Zebra Instruments Presents -

The Universal Zebra System

The Most Versatile Weapon in Your Arsenal Against ECM Motor Problems. . .



A Tool Designed to Troubleshoot Every ECM Motor in HVAC/R Systems

The Basic Tool: the UZ-/

- ▲ Three 3-position switches test up to 6 speeds
- ▲ LED's indicate power and signals being sent
- Rugged case protects your tools and leads

Free Online Video Tutorials Show You 'How-To' Troubleshooting Techniques

The Secret Weapon: Adapters

- ▲ Adapters quickly plug into motor and the UZ-I
- Magnetic Reference Cards show what each switch does & each LED means for that motor
- We are committed to providing you low-cost adapters for nearly every ECM motor that the HVAC/R Industry introduces.

See Reverse Side for More Info > > >



The Universal Zebra System

The Most Versatile Weapon in Your Arsenal Against ECM Motor Problems...

The *Universal Zebra System* consists of 4 categories of items, many of which are optional, so your System is customized to **you**, and to the way you work.

••• The **<u>Basic Tool</u>** is model UZ-1 (we affectionately call it the *UZI*.) It is able to test run a motor in one or more (up to six) speeds. It has seven LEDs and three 3-way switches. It arrives with *one* popular adapter, which fits the very common GE/Regal-Beloit series 2.0 and 2.3 motors.

••• <u>Adapters</u> couple the UZI to the motor. Six different adapters were available when the tool was released, with many more to come. In fact, we're committed to making low-cost adapters available for virtually every new ECM motor that is introduced into the HVAC/R Industry. The PWM Signal Generator Adapter is available for testing motors that utilize PWM signal inputs.

••• <u>Motor Power Cords with Plugs</u> are necessary when you want to test a motor out of its air handler/furnace environment. Most ECM motors have special power input plugs, so bench testing can be challenging without access to these plugs. A wide variety is available, with more to come.

••• <u>Accessories</u> round out the System: A 24" extension for the tool's main harness is available (it can also be used to replace the original harness if the fan wheel gets too close!) A rugged accessory case is available to protect your adapter and harness collection from getting damaged or lost. Other items will be added to this category as you ask for them.

You'll notice that a list of all the available *Adapters, Accessories, and Motor Power Test Cords & Plugs* isn't printed on this sheet. That's because the list would be obsolete shortly after printing. We add adapters, harnesses, and accessories to the System quite often. To see the most recent list, and to watch online video tutorials showing troubleshooting techniques, please visit the System's website at: *www.UniversalZebra.com* or Zebra's main website at: *www.ZebraInstruments.com*

A Comparison of the Tools Available for working with ECM Systems

To assist you in making a wise choice of tools to work on ECM systems, we offer this chart of the ECM motor and/or system tools with some comparisons of their features.

Tool	Test	Tool/Module	GE	GE	- Motor Compatibility -				Protective	Cost	Notes and
Model	Speeds	Protection	2.0-2.3	2.5	3.0	& X-13	Condenser	Motors	Case	(Relative)	Comments
GE TechMate XL	From 1 to 4	No Protection	V	х	х	Х	х	Х	Х	\$	First available tool. 4 speed selections. No longer made. No outer case.
GE TechMate PRO	1	Non- Replacable Fuse	\checkmark	Х	⊠ A	Х	х	х	х	\$	2nd Generation tool. Only one speed selection. Works on only a few motors, but popular.
Zebra VZ-7	From 3 to 5	Auto- Resetting Breaker	V	Х	х	⊠ A	⊠ A	?	\checkmark	\$\$\$	3rd Generation tool. Micropro- cessor controlled tests. Uses Inline System Analysis.
Zebra VZ-6	All 5	Auto- Resetting Breaker	Х	Х	Х	V	V	No - but Yes to X-Motors	$\mathbf{\nabla}$	\$\$	3rd Generation tool. <i>Inline System Analysis</i> . 5 speeds. For X-Motors & X-13's only.
Zebra UZ System	From 1 to 6	Auto- Resetting Breaker	V	⊠ A	⊠ A	⊠ A	⊠ A	⊠ A	V	\$	Adaptive Tool System. Up to 6 speeds. Adapters available for nearly all HVAC/R ECM Motors.

Legend: \square = Yes, \square A = with available adapter, X = No, ? = Possibly, not yet known. (Trademarks are the property of their respective owners.) Inline System Analysis means having the tool connected between the equipment's circuit boards and the motor, providing a *real-time* analysis.