

4-14 Line Boring Machine and Accessories Catalog





SUPERIOR

One Company, *Superior* Results.

ABOUT US

Superior Portable Machine Tools (SPR) is your go-to source for specialty tools and equipment in the Oil and Gas, Mining, Heavy Construction, Shipbuilding, Aerospace, Defense, and Power Generation industries. With a strong presence across locations in the US and Canada, as well as a global network of dealers, we proudly offer a comprehensive range of cutting-edge machinery. From portable line boring machines and auto bore welders to linear/gantry and rotary milling machines, our lineup covers all your needs. We also provide top-of-the-line Aggressive® clamshells (pipe cutters), ID/OD flange facers, end-prep bevelers, and weld isolation and test plugs. Additionally, our expertise extends to the production and maintenance of heat exchangers, condensers, and boilers through our partnership with Maus Italia. SPR's engineering group is ready to customize existing products or create tailor-made solutions from scratch, and we excel in precision grinding and tooling services, offering a wide assortment of custom and standard tool bits.

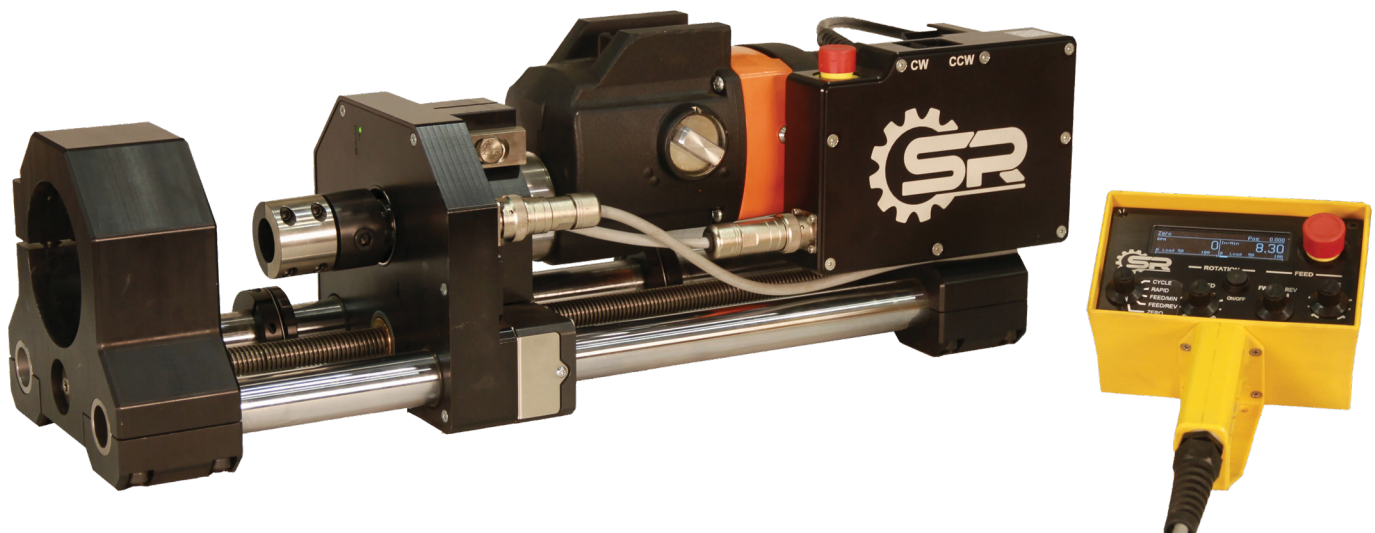
We go above and beyond by providing value-added engineering, comprehensive training programs, and unwavering operational support. Rest assured, we prioritize the highest health, safety, and environmental standards in the industry. Our extensive experience in service, deep understanding of equipment requirements, and unwavering dedication to customer satisfaction are the pillars of our commitment to delivering exceptional equipment and unmatched customer care.



4-14 S2 FEATURES

With the goal of increasing performance, utility, and ease of use, SPR is proud to present the all-new 4-14 S2 line boring machine. The new S2 is another example of our commitment to keep innovation and technology forefront as we continue to improve our product lines, increase our product offerings, and add value for our customers. Some of the features of the beautifully designed 4-14 S2 include:

- Lighter, 2x stiffer and has a smaller footprint than its predecessor
- All-new easy-to-read digital display showing feed current, feed rate, and RPM
- Accurate position control with DRO
- Automated cutting with Cycle Mode
- Load monitoring of feed and rotation with automatic shut-off
- Cutting tool travel 14.5 in (368 mm)
- Feed per minute ranging from 0 – 6.5 in per minute (165 mm per minute)
- Feed per rev starting at .1 - 20.5 thou per rev (.0025 - .521 mm per rev)
- Rapid traverse at 8.3 in per minute (211 mm per minute)
- Super lightweight base machine weights 51 lbs (23.1 kg); and the pendant at 3 lbs (1.36 kg)
- Powerful four variable speed reversible bar drive 3hp (2200W) motor weighing in at 26.5 lbs (12.02 kg)
- Available in 110 V & 230V systems
- Includes wide range of bore diameters from 1.5 to 16 in (38.1 to 406.4 mm)
- Bar drive torque at 203 ft-lbs of torque (275 Nm)



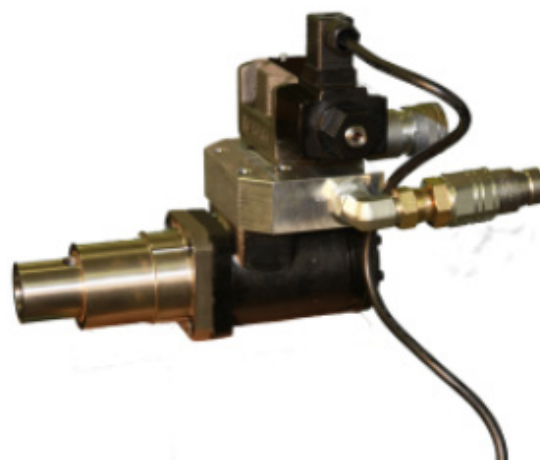
4-14 ET FEATURES

The 4-14 ET (electric touch) portable line boring machine is proven dependable and extremely powerful. Shown with our high-torque Eibenstock 34 four variable-speed motor, this combination makes the 4-14 ET extremely portable. A unique feature is the variable speed feed system with rapid traverse. This feed system provides 14" of cutting tool travel. Our control panel adds ease to the operation with the ability to add the optional remote control.

- Variable feed speeds, 14" tool travel with rapid traverse, automatic feed with optional remote control
- Line bore vertically or horizontally
- Line boring from 1 1/2" – 16" with our electric drive or up to 24" with our hydraulic bar drive
- Universal mount for line boring and bore welding – allowing you to set up ahead while you work.
- Factory trained dealer representatives provide demo's and training for line boring and bore welding machines.
- Available in 110 V & 230V systems
- Patents 4,932,814 and 5,000,627 Other patents pending

ELECTRIC OR HYDRAULIC BORING BAR DRIVES

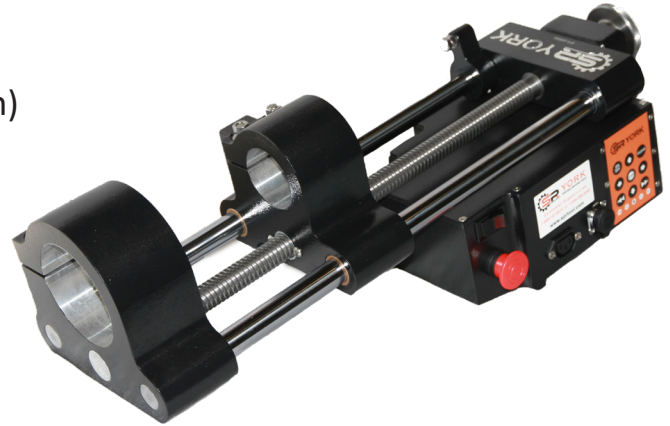
- Electric: 4-speed boring bar drive, faster speeds for better results 80/130/360/570 RPM
- Hydraulic: Four powerful variable speed motors to choose from



AUTOMATIC FEED

4-14 ET Full Function Electric Feed Carriage

- 14" (358 mm) cutting tool travel
- Feed Speeds of 0" -2.5" per minute (64 mm/min)
- Feed Torque 200 inch-lbs (22.6 Nm)
- Rapid Travers: 9" per min (228 mm/min)
- Weight: 55 lbs (25 kg)
- Adjustable limit stops
- Comes with custom aluminum carrying case



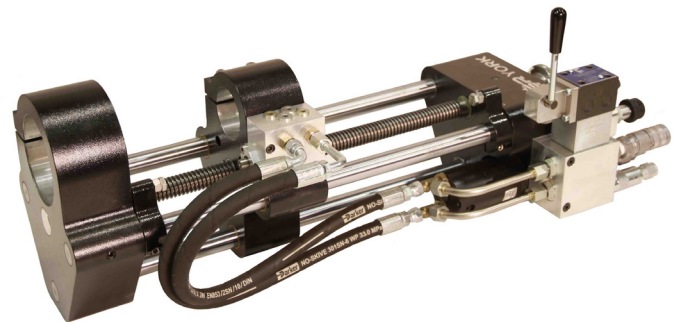
Part Number: ET-000-110V Assy (60 Hz)

Part Number: ET-000-230V Assy (50/60 Hz)

MANUAL / HAND FEED

4-14 Manual Feed

- 14" (358 mm) Cutting tool travel
- Manual feed by using hand wheel or ratchet
- Weight: 35 lbs (15.9 kg)
- Upgradeable to a full function machine



Part Number: 414-901

ELECTRIC BAR DRIVE

EIBENSTOCK 4 Variable Speed Electric Bar Drive

- 110 v — 20 amps
- 3 hp (2200 W) 114 ft lbs torque (154.56 Nm)
- 110 or 240 v 50/60 HZ
- 4 bar speeds, 80/130/360/570 RPM
- Reversible drive
- Weighs 19.5 lbs (8.8 kg)

Part Number: 19331-110V

Part Number: 18388-230V



5 HP HYDRAULIC POWER UNITS AND BAR DRIVES

AVAILABLE UNITS

3-Phase

Hydraulic Power Unit c/w Hydraulic Bar Drive

- 220~240 Volt, 50Hz Part Number: HPU-05-323050
- 380 Volt, 50 Hz Part Number: HPU-05-338050
- 440~460 Volt, 50 Hz Part Number: HPU-05-346050
- 230 Volt, 60 Hz Part Number: HPU-05-323060
- 440~460 Volt, 60 Hz Part Number: HPU-05-346060
- 575 Volt, 60 Hz Part Number: HPU-05-357560



Single-Phase

- 220~240 Volt, 60Hz Part Number: HPU-05-123060
- 220~240 Volt, 50Hz Part Number: HPU-05-123050

Features:

- 5 Hp single or three phase electric
- Reversible hydrostatic drive
- Variable Rotational Bar Drive Motors Available
 - 90 rpm, 333 ft lb Torque (449 Nm)
 - 160 rpm, 208 ft lb Torque (280 Nm)
 - 280 rpm, 106 ft lb Torque (141 Nm)
 - 460 rpm, 65 ft lb Torque (87 Nm)
- Bar rotation lock valve mounted on bar drive
- Bar drive weight 26 lbs (12 kg)

Part Number: depends on voltage/rpm

Eg. HBD-E- 12090

HBD-E- 240460



A) Premium Plus Package: 1.5” to 16” (38 mm to 406 mm) - Complete 5-bar package that covers the entire operating range of the 4-14. This is a very dynamic package designed for those who work on a wide range of large and small bores.

Part Number: P-1

B) Premium Package: 1.5” to 10” (38 mm to 254 mm) - Complete 5 bar package that is designed for those in the heavy equipment industry that work on bores up to 10 inches, this kit can be easily upgraded at any time to 16” (406 mm) diameters.

Part Number: P-2

C) Standard Package: 2.5” to 6” (63.5 mm to 152 mm) - 3-bar package using our 2” (52 mm) boring bars. Small bars can be added at any time if required.

Part Number: P-3

D) Combo Package: 1.5” to 6” (38 mm to 152 mm) - Kit is designed to meet the needs of most equipment owners. This kit is upgradeable by adding components as needed.

Part Number: P-4

E) Small Bore Package: 1.5” to 3” (38 mm to 76 mm) - 2-bar package is designed for our 1-1/4” (32 mm) bars for small diameters, we have an upgrade kit that can be added to reach 5” (127 mm) using our 1-1/4” (32 mm) bars.

Part Number: P-5

Custom packaging is also available. All our bars can be supplied with either imperial or metric tool ports.

A	B	C	D	E	Package Includes
1-1/4” Bar Package					
1	1			1	4 Foot Bar
1	1		1	1	6 Foot Bar
2	2		2	2	3" Line-up Cones
2	2		1	2	Mounting Head
2	2		1	2	Bore weld Interface
2	2		2	2	Tail Support
2	2		2	2	Clamping Collars
1	1		1	1	Calibration Tool
1	1		1	1	Accessories Tool Box
2” Bar Package					
1	1	1			3 Foot Bar
1	1	1	1		5 Foot Bar
1	1	1			7 Foot Bar
2	2	2	2		2-4 " Line-up Cones
2	2	2	2		4-6" Line-up Cones
2	2				6-8" Line-up Cones
	2				8-10" Line-up Cones
1					8-16" Line-up Spiders
2	2	2	1		Mounting Head
2	2	2	1		Bore welder Interface
1					Adjustable X/Y Mounting Kit
2	2	2	2		Tail Support
2	2	2	2		Clamping Collars
1	1	1	1		Calibration Tool
1	1				6-10" Big Bore Adapter
1					10-13" Big Bore Adapter
1					13-16" Big Bore Adapter
1	1	1	1		Accessories Tool Box

2-1/4” (58 mm) bars now available using our hydraulic drives – bore up to 24” (609 mm)

Optional chrome plated bars are available.

2" (50.8 MM) BORING BARS & ACCESSORIES

2" (50.8 mm) Mounting Head

- Two bearings for added support
- One bore welder mounting plate included
- Alignment adjusting screws

Part Number: 414-201

Replacement Inserts

Part Number: 414-201A



2" (50.8 mm) Tail Support

- 4 bolt flange bearings on replaceable mounting plates

Part Number: 414-202

Replacement Weld Plate

Part Number: 414-202A

Replacement Flange Bearing

Part Number: 414-202B



X/Y Adjustable Mounting Kit

- Freedom to move - the X/Y mounting head allows you to move the bar 5/8" (15.8 mm) in any direction from center. You also have a 6 degree spherical adjustment. This feature is a huge asset for bores larger than 10" (254 mm) that might require an extra degree of precision alignment.

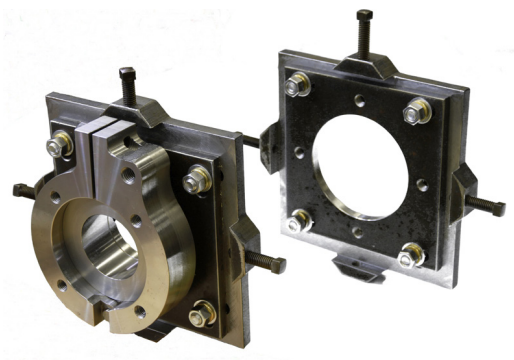
Part Number: 414-309 (Kit)

Adjustable X/Y Mounting Head only

Part Number: 414-310

Adjustable X/Y Tail Support only

Part Number: 414-330



2" (50.8 mm) Boring Bars

- Staggered 1/2" tool ports every three inches along the bar.
- Tool ports are broached and threaded
- Bars are made from C1045 precision ground shafting
- Available chrome plated and polished

3' Bar

Part # 414-213-36 Polished Bar

Part # 414-213-36C Chrome Bar

5' Bar

Part # 414-213-60 Polished Bar

Part # 414-213-60C Chrome Bar

7' Bar

Part # 414-213-84 Polished Bar

Part # 414-213-84C Chrome Bar



Note: For Metric bars place an M at the end of the part number.

Custom bars and lengths available on request.

2" (50.8 mm) Line-Up Cones

- Steel cones
- Precision alignment
- Relieved in the back to reduce weight

2" to 4" (50.8 mm to 101.6 mm)

Part Number: 414-203

4" to 6" (101.6 mm to 152.4 mm)

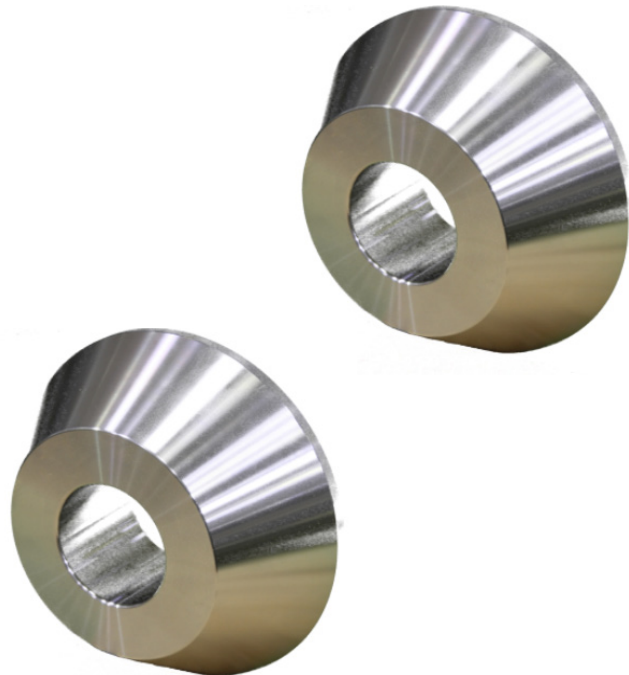
Part Number: 414-204

6" to 8" (152.4 mm to 203.2 mm)

Part Number: 414-215

8" to 10" (203.2 mm to 254 mm)

Part Number: 414-214



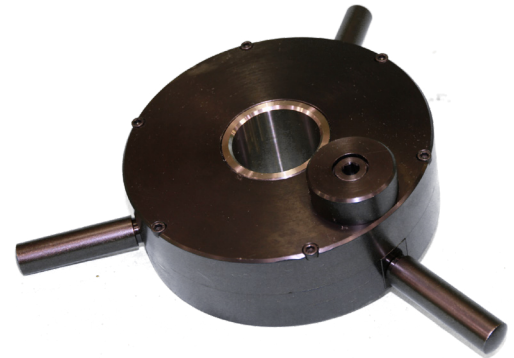
2" (50.8 MM) ITEMS

2" (50.8 mm) Adjustable Line-Up Tool (Spider) for bores 8"- 16" (203 mm - 406 mm) or 8" - 24" (203 mm—609 mm)

- For aligning and centering the bar when working with bores larger than 8" (203 mm). The line up tool dials out to the diameter that you need.
- The kit comes in a custom carrying case, with two centering tools and four sets of extensions.

Part Number: 414-501

Part Number: 414-502



2" (50.8 mm) Clamping Collars

- To secure the line up cones in place during set up
- Split collar with Allen head screws

Part Number: 414-205

(Sold in Package of 2)



2" (50.8 mm) Calibration Wrench *(An SPR York Exclusive!)*

- The calibration wrench allows accurate cutting tool adjustment in increments of .001". All of our boring bars have broached and threaded tool ports with a scribed line on center. We put an adjusting screw at the base of the cutting tool in which the calibration wrench fits. There are 50 graduations on the wrench. With each graduation past the scribed line the cutting tool advances .001"

Part Number: 414-207 (c/w 5 cutting tool adjusters)

Cutting Tool Adjusters

Part Number: 414-206



2" (50.8 mm) Accessories Tool Box

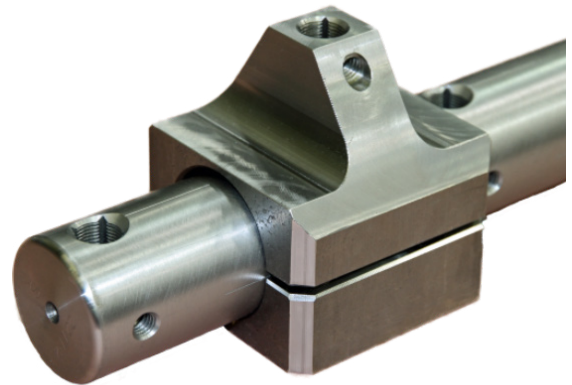
- Tool box (26")
- Set screws
- Sample Micro 100 carbide tooling
- Wrenches
- Allen keys

Part Number: 414-250



2" (50.8 mm) Large Bore Adapters

- The SPR York large bore adapters clamp securely to our 2" (50.8 mm) boring bar. The large bore adapter supports the tool bit to accommodate larger bores over 6" (152 mm) in diameter. The 6" - 10" (152 mm - 254 mm) adapter can be used with the SPR York calibration wrench and is our standard adapter. Custom large bore adapters are also available for 10" - 13" (254 mm - 330 mm) and 13" - 16" (330 mm - 406 mm)



6" to 10" (152.4 mm to 254 mm)

Part Number: 414-303

10" to 13" (254 mm to 330 mm)

Part Number: 414-301

13" to 16" (330.2 mm to 406 mm)

Part Number: 414-302



1-1/4" (32 MM) ITEMS

1-1/4" (32 mm) Mounting Head

- Two bearings for added support
- One bore welder mount plate included
- Alignment adjusting screws

Part Number: 414-101

Replacement Inserts

Part Number: 414-101A



1-1/4" (32 mm) Tail Support

- 4 bolt flange bearing on a replaceable mounting plate

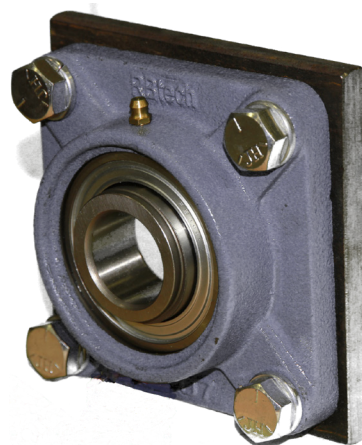
Part Number: 414-102

Replacement Weld Plate

Part Number: 414-102A

Replacement Flange

Part Number: 414-102B



1-1/4" (32 mm) Line Up Cones

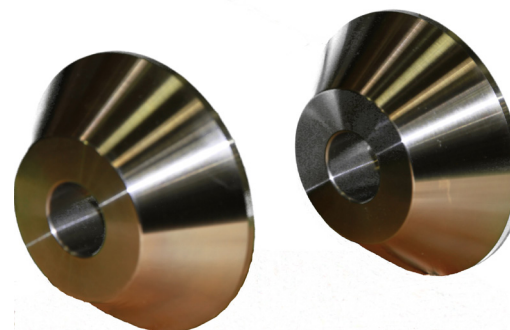
- Steel cones 1 1/4 to 3" and 3 to 5"
- Precision alignment
- 1 1/4 to 3"
- 3 to 5"

1-1/4" to 3" (32 to 76 mm)

Part Number: 414-103 (Set of 2)

3" to 5" (76 to 127 mm)

Part Number: 414-104 (Sold Separately)



1-1/4" (32 mm) Boring Bars

- Staggered 3/8" (9.5 mm) tool ports every 3" (76.2 mm) along the bar
- Tool ports are broached and threaded
- Bars are made from C1045 precision ground shafting
- Available chrome plated and polished

4' Bar (1219.2 mm)

Part Number: 414-113-48 Polished bar

Part Number: 414-113-48C Chrome bar

6' Bar (1828.8 mm)

Part Number: 414-113-72 Polished bar

Part Number: 414-113-72C Chrome bar

Note: For Metric bars place an M at the end of the part number

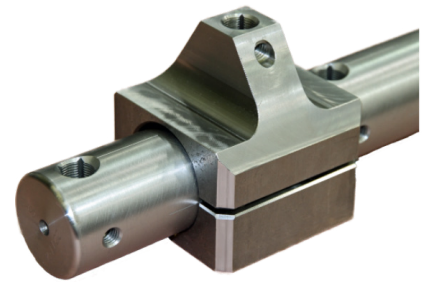
Custom bars and lengths available on request



1-1/4" (32 mm) Large Bore Adaptor

- This adaptor is used to support tooling for bores greater than 3". It will help reduce tool breakage and chatter. For maximum success we recommend using our 2" bars for bores greater than 3"

Part Number: 414-307



1-1/4" (32 mm) Clamping Collars

- Used to secure the line up cones in place during set up
- Split collar with Allen head screw

Part Number: 414-105

(Sold in Package of 2)



1-1/4" (32 MM) ITEMS

1-1/4" (32 mm) Calibration Wrench

- The calibration wrench allows accurate cutting tool adjustment in increments of .001". All of our boring bars have broached and threaded tool ports with a scribed line on center. We put an adjusting screw at the base of the cutting tool that the calibration wrench fits into. There are 50 graduations on the wrench. With each graduation past the scribed line the cutting tool advances .001".

Part Number: 414-107 (c/w 5 cutting tool adjusters)

Cutting Tool Adjusters

Part Number: 414-106



1-1/4" (32 mm) Accessories Tool Box

- Tool box (21")
- Set screws
- Sample Micro 100 carbide tooling
- Wrenches
- Allen keys

Part Number: 414-150



2-1/4" (57 MM) ITEMS (RECOMMENDED WITH OUR HYDRAULIC BAR DRIVES)

2-1/4" (57 mm) Mounting Head (Standard)

- Two bearings for added support
- One bore welder mount plate included
- Alignment adjusting screws

Part Number: 414-601

Replacement Inserts

Part Number: 414-601A



X/Y Adjustable Mounting Head & Tail Support

- Freedom to move - the X/Y mounting head allows you to move the bar 5/8" (15.8 mm) in any direction from center. You also have a 6 degree spherical adjustment. This feature is a huge asset for bores larger than 10" (254 mm) that might require an extra degree of precision alignment.

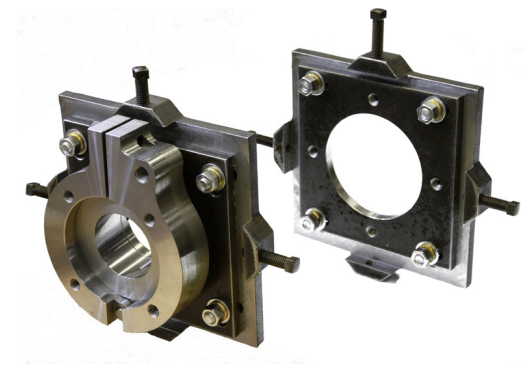
Part Number: 414-609 (Kit)

Mounting Head Only

Part Number: 414-610 Adjustable X/Y

Adjustable X/Y Tail Support Only

Part Number: 414-630



2-1/4" (57 mm) Tail Support

- 4 bolt flange bearing on a replaceable mounting plate

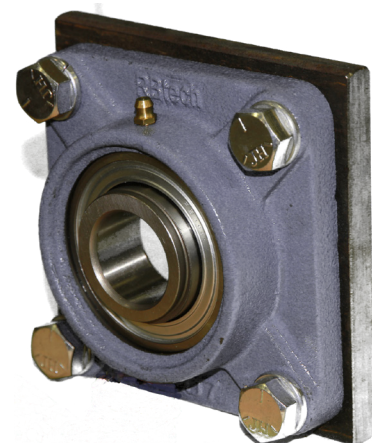
Part Number: 414-602

Replacement Weld Plate

Part Number: 414-602A

Replacement Flange

Part Number: 414-602B



2-1/4" (57 MM) ITEMS (RECOMMENDED WITH OUR HYDRAULIC BAR DRIVES)

2-1/4" (57 mm) Boring Bars

- Staggered 1/2" (12.7 mm) tool ports every 3" (76 mm) along the bar.
- Tool ports are broached and threaded
- Bars are made from C1045 precision ground shafting.
- Available chrome plated and polished

3' (914 mm) Boring Bar

Part Number: 414-613-36 Polished Bar

Part Number: 414-613-36C Chrome Bar

5' (1524 mm) Bar

Part Number: 414-613-60 Polished Bar

Part Number: 414-613-60C Chrome Bar

8' (2438 mm) Bar

Part Number: 414-613-96 Polished Bar

Part Number: 414-613-96C Chrome Bar



Note: For Metric bars place an M at the end of the part number.

Custom bars and lengths available on request.

2-1/4" (57 mm) Line-Up Cones

- Steel cones
- Precision alignment
- Relieved in the back to reduce weight

2" to 4" (50.8 mm to 101.6 mm)

Part Number: 414-603 (Sold Separately)

4" to 6" (101.6 mm to 152.4 mm)

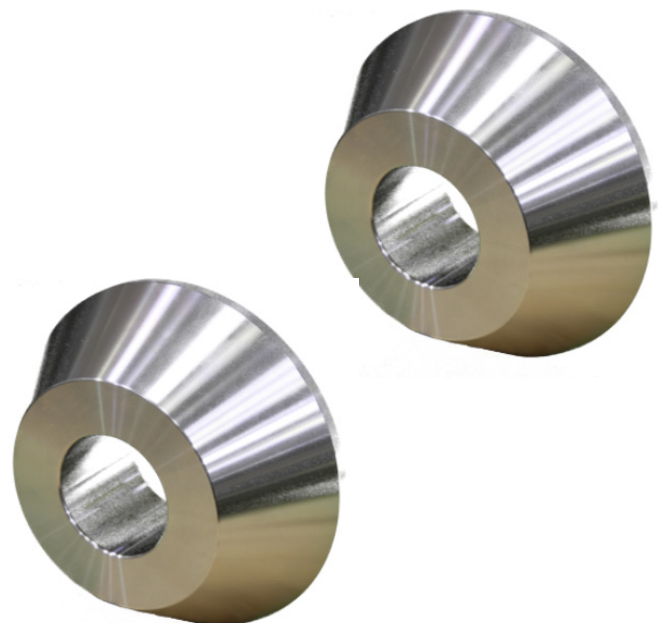
Part Number: 414-604 (Sold Separately)

6" to 8" (152.4 mm to 203.2 mm)

Part Number: 414-615 (Sold Separately)

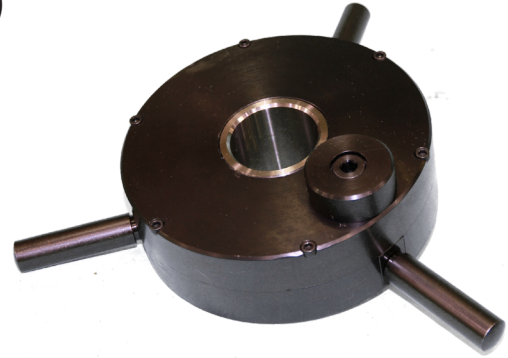
8" to 10" (203.2 mm to 254 mm)

Part Number: 414-614 (Sold Separately)



2-1/4" (57 mm) Adjustable Line-Up Tool (Spider) for bores 8" - 16" (203 mm - 406 mm) or 8" - 24" (203 mm - 609 mm)

- For aligning and centering the bar when working with bores larger than 8" (203 mm). The line up tool dials out to the diameter you need.
- The kit comes in a custom carrying case, with two centering tools and four sets of extensions.



Part Number: 414-503

Part Number: 414-504

2-1/4" (57 mm) Clamping Collars

- Used to secure the line up cones in place during setup
- Split collar with Allen head screw

Part Number: 414-605



Accessories Tool Box

- Tool Box (26")
- Set Screws
- Sample Micro 100 carbide tooling
- Allen keys
- Key Stock
- Wrenches

Part Number: 414-250



OPTIONAL ACCESSORIES

Facing Tools

- The York facing tools are designed to machine surfaces 90 degrees to the bore. The facing tool attaches to our boring bar. Two tool ports are set in the facing tool; one at 45 degrees and the other at 90 degrees. Each revolution of the bar actuates a gear driven lead screw that advances the cutting tool .005" (.127 mm).

Part Number: FT-1100 Max 10" (254 mm)

11" (279.4 mm) Swing Diameter

Use with 2" boring bar

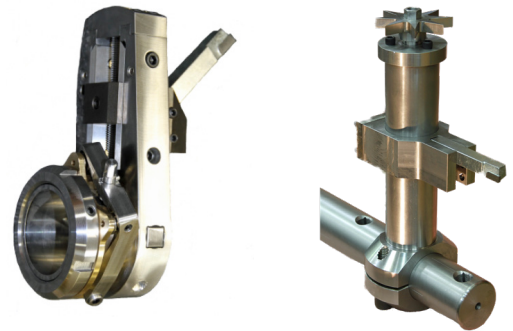
Part Number: FT-2100 Max 10" (254 mm)

11.4" (289.56 mm) Swing Diameter

Use with 2-1/4" boring bar

Part Number: FT 9000 Max 18" (457 mm)

Use with 2" or 2-1/4" boring bar



FT-1100 2" bar

FT-2100 2-1/4" bar

FT-9000

2" or 2-1/4" bar

FT-1100M, FT-2100M for metric bar

Off-Set Drive *(An SPR York Exclusive!)*

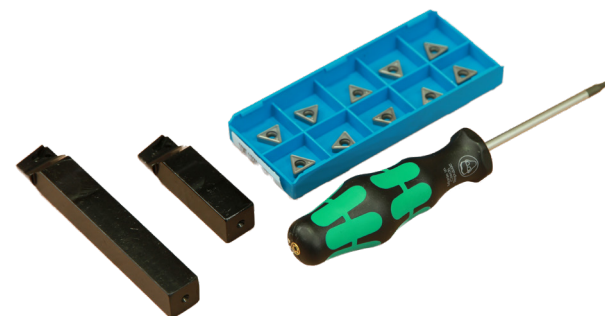
- Our offset drive feature allows more flexibility than thru-bar designs. The York line-boring machine is an excellent choice for working in constricted areas, as the drive-line allows 30 degrees offset in any direction from the boring bar alignment.



Part Number: OFF-000

Carbide Insert Tool Package 1/2" (12 mm)

- The York insert tool places the carbide cutting surface into the center of the bore, substantially improving cutting tool performance while extending tool holder life. Our tool holders use standard inserts that are readily available from most cutting tool suppliers. Insert tooling takes the guesswork out of tool geometry and improves the overall performance of your line boring machine.



Part Number: ITK-000 (1/2")

ITK-100 (3/8")

ITK-000M (12 mm)

Thru-Bar Measuring Kits

- Our thru-bar measuring tool allows you to accurately measure the bore without removing the bar. The measuring tool is placed into an adjacent tool port and traversed into the bore. By loosening the setscrew, the spring loaded measuring tool snaps opens - capturing the size of the bore. Tighten the setscrew and traverse the tool from the bore. Pull the measuring tool out of the bar. Using a micrometer, measure the thru-bar tool for the diameter of the bore.

1.9" to 12" (48.26 mm to 304.8 mm)

Part Number: MT2-1000 fits Imperial bars

1.9" to 16" (48.26 mm to 406.4 mm)

Part Number: MT2-2000 fits Imperial bars

1.9" - 12" (48.26 mm - 304.8 mm)

Part Number: MT2-3000 fits Metric bars

1.9" - 16" (48.26 mm to 406.4 mm)

Part Number: MT2-4000 fits Metric bars



MT2-1000



MT2-4000

Snap Ring Tool

- 3.8" to 7" (96.5 mm to 177.8 mm)
- 5/8" stroke (15.8 mm)
- Hydraulic feed
- Accurate adjustment

Part Number: SR-300-2.00

Part Number: SR-300-2.25



Full-Function Remote Control

Part Number: 414-098Q c/w 8 ft Cable

Part Number: ET-180Q - 12 ft Cable

Part Number: ET-181Q - 15 ft Cable

*Note: 12 ft & 15 ft cables available at additional cost.



Micro 100 Brazed Carbide Cutting Tools

- Micro 100 is highly shock resistant, will not chip or break under normal machining conditions and excels in interrupted cutting. Micro 100 carbide is a space age carbide with superior rupture strength for exceptional machining versatility.

#6 - 3/8"

Part Number: AR-6 or AL-6 MICRO 100 "A" Style

Part Number: BR-6 or BL-6 MICRO 100 "B" Style

#8 - 1/2"

Part Number: AR-8 or AL-8 MICRO 100 "A" Style

Part Number: BR-8 or BL-8 MICRO 100 "B" Style



Bore Welder Adapter Plates

Part Number: 414-212

(Sold Separately)

* NOTE: Will work with most brands of bore welders





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