



SHARPENING WOODTURNING TOOLS

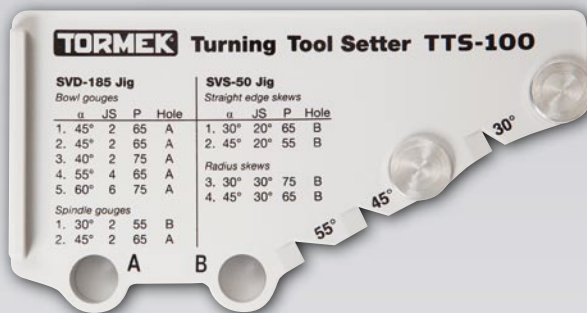
Tormek Jigs now also for Bench Grinders



The Key to Replication

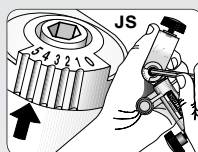
No matter which grinding machine you use the most difficult part in sharpening woodturning tools is to replicate the shape and the edge angle. Tormek have solved this problem by developing a key to instant and exact sharpening – *the Turning Tool Setter*.

This setting device takes the guesswork out of sharpening. There is no longer any need for trial and error to get the best edge shape for each turning operation. You just set the jig and get the shape you have selected. Thanks to the patented design it works irrespectively of the stone diameter. You can go from a 6" wheel to a 10" grindstone and achieve the same shape. Of course it works on all Tormek models and together with the BGM-100 Mounting Set it can also be used on a standard bench grinder.

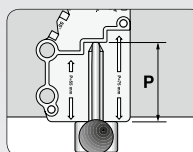


How Does It Work?

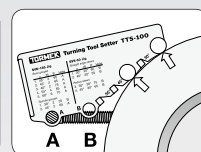
Three factors determine the shape of a gouge or a skew. By repeating them at each shaping or sharpening you will get an exact replication of the shape and edge angle every time.



JIG SETTING = JS



PROTRUSION = P



HOLE A OR B

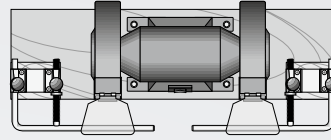
SVD-185 Gouge Jig



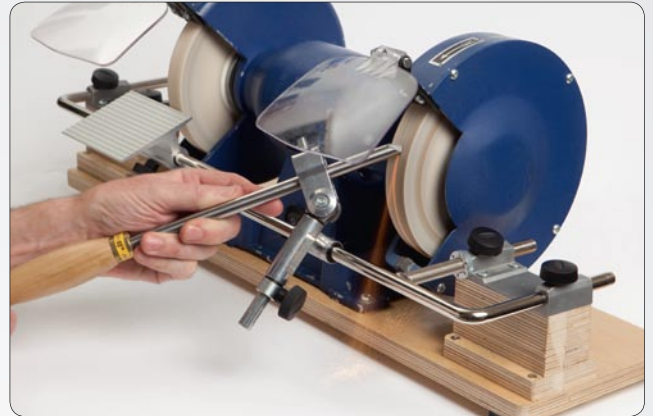
SVS-50 Multi Jig



1. Mount the tool with a fixed protrusion.
2. Set the distance of the Universal Support to the wheel.
3. Touch up the edge to the same shape.



With the Bench Grinder Mounting Set BGM-100 you get all the hardware you need to use the patented Tormek woodturning jigs on a bench grinder.



Using a Tormek Machine

Tormek make a clear distinction between shaping and sharpening. Once the tool is shaped, you just touch up the edge to a razor sharpness. You never remove more steel than necessary. You will achieve the finest edge, which gives the wood a smoother finish with less need for sanding. A finer edge also stays sharp longer than a rough edge.

If you prefer, the initial shaping can be done on a bench grinder with the BGM-100 Mounting Set. Since the patented Turning Tool Setter TTS-100 works on all stone diameters, the shape and edge angle is exactly replicated even when you go from a smaller bench grinder wheel to the large Tormek grindstone. This means you can benefit from the fast steel removal on the bench grinder and also get the finest surface on the water cooled grindstone and the leather honing wheel.

WHEEL CONDITION

At the low speed (90 RPM) there are no vibrations. You keep the grindstone running true with the Tormek Truing Tool TT-50. If the stone becomes glazed, you refresh it with the Stone Grader SP-650. The grit is 220 and the stone can be treated with the Tormek Stone Grader to work like a finer 1000 grit stone.

SAFETY

At the slow speed there is much less risk of accidents. Since no sparks are produced, you can also safely use your machine in a fire sensitive workshop. No grinding dust pollutes the air because all the grinding particles of steel and stone grains are collected in the water trough.

HONING

Powerhone and polish the bevel to a mirror finish on the leather honing wheel with the tool kept in the jig. The jig ensures that you hone at the right angle and do not round off the tip. The flute on gouges can be honed on the Profiled Leather Honing Wheel LA-120.

INFLUENCE OF HEAT ON HSS STEEL

Due to the continuous water cooling there is no risk for overheating the edge.

Using a Bench Grinder

If you use a bench grinder, you fix the Tormek BGM-100 Bench Grinder Mounting Set onto a wooden platform and you can benefit from the unique Tormek Sharpening System for woodturning tools. Mount the set on either side of the grinder, or buy two sets and mount on both sides and you get a versatile sharpening system. Detailed drawings for making the wooden platform come with the mounting set.

Not all wheels on a bench grinder are suitable for the precision sharpening of edge tools. The standard wheels are usually too hard and become easily glazed, which reduces steel removal and can cause overheating of the tool. Exchange the wheel to an aluminium oxide wheel with an open binding. The wheel should not be too hard to avoid glazing and not too soft to avoid grooves.

WHEEL CONDITION

True the wheel regularly to make the wheel run smoothly and minimize vibration. Use the truing tool recommended for your grinder. Also ensure that the surface does not become glazed by refreshing it with a dressing tool.

SAFETY

A bench grinder must be handled with knowledge and care. Follow the safety instructions which come with your machine. Always use eye protection. Ensure that you do not work near dry shavings or wood dust, since a spark can light a fire.

HONING

A smoother edge makes the tool cut more easily and the sharpness stays longer. Hone away the burr and smooth the bevel with a honing stone and the flute of the gouge with a slip stone.


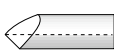



INFLUENCE OF HEAT ON HSS STEEL

HSS steel can withstand a much higher heat than carbon steel. However, at the very end of the tip, which is very thin, the temperature can reach a level high enough to affect the hardness. Therefore grind cautiously at the tip of the edge. If you cool in water, do not cool abruptly, since this can cause micro cracks invisible to the naked eye.

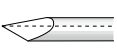

Which Shape Should I Use?

On this Selection Chart you can see which shape is suitable for your current type of turning. The geometries have been worked out in co-operation with some of the world's most experienced woodturners and woodturning workshops, such as Craft Supplies, USA and Drechselstube Neckarsteinach in Germany. Supplied as a laminated sheet together with the Turning Tool Setter TTS-100.





Bowl Gouges

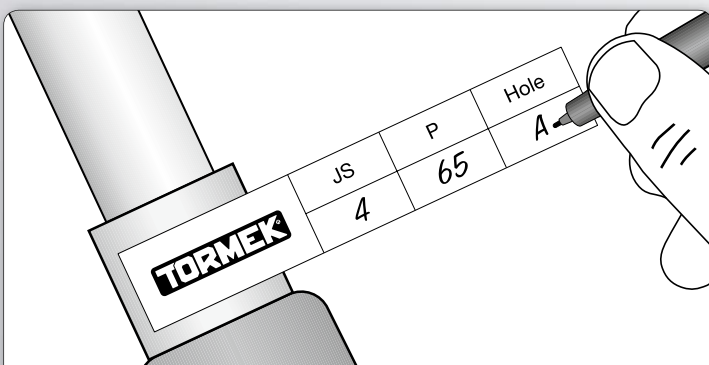
1	$\alpha=45^\circ$		JS 2 P 65 Hole A	Standard profile. Only lightly swept back wings. For turners of all skill levels.
2	$\alpha=45^\circ$		JS 2 P 65 Hole A	Irish profile. Swept back wings. Swing the tool 180° from side to side.
3	$\alpha=40^\circ$		JS 2 P 75 Hole A	With long swept back wings. Somewhat aggressive. For professional level turners.
4	$\alpha=55^\circ$		JS 4 P 65 Hole A	The larger edge angle is beneficial when turning deep bowls.
5	$\alpha=60^\circ$		JS 6 P 75 Hole A	"Ellsworth" shape. Wings are pronounced convex.

Spindle Gouges

1	$\alpha=30^\circ$		JS 2 P 55 Hole B	For tight spots, detail work and finest finish. For professional level turners.
2	$\alpha=45^\circ$		JS 2 P 65 Hole A	Standard profile. For turners of all skill levels.

Skews

1	Straight edges $\alpha=30^\circ$		JS 20° P 65 Hole B	For tight spots, detail work and finest finish. For professional level turners.
2	Straight edges $\alpha=45^\circ$		JS 20° P 55 Hole B	For broad application. Easier to control than a 30° edge angle.
3	Radius edges $\alpha=30^\circ$		JS 30° P 75 Hole B	For tight spots, detail work and finest finish. For professional level turners.
4	Radius edges $\alpha=45^\circ$		JS 30° P 65 Hole B	For broad application. Easier to control than a 30° edge angle.



The Turning Tool Setter TTS-100 is delivered with recipe labels so that you can easily mark your skews, bowl- and spindle gouges with the settings used.

ACCESSORIES

Work on Tormek Machines and Bench Grinders

Whether you use your bench grinder or a Tormek machine you will benefit from the precise Tormek jigs. The four accessories below can be used both on a Tormek machine and on a bench grinder.



Turning Tool Setter

Replicates the geometry on turning gouges and skews when using the SVD-185 and SVS-50 jigs. With built in edge geometries.



Gouge Jig

For fingernail shaped turning gouges of any geometry. Includes extra shaft for turning cutters. Also for bent carving gouges and V-tools. Max tool width 25 mm (1").



Multi Jig

For turning skew chisels, parting and beading tools and roughing gouges. Straight carving gouges up to 50 mm (2") width.



Tool Rest

For turning scrapers, straight hollowing tools and thin parting tools. Also for cabinet scrapers, screwdrivers and spoke shave blades.

For Tormek Machines Only



Truing Tool

Trues the grindstone exactly round and flat. Guided by the Universal Support, which also guides the jigs. Dual knobs for smooth feed across the stone.



Stone Grader

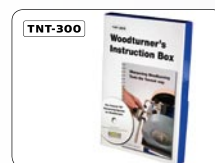
The fine side grades the stone for a 1000 grit finish. The coarse side of the grader reverses the stone to normal fast grinding. Activates a glazed stone.



Profiled Honing Wheels

For the inside honing and polishing of turning/carving gouges and V-tools. Set of two discs, one with a 3 mm (1/8") radius and one with a 60° tip.

For narrow tools complement with LA-124 with 2 mm (3/32") radius and a 45° tip.



Woodturner's Instruction Box

Contains TNT DVD film and detailed Handbook. Shows how to shape, sharpen and hone all your turning tools.



Blackstone Silicon SB-250

Tormek Blackstone delivers fast steel removal on HSS, exotic alloys and tools with large bevel area. It can also touch up carbide. 220 grit.

I have yet to find anything that cannot be sharpened on the Tormek. The honed edge is incredibly fine, and coupled to this dramatic improvement in edge quality is the not insignificant fact that the tools will last far longer, as the sharpening process is so much less aggressive. I am now a total convert to the wet grinding system. It really is Touch and Turn, but you touch far less often and turn far more!

Alan Holtham
The Woodworker, UK

The Tormek TNT-708 Woodturner's Kit is a superbly made, comprehensive kit and does speed up the sharpening process. It is, along with the rest of the Tormek product range, incredibly well made. I have got the process for sharpening a fingernail profile gouge down to under a minute so one can no longer say it is a slow process.

Look at the TTS-100 gouge and compare the cutting edge to that of a dry bench-ground one. It will produce a better finish off the tool and I do think the edge lasts longer as a result. It is well worth the money and as most of us work in other wood disciplines other than turning, the Tormek system becomes more and more attractive!

Mark Baker
Woodturning Magazine, UK

I use the Tormek system for all my tools. I usually sharpen them in the morning and hone them a couple of times during the day on the leather honing wheel. My jigs are set permanently and the sharpening only takes about a minute. As a production turner I value the short period of time I need to spend on sharpening, which gives me more time for turning. The edges also last much longer than when I was using a bench grinder and slip stones.

Kurt Johansson
Professional Woodturner, Sweden

Price often indicates quality, and we certainly found that to be true in wet sharpeners. Tormek's heavy-duty T-7 proved impossible to stall, no matter how hard we pressed on the tool during sharpening; none of the lower-priced units even came close. Its tool-holding system (tool rest and holders) fit together like hand in glove and gave us dead-on bevels and square ends with little fuss. And the stone wore much slower than less expensive models we tried. If you sharpen hand tools or knives at least once a week, the versatile T-7 is the sharpener for your shop.

Dave Campbell with John Olson
WOOD Magazine, USA

Best Buy



Sharpening Systems Compared
in Wood Magazine October 2008

TNT-708 Woodturner's Kit for Tormek machines

SVD-185, SVS-50, SVD-110, TTS-100, TNT-300

Recommended for Bench Grinders

SVD-185, SVS-50, SVD-110, TTS-100, BGM-100

Grinding Jigs

SVM-45	Knife Jig		
SVM-140	Long Knife Jig		
SVX-150	Scissors Jig		
SVA-170	Axe Jig		
SVS-32	Short Tool Jig		
SVD-185	Gouge Jig	×	×
SVS-50	Multi Jig	×	×
SVD-110	Tool Rest	×	×
SE-76	Square Edge Jig		
SVH-320	Planer Blade Attachment		
SVP-80	Moulding Knife Attachment		

Accessories

TT-50	Truing Tool		
WM-200	AngleMaster		
SP-650	Stone Grader		
LA-120	Profiled Honing Wheel		×
LA-124	Narrow discs for LA-120		
PA-70	Honing Compound		
TTS-100	Turning Tool Setter	×	×
MH-380	Machine Cover		×
HB-10	Handbook		
DVD-1	Tormek DVD		
TNT-300	Woodturner's Instruction Box		×
BGM-100	Bench Grinder Mounting Set	×	

Tormek Special Stones

SB-250	Blackstone Silicon (250 mm 10")		
SJ-250	Japanese Waterstone (250 mm 10")		
SJ-200	Japanese Waterstone (200 mm 8")		

TNT-708 Woodturner's Kit

With this kit you get all you need for sharpening woodturning tools on your Tormek. It includes all the Tormek patented woodturning jigs, the turning tool setter and additional accessories like the profiled leather honing wheel, a detailed instruction box and a machine cover to protect your machine from dust in the workshop.



Tormek offers a complete sharpening system for all your edge tools, for further information visit us at www.tormek.com