

Get-Started Recommendations - Mill and Lathe Tooling, Measurement and Workholding

This is a subset of my tool inventory for milling, lathe work, and general machining.	
This is my personal viewpoint - others may differ as to need and specific tool/brand.	
Hotlinks Are Provided Below	Green shade I consider "Must Have" items.
	Red Shade is for more advanced operations, and higher skill levels.
	Yellow Shade is for advanced or specialty work.
The specific items listed are for R-8 Spindle Mills, and MT3 Tailstock Lathes. Tailstock taper varies by lathe.	
The specific items listed are generally higher quality, investment-grade components. Less expensive and lower quality equivalents are available.	
A few components are listed that can be shared between mill and lathe (collets and drill chucks).	
A lot of the choices listed are Vertex brand. I have found Vertex (Taiwanese company) great value.	
The source linked to is one example (among many) for the specific item. Source the tool locally or online where most economical including shipping. Beware of counterfeits.	
Rotagrip is listed as a good source for several items. They are in the UK but have great pricing and ship to the USA quickly and low cost.	
Lathe-specific tooling and accessories such as QCTP, Cutting/Threading Tools, Chucks, Collet Systems, DRO's are not listed here. DM me for specific suggestions.	
Mill-specific accessories such as DRO's, Power Drawbars, Power Feeders, Cutting Tools are not listed here. DM me for specific suggestions.	

Category	Primary Usage	Anticipated Usage	Description - with Hotlink to one source of supply - just click on the description
Alignment, Measurement, Indicators	Mill	Frequently	Edge Finder 3/8" Shank - Starrett 827A
	Mill	Sometimes	Wiggler and Center Finder - Starrett S828HZ
	Mill	Frequently	Tschorn 3D Tester SLIMplus V2 Edge Finder (better than Heimer)
	Mill & Lathe	Rarely	Blake Coax Indicator
	Mill & Lathe	Sometimes	Mitutoyo Micrometer 0-1"
	Mill & Lathe	Sometimes	Mitutoyo Micrometer 1-2"
	Mill & Lathe	Sometimes	Mitutoyo Micrometer 2-3"
	Mill & Lathe	Frequently	Interrapid Dial Test Indicator 0.0005" Resolution
	Mill & Lathe	Sometimes	Starrett Precision Dial Indicator
	Mill	Rarely	Tramming Indicator Set - Edge Technology ProTram
	Mill	Frequently	NogaFlex Holder Model NF1018
	Mill & Lathe	Frequently	Noga Indicator Holder with Magnetic Base Model MG10533
	Mill & Lathe	Frequently	Mitutoyo 6" Digital Calipers
	Mill & Lathe	Sometimes	Mitutoyo 8" Digital Calipers
	Mill	Frequently	Dial indicator 0-1" - Beater sets - get 2
	Mill & Lathe	Rarely	Dial Indicator 0-2"
	Mill & Lathe	Sometimes	Screw Pitch Gage Metric - 28 Leaf, .25-2.50mm
	Mill & Lathe	Sometimes	Screw Pitch Gage Imperial - 30 Leaf, 4-42 T.P.I. Gage
	Mill	Frequently	Machinist Squares
	Lathe	Rarely	Precision Machinist Level - 0.0002"/10" Minimum Resolution
	Mill & Lathe	Sometimes	Magnifying Loop - 6-10X Power, At Least 1" Diameter Optics

Work Holding	Mill	Sometimes	Vertex 8" Horizontal/Vertical Table Rotary Table
	Mill	Rarely	Vertex DP-2 dividing Plates for 8" Horizontal Rotary Table
	Mill	Sometimes	Table Step Block & Clamp Set TE-CO
	Mill	Frequently	Kurt 6" D6X Milling Vise
	Mill	Frequently	Speed Handle For 6" Milling Machine Vise
	Mill	Frequently	Vise Stop - Clamps on Jaws for Repeated Setups
	Mill	Rarely	1/8" Thick Precision Parallel Set
	Mill	Frequently	1/8" Thick Beater Parallel Set (you need 2)
	Mill	Sometimes	1/32" Thin Parallel Set
	Mill	Sometimes	1-2-3 Blocks Matched Set
	Mill	Sometimes	2-4-6 Blocks Matched Set
	Mill	Sometimes	Ultra Precision V-Blocks with Clamps
	Mill	Rarely	Vise Jaw Soft for Kurt - Aluminum Plate as Required
	Mill	Sometimes	Machinist Jacks - Adjustable
	Mill & Lathe	Frequently	Soft-Blow Hammer
	Mill	Rarely	Vertex Toolmakers Vise VMV-25

Category	Primary Usage	Anticipated Usage	Description - with Hotlink to one source of supply - just click on the description
Tool Holders, Drill Chucks, Collets/Chucks and Adapters	Mill	Frequently	Vertex R-8 Collet Set Imperial
	Mill	Sometimes	R-8 Collet Set Metric
	Mill	Sometimes	Techniks 04206MS ER40 Collet Set - 4-26mm
		Sometimes	Vertex ER40 Collet Chuck for R8 Spindle
	Lathe	Sometimes	Bison ER-40 Collet Chuck MT3 for Lathe
	Mill & Lathe	Sometimes	Square ER-40 Collet Block
	Mill & Lathe	Rarely	Hex ER-40 Collet Block
	Mill	Frequently	Albrecht Keyless Drill Chuck R-8 Shank
	Lathe	Sometimes	Albrecht Keyless Drill Chuck J6 for Lathe
	Lathe	Sometimes	Accupro Drill Chuck Arbor - MT3 to J6 (fits chuck above)
	Mill	Sometimes	Vertex Keyed 1 - 16mm Vertex Ball Bearing Drill Chuck J3 for Mill
	Mill	Sometimes	Accupro Drill Chuck Arbor - R8 to J3 (fits chuck above)
	Lathe	Sometimes	Vertex Keyless Chuck for Lathe MT3
	Lathe	Rarely	Vertex Bull Nose Rotating Tailstock Center for Lathe
	Lathe	Sometimes	Vertex Long-point Rotating Tailstock Center for Lathe
	Mill & Lathe	Rarely	2pc Set No.6 Jacobs Removal Wedge
Cutting Tools for Mill and Lathe	Mill		Lakeshore Carbide End Mills
	Mill		Suncoast Tools End Mills
	Lathe	Frequently	Introduction to Indexable Tooling for the Metal Lathe book by David P. Best
Drill Sets	Mill & Lathe	Frequently	Jobbers Drill Bit Set 1/16-1/2" 118 point
	Mill & Lathe	Sometimes	Jobbers Drill Bit Set Letter A-Z 118 point
	Mill & Lathe	Sometimes	Jobbers Drill Bit Set 1-11 millimeters 118 point
	Mill & Lathe	Rarely	Jobbers Drill Bit Set #1-60 118 point
Tap & Die Tooling	Mill & Lathe	Sometimes	Spring Loaded Tap Follower - 1/2"
	Mill & Lathe	Sometimes	Starrett Tap Wrenches - 2 sizes
	Mill & Lathe	Sometimes	Starrett or Greenfield Tap Handles - 2 sizes
	Mill & Lathe	Rarely	Greenfield Die Stock Holder Wrench - 2 sizes
	Mill & Lathe		Taps and Matching Drills As Required
	Mill & Lathe		Dies as Required - round dies are adjustable and better quality than hex
Boring	Mill	Sometimes	2" Boring Head w R8 Shank - Shars
	Mill	Rarely	Vertex Automatic Boring Head (alternative to above)
Marking, Transfer Punches	Mill	Sometimes	Transfer Punches 1-13mm By .5mm
	Mill	Sometimes	Transfer Punches 3/32-1" By 64th
	Mill & Lathe	Rarely	Prussian Blue
	Mill & Lathe	Frequently	Diechem Marking Fluid
Lube and Cutting Fluids	Mill & Lathe	Frequently	Mobil Vacuoline 1409 Way Oil (for dovetail and lathe bedways)
	Lathe	Sometimes	DTE 24 1 Gal Mobil Hydraulic Oil (for lathe or mill geared heads)
	Mill & Lathe	Sometimes	Tapping Fluids - Steel
	Mill & Lathe	Sometimes	Tapping Fluids - Aluminum
	Mill & Lathe	Frequently	Acid Brushes