DRE
COMMERCIAL ELECTRIC WATER HEATER

DRE - 80/120

Designed for use as a recovery heater having its own storage tank.

- Meets the standby loss requirements of the U.S. Department of Energy and current edition of AHRAE/IES 90.1. Energy efficiency per IEC 60379:2007 is 93.7 %
- Heavy-duty medium watt density elements (three/immersion heater) have incoloy sheathing: provide excellent protection against oxidation and scaling.
- Glasslined tank. Two sizes: 80 and 119 gallon capacity. Tank interior is coated with glass specially developed by A. O. Smith for water heater use. Tanks rated at 150 PSI (1034 kPa) working pressure
- Protects all elements, thermostats, and internal wiring circuits against excess current flow. Meets National Electrical Code requirements that non-ASME tanks must have internal fusing when current draw exceeds 48 amps. Available as an option on Canadian built heaters.
- Terminal block is factory installed. Just bring the electrical service to the heater and connect to block.
- One temperature control (adjustable through a range of 120° to 181°F) and manual reset high temperature cut-off per element. Thermostat step control may be achieved by varying settings on individual temperature controls. Located behind hinged control compartment door for quick, easy access.
- Surface mounted thermostats
- Simplified circuitry, color coded for ease of service
- Two anode rods for maximum corrosion protection
- Cabinet has bonderized undercoat with baked enamel finish
- Bottom inlet and top outlet openings
- Brass drain valve
- CSA Certified and ASME rated T&P relief valve
- Single panel control box
- Foam insulation reduces costly heat loss

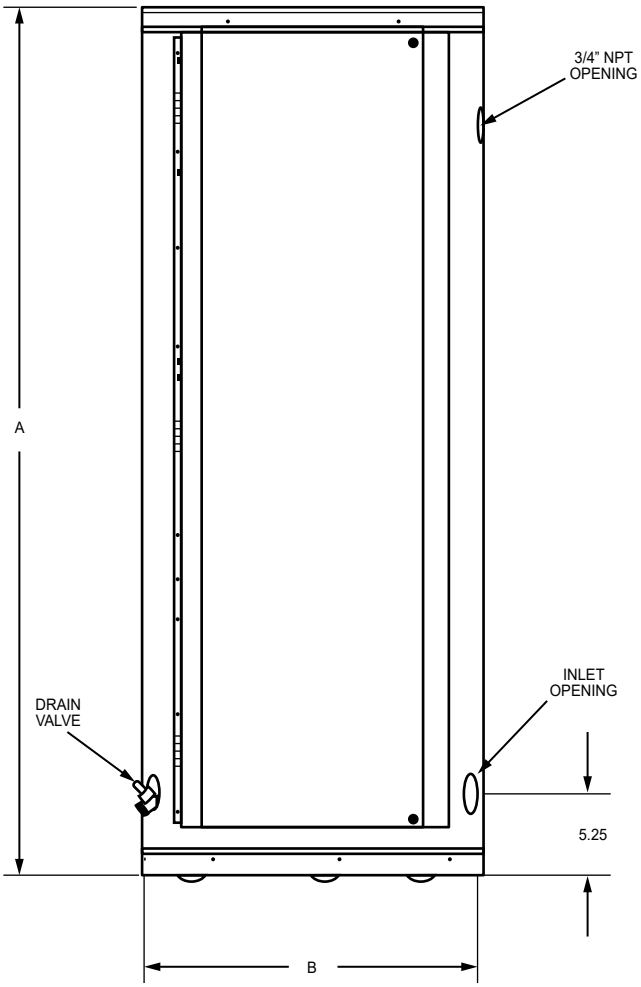
SAMPLE SPECIFICATION

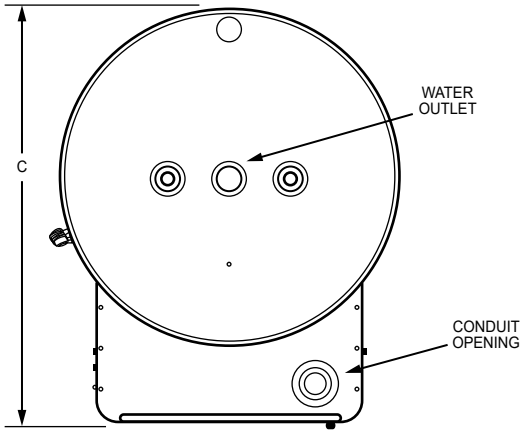
The heater(s) shall be Gold Series Commercial Electric Model Number _____ as manufactured by A. O. Smith. Heater(s) shall be rated at_____ kW,_____volts, _____ phase, 60 cycle AC, and listed by Underwriters' Laboratories and approved to the NSF Standard 5 by UL. Tank(s) shall be _____ (80 or 119) gallon capacity. Tanks shall have_____ (150 [Std] or 160 [ASME]) psi working pressure and be equipped with extruded high density anode. All internal surfaces of the heater(s) exposed to water shall be glasslined with an alkaline borosilicate composition that has been fused-to-steel by firing at a temperature range of 1400°F to 1600°F. Electric heating elements shall be low watt density. Each element shall be controlled by an individually mounted thermostat and high temperature cut-off switch. All internal circuits shall be fused. The outer jacket shall be of baked enamel finish and shall be provided with full size control compartment for performance of service and maintenance through hinged front panel and shall enclose the tank with foam insulation. Electrical junction box with heavy duty terminal block shall be provided. The drain valve shall be located in the front for ease of servicing. Heater tank shall have a three year limited warranty as outlined in the written warranty. Manufacturer shall supply ASME rated temperature and pressure relief valve. Fully illustrated instruction manual to be included. Meets standby loss requirements of the U. S. Department of Energy and current edition of ASHRAE/IES 90.1.

DIMENSIONS
DRE

OPTIONS

- UL and cUL listed conversion kits to adjust voltage and kW requirements in the field before and after installation
- ASME 160 psi (1103 kPa) tank construction
- International voltages – 220, 380, 400, 415, 575, and 600 volts, three phase available with Y connected elements
- Manifold kits – for multiple tank installations. Two heaters part # 9003429205, three heaters part # 9003430205 and four heaters part # 9003431205





Model number	Gallon capacity		Dimensions A		B		C		Inlet/Outlet (NPT)	Approx. shipping weight	
	gal.	litre	Inches	cm	Inches	cm	Inches	cm	Inches	lbs	kg
DRE-80	80	302	60-1/4	153	25-1/2	64.8	31	78.7	1-1/4	280	127
DRE-120	119	450	62-1/4	158.1	29-1/2	75	35	88.9	1-1/4	390	177

For ASME Construction add "A" to the model number (example: DRE 80A 24).

Standard kW input	BTU/ hour	30 °F	40 °F	50 °F	60 °F	70 °F	80 °F	90 °F	100 °F	110 °F	120 °F	130 °F	140 °F
		16.7 °C	22.3 °C	27.8 °C	33.4 °C	38.9 °C	44.5 °C	50 °C	55.6 °C	61.2 °C	66.7 °C	72.3 °C	77.8 °C
9	30,708	124	93	75	62	53	47	41	37	34	31	29	27
		469	352	284	235	201	178	155	140	129	117	110	102
12	40,944	166	124	99	83	71	62	55	50	45	41	38	35
		628	469	375	314	269	235	208	189	170	155	144	132
15	51,180	207	155	124	104	89	78	69	62	56	52	48	44
		783	587	469	394	337	295	261	235	212	197	182	167
18	61,416	248	186	149	124	106	93	83	75	68	62	57	53
		939	704	564	469	401	352	314	284	257	235	216	201
24	81,888	331	248	199	166	142	124	110	99	90	83	76	71
		1253	939	753	628	537	469	416	375	341	314	288	269
27	92,124	373	279	224	186	160	140	124	112	102	93	86	80
		1412	1056	848	704	606	530	469	424	386	352	326	303
30	102,360	414	311	248	207	177	155	138	124	113	104	96	89
		1567	1177	939	783	670	587	522	469	428	394	363	337
36	122,832	497	373	298	248	213	186	166	149	135	124	115	106
		1881	1412	1128	939	806	704	628	564	511	469	435	401
40.5	138,186	559	419	335	279	240	210	186	168	152	140	129	120
		2116	1586	1268	1056	908	795	704	636	575	530	488	454
45	153,540	621	466	373	311	266	233	207	186	169	155	143	133
		2350	1764	1412	1177	1007	882	783	704	640	587	541	503
54	184,248	745	559	447	373	319	279	248	224	203	186	172	160
		2820	2116	1692	1412	1207	1056	939	848	768	704	651	606

Figured at 1 kW (3413 BTU) = 4.1 Gallons at 100°F temperature rise.

TECHNICAL DETAILS

DRE

kW input	Number of elements	Element wattage	Full load current in amperes		
			Single phase	Three phase	
			230V	380V	400/415V
9	3	3000	37,5	13,6	12,5
12	3	4000	50,0	18,2	16,7
15	3	5000	62,5	22,7	20,8
18	3	6000	75,0	27,3	25,0
24	6	4000	100,0	36,4	33,3
27	6	4500	112,5	40,9	37,5
30	6	5000	125,0	45,5	41,7
36	6	6000	150,0	54,5	50,0
40,5	9	4500	168,8	61,4	56,3
45	9	5000	187,5	68,2	62,5
54	9	6000	225,0	81,8	75,0

For ASME Construction add “A” to the model number (example: DVE 80A 24).

Data subject to change
ME/DRE/01