Omega Temp

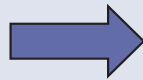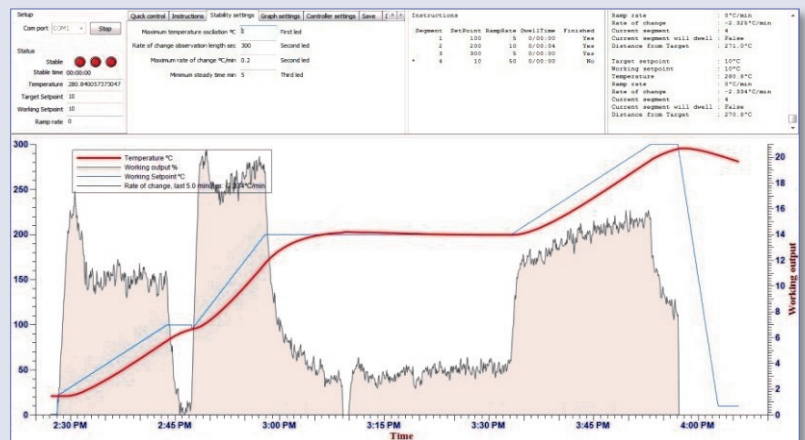## Software for operating furnaces

Omega Temp:

- ❑ Control, log and program furnace temperature profiles
- ❑ Create temperature profile with unlimited number of individual steps; setpoint, ramp rate and dwell time for each segment
- ❑ Define steady temperature
- ❑ Broadcast steady temperature
- ❑ Option: adjust sample temperature using secondary thermocouple feedback & fine tune

- ❑ Start doing next process automatically when setpoint temperature is reached. For example, run electrochemical measurements using our Omega family software
- ❑ Control and record temperature profiles for sintering and annealing processes
- ❑ Detect furnace breakdown
- ❑ Control a single furnace or furnace network
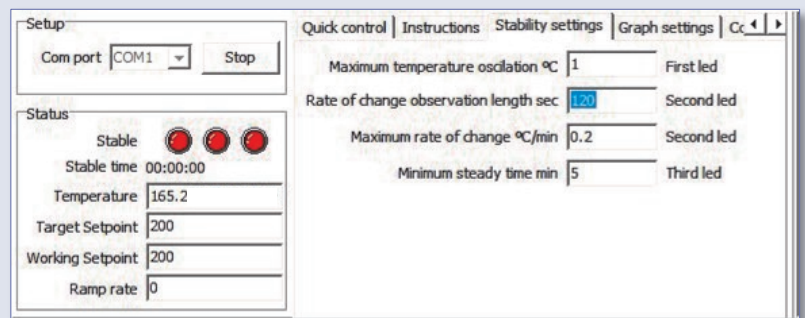- ❑ Developed for furnaces with Eurotherm controller series 2200, 2400 or 3200

From this…   … to this solution!

The brain of the furnace is the PID controller, a small box with led display, few buttons and a maze of menus and settings. The PID controller can be a challenge to use and it may lack crucial features. Omega Temp is a software that runs on a Windows based PC, connects to your furnace and to the PID controller in the furnace. Omega temp adds those missing elements and makes it easy to operate your furnace with few clicks of a mouse.

NORECS products

Measurement Systems

ProboStat™	Versatile sample holder system for measurements of electrical properties, transport parameters, kinetics of materials, solid/gas interfaces and electrodes at high temperatures under controlled atmospheres.
SeebSys	System for automated measurements of Seebeck coefficient and electrical resistance at high temperatures and under controlled atmospheres. Measurement software included.
CoulTCell	Coulometric titration setup for measurements of oxygen nonstoichiometry of materials at high temperatures in different partial pressure of oxygen. Measurement software included.
Tubular membranes and electrolytes for ProboStat™	Use standard ProboStat™ for tubular gas separation membranes or electrolyte cells. Catalytic Membrane Reactor (CMR) for tubular membranes with CMR-modified ProboStat™.

Software

Omega	Multipurpose measurement and data analysis software for electrochemical measurements. Omega is designed for maximum flexibility: it accepts data from many different sources such as instruments, furnaces and mass flow controllers. It can plot any measured or calculated data. With no time restrictions nor limit for simultaneous measurements. It was originally developed for ProboStat™ users.
Omega Temp	Software to control and program furnace temperatures and profiles, with unlimited number of segments.

Atmosphere control

ProGasMix FC	Versatile rotameter-based manual gas mixer especially developed for laboratory investigations of the properties of oxides at high temperatures vs T, pO_2, pH_2O etc., or fuel cell tests with humidification of fuel and/or oxidant. Partial pressures are calculated via accompany software. Allows measurements of proton and oxide ion transport numbers separately.
FCMix	Simple and low-cost gas mixer that controls the flows of fuel, oxidant and one inert gas that can be routed to the fuel and oxidant for flushing, soft start, slow SOFC anode reduction, and safe operation, as well as tests of gas diffusion limitations.
Probble	A combined humidification unit and over-pressure controller suitable for small gas flows to SOFC button cell testing (in for example ProboStat™), annealing furnaces, etc. Two units used with FCMix give combined humidification and overpressure control of each ProboStat™ cell chamber as well as fine pressure control in and between two cell chambers.

We supply

Furnaces	Furnaces customized for ProboStat™
TempBox	Simple thermocouple reader with USB port.
Samples and PLD targets	8YSZ, BZY-Ni, BZY15, BZCY72, etc.
SOFC button cells	Anode supported cells with 8YSZ electrolyte, porous nickel cermet anode and lanthanum cobaltite cathode.

NORECS