



Integrated Boiler Control

For Atmospheric and Induced Draft Gas Boilers

Now One Control Does It All!



The Five Function HydroStat-IC Combines...

The industry standard HydroStat you know

- Temperature Limit Control
- Low Water Cut-Off
- Fuel Saving Boiler Reset*

With New Features Including

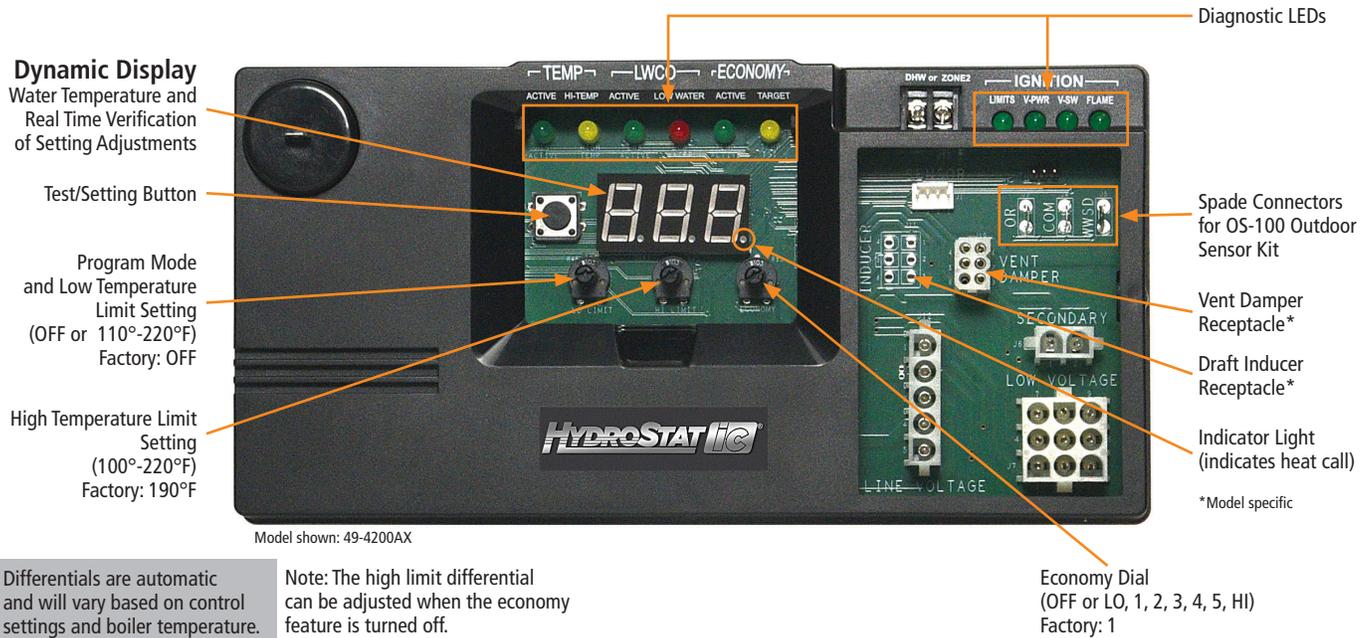
- **Spark Ignition:** Intermittent Spark Ignition with single rod flame sensing
 - Four Ignition Sequence LEDs for easy troubleshooting
 - Displays Flame Current on demand
- **Two Zone Capability:** Circulator input/output for
 - DHW with Smart-Priority
 - A second heating zone, or
 - Primary/Secondary pump operation

The only control your gas boiler needs.

**HYDROLEVEL
COMPANY**

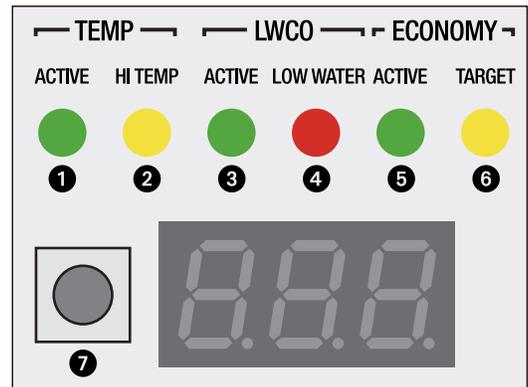
*Achieved through on-board Thermal Targeting algorithm or with optional outdoor sensor.

Layout and Visual Indicators



LED Legend and Test/Settings Button

- 1 **TEMP ACTIVE** – Indicates control is powered and temperature function is active.
- 2 **TEMP HI TEMP** – Illuminates when the boiler water temperature reaches the high limit setting.
- 3 **LWCO ACTIVE** – Indicates that the low water cut-off (LWCO) function of the HydroStat-IC is active. This function is activated by installing a Hydrolevel Electro-Well™. This LED will not illuminate when the control is installed on a standard immersion well.
- 4 **LWCO LOW WATER** – Indicates that the boiler is in a low water condition.
- 5 **ECONOMY ACTIVE** – Indicates that the Thermal Targeting function is active and the HydroStat-IC will reduce boiler temperature to conserve fuel.
- 6 **ECONOMY TARGET** – Illuminates any time the burner is off as a result of the boiler reaching the Target temperature determined by Thermal Targeting or Outdoor Reset.
- 7 **TEST/SETTINGS Button**
 - Press and hold to test the Low Water Cut-Off operation (operational when control is installed on an Electro-Well™).
 - Press momentarily to scroll through control settings (High Limit, Low Limit, Economy Setting, current Target Temperature, and flame current).



Dynamic Display

- Continually displays boiler temperature. Intermittently displays outside temperature when in outdoor reset mode.
- Instantly changes to display control settings when any dial is adjusted.

Features

Unique HydroStat-IC Features

Intermittent Spark Ignition (with Single Rod Flame Sensing)

The HydroStat-IC first proves the safety limit devices on the boiler before igniting the pilot. As each limit is checked, the corresponding light will turn on indicating the limit is satisfied. If any limits are not satisfied, the corresponding light will blink and the ignition sequence will stop. After ignition, the HydroStat-IC continues to monitor the limit devices, vent damper or air pressure switch, and pilot flame. If any of these are open or the pilot flame is lost, the main valve is immediately de-energized and the corresponding light will blink.



Spill switch, flame roll-out switch, etc.	Power sent to vent damper or inducer	Confirmation from vent damper or inducer	Pilot flame is established
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2 Zone Circulator Options

The HydroStat-IC is equipped with a second zone designed for a 120-volt circulator that can be set to operate in one of three ways:

- Domestic Hot Water (DHW) for use with an indirect water heater
- A Second Heating Zone
- Primary/Secondary Circulator Operation (Important: For use with primary/secondary piping systems only)

Classic HydroStat Features

- Industry Standard Temperature Limit
- Low Water Cut-Off
Provides protection against potentially dangerous low water conditions when installed with the Hydrolevel Electro-Well™
- Boiler Temperature Reset
Using Thermal Targeting , On-board microprocessor saves fuel by adjusting boiler temperature based on heating demand

Programable Features*

Program Mode is accessed by turning the LO LIMIT dial to the PRO position just above OFF. From there, use the HI LIMIT dial to select your desired feature, and the TEST/SETTINGS button to cycle through available options

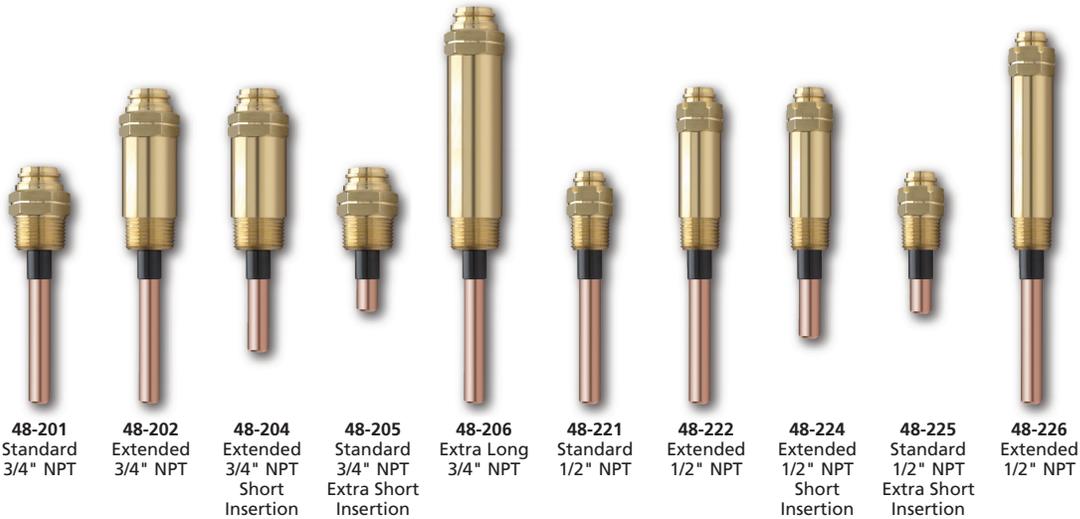
DIAL SETTING	FEATURE	DEFAULT	OPTION 1	OPTION 2
1	Thermal Pre-Purge	Inactive	Active	
2	Degrees F or Degrees C	Fahrenheit	Celsius	
3	LWCO Reset	Automatic	Manual	
4	Zone 2 Options	Domestic HW Circulator	Heat Circulator	Primary/Secondary
5	Circulator Hold Off	Active	Inactive	
7	Low Limit Dial	Off	On	
8	Well Type	Hydrolevel Electro-Well	Standard Immersion Well	
9	High Limit Differential	10°	20°	30°
def	Restore Defaults	No	Yes	

*Features and defaults vary by model

**Learn more about the HydroStat-IC at
www.hydrolevel.com/hydrostat-ic**

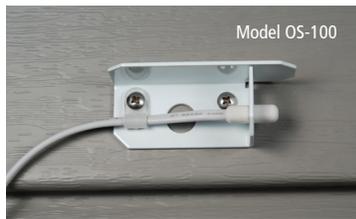
Accessories, Configurations and Specifications

- **Electro-Well Models** (Enables HydroStat's Low Water cut-off function)



- **Outdoor Sensor Kits** (Provides outdoor reset functionality)

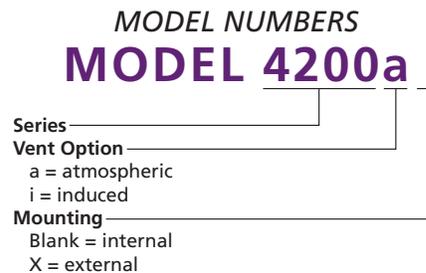
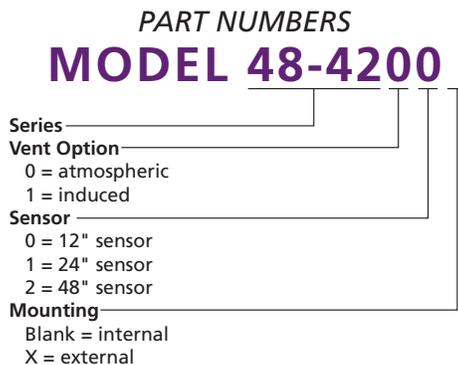
*OS-100 (48-140)
Activates Outdoor
Reset and Warm
Weather Shut-Down
on HydroStat.*



*OS-200 (48-145)
Wireless Outdoor
Sensor Kit –
Activates Outdoor Reset
and Warm Weather
Shut-Down on HydroStat.*



Configuration Options



Specifications

Line voltage input: 120 VAC, 50/60 HZ
Low voltage input: 24 VAC, 40 VA
Inducer (4200i): 6 FLA, 18 LRA @ 120 VAC
Vent damper (4200a): 0.5 A @ 24 VAC
Circulator contacts: 5.8 FLA, 34.8 LRA @ 120 VAC
Operating range–low limit: Off or 110°F (43°C) - 200°F (93°C)
Operating range–high limit: 100°F (38°C) - 220°F (104°C)
Pilot valve: 2 A @ 24 VAC

Main valve: 2 A @ 24 VAC
Operating ambient temp: -4°F (-20°C) to 150°F (66°C)
Thermostat anticipator: 0.2 A
Trial for ignition: 75 seconds (may vary by model)
Re-trial: 5 minutes
Flame current min: .8 µA
Flame current max: 7.3 µA