

# Magnecor KV85 V5 and R-100 V3 Ignition Cables Specifications

## OVERALL LEAD ASSEMBLY

Outside Diameter of Cables.....	8.5mm (KV85) and 10mm (R-100).
Colour.....	Red.
Boot/Terminal Configuration.....	Various - to suit different domestic and foreign applications as well as customer special requirements.
Country of Manufacture.....	Cable: USA. Assemblies: USA, UK and Australia.

## CABLE

Construction Type.....	One piece, no cost saving layers used.
Insulator Jacket Material.....	Extreme heat resistant TC-1500-HS high strength aerospace silicone rubber formulated to dissipate heat away from section exposed to high temperatures.
Heat Resistance.....	<b>KV85:</b> 600°F (320°C) service temp. 1,000°F (540°C) short burst 3 minutes. <b>R-100:</b> 700°F (380°C) service temp. 1,200° F (650°C) short burst 3 minutes.
Dielectric Strength.....	<b>KV85:</b> 60 kV, <b>R-100:</b> 80kV at 260°C.
Flexibility and Tear Strength.....	Extremely strong and flexible, <b>KV85</b> can be fitted into OEM 7mm separators. <b>R-100</b> may need holes in separators enlarged to at least 8.5mm if large hole separators are not available.

## CONDUCTOR

Conductor Size.....	2.50 mm in diameter.
Conductor Type.....	Magnecor Metallic Inductance. RFI and EMI Suppressed.
Core.....	Ferrimagnetic base.
Windings.....	79 turns per cm (200 turns per inch).
Windings Material.....	Stainless steel.
Resistance.....	72 ohm per cm, 2.2K ohm per ft. ± 10%.
Capacity.....	<b>R-100:</b> 80 kV, 2kVA. <b>KV85</b> limited by jacket thickness to 60kV unless spaced.

## TERMINALS

Spark Plug.....	Stainless steel snap-lock 180° bendable and fixed 90° styles.
Distributor and Coil.....	Brass, stainless steel and beryllium snap-lock 180° and 90° styles.

## PROTECTIVE BOOTS

Spark Plug.....	Silicone 320° C (600° F) - selection of straight, 45° and 90° styles used where applicable - special connector assemblies for some applications.
Distributor and Coil.....	EPDM or Silicone - some sets will be fitted with OE style connectors.

## AVAILABILITY

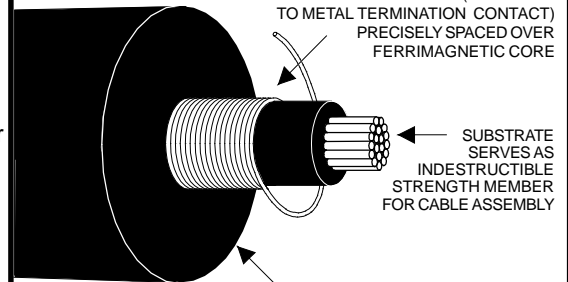
Available in sets to fit race and modified street engines in popular demand, sets made to customer specifications (at no extra cost), universal sets, individual leads for both race and street, sets for racing made to OEM engine lengths, sets for foreign vehicle race and street engines, sets for marine and motor cycle race and street engines — as well as severe service commercial engines and industrial applications requiring EMI suppressed high-temperature ignition leads.

**NO MINIMUM ORDER IS REQUIRED**

**MAGNECOR®**

## RACE WIRES METALLIC INDUCTANCE EMI SUPPRESSED CONDUCTOR

MAGNECOR'S EXCLUSIVE 2.5MM METALLIC INDUCTANCE EMI SUPPRESSED CONDUCTOR: STAINLESS STEEL WINDINGS FULLY EXPOSED (FOR METAL TO METAL TERMINATION CONTACT) PRECISELY SPACED OVER FERRIMAGNETIC CORE



NON-LAYERED HIGH STRENGTH INSULATING JACKETS MADE ENTIRELY OF AEROSPACE GRADE SILICONE RUBBER TO PREVENT SWELLING AND SPLITTING AT EXTREME TEMPERATURES

## RECOMMENDED USAGE:

Magnecor KV85 and R-100 Ignition Cables are primarily designed to eliminate both EMI and RFI suppression problems resulting from the use of solid and "mag" style conductor ignition wires on vehicles utilizing high-output ignition systems together with sensitive on board electronic devices, including fuel, ignition and engine management systems, as well as radio and TV equipment. When used with high-output ignitions, exceptional ignition performance can be expected from domestic and foreign built race and modified engines using fuel injection, turbo-charging, super-charging and/or exotic fuels.

Magnecor KV85 and R-100 Ignition Cables can also be used to advantage on engines fitted with exhaust emission controls, as well as marine engines, and severe load commercial vehicle engines - particularly those using alternative fuels such as propane and natural gas with a history of persistent ignition lead failure. These engines will benefit from the ability of Magnecor Ignition Cables to conduct a high spark current at above and below normal operating temperatures.

**Unless deliberately severed,  
Magnecor's Metallic  
Inductance Suppressed  
conductors will provide full  
conductance indefinitely**

# KV85 Version 5 (8.5mm) Competition Ignition Cables R-100 Version 3 (10mm) Racing Ignition Cables

## MAGNECOR RACE WIRES

Magnecor KV85 Version 5 (8.5mm) Competition and R-100 Version 3 (10mm) Ignition Cables are specifically designed and constructed to conduct the maximum output generated by conventional and racing ignition systems to the spark plugs, and to provide full suppression for both EMI (electro magnetic interference) and RFI (radio frequency interference).

Magnecor KV85 and R-100 Ignition Cables will enable output maximization from both conventional and specific race ignition systems on engines using turbo-charging, super-charging, and exotic fuels, particularly if electronic equipment, including computer controlled ignition, fuel and engine management systems, are also fitted to the vehicle. Improved clarity for radio and television transmission and reception can also be expected because of RFI reduction.

**EMI** suppression problems are caused by electrical energy picked up by sensors and wires connected to computerized equipment from ignition wires not designed or constructed (despite claims by manufacturers) to suppress EMI. As a result, computers and other electronic devices react to erroneous signals, often causing erratic engine running that may not immediately be associated with EMI emitted from ignition wires.

All serious EMI problems associated with cheap (to manufacture) generic "mag, spiral, heli, monel, pro, chromel, super, energy, twin core" etc. spiral conductor ignition wires (usually mass-marketed with well publicized performance component providers' name printed on them), and expensive so-called "capacitor" wires with partial grounded metal braiding over the jacket are eliminated by Magnecor KV85 and R-100 Ignition Cables. Most of these ignition wires are promoted as having little or no "resistance" if measured with an ohmmeter. However, in reality, none provide adequate, if any, EMI suppression.

Independent tests have shown that contrary to the exaggerated claims made by most ignition wires promoters, no spiral conductor ignition wires with low measurable electrical

resistance or grounded "capacitor" wires will either boost the ignition coil's output or adequately suppress EMI on race or street engines. An ignition wire's ability to conduct the full spark energy required to fire the spark plug gap and provide adequate EMI suppression is solely determined by the design and construction of conductors that are beyond the manufacturing capability of most ignition wire manufacturers. In reality, "low" electrical resistance indicates a design to cut manufacturing costs.

Magnecor KV85 and R-100 Ignition Cables feature Magnecor's exclusive 2.5mm Metallic Inductance Suppressed Conductor that consists of heavy duty stainless steel windings precisely spaced and wound at 200 turns per inch. The conductor is wound to provide an effective magnetic coupling for efficient EMI suppression and a capacitive reserve to help overcome the deficiency of high engine speed ignition coil energy regeneration. The use of a ferrimagnetic base core also provides efficient RFI suppression. The stainless steel conductor windings are exposed without a conductive bonding layer after insulating jacket is stripped away to provide a clean metal-to-metal terminal contact to prevent burnout when using high amperage racing ignition systems.

Magnecor KV85 and R-100 conductor core substrates also serve as strength members to provide terminated wire assemblies with excellent pull strength. This enables the use of a specially formulated aerospace grade one piece pure silicone rubber insulating jacket with exceptional thermal conductivity and high temperature resistance capabilities. The 10mm diameter R-100 Racing cable is recommended for use with ultra high output ignitions and magnetos.

Magnecor KV85's insulating jacket can withstand up to 1,000°F (540°C) and R-100 up to 1,200°F (650°C). Since both jackets are made entirely of a one compound silicone rubber - heat will dissipate away from any area subjected to the extreme heat that would normally destroy other brand multi-layer "silicone" ignition wires, as well as wires encased in tight fitting fiberglass mesh sleeves (with or without a "silicone" coating) that usually absorb

and localize heat from the heat source to cook and destroy any multi-layer ignition wire inside the fiberglass sleeves.

Magnecor KV85 and R-100 Ignition Cable assemblies are fitted with boots and terminals designed to work in high temperatures. Sets are available for most popular domestic and imported performance engine configurations, as well as individual leads in various styles and lengths tailored sets to meet customer specifications. Magnecor does not use ridiculously large spark plug boots that cannot be positioned away from headers.

Unlike its competitors, Magnecor does not manufacture its products to suit prices and terms dictated by mass-merchandisers. The designs, construction and materials used by Magnecor are what works best for the applications in which all Magnecor products are used, regardless of the cost, difficulty of manufacturing, and the amount of research and continuous upgrading necessary to stay with developments in the automobile and marine racing industries.

Magnecor KV85 and R-100 Ignition Cables can also benefit street engines fitted with exhaust emission controls, as well as marine and severe service commercial engines. Ignition noise suppression for radio, sensitive stereo and equipment is also provided.

**Since initial versions were added to Magnecor's extensive domestic and import product line of ignition leads in 1987, all versions of Magnecor KV85 and R-100 Ignition Cables have been used extensively throughout the world on road, track and marine racing engines, as well as on commercial engines. Both cables are used extensively for many industrial applications which require high temperature ignition leads able to provide EMI suppression for switching and control equipment.**