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SINCE 1978

Latest technology **I**nternationalized products **C**ompleted service **O**verall reliability

領先的技術・優良的品牌・完整的服務・全程的信賴

利 高 機 械

LICO MACHINERY

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利高機械工業股份有限公司
LICO MACHINERY CO., LTD.

感謝各位多年來的支持與愛護！

利高機械公司自1978年成立，一直是以生產CNC電腦車床及CAM凸輪式自動車床為主，至今我們已多次獲得「台灣精品獎」以及國家級創新研發獎，而且我們的銷售亦遍佈世界五十餘國，廣受各界好評。

我們秉持「品質至上，永續經營」的理念，不斷的提昇技術及服務品質，提供最佳的售前加工方案及完善的售後服務，更可依客戶需求訂製完全加工之整廠設備，進而為客戶創造最佳利潤，利高的用心，絕對讓您滿意。

Portrait

LICO Machinery Co., Ltd., established in 1978 under the leadership of president Mr. Hank Lin, is well known for manufacturing turning machines ranging from industrial cam operated single spindle automatic lathes to technical CNC turning centers. These machines are designed for the metalworking sector and have been adapted by various industries such as aviation, vehicles, computers, plumbing fittings, optical instruments and others. Today, LICO lathes become popular across the world thanks to in-house staff and satellite-contractors working in harmony with the management board.

HANK LIN
PRESIDENT

ISO 9000

利高機械．遍佈全球！
LICO MACHINE , ACROSS THE WORLD!

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LNT S-SERIES

CNC MULTI-ALIDE AUTOMATICS: LNT36

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CNC MULTI-ALIDE AUTOMATICS: LNT36

Explore New Concepts

The LICO CNC Multi-slide Automatics for Highly Productive Turning

Lico, a leading manufactirer of automatics in Taiwan, Announces an all-new automatic bar machine. It's a truly high production Multi-slide Automatic Lathe, combining the advantages of cam operated automatics and modern CNC multi-axis control techonlogy. The LNT36 S-series are equipped eith a Siemens 840D control, providing fast set up and easy operation for experienced and non-experienced operators.

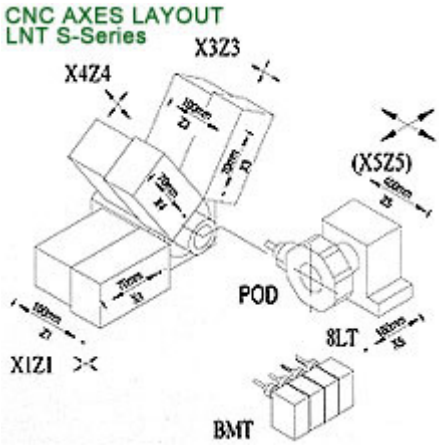
Enter Into a New Era of High Efficiency with LICO New LNT-S Series CNC Automatics.

The innovative LICO CNC Automatics comprises of three to four compound cross slide and one all-tool-driven 8-position turret, which are all fully CNC controlled. It provides amazing production output, and is unmatched to cam operated sutomatics and conventional CNC lathes.

Machining Samples

The LICO LNT Series Automatics are specially designed for metalworking industries such as for aviation, vehices, computers, plumbing fittings, optical instruments and many others.

It is ideal for machining all kinds of materials, ranging from aluminum, brass, steels, high alloy steels to stainless steels.



Rigidity , Stability, and Lifetime Deformation-free

All This Can Be Found On LICO CNC

Lico engineers have combined years of practical automatic lathe design experience eith latest structural design concepts to ensure that Lico automatic lathes provide optimum structural and machining accuracy.

Ruggedly constructed machine bed with scientifically rib reinforcement achieves the best possible stability.

Z-axis slide base and bed are one-piece consttucted for added rigidity.

* Extra wide span between Z-axis linear ways with full travel support largely increases machining stability and accuracy.
* X1 Z1, X3 Z3, X4 Z4 ball screws are directly driven by Siemens servomotors.
* Precision linear guideways on Z5axis.
* Automatic lubrication to all slideways.

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LNT S-SERIES

CNC MULTI-ALIDE AUTOMATICS: LNT36

RIGID HEADSTOCK

*The headstock is ruggedly constructed for maximum rigidity and stability.
*The spindle runs on class P4 high precision besrings, providing maximum speed up to 6,000 rpm.
*The collet chuck-type spindle is actuated by a rotary cylinder, providing fast workpiece chuckiing.

SIEMENS 840D CNC CONTROL

*The machine is equipped with a Siemens 840D CNC conttol, providing dialog programming for user-friendly operations.
*Graphic tool tracing makes training and operations much easier.
*During operation, aditional programs can be edited for reducing programming time.
*The CNC control box can be swiveled for added operational convenience.

POWERFUL HYDRAULIC POWER UNIT

*The hydraulic power unit is used for controlling the motions of turret and collet in the spindle.
*The hydraulic system consists of top performance hydraulic parts to ensure stable motions, powerful hydraulic pressure and long service life.

RIGID CROSS SLIDES

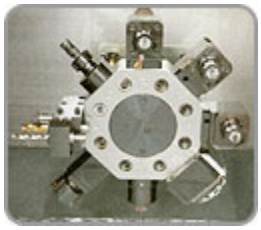
*The LICO CNC automatic lathe can be designed with three to four compound cross slides. They are used to perform various operations such as, longitudinal turning, complex contouring, thread chasing, part-off, etc. by using single point carbide tipped tools or conventional form tools.

MULTIPLE COMPOUND SLIDES

*Module designed servo controlled X-Z compound slides are mointed around main spindle, good for OD turning or ID boring and multiple tools can perform machining simultaneously for greatly shorten cycle time.

8-POSITION SERVO TURRET

Featuring Turret and Gang Slide Functions
*The newly-designed servo turret also provides the functions on a gang slide.
Mountrf on the compound slide, the turret is transmitted by a precision ball screw. It features extra long travel, high speed and two axes interpolation function.
Available to fit with VDI fixed or driving tool to perform contour or compound machining.



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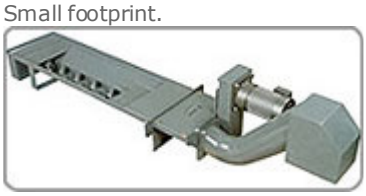
CNC MULTI-ALIDE AUTOMATICS: LNT36

BACK MACHINING

*The pick-off divice with collet is mounted on the turret and actuated by a hydraulic system and servo driven synchronously with the main spindle. It catches the workpieces before cutting off.
*After indexing to the opposite direction, the workpiece is ready for back machining.
*The back machining tool platform allows for mointing up to 4 gang tool golders or up to 3 live tool holders.

AUTOMATIC BAR FEEDER(OPTIONAL)

Choice of Bar Feeder Capacity 1.2 ~ 3.2 Meters.
The LICO CNC Aotomatic Lathe accommodates various brands of bar feeders. With the use of an sutomatic bar feeder, the CNC lathe will perform a fully automatic operations.
To enormoualy reduce labor costs, while upgrading your production efficiency, a bar feeder is recommended.
No specisl requirements or restrictions on material straightness.
Materal rotates eithin machining ares and spindle length of lathe.
Lathe spindle speed can be maximized.
Material can be round, hexagonal and shaped.
Material length can be uniform or random.
Easy to operate and maintain.
Small footprint.



SCREW-TYPE CHIP CONVEYOR

* The screw-type chip conveyor comes equipped with a chip cart.
* Link-type chip conveyor is available upon request.

PARTS OUTFEED CONVEYOR

*A partsœonveypr is available to equip in the front side of the machine, which automatically delivers the finished parts into a collection tank for convenient handling.
*The parts conveyor running is program-controlled by Mcode and running frequency can be set as desired by the operator.

HEAT EXCHANGER FOR ELECTRIC CABINET

The electrical control cabinet is equipped with a high performance heat exchanger to ensure a constant temperature in the cabinet at all times. This ensures not noly the normal performance of the control circuit but also extends the service life of electronic components.

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LNT S-SERIES CNC MULTI-ALIDE AUTOMATICS: LNT36

Technical Data:

Model	LNE36 S-SERIES
Unit	Metric(Inch)
CAPACITIES	
Collet bar capacity, dia.(through bore)	Ø36mm(1.42")
Max. turning length	130mm (4.72")
SPINDLE	
Spindle center height (approx.)	1,000mm(40")
Collet chuck type	F42
Spindle motor power	10KW (13.4 HP)
Max. spindle speed	6,000 rpm
COMPOUND SLIDE	
Cross silide travel(X-axis)	70mm(2.760")
Longitudinal slide travel(Z-axis)	100mm(4")
Parting off tool slide travel (B-axis)	X:15 M/min / Z:15 M/min
Working feed rate, X-axis/ Z-axis	5 M/min
Resolution	0.001mm(0.0001")
TOOL TURRET SLIDE	
Number of tool position	Basic 8 positions + Extra Tools
Tool shank type	VDI-30x55
Cross silide travel(X-axis)	160mm(6.3")
Longitudinal slide travel(Z-axis)	400mm(15.8")
Turning tool section	16mmSq. (5/8")
Indexinf time	0.28 sec/180° -0.6sec
Sub spindle power	4.2KW (5.6HP)
Sub spindle speed	3,000 rpm
MACHINE SPACE, WEIGHT AND POWER REQUIREMENTS	
Overall dimension (LxWxH)	2,265x1,787x1,931 mm (89.0"x70"x76.2")
Machining weight	3,000kg(6,600lb)
Hydraulic tank capacity	30L
Hydraulic pump motor	1k W
Coolant tank capacity	180L
Coolant pump motor	0.5k W
Lubrication capacity	2L, 10c.c./ 11min
Total power required	25KVA

CNC controller 840D standard functions:
* Part progam storage at lenght of 3,000M
* Graphic trace of tool path
* Multiple canned cycles
* Automatic chamfering & corner rounding
* Simultaneously controllable 10 axes
* Interface RS232C
* Tool offset memory 100 sets
* Tool nose radius compensation
* Constant surface speed control
* Oriented spindle stop
* Rigidity tapping
* C-axis

Optional Accessories:
1. Spindle-collet chuck F48(Max. Ø42mm)
2. Air live tool unit
3. Hydraulic live tool unit
4. Automatic bar loader
5. Chip conveyor with cart(screw/pallet-type)
6. Workpiece belt conveyor
7. Oil mist collector

Standard Equipment:
1. Spindle-collet chuck F42 (Max. Ø36mm)
2. 48-pos. spindle dividing system
3. 8-pos. servo tool turret (with tool driven)
4. Air bloe, coolant and hydraulic system
5. Automatic lubrication system
6. Bar loader interface
7. Front door interlock and work lamp
8. Tool box and tool kits
9. Control cabinet heat exchanger
10. Pick-off device
11. Back machining tool holders

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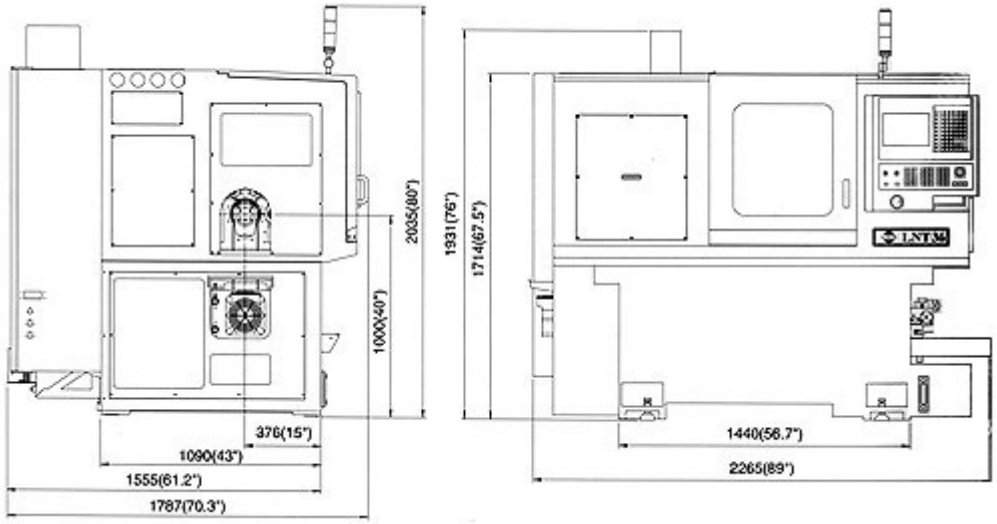
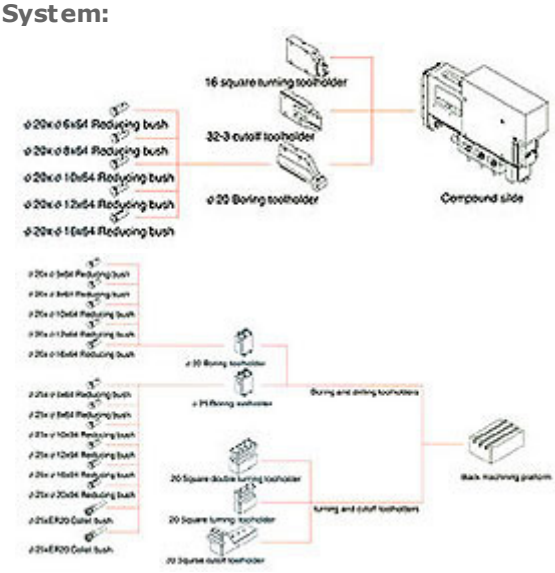
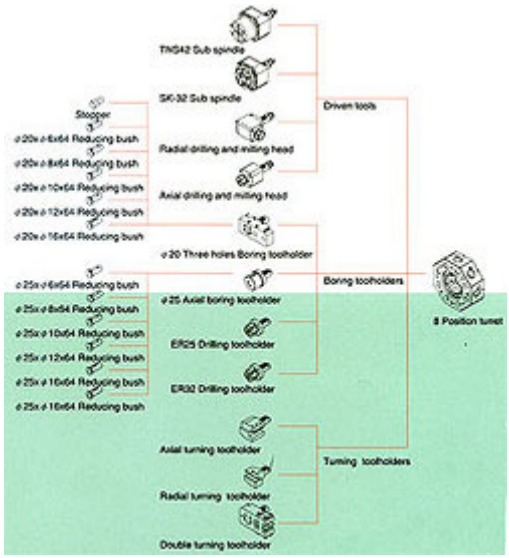
Dimensions:



Tooling System:





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公司沿革 Company Profile

1978 利高機械工業股份有限公司正式在九月三日於桃園成立。

1981 首次外銷單軸自動車床至美國及日本。

1984 利高機械首次參加馬來西亞機械展，積極拓展東南亞業務市場。

1990 成立利根機械於灣子加工區。
成立美國利寶高公司，除銷售原有設備外，並銷售汽車零件以服務美國市場。
研發CNC多滑軌自動車床。

1993 LNT-42 CNC 多滑座自動車床，榮獲第一屆「台灣精品獎」，
並取得台灣、大陸、德國等專利。

1994 利高公司發展LA32H自動車床榮獲第二屆「台灣精品獎」。

1996 利高公司取得ISO-9000國際品保認證。

1999 利高公司發展複合加工多功能CNC車床，榮獲第八屆「台灣精品獎」。

2001 利高公司經英國Amtriveritas取得CE認證，編號9002。

2002 LNE42複合加工CNC車銑加工機，榮獲第九屆國家級創新研發獎。

2004 利高開發LNT鍛胚自動送料，完全加工機。

2005 利高開發LNC-D自動棒材送料，有十二位複合加工及副主軸背面加工之CNC自動車床。

2006 利高開發CNA36P小型低成本之主軸移動式CNC車床，適用於長軸加工、不銹鋼球閥心軸含Y銑、手工具之多邊車削成形。

1978 LICO machinery co. was founded on Sep. 3, in Taoyuan by Hank Lin, Ray Cheng, Vic Lin , Knoll Chiu and other partners.

1981 LICO first exported single spindle automatic lathe to America and Japan.

1984 LICO attended Mex 1984 machine show at Kuala Lumpur, Malaysia, and set-up a sales net in the South-East Asian market.

1990 LICO invested and set-up a new company in the Tai-Chung Export Processing Zone (Taiwan)--Likon Machinery Co., Ltd.
LICO invested and set-up a new company with LIPO in Texas, U.S.A. --Lipoco Enterprises Inc.to produce automobile parts and sales for the American market.
LICO started to develop CNC machines, the first project was the "CNC Multi-Slide Automatic Bar Machine".

1993 LICO developed multi-slide LNT-42 CNC Lathe and got the prize of " It's Very Well Made In Taiwan" No.1.
Got the patent from Taiwan, Mainland China and Germany.

1994 LICO developed LA32H Cam Automatic Lathe and got the prize of " It's Very Well Made In Taiwan" No.2.

1996 LICO was passed the international quality assurance licence of ISO- 9000.

1999 LICO Developed functional complex CNC lathe and got the prize of " It's Very Well Made In Taiwan" No.8.

2001 The CE Mark approved by Amtriveritas in the UK.

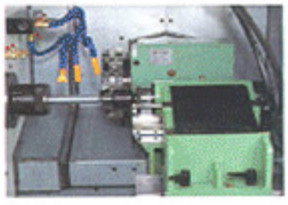
2002 LNE42 awarded the prize of "Innovative Research Award of SMEs" hosted by Taiwan Ministry of Economic Bureau.

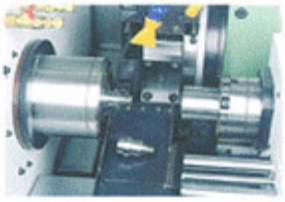
2004 LICO developed LNT forged blank with automatic loading complete machining machine.

2005 LICO developed LNC-D automatic bar feeding with 12-position live tools and sub-spindle back machining CNC automatics.

2006 LICO developed campact, affordable head stock sliding CNC automatic lathe for long shaft machining, stainless steel ball valve stem with Y-mill and hand tools with polygonal turning.





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