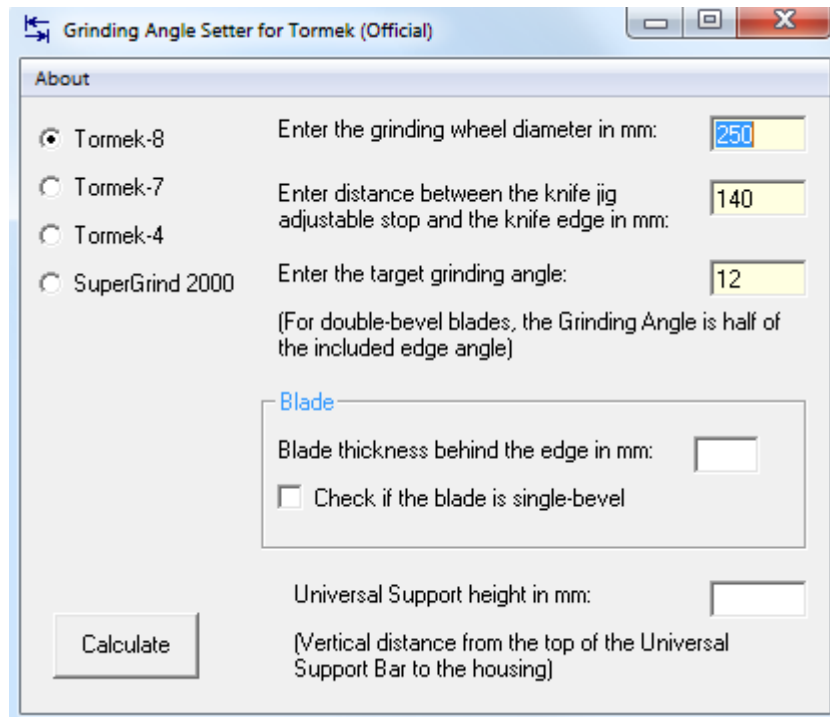


## Grinding and Honing Software for Tormek

Our software for Tormek includes two applets: **Grinding Angle Setter** and **Frontal Vertical Base**

**Grinding Angle Setter** – for grinding into the wheel, edge-leading



**Frontal Vertical Base** – for grinding in front of the Tormek, with the wheel rotation, and honing on the leather wheel, using our attachment “Frontal Vertical Base”.

Frontal Vertical Base for Tormek (Official)

About

☒ Tormek-8 Enter the honing or grinding wheel diameter in mm: 250  
(Tormek-7/8 leather wheel diameter is 215 mm)

☐ Tormek-7 Enter distance between the knife jig adjustable stop and the edge in mm: 140

☐ Tormek-4 Enter the target honing/grinding angle: 10  
(For double-bevel blades, the Angle is half of the included edge angle)

☐ SuperGrind 2000

**FVB position**

☒ Preset standard (knives)

☐ Preset extended (cleavers etc)

☐ Ad hoc in mm:   
(FVB rod protrusion)

**Blade**

Blade thickness behind the edge in mm: 10

☐ Check if the blade is single-bevel

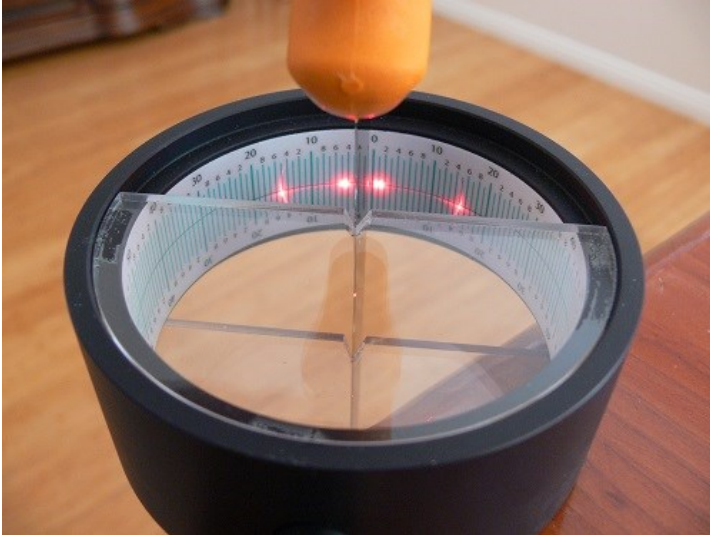
Universal Support height in mm:   
(Vertical distance from the top of the Universal Support bar to the top of the FVB)

Calculate



## Our computer software is used to:

- grind exact edge angle;
- match grinding wheels of different diameter;
- match the ground angle with the honing angle on Tormek leather wheel, using our Frontal Vertical Base.



Grind exact edge angle

Match grinding wheels of different diameter



Match the ground angle with the honing angle



## When to grind into the wheel, and when with the wheel?

Whenever possible, grinding **into the wheel** is preferred as **produces a lesser burr** that is easier to remove.

We grind with the wheel rotation only blades that are too wide to fit the standard grinding position, like a cleaver or machete.

We also hone on the Japanese wheel #4000 with the wheel rotation, edge-trailing.

However, when grinding knife steels prone to chipping on a stone wheel with pressure, grinding with the wheel rotation may put a better apex thanks to less micro-chipping compared to the edge-leading grinding; this is not an issue with CBN and diamond wheels where we do not apply excess pressure.



Since the 2 basic operations of sharpening are grinding and honing, you need both our applets, to match the ground with the honing angle. Using our **Grinding Angle Setter for Tormek** together with the **Frontal Vertical Base** software, our customers get exceptional sharpness on their knives, often sharper than Gillette razors.

## HOW TO USE THE GRINDING ANGLE SETTER

### Select your Tormek model

Grinding Angle Setter for Tormek (Official)

About

☒ Tormek-8  
☐ Tormek-7  
☐ Tormek-4  
☐ SuperGrind 2000

Enter the grinding wheel diameter in mm: 250

Enter distance between the knife jig adjustable stop and the knife edge in mm: 140

Enter the target grinding angle: 12  
(For double-bevel blades, the Grinding Angle is half of the included edge angle)

Blade

Blade thickness behind the edge in mm:

☐ Check if the blade is single-bevel

Universal Support height in mm:   
(Vertical distance from the top of the Universal Support Bar to the housing)

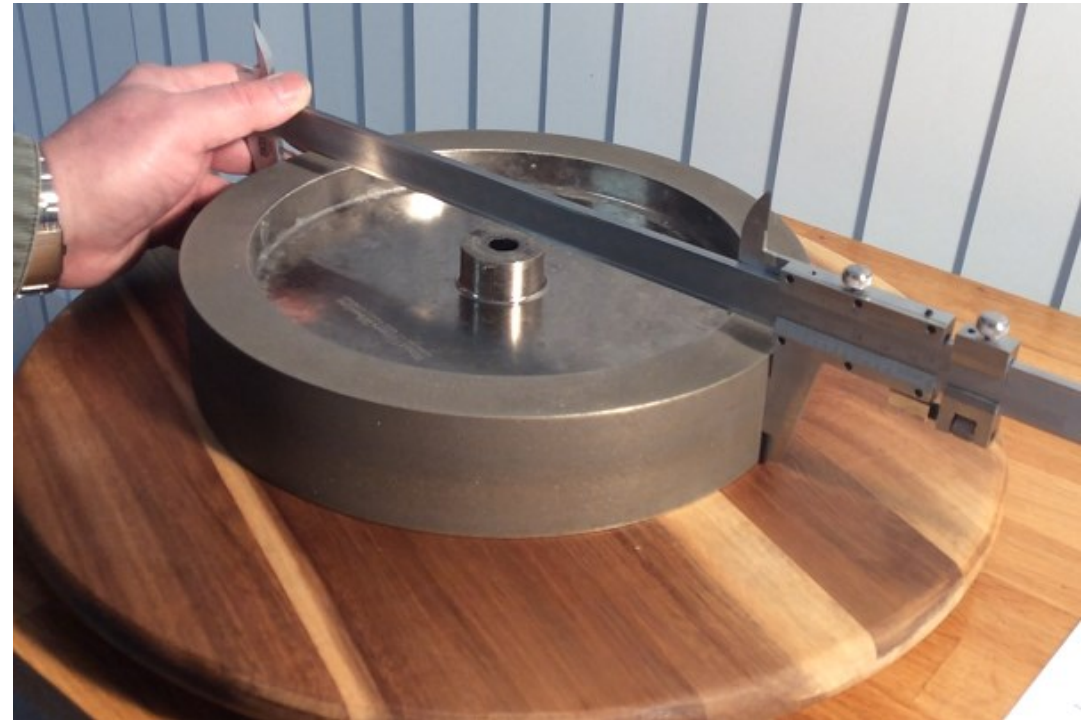
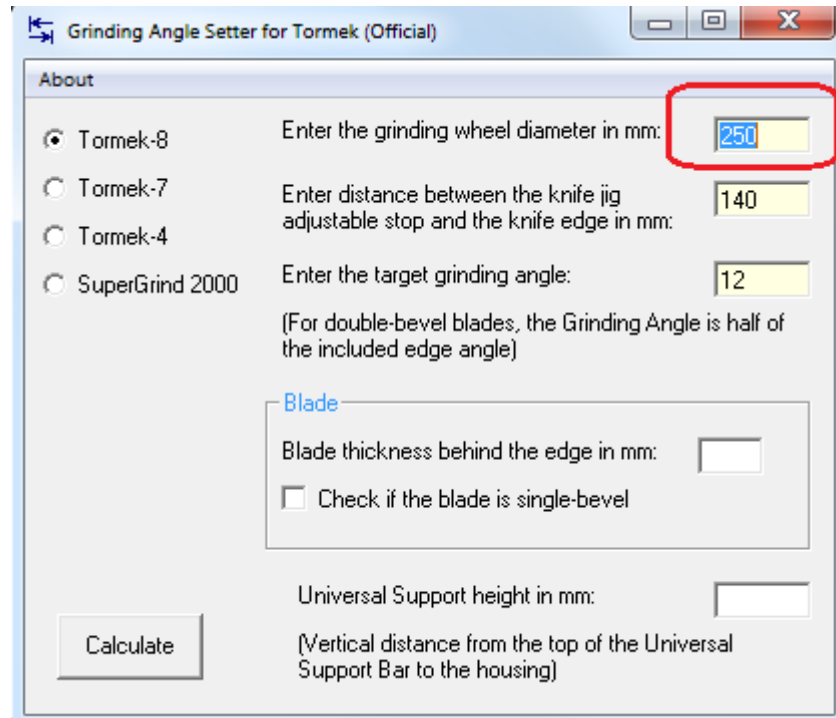
Calculate

If you own Tormek 3, select the option Tormek-4.

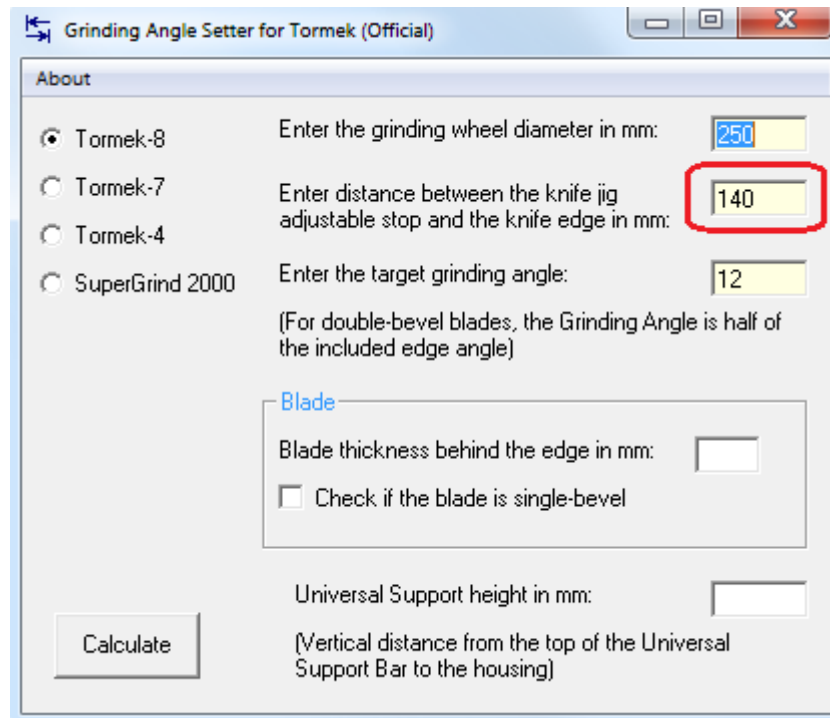
If you own Tormek 2000, select the option Tormek-7.

## Wheel Diameter

Wheel diameter is near 250 mm in a new Tormek T7 & T8 grinding wheel, and 200 mm in T4. Our CBN wheels diameter is 250.2 - 250.5 mm. You have to measure the actual diameter of your grinding wheel to a fraction of mm, using 300 mm calipers.



## Knife Jig Distance



Grinding Angle Setter for Tormek (Official)

About

☒ Tormek-8 Enter the grinding wheel diameter in mm: 250

☐ Tormek-7 Enter distance between the knife jig adjustable stop and the knife edge in mm: 140

☐ Tormek-4

☐ SuperGrind 2000 Enter the target grinding angle: 12

(For double-bevel blades, the Grinding Angle is half of the included edge angle)

Blade

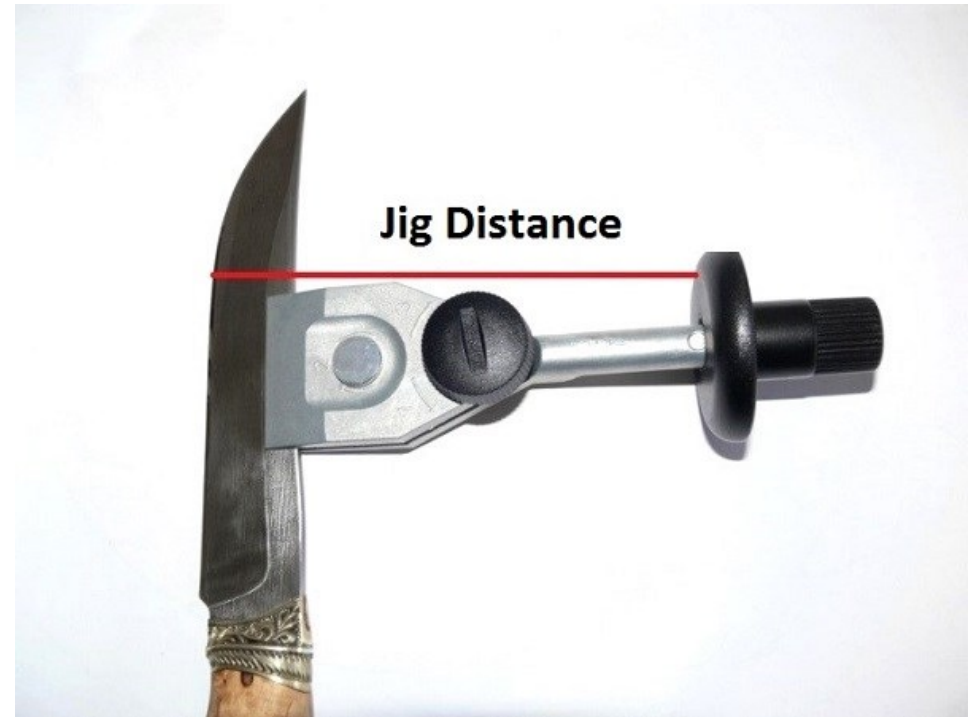
Blade thickness behind the edge in mm:

☐ Check if the blade is single-bevel

Calculate

Universal Support height in mm:

(Vertical distance from the top of the Universal Support Bar to the housing)



Measure to a fraction of mm the distance between the adjustable stop of the knife jig (the black plastic part) and the knife edge.

Use some kind of a jig setting block for better accuracy. The jig projection measuring/setting block has 2 functions: first is to align the knife edge parallel to the plane of the jig adjustable stop; and the second function is to accurately measure the **jig distance** for use with our software.







## Target Grinding Angle

Grinding Angle Setter for Tormek (Official)

About

☒ Tormek-8 Enter the grinding wheel diameter in mm: 250

☐ Tormek-7 Enter distance between the knife jig adjustable stop and the knife edge in mm: 140

☐ Tormek-4 Enter the target grinding angle: 12

(For double-bevel blades, the Grinding Angle is half of the included edge angle)

Blade

Blade thickness behind the edge in mm:

☐ Check if the blade is single-bevel

Universal Support height in mm:

Calculate

(Vertical distance from the top of the Universal Support Bar to the housing)

Enter the target edge angle in degrees per side (dps). For double-bevel blades, the **Grinding Angle** is half of the included edge angle.

## ***Blade thickness behind the edge***

Grinding Angle Setter for Tormek (Official)

About

☒ Tormek-8 Enter the grinding wheel diameter in mm: 250

☐ Tormek-7 Enter distance between the knife jig adjustable stop and the knife edge in mm: 140

☐ Tormek-4

☐ SuperGrind 2000 Enter the target grinding angle: 12

(For double-bevel blades, the Grinding Angle is half of the included edge angle)

Blade

Blade thickness behind the edge in mm: 0.8

☐ Check if the blade is single-bevel

Universal Support height in mm:

Calculate

(Vertical distance from the top of the Universal Support Bar to the housing)

Blade thickness behind the edge is not the same as thickness at the spine - you can have a knife 5 mm thick at the spine but 0.5 mm thin behind the edge.

Measure to a fraction of mm, using callipers or micrometre.





How to measure depends on the sharpening plan for this blade:

- when re-sharpening close to the original edge angle – measure at the edge bevel;
- when re-profiling to a lower angle or sharpening a grossly dull knife - within 3-5 mm from the edge bevel.

Re-sharpening close to the original edge angle – measure at the edge bevel



Re-profiling to a lower angle –within 3-5 mm from the edge bevel



Entering an accurate value for thickness behind the edge assures you will grind the edge to the target angle.

However, if accuracy of the edge angle is not your concern, and you chiefly want to match the ground angle to the honing angle for clean deburring, you can use this simplified method:

- For **thin** knives that measure behind the edge from 0.2 to 1.5 mm enter “**0.5**”;
- For **thicker** knives that measure behind the edge from 1.5 to 2.5 mm, enter “**2**”; and
- For really **thick** knives that measure behind the edge 3+ mm enter “**3**”.

Use the **same number** when honing with our **Frontal Vertical Base**.

### ***Check if the blade is single-bevel***

Grinding Angle Setter for Tormek (Official)

About

☒ Tormek-8 Enter the grinding wheel diameter in mm: 250

☐ Tormek-7 Enter distance between the knife jig adjustable stop and the knife edge in mm: 140

☐ Tormek-4

☐ SuperGrind 2000 Enter the target grinding angle: 12  
(For double-bevel blades, the Grinding Angle is half of the included edge angle)

Blade

Blade thickness behind the edge in mm: 0.8

☐ Check if the blade is single-bevel

Calculate

Universal Support height in mm:   
(Vertical distance from the top of the Universal Support Bar to the housing)

If you are sharpening a single-bevel knife, check this box.

Because you cannot centre the single-bevel blade in the Tormek knife jig, we use a clever computer algorithm to grind to the target angle. When sharpening a single-bevel knife on Tormek, use the stock, unmodified Tormek knife jig, and our software will take care of it.

But you always have to centre double-bevel knives in the knife jig as practical.

Having entered all the parameters, click the **Calculate button**

For your target grinding angle, the applet will give you the Universal Support bar height as a vertical distance from the top of the Universal Support bar to the housing.

Grinding Angle Setter for Tormek (Official)

About

☒ Tormek-8 Enter the grinding wheel diameter in mm: 250

☐ Tormek-7 Enter distance between the knife jig adjustable stop and the knife edge in mm: 140

☐ Tormek-4 Enter the target grinding angle: 12

(For double-bevel blades, the Grinding Angle is half of the included edge angle)

Blade

Blade thickness behind the edge in mm:

☐ Check if the blade is single-bevel

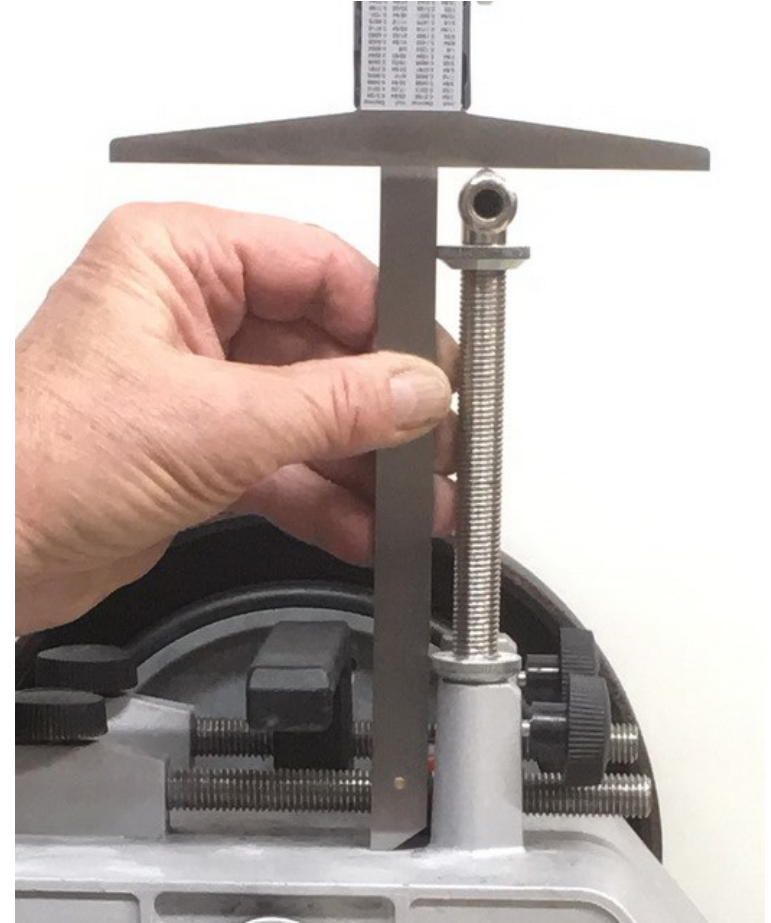
Calculate

Universal Support height in mm: 161.31

(Vertical distance from the top of the Universal Support Bar to the housing)

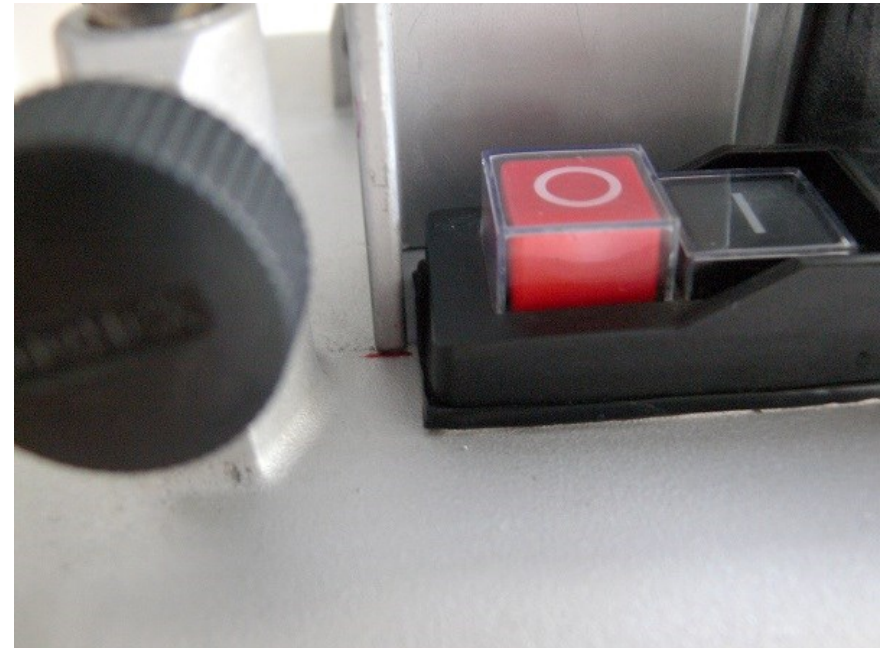


You can set the Universal Support bar height using the depth probe of your callipers, or depth callipers.



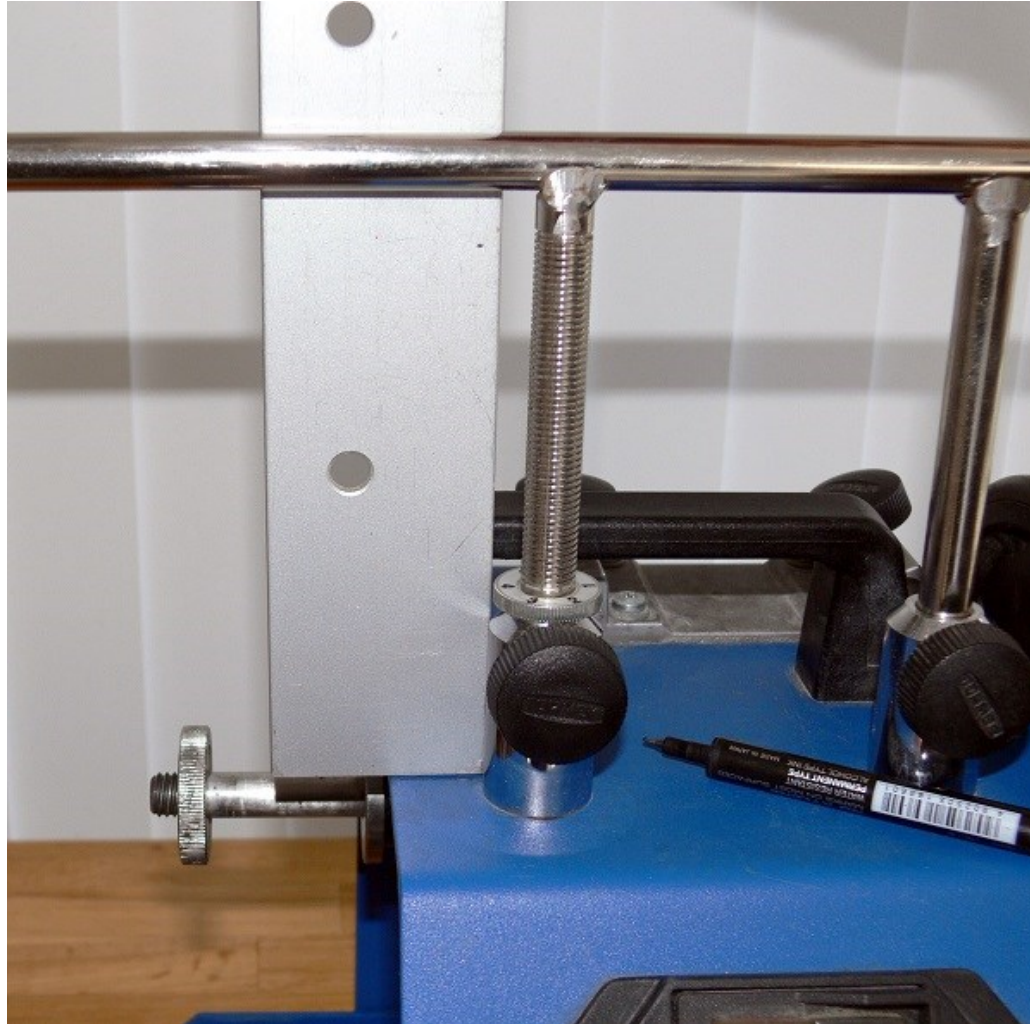
You have to think of a reliable method to drop perpendicular from the Universal Support bar to the housing. On T-8, we mark the line on the Tormek housing along the projection in front of the legs of the Universal Support, and set to a point on the line near the switch, making sure that the depth probe is parallel to the US leg.

The photos show how we mark the perpendicular.



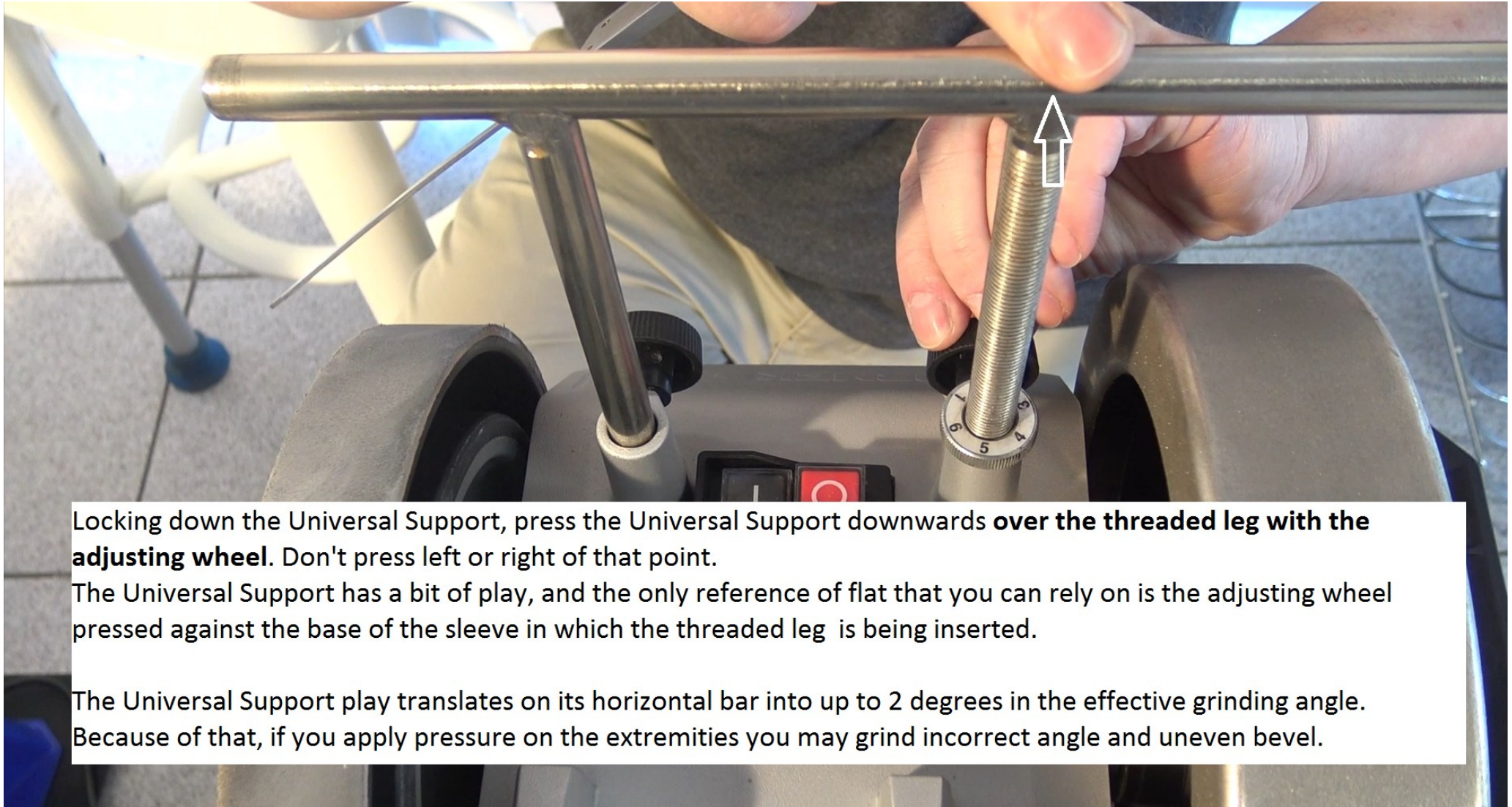


It is easier to mark on T-7.



Most important is to always set the Universal Support height to the same point on the Tormek housing.





Locking down the Universal Support, press the Universal Support downwards **over the threaded leg with the adjusting wheel**. Don't press left or right of that point.

The Universal Support has a bit of play, and the only reference of flat that you can rely on is the adjusting wheel pressed against the base of the sleeve in which the threaded leg is being inserted.

The Universal Support play translates on its horizontal bar into up to 2 degrees in the effective grinding angle. Because of that, if you apply pressure on the extremities you may grind incorrect angle and uneven bevel.

Now we can start grinding. Having ground bevels on your coarse wheel, change to the medium or fine wheel. If you use our CBN wheels, you can simply continue as they are very close in diameter.

However, if you use stone wheels, you need to match the wheels diameter with the help of the **Grinding Angle Setter**. Re-calculate using diameter of the next wheel, set the Universal Support to the new height, and grinding will continue at exactly the same angle.

When we sharpen a batch of knives at the same angle, and keep distance between the jig adjustable stop and the knife edge constant as we clamp new knives, we do not have to recalculate the Universal Support height for a given grinding wheel, unless after truing that wheel. If for whatever reason we change the clamping distance, or have to sharpen at a different angle, we recalculate the Universal Support height.

Having set edge on your knife, deburr on the Tormek leather wheel at a controlled angle using our **Frontal Vertical Base**.

## HOW TO USE THE FRONTAL VERTICAL BASE APPLET (FVB)

The main purpose of our FVB is to deburr cleanly not rounding the edge.

The FVB angle setter has additional input fields for the Frontal Vertical Base position

Frontal Vertical Base for Tormek (Official)

About

☒ Tormek-8 Enter the honing or grinding wheel diameter in mm: 215  
(Tormek-7/8 leather wheel diameter is 215 mm)

☐ Tormek-7 Enter distance between the knife jig adjustable stop and the edge in mm: 140

☐ Tormek-4 Enter the target honing/grinding angle: 12

☐ SuperGrind 2000 (For double-bevel blades, the Grinding Angle is half of the included edge angle)

**FVB position**

☒ Preset standard (knives)

☐ Preset extended (cleavers etc)

☐ Ad hoc in mm: [input field]  
(FVB rod protrusion)

Calculate

**Blade**

Blade thickness behind the edge in mm: [input field]

☐ Check if the blade is single-bevel

Universal Support height in mm: [input field]  
(Vertical distance from the top of the Universal Support bar to the top of the FVB)

### ***Preset standard (knives)***

Use this option for knives of regular size.

Insert the FVB into the horizontal sleeves of your Tormek till the FVB is pressed against the Tormek housing, and lock the FVB position with the black locking screws of your Tormek horizontal sleeves.

Preset standard position





### ***Preset extended (cleavers etc)***

Preset extended position



Use this option for wide blades that do not fit the preset standard position of the FVB, e.g. meat and veggie cleavers or machetes. Insert the FVB into the horizontal sleeves of your Tormek till the mark on the FVB rod is flush with the end of the Tormek horizontal sleeves. Lock the FVB position with the black locking screws of your Tormek horizontal sleeves.

### ***Ad hoc in mm (FVB rod protrusion)***

“**Ad hoc**” option of the application is for variable position of the Frontal Vertical Base (FVB). The nut on the threaded rod is used for fine adjustment when setting the angle with the marker method, and to an arbitrary “ad-hoc” position.

In some situations the edge of the blade may not fit the wheel in preset positions. This may happen when you hone on the Tormek leather wheel a low edge angle knife (e.g. 10 degrees) in the position **Preset standard (knives)**, and the Universal Support does not go low enough for the edge to contact the wheel. Or you sharpen a very wide blade, and the Universal Support height is not enough in the position **Preset extended (cleavers)**.

In these situations we extend the FVB till the edge of the blade contacts the wheel, and fix the FVB in this position.

Measure distance from the end of the Tormek horizontal sleeves to the FVB base, and enter the value in mm into the “Ad hoc” field – this distance is called the “FVB rod protrusion”.

Frontal Vertical Base for Tormek (Official)

About

☐ Tormek-8 Enter the honing or grinding wheel diameter in mm: 250.2  
(Tormek-7/8 leather wheel diameter is 215 mm)

☒ Tormek-7 Enter distance between the knife jig adjustable stop and the edge in mm: 140

☐ Tormek-4 Enter the target honing/grinding angle: 12

☐ SuperGrind 2000 (For double-bevel blades, the Angle is half of the included edge angle)

**FVB position**

☐ Preset standard (knives)

☐ Preset extended (cleavers etc)

☒ Ad hoc in mm: 110 (FVB rod protrusion)

**Blade**

Blade thickness behind the edge in mm: 1

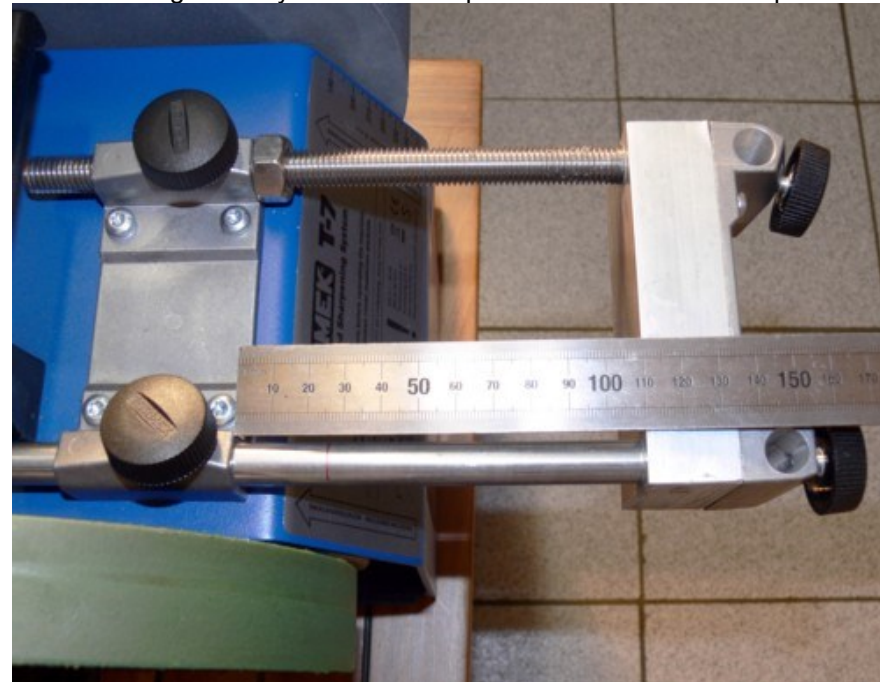
☐ Check if the blade is single-bevel

Universal Support height in mm:

(Vertical distance from the top of the Universal Support bar to the top of the FVB)

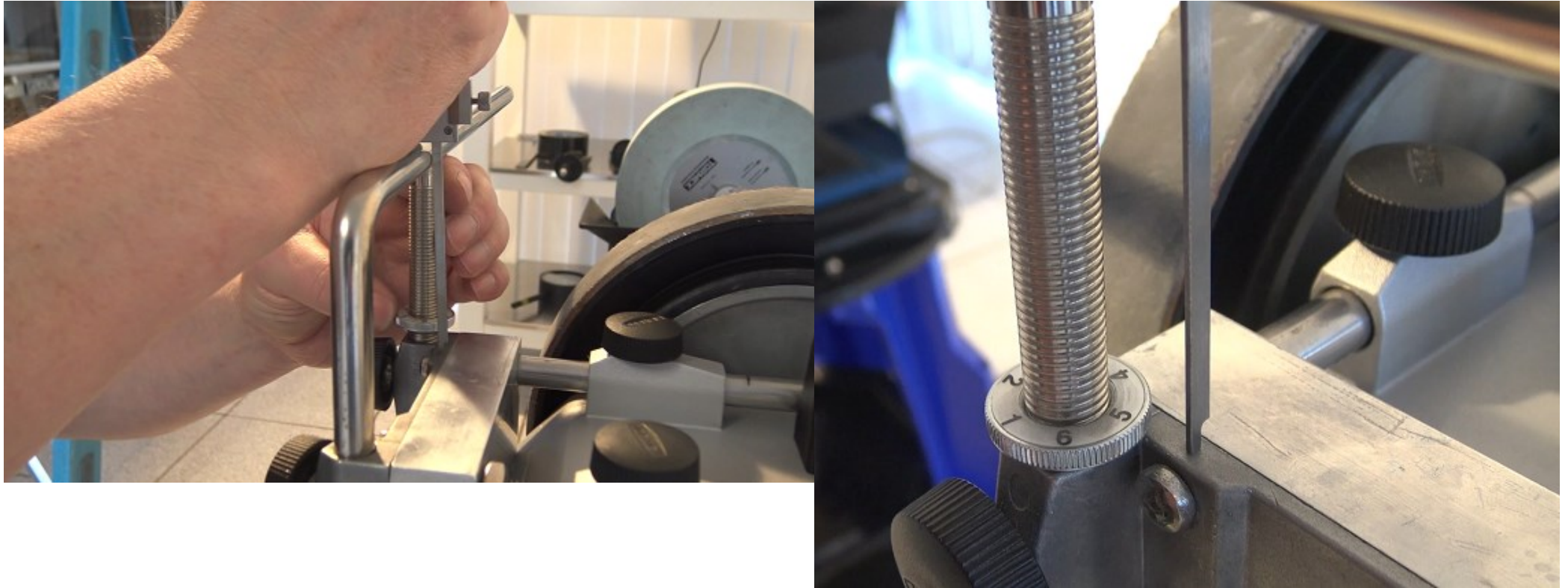
Calculate

Measuring arbitrary "Ad hoc" FVB position = 110 mm on the photo



For your target grinding or honing angle, the applet will give you the Universal Support bar height as a vertical distance from the top of the Universal Support bar to the top of the FVB.

Set the Universal Support bar height with the help of a depth probe. It is important to always set the Universal Support height to the same point on the top of the Frontal Vertical Base. The recommended point for honing is shown on the following photos.



Thanks to the perfect match of the ground angle to the honing angle, the edge is deburred cleanly to an ultra-sharp apex.



Exhaustive testing of our software for Tormek is published on our website:

[http://knifegrinders.com.au/software\\_testing.htm](http://knifegrinders.com.au/software_testing.htm)

Runs on all Windows, MacBook, iPhones and iPads, Android smartphones and tablets.