

LWT-2080/3080

CNC Worm Thread
Grinding Machine



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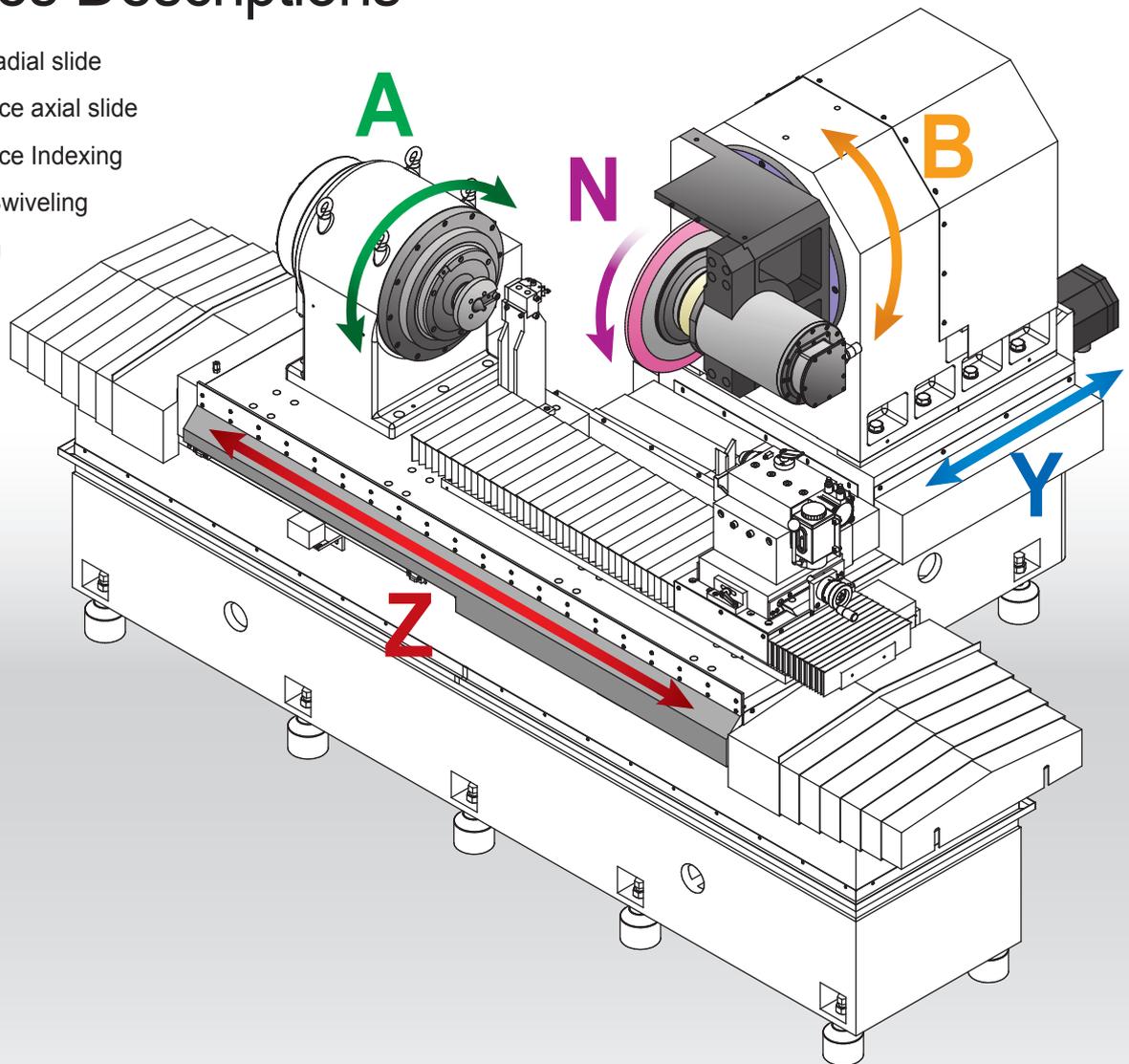
Luren Precision Co., Ltd. has been dedicating to the R&D of gear machining since 1994. We have extended the cut-tools technologies of Mechanical and Research Laboratories, ITRI, and integrated the research resource from the best universities, built the production lines of hobs and shaving cutters, and 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. The LWT 2080/3080 worm thread grinding machine applies FANUC controller and high-speed grinding spindle; it will design the tooth profile and grinding parameters flexibly through the intelligent conversations window software. The machine-able workpieces include the standard worms (ZK, ZI, ZN & ZA), dual-lead worms, ZC (Niemann) worms, thread plug gauges and rolling dies. The high-efficiency and high-precision machining performance meet the worldwide top brand products in this field. They are your best choice.

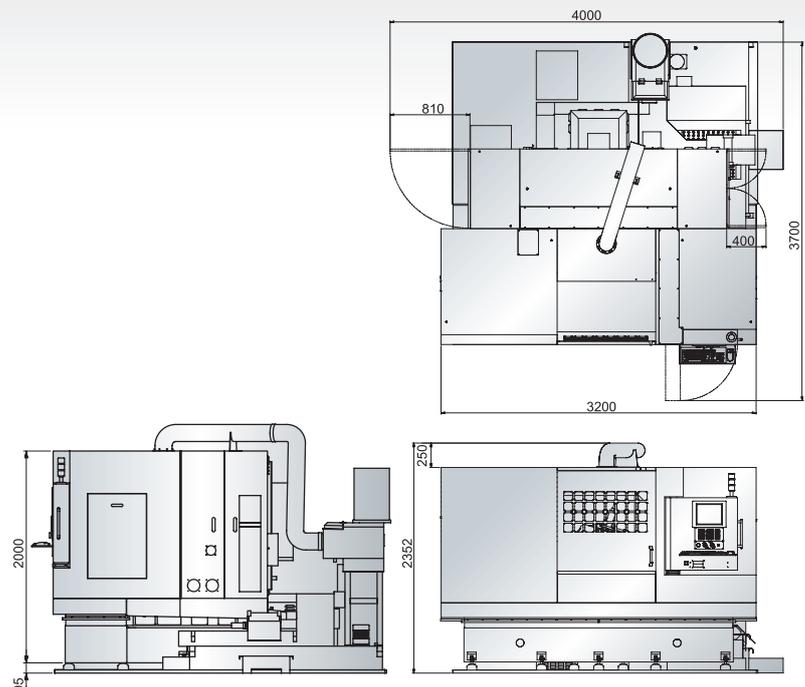


CNC Axes Descriptions

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



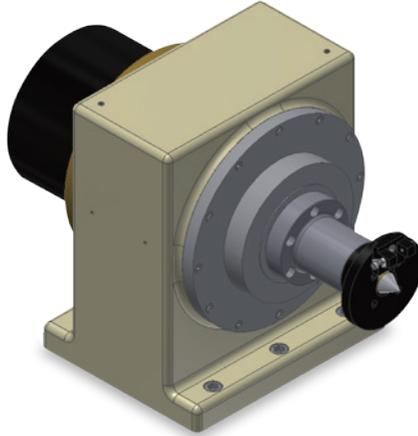
- The **LWT-2080/3080** products are the best-selling products of Luren. Stable bed structure, high stiffness and high efficiency are the admired features of them.
- **LWT-2080/3080** products apply world-famous FANUC controllers and serve & direct-driving motors; high precision performance is outputted from each axis.
- The Luren-developed intelligent conversions window software supports the entire machining process. Machine can generate NC program automatically through the parameters-input and setting of grinding conditions via the conversation, and thus increases the working efficiency significantly.



Except standard unit function, LWT 2080/3080 also provides the special mechanism selection ability; as to accommodate auto lot-production requirement; the auto positioning and auto load/unload functions also can be under selection.

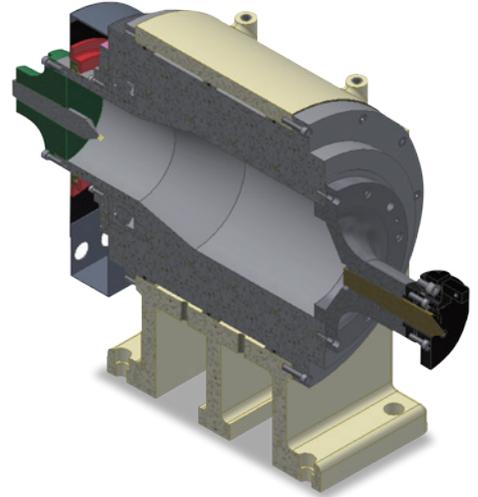
Headstock

Standard form (standard equipment)



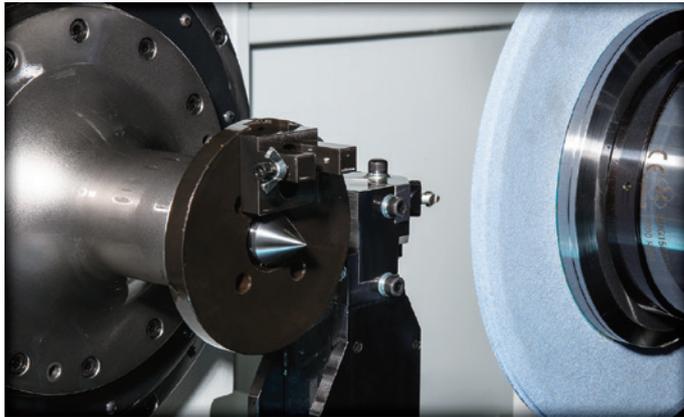
Through-bore design (optional)

Applicable to the workpiece length > 800mm.



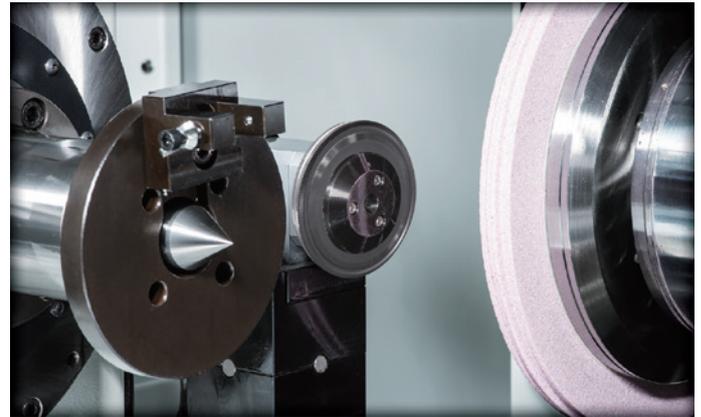
Dressing unit

Diamond point dressing unit (standard equipment)



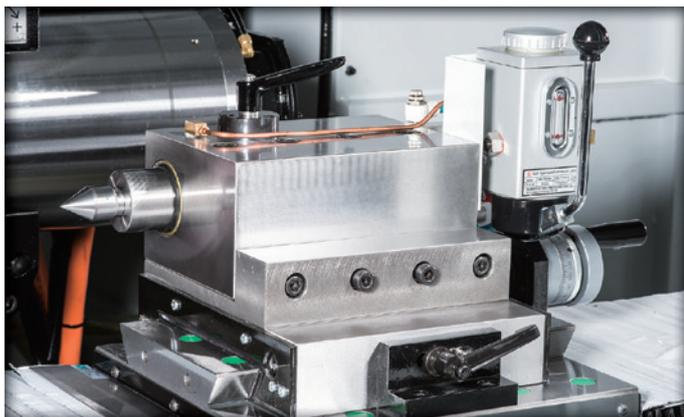
Disk dressing unit (optional)

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



Tailstock adjustment unit

Manual adjustment (standard equipment)



Electric adjustment (optional)

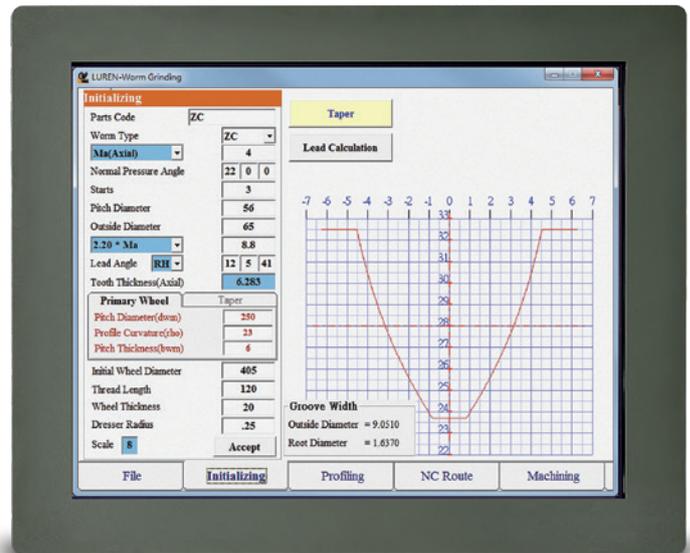
Reduce the installation error; suitable for long-size worms.

Note: Standard two centers distance: 600mm/two through-bores center distance: 1000mm



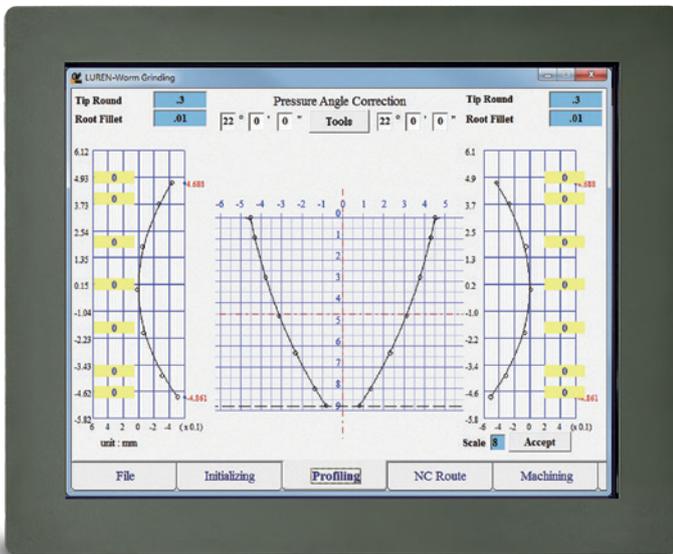
Intelligent Software Technology

Luren Precision develops our own worms-grinding software that includes: Initializing, profiling and NC route. All procedures input are made by a conversation matter, helping operator set the worm data and grinding parameters in a flexible way; software will auto generate the required NC program and guide operator to perform the grinding process.



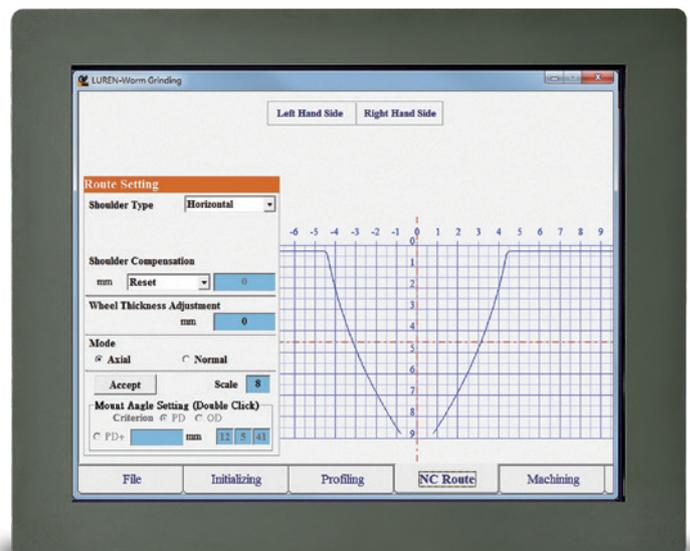
Initializing

Follow customer's design drawings to input the worm parameters; automatically generate the matched worm profile.



Profiling

The Profiling page provides convenient curve-adjustment ability. Operator uses the input form to build and fine-tune the profile curve. Effectively aids the design of tooth-profile modification.



NC route

NC route page can set the shoulder type of special requirements and shoulder & thickness compensations according to the actual machining result.

Machining Examples

The worm gear pair is the crossed gear pairs. Since the large gear ratio, the units can hold high-speed-reduction, high-loading force and high-torque and are equipped in a speed reducers. The worm gear reducers are commonly used in vehicles, machine tools, index devices and construction heavy machines. Worm types under LWT-2080/3080 machining scope include the standard (ZK, ZI, ZN & ZA) worms and the following special worms.

Dual-lead worm

Dual-lead worm with different tooth-pitch on both sides of teeth surfaces; able to adjust worm position to reduce the backlash between worm & worm gear made from long-term wear.



The electronic-assisted steering unit(EPS)worm

While car driver turns the steering wheel, EPS worm gear pair will output power, allowing driver to turn car wheels easily.



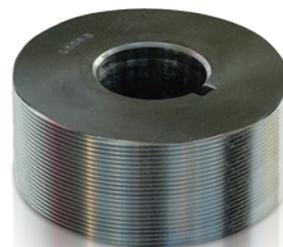
ZC(Cavex) worm gear pair

The ZC(Niemann) worm gear pair is the convex-concave arc tooth profile meshing transmission mechanism; the figure is on its high-efficiency and high-loading capacity. This mechanism is widely applied in the reducer of metallurgy, mining, chemical, construction, crane and other mechanical equipment.



Rolling die

The rolling die can produce the thread products in a material-saving and fast matter.



MAIN SPECIFICATIONS	LWT-2080	LWT-3080
Min./Max. workpiece outside diameter	5mm / 200mm (0.19"/7.8")	5mm / 300mm (0.19"/11.8")
Max. module	M8 (DP3.2)	M12 (DP2.1)
Thread range	1 ~ 99	1 ~ 99
Lead angle range	±35°	±45°
Pressure angle range	5° ~ 30°	5° ~ 30°

MECHANICAL SPECIFICATIONS	LWT-2080	LWT-3080
Min. distance between centers	80mm (3.1")	80mm (3.1")
Max. distance between centers	800mm (31.4")	800mm (31.4") (Standard) 1200mm (Through-bore) (47.2")
Work spindle through bore		130mm (5.1")
Max. axial slide travel (Z axis)	650mm (25.5")	650mm (25.5")
Min./Max. Distance between work spindle and grinding spindle	150mm / 400mm (5.9"/15.7")	150mm / 400mm (5.9"/15.7")
Max. table load (workpiece with fixture)	60kg(132lb)	80kg(176lb)

GRINDING WHEEL SPECIFICATIONS	LWT-2080	LWT-3080
Min grinding wheel root diameter/Max grinding wheel diameter		260mm / 400mm (10.2"/15.7")
Max. grinding wheel thickness		40mm (1.5")
Max. rpm of grinding spindle		4000 rpm
Drive power of grinding spindle		17kW (22Hp)

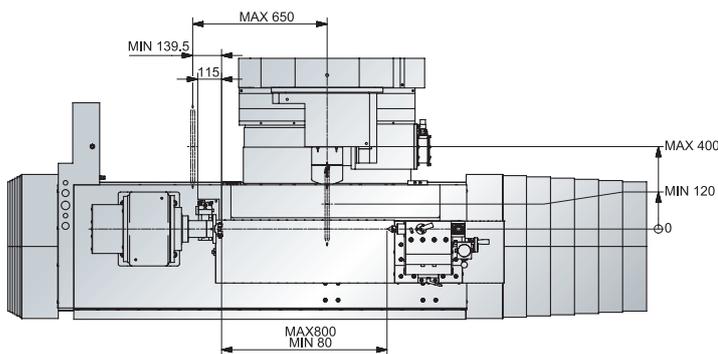
ELECTRIC SYSTEM	LWT-2080	LWT-3080
Voltage		3Ø 220V
Current Requirement		45 Amp
Ambient Temperature		10°C ~ 40°C (50°F ~ 104°F)
Max. Load of Machine		20 kVA

CNC CONTROLLER	LWT-2080	LWT-3080
		FANUC

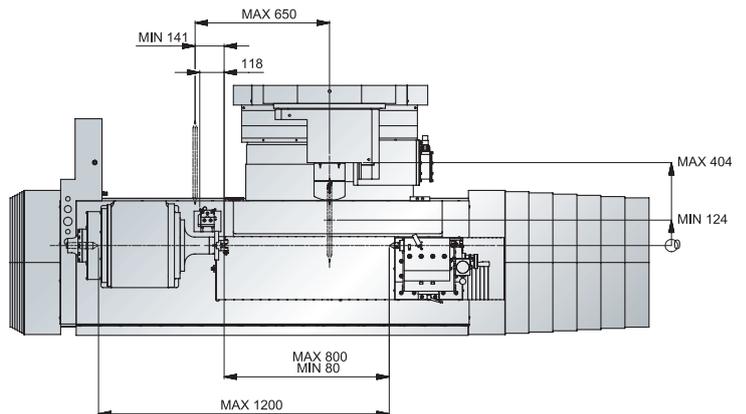
DIMENSION & WEIGHT	LWT-2080	LWT-3080
Space Requirement		L 3700 x W 4000 x H 2352mm L 146" x W 157" x H 93" (800mm (32") on each dimension is required for maintenance).
Weight of Basic Machine		8500kg (18700lb)

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

LWT-2080 Travel of each axis



LWT-3080 Travel of each axis



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