## ADVANTAGES AND INTRODUCTION TO AUTOMATIC TOOL CHANGE COOLANT RETROFIT SYSTEMS

<table>
<thead>
<tr>
<th>TOOLHOLDER VARIETY</th>
<th>Our selection of standard holders includes V-Flange and BT Shanks. The types of holders available include single and double angle collet chucks, end mill holders, morse taper and ABS® modular holders. Special application holders can be designed to meet your specifications.</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOOLHOLDER VERSATILITY</td>
<td>The same toolholder may be used for: 1. Automatic rotary induced coolant operation 2. Manual rotary induced coolant operation.</td>
</tr>
<tr>
<td>MAXIMUM CLEARANCE</td>
<td>Our compact design allows for trouble free tool change operations as well as maximum tool pocket clearance.</td>
</tr>
<tr>
<td>EASY MAINTENANCE</td>
<td>Simplicity of design and ease of assembly and disassembly allows for quick, economical maintenance.</td>
</tr>
<tr>
<td>ADAPTABILITY</td>
<td>The ATC Retrofit System can be easily adapted to most domestic and imported machines and is interchangeable with most competitive tooling systems.</td>
</tr>
<tr>
<td>TOOLHOLDER POSITIONING</td>
<td>ATC toolholders are equipped with a fully adjustable orientation ring.</td>
</tr>
<tr>
<td>TOOL EFFICIENCY</td>
<td>The light weight of the adapter and coolant gland allows for maximum cutting tool weight.</td>
</tr>
<tr>
<td>PROLONG TOOL LIFE</td>
<td>Cutting tool life is increased by applying coolant-thru-the-tool to prevent heat at the cutting edge, thus reducing premature tool chipping and tool breakage.</td>
</tr>
<tr>
<td>IMPROVED PRODUCTION</td>
<td>Coolant-thru-the-tool allows for increased speeds and feeds, improving surface finish and overall performance.</td>
</tr>
<tr>
<td>VALUE</td>
<td>Point for point, feature for feature, The George Whalley Company ATC System for coolant-fed tooling, is the most economically priced and easily adapted system available.</td>
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</table>
The George Whalley Company Automatic Tool Change (ATC) Retrofit System is available to users of CNC machining centers with magazine or matrix-type tool storage features. The ATC Retrofit System eliminates the need for manual loading of coolant-fed tooling when high speed unattended operation is desired.

The ATC Retrofit System consists of a specially designed coolant-thru-the-tool holder assembled with an ATC Rotary Coolant Gland. The gland, which is mounted in an aluminum base assembly, is a uniquely designed bronze wear bushing incorporated with a special double seal only found in The George Whalley ATC Rotary Coolant Gland. The seal is self-lubricating, high heat and wear resistant making it the rotary coolant gland of choice in many manufacturing facilities throughout the metal working industry. ATC Rotary Coolant Glands are supplied in face seal and single or dual pin O-ring seal configurations, designed to fit many of today’s popular machining centers. The Manual ATC Style Rotary Coolant Gland is a cost effective alternative when evaluating machine feasibility. These glands can be upgraded easily to ATC Rotary Coolant Glands without having to purchase new tootholders.

**REQUIREMENTS FOR RETROFITTING**

- **SUFFICIENT CLEARANCE IN TOOL CAROUSEL AND TOOL TRANSFER ARM AREAS.**

- **PROPER FILTERED AND PRESSURIZED COOLANT SUPPLY TO SERVE AUXILIARY MANIFOLD AT SPINDLE FACE.**

- **COOLANT FILTRATION AND PUMPING SYSTEM CAPABLE OF PRODUCING THE VOLUME AND PRESSURE NECESSARY FOR TYPES OF TOOLS BEING USED.**

- **PROPER MATCHING OF THE SPINDLE SPECIFICATIONS TO THE CORRECT HOLDER AND GLAND.**

- **CNC CONTROLS ABLE TO OPERATE COOLANT FLOW TO THE AUXILIARY MANIFOLD.**

- **APPROPRIATE SHIELDING OF THE MACHINE TO HANDLE COOLANT FLOW WITHOUT SPLASHING.**
COOLANT GLAND SELECTION

The Single Pin Face Seal (SPFS) Rotary Coolant Gland is the newest and most popular of The George Whalley Company ATC Coolant Gland assemblies. It is interchangeable with most foreign and domestic automatic tool change systems.

The Single Pin Face Seal (SPFS) Coolant Gland is used when your CNC machine spindle accepts a toolholder with a Cat 40, 45, 50 V-Flange or BT40, BT50 shank.

TOOLHOLDER SELECTION
- To order V-Flange Holders with (SPFS) Rotary Coolant Glands see pages 90-93.
- To order BT Shank Holders with (SPFS) Rotary Coolant Glands see pages 93-94.

RECEIVING MANIFOLD SELECTION AND SET-UP INFORMATION
The (SPFS) Coolant Gland requires the installation of a (SPFS) Receiving Manifold to activate the system (see next page).
SINGLE PIN FACE (SPFS) RECEIVING MANIFOLD BLANK

(SPFS) RECEIVING MANIFOLD SET-UP DIMENSIONS

Single Pin Face Seal Style Manifold (Figure 1) showing how a Receiving Manifold is mounted to the spindle cover of the machine.

FIGURE 1

Spindle face (Figure 2) showing where the Receiving Manifold must be mounted. A radius of 2.559 must be maintained for CAT 40V or BT 40 shanks. A radius of 3.150 must be maintained for CAT 45, 50V or BT 50 shanks.

FIGURE 2

SINGLE PIN FACE SEAL RECEIVING MANIFOLD BLANK

Interchangeable with most foreign and domestic manufacturers CAT 40, 45, 50V or BT 40 and BT 50 shanks.

ORDERING OPTIONS (Figure 3)

1. Purchase (SPFS) Manifold Blank (Part No. 117-100) and you alter to suit your machine requirements.

2. Purchase (SPFS) Manifold Blank and have The George Whalley Company custom machine your Manifold Blank to suit your requirements by filling out the information listed below. Pricing and delivery will be quoted after receipt of this information.

Using Figure 1 and Figure 2, please supply the following information for modifications on the Receiving Manifold Blank.

Machine Spindle Taper (check one)

- CAT 40V
- BT 40
- CAT 45V
- CAT 50V
- BT 50

PART NUMBER | DESCRIPTION
---|---
117-100 | Single Pin Face Seal (SPFS) Receiving Manifold Blank
COOLANT GLAND SELECTION


The Single Pin O-Ring (SPOR) Coolant Gland is used when your CNC machine spindle accepts a toolholder with a Cat 40 V-Flange or BT40 shank.

TOOLHOLDER SELECTION

• To order V-Flange Holders with (SPOR) Rotary Coolant Glands see pages 95-97.
• To order BT Shank Holders with (SPOR) Rotary Coolant Glands see pages 97-98.

RECEIVING MANIFOLD

The (SPOR) Coolant Gland requires the installation of a (SPOR) Receiving Manifold to activate the system (see next page).
SINGLE PIN O-RING (SPOR) RECEIVING MANIFOLD BLANK

(SPOR) RECEIVING MANIFOLD SET-UP DIMENSIONS

Single Pin O-Ring Seal Style Manifold (Figure 1) showing how a Receiving Manifold is mounted to the spindle cover of the machine.

FIGURE 1

Using Figure 1 and Figure 2, please supply the following information for modifications on the Receiving Manifold Blank:

Machine Spindle Taper
(check one)

A
B
C
D

FIGURE 2

Spindle face (Figure 2) showing where the Receiving Manifold must be mounted. A radius of 2.559 must be maintained for CAT 40V or BT 40 shanks.

SINGLE PIN O-RING RECEIVING MANIFOLD BLANK

For CAT 40 V or BT 40 shanks

ORDERING OPTIONS (Figure 3)

1. Purchase (SPOR) Manifold Blank (Part No. 117-200) and you alter to suit your machine requirements.

2. Purchase (SPOR) Manifold Blank and have The George Whalley Company custom machine your Manifold Blank to suit your requirements by filling out the information listed below. Pricing and delivery will be quoted after receipt of this information.

Shown are the basic dimensions of the Receiving Manifold Blank BEFORE modification.

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>DESCRIPTION</th>
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<tr>
<td>117-200</td>
<td>Single Pin O-Ring (SPOR) Receiving Manifold Blank</td>
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</table>
COOLANT GLAND SELECTION

The Dual Pin O-Ring (DPOR) Rotary Coolant Gland of The George Whalley Company offers minimum as well as maximum coolant pressure capabilities. It also provides the best radial location for the proper engagement of the Coolant Pin to the Receiving Manifold.

The Dual Pin O-Ring (DPOR) Coolant Gland is used when your CNC machine spindle accepts a toolholder with a Cat 45, 50 V-Flange, BT50 or K&T 200/300 Series. (K&T by special request)

TOOLHOLDER SELECTION

• To order V-Flange Holders with (DPOR) Rotary Coolant Glands see pages 99-101.
• To order BT Shank Holders with (DPOR) Rotary Coolant Glands see pages 103-104.
• To order K&T Holders with (DPOR) Rotary Coolant Glands see page 102.

RECEIVING MANIFOLD

The (DPOR) Coolant Gland requires the installation of a (DPOR) Receiving Manifold to activate the system (see next page).
(DPOR) RECEIVING MANIFOLD SET-UP DIMENSIONS
Dual Pin O-Ring Style Manifold (Figure 1) showing how a Receiving Manifold is mounted to the spindle cover of the machine.

FIGURE 1

Spindle face (Figure 2) showing where the Receiving Manifold must be mounted. A radius of 3.150 must be maintained for CAT 45V, 50V or BT 50 shanks.

FIGURE 2

DUAL PIN O-RING RECEIVING MANIFOLD BLANK
For CAT 45, CAT 50V, or BT 50 shanks

ORDERING OPTIONS (Figure 3)
1. Purchase (DPOR) Manifold Blank (Part No.117-300) and you alter to suit your machine requirements.

2. Purchase (DPOR) Manifold Blank and have The George Whalley Company custom machine your Manifold Blank to suit your requirements by filling out the information listed below. Pricing and delivery will be quoted after receipt of this information.

Using Figure 1 and Figure 2, please supply the following information for modifications on the Receiving Manifold Block.

Table:

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>117-300</td>
<td>Dual Pin O-Ring (DPOR) Receiving Manifold Blank</td>
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</table>
MANUAL (MG), ROTARY COOLANT GLAND ASSEMBLY

- Designed for preliminary manual applications.
- Upgrade to an Automatic Coolant Gland Assembly without purchasing another holder.
- For use on CNC machines with CAT 40, 45, 50V and BT 40, BT 50 shanks.

Toolholders can be utilized with a Manual Rotary Coolant Gland if the automatic tool change function is not required.

The Manual Rotary Coolant Gland is an economical means for proving out coolant-thru-the-tool processing.

The Manual Rotary Gland can also be used on Manual Machines with auxiliary coolant.

TOOLHOLDER SELECTION

- To order V-Flange Holders with Manual (MG) Rotary Coolant Glands see pages 104-106.
- To order BT Shank Holders with Manual (MG) Rotary Coolant Glands see pages 107-108.

General Operating Recommendations For All Coolant Glands See Page 88.
It is necessary to have the receiving block, tool holder and coolant gland assembly before the start of installation. The make and design of your particular machine will indicate which three modes of receiving block installations will best serve your operation. The George Whalley Company attempts to maintain records on specifications for machine tools. We cannot be responsible for changes or improvements to your particular machine tool and therefore must ask that you carefully review all specifications which we may provide. Use the following suggested procedure and double check each step of the installation.

Note: These instructions are to be followed after modification of Receiving Manifold Blank have been made to suit your machine.

1. Orient the spindle to the tool change position.
2. Load the automatic tool holder and gland assembly to the spindle. Observe the area where the receiving manifold is to be located. If there are any bolts, pins, or fasteners in this area, remove them at this time. Temporarily mark the location where the Receiving Manifold is to be mounted.
3. Remove the automatic tool holder assembly and receiving manifold from the machine. Thoroughly clean the manifold locating surface and the marked area to contain the manifold. Use lacquer thinner or solvent to clean oil or dirt from the mating surfaces.
4. Apply a generous coating of any brand of super type glue to the receiving manifold and mating surface to contain the manifold. Re-check spindle orient location at this time. Load the gland assembly to the machine along with the receiving manifold. The spring pressure of the gland assembly will hold the receiving manifold in place. Allow a proper time for the glue to set and adhere.
5. Remove the gland assembly from the spindle.
6. Use the existing mounting holes in the receiving manifold as a template to locate the matching holes on the machine member. Drill and tap holes as required. Drill dowel pin holes.
7. Re-assemble the coolant gland to the machine. Do not securely tighten the mounting bolts.
8. Re-load the gland assembly to the spindle allowing the receiving manifold and mating machine member to each find its ideal location. Secure all bolts. Ream the dowel pin holes and install the dowel pins.

See pages 80-85 for Receiving Manifold mounting information and dimensions.

**TWO PIECE CONSTRUCTION TOOLHOLDERS AS SEEN ON PAGES 92, 93, AND 101.**

The Two Piece Construction Holder with matching coolant gland assembly (shown on pages 92, 93, and 101) is designed to adapt large shank tooling to The George Whalley Company automatic tool change system. The system consists of the following three units:

1. **Shank Assembly** - The shank assembly has a #50 Cat. V-Flange taper with a #40 internal taper and two drive keys.
2. **Head Assembly** - The head assembly has a #40 taper shank and two drive slots. Straight bore or collet style front ends are available.
3. **Coolant Gland** - The coolant gland is located on the head assembly and automatically connects and disconnects from the receiving manifold which is mounted in proximity to the machine spindle.

The head and shank assemblies are located by drive and slot keys. The head and shank are fastened together by a draw screw. Concentricity is the same as one piece holders, approximately 0.0005” at the toolholder face.
The following is a useful outline of procedures for installation of coolant-fed automatic tool change equipment in your machine:

1. Check to see that you have a receiving manifold properly installed on your machine and connected to its coolant system.

2. If you have a face seal adjustable coolant pin make sure it is adjusted for appropriate length to release the Activating Pin. Be sure that the set screw on top pin is locked.

3. Adjust orientation ring on toolholder to suit manifold location.

4. Tighten orientation ring screws in position, place coolant holder and gland in tool carousel and run slowly through tool change cycle, making sure of clearance at all points.

5. Follow Break In and Operating Recommendations (listed below).

6. After completion of break in procedure, you may bring the tool holder up to speed.

**CAUTION!** Should gland show signs of overheating, stop operations and consult detailed operating instructions.

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**BREAK IN AND OPERATING RECOMMENDATIONS FOR AUTOMATIC AND MANUAL TOOL CHANGE COOLANT GLANDS**

In order to assure proper lubrication, even wear, and proper seating, high RPM glands should be broken in at 100 RPM for 3 minutes with coolant introduced at a pressure and volume between 100 PSI and 500 PSI to prevent overloading seals. Repeat procedure at 500 RPM for 3 minutes, and again at 1000 RPM. After break in procedure is complete, units may be run at pressure between 100 PSI and 1000 PSI.

For maximum life and performance of these coolant glands and seals the following conditions are recommended:

1. Coolant filtration: 30 to 50 micron minimum; 5 micron optimum

2. Proper type & viscosity of coolant: preferably a good water soluble synthetic with good lubrication and heat dissipation under pressure.

3. Coolant pressure: minimum of 100 lbs. coolant pressure at high R.P.M's (1800 SFM or more based on I.D. dimension of coolant gland or O.D. bearing diameter of tool holder). Maximum pressure of 1000 PSI

4. Coolant volume must be sufficient to properly lubricate cutting tool as recommended by its manufacturer. The combination of volume and pressure can not exceed the coolant orifice delivery capability of your tool or premature gland failure may result due to excessive heat build up.

**CAUTION!** All coolant glands require coolant at all speeds.

**CAUTION!** Operating RPM up to 1800 SFM based on the I.D. size of coolant gland or O.D. bearing diameter of toolholder.
The George Whalley Company will design and develop Automatic Coolant Systems to meet your requirements. The following is a partial list of some of the more popular machines our engineering staff has designed systems for:

- Bohle
- Cincinnati - Milacron
- Giddings & Lewis
- Hitachi - Seiki
- Kearney & Trecker
- LeBlonde - Makino
- Mazak
- Mitsubishi
- Mori Seiki
- Niigata
- Osaka Kiko (OKK)
- Toshiba
- Toyoda
- Hillyer
- Maho

Visit our website at www.coolantfedtooling.com for technical information and our latest product offerings.
The life and performance of the units depends on the following conditions:

Proper Filtration - Proper Type & Viscosity of Coolant - Coolant Pressure and Volume.

These RPM and Pressure ranges are not a guarantee of performance. The life and performance of the units depends on the following conditions:

Proper Filtration - Proper Type & Viscosity of Coolant - Coolant Pressure and Volume.

All units require coolant at all speeds.

### V-FLANGE SINGLE ANGLE COLLET CHUCK - SINGLE PIN FACE SEAL ROTARY COOLANT GLAND

<table>
<thead>
<tr>
<th>ASSEMBLY PART NUMBER</th>
<th>A RANGE (IN.)</th>
<th>COLLET SERIES</th>
<th>CLEARANCE DIAMETER (IN.)</th>
<th>C PROJ. (IN.)</th>
<th>D CTR TO CTR (IN.)</th>
<th>COOLANT GLAND (INCLUDED)</th>
<th>MINIMUM COOLANT PRESSURE (1)</th>
<th>MAXIMUM COOLANT PRESSURE (2)</th>
<th>MAXIMUM SPEED (RPM) (3)</th>
<th>OPTIONAL EXTENSION STYLE STOP SCREW (NOT INCLUDED)</th>
<th>REPLACEMENT SEAL KIT PART NUMBER (NOT INCLUDED)</th>
<th>SPANNER WRENCH (NOT INCLUDED)</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 V-FLANGE</td>
<td></td>
<td>C40-TG10-SFPS-6</td>
<td>0.094 - 1.000</td>
<td>TG 100</td>
<td>2.50</td>
<td>3.150</td>
<td>Al-9889N</td>
<td>100 PSI</td>
<td>1000 PSI</td>
<td>3000</td>
<td>116-004</td>
<td>585-916</td>
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<td></td>
<td></td>
<td>C40-TG10-SFPS-6</td>
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<td>2.50</td>
<td>3.150</td>
<td>Al-9889S</td>
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<tr>
<td>45 V-FLANGE</td>
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<td>5.50</td>
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<td>4000</td>
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</table>

### V-FLANGE END MILL HOLDERS - SINGLE PIN FACE SEAL ROTARY COOLANT GLAND

<table>
<thead>
<tr>
<th>ASSEMBLY PART NUMBER</th>
<th>A I.D. (IN.)</th>
<th>B CLEARANCE DIA. (IN.)</th>
<th>C PROJECTION (IN.)</th>
<th>D CTR TO CTR (IN.)</th>
<th>COOLANT GLAND (INCLUDED)</th>
<th>MINIMUM COOLANT PRESSURE (1)</th>
<th>MAXIMUM COOLANT PRESSURE (2)</th>
<th>MAXIMUM SPEED (RPM) (3)</th>
<th>COOLANT STOP SCREW (INCLUDED)</th>
<th>REPLACEMENT SEAL KIT PART NUMBER (NOT INCLUDED)</th>
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<td>1000 PSI</td>
<td>4000</td>
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<td>1.000</td>
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<td>2.559</td>
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<td>2500</td>
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</table>

### Outgoing Items

(1), (2) - These are recommended pressures. Lower coolant pressures may be utilized at very slow RPM’s. Pressures above recommended PSI may cause internal damage to seals.

(3) - Recommended Maximum RPM at Maximum 1000 PSI. Higher speeds may be achieved at lower pressures.

These RPM and Pressure ranges are not a guarantee of performance. The life and performance of the units depends on the following conditions:

Proper Filtration - Proper Type & Viscosity of Coolant - Coolant Pressure and Volume.

All units require coolant at all speeds.
V-FLANGE DOUBLE ANGLE COLLET CHUCK • SINGLE PIN FACE SEAL ROTARY COOLANT GLAND

<table>
<thead>
<tr>
<th>Assembly Part Number</th>
<th>A Range (in.)</th>
<th>Collet Series</th>
<th>Clearance Diameter (in.)</th>
<th>C Projection (in.)</th>
<th>D Ctr to Ctr (in.)</th>
<th>Coolant Gland (Included)</th>
<th>Minimum Coolant Pressure (1)</th>
<th>Maximum Coolant Pressure (2)</th>
<th>Maximum Speed (RPM) (3)</th>
<th>Replacement Seal Kit Part Number (Included)</th>
<th>Spanner Wrench (Not Included)</th>
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<tr>
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</table>

* Outgoing Items

(1), (2) - These are recommended pressures. Lower coolant pressures may be utilized at very slow RPM’s. Pressures above recommended PSI may cause internal damage to seals.

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V-FLANGE MORSE TAPER HOLDERS • SINGLE PIN FACE SEAL ROTARY COOLANT GLAND

<table>
<thead>
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<th>A Morse Taper</th>
<th>B Clearance Dia. (in.)</th>
<th>C Projection (in.)</th>
<th>D Ctr to Ctr (in.)</th>
<th>Coolant Gland (Included)</th>
<th>Minimum Coolant Pressure (1)</th>
<th>Maximum Coolant Pressure (2)</th>
<th>Maximum Speed (RPM) (3)</th>
<th>Replacement Seal Kit Part Number (Included)</th>
<th>Spanner Wrench (Not Included)</th>
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<td>4.50</td>
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<td>C40-MT4-SPFS-5</td>
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<td>2.125</td>
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<td>2.559</td>
<td>AI-9889N</td>
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<td>3000</td>
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<td>C40-MT4-SPFS-5A</td>
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<td>1000 PSI</td>
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<td>MT3</td>
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<td>2500</td>
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<tr>
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<td>1000 PSI</td>
<td>2500</td>
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<tr>
<td>*C50-MT3-SPFS-5A</td>
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<td>3.150</td>
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<td>*C50-MT4-SPFS-5</td>
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<td>1000 PSI</td>
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<tr>
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<td>3.150</td>
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<td>1000 PSI</td>
<td>4000</td>
<td>585-904</td>
<td></td>
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<tr>
<td>*C50-MT5-SPFS-5</td>
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<td>4.50</td>
<td>3.150</td>
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<td>100 PSI</td>
<td>1000 PSI</td>
<td>2500</td>
<td>585-920</td>
<td></td>
</tr>
</tbody>
</table>

* Outgoing Items

(1), (2) - These are recommended pressures. Lower coolant pressures may be utilized at very slow RPM’s. Pressures above recommended PSI may cause internal damage to seals.

(3) - Recommended Maximum RPM at Maximum 1000 PSI. Higher speeds may be achieved at lower pressures.

These RPM and Pressure ranges are not a guarantee of performance. The life and performance of the units depends on the following conditions:

* Proper Filtration - Proper Type & Viscosity of Coolant - Coolant Pressure and Volume.

All units require coolant at all speeds.
**V-Flange ABS® Style Holders • Single Pin Face Seal Rotary Coolant Gland**

![Diagram](image)

**ASSEMBLY PART NUMBER** | **A** | **B** | **C** | **D** | **COOLANT GLAND (INCLUDED)** | **MINIMUM COOLANT PRESSURE (1)** | **MAXIMUM COOLANT PRESSURE (2)** | **MAXIMUM SPEED (RPM) (3)** | **REPLACEMENT SEAL KIT PART NUMBER (NOT INCLUDED)** |
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
**40 V-FLANGE** | | | | | | | | | |
C40-ABS40-SPFS-6 | ABS 40 | 1.625 | 5.25 | 2.559 | Al-9780T | 100 PSI | 1000 PSI | 3200 | 585-912 |
C40-ABS50-SPFS-6 | ABS 50 | 2.125 | 5.50 | 2.559 | Al-9889N | 100 PSI | 1000 PSI | 3000 | 585-916 |
**45 V-FLANGE** | | | | | | | | | |
*C45-ABS40-SPFS-6* | ABS 40 | 1.625 | 5.25 | 3.150 | Al-0168T | 100 PSI | 1000 PSI | 3200 | 585-912 |
*C45-ABS50-SPFS-6* | ABS 50 | 2.125 | 5.50 | 3.150 | Al-9969X | 100 PSI | 1000 PSI | 3000 | 585-916 |
*C45-ABS63-SPFS-6* | ABS 63 | 2.500 | 5.62 | 3.150 | Al-9969S | 100 PSI | 1000 PSI | 2500 | 585-920 |
**50 V-FLANGE** | | | | | | | | | |
C50-ABS40-SPFS-6 | ABS 40 | 1.625 | 5.25 | 3.150 | Al-0180T | 100 PSI | 1000 PSI | 3000 | 585-912 |
C50-ABS50-SPFS-6 | ABS 50 | 2.125 | 5.50 | 3.150 | Al-9969X | 100 PSI | 1000 PSI | 3000 | 585-916 |
C50-ABS63-SPFS-6 | ABS 63 | 2.500 | 5.62 | 3.150 | Al-9969S | 100 PSI | 1000 PSI | 2500 | 585-920 |

**Outgoing Items**

- ABS 80 & 100 holders available by special quotation on 50 V-Flange units.

Please refer to the Modular Tooling Section on pages 140-143 for Modular Adapters

(1), (2) - These are recommended pressures. Lower coolant pressures may be utilized at very slow RPM’s. Pressures above recommended PSI may cause internal damage to seals.

(3) - Recommended Maximum RPM at Maximum 1000 PSI. Higher speeds may be achieved at lower pressures.

These RPM and Pressure ranges are not a guarantee of performance. The life and performance of the units depends on the following conditions:

- Proper Filtration - Proper Type & Viscosity of Coolant - Coolant Pressure and Volume.
- All units require coolant at all speeds.

---

**V-Flange 2 Piece Single Angle Collet Chuck • Single Pin Face Seal Rotary Coolant Gland**

![Diagram](image)

**ASSEMBLY PART NUMBER** | **A** | **B** | **C** | **D** | **COOLANT GLAND (INCLUDED)** | **MINIMUM COOLANT PRESSURE (1)** | **MAXIMUM COOLANT PRESSURE (2)** | **MAXIMUM SPEED (RPM) (3)** | **REPLACEMENT SEAL KIT PART NUMBER (NOT INCLUDED)** |
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
**50 V-FLANGE** | | | | | | | | | |
C50-TG15-2P-SPFS-9 | 0.500 - 1.500 | TG 150 | 3.50 | 8.38 | 3.150 | Al-9969S | 100 PSI | 1000 PSI | 2500 | 585-920 |

- These RPM and Pressure ranges are not a guarantee of performance. The life and performance of the units depends on the following conditions:
- Proper Filtration - Proper Type & Viscosity of Coolant - Coolant Pressure and Volume.
- All units require coolant at all speeds.

---

**Retention Knobs**

Sold Separately, See Pages 163-167.

---

**ASSOCIATE PART NUMBER** | **A** | **B** | **C** | **D** | **COOLANT GLAND (INCLUDED)** | **MINIMUM COOLANT PRESSURE (1)** | **MAXIMUM COOLANT PRESSURE (2)** | **MAXIMUM SPEED (RPM) (3)** | **REPLACEMENT SEAL KIT PART NUMBER (NOT INCLUDED)** |
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
**C50-TG15-2P-SPFS-9** | 0.500 - 1.500 | TG 150 | 3.50 | 8.38 | 3.150 | Al-9969S | 100 PSI | 1000 PSI | 2500 | 585-920 |

- These RPM and Pressure ranges are not a guarantee of performance. The life and performance of the units depends on the following conditions:
- Proper Filtration - Proper Type & Viscosity of Coolant - Coolant Pressure and Volume.
- All units require coolant at all speeds.

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**COOLANT-FED TOOLING & SYSTEMS® DIVISION**

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**ABS® is a registered trademark of KOMET.**

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**(1), (2) - These are recommended pressures. Lower coolant pressures may be utilized at very slow RPM’s. Pressures above recommended PSI may cause internal damage to seals.**

**(3) - Recommended Maximum RPM at Maximum 1000 PSI. Higher speeds may be achieved at lower pressures.**

These RPM and Pressure ranges are not a guarantee of performance. The life and performance of the units depends on the following conditions:

- Proper Filtration - Proper Type & Viscosity of Coolant - Coolant Pressure and Volume.
- All units require coolant at all speeds.
V-FLANGE 2 PIECE END MILL HOLDERS • SINGLE PIN FACE SEAL ROTARY COOLANT GLAND

<table>
<thead>
<tr>
<th>ASSEMBLY PART NUMBER</th>
<th>A L.D. (IN.)</th>
<th>B CLEARANCE DIA. (IN.)</th>
<th>C PROJECTION (IN.)</th>
<th>D CTR TO CTR (IN.)</th>
<th>COOLANT GLAND (INCLUDED)</th>
<th>MINIMUM COOLANT PRESSURE (1)</th>
<th>MAXIMUM COOLANT PRESSURE (2)</th>
<th>MAXIMUM SPEED (RPM) (3)</th>
<th>REPLACEMENT SEAL KIT PART NUMBER (NOT INCLUDED)</th>
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<tbody>
<tr>
<td>C50-EM17-2P-SPFS-9</td>
<td>1.750</td>
<td>3.750</td>
<td>8.25</td>
<td>3.150</td>
<td>AI-9906S</td>
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<td>1000 PSI</td>
<td>2500</td>
<td>585-920</td>
</tr>
<tr>
<td>C50-EM20-2P-SPFS-9</td>
<td>2.000</td>
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<td>8.25</td>
<td>3.150</td>
<td>AI-9906S</td>
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<td>100 PSI</td>
<td>1000 PSI</td>
<td>2500</td>
<td>585-920</td>
</tr>
</tbody>
</table>

- Especially designed to suit large shanked tools in a CNC carousel with limited space. • Utilizes standard coolant gland assemblies.  

(1), (2) - These are recommended pressures. Lower coolant pressures may be utilized at very slow RPM's. Pressures above recommended PSI may cause internal damage to seals.  

(3) - Recommended Maximum RPM at Maximum 1000 PSI. Higher speeds may be achieved at lower pressures. These RPM and Pressure ranges are not a guarantee of performance. The life and performance of the units depends on the following conditions: Proper Filtration - Proper Type & Viscosity of Coolant - Coolant Pressure and Volume. All units require coolant at all speeds.

BT SINGLE ANGLE COLLET CHUCK • SINGLE PIN FACE SEAL ROTARY COOLANT GLAND

<table>
<thead>
<tr>
<th>ASSEMBLY PART NUMBER</th>
<th>A RANGE (IN.)</th>
<th>COLLET SERIES</th>
<th>CLEARANCE DIA. (IN.)</th>
<th>C PROJ. (IN.)</th>
<th>D CTR TO CTR (IN.)</th>
<th>COOLANT GLAND (INCLUDED)</th>
<th>MINIMUM COOLANT PRESSURE (1)</th>
<th>MAXIMUM COOLANT PRESSURE (2)</th>
<th>MAXIMUM SPEED (RPM) (3)</th>
<th>OPTIONAL EXTENSION STYLE STOP SCREW (NOT INCLUDED)</th>
<th>REPLACEMENT SEAL KIT PART NUMBER (NOT INCLUDED)</th>
<th>SPANNER WRENCH (NOT INCLUDED)</th>
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<tbody>
<tr>
<td>BT40-TG10-SPFS-6</td>
<td>0.094 - 1.000</td>
<td>TG 100</td>
<td>2.50</td>
<td>5.25</td>
<td>2.55</td>
<td>AI-9809N</td>
<td>100 PSI</td>
<td>1000 PSI</td>
<td>3000</td>
<td>116-004</td>
<td>585-916</td>
<td>112-001</td>
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<tr>
<td>BT50-TG10-SPFS-6</td>
<td>0.094 - 1.000</td>
<td>TG 100</td>
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<td>5.25</td>
<td>3.150</td>
<td>AI-9906S</td>
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<td>1000 PSI</td>
<td>2500</td>
<td>116-001</td>
<td>585-920</td>
<td>112-001</td>
</tr>
</tbody>
</table>

(1), (2) - These are recommended pressures. Lower coolant pressures may be utilized at very slow RPM's. Pressures above recommended PSI may cause internal damage to seals.  

(3) - Recommended Maximum RPM at Maximum 1000 PSI. Higher speeds may be achieved at lower pressures. These RPM and Pressure ranges are not a guarantee of performance. The life and performance of the units depends on the following conditions: Proper Filtration - Proper Type & Viscosity of Coolant - Coolant Pressure and Volume. All units require coolant at all speeds.
BT END MILL HOLDERS • SINGLE PIN FACE SEAL ROTARY COOLANT GLAND

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<th>D CTR TO CTR (IN.)</th>
<th>COOLANT GLAND (INCLUDED)</th>
<th>MINIMUM COOLANT PRESSURE (1)</th>
<th>MAXIMUM COOLANT PRESSURE (2)</th>
<th>MAXIMUM SPEED (RPM) (3)</th>
<th>COOLANT STOP SCREW (INCLUDED)</th>
<th>REPLACEMENT SEAL KIT PART NUMBER (NOT INCLUDED)</th>
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<td>4000</td>
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<td>BT50-EM10-SPFS-5</td>
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<td>2500</td>
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<td>1000 PSI</td>
<td>2500</td>
<td>105-006</td>
<td>585-920</td>
</tr>
</tbody>
</table>

^ - Socket set screw location does not conform to ANSI specification. Request information if set screw location is critical.
(1), (2) - These are recommended pressures. Lower coolant pressures may be utilized at very slow RPM’s. Pressures above recommended PSI may cause internal damage to seals.
(3) - Recommended Maximum RPM at Maximum 1000 PSI. Higher speeds may be achieved at lower pressures.
These RPM and Pressure ranges are not a guarantee of performance. The life and performance of the units depends on the following conditions:
Proper Filtration - Proper Type & Viscosity of Coolant - Coolant Pressure and Volume.
All units require coolant at all speeds.

BT MORSE TAPER HOLDERS • SINGLE PIN FACE SEAL ROTARY COOLANT GLAND

<table>
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<th>ASSEMBLY PART NUMBER</th>
<th>A</th>
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<th>MINIMUM COOLANT PRESSURE (1)</th>
<th>MAXIMUM COOLANT PRESSURE (2)</th>
<th>MAXIMUM SPEED (RPM) (3)</th>
<th>REPLACEMENT SEAL KIT PART NUMBER (NOT INCLUDED)</th>
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<td>585-916</td>
</tr>
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<td>BT40-MT3-SPFS-5</td>
<td>MT3</td>
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<td>4.50</td>
<td>2.559</td>
<td>AI-9889N</td>
<td>100 PSI</td>
<td>1000 PSI</td>
<td>3000</td>
<td>585-916</td>
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<tr>
<td>BT40-MT4-SPFS-5</td>
<td>MT4</td>
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<td>100 PSI</td>
<td>1000 PSI</td>
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<td>585-916</td>
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<td></td>
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<tr>
<td>BT50-MT3-SPFS-5</td>
<td>MT3</td>
<td>2.500</td>
<td>4.50</td>
<td>3.150</td>
<td>AI-9989S</td>
<td>100 PSI</td>
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<td>585-920</td>
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<tr>
<td>BT50-MT4-SPFS-5</td>
<td>MT4</td>
<td>2.500</td>
<td>4.50</td>
<td>3.150</td>
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<td>100 PSI</td>
<td>1000 PSI</td>
<td>2500</td>
<td>585-920</td>
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<tr>
<td>BT50-MT5-SPFS-5</td>
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<td>100 PSI</td>
<td>1000 PSI</td>
<td>2500</td>
<td>585-920</td>
</tr>
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</table>

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(3) - Recommended Maximum RPM at Maximum 1000 PSI. Higher speeds may be achieved at lower pressures.
These RPM and Pressure ranges are not a guarantee of performance. The life and performance of the units depends on the following conditions:
Proper Filtration - Proper Type & Viscosity of Coolant - Coolant Pressure and Volume.
All units require coolant at all speeds.
**V-FLANGE SINGLE ANGLE COLLET CHUCK • SINGLE PIN O-RING ROTARY COOLANT GLAND**

<table>
<thead>
<tr>
<th>ASSEMBLY PART NUMBER</th>
<th>A RANGE (IN.)</th>
<th>COLLET SERIES</th>
<th>CLEARANCE DIA. (IN.)</th>
<th>C PROJ. (IN.)</th>
<th>D CTR TO CTR (IN.)</th>
<th>COOLANT GLAND (INCLUDED)</th>
<th>MINIMUM COOLANT PRESSURE (1)</th>
<th>MAXIMUM COOLANT PRESSURE (2)</th>
<th>MAXIMUM SPEED (RPM) (3)</th>
<th>OPTIONAL EXTENSION STYLE STOP SCREW (NOT INCLUDED)</th>
<th>REPLACEMENT SEAL KIT PART NUMBER (NOT INCLUDED)</th>
<th>SPANNER WRENCH (NOT INCLUDED)</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 V-FLANGE</td>
<td>0.094 - 1.000</td>
<td>TG 100</td>
<td>2.50</td>
<td>6.00</td>
<td>2.559</td>
<td>V-7419M</td>
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<td>1000 PSI</td>
<td>3000</td>
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<td>585-916</td>
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</tbody>
</table>

(1), (2) - These are recommended pressures. Lower coolant pressures may be utilized at very slow RPM's. Pressures above recommended PSI may cause internal damage to seals.
(3) - Recommended Maximum RPM at Maximum 1000 PSI. Higher speeds may be achieved at lower pressures.

These RPM and Pressure ranges are not a guarantee of performance. The life and performance of the units depends on the following conditions:
- Proper Filtration - Proper Type & Viscosity of Coolant - Coolant Pressure and Volume.

All units require coolant at all speeds.

---

**V-FLANGE DOUBLE ANGLE COLLET CHUCK • SINGLE PIN O-RING ROTARY COOLANT GLAND**

<table>
<thead>
<tr>
<th>ASSEMBLY PART NUMBER</th>
<th>A RANGE (IN.)</th>
<th>COLLET SERIES</th>
<th>CLEARANCE DIA. (IN.)</th>
<th>C PROJ. (IN.)</th>
<th>D CTR TO CTR (IN.)</th>
<th>COOLANT GLAND (INCLUDED)</th>
<th>MINIMUM COOLANT PRESSURE (1)</th>
<th>MAXIMUM COOLANT PRESSURE (2)</th>
<th>MAXIMUM SPEED (RPM) (3)</th>
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<th>REPLACEMENT SEAL KIT PART NUMBER (NOT INCLUDED)</th>
<th>SPANNER WRENCH (NOT INCLUDED)</th>
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<td>V-7419B</td>
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<td>1000 PSI</td>
<td>4000</td>
<td>585-904</td>
<td>112-019</td>
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(1), (2) - These are recommended pressures. Lower coolant pressures may be utilized at very slow RPM's. Pressures above recommended PSI may cause internal damage to seals.
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All units require coolant at all speeds.
V-FLANGE END MILL HOLDERS • SINGLE PIN O-RING ROTARY COOLANT GLAND

<table>
<thead>
<tr>
<th>ASSEMBLY PART NUMBER</th>
<th>A (IN.)</th>
<th>CLEARANCE DIA. (IN.)</th>
<th>C (IN.)</th>
<th>D CTR TO CTR (IN.)</th>
<th>COOLANT GLAND (INCLUDED)</th>
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<th>MAXIMUM COOLANT PRESSURE (2)</th>
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<th>COOLANT STOP SCREW (INCLUDED)</th>
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<td>3000</td>
<td>105-005</td>
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V-FLANGE ABS® STYLE HOLDERS • SINGLE PIN O-RING ROTARY COOLANT GLAND

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* Please refer to the Modular Tooling Section on pages 140-143 for Modular Adapters.

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V-FLANGE MORSE TAPER HOLDERS • SINGLE PIN O-RING ROTARY COOLANT GLAND

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All units require coolant at all speeds.

BT SINGLE ANGLE COLLET CHUCK • SINGLE PIN O-RING ROTARY COOLANT GLAND

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<td>1000 PSI</td>
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BT END MILL HOLDERS • SINGLE PIN O-RING ROTARY COOLANT GLAND

Retention Knobs
Sold Separately,
See Pages 163-167.

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BT MORSE TAPER HOLDERS • SINGLE PIN O-RING ROTARY COOLANT GLAND

Retention Knobs
Sold Separately,
See Pages 163-167.

<table>
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<th>B. CLEARANCE DIA. (IN.)</th>
<th>C. PROJECTION (IN.)</th>
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<th>MAXIMUM SPEED (RPM) (3)</th>
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### V-FLANGE SINGLE ANGLE COLLET CHUCK • DUAL PIN O-RING ROTARY COOLANT GLAND

**Retention Knobs**
Sold Separately, See Pages 163-167.

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<th>REPLACEMENT SEAL KIT PART NUMBER (NOT INCLUDED)</th>
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**Outgoing Items**

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### V-FLANGE END MILL HOLDERS • DUAL PIN O-RING ROTARY COOLANT GLAND

**Retention Knobs**
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### V-Flange ABS® Style Holders • Dual Pin O-Ring Rotary Coolant Gland

**Retention Knobs**
Sold Separately, See Pages 163-167.

<table>
<thead>
<tr>
<th>ASSEMBLY PART NUMBER</th>
<th>A</th>
<th>B CLEARANCE DIA. (IN.)</th>
<th>C</th>
<th>D CTR TO CTR (IN.)</th>
<th>COOLANT GLAND (INCLUDED)</th>
<th>MINIMUM COOLANT PRESSURE (1)</th>
<th>MAXIMUM COOLANT PRESSURE (2)</th>
<th>MAXIMUM SPEED (RPM) (3)</th>
<th>REPLACEMENT SEAL KIT PART NUMBER (NOT INCLUDED)</th>
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**Outgoing Items**
- ABS 80 & ABS 100 holders available by special quotation on 50 V-Flange units.

**Retention Knobs**
Sold Separately, See Pages 163-167.

<table>
<thead>
<tr>
<th>ASSEMBLY PART NUMBER</th>
<th>A</th>
<th>B CLEARANCE DIA. (IN.)</th>
<th>C</th>
<th>D CTR TO CTR (IN.)</th>
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**Outgoing Items**
- ABS® is a registered trademark of KOMET.

(1), (2) - These are recommended pressures. Lower coolant pressures may be utilized at very slow RPM's. Pressures above recommended PSI may cause internal damage to seals.

(3) - Recommended Maximum RPM at Maximum 1000 PSI. Higher speeds may be achieved at lower pressures.

These RPM and Pressure ranges are not a guarantee of performance. The life and performance of the units depends on the following conditions:

- Proper Filtration - Proper Type & Viscosity of Coolant - Coolant Pressure and Volume.

All units require coolant at all speeds.

### V-Flange Morse Taper Holders • Dual Pin O-Ring Rotary Coolant Gland

**Retention Knobs**
Sold Separately, See Pages 163-167.

<table>
<thead>
<tr>
<th>ASSEMBLY PART NUMBER</th>
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<th>D CTR TO CTR (IN.)</th>
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<th>MINIMUM COOLANT PRESSURE (1)</th>
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<td>2500</td>
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</tbody>
</table>

**Outgoing Items**
(1), (2) - These are recommended pressures. Lower coolant pressures may be utilized at very slow RPM's. Pressures above recommended PSI may cause internal damage to seals.

(3) - Recommended Maximum RPM at Maximum 1000 PSI. Higher speeds may be achieved at lower pressures.

These RPM and Pressure ranges are not a guarantee of performance. The life and performance of the units depends on the following conditions:

- Proper Filtration - Proper Type & Viscosity of Coolant - Coolant Pressure and Volume.

All units require coolant at all speeds.
**V-Flange 2 Piece Single Angle Collet Chuck • Dual Pin O-Ring Rotary Coolant Gland**

- Especially designed to suit large shanked tools in a CNC carousel with limited space.
- Utilizes standard coolant gland assemblies.

### 50 V-Flange

<table>
<thead>
<tr>
<th>Assembly Part Number</th>
<th>A Range (In.)</th>
<th>Collet Series</th>
<th>Clearance Dia. (In.)</th>
<th>C Projection (In.)</th>
<th>D Ctr To Ctr (In.)</th>
<th>Coolant Gland (Included)</th>
<th>Minimum Coolant Pressure (1)</th>
<th>Maximum Coolant Pressure (2)</th>
<th>Maximum Speed (RPM) (3)</th>
<th>Replacement Seal Kit Part Number (Not Included)</th>
<th>Spanner Wrench (Not Included)</th>
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<td>1000 PSI</td>
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<td>585-920</td>
<td>112-002</td>
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</table>

(1), (2) - These are recommended pressures. Lower coolant pressures may be utilized at very slow RPM’s. Pressures above recommended PSI may cause internal damage to seals.

(3) - Recommended Maximum RPM at Maximum 1000 PSI. Higher speeds may be achieved at lower pressures.

These RPM and Pressure ranges are not a guarantee of performance. The life and performance of the units depends on the following conditions:

- Proper Filtration
- Proper Type & Viscosity of Coolant
- Coolant Pressure and Volume.

All units require coolant at all speeds.

**Retention Knobs**

Sold Separately, see Pages 163-167.

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**V-Flange 2 Piece End Mill Holders • Dual Pin O-Ring Rotary Coolant Gland**

- Especially designed to suit large shanked tools in a CNC carousel with limited space.
- Utilizes standard coolant gland assemblies.

### 50 V-Flange

| Assembly Part Number | A I.D. (In.) | B Clearance Dia. (In.) | C Projection (In.) | D Ctr To Ctr (In.) | Coolant Gland (Included) | Minimum Coolant Pressure (1) | Maximum Coolant Pressure (2) | Maximum Speed (RPM) (3) | Replacement Seal Kit Part Number (Not Included) |
|----------------------|-------------|-----------------------|-------------------|-------------------|--------------------------|-----------------------------|-----------------------------|-----------------------------|--------------------------------|----------------------------|
| C50-EM17-2P-DPOR-9   | 1.750       | 3.750                 | 8.25              | 3.150             | E-7353S                 | 100 PSI                     | 1000 PSI                    | 2500                        | 585-920                       | 585-920                    |
| C50-EM20-2P-DPOR-9   | 2.000       | 3.750                 | 8.25              | 3.150             | E-7353S                 | 100 PSI                     | 1000 PSI                    | 2500                        | 585-920                       | 585-920                    |
| C50-EM22-2P-DPOR-9   | 2.250       | 4.000                 | 8.25              | 3.150             | E-7353S                 | 100 PSI                     | 1000 PSI                    | 2500                        | 585-920                       | 585-920                    |
| C50-EM25-2P-DPOR-9   | 2.500       | 4.000                 | 8.25              | 3.150             | E-7353S                 | 100 PSI                     | 1000 PSI                    | 2500                        | 585-920                       | 585-920                    |

(1), (2) - These are recommended pressures. Lower coolant pressures may be utilized at very slow RPM’s. Pressures above recommended PSI may cause internal damage to seals.

(3) - Recommended Maximum RPM at Maximum 1000 PSI. Higher speeds may be achieved at lower pressures.

These RPM and Pressure ranges are not a guarantee of performance. The life and performance of the units depends on the following conditions:

- Proper Filtration
- Proper Type & Viscosity of Coolant
- Coolant Pressure and Volume.

All units require coolant at all speeds.

---

**Retention Knobs**

Sold Separately, see Pages 163-167.
**KEARNEY & TRECKER SINGLE ANGLE COLLET CHUCK • DUAL PIN O-RING ROTARY COOLANT GLAND**

**Outgoing Items**

- All Kearney & Trecker holders are furnished with coolant stop screws, location keys and code ring locknuts

(1),(2) - These are recommended pressures. Lower coolant pressures may be utilized at very slow RPM’s. Pressures above recommended. PSI may cause internal damage to seals.

(3) - Recommended Maximum RPM at Maximum 1000 PSI. Higher speeds may be achieved at lower pressures.

*These RPM and Pressure ranges are not a guarantee of performance. The life and performance of the units depends on the following conditions:
- Proper Filtration - Proper Type & Viscosity of Coolant - Coolant Pressure and Volume.

All units require coolant at all speeds.

### COOLANT GLAND INFORMATION

- **Positive Seal Stop Screw**
- **Shank**
- **Bearing Diameter**
- **Receiving Manifold**

### ASSEMBLY PART NUMBER

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<th>ASSEMBLY PART NUMBER</th>
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<th>C CLEARANCE (IN.)</th>
<th>D PROJECTED (IN.)</th>
<th>E MAX DEPTH (IN.)</th>
<th>COOLANT GLAND (INCLUDED)</th>
<th>MINIMUM COOLANT PRESSURE (1)</th>
<th>MAXIMUM COOLANT PRESSURE (2)</th>
<th>POSITIVE SEAL STOP SCREW (INCLUDED)</th>
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</table>

- **Outgoing Items**

- All Kearney & Trecker holders are furnished with coolant stop screws, location keys and code ring locknuts

(1),(2) - These are recommended pressures. Lower coolant pressures may be utilized at very slow RPM’s. Pressures above recommended. PSI may cause internal damage to seals.

(3) - Recommended Maximum RPM at Maximum 1000 PSI. Higher speeds may be achieved at lower pressures.

*These RPM and Pressure ranges are not a guarantee of performance. The life and performance of the units depends on the following conditions:
- Proper Filtration - Proper Type & Viscosity of Coolant - Coolant Pressure and Volume.

All units require coolant at all speeds.

### KEARNEY & TRECKER END MILL HOLDERS • DUAL PIN O-RING ROTARY COOLANT GLAND

**Outgoing Items**

- All Kearney & Trecker holders are furnished with coolant stop screws, location keys and code ring locknuts

(1),(2) - These are recommended pressures. Lower coolant pressures may be utilized at very slow RPM’s. Pressures above recommended. PSI may cause internal damage to seals.

(3) - Recommended Maximum RPM at Maximum 1000 PSI. Higher speeds may be achieved at lower pressures.

*These RPM and Pressure ranges are not a guarantee of performance. The life and performance of the units depends on the following conditions:
- Proper Filtration - Proper Type & Viscosity of Coolant - Coolant Pressure and Volume.

All units require coolant at all speeds.

### ASSEMBLY PART NUMBER

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<th>E MAX DEPTH (IN.)</th>
<th>COOLANT GLAND (INCLUDED)</th>
<th>MINIMUM COOLANT PRESSURE (1)</th>
<th>MAXIMUM COOLANT PRESSURE (2)</th>
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<th>REPLACEMENT SEAL KIT PART NUMBER (NOT INCLUDED)</th>
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**BT SINGLE ANGLE COLLET CHUCK • SINGLE PIN O-RING ROTARY COOLANT GLAND**

- **Coolant Entry**
- **Dual Pin O-Ring Style Coolant Gland**
- **Adjustable Positive Seal Stop Screw**
- **TG Style Nosepiece (Included)**

### BT SINGLE ANGLE COLLET CHUCK • DUAL PIN O-RING ROTARY COOLANT GLAND

- **Retention Knobs**
- **Sold Separately**, See Pages 163-167.

### BT END MILL HOLDERS • DUAL PIN O-RING ROTARY COOLANT GLAND

- **Retention Knobs**
- **Sold Separately**, See Pages 163-167.

#### ASSEMBLY PART NUMBER

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<th>COLLET SERIES</th>
<th>CLEARANCE DIA. (IN.)</th>
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<th>MINIMUM COOLANT PRESSURE (1)</th>
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<td>E-7353S</td>
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<td>1000 PSI</td>
<td>2500</td>
<td>105-006</td>
<td>585-920</td>
</tr>
</tbody>
</table>

(1), (2) - These are recommended pressures. Lower coolant pressures may be utilized at very slow RPM's. Pressures above recommended PSI may cause internal damage to seals.

(3) - Recommended Maximum RPM at Maximum 1000 PSI. Higher speeds may be achieved at lower pressures.

**These RPM and Pressure ranges are not a guarantee of performance.** The life and performance of the units depends on the following conditions:

- **Proper Filtration - Proper Type & Viscosity of Coolant - Coolant Pressure and Volume.**
- **All units require coolant at all speeds.**

---

^ - Socket set screw location does not conform to ANSI specification. Request information if set screw location is critical.

(1), (2) - These are recommended pressures. Lower coolant pressures may be utilized at very slow RPM's. Pressures above recommended PSI may cause internal damage to seals.

(3) - Recommended Maximum RPM at Maximum 1000 PSI. Higher speeds may be achieved at lower pressures.

**These RPM and Pressure ranges are not a guarantee of performance.** The life and performance of the units depends on the following conditions:

- **Proper Filtration - Proper Type & Viscosity of Coolant - Coolant Pressure and Volume.**
- **All units require coolant at all speeds.**
**BT MORSE TAPER HOLDERS • DUAL PIN O-RING ROTARY COOLANT GLAND**

**ASSEMBLY PART NUMBER**
- BT50-MT3-DPOR-5
- BT50-MT4-DPOR-5
- BT50-MT5-DPOR-5

**BT MORSE TAPER**
- MT3
- MT4
- MT5

**CLEARANCE DIA. (IN.)**
- 2.500
- 2.500
- 2.500

**PROJECTION (IN.)**
- 4.50
- 4.50
- 4.50

**CTR TOCTR (IN.)**
- 3.150
- 3.150
- 3.150

**COOLANT GLAND (INCLUDED)**
- E-7353S
- E-7353S
- E-7353S

**MINIMUM COOLANT PRESSURE (1)**
- 100 PSI
- 100 PSI
- 100 PSI

**MAXIMUM COOLANT PRESSURE (2)**
- 1000 PSI
- 1000 PSI
- 1000 PSI

**MAXIMUM SPEED (RPM) (3)**
- 2500
- 2500
- 2500

**REPLACEMENT SEAL KIT PART NUMBER (NOT INCLUDED)**
- 585-920
- 585-920
- 585-920

(1), (2) - These are recommended pressures. Lower coolant pressures may be utilized at very slow RPM's. Pressures above recommended PSI may cause internal damage to seals.

(3) - Recommended Maximum RPM at Maximum 1000 PSI. Higher speeds may be achieved at lower pressures.

These RPM and Pressure ranges are not a guarantee of performance. The life and performance of the units depends on the following conditions:
- Pro 
t 
- Proper Filtration - Proper Type & Viscosity of Coolant - Coolant Pressure and Volume.

All units require coolant at all speeds.

---

**V-FLANGE SINGLE ANGLE COLLET CHUCK • MANUAL ROTARY COOLANT GLAND**

**ASSEMBLY PART NUMBER**
- C40-TG10-MG-6
- C45-TG10-MG-6
- C50-TG10-MG-6

**A RANGE (IN.)**
- 0.094 - 1.000
- 0.094 - 1.000
- 0.094 - 1.000

**COLLET SERIES**
- TG 100
- TG 100
- TG 100

**CLEARANCE DIA. (IN.)**
- 6.00
- 6.00
- 6.00

**C PROJ. (IN.)**
- 587-102
- 587-106
- 587-106

**COOLANT GLAND (INCLUDED)**
- TG Style Nosepiece (Included)
- TG Style Nosepiece (Included)
- TG Style Nosepiece (Included)

**MINIMUM COOLANT PRESSURE (1)**
- 100 PSI
- 100 PSI
- 100 PSI

**MAXIMUM COOLANT PRESSURE (2)**
- 1000 PSI
- 1000 PSI
- 1000 PSI

**MAXIMUM SPEED (RPM) (3)**
- 3000
- 2500
- 2500

**OPTIONAL EXTENSION STYLE STOP SCREW (NOT INCLUDED)**
- 116-004
- 116-001
- 116-001

**REPLACEMENT SEAL KIT PART NUMBER (NOT INCLUDED)**
- 585-916
- 585-920
- 585-920

**SPANNER WRENCH (NOT INCLUDED)**
- 112-001
- 112-001
- 112-001

(1), (2) - These are recommended pressures. Lower coolant pressures may be utilized at very slow RPM's. Pressures above recommended PSI may cause internal damage to seals.

(3) - Recommended Maximum RPM at Maximum 1000 PSI. Higher speeds may be achieved at lower pressures.

These RPM and Pressure ranges are not a guarantee of performance. The life and performance of the units depends on the following conditions:
- Proper Filtration - Proper Type & Viscosity of Coolant - Coolant Pressure and Volume.

All units require coolant at all speeds.
**V-FLANGE DOUBLE ANGLE COLLET CHUCK • MANUAL ROTARY COOLANT GLAND**

Retention Knobs
Sold Separately,
See Pages 163-167.

---

**COOLANT-FED TOOLING & SYSTEMS® DIVISION**

<table>
<thead>
<tr>
<th>ASSEMBLY PART NUMBER</th>
<th>A RANGE (IN.)</th>
<th>COLLET SERIES</th>
<th>CLEARANCE DIA. (IN.)</th>
<th>C PROJECTION (IN.)</th>
<th>COOLANT GLAND (INCLUDED)</th>
<th>MINIMUM COOLANT PRESSURE (1)</th>
<th>MAXIMUM COOLANT PRESSURE (2)</th>
<th>MAXIMUM SPEED (RPM) (3)</th>
<th>REPLACEMENT SEAL KIT PART NUMBER (NOT INCLUDED)</th>
<th>SPANNER WRENCH (NOT INCLUDED)</th>
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<tr>
<td>40 V-FLANGE</td>
<td>0.047 – 0.750</td>
<td>DA 180</td>
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<td>4000</td>
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</table>

**Outgoing Items**

1. (1), (2) - These are recommended pressures. Lower coolant pressures may be utilized at very slow RPM’s. Pressures above recommended PSI may cause internal damage to seals.
2. (3) - Recommended Maximum RPM at Maximum 1000 PSI. Higher speeds may be achieved at lower pressures.
3. These RPM and Pressure ranges are not a guarantee of performance. The life and performance of the units depends on the following conditions:
   - Proper Filtration - Proper Type & Viscosity of Coolant - Coolant Pressure and Volume.
   - All units require coolant at all speeds.

---

**45 V-FLANGE**

<table>
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<tr>
<th>ASSEMBLY PART NUMBER</th>
<th>A I.D. (IN.)</th>
<th>B CLEARANCE DIA. (IN.)</th>
<th>C PROJECTION (IN.)</th>
<th>COOLANT GLAND (INCLUDED)</th>
<th>MINIMUM COOLANT PRESSURE (1)</th>
<th>MAXIMUM COOLANT PRESSURE (2)</th>
<th>MAXIMUM SPEED (RPM) (3)</th>
<th>COOLANT STOP SCREW (INCLUDED)</th>
<th>REPLACEMENT SEAL KIT PART NUMBER (NOT INCLUDED)</th>
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<tbody>
<tr>
<td>C40-EM75-MG-6</td>
<td>0.750</td>
<td>1.312</td>
<td>5.50</td>
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<td>4000</td>
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<tr>
<td>C40-EM10-MG-6</td>
<td>1.000</td>
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<td>^C40-EM12-MG-5</td>
<td>1.250</td>
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<td>4.50</td>
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<tr>
<td>^C45-EM75-MG-5</td>
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<td>1000 PSI</td>
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<td>2.500</td>
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**Outgoing Items**

A - Socket set screw location does not conform to ANSI specification. Request information if set screw location is critical.

---

(1), (2) - These are recommended pressures. Lower coolant pressures may be utilized at very slow RPM’s. Pressures above recommended PSI may cause internal damage to seals.
(3) - Recommended Maximum RPM at Maximum 1000 PSI. Higher speeds may be achieved at lower pressures.

These RPM and Pressure ranges are not a guarantee of performance. The life and performance of the units depends on the following conditions:

1. Proper Filtration - Proper Type & Viscosity of Coolant - Coolant Pressure and Volume.
2. All units require coolant at all speeds.
### V-Flange ABS®-Style Holders • Manual Rotary Coolant Gland

**ASSEMBLY PART NUMBER**

<table>
<thead>
<tr>
<th>A</th>
<th>ABS® CONNECTION</th>
<th>B</th>
<th>CLEARANCE DIA. (IN.)</th>
<th>C</th>
<th>PROJECTION (IN.)</th>
<th>COOLANT GLAND (INCLUDED)</th>
<th>MINIMUM COOLANT PRESSURE (1)</th>
<th>MAXIMUM COOLANT PRESSURE (2)</th>
<th>MAXIMUM SPEED (RPM) (3)</th>
<th>REPLACEMENT SEAL KIT PART NUMBER (NOT INCLUDED)</th>
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<td>MT3</td>
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<td>50 V-FLANGE</td>
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<td>587-102</td>
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### V-Flange Morse Taper Holders • Manual Rotary Coolant Gland

**ASSEMBLY PART NUMBER**

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<th>MORSE TAPER</th>
<th>B</th>
<th>CLEARANCE DIA. (IN.)</th>
<th>C</th>
<th>PROJECTION (IN.)</th>
<th>COOLANT GLAND (INCLUDED)</th>
<th>MINIMUM COOLANT PRESSURE (1)</th>
<th>MAXIMUM COOLANT PRESSURE (2)</th>
<th>MAXIMUM SPEED (RPM) (3)</th>
<th>REPLACEMENT SEAL KIT PART NUMBER (NOT INCLUDED)</th>
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<td>45 V-FLANGE</td>
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<td>2.125</td>
<td>4.50</td>
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<td>100 PSI</td>
<td>100 PSI</td>
<td>3000</td>
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<tr>
<td>50 V-FLANGE</td>
<td>MT3</td>
<td>2.125</td>
<td>4.50</td>
<td>587-105</td>
<td>100 PSI</td>
<td>100 PSI</td>
<td>3000</td>
<td>587-105</td>
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</tbody>
</table>

*Outgoing Items* ^ - ABS 80 & ABS 100 holders available by special quotation on 50 V-Flange units.

- Please refer to the Modular Tooling Section on pages 140-143 for Modular Adapters.

(1), (2) - These are recommended pressures. Lower coolant pressures may be utilized at very slow RPM’s. Pressures above recommended PSI may cause internal damage to seals.

(3) - Recommended Maximum RPM at Maximum 1000 PSI. Higher speeds may be achieved at lower pressures.

These RPM and Pressure ranges are not a guarantee of performance. The life and performance of the units depends on the following conditions:

- Proper Filtration - Proper Type & Viscosity of Coolant - Coolant Pressure and Volume.
- These are recommended pressures. Lower coolant pressures may be utilized at very slow RPM’s. Pressures above recommended PSI may cause internal damage to seals.
- These RPM and Pressure ranges are not a guarantee of performance. The life and performance of the units depends on the following conditions:

Proper Filtration - Proper Type & Viscosity of Coolant - Coolant Pressure and Volume.

All units require coolant at all speeds.
---

### BT Single Angle Collet Chuck • Manual Rotary Coolant Gland

![Diagram of BT Single Angle Collet Chuck](image)

**Adjustable Positive Seal Stop Screw (Included)**

**TG Style Nosepiece (Included)**

---

#### BT Single Angle Collet Chuck Specifications

**ASSEMBLY PART NUMBER** | **A RANGE (IN.)** | **COLLET SERIES** | **CLEARANCE DIA. (IN.)** | **C PROJ. (IN.)** | **COOLANT GLAND (INCLUDED)** | **MINIMUM COOLANT PRESSURE (1)** | **MAXIMUM COOLANT PRESSURE (2)** | **MAXIMUM SPEED (RPM) (3)** | **OPTIONAL EXTENSION STYLE STOP SCREW (NOT INCLUDED)** | **REPLACEMENT SEAL KIT PART NUMBER (NOT INCLUDED)** | **SPANNER WRENCH (NOT INCLUDED)**
---
| BT 40 | 0.094 - 1.000 | TG 100 | 2.50 | 5.25 | 587-102 | 100 PSI | 1000 PSI | 3000 | 116-004 | 585-916 | 112-001 |
| BT 50 | 0.094 - 1.000 | TG 100 | 2.50 | 5.25 | 587-106 | 100 PSI | 1000 PSI | 2500 | 116-001 | 585-920 | 112-001 |

1. (1), (2) - These are recommended pressures. Lower coolant pressures may be utilized at very slow RPM's. Pressures above recommended PSI may cause internal damage to seals.
2. (3) - Recommended Maximum RPM at Maximum 1000 PSI. Higher speeds may be achieved at pressures below 1000 PSI. These RPM and Pressure ranges are not a guarantee of performance. The life and performance of the units depends on the following conditions:
   - Proper Filtration
   - Proper Type & Viscosity of Coolant
   - Coolant Pressure and Volume.

All units require coolant at all speeds.

---

### BT End Mill Holders • Manual Rotary Coolant Gland

![Diagram of BT End Mill Holders](image)

**Retention Knobs Sold Separately, See Pages 163-167.**

---

#### BT End Mill Holders Specifications

**ASSEMBLY PART NUMBER** | **A.D. (IN.)** | **B CLEARANCE DIA. (IN.)** | **C PROJ. (IN.)** | **COOLANT GLAND (INCLUDED)** | **MINIMUM COOLANT PRESSURE (1)** | **MAXIMUM COOLANT PRESSURE (2)** | **MAXIMUM SPEED (RPM) (3)** | **COOLANT STOP SCREW (INCLUDED)** | **REPLACEMENT SEAL KIT PART NUMBER (NOT INCLUDED)**
---
| BT 40 | 0.750 | 1.312 | 5.50 | 587-100 | 100 PSI | 1000 PSI | 4000 | 105-007 | 585-904 |
| BT 50 | 1.000 | 2.125 | 4.50 | 587-102 | 100 PSI | 1000 PSI | 3000 | 105-007 | 585-916 |

^ - Socket set screw location does not conform to ANSI specification. Request information if set screw location is critical.

---

(1), (2) - These are recommended pressures. Lower coolant pressures may be utilized at very slow RPM's. Pressures above recommended PSI may cause internal damage to seals.

(3) - Recommended Maximum RPM at Maximum 1000 PSI. Higher speeds may be achieved at pressures below 1000 PSI. These RPM and Pressure ranges are not a guarantee of performance. The life and performance of the units depends on the following conditions:
   - Proper Filtration
   - Proper Type & Viscosity of Coolant
   - Coolant Pressure and Volume.

All units require coolant at all speeds.
Retention Knobs
Sold Separately,
See Pages 163-167.

<table>
<thead>
<tr>
<th>ASSEMBLY PART NUMBER</th>
<th>A MORSE TAPER</th>
<th>B CLEARANCE DIA. (IN.)</th>
<th>C PROJECTION (IN.)</th>
<th>COOLANT GLAND (INCLUDED)</th>
<th>MINIMUM COOLANT PRESSURE (1)</th>
<th>MAXIMUM COOLANT PRESSURE (2)</th>
<th>MAXIMUM SPEED (RPM) (3)</th>
<th>REPAIR SEAL KIT PART NUMBER (NOT INCLUDED)</th>
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<td>100 PSI</td>
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</table>

(1) - These are recommended pressures. Lower coolant pressures may be utilized at very slow RPM’s. Pressures above recommended PSI may cause internal damage to seals.

(2) - Recommended Maximum RPM at Maximum 1000 PSI. Higher speeds may be achieved at pressures below 1000 PSI.

These RPM and Pressure ranges are not a guarantee of performance. The life and performance of the units depends on the following conditions:

Proper Filtration - Proper Type & Viscosity of Coolant - Coolant Pressure and Volume.

All units require coolant at all speeds.
# ATC Gland Specifications and Repair Parts

<table>
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<th>ATC Gland Part Number</th>
<th>Bearing Diameter (In.)</th>
<th>Maximum Speed (RMP)</th>
<th>Minimum Pressure (PSI)</th>
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**FACE SEAL REPAIR KIT FOR SPFS-STYLE GLANDS**

Kit includes (24) Face seal washers and Two-part Epoxy Adhesive: Order 100-001.

**SPOR-STYLE GLANDS - SPARE O-RING FOR PIN**

Order 001-039

**DPOR-STYLE GLANDS - SPARE O-RING FOR PIN**

Order 001-038

We offer Repair and Reconditioning services for our ATC glands. Please call us at **1.800.600.2248** for an RGA Number to return the unit to us. We will inspect the unit and forward a quote for the repair to you promptly!
The introduction of The George Whalley Company’s positive seal adjustment stop screws provides a solution to a major problem in coolant-fed machining operations. Coolant-fed cutting tools are able to deliver coolant to the cutting edge to assist cooling and chip ejection but this advantage can be seriously reduced when leakage at the stop screw decreases the coolant flow and pressure. The various standard adjustment stop screws generally in use in the machining industry for adjusting cutting tool length have basic disadvantages when used with coolant-fed tools. Steel stop screws have no sealing capability and are of little use in coolant-fed operations. Industry standard nylon capped steel stop screws provide a coolant seal where the tool shank meets the nylon cap but considerable leakage and loss of coolant pressure occurs around the screw threads. Solid nylon stop screws can provide a solution to this problem however they tend to be subject to wear when frequent tool adjustments are required. The George Whalley Company can provide all of the proceeding stop screws to interchange with industry standard holders. We strongly recommend our exclusive positive seal stop screw which will eliminate leakage and will handle necessary pressures to allow peak performance to the cutting tool. The George Whalley Company’s positive seal adjustment stop screw also has the advantage of using fine screw threads for finer tool length adjustment. The illustrations and text which follow explain their use and capability.
STANDARD POSITIVE SEAL ADJUSTMENT STOP SCREWS

These stop screws are designed exclusively for use with The George Whalley Company’s positive seal style collet chucks. For information on which collet chucks accept these stop screws please see tool holders section of catalog.

1. Coolant is delivered through the coolant gland pipe thread orifice in rotary inducer style holders or coolant passage through the axis of stop screw in coolant-thru-the-spindle holders.
2. Rotary inducer style holders have seals at the gland bearing surface to prevent coolant leakage.
3. Coolant enters the tool holder chamber where an O-ring seal prevents coolant loss around the outside diameter of stop screw head. A coolant cross hole in the neck of the stop screw then admits coolant for delivery to the cutting tool.
4. At the location where the cutting tool shank end meets the stop screw face, a nylon cap prevents leakage.
5. The nylon extension meets the end of the cutting tool shank, inside the single angle collet, for tool length adjustment and to seal against coolant leakage.
6. Coolant flows out through the cutting tool at maximum available pressure for cooling and chip ejection.

EXTENSION STYLE POSITIVE SEAL ADJUSTMENT STOP SCREWS

These stop screws are designed to prevent coolant leakage between the stop screw face and the shank of short shanked cutting tools. An extension is projected into the bore of the collet for sealing and tool length adjustment. For use in collet chucks which use TG10 and TG15 series single angle collets.

1. Coolant is delivered through the coolant gland pipe thread orifice in rotary inducer style holders or coolant passage through the axis of stop screw in coolant-thru-the-spindle holders.
2. Rotary inducer style holders have seals at the gland bearing surface to prevent coolant leakage.
3. Coolant enters the tool holder chamber where an O-ring seal prevents coolant loss around the outside diameter of stop screw head. A coolant cross hole in the neck of the stop screw then admits coolant for delivery to the cutting tool.
4. Nylon cap is mounted to the positive seal stop screw to accept nylon extensions. These nylon extensions are manufactured slightly undersize to provide clearance for insertion into the rear end of the single angle collet without interfering with collet grip. Where the nylon extension is inserted in the nylon cap, an O-ring is provided to prevent leakage.
5. The nylon extension meets the end of the cutting tool shank, inside the single angle collet, for tool length adjustment and to seal against coolant leakage.
6. Coolant flows out through the cutting tool at maximum available pressure for cooling and chip ejection.

EXTENSION STYLE STOP SCREW SETS

Each extension stop screw set listed includes one extension stop screw and one each of the seven extensions listed below.

EXTENSION STYLE POSITIVE SEAL STOP SCREWS

These stop screws are designed exclusively for use with The George Whalley Company’s positive seal style collet chucks. For information on which collet chucks accept these stop screws please see tool holders section of catalog.

1. Coolant is delivered through the coolant gland pipe thread orifice in rotary inducer style holders or coolant passage through the axis of stop screw in coolant-thru-the-spindle holders.
2. Rotary inducer style holders have seals at the gland bearing surface to prevent coolant leakage.
3. Coolant enters the tool holder chamber where an O-ring seal prevents coolant loss around the outside diameter of stop screw head. A coolant cross hole in the neck of the stop screw then admits coolant for delivery to the cutting tool.
4. At the location where the cutting tool shank end meets the stop screw face, a nylon cap prevents leakage.
5. The nylon extension meets the end of the cutting tool shank, inside the single angle collet, for tool length adjustment and to seal against coolant leakage.
6. Coolant flows out through the cutting tool at maximum available pressure for cooling and chip ejection.