## **The Capacitors** Turbo 200 Capacitors

The Turbo<sup>™</sup> 200 family of products was designed, developed and patented by AmRad (American Radionics)Engineering, one of the few remaining run capacitor manufacturers in the United States.

The Turbo<sup>™</sup> 200 Family includes the Turbo<sup>™</sup> 200, The Turbo<sup>™</sup> 200X and The Turbo<sup>™</sup> 200 mini.

The Turbo<sup>™</sup> 200 is a universal, permanent replacement Motor Run capacitor compatible with every air conditioner on the market today. It can replace up to 200 single or dual value run capacitors with a voltage rating of either 370 or 440 VAC.

By using jumper wires, included in every Turbo box, along with easy to follow instructions, capacitance values are easily achieved. No additional adjustments are necessary for 370 and 440 MFD.

The Turbo<sup>™</sup> 200 can produce a combination of capacitance values up to 67.5 microfarads. ie: Dual values 35 +5.0, 55 + 7.5/, 60.0 +7.5 or single value 35.0, 45.0 up to 65.0 mfd.

The Turbo<sup>™</sup> 200X was designed for large scroll type compressors. It accommodates mfd ratings up 97.5

The Turbo<sup>TM</sup> 200 mini was is designed for single capacitor ratings for condenser and blower motors up to 12.5 mfd. The range is 2.5 - 12.5 mfd.

All Turbo<sup>™</sup> 200's are fully compatible to operate with capacitor hard start kits. The patented Turbo<sup>™</sup> 200's meet the universal permanent split capacitor EIA (Electronic Industry Asso.) standard, EIA 456. The meeting of this standard is a requirement of every major air conditioning manufacturer.

Beware of major quality and safety differences between the Turbo<sup>™</sup> 200 family and less expensive, off shore imitations. Notably:

A history of field failures.

A history of causing fires due to a non-functioning protective device.

A UL recall – UL specs possibly NOT carried out.

Perhaps the most important difference between the Turbos and major competitive brand is that they (competition) stuff six separate capacitors into a metal can. If one fails, the device keeps operating. Here's what happens: If a 35mfd is in use (combining a 25 mfd and a 10 mfd) and the 25 mfd fails, the compressor motor is now operating with a 10 mfd capacitor rather than the required 35 mfd rating. RESULT – the motor will quickly overheat and fail thereby "taking out" the compressor along with it.

With the Turbo 200, in the very unlikely event of failure, the capacitor will open (via the pressure interrupter) and the top will bulge, as designed, thus shutting down the power to the motor. The system is now shut down and safe, ready to be serviced.

When tested under the EIA 456 (for motor run capacitors) some results have shown that the competitive brand will fail within 2 to 18 hours. The Turbo 200 easily meets the 500 hour requirement.

