TORMEK T-4

Water Cooled Sharpening System

Special Grindstones



Blackstone Silicon SB-250

Tormek Blackstone delivers faster steel removal on HSS and other exotic alloys than Tormek Original Grindstone. Suitable for tools with large bevel area. It can also touch up carbide. 220 grit.

Japanese Waterstone SJ-250 and SJ-200

This stone provides an extra fine surface finish on hand tools where a minimum of steel removal is needed. Ideal for carving tools. 4000 grit.

Available in two sizes, 250 mm (for T-7 and 2000 models) and 200 mm (for T-3 and 1200 models). Since it is made to create the finest surface, it has a limited steel removal capacity and cannot be used for shaping a tool.



TORMEK T-4 is a further development of the T-3 model taking the precision and stability to a completley new level. Vital functions like the motor and the main shaft are mounted in the zinc cast top which includes the integral sleeves for the Universal Support. This advanced design ensures an unbeatable precision for the Universal Support, which is the foundation of the Tormek jigsystem.

You get a high quality machine ideal for home and hobby work which can sharpen all the common edge tools. Delivered with the StoneGrader SP-650 AngleMaster WM-200, Honing compound, DVD and the comprehensive Tormek Handbook on sharpening. Complement the T-4 with your choice of jigs according to the tools that you are to sharper (The jigs are sold separately).

Dimensions

Width 230 mm (91/16")
Depth 200 mm (71/8")
Height 260 mm (101/4")

Weight

Shipping weight 9.8 kg Machine only 8.0 kg

Grindstone

Tormek Original Grindstone Aluminium oxide Ø 200×40 mm (8" × 15%") 120 rpm, torque 8.4 Nm

Leather Honing Wheel

 \emptyset 145 × 26 mm (5³/₄" × 1")

Main Shaft

Stainless steel main shaft and stone hardware. EzyLock in composite.

Housing

Zinc cast top Impact resistant ABS plastic

Motor

Industrial single phase 120 W (input) 230 V, 50 Hz or 115 V, 60 Hz Duty 30 min/hour Maintenance free Silent running, 52 dB 10,000 hour life

TNT-708 Woodturner's Kit

SVD-185, SVS-50, SVD-110, LA-120, MH-380, TTS-100, TNT-300

HTK-705 Hand Tool Kit

SVM-45, SVM-140, SVX-150, SVA-170, SVS-32

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			
Accesso TT-50	©			
Accesso	ries			×
Accesso	ries Truing Tool			×
Accesso TT-50 WM-200	ries Truing Tool AngleMaster		×	×
Accesso TT-50 WM-200 SP-650	ries Truing Tool AngleMaster Stone Grader		×	×
Accesso TT-50 WM-200 SP-650 LA-120	ries Truing Tool AngleMaster Stone Grader Profiled Honing Wheel		×	
Accesso TT-50 WM-200 SP-650 LA-120 LA-124	ries Truing Tool AngleMaster Stone Grader Profiled Honing Wheel Narrow discs for LA-120		×	
Accesso TT-50 WM-200 SP-650 LA-120 LA-124 PA-70	ries Truing Tool AngleMaster Stone Grader Profiled Honing Wheel Narrow discs for LA-120 Honing Compound		200	
Accesso TT-50 WM-200 SP-650 LA-120 LA-124 PA-70 TTS-100	ries Truing Tool AngleMaster Stone Grader Profiled Honing Wheel Narrow discs for LA-120 Honing Compound Turning Tool Setter		×	×
Accesso TT-50 WM-200 SP-650 LA-120 LA-124 PA-70 TTS-100 MH-380	ries Truing Tool AngleMaster Stone Grader Profiled Honing Wheel Narrow discs for LA-120 Honing Compound Turning Tool Setter Machine Cover		×	×



Square Edge Jig

For plane irons and wood chisels. Max tool width 76 mm (3"), max tool thickness 9 mm (36"). Safety stops prevent the tool from slipping off the stone.



AngleMaster

Sets and measures the edge angle. Adjustable to any stone diameter from \varnothing 250 mm (10") down to \varnothing 150 mm (6"). Measures from 10° to 75°.



Honing Compound

For application on the leather honing wheels. Grain size 3 micron (average). Removes the burr and polishes the edge to a mirror finish.



Handbook

Explains the basics in sharpening and how to best work with the Tormek system. Hardcover, with 166 pages and 660 line drawings. By Torgny Jansson.



Tormek DVD

Brings the Handbook instructions to life. 24 minute including a 4 minute introduction to the Tormek way of sharpening.

Additional Accessories



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.



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.



Woodturner's Instruction Box

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



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 (1/4") radius and one with a 60° tip.



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

Machine Cover

For protecting the machine from shavings and wood dust.

Get top results with a real sharpening system





THE MOST ADVANCED WATER COOLED SHARPENING SYSTEM AVAILABLE allows you sharpen your tools to the finest edge. Tormek's innovative sharpening system has come to be appreciated worldwide for its unbeatable versatility, accuracy and ease of use. T-8 maximises the precision thanks to the revolutionary fully cast housing which guarantees minimal play for the Universal support. This gives you the best conditions possible to succeed with your sharpening.

Tormek's unique drive system is efficient and manages to hold a constant speed, even under full load. The Tormek Original Grindstone sharpens all qualities of steel, including HSS. The machine features a number of elaborated details, like instant stone locking with EzyLock, water trough with lift and a removable magnet scraper for efficient cleansing. Read more at www.tormek.com!

Included with the Tormek T-8



Square Edge Jig

For plane irons and wood chisels. Max tool width 77 mm (3"), max tool thickness 9 mm (%"). Safety stops prevent the tool from slipping off the stone. (SE-77 replaces SE-76.)



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.



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.



AngleMaster

Sets and measures the edge angle. Adjustable to any stone diameter from Ø 250 mm (10") down to Ø 150 mm (6"). Measures from 10° to 75°. Magnets keep it in place.



Honing Compound

For application on the leather honing wheels. Grain size 3 micron (average). Removes the burr and polishes the edge to a mirror finish.

ΟΔΗΓΟΙ ΤΡΟΧΟΥ TORMEK



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



Square Edge Jig

For plane irons and wood chisels. Max tool width 76 mm (3"). Max tool thickness 9 mm (%"). Safety stops prevent the tool from slipping off the stone.



Planer Blade Attachment

For blades of any length. Blades longer than 270 mm (10½") are relocated in the blade holder. Min width of blade 13 mm (½").



Moulding Knife Attachment

For all makes and shapes of moulding knives with 24, 30 or 38 mm distance between guide hole centres. Max width of blade 100 mm (4").



Gouge Jig

For fingernail shaped turning gouges of any geometry. Plus shaft for turning cutters. Also for bent carving gouges and V-tools. Max tool width 36 mm



Knife Jig

For most knives. Width 45 mm (1¾"). Long knives need to be stiff. Min blade length 60 mm (2¾"). Also for carver's draw knives.



Long Knife Jig

Suitable for long and flexible knives. The 140 mm (5½") width of the jig stabilizes a thin blade. Min blade length 160 mm (6¼").



Scissors Jig

For scissors of all sizes and shears. Also suitable for portable electric hand planer blades.



Axe Jig

For carving and carpenter's axes. Max height of axe 170 mm (6½"). Copes with both straight and curved edges.



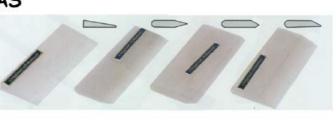
Short Tool Jig

For straight shanked carving gouges and V-tools down to 45 mm (1¾") length. Short wood chisels and tools for power carvers. Max tool width 32 mm (1¼").

AKONIA

AKONIA ARKANSAS ΣΕΤ 4 ΤΕΜ.





AKONIA NEPOY ΙΑΠΩΝΙΑΣ 1000/6000 GRIT



150 x 50 x 25 mm

205 x 50 x 25 mm

207 x 66 x 36 mm

AKONIA NEPOY ΙΑΠΩΝΙΑΣ ΜΑΧΑΙΡΩΤΑ GRIT 4000



 $\Lambda A \Delta A KONO ARKANSAS$ $\Sigma TPO\Gamma\Gamma Y \Lambda O 100 \times \emptyset 9 mm$



ΣΥΝΘΕΤΙΚΉ ΠΈΤΡΑ ΚΑΘΑΡΙΣΜΟΎ ΑΚΟΝΙΩΝ NAGURA



ΦΥΣΙΚΑ ΑΚΟΝΙΑ ΚΡΗΤΗΣ



AKONIA NEPOY ΙΑΠΩΝΙΑΣ 1000/3000 GRIT



ΟΔΗΓΟΣ

AKONIΣMATOΣ 65mm



AKONIA NEPOY ΙΑΠΩΝΙΑΣ 2 TEM



4000 GRIT



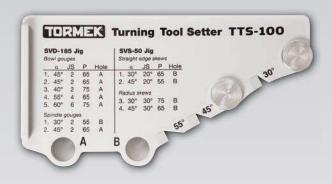
SHARPENING WOODTURNING **TOOLS**

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.

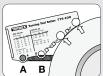


How Does It Work?

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











2. Set the distance of the Universal Support to the wheel.

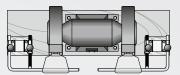




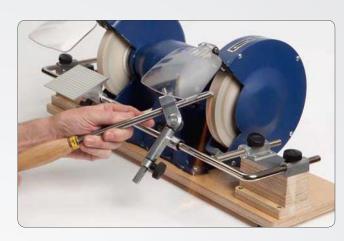
3. Touch up the edge to the same shape.







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 wood-turning 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

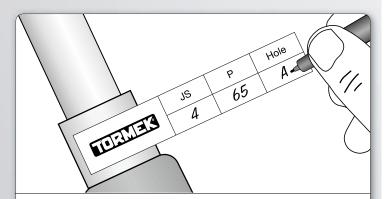
1	α=45°	JS P	2 65 A	Standard profile. Only lightly swept back wings. For turners of all skill levels.
2	α=45°	Hole		Irish profile. Swept back wings. Swing the tool 180° from side to side.
3	α=40°	JS P Hole	2 75 A	With long swept back wings. Somewhat aggressive. For professional level turners.
4	α=55°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

Spindle Gouges

1	α=30°		JS 2 P 55 Hole B	For tight spots, detail work and finest finish. For professional level turners.
2	α=45°		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 $\alpha{=}45^{\circ} \qquad \begin{array}{ c c c c c c c c c c c c c c c c c c c$	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.



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For the inside honing and polishing of turning/carving gouges and V-tools. Set of two discs, one with a 3 mm (1/4") radius and one with a 60° tip.

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



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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.

Top photo on cover page by Richard Raffan with courtesy of the Taunton Press

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		
WM-200	Truing Tool 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 S	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