

# A.O. SMITH CONSERVATIONIST®

Designed for use as a recovery heater having its own storage tank. Note: Not recommended for sanitizing water application.

## FEATURES

**GLASS-LINED TANK** - Three sizes; 52, 80 and 119 gallon capacity. Tank interior is coated with glass specially developed by A.O. Smith Ceramic Research for water heater use. Tanks rated at 150 psi (1034 kPa) working pressure (ASME 150 psi). Foam insulation reduces costly heat loss, and is vermin proof.

**ELEMENTS** - Incoloy sheathing for longer life. Low watt density; means lower surface temperature to minimize scale buildup and more surface to heat water. Element sizes from 3 to 6 Kw. Use 3, 6 or 9 elements standard; total of 9 to 54 Kw input (see chart on back).

**FUSING** - Protects all elements, thermostats, and internal wiring circuits against excess current flow. Meets National Electric Code requirements that non-ASME tanks must have internal fusing when current draw exceeds 48 amps. requirements.

**STANDARD VOLTAGES** - 208, 240 and 480V single-phase and three-phase delta. Convertible from three-phase to single-phase (in field) and vice versa. 277V single-phase also available.

**TERMINAL BLOCK** - Factory installed. Just bring the service to the heater and connect to block.

**CONTROLS** - One temperature control (adjustable through a range of 120° to 180°F) and manual reset high temperature cutoff 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.

## OTHER STANDARD FEATURES

- 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
- A.G.A./ ASME temperature and pressure relief valve
- Single panel control box.

## OPTIONAL

- U.L listed conversion kits to correct some voltage and Kw requirements in the field before and after installation
- Manifold kits with gate valves - available for multiple installation
- ASME 150 psi tank construction
- International voltages - 380, 415 and 480 volts, three-phase available with Y connected elements
- Field conversion kits for voltage and Kw.

**GOLDENROD ELEMENTS** - All DRE models are available with the Goldenrod 24K gold plated elements (patent pending). Goldenrod elements provide long life and 6 times the scaling resistance of standard incoloy elements. Goldenrod elements carry a three-year warranty against failure due to lime scale build-up.

# Dura-Power

COMMERCIAL ELECTRIC  
WATER HEATERS  
DRE-52, 80, 120

Meets or exceeds the requirements of ASHRAE 90.1b-1992 Standard for energy efficiencies.



ASME  
(OPTIONAL)



## LIMITED WARRANTY OUTLINE

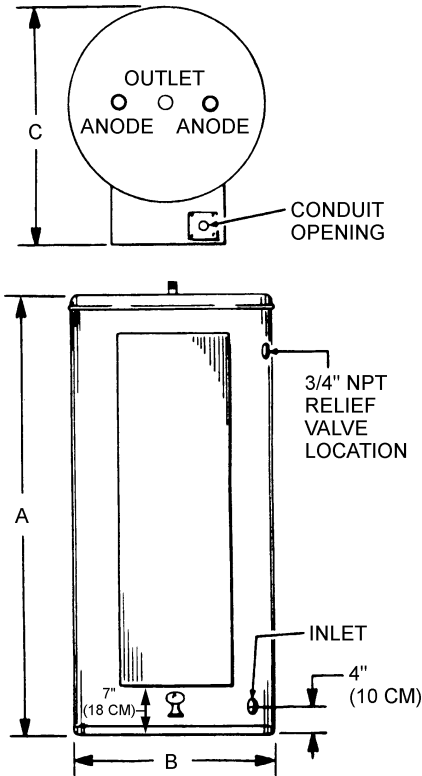
If the tank should leak any time during the first three years, under the terms of the warranty, A.O. Smith will furnish a replacement heater; installation, labor, handling and local delivery extra. **THIS OUTLINE IS NOT A WARRANTY.**

For complete information, consult the written warranty or A. O. Smith Water Products Company.

RECOVERY CAPACITY IN GALLONS AT TEMPERATURE RISE OF

Standard kW Input	BTU/ Hour	30°F 17°C	40°F 22°C	50°F 28°C	60°F 33°C	70°F 39°C	80°F 45°C	90°F 50°C	100°F 56°C	110°F 61°C	120°F 67°C	130°F 72°C	140°F 78°C
6	20,478	82	62	49	41	35	31	27	25	22	21	19	18
9	30,717	123	92	74	62	53	46	41	37	34	31	28	26
12	40,956	164	123	98	82	70	61	55	49	45	41	38	35
13.5	46,075	184	138	111	92	79	69	62	55	50	46	43	40
15	51,195	205	154	123	102	88	77	68	61	56	51	47	44
18	61,434	246	184	148	123	105	92	82	74	67	62	57	53
24	81,912	328	246	197	164	140	123	109	98	90	82	76	70
27	92,151	369	276	221	185	158	138	123	111	101	92	85	79
30	102,390	410	307	246	205	176	154	137	123	112	102	95	88
36	122,868	492	369	295	246	211	184	164	148	134	123	113	105
40.5	138,226	554	418	332	277	237	208	185	166	151	138	128	119
45	153,585	615	461	369	307	263	230	205	184	168	154	142	132
54	184,302	738	554	443	359	316	277	246	221	201	185	170	158

Figured at 1 KW (3413 BTU) = 4.1 Gallons at 100°F temperature rise.  
NSF ratings may be obtained by multiplying the above figures by 0.98.



Model Number	Tank Capacity		Dimensions						Inlet/Outlet (NPT)		Approx. Ship. Wt. (Lbs.)	
			A		B		C					
	gal.	litre	in.	cm	in.	cm	in.	cm	in.	cm	lb	kg
DRE-52	50	189	55 1/4	140.3	21 3/4	55.2	27 1/4	69.2	1 1/4	3.2	265	120
DRE-80	80	300	59 1/2	151.1	25 1/4	64.1	31 1/4	79.4	1 1/4	3.2	280	127
DRE-120	119	450	62 1/4	158.1	29 1/2	75.0	35 3/4	90.8	1 1/4	3.2	390	177

KW Input	Model Numbers Tank Capacity in Gallons			Number Of Elements	Element Wattage	Full Load Current In Amperes							
	50	80	119			Single Phase				Three Phase			
						208V	240V	277V	480V	208V	240V	480V	600V
6	DRE-52-6	DRE-80-6	DRE-120-6	3	2,000	28.8	25.0	21.7	12.5	16.7	14.4	7.2	6.0
9	DRE-52-9	DRE-80-9	DRE-120-9	3	3,000	43.3	37.5	32.5	18.8	25.0	21.7	10.8	9.0
12	DRE-52-12	DRE-80-12	DRE-120-12	3	4,000	57.7	50.0	43.3	25.0	33.3	28.9	14.4	12.0
13.5	DRE-52-13.5	DRE-80-13.5	DRE-120-13.5	3	4,500	64.9	56.3	48.7	28.1	37.5	32.5	16.2	13.5
15	DRE-52-15	DRE-80-15	DRE-120-15	3	5,000	72.1	62.5	54.2	31.3	41.6	36.1	18.0	15.0
18	DRE-52-18	DRE-80-18	DRE-120-18	3*	6,000	86.5	75.0	65.0	37.5	50.0	43.3	21.7	18.0
24	DRE-52-24	DRE-80-24	DRE-120-24	6	4,000	115.4	100.0	86.6	50.0	66.6	57.7	28.9	24.0
27	DRE-52-27	DRE-80-27	DRE-120-27	6	4,500	129.8	112.5	97.5	56.3	74.9	65.0	32.5	27.0
30	DRE-52-30	DRE-80-30	DRE-120-30	6	5,000	144.2	125.0	108.3	62.5	83.3	72.2	36.1	30.0
36	DRE-52-36	DRE-80-36	DRE-120-36	6*	6,000	173.1	150.0	130.0	75.0	99.9	86.6	43.3	36.0
40.5	DRE-52-40.5	DRE-80-40.5	DRE-120-40.5	9	4,500	194.7	168.8	146.2	84.4	112.4	97.4	48.7	40.5
45	DRE-52-45	DRE-80-45	DRE-120-45	9	5,000	216.3	187.5	162.5	93.8	124.9	108.3	54.1	45.0
54	DRE-52-54	DRE-80-54	DRE-120-54	9	6,000	N/A	225.0	194.9	112.5	149.9	129.9	65.0	54.0

\*208 volt models may contain three (3) additional elements.

SUGGESTED SPECIFICATIONS

The heater(s) shall be Dura-Power Commercial Electric Model Number \_\_\_\_\_ as manufactured by A.O. Smith or an approved equal. Heater(s) shall be rated at \_\_\_\_\_ KW, \_\_\_\_\_ volts, \_\_\_\_\_ phase, 60 cycle AC, and listed by Underwriters' Laboratories. Tank(s) shall be \_\_\_\_\_ gallon capacity. Heater(s) shall have 150 psi working pressure and be equipped with extruded high density anode. All internal surfaces of the heater(s) exposed to water shall be glass-lined 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 with incoloy sheath and 1" screw-in type. 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.

A.O. Smith Water Products Co., Inc. On Line  
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