CUTTING TOOLS

TOOLS DIRECT


TOOLS
DIRECT

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products

Straight Shank Drills

End Mills and Shank Cutters

Threading Tools

Morse Taper Shank Drills

Reamers, Countersinks & Counterbores

Bore Cutters

Toolbits

SELECTING THE CORRECT DRILL

Drills for general use

These twist drills are designed to drill the common materials under normal operating conditions.

Jobber Drills

General purpose drilling.

Long Series Drills

General purpose long reach drilling.

Stub Drills

A short robust drill suited to portable drill applications.

Reduced Shank Drills 1/2" / 12,7 mm Shank

General drilling for use in hand power tools.

Left hand Jobber Drills

General purpose drilling in the left hand direction.

MTS Drills

General purpose drilling.

MTS Drills, HSS-Co

General purpose drilling in difficult materials.

Drills for specific applications

More efficient drilling can be achieved by using a drill designed for a specific application.

Sheet Metal Drills

Self centring drill designed to produce accurate holes in thin materials. 135° split point.

Double Ended Sheet Metal Drills

Self centring drill designed to produce accurate holes in thin materials. 135° split point.

Tanged Jobber Drills

Designed to fit tang drive sleeve.

NDX - Heavy Duty Jobber Drills, HSS-Co

Drilling high tensile steels and other difficult materials. 135° split point.

TiN Coated Jobber Drills

For drilling in a production environment where higher speeds and or feeds are required.

Extra Length Drills

UDL Deep Hole Drills Long Series, HSS-Co

Parabolic Flute Form and Heavy Duty, for general purpose long reach drilling.

UDL Deep Hole Drills Extra Length, HSS-Co

Parabolic Flute Form and Heavy Duty, for extra deep hole drilling.

UDL Jobber Drills, Long Chip, HSS-Co

Parabolic Flute Form and Heavy Duty, for use on NC and CNC machines where high productivity and accurate holes are required.

UDL - Stub Drills, Long Chip, HSS-Co

Parabolic Flute Form and Heavy Duty, for use on NC and CNC machines where high productivity and accurate holes are required.

UDS - Jobber Drills, Short Chip, HSS-Co

Parabolic Flute Form and Heavy Duty, for use on NC and CNC machines where high productivity and accurate holes are required.

UDC - Jobber Drills, Cast Iron, HSS-Co

Parabolic Flute Form and Heavy Duty, for use on NC and CNC machines where high productivity and accurate holes are required.

MTS Extra Length Drill

MTS Core Drills

For enlarging diameters of existing holes whether drilled, punched or cored. (Details on page 21)

MTS Armour Piercing Drills, HSS-Co

Heavy duty drilling in work hardening and heat treated steels.

Drills for Special Applications

Subland Drills

For drilling stepped holes in one operation.

Drill Reamers

For drilling and reaming holes in one operation (hole tolerance wider than H7).

Coolant Feed Drills

For drilling extra deep holes. (Details on page 19)

Cotter Pin Drills

For heavy duty drilling using a tang drive sleeve.

Somta Sorger

Patented Auger for wood drilling

Rail Drills

Developed for drilling work hardening railway lines. Alternative to the Armour piercing drill.

SELECTING THE CORRECT REAMER
Standard Reamers

Parallel Hand Reamers

General hand reaming.

MTS Parallel Machine Reamers

General machine reaming.

Machine Chucking Reamers, Parallel Shank

General machine reaming for deeper holes.

MTS Machine Chucking Reamers

General machine reaming for deeper holes.

MTS Taper Bridge Machine Reamers

For opening out existing holes for alignment on structural steel work.

Intermediate size reamers are available on request.

Reamers for specific Applications

Hand Taper Pin Reamers - Metric

For reaming holes to suit standard metric taper pins with a taper of 1:50.

Hand Taper Pin Reamers - Fractional

For reaming holes to suit standard fractional taper pins with a taper of 1:48.

MTS Taper Socket Finishing Reamers

Finishing of Morse Taper holes.

MTS Taper Socket Roughing Reamers

Rough reaming Morse Taper holes.

Machine Chucking Reamers, Parallel Shank Tungsten Carbide Tip

Reaming of difficult to machine materials or mass production.

SELECTING THE CORRECT TAP
Short Machine and Hand Taps

Taper

Second

Bottoming

For general purpose hand or machine use for short production runs. Best suited for materials which do not present chip disposal problems.

Machine Taps

Spiral Point Tap

Sometimes called a gun nosed tap. For machine use on through holes. Suitable for a wide range of materials. The gun nose creates chip disposal ahead of the tap while the flute geometry allows an adequate supply of lubricant to the cutting area, making higher tapping speed possible.

Spiral Flute Tap

Mainly for work in blind holes and on ductile materials, such as aluminium and zinc alloys, which produce long stringy chips. The taps have a 35° right hand helix. The flute shape eliminates clogging and jamming, resulting in improved tap life.

Serial Taps

Rougher

Intermediate

Finisher

For general purpose machine or hand use in tough materials, producing accurate threads with a high finish. Used in sequence to remove most of the material in stages before finally sizing with the Finishing tap.

Pipe Taps

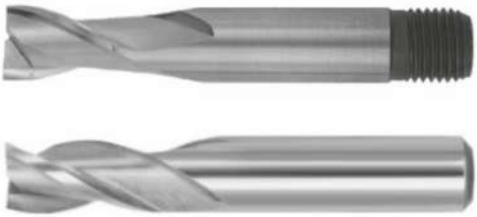
For machine use on pipe work for parallel threads.

For machine use on pipe work for tapered threads.

Special taps are available on request.

END MILL APPLICATIONS

Two and Three Flute End Mills



Two and three flute end mills are shank type cutters with peripheral teeth and end teeth of the plunging type. Intended for general purpose use, they have right hand cutting, right hand helical teeth; they are used on keyway and closed slotting operations where the close minus tolerance of the cutting diameter allows slot widths to be produced in one pass. These cutters are also extensively used when profiling and end milling aluminium alloys, due to the greater chip space required by this material.

Ball Nose Two Flute End Mills

Ball nosed two flute end mills are manufactured to the same tolerances as the normal two flute end mill, and have a centre cutting ball end. They are used extensively in die making for cutting fillets, radiused slots, pocketing etc. These cutters have right hand cutting, right hand helical teeth.

Multi-Flute End Mills

Multi-flute end mills are shank type cutters with peripheral teeth and end teeth of the both plunging and non-plunging type. Designed for general purpose use they have right hand cutting, right hand helical teeth, and are used in stepping and profiling applications. They can also be used on slots where the plus tolerance of the cutting diameter is not critical.

Roughing End Mills

Shank type cutters with right hand cutting, right hand helical teeth on the periphery with roughing profile and with heavy duty end teeth. These cutters are robust and durable even under heavy cutting conditions on a wide range of materials. They are intended for rapid and heavy rates of stock removal where surface finish is of lesser importance. Available in coarse and fine pitch knuckle form and flat crest type.

SHANK CUTTER APPLICATIONS

Dovetail Cutters

These angle cutters have right hand cutting straight teeth and non-plunging end teeth. They are used wherever dovetails or angles are required and are available in a range of angles and diameters.

Corner Rounding Cutters

Straight tooth cutters with right hand cutting teeth. Intended to produce a true convex up to 90° of arc.

T-Slot Cutters

Shank type cutters with right hand cutting alternate helical peripheral teeth as well as teeth on either face. Intended for opening out existing slots to form the T-slots used extensively on machine tables. They are produced in a range of diameters and widths to allow clearance on a standard range of bolt head sizes.

Woodruff Cutters

Shank type cutters with right hand cutting alternate helical peripheral teeth. Available in a range of diameters and widths. Designed to produce slots to suit standard woodruff keys.

ARBOR MOUNTED CUTTER APPLICATIONS

Staggered Tooth Side and Face Cutters

As the name suggests, side and face cutters have teeth on the periphery as well as on the sides, Designed with rugged alternate helical teeth, these cutters offer optimum performance when used for deep slotting with rapid stock removal; the cutting action of the alternate helical teeth combined with the coarse pitched side teeth giving excellent qualities of smooth cutting, efficient stock removal and good surface finish.

Straight Tooth Side and Face Cutters

Intended for light cuts and shallow slotting operations, the straight tooth side and face cutter is often used in a straddle milling function where two parallel surfaces are machined simultaneously. It is considered to be a compromise tool due to the reduced cutting action of its straight teeth, which cause greater shock when meeting the workpiece than cutters with helical teeth.

Cylindrical Cutters

Intended for medium/light surfacing cuts these helical cutters offer the benefits of shock reduction combined with a good cutting action.

Angle Cutters

Produced with light duty straight teeth these cutters are used mainly for cutting dovetails, serrations and angled slots on less difficult materials.

Shell End Mills

With helical peripheral teeth these cutters fillthe gap between normal shank cutters and the much larger facing cutters,this cuttter is better suited to light/medium cuts in a facing or stepping operation with its plain bore.

Shell End Mill (Roughing)

As the name implies, these cutters with their helical teeth and roughing profile are particularly efficient in areas where large volumes of stock must be removed at high speed and where tough materials are to be worked.

SLITTING SAW APPLICATIONS

Slitting Saw - Plain

Intended for shallow cutting-off operations, these saws have straight teeth on the periphery and are tapered on width towards the bore to prevent binding. They are available in either coarse or fine pitch to suit the type and section of materials to be cut.

Slitting Saws - Side Chip Clearance

Intended for optimum production of deep narrow slots and for sawing operations, these saws have alternate helical teeth on the periphery combined with side teeth to ensure efficient stock removal, clean cutting action, and good surface finish.

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Mob: 9562279990 | E-mail: info@toolsdirect.in

www.toolsdirect.in