

# Polyurethane CNC Spindle Liners

(US Patent Approved)

Manufactured by:  
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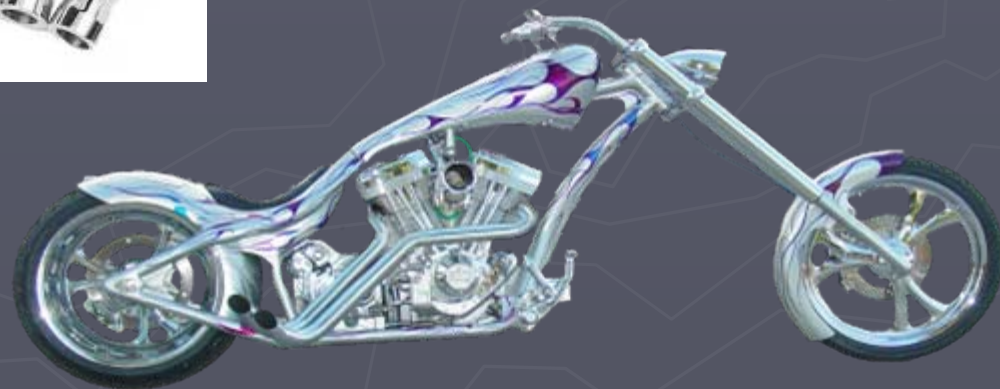
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## “What Discovery Channel Biker Build-Off Winner Eddie Trotta is Saying”

For Eddie, the results speak for themselves. “Our customers expect only the highest quality, most intricately designed parts on our custom bikes. Trusty-Cook liners allow us to machine these complex parts to meet my standards at speeds that keep up with part demand.”



Eddie's winning Biker Build-Off "Discovery Bike"  
Parts machined on Thunder Cycle's Mazak Quick  
Turn 250 with TRUSTY-COOK Spindle Liners

# Have You Ever Considered Bar Feeding a Shaped Bar Like This? You can now!!



Jack Butts, president of AmTTech, the Houston Area Daewoo Dealer was presented with a challenging project by John McCaslin, owner of AirForce Airguns... "John's vision was to make machining this aluminum extrusion an unmanned or lights-out operation"

"The challenges here were as follows: barfeeding (with a magazine type feed) an irregular shaped extrusion, offsetting the extrusion in the machine spindle to facilitate chucking on the barrel diameter and discharging a 22" long part via parts catcher/conveyor which was designed for a maximum part length of only 5".



*Excerpts taken from an article found at:  
[www.ipnews.com/archives/general\\_editorials/oct05/AmTTech.htm](http://www.ipnews.com/archives/general_editorials/oct05/AmTTech.htm)*



“AmTTech began addressing these issues by sending sample extrusions to every viable supplier of barfeeds distributed in the United States. SMW Systems was willing to make the required modifications to their standard Spacesaver 2100 Servo Barfeed and guarantee successful loading of this odd shaped extrusion.”

**“Additionally, Trusty-Cook was selected as the supplier for the spindle liner due to the ease of handling the irregular shaped part with their design of molded polyurethane spindle liners. Here the part was offset to position the rifle barrel on centerline with the machine spindle.”**



By thinking “outside of the conventional box” AmtTech and Air Force Guns, Inc. were able to achieve what was not previously thought possible. They are successfully barfeeding this part !!!



**Call TRUSTY-COOK the next time you are faced with the challenge of bar feeding extrusions or other non-round shaped stock !!**

# Polyurethane CNC Spindle Liners



## “What others in the Machine Tool Industry are saying”

- ▶ “Shelton Machinery has recommended and sold Trusty-Cook, Inc. Urethane Spindle Liners for approximately 6 years. The advantages of these liners over conventional liners are many. Our customers love the lower cost and reduced machine vibration!! When I deal with Trusty-Cook, my customer satisfaction is 100%. No matter what the challenge, they simply respond, and it’s much quicker than other suppliers. I’ve been in this business a long time and I’ve seen a lot of innovations, but this spindle liner is one of the best I’ve seen!” – **James Shelton, President Shelton Machinery, Indiana/Kentucky Mazak Machine Tool Dealer**
- ▶ “Ramdy Corp. has been using Trusty-Cook Polyurethane Spindle Liners for over 5 years. We have found significant advantages of using these liners over steel liners. The most significant of which are low cost, quick delivery, reduced vibration, and reduced weight in the spindle. Best of all is that we can purchase Hex ID liners for running Hex Bar Stock. This makes for easy orientation and loading of Hex Bar Stock. I highly recommend these liners to anyone using automatic bar feeders or even bar pullers to run production work” – **William F. Hayes, Jr., CNC Turning Manager, Ramdy Corporation, Oakville, CT**
- ▶ “What Trusty-Cook is doing with this spindle liner is a major leap forward. They’re the only ones I know making this type of liner in North America. This product is a big hit in the machining and manufacturing industry. Trusty-Cook has a strong reputation nationally, and with this, it’s only getting stronger!!– **Jill Sevelow, Managing Editor *Today's Machining World***
- ▶ “Alpine Automation supplied customers with Steel Liners for over 10 years. About 5 years ago we had some customers use Trusty-Cook Polyurethane Spindle Liners. The reaction was immediate acceptance. We have never sold another metal liner as our conversion rate has been 100%” – **John Krupa, President, Alpine Automation Bar Feeding Equipment, American Fork, UT**



# Polyurethane CNC Spindle Liners

## "The History"

- ▶ Since introducing Trusty-Cook Polyurethane CNC Spindle Liners to the metal turning marketplace in 2000, we have continually received feedback from end users and machine tool dealers who are excited to finally have an alternative supplier of low cost, quick delivery spindle liners that contribute to **maximizing the performance of virtually any turning center.**
- ▶ With well over 10,000 units sold, our market share continues to grow and consists of over 350 customers including a **small sampling** of machine tool dealers such as **Mazak** – Shelton Machinery, Pinnacle Machine Tool, Northwest Machine Technologies, Sudetco, **Daewoo** – Technical Equipment Sales, Mid-Atlantic CNC, Hales Machine Tool, Ferro-Technique, Foothills Machinery, AMTECH, Allegheny Machine Tool, 2SQ Machine Tool, Arthur Machinery, Professional Sales Services, Machinery Solutions, **Okuma** – Ellison Machinery, Hartwig, Inc., R.O. Dadrick, **Mori Seiki** – Tyler Machine Tool, Ellison Machinery, Maruka USA, Mori Seiki Mid American Sales, New West Machine Tool, **HAAS Factory Outlet (HFO)** – HFO Indiana, HFO Cleveland & Cincinnati, NYMAT Machine Tool, HFO Torrance CA., HFO Dallas, and TIMCO Machine Tool.



# Polyurethane CNC Spindle Liners

## "The Product"

- ▶ Trusty-Cook Liners are a MOLDED product. The ID surface is never machined so optimal concentricity is not jeopardized, and a smooth surface finish is provided. The OD finish may be machined and o-rings may or may not be used to achieve proper fit.
- ▶ Unlike metal liners, our liners typically have a uniform OD for its entire length. Depending on the machine, there may be a step or shoulder in the area of the actuator cylinder. The liners also have a mounting flange with applicable bolt patterns. Trusty-Cook liners are typically 1 piece construction.
- ▶ For shaped stock (i.e.. Hexagon, square, etc.), we can provide a shaped ID to match bar stock for the entire length of liner. This allows for maximum bar control and orientation relative to the chuck/collet.
- ▶ Extensions beyond the mounting flange are available at a nominal charge. The extensions are part of the 1 piece molded liner.
- ▶ Sizing Parameters:
  - Liner OD – Typically 0.015" to 0.040" less than ID of Draw Tube
  - Liner ID – Typically 0.030" to 0.060" over bar stock size. ID's specified outside this parameter are available at nominal charge.



# Polyurethane CNC Spindle Liners

## "The Material"

- ▶ Liners consist of a specially formulated high performance polyurethane material.
- ▶ Material is extremely resistant to friction and heat – withstand temperatures in excess of 300° F
- ▶ With an ultimate tensile strength of 7500 PSI and tear strength PLI of 810 (Die "C" ASTM D-624), material is very resilient and resistant to tearing and chip embedment.
- ▶ Trusty-Cook, Inc. also manufactures Screw Machine Stock Reel Hush Tubes and Liners, and Dead Blow Hammers. These products are constructed with the same high performance urethane material.



# Polyurethane CNC Spindle Liners

## "Pricing"

- ▶ Our Liners are typically priced according to the Liner OD or Draw Tube ID. For example, a liner for a machine with a 2" Draw Tube is priced at \$225 ea., regardless of ID size.
- ▶ Non-Round Shaped ID's are available. Hex shaped ID's are same price as round. **Nominal up-charge for other non-round shaped ID's (i.e. square, rectangular, extrusions, etc.)**
- ▶ Standard Clearance between liner ID and Bar Stock is 0.30" to 0.55". Specified ID's outside this range may result in nominal up charge.
- ▶ Liner extensions beyond mounting flange available.
- ▶ Standard Delivery is 3-7 days after receipt of order.

### LIST PRICES

<u>Spindle/Draw Tube Bore</u>	<u>List Price</u>
1" and smaller	\$125 ea.
>1" to 1.25"	\$175 ea.
>1.25" <1.75"	\$200 ea.
>1.75" <2.25"	\$225 ea.
>2.25" <2.75"	\$250 ea.
>2.75" <3.12"	\$275 ea.
>3.12" < 3.5"	\$325 ea.
>3.5"	Call for Pricing

# Polyurethane CNC Spindle Liners (patented)

## "Please Contact Us"

- ▶ Trusty-Cook, Inc. maintains and is adding daily to an extensive spindle liner database. To order, typically all we need is machine make and model. However, there are instances when some basic dimensions may be required to ensure proper fit of the Spindle Liner.
- ▶ We invite your inquiry to become a distributor of this product line, and for a limited time only, we will offer special introductory discounts to those who respond quickest to this promotion.
- ▶ Please contact **Jeff Nawrot** or **Joel Trusty** by any means listed below



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