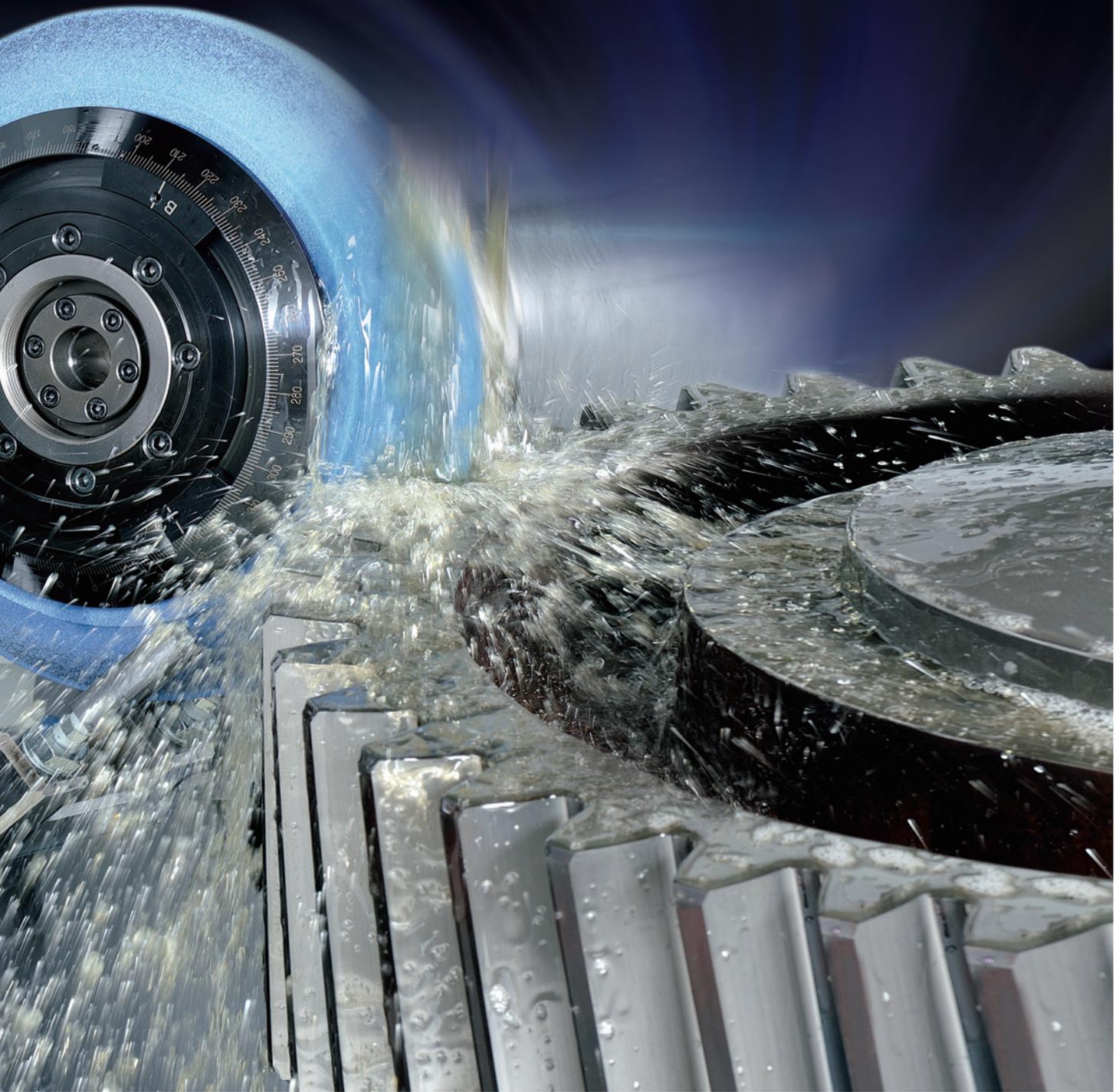


# LFG-8040

CNC | Vertical Type |  
Gear Form Grinding Machine



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# LFG-8040

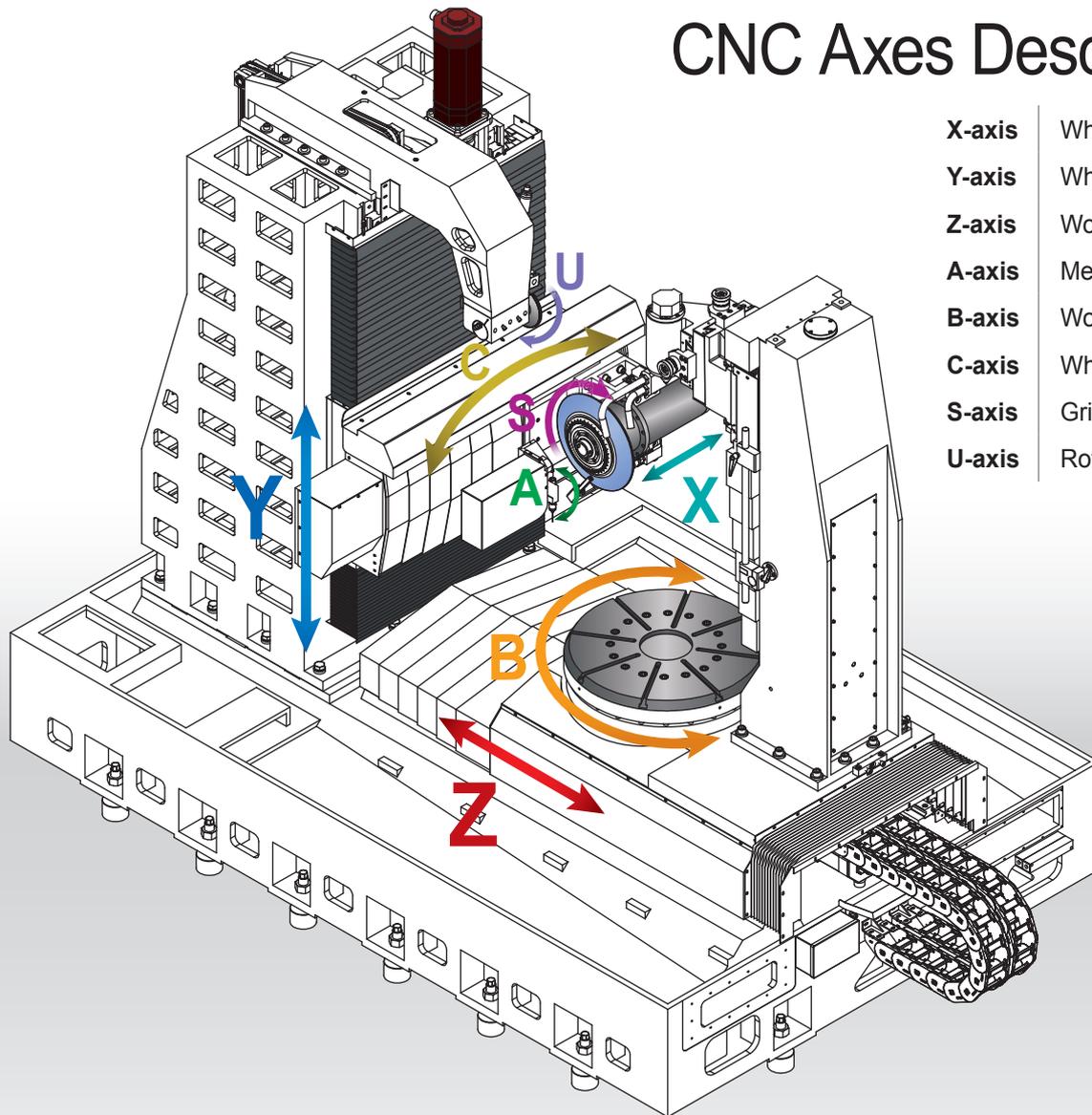
## CNC Vertical Type Gear Form Grinding Machine

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. Large-module- gears

are widely applied in vehicles, trucks, ships and agricultural tools. The LFG-8040 Vertical Gear Form Grinding Machine applies the FANUC controller and high-speed grinding spindle; through the Luren Precision-developed intelligent conversations window software, it can flexibly output the required tooth profile and grinding parameters. The workable machining workpieces include the involute gears, large-module hobs and cycloidal gears; the high-efficiency and high-precision expressed from the products are equivalent to worldwide-top brand' s ones; LFG-8040 is your best choice.

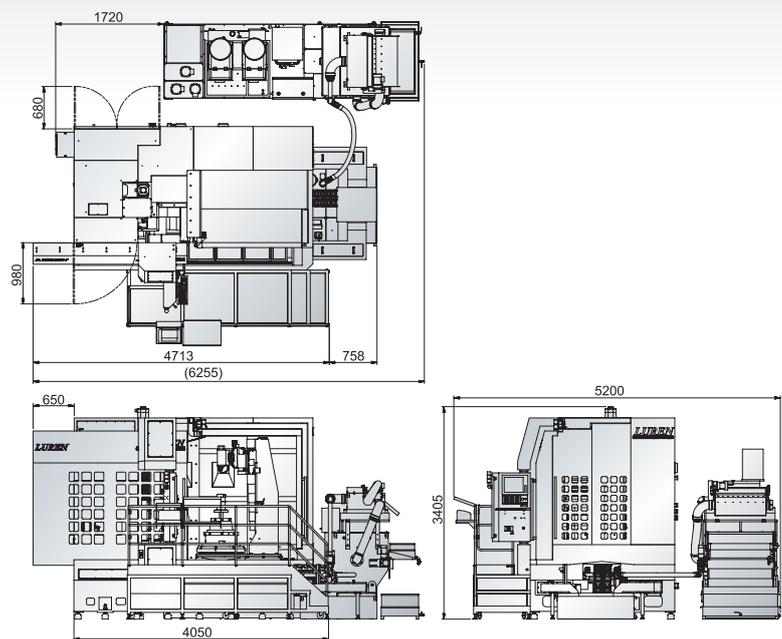


# CNC Axes Descriptions

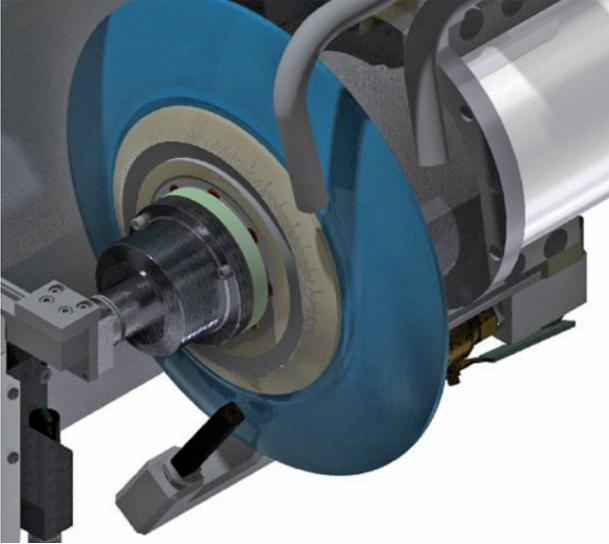


<b>X-axis</b>	Wheel axial slide
<b>Y-axis</b>	Wheel vertical slide
<b>Z-axis</b>	Workpiece radial slide
<b>A-axis</b>	Measuring arm swing
<b>B-axis</b>	Workpiece Indexing
<b>C-axis</b>	Wheel swiveling
<b>S-axis</b>	Grinding spindle
<b>U-axis</b>	Rotary wheel spindle

- Stable bed structure, high rigidity and high efficiency are the admired features of them.
- **LFG-8040** applies the globally famous FANUC controller. It combines the direct-drive motor and 8-axis close-loop servo system; each axis can simultaneously run to obtain a high-precision performance.
- The Luren Precision-developed intelligent conversations window software supports the complete machining process. Machine can generate NC program automatically through the parameters-input and setting of grinding conditions via the conversation, and thus elevates the working efficiency significantly.

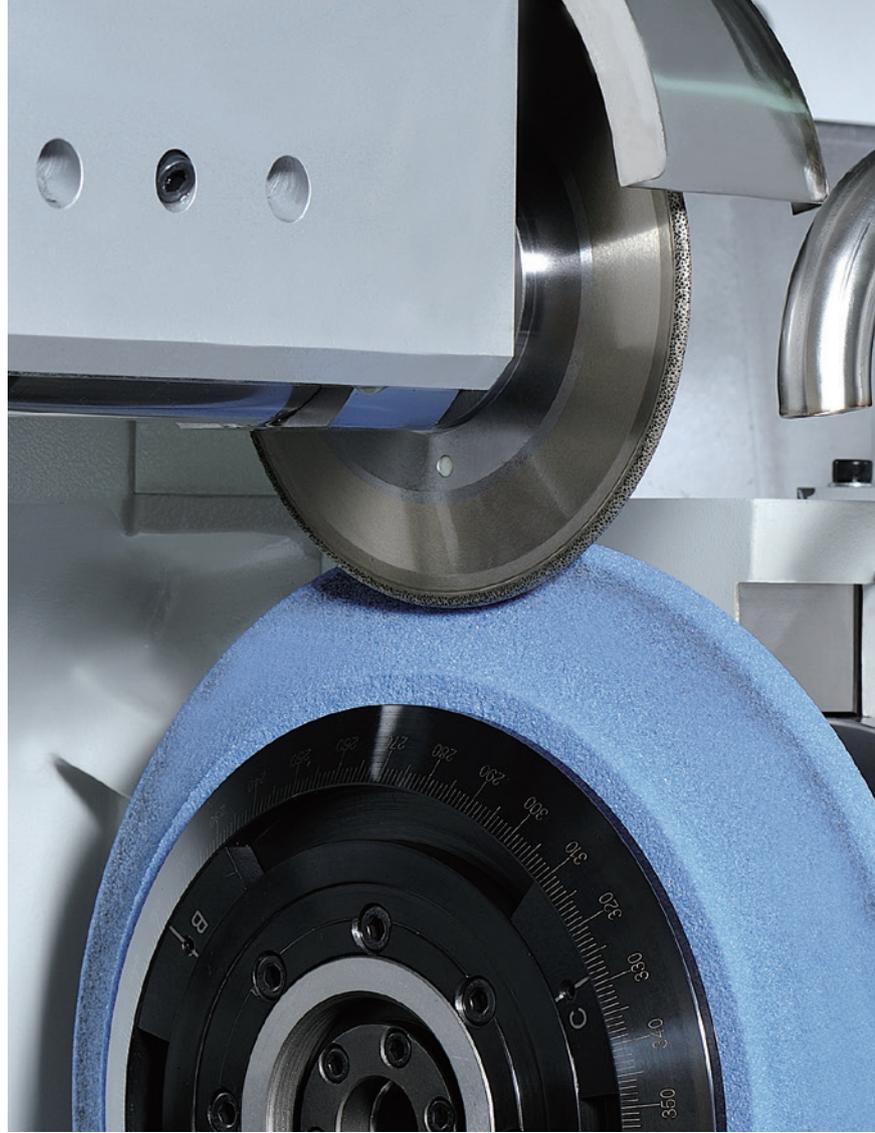


LFG-8040 is built in vertical construction, which enables mitigating the bending/deforming effect of large workpieces from gravity and building a more stable gear-grinding process. LFG-8040 offers Luren Precision-developed exclusive functions that include the online dynamic balance system, auto positioning and online measurement.



### Dynamic grinding balance system

Apply the online dynamic balance system to facilitate timely correcting the runout of wheel.



### Disc dressing unit

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



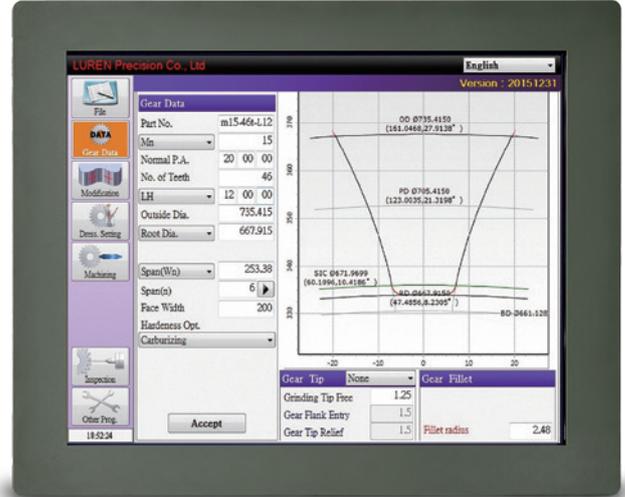
### Online measuring unit

Facilitate auto positioning and online measurement; skip the process of unloading down gears for measurement and reinstalling and aligning the gears back.



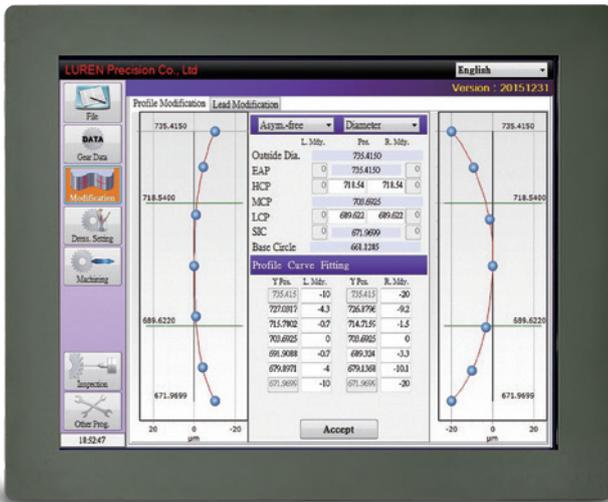
# Intelligent Software Technology

Luren Precision has developed the gear-profile forming software that includes the interfaces of gear data, profile modification, dress setting, inspection interface; all inputs apply the dialog blocks that enable operator to set gear data and grinding process parameters in a flexible matter; the software will generate complete NC program automatically and guide operator to run the grinding process.



## Gear data

Follow workpiece drawing to input the gear parameters and automatically calculate the matched gear profile. Freely zoom-in/out the graphics to check/confirm gear-profile details.



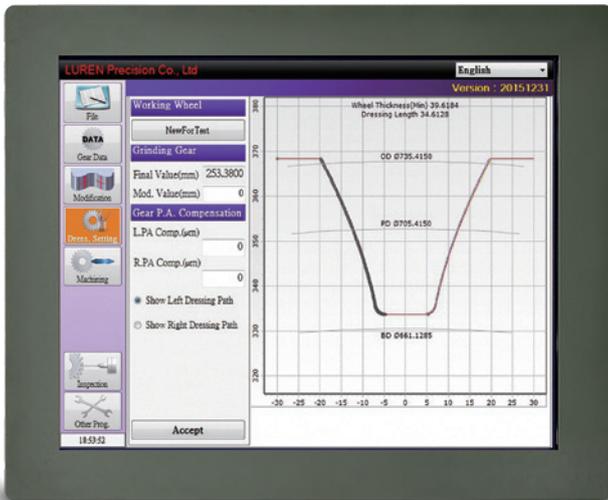
## Profile modification

The drag-control-point curve facilitates operator to modify gear profile and lead crowning according to customer's requirement.



## Inspection interface

DIN, ISO, JIS and AGMA STD available for measurement selection. Measured result can be stored in PC or print-out by printer.



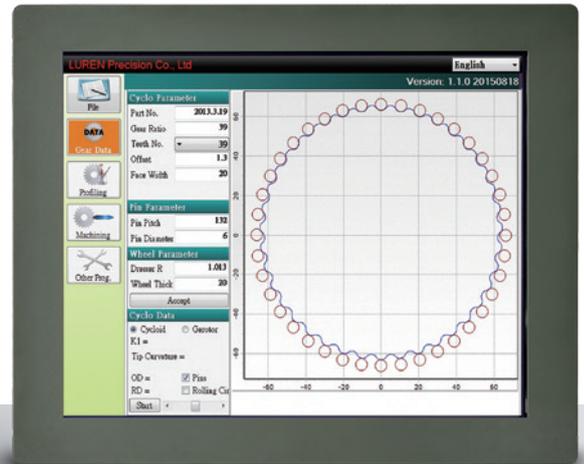
## Dressing setting

Compensate the wheel thickness and pressure angle flexibility according to measuring report.

Except involute tooth profile, LFG-8040 also allows for optional cycloidal gears grinding and large-module hobs sharpening functions.

### Cycloidal gear form grinding function (optional)

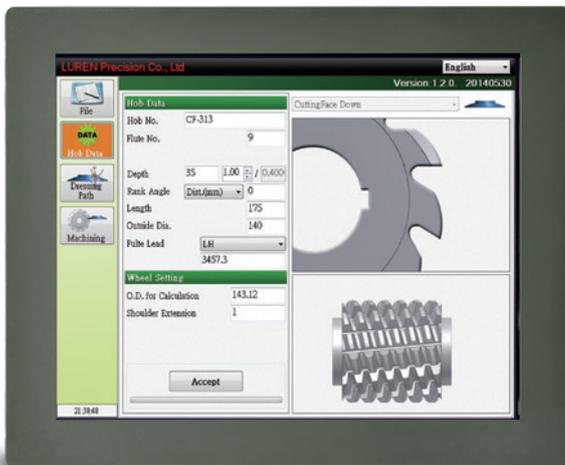
The cycloidal gears are applied in the high-precision cycloidal gear reducers.



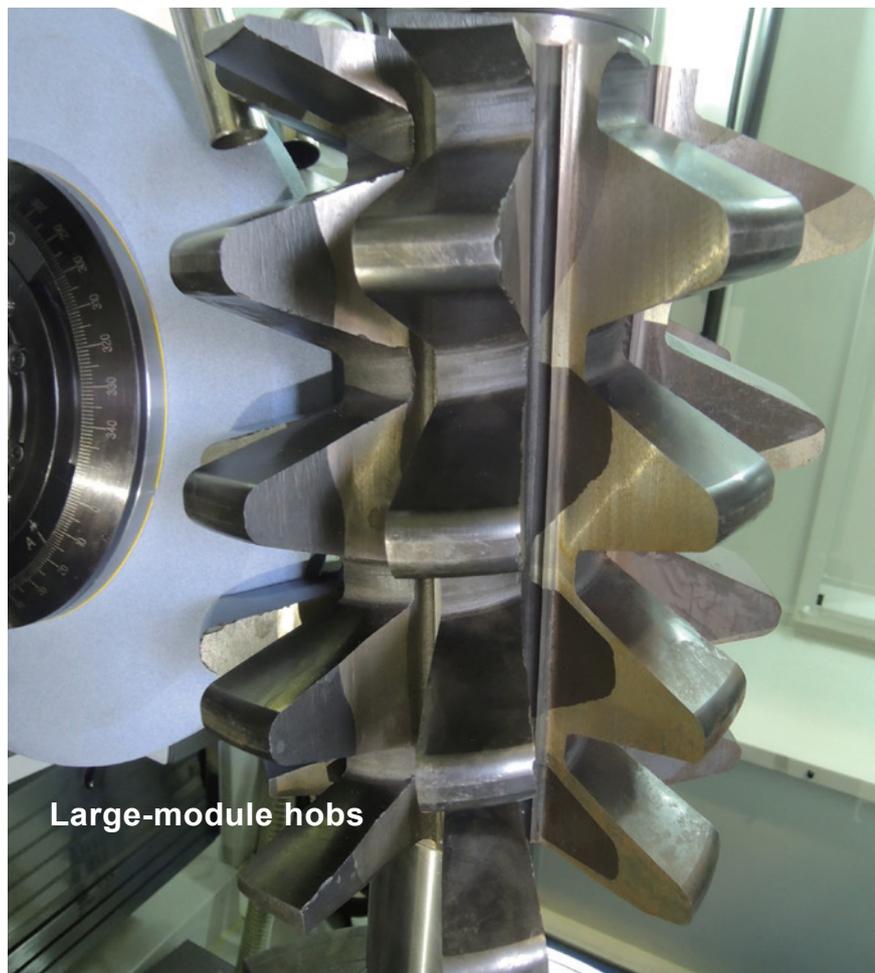
Large-diameter cycloidal gears

### Large-module-hobs sharpening (optional)

LFG-8040 can sharpen large-module hobs with diameter up to 350mm.



Hobs sharpening software interface



Large-module hobs

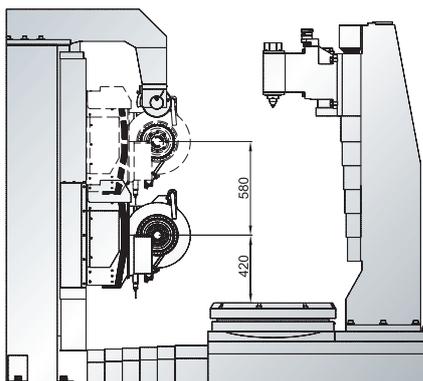


MAIN SPECIFICATIONS		LFG-8040
<b>Gear</b>		
Max. workpiece outside diameter	800mm	31.4"
Tooth range	9~999	
Min. workpiece root diameter	50mm	1.9"
Module	M2.0~M20	DP12.7~DP 1.27
Max. tooth depth	45mm	1.7"
Helix angle range	±45°	
<b>Hob cutter</b>		
Min. root diameter/Max. workpiece outside diameter	50mm~350mm	1.9"~13.7"
Max. flute depth	55mm	2.1"
Flute range	1~99	
Flute helix angel range	±40°	
<b>MECHANICAL SPECIFICATIONS</b>		
Max. grinding slide travel	400(450)mm	15.7"(17.7")
Max. workpiece slide travel (Z axis)	400mm	15.8"
Tailstock center height above rotary table	600mm~1250mm	23.6"~49.2"
Table diameter	740mm	29.1"
Max. table load (workpiece with fixture)	2500 kg	5500 lb
<b>GRINDING WHEEL SPECIFICATIONS</b>		
Min. dressable diameter of the grinding wheel		
Max. grinding wheel diameter	260mm / 400mm	10.2" /15.7"
Max. grinding wheel thickness	70mm	2.7"
Max. grinding spindle speed	4000 rpm	
Drive power of grinding spindle	15kW	20Hp
<b>ELECTRIC SYSTEM</b>		
Voltage	3Ø 220V	
Current Requirement	80 Amp	
Ambient Temperature	10°C ~ 40°C	50°F ~ 104°F
Max. Load of Machine	35 kVA	
<b>CNC CONTROLLER</b>		
FANUC		
<b>DIMENSION &amp; WEIGHT</b>		
Space Requirement	L 7825 x W 6800 x H 4200mm	L 309" x W 268" x H 166"
	(800mm (32") on each dimension is required for maintenance).	
Weight of Basic Machine	17000kg (37500lb)	

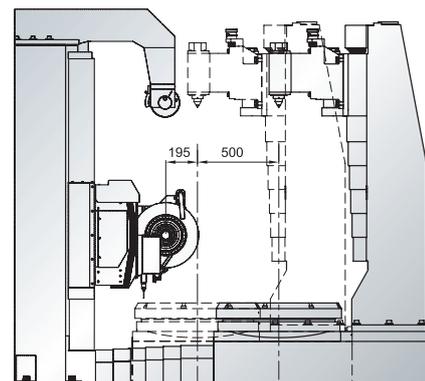
Note: The specifications are subject to the contract, as well as new technology and industrial advancements available.

**Travel of each axis**

**Y-axis**



**Z-axis**



# LUREN

LUREN PRECISION CO., LTD.

[www.luren.com.tw](http://www.luren.com.tw)

[sales@luren.com.tw](mailto:sales@luren.com.tw)

## Headquarters

No 1-1, Li-Hsin 1<sup>st</sup> 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](http://www.lurenusa.com)

