

Gleason



THE
TOTAL GEAR
SOLUTIONS™
PROVIDER

TURBO
LAPPER

600HTL

Next-generation 600HTL Turbo Lapper®: A new standard in bevel and hypoid hard finishing

With its introduction in 1999, the Gleason 600HTL TURBO LAPPER® Hypoid Lapping Machine made a quantum leap in lapping productivity, capability, and ease of operation. Now, the next-generation 600HTL has arrived, combining speed, ergonomics, and compact size of the original with a host of new innovations to create the most productive – and reliable – lapping machine ever built. For example:

Unsurpassed productivity.

The new TURBO LAPPER cuts lapping cycle times to as little as half that of a conventional lapping machine. Horizontal, direct-drive compliant spindles and a high-volume compound delivery system allow lapping speeds of 3,000 rpm or higher, while an open and highly accessible work chamber and extremely efficient user interface greatly reduce setup and other non-productive time.

Revolutionary new compound system.

The 600HTL eliminates the flow and sediment problems of conventional lapping compound systems with a simple, accessible design. The industry's first use of a Coriolis-effect flow sensor brings a much greater level of compound control to the process by accurately monitoring both flow rate and density under all temperature and slurry conditions. In addition, the new design greatly increases the space devoted

to the lapping compound system and puts pump and valves in fixed accessible locations. The separate tank is equipped with a powerful mechanical mixer that eliminates sediment accumulation.

Simple, efficient user interface.

While the Turbo Lapper is the most advanced CNC lapper ever built, daily operation has never been more

efficient. Operators can get the most out of the machine's capabilities with minimal keystrokes and software navigation simply by using main operator panel button pushes and "V & H diamond" mushroom buttons to execute common commands such as drive or coast setover changes and manual roll checks.

Main operator panel buttons and V & H diamond mushroom buttons, shown below, minimize keystroke and software navigation.



New 600HTL features a small footprint design with open accessible work chamber.

Highly ergonomic and economic.

A host of other experience-based and customer-driven improvements have been incorporated into the 600HTL to further improve day-to-day operation and maintainability. For instance:

- ✓ An enhanced nick and burr detection system provides high-speed, high-resolution measurements to identify tooth defects before lapping begins.
- ✓ A manually-operated hinged side door decreases cycle time, improves access and reliability and increases useable chamber size.
- ✓ A view-window in the chamber door allows the operator to verify compound application at any time. Larger maintenance access doors facilitate maintenance operations.
- ✓ A reconfigured chiller allows better maintenance and airflow.
- ✓ Handling of gaging data is now optimized for multiple summary and multiple machine installations.

Standard Equipment.

- ✓ Direct-drive horizontal spindles with optimal dynamic properties
- ✓ Arrangement for 39-taper pinion and 14-taper gear workholding
- ✓ Work chamber guarding for 600 mm maximum gear diameter
- ✓ Automatic compound applicator

Standard Equipment, cont.

- ✓ Large capacity air-driven compound pump with quick-disconnect piping
- ✓ Separate high-volume compound tank with motorized mechanical mixing
- ✓ Coriolis-effect in-line compound flow sensor
- ✓ Compound temperature control with heating
- ✓ Easy-clean magnetic compound filtration unit
- ✓ Power work chamber door
- ✓ Automatic backlash setting at multiple lapping positions
- ✓ Automatic run-out determination for both members
- ✓ High-speed spin clean
- ✓ Stack light
- ✓ Centralized automatic machine lubrication system

Optional Equipment.

- ✓ Automatic nick and burr detection
- ✓ 60-taper large bore pinion spindle
- ✓ 39-taper non-compliant gear spindle
- ✓ Workpiece seating safety check
- ✓ Torque verification
- ✓ Closed-loop lapping compound flow control

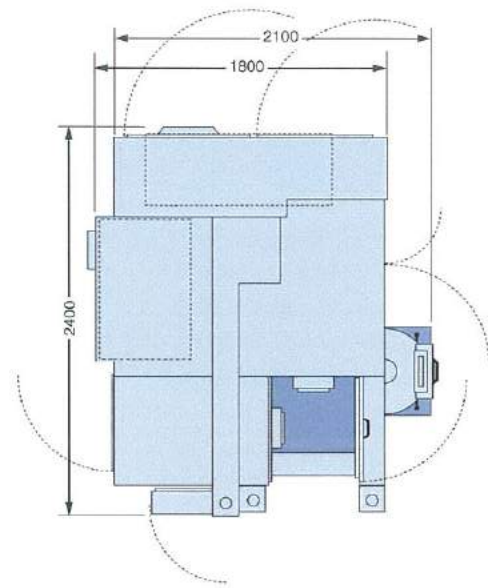
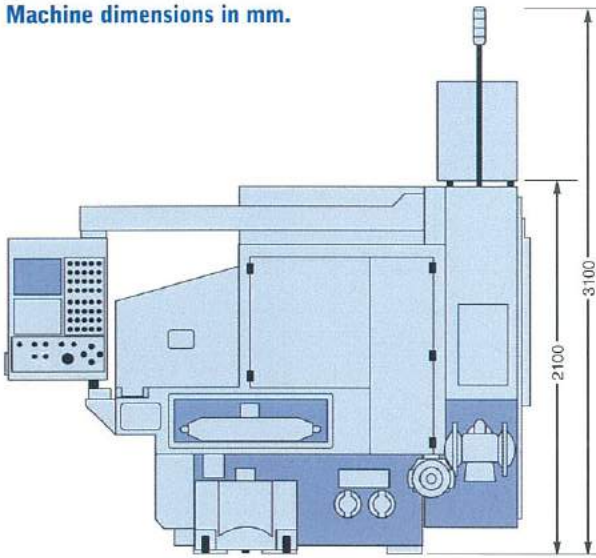


Self-contained, easily accessible lapping compound system, shown above, features powerful mechanical mixer to prevent sediment accumulation.



Industry's first Coriolis-effect flow sensor more accurately monitors lapping compound flow rate and density.

Machine dimensions in mm.



Description	Metric	English
Maximum Gear Outside Diameter	600 mm	23.6 in.
Maximum Pinion Outside Diameter	254 mm	10.0 in.
– Max. Pinion Drive Speed	3100 rpm	3100 rpm
– Maximum Gear Drive Speed	3100 rpm	3100 rpm
Offset Range	± 76 mm	± 3.0 in.
Pinion Cone Range	165 to 343 mm	6.5 to 13.5 in.
Gear Cone Range	89 to 267 mm	3.5 to 10.5 in.
Lapping Torque Load*	2 to 24 Nm	15 to 17.7 ft-lbs.
H (Pinion Cone) Servo Drive Motor	6 Nm	4.4 ft-lbs.
V (Vertical Offset) Servo Drive Motor	12 Nm	8.9 ft-lbs.
G (Gear Cone) Servo Drive Motor	6 Nm	4.4 ft-lbs.
A (Pinion Spindle) Servo Drive Motor	14 kW	18.8 hp
C (Gear Spindle) Servo Drive Motor	14 kW	18.8 hp
Floor Space	2100 x 2400 mm	83 x 93 in.
Height	3100 mm	122 in.
Weight	5670 kg	12500 lbs.

*Up to 50 Nm (443 in.-lb.) with optional 39-taper spindle.
 These specifications are approximate and subject to change.
 TURBO LAPPER® is a registered trademark of The Gleason Works.

Gleason

Gleason Corporation

1000 University Avenue
 P.O. Box 22970
 Rochester, NY 14692-2970, USA
 Tel. +1-585-473-1000
 Fax +1-585-461-4348
gleason-corporation@gleason.com

The Gleason Works

1000 University Avenue
 P.O. Box 22970
 Rochester, NY 14692-2970, USA
 Tel. +1-585-473-1000
 Fax +1-585-461-4348
gleason-works@gleason.com

Gleason-PFAUTER

Maschinenfabrik GmbH
 Daimlerstrasse 14
 D-71636 Ludwigsburg, Germany
 Tel. +49-(0)7141-404-0
 Fax +49-(0)7141-404-500
gleason-pfauter@gleason.com

www.gleason.com • sales@gleason.com

For Worldwide Locations and Additional Information.