

SHOP DRAWING PACKAGE

Prepared for

CONSULT MECHANICAL

Alterations Shoppers
Drug Mart
Nashville Heights
Kleinburg

For Water Heater and Hot Water Storage Tank Applications

Job Name	Contractor
	Approval
Job Location	
Engineer	Contractor's P.O. No.
Approval	Representative

LEAD FREE*

Series PLT

Potable Water Expansion Tanks

Series PLT Potable Water Expansion Tanks are designed to absorb the increased volume of water created by thermal expansion and to maintain balanced pressure throughout the potable water supply system.

Heated water expands, and in a domestic hot water system, the system may be closed when the potable water system is isolated from the public water supply by a one-way valve such as pressure reducing valve, backflow preventer or check valve. Provisions must be made for this expansion.

Series PLT expansion tanks absorb the increased volume of water created when the hot water storage tank is heated and keeps the system pressure below the relief setting of the T&P relief valve.

It is a pre-pressurized steel tank with an expansion membrane that prevents contact of the water with the air in the tank. This prevents loss of air to the water and insures long and trouble-free life for the system. These tanks may be used with all types of Direct Fired Hot Water Heaters (gas, oil or electric) and hot water storage tanks.

Features

- Rugged flexible butyl diaphragm
- Field adjustable pre-charge
- In-line and free standing models
- Can be used with most standard hot water heaters and storage tanks

Models

T-5-M1 has 3/4" male connection, tank volume 2.1 gal. PLT-12-M1 has 3/4" male connection, tank volume 4.5 gal. PLT-20-M1 has 3/4" male connection, tank volume 8.5 gal. PLT-35-M1 has 1" female connection, tank volume 14.00 gal.

Specifications

The potable water expansion tank shall be of drawn steel construction. It shall have a Butyl diaphragm separating the air chamber from the water containing chamber. Inlet connector shall be Stainless Steel. Materials of manufacture for the diaphragm shall be FDA approved.

The potable water expansion tank shall be a Watts Model PLT.

*The wetted surface of this product contacted by consumable water contains less than one quarter of one percent (0.25%) of lead by weight.



Standards

Models PLT-5, PLT-12 and PLT-20 are Listed by IAPMO.

Certified to ANSI/NSF 61 **Model PLT-35**

Certified to ANSI/NSF 61

P



(73°F/23°C)

Note: The potable water expansion tank shall be installed in the cold water service pipe line on the supply side of the water heater (or water storage tank). A pressure relief valve sized and installed in accordance with local codes must be incorporated in the system.

In those systems requiring a combined temperature and pressure safety relief valve, the temperature and pressure relief valve should be sized and installed in accordance with local codes. Adequate drainage provisions should be provided where water flow will cause damage.

See chart on back

Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.



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Selection

This Quick Reference Selection Guide may be used as an alternative to using a formula to determine the correct expansion tank for the system. This table is based upon a relief valve setting of 150psi (10.3 bar),

and a maximum of 50°F temperature rise.

To select the correct model PLT series tank, simply go the supply pressure equal to the system supply pressure (for pressures between those shown use next highest supply pressure shown), read across the chart to the correct tank as indicated by the water heater capacity (for capacities between those shown, use next highest capacity).

To accommodate the thermal expansion required for higher temperature and/or higher pressure systems, multiple tanks may be used. Please contact the factory for sizing information.

Materials

Diaphragm: Butyl rubber

Inlet Connection: Stainless Steel

SUPPLY **WATER HEATER (GALLONS)** 20 120 (PSIG) 40 50 55 60 70 80 90 100 110 120 PLT-20 PLT-5 PLT-12 PLT-35 Multiple tanks required - consult factory

Watts

Vacuum

Relief Valve

Watts Service

Check

Valve

Watts PLT

Expansion Tank

Technical Information

Description	PLT-5	PLT-12	PLT-20	PLT-35
Max. Pressure - PSI	150	150	150	150
Max. Temp °F	200	200	200	200
Tank Volume - Gal.	2.1	4.5	8.5	14.00
Air Pre-charge - PSI	20	20	20	20
Connections Size - Inches	3/4 Male	3/4 Male	3/4 Male	1 Female
Diameter - Inches	8	10.5	12.5	16.0
Length - Inches	11	13.5	19.2	21.7
Weight - Lbs.	5.5	10	15	32

Acceptance Volume

7 toooptan	- Volum				1	Press Gau		N		1\
Air Side Pre-pressure			de Volume i (gallons)			uau	ge		Watts T&P	Watts Seismic
(psi)	PLT-5	PLT-12	PLT-20	PLT-35					Relief Valve	Straps
20	1.48	3.42	7.102	10.69	1					/ '
40	1.26	2.88	5.882	9.17]	Watts	A		Watts	/
60	1.0	2.49	4.705	7.59		Backflow Preventer	八月	III	Drain Tube	Watts
80	.8	1.85	4.009	6.07	Watts	1 Teventer		N		Water
				Cold		ater	Watts Water Pressure Reducing Valve			Heater Stand



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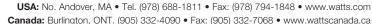
Hot Water to dishwasher

and washing

Tempered Water

Watts Tempering Valves

machine



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PLT-12-M1 has 3/4" male connection, tank volume 4.5 gal. PLT-20-M1 has 3/4" male connection, tank volume 8.5 gal. PLT-35-M1 has 1" female connection, tank volume 14.00 gal.

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Certified to ANSI/NSF 61
Model PLT-35

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(73°F/23°C)

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Materials

Diaphragm: Butyl rubber

Inlet Connection: Stainless Steel

WATER HEATER (GALLONS) SUPPLY 20 120 (PSIG) 40 50 55 60 70 80 90 100 110 120 PLT-5 PLT-20 PLT-12 PLT-35 Multiple tanks required - consult factory

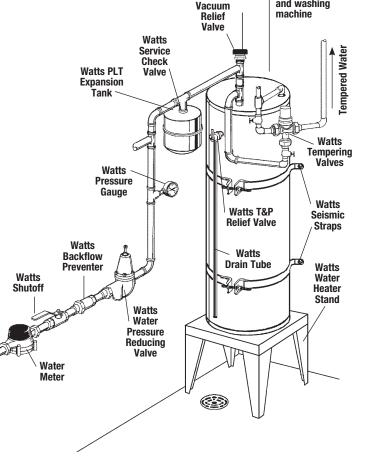
Watts

Technical Information

	/>			
Description	PLT-5	PLT-12	PLT-20	PLT-35
Max. Pressure - PSI	150	150	150	150
Max. Temp °F	200	200	200	200
Tank Volume - Gal.	2.1	4.5	8.5	14.00
Air Pre-charge - PSI	20	20	20	20
Connections Size - Inches	3/4 Male	3/4 Male	3/4 Male	1 Female
Diameter - Inches	8	10.5	12.5	16.0
Length - Inches	11	13.5	19.2	21.7
Weight - Lbs.	5.5	10	15	32

Acceptance Volume

Air Side Pre-pressure	Water Side Volume at 150psi (gallons)								
(psi)	PLT-5	PLT-12	PLT-20	PLT-35					
20	1.48	3.42	7.102	10.69					
40	1.26	2.88	5.882	9.17					
60	1.0	2.49	4.705	7.59					
80	.8	1.85	4.009	6.07					







SO 9001-2008

Hot Water to dishwasher

and washing

A Watts Water Technologies Company

ES-PLT 1027

USA: No. Andover, MA • Tel. (978) 688-1811 • Fax: (978) 794-1848 • www.watts.com Canada: Burlington, ONT. (905) 332-4090 • Fax: (905) 332-7068 • www.wattscanada.ca

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Submittal

Ref. #: SQO093469_1

Wet rotor Circulator

Model: Series Compass H20-20 SS(0-10V)

Project name: Representative: Sina Azami

Location: Phone number:

Date submitted: 3/5/2025 10:02 PM e-mail: sazami@armstrongfluidtechnology.com

Engineer: Submitted by: Azami, Sina

Application design data

Tag number:	P-1	Pipe orientation:	Single
Service:			
Location:		Fluid:	Potable Water
Quantity:	1		
Total system flow:	3 USgpm	Viscosity:	31 SSU
System head:	4 ft	Specific gravity:	1.0000
Environment:	Indoors	Safety factor % head:	0 %
Total dissolved solids:	0 ppm	Impeller diameter:	1.25 in
PEIvI:	Not applicable	ERvI:	Not applicable
Efficiency at Design:	N/A	Absorbed Power/BHP:	N/A
NPSHR:	0	%Mtr Safety*:	N/A
Outlet velocity:	N/A	Listing:	ETL and NSF-61 & 372 listed for US and Canada

^{*}Motor safety factor above duty point.

Materials of construction

Construction:	Stainless Steel	Impeller:	Noryl	
Rating:	ANSI-125	Pump shaft:	Ceramic	
Connections:	Inlet: 1 in, Outlet: 1 in	Bearings:	Ceramic	
Casing (volute):	Stainless Steel	Gasket:	EPDM	

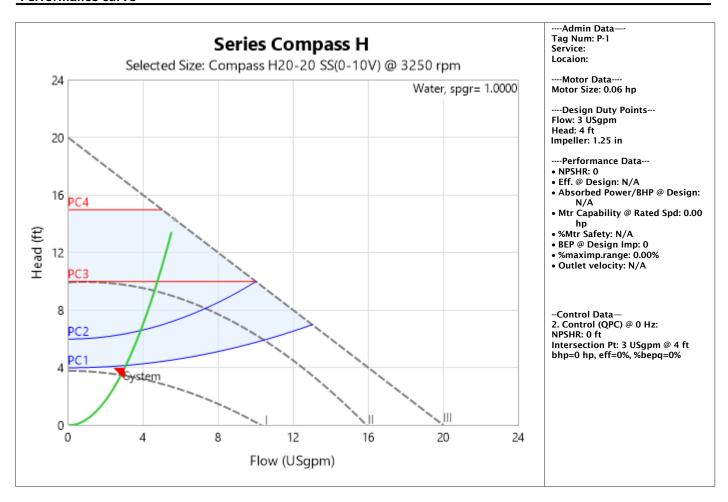
Motor electrical data

Supplier:	Factory Choice	Insulation class:	Class F Insulation
Size:	0.06 hp	Inverter motor type:	Permanent Magnet ECM
Frame size:	Not applicable	Efficiency:	ECM
Enclosure:	ODP	Operating speed @ 100% flow:	3250 rpm
Motor power supply:	115/1/60	Operating speed @ 50% flow***:	N/A rpm

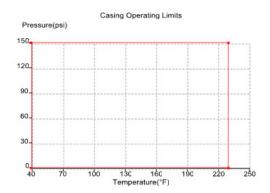
^{***}Based on minimum pressure setting of 40% of design head.



Performance curve



Operating limits (temperature - pressure)



Maximum pressure: 150 psi

Maximum temperature: 230 °F

All Pump casings are hydrostatically tested to requirements of ANSI/HI 14.6 standard.

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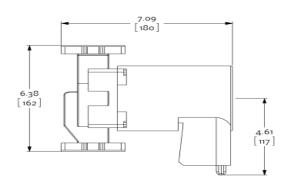


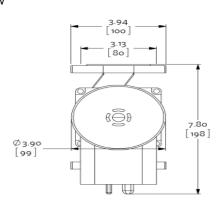
Design envelope pumping unit capability

Operating point	Flow	Head	Efficiency
Full capability at 100% design flow	3 USgpm	0 ft	0
Design point	3 USgpm	4 ft	N/A
50% average flow (with default load profile)	0 USgpm	0 ft	0 %

Dimensional data (not for construction)

Side view Top view





Weight: 8 lb [3.63 kg], Units of measure: inches [millimeters]

- R = minimum lifting clearance required above motor
- · Coupling guard and flush line (not shown) are supplied
- Tolerance of \pm 0.125 inch (\pm 3 mm) should be used
- · For certified dimensions, please contact your Armstrong representative
- Pump equipped with casing drain plug and $\mbox{\em 14}$ inch NPT suction and discharge gauge ports

Selected options

Companion Flange Kit- Stainless Steel 1" FS2 $\,$



Commercial Electric Water Heaters

DURA-POWER™

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

GLASSLINED TANK

 Thirteen sizes; 6 thru 119 gallon capacity. Tank interior is coated with glass specially designed by A. O. Smith for water heater use.

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).

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 5500 watt elements). Single element heaters, single-phase only.

TERMINAL BLOCK

 Factory-installed. Just bring the service to heater and connect to block. Terminal block not supplied on 120V & 277V models. (No junction box on DEL6-20)

CONTROLS

 Temperature control (adjustable through a range of 110° to 170°F on single element and 120° to 181°F on dual element) and manual reset high temperature cutoff per element.

CSA CERTIFIED AND ASME RATED T&P RELIEF VALVE

SIMPLIFIED CIRCUITRY, COLOUR CODED FOR EASE OF SERVICE

ANODE ROD FOR MAXIMUM CORROSION PROTECTION

CABINET HAS BONDERIZED UNDERCOAT WITH BAKED ENAMEL FINISH

DRAIN VALVE (EXCLUDES DEL 6-20)

UL APPROVED FIELD CONVERSION PROGRAM

COMPLIANCE

 Meets the standby loss requirements of NRCan and current edition of ASHRAE/IES 90.1.

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, labour, handling and local delivery extra. THIS OUTLINE IS NOT A WARRANTY. For complete information consult the written warranty or A. O. Smith.



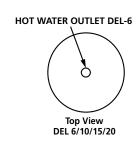


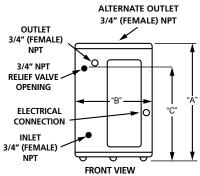






Commercial Electric Water Heaters



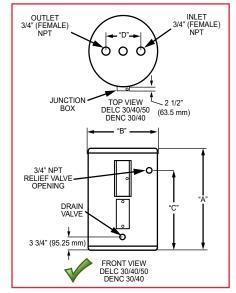


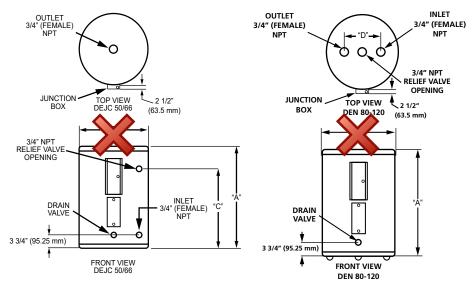
DEL 6/10/15/20
*(NO SIDE OUTLET AVAILABLE FOR DEL-6 MODELS)

ROUGH-IN DIMENSIONS

MODEL	NO. OF CAI		NK CITY	STANDBY LOSS	ı	4	Е	3	C		С)	SHIP WEI	
NUMBER	ELEMENTS	USG	L	WATTS	IN	MM	IN	MM	IN	MM	IN	MM	LB	KG
DEL-6	1	6	23	N/A	15-1/2	394	14-1/4	362	11	279	N/A	N/A	35	16
DEL-10	1	10	37	N/A	18-1/4	464	18	457	12-1/2	318	N/A	N/A	54	25
DEL-15	1	13	49	49	26	660	18	457	20-1/2	521	N/A	N/A	58	26
DEL-20	1	19	74	54	22-1/4	565	21-3/4	552	15-3/8	391	N/A	N/A	73	33

* No side outlet available on DEL-6 Model





ROUGH-IN DIMENSIONS

	ROOGH-IN DIMENSIONS														
MODEL NUMBER		NO. OF	TANK CAPACITY		STANDBY LOSS	Α		В		С		D		SHIPPING WEIGHT	
		ELEMENTS	USG	L	WATTS	IN	ММ	IN	MM	IN	MM	IN	ММ	LB	KG
V	DELC-30	2	27	103	46	31-5/8	803	24	610	21-15/16	557	8	203	120	54
	DELC-40	2	36	138	53	33-7/8	860	26	660	23-7/8	606	8	203	115	52
	DELC-50	2	50	190	63	36	914	26-1/2	673	26-1/8	664	8	203	175	79
	DENC-30	2	29	109	47	39-7/8	1013	22	559	30-7/16	773	8	203	100	45
	DENC-40	2	38	145	54	49-7/8	1267	20-1/2	521	40-3/4	1035	8	203	103	47
	DEJC-50	2	49	184	77	48-1/4	1226	22	559	40-5/16	1024	Side Inlets	-	127	58
	DEJC-66	2	63	237	87	60-1/2	1537	22	559	52-3/4	1340	Side Inlets	-	150	68
	DEN-80	2	75	284	86	59-3/8	1508	24	610	N/A	N/A	8	203	211	96
	DEN-120	2	113	428	146	62-7/16	1586	29-3/8	746	N/A	N/A	8	203	326	148

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ELEMENT AVAILABILITY CHART (LIGHT-DUTY COMMERCIAL ELECTRIC)

MODELS & ELEMENTS	VOLTAGE	WIRING		KW INPUT AVAILABLE								
	120V	-	1.5	2	2.5	3						
	208V	-	1.5	2	2.5	3						
6-GALLON MODELS SINGLE-ELEMENT	240V	-	1.5	2	2.5	3						
	277V	-	1.5	2	2.5	3						
	480V	-		2	2.5	3						
	120V	-	1.5	2	2.5	3						
10-GALLON THROUGH	208V	-	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
20-GALLON	240V	=	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
MODELS SINGLE-ELEMENT	277V	-	1.5	2	2.5	3		4	4.5	5		6
	480V	-		2	2.5	3		4	4.5	5	5.5	6
	120V	Interlock	1.5	2	2.5	3						
		Simultaneous	3	4	5	†						
	208V	Interlock	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
30-GALLON	2000	Simultaneous	3	4	5	6	7	8	9	10**	11**	†
THROUGH 120-GALLON	240V	Interlock	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
MODELS	2401	Simultaneous	3	4	5	6	7	8	9	10	11	12**
DOUBLE-ELEMENT	277V	Interlock	1.5	2	2.5	3		4	4.5	5		6
	2//٧	Simultaneous	3	4	5	6		8	9	10		12
	480V	Interlock		2	2.5	3		4	4.5	5	5.5	6
	4001	Simultaneous		4	5	6		8	9	10	11	12

6 gallon model not available above 3kW

6/10/15/20 gallon models all A6 circuit (2 wire) only

ELECTRIC CHARACTERISTICS

						FLECTRIC	CHARAC	TEDICTIC	·c						
						ELECTRIC	. CHARAC	TERISTIC	.5						
NON SIMULTANEOUS AND SINGLE ELEMENT OPERATION 6 - 120 GALLON						EOUS DU NGLE PH <i>A</i> 30 - 1		IECTION)			SIMULTANEOUS DUAL ELEMENT OPERATION (UNBALANCED THREE PHASE CONNECTION) 30 - 120 GALLON				
ELEMENT WATTAGE					ELEMENT WATTAGE			RENT IN A LS - L1, I	AMPERES L2)	ELEMENT WATTAGE	FULL LOAD CURRENT IN AMPERES (TERMINALS - L2 / TERMINAL L1 & L3)				
Upper/Lower	120V	208V	240V	480V	Upper/Lower	120V	208V	240V	480V	Upper/Lower	208V	240V	480V		
1500	12.5	7.2	6.3	3.2	1500/1500	25.0	14.4	12.5	6.3	1500/1500	12.4/7.2	10.8/6.3	5.4/3.2		
2000	16.7	9.6	8.3	4.2	2000/2000	33.4	19.2	16.6	8.3	2000/2000	16.6/9.6	14.4/8.3	7.2/4.2		
2500	20.8	12.0	10.4	5.2	2500/2500	41.6	24	20.8	10.4	2500/2500	20.8/12.0	18.0/10.4	9.0/5.2		
3000/3000	25.0	14.4	12.5	6.3	3000/3000	N/A	28.8	25	12.5	3000/3000	25.0/14.4	21.6/12.5	10.8/6.3		
4000/4000	N/A	19.2	16.7	8.3	4000/4000	N/A	38.4	33.3	16.6	4000/4000	33.3/19.2	28.8/16.7	14.4/8.3		
4500/4500	N/A	21.6	18.8	9.4	4500/4500	N/A	43.2	37.5	18.75	4500/4500	37.4/21.6	32.4/18.8	16.2/9.4		
5000/5000	N/A	24.0	20.8	10.4	5000/5000	N/A	N/A	41.6	20.8	5000/5000	41.6/24.0	36.0/20.8	18.0/10.4		
6000/6000	N/A	28.8	25.0	12.5	6000/6000	N/A	N/A	N/A	25	6000/6000	N/A	43.3/25.0	21.6/12.5		

[†] Exceeds maximum amp draw.

** Simultaneous only in 3ph



Commercial Electric Water Heaters

RECOVERY CAPACITIES

ELEMENT	INIDIIT				U. S. GALL	ONS/HR AN	D LITRES/HI	R AT TEMPE	RATURE RIS	E INDICATE	D				
WATTAGE (UPPER/	INPUT	F°	36	40	54	60	72	80	90	100	108	120	126		
LOWER)	KW	C°	20	22.2	30	33.3	40	44.4	50	55.5	60	66.6	70		
NON-SIMUL	NON-SIMULTANEOUS OPERATION														
/1500	1.5	GPH	17	15	11	10	8	8	7	6	6	5	5		
/1500	1.5	LPH	64	58	43	38	32	29	26	23	21	19	18		
/2000	2	GPH	23	20	15	14	11	10	9	8	8	7	6		
/2000	2	LPH	85	77	57	51	43	38	34	31	28	26	24		
/2500	2.5	GPH	28	25	19	17	14	13	11	10	9	8	8		
72300	2.3	LPH	107	96	71	64	53	48	43	38	36	32	30		
3000/3000	3	GPH	34	30	23	20	17	15	14	12	11	10	10		
3000/3000	3	LPH	128	115	85	77	64	58	51	46	43	38	37		
3500/3500	3.5	GPH	40	36	26	24	2	18	16	14	13	12	11		
3300/3300	3.3	LPH	151	136	98	90	75	68	60	52	49	45	41		
4000/4000	4	GPH	45	41	30	27	23	20	18	16	15	14	13		
4000/4000	4	LPH	170	153	114	102	85	77	68	61	57	51	49		
4500/4500	4.5	GPH	51	46	34	30	25	23	20	18	17	15	14		
4300/4300	4.3	LPH	192	173	128	115	96	86	77	69	64	58	55		
5000/5000	5	GPH	56	51	38	34	28	25	23	20	19	17	16		
3000/3000	ر	LPH	213	192	142	128	107	96	85	77	71	64	61		
5500/5500	5.5	GPH	63	56	42	37	31	28	25	22	21	18	18		
3300/3300	5.5	LPH	238	211	158	140	117	105	94	83	79	68	68		
6000/6000	6	GPH	68	61	45	41	34	30	27	24	23	20	19		
0000/0000	0	LPH	256	230	170	153	128	115	102	92	85	77	73		
SIMULTANE	OUS OPER	ATION													
3000/3000	6	GPH	68	61	45	41	34	30	27	24	23	20	19		
3000/3000	Ŭ	LPH	256	230	170	153	128	115	102	92	85	77	73		
3500/3500	7	GPH	80	72	53	48	40	36	32	28	26	24	22		
3300/3300		LPH	302	272	200	181	151	136	121	105	98	90	83		
4000/4000	8	GPH	90	81	60	54	45	41	36	32	30	27	26		
4000/4000	ů	LPH	341	307	227	205	170	153	136	123	114	102	97		
4500/4500	9	GPH	101	91	68	61	51	46	41	36	34	30	29		
4300/4300	, ,	LPH	384	345	256	230	192	173	153	138	128	115	110		
5000/5000	10	GPH	113	101	75	68	56	51	45	41	38	34	32		
3000/3000	10	LPH	426	384	284	256	213	192	170	153	142	128	122		
5500/5500	11	GPH	126	113	84	75	63	56	50	45	42	37	36		
3300/3300	''	LPH	476	427	317	283	238	211	189	170	158	140	136		
6000/6000	12	GPH	135	122	90	81	68	61	54	49	45	41	39		
5500/0000	12	LPH	511	460	341	307	256	230	205	184	170	153	146		

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.

SPECIFICATION

The water heaters(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. Models shall meet the standby loss requirements of NRCan and current edition of ASHRAE/IES 90.1. 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 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 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 backed enamel finish 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.

For Technical Information call 888-599-2837. A. O. Smith Enterprises Ltd. reserves the right to make product changes or improvements without prior notice.



Smith Commercial Electric Water Heaters

lura-Powei

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

GLASS-LINED TANK - Thirteen sizes; 6 thru 119 gallon capacity. Tank interior is coated with glass specially designed by A. O. Smith for water heater use.

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 arange of 110° to 170°F on single element and 120° to 180°Fon 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).

CSA CERTIFIED AND ASME RATED T&P RELIEF VALVE

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 - The 6 through 20 models are UL listed to UL 174 and the 30 through 120 models are listed to UL 1453.

COMPLIANCE - Meets or exceeds the standby loss Requirements of the U.S Department of Energy and current edition of ASHRAE/IESNA 90.1.

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, handeling and local delivery extra. THIS OUTLINE IS NOT A WARRANTY. For complete information consult the written warranty or A. O. Smith Water Products Company.

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.

DEN/DEL MODELS





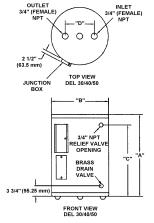
^{*} Not available in DEL-10, DEL-15 and DEN-30.

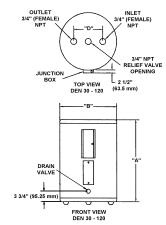
^{**} A6 non-simultaneous circuit only.

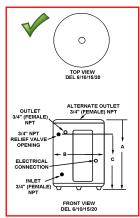


lura-Powei

PRODUCT SPECIFICATIONS







ROUGH-IN DIMENSIONS

Models	No. of	Tank Capacity		А		В		С		D		Shipping Weight.	
Dimensions	ements	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	2	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

RECOVERY CAPACITIES

Element			U.S. Gallons/Hr and Litres/Hr at TEMPERATURE RISE INDICATED												
Wattage	INPUT	F°	36F°	40F°	54F°	60F°	72F°	80F°	90F°	100F°	108F°	120F°	126F°		
(Upper/Lower)	KW	C°	20C°	22.2C°	30C°	33.3C°	40C°	44.4C°	50C°	55.5C°	60C°	66.6C°	70C°		
NON-SIMULATAN	NON-SIMULATANE S OPERATION														
/1500		GPH	17	15	11	10	8	8	7	6	6	5	5		
	1.5	LPH	64	58	43	38	32	29	26	23	21	19	18		
/2000		GPH	23	20	15	14	- 11	10	9	8	8	7	б		
	2.0	LPH	85	77	57	51	43	38	34	31	28	26	24		
/2500		GPH	28	25	19	17	14	13	11	10	9	8	8		
	2.5	LPH	107	96	71	64	53	48	43	38	36	32	30		
3000/3000		GPH	34	30	23	20	17	15	14	12	11	10	10		
	3.0	LPH	128	115	85	77	64	58	51	46	43	38	37		
4000/4000		GPH	45	41	30	27	23	20	18	16	15	14	13		
	4.0	LPH	170	153	114	102	85	77	68	61	57	51	49		
4500/4500		GPH	51	46	34	30	25	23	20	18	17	15	14		
	4.5	LPH	192	173	128	115	96	86	77	69	64	58	55		
5000/5000		GPH	56	51	38	34	28	25	23	20	19	17	16		
	5.0	LPH	213	192	142	128	107	96	85	77	71	64	61		
6000/6000		GPH	68	61	45	41	34	30	27	24	23	20	19		
	6.0	LPH	256	230	170	153	128	115	102	92	85	77	73		
SIMULATANEOU	S OPERA	TION										•			
3000/3000		GPH	68	61	45	41	34	30	27	24	23	20	19		
	6	LPH	256	230	170	153	128	115	102	92	85	77	73		
4000/4000		GPH	90	81	60	54	45	41	36	32	30	27	26		
	8	LPH	341	307	227	205	170	153	136	123	114	102	97		
4500/4500		GPH	101	91	68	61	51	46	41	36	34	30	29		
	9	LPH	384	345	256	230	192	173	153	138	128	115	110		
5000/5000		GPH	113	101	75	68	56	51	45	41	38	34	32		
	10	LPH	426	384	284	256	213	192	170	153	142	128	122		
6000/6000		GPH	135	122	90	81	68	61	54	49	45	41	39		
	12	LPH	511	460	341	307	256	230	205	184	170	153	146		

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 SPECS

The water heaters(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. Models shall meet or exceed the standby loss requirements of the U.S. Department of energy and current edition of ASHRAE/IESNA 90.1. Tank(s) shall be _____ gallon capacity. Heater(s) shall have 150 psi working pressure and be equipped with extruded high density anode rod. All 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 backed 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 value 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.

For Technical Information and Automated Fax Service, call 800-527-1953. A. O. Smith Corporation reserves the right to make product changes or improvements without prior notice.