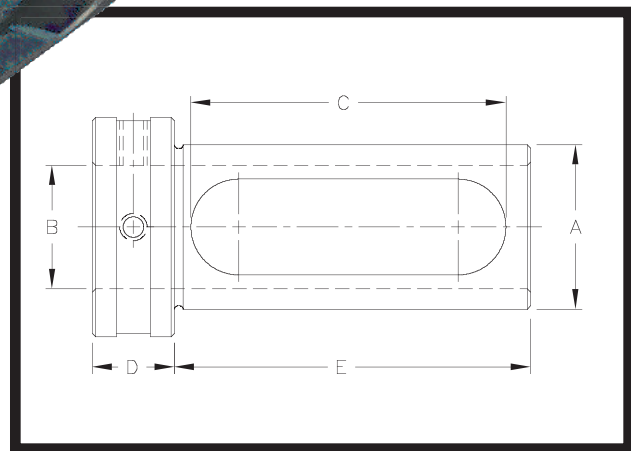
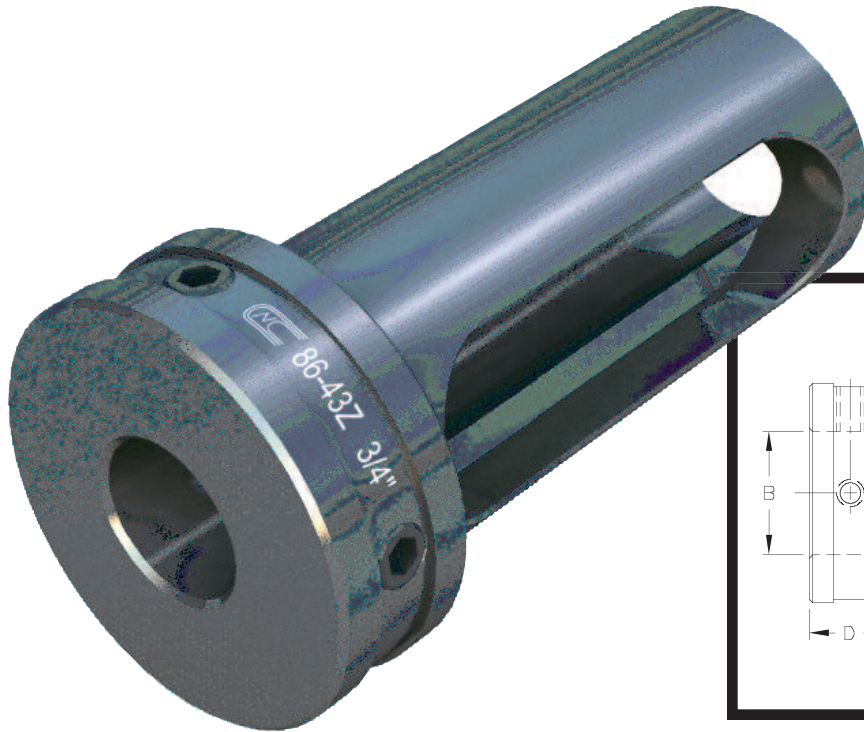




Toolholder Bushing Type “Z”

The most flexible Toolholder Bushing for all types of CNC Turning Centers, Turret Lathes and Chuckers. The Elongated Slot gives the user a complete interchangeability with all brands of equipment. The added Set Screws in the Head allow for increased rigidity. The bushings are hardened and precision ground concentric. Can also be used for Preset Tooling. Select the O.D. size that fits your machine and order from the chart below.



| CNC PART NUMBER | BUSH DIA. | | STANDARD BORE SIZES STOCKED | | LENGTH OF SLOT | | | HEAD THICKNESS | LENGTH UNDER HEAD | | |
|-----------------|-----------|-----|---|----------------------------|----------------|-------|-------|----------------|-------------------|-------|-------|
| | A | | B | | C | | | D | E | | |
| | INCH | MM | INCH | MM | ZS | Z | ZL | ZS | Z | ZL | |
| CNC 86-40Z | 3/4 | 20 | 1/4, 5/16, 3/8, 1/2 | 6, 8, 10, 12 | | 2 3/8 | | 1/2 | | 2 1/2 | |
| CNC 86-41Z | 1 | 25 | 1/4, 5/16, 3/8, 1/2, 5/8, 3/4 | 8, 10, 12, 16, 20 | | 2 3/8 | | 1/2 | | 2 3/4 | |
| CNC 86-42Z | 1 1/4 | 32 | 3/8, 1/2, 5/8, 3/4, 7/8, 1 | 10, 12, 16, 20, 25 | 1 7/8 | 2 5/8 | 3 1/8 | 5/8 | 2 1/4 | 3 | 3 3/4 |
| CNC 86-43Z | 1 1/2 | 40 | 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1 1/4 | 10, 12, 16, 20, 25, 32 | 2 1/8 | 2 7/8 | 3 5/8 | 3/4 | 2 1/2 | 3 1/4 | 4 |
| CNC 86-44Z | 1 3/4 | 45 | 1/2, 5/8, 3/4, 7/8, 1, 1 1/4, 1 1/2 | 12, 16, 20, 25, 32, 40 | 2 3/8 | 3 1/8 | 3 7/8 | 3/4 | 2 3/4 | 3 1/2 | 4 1/4 |
| CNC 86-45Z | 2 | 50 | 1/2, 5/8, 3/4, 7/8, 1, 1 1/4, 1 1/2, 1 3/4 | 12, 16, 20, 25, 32, 40, 45 | 2 5/8 | 3 1/2 | 4 1/8 | 3/4 | 3 | 3 3/4 | 4 1/2 |
| CNC 86-46Z | 2 1/2 | 65 | 5/8, 3/4, 7/8, 1, 1 1/4, 1 1/2, 1 3/4, 2, 2 1/4 | 16, 20, 25, 32, 40, 45, 50 | 3 1/8 | 3 7/8 | 4 5/8 | 3/4 | 3 1/2 | 4 1/4 | 5 |
| CNC 86-47Z | 3 | 80 | 1, 1 1/4, 1 1/2, 1 3/4, 2, 2 1/4, 2 1/2 | 25, 32, 40, 50, 60, 65 | 3 3/8 | 4 3/8 | 5 3/8 | 3/4 | 3 3/4 | 4 3/4 | 5 3/4 |
| CNC 86-48Z | 3 1/2 | 90 | 1 1/4, 1 1/2, 1 3/4, 2, 2 1/4, 2 1/2, 3 | 32, 40, 50, 60, 65 | 3 7/8 | 4 7/8 | 5 7/8 | 1 | 4 1/2 | 5 1/2 | 6 1/2 |
| CNC 86-49Z | 4 | 100 | 1 1/2, 1 3/4, 2, 2 1/4, 2 1/2, 3 | 40, 50, 60, 65, 80 | 4 3/8 | 5 5/8 | 7 1/8 | 1 | 5 | 6 1/4 | 7 1/2 |

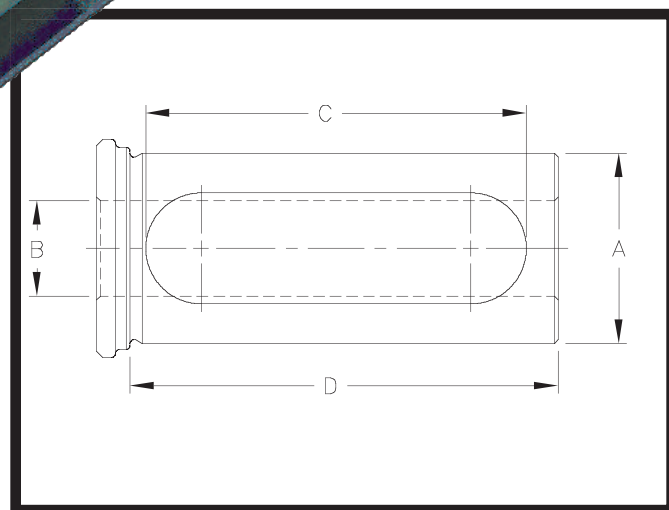
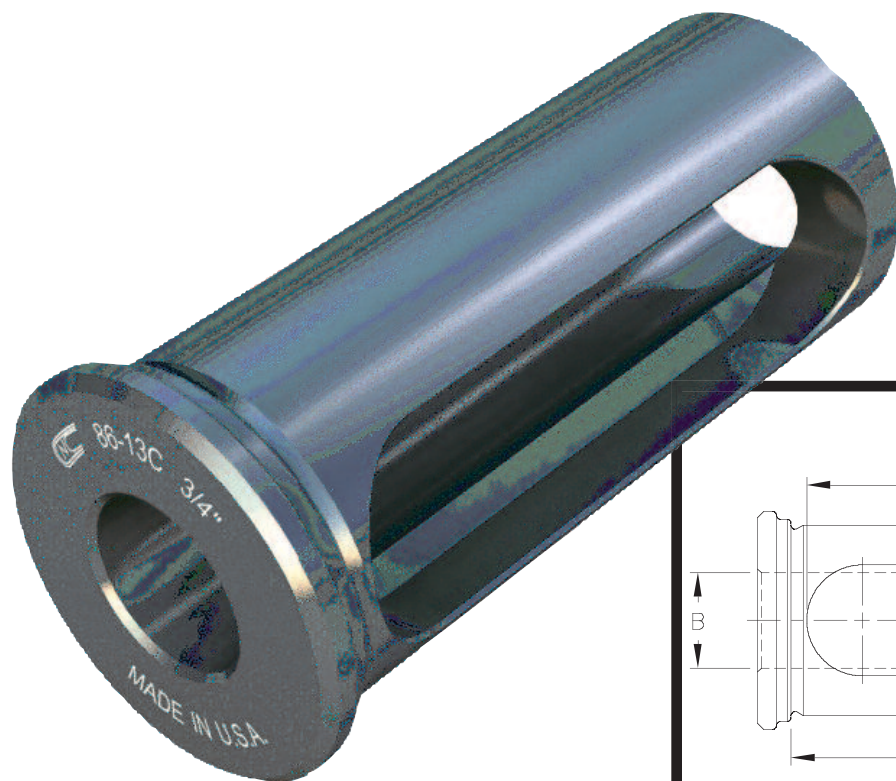
*Special sizes available to fit your machine specifications: inch-metric, metric-inch, or metric-metric.

*All Orders ship standard in inch sizes. If required; please specify metric O.D. or I.D., when ordering.



Toolholder Bushing Type “C”

This CNC Type C Bushing is designed for universal use on all C/N/C turning machines. To adapt a wide variety of Boring Bars, Drills, Reamers and Shank type tools. Precision machine hardened and ground concentric; made in the U.S.A. – BUILT TO LAST! Select the O.D. size that fits your machine and order from the chart below.



| CNC PART NUMBER | BUSH DIA. | | STANDARD BORE SIZES STOCKED | | LENGTH OF SLOT C | LENGTH UNDER HEAD D | NUMBER OF SLOTS |
|-----------------|-----------|----|--|----------------------------|---------------------|------------------------|-----------------|
| | A | | B | | | | |
| | INCH | MM | INCH | MM | | | |
| CNC 86-10C | 3/4 | 20 | 1/4, 5/16, 3/8, 1/2 | 6, 8, 10, 12 | 1 1/2 | 2 | 1 |
| CNC 86-11C | 1 | 25 | 1/4, 5/16, 3/8, 1/2, 5/8, 3/4 | 8, 10, 12, 16, 20 | 2 3/8 | 2 3/4 | 1 |
| CNC 86-12C | 1 1/4 | 32 | 3/8, 1/2, 5/8, 3/4, 7/8, 1 | 10, 12, 16, 20, 25 | 2 3/4 | 3 1/4 | 1 |
| CNC 86-13C | 1 1/2 | 40 | 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1 1/4 | 10, 12, 16, 20, 25, 32 | 3 | 3 3/8 | 1 |
| CNC 86-14C | 1 3/4 | 45 | 1/2, 5/8, 3/4, 7/8, 1, 1 1/4, 1 1/2 | 12, 16, 20, 25, 32, 40 | 3 1/8 | 3 1/2 | 1 |
| CNC 86-15C | 2 | 50 | 1/2, 5/8, 3/4, 1, 1 1/4, 1 1/2, 1 3/4 | 12, 16, 20, 25, 32, 40, 45 | 3 5/8 | 4 | 1 |
| CNC 86-16C | 2 1/2 | 65 | 3/4, 1, 1 1/4, 1 1/2, 1 3/4, 2, 2 1/4 | 20, 25, 32, 40, 45, 50 | 4 1/8 | 4 1/2 | 1 or 2* |
| CNC 86-17C | 3 | 80 | 1, 1 1/4, 1 1/2, 1 3/4, 2, 2 1/4, 2 1/2 | 25, 32, 40, 45, 50, 60, 65 | 4 5/8 | 5 | 1 or 2* |
| CNC 86-18C | 3 1/2 | 90 | 1, 1 1/4, 1 1/2, 1 3/4, 2, 2 1/4, 2 1/2, 3 | 25, 32, 40, 45, 50, 60, 65 | 5 | 5 3/4 | 1 or 2* |

*Special sizes available to fit your machine specifications: inch-metric, metric-inch, or metric-metric.

*Bushings 2 1/2 OD and larger: ID's larger than 1 1/2" have 2 slots.

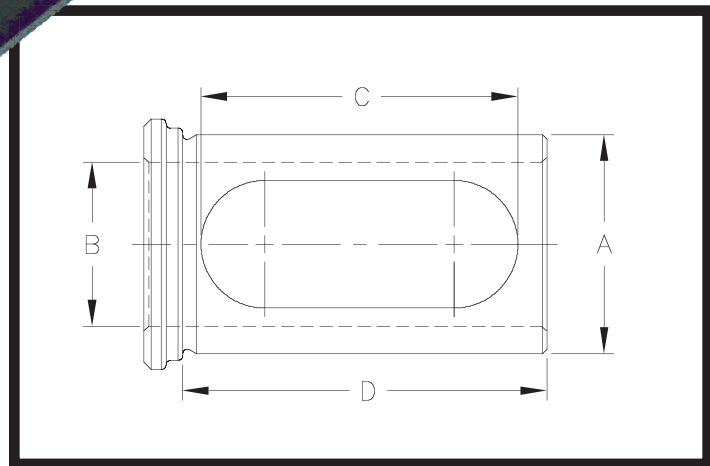
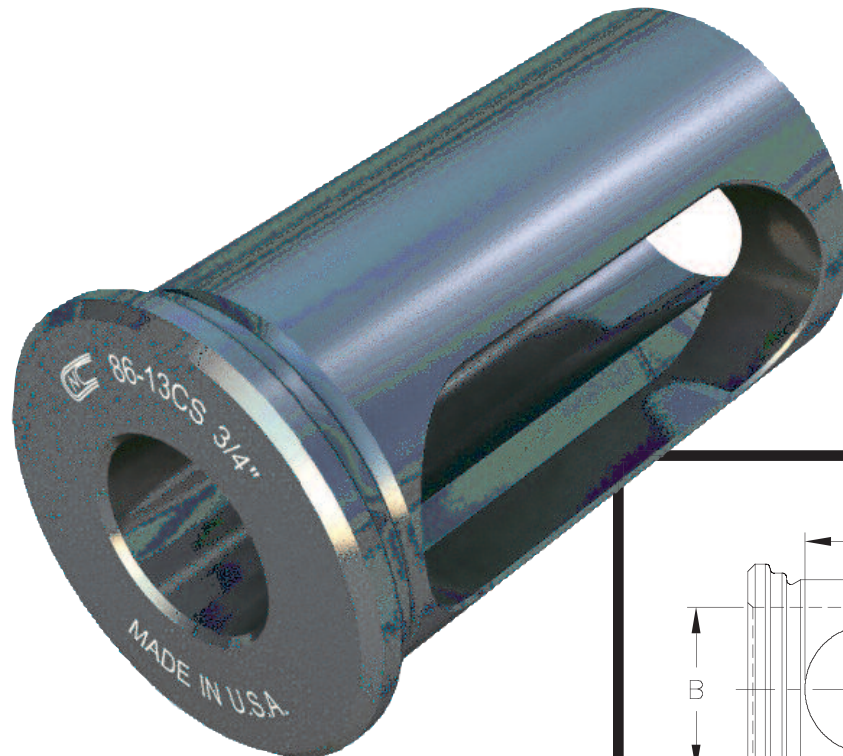
*All Orders ship standard in inch sizes. If required; please specify metric O.D. or I.D. when ordering.



Toolholder Bushing Type “CS”

Short Series

Introducing the “all new” CNC Type CS Bushing designed for universal use on all CNC Turning machines. The Bushings are hardened & precision ground concentric. Select the O.D. size that fits your machine and order from the chart below.



| CNC PART NUMBER | BUSH DIA. | | STANDARD BORE SIZES STOCKED | | LENGTH OF SLOT C | LENGTH UNDER HEAD D |
|-----------------|-----------|----|--|----------------------------|---------------------|------------------------|
| | A | | B | | | |
| | INCH | MM | INCH | MM | | |
| CNC 86-10CS | 3/4 | 20 | 1/4, 5/16, 3/8, 1/2 | 6, 8, 10, 12 | 1 1/8 | 1 1/2 |
| CNC 86-11CS | 1 | 25 | 1/4, 5/16, 3/8, 1/2, 5/8, 3/4 | 8, 10, 12, 16, 20 | 1 3/8 | 1 3/4 |
| CNC 86-12CS | 1 1/4 | 32 | 3/8, 1/2, 5/8, 3/4, 7/8, 1 | 10, 12, 16, 20, 25 | 1 3/4 | 2 1/8 |
| CNC 86-13CS | 1 1/2 | 40 | 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1 1/4 | 10, 12, 16, 20, 25, 32 | 2 1/8 | 2 1/2 |
| CNC 86-14CS | 1 3/4 | 45 | 1/2, 5/8, 3/4, 7/8, 1, 1 1/4, 1 1/2 | 12, 16, 20, 25, 32, 40 | 2 5/8 | 3 |
| CNC 86-15CS | 2 | 50 | 1/2, 5/8, 3/4, 1, 1 1/4, 1 1/2, 1 3/4 | 12, 16, 20, 25, 32, 40, 45 | 3 | 3 1/2 |
| CNC 86-16CS | 2 1/2 | 65 | 3/4, 1, 1 1/4, 1 1/2, 1 3/4, 2, 2 1/4 | 20, 25, 32, 40, 45, 50 | 3 1/2 | 4 |
| CNC 86-17CS | 3 | 80 | 1, 1 1/4, 1 1/2, 1 3/4, 2, 2 1/4, 2 1/2 | 25, 32, 40, 45, 50, 60, 65 | 4 1/8 | 4 1/2 |
| CNC 86-18CS | 3 1/2 | 90 | 1, 1 1/4, 1 1/2, 1 3/4, 2, 2 1/4, 2 1/2, 3 | 25, 32, 40, 45, 50, 60, 65 | 4 3/4 | 5 1/4 |

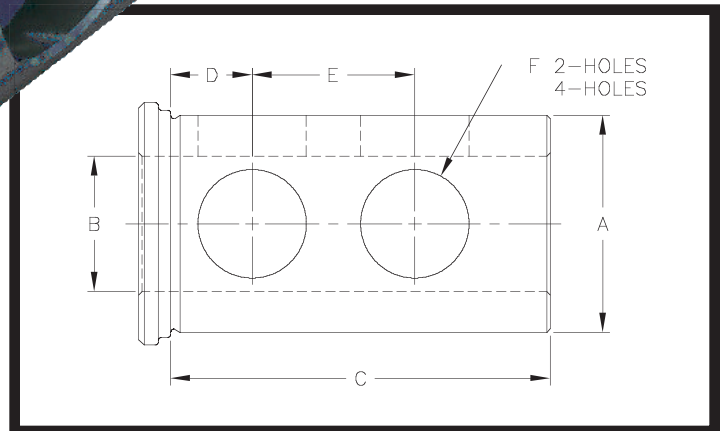
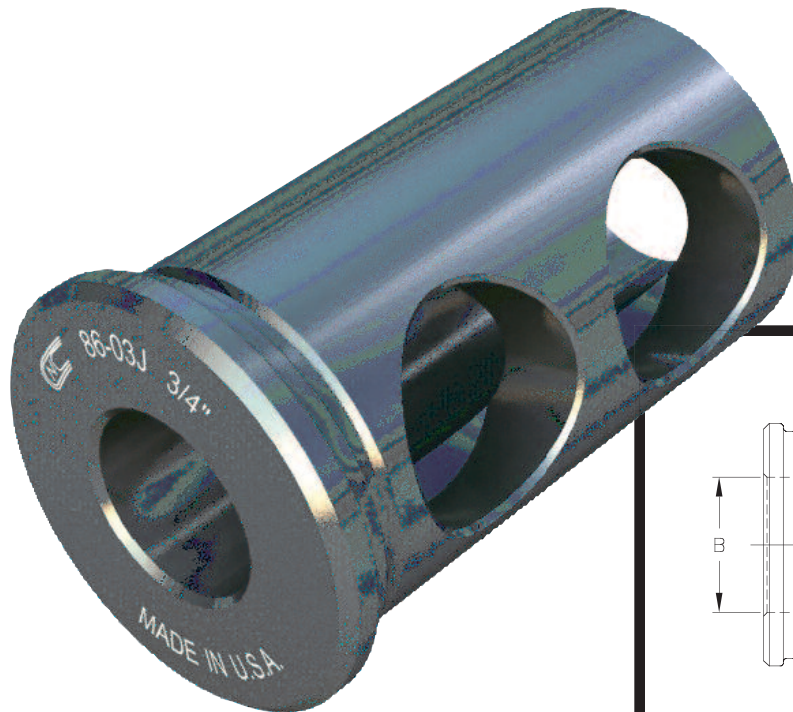
*Special sizes available to fit your machine specifications: inch-metric, metric-inch, or metric-metric.

*All Orders ship standard in inch sizes. If required; please specify metric O.D. or I.D., when ordering.



Toolholder Bushing Type “J”

This Type J Toolholder Bushing, with long solid body, has clearance holes so that you can clamp directly on the tool with set screws for positive alignment of the cutting edge of the tool. They are hardened and precision ground concentric. Select the O.D. size that fits your machine and order from the chart below.



| CNC PART NUMBER | BUSH DIA. | | STANDARD BORE SIZES STOCKED | | SPECIAL BORE SIZES AVAILABLE | | LENGTH UNDER HEAD | LENGTH DIMENSIONS | | HOLE SIZE | NO. HOLES |
|-----------------|-----------|----|--|----------------------------|------------------------------|-------|-------------------|-------------------|-------|-----------|-----------|
| | A | | B | | MIN. | MAX. | C | D | E | | |
| | IN. | MM | IN. | MM | | | | | | | |
| CNC 86-01J | 3/4 | 20 | 1/4, 5/16, 3/8, 1/2, | 6, 8, 10, 12, | 3/16 | 5/8 | 1 1/2 | 3/9 | 13/16 | 3/8 | 2 |
| CNC 86-02J | 1 | 25 | 3/8, 1/2, 5/8, 3/4 | 10, 12, 16, 20 | 1/4 | 7/8 | 1 3/4 | 7/16 | 7/8 | 5/8 | 2 |
| CNC 86-12J | 1 1/4 | 32 | 3/8, 1/2, 5/8, 3/4, 7/8, 1 | 10, 12, 16, 20, 25 | 1/4 | 1 1/8 | 2 1/8 | 5/8 | 1 | 3/4 | 2 |
| CNC 86-03J | 1 1/2 | 40 | 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1 1/4 | 10, 12, 16, 20, 25, 32 | 1/4 | 1 1/4 | 2 1/2 | 1 1/16 | 1 1/8 | 7/8 | 2 |
| CNC 86-04J | 1 3/4 | 45 | 1/2, 5/8, 3/4, 7/8, 1, 1 1/4, 1 1/2 | 12, 16, 20, 25, 32, 40 | 1/4 | 1 1/2 | 3 | 3/4 | 1 1/4 | 7/8 | 2 |
| CNC 86-05J | 2 | 50 | 1/2, 5/8, 3/4, 7/8, 1, 1 1/4, 1 1/2, 1 3/4 | 12, 16, 20, 25, 32, 40, 45 | 3/8 | 1 3/4 | 3 1/2 | 3/4 | 1 1/2 | 1 | 2 |
| CNC 86-06J | 2 1/2 | 65 | 3/4, 7/8, 1, 1 1/4, 1 1/2, 1 3/4, 2, 2 1/4 | 20, 25, 32, 40, 45, 50 | 1/2 | 2 1/4 | 4 | 7/8 | 1 3/4 | 1 1/4 | 2 |
| CNC 86-07J | 3 | 80 | 1, 1 1/4, 1 1/2, 1 3/4, 2, 2 1/4, 2 1/2 | 25, 32, 40, 45, 50, 60, 65 | 1/2 | 2 1/2 | 4 1/2 | 1 | 2 | 1 1/4 | 4 |
| CNC 86-08J | 3 1/2 | 90 | 1, 1 1/4, 1 1/2, 1 3/4, 2, 2 1/4, 2 1/2, 3 | 25, 32, 40, 45, 50, 60, 65 | 3/4 | 3 | 5 1/4 | 1 1/4 | 2 1/2 | 1 1/4 | 4 |

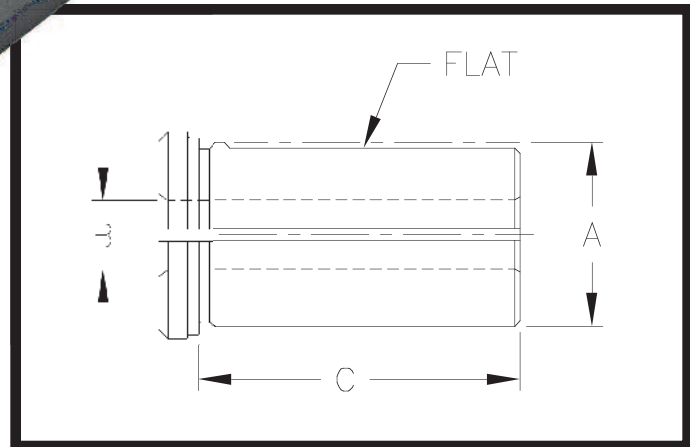
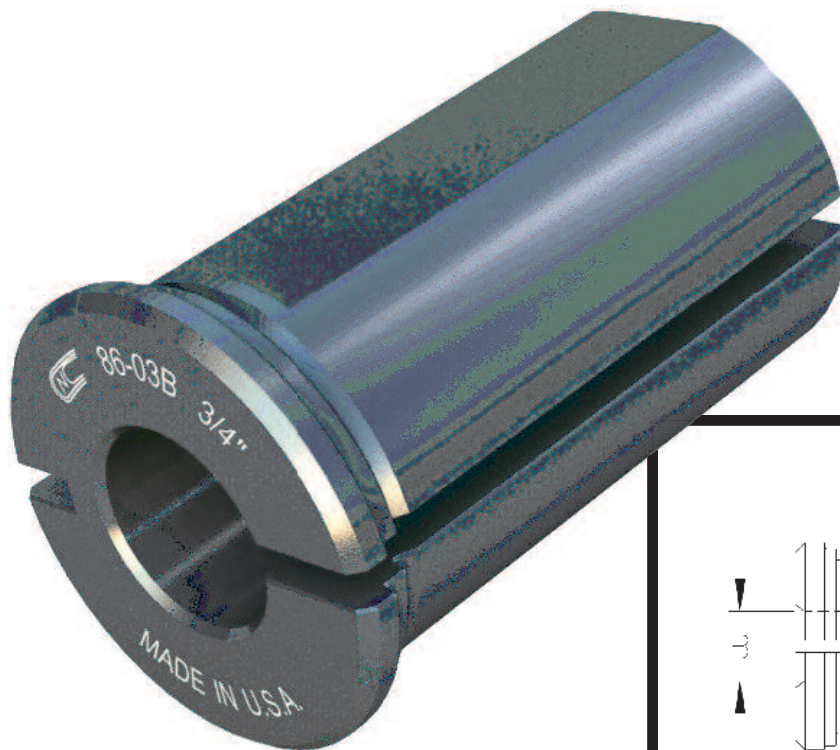
*Special sizes available to fit your machine specifications: inch-metric, metric-inch, or metric-metric.

*All Orders ship standard in inch sizes. If required; please specify metric O.D. or I.D., when ordering.



Toolholder Bushing Type “B”

These split Type B Bushings are manufactured with flexible manufacturing systems, for all Types and sizes of CNC Lathes and Chuckers; are Heat Treated and precision ground concentric. It is used to adapt Drills, Boring Bars, and other Shank Tools. Select the O.D. size that fits your machine and order from the chart below.



| CNC PART NUMBER | BUSH DIA. | | STANDARD BORE SIZES STOCKED | | SPECIAL BORE SIZES AVAILABLE | | LENGTH UNDER HEAD |
|-----------------|-----------|----|--|----------------------------|------------------------------|-------|-------------------|
| | A | | B | | MIN. | MAX. | C |
| | IN. | MM | IN. | MM | | | |
| CNC 86-01B | 3/4 | 20 | 1/4, 5/16, 3/8, 1/2 | 6, 8, 10, 12 | 3/16 | 5/8 | 1 1/2 |
| CNC 86-02B | 1 | 25 | 3/8, 1/2, 5/8, 3/4 | 10, 12, 16, 20 | 3/16 | 7/8 | 1 3/4 |
| CNC 86-12B | 1 1/4 | 32 | 3/8, 1/2, 5/8, 3/4, 7/8, 1 | 10, 12, 16, 20, 25 | 3/16 | 1 | 2 1/8 |
| CNC 86-03B | 1 1/2 | 40 | 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1 1/4 | 10, 12, 16, 20, 25, 32 | 3/16 | 1 1/4 | 2 1/2 |
| CNC 86-04B | 1 3/4 | 45 | 1/2, 5/8, 3/4, 7/8, 1, 1 1/4, 1 1/2 | 10, 12, 16, 20, 25, 32, 40 | 1/4 | 1 1/2 | 3 |
| CNC 86-05B | 2 | 50 | 1/2, 5/8, 3/4, 7/8, 1, 1 1/4, 1 1/2, 1 3/4, | 12, 16, 20, 25, 32, 40 | 1/2 | 1 3/4 | 3 1/2 |
| CNC 86-06B | 2 1/2 | 65 | 1/2, 5/8, 3/4, 7/8, 1, 1 1/4, 1 1/2, 1 3/4, 2, 2 1/4 | 20, 25, 32, 40, 45, 50 | 1/2 | 2 1/4 | 4 |
| CNC 86-07B | 3 | 80 | 1, 1 1/4, 1 1/2, 1 3/4, 2, 2 1/4, 2 1/2 | 25, 32, 40, 45, 50, 60, 65 | 5/8 | 2 1/2 | 4 1/2 |
| CNC 86-08B | 3 1/2 | 90 | 1, 1 1/4, 1 1/2, 1 3/4, 2, 2 1/4, 2 1/2, 3 | 25, 32, 40, 45, 50, 60, 65 | 5/8 | 3 | 5 1/4 |

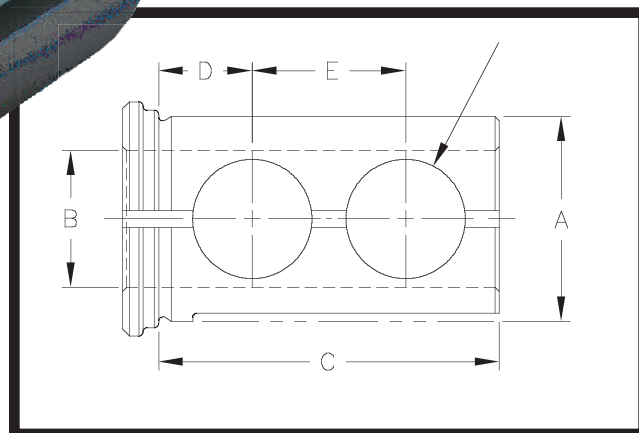
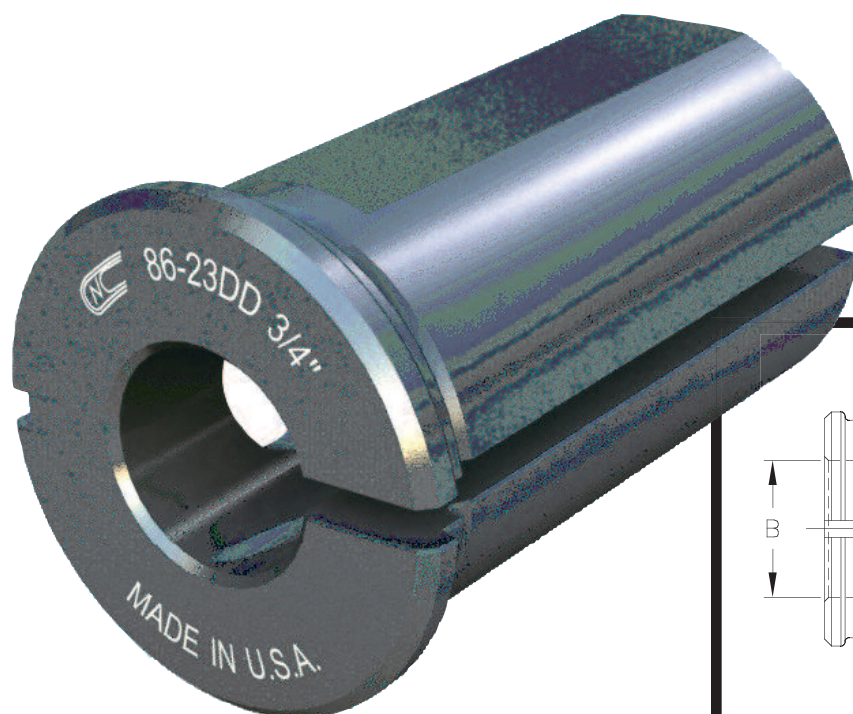
*Special sizes available to fit your machine specifications: inch-metric, metric-inch, or metric-metric.

*All Orders ship standard in inch sizes. If required; please specify metric O.D. or I.D., when ordering.



Toolholder Bushing Type “DD”

With the combination of the industry standard “B” style split bushing and “J” set screw clearance bushing design, CNC has a set a precedent with its new innovative “DD” Double Duty bushing. This new improved “DD” bushing with clearance holes and split milled flat can be used as a conventional “B” style or “J” style bushing. “Double Duty” one of CNC’s latest innovations. Select the O.D. size that fits your machine and order from the chart below.



| CNC PART NUMBER | BUSH DIA. | | STANDARD BORE SIZES STOCKED | | SPECIAL BORE SIZES AVAILABLE | | LENGTH UNDER HEAD | LENGTH DIMENSIONS | | HOLE SIZE | NO. HOLES |
|-----------------|-----------|----|----------------------------------|----------------------------|------------------------------|------|-------------------|-------------------|----|-----------|-----------|
| | A | | B | | MIN. | MAX. | C | D | E | F | |
| | IN. | MM | IN. | MM | | | | | | | |
| CNC 86-23DD | 1½ | 40 | ⅜, ½, ⅝, ¾, ⅞, 1, 1¼ | 10, 12, 16, 20, 25, 32 | ¼ | 1¼ | 2½ | 1/16 | 1⅞ | 7/8 | 2 |
| CNC 86-24DD | 1¾ | 45 | ½, ⅝, ¾, ⅞, 1, 1¼, 1½ | 12, 16, 20, 25, 32, 40 | ⅜ | 1½ | 3 | ¾ | 1¼ | 7/8 | 2 |
| CNC 86-25DD | 2 | 50 | ½, ⅝, ¾, ⅞, 1, 1¼, 1½, 1¾ | 12, 16, 20, 25, 32, 45, 50 | ⅜ | 1¾ | 3½ | ¾ | 1½ | 1 | 2 |
| CNC 86-26DD | 2½ | 65 | ½, ⅝, ¾, ⅞, 1, 1¼, 1½, 1¾, 2, 2¼ | 20, 25, 32, 40, 45, 50 | ½ | 2¼ | 4 | 7/8 | 1¾ | 1¼ | 2 |
| CNC 86-27DD | 3 | 80 | 1, 1¼, 1½, 1¾, 2, 2¼, 2½ | 25, 32, 40, 45, 50, 60, 65 | ¾ | 2½ | 4½ | 1 | 2 | 1¼ | 4 |
| CNC 86-28DD | 3½ | 90 | 1½, 1¾, 2, 2¼, 2½, 3 | 25, 32, 40, 45, 50, 60, 65 | ¾ | 3 | 5¼ | 1¼ | 2½ | 1¼ | 4 |

*Special sizes available to fit your machine specifications: inch-metric, metric-inch, or metric-metric.

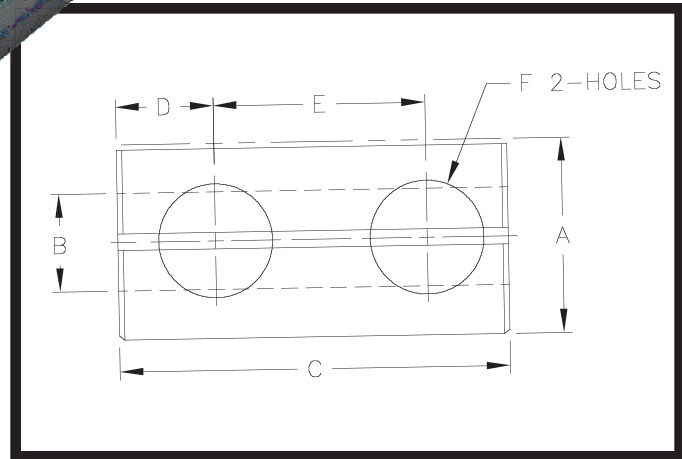
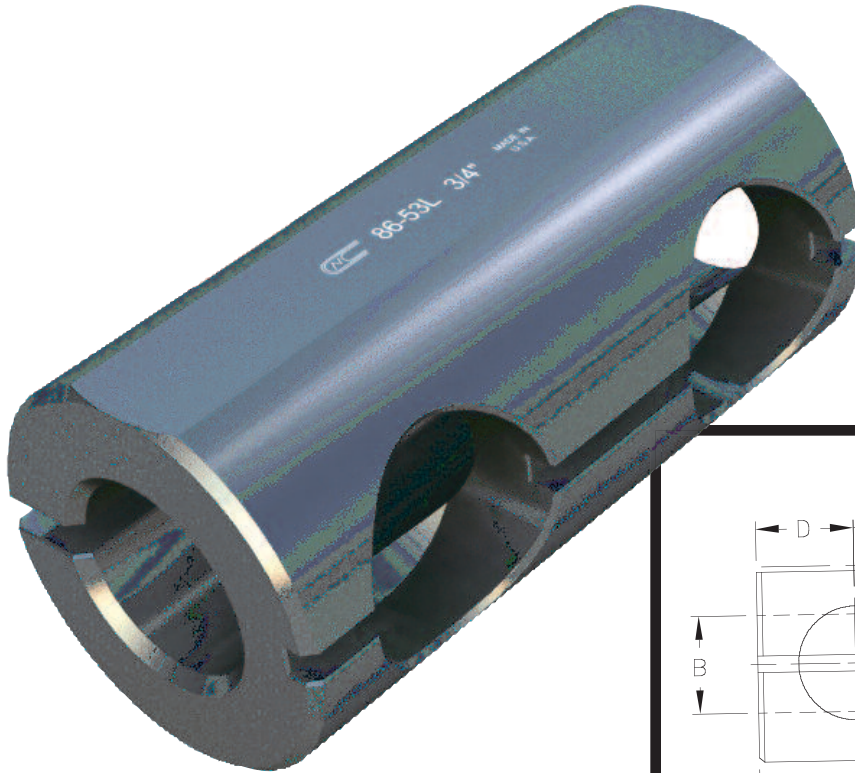
*All Orders ship standard in inch sizes. If required; please specify metric O.D. or I.D., when ordering.



Toolholder Bushing Type “L”

All “L” style bushings are shoulder-less, have set screw clearance holes opposite the slot and have a split with a flat on the O.D.

“L” Style Bushings are used to adapt drills, boring bars and shank tools to any size in a standard turret or toolholder. CNC has full selection and assortment of these bushings. We can supply these to you, minimizing production downtime – allowing you to increase production. Select the O.D. size that fits your machine and order from the chart below.



| CNC PART NUMBER | BUSH DIA. | | STANDARD BORE SIZES STOCKED | | SPECIAL BORE SIZES AVAILABLE | | OVERALL LENGTH | LENGTH DIMENSIONS | | HOLE SIZE | NO. HOLES |
|-----------------|-----------|----|-----------------------------|------------------------|------------------------------|------|----------------|-------------------|----|-----------|-----------|
| | A | | B | | MIN. | MAX. | C | D | E | F | |
| | IN. | MM | IN. | MM | | | | | | | |
| CNC 86-53L | 1½ | 40 | ⅜, ½, ⅝, ¾, 1, 1¼ | 10, 12, 16, 20, 25, 32 | ¼ | 1¼ | 3 | ¾ | 1⅝ | ⅞ | 2 |
| CNC 86-54L | 1¾ | 45 | ½, ⅝, ¾, 1, 1¼, 1½ | 12, 16, 20, 25, 32, 40 | ⅜ | 1½ | 3 | ¾ | 1⅝ | ⅞ | 2 |
| CNC 86-56L | 2¼ | 60 | ⅝, ¾, 1, 1¼, 1½, 1¾, 2 | 16, 20, 25, 32, 40, 50 | ½ | 2 | 4½ | ⅞ | 2 | 1 | 2 |
| CNC 86-57L | 2¾ | 70 | ¾, 1, 1¼, 1½, 1¾, 2, 2¼ | 20, 25, 32, 40, 50 | ½ | 2¼ | 4½ | ⅞ | 2 | 1 | 2 |

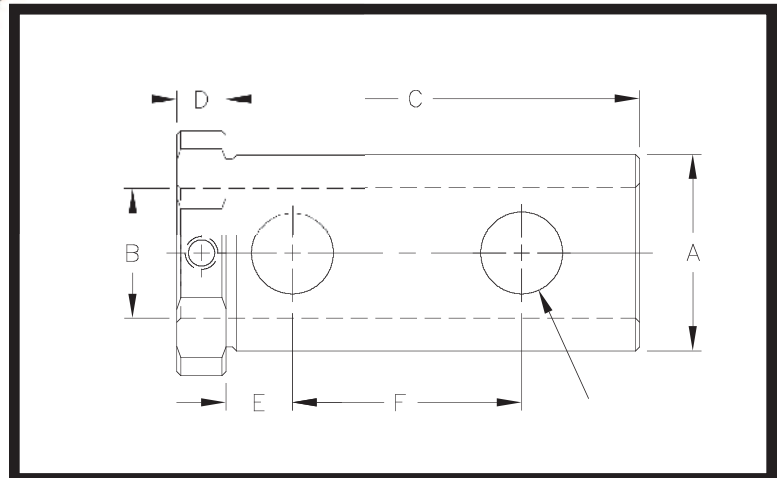
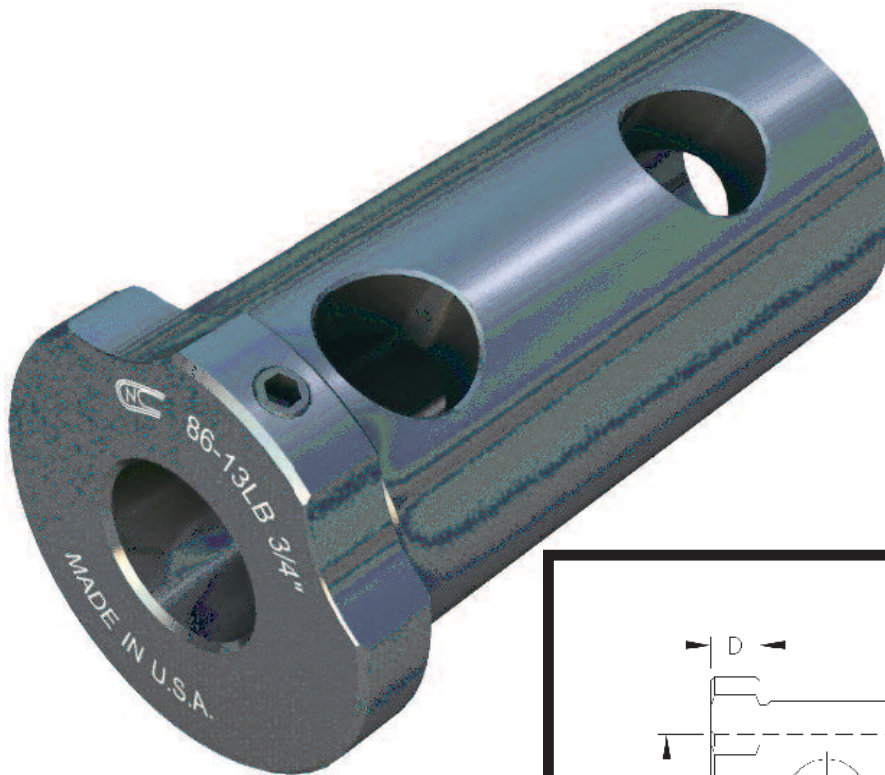
*Special sizes available to fit your machine specifications: inch-metric, metric-inch, or metric-metric.

*All Orders ship standard in inch sizes. If required; please specify metric O.D. or I.D., when ordering.



Toolholder Bushing Type "LB"

This Type LB Toolholder Bushing with long solid body, has four clearance holes so that you can clamp directly on the tool with Set Screws for positive alignment of the cutting edge of the tool. Manufactured to include clearance notches for coolant. They are hardened and precision ground concentric. For use on all Okuma CNC Machines.



| CNC PART NUMBER | BUSHING DIA. | | STANDARD BORE SIZES STOCKED | | LENGTH UNDER HEAD | HEAD THICKNESS | LENGTH DIM. | | HOLE SIZE |
|-----------------|--------------|-----|-----------------------------|----------------------------|-------------------|----------------|-------------|----|-----------|
| | A | | B | | C | D | E | F | G |
| | INCH | M M | INCH | M M | | | | | |
| CNC 86-12LB | 1¼ | 32 | ⅜, ½, ⅝, ¾, ⅞, 1 | 10, 12, 16, 20, 25 | 3⅜ | ⅜ | ½ | 1¾ | ⅝ |
| CNC 86-13LB | 1½ | 40 | ⅜, ½, ⅝, ¾, ⅞, 1, 1¼ | 10, 12, 16, 20, 25, 32 | 3⅜ | ⅜ | ½ | 1¾ | ⅝ |
| CNC 86-15LB | 2 | 50 | ½, ⅝, ¾, ⅞, 1, 1¼, 1½, 1¾ | 12, 16, 20, 25, 32, 40, 45 | 4½ | ½ | ½ | 2¾ | 11/16 |

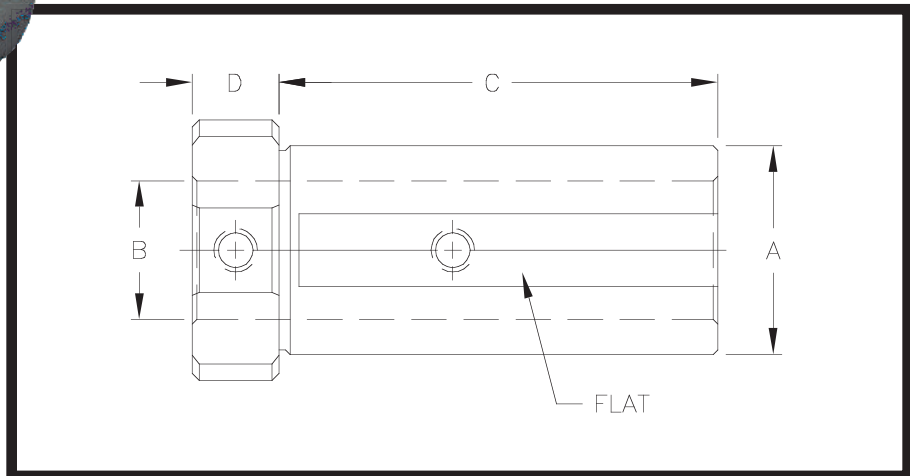
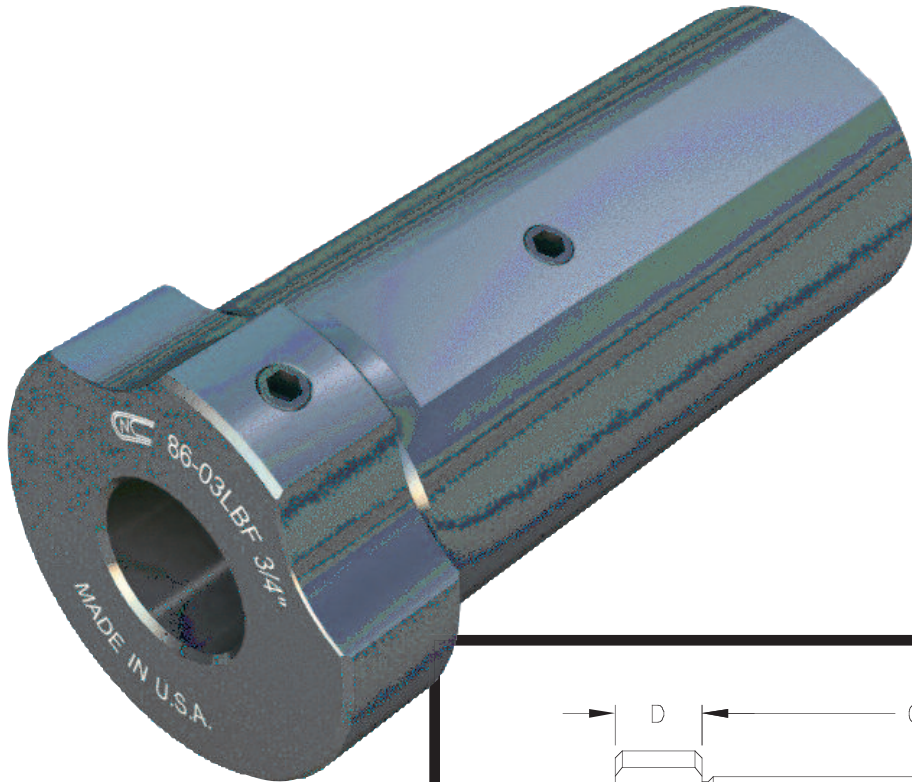
*Special sizes available to fit your machine specifications: inch-metric, metric-inch, or metric-metric.

*All Orders ship standard in inch sizes. If required; please specify metric O.D. or I.D., when ordering.



Toolholder Bushing Type “LBF”

These LBF Type Bushings are manufactured with a flat for clamping the Toolholder and two set screws for clamping a variety of Drills, Boring Bars and other Shank Tools. Equipped with two clearance notches for coolant. Are Heat Treated and precision ground concentric. This Universal Style is good for Coolant Through the Tool applications due to its solid configuration. For use on all Okuma CNC Machines.



| CNC PART NUMBER | BUSHING DIA. | | STANDARD BORE SIZES STOCKED | | LENGTH UNDER HEAD | HEAD THICKNESS |
|-----------------|--------------|----|--|----------------------------|-------------------|----------------|
| | A | | B | | C | D |
| | | | INCH | MM | | |
| CNC 86-12LBF | 1 1/4 | 32 | 3/8, 1/2, 5/8, 3/4, 7/8, 1 | 10, 12, 16, 20, 25 | 2 13/16 | 5/8 |
| CNC 86-03LBF | 1 1/2 | 40 | 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1 1/4 | 10, 12, 16, 20, 25, 32 | 3 5/32 | 5/8 |
| CNC 86-05LBF | 2 | 50 | 1/2, 5/8, 3/4, 7/8, 1, 1 1/4, 1 1/2, 1 3/4 | 12, 16, 20, 25, 32, 40, 45 | 3 3/4 | 3/4 |

*Special sizes available to fit your machine specifications: inch-metric, metric-inch, or metric-metric.

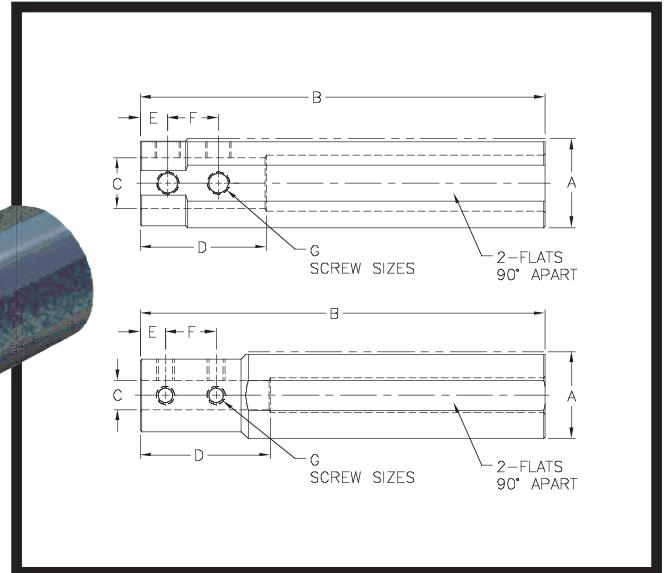
*All Orders ship standard in inch sizes. If required; please specify metric O.D. or I.D., when ordering.



Boring Bar Sleeves

CNC Boring Bar Sleeves are universally used to adapt all Boring Bar or shank type tools to any CNC Turning Machines and Machining Centers for extensions or hard to reach areas. They are hardened, precision ground, concentric, and black oxidized for long lasting protection. Select the O.D. size, length, and ID size from the chart below.

*This NEW innovative design on the 1½ O.D. boring bar sleeves helps the tools stay cool longer by projecting the coolant directly on the cutting edge.



| CNC PART NUMBER | DIMENSIONS | | | | | | | SCREW SIZE | |
|-----------------|------------|----|----|----|----|----|---|------------|-------|
| | A | | B | C | | D | E | | F |
| | IN. | MM | | IN | MM | | | | |
| CNC 8815 | ¾ | 20 | 5 | ¼ | 6 | 1½ | ⅝ | ⅝ | 10-32 |
| CNC 8816 | ¾ | 20 | 5 | ⅝ | 8 | 1½ | ⅝ | ⅝ | 10-32 |
| CNC 8817 | ¾ | 20 | 5 | ¾ | 10 | 1½ | ⅝ | ⅝ | 10-32 |
| CNC 8818 | ¾ | 20 | 5 | ½ | 12 | 3 | ⅝ | ⅝ | 10-32 |
| CNC 8819 | 1 | 25 | 6 | ⅝ | 8 | 1¼ | ⅞ | ⅝ | ¼-28 |
| CNC 8820 | 1 | 25 | 6 | ¾ | 10 | 1¼ | ⅞ | ⅝ | ¼-28 |
| CNC 8821 | 1 | 25 | 6 | ½ | 12 | 2 | ⅞ | ⅝ | ¼-28 |
| CNC 88125 | 1¼ | 32 | 6½ | ¾ | 10 | 1½ | ⅝ | ⅝ | ¼-28 |
| CNC 88126 | 1¼ | 32 | 6½ | ½ | 12 | 2¼ | ⅞ | ⅝ | ¼-28 |
| CNC 88127 | 1¼ | 32 | 6½ | ⅝ | 16 | 2½ | ⅞ | ¾ | ¼-28 |
| CNC 88128 | 1¼ | 32 | 6½ | ¾ | 20 | 3 | ⅞ | ¾ | ¼-28 |
| CNC 88129 | 1¼ | 32 | 6½ | ⅞ | 22 | 4 | ⅞ | ¾ | 10-32 |
| CNC 88130 | 1¼ | 32 | 6½ | 1 | 25 | 4 | ⅞ | ¾ | 10-32 |
| CNC 8822 | 1½ | 40 | 7 | ¾ | 10 | 2 | ⅝ | ⅝ | ¼-28 |
| CNC 8823 | 1½ | 40 | 7 | ½ | 12 | 2¼ | ⅞ | 1⅛ | ⅝-24 |
| CNC 8824 | 1½ | 40 | 7 | ⅝ | 16 | 2¼ | ⅞ | ¾ | ⅝-24 |
| CNC 8825 | 1½ | 40 | 7 | ¾ | 20 | 2½ | ⅞ | ¾ | ⅝-24 |
| CNC 8826 | 1½ | 40 | 8 | ⅞ | 22 | 3 | ⅞ | ¾ | ¼-28 |
| CNC 8827 | 1½ | 40 | 8 | 1 | 25 | 4 | ⅞ | ⅞ | ¼-28 |
| CNC 8828 | 1¾ | 45 | 8 | ½ | 12 | 2½ | ⅝ | ⅝ | ⅝-24 |
| CNC 8829 | 1¾ | 45 | 8 | ⅝ | 16 | 2½ | ⅞ | 1 | ⅝-24 |
| CNC 8830 | 1¾ | 45 | 8 | ¾ | 20 | 2½ | ⅞ | 1 | ¾-24 |
| CNC 8831 | 1¾ | 45 | 8 | ⅞ | 22 | 2½ | ⅞ | 1 | ¾-24 |
| CNC 8832 | 1¾ | 45 | 8 | 1 | 25 | 2½ | ⅞ | 1 | ¾-24 |

| CNC PART NUMBER | DIMENSIONS | | | | | | | SCREW SIZE | |
|-----------------|------------|-----|-----|----|----|----|-------|------------|------|
| | A | | B | C | | D | E | | F |
| | IN. | MM | | IN | MM | | | | |
| CNC 8834 | 2 | 50 | 9 | ⅝ | 16 | 2 | ⅞ | 1 | ⅞-20 |
| CNC 8835 | 2 | 50 | 9 | ¾ | 20 | 2¾ | ⅞ | 1 | ⅞-20 |
| CNC 8833 | 2 | 50 | 9 | ⅞ | 22 | 2 | ⅞ | 1 | ⅞-20 |
| CNC 8836 | 2 | 50 | 9 | 1 | 25 | 3½ | ⅞ | 1 | ½-20 |
| CNC 8837 | 2 | 50 | 9 | 1¼ | 32 | 3 | ⅝ | 1 | ½-20 |
| CNC 8838 | 2½ | 65 | 10 | ⅝ | 16 | 3½ | ⅞ | 1 | ½-20 |
| CNC 8839 | 2½ | 65 | 10 | ¾ | 20 | 3½ | ⅞ | 1 | ½-20 |
| CNC 8840 | 2½ | 65 | 10 | 1 | 25 | 4 | ⅞ | 1 | ½-20 |
| CNC 8841 | 2½ | 65 | 10 | 1¼ | 32 | 4 | ⅝ | 1 | ½-20 |
| CNC 8842 | 2½ | 65 | 10 | 1½ | 40 | 3½ | ½ | 1 | ½-20 |
| CNC 8845 | 3 | 80 | 11½ | 1 | 25 | 4 | ½ | 1 | ½-20 |
| CNC 8843 | 3 | 80 | 11½ | 1¼ | 32 | 3½ | ½ | 1 | ½-20 |
| CNC 8844 | 3 | 80 | 11½ | 1½ | 40 | 4½ | ½ | 1 | ½-20 |
| CNC 8847 | 3 | 80 | 11½ | 1¾ | 45 | 3¾ | ⅝ | 1¼ | ½-20 |
| CNC 8846 | 3 | 80 | 11½ | 2 | 50 | 4½ | ½ | 1 | ½-20 |
| CNC 8850 | 4 | 100 | 14 | 1½ | 40 | 3¾ | 19/32 | 1⅞ | ⅝-18 |
| CNC 8851 | 4 | 100 | 14 | 1¾ | 45 | 3¾ | ⅝ | 1⅞ | ⅝-18 |
| CNC 8852 | 4 | 100 | 14 | 2 | 50 | 3¾ | 19/32 | 1¾ | ⅝-18 |
| CNC 8853 | 4 | 100 | 14 | 2½ | 65 | 4 | ⅝ | 2 | ⅝-18 |
| CNC 8854 | 4 | 100 | 14 | 3 | 80 | 4 | ¾ | 1¼ | ⅝-18 |

*Special sizes available to fit your machine specifications: inch-metric, metric-inch, or metric-metric.

*All Orders ship standard in inch sizes. If required; please specify metric O.D. or I.D., when ordering.

*New Style!



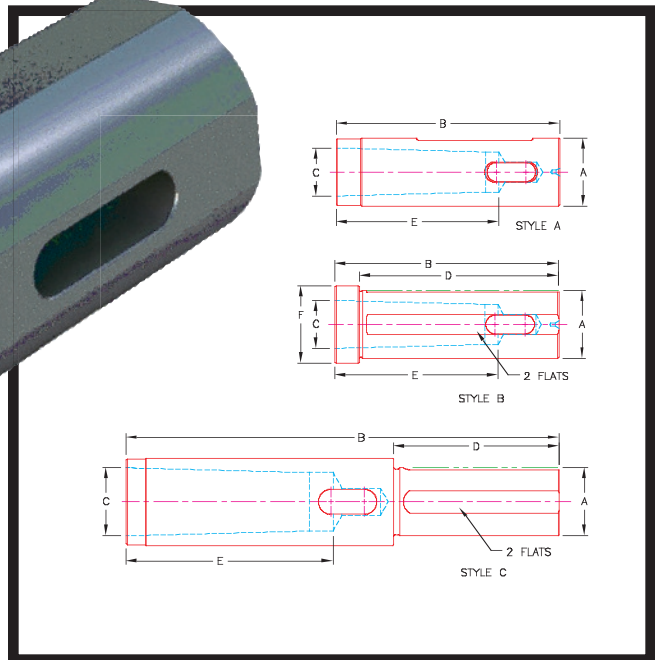
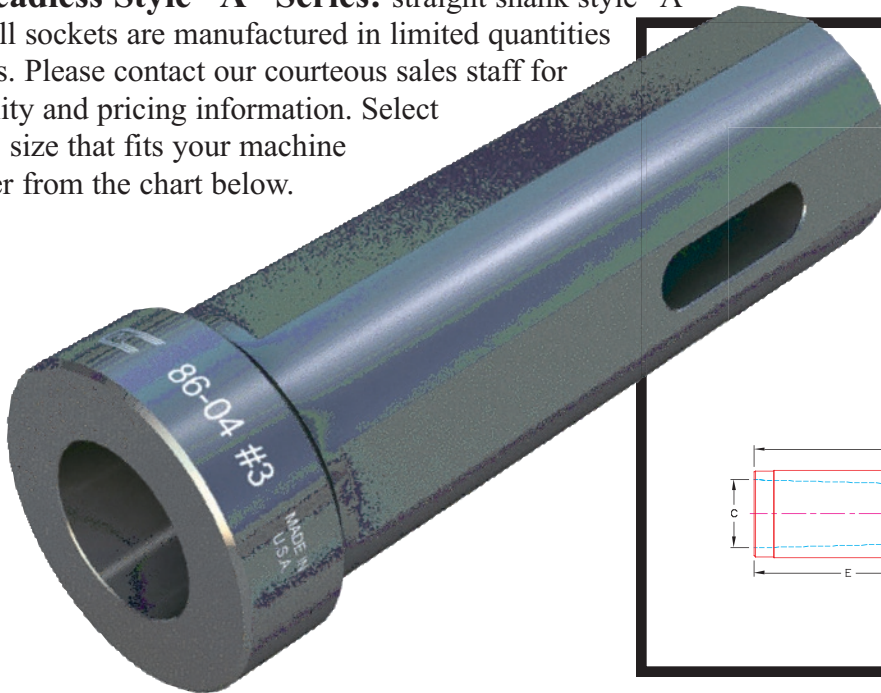
Taper Drill Sockets: Morse Taper

The New Headed Series:

All of our Taper Drill Sockets have been redesigned with a shoulder, as a "B" style, to further insure correct depth of the drilling operation. This new style also provides safety for secondary operations such as boring and reaming. It is held with set screws on two flats so that it will never push back or turn.

Our taper drill sockets are hardened, precision ground, and concentric within .0002 of an inch. They fit directly into tool holders and turrets to positively drive all morse taper shank tools, drills, reamers and counterbores.

The Headless Style "A" Series: straight shank style "A" taper drill sockets are manufactured in limited quantities and sizes. Please contact our courteous sales staff for availability and pricing information. Select the O.D. size that fits your machine and order from the chart below.



| CNC PART NUMBER | STYLE | SHANK DIA. | | B | MORSED TAPER | | | |
|-----------------|-------|------------|----|--------|--------------|--------|--------|-------|
| | | A | | | C | D | E | F |
| | | INCH | MM | | | | | |
| CNC 86-01#1 | A | 3/4 | 20 | 3 1/4 | #1 | 2 5/16 | 2 3/16 | 1 |
| CNC 86-02#1 | B | 1 | 25 | 3 3/4 | #1 | 3 1/8 | 2 3/16 | 1 1/4 |
| CNC 86-02#2 | B | 1 | 25 | 3 3/4 | #2 | 3 1/8 | 2 5/8 | 1 1/4 |
| CNC 86-03#1 | B | 1 1/4 | 32 | 4 | #1 | 3 3/8 | 2 3/16 | 1 1/2 |
| CNC 86-03#2 | B | 1 1/4 | 32 | 4 | #2 | 3 3/8 | 2 5/8 | 1 1/2 |
| CNC 86-03#3 | B | 1 1/4 | 32 | 4 | #3 | 4 | 3 1/4 | 1 1/2 |
| CNC 86-04#1 | B | 1 1/2 | 40 | 5 | #1 | 4 3/8 | 2 3/16 | 1 3/4 |
| CNC 86-04#2 | B | 1 1/2 | 40 | 5 | #2 | 4 3/8 | 2 5/8 | 1 3/4 |
| CNC 86-04#3 | B | 1 1/2 | 40 | 5 | #3 | 4 3/8 | 3 1/4 | 1 3/4 |
| CNC 86-04#4 | B | 1 1/2 | 40 | 5 3/4 | #4 | 4 3/8 | 4 1/8 | 1 3/4 |
| CNC 86-05#1 | B | 1 3/4 | 45 | 5 3/4 | #1 | 5 1/8 | 2 3/16 | 2 |
| CNC 86-05#2 | B | 1 3/4 | 45 | 5 3/4 | #2 | 5 1/8 | 2 5/8 | 2 |
| CNC 86-05#3 | B | 1 3/4 | 45 | 5 3/4 | #3 | 5 1/8 | 3 1/4 | 2 |
| CNC 86-05#4 | B | 1 3/4 | 45 | 5 3/4 | #4 | 4 3/8 | 4 1/8 | 2 |
| CNC 86-06#5 | C | 1 3/4 | 45 | 11 1/8 | #5 | 4 1/4 | 5 1/4 | 1 3/8 |

| CNC PART NUMBER | STYLE | SHANK DIA. | | B | MORSED TAPER | | | |
|-----------------|-------|------------|----|--------|--------------|-------|-------|-------|
| | | A | | | C | D | E | F |
| | | INCH | MM | | | | | |
| CNC 86-07#2 | B | 2 | 50 | 6 1/8 | #2 | 5 1/2 | 2 5/8 | 2 1/4 |
| CNC 86-07#3 | B | 2 | 50 | 6 1/8 | #3 | 5 1/2 | 3 1/4 | 2 1/4 |
| CNC 86-07#4 | B | 2 | 50 | 6 1/8 | #4 | 5 1/2 | 4 1/8 | 2 1/4 |
| CNC 86-08#5 | C | 2 | 50 | 11 1/8 | #5 | 4 1/4 | 5 1/4 | 2 3/8 |
| CNC 86-09#2 | B | 2 1/2 | 65 | 5 3/4 | #2 | 5 1/8 | 2 5/8 | 2 3/4 |
| CNC 86-09#3 | B | 2 1/2 | 65 | 6 5/8 | #3 | 6 | 3 1/4 | 2 3/4 |
| CNC 86-09#4 | B | 2 1/2 | 65 | 6 5/8 | #4 | 6 | 4 1/8 | 2 3/4 |
| CNC 86-09#5 | B | 2 1/2 | 65 | 7 5/8 | #5 | 7 | 5 1/4 | 2 3/4 |
| CNC 86-11#4 | B | 3 | 80 | 6 5/8 | #4 | 6 | 4 1/8 | 3 3/8 |
| CNC 86-12#5 | B | 3 | 80 | 7 5/8 | #5 | 7 | 5 1/4 | 3 3/8 |
| CNC 86-13#4 | B | 2 1/4 | 60 | 6 5/8 | #4 | 6 | 4 1/8 | 2 1/2 |
| CNC 86-14#5 | B | 2 1/4 | 60 | 7 5/8 | #5 | 7 | 5 1/4 | 2 1/2 |
| CNC 86-15#4 | B | 2 3/4 | 70 | 6 5/8 | #4 | 6 | 4 1/8 | 3 |
| CNC 86-16#5 | B | 2 3/4 | 70 | 7 5/8 | #5 | 7 | 5 1/4 | 3 |

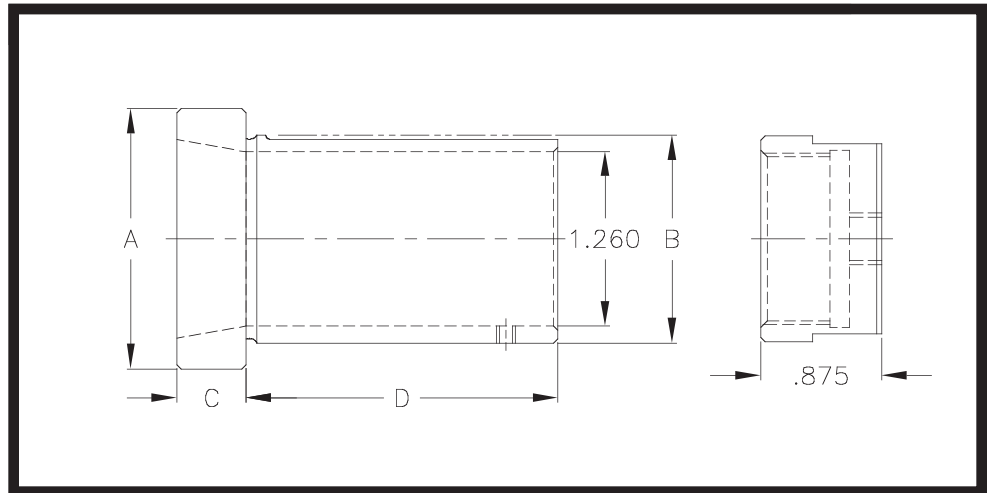
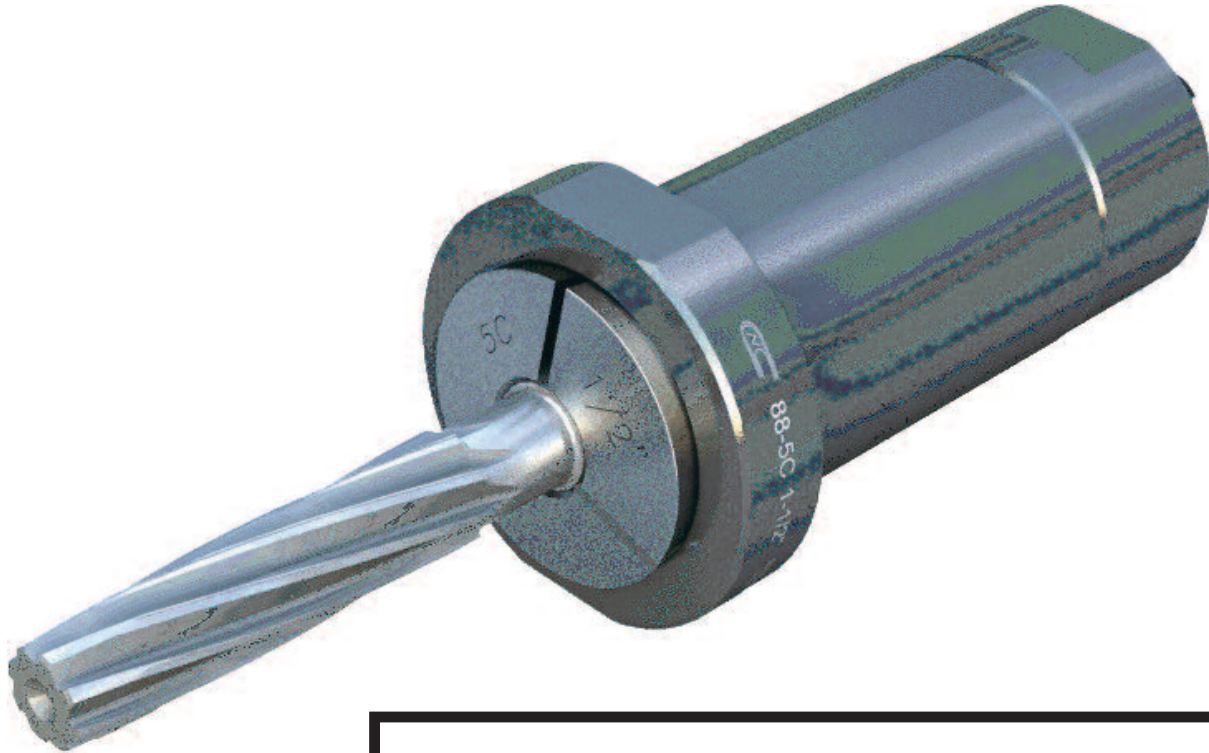
*Special sizes available to fit your machine specifications: inch-metric, metric-inch, or metric-metric.

*All Orders ship standard in inch sizes. If required; please specify metric O.D. or I.D., when ordering.



“5C” Collet Holder Bushing

This brand new 5C Collet Holder Bushing is used to adapt all kinds of Drills, Reamers, Counter Bores and End Mills to your CNC machines. Adds flexibility, versatility and reduces set-up time. Includes back locking nut and screw to hold your 5C Collet in place.



| CNC PART NUMBER | A | B | | C | D | OD NUT SIZE |
|-----------------|----|------|----|---|----|-------------|
| | | INCH | MM | | | |
| CNC 885C 1½ | 2 | 1½ | 40 | ½ | 2¼ | 1¾/16 |
| CNC 885C 1¾ | 2¼ | 1¾ | 45 | ½ | 2¼ | 1¹¹/16 |
| CNC 885C 2 | 2½ | 2 | 50 | ½ | 2¼ | 1¹⁹/16 |
| CNC 885C 2½ | 3 | 2½ | 65 | ½ | 2¼ | 2 7/16 |

Special sizes available to fit your machine specifications: inch-metric, metric-inch, or metric-metric.
All Orders ship standard in inch sizes. If required; please specify metric O.D. or I.D., when ordering.