

# gear

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## grinding

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## Liebherr: Short Grinding Times with High-Production Quality

The newly designed gear grinding machine LGG 180 for profile and generating grinding offers compact dimensions and is suited to handle the high production demands of vehicle and transmission manufacturers. “The advantage is higher quality throughout the entire production. It gives users fast processing combined with the advances of a one-table solution,” says Dr.-Ing. Andreas Mehr, grinding and shaping technology development and consultancy at Liebherr.

The machines for 180 mm and 280 mm contain the same dimensions, making it easy to develop a complete high quality production line in which all the gears are produced using a one-table solution. Manufacturers can ground planetary and sun gears, bore-type gears as well as drive and pinion shafts with lengths of up to 500 mm. New features on the LGG 180 include a new grinding head, (speeds up to 10,000 rpm and a spindle power of 35 kW), a thermally stable machine bed and reserve capacities for future grinding developments. The LGG 180 can also utilize the abrasive Cubitron II from 3M.

In addition, the machine will enable undulations to be applied specifically to gear wheel flanks for noise optimization purposes for the first time. The ability to produce sub- $\mu$  range waviness cost-effectively gives designers a whole new range of options. Features under consideration include twist-free grinding, grinding of stimulus-optimized corrections (amplitude, wavelength, phase, orientation), trueing up of lines and grinding of conical gear teeth (beveloids). The newly designed user interface is individually configurable, enables intuitive operation via touch panel, and allows for mathematical analysis of waviness and twist. It also provides user guidance for process cycles and conversion cycles.



## Luren Looks to Job Shops with Universal Grinding Machines

Luren Precision established itself in the industry for manufacturing and engineering gear cutting tools but has expanded in the market to provide gear grinding machines. “The LUG-3040 is a great example of Luren’s machining versatility,” says Darian Ditzler, sales and service manager at Luren. “This machine is perfect for job shops. It utilizes a Fanuc controller and direct drive motor for the workpiece spindle and a built-in motor for grinding. It offers a wide range

of specifications and software capabilities for multifunctional machining.”

In addition to the LUG-3040, Ditzler says the LWT-3080 attracted interest during Gear Expo. “This is our best-selling machine in the States, thanks to its competitive price and the direct drive motor and linear motor.” Luren’s *Smart Dialogue* software offers flexibility as well as management of the grinding/dressing cycle without the need for the external PC.

The company plans to bring more machines to the States that are being utilized in Asia in the near future. Currently, Luren offers hob sharpening, worm thread grinding, horizontal and vertical grinding, and CNC universal gear tool grinding machines.

Ditzler was happy with the concentrated traffic that visited Luren’s booth during Gear Expo in Indianapolis. “We’ve received some great feedback this week. We’re walking away with a couple of prospects for our universal grinding machine. While it’s a small show, it’s a much better focus than you’ll find at IMTS or the larger trade shows. I think we’re going to get a larger booth in Detroit in two years and focus on bringing more engineering personnel to talk about our increasing machine capabilities.”

