

ElectroPuls™ | E1000 All-Electric Dynamic Test Instrument

The ElectroPuls™ E1000 is a state-of-the-art, all-electric test instrument designed for dynamic and static testing on a wide range of materials and components. It includes Instron® advanced digital control electronics, Dynacell™ load cell, Console software, and the very latest in testing technology – hassle-free tuning based on specimen stiffness, electrically operated crosshead lifts, a T-slot table for flexible test set ups, and a host of other user-orientated features. Powered from a single-phase supply it requires no additional utilities for basic machine operation (for example, pneumatic air, hydraulics, or water).

Features

- Patented, oil-free linear motor technology for clean conditions
- Designed for both dynamic and static testing on a variety of materials and components
- High dynamic performance, capable of operating at over 100 Hz
- ±1000 N dynamic load capacity and ±710 N static load capacity
- Electrically powered from single phase main supply, no need for hydraulic or pneumatic air supplies
- Temperature-controlled air-cooling system
- High-stiffness, precision-aligned twin column load frame with actuator in upper crosshead
- Versatile T-slot table for regular and irregular grips and specimens
- Compact instrument - frame requires less than 0.15 m² (1.6 ft²) of desk space

Hardware and Software Interfaces Designed to Put You in Control

- Console software control interface - engineered with Instron's knowledge of machine usability
- Rigidly mounted control pod with critical controls and emergency stop at your fingertips
- Electrically powered crosshead lift system with manual lever clamps for ease of test space adjustment
- System status indicator shows system conditions (off, on, emergency stop, and fault)

Hidden Technology Designed to Improve Your Test

- Patented stiffness-based loop tuning system
- Unique actuator bearing system maintains load string alignment when offset or lateral loads are induced by specimens or fixtures
- An optical encoder for precise digital extension control and a dedicated position channel for set up and end of test
- Digital controller based on the industry's most advanced controller
- Dynacell advanced load cell technology for faster testing and reduction of inertial errors

A High Level of Versatility

- Readily adjustable test space to suit a wide variety of specimens, grips, fixtures, and accessories
- 60 mm (2.36 in) stroke for a wide range of tests, as well as ease of specimen set up
- Offset diagonal column configuration provides optimum access to the test area
- Compatible with WaveMatrix™, Bluehill® Universal* and Application Specific software
- Compatible with a large range of grips, fixtures, chambers, saline baths, video extensometers, and other accessories
- Optional accessory kit to allow frame to be mounted in horizontal orientation for ease of testing with imaging systems and microscopes

*Only supported in desktop mode

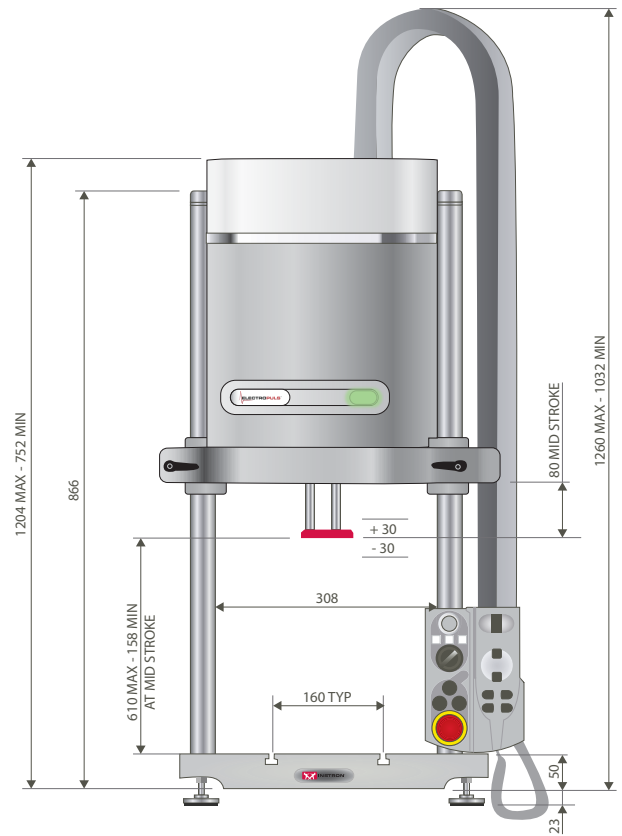


Specifications

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|------------------------|-------------------------------------------------------------------------------------------|
| Dynamic Capacity | ±1000 N (±225 lbf) |
| Static Capacity | ±710 N (±160 lbf) |
| Stroke | 60 mm (2.36 in) |
| Load Weighing Accuracy | ±0.5 % of indicated load or ±0.005 % of load cell capacity, whichever is greater |
| Daylight Opening | 610 mm (24 in) maximum with actuator at mid stroke |
| Configuration | Diagonal twin-column with actuator in upper crosshead |
| Mounting | Tabletop: Vertical (Horizontal with optional mounting kit) |
| Lift and Locks | Electrically powered lifts with manual lever clamps |
| Load Cell | ±2 kN Dynacell™ mounted to base |
| Weight | 92 kg (202 lb) [frame only] 40 kg (88 lb) [controller] |
| Electrical Supply | 100 VAC to 140 VAC 20A single phase 50/60 Hz 220 VAC to 240 VAC 10A single phase 50 Hz |
| Cooling | Temperature-controlled air cooling |
| Operating Temperature | +10 to +30 °C (+50 to +86 °F) |

INTERFACES

| | |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Actuator | M6 × 1 right hand central thread 3 × M6 on 57 mm PCD |
| T-Slot Table | M6 × 1 right hand central thread 3 × M6 holes on 57 mm PCD 6 × M10 holes on 100 mm PCD 4 × M10 holes on a 280 mm x 90 mm accessory rectangle 4 × M6 T-slots spaced 80 mm from center |



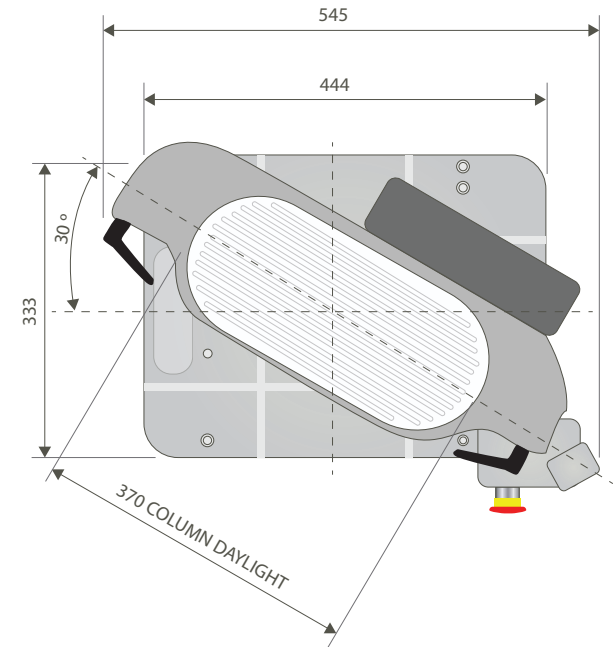
E1000 dimensions front view

Accessories

| | |
|----------|----------------------------------------------------------------|
| 1300-311 | High Stiffness Support Table |
| 1300-151 | Horizontal mounting kit for ElectroPuls™ E1000 test instrument |
| 1300-301 | Safety Screen for E1000 test instrument |
| 2742-102 | ±1 kN (±225 lbf) fatigue-rated mechanical wedge grip |
| 2742-103 | ±1 kN (±225 lbf) fatigue-rated pneumatic wedge grip |
| 2718-013 | Pneumatic grip air kit for dynamic systems |
| CP114160 | ±3 kN (±675 lbs) Compression Platens |



E1000 test instrument in horizontal configuration



E1000 dimensions plan view

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