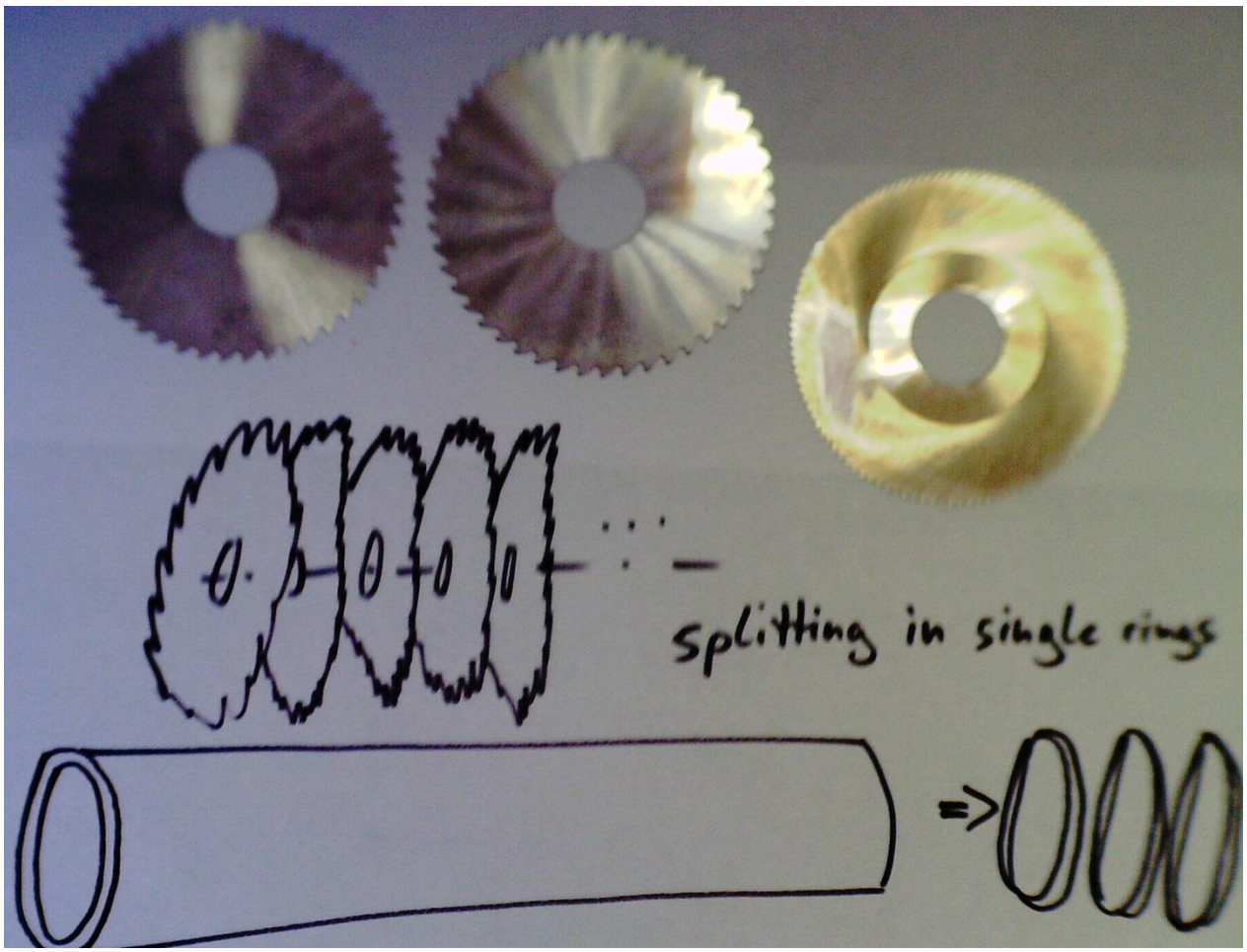
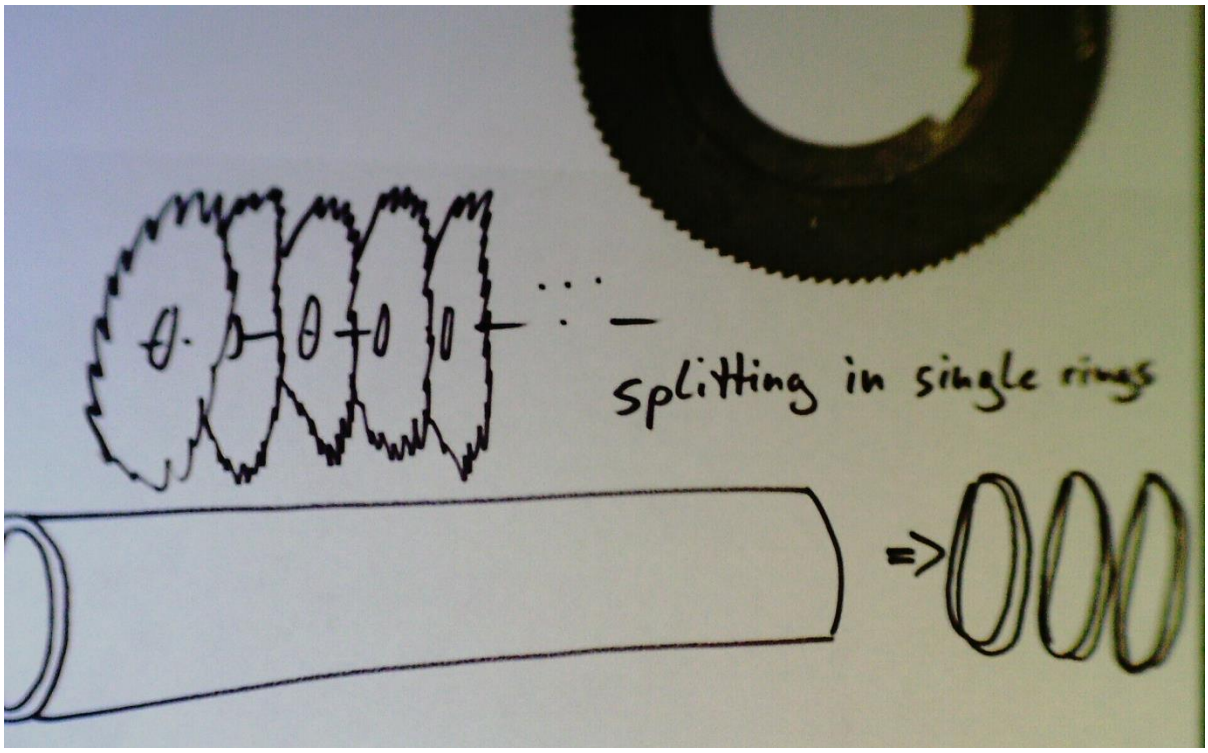
For Piston rings there are basically three interesting processes for us:

1) Splitting from the cast in the single rings
2) opening the rings (gap)
3) cutting the oil groves in the oil rings

In each category different sizes and toothings depending on the material and the size of the piston rings are used.

1) Splitting



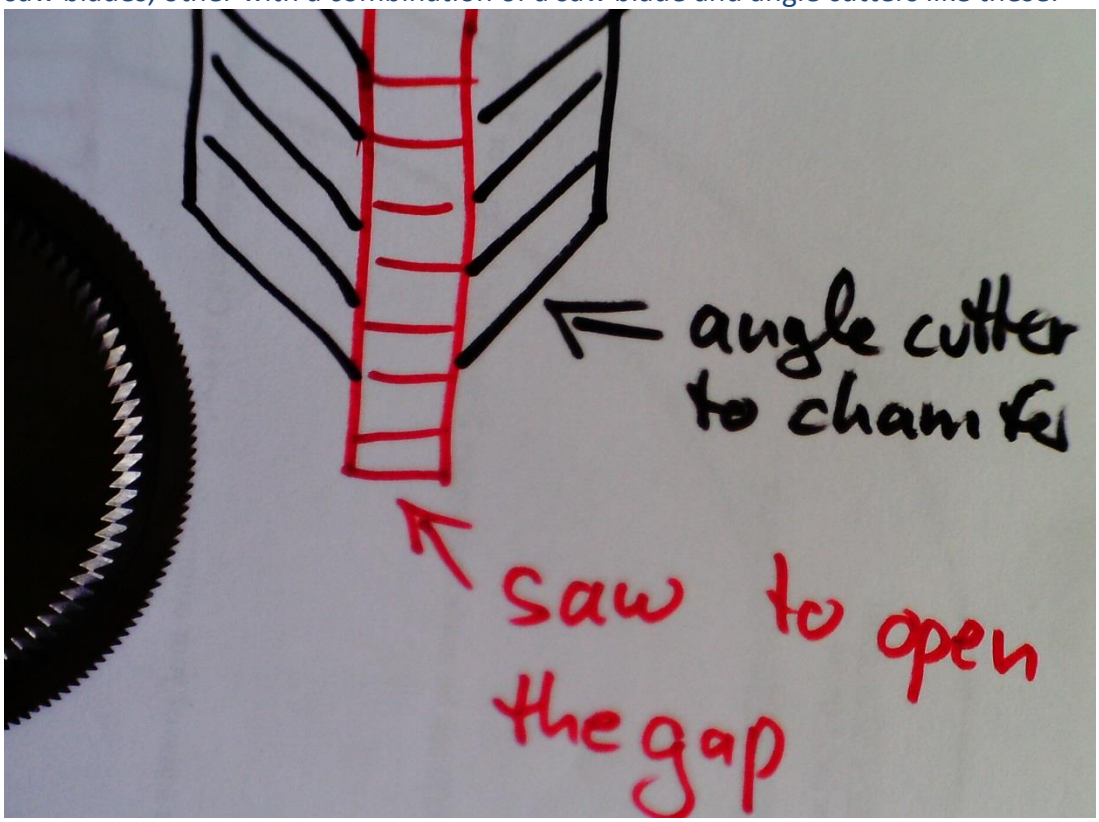


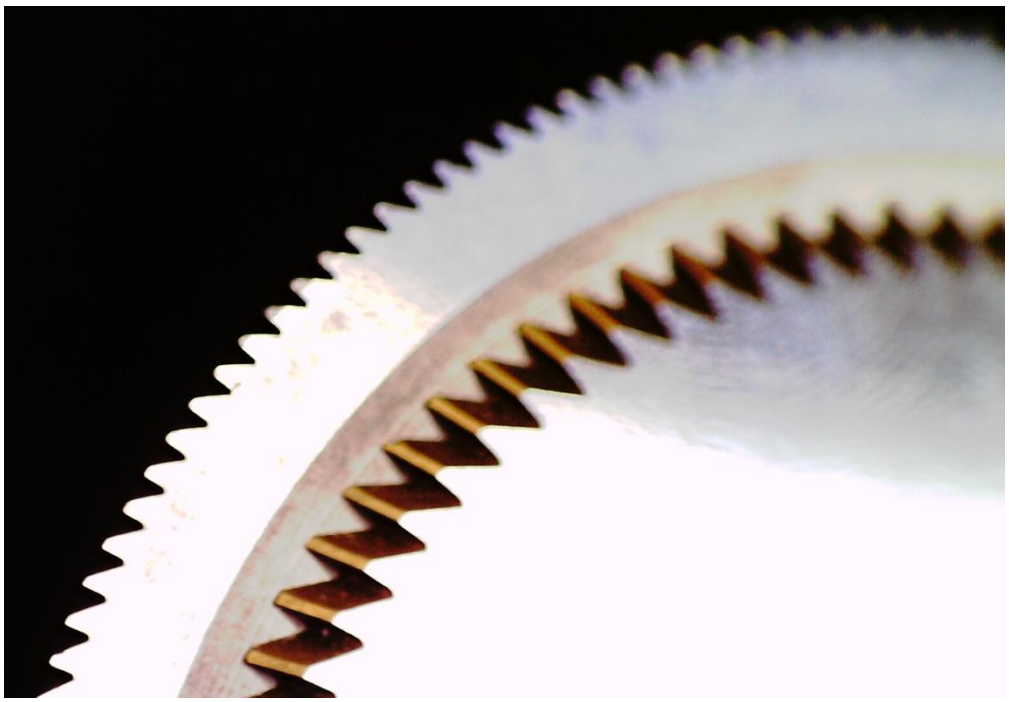
125mm saw


Splitted Rings

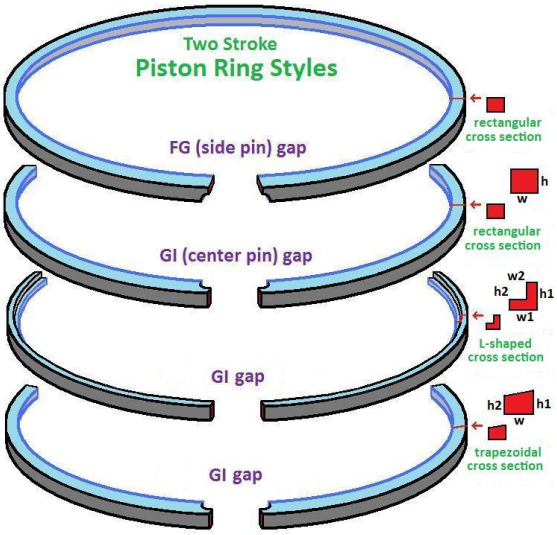
2) Gap

There are different kind of gaps wher different tools are used for. Some gaps are made just with saw blades, other with a combination of a saw blade and angle cutters like these:





Here you can see some gap styles, but there are a few more.



3) Halfround cutters for oil grooves

We produce many radius cutters which are used in sets to cut the oil groves in the rings. We produce these out of solid carbide and HSS-Co in different widths with different radii.
They put the rings together on one spindle (lined up with the gap) and plunge down with a big spindle of these radius cutters.