

Webster & Bennett Millennium 3E-125/150VTC vertical turning and machining centres with Siemens 840D CNC

Serviced and refurbished to work to original new machine tolerances

The Millennium range was designed and built to provide a unique turning and machining capability. For full technical specification please see attachment

These machines handle very efficiently both simple turning processes and the very complex combination of turning, drilling, contour milling and grinding of large basically round components, all with high precision and high metal removal if required

The machine on offer has been used solely in the production of high precision aerospace components and although the Millennium is proven for heavy cutting this machine has never been stressed in heavy metal removal conditions

It is offered with two 18 pocket tool magazines that accommodate both live tools and turning tools in every pre-set pocket. The length of the crossrail allows tool pick up from an ATC magazine on each side of the machine. Chip conveyor with built in coolant

Basic Specification

Maximum turning diameter and swing	1500mm
Max workpiece + fixture weight	10,000kgs
Maximum height under ram	1200mm.

Crossrail can be repositioned at 200mm precision latched intervals

Table - 4 jaw steel faceplate chuck dia, 1250mm

Table drive - 37kw (continuous duty) DC motor

Table speeds 1 – 580rpm. Minimum table speed at full power – 36rpm.

These are very high and very quiet chuck speeds for a machine of this capacity.

Workholding is paramount if these ultra high speeds are to be used.

Max cutting force **Z** axis 45kN. Feed force for turning **X** axis 30kN.

Full C axis to the table is very precise and powerful for precision rotary contour milling, PCD drilling, off centre thread milling

C axis table positional accuracy ± 5 arc secs, repeatability ± 2.5 arc/secs. *When we commission we can usually leave the machine with accuracies substantially better than standard*

C axis – table speed for PCD positioning - up to 5.3rpm.

C axis – table speed for contour milling 0.1 – 2.65rpm. Torque at table 5000Nm

To work together with the **C axis control** is the **Live spindle ram**. It accepts static tools for turning and 50 taper live spindle tools for milling, drilling and grinding

Live spindle ram	200mm square.
Ram stroke (Z axis)	1000mm.
Live spindle power	18kw.
Live spindle speeds	20-3000rpm.
Z axis feeds	0 – 5000mm/min.
Feed force	45kN
Rapid traverse	10,000mm/min

Ram saddle travel - X axis
left and right of centre 1430mm (2860mm total)

Positional accuracy X and Z $\pm 0.0075\text{mm}/1000\text{mm}$. Repeat $0.005\text{mm}/1000\text{mm}$

ATC magazine capacity

Number of positions	18
Maximum individual tool weight	53 kg
Maximum total tool weight in magazine	700 kg
Maximum tool length	450 mm

ATC magazines on each side provide 36 tool pockets to allow the automatic tool pick up of a wide range of turning and milling tools and attachments

Substantial chip conveyor with high capacity coolant tank and pump

The above is a very short description of a very sophisticated high precision, high power machine tool

Viewing and testing under power in our workshop close to Birmingham Airport

PRICE £295,000 installed onto your prepared foundation and commissioned in your works subject to the extra costs of travel, accommodation, machine transport, rigging/lifting and duty if applicable.

The price includes **12 months warranty of 96% uptime performance** and a full PMP service at 6 months and 12 months, only cost being travel and accommodation

Guarding of this high performance machines is designed together with the machine purchaser. Areas to guard are the machine surround, the tool magazine and to provide coolant and chip clearance control. The purchasers positioning preference for the chip conveyor also has significance. This is a very important design to get right and to function test totally. A budget cost is £30,000.

Tooling options – in addition to standard tooling we can offer right angle milling heads and high precision grinding heads



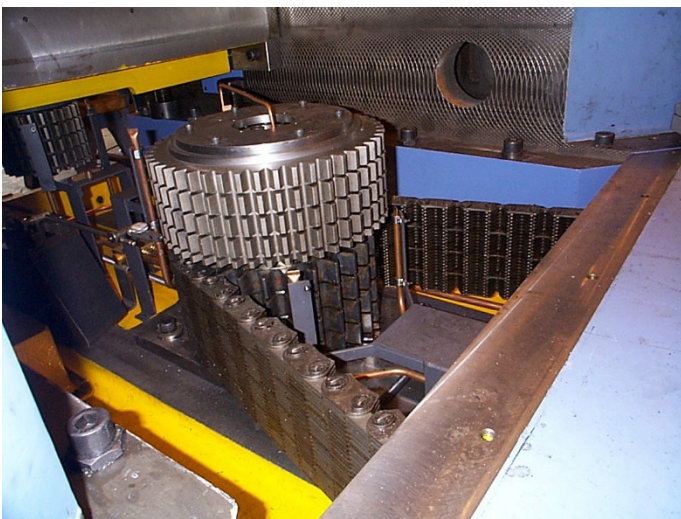
VTT-WB LTD

3E-125/150VTC with 36 pocket ATCs. C axis lasering better than new



WEBSTER & BENNETT MILLENNIUM VERTICAL TURNING LATHES AND VERTICAL TURNING & MILLING CENTRES

Conceived, designed and built with innovative world leading features that won multiple orders from world leading companies in demanding industries - aero engine manufacture and repair, missiles, compressors, turbines, oil and gas, rail and submarine transmissions, locomotive turbo chargers, space rockets, military tank drives, Cranes, Medical body scanners, Crushers – *components ranging from light cutting with super precision to heavy duty cutting with precision*



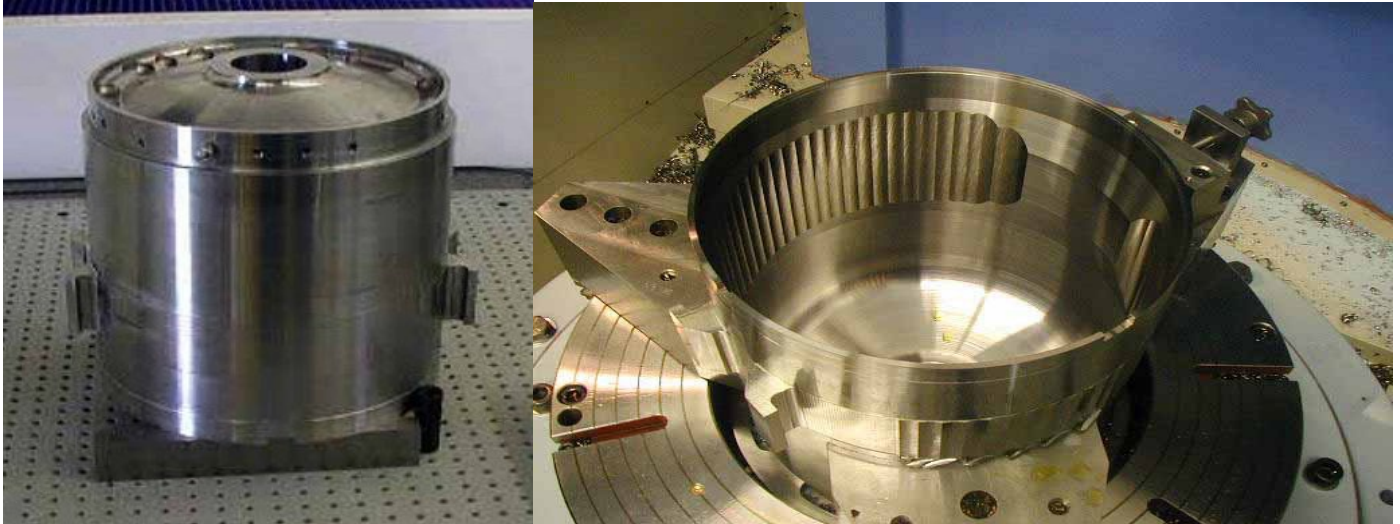
Two innovations in particular made these machines unique

- **the involute chain drive** from the motor to the table enabled very high speeds with a noise level <80db, way below the current norm
- **the C axis drive** was very powerful and backlash free enabling precision rotary contour milling at metal removal rates not seen before on C axis VTL's

20 years later these machines still provide these world class features. **6 years ago** we refurbished the machine above. It had been in storage because of a factory move. Very little updating was required. The user is one of the world's foremost engineering companies. Since we commissioned it the machine has been producing very high precision components. *This can be seen in a short film on our web site*

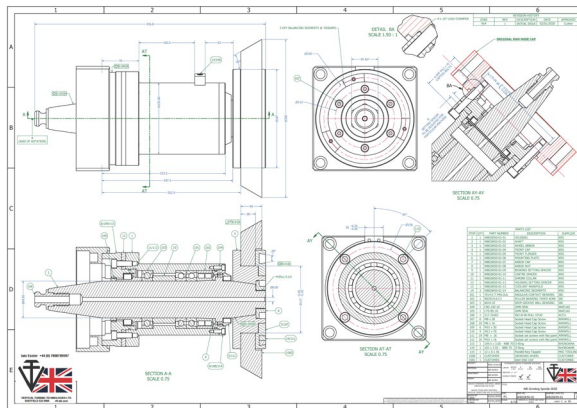
The versatile turning and machining capability of the Millennium VTC was almost unique when these machines created such interest twenty five years ago.

They continue to provide a combination of versatility, high accuracy, high metal removal and reliability that is rarely available even today



Two views of this component produced totally on a Millennium 3E 125/150VTC from a solid forging Turning and rotary contour milling directly from the ram. Horizontal drilling and milling with right angle milling heads

The two 18 pocket toolchanger magazines provide 36 tool storage positions for in cycle tool pick up of turning tools, live spindle tooling and light duty angle milling heads. Heavy milling heads and heavy duty high speed grinding spindles (example below) will be picked up from individual positions on the machine



That these machines are no longer built new in the UK can be traced back to the early 1990's when the UK government combined its attack on 'Supergun' with actions that were to destroy most of the UK machine tool industry. If that is of interest to you take a look at the 'history' section on our web site.

Today you have a rare opportunity to purchase one of these machines

It is offered at a fraction of the original price but is now so close to new condition that is offered with the accuracy and 96% uptime guarantees that were standard with the original new machine sales

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