

Name	Unit	SH 1800 CNC	SH 1800 CNC - S
Maximum turning length	mm	1900	1900
Maximum diameter over bed	mm	540	540
Maximum turning diameter	mm	270	270
Maximum turning diameter with stay	mm	140	140
Travel of cross-slide	mm	250	250
Spindle electric motor	kW	5,9	5,9
Spindle speed RPM	epm	0 – 3750	0 – 3750
Number of controlled axes	Pcs	3	4
Maximum feed speed Z/X/A	m/min	30/20/20	30/20/20
Taper in spindle	MORSE	3	3
Total power input	kW	12	14
Exhausting capacity / Diameter of dust outlets	m <sup>3</sup> /hod, mm	4000 / 250	4000 / 250
Number of spindles for milling	Pcs	---	2
Spindle speed RPM of spindles for milling rpm	m/min	---	1000 – 18000
Power of spindles for milling	kW	---	2
Cramping of milling tools	---	---	ER25
Range of diameters of clamps	mm	---	1 – 16
Machine dimensions - l x w x h - working	mm	4300 x 1900 x 2100	4300 x 1900 x 2100
Machine dimensions - l x w x h - shipping	mm	3500 x 1820 x 1900	3500 x 1820 x 1900
Weight Netto	kg	1600	1650
Weight Brutto	kg	1700	1750

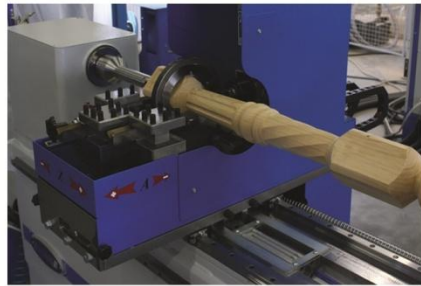


## UNIVESAL CENTRE LATHE



SAHOS s.r.o.  
 Pištín 134  
 373 41, Hluboká nad Vltavou  
 tel./fax: 387 203 126  
 e-mail: [sahos@sahos.cz](mailto:sahos@sahos.cz)  
[www.sahos.eu](http://www.sahos.eu)





### The stable construction

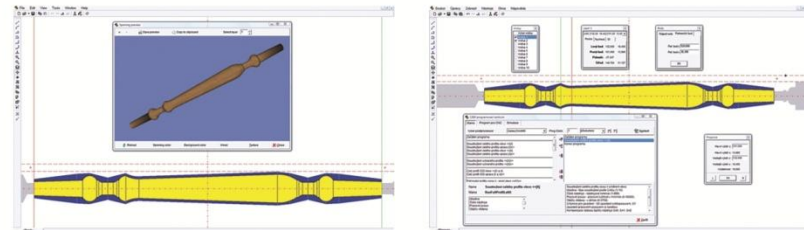
A rugged steel bed with a headstock and a tailstock made of grey cast iron guarantee a high stiffness of the entire set. A precise rolling guideway and ball screws on all axes are the guarantee of high accuracy and long working life of the machine. A spindle is placed in two ball bearings with an oblique contact, which are fitted with permanent grease filler. The front end of the spindle ends with MORSE 3 conic hollow for driving lathe centres and outer cylindrical area with a groove for spring, on which special jigs such as self-centring chuck, machining face plates, etc. can be fastened. A frequency converter fluently regulates spindle turns.

### Simple and intuitive CAD/CAM software LatheCAM

To create NC program comes LatheCAM graphic software, which contains all the function for convenient and quick drawing of the required profiles, management of libraries with different products, postprocessor for creating of NC program, 3D render, and so on.

Desired profile in LatheCAM established with pre-defined objects, which can be changed parametrically into different dimensions. This allowed to created profiles not just geometrically accurate, but also focused on the artistic design of the product.

To check the generated code is LatheCAM equipped with graphical representation during machining directly on screen. This allows the operator select optimal machining indentifies possible collision in advance. 3D render and product appears on screen in photorealistic quality. This view can be saved in classic formats, printed on a printer, put in any offers and so on.



### Supporting stay

A universal supporting stay (up to the diameter of 140mm), which is anchored in a longitudinal support, can be used for machining of long parts at one cut and also for parts with the preservation of end square profiles at both ends of the product. A pre-cutting tool fluently sets machined diameter prior the entrance to stay. Thus a product enters the stay as previously machined to an accurate diameter and therefore highly hard driving of material is guaranteed. Copying cutting tools placed at cross supports then make a required form.

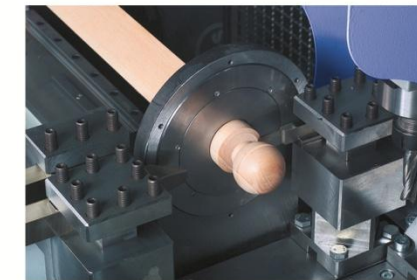
### A tailstock from grey cast iron

A massive casting of the tailstock body is accurately seated in guiding area of the bed. A tailstock sleeve is fitted with a turning point with ending, which prevents the material splitting. The machine is standardly fitted with an electric control of a tailstock sleeve that enables fluent setting of pressure strength with factor clutch.



### Machining of short parts

An effective machining of short parts is possible if the cross support is fitted with a stay and a cutting-off tool. After mounting the semi-finished product, a profile of the first part is machined, which is cut off and consequently the machine continues in machining of another part in the set number of cycles. A tenoning tool can machine assembly pins.



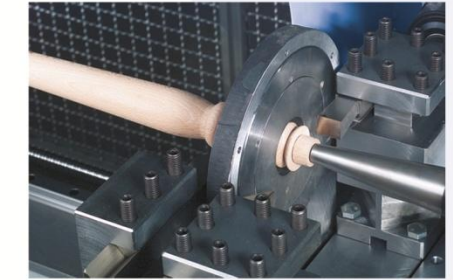
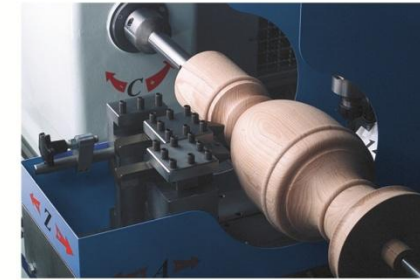
### Alignment forks

Alignment forks for fast and accurate establishment of workpiece between points the machines are controlled pneumatically and their movement can be integrated directly into the program. This solution reduces the time the exchange workpiece to minimum and significantly increase productivity.



### Machining in many variables

The machine can be fitted with up to 4 work tools. A large removal of material at 1 bite is possible in case of simultaneous machining with two copying knives. The tool of the first support will make a rough stage and the tool of the second support will make the finishing one. Machining in this manner can be performed in both directions by changing the function of individual supports. At machining the large diameters where these two stages would not be enough, it is possible to divide machining into several stages. Easy division to individual stages is also fully supported by LatheCAM software. The same technique can be used for frontal turning work of plates, turning shaped holes etc. With pins knife can be turn on lathe anywhere on the product mounting pins.

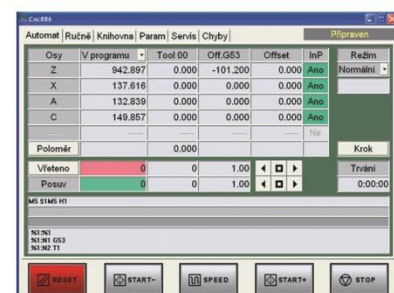


### The productive CNC lathe...

Universal centre lathes of the GALAXY model line are outlined on the basis of need of productive and efficient machine for continuous service. A possibility for turning a large range of dimensions and lengths, high dynamics, a wide range of accessories and a quick machine preparation for a change of the product profile or type meet the most challenging criteria current market.

### Milling of decorated spirals

The machine in modification with controlled spindle and cross supports fitted with two efficient milling spindles allows machining and consequent milling at one workpiece mounting. This modification allows profile milling with a front or side of the tool and thus it is possible to mill decorated helixes, threads, grooves, profile spirals, multi-edge forms, bore hollows, etc.



### The effective control system

A modern fully digital CNC886 control system provides control over the whole machine. Apart from standard functions such as straight lines interpolation, circular arch interpolation and the control over all PLC functions of the machine, the system integrates all necessary functions for high-speed machining. Especially an automatic speed adjustment to the path geometry and dynamic characteristics of a set is concerned. NC programmes can be transmitted via RS232 or a network. The control system interprets a standard ISO code. LCD colour makes easy and clear orientation in individual menus of the control system possible.

