

BUILT ON AUTOBLOCKS · CASE STUDY

# OEM INDUCTION POWER SUPPLY CONTROL

100% the same AutoCode. An embedded Autoblocks controller — built into the RDO power supply, running the exact runtime that drives full robotic cells.

INDUCTION HEATING · OEM POWER ELECTRONICS · BRAZING, HARDENING, ANNEALING, MELTING



**100%**

AUTOCODE PARITY WITH  
THE FULL CONTROL  
BLOCK

**10"**

BUILT-IN TOUCHSCREEN  
HMI ON THE SUPPLY

**0**

FIRMWARE FORKS  
PER PRODUCT VARIANT

embedded — not the full Control Block, but the same runtime, the same AutoCode, the same AnAutoblocksrecipes — built into the RDO power supply with a 10" touchscreen on the front. controller One codebase. Every Autoblocks platform release flows directly to the OEM line.

# The Challenge / The Solution / The Outcome

OEM INDUCTION  
POWER SUPPLY  
CONTROL

## THE CHALLENGE

RDO Induction designs and manufactures induction heating power supplies for OEMs and integrators across heat-treat, brazing, hardening, annealing, and melting. As demand grew for embedded recipe control and per-cycle data traceability — driven by audit requirements in aerospace, medical, and automotive heat-treat — every new product variant meant another bespoke firmware build, another custom HMI, and another isolated path for recipe and log data to live on.

RDO needed a controller that could ship **inside** the supply, scale across product classes, and give OEM customers operator-changeable recipes and audit-grade logs without a firmware fork per variant.

## THE SOLUTION

An **embedded Autoblocks controller** — a compact embedded variant of the platform, not the full standalone Control Block, but the **same processor and 100% the same AutoCode runtime** — was built into the RDO Induction supply. A 10" touchscreen mounted on the front of the unit replaces the standalone Pendant. Power-on sequencing, coil enable, ramp / dwell / cooldown profiles, recipe selection, fault interlocks, and per-cycle data logging all run on the embedded controller — directly inside the supply, with no external box required.

Because the runtime is identical, every **AutoCode** program that runs on a full Control Block runs on the embedded controller as-is. Recipe screens, data logs, and the AutoCode language are the same — operators and integrators see one platform.

## THE OUTCOME

**100% the same AutoCode** across the full Control Block (in robotic cells) and the embedded controller (inside the power supply). RDO ships a supply with operator-configurable recipes on the built-in 10" touchscreen and audit-grade per-cycle logs (recipe, setpoints, actuals, faults, timestamp) without writing custom firmware per product class.

The platform payoff: RDO's engineering team adds new recipes, process steps, and logged data fields the same way Autoblocks ships them to robotic-cell customers — at the touchscreen, in AutoCode, with no vendor callback. Every Autoblocks platform release flows directly to the OEM line. **One codebase. Two completely different machine classes.**



## CELL ARCHITECTURE

- ▶ **Controller:** Autoblocks embedded controller — compact variant of the Control Block platform
- ▶ **Code Parity:** 100% the same AutoCode runtime as the full Control Block
- ▶ **HMI:** Built-in 10" touchscreen on the supply (no external Pendant required)
- ▶ **Power Electronics:** RDO Induction OEM supply (multi-kW class)
- ▶ **Process Control:** Recipe-driven ramp / dwell / cooldown profiles
- ▶ **Sensing:** Coil current & voltage feedback, IR pyrometer (part temp)
- ▶ **Data Tracking:** Per-cycle log — recipe, setpoints, actuals, faults, timestamp
- ▶ **Programming:** AutoCode (27-command, human-auditable)
- ▶ **Safety:** Front-panel E-stop, interlock chain, coil-position monitoring
- ▶ **OEM-extensible:** Customer-added recipes & logged fields in field

INTEGRATION  
PARTNER

**RDO** Induction  
Heating Solutions

### THE PLATFORM DIFFERENCE

This is not a port. Not a fork. **It is the same AutoCode** that runs a full robotic cell, executing on an embedded Autoblocks controller built into the RDO power supply — and it stays current with every Autoblocks platform release.



**AUTOBLOCKS**  
autoblocks.co



**RDO DURAPOW**  
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