



**Enviroflame**  
technologies

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# high volume industrial water heater

Industry Leading Heating Efficiency and Fuel Savings

## 01 tank specifications & features



- Our EF310 model is 23' long and 56' wide
- Tank components and all piping manufactured to Canadian Welding Bureau standards.
- Fully engineered water flow simulation analysis (spray bars and jacket water) for optimal heating efficiency and fuel savings.
- Slim design for optimizing integration space and maximizing accessibility to heater components.
- Proprietary exhaust heat capture system, easy service.
- Proprietary mist extractor.
- Stack water filter and conveniently mounted blow/drain valve.
- Proprietary spray bar design for simple access and inspection/cleanout.
- 2 sight glasses for internal heater flame/water viewing.
- Easy access tank manway and jacket water cleanout ports.
- Non-pressurized system.
- No regulatory inspections or operating tickets necessary.

Heater performance examples at varied flow rates (single water flow pass)

model	btu input	max water output temp	flow rate	temp rise (single pass)	flow rate	temp rise (single pass)
EF 430	43MM	167F / 75C	1300 gpm	62 deg F	5.0 M3/min	36 deg C
			1200 gpm	68 deg F	4.6 M3/min	38 deg C
			1100 gpm	74 deg F	4.2 M3/min	42 deg C
EF 310	31MM	167F / 75C	900 gpm	65 deg F	3.4 M3/min	36 deg C
			800 gpm	72 deg F	3.0 M3/min	40 deg C
			750 gpm	75 deg F	2.8 M3/min	42 deg C
EF 270	27 MM	167F / 75C	900 gpm	57 deg F	3.4 M3/min	31 deg C
			800 gpm	63 deg F	3 M3/min	34 deg C
			750 gpm	67 deg F	2.8 M3/min	36 deg C
EF150	15 MM	167F / 75C	900 gpm	32 deg F	3.4 M3/min	18 deg C
			800 gpm	36 deg F	3.0 M3/min	20 deg C
			750 gpm	38 deg F	2.8 M3/min	21 deg C
EF100	10 MM	167F / 75C	900 gpm	21 deg F	3.4 M3/min	12 deg C
			800 gpm	24 deg F	3.0 M3/min	13 deg C
			750 gpm	26 deg F	2.8 M3/min	14 deg C

Note: btu's and water flow rates are scalable for customized applications



## 02 burner specifications

- Vitotherm high efficiency forced draft tri-fuel burner - diesel, propane, natural gas, instant fuel switching
- Quiet operation, no air compressor required for combustion, 100% outside air ducting.
- Easy serviceability, swing away hinged blower housing to access combustion components.
- 2 supplied gas trains, (propane and natural gas) compact and mounted on top of heater tank.

- Electronic spark ignition.
- Full safety shutdowns.
- Autoflame MK8 control package with Data Transfer Interface for remote monitoring / training / supervision.
- HMI digital display - easy operation, digital combustion curve program uploaded and easily adjustable by technicians, backup program kept on file.
- Autoflame BMS and safety features



## 03 water pump specification & controls

- 2 operating pumps - variable sizing Berkeley long life centrifugal, VFD controlled, variable output. Pump pressures according to customer requests.
- 2-4" discharge water camlocks, manual butterfly valves on each. (mobile units)
- 2-6" suction water camlocks, manual butterfly valves on each. (mobile units)
- Proprietary built in suction priming/tank draining system - 2" T&E gear pump, automated with electric butterfly valves (no external prime or drain system needed).
- Pressure transducer tank level control for consistent operation.
- High tank level sensor and suction water emergency slammer valves eliminates flooding.

- HMI digital display and control screen - designed for simple operation, minimal training, operations logging and reporting, and simple diagnostics/troubleshooting.
- Electric water flow control valves and meters, no air required for heater operation.
- Full safety shutdowns.
- Data Transfer Interface for remote monitoring of water flows, temperature, and pumps.



## 04 integration options

- Robust 40 ft hi-cube intermodal sea container, customized, insulated lining and painted exterior.
- Integrated office room with desk.
- Generator/electrical room lined with sound attenuation foam walls and ceiling.
- Generous exterior worksite LED lighting, internal 12v and 110v LED lighting.
- Packaged and mounted in a standard 40' intermodal container with air ride trailer chassis.
- Reasonable footprint on lease, with maneuverability.
- Other integration solutions also available.
- Trailer style units or skidded units available

## 05 generator & air compressor

- Isuzu engine with Stamford generator, 120Kw 150Kva prime power. (Canadian emissions tier 3)
- or JCB engine with Stamford generator, 105Kw 130Kva (USA Emissions Tier 4 )
- or customer supplied choice
- Integrated 454 litre diesel fuel tank (approx. 30hr run time) c/w quick switch valve for external fuel tank.
- 60gal vertical tank c/w 240v air compressor for water hose blow out.



## 06 permanent facility installations

- Mining processes, food processing CIP's (clean-in-place), pond heating, large scale washing systems, high volume fuel efficient water heating applications
- Skid mounted package - tank size, water flows and burner BTU's are scalable
- High BTU's with minimal space requirements
- Customizable - PLC programming, HMI interface, and monitoring system to communicate with existing facilities, multi unit integrated operation Internal hot water storage for lower water usage applications, or maintain a temperature on external large storage tanks
- Low NOx, low CO, high efficiency burner
- Carbon steel or stainless steel options
- Low maintenance robust design
- No annual regulatory inspections or operator certifications required