

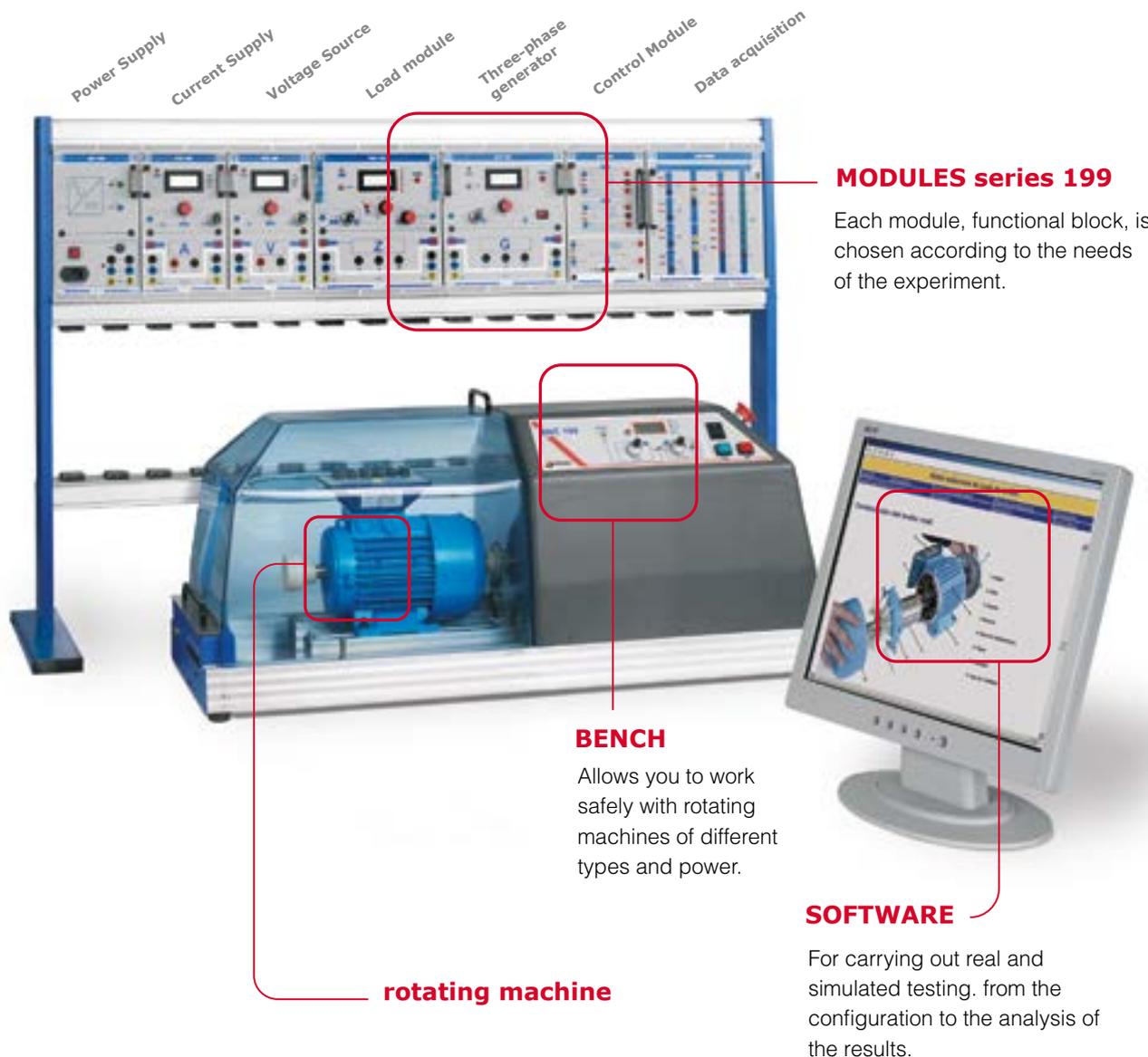
BEM 199

Modular test bench

Ref: 9EQBNCMD6C

The BEM-199 provides the most modern and cost effective approach to teaching the theory and practice of Electrical Machines. Operating from a single phase supply, producing its own dc and 3-phase, there is now no need to provide a dedicated laboratory for testing Electrical Machines; the experiments can be performed in any classroom. The BEM-199 can be used as a traditional stand-alone system, with its comprehensive range of modules, but its full potential is only realised when used with the powerful DIANA software package in a networked environment. No longer is it essential for each group of students to

have an individual test bench and range of machines. Not only can the BEM-199 be used for demonstration but each student on the network can have access and control of the hardware to perform their own tests supervised by the instructor. Familiarisation with the equipment and post experiment analysis of data and report writing can be performed outside the laboratory. In addition DIANA includes comprehensive simulations for each machine. Safety, to protect both the equipment and the student, is paramount and to protect the environment power is returned to the grid when the system is acting as a load.



MODULES series 199

Each module, functional block, is chosen according to the needs of the experiment.

BENCH

Allows you to work safely with rotating machines of different types and power.

rotating machine

SOFTWARE

For carrying out real and simulated testing. from the configuration to the analysis of the results.

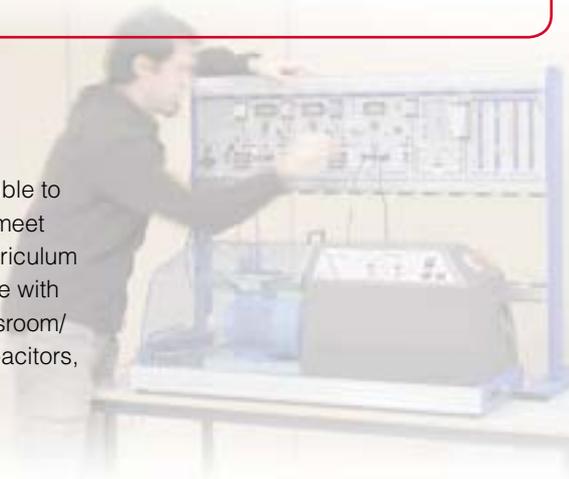


Adapted to classroom needs

The BEM system enables students to learn concepts and procedures of the operation of static and rotating electrical machines.

Scalability

The modular system makes it possible to acquire the components that best meet the needs of its centre, for both curriculum and budget. The BEM is compatible with conventional elements in your classroom/workshop (resistors, inductors, capacitors, rectifier bridges...)



Time and motion economy



One machine per class is sufficient, reducing acquisition and maintenance costs.

The "199" module series, designed for this system has standard instrumentation built in.

The most complex assembly takes only a few minutes and with few cables.



ENVIRONMENTALLY FRIENDLY PRODUCT

The equipment returns the energy to the grid that is traditional dissipated into heat. In addition to reducing consumption, it implies the reduction of the size of the modules and bench, and the elimination of potentially dangerous hot spots.

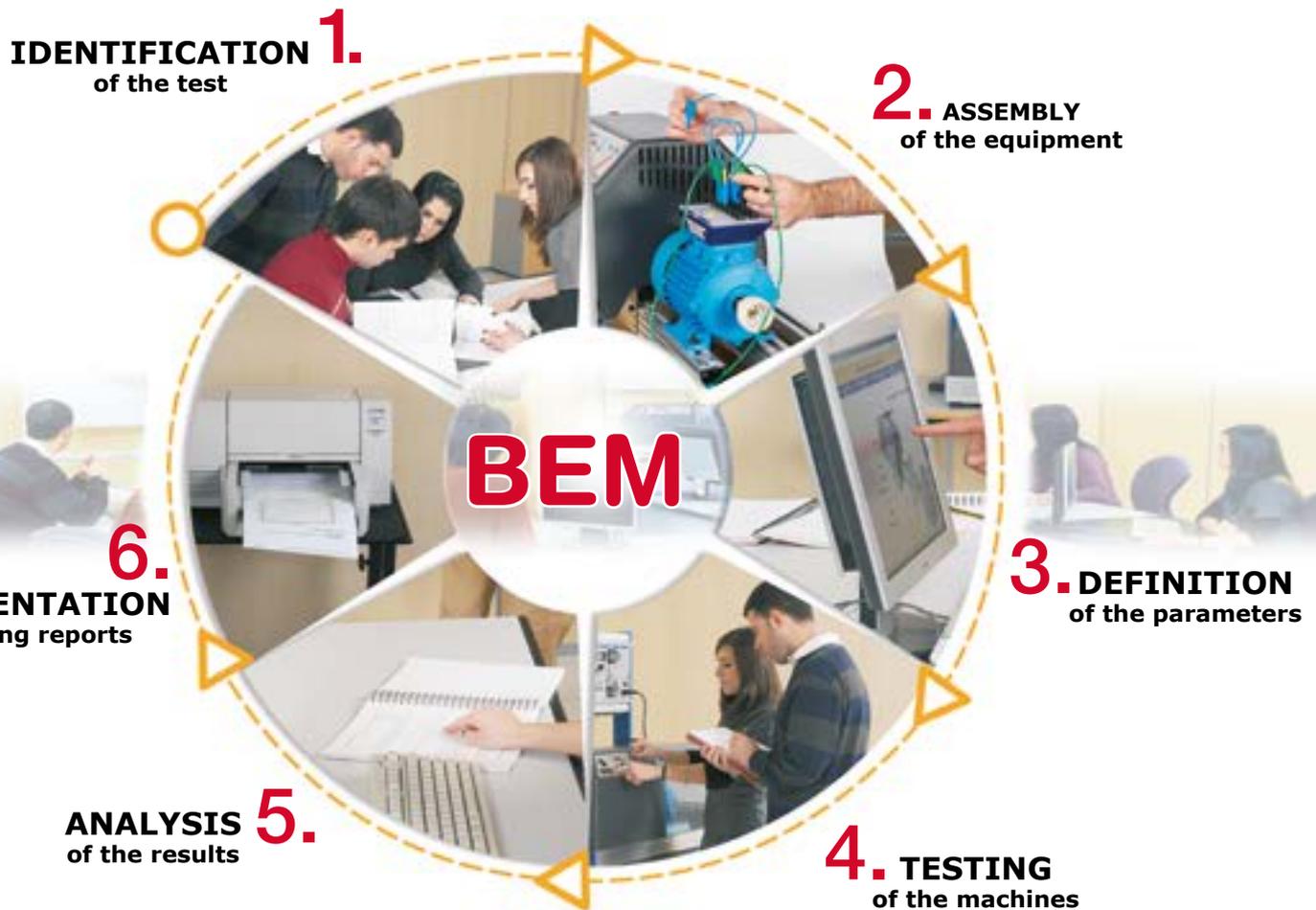


SAFETY

This equipment goes beyond the current regulations relating to safety, implementing a series of added protection to prevent accidents in the field of education.

Work process

The BEM allows the student to put into practise the basic concepts learnt in the theory related to the operation of electrical machines. The putting into practise is by testing, whether real or simulated. Each test is performed following these 6 steps:





Classroom work



1

MANUAL

Testing with the modules and the bench. Fieldwork. Manual demonstrations.



2

MIXED

Combines the use computer to prepare exercises and sending the manual application, to the machine bench.



3

SIMULATION

Enables the entire work process to be carried out through the software. The library has the most significant test activities to achieve global learning.

Configuration

Students in the class are kept active thus avoiding, as far as possible, waiting times. Classroom connectivity completes the work:



simple

non-networked, students work individually on their computers and run the test manually or from the teacher's computer.



in network

Having a local area network enables tests to be carried out from any computer and enables the DIANA monitoring options.



internet

If Internet is added, the users who are not physically in the classroom, may access the test bench thus facilitating distance learning.