



Engineering Submittal

Smart 316 Indirect Water Heater



SMART 316 Features

- Exclusive "Tank-in-Tank" Technology
- Self Cleaning/Self Descaling Heat Exchanger
- Superior Heat Exchanger Surface Area
- Exceptionally Low Boiler Side Pressure Drop
- Limited Lifetime Residential Warranty
- 6 Year Limited Commercial Warranty
- Polypropylene exterior jacket resist dents, cuts and abrasions

"Tank-in-Tank" Technology

- Inner corrugated domestic tank is suspended within the outer tank making it free to expand and contract
- Inner tank's movement prevents lime build up, making the SMART 316 Self Cleaning
- Design provides superior surface area compared to a traditional coil water heater
- Self cleaning ensures heat transfer performance is maintained throughout life of the tank
- Maximum boiler water temperature is 210°F
- Maximum boiler water working pressure is limited to 45 psig

Domestic Stainless Steel Tank

- Corrosion resistant acid pickled 316L stainless steel domestic tank
- No protective anode is required
- Residential domestic storage temperature adjustable from 90°F to 158°F
- Commercial domestic storage temperature adjustable from 90°F to 194°F
- Maximum domestic working pressure is 150 psi
- Hydrostatic test pressure of 300 psi

Large Heating Surface Area

- Large heating area allows greater hot water output and faster recovery time than typical coil tanks
- Allows a smaller water heater to be installed for the same water demand
- As tank size increases, so does surface area, increasing domestic hot water output

Exceptionally Low Boiler Side Pressure Drop

- Boiler side head loss as low as 3/4 ft of head
- Maximum head loss is 2.5 ft of head
- Allows for use of a smaller circulator

Optimal Insulation

- 2" of Polyurethane Foam Insulation with R value of 16
- CFC/HCFC-free
- Stand by heat loss is less than 1°F per hour

Approvals

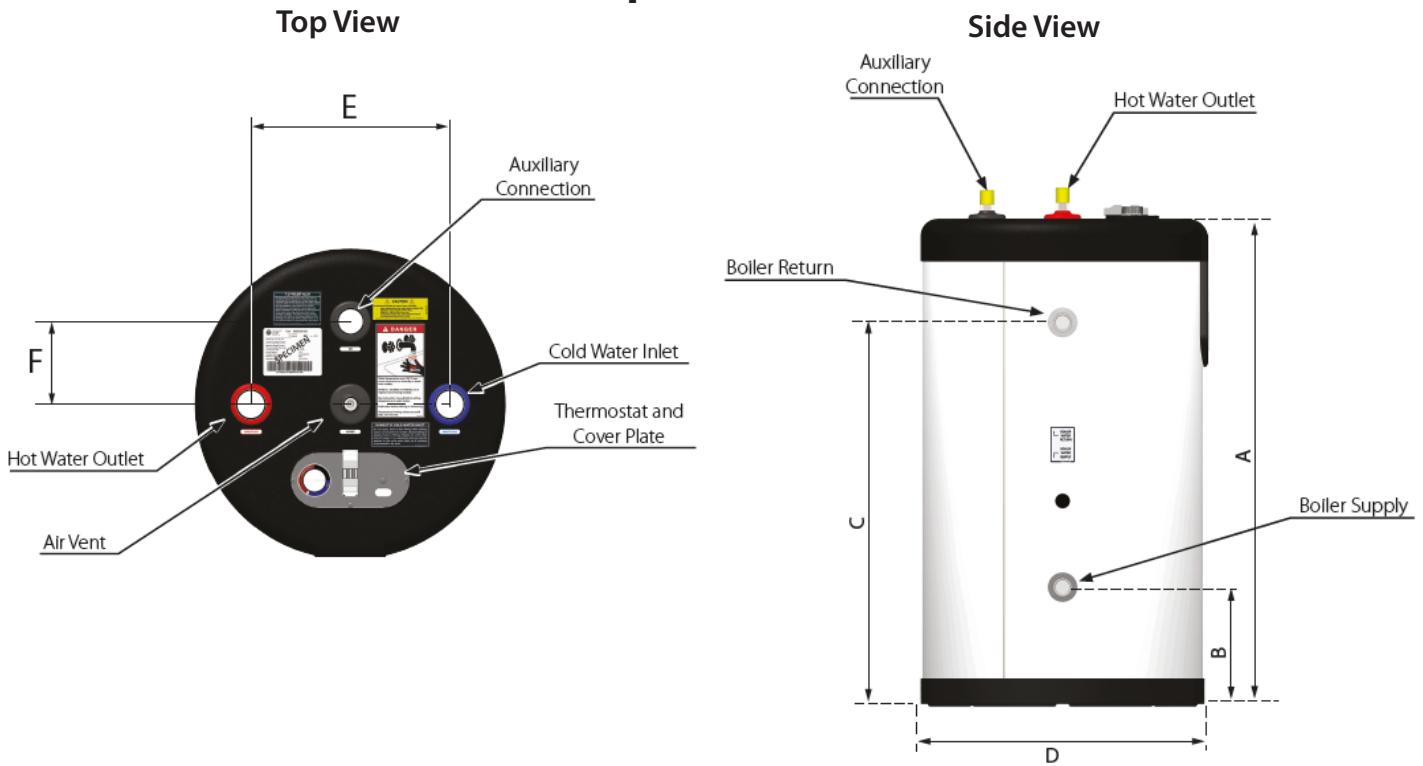
- UL 174 water heater standards
- Complies with Commonwealth of Massachusetts Plumbing Board requirements

Auxiliary Connection

- Additional domestic connection is provided standard
- Can be used for recirculation loop or temperature / pressure relief valve

Project / Location: _____	Date: _____
Consulting Engineer / Architect: _____	
Mechanical Contractor: _____	

Specifications



Model	SMART 316 30	SMART 316 40	SMART 316 50	SMART 316 60	SMART 316 80	SMART 316 100	SMART 316 120
Performance							
Boiler Output (BTU/hr)	87,000	112,000	140,000	270,000	300,000	337,000	420,000
1st Hour Recover (Gal/hr)	140	180	220	410	460	525	650
Continuous Flow (Gal/hr)	115	150	185	360	400	450	560
Peak Flow (Gal/ 10min)	40	50	65	100	125	150	190
Boiler Side Head Loss (ft)	3/4	1	1 1/4	1 1/2	2	2	2 1/2
Heating Water Capacity (Gal)	5	6	8	8	14	25	43
Domestic Water Capacity (Gal)	28	36	46	56	70	95	119
Heat Surface (ft ²)	13	16	20	24	28	36	42
Boiler Pressure Drop (ft)	3/4	1	1 1/4	1 1/2	2	2	2 1/2
Connections							
Boiler Supply/Return	1"	1"	1 1/4"	1 1/4"	1 1/2"	1 1/2"	2"
Domestic Inlet/Outlet	3/4"	3/4"	3/4"	3/4"	1 1/2"	1 1/2"	1 1/2"
Auxiliary	3/4"	3/4"	3/4"	3/4"	1 1/2"	1 1/2"	1 1/2"
Dimensions							
Empty Weight (lbs)	115	135	165	190	271	362	479
A	38"	46"	57"	66"	61"	78"	72"
B	9"	9"	9"	9"	10"	10"	10"
C	30"	38"	49"	58"	50 1/2"	68"	64"
D	22"	22"	22"	22"	26"	26"	32"
E	14"	14"	14"	14"	10 1/2"	10 1/2"	10 1/2"
F	6"	6"	6"	6"	10 1/2"	10 1/2"	5"
Performance Conditions: - 200°F boiler water supply - 90°F temperature rise							