



STIEFELMAYER



FORM Line
3D Modeling
Measuring and Scanning

Solutions for Modeling, Molding and Prototyping



Why modeling with Stiefelmayer?

Unique combination of modeling and digitalization

To prepare, model, detail and finally digitize a model without moving it – that's impossible!

Actually, it is possible – with Stiefelmayer!

On one single machine, models can be measured with tactile probes, and individual surfaces or the entire model can be digitized via scanner. In addition, machining is possible with both, a manual or our motorized milling head in 3+2 operation*. Thus, the entire loop is closed with one single machine: starting from the digital model, doing mechanical processing and optimization up to another re-digitization. This allows optimum flexibility in modeling, moulding or prototyping.

* Execution of the 3D program: The milling tool is automatically positioned upfront at the optimum inclination angle along two axes and is then clamped for machining.



Application experts in consulting and service

Application expertise is one of our top priorities. We are convinced that we need to understand your application in detail in order to fit our solutions perfectly to your needs. In our technical center we are able to carry out a wide range of mechanical processing of soft materials. This helps when advising on a new project, as we can replicate and understand your requirements. The application-related training is a must for our employees in consulting and service. We are convinced that this is an important prerequisite for optimal solutions and top customer services.

Robust and precise mechanics for optimum modeling results

Stiefelmayer's mature and highly sophisticated mechanical construction provides the basis for obtaining optimum modeling results. At the same time, our machines are known for their high precision – an important factor for the accuracy of models. Our users appreciate this performance of our modeling and measuring machines and their reliability over decades.

Minimized operating costs over the entire machine lifetime

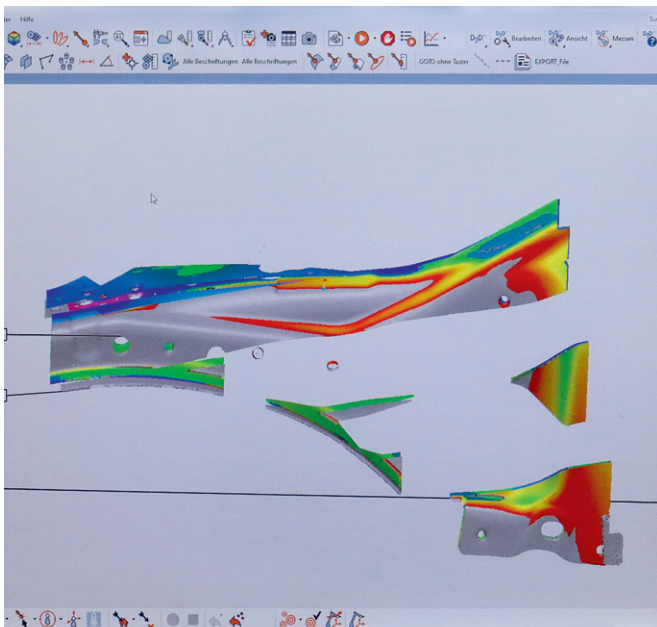
The Stiefelmayer name stands for durability and smooth running. This principle is also reflected in our motorized milling head. The result: minimum operating costs over the entire life cycle of the machine. Mechanical engineering usually comes along with high wear and maintenance costs and



crashes lead to expensive follow-up costs. This issue is significantly reduced with the Stiefelmayer solution. We ensure that modernization to the latest state of the art is possible at any time via retrofitting and upgrading. This is also an important contribution to sustainability enabled by our systems.

Optimal utilisation of available times

Modeling requires a high level of human resources. In addition, the physical model often lags behind the digital model during the design process. With the help of the motorized milling head, modeling can be carried out in 3+2 operation, even in non-productive times and overnight. This allows the designer to concentrate on the essential tasks. Once modeling is completed, non-productive times can be used further on to digitize the model with a scanner. This ensures that the physical model is matched and updated according to the digital CAD model in short intervals.



Solutions / Tasks	Manual drilling / Milling and marking	3-Axis CNC milling with manual positioning	3+2-Axis CNC milling
Application	<ul style="list-style-type: none"> Support for manual modeling in design studios: drilling and marking of clay and rigid foam materials 	<ul style="list-style-type: none"> Usage in design studios for machining of clay and rigid foam materials 	<ul style="list-style-type: none"> Usage in design studios for machining of clay and rigid foam materials with higher productivity requirements Mould making by milling positive as well as negative moulds e.g. for carbon parts
Advantages	<ul style="list-style-type: none"> Ease of use Solid and robust Smooth running Duplex possible Stable Flush with floor for Actura and Ventura 	<ul style="list-style-type: none"> Working area completely accessible by foot and vehicle Integrated dirt-resistant guides Very smooth running Versatile usage: measuring, marking, modeling and milling For manual and CNC operation Long-lasting due to internal cable routing and on-board control cabinet Improved milling results due to optimized drives High-quality machine design and long-lasting construction 	<ul style="list-style-type: none"> Working area completely accessible by foot and vehicle Integrated dirt-resistant guides Very smooth running Versatile usage: measuring, marking, modeling and milling For manual and CNC operation Long-lasting due to internal cable routing and on-board control cabinet Improved milling results due to optimized drives High-quality machine design and long-lasting construction
Machine	<ul style="list-style-type: none"> Actura Ventura Standard 	<ul style="list-style-type: none"> Ventura with reinforced Y horizontal arm 	<ul style="list-style-type: none"> Ventura with reinforced Y horizontal arm, optimized drives in Y and Z, and new drive concept in X
Milling head	Pneumatic air motor with holder: <ul style="list-style-type: none"> Non-swiveling Nominal power 380 watts Up to 19000 rpm 	Milling head MILL 20: <ul style="list-style-type: none"> Manual swiveling in 15° steps Nominal power 980 watts Up to 6000 rpm Collet chucks up to 20 mm 	Milling head MILL 40: <ul style="list-style-type: none"> Automatic swiveling in 1° steps Nominal power 350 watts Up to 6000 rpm Collet chucks 2–16 mm Clamping force 108 Nm each in B and C
Preparation / Digitization	Marking or probing	Tactile measurement	Scanning
Application	Support to realize symmetry of models and for alignment of model before machining	Measurement of relevant points on fixtures or for alignment of model	Scanning e.g. before machining to ensure that there is enough material to work with. After machining: Digitization of the modelled and optimized model in off-peak times or overnight
Advantages	<ul style="list-style-type: none"> Various probe tips and marking tools can be used Flexible and fast mounting into cubic head and via various extensions 	<ul style="list-style-type: none"> Tactile measurement with rigid probes or 2-axis probe head Flexible and fast mounting into cubic head and via various extensions 	<ul style="list-style-type: none"> Scanning with 100 mm tracks/beam width Measuring with 2-axis measuring head Automatic switch between scanner and tactile probe via optional autochange rack