



ALLIED MACHINE & ENGINEERING CORP



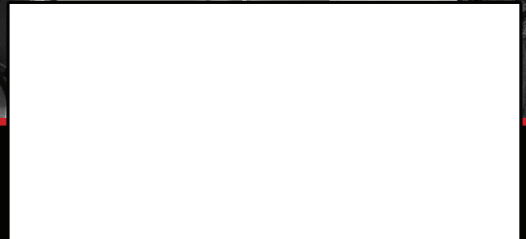
Allied Criterion Boring Systems

Catalog 2014

www.alliedmachine.com



Represented by:



Manufactured in the U.S.A.

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ALLIED MACHINE & ENGINEERING CORP.

For years, Allied Machine has supplied a variety of industries with tooling products that have increased productivity and improved precision. With the introduction of the revolutionary CBER® Boring System, manufacturers eliminate the need for special holders for precision boring heads.

Our focus on product excellence and service to the customer enables us to deliver outstanding results in a diverse range of manufacturing, production, and process engineering industries. As a result, Allied Machine's high performance tooling is helping countless businesses across the world to produce better products with greater accuracy, increased speed, and higher quality.

Precision, performance, and productivity are core features of Allied Machine tooling. Our commitment to innovation in all aspects of hole-making technology means we continually set new industry standards in production efficiency, tool life, and manufacturing cost improvements.

This product catalog provides detailed information on products in a comprehensive, easy to use, and informative single source reference guide. However, we recognize that every company's needs are unique, which is why our customer service and technical support teams are always available to provide help and advice, should you need it.

Whatever you need, Allied Machine & Engineering Corp. delivers high performance tooling on the cutting edge.



WARNING

Tool failure during use can cause serious injury. Follow safety precautions and instructions that accompany machinery and all tools.

Wear safety glasses and appropriate safety equipment at all times when machinery is operating.



Boring Heads



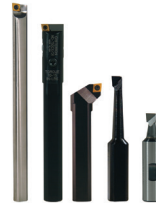
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This catalog contains important messages that pertain to proper use of the products shown in this catalog. Always read and follow all precautions that use these words.

NOTICE means that failure to follow the precautions in this message could result in damage to the tool or machine but not result in personal injury

NOTE and **IMPORTANT** are also used. These are important that you read and follow but are not safety-related.

Visit www.alliedmachine.com for the most up-to-date information and procedures.



Services and Support

Allied Machine's success is not just a result of our quality products and high performance solutions, but also the level of technical support and expertise we provide on a constant basis to all of our customers through a range of dedicated services.

Online Services



Allied Machine's website hosts a number of key features for distributors. One being our online ordering service that simplifies and speeds up the ordering process. It can also be used for checking inventory and pricing. Available to distributors and end-users is our fast response **Insta-Quote™** quoting system that provides quotes and drawings for special purpose tooling online in a matter of minutes.

All of our case studies, product literature, industry sector information and a wealth of other data is available through our website, which includes the latest details to ensure that up-to-date information is available for download. Visit www.alliedmachine.com.

Customer Service



The most important aspect of our business is our customers. Our customer care processes and support operations are vital and integral parts of our commitment to customers.

Sometimes, all that's needed is a helpful and friendly voice at the end of a telephone to check an order, answer a question, or just point you in the right direction. Our fully trained team is always available to help. No matter what your requirement, we'll have someone who can handle your question quickly and effectively.

Technical Support



Our technical department is staffed by Allied Machine experts who have years of experience in helping customers meet demanding application challenges with high performance Allied Machine tooling. They are also

able to provide technical support on a wide range of industry sectors via our technical helpline, which can help customers save time and money when a solution is needed quickly.

We also have an excellent and unique reference library of technical case studies and cutting data which is compiled from information and experience gained from our global applications base. Chances are, if you have an application issue or problem, we've probably already solved it somewhere in the world.

Training



Allied Machine holds regular Technical Education Seminar (TES) training courses in our training facility in Dover, Ohio. These classes allow customers to experience the advanced Allied Machine hole-making solutions and gain deeper

knowledge of their applications. The seminars cover technical data, cutting technology, tool application, and benefits of all Allied Machine products as well as extensive and detailed on-machine training while demonstrating the tools in action. Details and listings for TES courses can be found at www.alliedmachine.com/tes.aspx.

External Support



Our Field Sales Engineers (FSE's) provide a constant "on-the-ground" support network, helping solve manufacturing problems on site and providing the most effective solutions.



Boring Heads



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Features & Benefits

- Large mounting surface for rigidity and stability
- Standard adjustment .001" on diameter
- Micro-adjustment .00005" on diameter
- Large boring ranges
- Dials are direct diameter movement

Komet® and ABS® are registered trademarks of KOMET Präzisionswerkzeuge Robert Breuning GmbH, Besigheim, Germany, and are not affiliated with Allied Machine & Engineering Corp.

Big® and Kaiser® are registered trademarks of Big Daishowa Seiki Co. Ltd., Osaka, Japan and are not affiliated with Allied Machine & Engineering Corp.





Modular Boring System Ranges

Cri-Twin® Modular Boring System

| Description | Inch | | Metric | |
|-----------------|----------------|----------------|----------------|----------------|
| | Min. Bore Dia. | Max. Bore Dia. | Min. Bore Dia. | Max. Bore Dia. |
| CT1000 / CT025M | 1.100 | 1.500 | 28 | 38 |
| CT1250 / CT032M | 1.400 | 1.900 | 36 | 48 |
| CT1500 / CT038M | 1.600 | 2.500 | 41 | 63 |
| CT2000 / CT050M | 2.100 | 3.100 | 54 | 78 |
| CT3000 / CT076M | 3.100 | 5.000 | 79 | 127 |

Cri-Bore® Modular Boring System

| Description | Inch | | Metric | |
|-----------------|----------------|----------------|----------------|----------------|
| | Min. Bore Dia. | Max. Bore Dia. | Min. Bore Dia. | Max. Bore Dia. |
| CB1000 / CB025M | 1.050 | 1.320 | 27 | 33 |
| CB1250 / CB032M | 1.300 | 1.600 | 33 | 41 |
| CB1500 / CB038M | 1.585 | 2.700 | 41 | 68 |
| CB2000 / CB050M | 2.060 | 3.320 | 53 | 84 |
| CB3000 / CB076M | 3.065 | 5.065 | 78 | 128 |
| CB4000 / CB101M | 4.180 | 7.380 | 104 | 187 |

Cri-Tip Boring System

| Description | Inch | | Metric | |
|-------------------------|----------------|----------------|----------------|----------------|
| | Min. Bore Dia. | Max. Bore Dia. | Min. Bore Dia. | Max. Bore Dia. |
| Big® Kaiser® Connection | .050 | 11.000 | 3 | 128 |
| Komet® ABS® Connection | .050 | 11.000 | 3 | 128 |

Large Cri-Bore System

| Description | Inch | | Metric | |
|-------------|----------------|----------------|----------------|----------------|
| | Min. Bore Dia. | Max. Bore Dia. | Min. Bore Dia. | Max. Bore Dia. |
| O.D. Boring | .710 | 7.830 | 19 | 198 |
| I.D. Boring | 5.000 | 12.125 | 127 | 307 |

CB Boring Heads

| Description | Inch | | | | | | Metric | | | | | |
|------------------------|-------------|----------|---------------|----------|------------|-----------|-------------|----------|---------------|----------|------------|-----------|
| | Center Hole | | Outboard Hole | | Cross Hole | | Center Hole | | Outboard Hole | | Cross Hole | |
| | Min Dia. | Max Dia. | Min Dia. | Max Dia. | Min Dia. | Max Dia.* | Min Dia. | Max Dia. | Min Dia. | Max Dia. | Min Dia. | Max Dia.* |
| CB-1500B / CB-038MB | .050 | 1.625 | — | — | — | — | 3 | 40 | — | — | — | — |
| CB-2375A / CB-038MA | .050 | 1.625 | 1.000 | 2.500 | — | — | 3 | 40 | 25 | 62 | — | — |
| CB-202 / CB-050M | .050 | 1.750 | 1.312 | 3.000 | 2.875 | 6.687 | 3 | 44 | 35 | 76 | 73 | 169 |
| CB-203 / CB-076M | .500 | 3.250 | 2.000 | 5.125 | 4.937 | 11.000 | 10 | 70 | 60 | 130 | 126 | 292 |
| CB-204 / CB-101M | .500 | 4.500 | 3.000 | 7.000 | 5.625 | 13.437 | 10 | 113 | 76 | 178 | 143 | 301 |
| CB-206 | 1.750 | 5.750 | 5.500 | 9.500 | 9.093 | 21.500 | — | — | — | — | — | — |
| CB-1500AMA | .050 | 1.625 | 1.000 | 2.500 | — | — | — | — | — | — | — | — |
| CB-2500MA / CB-064MBMA | .050 | 1.750 | 1.312 | 3.000 | — | — | 3 | 42 | 34 | 73 | — | — |
| CB-3000MA / CB-076MDMA | .050 | 3.250 | 2.375 | 5.125 | — | — | 10 | 73 | 60 | 130 | — | — |

*NOTICE: Maximum bore diameter based upon CHB bars being secured in the bar holder with at least 2 set screws

Boring & Facing Heads

| Description | Inch | | | | | | Metric | | | | | |
|-------------------|-------------|----------|---------------|----------|------------|-----------|-------------|----------|---------------|----------|------------|-----------|
| | Center Hole | | Outboard Hole | | Cross Hole | | Center Hole | | Outboard Hole | | Cross Hole | |
| | Min Dia. | Max Dia. | Min Dia. | Max Dia. | Min Dia. | Max Dia.* | Min Dia. | Max Dia. | Min Dia. | Max Dia. | Min Dia. | Max Dia.* |
| BFM-300 / BFM-076 | .500 | 2.875 | 2.375 | 4.750 | 4.937 | 10.625 | 10 | 76 | 60 | 120 | 126 | 288 |

*NOTICE: Maximum bore diameter based upon CHB bars being secured in the bar holder with at least 2 set screws

Boring Heads

Shanks

Bars & Tools

Inserts

Accessories

Kits & Sets

Technical

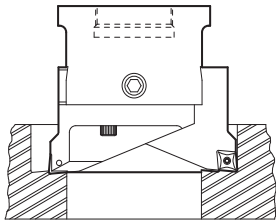
Cri-Twin® Boring Heads

Standard Adjusting



Inserts sold separately

- Remove twice the amount of material with a standard and short insert holder
- Rough and finish in the same operation with a standard and short insert holder
- Remove material twice as fast with two insert holders of the same length

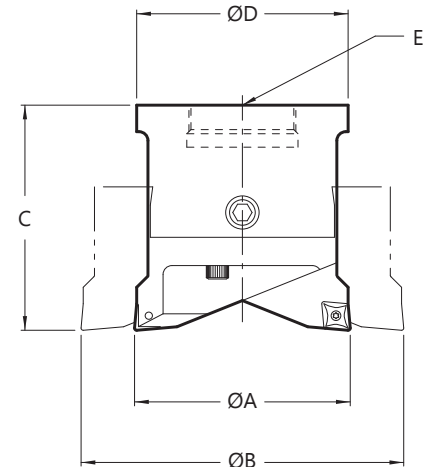


CTXXXX-0 units have a 0° lead angle so they produce a flat bottom

CTXXXX-1 and 2 units have a 5° lead angle

CTXXXX-2 units can be offset to remove twice the amount of material as illustrated

See page 67 for choosing the correct insert holder length for your application



Inch

.001" Adjustment on Diameter

| Part No. | Bore Diameter | | C | ØD | E | Insert | | | Insert Holder Type | |
|----------|---------------|--------|-------|------|----------|--------|-----------|-------------|--------------------|-----------|
| | MIN ØA | MAX ØB | | | | I.C. | Thickness | Shape/Style | Side 1 | Side 2 |
| CT1000-0 | 1.100 | 1.500 | 1.870 | 1.00 | 7/8-20 | .250 | .094 | ◇ CP or CC | Zero Lead | Zero Lead |
| CT1000-1 | 1.100 | 1.500 | 1.900 | 1.00 | 7/8-20 | .250 | .094 | ◇ CP or CC | Standard | Standard |
| CT1000-2 | 1.100 | 1.500 | 1.900 | 1.00 | 7/8-20 | .250 | .094 | ◇ CP or CC | Standard | Short |
| CT1250-0 | 1.400 | 1.900 | 1.870 | 1.25 | 7/8-20 | .250 | .094 | ◇ CP or CC | Zero Lead | Zero Lead |
| CT1250-1 | 1.400 | 1.900 | 1.900 | 1.25 | 7/8-20 | .250 | .094 | ◇ CP or CC | Standard | Standard |
| CT1250-2 | 1.400 | 1.900 | 1.900 | 1.25 | 7/8-20 | .250 | .094 | ◇ CP or CC | Standard | Short |
| CT1500-0 | 1.600 | 2.500 | 2.570 | 1.50 | 7/8-20 | .375 | .156 | ◇ CP or CC | Zero Lead | Zero Lead |
| CT1500-1 | 1.600 | 2.500 | 2.600 | 1.50 | 7/8-20 | .375 | .156 | ◇ CP or CC | Standard | Standard |
| CT1500-2 | 1.600 | 2.500 | 2.600 | 1.50 | 7/8-20 | .375 | .156 | ◇ CP or CC | Standard | Short |
| CT2000-0 | 2.100 | 3.100 | 2.470 | 2.00 | 7/8-20 | .375 | .156 | ◇ CP or CC | Zero Lead | Zero Lead |
| CT2000-1 | 2.100 | 3.100 | 2.500 | 2.00 | 7/8-20 | .375 | .156 | ◇ CP or CC | Standard | Standard |
| CT2000-2 | 2.100 | 3.100 | 2.500 | 2.00 | 7/8-20 | .375 | .156 | ◇ CP or CC | Standard | Short |
| CT3000-0 | 3.100 | 5.000 | 3.170 | 3.00 | 1-1/2-18 | .375 | .156 | ◇ CP or CC | Zero Lead | Zero Lead |
| CT3000-1 | 3.100 | 5.000 | 3.200 | 3.00 | 1-1/2-18 | .375 | .156 | ◇ CP or CC | Standard | Standard |
| CT3000-2 | 3.100 | 5.000 | 3.200 | 3.00 | 1-1/2-18 | .375 | .156 | ◇ CP or CC | Standard | Short |

Metric

.025mm Adjustment on Diameter

| Part No. | Bore Diameter | | C | ØD | E | Insert | | | Insert Holder Type | |
|----------|---------------|--------|----|----|----------|--------|-----------|-------------|--------------------|-----------|
| | MIN ØA | MAX ØB | | | | I.C. | Thickness | Shape/Style | Side 1 | Side 2 |
| CT025M-0 | 28 | 38 | 47 | 25 | 7/8-20 | 6,35 | 2,39 | ◇ CP or CC | Zero Lead | Zero Lead |
| CT025M-1 | 28 | 38 | 48 | 25 | 7/8-20 | 6,35 | 2,39 | ◇ CP or CC | Standard | Standard |
| CT025M-2 | 28 | 38 | 48 | 25 | 7/8-20 | 6,35 | 2,39 | ◇ CP or CC | Standard | Short |
| CT032M-0 | 36 | 48 | 47 | 32 | 7/8-20 | 6,35 | 2,39 | ◇ CP or CC | Zero Lead | Zero Lead |
| CT032M-1 | 36 | 48 | 48 | 32 | 7/8-20 | 6,35 | 2,39 | ◇ CP or CC | Standard | Standard |
| CT032M-2 | 36 | 48 | 48 | 32 | 7/8-20 | 6,35 | 2,39 | ◇ CP or CC | Standard | Short |
| CT038M-0 | 41 | 63 | 65 | 38 | 7/8-20 | 9,53 | 3,96 | ◇ CP or CC | Zero Lead | Zero Lead |
| CT038M-1 | 41 | 63 | 66 | 38 | 7/8-20 | 9,53 | 3,96 | ◇ CP or CC | Standard | Standard |
| CT038M-2 | 41 | 63 | 66 | 38 | 7/8-20 | 9,53 | 3,96 | ◇ CP or CC | Standard | Short |
| CT050M-0 | 54 | 78 | 63 | 50 | 7/8-20 | 9,53 | 3,96 | ◇ CP or CC | Zero Lead | Zero Lead |
| CT050M-1 | 54 | 78 | 64 | 50 | 7/8-20 | 9,53 | 3,96 | ◇ CP or CC | Standard | Standard |
| CT050M-2 | 54 | 78 | 64 | 50 | 7/8-20 | 9,53 | 3,96 | ◇ CP or CC | Standard | Short |
| CT076M-0 | 79 | 127 | 80 | 76 | 1-1/2-18 | 9,53 | 3,96 | ◇ CP or CC | Zero Lead | Zero Lead |
| CT076M-1 | 79 | 127 | 81 | 76 | 1-1/2-18 | 9,53 | 3,96 | ◇ CP or CC | Standard | Standard |
| CT076M-2 | 79 | 127 | 81 | 76 | 1-1/2-18 | 9,53 | 3,96 | ◇ CP or CC | Standard | Short |



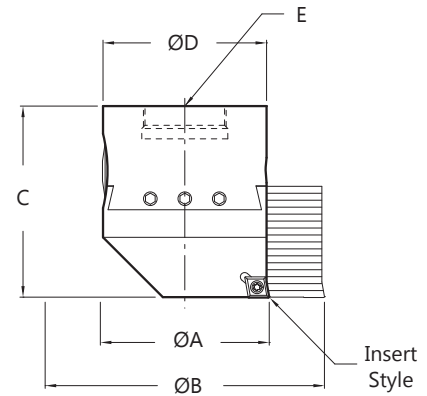
Cri-Bore® Boring Heads

Standard Adjusting



Inserts sold separately

- Excellent for finish boring



Inch

.001" Adjustment on Diameter

| Part No. | Bore Diameter | | C | ØD | E | Insert | | |
|-------------|---------------|--------|-------|-------|----------|--------|-----------|-------------|
| | MIN ØA | MAX ØB | | | | I.C. | Thickness | Shape/Style |
| CB1000-TP | 1.050 | 1.320 | 1.980 | 1.000 | 7/8-20 | .250 | .094 | ▲ TP |
| CB1000-CP | 1.050 | 1.320 | 1.980 | 1.000 | 7/8-20 | .250 | .094 | ◆ CP or CC |
| CB1250-TP | 1.300 | 1.600 | 2.210 | 1.250 | 7/8-20 | .250 | .094 | ▲ TP |
| CB1250-CP | 1.300 | 1.600 | 2.210 | 1.250 | 7/8-20 | .250 | .094 | ◆ CP or CC |
| ▶ CB1500-TP | 1.585 | 2.700 | 2.480 | 1.500 | 7/8-20 | .375 | .125 | ▲ TP |
| ▶ CB1500-CP | 1.585 | 2.700 | 2.480 | 1.500 | 7/8-20 | .375 | .156 | ◆ CP or CC |
| CB2000-TP | 2.060 | 3.320 | 2.735 | 2.000 | 7/8-20 | .375 | .125 | ▲ TP |
| CB2000-CP | 2.060 | 3.320 | 2.735 | 2.000 | 7/8-20 | .375 | .156 | ◆ CP or CC |
| CB3000-TP | 3.065 | 5.065 | 3.465 | 3.000 | 1-1/2-18 | .375 | .125 | ▲ TP |
| CB3000-CP | 3.065 | 5.065 | 3.465 | 3.000 | 1-1/2-18 | .375 | .156 | ◆ CP or CC |
| CB4000-TP | 4.100 | 7.300 | 3.970 | 4.000 | 1-1/2-18 | .375 | .125 | ▲ TP |
| CB4000-CP | 4.180 | 7.380 | 3.970 | 4.000 | 1-1/2-18 | .500 | .188 | ◆ CC |

▶ Can be used with Large Cri-Bore extender bar (see page 51) and shanks (page 28)

Metric

.025mm Adjustment on Diameter

| Part No. | Bore Diameter | | C | ØD | E | Insert | | |
|-------------|---------------|--------|-----|-----|----------|--------|-----------|-------------|
| | MIN ØA | MAX ØB | | | | I.C. | Thickness | Shape/Style |
| CB025M-TP | 27 | 33 | 50 | 25 | 7/8-20 | 6,35 | 2,39 | ▲ TP |
| CB025M-CP | 27 | 33 | 50 | 25 | 7/8-20 | 6,35 | 2,39 | ◆ CP or CC |
| CB032M-TP | 33 | 41 | 56 | 32 | 7/8-20 | 6,35 | 2,39 | ▲ TP |
| CB032M-CP | 33 | 41 | 56 | 32 | 7/8-20 | 6,35 | 2,39 | ◆ CP or CC |
| ▶ CB038M-TP | 41 | 68 | 63 | 38 | 7/8-20 | 9,53 | 3,18 | ▲ TP |
| ▶ CB038M-CP | 41 | 68 | 63 | 38 | 7/8-20 | 9,53 | 3,96 | ◆ CP or CC |
| CB050M-TP | 53 | 84 | 69 | 50 | 7/8-20 | 9,53 | 3,18 | ▲ TP |
| CB050M-CP | 53 | 84 | 69 | 50 | 7/8-20 | 9,53 | 3,96 | ◆ CP or CC |
| CB076M-TP | 78 | 128 | 88 | 76 | 1-1/2-18 | 9,53 | 3,18 | ▲ TP |
| CB076M-CP | 78 | 128 | 88 | 76 | 1-1/2-18 | 9,53 | 3,96 | ◆ CP or CC |
| CB101M-TP | 104 | 185 | 101 | 101 | 1-1/2-18 | 9,53 | 3,18 | ▲ TP |
| CB101M-CP | 106 | 187 | 101 | 101 | 1-1/2-18 | 12,70 | 4,76 | ◆ CC |

▶ Can be used with Large Cri-Bore extender bar (see page 51) and shanks (page 28)

Boring Heads

Shanks

Bars & Tools

Inserts

Accessories

Kits & Sets

Technical

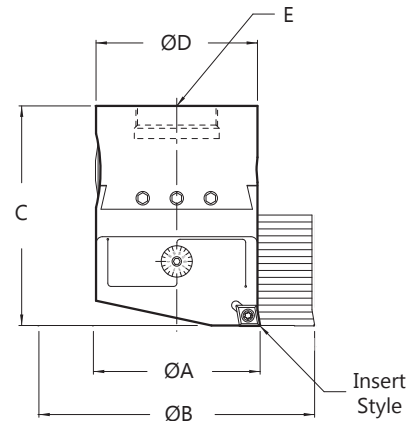
Cri-Bore® Boring Heads

Micro Adjusting



Inserts sold separately

- Excellent for close tolerance boring
- Total range of micro adjustment is .006" (.150mm) on diameter



Inch

.0005" Adjustment on Diameter

| Part No. | Bore Diameter | | C | ØD | E | Insert | | |
|---------------|---------------|--------|-------|-------|----------|--------|-----------|-------------|
| | MIN ØA | MAX ØB | | | | I.C. | Thickness | Shape/Style |
| CB1000-TPMA | 1.050 | 1.320 | 2.580 | 1.000 | 7/8-20 | .250 | .094 | ▲ TP |
| CB1000-CPMA | 1.050 | 1.320 | 2.580 | 1.000 | 7/8-20 | .250 | .094 | ◆ CP or CC |
| CB1250-TPMA | 1.300 | 1.600 | 2.810 | 1.250 | 7/8-20 | .250 | .094 | ▲ TP |
| CB1250-CPMA | 1.300 | 1.600 | 2.810 | 1.250 | 7/8-20 | .250 | .094 | ◆ CP or CC |
| ▶ CB1500-TPMA | 1.585 | 2.700 | 3.180 | 1.500 | 7/8-20 | .375 | .125 | ▲ TP |
| ▶ CB1500-CPMA | 1.585 | 2.700 | 3.180 | 1.500 | 7/8-20 | .375 | .156 | ◆ CP or CC |
| CB2000-TPMA | 2.060 | 3.320 | 3.530 | 2.000 | 7/8-20 | .375 | .125 | ▲ TP |
| CB2000-CPMA | 2.060 | 3.320 | 3.530 | 2.000 | 7/8-20 | .375 | .156 | ◆ CP or CC |
| CB3000-TPMA | 3.065 | 5.065 | 4.090 | 3.000 | 1-1/2-18 | .375 | .125 | ▲ TP |
| CB3000-CPMA | 3.065 | 5.065 | 4.090 | 3.000 | 1-1/2-18 | .375 | .156 | ◆ CP or CC |

▶ Can be used with Large Cri-Bore extender bar (see page 51) and shanks (page 28)

Metric

.0012mm Adjustment on Diameter

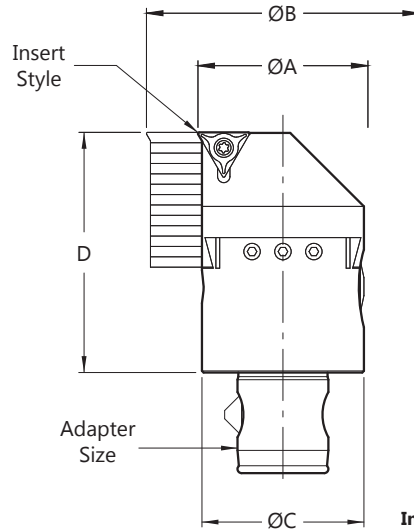
| Part No. | Bore Diameter | | C | ØD | E | Insert | | |
|---------------|---------------|--------|-----|----|----------|--------|-----------|-------------|
| | MIN ØA | MAX ØB | | | | I.C. | Thickness | Shape/Style |
| CB025M-TPMA | 27 | 33 | 65 | 25 | 7/8-20 | 6,35 | 2,39 | ▲ TP |
| CB025M-CPMA | 27 | 33 | 65 | 25 | 7/8-20 | 6,35 | 2,39 | ◆ CP or CC |
| CB032M-TPMA | 33 | 41 | 71 | 32 | 7/8-20 | 6,35 | 2,39 | ▲ TP |
| CB032M-CPMA | 33 | 41 | 71 | 32 | 7/8-20 | 6,35 | 2,39 | ◆ CP or CC |
| ▶ CB038M-TPMA | 41 | 68 | 81 | 38 | 7/8-20 | 9,53 | 3,18 | ▲ TP |
| ▶ CB038M-CPMA | 41 | 68 | 81 | 38 | 7/8-20 | 9,53 | 3,96 | ◆ CP or CC |
| CB050M-TPMA | 53 | 84 | 90 | 50 | 7/8-20 | 9,53 | 3,18 | ▲ TP |
| CB050M-CPMA | 53 | 84 | 90 | 50 | 7/8-20 | 9,53 | 3,96 | ◆ CP or CC |
| CB076M-TPMA | 78 | 128 | 104 | 76 | 1-1/2-18 | 9,53 | 3,18 | ▲ TP |
| CB076M-CPMA | 78 | 128 | 104 | 76 | 1-1/2-18 | 9,53 | 3,96 | ◆ CP or CC |

▶ Can be used with Large Cri-Bore extender bar (see page 51) and shanks (page 28)



Cri-Tip

Standard Adjusting - Komet® ABS® Connection



Inserts sold separately

Inch

.001" Adjustment on Diameter

| Part No. | Bore Diameter | | ØC | D | Insert | | | Adapter Size |
|---------------|---------------|--------|-------|--------|--------|-----------|-------------|--------------|
| | MIN ØA | MAX ØB | | | I.C. | Thickness | Shape/Style | |
| CTP1500-A40TP | 1.585 | 2.700 | 1.500 | 2.550 | .375 | .125 | ▲ TP | A40 |
| CTP1500-A40CP | 1.585 | 2.700 | 1.500 | 2.550 | .375 | .156 | ◆ CP or CC | A40 |
| CTP1500-A50TP | 1.585 | 2.700 | 1.500 | 2.800* | .375 | .125 | ▲ TP | A50 |
| CTP1500-A50CP | 1.585 | 2.700 | 1.500 | 2.800* | .375 | .156 | ◆ CP or CC | A50 |
| CTP2000-A50TP | 2.060 | 3.320 | 2.000 | 2.925 | .375 | .125 | ▲ TP | A50 |
| CTP2000-A50CP | 2.060 | 3.320 | 2.000 | 2.925 | .375 | .156 | ◆ CP or CC | A50 |
| CTP3000-A80TP | 3.065 | 5.065 | 3.000 | 4.250 | .375 | .125 | ▲ TP | A80 |
| CTP3000-A80CP | 3.065 | 5.060 | 3.000 | 4.250 | .375 | .156 | ◆ CP or CC | A80 |

*Max Bore depth is 2.087"

Metric

.025mm Adjustment on Diameter

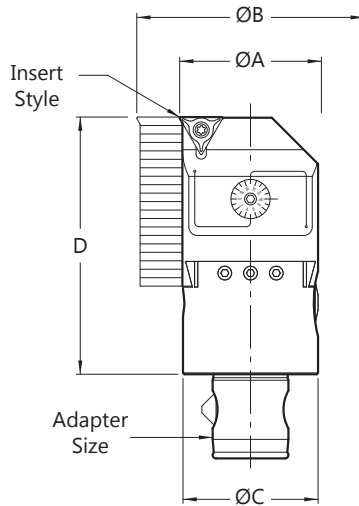
| Part No. | Bore Diameter | | ØC | D | Insert | | | Adapter Size |
|---------------|---------------|--------|----|-----|--------|-----------|-------------|--------------|
| | MIN ØA | MAX ØB | | | I.C. | Thickness | Shape/Style | |
| CTP038M-A40TP | 41 | 68 | 38 | 64 | 9,53 | 3,18 | ▲ TP | A40 |
| CTP038M-A40CP | 41 | 68 | 38 | 64 | 9,53 | 3,96 | ◆ CP or CC | A40 |
| CTP038M-A50TP | 41 | 68 | 38 | 71* | 9,53 | 3,18 | ▲ TP | A50 |
| CTP038M-A50CP | 41 | 68 | 38 | 71* | 9,53 | 3,96 | ◆ CP or CC | A50 |
| CTP050M-A50TP | 53 | 84 | 50 | 74 | 9,53 | 3,18 | ▲ TP | A50 |
| CTP050M-A50CP | 53 | 84 | 50 | 74 | 9,53 | 3,96 | ◆ CP or CC | A50 |
| CTP076M-A80TP | 78 | 128 | 76 | 100 | 9,53 | 3,18 | ▲ TP | A80 |
| CTP076M-A80CP | 78 | 128 | 76 | 100 | 9,53 | 3,96 | ◆ CP or CC | A80 |

*Max Bore depth is 53mm



Micro Adjusting - Komet® ABS® Connection

- Total range of micro adjustment is .006" (.150mm) on diameter



Inserts sold separately

Inch

.00005" Adjustment on Diameter

| Part No. | Bore Diameter | | ØC | D | Insert | | | Adapter Size |
|-----------------|---------------|--------|-------|--------|--------|-----------|-------------|--------------|
| | MIN ØA | MAX ØB | | | I.C. | Thickness | Shape/Style | |
| CTP1500-A40TPMA | 1.585 | 2.700 | 1.500 | 3.250 | .375 | .125 | ▲ TP | A40 |
| CTP1500-A40CPMA | 1.585 | 2.700 | 1.500 | 3.250 | .375 | .156 | ◆ CP or CC | A40 |
| CTP1500-A50TPMA | 1.585 | 2.700 | 1.500 | 3.500* | .375 | .125 | ▲ TP | A50 |
| CTP1500-A50CPMA | 1.585 | 2.700 | 1.500 | 3.500* | .375 | .156 | ◆ CP or CC | A50 |
| CTP2000-A50TPMA | 2.060 | 3.320 | 2.000 | 3.750 | .375 | .125 | ▲ TP | A50 |
| CTP2000-A50CPMA | 2.060 | 3.320 | 2.000 | 3.750 | .375 | .156 | ◆ CP or CC | A50 |
| CTP3000-A80TPMA | 3.065 | 5.065 | 3.000 | 4.875 | .375 | .125 | ▲ TP | A80 |
| CTP3000-A80CPMA | 3.065 | 5.060 | 3.000 | 4.875 | .375 | .156 | ◆ CP or CC | A80 |

*Max Bore depth is 2.795"

Metric

.0012mm Adjustment on Diameter

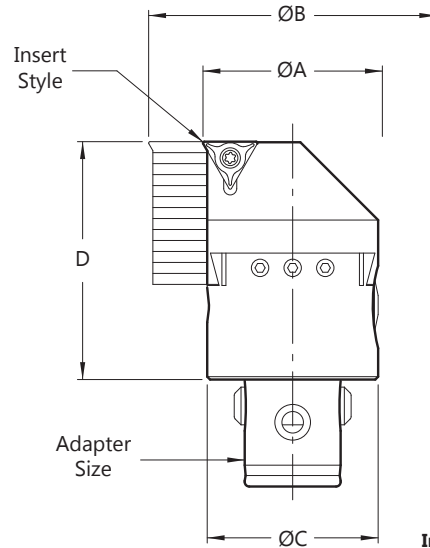
| Part No. | Bore Diameter | | ØC | D | Insert | | | Adapter Size |
|-----------------|---------------|--------|----|-----|--------|-----------|-------------|--------------|
| | MIN ØA | MAX ØB | | | I.C. | Thickness | Shape/Style | |
| CTP038M-A40TPMA | 41 | 68 | 38 | 82 | 9,53 | 3,18 | ▲ TP | A40 |
| CTP038M-A40CPMA | 41 | 68 | 38 | 82 | 9,53 | 3,96 | ◆ CP or CC | A40 |
| CTP038M-A50TPMA | 41 | 68 | 38 | 88* | 9,53 | 3,18 | ▲ TP | A50 |
| CTP038M-A50CPMA | 41 | 68 | 38 | 88* | 9,53 | 3,96 | ◆ CP or CC | A50 |
| CTP050M-A50TPMA | 53 | 84 | 50 | 95 | 9,53 | 3,18 | ▲ TP | A50 |
| CTP050M-A50CPMA | 53 | 84 | 50 | 95 | 9,53 | 3,96 | ◆ CP or CC | A50 |
| CTP076M-A80TPMA | 78 | 128 | 76 | 123 | 9,53 | 3,18 | ▲ TP | A80 |
| CTP076M-A80CPMA | 78 | 128 | 76 | 123 | 9,53 | 3,96 | ◆ CP or CC | A80 |

*Max Bore depth is 71mm



Cri-Tip

Standard Adjusting - Big® Kaiser® Connection



Inserts sold separately

Inch

.001" Adjustment on Diameter

| Part No. | Bore Diameter | | ØC | D | Insert | | | Adapter Size |
|--------------|---------------|--------|-------|--------|--------|-----------|-------------|--------------|
| | MIN ØA | MAX ØB | | | I.C. | Thickness | Shape/Style | |
| CTP1500-K4TP | 1.585 | 2.700 | 1.500 | 2.305 | 0.375 | 0.125 | ▲ TP | KA4 |
| CTP1500-K4CP | 1.585 | 2.700 | 1.500 | 2.305 | 0.375 | 0.156 | ◆ CP or CC | KA4 |
| CTP1500-K5TP | 1.585 | 2.700 | 1.500 | 2.550* | 0.375 | 0.125 | ▲ TP | KA5 |
| CTP1500-K5CP | 1.585 | 2.700 | 1.500 | 2.550* | 0.375 | 0.156 | ◆ CP or CC | KA5 |
| CTP2000-K5TP | 2.060 | 3.320 | 2.000 | 2.740 | 0.375 | 0.125 | ▲ TP | KA5 |
| CTP2000-K5CP | 2.060 | 3.320 | 2.000 | 2.740 | 0.375 | 0.156 | ◆ CP or CC | KA5 |
| CTP3000-K7TP | 3.065 | 5.065 | 3.000 | 3.940 | 0.375 | 0.125 | ▲ TP | KA7 |
| CTP3000-K7CP | 3.065 | 5.060 | 3.000 | 3.940 | 0.375 | 0.156 | ◆ CP or CC | KA7 |

*Max Bore depth is 2.087"

Metric

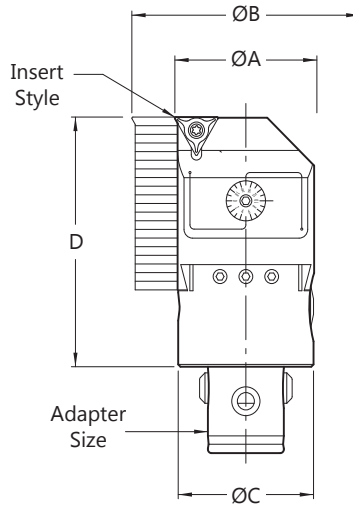
.025mm Adjustment on Diameter

| Part No. | Bore Diameter | | ØC | D | Insert | | | Adapter Size |
|--------------|---------------|--------|----|-----|--------|-----------|-------------|--------------|
| | MIN ØA | MAX ØB | | | I.C. | Thickness | Shape/Style | |
| CTP038M-K4TP | 41 | 68 | 38 | 58 | 9,53 | 3,18 | ▲ TP | KA4 |
| CTP038M-K4CP | 41 | 68 | 38 | 58 | 9,53 | 3,96 | ◆ CP or CC | KA4 |
| CTP038M-K5TP | 41 | 68 | 38 | 64* | 9,53 | 3,18 | ▲ TP | KA5 |
| CTP038M-K5CP | 41 | 68 | 38 | 64* | 9,53 | 3,96 | ◆ CP or CC | KA5 |
| CTP050M-K5TP | 53 | 84 | 50 | 69 | 9,53 | 3,18 | ▲ TP | KA5 |
| CTP050M-K5CP | 53 | 84 | 50 | 69 | 9,53 | 3,96 | ◆ CP or CC | KA5 |
| CTP076M-K7TP | 78 | 128 | 76 | 100 | 9,53 | 3,18 | ▲ TP | KA7 |
| CTP076M-K7CP | 78 | 128 | 76 | 100 | 9,53 | 3,96 | ◆ CP or CC | KA7 |

*Max Bore depth is 53mm



Micro Adjusting - Big® Kaiser® Connection



- Total range of micro adjustment is .006" (.150mm) on diameter

Inserts sold separately

Inch

.00005" Adjustment on Diameter

| Part No. | Bore Diameter | | ØC | D | Insert | | | Adapter Size |
|----------------|---------------|--------|-------|--------|--------|-----------|-------------|--------------|
| | MIN ØA | MAX ØB | | | I.C. | Thickness | Shape/Style | |
| CTP1500-K4TPMA | 1.585 | 2.700 | 1.500 | 3.000 | 0.375 | 0.125 | ▲ TP | KA4 |
| CTP1500-K4CPMA | 1.585 | 2.700 | 1.500 | 3.000 | 0.375 | 0.156 | ◆ CP or CC | KA4 |
| CTP1500-K5TPMA | 1.585 | 2.700 | 1.500 | 3.250* | 0.375 | 0.125 | ▲ TP | KA5 |
| CTP1500-K5CPMA | 1.585 | 2.700 | 1.500 | 3.250* | 0.375 | 0.156 | ◆ CP or CC | KA5 |
| CTP2000-K5TPMA | 2.060 | 3.320 | 2.000 | 3.560 | 0.375 | 0.125 | ▲ TP | KA5 |
| CTP2000-K5CPMA | 2.060 | 3.320 | 2.000 | 3.560 | 0.375 | 0.156 | ◆ CP or CC | KA5 |
| CTP3000-K7TPMA | 3.065 | 5.065 | 3.000 | 4.560 | 0.375 | 0.125 | ▲ TP | KA7 |
| CTP3000-K7CPMA | 3.065 | 5.060 | 3.000 | 4.560 | 0.375 | 0.156 | ◆ CP or CC | KA7 |

*Max Bore depth is 2.795"

Metric

.0012mm Adjustment on Diameter

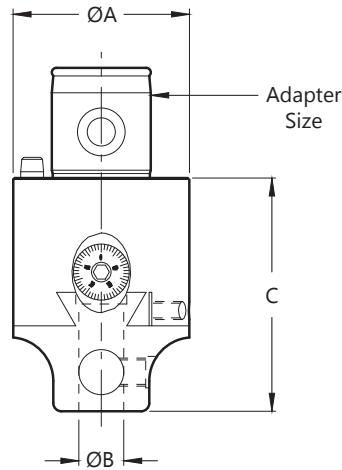
| Part No. | Bore Diameter | | ØC | D | Insert | | | Adapter Size |
|----------------|---------------|--------|----|-----|--------|-----------|-------------|--------------|
| | MIN ØA | MAX ØB | | | I.C. | Thickness | Shape/Style | |
| CTP038M-K4TPMA | 41 | 68 | 38 | 76 | 9,53 | 3,18 | ▲ TP | KA4 |
| CTP038M-K4CPMA | 41 | 68 | 38 | 76 | 9,53 | 3,96 | ◆ CP or CC | KA4 |
| CTP038M-K5TPMA | 41 | 68 | 38 | 82* | 9,53 | 3,18 | ▲ TP | KA5 |
| CTP038M-K5CPMA | 41 | 68 | 38 | 82* | 9,53 | 3,96 | ◆ CP or CC | KA5 |
| CTP050M-K5TPMA | 53 | 84 | 50 | 90 | 9,53 | 3,18 | ▲ TP | KA5 |
| CTP050M-K5CPMA | 53 | 84 | 50 | 90 | 9,53 | 3,96 | ◆ CP or CC | KA5 |
| CTP076M-K7TPMA | 78 | 128 | 76 | 115 | 9,53 | 3,18 | ▲ TP | KA7 |
| CTP076M-K7CPMA | 78 | 128 | 76 | 115 | 9,53 | 3,96 | ◆ CP or CC | KA7 |

*Max Bore depth is 71mm



Cri-Tip

CB Style - Komet® ABS® Connection



Inch

.001" Adjustment on Diameter

| Part No. | ØA | ØB | C | Offset | Bore Diameter | | | | | | Adapter Size |
|------------------|-------|------|-------|--------|---------------|-------|---------------|-------|-------------|--------|--------------|
| | | | | | Center Hole | | Outboard Hole | | Cross Hole* | | |
| | | | | | MIN | MAX | MIN | MAX | MIN | MAX | |
| CTP1500-A40002 | 1.500 | .500 | 2.530 | .562 | .050 | 1.625 | – | – | – | – | A40 |
| CTP1500-A40152 | 1.500 | .375 | 2.530 | .562 | .050 | 1.625 | 1.000 | 2.500 | – | – | A40 |
| CTP1500-A50002 | 1.500 | .500 | 2.780 | .562 | .050 | 1.625 | – | – | – | – | A50 |
| CTP1500-A50152 | 1.500 | .375 | 2.780 | .562 | .050 | 1.625 | 1.000 | 2.500 | – | – | A50 |
| CTP2000-A50202A | 2.000 | .375 | 2.600 | .625 | .050 | 1.750 | 1.312 | 3.000 | 2.875 | 6.687 | A50 |
| CTP2000-A50202B | 2.000 | .500 | 2.600 | .625 | .050 | 1.750 | 1.312 | 3.000 | 2.875 | 6.687 | A50 |
| CTP3000-A80203D | 3.000 | .750 | 3.945 | 1.000 | .500 | 3.250 | 2.375 | 5.125 | 4.937 | 11.000 | A80 |
| ✦CTP3000-A8030MA | 3.000 | .750 | 4.165 | 1.000 | .050 | 3.250 | 2.375 | 5.125 | – | – | A80 |

*NOTICE: Cross Hole Bars should always be secured in the bar holder with at least two set screws.

✦Micro adjusting (.00005" Adjustment on Diameter)

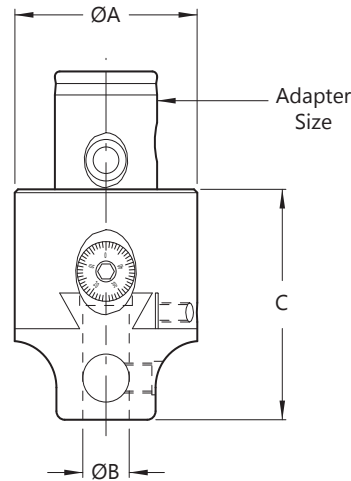
Metric

.025mm Adjustment on Diameter

| Part No. | ØA | ØB | C | Offset | Bore Diameter | | | | | | Adapter Size |
|-----------------|----|----|-----|--------|---------------|-----|---------------|-----|-------------|-----|--------------|
| | | | | | Center Hole | | Outboard Hole | | Cross Hole* | | |
| | | | | | MIN | MAX | MIN | MAX | MIN | MAX | |
| CTP038M-A40B | 38 | 12 | 64 | 14 | 3 | 40 | – | – | – | – | A40 |
| CTP038M-A50B | 38 | 12 | 71 | 14 | 3 | 40 | – | – | – | – | A50 |
| CTP050M-A50B | 50 | 12 | 66 | 16 | 3 | 44 | 35 | 76 | 73 | 169 | A50 |
| CTP076M-A80D | 76 | 20 | 100 | 25 | 10 | 70 | 60 | 130 | 126 | 279 | A80 |
| ✦CTP076M-A80DMA | 76 | 20 | 106 | 25 | 10 | 70 | 60 | 130 | – | – | A80 |

*NOTICE: Cross Hole Bars should always be secured in the bar holder with at least two set screws.

✦Micro adjusting (.00005" Adjustment on Diameter)



Inch

.001" Adjustment on Diameter

| Part No. | ØA | ØB | C | Offset | Bore Diameter | | | | | | Adapter Size |
|------------------|-------|------|-------|--------|---------------|-------|---------------|-------|-------------|--------|--------------|
| | | | | | Center Hole | | Outboard Hole | | Cross Hole* | | |
| | | | | | MIN | MAX | MIN | MAX | MIN | MAX | |
| CTP1500-K4002 | 1.500 | .500 | 2.280 | .562 | .050 | 1.625 | — | — | — | — | KA4 |
| CTP1500-K4152 | 1.500 | .375 | 2.280 | .562 | .050 | 1.625 | 1.000 | 2.500 | — | — | KA4 |
| CTP1500-K5002 | 1.500 | .500 | 2.530 | .562 | .050 | 1.625 | — | — | — | — | KA5 |
| CTP1500-K5152 | 1.500 | .375 | 2.530 | .562 | .050 | 1.625 | 1.000 | 2.500 | — | — | KA5 |
| CTP2000-K5202A | 2.000 | .375 | 2.405 | .625 | .050 | 1.750 | 1.312 | 3.000 | 2.875 | 6.687 | KA5 |
| CTP2000-K5202B | 2.000 | .500 | 2.405 | .625 | .050 | 1.750 | 1.312 | 3.000 | 2.875 | 6.687 | KA5 |
| CTP3000-K7203D | 3.000 | .750 | 3.625 | 1.000 | .500 | 3.250 | 2.375 | 5.125 | 4.937 | 11.000 | KA7 |
| ❖CTP3000-K7300MA | 3.000 | .750 | 3.855 | 1.000 | .050 | 3.250 | 2.375 | 5.125 | — | — | KA7 |

*NOTICE: Cross Hole Bars should always be secured in the bar holder with at least two set screws.

❖Micro adjusting (.00005" Adjustment on Diameter)

Metric

.025mm Adjustment on Diameter

| Part No. | ØA | ØB | C | Offset | Bore Diameter | | | | | | Adapter Size |
|----------------|----|----|----|--------|---------------|-----|---------------|-----|-------------|-----|--------------|
| | | | | | Center Hole | | Outboard Hole | | Cross Hole* | | |
| | | | | | MIN | MAX | MIN | MAX | MIN | MAX | |
| CTP038M-K4B | 38 | 12 | 58 | 14 | 3 | 40 | — | — | — | — | KA4 |
| CTP038M-K5B | 38 | 12 | 64 | 14 | 3 | 40 | — | — | — | — | KA5 |
| CTP050M-K5B | 50 | 12 | 61 | 16 | 3 | 44 | 35 | 76 | 73 | 169 | KA5 |
| CTP076M-K7D | 76 | 20 | 92 | 25 | 10 | 70 | 60 | 130 | 126 | 279 | KA7 |
| ❖CTP076M-K7DMA | 76 | 20 | 98 | 25 | 10 | 70 | 60 | 130 | — | — | KA7 |

*NOTICE: Cross Hole Bars should always be secured in the bar holder with at least two set screws.

❖Micro adjusting (.00005" Adjustment on Diameter)



CB Style Boring Heads

Standard Adjusting

Boring Heads

Shanks

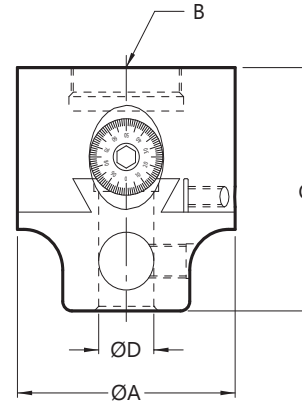
Bars & Tools

Inserts

Accessories

Kits & Sets

Technical



Inch

.001" Adjustment on Diameter

| Part No. | ØA | B | C | ØD | Offset | Bore Diameter | | | | | |
|----------|-------|----------|-------|-------|--------|---------------|-------|---------------|-------|-------------|--------|
| | | | | | | Center Hole | | Outboard Hole | | Cross Hole* | |
| | | | | | | MIN | MAX | MIN | MAX | MIN | MAX |
| CB-1500B | 1.500 | 7/8-20 | 2.500 | .500 | .562 | .050 | 1.625 | – | – | – | – |
| CB-2375A | 1.500 | 7/8-20 | 2.500 | .375 | .562 | .050 | 1.625 | 1.000 | 2.500 | – | – |
| CB-202A | 2.000 | 7/8-20 | 2.406 | .375 | .625 | .050 | 1.750 | 1.312 | 3.000 | 2.875 | 6.687 |
| CB-202B | 2.000 | 7/8-20 | 2.406 | .500 | .625 | .050 | 1.750 | 1.312 | 3.000 | 2.875 | 6.687 |
| CB-203D | 3.000 | 1-1/2-18 | 3.156 | .750 | 1.000 | .500 | 3.250 | 2.375 | 5.125 | 4.937 | 11.000 |
| CB-204E | 4.000 | 1-1/2-18 | 3.867 | 1.000 | 1.625 | .500 | 4.500 | 3.000 | 7.000 | 5.625 | 13.437 |
| CB-206F | 6.000 | 2-1/4-10 | 5.500 | 1.500 | 2.000 | 1.750 | 5.750 | 5.500 | 9.500 | 9.093 | 21.500 |

***NOTICE:** Cross Hole Bars should always be secured in the bar holder with at least two set screws.

Metric

.025mm Adjustment on Diameter

| Part No. | ØA | B | C | ØD | Offset | Bore Diameter | | | | | |
|----------|-----|----------|----|----|--------|---------------|-----|---------------|-----|-------------|-----|
| | | | | | | Center Hole | | Outboard Hole | | Cross Hole* | |
| | | | | | | MIN | MAX | MIN | MAX | MIN | MAX |
| CB-038MB | 38 | 7/8-20 | 63 | 12 | 14 | 3 | 40 | – | – | – | – |
| CB-038MA | 38 | 7/8-20 | 63 | 10 | 14 | 3 | 40 | 25 | 62 | – | – |
| CB-050MA | 50 | 7/8-20 | 61 | 10 | 16 | 3 | 40 | 35 | 76 | 73 | 169 |
| CB-050MB | 50 | 7/8-20 | 61 | 12 | 16 | 3 | 44 | 35 | 76 | 73 | 169 |
| CB-076MD | 76 | 1-1/2-18 | 80 | 20 | 25 | 10 | 70 | 60 | 130 | 126 | 279 |
| CB-101ME | 101 | 1-1/2-18 | 95 | 25 | 41 | 10 | 113 | 76 | 178 | 143 | 341 |

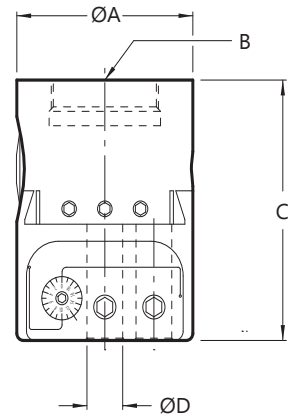
***NOTICE:** Cross Hole Bars should always be secured in the bar holder with at least two set screws.

CB Style Boring Heads

Micro Adjusting



- Excellent for close tolerance bores
- Total range of micro adjustment is .006" (.150mm) on diameter



Inch

.00005" Adjustment on Diameter

| Part No. | ØA | B | C | ØD | Offset | Bore Diameter | | | |
|------------|-------|----------|-------|------|--------|---------------|-------|---------------|-------|
| | | | | | | Center Hole | | Outboard Hole | |
| | | | | | | MIN | MAX | MIN | MAX |
| CB-1500AMA | 1.500 | 7/8-20 | 3.000 | .375 | .562 | .050 | 1.625 | 1.000 | 2.500 |
| CB-2500BMA | 2.500 | 1-1/2-18 | 3.375 | .500 | .687 | .050 | 1.875 | 1.500 | 3.250 |
| CB-3000DMA | 3.000 | 1-1/2-18 | 3.375 | .750 | 1.000 | .050 | 3.250 | 2.375 | 5.125 |

Metric

.0012mm Adjustment on Diameter

| Part No. | ØA | B | C | ØD | Offset | Bore Diameter | | | |
|------------|----|----------|----|----|--------|---------------|-----|---------------|-----|
| | | | | | | Center Hole | | Outboard Hole | |
| | | | | | | MIN | MAX | MIN | MAX |
| CB-064MBMA | 64 | 1-1/2-18 | 86 | 12 | 20 | 3 | 42 | 34 | 73 |
| CB-076MDMA | 76 | 1-1/2-18 | 86 | 20 | 25 | 10 | 73 | 60 | 130 |

Boring Heads

Shanks

Bars & Tools

Inserts

Accessories

Kits & Sets

Technical



CBER[®] Boring System

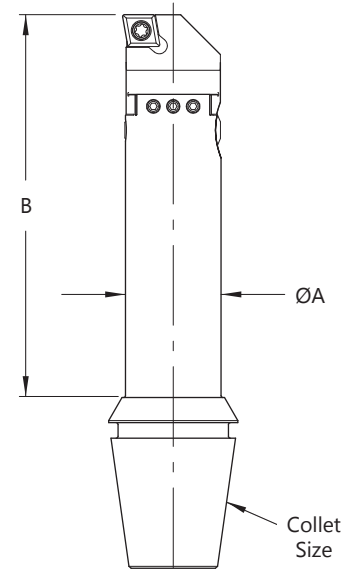
Standard Adjusting

Inch

.001" Adjustment on Diameter

| Part No. | Bore Diameter | | ØA | B | Collet Size | Insert | | |
|-------------|---------------|-------|-------|-------|-------------|--------|-----------|-------------|
| | MIN | MAX | | | | I.C. | Thickness | Shape/Style |
| CBER16S-CP* | .672 | .944 | .625 | 1.500 | ER16 | .250 | .094 | ◇ CP or CC |
| CBER16-CP* | .672 | .944 | .625 | 2.500 | | .250 | .094 | ◇ CP or CC |
| CBER16S-TP* | .672 | .944 | .625 | 1.500 | | .250 | .094 | △ TP |
| CBER16-TP* | .672 | .944 | .625 | 2.500 | | .250 | .094 | △ TP |
| CBER20S-CP | .672 | .944 | .625 | 1.500 | ER20 | .250 | .094 | ◇ CP or CC |
| CBER20-CP | .672 | .944 | .625 | 2.500 | | .250 | .094 | ◇ CP or CC |
| CBER20S-TP | .672 | .944 | .625 | 1.500 | | .250 | .094 | △ TP |
| CBER20-TP | .672 | .944 | .625 | 2.500 | | .250 | .094 | △ TP |
| CBER25S-CP | .825 | 1.087 | .750 | 1.500 | ER25 | .250 | .094 | ◇ CP or CC |
| CBER25-CP | .825 | 1.087 | .750 | 3.000 | | .250 | .094 | ◇ CP or CC |
| CBER25S-TP | .825 | 1.087 | .750 | 1.500 | | .250 | .094 | △ TP |
| CBER25-TP | .825 | 1.087 | .750 | 3.000 | | .250 | .094 | △ TP |
| CBER32S-CP | 1.050 | 1.320 | 1.000 | 2.000 | ER32 | .250 | .094 | ◇ CP or CC |
| CBER32-CP | 1.050 | 1.320 | 1.000 | 4.000 | | .250 | .094 | ◇ CP or CC |
| CBER32S-TP | 1.050 | 1.320 | 1.000 | 2.000 | | .250 | .094 | △ TP |
| CBER32-TP | 1.050 | 1.320 | 1.000 | 4.000 | | .250 | .094 | △ TP |
| CBER40S-CP | 1.300 | 1.600 | 1.250 | 2.500 | ER40 | .250 | .094 | ◇ CP or CC |
| CBER40-CP | 1.300 | 1.600 | 1.250 | 5.000 | | .250 | .094 | ◇ CP or CC |
| CBER40S-TP | 1.300 | 1.600 | 1.250 | 2.500 | | .250 | .094 | △ TP |
| CBER40-TP | 1.300 | 1.600 | 1.250 | 5.000 | | .250 | .094 | △ TP |

*NOTE: CBER16 Style Boring System includes the ER16 collet nut with M22x1.5 thread as part of the assembly



Inserts sold separately

Metric

.025mm Adjustment on Diameter

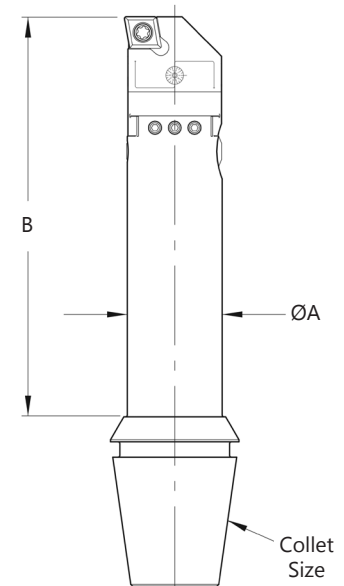
| Part No. | Bore Diameter | | ØA | B | Collet Size | Insert | | |
|--------------|---------------|------|-------|-------|-------------|--------|-----------|-------------|
| | MIN | MAX | | | | I.C. | Thickness | Shape/Style |
| CBER16MS-CP* | 17,1 | 23,9 | 15,9 | 38,1 | ER16 | 6,35 | 2,36 | ◇ CP or CC |
| CBER16M-CP* | 17,1 | 23,9 | 15,9 | 63,5 | | 6,35 | 2,36 | ◇ CP or CC |
| CBER16MS-TP* | 17,1 | 23,9 | 15,9 | 38,1 | | 6,35 | 2,36 | △ TP |
| CBER16M-TP* | 17,1 | 23,9 | 15,9 | 63,5 | | 6,35 | 2,36 | △ TP |
| CBER20MS-CP | 17,1 | 23,9 | 15,9 | 38,1 | ER20 | 6,35 | 2,36 | ◇ CP or CC |
| CBER20M-CP | 17,1 | 23,9 | 15,9 | 63,5 | | 6,35 | 2,36 | ◇ CP or CC |
| CBER20MS-TP | 17,1 | 23,9 | 15,9 | 38,1 | | 6,35 | 2,36 | △ TP |
| CBER20M-TP | 17,1 | 23,9 | 15,9 | 63,5 | | 6,35 | 2,36 | △ TP |
| CBER25MS-CP | 20,1 | 27,6 | 19,05 | 38,1 | ER25 | 6,35 | 2,36 | ◇ CP or CC |
| CBER25M-CP | 20,1 | 27,6 | 19,05 | 76,2 | | 6,35 | 2,36 | ◇ CP or CC |
| CBER25MS-TP | 20,1 | 27,6 | 19,05 | 38,1 | | 6,35 | 2,36 | △ TP |
| CBER25M-TP | 20,1 | 27,6 | 19,05 | 76,2 | | 6,35 | 2,36 | △ TP |
| CBER32MS-CP | 26,7 | 33,5 | 25,4 | 50,8 | ER32 | 6,35 | 2,36 | ◇ CP or CC |
| CBER32M-CP | 26,7 | 33,5 | 25,4 | 101,6 | | 6,35 | 2,36 | ◇ CP or CC |
| CBER32MS-TP | 26,7 | 33,5 | 25,4 | 50,8 | | 6,35 | 2,36 | △ TP |
| CBER32M-TP | 26,7 | 33,5 | 25,4 | 101,6 | | 6,35 | 2,36 | △ TP |
| CBER40MS-CP | 33,1 | 40,6 | 31,75 | 63,5 | ER40 | 6,35 | 2,36 | ◇ CP or CC |
| CBER40M-CP | 33,1 | 40,6 | 31,75 | 127 | | 6,35 | 2,36 | ◇ CP or CC |
| CBER40MS-TP | 33,1 | 40,6 | 31,75 | 63,5 | | 6,35 | 2,36 | △ TP |
| CBER40M-TP | 33,1 | 40,6 | 31,75 | 127 | | 6,35 | 2,36 | △ TP |

*NOTE: CBER16 Style Boring System includes the ER16 collet nut with M22x1.5 thread as part of the assembly

Inch

.00005" Adjustment on Diameter

| Part No. | Bore Diameter | | ØA | B | Collet Size | Insert | | |
|--------------|---------------|-------|-------|-------|-------------|--------|-----------|-------------|
| | MIN | MAX | | | | I.C. | Thickness | Shape/Style |
| CBER32S-CPMA | 1.050 | 1.320 | 1.000 | 2.700 | ER32 | .250 | .094 | ◇ CP or CC |
| CBER32-CPMA | 1.050 | 1.320 | 1.000 | 4.700 | | .250 | .094 | ◇ CP or CC |
| CBER32S-TPMA | 1.050 | 1.320 | 1.000 | 2.700 | | .250 | .094 | △ TP |
| CBER32-TPMA | 1.050 | 1.320 | 1.000 | 4.700 | | .250 | .094 | △ TP |
| CBER40S-CPMA | 1.300 | 1.600 | 1.250 | 3.200 | ER40 | .250 | .094 | ◇ CP or CC |
| CBER40-CPMA | 1.300 | 1.600 | 1.250 | 5.700 | | .250 | .094 | ◇ CP or CC |
| CBER40S-TPMA | 1.300 | 1.600 | 1.250 | 3.200 | | .250 | .094 | △ TP |
| CBER40-TPMA | 1.300 | 1.600 | 1.250 | 5.700 | | .250 | .094 | △ TP |



Metric

.0012mm Adjustment on Diameter

| Part No. | Bore Diameter | | ØA | B | Collet Size | Insert | | |
|---------------|---------------|------|-------|-------|-------------|--------|-----------|-------------|
| | MIN | MAX | | | | I.C. | Thickness | Shape/Style |
| CBER32MS-CPMA | 26,7 | 33,5 | 25,4 | 68,5 | ER32 | 6,35 | 2,36 | ◇ CP or CC |
| CBER32M-CPMA | 26,7 | 33,5 | 25,4 | 119,4 | | 6,35 | 2,36 | ◇ CP or CC |
| CBER32MS-TPMA | 26,7 | 33,5 | 25,4 | 68,5 | | 6,35 | 2,36 | △ TP |
| CBER32M-TPMA | 26,7 | 33,5 | 25,4 | 119,4 | | 6,35 | 2,36 | △ TP |
| CBER40MS-CPMA | 33,1 | 40,6 | 31,75 | 81,2 | ER40 | 6,35 | 2,36 | ◇ CP or CC |
| CBER40M-CPMA | 33,1 | 40,6 | 31,75 | 144,7 | | 6,35 | 2,36 | ◇ CP or CC |
| CBER40MS-TPMA | 33,1 | 40,6 | 31,75 | 81,2 | | 6,35 | 2,36 | △ TP |
| CBER40M-TPMA | 33,1 | 40,6 | 31,75 | 144,7 | | 6,35 | 2,36 | △ TP |

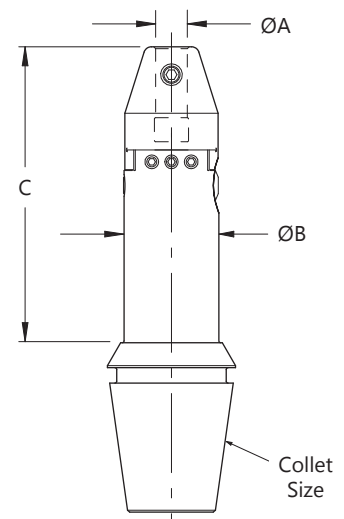
Inserts sold separately

SGL Style - Standard Adjusting

Inch

.001" Adjustment on Diameter

| Part No. | Bore Diameter | | ØA | ØB | C | Collet Size |
|-------------|---------------|------|------|-------|-------|-------------|
| | MIN | MAX | | | | |
| CBER16S-SG* | .050 | .380 | .125 | .625 | 1.500 | ER16 |
| CBER16-SG* | .050 | .380 | | | 2.500 | |
| CBER20S-SG | .050 | .380 | | | 1.500 | ER20 |
| CBER20-SG | .050 | .380 | | | 2.500 | |
| CBER25S-SH | .050 | .470 | .250 | .750 | 1.687 | ER25 |
| CBER25-SH | .050 | .470 | | | 3.187 | |
| CBER32S-SA | .120 | .645 | | | 2.437 | ER32 |
| CBER32-SA | .120 | .645 | | | 4.437 | |
| CBER40S-SB | .250 | .800 | .500 | 1.250 | 2.781 | ER40 |
| CBER40-SB | .250 | .800 | | | 5.281 | |



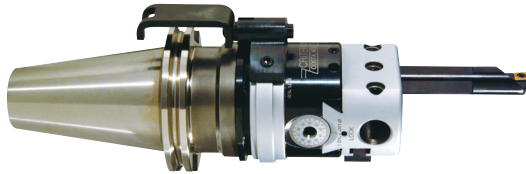
*NOTE: CBER16 Style Boring System includes the ER16 collet nut with M22x1.5 thread as part of the assembly



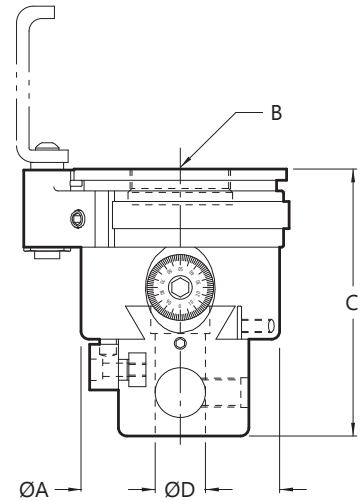
Boring & Facing Heads

CNC

- Boring, facing, grooving, backfacing, and counterboring operations
- Available in .003" per revolution or fine feed .0015" per revolution
- Clutch automatically disengages drive when preset stops are contacted
- Head feeds in both directions



Stop Arm, Shank and Boring Bar sold separately



Inch

.001" Adjustment on Diameter

| Part No. | Feed | ØA | B | C | ØD | Offset | Bore Diameter | | | | | |
|------------|----------|-------|----------|-------|------|--------|---------------|-------|---------------|-------|-------------|--------|
| | | | | | | | Center Hole | | Outboard Hole | | Cross Hole* | |
| | | | | | | | MIN | MAX | MIN | MAX | MIN | MAX |
| BFC-300D | Standard | 3.000 | 1-1/2-18 | 3.875 | .750 | .812 | .500 | 2.875 | 2.375 | 4.750 | 4.937 | 10.625 |
| BFC-300DFF | Fine | 3.000 | 1-1/2-18 | 3.875 | .750 | .812 | .500 | 2.875 | 2.375 | 4.750 | 4.937 | 10.625 |

***NOTICE:** Cross Hole Bars should always be secured in the bar holder with at least two set screws.

Metric

.025mm Adjustment on Diameter

| Part No. | Feed | ØA | B | C | ØD | Offset | Bore Diameter | | | | | |
|-------------|----------|----|----------|----|----|--------|---------------|-----|---------------|-----|-------------|-----|
| | | | | | | | Center Hole | | Outboard Hole | | Cross Hole* | |
| | | | | | | | MIN | MAX | MIN | MAX | MIN | MAX |
| BFC-076MD | Standard | 76 | 1-1/2-18 | 98 | 20 | 22 | 10 | 76 | 60 | 120 | 125 | 288 |
| BFC-076MDFF | Fine | 76 | 1-1/2-18 | 98 | 20 | 22 | 10 | 76 | 60 | 120 | 125 | 288 |

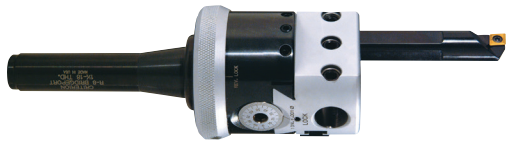
***NOTICE:** Cross Hole Bars should always be secured in the bar holder with at least two set screws.

Boring & Facing Heads

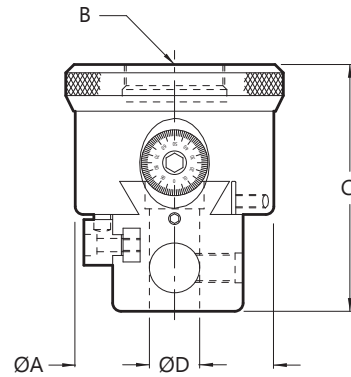
Manual



- Boring, facing, grooving, backfacing, and counterboring operations
- Available in .003" per revolution or fine feed .0015" per revolution
- Clutch automatically disengages drive when preset stops are contacted
- Head feeds in both directions



Stop Arm, Shank and Boring Bar sold separately



Inch

.001" Adjustment on Diameter

| Part No. | Feed | ØA | B | C | ØD | Offset | Bore Diameter | | | | | |
|------------|----------|-------|----------|-------|------|--------|---------------|-------|---------------|-------|-------------|--------|
| | | | | | | | Center Hole | | Outboard Hole | | Cross Hole* | |
| | | | | | | | MIN | MAX | MIN | MAX | MIN | MAX |
| BFM-300D | Standard | 3.000 | 1-1/2-18 | 3.875 | .750 | .812 | .500 | 2.875 | 2.375 | 4.750 | 4.937 | 10.625 |
| BFM-300DFF | Fine | 3.000 | 1-1/2-18 | 3.875 | .750 | .812 | .500 | 2.875 | 2.375 | 4.750 | 4.937 | 10.625 |

*NOTICE: Cross Hole Bars should always be secured in the bar holder with at least two set screws.

Metric

.025mm Adjustment on Diameter

| Part No. | Feed | ØA | B | C | ØD | Offset | Bore Diameter | | | | | |
|-------------|----------|----|----------|----|----|--------|---------------|-----|---------------|-----|-------------|-----|
| | | | | | | | Center Hole | | Outboard Hole | | Cross Hole* | |
| | | | | | | | MIN | MAX | MIN | MAX | MIN | MAX |
| BFM-076MD | Standard | 76 | 1-1/2-18 | 98 | 20 | 22 | 10 | 76 | 60 | 120 | 125 | 288 |
| BFM-076MDFF | Fine | 76 | 1-1/2-18 | 98 | 20 | 22 | 10 | 76 | 60 | 120 | 125 | 288 |

*NOTICE: Cross Hole Bars should always be secured in the bar holder with at least two set screws.

Boring Heads

Shanks

Bars & Tools

Inserts

Accessories

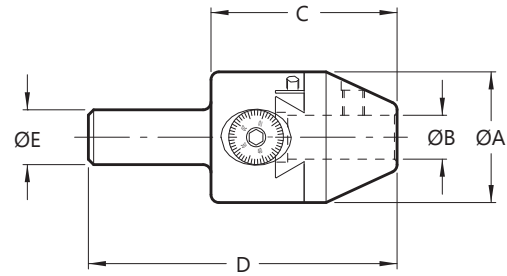
Kits & Sets

Technical



Boring Heads

Tiny Mite



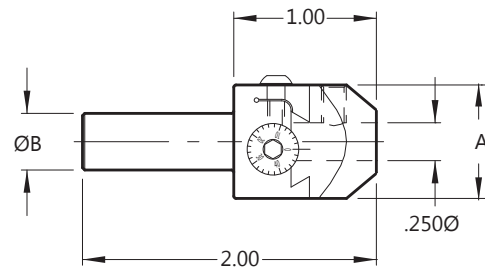
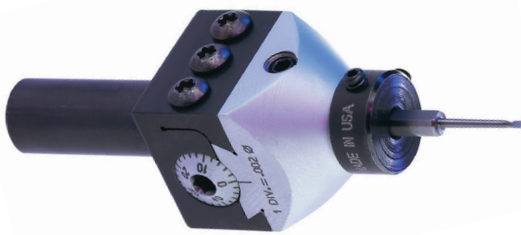
MB002 Style

002 & 152 Style

.001" Adjustment on Diameter

| Part No. | ØA | ØB | C | D | ØE | Offset | Bore Diameter | | | |
|-----------|------|------|-------|-------|------|--------|---------------|-------|---------------|-------|
| | | | | | | | Center Hole | | Outboard Hole | |
| | | | | | | | MIN | MAX | MIN | MAX |
| MB002-500 | 1.50 | .500 | 2.125 | 3.500 | .500 | .562 | .050 | 1.625 | — | — |
| MB002-625 | 1.50 | .500 | 2.125 | 3.500 | .625 | .562 | .050 | 1.625 | — | — |
| MB002-750 | 1.50 | .500 | 2.125 | 3.500 | .750 | .562 | .050 | 1.625 | — | — |
| MB152-500 | 1.50 | .375 | 2.125 | 3.500 | .500 | .562 | .050 | 1.625 | 1.000 | 2.500 |
| MB152-625 | 1.50 | .375 | 2.125 | 3.500 | .625 | .562 | .050 | 1.625 | 1.000 | 2.500 |
| MB152-750 | 1.50 | .375 | 2.125 | 3.500 | .750 | .562 | .050 | 1.625 | 1.000 | 2.500 |

- Effective in limited space applications
- Second hole for a greater boring range

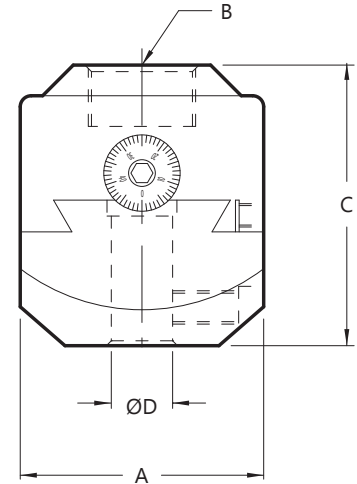


TMT Style

.001" Adjustment on Diameter

| Part No. | A | ØB | Bore Diameter | | | |
|-----------|-------|------|---------------|-------|---------------|-------|
| | | | Center Hole | | Outboard Hole | |
| | | | MIN | MAX | MIN | MAX |
| TMT-0750H | .750 | .375 | .050 | .580 | — | — |
| TMT-1000H | 1.000 | .500 | .050 | 1.100 | .670 | 1.730 |

- Small and compact design

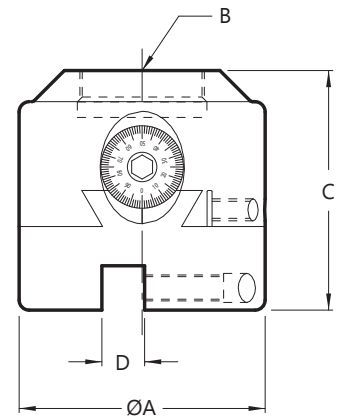


Square

.001" Adjustment on Diameter

| Part No. | A | B | C | ØD | Offset | Bore Diameter | |
|----------|---------|----------|-------|-------|--------|---------------|-------|
| | | | | | | MIN | MAX |
| SQ-1500B | 1.50 SQ | 7/8-20 | 2.250 | .500 | .562 | .050 | 1.625 |
| SQ-2000B | 2.00 SQ | 7/8-20 | 2.250 | .500 | .938 | .050 | 2.375 |
| SQ-3000D | 3.00 SQ | 1-1/2-18 | 2.937 | .750 | 1.500 | .500 | 4.250 |
| SQ-3000E | 3.00 SQ | 1-1/2-18 | 2.937 | 1.000 | 1.500 | .500 | 4.250 |

- Square design allows large offset
- Tapered nose design to facilitate coolant



Slotted

.001" Adjustment on Diameter

| Part No. | ØA | B | C | D | Offset |
|----------|------|----------|-------|------|--------|
| CSL-202 | 2.00 | 7/8-20 | 2.406 | .375 | .625 |
| CSL-203 | 3.00 | 7/8-20 | 2.875 | .500 | 1.000 |
| CSL-204 | 4.00 | 1-1/2-18 | 3.375 | .750 | 1.625 |

- Slotted boring heads can enter the hole being bored



Notes

Boring Heads

Shanks

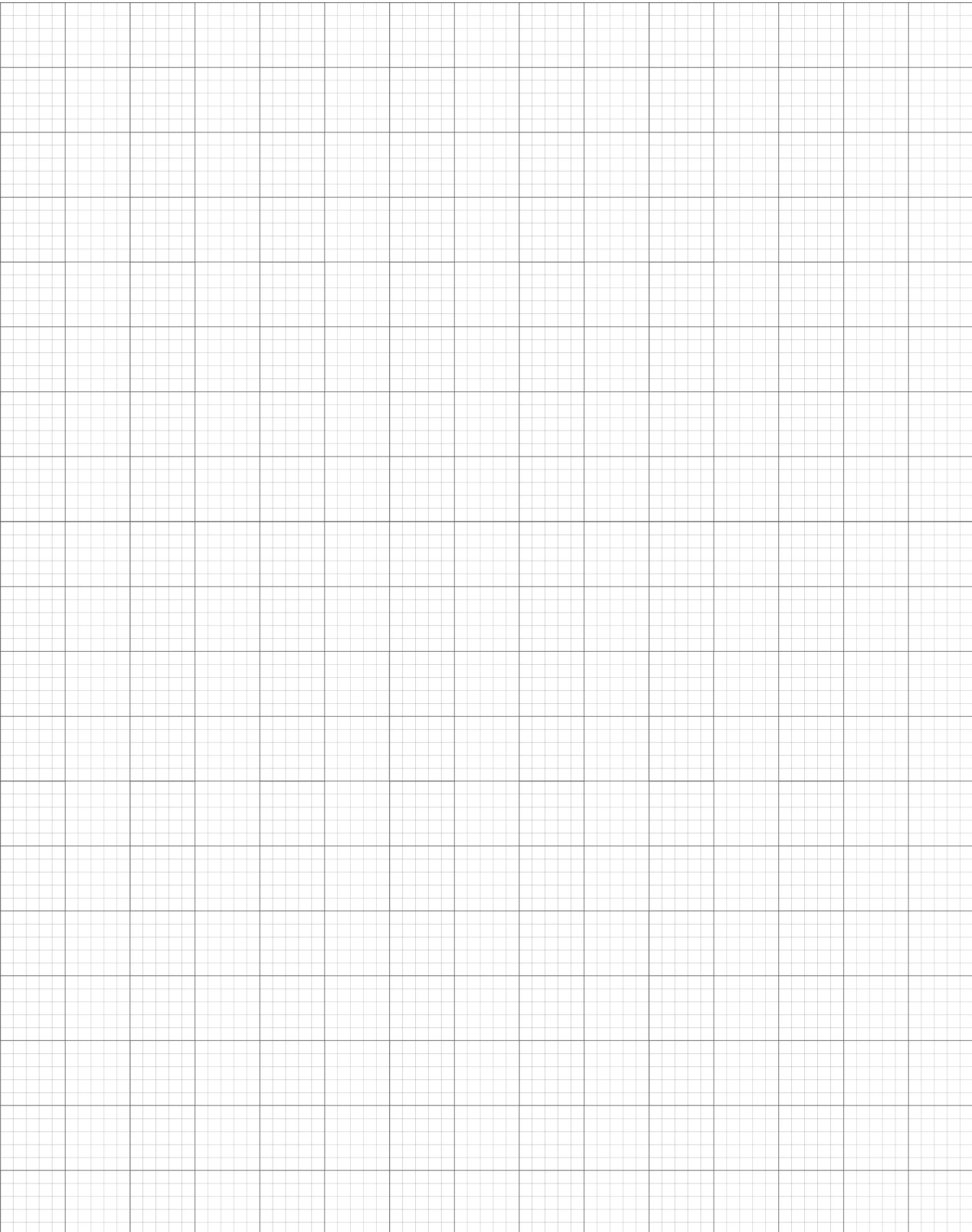
Bars & Tools

Inserts

Accessories

Kits & Sets

Technical



Shanks



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Features & Benefits

- CNC holders ground to AT3 taper tolerance
- Large selection of holders for CNC and Manual Milling Machines
- Large mounting surface on CNC holders for rigidity and stability
- All CNC holders are through the spindle coolant capable



**ALLIED MACHINE
& ENGINEERING CORP**



Shanks

Boring Heads

Shanks

Bars & Tools

Inserts

Accessories

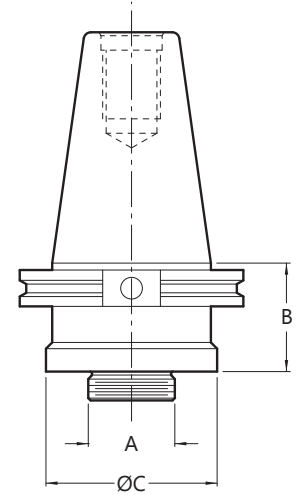
Kits & Sets

Technical

V-Flange

| Part No. | Taper | A | B | ØC |
|-------------|-------|----------|------|------|
| CB1500-CV40 | 40 | 7/8-20 | 1.75 | 1.50 |
| CB1500-CV50 | 50 | 7/8-20 | 1.75 | 1.50 |
| CB2000-CV40 | 40 | 7/8-20 | 1.88 | 2.00 |
| CB2000-CV50 | 50 | 7/8-20 | 1.88 | 2.00 |
| CB2500-CV40 | 40 | 1-1/2-18 | 1.88 | 2.50 |
| CB2500-CV50 | 50 | 1-1/2-18 | 1.88 | 2.50 |
| CB3000-CV40 | 40 | 1-1/2-18 | 1.88 | 3.00 |
| CB3000-CV50 | 50 | 1-1/2-18 | 1.88 | 3.00 |
| CB6000-CV50 | 50 | 2-1/4-10 | 2.13 | 3.38 |

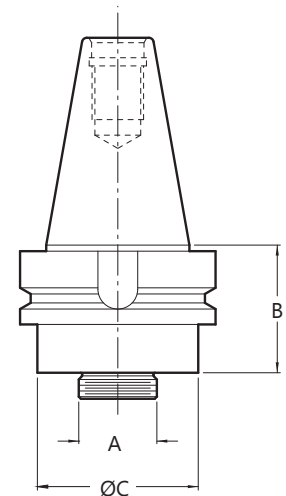
- Taper ground to AT3 tolerance



BT-Flange

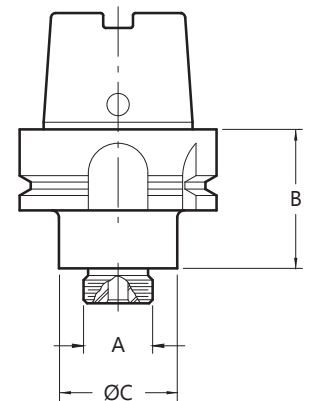
| Part No. | Taper | A | B | ØC |
|-------------|-------|----------|------|------|
| CB1500-BT30 | 30 | 7/8-20 | 1.75 | 1.50 |
| CB1500-BT40 | 40 | 7/8-20 | 1.75 | 1.50 |
| CB1500-BT50 | 50 | 7/8-20 | 1.75 | 1.50 |
| CB2000-BT40 | 40 | 7/8-20 | 1.56 | 2.00 |
| CB2000-BT50 | 50 | 7/8-20 | 1.56 | 2.00 |
| CB2500-BT40 | 40 | 1-1/2-18 | 2.06 | 2.50 |
| CB3000-BT40 | 40 | 1-1/2-18 | 2.06 | 3.00 |
| CB3000-BT50 | 50 | 1-1/2-18 | 2.06 | 3.00 |
| CB6000-BT50 | 50 | 2-1/4-10 | 2.13 | 3.38 |

- Taper ground to AT3 tolerance



HSK

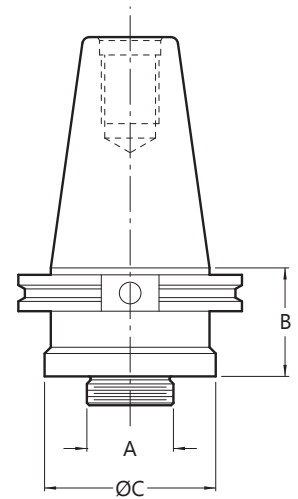
| Part No. | Taper | A | B | ØC |
|----------------|-------|----------|------|------|
| CB1500-HSK63A | 63A | 7/8-20 | 1.75 | 1.50 |
| CB1500-HSK100A | 100A | 7/8-20 | 1.75 | 1.50 |
| CB2000-HSK63A | 63A | 7/8-20 | 1.75 | 2.00 |
| CB2000-HSK100A | 100A | 7/8-20 | 2.25 | 2.00 |
| CB3000-HSK63A | 63A | 1-1/2-18 | 2.25 | 3.00 |
| CB3000-HSK100A | 100A | 1-1/2-18 | 2.25 | 3.00 |



DIN 69871A

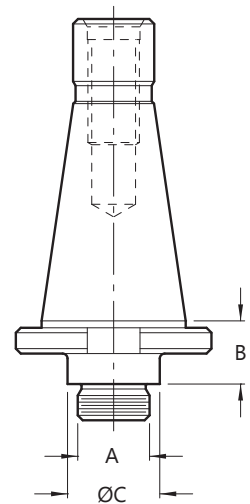
| Part No. | Taper | A | B | ØC |
|--------------|-------|----------|------|----|
| CB038M-DIN40 | 40 | 7/8-20 | 38,4 | 38 |
| CB038M-DIN50 | 50 | 7/8-20 | 38,4 | 38 |
| CB050M-DIN40 | 40 | 7/8-20 | 41,5 | 50 |
| CB050M-DIN50 | 50 | 7/8-20 | 41,5 | 50 |
| CB076M-DIN40 | 40 | 1-1/2-18 | 48 | 76 |
| CB076M-DIN50 | 50 | 1-1/2-18 | 48 | 76 |

- Taper ground to AT3 tolerance



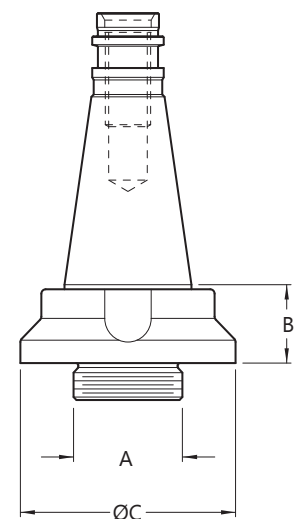
NMTB Taper

| Part No. | Taper | A | B | ØC |
|---------------|-------|----------|------|------|
| NMTB30-087520 | 30 | 7/8-20 | .78 | 1.11 |
| NMTB40-087520 | 40 | 7/8-20 | .77 | 1.11 |
| NMTB50-087520 | 50 | 7/8-20 | 1.25 | 1.11 |
| NMTB30-150018 | 30 | 1-1/2-18 | 1.05 | 1.86 |
| NMTB40-150018 | 40 | 1-1/2-18 | 1.04 | 1.86 |
| NMTB50-150018 | 50 | 1-1/2-18 | 1.25 | 1.86 |
| NMTB50-225010 | 50 | 2-1/4-10 | 1.25 | 3.38 |



DIN 2080

| Part No. | Taper | A | B | ØC |
|--------------|-------|----------|------|----|
| CB038M-ISO30 | SK-30 | 7/8-20 | 19,6 | 38 |
| CB038M-ISO40 | SK-40 | 7/8-20 | 21,1 | 38 |
| CB038M-ISO50 | SK-50 | 7/8-20 | 39,4 | 38 |
| CB050M-ISO30 | SK-30 | 7/8-20 | 25,7 | 50 |
| CB050M-ISO40 | SK-40 | 7/8-20 | 27,7 | 50 |
| CB050M-ISO50 | SK-50 | 7/8-20 | 39,4 | 50 |
| CB076M-ISO40 | SK-40 | 1-1/2-18 | 27,7 | 76 |
| CB076M-ISO50 | SK-50 | 1-1/2-18 | 39,4 | 76 |

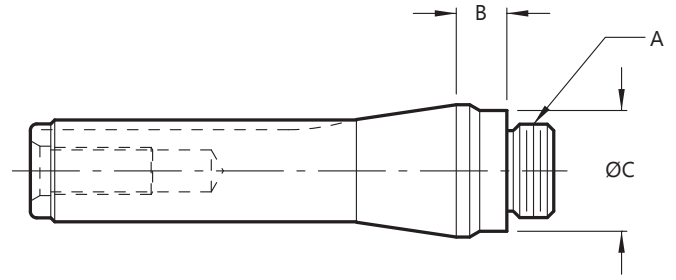




Shanks

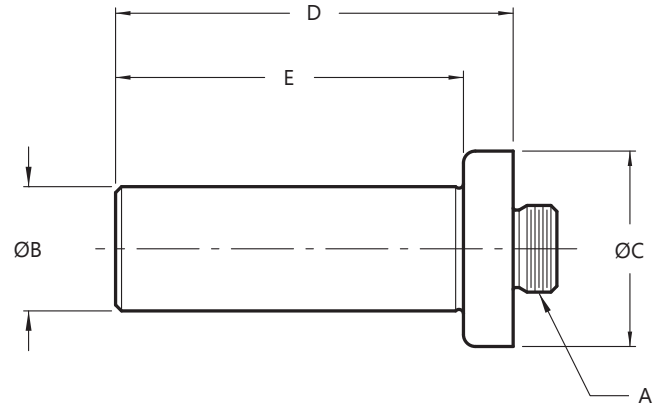
R-8 Shanks

| Part No. | A | B | ØC |
|-----------|----------|-----|------|
| R8-087520 | 7/8-20 | .47 | 1.11 |
| R8-150018 | 1-1/2-18 | .37 | 1.86 |



Straight Shanks

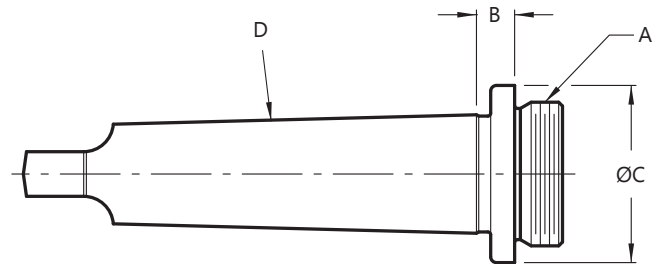
| Part No. | A | ØB | ØC | D | E |
|---------------|----------|-------|------|------|------|
| SS0500-087520 | 7/8-20 | .500 | 1.11 | 2.69 | 2.00 |
| SS0625-087520 | 7/8-20 | .625 | 1.11 | 3.06 | 2.37 |
| SS0750-087520 | 7/8-20 | .750 | 1.11 | 3.44 | 2.75 |
| SS1000-087520 | 7/8-20 | 1.000 | 1.11 | 3.81 | 3.12 |
| SS0750-150018 | 1-1/2-18 | .750 | 1.86 | 3.87 | 3.12 |
| SS1000-150018 | 1-1/2-18 | 1.000 | 1.86 | 3.87 | 3.12 |
| SS1250-150018 | 1-1/2-18 | 1.250 | 1.86 | 4.63 | 3.87 |
| SS1500-150018 | 1-1/2-18 | 1.500 | 1.86 | 5.38 | 4.64 |
| SS2000-150018 | 1-1/2-18 | 2.000 | 1.86 | 6.88 | 6.38 |



Morse Taper Shanks

| Part No. | A | B | ØC | D |
|------------------|----------|-----|------|---|
| *MT2-375THD87520 | 7/8-20 | .44 | 1.11 | 2 |
| MT2-087520 | 7/8-20 | .44 | 1.11 | 2 |
| MT3-087520 | 7/8-20 | .44 | 1.11 | 3 |
| MT4-087520 | 7/8-20 | .25 | 1.11 | 4 |
| MT3-150018 | 1-1/2-18 | .44 | 1.86 | 3 |
| MT4-150018 | 1-1/2-18 | .50 | 1.86 | 4 |
| MT5-150018 | 1-1/2-18 | .62 | 1.86 | 5 |

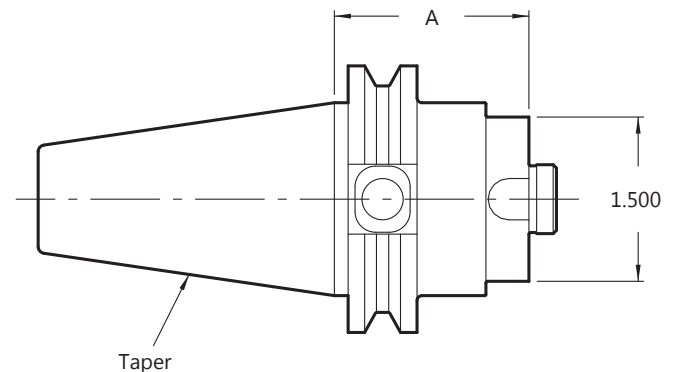
*Features a 3/8-16 Thread instead of tang



Large Cri-Bore System Shanks

| Part No. | Taper | A |
|----------------|--------------|------|
| LCB1500-CV40 | 40 V-Flange | 1.75 |
| LCB1500-CV50 | 50 V-Flange | 1.75 |
| LCB1500-BT40 | 40 BT-Flange | 1.75 |
| LCB1500-HSK63A | HSK63A | 1.75 |

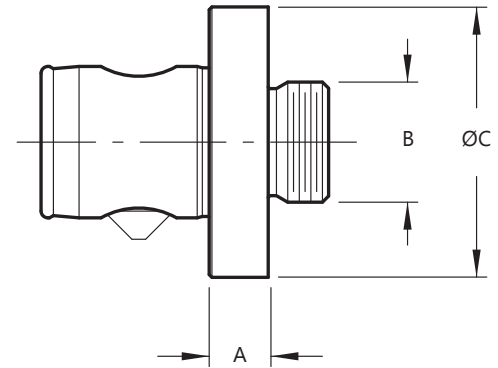
- See pages 8-9 for Cri-Bore heads
- See page 51 for Large Cri-Bore extender bars





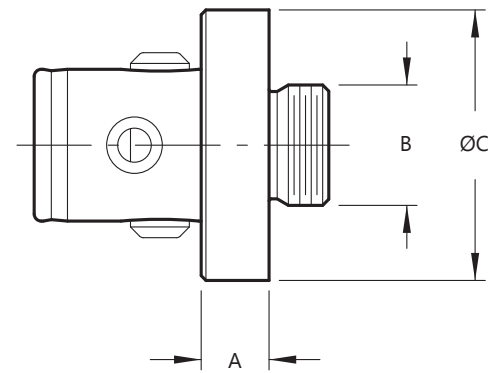
Komet® ABS®

| Part No. | A | B | ØC | Adapter Size |
|-----------------|-------|----------|-------|--------------|
| CTP1500-A400875 | 0.430 | 7/8-20 | 1.500 | A40 |
| CTP2000-A500875 | 0.430 | 7/8-20 | 2.000 | A50 |
| CTP3000-A801500 | 1.050 | 1-1/2-18 | 3.000 | A80 |



Big® Kaiser®

| Part No. | A | B | ØC | Adapter Size |
|-----------------|-------|----------|-------|--------------|
| CTP1500-K408752 | 0.500 | 7/8-20 | 1.500 | KA4 |
| CTP2000-K508752 | 0.500 | 7/8-20 | 2.000 | KA5 |
| CTP3000-K715001 | 0.750 | 1-1/2-18 | 3.000 | KA7 |



Bars & Tools



CONTENTS

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Features & Benefits

- All boring bar and boring tool cutting edges are designed to be on center
- All micro grain carbide
- Designed for use in Boring Heads
- All boring tools are ground concentric to tool shank



**ALLIED MACHINE
& ENGINEERING CORP**

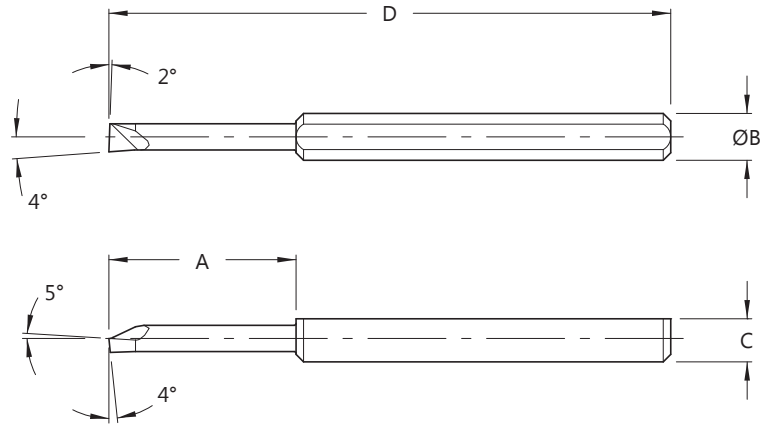


Carbide Boring Tools

Solid Carbide

| Part No. | Min Bore Dia. | A | ØB | C | D |
|---------------|---------------|-------|------|------|-------|
| CBT-00500150G | | .150 | | | |
| CBT-00500300G | .050 | .300 | | | |
| CBT-00500400G | | .400 | | | |
| CBT-00600150G | | .150 | | | |
| CBT-00600300G | .060 | .300 | | | |
| CBT-00600500G | | .500 | | | |
| CBT-00800150G | | .150 | | | |
| CBT-00800300G | .080 | .300 | | | |
| CBT-00800500G | | .500 | .125 | .115 | 1.500 |
| CBT-01000200G | | .200 | | | |
| CBT-01000400G | .100 | .400 | | | |
| CBT-01000600G | | .600 | | | |
| CBT-01000700G | | .700 | | | |
| CBT-01100200G | | .200 | | | |
| CBT-01100400G | .110 | .400 | | | |
| CBT-01100600G | | .600 | | | |
| CBT-01100700G | | .700 | | | |
| CBT-01200250H | | .250 | | | |
| CBT-01200375H | | .375 | | | |
| CBT-01200500H | .120 | .500 | | | |
| CBT-01200625H | | .625 | | | |
| CBT-01200750H | | .750 | | | |
| CBT-01400250H | | .250 | | | |
| CBT-01400375H | | .375 | | | |
| CBT-01400500H | .140 | .500 | | | |
| CBT-01400625H | | .625 | | | |
| CBT-01400750H | | .750 | | | |
| CBT-01600375H | | .375 | | | |
| CBT-01600500H | | .500 | | | |
| CBT-01600625H | .160 | .625 | .250 | .230 | 2.500 |
| CBT-01600750H | | .750 | | | |
| CBT-01600875H | | .875 | | | |
| CBT-01800500H | | .500 | | | |
| CBT-01800625H | | .625 | | | |
| CBT-01800750H | .180 | .750 | | | |
| CBT-01800875H | | .875 | | | |
| CBT-01801000H | | 1.000 | | | |
| CBT-01801125H | | 1.125 | | | |
| CBT-02000500H | | .500 | | | |
| CBT-02000625H | | .625 | | | |
| CBT-02000750H | .200 | .750 | | | |
| CBT-02000875H | | .875 | | | |
| CBT-02001000H | | 1.000 | | | |
| CBT-02001250H | | 1.250 | | | |

- Micro grain carbide
- Uncoated



Boring Heads

Shanks

Bars & Tools

Inserts

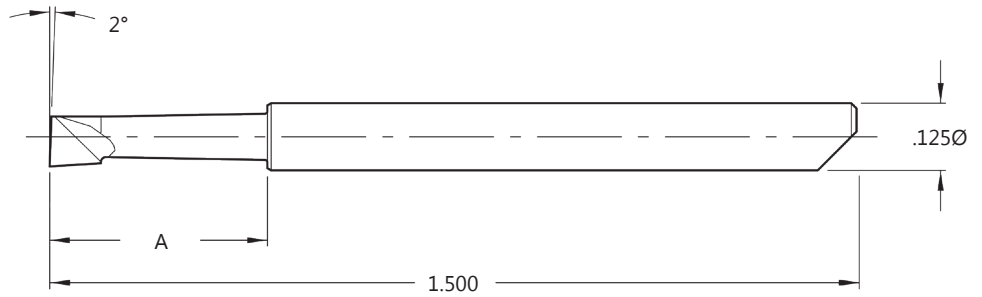
Accessories

Kits & Sets

Technical

Qualified Length Tools

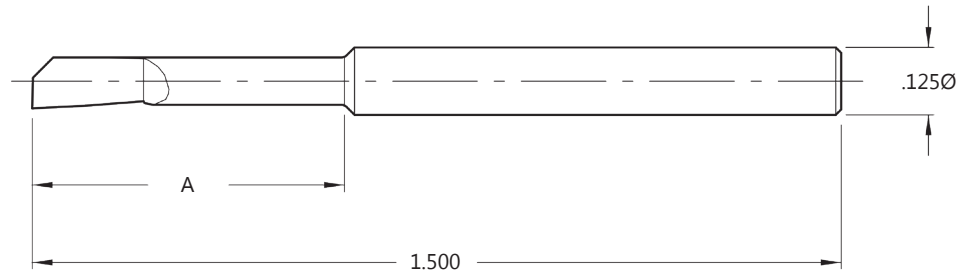
| Part No. | Min Bore Dia. | A |
|-----------------|---------------|------|
| CBT-00500150GQL | .050 | .150 |
| CBT-00500300GQL | | .300 |
| CBT-00500400GQL | | .400 |
| CBT-00600150GQL | .060 | .150 |
| CBT-00600300GQL | | .300 |
| CBT-00600500GQL | | .500 |
| CBT-00800150GQL | .080 | .150 |
| CBT-00800300GQL | | .300 |
| CBT-00800500GQL | | .500 |
| CBT-01000200GQL | .100 | .200 |
| CBT-01000400GQL | | .400 |
| CBT-01000600GQL | | .600 |
| CBT-01000700GQL | .110 | .700 |
| CBT-01100200GQL | | .200 |
| CBT-01100400GQL | | .400 |
| CBT-01100600GQL | .110 | .600 |
| CBT-01100700GQL | | .700 |



- Micro grain carbide
- Uncoated
- Length repeatability $\pm .001$ "
- See adapters on page 54

Helical Rake Carbide Boring Tools

| Part No. | Min Bore Dia. | A |
|-----------------|---------------|-------|
| CBT-00350125GHB | .035 | .125 |
| CBT-00350187GHB | | .187 |
| CBT-00400187GHB | .040 | .187 |
| CBT-00400250GHB | | .250 |
| CBT-00500312GHB | .050 | .312 |
| CBT-00600375GHB | .060 | .375 |
| CBT-00700437GHB | .070 | .437 |
| CBT-00800500GHB | .080 | .500 |
| CBT-00900500GHB | .090 | .500 |
| CBT-01000562GHB | .100 | .562 |
| CBT-01200625GHB | .120 | .625 |
| CBT-01201000GHB | | 1.000 |



- Micro grain carbide
- Uncoated
- Helical ground top rake for better chip control

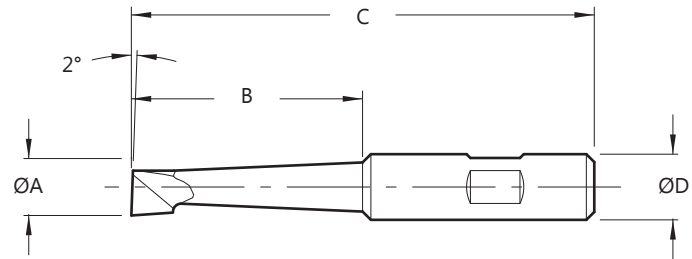


Carbide Boring Tools

Round Shanks (Inch)

| Part No. | Min Bore ØA | B | C | ØD |
|---------------|-------------|-------|-------|------|
| SBT-00620250A | .062 | .250 | 1.590 | 3/8" |
| SBT-00930375A | .093 | .375 | 1.750 | |
| SBT-01250500A | .125 | .500 | 1.875 | |
| SBT-01870812A | .187 | .812 | 2.156 | |
| SBT-02501125A | .250 | 1.125 | 2.468 | |
| SBT-03121500A | .312 | 1.500 | 2.812 | |
| SBT-03751875A | .375 | 1.875 | 3.187 | |
| SBT-05002312A | .500 | 2.312 | 3.500 | |
| SBT-00620250B | .062 | .250 | 1.590 | |
| SBT-00930375B | .093 | .375 | 1.750 | |
| SBT-01250250B | .125 | .250 | 1.656 | |
| SBT-01250500B | .125 | .500 | 1.875 | |
| SBT-01870312B | .187 | .312 | 1.812 | |
| SBT-01870812B | .187 | .812 | 2.156 | |
| SBT-02500437B | .250 | .437 | 2.000 | |
| SBT-02501125B | .250 | 1.125 | 2.468 | |
| SBT-03120562B | .312 | .562 | 2.187 | |
| SBT-03121500B | .312 | 1.500 | 2.812 | |
| SBT-03750687B | .375 | .687 | 2.375 | |
| SBT-03751750B | .375 | 1.750 | 3.187 | |
| SBT-05000812B | .500 | .812 | 2.562 | |
| SBT-05002187B | .500 | 2.187 | 3.500 | |
| SBT-01250500C | .125 | .500 | 2.250 | |
| SBT-01870812C | .187 | .812 | 2.562 | |
| SBT-02501125C | .250 | 1.125 | 2.875 | |
| SBT-03751750C | .375 | 1.750 | 3.500 | |
| SBT-05002125C | .500 | 2.125 | 3.812 | |
| SBT-06252500C | .625 | 2.500 | 4.125 | |
| SBT-05001312D | .500 | 1.312 | 2.937 | |
| SBT-05002187D | .500 | 2.187 | 3.945 | |
| SBT-06252750D | .625 | 2.750 | 4.468 | |
| SBT-07501531D | .750 | 1.531 | 3.156 | |
| SBT-07503000D | .750 | 3.000 | 4.687 | |
| SBT-10001750D | 1.000 | 1.750 | 3.375 | |
| SBT-10003500D | 1.000 | 3.500 | 5.125 | |
| SBT-12504000D | 1.250 | 4.000 | 5.562 | |
| SBT-05002375E | .500 | 2.375 | 4.250 | |
| SBT-06252625E | .625 | 2.625 | 4.468 | |
| SBT-07502875E | .750 | 2.875 | 4.687 | |
| SBT-10001750E | 1.000 | 1.750 | 3.375 | |
| SBT-10003500E | 1.000 | 3.500 | 5.125 | |
| SBT-12501968E | 1.250 | 1.968 | 3.593 | |
| SBT-12503875E | 1.250 | 3.875 | 5.562 | |

- Micro grain carbide
- Uncoated
- Tools with a minimum bore diameter of .250" (6mm) or less feature a solid carbide neck and head; otherwise, the tool has a brazed tip



Boring Heads

Shanks

Bars & Tools

Inserts

Accessories

Kits & Sets

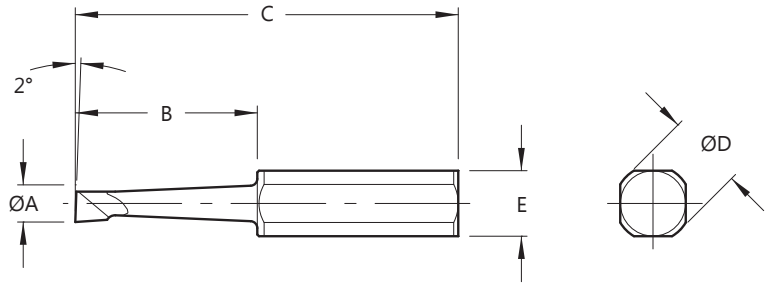
Technical



Square Shank (Inch)

| Part No. | Min Bore ØA | B | C | ØD | E |
|----------------|-------------|-------|-------|------|------|
| SBT-00620250BS | .062 | .250 | 1.590 | 1/2" | .437 |
| SBT-00930375BS | .093 | .375 | 1.750 | | |
| SBT-01250250BS | .125 | .250 | 1.656 | | |
| SBT-01250500BS | .125 | .500 | 1.875 | | |
| SBT-01870312BS | .187 | .312 | 1.812 | | |
| SBT-01870812BS | .187 | .812 | 2.156 | | |
| SBT-02500437BS | .250 | .437 | 2.000 | | |
| SBT-02501125BS | .250 | 1.125 | 2.468 | | |
| SBT-03120562BS | .312 | .562 | 2.187 | | |
| SBT-03121500BS | .312 | 1.500 | 2.812 | | |
| SBT-03750687BS | .375 | .687 | 2.375 | | |
| SBT-03751750BS | .375 | 1.750 | 3.187 | | |
| SBT-05000812BS | .500 | .812 | 2.562 | | |
| SBT-05002187BS | .500 | 2.187 | 3.500 | | |

- Micro grain carbide
- Uncoated
- Tools with a minimum bore diameter of .250" (6mm) or less feature a solid carbide neck and head; otherwise, the tool has a brazed tip



Square Shank (Metric)

| Part No. | Min Bore ØA | B | C | ØD | E |
|-------------|-------------|-----|-----|----|----|
| SBT-03012MA | 3 | 12 | 48 | 10 | 8 |
| SBT-04020MA | 4 | 20 | 55 | | |
| SBT-06028MA | 6 | 28 | 62 | | |
| SBT-08037MA | 8 | 37 | 71 | | |
| SBT-10048MA | 10 | 48 | 81 | | |
| SBT-12055MA | 12 | 55 | 90 | | |
| SBT-03012MB | 3 | 12 | 48 | 12 | 10 |
| SBT-04020MB | 4 | 20 | 55 | | |
| SBT-06028MB | 6 | 28 | 62 | | |
| SBT-08037MB | 8 | 37 | 71 | | |
| SBT-10048MB | 10 | 48 | 81 | | |
| SBT-12055MB | 12 | 55 | 90 | | |
| SBT-12063MD | 12 | 63 | 107 | 20 | 18 |
| SBT-16071MD | 16 | 71 | 113 | | |
| SBT-19078MD | 19 | 78 | 119 | | |
| SBT-25090MD | 25 | 90 | 130 | | |
| SBT-32100MD | 32 | 100 | 141 | | |
| SBT-12060ME | 12 | 60 | 107 | | |
| SBT-16067ME | 16 | 67 | 113 | | |
| SBT-19074ME | 19 | 74 | 119 | | |
| SBT-25089ME | 25 | 89 | 130 | | |
| SBT-32100ME | 32 | 100 | 141 | | |

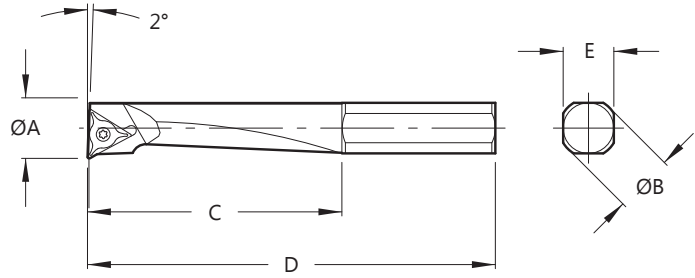


TA Boring Bars

- 4 flat design allows clamping in round holes as well as turret post holders



Inserts sold separately



Inch

| Part No. | Min Bore ØA | ØB | C | D | E | Insert | | |
|--------------|-------------|-------|-------|-------|------|--------|-----------|-------------|
| | | | | | | I.C. | Thickness | Shape/Style |
| TA-02501062A | .250 | .375 | 1.062 | 2.437 | .310 | .156 | .063 | △ WCMT |
| TA-03121437A | .312 | | 1.437 | 2.750 | | .156 | .078 | △ TC |
| TA-03751750A | .375 | | 1.750 | 3.062 | | .156 | .078 | △ TC |
| TA-02501062B | .250 | .500 | 1.062 | 2.437 | .437 | .156 | .063 | △ WCMT |
| TA-03121437B | .312 | | 1.437 | 2.750 | | .156 | .078 | △ TC |
| TA-03751750B | .375 | | 1.750 | 3.062 | | .156 | .078 | △ TC |
| TA-04372062B | .437 | .625 | 2.062 | 3.375 | .531 | .250 | .094 | △ TP |
| TA-05002187B | .500 | | 2.187 | 3.500 | | .250 | .094 | △ TP |
| TA-03751750C | .375 | | 1.750 | 3.062 | | .156 | .078 | △ TC |
| TA-05002187C | .500 | .750 | 2.187 | 3.500 | .641 | .250 | .094 | △ TP |
| TA-06252750C | .625 | | 2.750 | 4.390 | | .250 | .094 | △ TP |
| TA-05002500D | .500 | | 2.500 | 4.250 | | .250 | .094 | △ TP |
| TA-07503000D | .750 | 1.000 | 3.000 | 4.687 | .859 | .375 | .125 | △ TP |
| TA-10003500D | 1.000 | | 3.500 | 5.125 | | .375 | .125 | △ TP |
| TA-12504000D | 1.250 | | 4.000 | 5.562 | | .375 | .125 | △ TP |
| TA-05002375E | .500 | 1.000 | 2.375 | 4.250 | .859 | .250 | .094 | △ TP |
| TA-07502875E | .750 | | 2.875 | 4.687 | | .375 | .125 | △ TP |
| TA-10003500E | 1.000 | | 3.500 | 5.125 | | .375 | .125 | △ TP |
| TA-12503875E | 1.250 | | 3.875 | 5.562 | | .375 | .125 | △ TP |

Boring Heads

Shanks

Bars & Tools

Inserts

Accessories

Kits & Sets

Technical

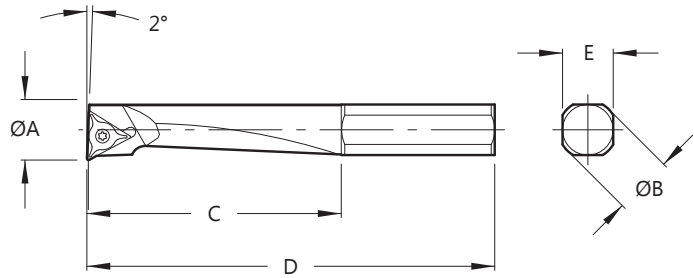
TA Boring Bars



- 4 flat design allows clamping in round holes as well as turret post holders



Inserts sold separately



Metric

| Part No. | Min Bore ØA | ØB | C | D | E | Insert | | |
|-------------|-------------|----|-----|-----|----|--------|-----------|-------------|
| | | | | | | I.C. | Thickness | Shape/Style |
| TAS-06M012A | 6 | 10 | 12 | 47 | 8 | 3,97 | 1,60 | △ WCMT |
| TA-06M027A | 6 | | 27 | 62 | | 3,97 | 1,60 | △ WCMT |
| TAS-08M016A | 8 | | 16 | 50 | | 3,97 | 1,98 | △ TC |
| TA-08M036A | 8 | | 36 | 70 | | 3,97 | 1,98 | △ TC |
| TAS-10M020A | 10 | | 20 | 54 | | 3,97 | 1,98 | △ TC |
| TA-10M045A | 10 | | 45 | 78 | | 3,97 | 1,98 | △ TC |
| TAS-06M012B | 6 | 12 | 12 | 47 | 10 | 3,97 | 1,60 | △ WCMT |
| TA-06M027B | 6 | | 27 | 63 | | 3,97 | 1,60 | △ WCMT |
| TAS-08M016B | 8 | | 16 | 50 | | 3,97 | 1,98 | △ TC |
| TA-08M036B | 8 | | 36 | 71 | | 3,97 | 1,98 | △ TC |
| TAS-10M020B | 10 | | 20 | 54 | | 3,97 | 1,98 | △ TC |
| TA-10M045B | 10 | | 45 | 80 | | 3,97 | 1,98 | △ TC |
| TAS-12M024B | 12 | 20 | 24 | 57 | 18 | 6,35 | 2,39 | △ TC |
| TA-12M054B | 12 | | 54 | 86 | | 6,35 | 2,39 | △ TC |
| TAS-10M020D | 10 | | 20 | 67 | | 3,97 | 1,98 | △ TC |
| TA-10M045D | 10 | | 45 | 92 | | 3,97 | 1,98 | △ TC |
| TAS-12M024D | 12 | | 24 | 70 | | 6,35 | 2,39 | △ TC |
| TA-12M054D | 12 | | 54 | 100 | | 6,35 | 2,39 | △ TC |
| TAS-16M032D | 16 | 25 | 32 | 76 | 23 | 9,53 | 3,96 | △ TC |
| TA-16M072D | 16 | | 72 | 116 | | 6,35 | 2,39 | △ TC |
| TAS-20M040D | 20 | | 40 | 82 | | 6,35 | 2,39 | △ TC |
| TA-20M090D | 20 | | 90 | 131 | | 9,53 | 3,96 | △ TC |
| TAS-10M020E | 10 | | 20 | 69 | | 9,53 | 1,98 | △ TC |
| TA-10M045E | 10 | | 45 | 94 | | 9,53 | 1,98 | △ TC |
| TAS-12M024E | 12 | 25 | 24 | 73 | 23 | 6,35 | 2,39 | △ TC |
| TA-12M054E | 12 | | 54 | 102 | | 6,35 | 2,39 | △ TC |
| TAS-16M032E | 16 | | 32 | 78 | | 9,53 | 3,96 | △ TC |
| TA-16M072E | 16 | | 72 | 118 | | 9,53 | 3,96 | △ TC |
| TAS-20M040E | 20 | | 40 | 85 | | 9,53 | 3,96 | △ TC |
| TA-20M090E | 20 | | 90 | 135 | | 9,53 | 3,96 | △ TC |
| TAS-25M050E | 25 | 25 | 50 | 92 | 23 | 9,53 | 3,96 | △ TC |
| TA-25M113E | 25 | | 113 | 155 | | 9,53 | 3,96 | △ TC |

Boring Heads

Shanks

Bars & Tools

Inserts

Accessories

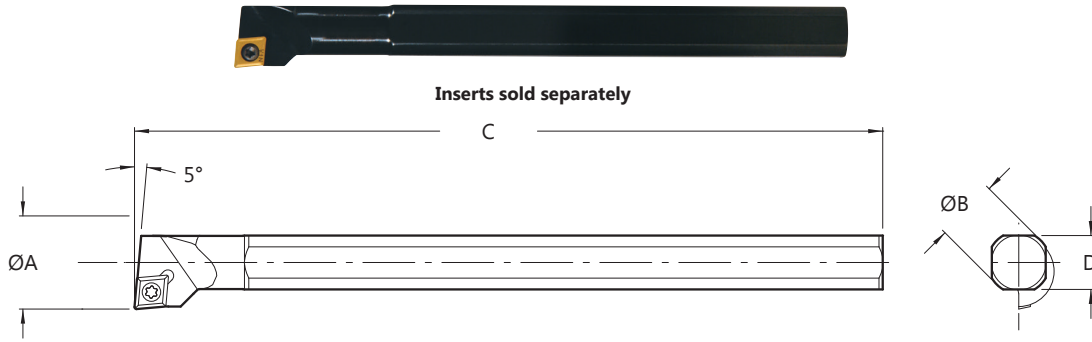
Kits & Sets

Technical



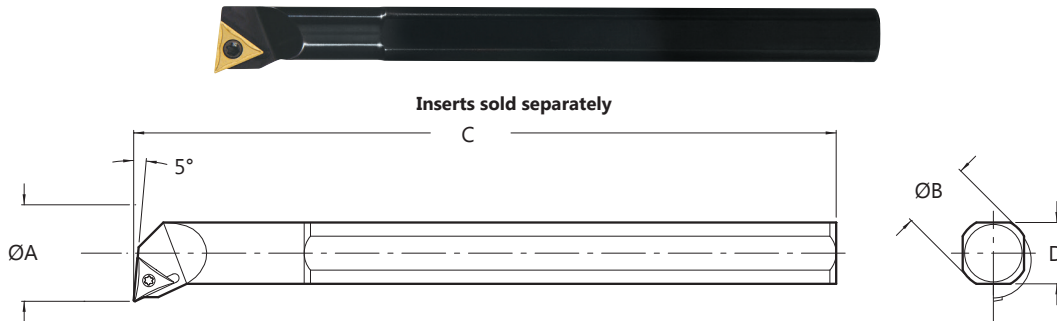
Steel Boring Bars

- Bore depths up to 4x bar diameter
- 4 flat design allows clamping in round holes as well as turret post holders



CFX Boring Bars

| Part No. | Min Bore $\varnothing A$ | $\varnothing B$ | C | D | Insert | | |
|----------|--------------------------|-----------------|-------|------|--------|-----------|-------------|
| | | | | | I.C. | Thickness | Shape/Style |
| CFX-0500 | .75 | .500 | 6.00 | .43 | .250 | .094 | ◇ CP or CC |
| CFX-0750 | 1.00 | .750 | 8.00 | .66 | .375 | .156 | ◇ CP or CC |
| CFX-1000 | 1.38 | 1.000 | 10.00 | .88 | .375 | .156 | ◇ CP or CC |
| CFX-1500 | 1.76 | 1.500 | 10.60 | 1.31 | .500 | .188 | ◇ CC |



TFX Boring Bars

| Part No. | Min Bore $\varnothing A$ | $\varnothing B$ | C | D | Insert | | |
|----------|--------------------------|-----------------|-------|-----|--------|-----------|-------------|
| | | | | | I.C. | Thickness | Shape/Style |
| TFX-0500 | .75 | .500 | 6.00 | .43 | .250 | .094 | ▲ TP |
| TFX-0750 | 1.00 | .750 | 8.00 | .66 | .375 | .125 | ▲ TP |
| TFX-1000 | 1.38 | 1.000 | 10.00 | .88 | .375 | .125 | ▲ TP |

Heavy Metal Boring Bars

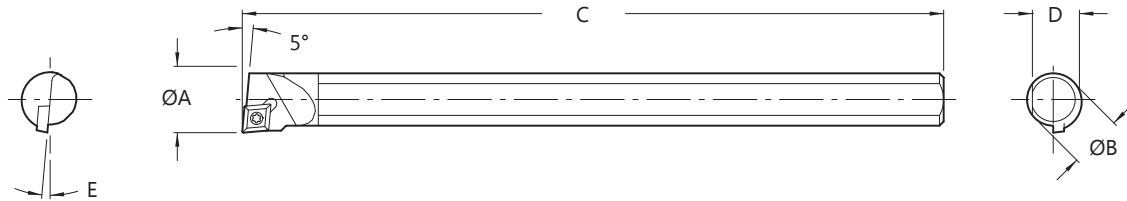


NOTICE: Heavy metal boring bars can cause increased imbalance. Do not operate the boring system at RPMs that cause excessive machine vibration. This vibration is likely to occur at spindle speeds above 1000 RPM and is more likely to occur when using the boring system at its maximum diameter.

- Bore depths up to 6x bar diameter
- Good vibration dampening characteristics



Inserts sold separately

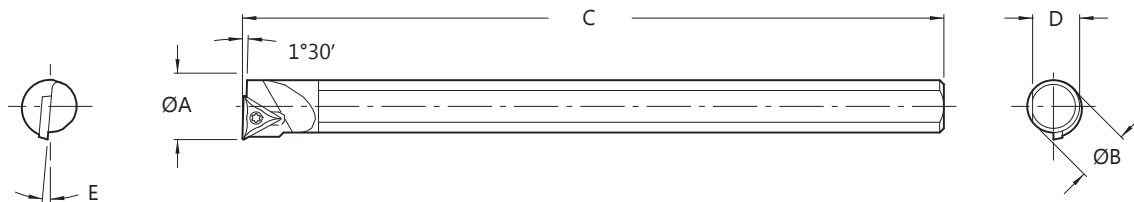


CFX Heavy Metal Boring Bars Insert

| Part No. | Min Bore ØA | ØB | C | D | E | Insert | | |
|------------|-------------|------|------|------|-----|--------|-----------|-------------|
| | | | | | | I.C. | Thickness | Shape/Style |
| CFX-0187HM | .197 | .187 | 3.0 | .180 | 0° | .156 | .040 | ◇ CD |
| CFX-0250HM | .260 | .250 | 3.0 | .230 | 0° | .156 | .040 | ◇ CD |
| CFX-0312HM | .365 | .312 | 4.0 | .290 | 10° | .250 | .094 | ◇ CP or CC |
| CFX-0375HM | .425 | .375 | 4.0 | .340 | 10° | .250 | .094 | ◇ CP or CC |
| CFX-0500HM | .550 | .500 | 6.0 | .455 | 5° | .250 | .094 | ◇ CP or CC |
| CFX-0625HM | .688 | .625 | 8.0 | .565 | 8° | .375 | .156 | ◇ CP or CC |
| CFX-0750HM | .832 | .750 | 10.0 | .680 | 8° | .375 | .156 | ◇ CP or CC |



Inserts sold separately



TFX Heavy Metal Boring Bars

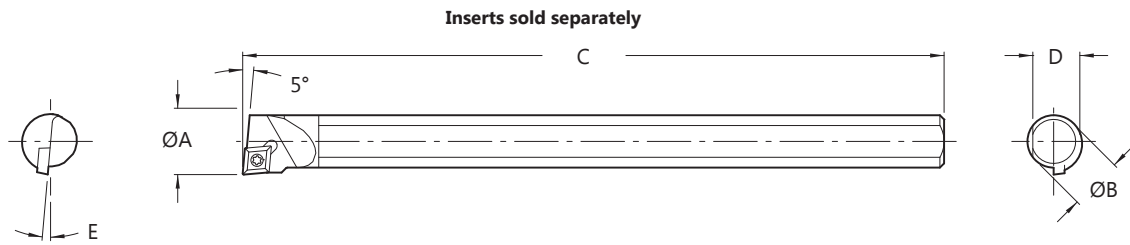
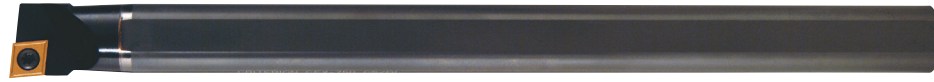
| Part No. | Min Bore ØA | ØB | C | D | E | Insert | | |
|------------|-------------|------|------|------|----|--------|-----------|-------------|
| | | | | | | I.C. | Thickness | Shape/Style |
| TFX-0375HM | .425 | .375 | 4.00 | .340 | 8° | .219 | .094 | △ TC |
| TFX-0500HM | .550 | .500 | 6.00 | .455 | 5° | .250 | .094 | △ TC |



Carbide Shank Boring Bars

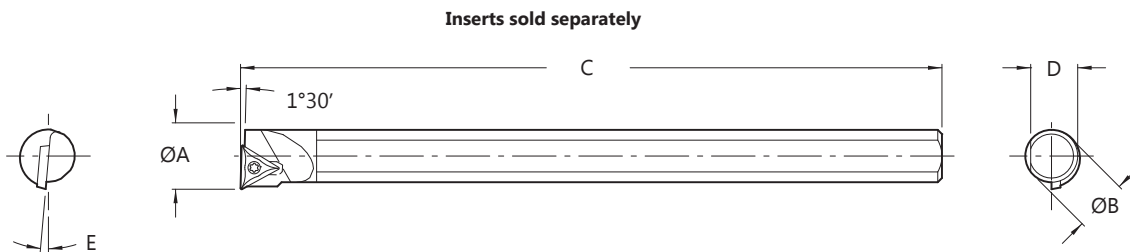
NOTICE: Carbide shank boring bars can cause increased imbalance. Do not operate the boring system at RPMs that cause excessive machine vibration. This vibration is likely to occur at spindle speeds above 1000 RPM and is more likely to occur when using the boring system at its maximum diameter.

- Bore depths up to 8x bar diameter
- Maximum rigidity and depth



CFX Carbide Shank Boring Bars

| Part No. | Min Bore ØA | | ØB | C | D | E | Insert | | |
|------------|-------------|-------|------|-------|-----|----|--------|-----------|-------------|
| | CP | CC | | | | | I.C. | Thickness | Shape/Style |
| CFX-0375CS | .500 | .750 | .375 | 6.00 | .34 | 0° | .250 | .094 | ◇ CP or CC |
| CFX-0500CS | .625 | .750 | .500 | 8.00 | .47 | 0° | .250 | .094 | ◇ CP or CC |
| CFX-0625CS | .750 | .750 | .625 | 10.00 | .59 | 0° | .250 | .094 | ◇ CP or CC |
| CFX-0750CS | .875 | 1.230 | .750 | 10.00 | .70 | 0° | .375 | .156 | ◇ CP or CC |



TFX Carbide Shank Boring Bars

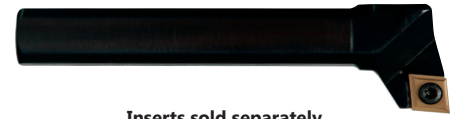
| Part No. | Min Bore ØA | ØB | C | D | E | Insert | | |
|------------|-------------|------|-------|-----|----|--------|-----------|-------------|
| | | | | | | I.C. | Thickness | Shape/Style |
| TFX-0375CS | .500 | .375 | 6.00 | .34 | 0° | .250 | .094 | ▲ TP |
| TFX-0500CS | .625 | .500 | 8.00 | .47 | 0° | .250 | .094 | ▲ TP |
| TFX-0625CS | .750 | .625 | 10.00 | .59 | 0° | .375 | .125 | ▲ TP |
| TFX-0750CS | .875 | .750 | 10.00 | .70 | 0° | .375 | .125 | ▲ TP |

Boring Heads
Shanks
Bars & Tools
Inserts
Accessories
Kits & Sets
Technical

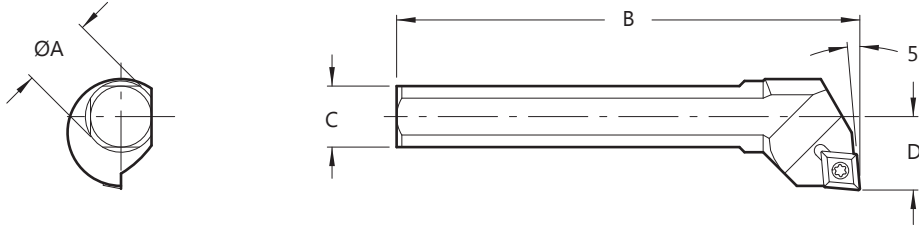
Specialized Boring Bars



- Designed to be used in CB and DBL style boring heads
- Cross hole bars can also be used as right hand turn bars



Inserts sold separately



Cross Hole Bar (Inch)

| Part No. | ØA | B | C | D | Bore Diameter | | Insert | | |
|----------|-------|------|------|------|---------------|--------|--------|-----------|-------------|
| | | | | | MIN | MAX* | I.C. | Thickness | Shape/Style |
| CHB-0500 | .500 | 2.75 | .43 | .53 | 2.875 | 6.687 | .250 | .094 | ◇ CP or CC |
| CHB-0750 | .750 | 4.75 | .64 | .77 | 4.937 | 11.000 | .375 | .156 | ◇ CP or CC |
| CHB-1000 | 1.000 | 5.31 | .85 | .87 | 5.625 | 13.437 | .375 | .156 | ◇ CP or CC |
| CHB-1500 | 1.500 | 9.00 | 1.31 | 1.17 | 9.093 | 21.500 | .500 | .188 | ◇ CC |

***NOTICE:** Cross Hole Bars should always be secured in the bar holder with at least two set screws.

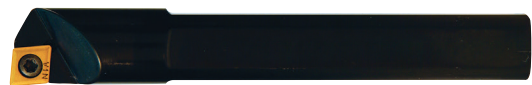
Cross Hole Bar (Metric)

| Part No. | ØA | B | C | D | Bore Diameter | | Insert | | |
|----------|----|-----|----|----|---------------|------|--------|-----------|-------------|
| | | | | | MIN | MAX* | I.C. | Thickness | Shape/Style |
| CHB-012M | 12 | 72 | 10 | 13 | 73 | 169 | 6,35 | 2,39 | ◇ CP or CC |
| CHB-020M | 20 | 123 | 18 | 19 | 126 | 279 | 9,53 | 3,96 | ◇ CP or CC |
| CHB-025M | 25 | 134 | 23 | 22 | 143 | 341 | 9,53 | 3,96 | ◇ CP or CC |

***NOTICE:** Cross Hole Bars should always be secured in the bar holder with at least two set screws.

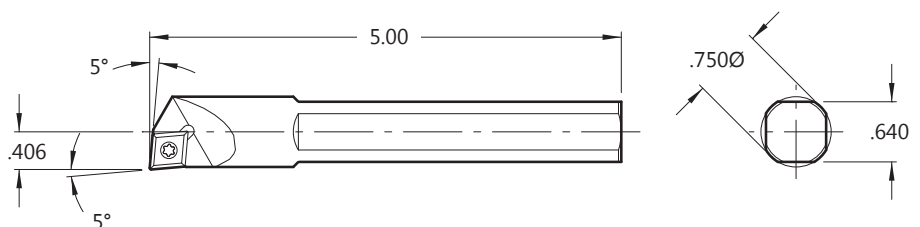
Boring & Facing Bar

| Part No. | Insert | | |
|----------|--------|-----------|-------------|
| | I.C. | Thickness | Shape/Style |
| BFB-075D | .375 | .156 | ◇ CP or CC |



Inserts sold separately

- Designed with the proper clearance to bore or face with both of the Boring and Facing Heads
- See pages 20-21

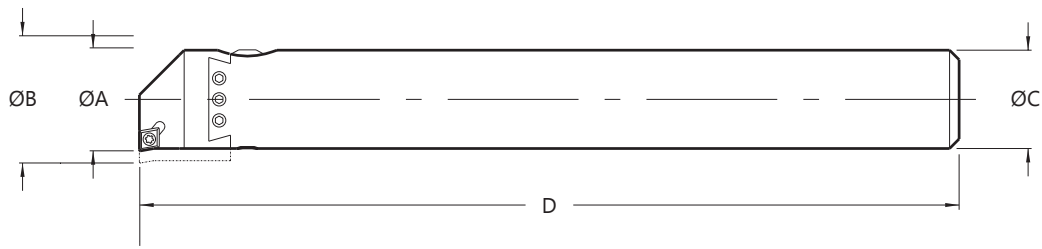




Cri-Bar Adjustable Boring Bars

Round Shank

- Ideally suited for use in collet or shrink-fit holders



Inserts sold separately

Standard Adjusting

.001" Adjustment on Diameter

| Part No. | Min Bore ØA | Max Bore ØB | ØC | D | Insert | | |
|--------------|----------------|----------------|-------|-------|--------|-----------|-------------|
| | | | | | I.C. | Thickness | Shape/Style |
| * CBR-0625CP | .672 | .944 | .625 | 5.25 | .250 | .094 | ◇ CP or CC |
| CBR-0625TP | .672 | .944 | | 5.25 | .250 | .094 | △ TP |
| CBR-0750CP | .825 | 1.087 | .750 | 6.31 | .250 | .094 | ◇ CP or CC |
| CBR-0750TP | .825 | 1.087 | | 6.31 | .250 | .094 | △ TP |
| CBR-1000CP | 1.050 | 1.320 | 1.000 | 8.25 | .250 | .094 | ◇ CP or CC |
| CBR-1000TP | 1.050 | 1.320 | | 8.25 | .250 | .094 | △ TP |
| CBR-1250CP | 1.300 | 1.600 | 1.250 | 10.31 | .250 | .094 | ◇ CP or CC |
| CBR-1250TP | 1.300 | 1.600 | | 10.31 | .250 | .094 | △ TP |

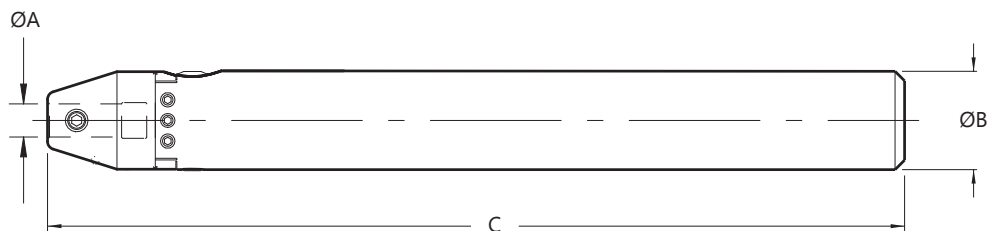
*CBR-0625 style boring system's minimum bore diameter when using a CC style insert is .750"

Micro Adjusting

0.00005" Adjustment on Diameter

| Part No. | Min Bore ØA | Max Bore ØB | ØC | D | Insert | | |
|--------------|----------------|----------------|-------|-------|--------|-----------|-------------|
| | | | | | I.C. | Thickness | Shape/Style |
| CBR-1000CPMA | 1.050 | 1.320 | 1.000 | 8.95 | .250 | .094 | ◇ CP or CC |
| CBR-1000TPMA | 1.050 | 1.320 | | 8.95 | .250 | .094 | △ TP |
| CBR-1250CPMA | 1.300 | 1.600 | 1.250 | 11.00 | .250 | .094 | ◇ CP or CC |
| CBR-1250TPMA | 1.300 | 1.600 | | 11.00 | .250 | .094 | △ TP |

- Total range of the micro adjustment is .006" (.150mm) on diameter



SGL Style

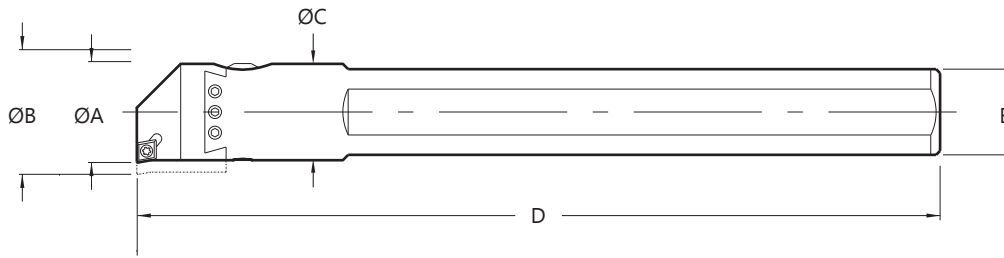
| Part No. | Min Bore Dia. | Max Bore Dia. | ØA | ØB | C |
|------------|------------------|------------------|------|-------|-------|
| CBR-0625SG | .050 | .380 | .125 | .625 | 5.25 |
| CBR-0750SH | .050 | .470 | .250 | .750 | 6.50 |
| CBR-1000SA | .120 | .640 | .375 | 1.000 | 8.69 |
| CBR-1250SB | .250 | .800 | .500 | 1.250 | 10.60 |

Cri-Bar Adjustable Boring Bars

Square Shanks



- Ideally suited for use in side lock end mill holders



Inserts sold separately

Standard Adjusting

.001" Adjustment on Diameter

| Part No. | Min Bore ØA | Max Bore ØB | ØC | D | E | Insert | | |
|-------------|-------------|-------------|-------|-------|-------|--------|-----------|-------------|
| | | | | | | I.C. | Thickness | Shape/Style |
| *CBS-0625CP | .672 | .944 | .625 | 5.25 | .541 | .250 | .094 | ◇ CP or CC |
| CBS-0625TP | .672 | .944 | | 5.25 | .541 | .250 | .094 | ▲ TP |
| CBS-0750CP | .825 | 1.087 | .750 | 6.31 | .660 | .250 | .094 | ◇ CP or CC |
| CBS-0750TP | .825 | 1.087 | | 6.31 | .660 | .250 | .094 | ▲ TP |
| CBS-1000CP | 1.050 | 1.320 | 1.000 | 8.25 | .883 | .250 | .094 | ◇ CP or CC |
| CBS-1000TP | 1.050 | 1.320 | | 8.25 | .883 | .250 | .094 | ▲ TP |
| CBS-1250CP | 1.300 | 1.600 | 1.250 | 10.31 | 1.100 | .250 | .094 | ◇ CP or CC |
| CBS-1250TP | 1.300 | 1.600 | | 10.31 | 1.100 | .250 | .094 | ▲ TP |

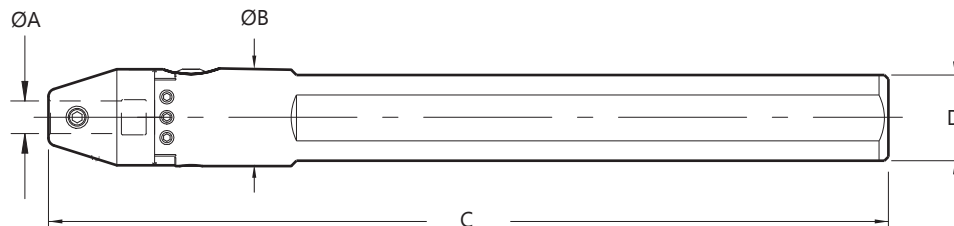
*CBS-0625 style boring system's minimum bore diameter when using a CC style insert is .750"

Micro Adjusting

0.00005" Adjustment on Diameter

| Part No. | Min Bore ØA | Max Bore ØB | ØC | D | E | Insert | | |
|--------------|-------------|-------------|-------|-------|-------|--------|-----------|-------------|
| | | | | | | I.C. | Thickness | Shape/Style |
| CBS-1000CPMA | 1.050 | 1.320 | 1.000 | 8.95 | .883 | .250 | .094 | ◇ CP or CC |
| CBS-1000TPMA | 1.050 | 1.320 | | 8.95 | .883 | .250 | .094 | ▲ TP |
| CBS-1250CPMA | 1.300 | 1.600 | 1.250 | 11.00 | 1.100 | .250 | .094 | ◇ CP or CC |
| CBS-1250TPMA | 1.300 | 1.600 | | 11.00 | 1.100 | .250 | .094 | ▲ TP |

- Total range of the micro adjustment is .006" (.150mm) on diameter



SGL Style

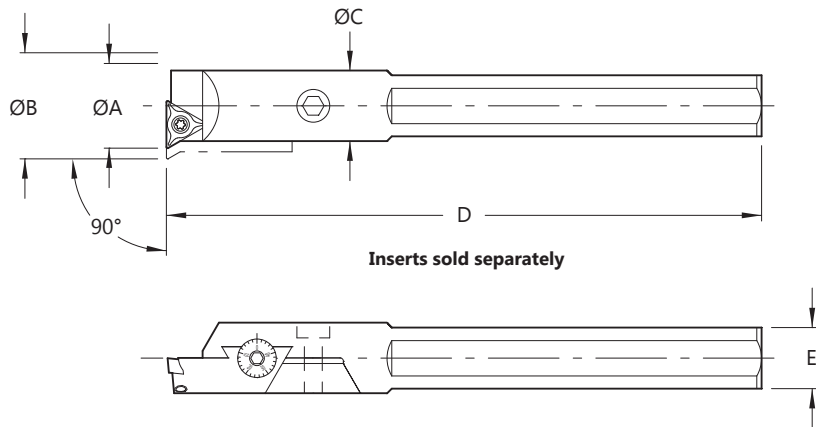
| Part No. | Min Bore Dia. | Max Bore Dia. | ØA | ØB | C | D |
|------------|---------------|---------------|------|-------|-------|-------|
| CBS-0625SG | .050 | .380 | .125 | .625 | 5.25 | .541 |
| CBS-0750SH | .050 | .470 | .250 | .750 | 6.50 | .660 |
| CBS-1000SA | .120 | .640 | .375 | 1.000 | 8.69 | .883 |
| CBS-1250SB | .250 | .800 | .500 | 1.250 | 10.60 | 1.100 |



MD Adjustable Boring Bars

Square Shanks

- Unique cantilevered design results in exceptional rigidity
- Ideally suited for use in CNC Mills



Inch

.001" Adjustment on Diameter

| Part No. | Bore Diameter | | ØC | D | E | Insert | | |
|-------------|---------------|--------|-------|-------|-------|--------|-----------|-------------|
| | MIN ØA | MAX ØB | | | | I.C. | Thickness | Shape/Style |
| *MDB-0625CP | .700 | .960 | .625 | 5.25 | .541 | .250 | .094 | ◇ CP or CC |
| MDB-0625TP | .710 | .960 | | 5.25 | .541 | .250 | .094 | ▲ TP |
| MDB-0750CP | .850 | 1.200 | .750 | 6.31 | .660 | .375 | .156 | ◇ CP or CC |
| MDB-0750TP | .890 | 1.280 | | 6.31 | .660 | .375 | .125 | ▲ TP |
| MDB-1000CP | 1.100 | 1.670 | 1.000 | 8.25 | .883 | .375 | .156 | ◇ CP or CC |
| MDB-1000TP | 1.130 | 1.650 | | 8.25 | .883 | .375 | .125 | ▲ TP |
| MDB-1250CP | 1.370 | 2.330 | 1.250 | 10.31 | 1.100 | .375 | .156 | ◇ CP or CC |
| MDB-1250TP | 1.400 | 2.370 | | 10.31 | 1.100 | .375 | .125 | ▲ TP |

*MDB-0625CP style boring system's minimum bore diameter when using a CC style insert is .750"

Metric

.025mm Adjustment on Diameter

| Part No. | Bore Diameter | | ØC | D | E | Insert | | |
|----------|---------------|--------|----|-----|----|--------|-----------|-------------|
| | MIN ØA | MAX ØB | | | | I.C. | Thickness | Shape/Style |
| MDB-16MT | 18 | 27 | 16 | 133 | 14 | 6,35 | 2,39 | ▲ TP |
| MDB-20MT | 22 | 33 | 20 | 160 | 18 | 9,53 | 3,96 | ▲ TP |
| MDB-25MT | 27 | 42 | 25 | 210 | 23 | 9,53 | 3,96 | ▲ TP |
| MDB-32MT | 33 | 60 | 32 | 260 | 28 | 9,53 | 3,96 | ▲ TP |

Inserts



CONTENTS

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| 80° Diamond Inserts | 46 |
| Triangle Inserts | 47 |
| Trigon Inserts | 48 |
| Torx Screws/Drivers | 48 |

Features & Benefits

- Meets or exceeds ANSI / ISO standards
- Selected especially for boring applications
- C-2 for non-ferrous materials
- C-6 for ferrous applications



**ALLIED MACHINE
& ENGINEERING CORP**

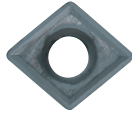
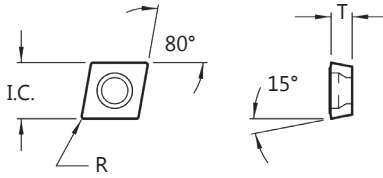


Inserts

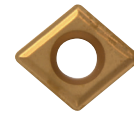
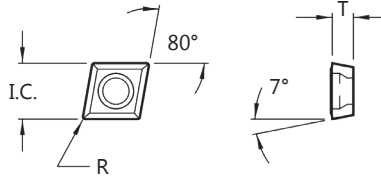
80° Diamond



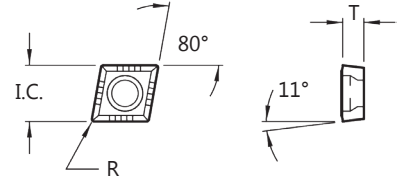
CDCD



CCMT



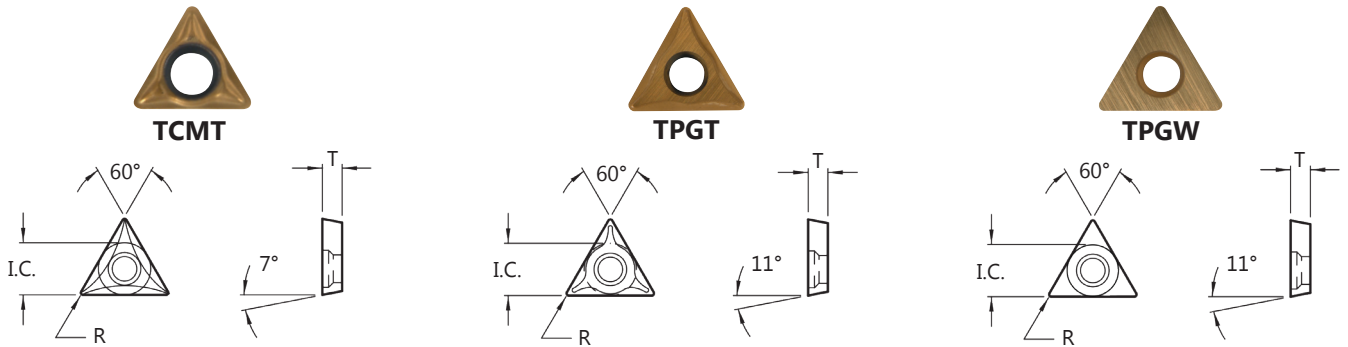
CPMT



| Style | ISO Description | Insert I.C./Size | T | R | Item No. (10 Piece Packs) | | | | Insert Screw (10 pk) |
|--------|-----------------|------------------|------|------------|---------------------------|---------------|--------------|---------------|----------------------|
| | | | | | C-2 Uncoated | C-2 TiN | C-6 Uncoated | C-6 TiN | |
| CDCD | - | .156 | .040 | .002 | CDCD513002C2 | CDCD513002C2T | CDCD513002C6 | - | TXS-001-10 |
| | | 3,97 | 1,02 | 0,05 | | | | | |
| CDCD | - | .156 | .040 | .007 | - | CDCD513007C2T | - | CDCD513007C6T | TXS-001-10 |
| | | 3,97 | 1,02 | 0,18 | | | | | |
| CCMT | 060202 | .250 | .094 | .008 | CCMT2150C2 | CCMT2150C2T | CCMT2150C6 | CCMT2150C6T | TXS-116-10 |
| | | 6,35 | 2,39 | 0,20 | | | | | |
| | 060204 | .250 | .094 | .016 | CCMT2151C2 | CCMT2151C2T | CCMT2151C6 | CCMT2151C6T | TXS-116-10 |
| | | 6,35 | 2,39 | 0,40 | | | | | |
| | 09T302 | .375 | .156 | .008 | CCMT3250C2 | CCMT3250C2T | CCMT3250C6 | CCMT3250C6T | TXS-009-10 |
| | | 9,53 | 3,96 | 0,20 | | | | | |
| 09T304 | .375 | .156 | .016 | CCMT3251C2 | CCMT3251C2T | CCMT3251C6 | CCMT3251C6T | TXS-009-10 | |
| | 9,53 | 3,96 | 0,40 | | | | | | |
| 09T308 | .375 | .156 | .031 | CCMT3252C2 | CCMT3252C2T | CCMT3252C6 | CCMT3252C6T | TXS-009-10 | |
| | 9,53 | 3,96 | 0,79 | | | | | | |
| 120408 | .500 | .188 | .031 | - | - | - | CCMT432C6T | TXS-119-10 | |
| | 12,70 | 4,76 | 0,79 | | | | | | |
| CPMT | 060202 | .250 | .094 | .008 | - | CPMT2150C2T | - | CPMT2150C6T | TXS-116-10 |
| | | 6,35 | 2,39 | 0,20 | | | | | |
| | 060204 | .250 | .094 | .016 | - | CPMT2151C2T | - | CPMT2151C6T | TXS-116-10 |
| | | 6,35 | 2,39 | 0,40 | | | | | |
| | 09T304 | .375 | .156 | .016 | - | CPMT3251C2T | - | CPMT3251C6T | TXS-009-10 |
| | | 9,53 | 3,96 | 0,40 | | | | | |
| 09T308 | .375 | .156 | .031 | - | CPMT3252C2T | - | CPMT3252C6T | TXS-009-10 | |
| | 9,53 | 3,96 | 0,79 | | | | | | |

- Boring Heads
- Shanks
- Bars & Tools
- Inserts
- Accessories
- Kits & Sets
- Technical

Inserts Triangle



| Style | ISO Description | Insert I.C./Size | T | R | Item No. (10 Piece Packs) | | | | Insert Screw (10 pk) |
|--------|-----------------|------------------|------|------------|---------------------------|--------------|--------------|--------------|----------------------|
| | | | | | C-2 Uncoated | C-2 TiN | C-6 Uncoated | C-6 TiN | |
| TCMT | 06T104 | .156 | .078 | .016 | TCMT12121C2 | TCMT12121C2T | - | TCMT12121C6T | TXS-028-10 |
| | | 3,97 | 1,98 | 0,40 | | | | | |
| | 06T108 | .156 | .078 | .031 | TCMT12122C2 | TCMT12122C2T | - | TCMT12122C6T | TXS-028-10 |
| | | 3,97 | 1,98 | 0,79 | | | | | |
| | 090202 | .219 | .094 | .008 | TCMT18150C2 | TCMT18150C2T | TCMT18150C6 | TCMT18150C6T | TXS-116-10 |
| 110202 | .250 | .094 | .008 | TCMT2150C2 | TCMT2150C2T | TCMT2150C6 | TCMT2150C6T | TXS-116-10 | |
| 16T304 | .375 | .156 | .016 | - | - | TCMT3251C6 | TCMT3251C6T | TXS-100-10 | |
| | | 9,53 | 3,96 | 0,40 | | | | | |
| TPGT | 110204 | .250 | .094 | .016 | TPGT2151C2 | TPGT2151C2T | TPGT2151C6 | TPGT2151C6T | TXS-116-10 |
| | | 6,35 | 2,39 | 0,40 | | | | | |
| | 110208 | .250 | .094 | .031 | TPGT2152C2 | TPGT2152C2T | TPGT2152C6 | TPGT2152C6T | TXS-116-10 |
| | | 6,35 | 2,39 | 0,79 | | | | | |
| | 160304 | .375 | .125 | .016 | TPGT321C2 | TPGT321C2T | TPGT321C6 | TPGT321C6T | TXS-100-10 |
| | | 9,53 | 3,18 | 0,40 | | | | | |
| 160308 | .375 | .125 | .031 | TPGT322C2 | TPGT322C2T | TPGT322C6 | TPGT322C6T | TXS-100-10 | |
| | 9,53 | 3,18 | 0,79 | | | | | | |
| 16T304 | .375 | .156 | .016 | TPGT3251C2 | TPGT3251C2T | TPGT3251C6 | TPGT3251C6T | TXS-100-10 | |
| | | 9,53 | 3,96 | 0,40 | | | | | |
| TPGW | 1102V5 | .250 | .094 | .002 | TPGW2150C2 | TPGW2150C2T | TPGW2150C6 | TPGW2150C6T | TXS-116-10 |
| | | 6,35 | 2,39 | 0,05 | | | | | |
| | 110204 | .250 | .094 | .016 | TPGW2151C2 | TPGW2151C2T | TPGW2151C6 | TPGW2151C6T | TXS-116-10 |
| | | 6,35 | 2,39 | 0,40 | | | | | |
| | 110208 | .250 | .094 | .031 | TPGW2152C2 | TPGW2152C2T | TPGW2152C6 | TPGW2152C6T | TXS-116-10 |
| | | 6,35 | 2,39 | 0,79 | | | | | |
| | 1603V5 | .375 | .125 | .002 | TPGW320C2 | TPGW320C2T | TPGW320C6 | TPGW320C6T | TXS-100-10 |
| | | 9,53 | 3,18 | 0,05 | | | | | |
| | 160304 | .375 | .125 | .016 | TPGW321C2 | TPGW321C2T | TPGW321C6 | TPGW321C6T | TXS-100-10 |
| 9,53 | | 3,18 | 0,40 | | | | | | |
| 160308 | .375 | .125 | .031 | TPGW322C2 | TPGW322C2T | TPGW322C6 | TPGW322C6T | TXS-100-10 | |
| | 9,53 | 3,18 | 0,79 | | | | | | |
| 16T3V5 | .375 | .156 | .002 | TPGW3250C2 | TPGW3250C2T | TPGW3250C6 | TPGW3250C6T | TXS-100-10 | |
| | | 9,53 | 3,96 | 0,05 | | | | | |
| 16T304 | .375 | .156 | .016 | TPGW3251C2 | TPGW3251C2T | TPGW3251C6 | TPGW3251C6T | TXS-100-10 | |
| | 9,53 | 3,96 | 0,40 | | | | | | |
| 16T308 | .375 | .156 | .031 | TPGW3252C2 | TPGW3252C2T | TPGW3252C6 | TPGW3252C6T | TXS-100-10 | |
| | 9,53 | 3,96 | 0,79 | | | | | | |

Boring Heads

Shanks

Bars & Tools

Inserts

Accessories

Kits & Sets

Technical

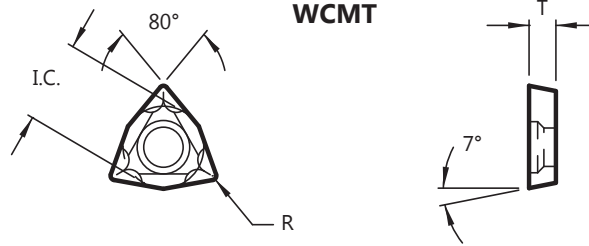


Inserts

Trigon



WCMT



| Style | ISO Description | Insert I.C./Size | T | R | Item No. (10 Piece Packs) | | | | Insert Screw (10 pk) |
|-------|-----------------|------------------|------|------|---------------------------|---------------|--------------|---------------|----------------------|
| | | | | | C-2 Uncoated | C-2 TiN | C-6 Uncoated | C-6 TiN | |
| WCMT | 020102 | .156 | .063 | .008 | WCMT020102C2 | WCMT020102C2T | WCMT020102C6 | WCMT020102C6T | TXS-028-10 |
| | | 3,97 | 1,60 | 0,20 | | | | | |
| WCMT | 020104 | .156 | .063 | .016 | WCMT020104C2 | WCMT020104C2T | WCMT020104C6 | WCMT020104C6T | TXS-028-10 |
| | | 3,97 | 1,60 | 0,40 | | | | | |

Torx Screw Reference

| Insert Screw | Torx Size | Torx Driver Item No. |
|--------------|-----------|----------------------|
| TXS-001 | T6 | 8T-6 |
| TXS-009 | T15 | 8T-15 |
| TXS-028 | T6 | 8T-6 |
| TXS-100 | T20 | 8T-20 |
| TXS-116 | T7 | 8T-7 |
| TXS-119 | T15 | 8T-15 |

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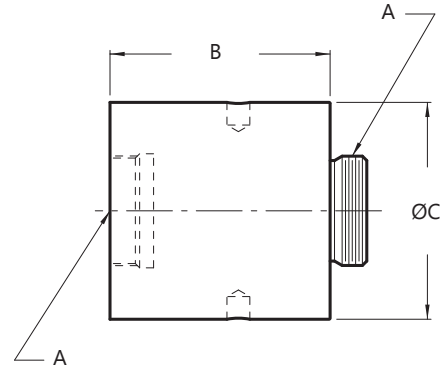
| | |
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| Extensions & Reducers | 50 |
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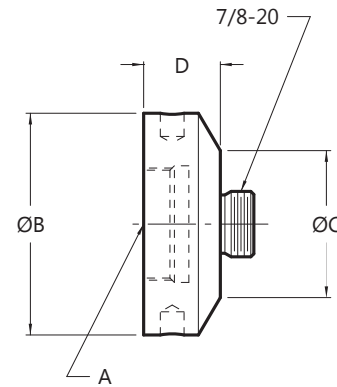
Modular Adapters

IMPORTANT: The extensions and reducers below increase the number of connections in your modular boring system and may adversely affect performance. Factory technical assistance is available through our Application Engineering department.



Extensions

| Part No. | A | B | ØC |
|---------------|----------|------|------|
| CB1000-IA1000 | 7/8-20 | 1.00 | 1.00 |
| CB1000-IA2000 | 7/8-20 | 2.00 | 1.00 |
| CB1250-IA1250 | 7/8-20 | 1.25 | 1.25 |
| CB1250-IA2500 | 7/8-20 | 2.50 | 1.25 |
| CB1500-IA1500 | 7/8-20 | 1.50 | 1.50 |
| CB1500-IA3000 | 7/8-20 | 3.00 | 1.50 |
| CB2000-IA2000 | 7/8-20 | 2.00 | 2.00 |
| CB2000-IA4000 | 7/8-20 | 4.00 | 2.00 |
| CB3000-IA3000 | 1-1/2-18 | 3.00 | 3.00 |
| CB3000-IA6000 | 1-1/2-18 | 6.00 | 3.00 |



Reducers

| Part No. | A | ØB | ØC | D |
|-----------------|----------|------|------|------|
| CB1500-IRCB1000 | 7/8-20 | 1.50 | 1.00 | 1.00 |
| CB1500-IRCB1250 | 7/8-20 | 1.50 | 1.25 | 1.00 |
| CB2000-IRCB1000 | 7/8-20 | 2.00 | 1.00 | 1.00 |
| CB2000-IRCB1250 | 7/8-20 | 2.00 | 1.25 | 1.00 |
| CB2000-IRCB1500 | 7/8-20 | 2.00 | 1.50 | 1.00 |
| CB3000-IRCB1000 | 1-1/2-18 | 3.00 | 1.00 | 1.25 |
| CB3000-IRCB1250 | 1-1/2-18 | 3.00 | 1.25 | 1.25 |
| CB3000-IRCB1500 | 1-1/2-18 | 3.00 | 1.50 | 1.25 |
| CB3000-IRCB2000 | 1-1/2-18 | 3.00 | 2.00 | 1.25 |

Boring Heads

Shanks

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Technical

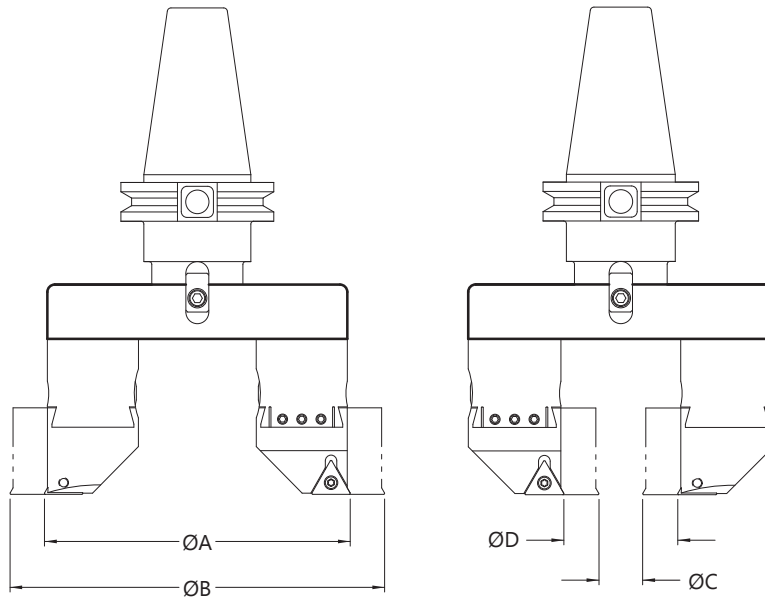


LCB1500 Extender Bars

| Part No. | ØA | ØB | ØC | ØD |
|-----------------|--------|--------|-------|-------|
| LCB1500-56EBK | 5.000 | 6.125 | 0.710 | 1.830 |
| LCB1500-67EBK | 6.000 | 7.125 | 1.710 | 2.830 |
| LCB1500-78EBK | 7.000 | 8.125 | 2.710 | 3.830 |
| LCB1500-89EBK | 8.000 | 9.125 | 3.710 | 4.830 |
| LCB1500-910EBK | 9.000 | 10.125 | 4.710 | 5.830 |
| LCB1500-1011EBK | 10.000 | 11.125 | 5.710 | 6.830 |
| LCB1500-1112EBK | 11.000 | 12.125 | 6.710 | 7.830 |

- LCB1500 Modular Boring System has interchangeable Extender Bars
- Extender Bars are through coolant capable
- Extender Bars are designed to be used with standard CB1500 Boring Heads
- Utilizes LCB Shanks (see page 28)

Hardware included for mounting.

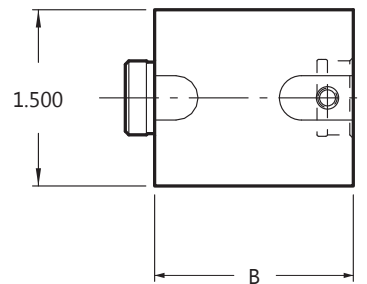


LCB1500 Extensions

| Part No. | B |
|----------------|------|
| LCB1500-IA1500 | 1.50 |
| LCB1500-IA3000 | 3.00 |
| LCB1500-IA4500 | 4.50 |

Hardware included for mounting.

NOTE: Extensions cannot be combined. They must be used separately.



LCB1500 Optional Parts

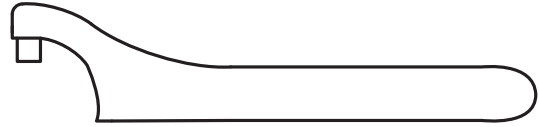
NOTICE: The Large Cri-Bore System can be used with a single Cri-Bore Boring Head. This configuration would result in increased imbalance and would affect the tool's performance and/or spindle damage. A counterbalance weight is recommended to balance the tool. Factory technical assistance is available through our Application Engineering department.

| Part No. | Description | Notes |
|---------------|-----------------------|---|
| LCB1500-CBW | Counterbalance weight | Recommended when using a single CB1500 Boring Head |
| LCB1500-CBUTA | Counterbalance weight | Recommended when using a single CB1500-MA Boring Head |
| LCB1500-HA | Height adapter | Required when using a CB1500 and CB1500-MA Boring Head in combination |



Pin Spanner Wrenches

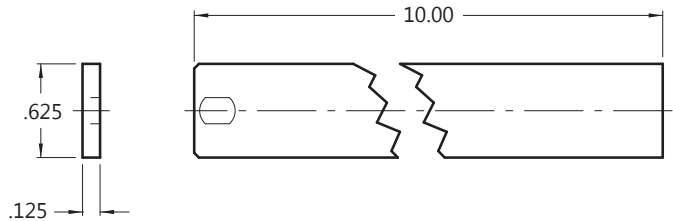
| Part No. | Descriptions |
|------------|----------------------------------|
| CB1000-PSW | Dedicated to 1.00" Body Diameter |
| CB1250-PSW | Dedicated to 1.25" Body Diameter |
| CB1500-PSW | Dedicated to 1.50" Body Diameter |
| CB2000-PSW | Dedicated to 2.00" Body Diameter |
| CB2500-PSW | Dedicated to 2.50" Body Diameter |
| CB3000-PSW | Dedicated to 3.00" Body Diameter |
| CB4000-PSW | Dedicated to 4.00" Body Diameter |



Fadal BT Stop Arm

HAAS BT Stop Arm

Blank Stop Arm



Stop Arms

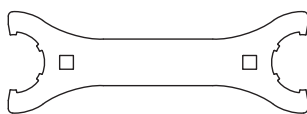
To be used with CNC Boring & Facing Heads (see page 20)

| Part No. | Descriptions |
|----------------|----------------------|
| BFC-300DSAB | Blank Stop Arm |
| BFC-300DSAFV40 | Fadal V-40 Stop Arm |
| BFC-300DSAHV40 | HAAS V-40 Stop Arm |
| BFC-300DSAFB40 | Fadal BT-40 Stop Arm |
| BFC-300DSAHB40 | HAAS BT-40 Stop Arm |

CBER® Accessories

Collet Nut Wrench

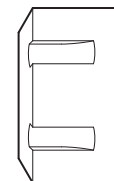
| Part No. |
|-------------|
| CBER16-NUTW |
| CBER20-NUTW |
| CBER25-NUTW |
| CBER32-NUTW |
| CBER40-NUTW |



Collet Nut

| Part No. |
|------------|
| CBER20-NUT |
| CBER25-NUT |
| CBER32-NUT |
| CBER40-NUT |

Does not include retaining ring



Boring Heads

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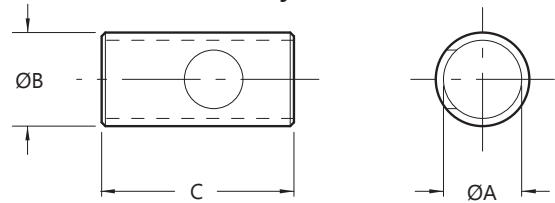
For CB Style Boring Heads



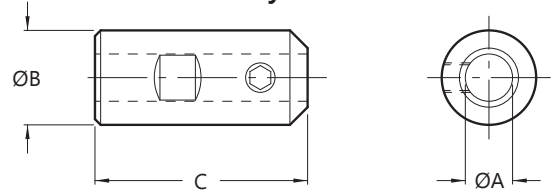
Inch

| Part No. | ØA | ØB | C | D | Style |
|--------------|-------|-------|-------|-------|-------|
| BTH-01250250 | .125 | 0.250 | 0.695 | 0.200 | 3 |
| BTH-01250375 | | 0.375 | 2.000 | 0.220 | 4 |
| BTH-01250500 | | 0.500 | 2.000 | 0.220 | 4 |
| BTH-01250625 | | 0.625 | 2.000 | 0.220 | 4 |
| BTH-01250750 | | 0.750 | 2.000 | 0.220 | 4 |
| BTH-01870375 | .187 | 0.375 | 1.312 | - | 1 |
| BTH-01870500 | | 0.500 | 1.312 | - | 1 |
| BTH-02500375 | .250 | 0.375 | 1.312 | - | 1 |
| BTH-02500500 | | 0.500 | 1.312 | - | 1 |
| BTH-02500625 | | 0.625 | 2.000 | .220 | 4 |
| BTH-02500750 | | 0.750 | 2.000 | .220 | 4 |
| BTH-03120375 | | .312 | 0.375 | 1.312 | - |
| BTH-03120500 | 0.500 | | 1.312 | - | 1 |
| BTH-03750750 | .375 | 0.750 | 2.406 | - | 2 |
| BTH-03751000 | | 1.000 | 2.250 | - | 2 |
| BTH-05000750 | .500 | 0.750 | 2.406 | 0.910 | 3 |
| BTH-05001000 | | 1.000 | 2.250 | - | 2 |
| BTH-06250750 | .625 | 0.750 | 1.500 | - | 1 |
| BTH-06251000 | | 1.000 | 2.406 | 1.120 | 3 |
| BTH-07501000 | 0.750 | 1.000 | 2.406 | 1.120 | 3 |
| BTH-10001500 | 1.000 | 1.500 | 3.000 | 1.000 | 3 |

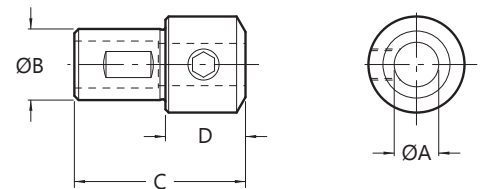
Style 1



Style 2



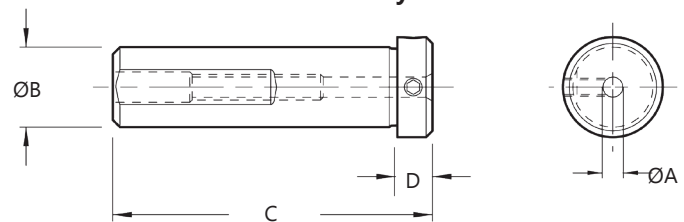
Style 3



Metric

| Part No. | ØA | ØB | C | D | Style |
|------------|----|----|----|----|-------|
| BTH-10M12M | 10 | 12 | 32 | - | 1 |
| BTH-10M20M | | 20 | 65 | 24 | 3 |
| BTH-10M25M | | 25 | 65 | - | 2 |
| BTH-12M20M | 12 | 20 | 65 | 24 | 3 |
| BTH-12M25M | | 25 | 65 | - | 2 |
| BTH-20M25M | 20 | 25 | 70 | 28 | 3 |

Style 4



Back-up screw for length adjustment

Boring Heads

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Technical



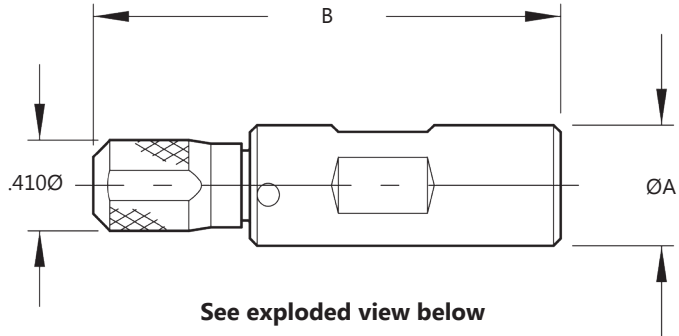
Adapters

Qualified Length Tool Holder

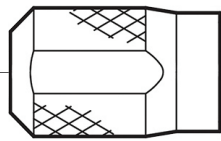
To be used with Qualified Length Boring Tools (see page 33)

| Part No. | ØA | B |
|------------|------|-------|
| CHD-0250QL | .250 | 1.275 |
| CHD-0375QL | .375 | 1.970 |
| CHD-0500QL | .500 | 1.970 |
| CHD-0625QL | .625 | 2.300 |
| CHD-0750QL | .750 | 2.300 |

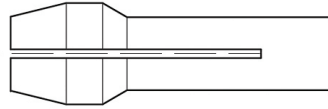
Tool Holder comes with collet nut and wrench.
The collet is sold separately.



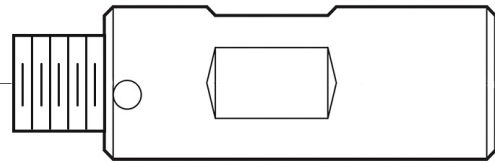
| Part No. | Description |
|------------|-------------------|
| CHD-125C | .125Ø Collet |
| CHD-125CNW | Collet Nut Wrench |
| CHD-0250CN | Collet Nut |



CHD-0250CN



CHD-125C
Collet Sold Separately



CHD-XXXXQL

Boring Heads

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**ALLIED MACHINE
& ENGINEERING CORP**



CB Kits

Carbide Boring Tools



Inch

| Part No. | Parts Included in Kit | | | | |
|-----------------|-----------------------|-----------|--|--|---|
| | Boring Head | Shank | Boring Tools / Adapters | | |
| KIT-202BR8SBT | CB-202B | R8-087520 | SBT-01250500B SBT-03121500B | SBT-01870812B SBT-03751750B | SBT-02501125B SBT-05002187B |
| KIT-203DR8SBT | CB-203D | R8-150018 | SBT-05002187D SBT-10003500D | SBT-06252750D SBT-12504000D | SBT-07503000D - |
| KIT-203DR8SBTBD | CB-203D | R8-150018 | SBT-01250500B SBT-03121500B SBT-06252750D SBT-12504000D | SBT-01870812B SBT-03751750B SBT-07503000D - | SBT-02501125B SBT-05002187B SBT-10003500D BTH-05000750 |

Metric

| Part No. | Parts Included in Kit | | | | |
|----------------|-----------------------|-------|--|---------------------------------|---------------------------------|
| | Boring Head | Shank | Boring Tools / Adapters | | |
| KIT-CB038MASBT | CB-038MA | - | SBT-03012MA SBT-08037MA | SBT-04020MA SBT-10048MA | SBT-06028MA SBT-12055MA |
| KIT-CB050MBSBT | CB-050MB | - | SBT-03012MB SBT-08037MB CHB-012M | SBT-04020MB SBT-10048MB - | SBT-06028MB SBT-12055MB - |
| KIT-CB076MDSBT | CB-076MD | - | SBT-12063MD SBT-25090MD | SBT-16071MD SBT-32100MD | SBT-19078MD CHB-020M |

Boring Heads

Shanks

Bars & Tools

Inserts

Accessories

Kits & Sets

Technical

CB Kits

TA Boring Bars



Inserts sold separately

Inch

| Part No. | Parts Included in Kit | | | | |
|-----------------|-----------------------|-------------|--|--|--|
| | Boring Head | Shank | Boring Bars / Adapters | | |
| KIT-202BR8TA | CB-202B | R8-087520 | TA-02501062B TA-04372062B | TA-03121437B TA-05002187B | TA-03751750B - |
| KIT-203DR8TA | CB-203D | R8-150018 | TA-05002500D TA-12504000D | TA-07503000D - | TA-10003500D - |
| KIT-203DR8TABD | CB-203D | R8-150018 | TA-02501062B TA-04372062B TA-10003500D | TA-03121437B TA-05002500D TA-12504000D | TA-03751750B TA-07503000D BTH-05000750 |
| KIT-203DC40TABD | CB-203D | CB3000-CV40 | TA-02501062B TA-04372062B TA-10003500D | TA-03121437B TA-05002500D TA-12504000D | TA-03751750B TA-07503000D BTH-05000750 |

Metric

| Part No. | Parts Included in Kit | | | | |
|----------------|-----------------------|-------|----------------------------|-------------------------|------------------|
| | Boring Head | Shank | Boring Bars / Adapters | | |
| KIT-CB038MATA | CB-038MA | - | TA-06M027A | TA-08M036A | TA-10M045A |
| KIT-CB050MBTA | CB-050MB | - | TA-06M027B TA-12M054B | TA-08M036B CHB-012M | TA-10M045B - |
| KIT-CB076MDTA | CB-076MD | - | TA-10M045D TA-20M090D | TA-12M054D CHB-020M | TA-16M072D - |
| KIT-CB038MATAS | CB-038MA | - | TAS-06M012A | TAS-08M016A | TAS-10M020A |
| KIT-CB050MBTAS | CB-050MB | - | TAS-06M012B TAS-12M024B | TAS-08M016B CHB-012M | TAS-10M020B - |
| KIT-CB076MDTAS | CB-076MD | - | TAS-10M020D TAS-20M040D | TAS-12M024D CHB-020M | TAS-16M032D - |



CB202B Balance Kit

IMPORTANT: Using the 202B Balancing Kit with the CB202B Boring Head helps the boring system to be balanced, which will improve performance. Having the CB202B boring system in balance will allow you to operate at optimum speeds. Follow the Speed & Feed chart on pages 64-65.



- Bores up to 8x faster
- Fits all 202B style boring heads
- Improves bore finish, concentricity, and productivity
- Simple to use

U.S. Patent No.: 7,309,194

KIT-202BT40BAL

| Part No. | Parts Included in Kit | | | | |
|-----------------|-----------------------|---------------|--|-----------------------------------|---|
| | Boring Head | Shank | Boring Bars | | Shafts / Weights |
| KIT-202BBAL | - | - | - | - | All Balance Kits come with 6 shafts and 4 weights to obtain balance |
| KIT-202BTABAL | CB-202B | R8-087520 | TA-02501062B TA-03121437B TA-03751750B | TA-04372062B TA-05002187B - | |
| KIT-202BR8BAL | CB-202B | R8-087520 | TA-02501062B TA-03121437B TA-03751750B | TA-04372062B TA-05002187B - | |
| KIT-202BNT40BAL | CB-202B | NMTB40-087520 | TA-02501062B TA-03121437B TA-03751750B | TA-04372062B TA-05002187B - | |
| KIT-202BCV40BAL | CB-202B | CB2000-CV40 | TA-02501062B TA-03121437B TA-03751750B | TA-04372062B TA-05002187B - | |
| KIT-202BBT40BAL | CB-202B | CB2000-BT40 | TA-02501062B TA-03121437B TA-03751750B | TA-04372062B TA-05002187B - | |
| KIT-CTP202K5BAL | CTP2000-K5202B | - | TA-02501062B TA-03121437B TA-03751750B | TA-04372062B TA-05002187B - | |
| KIT-CTP202A5BAL | CTP2000-A50202B | - | TA-02501062B TA-03121437B TA-03751750B | TA-04372062B TA-05002187B - | |
| KIT-202BHS63BAL | CB-202B | CB2000-HSK63A | TA-02501062B TA-03121437B TA-03751750B | TA-04372062B TA-05002187B - | |
| KIT-050MBBAL | CB-050MB | - | - | - | |
| KIT-050MTABAL | CB-050MB | - | TA-06M027B TA-08M032B | TA-10M045B TA-12M054B | |
| KIT-050MBD40BAL | CB-050MB | CB050M-DIN40 | TA-06M027B TA-08M032B | TA-10M045B TA-12M054B | |
| KIT-050MBI40BAL | CB-050MB | CB050M-ISO40 | TA-06M027B TA-08M032B | TA-10M045B TA-12M054B | |

Boring Heads

Shanks

Bars & Tools

Inserts

Accessories

Kits & Sets

Technical

Boring Tool Sets

Round Shanks



- Micro grain carbide
- Uncoated



Inch

| Part No. | Shank Dia. | Boring Tools Included in Set | | |
|----------|------------|--------------------------------|--------------------------------|--------------------------------|
| SET-SBTA | .375 | SBT-01250500A SBT-03121500A | SBT-01870812A SBT-03751875A | SBT-02501125A SBT-05002312A |
| SET-SBTB | .500 | SBT-01250500B SBT-03121500B | SBT-01870812B SBT-03751750B | SBT-02501125B SBT-05002187B |
| SET-SBTD | .750 | SBT-05002187D SBT-10003500D | SBT-06252750D SBT-12504000D | SBT-07503000D - |
| SET-SBTE | 1.000 | SBT-05002375E SBT-12503875E | SBT-07502875E SBT-06252625E | SBT-10003500E - |



Stubby Carbide Boring Tool Sets

| Part No. | Shank Dia. | Boring Tools Included in Set | | |
|-------------|------------|--------------------------------|--------------------------------|--------------------------------|
| SET-SBTBSHT | .500 | SBT-01250250B SBT-03120562B | SBT-01870312B SBT-03750687B | SBT-02500437B SBT-05000812B |
| SET-SBTDSHT | .750 | SBT-05001312D | SBT-07501531D | SBT-10001750D |

Boring Heads

Shanks

Bars & Tools

Inserts

Accessories

Kits & Sets

Technical



Boring Tool Sets

Square Shanks

- Micro grain carbide
- Uncoated



Inch

| Part No. | Shank Dia. | Boring Tools Included in Set | | |
|-----------|------------|----------------------------------|----------------------------------|----------------------------------|
| SET-SBTBS | .500 | SBT-01250500BS SBT-03121500BS | SBT-01870812BS SBT-03751750BS | SBT-02501125BS SBT-05002187BS |

Metric

| Part No. | Shank Dia. | Boring Tools Included in Set | | |
|-----------|------------|------------------------------|----------------------------|----------------------------|
| SET-SBTMA | 10 | SBT-03012MA SBT-08037MA | SBT-04020MA SBT-10048MA | SBT-06028MA SBT-12055MA |
| SET-SBTMB | 12 | SBT-03012MB SBT-08037MB | SBT-04020MB SBT-10048MB | SBT-06028MB SBT-12055MB |
| SET-SBTMD | 20 | SBT-12063MD SBT-25090MD | SBT-16071MD SBT-32100MD | SBT-19078MD - |
| SET-SBTME | 25 | SBT-12060ME SBT-25089ME | SBT-16067ME SBT-32100ME | SBT-19074ME - |

Boring Heads

Shanks

Bars & Tools

Inserts

Accessories

Kits & Sets

Technical

TA Boring Bar Sets



Inserts sold separately

Inch

| Part No. | Shank Dia. | Boring Bars Included in Set | | |
|----------|------------|------------------------------|------------------------------|-------------------|
| SET-TAB | .500 | TA-02501062B TA-04372062B | TA-03121437B TA-05002187B | TA-03751750B - |
| SET-TAD | .750 | TA-05002500D TA-12504000D | TA-07503000D - | TA-10003500D - |
| SET-TAE | 1.000 | TA-05002375E TA-12503875E | TA-07502875E - | TA-10003500E - |

Metric

| Part No. | Shank Dia. | Boring Bars Included in Set | | |
|-----------|------------|-----------------------------|----------------------------|------------------|
| SET-TAMA | 10 | TA-06M027A | TA-08M036A | TA-10M045A |
| SET-TASMA | 10 | TAS-06M012A | TAS-08M016A | TAS-10M020A |
| SET-TAMB | 12 | TA-06M027B TA-12M054B | TA-08M036B - | TA-10M045B - |
| SET-TASMB | 12 | TAS-06M012B TAS-12M024B | TAS-08M016B - | TAS-10M020B - |
| SET-TAMD | 20 | TA-10M045D TA-20M090D | TA-12M054D - | TA-16M072D - |
| SET-TASMD | 20 | TAS-10M020D TAS-20M040D | TAS-12M024D - | TAS-16M032D - |
| SET-TAME | 25 | TA-10M045E TA-20M090E | TA-12M054E TA-25M113E | TA-16M072E - |
| SET-TASME | 25 | TAS-10M020E TAS-20M040E | TAS-12M024E TAS-25M050E | TAS-16M032E - |

Boring Heads

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Recommended Speeds & Feeds

Inch

IMPORTANT: The speeds and feeds below are a general starting point for all applications. Factory technical assistance is available through our Application Engineering department.

| Material | Hardness (BHN) | Finish Boring (Cri-Bore [®] , CB, CBER [®]) | | | Rough Boring (Cri-Twin [®]) * | | |
|--|----------------|--|----------|-----------|---|----------|-----------|
| | | Speed | | Feed | Speed | | Feed |
| | | Uncoated | TiN | IPR | Uncoated | TiN | IPR |
| | | SFM | | | SFM | | |
| Free Machining Steel 1118, 1215, 12L14, etc. | 100-250 | 350-700 | 450-800 | .003-.005 | 450-800 | 450-1000 | .006-.016 |
| Low Carbon Steel 1010, 1020, 1025, 1522, 1144, etc. | 85-275 | 350-700 | 450-800 | .002-.004 | 450-800 | 450-1000 | .006-.016 |
| Medium Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc. | 125-325 | 400-700 | 500-800 | .002-.004 | 450-800 | 450-1000 | .006-.016 |
| Alloy Steel 4140, 5140, 8640, etc. | 125-375 | 300-600 | 400-700 | .002-.004 | 450-800 | 450-1000 | .006-.016 |
| High Strength Alloy 4340, 4330V, 300M, etc. | 225-400 | 300-600 | 350-650 | .002-.004 | 400-700 | 450-800 | .006-.016 |
| Tool Steel H-13, H-21, A-4, O-2, 5-3, etc. | 150-250 | 300-600 | 350-700 | .002-.004 | 400-700 | 400-700 | .006-.010 |
| High Temp Alloy Hastelloy B, Inconel 600, etc. | 140-310 | 100-250 | 150-300 | .002-.004 | 100-250 | 150-300 | .006-.010 |
| Stainless Steel 400 Series 416, 420 | 185-350 | 350-600 | 400-650 | .002-.004 | 400-600 | 400-700 | .006-.012 |
| Stainless Steel 300 Series 304, 316, 17-4PH | 135-275 | 350-600 | 400-650 | .002-.004 | 400-600 | 400-700 | .006-.012 |
| Super Duplex Stainless Steel | 135-275 | 350-600 | 400-650 | .002-.004 | 400-600 | 400-700 | .006-.012 |
| Nodular, Grey, Ductile Cast Iron | 120-320 | 400-600 | 500-700 | .002-.004 | 400-600 | 500-700 | .006-.012 |
| Cast Aluminum | 30-180 | 750-1000 | 800-1100 | .002-.004 | 750-1000 | 800-1100 | .006-.016 |
| Wrought Aluminum | 30-180 | 750-1000 | 750-1000 | .002-.004 | 750-1000 | 750-1000 | .006-.016 |
| Brass | 100 | 700-950 | 750-1000 | .002-.004 | 700-950 | 750-1000 | .006-.016 |

*See page 67 for instructions on applying Cri-Twin[®] boring head in different configurations

NOTICE: The modular boring system's configuration, including the length of boring bar, boring head off set, and amount of extensions and/or reducers may all affect performance of boring systems. All of these factors may increase imbalance of the modular boring system. Imbalance at excessive RPM will cause vibration in the machine tool, which can cause damage to the machine tool; in particular the spindle. This vibration may occur at spindle speeds above 1000 RPM. If vibration is present, reduce spindle speed.

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Recommended Speeds & Feeds

Metric



IMPORTANT: The speeds and feeds below are a general starting point for all applications. Factory technical assistance is available through our Application Engineering department.

| Material | Hardness (BHN) | Finish Boring (Cri-Bore [®] , CB, CBER [®]) | | | Rough Boring (Cri-Twin [®]) * | | |
|--|----------------|--|-----------|-----------|---|-----------|-----------|
| | | Speed | | Feed | Speed | | Feed |
| | | Uncoated | TiN | | Uncoated | TiN | |
| | | M/min | | mm/rev | M/min | | mm/rev |
| Free Machining Steel 1118, 1215, 12L14, etc. | 100 - 250 | 107 - 213 | 137 - 244 | .08 - .13 | 137 - 244 | 137 - 305 | .15 - .41 |
| Low Carbon Steel 1010, 1020, 1025, 1522, 1144, etc. | 85 - 275 | 107 - 213 | 137 - 244 | .05 - .10 | 137 - 244 | 137 - 305 | .15 - .41 |
| Medium Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc. | 125 - 325 | 122 - 213 | 152 - 244 | .05 - .10 | 137 - 244 | 137 - 305 | .15 - .41 |
| Alloy Steel 4140, 5140, 8640, etc. | 125 - 375 | 91 - 182 | 122 - 213 | .05 - .10 | 137 - 244 | 137 - 305 | .15 - .41 |
| High Strength Alloy 4340, 4330V, 300M, etc. | 225 - 400 | 91 - 182 | 107 - 198 | .05 - .10 | 122 - 213 | 137 - 244 | .15 - .41 |
| Tool Steel H-13, H-21, A-4, O-2, 5-3, etc. | 150 - 250 | 91 - 182 | 107 - 213 | .05 - .10 | 122 - 213 | 122 - 213 | .15 - .25 |
| High Temp Alloy Hastelloy B, Inconel 600, etc. | 140 - 310 | 30 - 76 | 46 - 91 | .05 - .10 | 30 - 76 | 46 - 91 | .15 - .25 |
| Stainless Steel 400 Series 416, 420 | 185 - 350 | 107 - 182 | 122 - 198 | .05 - .10 | 122 - 182 | 122 - 213 | .15 - .31 |
| Stainless Steel 300 Series 304, 316, 17-4PH | 135 - 275 | 107 - 182 | 122 - 198 | .05 - .10 | 122 - 182 | 122 - 213 | .15 - .31 |
| Super Duplex Stainless Steel | 135 - 275 | 107 - 182 | 122 - 198 | .05 - .10 | 122 - 182 | 122 - 213 | .15 - .31 |
| Nodular, Grey, Ductile Cast Iron | 120 - 320 | 122-182 | 152 - 213 | .05 - .10 | 122 - 182 | 152 - 213 | .15 - .31 |
| Cast Aluminum | 30 - 180 | 229 - 305 | 244- 335 | .05 - .10 | 229 - 305 | 244- 335 | .15 - .41 |
| Wrought Aluminum | 30 - 180 | 229 - 305 | 229 - 305 | .05 - .10 | 229 - 305 | 229 - 305 | .15 - .41 |
| Brass | 100 | 213 - 290 | 229 - 305 | .05 - .10 | 213 - 290 | 229 - 305 | .15 - .41 |

*See page 67 for instructions on applying Cri-Twin[®] boring head in different configurations

NOTICE: The modular boring system's configuration, including the length of boring bar, boring head off set, and amount of extensions and/or reducers may all affect performance of boring systems. All of these factors may increase imbalance of the modular boring system. Imbalance at excessive RPM will cause vibration in the machine tool, which can cause damage to the machine tool; in particular the spindle. This vibration may occur at spindle speeds above 1000 RPM. If vibration is present, reduce spindle speed.

Boring Heads

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Set-up Instructions

General Information

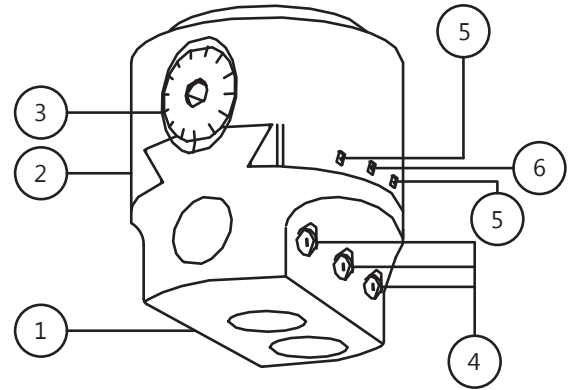
General Boring Head Information

Allied Criterion Boring Heads have three major components: the boring head body (#2), bar holder/insert holder (#1), and dial screw (#3).

The boring head body (#2) has a black oxide finish for rust prevention. The bar holder or insert holder (#1) has been satin chromed for wear resistance. The dial screw (#3) has been precision ground to give accurate movement of the bar holder/insert holder in the dove tail slide.

The gib tension has been preset at the factory. The two gib screws (#5) should not be loosened to make size adjustments. These screws are for adjusting the gib pressure only and are filled with red wax to prevent accidental adjustment.

The locking screw (#6) is the only screw used for making size changes to the boring head.



1. Bar/Insert Holder
2. Boring Head Body
3. Dial Screw
4. Bar Holder Set Screws
5. Gib Screws
6. Locking Screw

Diameter Adjustment

Adjusting Standard Boring Heads (see figure above)

To adjust the diameter of an Allied Criterion standard boring head:

1. Loosen the locking screw (#6).
2. Turn the dial screw (#3) clockwise to increase the diameter and counterclockwise to decrease the diameter.
3. Tighten the locking screw (#6).

IMPORTANT: Do not loosen the gib screws (#5). It can cause poor performance when making diameter adjustments.

NOTE: To machine a smaller bore diameter, turn dial screw (#3) counterclockwise one full turn minimum to remove any backlash and then adjust to smaller size.

Adjusting Micro Adjusting Setting Boring Heads

Before setting the Micro Adjusting Boring Head to the bore diameter, you need to set the Micro Adjusting Dial (#7) to the minimum bore diameter setting.

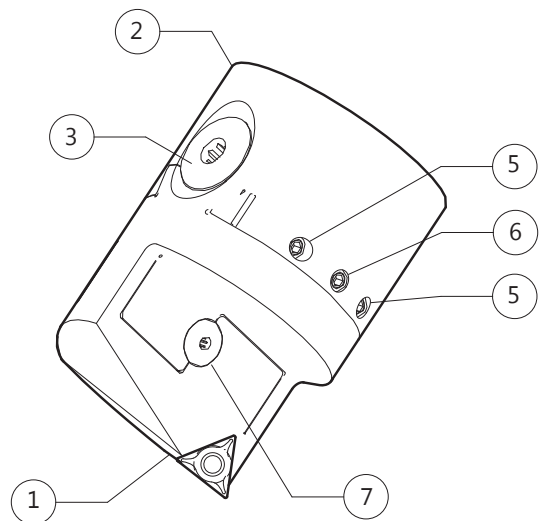
1. Turn the Micro Adjusting Dial (#7) clockwise until the dial screw bottoms out on the bottom of the dial screw bore.
2. Note the graduation line on the dial face that is closest to the reference line, then turn the Micro Adjusting Dial (#7) counterclockwise 3-1/4 turns.
3. Reverse direction and line the graduation line noted in Step 2 with the reference line.

The Micro Adjusting Dial is now set so you have .006" on diameter of adjustment.

Adjusting micro adjusting setting boring heads is just as easy as adjusting standard boring heads. First, you adjust the boring head using the .001" adjustment (#3) and then you make your final adjustment with the .00005" adjustment (#7).

1. Loosen the locking screw (#6).
2. Turn the dial screw (#3) clockwise to increase the diameter and counterclockwise to decrease the diameter.
3. Tighten the locking screw (#6).
4. Turn the .00005" dial screw (#7) clockwise to increase the diameter and counterclockwise to decrease the diameter. No locking of the .00005" dial screw (#7) is required.

NOTE: The micro adjusting dial screws only have a total range of .006" (.150mm) on diameter.



1. Bar/Insert Holder
2. Boring Head Body
3. Dial Screw
4. Bar Holder Set Screws
5. Gib Screws
6. Locking Screw
7. Micro Adjusting Dial Screw



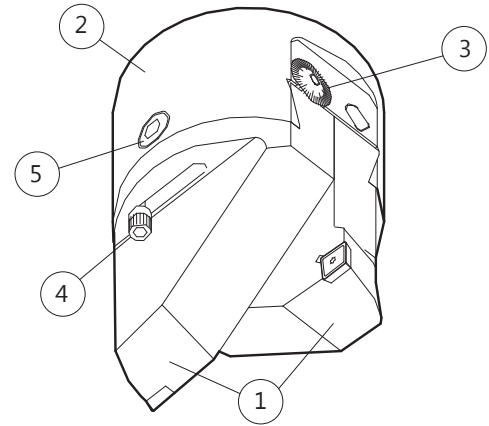


Cri-Twin® Modular Boring Heads

Procedure for Adjusting Cri-Twin® Modular Boring Heads

1. Loosen the insert holder locking screw (#4) on the insert holder (#1) to be adjusted and re-slug lightly, using light finger pressure only. Only one insert holder should be adjusted at a time. The other insert holder should remain locked.
2. Loosen and re-slug the body clamp bolt (#5) so a small amount of tension is felt when adjusting the dial screw.
3. Turn dial screw (#3) clockwise to increase the diameter and counterclockwise to decrease the diameter.
4. Tighten the insert holder locking screw (#4).
5. Rotate the boring head 180°.
6. Repeat steps 1, 3, and 4.
7. Tighten the body clamp bolt (#5).

NOTE: To machine a smaller bore diameter, turn dial screw (#3) counterclockwise one full turn minimum to remove any backlash and then adjust to smaller size.



1. Insert Holders
2. Boring Head Body
3. Dial Screw
4. Insert Holder Locking Screw
5. Body Clamp Bolt

The Cri-Twin® Modular Boring System is one of the most versatile boring systems available today. You can, with a combination of insert holders, perform different types of boring operations. The Cri-Twin® System can double your feed rate, double the material removed, or rough and finish in the same operation.

- **Double Feed Rate Operations:** This requires using two "standard length" or two "zero lead" insert holders and setting the cutting tips of both insert holders to bore the same diameter. The inserts will make equal cuts in the bore so you can double your feed rate and reduce the cycle time to bore your hole. Utilizing the Cri-Twin® System in this manner may leave tool retraction marks in the finish bore. For best results, you should bore into and out of the hole.

NOTICE: Use rough boring feed recommendations from Speeds & Feeds charts on pages 64-65.

- **Double Material Removed:** This requires using a standard and a short length insert holder. The standard length insert holder enters the cut first so it needs to be set to remove one-half of the material to be bored from the hole. The short insert holder is then set to the finish bore diameter. Remember, when doubling the material removed, each cutting edge is working separately, and you should not double your feed rate.

NOTICE: Use finish boring feed recommendations from Speeds & Feeds charts on pages 64-65.

- **Roughing and Finishing:** This requires using a standard and a short length insert holder. The standard length insert holder will be set to the rough bore diameter and then the short length insert holder will be set to the finish bore diameter. Utilizing the Cri-Twin® System in this manner may leave tool retraction marks in the finish bore. For best results, you should bore into and out of the hole.

NOTICE: Use finish boring feed recommendations from Speeds & Feeds charts on pages 64-65.



Set-up Instructions

Manual Boring and Facing Head

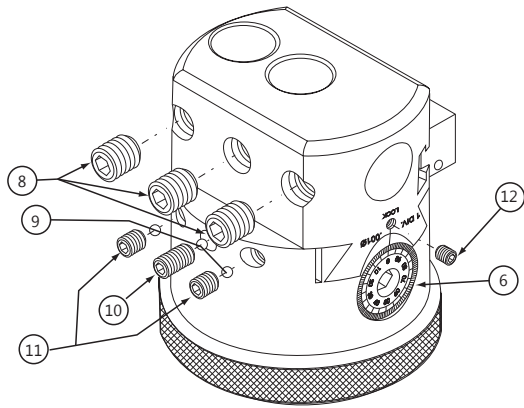


Fig. 1

1. Bar Holder
2. Left Dog Stop
3. Stop Pin
4. Right Dog Stop
5. Body
6. Dial Screw
7. Facing Ring
8. Bar Holder Set Screws
9. Steel Balls
10. Locking Screw
11. Gib Screws
12. Dial Screw Lock
13. Fine Adjusting Screws
14. Top Cap
15. Reversing Lock Screw

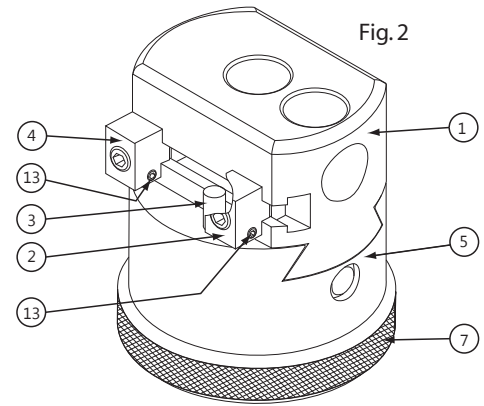


Fig. 2

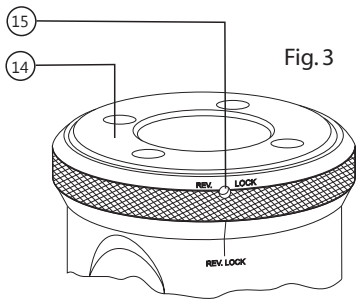


Fig. 3

For General Boring:

When no lateral movement is required, the Manual Boring and Facing Head can be used for standard boring operations. Adjustments are made by placing a hex wrench in the end of the dial screw (#6) and dialing off the required amount. Each graduation on the dial represents .001" on the bore diameter.

1. Loosen locking screw (#10).
2. Turn the dial screw (#6) clockwise to increase the diameter and counterclockwise to decrease the diameter.
3. Tighten the locking screw (#10).
4. To readjust for the next cut, repeat steps 1, 2, and 3.

NOTE: To machine a smaller bore diameter, turn dial screw (#6) counterclockwise one full turn minimum to remove any backlash and then adjust to smaller size.

For Facing in the Reverse Direction

The Manual Boring & Facing Head is capable of reverse feed by running the spindle in reverse. To set the head for feeding in clockwise and counterclockwise direction, screw the head on the desired shank. Align the "Rev. Lock" mark on the facing ring (#7) with the "Rev. Lock" mark on the body (#5) (see Figure 3). Insert a 3/32" hex wrench through the hole in the facing ring (#7) and tighten the reversing lock screw (#15) (see Figure 3) in the top cap (#14). This prevents the head from unscrewing during reverse (counterclockwise) operation.

NOTICE: To run the spindle in reverse, the head must be locked onto the shank. Please follow the directions above carefully.

For Facing, Grooving, and Undercutting

To assure free lateral movement, loosen gib screws (#11), then re-tighten just enough to create a slight drag when turning the dial screw (#6). This snug, but free, feeling can best be felt when turning the dial screw (#6) by hand using a hex wrench.

NOTICE: While machining either right or left hand, the bar holder (#1) should never extend past the body (#5) on the dial screw face side. This would result in tool damage due to the boring head rubbing inside of the bored hole.

Set-up Instructions:

1. Make sure the dial screw lock (#12) is loose.
2. Insert a hex wrench in the dial screw (#6) and position the tool at the start of the cut. To simplify a return to this position, set left* dog stop (#2) against the stop pin (#3).
3. Determine the length of cut required and with the aid of a gauge block, set the right* dog stop (#4) against the stop pin (#3).
4. Remove gauge block and lower the spindle to the proper depth.
5. Tighten the dial screw lock (#12).
6. As the spindle turns, hold on to the facing ring (#7). The tool will feed out at the rate of .003 per revolution (fine feed, .0015) until the right* dog stop (#4) strikes the stop pin. At this point, the clutch will disengage. Although the facing ring (#7) will continue to revolve, the tool will not advance.
7. For fine adjustments: after setting for facing mode with gauge block, the fine adjusting screws (#13) may be utilized to aid in the adjustment of the dog stops (#2) and (#4).
8. To return the tool to the starting position, place a hex wrench in the dial screw (#6) and turn counterclockwise until left* dog stop (#2) contacts the stop pin (#3) or (see note below) while holding onto the facing ring (#7), reverse the spindle and the tool will go back to the starting position.

*Instructions are based on right hand cutting. If application requires left hand cutting, please reverse dog stop instructions listed above.

Set-up Instructions

CNC Boring and Facing Head



For CNC Operations, Horizontal or Vertical

To set the head for CNC tool change operations, first refer to the "For Facing, Grooving, and Undercutting" and "For Facing in the Reverse Direction" instructions on page 68 and set the gib, stop dogs, and thread lock as described.

1. Install the head in the machine spindle and ensure the spindle is in its "home" or "tool change" position. Take note of the position of the anti-rotation device on your machine in relation to the key slot in the taper shank.
2. Remove the head from the machine.
3. Using the two #10-32 cap screws supplied, attach the plunger housing (#16) to the facing ring (#7). Note that the lock ring (#18) should be loose and turn freely.
4. Align the 1/8" dowel pin in the plunger (#17) with the slot in the lock ring (#18).
5. Attach the stop arm (#19) to the plunger (#17) using the #10-32 button head screw provided. At this time, the facing ring (#7) should turn with slight resistance.
6. Rotate the facing ring (#7) so that the stop arm (#19) is in the approximate position relative to the key slot in the taper shank, noted previously.
7. Install the head in the spindle, taking care to set the stop arm (#19) in its proper position relative to the anti-rotation device on the machine.

IMPORTANT: Stop arm is required.

With the head in the machine's spindle at its "home" or "tool change" position, clamp the lock ring (#20) in position using the two #4-40 set screws on the periphery of the lock ring (#18). The head is now ready for use.

Calculating Dwell Time

NOTICE: Damage to the Boring & Facing Head's clutch and gear mechanism may result if operated above 700 RPM. Because the head is not connected to, or controlled by, the machine's CNC control; allowances must be made in the machine's program to allow the head enough time to make its cut (and return). To accomplish this, a dwell must be inserted in the program. To calculate the dwell time, use the following formula.

$$(D/.0015) / (RPM/60) = T$$

WHERE:

- **RPM** is the spindle speed
- **60** = seconds
- **D** is the distance from the dog stop to the stop pin
- **.0015"** = radial feed per revolution
- **T** is the dwell time in seconds

EXAMPLE:

The cut is .500" change in diameter. The radial distance (the distance the dog stop is away from the stop pin) is .250". This is your D. The spindle speed is determined to be 500 RPM. Therefore, the formula is now:

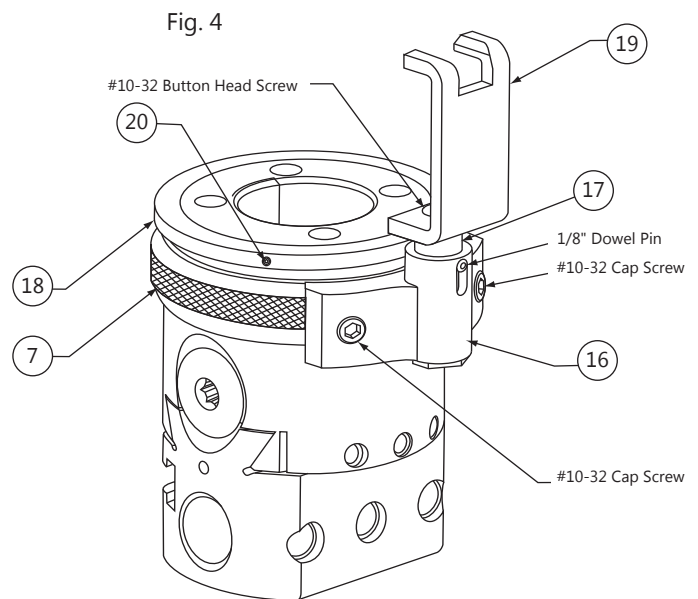
$$(.250/.0015) / (500/60) = T$$

$$20 \text{ seconds} = T$$

As a matter of practice, the dwell time will almost always be a few seconds longer than "T" to allow the head to come firmly against the stop and force the clutch to slip. This will allow the tool to come to a constant size (spring cut). This may take some test cuts to determine the necessary additional time.

Use the information above to face a bottom bore and cut an internal relief groove. Call up the head in the CNC program. DO NOT START THE SPINDLE. Center the head over the bore to enter. Enter the holder in Z axis so that the groove tool is properly placed to begin cutting. In the program, set the RPM to be 500 as calculated from example. NOW START THE SPINDLE and set a dwell time of, say, 22 seconds. At the end of this dwell, stop the spindle and set another dwell time of 22 seconds. At the end of this dwell, stop the spindle and retract the head. You now have a faced surface with an undercut.

If the tool is free of cutting on the return stroke, the head may be increased to the maximum of 700 RPM to speed the return as long as the dwell time is reduced accordingly so as not to slip the clutch unnecessarily. Excessive dwell time has the effect of "impact hammering" the feed mechanism against the dog stop and should be avoided.



7. Facing Ring
16. Plunger Housing
17. Plunger
18. Lock Ring
19. Stop Arm
20. Lock Ring Clamps



Guaranteed Test/Demo Application Form

Distributor PO # _____

The following must be filled out completely before test will be considered

| | |
|-----------------------|-----------------|
| Distributor: _____ | End User: _____ |
| Contact: _____ | Contact: _____ |
| Account Number: _____ | Industry: _____ |
| Phone: _____ | Phone: _____ |
| Email: _____ | Email: _____ |

Current Process

 List all tooling, coatings, substrates, speeds and feeds, tool life and any problems

Test Objective

 List what would make this a successful test (i.e. Penetration Rate, Finish, Tool Life, Hole Size, etc.)

Application Information

| | | |
|------------------------------------|----------------------------|--|
| Finish Bore Diameter: _____ in/mm | Tolerance: _____ | Material: _____ (4150/A36/Cast Iron/etc.) |
| Pre-existing Diameter: _____ in/mm | Depth of Bore: _____ in/mm | Hardness: _____ (BHN/Rc) |
| | | State: _____ (Casting/Hot Rolled/Forging) |

Machine Information

| | | |
|---|--|--|
| Machine Type: _____ (Lathe/Screw Machine/Machine Center, etc.) | Builder: _____ (Haas/Mori Seiki, etc.) | Model#: _____ |
| Shank Required: _____ (CAT50, Morse Taper, etc.) | Rigidity: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Poor | Tool Rotating: <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Power: _____ HP/KW | Orientation: <input type="checkbox"/> Vertical <input type="checkbox"/> Horizontal | Using Canned Boring Cycle: <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Thrust: _____ Lbs./N | | |

Coolant Information

| | |
|---|---------------------------------|
| Coolant Delivery: _____ (Through Tool/Flood) | Coolant Pressure: _____ PSI/bar |
| Coolant Type: _____ (Air Mist/Oil/Synthetic/Water Soluble, etc.) | Coolant Volume: _____ GPM/LPM |

Requested Tooling

| QTY | Item Number | QTY | Item Number |
|-----|-------------|-----|-------------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

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Warranty

Allied Machine & Engineering Corp. warrants to original equipment manufacturers, distributors, industrial and commercial users of its products that each new product manufactured or supplied by Allied Machine shall be free from defects in material and workmanship.

Allied's obligation under this warranty is limited to furnishing without additional charge a replacement or, at its option repairing or issuing credit for any product which shall within one year from the date of sale be returned freight prepaid to the plant designated by an Allied representative and which upon inspection is determined by Allied to be defective in materials or workmanship.

Complete information as to operating conditions, machine, set-up, and application of cutting fluid should accompany any product returned for inspection. The provisions of this warranty shall not apply to any Allied products which have been subjected to misuse, improper operating conditions, machine set-up or application of cutting fluid or which have been repaired or altered if such repair or alteration in the judgment of Allied would adversely affect performance of the product.

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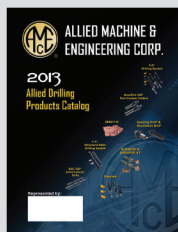
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Allied Drilling Products



Allied Drilling Products are designed and manufactured by Allied Machine & Engineering Corp. The combination of premium materials, along with unique geometry and coatings allows for the finest drilling systems in the metal cutting industry, resulting in the lowest cost per hole.

Literature Order Number: ADP-13

Allied Threadmilling Catalog



AccuThread 856® specific Thread Mills conform with J1926 and SAE AS5202 and have a thicker core and a helical flute which offers increased strength and rigidity when cutting forces are applied. AccuThread 856® provides superior thread forms compared to other competitive thread mills and taps.

Literature Order Number: TMC-13

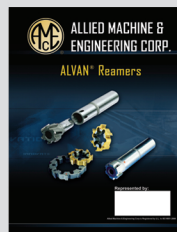
High Performance & Universal



This catalog lists the widest variety of spade drills and holders in our industry. Our TiN, TiAlN, and TiCN coated high performance spade drills (31/32" to 5") offer a 100% to 500% increase in productivity and an extended tool life of 3 to 20 times over uncoated tools.

Literature Order Number: HPU-13

ALVAN® Reamers



The ALVAN® product line includes monobloc, ring style, and replaceable head reamers, offered with carbide, cermet, PCD, and CBN cutting edges.

Literature Order Number: ALV-13

APX™ Drill



The APX™ Drill is capable of drilling to depths up to 10xD. The head diameter ranges from 1.50" - 4.00" using only 10 holder series. APX™ offers multiple pilot inserts and geometries, T-A, GEN2 T-A, GEN3SYS, and GEN3SYS XT. All outboard inserts use AM300 coating for maximum performance.

Literature Order Number: APX-14

i-Form



Custom indexable drill/form tool system that allows you to design forms for any style hole with increased productivity in mind.

Literature Order Number: IFFL

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