

LUG-3040

CNC Universal
Gear & Tool Grinding Machine



www.luren.com.tw

LUREN



LUG-3040

CNC Universal Gear & Tool Grinding Machine

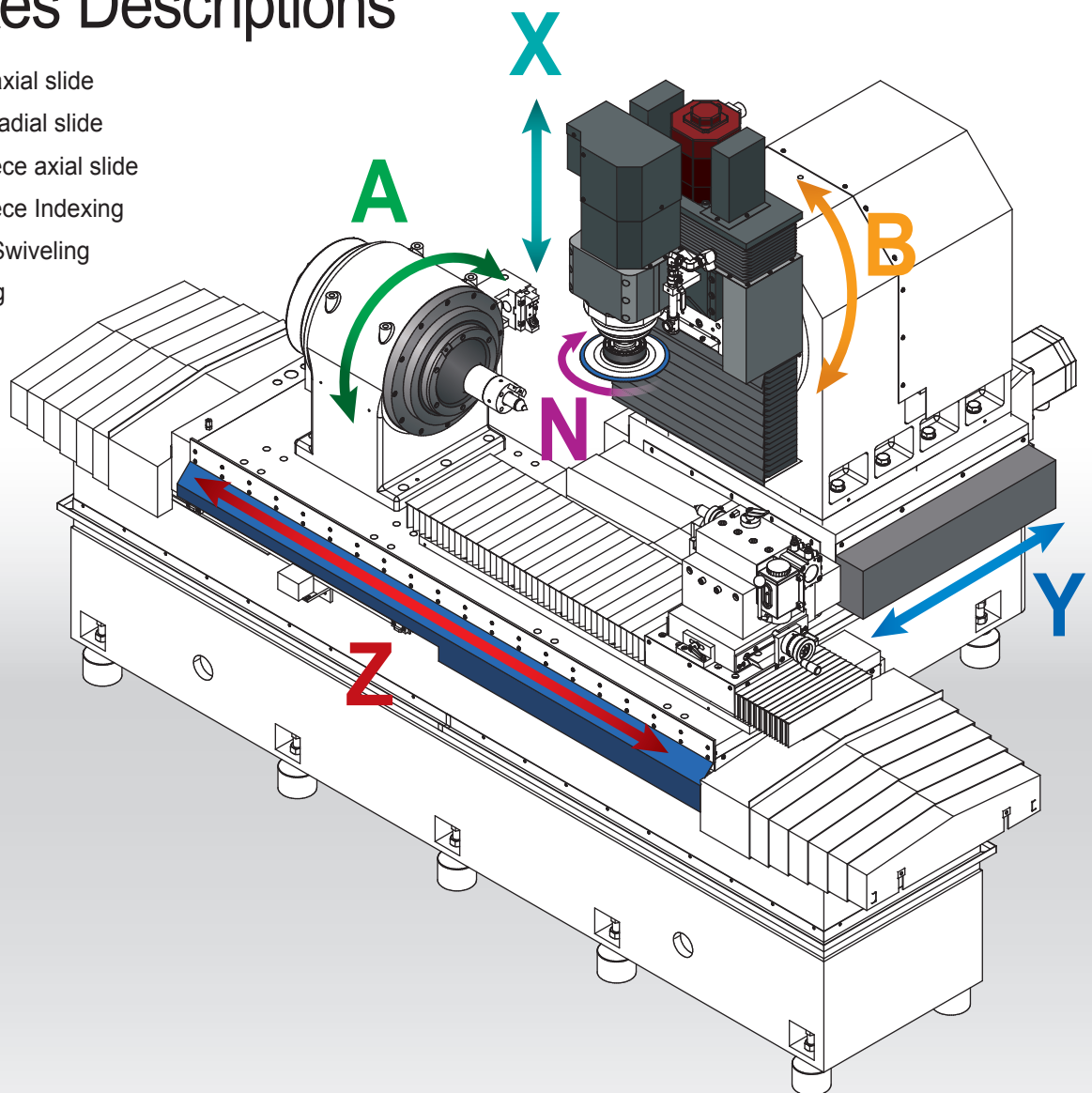
Luren Precision Co., Ltd. has been dedicating to the R&D of gear machining since 1994. We have extended the cut-tools technologies of Mechanical and Research Laboratories, ITRI, and integrated the research resource from the best universities, built the production lines of hobs and shaving cutters, and successfully and stably sold our products to European, American and Asian markets. In grinding machines, Luren Precision produces the gear form grinding machines, worm thread grinding machines and cutting tools sharpening machines; and earns outstanding reputations in the fields. From years of experience accumulation, integrate the technologies of gear

form grinding and tools sharpening and launched the LUG-3040 universal gear & tool grinding machine. Meanwhile, apply the advanced FANUC controller and high-rpm grinding wheel spindles, plus the Luren Precision-developed "intelligent conversations window software", this machine achieves a flexible grinding result. This machine includes form grinding and tools sharpening functions. Form grinding workpieces include the external gears and splines; the tools sharpening workpieces include hobs, shaper cutters and shaving cutters. The high-efficiency/precision performance is equivalent to globally top brand and is your best choice.

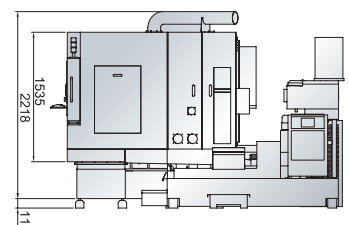
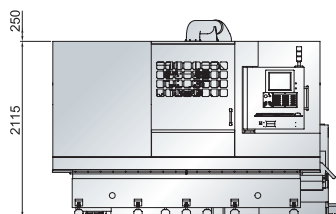
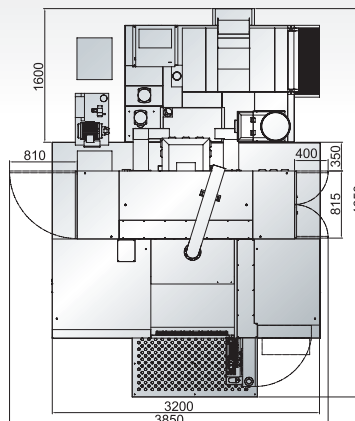


CNC Axes Descriptions

X-axis	Wheel axial slide
Y-axis	Wheel radial slide
Z-axis	Workpiece axial slide
A-axis	Workpiece Indexing
B-axis	Wheel Swiveling
N-axis	Grinding spindle



- **LUG-3040** integrates the advantages of Luren Precision gear form grinding machine and tools sharpening machine; the stable frame structure, high rigidity and high efficiency earn wide reputation worldwide.
- **LUG-3040** applies the globally famous FANUC controller and servo & direct-drive motors; each axis can move simultaneously and receive a high-precision performance.
- The Luren Precision-developed intelligent conversations window software supports the complete machining process. Machine can produce NC program automatically through the parameters-input and setting of grinding conditions via the conversation, and thus increase the working efficiency significantly.



High-efficiency, High-precision unit

HSK Arbors

LUG-3040 applies high-precision HSK arbors, ensuring the precision level of machined products. It also offers the exclusively matched mechanism functions developed by Luren Precision.



Dressing unit

Diamond point dressing unit (standard equipment)



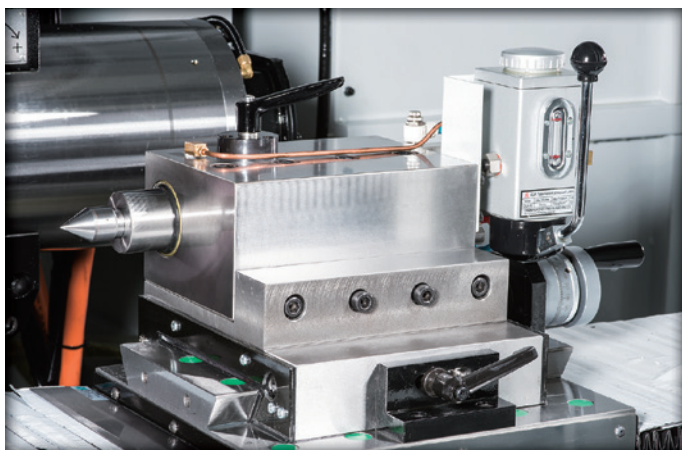
Disk dressing unit (optional)

Rotary dresser has long lifetime, high stability and makes little tooth-profile deviation.

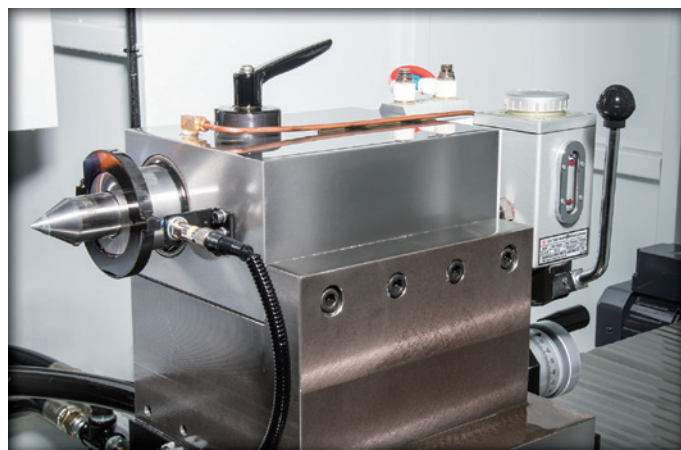


Tailstock adjustment unit

Manual adjustment (standard equipment)



Electric adjustment (optional)

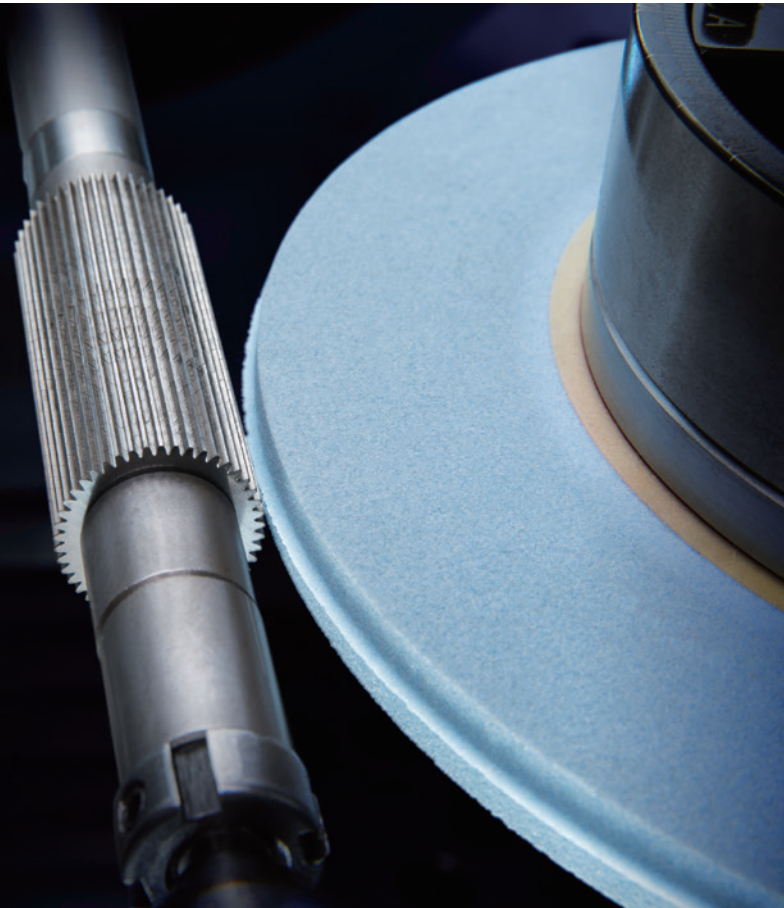
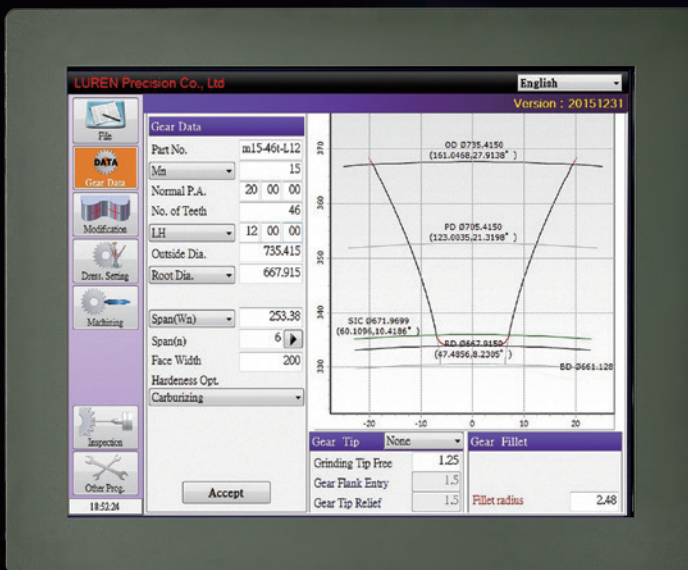


Intelligent Software Technology

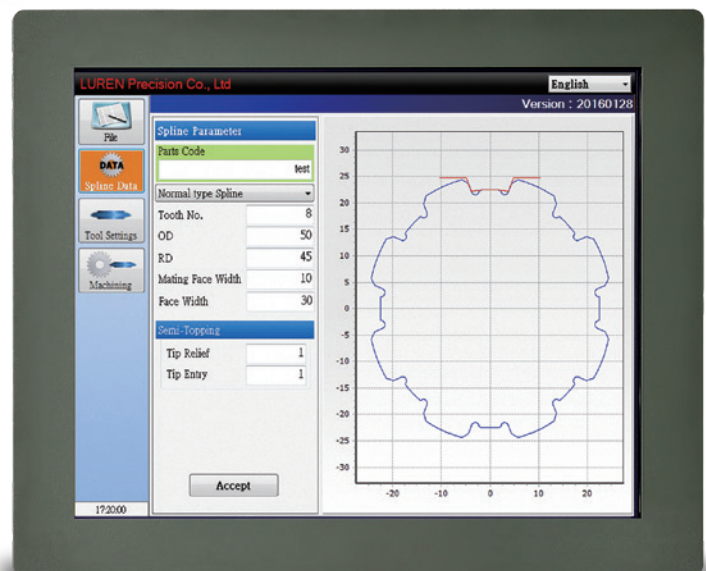
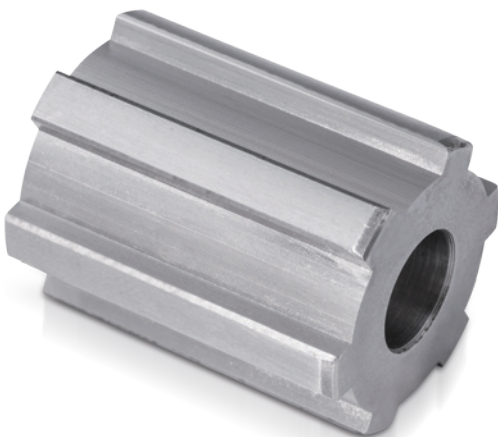
The Luren Precision-developed gears-grinding and tools-sharpening software helps operator set up gear & tool data and grinding parameters in a flexible matter. After all data are set, software will generate complete NC program automatically, and guide operator to perform grinding machining task.

Gears and splines have been used in daily life widely for a long time. Gears are used to transmit power; it can get the changes of torque, speed and direction through assembling different gears. Splines are used to combine both shafts and keys.

Gear form grinding

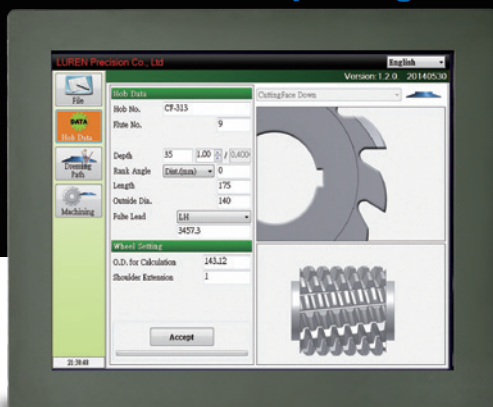


Splines form grinding

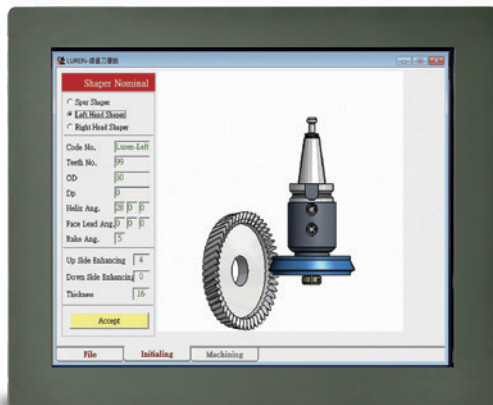


The hobbing, shaping and shaving processes are common and important in gears manufacture. The procedure is to machine the gear profile by using the generating principle. After long-time cutting on the blanks, blade edges of hob, shaper cutter and shaving cutter are worn out, unable to machine gears with required precision. Operators can use LHG-3040 to sharp cutting tool's blade edges and regain the required precision level.

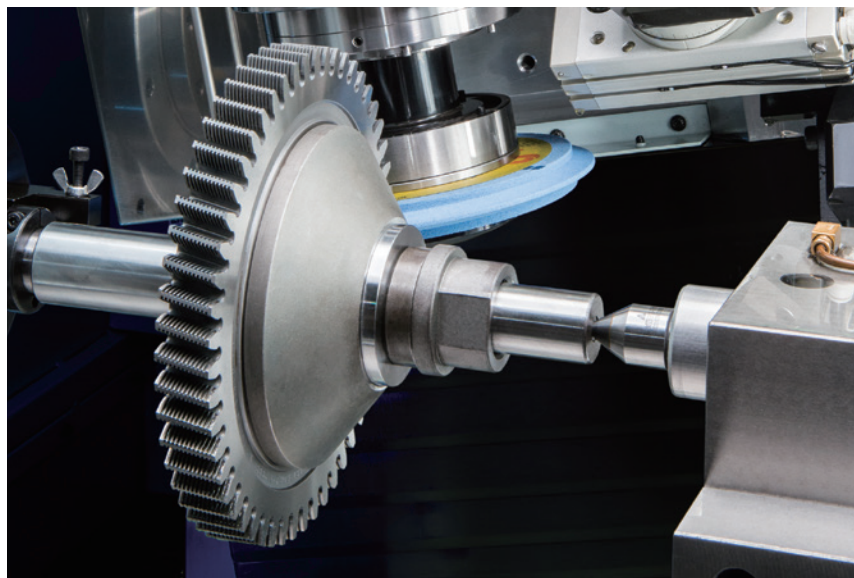
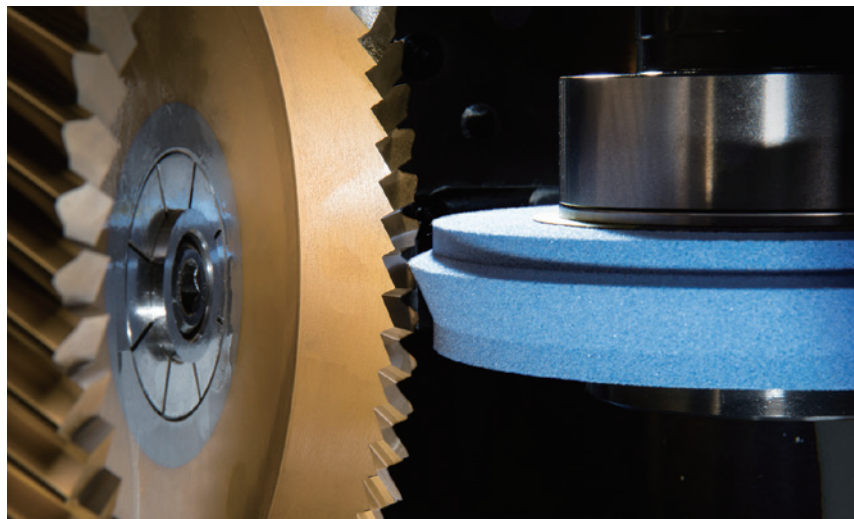
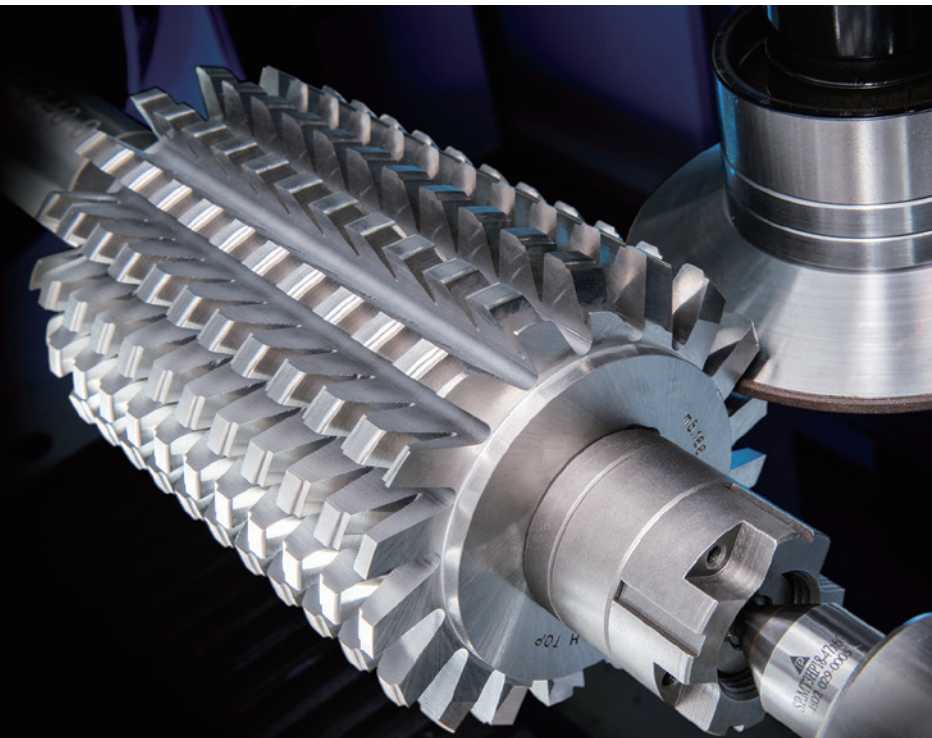
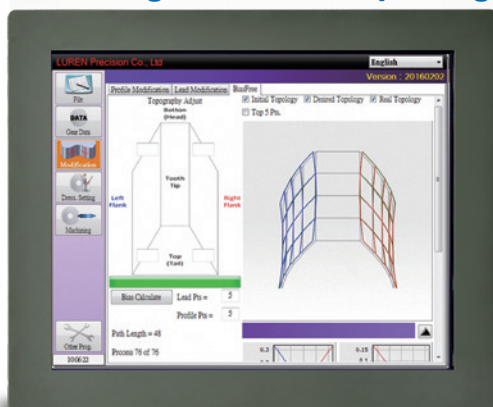
Hobs sharpening



Shaper cutters sharpening

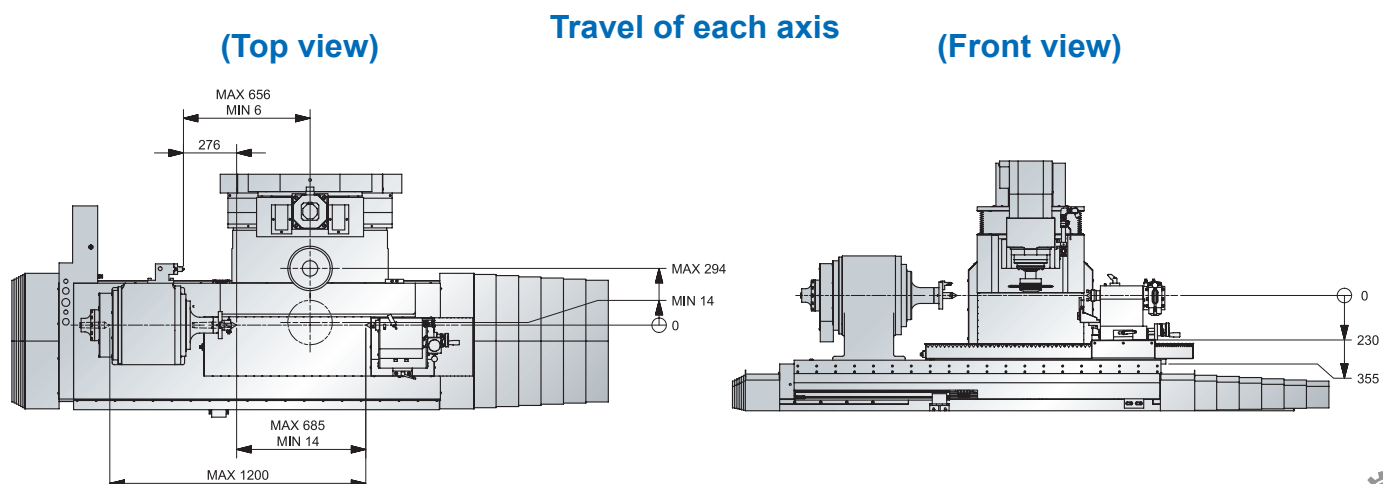


Shaving cutters sharpening



MAIN SPECIFICATIONS		LUG-3040
Hob cutter		
Min. / Max. workpiece outside diameter	20 mm / 250 mm	0.8" / 9.8"
Max. grinding depth	45 mm	1.7"
Lead angle range	$\pm 15^\circ$	
Gash lead range	1500 mm $\sim \infty$	59.0" $\sim \infty$
Helical shaper cutter		
Min. ID / Max. OD of cutting face	20mm / 250 mm	0.8" / 9.8"
Module range	M0.6 ~ M10	DP42.3 ~ DP2.4
Involute gear		
Min. / Max. workpiece outside diameter	30 mm / 400 mm	1.1" / 15.7"
Module	M0.5 ~ M8 (over13T)	DP50.8~DP3.2 (over13T)
Helix angle range	$\pm 45^\circ$	
Shaving cutter (Optional)		
Module range	M1.25 ~ M4	DP20.32 ~ DP6.35
Helix angle range	$\pm 20^\circ$	
Max. grinding face width	60 mm	2.3"
Profile modification	True or K profile(without S profile)	
Lead modification	True or U shape(concave)	
MECHANICAL SPECIFICATIONS		
Min. distance between centers (standard)	14 mm	0.5"
Max. distance between centers (standard)	685 mm	26.9"
Max. distance between centers (through-bore in workhead)	1200 mm	47.2"
Max. axial slide travel (Z axis) (B=0°)	650mm	25.5"
Max. table load (workpiece with fixture)	80 kg	176 lb
GRINDING WHEEL SPECIFICATIONS		
Min. abrasive grinding wheel root diameter/Max. grinding wheel diameter	50 mm / 230 mm	1.9" / 9.0"
Max. grinding wheel thickness	30 mm	1.1"
Max. rpm of grinding spindle	10000 rpm	
Drive power of grinding spindle	20 kW	26Hp
ELECTRIC SYSTEM		
Voltage	3Ø 220V	
Current Requirement	50 Amp	
Ambient Temperature	10°C ~ 40°C	50°F ~ 104°F
Max. Load of Machine	20 kVA	
CNC CONTROLLER		
	FANUC	
DIMENSION & WEIGHT		
Space Requirement	L 4650 x W 3850 x H 2365mm (800mm (32") on each dimension is required for maintenance).	L 184" x W 152" x H 94"
Weight of Basic Machine	8500kg	18700lb

Note: The specifications are subject to the contract, as well as new technology and industrial advancements available.





LUREN PRECISION CO., LTD.

www.luren.com.tw

sales@luren.com.tw

Headquarters

No 1-1, Li-Hsin 1st Rd.,
Hsinchu Science Park,
Hsinchu 30078, Taiwan
Tel: +886-3-578-6767
Fax: +886-3-578-4933

Shanghai Branch

Luren Precision Machinery (Shanghai) Co., Ltd.

6B, Building 2, 401, CaoBao Rd.,
Xuhui Dist., Shanghai, 200233 China
Tel: +86-21-5497-1105
Fax: +86-21-5497-1095

Osaka Branch

Luren Precision (Japan) Inc.

O's 520 ATC Bldg North Wing
5F 2-1-10, Nanko-Kita, Suminoe,
Osaka 559-0034, Japan
Tel: +81-6-6614-9739
Fax: +81-6-6614-9741

Chicago Branch

Luren Precision Chicago Co., Ltd.

707 Remington Road, Suite 1,
Schaumburg, IL 60173, USA
Tel: +1-847-882-1388
Fax: +1-847-882-1933
www.lurenusa.com

