



## Adapting with rigging harnesses

Rigging harnesses are a composition of electric wires, that are equipped with isolations and corresponding protection appliances as well as contacting devices.

Rigging harnesses serve to connect a unit under test electrically replacing the original cable harness. As opposed to the original harness the rigging harnesses must be designed for thousands up to several hundred thousand mating cycles.

According to environmental conditions and number of the expected mating cycles, the plugs of a rigging harness will be designed application-specific.

Characteristically a combination of different hand adapters with corresponding wiring and a transfer plug, as well as corresponding isolations and strain relieves form a rigging harness.

The rigging harness is connected to the test unit using its transfer plug and a docking station at the opposite end.

## Application example:

Copy of an engine cable harness for combustion engines for a function test in hot and cold test benches.

The test takes place in the cold test for with approximately 100 percent of all engines, the hot test is performed with a limited manufacturing sample size.

The hot test generates special requirements for rigging cable harnesses. Temperature, fuel exposure and the broad vibration spectrum covering a speed up to 6000 1/min, sometimes use over several hours, represent the toughest standard for this test tool.

Rigging harnesses consist of hand adaptations, that contact the individual sensors and actuators of a combustion engine, as well as of a central transfer interface for the signal transfer to the test. Especially rough environmental conditions and extremely high application cycles put high requirements for construction, material and design.

## Requirements for rigging harnesses:

Individual design of the test surrounding of an EFT (Engine Function test) cold test bench or the rough conditions in the hot test are crucial criterions at the development.

The accessibility to sensors, cable junctions and cable routing are to take into account during the projecting. Besides the industrial suitability of an adaptation, also the handling put a crucial role here. Often "filigree" adaptations have to be handled with protection gloves.

Not defined mounting situations of the unit under test (360°) under partially strongly cramped location circumstances necessitate exceptional solutions.

Maintenance friendly design of the rigging harness, so that regular maintenance works can be realized by company-owned personnel.

Ensuring a service life of more than 1,000 contact cycles, or more than 100,000 contact cycles.

## Ensuring of your product quality by system availability

The high reliability of the adaptronic test and adapter systems, our reaction-fast service and more than 20 years of experience make a convincing contribution to the quality securing of your products.