

A.O. SMITH

Designed for use as a recovery heater having its own storage tank. Available in upright standard models (DEN) and lowboy models (DEL).

FEATURES

GLASS-LINED TANK - Thirteen sizes; 6 thru 119 gallon capacity. Tank interior is coated with glass specially developed by A. O. Smith Ceramic Research for water heater use. Tanks rated 150 psi working pressure; tested at 300 psi. Foam insulation provides maximum energy savings by minimizing radiant standby heat loss.

ELEMENTS - Zinc plated copper sheaths for longer life. Medium watt density; means lower surface temperature to minimize scale build-up and more surface to heat water. Element sizes from 1.5 to 6 KW. Maximum input 12 KW (see chart on back).

STANDARD VOLTAGES - 120, 277 single phase and 208, 240 and 480V unbalanced three-phase delta; easily converted to single-phase at terminal block (except 208V with 6000 watt elements). Single element heater, single-phase only.

TERMINAL BLOCK - Factory installed. Just bring the service to heater and connect to block. Terminal block not supplied on 120V & 277 volt models.

CONTROLS - Temperature control (adjustable through a range of 110° to 170°F on single element and 120° to 180°F on dual element) and manual reset high temperature cutoff per element (dual element models). Factory wired for non-simultaneous operation; easily converted to simultaneous element operation (three phase models only).

OPTIONAL

GOLDENROD ELEMENTS - All DEN & DEL 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.

ELEMENT AVAILABILITY CHART

Input	120V	208V	240V	277V	480V
1,500	YES	YES	YES	YES	---
2,000	YES	YES	YES	YES	YES
2,500	YES	YES	YES	YES	YES
3,000	YES	YES	YES	YES	YES
3,500	---	---	YES	---	---
4,000	---	YES	YES	YES	YES
4,500	---	YES	YES	YES	YES
5,000	---	YES*	YES*	YES*	YES*
5,500	---	---	YES*	---	---
6,000	---	YES**	YES	YES	YES

NOTE: DEL-6 not available in above 2.5 KW.

DEL-6 not available in 480V.

* Not available in DEL-10, DEL-15 and DEN-30.

** A6 non-simultaneous circuit only.

Dura-Power

COMMERCIAL ELECTRIC WATER HEATERS

DEN & DEL MODELS

Meets or exceeds the requirements of ASHRAE 90.1-1999 Standard for energy efficiencies.

See page C 029.0 for service wiring and fuse selection.



DEL MODELS

DEN MODELS

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.

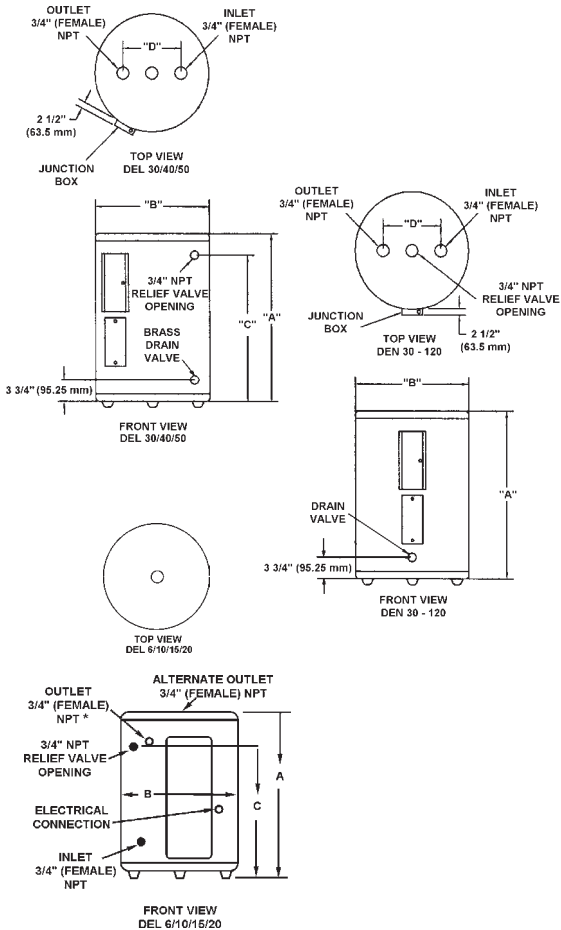
OTHER STANDARD FEATURES

- Simplified circuitry, color coded for ease of service
- Anode rod for maximum corrosion protection
- Cabinet has bonderized undercoat with baked enamel finish
- Top inlet and outlet openings
- Drain valve
- UL approved field conversion program.

ROUGH-IN DIMENSIONS

Models Dimensions	No. of Elements	Tank Capacity		A		B		C		D		Approx. Shipping Weight.	
		US Gals.	Litres	inches	mm	inches	mm	inches	mm	inches	mm	Lbs.	Kg.
DEL-6	1	6	23	15 1/2	394	14 1/4	362	11	279	-	-	35	15.9
DEL-10	1	10	38	18 1/4	464	18	457	12 1/2	318	-	-	54	24.5
DEL-15	1	15	57	26	660	18	457	20 1/2	521	-	-	58	26.3
DEL-20	1	20	76	22 1/4	565	21 3/4	552	15 3/8	391	-	-	73	33.1
DEL-30	2	30	114	30 7/8	784	21 3/4	552	24 1/8	613	8	203	100	45.4
DEL-40	2	40	151	32 1/4	819	24	610	25 9/16	649	8	203	125	56.7
DEL-50	2	50	189	32 1/4	819	26 1/2	673	25 1/8	638	8	203	166	75.3
DEN-30	1	30	114	34 1/2	876	20 1/2	521	-	-	8	203	98	44.5
DEN-40	2	40	151	45 1/8	1146	20 1/2	521	-	-	8	203	113	51.3
DEN-52	2	50	189	54 7/8	1394	20 1/2	521	-	-	8	203	131	59.4
DEN-66	2	66	250	60 3/4	1543	21 3/4	552	-	-	8	203	176	79.8
DEN-80	2	80	303	59 3/8	1508	24	610	-	-	8	203	211	95.7
DEN-120	2	119	450	62 7/16	1586	29 3/8	746	-	-	8	203	326	147.9

ELECTRIC CHARACTERISTICS AND CAPACITIES



Element Wattage Upper/Lower	NON-SIMULTANEOUS AND SINGLE ELEMENT OPERATION					Full Load Current In Amperes Connected to Single Phase Power (All Terminals - L1,L2,&L3)		
	Recovery Capacities GPH @ Temperature Rise Of					208V	240V	480V
	40°	60°	80°	100°	120°			
1500	15	10	8	6	5	7.2	6.3	3.2
2000	21	14	10	8	7	9.6	8.3	4.2
2500	26	18	13	10	9	12.0	10.4	5.2
3000/3000	31	20	15	12	10	14.4	12.5	6.3
4000/4000	41	27	20	16	14	19.2	16.7	8.3
4500/4500	46	31	23	18	15	21.6	18.8	9.4
5000/5000	51	34	26	20	17	24.0	20.8	10.4
6000/6000	61	41	31	25	20	28.8	25.0	12.5
Element Wattage Upper/Lower	SIMULTANEOUS DUAL ELEMENT OPERATION (both elements on when entire tank is cold)					Full Load Current In Amperes Connected to Three Phase Power (Terminal L2/Terminals L1 & L3)		
	Recovery Capacities GPH @ Temperature Rise Of					208V	240V	480V
	40°	60°	80°	100°	120°			
3000/3000	61	41	31	24	20	25.0/14.4	21.7/12.5	10.8/6.3
4000/4000	81	54	41	33	27	33.3/19.2	28.9/16.7	14.4/8.3
4500/4500	91	61	45	37	31	37.5/21.6	32.5/18.8	16.2/9.4
5000/5000	102	68	51	41	34	41.6/24.0	36.1/20.8	18.0/10.4
6000/6000	122	81	61	49	41	N/A	43.3/25.0	21.7/12.5

Recovery capacities at 100°F rise equal: for non-simultaneous element operation - 4.1 gal. x KW of one element; for simultaneous element operation - 4.1 gal. x 2/3 KW of both elements. For other rises multiply element KW as previously explained by 410 and divide by temperature rise. Full load current for single phase = total watts ÷ voltage.

SUGGESTED SPECIFICATIONS

The water heater(s) shall be Dura-Power Model(s) No. _____ 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 rod. 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 1600°F. Electric heating elements shall be medium watt density with zinc plated copper sheath. Each element shall be controlled by an individually mounted thermostat and high temperature cutoff switch. 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 panels and shall enclose the tank with foam insulation. Electrical junction box with heavy duty terminal block shall be provided (except on 120V & 277V [no junction box on DEL-6 thru 20]). 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. Fully illustrated instruction manual to be included.

A.O. Smith Water Products Co., Inc. On Line
www.aosmithwaterheaters.com

For Technical Information and
Automated Fax Service,
Phone: 800-527-1953

A. O. Smith
Water Products Company
Ashland City, TN
A Division of A. O. Smith Corporation

A. O. Smith Corporation reserves the right to make product changes or improvements at any time without notice.