



SINCE 1978

**L**atest 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**



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.



**ISO 9000**

HANK LIN  
PRESIDENT



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

# LNA SERIES

**AUTOMATICS UPGRADE CNC LATHE : LNA36**



## LNA SERIES

### AUTOMATICS UPGRADE CNC LATHE : LNA36

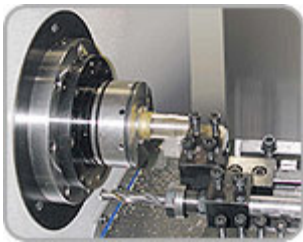
Standard with Gang Tooling, Ideal for Bar Feeder or Robt Automation or Manual Loading Jobs



Working Samples

#### Best value, affordable and lean machine for all production shops.

1. High precision processing within 0.009mm for both roundness and surface precision.
2. Easy to connect with automatic bar feeder, robot loading system or manual loading Jobs.



Together with a rigid casting frame in compact size and an affordable price make LNA36 an appropriate machine for volume production at turning workshop. Yet, machining with optional optical digit scale drives LNA36 being an ideal machine for 0.009mm precision required jobs at today's turning industry. Still more, its flexibility and expansibility of connection with automatic bar feeder or robot or designed manual loading system enhance LNA36 become a cost-saver in this ever-increasing competitive industry.

#### Automation

To achieve an automations, LNA36 is able to connect with either gang-type or arm-type robot which saves secondary loading/ unloading operations and fulfills the automation.



#### Rapid and Precision Tool Turret

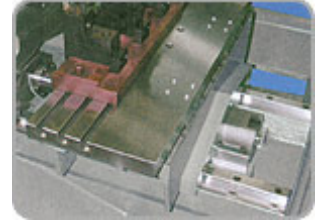
A rigid and durable bi-direction 8-position tool turret ensures high repeated positioning accuracy and rigidity. Single indexing time in 0.35 seconds, continuous 180° change in 1.3 nozzle sprays coolant directly to the tool tips, makes a fast cooking, brings tools a longer life.

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#### X/ Z Slides with Linear Way

Both X-axis and Z-axis are designed in a linear way gained both benefits of chips-free and well lubrication as well as to achieve precision positioning and rapid movement. On the slide of X-axis can expand an option of economic gang tools with sub plate or the sophistic 8-position turret with thru coolant.



#### Hydraulic Rotary Cylinder

It is designed for ever-changing size machining jobs. Main spindle with collet chuck actuated by a hydraulic rotary cylinder. The design utilizes cylinder's powerful chucking force to clamping parts. The 48-pos. specialized for heavy job.

#### Bed and saddle

Bed and saddle are made of HIGH RIGID cast iron with stress relieved. Flat saddle construction makes set-up job easier.



#### CNC Control System

User-friendly console offers an easy operation even for inexperienced trainees. Standard with Mitsubishi M64, PC-based or other CNC controllers such as Siemens, Fanuc are also available for requirements.

#### Wire Cabinet

A sizable wire cabinet with functional heat exchanger ensured a right temperature for every electronic component during intensively cuttings. The succinct wiring design provides for maintenance, makes the job easier.



#### Collet Chuck

Standard spindle is equipped with F-type collet chuck. For precision required parts can equipped with air chuck and apply spindle speed to 10,000rpm upon request.

**LNA SERIES**

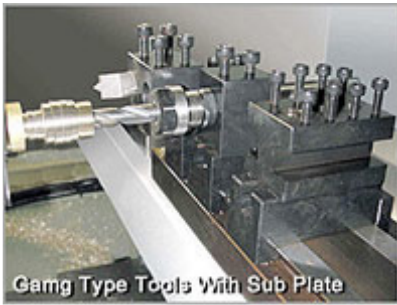
**AUTOMATICS UPGRADE CNC LATHE : LNA36**

**Technical Data:**

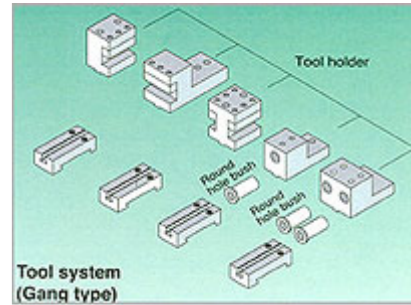
<b>Model</b>	<b>LNA36</b>
Unit	Metric (Inch)
<b>CAPACITIES</b>	
Collet bar capacity, dia.(through bore)	Ø36 (1.42")
Swing over bad	Ø150 (Ø5.9")
Swing over alide	Ø350 (Ø13.8")
Max. turning dia.(3-jaw power chuck)	Ø125 (Ø5")
Max. turning length	100(4")
<b>SPINDLE</b>	
Height of spindle center (approx.)	1,000(39.4")
Spindle nose	A2-4
Collet chuck type	F42
Power chuck type	Ø5"
Spindle/ draw bar through bore	Ø37(1.46")
<b>SPINDLE DRIVE</b>	
Motor power cont.(Mitaubishi)	3.7/5.5kw (5/7.5 HP)
Max. spindle speed	6,500rpm
<b>SLIDE</b>	
Cross silide travel(X-axis)	200mm(8")
Longitudinal slide travel(Z-axis)	200mm(8")
<b>TOOL</b>	
Turning tool section	20mm Sq.
Boring tool reception	Ø25mm(1")
<b>SERVO MOTORS</b>	
Working feeds, X-axis and Z	0~10,000 mm/min
Rapid traverses, X-axis and Z	15 M/min
Feed force, X-axis and Z (Mitsubishi)	4Nm
<b>MACHINE SPACE, WELGT and POWER REQUIREMENTS</b>	
Overall dimension (LxWxH)	1,530 x 1,260 x 1,620 (60.2"x19.6"x63.8")
Machine weight	1,260 kg
Hydraulic tank capacity	30L
Hydraulic pump motor	0.75kw
Coolant tank capacity	180L
Coolant pump motor	0.187kw
Lubrication capacity	2L, 10cc/10min
Total power required (Mitsubishi)	8kVA

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Gang Type Tools With Sub Plate



**"MITSUBISHI" M64 CNC controller standard functions:**

- \* Part program storage length 600M
- \* Graphic trace of tool path
- \* Multiple canned cycles
- \* Automatic chamfering & corner rounding
- \* Simultaneously controllable 2 axes
- \* Tool offset memory 80 sets
- \* Tool life management
- \* Constant surface speed control
- \* Oriented spindle stop

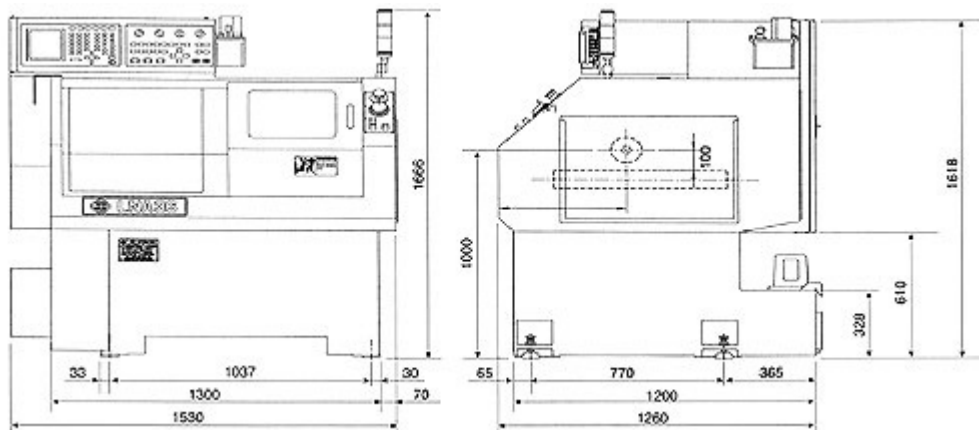
**Standard Equipment:**

1. Collet Chuck LNA36 F42 (Max. Ø36mm)
2. 48-Pos Spindle Dividing System
3. Hydraulic System, Coolant System and Air Jet System
4. Automatic Lubrication System
5. Work Lamp and Front Door Interlock
6. Tool Box and Tool Kits
7. Control Cabinet Heat Exchanger

**Optional Accessories:**

1. Hollow Power Chuck Ø5"
2. Precision Air Chuck Ø4"
3. Parts Catcher
4. Optical Digit Scale for X/Z Slide
5. Tool Turret 8-station (No Tool Driven) VDI-30
6. Hydraulic Live Tool Unit (max. 1 set)
7. Air Live Tool Unit (max. 2 sets)
8. Sub-plate Assembly
9. Extra Tool Holders
10. Automatic Bar Feeder with Interface
11. Gantry Type Robot Loading System

**Dimensions:**





## 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。  | 1978 LICO machinery co. was founded on Sep. 3, in Taoyuan by Hank Lin, Ray Cheng, Vic Lin, Knoll Chiu and other partners.  |
| 1981 首次外銷單軸自動車床至美國及日本。  | 1981 LICO first exported single spindle automatic lathe to America and Japan.  |
| 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。   | 1984 LICO attended Mex 1984 machine show at Kuala Lumpur, Malaysia, and set-up a sales net in the South-East Asian market.   |
| 1990 成立利根機械於潭子加工區。<br>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。<br>研發CNC多滑軌自動車床。 | 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.<br>LICO started to develop CNC machines, the first project was the "CNC Multi-Slide Automatic Bar Machine". |
| 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。                      | 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 利高公司發展LA32H自動車床榮獲第二屆「台灣精品獎」。   | 1994 LICO developed LA32H Cam Automatic Lathe and got the prize of "It's Very Well Made In Taiwan" No.2.   |
| 1996 利高公司取得ISO-9000國際品保認證。  | 1996 LICO was passed the international quality assurance licence of ISO- 9000.   |
| 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」。                                     | 1999 LICO Developed functional complex CNC lathe and got the prize of "It's Very Well Made In Taiwan" No.8.  |
| 2001 利高公司經英國Amtriveritas取得CE認證，編號9002。                                    | 2001 The CE Mark approved by Amtriveritas in the UK.   |
| 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。                                     | 2002 LNE42 awarded the prize of "Innovative Research Award of SMEs" hosted by Taiwan Ministry of Economic Bureau.  |
| 2004 利高開發LNT鍛胚自動送料，完全加工機。   | 2004 LICO developed LNT forged blank with automatic loading complete machining machine.  |
| 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。                            | 2005 LICO developed LNC-D automatic bar feeding with 12-position live tools and sub-spindle back machining CNC automatics.   |
| 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、不銹鋼球閥心軸銜Y銑、手工具之多邊車削成形。            | 2006 LICO developed compact, 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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