

BARON-MAX[®]

Versatile *CNC Plus* Lathes



*Combination of manual, advanced electronic
or full CNC operation*

Power, Reliability & Accuracy, Simply the Best,

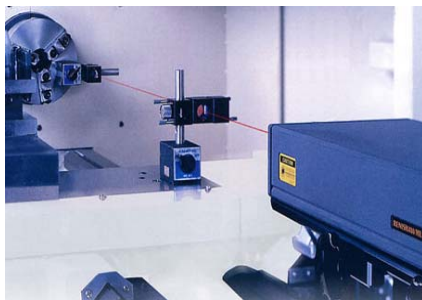
BARON-MAX[®] Versatile CNC Plus Lathes

Low Cost of Outstanding Value LC-1840 Combination Lathes Operate in Manual, Cycles, Teach or G/M Code to suit all types of High-Precision turning applications.



The lathe in standard execution is intended for:

- Conventional turning with electronic handwheels and a digital/graphic positioning display
- Teach-in: the first piece is machined manually, the next piece is then CNC controlled
- Constant Surface Speed
- Elementary geometries: longitudinal turning and facing, conical and circular turning with CNC support
- Cycles: stock removal, grooving, drilling, threading, undercutting. The re-working of threads is also possible
- Contour mode: drawing contour, contour calculator for undefined elements, machining a contour, also manual machining of contours
- Tool table for 99 tools
- User friendly, with a straightforward programmed display
- CNC mode: executing a program in ISO/DIN code, read-in and read-out of programs via USB port for easy data transfers
- Graphic simulation before and during turning



Laser Calibration



The Baronmax Versatile CNC Plus Lathe is the latest generation of Manual/CNC combinations lathe, designed with the versatility to handle everything from your precision small to medium batches or moderate length heavy duty work. The Baronmax Versatile CNC Plus Lathes can machine up to a 3000 mm long part, giving you the flexibility no slant-bed machine can offer. With easy to use conversational programming, reduce setup time for complex parts and improve part consistence and quality,

Features:

- Extra wide bed with flat way and Vee-way, induction hardened and precision ground to HRC 50.
- *Turcite-B anti-friction coating on saddle and cross slide for improved accuracy & wear*
- *Precision hand scraped for all mating sliding surfaces and gibes.*
- *Hardened & Ground ball-screw with preloaded double nuts, fitted on 60° angular contact bearing.*
- *Powerful AC Vector spindle drive, provide high power for Constant Surface Speed Cutting.*
- *Large bore heavy duty spindle mounted on precision taper roller bearing for heavy cutting.*
- *Headstock with three automatic change-over speed-ranges with fully programmable spindle speeds.*
- *Heavy duty manual tail-stock with safety switch.*
- *AC Servo axes motors and drives provided high Performance.*
- *Dual electronic hand wheels allowing unrestricted manual operation.*
- *Automatic lubrication to all sliding surfaces and axes ball-screws.*
- *Flood coolant system and Halogen work light are as standard.*
- *All electric component are built-in an enclosure cabinet and main disconnect switch.*
- *Fully enclosed guarding with interlocked sliding doors access to CE standard.*
- *Every machine before shipping is inspected by Laser calibrated and cutting & coolant Testing and Undergoes a rigorous 30 hours non-stop running.*
- *Integrated FAGOR 8058elite T Control with 11" Color TFT display. Simple as a DRO, Powerful as a CNC,*





CNC Controls:

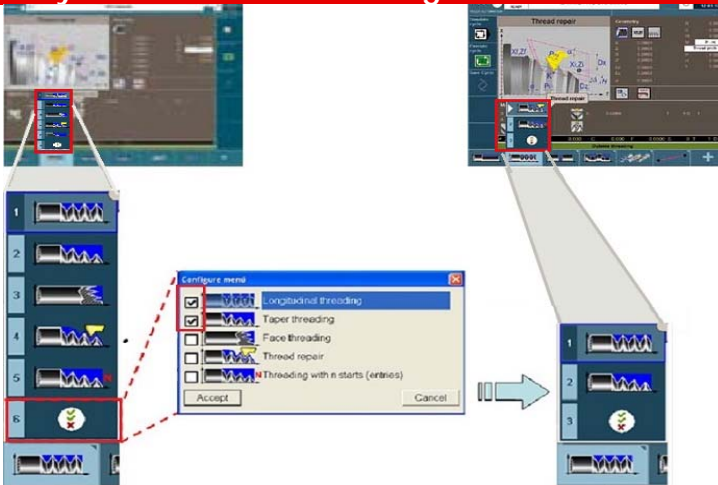
8058elite/8060elite Conversational CNC Control:



The new 8058elite controls is PC based and much more up to date, with full color conversational and graphical input. Without the need for advanced programming knowledge.

- 10.4" Color TFT LCD screen, touch screen an option.
- Use as a D.R.O. in Manual Mode
- Top-rated conversational programming workflow with customizable navigation, easy to program.
- Powerful ISO/G-Code programmable.
- Built-in FAGOR CAD/CAM system.
- It allows editing, modifying and simulating a part-program
- HSSA I system in the CNC 8058 and the HSSA II system in the CNC 8060
- Free PC simulator for offline programming.
- It allows editing part profiles graphically and importing DXF files.
- Remote CNC Support via TeamViewer™
- Windows 10 OS, industrial hardware
- User memory: 3 Gb (8058elite), 4.5 Gb (8060elite)
- USB ports, Ethernet Ports, & CFast Card.
- Automatic and Manual operating modes

Easy User Customizable Navigation



With this feature, the operator may select the work screens and the machining cycles that he actually uses and hide the rest, thus simplifying even more the operation of the CNC.

Easy and simple operation

Pop-up navigation (browsing) is an innovative system on the machine tool market. It offers a pop-up menu system for immediate access to all available option in that mode. The softkeys have icons and texts. Touch-screen monitor, mouse browsing.

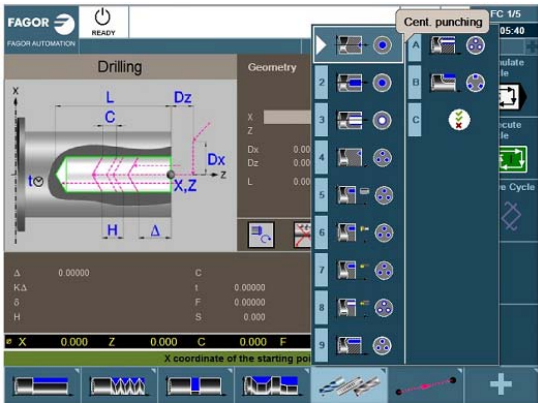
Pop-up
Navigation
(browsing)



Softkeys
described by
text icons

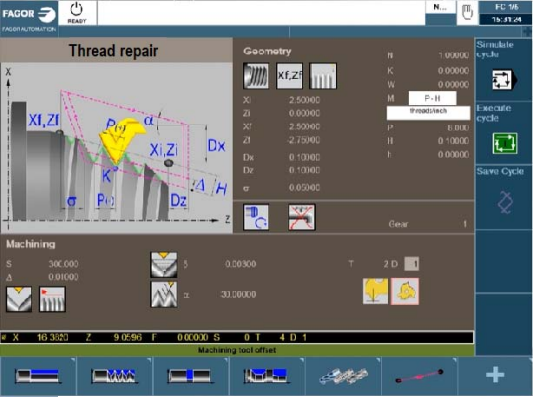
Options available in active mode

Milling cycles on a lathe (C + Y Axis – Option)



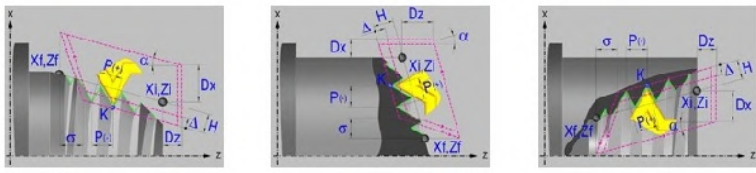
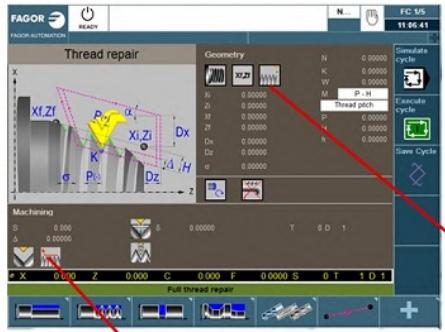
The FAGOR 8058 and 8060 models offer a wide range of predefined cycles for milling on a lathe while working with the C and the Y-axis. In addition to having all cycles of the milling machine available for drilling, threading, etc., the user may also easily program irregular or regular shaped pockets and repeat these utilizing a predefined positioning pattern.

Thread repair

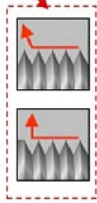


For previously machined threads that may have been worn or damaged, FAGOR offers a machining cycle that allows for complete or partial repair of the thread, thus the ability to repair the existing part without having to machine a new part. This functionality is available for single or multi start -threads, including taper threads.

Improved thread cycles



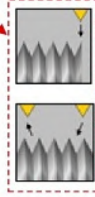
External, internal & frontal threads



Standard thread



Blind thread



Full thread repair



Partial thread repair



Multi-start (entry) thread repair

IIP (Interactive Icon-based Pages) CONVERSATIONAL

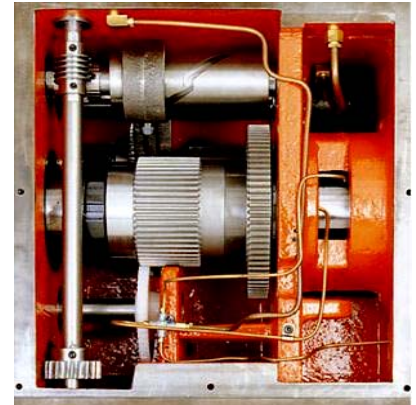


This programming system is a conversational language, especially designed for people with no prior programming knowledge or not familiarized with Fagor CNC's. Therefore, an operator of a conventional machine can start working on Fagor CNC in a couple of hours. Working in conversational mode is easier than in ISO mode. It ensures proper data entry and minimizes the number of operations to be defined. There is no need to work with part-programs.

Features:

Geared Headstock:

The Spindle & Gears are made of CR-MO alloy steel which are carburizing & precisely ground, forced lubricating & oil bathed combined in headstock which can be prolonged servicing life



Variable, Programmable Speed Functions:

Continuously variable spindle speeds are programmable through three gear ranges by automatically shifts. The constant surface speed control feature maintains excellent part surface finish and improves tool life.



Electrical Cabinet:

All electric component are built-in an enclosure cabinet and main disconnect switch. The control circuit with no-volt release, designed to meet CE requested.



Double configuration with Turret and Quick change tool post

The optional 8 station bi-directional turret mounted on the front or rear of the cross slide (option VDI) and quick change tool post (manual)



Double configuration with Electric H4 tool post and Quick change tool post

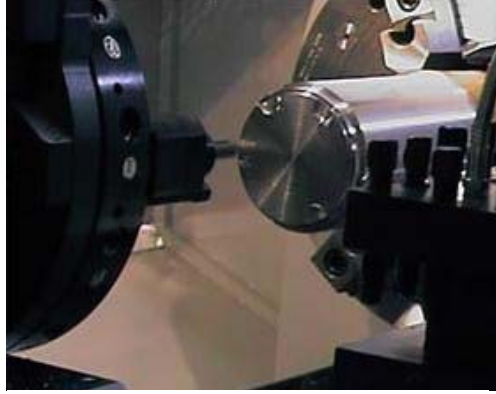
The programmable 4 ways electric tool post and quick change tool post (manual)



Double configuration with 4 way tool post and Quick change tool post

Accuracy indexing 2 station tool post with 6 quick change toolholder and 4 ways tool post by manual

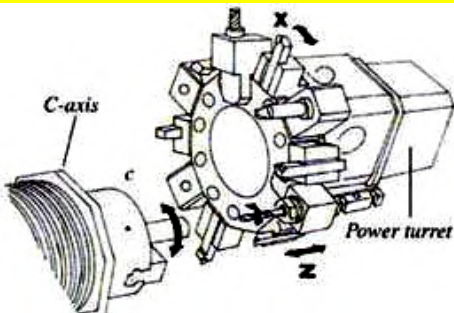
Baron-Max[®] CNC Teach-in lathes is available with full C-axis capability and Live tool for combined Milling and Turning in one machine (Option)



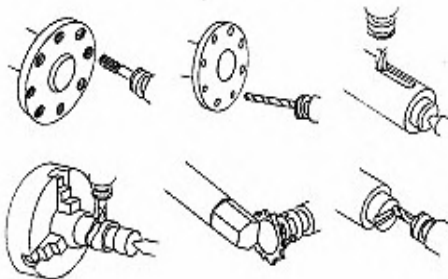
Turret with live tools

KL-2100 M & KL-2400 M series with full package digital system, which offer C-axis function, allows milling, radial drilling, tapping, keyways capability to be completed on one machine. The KL-2100 M & KL-2400 M series equipped with Hydraulic disk brake to ensure spindle is rigidly held during operation offers a full C-axis spindle with $\pm 0.03^\circ$ deg accuracy, by means of either a driven tool turret (12 station, VDI 30) or a Hydraulic live tools with Radial milling/drilling head or Axial milling/drilling head.

KL - M series with full C axis and live tool capability



C-axis Proess Drawing



Driven Tool Specification

Tool holder type	30 VDI x 12 stations (6 driven tools + 6 fixed tools)
Driven Tool Speed	4000 rev/min
Power (P cal)	3.6 KW
Tool shank size	20 x 20 mm (30 VDI)
Rotating Tool Coupling	DIN 5480 W16 x 0.8

C-Axis Specification

Minimal Programmable Increment	0.001°deg
Positional Measurement	angle measuring system
Positioning accuracy	$\pm 0.03^\circ$ deg

Spindle Motor Power & Torque Chart

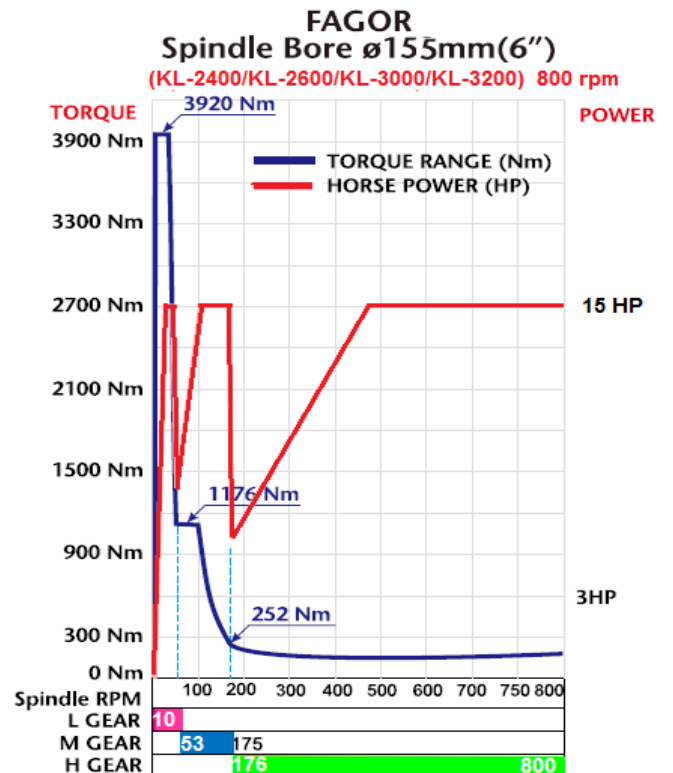
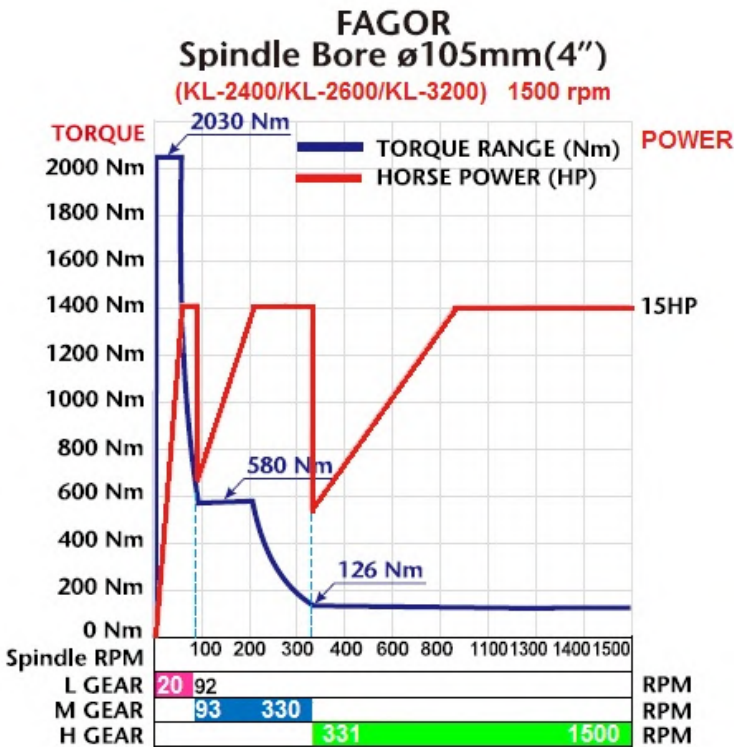
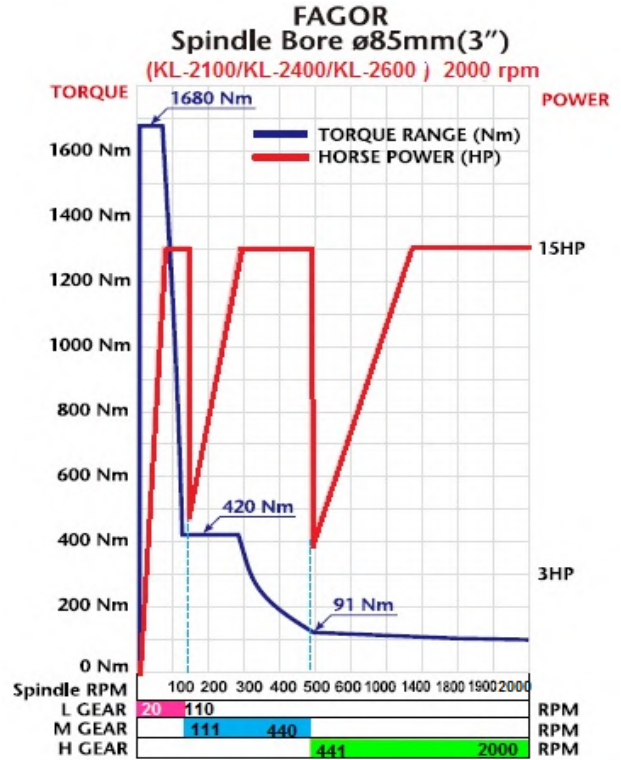
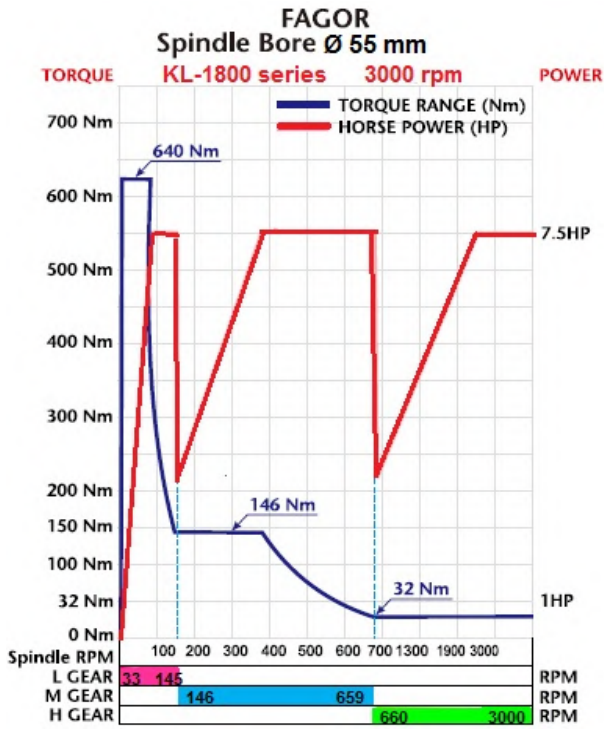
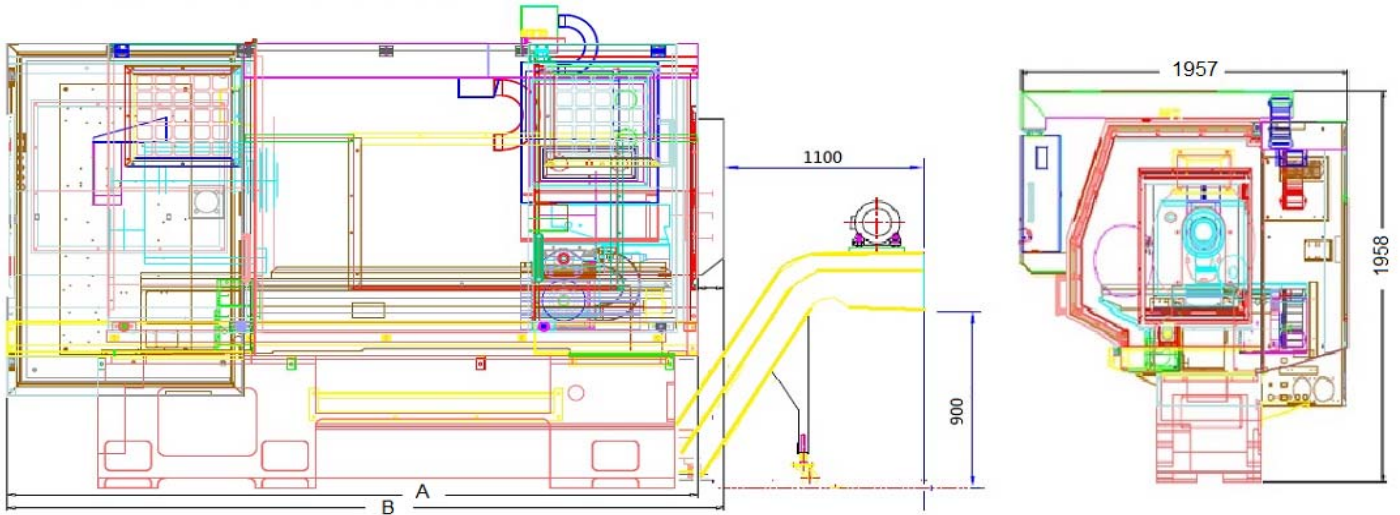
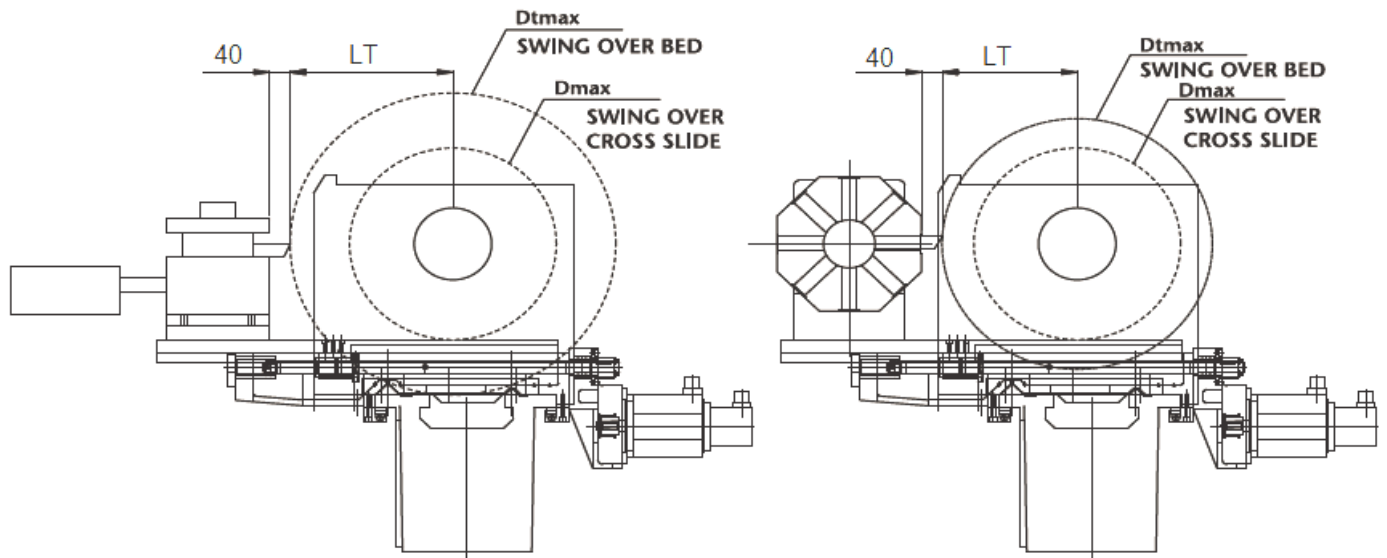


Diagram of minimum space



Model	A	B
LC-1840	2250	2150
KL-1840/KL-2140/KL-2440	2625	2805
KL-1860/KL-2160/KL-2460	3125	3305
KL-1880/KL-2180/KL-2480	3625	3805

Max. Turning Diameter



Model	Dmax	Dtmax	Lt
KL-1840/KL-1860/KL-1880	230mm	460mm	230mm
KL-2140/KL-2160/KL-2480	230mm	460mm	230mm
KL-2440/KL-2460/KL-2480	310mm	530mm	310mm

Specifications for CNC Teach-in Lathes

MODEL series Model No	LC-1840 / KL-1800 Series				KL-2100 Series			KL-2400 Series			
	LC-1840	KL-1840	KL-1860	KL-1880	KL-2140	KL-2160	KL-2180	KL-2440	KL-2460	KL-2480	
CAPACITY											
Height of centers	230 mm	230 mm (9")			265 mm (10.5")			315 mm (12.2")			
Swing over bed	460 mm	460 mm (18")			530 mm (21")			630 mm (24.8")			
Swing over cross slide	230 mm	220 mm (10")			310 mm (12")			400 mm (15.7")			
Distance between center	1000 mm	1000mm	1500mm	2000mm	1000mm	1500mm	2000mm	1000mm	1500mm	2000mm	
Max. weight in chuck only	350 Kgs	500 Kgs			500 Kgs			500 Kgs			
Between centers unsupported	1200Kgs	1500 Kgs			1500 Kgs			1500 Kgs			
BED & SADDLE											
Overall bed guide width	300 mm	350 mm			350 mm			350 mm			
Cross slide guide width	220 mm	220 mm			220 mm			220 mm			
Longitudinal travel (Z)	800 mm	800 mm	1300 mm	1800mm	800 mm	1300mm	1800mm	800mm	1300mm	1800mm	
Cross slide travel (X)	280 mm	280 mm (11")			335 mm (13.2")			335 mm (13.2")			
HEADSTOCK											
Spindle Nose	A1-6	D1-6 (STD)			D1-8, D1-11 (Opt.)			D1-8 (Std.), A1-11 (Opt.)			
Spindle bored (standard)	Ø 56 mm (2-1/8")				Ø 85 mm (3-1/8")			Ø 85 mm (3-1/8"):			
Spindle bored (optional)	---				Ø 105 mm (4")			Ø 105 mm (4") / Ø 155 mm (6")			
Taper of S/Nose & center	MT No.6 x No.4 for D1-6,				MT No.7 x No.5 for D1-8			MT No.7 x No.5			
3-Jaw scroll chuck (Option)	Ø 200 mm (8") for D1-6 or A1-6, Ø 250 mm (10") for D1-8, Ø 300 mm (12") or Ø 400 mm (16") for A1-11										
Hydraulic Power chuck (Opt.)	Ø 200 mm (8") for D1-6 or A1-6, Ø 250 mm (10") for D1-8, Ø 300 mm (12") or Ø 380 mm (15") for A1-11										
Bar capacity (Power chuck)	8" chuck: Ø 45 mm, 10" chuck: Ø 75 mm, Ø12" chuck: Ø 91 mm, Ø15" chuck: Ø 117 mm										
Range of spindle speeds	2 Gears	3 Rang Gears Auto Shifting									
S/Bore & 3-Jaw chuck	Ø 56 mm : 8" chuck		Ø 85 mm:10" Chuck		Ø105 mm :12" chuck(Opt)			Ø155 mm :16" chuck(Opt)			
Spindle speed (variable)	H: 3000-601 L: 600 - 60	H: 3000-660 rpm M: 659-146 rpm L: 145 - 33 rpm	H: 2000 - 441 rpm M: 440 - 111 rpm L: 110 - 25 rpm	H: 1500 - 331 rpm M: 330 - 93 rpm L: 92 - 20 rpm	H: 800 - 176 rpm M: 175 - 59 rpm L: 58 - 12 rpm						
INDEXING TURRET (OPTIONAL)											
Turret tool station	8 station										
Standard O.D. tool size	20 mm (3/4")				25 mm (1")						
I.D. tool size (Max..)	20 mm (3/4")				25 mm (1")						
TAILSTOCK											
Tailstock quill travel	160 mm	180 mm (7.08")									
Tailstock quill diameter	52 mm	75 mm (3")					75 mm (3")				
Tailstock quill taper	No.4 MT				No.5 MT			NO.5 MT			
MOTOR											
Spindle drive motor	7.5 HP(Std), 10 HP: Opt,				10 HP (Std), 15 HP: Opt.			15 HP: Std. (20 HP: Opt.)			
Feed Motor torque (Z-X)	12 Nm (Z) / 12 Nm (X) Nm										
Coolant pump	1/8 HP, (1/4 HP: up to 2000 mm center distance)										
Rapid traverse (Z-X)	8,000 mm/min (315 ips)										
Cutting federate (Z-X)	1-4000 mm/min (0-157 ips)										
ACCURACY											
Positioning	±0.010/300 mm (±0.0004/12")										
Positioning repeatability	±0.005/300 mm (±0.0002/12")										
Power required	16 KVA							20 KVA			
Approx. Machine weight (kg)	2500	2900	3200	3500	3100	3400	3700	3200	3500	3800	

- Specifications are subject to change without prior notice.
- Actual working travel maybe reduced by Hyd. Turret and Chuck option is fitted.

STANDARD EQUIPMENT:

- FAGOR 8058elite or SIEMENS 802D sl Pro control
- Coolant system
- Automatic Lubrication system
- Two electric hand-wheels for X-Z axes
- Manual Tailstock
- Fully enclosed guarding with interlock sliding doors
- Halogen work light
- Leveling pads & bolts for installation
- Instruction manual and tools box & tool kits

OPIONAL EQUIPMENT:

- SINUMERIK 828D w/ManualTurn.
- FANUC 0i TF CNC control
- 3-jaw scroll chuck (Manual)
- Quick change tool post with 6 holder
- Hydraulic pump unit for chuck & Turret.
- Hydraulic power chuck w/rotary cylinder.
- Chip conveyer
- Air condition for electric cabinet
- 8 station Turret.
- C axis with Live tools
- Steady rest w/roller
- Follow rest
- Boring attachment
- Double chuck system
- Hydraulic Tailstock
- Spindle Oil chiller for headstock



BARON-MAX® MACHINE TOOLS Since 1976

KOAN CHO MACHINERY CO., LTD.

Mailing add.: P. O. Box 20-30 Taichung 402720 Taiwan R.O.C.

No. 116, Ln. 105, Taming N. Road, Wuri Dist, Taichung 414021 Taiwan, ROC

Tel: 00-886-4-2475-9927, Fax: 00-886-4-2475-9936

E-mail: baronmax1976@gmail.com , <http://www.baronmax.com>