

# Liebherr/Barber Colman Hob Settings

## QUESTION #2

I would like some instructions for setting the degrees and minutes on a Liebherr or Barber Colman hob. Our machines use a Vernier scale to match the lead angle of the cutter to the part to form straight teeth. There is a dispute on how to do this task, and I wanted insight from another professional.

**Expert response provided by Hans Grass, vice president, Machine Tool Group, Star SU LLC.**

Regardless of what model and brand of hobbing machine, the hob head angle is set to the same angle as the lead angle of the hob for spur gears. In other words, the angular position of the hob head is adjusted to line up the lead of the hob to be parallel to the axis of the work.

For example: for an RH hob, and the hob head is on the LH side of the work spindle for a vertical hobbing machine,

the hob head angle is set CW from zero, looking from the center of the work spindle towards the hob head. This is the best definition without knowledge of the plus/minus marking of the Vernier scale, depending on the manufacturer of the machine.

Helical gear example: For an RH helix angle of the workpiece, the hob head angle is set to a CCW angle equal to the helix angle minus the hob lead angle for the above mentioned hob head arrangement and definition of rotational direction.

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**Hans Grass**, vice president, Machine Tool Group, Star SU LLC



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