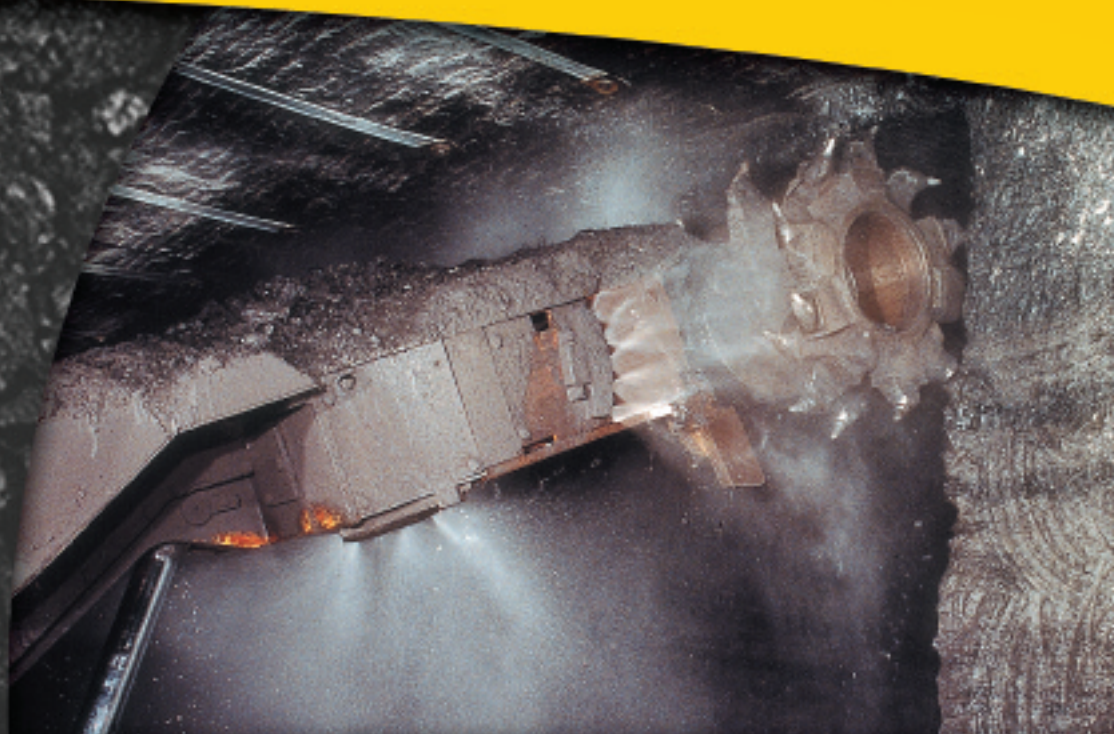


*Engineering
Your
Competitive
Edge*



UNDERGROUND MINING





Engineering Your Competitive Edge



...In Underground Mining

No matter what your underground mining application - longwall shearing, continuous mining, or roof bolting - Kennametal has the high-performance, long-lasting tungsten carbide tooling solution to meet your needs!

We'll help you:

- *assemble the best block-sleeve-conical combination for optimum efficiency in any condition*
- *improve machine uptime to reduce costly downtime and maintenance*
- *increase output to boost productivity (and profitability!)*

Safety Note

Kennametal has no control over the end use of its products or the environment into which those products are placed. Kennametal urges its customers to adhere to the recommended standards of use of their machines and tools, and that they follow procedures that ensure safe operations.

The information included in this catalog and other recommendations on machining practices referred to herein are only advisory in nature and do not constitute representations or warranties and are not necessarily appropriate for any particular work environment or application.

Kennametal Inc. encourages the safe use of its products. To help avoid personal injury or damage to tools, please follow these recommended guidelines:

- Wear approved personal protection equipment, including eye, head, ear and foot protection.
- Make sure tools are properly seated and securely retained.
- Do not strike tools with metal objects. Carbide tips could shatter.
- Exercise care when removing tools.
- Inspect tools before each use. If they are dull, cracked, burred, or bent, do not use them.
- Operate all machines with safety in mind. Stand clear of machines in use and make sure protective guards are in place.
- Do not change tools when the drum is moving or still engaged.

Table of Contents



	page
Cutting Systems Overview	6
Blocks, Sleeves, and Bushings	12
Conical Tools	
1.70" (43 mm) step shank	20
1.38" (35 mm) shank	22
1.18" (30 mm) shank	24
1" (25 mm) shank	27
.80" (20 mm) shank	31
.75" (19 mm) shank	32
Crusher Tools	
2.06" (52 mm) shank	33
2" (51 mm) shank	35
1.50" (38 mm) shank	36
1.50" (38 mm) step shank	37
Flats and Radials	39
Drilling Tools	
7/8" (22 mm) hex drill steel	40
1 1/8" (29 mm) hex drill steel	46
Wrenches	49
Auger Systems	52
Two-Prong Tools	56
Cutting Drums	58
Wear Protection	59

NOTE: Tool images are not shown to scale.





K35W 170 Water Block

- induction-hardened block bore for optimum wear resistance
- full-length press-fit bushing for maximum bore protection
- easy-to-change spray nozzle that puts the water closer to the cutting tool tip for maximum dust suppression

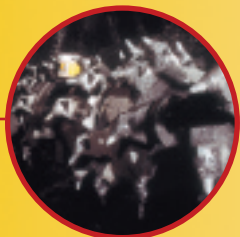
LRD Retention System

Our new, patent-pending long retainer (dimpled) provides maximum holding power!

- combined technologies of long-retainer friction and “wedding band” retainer locking strength
- fits straight and step shank tools
- compatible with most grooved sleeves



IN UNDERGROUND MINING



KCV4 1 RRWN Drilling Tool

- heavy-duty carbide tip for durability and high-performance drilling
- tip features fluted relief and notched apex for faster penetration
- up to 18% faster than our other wide-tipped drilling tools



5418 1 Wet Coupler/Driver Drilling System

Our new patent-pending design features bonded rubber hex on the 5418 1 wet coupler/driver for durable, hassle-free wet drilling!

- easy connection and separation
- less leakage for lower water consumption
- stackable system... drives off of internal and external hex
- rubber hex seal reduces connection rattle for quieter drilling



KMTCB Core Breaker

Ideal for breaking hard coal!

- heavy-duty construction for increased sump and shear rates and faster shuttle car loading
- faster, more economical tool changes (change only the tool, not the unit!)
- available to fit 38" and 44" drums



Cutting Systems Overview



K225S P 170 System 2271366

*High-horsepower
longwall shearers
and continuous miners*

U170K225S P Bushing 2271626

Heavy

U170LR 4.0 22 (1793328)
U170LR 4.5 25NB (2210329)
U170LRD 4.5 25NB (2425696)

(see pages 20-21)

Medium

U170LR 4.0 22NB (2275213)
U170LR 4.5 22NB (2273708)
U170LR 4.5 .74 (2448115)
U170LRD 4.5 22NB (2398568)

(see pages 20-21)



K225S P 90 System 2271367

*High-horsepower
longwall shearers
and continuous miners*

U90K225S P Bushing 2271368

Heavy

U94KHD (1010443)
U92K 4.0 22NB (2272937)
U92LR 3.5 25NB (2412363)
U94HDLR (1010469)
U92LR 4.0 22NB (2250379)

(see pages 22-23)

Medium

U92K 4.0 19NB (2394830)
U92KHD (1010431)
U93LRD 3.5 14NB (2434939)

(see pages 22-23)



K225S Block 2445771

*High-horsepower longwall shearers
and continuous miners*

U170K225S Sleeve 1796981

Heavy

U170LR 4.0 22 (1793328)
U170LR 4.5 25NB (2210329)
U170LRD 4.5 25NB (2425696)

(see pages 20-21)

Medium

U170LR 4.0 22NB (2275213)
U170LR 4.5 22NB (2273708)
U170LR 4.5 .74 (2448115)
U170LRD 4.5 22NB (2398568)

(see pages 20-21)



K225SW Water Block (left) 2391100 (right) 2391095

U90K225S Sleeve 1890173

Heavy

U94KHD (1010443)
U92K 4.0 22NB (2272937)
U92LR 3.5 25NB (2412363)
U94HDLR (1010469)
U92LR 4.0 22NB (2250379)

(see pages 22-23)

Medium

U92K 4.0 19NB (2394830)
U92KHD (1010431)
U93LRD 3.5 14NB (2434939)

(see pages 22-23)

Cutting Systems Overview



**K35 170
System**
2507404

**K35W 170
System**
2507403



High-horsepower longwall shearers and continuous miners

U170K35P Bushing
2507379

Heavy

U170 4.0 25NB (2390398)
U170 4.0 22S (1993222)
U170LR 4.0 22 (1793328)

(see page 20)

Medium

U170LR 4.0 22NB (2275213)

(see page 20)



**K35 90
System**
2507382

**K35W 90
System**
2507380



High-horsepower longwall shearers and continuous miners

U90K35P Bushing
2507377

Heavy

U92 4.0 22NB (2414148)
U94KHD (1010443)
U92K 4.0 22NB (2272937)
U92LR 3.5 25NB (2412363)
U94HDLR (1010469)
U92LR 4.0 22NB (2250379)

(see pages 22-23)

Medium

U92HDL (1715472)
U92K 4.0 19NB (2394830)
U92KHD (1010431)
U93LRD 3.5 14NB (2434939)

(see pages 22-23)

Light

U92HDL 5 (1715471)

(see page 22)

Cutting Systems Overview

K175S Block 1875596



*Low-horsepower longwall shearers
and high-horsepower continuous miners*

U90K175S Sleeve 1819044

Heavy

U94KHD (1010443)
U92K 4.0 22NB (2272937)
U92LR 3.5 25NB (2412363)
U94HDLR (1010469)
U92LR 4.0 22NB (2250379)

(see pages 22-23)

Medium

U92K 4.0 19NB (2394830)
U92KHD (1010431)
U93LRD 3.5 14NB (2434939)

(see pages 22-23)

U80K175S Sleeve 1817268

Heavy

U84KHD (1010379)

(see page 26)

Medium

U118HCP 3.0 14NB (1992512)
U83K 3.1 48 (2442351)
U119K 80 16 (1010562)

(see page 26)

Light

U118K 3.0 11NB (1107178)
AM503PFB (1891397)
AM500K 3.1 11NB (2243255)
AM506PFB (1891398)

(see page 26)



K30S System 1887731

Mid- to high-horsepower
continuous miners

U80K30S Bushing 1881717

Heavy

AM510FG (1891401)
U119 80 16 (1107477)
U119HF 80 16 (2234431)
AM521HF .74 (1835670)

(see page 24)

Medium

AM514P .62 (1891427)
U85AUS 16NB (1075595)
AM511FG (1891423)
U85 3.4 14NB (2080065)
U85HD (1010407)
U85HDF (2234432)
UR118 3.5 .48 (1196746)
UR118 3.5 12.5NB (1104924)

(see pages 24-25)

Light

AM511 12.5NB 65 (1857842)
U119 3.4 .42 (1010726)
AM512FG (1891426)
UR118 3.5 11NB (1313004)

(see pages 24-25)



K25S System 1887730

Low- to mid-horsepower
continuous miners

U70K25S Bushing 1881716

Heavy

U765XHD (1960547)

(see page 27)

Medium

AM476FG (1327056)
U765HD (1960546)
UC765 2.6 .62 (2235630)
U765 2.7 .48 (2433394)
U765H .42 (1960634)
AM470 2.75 .62 (2271391)
AM470F (1753656)
U73 2.8 12.5NB (2432314)
AM472 (1887766)

(see pages 27-28)

Light

U73 2.5 .36 (2419418)
U73 2.5 .32 (2432316)
U765H .36 (1960551)
U765S 2.75 .36-60 (2432301)
U73 2.8 15.87A (2446719)

(see pages 27-28)

Cutting Systems Overview



2356IH Block
1012399

*Low-horsepower
continuous miners*

Heavy

U765XHD (1960547)

(see page 27)

Medium

AM476FG (1327056)
U765HD (1960546)
UC765 2.6 .62 (2235630)
U765 2.7 .48 (2433394)
U765H .42 (1960634)
AM470 2.75 .62 (2271391)
AM470 (1753656)
U73 2.8 12.5NB (2432314)
AM472 (1887766)

(see pages 27-28)

Light

U73 2.5 .36 (2419418)
U73 2.5 .32 (2432316)
U765H .36 (1960551)
U765S 2.75 .36-60 (2432301)
U73 2.8 15.87A (2446719)

(see pages 27-28)



**BS30.65
Block**
1011569

**BBS30.65H P
Block**
1775706

BBS30.65H Block
1131591

*Road headers, surface
miners, and crushers*

Severe

KSM5 (2247813)

(see page 24)

Heavy

AM510FG (1891401)
U119 80 16 (1107477)
U119HF 80 16 (2234431)
AM521HF .74 (1835670)

(see page 24)

Medium

AM514P .62 (1891427)
U85AUS 16NB (1075595)
AM511FG (1891423)
U85 3.4 14NB (2080065)
U85HD (1010407)
U85HDF (2234432)
UR118 3.5 .48 (1196746)
UR118 3.5 12.5NB (1104924)

(see pages 24-25)

Light

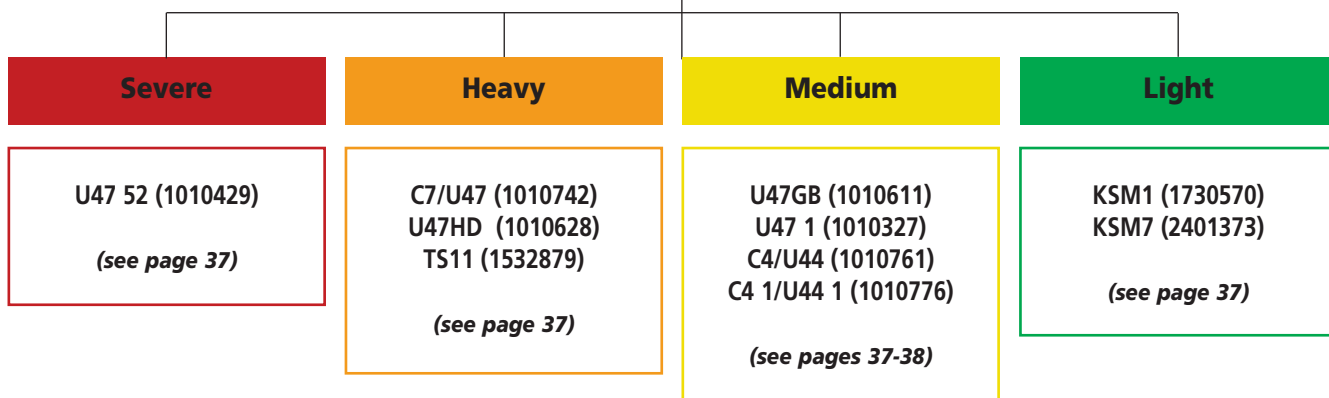
AM511 12.5NB 65 (1857842)
U119 3.4 .42 (1010726)
AM512FG (1891426)
UR118 3.5 11NB (1313004)

(see pages 24-25)



U43XHD Block
1547387

*Road headers, surface
miners, and crushers*



Tool Application Guidelines

Tools are coded for light, medium, heavy, and severe cutting conditions based on tip diameter, nose geometry, and gauge.

We recommend choosing a tool suitable for the toughest cutting conditions anticipated.

These are guidelines only. Consult your Kennametal representative for assistance in choosing the best tool for your job.

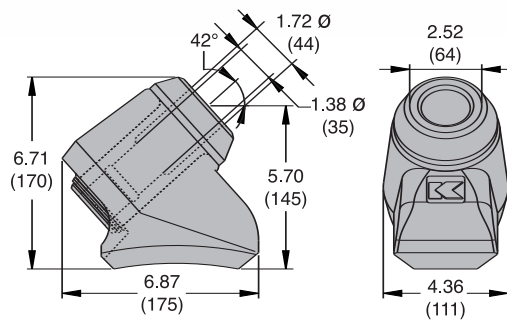


K Blocks, Sleeves, and Bushings

K225S P 170 System 2271366



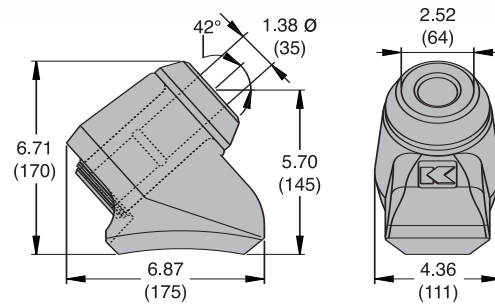
- induction-hardened bore
- replaceable press-fit bushing with snap ring



K225S P 90 System 2271367

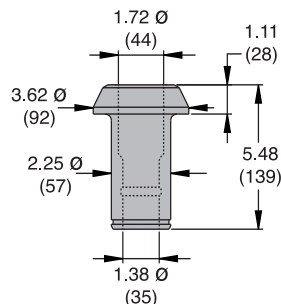


- induction-hardened bore
- replaceable press-fit bushing with snap ring



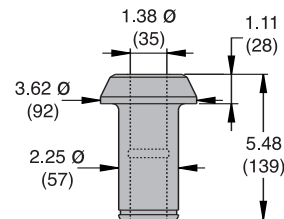
U170K225S P Bushing 2271626

- replacement press-fit bushing with snap ring for K225S P 170 system



U90K225S P Bushing 2271368

- replacement press-fit bushing for K225S P 90 system



K225S P Highlights

- Fewer sleeve changes
- Reduced bore wear
- K225S P 170 accepts step shank tools
- K225S P 90 accepts 1.38" shank tools

Accessories KR225 Retainer 2401741

- replacement 2.25" (57 mm) snap ring for U170K225S P and U90K225S P sleeves
- use KRP200 pliers (see page 33)

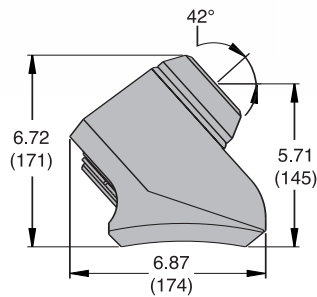


Blocks, Sleeves, and Bushings

K225S Block 2445771



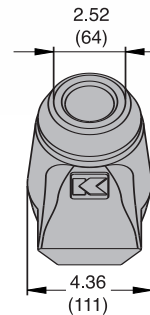
- induction-hardened bore
- requires a U170K225S or U90K225S sleeve



K225SW Water Block (left) 2391100 (right) 2391095

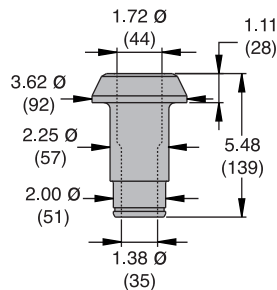


- weld-on replaceable spray housing
- induction-hardened bore
- requires a U170K225S or U90K225S sleeve and rear entry spray (see page 19)



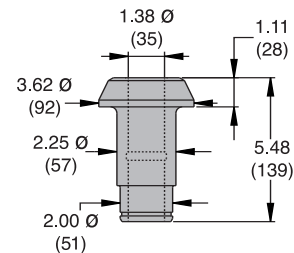
U170K225S Sleeve 1796981

- rotating sleeve
- use with K225S and K225SW blocks

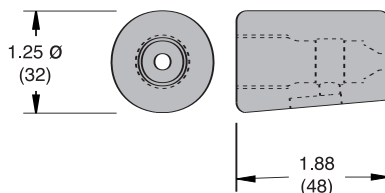


U90K225S Sleeve 1890173

- rotating sleeve
- use with K225S and K225SW blocks



K225SW Spray Housing – Weld On 1903603



- replacement spray housing for K225SW wet block

Accessories KR200 Retainer 1011893

- replacement 2" (50 mm) snap ring for U170K225S, U90K225S, U90K175S, and U80K175S sleeves
- use KRP200 pliers (see page 33)

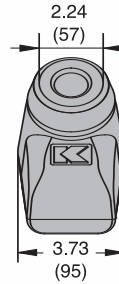
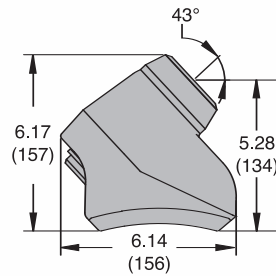


Blocks, Sleeves, and Bushings

K175S Block 1875596

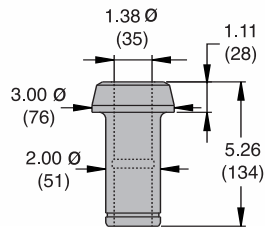


- induction-hardened bore
- requires U90K175S or U80K175S sleeve



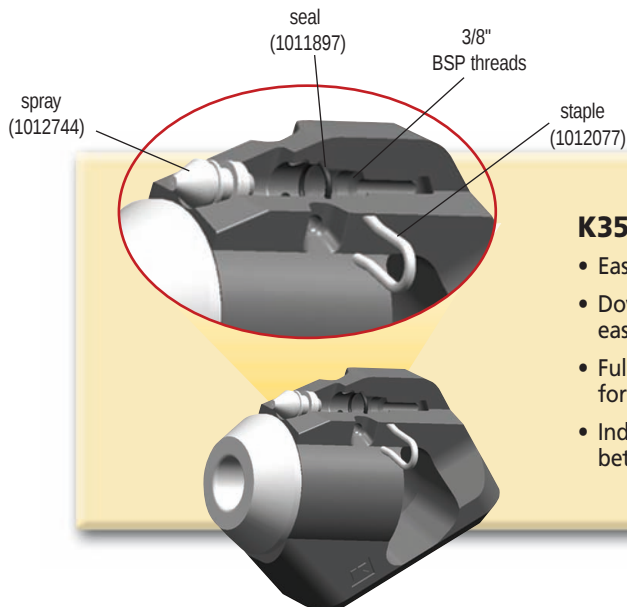
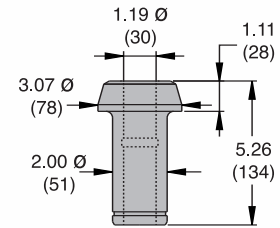
U90K175S Sleeve 1819044

- rotating sleeve
- use with K175S block



U80K175S Sleeve 1817268

- rotating sleeve
- use with K175S block

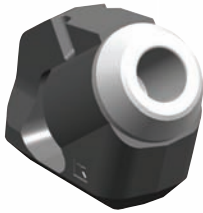


K35W 170 Water Block

- Easy-to-change sprays
- Dowel pin holes in base for faster, easier block replacement
- Full-length press-fit bushing for longer bore life
- Induction-hardened bore provides better wear protection

Blocks, Sleeves, and Bushings

K35 170 System 2507404

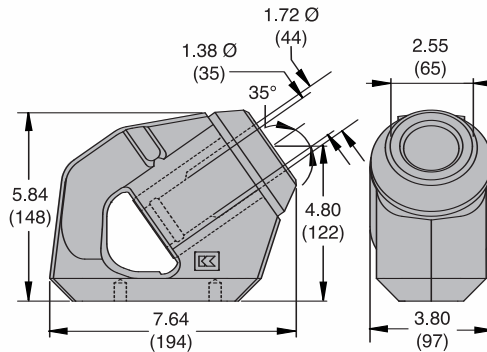


- induction-hardened bore
- full-length press-fit bushing
- dowel pin locator holes

K35W 170 System 2507403

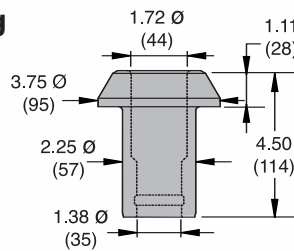


- water block
- induction-hardened bore
- full-length press-fit bushing
- dowel pin locator holes
- requires spray, seal, and staple (see page 19)



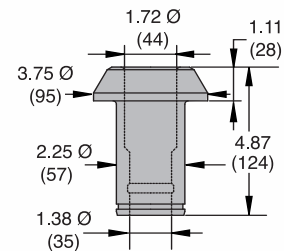
U170K35P Bushing 2507379

- replacement bushing for K35 170 and K35W 170 blocks

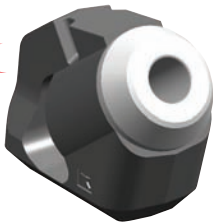


U170K35R Sleeve 2507376

- replacement rotating sleeve for K35 and K35W blocks with KR225 retainer



K35 90 System 2507382

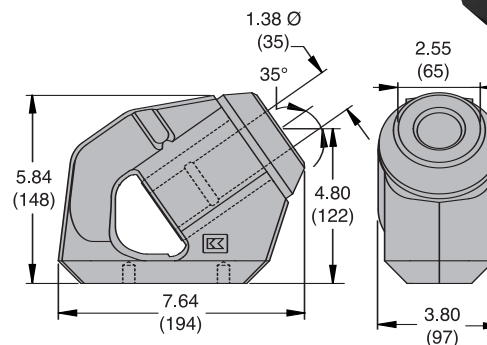


- induction-hardened bore
- full-length press-fit bushing
- dowel pin locator holes

K35W 90 System 2507380

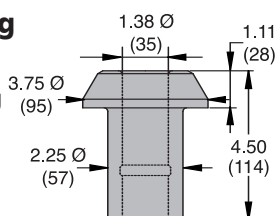


- water block
- induction-hardened bore
- full-length press-fit bushing
- dowel pin locator holes
- requires spray, seal, and staple (see page 19)



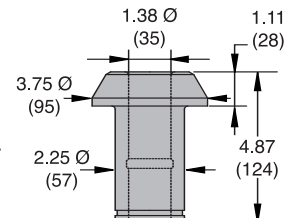
U90K35P Bushing 2507377

- replacement bushing for K35 90 and K35W 90 blocks



U90K35R Sleeve 2507378

- replacement rotating sleeve for K35 and K35W blocks with KR225 retainer

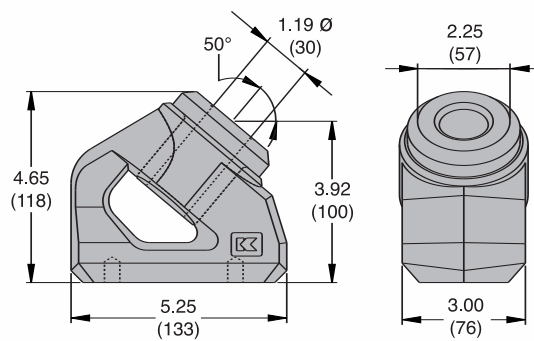


K Blocks, Sleeves, and Bushings

K30S System 1887731



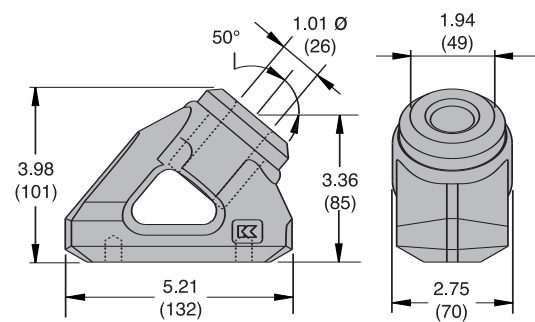
- full-length press-fit bushing
- induction-hardened bore
- dowel pin locator holes



K25S System 1887730

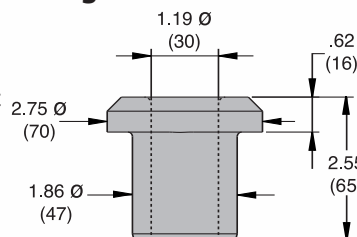


- full-length press-fit bushing
- induction-hardened bore
- dowel pin locator holes



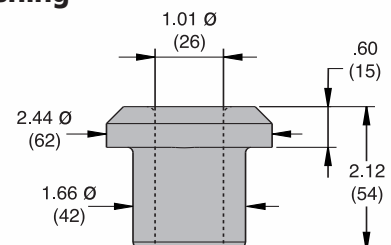
U80K30S Bushing 1881717

- replacement bushing for K30S block



U70K25S Bushing 1881716

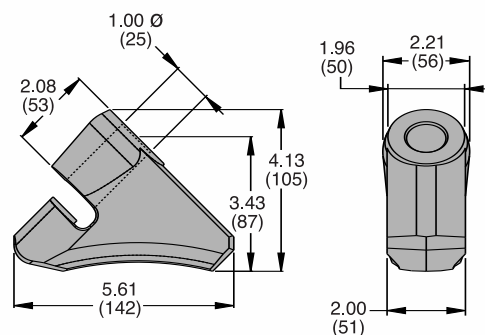
- replacement bushing for K25S block



2356IH Block 1012399



- streamlined design
- induction-hardened bore



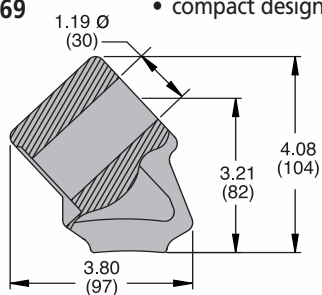
Blocks, Sleeves, and Bushings

BBS30.65H P Block
1775706



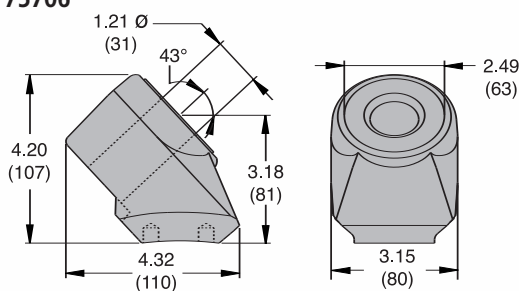
BS30.65 Block
1011569

- compact design



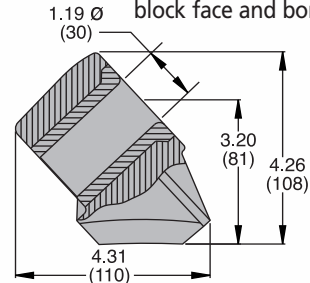
BBS30.65H P Block
1775706

- dowel pin locator holes



BBS30.65H Block
1131591

- hardened bushing protects block face and bore

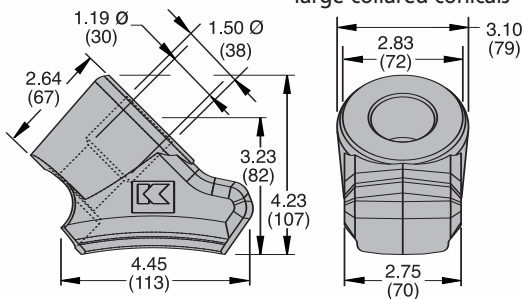


U43XHD Block
1547387



U43XHD Block
1547387

- wide face supports large-collared conicals



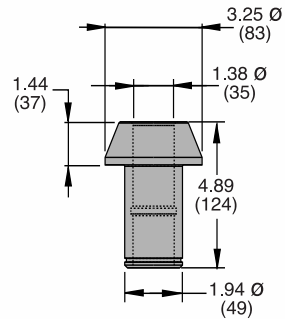
Call Customer Service at
800/458-3608

To Place an Order
or For Assistance!

Blocks, Sleeves, and Bushings

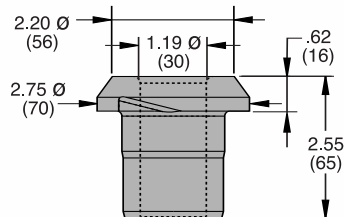
U138K193J150 Sleeve 1326670

- replacement sleeve



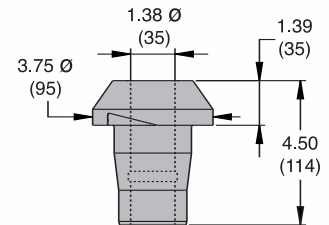
U80JWP Bushing 1532875

- replacement bushing



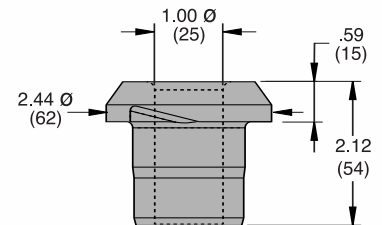
U90JWP Bushing 1607064

- replacement bushing



U70JWP Bushing 1532481

- replacement bushing



.9 mm Rear Entry Spray 2276068

1.2 mm Rear Entry Spray 1012136

- fits replaceable spray housing (item 1903603)



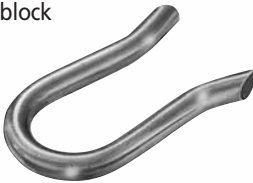
K178DVC 08 Spray 1012744

- for K35W block



9244 Staple 1012077

- for K35W block



SC Seal 1011897

- for K178DVC and SC2801 sprays



SC2801 Spray Housing 1011905

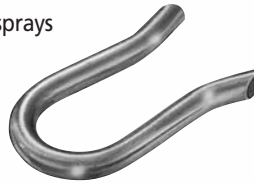


SC2801ES Short Spray Housing 1011920



SC Staple 1011899

- for SC2801 sprays



SC2801 Spray-CC 1/16 1011917

SC2801 Spray-DC 3/32 1011907



KMTCB-38 Kennametal Core Breaker Set 2271329

- fits machines with 38" drums



KMTCB-44 Kennametal Core Breaker Set 2271327

- fits machines with 44" drums



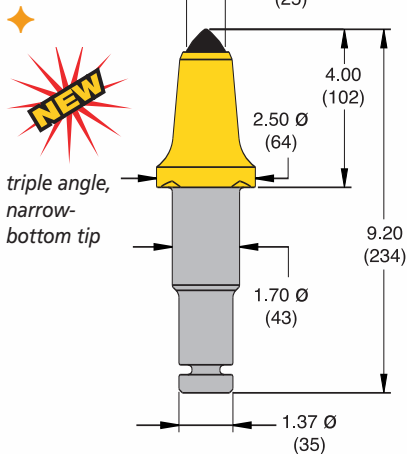
U51-KMTCB Puller 2401384

- removes collarless .80" (20 mm) shank tools in core breakers

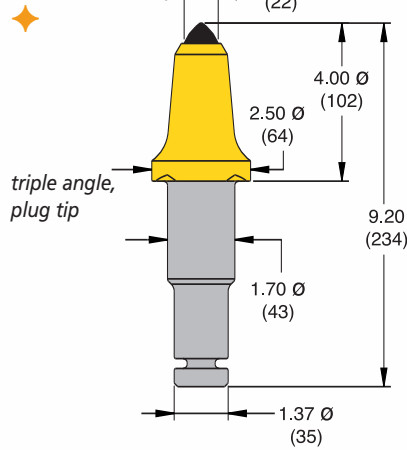


Conical Tools — 1.70" (43 mm) Step Shank

U170 4.0 25NB
2390398

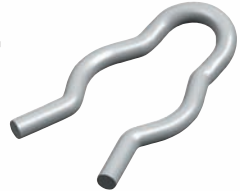


U170 4.0 22S
1993222

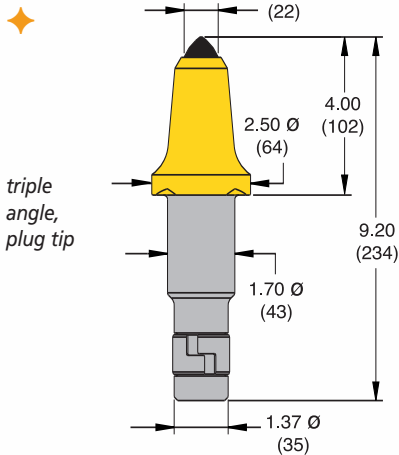


HP retainer
1304100

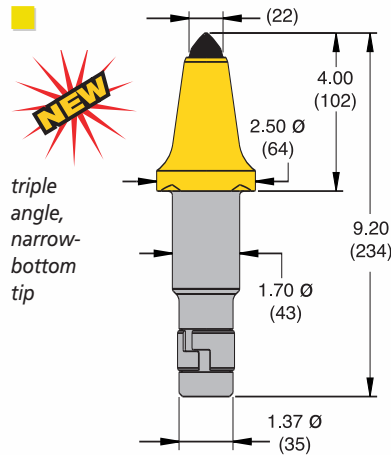
- for externally retained 1 3/4" (43 mm) step shank and 1 3/8" straight shank tools



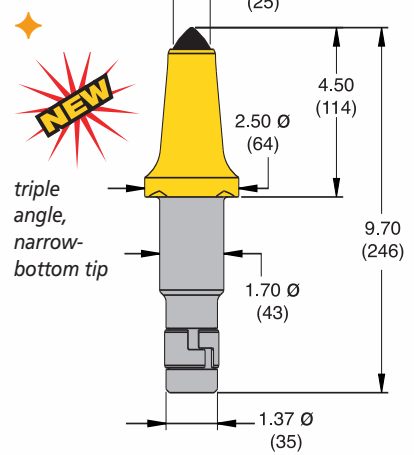
U170LR 4.0 22
1793328



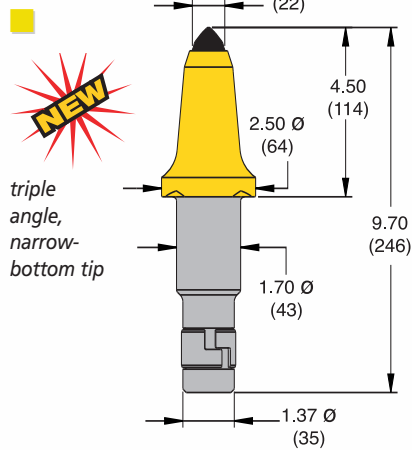
U170LR 4.0 22NB
2275213



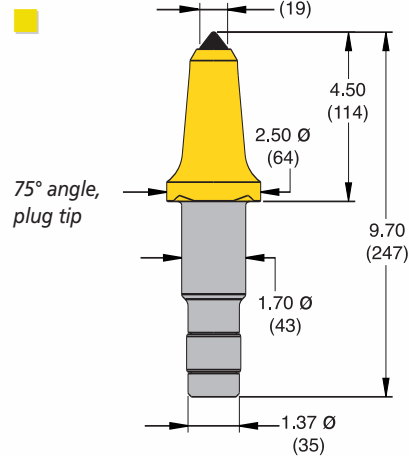
U170LR 4.5 25NB
2210329



U170LR 4.5 22NB
2273708



U170LR 4.5 .74
1854000



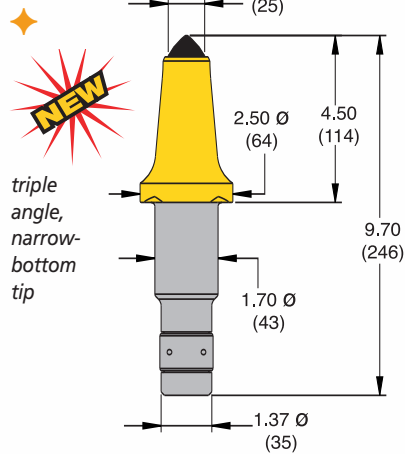
cutting conditions light medium heavy severe

▲ ■ ◆ ●

Conical Tools — 1.70" (43 mm) Step Shank

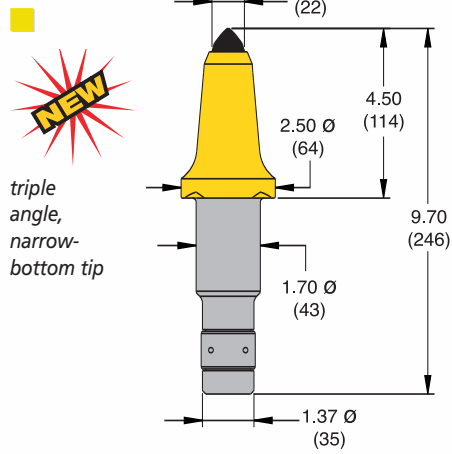
U170LRD 4.5 25NB

2425696



U170LRD 4.5 22NB

2398568



U170 puller 1776905

- removes 1 3/4" (43 mm) step shank tools with collars



cutting conditions light medium heavy severe

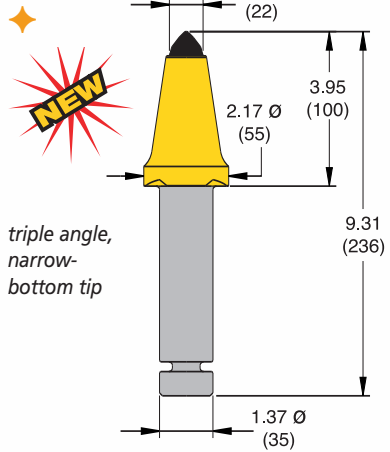


NEW U170 Body Design

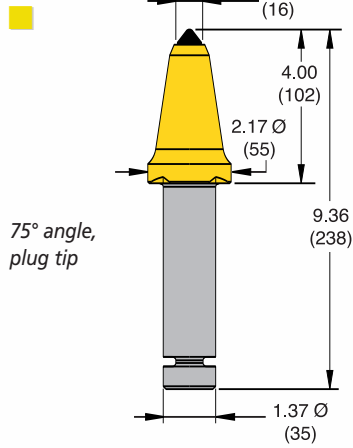
- Slim nose profile for improved penetration
- 25% greater seating area
- Larger collar for better block protection
- Puller grooves for easier tool extraction

Conical Tools — 1.38" (35 mm) Shank

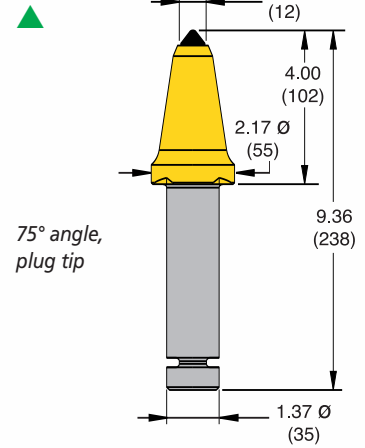
U92 4.0 22NB
2414148



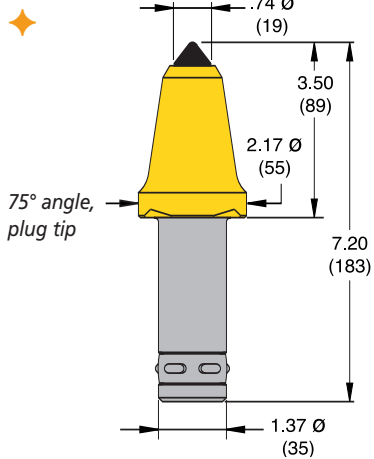
U92HDL
1715472



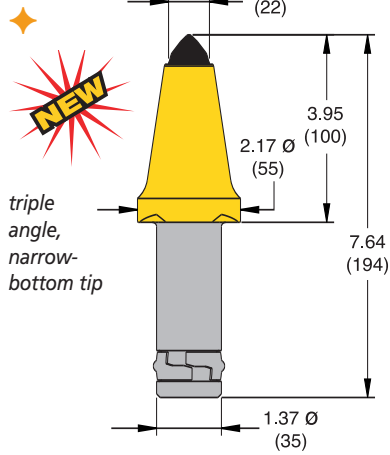
U92HDL 5
1715471



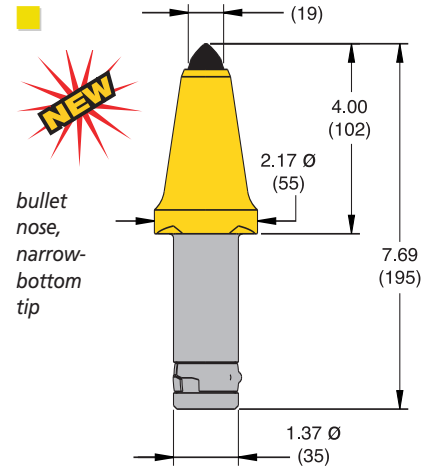
U94KHD
1010443



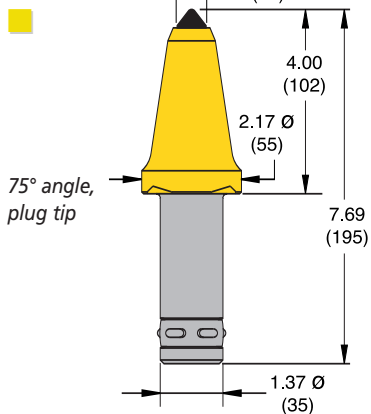
U92K 4.0 22NB
2272937



U92K 4.0 19NB
2394830



U92KHD
1010431



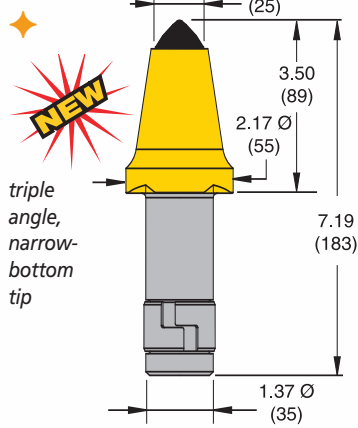
cutting conditions light medium heavy severe
 ▲ ■ ★ ●



Conical Tools — 1.38" (35 mm) Shank

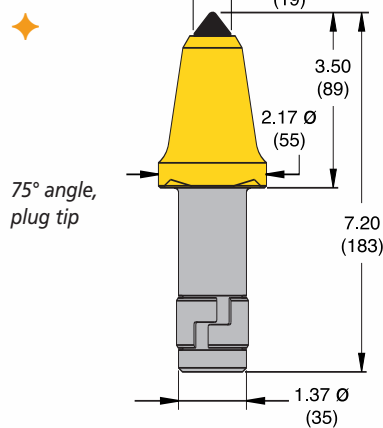
U92LR 3.5 25NB

2412363



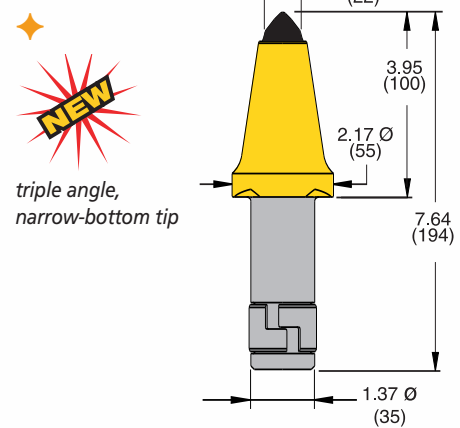
U94HDLR

1010469



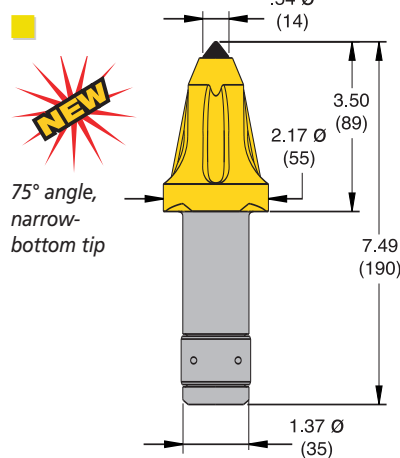
U92LR 4.0 22NB

2250379



U93LRD 3.5 14NB

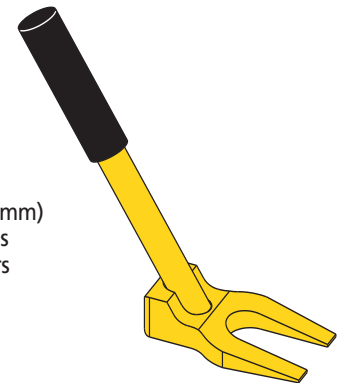
2434939



U90 puller

1012101

- removes 1 3/8" (35 mm) shank tools with collars



cutting conditions light medium heavy severe
   

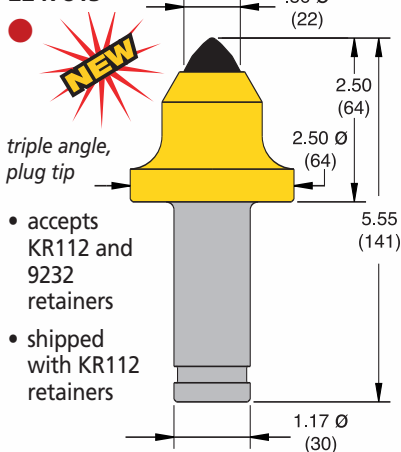


Narrow Bottom Tools

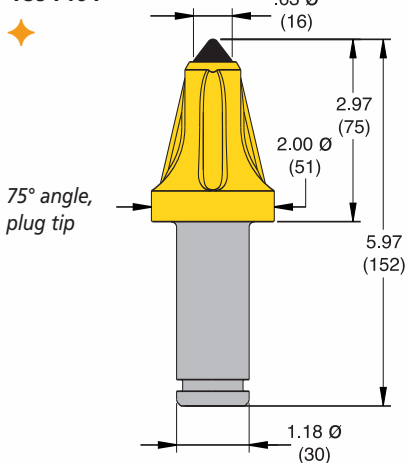
- New tip combines plug-style and cap-style advantages
- Better protection of brazed joint slows steel wash for longer tool life

Conical Tools — 1.18" (30 mm) Shank

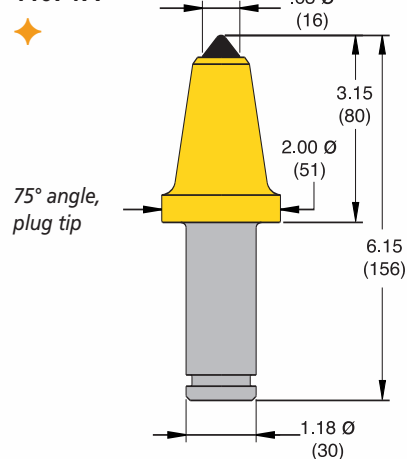
KSM5
2247813



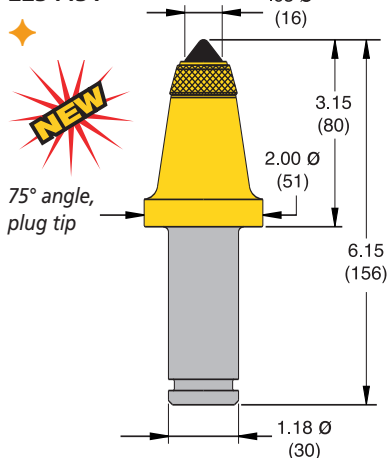
AM510FG
1891401



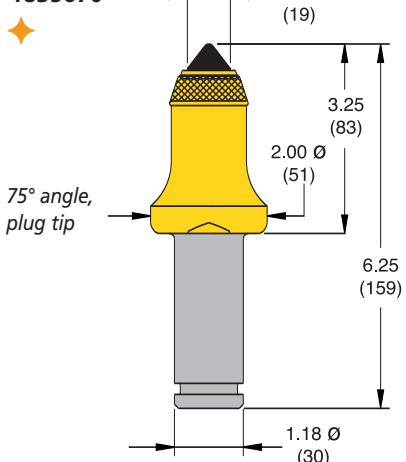
U119 80 16
1107477



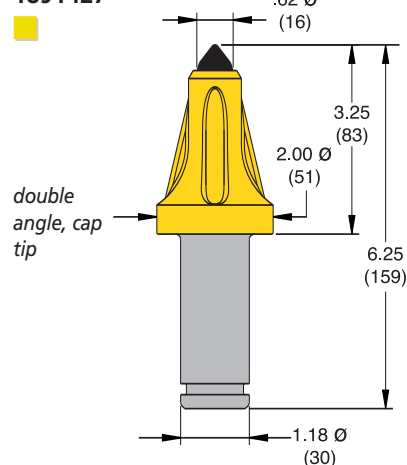
U119HF 80 16
2234431



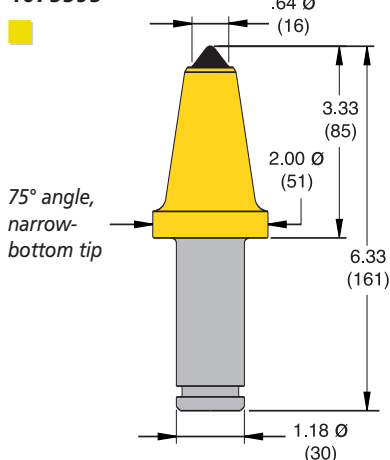
AM521HF .74
1835670



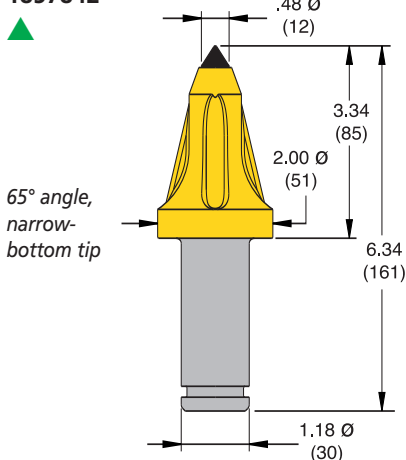
AM514P .62
1891427



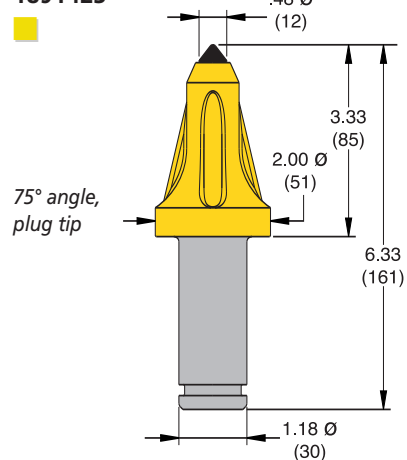
U85AUS 16NB
1075595



AM511 12.5NB 65°
1857842



AM511FG
1891423

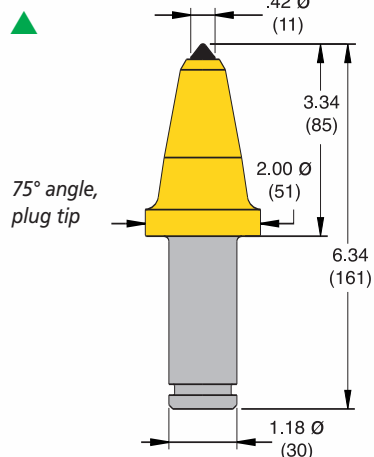


cutting conditions light medium heavy severe

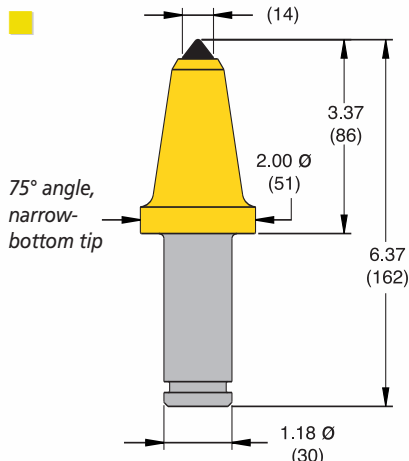
▲ ■ ◆ ●

Conical Tools — 1.18" (30 mm) Shank

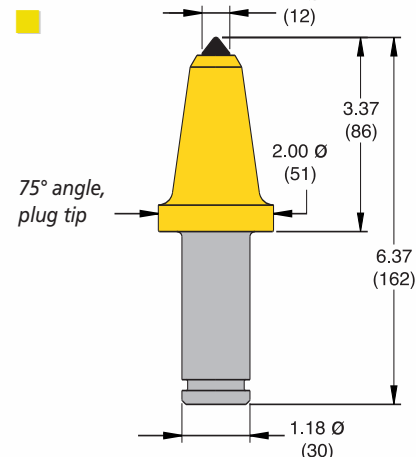
U119 3.4 .42
1010726



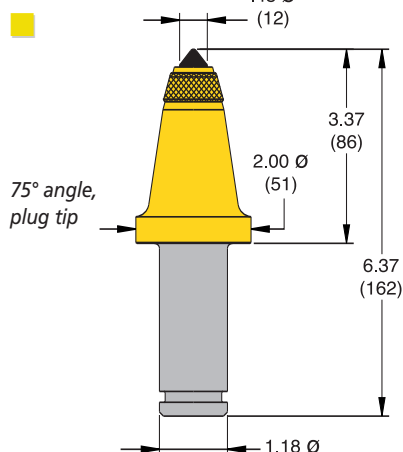
U85 3.4 14NB
2080065



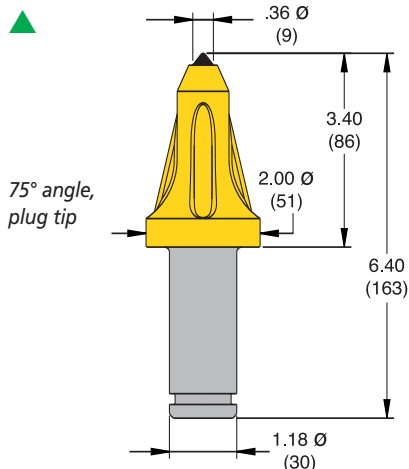
U85HD
1010407



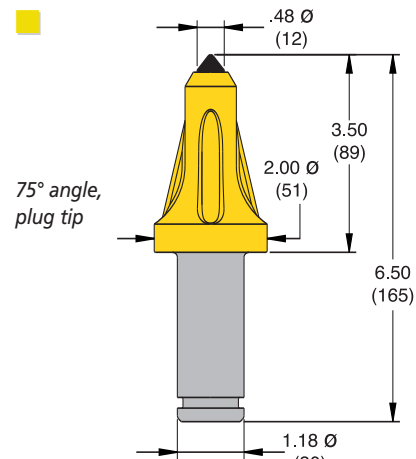
U85HDF
2234432



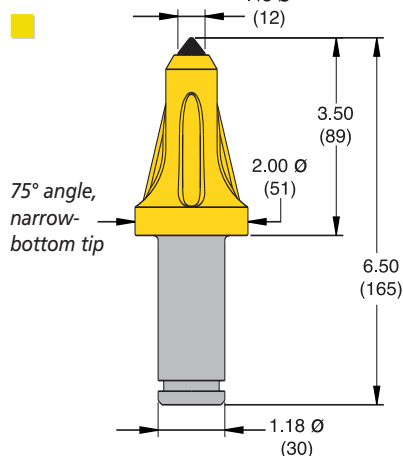
AM512FG
1891426



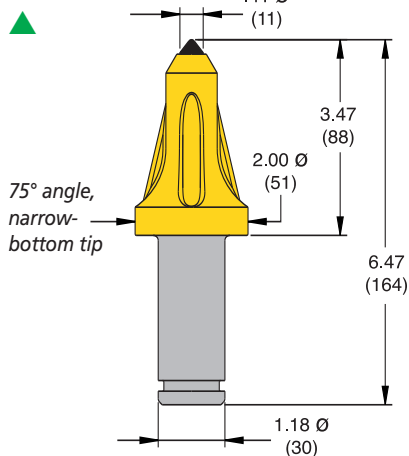
UR118 3.5 .48
1196746



UR118 3.5 12.5NB
1104924



UR118 3.5 11NB
1313004



Accessories

9232
Hair Pin Retainer
1012059

- for externally retained 1 3/16" (30 mm) shank tools

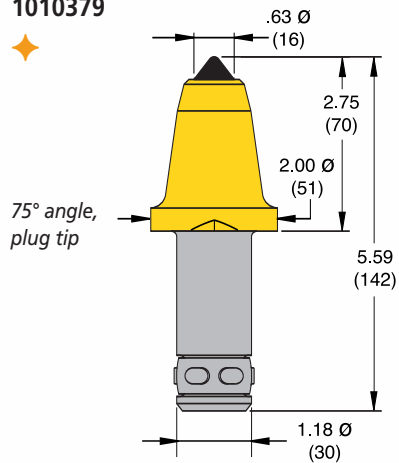


cutting conditions light medium heavy severe

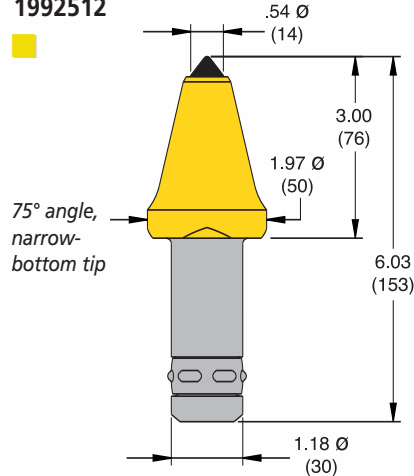
▲ ■ ◆ ●

Conical Tools — 1.18" (30 mm) Shank

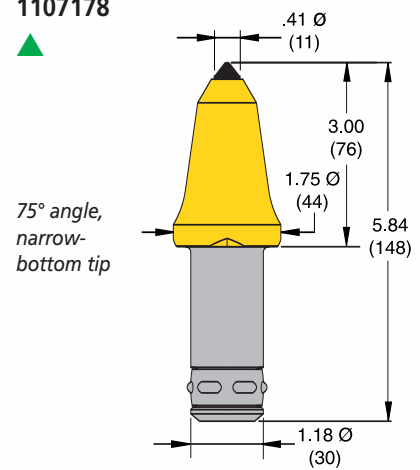
U84KHD
1010379



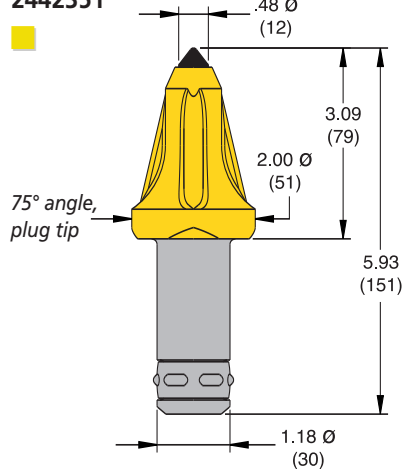
U118HCP 3.0 14NB
1992512



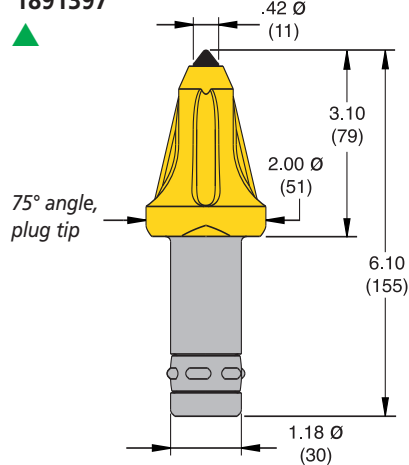
U118K 3.0 11NB
1107178



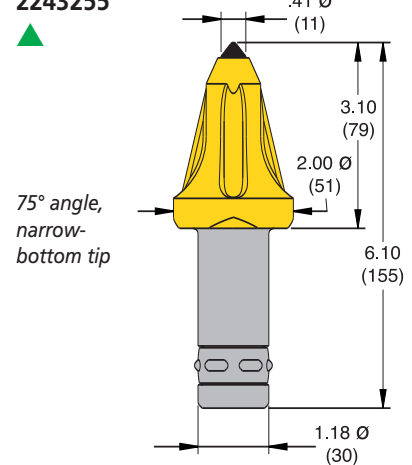
U83K 3.1 48
2442351



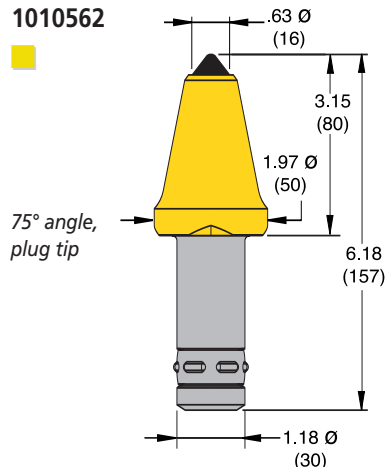
AM503PFB
1891397



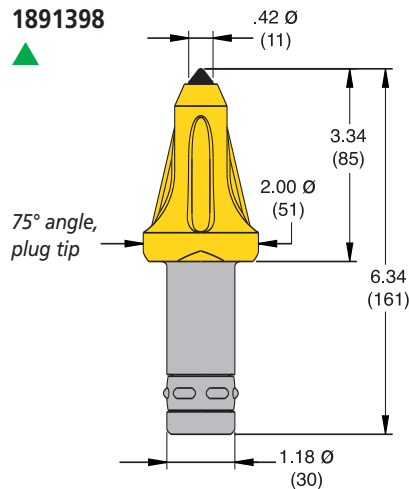
AM500K 3.1 11NB
2243255



U119K 80 16
1010562



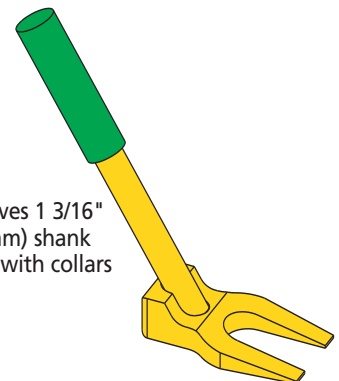
AM506PFB
1891398



Accessories

U80 puller
1012102

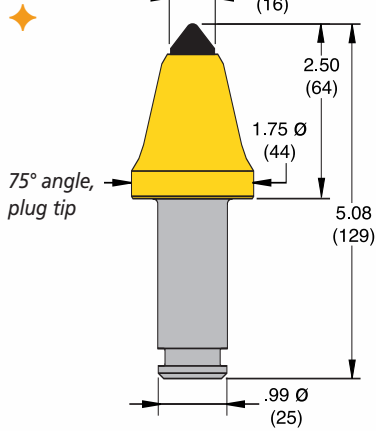
- removes 1 3/16" (30 mm) shank tools with collars



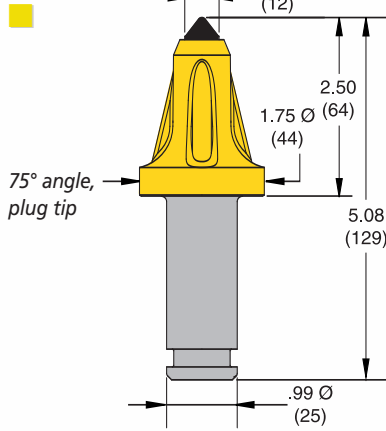
cutting conditions light medium heavy severe

Conical Tools — 1" (25 mm) Shank

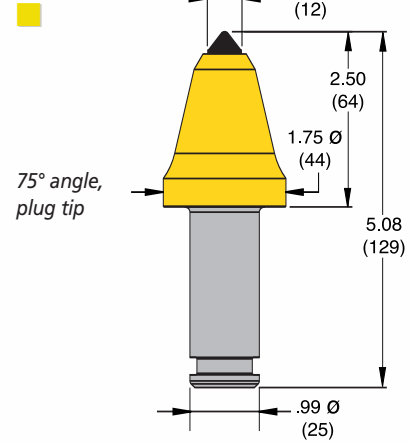
U765XHD
1960547



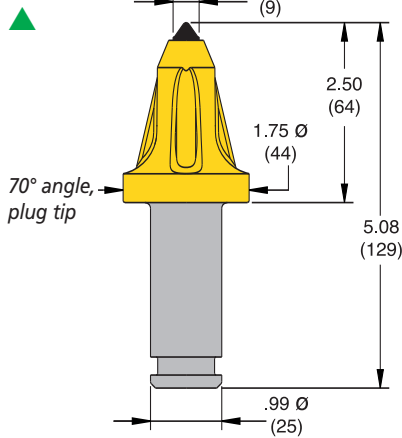
AM476
1327056



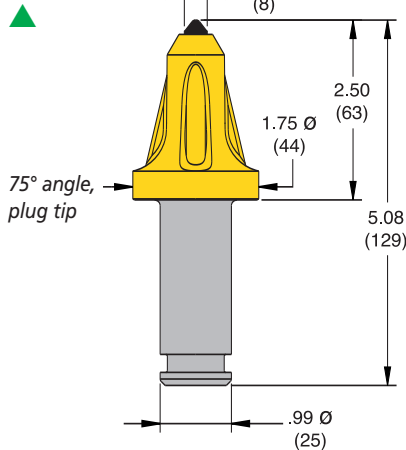
U765HD
1960546



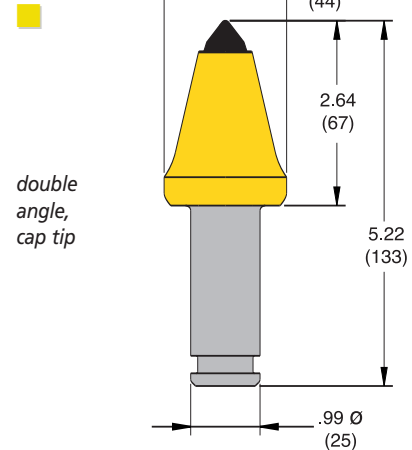
U73 2.5 .36
2419418



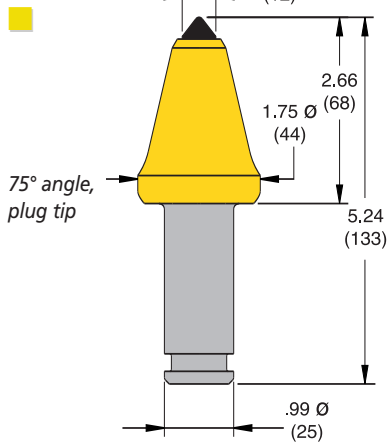
U73 2.5 .32
2432316



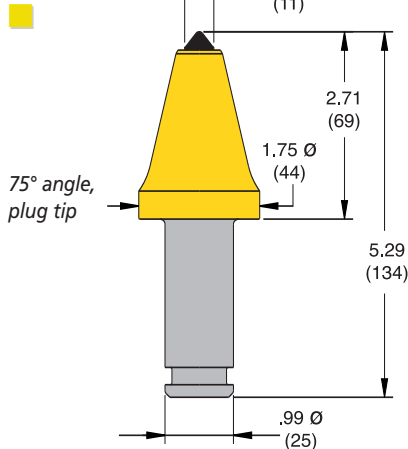
UC765 2.6 .62
2235630



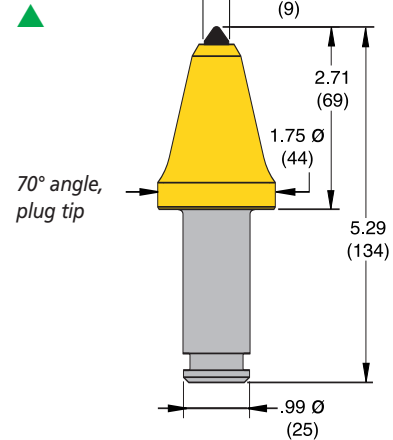
U765 2.7 .48
2433394



U765H .42
1960634



U765H .36
1960551

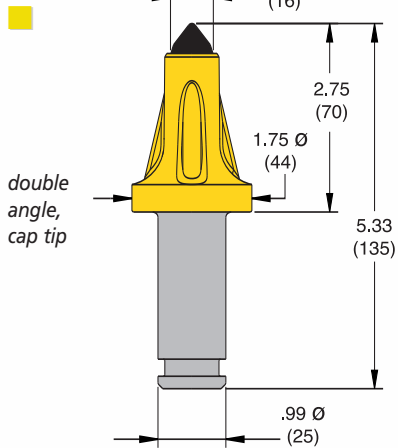


cutting conditions light medium heavy severe
 ▲ ■ ✦ ●

Conical Tools — 1" (25 mm) Shank

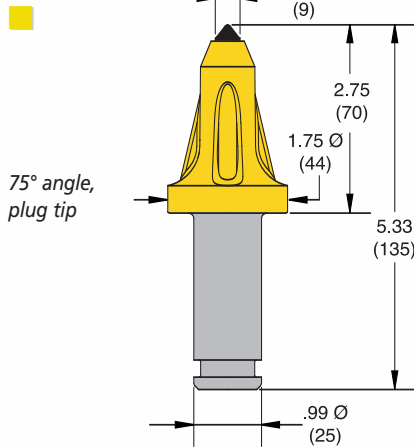
AM470 2.75 .62

2271391



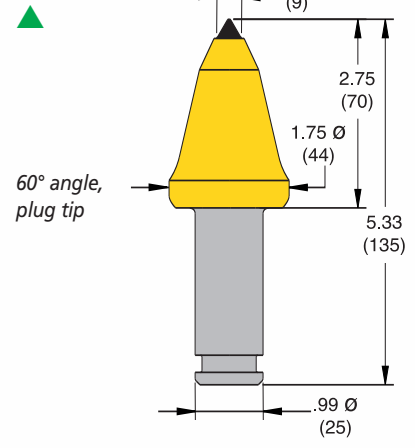
AM470

1753656



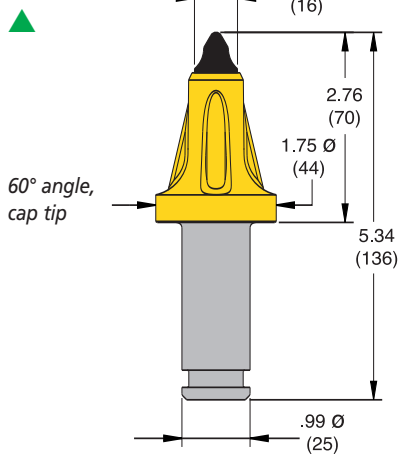
U765S 2.75 .36-60°

2432301



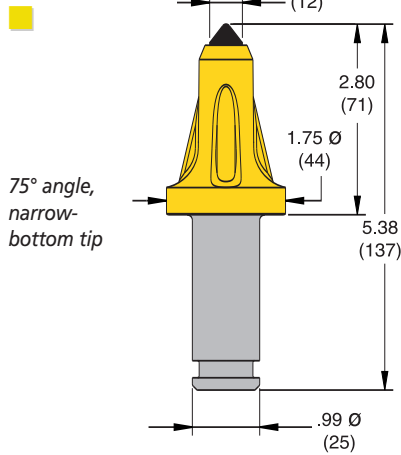
U73 2.8 15.87A

2446719



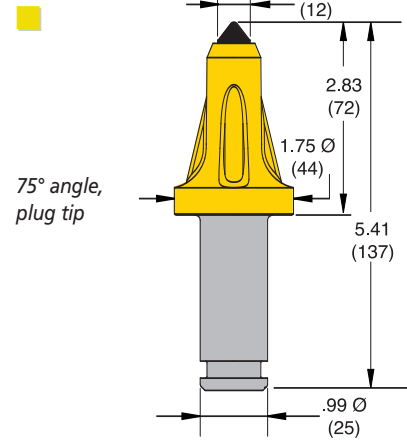
U73 2.8 12.5NB

2432314



AM472

1887766



Accessories

9231

Hair Pin Retainer

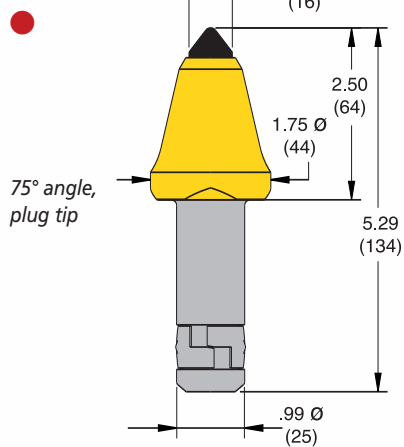
1012056



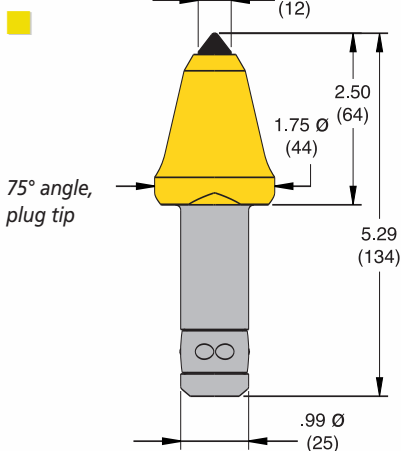
- for externally retained 1" (25 mm) shank tools

Conical Tools — 1" (25 mm) Shank

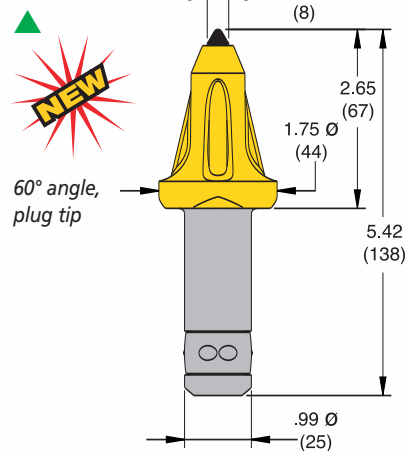
U765K 2.5 .63
2433376



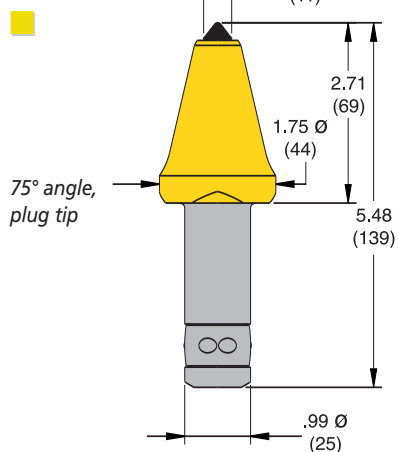
U765PKHD
1960550



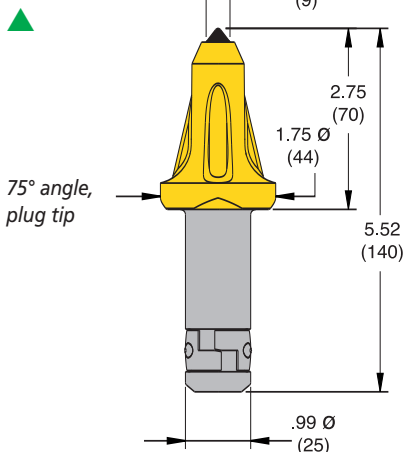
U73K 2.65 .32
2384561



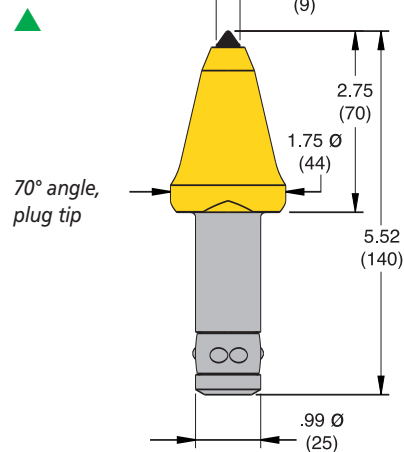
U765PKH .42
1960639



AM430FB
1327077



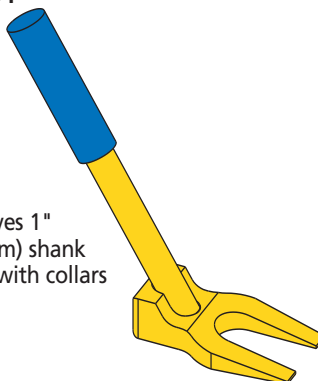
U765PKH .36
1960638



Accessories

U70 Puller
1012104

- removes 1" (25 mm) shank tools with collars



cutting conditions light medium heavy severe

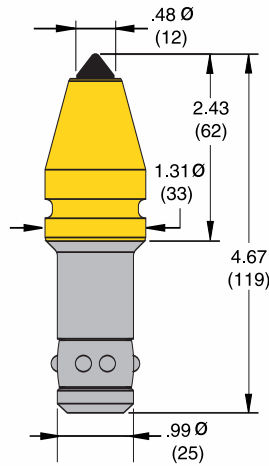
▲ ■ ◆ ●

Conical Tools — 1" (25 mm) Shank

C31HD / U40KHD
1010787



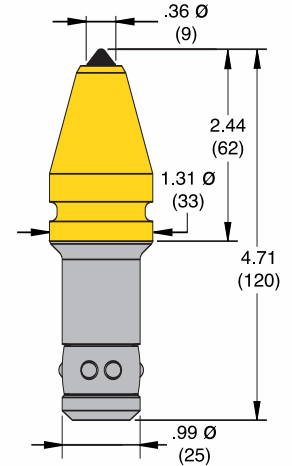
75° angle,
plug tip



C31 / U40KH
1010304



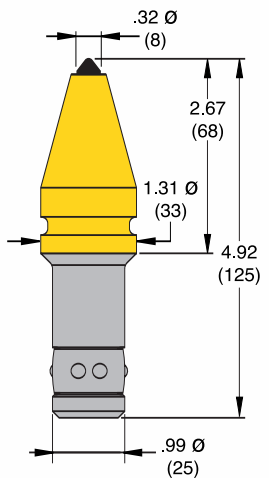
90° angle,
plug tip



C32 / U40K 75°
1010296



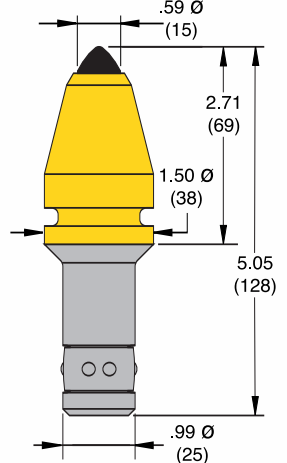
75° angle,
plug tip



U40HD
1010414



triple angle,
plug tip



Accessories

C30HP/U40HP Puller
1011982



- removes collarless 1" (25 mm) shank tools with puller grooves

cutting
conditions

light



medium



heavy

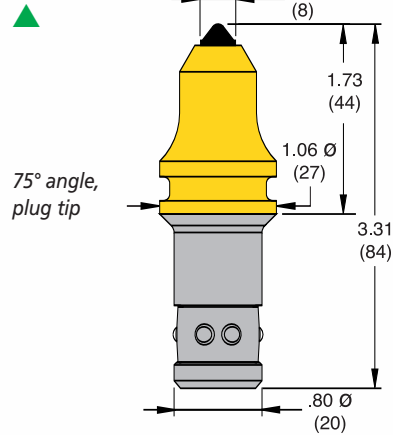


severe

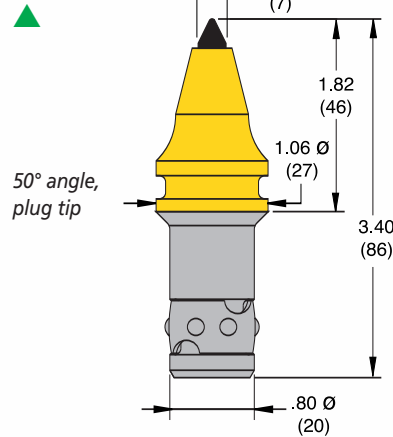


Conical Tools — .80" (20 mm) Shank

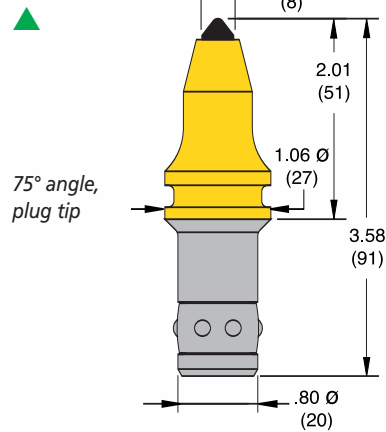
U50KH 75°
1010316



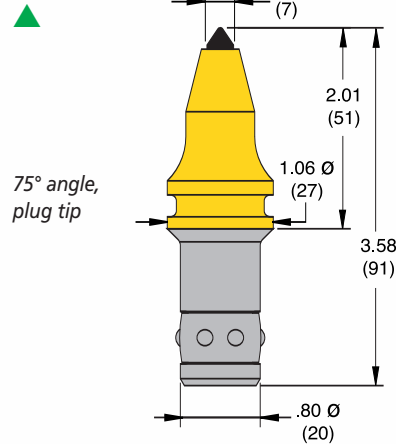
U50KL 50°
1010324



U51KHL 75°
1010394

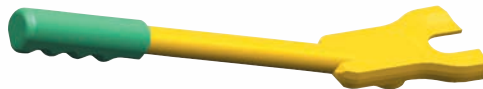


U51KL 68°
1010318



Accessories

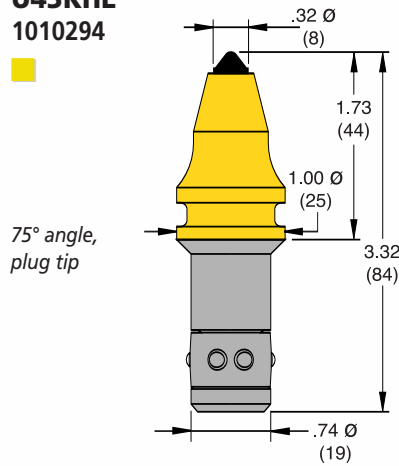
C123HP / U50HP Puller
1012016



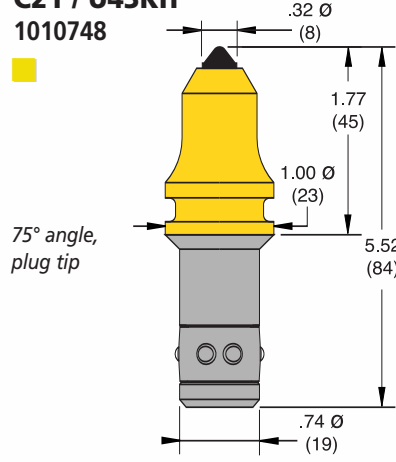
- removes collarless .80" (20 mm) shank tools with puller grooves

Conical Tools — .75" (19 mm) Shank

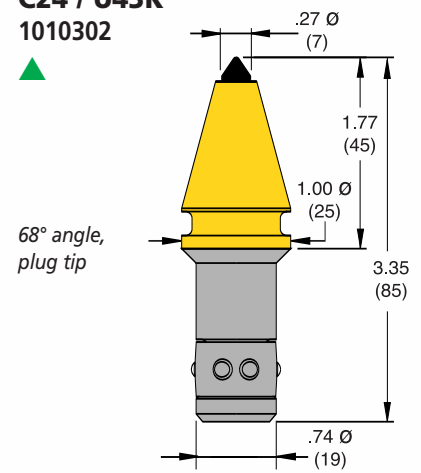
U43KHL
1010294



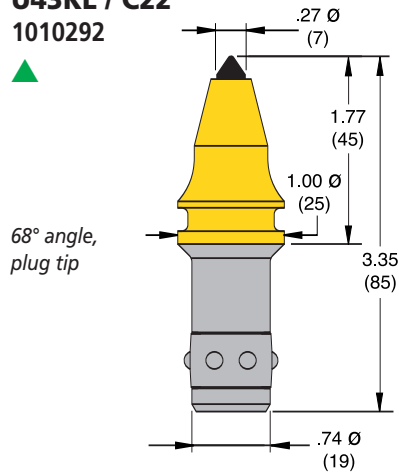
C21 / U43KH
1010748



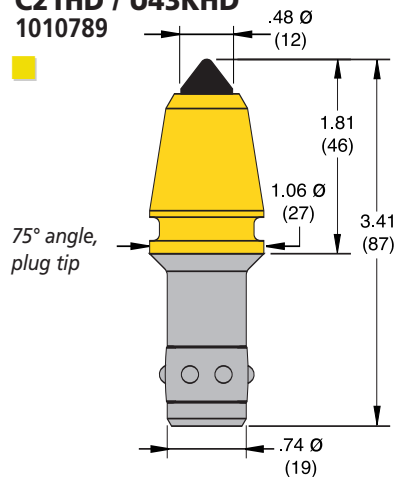
C24 / U43K
1010302



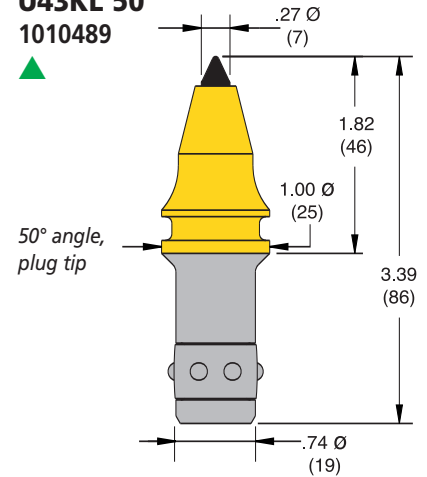
U43KL / C22
1010292



C21HD / U43KHD
1010789



U43KL 50°
1010489



Accessories

C20HP / U43HP Puller
1011984

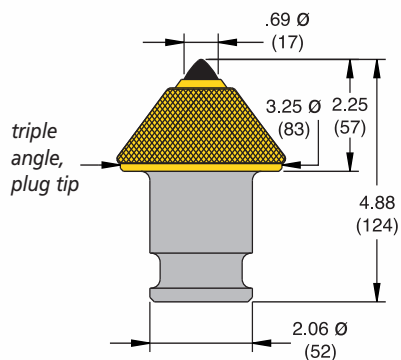


- removes collarless 3/4" (19 mm) shank tools with puller grooves

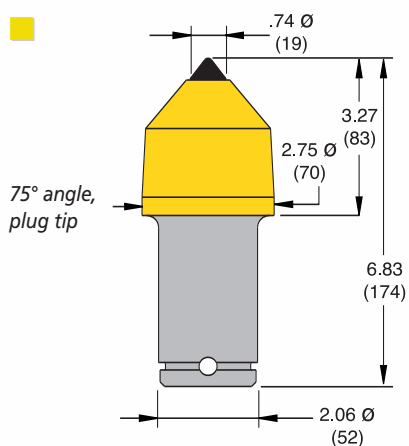
cutting conditions light medium heavy severe

Crusher Tools — 2.06" (52 mm) Shank

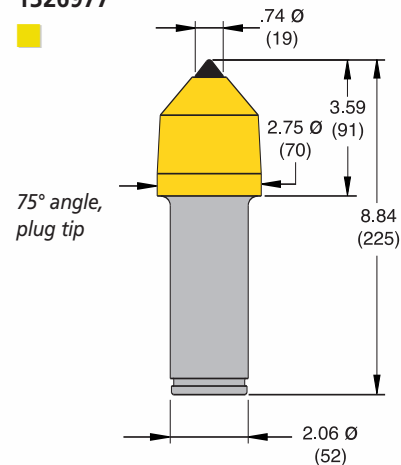
U200HF 2.2 17.5
2248807



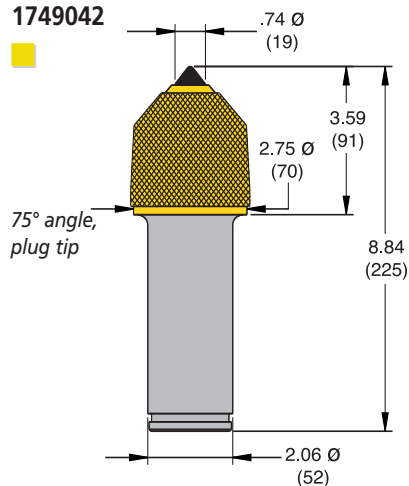
AM956DB
1326980



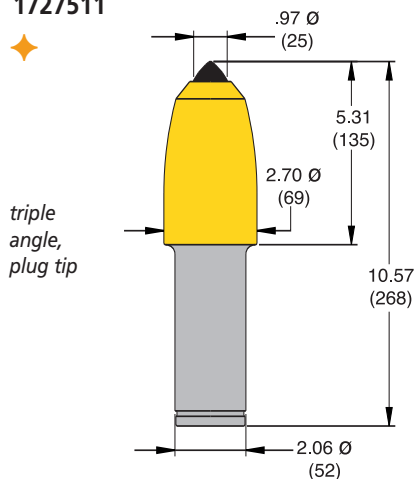
AM962
1326977



AM962HF
1749042



U200 5.3 .97
1727511



Accessories

KR200 Retainer
1011893



- replacement 2" (50 mm) snap ring for U170K225S, U90K225S, U90K175S, and U80K175S sleeves

KRP200 Pliers
1012063



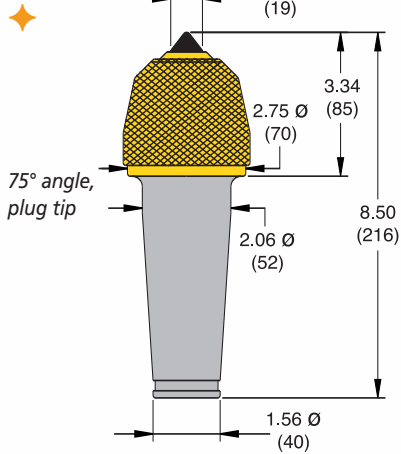
- for use on KR200 and KR225 snap rings
- replaceable tips (item 1012073)

cutting conditions light medium heavy severe

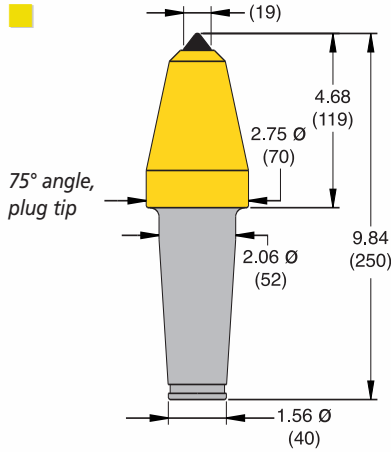


Crusher Tools — 2.06" (52 mm) Shank

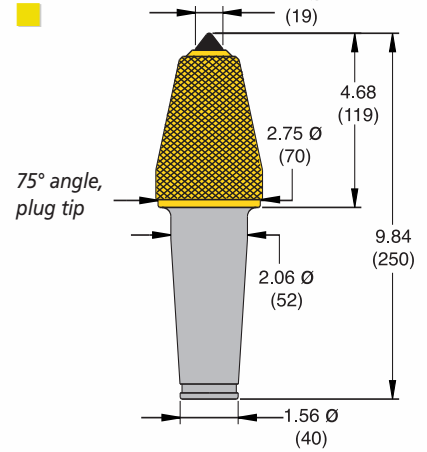
U200TSHF 3.2 .74
2288279



U200TS 5.0 .74
2230262



U200TSHF 5.0 .74
1723538



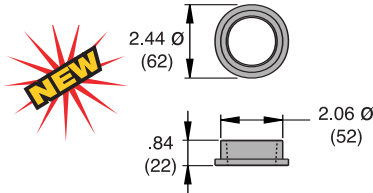
Accessories

KR156 Retainer
1732772



- 1.56" (40 mm) snap ring for tapered shank crusher tools

U200TS Block Spacer
1755052



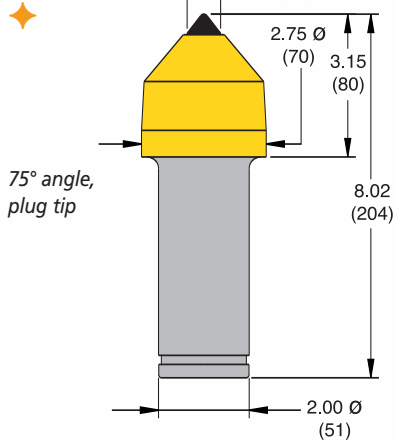
- use in conjunction with tapered shank tools and a 2.06" bore block

cutting conditions light medium heavy severe

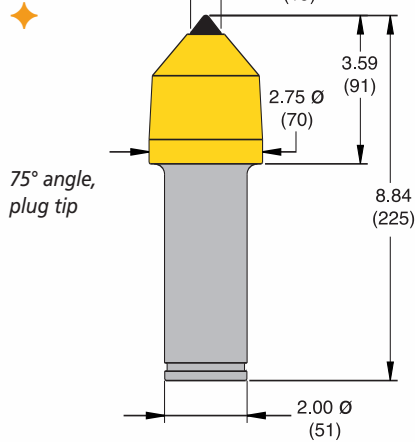


Crusher Tools — 2" (51 mm) Shank

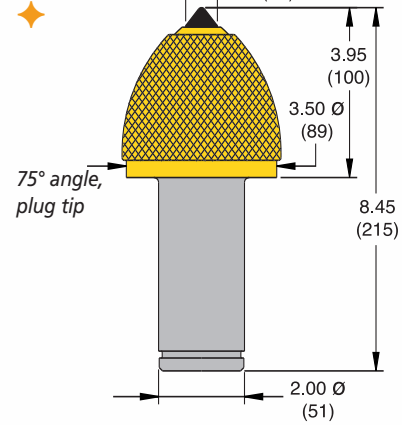
U200 3.2 .74
2223173



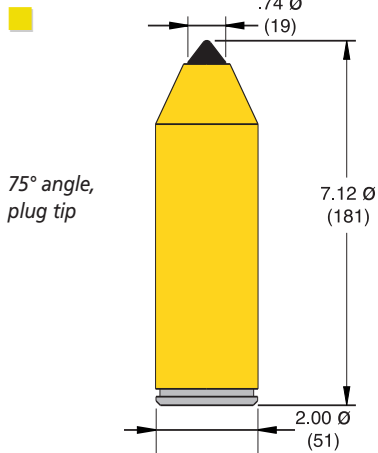
U200 3.6 .74
2416843



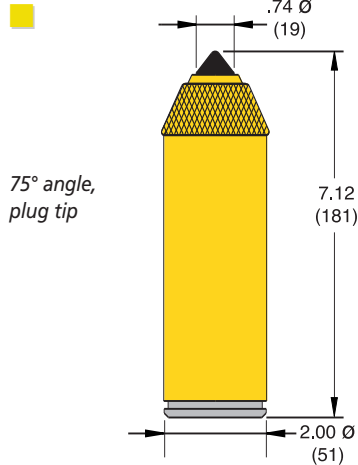
U200HF 4.0 .74
2240028



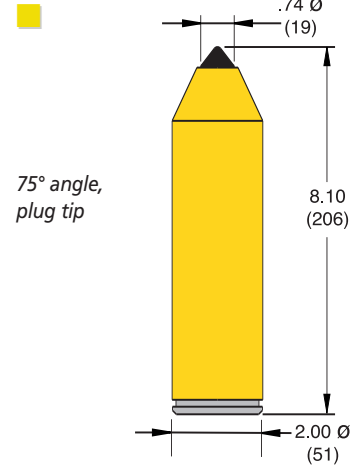
AM941
1326987



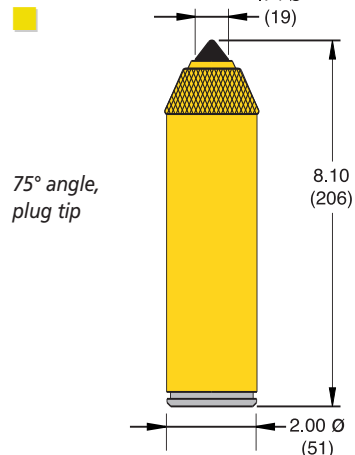
AM941HF
1851744



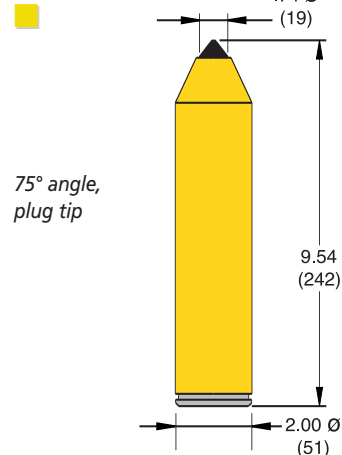
AM942DB
1326986



AM942DBHF
1808476



AM943DB
1326985



Accessories
KR200 Retainer
1011893



- replacement 2" (50 mm) snap ring for U170K225S, U90K225S, U90K175S, and U80K175S sleeves

cutting conditions light medium heavy severe

▲ ■ ◆ ●

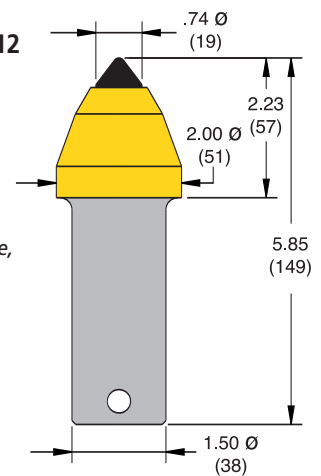
Crusher Tools — 1.50" (38 mm) Shank



**KBB2
1010312**



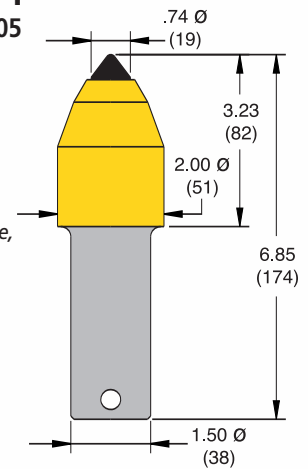
75° angle,
plug tip



**KBB2 1
1176205**



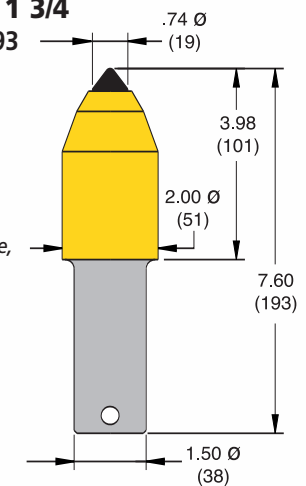
75° angle,
plug tip



**KBB2 1 3/4
1238793**



75° angle,
plug tip



cutting
conditions

light



medium



heavy

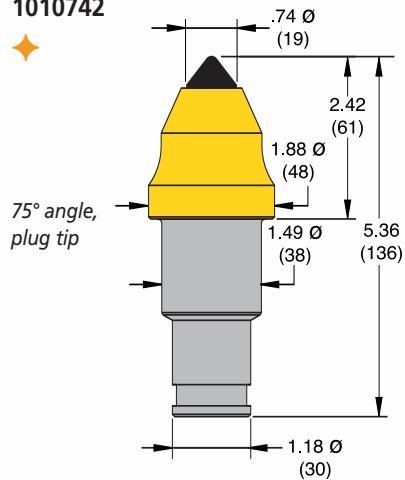


severe

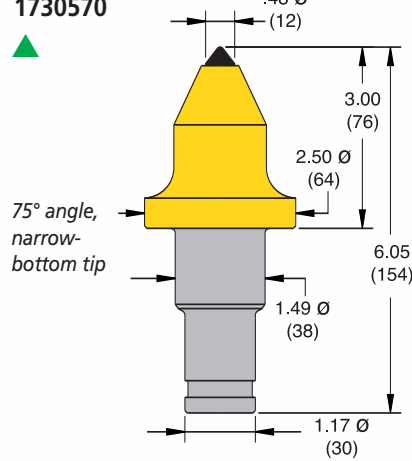


Crusher Tools — 1.50" (38 mm) Step Shank

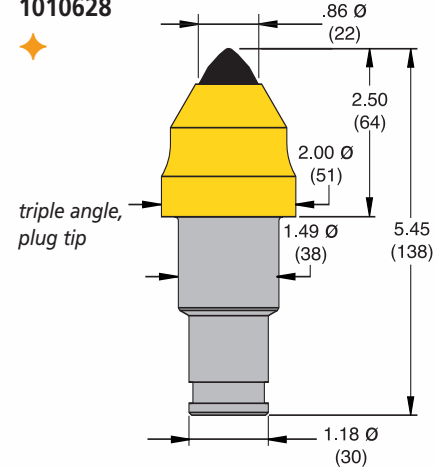
C7 / U47
1010742



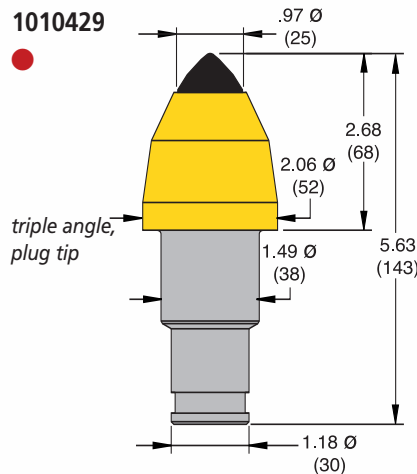
KSM1
1730570



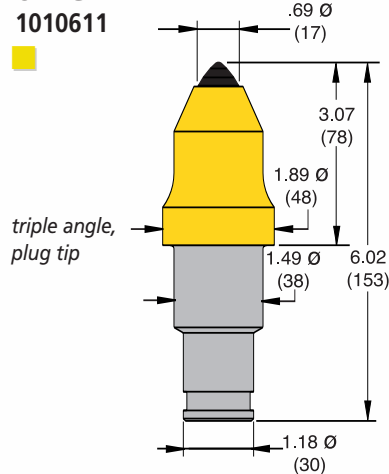
U47HD
1010628



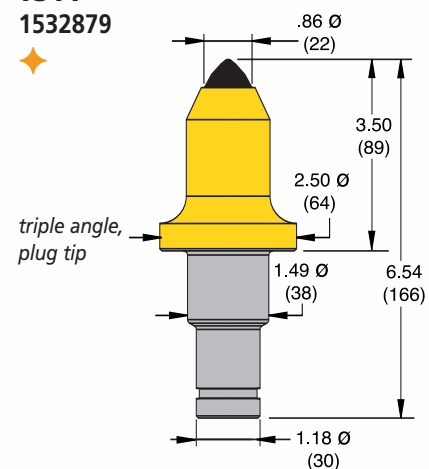
U47 52
1010429



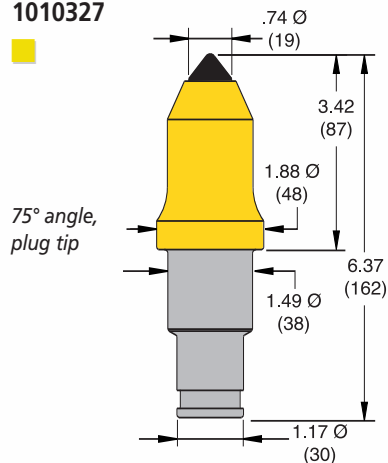
U47GB
1010611



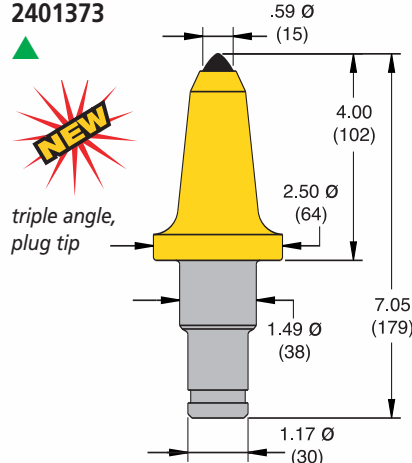
TS11
1532879



U47 1
1010327



KSM7
2401373



Call Customer Service at
800/458-3608
To Place an Order
or For Assistance!

cutting conditions light medium heavy severe

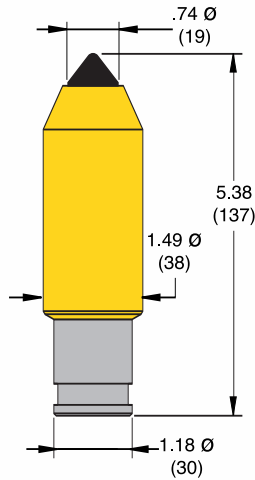


Crusher Tools — 1.50" (38 mm) Shank

C4 / U44
1010761



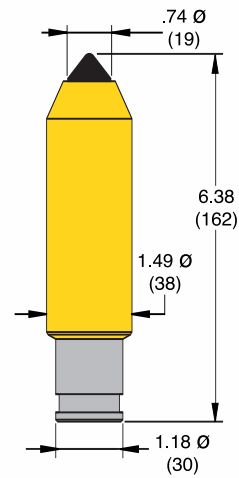
75° angle,
plug tip



C4 1 / U44 1
1010776



75° angle,
plug tip



Accessories

KR112 Retainer **1011979**

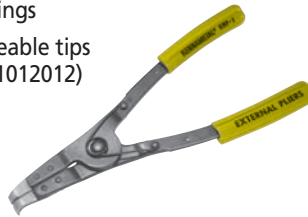
- for externally retained 1 1/2" (38 mm) step shank and 1 3/16" straight shank tools



cutting conditions light medium heavy severe
   

KRP1/C4 Pliers **1012010**

- for use on external snap rings
- replaceable tips (item 1012012)



KRP4 Pliers **1012047**

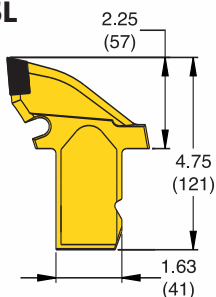
- for use on external snap rings



1" x 1 5/8" Shank

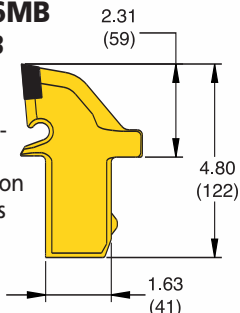
KR225-CSL 1011201

- for rear-lock retention systems



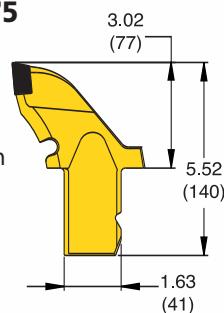
AM276MB 1327083

- for button-lock retention systems



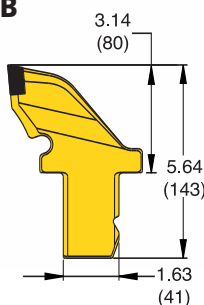
KR300-75 1011203

- for rear-lock retention systems



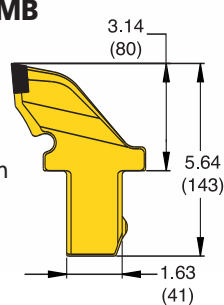
AM238MB 1327099

- for rear-lock retention systems



AM239MB 1327098

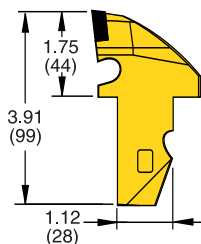
- for button-lock retention systems



5/8" x 1 1/8" Shank

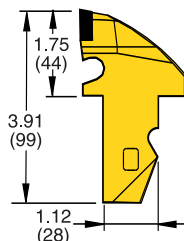
U21L 1011195

- log cabin-style tip



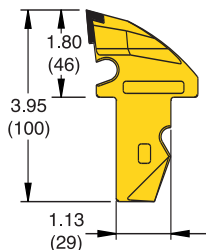
U21PL 1011205

- zero rake tip



U21RL 5° 2219179

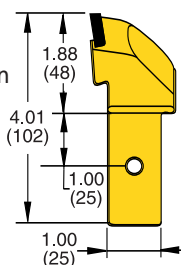
- 5° rake log cabin-style tip



1/2" x 1" Shank

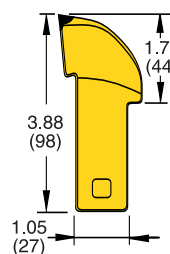
U15PS 1011189

- 1/4" roll-pin hole in shank



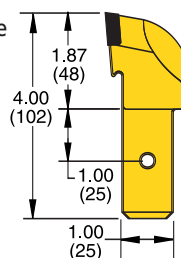
U7RAS 1011310

- plug-style tip



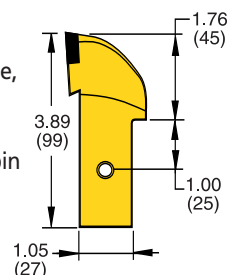
U15PL 1011191

- all-purpose log cabin-style tip
- 1/4" roll-pin hole in shank



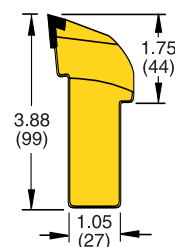
U7LP 1011187

- all-purpose, log cabin-style tip
- 1/4" roll-pin hole in shank



U7RLS 1573083

- sharp recessed tip



Drilling Tools — 7/8" (22 mm) Hex Drill Steel System



Pro Point™ Tool Selection System

To assemble your hex drill steel system, simply follow these steps:

1

Select the drilling tool for your particular operation.

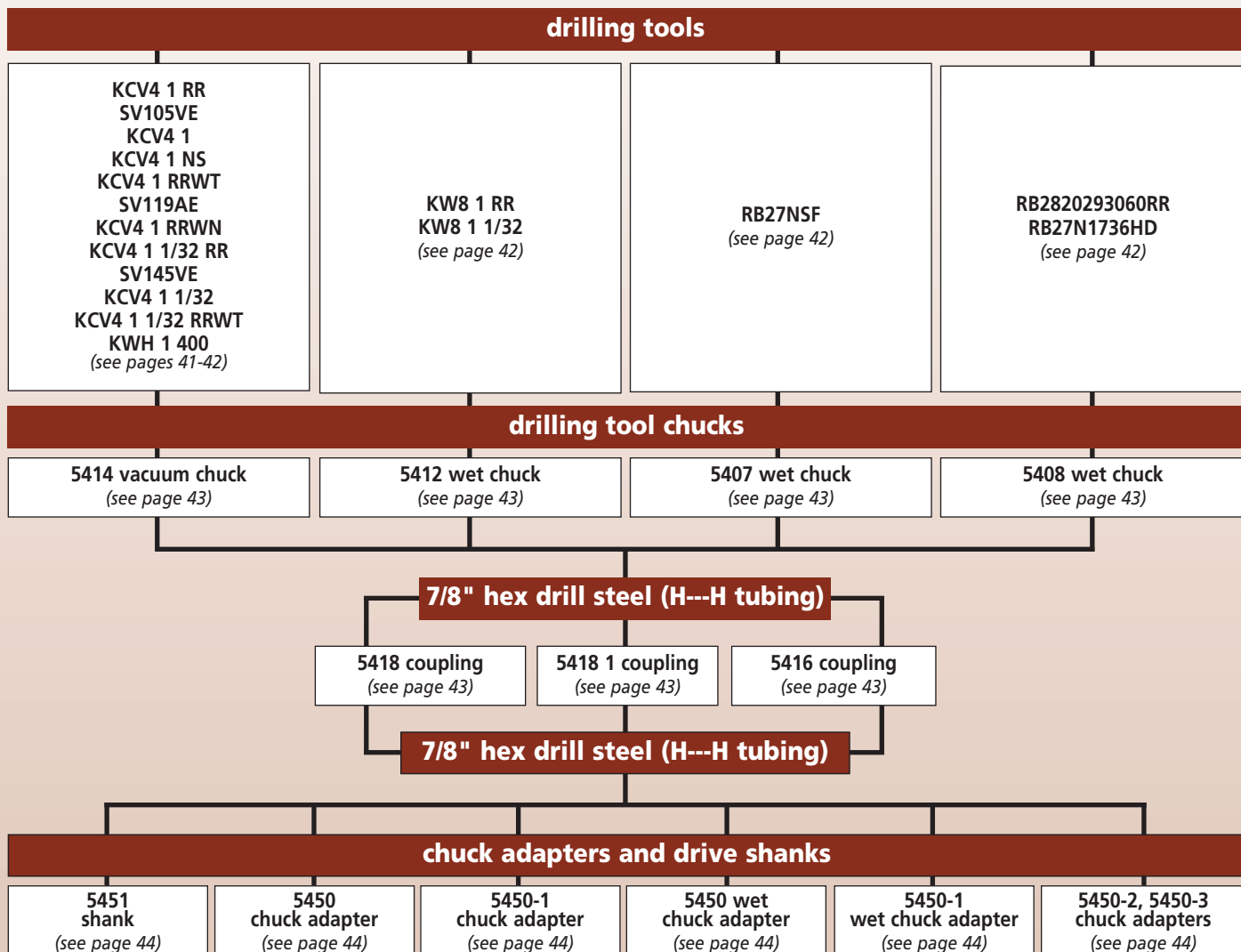
2

Select the appropriate chuck for the drilling tool.

3

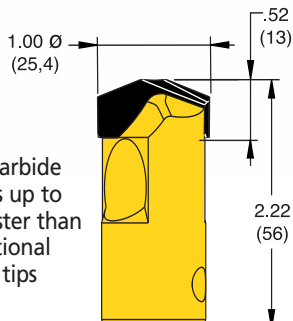
Select the proper length of hex tubing.

It's that easy!



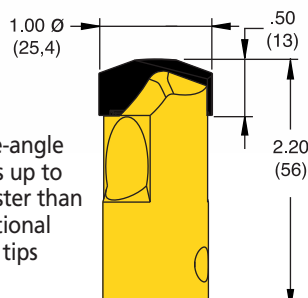
KCV4 1 RR
1011333

- fluted carbide tip drills up to 30% faster than conventional carbide tips



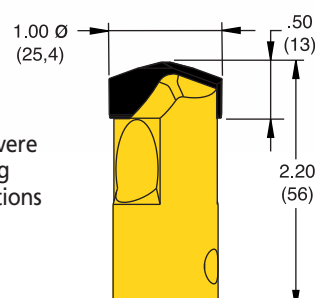
SV105VE
1326655

- variable-angle tip drills up to 30% faster than conventional carbide tips



KCV4 1
1011322

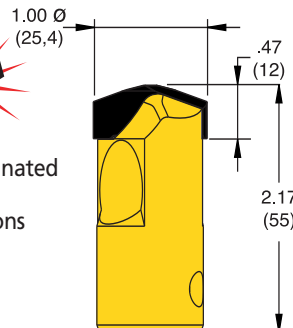
- for severe drilling conditions



KCV4 1 NS
2243296

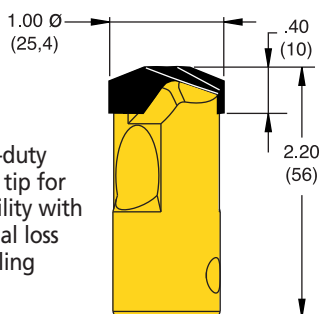


- for laminated drilling conditions



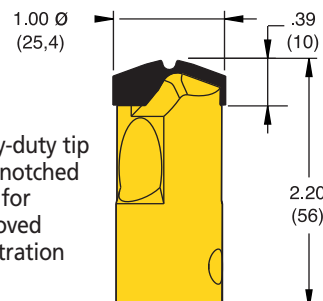
KCV4 1 RRWT
1080984

- heavy-duty fluted tip for durability with minimal loss of drilling speed



SV119AE
1326654

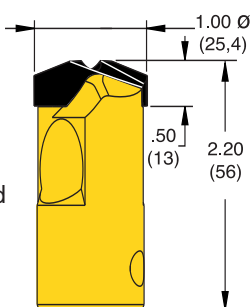
- heavy-duty tip with notched apex for improved penetration



KCV4 1 RRWN
2461136

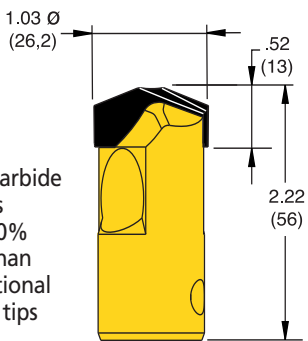


- heavy-duty fluted tip with notched apex for improved penetration



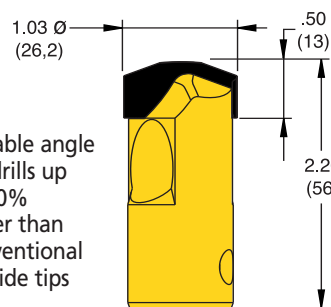
KCV4 1 1/32 RR
1011334

- fluted carbide tip drills up to 30% faster than conventional carbide tips



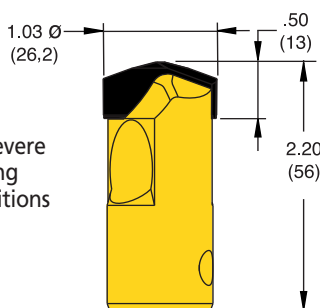
SV145VE
1326645

- variable angle tip drills up to 30% faster than conventional carbide tips



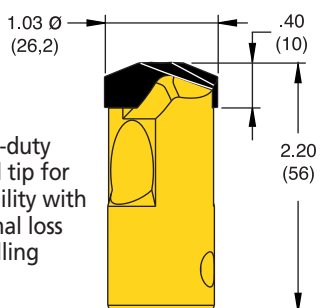
KCV4 1 1/32
1011328

- for severe drilling conditions



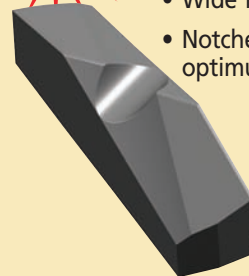
KCV4 1 1/32 RRWT
1149472

- heavy-duty fluted tip for durability with minimal loss of drilling speed



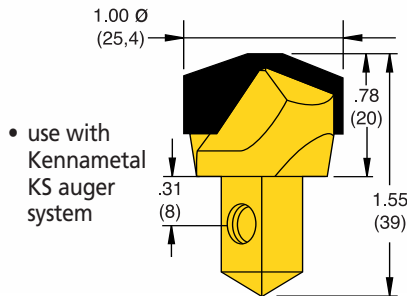
KCV4 1 RRWN Tip

- Wide fluted tip
- Notched apex for optimum penetration

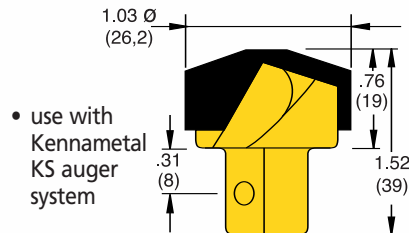


Drilling Tools — 7/8" (22 mm) Hex Drill Steel System

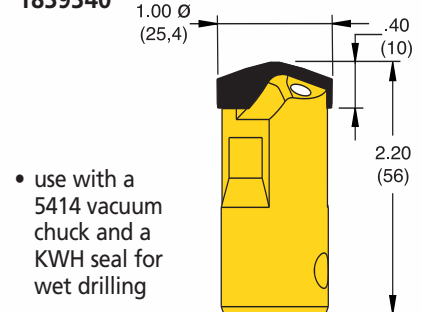
KV2 1
1187664



KV2 1 1/32
1108385



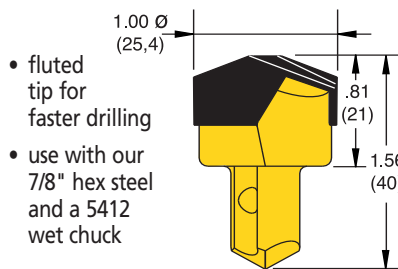
KWH 1 400
1839340



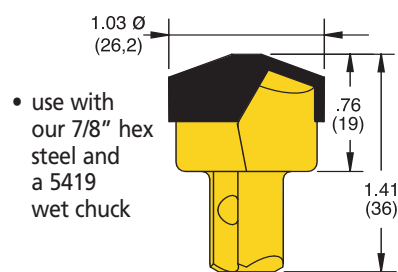
KWH Seal
1895511



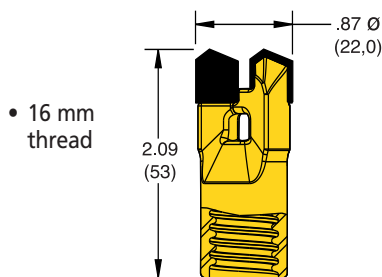
KW8 1 RR
1084689



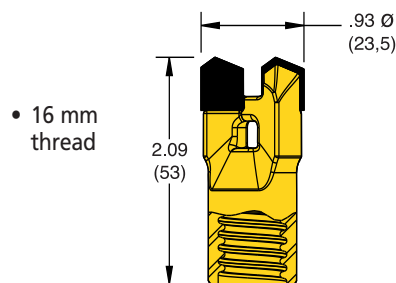
KW8 1 1/32
1011343



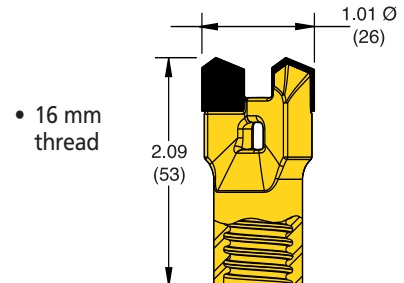
RB22.0
1749417



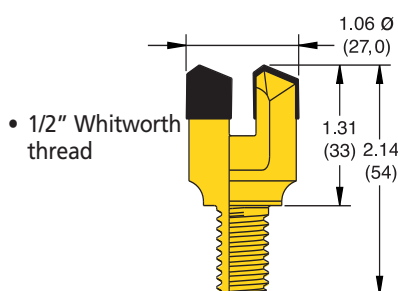
RB23.5
1557976



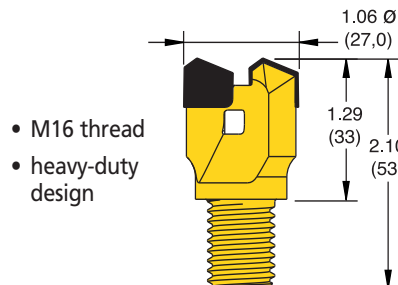
RB25.6 SA
1750701



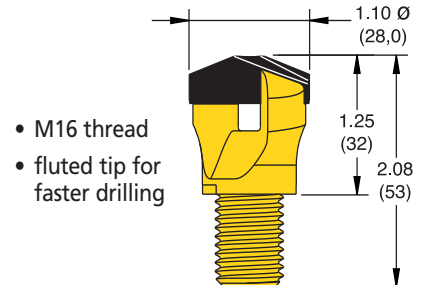
RB27NSF
1075594



RB27N1736HD
1075587



RB2820293060RR
1887990

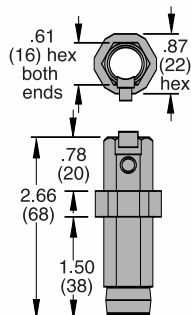


Drilling Tools — 7/8" (22 mm) Hex Drill Steel System



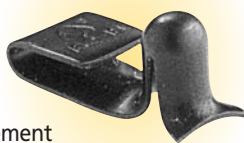
5414 Vacuum Chuck 1012082

- drives 1" and 1 1/32" center vacuum tools and KWH wet drilling tools



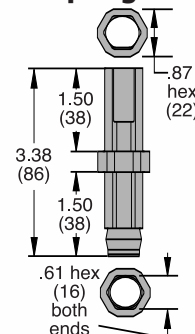
9200 Retainer 1012023

- replacement clip for 5414 and 5522 chucks



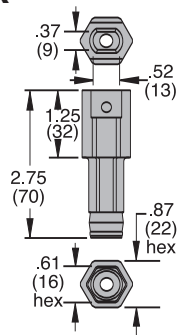
5416 Vacuum Coupling 1012085

- vacuum coupling for 7/8" (22 mm) hex steel



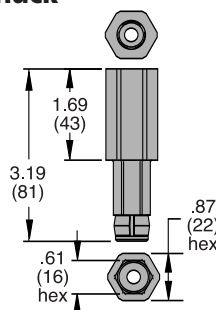
5412 Wet Chuck 1012078

- drives KW8-style tools



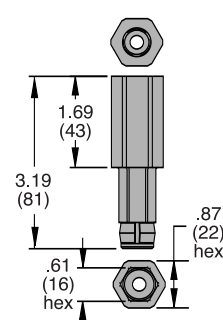
5408 Wet Chuck 1012074

- drives M16 male thread



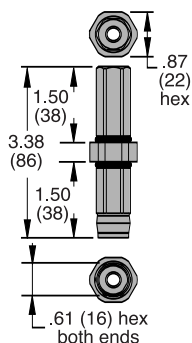
5407 Chuck 1012072

- drives 1/2" Whitworth male thread



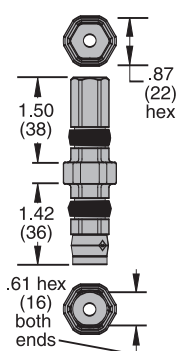
5418 Wet Coupling 1012149

- wet coupling for 7/8" (22 mm) hex steel



5418 1 Wet Coupler/Driver 2234876

- wet coupling for 7/8" (22 mm) hex steel
- wet driver with 5450 2 wet chuck adapter



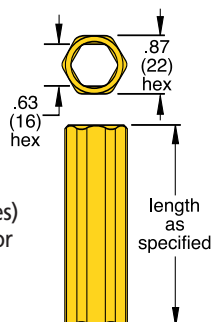
5400 Clip 1011890

- replacement retainer band for 7/8" (22 mm) hex couplings and chucks



H---H Tubing

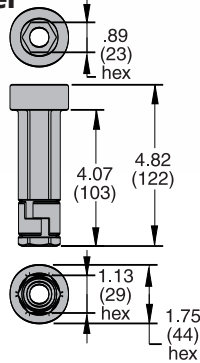
- order as "H (length in inches) H" (Example: for an 8-ft. length, order H096H; full-length, H144H)



Drilling Tools — 7/8" (22 mm) Hex Drill Steel System

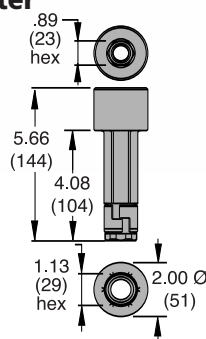
5450 Short Vacuum Chuck Adapter
1117376

- converts 1 1/8" (29 mm) deep hex to 7/8" (22 mm) hex



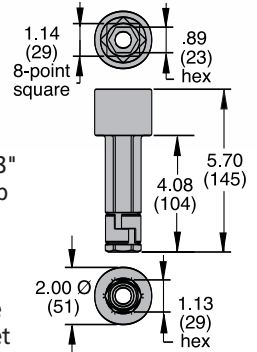
5450 Vacuum Chuck Adapter
1012100

- converts 1 1/8" (29 mm) deep hex to 7/8" (22 mm) deep hex



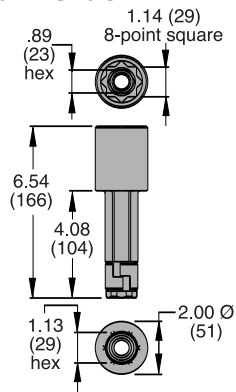
5450 1 Short Vacuum Chuck Adapter
1117179

- converts 1 1/8" (29 mm) deep hex to 7/8" (22 mm) hex
- integrated 1 1/8" square 8-point socket



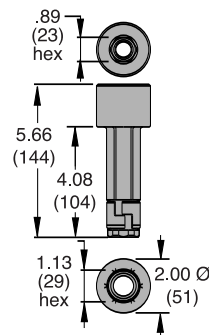
5450 1 Vacuum Chuck Adapter
1012137

- converts 1 1/8" (29 mm) deep hex to 7/8" (22 mm) hex
- integrated 1 1/8" square 8-point socket



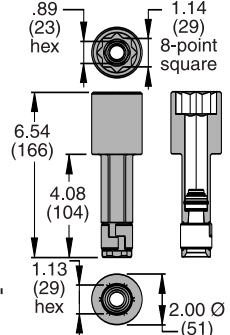
5450 Wet Chuck Adapter
1012119

- for wet drilling
- converts 1 1/8" (29 mm) deep hex to 7/8" (22 mm) hex
- includes a water seal



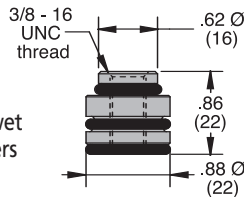
5450 1 Wet Chuck Adapter
1012121

- for wet drilling
- converts 1 1/8" (29 mm) deep hex to 7/8" (22 mm) hex
- includes a water seal and an integrated 1 1/8" square 8-point socket



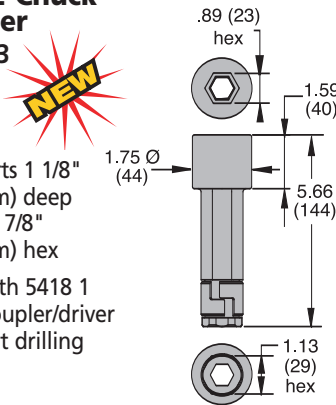
5450 Replacement Water Seal
1012041

- replacement seal for 5450 and 5450-1 wet chuck adapters



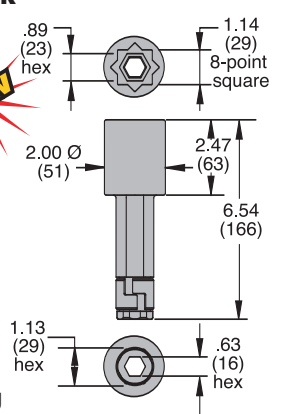
5450 2 Chuck Adapter
2454683

- converts 1 1/8" (29 mm) deep hex to 7/8" (22 mm) hex
- use with 5418 1 wet coupler/driver for wet drilling



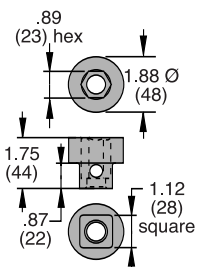
5450 3 Chuck Adapter
2461029

- converts 1 1/8" (29 mm) deep hex to 7/8" (22 mm) hex
- use with 5418 1 wet coupler/driver for wet drilling
- integrated 1 1/8" square 8-point socket



5451 Shank
1012103

- weld-on adapter
- drives 7/8" (22 mm) hex drill steel from a 1 1/8" (29 mm) square chuck



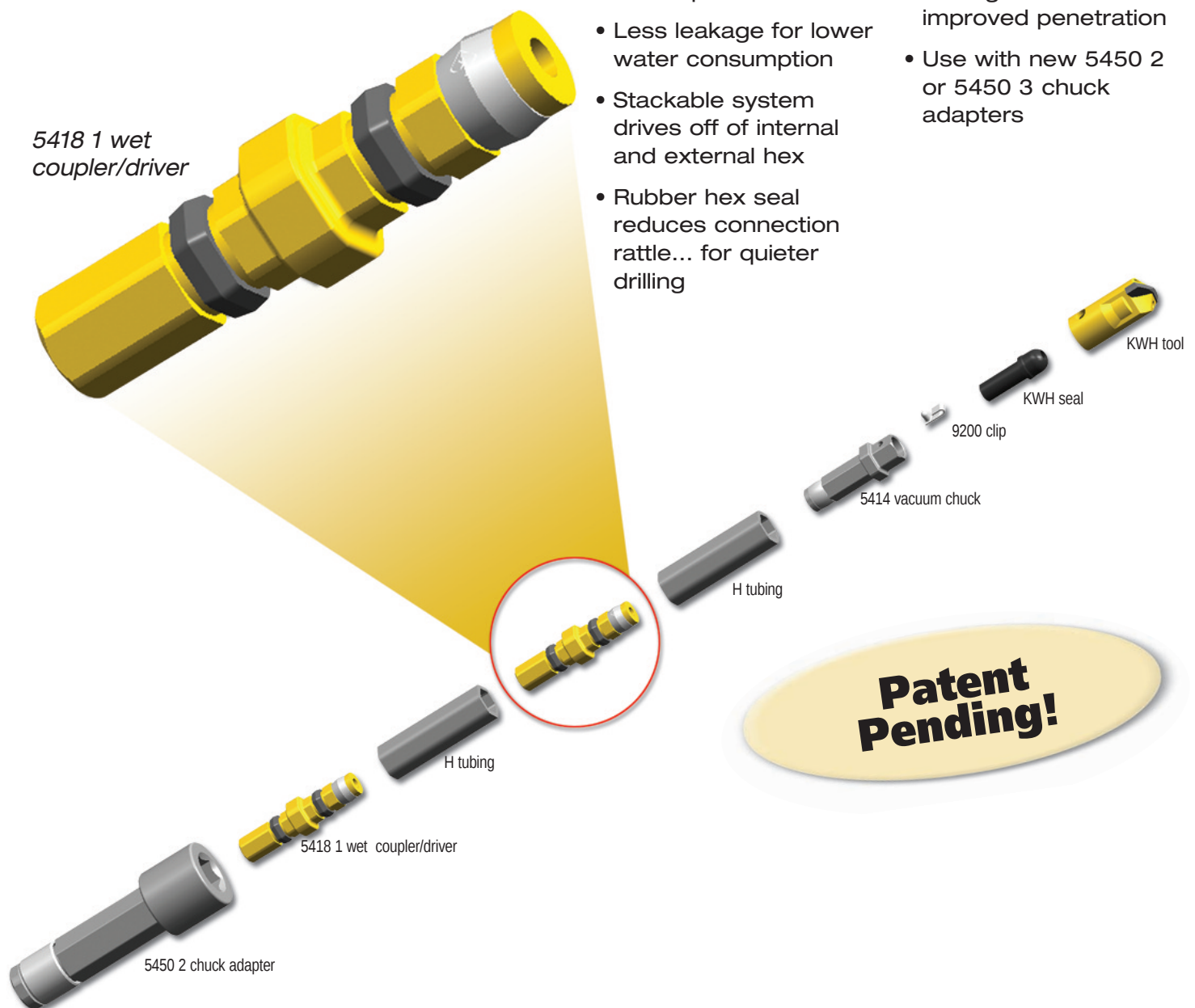
NEW

5418 1 Wet Coupler/Driver Drilling System

Our new patent-pending design features bonded rubber hex on the 5418 1 wet coupler/driver for durable, hassle-free wet drilling!

- Easy connection and separation!
- Less leakage for lower water consumption
- Stackable system drives off of internal and external hex
- Rubber hex seal reduces connection rattle... for quieter drilling
- Increases water to cutting zone for improved penetration
- Use with new 5450 2 or 5450 3 chuck adapters

5418 1 wet coupler/driver





Pro Point™ Tool Selection System

To assemble your hex drill steel system, simply follow these steps:

1

Select the drilling tool for your particular operation.

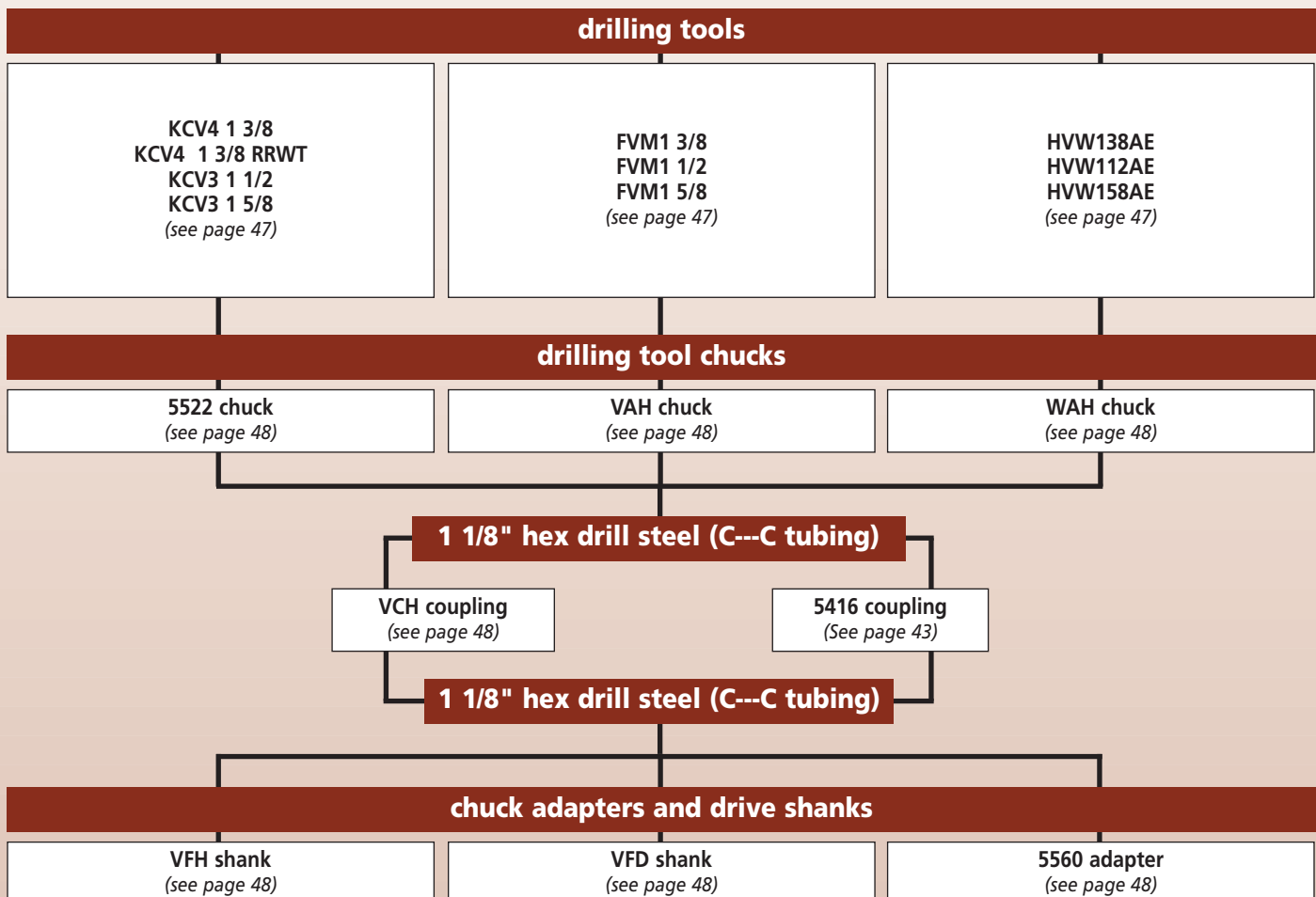
2

Select the appropriate chuck for the drilling tool.

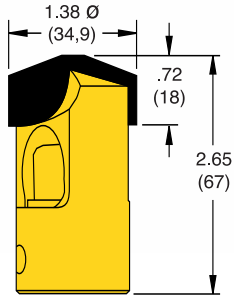
3

Select the proper length of hex tubing.

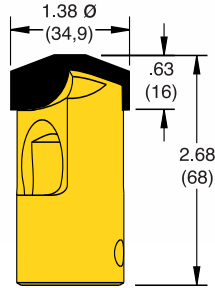
It's that easy!



KCV4 1 3/8
1326653

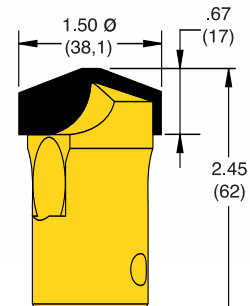


KCV4 1 3/8 RRWT
1087205

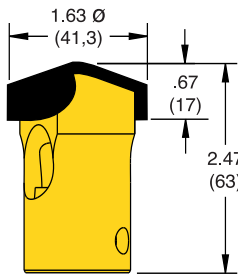


- heavy-duty fluted insert for durability with minimal loss of drilling speed

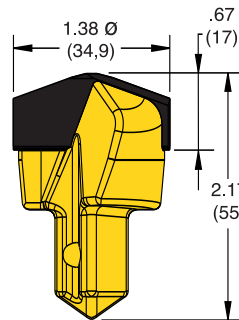
KCV3 1 1/2
1011315



KCV3 1 5/8
1326640

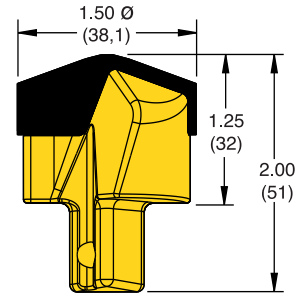


FVM 1 3/8
1326871



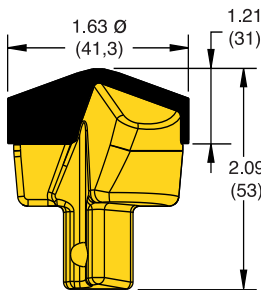
- for use with our VAH vacuum chuck

FVM 1 1/2
1326872



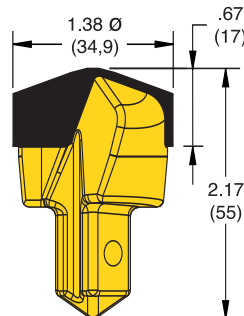
- for use with our VAH vacuum chuck

FVM 1 5/8
1326869



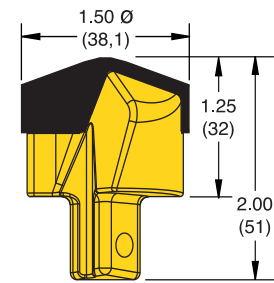
- for use with our VAH vacuum chuck

HVW 1 3/8AE
1326860



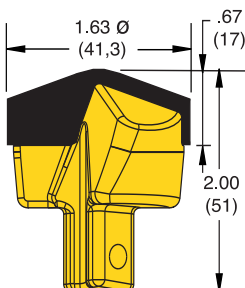
- for use with our VAH wet chuck

HVW 1 1/2AE
1326862



- for use with our VAH wet chuck

HVW 1 5/8AE
1326858

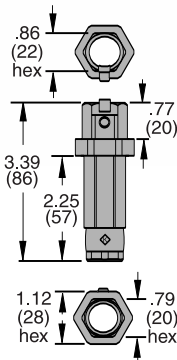


- for use with our VAH wet chuck

Drilling Tools — 1 1/8" (29 mm) Hex Drill Steel System

5522 Vacuum Chuck 1012116

- used in starters and lead extensions
- drives 1 3/8" (35 mm) and larger center vacuum tools



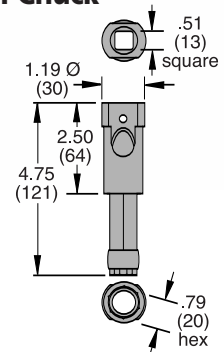
9200 Retainer 1012023

- replacement clip for 5414 and 5522 chucks



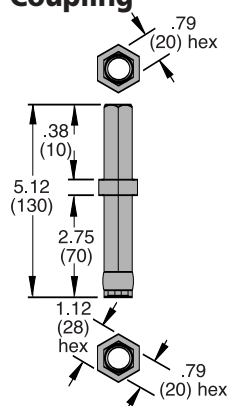
VAH Vacuum Chuck 1012046

- used in starters and lead extensions
- drives 1/2" (13 mm) square shank vacuum tools



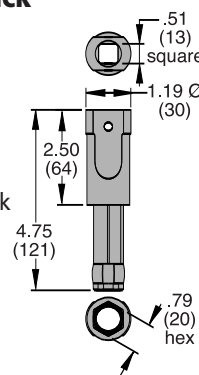
VCH Vacuum Coupling 1012043

- vacuum coupling for 1 1/8" (29 mm) hex drill steel



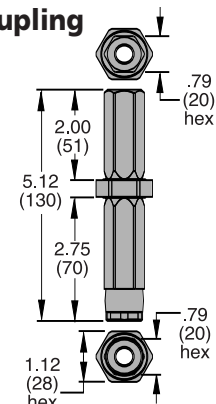
WAH Wet Chuck 1012112

- used in starters and lead extensions
- drives 1/2" (13 mm) square shank wet drilling tools



WCH Wet Coupling 1012114

- wet coupling for 1 1/8" (29 mm) hex drill steel



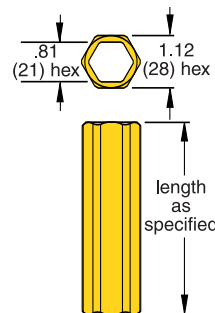
H clip 1011990

- replacement retainer band for 1 1/8" (29 mm) hex couplings and chucks



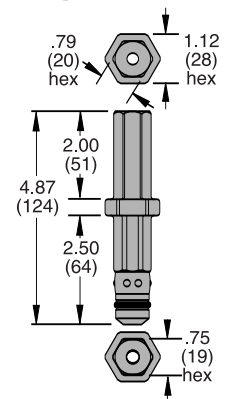
C---C Tubing

- order as "C (length in inches) C" (Example: for an 8-ft. length, order C096C; full-length tubing, C144C)



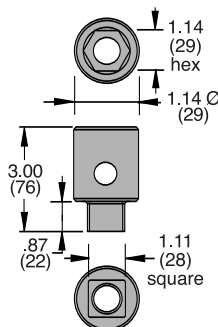
5560 Chuck Adapter 1012122

- drives 1 1/8" (29 mm) hex steel from a 3/4" (19 mm) hex chuck



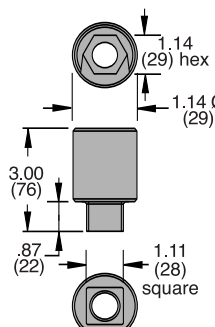
VFD Shank 1012070

- weld on adapter
- drives 1 1/8" (29 mm) hex steel from a 1 1/8" square chuck



VFH Shank 1012048

- drives 1 1/8" (29 mm) hex steel from a 1 1/8" square chuck
- held on by a KR112 retainer





Pro Point™ Tool Selection System

To order an assembled wrench, follow these steps:

1

Select the socket to fit your needs.

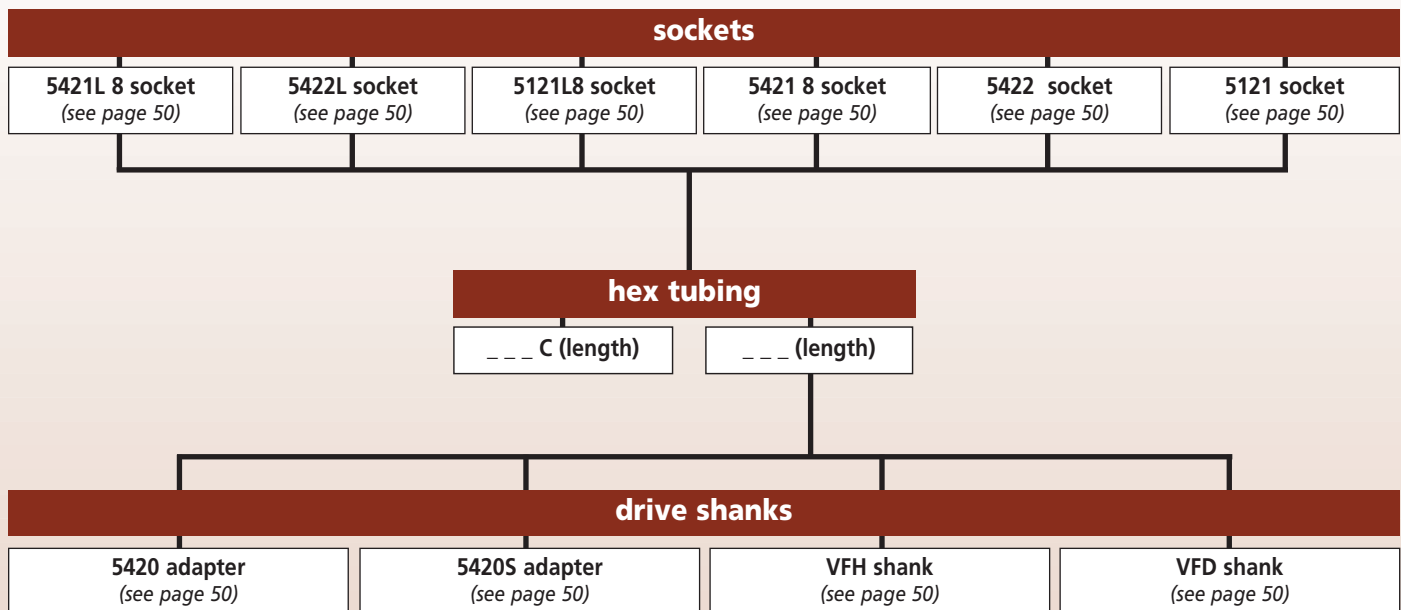
2

Select the proper length in inches of hex tubing.

3

Select drive shank, where required.

It's that easy!



Order example:

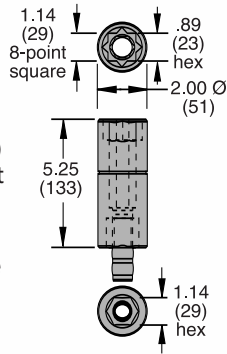
To order a 24" wrench with a 5422 socket, order a **5422024C** (socket + tubing length).

To order a 24" wrench with a 5422 socket and 5420 drive shank, order a **54220245420** (socket + tubing length + drive shank).

5421 L8 Socket

1012130

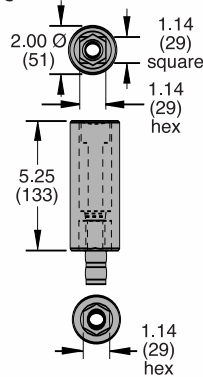
- lock-pin retained
- 1 1/2" (38 mm) square, 8-point socket
- 7/8" (22 mm) deep hex drive



5422 L Socket

1012133

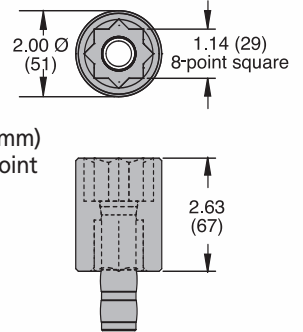
- lock-pin retained
- 1 1/2" (38 mm) square, 4-point socket
- 1 1/8" (29 mm) deep hex drive



5121 L8 Socket

1012143

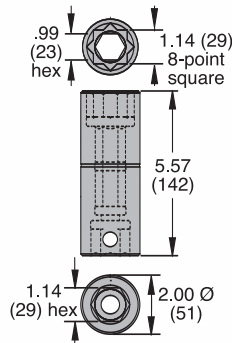
- lock pin retained
- 1 1/8" (29 mm) square 8-point socket



5421 8 Socket

1012094

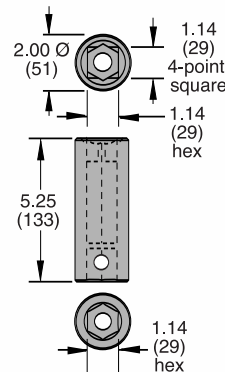
- weld-on
- 1 1/2" (38 mm) square, 8-point socket
- 7/8" (22 mm) deep hex drive



5422 Socket

1012096

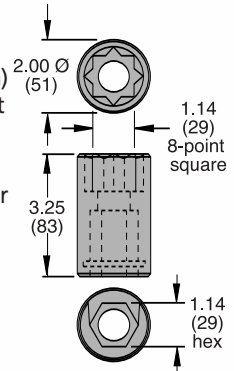
- weld-on
- 1 1/2" (38 mm) square, 4-point socket
- 1 1/8" (29 mm) deep hex drive



5121 8 Socket

1012050

- 1 1/8" (29 mm) square 8-point socket
- held on by a KR112 retainer



KRP2 Pliers

1012014

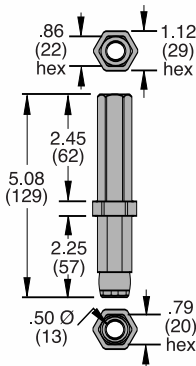


- for use on internal or external snap rings

5420 Adapter

1012092

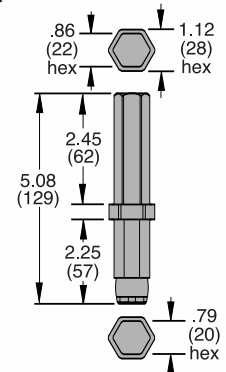
- hollow body
- drives 1 1/8" (29 mm) hex steel from a 7/8" (22 mm) deep hex chuck



5420 S Adapter

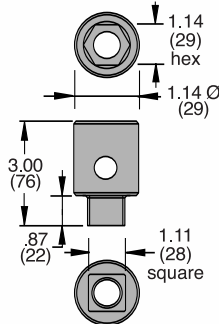
1012090

- solid body
- drives 1 1/8" (29 mm) hex steel from a 7/8" (22 mm) deep hex chuck



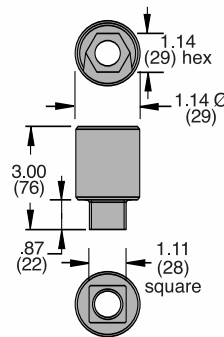
VFD Shank 1012070

- drives 1 1/8" (29 mm) hex steel from a 1 1/8" square chuck
- weld on



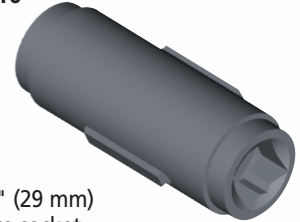
VFH Shank 1012048

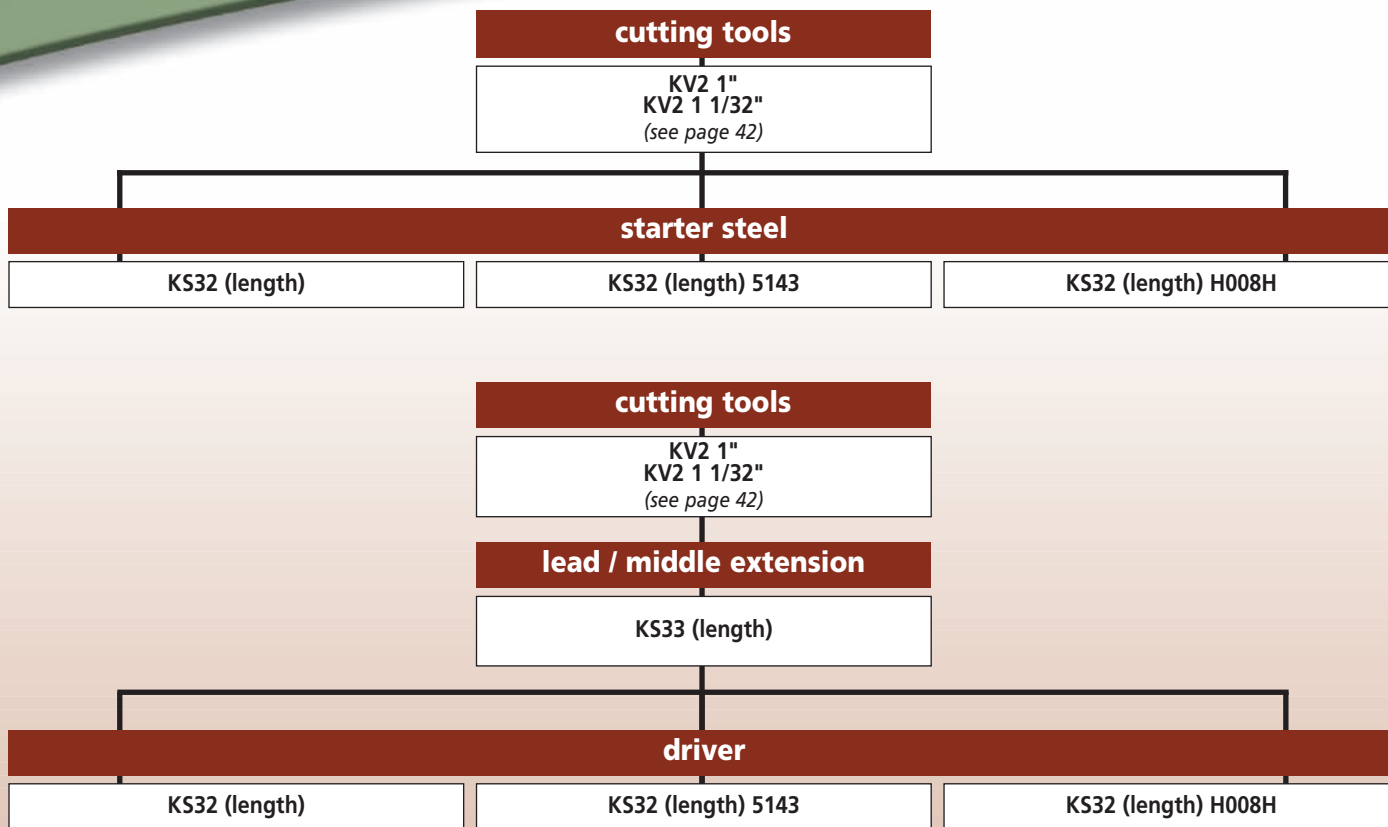
- drives 1 1/8" (29 mm) hex steel from a 1 1/8" square chuck
- held on by a KR112 retainer



Mid Key Fletcher Chuck 1012110

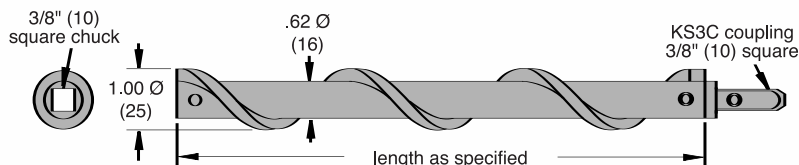
- 1 1/8" (29 mm) square socket
- 1 1/8" (29 mm) deep hex drive
- 7/8" (22 mm) deep hex drive





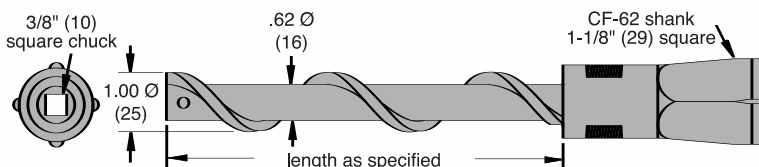
KS33 (length) lead/middle extension

- Lead/middle extension can be coupled with a Kennametal KS32 starter/driver to form a KS scrolled resin-anchorage auger system.



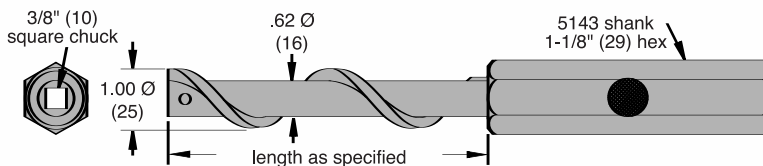
KS32 (length) starter/driver

- Starter/driver can be coupled with a Kennametal KS33 lead/middle extension to form a KS scrolled resin-anchorage auger system.



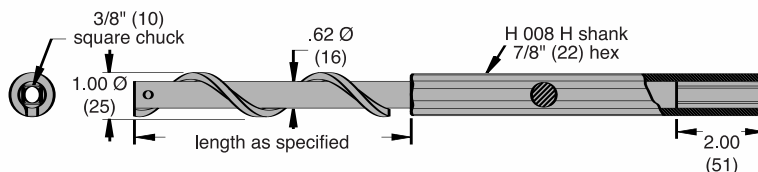
KS32 (length) 5143 starter/driver

- Starter/driver can be coupled with a Kennametal KS33 lead/middle extension to form a KS scrolled resin-anchorage auger system.



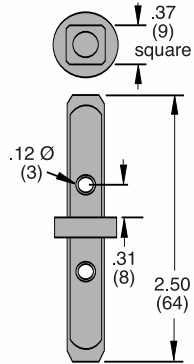
KS32 (length) H008H starter/driver

- Starter/driver can be coupled with a Kennametal KS33 lead/middle extension to form a KS scrolled resin-anchorage auger system.



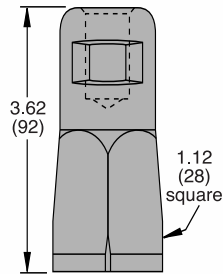
KS3C Coupling 1012034

- lead/middle extension coupling for use on Kennametal KS-series scrolled augers



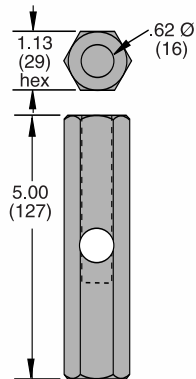
CF 62 Shank 1012030

- 1 1/8" (29 mm) square driver for use on Kennametal KS-series scrolled augers



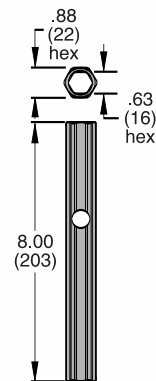
5143 Shank 1012064

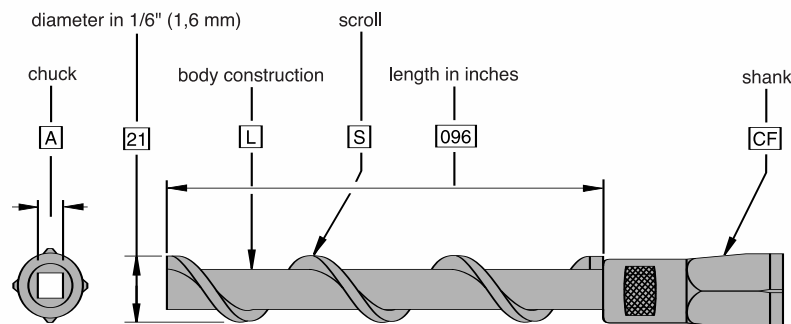
- 1 1/8" (29 mm) deep hex driver for use on Kennametal KS-series scrolled augers



H008H Shank 1012135

- 7/8" (22 mm) hex driver for use on KS augers





tool drive shank dimension inch (mm)	available bit chucks and letter designation	tool cutting hole diameter inch (mm)	available auger diameter	solid body 7/8" (22 mm) solid bar	hollow body 1 1/8" (29 mm) tubing with a .313" wall	letter designation	length (inch)	letter designation (CHOOSE ONE)
1/2" (12,5) square	A	1 3/8" (35)	21 (1 5/16")	L	NA	S	as requested	CA, CF, TS, WDL, 5137
1/2" (12,5) square	A	1 3/4" (44)	24 (1 1/2")	L	NA	S	as requested	CA, CF, TS, WDL, 5137
1/2" (12,5) square	A	1 7/8" (48)	26 (1 5/8")	L	P	S	as requested	CA, CF, TS, WDL, 5137 WDP& WD2
1/2" (12,5) square	A	1 7/8" (48)	28 (1 3/4")	L	P	S	as requested	CA, CF, TS, WDL, 5137 WDP& WD2
5/8" (16) square	B	2" (50)	28 (1 3/4")	NA	P	S	as requested	TS, WDP, WD2
13/16" (21) hex	C	2 1/4" (57)	32 (2")	NA	P	S	as requested	TS, WDP, WD2
13/16" (21) hex	C	2 1/2" (63)	32 (2")	NA	P	S	as requested	TS, WDP, WD2

letter designation	drive shank and coupling dimensions inch (mm)
WDL	1 1/8" (29) deep hex
WDP	1 1/8" (29) deep hex
WD2	1 1/8" (29) short hex
5137	1 1/8" (29) hex
CF	1 1/8" (29) square
CA	1/2" (12,5) square coupling
TS	twist shank
NS	no drive shank; available on all augers

available scroll options	letter designation
single scroll	S
double scroll	D
no scroll	N
partial scroll	P
2" pitch	X

Ordering Information

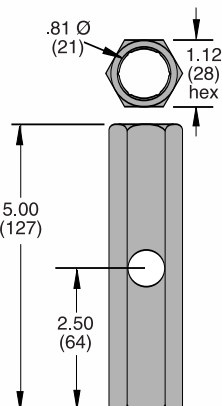
To order Kennametal augers, please use the top chart to establish the auger order code. Starting in the far left column, select the option from each column that applies to your order. The selection from each column will create your auger order code.

For example, to request an auger that has a 1/2" (12,5 mm) chuck (**A**); a 1-5/16" diameter (16/16" + 5/16" = 21/16") [**21**]; a 7/8" (22 mm) solid body or core (**L**); a standard scroll (**S**); an 8-ft. length, in inches (**096**); and a 1 1/8" (29 mm) square shank (**CF**), ask for **A21LS096CF**.

Some configurations of augers are non-stock standards. Please check with your Kennametal representative for availability and delivery lead times.

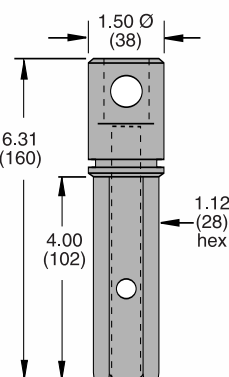
5137 Shank 1012060

- 1 1/8" deep hex drive used on 7/8" (22 mm) solid auger bodies



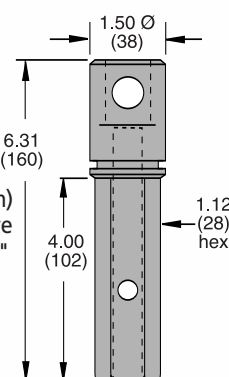
WDL Shank 1012058

- shouldered 1 1/8" (29 mm) deep hex drive used on 7/8" (22 mm) solid auger bodies



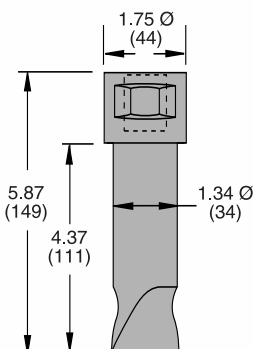
WDP Shank 1012055

- shouldered 1 1/8" (29 mm) deep hex drive used on 1 1/8" (29 mm) hollow auger bodies



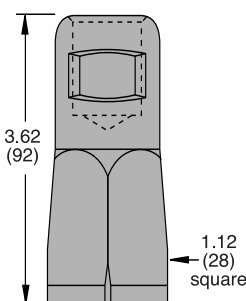
TS Shank 1012026

- twist shank for use on 7/8" (22 mm) diameter auger bodies



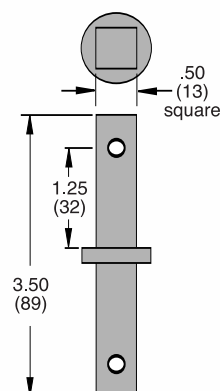
CF Shank 1012032

- 1 1/8" (29 mm) square drive for use on 7/8" (22 mm) diameter auger bodies



CA Coupling 1012027

- 1/2" (12,5 mm) square for lead/middle extension



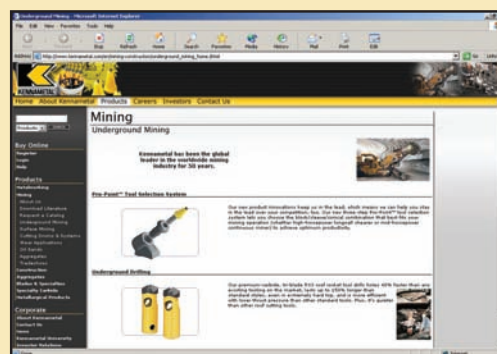
Visit www.kennametal.com

See what's new!

Order on line!

See our complete product overview!

Whether you work in an underground mine or on the surface in an aggregates quarry, whether you mill highways or dig trenches, whether you recycle C&D and wood waste or plow farm fields...no matter what your industry or application... Kennametal sells a complete line of cutting tool and block systems, cutting drums, and accessories for nearly every application in the mining and construction industries.

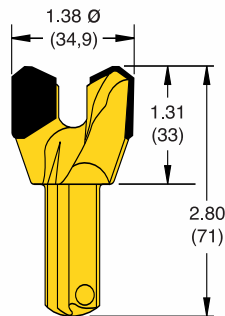


Contact Kennametal Customer Service 800/458-3608

Two-Prong Tools

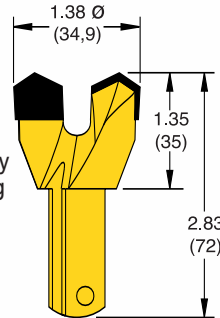
RD 1 3/8
1011229

- for use in slate and shale, and coal seams that contain impurities
- 1/2" (12,5 mm) square shank



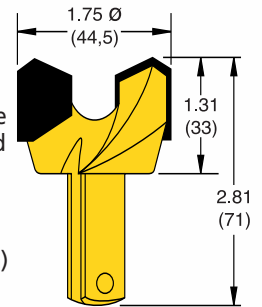
RDP 1 3/8
1011260

- aggressive cutting geometry for faster drilling
- 1/2" (12,5 mm) square shank



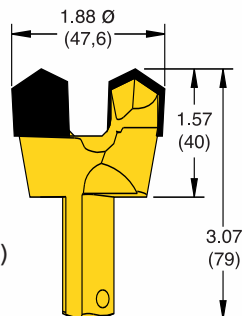
RD 1 3/4
1011233

- for use in slate and shale, and coal seams that contain impurities
- 1/2" (12,5 mm) square shank



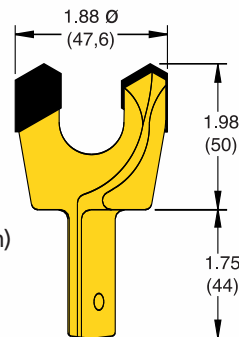
RDP 1 7/8
1548553

- aggressive cutting geometry for faster drilling
- 1/2" (12,5 mm) square shank



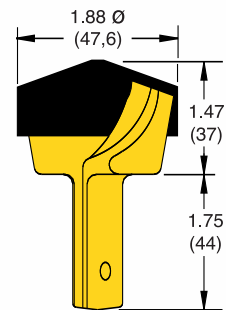
AD179RD
1327108

- non-tracking for faster penetration
- 1/2" (12,5 mm) square shank



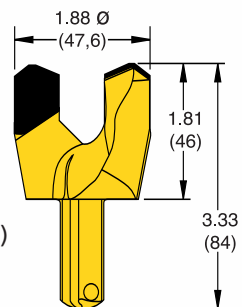
AD178FE
1327111

- designed for severe drilling applications
- 1/2" (12,5 mm) square shank



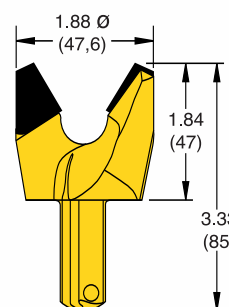
D 1 7/8
1011239

- for face drilling in virtually any condition
- 1/2" (12,5 mm) square shank



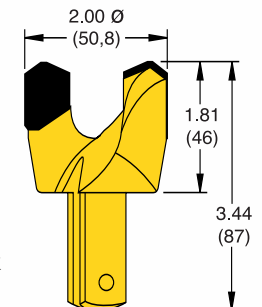
DL 1 7/8
1011241

- for use on hand-held and mounted rotary drills
- provides rapid penetration rates
- 1/2" (12,5 mm) square shank

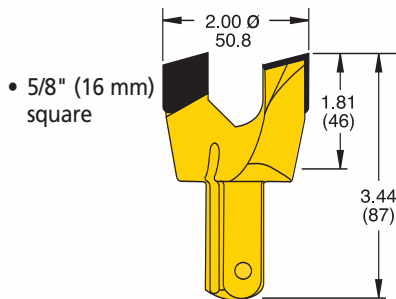


DD 2
1011247

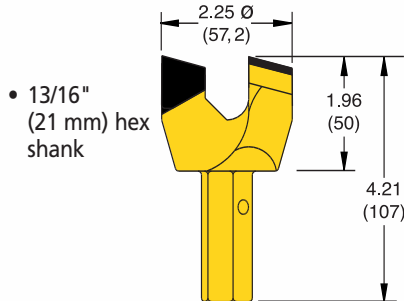
- for face drilling in virtually any condition
- 5/8" (16 mm) square shank



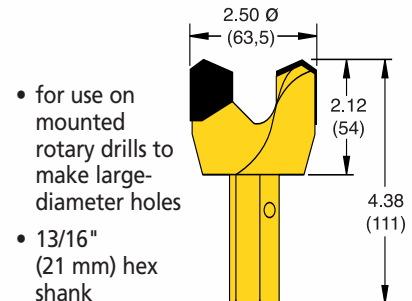
DDN 2
1794642



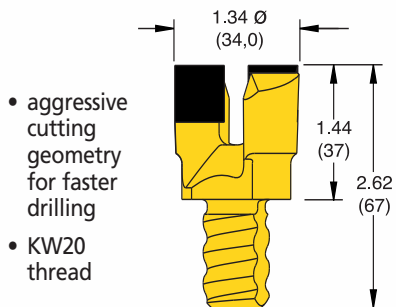
DBNT 2 1/4
1821773



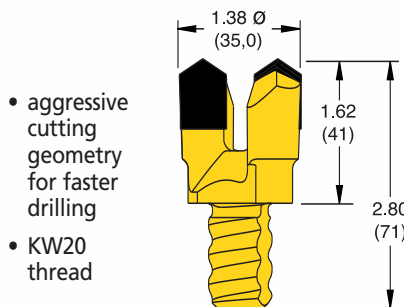
DB 2 1/2
1011257



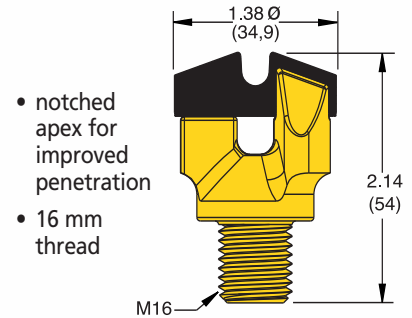
RB34F
2270004



RB35G
2212730



RB38-M16
1836122





Custom Cutting Drums from Kennametal...

***Precise!
High Performance!
Economical!***

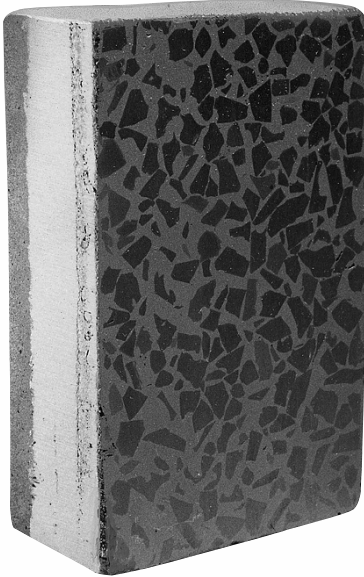
We'll design, build, tool, and service your longwall shearer, continuous miner, or crusher/breaker drums to meet your particular cutting needs.

- Computer-designed lacing patterns for optimum cutting efficiency!
- Balanced to significantly reduce machine vibration!
- Tooled with high-performance Kennametal cutting systems
- Backed by our exceptional maintenance program!

**Call Customer Service
800/458-3608**
for details!



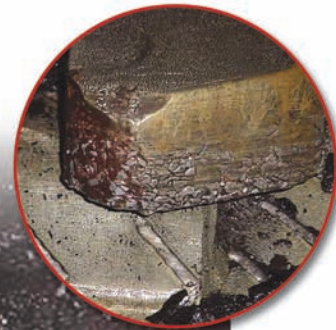
**Exclusively
from
Kennametal!**



KenCast™ Tungsten Carbide Wear Parts

KenCast™ is a unique wear protection material that can significantly increase tool life... and productivity!

- Specifically engineered to guard against premature and costly wear on your underground mining equipment
- Tungsten carbide particles are metallurgically bonded to air-hardening steel to create this highly abrasion- and impact-resistant composite
- Proven effective on longwall shearers, continuous miners, and continuous loading arms
- Economical - available in standard sizes, or custom-made to fit your equipment
- Easy to weld



*CLA tip with
KenCast protection.*



Engineering Your Competitive Edge

KENNAMETAL CUSTOMER SERVICE

800/458-3608

**CALL TOLL-FREE TO PLACE AN ORDER OR WITH
QUESTIONS ABOUT KENNAMETAL PRODUCTS**

Kennametal Inc. (USA)

Mining and Construction Division
Phone: 800/458-3608 (order entry only)

Kennametal Australia Pty. Ltd.

Phone: (61) 2 8594 6999

Kennametal Inc. (Canada)

Phone: 306/244-1584

Kennametal Xuzhou Ltd.

Beijing Representative Office Phone: (86) 10 8563 4883
Plant Location Office Phone: (86) 516 575 0380

Kennametal Inc. (France)

Phone: (33) 387 8965 93

Kennametal GmbH & Co. KG (Europe)

Phone: (49) 6172/28 52 20

Kennametal Japan Ltd. (Tokyo)

Phone: (81) 3 3820 2855

Kennametal Korea Ltd.

Phone: (82) 2 794 8999

Kennametal (Malaysia) Sdn. Bhd.

Phone: (60) 3 5632 8806

Kennametal Sp. z O.O. (Poland)

Phone: (48) 32 739 4352 to 53

Kennametal (Singapore) Pte. Ltd.

Phone: (65) 6 265 9222

Kennametal South Africa Pty. Ltd.

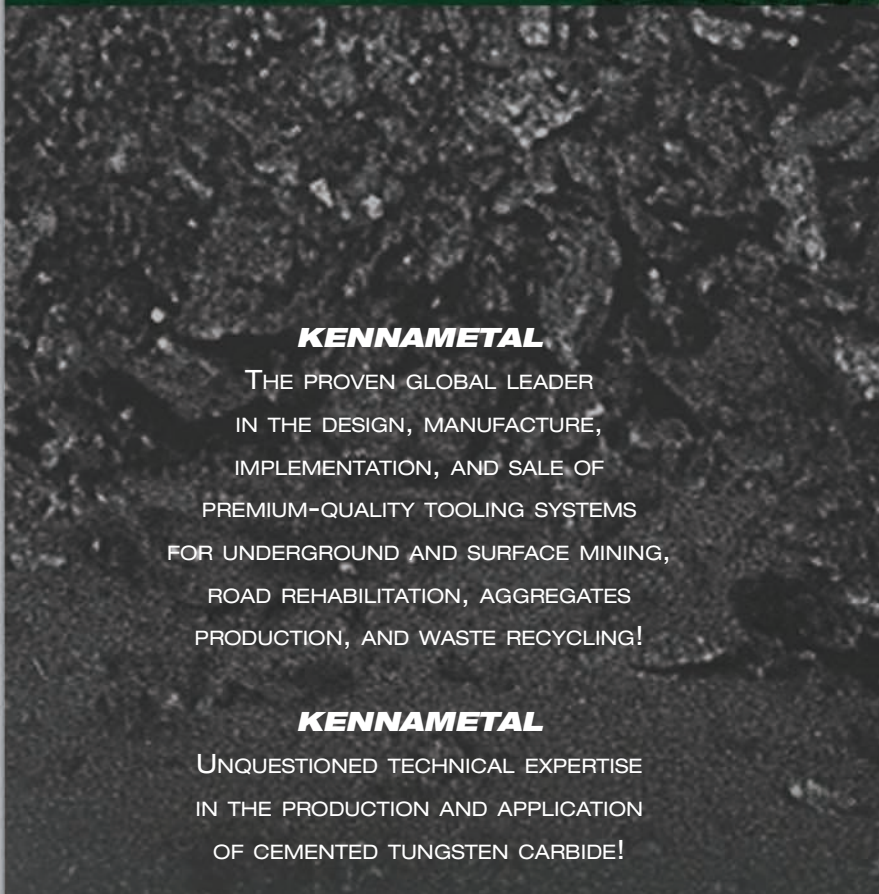
Phone: (27) 11 397 3540

Kennametal Hardpoint Taiwan Inc.

Phone: (886) 2 23516720

Kennametal (Thailand) Co. Ltd.

Phone: (662) 377-1501



KENNAMETAL

THE PROVEN GLOBAL LEADER
IN THE DESIGN, MANUFACTURE,
IMPLEMENTATION, AND SALE OF
PREMIUM-QUALITY TOOLING SYSTEMS
FOR UNDERGROUND AND SURFACE MINING,
ROAD REHABILITATION, AGGREGATES
PRODUCTION, AND WASTE RECYCLING!

KENNAMETAL

UNQUESTIONED TECHNICAL EXPERTISE
IN THE PRODUCTION AND APPLICATION
OF CEMENTED TUNGSTEN CARBIDE!



ENGINEERING YOUR COMPETITIVE EDGE