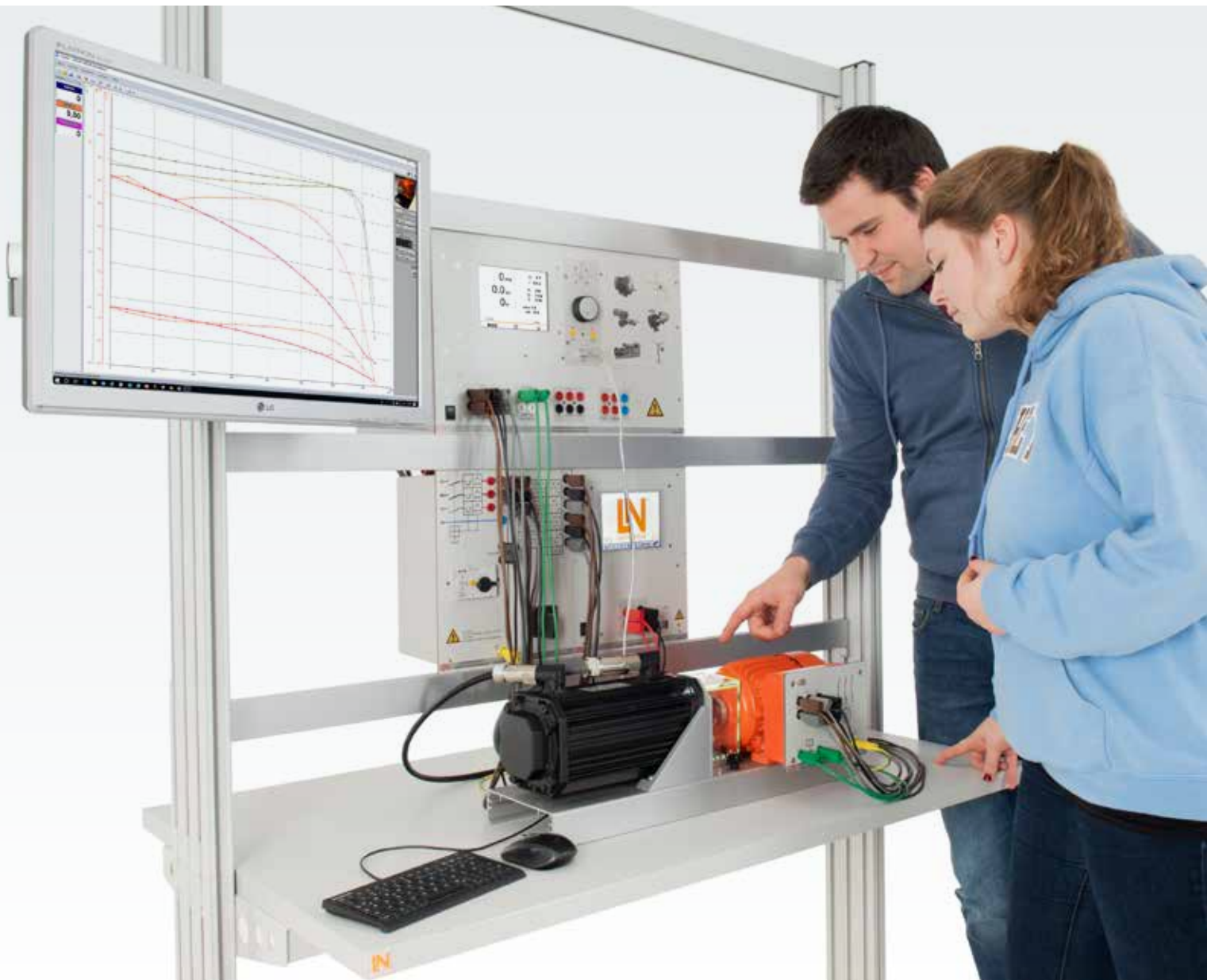# MACHINE TEST SYSTEM

Hands-on investigation of industrial drives

THE 3RD GENERATION SERVO MACHINE TESTING SYSTEM

The servo machine testing system permits hands-on investigations of standard industrial drives. In addition to pure drives and brakes, you can also use this system to realistically emulate working machine models. Thus, you can investigate in the lab how machines, generators and drives operate under realistic conditions. In the process, the system records all the important measurement data and displays it in a clear and precise way.

Benefits

- Digital control unit and servo drive in combination
- Special educational software: ActiveServo
- 13 different operating modes / driven machine models
- Systems adapted for the 300 W and 1 kW power classes
- Over 70 newly revised, interactive courses for a variety of motors and drives

Art. no.
CO3636-6X, 300 W power class
CO3636-6Y, 1 kW power class

Safe

The fully integrated safety concept includes all shaft covers and in the event of faults shuts down the power supply to the device under test.

Digitised data

Relevant machine data is digitally available in the form of an electronic "EDD" rating plate. The data is used, for example, for the configuration of the ActiveServo software. This simplifies work procedures and protects against operating the system improperly.

User-friendly

A 5.7" large color touch display makes operation intuitive and easy. An electrically isolated USB port ensures protection against interference. Thanks to its innovative cooling and modified servo control, the machine testing system runs quietly.

ActiveServo 2.0 – the flexible software solution

The new version of the software permits simple operation via the PC and is also compatible with earlier versions of the system.

100 percent compatible

Planning safety for existing training systems – The third generation of the servo machine test system remains compatible with the entire Lucas-Nülle machine program.

THE SYSTEM

Control unit
- Drives and brakes operate in four quadrants
- Dynamic and steady-state operation
- Electrically isolated USB port for more protection against interference
- Able to determine speed and torque
- Integrated measurement amplifier for measuring current and voltage
- 5.7" touch display for easy operation
- Low-noise operation thanks to innovative cooling

Drive unit
- Self-cooling servo-motor
- Integrated speed and rotor position detection via resolver
- Temperature monitoring thanks to built-in temperature sensor
- Drift and calibration-free system
- Speed-connect plug-in system for quicker set-up times
- High power reserve for true-to-life emulation of loads

Comprehensive safety concept
- Detection mechanism for all shaft guards
- Upgraded protection against contact thanks to flush-fitting covers
- Built-in illumination signals that safety function is intact
- Supply voltage of connected machinery is disconnected when the shaft guard is removed
- Temperature monitoring of device under test

Electronic rating plate EDD
- Motors are equipped with an electronic rating plate (Electronic Drive Data)
- Relevant machine data is automatically uploaded
- Presetting of scaling in the ActiveServo software

SIMPLE OPERATION AND MEASUREMENT RECORDING ON PC

Various programs specialized for specific needs permit the servo machine test system to be operated via the PC.

ActiveServo 2.0

- Permits the recording of motor characteristics
- Determines the operating points for a variety of driven machines
- Plots dynamic processes like starting or braking a motor drive

PosiDrive

- Set positioning drive parameters
- Definition of setpoint positions with freely selectable values for ramp times, maximum speed and maximum torque
- Graphic plotting of position, torque, speed and drag errors

Integration into LN-SCADA for Power Lab

- Control operation take over by the SCADA software
- Designing, setting parameters and operating generator controls
- Emulation of wind power plants
- Complex performance characteristics can be programmed with the software-based PLC
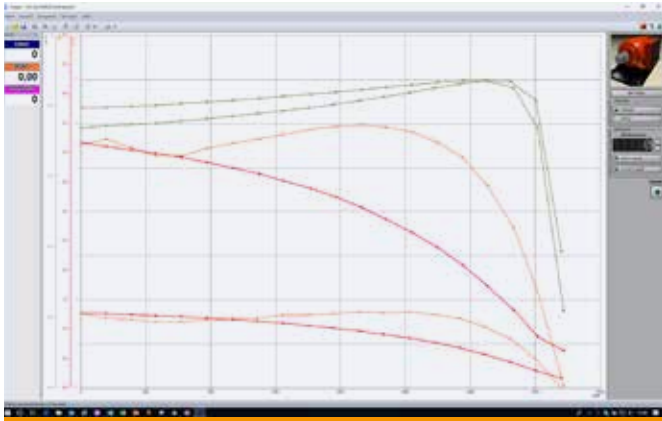
Recording motor characteristics
- Measurement over all four quadrants
- Recording measurement values in variable speed and torque operating mode
- Measurement, calculation and display of both measured and calculated mechanical and electrical variables
- Ramp functions can be defined as desired for carrying out PC-controlled load experiments
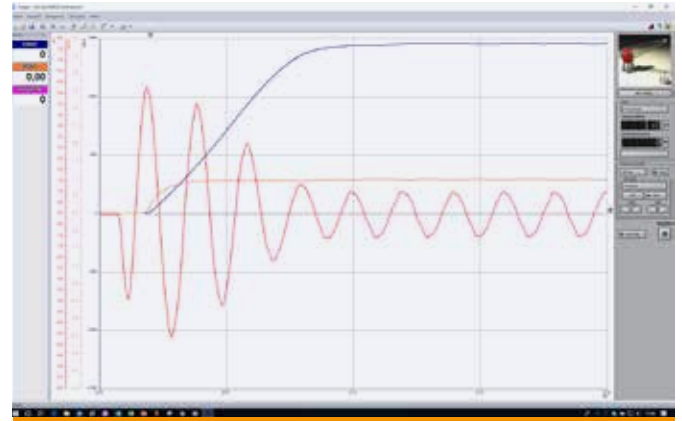
Recording dynamic processes
- Determining start-up currents for various loads
- Investigating the dynamic response of variable-speed drives
- Realistic emulation of driven machines also during dynamic operating processes
- Plotting of electrical variables as instantaneous value or as rms value
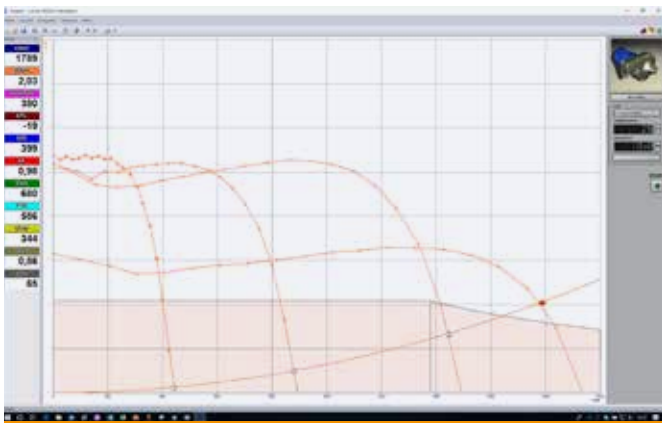
Determining operating points
- Superpositioning of curves from driving and driven machines
- Realistic, detailed emulation of pumps, ventilators, lifting equipment, calendars, flywheels, piston compressors, winding drives as well as a freely definable driven machine
- Determining operating points
- Determining operating and overload range
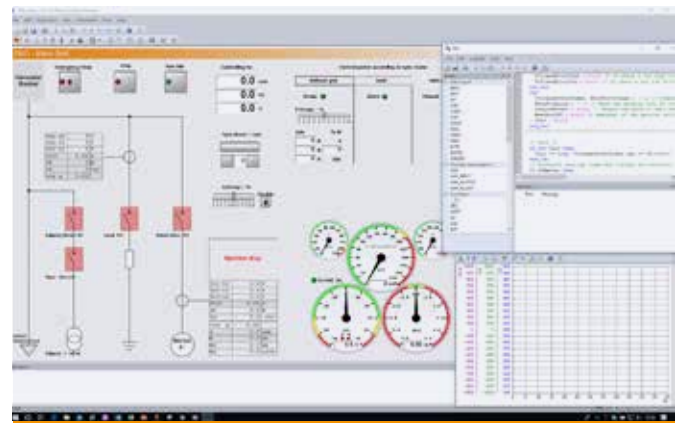
Integration into LN-SCADA for Power Lab
- Easy integration into the SCADA software
- Control and display of measurement values in real time
- Plotting of measurement values over time
- Control using integrated software-based PLC
- Addressable as OPC client or as SCADA remote client

LUCAS-NÜLLE GMBH

Siemensstr. 2
50170 Kerpen, Germany

Tel.: +49 2273 567-0
Fax: +49 2273 567-69

www.lucas-nuelle.com
export@lucas-nuelle.com