

## Cyclic lathe model LS 600M



MAIN TECHNICAL DATA			LS600M
<b>CAPACITY</b>	Height of centers	mm	300
	Swing over bed	mm	600
	Swing over cross slide	mm	400
	Width of bed	mm	400
	Distance between centers	mm	1000
<b>SPINDLE</b>	Spindle nose DIN 55027	No	8
	Spindle bore	mm	80
	Spindle taper	Metric	90
<b>HEADSTOCK</b>	Number of spindle speeds		Infinitely variable in 3 sub-ranges
	Spindle variable speed sub-ranges	rpm	20 - 100; 80 - 400; 400 - 2000
<b>TRAVELS AND FEEDS</b>	Longitudinal feed (Z-axis)	m/min	8 (max)
	Cross feed (X-axis)	m/min	8 (max)
	Rapid traverse (Z and X axis)	m/min	8 (max)
	Cross slide maximum travel	mm	290
<b>BALL SCREW</b>	Z-axis	mm	50x10
	X-axis	mm	32x5
<b>TAILSTOCK</b>	Quill diameter	mm	90
	Quill taper	Morse	No.5
	Quill travel	mm	225
<b>DRIVES</b>	Main drive power	kW	11 (15)
	Z-axis servo drive power	kW/N.m	3.5/22
	X-axis servo drive power	kW/N.m	1.75/11
	Spindle maximum torque	daN.M	120
	Z-axis tow strength	daN	1250
	X-axis tow strength	daN	1050

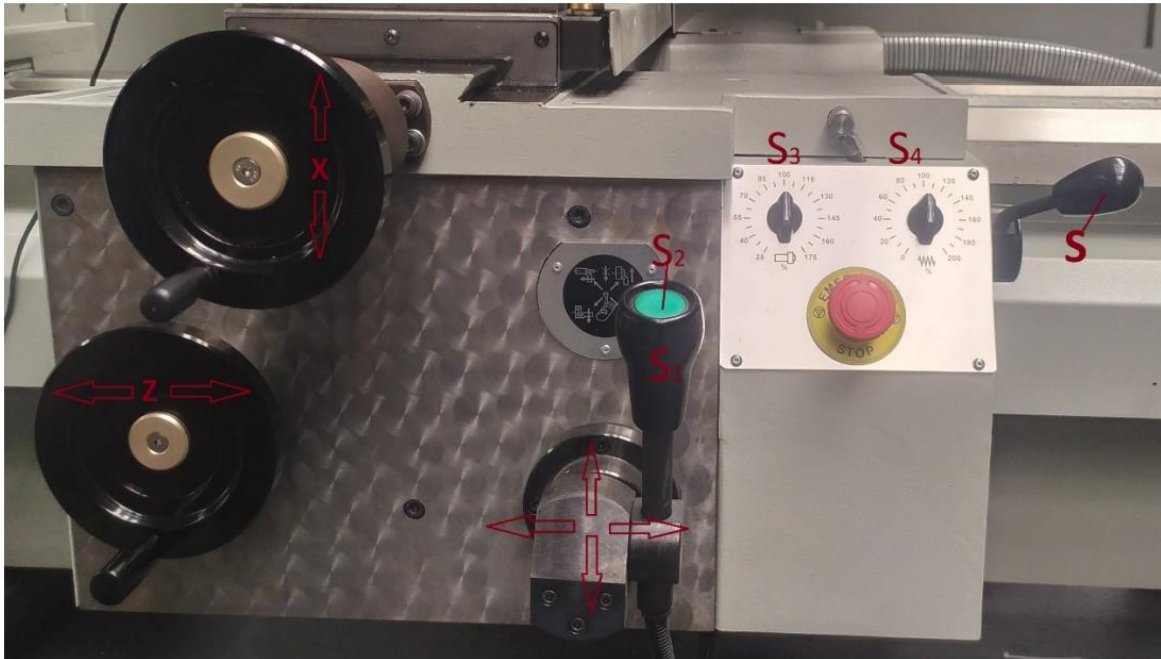
#### **EQUIPPED WITH:**

- 4-position tool post
- Digital read-out
- Constant cutting speed (CCS) in manual and automatic mode
- Controller Schneider Magelis with 10" touch screen display
- Two ball-screws providing high reliability, long service life and high efficiency
- Central lubrication system

## CONTROL

### ➤ **Manual control mode**

Starting and manual operation of the LS 600M is similar as at the universal lathe with variable spindle speed control equipped with digital read-out.

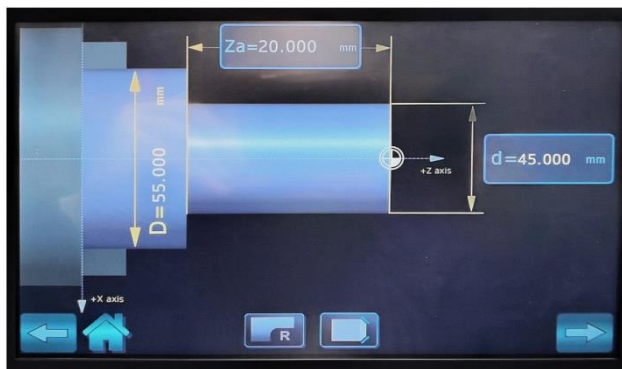


- Flywheels for manual movement of the carriage on X and Z axis
- Handle S for starting, reversing and stopping the spindle
- Handle S1 for automatic feed movements on X and Z axis
- Button S2 rapid travers on X and Z axis
- Knob S3 for percentage adjustment of spindle speed
- Knob S4 for percentage adjustment of feeds

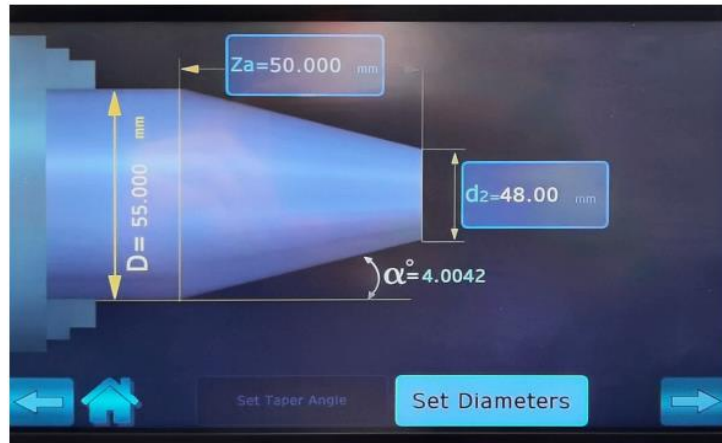
### ➤ **Automatic control mode**

Currently the lathe is programmed to execute the following cyclic operations:

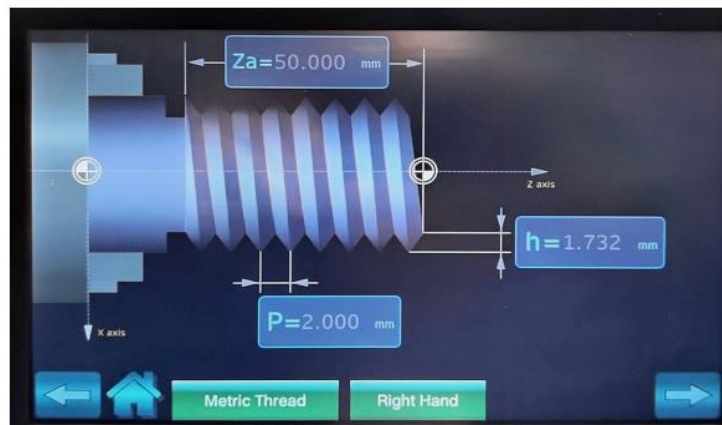
- Cylindrical longitudinal turning + bevel edge – external



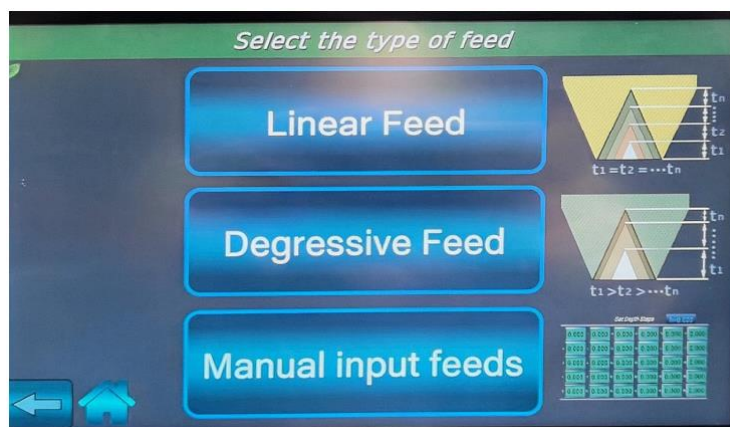
- Taper turning – external, set by angle and diameter or both diameters and length



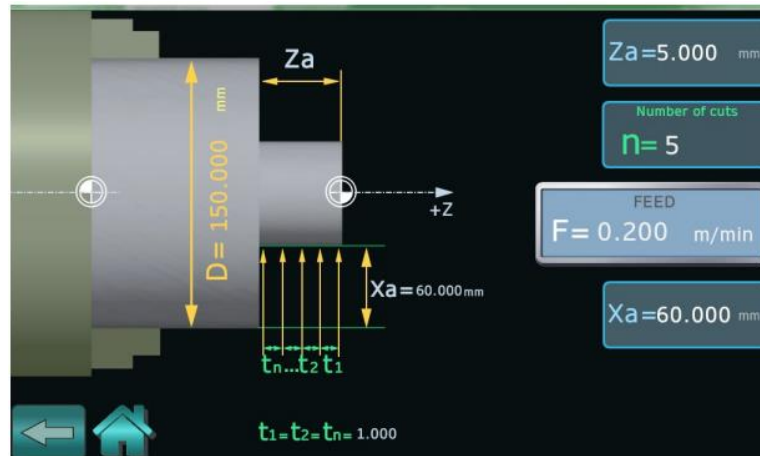
- External cylindrical and conical threads – selection between left and right as well as between millimetre, inch, modular and diametral pitch



- Selection between 3 methods of feeds for each transition – linear (the depth of all transitions is the same); degressive (the depth of each next transition is smaller than the previous one); manual input (the depth for each transition is entered manually)



- Cross turning



- Other features under development – internal cylindrical turning; internal taper turning; internal cylindrical thread; internal taper thread

## **ADVANTAGES**

- Based on the controller Schneider Magelis the intelligent, self-developed ZMM Sliven software leads the operator also without programming skills simple and fast to the finished workpiece.
- The interface is simple and with large icons, which is convenient in a specific work environment.
- The intuitive menu facilitates the transition to next screens and operations.
- Well visualized and structured cyclic operations, threads and steps.
- Possibility to set-up the feeds, threads, etc. both mechanically and digitally (via the display).
- The manual, automatic and combined mode allows more precise operation compared to universal lathe.
- Easy transition from manual to automatic operation mode.

## **IN SUMMERY**

- Fast and simple communication between the operator and the lathe.
- Simple workpieces are machined in the same way as on the universal lathe, but more efficient.
- Complicated workpieces are machined in the same way as on the universal lathe, but faster.
- Complicated workpieces are machined in the same way as on the CNC lathe, but easier.