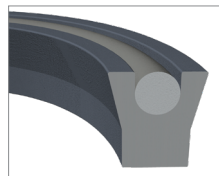
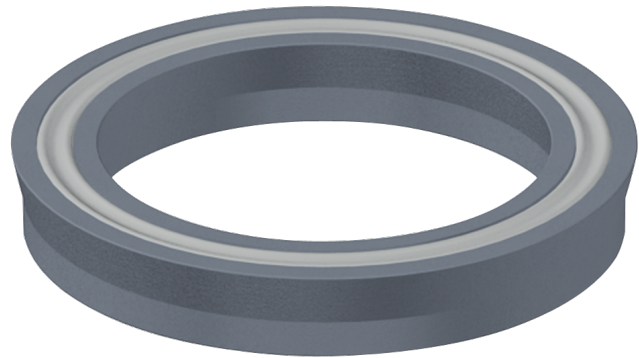


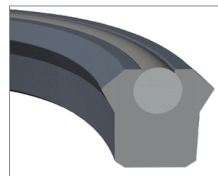
# Loaded U-Cups

Loaded U-Cups

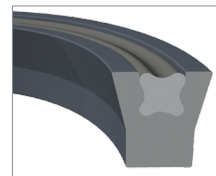
| Seal Materials       | Temp. Range |          |
|----------------------|-------------|----------|
| Urethane             | -54°C       | to 105°C |
| Viton™/Fluorocarbon  | -26°C       | to 204°C |
| Hytrel®/Fluorotrel™  | -54°C       | to 149°C |
| Hydrogenated Nitrile | -40°C       | to 160°C |
| Loader Materials     |             |          |
| Nitrile 70 Duro.     | -40°C       | to 120°C |
| Nitrile 90 Duro.     | -25°C       | to 120°C |
| Low Temp. Nitrile    | -54°C       | to 116°C |
| Viton™/Fluorocarbon  | -26°C       | to 204°C |
| Ethylene Propylene   | -54°C       | to 150°C |



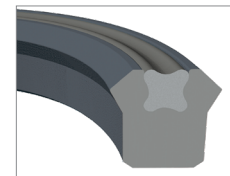
O-Ring Loaded w/ Straight Lip



O-Ring Loaded w/ Beveled Lip



Quad Loaded w/ Straight Lip



Quad Loaded w/ Beveled Lip

## Product Description

U-cups are one of the most popular lip seals used today. Loaded U-cups are primarily intended for dynamic reciprocating applications. They are an excellent seal in low pressure rod or piston applications. As the system pressure increases, the loading lip force also increases, automatically compensating for the higher pressure while maintaining a positive seal. A variety of styles, materials, and sizes are available to suit specific requirements.

## Part Numbers:



Prefix:

- LUC - TPU Loaded U-Cup
- HNBR - Hydrogenated Nitrile/HNBR loader
- VUC - Viton™/Viton™ Loader
- HTL - Hytrel®/Nitrile Loader

Suffix:

- Blank - O-Ring Loaded, Straight Lip
- B - O-Ring Loaded, Beveled Lip
- Q - Quad Loaded, Straight Lip
- BQ - Quad Loaded, Beveled Lip
- Material - if other than described by the prefix

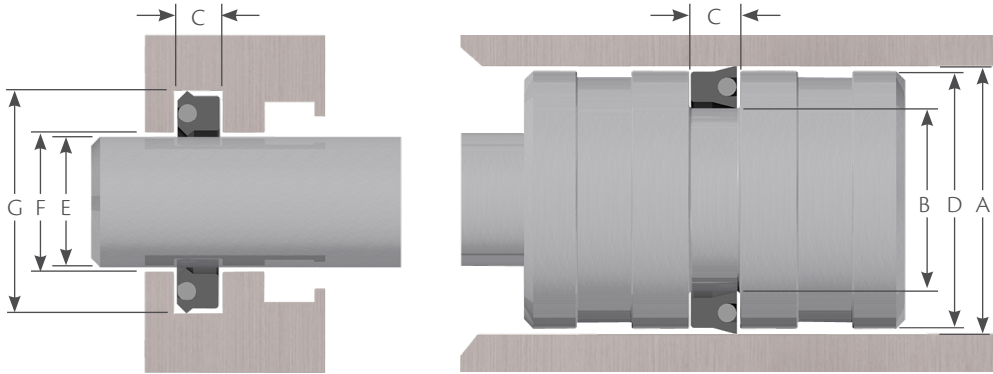
\* Height is only listed if the axial height is greater than the cross-section.

**Example:** LUC 1250 1062 250 - Urethane U-Cup, Nitrile O-Ring, 0.125" C/S, 1.062" Nominal I.D., .0250" Height (Nominal Depth).

# Loaded U-Cups

IMPERIAL SEALS

Loaded U-Cups



If a wear ring is used value C is to the O.D. of the installed wear ring.

If a wear ring is used value F is to the I.D. of the installed wear ring.

| C/S<br>(Width) | Size<br>Number | Nom<br>I.D. | Nom<br>O.D. | Nom<br>Height | Piston Applications     |                   |                     |                     | Shaft Applications |                     |                     |
|----------------|----------------|-------------|-------------|---------------|-------------------------|-------------------|---------------------|---------------------|--------------------|---------------------|---------------------|
|                |                |             |             |               | C<br>Groove<br>Width    | A<br>Bore<br>Dia. | D<br>Piston<br>Dia. | B<br>Groove<br>Dia. | E<br>Shaft<br>Dia. | F<br>Throat<br>Dia. | G<br>Groove<br>Dia. |
|                |                |             |             |               | <b>Tolerance Limits</b> |                   |                     |                     |                    |                     |                     |
|                |                |             |             |               | +0.010<br>-0.000        | +0.002<br>-0.000  | +0.000<br>-0.001    | +0.000<br>-0.002    | +0.000<br>-0.001   | +0.002<br>-0.000    | +0.002<br>-0.000    |
| 1/8"           | 12500125       | 1/8         | 3/8         | 1/8           | 0.138                   | 0.375             | 0.374               | 0.125               | 0.125              | 0.126               | 0.375               |
|                | 12500125250    |             |             | 1/4           | 0.275                   |                   |                     |                     |                    |                     |                     |
|                | 12500187       | 3/16        | 7/16        | 1/8           | 0.138                   | 0.437             | 0.436               | 0.187               | 0.187              | 0.188               | 0.437               |
|                | 12500187250    |             |             | 1/4           | 0.275                   |                   |                     |                     |                    |                     |                     |
|                | 12500250       | 1/4         | 1/2         | 1/8           | 0.138                   | 0.500             | 0.499               | 0.250               | 0.250              | 0.251               | 0.500               |
|                | 12500250250    |             |             | 1/4           | 0.275                   |                   |                     |                     |                    |                     |                     |
|                | 12500312       | 5/16        | 9/16        | 1/8           | 0.138                   | 0.562             | 0.561               | 0.312               | 0.312              | 0.313               | 0.562               |
|                | 12500312250    |             |             | 1/4           | 0.275                   |                   |                     |                     |                    |                     |                     |
|                | 12500375       | 3/8         | 5/8         | 1/8           | 0.138                   | 0.625             | 0.624               | 0.375               | 0.375              | 0.376               | 0.625               |
|                | 12500375250    |             |             | 1/4           | 0.275                   |                   |                     |                     |                    |                     |                     |
|                | 12500437       | 7/16        | 11/16       | 1/8           | 0.138                   | 0.687             | 0.686               | 0.437               | 0.437              | 0.438               | 0.687               |
|                | 12500437250    |             |             | 1/4           | 0.275                   |                   |                     |                     |                    |                     |                     |
|                | 12500500       | 1/2         | 3/4         | 1/8           | 0.138                   | 0.750             | 0.749               | 0.500               | 0.500              | 0.501               | 0.750               |
|                | 12500500250    |             |             | 1/4           | 0.275                   |                   |                     |                     |                    |                     |                     |
|                | 12500562       | 9/16        | 13/16       | 1/8           | 0.138                   | 0.812             | 0.811               | 0.562               | 0.562              | 0.563               | 0.812               |
|                | 12500562250    |             |             | 1/4           | 0.275                   |                   |                     |                     |                    |                     |                     |
|                | 12500625       | 5/8         | 7/8         | 1/8           | 0.138                   | 0.875             | 0.874               | 0.625               | 0.625              | 0.626               | 0.875               |
|                | 12500625250    |             |             | 1/4           | 0.275                   |                   |                     |                     |                    |                     |                     |
|                | 12500687       | 11/16       | 15/16       | 1/8           | 0.138                   | 0.937             | 0.936               | 0.687               | 0.687              | 0.688               | 0.937               |
|                | 12500687250    |             |             | 1/4           | 0.275                   |                   |                     |                     |                    |                     |                     |
|                | 12500750       | 3/4         | 1           | 1/8           | 0.138                   | 1.000             | 0.999               | 0.750               | 0.750              | 0.751               | 1.000               |
|                | 12500750250    |             |             | 1/4           | 0.275                   |                   |                     |                     |                    |                     |                     |
|                | 12500812       | 13/16       | 1 - 1/16    | 1/8           | 0.138                   | 1.062             | 1.061               | 0.812               | 0.812              | 0.813               | 1.062               |
|                | 12500812250    |             |             | 1/4           | 0.275                   |                   |                     |                     |                    |                     |                     |
|                | 12500875       | 7/8         | 1 - 1/8     | 1/8           | 0.138                   | 1.125             | 1.124               | 0.875               | 0.875              | 0.876               | 1.125               |
|                | 12500875250    |             |             | 1/4           | 0.275                   |                   |                     |                     |                    |                     |                     |
|                | 12500937       | 15/16       | 1 - 3/16    | 1/8           | 0.138                   | 1.187             | 1.186               | 0.937               | 0.937              | 0.938               | 1.187               |
|                | 12500937250    |             |             | 1/4           | 0.275                   |                   |                     |                     |                    |                     |                     |
|                | 12501000       | 1           | 1 - 1/4     | 1/8           | 0.138                   | 1.250             | 1.249               | 1.000               | 1.000              | 1.001               | 1.250               |
|                | 12501000250    |             |             | 1/4           | 0.275                   |                   |                     |                     |                    |                     |                     |
|                | 12501062       | 1 - 1/16    | 1 - 5/16    | 1/8           | 0.138                   | 1.312             | 1.311               | 1.062               | 1.062              | 1.063               | 1.312               |
|                | 12501062250    |             |             | 1/4           | 0.275                   |                   |                     |                     |                    |                     |                     |

# Loaded U-Cups

Loaded U-Cups

| C/S<br>(Width)          | Size<br>Number | Nom<br>I.D. | Nom<br>O.D. | Nom<br>Height | Piston Applications      |                          |                          | Shaft Applications       |                          |                          |                          |
|-------------------------|----------------|-------------|-------------|---------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                         |                |             |             |               | C<br>Groove<br>Width     | A<br>Bore<br>Dia.        | D<br>Piston<br>Dia.      | B<br>Groove<br>Dia.      | E<br>Shaft<br>Dia.       | F<br>Throat<br>Dia.      | G<br>Groove<br>Dia.      |
| <b>Tolerance Limits</b> |                |             |             |               | <b>+0.010<br/>-0.000</b> | <b>+0.002<br/>-0.000</b> | <b>+0.000<br/>-0.001</b> | <b>+0.000<br/>-0.002</b> | <b>+0.000<br/>-0.001</b> | <b>+0.002<br/>-0.000</b> | <b>+0.002<br/>-0.000</b> |
| 1/8"                    | 12501125       | 1 - 1/8     | 1 - 3/8     | 1/8           | 0.138                    | 1.375                    | 1.374                    | 1.125                    | 1.125                    | 1.126                    | 1.375                    |
|                         | 12501125250    |             |             | 1/4           | 0.275                    |                          |                          |                          |                          |                          |                          |
|                         | 12501187       | 1 - 3/16    | 1 - 7/16    | 1/8           | 0.138                    | 1.437                    | 1.436                    | 1.187                    | 1.187                    | 1.188                    | 1.437                    |
|                         | 12501187250    |             |             | 1/4           | 0.275                    |                          |                          |                          |                          |                          |                          |
|                         | 12501250       | 1 - 1/4     | 1 - 1/2     | 1/8           | 0.138                    | 1.500                    | 1.499                    | 1.250                    | 1.250                    | 1.251                    | 1.500                    |
|                         | 12501250250    |             |             | 1/4           | 0.275                    |                          |                          |                          |                          |                          |                          |
|                         | 12501312       | 1 - 5/16    | 1 - 9/16    | 1/8           | 0.138                    | 1.562                    | 1.561                    | 1.312                    | 1.312                    | 1.313                    | 1.562                    |
|                         | 12501312250    |             |             | 1/4           | 0.275                    |                          |                          |                          |                          |                          |                          |
|                         | 12501375       | 1 - 3/8     | 1 - 5/8     | 1/8           | 0.138                    | 1.625                    | 1.624                    | 1.375                    | 1.375                    | 1.376                    | 1.625                    |
|                         | 12501375250    |             |             | 1/4           | 0.275                    |                          |                          |                          |                          |                          |                          |
|                         | 12501437       | 1 - 7/16    | 1 - 11/16   | 1/8           | 0.138                    | 1.687                    | 1.686                    | 1.437                    | 1.437                    | 1.438                    | 1.687                    |
|                         | 12501437250    |             |             | 1/4           | 0.275                    |                          |                          |                          |                          |                          |                          |
|                         | 12501500       | 1 - 1/2     | 1 - 3/4     | 1/8           | 0.138                    | 1.750                    | 1.749                    | 1.500                    | 1.500                    | 1.501                    | 1.750                    |
|                         | 12501500250    |             |             | 1/4           | 0.275                    |                          |                          |                          |                          |                          |                          |
|                         | 12501625       | 1 - 5/8     | 1 - 7/8     | 1/8           | 0.138                    | 1.875                    | 1.874                    | 1.625                    | 1.625                    | 1.626                    | 1.875                    |
|                         | 12501625250    |             |             | 1/4           | 0.275                    |                          |                          |                          |                          |                          |                          |
|                         | 12501750       | 1 - 3/4     | 2           | 1/8           | 0.138                    | 2.000                    | 1.999                    | 1.750                    | 1.750                    | 1.751                    | 2.000                    |
|                         | 12501750250    |             |             | 1/4           | 0.275                    |                          |                          |                          |                          |                          |                          |
|                         | 12501875       | 1 - 7/8     | 2 - 1/8     | 1/8           | 0.138                    | 2.125                    | 2.124                    | 1.875                    | 1.875                    | 1.876                    | 2.125                    |
|                         | 12501875250    |             |             | 1/4           | 0.275                    |                          |                          |                          |                          |                          |                          |
|                         | 12502000       | 2           | 2 - 1/4     | 1/8           | 0.138                    | 2.250                    | 2.249                    | 2.000                    | 2.000                    | 2.001                    | 2.250                    |
|                         | 12502000250    |             |             | 1/4           | 0.275                    |                          |                          |                          |                          |                          |                          |
|                         | 12502125       | 2 - 1/8     | 2 - 3/8     | 1/8           | 0.138                    | 2.375                    | 2.374                    | 2.125                    | 2.125                    | 2.126                    | 2.375                    |
|                         | 12502125250    |             |             | 1/4           | 0.275                    |                          |                          |                          |                          |                          |                          |
|                         | 12502250       | 2 - 1/4     | 2 - 1/2     | 1/8           | 0.138                    | 2.500                    | 2.499                    | 2.250                    | 2.250                    | 2.251                    | 2.500                    |
|                         | 12502250250    |             |             | 1/4           | 0.275                    |                          |                          |                          |                          |                          |                          |
|                         | 12502375       | 2 - 3/8     | 2 - 5/8     | 1/8           | 0.138                    | 2.625                    | 2.624                    | 2.375                    | 2.375                    | 2.376                    | 2.625                    |
|                         | 12502375250    |             |             | 1/4           | 0.275                    |                          |                          |                          |                          |                          |                          |
|                         | 12502500       | 2 - 1/2     | 2 - 3/4     | 1/8           | 0.138                    | 2.750                    | 2.749                    | 2.500                    | 2.500                    | 2.501                    | 2.750                    |
|                         | 12502500250    |             |             | 1/4           | 0.275                    |                          |                          |                          |                          |                          |                          |
| <b>Tolerance Limits</b> |                |             |             |               | <b>+0.010<br/>-0.000</b> | <b>+0.002<br/>-0.000</b> | <b>+0.000<br/>-0.002</b> | <b>+0.000<br/>-0.002</b> | <b>+0.000<br/>-0.002</b> | <b>+0.002<br/>-0.000</b> | <b>+0.002<br/>-0.000</b> |
| 3/16"                   | 18700187       | 3/16        | 9/16        | 3/16          | 0.207                    | 0.562                    | 0.561                    | 0.187                    | 0.187                    | 0.188                    | 0.562                    |
|                         | 18700187312    |             |             | 5/16          | 0.344                    |                          |                          |                          |                          |                          |                          |
|                         | 18700250       | 1/4         | 5/8         | 3/16          | 0.207                    | 0.625                    | 0.624                    | 0.250                    | 0.250                    | 0.251                    | 0.625                    |
|                         | 18700250312    |             |             | 5/16          | 0.344                    |                          |                          |                          |                          |                          |                          |
|                         | 18700312       | 5/16        | 11/16       | 3/16          | 0.207                    | 0.687                    | 0.686                    | 0.312                    | 0.312                    | 0.313                    | 0.687                    |
|                         | 18700312312    |             |             | 5/16          | 0.344                    |                          |                          |                          |                          |                          |                          |
|                         | 1870375        | 3/8         | 3/4         | 3/16          | 0.207                    | 0.750                    | 0.749                    | 0.375                    | 0.375                    | 0.376                    | 0.750                    |
|                         | 18700375312    |             |             | 5/16          | 0.344                    |                          |                          |                          |                          |                          |                          |
|                         | 18700437       | 7/16        | 13/16       | 3/16          | 0.207                    | 0.812                    | 0.811                    | 0.437                    | 0.437                    | 0.438                    | 0.812                    |
|                         | 18700437312    |             |             | 5/16          | 0.344                    |                          |                          |                          |                          |                          |                          |
|                         | 18700500       | 1/2         | 7/8         | 3/16          | 0.207                    | 0.875                    | 0.874                    | 0.500                    | 0.500                    | 0.501                    | 0.875                    |
|                         | 18700500312    |             |             | 5/16          | 0.344                    |                          |                          |                          |                          |                          |                          |
|                         | 18700562       | 9/16        | 15/16       | 3/16          | 0.207                    | 0.937                    | 0.936                    | 0.562                    | 0.562                    | 0.563                    | 0.937                    |
|                         | 18700562312    |             |             | 5/16          | 0.344                    |                          |                          |                          |                          |                          |                          |

# Loaded U-Cups

IMPERIAL SEALS

Loaded U-Cups

| C/S<br>(Width)   | Size<br>Number | Nom<br>I.D. | Nom<br>O.D. | Nom<br>Height | Piston Applications  |                   |                     | Shaft Applications  |                    |                     |                     |
|------------------|----------------|-------------|-------------|---------------|----------------------|-------------------|---------------------|---------------------|--------------------|---------------------|---------------------|
|                  |                |             |             |               | C<br>Groove<br>Width | A<br>Bore<br>Dia. | D<br>Piston<br>Dia. | B<br>Groove<br>Dia. | E<br>Shaft<br>Dia. | F<br>Throat<br>Dia. | G<br>Groove<br>Dia. |
| Tolerance Limits |                |             |             |               | +0.010<br>-0.000     | +0.002<br>-0.000  | +0.000<br>-0.002    | +0.000<br>-0.002    | +0.000<br>-0.002   | +0.002<br>-0.000    | +0.002<br>-0.000    |
| 3/16"            | 18700625       | 5/8         | 1           | 3/16          | 0.207                | 1.000             | 0.999               | 0.625               | 0.625              | 0.626               | 1.000               |
|                  | 18700625312    |             |             | 5/16          | 0.344                |                   |                     |                     |                    |                     |                     |
|                  | 18700687       | 11/16       | 1 - 1/16    | 3/16          | 0.207                | 1.062             | 1.061               | 0.687               | 0.687              | 0.688               | 1.062               |
|                  | 18700687312    |             |             | 5/16          | 0.344                |                   |                     |                     |                    |                     |                     |
|                  | 18700750       | 3/4         | 1 - 1/8     | 3/16          | 0.207                | 1.125             | 1.124               | 0.750               | 0.750              | 0.751               | 1.125               |
|                  | 18700750312    |             |             | 5/16          | 0.344                |                   |                     |                     |                    |                     |                     |
|                  | 18700812       | 13/16       | 1 - 3/16    | 3/16          | 0.207                | 1.187             | 1.186               | 0.812               | 0.812              | 0.813               | 1.187               |
|                  | 18700812312    |             |             | 5/16          | 0.344                |                   |                     |                     |                    |                     |                     |
|                  | 18700875       | 7/8         | 1 - 1/4     | 3/16          | 0.207                | 1.250             | 1.249               | 0.875               | 0.875              | 0.876               | 1.250               |
|                  | 18700875312    |             |             | 5/16          | 0.344                |                   |                     |                     |                    |                     |                     |
|                  | 18700937       | 15/16       | 1 - 5/16    | 3/16          | 0.207                | 1.312             | 1.311               | 0.937               | 0.937              | 0.938               | 1.312               |
|                  | 18700937312    |             |             | 5/16          | 0.344                |                   |                     |                     |                    |                     |                     |
|                  | 18701000       | 1           | 1 - 3/8     | 3/16          | 0.207                | 1.375             | 1.374               | 1.000               | 1.000              | 1.001               | 1.375               |
|                  | 18701000312    |             |             | 5/16          | 0.344                |                   |                     |                     |                    |                     |                     |
|                  | 18701062       | 1 - 1/16    | 1 - 7/16    | 3/16          | 0.207                | 1.437             | 1.436               | 1.062               | 1.062              | 1.063               | 1.437               |
|                  | 18701062312    |             |             | 5/16          | 0.344                |                   |                     |                     |                    |                     |                     |
|                  | 18701125       | 1 - 1/8     | 1 - 1/2     | 3/16          | 0.207                | 1.500             | 1.499               | 1.125               | 1.125              | 1.126               | 1.500               |
|                  | 18701125312    |             |             | 5/16          | 0.344                |                   |                     |                     |                    |                     |                     |
|                  | 18701187       | 1 - 3/16    | 1 - 9/16    | 3/16          | 0.207                | 1.562             | 1.561               | 1.187               | 1.187              | 1.188               | 1.562               |
|                  | 18701187312    |             |             | 5/16          | 0.344                |                   |                     |                     |                    |                     |                     |
|                  | 18701250       | 1 - 1/4     | 1 - 5/8     | 3/16          | 0.207                | 1.625             | 1.624               | 1.250               | 1.250              | 1.251               | 1.625               |
|                  | 18701250312    |             |             | 5/16          | 0.344                |                   |                     |                     |                    |                     |                     |
|                  | 18701312       | 1 - 5/16    | 1 - 11/16   | 3/16          | 0.207                | 1.687             | 1.686               | 1.312               | 1.312              | 1.313               | 1.687               |
|                  | 18701312312    |             |             | 5/16          | 0.344                |                   |                     |                     |                    |                     |                     |
|                  | 18701375       | 1 - 3/8     | 1 - 3/4     | 3/16          | 0.207                | 1.750             | 1.749               | 1.375               | 1.375              | 1.376               | 1.750               |
|                  | 18701375312    |             |             | 5/16          | 0.344                |                   |                     |                     |                    |                     |                     |
|                  | 18701437       | 1 - 7/16    | 1 - 13/16   | 3/16          | 0.207                | 1.812             | 1.811               | 1.437               | 1.437              | 1.438               | 1.812               |
|                  | 18701437312    |             |             | 5/16          | 0.344                |                   |                     |                     |                    |                     |                     |
|                  | 18701500       | 1 - 1/2     | 1 - 7/8     | 3/16          | 0.207                | 1.875             | 1.874               | 1.500               | 1.500              | 1.501               | 1.875               |
|                  | 18701500375    |             |             | 3/8           | 0.413                |                   |                     |                     |                    |                     |                     |
|                  | 18701625       | 1 - 5/8     | 2           | 3/16          | 0.207                | 2.000             | 1.999               | 1.625               | 1.625              | 1.626               | 2.000               |
|                  | 18701625375    |             |             | 3/8           | 0.413                |                   |                     |                     |                    |                     |                     |
|                  | 18701687       | 1 - 11/16   | 2 - 1/16    | 3/16          | 0.207                | 2.062             | 2.061               | 1.687               | 1.687              | 1.688               | 2.062               |
|                  | 18701687375    |             |             | 3/8           | 0.413                |                   |                     |                     |                    |                     |                     |
|                  | 18701750       | 1 - 3/4     | 2 - 1/8     | 3/16          | 0.207                | 2.125             | 2.124               | 1.750               | 1.750              | 1.751               | 2.125               |
|                  | 18701750375    |             |             | 3/8           | 0.413                |                   |                     |                     |                    |                     |                     |
|                  | 18701875       | 1 - 7/8     | 2 - 1/4     | 3/16          | 0.207                | 2.250             | 2.249               | 1.875               | 1.875              | 1.876               | 2.250               |
|                  | 18701875375    |             |             | 3/8           | 0.413                |                   |                     |                     |                    |                     |                     |
|                  | 18702000       | 2           | 2 - 3/8     | 3/16          | 0.207                | 2.375             | 2.374               | 2.000               | 2.000              | 2.001               | 2.375               |
|                  | 18702000375    |             |             | 3/8           | 0.413                |                   |                     |                     |                    |                     |                     |
|                  | 18702125       | 2 - 1/8     | 2 - 1/2     | 3/16          | 0.207                | 2.500             | 2.499               | 2.125               | 2.125              | 2.126               | 2.500               |
|                  | 18702125375    |             |             | 3/8           | 0.413                |                   |                     |                     |                    |                     |                     |
|                  | 18702250       | 2 - 1/4     | 2 - 5/8     | 3/16          | 0.207                | 2.625             | 2.624               | 2.250               | 2.250              | 2.251               | 2.625               |
|                  | 18702250375    |             |             | 3/8           | 0.413                |                   |                     |                     |                    |                     |                     |
|                  | 18702375       | 2 - 3/8     | 2 - 3/4     | 3/16          | 0.207                | 2.750             | 2.749               | 2.375               | 2.375              | 2.376               | 2.750               |
|                  | 18702375375    |             |             | 3/8           | 0.413                |                   |                     |                     |                    |                     |                     |

# Loaded U-Cups

Loaded U-Cups

| C/S<br>(Width)          | Size<br>Number | Nom<br>I.D. | Nom<br>O.D. | Nom<br>Height | Piston Applications      |                          |                          |                          | Shaft Applications       |                          |                          |
|-------------------------|----------------|-------------|-------------|---------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                         |                |             |             |               | C<br>Groove<br>Width     | A<br>Bore<br>Dia.        | D<br>Piston<br>Dia.      | B<br>Groove<br>Dia.      | E<br>Shaft<br>Dia.       | F<br>Throat<br>Dia.      | G<br>Groove<br>Dia.      |
| <b>Tolerance Limits</b> |                |             |             |               | <b>+0.010<br/>-0.000</b> | <b>+0.002<br/>-0.000</b> | <b>+0.000<br/>-0.002</b> | <b>+0.000<br/>-0.002</b> | <b>+0.000<br/>-0.002</b> | <b>+0.002<br/>-0.000</b> | <b>+0.002<br/>-0.000</b> |
| 3/16"                   | 18702500       | 2 - 1/2     | 2 - 7/8     | 3/16          | 0.207                    | 2.875                    | 2.874                    | 2.500                    | 2.500                    | 2.501                    | 2.875                    |
|                         | 18702500375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 18702625       | 2 - 5/8     | 3           | 3/16          | 0.207                    | 3.000                    | 2.999                    | 2.625                    | 2.625                    | 2.626                    | 3.000                    |
|                         | 18702625375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 18702750       | 2 - 3/4     | 3 - 1/8     | 3/16          | 0.207                    | 3.125                    | 3.124                    | 2.750                    | 2.750                    | 2.751                    | 3.125                    |
|                         | 18702750375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 18702875       | 2 - 7/8     | 3 - 1/4     | 3/16          | 0.207                    | 3.250                    | 3.249                    | 2.875                    | 2.875                    | 2.876                    | 3.250                    |
|                         | 18702875375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 18703000       | 3           | 3 - 3/8     | 3/16          | 0.207                    | 3.375                    | 3.374                    | 3.000                    | 3.000                    | 3.001                    | 3.375                    |
|                         | 18703000375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 18703125       | 3 - 1/8     | 3 - 1/2     | 3/16          | 0.207                    | 3.500                    | 3.499                    | 3.125                    | 3.125                    | 3.126                    | 3.500                    |
|                         | 18703125375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 18703250       | 3 - 1/4     | 3 - 5/8     | 3/16          | 0.207                    | 3.625                    | 3.624                    | 3.250                    | 3.250                    | 3.251                    | 3.625                    |
|                         | 18703250375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 18703375       | 3 - 3/8     | 3 - 3/4     | 3/16          | 0.207                    | 3.750                    | 3.749                    | 3.375                    | 3.375                    | 3.376                    | 3.750                    |
|                         | 18703375375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 18703500       | 3 - 1/2     | 3 - 7/8     | 3/16          | 0.207                    | 3.875                    | 3.874                    | 3.500                    | 3.500                    | 3.501                    | 3.875                    |
|                         | 18703500375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 18703625       | 3 - 5/8     | 4           | 3/16          | 0.207                    | 4.000                    | 3.999                    | 3.625                    | 3.625                    | 3.626                    | 4.000                    |
|                         | 18703625375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 18703750       | 3 - 3/4     | 4 - 1/8     | 3/16          | 0.207                    | 4.125                    | 4.124                    | 3.750                    | 3.750                    | 3.751                    | 4.125                    |
|                         | 18703750375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 18703875       | 3 - 7/8     | 4 - 1/4     | 3/16          | 0.207                    | 4.250                    | 4.249                    | 3.875                    | 3.875                    | 3.876                    | 4.250                    |
|                         | 18703875375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 18704000       | 4           | 4 - 3/8     | 3/16          | 0.207                    | 4.375                    | 4.374                    | 4.000                    | 4.000                    | 4.001                    | 4.375                    |
|                         | 18704000375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 18704125       | 4 - 1/8     | 4 - 1/2     | 3/16          | 0.207                    | 4.500                    | 4.499                    | 4.125                    | 4.125                    | 4.126                    | 4.500                    |
|                         | 18704125375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 18704250       | 4 - 1/4     | 4 - 5/8     | 3/16          | 0.207                    | 4.625                    | 4.624                    | 4.250                    | 4.250                    | 4.251                    | 4.625                    |
|                         | 18704250375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 18704375       | 4 - 3/8     | 4 - 3/4     | 3/16          | 0.207                    | 4.750                    | 4.749                    | 4.375                    | 4.375                    | 4.376                    | 4.750                    |
|                         | 18704375375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 18704500       | 4 - 1/2     | 4 - 7/8     | 3/16          | 0.207                    | 4.875                    | 4.874                    | 4.500                    | 4.500                    | 4.501                    | 4.875                    |
|                         | 18704500375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
| <b>Tolerance Limits</b> |                |             |             |               | <b>+0.010<br/>-0.000</b> | <b>+0.003<br/>-0.000</b> | <b>+0.000<br/>-0.002</b> | <b>+0.000<br/>-0.003</b> | <b>+0.000<br/>-0.002</b> | <b>+0.003<br/>-0.000</b> | <b>+0.003<br/>-0.000</b> |
| 1/4"                    | 2500250        | 1/4         | 3/4         | 1/4           | 0.275                    | 0.750                    | 0.749                    | 0.250                    | 0.250                    | 0.251                    | 0.750                    |
|                         | 2500250375     |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 2500312        | 5/16        | 13/16       | 1/4           | 0.275                    | 0.812                    | 0.811                    | 0.312                    | 0.312                    | 0.313                    | 0.812                    |
|                         | 2500312375     |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 2500375        | 3/8         | 7/8         | 1/4           | 0.275                    | 0.875                    | 0.874                    | 0.375                    | 0.375                    | 0.376                    | 0.875                    |
|                         | 2500375375     |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 2500437        | 7/16        | 15/16       | 1/4           | 0.275                    | 0.937                    | 0.936                    | 0.437                    | 0.437                    | 0.438                    | 0.937                    |
|                         | 2500437375     |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 2500500        | 1/2         | 1           | 1/4           | 0.275                    | 1.000                    | 0.999                    | 0.500                    | 0.500                    | 0.501                    | 1.000                    |
|                         | 2500500375     |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |

# Loaded U-Cups

IMPERIAL SEALS

| C/S<br>(Width)          | Size<br>Number | Nom<br>I.D. | Nom<br>O.D. | Nom<br>Height | Piston Applications      |                          |                          | Shaft Applications       |                          |                          |                          |
|-------------------------|----------------|-------------|-------------|---------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                         |                |             |             |               | C<br>Groove<br>Width     | A<br>Bore<br>Dia.        | D<br>Piston<br>Dia.      | B<br>Groove<br>Dia.      | E<br>Shaft<br>Dia.       | F<br>Throat<br>Dia.      | G<br>Groove<br>Dia.      |
| <b>Tolerance Limits</b> |                |             |             |               | <b>+0.010<br/>-0.000</b> | <b>+0.003<br/>-0.000</b> | <b>+0.000<br/>-0.002</b> | <b>+0.000<br/>-0.003</b> | <b>+0.000<br/>-0.002</b> | <b>+0.003<br/>-0.000</b> | <b>+0.003<br/>-0.000</b> |
| 1/4"                    | 25000562       | 9/16        | 1 - 1/16    | 1/4           | 0.275                    | 1.062                    | 1.061                    | 0.562                    | 0.562                    | 0.563                    | 1.062                    |
|                         | 25000562375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 25000625       | 5/8         | 1 - 1/8     | 1/4           | 0.275                    | 1.125                    | 1.124                    | 0.625                    | 0.625                    | 0.626                    | 1.125                    |
|                         | 25000625375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 25000687       | 11/16       | 1 - 3/16    | 1/4           | 0.275                    | 1.187                    | 1.186                    | 0.687                    | 0.687                    | 0.688                    | 1.187                    |
|                         | 25000687375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 25000750       | 3/4         | 1 - 1/4     | 1/4           | 0.275                    | 1.250                    | 1.249                    | 0.750                    | 0.750                    | 0.751                    | 1.250                    |
|                         | 25000750375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 25000812       | 13/16       | 1 - 5/16    | 1/4           | 0.275                    | 1.312                    | 1.311                    | 0.812                    | 0.812                    | 0.813                    | 1.312                    |
|                         | 25000812375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 25000875       | 7/8         | 1 - 3/8     | 1/4           | 0.275                    | 1.375                    | 1.374                    | 0.875                    | 0.875                    | 0.876                    | 1.375                    |
|                         | 25000875375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 25000937       | 15/16       | 1 - 7/16    | 1/4           | 0.275                    | 1.437                    | 1.436                    | 0.937                    | 0.937                    | 0.938                    | 1.437                    |
|                         | 25000937375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 25001000       | 1           | 1 - 1/2     | 1/4           | 0.275                    | 1.500                    | 1.499                    | 1.000                    | 1.000                    | 1.001                    | 1.500                    |
|                         | 25001000375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 25001062       | 1 - 1/16    | 1 - 9/16    | 1/4           | 0.275                    | 1.562                    | 1.561                    | 1.062                    | 1.062                    | 1.063                    | 1.562                    |
|                         | 25001062375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 25001125       | 1 - 1/8     | 1 - 5/8     | 1/4           | 0.275                    | 1.625                    | 1.624                    | 1.125                    | 1.125                    | 1.126                    | 1.625                    |
|                         | 25001125375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 25001187       | 1 - 3/16    | 1 - 11/16   | 1/4           | 0.275                    | 1.687                    | 1.686                    | 1.187                    | 1.187                    | 1.188                    | 1.687                    |
|                         | 25001187375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 25001250       | 1 - 1/4     | 1 - 3/4     | 1/4           | 0.275                    | 1.750                    | 1.749                    | 1.250                    | 1.250                    | 1.251                    | 1.750                    |
|                         | 25001250375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 25001312       | 1 - 5/16    | 1 - 13/16   | 1/4           | 0.275                    | 1.813                    | 1.812                    | 1.313                    | 1.313                    | 1.314                    | 1.813                    |
|                         | 25001312375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 25001375       | 1 - 3/8     | 1 - 7/8     | 1/4           | 0.275                    | 1.875                    | 1.874                    | 1.375                    | 1.375                    | 1.376                    | 1.875                    |
|                         | 25001375375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 25001437       | 1 - 7/16    | 1 - 15/16   | 1/4           | 0.275                    | 1.937                    | 1.936                    | 1.437                    | 1.437                    | 1.438                    | 1.937                    |
|                         | 25001437375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 25001500       | 1 - 1/2     | 2           | 1/4           | 0.275                    | 2.000                    | 1.999                    | 1.500                    | 1.500                    | 1.501                    | 2.000                    |
|                         | 25001500375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 25001625       | 1 - 5/8     | 2 - 1/8     | 1/4           | 0.275                    | 2.125                    | 2.124                    | 1.625                    | 1.625                    | 1.626                    | 2.125                    |
|                         | 25001625375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 25001750       | 1 - 3/4     | 2 - 1/4     | 1/4           | 0.275                    | 2.250                    | 2.249                    | 1.750                    | 1.750                    | 1.751                    | 2.250                    |
|                         | 25001750375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 25001875       | 1 - 7/8     | 2 - 3/8     | 1/4           | 0.275                    | 2.375                    | 2.374                    | 1.875                    | 1.875                    | 1.876                    | 2.375                    |
|                         | 25001875375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 25002000       | 2           | 2 - 1/2     | 1/4           | 0.275                    | 2.500                    | 2.499                    | 2.000                    | 2.000                    | 2.001                    | 2.500                    |
|                         | 25002000375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 25002125       | 2 - 1/8     | 2 - 5/8     | 1/4           | 0.275                    | 2.625                    | 2.624                    | 2.125                    | 2.125                    | 2.126                    | 2.625                    |
|                         | 25002125375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 25002250       | 2 - 1/4     | 2 - 3/4     | 1/4           | 0.275                    | 2.750                    | 2.749                    | 2.250                    | 2.250                    | 2.251                    | 2.750                    |
|                         | 25002250375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |
|                         | 25002375       | 2 - 3/8     | 2 - 7/8     | 1/4           | 0.275                    | 2.875                    | 2.874                    | 2.375                    | 2.375                    | 2.376                    | 2.875                    |
|                         | 25002375375    |             |             | 3/8           | 0.413                    |                          |                          |                          |                          |                          |                          |

Loaded U-Cups

# Loaded U-Cups

| C/S<br>(Width)   | Size<br>Number | Nom<br>I.D. | Nom<br>O.D. | Nom<br>Height | Piston Applications  |                   |                     |                     | Shaft Applications |                     |                     |
|------------------|----------------|-------------|-------------|---------------|----------------------|-------------------|---------------------|---------------------|--------------------|---------------------|---------------------|
|                  |                |             |             |               | C<br>Groove<br>Width | A<br>Bore<br>Dia. | D<br>Piston<br>Dia. | B<br>Groove<br>Dia. | E<br>Shaft<br>Dia. | F<br>Throat<br>Dia. | G<br>Groove<br>Dia. |
| Tolerance Limits |                |             |             |               | +0.010<br>-0.000     | +0.003<br>-0.000  | +0.000<br>-0.002    | +0.000<br>-0.003    | +0.000<br>-0.002   | +0.003<br>-0.000    | +0.003<br>-0.000    |
| 1/4"             | 25002500       | 2 - 1/2     | 3           | 1/4           | 0.275                | 3.000             | 2.999               | 2.500               | 2.500              | 2.501               | 3.000               |
|                  | 25002500375    |             |             | 3/8           | 0.413                |                   |                     |                     |                    |                     |                     |
|                  | 25002625       | 2 - 5/8     | 3 - 1/8     | 1/4           | 0.275                | 3.125             | 3.124               | 2.625               | 2.625              | 2.626               | 3.125               |
|                  | 25002625375    |             |             | 3/8           | 0.413                |                   |                     |                     |                    |                     |                     |
|                  | 25002750       | 2 - 3/4     | 3 - 1/4     | 1/4           | 0.275                | 3.250             | 3.249               | 2.750               | 2.750              | 2.751               | 3.250               |
|                  | 25002750375    |             |             | 3/8           | 0.413                |                   |                     |                     |                    |                     |                     |
|                  | 25002875       | 2 - 7/8     | 3 - 3/8     | 1/4           | 0.275                | 3.375             | 3.374               | 2.875               | 2.875              | 2.876               | 3.375               |
|                  | 25002875375    |             |             | 3/8           | 0.413                |                   |                     |                     |                    |                     |                     |
|                  | 25003000       | 3           | 3 - 1/2     | 1/4           | 0.275                | 3.500             | 3.499               | 3.000               | 3.000              | 3.001               | 3.500               |
|                  | 25003000375    |             |             | 3/8           | 0.413                |                   |                     |                     |                    |                     |                     |
|                  | 25003125       | 3 - 1/8     | 3 - 5/8     | 1/4           | 0.275                | 3.625             | 3.624               | 3.125               | 3.125              | 3.126               | 3.625               |
|                  | 25003125375    |             |             | 3/8           | 0.413                |                   |                     |                     |                    |                     |                     |
|                  | 25003250       | 3 - 1/4     | 3 - 3/4     | 1/4           | 0.275                | 3.750             | 3.749               | 3.250               | 3.250              | 3.251               | 3.750               |
|                  | 25003250375    |             |             | 3/8           | 0.413                |                   |                     |                     |                    |                     |                     |
|                  | 25003375       | 3 - 3/8     | 3 - 7/8     | 1/4           | 0.275                | 3.875             | 3.874               | 3.375               | 3.375              | 3.376               | 3.875               |
|                  | 25003375375    |             |             | 3/8           | 0.413                |                   |                     |                     |                    |                     |                     |
|                  | 25003500       | 3 - 1/2     | 4           | 1/4           | 0.275                | 4.000             | 3.999               | 3.500               | 3.500              | 3.501               | 4.000               |
|                  | 25003500375    |             |             | 3/8           | 0.413                |                   |                     |                     |                    |                     |                     |
|                  | 25003625       | 3 - 5/8     | 4 - 1/8     | 1/4           | 0.275                | 4.125             | 4.124               | 3.625               | 3.625              | 3.626               | 4.125               |
|                  | 25003625375    |             |             | 3/8           | 0.413                |                   |                     |                     |                    |                     |                     |
|                  | 25003750       | 3 - 3/4     | 4 - 1/4     | 1/4           | 0.275                | 4.250             | 4.249               | 3.750               | 3.750              | 3.751               | 4.250               |
|                  | 25003750375    |             |             | 3/8           | 0.413                |                   |                     |                     |                    |                     |                     |
|                  | 25004000       | 4           | 4 - 1/2     | 1/4           | 0.275                | 4.500             | 4.499               | 4.000               | 4.000              | 4.001               | 4.500               |
|                  | 25004000562    |             |             | 9/16          | 0.619                |                   |                     |                     |                    |                     |                     |
|                  | 25004125       | 4 - 1/8     | 4 - 5/8     | 1/4           | 0.275                | 4.625             | 4.624               | 4.125               | 4.125              | 4.126               | 4.625               |
|                  | 25004125562    |             |             | 9/16          | 0.619                |                   |                     |                     |                    |                     |                     |
|                  | 25004250       | 4 - 1/4     | 4 - 3/4     | 1/4           | 0.275                | 4.750             | 4.749               | 4.250               | 4.250              | 4.251               | 4.750               |
|                  | 25004250562    |             |             | 9/16          | 0.619                |                   |                     |                     |                    |                     |                     |
|                  | 25004375       | 4 - 3/8     | 4 - 7/8     | 1/4           | 0.275                | 4.875             | 4.874               | 4.375               | 4.375              | 4.376               | 4.875               |
|                  | 25004375562    |             |             | 9/16          | 0.619                |                   |                     |                     |                    |                     |                     |
|                  | 25004500       | 4 - 1/2     | 5           | 1/4           | 0.275                | 5.000             | 4.999               | 4.500               | 4.500              | 4.501               | 5.000               |
|                  | 25004500562    |             |             | 9/16          | 0.619                |                   |                     |                     |                    |                     |                     |
|                  | 25004625       | 4 - 5/8     | 5 - 1/8     | 1/4           | 0.275                | 5.125             | 5.124               | 4.625               | 4.625              | 4.626               | 5.125               |
|                  | 25004625562    |             |             | 9/16          | 0.619                |                   |                     |                     |                    |                     |                     |
|                  | 25004750       | 4 - 3/4     | 5 - 1/4     | 1/4           | 0.275                | 5.250             | 5.249               | 4.750               | 4.750              | 4.751               | 5.250               |
|                  | 25004750562    |             |             | 9/16          | 0.619                |                   |                     |                     |                    |                     |                     |
|                  | 25004875       | 4 - 7/8     | 5 - 3/8     | 1/4           | 0.275                | 5.375             | 5.374               | 4.875               | 4.875              | 4.876               | 5.375               |
|                  | 25004875562    |             |             | 9/16          | 0.619                |                   |                     |                     |                    |                     |                     |
|                  | 25005000       | 5           | 5 - 1/2     | 1/4           | 0.275                | 5.500             | 5.499               | 5.000               | 5.000              | 5.001               | 5.500               |
|                  | 25005000562    |             |             | 9/16          | 0.619                |                   |                     |                     |                    |                     |                     |
|                  | 25005125       | 5 - 1/8     | 5 - 5/8     | 1/4           | 0.275                | 5.625             | 5.624               | 5.125               | 5.125              | 5.126               | 5.625               |
|                  | 25005125562    |             |             | 9/16          | 0.619                |                   |                     |                     |                    |                     |                     |
|                  | 25005250       | 5 - 1/4     | 5 - 3/4     | 1/4           | 0.275                | 5.750             | 5.749               | 5.250               | 5.250              | 5.251               | 5.750               |
|                  | 25005250562    |             |             | 9/16          | 0.619                |                   |                     |                     |                    |                     |                     |
|                  | 25005375       | 5 - 3/8     | 5 - 7/8     | 1/4           | 0.275                | 5.875             | 5.874               | 5.375               | 5.375              | 5.376               | 5.875               |
|                  | 25005375562    |             |             | 9/16          | 0.619                |                   |                     |                     |                    |                     |                     |

Loaded U-Cups

# Loaded U-Cups

IMPERIAL SEALS

Loaded U-Cups

| C/S<br>(Width)   | Size<br>Number | Nom<br>I.D. | Nom<br>O.D. | Nom<br>Height | C<br>Groove<br>Width | Piston Applications |                     |                     | Shaft Applications |                     |                     |
|------------------|----------------|-------------|-------------|---------------|----------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|
|                  |                |             |             |               |                      | A<br>Bore<br>Dia.   | D<br>Piston<br>Dia. | B<br>Groove<br>Dia. | E<br>Shaft<br>Dia. | F<br>Throat<br>Dia. | G<br>Groove<br>Dia. |
| Tolerance Limits |                |             |             |               | +0.010<br>-0.000     | +0.003<br>-0.000    | +0.000<br>-0.002    | +0.000<br>-0.003    | +0.000<br>-0.002   | +0.003<br>-0.000    | +0.003<br>-0.000    |
| 1/4"             | 25005500       | 5 - 1/2     | 6           | 1/4           | 0.275                | 6.000               | 5.999               | 5.500               | 5.500              | 5.501               | 6.000               |
|                  | 25005500562    |             |             | 9/16          | 0.619                |                     |                     |                     |                    |                     |                     |
|                  | 25005625       | 5 - 5/8     | 6 - 1/8     | 1/4           | 0.275                | 6.125               | 6.124               | 5.625               | 5.625              | 5.626               | 6.125               |
|                  | 25005625562    |             |             | 9/16          | 0.619                |                     |                     |                     |                    |                     |                     |
|                  | 25005750       | 5 - 3/4     | 6 - 1/4     | 1/4           | 0.275                | 6.250               | 6.249               | 5.750               | 5.750              | 5.751               | 6.250               |
|                  | 25005750562    |             |             | 9/16          | 0.619                |                     |                     |                     |                    |                     |                     |
|                  | 25005875       | 5 - 7/8     | 6 - 3/8     | 1/4           | 0.275                | 6.375               | 6.374               | 5.875               | 5.875              | 5.876               | 6.375               |
|                  | 25005875562    |             |             | 9/16          | 0.619                |                     |                     |                     |                    |                     |                     |
|                  | 25006000       | 6           | 6 - 1/2     | 1/4           | 0.275                | 6.500               | 6.499               | 6.000               | 6.000              | 6.001               | 6.500               |
|                  | 25006000562    |             |             | 9/16          | 0.619                |                     |                     |                     |                    |                     |                     |
|                  | 25006250       | 6 - 1/4     | 6 - 3/4     | 1/4           | 0.275                | 6.750               | 6.749               | 6.250               | 6.250              | 6.251               | 6.750               |
|                  | 25006250562    |             |             | 9/16          | 0.619                |                     |                     |                     |                    |                     |                     |
|                  | 25006500       | 6 - 1/2     | 7           | 1/4           | 0.275                | 7.000               | 6.999               | 6.500               | 6.500              | 6.501               | 7.000               |
|                  | 25006500562    |             |             | 9/16          | 0.619                |                     |                     |                     |                    |                     |                     |
|                  | 25006750       | 6 - 3/4     | 7 - 1/4     | 1/4           | 0.275                | 7.250               | 7.249               | 6.750               | 6.750              | 6.751               | 7.250               |
|                  | 25006750562    |             |             | 9/16          | 0.619                |                     |                     |                     |                    |                     |                     |
|                  | 25007000       | 7           | 7 - 1/2     | 1/4           | 0.275                | 7.500               | 7.499               | 7.000               | 7.000              | 7.001               | 7.500               |
|                  | 25007000562    |             |             | 9/16          | 0.619                |                     |                     |                     |                    |                     |                     |
|                  | 25007250       | 7 - 1/4     | 7 - 3/4     | 1/4           | 0.275                | 7.750               | 7.749               | 7.250               | 7.250              | 7.251               | 7.750               |
|                  | 25007250562    |             |             | 9/16          | 0.619                |                     |                     |                     |                    |                     |                     |
|                  | 25007500       | 7 - 1/2     | 8           | 1/4           | 0.275                | 8.000               | 7.999               | 7.500               | 7.500              | 7.501               | 8.000               |
|                  | 25007500562    |             |             | 9/16          | 0.619                |                     |                     |                     |                    |                     |                     |
|                  | 25007750       | 7 - 3/4     | 8 - 1/4     | 1/4           | 0.275                | 8.250               | 8.249               | 7.750               | 7.750              | 7.751               | 8.250               |
|                  | 25007750562    |             |             | 9/16          | 0.619                |                     |                     |                     |                    |                     |                     |
|                  | 25008000       | 8           | 8 - 1/2     | 1/4           | 0.275                | 8.500               | 8.499               | 8.000               | 8.000              | 8.001               | 8.500               |
|                  | 25008000562    |             |             | 9/16          | 0.619                |                     |                     |                     |                    |                     |                     |
|                  | 25008250       | 8 - 1/4     | 8 - 3/4     | 1/4           | 0.275                | 8.750               | 8.749               | 8.250               | 8.250              | 8.251               | 8.750               |
|                  | 25008250562    |             |             | 9/16          | 0.619                |                     |                     |                     |                    |                     |                     |
|                  | 25008500       | 8 - 1/2     | 9           | 1/4           | 0.275                | 9.000               | 8.999               | 8.500               | 8.500              | 8.501               | 9.000               |
|                  | 25008500562    |             |             | 9/16          | 0.619                |                     |                     |                     |                    |                     |                     |
|                  | 25008750       | 8 - 3/4     | 9 - 1/4     | 1/4           | 0.275                | 9.250               | 9.249               | 8.750               | 8.750              | 8.751               | 9.250               |
|                  | 25008750562    |             |             | 9/16          | 0.619                |                     |                     |                     |                    |                     |                     |
|                  | 25009000       | 9           | 9 - 1/2     | 1/4           | 0.275                | 9.500               | 9.499               | 9.000               | 9.000              | 9.001               | 9.500               |
|                  | 25009000562    |             |             | 9/16          | 0.619                |                     |                     |                     |                    |                     |                     |
|                  | 25009250       | 9 - 1/4     | 9 - 3/4     | 1/4           | 0.275                | 9.750               | 9.749               | 9.250               | 9.250              | 9.251               | 9.750               |
|                  | 25009250562    |             |             | 9/16          | 0.619                |                     |                     |                     |                    |                     |                     |
|                  | 25009500       | 9 - 1/2     | 10          | 1/4           | 0.275                | 10.000              | 9.999               | 9.500               | 9.500              | 9.501               | 10.000              |
|                  | 25009500562    |             |             | 9/16          | 0.619                |                     |                     |                     |                    |                     |                     |
|                  | 25009750       | 9 - 3/4     | 10 - 1/4    | 1/4           | 0.275                | 10.250              | 10.249              | 9.750               | 9.750              | 9.751               | 10.250              |
|                  | 25009750562    |             |             | 9/16          | 0.619                |                     |                     |                     |                    |                     |                     |
|                  | 250010000      | 10          | 10 - 1/2    | 1/4           | 0.275                | 10.500              | 10.499              | 10.000              | 10.000             | 10.001              | 10.500              |
|                  | 250010000562   |             |             | 9/16          | 0.619                |                     |                     |                     |                    |                     |                     |



# Loaded U-Cups

| C/S<br>(Width)          | Size<br>Number | Nom<br>I.D. | Nom<br>O.D. | Nom<br>Height | Piston Applications      |                          |                          |                          | Shaft Applications       |                          |                          |
|-------------------------|----------------|-------------|-------------|---------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                         |                |             |             |               | C<br>Groove<br>Width     | A<br>Bore<br>Dia.        | D<br>Piston<br>Dia.      | B<br>Groove<br>Dia.      | E<br>Shaft<br>Dia.       | F<br>Throat<br>Dia.      | G<br>Groove<br>Dia.      |
| <b>Tolerance Limits</b> |                |             |             |               | <b>+0.010<br/>-0.000</b> | <b>+0.003<br/>-0.000</b> | <b>+0.000<br/>-0.002</b> | <b>+0.000<br/>-0.004</b> | <b>+0.000<br/>-0.002</b> | <b>+0.003<br/>-0.000</b> | <b>+0.004<br/>-0.000</b> |
| 5/16"                   | 31200375       | 3/8         | 1           | 5/16          | 0.344                    | 1.000                    | 0.998                    | 0.375                    | 0.375                    | 0.377                    | 1.000                    |
|                         | 31200375500    |             |             | 1/2           | 0.550                    |                          |                          |                          |                          |                          |                          |
|                         | 31200437       | 7/16        | 1 - 1/16    | 5/16          | 0.344                    | 1.062                    | 1.060                    | 0.437                    | 0.437                    | 0.439                    | 1.062                    |
|                         | 31200437500    |             |             | 1/2           | 0.550                    |                          |                          |                          |                          |                          |                          |
|                         | 31200500       | 1/2         | 1 - 1/8     | 5/16          | 0.344                    | 1.125                    | 1.123                    | 0.500                    | 0.500                    | 0.502                    | 1.125                    |
|                         | 31200500500    |             |             | 1/2           | 0.550                    |                          |                          |                          |                          |                          |                          |
|                         | 31200562       | 9/16        | 1 - 3/16    | 5/16          | 0.344                    | 1.187                    | 1.185                    | 0.562                    | 0.562                    | 0.564                    | 1.187                    |
|                         | 31200562500    |             |             | 1/2           | 0.550                    |                          |                          |                          |                          |                          |                          |
|                         | 31200625       | 5/8         | 1 - 1/4     | 5/16          | 0.344                    | 1.250                    | 1.248                    | 0.625                    | 0.625                    | 0.627                    | 1.250                    |
|                         | 31200625500    |             |             | 1/2           | 0.550                    |                          |                          |                          |                          |                          |                          |
|                         | 31200687       | 11/16       | 1 - 5/16    | 5/16          | 0.344                    | 1.312                    | 1.310                    | 0.687                    | 0.687                    | 0.689                    | 1.312                    |
|                         | 31200687500    |             |             | 1/2           | 0.550                    |                          |                          |                          |                          |                          |                          |
|                         | 31200750       | 3/4         | 1 - 3/8     | 5/16          | 0.344                    | 1.375                    | 1.373                    | 0.750                    | 0.750                    | 0.752                    | 1.375                    |
|                         | 31200750500    |             |             | 1/2           | 0.550                    |                          |                          |                          |                          |                          |                          |
|                         | 31200812       | 13/16       | 1 - 7/16    | 5/16          | 0.344                    | 1.437                    | 1.435                    | 0.812                    | 0.812                    | 0.814                    | 1.437                    |
|                         | 31200812500    |             |             | 1/2           | 0.550                    |                          |                          |                          |                          |                          |                          |
|                         | 31200875       | 7/8         | 1 - 1/2     | 5/16          | 0.344                    | 1.500                    | 1.498                    | 0.875                    | 0.875                    | 0.877                    | 1.500                    |
|                         | 31200875500    |             |             | 1/2           | 0.550                    |                          |                          |                          |                          |                          |                          |
|                         | 31200937       | 15/16       | 1 - 9/16    | 5/16          | 0.344                    | 1.562                    | 1.560                    | 0.937                    | 0.937                    | 0.939                    | 1.562                    |
|                         | 31200937500    |             |             | 1/2           | 0.550                    |                          |                          |                          |                          |                          |                          |
|                         | 31201000       | 1           | 1 - 5/8     | 5/16          | 0.344                    | 1.625                    | 1.623                    | 1.000                    | 1.000                    | 1.002                    | 1.625                    |
|                         | 31201000500    |             |             | 1/2           | 0.550                    |                          |                          |                          |                          |                          |                          |
|                         | 31201062       | 1 - 1/16    | 1 - 11/16   | 5/16          | 0.344                    | 1.687                    | 1.685                    | 1.062                    | 1.062                    | 1.064                    | 1.687                    |
|                         | 31201062500    |             |             | 1/2           | 0.550                    |                          |                          |                          |                          |                          |                          |
|                         | 31201125       | 1 - 1/8     | 1 - 3/4     | 5/16          | 0.344                    | 1.750                    | 1.748                    | 1.125                    | 1.125                    | 1.127                    | 1.750                    |
|                         | 31201125500    |             |             | 1/2           | 0.550                    |                          |                          |                          |                          |                          |                          |
|                         | 31201375       | 1 - 3/16    | 1 - 13/16   | 5/16          | 0.344                    | 1.812                    | 1.810                    | 1.187                    | 1.187                    | 1.189                    | 1.812                    |
|                         | 31201375500    |             |             | 1/2           | 0.550                    |                          |                          |                          |                          |                          |                          |
|                         | 31201250       | 1 - 1/4     | 1 - 7/8     | 5/16          | 0.344                    | 1.875                    | 1.873                    | 1.250                    | 1.250                    | 1.252                    | 1.875                    |
|                         | 31201250500    |             |             | 1/2           | 0.550                    |                          |                          |                          |                          |                          |                          |
|                         | 31201312       | 1 - 5/16    | 1 - 15/16   | 5/16          | 0.344                    | 1.937                    | 1.935                    | 1.312                    | 1.312                    | 1.314                    | 1.937                    |
|                         | 31201312500    |             |             | 1/2           | 0.550                    |                          |                          |                          |                          |                          |                          |
|                         | 31201375       | 1 - 3/8     | 2           | 5/16          | 0.344                    | 2.000                    | 1.998                    | 1.375                    | 1.375                    | 1.377                    | 2.000                    |
|                         | 31201375500    |             |             | 1/2           | 0.550                    |                          |                          |                          |                          |                          |                          |
|                         | 31201437       | 1 - 7/16    | 2 - 1/16    | 5/16          | 0.344                    | 2.062                    | 2.060                    | 1.437                    | 1.437                    | 1.439                    | 2.062                    |
|                         | 31201437500    |             |             | 1/2           | 0.550                    |                          |                          |                          |                          |                          |                          |
|                         | 31201500       | 1 - 1/2     | 2 - 1/8     | 5/16          | 0.344                    | 2.125                    | 2.123                    | 1.500                    | 1.500                    | 1.502                    | 2.125                    |
|                         | 31201500500    |             |             | 1/2           | 0.550                    |                          |                          |                          |                          |                          |                          |

Loaded U-Cups

# Loaded U-Cups

IMPERIAL SEALS

| C/S<br>(Width)   | Size<br>Number | Nom<br>I.D. | Nom<br>O.D. | Nom<br>Height | Piston Applications  |                   |                     | Shaft Applications  |                    |                     |                     |
|------------------|----------------|-------------|-------------|---------------|----------------------|-------------------|---------------------|---------------------|--------------------|---------------------|---------------------|
|                  |                |             |             |               | C<br>Groove<br>Width | A<br>Bore<br>Dia. | D<br>Piston<br>Dia. | B<br>Groove<br>Dia. | E<br>Shaft<br>Dia. | F<br>Throat<br>Dia. | G<br>Groove<br>Dia. |
| Tolerance Limits |                |             |             |               | +0.010<br>-0.000     | +0.003<br>-0.000  | +0.000<br>-0.002    | +0.000<br>-0.004    | +0.000<br>-0.002   | +0.003<br>-0.000    | +0.004<br>-0.000    |
| 5/16"            | 31201625       | 1 - 5/8     | 2 - 1/4     | 5/16          | 0.344                | 2.250             | 2.248               | 1.625               | 1.625              | 1.627               | 2.250               |
|                  | 31201625500    |             |             | 1/2           | 0.550                |                   |                     |                     |                    |                     |                     |
|                  | 31201750       | 1 - 3/4     | 2 - 3/8     | 5/16          | 0.344                | 2.375             | 2.373               | 1.750               | 1.750              | 1.752               | 2.375               |
|                  | 31201750500    |             |             | 1/2           | 0.550                |                   |                     |                     |                    |                     |                     |
|                  | 31201875       | 1 - 7/8     | 2 - 1/2     | 5/16          | 0.344                | 2.500             | 2.498               | 1.875               | 1.875              | 1.877               | 2.500               |
|                  | 31201875500    |             |             | 1/2           | 0.550                |                   |                     |                     |                    |                     |                     |
|                  | 31202000       | 2           | 2 - 5/8     | 5/16          | 0.344                | 2.625             | 2.623               | 2.000               | 2.000              | 2.002               | 2.625               |
|                  | 31202000500    |             |             | 1/2           | 0.550                |                   |                     |                     |                    |                     |                     |
|                  | 31202125       | 2 - 1/8     | 2 - 3/4     | 5/16          | 0.344                | 2.750             | 2.748               | 2.125               | 2.125              | 2.127               | 2.750               |
|                  | 31202125500    |             |             | 1/2           | 0.550                |                   |                     |                     |                    |                     |                     |
|                  | 31202250       | 2 - 1/4     | 2 - 7/8     | 5/16          | 0.344                | 2.875             | 2.873               | 2.250               | 2.250              | 2.252               | 2.875               |
|                  | 31202250500    |             |             | 1/2           | 0.550                |                   |                     |                     |                    |                     |                     |
|                  | 31202375       | 2 - 3/8     | 3           | 5/16          | 0.344                | 3.000             | 2.998               | 2.375               | 2.375              | 2.377               | 3.000               |
|                  | 31202375500    |             |             | 1/2           | 0.550                |                   |                     |                     |                    |                     |                     |
|                  | 31202500       | 2 - 1/2     | 3 - 1/8     | 5/16          | 0.344                | 3.125             | 3.123               | 2.500               | 2.500              | 2.502               | 3.125               |
|                  | 31202500500    |             |             | 1/2           | 0.550                |                   |                     |                     |                    |                     |                     |
|                  | 31202625       | 2 - 5/8     | 3 - 1/4     | 5/16          | 0.344                | 3.250             | 3.248               | 2.625               | 2.625              | 2.627               | 3.250               |
|                  | 31202625500    |             |             | 1/2           | 0.550                |                   |                     |                     |                    |                     |                     |
|                  | 31202750       | 2 - 3/4     | 3 - 3/8     | 5/16          | 0.344                | 3.375             | 3.373               | 2.750               | 2.750              | 2.752               | 3.375               |
|                  | 31202750500    |             |             | 1/2           | 0.550                |                   |                     |                     |                    |                     |                     |
|                  | 31202875       | 2 - 7/8     | 3 - 1/2     | 5/16          | 0.344                | 3.500             | 3.498               | 2.875               | 2.875              | 2.877               | 3.500               |
|                  | 31202875500    |             |             | 1/2           | 0.550                |                   |                     |                     |                    |                     |                     |
|                  | 31203000       | 3           | 3 - 5/8     | 5/16          | 0.344                | 3.625             | 3.623               | 3.000               | 3.000              | 3.002               | 3.625               |
|                  | 31203000500    |             |             | 1/2           | 0.550                |                   |                     |                     |                    |                     |                     |
|                  | 31203125       | 3 - 1/8     | 3 - 3/4     | 5/16          | 0.344                | 3.750             | 3.748               | 3.125               | 3.125              | 3.127               | 3.750               |
|                  | 31203125500    |             |             | 1/2           | 0.550                |                   |                     |                     |                    |                     |                     |
|                  | 31203250       | 3 - 1/4     | 3 - 7/8     | 5/16          | 0.344                | 3.875             | 3.873               | 3.250               | 3.250              | 3.252               | 3.875               |
|                  | 31203250500    |             |             | 1/2           | 0.550                |                   |                     |                     |                    |                     |                     |
|                  | 31203375       | 3 - 3/8     | 4           | 5/16          | 0.344                | 4.000             | 3.998               | 3.375               | 3.375              | 3.377               | 4.000               |
|                  | 31203375500    |             |             | 1/2           | 0.550                |                   |                     |                     |                    |                     |                     |
|                  | 31203500       | 3 - 1/2     | 4 - 1/8     | 5/16          | 0.344                | 4.125             | 4.123               | 3.500               | 3.500              | 3.502               | 4.125               |
|                  | 31203500500    |             |             | 1/2           | 0.550                |                   |                     |                     |                    |                     |                     |
|                  | 31203625       | 3 - 5/8     | 4 - 1/4     | 5/16          | 0.344                | 4.250             | 4.248               | 3.625               | 3.625              | 3.627               | 4.250               |
|                  | 31203625500    |             |             | 1/2           | 0.550                |                   |                     |                     |                    |                     |                     |
|                  | 31203750       | 3 - 3/4     | 4 - 3/8     | 5/16          | 0.344                | 4.375             | 4.373               | 3.750               | 3.750              | 3.752               | 4.375               |
|                  | 31203750500    |             |             | 1/2           | 0.550                |                   |                     |                     |                    |                     |                     |
|                  | 31203875       | 3 - 7/8     | 4 - 1/2     | 5/16          | 0.344                | 4.500             | 4.498               | 3.875               | 3.875              | 3.877               | 4.500               |
|                  | 31203875500    |             |             | 1/2           | 0.550                |                   |                     |                     |                    |                     |                     |
|                  | 31204000       | 4           | 4 - 5/8     | 5/16          | 0.344                | 4.625             | 4.623               | 4.000               | 4.000              | 4.002               | 4.625               |
|                  | 31204000562    |             |             | 9/16          | 0.619                |                   |                     |                     |                    |                     |                     |
|                  | 31204125       | 4 - 1/8     | 4 - 3/4     | 5/16          | 0.344                | 4.750             | 4.748               | 4.125               | 4.125              | 4.127               | 4.750               |
|                  | 31204125562    |             |             | 9/16          | 0.619                |                   |                     |                     |                    |                     |                     |
|                  | 31204250       | 4 - 1/4     | 4 - 7/8     | 5/16          | 0.344                | 4.875             | 4.873               | 4.250               | 4.250              | 4.252               | 4.875               |
|                  | 31204250562    |             |             | 9/16          | 0.619                |                   |                     |                     |                    |                     |                     |
|                  | 31204375       | 4 - 3/8     | 5           | 5/16          | 0.344                | 5.000             | 4.998               | 4.375               | 4.375              | 4.377               | 5.000               |
|                  | 31204375562    |             |             | 9/16          | 0.619                |                   |                     |                     |                    |                     |                     |

Loaded U-Cups

# Loaded U-Cups

| C/S<br>(Width)   | Size<br>Number | Nom<br>I.D. | Nom<br>O.D. | Nom<br>Height | Piston Applications  |                   |                     |                     | Shaft Applications |                     |                     |
|------------------|----------------|-------------|-------------|---------------|----------------------|-------------------|---------------------|---------------------|--------------------|---------------------|---------------------|
|                  |                |             |             |               | C<br>Groove<br>Width | A<br>Bore<br>Dia. | D<br>Piston<br>Dia. | B<br>Groove<br>Dia. | E<br>Shaft<br>Dia. | F<br>Throat<br>Dia. | G<br>Groove<br>Dia. |
| Tolerance Limits |                |             |             |               | +0.010<br>-0.000     | +0.003<br>-0.000  | +0.000<br>-0.002    | +0.000<br>-0.004    | +0.000<br>-0.002   | +0.003<br>-0.000    | +0.004<br>-0.000    |
| 5/16"            | 31204500       | 4 - 1/2     | 5 - 1/8     | 5/16          | 0.344                | 5.125             | 5.123               | 4.500               | 4.500              | 4.502               | 5.125               |
|                  | 31204500625    |             |             | 5/8           | 0.688                |                   |                     |                     |                    |                     |                     |
|                  | 31204625       | 4 - 5/8     | 5 - 1/4     | 5/16          | 0.344                | 5.250             | 5.248               | 4.625               | 4.625              | 4.627               | 5.250               |
|                  | 31204625625    |             |             | 5/8           | 0.688                |                   |                     |                     |                    |                     |                     |
|                  | 31204750       | 4 - 3/4     | 5 - 3/8     | 5/16          | 0.344                | 5.375             | 5.373               | 4.750               | 4.750              | 4.752               | 5.375               |
|                  | 31204750625    |             |             | 5/8           | 0.688                |                   |                     |                     |                    |                     |                     |
|                  | 31204875       | 4 - 7/8     | 5 - 1/2     | 5/16          | 0.344                | 5.500             | 5.498               | 4.875               | 4.875              | 4.877               | 5.500               |
|                  | 31204875625    |             |             | 5/8           | 0.688                |                   |                     |                     |                    |                     |                     |
|                  | 31205000       | 5           | 5 - 5/8     | 5/16          | 0.344                | 5.625             | 5.623               | 5.000               | 5.000              | 5.002               | 5.625               |
|                  | 31205000625    |             |             | 5/8           | 0.688                |                   |                     |                     |                    |                     |                     |
|                  | 31205125       | 5 - 1/8     | 5 - 3/4     | 5/16          | 0.344                | 5.750             | 5.748               | 5.125               | 5.125              | 5.127               | 5.750               |
|                  | 31205125625    |             |             | 5/8           | 0.688                |                   |                     |                     |                    |                     |                     |
|                  | 31205250       | 5 - 1/4     | 5 - 7/8     | 5/16          | 0.344                | 5.875             | 5.873               | 5.250               | 5.250              | 5.252               | 5.875               |
|                  | 31205250625    |             |             | 5/8           | 0.688                |                   |                     |                     |                    |                     |                     |
|                  | 31205375       | 5 - 3/8     | 6           | 5/16          | 0.344                | 6.000             | 5.998               | 5.375               | 5.375              | 5.377               | 6.000               |
|                  | 31205375625    |             |             | 5/8           | 0.688                |                   |                     |                     |                    |                     |                     |
|                  | 31205500       | 5 - 1/2     | 6 - 1/8     | 5/16          | 0.344                | 6.125             | 6.123               | 5.500               | 5.500              | 5.502               | 6.125               |
|                  | 31205500625    |             |             | 5/8           | 0.688                |                   |                     |                     |                    |                     |                     |
|                  | 31205625       | 5 - 5/8     | 6 - 1/4     | 5/16          | 0.344                | 6.250             | 6.248               | 5.625               | 5.625              | 5.627               | 6.250               |
|                  | 31205625625    |             |             | 5/8           | 0.688                |                   |                     |                     |                    |                     |                     |
|                  | 31205750       | 5 - 3/4     | 6 - 3/8     | 5/16          | 0.344                | 6.375             | 6.373               | 5.750               | 5.750              | 5.752               | 6.375               |
|                  | 31205750625    |             |             | 5/8           | 0.688                |                   |                     |                     |                    |                     |                     |
|                  | 31205875       | 5 - 7/8     | 6 - 1/2     | 5/16          | 0.344                | 6.500             | 6.498               | 5.875               | 5.875              | 5.877               | 6.500               |
|                  | 31205875625    |             |             | 5/8           | 0.688                |                   |                     |                     |                    |                     |                     |
|                  | 31206000       | 6           | 6 - 5/8     | 5/16          | 0.344                | 6.625             | 6.623               | 6.000               | 6.000              | 6.002               | 6.625               |
|                  | 31206000625    |             |             | 5/8           | 0.688                |                   |                     |                     |                    |                     |                     |
|                  | 31206125       | 6 - 1/8     | 6 - 3/4     | 5/16          | 0.344                | 6.750             | 6.748               | 6.125               | 6.125              | 6.127               | 6.750               |
|                  | 31206125625    |             |             | 5/8           | 0.688                |                   |                     |                     |                    |                     |                     |
|                  | 31206250       | 6 - 1/4     | 6 - 7/8     | 5/16          | 0.344                | 6.875             | 6.873               | 6.250               | 6.250              | 6.252               | 6.875               |
|                  | 31206250625    |             |             | 5/8           | 0.688                |                   |                     |                     |                    |                     |                     |
|                  | 31206375       | 6 - 3/8     | 7           | 5/16          | 0.344                | 7.000             | 6.998               | 6.375               | 6.375              | 6.377               | 7.000               |
|                  | 31206375625    |             |             | 5/8           | 0.688                |                   |                     |                     |                    |                     |                     |
|                  | 31206500       | 6 - 1/2     | 7 - 1/8     | 5/16          | 0.344                | 7.125             | 7.123               | 6.500               | 6.500              | 6.502               | 7.125               |
|                  | 31206500625    |             |             | 5/8           | 0.688                |                   |                     |                     |                    |                     |                     |
|                  | 31206625       | 6 - 5/8     | 7 - 1/4     | 5/16          | 0.344                | 7.250             | 7.248               | 6.625               | 6.625              | 6.627               | 7.250               |
|                  | 31206625625    |             |             | 5/8           | 0.688                |                   |                     |                     |                    |                     |                     |
|                  | 31206750       | 6 - 3/4     | 7 - 3/8     | 5/16          | 0.344                | 7.375             | 7.373               | 6.750               | 6.750              | 6.752               | 7.375               |
|                  | 31206750625    |             |             | 5/8           | 0.688                |                   |                     |                     |                    |                     |                     |
|                  | 31206875       | 6 - 7/8     | 7 - 1/2     | 5/16          | 0.344                | 7.500             | 7.498               | 6.875               | 6.875              | 6.877               | 7.500               |
|                  | 31206875625    |             |             | 5/8           | 0.688                |                   |                     |                     |                    |                     |                     |
|                  | 31207000       | 7           | 7 - 5/8     | 5/16          | 0.344                | 7.625             | 7.623               | 7.000               | 7.000              | 7.002               | 7.625               |
|                  | 31207000625    |             |             | 5/8           | 0.688                |                   |                     |                     |                    |                     |                     |
|                  | 31207125       | 7 - 1/8     | 7 - 3/4     | 5/16          | 0.344                | 7.750             | 7.748               | 7.125               | 7.125              | 7.127               | 7.750               |
|                  | 31207125625    |             |             | 5/8           | 0.688                |                   |                     |                     |                    |                     |                     |

Loaded U-Cups

# Loaded U-Cups

IMPERIAL SEALS

Loaded U-Cups

| C/S<br>(Width)          | Size<br>Number | Nom<br>I.D. | Nom<br>O.D. | Nom<br>Height | Piston Applications            |                                |                                |                                | Shaft Applications             |                                |                                |
|-------------------------|----------------|-------------|-------------|---------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
|                         |                |             |             |               | C<br>Groove<br>Width           | A<br>Bore<br>Dia.              | D<br>Piston<br>Dia.            | B<br>Groove<br>Dia.            | E<br>Shaft<br>Dia.             | F<br>Throat<br>Dia.            | G<br>Groove<br>Dia.            |
| <b>Tolerance Limits</b> |                |             |             |               | <b>+0.010</b><br><b>-0.000</b> | <b>+0.003</b><br><b>-0.000</b> | <b>+0.000</b><br><b>-0.002</b> | <b>+0.000</b><br><b>-0.004</b> | <b>+0.000</b><br><b>-0.002</b> | <b>+0.003</b><br><b>-0.000</b> | <b>+0.004</b><br><b>-0.000</b> |
| 5/16"                   | 31207250       | 7 - 1/4     | 7 - 7/8     | 5/16          | 0.344                          | 7.875                          | 7.873                          | 7.250                          | 7.250                          | 7.252                          | 7.875                          |
|                         | 31207250625    |             |             | 5/8           | 0.688                          |                                |                                |                                |                                |                                |                                |
|                         | 31207375       | 7 - 3/8     | 8           | 5/16          | 0.344                          | 8.000                          | 7.998                          | 7.375                          | 7.375                          | 7.377                          | 8.000                          |
|                         | 31207375625    |             |             | 5/8           | 0.688                          |                                |                                |                                |                                |                                |                                |
| <b>Tolerance Limits</b> |                |             |             |               | <b>+0.010</b><br><b>-0.000</b> | <b>+0.004</b><br><b>-0.000</b> | <b>+0.000</b><br><b>-0.002</b> | <b>+0.000</b><br><b>-0.005</b> | <b>+0.000</b><br><b>-0.002</b> | <b>+0.004</b><br><b>-0.000</b> | <b>+0.005</b><br><b>-0.000</b> |
| 3/8"                    | 37500500       | 1/2         | 1 - 1/4     | 3/8           | 0.413                          | 1.250                          | 1.248                          | 0.500                          | 0.500                          | 0.502                          | 1.250                          |
|                         | 37500500625    |             |             | 5/8           | 0.688                          |                                |                                |                                |                                |                                |                                |
|                         | 37500562       | 9/16        | 1 - 5/16    | 3/8           | 0.413                          | 1.312                          | 1.310                          | 0.562                          | 0.562                          | 0.564                          | 1.312                          |
|                         | 37500562625    |             |             | 5/8           | 0.688                          |                                |                                |                                |                                |                                |                                |
|                         | 37500625       | 5/8         | 1 - 3/8     | 3/8           | 0.413                          | 1.375                          | 1.373                          | 0.625                          | 0.625                          | 0.627                          | 1.375                          |
|                         | 37500625625    |             |             | 5/8           | 0.688                          |                                |                                |                                |                                |                                |                                |
|                         | 37500687       | 11/16       | 1 - 7/16    | 3/8           | 0.413                          | 1.437                          | 1.435                          | 0.687                          | 0.687                          | 0.689                          | 1.437                          |
|                         | 37500687625    |             |             | 5/8           | 0.688                          |                                |                                |                                |                                |                                |                                |
|                         | 37500750       | 3/4         | 1 - 1/2     | 3/8           | 0.413                          | 1.500                          | 1.498                          | 0.750                          | 0.750                          | 0.752                          | 1.500                          |
|                         | 37500750625    |             |             | 5/8           | 0.688                          |                                |                                |                                |                                |                                |                                |
|                         | 37500812       | 13/16       | 1 - 9/16    | 3/8           | 0.413                          | 1.562                          | 1.560                          | 0.812                          | 0.812                          | 0.814                          | 1.562                          |
|                         | 37500812625    |             |             | 5/8           | 0.688                          |                                |                                |                                |                                |                                |                                |
|                         | 37500875       | 7/8         | 1 - 5/8     | 3/8           | 0.413                          | 1.625                          | 1.623                          | 0.875                          | 0.875                          | 0.877                          | 1.625                          |
|                         | 37500875625    |             |             | 5/8           | 0.688                          |                                |                                |                                |                                |                                |                                |
|                         | 37500937       | 15/16       | 1 - 11/16   | 3/8           | 0.413                          | 1.687                          | 1.685                          | 0.937                          | 0.937                          | 0.939                          | 1.687                          |
|                         | 37500937625    |             |             | 5/8           | 0.688                          |                                |                                |                                |                                |                                |                                |
|                         | 37501000       | 1           | 1 - 3/4     | 3/8           | 0.413                          | 1.750                          | 1.748                          | 1.000                          | 1.000                          | 1.002                          | 1.750                          |
|                         | 37501000625    |             |             | 5/8           | 0.688                          |                                |                                |                                |                                |                                |                                |
|                         | 37501062       | 1 - 1/16    | 1 - 13/16   | 3/8           | 0.413                          | 1.812                          | 1.810                          | 1.062                          | 1.062                          | 1.064                          | 1.812                          |
|                         | 37501062625    |             |             | 5/8           | 0.688                          |                                |                                |                                |                                |                                |                                |
|                         | 37501125       | 1 - 1/8     | 1 - 7/8     | 3/8           | 0.413                          | 1.875                          | 1.873                          | 1.125                          | 1.125                          | 1.127                          | 1.875                          |
|                         | 37501125625    |             |             | 5/8           | 0.688                          |                                |                                |                                |                                |                                |                                |
|                         | 37501187       | 1 - 3/16    | 1 - 15/16   | 3/8           | 0.413                          | 1.937                          | 1.935                          | 1.187                          | 1.187                          | 1.189                          | 1.937                          |
|                         | 37501187625    |             |             | 5/8           | 0.688                          |                                |                                |                                |                                |                                |                                |
|                         | 37501250       | 1 - 1/4     | 2           | 3/8           | 0.413                          | 2.000                          | 1.998                          | 1.250                          | 1.250                          | 1.252                          | 2.000                          |
|                         | 37501250625    |             |             | 5/8           | 0.688                          |                                |                                |                                |                                |                                |                                |
|                         | 37501312       | 1 - 5/16    | 2 - 1/16    | 3/8           | 0.413                          | 2.062                          | 2.060                          | 1.312                          | 1.312                          | 1.314                          | 2.062                          |
|                         | 37501312625    |             |             | 5/8           | 0.688                          |                                |                                |                                |                                |                                |                                |
|                         | 37501375       | 1 - 3/8     | 2 - 1/8     | 3/8           | 0.413                          | 2.125                          | 2.123                          | 1.375                          | 1.375                          | 1.377                          | 2.125                          |
|                         | 37501375625    |             |             | 5/8           | 0.688                          |                                |                                |                                |                                |                                |                                |
|                         | 37501437       | 1 - 7/16    | 2 - 3/16    | 3/8           | 0.413                          | 2.187                          | 2.185                          | 1.437                          | 1.437                          | 1.439                          | 2.187                          |
|                         | 37501437625    |             |             | 5/8           | 0.688                          |                                |                                |                                |                                |                                |                                |
| 37501500                | 1 - 1/2        | 2 - 1/4     | 3/8         | 0.413         | 2.250                          | 2.248                          | 1.500                          | 1.500                          | 1.502                          | 2.250                          |                                |
| 37501500625             |                |             | 5/8         | 0.688         |                                |                                |                                |                                |                                |                                |                                |
| 37501625                | 1 - 5/8        | 2 - 3/8     | 3/8         | 0.413         | 2.375                          | 2.373                          | 1.625                          | 1.625                          | 1.627                          | 2.375                          |                                |
| 37501625625             |                |             | 5/8         | 0.688         |                                |                                |                                |                                |                                |                                |                                |
| 37501750                | 1 - 3/4        | 2 - 1/2     | 3/8         | 0.413         | 2.500                          | 2.498                          | 1.750                          | 1.750                          | 1.752                          | 2.500                          |                                |
| 37501750625             |                |             | 5/8         | 0.688         |                                |                                |                                |                                |                                |                                |                                |
| 37501875                | 1 - 7/8        | 2 - 5/8     | 3/8         | 0.413         | 2.625                          | 2.623                          | 1.875                          | 1.875                          | 1.877                          | 2.625                          |                                |
| 37501875625             |                |             | 5/8         | 0.688         |                                |                                |                                |                                |                                |                                |                                |

# Loaded U-Cups

| C/S<br>(Width)          | Size<br>Number | Nom<br>I.D. | Nom<br>O.D. | Nom<br>Height | Piston Applications      |                          |                          |                          | Shaft Applications       |                          |                          |
|-------------------------|----------------|-------------|-------------|---------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                         |                |             |             |               | C<br>Groove<br>Width     | A<br>Bore<br>Dia.        | D<br>Piston<br>Dia.      | B<br>Groove<br>Dia.      | E<br>Shaft<br>Dia.       | F<br>Throat<br>Dia.      | G<br>Groove<br>Dia.      |
| <b>Tolerance Limits</b> |                |             |             |               | <b>+0.010<br/>-0.000</b> | <b>+0.004<br/>-0.000</b> | <b>+0.000<br/>-0.002</b> | <b>+0.000<br/>-0.005</b> | <b>+0.000<br/>-0.002</b> | <b>+0.004<br/>-0.000</b> | <b>+0.005<br/>-0.000</b> |
| 3/8"                    | 37502000       | 2           | 2 - 3/4     | 3/8           | 0.413                    | 2.750                    | 2.748                    | 2.000                    | 2.000                    | 2.002                    | 2.750                    |
|                         | 37502000625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                         | 37502125       | 2 - 1/8     | 2 - 7/8     | 3/8           | 0.413                    | 2.875                    | 2.873                    | 2.125                    | 2.125                    | 2.127                    | 2.875                    |
|                         | 37502125625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                         | 37502250       | 2 - 1/4     | 3           | 3/8           | 0.413                    | 3.000                    | 2.998                    | 2.250                    | 2.250                    | 2.252                    | 3.000                    |
|                         | 37502250625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                         | 37502375       | 2 - 3/8     | 3 - 1/8     | 3/8           | 0.413                    | 3.125                    | 3.123                    | 2.375                    | 2.375                    | 2.377                    | 3.125                    |
|                         | 37502375625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                         | 37502500       | 2 - 1/2     | 3 - 1/4     | 3/8           | 0.413                    | 3.250                    | 3.248                    | 2.500                    | 2.500                    | 2.502                    | 3.250                    |
|                         | 37502500625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                         | 37502625       | 2 - 5/8     | 3 - 3/8     | 3/8           | 0.413                    | 3.375                    | 3.373                    | 2.625                    | 2.625                    | 2.627                    | 3.375                    |
|                         | 37502625625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                         | 37502750       | 2 - 3/4     | 3 - 1/2     | 3/8           | 0.413                    | 3.500                    | 3.498                    | 2.750                    | 2.750                    | 2.752                    | 3.500                    |
|                         | 37502750625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                         | 37502875       | 2 - 7/8     | 3 - 5/8     | 3/8           | 0.413                    | 3.625                    | 3.623                    | 2.875                    | 2.875                    | 2.877                    | 3.625                    |
|                         | 37502875625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                         | 37503000       | 3           | 3 - 3/4     | 3/8           | 0.413                    | 3.750                    | 3.748                    | 3.000                    | 3.000                    | 3.002                    | 3.750                    |
|                         | 37503000625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                         | 37503125       | 3 - 1/8     | 3 - 7/8     | 3/8           | 0.413                    | 3.875                    | 3.873                    | 3.125                    | 3.125                    | 3.127                    | 3.875                    |
|                         | 37503125625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                         | 37503250       | 3 - 1/4     | 4           | 3/8           | 0.413                    | 4.000                    | 3.998                    | 3.250                    | 3.250                    | 3.252                    | 4.000                    |
|                         | 37503250625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                         | 37503375       | 3 - 3/8     | 4 - 1/8     | 3/8           | 0.413                    | 4.125                    | 4.123                    | 3.375                    | 3.375                    | 3.377                    | 4.125                    |
|                         | 37503375625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                         | 37503500       | 3 - 1/2     | 4 - 1/4     | 3/8           | 0.413                    | 4.250                    | 4.248                    | 3.500                    | 3.500                    | 3.502                    | 4.250                    |
|                         | 37503500625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                         | 37503625       | 3 - 5/8     | 4 - 3/8     | 3/8           | 0.413                    | 4.375                    | 4.373                    | 3.625                    | 3.625                    | 3.627                    | 4.375                    |
|                         | 37503625625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                         | 37503750       | 3 - 3/4     | 4 - 1/2     | 3/8           | 0.413                    | 4.500                    | 4.498                    | 3.750                    | 3.750                    | 3.752                    | 4.500                    |
|                         | 37503750625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                         | 37503875       | 3 - 7/8     | 4 - 5/8     | 3/8           | 0.413                    | 4.625                    | 4.623                    | 3.875                    | 3.875                    | 3.877                    | 4.625                    |
|                         | 37503875625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                         | 37504000       | 4           | 4 - 3/4     | 3/8           | 0.413                    | 4.750                    | 4.748                    | 4.000                    | 4.000                    | 4.002                    | 4.750                    |
|                         | 37504000625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                         | 37504125       | 4 - 1/8     | 4 - 7/8     | 3/8           | 0.413                    | 4.875                    | 4.873                    | 4.125                    | 4.125                    | 4.127                    | 4.875                    |
|                         | 37504125625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                         | 37504250       | 4 - 1/4     | 5           | 3/8           | 0.413                    | 5.000                    | 4.998                    | 4.250                    | 4.250                    | 4.252                    | 5.000                    |
|                         | 37504250625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                         | 37504375       | 4 - 3/8     | 5 - 1/8     | 3/8           | 0.413                    | 5.125                    | 5.123                    | 4.375                    | 4.375                    | 4.377                    | 5.125                    |
|                         | 37504375625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                         | 37504500       | 4 - 1/2     | 5 - 1/4     | 3/8           | 0.413                    | 5.250                    | 5.248                    | 4.500                    | 4.500                    | 4.502                    | 5.250                    |
|                         | 37504500625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                         | 37504625       | 4 - 5/8     | 5 - 3/8     | 3/8           | 0.413                    | 5.375                    | 5.373                    | 4.625                    | 4.625                    | 4.627                    | 5.375                    |
|                         | 37504625625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                         | 37504750       | 4 - 3/4     | 5 - 1/2     | 3/8           | 0.413                    | 5.500                    | 5.498                    | 4.750                    | 4.750                    | 4.752                    | 5.500                    |
|                         | 37504750625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |

Loaded U-Cups

# Loaded U-Cups

IMPERIAL SEALS

Loaded U-Cups

| C/S<br>(Width) | Size<br>Number | Nom<br>I.D. | Nom<br>O.D. | Nom<br>Height | Piston Applications      |                          |                          |                          | Shaft Applications       |                          |                          |
|----------------|----------------|-------------|-------------|---------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                |                |             |             |               | C                        | A                        | D                        | B                        | E                        | F                        | G                        |
|                |                |             |             |               | Groove<br>Width          | Bore<br>Dia.             | Piston<br>Dia.           | Groove<br>Dia.           | Shaft<br>Dia.            | Throat<br>Dia.           | Groove<br>Dia.           |
|                |                |             |             |               | <b>+0.010<br/>-0.000</b> | <b>+0.004<br/>-0.000</b> | <b>+0.000<br/>-0.002</b> | <b>+0.000<br/>-0.005</b> | <b>+0.000<br/>-0.002</b> | <b>+0.004<br/>-0.000</b> | <b>+0.005<br/>-0.000</b> |
| 3/8"           | 37504875       | 4 - 7/8     | 5 - 5/8     | 3/8           | 0.413                    | 5.625                    | 5.623                    | 4.875                    | 4.875                    | 4.877                    | 5.625                    |
|                | 3750487625     |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                | 3705000        | 5           | 5 - 3/4     | 3/8           | 0.413                    | 5.750                    | 5.748                    | 5.000                    | 5.000                    | 5.002                    | 5.750                    |
|                | 3750000625     |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                | 37505125       | 5 - 1/8     | 5 - 7/8     | 3/8           | 0.413                    | 5.875                    | 5.873                    | 5.125                    | 5.125                    | 5.127                    | 5.875                    |
|                | 37505125625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                | 37505250       | 5 - 1/4     | 6           | 3/8           | 0.413                    | 6.000                    | 5.998                    | 5.250                    | 5.250                    | 5.252                    | 6.000                    |
|                | 37505250625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                | 37505375       | 5 - 3/8     | 6 - 1/8     | 3/8           | 0.413                    | 6.125                    | 6.123                    | 5.375                    | 5.375                    | 5.377                    | 6.125                    |
|                | 37505375625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                | 37505500       | 5 - 1/2     | 6 - 1/4     | 3/8           | 0.413                    | 6.250                    | 6.248                    | 5.500                    | 5.500                    | 5.502                    | 6.250                    |
|                | 37505500625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                | 37505625       | 5 - 5/8     | 6 - 3/8     | 3/8           | 0.413                    | 6.375                    | 6.373                    | 5.625                    | 5.625                    | 5.627                    | 6.375                    |
|                | 37505625625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                | 37505750       | 5 - 3/4     | 6 - 1/2     | 3/8           | 0.413                    | 6.500                    | 6.498                    | 5.750                    | 5.750                    | 5.752                    | 6.500                    |
|                | 37505750625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                | 37505875       | 5 - 7/8     | 6 - 5/8     | 3/8           | 0.413                    | 6.625                    | 6.623                    | 5.875                    | 5.875                    | 5.877                    | 6.625                    |
|                | 37505875625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                | 37506000       | 6           | 6 - 3/4     | 3/8           | 0.413                    | 6.750                    | 6.748                    | 6.000                    | 6.000                    | 6.002                    | 6.750                    |
|                | 37506000625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                | 37506250       | 6 - 1/4     | 7           | 3/8           | 0.413                    | 7.000                    | 6.998                    | 6.250                    | 6.250                    | 6.252                    | 7.000                    |
|                | 37506250625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                | 37506500       | 6 - 1/2     | 7 - 1/4     | 3/8           | 0.413                    | 7.250                    | 7.248                    | 6.500                    | 6.500                    | 6.502                    | 7.250                    |
|                | 37506500625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                | 37506750       | 6 - 3/4     | 7 - 1/2     | 3/8           | 0.413                    | 7.500                    | 7.498                    | 6.750                    | 6.750                    | 6.752                    | 7.500                    |
|                | 37506750625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                | 37507000       | 7           | 7 - 3/4     | 3/8           | 0.413                    | 7.750                    | 7.748                    | 7.000                    | 7.000                    | 7.002                    | 7.750                    |
|                | 37507000625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                | 37507250       | 7 - 1/4     | 8           | 3/8           | 0.413                    | 8.000                    | 7.998                    | 7.250                    | 7.250                    | 7.252                    | 8.000                    |
|                | 37507250625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                | 37507500       | 7 - 1/2     | 8 - 1/4     | 3/8           | 0.413                    | 8.250                    | 8.248                    | 7.500                    | 7.500                    | 7.502                    | 8.250                    |
|                | 37507500625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                | 37507750       | 7 - 3/4     | 8 - 1/2     | 3/8           | 0.413                    | 8.500                    | 8.498                    | 7.750                    | 7.750                    | 7.752                    | 8.500                    |
|                | 37507750625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                | 37508000       | 8           | 8 - 3/4     | 3/8           | 0.413                    | 8.750                    | 8.748                    | 8.000                    | 8.000                    | 8.002                    | 8.750                    |
|                | 37508000625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                | 3750 8250      | 8 - 1/4     | 9           | 3/8           | 0.413                    | 9.000                    | 8.998                    | 8.250                    | 8.250                    | 8.252                    | 9.000                    |
|                | 37508250625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                | 37508500       | 8 - 1/2     | 9 - 1/4     | 3/8           | 0.413                    | 9.250                    | 9.248                    | 8.500                    | 8.500                    | 8.502                    | 9.250                    |
|                | 37508500625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                | 37508750       | 8 - 3/4     | 9 - 1/2     | 3/8           | 0.413                    | 9.500                    | 9.498                    | 8.750                    | 8.750                    | 8.752                    | 9.500                    |
|                | 37508750625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                | 37509000       | 9           | 9 - 3/4     | 3/8           | 0.413                    | 9.750                    | 9.748                    | 9.000                    | 9.000                    | 9.002                    | 9.750                    |
|                | 37509000625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                | 37509250       | 9 - 1/4     | 10          | 3/8           | 0.413                    | 10.000                   | 9.998                    | 9.250                    | 9.250                    | 9.252                    | 10.000                   |
|                | 37509250625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |

# Loaded U-Cups

Loaded U-Cups

| C/S<br>(Width)          | Size<br>Number | Nom<br>I.D. | Nom<br>O.D. | Nom<br>Height | Piston Applications      |                          |                          |                          | Shaft Applications       |                          |                          |
|-------------------------|----------------|-------------|-------------|---------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                         |                |             |             |               | C<br>Groove<br>Width     | A<br>Bore<br>Dia.        | D<br>Piston<br>Dia.      | B<br>Groove<br>Dia.      | E<br>Shaft<br>Dia.       | F<br>Throat<br>Dia.      | G<br>Groove<br>Dia.      |
| <b>Tolerance Limits</b> |                |             |             |               | <b>+0.010<br/>-0.000</b> | <b>+0.004<br/>-0.000</b> | <b>+0.000<br/>-0.002</b> | <b>+0.000<br/>-0.005</b> | <b>+0.000<br/>-0.002</b> | <b>+0.004<br/>-0.000</b> | <b>+0.005<br/>-0.000</b> |
| 3/8"                    | 37509500       | 9 - 1/2     | 10 - 1/4    | 3/8           | 0.413                    | 10.250                   | 10.248                   | 9.500                    | 9.500                    | 9.502                    | 10.250                   |
|                         | 37509500625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                         | 37509750       | 9 - 3/4     | 10 - 1/2    | 3/8           | 0.413                    | 10.500                   | 10.498                   | 9.750                    | 9.750                    | 9.752                    | 10.500                   |
|                         | 37509750625    |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                         | 375010000      | 10          | 10 - 3/4    | 3/8           | 0.413                    | 10.750                   | 10.748                   | 10.000                   | 10.000                   | 10.002                   | 10.750                   |
|                         | 375010000625   |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                         | 375010250      | 10 - 1/4    | 11          | 3/8           | 0.413                    | 11.000                   | 10.998                   | 10.250                   | 10.250                   | 10.252                   | 11.000                   |
|                         | 375010250625   |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                         | 375010500      | 10 - 1/2    | 11 - 1/4    | 3/8           | 0.413                    | 11.250                   | 11.248                   | 10.500                   | 10.500                   | 10.502                   | 11.250                   |
|                         | 375010500625   |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                         | 375010750      | 10 - 3/4    | 11 - 1/2    | 3/8           | 0.413                    | 11.500                   | 11.498                   | 10.750                   | 10.750                   | 10.752                   | 11.500                   |
|                         | 375010750625   |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                         | 375011000      | 11          | 11 - 3/4    | 3/8           | 0.413                    | 11.750                   | 11.748                   | 11.000                   | 11.000                   | 11.002                   | 11.750                   |
|                         | 375011000625   |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                         | 375011250      | 11 - 1/4    | 12          | 3/8           | 0.413                    | 12.000                   | 11.998                   | 11.250                   | 11.250                   | 11.252                   | 12.000                   |
|                         | 375011250625   |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                         | 375011500      | 11 - 1/2    | 12 - 1/4    | 3/8           | 0.413                    | 12.250                   | 12.248                   | 11.500                   | 11.500                   | 11.502                   | 12.250                   |
|                         | 375011500625   |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                         | 375011750      | 11 - 3/4    | 12 - 1/2    | 3/8           | 0.413                    | 12.500                   | 12.498                   | 11.750                   | 11.750                   | 11.752                   | 12.500                   |
|                         | 375011750625   |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
|                         | 375012000      | 12          | 12 - 3/4    | 3/8           | 0.413                    | 12.750                   | 12.748                   | 12.000                   | 12.000                   | 12.002                   | 12.750                   |
|                         | 375012000625   |             |             | 5/8           | 0.688                    |                          |                          |                          |                          |                          |                          |
| <b>Tolerance Limits</b> |                |             |             |               | <b>+0.010<br/>-0.000</b> | <b>+0.005<br/>-0.000</b> | <b>+0.000<br/>-0.003</b> | <b>+0.000<br/>-0.007</b> | <b>+0.000<br/>-0.003</b> | <b>+0.005<br/>-0.000</b> | <b>+0.007<br/>-0.000</b> |
| 1/2"                    | 50001000       | 1           | 2           | 1/2           | 0.550                    | 2.000                    | 1.998                    | 1.000                    | 1.000                    | 1.002                    | 2.000                    |
|                         | 50001000750    |             |             | 3/4           | 0.825                    |                          |                          |                          |                          |                          |                          |
|                         | 50001250       | 1 - 1/4     | 2 - 1/4     | 1/2           | 0.550                    | 2.250                    | 2.248                    | 1.250                    | 1.250                    | 1.252                    | 2.250                    |
|                         | 50001250750    |             |             | 3/4           | 0.825                    |                          |                          |                          |                          |                          |                          |
|                         | 50001375       | 1 - 3/8     | 2 - 3/8     | 1/2           | 0.550                    | 2.375                    | 2.373                    | 1.375                    | 1.375                    | 1.377                    | 2.375                    |
|                         | 50001375750    |             |             | 3/4           | 0.825                    |                          |                          |                          |                          |                          |                          |
|                         | 50001500       | 1 - 1/2     | 2 - 1/2     | 1/2           | 0.550                    | 2.500                    | 2.498                    | 1.500                    | 1.500                    | 1.502                    | 2.500                    |
|                         | 50001500750    |             |             | 3/4           | 0.825                    |                          |                          |                          |                          |                          |                          |
|                         | 50001750       | 1 - 3/4     | 2 - 3/4     | 1/2           | 0.550                    | 2.750                    | 2.748                    | 1.750                    | 1.750                    | 1.752                    | 2.750                    |
|                         | 50001750750    |             |             | 3/4           | 0.825                    |                          |                          |                          |                          |                          |                          |
|                         | 50002000       | 2           | 3           | 1/2           | 0.550                    | 3.000                    | 2.998                    | 2.000                    | 2.000                    | 2.002                    | 3.000                    |
|                         | 50002000750    |             |             | 3/4           | 0.825                    |                          |                          |                          |                          |                          |                          |
|                         | 50002250       | 2 - 1/4     | 3 - 1/4     | 1/2           | 0.550                    | 3.250                    | 3.248                    | 2.250                    | 2.250                    | 2.252                    | 3.250                    |
|                         | 50002250750    |             |             | 3/4           | 0.825                    |                          |                          |                          |                          |                          |                          |
|                         | 50002375       | 2 - 3/8     | 3 - 3/8     | 1/2           | 0.550                    | 3.375                    | 3.373                    | 2.375                    | 2.375                    | 2.377                    | 3.375                    |
|                         | 50002375750    |             |             | 3/4           | 0.825                    |                          |                          |                          |                          |                          |                          |
|                         | 50002500       | 2 - 1/2     | 3 - 1/2     | 1/2           | 0.550                    | 3.500                    | 3.498                    | 2.500                    | 2.500                    | 2.502                    | 3.500                    |
|                         | 50002500750    |             |             | 3/4           | 0.825                    |                          |                          |                          |                          |                          |                          |
|                         | 50002750       | 2 - 3/4     | 3 - 3/4     | 1/2           | 0.550                    | 3.750                    | 3.748                    | 2.750                    | 2.750                    | 2.752                    | 3.750                    |
|                         | 50002750750    |             |             | 3/4           | 0.825                    |                          |                          |                          |                          |                          |                          |
|                         | 50003000       | 3           | 4           | 1/2           | 0.550                    | 4.000                    | 3.998                    | 3.000                    | 3.000                    | 3.002                    | 4.000                    |
|                         | 50003000750    |             |             | 3/4           | 0.825                    |                          |                          |                          |                          |                          |                          |

# Loaded U-Cups

IMPERIAL SEALS

Loaded U-Cups

| C/S<br>(Width)   | Size<br>Number | Nom<br>I.D. | Nom<br>O.D. | Nom<br>Height | Piston Applications  |                   |                     |                     | Shaft Applications |                     |                     |
|------------------|----------------|-------------|-------------|---------------|----------------------|-------------------|---------------------|---------------------|--------------------|---------------------|---------------------|
|                  |                |             |             |               | C<br>Groove<br>Width | A<br>Bore<br>Dia. | D<br>Piston<br>Dia. | B<br>Groove<br>Dia. | E<br>Shaft<br>Dia. | F<br>Throat<br>Dia. | G<br>Groove<br>Dia. |
| Tolerance Limits |                |             |             |               | +0.010<br>-0.000     | +0.005<br>-0.000  | +0.000<br>-0.003    | +0.000<br>-0.007    | +0.000<br>-0.003   | +0.005<br>-0.000    | +0.007<br>-0.000    |
| 1/2"             | 50003250       | 3 - 1/4     | 4 - 1/4     | 1/2           | 0.550                | 4.250             | 4.248               | 3.250               | 3.250              | 3.252               | 4.250               |
|                  | 3/4            |             |             | 0.825         |                      |                   |                     |                     |                    |                     |                     |
|                  | 50003500       | 3 - 1/2     | 4 - 1/2     | 1/2           | 0.550                | 4.500             | 4.498               | 3.500               | 3.500              | 3.502               | 4.500               |
|                  | 3/4            |             |             | 0.825         |                      |                   |                     |                     |                    |                     |                     |
|                  | 50003750       | 3 - 3/4     | 4 - 3/4     | 1/2           | 0.550                | 4.750             | 4.748               | 3.750               | 3.750              | 3.752               | 4.750               |
|                  | 3/4            |             |             | 0.825         |                      |                   |                     |                     |                    |                     |                     |
|                  | 50004000       | 4           | 5           | 1/2           | 0.550                | 5.000             | 4.998               | 4.000               | 4.000              | 4.002               | 5.000               |
|                  | 3/4            |             |             | 0.825         |                      |                   |                     |                     |                    |                     |                     |
|                  | 50004250       | 4 - 1/4     | 5 - 1/4     | 1/2           | 0.550                | 5.250             | 5.248               | 4.250               | 4.250              | 4.252               | 5.250               |
|                  | 3/4            |             |             | 0.825         |                      |                   |                     |                     |                    |                     |                     |
|                  | 50004375       | 4 - 3/8     | 5 - 3/8     | 1/2           | 0.550                | 5.375             | 5.373               | 4.375               | 4.375              | 4.377               | 5.375               |
|                  | 3/4            |             |             | 0.825         |                      |                   |                     |                     |                    |                     |                     |
|                  | 50004500       | 4 - 1/2     | 5 - 1/2     | 1/2           | 0.550                | 5.500             | 5.498               | 4.500               | 4.500              | 4.502               | 5.500               |
|                  | 3/4            |             |             | 0.825         |                      |                   |                     |                     |                    |                     |                     |
|                  | 50004750       | 4 - 3/4     | 5 - 3/4     | 1/2           | 0.550                | 5.750             | 5.748               | 4.750               | 4.750              | 4.752               | 5.750               |
|                  | 3/4            |             |             | 0.825         |                      |                   |                     |                     |                    |                     |                     |
|                  | 50005000       | 5           | 6           | 1/2           | 0.550                | 6.000             | 5.998               | 5.000               | 5.000              | 5.002               | 6.000               |
|                  | 3/4            |             |             | 0.825         |                      |                   |                     |                     |                    |                     |                     |
|                  | 50005250       | 5 - 1/4     | 6 - 1/4     | 1/2           | 0.550                | 6.250             | 6.248               | 5.250               | 5.250              | 5.252               | 6.250               |
|                  | 3/4            |             |             | 0.825         |                      |                   |                     |                     |                    |                     |                     |
|                  | 50005375       | 5 - 3/8     | 6 - 3/8     | 1/2           | 0.550                | 6.375             | 6.373               | 5.375               | 5.375              | 5.377               | 6.375               |
|                  | 3/4            |             |             | 0.825         |                      |                   |                     |                     |                    |                     |                     |
|                  | 50005500       | 5 - 1/2     | 6 - 1/2     | 1/2           | 0.550                | 6.500             | 6.498               | 5.500               | 5.500              | 5.502               | 6.500               |
|                  | 3/4            |             |             | 0.825         |                      |                   |                     |                     |                    |                     |                     |
|                  | 50005750       | 5 - 3/4     | 6 - 3/4     | 1/2           | 0.550                | 6.750             | 6.748               | 5.750               | 5.750              | 5.752               | 6.750               |
|                  | 3/4            |             |             | 0.825         |                      |                   |                     |                     |                    |                     |                     |
|                  | 50006000       | 6           | 7           | 1/2           | 0.550                | 7.000             | 6.998               | 6.000               | 6.000              | 6.002               | 7.000               |
|                  | 3/4            |             |             | 0.825         |                      |                   |                     |                     |                    |                     |                     |
|                  | 50006250       | 6 - 1/4     | 7 - 1/4     | 1/2           | 0.550                | 7.250             | 7.248               | 6.250               | 6.250              | 6.252               | 7.250               |
|                  | 3/4            |             |             | 0.825         |                      |                   |                     |                     |                    |                     |                     |
|                  | 50006500       | 6 - 1/2     | 7 - 1/2     | 1/2           | 0.550                | 7.500             | 7.498               | 6.500               | 6.500              | 6.502               | 7.500               |
|                  | 3/4            |             |             | 0.825         |                      |                   |                     |                     |                    |                     |                     |
|                  | 50006750       | 6 - 3/4     | 7 - 3/4     | 1/2           | 0.550                | 7.750             | 7.748               | 6.750               | 6.750              | 6.752               | 7.750               |
|                  | 3/4            |             |             | 0.825         |                      |                   |                     |                     |                    |                     |                     |
|                  | 50007000       | 7           | 8           | 1/2           | 0.550                | 8.000             | 7.998               | 7.000               | 7.000              | 7.002               | 8.000               |
|                  | 3/4            |             |             | 0.825         |                      |                   |                     |                     |                    |                     |                     |
|                  | 50007250       | 7 - 1/4     | 8 - 1/4     | 1/2           | 0.550                | 8.250             | 8.248               | 7.250               | 7.250              | 7.252               | 8.250               |
|                  | 3/4            |             |             | 0.825         |                      |                   |                     |                     |                    |                     |                     |
|                  | 50007500       | 7 - 1/2     | 8 - 1/2     | 1/2           | 0.550                | 8.500             | 8.498               | 7.500               | 7.500              | 7.502               | 8.500               |
|                  | 3/4            |             |             | 0.825         |                      |                   |                     |                     |                    |                     |                     |
|                  | 50007750       | 7 - 3/4     | 8 - 3/4     | 1/2           | 0.550                | 8.750             | 8.748               | 7.750               | 7.750              | 7.752               | 8.750               |
|                  | 3/4            |             |             | 0.825         |                      |                   |                     |                     |                    |                     |                     |
|                  | 50008000       | 8           | 9           | 1/2           | 0.550                | 9.000             | 8.998               | 8.000               | 8.000              | 8.002               | 9.000               |
|                  | 3/4            |             |             | 0.825         |                      |                   |                     |                     |                    |                     |                     |
|                  | 50008250       | 8 - 1/4     | 9 - 1/4     | 1/2           | 0.550                | 9.250             | 9.248               | 8.250               | 8.250              | 8.252               | 9.250               |
|                  | 3/4            |             |             | 0.825         |                      |                   |                     |                     |                    |                     |                     |



# Loaded U-Cups

Loaded U-Cups

| C/S<br>(Width)          | Size<br>Number | Nom<br>I.D. | Nom<br>O.D. | Nom<br>Height | Piston Applications      |                          |                          |                          | Shaft Applications       |                          |                          |
|-------------------------|----------------|-------------|-------------|---------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                         |                |             |             |               | C<br>Groove<br>Width     | A<br>Bore<br>Dia.        | D<br>Piston<br>Dia.      | B<br>Groove<br>Dia.      | E<br>Shaft<br>Dia.       | F<br>Throat<br>Dia.      | G<br>Groove<br>Dia.      |
| <b>Tolerance Limits</b> |                |             |             |               | <b>+0.010<br/>-0.000</b> | <b>+0.005<br/>-0.000</b> | <b>+0.000<br/>-0.003</b> | <b>+0.000<br/>-0.007</b> | <b>+0.000<br/>-0.003</b> | <b>+0.005<br/>-0.000</b> | <b>+0.007<br/>-0.000</b> |
| 1/2"                    | 50008500       | 8 - 1/2     | 9 - 1/2     | 1/2           | 0.550                    | 9.500                    | 9.498                    | 8.500                    | 8.500                    | 8.502                    | 9.500                    |
|                         | 50008500750    |             |             | 3/4           | 0.825                    |                          |                          |                          |                          |                          |                          |
|                         | 50008750       | 8 - 3/4     | 9 - 3/4     | 1/2           | 0.550                    | 9.750                    | 9.748                    | 8.750                    | 8.750                    | 8.752                    | 9.750                    |
|                         | 50008750750    |             |             | 3/4           | 0.825                    |                          |                          |                          |                          |                          |                          |
|                         | 50009000       | 9           | 10          | 1/2           | 0.550                    | 10.000                   | 9.998                    | 9.000                    | 9.000                    | 9.002                    | 10.000                   |
|                         | 50009000750    |             |             | 3/4           | 0.825                    |                          |                          |                          |                          |                          |                          |
|                         | 50009250       | 9 - 1/4     | 10 - 1/4    | 1/2           | 0.550                    | 10.250                   | 10.248                   | 9.250                    | 9.250                    | 9.252                    | 10.250                   |
|                         | 50009250750    |             |             | 3/4           | 0.825                    |                          |                          |                          |                          |                          |                          |
|                         | 50009500       | 9 - 1/2     | 10 - 1/2    | 1/2           | 0.550                    | 10.500                   | 10.498                   | 9.500                    | 9.500                    | 9.502                    | 10.500                   |
|                         | 50009500750    |             |             | 3/4           | 0.825                    |                          |                          |                          |                          |                          |                          |
|                         | 50009750       | 9 - 3/4     | 10 - 3/4    | 1/2           | 0.550                    | 10.750                   | 10.748                   | 9.750                    | 9.750                    | 9.752                    | 10.750                   |
|                         | 50009750750    |             |             | 3/4           | 0.825                    |                          |                          |                          |                          |                          |                          |
|                         | 500010000      | 10          | 11          | 1/2           | 0.550                    | 11.000                   | 10.998                   | 10.000                   | 10.000                   | 10.002                   | 11.000                   |
|                         | 500010000750   |             |             | 3/4           | 0.825                    |                          |                          |                          |                          |                          |                          |
|                         | 500010500      | 10 - 1/2    | 11 - 1/2    | 1/2           | 0.550                    | 11.500                   | 11.498                   | 10.500                   | 10.500                   | 10.502                   | 11.500                   |
|                         | 500010500750   |             |             | 3/4           | 0.825                    |                          |                          |                          |                          |                          |                          |
|                         | 500011000      | 11          | 12          | 1/2           | 0.550                    | 12.000                   | 11.998                   | 11.000                   | 11.000                   | 11.002                   | 12.000                   |
|                         | 500011000750   |             |             | 3/4           | 0.825                    |                          |                          |                          |                          |                          |                          |
|                         | 500011500      | 11 - 1/2    | 12 - 1/2    | 1/2           | 0.550                    | 12.500                   | 12.498                   | 11.500                   | 11.500                   | 11.502                   | 12.500                   |
|                         | 500011500750   |             |             | 3/4           | 0.825                    |                          |                          |                          |                          |                          |                          |
|                         | 500012000      | 12          | 13          | 1/2           | 0.550                    | 13.000                   | 12.998                   | 12.000                   | 12.000                   | 12.002                   | 13.000                   |
|                         | 500012000750   |             |             | 3/4           | 0.825                    |                          |                          |                          |                          |                          |                          |
|                         | 500012500      | 12 - 1/2    | 13 - 1/2    | 1/2           | 0.550                    | 13.500                   | 13.498                   | 12.500                   | 12.500                   | 12.502                   | 13.500                   |
|                         | 500012500750   |             |             | 3/4           | 0.825                    |                          |                          |                          |                          |                          |                          |
|                         | 500013000      | 13          | 14          | 1/2           | 0.550                    | 14.000                   | 13.998                   | 13.000                   | 13.000                   | 13.002                   | 14.000                   |
|                         | 500013000750   |             |             | 3/4           | 0.825                    |                          |                          |                          |                          |                          |                          |
|                         | 500013500      | 13 - 1/2    | 14 - 1/2    | 1/2           | 0.550                    | 14.500                   | 14.498                   | 13.500                   | 13.500                   | 13.502                   | 14.500                   |
|                         | 500013500750   |             |             | 3/4           | 0.825                    |                          |                          |                          |                          |                          |                          |
|                         | 500014000      | 14          | 15          | 1/2           | 0.550                    | 15.000                   | 14.998                   | 14.000                   | 14.000                   | 14.002                   | 15.000                   |
|                         | 500014000750   |             |             | 3/4           | 0.825                    |                          |                          |                          |                          |                          |                          |
|                         | 500014500      | 14 - 1/2    | 15 - 1/2    | 1/2           | 0.550                    | 15.500                   | 15.498                   | 14.500                   | 14.500                   | 14.502                   | 15.500                   |
|                         | 500014500750   |             |             | 3 / 4         | 0.825                    |                          |                          |                          |                          |                          |                          |
|                         | 500015000      | 15          | 16          | 1/2           | 0.550                    | 16.000                   | 15.998                   | 15.000                   | 15.000                   | 15.002                   | 16.000                   |
|                         | 500015000750   |             |             | 3/4           | 0.825                    |                          |                          |                          |                          |                          |                          |
| <b>Tolerance Limits</b> |                |             |             |               | <b>+0.010<br/>-0.000</b> | <b>+0.006<br/>-0.000</b> | <b>+0.000<br/>-0.003</b> | <b>+0.000<br/>-0.009</b> | <b>+0.000<br/>-0.003</b> | <b>+0.006<br/>-0.000</b> | <b>+0.009<br/>-0.000</b> |
|                         | 62501250       | 1 - 1/4     | 2 - 1/2     | 5/8           | 0.688                    | 2.500                    | 2.497                    | 1.250                    | 1.250                    | 1.253                    | 2.500                    |
|                         | 62501250100    |             |             | 1             | 1.100                    |                          |                          |                          |                          |                          |                          |
|                         | 62501375       | 1 - 3/8     | 2 - 5/8     | 5/8           | 0.688                    | 2.625                    | 2.622                    | 1.375                    | 1.375                    | 1.378                    | 2.625                    |
|                         | 62501375100    |             |             | 1             | 1.100                    |                          |                          |                          |                          |                          |                          |
|                         | 62501500       | 1 - 1/2     | 2 - 3/4     | 5/8           | 0.688                    | 2.750                    | 2.747                    | 1.500                    | 1.500                    | 1.503                    | 2.750                    |
|                         | 62501500100    |             |             | 1             | 1.100                    |                          |                          |                          |                          |                          |                          |
|                         | 62501750       | 1 - 3/4     | 3           | 5/8           | 0.688                    | 3.000                    | 2.997                    | 1.750                    | 1.750                    | 1.753                    | 3.000                    |
|                         | 62501750100    |             |             | 1             | 1.100                    |                          |                          |                          |                          |                          |                          |
|                         | 62502000       | 2           | 3 - 1/4     | 5/8           | 0.688                    | 3.250                    | 3.247                    | 2.000                    | 2.000                    | 2.003                    | 3.250                    |
|                         | 62502000100    |             |             | 1             | 1.100                    |                          |                          |                          |                          |                          |                          |

# Loaded U-Cups

IMPERIAL SEALS

| C/S<br>(Width)   | Size<br>Number | Nom<br>I.D. | Nom<br>O.D. | Nom<br>Height | Piston Applications  |                   |                     | Shaft Applications  |                    |                     |                     |
|------------------|----------------|-------------|-------------|---------------|----------------------|-------------------|---------------------|---------------------|--------------------|---------------------|---------------------|
|                  |                |             |             |               | C<br>Groove<br>Width | A<br>Bore<br>Dia. | D<br>Piston<br>Dia. | B<br>Groove<br>Dia. | E<br>Shaft<br>Dia. | F<br>Throat<br>Dia. | G<br>Groove<br>Dia. |
| Tolerance Limits |                |             |             |               | +0.010<br>-0.000     | +0.006<br>-0.000  | +0.000<br>-0.003    | +0.000<br>-0.009    | +0.000<br>-0.003   | +0.006<br>-0.000    | +0.009<br>-0.000    |
| 5/8"             | 62502250       | 2 - 1/4     | 3 - 1/2     | 5/8           | 0.688                | 3.500             | 3.497               | 2.250               | 2.250              | 2.253               | 3.500               |
|                  | 62502250100    |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |
|                  | 62502500       | 2 - 1/2     | 3 - 3/4     | 5/8           | 0.688                | 3.750             | 3.747               | 2.500               | 2.500              | 2.503               | 3.750               |
|                  | 62502500100    |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |
|                  | 62502750       | 2 - 3/4     | 4           | 5/8           | 0.688                | 4.000             | 3.997               | 2.750               | 2.750              | 2.753               | 4.000               |
|                  | 62502750100    |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |
|                  | 62503000       | 3           | 4 - 1/4     | 5/8           | 0.688                | 4.250             | 4.247               | 3.000               | 3.000              | 3.003               | 4.250               |
|                  | 62503000100    |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |
|                  | 62503250       | 3 - 1/4     | 4 - 1/2     | 5/8           | 0.688                | 4.500             | 4.497               | 3.250               | 3.250              | 3.253               | 4.500               |
|                  | 62503250100    |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |
|                  | 62503500       | 3 - 1/2     | 4 - 3/4     | 5/8           | 0.688                | 4.750             | 4.747               | 3.500               | 3.500              | 3.503               | 4.750               |
|                  | 62503500100    |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |
|                  | 62503750       | 3 - 3/4     | 5           | 5/8           | 0.688                | 5.000             | 4.997               | 3.750               | 3.750              | 3.753               | 5.000               |
|                  | 62503750100    |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |
|                  | 62504000       | 4           | 5 - 1/4     | 5/8           | 0.688                | 5.250             | 5.247               | 4.000               | 4.000              | 4.003               | 5.250               |
|                  | 62504000100    |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |
|                  | 62504250       | 4 - 1/4     | 5 - 1/2     | 5/8           | 0.688                | 5.500             | 5.497               | 4.250               | 4.250              | 4.253               | 5.500               |
|                  | 62504250100    |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |
|                  | 62504500       | 4 - 1/2     | 5 - 3/4     | 5/8           | 0.688                | 5.750             | 5.747               | 4.500               | 4.500              | 4.503               | 5.750               |
|                  | 62504500100    |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |
|                  | 62504750       | 4 - 3/4     | 6           | 5/8           | 0.688                | 6.000             | 5.997               | 4.750               | 4.750              | 4.753               | 6.000               |
|                  | 62504750100    |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |
|                  | 62505000       | 5           | 6 - 1/4     | 5/8           | 0.688                | 6.250             | 6.247               | 5.000               | 5.000              | 5.003               | 6.250               |
|                  | 62505000100    |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |
|                  | 62505250       | 5 - 1/4     | 6 - 1/2     | 5/8           | 0.688                | 6.500             | 6.447               | 5.250               | 5.250              | 5.253               | 6.500               |
|                  | 62505250100    |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |
|                  | 62505500       | 5 - 1/2     | 6 - 3/4     | 5/8           | 0.688                | 6.750             | 6.747               | 5.500               | 5.500              | 5.503               | 6.750               |
|                  | 62505500100    |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |
|                  | 62505750       | 5 - 3/4     | 7           | 5/8           | 0.688                | 7.000             | 6.997               | 5.750               | 5.750              | 5.753               | 7.000               |
|                  | 62505750100    |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |
|                  | 62506000       | 6           | 7 - 1/4     | 5/8           | 0.688                | 7.250             | 7.247               | 6.000               | 6.000              | 6.003               | 7.250               |
|                  | 62506000100    |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |
|                  | 62506250       | 6 - 1/4     | 7 - 1/2     | 5/8           | 0.688                | 7.500             | 7.497               | 6.250               | 6.250              | 6.253               | 7.500               |
|                  | 62506250100    |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |
|                  | 62506500       | 6 - 1/2     | 7 - 3/4     | 5/8           | 0.688                | 7.750             | 7.747               | 6.500               | 6.500              | 6.503               | 7.750               |
|                  | 62506500100    |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |
|                  | 62506750       | 6 - 3/4     | 8           | 5/8           | 0.688                | 8.000             | 7.997               | 6.750               | 6.750              | 6.753               | 8.000               |
|                  | 62506750100    |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |
|                  | 62507000       | 7           | 8 - 1/4     | 5/8           | 0.688                | 8.250             | 8.247               | 7.000               | 7.000              | 7.003               | 8.250               |
|                  | 62507000100    |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |
|                  | 62507250       | 7 - 1/4     | 8 - 1/2     | 5/8           | 0.688                | 8.500             | 8.497               | 7.250               | 7.250              | 7.253               | 8.500               |
|                  | 62507250100    |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |
|                  | 62507500       | 7 - 1/2     | 8 - 3/4     | 5/8           | 0.688                | 8.750             | 8.747               | 7.500               | 7.500              | 7.503               | 8.750               |
|                  | 62507500100    |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |
|                  | 62507750       | 7 - 3/4     | 9           | 5/8           | 0.688                | 9.000             | 8.997               | 7.750               | 7.750              | 7.753               | 9.000               |
|                  | 62507750100    |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |

Loaded U-Cups

# Loaded U-Cups

| C/S<br>(Width)          | Size<br>Number | Nom<br>I.D. | Nom<br>O.D. | Nom<br>Height | Piston Applications      |                          |                          | Shaft Applications       |                          |                          |                          |
|-------------------------|----------------|-------------|-------------|---------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                         |                |             |             |               | C<br>Groove<br>Width     | A<br>Bore<br>Dia.        | D<br>Piston<br>Dia.      | B<br>Groove<br>Dia.      | E<br>Shaft<br>Dia.       | F<br>Throat<br>Dia.      | G<br>Groove<br>Dia.      |
| <b>Tolerance Limits</b> |                |             |             |               | <b>+0.010<br/>-0.000</b> | <b>+0.006<br/>-0.000</b> | <b>+0.000<br/>-0.003</b> | <b>+0.000<br/>-0.009</b> | <b>+0.000<br/>-0.003</b> | <b>+0.006<br/>-0.000</b> | <b>+0.009<br/>-0.000</b> |
| 5/8"                    | 62508000       | 8           | 9 - 1/4     | 5/8           | 0.688                    | 9.250                    | 9.247                    | 8.000                    | 8.000                    | 8.003                    | 9.250                    |
|                         | 62508000100    |             |             | 1             | 1.100                    |                          |                          |                          |                          |                          |                          |
|                         | 62508250       | 8 - 1/4     | 9 - 1/2     | 5/8           | 0.688                    | 9.500                    | 9.497                    | 8.250                    | 8.250                    | 8.253                    | 9.500                    |
|                         | 62508250100    |             |             | 1             | 1.100                    |                          |                          |                          |                          |                          |                          |
|                         | 62508500       | 8 - 1/2     | 9 - 3/4     | 5/8           | 0.688                    | 9.750                    | 9.747                    | 8.500                    | 8.500                    | 8.503                    | 9.750                    |
|                         | 62508500100    |             |             | 1             | 1.100                    |                          |                          |                          |                          |                          |                          |
|                         | 62508750       | 8 - 3/4     | 10          | 5/8           | 0.688                    | 10.000                   | 9.997                    | 8.750                    | 8.750                    | 8.753                    | 10.000                   |
|                         | 62508750100    |             |             | 1             | 1.100                    |                          |                          |                          |                          |                          |                          |
|                         | 62509000       | 9           | 10 - 1/4    | 5/8           | 0.688                    | 10.250                   | 10.247                   | 9.000                    | 9.000                    | 9.003                    | 10.250                   |
|                         | 62509000100    |             |             | 1             | 1.100                    |                          |                          |                          |                          |                          |                          |
|                         | 62509250       | 9 - 1/4     | 10 - 1/2    | 5/8           | 0.688                    | 10.500                   | 10.497                   | 9.250                    | 9.250                    | 9.253                    | 10.500                   |
|                         | 62509250100    |             |             | 1             | 1.100                    |                          |                          |                          |                          |                          |                          |
|                         | 62509500       | 9 - 1/2     | 10 - 3/4    | 5/8           | 0.688                    | 10.750                   | 10.747                   | 9.500                    | 9.500                    | 9.503                    | 10.750                   |
|                         | 62509500100    |             |             | 1             | 1.100                    |                          |                          |                          |                          |                          |                          |
|                         | 62509750       | 9 - 3/4     | 11          | 5/8           | 0.688                    | 11.000                   | 10.997                   | 9.750                    | 9.750                    | 9.753                    | 11.000                   |
|                         | 62509750100    |             |             | 1             | 1.100                    |                          |                          |                          |                          |                          |                          |
|                         | 625010000      | 10          | 11 - 1/4    | 5/8           | 0.688                    | 11.250                   | 11.247                   | 10.000                   | 10.000                   | 10.003                   | 11.250                   |
|                         | 625010000100   |             |             | 1             | 1.100                    |                          |                          |                          |                          |                          |                          |
|                         | 625010250      | 10 - 1/4    | 11 - 1/2    | 5/8           | 0.688                    | 11.500                   | 11.497                   | 10.250                   | 10.250                   | 10.253                   | 11.500                   |
|                         | 625010250100   |             |             | 1             | 1.100                    |                          |                          |                          |                          |                          |                          |
|                         | 625010500      | 10 - 1/2    | 11 - 3/4    | 5/8           | 0.688                    | 11.750                   | 11.747                   | 10.500                   | 10.500                   | 10.503                   | 11.750                   |
|                         | 625010500100   |             |             | 1             | 1.100                    |                          |                          |                          |                          |                          |                          |
|                         | 625010750      | 10 - 3/4    | 12          | 5/8           | 0.688                    | 12.000                   | 11.997                   | 10.750                   | 10.750                   | 10.753                   | 12.000                   |
|                         | 625010750100   |             |             | 1             | 1.100                    |                          |                          |                          |                          |                          |                          |
|                         | 625011000      | 11          | 12 - 1/4    | 5/8           | 0.688                    | 12.250                   | 12.247                   | 11.000                   | 11.000                   | 11.003                   | 12.250                   |
|                         | 625011000100   |             |             | 1             | 1.100                    |                          |                          |                          |                          |                          |                          |
|                         | 625011250      | 11 - 1/4    | 12 - 1/2    | 5/8           | 0.688                    | 12.500                   | 12.497                   | 11.250                   | 11.250                   | 11.253                   | 12.500                   |
|                         | 625011250100   |             |             | 1             | 1.100                    |                          |                          |                          |                          |                          |                          |
|                         | 625011500      | 11 - 1/2    | 12 - 3/4    | 5/8           | 0.688                    | 12.750                   | 12.747                   | 11.500                   | 11.500                   | 11.503                   | 12.750                   |
|                         | 625011500100   |             |             | 1             | 1.100                    |                          |                          |                          |                          |                          |                          |
|                         | 625011750      | 11 - 3/4    | 13          | 5/8           | 0.688                    | 13.000                   | 12.997                   | 11.750                   | 11.750                   | 11.753                   | 13.000                   |
|                         | 625011750100   |             |             | 1             | 1.100                    |                          |                          |                          |                          |                          |                          |
|                         | 625012000      | 12          | 13 - 1/4    | 5/8           | 0.688                    | 13.250                   | 13.247                   | 12.000                   | 12.000                   | 12.003                   | 13.250                   |
|                         | 625012000100   |             |             | 1             | 1.100                    |                          |                          |                          |                          |                          |                          |
|                         | 625012250      | 12 - 1/4    | 13 - 1/2    | 5/8           | 0.688                    | 13.500                   | 13.497                   | 12.250                   | 12.250                   | 12.253                   | 13.500                   |
|                         | 625012250100   |             |             | 1             | 1.100                    |                          |                          |                          |                          |                          |                          |
|                         | 625012500      | 12 - 1/2    | 13 - 3/4    | 5/8           | 0.688                    | 13.750                   | 13.747                   | 12.500                   | 12.500                   | 12.503                   | 13.750                   |
|                         | 625012500100   |             |             | 1             | 1.100                    |                          |                          |                          |                          |                          |                          |
|                         | 625012750      | 12 - 3/4    | 14          | 5/8           | 0.688                    | 14.000                   | 13.997                   | 12.750                   | 12.750                   | 12.753                   | 14.000                   |
|                         | 625012750100   |             |             | 1             | 1.100                    |                          |                          |                          |                          |                          |                          |
|                         | 625013000      | 13          | 14 - 1/4    | 5/8           | 0.688                    | 14.250                   | 14.247                   | 13.000                   | 13.000                   | 13.003                   | 14.250                   |
|                         | 625013000100   |             |             | 1             | 1.100                    |                          |                          |                          |                          |                          |                          |
|                         | 625013250      | 13 - 1/4    | 14 - 1/2    | 5/8           | 0.688                    | 14.500                   | 14.497                   | 13.250                   | 13.250                   | 13.253                   | 14.500                   |
|                         | 625013250100   |             |             | 1             | 1.100                    |                          |                          |                          |                          |                          |                          |
|                         | 625013500      | 13 - 1/2    | 14 - 3/4    | 5/8           | 0.688                    | 14.750                   | 14.747                   | 13.500                   | 13.500                   | 13.503                   | 14.750                   |
|                         | 625013500100   |             |             | 1             | 1.100                    |                          |                          |                          |                          |                          |                          |

Loaded U-Cups

# Loaded U-Cups

IMPERIAL SEALS

Loaded U-Cups

| C/S<br>(Width)   | Size<br>Number | Nom<br>I.D. | Nom<br>O.D. | Nom<br>Height | Piston Applications  |                   |                     |                     | Shaft Applications |                     |                     |
|------------------|----------------|-------------|-------------|---------------|----------------------|-------------------|---------------------|---------------------|--------------------|---------------------|---------------------|
|                  |                |             |             |               | C<br>Groove<br>Width | A<br>Bore<br>Dia. | D<br>Piston<br>Dia. | B<br>Groove<br>Dia. | E<br>Shaft<br>Dia. | F<br>Throat<br>Dia. | G<br>Groove<br>Dia. |
| Tolerance Limits |                |             |             |               | +0.010<br>-0.000     | +0.006<br>-0.000  | +0.000<br>-0.003    | +0.000<br>-0.009    | +0.000<br>-0.003   | +0.006<br>-0.000    | +0.009<br>-0.000    |
| 5/8"             | 625013750      | 13 - 3/4    | 15          | 5/8           | 0.688                | 15.000            | 14.997              | 13.750              | 13.750             | 13.753              | 15.000              |
|                  | 625013750100   |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |
|                  | 625014000      | 14          | 15 - 1/4    | 5/8           | 0.688                | 15.250            | 15.247              | 14.000              | 14.000             | 14.003              | 15.250              |
|                  | 625014000100   |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |
|                  | 625014250      | 14 - 1/4    | 15 - 1/2    | 5/8           | 0.688                | 15.500            | 15.497              | 14.250              | 14.250             | 14.253              | 15.500              |
|                  | 625014250100   |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |
|                  | 625014500      | 14 - 1/2    | 15 - 3/4    | 5/8           | 0.688                | 15.750            | 15.747              | 14.500              | 14.500             | 14.503              | 15.750              |
|                  | 625014500100   |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |
|                  | 625014750      | 14 - 3/4    | 16          | 5/8           | 0.688                | 16.000            | 15.997              | 14.750              | 14.750             | 14.753              | 16.000              |
|                  | 625014750100   |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |
|                  | 625015000      | 15          | 16 - 1/4    | 5/8           | 0.688                | 16.250            | 16.247              | 15.000              | 15.000             | 15.003              | 16.250              |
|                  | 625015000100   |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |
|                  | 625015500      | 15 - 1/2    | 16 - 3/4    | 5/8           | 0.688                | 16.750            | 16.747              | 15.500              | 15.500             | 15.503              | 16.750              |
|                  | 625015500100   |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |
|                  | 625016000      | 16          | 17 - 1/4    | 5/8           | 0.688                | 17.250            | 17.247              | 16.000              | 16.000             | 16.003              | 17.250              |
|                  | 625016000100   |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |
|                  | 625016500      | 16 - 1/2    | 17 - 3/4    | 5/8           | 0.688                | 17.750            | 17.747              | 16.500              | 16.500             | 16.503              | 17.750              |
|                  | 625016500100   |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |
|                  | 625017000      | 17          | 18 - 1/4    | 5/8           | 0.688                | 18.250            | 18.247              | 17.000              | 17.000             | 17.003              | 18.250              |
|                  | 625017000100   |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |
|                  | 625017500      | 17 - 1/2    | 18 - 3/4    | 5/8           | 0.688                | 18.750            | 18.747              | 17.500              | 17.500             | 17.503              | 18.750              |
|                  | 625017500100   |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |
|                  | 625018000      | 18          | 19 - 1/4    | 5/8           | 0.688                | 19.250            | 19.247              | 18.000              | 18.000             | 18.003              | 19.250              |
|                  | 625018000100   |             |             | 1             | 1.100                |                   |                     |                     |                    |                     |                     |
| Tolerance Limits |                |             |             |               | +0.010<br>-0.000     | +0.007<br>-0.000  | +0.000<br>-0.004    | +0.000<br>-0.011    | +0.000<br>-0.004   | +0.007<br>-0.000    | +0.011<br>-0.000    |
| 3/4"             | 75003000       | 3           | 4 - 1/2     | 3/4           | 0.825                | 4.500             | 4.497               | 3.000               | 3.000              | 3.003               | 4.500               |
|                  | 75003000125    |             |             | 1 - 1/4       | 1.375                |                   |                     |                     |                    |                     |                     |
|                  | 75003250       | 3 - 1/4     | 4 - 3/4     | 3/4           | 0.825                | 4.750             | 4.747               | 3.250               | 3.250              | 3.253               | 4.750               |
|                  | 75003250125    |             |             | 1 - 1/4       | 1.375                |                   |                     |                     |                    |                     |                     |
|                  | 75003500       | 3 - 1/2     | 5           | 3/4           | 0.825                | 5.000             | 4.997               | 3.500               | 3.500              | 3.503               | 5.000               |
|                  | 75003500125    |             |             | 1 - 1/4       | 1.375                |                   |                     |                     |                    |                     |                     |
|                  | 75003750       | 3 - 3/4     | 5 - 1/4     | 3/4           | 0.825                | 5.250             | 5.247               | 3.750               | 3.750              | 3.753               | 5.250               |
|                  | 75003750125    |             |             | 1 - 1/4       | 1.375                |                   |                     |                     |                    |                     |                     |
|                  | 75004000       | 4           | 5 - 1/2     | 3/4           | 0.825                | 5.500             | 5.497               | 4.000               | 4.000              | 4.003               | 5.500               |
|                  | 75004000125    |             |             | 1 - 1/4       | 1.375                |                   |                     |                     |                    |                     |                     |
|                  | 75004250       | 4 - 1/4     | 5 - 3/4     | 3/4           | 0.825                | 5.750             | 5.747               | 4.250               | 4.250              | 4.253               | 5.750               |
|                  | 75004250125    |             |             | 1 - 1/4       | 1.375                |                   |                     |                     |                    |                     |                     |
|                  | 75004500       | 4 - 1/2     | 6           | 3/4           | 0.825                | 6.000             | 5.997               | 4.500               | 4.500              | 4.503               | 6.000               |
|                  | 75004500125    |             |             | 1 - 1/4       | 1.375                |                   |                     |                     |                    |                     |                     |
|                  | 75004750       | 4 - 3/4     | 6 - 1/4     | 3/4           | 0.825                | 6.250             | 6.247               | 4.750               | 4.750              | 4.753               | 6.250               |
|                  | 75004750125    |             |             | 1 - 1/4       | 1.375                |                   |                     |                     |                    |                     |                     |
|                  | 75005000       | 5           | 6 - 1/2     | 3/4           | 0.825                | 6.500             | 6.497               | 5.000               | 5.000              | 5.003               | 6.500               |
|                  | 75005000125    |             |             | 1 - 1/4       | 1.375                |                   |                     |                     |                    |                     |                     |
|                  | 75005250       | 5 - 1/4     | 6 - 3/4     | 3/4           | 0.825                | 6.750             | 6.747               | 5.250               | 5.250              | 5.253               | 6.750               |
|                  | 75005250125    |             |             | 1 - 1/4       | 1.375                |                   |                     |                     |                    |                     |                     |
|                  | 75005500       | 5 - 1/2     | 7           | 3/4           | 0.825                | 7.000             | 6.997               | 5.500               | 5.500              | 5.503               | 7.000               |
|                  | 75005500125    |             |             | 1 - 1/4       | 1.375                |                   |                     |                     |                    |                     |                     |

# Loaded U-Cups

| C/S<br>(Width)          | Size<br>Number | Nom<br>I.D. | Nom<br>O.D. | Nom<br>Height | Piston Applications      |                          |                          |                          | Shaft Applications       |                          |                          |
|-------------------------|----------------|-------------|-------------|---------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                         |                |             |             |               | C                        | A                        | D                        | B                        | E                        | F                        | G                        |
|                         |                |             |             |               | Groove<br>Width          | Bore<br>Dia.             | Piston<br>Dia.           | Groove<br>Dia.           | Shaft<br>Dia.            | Throat<br>Dia.           | Groove<br>Dia.           |
| <b>Tolerance Limits</b> |                |             |             |               | <b>+0.010<br/>-0.000</b> | <b>+0.007<br/>-0.000</b> | <b>+0.000<br/>-0.004</b> | <b>+0.000<br/>-0.011</b> | <b>+0.000<br/>-0.004</b> | <b>+0.007<br/>-0.000</b> | <b>+0.011<br/>-0.000</b> |
| 3/4"                    | 75005750       | 5 - 3/4     | 7 - 1/4     | 3/4           | 0.825                    | 7.250                    | 7.247                    | 5.750                    | 5.750                    | 5.753                    | 7.250                    |
|                         | 75005750125    |             |             | 1 - 1/4       | 1.375                    |                          |                          |                          |                          |                          |                          |
|                         | 75006000       | 6           | 7 - 1/2     | 3/4           | 0.825                    | 7.500                    | 7.497                    | 6.000                    | 6.000                    | 6.003                    | 7.500                    |
|                         | 75006000125    |             |             | 1 - 1/4       | 1.375                    |                          |                          |                          |                          |                          |                          |
|                         | 75006250       | 6 - 1/4     | 7 - 3/4     | 3/4           | 0.825                    | 7.750                    | 7.747                    | 6.250                    | 6.250                    | 6.253                    | 7.750                    |
|                         | 75006250125    |             |             | 1 - 1/4       | 1.375                    |                          |                          |                          |                          |                          |                          |
|                         | 75006500       | 6 - 1/2     | 8           | 3/4           | 0.825                    | 8.000                    | 7.997                    | 6.500                    | 6.500                    | 6.503                    | 8.000                    |
|                         | 75006500125    |             |             | 1 - 1/4       | 1.375                    |                          |                          |                          |                          |                          |                          |
|                         | 75006750       | 6 - 3/4     | 8 - 1/4     | 3/4           | 0.825                    | 8.250                    | 8.247                    | 6.750                    | 6.750                    | 6.753                    | 8.250                    |
|                         | 75006750125    |             |             | 1 - 1/4       | 1.375                    |                          |                          |                          |                          |                          |                          |
|                         | 75007000       | 7           | 8 - 1/2     | 3/4           | 0.825                    | 8.500                    | 8.497                    | 7.000                    | 7.000                    | 7.003                    | 8.500                    |
|                         | 75007000125    |             |             | 1 - 1/4       | 1.375                    |                          |                          |                          |                          |                          |                          |
|                         | 75007250       | 7 - 1/4     | 8 - 3/4     | 3/4           | 0.825                    | 8.750                    | 8.747                    | 7.250                    | 7.250                    | 7.253                    | 8.750                    |
|                         | 75007250125    |             |             | 1 - 1/4       | 1.375                    |                          |                          |                          |                          |                          |                          |
|                         | 75007500       | 7 - 1/2     | 9           | 3/4           | 0.825                    | 9.000                    | 8.997                    | 7.500                    | 7.500                    | 7.503                    | 9.000                    |
|                         | 75007500125    |             |             | 1 - 1/4       | 1.375                    |                          |                          |                          |                          |                          |                          |
|                         | 75007750       | 7 - 3/4     | 9 - 1/4     | 3/4           | 0.825                    | 9.250                    | 9.247                    | 7.750                    | 7.750                    | 7.753                    | 9.250                    |
|                         | 75007750125    |             |             | 1 - 1/4       | 1.375                    |                          |                          |                          |                          |                          |                          |
|                         | 75008000       | 8           | 9 - 1/2     | 3/4           | 0.825                    | 9.500                    | 9.497                    | 8.000                    | 8.000                    | 8.003                    | 9.500                    |
|                         | 75008000125    |             |             | 1 - 1/4       | 1.375                    |                          |                          |                          |                          |                          |                          |
|                         | 75008250       | 8 - 1/4     | 9 - 3/4     | 3/4           | 0.825                    | 9.750                    | 9.747                    | 8.250                    | 8.250                    | 8.253                    | 9.750                    |
|                         | 75008250125    |             |             | 1 - 1/4       | 1.375                    |                          |                          |                          |                          |                          |                          |
|                         | 75008500       | 8 - 1/2     | 10          | 3/4           | 0.825                    | 10.000                   | 9.997                    | 8.500                    | 8.500                    | 8.503                    | 10.000                   |
|                         | 75008500125    |             |             | 1 - 1/4       | 1.375                    |                          |                          |                          |                          |                          |                          |
|                         | 75008750       | 8 - 3/4     | 10 - 1/4    | 3/4           | 0.825                    | 10.250                   | 10.247                   | 8.750                    | 8.750                    | 8.753                    | 10.250                   |
|                         | 75008750125    |             |             | 1 - 1/4       | 1.375                    |                          |                          |                          |                          |                          |                          |
|                         | 75009000       | 9           | 10 - 1/2    | 3/4           | 0.825                    | 10.500                   | 10.447                   | 9.000                    | 9.000                    | 9.003                    | 10.500                   |
|                         | 75009000125    |             |             | 1 - 1/4       | 1.375                    |                          |                          |                          |                          |                          |                          |
|                         | 75009250       | 9 - 1/4     | 10 - 3/4    | 3/4           | 0.825                    | 10.750                   | 10.747                   | 9.250                    | 9.250                    | 9.253                    | 10.750                   |
|                         | 75009250125    |             |             | 1 - 1/4       | 1.375                    |                          |                          |                          |                          |                          |                          |
|                         | 75009500       | 9 - 1/2     | 11          | 3/4           | 0.825                    | 11.000                   | 10.997                   | 9.500                    | 9.500                    | 9.503                    | 11.000                   |
|                         | 75009500125    |             |             | 1 - 1/4       | 1.375                    |                          |                          |                          |                          |                          |                          |
|                         | 75009750       | 9 - 3/4     | 11 - 1/4    | 3/4           | 0.825                    | 11.250                   | 11.247                   | 9.750                    | 9.750                    | 9.753                    | 11.250                   |
|                         | 75009750125    |             |             | 1 - 1/4       | 1.375                    |                          |                          |                          |                          |                          |                          |
|                         | 750010000      | 10          | 11 - 1/2    | 3/4           | 0.825                    | 11.500                   | 11.497                   | 10.000                   | 10.000                   | 10.003                   | 11.500                   |
|                         | 750010000125   |             |             | 1 - 1/4       | 1.375                    |                          |                          |                          |                          |                          |                          |
|                         | 750010500      | 10 - 1/2    | 12          | 3/4           | 0.825                    | 12.000                   | 11.997                   | 10.500                   | 10.500                   | 10.503                   | 12.000                   |
|                         | 750010500125   |             |             | 1 - 1/4       | 1.375                    |                          |                          |                          |                          |                          |                          |
|                         | 750011000      | 11          | 12 - 1/2    | 3/4           | 0.825                    | 12.500                   | 12.497                   | 11.000                   | 11.000                   | 11.003                   | 12.500                   |
|                         | 750011000125   |             |             | 1 - 1/4       | 1.375                    |                          |                          |                          |                          |                          |                          |
|                         | 750011500      | 11 - 1/2    | 13          | 3/4           | 0.825                    | 13.000                   | 12.997                   | 11.500                   | 11.500                   | 11.503                   | 13.000                   |
|                         | 750011500125   |             |             | 1 - 1/4       | 1.375                    |                          |                          |                          |                          |                          |                          |
|                         | 750012000      | 12          | 13 - 1/2    | 3/4           | 0.825                    | 13.500                   | 13.497                   | 12.000                   | 12.000                   | 12.003                   | 13.500                   |
|                         | 750012000125   |             |             | 1 - 1/4       | 1.375                    |                          |                          |                          |                          |                          |                          |
|                         | 750012500      | 12 - 1/2    | 14          | 3/4           | 0.825                    | 14.000                   | 13.997                   | 12.500                   | 12.500                   | 12.503                   | 14.000                   |
|                         | 750012500125   |             |             | 1 - 1/4       | 1.375                    |                          |                          |                          |                          |                          |                          |

Loaded U-Cups

# Loaded U-Cups

IMPERIAL SEALS

Loaded U-Cups

| C/S<br>(Width) | Size<br>Number | Nom<br>I.D. | Nom<br>O.D. | Nom<br>Height | C<br>Groove<br>Width    | Piston Applications      |                          |                          | Shaft Applications       |                          |                          |                          |
|----------------|----------------|-------------|-------------|---------------|-------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                |                |             |             |               |                         | A<br>Bore<br>Dia.        | D<br>Piston<br>Dia.      | B<br>Groove<br>Dia.      | E<br>Shaft<br>Dia.       | F<br>Throat<br>Dia.      | G<br>Groove<br>Dia.      |                          |
|                |                |             |             |               | <b>Tolerance Limits</b> | <b>+0.010<br/>-0.000</b> | <b>+0.007<br/>-0.000</b> | <b>+0.000<br/>-0.004</b> | <b>+0.000<br/>-0.011</b> | <b>+0.000<br/>-0.004</b> | <b>+0.007<br/>-0.000</b> | <b>+0.011<br/>-0.000</b> |
| 3/4"           | 750013000      | 13          | 14 - 1/2    | 3/4           | 0.825                   | 14.500                   | 14.497                   | 13.000                   | 13.000                   | 13.003                   | 14.500                   |                          |
|                | 750013000125   |             |             | 1 - 1/4       | 1.375                   |                          |                          |                          |                          |                          |                          |                          |
|                | 750013500      | 13 - 1/2    | 15          | 3/4           | 0.825                   | 15.000                   | 14.997                   | 13.500                   | 13.500                   | 13.503                   | 15.000                   |                          |
|                | 750013500125   |             |             | 1 - 1/4       | 1.375                   |                          |                          |                          |                          |                          |                          |                          |
|                | 750014000      | 14          | 15 - 1/2    | 3/4           | 0.825                   | 15.500                   | 15.497                   | 14.000                   | 14.000                   | 14.003                   | 15.500                   |                          |
|                | 750014000125   |             |             | 1 - 1/4       | 1.375                   |                          |                          |                          |                          |                          |                          |                          |
|                | 750014500      | 14 - 1/2    | 16          | 3/4           | 0.825                   | 16.000                   | 15.997                   | 14.500                   | 14.500                   | 14.503                   | 16.000                   |                          |
|                | 750014500125   |             |             | 1 - 1/4       | 1.375                   |                          |                          |                          |                          |                          |                          |                          |
|                | 750015000      | 15          | 16 - 1/2    | 3/4           | 0.825                   | 16.500                   | 16.497                   | 15.000                   | 15.000                   | 15.003                   | 16.500                   |                          |
|                | 750015000125   |             |             | 1 - 1/4       | 1.375                   |                          |                          |                          |                          |                          |                          |                          |
|                | 750015500      | 15 - 1/2    | 17          | 3/4           | 0.825                   | 17.000                   | 16.997                   | 15.500                   | 15.500                   | 15.503                   | 17.000                   |                          |
|                | 750015500125   |             |             | 1 - 1/4       | 1.375                   |                          |                          |                          |                          |                          |                          |                          |
|                | 750016000      | 16          | 17 - 1/2    | 3/4           | 0.825                   | 17.500                   | 17.497                   | 16.000                   | 16.000                   | 16.003                   | 17.500                   |                          |
|                | 750016000125   |             |             | 1 - 1/4       | 1.375                   |                          |                          |                          |                          |                          |                          |                          |
|                | 750016500      | 16 - 1/2    | 18          | 3/4           | 0.825                   | 18.000                   | 17.997                   | 16.500                   | 16.500                   | 16.503                   | 18.000                   |                          |
|                | 750016500125   |             |             | 1 - 1/4       | 1.375                   |                          |                          |                          |                          |                          |                          |                          |
|                | 750017000      | 17          | 18 - 1/2    | 3/4           | 0.825                   | 18.500                   | 18.497                   | 17.000                   | 17.000                   | 17.003                   | 18.500                   |                          |
|                | 750017000125   |             |             | 1 - 1/4       | 1.375                   |                          |                          |                          |                          |                          |                          |                          |
|                | 750017500      | 17 - 1/2    | 19          | 3/4           | 0.825                   | 19.000                   | 18.997                   | 17.500                   | 17.500                   | 17.503                   | 19.000                   |                          |
|                | 750017500125   |             |             | 1 - 1/4       | 1.375                   |                          |                          |                          |                          |                          |                          |                          |
|                | 750018000      | 18          | 19 - 1/2    | 3/4           | 0.825                   | 19.500                   | 19.497                   | 18.000                   | 18.000                   | 18.003                   | 19.500                   |                          |
|                | 750018000125   |             |             | 1 - 1/4       | 1.375                   |                          |                          |                          |                          |                          |                          |                          |
|                | 750018500      | 18 - 1/2    | 20          | 3/4           | 0.825                   | 20.000                   | 19.997                   | 18.500                   | 18.500                   | 18.503                   | 20.000                   |                          |
|                | 750018500125   |             |             | 1 - 1/4       | 1.375                   |                          |                          |                          |                          |                          |                          |                          |
|                | 750019000      | 19          | 20 - 1/2    | 3/4           | 0.825                   | 20.500                   | 20.497                   | 19.000                   | 19.000                   | 19.003                   | 20.500                   |                          |
|                | 750019000125   |             |             | 1 - 1/4       | 1.375                   |                          |                          |                          |                          |                          |                          |                          |
|                | 750019500      | 19 - 1/2    | 21          | 3/4           | 0.825                   | 21.000                   | 20.997                   | 19.500                   | 19.500                   | 19.503                   | 21.000                   |                          |
|                | 750019500125   |             |             | 1 - 1/4       | 1.375                   |                          |                          |                          |                          |                          |                          |                          |
|                | 750020000      | 20          | 21 - 1/2    | 3/4           | 0.825                   | 21.500                   | 21.497                   | 20.000                   | 20.000                   | 20.003                   | 21.500                   |                          |
|                | 750020000125   |             |             | 1 - 1/4       | 1.375                   |                          |                          |                          |                          |                          |                          |                          |
|                |                |             |             |               | <b>Tolerance Limits</b> | <b>+0.010<br/>-0.000</b> | <b>+0.009<br/>-0.000</b> | <b>+0.000<br/>-0.005</b> | <b>+0.000<br/>-0.015</b> | <b>+0.000<br/>-0.005</b> | <b>+0.009<br/>-0.000</b> | <b>+0.015<br/>-0.000</b> |
| 1"             | 10003000       | 3           | 5           | 1             | 1.100                   | 5.000                    | 4.996                    | 3.000                    | 3.000                    | 3.004                    | 5.000                    |                          |
|                | 10003000150    |             |             | 1 - 1/2       | 1.650                   |                          |                          |                          |                          |                          |                          |                          |
|                | 10003500       | 3 - 1/2     | 5 - 1/2     | 1             | 1.100                   | 5.500                    | 5.496                    | 3.500                    | 3.500                    | 3.504                    | 5.500                    |                          |
|                | 10003500150    |             |             | 1 - 1/2       | 1.650                   |                          |                          |                          |                          |                          |                          |                          |
|                | 10004000       | 4           | 6           | 1             | 1.100                   | 6.000                    | 5.996                    | 4.000                    | 4.000                    | 4.004                    | 6.000                    |                          |
|                | 10004000150    |             |             | 1 - 1/2       | 1.650                   |                          |                          |                          |                          |                          |                          |                          |
|                | 10004500       | 4 - 1/2     | 6 - 1/2     | 1             | 1.100                   | 6.500                    | 6.496                    | 4.500                    | 4.500                    | 4.504                    | 6.500                    |                          |
|                | 10004500150    |             |             | 1 - 1/2       | 1.650                   |                          |                          |                          |                          |                          |                          |                          |
|                | 10005000       | 5           | 7           | 1             | 1.100                   | 7.000                    | 6.996                    | 5.000                    | 5.000                    | 5.004                    | 7.000                    |                          |
|                | 10005000150    |             |             | 1 - 1/2       | 1.650                   |                          |                          |                          |                          |                          |                          |                          |
|                | 10005500       | 5 - 1/2     | 7 - 1/2     | 1             | 1.100                   | 7.500                    | 7.496                    | 5.500                    | 5.500                    | 5.504                    | 7.500                    |                          |
|                | 10005500150    |             |             | 1 - 1/2       | 1.650                   |                          |                          |                          |                          |                          |                          |                          |
|                | 10006000       | 6           | 8           | 1             | 1.100                   | 8.000                    | 7.996                    | 6.000                    | 6.000                    | 6.004                    | 8.000                    |                          |
|                | 10006000150    |             |             | 1 - 1/2       | 1.650                   |                          |                          |                          |                          |                          |                          |                          |

# Loaded U-Cups

| C/S<br>(Width)          | Size<br>Number | Nom<br>I.D. | Nom<br>O.D. | Nom<br>Height | C<br>Groove<br>Width     | Piston Applications      |                          |                          | Shaft Applications       |                          |                          |
|-------------------------|----------------|-------------|-------------|---------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                         |                |             |             |               |                          | A<br>Bore<br>Dia.        | D<br>Piston<br>Dia.      | B<br>Groove<br>Dia.      | E<br>Shaft<br>Dia.       | F<br>Throat<br>Dia.      | G<br>Groove<br>Dia.      |
| <b>Tolerance Limits</b> |                |             |             |               | <b>+0.010<br/>-0.000</b> | <b>+0.009<br/>-0.000</b> | <b>+0.000<br/>-0.005</b> | <b>+0.000<br/>-0.015</b> | <b>+0.000<br/>-0.005</b> | <b>+0.009<br/>-0.000</b> | <b>+0.015<br/>-0.000</b> |
| 1"                      | 10006500       | 6 - 1/2     | 8 - 1/2     | 1             | 1.100                    | 8.500                    | 8.496                    | 6.500                    | 6.500                    | 6.504                    | 8.500                    |
|                         | 10006500150    |             |             | 1 - 1/2       | 1.650                    |                          |                          |                          |                          |                          |                          |
|                         | 10007000       | 7           | 9           | 1             | 1.100                    | 9.000                    | 8.996                    | 7.000                    | 7.000                    | 7.004                    | 9.000                    |
|                         | 10007000150    |             |             | 1 - 1/2       | 1.650                    |                          |                          |                          |                          |                          |                          |
|                         | 10007500       | 7 - 1/2     | 9 - 1/2     | 1             | 1.100                    | 9.500                    | 9.496                    | 7.500                    | 7.500                    | 7.504                    | 9.500                    |
|                         | 10007500150    |             |             | 1 - 1/2       | 1.650                    |                          |                          |                          |                          |                          |                          |
|                         | 10008000       | 8           | 10          | 1             | 1.100                    | 10.000                   | 9.996                    | 8.000                    | 8.000                    | 8.004                    | 10.000                   |
|                         | 10008000150    |             |             | 1 - 1/2       | 1.650                    |                          |                          |                          |                          |                          |                          |
|                         | 10008500       | 8 - 1/2     | 10 - 1/2    | 1             | 1.100                    | 10.500                   | 10.496                   | 8.500                    | 8.500                    | 8.504                    | 10.500                   |
|                         | 10008500150    |             |             | 1 - 1/2       | 1.650                    |                          |                          |                          |                          |                          |                          |
|                         | 10009000       | 9           | 11          | 1             | 1.100                    | 11.000                   | 10.996                   | 9.000                    | 9.000                    | 9.004                    | 11.000                   |
|                         | 10009000150    |             |             | 1 - 1/2       | 1.650                    |                          |                          |                          |                          |                          |                          |
|                         | 10009500       | 9 - 1/2     | 11 - 1/2    | 1             | 1.100                    | 11.500                   | 11.496                   | 9.500                    | 9.500                    | 9.504                    | 11.500                   |
|                         | 10009500150    |             |             | 1 - 1/2       | 1.650                    |                          |                          |                          |                          |                          |                          |
|                         | 100010000      | 10          | 12          | 1             | 1.100                    | 12.000                   | 11.996                   | 10.000                   | 10.000                   | 10.004                   | 12.000                   |
|                         | 100010000150   |             |             | 1 - 1/2       | 1.650                    |                          |                          |                          |                          |                          |                          |
|                         | 100010500      | 10 - 1/2    | 12 - 1/2    | 1             | 1.100                    | 12.500                   | 12.496                   | 10.500                   | 10.500                   | 10.504                   | 12.500                   |
|                         | 100010500150   |             |             | 1 - 1/2       | 1.650                    |                          |                          |                          |                          |                          |                          |
|                         | 100011000      | 11          | 13          | 1             | 1.100                    | 13.000                   | 12.996                   | 11.000                   | 11.000                   | 11.004                   | 13.000                   |
|                         | 100011000150   |             |             | 1 - 1/2       | 1.650                    |                          |                          |                          |                          |                          |                          |
|                         | 100011500      | 11 - 1/2    | 13 - 1/2    | 1             | 1.100                    | 13.500                   | 13.496                   | 11.500                   | 11.500                   | 11.504                   | 13.500                   |
|                         | 100011500150   |             |             | 1 - 1/2       | 1.650                    |                          |                          |                          |                          |                          |                          |
|                         | 100012000      | 12          | 14          | 1             | 1.100                    | 14.000                   | 13.996                   | 12.000                   | 12.000                   | 12.004                   | 14.000                   |
|                         | 100012000150   |             |             | 1 - 1/2       | 1.650                    |                          |                          |                          |                          |                          |                          |
|                         | 100012500      | 12 - 1/2    | 14 - 1/2    | 1             | 1.100                    | 14.500                   | 14.496                   | 12.500                   | 12.500                   | 12.504                   | 14.500                   |
|                         | 100012500150   |             |             | 1 - 1/2       | 1.650                    |                          |                          |                          |                          |                          |                          |
|                         | 100013000      | 13          | 15          | 1             | 1.100                    | 15.000                   | 14.996                   | 13.000                   | 13.000                   | 13.004                   | 15.000                   |
|                         | 100013000150   |             |             | 1 - 1/2       | 1.650                    |                          |                          |                          |                          |                          |                          |
|                         | 100013500      | 13 - 1/2    | 15 - 1/2    | 1             | 1.100                    | 15.500                   | 15.496                   | 13.500                   | 13.500                   | 13.504                   | 15.500                   |
|                         | 100013500150   |             |             | 1 - 1/2       | 1.650                    |                          |                          |                          |                          |                          |                          |
|                         | 100014000      | 14          | 16          | 1             | 1.100                    | 16.000                   | 15.996                   | 14.000                   | 14.000                   | 14.004                   | 16.000                   |
|                         | 100014000150   |             |             | 1 - 1/2       | 1.650                    |                          |                          |                          |                          |                          |                          |
|                         | 100014500      | 14 - 1/2    | 16 - 1/2    | 1             | 1.100                    | 16.500                   | 16.496                   | 14.500                   | 14.500                   | 14.504                   | 16.500                   |
|                         | 100014500150   |             |             | 1 - 1/2       | 1.650                    |                          |                          |                          |                          |                          |                          |
|                         | 100015000      | 15          | 17          | 1             | 1.100                    | 17.000                   | 16.996                   | 15.000                   | 15.000                   | 15.004                   | 17.000                   |
|                         | 100015000150   |             |             | 1 - 1/2       | 1.650                    |                          |                          |                          |                          |                          |                          |
|                         | 100015500      | 15 - 1/2    | 17 - 1/2    | 1             | 1.100                    | 17.500                   | 17.496                   | 15.500                   | 15.500                   | 15.504                   | 17.500                   |
|                         | 100015500150   |             |             | 1 - 1/2       | 1.650                    |                          |                          |                          |                          |                          |                          |
|                         | 100016000      | 16          | 18          | 1             | 1.100                    | 18.000                   | 17.996                   | 16.000                   | 16.000                   | 16.004                   | 18.000                   |
|                         | 100016000150   |             |             | 1 - 1/2       | 1.650                    |                          |                          |                          |                          |                          |                          |
|                         | 100016500      | 16 - 1/2    | 18 - 1/2    | 1             | 1.100                    | 18.500                   | 18.496                   | 16.500                   | 16.500                   | 16.504                   | 18.500                   |
|                         | 100016500150   |             |             | 1 - 1/2       | 1.650                    |                          |                          |                          |                          |                          |                          |
|                         | 100017000      | 17          | 19          | 1             | 1.100                    | 19.000                   | 18.996                   | 17.000                   | 17.000                   | 17.004                   | 19.000                   |
|                         | 100017000150   |             |             | 1 - 1/2       | 1.650                    |                          |                          |                          |                          |                          |                          |
|                         | 100017500      | 17 - 1/2    | 19 - 1/2    | 1             | 1.100                    | 19.500                   | 19.496                   | 17.500                   | 17.500                   | 17.504                   | 19.500                   |
|                         | 100017500150   |             |             | 1 - 1/2       | 1.650                    |                          |                          |                          |                          |                          |                          |

Loaded U-Cups

# Loaded U-Cups

IMPERIAL SEALS

| C/S<br>(Width) | Size<br>Number | Nom<br>I.D. | Nom<br>O.D. | Nom<br>Height | C<br>Groove<br>Width | Piston Applications            |                                |                                | Shaft Applications             |                                |                                |                                |
|----------------|----------------|-------------|-------------|---------------|----------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
|                |                |             |             |               |                      | A<br>Bore<br>Dia.              | D<br>Piston<br>Dia.            | B<br>Groove<br>Dia.            | E<br>Shaft<br>Dia.             | F<br>Throat<br>Dia.            | G<br>Groove<br>Dia.            |                                |
|                |                |             |             |               |                      | <b>+0.010</b><br><b>-0.000</b> | <b>+0.009</b><br><b>-0.000</b> | <b>+0.000</b><br><b>-0.005</b> | <b>+0.000</b><br><b>-0.015</b> | <b>+0.000</b><br><b>-0.005</b> | <b>+0.009</b><br><b>-0.000</b> | <b>+0.015</b><br><b>-0.000</b> |
| 1"             | 100018000      | 18          | 20          | 1             | 1.100                | 20.000                         | 19.996                         | 18.000                         | 18.000                         | 18.004                         | 20.000                         |                                |
|                | 100018000150   |             |             | 1 - 1/2       | 1.650                |                                |                                |                                |                                |                                |                                |                                |
|                | 100018500      | 18 - 1/2    | 20 - 1/2    | 1             | 1.100                | 20.500                         | 20.496                         | 18.500                         | 18.500                         | 18.504                         | 20.500                         |                                |
|                | 100018500150   |             |             | 1 - 1/2       | 1.650                |                                |                                |                                |                                |                                |                                |                                |
|                | 100019000      | 19          | 21          | 1             | 1.100                | 21.000                         | 20.996                         | 19.000                         | 19.000                         | 19.004                         | 21.000                         |                                |
|                | 100019000150   |             |             | 1 - 1/2       | 1.650                |                                |                                |                                |                                |                                |                                |                                |
|                | 100019500      | 19 - 1/2    | 21 - 1/2    | 1             | 1.100                | 21.500                         | 21.496                         | 19.500                         | 19.500                         | 19.504                         | 21.500                         |                                |
|                | 100019500150   |             |             | 1 - 1/2       | 1.650                |                                |                                |                                |                                |                                |                                |                                |
|                | 100020000      | 20          | 22          | 1             | 1.100                | 22.000                         | 21.996                         | 20.000                         | 20.000                         | 20.004                         | 22.000                         |                                |
|                | 100020000150   |             |             | 1 - 1/2       | 1.650                |                                |                                |                                |                                |                                |                                |                                |
|                | 100022000      | 22          | 24          | 1             | 1.100                | 24.000                         | 23.996                         | 22.000                         | 22.000                         | 22.004                         | 24.000                         |                                |
|                | 100022000150   |             |             | 1 - 1/2       | 1.650                |                                |                                |                                |                                |                                |                                |                                |
|                | 100024000      | 24          | 26          | 1             | 1.100                | 26.000                         | 25.996                         | 24.000                         | 24.000                         | 24.004                         | 26.000                         |                                |
|                | 100024000150   |             |             | 1 - 1/2       | 1.650                |                                |                                |                                |                                |                                |                                |                                |
|                | 100026000      | 26          | 28          | 1             | 1.100                | 28.000                         | 27.996                         | 26.000                         | 26.000                         | 26.004                         | 28.000                         |                                |
|                | 100026000150   |             |             | 1 - 1/2       | 1.650                |                                |                                |                                |                                |                                |                                |                                |
|                | 100028000      | 28          | 30          | 1             | 1.100                | 30.000                         | 29.996                         | 28.000                         | 28.000                         | 28.004                         | 30.000                         |                                |
|                | 100028000150   |             |             | 1 - 1/2       | 1.650                |                                |                                |                                |                                |                                |                                |                                |
|                | 100030000      | 30          | 32          | 1             | 1.100                | 32.000                         | 31.996                         | 30.000                         | 30.000                         | 30.004                         | 32.000                         |                                |
|                | 100030000150   |             |             | 1 - 1/2       | 1.650                |                                |                                |                                |                                |                                |                                |                                |
|                | 100032000      | 32          | 34          | 1             | 1.100                | 34.000                         | 33.996                         | 32.000                         | 32.000                         | 32.004                         | 34.000                         |                                |
|                | 100032000150   |             |             | 1 - 1/2       | 1.650                |                                |                                |                                |                                |                                |                                |                                |

Custom sizes available upon request. For more information, contact a Hi-Tech Seals representative.