



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



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!

LNE SERIES

CNC TURNING CENTER: LNE42

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All operations that materials to designed parts can be completed on one LNE42.

To complete machining bar parts in one manufacturing operation, the C-axis, sub-spindle and live tools as well as back machining tools work coordinately to minimize cycle time while keeping measurements within designed tolerance.



Automations with Bar Feeder(1M~3.2M)

For non-stop operations, the LNE42 is capable to accommodate nearly every brand bar feeder. Selected bar feeder or designed secondary job magazine loader aides LNE42 in full automation and priced in favour of your budget.



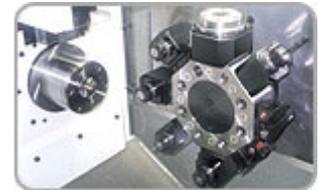
Machining samples

LNE42 is designed to the metalworking sector. It has been adapted by various industries such as aviation, vehicles, computers, plumbing fittings, optical instruments and others.

An appropriate production proposal with production rate defined by tool arrangement, cycle time and attachments can be offered before you purchasing.

8-station servo turret with rotary live tools

With bi-directional tool change feature, the servo-controlled 8-station turret rationally combined with a variety of rotary live tools give a beyond performance over classical turnings centers in both multiple machining and production efficiency. (i.e. rapid indexing time is 0.3sec./45° ; 8sec/180°)



Synchronous sub-spindle and back machining (Max 4 tools)

The synchronous driven sub-spindle is a sophisticate design by LICO self. It is mounted in one station of turret to bring LNE42 the edge on pip-free parting off job and back machining. Due this feature, LNE42 shortens cycle times and increases machining flexibility.

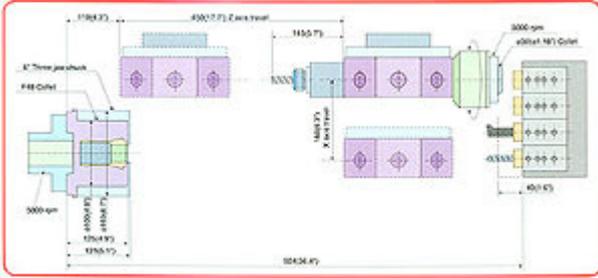
The Siemens 800-series Controller

Siemens 840D control system, providing a user-friendly console with a dialogue program, creates a simple operation environment. Particularly, the graphic trace of tooling path makes trainings and operations easier. Background edit allows for reprogramming while machine running, this function minimizes waiting time and keeps efficiency at a possible top rank.



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CNC TURNING CENTER: LNE42



The working space

The X-axis of quill-type travels at speed of 15 meters per minute within its full traverse of 160mm. The linear-way Z-axis travels at speed of 25 meyers per minute within its full traverse of 450mm. The compound design offers the machanic rigidity with rapid movement



Parts catcher with conveyor

The finished workpiece can be discharged via a designed parts catcher on spindle or match with sub-spindle on rear side. In addition, for finished parts safe, a belt conveyor can be installed either on the front or the rear side of machine to deliver the parts to the preset tray.



The spindle package

Main spindle with a 7.5° increment, the 48-position dividing system is able to do more heavy-duty milling jobs. C-axis projects 0.001° increment enhances the capability of contour milling.

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The chucking system

Either with standard F48 or optional Hainbuch 42 collet transfers LNE42 to bar-feeding operations up to diameter of 42mm (1 5/8 inch). An optional power chuck creates a chuck-machining up to diameter of 165 mm (6.5 inches) either with a manual feeding operation or the designed automatic loading system.

Servo controlled part-off slide

The programmable feed part-off alide is controlled by the servo system with prompt response to cut workpiece off precisely.



LNE SERIES

CNC TURNING CENTER: LNE42

Technical Data:

| Model | LNE42 |
|--|-------------------------------------|
| Unit | Metric(Inch) |
| CAPACITIES | |
| Collet bar capacity, dia.(through bore) | Ø42/ Ø1.65"(1-5/8") |
| Max. swing | Ø330 (Ø13") |
| Max. turning diameter (6"3-jaw power chuck) | Ø165 (Ø6.5") |
| SPINDLE | |
| Height of spindle center (approx.) | 900(35.4") |
| Spindle nose | ISO A2-5 |
| Collet chuck type | F48 (MAX. Ø42) |
| Power chuck reception | 6" |
| Spindle/ draw bar through bore | Ø53 (Ø2")/ Ø43 (Ø1.7") |
| SPINDLE DRIVE | |
| Motor power (continuously) | 7/10kw (9.5/13.5 HP) |
| Max. spindle speed | 5,000rpm |
| SLIDE | |
| Longitudinal slide travel(Z-axis) | 450(17.7") |
| Cross slide travel(X-axis) | 160(6.3") |
| Parting off tool slide travel (B-axis) | 160(6.3") |
| Resolution | 0.001(0.0001") |
| TOOL TURRET | |
| Number of tool stations | 8 |
| Turning tool section | ϕ20 (ϕ3/4") |
| Tool holder | VDI & Oslash; 30x55(DIN 69880) |
| Index inf time | 0.3(45°)/ 0.8(180°) sec |
| BACK MACHINING | |
| Turning tool section | ϕ20 (ϕ3/4") |
| Boring tool reception | Ø25(Ø1") |
| SERVO MOTORS | |
| Working feeds, X-axis and Z | 0~10,000 mm/min(0~394 in./min) |
| Rapid traverses, X-axis and Z | 15/ 25 m/min(590/ 984 in./min) |
| Feed force, X-axis and Z (Mitsubishi) | 5Nm (1.4kW) |
| SUB SPINDLE | |
| Chuck type | TNS32 |
| Sub spindle max. turning diameter | Ø32 (Ø1.26") |
| Sub spindle motor (Rotary) | 4.2 kW (5.6HP) |
| Max. sub spindle speed | 3,000 rpm |
| SPACE REQUIREMENT AND WEIGHT | |
| Hydraulic tank capacity | 25L (6.6 gal.) |
| Hydraulic pump motor | 1.5kw (2HP) |
| Coolant tank capacity | 150L (39.6 gal.) |
| Coolant pump motor | 0.375kw (0.5HP) |
| Lubrication capacity | 2L, 3~8c.c./ 10min |
| Overall dimension (LxWxH) | 2180 1620x1740 mm (85.8x63.8x68.5") |
| Approx. net weights of machine with electrical cabinet(N.W.) | 2400kg (5290 lbs) |
| Packing size | 8.4m3 |
| Total power required | 20kVA |

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CNC TURNING CENTER: LNE42

CNC controller 840D standard functions:

- * Part program storage at length of 3,000M
- * Graphic trace of tool path
- * Multiple canned cycles
- * Automatic chamfering & corner rounding
- * Simultaneously controllable 2 axes
- * Interface RS232C
- * Tool offset memory 100 sets
- * Tool nose radius compensation
- * Constant surface speed control
- * Oriented spindle stop
- * Rigidity tapping
- * C-axis

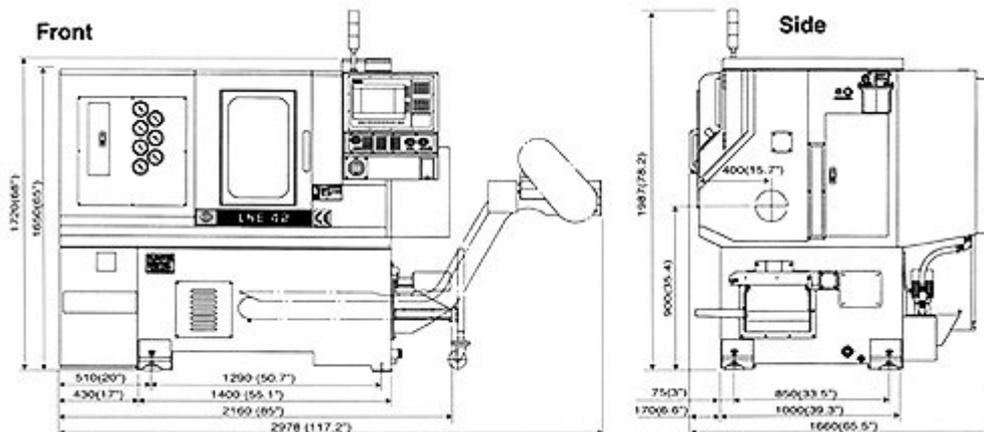
Standard Equipment:

1. A2-5 spindle nose, F48 collet chuck
2. Hydraulic system
3. Coolant system
4. Automatic lubrication system
5. Work lamp
6. Front door safety interlock
7. Tool box & tool lits
8. 8-station servo driven turret
9. Control cabinet heat exchanger
10. Air jet system
11. 48-position spindle diving system

Optional Accessories:

1. 6" hollow power chuck
2. Hainbuch 42 collet system for main spindle
3. Hainbuch 32 collet system for sub spindle
4. Chip conveyer with removable cart
5. Parts catcher
6. VD130 tool holders
7. Automatic bar feeder with interface
8. Live tools
9. Synchronous sub spindle
10. Back machining attachment
11. Servo parting-off slide

Dimensions:



公司沿革 Company Profile

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