

MACHINE SPECIFICATION

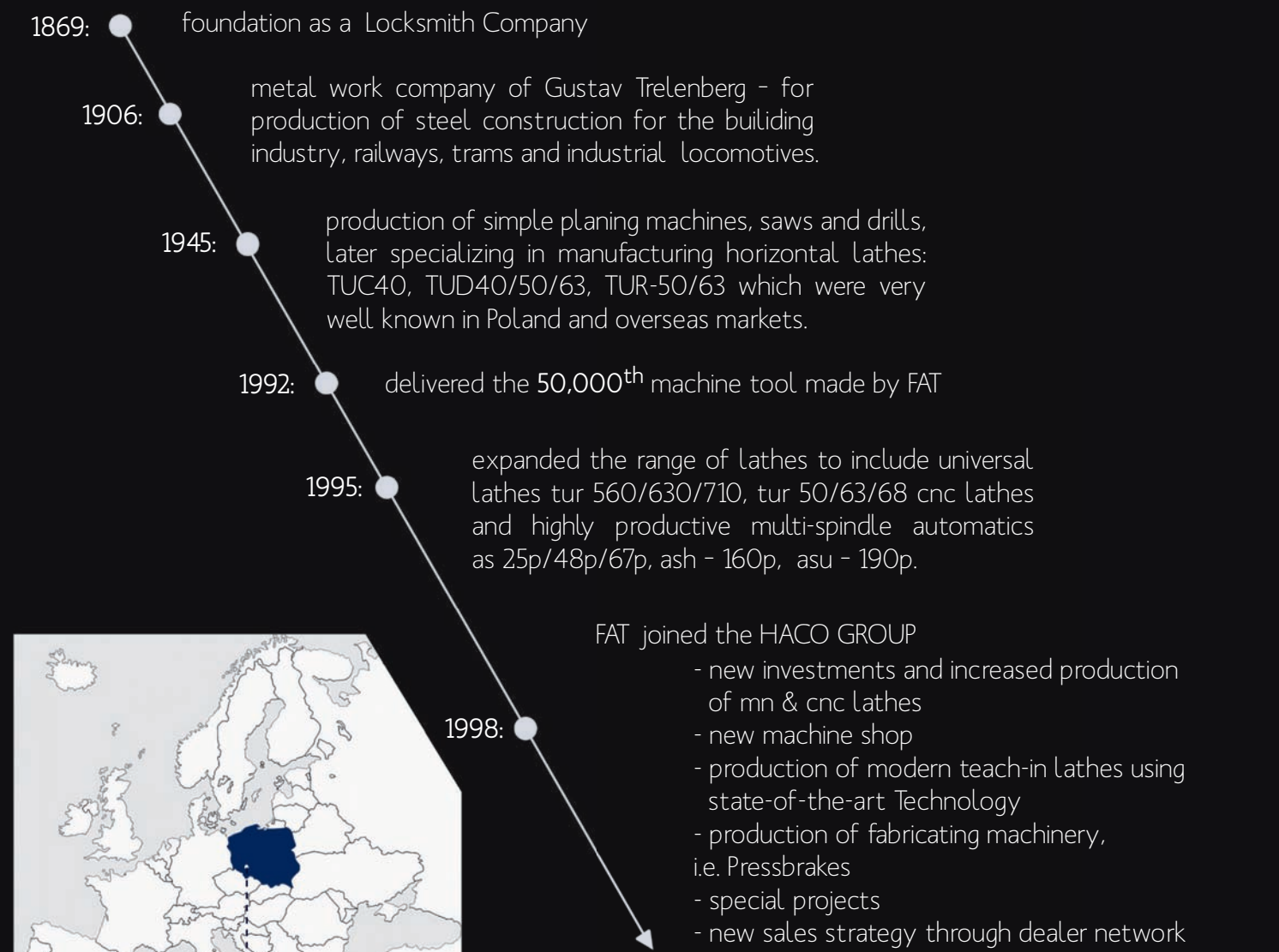
		Type	FTM 165
CAPACITY			
Distance between centers		mm	600 - 800 - 1000
Swing over bed		mm	550
Swing over saddle		mm	350
Max turning dia.	static tool disc	mm	350
	driven tool disc (o)	mm	255
HEADSTOCK			
Maximum spindle speed		rpm	6000
Main drive motor power		kW	15
Maximum turning torque		Nm	275
Spindle nose (DIN 55026)			A2-6
Spindle inner taper			1:20
Spindle bore without hydraulic cylinder and chuck		mm	40 (s) - 65 (o) - 80 (o)
SUB SPINDLE (o)			
Maximum speed		rpm	6000
Rapid traverse rate		M/min	30
Maximum turning torque		N.m	95
Spindle nose (DIN 55026)			A2-6
SADDLE			
Cross slide travel X-axis		mm	210
Rapid traverse rate Z-axis		M/min	35
Rapid traverse rate X-axis		M/min	35
TOOL TURRET			
12-position EWS turret for static tools			VDI 40
Maximum boring holder diameter		mm	20
Indexing time		sec	0,2
EWS turret for driven tools VDI 40 (o)			VDI 40
Number of driven positions			12
Maximum speed of rotating tool		rpm	4000
Maximum diameter of milling tool		mm	20
Indexing time		sec	0,2
TAILSTOCK			
Quill taper			MT 4
Travel method			auto positioning
Quill diameter		mm	55
Hydraulic stroke of tailstock		mm	15
Thrust		N	4.400
GENERAL			
Width of machine		mm	1.940
Height of machine		mm	1.860
Length of machine		mm	3.350 / 3.550/ 3.750
Weight of machine (approx.)			
( FTM 165 x 600 / 800 / 1000 )		kg	4500 / 4900 / 5300
Control system		Type	Siemens 840 D SL

NOTE : Specifications and technical alterations are subject to change without prior notice

SHORT HISTORY OF FAT-HACO

FAT Haco offers you the benefit of our vast experience – since the year 1945 over 50.000 machine tools have been sold in many countries around the world!

Excellently equipped machine shop, assembly facility, research office and our own foundry allow us to manufacture most components by ourselves complete from casting to finished product. FAT works closely with you to develop the absolute best product for your needs. Our experience and quick reaction time will save you both time and money. Together, let’s make creative imagination our only limitation!



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DISTRIBUTOR:

FTM 165

POWER...PRECISION...PERFORMANCE!



for impressive performances





# FTM 165 SLANT BED LATHE - INTRODUCTION

Based on our experience gained on the larger FTM machines, this new model is the smallest in the range of highly flexible turn / mill centres available from FAT Haco. Its exceptional stability is based on a machine whose structures are produced in our own foundry which, together with the use of high precision components and unrivalled quality of assembly, will ensure many years of reliable service.

We are confident that the FTM165, by its combination of highly efficient productivity and cost effectiveness through innovative design and careful manufacture, will provide the user with the best machine of its type on the market today.

## GENERAL MACHINE DESCRIPTION

The slant bed FAT FTM 165 is a high precision, high quality European product manufactured entirely in Poland, with outsourced critical components such as ballscrews, bearings, switchgear, etc. purchased only from established world leaders in machine tools parts manufacture and supply, with spare parts easily available.

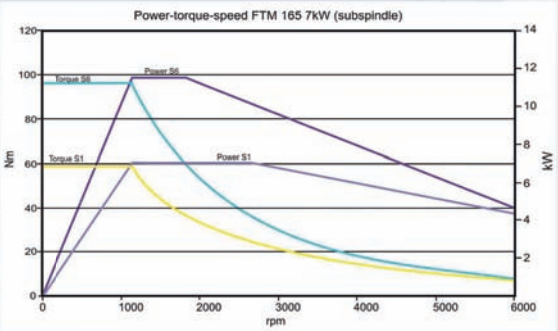
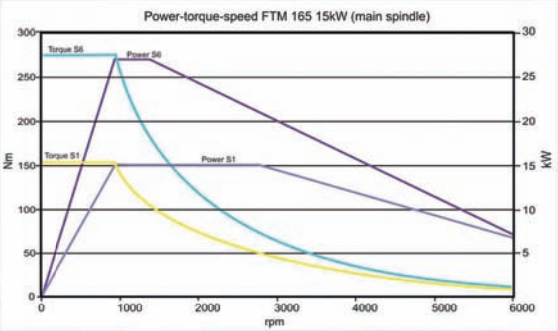
The standard CNC lathe meets many requirements, but can be configured to suit any application through a combination of features such as tool turret for driven tools, various types of manual or hydraulic chucks, hydraulic steady rests, sub-spindle, parts catcher and many other options that increase both efficiency and flexibility.

The FTM165 has 3 alternatives of spindle bore sizes. A 40mm bore is standard, with 65mm or 80mm spindle bore diameters available as options - the large bore variant having larger Ø170mm bearings. Various types and sizes of chucks are also available. With a collet chuck selected and the machine already prepared for easy connection with a bar feeder, the machine is ideally configured for serial production of small / medium sized components.

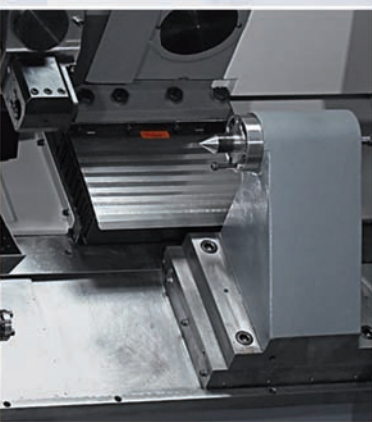
The Siemens 840D SL controller enables simple programming of machining operations on the lathe by the operator, as well as having a computerised interface for off-line programming of complex components.



## MAIN AND SUB-SPINDLE POWER / TORQUE



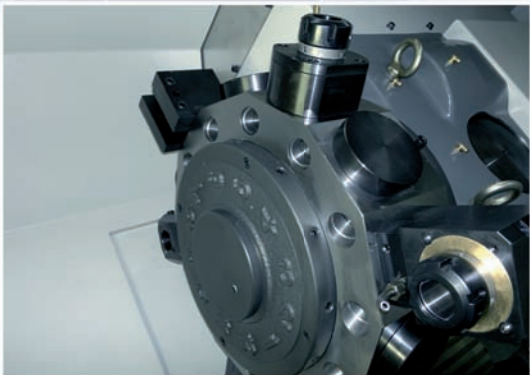
The retractable part catcher integrated with the front door outlet



Tailstock with programmable positioning and hydraulic stroke

Components from the part catcher are easily accessed from the front

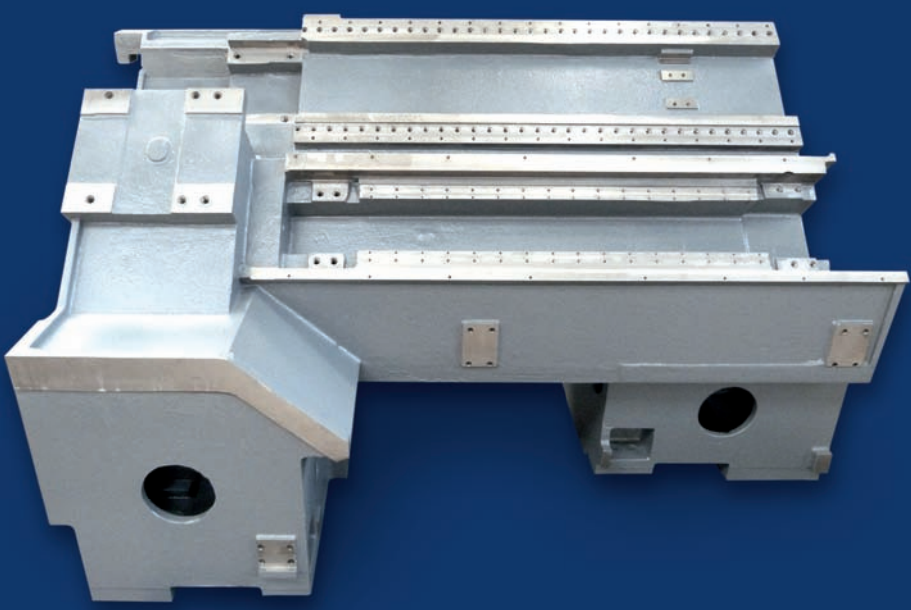
The machine is totally enclosed for operator safety, with wide window visibility



## TOOLING SYSTEMS:

- Standard 12 station tool turret for static tools - VDI 40
- Optional 12 station tool turret for driven tools - VDI 40 in combination with C-axis positioning and hydraulic brake on main spindle

Note: tool holders are not supplied with the machine - available as options in combinations to suit the application



45 degrees slant machine cast beds with roller linear guide ways on the X- and Z-axes provide exceptional rigidity and stability for heavy duty and accurate machining processes. All machine bed lengths are made as single mono-block castings, designed for easy swarf removal and ergonomically configured for convenient operator access to the work piece.

## MACHINE STANDARD EQUIPMENT:

- Siemens CNC Control System: Sinumerik 840D SL
- Brushless AC servo motors
- Direct belt drive on main spindle
- Spindle nose A2-6
- 12 position turret for static tools (without tool holders)
- Colour RAL 7031/7044
- Work light (24V)
- One set of operation / programming & maintenance manuals (English or German)
- Hydraulic tank
- CE conformity
- Siemens Service Contract - 1 year
- Programmable positioning of tailstock with automatic clamping
- Hydraulic stroke of tailstock quill
- USB Port
- Absolute encoders for axial motors
- Total machine enclosure

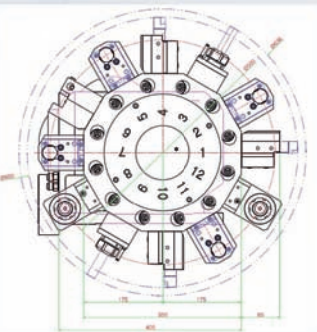
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## MACHINE OPTIONAL EQUIPMENT:

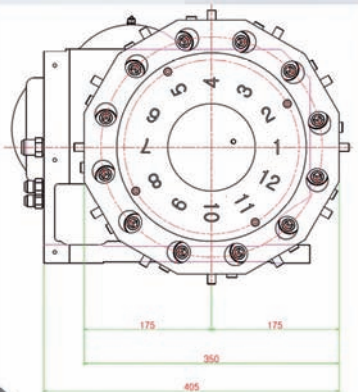
- Dead center
- Bigger spindle bore - Ø65 or 80 mm
- Manual / hydraulic / collet chucks
- 12 station turret for driven tools VDI40, in combination with C-axis positioning and hydraulic brake on main spindle
- Automatic door opening
- Tool touch probe
- Hydraulic steady rests
- Chip conveyor
- Bar feeder
- High pressure coolant pump
- Part catcher
- Sub spindle

Note: other options are available on request - please email for details.

## TOOL INTERFERENCE

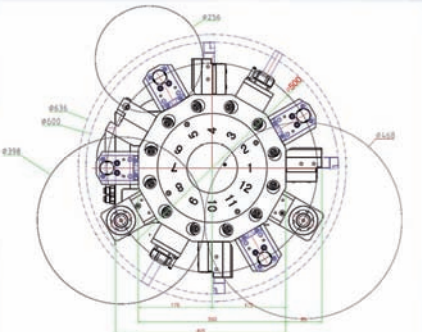


12 position tool turret for driven tools - VDI 40

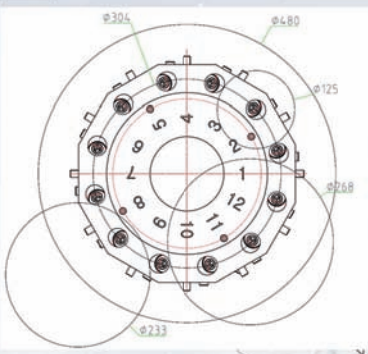


12 position tool turret for static tools - VDI 40

Driven tools



Static tools



## CNC CONTROL

The Siemens 840D SL is powerful yet surprisingly easy to programme! The user friendly Conversational Programming System makes operation of the FTM165 highly efficient and enjoyable for the machine operator. Likewise, for programming of complex components, the FTM 165 control allows you prepare and check part programmes off the machine and then produce parts in fully automatic CNC mode with minimum downtime.

Main features:

- easy programming without the need for in-depth knowledge of DIN/ISO formats
- extremely short programming time using graphics
- clear display of technical data and machining sequences
- prevention of invalid inputs thanks to checks using dynamic online graphics
- simple management of tools and tooling data
- wide selection of standard machining and measuring cycles



Fanuc or Fagor CNC controls are available as options