

HIGH EFFICIENCY WATER HEATING



SOLSTREAM™
Direct Fired Water Heater

SOLSTREAM™ Systems

SOLSTREAM™ direct fired water heaters are highly efficient, low maintenance systems. Water conditioning is not required.

By utilizing Complete Thermal Exchange (CTE) technology, no fuel is used for warm-up or idle time, and no energy is lost through conversion or exchange. Additionally, without internal moving parts, there is very little to maintain.

WHY SOLSTREAM™?

SOLSTREAM™ direct fired water heaters offer a complete range of high efficiency, compact, all stainless steel water heaters which are remarkably dependable, simple in design and operation, and perfect for your process hot water applications.

The SOLSTREAM™ often delivers fuel savings as high as 30–60% when compared to steam/water heating systems. Standard operating capacities are between 1 million and 15 million BTU per hour.

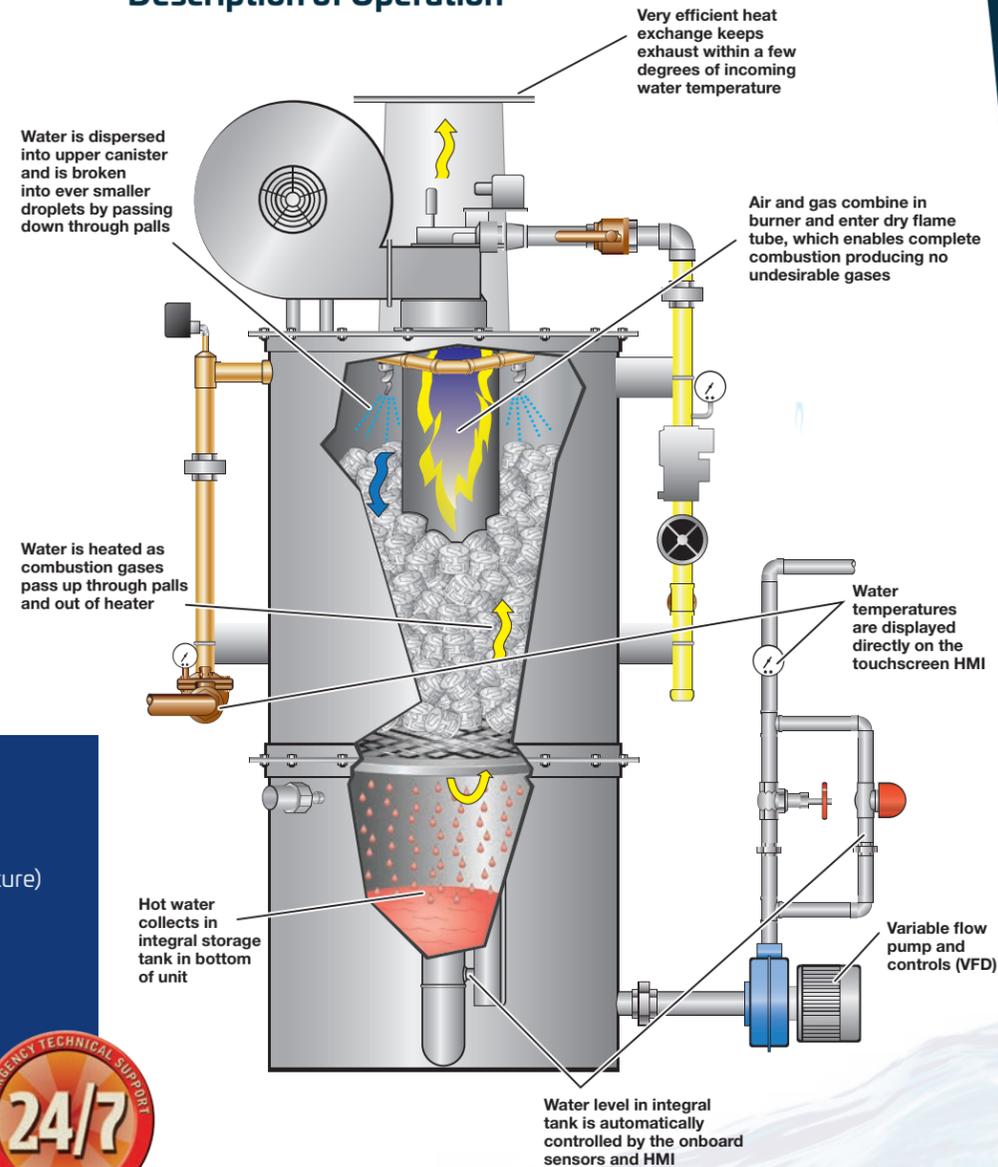
Hamilton Engineering's custom system solutions are our specialty—multiple orientations, configurations and options are available.

COMMON OPTIONS:

- Gravity drain (without a transfer pump)
- Standard (consistent incoming water temperature) or modulating burner actuator
- Natural gas or propane fuel
- Remote or integral tank
- VFD discharge/ transfer pump
- Remote control/ monitoring
- BMS integration



Description of Operation



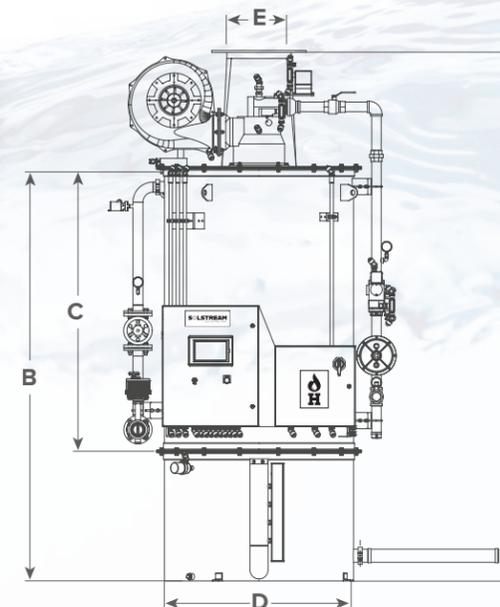
SOLSTREAM™ FEATURES:

- Complete thermal exchange technology—no fuel is used for warm-up or idle time and no energy is lost through conversion or exchange
- No internal moving parts—there is very little to maintain
- Unique design prevents scale build up—no water conditioning required. Up to 30 grains of hardness and 185°F delivered water temperature
- Full modulation firing control
- Touch Screen HMI, PLC and Ethernet/IP Communications
- Low-temperature exhaust (within a few degrees of incoming water temperature)
- 99.7% or greater high heat value efficiency
- Stainless steel construction
- Minimal footprint
- Modular fuel train using slide out components for ease of maintenance or replacement. CSA, NFAPL and FM compliant
- Seven year warranty on structure/ two years on all other components

SOLSTREAM™ Dimensions and Weights

Model	Connections				Dimensions										Weight		btu/hr
	1		2		A		B		C		D		E		lb	kg	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm			
1000	1	25	1	25	95	2413	71	1803	39	991	24	610	8	203	825	375	1,000,000
1500	1	25	1	25	97	2464	73	1854	41	1041	26	660	8	203	850	386	1,500,000
2000	1-1/2	40	1-1/2	40	100	2540	76	1930	44	1118	30	762	10-3/4	273	1500	680	2,000,000
3000	2	50	1-1/2	40	100	2540	76	1930	44	1118	36	914	12	305	1600	725	3,000,000
5000	2-1/2	65	2	50	127	3226	97	2464	65	1651	44	1118	16	406	2500	1136	5,000,000
6000	3	80	2	50	132	3353	100	2540	70	1778	47	1194	18	457	2900	1316	6,000,000
7000	3	80	2	50	139	3531	107	2718	77	1956	50	1270	18	457	3200	1455	7,000,000
9000	3	80	2	50	169	4293	139	3531	107	2718	60	1524	20	508	5000	2273	9,000,000
10000	3	80	2	50	181	4597	151	3835	119	3023	61	1549	20	508	5200	2405	10,000,000
12000	4	100	3	80	181	4597	151	3835	119	3023	61	1549	22	559	5500	2495	12,000,000
15000	4	100	3	80	192	4877	161	4089	129	3277	70	1778	24	610	7000	3175	15,000,000

All dimensions and weights are approximate. Use certified print for exact dimensions. Design and materials are subject to change without notice.



ABOUT CTE TECHNOLOGY

Developed from direct contact water heating science which was first introduced more than five decades ago, Complete Thermal Exchange (CTE) technology has revolutionized high efficiency water heating methods. Today CTE enjoys a proven record and has rapidly become the new standard in high efficiency water heating and energy savings.

While traditional direct contact water heating can offer significant energy savings when compared to a conventional steam boiler system, the Hamilton Engineering SOLSTREAM™ direct fired water heater offers an unparalleled, 99.7% high heat value (110% approx. low heat value) efficiency rating* throughout each phase of its operation cycle.

The sustained operational efficiency of SOLSTREAM™ direct fired water heaters creates the most energy efficient method of hot water production currently available.

No Scale Build-Up

The SOLSTREAM™ direct fired water heater's unique design prevents scale build-up because there are no "hot spots" internally or externally, and because calcium is prevented from completely falling out of suspension during operation. As a result, the mineral content of the influent water and the effluent water will be equal.

SOLSTREAM™ direct fired water heaters achieve CTE Standards

The SOLSTREAM™ direct fired water heaters meet four standards not available with the older designs and traditional methods of direct contact water heater technology:

1. CTE units maintain a minimum of 99.7% high heat value (110% approx. low heat value) efficiency in all modes of operation, not just under optimal conditions.
2. CTE units have multiple thermal passes. Water and the combustion gases (or heat from the combustion) repeatedly come in contact. This ensures that the maximum amount of heat or energy from combustion is transferred to the water.
3. CTE units maintain complete combustion at all times, utilizing a dry combustion chamber.
4. CTE units must have a built in water quality integrity system. Operational procedures must be in place to ensure that effluent water quality is equal to the influent water quality.



REPRESENTED BY



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