



Model 3200-Plus
Model 3250-Plus

Three Function Control

Temperature Limit

Designed for cold start and tankless coil boilers

Low Water Cut-Off

Provides protection against potentially dangerous low water conditions when installed with the Hydrolevel Electro-Well™

Boiler Reset

- **Thermal Targeting**
On-board microprocessor saves fuel by adjusting boiler temperature based on heating demand
- **Outdoor Reset Ready**
Provides outdoor reset and warm weather shutdown with addition of Outdoor Sensor Kit



MODEL 3200-Plus
for gas-fired boilers

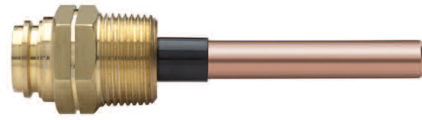
MODEL 3250-Plus
for oil-fired boilers

**HYDROLEVEL
COMPANY**

Innovators in Boiler Protection
Since 1965

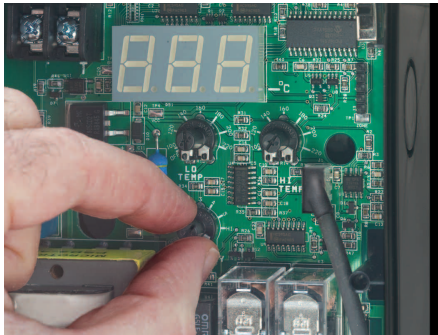
Upgrade Existing Cold Start and Triple-Action Aquastats*

- Install HydroStat on existing immersion well for full Aquastat and Boiler Reset functionality, or
- Install HydroStat on Electro-Well™ to add Low Water Cut-Off protection



■ Easy Dial-Type Set-up

Simply dial in the Temperature Limit and Economy settings.



■ 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.



■ Test/Settings Button

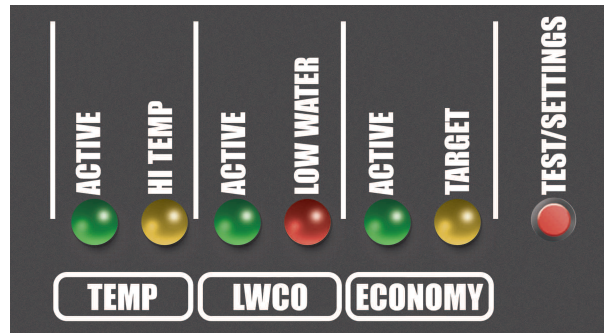
- Press and hold to test the Low Water Cut-Off operation (operational when control is installed on an Electro-Well™)
- Press momentarily to scroll through control settings (High Limit, Low Limit, Economy Setting, and the current Boiler Reset Target Temperature).

■ Easy to Install

Uses industry standard wiring designations.

■ LED Status Lights

Continually indicates which functions are active and if the control is holding the burner off for any reason.



- **TEMP ACTIVE** – Indicates the control is powered and the temperature function is active.
- **TEMP HI TEMP** – Illuminates any time the burner is off as a result of the boiler reaching the high limit setting.
- **LWCO ACTIVE** – Illuminates when the control is providing low water cut-off protection. 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.
- **LWCO LOW WATER** – Indicates a low water condition in the boiler.
- **ECONOMY ACTIVE** – Indicates that the Economy dial is turned on and that Thermal Targeting or Outdoor Reset function is active.
- **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.

■ Smart DHW Priority

Closely monitors boiler temperature when calls for domestic hot water coincide with space heating calls. The control will prioritize the domestic hot water call only when needed.

■ Call for Heat Indicator



Illuminates on any call for heat.

*Aquastat is a registered trademark of Honeywell International, Inc.

The three-function Fuel Smart HydroStat is factory equipped on many premier boiler lines. It is also available at leading plumbing & heating wholesalers for upgrading existing gas and oil fired boilers with fuel-saving Boiler Reset Functionality.

Optional Features

Easily activated in HydroStat's program mode

Thermal Pre-Purge – Further enhances boiler efficiency by supplying latent heat, that may remain in the boiler from a previous run cycle, to the heating zone requiring heat. The control activates the burner only when it determines that the latent heat will not be adequate to satisfy the heating demand. During the Pre-Purge cycle, the display will indicate P_{ur} .

Degrees Celsius – Changes the control's settings and display to Celsius.

Manual Reset LWCO – Changes the low water cut-off function to manual reset, which is required for many commercial installations.

Circulator Activation – Can be set to activate the primary circulator on calls from T/T, ZC/ZR, or both.

Enhanced Condensing Protection – To reduce the potential for condensing, on a call for heat, this feature allows the boiler to heat to 125°F prior to energizing the circulator. Once activated, the control continues to monitor boiler temperature and interrupts the circulator if it drops below 115°F.

Fuel Savings through Boiler Reset

Boiler Reset is the decades-old principle of governing boiler temperature in accordance with the heating demand. A boiler is sized to heat a home during the coldest days of the year. During all other times, the heating system is larger than it needs to be. Boiler Reset saves fuel by reducing the boiler temperature during periods of non-peak demand. The FuelSmart HydroStat offers two cost effective ways to provide this fuel saving technology:

Thermal Targeting™ – This on-board microprocessor based algorithm monitors thermostat activity and continually evaluates how much heat the house requires. When it is very cold outside, the demand for heat is high and the Fuel Smart HydroStat raises the boiler's Target Temperature to provide needed heat to the house. When the outside temperature is milder, the demand for heat is lower. During these periods, the Fuel Smart HydroStat lowers the boiler's Target Temperature – saving fuel – while continuing to provide comfort to the house.

Outdoor Reset & Warm Weather Shutdown – For those who prefer the more traditional outdoor reset approach, Hydrolevel offers a low cost OS-100 Outdoor Sensor Kit (sold separately). When the sensor is plugged into the control, the boiler reset methodology changes instantly from Thermal Targeting to Outdoor Reset, where the boiler temperature is governed by the temperature outside. The addition of the sensor also allows the control's Warm Weather Shutdown feature to be activated. This feature prevents the boiler from supplying space heating when the outside temperature exceeds a selected level.

Also Available...

Model 3000

For cold-start gas boilers

- High Temperature Limit
- Low Water Cut-Off
- Boiler Reset through Thermal Targeting

The compact Model 3000 is designed to replace and upgrade smaller, high-limit Aquastats common on many cold-start gas boilers. It includes wire harnesses for easy connections to either transformer-style Control Centers or Integrated Boiler Control Modules equipped on most cold-start gas boilers.

Like other Fuel Smart HydroStat models, the Model 3000 is a three-function control and features easy to use Dial-Type Settings, LED Status Lights, a LWCO Test Button and Thermal Pre-Purge. It does not offer outdoor reset or warm weather shutdown capability. For complete details, contact Hydrolevel or visit us at hydrolevel.com.



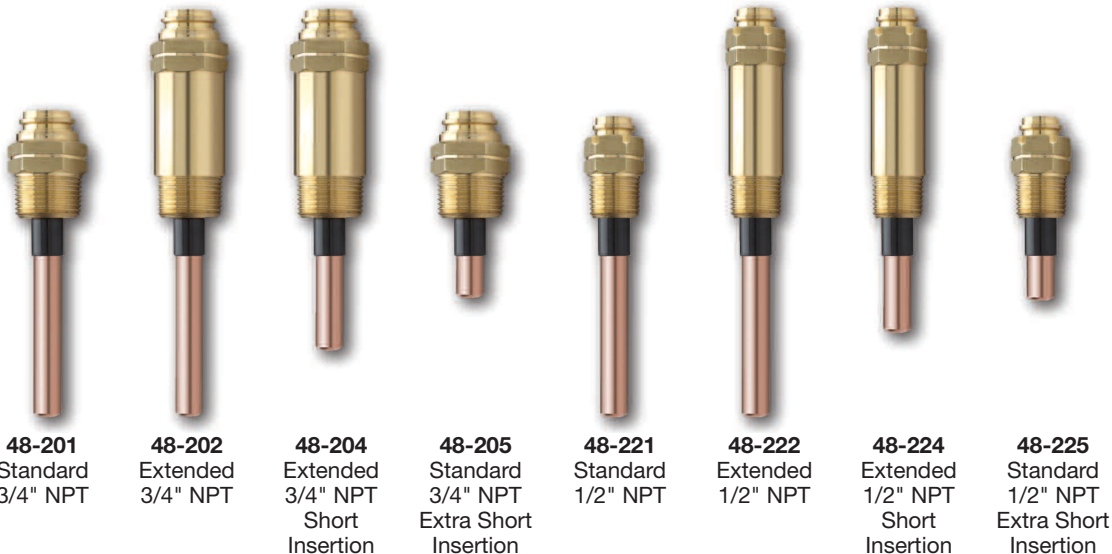
Accessories for HydroStat Controls

Outdoor Sensor Kit OS-100 Provides outdoor reset functionality.

For HydroStat Models 3200-Plus and 3250-Plus only

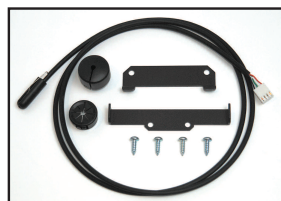
48-140 Kit includes: outdoor sensor with 9' cable (additional wire to be added in field as needed), sensor mounting bracket with 2 screws, wire clip, 2 spade connectors and knockout wire bushing. See photo on front cover.

Electro-Well™ Models Enables HydroStat's low water cut-off function.



Remote Mounting Options

For all HydroStat Models except 3000 Series



Wall/Jacket Mounting Kit
Kit includes: 2 mounting brackets, remote sensor, plastic grommet, rubber well cap, 4 #8x1/2" self-tapping screws.

- 48-101** HydroStat Wall/Jacket Mounting Kit with 2' sensor
- 48-102** HydroStat Wall/Jacket Mounting Kit with 4' sensor
- 48-103** HydroStat Wall/Jacket Mounting Kit with 10' sensor
- 48-104** HydroStat Wall/Jacket Mounting Kit with 20' sensor



Pipe Mounting Kit
Kit includes: mounting bracket for 1" to 2" pipe, remote sensor, plastic grommet, rubber well cap.

- 48-121** HydroStat Pipe Mounting Kit with 4' sensor

Specifications

Burner Contacts
Circulator Contacts
Operating Range – Low Limit
Operating Range – High Limit
Operating Range – Differential

Model 3200-Plus

30 VA@24 VAC
5.8 FLA, 34.8 LRA@120 VAC
Off or 110°F - 200°F
100°F - 220°F
Automatic – will vary between 10° and 20° subtractive based on control settings and boiler temperature

Model 3250-Plus

7.4 FLA, 44.4 LRA@120 VAC
5.8 FLA, 34.8 LRA@120 VAC
Off or 110°F - 200°F
100°F - 220°F
Automatic – will vary between 10° and 20° subtractive based on control settings and boiler temperature



PATENT NO. 7,891,572

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HYD-3200

Submittal Data Information

Combination Temperature Limit, Low Water Cut-Off and Boiler Reset Residential Hot Water Boilers



Supersedes: New

Effective: September 1, 2010

JOB _____ ENGINEER _____ CONTRACTOR _____

Item Number	Model Number	Notes

Features

- **Dial Type Settings**-Allows for quick and easy set-up.
- **Diagnostic Lights**-Continually indicate which features are active and if the control is holding off the burner for any reason. No complicated menus to scroll through.
- **Dynamic Display**-Continually displays boiler temperature. Changes to indicate control settings when Test/Settings button is pressed. Displays **Pur** when control is in Thermal Pre-Purge mode.
- **Test/Settings Button**-Tests the low water cut-off operation when installed with a Hydrolevel Electro-Well.
- **Indirect Water Heater Compatible**-Bypasses Thermal Targeting function on calls from the indirect water heater, allowing the boiler to fire to the high limit setting, ensuring quick response to hot water needs.
- **Circulator Hold-Off**-Delays circulator on a call for heat until the boiler temperature reaches 120°F to reduce potential for condensing.

Standard Application

Hydrolevel's Fuel Smart HydroStats are installed primarily on residential oil or gas fired water boilers. Fuel Smart HydroStat combines the functions of temperature limit control, low water cut-off and energy saving boiler reset into a single control.

Operation

● Low Water Cut-Off Function

When installed with Hydrolevel's ElectroWell, Fuel Smart HydroStat will provide automatic reset Low Water Cut-Off functionality to any boiler installation. When the Fuel Smart HydroStat is installed on an electrowell a green LWCO "active" light will automatically illuminate on the control.

● How Thermal Targeting Works

Thermal Targeting Technology analyzes thermostat activity and continually evaluates how much heat the house requires. When it is very cold outside, the heat demand is high and the Fuel Smart HydroStat will raise the boiler's Target temperature to provide needed heat to the home. When the outside temperature is milder, the heat demand is lower. During these periods, the Fuel Smart HydroStat will lower the boiler's Target temperature - saving fuel - while continuing to provide comfort to the house.

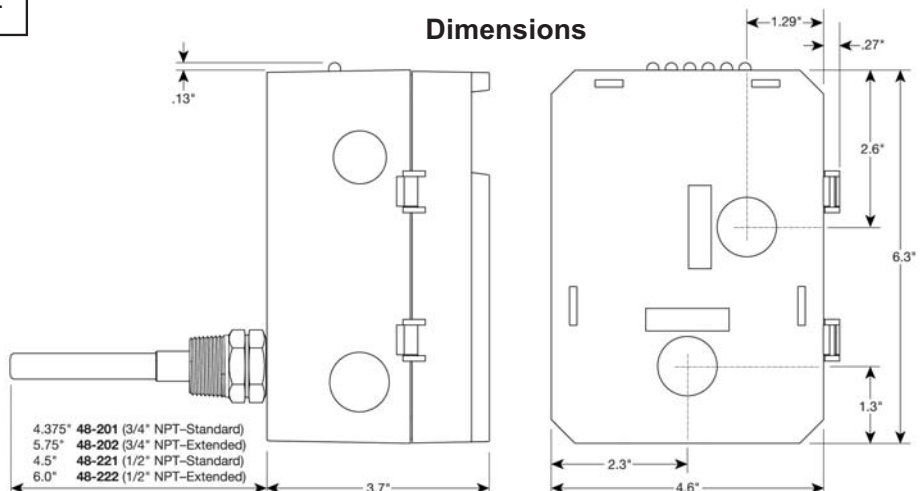
● How Thermal Pre-Purge Works

To further enhance fuel efficiency, Fuel Smart HydroStat is also equipped with a Thermal Pre-Purge feature. When activated, the control will purge standing heat in the boiler at the start of any thermostat call, supplying the "free" latent energy to the heating zone that is calling. If this latent heat is not sufficient to satisfy the thermostat, the control will then energize the burner. This feature works with single and multi-zone heating systems utilizing circulators or zone valves and requires no change in wiring.

Specifications

- Input Voltage:.....120VAC/60HZ
- Operating Range
Low Limit:.....Off or 110°F to 200°F
- Operating Range
High Limit:.....100°F to 220°F
- Circulator Contacts:5.8 FLA, 34.8 LRA
@120VAC
- Burner Contacts (3250): 7.4 FLA, 44.4 LRA
@120VAC
- Burner Contacts (3200): 30VA@ 24VAC
- Power Consumption.....2.6 VA
- Agency Listing.....U.L. 353
- NEMA Classification.....NEMA 1

Dimensions



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