



Waltham Road, White Waltham,
Maidenhead, Berkshire, SL6 3LR, UK
Tel: +44(0)1628 827600
Fax: +44(0)1628 829706
e-mail: stephen.d@hewland.com
www.hewland.com



Hewland Engineering has recently invested a KAPP VAS 55 (p) grinding machine. This high specification machine has been sited in a dedicated environmentally controlled grinding facility along with a range of Studer and Jones & Shipman grinding machines.

The KAPP machine has the following capabilities:

- ✓ NC Profile Dressing (with the capability of producing non-involute forms)
- ✓ Integrated Gear Measuring System
- ✓ Configured for Internal Gear Grinding
- ✓ Maximum Module 16
- ✓ Maximum OD of Gear 500mm
- ✓ Overall workpiece length 1m
- ✓ Capable of Grinding Prototype Gears from Solid
- ✓ CBN and Vitrified Dressable Grinding Wheels
- ✓ CBN Non-dressable Grinding Wheels
- ✓ Grinding of Spur & Helical Gears, Worms, Threads, Internal Threads etc.
- ✓ Grinding-Measuring-Grinding Strategy
- ✓ Gear modifications for Tip & Root Relief, Fillet Radius and Radius Transitions

The process of full form profile grinding of gear teeth allows the tooth form to be fully optimised, giving the advantage that we can discuss with the client and specify the design and manufacture of the profile geometry for individual bespoke applications.

The refinement of gear accuracy and surface finish allows for increased durability, cooler running and efficiencies rig measured at 20% improvement in power loss.

The process also benefits by being able to control the repeatability of parts, to allow greater consistency in normal lifing.

Gear grinding creates a better finish yielding lower drag. cool running, and better durability. This enables us to produce smaller, lighter, stronger gear sets for a variety of applications from F3 to F1 as well as a number of non-autosport markets.

Increased root and flank load carrying capacity have the additional advantage of being able to design transmissions with reduced overall gear box dimensions coupled with the the advantage of quieter running transmissions (noise, vibrations at high speeds)

There is also a marked gain in mechanical efficiency, durability and refinement in the application of helical gears with full-form ground teeth with multi-cone synchroniser engagement.