



**VENTURA DESIGN –**  
Measuring and Milling  
in Modelling and Design

## **Metrology – VENTURA DESIGN:** The horizontal arm measuring machine with CNC milling option.

### **Marking. Measuring. Milling.**

Beside inventiveness, imagination, experience and craftsmanship, the modelling and design process also requires an efficient technical equipment – to implement objectives quickly and to make ideas come true.

Thus, with VENTURA DESIGN we complement our well-proven manual measuring and lay-out technology by a CNC milling option – in a single machine.



### **Thought Out Down to the Last Detail**

The VENTURA DESIGN features an exchangeable measuring head which is attached to the traversing arm and enables the quick change between measuring and milling operation.

Our wireless control panel supports the user in the execution of measuring or marking-out tasks.

The adapted software packages PowerINSPECT and ClayMILL allow the simple creation and execution of milling programs as well as the conventional measuring against CAD-data.

The milling head MILL 20 is suitable for tools with shaft diameters of up to 20 mm allowing also larger roughing assignments to be carried out efficiently.

# VENTURA DESIGN – to suit your particular needs.

## The Machines

tailor-made and retrofittable.

### VENTURA DESIGN – Retrofittable as and when Required

If you do not want to make the decision for a combination machine with milling head yet, but want to keep the option open for the future – no problem.

In line with our concept of modular retrofitting we will equip you with a basic machine which you can have retrofitted as combination milling machine directly at your site at any time.

### VENTURA DESIGN Is Available in the Following Versions:

#### **XMOT**

This model features a motor-driven X-axis, while Y- and Z-axis are operated manually. VENTURA DESIGN XMOT can be retrofitted for milling operation directly at the customer's site at any time.

#### **ALLROUND**

All three axes are motor-driven/designed for CNC-operation. Additionally, the Y- and Z-axis each have disengageable drives to change over into manual operation at any time. With its milling head MILL 20 the ALLROUND becomes a functional milling machine for clay processing.

**With ALLROUND we are presenting you indeed the "allround" solution.** Measuring and marking-out in manual mode, CNC-measurement, CNC-milling – all this in one single machine with minimum changeover times.

### Truly tailor-made

As far as the machine's dimensions are concerned, we will completely cater to your requirements. Due to our in-house production of all long parts (column, traversing arm, rail system), we are very flexible and able to offer you tailor-made solutions.

**Please find out more about our  
complete machine program ....**



### Features at a glance:

- **Integrated exchangeable head for the change between measuring and milling operation**
- **Milling head MILL 20 for 20 mm tool holding fixtures**
- **Powerful on-board control HSC 100**
- **Coherent dirt protection concept**
- **Wireless control panel HT 400**
- **Electronic hand wheel for ergonomic operation of the motor-driven X-axis (option)**
- **Adapted software concept ClayMILL/ PowerINSPECT**



Laptop holder

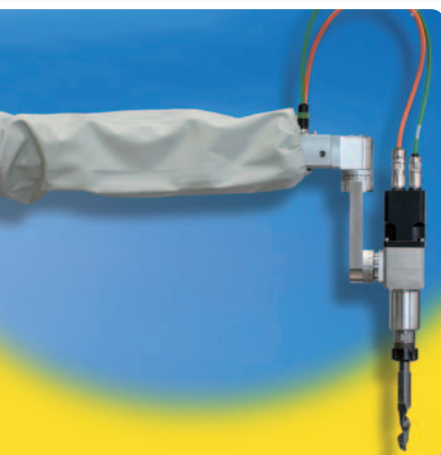
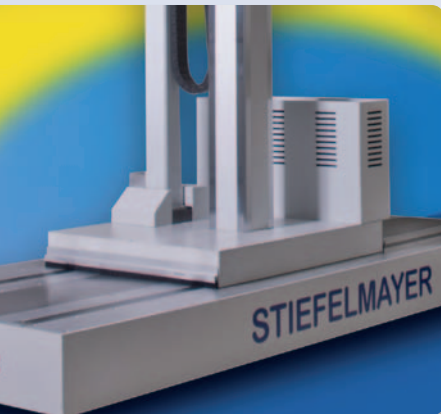


On-board control unit

# VENTURA DESIGN – robust for a long-term working life

## The Features

solid mechanics and sturdy design.



### General Features of the Machine:

#### Robust base plate:

- Measuring plate at floor level, walkable and driveable, in one piece or multiple parts, made of special grey cast iron, flatness according to DIN 876/II.
- The measuring plates can be equipped with T-slots, drill holes or also with ruled lines for easy alignment and clamping of workpieces and fixtures.

#### Protected X-guiding system:

- The linear guides of the X-axis run concealed and are protected against coarse dirt by a protective steel tape. The structural installation below a protrusion also prevents fine dirt, which has worked its way around the protective tape, from depositing on the guides.

#### Quiet and smooth running:

- High-quality gears free of clearance in all axes ensure the smooth operation and highly precise positioning without overrun.

#### Robust magnetic measuring system:

- The magnetic measuring system used in all axes is highly precise (resolution 0.001 mm), very robust and dirt tolerant at the same time – important characteristics for the long-term reliability of the machine in measuring and milling operation.

#### Hardened guideways:

- Hardened and chrome-plated guideways on columns and traversing arm ensure longevity and wear resistance of the machine for years to come.

#### On-board control unit:

- The on-board control unit reduces the number of attached cables in the X-axis to a minimum and saves space. This contributes to the machine's ease of running while reducing its susceptibility to failure by cable break etc.

#### Detachable traversing arm protection for milling operation (option):

- Flexible textile bellow for the special protection of the traversing arm in milling operation: easy to mount, washable, no restriction of ease of running of the machine.

#### Flexible laptop holder (option):

- We offer a swivelling, lockable holder which is directly mounted on the base plate of the machine. The connection cables are integrated in the holder.

# VENTURA DESIGN – flexible and precise

## The Equipment

comfortable working with wireless hand panel and electronic hand wheel.

### VENTURA DESIGN – Compatible with a Multitude of Measuring and Marking-out Tools

The versatile design as well as the proven STIEFELMAYER receptacle cube at the traversing arm enables the usage of the wide range of our measuring and marking-out tools on the VENTURA DESIGN.

### Electronic Hand Wheel – for Exact Operation

The electronic hand wheel is an additional option for the exact operation of the measuring machine in X. With a dynamic turning knob the machine is traversed along the X-axis. Further features are a second, small turning knob for fine gear as well as two buttons for fast gear +/- for bridging longer distances.

For the work with marking-out tools the electronic hand wheel is also equipped with a function key for the triggering of marker points.

The unit is ergonomically designed and therefore fits the hand extremely well.

### Wireless Control Panel HT 400

Our integrated manual control panels accompany the operator in the measuring and marking process. With the HT 400 the motor-driven axes can be moved and the Y- and Z-axis engaged and disengaged by use of the joystick.

Furthermore, program functions can be executed comfortably on the manual control panel directly at the workplace,

**for example:**

- Elimination of wrongly probed points
- Measuring takeover
- Start and Stop measuring program

Additionally, there are free keys for a selection of shortcuts. The manual control panel HT 400 is equipped with an efficient battery.

Fault reports from the CMM's control are shown with an error-code key on the display of the control panel.

The communication with the control is carried out via an exclusive connection with individual key (DECT standard). Thanks to an integrated magnet the manual control panel can be easily and flexibly attached to the measuring machine when it is not in use.



left: Electronic Hand Wheel  
right: Wireless Control Panel HT 400



# VENTURA DESIGN – intelligent solution for clay and foam milling.

## Milling head MILL 20

high flexibility in operation – for tool  
holding fixtures up to 20 mm.

### Milling Head MILL 20 – Efficient in Use

Our milling head MILL 20 is used for milling clay, polystyrene and rigid foams. It can be quickly and easily attached to the exchangeable head of the traversing arm with a form- and force-fitting holding fixture.

The milling head can be swiveled manually in two axes in steps of 15 degrees. Its pretty slim design ensures the optimal accessibility at the workpiece.

### Technical details:

- Swivelling holding fixture, step sizes of 15° each in A- and B-axis
- Easy and quick installation at the traversing arm
- Nominal capacity 980 watts
- Spindle: 3000 – 6000 r.p.m., adjustable
- For collet chuck holders of up to 20 mm
- Suitable for cherries with shaft diameter 3 to 20 mm

The associated milling controller is accommodated in the on-board control unit of the VENTURA DESIGN.

Of course, we offer you suitable barrier and security packages for the milling operation, which are integrated in the overall system.

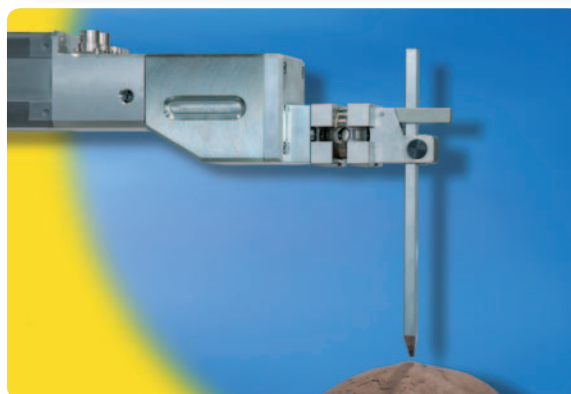
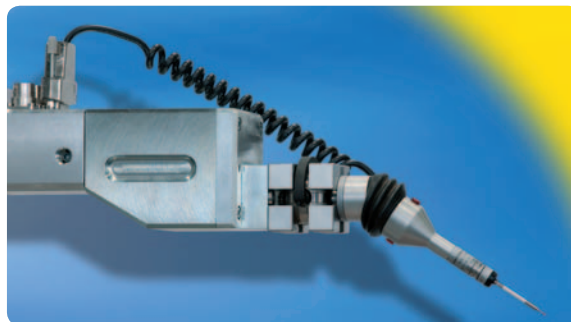
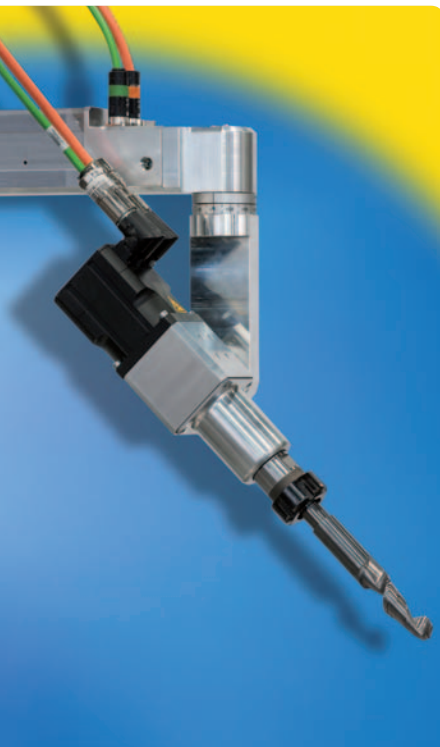
### VENTURA DESIGN – Instant Switch between Milling Head and Measuring Tools

**Simple and fast switch: Open the clamping screws – remove the milling head – plug in and screw the adapter head – ready!**

The adapter head already includes the required weight compensation for the tool change.

**Exact positioning of the milling head axes due to highly precise Hirth couplings.**

Swivelling Milling Head MILL 20



# VENTURA DESIGN – supported by perfectly harmonised software packages.

## The Software

powerful and easy to use.

### PowerINSPECT Design – User-friendly Measuring and Evaluation Software

With PowerINSPECT Design we offer you a Windows-based, very easy-to-use software for the measuring operation. PowerINSPECT applies data of all common CAD-systems, supports the common alignment strategies and has the simple routines for probe selection and calibration.

PowerINSPECT Design measures unknown contours or compares measuring results against CAD-data set. Both the geometry as well as the free-form surfaces can be measured together in one program. The generation of the measuring sequences can either be carried out in the teach-in process or off-line by use of the data set.

Particularly for designing, there are extensive digitising functions available. The operator is able to digitise unknown curves and cuts, assign characteristics to points (e.g. corner point) and edit the point lists and use them further for marking tasks.

#### Further features:

- Useable for different hardware: coordinate measuring machines, measuring arms, etc.
- Integrated Renishaw probe database
- Generation of inspection records in real time
- Extensive visualisation possibilities of elements, positions and deviations from the inspection record
- Many CAD interfaces (IGES, STEP, VDA, AutoCAD, optionally CATIA, UG and many more)



### Milling Software ClayMILL – Milling Made Easy

With the accompanying milling software ClayMILL CAD-data are processed into milling programs and NC-programs are executed.

ClayMILL also includes an integrated tool configurator with which the administration and calibration of milling tools can be carried out directly on the measuring machine.

ClayMILL is based on the powerful software Delcam PowerMILL which makes it possible to provide common milling strategies (templates) by default and already parameterised. They are presented on an intuitive, user-friendly surface.

Thereby, the operator is able to concentrate on the functions which are actually needed in the daily processes of the design studio. Together with the familiar "look and feel", which is related to PowerINSPECT, this will result in a minimum training effort for learning ClayMILL.

#### Further features of ClayMILL:

- Easy programming by using the CAD-data set
- Running of NC-programs from the data of random CAM-modules
- A software wizard facilitates the calibration of milling tools and the management of the tools in a database
- Visualising functions for NC-programs
- Common milling strategies are available by default, e.g.
  - Raster milling
  - Z-constant for steep areas
  - Residual material milling
- Quick and simple selection of the areas to be processed
- Compatible with all common CAD-systems – identical with PowerINSPECT

# STIEFELMAYER – The Company Group at a Glance



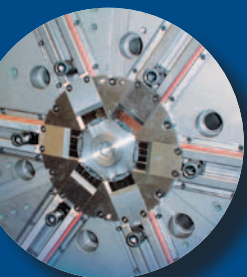
## STIEFELMAYER- Metrology

- ▮ 3D coordinate metrology
- ▮ Measuring software
- ▮ Accessories



## STIEFELMAYER- Laser Technology

- ▮ Laser cutting
- ▮ Laser hardening
- ▮ Laser welding



## STIEFELMAYER- Clamping Tools

- ▮ Special chucks
- ▮ Special mandrels

### Metrology – the product range:

#### Horizontal arm measuring machines

- ▮ FUTURA manual · motorised · CNC version
- ▮ VENTURA manual · motorised · CNC version
- ▮ ACTURA manual · motorised
- ▮ VENTURA DESIGN manual · motorised · CNC version

#### Modernisations · Upgrades

- ▮ Measuring counter MZ 2000 for manual machines
- ▮ Controller modernisations
- ▮ Upgrades manual to motorised · CNC version

#### Accessories

- ▮ Probe tools
- ▮ Marking-out tools
- ▮ Auxiliary equipment
- ▮ Extensions
- ▮ 3D probe accessories
- ▮ Threaded styli
- ▮ Scanning sensors

#### Measuring software

#### Service

- ▮ Calibrations
- ▮ Repairs
- ▮ Installations
- ▮ Machine moving

#### Second hand machines



### Stiefelmayer-Messtechnik GmbH & Co. KG

Rechbergstraße 42  
D-73770 Denkendorf

Phone: ++49 (0)711 / 93 440-0  
Fax: ++49 (0)711 / 93 440-12  
E-mail: [messtechnik@stiefelmayer.de](mailto:messtechnik@stiefelmayer.de)  
[www.stiefelmayer.de](http://www.stiefelmayer.de)