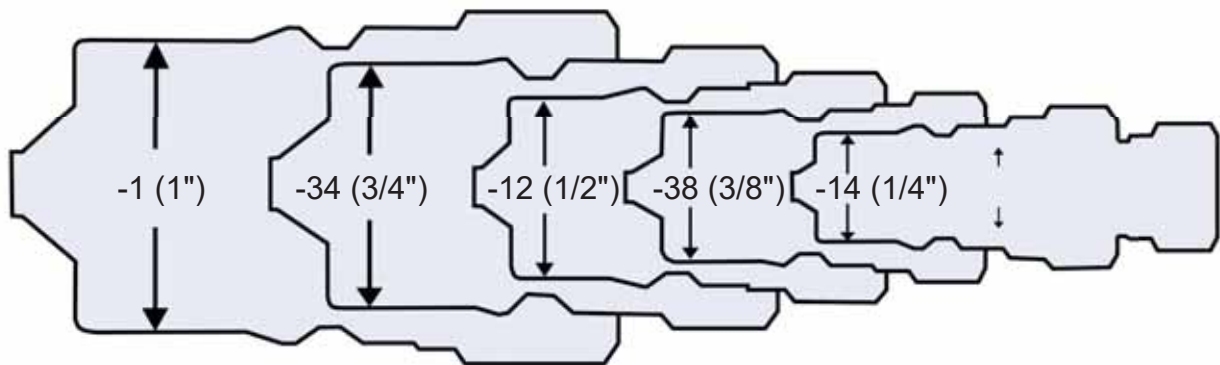
**MALE JIC/ MALE O-RING BOSS**

**O-RING FACE SEAL**

**MALE PIPE**

**AG INTERCHANGE - NV SERIES**



ISO 7241 - 1 - ISO A - ANV SERIES



ISO 16028 - FF SERIES



ISO 7241 - 1 ISO B - HNV SERIES

## FEMALE PIPE SWIVELS

## STEEL PIPE SWIVEL ADAPTERS

## MALE PIPE SWIVEL ADAPTER

SAE 140130



| Part #     | Male Pipe 1 | Female NPSM 2 | List Price |
|------------|-------------|---------------|------------|
| 1404-2-2   | 1/8         | 1/8           | ----       |
| 1404-2-4   | 1/8         | 1/4           | ----       |
| 1404-4-2   | 1/4         | 1/8           | ----       |
| 1404-4-4   | 1/4         | 1/4           | ----       |
| 1404-4-6   | 1/4         | 3/8           | ----       |
| 1404-4-8   | 1/4         | 1/2           | ----       |
| 1404-6-4   | 3/8         | 1/4           | ----       |
| 1404-6-6   | 3/8         | 3/8           | ----       |
| 1404-6-8   | 3/8         | 1/2           | ----       |
| 1404-8-4   | 1/2         | 1/4           | ----       |
| 1404-8-6   | 1/2         | 3/8           | ----       |
| 1404-8-8   | 1/2         | 1/2           | ----       |
| 1404-12-8  | 3/4         | 1/2           | ----       |
| 1404-12-12 | 3/4         | 3/4           | ----       |
| 1404-12-16 | 3/4         | 1             | ----       |
| 1404-16-12 | 1           | 3/4           | ----       |
| 1404-16-16 | 1           | 1             | ----       |
| 1404-20-16 | 1-1/4       | 1             | ----       |
| 1404-20-20 | 1-1/4       | 1-1/4         | ----       |
| 1404-24-24 | 1-1/2       | 1-1/2         | ----       |
| 1404-32-32 | 2           | 2             | ----       |

1404 2045R 1210 9205R 0107

## FEMALE PIPE SWIVEL ADAPTER

SAE 140131



| Part #     | Female Pipe 1 | Female NPSM 2 | List Price |
|------------|---------------|---------------|------------|
| 1405-2-2   | 1/8           | 1/8           | ----       |
| 1405-4-2   | 1/4           | 1/8           | ----       |
| 1405-4-4   | 1/4           | 1/4           | ----       |
| 1405-4-6   | 1/4           | 3/8           | ----       |
| 1405-6-4   | 3/8           | 1/4           | ----       |
| 1405-6-6   | 3/8           | 3/8           | ----       |
| 1405-6-8   | 3/8           | 1/2           | ----       |
| 1405-8-4   | 1/2           | 1/4           | ----       |
| 1405-8-6   | 1/2           | 3/8           | ----       |
| 1405-8-8   | 1/2           | 1/2           | ----       |
| 1405-12-12 | 3/4           | 3/4           | ----       |
| 1405-16-12 | 1             | 3/4           | ----       |
| 1405-16-16 | 1             | 1             | ----       |
| 1405-20-20 | 1-1/4         | 1-1/4         | ----       |
| 1405-24-24 | 1-1/2         | 1-1/2         | ----       |
| 1405-32-32 | 2             | 2             | ----       |

1405 2046R 1212 9255 C207

## HYDRAULIC ADAPTERS

## MALE PIPE ELBOW SWIVEL ADAPTER

SAE 140230



| Part #     | Male Pipe 1 | Female NPSM 2 | List Price |
|------------|-------------|---------------|------------|
| 1501-2-2   | 1/8         | 1/8           | ----       |
| 1501-4-2   | 1/4         | 1/8           | ----       |
| 1501-4-4   | 1/4         | 1/4           | ----       |
| 1501-6-4   | 3/8         | 1/4           | ----       |
| 1501-6-6   | 3/8         | 3/8           | ----       |
| 1501-8-4   | 1/2         | 1/4           | ----       |
| 1501-8-6   | 1/2         | 3/8           | ----       |
| 1501-8-8   | 1/2         | 1/2           | ----       |
| 1501-12-8  | 3/4         | 1/2           | ----       |
| 1501-12-12 | 3/4         | 3/4           | ----       |
| 1501-16-12 | 1           | 3/4           | ----       |
| 1501-16-16 | 1           | 1             | ----       |
| 1501-20-20 | 1-1/4       | 1-1/4         | ----       |
| 1501-24-24 | 1-1/2       | 1-1/2         | ----       |
| 1501-32-32 | 2           | 2             | ----       |

1501 2047R 1218 9405 2107

## FEMALE UNION ELBOW SWIVEL ADAPTER

SAE 140231



| Part #     | Female Pipe 1 | Female NPSM 2 | List Price |
|------------|---------------|---------------|------------|
| 1502-2-2   | 1/8           | 1/8           | ----       |
| 1502-4-4   | 1/4           | 1/4           | ----       |
| 1502-6-4   | 3/8           | 1/4           | ----       |
| 1502-6-6   | 3/8           | 3/8           | ----       |
| 1502-6-8   | 3/8           | 1/2           | ----       |
| 1502-8-6   | 1/2           | 3/8           | ----       |
| 1502-8-8   | 1/2           | 1/2           | ----       |
| 1502-12-12 | 3/4           | 3/4           | ----       |
| 1502-16-16 | 1             | 1             | ----       |
| 1502-20-20 | 1-1/4         | 1-1/4         | ----       |
| 1502-24-24 | 1-1/2         | 1-1/2         | ----       |

1502 2207 1216 945SR

## HYDRAULIC ADAPTERS

## FEMALE PIPE SWIVELS

### MALE 45° PIPE ELBOW SWIVEL ADAPTER

SAE 140330



| Part #     | Male Pipe 1 | Female NPSM 2 | List Price |
|------------|-------------|---------------|------------|
| 1503-2-2   | 1/8         | 1/8           | ----       |
| 1503-4-4   | 1/4         | 1/4           | ----       |
| 1503-6-4   | 3/8         | 1/4           | ----       |
| 1503-6-6   | 3/8         | 3/8           | ----       |
| 1503-8-6   | 1/2         | 3/8           | ----       |
| 1503-8-8   | 1/2         | 1/2           | ----       |
| 1503-12-8  | 3/4         | 1/2           | ----       |
| 1503-12-12 | 3/4         | 3/4           | ----       |
| 1503-16-12 | 1           | 3/4           | ----       |
| 1503-16-16 | 1           | 1             | ----       |
| 1503-20-20 | 1-1/4       | 1-1/4         | ----       |
| 1503-24-24 | 1-1/2       | 1-1/2         | ----       |
| 1503-32-32 | 2           | 2             | ----       |

1503 2049R 3107 1214 9355R

### FEMALE 45° UNION ELBOW SWIVEL ADAPTER

SAE 140331



| Part #     | Female Pipe 1 | Female NPSM 2 | List Price |
|------------|---------------|---------------|------------|
| 1504-2-2   | 1/8           | 1/8           | ----       |
| 1504-4-4   | 1/4           | 1/4           | ----       |
| 1504-6-6   | 3/8           | 3/8           | ----       |
| 1504-8-8   | 1/2           | 1/2           | ----       |
| 1504-12-12 | 3/4           | 3/4           | ----       |
| 1504-16-16 | 1             | 1             | ----       |
| 1504-20-20 | 1-1/4         | 1-1/4         | ----       |
| 1504-24-24 | 1-1/2         | 1-1/2         | ----       |

1504 2050R 1249 9385R

### MALE SWIVEL BRANCH TEE



| Part #     | Female NPSM 1 & 2 | Male Pipe 3 | List Price |
|------------|-------------------|-------------|------------|
| 1601-2-2   | 1/8               | 1/8         | ----       |
| 1601-4-4   | 1/4               | 1/4         | ----       |
| 1601-6-6   | 3/8               | 3/8         | ----       |
| 1601-8-8   | 1/2               | 1/2         | ----       |
| 1601-12-12 | 3/4               | 3/4         | ----       |
| 1601-16-16 | 1                 | 1           | ----       |
| 1601-20-20 | 1-1/4             | 1-1/4       | ----       |
| 1601-24-24 | 1-1/2             | 1-1/2       | ----       |

1601 2254R 1258 9406R

### FEMALE SWIVEL TEE



| Part #     | Female NPSM 1 & 2 | Female Pipe 3 | List Price |
|------------|-------------------|---------------|------------|
| 1602-4-4   | 1/4               | 1/4           | ----       |
| 1602-6-6   | 3/8               | 3/8           | ----       |
| 1602-8-8   | 1/2               | 1/2           | ----       |
| 1602-12-12 | 3/4               | 3/4           | ----       |
| 1602-16-16 | 1                 | 1             | ----       |
| 1602-20-20 | 1-1/4             | 1-1/4         | ----       |

1602 2253R 1259 9456R

### FEMALE SWIVEL UNION TEE



| Part #     | Female NPSM 1,2 & 3 | List Price |
|------------|---------------------|------------|
| 1603-4-4   | 1/4                 | ----       |
| 1603-6-6   | 3/8                 | ----       |
| 1603-8-8   | 1/2                 | ----       |
| 1603-12-12 | 3/4                 | ----       |
| 1603-16-16 | 1                   | ----       |
| 1603-20-20 | 1-1/4               | ----       |

1603 2255 1223 9705R

## STRAIGHTS STEEL JIC FLARE 37°

## HYDRAULIC ADAPTERS

## LONG JIC TUBE NUT

SAE 070111



| Part #  | Tube O.D | JIC Thread Size | List Price |
|---------|----------|-----------------|------------|
| 0304-4  | 1/4      | 7/16-20         | ----       |
| 0304-6  | 3/8      | 9/16-18         | ----       |
| 0304-8  | 1/2      | 3/4-16          | ----       |
| 0304-10 | 5/8      | 7/8-14          | ----       |
| 0304-12 | 3/4      | 1-1/16-12       | ----       |
| 0304-16 | 1        | 1-5/16-12       | ----       |

304 221000 0304 C5115

## JIC CAP

SAE 070112  
MS 51532

| Part #    | Tube O.D. | JIC Thread Size | List Price |
|-----------|-----------|-----------------|------------|
| 0304-C-2  | 1/8       | 5/16-24         | ----       |
| 0304-C-3  | 3/16      | 3/8-24          | ----       |
| 0304-C-4  | 1/4       | 7/16-20         | ----       |
| 0304-C-5  | 5/16      | 1/2-20          | ----       |
| 0304-C-6  | 3/8       | 9/16-18         | ----       |
| 0304-C-8  | 1/2       | 3/4-16          | ----       |
| 0304-C-10 | 5/8       | 7/8-14          | ----       |
| 0304-C-12 | 3/4       | 1-1/16-12       | ----       |
| 0304-C-14 | 7/8       | 1-3/16-12       | ----       |
| 0304-C-16 | 1         | 1-5/16-12       | ----       |
| 0304-C-20 | 1-1/4     | 1-5/8-12        | ----       |
| 0304-C-24 | 1-1/2     | 1-7/8-12        | ----       |
| 0304-C-32 | 2         | 2-1/2-12        | ----       |

820 304 210292 FNTX 1329 C5129

JIC TUBE NUT  
(SLEEVE REQUIRED)SAE 070110  
MS 51531

| Part #  | Tube O.D | JIC Thread Size | List Price |
|---------|----------|-----------------|------------|
| 0318-2  | 1/8      | 5/16-24         | ----       |
| 0318-3  | 3/16     | 3/8-24          | ----       |
| 0318-4  | 1/4      | 7/16-20         | ----       |
| 0318-5  | 5/16     | 1/2-20          | ----       |
| 0318-6  | 3/8      | 9/16-18         | ----       |
| 0318-8  | 1/2      | 3/4-16          | ----       |
| 0318-10 | 5/8      | 7/8-14          | ----       |
| 0318-12 | 3/4      | 1-1/16-12       | ----       |
| 0318-14 | 7/8      | 1-3/16-12       | ----       |
| 0318-16 | 1        | 1-5/16-12       | ----       |
| 0318-20 | 1-1/4    | 1-5/8-12        | ----       |
| 0318-24 | 1-1/2    | 1-7/8-12        | ----       |
| 0318-32 | 2        | 2-1/2-12        | ----       |

318 1290 BTX 1311 C5105

## JIC TUBE SLEEVE

SAE 070115  
MS 51533

| Part #  | Tube O.D | List Price |
|---------|----------|------------|
| 0319-2  | 1/8      | ----       |
| 0319-3  | 3/16     | ----       |
| 0319-4  | 1/4      | ----       |
| 0319-5  | 5/16     | ----       |
| 0319-6  | 3/8      | ----       |
| 0319-8  | 1/2      | ----       |
| 0319-10 | 5/8      | ----       |
| 0319-12 | 3/4      | ----       |
| 0319-14 | 7/8      | ----       |
| 0319-16 | 1        | ----       |
| 0319-20 | 1-1/4    | ----       |
| 0319-24 | 1-1/2    | ----       |
| 0319-32 | 2        | ----       |

319 900605 TX 1253 C5165

## JIC TUBE UNION

SAE 070101  
MS 51501

| Part #     | JIC Thread Size 1 | JIC Thread Size 2 | List Price |
|------------|-------------------|-------------------|------------|
| 2403-2-2   | 5/16-24           | 5/16-24           | ----       |
| 2403-3-3   | 3/8-24            | 3/8-24            | ----       |
| 2403-4-4   | 7/16-20           | 7/16-20           | ----       |
| 2403-5-5   | 1/2-20            | 1/2-20            | ----       |
| 2403-6-6   | 9/16-18           | 9/16-18           | ----       |
| 2403-6-4   | 9/16-18           | 7/16-20           | ----       |
| 2403-8-8   | 3/4-16            | 3/4-16            | ----       |
| 2403-8-4   | 3/4-16            | 7/16-20           | ----       |
| 2403-8-6   | 3/4-16            | 9/16-18           | ----       |
| 2403-10-10 | 7/8-14            | 7/8-14            | ----       |
| 2403-10-8  | 7/8-14            | 3/4-16            | ----       |
| 2403-12-12 | 1-1/16-12         | 1-1/16-12         | ----       |
| 2403-12-8  | 1-1/16-12         | 3/4-16            | ----       |
| 2403-12-10 | 1-1/16-12         | 7/8-14            | ----       |
| 2403-14-14 | 1-3/16-12         | 1-3/16-12         | ----       |
| 2403-16-16 | 1-5/16-12         | 1-5/16-12         | ----       |
| 2403-16-12 | 1-5/16-12         | 1-1/16-12         | ----       |
| 2403-20-20 | 1-5/8-12          | 1-5/8-12          | ----       |
| 2403-24    | 1-7/8-12          | 1-7/8-12          | -----      |
| 2403-24-20 | 1-7/8-12          | 1-5/8-12          | ----       |
| 2403-32    | 2-1/2-12          | 2-1/2-12          | -----      |

2403 2027 HTX 1204 C5305

## HYDRAULIC ADAPTERS

## STRAIGHTS STEEL JIC FLARE 37°

### JIC MALE CONNECTOR

SAE 070102  
MS 51500



| Part #     | JIC Thread<br>Size 1 | Male Pipe<br>Thread 2 | List Price |
|------------|----------------------|-----------------------|------------|
| 2404-2-2   | 5/16-24              | 1/8                   | ----       |
| 2404-2-4   | 5/16-24              | 1/4                   | ----       |
| 2404-4-2   | 7/16-20              | 1/8                   | ----       |
| 2404-4-4   | 7/16-20              | 1/4                   | ----       |
| 2404-4-6   | 7/16-20              | 3/8                   | ----       |
| 2404-4-8   | 7/16-20              | 1/2                   | ----       |
| 2404-6-2   | 9/16-18              | 1/8                   | ----       |
| 2404-6-4   | 9/16-18              | 1/4                   | ----       |
| 2404-6-6   | 9/16-18              | 3/8                   | ----       |
| 2404-6-8   | 9/16-18              | 1/2                   | ----       |
| 2404-8-4   | 3/4-16               | 1/4                   | ----       |
| 2404-8-6   | 3/4-16               | 3/8                   | ----       |
| 2404-8-8   | 3/4-16               | 1/2                   | ----       |
| 2404-8-12  | 3/4-16               | 3/4                   | ----       |
| 2404-8-16  | 3/4-16               | 1                     | ----       |
| 2404-10-8  | 7/8-14               | 1/2                   | ----       |
| 2404-10-12 | 7/8-14               | 3/4                   | ----       |
| 2404-12-6  | 1-1/16-12            | 3/8                   | ----       |
| 2404-12-8  | 1-1/16-12            | 1/2                   | ----       |
| 2404-12-12 | 1-1/16-12            | 3/4                   | ----       |
| 2404-12-16 | 1-1/16-12            | 1                     | ----       |
| 2404-16-12 | 1-5/16-12            | 3/4                   | ----       |
| 2404-16-16 | 1-5/16-12            | 1                     | ----       |
| 2404-20-16 | 1-5/8-12             | 1                     | ----       |
| 2404-20-20 | 1-5/8-12             | 1-1/4                 | ----       |
| 2404-20-24 | 1-5/8-12             | 1-1/2                 | ----       |
| 2404-24-16 | 1-7/8-12             | 1                     | ----       |
| 2404-24-20 | 1-7/8-12             | 1-1/4                 | ----       |
| 2404-24-24 | 1-7/8-12             | 1-1/2                 | ----       |
| 2404-32-24 | 2-1/2-12             | 1-1/2                 | ----       |
| 2404-32-32 | 2-1/2-12             | 2                     | ----       |

2404 2021R FTX 1202R C5205 816

### JIC FEMALE CONNECTOR

SAE 070103  
MS 51503



| Part #     | JIC Thread<br>Size 1 | Female Pipe<br>Size 2 | List Price |
|------------|----------------------|-----------------------|------------|
| 2405-2-2   | 5/16-24              | 1/8                   | ----       |
| 2405-4-2   | 7/16-20              | 1/8                   | ----       |
| 2405-4-4   | 7/16-20              | 1/4                   | ----       |
| 2405-6-4   | 9/16-18              | 1/4                   | ----       |
| 2405-6-6   | 9/16-18              | 3/8                   | ----       |
| 2405-6-8   | 9/16-18              | 1/2                   | ----       |
| 2405-8-4   | 3/4-16               | 1/4                   | ----       |
| 2405-8-6   | 3/4-16               | 3/8                   | ----       |
| 2405-8-8   | 3/4-16               | 1/2                   | ----       |
| 2405-10-6  | 7/8-14               | 3/8                   | ----       |
| 2405-10-8  | 7/8-14               | 1/2                   | ----       |
| 2405-12-8  | 1-1/16-12            | 1/2                   | ----       |
| 2405-12-12 | 1-1/16-12            | 3/4                   | ----       |
| 2405-16-12 | 1-5/16-12            | 3/4                   | ----       |
| 2405-16-16 | 1-5/16-12            | 1                     | ----       |
| 2405-20-20 | 1-5/8-12             | 1-1/4                 | ----       |
| 2405-24-24 | 1-7/8-12             | 1-1/2                 | ----       |
| 2405-32-32 | 2-1/2-12             | 2                     | ----       |

2405 2022R GTX 1230R C5255

### JIC REDUCER/ EXPANDER



| Part #     | JIC Thread<br>Size 1 | JIC Thread<br>Size 2 | List Price |
|------------|----------------------|----------------------|------------|
| 2406-6-4   | 9/16-18              | 7/16-20              | ----       |
| 2406-6-8   | 9/16-18              | 3/4-16               | ----       |
| 2406-8-4   | 3/4-16               | 7/16-20              | ----       |
| 2406-8-6   | 3/4-16               | 9/16-18              | ----       |
| 2406-8-12  | 3/4-16               | 1-1/16-12            | ----       |
| 2406-10-4  | 7/8-14               | 7/16-20              | ----       |
| 2406-10-6  | 7/8-14               | 9/16-18              | ----       |
| 2406-10-8  | 7/8-14               | 3/4-16               | ----       |
| 2406-12-4  | 1-1/16-12            | 7/16-20              | ----       |
| 2406-12-6  | 1-1/16-12            | 9/16-18              | ----       |
| 2406-12-8  | 1-1/16-12            | 3/4-16               | ----       |
| 2406-12-10 | 1-1/16-12            | 7/8-14               | ----       |
| 2406-16-4  | 1-5/16-12            | 7/16-20              | ----       |
| 2406-16-12 | 1-5/16-12            | 1-1/16-12            | ----       |
| 2406-16-20 | 1-5/16-12            | 1-5/8-12             | ----       |
| 2406-20-12 | 1-5/8-12             | 1-1/16-12            | ----       |
| 2406-20-16 | 1-5/8-12             | 1-5/16-12            | ----       |
| 2406-24-16 | 1-7/8-12             | 1-5/16-12            | ----       |
| 2406-32-24 | 2-1/2-12             | 1-7/8-12             | ----       |

2406 C5015 2215 TRTX 1246

## STRAIGHTS STEEL JIC FLARE 37°

## HYDRAULIC ADAPTERS

SAE 070109  
MS 51518

## PLUG



| Part #  | Tube O.D. | JIC Thread Size | List Price |
|---------|-----------|-----------------|------------|
| 2408-2  | 1/8       | 5/16-24         | ----       |
| 2408-3  | 3/16      | 3/8-24          | ----       |
| 2408-4  | 1/4       | 7/16-20         | ----       |
| 2408-5  | 5/16      | 1/2-20          | ----       |
| 2408-6  | 3/8       | 9/16-18         | ----       |
| 2408-8  | 1/2       | 3/4-16          | ----       |
| 2408-10 | 5/8       | 7/8-14          | ----       |
| 2408-12 | 3/4       | 1-1/16-12       | ----       |
| 2408-14 | 7/8       | 1-3/16-12       | ----       |
| 2408-16 | 1         | 1-5/16-12       | ----       |
| 2408-20 | 1-1/4     | 1-5/8-12        | ----       |
| 2408-24 | 1-1/2     | 1-7/8-12        | ----       |
| 2408-32 | 2         | 2-1/2-12        | ----       |

2408 430549 PNTX 1254 C5229

SAE 070201  
MS 51505

## JIC UNION ELBOW



| Part #     | JIC Thread Size 1 | JIC Thread Size 2 | List Price |
|------------|-------------------|-------------------|------------|
| 2500-2-2   | 5/16-24           | 5/16-24           | ----       |
| 2500-4-4   | 7/16-20           | 7/16-20           | ----       |
| 2500-5-5   | 1/2-20            | 1/2-20            | ----       |
| 2500-6-6   | 9/16-18           | 9/16-18           | ----       |
| 2500-6-4   | 9/16-18           | 7/16-20           | ----       |
| 2500-8-8   | 3/4-16            | 3/4-16            | ----       |
| 2500-8-6   | 3/4-16            | 9/16-18           | ----       |
| 2500-10-10 | 7/8-14            | 7/8-14            | ----       |
| 2500-12-12 | 1-1/16-12         | 1-1/16-12         | ----       |
| 2500-16-16 | 1-5/16-12         | 1-5/16-12         | ----       |
| 2500-20-20 | 1-5/8-12          | 1-5/8-12          | ----       |
| 2500-24-24 | 1-7/8-12          | 1-7/8-12          | ----       |
| 2500-32-32 | 2-1/2-12          | 2-1/2-12          | ----       |

2500 2039 1234 C5505 821

## STEEL 37° JIC FLARE SHAPES

## JIC MALE ELBOW

SAE 070202  
MS 51504

| Part #     | JIC Thread Size 1 | Male Pipe Size 2 | List Price |
|------------|-------------------|------------------|------------|
| 2501-2-2   | 5/16-24           | 1/8              | ----       |
| 2501-4-2   | 7/16-20           | 1/8              | ----       |
| 2501-4-4   | 7/16-20           | 1/4              | ----       |
| 2501-4-6   | 7/16-20           | 3/8              | ----       |
| 2501-4-8   | 7/16-20           | 1/2              | ----       |
| 2501-6-2   | 9/16-18           | 1/8              | ----       |
| 2501-6-4   | 9/16-18           | 1/4              | ----       |
| 2501-6-6   | 9/16-18           | 3/8              | ----       |
| 2501-6-8   | 9/16-18           | 1/2              | ----       |
| 2501-8-4   | 3/4-16            | 1/4              | ----       |
| 2501-8-6   | 3/4-16            | 3/8              | ----       |
| 2501-8-8   | 3/4-16            | 1/2              | ----       |
| 2501-8-12  | 3/4-16            | 3/4              | ----       |
| 2501-10-6  | 7/8-14            | 3/8              | ----       |
| 2501-10-8  | 7/8-14            | 1/2              | ----       |
| 2501-12-8  | 1-1/16-12         | 1/2              | ----       |
| 2501-12-12 | 1-1/16-12         | 3/4              | ----       |
| 2501-12-16 | 1-1/16-12         | 1                | ----       |
| 2501-16-12 | 1-5/16-12         | 3/4              | ----       |
| 2501-16-16 | 1-5/16-12         | 1                | ----       |
| 2501-16-20 | 1-5/16-12         | 1-1/4            | ----       |
| 2501-20-20 | 1-5/8-12          | 1-1/4            | ----       |
| 2501-24-24 | 1-7/8-12          | 1-1/2            | ----       |
| 2501-32-32 | 2-1/2-12          | 2                | ----       |

1208R C5405 2501 2024R CTX 822

## JIC FEMALE ELBOW

SAE 070203  
MS 51506

| Part #     | JIC Thread Size 1 | Female Pipe Size 2 | List Price |
|------------|-------------------|--------------------|------------|
| 2502-4-2   | 7/16-20           | 1/8                | ----       |
| 2502-4-4   | 7/16-20           | 1/4                | ----       |
| 2502-6-4   | 9/16-18           | 1/4                | ----       |
| 2502-6-6   | 9/16-18           | 3/8                | ----       |
| 2502-6-8   | 9/16-18           | 1/2                | ----       |
| 2502-8-4   | 3/4-16            | 1/4                | ----       |
| 2502-8-6   | 3/4-16            | 3/8                | ----       |
| 2502-8-8   | 3/4-16            | 1/2                | ----       |
| 2502-10-6  | 7/8-14            | 3/8                | ----       |
| 2502-10-8  | 7/8-14            | 1/2                | ----       |
| 2502-12-8  | 1-1/16-12         | 1/2                | ----       |
| 2502-12-12 | 1-1/16-12         | 3/4                | ----       |
| 2502-16-16 | 1-5/16-12         | 1                  | ----       |
| 2502-20-20 | 1-5/8-12          | 1-1/4              | ----       |

2502 2025R DTX 1240R C5455

## HYDRAULIC ADAPTERS

## SHAPES STEEL JIC FLARE 37°

SAE 070302  
MS 51508

### JIC MALE 45° ELBOW



| Part #     | JIC Thread<br>Size 1 | Male Pipe<br>Size 2 | List<br>Price |
|------------|----------------------|---------------------|---------------|
| 2503-2-2   | 5/16-24              | 1/8                 | ----          |
| 2503-4-4   | 7/16-20              | 1/4                 | ----          |
| 2503-6-4   | 9/16-18              | 1/4                 | ----          |
| 2503-6-6   | 9/16-18              | 3/8                 | ----          |
| 2503-6-8   | 9/16-18              | 1/2                 | ----          |
| 2503-8-4   | 3/4-16               | 1/4                 | ----          |
| 2503-8-6   | 3/4-16               | 3/8                 | ----          |
| 2503-8-8   | 3/4-16               | 1/2                 | ----          |
| 2503-10-6  | 7/8-14               | 3/8                 | ----          |
| 2503-10-8  | 7/8-14               | 1/2                 | ----          |
| 2503-12-8  | 1-1/16-12            | 1/2                 | ----          |
| 2503-12-12 | 1-1/16-12            | 3/4                 | ----          |
| 2503-12-16 | 1-1/16-12            | 1                   | ----          |
| 2503-16-16 | 1-5/16-12            | 1                   | ----          |
| 2503-16-20 | 1-5/16-12            | 1-1/4               | ----          |
| 2503-20-16 | 1-5/8-12             | 1                   | ----          |
| 2503-20-20 | 1-5/8-12             | 1-1/4               | ----          |

2503 2023R VTX 1206R C5355 823

### JIC MALE BRANCH TEE



| Part #     | JIC Thread<br>Size 1&2 | Pipe Thread<br>Size 3 | List<br>Price |
|------------|------------------------|-----------------------|---------------|
| 2601-4-4   | 7/16-20                | 1/4                   | ----          |
| 2601-6-4   | 9/16-18                | 1/4                   | ----          |
| 2601-6-6   | 9/16-18                | 3/8                   | ----          |
| 2601-8-8   | 3/4-16                 | 1/2                   | ----          |
| 2601-12-12 | 1-1/16-12              | 3/4                   | ----          |
| 2601-16-16 | 1-5/16-12              | 1                     | ----          |

2601 2030R STX 1221R C5605

SAE 070427  
MS 51513

### JIC FEMALE BRANCH TEE



| Part #     | JIC Thread<br>Size 1 & 2 | Female Pipe<br>Size 3 | List<br>Price |
|------------|--------------------------|-----------------------|---------------|
| 2602-4-4   | 7/16-20                  | 1/4                   | ----          |
| 2602-6-6   | 9/16-18                  | 3/8                   | ----          |
| 2602-8-8   | 3/4-16                   | 1/2                   | ----          |
| 2602-12-12 | 1-1/16-12                | 3/4                   | ----          |
| 2602-16-16 | 1-5/16-12                | 1                     | ----          |
| 2602-20-20 | 1-5/8-12                 | 1-1/4                 | ----          |

2602 2031R OTX 1228R C6566

### JIC UNION TEE

SAE 070401  
MS 51510



| Part #     | JIC Thread<br>Size 1 & 2 | JIC Thread<br>Size 3 | List<br>Price |
|------------|--------------------------|----------------------|---------------|
| 2603-2-2   | 5/16-24                  | 5/16-24              | ----          |
| 2603-3-3   | 3/8-24                   | 3/8-24               | ----          |
| 2603-4-4   | 7/16-20                  | 7/16-20              | ----          |
| 2603-6-6   | 9/16-18                  | 9/16-18              | ----          |
| 2603-8-8   | 3/4-16                   | 3/4-16               | ----          |
| 2603-10-10 | 7/8-14                   | 7/8-14               | ----          |
| 2603-12-12 | 1-1/16-12                | 1-1/16-12            | ----          |
| 2603-16-16 | 1-5/16-12                | 1-5/16-12            | ----          |
| 2603-20-20 | 1-5/8-12                 | 1-5/8-12             | ----          |

2603 2033 JTX 1220 C5705

## STEEL BULKHEAD FITTINGS

## LOCK NUT

SAE 070118  
MS 51860

\* Lock Nut no longer included on fittings

| Part #  | Thread Size | List Price |
|---------|-------------|------------|
| 0306-2  | 5/16-24     | ----       |
| 0306-4  | 7/16-20     | ----       |
| 0306-5  | 1/2-20      | ----       |
| 0306-6  | 9/16-18     | ----       |
| 0306-8  | 3/4-16      | ----       |
| 0306-10 | 7/8-14      | ----       |
| 0306-12 | 1-1/16-12   | ----       |
| 0306-14 | 1-3/16-12   | ----       |
| 0306-16 | 1-5/16-12   | ----       |
| 0306-20 | 1-5/8-12    | ----       |
| 0306-24 | 1-7/8-12    | ----       |
| 0306-32 | 2-1/2-12    | ----       |

1306 894 210212 WLN 1332 C5624

## JIC BULKHEAD UNION

SAE 070601  
MS 51520

| Part #   | JIC Thread<br>Size 1 | JIC Thread<br>Size 2 | List<br>Price |
|----------|----------------------|----------------------|---------------|
| 2700-2-2 | 5/16-24              | 5/16-24              | ----          |
| 2700-4-4 | 7/16-20              | 7/16-20              | ----          |
| 2700-5-5 | 1/2-20               | 1/2-20               | ----          |
| 2700-6-6 | 9/16-18              | 9/16-18              | ----          |
| 2700-8   | 3/4-16               | 3/4-16               | ----          |
| 2700-10  | 7/8-14               | 7/8-14               | ----          |
| 2700-12  | 1-1/16-12            | 1-1/16-12            | ----          |
| 2700-14  | 1-3/16-12            | 1-3/16-12            | ----          |
| 2700-16  | 1-5/16-12            | 1-5/16-12            | ----          |
| 2700-20  | 1-5/8-12             | 1-5/8-12             | ----          |
| 2700-24  | 1-7/8-12             | 1-7/8-12             | ----          |
| 2700-32  | 2-1/2-12             | 2-1/2-12             | ----          |

2700 2041R WTX 1260 C5325

## JIC BULKHEAD UNION ELBOW

SAE 070701  
MS 51507

| Part #  | JIC Thread<br>Size 1 | JIC Bulkhead<br>Thread 2 | List<br>Price |
|---------|----------------------|--------------------------|---------------|
| 2701-4  | 7/16-20              | 7/16-20                  | ----          |
| 2701-5  | 1/2-20               | 1/2-20                   | ----          |
| 2701-6  | 9/16-18              | 9/16-18                  | ----          |
| 2701-8  | 3/4-16               | 3/4-16                   | ----          |
| 2701-10 | 7/8-14               | 7/8-14                   | ----          |
| 2701-12 | 1-1/16-12            | 1-1/16-12                | ----          |
| 2701-16 | 1-5/16-12            | 1-5/16-12                | ----          |
| 2701-20 | 1-5/8-12             | 1-5/8-12                 | ----          |
| 2701-24 | 1-7/8-12             | 1-7/8-12                 | ----          |

2701 2043R WETX 1262 C5525

## HYDRAULIC ADAPTERS

## JIC BULKHEAD UNION 45° ELBOW

SAE 070801  
MS 51509

| Part #  | JIC Thread<br>Size 1 | JIC Thread<br>Size 2 | List<br>Price |
|---------|----------------------|----------------------|---------------|
| 2702-4  | 7/16-20              | 7/16-20              | ----          |
| 2702-6  | 9/16-18              | 9/16-18              | ----          |
| 2702-8  | 3/4-16               | 3/4-16               | ----          |
| 2702-10 | 7/8-14               | 7/8-14               | ----          |
| 2702-12 | 1-1/16-12            | 1-1/16-12            | ----          |
| 2702-16 | 1-5/16-12            | 1-5/16-12            | ----          |
| 2702-20 | 1-5/8-12             | 1-5/8-12             | ----          |

2702 2042 WNTX 1261 C5375

## JIC BULKHEAD BRANCH TEE

SAE 070959  
MS 51515

| Part #  | JIC Thread<br>Size 1&2 | JIC Thread<br>Size 3 | List<br>Price |
|---------|------------------------|----------------------|---------------|
| 2703-4  | 7/16-20                | 7/16-20              | ----          |
| 2703-6  | 9/16-18                | 9/16-18              | ----          |
| 2703-8  | 3/4-16                 | 3/4-16               | ----          |
| 2703-10 | 7/8-14                 | 7/8-14               | ----          |
| 2703-12 | 1-1/16-12              | 1-1/16-12            | ----          |
| 2703-16 | 1-5/16-12              | 1-5/16-12            | ----          |
| 2703-20 | 1-5/8-12               | 1-5/8-12             | ----          |

2703 203002 WJT 1283 C5725

## JIC BULKHEAD RUN TEE

SAE 070958  
MS 51516

| Part #  | JIC Thread<br>Size 1&3 | JIC Thread<br>Size 2 | List Price |
|---------|------------------------|----------------------|------------|
| 2704-4  | 7/16-20                | 7/16-20              | ----       |
| 2704-6  | 9/16-18                | 9/16-18              | ----       |
| 2704-8  | 3/4-16                 | 3/4-16               | ----       |
| 2704-10 | 7/8-14                 | 7/8-14               | ----       |
| 2704-12 | 1-1/16-12              | 1-1/16-12            | ----       |
| 2704-16 | 1-5/16-12              | 1-5/16-12            | ----       |

2704 203008 WJTT 1284 C5726

\* Lock Nuts sold separately

## JIC TO FEMALE PIPE BULKHEAD



| Part #     | JIC Thread<br>Size 1 | Female Pipe<br>Size 2 | List<br>Price |
|------------|----------------------|-----------------------|---------------|
| 2705-4-4   | 7/16-20              | 1/4                   | ----          |
| 2705-6-6   | 9/16-18              | 3/8                   | ----          |
| 2705-8-8   | 3/4-16               | 1/2                   | ----          |
| 2705-12-12 | 1-1/16-12            | 3/4                   | ----          |
| 2705-16-16 | 1-5/16-12            | 1                     | ----          |
| 2705-20-20 | 1-5/8-12             | 1-1/4                 | ----          |

2705 2239 WGTX C5275

## JIC TO MALE PIPE BULKHEAD



| Part #     | JIC Thread<br>Size 1 | Pipe Thread<br>Size 2 | List<br>Price |
|------------|----------------------|-----------------------|---------------|
| 2706-4-4   | 7/16-20              | 1/4                   | ----          |
| 2706-6-6   | 9/16-18              | 3/8                   | ----          |
| 2706-8-8   | 3/4-16               | 1/2                   | ----          |
| 2706-12-12 | 1-1/16-12            | 3/4                   | ----          |
| 2706-16-16 | 1-5/16-12            | 1                     | ----          |
| 2706-20-20 | 1-5/8-12             | 1-1/4                 | ----          |

2706 2240

\* Lock Nuts sold separately - pg. 408

## STEEL PIPE FITTINGS

## PIPE COUPLING

910

SAE 140138



| Part #     | Female Pipe 1 | Female Pipe 2 | List Price |
|------------|---------------|---------------|------------|
| 5000-2     | 1/8           | 1/8           | ----       |
| 5000-4-2   | 1/4           | 1/8           | ----       |
| 5000-4     | 1/4           | 1/4           | ----       |
| 5000-6-4   | 3/8           | 1/4           | ----       |
| 5000-6-6   | 3/8           | 3/8           | ----       |
| 5000-8-4   | 1/2           | 1/4           | ----       |
| 5000-8-6   | 1/2           | 3/8           | ----       |
| 5000-8     | 1/2           | 1/2           | ----       |
| 5000-12-12 | 3/4           | 3/4           | ----       |
| 5000-16-12 | 1             | 3/4           | ----       |
| 5000-16    | 1             | 1             | ----       |
| 5000-20-20 | 1-1/4         | 1-1/4         | ----       |
| 5000-24    | 1-1/2         | 1-1/2         | ----       |
| 5000-32    | 2             | 2             | ----       |

5000 2096 GG 1273 C3309

## HEX PIPE NIPPLES

SAE 140137



| Part #     | Male Pipe 1 | Male Pipe 2 | List Price |
|------------|-------------|-------------|------------|
| 5404-2     | 1/8         | 1/8         | ----       |
| 5404-4-2   | 1/4         | 1/8         | ----       |
| 5404-4     | 1/4         | 1/4         | ----       |
| 5404-6-2   | 3/8         | 1/8         | ----       |
| 5404-6-4   | 3/8         | 1/4         | ----       |
| 5404-6     | 3/8         | 3/8         | ----       |
| 5404-8-4   | 1/2         | 1/4         | ----       |
| 5404-8-6   | 1/2         | 3/8         | ----       |
| 5404-8     | 1/2         | 1/2         | ----       |
| 5404-12-6  | 3/4         | 3/8         | ----       |
| 5404-12-8  | 3/4         | 1/2         | ----       |
| 5404-12    | 3/4         | 3/4         | ----       |
| 5404-16-12 | 1           | 3/4         | ----       |
| 5404-16    | 1           | 1           | ----       |
| 5404-20-16 | 1-1/4       | 1           | ----       |
| 5404-20    | 1-1/4       | 1-1/4       | ----       |
| 5404-24-20 | 1-1/2       | 1-1/4       | ----       |
| 5404-24    | 1-1/2       | 1-1/2       | ----       |
| 5404-32-24 | 2           | 1-1/2       | ----       |
| 5404-32    | 2           | 2           | ----       |

5404 2083 FF 1252 C3069 911

## HYDRAULIC ADAPTERS

## EXPANDING PIPE ADAPTER

SAE 140139



| Part #     | Male Pipe 1 | Female Pipe 2 | List Price |
|------------|-------------|---------------|------------|
| 5405-2-2   | 1/8         | 1/8           | ----       |
| 5405-2-4   | 1/8         | 1/4           | ----       |
| 5405-4-2   | 1/4         | 1/8           | ----       |
| 5405-4-4   | 1/4         | 1/4           | ----       |
| 5405-6-4   | 3/8         | 1/4           | ----       |
| 5405-6-6   | 3/8         | 3/8           | ----       |
| 5405-6-8   | 3/8         | 1/2           | ----       |
| 5405-8-8   | 1/2         | 1/2           | ----       |
| 5405-8-12  | 1/2         | 3/4           | ----       |
| 5405-12-12 | 3/4         | 3/4           | ----       |
| 5405-16-16 | 1           | 1             | ----       |
| 5405-16-20 | 1           | 1-1/4         | ----       |
| 5405-20-20 | 1-1/4       | 1-1/4         | ----       |
| 5405-20-24 | 1-1/4       | 1-1/2         | ----       |
| 5405-24-24 | 1-1/2       | 1-1/2         | ----       |

920 5405 2040 FG-(R) 1274 C3209(R)

## HEX REDUCER BUSHING

SAEF1  
140140

| Part #     | Male Pipe | Female Pipe | List Price |
|------------|-----------|-------------|------------|
| 5406-4-2   | 1/4       | 1/8         | ----       |
| 5406-6-2   | 3/8       | 1/8         | ----       |
| 5406-6-4   | 3/8       | 1/4         | ----       |
| 5406-8-2   | 1/2       | 1/8         | ----       |
| 5406-8-4   | 1/2       | 1/4         | ----       |
| 5406-8-6   | 1/2       | 3/8         | ----       |
| 5406-12-2  | 3/4       | 1/8         | ----       |
| 5406-12-4  | 3/4       | 1/4         | ----       |
| 5406-12-6  | 3/4       | 3/8         | ----       |
| 5406-12-8  | 3/4       | 1/2         | ----       |
| 5406-16-4  | 1         | 1/4         | ----       |
| 5406-16-6  | 1         | 3/8         | ----       |
| 5406-16-8  | 1         | 1/2         | ----       |
| 5406-16-12 | 1         | 3/4         | ----       |
| 5406-24-20 | 1-1/2     | 1-1/4       | ----       |
| 5406-32-20 | 2         | 1-1/4       | ----       |
| 5406-32-24 | 2         | 1-1/2       | ----       |

5406 2081 PTR 1250 C3109 912

## HYDRAULIC ADAPTERS

## STEEL PIPE FITTINGS

### HEX HEAD PLUG

SAE 130109E



| Part #    | Male Pipe | List Price |
|-----------|-----------|------------|
| 5406-P-2  | 1/8       | ----       |
| 5406-P-4  | 1/4       | ----       |
| 5406-P-6  | 3/8       | ----       |
| 5406-P-8  | 1/2       | ----       |
| 5406-P-12 | 3/4       | ----       |
| 5406-P-16 | 1         | ----       |
| 5406-P-20 | 1-1/4     | ----       |
| 5406-P-24 | 1-1/2     | ----       |
| 5406-P-32 | 2         | ----       |

933 5406P 2082 HP 1251 C3159

### HOLLOW HEX PLUG

SAE 130109



| Part #      | Male Pipe | List Price |
|-------------|-----------|------------|
| 5406-HHP-2  | 1/8       | ----       |
| 5406-HHP-4  | 1/4       | ----       |
| 5406-HHP-6  | 3/8       | ----       |
| 5406-HHP-8  | 1/2       | ----       |
| 5406-HHP-12 | 3/4       | ----       |
| 5406-HHP-16 | 1         | ----       |
| 5406-HHP-20 | 1-1/4     | ----       |
| 5406-HHP-24 | 1-1/2     | ----       |

C3169 2222

### FLUSH HOLLOW HEX PLUG W/ 7/8 TAPER



| Part #      | Male Pipe | List Price |
|-------------|-----------|------------|
| 5406-FLP-2  | 1/8       | ----       |
| 5406-FLP-4  | 1/4       | ----       |
| 5406-FLP-6  | 3/8       | ----       |
| 5406-FLP-8  | 1/2       | ----       |
| 5406-FLP-12 | 3/4       | ----       |

### SQUARE HEAD PLUG

SAE 130109A



| Part #      | Male Pipe | List Price |
|-------------|-----------|------------|
| 5406-SHP-2  | 1/8       | ----       |
| 5406-SHP-4  | 1/4       | ----       |
| 5406-SHP-6  | 3/8       | ----       |
| 5406-SHP-8  | 1/2       | ----       |
| 5406-SHP-12 | 3/4       | ----       |
| 5406-SHP-16 | 1         | ----       |
| 5406-SHP-20 | 1-1/4     | ----       |
| 5406-SHP-24 | 1-1/2     | ----       |
| 5406-SHP-32 | 2         | ----       |

C3179

### PIPE CAP



| Part #    | Female Pipe | List Price |
|-----------|-------------|------------|
| 5406-C-2  | 1/8         | ----       |
| 5406-C-4  | 1/4         | ----       |
| 5406-C-6  | 3/8         | ----       |
| 5406-C-8  | 1/2         | ----       |
| 5406-C-12 | 3/4         | ----       |
| 5406-C-16 | 1           | ----       |

HPC

### MALE ELBOW

SAE 140237



| Part #     | Male Pipe 1 | Male Pipe 2 | List Price |
|------------|-------------|-------------|------------|
| 5500-2     | 1/8         | 1/8         | ----       |
| 5500-4     | 1/4         | 1/4         | ----       |
| 5500-6     | 3/8         | 3/8         | ----       |
| 5500-8-4   | 1/2         | 1/4         | ----       |
| 5500-8-6   | 1/2         | 3/8         | ----       |
| 5500-8     | 1/2         | 1/2         | ----       |
| 5500-12-8  | 3/4         | 1/2         | ----       |
| 5500-12-12 | 3/4         | 3/4         | ----       |
| 5500-16    | 1           | 1           | ----       |
| 5500-16-12 | 1           | 3/4         | ----       |
| 5500-20-20 | 1-1/4       | 1-1/4       | ----       |
| 5500-24    | 1-1/2       | 1-1/2       | ----       |

919 5500 2085 CR 1275 C3529

## STEEL PIPE FITTINGS

## 45° MALE ELBOW



| Part #     | Male Pipe 1 | Male Pipe 2 | List Price |
|------------|-------------|-------------|------------|
| 5501-2-2   | 1/8         | 1/8         | ----       |
| 5501-4-4   | 1/4         | 1/4         | ----       |
| 5501-6-6   | 3/8         | 3/8         | ----       |
| 5501-8     | 1/2         | 1/2         | ----       |
| 5501-12-12 | 3/4         | 3/4         | ----       |
| 5501-16-16 | 1           | 1           | ----       |

5501 2247

## 90° STREET ELBOW

SAE 140239



| Part #     | Male Pipe 1 | Female Pipe 2 | List Price |
|------------|-------------|---------------|------------|
| 5502-2     | 1/8         | 1/8           | ----       |
| 5502-4     | 1/4         | 1/4           | ----       |
| 5502-4-6   | 1/4         | 3/8           | ----       |
| 5502-6-2   | 3/8         | 1/8           | ----       |
| 5502-6-4   | 3/8         | 1/4           | ----       |
| 5502-6     | 3/8         | 3/8           | ----       |
| 5502-6-8   | 3/8         | 1/2           | ----       |
| 5502-8-4   | 1/2         | 1/4           | ----       |
| 5502-8-6   | 1/2         | 3/8           | ----       |
| 5502-8-8   | 1/2         | 1/2           | ----       |
| 5502-12-8  | 3/4         | 1/2           | ----       |
| 5502-12    | 3/4         | 3/4           | ----       |
| 5502-16-12 | 1           | 3/4           | ----       |
| 5502-16-16 | 1           | 1             | ----       |
| 5502-20    | 1-1/4       | 1-1/4         | ----       |
| 5502-24    | 1-1/2       | 1-1/2         | ----       |

5502 2089 CD 1234R C3409 914

## HYDRAULIC ADAPTERS

## 45° STREET ELBOW

SAE 140339



| Part #     | Male Pipe 1 | Female Pipe 2 | List Price |
|------------|-------------|---------------|------------|
| 5503-2     | 1/8         | 1/8           | ----       |
| 5503-4     | 1/4         | 1/4           | ----       |
| 5503-6     | 3/8         | 3/8           | ----       |
| 5503-8     | 1/2         | 1/2           | ----       |
| 5503-12-12 | 3/4         | 3/4           | ----       |
| 5503-16    | 1           | 1             | ----       |
| 5503-20    | 1-1/4       | 1-1/4         | ----       |
| 5503-24    | 1-1/2       | 1-1/2         | ----       |

5503 CD45 1244

## FEMALE ELBOW

SAE 140238



| Part #   | Female Pipe 1 | Female Pipe 2 | List Price |
|----------|---------------|---------------|------------|
| 5504-2   | 1/8           | 1/8           | ----       |
| 5504-4-2 | 1/4           | 1/8           | ----       |
| 5504-4   | 1/4           | 1/4           | ----       |
| 5504-6-4 | 3/8           | 1/4           | ----       |
| 5504-6   | 3/8           | 3/8           | ----       |
| 5504-8-6 | 1/2           | 3/8           | ----       |
| 5504-8   | 1/2           | 1/2           | ----       |
| 5504-12  | 3/4           | 3/4           | ----       |
| 5504-16  | 1             | 1             | ----       |
| 5504-20  | 1-1/4         | 1-1/4         | ----       |
| 5504-24  | 1-1/2         | 1-1/2         | ----       |

5504 2087 DD 1245 C3509 916

## 45° FEMALE ELBOW

SAE 140338



| Part #  | Female Pipe 1 | Female Pipe 2 | List Price |
|---------|---------------|---------------|------------|
| 5505-4  | 1/4           | 1/4           | ----       |
| 5505-6  | 3/8           | 3/8           | ----       |
| 5505-8  | 1/2           | 1/2           | ----       |
| 5505-12 | 3/4           | 3/4           | ----       |
| 5505-16 | 1             | 1             | ----       |
| 5505-20 | 1-1/4         | 1-1/4         | ----       |

5505 DD45 1241 C3559

## HYDRAULIC ADAPTERS

## STEEL PIPE FITTINGS

### MALE PIPE TEE

SAE 140437



| Part #   | Male<br>Pipe 1 & 2 | Male<br>Pipe 3 | List Price |
|----------|--------------------|----------------|------------|
| 5600-2-2 | 1/8                | 1/8            | ----       |
| 5600-4-4 | 1/4                | 1/4            | ----       |
| 5600-6-6 | 3/8                | 3/8            | ----       |
| 5600-8-8 | 1/2                | 1/2            | ----       |
| 5600-12  | 3/4                | 3/4            | ----       |
| 5600-16  | 1                  | 1              | ----       |
| 5600-20  | 1-1/4              | 1-1/4          | ----       |
| 5600-24  | 1-1/2              | 1-1/2          | ----       |

5600 2257 RRS

### FEMALE BRANCH PIPE TEE

SAE 140427



| Part #   | Male<br>Pipe 1 & 2 | Female<br>Pipe 3 | List Price |
|----------|--------------------|------------------|------------|
| 5601-2-2 | 1/8                | 1/8              | ----       |
| 5601-4-4 | 1/4                | 1/4              | ----       |
| 5601-6-6 | 3/8                | 3/8              | ----       |
| 5601-8   | 1/2                | 1/2              | ----       |
| 5601-12  | 3/4                | 3/4              | ----       |
| 5601-16  | 1                  | 1                | ----       |
| 5601-20  | 1-1/4              | 1-1/4            | ----       |
| 5601-24  | 1-1/2              | 1-1/2            | ----       |

901 5601 2256

### STREET PIPE TEE

SAE 140424



| Part #   | Male<br>Pipe 1 | Female<br>Pipe 2 & 3 | List Price |
|----------|----------------|----------------------|------------|
| 5602-2-2 | 1/8            | 1/8                  | ----       |
| 5602-4-4 | 1/4            | 1/4                  | ----       |
| 5602-6-6 | 3/8            | 3/8                  | ----       |
| 5602-8-8 | 1/2            | 1/2                  | ----       |
| 5602-12  | 3/4            | 3/4                  | ----       |
| 5602-16  | 1              | 1                    | ----       |
| 5602-20  | 1-1/4          | 1-1/4                | ----       |
| 5602-24  | 1-1/2          | 1-1/2                | ----       |

902 5602 2092 MRO 1276 C3759

### FEMALE RUN PIPE TEE

SAE 1404276



| Part #   | Male<br>Pipe 1 & 3 | Female<br>Pipe 2 | List Price |
|----------|--------------------|------------------|------------|
| 5603-2-2 | 1/8                | 1/8              | ----       |
| 5603-4-4 | 1/4                | 1/4              | ----       |
| 5603-6-6 | 3/8                | 3/8              | ----       |
| 5603-8-8 | 1/2                | 1/2              | ----       |
| 5603-12  | 3/4                | 3/4              | ----       |
| 5603-16  | 1                  | 1                | ----       |
| 5603-20  | 1-1/4              | 1-1/4            | ----       |
| 5603-24  | 1-1/2              | 1-1/2            | ----       |

5603 2093 MMO 1277

### MALE BRANCH PIPE TEE



| Part #   | Female<br>Pipe 1 & 2 | Male<br>Pipe 3 | List Price |
|----------|----------------------|----------------|------------|
| 5604-2-2 | 1/8                  | 1/8            | ----       |
| 5604-4-4 | 1/4                  | 1/4            | ----       |
| 5604-6-6 | 3/8                  | 3/8            | ----       |
| 5604-8-8 | 1/2                  | 1/2            | ----       |
| 5604-12  | 3/4                  | 3/4            | ----       |
| 5604-16  | 1                    | 1              | ----       |
| 5604-20  | 1-1/4                | 1-1/4          | ----       |
| 5604-24  | 1-1/2                | 1-1/2          | ----       |

904 5604 2091 MMS 1278 C3609

### FEMALE PIPE TEE

SAE 140438



| Part #   | Female Pipe | List Price |
|----------|-------------|------------|
| 5605-2-2 | 1/8         | ----       |
| 5605-4-4 | 1/4         | ----       |
| 5605-6-6 | 3/8         | ----       |
| 5605-8   | 1/2         | ----       |
| 5605-12  | 3/4         | ----       |
| 5605-16  | 1           | ----       |
| 5605-20  | 1-1/4       | ----       |
| 5605-24  | 1-1/2       | ----       |

917 5605 2090 1225 C3709

## STEEL O-RING ADAPTERS

## JIC TO O-RING CONNECTOR

SAE 070120  
MS 51525

| Part #     | JIC Thread Size 1 | O-Ring Thread 2 | List Price |
|------------|-------------------|-----------------|------------|
| 6400-2     | 5/16-24           | 5/16-24         | ----       |
| 6400-3     | 3/8-24            | 3/8-24          | ----       |
| 6400-4     | 7/16-20           | 7/16-20         | ----       |
| 6400-4-2   | 7/16-20           | 5/16-24         | ----       |
| 6400-4-3   | 7/16-20           | 3/8-24          | ----       |
| 6400-4-5   | 7/16-20           | 1/2-20          | ----       |
| 6400-4-6   | 7/16-20           | 9/16-18         | ----       |
| 6400-4-8   | 7/16-20           | 3/4-16          | ----       |
| 6400-5     | 1/2-20            | 1/2-20          | ----       |
| 6400-6     | 9/16-18           | 9/16-18         | ----       |
| 6400-6-4   | 9/16-18           | 7/16-20         | ----       |
| 6400-6-5   | 9/16-18           | 1/2-20          | ----       |
| 6400-6-8   | 9/16-18           | 3/4-16          | ----       |
| 6400-6-10  | 9/16-18           | 7/8-14          | ----       |
| 6400-6-12  | 9/16-18           | 1-1/16-12       | ----       |
| 6400-8     | 3/4-16            | 3/4-16          | ----       |
| 6400-8-4   | 3/4-16            | 7/16-20         | ----       |
| 6400-8-6   | 3/4-16            | 9/16-18         | ----       |
| 6400-8-10  | 3/4-16            | 7/8-14          | ----       |
| 6400-8-12  | 3/4-16            | 1-1/16-12       | ----       |
| 6400-10    | 7/8-14            | 7/8-14          | ----       |
| 6400-10-6  | 7/8-14            | 9/16-18         | ----       |
| 6400-10-8  | 7/8-14            | 3/4-16          | ----       |
| 6400-10-12 | 7/8-14            | 1-1/16-12       | ----       |
| 6400-10-16 | 7/8-14            | 1-5/16-12       | ----       |
| 6400-12    | 1-1/16-12         | 1-1/16-12       | ----       |
| 6400-12-6  | 1-1/16-12         | 3/8             | ----       |
| 6400-12-8  | 1-1/16-12         | 3/4-16          | ----       |
| 6400-12-10 | 1-1/16-12         | 7/8-14          | ----       |
| 6400-12-14 | 1-1/16-12         | 1-3/16-12       | ----       |
| 6400-12-16 | 1-1/16-12         | 1-5/16-12       | ----       |
| 6400-14    | 1-3/16-12         | 1-3/16-12       | ----       |
| 6400-16    | 1-5/16-12         | 1-5/16-12       | ----       |
| 6400-16-12 | 1-5/16-12         | 1-1/16-12       | ----       |
| 6400-16-20 | 1-5/16-12         | 1-5/8-12        | ----       |
| 6400-16-24 | 1-5/16-12         | 1-7/8-12        | ----       |
| 6400-20    | 1-5/8-12          | 1-5/8-12        | ----       |
| 6400-20-24 | 1-5/8-12          | 1-7/8-12        | ----       |
| 6400-24    | 1-7/8-12          | 1-7/8-12        | ----       |
| 6400-24-32 | 1-7/8-12          | 2-1/2-12        | ----       |

6400 202702R F50X 1231 C5315

## O-RING HEX NIPPLE UNION



| Part #    | O-Ring Thread 1 | O-Ring Thread 2 | List Price |
|-----------|-----------------|-----------------|------------|
| 6403-O-6  | 9/16-18         | 9/16-18         | ----       |
| 6403-O-8  | 3/4-16          | 3/4-16          | ----       |
| 6403-O-10 | 7/8-14          | 7/8-14          | ----       |
| 6403-O-12 | 1-1/16-12       | 1-1/16-12       | ----       |
| 6403-O-16 | 1-5/16-12       | 1-5/16-12       | ----       |

## HYDRAULIC ADAPTERS

## O-RING TO PIPE ADAPTER



| Part #     | O-Ring Thread 1 | Male Pipe Thread 2 | List Price |
|------------|-----------------|--------------------|------------|
| 6401-4-2   | 7/16-20         | 1/8                | ----       |
| 6401-4-4   | 7/16-20         | 1/4                | ----       |
| 6401-6-4   | 9/16-18         | 1/4                | ----       |
| 6401-6-6   | 9/16-18         | 3/8                | ----       |
| 6401-6-8   | 9/16-18         | 1/2                | ----       |
| 6401-8-6   | 3/4-16          | 3/8                | ----       |
| 6401-8-8   | 3/4-16          | 1/2                | ----       |
| 6401-10-6  | 7/8-14          | 3/8                | ----       |
| 6401-10-8  | 7/8-14          | 1/2                | ----       |
| 6401-12-8  | 1-1/16-12       | 1/2                | ----       |
| 6401-12-12 | 1-1/16-12       | 3/4                | ----       |
| 6401-16-16 | 1-5/16-12       | 1                  | ----       |
| 6401-20-20 | 1-5/8-12        | 1-1/4              | ----       |

6401 F5X 1264R C3249

## O-RING TO 37° JIC - SWIVEL ADAPTER



| Part #       | O-Ring Thread 1 | JIC Thread Size 2 | List Price |
|--------------|-----------------|-------------------|------------|
| 6402-O-4-4   | 7/16-20         | 7/16-20           | ----       |
| 6402-O-6-6   | 9/16-18         | 9/16-18           | ----       |
| 6402-O-8-8   | 3/4-16          | 3/4-16            | ----       |
| 6402-O-10-10 | 7/8-14          | 7/8-14            | ----       |
| 6402-O-12-12 | 1-1/16-12       | 1-1/16-12         | ----       |
| 6402-O-16-16 | 1-5/16-12       | 1-5/16-12         | ----       |
| 6402-O-20-20 | 1-5/8-12        | 1-5/8-12          | ----       |
| 6402-O-24-24 | 1-7/8-12        | 1-7/8-12          | ----       |

6402 2266 F65X 1213 9316

## FEMALE O-RING TO MALE PIPE ADAPTER



| Part #     | O-Ring Thread 1 | Male Pipe Thread 2 | List Price |
|------------|-----------------|--------------------|------------|
| 6404-4-2   | 7/16-20         | 1/8                | ----       |
| 6404-4-4   | 7/16-20         | 1/4                | ----       |
| 6404-6-4   | 9/16-18         | 1/4                | ----       |
| 6404-6-6   | 9/16-18         | 3/8                | ----       |
| 6404-6-8   | 9/16-18         | 1/2                | ----       |
| 6404-8-8   | 3/4-16          | 1/2                | ----       |
| 6404-10-8  | 7/8-14          | 1/2                | ----       |
| 6404-12-12 | 1-1/16-12       | 3/4                | ----       |
| 6404-16-16 | 1-5/16-12       | 1                  | ----       |
| 6404-20-20 | 1-5/8-12        | 1-1/4              | ----       |

6404 2246R 1267R C3239 FHG5

## HYDRAULIC ADAPTERS

### O-RING TO FEMALE PIPE ADAPTER



| Part #       | O-Ring Thread 1 | Female Pipe Thread 2 | List Price |
|--------------|-----------------|----------------------|------------|
| 6405-O-4-2   | 7/16-20         | 1/8                  | ----       |
| 6405-O-4-4   | 7/16-20         | 1/4                  | ----       |
| 6405-O-6-4   | 9/16-18         | 1/4                  | ----       |
| 6405-O-6-6   | 9/16-18         | 3/8                  | ----       |
| 6405-O-8-4   | 3/4-16          | 1/4                  | ----       |
| 6405-O-8-6   | 3/4-16          | 3/8                  | ----       |
| 6405-O-8-8   | 3/4-16          | 1/2                  | ----       |
| 6405-O-10-6  | 7/8-14          | 3/8                  | ----       |
| 6405-O-10-8  | 7/8-14          | 1/2                  | ----       |
| 6405-O-12-6  | 1-1/16-12       | 3/8                  | ----       |
| 6405-O-12-8  | 1-1/16-12       | 1/2                  | ----       |
| 6405-O-12-12 | 1-1/16-12       | 3/4                  | ----       |
| 6405-O-16-8  | 1-5/16-12       | 1/2                  | ----       |
| 6405-O-16-12 | 1-5/16-12       | 3/4                  | ----       |
| 6405-O-16-16 | 1-5/16-12       | 1                    | ----       |
| 6405-O-20-20 | 1-5/8-12        | 1-1/4                | ----       |
| 6405-O-24-24 | 1-7/8-12        | 1-1/2                | ----       |
| 6405-O-32-32 | 2-1/2-12        | 2                    | ----       |

6405 2216R F50G 1268R C3269

### O-RING HEX HEAD PLUG

SAE 090109A



\* Not all sizes are solid

| Part #    | O-Ring Thread | List Price |
|-----------|---------------|------------|
| 6408-O-2  | 5/16-24       | ----       |
| 6408-O-4  | 7/16-20       | ----       |
| 6408-O-5  | 1/2-20        | ----       |
| 6408-O-6  | 9/16-18       | ----       |
| 6408-O-8  | 3/4-16        | ----       |
| 6408-O-10 | 7/8-14        | ----       |
| 6408-O-12 | 1-1/16-12     | ----       |
| 6408-O-14 | 1-3/16-20     | ----       |
| 6408-O-16 | 1-5/16-12     | ----       |
| 6408-O-20 | 1-5/8-12      | ----       |
| 6408-O-24 | 1-7/8-12      | ----       |
| 6408-O-32 | 2-1/2-12      | ----       |

6408 900598 P50N 1265 7237

## STEEL O-RING ADAPTERS

### O-RING HOLLOW - HEX HEAD PLUG

SAE 090109B



| Part #      | O-Ring Thread | List Price |
|-------------|---------------|------------|
| 6408-H-O-2  | 5/16-24       | ----       |
| 6408-H-O-4  | 7/16-20       | ----       |
| 6408-H-O-5  | 1/2-20        | ----       |
| 6408-H-O-6  | 9/16-18       | ----       |
| 6408-H-O-8  | 3/4-16        | ----       |
| 6408-H-O-10 | 7/8-14        | ----       |
| 6408-H-O-12 | 1-1/16-12     | ----       |
| 6408-H-O-14 | 1-3/16-20     | ----       |
| 6408-H-O-16 | 1-5/16-12     | ----       |
| 6408-H-O-20 | 1-5/8-12      | ----       |
| 6408-H-O-24 | 1-7/8-12      | ----       |
| 6408-H-O-32 | 2-1/2-12      | ----       |

6408HHP FF2138 HP50N 1256 7238 6409

### O-RING PORT REDUCER/EXPANDER



| Part #       | O-Ring Thread 1 | O-Ring Thread 2 | List Price |
|--------------|-----------------|-----------------|------------|
| 6410-O-4-4   | 7/16-20         | 7/16-20         | ----       |
| 6410-O-8-4   | 3/4-16          | 7/16-20         | ----       |
| 6410-O-8-6   | 3/4-16          | 9/16-18         | ----       |
| 6410-O-8-8   | 3/4-16          | 3/4-16          | ----       |
| 6410-O-12-6  | 1-1/16-12       | 9/16-18         | ----       |
| 6410-O-12-8  | 1-1/16-12       | 3/4-16          | ----       |
| 6410-O-12-12 | 1-1/16-12       | 1-1/16-12       | ----       |
| 6410-O-16-12 | 1-5/16-12       | 1-1/16-12       | ----       |
| 6410-O-24-16 | 1-7/8-12        | 1-5/16-12       | ----       |

6410 FF1010 F50G5 1270 7033

## FEMALE SWIVELS JIC

## JIC SWIVEL NUT ELBOW

SAE 070221  
MS 51521

| Part #    | JIC Thread<br>Size 1 | JIC Thread<br>Size 2 | List<br>Price |
|-----------|----------------------|----------------------|---------------|
| 6500-4    | 7/16-20              | 7/16-20              | ----          |
| 6500-5    | 1/2-20               | 1/2-20               | ----          |
| 6500-6    | 9/16-18              | 9/16-18              | ----          |
| 6500-8    | 3/4-16               | 3/4-16               | ----          |
| 6500-10   | 7/8-14               | 7/8-14               | ----          |
| 6500-10-8 | 7/8-14               | 3/4-16               | ----          |
| 6500-12   | 1-1/16-12            | 1-1/16-12            | ----          |
| 6500-12-8 | 1-1/16-12            | 3/4-16               | ----          |
| 6500-14   | 1-3/16-12            | 1-3/16-12            | ----          |
| 6500-16   | 1-5/16-12            | 1-5/16-12            | ----          |
| 6500-20   | 1-5/8-12             | 1-5/8-12             | ----          |
| 6500-24   | 1-7/8-12             | 1-7/8-12             | ----          |

6500 2071R C6X 1236 G5506

## JIC SWIVEL TO MALE PIPE ELBOW



| Part #     | JIC Thread<br>Size 1 | Male Pipe<br>Thread 2 | List<br>Price |
|------------|----------------------|-----------------------|---------------|
| 6501-4-2   | 7/16-20              | 1/8                   | ----          |
| 6501-4-4   | 7/16-20              | 1/4                   | ----          |
| 6501-6-4   | 9/16-18              | 1/4                   | ----          |
| 6501-6-6   | 9/16-18              | 3/8                   | ----          |
| 6501-8-8   | 3/4-16               | 1/2                   | ----          |
| 6501-10-8  | 7/8-14               | 1/2                   | ----          |
| 6501-12-12 | 1-1/16-12            | 3/4                   | ----          |
| 6501-16-16 | 1-5/16-12            | 1                     | ----          |
| 6501-20-20 | 1-5/8-12             | 1-1/4                 | ----          |
| 6501-24-24 | 1-7/8-12             | 1-1/2                 | ----          |

6501 2250 1247R TF5406

## JIC SWIVEL 45° ELBOW

SAE 070321  
MS 51522

| Part #  | JIC Thread<br>Size 1 | JIC Thread<br>Size 2 | List<br>Price |
|---------|----------------------|----------------------|---------------|
| 6502-4  | 7/16-20              | 7/16-20              | ----          |
| 6502-6  | 9/16-18              | 9/16-18              | ----          |
| 6502-8  | 3/4-16               | 3/4-16               | ----          |
| 6502-10 | 7/8-14               | 7/8-14               | ----          |
| 6502-12 | 1-1/16-12            | 1-1/16-12            | ----          |
| 6502-16 | 1-5/16-12            | 1-5/16-12            | ----          |
| 6502-20 | 1-5/8-12             | 1-5/8-12             | ----          |
| 6502-24 | 1-7/8-12             | 1-7/8-12             | ----          |

6502 2070R V6X 1237 C5356

## HYDRAULIC ADAPTERS

## JIC SWIVEL TO FEMALE - PIPE ELBOW



| Part #     | JIC Thread<br>Size 1 | Female Pipe<br>Thread 2 | List<br>Price |
|------------|----------------------|-------------------------|---------------|
| 6503-4-4   | 7/16-20              | 1/4                     | ----          |
| 6503-6-6   | 9/16-18              | 3/8                     | ----          |
| 6503-8-8   | 3/4-16               | 1/2                     | ----          |
| 6503-12-12 | 1-1/16-12            | 3/4                     | ----          |

## JIC SWIVEL CONNECTOR



| Part #     | JIC Thread<br>Size 1 | JIC Thread<br>Size 2 | List<br>Price |
|------------|----------------------|----------------------|---------------|
| 6504-4-4   | 7/16-20              | 7/16-20              | ----          |
| 6504-6-4   | 9/16-18              | 7/16-20              | ----          |
| 6504-6-6   | 9/16-18              | 9/16-18              | ----          |
| 6504-8-8   | 3/4-16               | 3/4-16               | ----          |
| 6504-10-10 | 7/8-14               | 7/8-14               | ----          |
| 6504-12-12 | 1-1/16-12            | 1-1/16-12            | ----          |
| 6504-16-16 | 1-5/16-12            | 1-5/16-12            | ----          |
| 6504-20-20 | 1-5/8-12             | 1-5/8-12             | ----          |
| 6504-24-24 | 1-7/8-12             | 1-7/8-12             | ----          |

6504 1205

## JIC SWIVEL TO MALE - PIPE ADAPTER



| Part #     | JIC Thread<br>Size 1 | Male Pipe<br>Thread 2 | List<br>Price |
|------------|----------------------|-----------------------|---------------|
| 6505-4-2   | 7/16-20              | 1/8                   | ----          |
| 6505-4-4   | 7/16-20              | 1/4                   | ----          |
| 6505-4-6   | 7/16-20              | 3/8                   | ----          |
| 6505-6-4   | 9/16-18              | 1/4                   | ----          |
| 6505-6-6   | 9/16-18              | 3/8                   | ----          |
| 6505-8-6   | 3/4-16               | 3/8                   | ----          |
| 6505-8-8   | 3/4-16               | 1/2                   | ----          |
| 6505-10-8  | 7/8-14               | 1/2                   | ----          |
| 6505-12-8  | 1-1/16-12            | 1/2                   | ----          |
| 6505-12-12 | 1-1/16-12            | 3/4                   | ----          |
| 6505-16-16 | 1-5/16-12            | 1                     | ----          |
| 6505-20-20 | 1-5/8-12             | 1-1/4                 | ----          |
| 6505-24-24 | 1-7/8-12             | 1-1/2                 | ----          |

6505 2018 F6X 1211 9100R

## HYDRAULIC ADAPTERS

### JIC SWIVEL TO FEMALE PIPE ADAPTER



| Part #     | JIC Thread<br>Size 1 | Female Pipe<br>Thread 2 | List<br>Price |
|------------|----------------------|-------------------------|---------------|
| 6506-4-2   | 7/16-20              | 1/8                     | ----          |
| 6506-4-4   | 7/16-20              | 1/4                     | ----          |
| 6506-4-6   | 7/16-20              | 3/8                     | ----          |
| 6506-6-4   | 9/16-18              | 1/4                     | ----          |
| 6506-6-6   | 9/16-18              | 3/8                     | ----          |
| 6506-6-8   | 9/16-18              | 1/2                     | ----          |
| 6506-8-6   | 3/4-16               | 3/8                     | ----          |
| 6506-8-8   | 3/4-16               | 1/2                     | ----          |
| 6506-10-6  | 7/8-14               | 3/8                     | ----          |
| 6506-10-8  | 7/8-14               | 1/2                     | ----          |
| 6506-12-12 | 1-1/16-12            | 3/4                     | ----          |
| 6506-16-16 | 1-5/16-12            | 1                       | ----          |
| 6506-20-20 | 1-5/8-12             | 1-1/4                   | ----          |
| 6506-24-24 | 1-7/8-12             | 1-1/2                   | ----          |

6506 2242 1215

### JIC SWIVEL BRANCH TEE

SAE 070433  
MS 51524



| Part #   | JIC Thread<br>Size 1 & 2 | JIC Female<br>Thread 3 | List<br>Price |
|----------|--------------------------|------------------------|---------------|
| 6600-4-4 | 7/16-20                  | 7/16-20                | ----          |
| 6600-5-5 | 1/2-20                   | 1/2-20                 | ----          |
| 6600-6-6 | 9/16-18                  | 9/16-18                | ----          |
| 6600-8-8 | 3/4-16                   | 3/4-16                 | ----          |
| 6600-10  | 7/8-14                   | 7/8-14                 | ----          |
| 6600-12  | 1-1/16-12                | 1-1/16-12              | ----          |
| 6600-16  | 1-5/16-12                | 1-5/16-12              | ----          |
| 6600-20  | 1-5/8-12                 | 1-5/8-12               | ----          |
| 6600-24  | 1-7/8-12                 | 1-7/8-12               | ----          |

6600 203101R 65X 1227 C5707

## FEMALE SWIVELS

### JIC SWIVEL RUN TEE

SAE 070432  
MS 51523



| Part #  | JIC Thread<br>Size 1 & 3 | JIC Female<br>Thread 2 | List<br>Price |
|---------|--------------------------|------------------------|---------------|
| 6602-4  | 7/16-20                  | 7/16-20                | ----          |
| 6602-5  | 1/2-20                   | 1/2-20                 | ----          |
| 6602-6  | 9/16-18                  | 9/16-18                | ----          |
| 6602-8  | 3/4-16                   | 3/4-16                 | ----          |
| 6602-10 | 7/8-14                   | 7/8-14                 | ----          |
| 6602-12 | 1-1/16-12                | 1-1/16-12              | ----          |
| 6602-14 | 1-3/16-12                | 1-3/16-12              | ----          |
| 6602-16 | 1-5/16-12                | 1-5/16-12              | ----          |
| 6602-20 | 1-5/8-12                 | 1-5/8-12               | ----          |
| 6602-24 | 1-7/8-12                 | 1-7/8-12               | ----          |

6602 203102R R6X 1248 C5706

NWO = Nut, Washer & O-Ring

## STEEL SAE O-RING ADAPTERS

## JIC TO O-RING ELBOW CONNECTOR

SAE 070220  
MS 51527

| Part #         | JIC Thread<br>Size 1 | O-Ring Thread<br>Size 2 | List<br>Price |
|----------------|----------------------|-------------------------|---------------|
| 6801-NWO-4     | 7/16-20              | 7/16-20                 | ----          |
| 6801-NWO-4-6   | 7/16-20              | 9/16-18                 | ----          |
| 6801-NWO-4-8   | 7/16-20              | 3/4-16                  | ----          |
| 6801-NWO-5     | 1/2-20               | 1/2-20                  | ----          |
| 6801-NWO-6     | 9/16-18              | 9/16-18                 | ----          |
| 6801-NWO-6-4   | 9/16-18              | 7/16-20                 | ----          |
| 6801-NWO-6-5   | 9/16-18              | 1/2-20                  | ----          |
| 6801-NWO-6-8   | 9/16-18              | 3/4-16                  | ----          |
| 6801-NWO-6-10  | 9/16-18              | 7/8-14                  | ----          |
| 6801-NWO-8     | 3/4-16               | 3/4-16                  | ----          |
| 6801-NWO-8-6   | 3/4-16               | 9/16-18                 | ----          |
| 6801-NWO-8-10  | 3/4-16               | 7/8-14                  | ----          |
| 6801-NWO-8-12  | 3/4-16               | 1-1/16-12               | ----          |
| 6801-NWO-10    | 7/8-14               | 7/8-14                  | ----          |
| 6801-NWO-10-8  | 7/8-14               | 3/4-16                  | ----          |
| 6801-NWO-10-12 | 7/8-14               | 1-1/16-12               | ----          |
| 6801-NWO-12    | 1-1/16-12            | 1-1/16-12               | ----          |
| 6801-NWO-12-10 | 1-1/16-12            | 7/8-14                  | ----          |
| 6801-NWO-12-16 | 1-1/16-12            | 1-5/16-12               | ----          |
| 6801-NWO-16    | 1-5/16-12            | 1-5/16-12               | ----          |
| 6801-NWO-16-12 | 1-5/16-12            | 1-1/16-12               | ----          |
| 6801-NWO-16-14 | 1-5/16-12            | 1-3/16-12               | ----          |
| 6801-NWO-16-20 | 1-5/16-12            | 1-5/8-12                | ----          |
| 6801-NWO-20    | 1-5/8-12             | 1-5/8-12                | ----          |
| 6801-NWO-20-16 | 1-5/8-12             | 1-5/16-12               | ----          |
| 6801-NWO-24    | 1-7/8-12             | 1-7/8-12                | ----          |

6801 2062R C50X 1238L C5515

## JIC TO O-RING 45° ELBOW

SAE 070320  
MS 51528

| Part #        | JIC<br>Thread Size 1 | O-Ring<br>Thread Size 2 | List<br>Price |
|---------------|----------------------|-------------------------|---------------|
| 6802-NWO-2    | 5/16-24              | 5/16-24                 | ----          |
| 6802-NWO-4    | 7/16-20              | 7/16-20                 | ----          |
| 6802-NWO-6    | 9/16-18              | 9/16-18                 | ----          |
| 6802-NWO-8    | 3/4-16               | 3/4-16                  | ----          |
| 6802-NWO-8-6  | 3/4-16               | 9/16-18                 | ----          |
| 6802-NWO-8-10 | 3/4-16               | 7/8-14                  | ----          |
| 6802-NWO-10   | 7/8-14               | 7/8-14                  | ----          |
| 6802-NWO-10-8 | 7/8-14               | 3/4-16                  | ----          |
| 6802-NWO-12   | 1-1/16-12            | 1-1/16-12               | ----          |
| 6802-NWO-16   | 1-5/16-12            | 1-5/16-12               | ----          |
| 6802-NWO-20   | 1-5/8-12             | 1-5/8-12                | ----          |
| 6802-NWO-24   | 1-7/8-12             | 1-7/8-12                | ----          |

6802 2061 V50X 1240R C5365

## HYDRAULIC ADAPTERS

## JIC TO O-RING - BRANCH TEE

SAE 070429  
MS 51529

| Part #      | JIC Thread<br>Size 1 & 2 | O-Ring<br>Thread Size 3 | List<br>Price |
|-------------|--------------------------|-------------------------|---------------|
| 6803-NWO-4  | 7/16-20                  | 7/16-20                 | ----          |
| 6803-NWO-6  | 9/16-18                  | 9/16-18                 | ----          |
| 6803-NWO-8  | 3/4-16                   | 3/4-16                  | ----          |
| 6803-NWO-10 | 7/8-14                   | 7/8-14                  | ----          |
| 6803-NWO-12 | 1-1/16-12                | 1-1/16-12               | ----          |
| 6803-NWO-16 | 1-5/16-12                | 1-5/16-12               | ----          |
| 6803-NWO-20 | 1-5/8-12                 | 1-5/8-12                | ----          |
| 6803-NWO-24 | 1-7/8-12                 | 1-7/8-12                | ----          |

6803 203003X S50X 1265R C5715

## JIC TO O-RING RUN TEE

SAE 070428  
MS 51530

| Part #      | JIC Thread<br>Size 1 & 3 | O-Ring<br>Thread Size 2 | List<br>Price |
|-------------|--------------------------|-------------------------|---------------|
| 6804-NWO-4  | 7/16-20                  | 7/16-20                 | ----          |
| 6804-NWO-6  | 9/16-18                  | 9/16-18                 | ----          |
| 6804-NWO-8  | 3/4-16                   | 3/4-16                  | ----          |
| 6804-NWO-10 | 7/8-14                   | 7/8-14                  | ----          |
| 6804-NWO-12 | 1-1/16-12                | 1-1/16-12               | ----          |
| 6804-NWO-16 | 1-5/16-12                | 1-5/16-12               | ----          |
| 6804-NWO-20 | 1-5/8-12                 | 1-5/8-12                | ----          |
| 6804-NWO-24 | 1-7/8-12                 | 1-7/8-12                | ----          |

6804 203005R R50X 1266R C5716

## O-RING TO - FEMALE PIPE ELBOW



| Part #         | O-Ring<br>Thread Size 1 | Pipe Thread<br>Size 2 | List<br>Price |
|----------------|-------------------------|-----------------------|---------------|
| 6805-NWO-4-4   | 7/16-20                 | 1/4                   | ----          |
| 6805-NWO-6-6   | 9/16-18                 | 3/8                   | ----          |
| 6805-NWO-8-6   | 3/4-16                  | 3/8                   | ----          |
| 6805-NWO-8-8   | 3/4-16                  | 1/2                   | ----          |
| 6805-NWO-10-8  | 7/8-14                  | 1/2                   | ----          |
| 6805-NWO-12-8  | 1-1/16-12               | 1/2                   | ----          |
| 6805-NWO-12-12 | 1-1/16-12               | 3/4                   | ----          |
| 6805-NWO-16-16 | 1-5/16-12               | 1                     | ----          |
| 6805-NWO-20-20 | 1-5/8-12                | 1-1/4                 | ----          |
| 6805-NWO-24-24 | 1-7/8-12                | 1-1/2                 | ----          |

6805 206801R AE0G 1264 C3459

## HYDRAULIC ADAPTERS

## STEEL O-RING

### O-RING TO MALE PIPE ELBOW



| Part #         | O-Ring<br>Thread Size 1 | Pipe Thread<br>Size 2 | List<br>Price |
|----------------|-------------------------|-----------------------|---------------|
| 6806-NWO-4-4   | 7/16-20                 | 1/4                   | ----          |
| 6806-NWO-6-6   | 9/16-18                 | 3/8                   | ----          |
| 6806-NWO-8-8   | 3/4-16                  | 1/2                   | ----          |
| 6806-NWO-12-12 | 1-1/16-12               | 3/4                   | ----          |
| 6806-NWO-16-16 | 1-5/16-12               | 1                     | ----          |
| 6806-NWO-20-20 | 1-5/8-12                | 1-1/4                 | ----          |
| 6806-NWO-24-24 | 1-7/8-12                | 1-1/2                 | ----          |

6806 1263 TF3569

### O-RING TO 37° JIC SWIVEL NUT TO O-RING ELBOW



| Part #         | O-Ring<br>Thread<br>Size 1 | JIC<br>Thread<br>Size 2 | List<br>Price |
|----------------|----------------------------|-------------------------|---------------|
| 6809-NWO-4-4   | 7/16-20                    | 7/16-20                 | ----          |
| 6809-NWO-6-6   | 9/16-18                    | 9/16-18                 | ----          |
| 6809-NWO-8-8   | 3/4-16                     | 3/4-16                  | ----          |
| 6809-NWO-12-12 | 1-1/16-12                  | 1-1/16-12               | ----          |
| 6809-NWO-16-16 | 1-5/16-12                  | 1-5/16-12               | ----          |
| 6809-NWO-20-20 | 1-5/8-12                   | 1-5/8-12                | ----          |
| 6809-NWO-24-24 | 1-7/8-12                   | 1-7/8-12                | ----          |

### FEMALE O-RING TO MALE O-RING ELBOW



| Part #         | O-Ring<br>Thread<br>Size 1 | O-Ring<br>Thread<br>Size 2 | List<br>Price |
|----------------|----------------------------|----------------------------|---------------|
| 6815-NWO-4-4   | 7/16-20                    | 7/16-20                    | ----          |
| 6815-NWO-6-6   | 9/16-18                    | 9/16-18                    | ----          |
| 6815-NWO-6-8   | 9/16-18                    | 3/4-16                     | ----          |
| 6815-NWO-8-8   | 3/4-16                     | 3/4-16                     | ----          |
| 6815-NWO-10-10 | 7/8-14                     | 7/8-14                     | ----          |
| 6815-NWO-12-12 | 1-1/16-12                  | 1-1/16-12                  | ----          |

### MALE O-RING SWIVEL ADAPTER

SAE 140157



| Part #       | O-Ring<br>Thread<br>Size 1 | Female<br>NPSM<br>Size 2 | List<br>Price |
|--------------|----------------------------|--------------------------|---------------|
| 6900-O-4-2   | 7/16-20                    | 1/8                      | ----          |
| 6900-O-4-4   | 7/16-20                    | 1/4                      | ----          |
| 6900-O-6-4   | 9/16-18                    | 1/4                      | ----          |
| 6900-O-6-6   | 9/16-18                    | 3/8                      | ----          |
| 6900-O-6-8   | 9/16-18                    | 1/2                      | ----          |
| 6900-O-8-6   | 3/4-16                     | 3/8                      | ----          |
| 6900-O-8-8   | 3/4-16                     | 1/2                      | ----          |
| 6900-O-8-12  | 3/4-16                     | 3/4                      | ----          |
| 6900-O-10-8  | 7/8-14                     | 1/2                      | ----          |
| 6900-O-10-12 | 7/8-14                     | 3/4                      | ----          |
| 6900-O-12-8  | 1-1/16-12                  | 1/2                      | ----          |
| 6900-O-12-12 | 1-1/16-12                  | 3/4                      | ----          |
| 6900-O-16-16 | 1-5/16-12                  | 1                        | ----          |
| 6900-O-20-20 | 1-5/8-12                   | 1-1/4                    | ----          |
| 6900-O-24-20 | 1-7/8-12                   | 1-1/4                    | ----          |
| 6900-O-24-24 | 1-7/8-12                   | 1-1/2                    | ----          |

6900 2066R 1235 9315

### 90° O-RING SWIVEL ADAPTER

SAE 140257



| Part #         | O-Ring<br>Thread<br>Size 1 | Female<br>NPSM<br>Size 2 | List<br>Price |
|----------------|----------------------------|--------------------------|---------------|
| 6901-NWO-4-4   | 7/16-20                    | 1/4                      | ----          |
| 6901-NWO-6-4   | 9/16-18                    | 1/4                      | ----          |
| 6901-NWO-6-6   | 9/16-18                    | 3/8                      | ----          |
| 6901-NWO-6-8   | 9/16-18                    | 1/2                      | ----          |
| 6901-NWO-8-4   | 3/4-16                     | 1/4                      | ----          |
| 6901-NWO-8-6   | 3/4-16                     | 3/8                      | ----          |
| 6901-NWO-8-8   | 3/4-16                     | 1/2                      | ----          |
| 6901-NWO-8-12  | 3/4-16                     | 3/4                      | ----          |
| 6901-NWO-10-6  | 7/8-14                     | 3/8                      | ----          |
| 6901-NWO-10-8  | 7/8-14                     | 1/2                      | ----          |
| 6901-NWO-12-6  | 1-1/16-12                  | 3/8                      | ----          |
| 6901-NWO-12-8  | 1-1/16-12                  | 1/2                      | ----          |
| 6901-NWO-12-12 | 1-1/16-12                  | 3/4                      | ----          |
| 6901-NWO-16-12 | 1-5/16-12                  | 3/4                      | ----          |
| 6901-NWO-16-16 | 1-5/16-12                  | 1                        | ----          |
| 6901-NWO-20-20 | 1-5/8-12                   | 1-1/4                    | ----          |
| 6901-NWO-24-24 | 1-7/8-12                   | 1-1/2                    | ----          |

6401 2068R 1271 9515

## STEEL SAE O-RING

## 45° O-RING SWIVEL ADAPTER

SAE 140357



| Part #         | O-Ring Thread Size 1 | Female NPSM Size 2 | List Price |
|----------------|----------------------|--------------------|------------|
| 6902-NWO-4-4   | 7/16-20              | 1/4                | ----       |
| 6902-NWO-6-4   | 9/16-18              | 1/4                | ----       |
| 6902-NWO-6-6   | 9/16-18              | 3/8                | ----       |
| 6902-NWO-8-6   | 3/4-16               | 3/8                | ----       |
| 6902-NWO-8-8   | 3/4-16               | 1/2                | ----       |
| 6902-NWO-10-8  | 7/8-14               | 1/2                | ----       |
| 6902-NWO-12-8  | 1-1/16-12            | 1/2                | ----       |
| 6902-NWO-12-12 | 1-1/16-12            | 3/4                | ----       |
| 6902-NWO-16-16 | 1-5/16-12            | 1                  | ----       |
| 6902-NWO-20-20 | 1-5/8-12             | 1-1/4              | ----       |

6902 2067R 1272 9365

## HYDRAULIC ADAPTERS

## NITRILE 90 SAE BOSS O-RING



| Part #   | O-Ring Thread | List Price |
|----------|---------------|------------|
| 4000-2-2 | 5/16-24       | ----       |
| 4000-3-3 | 3/8-24        | ----       |
| 4000-4-4 | 7/16-20       | ----       |
| 4000-5-5 | 1/2-20        | ----       |
| 4000-6-6 | 9/16-18       | ----       |
| 4000-8-8 | 3/4-16        | ----       |
| 4000-10  | 7/8-14        | ----       |
| 4000-12  | 1-1/16-12     | ----       |
| 4000-14  | 1-3/16-12     | ----       |
| 4000-16  | 1-5/16-12     | ----       |
| 4000-20  | 1-5/8-12      | ----       |
| 4000-24  | 1-7/8-12      | ----       |
| 4000-32  | 2-1/2-12      | ----       |

## O-RINGS

## VITON 75 SAE BOSS O-RING

Fluorocarbon



| Part #   | O-Ring Thread | List Price |
|----------|---------------|------------|
| 4001-2-2 | 5/16-24       | ----       |
| 4001-3-3 | 3/8-24        | ----       |
| 4001-4-4 | 7/16-20       | ----       |
| 4001-5-5 | 1/2-20        | ----       |
| 4001-6-6 | 9/16-18       | ----       |
| 4001-8-8 | 3/4-16        | ----       |
| 4001-10  | 7/8-14        | ----       |
| 4001-12  | 1-1/16-12     | ----       |
| 4001-16  | 1-5/16-12     | ----       |
| 4001-20  | 1-5/8-12      | ----       |
| 4001-24  | 1-7/8-12      | ----       |
| 4001-32  | 2-1/2-12      | ----       |

## HYDRAULIC ADAPTERS

## O-RING FACE SEAL ADAPTERS

### BRAZE TUBE NUT (SLEEVE REQUIRED)

SAE 520110



| Part #    | Tube O.D. | Braze Tube O.D. | List Price |
|-----------|-----------|-----------------|------------|
| FSO318-4  | 1/4       | .25             | ----       |
| FSO318-6  | 3/8       | .38             | ----       |
| FSO318-8  | 1/2       | .50             | ----       |
| FSO318-10 | 5/8       | .62             | ----       |
| FSO318-12 | 3/4       | .72             | ----       |
| FSO318-16 | 1         | 1.00            | ----       |
| FSO318-20 | 1 1/4     | 1.25            | ----       |
| FSO318-24 | 1 1/2     | 1.50            | ----       |

FF318 FF1311

### BRAZE TUBE SLEEVE

SAE 520115



| Part #    | Tube O.D. | List Price |
|-----------|-----------|------------|
| FSO319-4  | 1/4       | ----       |
| FSO319-6  | 3/8       | ----       |
| FSO319-8  | 1/2       | ----       |
| FSO319-10 | 5/8       | ----       |
| FSO319-12 | 3/4       | ----       |
| FSO319-16 | 1         | ----       |
| FSO319-20 | 1-1/4     | ----       |
| FSO319-24 | 1-1/2     | ----       |

FF319 FF3019

*See Page 414 for JIC Nut and Sleeve*

### CAP

SAE 520112



• Two Piece  
Nut/ Insert

| Part #      | Tube O.D. | Face Seal Thread | List Price |
|-------------|-----------|------------------|------------|
| FSO304-C-4  | 1/4       | 9/16-18          | ----       |
| FSO304-C-6  | 3/8       | 11/16-16         | ----       |
| FSO304-C-8  | 1/2       | 13/16-16         | ----       |
| FSO304-C-10 | 5/8       | 1-14             | ----       |
| FSO304-C-12 | 3/4       | 1-3/16-12        | ----       |
| FSO304-C-16 | 1         | 1-7/16-12        | ----       |
| FSO304-C-20 | 1-1/4     | 1-11/16-12       | ----       |
| FSO304-C-24 | 1-1/2     | 2-12             | ----       |

FF304C

### BULKHEAD LOCKNUT

SAE 520118



| Part #    | Thread Size | List Price |
|-----------|-------------|------------|
| FSO306-4  | 9/16-18     | ----       |
| FSO306-6  | 11/16-16    | ----       |
| FSO306-8  | 13/16-16    | ----       |
| FSO306-10 | 1-14        | ----       |
| FSO306-12 | 1-3/16-12   | ----       |
| FSO306-16 | 1-7/16-12   | ----       |
| FSO306-20 | 1-11/16-12  | ----       |
| FSO306-24 | 2-12        | ----       |

### MALE UNION CONNECTOR

SAE 520102



| Part #        | Tube O.D. | Face Seal Thread 1&2 | List Price |
|---------------|-----------|----------------------|------------|
| FSO2403-4-4   | 1/4       | 9/16-18              | ----       |
| FSO2403-6-6   | 3/8       | 11/16-16             | ----       |
| FSO2403-8-8   | 1/2       | 13/16-16             | ----       |
| FSO2403-12-12 | 3/4       | 1-3/16-12            | ----       |
| FSO2403-16-16 | 1         | 1-7/16-12            | ----       |
| FSO2403-20-20 | 1-1/4     | 1-11/16-12           | ----       |
| FSO2403-24-24 | 1-1/2     | 2-12                 | ----       |

FF403

FF2403 FF1203

## O-RING FACE SEAL ADAPTERS

## MALE O-RING FACE SEAL ADAPTER



| Part #        | Face Seal Thread 1 | Male Pipe Size 2 | List Price |
|---------------|--------------------|------------------|------------|
| FSO2404-4-4   | 9/16-18            | 1/4-18           | ----       |
| FSO2404-6-2   | 11/16-16           | 1/8-27           | ----       |
| FSO2404-6-4   | 11/16-16           | 1/4-18           | ----       |
| FSO2404-6-6   | 11/16-16           | 3/8-18           | ----       |
| FSO2404-8-4   | 13/16-16           | 1/4-18           | ----       |
| FSO2404-8-8   | 13/16-16           | 1/2-14           | ----       |
| FSO2404-10-8  | 1-14               | 1/2-14           | ----       |
| FSO2404-12-8  | 1-3/16-12          | 1/2-14           | ----       |
| FSO2404-12-12 | 1-3/16-12          | 3/4-14           | ----       |
| FSO2404-16-12 | 1-7/16-12          | 3/4-14           | ----       |
| FSO2404-16-16 | 1-7/16-12          | 1-11-1/2         | ----       |
| FSO2404-20-20 | 1-11/16-12         | 1-1/4-11-1/2     | ----       |

FF2404 4205 FLO

## FEMALE ORFS TO MALE ORFS REDUCER



| Part #        | Female Face Seal Size 1 | Male Face Seal Thread 2 | List Price |
|---------------|-------------------------|-------------------------|------------|
| FSO2406-6-4   | 11/16-16                | 9/16-18                 | ----       |
| FSO2406-8-4   | 13/16-16                | 9/16-18                 | ----       |
| FSO2406-10-6  | 1-14                    | 11/16-16                | ----       |
| FSO2406-10-8  | 1-14                    | 13/16-16                | ----       |
| FSO2406-12-6  | 1-3/16-12               | 11/16-16                | ----       |
| FSO2406-12-8  | 1-3/16-12               | 13/16-16                | ----       |
| FSO2406-16-12 | 1-7/16-12               | 1-3/16-12               | ----       |
| FSO2406-20-12 | 1-11/16-12              | 1-3/16-12               | ----       |
| FSO2406-20-16 | 1-11/16-12              | 1-7/16-12               | ----       |
| FSO2406-24-20 | 2-12                    | 1-11/16-12              | ----       |

FF2406 TRLON

## HYDRAULIC ADAPTERS

## PLUG

SAE 520109



| Part #     | Tube O.D. | Face Seal Thread | List Price |
|------------|-----------|------------------|------------|
| FSO2408-4  | 1/4       | 9/16-18          | ----       |
| FSO2408-6  | 3/8       | 11/16-16         | ----       |
| FSO2408-8  | 1/2       | 13/16-16         | ----       |
| FSO2408-10 | 5/8       | 1-14             | ----       |
| FSO2408-12 | 3/4       | 1-3/8-12         | ----       |
| FSO2408-16 | 1         | 1-7/16-12        | ----       |
| FSO2408-20 | 1-1/4     | 1-11/16-12       | ----       |
| FSO2408-24 | 1-1/2     | 2-12             | ----       |

FF2408 FF1254 4229 PNLO

## ORFS UNION ELBOW 90°



| Part #       | Face Seal Thread 1 | Face Seal Thread 2 | List Price |
|--------------|--------------------|--------------------|------------|
| FS2500-4-4   | 9/16-18            | 9/16-18            | ----       |
| FS2500-6-6   | 11/16-16           | 11/16-16           | ----       |
| FS2500-10-10 | 1-14               | 1-14               | ----       |
| FS2500-12-12 | 1-3/16-12          | 1-3/16-12          | ----       |
| FS2500-16-16 | 1-7/16-12          | 1-7/16-12          | ----       |
| FS2500-20-20 | 1-11/16-12         | 1-11/16-12         | ----       |
| FS2500-24-24 | 2-12               | 2-12               | ----       |

FF2500 4505 ELO

## ORFS TO MALE ELBOW

SAE 520202



| Part #       | Face Seal Thread 1 | Male Pipe Thread 2 | List Price |
|--------------|--------------------|--------------------|------------|
| FS2501-4-4   | 9/16-18            | 1/4                | ----       |
| FS2501-6-4   | 11/16-16           | 1/4                | ----       |
| FS2501-6-6   | 11/16-16           | 3/8                | ----       |
| FS2501-8-6   | 13/16-16           | 3/8                | ----       |
| FS2501-8-8   | 13/16-16           | 1/2                | ----       |
| FS2501-10-8  | 1-14               | 1/2                | ----       |
| FS2501-12-8  | 1-3/8-12           | 1/2                | ----       |
| FS2501-12-12 | 1-3/8-12           | 3/4                | ----       |
| FS2501-16-12 | 1-7/16-12          | 3/4                | ----       |
| FS2501-16-16 | 1-7/16-12          | 1                  | ----       |
| FS2501-20-20 | 1-11/16-12         | 1-1/4              | ----       |
| FS2501-24-24 | 2-12               | 1-1/2              | ----       |

FF2501 FF1208 4405 CLO

## HYDRAULIC ADAPTERS

### ORFS TO PIPE ELBOW 45°



| Part #       | Face Seal Thread 1 | Male Pipe Thread 2 | List Price |
|--------------|--------------------|--------------------|------------|
| FS2503-4-4   | 9/16-18            | 1/4                | ----       |
| FS2503-6-6   | 11/16-16           | 3/8                | ----       |
| FS2503-8-8   | 13/16-16           | 1/2                | ----       |
| FS2503-12-12 | 1-3/16-12          | 3/4                | ----       |
| FS2503-16-16 | 1-7/16-12          | 1                  | ----       |

FF2503 4355 VLO

### ORFS TO PIPE BRANCH TEE



| Part #       | Face Seal Thread 1+2 | Male Pipe Thread 3 | List Price |
|--------------|----------------------|--------------------|------------|
| FS2601-4-4   | 9/16-18              | 1/4-18             | ----       |
| FS2601-6-6   | 11/16-16             | 3/8-18             | ----       |
| FS2601-8-8   | 13/16-16             | 1/2-14             | ----       |
| FS2601-12-12 | 1-3/16-12            | 3/4-14             | ----       |
| FS2601-16-16 | 1-7/16-12            | 1-11-1/2           | ----       |

FF2601

### ORFS UNION TEE



| Part #       | Face Seal Thread 1+2+3 | List Price |
|--------------|------------------------|------------|
| FS2603-4-4   | 9/16-18                | ----       |
| FS2603-6-6   | 11/16-16               | ----       |
| FS2603-8-8   | 13/16-16               | ----       |
| FS2603-12-12 | 1-3/16-12              | ----       |
| FS2603-16-16 | 1-7/16-12              | ----       |
| FS2603-20-20 | 1-11/16-12             | ----       |
| FS2603-24-24 | 2-12                   | ----       |

FF2603 4705 JLO

## O-RING FACE SEAL ADAPTERS

### ORFS BULKHEAD UNION



| Part #       | Face Seal Thread 1+2 | List Price |
|--------------|----------------------|------------|
| FS2700-4-4   | 9/16-18              | ----       |
| FS2700-6-6   | 11/16-16             | ----       |
| FS2700-8-8   | 13/16-16             | ----       |
| FS2700-12-12 | 1-3/16-12            | ----       |
| FS2700-16-16 | 1-7/16-12            | ----       |
| FS2700-20-20 | 1-11/16-12           | ----       |
| FS2700-24-24 | 2-12                 | ----       |

• Locknut not included on Bulkhead fittings

FF2700 WLO

### ORFS BULKHEAD UNION 90°



| Part #       | Face Seal Thread 1+2 | List Price |
|--------------|----------------------|------------|
| FS2701-4-4   | 9/16-18              | ----       |
| FS2701-6-6   | 11/16-16             | ----       |
| FS2701-8-8   | 13/16-16             | ----       |
| FS2701-12-12 | 1-3/16-12            | ----       |
| FS2701-16-16 | 1-7/16-12            | ----       |
| FS2701-20-20 | 1-11/16-12           | ----       |
| FS2701-24-24 | 2-12                 | ----       |

• Locknut not included on Bulkhead fittings

FF2701 4525 WELO

### ORFS BULKHEAD UNION 45°



| Part #       | Face Seal Thread 1+2 | List Price |
|--------------|----------------------|------------|
| FS2702-4-4   | 9/16-18              | ----       |
| FS2702-6-6   | 11/16-16             | ----       |
| FS2702-16-16 | 1-7/16-12            | ----       |
| FS2702-20-20 | 1-11/16-12           | ----       |

• Locknut not included on Bulkhead fittings

FF2702 4375 WNLO

## O-RING FACE SEAL ADAPTERS

## ORFS BULKHEAD UNION BRANCH TEE



| Part #    | Face Seal Thread<br>1+2+3 | List Price |
|-----------|---------------------------|------------|
| FS2703-4  | 9/16-18                   | ----       |
| FS2703-6  | 11/16-16                  | ----       |
| FS2703-8  | 13/16-16                  | ----       |
| FS2703-12 | 1-3/16-12                 | ----       |
| FS2703-16 | 1-7/16-12                 | ----       |
| FS2703-20 | 1-11/16-12                | ----       |

• Locknut not included on Bulkhead Fittings

FF2703 WJLO

## ORFS BULKHEAD UNION RUN TEE



| Part #       | Face Seal Thread<br>1+2+3 | List Price |
|--------------|---------------------------|------------|
| FS2704-4-4   | 9/16-18                   | ----       |
| FS2704-6-6   | 11/16-16                  | ----       |
| FS2704-8-8   | 13/16-16                  | ----       |
| FS2704-12-12 | 1-3/16-12                 | ----       |
| FS2704-16-16 | 1-7/16-12                 | ----       |
| FS2704-20-20 | 1-11/16-12                | ----       |

• Locknut not included on Bulkhead Fittings

FF2704 WJLO

## ORFS TO FEMALE SWIVEL BRANCH TEE



| Part #       | Face Seal Thread 1+2 | Female JIC 3 | List Price |
|--------------|----------------------|--------------|------------|
| FS6600-4-4   | 9/16-18              | 9/16-18      | ----       |
| FS6600-6-6   | 11/16-16             | 11/16-16     | ----       |
| FS6600-8-8   | 13/16-16             | 13/16-16     | ----       |
| FS6600-12-12 | 1-3/16-12            | 1-3/16-12    | ----       |
| FS6600-16-16 | 1-7/16-12            | 1-7/16-12    | ----       |
| FS6600-20-20 | 1-11/16-12           | 1-11/16-12   | ----       |
| FS6600-24-24 | 2-12                 | 2-12         | ----       |

FF6600 S6LO

## HYDRAULIC ADAPTERS

## ORFS TO JIC SWIVEL RUN TEE



| Part #       | Face Seal Thread 1+3 | Female Face Seal 2 | List Price |
|--------------|----------------------|--------------------|------------|
| FS6602-4-4   | 9/16-18              | 9/16-18            | ----       |
| FS6602-6-6   | 11/16-16             | 11/16-16           | ----       |
| FS6602-8-8   | 13/16-16             | 13/16-16           | ----       |
| FS6602-12-12 | 1-3/16-12            | 1-3/16-12          | ----       |
| FS6602-16-16 | 1-7/16-12            | 1-7/16-12          | ----       |
| FS6602-20-20 | 1-11/16-12           | 1-11/16-12         | ----       |
| FS6602-24-24 | 2-12                 | 2-12               | ----       |

FF6602 R6LO

## MALE ORFS TO ORB CONNECTOR

SAE 520120



| Part #         | Face Seal Thread 1 | O-Ring Thread 2 | List Price |
|----------------|--------------------|-----------------|------------|
| FS6400-O-4-4   | 9/16-18            | 7/16-20         | ----       |
| FS6400-O-4-6   | 9/16-18            | 9/16-18         | ----       |
| FS6400-O-6-4   | 11/16-16           | 7/16-20         | ----       |
| FS6400-O-6-6   | 11/16-16           | 9/16-18         | ----       |
| FS6400-O-6-8   | 11/16-16           | 3/4-16          | ----       |
| FS6400-O-8-6   | 13/16-16           | 9/16-18         | ----       |
| FS6400-O-8-8   | 13/16-16           | 3/4-16          | ----       |
| FS6400-O-8-10  | 13/16-16           | 7/8-14          | ----       |
| FS6400-O-10-8  | 1-14               | 3/4-16          | ----       |
| FS6400-O-10-10 | 1-14               | 7/8-14          | ----       |
| FS6400-O-12-8  | 1-3/16-12          | 3/4-16          | ----       |
| FS6400-O-12-10 | 1-3/16-12          | 7/8-14          | ----       |
| FS6400-O-12-12 | 1-3/16-12          | 1-1/16-12       | ----       |
| FS6400-O-12-16 | 1-3/16-12          | 1-5/16-12       | ----       |
| FS6400-O-16-12 | 1-7/16-12          | 1-1/16-12       | ----       |
| FS6400-O-16-16 | 1-7/16-12          | 1-5/16-12       | ----       |
| FS6400-O-20-20 | 1-11/16-12         | 1-5/8-12        | ----       |
| FS6400-O-24-24 | 2-12               | 1-7/8-12        | ----       |

4315 FF6400 FF1231

## MALE FLAT FACE TO FEMALE 37 ° SWIVEL



| Part #       | Face Seal Thread 1 | JIC Thread 2 | List Price |
|--------------|--------------------|--------------|------------|
| FS6402-4-4   | 9/16-18            | 7/16-20      | ----       |
| FS6402-6-6   | 11/16-16           | 9/16-18      | ----       |
| FS6402-8-8   | 13/16-16           | 3/4-16       | ----       |
| FS6402-10-10 | 1-14               | 7/8-14       | ----       |
| FS6402-12-12 | 1-3/16-12          | 1-1/16-12    | ----       |
| FS6402-16-16 | 1-7/16-12          | 1-5/16-12    | ----       |

FF6402 FF1294

## HYDRAULIC ADAPTERS

### SWIVEL NUT ELBOW



| Part #       | Face Seal Thread 1 | Face Seal Thread 2 | List Price |
|--------------|--------------------|--------------------|------------|
| FS6500-4-4   | 9/16-18            | 9/16-18            | ----       |
| FS6500-6-6   | 11/16-16           | 11/16-16           | ----       |
| FS6500-8-8   | 13/16-16           | 13/16-16           | ----       |
| FS6500-10-10 | 1-14               | 1-14               | ----       |
| FS6500-12-12 | 1-3/16-12          | 1-3/16-12          | ----       |
| FS6500-16-16 | 1-7/16-12          | 1-7/16-12          | ----       |
| FS6500-20-20 | 1-11/16-12         | 1-11/16-12         | ----       |
| FS6500-24-24 | 2-12               | 2-12               | ----       |

FF6500 FF1236

### MALE JIC 37° FLARE TO FEMALE FLAT FACE SWIVEL



| Part #       | JIC Thread Size 1 | Face Seal Thread 2 | List Price |
|--------------|-------------------|--------------------|------------|
| FS6504-4-4   | 7/16-20           | 9/16-18            | ----       |
| FS6504-6-6   | 9/16-18           | 11/16-16           | ----       |
| FS6504-8-8   | 3/4-16            | 13/16-16           | ----       |
| FS6504-10-10 | 7/8-14            | 1-14               | ----       |
| FS6504-12-12 | 1-1/16-12         | 1-3/16-12          | ----       |
| FS6504-16-16 | 1-5/16-12         | 1-7/16-12          | ----       |

FF6504 FF1296

### O-RING ELBOW CONNECTOR



| Part #       | Face Seal Thread 1 | O-Ring Thread 2 | List Price |
|--------------|--------------------|-----------------|------------|
| FS6801-4-4   | 9/16-18            | 7/16-20         | ----       |
| FS6801-6-4   | 11/16-16           | 7/16-20         | ----       |
| FS6801-6-6   | 11/16-16           | 9/16-18         | ----       |
| FS6801-8-6   | 13/16-16           | 9/16-18         | ----       |
| FS6801-8-8   | 13/16-16           | 3/4-16          | ----       |
| FS6801-8-10  | 13/16-16           | 7/8-14          | ----       |
| FS6801-10-8  | 1-14               | 3/4-16          | ----       |
| FS6801-10-10 | 1-14               | 7/8-14          | ----       |
| FS6801-12-12 | 1-3/16-12          | 1-1/16-12       | ----       |
| FS6801-16-16 | 1-7/16-12          | 1-5/16-12       | ----       |
| FS6801-20-20 | 1-11/16-12         | 1-5/8-12        | ----       |
| FS6801-24-24 | 2-12               | 1-7/8-12        | ----       |

FF6801 FF1238 4515

## O-RING FACE SEAL ADAPTERS

### ORFS TO O-RING ELBOW 45°



| Part #       | Face Seal Thread 1 | O-Ring Size 2 | List Price |
|--------------|--------------------|---------------|------------|
| FS6802-4-4   | 9/16-18            | 7/16-20       | ----       |
| FS6802-6-6   | 11/16-16           | 9/16-18       | ----       |
| FS6802-8-8   | 13/16-16           | 3/4-16        | ----       |
| FS6802-10-10 | 1-14               | 7/8-14        | ----       |
| FS6802-12-12 | 1-3/16-12          | 1-1/16-12     | ----       |
| FS6802-16-16 | 1-7/16-12          | 1-5/16-12     | ----       |
| FS6802-20-20 | 1-11/16-12         | 1-5/8-12      | ----       |
| FS6802-24-24 | 2-12               | 1-7/8-12      | ----       |

FF6802 4365 V5OLO

### ORFS TO O-RING BRANCH TEE



| Part #       | Face Seal Thread 1 + 2 | O-Ring Size 3 | List Price |
|--------------|------------------------|---------------|------------|
| FS6803-4-4   | 9/16-18                | 7/16-20       | ----       |
| FS6803-6-6   | 11/16-16               | 9/16-18       | ----       |
| FS6803-8-8   | 13/16-16               | 3/4-16        | ----       |
| FS6803-12-12 | 1-3/16-12              | 1-1/16-12     | ----       |
| FS6803-16-16 | 1-7/16-12              | 1-5/16-12     | ----       |
| FS6803-20-20 | 1-11/16-12             | 1-5/8-12      | ----       |
| FS6803-24-24 | 2-12                   | 1-7/8-12      | ----       |

FF6803 4715 SJOLO

### ORFS TO O-RING RUN TEE



| Part #       | Face Seal Size 1 | O-Ring Size 2 | Face Seal Size 3 | List Price |
|--------------|------------------|---------------|------------------|------------|
| FS6804-4-4   | 9/16-18          | 7/16-20       | 9/16-18          | ----       |
| FS6804-6-6   | 11/16-16         | 9/16-18       | 11/16-16         | ----       |
| FS6804-8-8   | 13/16-16         | 3/4-16        | 13/16-16         | ----       |
| FS6804-12-12 | 1-3/16-12        | 1-1/16-12     | 1-3/16-12        | ----       |
| FS6804-16-16 | 1-7/16-12        | 1-5/16-12     | 1-7/16-12        | ----       |
| FS6804-20-20 | 1-11/16-12       | 1-5/8-12      | 1-11/16-12       | ----       |
| FS6804-24-24 | 2-12             | 1-7/8-12      | 2-12             | ----       |

FF6804 4716 KJOLO

## STEEL BSPT ADAPTERS

## STRAIGHT THREAD SWIVEL NUT ELBOW



| Part #       | O-Ring Thread 1 | Face Seal Thread 2 | List Price |
|--------------|-----------------|--------------------|------------|
| FS6809-4-4   | 7/16-20         | 9/16-18            | ----       |
| FS6809-6-6   | 9/16-18         | 11/16-16           | ----       |
| FS6809-8-8   | 3/4-16          | 13/16-16           | ----       |
| FS6809-12-12 | 1-1/16-12       | 1-3/16-12          | ----       |
| FS6809-16-16 | 1-5/16-12       | 1-7/16-12          | ----       |

FF6809 FF1239 4535 AOELC

## STEEL BSPT ADAPTERS

## JIC MALE CONNECTOR BSPT



| Part #     | JIC Thread Size 1 | Male BSPT 2 | List Price |
|------------|-------------------|-------------|------------|
| 7000-4-2   | 7/16-20           | 1/8-28      | ----       |
| 7000-4-4   | 7/16-20           | 1/4-19      | ----       |
| 7000-6-4   | 9/16-18           | 1/4-19      | ----       |
| 7000-6-6   | 9/16-18           | 3/8-19      | ----       |
| 7000-6-8   | 9/16-18           | 1/2-14      | ----       |
| 7000-8-6   | 3/4-16            | 3/8-19      | ----       |
| 7000-8-8   | 3/4-16            | 1/2-14      | ----       |
| 7000-8-12  | 3/4-16            | 3/4-14      | ----       |
| 7000-10-8  | 7/8-14            | 1/2-14      | ----       |
| 7000-10-12 | 7/8-14            | 3/4-14      | ----       |
| 7000-12-8  | 1-1/16-12         | 1/2-14      | ----       |
| 7000-12-12 | 1-1/16-12         | 3/4-14      | ----       |
| 7000-16-16 | 1-5/16-12         | 1-11        | ----       |
| 7000-20-20 | 1-5/8-12          | 1-1/4-11    | ----       |

3404 305

## JIC MALE ELBOW BSPT



| Part #     | JIC Thread Size 1 | Male BSPT 2 | List Price |
|------------|-------------------|-------------|------------|
| 7200-4-2   | 7/16-20           | 1/8-28      | ----       |
| 7200-4-4   | 7/16-20           | 1/4-19      | ----       |
| 7200-6-4   | 9/16-18           | 1/4-19      | ----       |
| 7200-6-6   | 9/16-18           | 3/8-19      | ----       |
| 7200-6-8   | 9/16-18           | 1/2-14      | ----       |
| 7200-8-6   | 3/4-16            | 3/8-19      | ----       |
| 7200-8-8   | 3/4-16            | 1/2-14      | ----       |
| 7200-12-12 | 1-1/16-12         | 3/4-14      | ----       |
| 7200-16-16 | 1-5/16-12         | 1-11        | ----       |

3501 315

## HYDRAULIC ADAPTERS

## BSPT HEX NIPPLE



| Part #     | Male BSPT 1 | Male BSPT 2 | List Price |
|------------|-------------|-------------|------------|
| 7520-2-2   | 1/8-28      | 1/8-28      | ----       |
| 7520-4-4   | 1/4-19      | 1/4-19      | ----       |
| 7520-6-6   | 3/8-19      | 3/8-19      | ----       |
| 7520-8-8   | 1/2-14      | 1/2-14      | ----       |
| 7520-10-10 | 5/8-14      | 5/8-14      | ----       |
| 7520-12-12 | 3/4-14      | 3/4-14      | ----       |

3520 MBT

## BSPT PLUG



| Part #  | BSPT   | List Price |
|---------|--------|------------|
| 9508-2  | 1/8-28 | ----       |
| 9508-4  | 1/4-19 | ----       |
| 9508-6  | 3/8-19 | ----       |
| 9508-8  | 1/2-14 | ----       |
| 9508-12 | 3/4-14 | ----       |
| 9508-16 | 1-11   | ----       |

100B-Y KA-RM MHL 296

## STEEL BSPP ADAPTERS

## BSPP HEX NIPPLE



| Part #     | Male BSPP 1 | Male BSPP 2 | List Price |
|------------|-------------|-------------|------------|
| 7420-2-2   | 1/8-28      | 1/8-28      | ----       |
| 7420-4-2   | 1/4-19      | 1/8-28      | ----       |
| 7420-6-4   | 3/8-19      | 1/4-19      | ----       |
| 7420-6-6   | 3/8-19      | 3/8-19      | ----       |
| 7420-8-6   | 1/2-14      | 3/8-19      | ----       |
| 7420-8-8   | 1/2-14      | 1/2-14      | ----       |
| 7420-10-8  | 5/8-14      | 1/2-14      | ----       |
| 7420-12-8  | 3/4-14      | 1/2-14      | ----       |
| 7420-12-12 | 3/4-14      | 3/4-14      | ----       |
| 7420-16-12 | 1-11        | 3/4-14      | ----       |
| 7420-16-16 | 1-11        | 1-11        | ----       |

3420 MB 9022

## HYDRAULIC ADAPTERS

### BSPP COUPLING



| Part #  | BSPP   | List Price |
|---------|--------|------------|
| 7425-2  | 1/8-28 | ----       |
| 7425-4  | 1/4-19 | ----       |
| 7425-8  | 1/2-14 | ----       |
| 7425-10 | 5/8-14 | ----       |
| 7425-12 | 3/4-14 | ----       |
| 7425-16 | 1-11   | ----       |

3425 FB

### JIC TO FEMALE BSPP STRAIGHT SWIVEL



| Part #  | JIC Thread Size 1 | Female BSPP Swivel 2 | List Price |
|---------|-------------------|----------------------|------------|
| 7240-4  | 7/16-20           | 1/4-19               | ----       |
| 7240-6  | 9/16-18           | 3/8-19               | ----       |
| 7240-8  | 3/4-16            | 1/2-14               | ----       |
| 7240-10 | 7/8-14            | 5/8-14               | ----       |
| 7240-12 | 1-1/16-12         | 3/4-14               | ----       |
| 7240-16 | 1-5/16-12         | 1-11                 | ----       |

3240 MJFBS

### JIC TO BSPP MALE ELBOW



| Part #         | JIC Thread Size 1 | Male BSPP 2 | List Price |
|----------------|-------------------|-------------|------------|
| 7202-NWO-4-2   | 7/16-20           | 1/8-28      | ----       |
| 7202-NWO-4-4   | 7/16-20           | 1/4-19      | ----       |
| 7202-NWO-6-4   | 9/16-18           | 1/4-19      | ----       |
| 7202-NWO-6-6   | 9/16-18           | 3/8-19      | ----       |
| 7202-NWO-6-8   | 9/16-18           | 1/2-14      | ----       |
| 7202-NWO-8-6   | 3/4-16            | 3/8-19      | ----       |
| 7202-NWO-8-8   | 3/4-16            | 1/2-14      | ----       |
| 7202-NWO-8-12  | 3/4-16            | 3/4-14      | ----       |
| 7202-NWO-10-8  | 7/8-14            | 1/2-14      | ----       |
| 7202-NWO-12-12 | 1-1/16-12         | 3/4-14      | ----       |
| 7202-NWO-12-16 | 1-1/16-12         | 1-11        | ----       |
| 7202-NWO-16-16 | 1-5/16-12         | 1-11        | ----       |

3801 315

## STEEL BSPP ADAPTERS

### JIC TO BSPP 45° ELBOW



| Part #  | JIC Thread Size 1 | Male BSPP 2 | List Price |
|---------|-------------------|-------------|------------|
| 7802-4  | 7/16-20           | 1/4-19      | ----       |
| 7802-6  | 9/16-18           | 3/8-19      | ----       |
| 7802-8  | 3/4-16            | 1/2-14      | ----       |
| 7802-12 | 1-1/16-12         | 3/4-14      | ----       |
| 7802-16 | 1-5/16-12         | 1-11        | ----       |

3802 35J

### BSPP TO MALE PIPE NIPPLE



| Part #  | Male BSPP Size 1 | Male Pipe Thread Size 2 | List Price |
|---------|------------------|-------------------------|------------|
| 7825-2  | 1/8-28           | 1/8                     | ----       |
| 7825-4  | 1/4-19           | 1/4                     | ----       |
| 7825-6  | 3/8-19           | 3/8                     | ----       |
| 7825-8  | 1/2-14           | 1/2                     | ----       |
| 7825-12 | 3/4-14           | 3/4                     | ----       |
| 7825-16 | 1-11             | 1                       | ----       |

MBMP 3825

### JIC TO BSPP MALE CONNECTOR



| Part #     | JIC Thread Size 1 | Male BSPP 2 | List Price |
|------------|-------------------|-------------|------------|
| 7002-4-2   | 7/16-20           | 1/8-28      | ----       |
| 7002-4-4   | 7/16-20           | 1/4-19      | ----       |
| 7002-4-6   | 7/16-20           | 3/8-19      | ----       |
| 7002-4-8   | 7/16-20           | 1/2-14      | ----       |
| 7002-6-4   | 9/16-18           | 1/4-19      | ----       |
| 7002-6-6   | 9/16-18           | 3/8-19      | ----       |
| 7002-6-8   | 9/16-18           | 1/2-14      | ----       |
| 7002-8-6   | 3/4-16            | 3/8-19      | ----       |
| 7002-8-8   | 3/4-16            | 1/2-14      | ----       |
| 7002-8-12  | 3/4-16            | 3/4-14      | ----       |
| 7002-10-8  | 7/8-14            | 1/2-14      | ----       |
| 7002-12-12 | 1-1/16-12         | 3/4-14      | ----       |
| 7002-12-16 | 1-1/16-12         | 1-11        | ----       |
| 7002-16-16 | 1-5/16-12         | 1-11        | ----       |

30J 3800

## STEEL BSPP ADAPTERS

## JIC TO BSPP STRAIGHT SWIVEL



| Part #     | JIC<br>Thread Size 1 | Male<br>BSPP 2 | List<br>Price |
|------------|----------------------|----------------|---------------|
| 7022-4-2   | 7/16-20              | 1/8-28         | ----          |
| 7022-4-4   | 7/16-20              | 1/4-19         | ----          |
| 7022-6-4   | 9/16-18              | 1/4-19         | ----          |
| 7022-6-6   | 9/16-18              | 3/8-19         | ----          |
| 7022-8-6   | 3/4-16               | 3/8-19         | ----          |
| 7022-8-8   | 3/4-16               | 1/2-14         | ----          |
| 7022-10-8  | 7/8-14               | 1/2-14         | ----          |
| 7022-12-12 | 1-1/16-12            | 3/4-14         | ----          |
| 7022-16-16 | 1-5/16-12            | 1-11           | ----          |

3402 3055

## HEX HEAD PLUG BSPP



| Part #    | Male BSPP | List Price |
|-----------|-----------|------------|
| 9522-P-2  | 1/8-28    | ----       |
| 9522-P-4  | 1/4-19    | ----       |
| 9522-P-6  | 3/8-19    | ----       |
| 9522-P-8  | 1/2-14    | ----       |
| 9522-P-12 | 3/4-14    | ----       |
| 9522-P-16 | 1-11      | ----       |

3408

## HOLLOW HEX PLUG BSPP



| Part #    | Male BSPP | List Price |
|-----------|-----------|------------|
| 9522-H-2  | 1/8-28    | ----       |
| 9522-H-4  | 1/4-19    | ----       |
| 9522-H-6  | 3/8-19    | ----       |
| 9522-H-8  | 1/2-14    | ----       |
| 9522-H-12 | 3/4-14    | ----       |
| 9522-H-16 | 1-11      | ----       |

3408 HHP

## HYDRAULIC ADAPTERS

## FEMALE ADAPTER BSPP



| Part #     | Female<br>Pipe 1 | Male<br>BSPP 2 | List<br>Price |
|------------|------------------|----------------|---------------|
| 7042-2-2   | 1/8              | 1/8-28         | ----          |
| 7042-4-2   | 1/4              | 1/8-28         | ----          |
| 7042-4-4   | 1/4              | 1/4-19         | ----          |
| 7042-6-6   | 3/8              | 3/8-19         | ----          |
| 7042-8-8   | 1/2              | 1/2-14         | ----          |
| 7042-12-12 | 3/4              | 3/4-14         | ----          |
| 7042-16-16 | 1                | 1-11           | ----          |

3455 MMFP

## STEEL METRIC ADAPTERS

## MALE CONNECTOR



| Part #     | JIC Thread<br>Size 1 | Metric<br>Thread 2 | List Price |
|------------|----------------------|--------------------|------------|
| 7005-4-10  | 7/16-20              | 10x1.0             | ----       |
| 7005-4-12  | 7/16-20              | 12x1.5             | ----       |
| 7005-4-14  | 7/16-20              | 14x1.5             | ----       |
| 7005-4-18  | 7/16-20              | 18x1.5             | ----       |
| 7005-5-12  | 1/2-20               | 12x1.5             | ----       |
| 7005-5-14  | 1/2-20               | 14x1.5             | ----       |
| 7005-6-14  | 9/16-18              | 14x1.5             | ----       |
| 7005-6-16  | 9/16-18              | 16x1.5             | ----       |
| 7005-6-18  | 9/16-18              | 18x1.5             | ----       |
| 7005-8-16  | 3/4-16               | 16x1.5             | ----       |
| 7005-8-18  | 3/4-16               | 18x1.5             | ----       |
| 7005-8-22  | 3/4-16               | 22x1.5             | ----       |
| 7005-10-18 | 7/8-14               | 18x1.5             | ----       |
| 7005-10-20 | 7/8-14               | 20x1.5             | ----       |
| 7005-10-22 | 7/8-14               | 22x1.5             | ----       |
| 7005-12-22 | 1-1/16-12            | 22x1.5             | ----       |
| 7005-12-27 | 1-1/16-12            | 27x1.5             | ----       |

Port-seal crush washer and O-ring included

7400 30J (R) 7011

## HYDRAULIC ADAPTERS

## MALE ELBOW



| Part #         | JIC Thread<br>Size 1 | Metric<br>Thread 2 | List<br>Price |
|----------------|----------------------|--------------------|---------------|
| 7205-NWO-4-10  | 7/16-20              | 10x1.0             | ----          |
| 7205-NWO-4-12  | 7/16-20              | 12x1.5             | ----          |
| 7205-NWO-4-14  | 7/16-20              | 14x1.5             | ----          |
| 7205NWO-5-12   | 1/2-20               | 12x1.5             | ----          |
| 7205-NWO-6-14  | 9/16-18              | 14x1.5             | ----          |
| 7205-NWO-6-16  | 9/16-18              | 16x1.5             | ----          |
| 7205-NWO-8-16  | 3/4-16               | 16x1.5             | ----          |
| 7205-NWO-8-18  | 3/4-16               | 18x1.5             | ----          |
| 7205-NWO-8-22  | 3/4-16               | 22x1.5             | ----          |
| 7205-NWO-10-18 | 7/8-14               | 18x1.5             | ----          |

Port-seal crush washer and O-ring included

7801 315 (R)

## STRAIGHT SWIVEL



| Part #     | JIC Thread<br>Size 1 | Metric<br>Thread 2 | List<br>Price |
|------------|----------------------|--------------------|---------------|
| 7025-4-10  | 7/16-20              | 10x1.0             | ----          |
| 7025-4-12  | 7/16-20              | 12x1.5             | ----          |
| 7025-5-12  | 1/2-20               | 12x1.5             | ----          |
| 7025-6-14  | 9/16-18              | 14x1.5             | ----          |
| 7025-6-16  | 9/16-18              | 16x1.5             | ----          |
| 7025-8-16  | 3/4-16               | 16x1.5             | ----          |
| 7025-10-22 | 7/8-14               | 22x1.5             | ----          |
| 7025-12-27 | 1-1/16-12            | 27x2.0             | ----          |
| 7025-16-33 | 1-5/16-12            | 33x2.0             | ----          |

7402 30JS (R)

## HEX HEAD PLUG METRIC PARALLEL



| Part #    | Metric Thread | List Price |
|-----------|---------------|------------|
| 8555-P-10 | 10x1.0        | ----       |
| 8555-P-12 | 12x1.5        | ----       |
| 8555-P-14 | 14x1.5        | ----       |
| 8555-P-16 | 16x1.5        | ----       |
| 8555-P-18 | 18x1.5        | ----       |
| 8555-P-20 | 20x1.5        | ----       |
| 8555-P-22 | 22x1.5        | ----       |
| 8555-P-26 | 26x1.5        | ----       |
| 8555-P-30 | 30x1.5        | ----       |

7408

## STEEL METRIC ADAPTERS

HOLLOW HEX HEAD PLUG  
METRIC PARALLEL

| Part #    | Metric Thread | List Price |
|-----------|---------------|------------|
| 8555-H-10 | 10x1.0        | ----       |
| 8555-H-12 | 12x1.5        | ----       |
| 8555-H-14 | 14x1.5        | ----       |
| 8555-H-16 | 16x1.5        | ----       |
| 8555-H-18 | 18x1.5        | ----       |
| 8555-H-20 | 20x1.5        | ----       |
| 8555-H-22 | 22x1.5        | ----       |
| 8555-H-26 | 26x1.5        | ----       |
| 8555-H-30 | 30x1.5        | ----       |

7408 HHP

## FEMALE ADAPTER



| Part #     | Female<br>Pipe Thread 1 | Metric<br>Thread 2 | List<br>Price |
|------------|-------------------------|--------------------|---------------|
| 7045-2-10  | 1/8                     | 10x1.0             | ----          |
| 7045-4-12  | 1/4                     | 12x1.5             | ----          |
| 7045-4-14  | 1/4                     | 14x1.5             | ----          |
| 7045-6-12  | 3/8                     | 12x1.5             | ----          |
| 7045-6-16  | 3/8                     | 16x1.5             | ----          |
| 7045-6-18  | 3/8                     | 18x1.5             | ----          |
| 7045-8-16  | 1/2                     | 16x1.5             | ----          |
| 7045-8-18  | 1/2                     | 18x1.5             | ----          |
| 7045-8-22  | 1/2                     | 22x1.5             | ----          |
| 7045-12-27 | 3/4                     | 27x2.0             | ----          |
| 7045-16-33 | 1                       | 33x2.0             | ----          |

MMFP (R)

## STEEL BEADED HOSE INSERTS

## MALE PIPE HOSE INSERT

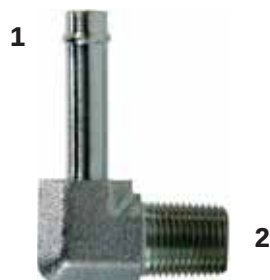
SAE 430160



| Part #     | Hose I.D.<br>1 | Pipe Thread<br>2 | List Price |
|------------|----------------|------------------|------------|
| 4404-4-4   | 1/4            | 1/4              | ----       |
| 4404-6-6   | 3/8            | 3/8              | ----       |
| 4404-8-8   | 1/2            | 1/2              | ----       |
| 4404-12-12 | 3/4            | 3/4              | ----       |
| 4404-16-16 | 1              | 1                | ----       |
| 4404-20-16 | 1-1/4          | 1                | ----       |
| 4404-20-20 | 1-1/4          | 1-1/4            | ----       |
| 4404-24-24 | 1-1/2          | 1-1/2            | ----       |

## 90° PIPE HOSE INSERT

SAE 430260



| Part #     | Hose I.D.<br>1 | Pipe Thread<br>2 | List Price |
|------------|----------------|------------------|------------|
| 4501-4-4   | 1/4            | 1/4              | ----       |
| 4501-6-6   | 3/8            | 3/8              | ----       |
| 4501-8-6   | 1/2            | 3/8              | ----       |
| 4501-8-8   | 1/2            | 1/2              | ----       |
| 4501-10-8  | 5/8            | 1/2              | ----       |
| 4501-12-12 | 3/4            | 3/4              | ----       |
| 4501-16-12 | 1              | 3/4              | ----       |
| 4501-16-16 | 1              | 1                | ----       |
| 4501-20-20 | 1-1/4          | 1-1/4            | ----       |
| 4501-24-24 | 1-1/2          | 1-1/2            | ----       |

## 45° PIPE HOSE INSERT

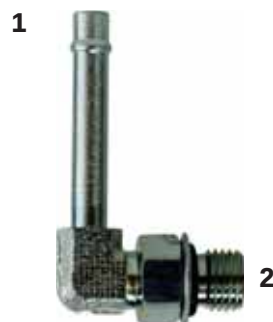
SAE 430360



| Part #     | Hose I.D.<br>1 | Pipe Thread<br>2 | List Price |
|------------|----------------|------------------|------------|
| 4503-12-12 | 3/4            | 3/4              | ----       |
| 4503-16-16 | 1              | 1                | ----       |
| 4503-20-20 | 1-1/4          | 1-1/4            | ----       |

## HYDRAULIC ADAPTERS

## 90° O-RING HOSE INSERT



| Part #      | Hose I.D.<br>1 | O-Ring Thread 2 | List Price |
|-------------|----------------|-----------------|------------|
| 4601-NWO-4  | 1/4            | 7/16-20         | ----       |
| 4601-NWO-6  | 3/8            | 9/16-18         | ----       |
| 4601-NWO-8  | 1/2            | 3/4-16          | ----       |
| 4601-NWO-12 | 3/4            | 1-1/16-12       | ----       |
| 4601-NWO-16 | 1              | 1-5/16-12       | ----       |
| 4601-NWO-20 | 1-1/4          | 1-5/8-12        | ----       |
| 4601-NWO-24 | 1-1/2          | 1-7/8-12        | ----       |

## 45° O-RING HOSE INSERT



| Part #      | Hose I.D.<br>1 | O-Ring Thread 2 | List Price |
|-------------|----------------|-----------------|------------|
| 4603-NWO-4  | 1/4            | 7/16-20         | ----       |
| 4603-NWO-6  | 3/8            | 9/16-18         | ----       |
| 4603-NWO-8  | 1/2            | 3/4-16          | ----       |
| 4603-NWO-10 | 5/8            | 7/8-14          | ----       |
| 4603-NWO-12 | 3/4            | 1-1/12-12       | ----       |
| 4603-NWO-16 | 1              | 1-5/16-12       | ----       |
| 4603-NWO-20 | 1-1/4          | 1-5/8-12        | ----       |
| 4603-NWO-24 | 1-1/2          | 1-7/8-12        | ----       |

## O-RING HOSE INSERT



| Part #    | Hose I.D.<br>1 | O-Ring Thread 2 | List Price |
|-----------|----------------|-----------------|------------|
| 4604-O-4  | 1/4            | 7/16-20         | ----       |
| 4604-O-6  | 3/8            | 9/16-18         | ----       |
| 4604-O-8  | 1/2            | 3/4-16          | ----       |
| 4604-O-12 | 3/4            | 1-1/16-12       | ----       |
| 4604-O-16 | 1              | 1-5/16-12       | ----       |
| 4604-O-20 | 1-1/4          | 1-5/8-12        | ----       |
| 4604-O-24 | 1-1/2          | 1-7/8-12        | ----       |

## HYDRAULIC ADAPTERS

### TUBE NUT

SAE 080110



| Part #  | Tube O.D | JIC Thread Size | List Price |
|---------|----------|-----------------|------------|
| C318-2  | 1/8      | 5/16-24         | ----       |
| C318-4  | 1/4      | 7/16-20         | ----       |
| C318-6  | 3/8      | 9/16-18         | ----       |
| C318-8  | 1/2      | 3/4-16          | ----       |
| C318-12 | 3/4      | 1-1/16-12       | ----       |
| C318-16 | 1        | 1-5/16-12       | ----       |

7105 BU-S

### TUBE SLEEVE

SAE 08011SA



| Part #  | Tube O.D | List Price |
|---------|----------|------------|
| C319-2  | 1/8      | ----       |
| C319-4  | 1/4      | ----       |
| C319-6  | 3/8      | ----       |
| C319-8  | 1/2      | ----       |
| C319-12 | 3/4      | ----       |
| C319-16 | 1        | ----       |

TU-S 7165

### UNION

SAE 080101



| Part #      | Tube Size | List Price |
|-------------|-----------|------------|
| C2403-2-2   | 1/8       | ----       |
| C2403-4-4   | 1/4       | ----       |
| C2403-6-6   | 3/8       | ----       |
| C2403-8-8   | 1/2       | ----       |
| C2403-12-12 | 3/4       | ----       |
| C2403-16-16 | 1         | ----       |

7305 HBU-S

• Fittings are single ferrule

## FLARELESS BITE-TYPE STEEL

### MALE CONNECTOR

SAE 080102



| Part #      | Tube Size 1 | Male Pipe Thread 2 | List Price |
|-------------|-------------|--------------------|------------|
| C2404-2-2   | 1/8         | 1/8                | ----       |
| C2404-4-4   | 1/4         | 1/4                | ----       |
| C2404-6-4   | 3/8         | 1/4                | ----       |
| C2404-6-6   | 3/8         | 3/8                | ----       |
| C2404-8-6   | 1/2         | 3/8                | ----       |
| C2404-8-8   | 1/2         | 1/2                | ----       |
| C2404-12-12 | 3/4         | 3/4                | ----       |
| C2404-16-16 | 1           | 1                  | ----       |

FBU-S 7205

### UNION ELBOW

SAE 080201



| Part #      | Tube Size | List Price |
|-------------|-----------|------------|
| C2500-2-2   | 1/8       | ----       |
| C2500-4-4   | 1/4       | ----       |
| C2500-6-6   | 3/8       | ----       |
| C2500-8-8   | 1/2       | ----       |
| C2500-12-12 | 3/4       | ----       |
| C2500-16-16 | 1         | ----       |

7505 EBU-S

### MALE ELBOW

SAE 080202  
ms 51504



| Part #      | Tube Size 1 | Male Pipe Size 2 | List Price |
|-------------|-------------|------------------|------------|
| C2501-4-2   | 1/4         | 1/8              | ----       |
| C2501-4-4   | 1/4         | 1/4              | ----       |
| C2501-6-4   | 3/8         | 1/4              | ----       |
| C2501-6-6   | 3/8         | 3/8              | ----       |
| C2501-6-8   | 3/8         | 1/2              | ----       |
| C2501-8-8   | 1/2         | 1/2              | ----       |
| C2501-12-12 | 3/4         | 3/4              | ----       |
| C2501-16-16 | 1           | 1                | ----       |

7405 CBU-S

## FLARELESS BITE-TYPE STEEL

## HYDRAULIC ADAPTERS

## FEMALE ELBOW

SAE 080203



| Part #      | Tube Size 1 | Female Pipe Size 2 | List Price |
|-------------|-------------|--------------------|------------|
| C2502-4-4   | 1/4         | 1/4                | ----       |
| C2502-6-4   | 3/8         | 1/4                | ----       |
| C2502-6-6   | 3/8         | 3/8                | ----       |
| C2502-8-8   | 1/2         | 1/2                | ----       |
| C2502-12-12 | 3/4         | 3/4                | ----       |
| C2502-16-16 | 1           | 1                  | ----       |

7455 DBU-S

## MALE BRANCH TEE

SAE 080425



| Part #      | Tube Size 1&2 | Pipe Thread Size 3 | List Price |
|-------------|---------------|--------------------|------------|
| C2601-2-2   | 1/8           | 1/8                | ----       |
| C2601-4-2   | 1/4           | 1/8                | ----       |
| C2601-4-4   | 1/4           | 1/4                | ----       |
| C2601-8-8   | 1/2           | 1/2                | ----       |
| C2601-12-12 | 3/4           | 3/4                | ----       |
| C2601-16-16 | 1             | 1                  | ----       |

SBU-S 7605

## FEMALE BRANCH TEE

SAE 080427



| Part #      | Tube Size 1+2 | Female Pipe Size 3 | List Price |
|-------------|---------------|--------------------|------------|
| C2602-4-4   | 1/4           | 1/4                | ----       |
| C2602-6-4   | 3/8           | 1/4                | ----       |
| C2602-6-6   | 3/8           | 3/8                | ----       |
| C2602-8-8   | 1/2           | 1/2                | ----       |
| C2602-12-12 | 3/4           | 3/4                | ----       |
| C2602-16-16 | 1             | 1                  | ----       |

7655 OBU-S

• Fittings are single ferrule

## UNION TEE

SAE 080401



| Part #      | Tube Size | List Price |
|-------------|-----------|------------|
| C2603-2-2   | 1/8       | ----       |
| C2603-4-4   | 1/4       | ----       |
| C2603-6-6   | 3/8       | ----       |
| C2603-8-8   | 1/2       | ----       |
| C2603-12-12 | 3/4       | ----       |
| C2603-16-16 | 1         | ----       |

7705 JBU-S

## MALE O-RING CONNECTOR

SAE 080120



| Part #      | Tube Size | O-Ring Thread 2 | List Price |
|-------------|-----------|-----------------|------------|
| C6400-4-4   | 1/4       | 7/16-20         | ----       |
| C6400-6-6   | 3/8       | 9/16-18         | ----       |
| C6400-8-8   | 1/2       | 3/4-16          | ----       |
| C6400-8-10  | 1/2       | 7/8-14          | ----       |
| C6400-12-12 | 3/4       | 1-1/16-12       | ----       |
| C6400-16-16 | 1         | 1-5/16-12       | ----       |

7315 F5B-J

## O-RING ELBOW CONNECTOR

SAE 080220



| Part #      | Tube Size 1 | O-Ring Thread Size 2 | List Price |
|-------------|-------------|----------------------|------------|
| C6801-4-4   | 1/4         | 7/16-20              | ----       |
| C6801-6-6   | 3/8         | 9/16-18              | ----       |
| C6801-8-8   | 1/2         | 3/4-16               | ----       |
| C6801-12-12 | 3/4         | 1-1/16-12            | ----       |
| C6801-16-16 | 1           | 1-5/16-12            | ----       |

7515 C5BU-S

## MALE O-RING BRANCH TEE

SAE 080429



| Part #    | Tube Size Size 1 & 2 | O-Ring Thread Size 3 | List Price |
|-----------|----------------------|----------------------|------------|
| C6803-4-4 | 1/4                  | 7/16-20              | ----       |
| C6803-6-6 | 3/8                  | 9/16-18              | ----       |
| C6803-8-8 | 1/2                  | 3/4-16               | ----       |

7715 S5BU-S

## HYDRAULIC ADAPTERS

- Double Ferule bite-type
- Material 316SS
- Metal to Metal

### TUBE NUT



STAINLESS  
STEEL

| Part #    | Tube<br>O.D | Thread<br>Size | List Price |
|-----------|-------------|----------------|------------|
| SSC318-2  | 1/8         | 5/16-24        | ----       |
| SSC318-4  | 1/4         | 7/16-20        | ----       |
| SSC318-6  | 3/8         | 9/16-18        | ----       |
| SSC318-8  | 1/2         | 3/4-16         | ----       |
| SSC318-12 | 3/4         | 1-1/16-12      | ----       |
| SSC318-16 | 1           | 1-5/16-12      | ----       |

### SLEEVE SET



STAINLESS  
STEEL

- Front and Back sold as a set

| Part #    | Tube O.D | List Price |
|-----------|----------|------------|
| SSC320-2  | 1/8      | ----       |
| SSC320-4  | 1/4      | ----       |
| SSC320-6  | 3/8      | ----       |
| SSC320-8  | 1/2      | ----       |
| SSC320-12 | 3/4      | ----       |
| SSC320-16 | 1        | ----       |

### TUBE UNION



STAINLESS  
STEEL

| Part #        | Tube Size | List Price |
|---------------|-----------|------------|
| SSC2403-4-4   | 1/4       | ----       |
| SSC2403-6-6   | 3/8       | ----       |
| SSC2403-8-8   | 1/2       | ----       |
| SSC2403-12-12 | 3/4       | ----       |
| SSC2403-16-16 | 1         | ----       |

- Reducers available upon request

**SS = Stainless Steel (316)**

## STAINLESS STEEL FLARELESS BITE-TYPE

### MALE CONNECTOR



STAINLESS  
STEEL

| Part #        | Tube<br>Size 1 | Male Pipe<br>Thread 2 | List Price |
|---------------|----------------|-----------------------|------------|
| SSC2404-4-2   | 1/4            | 1/8                   | ----       |
| SSC2404-4-4   | 1/4            | 1/4                   | ----       |
| SSC2404-4-8   | 1/4            | 1/2                   | ----       |
| SSC2404-6-4   | 3/8            | 1/4                   | ----       |
| SSC2404-6-6   | 3/8            | 3/8                   | ----       |
| SSC2404-6-8   | 3/8            | 1/2                   | ----       |
| SSC2404-8-8   | 1/2            | 1/2                   | ----       |
| SSC2404-12-12 | 3/4            | 3/4                   | ----       |
| SSC2404-16-16 | 1              | 1                     | ----       |

### FEMALE CONNECTOR



STAINLESS  
STEEL

| Part #        | Tube<br>O.D. 1 | Thread<br>Size 2 | List Price |
|---------------|----------------|------------------|------------|
| SSC2405-4-2   | 1/4            | 1/8              | ----       |
| SSC2405-4-4   | 1/4            | 1/4              | ----       |
| SSC2405-6-2   | 3/8            | 1/8              | ----       |
| SSC2405-6-6   | 3/8            | 3/8              | ----       |
| SSC2405-6-8   | 3/8            | 1/2              | ----       |
| SSC2405-8-4   | 1/2            | 1/4              | ----       |
| SSC2405-8-6   | 1/2            | 3/8              | ----       |
| SSC2405-8-8   | 1/2            | 1/2              | ----       |
| SSC2405-12-12 | 3/4            | 3/4              | ----       |
| SSC2405-16-16 | 1              | 1                | ----       |

### UNION ELBOW



STAINLESS  
STEEL

| Part #        | Tube Size | List Price |
|---------------|-----------|------------|
| SSC2500-2-2   | 1/8       | ----       |
| SSC2500-4-4   | 1/4       | ----       |
| SSC2500-6-6   | 3/8       | ----       |
| SSC2500-8-8   | 1/2       | ----       |
| SSC2500-12-12 | 3/4       | ----       |
| SSC2500-16-16 | 1         | ----       |

## STAINLESS STEEL BITE-TYPE

## MALE ELBOW

STAINLESS  
STEEL

| Part #        | Tube Size 1 | Male Pipe Size 2 | List Price |
|---------------|-------------|------------------|------------|
| SSC2501-4-2   | 1/4         | 1/8              | ----       |
| SSC2501-4-4   | 1/4         | 1/4              | ----       |
| SSC2501-6-2   | 3/8         | 1/8              | ----       |
| SSC2501-6-4   | 3/8         | 1/4              | ----       |
| SSC2501-6-6   | 3/8         | 3/8              | ----       |
| SSC2501-6-8   | 3/8         | 1/2              | ----       |
| SSC2501-8-4   | 1/2         | 1/4              | ----       |
| SSC2501-8-6   | 1/2         | 3/8              | ----       |
| SSC2501-8-8   | 1/2         | 1/2              | ----       |
| SSC2501-12-12 | 3/4         | 3/4              | ----       |
| SSC2501-16-16 | 1           | 1                | ----       |

## FEMALE ELBOW

STAINLESS  
STEEL

| Part #        | Tube Size 1 | Female Pipe Size 2 | List Price |
|---------------|-------------|--------------------|------------|
| SSC2502-4-4   | 1/4         | 1/4                | ----       |
| SSC2502-6-4   | 3/8         | 1/4                | ----       |
| SSC2502-6-6   | 3/8         | 3/8                | ----       |
| SSC2502-8-8   | 1/2         | 1/2                | ----       |
| SSC2502-12-12 | 3/4         | 3/4                | ----       |
| SSC2502-16-16 | 1           | 1                  | ----       |

## MALE BRANCH TEE

STAINLESS  
STEEL

| Part #      | Tube Size 1&2 | Pipe Thread Size 3 | List Price |
|-------------|---------------|--------------------|------------|
| SSC2601-2-2 | 1/8           | 1/8                | ----       |
| SSC2601-4-4 | 1/4           | 1/4                | ----       |
| SSC2601-6-4 | 3/8           | 1/4                | ----       |
| SSC2601-6-6 | 3/8           | 3/8                | ----       |
| SSC2601-8-8 | 1/2           | 1/2                | ----       |

## HYDRAULIC ADAPTERS

## UNION TEE

STAINLESS  
STEEL

| Part #        | Tube Size | List Price |
|---------------|-----------|------------|
| SSC2603-2-2   | 1/8       | ----       |
| SSC2603-4-4   | 1/4       | ----       |
| SSC2603-6-6   | 3/8       | ----       |
| SSC2603-8-8   | 1/2       | ----       |
| SSC2603-12-12 | 3/4       | ----       |
| SSC2603-16-16 | 1         | ----       |

## O-RING ELBOW CONNECTOR

SAE 080220

C5BU-SS

STAINLESS  
STEEL

| Part #        | Tube Size 1 | O-Ring Thread Size 2 | List Price |
|---------------|-------------|----------------------|------------|
| SSC6801-4-4   | 1/4         | 7/16-20              | ----       |
| SSC6801-6-6   | 3/8         | 9/16-18              | ----       |
| SSC6801-8-8   | 1/2         | 3/4-16               | ----       |
| SSC6801-12-12 | 3/4         | 1-1/16-12            | ----       |
| SSC6801-16-16 | 1           | 1-5/16-12            | ----       |

## HYDRAULIC ADAPTERS

## QUICK DISCONNECT



- Brass Body
- Steel Wing Nut
- Buna-Seal ( -40° to +250°F)

Aeroquip 5100  
Parker 6100  
Snaptite B78



- Bonded Face Seal
- External ORing Alleviates Full Connection

| Part # | Body Size | Female NPT | Max PSI | List Price |
|--------|-----------|------------|---------|------------|
| 61-150 | 3/4       | 1/2        | 3000    | ----       |
| 61-152 | 3/4       | 3/4        | 3000    | ----       |
| 61-153 | 1         | 1          | 3000    | ----       |
| 61-154 | 1-1/4     | 1-1/4      | 2750    | ----       |
| 61-155 | 1-1/2     | 1-1/2      | 2500    | ----       |

| Part # | Body Size | Female NPT | Max PSI | List Price |
|--------|-----------|------------|---------|------------|
| 61-050 | 3/4       | 1/2        | 3000    | ----       |
| 61-052 | 3/4       | 3/4        | 3000    | ----       |
| 61-053 | 1         | 1          | 3000    | ----       |
| 61-054 | 1-1/4     | 1-1/4      | 2750    | ----       |
| 61-055 | 1-1/2     | 1-1/2      | 2500    | ----       |

### FEATURES - ISO A and ISO B

- Poppet valves to prevent uncoupled leakage
- Critical parts are induction hardened for durability
- Dependable ball-locking mechanism holds the mating halves together
- Socket and plug are precision machined from solid barstock
- Standard nitrile seals temp range -40°F to +250°F

| ISO 7241-1 ISO-A Interchange ( Connected ) |                     |     |        |       |
|--------------------------------------------|---------------------|-----|--------|-------|
| Body Size                                  | Steel Coupler/ Plug |     |        |       |
|                                            | Maximum Working     |     | Burst  |       |
|                                            | PSI                 | Bar | PSI    | Bar   |
| 1/4"                                       | 5,000               | 345 | 18,270 | 1,200 |
| 3/8"                                       | 4,000               | 275 | 18,270 | 1,200 |
| 1/2"                                       | 4,000               | 275 | 16,500 | 1,100 |
| 3/4"                                       | 4,000               | 275 | 14,800 | 1,000 |
| 1"                                         | 4,000               | 275 | 12,400 | 850   |

### INTERCHANGE DATA:

- Parker 6600, Aeroquip/ Eaton FD56, Dixon 'K' Series.
- Hansen HA 15000, Safeway S56

| ISO 7241-1 Series B ISO-B Interchange ( Connected ) |                     |     |        |       |                     |     |        |       |
|-----------------------------------------------------|---------------------|-----|--------|-------|---------------------|-----|--------|-------|
| Body Size                                           | Steel Coupler/ Plug |     |        |       | Brass Coupler/ Plug |     |        |       |
|                                                     | Max. Working        |     | Burst  |       | Max. Working        |     | Burst  |       |
|                                                     | PSI                 | Bar | PSI    | Bar   | PSI                 | Bar | PSI    | Bar   |
| 1/4"                                                | 5,000               | 345 | 22,500 | 1,550 | 3,000               | 200 | 15,000 | 1,000 |
| 3/8"                                                | 4,000               | 275 | 16,500 | 1,150 | 2,500               | 175 | 12,000 | 800   |
| 1/2"                                                | 4,000               | 275 | 16,000 | 1,100 | 2,500               | 175 | 11,500 | 750   |
| 3/4"                                                | 4,000               | 275 | 16,500 | 1,150 | 2,000               | 150 | 12,000 | 800   |
| 1"                                                  | 4,000               | 275 | 16,000 | 1,100 | 1,500               | 100 | 8,500  | 800   |

### INTERCHANGE DATA:

- Parker 60 Series, Snap-tite 72 series, Dixon 'H' series
- Hansen HK - series, Aeroquip/ Eaton FDH5

### B=BRASS



BRASS - HNV SERIES PLUG



BRASS - HNV SERIES COUPLER

### ISO-A FEMALE PIPE COUPLER

| Part #   | Body Size | NPT  | List Price |
|----------|-----------|------|------------|
| ANV-14-F | 1/4"      | 1/4" | ----       |
| ANV-38-F | 3/8"      | 3/8" | ----       |
| ANV-12-F | 1/2"      | 1/2" | ----       |
| ANV-34-F | 3/4"      | 3/4" | ----       |
| ANV-1-F  | 1"        | 1"   | ----       |

### ISO-A FEMALE PIPE PLUG

| Part #   | Body Size | NPT  | List Price |
|----------|-----------|------|------------|
| ANV-14-M | 1/4"      | 1/4" | ----       |
| ANV-38-M | 3/8"      | 3/8" | ----       |
| ANV-12-M | 1/2"      | 1/2" | ----       |
| ANV-34-M | 3/4"      | 3/4" | ----       |
| ANV-1-M  | 1"        | 1"   | ----       |

### ISO-B FEMALE PIPE COUPLER

| Part #     | Body Size | NPT  | List Price |
|------------|-----------|------|------------|
| HNV-14-F   | 1/4"      | 1/4" | ----       |
| HNV-14-F-B | 1/4"      | 1/4" | ----       |
| HNV-38-F   | 3/8"      | 3/8" | ----       |
| HNV-38-F-B | 3/8"      | 3/8" | ----       |
| HNV-12-F   | 1/2"      | 1/2" | ----       |
| HNV-12-F-B | 1/2"      | 1/2" | ----       |
| HNV-34-F   | 3/4"      | 3/4" | ----       |
| HNV-34-F-B | 3/4"      | 3/4" | ----       |
| HNV-1-F    | 1"        | 1"   | ----       |
| HNV-1-F-B  | 1"        | 1"   | ----       |

### ISO-B FEMALE PIPE PLUG

| Part #     | Body Size | NPT  | List Price |
|------------|-----------|------|------------|
| HNV-14-M   | 1/4"      | 1/4" | ----       |
| HNV-14-M-B | 1/4"      | 1/4" | ----       |
| HNV-38-M   | 3/8"      | 3/8" | ----       |
| HNV-38-M-B | 3/8"      | 3/8" | ----       |
| HNV-12-M   | 1/2"      | 1/2" | ----       |
| HNV-12-M-B | 1/2"      | 1/2" | ----       |
| HNV-34-M   | 3/4"      | 3/4" | ----       |
| HNV-34-M-B | 3/4"      | 3/4" | ----       |
| HNV-1-M    | 1"        | 1"   | ----       |
| HNV-1-M-B  | 1"        | 1"   | ----       |

## QUICK DISCONNECT

## HYDRAULIC ADAPTERS

### FEATURES

- Steel construction, zinc plated trivalent finish. Hardened Nipples and sleeves and solid barstock construction for maximum resistance to damage from hydraulic and mechanical shock.
- This Anti-Blowout Nitrile/ PTFE bonded seal is designed to prevent blow out or damage during severe service conditions.
- Durable ball-locking mechanism assures reliable connection everytime.
- Temp Range -65° to +250°

### ISO 16028

| Body Size | FLUSH FACE                  |     |        |       |
|-----------|-----------------------------|-----|--------|-------|
|           | Steel Coupler/ Plug Coupled |     |        |       |
|           | Maximum Working             |     | Burst  |       |
|           | PSI                         | Bar | PSI    | Bar   |
| 1/4"      | 5,000                       | 345 | 18,270 | 1,200 |
| 3/8"      | 4,000                       | 275 | 18,270 | 1,200 |
| 1/2"      | 4,000                       | 275 | 16,500 | 1,100 |
| 5/8"      | 4,000                       | 275 | 14,800 | 1,000 |
| 3/4"      | 4,000                       | 275 | 12,400 | 850   |
| 1"        | 3,000                       | 200 | 12,600 | 850   |

FF Series  
HTMC  
74C



### FEMALE PIPE COUPLER

| Part #    | Body Size | NPT  | List Price |
|-----------|-----------|------|------------|
| FF-14-F   | 1/4"      | 1/4" | ----       |
| FF-38-F   | 3/8"      | 3/8" | ----       |
| FF-12-F   | 1/2"      | 1/2" | ----       |
| FF-3812-F | 3/8"      | 1/2" | ----       |
| FF-1234-F | 1/2"      | 3/4" | ----       |
| FF-3416-F | 3/4"      | 1"   | ----       |
| FF-34-F   | 3/4"      | 3/4" | ----       |
| FF-1-F    | 1"        | 1"   | ----       |

FF Series  
HTMN  
74N



### FEMALE PIPE PLUG

| Part #    | Body Size | NPT  | List Price |
|-----------|-----------|------|------------|
| FF-14-M   | 1/4"      | 1/4" | ----       |
| FF-38-M   | 3/8"      | 3/8" | ----       |
| FF-12-M   | 1/2"      | 1/2" | ----       |
| FF-3812-M | 3/8"      | 1/2" | ----       |
| FF-1234-M | 1/2"      | 3/4" | ----       |
| FF-3416-M | 3/4"      | 1"   | ----       |
| FF-34-M   | 3/4"      | 3/4" | ----       |
| FF-1-M    | 1"        | 1"   | ----       |

## FLAT FACE THREAD LOCK - VEP QUICK COUPLING

### APPLICATIONS

- Widely used in public equipment
- Portable construction equipment.
- Hydraulic tools
- Vehicles

### FEATURES

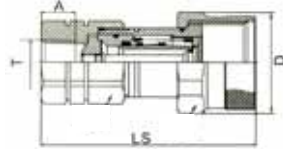
- New valve design provides better resistance from high flow and the pressure of impulse, thus providing advanced performance.
- Special nipple design for connecting under pressure, allows connection and disconnection with high residual pressures.
- The LSQ-VEP series employs a threaded sleeve locking mechanism, mates with matching male threads on the coupler.
- New plating treatment provides advanced anti-rust performance.
- LSQ-VEP series couplings employ flush valving when connecting or disconnecting, therefore only a small amount of fluid can be lost during disconnecting or air inclusion during reconnection.
- The Anti-Blowout bonded seal is designed to prevent blow-out or damage during severe service conditions.
- Machined form solid steel barstock for durability. Compatible with most other VEP series.
- O-Ring SAE Boss Thread available with import lead time (same list price)

### SPECIFICATIONS

| Body Size (in)       | 1/2(12)      | 3/4(34) | 1(1) | 1-1/2(24) |
|----------------------|--------------|---------|------|-----------|
| Rated Pressure (PSI) | 7000         | 7000    | 6000 | 5000      |
| Rated Flow (GPM)     | 12           | 50      | 88   | 152       |
| Temperature Range    | -20°C +120°C |         |      |           |

Standard seal material is **NBR**

Test Fluid-Oil = 200 SUS

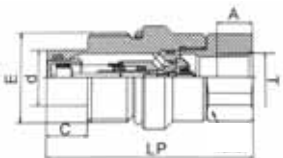


### FEMALE COUPLER

| Part #        | LS   | D    | A    | NPT   | List Price |
|---------------|------|------|------|-------|------------|
| LSQ-VEP-12-SF | 4.09 | 1.13 | 0.67 | 1/2   | ----       |
| LSQ-VEP-34-SF | 4.49 | 2.13 | 0.79 | 3/4   | ----       |
| LSQ-VEP-1-SF  | 5.28 | 2.33 | 0.83 | 1     | ----       |
| LSQ-VEP-20-SF | 5.71 | 2.72 | 0.83 | 1-1/4 | ----       |
| LSQ-VEP-24-SF | 7.41 | 3.63 | 0.83 | 1-1/2 | ----       |

### FEMALE PLUG

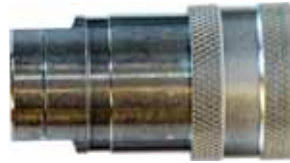
| Part #        | LS   | D    | A    | NPT   | List Price |
|---------------|------|------|------|-------|------------|
| LSQ-VEP-12-PF | 4.09 | 1.13 | 0.67 | 1/2   | ----       |
| LSQ-VEP-34-PF | 4.49 | 2.13 | 0.79 | 3/4   | ----       |
| LSQ-VEP-1-PF  | 5.28 | 2.33 | 0.83 | 1     | ----       |
| LSQ-VEP-20-PF | 5.71 | 2.72 | 0.83 | 1-1/4 | ----       |
| LSQ-VEP-24-PF | 7.41 | 3.63 | 0.83 | 1-1/2 | ----       |



## AG - Series Agricultural Interchange ( Connected )

| Nominal Size | Steel Coupler/ Plug |     |        |       |
|--------------|---------------------|-----|--------|-------|
|              | Maximum Working     |     | Burst  |       |
|              | PSI                 | Bar | PSI    | Bar   |
| 1/4"         | 4,000               | 275 | 21,000 | 1,500 |
| 3/8"         | 4,000               | 275 | 23,100 | 1,600 |
| 1/2"         | 4,000               | 275 | 16,500 | 1,100 |
| 3/4"         | 3,000               | 200 | 10,300 | 700   |
| 1"           | 3,000               | 200 | 13,000 | 900   |

## Snap-Tite 60 Series



### FEMALE PIPE COUPLER

| Part #  | Body Size | NPT  | List Price |
|---------|-----------|------|------------|
| NV-14-F | 1/4"      | 1/4" | ----       |
| NV-38-F | 3/8"      | 3/8" | ----       |
| NV-12-F | 1/2"      | 1/2" | ----       |
| NV-34-F | 3/4"      | 3/4" | ----       |
| NV-1-F  | 1"        | 1"   | ----       |

### FEMALE PIPE PLUG

| Part #  | Body Size | NPT  | List Price |
|---------|-----------|------|------------|
| NV-14-M | 1/4"      | 1/4" | ----       |
| NV-38-M | 3/8"      | 3/8" | ----       |
| NV-12-M | 1/2"      | 1/2" | ----       |
| NV-34-M | 3/4"      | 3/4" | ----       |
| NV-1-M  | 1"        | 1"   | ----       |

### FEATURES

- Heavy duty heat treated poppet: valves are standard with rugged, specially-designed seals made of nitrite for leak-free performance in the toughest application.
- High-strength steel valve guides designed for high flow rates and made extra tough for agricultural service.
- Dependable hardened chrome alloy steel locking balls. Heat treated plugs and sleeves.
- Standard seals temp range -40°F to +250°F

## THREAD LOCK HYDRAULIC JACK COUPLING

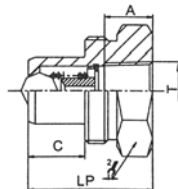
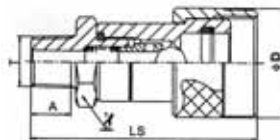
### SPECIFICATIONS

|                   |              |         |
|-------------------|--------------|---------|
| Body Size         | 1/4(14)      | 3/8(38) |
| Rated Pressure    | 10,000       |         |
| Rated Flow (GPM)  | 3            | 6       |
| Temperature Range | -20°C +120°C |         |

Standard seal material is **NBR**

### APPLICATIONS

- Thread lock couplings with their threaded union locking system and precision ball-type check valves are designed for extreme high pressure applications such as portable hydraulic jacks.
- **Ball Type.**



### MALE COUPLER

| Part #      | LS   | D    | Hex  | A    | NPT | List Price |
|-------------|------|------|------|------|-----|------------|
| KZE-B-14-SM | 2.40 | 1.14 | 0.87 | 0.55 | 1/4 | ----       |
| KZE-B-38-SM | 2.91 | 1.38 | 0.98 | 0.57 | 3/8 | ----       |

### FEMALE COUPLER

| Part #      | LS   | D    | Hex  | A    | NPT | List Price |
|-------------|------|------|------|------|-----|------------|
| KZE-B-14-PF | 1.30 | 0.44 | 0.75 | 0.51 | 1/4 | ----       |
| KZE-B-38-PF | 1.38 | 0.63 | 1.26 | 0.55 | 3/8 | ----       |

**DIN 2353 METRIC****HYDRAULIC ADAPTERS****TUBE PLUG - INSERT /NUT**

| Part #   | Tube 1 -<br>MM | Size 2    | List<br>Price |
|----------|----------------|-----------|---------------|
| 8003-L06 | 6              | M12 X 1.5 | ----          |
| 8003-L08 | 8              | M14 X 1.5 | ----          |
| 8003-L10 | 10             | M16 X 1.5 | ----          |
| 8003-L12 | 12             | M18 X 1.5 | ----          |
| 8003-L15 | 15             | M22 X 1.5 | ----          |
| 8003-L18 | 18             | M26 X 1.5 | ----          |
| 8003-L22 | 22             | M30 X 2.0 | ----          |
| 8003-L28 | 28             | M36 X 2.0 | ----          |
| 8003-L35 | 35             | M45 X 2.0 | ----          |
| 8003-L42 | 42             | M52 X 2.0 | ----          |
| 8003-S06 | 6              | M14 X 1.5 | ----          |
| 8003-S08 | 8              | M16 X 1.5 | ----          |
| 8003-S10 | 10             | M18 X 1.5 | ----          |
| 8003-S12 | 12             | M22 X 1.5 | ----          |
| 8003-S16 | 16             | M26 X 1.5 | ----          |
| 8003-S20 | 20             | M30 X 2.0 | ----          |
| 8003-S25 | 25             | M36 X 2.0 | ----          |
| 8003-S30 | 30             | M45 X 2.0 | ----          |
| 8003-S38 | 38             | M52 X 2.0 | ----          |

**TUBE CAP 24° INNER CORE**

| Part #   | Tube 1 -<br>MM | Size 2    | List<br>Price |
|----------|----------------|-----------|---------------|
| 8004-L08 | 8              | M14 X 1.5 | ----          |
| 8004-L10 | 10             | M16 X 1.5 | ----          |
| 8004-L12 | 12             | M18 X 1.5 | ----          |
| 8004-L15 | 15             | M22 X 1.5 | ----          |
| 8004-L18 | 18             | M26 X 1.5 | ----          |
| 8004-L22 | 22             | M30 X 2.0 | ----          |
| 8004-L28 | 28             | M36 X 2.0 | ----          |
| 8004-S06 | 6              | M14 X 1.5 | ----          |
| 8004-S08 | 8              | M16 X 1.5 | ----          |
| 8004-S10 | 10             | M18 X 1.5 | ----          |
| 8004-S12 | 12             | M22 X 1.5 | ----          |
| 8004-S16 | 16             | M26 X 1.5 | ----          |
| 8004-S20 | 20             | M30 X 2.0 | ----          |

**PARALLELL MALE STUD COUPLING**

| Part #      | Tube 1 -<br>MM | Size 2    | List<br>Price |
|-------------|----------------|-----------|---------------|
| 8031-L06-10 | 6              | M10 X 1.0 | ----          |
| 8031-L08-12 | 8              | M12 X 1.5 | ----          |
| 8031-L10-14 | 10             | M14 X 1.5 | ----          |
| 8031-L12-16 | 12             | M16 X 1.5 | ----          |
| 8031-L15-18 | 15             | M18 X 1.5 | ----          |
| 8031-L18-22 | 18             | M22 X 1.5 | ----          |
| 8031-L22-26 | 22             | M26 X 1.5 | ----          |
| 8031-L28-33 | 28             | M33 X 2.0 | ----          |
| 8031-L35-42 | 35             | M42 X 2.0 | ----          |
| 8031-L42-48 | 42             | M48 X 2.0 | ----          |
| 8031-S06-12 | 6              | M12 X 1.5 | ----          |
| 8031-S08-14 | 8              | M14 X 1.5 | ----          |
| 8031-S10-16 | 10             | M16 X 1.5 | ----          |
| 8031-S12-18 | 12             | M18 X 1.5 | ----          |
| 8031-S16-22 | 16             | M22 X 1.5 | ----          |
| 8031-S20-27 | 20             | M27 X 2.0 | ----          |
| 8031-S25-33 | 25             | M33 X 2.0 | ----          |
| 8031-S30-42 | 30             | M42 X 2.0 | ----          |
| 8031-S38-48 | 38             | M48 X 2.0 | ----          |

**DIN MALE STUD BSPP**

| Part #      | Tube 1 -<br>MM | Size 2<br>BSPP | List<br>Price |
|-------------|----------------|----------------|---------------|
| 8046-L08-04 | 8              | 1/4            | ----          |
| 8046-L10-04 | 10             | 1/4            | ----          |
| 8046-L12-06 | 12             | 3/8            | ----          |
| 8046-L15-08 | 15             | 1/2            | ----          |
| 8046-L22-12 | 22             | 3/4            | ----          |
| 8046-L28-16 | 28             | 1-1/8          | ----          |
| 8046-L35-20 | 35             | 1-1/4          | ----          |
| 8046-L42-24 | 42             | 1-1/2          | ----          |
| 8046-S10-06 | 10             | 1/4            | ----          |
| 8046-S12-06 | 12             | 3/8            | ----          |
| 8046-S16-08 | 16             | 1/2            | ----          |
| 8046-S20-12 | 20             | 3/4            | ----          |

L = LIGHT PATTERN S = HEAVY PATTERN

## UNION COUPLING



| Part #      | Tube 1 -<br>MM | Tube 2 -<br>MM | List<br>Price |
|-------------|----------------|----------------|---------------|
| 8060-L08-08 | 8              | 8              | ----          |
| 8060-L10-10 | 10             | 10             | ----          |
| 8060-L12-12 | 12             | 12             | ----          |
| 8060-L15-15 | 15             | 15             | ----          |
| 8060-L18-18 | 18             | 18             | ----          |
| 8060-L22-22 | 22             | 22             | ----          |
| 8060-L28-28 | 28             | 28             | ----          |
| 8060-L35-35 | 35             | 35             | ----          |
| 8060-L42-42 | 42             | 42             | ----          |
| 8060-S06-06 | 6              | 6              | ----          |
| 8060-S08-08 | 8              | 8              | ----          |
| 8060-S10-10 | 10             | 10             | ----          |
| 8060-S12-12 | 12             | 12             | ----          |
| 8060-S16-16 | 16             | 16             | ----          |
| 8060-S20-20 | 20             | 20             | ----          |
| 8060-S25-25 | 25             | 25             | ----          |
| 8060-S30-30 | 30             | 30             | ----          |

## BULKHEAD STRAIGHT COUPLING



| Part #         | Tube 1 -<br>MM | Tube 2 -<br>MM | List Price |
|----------------|----------------|----------------|------------|
| 8061-LN-L08-08 | 8              | 8              | ----       |
| 8061-LN-L10-10 | 10             | 10             | ----       |
| 8061-LN-L12-12 | 12             | 12             | ----       |
| 8061-LN-L15-15 | 15             | 15             | ----       |
| 8061-LN-L18-18 | 18             | 18             | ----       |
| 8061-LN-L22-22 | 22             | 22             | ----       |
| 8061-LN-L28-28 | 28             | 28             | ----       |
| 8061-LN-L35-35 | 35             | 35             | ----       |
| 8061-LN-L42-42 | 42             | 42             | ----       |
| 8061-LN-S06-06 | 6              | 6              | ----       |
| 8061-LN-S08-08 | 8              | 8              | ----       |
| 8061-LN-S10-10 | 10             | 10             | ----       |
| 8061-LN-S12-12 | 12             | 12             | ----       |
| 8061-LN-S16-16 | 16             | 16             | ----       |
| 8061-LN-S20-20 | 20             | 20             | ----       |
| 8061-LN-S25-25 | 25             | 25             | ----       |
| 8061-LN-S30-30 | 30             | 30             | ----       |
| 8061-LN-S38-38 | 38             | 38             | ----       |

## UNION ELBOW



| Part #      | Tube 1 -<br>MM | Tube 2 -<br>MM | List<br>Price |
|-------------|----------------|----------------|---------------|
| 8260-L08-08 | 8              | 8              | ----          |
| 8260-L10-10 | 10             | 10             | ----          |
| 8260-L12-12 | 12             | 12             | ----          |
| 8260-L15-15 | 15             | 15             | ----          |
| 8260-L18-18 | 18             | 18             | ----          |
| 8260-L22-22 | 22             | 22             | ----          |
| 8260-L28-28 | 28             | 28             | ----          |
| 8260-L35-35 | 35             | 35             | ----          |
| 8260-L42-42 | 42             | 42             | ----          |
| 8260-S06-06 | 6              | 6              | ----          |
| 8260-S08-08 | 8              | 8              | ----          |
| 8260-S10-10 | 10             | 10             | ----          |
| 8260-S12-12 | 12             | 12             | ----          |
| 8260-S16-16 | 16             | 16             | ----          |
| 8260-S20-20 | 20             | 20             | ----          |
| 8260-S25-25 | 25             | 25             | ----          |
| 8260-S30-30 | 30             | 30             | ----          |
| 8260-S38-38 | 38             | 38             | ----          |

## DIN SWIVEL NUT ELBOW



| Part #      | Tube<br>1 - MM | Tube<br>2 - MM | DIN 3     | List<br>Price |
|-------------|----------------|----------------|-----------|---------------|
| 8263-L08-08 | 8              | 8              | M14 X 1.5 | ----          |
| 8263-L12-12 | 12             | 12             | M18 X 1.5 | ----          |
| 8263-L15-15 | 15             | 15             | M22 X 1.5 | ----          |
| 8263-L22-22 | 22             | 22             | M30 X 2.0 | ----          |
| 8263-L28-28 | 28             | 28             | M36 X 2.0 | ----          |
| 8263-L35-35 | 35             | 35             | M45 X 2.0 | ----          |
| 8263-S08-08 | 8              | 8              | M16 X 1.5 | ----          |
| 8263-S12-12 | 12             | 12             | M20 X 1.5 | ----          |
| 8263-S16-16 | 16             | 16             | M24 X 1.5 | ----          |
| 8263-S20-20 | 20             | 20             | M30 X 2.0 | ----          |
| 8263-S25-25 | 25             | 25             | M36 X 2.0 | ----          |
| 8263-S30-30 | 30             | 30             | M42 X 2.0 | ----          |
| 8263-S38-38 | 38             | 38             | M52 X 2.0 | ----          |

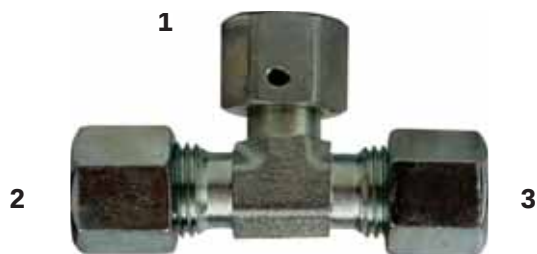
L = LIGHT PATTERN S = HEAVY PATTERN

**DIN 2353 METRIC****HYDRAULIC ADAPTERS****UNION TEE**

| Part #         | Tube 1 -<br>MM | Tube 2 -<br>MM | Tube 3 -<br>MM | List<br>Price |
|----------------|----------------|----------------|----------------|---------------|
| 8360-L06-06-06 | 6              | 6              | 6              | ----          |
| 8360-L08-08-08 | 8              | 8              | 8              | ----          |
| 8360-L10-10-10 | 10             | 10             | 10             | ----          |
| 8360-L12-12-12 | 12             | 12             | 12             | ----          |
| 8360-L15-15-15 | 15             | 15             | 15             | ----          |
| 8360-L18-18-18 | 18             | 18             | 18             | ----          |
| 8360-L22-22-22 | 22             | 22             | 22             | ----          |
| 8360-L28-28-28 | 28             | 28             | 28             | ----          |
| 8360-L35-35-35 | 35             | 35             | 35             | ----          |
| 8360-L42-42-42 | 42             | 42             | 42             | ----          |
| 8360-S06-06-06 | 6              | 6              | 6              | ----          |
| 8360-S08-08-08 | 8              | 8              | 8              | ----          |
| 8360-S10-10-10 | 10             | 10             | 10             | ----          |
| 8360-S12-12-12 | 12             | 12             | 12             | ----          |
| 8360-S16-16-16 | 16             | 16             | 16             | ----          |
| 8360-S20-20-20 | 20             | 20             | 20             | ----          |
| 8360-S25-25-25 | 25             | 25             | 25             | ----          |
| 8360-S30-30-30 | 30             | 30             | 30             | ----          |
| 8360-S38-38-38 | 38             | 38             | 38             | ----          |

**DIN SWIVEL NUT BRANCH TEE**

| Part #         | Tube 1, 3<br>THREAD | DIN - 2   | List<br>Price |
|----------------|---------------------|-----------|---------------|
| 8563-L08-08-08 | 8                   | M14 X 1.5 | ----          |
| 8563-L10-10-10 | 10                  | M16 X 1.5 | ----          |
| 8563-L12-12-12 | 12                  | M18 X 1.5 | ----          |
| 8563-L15-15-15 | 15                  | M22 X 1.5 | ----          |
| 8563-L18-18-18 | 18                  | M26 X 1.5 | ----          |
| 8563-L22-22-22 | 22                  | M30 X 2.0 | ----          |
| 8563-L28-28-28 | 28                  | M36 X 2.0 | ----          |
| 8563-L35-35-35 | 35                  | M45 X 2.0 | ----          |
| 8563-S08-08-08 | 8                   | M16 X 1.5 | ----          |
| 8563-S10-10-10 | 10                  | M18 X 1.5 | ----          |
| 8563-S12-12-12 | 12                  | M20 X 1.5 | ----          |
| 8563-S16-16-16 | 16                  | M24 X 1.5 | ----          |
| 8563-S25-25-25 | 25                  | M36 X 2.0 | ----          |
| 8563-S30-30-30 | 30                  | M42 X 2.0 | ----          |
| 8563-S38-38-38 | 38                  | M52 X 2.0 | ----          |

**DIN SWIVEL NUT RUN TEE**

| Part #         | Tube 1, 2, 3 -<br>MM | DIN<br>THREAD | List<br>Price |
|----------------|----------------------|---------------|---------------|
| 8469-L08-08-08 | 8                    | M14 X 1.5     | ----          |
| 8469-L10-10-10 | 10                   | M16 X 1.5     | ----          |
| 8469-L12-12-12 | 12                   | M18 X 1.5     | ----          |
| 8469-L15-15-15 | 15                   | M22 X 1.5     | ----          |
| 8469-L18-18-18 | 18                   | M26 X 1.5     | ----          |
| 8469-L22-22-22 | 22                   | M30 X 2.0     | ----          |
| 8469-L28-28-28 | 28                   | M36 X 2.0     | ----          |
| 8469-L35-35-35 | 35                   | M45 X 2.0     | ----          |
| 8469-L42-42-42 | 42                   | M52 X 2.0     | ----          |
| 8469-S08-08-08 | 8                    | M16 X 1.5     | ----          |
| 8469-S10-10-10 | 10                   | M18 X 1.5     | ----          |
| 8469-S12-12-12 | 12                   | M20 X 1.5     | ----          |
| 8469-S16-16-16 | 16                   | M24 X 1.5     | ----          |
| 8469-S20-20-20 | 20                   | M30 X 2.0     | ----          |
| 8469-S25-25-25 | 25                   | M36 X 2.0     | ----          |
| 8469-S30-30-30 | 30                   | M42 X 2.0     | ----          |
| 8469-S38-38-38 | 38                   | M52 X 2.0     | ----          |

L = LIGHT PATTERN    S = HEAVY PATTERN

(Charlynn 101 / Danfoss DH / White HS / Parker ME-MB-TE-TJ / -RR-USA HP)

The MMPH series gear set, shaft distribution flow, hydraulic motor is a compact, high efficient, low speed high torque design which can be used in either parallel or series systems.



| Part #                                          |       | MMPH50         | MMPH80         | MMPH100       | MMPH125      | MMPH160      | MMPH200       | MMPH250       | MMPH315     | MMPH400       |
|-------------------------------------------------|-------|----------------|----------------|---------------|--------------|--------------|---------------|---------------|-------------|---------------|
| List Price                                      |       | ----           | ----           | ----          | ----         | ----         | ----          | ----          | ----        | ----          |
| Displacement<br>cm <sup>3</sup> /rev(cu.in/rev) |       | 51.7<br>(3.15) | 77.7<br>(4.75) | 96.2<br>(5.9) | 118<br>(7.2) | 156<br>(9.5) | 190<br>(11.6) | 231<br>(14.1) | 312<br>(19) | 387<br>(23.6) |
| Max Speed rpm                                   | Cont. | 880            | 740            | 590           | 475          | 370          | 295           | 240           | 190         | 150           |
|                                                 | Int.  | 975            | 825            | 675           | 595          | 465          | 370           | 295           | 235         | 185           |
| Max Torque<br>NW (in.lbs)                       | Cont. | 81 (717)       | 129(1140)      | 161(1425)     | 202(1790)    | 245(2170)    | 286(2530)     | 360(3185)     | 406(3575)   | 435(3850)     |
|                                                 | Int.  | 108(956)       | 171(1514)      | 213(1885)     | 268(2372)    | 342(3026)    | 390(3450)     | 456(4035)     | 505(4470)   | 533(4717)     |
| Max performance<br>KW/ (HP)                     | Cont. | 7(9.4)         | 9.1(12.2)      | 9(12.1)       | 9.1(12.2)    | 8.7(11.65)   | 8.1(10.85)    | 8.2(11)       | 7.2(9.7)    | 6.1(8.2)      |
|                                                 | Int.  | 8.9(12)        | 11.8(15.8)     | 11.9(15.95)   | 11.8(15.8)   | 11.9(15.95)  | 10.9(14.7)    | 10.1(13.5)    | 8.6(11.5)   | 7.2(9.65)     |
| Max Differential<br>Mpa/ (PSI)                  | Cont. | 12.5(1840)     | 12.5(1840)     | 12.5(1840)    | 12.5(1840)   | 12.5(1840)   | 11(1625)      | 11(1625)      | 11(1625)    | 10(1450)      |
|                                                 | Int.  | 16.5(2425)     | 16.5(2425)     | 16.5(2425)    | 16.5(2425)   | 16.5(2425)   | 16.5(2425)    | 14(2060)      | 12.5(1840)  | 10.5(1540)    |
| Max flow<br>L/min. / (gpm)                      | Cont. | 45(11.85)      | 60(15.8)       | 60(15.8)      | 60(15.8)     | 60(15.8)     | 60(15.8)      | 60(15.8)      | 60(15.8)    | 60(15.8)      |
|                                                 | Int.  | 50(13.15)      | 75(19.75)      | 75(19.75)     | 75(19.75)    | 75(19.75)    | 75(19.75)     | 75(19.75)     | 75(19.75)   | 75(19.75)     |
| Weight                                          | lb.   | 5.6            | 5.7            | 5.9           | 6            | 6.2          | 6.4           | 6.6           | 6.9         | 7.4           |

## ORDERING INFORMATION

| MMPH           | 50                           | H2                      | K                       | P                       |
|----------------|------------------------------|-------------------------|-------------------------|-------------------------|
| MODEL SERIES   | FRAME SIZE                   | MOUNTING<br>FLANGE TYPE | DRIVE SHAFT             | PORT SIZE               |
| MMPH (GEROTOR) | (cu.in/rev)                  |                         | K - 1 Inch Woodruff Key | P - 1/2 NPTF            |
| MMRS (GEROTOR) | <b>MMPH</b> <b>MMRS</b>      | H4 - 4 Bolt             | S - SAE - 6B Spline     | S - 7/8-14 SAE "O" Ring |
|                | 50 (3.15)      50 (3.13)     | H2 - SAE "A" 2 Bolt     | H - 1 Inch parallel     | F - Manifold            |
|                | 80 (4.74)      80 (4.92)     | H6 - Magneto            | 0.40 dia. crosshole     |                         |
|                | 100 (5.87)      100 (6.15)   |                         | H1 - 1 Inch parallel    |                         |
|                | 125 (7.19)      125 (7.62)   |                         | 0.31 dia. crosshole     |                         |
|                | 160 (9.49)      160 (9.59)   |                         |                         |                         |
|                | 200 (11.59)      200 (12.15) |                         |                         |                         |
|                | 250 (15.25)      250 (15.38) |                         |                         |                         |
|                | 315 (19.02)      315 (19.2)  |                         |                         |                         |
|                | 400 (23.57)      375 (22.58) |                         |                         |                         |

(Charlynn 103 &amp; 158 / Danfoss DS / Parker ME-MB-TE-TJ / RR-USA HR)

The MMRS series advanced gear set, shaft distribution flow, hydraulic motor is a compact, low noise, highly efficient torque low speed design. The gear set also affords a reliable smooth start-up at low pressure. The special design of the drive linkage and high pressure capability of the shaft seal provides a long life and these motors can be used in either series or parallel operation.



| Part #                                          |       | MMRS50         | MMRS80         | MMRS100         | MMRS125         | MMRS160         | MMRS200          | MMRS250        | MMRS315         | MMRS375        |
|-------------------------------------------------|-------|----------------|----------------|-----------------|-----------------|-----------------|------------------|----------------|-----------------|----------------|
| List Price                                      |       | ----           | ----           | ----            | ----            | ----            | ----             | ----           | ----            | ----           |
| Displacement<br>cm <sup>3</sup> /rev(cu.in/rev) |       | 51.3<br>(3.13) | 80.6<br>(4.92) | 100.8<br>(6.15) | 124.9<br>(7.62) | 157.2<br>(9.59) | 199.2<br>(12.15) | 252<br>(15.38) | 314.5<br>(19.2) | 370<br>(22.58) |
| Max Speed rpm                                   | Rated | 755            | 750            | 600             | 475             | 375             | 300              | 240            | 190             | 160            |
|                                                 | Cont. | 970            | 940            | 750             | 600             | 470             | 375              | 300            | 240             | 200            |
| Max Torque<br>NW (in.lbs)                       | Cont. | 100(885)       | 190(1682)      | 240(2124)       | 292(2584)       | 363(3273)       | 358(3168)        | 352(3115)      | 360(3186)       | 420(3717)      |
|                                                 | Int.  | 126(1115)      | 220(1947)      | 280(2478)       | 340(3010)       | 430(3806)       | 448(3965)        | 470(4159)      | 470(4159)       | 548(4850)      |
| Max performance<br>KW/ (HP)                     | Cont. | 7.7(10.3)      | 15(20.10)      | 15(20.10)       | 14(18.75)       | 14(18.75)       | 11(14.75)        | 9(12.10)       | 7.2(9.7)        | 6.1(8.2)       |
|                                                 | Int.  | 9.7(13)        | 17(22.8)       | 17(22.8)        | 16(21.45)       | 16(21.45)       | 14(18.75)        | 12(16.10)      | 9(12.10)        | 12(16.10)      |
| Max Differential<br>Mpa/ (PSI)                  | Cont. | 14(2061)       | 17.5(2576)     | 17.5(2576)      | 17.5(2576)      | 16.5(2429)      | 13(1914)         | 11(1619)       | 8.5(1251)       | 8.5(1251)      |
|                                                 | Int.  | 17.5(2576)     | 20(2944)       | 20(2944)        | 20(2944)        | 20(2944)        | 17.5(2576)       | 14(2061)       | 11.5(1693)      | 11.5(1693)     |
| Max flow<br>L/min. / (gpm)                      | Cont. | 40(10.5)       | 60(15.8)       | 60(15.8)        | 60(15.8)        | 60(15.8)        | 60(15.8)         | 60(15.8)       | 60(15.8)        | 60(15.8)       |
|                                                 | Int.  | 50(13.1)       | 75(19.75)      | 75(19.75)       | 75(19.75)       | 75(19.75)       | 75(19.75)        | 75(19.75)      | 75(19.75)       | 75(19.75)      |
| Weight                                          | lb.   | 6.7            | 6.9            | 6.9             | 7.2             | 7.5             | 8.0              | 8.5            | 9.0             | 9.3            |

## HYDRAULIC GEAR PUMP

## HYDRAULIC ADAPTERS

## MODEL # MGP-F10

- All Aluminium construction.
- 7 Displacement sizes from 0.07 to 0.37 cu. in/rev.
- Mounting flange is SAE AA-2 bolt.
- Ports are SAE-8 inlet and SAE-6 outlet.
- Drive shaft is a 1/2 inch straight shaft with 1/8 key.

## Recommended working conditions:

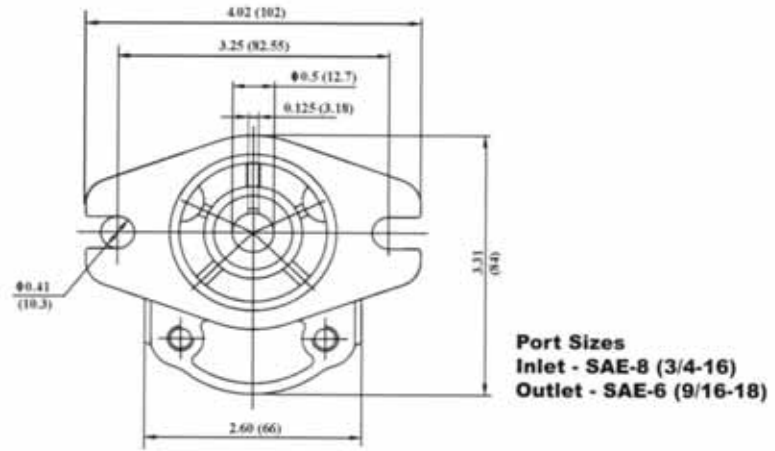
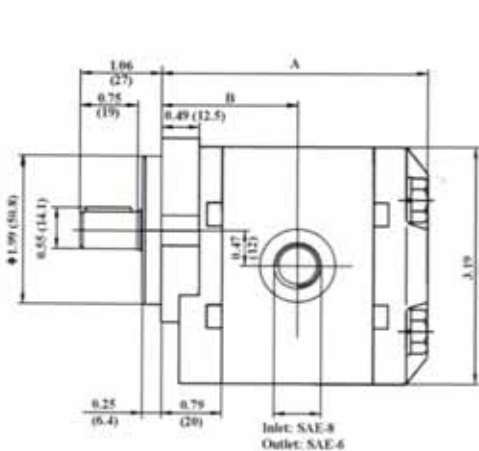
- Filtration 25 micron or better.
- Oil Viscosity 6 to 200 cSt.
- Inlet pressure 12 to 32 psi abs.
- Oil Temperature -25 to 55 degrees C (-12 to 175 F°).
- Ambient -22 to 55 C° (-8 to 130 F°).



| Part #     | Displacement<br>cu.in/rev | PSI  | Speed RPM |      | Weight<br>Lbs | List<br>Price |
|------------|---------------------------|------|-----------|------|---------------|---------------|
|            |                           |      | Rated     | Max  |               |               |
| MGP-F10-13 | 0.07                      | 3625 | 2000      | 5000 | 2.02          | ----          |
| MGP-F10-20 | 0.12                      | 3625 | 2000      | 5000 | 2.31          | ----          |
| MGP-F10-27 | 0.16                      | 3625 | 2000      | 5000 | 2.68          | ----          |
| MGP-F10-34 | 0.20                      | 3625 | 2000      | 5000 | 2.99          | ----          |
| MGP-F10-41 | 0.25                      | 3625 | 2000      | 4000 | 3.34          | ----          |
| MGP-F10-51 | 0.31                      | 3625 | 2000      | 4000 | 3.78          | ----          |
| MGP-F10-61 | 0.37                      | 3625 | 2000      | 4000 | 4.18          | ----          |

- Displacement (cu.in/ rev) x speed (RPM)/ 231 Volumetric efficiency % $\geq$ 93
- GPM X 231/ RPM = CU.IN

## INSTALLATION DATA



**Port Sizes**  
Inlet - SAE-8 (3/4-16)  
Outlet - SAE-6 (9/16-18)

| Part #     | A           |        | B           |        |
|------------|-------------|--------|-------------|--------|
|            | Millimeters | Inches | Millimeters | Inches |
| MGP-F10-13 | 82          | 3.23   | 42          | 1.65   |
| MGP-F10-20 | 84          | 3.3    | 43          | 1.69   |
| MGP-F10-27 | 86          | 3.39   | 44          | 1.73   |
| MGP-F10-34 | 88          | 3.46   | 45          | 1.77   |

| Part #     | A           |        | B           |        |
|------------|-------------|--------|-------------|--------|
|            | Millimeters | Inches | Millimeters | Inches |
| MGP-F10-41 | 90          | 3.54   | 46          | 1.81   |
| MGP-F10-51 | 93          | 3.66   | 47.5        | 1.87   |
| MGP-F10-61 | 96          | 3.78   | 49          | 1.93   |

## ORDERING INFORMATION

MGP

Aluminum  
Gear Pump

F10

High  
Pressure  
Series

16

Displacement  
cm<sup>3</sup>/rev  
(see chart)  
13/20/27/34  
41/51/61

P

Drive  
Shaft  
P-1/2 Dia

C

Rotation  
Direction  
C-Clockwise  
A-Counter Clockwise  
(viewed from drive shaft  
end)

**MODEL # MGP-F20**

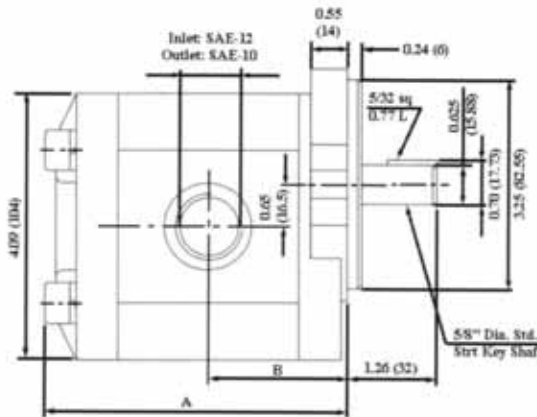
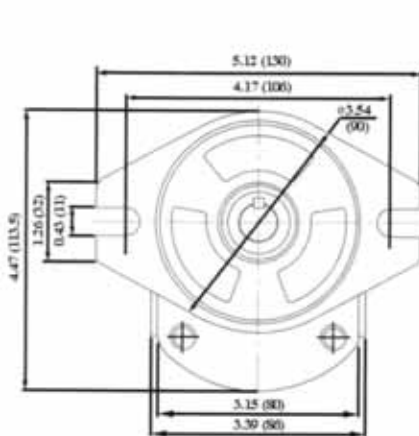
- Aluminium construction.
- 8 Displacement sizes from 0.36 to 1.52 cu. in/rev.
- Mounting flange is SAE A-2 bolt.
- Ports are SAE-12 inlet and SAE-10 outlet.
- Drive shaft is a 5/8 inch diameter straight with 5/32 straight key.

**Recommended working conditions:**

- Filtration 25 micron or better.
- Oil Viscosity 6 to 200 cSt.
- Inlet pressure 12 to 32 psi abs.
- Oil Temperature -25 to 55 degrees C (-12 to 175 F°).
- Ambient -22 to 55 C° (-8 to 130 F°).



| Part #     | Displacement<br>cu.in/rev | PSI  | Speed RPM |      | Weight<br>Lbs | List<br>Price |
|------------|---------------------------|------|-----------|------|---------------|---------------|
|            |                           |      | Rated     | Max  |               |               |
| MGP-F20-06 | 0.36                      | 3650 | 2000      | 3000 | 5.35          | ----          |
| MGP-F20-08 | 0.48                      | 3650 | 2000      | 3600 | 5.61          | ----          |
| MGP-F20-10 | 0.61                      | 3650 | 2000      | 3600 | 5.72          | ----          |
| MGP-F20-12 | 0.73                      | 3650 | 2000      | 3600 | 5.91          | ----          |
| MGP-F20-14 | 0.85                      | 3650 | 2000      | 3600 | 6.00          | ----          |
| MGP-F20-16 | 0.97                      | 2900 | 2000      | 3600 | 6.27          | ----          |
| MGP-F20-20 | 1.22                      | 2900 | 2000      | 3600 | 6.73          | ----          |
| MGP-F20-25 | 1.52                      | 2900 | 2000      | 3600 | 7.19          | ----          |

**INSTALLATION DATA**

**Port Sizes**  
Inlet - SAE-12 (1 1/16-12)  
Outlet - SAE-10 (7/8-14)

| Part #     | A           |        | B           |        |
|------------|-------------|--------|-------------|--------|
|            | Millimeters | Inches | Millimeters | Inches |
| MGP-F20-06 | 98          | 3.87   | 45          | 1.77   |
| MGP-F20-08 | 100         | 3.95   | 47          | 1.85   |
| MGP-F20-10 | 104         | 4.12   | 48          | 1.89   |
| MGP-F20-12 | 108         | 4.25   | 50          | 1.97   |

| Part #     | A           |        | B           |        |
|------------|-------------|--------|-------------|--------|
|            | Millimeters | Inches | Millimeters | Inches |
| MGP-F20-14 | 110         | 4.35   | 51          | 2      |
| MGP-F20-16 | 114         | 4.50   | 52.5        | 2.07   |
| MGP-F20-20 | 120         | 4.72   | 56          | 2.2    |
| MGP-F20-25 | 128         | 5.05   | 60          | 2.36   |

**ORDERING INFORMATION****MGP**

Aluminum  
Gear Pump

**F20**

High  
Pressure  
Series

**16**

Displacement  
cm<sup>3</sup>/rev  
(see chart)  
06/08/10/12/14/16  
20/25

**P**

Drive  
Shaft  
P-5/8 Dia  
Straight  
P1-3/4 Dia  
Straight  
S9-Spline 9 tooth

**C**

Rotation  
Direction  
C-Clockwise  
A-Counter Clockwise  
(viewed from drive shaft  
end)

## HYDRAULIC FLOW CONTROL / NEEDLE VALVES

## HYDRAULIC ADAPTERS

## MM-FC SERIES FLOW CONTROL VALVES

## FEATURES:

- Micrometer adjustment knob for accurate valve setting.
- Rugged construction.

## TECHNICAL DATA:

## • Materials

|            |                                     |
|------------|-------------------------------------|
| Body:      | Carbon steel w/ black oxide plating |
| Handle:    | Zinc Alloy                          |
| Set Screw: | Steel                               |
| Packing:   | Buna O-Ring/ PTFE stem packing      |

Maximum Pressure: 5000PSI

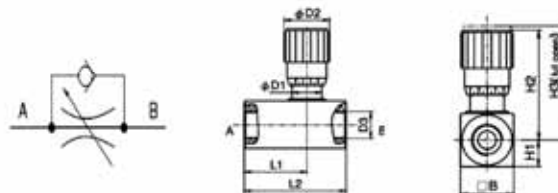
Temperature Ratings: -4°F to 176°F (-20°C to 80°C)

Flow Rate: 0-42 GPM



INLET

&lt;&lt; FREE FLOW



| Part#     | B    | D1   | D2   | D3        | H1   | H2   | H3   | L1   | L2   | WEIGHT (lbs) | List Price |
|-----------|------|------|------|-----------|------|------|------|------|------|--------------|------------|
| MMFC4NPT  | 1.10 | 0.76 | 1.18 | 1/4 NPT   | 0.55 | 2.41 | 2.67 | 1.54 | 2.52 | 0.90         | ----       |
| MMFC6NPT  | 1.10 | 0.76 | 1.18 | 3/8 NPT   | 0.55 | 2.41 | 2.67 | 1.69 | 2.75 | 0.90         | ----       |
| MMFC8NPT  | 1.50 | 0.95 | 1.46 | 1/2 NPT   | 0.75 | 3.07 | 3.41 | 2.05 | 3.27 | 2.00         | ----       |
| MMFC12NPT | 1.50 | 0.95 | 1.46 | 3/4 NPT   | 0.75 | 3.08 | 3.41 | 2.19 | 3.50 | 2.00         | ----       |
| MMFC16NPT | 1.89 | 1.38 | 1.89 | 1 NPT     | 0.94 | 4.03 | 4.50 | 2.79 | 4.60 | 4.20         | ----       |
| MMFC20NPT | 2.38 | 1.96 | 2.28 | 1-1/4 NPT | 1.18 | 5.25 | 5.88 | 3.39 | 6.07 | 9.55         | ----       |

## MM-NV SERIES NEEDLE VALVES

## FEATURES:

- Micrometer adjustment knob for accurate valve setting.
- Rugged construction.

## TECHNICAL DATA:

## • Materials

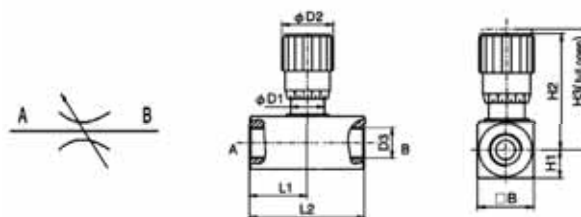
|            |                                     |
|------------|-------------------------------------|
| Body:      | Carbon steel w/ black oxide plating |
| Handle:    | Zinc Alloy                          |
| Set Screw: | Steel                               |

Packing: Buna O-Ring/ PTFE stem packing

Maximum Pressure: 5000PSI

Temperature Ratings: -4°F to 176°F (-20°C to 80°C)

Flow Rate: 0-42 GPM

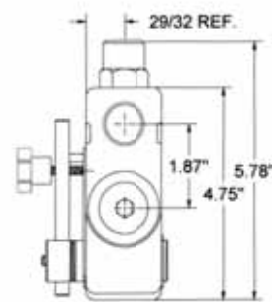
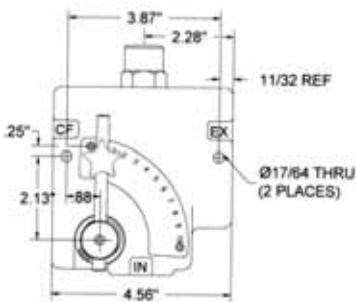


| Part#     | B    | D1   | D2   | D3      | H1   | H2   | H3   | L1   | L2   | WEIGHT (lbs) | List Price |
|-----------|------|------|------|---------|------|------|------|------|------|--------------|------------|
| MMNV4NPT  | 1.10 | 0.76 | 1.18 | 1/4 NPT | 0.55 | 2.41 | 2.67 | 1.07 | 2.13 | 0.90         | ----       |
| MMNV6NPT  | 1.10 | 0.76 | 1.18 | 3/8 NPT | 0.55 | 2.41 | 2.67 | 1.07 | 2.13 | 0.90         | ----       |
| MMNV8NPT  | 1.50 | 0.95 | 1.46 | 1/2 NPT | 0.75 | 3.07 | 3.41 | 1.34 | 2.38 | 2.00         | ----       |
| MMNV12NPT | 1.50 | 0.95 | 1.46 | 3/4 NPT | 0.75 | 3.08 | 3.41 | 1.54 | 3.09 | 2.00         | ----       |
| MMNV16NPT | 1.89 | 1.38 | 1.89 | 1 NPT   | 0.94 | 4.03 | 4.50 | 1.81 | 3.62 | 4.20         | ----       |

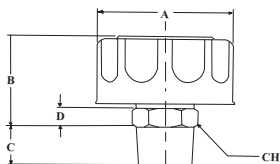
**HYDRAULIC ADAPTERS****HYDRAULIC FLOW CONTROL / BREATHERS****PRESSURE COMPENSATING VARIABLE FLOW CONTROL****FEATURES:**

MFC-51 model is a full range pressure compensating variable flow control. It is designed so that the orifice area varies as the lever is rotated. The outlet flow is smooth and constant regardless of the pressure on the control flow or excess flow ports. An adjustable ball spring relief allows for pressure compensated flow up to the pressure setting on the relief. Relief valves are preset at 1500 PSI and field adjustable from 750 to 3000 PSI.

- Materials: Cast Iron Body, Heat Treated Compensator Spool, Stainless Steel Rotary Spool, Buna N "O" Rings (Standard)
- **ALL ARE STANDARD FLOW CONTROL**
- **ALL HAVE ADJUSTABLE BALL SPRING RELIEF**
- **SAE PORT AVAILABLE. MINIMUM ORDER REQUIRED**



| Part#    | Size       | Flow     | List Price |
|----------|------------|----------|------------|
| MFC-38-N | 3/8" - NPT | 0-8 gpm  | ----       |
| MFC-12-N | 1/2" - NPT | 0-16 gpm | ----       |
| MFC-34-N | 3/4" - NPT | 0-30 gpm | ----       |

**SCREW-ON TYPE AIR BREATHERS**

• **Chrome Plated Steel** • **1/4 To 1 Inch NPT** • **40 Micron Breather**

| Part Number | Flow cfm | NPT | A    | B    | C   | D   | CH   | Micron | List Price |
|-------------|----------|-----|------|------|-----|-----|------|--------|------------|
| MB40-04     | 10       | 1/4 | 1.85 | 1.60 | .50 | .30 | .63  | 40     | ----       |
| MB40-06     | 10       | 3/8 | 1.85 | 1.70 | .50 | .30 | .75  | 40     | ----       |
| MB40-08     | 10       | 1/2 | 2.54 | 1.88 | .68 | .29 | .95  | 40     | ----       |
| MB40-12     | 25       | 3/4 | 3.13 | 2.00 | .82 | .35 | 1.12 | 40     | ----       |
| MB40-16     | 25       | 1   | 3.13 | 2.11 | .90 | .42 | 1.35 | 40     | ----       |