

CASTROL NEAT OILS GIVE YOU THE ADVANTAGE

CHOOSING OUR NEAT OILS WILL BOOST YOUR PRODUCTIVITY

- Increased feeds and speeds reduce cycle times
- Enhanced tool life cuts down-time and tooling costs
- Easy-to-manage products let you focus on your core operations
- Multi-functional neat cutting oils lead to reduced product inventory

OUR PRODUCTS CAN HELP YOU TO IMPROVE YOUR HEALTH, SAFETY AND ENVIRONMENTAL (HSE) PERFORMANCE

- Ester and hydrocracked technologies give you a higher flash point, lighter colour, improved misting and odour, and higher oxidation stability. This results in increased operator acceptance
- Products with lower viscosity reduce drag out resulting in lower consumption and a cleaner working environment
- Our range meets your local legislative requirements, eg. chlorine free or heavy metal free

WE CAN MEET YOUR MACHINING REQUIREMENTS

- Our dedicated range of neat oils fulfils your operational needs – from honing to broaching and for all ferrous and non-ferrous metals
- Castrol's multi-metal compatible metalworking oils reduce the risk of metal staining and corrosion

OUR NEAT OILS RANGE AT A GLANCE

Castrol Variocut HC: Extreme High Viscosity Index (EHVI) hydrocracked base oil range.

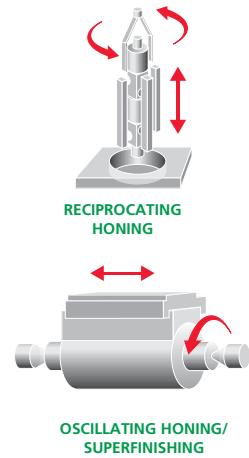
Castrol Variocut: Highly refined base oil range in combination with chlorine free technology.

**Castrol Ilocut
Castrol Honilo** Complete range based on proven additive technology and highly refined base oils.

HONING AND SUPERFINISHING

Honing is a low speed, surface finishing process used to produce uniform components with high accuracy and fine surface finish. Metal particles are removed by the shearing action of a moving honing stone or stick.

Superfinishing is a polishing process that utilises abrasive tapes or specialised superfinishing stones to provide a unique and consistent finish.

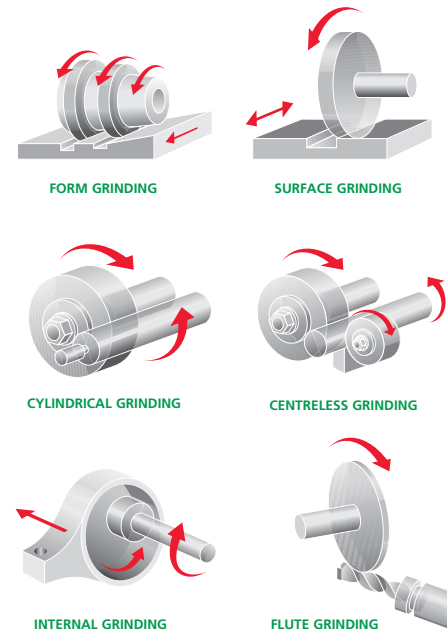


Our **Castrol Honilo** range offers the following features and benefits.

Features	Benefits
Compatible with all metals	<ul style="list-style-type: none"> • No staining on ferrous and non-ferrous metals
Excellent flushing and lubrication properties	<ul style="list-style-type: none"> • Extends honing stone life • Maintains high surface finish and dimensional accuracy
Chlorine and heavy metal free	<ul style="list-style-type: none"> • Good for your environmental requirements
Formulated on highly refined base oils and high flash point biodegradable ester	<ul style="list-style-type: none"> • Reduces disposal costs • Meets your productivity demands
Low viscosity	<ul style="list-style-type: none"> • Minimises oil drag out, especially with small parts

GRINDING

Grinding is a process in which small particles of metal are removed from the work piece surface using an abrasive wheel. It is used to produce components of precise geometry and surface finish. The type of grinding process and the choice of wheel material and grit size depends upon the shape of the component, the metal removal rate and the required surface finish.

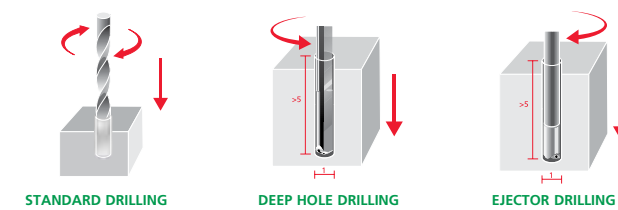


Our **Castrol Variocut** range offers the following features and benefits.

Features	Benefits
Chlorine free	<ul style="list-style-type: none"> • Good for your environmental requirements • Reduces disposal costs
Wide range of base oil technologies, including thermally stable base oils, the latest generation of EHVI hydrocracked (aromatic free) base oils and advanced readily biodegradable synthetic esters	<ul style="list-style-type: none"> • Good for your environmental requirements • Meets your productivity demands • Low odour and pale colour
Advanced additive technology leads to exceptional wetting and lubricating properties	<ul style="list-style-type: none"> • High cutting efficiency delivers extended tool life and excellent surface finish • Allows higher productivity • Maintains accuracy of grinding wheels over a long time period with reduced down-time and tooling costs, e.g. wheel dressing etc.
Minimal mist generation and low viscosity	<ul style="list-style-type: none"> • Improves working environment • Reduces drag out and improves filtration properties

DRILLING AND DEEP HOLE DRILLING

Drilling is a machining process where a solid fluted tool is used to produce a hole in a solid component. The cutting tips are situated at the end of the drill and the flutes allow coolant to enter the cutting zone and allow metal chips to evacuate the hole. With deep hole and ejector drilling the cutting tip is supplied with coolant, at high pressure, through a hole down the centre of the drill and the chips are ejected via a groove or a second hole down the length of the drill body.



Our **Castrol Variocut** and **Ilocut** ranges offer the following features and benefits.

Features	Benefits
Advanced additive technology giving high extreme pressure (EP) lubrication properties	<ul style="list-style-type: none"> • Lowers production costs through extended tool life, minimised wear, improved surface finish and increased cutting speeds
Compatible with paints, plastics and standard elastomers	<ul style="list-style-type: none"> • Reduces compatibility issues and maintenance costs

BROACHING AND GEAR MANUFACTURING

Broaching is a machining process in which a cutting tool is pushed or pulled through a hole or across a surface to remove metal. The cutting teeth are set so that each tooth removes a small amount of metal.

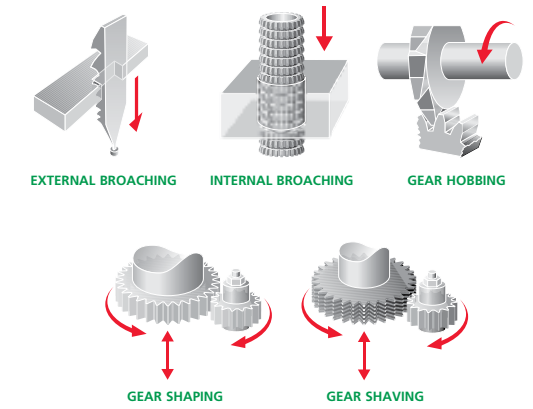
Gear hobbing is a multi-point machining process in which gear teeth are progressively generated by a series of cuts with a helical cutting tool (hob). Both the hob and the work piece revolve constantly as the hob is fed across the face width of the gear blank.

Gear shaping uses a gear shaped cutter that is reciprocated and rotated, in relation to a blank, to produce the gear teeth.

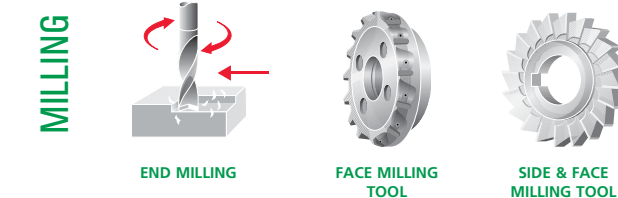
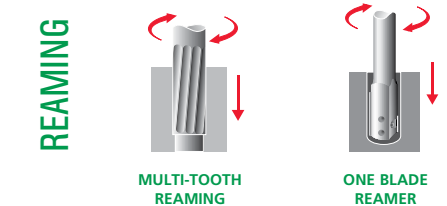
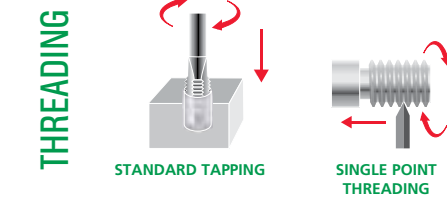
Gear shaving is applied to unhardened gears to improve their accuracy and uses a gashed rotary cutter in the shape of a helical gear which removes small slivers of material from the tooth profile.

Our **Castrol Variocut** range offers the following features and benefits.

Features	Benefits
Advanced additive technology giving high EP lubrication properties	<ul style="list-style-type: none"> • Lowers production costs through extended tool life, minimised wear, improved surface finish and increased cutting speeds
Compatible with paints, plastics and standard elastomers	<ul style="list-style-type: none"> • Reduces compatibility issues and maintenance costs



GENERAL MACHINING



Our **Castrol Variocut** and **Ilocut** ranges offer the following features and benefits.

Features	Benefits
Advanced additive technology giving high EP lubrication properties	<ul style="list-style-type: none"> • Lowers production costs through extended tool life, minimised wear, improved surface finish and increased cutting speeds
Compatible with paints, plastics and standard elastomers	<ul style="list-style-type: none"> • Reduces compatibility issues and maintenance costs

THE EXPERTS IN NEAT OIL TECHNOLOGY

CASTROL OFFERS YOU A COMPREHENSIVE RANGE OF WORLD-CLASS NEAT OILS AND PRODUCT SUPPORT SERVICES THAT WILL HELP YOU TO:

- INCREASE YOUR PRODUCTIVITY AND PERFORMANCE
- FULFIL YOUR HEALTH, SAFETY AND ENVIRONMENTAL REQUIREMENTS
- MEET YOUR MACHINING NEEDS

We can offer you these vital benefits by harnessing the leading edge global process and application knowledge provided by our network of engineering and research professionals. This expertise will be delivered directly to you by our knowledgeable local sales and support teams.

Our goal is to generate cost savings for you by boosting your productivity, helping you to achieve your manufacturing targets and improving your work environment.

Simply, you can trust Castrol to provide the right product for the job, across all your operations.

A CHOICE TO SUIT YOUR NEEDS

Castrol has a high performance and versatile range of neat oils designed to meet your metalworking requirements.

As the experts in neat oil technology, our sales team will work with you to select the right products for your operations, taking the following important factors into account:

- Your machining process – speed, feed, depth of cut and tooling properties
- Material specifications
- Surface finish requirements
- System parameters – size, filtration, flow rate
- Local legislative requirements
- Waste treatment
- Compatibility with your entire process

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To make any comments about Castrol Products and services call:
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METALWORKING

NEAT CUTTING & GRINDING OILS

YOUR ADVANTAGE IN AN INDUSTRIAL WORLD

IT'S MORE THAN JUST OIL. IT'S LIQUID ENGINEERING.



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