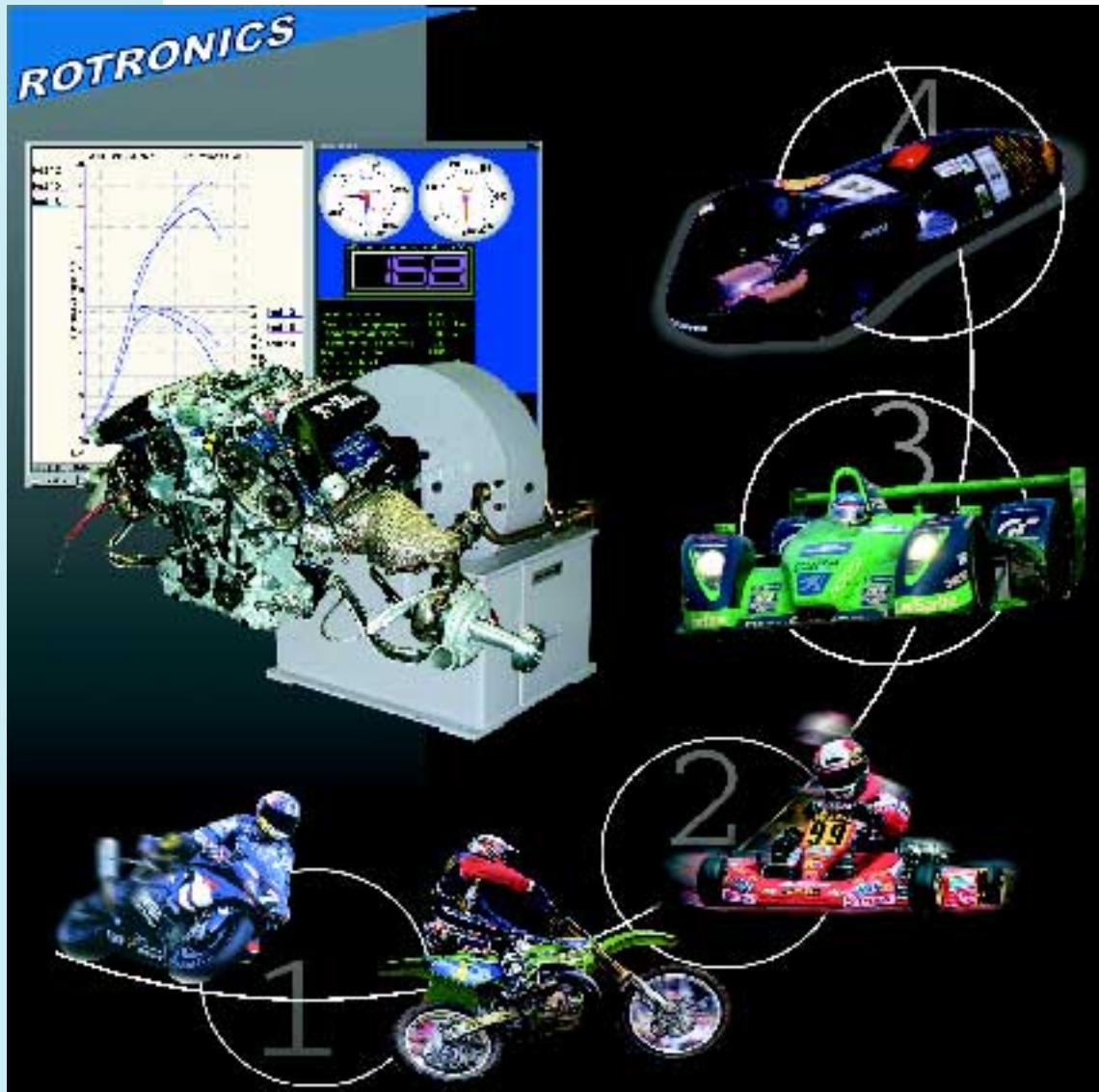


# ROTRONICS

## Engine and Chassis Dynamometers



A complete range of products for the automotive and motor sport industry, and for technical training.

## **THE COMPANY...**

ROTRONICS is a French company specialised in the design and manufacture of test facilities for vehicles and internal combustion engines. Established in 1990, the company designs, produces and sells electronic and mechanical equipment and software for the automotive industry.



## **...ITS ACTIVITIES**

The company has a wide range of activities: complete engine test cells, renovation of old test cells, development of existing test cells, engine dynamometers, inertial and brake load chassis dynamometers, teaching dynamometers and many special projects relating to data acquisition for internal combustion engines.

ROTRONICS operates in the following areas:

car and motorcycle racing, professional automotive and motorcycling industry, professional teaching and training establishments.

With its knowledge and experience, ROTRONICS supplies high technology solutions made to client specification, as well as a range of competitive high-performance standard products.

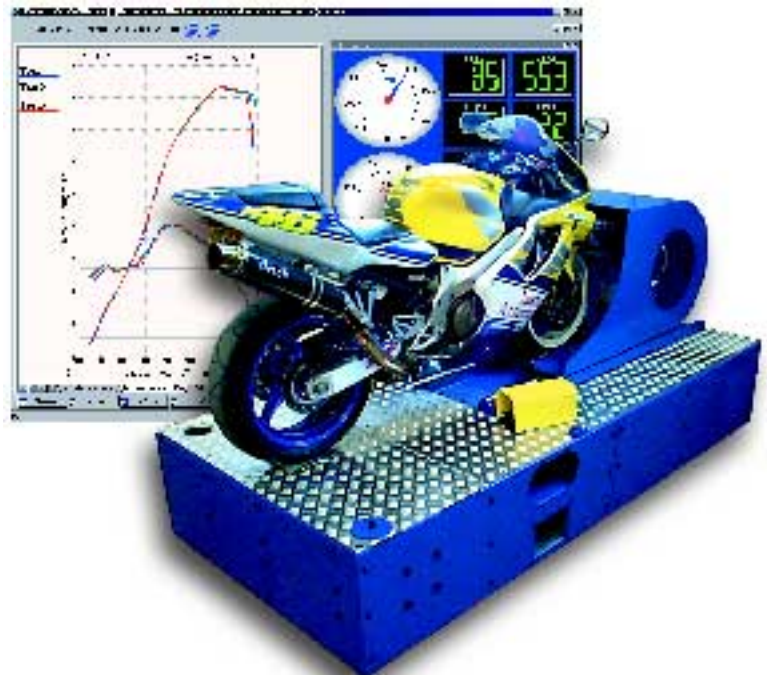
## **STANDARD PRODUCTS**

These include products with no requiring of special design or development work. They are delivered complete, tested and ready to use. Whatever the product, commissioning and training are available.

### **MOTOSCAN II**

#### ***Motorcycle chassis dynamometer***

Developed for motorcycle specialists, Motoscan II is also suitable for teaching use at a polytechnic or technical training centre. Based on simple concepts providing performance and flexibility, Motoscan II can undertake both inertial or controlled load tests. Available either for building into the floor structure or as a free standing installation, it accepts all types of motorcycles, mopeds and scooters.



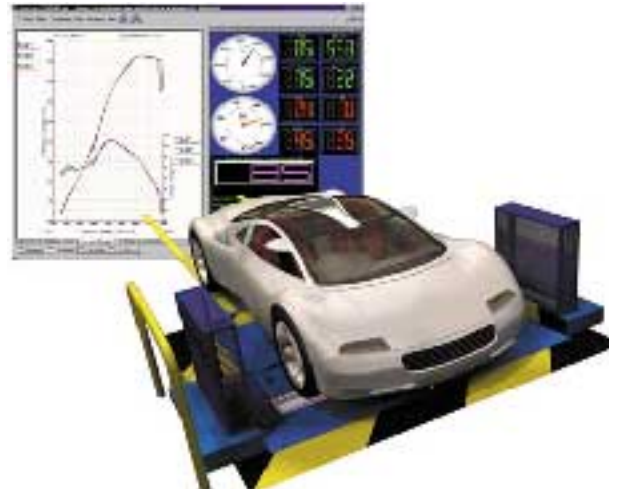
# AUTOSCAN

## *Automobile chassis dynamometer*

Designed for motorsport and technical training, AUTOSCAN allows rapid visualization of performance changes resulting from work undertaken on the vehicle.

Available with an inertial or controlled load (up to 500 kW), Autoscan can also be equipped with six mechanically linked rollers. This version is compatible with all four wheel drive technologies (permanent, manual or automatic) and with traction control systems.

As with all our standard products, Autoscan is modular and hence remains totally adaptable to your changing needs.



# BEMP 201

## *Engine dynamometer for teaching*

Specifically created to respond to educational needs, the teaching version of the engine dynamometer is destined to the automobile, motorcycle, engine, energy or industrial maintenance sectors. Depending on the chosen configuration, it is equally suitable for trainee technicians as well as for university / postgraduate students.

BEMP 201 is entirely autonomous, requiring no special installation or civil engineering work.

This product permits the measurement of those characteristics necessary for a detailed understanding of the function of an internal combustion engine.

Mounted on a wheeled chassis, the engines (petrol injection with programmable ignition, diesel with mechanical injector ...) are easily interchangeable within a few minutes, thanks to a quick fastening system.

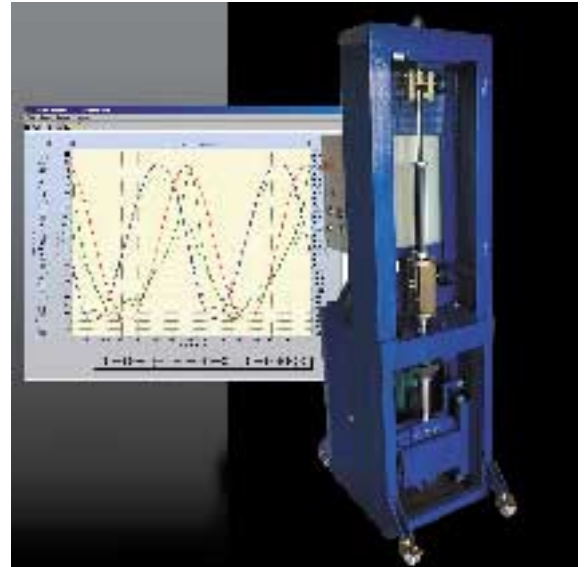


# MECADYN

## ***Teaching test bed for vehicle components***

Developed for automotive departments, Mecadyn is a spring and shock absorber test bed with a flexibility that also supports more general practical or laboratory work.

In effect, in addition to the characteristic graph of a suspension element, Mécadyn also allows the analysis of the fundamental dynamic principles whether in a translation or rotation mode. The test bed also allows the study of translations and rotations of a connecting rod - crankshaft or sliding mechanism.



# DYNASCAN

## ***Data acquisition and control system for inertial dynamometer***

Specialy developed for inertial dynamometers, Dynascan is an economic solution offered to users of existing test beds as well as those who wish to design their own; a vehicle or engine dynamometer version is available. Dynascan comprises a modern and high performance data acquisition and operating software package. The equipment is designed to be retro-fitted to classical drum or inertial roller mechanisms.



# MPE Kit

## ***On-board power measurement kit***

Conceived for easy and rapid vehicle performance measurement under actual driving conditions, the on-board measurement kit is a real inertial dynamometer. With no vehicle modification, the data acquisition system, linked to a portative computer, measures the acceleration acting upon the moving vehicle and plots the power and torque curves for the engine.

The MPE kit allows cost effective evaluation of an engine's performance, validation of technical changes or of engine configuration for particular road conditions.



# DYNAKART

## ***Karting engine dynamometer***

Specifically designed for karting professionals, this loading engine test bed can also accept all types of engines linked to this activity : 2 or 4 strokes, competition or leisure. The proposed tests procedures permit to test engines, almost in real conditions, like acceleration test under controlled load, following a road law. With a very easy use, Dynakart permits a very precise measurement.



# AUTOSCAN ABS

## ***Chassis dynamometer with brake test and teaching options***

This evolution of Autoscan is adapted to teaching needs and aimed at academic organisations providing instruction from technician to postgraduate student level. The mechanical component of Autoscan ABS allows positioning of a vehicle for particular traction configurations or for simulation of weight transfers. In addition to the usual chassis dynamometer functions, the available tests and measurements target the understanding of physical phenomena associated with traditional or assisted braking and with traction control (weight, speed, transmission ratios, acceleration, braking force, pressure, ABS valve operation...).

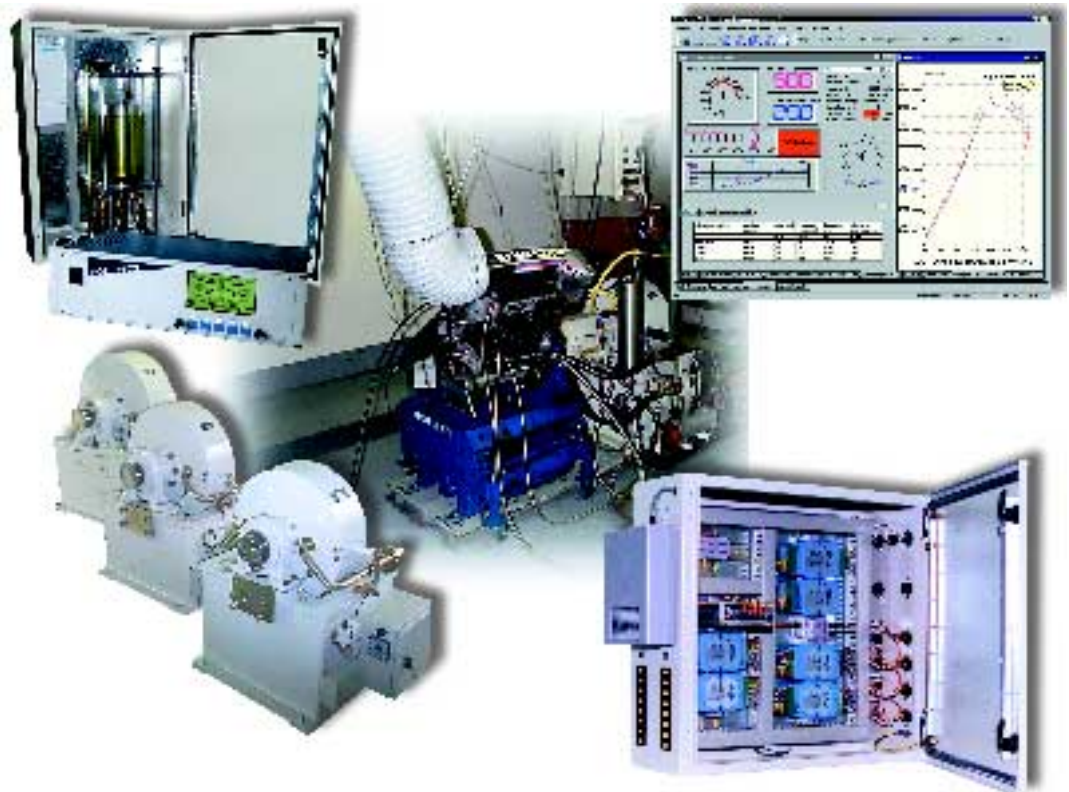
Specific software enables on-line teaching tutorials and data visualization.



# KRONOS PRODUCT RANGE

These are modular products for industrial use. The majority of products are designed and manufactured by ROTRONICS. They integrate with existing rolling test beds and engine cells and address the following requirements :

- Engine load : Industrial eddy current loading brakes by Foucault *Borghi & Saveri*. Wide range available : from a few kW to approximately 1000 kW.
- Control of loading brake (electric or hydraulic)
- Control of engine fuel feed
- Acquisition of digital data
- Measurement of fuel consumption
- Low frequency measurements : temperatures, pressures, outputs.
- Measurement of dynamic pressures (cylinder, inlet, exhaust)
- Dynamometer management and measurements by the Kronos V4 software modules : visualization, monitoring, test management, operation.



# PROJECTS

ROTRONICS applies its knowledge and experience in developing specific solutions to meet a particular specification, integrating its own products with externally sourced equipment in order to satisfy the clients needs.

A project might concern any type of dynamometer or test facility, for vehicle or engine, in accordance with the client's specification. It might include only the measurement equipment, or all equipment and services :

- Test facility soundproofing
- Cooling systems for engine and brake (open and closed circuit cooling, internal exchangers, cooling towers...)
- Conditioning of fluid temperatures : air supply, fuel, water, oil
- Extraction of exhaust gas
- Ventilation of premises
- Manufacture of mechanical equipment (dynamometer platform, mountings, transmission,...)
- Provision of sensors and data acquisition equipment
- On-site installation
- Final certification
- Commissioning and user training
- Maintenance



*Pictures credits : Rotronics, Pescarolo Sport, Clément Marin, Association Microjoule, Alpha Karting, MG Compétition, RPM, Courage Compétition, SME.*

## ROTRONICS

39, impasse de l'étang - Z.I. des Dragiez  
F-74800 LA ROCHE SUR FORON - FRANCE

ROTRONICS

<http://www.rotronics.com>  
email:info@rotronics.com  
Tel: + 33 (0) 450 030 859  
Fax: + 33 (0) 450 030 597