

# Allegro XP™

## High-speed testing and sorting of MLCCs



### Precision in Motion

Allegro XP delivers the levels of precision demanded by leading MLCC manufacturers producing larger and higher-voltage chips for applications in industries such as automotive, IoT, handheld devices and commercial communication equipment.

### Flexibility Designed In

Allegro XP incorporates testing innovations pioneered by ESI to enable MLCC manufacturers to test a wide range of chip sizes and capacitance. Test the latest-generation larger-size chips at high throughput while minimizing damage to the chips.



**Testing to a higher quality standard.**

### High-Precision Processing and Testing Technologies Pioneered by ESI

#### Testing for Higher-Voltage Applications

Allegro XP performs high-throughput production-level electrical testing of the latest high-voltage chips (up to 1kV).

#### Higher Reliability Low-Impact Chip Handling

Allegro XP utilizes ESI's latest low-impact rotary chip handling technology to maintain throughput while minimizing testing-related chip damage.

#### Ultra High-Speed Processing

MLCCs are tested at rates of up to 16,666 parts per minute (1,000,000 parts per hour).

#### Addresses the Full Range of Capacitance

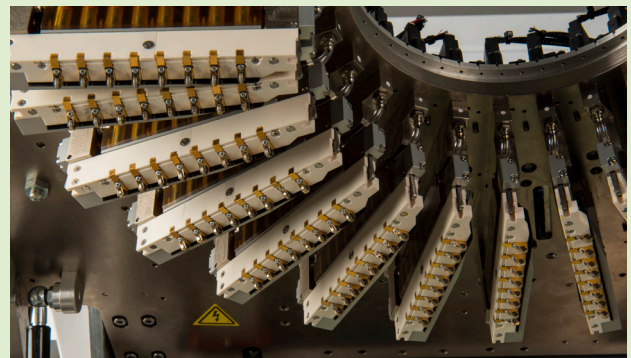
- Test Frequencies: 120 Hz/1 kHz & 1 MHz
- Supports a full range of MLCC sizes

### Low-Impact Ultra High-Speed Processing From a Market Leader in MLCC Testing

- Patented pulse-actuated contacts
- Minimal termination marking
- Maintain contact integrity

### Flexibility to Test a Wide Range of Sizes

- Test chip sizes of 0603-1210 (1608-3225 metric)



## System Specifications

### Throughput

Up to 16,666 parts per minute  
(1,000,000 parts per hour)

### Chip Sizes

- 0603 (1608 metric)
- 0805 (2012 metric)
- 1206 (3216 metric)
- 1210 (3225 metric)

### Applied Tests

Up to 25 stations are available to perform the following tests:

- Capacitance & DF (120Hz, 1KHz, 1MHz)
- IR Pre-Charge
- IR Pre-Soak
- IR/Current Measurement
- 100% Data Collection (Optional)

### Instrumentation

Capacitance & DF:  
Agilent 4981 (2 units per CD Station)

### Flash and IR:

- ESI Source and Measure Units
- Models 620 and 720
- Applied test voltage:
  - 2V – 600V (standard)
  - 2V - 1,000V (optional)
- Charge current: 2mA – 250mA (standard)
- Charge current: 2mA to 90mA w/HV Protect (optional)
- Measured current: 1pA – 2mA
- 18mA current range is optional

### Test Contacts

Upper Contacts:

- Roller contact with computer-programmable constant force settings
  - PAC Function
- Lower Contacts
- Beryllium copper, Silver, or Tungsten

### Sort Bins

9 bins:

- Up to 7 cap tolerance bins
- Up to 7 reject bins
- 1 retest bin

### System Control

Multi-Core Processor  
Touch screen operator interface  
System status light tower  
Internally mounted printer (option)  
Network control (option)

### Service Requirements

Main Power:

200-230 VAC, 50/60 Hz, 20A, Single-Phase

### Vacuum Pump (optional):

200-230 VAC, 50/60 Hz, 20A, Three-Phase

### Pressurized Air:

Compressed Air Pressure: 550 (80 psi; .055 MPa)

Compressed Air Flow Rate:

Minimum: 340 LPM (12 CFM)

Moisture Limit <10PPM Water

### Vacuum:

Vacuum Pressure: 55kPa (16.24 Inches Hg)

Vacuum Flow Rate: Minimum 560 LPM (19.8 CFM)

Air Hose: 16mm OD/13mm ID; PVC Type Supply Hose

Vacuum Pump (optional)

Temperature and Humidity Range:

15°-35°C and 50%-80%

### Dimensions & Weight

Height: 75" (1.90 m)

Width: 63" (1.60 m)

Depth: 62" (1.57 m)

Net Weight: 2000 lb. (910 kg)

Shipping Weight: 2700 lb. (1225 kg)

\* Weights will vary according to machine configuration

**Ask an Expert! For facilities guidelines, requirements or more information, please contact your local ESI representative or visit [www.esi.com](http://www.esi.com).**