HAEFELY HIPOTRONICS

MOTOR TESTING

APPLICATION GUIDE

www.hipotronics.com

reliable. precision.

HUBBELL HIGH VOLTAGE TEST SOLUTIONS

MOTOR TEST SYSTEMS

HAEFELY HIPOTRONICS is the world's leading supplier of quality AC and DC motor testing equipment to motor manufacturers, motor repair shops, and industrial plant maintenance programs since 1962. Our 100+ years of combined experience have enabled us to develop the most reliable and efficient test systems on the market today.

All of our manufacturing is done in-house to provide the highest level of quality. Our standardized designs, patented Peschel Variable Transformer (PVT), and rugged motorized tap switch allow for years of operation with minimal maintenance.

Our Motor Test Systems come with a 10-inch (25cm) color touchscreen controller with intuitive menu functions.

A standard digital tachometer and wattmeter allow for conveniently displayed measurements on the controller interface as well as temperature and power factor metering.

Fast and easy test reports can be generated using our new data acquisition software on any computer.

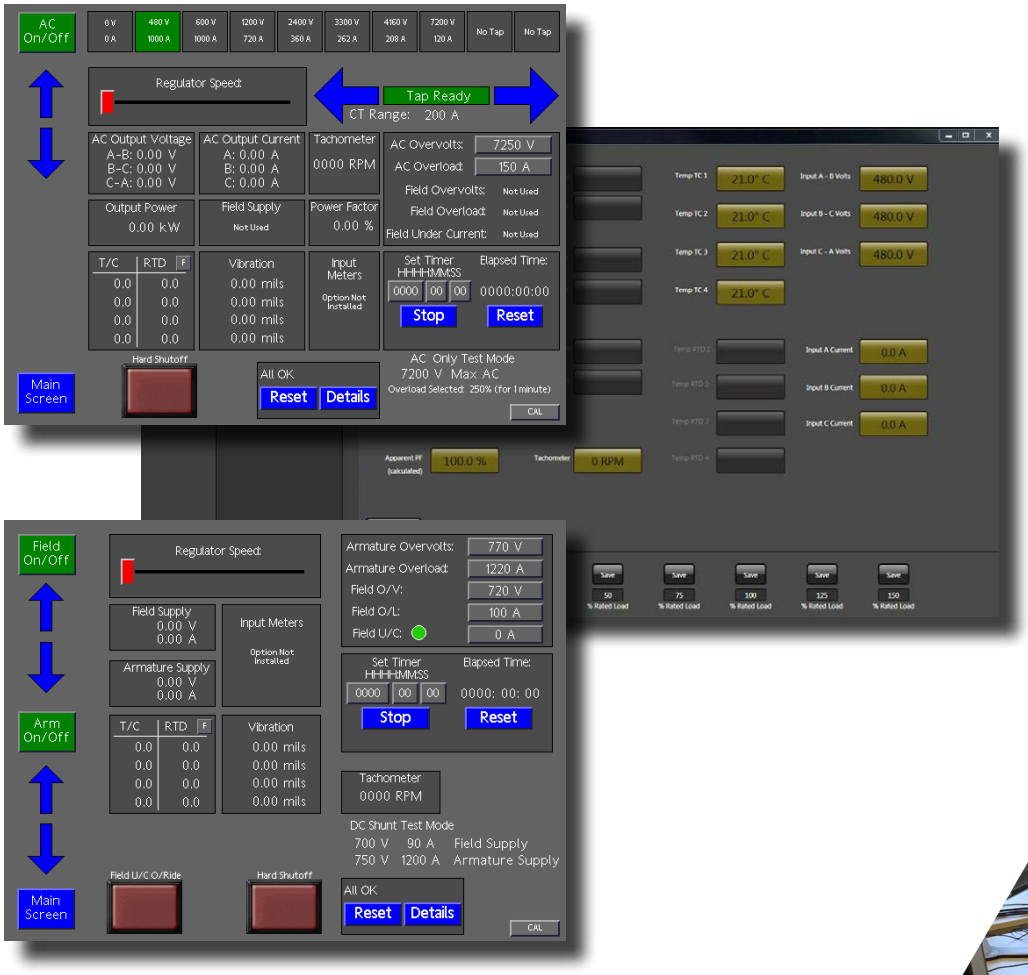
FEATURES

- **Measurement devises are included** with all models: (1) Digital Tachometer; (2) Digital Wattmeter; (3) Temperature Meter (Type - E); (4) Power Factor Meter
- **Emergency OFF switch** and **warning lamp**
- **External interlock provisions**
- **Motorized tap selector switch** to decrease start-up time
- **Primary overload protection**
- **Interlocked HV taps** for maximum safety
- **Lifting provisions** (crane and forklift)
- Export **all test data** to .CSV

BENEFITS

- Variable transformer offers the most **stable output** available
- **Continuously variable voltage** from near zero to full voltage
- **Complete metering** to verify conditions of motor under test
- **Decreased start-up cost** with minimal mains wiring required
- **Latest technology** with motorized tap switch to ensure reliability and accuracy
- Touchscreen PLC controls allows for **minimal user training**
- **Smaller footprint** with patented PVT design

NEW DATA ACQUISITION SOFTWARE



WHAT'S NEW?

Our newly-redesigned Motor Test Systems, based on years of collabration with our customers, are ready to ship with upgraded control and data acquisition software.

- Intuitive interface
- Touchscreen PLC controls
- Simple mode selection
- Ease of operation

PRODUCT OVERVIEW

HAEFELY HIPOTRONICS low and high power Motor Test Systems are designed to meet all of your testing requirements. The MTS Series, used to perform tests at no-load or full-load operation, have been supplied all over the world.

Electric motor testing can tell you a lot about the condition of a motor's electrical makeup and mechanical integrity. Different test parameters have been established for Manufacturers, Motor Repair Shops, and Off-Line In-Service Testing to ensure the proper performance and operating efficiency.

◆ Included ❖ Optional ⅄ Not available

System kVA Ratings (MTA & MTC)

(up to)	150	300	500	750	1000	1500	2000
240V	◆	⅄	⅄	⅄	⅄	⅄	⅄
480V	◆	◆	◆	◆	◆	⅄	⅄
600V 1200V 2400V	◆	◆	◆	◆	◆	◆	◆
3300V 4160V	⅄	◆	◆	◆	◆	◆	◆
7200V	⅄	❖	❖	❖	❖	◆	◆
11000V 13800V	⅄	⅄	❖	❖	❖	❖	❖

OUTPUT VOLTAGES
Near 0V...13,800V *(availability dependent on system)*

INPUT VOLTAGES

150kVA...1500kVA	380 / 400 / 415 V AC, 50 Hz, 3p 440 / 480 / 600 V AC, 60 Hz, 3p 3300 / 4160 / 6600 V AC, 50 /60 Hz, 3p
2000kVA	3300 / 4160 / 6600 V AC, 50 /60 Hz, 3p

	(up to)	MTA-150	MTA-300	MTA-500	MTA-750	MTA-1000	MTA-1500	MTA-2000
AC Testing	150 HP / 110 kW	•	•	•	•	•	•	•
	300 HP / 220 kW	○	•	•	•	•	•	•
	500 HP / 370 kW	○	○	•	•	•	•	•
	750 HP / 550 kW	○	○	○	•	•	•	•
	1000 HP / 740 kW		○	○	○	•	•	•
	1500 HP / 1100 kW		○	○	○	○	•	•
	2000 HP / 1490 kW			○	○	○	○	•
	2500 HP / 1865 kW			○	○	○	○	○
	3750 HP / 2795 kW				○	○	○	○
	5000 HP / 3730 kW					○	○	○
	7500 HP / 5595 kW						○	○
	10000 HP / 7460 kW							○

*MTC includes all MTA features plus those listed below.**

	(up to)	(up to)	MTC-150	MTC-300	MTC-500	MTC-750	MTC-1000	MTC-1500	MTC-2000
DC Testing ARMATURE SUPPLY	650V	200A	■	■	■	■	■	■	■
		425A		■	■	■	■	■	■
		625A			■	■	■	■	■
	750V	900A				■	■	■	■
		1200A						■	■
		1500A							■
FIELD SUPPLY	300V	10A	■	■	■	■	■	■	■
	700V	90A		■	■	■	■	■	■

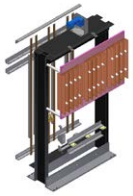
• AC Full-Load and No-Load Test Capabilities ■ DC Test Capability
○ AC No-Load Test Capability

Full-Load and No-Load calculations are approximate and could vary with your specific application.
For Motor Test Systems with AC output only, DC specs are eliminated.
The model prefix MTC applies to systems with both AC and DC testing capabilities.*
For Motor Test Systems with AC capabilities only, the model prefix is MTA.*
Larger and smaller units and other input voltages may be available upon request.
For complete specifications for a particular model, please contact Hipotronics at 845-230-9245.

PREMIUM HARDWARE

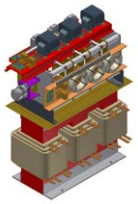
PESCHEL VARIABLE TRANSFORMER (PVT)

Over 25 years ago, Hipotronics designed and patented the Peschel Variable Transformer (PVT) specifically for high power applications. The PVT is still the best solution for economical, uncomplicated, high power variable voltage requirements. The PVT has been put to the test in a wide range of applications and has proven itself to be the best method to achieve a high power variable voltage output, while maintaining a clean sinusoidal wave shape.



MULTI-TAP TRANSFORMER & MOTORIZED TAP SWITCH

The main transformer and tap switch are used to output three-phase AC voltage. Operators can easily select their desired tap from visual graphics displayed on the touchscreen. When the DC armature mode is selected, the AC output tap switch defaults to zero (ground).



If a tap change is made while the supply is energized, the voltage automatically ramps down to zero; then the tap changes. The AC or DC armature cannot be energized until the associated tap ready indicators are illuminated.

INCREASED TEST CAPABILITY

REWRITTEN CONTROL & DATA ACQUISITION SOFTWARE

FAST TURNAROUND

EASY EXPORT OF DATA TO .CSV

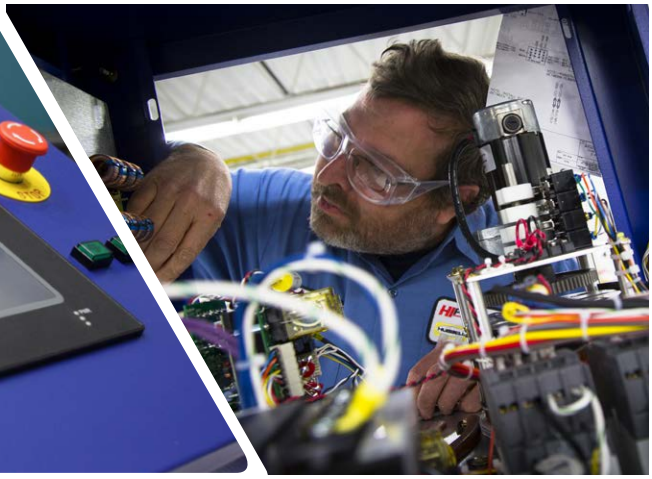
CLEAN AND MODERN LOOK

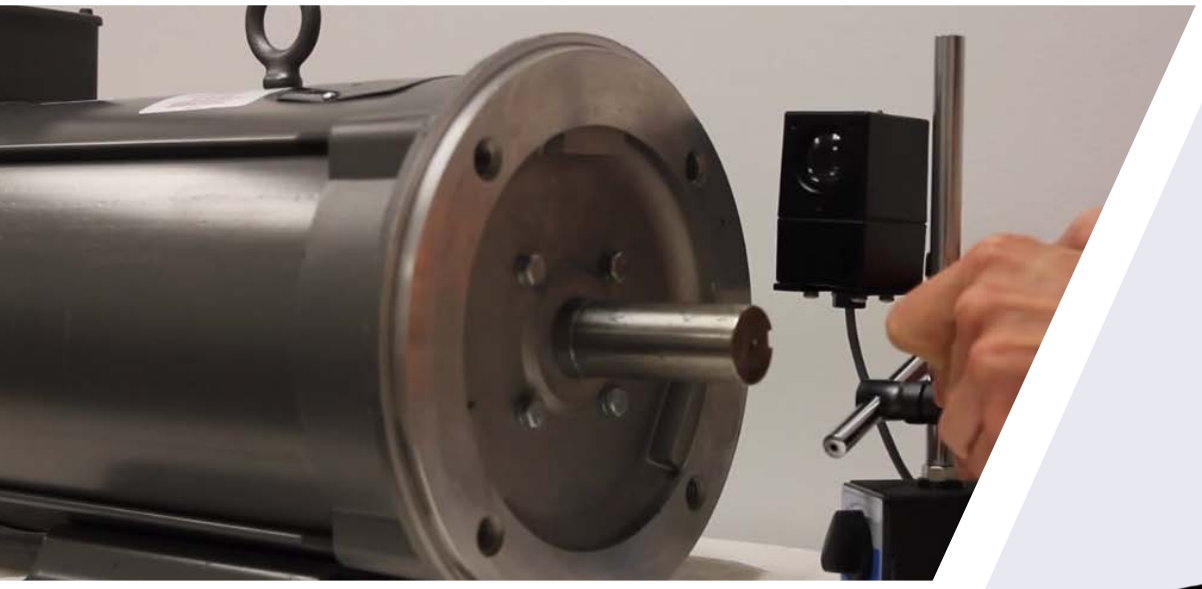
OPTIONAL EQUIPMENT

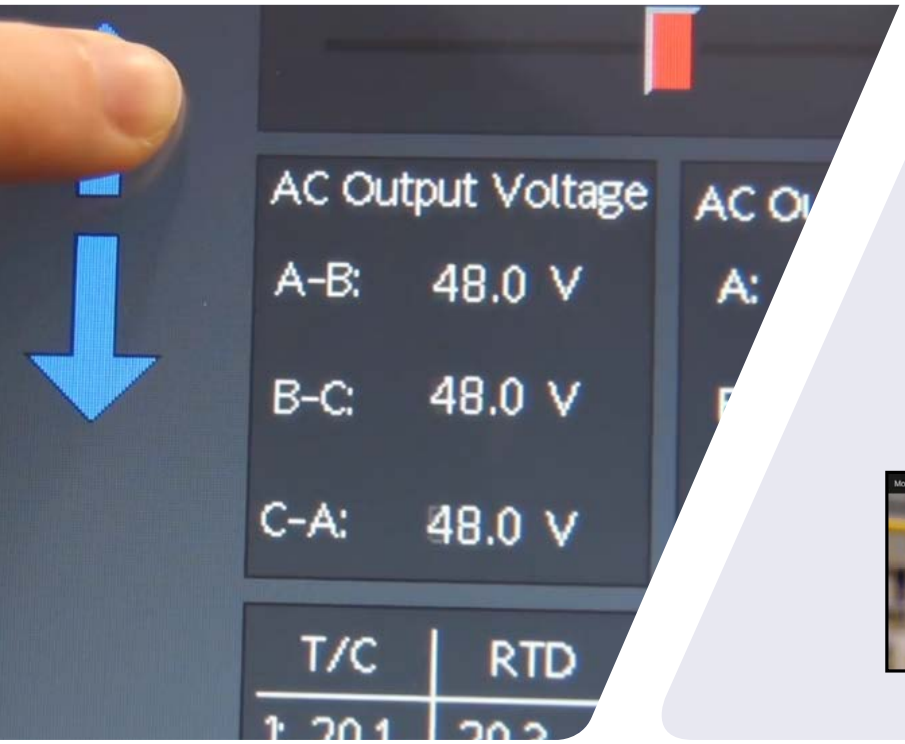
Below is a list of optional equipment available a la carte.

- RTD temperature measurement input
- Boom arm output
- Impedance supply
- Vibration analyzer
- Additional voltage taps
- Optional series field supply
- Input voltage and current meters

We are a proud member of The Electrical Apparatus Service Association (EASA). EASA provides members with a means of keeping up to date on materials, equipment, and state-of-the-art technology.







Watch our Motor Test System video for a product overview and live demonstration.

RELATED PRODUCTS

The **DDX9121b partial discharge measuring system** is the latest in the DDX family of PD detection equipment. It is modular and fits a wide range of PD detection applications.

The **700 Series AC dielectric test systems** are designed to perform high voltage AC tests on electrical apparatus in accordance with several national test standards.

The **MIDAS (Mobile Insulation Diagnosis & Analyzing System)** is a portable power factor tester for periodic maintenance and inspection of high voltage insulation losses of apparatus, especially in harsh environments.

The **800 Series of DC Hipot testers** is an economical solution to DC field testing of cables and other electrical apparatus. All models are self-contained in a rugged and durable enclosure.

The **5478 portable terohmmeter** is a multipurpose digital tester intended for analyzing, inspecting and maintaining any high voltage insulations.

The **2293 winding resistance meter** is a unique instrument capable of handling even the toughest resistance measurement applications.

VIEW MORE AT WWW.HIPOTRONICS.COM

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