F69M

OPTIONAL EQUIPMENT CATALOG

MANUFACTURED BY:

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NOTE: WHEN ORDERING REPLACEMENT PARTS,
PLEASE GIVE THE MODEL AND SERIAL NUMBER.
SEND DIGITAL PHOTO OF PART TO EXPIDITE ORDER.
ORDER BY PART NUMBER.
THERE IS A MINIMUM ORDER OF $25.00
F69A Options & Accessories Catalog

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Cylinder Bore Centering

Automatic Centering

650-3-59Y Renishaw Wireless Probing System

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Manual Centering

502-12-7B Digital Runout Probe and Readout
Including Magnetic Holder for Block Set Up and Manual Centering of Cylinder Bores and Main Line Bores
502-9-9A Mechanical run out indicator
General purpose (.001) resolution

502-12-4 Magnetic base
With (2) extension arms for indicators (4) magnet base for cylinder boring bar
BLOCK FIXTURING

Automatic

690-3-63 Computer Controlled Automatic 4Th Axis Block Roll Over Fixture
Including:
1: Rottler 4th Axis Software Packages.
2: Universal Engine Block Mounting System to Locate and Hold A Wide Variety of Camshaft Type V Blocks, Requires Main and Cam Bearing Locators to Precision Mount Blocks.
3: Adjustable Camshaft Centerline Locating Device to Set Up Camshaft Type V Blocks with Reference to the Centerline of their Camshaft and Crankshaft.
4: Power Tail Stock for Quick Mounting of Blocks and Rigid Support During Machining.
650-3-1 Performance 90 Degree V Block Fixture
Heavy Duty, Including Crankshaft and Camshaft Bars to Accommodate Max. Block Length of 23.85” (606mm). Customer Must Order Main and Cam Locators Required from List Below. Fixture Price Does not Include Locators
Optional Performance Fixture Crankshaft and Camshaft Bars for Longer Block Models

650-3-4E Crankshaft Bar for Longer Block Models
V10. Maximum Block Length 31.85” (809mm)

650-3-7K Camshaft Bar for Longer Block Models
V10. Maximum Block Length 31.85” (809mm)

Spacer Set for Honda, Subaru, Mitsubishi Blocks

650-3-4F Spacer Set for Honda, Subaru, Mitsubishi Blocks
For Boring and Milling/Surfacing with the 650-3-1 Performance Fixture.
7241P Rottler Economy Head and Block Fixture Assembly
(Includes Clamp Towers - 7242M)
F69M Optional Equipment

Miscellaneous Accessories

650-3-37 1/2" (12.7mm) Universal Clamping Kit
Including T-Nuts, Bolts, Studs, Strap Clamps, etc.

7219W 5.2" (138.08mm) Heavy Duty T-Slot Universal Parallels
LOCATOR SETS
For 4th AXIS includes front & rear main locator and rear cam locator

Chevrolet sets

650-3-68 Locator Assembly (Small Block Chevy)

650-3-68B Locator Assembly (Big Block Chevy)

650-3-68L Locator Assembly (327 Small Journal Crank)
650-3-68J Locator Assembly (400 Small Block Chevy)

650-3-68G Locator Assembly (Chevy Bowtie Block)

650-3-68F Locator Assembly (Chevy 58mm Cam Bore) for 55mm Cam Journal
650-3-68E Locator Assembly (Chevy 63mm Cam Bore) for 60mm Cam Journal

650-3-68M Locator Assembly (Chevy 5.3 liter 99 & Up)

650-3-68R Locator Assembly (Chevy Gen3 LS1 to LS6)
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650-3-68T Locator Assembly (Chevy LS7)

Ford sets

650-3-68A Locator Assembly (Ford 289/302)

650-3-68H Locator Assembly (Ford 351W)

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650-3-68P Locator Assembly (Ford 351C)

650-3-68C Locator assembly (Ford 460)

Mopar sets

650-3-68K Locator Assembly (Mopar 318)
F69M Optional Equipment

650-3-68D Locator Assembly (Mopar 360)

650-3-68Q Locator Assembly (Mopar 383,426,440)

CONTACT ROTTLER FOR MORE LOCATORS FOR OTHER MANUFACTURERS
Main & Cam Bearing Locator Assemblies
For Rottler 4th Axis Roll Over Fixture. Contact Rottler for Details. If Customer Requires Sizes Other than Available from Stock, Rottler will Manufacture the Required Size.
Customer must provide the size, including tolerance, of the Bore/s the Locator will be Used in. Rottler will use this information to Design the Actual Locator. Sold as Assemblies.

LOCATOR SETS FOR PERFORMANCE FIXTURE

Domestic Main Locators

502-1-47A Locator, Main Bearing Chevy V8
(350) Chevy V6 (4.3L) 2.6391" (67.033mm) Chevy V8 (400Sb) Chevy V6 (3.4L) 2.8390" (72.111mm) 1 pair

502-1-47B Locator, Main Bearing Chevy V8
(396/400Bb/454) 2.9365" (74.587mm) Buick V6 (231 Cu. In.) 2.6855" (68.212mm) 1 pair
502-1-47D Locator, Main Bearing Ford V8
(351C) 2.9402” (74.681mm) Ford V8 (351W / 429 / 460) 3.1907” (81.044mm) 1 pair

502-1-47E Locator, Main Bearing Ford V8
(289/302) 2.4397” (61.968mm) Mopar V8 (360) 3.0010” (76.225mm) 1 pair

502-1-47F Locator, Main Bearing Mopar V8
(318/340) 2.6910” (68.351mm) Mopar V8 (426 / 440) 2.9410” (74.701mm) 1 pair
502-1-47G Locator, Main Bearing Chevy V8
(283/327 Early) 2.4892" (63.226mm) Chevy V8 (5.3L 1999 & Newer) 2.7490" (69.825mm) Chevy Ls-1
2.7495" (69.825mm) 1 pair

502-1-47C Locator, Main Bearing Buick/Olds/Pontiac V8
(350/389/400) 3.1866" (80.940mm) Buick/Pontiac V8 (421/428/455) 3.4365" (87.287mm) 1 pair

502-1-47K Locator, Main Bearing GM 6.5L/395 Cu. In.
Diesel Application 3.1420" (79.807mm) 1 pair
502-1-47L Locator, Main Bearing Ford
4.6 (2.8491”) Ford Zetec 2.4528” (62.301mm) 1 pair

Import Main Locators

502-1-47J Locator, Main Bearing 928 Porsche
V8 5L Block 2.953” (75.260mm) 1 pair

502-1-47M Locator, Main Bearing Honda
1.8 (2.3216”) Mitsubishi 2.0 - 2.4002” (60.965mm) 1 pair
502-1-47R Locator, Main Bearing 2.5 Liter Subaru
2.5185/2.5195" (63.970/63996mm) 2.2 Liter Honda 2.1250/2.1260" (53.975/54.00mm) 1 pair

502-1-47P Locator, Main Bearing 7.3 IHC Diesel V8
3.315/3.316" (84.201/84.226mm) 3.0 Toyota V6 2.677/2.678" (67.996/68.021mm) 1 pair
Main Bearing Locators for 650-3-1 Performance Fixture.

If Customer Requires Sizes Other Than Listed Below, Rottler Will Manufacture the Required Size. Customer Must Provide the Size, Including Tolerance, of the Bore/s the Locator will be used in. Rottler Will use this Information to Design the Actual Locator. Sold In Pairs.

CAM BEARING LOCATOR SETS FOR PERFORMANCE FIXTURE

Chevrolet sets

650-3-19 Locator, Cam Bearing Small Block Chevy
(283/327/350/400) Bore#1 2.019/2.021" #5 (2.009/2.011)

650-3-19A Locator, Cam Bearing Big Block Chevy
(396/427/454) Bore#1 2.1395/2.1405" #5 (2.1295/2.1305)
650-3-19G Locator, Cam Bearing Special Prostock Racing Big Block Chevy
63mm Roller Bearing Bore 2.4780/2.4790"

650-3-19H Locator, Cam Bearing Special Prostock Racing Big Block Chevy
Bore 2.6733/2.6743"

650-3-19J Locator, Cam Bearing Small Block Chevy Roller Bearing
Bore 1.8745/1.8750"
650-3-19M Locator, Cam Bearing Chevy 58mm Roller Bearing
Bore 2.2827/2.2831”

650-3-19N Locator, Cam Bearing Chevy Bow-Tie Block
Bore 1.999/2.0010”
Ford Sets

650-3-19B Locator, Cam Bearing Big Block Ford
(427/429/460) Bore#1 2.2495/2.2505" - #5 2.2495/2.2505"

650-3-19C Locator, Cam Bearing Small Block Ford
(260/289/302/351W) Bore#1 2.2041/2.2051 - #5 2.144/2.145"

650-3-19D Locator, Cam Bearing Small Block Ford
(351M) Bore#1 2.2495/2.2505" - #5 2.1440/2.1450"
650-3-19Q Locator, Cam Bearing Big Block Ford

390 Bore#1 2.3095/2.3105" - #5
2.2495/2.2505"

Mopar Sets

650-3-19E Locator, Cam Bearing Small Block Mopar
(318/340/360) Bore#1 2.1295/2.1305" - #5 1.6920/1.6930"

650-3-19F Locator, Cam Bearing Big Block Mopar
(383/426/440) Bore#1 2.1295/2.1305" - #5 1.8795/1.8805"
Main Bearing Locators for 650-3-1 Performance Fixture.

If Customer Requires Sizes Other Than Listed, Rottler Will Manufacture the Required Size.
Customer must provide the Size, Including Tolerance, of the Housing Bore/s the Locator Will be used in. Rottler will use this information to design the actual locator. Sold In Pairs. Locators are Machined Smaller than Housing Bore. Housing Bores are Listed Below.
FIXTURING FOR MACHINE

Block End Truing

650-3-30 Block End Truing Fixture Assembly
(Requires Performance Fixture Part #650-3-1) Used for Surfacing and Machining Front and Rear End of Block True to Crankshaft Centerline.
650-3-30A Block End Truing Fixture Assembly
(Requires 4th Axis Fixture #650-3-59) Used for Surfacing and Machining Front and Rear End of Block True to Crankshaft Centerline.
Overhead Cam Block Fixturing

650-3-20A Pan Rail Wedge Fixture
(Requires Performance Fixture Part #650-3-1). Used for Fixturing 60 & 90-Degree Overhead CAM Blocks
650-3-84 Overhead Cam Block Fixture
For V Blocks for 4th Axis Fixture (650-3-59)
Cylinder Head Surfacing Fixture

7209M Leveling Table with Airfloat
Complete with Universal Work Holding System for Surfacing Cylinder Heads and Small In-Line Blocks

7226G Exhaust and Intake Manifold Surfacing Fixture System
For #7209M Table
Block Main Line Boring and Cam Boring Fixtures

650-3-1A Lower End Machining Package Assembly
(Requires Performance Fixture Part # 650-3-1) Used for Set Up for Main Line Boring and Angle Adjustment for Splayed Cap Drilling and Tapping.

650-3-56 Line Bore Pivot Table
Complete with Universal Work Hold System for Small In Line and 90 Degree V Blocks, used for Main Line Boring and Stroker Crank Clearance.
Special Application Fixture

650-3-82 Mopar 5.7L Hemi Fixture Assembly
(Requires 4th Axis Fixture 650-3-59)
TOOLING
Cylinder Boring

Boring/Sleeving/Chamfering/O-Ring Tooling

650-2-1D Cutterhead Assembly
2.0 - 4.0" (50.80 - 101.60mm) Diameter X 7.0" (177.80mm) Length Complete with Tooling and Digital Micrometer
650-2-14B Cutterhead Assembly
2.9 - 5.0" (73.66 - 127.00mm) Diameter X 7.0" (177.80mm) Length Complete with Tooling and Digital Micrometer
650-2-14F Cutterhead Assembly
2.9 - 5.0" (73.66 - 127.00mm) Diameter X 10.0" (254mm) Length Complete with Tooling and Digital Micrometer
Extender for 650-2-14B&F Cutterhead Assembly

650-2-16D 1.400" (35.5mm) Spacer
(Extension) for 650-2-14B&F Cutterheads
Miscellaneous Tooling for 650-2-14B&F Cutterheads

501-29-6K PCD Tipped Triangular Insert
For Boring/Counterboring Aluminum Only - Ideal for Finishing Boring and Counterboring of Aluminum/Alusil Blocks in Preparation for a Sleeve.

6598M Cartridge
Triangular, Positive Rake, 13/16 Shank Length, for Counter Boring

6513J Toolbit, Brazed Carbide
.037" Wide O Ring Grooving

6513L Toolbit, Brazed Carbide
.039" Wide O Ring Grooving

6513N Toolbit, Brazed Carbide
.060" Wide O Ring Grooving
6513P Toolbit, Brazed Carbide
.085" Wide O Ring Grooving

6513Q Toolbit, Brazed Carbide
.120" Wide O Ring Grooving

6747K Cartridge Assembly
5 Degree Chamfer for Triangular Positive Rake Inserts

6747P Cartridge Assembly
10 Degree Chamfer for Triangular Positive Rake Inserts

6747G Cartridge Assembly
15 Degree Chamfer for Triangular Positive Rake Inserts

6747F Cartridge Assembly
20 Degree Chamfer for Triangular Positive Rake Inserts
6747M Cartridge Assembly
20 Degree Chamfer for Triangular Positive Rake Inserts (Special Application Only)

6747H Cartridge Assembly
30 Degree Chamfer for Triangular Positive Rake Inserts

6593L Cartridge Assembly
Offset Indexable Insert, Triangular Positive Rake (3.14 - 3.40” Diameter)

6593M Cartridge Assembly
Offset Indexable Insert, Triangular Positive Rake (3.40 - 3.90” Diameter)

6593N Cartridge Assembly
Offset Indexable Insert, Triangular Positive Rake (3.90 - 4.40” Diameter)

6593P Cartridge Assembly
Offset Indexable Insert, Triangular Positive Rake (4.40 - 4.90” Diameter)
RT211 Insert
Triangular 1/4" (6.35mm) 1/64" (.397mm) radius, 1/4" triangular Insert holders only, general purpose and sleeving

RT212 Insert
Triangular 1/4" (6.35mm) 1/32" (.787mm) radius, 1/4" triangular Insert holders only, general purpose and sleeving

RT321 Insert
Triangular positive rake, 3/8" (9.525mm) 1/64" (.397mm) radius, general purpose and sleeving (10% Discount on orders of 10-49, 20% Discount on orders of 50 or more)

RT322 Insert
Triangular positive rake, 3/8" (9.525mm) 1/32" (.787mm) radius, general purpose and sleeving

RT321F Insert
Triangular positive rake, 3/8" 1/64" Radius, Precision Counterboring
**RT322F Insert**
Triangular positive rake, 3/8" 1/32" Radius, Precision Counterboring

![RT322F Insert Image]

**RS322 Insert**
Square negative rake, 1/32" (.787mm) radius, 3/8" (9.525mm) IC, black ceramic coated for high speed oversize thru boring

![RS322 Insert Image]
Surfacing
Surfacing Tooling

650-2-8E Surfacing Cutterhead
Flycutter, 10" (254mm) Diameter Including (2) Radially and Axially Adjustable 3/8" (9.525mm) IC Insert Holders. Inserts must be ordered separately
650-2-8F Surfacing Cutterhead
Flycutter, 14" (356mm) Diameter Including (2) Radially and Axially Adjustable 3/8" (9.525mm) IC Insert Holders. Inserts must be ordered separately

6303B CBN Insert
Round, Double-Sided, 3/8" (9.525mm) IC, for Cutting Cast Iron
F69M Optional Equipment

6303M PCD Insert
Round, 3/8" (9.525mm) IC, for Cutting Aluminum

6303K Coated Carbide Insert
Round, 3/8" (9.525mm) IC, for General Purpose Use

6303S CBN Insert
Round, 3/8" (9.525mm) IC, for Cutting Aluminum Blocks with Liners
Lifter Boring
Lifter Bore Tooling

650-2-60B Lifter Bore Tooling Kit
Utilizing Micro Adjustable Boring Bars from .750 - 1.218" (19.05 - 30.93mm)
F69M Optional Equipment

650-2-60N Setting Fixture
For 650-2-60B Lifter Tooling Package

650-2-60G Insert
For 0.750 - 0.900 diameter cartridge

650-2-60H Insert
For 0.920 - 1.180 diameter cartridge
Spacers Required for the Performance Fixture #650-3-1
To Set V Blocks at the Correct Angle for Lifter Boring Machine Work

650-3-7E 4-Degree Cam Bar Spacer-Chevy
Small Block Only

650-3-7F 6.25 Degree Cam Bar Spacer-Chevy
Big Block Only

650-3-7G Spacer, Cam Bar 3.5 Degree Ford
289/302/351W
F69M Optional Equipment

650-3-7H Spacer, Cam Bar 4-Degree Ford
429/400

650-3-7J Spacer Cam Bar 48-Degree Mopar Small Block (Race)

650-3-7N Spacer, Cam Bar 42-Degree Chevy Aurora

650-3-7P Spacer, Cam Bar 43-Degree Chevy Aurora
650-3-7Q Spacer, Cam Bar 44-Degree Chevy Aurora

650-3-7S Spacer, Cam Bar 44-Degree Chevy Small Block

650-3-7T Spacer, Cam Bar 48-Degree Chrysler Big Block
Main Line Bore Tooling

6753Q Main Line Bore 90 Degree Right Angle Drive Assembly
Diameter 1.9 - 5.6" (48 - 142.2mm) Minimum clearance 3.29" (83.6mm) with 650-2-39B Cutterhead,
Includes 5 extensions spacers
650-2-38G Special Belt Drive 90 Degree Right Angle Drive Assembly
For Limited Clearance Between Bearing Caps, Diameter 1.9 - 4.0" (48 - 101.6mm) Minimum clearance 2.7" (69mm) with 650-2-39B Cutterhead, includes 5 extension spacers

Note: Cutterheads are not included with right angle drive and must be ordered separately
Note: The Belt Drive Right Angle Drive is Designed for Limited Clearance Between Bearing Caps and its Cutting Performance Will Deteriorate as Larger Diameters are Bored and Extension Spacers are Used.
Note: Length of Bores can be Increased with Extension Spacers. The Addition of Extension Spacers Will Increase The Minimum Distance Between Bearing Housings by the Length of the Spacer. Allow for some Clearance either side of the Assembly for Safety While

Rottler Right Angle Drive Line Bore System will not be able to Line Bore Blocks that have Castings Between the Main Bearing Caps Found in Some New Design Light Weight Blocks.
Replace this box with correct illustration when available from engineering

Note: Cutterheads are not included with right angle drive and must be ordered separately

Note: The Belt Drive Right Angle Drive is Designed for Limited Clearance Between Bearing Caps and It's Cutting Performance Will Deteriorate as Larger Diameters are Bored and Extension Spacers are Used.

Note: Length of Bores can be Increased with Extension Spacers. The Addition of Extension Spacers Will Increase The Minimum Distance Between Bearing Housings by the Length of the Spacer. Allow for some Clearance either side of the Assembly for Safety While

Rottler Right Angle Drive Line Bore System will not be able to Line Bore Blocks that have Castings Between the Main Bearing Caps Found in Some New Design Light Weight Blocks.
650-2-39B Cutterhead Assembly Line Boring
1.9 - 4.0" (48.26 - 101.60mm) Diameter Complete with Tooling and Digital Micrometer. (When used with 11103 Drive, minimum distance between Bearing Housings 3.29") (83.6mm)
650-2-39C Cutterhead Assembly Line Boring
2.9 - 5.6" (73.66 - 142.24mm) Diameter Complete with Tooling and Digital Micrometer. When used with 11103 Drive, minimum distance between Bearing Housings 4.07" (103.4mm)
Special Main Line Boring Chamfering Tool

199-90 Toolholder
2 - 3" (50.80 - 76.20mm)

199-96 Toolholder
3 - 4" (76.20 - 101.60mm)

501-33E Toolbit
45-Degree Chamfer
Cam Bore

Cam Line Boring Tooling

650-3-43T Cam Line Bore Tooling Package
(Requires 650-3-30 Block End Truing Fixture, 650-3-1 Performance Fixture and 6753Q Right Angle Drive Assembly) Customer Must Order Cam Line Bar Bushings and Cam Bearing Locators to Suit Diameter to be Line Bored.
Cam Line Bar Bushings
If Customer Requires Sizes Other than Listed Below, Rottler will Manufacture the Required Size. Customer Must Provide the Size, Including Tolerance of the Housing Bore/s the Bushing will be used in. Rottler will use this Information to Design the Actual Bushing. Sold in Pairs. Bushings are Machined Smaller than Housing Bore.

**650-3-43B Bushing - 63mm (2.480" +/- .0007)**
(Sold in pairs)

**650-3-43C Bushing - 58mm (2.282" +/- .0007)**
(Sold in pairs)
F69M Optional Equipment

650-3-43D Bushing - (2.250" +/- .0007)  
(Sold in pairs)

650-3-43E Bushing - (2.790" +/- .0007)  
(Sold in pairs)

650-3-43F Bushing - (2.309" +/- .0007)  
(Sold in pairs)
650-3-43G Bushing - (2.500" +/- .0007)  
(Sold in pairs)

650-3-43H Bushing - (2.120" +/- .0007)  
(Sold in pairs)

650-3-43J Bushing - (2.030" +/- .0007)  
(Sold in pairs)
F69M Optional Equipment

650-3-43K Bushing - (2.040" +/- .0015)
(Sold in pairs)

650-3-43L Bushing - (2.400" +/- .0007)
(Sold in pairs)

650-3-43M Bushing - (2.125" +/- .0007)
(Sold in pairs)
650-3-43N Bushing - (2.150" +/- .0007)
(Sold in pairs)

650-3-43P Bushing - (2.300" +/- .0007)
(Sold in pairs)

650-3-43Q Bushing - (2.060" +/- .0007)
(Sold in pairs)
650-3-43R Bushing - (2.6733" +/- .0007)  
(Sold in pairs)

650-3-43S Bushing - (2.0450 +/- .0007)  
(Sold in pairs)
Thread Tapping Tooling

650-2-11K Quick Change Tap Holder Cartridge Assembly with Adaptor

650-2-11C Torque Control Tap Holder for 1/4" (6.35mm) taps

650-2-11D Torque Control Tap Holder for 5/16" (7.95mm) taps

650-2-11E Torque Control Tap Holder for 3/8" (9.525mm) taps

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F69M Optional Equipment

650-2-11F Torque Control Tap Holder for 7/16" (11.13mm) taps

650-2-11G Torque Control Tap Holder for 1/2" (12.70mm) taps

Drill Tooling

650-2-44M Precision Drill Chuck Assembly
Shell Mill Assemblies

650-2-44N 2 1/2" (63.50mm) Shell Mill Assembly

650-2-44P 4" (101.60mm) Shell Mill Assembly
Gages and Indicators

650-3-38 Level-Intake and Exhaust Manifolds

7152A Dual Axis Level Assembly

650-2-44Q Three Dimensional Electronic Position Finder
With Spindle Adaptor and Retention Knob
502-9-9A Mechanical Run Out Indicator
General Purpose (.001 Resolution)

502-11-39D Mechanical Run Out Indicator
For Precision Bore Adjustment (.0001 Resolution)
502-12-4 Magnetic Base
Including (2) Extension Arms for Indicators (for centering cylinder bores) requires 502-9-9A

502-12-4A Magnetic Indicator Holder Assembly
For centering on main bores for line boring. (Requires 502-9-9A Mechanical Runout Indicator)
Miscellaneous Accessories

650-2-45H roughing end mill
1" (25.4mm) diameter X 8 1/2" (216mm) long for block stroker clearance

7242M Clamp Tower Assembly
(1 Pair)
Connecting Rod Fixturing and Tooling

650-3-44S Rottler Precision Connecting Rod Fixturing System
For Connecting Rods Center to Center Distance Approx. 8 - 24" (200 - 600mm)
650-2-3S Cutterhead Assembly
1.0 - 2.0” (25 - 50mm) Diameter X 3.0” (75mm) Long Complete with Tooling and Digital Micrometer for Con Rod Application
F69M Optional Equipment

650-2-3T Cutterhead Assembly
2.0 - 4.0” (50 - 100mm) Diameter X 4.0” (100mm) Long Complete with Tooling and Digital Micrometer for Con Rod Application.
650-2-15F Cutterhead Assembly
2.9 - 8.0" (73.5 - 200mm) Diameter X 4.0" (100mm) Long Complete with Tooling and Digital Micrometer for Con Rod Application.
RTCR322 Insert
Triangular Positive Rake, 3/8 IC 1/64" 9.397mm) Radius, for Connecting Rod Steel Cutting Only