LODGE & SHIPLEY

TECHNICAL OFFER

PROFITTURN 1150/1350/1550 MN CNC LATHE

with Siemens ONE control system

Version: 2026016V4

MONARCH LATHES LP
615 OAK AVENUE
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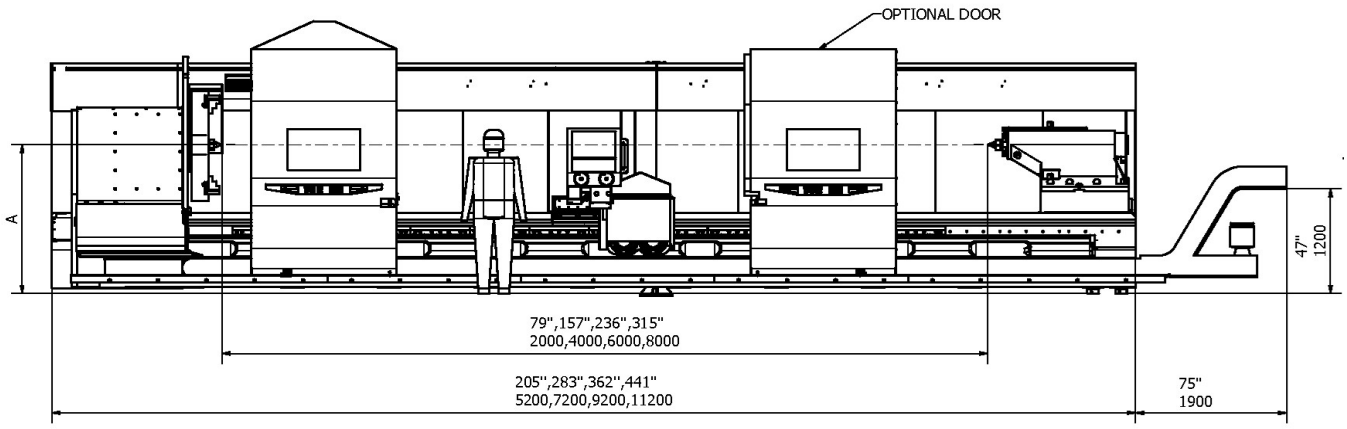
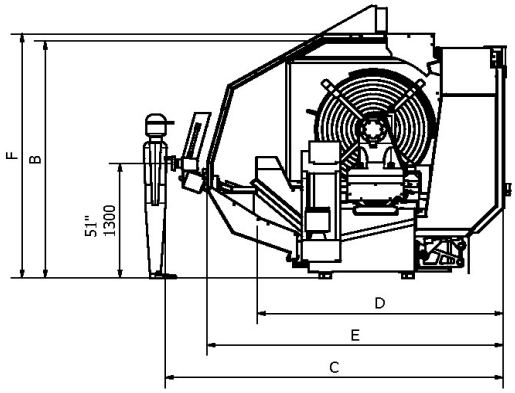
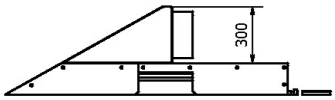
TECHNICAL DESCRIPTION

1) MACHINE LAYOUT LODGE & SHIPLEY PROFITTURN 1150/1350/1550 MN MACHINES







TYPE		PROFITTURN 1150 MN	PROFITTURN 1350 MN	PROFITTURN 1550 MN
A	mm	1400	1500	1600
	in	55	59	63
B	mm	2350	2350	2500
	in	92.5	92.5	98.4
C	mm	3300	3300	3500
	in	130	130	138
D (transport dimension - auto)	mm	2340	2340	2550
	in	92	92	100
D (transport dimension - container)	mm	2500	2500	2340
	in	98.5	98.5	92
E	mm	2900	2900	3050
	in	114	114	120
F	mm	2550	2550	2750
	in	100	100	108

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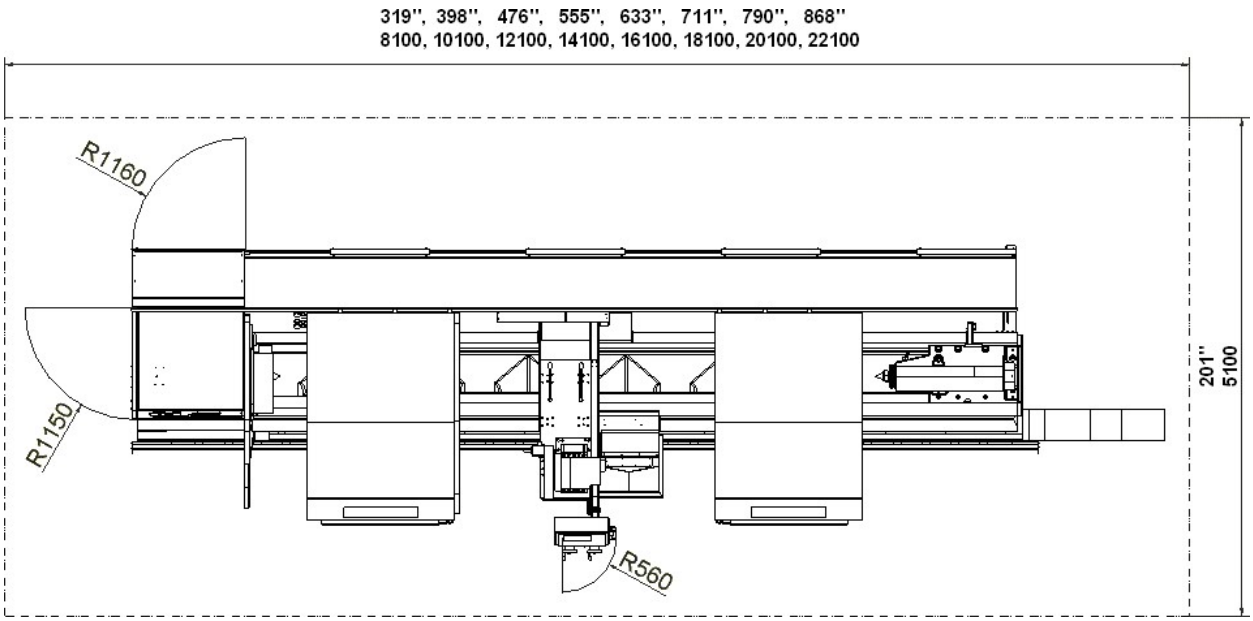

2) MAIN FEATURES LODGE & SHIPLEY PROFITTURN 1150/1350/1550 MN MACHINES

- *European made machine, composed by top quality components*
- *Siemens electrical equipment with latest Siemens Sinumerik One. Fanuc or Fagor controller as options*
- *Rigid and wide 1-piece mono-bloc bed with enormous dimensioned slide-ways assure high rigidity and accuracy of operation, also fine surface finish of machined workpiece*
- *Hardened and ground bed-ways, hardened and ground gears assure long lifetime*
- *X-axis on over dimensioned preloaded anti-friction linear roller guide ways results in excellent anti-vibration characteristics and high dynamics*
- *Z-axis drive with dual motor (master / slave system) with automatic backlash compensation by CNC control on machines longer than 5 meters b.c. This system is maintenance free and does not request readjustment due to wear.*
- *Linear measuring system as standard in the Z-axis for machines longer than 5 meters b.c. Optional for 2 and 4m machine*
- *The very heavy-duty tailstock; the quill with built-in bearing system (prepared for dead centre MT6) allows to load bigger work piece and reduces vibration during heavy rough cutting*
- *Due to the unique design of bed, guarding and chip conveyor in the front, the machine has an excellent chips removal*
- *The machine is ergonomically designed and has a rotating control panel*
- *Centrally operated lubrication system with detection*
- *Big spindle bore of 140mm as standard, 220mm, 320mm, 360mm and 450mm bore as option, with double spindle nose as option*
- *Powerful spindle motor; stronger motors optionally available*
- *High torque available for heavy stock removal*
- *Absolute encoders in Z- and X-axis motors*
- *Machine can be extended with all kind of options such as power chuck, tool turret with or without live tooling, hydraulic tailstock, C-axis, boring bar attachment, etc.*

3) MACHINE SPECIFICATION

LODGE & SHIPLEY PROFITTURN		1150 MN	1350 MN	1550 MN
CAPACITY				
Distance between centers **(other lengths on special request)**	*mm*	*2000 – 4000 – 6000… – 16000*		
	in	*79 – 157 – 236… – 630*		
Swing over bed	*mm*	*1150*	*1350*	*1550*
	in	*45*	*53*	*61*
Swing over saddle	*mm*	*700*	*900*	*1100 / 1300*
	in	*27.5*	*35.5*	*43.3 / 51.1*
Swing over gap	*mm*	*1280*	*1480*	*1680*
	in	*51.5*	*59.5*	*66*
Width of gap	*mm*	*580*		
	in	*22.8*		
Max. weight between centers (without steadies)	*kg*	*12,000 (20,000 option)*		
	lbs	*26,400*		
Max. weight between centers (with one steady)	*kg*	*15,000*		
	lbs	*33,000*		
Max. weight between centers (with two steadies)	*kg*	*18,000*		
	lbs	*39,600*		
Max. weight in chuck only	*kg*	*3,000*		
	lbs	*6,600*		
HEADSTOCK				
Number of spindle ranges		*2*	*2*	*2*
Top spindle speed ranges (standard machine with 140 mm spindle bore)	*rpm*	*I: 2–225, II: 180-1000*	*I: 2–225, II: 180-1000*	*I: 2–225, II: 180-1000*
Main drive motor power (S1)	*kW*	*41*	*41*	*41*
	hp	*56*	*56*	*56*
Max. Turning torque	*Nm*	*8200*	*8200*	*8200*
	ft-lb	*6048*	*6048*	*6048*
Standard execution:				
*Spindle nose ** *	*DIN55026*	*A2-15*		
Spindle bore standard version	*mm*	*140*	*140*	*140*
	in	*5.5*	*5.5*	*5.5*
Special execution 220:				
*Spindle nose ** *	*DIN55026*	*A2-15*		
Max speed	*rpm*	*1000*	*1000*	*1000*
Spindle bore	*mm*	*220*	*220*	*220*
	In	*8.6*	*8.6*	*8.6*
Max. Turning torque	*Nm*	*8200*	*8200*	*8200*
	ft-lb	*6048*	*6048*	*6048*
Special execution 320:				
*Spindle nose ** *	*DIN55026*	*A2-20*		
Max speed	*rpm*	*500/700*	*500/700*	*500/700*
Spindle bore	*mm*	*320*	*320*	*320*
	in	*12.5*	*12.5*	*12.5*
Max. Turning torque	*Nm*	*8200*	*8200*	*8200*
	ft-lb	*6048*	*6048*	*6048*
Special execution 360:				
*Spindle nose ** *	*DIN55026*	*A2-20*		
Max speed	*rpm*	*500*	*500*	*500*
Spindle bore	*mm*	*360*	*360*	*360*
	In	*14.1*	*14.1*	*14.1*
Max. Turning torque	*Nm*	*8200*	*8200*	*8200*
	ft-lb	*6048*	*6048*	*6048*
Special execution 450:				
*Spindle nose ** *	*DIN55026*	*A2-28*		
Spindle bore	*mm*	*350*	*350*	*350*
	In	*17.7*	*17.7*	*17.7*
Max. Turning torque	*Nm*	*9900*	*9900*	*9900*
	ft-lb	*7300*	*7300*	*7300*

SADDLE				
Cross slide travel X-axis	mm	650	750	775
	in	25.5	29.5	30.5
Rapid travel Z-axis	m/min	8		
	ipm	310		
Rapid travel X-axis	m/min	10		
	ipm	390		
Feed force transverse	kN	25		
	lbf	5500		
Feed force longitudinal	kN	55		
	lbf	12300		
Ball screw Z-axis (2,4m b.c.)	mm	80		
	in	3.1		
Drive Z-axis (6m and longer)	-	Gear drive		
Ball screw X-axis	mm	40		
	in	1.6		
Carriage length bearing on bed ways	mm	1150		
	in	45.3		
Width of cross guide ways (linear guide ways)	mm	410	410	410
	in	16.1	16.1	16.1
Manual Tool post Type Multifix	size	D2		
Automatic tool turret with 8-pos. tool disc (option)	DIN69880	VDI 60		
Automatic 4-pos. tool turret "HEAD-Type" (option)	DIN69881	NG40		
TAILSTOCK				
Quill diameter	mm	220 (280mm option)		
	in	8.6		
Quill taper for dead center	size	MT 6		
Quill stroke	mm	300		
	in	11.8		
GENERAL				
Width of bed ways	mm	1020		
	in	40		
Height of bed ways	mm	755		
	in	30		
Total length of machine *				
2.000 mm b.c.	mm	5200		
	in	205		
4.000 mm b.c.	mm	7200		
	in	283		
6.000 mm b.c.	mm	9200		
	in	362		
16.000 mm b.c.	mm	19200		
	in	756		
Width of machine	mm	3300		
	in	130		
Width of machine for transport	mm	2350		
	in	93		
Height of machine	mm	2550	2550	2750
	in	100	100	108
Weight of machine (approx.)				
2.000 mm b.c.	kg	16500	17300	18100
	lbs	36383	38147	39911
4.000 mm b.c.	kg	19000	19800	20600
	ibs	41895	43659	45423
6.000 mm b.c.	kg	21500	22300	23100
	lbs	47408	49172	50936
16.000 mm b.c.	kg	34000	34800	35600
	lbs	74800	76560	78320

Subject to alterations without prior notice.
** Bigger lengths b.c. on special request,* *** double spindle nose as option*

The data in the table refer to the basic version of the lathe with Siemens controller. They may differ depending on the version of the machine and additional equipment. Especially from the tool system, special guards and doors, type of tailstock, chuck, steady rests and other options. The values of power, torque and speed of the spindle will be different with Fanuc and Fagor controller.

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4) MACHINE EXECUTION

4.1) GENERAL DISCRIPTION OF THE MACHINE

The PROFITTURN 1150/1350/1550 MN is a manual/CNC combination high-precision lathe. Equipped with the very latest Siemens SINUMERIK One and AC drives it became a production unit for manufacturing the high-precision, complicated parts made as one-offs or in small batches. When the machine is equipped with such options as hydraulically operated power chuck and hydraulic tailstock, live tooling and electric automatic tool turret, it offers efficiency of a modern flatbed CNC lathe. The great advantage to the user of this lathe is the possibility of employing the highly developed techniques without any special knowledge of programming.

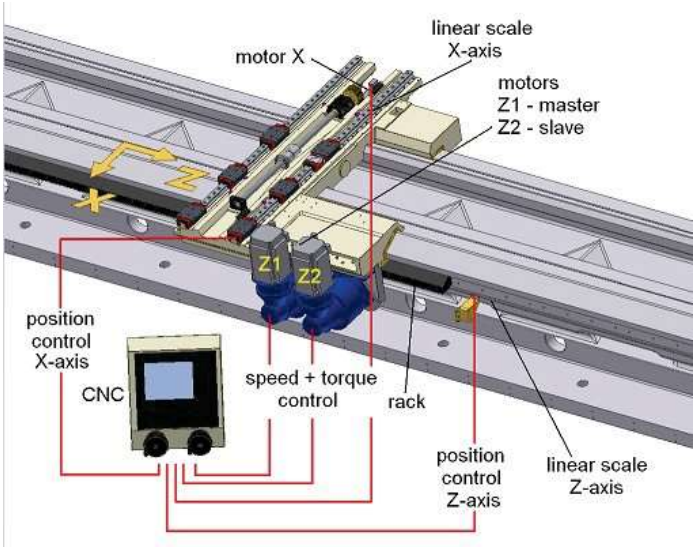
Reduced machining times, the highest and uniform precision of all parts in the batch as well as taking away from the operator his routine work demonstrates the new level of production efficiency.

The PROFITTURN MN manual Turn lathe is equipped with control elements traditionally used on modern manual center lathes, such as hand wheels and the digital readout system. Therefore, the machine offers to its operator the possibility to operate it in the conventional manner.
The sequence of motions can involve a single element of machining, a fixed cycle or a complete program.

The first steps are easy to master and you can then gradually increase the level of complexity.
Right through to user-friendly Easy step programming, ready cycles and full CNC automatic mode. The spindle speed is infinitely adjustable from the minimum until maximum speed. CSS is programmable. To ensure a high torque at low speeds, the machine is equipped with a 2-speed range gearbox which is automatically programmable as standard. The machine is as standard equipped with manual quick change tool holder (Multifix D2). To achieve higher productivity, more flexibility and to reduce non-cutting time, the machine can be equipped with automatic tool turret for static or live tooling. Hydraulic or pneumatic chucks are optionally available.

4.2) CARRIAGE

PROFITTURN 1150/1350/1550 MN x 6000 and longer with master-slave concepts:

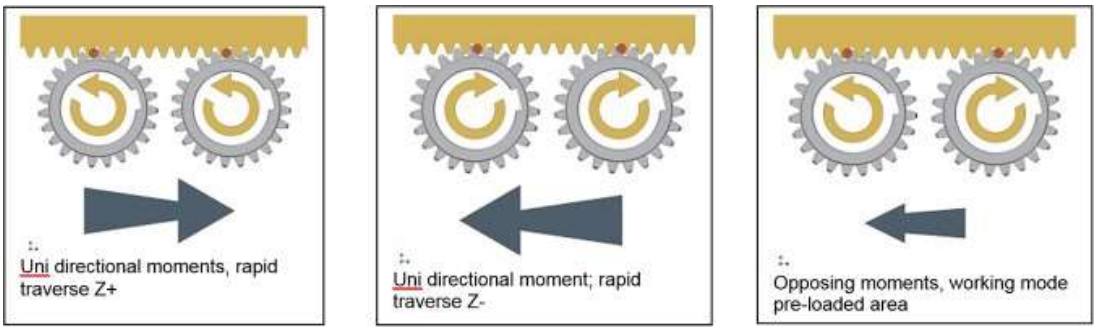


Double pinions, electronically pre-loaded Z-axis by 2 drives. Advantages:

- *automatic backlash elimination*
- *high stiffness*
- *maintenance free and no readjustment needed*
- *reduced number of mechanical elements*

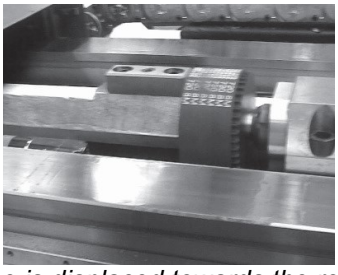
Linear measuring system for Z-axis standard on 6 meters and longer machines:

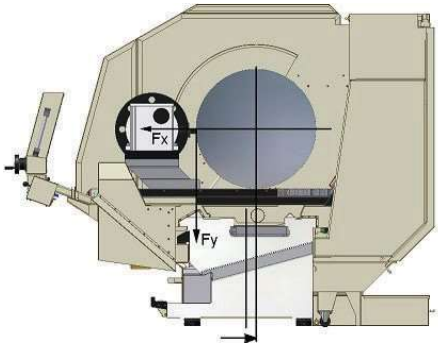
- *very high positioning accuracy and repeatability*
- *no deviation of positioning due to temperature influence or expansion of the ball screw or play between nut and ball screw*
- *measuring near to the cutting process and elimination of error*
- *electronic reference points integrated*



For the longitudinal travel of the saddle a rigid ball screw of 80mm diameter is used for 2m, 4m and 5m b.c. machines. The 6m and longer machines have a gear drive (rack and pinion) in longitudinal axis. The system is driving by 2 servomotors (master/slave system for automatic backlash compensation by CNC). The 6 meters and longer machines have a linear measuring system in Z-axis as standard. The high precision ball screws for X &Z axis are mounted on high precision bearings to enable sensitive movement. The drive for Z-axis on 2 and 4 m machine is transmitted to the ball screw via cogged belt from a Siemens AC servomotor, located on the left-hand side of the machine. The Siemens AC servomotor and timing belt transmission are also used for X-axis drive (cross slide). Its ball screw is with 40mm diameter. The bearing surfaces in the carriage are lined with Turcite B type lining to eliminate stick-slip problems and assure accurate positioning and repeatability and long lifetime.
The X-axis has over dimensioned preloaded anti-friction linear roller guide ways. This results in excellent anti-vibration characteristics and high dynamics.
The X-axis digital drive ensures high positioning accuracy and repeatability and contour accuracy.
The longitudinal and cross slide ways are lubricated by a separate lubrication unit.
The transversal guide ways are protected with telescopic cover.

Optionally the slide ways of saddle in X-axis can be installed.

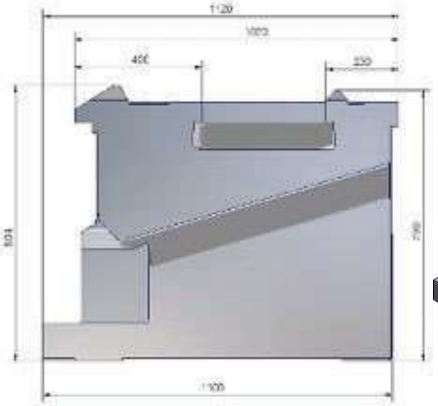


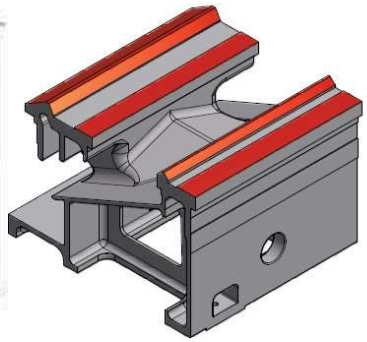


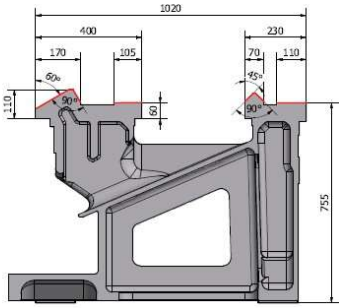
The spindle centerline is displaced towards the rear of the bed center. This design, in combination with the wide bed construction, allows to avoid a large overhang of the cross slide and tool system. The cutting force is being taken by the prism guide way. Moreover, this concept increases the rigidity of the machine and allows heavy cutting machining.

4.3) BED

The enormous wide 1-piece mono-block bed is made from high-grade cast iron. The guide ways are induction hardened and ground. The heavy-ribbed bed is double walled. This substantially minimizes vibration and improves finishes. The bed is provided with special chutes enabling an easy flow of chips. The bed width is 1020 mm. The use of hardened guide ways, high rigidity of bed castings subjected to stress relieving treatment and precise machining ensure a long-life accurate operation of the lathe.



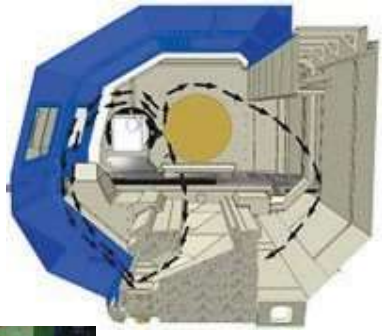




4.4) CHIP REMOVAL – CHIP CONVEYOR

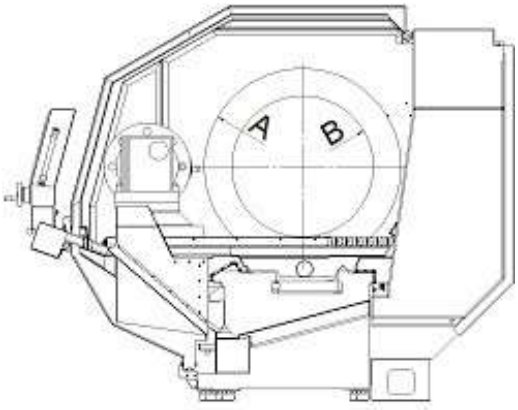
On traditional heavy-duty flatbed universal CNC lathes, chip contamination remains a problem. On the PROFITTURN 1150/1350/1550 MN, this belongs to the past. Due to the unique design of the guarding, bed design, chip removal is excellent. The chip conveyor (standard) is positioned in the front of the machine, integrated in the machine bed. Practical experience has shown that the majority of the chips are collected in the front. The occasional chips falling to the back of the machine are collected in a chip pan. The chip clearance is optimal and is comparable as this of a slant bed lathe. This results in reduced downtime of cleaning chips and increases the productivity.
The chip conveyor can be easily pulled out from the front for eventual maintenance job without requiring additional space.
The chain type chip conveyor has the following specification:

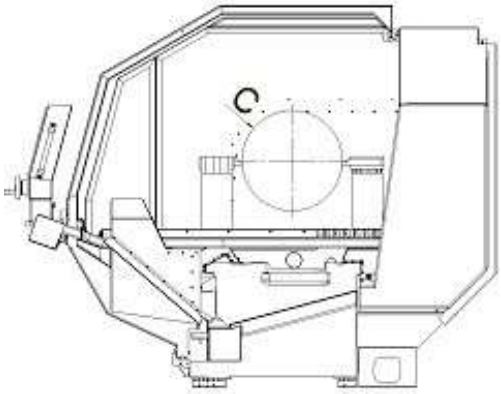
Capacity of chip conveyor: *0.8 m³/h*
Capacity of coolant system: *300 l (2 m) to 700 l (8 m)*



Rear chip conveyor as an option

4.5) WORK AREA DRAWINGS



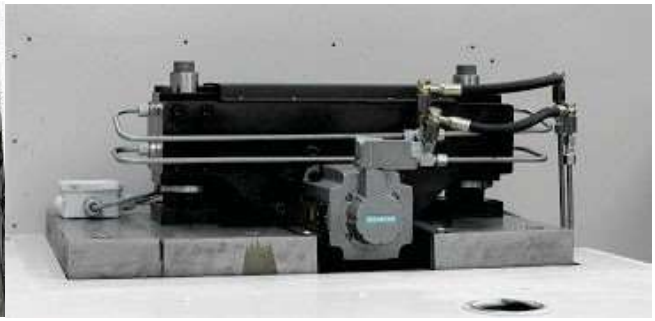


TYPE			1150MN	1350MN	1550MN
A	Disc type VDI 60 with or without tool drive	mm	1050	1250	1250
		in	41	49	49
	Horizontal 4-positon NG40	mm	1150	1350	1550
		in	45	53	61
	Multifix D2	mm	1150	1350	1550
		in	45	53	61
B	Disc type VDI 60 with or without tool drive	mm	700	900	1100
		in	27.5	35.5	43
	Horizontal 4-positon NG40	mm	700	900	1100
		in	27.5	35.5	43
	Multifix D2	mm	700	900	1100
		in	27.5	35.5	43
C	Multifix D2	mm	660	660	660
		in	26	26	26

4.6) TOOLING SYSTEM

For such work as eccentric drilling, T-nut milling, etc... , the PROFITTURN MN machine can be equipped optionally with spindle control. There are 2 different possibilities:

1. *C-axis positioning: the spindle is driven by main motor, with hydraulic brake on spindle, spindle encoder for positioning every position (+/- 0,02°). With life tooling in combination with the C-axis positioning option, it is possible to make eccentric drilling, tapping, key-slot milling with static spindle. It is not recommended to use this option for interpolation work with moving spindle. The accuracy of this work will be limited.*
2. *Full contouring C-axis: the spindle is driven by direct drive with spindle encoder on the spindle for positioning every position (+/-0,02°). Maximal speed of spindle is 8 rpm and maximal torque equals 11 800 Nm. The direct drive has a separate CNC servo motor and ensures high torque during slow rotating of the spindle. Life tooling in combination with the full contouring C-axis, it is possible to make complicated contour milling operation during slow rotation of the spindle, as well as eccentric drilling, tapping, key slot milling, etc*

3.  

C-axis positioning: with hydraulic break and direct C-axis.

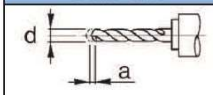
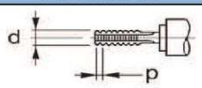
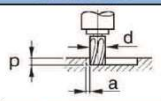
4.6.1) Disc turrets

Disc turret for static tools (special disc)

Disc turret for driven tools

Batuffaldi disc turret for driven tools

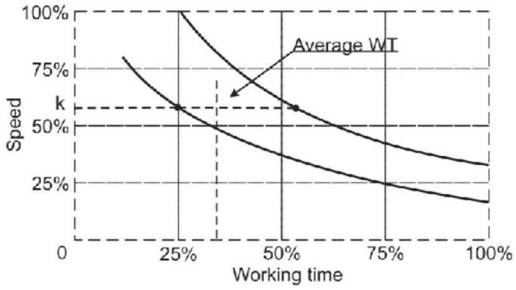
Cutting capacity for driven tools (HSS) of Baruffaldi turrets:

	TWIST DRILLING *FORATURA*	TAPPING *MASCHIATURA*	SLOT MILLING *FRESATURA*
			
	d x a (mm)x(mm)	d x p (mm)x(mm)	d x p x a (mm)x(mm) x (mm/min)
TBMA 100	10 x 0.15	M10 x 1.5	10 x 6 x 45
TBMA 120	14 x 0.15	M12 x 1.5 M22 x 1	20 x 12 x 40
TBMA 160	14 x 0.15	M14 x 1.5 M24 x 1	20 x 12 x 40
TBMA 200	20 x 0.20	M16 x 2 M22 x 1.5	25 x 14 x 40
TBMA 250	24 x 0.20	M18 x 2.5 M27 x 1.5	25 x 20 x 40
TBMA 320	32 x 0.20	M24 x 3	42 x18 x 35
TBMA 400	40x 0.22	M48x3	

The above data sheet is indicative only for general reference

When using live tools with the standard TBMA driven turrets please consider limits of working time and watch "working time" reference diagram shown below to adjust working parameters.

As for the speed, the greater the speed, the shorter the permitted working time remains.

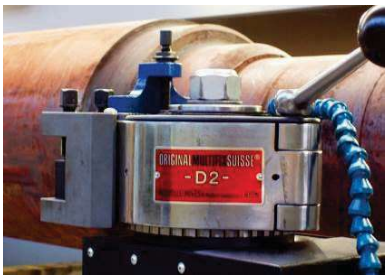


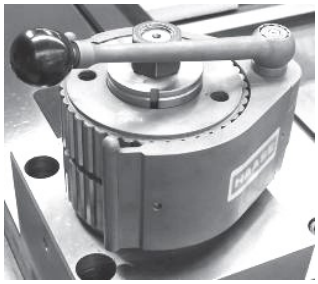
The TBMA turrets can be optionally equipped with Forced Lubrication system that allows working with driven tools in continuous mode (up to 100%). The turret is thus upgraded to a Milling Unit.

4.6.2) Head turret

4.6.3) Manual tool post

Standard: Multifix





Option: Parat size 5,

4.6.4) Milling units

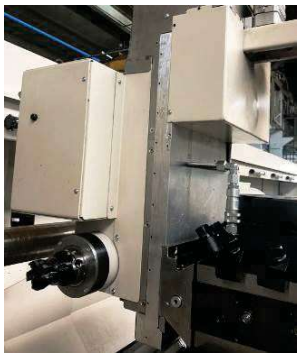
For heavier milling operation it is possible to install the milling unit on the machine. There are different options available: milling unit on the 4-pos. turret, on the T-slots or on automatic Y-axis base.



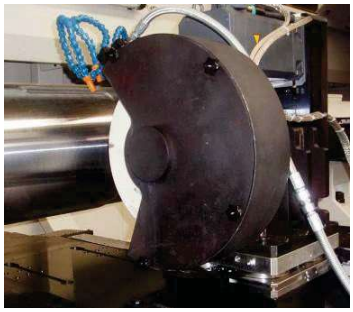
Milling unit installed on 4-position bi-directional tool turret

(horizontal) or on independent base. Fixture of tools according to DIN 2080 A40; TAPER ISO 40. The milling unit can be dissembled if you don't need the live tooling. As an option it is possible to offer the milling unit with integrated NC Y-Axis (+/-100mm).



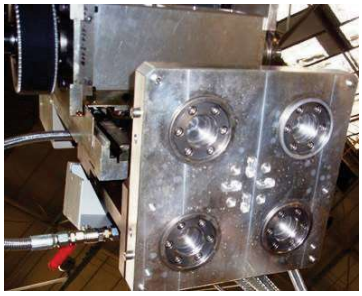


4.6.5) Grinding units


4.6.6) Quick change system for different tooling systems





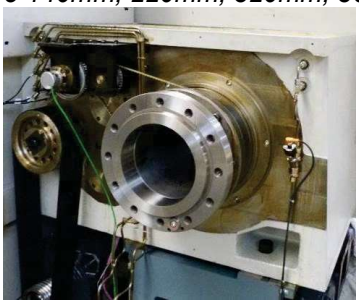
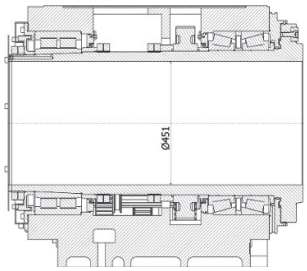

4.7) HEADSTOCK

4.7.1) STANDARD EXECUTION

The headstock is of a modern compact design. The heavy-duty spindle is supported by high precision bearings. Due to application of closely supported shafts and ground gears the headstock runs very smoothly at all speeds.

The power is transmitted to the gearbox by means of multi-V power belt. To keep the high turning torque at low rpm, the machine is equipped with a 2-range gearbox. The change of spindle speed range is realized by means of automatic shifted gear as standard. The main motor is also used to break the headstock. A separate lubrication unit driven by its own motor lubricates the headstock's gears. A pressure switch ensures that headstock does not operate without proper lubrication.

The machine might be optionally equipped with headstock for bigger spindles with bigger through holes. The available spindle bores are 140mm, 220mm, 320mm, 360mm and 450mm. Other sizes on request.

4.7.2) HIGH-TORQUE EXECUTION

The main spindle is powered by a Siemens AC motor, variable speed, 60 kW.

The power is transmitted from main motor through planetary gearbox to the main gearbox without transmission belt.
To keep the high turning torque at low rpm, the machine is equipped with a 2-range automatic planetary gearbox. For other types of controllers, the parameters of motors may vary

4.8) HYDRAULIC POWER PACK

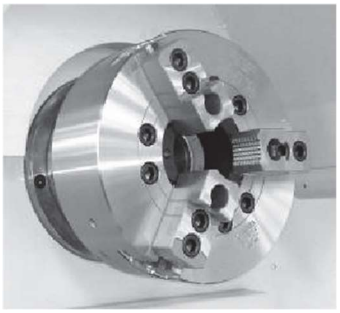
The hydraulic power pack is integrated inside the machine, has the following specification:

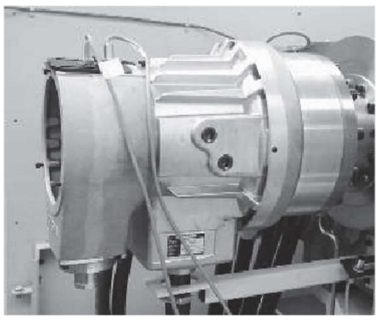
- *oil tank capacity 60 liters*
- *hydraulic pump 20 l/min output*
- *valves controlling hydraulically operated tailstock*
- *valves for setting the pressure adjustable up to 40 bar*

4.9) HYDRAULIC CHUCK (option)

Attention: this option is possible with the front spindle nose only. Not available for version with two spindle noses.

There is a choice of different power operated chucks with opened or closed center. All chucks with hydraulic actuator are completely tested and integrated in CNC control of the machine. The pressure and working force can be adjusted at the hydraulic power pack. The chuck is operated by means of a foot pedal. The system is provided with the necessary interlocks, as no rotation of spindle when chuck in opened or when operating force is not reached, control of end movement of clamping jaws, etc.

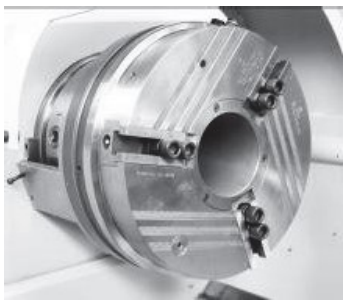




Hydraulic chuck with closing trough hole or closed

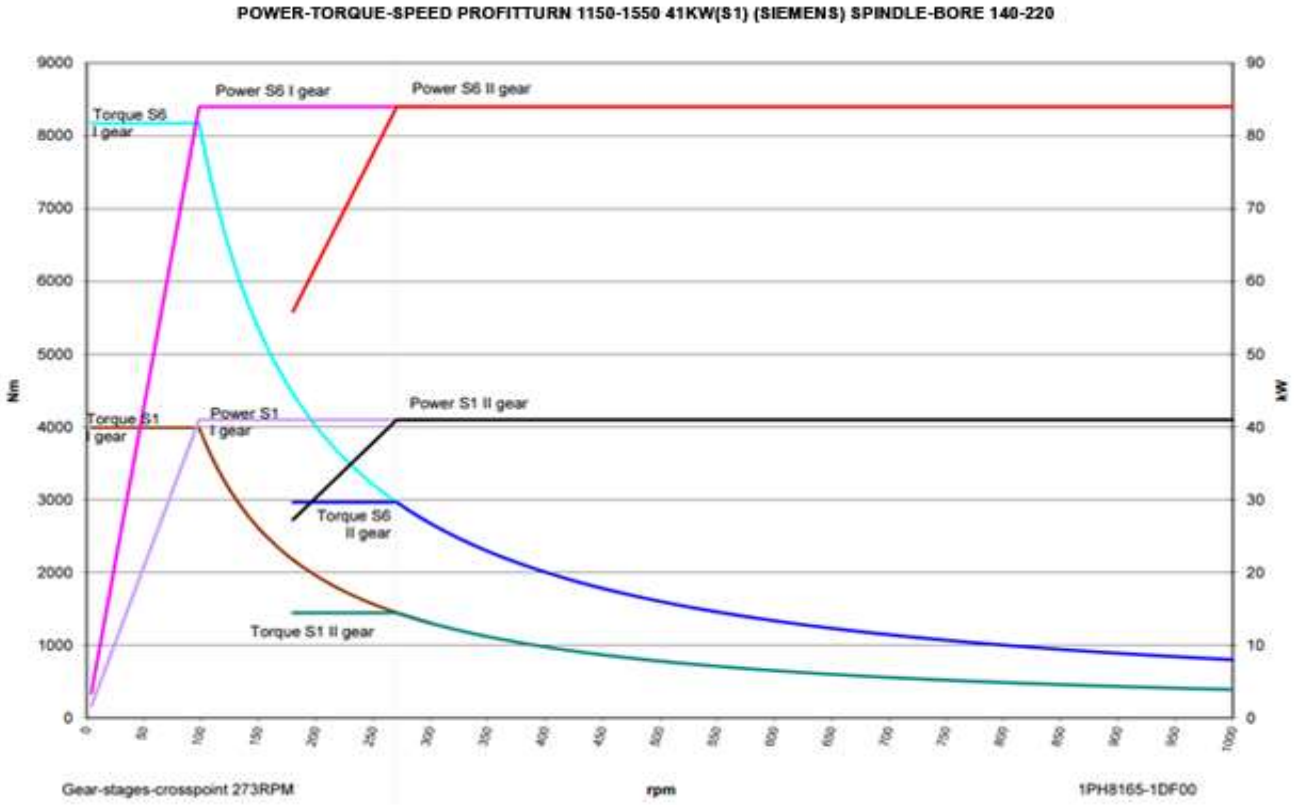
4.10) PNEUMATIC CHUCK (option)

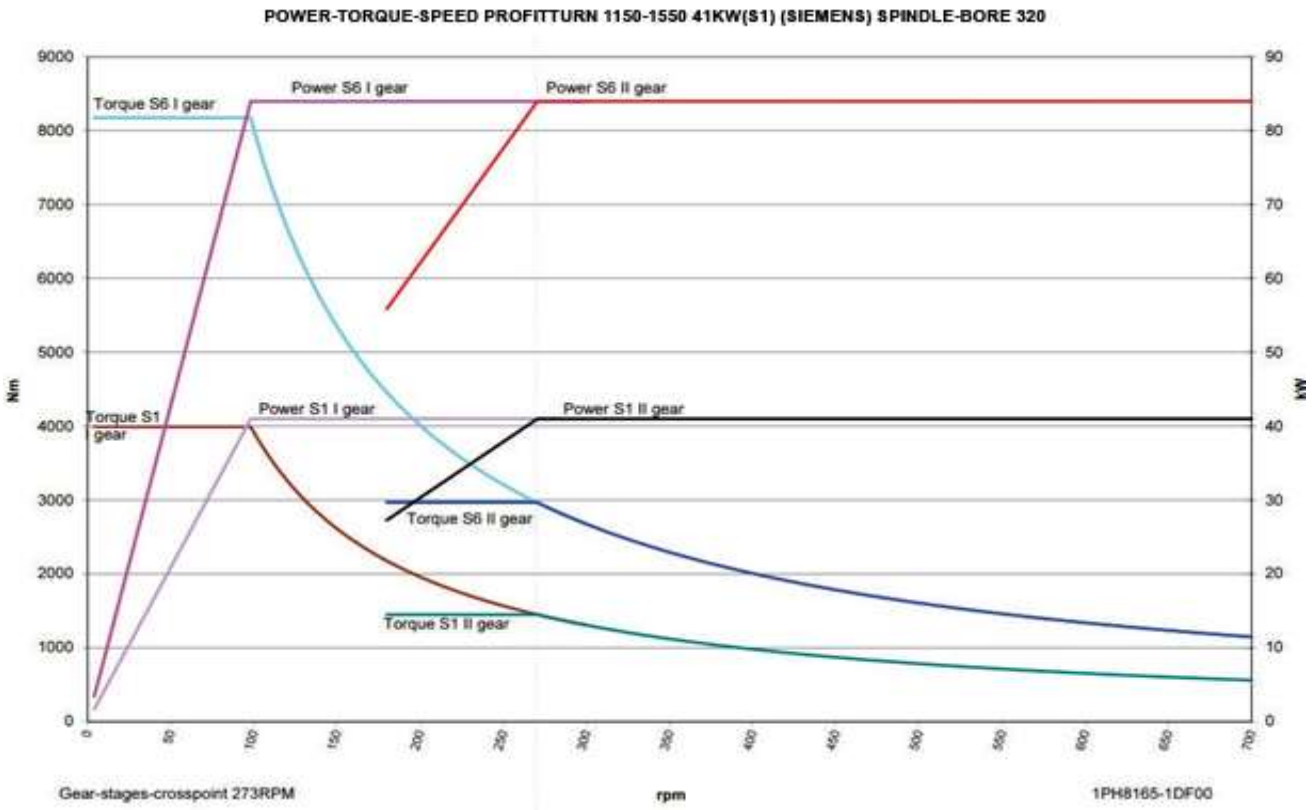
The pneumatic chucks are available as an additional option. With the pneumatic chuck on the machine there is no limit of spindle through-hole (no drawing bar inside and no cylinder on the rear). Thanks to this solution there is also possibility of assembling on both spindle noses on machines with double nose 2 automatic chucks. Like with hydraulic chucks we ensure the full integration and operation security.



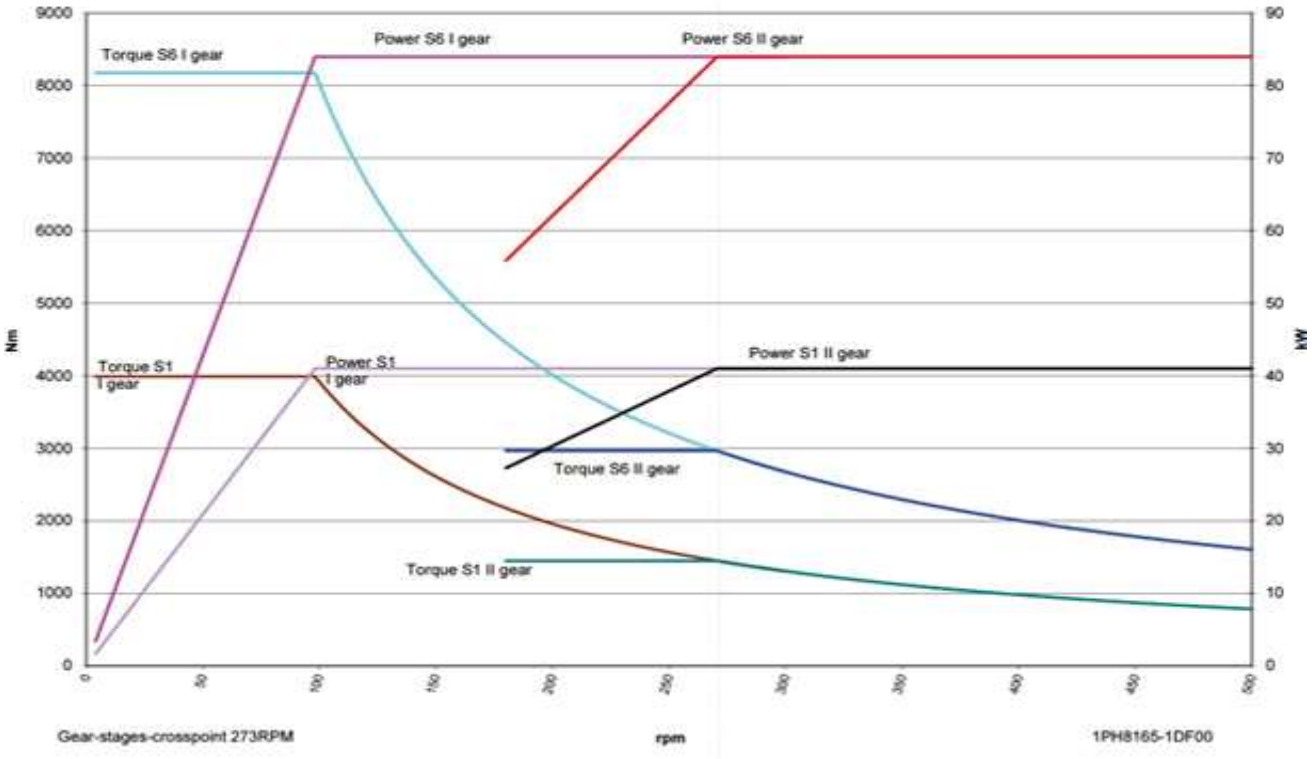
4.11) POWER-TORQUE DIAGRAM *

4.11.1) STANDARD EXECUTION



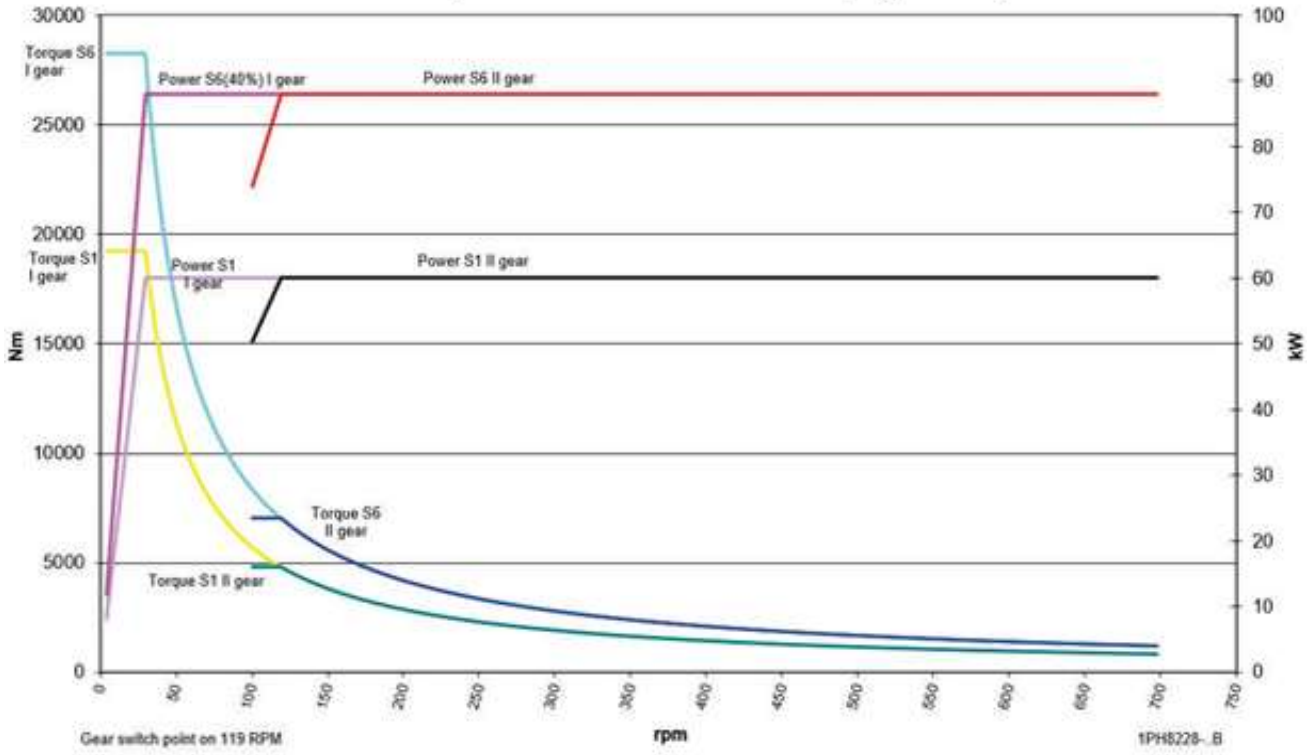


POWER-TORQUE-SPEED PROFITTURN 1150-1550 41KW(S1) (SIEMENS) SPINDLE-BORE 360



4.11.2) HIGH-TORQUE EXECUTION

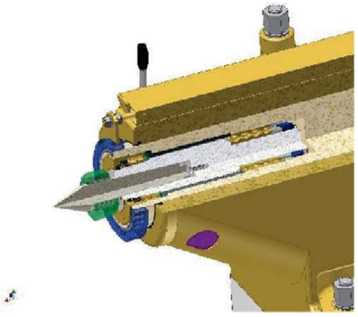
POWER-TORQUE-SPEED SUPERTURN 4 MN 60KW(S1) (SIEMENS)



**** The values of power, torque and speed of the spindle will be different for Fanuc and Fagor controller.***

4.12) HYDRAULIC TAILSTOCK

This specially extended neck allows more clearance between tailstock body and cross slide. This design permits better access for machining parts close to the tailstock center. The extra-large 220 mm diameter hydraulic quill is hardened and ground and has built-in bearing system (prepared for dead center MT6). The heavy-duty tailstock allows bigger workpiece loads and reduces vibration during heavy rough cutting. The tailstock is on an air cushion for easy movement and it can be easily positioned by carriage using a quick-disconnecting coupling as standard. Optionally tailstock might have separate motor and be driven by means of rack and pinion system.
Other option is special heavy-duty execution of the tailstock. Stronger body and quill with 280mm diameter with short cone increase the capacity up to 20,000kg between centers without steady rest support.



4.12.1) HEAVY DUTY EXECUTION

4.13) CHIP GUARD

The PROFITTURN MN has one sliding guard at the front of the machine with vision security window, second front door is optional available. Electro switch interlocks prevent the machine from being started if the guard is not connected with the cross slide and prevents from opening the guards if the machine is operating in automatic cycle. At the rear side, there is a full-length rear splash guard and a telescopic guard.
The sliding guards are designed in such way, that even long work pieces can be loaded without problems and ensure good accessibility.

Lathe with second movable door

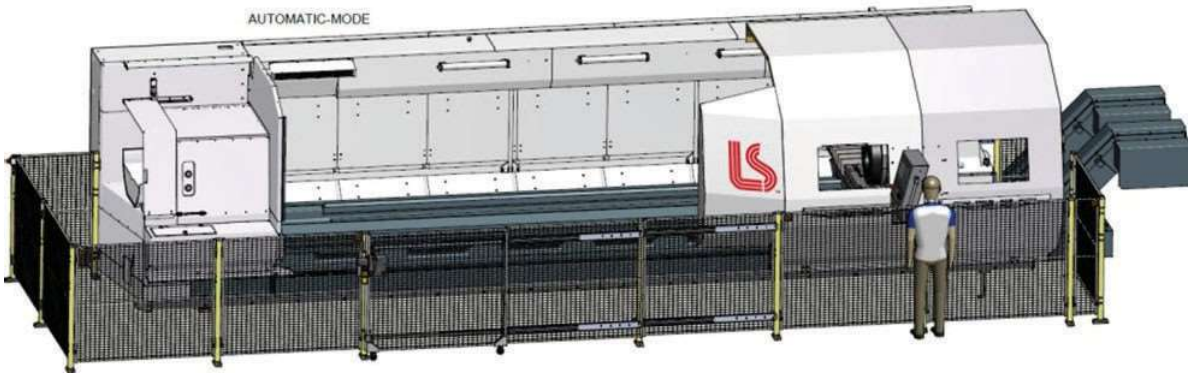
Due to the increasingly restrictive safety regulations resulting from the CE directive, there are following adjustments on the lathes:

1. *Starting spindle to 50rpm with open doors requires following:*
   - *Chuck covers with interlocked safety switch*
   - *Hold to run button*

   To achieve this in setting mode MPG (3rd hand wheel) will be required. MPG has "hold to run" button.
   Note: 5rpm spindle jogging is always possible by pushing button on machine control panel and doesn't require MPG

2. *Long lathes are equipped as standard with single or double doors that move together with a carriage. It is still a form compliant with the CE directive. However, in many countries and even in the companies themselves, there are separate regulations regarding the safety of machines. More and more often, full enclosure of the machine or its fencing is required. Please take this information into account when the certain model is not fully built-up as standard.*

   Here an example of the fence which can be installed over the lathe as an option:



Many factors should be taken into account, such as: available space, the possibility of loading and unloading the machine, ergonomics of the operator's work, etc.
Other solution can be light curtain in the front.

4.14) LINEAR MEASURING SYSTEM

PROFITTURN 1150/1350/1550 MN is as standard equipped with Linear Measuring System in the Z-axis on the 6000mm b.c. and longer machines (with gear drive). Optionally available on the 2000 and 4000 mm machine (with ball screw) and for X-axis also optionally available. The Linear Measuring System ensures a high positioning accuracy and higher repeatability. The linear measuring system eliminates deviations of position due to expansion of the ball screw because of temperature fluctuations or play between nut and screw or other mechanical play.
Linear measuring system has integrated electronic reference points.
For special request it is possible to install absolute direct measuring system.

4.15) STEADY REST (option)

Steady rest with 3 or 4 rollers on cylindrical roller bearing (optionally with bronze quills). Easily detachable from bed.

Available diameters: Ø 50–400, Ø 380–700, Ø 680–1000

Front regulation of rear quill as an option
Another dimension for request.

Optionally available self-centering hydraulic steady rests, ring steady rests, follow rests, hydrostatic rest etc.

Hydrostatic steady rest

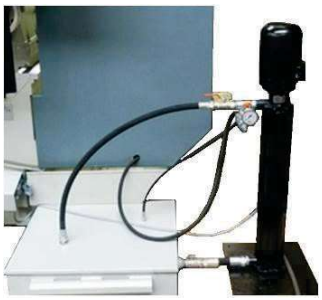
4.16) BORING BAR HOLDER (OPTION)

In case of using boring bars, it is needed to install boring bar holder. For heavy machining (large bore diameter or long boring bar) boring bar holder has to be placed on T-slots of cross slide. The execution ensures high stability and accuracy even for complicated boring operation.


Note working area limits in case of installing a boring bar holder supported by an additional guide way. Work with the tailstock only when the quill is fully extended.
In order to avoid the full extension of the quill, it is necessary to disassemble the boring bar holder together with the guide.
The action of assembly and disassembly is facilitated by quick-change plates and units, which are available as optional equipment.

4.17) COOLANT STATIONS (OPTION)

If necessary, using high pressure pump or/and big volume of coolant LODGE & SHIPLEY lathes can be optionally equipped with various types of pumps and tanks.

4.18) CONTROL PANEL

The compact CNC control panel is incorporated into the operator's control console and is rotating for ease of operation. All external wiring is carried in protective conduits.

Fanuc or Fagor controllers are as an option available.

4.19 SECOND MOVABLE DOOR (OPTION)

For better security against chips and coolant there is second right door optionally available. The door is traveling along the machine with the saddle during the machining.

4.20 ADDITIONAL PROTECTING COVERS (OPTION)

For special operations, like grinding or machining of plastic, ceramic or aggressive materials it can be necessary an additional protection for spindle bearings and bed guide-ways. LODGE & SHIPLEY offers solutions for such works:

4.20.1) Sealing for spindle bearings

Spindle bearings in LODGE &SHIPLEY lathes are secured as standard with taking coolant away labyrinth and with an additional sealing which help to stop coolant and dirt while slow spindle motion.
As an option the spindle bearings can be sealed additionally with air pressure.

4.20.2) Protection for guide ways

The guide-ways of the bed can be optionally secured by scrappers with air pressure. As an additional security can be installed the bellows covers for Z- and/or X-axis. To avoid destroying the covers can be easily removed when the standard hot chips will be turned. Other option is small telescopic cover against hard chips.

Note working area limits. With installed bellows the tool post will not come to the spindle nose. The material supported by a tailstock cannot be processed directly from the side of the tailstock's center with installed bellows.

5) Electrical specification

- **Rated current**

Machine Version	Power Installed [kW]	In [A]
		400V
PROFITTURN 1350/1550 MN	60	100

- **Fuses**

Machine Version	Power Installed [kW]	Fuses [A]
		400V
PROFITTURN 1350/1550 BS	60	125

- **Cables**

Machine Version	Power Installed [kW]	Cable [mm²]
		400V
PROFITTURN 1350/1550 BS	60	35

The electrical connection values are given for the basic version of the machine. Other control, type of motors or additional optional equipment increases the demand. Ask for details for a specific lathe.

6) MACHINE STANDARD EQUIPMENT

- *Siemens CNC Control System: Sinumerik One*
- *Third movable hand-wheel for easy tool-setting (MPG)*
- *Automatic programmable change 2-step gearbox*
- *Tool-post type Multifix Size D2*
- *Color RAL 7016/7035*
- *2 LED lamps in working area (4 lamps for machines 6.000mm and longer)*
- *Complete coolant system*
- *One movable front door (connected to cross slide)*
- *Full back guard*
- *Hydraulic tailstock quill 220mm in diameter with hydraulic stroke 300mm*
- *Electrical emergency contact between tailstock and cross slide*
- *Hydraulic unit*
- *Automatic lubrication system*
- *Front chip conveyor integrated with bed and coolant system*
- *Rotating operator panel*
- *Direct measuring system in the Z-axis for machines 6.000mm and longer*
- *Double T-slot on the rear of the cross slide*
- *Absolute encoder*
- *USB port*

7) MACHINE OPTIONAL EQUIPMENT

- *Fanuc or Fagor controller*
- *Various sizes of spindle bore: 220, 320, 360, 450 mm and other*
- *High-torque execution of spindle box*
- *Manual steady and follow rests*
- *Hydraulic steady and follow rests*
- *Hydrostatic steady rest*
- *Various types of chucks:*
  - *manual*
  - *pneumatic*
  - *hydraulic*
  - *T-slots face plates*
  - *closed or with through-hole*
- *Manual tool post Parat*
- *8-position disc turret for static and driven tools*
- *4-position head turret*
- *NC-axes: C, Y, U, B*
- *Special solutions for milling and drillings*
- *Grinding unit*
- *Boring bar attachment*
- *Special headstock and more powerful main motor*
- *Coolant station with filter and high-pressure pomp*
- *Oil mist collector*

- *Independent tailstock drive*
- *Additional front door*
- *Additional chip conveyor in the back of lathe*

Notice: *Technical alterations are always possible without prior notice.*

1. ***Informational nature of the offer:***

This document is for informational purposes only and does not constitute an offer within the meaning of Article 66 §1 of the Polish Civil Code, nor does it constitute a representation within the meaning of Article 556 §1 of the Polish Civil Code. The information contained herein is indicative and subject to change without prior notice.

2. ***Specification subject to confirmation:***

The technical specifications and the scope of standard and optional equipment presented herein require confirmation in the course of separate arrangements with the Buyer, and their final form shall be subject to individually negotiated contractual terms.

3. ***Right to make design modifications:***

The manufacturer reserves the right to introduce design and technological modifications to the offered machines that do not negatively affect their quality, functionality, or intended use, without prior notice.

4. ***Disclaimer for errors:***

The manufacturer reserves the right to typographical and clerical errors in this offer, including but not limited to technical data, illustrations, and pricing, and shall not be held liable for any consequences arising from such errors.

5. ***Illustrative nature of visuals:***

All images, graphics, and visualizations presented in this offer are for illustrative purposes only and may depict optional or non-standard equipment. The actual appearance and configuration of the machine may vary depending on the version and specific arrangements with the Buyer.

6. ***Verification obligation:***

Prior to making a purchasing decision, the Buyer is obliged to verify the compliance of the offered product's technical parameters and equipment with their own needs and requirements.