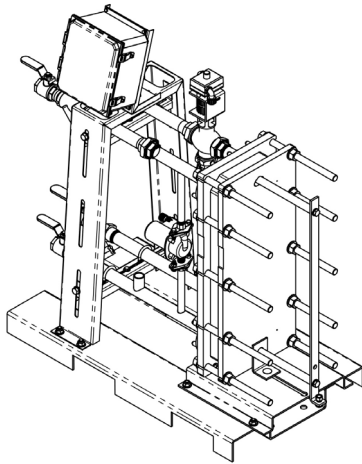


COMMERCIAL INDIRECT WATER HEATER, MODEL LP

LAARS-PLATE™

Submittal Data



Date:

Project #:

Engineer:

Prepared By:

Bid Date:



Project Name:

Location:

Contractor:

Standard Features

- ASME section VIII stamped
- Rated in accordance with ANSI/AHRI Standard 400
- Advanced electronic PID controls with 4.3" color touchscreen
- Compatible with BMS via Modbus IP or BACnet IP
- Data logging
- Fault log
- Trending / graphing
- +/- 4°F temp control with 5°F approach temperature
- Audible over-temp alarm
- Completely skid-mounted and wired
- Control panel rotates 180° for easy readability
- Double-wall stainless steel construction
- Fully modulating electronic 3-way control valve
- 150 psi temperature & pressure relief valve
- Backflush connections
- Isolation valves
- Temperature gauge
- Drain valve
- Inlet strainer
- Compatible with condensing and non-condensing boilers
- 5-year heat exchanger warranty.

Model Data

Number of Units:

Model:

- LP-18D
- LP-26D
- LP-36D
- LP-52D
- LP-80D

Specifications

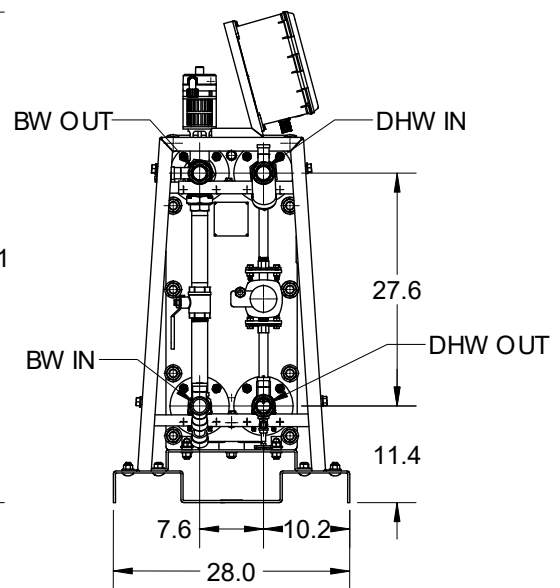
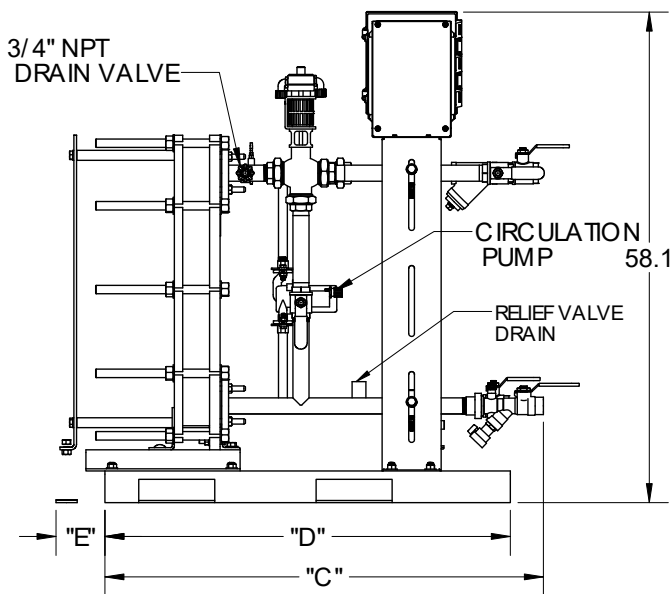
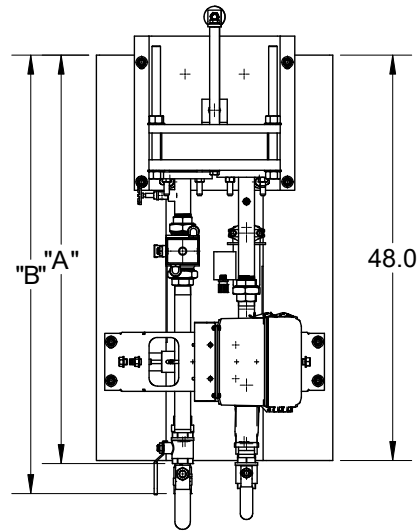
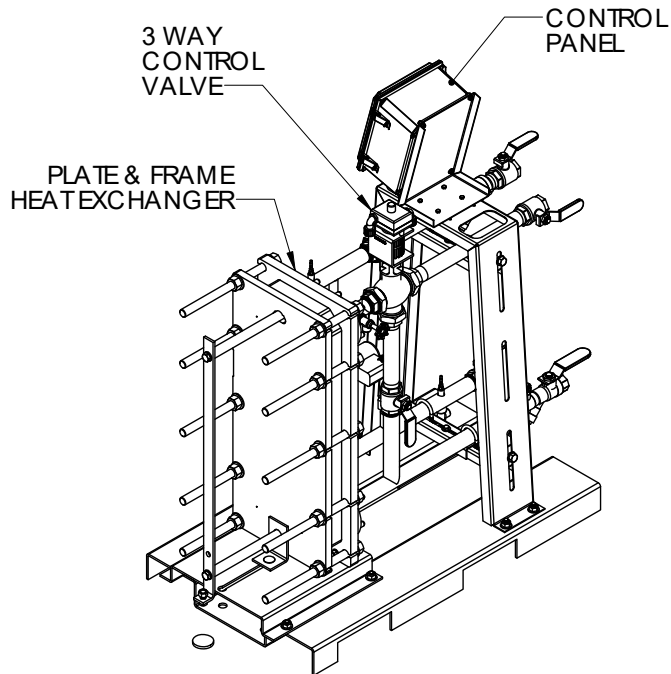
Model	LP-18D	LP-26D	LP-36D	LP-52D	LP-80D
Electrical Requirements	120V Single Phase 60Hz				
Standby Amperage Draw	2 Amps				
Full Load Amperage Draw	2 Amps				
Ambient Temperature	32-110°F				
Max. Continuous DHW Water Flow	90 gpm				
Max. Boiler Water Pressure & Temp	150 psig @ 220°F				
Max. Domestic Water Pressure	150 psig				
Adjustable Temp Control Set Point	Up to 180°F				
Accuracy	+/- 4°F				
Water Inlet/Outlet Connection Sizes	1½" FNPT			2" FNPT	
Estimated Shipping Weight	934 lbs	963 lbs	1024 lbs	1082 lbs	1315 lbs



Customer Service and Product Support: 800.900.9276 • Fax 800.559.1583
 Headquarters: 20 Industrial Way, Rochester, NH, USA 03867 • 603.335.6300 • Fax 603.335.3355
 9 Brigden Gate, Halton Hills, Ontario, Canada L7G 0A3 (905) 203-0600 Fax: (905) 636-0666
www.Laars.com

Dimensional Data

Model	"A" inches	"B" inches	"C" inches	"D" inches	"E" inches	Water Connections NPT
LP-18D	47.5	51.8	51.5	47.8	5.8	1½"
LP-26D	47.5	51.8	51.5	47.8	5.8	1½"
LP-36D	48.6	52.5	52.8	48.4	5.8	2"
LP-52D	48.6	52.5	52.8	48.4	5.8	2"
LP-80D	48.6	52.5	52.8	48.4	13.6	2"



Performance Data

Note: Most system designers will opt to keep the pressure on the domestic water side at 10 PSIG or lower. Shaded parameters are those with higher than usual pressure.

Domestic Water Temperature Rise °F	Heat Exchanger Inlet Water Temp From Boiler °F	Laars Plate Model	Domestic Water		Boiler Water		
			Water Flow gpm	Pressure Drop PSIG	Water Flow gpm	Temp Back to Boiler °F	Pressure Drop PSIG
40-120	125	LP-18D	12	2	33	96	8
		LP-26D	17	1	41	92	8
		LP-36D	24	1	57	92	8
		LP-52D	32	1	67	87	8
		LP-80D	40	1	74	82	8
	130	LP-18D	16	2	33	92	8
		LP-26D	22	2	41	88	8
		LP-36D	31	2	57	87	8
		LP-52D	41	2	67	82	8
		LP-80D	51	2	74	75	8
	140	LP-18D	22	4	33	87	8
		LP-26D	30	3	41	82	8
		LP-36D	42	3	57	82	8
		LP-52D	54	3	67	76	8
		LP-80D	66	3	74	69	8
	150	LP-18D	27	5	33	85	8
		LP-26D	36	5	41	80	8
		LP-36D	51	5	57	79	8
		LP-52D	66	4	67	72	8
		LP-80D	78	4	74	66	8
	160	LP-18D	32	7	33	83	8
		LP-26D	42	5	41	79	8
		LP-36D	60	6	57	76	8
		LP-52D	76	5	67	70	8
		LP-80D	90	5	74	63	8
	170	LP-18D	36	8	33	83	8
		LP-26D	48	7	41	77	8
		LP-36D	68	7	57	75	8
		LP-52D	85	7	67	69	8
		LP-80D	101	6	74	61	8
	180	LP-18D	41	9	33	81	8
		LP-26D	54	8	41	75	8
		LP-36D	75	9	57	75	8
		LP-52D	95	8	67	67	8
		LP-80D	111	7	74	60	8
	190	LP-18D	45	11	33	81	8
		LP-26D	59	10	41	75	8
		LP-36D	83	11	57	74	8
		LP-52D	104	10	67	66	8
		LP-80D	121	8	74	60	8
	200	LP-18D	49	13	33	82	8
		LP-26D	65	12	41	74	8
		LP-36D	90	12	57	74	8
		LP-52D	112	11	67	67	8
		LP-80D	131	9	74	59	8
	210	LP-18D	49	13	33	92	8
		LP-26D	70	14	41	74	8
		LP-36D	97	14	57	74	8
LP-52D		121	13	67	66	8	
LP-80D		141	10	74	58	8	
220	LP-18D	49	13	33	102	8	
	LP-26D	74	15	41	76	8	
	LP-36D	105	16	57	73	8	
	LP-52D	130	15	67	65	8	
	LP-80D	151	12	74	57	8	

Performance Data, Cont.

Note: Most system designers will opt to keep the pressure on the domestic water side at 10 PSIG or lower. Shaded parameters are those with higher than usual pressure.

Domestic Water Temperature Rise °F	Heat Exchanger Inlet Water Temp From Boiler °F	Laars Plate Model	Domestic Water		Boiler Water		
			Water Flow gpm	Pressure Drop PSIG	Water Flow gpm	Temp Back to Boiler °F	Pressure Drop PSIG
40-130	135	LP-18D	12	2	33	103	8
		LP-26D	16	1	41	100	8
		LP-36D	23	1	57	99	8
		LP-52D	31	1	67	94	8
		LP-80D	40	1	74	87	8
	140	LP-18D	15	2	33	100	8
		LP-26D	21	2	41	94	8
		LP-36D	30	2	57	93	8
		LP-52D	40	2	67	87	8
	150	LP-80D	49	2	74	81	8
		LP-18D	21	3	33	93	8
		LP-26D	28	3	41	89	8
		LP-36D	40	3	57	87	8
	160	LP-52D	52	3	67	81	8
		LP-80D	63	3	74	74	8
		LP-18D	26	5	33	90	8
		LP-26D	34	4	41	86	8
	170	LP-36D	48	4	57	85	8
		LP-52D	63	4	67	76	8
		LP-80D	75	3	74	69	8
		LP-18D	30	6	33	89	8
	180	LP-26D	40	5	41	83	8
		LP-36D	56	6	57	82	8
		LP-52D	71	5	67	75	8
		LP-80D	85	4	74	67	8
		LP-18D	34	6	33	88	8
	190	LP-26D	45	6	41	82	8
		LP-36D	64	7	57	79	8
		LP-52D	80	6	67	73	8
		LP-80D	95	5	74	65	8
	200	LP-18D	38	8	33	87	8
		LP-26D	50	7	41	81	8
LP-36D		71	8	57	78	8	
LP-52D		89	7	67	71	8	
LP-80D		104	6	74	64	8	
210	LP-18D	42	10	33	86	8	
	LP-26D	55	9	41	80	8	
	LP-26D	77	9	57	79	8	
	LP-52D	97	8	67	70	8	
	LP-80D	114	7	74	62	8	
220	LP-18D	46	11	33	85	8	
	LP-26D	60	10	41	79	8	
	LP-36D	84	11	57	78	8	
	LP-52D	105	10	67	69	8	
220	LP-80D	123	8	74	61	8	
	LP-18D	49	13	33	87	8	
	LP-26D	65	12	41	78	8	
	LP-36D	91	13	57	77	8	
220	LP-52D	113	11	67	69	8	
	LP-80D	131	9	74	61	8	

Performance Data, Cont.

Domestic Water Temperature Rise °F	Heat Exchanger Inlet Water Temp From Boiler °F	Laars Plate Model	Domestic Water		Boiler Water		
			Water Flow gpm	Pressure Drop PSIG	Water Flow gpm	Temp Back to Boiler °F	Pressure Drop PSIG
40-140	145	LP-18D	11	1	33	112	8
		LP-26D	16	1	41	106	8
		LP-36D	23	1	57	105	8
		LP-52D	30	1	67	101	8
		LP-80D	39	1	74	93	8
	150	LP-18D	15	2	33	105	8
		LP-26D	21	2	41	99	8
		LP-36D	29	2	57	100	8
		LP-52D	39	2	67	92	8
		LP-80D	48	2	74	86	8
	160	LP-18D	20	3	33	100	8
		LP-26D	27	3	41	95	8
		LP-36D	39	3	57	92	8
		LP-52D	49	3	67	87	8
		LP-80D	61	2	74	79	8
	170	LP-18D	24	4	33	98	8
		LP-26D	33	4	41	90	8
		LP-36D	47	4	57	88	8
		LP-52D	59	4	67	82	8
		LP-80D	72	3	74	73	8
	180	LP-18D	29	6	33	93	8
		LP-26D	38	5	41	88	8
		LP-36D	53	5	57	88	8
		LP-52D	69	5	67	78	8
		LP-80D	81	4	74	71	8
	190	LP-18D	32	7	33	94	8
		LP-26D	43	5	41	86	8
		LP-36D	60	6	57	85	8
		LP-52D	76	5	67	77	8
		LP-80D	91	5	74	68	8
	200	LP-18D	36	7	33	91	8
		LP-26D	48	7	41	83	8
		LP-36D	67	7	57	83	8
		LP-52D	84	6	67	75	8
		LP-80D	99	5	74	67	8
	210	LP-18D	40	9	33	89	8
		LP-26D	52	8	41	84	8
		LP-36D	73	8	57	82	8
		LP-52D	92	8	67	73	8
		LP-80D	108	6	74	65	8
220	LP-18D	43	10	33	90	8	
	LP-26D	57	9	41	81	8	
	LP-36D	79	10	57	82	8	
	LP-52D	99	9	67	73	8	
	LP-80D	116	7	74	64	8	
40-150	155	LP-18D	11	1	33	119	8
		LP-26D	16	1	41	113	8
		LP-36D	22	1	57	113	8
		LP-52D	30	1	67	106	8
		LP-80D	39	1	74	98	8
	160	LP-18D	14	2	33	114	8
		LP-26D	20	2	41	107	8
		LP-36D	28	2	57	106	8
		LP-52D	38	2	67	98	8
LP-80D	47	2	74	91	8		

Performance Data, Cont.

Domestic Water Temperature Rise °F	Heat Exchanger Inlet Water Temp From Boiler °F	Laars Plate Model	Domestic Water		Boiler Water			
			Water Flow gpm	Pressure Drop PSIG	Water Flow gpm	Temp Back to Boiler °F	Pressure Drop PSIG	
40-150	170	LP-18D	19	3	33	107	8	
		LP-26D	26	3	41	101	8	
		LP-36D	37	3	57	99	8	
		LP-52D	49	3	67	90	8	
		LP-80D	60	2	74	81	8	
	180	LP-18D	24	4	33	100	8	
		LP-26D	32	4	41	95	8	
		LP-36D	45	4	57	94	8	
		LP-52D	58	4	67	85	8	
	190	LP-18D	27	5	33	100	8	
		LP-26D	37	5	41	91	8	
		LP-36D	51	5	57	92	8	
		LP-52D	66	4	67	82	8	
	200	LP-18D	31	7	33	97	8	
		LP-26D	41	5	41	90	8	
		LP-36D	58	5	57	89	8	
		LP-52D	73	5	67	81	8	
	210	LP-18D	34	6	33	97	8	
		LP-26D	45	6	41	90	8	
		LP-36D	64	7	57	87	8	
		LP-52D	80	6	67	79	8	
	220	LP-18D	38	8	33	94	8	
		LP-26D	50	7	41	86	8	
		LP-36D	69	8	57	87	8	
		LP-52D	87	7	67	78	8	
	40-160	165	LP-18D	11	1	33	125	8
			LP-26D	15	1	41	122	8
			LP-36D	22	1	57	119	8
LP-52D			30	1	67	112	8	
LP-80D			38	1	74	104	8	
170		LP-18D	14	2	33	120	8	
		LP-26D	20	2	41	112	8	
		LP-36D	28	2	57	112	8	
		LP-52D	37	2	67	104	8	
180		LP-18D	19	3	33	111	8	
		LP-26D	26	3	41	104	8	
		LP-36D	36	3	57	105	8	
		LP-52D	47	3	67	96	8	
190		LP-18D	23	4	33	107	8	
		LP-26D	31	3	41	100	8	
		LP-36D	43	4	57	100	8	
		LP-52D	56	3	67	90	8	
200		LP-18D	26	5	33	106	8	
		LP-26D	35	4	41	98	8	
		LP-36D	50	5	57	95	8	
		LP-52D	64	4	67	86	8	
			LP-80D	76	3	74	77	8

Performance Data, Cont.

Domestic Water Temperature Rise °F	Heat Exchanger Inlet Water Temp From Boiler °F	Laars Plate Model	Domestic Water		Boiler Water		
			Water Flow gpm	Pressure Drop PSIG	Water Flow gpm	Temp Back to Boiler °F	Pressure Drop PSIG
40-160	210	LP-18D	30	6	33	101	8
		LP-26D	39	5	41	96	8
		LP-36D	55	5	57	95	8
		LP-52D	71	5	67	83	8
		LP-80D	84	4	74	74	8
	220	LP-18D	33	6	33	100	8
		LP-26D	43	5	41	95	8
		LP-36D	61	6	57	92	8
40-170	175	LP-18D	11	1	33	132	8
		LP-26D	15	1	41	128	8
		LP-36D	22	1	57	125	8
		LP-52D	30	1	67	117	8
		LP-80D	38	1	74	109	8
	180	LP-18D	14	2	33	125	8
		LP-26D	19	2	41	120	8
		LP-36D	27	2	57	119	8
		LP-52D	36	2	67	111	8
		LP-80D	45	2	74	101	8
	190	LP-18D	18	3	33	120	8
		LP-26D	25	2	41	111	8
		LP-36D	35	3	57	111	8
		LP-52D	46	2	67	101	8
		LP-80D	57	2	74	90	8
	200	LP-18D	22	4	33	114	8
		LP-26D	30	3	41	105	8
		LP-36D	42	3	57	105	8
		LP-52D	54	3	67	96	8
		LP-80D	66	3	74	85	8
	210	LP-18D	25	5	33	112	8
		LP-26D	34	4	41	103	8
		LP-36D	48	4	57	101	8
		LP-52D	62	4	67	90	8
		LP-80D	74	3	74	80	8
	220	LP-18D	33	6	33	90	8
		LP-26D	38	5	41	100	8
		LP-36D	53	5	57	100	8
LP-52D		68	4	67	89	8	
LP-80D		81	4	74	78	8	
40-180	185	LP-18D	11	1	33	139	8
		LP-26D	15	1	41	134	8
		LP-36D	22	1	57	131	8
		LP-52D	29	1	67	125	8
		LP-80D	37	1	74	115	8
	190	LP-18D	14	2	33	131	8
		LP-26D	19	2	41	126	8
		LP-36D	27	2	57	124	8
		LP-52D	36	2	67	115	8
		LP-80D	45	2	74	105	8
	200	LP-18D	18	3	33	124	8
		LP-26D	24	2	41	119	8
		LP-36D	35	3	57	115	8
		LP-52D	46	2	67	104	8
		LP-80D	56	2	74	95	8

Performance Data, Cont.

Note: Most system designers will opt to keep the pressure on the domestic water side at 10 PSIG or lower. Shaded parameters are those with higher than usual pressure.

Domestic Water Temperature Rise °F	Heat Exchanger Inlet Water Temp From Boiler °F	Laars Plate Model	Domestic Water		Boiler Water		
			Water Flow gpm	Pressure Drop PSIG	Water Flow gpm	Temp Back to Boiler °F	Pressure Drop PSIG
40-180	210	LP-18D	21	3	33	121	8
		LP-26D	29	3	41	111	8
		LP-36D	41	3	57	110	8
		LP-52D	53	3	67	100	8
		LP-80D	65	3	74	88	8
	220	LP-18D	25	5	33	114	8
		LP-26D	33	4	41	108	8
		LP-36D	47	4	57	105	8
		LP-52D	60	4	67	95	8
		LP-80D	72	3	74	84	8
50-120	125	LP-18D	13	2	33	97	8
		LP-26D	18	2	41	94	8
		LP-36D	25	2	57	94	8
		LP-52D	34	2	67	89	8
		LP-80D	43	1	74	84	8
	130	LP-18D	17	2	33	94	8
		LP-26D	23	2	41	91	8
		LP-36D	33	2	57	89	8
		LP-52D	43	2	67	85	8
		LP-80D	54	2	74	79	8
	140	LP-18D	24	4	33	89	8
		LP-26D	32	4	41	85	8
		LP-36D	45	4	57	85	8
		LP-52D	58	4	67	79	8
		LP-80D	70	3	74	74	8
	150	LP-18D	29	6	33	88	8
		LP-26D	39	5	41	83	8
		LP-36D	55	5	57	82	8
		LP-52D	70	5	67	77	8
		LP-80D	84	4	74	71	8
	160	LP-18D	35	7	33	86	8
		LP-26D	46	6	41	81	8
		LP-36D	64	7	57	81	8
		LP-52D	81	6	67	75	8
		LP-80D	96	5	74	69	8
	170	LP-18D	40	9	33	85	8
		LP-26D	52	8	41	81	8
		LP-36D	73	8	57	80	8
		LP-52D	92	8	67	74	8
		LP-80D	108	6	74	68	8
	180	LP-18D	45	11	33	85	8
		LP-26D	59	10	41	79	8
		LP-36D	82	10	57	79	8
		LP-52D	103	9	67	72	8
		LP-80D	120	8	74	66	8
	190	LP-18D	49	13	33	86	8
		LP-26D	65	12	41	79	8
		LP-36D	91	13	57	78	8
		LP-52D	113	11	67	72	8
		LP-80D	131	9	74	66	8
200	LP-18D	49	13	33	96	8	
	LP-26D	71	14	41	79	8	
	LP-36D	99	15	57	78	8	
	LP-52D	122	13	67	73	8	
	LP-80D	143	11	74	65	8	

Performance Data, Cont.

Note: Most system designers will opt to keep the pressure on the domestic water side at 10 PSIG or lower. Shaded parameters are those with higher than usual pressure.

Domestic Water Temperature Rise °F	Heat Exchanger Inlet Water Temp From Boiler °F	Laars Plate Model	Domestic Water		Boiler Water		
			Water Flow gpm	Pressure Drop PSIG	Water Flow gpm	Temp Back to Boiler °F	Pressure Drop PSIG
50-120	210	LP-18D	49	13	33	106	8
		LP-26D	74	15	41	84	8
		LP-36D	105	16	57	81	8
		LP-52D	132	15	67	72	8
		LP-80D	154	12	74	64	8
	220	LP-18D	49	13	33	116	8
		LP-26D	74	15	41	94	8
		LP-36D	105	16	57	91	8
		LP-52D	142	17	67	72	8
		LP-80D	165	14	74	64	8
50-130	135	LP-18D	12	1	33	106	8
		LP-26D	17	1	41	102	8
		LP-36D	25	2	57	100	8
		LP-52D	33	1	67	96	8
		LP-80D	41	1	74	91	8
	140	LP-18D	16	2	33	101	8
		LP-26D	22	2	41	97	8
		LP-36D	32	2	57	95	8
		LP-52D	42	2	67	90	8
		LP-80D	52	2	74	84	8
	150	LP-18D	22	4	33	97	8
		LP-26D	30	3	41	91	8
		LP-36D	43	4	57	90	8
		LP-52D	55	3	67	84	8
		LP-80D	67	3	74	78	8
	160	LP-18D	28	6	33	92	8
		LP-26D	37	5	41	88	8
		LP-36D	52	5	57	87	8
		LP-52D	66	4	67	81	8
		LP-80D	79	4	74	75	8
	170	LP-18D	32	7	33	92	8
		LP-26D	43	5	41	86	8
		LP-36D	60	6	57	86	8
		LP-52D	76	5	67	79	8
		LP-80D	91	5	74	72	8
	180	LP-18D	37	8	33	90	8
		LP-26D	49	7	41	84	8
		LP-36D	68	7	57	85	8
		LP-52D	86	7	67	77	8
		LP-80D	101	6	74	71	8
	190	LP-18D	41	9	33	91	8
		LP-26D	54	8	41	85	8
		LP-36D	76	9	57	83	8
		LP-52D	95	8	67	77	8
		LP-80D	112	7	74	69	8
	200	LP-26D	60	10	41	83	8
		LP-52D	104	10	67	76	8
		LP-80D	122	8	74	68	8
	210	LP-80D	132	9	74	67	8
	220	LP-18D	46	11	33	95	8
LP-26D		61	11	41	86	8	
LP-36D		85	11	57	86	8	

Performance Data, Cont.

Domestic Water Temperature Rise °F	Heat Exchanger Inlet Water Temp From Boiler °F	Laars Plate Model	Domestic Water		Boiler Water		
			Water Flow gpm	Pressure Drop PSIG	Water Flow gpm	Temp Back to Boiler °F	Pressure Drop PSIG
50-140	145	LP-18D	12	1	33	112	8
		LP-26D	17	1	41	108	8
		LP-36D	24	1	57	107	8
		LP-52D	32	1	67	102	8
		LP-80D	41	1	74	95	8
	150	LP-18D	16	2	33	106	8
		LP-26D	22	2	41	102	8
		LP-36D	31	2	57	101	8
		LP-52D	41	2	67	95	8
		LP-80D	50	2	74	89	8
	160	LP-18D	21	3	33	103	8
		LP-26D	29	3	41	96	8
		LP-36D	41	3	57	95	8
		LP-52D	53	3	67	89	8
		LP-80D	64	3	74	82	8
	170	LP-18D	26	5	33	99	8
		LP-26D	35	4	41	93	8
		LP-36D	49	4	57	93	8
		LP-52D	63	4	67	85	8
		LP-80D	76	3	74	78	8
	180	LP-18D	30	6	33	98	8
		LP-26D	40	5	41	92	8
		LP-36D	57	5	57	90	8
		LP-52D	72	5	67	83	8
		LP-80D	86	4	74	75	8
	190	LP-18D	35	7	33	95	8
		LP-26D	46	6	41	89	9
		LP-36D	64	7	57	89	8
		LP-52D	81	6	67	81	8
		LP-80D	96	5	74	73	8
200	LP-18D	39	8	33	94	8	
	LP-26D	51	7	41	88	9	
	LP-36D	71	8	57	88	8	
	LP-52D	90	7	67	79	8	
	LP-80D	105	6	74	72	8	
210	LP-18D	42	10	33	95	8	
	LP-26D	56	9	41	87	8	
	LP-36D	78	9	57	87	8	
	LP-52D	98	9	67	78	8	
	LP-80D	114	7	74	71	8	
220	LP-52D	106	10	67	78	8	
	LP-80D	123	8	74	70	8	
50-150	155	LP-18D	12	1	33	119	8
		LP-26D	16	1	41	116	8
		LP-36D	23	1	57	115	8
		LP-52D	31	1	67	109	8
		LP-80D	40	1	74	101	8
	160	LP-18D	15	2	33	115	8
		LP-26D	21	2	41	109	8
		LP-36D	30	2	57	107	8
		LP-52D	40	2	67	100	8
LP-80D	49	2	74	94	8		

Performance Data, Cont.

Domestic Water Temperature Rise °F	Heat Exchanger Inlet Water Temp From Boiler °F	Laars Plate Model	Domestic Water		Boiler Water		
			Water Flow gpm	Pressure Drop PSIG	Water Flow gpm	Temp Back to Boiler °F	Pressure Drop PSIG
50-150	170	LP-18D	20	3	33	109	8
		LP-26D	28	3	41	102	8
		LP-36D	39	3	57	102	8
		LP-52D	51	3	67	94	8
		LP-80D	62	3	74	86	8
	180	LP-18D	25	5	33	104	8
		LP-26D	33	4	41	100	8
		LP-36D	47	4	57	98	8
		LP-52D	61	4	67	89	8
	190	LP-18D	29	6	33	102	8
		LP-26D	39	5	41	95	8
		LP-36D	54	5	57	95	8
		LP-52D	69	5	67	87	8
	200	LP-18D	33	6	33	100	8
		LP-26D	43	5	41	95	8
		LP-36D	57	6	57	100	8
		LP-52D	77	6	67	85	8
	210	LP-18D	36	7	33	101	8
		LP-26D	48	7	41	93	8
		LP-36D	67	7	57	92	8
LP-52D		85	7	67	83	8	
220	LP-18D	40	9	33	99	8	
	LP-26D	53	8	41	91	8	
	LP-36D	74	9	57	90	8	
	LP-52D	92	8	67	83	8	
50-160	165	LP-18D	11	1	33	128	8
		LP-26D	16	1	41	122	8
		LP-36D	23	1	57	121	8
		LP-52D	31	1	67	114	8
		LP-80D	39	1	74	107	8
	170	LP-18D	15	2	33	120	8
		LP-26D	20	2	41	116	8
		LP-36D	29	2	57	114	8
		LP-52D	38	2	67	108	8
		LP-80D	48	2	74	99	8
	180	LP-18D	20	3	33	113	8
		LP-26D	27	3	41	108	8
		LP-36D	38	3	57	107	8
		LP-52D	49	3	67	100	8
	190	LP-18D	24	4	33	110	8
		LP-26D	32	4	41	104	8
		LP-36D	45	4	57	103	8
		LP-52D	58	4	67	95	8
	200	LP-18D	28	6	33	107	8
		LP-26D	37	5	41	101	8
LP-36D		52	5	57	100	8	
LP-52D		67	4	67	90	8	
LP-80D		79	4	74	83	8	

Performance Data, Cont.

Domestic Water Temperature Rise °F	Heat Exchanger Inlet Water Temp From Boiler °F	Laars Plate Model	Domestic Water		Boiler Water		
			Water Flow gpm	Pressure Drop PSIG	Water Flow gpm	Temp Back to Boiler °F	Pressure Drop PSIG
50-160	210	LP-18D	31	7	33	107	8
		LP-26D	41	5	41	100	8
		LP-36D	58	5	57	98	8
		LP-52D	74	5	67	89	8
		LP-80D	88	4	74	79	8
	220	LP-18D	35	7	33	103	8
		LP-26D	46	6	41	97	8
		LP-36D	64	7	57	96	8
50-170	175	LP-18D	11	1	33	135	8
		LP-26D	16	1	41	128	8
		LP-36D	22	1	57	129	8
		LP-52D	31	1	67	119	8
		LP-80D	39	1	74	112	8
	180	LP-18D	14	2	33	129	8
		LP-26D	20	2	41	121	8
		LP-36D	28	2	57	121	8
		LP-52D	38	2	67	112	8
	190	LP-80D	47	2	74	104	8
		LP-18D	19	3	33	121	8
		LP-26D	26	3	41	114	8
		LP-36D	37	3	57	112	8
		LP-52D	48	3	67	104	8
	200	LP-80D	59	2	74	94	8
		LP-18D	23	4	33	116	8
		LP-26D	31	3	41	109	8
		LP-36D	44	4	57	107	8
		LP-52D	57	3	67	98	8
	210	LP-80D	68	3	74	90	8
		LP-18D	27	5	33	112	8
		LP-26D	36	4	41	105	8
		LP-36D	50	5	57	105	8
		LP-52D	64	4	67	95	8
	220	LP-80D	77	4	74	85	8
		LP-18D	30	6	33	111	8
		LP-26D	40	5	41	103	8
		LP-36D	56	6	57	102	8
LP-52D		71	5	67	93	8	
50-180	185	LP-80D	85	4	74	82	8
		LP-18D	11	1	33	142	8
		LP-26D	16	1	41	134	8
		LP-36D	22	1	57	135	8
		LP-52D	30	1	67	127	8
	190	LP-80D	38	1	74	118	8
		LP-18D	14	2	33	135	8
		LP-26D	20	2	41	127	8
		LP-36D	28	2	57	126	8
		LP-52D	37	2	67	118	8
	200	LP-80D	46	2	74	109	8
		LP-18D	19	3	33	125	8
		LP-26D	25	2	41	121	8
		LP-36D	36	3	57	118	8
		LP-52D	47	2	67	109	8
	LP-80D	57	2	74	100	8	

Performance Data, Cont.

Note: Most system designers will opt to keep the pressure on the domestic water side at 10 PSIG or lower. Shaded parameters are those with higher than usual pressure.

Domestic Water Temperature Rise °F	Heat Exchanger Inlet Water Temp From Boiler °F	Laars Plate Model	Domestic Water		Boiler Water		
			Water Flow gpm	Pressure Drop PSIG	Water Flow gpm	Temp Back to Boiler °F	Pressure Drop PSIG
50-180	210	LP-18D	22	4	33	123	8
		LP-26D	30	3	41	115	8
		LP-36D	42	3	57	114	8
		LP-52D	55	3	67	103	8
		LP-80D	66	3	74	94	8
	220	LP-18D	26	5	33	118	8
		LP-26D	34	4	41	112	8
		LP-36D	48	4	57	111	8
		LP-52D	62	4	67	100	8
		LP-80D	74	3	74	90	8
60-120	125	LP-18D	14	2	33	100	8
		LP-26D	19	2	41	97	8
		LP-36D	27	2	57	97	8
		LP-52D	36	2	67	93	8
		LP-80D	54	2	74	81	8
	130	LP-18D	18	3	33	97	8
		LP-26D	25	2	41	93	8
		LP-36D	36	3	57	92	8
		LP-52D	46	2	67	89	8
		LP-80D	57	2	74	84	8
	140	LP-18D	26	5	33	93	8
		LP-26D	35	4	41	89	8
		LP-36D	49	4	57	88	8
		LP-52D	63	4	67	84	8
		LP-80D	75	3	74	79	8
	150	LP-18D	32	7	33	92	8
		LP-26D	43	5	41	87	8
		LP-36D	60	6	57	87	8
		LP-52D	76	5	67	82	8
		LP-80D	91	5	74	76	8
	160	LP-18D	38	8	33	91	8
		LP-26D	51	7	41	85	8
		LP-36D	71	8	57	85	8
		LP-52D	89	7	67	80	8
		LP-80D	105	6	74	75	8
	170	LP-18D	44	2	33	90	8
		LP-26D	58	10	41	85	8
		LP-36D	81	10	57	85	8
		LP-52D	101	9	67	80	8
		LP-80D	119	8	74	74	8
	180	LP-18D	49	13	33	91	8
		LP-26D	65	12	41	85	8
		LP-36D	91	13	57	84	8
		LP-52D	113	11	67	79	8
		LP-80D	132	9	74	73	8
	190	LP-18D	49	13	33	101	8
		LP-26D	72	14	41	85	8
		LP-36D	101	15	57	84	8
		LP-52D	125	13	67	78	8
		LP-80D	145	11	74	72	8
200	LP-18D	49	13	33	111	8	
	LP-26D	74	15	41	92	8	
	LP-36D	105	16	57	89	8	
	LP-52D	136	16	67	78	8	
	LP-80D	158	13	74	72	8	

Performance Data, Cont.

Note: Most system designers will opt to keep the pressure on the domestic water side at 10 PSIG or lower. Shaded parameters are those with higher than usual pressure.

Domestic Water Temperature Rise °F	Heat Exchanger Inlet Water Temp From Boiler °F	Laars Plate Model	Domestic Water		Boiler Water		
			Water Flow gpm	Pressure Drop PSIG	Water Flow gpm	Temp Back to Boiler °F	Pressure Drop PSIG
60-120	210	LP-18D	49	13	33	121	8
		LP-26D	74	15	41	102	8
		LP-36D	105	16	57	99	8
		LP-52D	147	18	67	78	8
		LP-80D	170	15	74	72	8
	220	LP-18D	49	13	33	131	8
		LP-26D	74	15	41	112	8
		LP-36D	105	16	57	109	8
		LP-52D	153	20	67	83	8
		LP-80D	183	17	74	72	8
60-130	135	LP-18D	13	2	33	107	8
		LP-26D	18	2	41	104	8
		LP-36D	26	2	57	103	8
		LP-52D	35	2	67	98	8
		LP-80D	43	1	74	94	8
	140	LP-18D	17	2	33	104	8
		LP-26D	24	2	41	99	8
		LP-36D	34	2	57	98	8
		LP-52D	67	3	67	70	8
		LP-80D	54	2	74	89	8
	150	LP-18D	24	4	33	99	8
		LP-26D	32	4	41	95	8
		LP-36D	46	4	57	94	8
		LP-52D	59	4	67	88	8
		LP-80D	71	3	74	83	8
	160	LP-18D	30	6	33	96	8
		LP-26D	40	5	41	92	8
		LP-36D	56	6	57	91	8
		LP-52D	71	5	67	86	8
		LP-80D	85	4	74	80	8
	170	LP-18D	35	7	33	96	8
		LP-26D	46	6	41	91	8
		LP-36D	65	7	57	90	8
		LP-52D	82	6	67	84	8
		LP-80D	97	5	74	78	8
	180	LP-18D	40	9	33	95	8
		LP-26D	53	8	41	90	8
		LP-36D	74	9	57	89	8
		LP-52D	93	8	67	83	8
		LP-80D	109	7	74	77	8
	190	LP-18D	45	11	33	95	8
		LP-26D	59	10	41	89	8
		LP-36D	83	11	57	88	8
		LP-52D	104	10	67	81	8
		LP-80D	121	8	74	76	8
	200	LP-18D	49	13	33	96	8
		LP-26D	65	12	41	89	8
		LP-36D	91	13	57	88	8
		LP-52D	114	11	67	81	8
		LP-80D	132	9	74	75	8
	210	LP-18D	49	13	33	106	8
		LP-26D	71	14	41	89	8
LP-36D		99	15	57	88	8	
LP-52D		124	13	67	80	8	
LP-80D		143	11	74	75	8	

Performance Data, Cont.

Note: Most system designers will opt to keep the pressure on the domestic water side at 10 PSIG or lower. Shaded parameters are those with higher than usual pressure.

Domestic Water Temperature Rise °F	Heat Exchanger Inlet Water Temp From Boiler °F	Laars Plate Model	Domestic Water		Boiler Water		
			Water Flow gpm	Pressure Drop PSIG	Water Flow gpm	Temp Back to Boiler °F	Pressure Drop PSIG
60-130	220	LP-18D	49	13	33	116	8
		LP-26D	74	15	41	94	8
		LP-36D	105	16	57	91	8
		LP-52D	133	15	67	81	8
		LP-80D	154	12	74	74	8
60-140	145	LP-18D	13	2	33	113	8
		LP-26D	18	2	41	110	8
		LP-36D	25	2	57	110	8
		LP-52D	34	2	67	104	8
		LP-80D	42	1	74	100	8
	150	LP-18D	17	2	33	109	8
		LP-26D	23	2	41	105	8
		LP-36D	32	2	57	105	8
		LP-52D	43	2	67	99	8
		LP-80D	52	2	74	94	8
	160	LP-18D	23	4	33	104	8
		LP-26D	31	3	41	100	8
		LP-36D	43	4	57	100	8
		LP-52D	56	3	67	93	8
		LP-80D	67	3	74	88	8
	170	LP-18D	28	6	33	102	8
		LP-26D	37	5	41	98	8
		LP-36D	52	5	57	97	8
		LP-52D	67	4	67	90	8
		LP-80D	80	4	74	84	8
	180	LP-18D	33	6	33	100	8
		LP-26D	43	5	41	96	8
		LP-36D	61	6	57	94	8
		LP-52D	77	6	67	88	8
		LP-80D	92	5	74	81	8
	190	LP-18D	37	8	33	100	8
		LP-26D	49	7	41	94	9
		LP-36D	69	7	57	93	8
		LP-52D	87	7	67	86	8
		LP-80D	102	6	74	80	8
	200	LP-18D	42	10	33	98	8
		LP-26D	55	9	41	93	9
		LP-36D	77	9	57	92	8
		LP-52D	96	8	67	85	8
		LP-80D	112	7	74	79	8
	210	LP-18D	46	11	33	98	8
		LP-26D	60	10	41	93	8
		LP-36D	84	11	57	92	8
		LP-52D	105	10	67	85	8
		LP-80D	122	8	74	78	8
220	LP-18D	49	13	33	101	8	
	LP-26D	65	12	41	93	8	
	LP-36D	92	13	57	91	8	
	LP-52D	114	11	67	84	8	
	LP-80D	132	9	74	77	8	
60-150	155	LP-18D	12	1	33	122	8
		LP-26D	17	1	41	118	8
		LP-36D	24	1	57	117	8
		LP-52D	33	1	67	111	8
		LP-80D	42	1	74	104	8

Performance Data, Cont.

Domestic Water Temperature Rise °F	Heat Exchanger Inlet Water Temp From Boiler °F	Laars Plate Model	Domestic Water		Boiler Water			
			Water Flow gpm	Pressure Drop PSIG	Water Flow gpm	Temp Back to Boiler °F	Pressure Drop PSIG	
60-150	160	LP-18D	16	2	33	116	8	
		LP-26D	22	2	41	112	8	
		LP-36D	31	2	57	111	8	
		LP-52D	41	2	67	105	8	
		LP-80D	51	2	74	98	8	
	170	LP-18D	22	4	33	110	8	
		LP-26D	29	3	41	106	8	
		LP-36D	41	3	57	105	8	
		LP-52D	53	3	67	99	8	
	180	LP-80D	65	3	74	91	8	
		LP-18D	26	5	33	109	8	
		LP-26D	35	4	41	103	8	
		LP-36D	50	5	57	101	8	
	190	LP-52D	64	4	67	94	8	
		LP-80D	76	3	74	88	8	
		LP-18D	31	7	33	105	8	
		LP-26D	41	5	41	100	8	
	200	LP-36D	57	5	57	100	8	
		LP-52D	73	5	67	92	8	
		LP-80D	87	4	74	84	8	
		LP-18D	35	7	33	105	8	
	210	LP-26D	46	6	41	99	8	
		LP-36D	65	7	57	97	8	
		LP-52D	82	6	67	90	8	
		LP-80D	97	5	74	82	8	
	220	LP-18D	39	8	33	104	8	
		LP-26D	51	7	41	98	8	
		LP-36D	72	8	57	96	8	
		LP-52D	90	7	67	89	8	
	60-160	165	LP-80D	106	6	74	81	8
			LP-18D	43	10	33	103	8
			LP-26D	56	9	41	97	8
LP-36D			79	10	57	95	8	
LP-52D			98	9	67	88	8	
170		LP-80D	115	7	74	80	8	
		LP-18D	12	1	33	129	8	
		LP-26D	17	1	41	124	8	
		LP-36D	24	1	57	123	8	
180		LP-52D	32	1	67	117	8	
		LP-80D	41	1	74	110	8	
		LP-18D	15	2	33	125	8	
		LP-26D	21	2	41	119	8	
190		LP-36D	30	2	57	117	8	
		LP-52D	40	2	67	110	8	
		LP-80D	49	2	74	104	8	
	LP-18D	21	3	33	116	8		
180	LP-26D	28	3	41	112	8		
	LP-36D	40	3	57	110	8		
	LP-52D	51	3	67	104	8		
	LP-80D	63	3	74	95	8		
	LP-18D	25	5	33	114	8		
190	LP-26D	34	4	41	107	8		
	LP-36D	48	4	57	106	8		
	LP-52D	61	4	67	99	8		
	LP-80D	73	3	74	91	8		

Performance Data, Cont.

Domestic Water Temperature Rise °F	Heat Exchanger Inlet Water Temp From Boiler °F	Laars Plate Model	Domestic Water		Boiler Water		
			Water Flow gpm	Pressure Drop PSIG	Water Flow gpm	Temp Back to Boiler °F	Pressure Drop PSIG
60-160	200	LP-18D	29	6	33	112	8
		LP-26D	39	5	41	105	8
		LP-36D	55	5	57	104	8
		LP-52D	70	5	67	96	8
		LP-80D	83	4	74	88	8
	210	LP-18D	33	6	33	110	8
		LP-26D	44	6	41	103	8
		LP-36D	61	6	57	103	8
		LP-52D	78	6	67	94	8
	220	LP-80D	92	5	74	86	8
		LP-18D	37	8	33	108	8
		LP-26D	48	7	41	103	8
LP-36D		68	7	57	101	8	
60-170	175	LP-52D	85	7	67	93	8
		LP-80D	101	6	74	84	8
		LP-18D	12	1	33	135	8
		LP-26D	16	1	41	132	8
		LP-36D	23	1	57	131	8
	180	LP-52D	32	1	67	122	8
		LP-80D	40	1	74	116	8
		LP-18D	15	2	33	130	8
		LP-26D	21	2	41	124	8
	190	LP-36D	29	2	57	124	8
		LP-52D	39	2	67	116	8
		LP-80D	48	2	74	109	8
		LP-18D	20	3	33	123	8
	200	LP-26D	27	3	41	118	8
		LP-36D	38	3	57	117	8
		LP-52D	50	3	67	108	8
		LP-80D	61	2	74	99	8
	210	LP-18D	24	4	33	120	8
		LP-26D	32	4	41	114	8
		LP-36D	46	4	57	111	8
LP-52D		59	4	67	103	8	
220	LP-80D	70	3	74	96	8	
	LP-18D	28	6	33	117	8	
	LP-26D	37	5	41	111	8	
	LP-36D	52	5	57	110	8	
185	LP-52D	67	4	67	100	8	
	LP-80D	80	4	74	91	8	
	LP-18D	31	7	33	117	8	
	LP-26D	42	5	41	107	8	
60-180	190	LP-36D	59	6	57	106	8
		LP-52D	74	5	67	99	8
		LP-80D	88	4	74	89	8
		LP-18D	11	1	33	145	8
		LP-26D	16	1	41	138	8
190	LP-36D	23	1	57	137	8	
	LP-52D	31	1	67	129	8	
	LP-80D	39	1	74	122	8	
	LP-18D	15	2	33	135	8	
190	LP-26D	20	2	41	131	8	
	LP-36D	29	2	57	129	8	
	LP-52D	38	2	67	122	8	
	LP-80D	47	2	74	114	8	

Performance Data, Cont.

Domestic Water Temperature Rise °F	Heat Exchanger Inlet Water Temp From Boiler °F	Laars Plate Model	Domestic Water		Boiler Water		
			Water Flow gpm	Pressure Drop PSIG	Water Flow gpm	Temp Back to Boiler °F	Pressure Drop PSIG
60-180	200	LP-18D	19	3	33	131	8
		LP-26D	26	3	41	124	8
		LP-36D	37	3	57	122	8
		LP-52D	48	3	67	114	8
		LP-80D	59	2	74	104	8
	210	LP-18D	23	4	33	126	8
		LP-26D	31	3	41	119	8
		LP-36D	44	4	57	117	8
		LP-52D	57	3	67	108	8
		LP-80D	69	3	74	98	8
	220	LP-18D	27	5	33	122	8
		LP-26D	36	4	41	115	8
		LP-36D	50	5	57	115	8
		LP-52D	65	4	67	104	8
		LP-80D	77	4	74	95	8



