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 cooperation with some of the world’s most experienced woodturners and woodturning workshops and it is supplied as out in cooperation with some of the world’s most experienced woodturners and woodturning workshops.

**Which Shape Should I Use?**

**Bowl Gouges**

1. $\alpha = 45^\circ$
   - JS 2
   - Holes: B
   - Standard profile.
   - Only lightly swept back wings.
   - For light spots and detail work.
   - For professional level turners.

2. $\alpha = 45^\circ$
   - JS 3
   - Holes: B
   - With light sweep back wings.
   - Somewhat aggressive.
   - For professional level turners.

3. $\alpha = 40^\circ$
   - JS 4
   - Holes: A
   - The larger edge angle is beneficial when turning deep bowls.
   - "Sweptout" shape. Wings are pronounced convex.

4. $\alpha = 65^\circ$
   - JS 5
   - Holes: A
   - With profile. Swept back wings.
   - Saving the tool 180° from side to side.

5. $\alpha = 60^\circ$
   - JS 6
   - Holes: A
   - "Sweptout" shape. Wings are pronounced convex.

**Spindle Gouges**

1. $\alpha = 30^\circ$
   - JS 2
   - P 75
   - Hole: B
   - Standard profile.
   - For light spots and detail work.

2. $\alpha = 45^\circ$
   - JS 3
   - P 75
   - Hole: A
   - With profile. Swept back wings.
   - Saving the tool 180° from side to side.

**Skews**

1. $\alpha = 30^\circ$
   - JS 2
   - For light spots and detail work.

2. $\alpha = 45^\circ$
   - JS 3
   - For light spots and detail work.

3. $\alpha = 30^\circ$
   - JS 2
   - P 65
   - Hole: A
   - For light spots, detail work and detail trash.

4. $\alpha = 65^\circ$
   - JS 3
   - P 75
   - Hole: A
   - For light spots, detail work and detail trash.

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.

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.

**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 achieve the finest edge, which gives the tool 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** 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 Grinder 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 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.

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**

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 rotate off the tip. The flutes on gouges can be honed on the Profiled Leather Honing Wheel LA-120.

**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**

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

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.

**INFLUENCE OF HEAT ON HSS STEEL**

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.
Woodturners about Tormek

“Some people have never experienced using a truly sharp tool, but when they do, they will find it takes less time to use and it cuts so clearly that the savings in abrasives alone are significant.”

TERRY MARTIN
American Woodturner

“Because Tormek regularly improves its system, that’s the brand I selected. By wet sharpening, like me, you will be amazed how much better your turning experience is.”

NICK AGAR
Woodturning artist
Devon, UK

“Whether I am teaching my students or sharpening my own tools, the Tormek is the safest and most accurate system producing the finest edge in the shortest time.”

GLENN LUCAS
Woodturner
Ireland

“With Tormek’s sharpening machine and jigs, I can finally teach students to efficiently sharpen their tools. Anyone can learn how to achieve a superb cutting edge in 10 seconds! Fantastic system.”

KURT JOHANSSON
Woodturner
Sweden

“Use the Tormek system for all my tools. 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 Tormek system makes my work easier and cleaner that the savings in abrasives alone are significant.”

“Try wet sharpening; like me, you will be amazed how much better your turning operation is.”

“Some people have never experienced using a truly sharp tool, but when they do, they will find it takes less force to cut and it cuts so clearly that the savings in abrasives alone are significant.”

USING THE UNIQUE TORMEK JIG SYSTEM

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.

How Does It Work?

TNT-708 Woodturner’s Kit for Tormek machines

SVM-150 Scissors Jig
SVM-170 Axe Jig
SVS-186 Gouge Jig
SVM-50 Multi Jig
SVS-110 Tool Rest
SE-77 Square Edge Jig
SM-320 Planer Blade Attachment
SVP-80 Moulding Knife Attachment
DBS-22 Dull Bit Sharpening Attachment

TNT-708 Woodturner’s Kit

With this kit you get all you need for sharpening woodturning tools on your Tormek!

TTS-100 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 TTS-100.

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.

TNT-708 Woodturner’s Kit

With this kit you get all you need for sharpening woodturning tools on your Tormek!

Accessories

TT-50 Truing Tool
WM-200 AngleMaster
SP-660 Stone Grader
LA-120 Profiled Honing Wheel
LA-124 Narrow discs for LA-120
PA-76 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
RB-180 Rotating Base
OWC-1 Tormek Converter

Tormek Special Stones

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

SB-22 Drill Bit Sharpening Attachment
SVP-80 Moulding Knife Attachment
DBS-22 Dull Bit Sharpening Attachment

Grinding Jigs

SVM-45 Knife Jig
SVM-148 Long Knife Jig
SVM-150 Scissors Jig
SVA-170 Axe Jig
SVS-38 Short Tool Jig
SVD-186 Gouge Jig
SVS-50 Multi Jig
SVD-110 Tool Rest
SE-77 Square Edge Jig
SM-320 Planer Blade Attachment
SVP-80 Moulding Knife Attachment
DBS-22 Dull Bit Sharpening Attachment

TNT-708 Woodturner’s Kit

With this kit you get all you need for sharpening woodturning tools on your Tormek!

SHARPENING WOODTURNING TOOLS

Can be used also on a Bench Grinder

SVM-148 Long Knife Jig
SVM-150 Scissors Jig
SVM-150 Scissors Jig
SVA-170 Axe Jig
SVS-38 Short Tool Jig
SVD-186 Gouge Jig
SVS-50 Multi Jig
SVD-110 Tool Rest
SE-77 Square Edge Jig
SM-320 Planer Blade Attachment
SVP-80 Moulding Knife Attachment
DBS-22 Dull Bit Sharpening Attachment

How to Use the TTS-100

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 your chosen shape (JS).

TIP! See the film how TTS-100 works at www.tormek.com

TNT-708 Woodturner’s Kit

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TIPS

View Tormek's videos on www.tormek.com

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TORMEK® Sharpening Innovation

www.tormek.com