

**Your One-stop
Source for
Quality Aircraft Tools**



PRODUCT CATALOGUE

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About Us



EMSIL Technologies Pte Ltd

Set up in July 1990 as an Asia Sales Office for Special Cutting Tools for the Aviation, Military and Automotive Industries in the Asia region, our product range includes Aircraft Cutting Tools, Hand Tools and Aircraft Tooling and our tools are marked under our own brand “EMSIL” with registered trade mark. We also represent US and European Ground Support Equipment manufacturers.

Our Capabilities

Today EMSIL Technologies is an established partner and approved vendor for most major Airlines, MRO's for Aviation, Military, Automotive and other Industries in the Asia region.

EMSIL services include technical know-how, production advice and recommendations to improve tool design in order to achieve greater efficiency, higher productivity and quality standards, which contribute to customers' success. We produce a wide range of aircraft cutting tools (equivalent to Boeing and major aircraft manufacturer specifications), for use in repair, maintenance, overhaul, modification and conversion of aircrafts.

Quality & Standard

All EMSIL Aircraft tools are produced according to the specification and quality of National Aerospace Standard (NAS), Boeing, FAA, ISO & RINA Standard. We use the highest quality raw material, machinery and equipment, and ensure quality control and certification before delivery to our customers.

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Aircraft Cutting Tools



We produce a wide range of aircraft cutting tools (equivalent to Boeing and other major aircraft manufacturers specifications), for use in applications such as the pylon modification of B747's and various other aircraft repairing jobs.

All our tool products are manufactured following ISO & RINA standards, using the highest quality raw materials, machinery and equipment, and finally subjected to stringent quality control before delivery to our customers.

We continue to serve the Asian region with the highest quality special cutting tools from the best European tool manufacturers.

Product Range

- Aircraft Drills
- Aircraft Reamers
- Countersink & Counterbore
- Reverse Countersink, Spotfacer, & Hole Saw Cutter
- Taps, Rotary Files & Deburring Tools
- Cold Expansion Process Tools

Aircraft Drills



- All Products available in Standard & Non-standard Sizes
- Material Available in HSS, Cobalt, Carbide & PCD

JobberLength Drill



To Order:

JBDR907B#10X3-5/8H

Part No + Type Size Length + Material

- **NAS907 Type A** - 118° split point
For drilling mild steel, aluminum, magnesium and other soft alloys
- **NAS907 Type B** - 135° split point
For drilling hard steel, titanium, and stainless
- Material: High Speed Steel (HSS)

Cobalt Drill



To Order:

COBDR907J#20X3-1/4

Part No + Type Size Length

- **NAS907 Type J** - 135° split point (General Heavy Duty)
For drilling tough, high-tensile strength materials
- **NAS907 Type D & E** - 135° split point also available
Short flute and low helix (Type E)
- Material: Cobalt Steel

Aircraft Extension Drill



To Order:

EXTDR1/4X6H

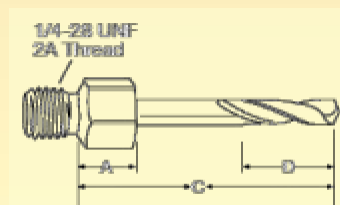
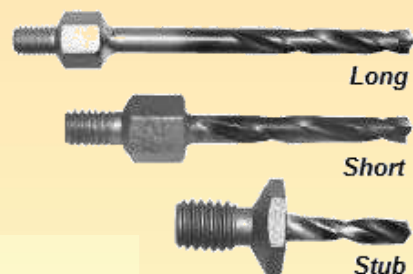
Part No + Size Length + Material

H – HSS
H8 – Cobalt
CA – Carbide

- **NAS907 EXTENSION** - 135° split point
- Offered in standard 6" and 12" lengths
For use when extra reach is required
- Material: High Speed Steel, Cobalt Steel, or Carbide

Threaded Shank (Adapter) Drill

- 135° split point, 1/4-28 UNF Class 2A thread
- **NAS965 Type B** – Threaded Hex Shank HSS Adapter
For drilling general to medium duty, low tensile strength materials in confined areas
- **NAS965 Type D** – Threaded Square Shank Cobalt Adapter
For drilling hard, tough, high tensile strength materials
- Also available in #10-32 thread
- Material: High Speed Steel, Cobalt Steel, or Carbide
- Available in Stub, Short, and Long Series:



To Order:

THSKDR5/32X1-1/4H8

Part No + Size

Length + Material

H – HSS
H8 – Cobalt
CA – Carbide

DRILL SIZE	Series	A	C	D
#40 to 1/8"	Stub	1/8	1/2	5/16
.0980 to .1250	Short	1/4	1	9/16
	Long	1/4	2-1/8	7/8
#30 to #10	Stub	1/8	9/16	5/16
.1285 to .1935	Short	1/4	1-1/4	9/16
	Long	1/4	2-1/8	1-1/8
#9 to F	Stub	1/4	5/8	5/16
.1960 to .2570	Short	5/16	1-1/4	9/16
	Long	5/16	2-1/8	1-1/8

Aircraft Drills



- All Products available in Standard & Non-standard Sizes
- Material Available in HSS, Cobalt, Carbide & PCD

Double Margin Drill

- **NAS937, 135° split point**
 - For drilling close tolerance holes in titanium, stainless, heat treated material and aluminum alloys
- Available piloted (step) or non-piloted
- Available in straight or threaded shank
- Material: High Speed Steel, Cobalt Steel, or Carbide



Piloted (Step)



Non-piloted

To Order:

DMD.268X.253X4H

Part No + Drill Ø + PilotØ Length + Material

*H – HSS
H8 – Cobalt
CA – Carbide*

Gun Barrel Drill

- **165° split point**
- Uncleared twist drills for drilling titanium and stainless, heat treated materials and aluminum alloys
- Available in straight, tri-flat, or threaded shank
- Material: High Speed Steel, Cobalt Steel, or Carbide



To Order:



GUNB.309X2THD-H

Part No + DrillØ	Length + Shank	-	Material
	<i>SS</i> – Straight		<i>H</i> – HSS
	<i>THD</i> – Threaded		<i>H8</i> – Cobalt
	<i>TF</i> – Tri-flat		<i>CA</i> – Carbide

Core Drill

- **3-Flute Core drills** for reworking of round holes
- **4-Flute Core drills** for enlarging previously drilled holes
- Available piloted or non-piloted
- Available in straight, tri-flat, or threaded shank
- Material: High Speed Steel or Cobalt Steel



Non-piloted



Piloted

To Order:

CORD.250X.124X6H

Part No + Drill Ø + Pilot Ø Length + Material
H – HSS
H8 – Cobalt

Carbide Drill

CARBIDE-TIPPED, TAPER LENGTH TANGED DRILLS

- Longer flute and overall lengths than jobber length drills
- **118° cam relieved point** for cast aluminum, bronze, cast iron, fiberglass, hard plastics, and non-ferrous materials.
- **135° split point** for tough abrasive or high tensile materials



Carbide Tip, Taper Length Tanged Drill



Solid Carbide 2-Flute Drill



Solid Carbide 3-Flute Drill

SOLID CARBIDE (Heavy Duty) DRILLS

- **2-Flute, 118° four-facet point** for cast iron/aluminum, bronze, hard plastics, and other abrasive and easily machined materials
- **3-Flute, 150° point angle and 30° spiral** for drilling cast iron, high silicon aluminum, alloy steel, and other nonferrous materials
- Greater hole accuracy, higher production rates, and reduced drill deflection

To Order:

CADRTTSS5/32X5-3/8

Part No + Size	Length
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CARDRHD3/32X2

Part No + Size	Length
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Aircraft Reamers



- All Products available in Standard & Non-standard Sizes
- Material Available in HSS, Cobalt, Carbide & PCD

Hand Reamer

- Used by hand for final sizing / finishing of pre-drilled holes
- Ground with a starting chamfer to provide easy entry of the reamer into the hole
- **Straight flute** for general reaming
- **Spiral flute** (left hand) for reaming interrupted cut holes
- Square shank can be held securely in a tap handle, reamer wrench, or vise.



To Order:

HR5/16X4-1/2H

Part No +Size	Length + Material	H –HSS H8–Cobalt CA–Carbide
100-1/2"	100-1/2"	
100-3/4"	100-3/4"	
100-1"	100-1"	
100-1 1/4"	100-1 1/4"	
100-1 1/2"	100-1 1/2"	
100-1 3/4"	100-1 3/4"	
100-2"	100-2"	
100-2 1/4"	100-2 1/4"	
100-2 1/2"	100-2 1/2"	
100-2 3/4"	100-2 3/4"	
100-3"	100-3"	
100-3 1/4"	100-3 1/4"	
100-3 1/2"	100-3 1/2"	
100-3 3/4"	100-3 3/4"	
100-4"	100-4"	
100-4 1/4"	100-4 1/4"	
100-4 1/2"	100-4 1/2"	
100-4 3/4"	100-4 3/4"	
100-5"	100-5"	
100-5 1/4"	100-5 1/4"	
100-5 1/2"	100-5 1/2"	
100-5 3/4"	100-5 3/4"	
100-6"	100-6"	
100-6 1/4"	100-6 1/4"	
100-6 1/2"	100-6 1/2"	
100-6 3/4"	100-6 3/4"	
100-7"	100-7"	
100-7 1/4"	100-7 1/4"	
100-7 1/2"	100-7 1/2"	
100-7 3/4"	100-7 3/4"	
100-8"	100-8"	
100-8 1/4"	100-8 1/4"	
100-8 1/2"	100-8 1/2"	
100-8 3/4"	100-8 3/4"	
100-9"	100-9"	
100-9 1/4"	100-9 1/4"	
100-9 1/2"	100-9 1/2"	
100-9 3/4"	100-9 3/4"	
100-10"	100-10"	
100-10 1/4"	100-10 1/4"	
100-10 1/2"	100-10 1/2"	
100-10 3/4"	100-10 3/4"	
100-11"	100-11"	
100-11 1/4"	100-11 1/4"	
100-11 1/2"	100-11 1/2"	
100-11 3/4"	100-11 3/4"	
100-12"	100-12"	
100-12 1/4"	100-12 1/4"	
100-12 1/2"	100-12 1/2"	
100-12 3/4"	100-12 3/4"	
100-13"	100-13"	
100-13 1/4"	100-13 1/4"	
100-13 1/2"	100-13 1/2"	
100-13 3/4"	100-13 3/4"	
100-14"	100-14"	
100-14 1/4"	100-14 1/4"	
100-14 1/2"	100-14 1/2"	
100-14 3/4"	100-14 3/4"	
100-15"	100-15"	
100-15 1/4"	100-15 1/4"	
100-15 1/2"	100-15 1/2"	
100-15 3/4"	100-15 3/4"	
100-16"	100-16"	
100-16 1/4"	100-16 1/4"	
100-16 1/2"	100-16 1/2"	
100-16 3/4"	100-16 3/4"	
100-17"	100-17"	
100-17 1/4"	100-17 1/4"	
100-17 1/2"	100-17 1/2"	
100-17 3/4"	100-17 3/4"	
100-18"	100-18"	
100-18 1/4"	100-18 1/4"	
100-18 1/2"	100-18 1/2"	
100-18 3/4"	100-18 3/4"	
100-19"	100-19"	
100-19 1/4"	100-19 1/4"	
100-19 1/2"	100-19 1/2"	
100-19 3/4"	100-19 3/4"	
100-20"	100-20"	
100-20 1/4"	100-20 1/4"	
100-20 1/2"	100-20 1/2"	
100-20 3/4"	100-20 3/4"	
100-21"	100-21"	
100-21 1/4"	100-21 1/4"	
100-21 1/2"	100-21 1/2"	
100-21 3/4"	100-21 3/4"	
100-22"	100-22"	
100-22 1/4"	100-22 1/4"	
100-22 1/2"	100-22 1/2"	
100-22 3/4"	100-22 3/4"	
100-23"	100-23"	
100-23 1/4"	100-23 1/4"	
100-23 1/2"	100-23 1/2"	
100-23 3/4"	100-23 3/4"	
100-24"	100-24"	
100-24 1/4"	100-24 1/4"	
100-24 1/2"	100-24 1/2"	
100-24 3/4"	100-24 3/4"	

Taper Pin Reamer

- Used to ream tapered holes for standard taper pins
- Manufactured with a taper of 1/4" per foot
- Square shank for hand reaming applications
 - **Straight flute** recommended for most materials
 - **Spiral flute** for use in hard to ream materials and where reamer tends to wedge itself.
- **Helical flute** for machine reaming of holes on a production basis. Helical design throws the chips forward and minimizes chip packing in flutes.



Straight Flute



Left Hand Spiral



Helical Flute

To Order:

TPR#11X.706X11-1/4H

**Part No + Size + Small Ø Length + Material H – HSS
H8 – Cobalt**

Taper LockCutters

DRILL REAMER (for Flush Head & Protruding Head Fasteners)

- Produces standard finish Taper Lock holes in Aluminum and other soft metals (pre-drilled pilot hole required)
- Manufactured with a taper of 1/4" per foot
- **Type 2040 AR** for Flush Head Fasteners (countersink holes)
- **Type 2040 BR** for Protruding Head Fasteners
- 20° Helix Angle, High Speed Steel, no oil holes
- Tool also available in Cobalt Steel (**Type 2030 AR/BR**)



2040 AR



2040 BR



2060 AR



2060 ER

SIX-FLUTE TAPER LOCK MACHINE REAMER

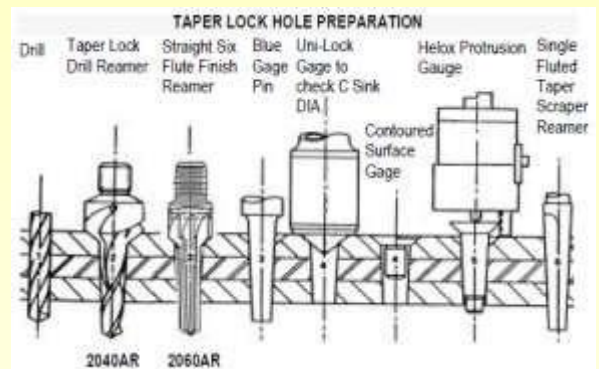
- For clean-up and finishing of Taper lock holes
- **Type 2060 AR** for 100° Angle Head Flush Fasteners
- **Type 2060 BR** for Protruding Head Fasteners
- Straight Flutes, High Speed Steel, no oil holes
- Tool also available in Cobalt Steel and Carbide

To Order:

TLD2040AR-1-5

Part No + Type	Bolt Group + Nominal Bolt Ø
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(Reamer P/N: **TLR2060**) *Group & Size Chart available upon request.*



Countersink & Counterbore



- Material Available in HSS, Cobalt, Carbide & PCD

Stop Countersink Cutter

INTEGRAL PILOT, THREADED SHANK

- Used to make precision countersinks for flush-head fasteners
- Ground in one operation to assure concentricity of pilot, cutting angle and shank
- Available in 78° – 82° – 90° – 100° – 110° and 120°
- Available with 2 or 3 flutes
- Cutters with removable pilot are also available

REPLACEABLE PILOT, THREADED SHANK

- Carbide-tipped countersinks** for cutting highly abrasive, difficult to machine materials; for longer tool life
- PCD cutters** for cutting highly abrasive, non-ferrous materials where carbide will not perform well
- Construction allows replacement of damaged pilots and substitution of various pilot diameters with the same cutter
- Replaceable pilot in HSS (*Ordered separately*)

To Order:



CSKP3/8X3/16X100H

Part No + Body \varnothing + Pilot \varnothing Angle + Material

H – HSS
H8 – Cobalt
CT – Carbide-Tipped
CA – Solid Carbide
PCD – Polycrystalline
Diamond-Tipped



To Order:

CSKRP1/2X5/64X100CT

Part No + Body \varnothing
+ Pilot Hole \varnothing *

Angle + Material CT – Carbide-Tipped
PCD – Polycrystalline
Diamond-Tipped

* Pilot hole diameter corresponds to shank diameter of Pilot.

Straight Shank Piloted Countersink

- PILOTED, 3/16" STRAIGHT SHANK, 3-FLUTE
- Used for machine/portable work
- Available in 90° – 100° and 120°
- Material: Available in Cobalt only**

To Order:

CSKPSS1/4X1/8X100

P/N + Body \varnothing + Pilot \varnothing Angle



Single Flute Countersink Cutter

STRAIGHT SHANK, SINGLE-FLUTE

- Used for machine/portable work, operating at higher speeds, when multi-flute countersinks chatter, or hole is too small
- Suitable for deburring, countersinking, and chamfering
- Drilled hole should be at least 10% of the body diameter
- Available in 60° – 82° – 90° – 100° – 110° and 120°

To Order:

CSK1F3/8X1/4X90H

Part No + Body \varnothing
+ Shank \varnothing

Angle + Material

H – HSS
H8 – Cobalt
CA – Solid Carbide



3-Flute Countersink/Center Reamer

STRAIGHT SHANK, 3-FLUTE

- Used to countersink centers or enlarge existing holes
- Used at a slower speed (1/2 to 2/3 of drilling speed), widely used in portable applications
- Available in 60° – 82° – 90° – 100° – 110° and 120°

To Order:

CSK3F3/4X3/8X82H

Part No + Body \varnothing
+ Shank \varnothing

Angle + Material

H – HSS
H8 – Cobalt
CA – Solid Carbide



Countersink & Counterbore



- Material Available in HSS, Cobalt, Carbide & PCD

Briles Countersink Cutter & Microstop Cage

BRILES COUNTERSINK CUTTER

- Used to prepare holes for Military Std #MS14218/#MS14219, Briles Rivet Corp. STD #BRFZ/#BRFR, and Boeing Aircraft #BACR15FV rivets.
- Unique geometry that cuts a counterbore and a countersink in the same hole
- 120°, 3/8" Body Diameter, HSS, 1/4-28 threaded cutters
- 14218 (FZP™) series is for "**flush shear**" applications
- 14219 (FRP™) series is for "**flush tension**" applications

To Order:

CSKBR3/32-FZP

Part No + Rivet Ø FZP – Flush shear
FRP – Flush tension



Microstop Cage

- Provide precise depth control by limiting the travel of the cutter, and aid in the alignment of the cutter so that it is perpendicular to the surface
- All units feature hardened and ground spindles, supported by bronze bushings (general use) or needle and ball bearings (for high-speed applications).
- May be ordered with a variety of foot pieces and skirt styles.
- 1/4-28 shaft thread for max. cutter capacity 5/8"
- 3/8-24 shaft thread for jumbo (max. cutter capacity 1-1/4")

To Order:

MSC1/4X5/8X3K

Part No + Shank Ø RPM
+ Cutter Ø



BRILES MICROSTOP CAGE

- 1/4-28 shaft thread for max. cutter capacity 5/8"

Aircraft Counterbore

4-FLUTE, STRAIGHT SHANK COUNTERBORE

- Used to create a recess for a cap screw, spring or bolt
- Short Type Counterbore**, 1/4" or 1/2" diameter shank
- Long Type Counterbore** with straight shank
- Material: High Speed Steel or Cobalt Steel

3-FLUTE, CARBIDE-TIPPED, STRAIGHT SHANK COUNTERBORE

- Used in cutting highly abrasive materials, recommended for spotfacing difficult to machine/exotic materials

3-FLUTE, THREADED SHANK, STOP COUNTERBORE

- Threaded shank, **stop counterbores** are used with microstop countersinking cages
- Material: High Speed Steel, Cobalt, or Carbide-tipped

All counterbores can be used **with interchangeable pilots** ground to fit various hole sizes (Ordered separately)



To Order:

CBR1/4X3/32X2-3/8CT

Part No + Body Ø OAL + Material
+ Pilot Hole Ø H – HSS
H8 – Cobalt
CT – Carbide-Tipped

Reverse Countersink, Spotfacer & Hole Saw Cutter



- Material Available in HSS, Cobalt, Carbide & PCD

Reverse Countersink

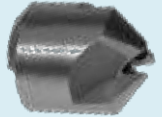
- Used in restricted areas where conventional countersink cutters cannot be utilized.
- 3 or 4 flutes for fast free cutting
- Available in 78° – 82° – 90° – 100° – 110° and 120°
- Material in High Speed Steel, Cobalt, or Solid Carbide
- Used with pilots (*Ordered separately*)

To Order:

CSKR1/4X1/8X100H

Part No + Body Ø
+ Pilot Hole Ø

Angle + Material H – HSS
H8 – Cobalt
CA – Solid Carbide



Reverse Spotfacers

- Used in restricted areas where conventional spotfacing cannot be accomplished.
- 3-flute or 4-flute, single-end (S) or double-end (D)
- Outside diameter precision ground with back taper, to assure free cutting clearance and concentricity between hole and diameter
- Corner radius available upon request
- Material in High Speed Steel, Cobalt, Carbide-Tipped or Solid Carbide
- Used with pilots (*Ordered separately*)

To Order:

SFCR1/4X1/8X100D-H

Part No + Body Ø
+ Pilot Hole Ø

Angle + End + Material

H – HSS
H8 – Cobalt
CT – Carbide-Tipped
CA – Solid Carbide



Hole Saw & Arbor

FINE TOOTH HOLE SAW

- Used for fast cutting through thin skins, steel, and other materials; particularly useful for tubular assemblies
- Back taper on outside/inside diameter for fast, free cutting
- Available in the following stock sizes:
Diameters 3/8" through 1-1/4" – 5/16"-24 thread
Diameters 1-5/16" through 4" – 1/2"-20 thread

COARSE TOOTH HOLE SAW

- Same as fine tooth except with fewer and deeper teeth
- Used for thick material and faster cutting where better chip flow is required; also used on plastics, laminated woods, aluminum, steel, or other materials.
- Available in the following stock sizes:
Diameters 3/8" through 1-1/4" – 5/16"-24 thread
Diameters 1-5/16" through 4" – 1/2"-20 thread

HOLE SAW ARBOR

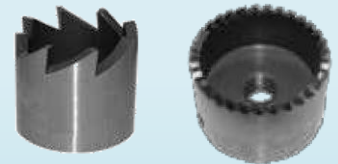
- Made of high quality tool steel, heat treated and precision ground to ensure concentricity between diameters
- Special pilot diameters available on special order.

To Order:

HSAW3/4X5/16C-H

Part No + Ø + Shank Ø + Type

Material H – HSS
H8 – Cobalt
C – Coarse
F – Fine



To Order:

HSARB3/16X1/4x5/16

Part No + Pilot Ø + Shank Ø + Thread Size



Taps, Rotary Files & Deburring Tools



- Material Available in HSS, Cobalt, Carbide & PCD

Taps



- Available **Standard** or **STI** (Screw Thread Insert) type
- Available in **Machine Screw**, **Fraction**, or **Metric** sizes
- Available in three styles: **Taper**, **Plug**, and **Bottoming** (Ordered individually or in 3-piece sets)

STRAIGHT FLUTE TAPS (High Speed Steel, Ground Thread)

- Designed for general-purpose hand or production machine tapping where ground thread accuracy and performance are required.
- Suitable for tapping most materials in through or blind holes.

SPIRAL POINT "GUN" TAPS (High Speed Steel, Ground Thread)

- Designed for production use (not intended for hand use)
- Spiral point drives chips ahead of the tap, allowing higher speeds and less driving power
- Use plug tap in through holes, bottoming tap in blind holes

CHAMFER STYLES

- Taper taps** (7-10 threads chamfered) are designed for threading through holes by hand.
- Plug taps** (3-5 threads chamfered) are most widely used in through holes and blind holes that do not have to be threaded all the way to the bottom.
- Bottoming taps** (1-2 threads chamfered) are designed to thread blind holes close to the bottom.

To Order:

TAP1/2-20UNJF-H34F

Part No + Size Thread H-Limit + Flute No.
Class

Carbide Burrs / Rotary Files

- Machine ground for consistently high performance
- Styles include NF: non-ferrous (single cut), double cut, miniature, and long series burs
- Available in standard and special shapes

NON-FERROUS, SINGLE CUT BURRS

- Designed for use on aluminum, non-ferrous metals, soft steel, reinforced plastics, and other soft materials.

SOLID CARBIDE, DOUBLE CUT BURRS

- Engineered specifically for tough applications
- For faster, splinter-free cutting in weld and alloy castings with increased tool life



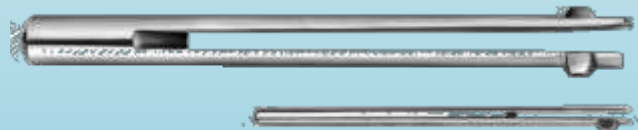
To Order:

RTFILE3/4X1/4CA

Part No + Size Shank Size + Material

Burr-off / Deburring Tool

- Used to deburr front, back, or both sides of holes in one pass
- For high-production, automated deburring operations
- Open-slot design of the "clothespin tool" allows chips to clear easily, which makes the tool ideal for automatic equipment and multi-spindle machines
- CP-4 through CP-13 for hole sizes from .062 in (1.57 mm) to .219 in (5.56 mm) have single cutting edge; larger tools feature two cutting edges



To Order:

BURR-CP-10

Part No + Size

Cold Expansion Process Tools



Durable & Expendable Tooling

STARTING DRILL

- Used to create holes ready for reaming to pre-coldwork size.
- Manufactured from high speed steel or cobalt
- Drills under ½" - straight shank, larger sizes - reduced shank.

STARTING REAMER

- Start hole reamers bring the hole to its pre-coldwork size.
- Noncutting pilot guides reamer into pre-drilled pilot hole.
- Cobalt reamers are available in many sizes.

COMBINATION GAUGE

- Used to check the reamed, pre-coldworked start hole, with a go-no go end; other end verifies hole has been coldworked.

MANDREL

- Used to coldwork holes, available in both high interference (Class I) suitable for highly stressed areas, and low interference (Class II), used in moderately stressed conditions.
- Available in a various lengths, based on stackup to be pulled, used with flush/extension nose caps. Special lengths available.
- Manufactured from high quality vacuum-melted tool steel, double tempered and precision ground.

MANDREL WEAR GAUGE

- Used to check mandrel limits. If mandrel major diameter passes through No Go gage, the mandrel is worn beyond its limit and needs to be replaced.

NOSECAP ASSEMBLY (FLUSH/EXTENSION)

- The nosecap assembly consists of: (1) the end cap, (2) jaw retainer, (3) jaw assembly, which keeps the sleeve in the hole during coldworking.
- Extension nosecap enables coldworking in restricted access areas by providing a narrow diameter extension to the nosecap. Extension includes integral jaws. (Extension mandrel must be ordered with extension nosecap.)

FINISHING (FINAL SIZE) REAMER

- Cleans up the ridge left by the sleeve and leaves a smooth, round hole ready for countersinking or fastener installation.
- Non-cutting pilot is used both as a guide and to verify the hole has been coldworked.

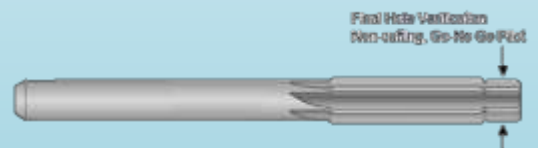
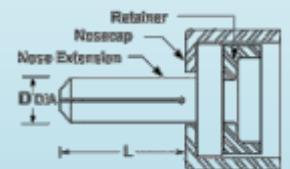
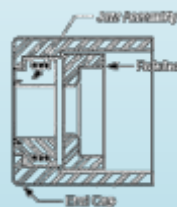
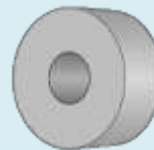
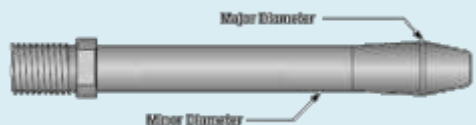
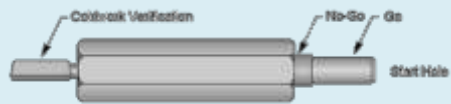
SPLIT SLEEVE (STRAIGHT/FLARED)

- Used to prevent mandrel from sticking to hole being coldworked.
- Manufactured from full hard stainless steel with a baked, dry-film lubricant on the inside surface
- Flared sleeves when only one sleeve is needed for coldworking; Straight sleeves when a deep stack is to be coldworked.

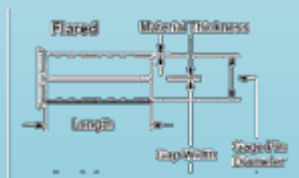
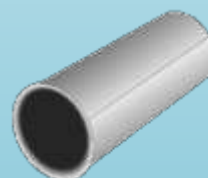
*Note: **Capital Tooling** also available.
Please contact us for more details.*



Pilot Hole Verification
Non-cutting, Go-No Go Pilot



Final Hole Verification
Non-cutting, Go-No Go Pilot



*Note: **Capital Tooling** (puller guns, adaptors, power units) also available. Please contact us for more details.*

Hand Tools

EMSIL strives to deliver superior quality crimp tools, mil-spec and commercial connectors, contacts, relays, and accessories used for the avionics and aerospace industry. We also provide cross reference to most tools supplies by connector manufacturers.

Product Range

- Crimp Tools, Die Sets & Locators
- Insertion & Removal Tools
- Screwdriver Bits
- Riveting & Fastening Tools
- Air Vacuum, Abrasives, Brush, & Nozzle
- Air Drills & Accessories & Measuring Tools
- General Purpose Hand Tools

Crimp Tools, Die Sets, and Locators



Crimp Tools

Has virtually limitless application **within the specified wire range of 12 through 26 AWG**. The 8 impression crimp, assures absolute maximum tensile strength with almost every closed barrel contact. Positive crimp depth is controlled by an 8 position selector knob conveniently located on the tool frame.



Designed for most of the **miniature and sub-miniature connector** types that are so widely **used in all type of electronic systems**. The tool frame has a built-in 8 step selector knob for ease in dialing the connect crimp depth setting for the wire being used.

Feature a system of interchangeable dies which **eliminate the need of separate fixed die crimp tools for each and every different application** eliminating the cost associated with maintaining and calibrating bulky inventories of single purpose tools.



For numerous applications; **particularly open barrel, stamped and formed contacts**. Supplied complete with a locator, a positive wire stop and contoured crimp cavities. These elements are permanently affixed to a reliable handle assembly which incorporates a precision cycle controlled ratchet.

In addition to the four opposing indenters these tools also have four retainers which encompass the contact prior to the initiation of the crimping operation **this assuring concentricity**



These **all steel C-frame crimping tool** features interchangeable pop-in - hex dies for either MS or proprietary applications including BNC, TNC, and N series RF connectors. These tools are easy to use. Simply install the proper interchangeable die set and squeeze the handles.

Crimp Tools, Die Sets, and Locators



Die Sets



Crimp die set used in crimp tool frame. Designed to crimp insulated terminals and window splices size 22-10

Die assembly used to crimp machined pin and socket contacts installed in front and rear release connectors



Die set used with crimp tool frame to crimp size 22 thru 10 insulated terminals and splices

Locator

Used to crimp machined pin and socket contacts installed in front and rear release connectors



Insertion & Removal Tools



Insertion Tools



Designed to insert pin and socket contacts which are crimped to small, fragile wires

Used to insert size 12 pin and socket contacts installed in front release circular connectors



Plier type tool designed to insert 20 pin and socket contacts Amphenol-Bendix into circular connectors

Used to insert size 8 pin and socket contacts installed in front release circular connectors



Tweezer type tool used to insert size 20 pin and socket contacts installed in rear release rectangular connectors

Used to insert size 0 pin and socket contacts installed in front release circular connectors



Insertion & Removal Tools



Removal Tools



Used to remove size 16 pin and socket contacts installed in front release circular connectors.

Used to remove size 4 pin and socket contacts installed in front release circular connectors



Tweezer type tool used to remove size 16 pin and socket contacts installed in rear release circular connectors

Used to remove the relays from track mounted relay sockets manufactured by PCD



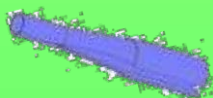
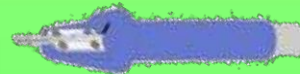
Double module removal tool used with Terminal Junction Modules, Grounding Modules, Power Distribution and Feedback Modules

Single module removal tool used Terminal Junction Modules, Grounding Modules, Power Distribution and Feedback Modules



Removal kit for Amphenol-Bendix circular connector. Consists of a hollow handle containing tips to remove size and 20 contacts.

Designed to remove Collins contacts



Plastic removal tool used to remove size 4 contacts from rear release connectors

Designed to remove socket (female) contacts from AMP connectors



Designed to remove pin (male) contacts from AMP connectors

Screwdriver Bits



Screwdriver Bits

Common Styles:



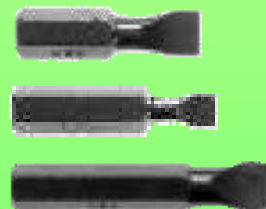
Other Available Styles:



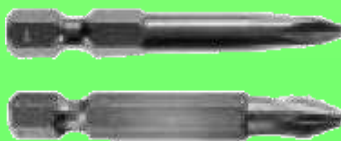
Philips Insert Bits



TORQ-Set Insert Bits



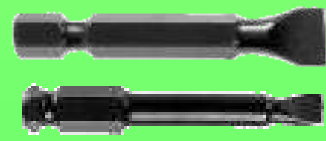
Slotted Insert Bits



Philips Power Bits



TORQ-Set Power Bits



Slotted Power Bits

Riveting & Fastening Tools

Riveting Tools



Rivet Cutters



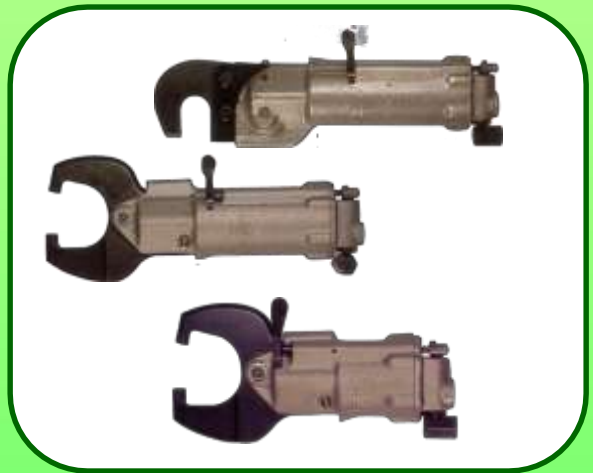
Rivet Guns



Break Loose Tools



Hydraulic Hand Riveter Kit



Rivet Squeezer

Bucking Bar



Riveting & Fastening Tools



Fasteners

Fasteners of high strength and reliability are crucial to the airframe and engines of today. **EMSIL** provides service and support for the fasteners needs of the aircraft industry.



Visu-lok Blind Bolts



MS Self-Plugging & Pull Thru Blind Rivets



Kwiklok & Clecloc



Huck Fastening System



Nut Plates & Rivets



Lock Bolts & Collar



Solid & Tubular Rivets



Hi-Shear Rivets

Air Vacuum, Abrasives, Brush, & Nozzle



Air Vacuum

Part No.	Description
AIRVAC-151780	Mini Air Vacuum



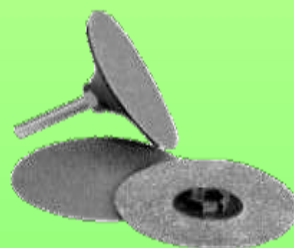
Bonding Brush

Part No.	Description	BD	PD	SD	WD
BBRUSH-3/4X1/4X1/4	SS Rotary Bonding Brush	3/4"	1/4"	1/4"	0.005"



Disc Holder

Part No.	Description	Size	Shank	RPM
ABRDISC-ARC50266	Abrasive Disc Holder	2"	1/4"	30000



Nozzle

Part No.	Description
NOZZ-906126	Nozzle 613
NOZZ-PIPE-906115	Nozzle Pipe W/ Nozzle & Guide, Pin 180 Deg, L=300MM, Inside Spray



Air Drills & Accessories & Measuring Tools



Angle Drill



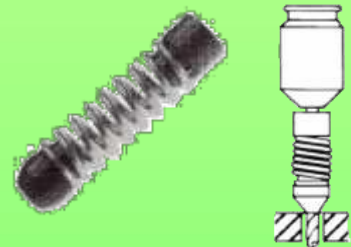
Part No.	Description
ANGDRIL45D-77545	Angle Drill, 45 degree

Collet



Part No.	Description	Size	Collet Dia	RPM
Collet-AC-2520	Collet for Angle Drill	1/4"	6.4MM	1/4"

Drill Stop



Part No.	Description	Size
DRILLSTOP-KDS1/4	Drill Stop	1/4"

Gauge



Part No.	Description
GAUGE-DRILL-18-14E	Drill Gauge-Fractional

Ruler



Part No.	Description	Length
RULER-79SS	Stainless Steel Ruler	79"

General Purpose Hand Tools



C-Clamp

Part No.	Description
CCLAMP-04-6SP	Locking Clamps With Swivel Pad



Hammer

Part No.	Description
HAMMER-01512RH24	DOGYU RUBBER HAMMER 670G With Wooden Handle



Hand Protection

Part No.	Description
GLOVE-17001L	Gloves-Vibration Killer



Pliers

Part No.	Description
PLIER-H112	CLECO Pliers



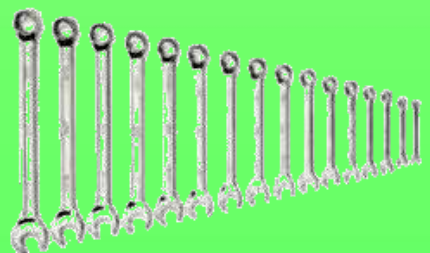
Spanner

Part No.	Description
SPANNER-41532022	Ring Spanner 5/16 X 11/32



Wrench Set

Part No.	Description
WRENCHSET-92376	12-PT Full Polish, LongComb Wrench Set, 26-PC Set



Ground Support Equipment



Product Range

- Ground Support Equipment
- Maintenance Tooling
- Lighting

Ground Support Equipment



Maintenance Tooling



Hoist Adapter



Portable hydraulic test stand

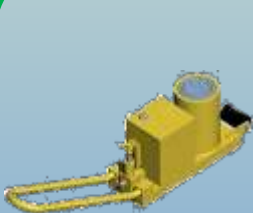


Maintenance Tooling



Test Equipment

Ground Support Equipment



Axle Jack



Tripod Jack



Axle Jack



Tripod Jack



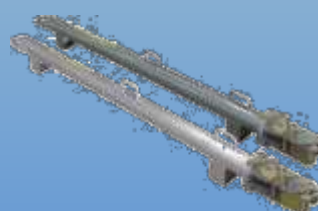
Engine Stand



Towbar Nose wheel dragger



Towbar head



Stowable towbar



Multihead Towbar

Ground Support Equipment



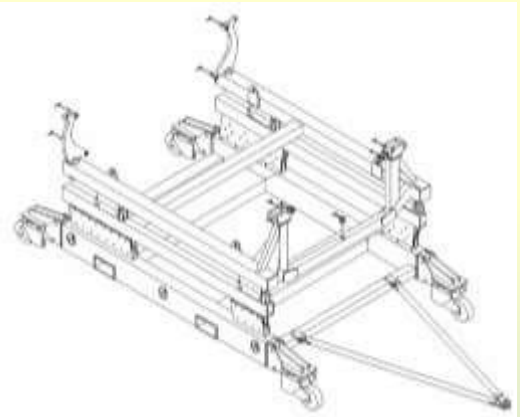
AS6-50W



The AS6-50 handles all of the CF6-6, -45, and -50 engines.

The AS6-50 has standard bootstrap points for Boeing, Airbus and McDonnell Douglas aircraft bootstrap equipment.

The base comes standard with vibration isolators as required by engine handling documents.



Options: Shock absorbing casters and towbars.

Overall Dimensions with casters and towbars.

Overall Length: 182 1/2 inches

Overall Width: 97 1/2 inches

Overall Height with Casters Down: 75 inches

Weight: 4690 pounds

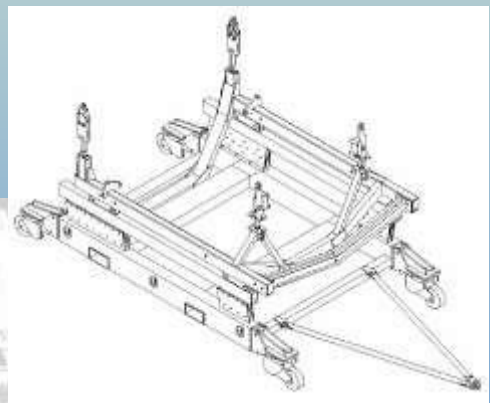
AS9



The AS9 handles all of the JT9D engines and PW4000 engines through 4062. Stand is lightweight and low profile (All engine cases less than 117" tall)

The AS9 has standard bootstrap points for 747 through-400, 767, MD-11 tail and wing, and A300/A310.

The base comes standard with vibration isolators as required by engine handling documents.



Options: Shock absorbing casters and towbars.

Overall Dimensions with casters and towbars.

Overall Length: 182 1/2 inches

Overall Width: 97 1/2 inches

Overall Height with Casters Down: 76 1/4"

Ground Support Equipment



AIR DATA TEST SET

As a complement to the Aircraft industry we offer a wide range of Pitot Static/Air Data Tester. An Air Data Test Set performs two basic functions. First, it provides the means to leak test an aircraft pitot-static system. Second, it simulates pressure and vacuum conditions required to calibrate the airspeed, altimeter, vertical speed, manifold pressure, and engine pressure ratio (EPR) indicators

Pitot Static Tester

Used for testing and calibrating aircraft pitotstatic systems. The tester uses three analog instruments (Altimeter, Vertical Speed, and Airspeed) with the appropriate correction cards to perform aircraft leak tests or instrument calibrations



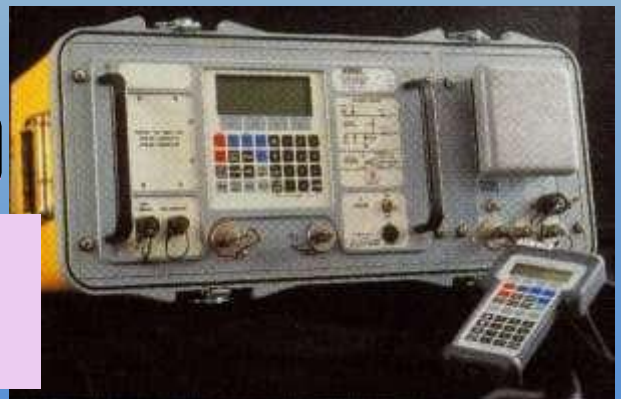
Digital Air Data Tester

All functions of the tester are fully automatic and require no manual sequencing of valves or regulators meeting the high accuracy demands of Reduced Vertical Separation Minimum (RVSM) specifications..



Automatic Digital Air Data Tester

Air Data Test Set with self-contained, transportable, fully automated, user programmable Pitot-Static tester housed in a military styled enclosure.



Lightings for the Aviation Industry



Powerful Work light



Portable EEXD Light



Hand Lamps



**Portable Work Lights
For Professionals**



**Portable Work Lights
For Hazardous Areas**



**Portable Lighting
For Hazardous Areas**



**Explosion-proof Lighting
For Hazardous Areas**

Appendix

Ordering From Us

Please send us your 'Request for Quotation'(RFQ) and provide us full detailed technical specification. Or you can simply download the RFQ form on our website. Complete the form and send to us. We will get back to you as soon as possible.

RFQ Format



EMSIL Technologies Pte Ltd Registration No.: 199003237D
 59 UBI AVENUE 1, # 06 - 08 BIZLINK CENTRE, SINGAPORE 408938
 TEL : (65) 6285 8655 FAX : (65) 6285 7455 E-mail : emsil@singnet.com.sg

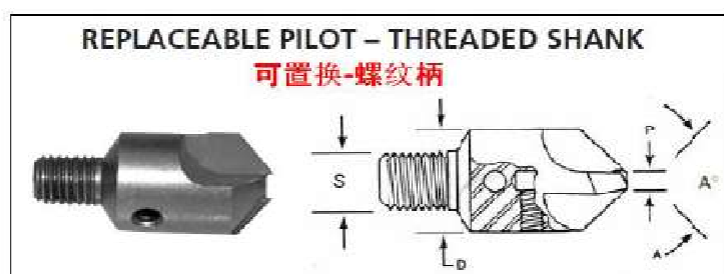
ORDER FORMAT

PRODUCT: 限位划钻头 (COUNTERSINK CUTTER)

类型 1



类型 2



A. 可提供钻头角度 (A) 如下: 78° - 82° - 90° - 100° - 110° - 120°.

B. 可提供钻头材料如下: 高速工具钢 (HSS), 高钻韧性高速钢 (M42钢材),
 硬质合金 (Carbide-Tipped)

请提供缺少的信息如下 (Kindly provide the missing information below)

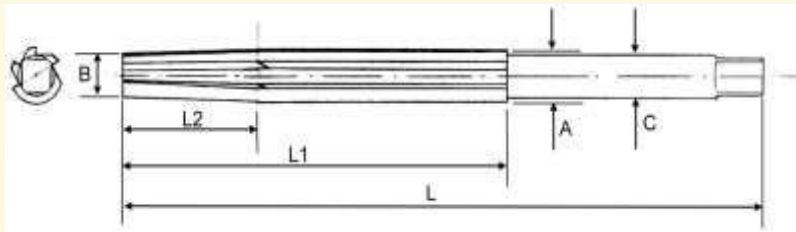
信息格式请参考第一行的例子。 对应的型号, 尺寸等详细信息请参考上面的标注

号码 NO.	产品描述 DESCRIPTION	钻尺寸 PILOT SIZE (P)"	主体直径 BODY DIA (D)"	沟纹数目 NO. OF FLUTE	柄尺寸 SHANK SIZE (S)"	角度 DEGREE (A)	材料 MAT'L	数量 QTY
1	COUNTERSINK WITH INTEGRAL PILOT	3/32"	3/8"	2	1/4-28 THD	100°	M42	10
2								
3								
4								
5								
6								

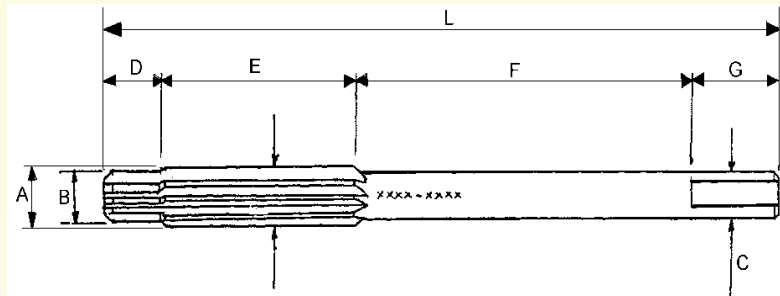
Sample Technical Specification

Aviation Reamers

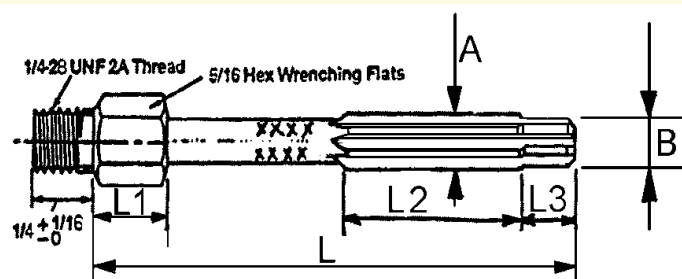
Centering Reamers



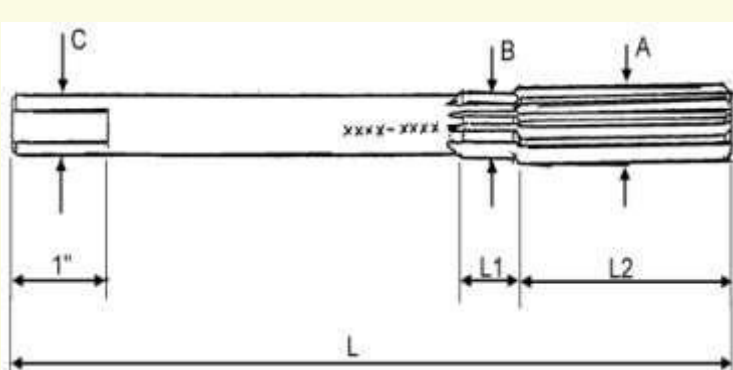
Tri-Flat Shank Pilot Reamers



Threaded Shank Pilot Reamers



Tri-Flat Shank Pilot Pull Reamers

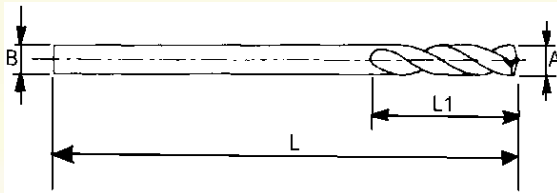


NOTE: ALL SIZES AVAILABLE IN DIFFERENT MATERIAL TYPE, PRICE ON APPLICATION

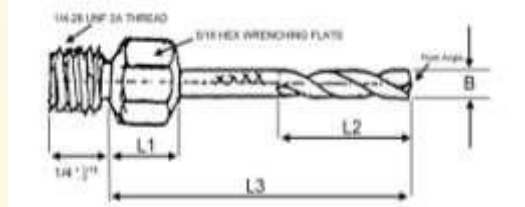
Sample Technical Specification

Aviation Drills

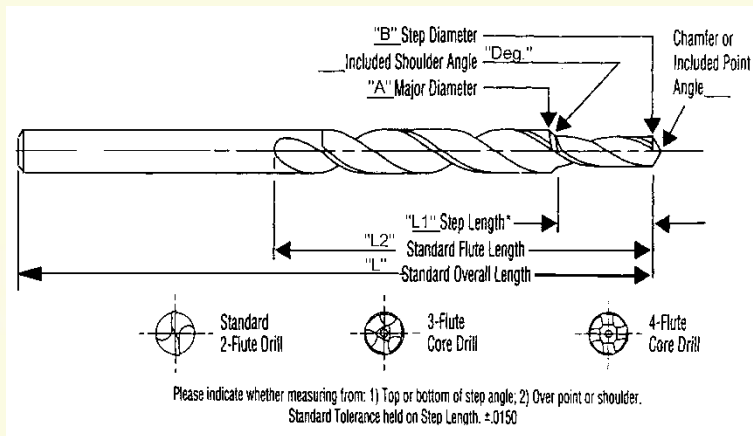
Stove Burner Drill (Gun Barrel Drill)



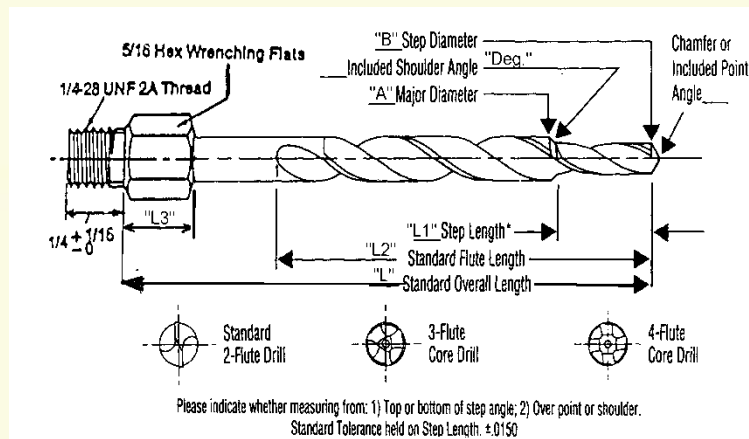
Threaded Shank Gun Barrel Drill



Straight/ Tri-Flat Shank Step Drill/ Core Drill

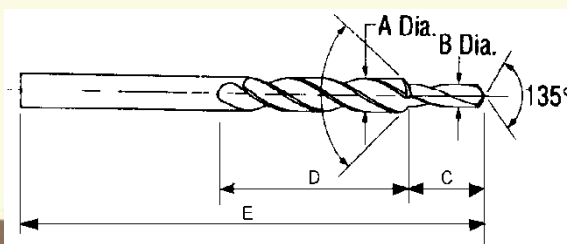


Threaded Step Drill/ Core Drill [3-4 Flute]

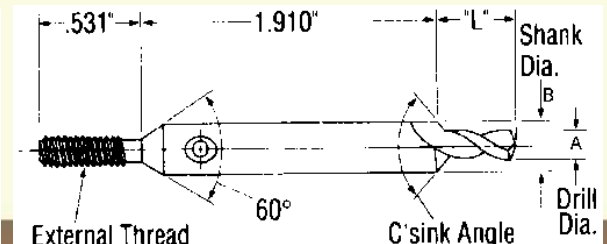


NOTE: ALL SIZES
AVAILABLE IN
DIFFERENT MATERIAL
TYPE, PRICE ON
APPLICATION

Double Margin Step Drill



Nut-Plate Drill



CONTACT INFO

59 Ubi Avenue 1, #06-08 Bizlink Centre Singapore 408938

Tel: 65-6285 8655 Email: sales@emsil.com.sg

Web: www.emsiltechnologies.com

CONTACT US: Sales Director: Lilian Tan Technical Director: Luciano Ceresa

OUR DISTRIBUTERS IN ASIA



EMSIL CUTTING TOOLS WITH EUROPEAN QUALITY AND ASIAN PRICE

