

# M3 CONDENSING WATER BOILER

## Duplex Stainless Steel Construction

### 500 to 800 MBH

#### STANDARD FEATURES AND EQUIPMENT

##### PERFORMANCE

- 95% to 96% thermal efficiency (per DOE, 10 CFR 431)
- Up to 99% thermal efficiency at low fire with low return temp
- < 20 ppm NOx
- Ducts direct combustion air up to 150 equivalent feet through 6-inch diameter combustion air pipe
- Direct vents up to 150 equivalent feet through 6-inch-diameter material.

##### PRESSURE VESSEL AND HEAT EXCHANGER

- Pressure vessel fabricated from duplex stainless steel
- Submerged combustion chamber with spiraled fire tubes fabricated from duplex stainless steel
- ASME "H" stamped and National Board Registered for 100 psi MAWP, maximum operating temperature 200°F
- Boiler water temperature and pressure gauge (3½ in.)
- ASME pressure relief valve (50 psi installed as standard)
- Drain valve
- Cleanout /inspection fitting
- Fiberglass tank insulation
- Durable, corrosion-proof, polyethylene jacket

##### CODES AND STANDARDS

- Intertek / ETL listed to U.S. and Canadian safety standards
- CSD-1 compliant, FM compliant
- ASHRAE 90.1 compliant

##### WARRANTY AND SERVICE POLICY

- 5-Year, non-prorated workmanship, materials, and condensate corrosion warranty ① (34-2E)
- 10-Year thermal shock warranty. ① (34-2E)
- "Service Advantage Plan" covering parts, materials, freight and labor on any repair or replacement for the first year of operation ① (34-27)

##### BURNER, COMBUSTION CONTROLS AND OPERATING CONTROLS

- Pre-mix surface burner with proportional gas/air control and variable-speed blower motor for seamless modulation
- Electronic ignition control with pre- and post-purge
- Programmable electronic operating control with digital readout
- Firing cycle status indication
- Dual temperature limits with manual-reset on high temperature control
- Manual-reset, electronic low-water cutoff with test switch (no lockout on power loss)
- Flame failure audible alarm and indicating light with remote contacts
- High and low gas pressure switches
- Alarm on any failure
- Remote equipment relay and proving terminals

##### REMOTE/NETWORK BAS INTERFACE

- MODBUS protocol on operating control through a 485 serial connection (cable included)
- Remote on/off terminals
- Remote alarm on any failure notification through local contacts and RS-485 serial connection, MODBUS RTU

##### MISCELLANEOUS

- Condensate "P" trap
- Ready for connection to direct combustion air for sealed-combustion applications
- Factory authorized startup

##### VENT MATERIAL

- Factory configured for use with schedule 40, PVC pipe venting for boiler loop return water temperatures up to 100°F. For higher boiler return water temperatures, see optional equipment list for the required vent material.

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#### OPTIONAL FEATURES AND EQUIPMENT

- Extended "Service Advantage Plan" covers freight and labor on a vessel replacement for 5 years ① (34-28)

##### Factory-installed options/configurations

- Configured for Sch. 40, CPVC or Category IV listed Polypropylene vent material for boiler loop return water temperatures up to 140°F (VENTM)
- Configured for Category IV listed, stainless steel vent material for boiler loop return water temperatures exceeding 140°F (VENTH)
- L.P. gas operation (LPGAS)
- Alternate pressure relief valve     30 psi     75 psi     100 psi

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##### Field installed options (1 each boiler unless indicated)

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|--|---|
| <input type="checkbox"/> Condensate neutralization system  | <input type="checkbox"/> Vent termination cap for direct inlet air duct, 6-inch diameter                                  |
| <input type="checkbox"/> Combustion air filter   | <input type="checkbox"/> Boiler pump for primary-secondary piping   |
| <input type="checkbox"/> Water flow switch (one per multiple boiler system)  | <input type="checkbox"/> 2-inch motorized butterfly boiler isolation valve  |
| <input type="checkbox"/> Gas pressure gauge  | <input type="checkbox"/> Multi-well for installing up to four TempTrac temperature probes in supply or return boiler loop |
| <input type="checkbox"/> Pounds to ounces gas regulator (for source pressures above cataloged standards) (one per source gas line) | <input type="checkbox"/> Outdoor Reset - (Contact Factory)  |

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#### ELECTRONIC OPERATING CONTROL OPTIONS (field installed) (one gateway can communicate to up to 8 boilers)

- Protocol gateway (consult factory)     Modbus TCP/IP     BacNet IP     BacNet MSTP     LonWorks



① See complete warranty and/or service policy for details