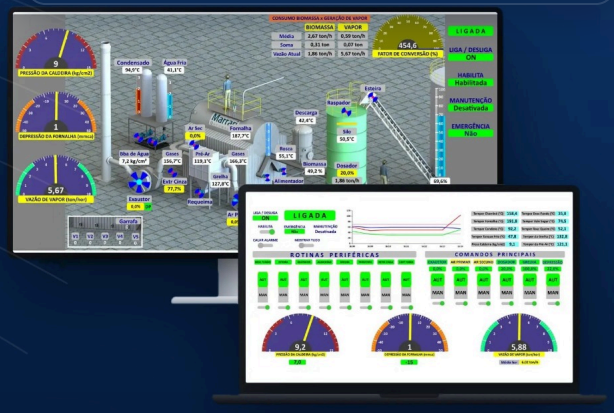
Marrari
AUTOMAÇÃO

DATASHEET
BOILER AUTOMATION · BIOMASS
EN

EcoSteam

Automation for biomass boilers

Monitors and controls the boiler in real time, with alarms on your phone. Two versions: EcoSteam, full, and EasySteam, compact.



0–25 bar	**10"**	**3**	**2**
pressure transducer	touch HMI (EcoSteam)	alert channels	panel versions

01 WHY USE IT

More steam, less fuel and downtime.

Controlled combustion
Primary and secondary air and feeder adjusted to steam pressure and furnace draft.

Alarms wherever you are
Alerts by email, Telegram and app, with an event history.

Safer operation
Water level, pumps and bottom blowdown watched at all times.

02 HOW IT WORKS

The panel reads **steam pressure, draft, temperatures and water level** and drives **combustion air, feeder, bottom blowdown and biomass conveyors**, keeping the boiler at its working point.

1. **Sensors** — Pressure, draft, temperatures, level
   — 4–20 mA · Pt100 · thermocouple —
2. **Automation panel** — CP300 PLC and touch HMI
   — Relay outputs · 6 A · analog —
3. **Actuators** — Air, feeder, blowdown, conveyors
   — Modbus · RTU · TCP —
4. **Monitoring and alerts** — App, email and Telegram

The panel reads the boiler sensors, controls combustion and feeding, and sends alarms to the team wherever they are.

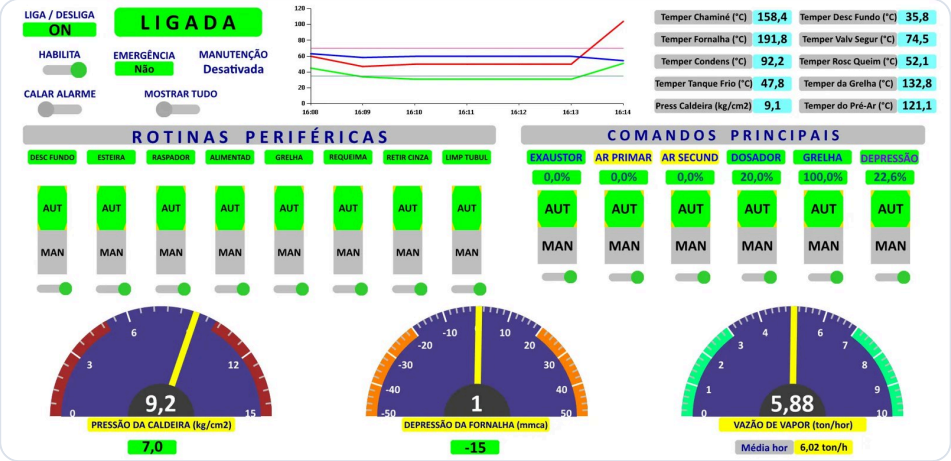
VERSIONS

EcoSteam or EasySteam

EasySteam suits smaller boilers. It leaves out:

- Condensate and water tanks
- Bottom blowdown beyond 5 valves
- Biomass conveyors and belts
- Larger HMI: 3.5" screen instead of 10"

03 MONITORING, CONTROL AND PANELS



Monitors

Steam and furnace	Pressure · draft · furnace, stack and pre-air temperature
Water	Level · pumps · condensate and water tanks*

Controls

Combustion	Primary and secondary air · feeder
Feeding	Bottom blowdown** · biomass conveyors and belts*

Panels

EasySteam	800 × 600 × 250 mm · CP300 · touchscreen 3,5"
EcoSteam	1700 × 600 × 400–450 mm · CP300 · touchscreen 10"
I/O EasySteam	24 DI · 20 DO · 8 AI · 4 AO
I/O EcoSteam	48 DI · 40 DO · 16 AI · 8 AO

*** EcoSteam only · ** EasySteam limited to 5 valves**

04 SENSORS, COMMUNICATION AND SERVICES

Sensors
Included in the system
Pressure 0–25 bar · draft −50 to 50 mmH_2O · Pt100 on stack and pre-air · furnace thermocouple.

Outputs
Relay and analog
6 A relay digital outputs and isolated analog outputs.

Communication
Modbus RTU and TCP
1 RS232 · 2 RS485 · 1 Ethernet, to connect to the plant's SCADA.

Alerts
App, email and Telegram
Pressure, level and fault alarms sent to the team in charge.

Yearly maintenance
Performed by Marrari
Software update and check against Marrari standards, once a year.

Warranty
6 months
Made in Brazil, with support and training from the after-sales team: posvendas@marrari.com.br.

General specifications

Application	Biomass boilers	Internal supply	24 V · 350 W or 75 W
Versions	EcoSteam and EasySteam	Temperature	Up to 50 °C
PLC	CP300	Protocols	Modbus RTU and Modbus TCP
HMI	10" or 3.5" touch	Ports	1 RS232 · 2 RS485 · 1 Ethernet
Power supply	95 to 240 Vac, 50/60 Hz · 500 W	Alerts	Email, Telegram and app