

# WICKMAN



A versatile range of 2, 4, 5 & 7 axis turning centres with the ability to perform simultaneous operations and finish components on a single machine, with power tooling and 'C' axis control. Machines can be supplied with gantry and other types of loading to suit customers requirements.

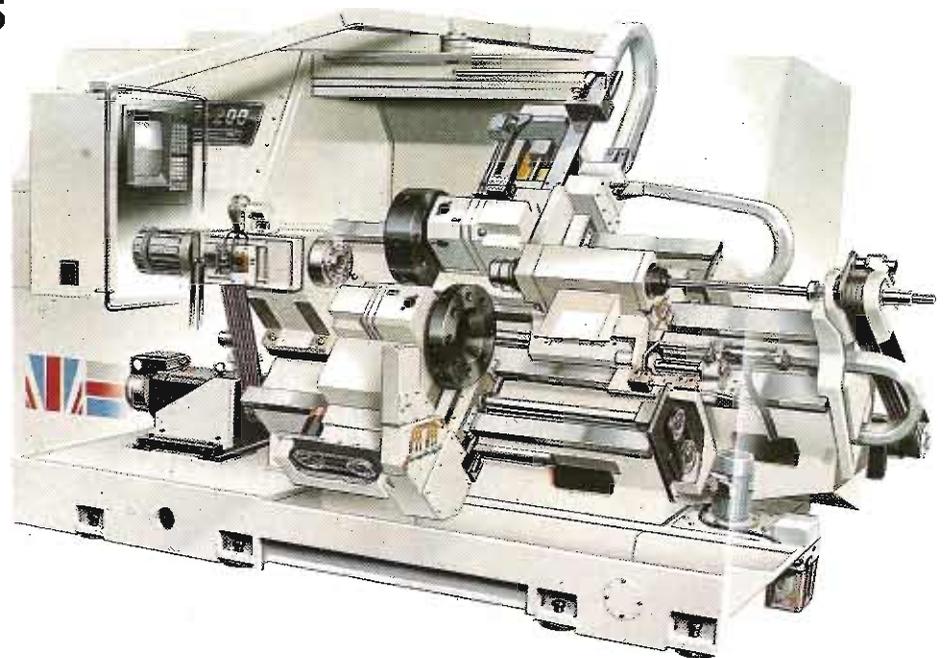
## Design Features

### INCLUDE:-

- Simultaneous machining on each turret substantially reducing cycle times.
- Driven tooling available on each turret resulting in shorter rapid cycle times and complete secondary operations.
- Automatic bar loading with magazine/storage – increased efficiency by reducing loading time.
- Spindle positioning available with 5° (2½° optional) indexing increments and fully programmable 'C' axis – offering turning and secondary operations in a single set-up.
- Working area conveniently positioned on the 45° slant bed – for ease of setting and for compatibility with robot, gantry or other handling systems.
- Choice of C.N.C. controls offering full graphics, operator prompting, diagnostics and other features.
- Rigid bed construction with isolated drive – providing stability, high accuracy and consistent quality.
- Induction hardened ground ways with Turcite coated mating surfaces and central lubrication system.
- Tool breakage detection available – with the ability to suspend operation or automatically replace with back-up tool.
- In-process gauging available – to enable continuous monitoring of statistical process control.
- Tool wear compensation available – tools are automatically monitored for wear with data transmitted to the C.N.C. for automatic compensation of off-sets.
- Part catcher within the C.N.C. cycle – avoiding damage following parting-off operation.

## 5 Axis Design Features

Whilst incorporating many of the features of the 2,3 and 4 axis machines, the 5 axis has in addition a secondary operation spindle positioned at the rear of the bed, and in-line with the head stock spindle. This allows components to be transferred to the secondary spindle enabling the parts to be completed at one set-up where normally two would be required on conventional machines. The secondary spindle is served by a dedicated disc turret on the lower slide, which is also available with either driven or non-driven tools, thus first and second operations are machined simultaneously on separate spindles within the cycle time for producing the longest of the two operations.





# Headstock Assembly

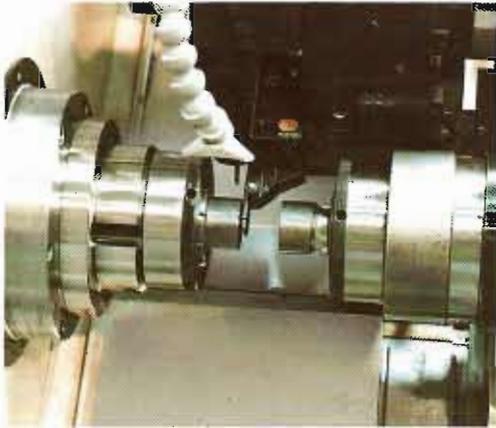
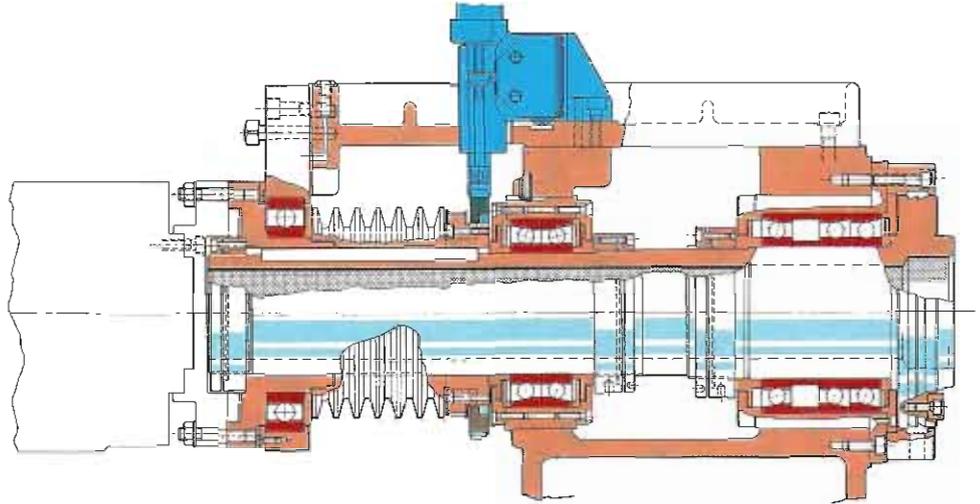
The Headstock is of a substantial, rigid design to take advantage of bearing technology, permitting higher spindle speeds.

The hardened and ground spindle is supported at the front by a pre-loaded pack of three precision angular contact bearings, and at the rear by a pack of two precision A/C bearings. In addition the Wickman Bennett Design incorporates an outrigger ball race support bearing for the drive pulley and hydraulic cylinder assembly, which ensures even further spindle stiffness under the heaviest cutting loads.

## MAIN SPINDLE

Substantial and torsional stiffness in spindle provides rigidity under heavy cutting loads at high speeds.

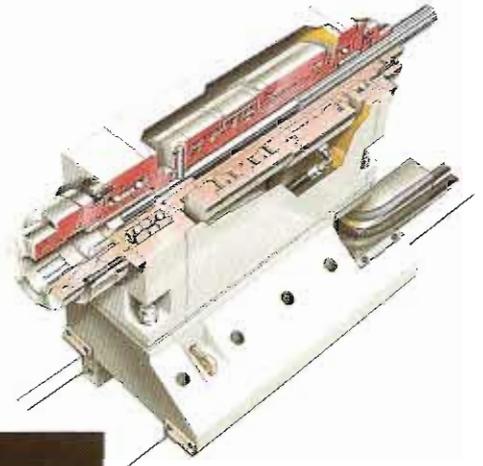
Spindle rotation is reversible.



## SECONDARY SPINDLE

The secondary operation spindle is capable of synchronous running with the main spindle. Therefore when revolving components are transferred to the rear turning position (during parting-off operation in the case of bar machines), any likelihood of run-out, part off pips, and marking on chucking diameter are eliminated.

Part catcher with the C.N.C. cycle at the secondary operation spindle – to eliminate damage, and orientate components for compatibility to robot or gantry unloading.

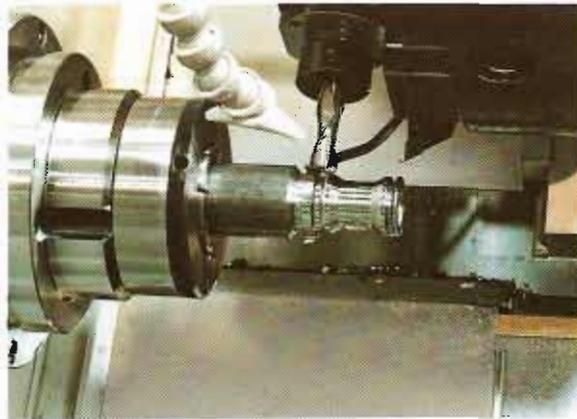


Secondary operation spindle

## 'C Axis'

When the machine is equipped with the rotary 'C' axis servo drive, spindle rotation under cut permits contour milling in conjunction with the driven tools.

Spindle positioning for auto-loading or cross milling and drilling operations is available without the necessity for a rotary 'C' axis on the spindle. The spindle is automatically positioned in increments of 5 degrees (or 2.5 degrees as an option), and locked in position with an electro-mechanical device.



# CNC Control Systems

Fanuc Series OT Option Fanuc Series OTF	<b>2 Axis</b>
Fanuc Series OT Option Fanuc Series OTF	<b>4 Axis</b>
Fanuc Series 15 TT Option Fanuc Series 15 TTF	<b>5 Axis</b>

Features include:-

- Conversational multi-language programming and diagnostic systems.
- All data can be stored in bubble memories to protect against loss of data during power failure.
- Calculations for inter-section points, co-ordinated values, and other complicated data are no longer required. By entering the data described on the workpiece drawings, selected controls can do the rest.
- Graphic displays for convenient programme verification. The trace function can monitor the actual machining in real time on the C.R.T. display allowing the operator to know exactly where his tool is during the operation.

Wickman Bennett Machine Tool Co. Ltd, is a member of the Ketlon Group

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We reserve the right to alter the specification of our machines without prior notice.