

COMPOSITE TOASTER

Autoclave-Free Manufacturing System

MICADO
rethinking technology

CURING ONLY WHERE HEAT IS NEEDED.

LESS ENERGY. LESS INFRASTRUCTURE. SHORTER PROCESSES. FULL PROCESS CONTROL.

Precision-controlled curing **directly at the part** — without an autoclave. Heat is applied exactly where it is needed, measured and controlled. Process reliability in a compact format, production-ready for lab and small-series use.



AUTOMATED HEAT & CURE SYSTEM · DIRECTLY HEATED · PID-CONTROLLED

MEASURABLE. REPEATABLE. ECONOMICAL.

Four concrete effects — from the very first part, in every application.

-75 %

ENERGY SAVINGS

Up to 75 % less energy input compared with curing in a large oven.

CAPEX

REDUCED INVESTMENT

Significantly lower equipment costs, ROI already during the development phase.

CO₂

LOWER FOOTPRINT

A direct energy path and smaller heating volumes reduce emissions per part.

Plug-In

MINIMAL INFRASTRUCTURE

No autoclave, no compressed air, no plant conversions. Installation in existing facilities.

*Energy figure based on internal comparative tests against conventional oven curing.

MICADO SMART ENGINEERING GmbH

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REQUEST A LIVE DEMO →

COMPOSITE TOASTER

Autoclave-Free Manufacturing System



HOW IT WORKS

DIRECTLY HEATED. PID-CONTROLLED.

01 DIRECT HEATING

Heating rods
integrated directly in
the tool — heat where
the part needs it.

02 PID CONTROL

Integrated control
with temperature and
pressure sensor
feedback in real time.

03 MULTI-STAGE PROFILES

Programmable curing
curves, auditable and
reproducible.

04 SAFETY

Overtemperature and
system monitoring,
continuously
logged.

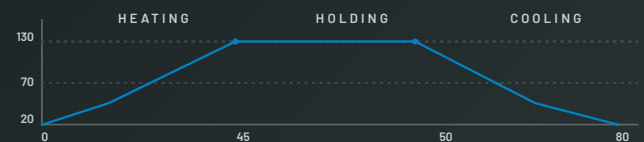
TECHNICAL DATA

AT A GLANCE.

MAX. TEMPERATURE	200 °C
HEATING POWER	Master 3 kW / Slave 10 kW (up to 4 slave modules, max. 43 kW)
COOLING	controlled Schuko socket, 230 V / 16 A
HEATING METHOD	integrated directly in the mold
CONTROL	integrated PID controller
SENSORS	Temperature sensor (optional pressure sensor)
SAFETY	overtemperature monitoring

CURING PROFILE

HEATING. HOLDING. COOLING.



Example of a curing and cooling profile. The actual process parameters depend on tool, material, part mass and resin system.

01 · HEATING

45 min

Controlled rise
to process
temperature.

02 · HOLDING

5 min

Constant at 130 °C:
cross-linking and
polymerisation.

03 · COOLING

30 min

Controlled cool-down,
minimises residual
stresses.

APPLICATIONS

THREE INDUSTRIES. ONE PLATFORM.



01 · AEROSPACE

LABORATORY TESTS

Material qualification, curing
trials and prototypes, precisely
documented.



02 · AUTOMOTIVE

PRE-DEVELOPMENT

Material tests and concept samples,
flexible and without dependence
on series production lines.



03 · SPORTS & LEISURE

SMALL SERIES

From design study to pre-series —
short development cycles.

NEXT STEP

REQUEST A LIVE DEMO compositetoaster@micado.at →

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YOUR CONTACT PERSON



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