

A.O. SMITH CONSERVATIONIST®

Designed for use as a recovery heater having its own storage tank or booster for supplying sanitizing rinse water for dishwashing.

FEATURES

GLASS-LINED TANK - Three sizes; 52, 80 and 119 gallon (189, 300, 450 Liter) 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; tested at 300 psi (2068 kPa). Foam insulation reduces costly heat loss. ASME (optional) maximum working pressure is 160 psi (1100 kPa).

ELEMENTS - Heavy duty elements have Incoloy sheaths and ceramic terminal block for rugged commercial service. Medium watt density means lower surface temperature to minimize scale buildup and more surface to heat water. Element sizes from 2 to 6 KW. Use 3, 6 or 9 elements; maximum input 54 KW. The design assures proper placement of elements in the tank to avoid bridging the sheaths with lime or scale deposits.

STANDARD VOLTAGES - 208, 220/240 and 440/480V single-phase and three-phase delta; 277V single-phase; 380/416 and 575/600 volt three-phase (Y connected elements).

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

MAGNETIC CONTACTORS - Heavy duty; CSA rated 100,000 cycles.

CONTROLS - 120V control circuit is powered by fused transformer, eliminating need for 120V service connection. Immersion temperature control adjustable through a range of 60°F to 180°F (15°C to 82°C). Immersion manual reset high temperature cutoff.

- Simplified circuitry, color coded for ease of service
- Hinged control compartment door for quick, easy access
- Two anode rods for maximum corrosion protection
- Cabinet has bonderized undercoat with baked enamel finish
- Top outlet, side inlet and relief valve openings
- Nipple and brass drain valve
- C.G.A./ ASME temperature and pressure relief valve.

OPTIONAL

POWER CIRCUIT FUSING - Protects elements and contactors from short circuits, overloading or line surges. Meets Canadian Electric Code requirements.

MANIFOLD KITS WITH STOP VALVES - Available for multiple installations.

THERMOSTATIC SEQUENCING CONTROL - Energizes three elements at a time to prevent line surges when thermostat calls for heat. Available on units 24 KW and larger.

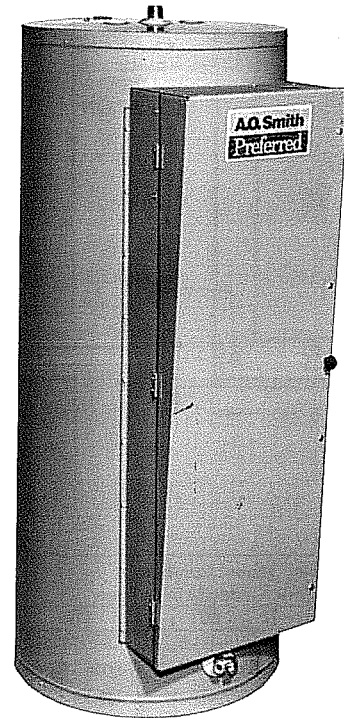
See page C 029.0 for service wiring and fuse selection.

GOLDENROD ELEMENTS - All DVE 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 scale.

Dura-Power

COMMERCIAL ELECTRIC
WATER HEATERS
DVE-52, 80, 120

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



ASME
(OPTIONAL)



LIMITED WARRANTY OUTLINE

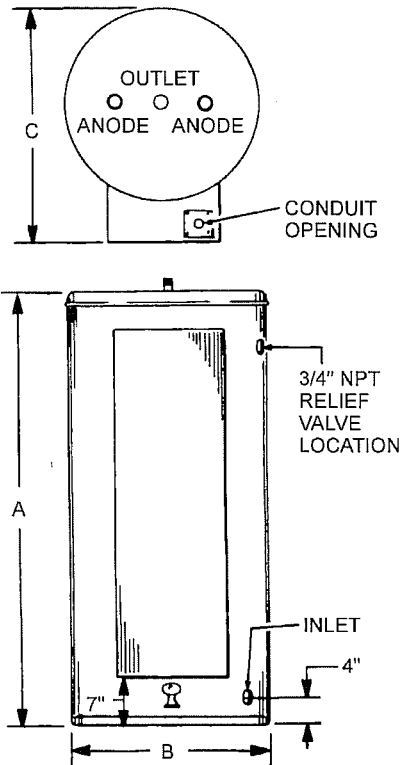
If the tank should leak any time during the first three years, under the terms of the warranty, A.O. Smith will furnish a replacement heater; installation, labor, handling and local delivery extra. **THIS OUTLINE IS NOT A WARRANTY.**

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	82 310	62 233	49 166	41 155	35 133	31 116	27 103	25 93	22 85	21 78	19 72	18 66
9	30,717	123 465	92 349	74 279	62 233	53 199	46 174	41 155	37 140	34 127	31 116	28 107	26 100
12	40,956	164 620	123 465	98 372	82 310	70 266	61 233	55 207	49 186	45 169	41 155	38 143	35 133
13.5	46,075	184 698	138 523	111 419	92 349	79 299	69 262	62 233	55 209	50 190	46 174	43 161	40 150
15	51,195	205 775	154 582	123 465	102 388	88 332	77 291	68 258	61 233	56 211	51 194	47 149	44 166
18	61,434	246 930	184 698	148 558	123 465	105 399	92 349	82 310	74 279	67 254	62 233	57 215	53 199
24	81,912	328 1241	246 930	197 744	164 620	140 532	123 465	109 414	98 372	90 338	82 310	76 286	70 266
27	92,151	369 1396	276 1047	221 938	185 609	158 509	138 523	123 465	111 410	101 391	92 340	85 322	79 299
30	102,390	410 1551	307 1163	246 930	205 775	176 665	154 582	137 517	123 465	112 423	102 388	95 358	88 332
36	122,868	492 1861	369 1396	295 1117	246 930	211 798	184 698	164 620	148 556	134 508	123 465	113 429	105 399
40.5	138,226	554 2094	418 1570	332 1256	277 1047	237 897	208 785	185 698	166 628	151 634	138 582	128 537	119 498
45	153,585	615 2326	461 1745	369 1398	307 1163	263 997	230 872	205 755	184 698	168 634	154 582	142 537	132 498
54	184,302	738 2791	554 2094	443 1675	359 1396	316 1196	277 1047	246 930	221 837	201 761	185 696	170 644	158 598

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.	
	gal.	L	A		B		C		in.	cm	lbs.	kgs.
DVE-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
DVE-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
DVE-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	DVE-52-6	DVE-80-6	DVE-120-6	3	2,000	28.8	25.0	21.7	12.5	16.7	14.4	7.2	6.0
9	DVE-52-9	DVE-80-9	DVE-120-9	3	3,000	43.3	37.5	32.5	18.8	25.0	21.7	10.8	9.0
12	DVE-52-12	DVE-80-12	DVE-120-12	3	4,000	57.7	50.0	43.3	25.0	33.3	28.9	14.4	12.0
13.5	DVE-52-13.5	DVE-80-13.5	DVE-120-13.5	3	4,500	64.9	56.3	48.7	28.1	37.5	32.5	16.2	13.5
15	DVE-52-15	DVE-80-15	DVE-120-15	3	5,000	72.1	62.5	54.2	31.3	41.6	36.1	18.0	15.0
18	DVE-52-18	DVE-80-18	DVE-120-18	3*	6,000	86.5	75.0	65.0	37.5	50.0	43.3	21.7	18.0
24	DVE-52-24	DVE-80-24	DVE-120-24	6	4,000	115.4	100.0	86.6	50.0	66.6	57.7	28.9	24.0
27	DVE-52-27	DVE-80-27	DVE-120-27	6	4,500	129.8	112.5	97.5	56.3	74.9	65.0	32.5	27.0
30	DVE-52-30	DVE-80-30	DVE-120-30	6	5,000	144.2	125.0	108.3	62.5	83.3	72.2	36.1	30.0
36	DVE-52-36	DVE-80-36	DVE-120-36	6*	6,000	173.1	150.0	130.0	75.0	99.9	86.6	43.3	36.0
40.5	DVE-52-40.5	DVE-80-40.5	DVE-120-40.5	9	4,500	194.7	168.8	146.2	84.4	112.4	97.4	48.7	40.5
45	DVE-52-45	DVE-80-45	DVE-120-45	9	5,000	216.3	187.5	162.5	93.8	124.9	108.3	54.1	45.0
54	DVE-52-54	DVE-80-54	DVE-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 Enterprises Limited or equivalent. Heater(s) shall be rated at _____ KW _____ V _____ phase, 60 cycle AC listed by Canadian Standards Association. Tank(s) shall be _____ gallon (Liter) capacity with 150 psi (1034 kPa) working pressure and equipped with dual extruded high density anodes. 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 (760° to 870°C). Electric heating elements shall be medium watt density screw-in type with Incoloy sheath and ceramic terminal block. Internal power circuit fusing shall be provided (optional). Element operation shall be _____ (1. simultaneous; or 2. sequenced with thermostats) switched through individual magnetic contactors. Control circuit shall be factory fused (optional) and include manual reset high temperature cutoff switch and thermostat with sensing element in tin-plated well, immersed in water. Control cabinet and jacket shall be of baked enamel finish and shall provide full size control and element compartment for complete service and maintenance performance through front hinged compartment door, and enclose tank with foam insulation. 1 1/4" (npt) inlet and outlet connection shall be provided. The heater tank shall have a three year limited warranty and controls and accessories shall have a one year limited warranty as outlined in the written warranty. Fully illustrated instruction manual to be included. For multiple installation, factory built manifold kits for _____ heater installation (maximum of 4 heaters) shall be provided. Meets ASHRAE 90.1b-1992.

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