MICROCUT

PARTNER FOR YOUR SUCCESS

# TOTAL MACHINETOOLS SOLUTION

# WHO WE ARE

We are one of a worldwide leader in development of metal-cutting, metal forming, assembling and welding machinery as well as complete production lines and individual technical solutions.

We build a strong basis for high quality standards of all machinetool products. Moreover, as our aim is to reach the excellent quality level on every stage of the production process we purchase our materials, components and units from European Union countries and other globally renown manufacturers.

We do supply our machine since 2004 worldwide. In many facts of metal forming machines are past technological developments up-to today's requested cutting-edge technology. Our references as well as the fact of having designed and produced the world's largest forming machines, provides an insight into the top technological position in the field of metal-cutting, metal bending/forming technology.

The Group's strategy is to organically develop each of the four business areas, building on the viable operating platform established as a result of the Group's recent reorganization. The Group also intends to strengthen its existing manufacturing base through investment in further capacity, providing for increased flexibility, improved quality, reduced lead times and cost.

# Conventional & CNC Vertical Turning, boring and Milling Machine

**Design features:**

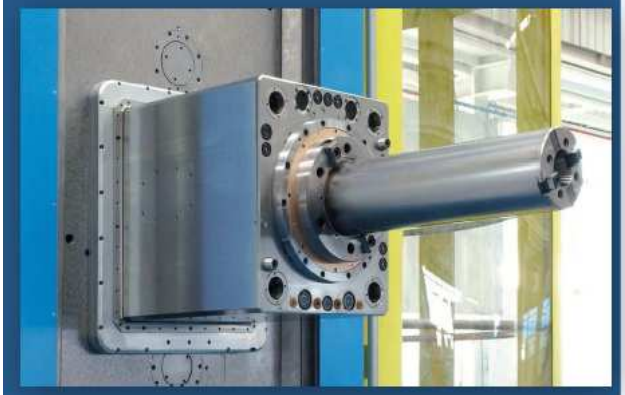
- Units compact design adjusted to modern machining requirements.
- High rigidity & stability
- Tailor made machine with European sub-components.
- Single or Double Column machines.
- All the guide-ways are grinded and handled by supersonic frequency induction hardening , excellent casting with artificial heat ageing.
- Possibility of work-piece complex machining in one setup with one or two vertical heads.
- Vertical head ram for turning or milling, grinding, drilling, and threading.
- High rigidity and high accuracy of machining.
- Accurate lead screws (ball) with nuts for "X" and "Y" axes and drives through planetary gears.
- Measuring scales of Heidenhein or other familiar European brands.
- One or two full tool (Ram) head and tool magazines.
- Separate drive for table positioning when milling and drilling.
  ISO 50, CAPTO or other tooling system.
- CE Certified electrical components

Our strategy is to offer custom solutions for turning applications with a high complexity on high-tech products. The aerospace, automotive, rail, industrial resources, wind, oil sectors and outsourcing workshops are the main trading sectors of VERTICAL LATHES.
The technological leadership of VERTICAL LATHES in the development and manufacture of horizontal and vertical lathes makes it possible to offer leading-edge and highly effective turning solutions to our customers.

We wished to offer the market this compendium of knowledge in one single machine, a machine that would bring together our know-how of many years: our Vertical Lathe. Thus, VTC vertical lathes are not merely vertical lathes, but Vertical Turning centres. Therefore designed, developed and combined the heads of our vertical lathe, heads capable of milling, angle heads, B-axis heads, grinding heads, Y-axis heads, so that the vertical lathe transformed into a vertical turning centre. A vertical lathe which represents our know-how, an exclusive and unique vertical lathe.

# CNC Horizontal Turning, boring and Milling Machine - Floor Type & T Type

- Modular design, high rigidity & stability
- Large spindle bores
- Suitable for heavy milling, boring and machining work.
- Tailor made machine with European sub-components.
- CNC Controllers from SIEMENS, Fanuc, Hidenhein Mitsubishi, etc.
- All the guide-ways are grinded and handled by supersonic frequency induction hardening , excellent casting with artificial heat ageing.
- Floor Type Boring Milling—Ram boring & Ram Milling
- T-Type Boring, Ram boring & Ram Milling
- Bed type Boring & Milling
- Multi function Rotary-tables
- Various type of heads—Universal Head, Orthogonal-head, Automatic Angular Head, Fixed Horizontal Boring Head, NC Facing and Boring-head, D'Andrea-Head, etc.
- Various range of tool magazines.
- CE Certified Electrical components.



Our technical team offers great flexibility designing machine tools. We realize that our customers are not looking to buy machines, if not to solve their machining needs at the lowest cost and the highest possible quality. Therefore we adapt the design of our machines to the customer's needs and not the other. We are experts in providing complete turnkey installations including piece programming, tools, fixtures, extended training courses, etc.

We specializes in the design and manufacture of advanced technology and high performance Milling Machines, Milling-Boring Machines and Milling-Turning Centres. its great reliability, high performance and advanced technology, offering solutions geared to productivity efficiency.

The machine milling and boring center is a multi-purpose milling and boring machine. Its modular design makes it remarkably versatile, as it can be equipped with a wide range of optional accessories and efficiently and precisely customized for any specific customer need.

It stands out for its proven stability thanks for its flat longitudinal axes design and low profile column connection, keeping center of gravity very low. This ensures high machine stability and saves of foundation costs.

It is the ideal machine for sectors such as the energy sector (wind power, gas, nuclear), shipbuilding, rail and capital goods.

The machine can be equipped with Dynamic Ram Balance System and equipped with Modular Quill.

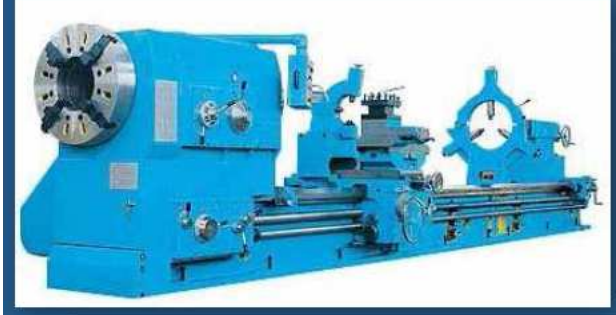
The machine can incorporate a wide variety of optional features and accessories to meet customer requirements in the most demanding sectors and components.

# Conventional & CNC Turning Lathes—Big Bore Oil-country lathes

- Heavy-duty Conventional Lathes for larger size components turning.
- CNC Lathes—straight and slant-bed type.
- Big-bore Oil Country Lathes.
- Automatic CNC production lathes.
- Tailor made machine with custom-ized sub-components.
- CE Certified electric system.

## LARGE SPINDLE

## AUTOMATIC TURRETS



Our company is today known as one of the worldwide leaders among the manufacturers of Conventional and CNC controlled heavy duty Lathes and Turning / milling centers as well as Deep hole boring machines. The machines we produce are appreciated in all the most advanced markets, from Europe to North America, from Russia to China, from India to South Asia and even other countries.

The combined experience and partnerships between our R& D Department and our quality suppliers ensure that we utilize lead-ing edge technology in all aspects of our machines, including CNC controls, drives, transmission elements and hardware. We are able to offer our customers lathes that we classify in the medium ranges, both 2 and 4 guideway versions. Features include:

- Independent guideways for the carriage
- Rigidity of the bed,carriage, headstock, tailstock, steady-rests, etc.
- High Precision accuracy and repeatability
- Optimum surface finish
- Twin prismatic guideways in inverted "V" in the longitudinal carriage giving automatic alignment of the carriage to the bedway.
- Prismatic guideways for the cross slide
- Prismatic guideway in inverted "v" plus a flat one for the tailstock
- Central traction for the slides with ball-spindle in the middle
- Excellent chip clearance with chip tray or conveyor
- Easy access for preventive maintenance

# Rotor Turning Lathes & Facing Lathes

- Conventional and CNC controlled heavy-duty rotor turning & milling lathes.
- Conventional and CNC controlled roll turning lathes.
- Conventional, NC & CNC controlled larger dia and short bed length facing lathes.

## HYDRAULIC CHUCKS

## HEAVY-DUTY ELECTRIC TAIL-STOCK

- All the **Rotor Repairing** Lathes are designed with 4 ways, there fore the carriage can pass freely either at side of the tailstock and steady rests.
- The headstock unit is designed with three speed range and it can be equipped with high precision indexing "C" axis. The spindle can be supported by conventional roller bearings or alternatively by Hydrostatic bearings in case of high precision machining needs.
- On the Hydrostatic carriages different turning units can be supplied according to the requests: **Blades, Square turret, Disc turret** 12 positions eventually with live tools. Also the vertical **"Y" Axis** can be supplied on demand.
- Other machining operations can be performed with the special purpose lathes, like Boring, Milling or Drilling operations. The different working units can be Combined on a column with rotating base ("B" Axis) or on different Pallets to be manually or automatically installed in the carriage.
- On demand different accessories are available like the work piece probe, the tool probe and the Automatic tool changer.

# CNC Vertical Machining Centers- 3 Axis, 4 Axis and 5 Axis

- Space saving design
- Rigid machine design.
- Easy access to work-piece & work area.
- 3-Axes simultaneous contouring operation function
- Multi-head exchangeable spindle for more application purpose.
- Stationary & moving table designs according work-piece load.
- Twin ballscrew feed system
- Direct-drive, Gear-driven and belt-drive spindle heads.
- ZF-German gear-box
- High speed drilling, taping, milling, grooving and machining option.

Delivering machining centers that are rigid and reliable is a given. Our manufacturing team is relentless when it comes to quality and attention to detail. Like you, they take pride in what they do.

All of our machine design is conducted using both static and finite element analysis in addition to reliability analysis. Our team is skilled at user-centric design that results in ergonomic machine tools. Even better, the efficient design promotes flexible manufacturing, allowing you to schedule a wide variety of jobs. All of our machine tools are manufactured at our wholly-owned facilities, which gives us complete control from design to manufacture of our rigid CNC machining centers

We use high quality components, such as larger linear rails for increased rigidity and accuracy, we have strategic alliances with companies that are the best at what they do--companies such as Yaskawa, Rexroth, and FAG/SKF Bearings. Since we don't simply source components, these partners collaborate with us during each phase of design to ensure we manufacture the best machine tool in the most efficient manner.

## DIRECT DRIVE, GEAR-DRIVE AND BELT-DRIVER SPINDLES

# CNC Horizontal Machining Centers—3 Axis, 4 Axis and 5 Axis

- High productivity
- High strength and rigidity
- High dynamic and thermal stability
- Long-lasting high accuracy
- Linear guide-ways in all axes
- Direct measuring in all axes
- Utilization of HSC technology
- Model flexibility
- Hydraulic & Electric Rotary-table for 4th Axis.
- High quality ball-screws.
- High accuracy
- High-quality Optical-linear scales
- High torque spindle power.

Our goal is always to meet customers' applications by collaborating and exchanging information with the international manufacturers, and continuously developing and upgrading the techniques and design in production, in order to offer higher quality products and prompt after-sale services. We producing both CNC and conventional horizontal boring & milling machine and CNC double column machining center, which has a big market share in domestic market.

All machines are serving aerospace, mobile, electronic, communications, computer etc. those high tech industries, thus quality of the products becomes the most important key-point of a company's reputation.

**BOSCH/THK/BILiTZ BALLSCREW/**

**ARM/AMBERLLA/ROUND TYPE TOOL-MAGAZINES**

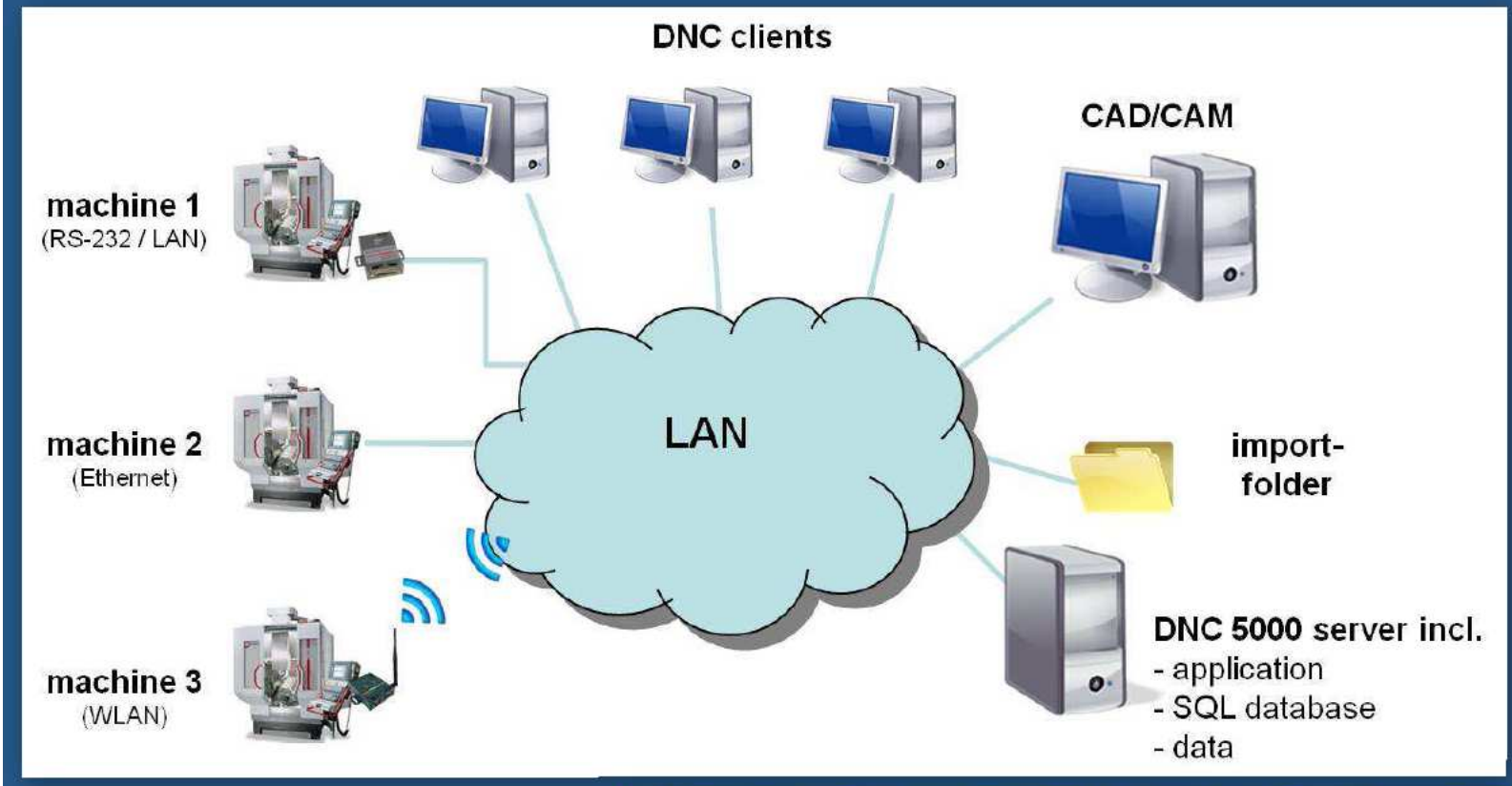
# CNC Controller integration & upgradation

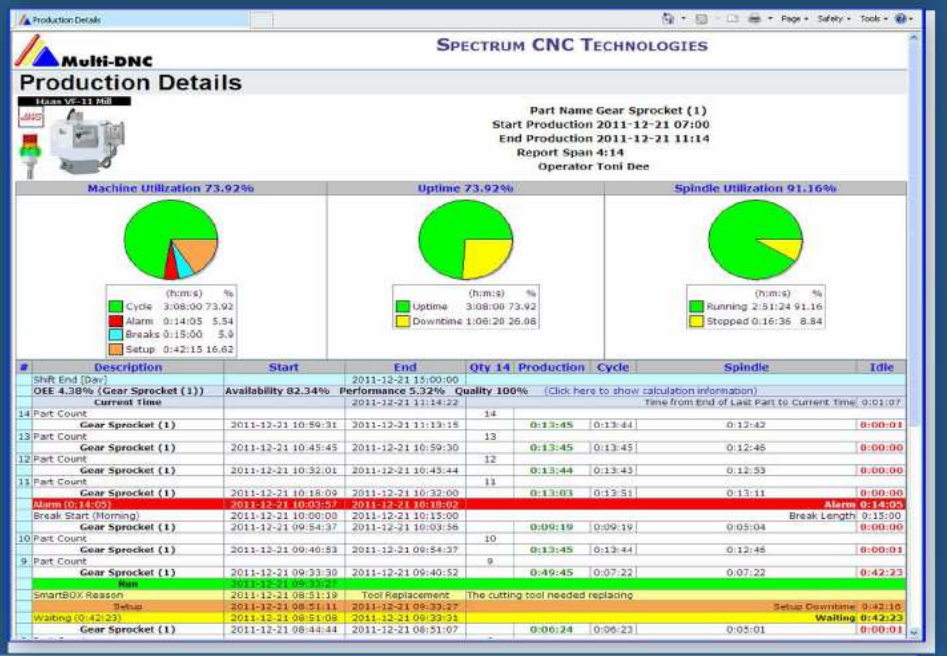
**VARIOUS TYPE OF CNC, DRO & NC CONTROLLERS INTE-GRATION ACCORDING TO YOUR CHOICE**

- Upgrading your existing CNC Controllers with higher version.
- Complete New CNC Controller integration.
- New NC Controllers & DRO integration.
- Trouble shooting.
- Training.

- Fanuc
- SIEMENS
- Mitsubishi
- Heidenhain
- Fagor
- Newall
- GSK

# DNC System - Machine Production Monitoring System





# RETROFITTING & REMANUFACTURING

- Major over-hauling
- Re-manufacturing
- Retrofitting with CNC, DRO or NC controllers as per customers' choice.
- System integration
- Spindle Overhauling & refurbishment.
- Geometrical test, correction and repair
- Electrical upgradation and refurbishment.
- Re-manufacturing damaged components by reverse engineering system.
- Analysis Existing condition of the machines for upgrading proposal.
- PLC Automation
- CAD/CAM Software supply, installation and implementation.
- Laser Calibration.
- Training of customers engineers.
- Third party inspection certification for customer's purchased machines at their supplier/manufacturer's facility.

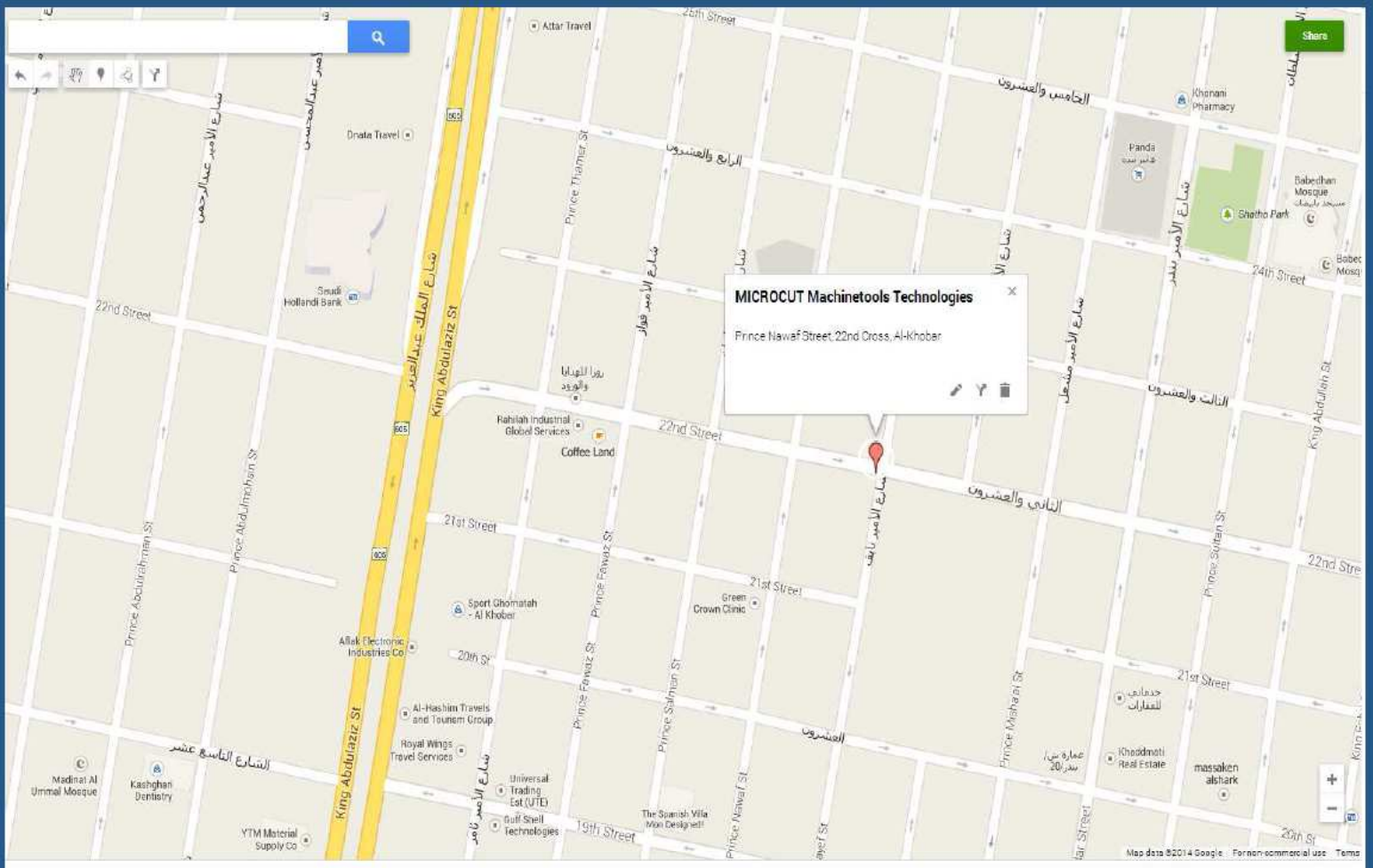
SKODA FLOORBORER REFURBISHMENT

22MTRS LENGTH LATHE-BED SCRAPPING

MAINSPINDLE AFTER REFURBISHMENT

MACHINE INPUT

MACHINE OUT-PUT AFTER RE-MANUFACTURING

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