

Low Water Cut-Offs – Residential/Commercial

CycleGard® CG400 Series

- Intermittent Level Test – Maximum Protection for Foaming Boilers
- 15 Second Burner Off Delay
- 30 Second Burner On Delay
- Automatic Reset
- Low Water Indicating Light
- Direct Boiler Mounting – Eliminates Blowdowns

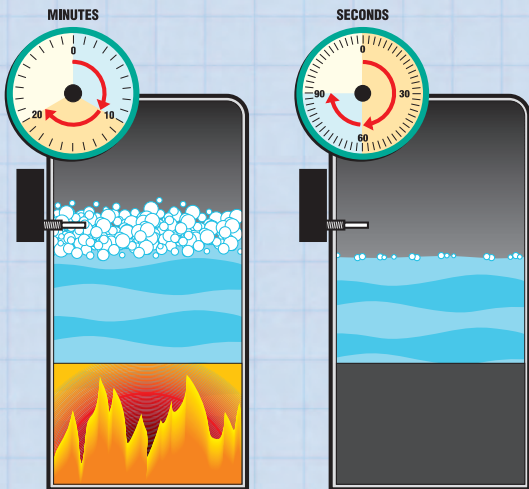


Specifications	Model CG400	Models CG450 and CGT450
Power Consumption	2.1 VA	4.2 VA
Switching Capacity	50 VA	5.8 FLA, 34.8 LRA
Switch Contacts	SPDT	SPDT
Max. Steam Pressure	15 PSI	15 PSI



MODEL	VOLTAGE	DESCRIPTION/OPERATION
CG400-1090	24 VAC	Burner circuit contacts open after 15 second delay in a low water condition. Delay prevents short cycling caused by momentary fluctuations in the boiler water level. Automatically reactivates burner circuit 30 seconds after water reaches the probe, allowing optional water feeder to raise water level above the probe. Intermittent Level Test (ILT) feature provides maximum boiler protection by removing power from the burner circuit at set intervals. <ul style="list-style-type: none"> ▶ Models ending in "1090" perform the ILT every 10 minutes for 90 seconds. ▶ Models ending in "1560" perform the ILT every 15 minutes for 60 seconds. ▶ Models ending in "2060" perform the ILT every 20 minutes for 60 seconds. ▶ Models ending in "2090" perform the ILT every 20 minutes for 90 seconds.
CG400-2090	24 VAC	
CG450-1090	120 VAC	
CG450-1560	120 VAC	
CG450-2060	120 VAC	
CGT450-2060	120 VAC	Same as CG450-2060 (described above) with added feature for boilers equipped with tankless coils. The CGT450-2060 suspends operation of the Intermittent Level Test when the boiler is receiving a call for domestic hot water. This feature ensures continued burner operation during a demand for hot water.

U.S. Patent No. 5,739,504; 6,390,027



CycleGard®

Maximum boiler protection – Even in SURGING and FOAMING boilers.

CycleGard continually monitors the boiler water level like other probe type cut-offs. But, unlike any other cut-off, CycleGard uses **Intermittent Level Test (ILT)** technology to provide protection against false signals created by foaming and volatile water conditions in the boiler. CycleGard's **ILT** periodically removes power from the burner circuit. During this test, foam dissipates and the water level stabilizes – allowing CycleGard to monitor the *true* water level in the boiler. Since 1996, the superior protection of CycleGard has made it the standard low water cut-off for many of the industry's leading boiler manufacturers.

▶ See CycleGard video at www.hydrolevel.com

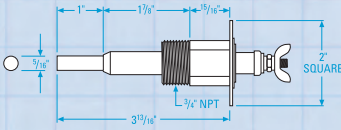
Probe Options/Specifications

Add letters in the chart below to the base model number to specify other probe options. (Example: CG450P)

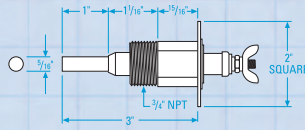
MODEL SUFFIX	PROBE MODEL DESIGNATED	PROBE DESCRIPTION
SV	EL1214-SV	3/4" NPT. Short Inside Dimension. Designed for installation in standard reducing tee and short clearance installations.
SVA	EL1220-SV	1/2" NPT. Short Inside Dimension. Designed for installation in standard reducing tee and short clearance installations.
P	EL1214-P	3/4" NPT. Long nut for thicker boiler jackets.
A	EL1220	1/2" NPT. Same dimensions as standard EL1214.
R	EL1214-R	3/4" NPT. Remote mount probe mounted to j-box (standard dimensions).
RA	EL1220-R	1/2" NPT. Remote mount probe mounted to j-box (standard dimensions).

Test pressure 1000 PSI, all models.

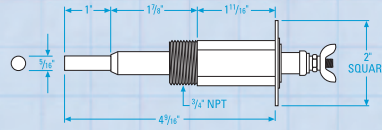
Note: All controls include one EL1214 probe unless otherwise specified.



EL1214 STANDARD 3/4" NPT
EL1220 1/2" NPT



EL1214-SV 3/4" NPT
EL1220-SV 1/2" NPT



EL1214-P 3/4" NPT



REMOTE PROBE
EL1214-R
EL1220-R

Manifold Fittings



1214C-1



711C



250C



1" H.P. TEE



1214C-2



FOEM

MODEL	MAX. PSI	DESCRIPTION
1214C-1	250	1" x 1" x (3) 3/4". Three-probe manifold with tri cock and gauge glass tappings. Supplied with control models LCFT 967, 250WC, 250MWC.
711C	35	Two-probe manifold. Supplied with control models 711 and 724.
250C	250	1" x 1" x (3) 3/4". Three-probe manifold. Supplied with control models 250 and 250M.
1" H.P. TEE	250	1" x 1" x 3/4". High Pressure Tee for use with EL1214-SV probe .
1214C-2	250	1" x 1" x 3/4". One-probe manifold.
FOEM-1	160	One-probe manifolds.
FOEM-2	160	FOEM-1 is 1/2" x 1/2" x 3/4"; FOEM-2 is 1" x 1" x 3/4"; FOEM-3 is 1/4" x 1/4" x 3/4".
FOEM-3	160	