

CLOSED CIRCUIT COOLERS

LSWE/LRWB

Forced Draft Closed Circuit Coolers



LSWE



LRWB

Engineering Data



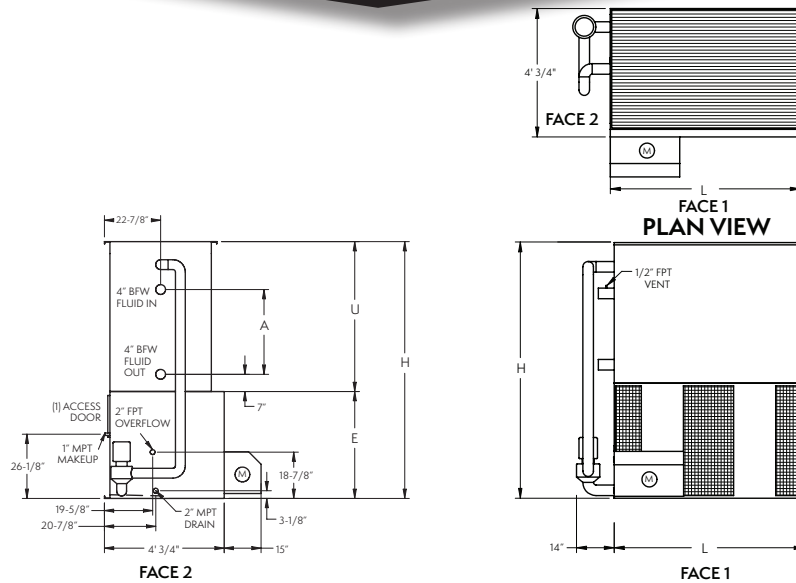
for LIFE

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Models: LSWE 4-2F6 to 4-5J9

Closed Circuit Coolers



NOTE: The number of coil connections doubles when the flow rate exceeds 450 gpm on 4x6 and 4x9 models. This required option is referred to as the High Flow coil configuration.

Model No.†	WEIGHTS (LBS)			FANS		SPRAY PUMP		Coil Volume (Gallons)	REMOTE SUMP Δ			DIMENSIONS ▲				
	Shipping	Heaviest Section*	Operating	HP	CFM	HP	GPM		Gallons Req'd**	Conn. Size	Operating Weight (lbs)	Height H	Length L	Lower E	Upper U	Coil A
LSWE 4-2F6	2,360	1,230	3,290	3	10,200	3/4	120	33	80	4"	2,870	6'10"	5'11-7/8"	3'7-1/2"	3'2-1/2"	12"
LSWE 4-2G6	2,370	1,230	3,300	5	12,100	3/4	120	33	80	4"	2,880	6'10"	5'11-7/8"	3'7-1/2"	3'2-1/2"	12"
LSWE 4-2H6	2,420	1,230	3,350	7.5	13,900	3/4	120	33	80	4"	2,930	6'10"	5'11-7/8"	3'7-1/2"	3'2-1/2"	12"
LSWE 4-3F6	2,720	1,590	3,770	3	10,000	3/4	120	47	80	4"	3,340	7'5-1/2"	5'11-7/8"	3'7-1/2"	3'10"	19-1/2"
LSWE 4-3G6	2,730	1,590	3,780	5	11,900	3/4	120	47	80	4"	3,350	7'5-1/2"	5'11-7/8"	3'7-1/2"	3'10"	19-1/2"
LSWE 4-3H6	2,780	1,590	3,830	7.5	13,600	3/4	120	47	80	4"	3,400	7'5-1/2"	5'11-7/8"	3'7-1/2"	3'10"	19-1/2"
LSWE 4-3I6	2,800	1,590	3,850	10	15,000	3/4	120	47	80	4"	3,420	7'5-1/2"	5'11-7/8"	3'7-1/2"	3'10"	19-1/2"
LSWE 4-4F6	3,070	1,940	4,230	3	9,800	3/4	120	60	80	4"	3,800	8'1"	5'11-7/8"	3'7-1/2"	4'5-1/2"	27"
LSWE 4-4G6	3,080	1,940	4,240	5	11,700	3/4	120	60	80	4"	3,810	8'1"	5'11-7/8"	3'7-1/2"	4'5-1/2"	27"
LSWE 4-4H6	3,130	1,940	4,290	7.5	13,400	3/4	120	60	80	4"	3,860	8'1"	5'11-7/8"	3'7-1/2"	4'5-1/2"	27"
LSWE 4-4I6	3,150	1,940	4,310	10	14,700	3/4	120	60	80	4"	3,880	8'1"	5'11-7/8"	3'7-1/2"	4'5-1/2"	27"
LSWE 4-5G6	3,440	2,300	4,710	5	11,400	3/4	120	74	80	4"	4,290	8'8-1/2"	5'11-7/8"	3'7-1/2"	5'1"	34-1/2"
LSWE 4-5H6	3,490	2,300	4,760	7.5	13,100	3/4	120	74	80	4"	4,340	8'8-1/2"	5'11-7/8"	3'7-1/2"	5'1"	34-1/2"
LSWE 4-5I6	3,510	2,300	4,780	10	14,400	3/4	120	74	80	4"	4,360	8'8-1/2"	5'11-7/8"	3'7-1/2"	5'1"	34-1/2"
LSWE 4-3G9	3,750	2,260	5,380	5	15,600	1	180	68	120	6"	4,780	7'5-1/2"	8'11-1/4"	3'7-1/2"	3'10"	19-1/2"
LSWE 4-3H9	3,800	2,260	5,380	7.5	17,800	1	180	68	120	6"	4,830	7'5-1/2"	8'11-1/4"	3'7-1/2"	3'10"	19-1/2"
LSWE 4-3I9	3,820	2,260	5,400	10	19,600	1	180	68	120	6"	4,850	7'5-1/2"	8'11-1/4"	3'7-1/2"	3'10"	19-1/2"
LSWE 4-3J9	3,940	2,260	5,520	15	22,500	1	180	68	120	6"	4,970	7'5-1/2"	8'11-1/4"	3'7-1/2"	3'10"	19-1/2"
LSWE 4-4H9	4,310	2,770	6,060	7.5	17,500	1	180	89	120	6"	5,510	8'1"	8'11-1/4"	3'7-1/2"	4'5-1/2"	27"
LSWE 4-4I9	4,330	2,770	6,080	10	19,200	1	180	89	120	6"	5,530	8'1"	8'11-1/4"	3'7-1/2"	4'5-1/2"	27"
LSWE 4-4J9	4,450	2,770	6,200	15	22,000	1	180	89	120	6"	5,650	8'1"	8'11-1/4"	3'7-1/2"	4'5-1/2"	27"
LSWE 4-5H9	4,840	3,300	6,770	7.5	17,100	1	180	109	120	6"	6,210	8'8-1/2"	8'11-1/4"	3'7-1/2"	5'1"	34-1/2"
LSWE 4-5I9	4,860	3,300	6,790	10	18,800	1	180	109	120	6"	6,230	8'8-1/2"	8'11-1/4"	3'7-1/2"	5'1"	34-1/2"
LSWE 4-5J9	4,980	3,300	6,910	15	21,600	1	180	109	120	6"	6,350	8'8-1/2"	8'11-1/4"	3'7-1/2"	5'1"	34-1/2"

† Model Number will end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping. Model numbers will include "I" for units with Intake Attenuation, "D" for units with Discharge Attenuation, "F" for units with Full Sound Attenuation, "T" for units with a Tapered Discharge Hood, and "S" for units with an option that negates CTI Certification.

†† Model normally ships in one piece.

* Heaviest section is the coil section.

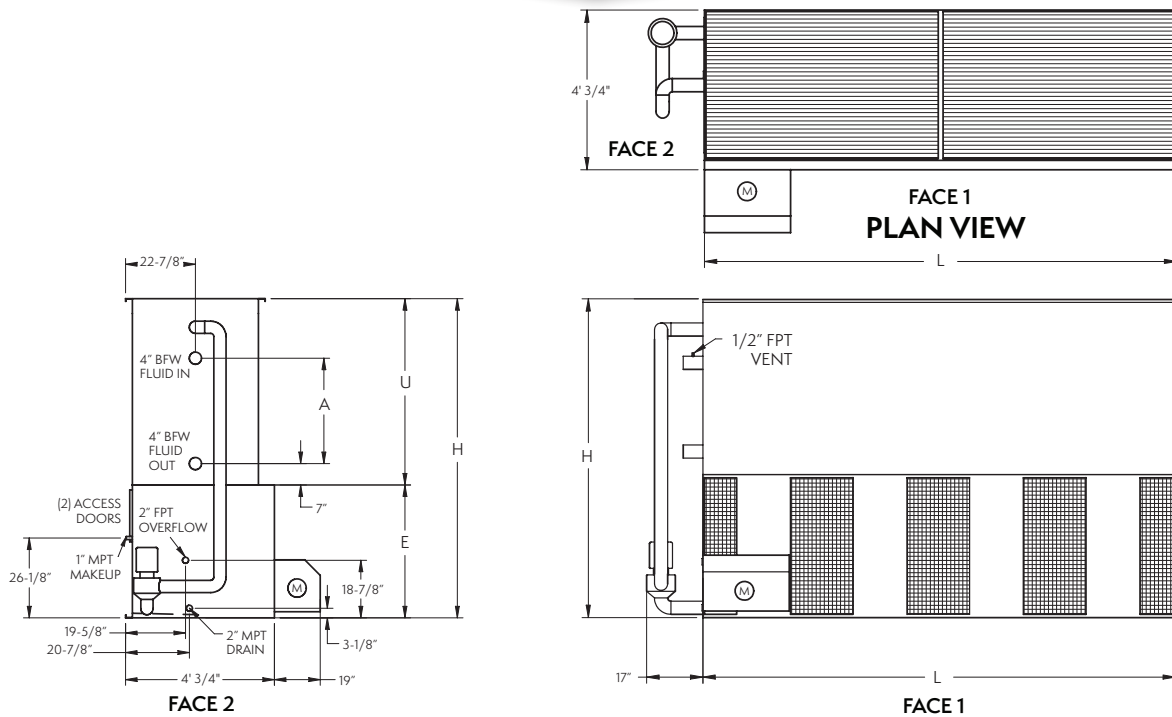
** Gallons shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation (12" would normally be sufficient).

Δ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.

▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration. Coil connections are 4" bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Models: LSWE 4-3H12 to 4-5M18

Closed Circuit Coolers



NOTE: The number of coil connections doubles when the flow rate exceeds 450 gpm on 4x6 and 4x9 models. This required option is referred to as the High Flow coil configuration.

Model No. †	WEIGHTS (LBS)			FANS		SPRAY PUMP		Coil Volume (Gallons)	REMOTE SUMP Δ			DIMENSIONS ▲				
	Shipping	Heaviest Section *	Operating	HP	CFM	HP	GPM		Gallons Req'd **	Conn. Size	Operating Weight (lbs)	Height H	Length L	Lower E	Upper U	Coil A
LSWE 4-3H12	4,970	3,000	6,990	7.5	21,600	1.5	245	89	170	6"	6,380	7' 5-1/2"	11' 11-3/4"	3' 7-1/2"	3' 10"	19-1/2"
LSWE 4-3I12	4,990	3,000	7,010	10	23,800	1.5	245	89	170	6"	6,400	7' 5-1/2"	11' 11-3/4"	3' 7-1/2"	3' 10"	19-1/2"
LSWE 4-3J12	5,110	3,000	7,130	15	27,300	1.5	245	89	170	6"	6,520	7' 5-1/2"	11' 11-3/4"	3' 7-1/2"	3' 10"	19-1/2"
LSWE 4-3K12	5,170	3,000	7,190	20	30,000	1.5	245	89	170	6"	6,580	7' 5-1/2"	11' 11-3/4"	3' 7-1/2"	3' 10"	19-1/2"
LSWE 4-4I12	5,680	3,690	7,930	10	23,300	1.5	245	117	170	6"	7,320	8' 1"	11' 11-3/4"	3' 7-1/2"	4' 5-1/2"	27"
LSWE 4-4J12	5,800	3,690	8,050	15	26,700	1.5	245	117	170	6"	7,440	8' 1"	11' 11-3/4"	3' 7-1/2"	4' 5-1/2"	27"
LSWE 4-4K12	5,860	3,690	8,110	20	29,400	1.5	245	117	170	6"	7,500	8' 1"	11' 11-3/4"	3' 7-1/2"	4' 5-1/2"	27"
LSWE 4-5I12	6,330	4,340	8,810	10	22,900	1.5	245	145	170	6"	8,230	8' 8-1/2"	11' 11-3/4"	3' 7-1/2"	5' 1"	34-1/2"
LSWE 4-5J12	6,450	4,340	8,930	15	26,200	1.5	245	145	170	6"	8,350	8' 8-1/2"	11' 11-3/4"	3' 7-1/2"	5' 1"	34-1/2"
LSWE 4-5K12	6,510	4,340	8,990	20	28,800	1.5	245	145	170	6"	8,410	8' 8-1/2"	11' 11-3/4"	3' 7-1/2"	5' 1"	34-1/2"
LSWE 4-3I18	7,170	4,410	10,070	10	31,300	2	365	132	250	8"	8,880	7' 5-1/2"	18'	3' 7-1/2"	3' 10"	19-1/2"
LSWE 4-3J18	7,290	4,410	10,190	15	35,800	2	365	132	250	8"	9,000	7' 5-1/2"	18'	3' 7-1/2"	3' 10"	19-1/2"
LSWE 4-3K18	7,350	4,410	10,250	20	39,400	2	365	132	250	8"	9,060	7' 5-1/2"	18'	3' 7-1/2"	3' 10"	19-1/2"
LSWE 4-3L18	7,380	4,410	10,280	25	42,400	2	365	132	250	8"	9,090	7' 5-1/2"	18'	3' 7-1/2"	3' 10"	19-1/2"
LSWE 4-4J18	8,300	5,420	11,550	15	35,100	2	365	174	250	8"	10,370	8' 1"	18'	3' 7-1/2"	4' 5-1/2"	27"
LSWE 4-4K18	8,360	5,420	11,610	20	38,600	2	365	174	250	8"	10,430	8' 1"	18'	3' 7-1/2"	4' 5-1/2"	27"
LSWE 4-4L18	8,390	5,420	11,640	25	41,600	2	365	174	250	8"	10,460	8' 1"	18'	3' 7-1/2"	4' 5-1/2"	27"
LSWE 4-5J18	9,290	6,410	12,890	15	34,400	2	365	215	250	8"	11,710	8' 8-1/2"	18'	3' 7-1/2"	5' 1"	34-1/2"
LSWE 4-5K18	9,350	6,410	12,950	20	37,800	2	365	215	250	8"	11,770	8' 8-1/2"	18'	3' 7-1/2"	5' 1"	34-1/2"
LSWE 4-5L18	9,380	6,410	12,980	25	40,800	2	365	215	250	8"	11,800	8' 8-1/2"	18'	3' 7-1/2"	5' 1"	34-1/2"
LSWE 4-5M18	9,430	6,410	13,030	30	43,300	2	365	215	250	8"	11,850	8' 8-1/2"	18'	3' 7-1/2"	5' 1"	34-1/2"

† Model Number will end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping. Model numbers will include "I" for units with Intake Attenuation, "D" for units with Discharge Attenuation, "F" for units with Full Sound Attenuation, "T" for units with a Tapered Discharge Hood, and "S" for units with an option that negates CTI Certification.

* Heaviest section is the coil section.

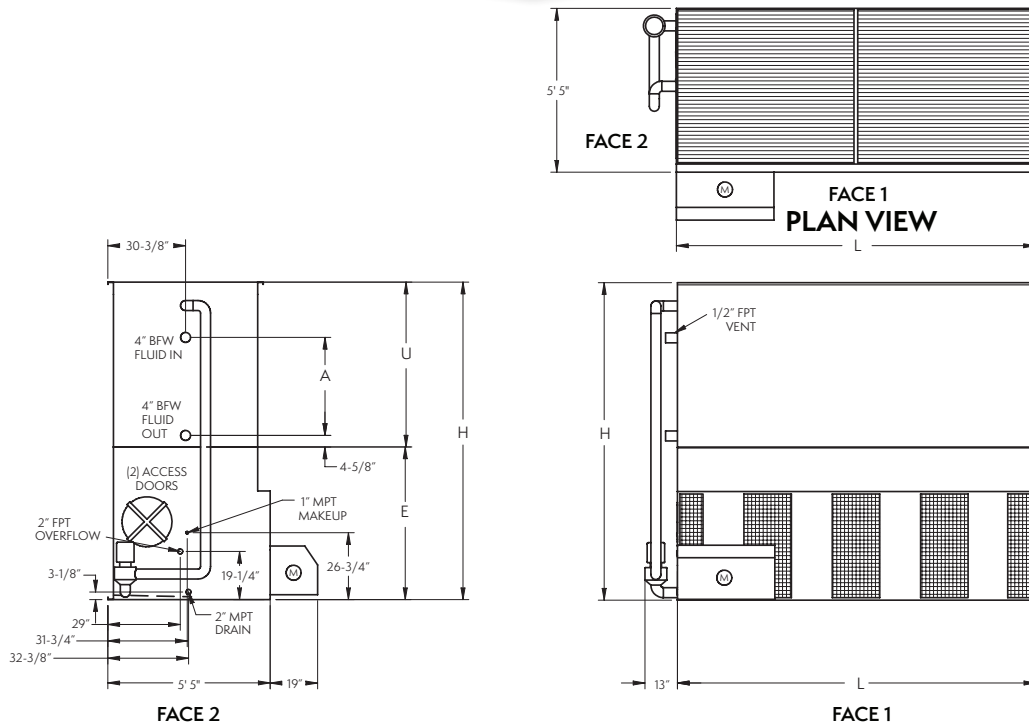
** Gallons shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation (12" would normally be sufficient).

Δ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.

▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration. Coil connections are 4" bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Models: LSWE 5-3I12 to 5-7M12

Closed Circuit Coolers



NOTE: The number of coil connections doubles when the flow rate exceeds 450 gpm on 5x12 models. This required option is referred to as the High Flow coil configuration.

Model No. †	WEIGHTS (LBS)			FANS		SPRAY PUMP		Coil Volume (Gallons)	REMOTE SUMP Δ			DIMENSIONS ▲				
	Shipping	Heaviest Section *	Operating	HP	CFM	HP	GPM		Gallons Req'd **	Conn. Size	Operating Weight (lbs)	Height H	Length L	Lower E	Upper U	Coil A
LSWE 5-3I12	6,540	3,970	10,020	10	29,900	2	345	127	230	6"	8,300	9' 2-1/8"	11' 11-1/2"	5' 1-1/8"	4' 1"	22-1/4"
LSWE 5-3J12	6,660	3,970	10,140	15	34,200	2	345	127	230	6"	8,420	9' 2-1/8"	11' 11-1/2"	5' 1-1/8"	4' 1"	22-1/4"
LSWE 5-3K12	6,720	3,970	10,200	20	37,700	2	345	127	230	6"	8,480	9' 2-1/8"	11' 11-1/2"	5' 1-1/8"	4' 1"	22-1/4"
LSWE 5-3L12	6,750	3,970	10,230	25	40,600	2	345	127	230	6"	8,510	9' 2-1/8"	11' 11-1/2"	5' 1-1/8"	4' 1"	22-1/4"
LSWE 5-4I12	7,500	4,930	11,310	10	29,300	2	345	166	230	6"	9,620	9' 10-5/8"	11' 11-1/2"	5' 1-1/8"	4' 9-1/2"	30-3/4"
LSWE 5-4J12	7,620	4,930	11,430	15	33,600	2	345	166	230	6"	9,740	9' 10-5/8"	11' 11-1/2"	5' 1-1/8"	4' 9-1/2"	30-3/4"
LSWE 5-4K12	7,680	4,930	11,490	20	36,900	2	345	166	230	6"	9,800	9' 10-5/8"	11' 11-1/2"	5' 1-1/8"	4' 9-1/2"	30-3/4"
LSWE 5-4L12	7,710	4,930	11,520	25	39,800	2	345	166	230	6"	9,830	9' 10-5/8"	11' 11-1/2"	5' 1-1/8"	4' 9-1/2"	30-3/4"
LSWE 5-5J12	8,620	5,930	12,760	15	32,900	2	345	206	230	6"	11,080	10' 7-1/8"	11' 11-1/2"	5' 1-1/8"	5' 6"	39-1/4"
LSWE 5-5K12	8,680	5,930	12,820	20	36,200	2	345	206	230	6"	11,140	10' 7-1/8"	11' 11-1/2"	5' 1-1/8"	5' 6"	39-1/4"
LSWE 5-5L12	8,710	5,930	12,850	25	39,000	2	345	206	230	6"	11,170	10' 7-1/8"	11' 11-1/2"	5' 1-1/8"	5' 6"	39-1/4"
LSWE 5-6J12	9,600	6,910	14,070	15	32,200	2	345	245	230	6"	12,400	11' 3-5/8"	11' 11-1/2"	5' 1-1/8"	6' 2-1/2"	47-3/4"
LSWE 5-6K12	9,660	6,910	14,130	20	35,500	2	345	245	230	6"	12,460	11' 3-5/8"	11' 11-1/2"	5' 1-1/8"	6' 2-1/2"	47-3/4"
LSWE 5-6L12	9,690	6,910	14,160	25	38,200	2	345	245	230	6"	12,490	11' 3-5/8"	11' 11-1/2"	5' 1-1/8"	6' 2-1/2"	47-3/4"
LSWE 5-6M12	9,740	6,910	14,210	30	40,600	2	345	245	230	6"	12,540	11' 3-5/8"	11' 11-1/2"	5' 1-1/8"	6' 2-1/2"	47-3/4"
LSWE 5-7J12	10,720	8,030	15,520	15	31,500	2	345	285	230	6"	13,850	11' 3-5/8"	11' 11-1/2"	5' 1-1/8"	6' 2-1/2"	47-3/4"
LSWE 5-7K12	10,780	8,030	15,580	20	34,700	2	345	285	230	6"	13,910	11' 3-5/8"	11' 11-1/2"	5' 1-1/8"	6' 2-1/2"	47-3/4"
LSWE 5-7L12	10,810	8,030	15,610	25	37,400	2	345	285	230	6"	13,940	11' 3-5/8"	11' 11-1/2"	5' 1-1/8"	6' 2-1/2"	47-3/4"
LSWE 5-7M12	10,860	8,030	15,660	30	39,700	2	345	285	230	6"	13,990	11' 3-5/8"	11' 11-1/2"	5' 1-1/8"	6' 2-1/2"	47-3/4"

† Model Number will end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping. Model numbers will include "I" for units with Intake Attenuation, "D" for units with Discharge Attenuation, "F" for units with Full Sound Attenuation, "T" for units with a Tapered Discharge Hood, and "S" for units with an option that negates CTI Certification.

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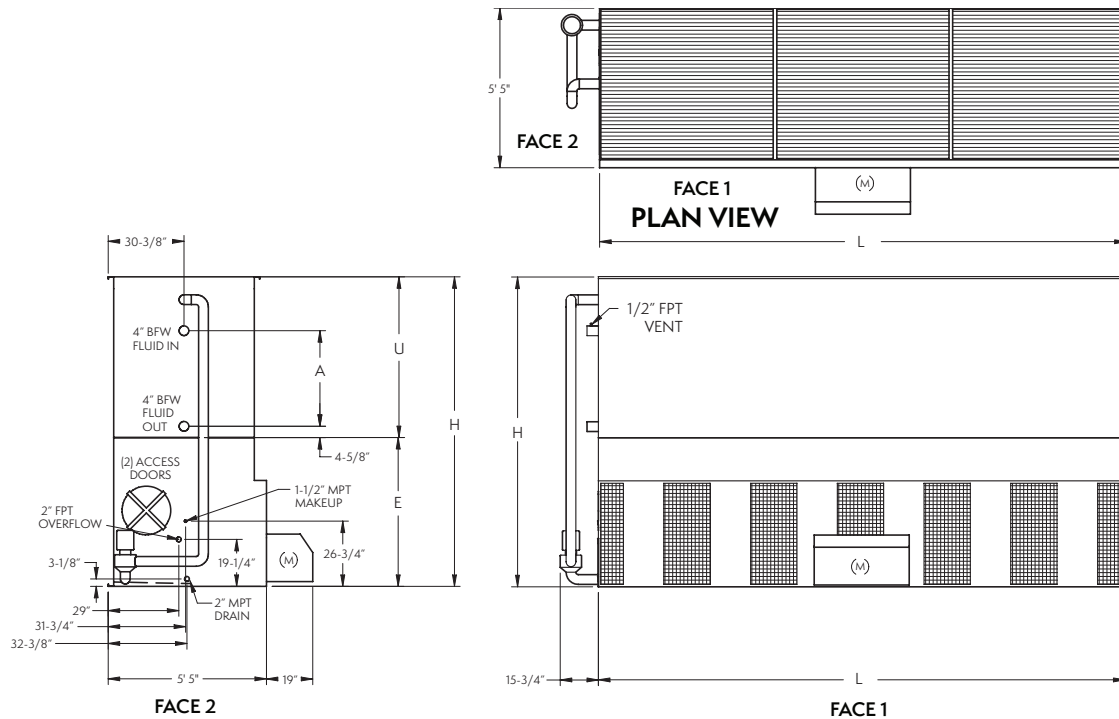
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Δ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.

▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration. Coil connections are 4" bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Models: LSWE 5-3J18 to 5-7N18

Closed Circuit Coolers



NOTE: The number of coil connections doubles when the flow rate exceeds 450 gpm on 5x18 models. This required option is referred to as the High Flow coil configuration.

Model No. †	WEIGHTS (LBS)			FANS		SPRAY PUMP		Coil Volume (Gallons)	REMOTE SUMP Δ			DIMENSIONS ▲				
	Shipping	Heaviest Section *	Operating	HP	CFM	HP	GPM		Gallons Req'd **	Conn. Size	Operating Weight (lbs)	Height H	Length L	Lower E	Upper U	Coil A
LSWE 5-3J18	9,830	5,950	14,820	15	45,000	3	515	187	340	8"	11,840	9' 2-1/8"	18' 1/8"	5' 1-1/8"	4' 1"	22-1/4"
LSWE 5-3K18	9,890	5,950	14,880	20	49,500	3	515	187	340	8"	11,900	9' 2-1/8"	18' 1/8"	5' 1-1/8"	4' 1"	22-1/4"
LSWE 5-3L18	9,920	5,950	14,910	25	53,300	3	515	187	340	8"	11,930	9' 2-1/8"	18' 1/8"	5' 1-1/8"	4' 1"	22-1/4"
LSWE 5-3M18	9,970	5,950	14,960	30	56,600	3	515	187	340	8"	11,980	9' 2-1/8"	18' 1/8"	5' 1-1/8"	4' 1"	22-1/4"
LSWE 5-4K18	11,330	7,390	16,810	20	48,500	3	515	247	340	8"	13,830	9' 10-5/8"	18' 1/8"	5' 1-1/8"	4' 9-1/2"	30-3/4"
LSWE 5-4L18	11,360	7,390	16,840	25	52,300	3	515	247	340	8"	13,860	9' 10-5/8"	18' 1/8"	5' 1-1/8"	4' 9-1/2"	30-3/4"
LSWE 5-4M18	11,410	7,390	16,890	30	55,500	3	515	247	340	8"	13,910	9' 10-5/8"	18' 1/8"	5' 1-1/8"	4' 9-1/2"	30-3/4"
LSWE 5-4N18	11,570	7,390	17,050	40	61,100	3	515	247	340	8"	14,070	9' 10-5/8"	18' 1/8"	5' 1-1/8"	4' 9-1/2"	30-3/4"
LSWE 5-5K18	12,840	8,900	18,820	20	47,500	3	515	306	340	8"	15,860	10' 7-1/8"	18' 1/8"	5' 1-1/8"	5' 6"	39-1/4"
LSWE 5-5L18	12,870	8,900	18,850	25	51,200	3	515	306	340	8"	15,890	10' 7-1/8"	18' 1/8"	5' 1-1/8"	5' 6"	39-1/4"
LSWE 5-5M18	12,920	8,900	18,900	30	54,400	3	515	306	340	8"	15,940	10' 7-1/8"	18' 1/8"	5' 1-1/8"	5' 6"	39-1/4"
LSWE 5-5N18	13,080	8,900	19,060	40	59,900	3	515	306	340	8"	16,100	10' 7-1/8"	18' 1/8"	5' 1-1/8"	5' 6"	39-1/4"
LSWE 5-6L18	14,340	10,370	20,820	25	50,200	3	515	366	340	8"	17,890	11' 3-5/8"	18' 1/8"	5' 1-1/8"	6' 2-1/2"	47-3/4"
LSWE 5-6M18	14,390	10,370	20,870	30	53,300	3	515	366	340	8"	17,940	11' 3-5/8"	18' 1/8"	5' 1-1/8"	6' 2-1/2"	47-3/4"
LSWE 5-6N18	14,550	10,370	21,030	40	58,700	3	515	366	340	8"	18,100	11' 3-5/8"	18' 1/8"	5' 1-1/8"	6' 2-1/2"	47-3/4"
LSWE 5-7L18	16,030	12,060	23,010	25	49,100	3	515	426	340	8"	20,070	11' 3-5/8"	18' 1/8"	5' 1-1/8"	6' 2-1/2"	47-3/4"
LSWE 5-7M18	16,080	12,060	23,060	30	52,200	3	515	426	340	8"	20,120	11' 3-5/8"	18' 1/8"	5' 1-1/8"	6' 2-1/2"	47-3/4"
LSWE 5-7N18	16,240	12,060	23,220	40	57,400	3	515	426	340	8"	20,280	11' 3-5/8"	18' 1/8"	5' 1-1/8"	6' 2-1/2"	47-3/4"

† Model Number will end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping. Model numbers will include "I" for units with Intake Attenuation, "D" for units with Discharge Attenuation, "F" for units with Full Sound Attenuation, "T" for units with a Tapered Discharge Hood, and "S" for units with an option that negates CTI Certification.

* Heaviest section is the coil section.

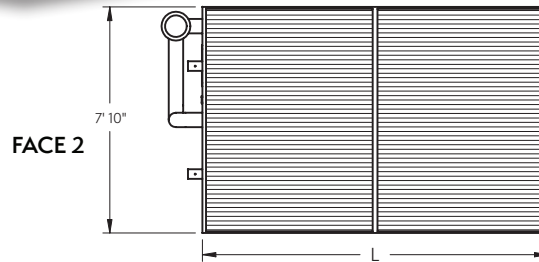
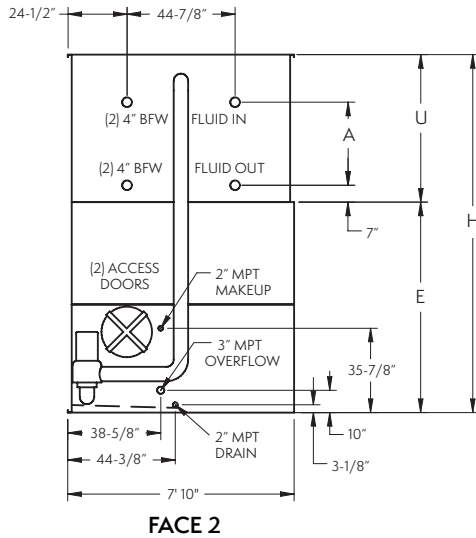
** Gallons shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation (12" would normally be sufficient).

Δ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.

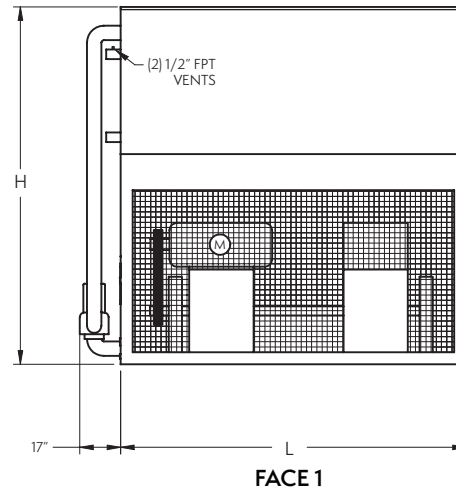
▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration. Coil connections are 4" bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Models: LSWE 8P-3K12 to 8P-7O12

Closed Circuit Coolers



FACE 1
PLAN VIEW



NOTE: The number of coil connections doubles when the flow rate exceeds 900 gpm on 8Px12 models. This required option is referred to as the High Flow coil configuration.

Model No. †	WEIGHTS (LBS)			FANS		SPRAY PUMP		Coil Volume (Gallons)	REMOTE SUMP Δ			DIMENSIONS ▲				
	Shipping	Heaviest Section*	Operating	HP	CFM	HP	GPM		Gallons Req'd**	Conn. Size	Operating Weight (lbs)	Height H	Length L	Lower E	Upper U	Coil A
LSWE 8P-3K12	9,660	5,870	14,700	20	48,600	5	570	200	360	10"	12,730	11' 1-5/8"	11' 11-3/4"	7' 3-3/8"	3' 10-1/4"	19-1/2"
LSWE 8P-3L12	9,690	5,870	14,730	25	52,400	5	570	200	360	10"	12,760	11' 1-5/8"	11' 11-3/4"	7' 3-3/8"	3' 10-1/4"	19-1/2"
LSWE 8P-3M12	9,740	5,870	14,780	30	55,700	5	570	200	360	10"	12,810	11' 1-5/8"	11' 11-3/4"	7' 3-3/8"	3' 10-1/4"	19-1/2"
LSWE 8P-3N12	9,900	5,870	14,940	40	61,300	5	570	200	360	10"	12,970	11' 1-5/8"	11' 11-3/4"	7' 3-3/8"	3' 10-1/4"	19-1/2"
LSWE 8P-4L12	11,150	7,330	16,710	25	51,300	5	570	262	360	10"	14,850	11' 9-1/8"	11' 11-3/4"	7' 3-3/8"	4' 5-3/4"	27"
LSWE 8P-4M12	11,200	7,330	16,760	30	54,600	5	570	262	360	10"	14,900	11' 9-1/8"	11' 11-3/4"	7' 3-3/8"	4' 5-3/4"	27"
LSWE 8P-4N12	11,360	7,330	16,920	40	60,100	5	570	262	360	10"	15,060	11' 9-1/8"	11' 11-3/4"	7' 3-3/8"	4' 5-3/4"	27"
LSWE 8P-4O12	11,370	7,330	16,930	50	64,700	5	570	262	360	10"	15,070	11' 9-1/8"	11' 11-3/4"	7' 3-3/8"	4' 5-3/4"	27"
LSWE 8P-5M12	12,610	8,740	18,690	30	53,500	5	570	324	360	10"	16,940	12' 4-5/8"	11' 11-3/4"	7' 3-3/8"	5' 1-1/4"	34-1/2"
LSWE 8P-5N12	12,770	8,740	18,850	40	58,900	5	570	324	360	10"	17,100	12' 4-5/8"	11' 11-3/4"	7' 3-3/8"	5' 1-1/4"	34-1/2"
LSWE 8P-5O12	12,780	8,740	18,860	50	63,400	5	570	324	360	10"	17,110	12' 4-5/8"	11' 11-3/4"	7' 3-3/8"	5' 1-1/4"	34-1/2"
LSWE 8P-6M12	14,070	10,200	20,670	30	52,400	5	570	386	360	10"	19,040	13' 1/8"	11' 11-3/4"	7' 3-3/8"	5' 8-3/4"	42"
LSWE 8P-6N12	14,230	10,200	20,830	40	57,700	5	570	386	360	10"	19,200	13' 1/8"	11' 11-3/4"	7' 3-3/8"	5' 8-3/4"	42"
LSWE 8P-6O12	14,240	10,200	20,840	50	62,100	5	570	386	360	10"	19,210	13' 1/8"	11' 11-3/4"	7' 3-3/8"	5' 8-3/4"	42"
LSWE 8P-7M12	15,550	11,680	22,670	30	51,300	5	570	448	360	10"	21,040	13' 2-1/8"	11' 11-3/4"	7' 3-3/8"	5' 10-3/4"	47-3/4"
LSWE 8P-7N12	15,710	11,680	22,830	40	56,400	5	570	448	360	10"	21,200	13' 2-1/8"	11' 11-3/4"	7' 3-3/8"	5' 10-3/4"	47-3/4"
LSWE 8P-7O12	15,720	11,680	22,840	50	60,800	5	570	448	360	10"	21,210	13' 2-1/8"	11' 11-3/4"	7' 3-3/8"	5' 10-3/4"	47-3/4"

† Model Number will end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping. Model numbers will include "I" for units with Intake Attenuation, "D" for units with Discharge Attenuation, "F" for units with Full Sound Attenuation, "T" for units with a Tapered Discharge Hood, and "S" for units with an option that negates CTI Certification.

* Heaviest section is the coil section.

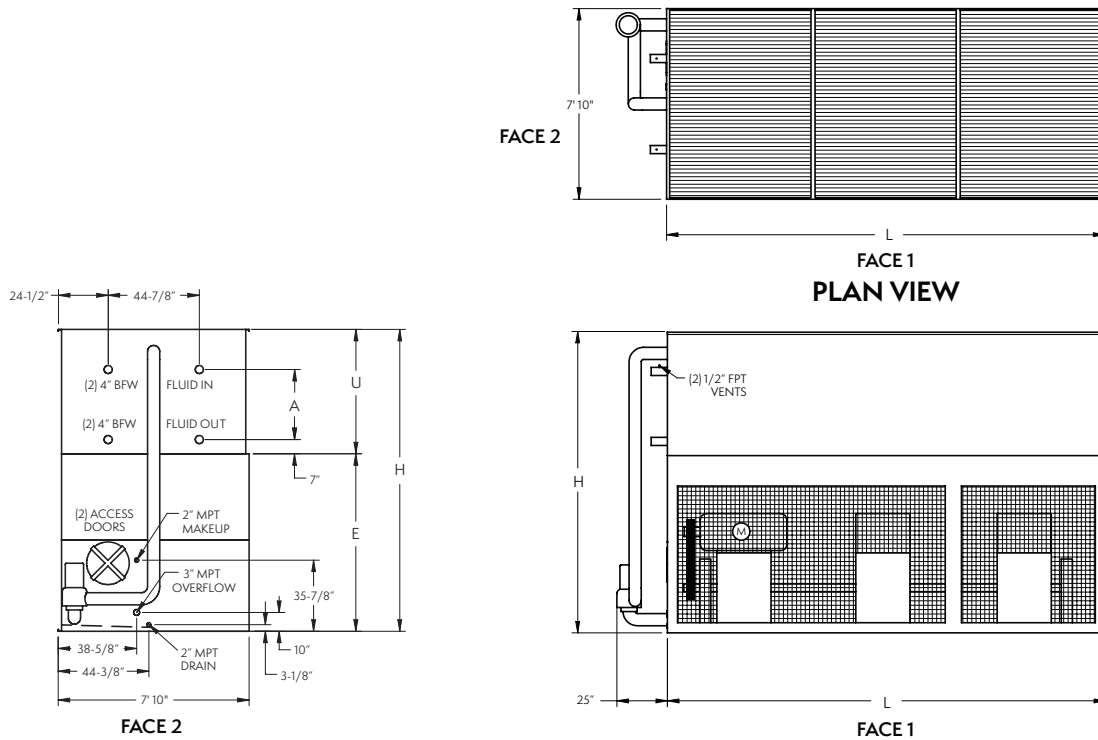
** Gallons shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation (12" would normally be sufficient).

Δ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.

▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration. Coil connections are 4" bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Models: LSWE 8P-3M18 to 8P-7P18

Closed Circuit Coolers



NOTE: The number of coil connections doubles when the flow rate exceeds 900 gpm on 8Px18 models. This required option is referred to as the High Flow coil configuration.

Model No. †	WEIGHTS (LBS)			FANS		SPRAY PUMP		Coil Volume (Gallons)	REMOTE SUMP Δ			DIMENSIONS ▲				
	Shipping	Heaviest Section *	Operating	HP	CFM	HP	GPM		Gallons Req'd **	Conn. Size	Operating Weight (lbs)	Height H	Length L	Lower E	Upper U	Coil A
LSWE 8P-3M18	13,940	8,700	21,540	30	72,800	7.5	840	295	530	12"	18,640	11' 1-5/8"	18'	7' 3-3/8"	3' 10-1/4"	19-1/2"
LSWE 8P-3N18	14,100	8,700	21,700	40	80,100	7.5	840	295	530	12"	18,800	11' 1-5/8"	18'	7' 3-3/8"	3' 10-1/4"	19-1/2"
LSWE 8P-3O18	14,110	8,700	21,710	50	86,300	7.5	840	295	530	12"	18,810	11' 1-5/8"	18'	7' 3-3/8"	3' 10-1/4"	19-1/2"
LSWE 8P-3P18	14,310	8,700	21,910	60	91,700	7.5	840	295	530	12"	19,010	11' 1-5/8"	18'	7' 3-3/8"	3' 10-1/4"	19-1/2"
LSWE 8P-4M18	16,130	10,890	24,510	30	71,300	7.5	840	389	530	12"	21,790	11' 9-1/8"	18'	7' 3-3/8"	4' 5-3/4"	27"
LSWE 8P-4N18	16,290	10,890	24,670	40	78,500	7.5	840	389	530	12"	21,950	11' 9-1/8"	18'	7' 3-3/8"	4' 5-3/4"	27"
LSWE 8P-4O18	16,300	10,890	24,680	50	84,600	7.5	840	389	530	12"	21,960	11' 9-1/8"	18'	7' 3-3/8"	4' 5-3/4"	27"
LSWE 8P-4P18	16,500	10,890	24,880	60	89,900	7.5	840	389	530	12"	22,160	11' 9-1/8"	18'	7' 3-3/8"	4' 5-3/4"	27"
LSWE 8P-5N18	18,380	12,980	27,540	40	77,000	7.5	840	483	530	12"	24,990	12' 4-5/8"	18'	7' 3-3/8"	5' 1-1/4"	34-1/2"
LSWE 8P-5O18	18,390	12,980	27,550	50	82,900	7.5	840	483	530	12"	25,000	12' 4-5/8"	18'	7' 3-3/8"	5' 1-1/4"	34-1/2"
LSWE 8P-5P18	18,590	12,980	27,750	60	88,100	7.5	840	483	530	12"	25,200	12' 4-5/8"	18'	7' 3-3/8"	5' 1-1/4"	34-1/2"
LSWE 8P-6N18	20,600	15,200	30,550	40	75,400	7.5	840	577	530	12"	28,160	13' 1/8"	18'	7' 3-3/8"	5' 8-3/4"	42"
LSWE 8P-6O18	20,610	15,200	30,560	50	81,200	7.5	840	577	530	12"	28,170	13' 1/8"	18'	7' 3-3/8"	5' 8-3/4"	42"
LSWE 8P-6P18	20,810	15,200	30,760	60	86,300	7.5	840	577	530	12"	28,370	13' 1/8"	18'	7' 3-3/8"	5' 8-3/4"	42"
LSWE 8P-7N18	22,790	17,390	33,520	40	73,800	7.5	840	671	530	12"	31,130	13' 2-1/8"	18'	7' 3-3/8"	5' 10-3/4"	47-3/4"
LSWE 8P-7O18	22,800	17,390	33,530	50	79,500	7.5	840	671	530	12"	31,140	13' 2-1/8"	18'	7' 3-3/8"	5' 10-3/4"	47-3/4"
LSWE 8P-7P18	23,000	17,390	33,730	60	84,500	7.5	840	671	530	12"	31,340	13' 2-1/8"	18'	7' 3-3/8"	5' 10-3/4"	47-3/4"

† Model Number will end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping. Model numbers will include "I" for units with Intake Attenuation, "D" for units with Discharge Attenuation, "F" for units with Full Sound Attenuation, "T" for units with a Tapered Discharge Hood, and "S" for units with an option that negates CTI Certification.

* Heaviest section is the coil section.

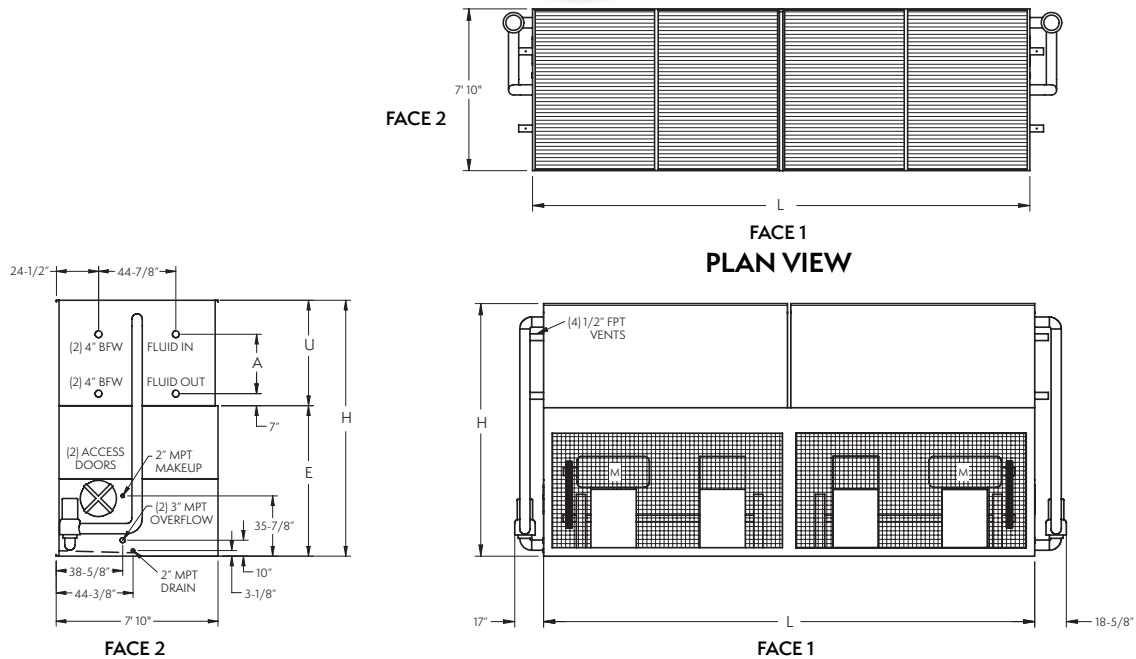
** Gallons shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation (12" would normally be sufficient).

Δ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.

▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration. Coil connections are 4" bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Models: LSWE 8P-3K24 to 8P-7O24

Closed Circuit Coolers



NOTE: The number of coil connections doubles when the flow rate exceeds 1800 gpm on 8Px24 models. This required option is referred to as the High Flow coil configuration.

Model No. †	WEIGHTS (LBS)			FANS		SPRAY PUMP		Coil Volume (Gallons)	REMOTE SUMP Δ			DIMENSIONS ▲				
	Shipping	Heaviest Section*	Operating	HP	CFM	HP	GPM		Gallons Req'd**	Conn. Size	Operating Weight (lbs)	Height H	Length L	Lower E	Upper U	Coil A
LSWE 8P-3K24	18,640	6,900	28,790	(2) 20	97,200	(2) 5	1140	400	720	(2) 10"	25,650	11' 1-5/8"	24' 1"	7' 3-3/8"	3' 10-1/4"	19-1/2"
LSWE 8P-3L24	18,700	6,960	28,850	(2) 25	104,700	(2) 5	1140	400	720	(2) 10"	25,770	11' 1-5/8"	24' 1"	7' 3-3/8"	3' 10-1/4"	19-1/2"
LSWE 8P-3M24	18,800	7,060	28,950	(2) 30	111,300	(2) 5	1140	400	720	(2) 10"	25,970	11' 1-5/8"	24' 1"	7' 3-3/8"	3' 10-1/4"	19-1/2"
LSWE 8P-3N24	19,120	7,380	29,270	(2) 40	122,500	(2) 5	1140	400	720	(2) 10"	26,610	11' 1-5/8"	24' 1"	7' 3-3/8"	3' 10-1/4"	19-1/2"
LSWE 8P-4L24	21,600	7,320	32,790	(2) 25	102,700	(2) 5	1140	524	720	(2) 10"	29,970	11' 9-1/8"	24' 1"	7' 3-3/8"	4' 5-3/4"	27"
LSWE 8P-4M24	21,700	7,320	32,890	(2) 30	109,100	(2) 5	1140	524	720	(2) 10"	30,170	11' 9-1/8"	24' 1"	7' 3-3/8"	4' 5-3/4"	27"
LSWE 8P-4N24	22,020	7,380	33,210	(2) 40	120,100	(2) 5	1140	524	720	(2) 10"	30,810	11' 9-1/8"	24' 1"	7' 3-3/8"	4' 5-3/4"	27"
LSWE 8P-4O24	22,040	7,400	33,230	(2) 50	129,400	(2) 5	1140	524	720	(2) 10"	30,850	11' 9-1/8"	24' 1"	7' 3-3/8"	4' 5-3/4"	27"
LSWE 8P-5M24	24,540	8,740	36,770	(2) 30	106,900	(2) 5	1140	648	720	(2) 10"	34,260	12' 4-5/8"	24' 1"	7' 3-3/8"	5' 1-1/4"	34-1/2"
LSWE 8P-5N24	24,860	8,740	37,090	(2) 40	117,700	(2) 5	1140	648	720	(2) 10"	34,900	12' 4-5/8"	24' 1"	7' 3-3/8"	5' 1-1/4"	34-1/2"
LSWE 8P-5O24	24,880	8,740	37,110	(2) 50	126,800	(2) 5	1140	648	720	(2) 10"	34,940	12' 4-5/8"	24' 1"	7' 3-3/8"	5' 1-1/4"	34-1/2"
LSWE 8P-6M24	27,460	10,200	40,730	(2) 30	104,800	(2) 5	1140	772	720	(2) 10"	38,470	13' 1/8"	24' 1"	7' 3-3/8"	5' 8-3/4"	42"
LSWE 8P-6N24	27,780	10,200	41,050	(2) 40	115,300	(2) 5	1140	772	720	(2) 10"	39,110	13' 1/8"	24' 1"	7' 3-3/8"	5' 8-3/4"	42"
LSWE 8P-6O24	27,800	10,200	41,070	(2) 50	124,200	(2) 5	1140	772	720	(2) 10"	39,150	13' 1/8"	24' 1"	7' 3-3/8"	5' 8-3/4"	42"
LSWE 8P-7M24	30,420	11,680	44,730	(2) 30	102,600	(2) 5	1140	897	720	(2) 10"	42,470	13' 2-1/8"	24' 1"	7' 3-3/8"	5' 10-3/4"	47-3/4"
LSWE 8P-7N24	30,740	11,680	45,050	(2) 40	112,900	(2) 5	1140	897	720	(2) 10"	43,110	13' 2-1/8"	24' 1"	7' 3-3/8"	5' 10-3/4"	47-3/4"
LSWE 8P-7O24	30,760	11,680	45,070	(2) 50	121,600	(2) 5	1140	897	720	(2) 10"	43,150	13' 2-1/8"	24' 1"	7' 3-3/8"	5' 10-3/4"	47-3/4"

† Model Number will end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping. Model numbers will include "I" for units with Intake Attenuation, "D" for units with Discharge Attenuation, "F" for units with Full Sound Attenuation, "T" for units with a Tapered Discharge Hood, and "S" for units with an option that negates CTI Certification.

†† Model normally ships in one piece.

* Heaviest section is the coil section.

** Gallons shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation (12" would normally be sufficient).

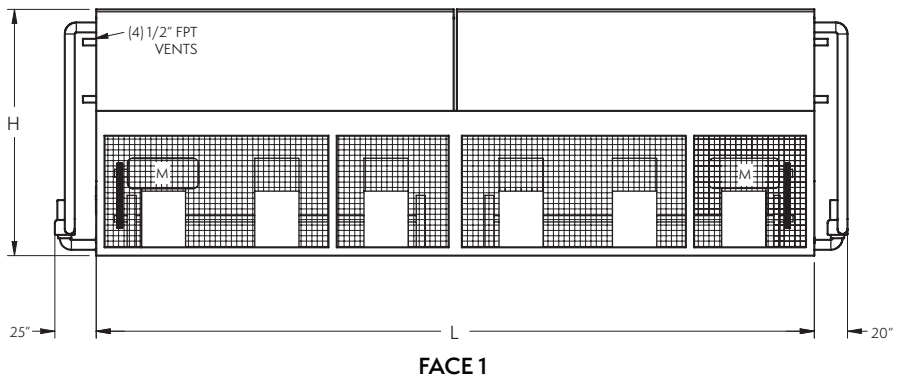
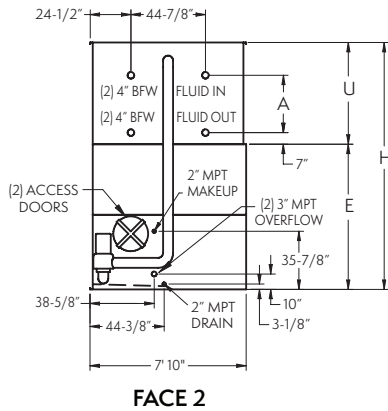
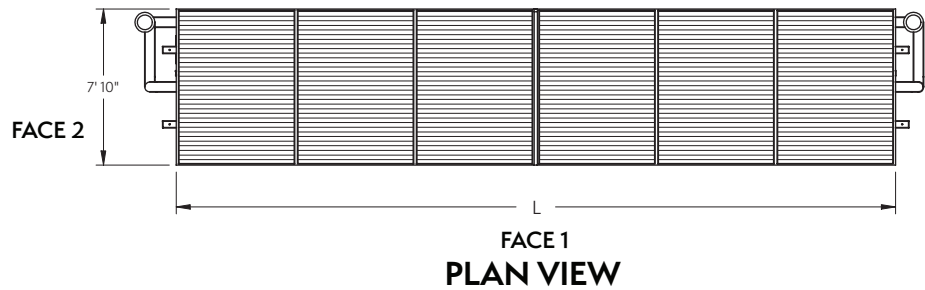
Δ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.

▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration.

Coil connections are 4" bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Models: LSWE 8P-3M36 to 8P-7P36

Closed Circuit Coolers



NOTE: The number of coil connections doubles when the flow rate exceeds 1800 gpm on 8Px36 models. This required option is referred to as the High Flow coil configuration.

Model No. †	WEIGHTS (LBS)			FANS		SPRAY PUMP		Coil Volume (Gallons)	REMOTE SUMP Δ			DIMENSIONS ▲				
	Shipping	Heaviest Section *	Operating	HP	CFM	HP	GPM		Gallons Req'd**	Conn. Size	Operating Weight (lbs)	Height H	Length L	Lower E	Upper U	Coil A
LSWE 8P-3M36	27,130	9,730	42,430	[2] 30	145,600	[2] 7.5	1680	590	1060	[2] 12"	37,640	11' 1-5/8"	36' 1-1/2"	7' 3-3/8"	3' 10-1/4"	19-1/2"
LSWE 8P-3N36	27,450	10,050	42,750	[2] 40	160,200	[2] 7.5	1680	590	1060	[2] 12"	38,280	11' 1-5/8"	36' 1-1/2"	7' 3-3/8"	3' 10-1/4"	19-1/2"
LSWE 8P-3O36	27,470	10,070	42,770	[2] 50	172,600	[2] 7.5	1680	590	1060	[2] 12"	38,320	11' 1-5/8"	36' 1-1/2"	7' 3-3/8"	3' 10-1/4"	19-1/2"
LSWE 8P-3P36	27,870	10,470	43,170	[2] 60	183,400	[2] 7.5	1680	590	1060	[2] 12"	39,120	11' 1-5/8"	36' 1-1/2"	7' 3-3/8"	3' 10-1/4"	19-1/2"
LSWE 8P-4M36	31,530	10,900	48,390	[2] 30	142,700	[2] 7.5	1680	778	1060	[2] 12"	43,940	11' 9-1/8"	36' 1-1/2"	7' 3-3/8"	4' 5-3/4"	27"
LSWE 8P-4N36	31,850	10,900	48,710	[2] 40	157,100	[2] 7.5	1680	778	1060	[2] 12"	44,580	11' 9-1/8"	36' 1-1/2"	7' 3-3/8"	4' 5-3/4"	27"
LSWE 8P-4O36	31,870	10,900	48,730	[2] 50	169,200	[2] 7.5	1680	778	1060	[2] 12"	44,620	11' 9-1/8"	36' 1-1/2"	7' 3-3/8"	4' 5-3/4"	27"
LSWE 8P-4P36	32,270	10,900	49,130	[2] 60	179,800	[2] 7.5	1680	778	1060	[2] 12"	45,420	11' 9-1/8"	36' 1-1/2"	7' 3-3/8"	4' 5-3/4"	27"
LSWE 8P-5N36	36,050	13,000	54,470	[2] 40	153,900	[2] 7.5	1680	966	1060	[2] 12"	50,710	12' 4-5/8"	36' 1-1/2"	7' 3-3/8"	5' 1-1/4"	34-1/2"
LSWE 8P-5O36	36,070	13,000	54,490	[2] 50	165,800	[2] 7.5	1680	966	1060	[2] 12"	50,750	12' 4-5/8"	36' 1-1/2"	7' 3-3/8"	5' 1-1/4"	34-1/2"
LSWE 8P-5P36	36,470	13,000	54,890	[2] 60	176,200	[2] 7.5	1680	966	1060	[2] 12"	51,550	12' 4-5/8"	36' 1-1/2"	7' 3-3/8"	5' 1-1/4"	34-1/2"
LSWE 8P-6N36	40,450	15,200	60,450	[2] 40	150,800	[2] 7.5	1680	1153	1060	[2] 12"	57,010	13' 1/8"	36' 1-1/2"	7' 3-3/8"	5' 8-3/4"	42"
LSWE 8P-6O36	40,470	15,200	60,470	[2] 50	162,400	[2] 7.5	1680	1153	1060	[2] 12"	57,050	13' 1/8"	36' 1-1/2"	7' 3-3/8"	5' 8-3/4"	42"
LSWE 8P-6P36	40,870	15,200	60,870	[2] 60	172,600	[2] 7.5	1680	1153	1060	[2] 12"	57,850	13' 1/8"	36' 1-1/2"	7' 3-3/8"	5' 8-3/4"	42"
LSWE 8P-7N36	44,830	17,390	66,390	[2] 40	147,600	[2] 7.5	1680	1341	1060	[2] 12"	62,960	13' 2-1/8"	36' 1-1/2"	7' 3-3/8"	5' 10-3/4"	47-3/4"
LSWE 8P-7O36	44,850	17,390	66,410	[2] 50	159,000	[2] 7.5	1680	1341	1060	[2] 12"	63,000	13' 2-1/8"	36' 1-1/2"	7' 3-3/8"	5' 10-3/4"	47-3/4"
LSWE 8P-7P36	45,250	17,390	66,810	[2] 60	169,000	[2] 7.5	1680	1341	1060	[2] 12"	63,800	13' 2-1/8"	36' 1-1/2"	7' 3-3/8"	5' 10-3/4"	47-3/4"

† Model Number will end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping. Model numbers will include "I" for units with Intake Attenuation, "D" for units with Discharge Attenuation, "F" for units with Full Sound Attenuation, "T" for units with a Tapered Discharge Hood, and "S" for units with an option that negates CTI Certification.

†† Model normally ships in one piece.

* Heaviest section is the coil section.

** Gallons shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation (12" would normally be sufficient).

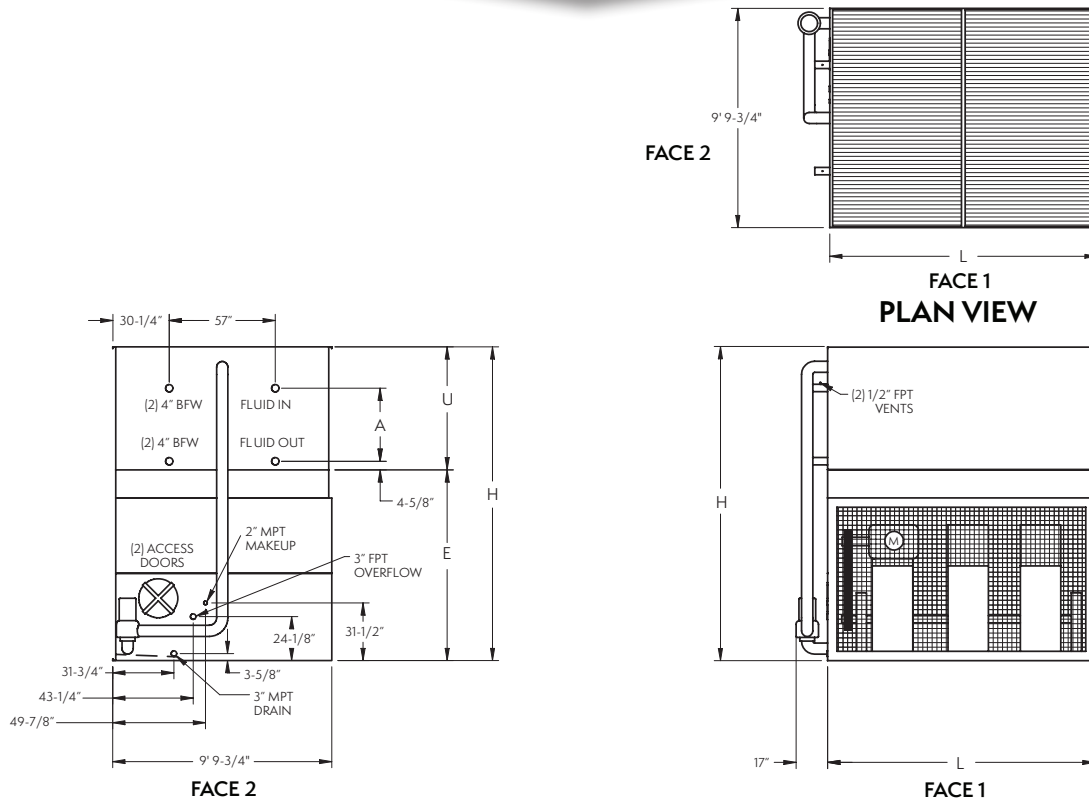
Δ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.

▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration.

Coil connections are 4" bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Models: LSWE Models 10-3M12 to 10-7P12

Closed Circuit Coolers



NOTE: The number of coil connections doubles when the flow rate exceeds 900 gpm on 10x12 models. This required option is referred to as the High Flow coil configuration.

Model No. †	WEIGHTS (LBS)			FANS		SPRAY PUMP		Coil Volume (Gallons)	REMOTE SUMP Δ			DIMENSIONS ▲				
	Shipping	Heaviest Section*	Operating	HP	CFM	HP	GPM		Gallons Req'd**	Conn. Size	Operating Weight (lbs)	Height H	Length L	Lower E	Upper U	Coil A
LSWE 10-3M12	12,770	7,880	19,240	30	68,400	5	685	253	410	10"	16,990	12' 7-5/8"	11' 11-3/4"	8' 6-1/2"	4' 1-1/8"	22-1/4"
LSWE 10-3N12	12,930	7,880	19,400	40	75,200	5	685	253	410	10"	17,150	12' 7-5/8"	11' 11-3/4"	8' 6-1/2"	4' 1-1/8"	22-1/4"
LSWE 10-3O12	12,940	7,880	19,410	50	81,100	5	685	253	410	10"	17,160	12' 7-5/8"	11' 11-3/4"	8' 6-1/2"	4' 1-1/8"	22-1/4"
LSWE 10-4M12	14,690	9,800	21,820	30	67,000	5	685	332	410	10"	19,750	13' 4-1/8"	11' 11-3/4"	8' 6-1/2"	4' 9-5/8"	30-3/4"
LSWE 10-4N12	14,850	9,800	21,980	40	73,800	5	685	332	410	10"	19,910	13' 4-1/8"	11' 11-3/4"	8' 6-1/2"	4' 9-5/8"	30-3/4"
LSWE 10-4O12	14,860	9,800	21,990	50	79,500	5	685	332	410	10"	19,920	13' 4-1/8"	11' 11-3/4"	8' 6-1/2"	4' 9-5/8"	30-3/4"
LSWE 10-5M12	16,500	11,610	24,290	30	65,700	5	685	411	410	10"	22,390	14' 5/8"	11' 11-3/4"	8' 6-1/2"	5' 6-1/8"	39-1/4"
LSWE 10-5N12	16,660	11,610	24,450	40	72,300	5	685	411	410	10"	22,550	14' 5/8"	11' 11-3/4"	8' 6-1/2"	5' 6-1/8"	39-1/4"
LSWE 10-5O12	16,670	11,610	24,460	50	77,900	5	685	411	410	10"	22,560	14' 5/8"	11' 11-3/4"	8' 6-1/2"	5' 6-1/8"	39-1/4"
LSWE 10-6M12	18,400	13,510	26,840	30	64,300	5	685	490	410	10"	25,120	14' 9-1/8"	11' 11-3/4"	8' 6-1/2"	6' 2-5/8"	47-3/4"
LSWE 10-6N12	18,560	13,510	27,000	40	70,800	5	685	490	410	10"	25,280	14' 9-1/8"	11' 11-3/4"	8' 6-1/2"	6' 2-5/8"	47-3/4"
LSWE 10-6O12	18,570	13,510	27,010	50	76,300	5	685	490	410	10"	25,290	14' 9-1/8"	11' 11-3/4"	8' 6-1/2"	6' 2-5/8"	47-3/4"
LSWE 10-6P12	18,770	13,510	27,210	60	81,100	5	685	490	410	10"	25,490	14' 9-1/8"	11' 11-3/4"	8' 6-1/2"	6' 2-5/8"	47-3/4"
LSWE 10-7M12	20,640	15,750	29,740	30	63,000	5	685	569	410	10"	28,020	14' 9-1/8"	11' 11-3/4"	8' 6-1/2"	6' 2-5/8"	47-3/4"
LSWE 10-7N12	20,800	15,750	29,900	40	69,300	5	685	569	410	10"	28,180	14' 9-1/8"	11' 11-3/4"	8' 6-1/2"	6' 2-5/8"	47-3/4"
LSWE 10-7O12	20,810	15,750	29,910	50	74,700	5	685	569	410	10"	28,190	14' 9-1/8"	11' 11-3/4"	8' 6-1/2"	6' 2-5/8"	47-3/4"
LSWE 10-7P12	21,010	15,750	30,110	60	79,400	5	685	569	410	10"	28,390	14' 9-1/8"	11' 11-3/4"	8' 6-1/2"	6' 2-5/8"	47-3/4"

† Model Number will end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping. Model numbers will include "I" for units with Intake Attenuation, "D" for units with Discharge Attenuation, "F" for units with Full Sound Attenuation, "T" for units with a Tapered Discharge Hood, and "S" for units with an option that negates CTI Certification.

* Heaviest section is the coil section.

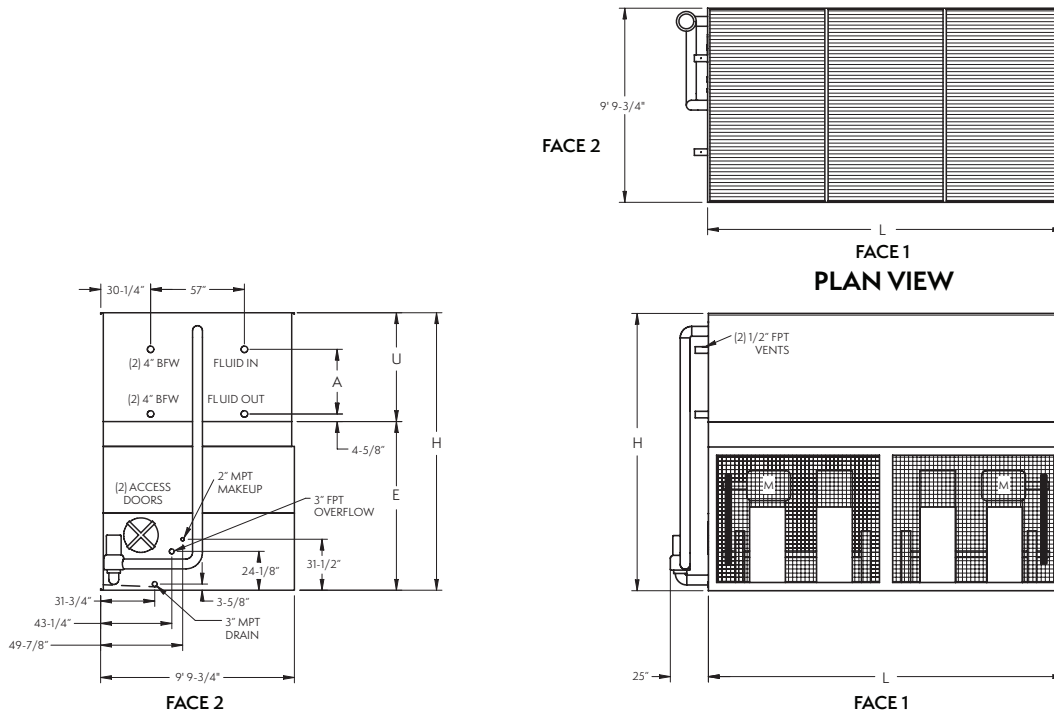
** Gallons shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation (12" would normally be sufficient).

Δ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.

▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration. Coil connections are 4" bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Models: LSWE 10-3K18 to 10-7N18

Closed Circuit Coolers



NOTE: The number of coil connections doubles when the flow rate exceeds 900 gpm on 10x18 models. This required option is referred to as the High Flow coil configuration.

Model No. †	WEIGHTS (LBS)			FANS		SPRAY PUMP		Coil Volume (Gallons)	REMOTE SUMP Δ			DIMENSIONS ▲				
	Shipping	Heaviest Section *	Operating	HP	CFM	HP	GPM		Gallons Req'd**	Conn. Size	Operating Weight (lbs)	Height H	Length L	Lower E	Upper U	Coil A
LSWE 10-3K18	18,660	11,530	28,410	[2] 20	98,800	7.5	1,030	374	600	12"	24,900	12' 7-5/8"	18' 1/4"	8' 6-1/2"	4' 1-1/8"	22-1/4"
LSWE 10-3L18	18,720	11,530	28,470	[2] 25	106,400	7.5	1,030	374	600	12"	24,960	12' 7-5/8"	18' 1/4"	8' 6-1/2"	4' 1-1/8"	22-1/4"
LSWE 10-3M18	18,820	11,530	28,570	[2] 30	113,100	7.5	1,030	374	600	12"	25,060	12' 7-5/8"	18' 1/4"	8' 6-1/2"	4' 1-1/8"	22-1/4"
LSWE 10-3N18	19,140	11,530	28,890	[2] 40	124,500	7.5	1,030	374	600	12"	25,380	12' 7-5/8"	18' 1/4"	8' 6-1/2"	4' 1-1/8"	22-1/4"
LSWE 10-4L18	21,530	14,340	32,270	[2] 25	104,400	7.5	1,030	494	600	12"	28,980	13' 4-1/8"	18' 1/4"	8' 6-1/2"	4' 9-5/8"	30-3/4"
LSWE 10-4M18	21,630	14,340	32,370	[2] 30	110,900	7.5	1,030	494	600	12"	29,080	13' 4-1/8"	18' 1/4"	8' 6-1/2"	4' 9-5/8"	30-3/4"
LSWE 10-4N18	21,950	14,340	32,690	[2] 40	122,000	7.5	1,030	494	600	12"	29,400	13' 4-1/8"	18' 1/4"	8' 6-1/2"	4' 9-5/8"	30-3/4"
LSWE 10-5L18	24,240	17,050	35,980	[2] 25	102,300	7.5	1,030	613	600	12"	32,950	14' 5/8"	18' 1/4"	8' 6-1/2"	5' 6-1/8"	39-1/4"
LSWE 10-5M18	24,340	17,050	36,080	[2] 30	108,700	7.5	1,030	613	600	12"	33,050	14' 5/8"	18' 1/4"	8' 6-1/2"	5' 6-1/8"	39-1/4"
LSWE 10-5N18	24,660	17,050	36,400	[2] 40	119,600	7.5	1,030	613	600	12"	33,370	14' 5/8"	18' 1/4"	8' 6-1/2"	5' 6-1/8"	39-1/4"
LSWE 10-6L18	27,060	19,870	39,790	[2] 25	100,200	7.5	1,030	732	600	12"	37,010	14' 9-1/8"	18' 1/4"	8' 6-1/2"	6' 2-5/8"	47-3/4"
LSWE 10-6M18	27,160	19,870	39,890	[2] 30	106,500	7.5	1,030	732	600	12"	37,110	14' 9-1/8"	18' 1/4"	8' 6-1/2"	6' 2-5/8"	47-3/4"
LSWE 10-6N18	27,480	19,870	40,210	[2] 40	117,200	7.5	1,030	732	600	12"	37,430	14' 9-1/8"	18' 1/4"	8' 6-1/2"	6' 2-5/8"	47-3/4"
LSWE 10-7L18	30,420	23,230	44,150	[2] 25	98,100	7.5	1,030	851	600	12"	41,370	14' 9-1/8"	18' 1/4"	8' 6-1/2"	6' 2-5/8"	47-3/4"
LSWE 10-7M18	30,520	23,230	44,250	[2] 30	104,200	7.5	1,030	851	600	12"	41,470	14' 9-1/8"	18' 1/4"	8' 6-1/2"	6' 2-5/8"	47-3/4"
LSWE 10-7N18	30,840	23,230	44,570	[2] 40	114,700	7.5	1,030	851	600	12"	41,790	14' 9-1/8"	18' 1/4"	8' 6-1/2"	6' 2-5/8"	47-3/4"

† Model Number will end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping. Model numbers will include "I" for units with Intake Attenuation, "D" for units with Discharge Attenuation, "F" for units with Full Sound Attenuation, "T" for units with a Tapered Discharge Hood, and "S" for units with an option that negates CTI Certification.

* Heaviest section is the coil section.

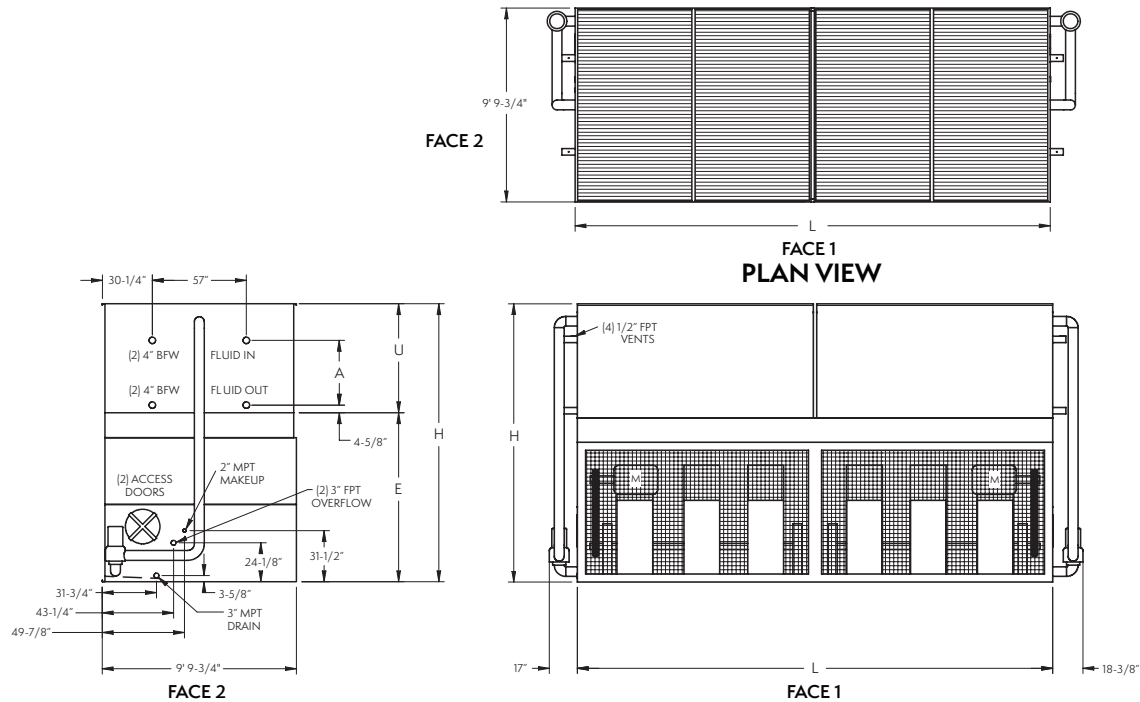
** Gallons shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation (12" would normally be sufficient).

Δ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.

▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration. Coil connections are 4" bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Models: LSWE 10-3M24 to 10-7P24

Closed Circuit Coolers



NOTE: The number of coil connections doubles when the flow rate exceeds 1800 gpm on 10x24 models. This required option is referred to as the High Flow coil configuration.

Model No. †	WEIGHTS (LBS)			FANS		SPRAY PUMP		Coil Volume (Gallons)	REMOTE SUMP Δ			DIMENSIONS ▲				
	Shipping	Heaviest Section *	Operating	HP	CFM	HP	GPM		Gallons Req'd **	Conn. Size	Operating Weight (lbs)	Height H	Length L	Lower E	Upper U	Coil A
LSWE 10-3M24	24,960	9,200	38,060	[2] 30	136,700	[2] 5	1,370	507	820	[2] 10"	34,130	12' 7-5/8"	24' 3/4"	8' 6-1/2"	4' 1-1/8"	22-1/4"
LSWE 10-3N24	25,280	9,520	38,380	[2] 40	150,500	[2] 5	1,370	507	820	[2] 10"	34,770	12' 7-5/8"	24' 3/4"	8' 6-1/2"	4' 1-1/8"	22-1/4"
LSWE 10-3O24	25,300	9,540	38,400	[2] 50	162,100	[2] 5	1,370	507	820	[2] 10"	34,810	12' 7-5/8"	24' 3/4"	8' 6-1/2"	4' 1-1/8"	22-1/4"
LSWE 10-4M24	28,780	9,790	43,200	[2] 30	134,000	[2] 5	1,370	664	820	[2] 10"	39,600	13' 4-1/8"	24' 3/4"	8' 6-1/2"	4' 9-5/8"	30-3/4"
LSWE 10-4N24	29,100	9,790	43,520	[2] 40	147,500	[2] 5	1,370	664	820	[2] 10"	40,240	13' 4-1/8"	24' 3/4"	8' 6-1/2"	4' 9-5/8"	30-3/4"
LSWE 10-4O24	29,120	9,790	43,540	[2] 50	158,900	[2] 5	1,370	664	820	[2] 10"	40,280	13' 4-1/8"	24' 3/4"	8' 6-1/2"	4' 9-5/8"	30-3/4"
LSWE 10-5M24	32,420	11,610	48,160	[2] 30	131,400	[2] 5	1,370	822	820	[2] 10"	44,880	14' 5/8"	24' 3/4"	8' 6-1/2"	5' 6-1/8"	39-1/4"
LSWE 10-5N24	32,740	11,610	48,480	[2] 40	144,600	[2] 5	1,370	822	820	[2] 10"	45,520	14' 5/8"	24' 3/4"	8' 6-1/2"	5' 6-1/8"	39-1/4"
LSWE 10-5O24	32,760	11,610	48,500	[2] 50	155,800	[2] 5	1,370	822	820	[2] 10"	45,560	14' 5/8"	24' 3/4"	8' 6-1/2"	5' 6-1/8"	39-1/4"
LSWE 10-6M24	36,220	13,510	53,260	[2] 30	128,700	[2] 5	1,370	980	820	[2] 10"	50,310	14' 9-1/8"	24' 3/4"	8' 6-1/2"	6' 2-5/8"	47-3/4"
LSWE 10-6N24	36,540	13,510	53,580	[2] 40	141,600	[2] 5	1,370	980	820	[2] 10"	50,950	14' 9-1/8"	24' 3/4"	8' 6-1/2"	6' 2-5/8"	47-3/4"
LSWE 10-6O24	36,560	13,510	53,600	[2] 50	152,600	[2] 5	1,370	980	820	[2] 10"	50,990	14' 9-1/8"	24' 3/4"	8' 6-1/2"	6' 2-5/8"	47-3/4"
LSWE 10-6P24	36,960	13,510	54,000	[2] 60	162,100	[2] 5	1,370	980	820	[2] 10"	51,790	14' 9-1/8"	24' 3/4"	8' 6-1/2"	6' 2-5/8"	47-3/4"
LSWE 10-7M24	40,700	15,750	59,060	[2] 30	126,000	[2] 5	1,370	1,138	820	[2] 10"	56,110	14' 9-1/8"	24' 3/4"	8' 6-1/2"	6' 2-5/8"	47-3/4"
LSWE 10-7N24	41,020	15,750	59,380	[2] 40	138,700	[2] 5	1,370	1,138	820	[2] 10"	56,750	14' 9-1/8"	24' 3/4"	8' 6-1/2"	6' 2-5/8"	47-3/4"
LSWE 10-7O24	41,040	15,750	59,400	[2] 50	149,400	[2] 5	1,370	1,138	820	[2] 10"	56,790	14' 9-1/8"	24' 3/4"	8' 6-1/2"	6' 2-5/8"	47-3/4"
LSWE 10-7P24	41,440	15,750	59,800	[2] 60	158,800	[2] 5	1,370	1,138	820	[2] 10"	57,590	14' 9-1/8"	24' 3/4"	8' 6-1/2"	6' 2-5/8"	47-3/4"

† Model Number will end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping. Model numbers will include "I" for units with Intake Attenuation, "D" for units with Discharge Attenuation, "F" for units with Full Sound Attenuation, "T" for units with a Tapered Discharge Hood, and "S" for units with an option that negates CTI Certification.

* Heaviest section is the coil section.

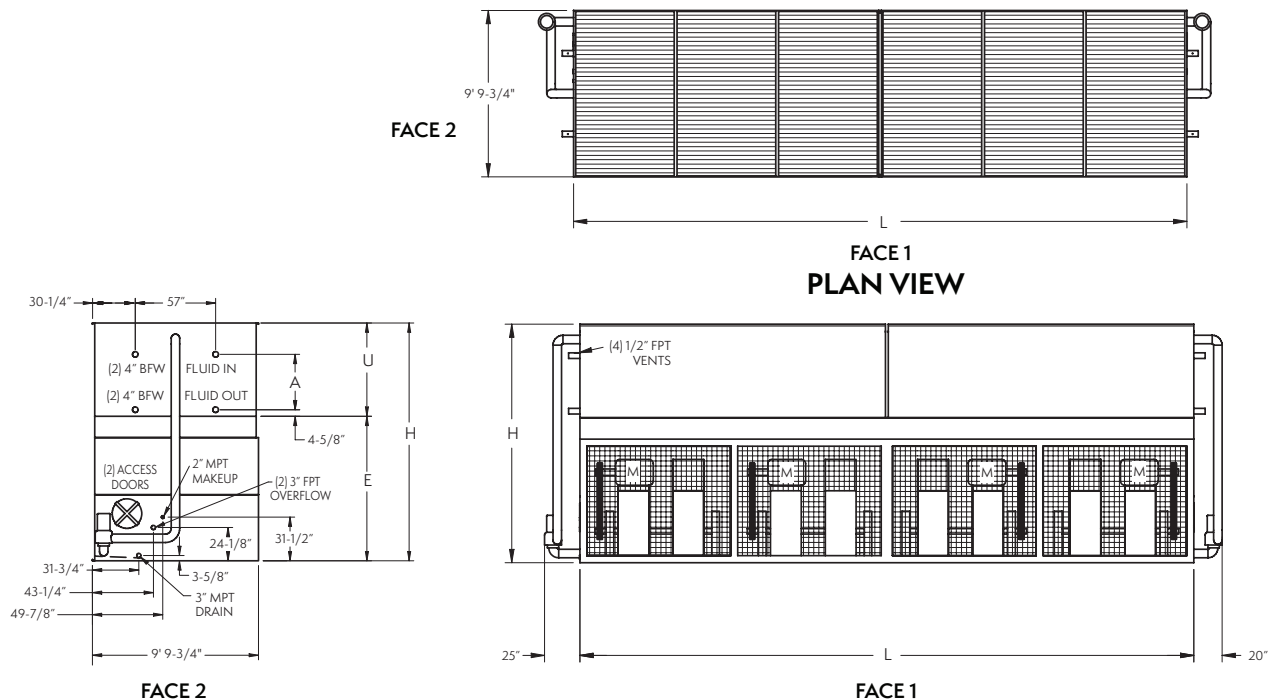
** Gallons shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation (12" would normally be sufficient).

Δ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.

▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration. Coil connections are 4" bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Models: LSWE 10-3K36 to 10-7N36

Closed Circuit Coolers



NOTE: The number of coil connections doubles when the flow rate exceeds 1800 gpm on 10x36 models. This required option is referred to as the High Flow coil configuration.

Model No. †	WEIGHTS (LBS)			FANS		SPRAY PUMP		Coil Volume (Gallons)	REMOTE SUMP Δ			DIMENSIONS ▲				
	Shipping	Heaviest Section *	Operating	HP	CFM	HP	GPM		Gallons Req'd **	Conn. Size	Operating Weight (lbs)	Height H	Length L	Lower E	Upper U	Coil A
LSWE 10-3K36	37,260	14,200	56,770	(4) 20	197,600	(2) 7.5	2,060	748	1,500	(2) 12"	51,310	12' 7-5/8"	36' 2"	8' 6-1/2"	4' 1-1/8"	22-1/4"
LSWE 10-3L36	37,380	14,320	56,890	(4) 25	212,900	(2) 7.5	2,060	748	1,500	(2) 12"	51,550	12' 7-5/8"	36' 2"	8' 6-1/2"	4' 1-1/8"	22-1/4"
LSWE 10-3M36	37,580	14,520	57,090	(4) 30	226,200	(2) 7.5	2,060	748	1,500	(2) 12"	51,950	12' 7-5/8"	36' 2"	8' 6-1/2"	4' 1-1/8"	22-1/4"
LSWE 10-3N36	38,220	15,160	57,730	(4) 40	249,000	(2) 7.5	2,060	748	1,500	(2) 12"	53,230	12' 7-5/8"	36' 2"	8' 6-1/2"	4' 1-1/8"	22-1/4"
LSWE 10-4L36	43,000	14,340	64,490	(4) 25	208,700	(2) 7.5	2,060	987	1,500	(2) 12"	59,580	13' 4-1/8"	36' 2"	8' 6-1/2"	4' 9-5/8"	30-3/4"
LSWE 10-4M36	43,200	14,520	64,690	(4) 30	221,800	(2) 7.5	2,060	987	1,500	(2) 12"	59,980	13' 4-1/8"	36' 2"	8' 6-1/2"	4' 9-5/8"	30-3/4"
LSWE 10-4N36	43,840	15,160	65,330	(4) 40	244,100	(2) 7.5	2,060	987	1,500	(2) 12"	61,260	13' 4-1/8"	36' 2"	8' 6-1/2"	4' 9-5/8"	30-3/4"
LSWE 10-5L36	48,420	17,050	71,910	(4) 25	204,500	(2) 7.5	2,060	1,226	1,500	(2) 12"	67,520	14' 5/8"	36' 2"	8' 6-1/2"	5' 6-1/8"	39-1/4"
LSWE 10-5M36	48,620	17,050	72,110	(4) 30	217,300	(2) 7.5	2,060	1,226	1,500	(2) 12"	67,920	14' 5/8"	36' 2"	8' 6-1/2"	5' 6-1/8"	39-1/4"
LSWE 10-5N36	49,260	17,050	72,750	(4) 40	239,200	(2) 7.5	2,060	1,226	1,500	(2) 12"	69,200	14' 5/8"	36' 2"	8' 6-1/2"	5' 6-1/8"	39-1/4"
LSWE 10-6L36	54,040	19,860	79,510	(4) 25	200,400	(2) 7.5	2,060	1,464	1,500	(2) 12"	75,640	14' 9-1/8"	36' 2"	8' 6-1/2"	6' 2-5/8"	47-3/4"
LSWE 10-6M36	54,240	19,860	79,710	(4) 30	212,900	(2) 7.5	2,060	1,464	1,500	(2) 12"	76,040	14' 9-1/8"	36' 2"	8' 6-1/2"	6' 2-5/8"	47-3/4"
LSWE 10-6N36	54,880	19,860	80,350	(4) 40	234,300	(2) 7.5	2,060	1,464	1,500	(2) 12"	77,320	14' 9-1/8"	36' 2"	8' 6-1/2"	6' 2-5/8"	47-3/4"
LSWE 10-7L36	60,760	23,220	88,230	(4) 25	196,200	(2) 7.5	2,060	1,703	1,500	(2) 12"	84,360	14' 9-1/8"	36' 2"	8' 6-1/2"	6' 2-5/8"	47-3/4"
LSWE 10-7M36	60,960	23,220	88,430	(4) 30	208,500	(2) 7.5	2,060	1,703	1,500	(2) 12"	84,760	14' 9-1/8"	36' 2"	8' 6-1/2"	6' 2-5/8"	47-3/4"
LSWE 10-7N36	61,600	23,220	89,070	(4) 40	229,500	(2) 7.5	2,060	1,703	1,500	(2) 12"	86,040	14' 9-1/8"	36' 2"	8' 6-1/2"	6' 2-5/8"	47-3/4"

† Model Number will end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping. Model numbers will include "I" for units with Intake Attenuation, "D" for units with Discharge Attenuation, "F" for units with Full Sound Attenuation, "T" for units with a Tapered Discharge Hood, and "S" for units with an option that negates CTI Certification.

†† Heaviest section is the fan section.

* Heaviest section is the coil section.

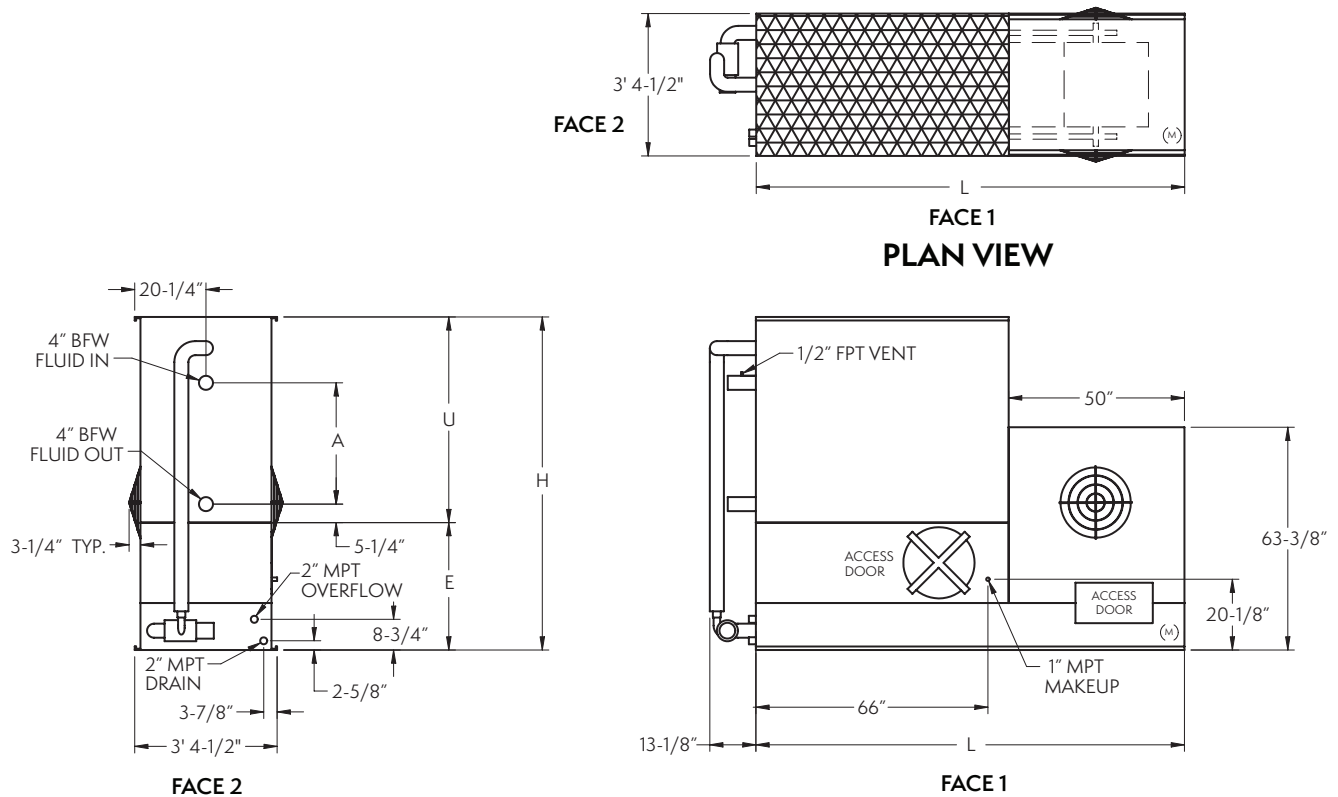
** Gallons shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation (12" would normally be sufficient).

Δ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.

▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration. Coil connections are 4" bevel for weld (BFW). also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Models: LRWB 3-2D6 to 3-5I6

Closed Circuit Coolers



NOTE: The number of coil connections doubles when the flow rate exceeds 450 gpm on 3x6 models. This required option is referred to as the High Flow coil configuration.

Model No.†	WEIGHTS (LBS)		FANS		SPRAY PUMP		Coil Volume (Gallons)	REMOTE SUMP Δ			DIMENSIONS ▲				
	Shipping	Operating	HP	CFM	HP	GPM		Gallons	Conn.	Operating	Height	Length	Lower	Upper	Coil
LRWB 3-2D6	2,170	3,400	1.5	7,600	1/2	100	30	33	4"	2,700	6' 1/4"	10' 1-7/8"	3' 1/4"	3'	12"
LRWB 3-2E6	2,170	3,400	2	8,300	1/2	100	30	33	4"	2,700	6' 1/4"	10' 1-7/8"	3' 1/4"	3'	12"
LRWB 3-2F6	2,200	3,430	3	9,600	1/2	100	30	33	4"	2,720	6' 1/4"	10' 1-7/8"	3' 1/4"	3'	12"
LRWB 3-2G6	2,210	3,440	5	11,300	1/2	100	30	33	4"	2,730	6' 1/4"	10' 1-7/8"	3' 1/4"	3'	12"
LRWB 3-2H6	2,260	3,490	7.5	13,000	1/2	100	30	33	4"	2,770	6' 1/4"	10' 1-7/8"	3' 1/4"	3'	12"
LRWB 3-3E6	2,460	3,790	2	8,200	1/2	100	43	33	4"	3,140	6' 7-3/4"	10' 1-7/8"	3' 1/4"	3' 7-1/2"	19-1/2"
LRWB 3-3F6	2,490	3,820	3	9,400	1/2	100	43	33	4"	3,160	6' 7-3/4"	10' 1-7/8"	3' 1/4"	3' 7-1/2"	19-1/2"
LRWB 3-3G6	2,500	3,830	5	11,100	1/2	100	43	33	4"	3,170	6' 7-3/4"	10' 1-7/8"	3' 1/4"	3' 7-1/2"	19-1/2"
LRWB 3-3H6	2,550	3,880	7.5	12,700	1/2	100	43	33	4"	3,210	6' 7-3/4"	10' 1-7/8"	3' 1/4"	3' 7-1/2"	19-1/2"
LRWB 3-4E6	2,780	4,210	2	8,000	1/2	100	55	33	4"	3,600	7' 3-1/4"	10' 1-7/8"	3' 1/4"	4' 3"	27"
LRWB 3-4F6	2,810	4,240	3	9,200	1/2	100	55	33	4"	3,620	7' 3-1/4"	10' 1-7/8"	3' 1/4"	4' 3"	27"
LRWB 3-4G6	2,820	4,250	5	10,900	1/2	100	55	33	4"	3,630	7' 3-1/4"	10' 1-7/8"	3' 1/4"	4' 3"	27"
LRWB 3-4H6	2,870	4,300	7.5	12,500	1/2	100	55	33	4"	3,670	7' 3-1/4"	10' 1-7/8"	3' 1/4"	4' 3"	27"
LRWB 3-5F6	3,140	4,680	3	9,000	1/2	100	67	33	4"	4,120	7' 10-3/4"	10' 1-7/8"	3' 1/4"	4' 10-1/2"	34-1/2"
LRWB 3-5G6	3,150	4,690	5	10,700	1/2	100	67	33	4"	4,130	7' 10-3/4"	10' 1-7/8"	3' 1/4"	4' 10-1/2"	34-1/2"
LRWB 3-5H6	3,200	4,740	7.5	12,200	1/2	100	67	33	4"	4,170	7' 10-3/4"	10' 1-7/8"	3' 1/4"	4' 10-1/2"	34-1/2"
LRWB 3-5I6	3,220	4,760	10	13,500	1/2	100	67	33	4"	4,210	7' 10-3/4"	10' 1-7/8"	3' 1/4"	4' 10-1/2"	34-1/2"

† Model Number will end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping. Model numbers will include "I" for units with Intake Attenuation, "D" for units with Discharge Attenuation, "F" for units with Full Sound Attenuation, "T" for units with a Tapered Discharge Hood, and "S" for units with an option that negates CTI Certification.

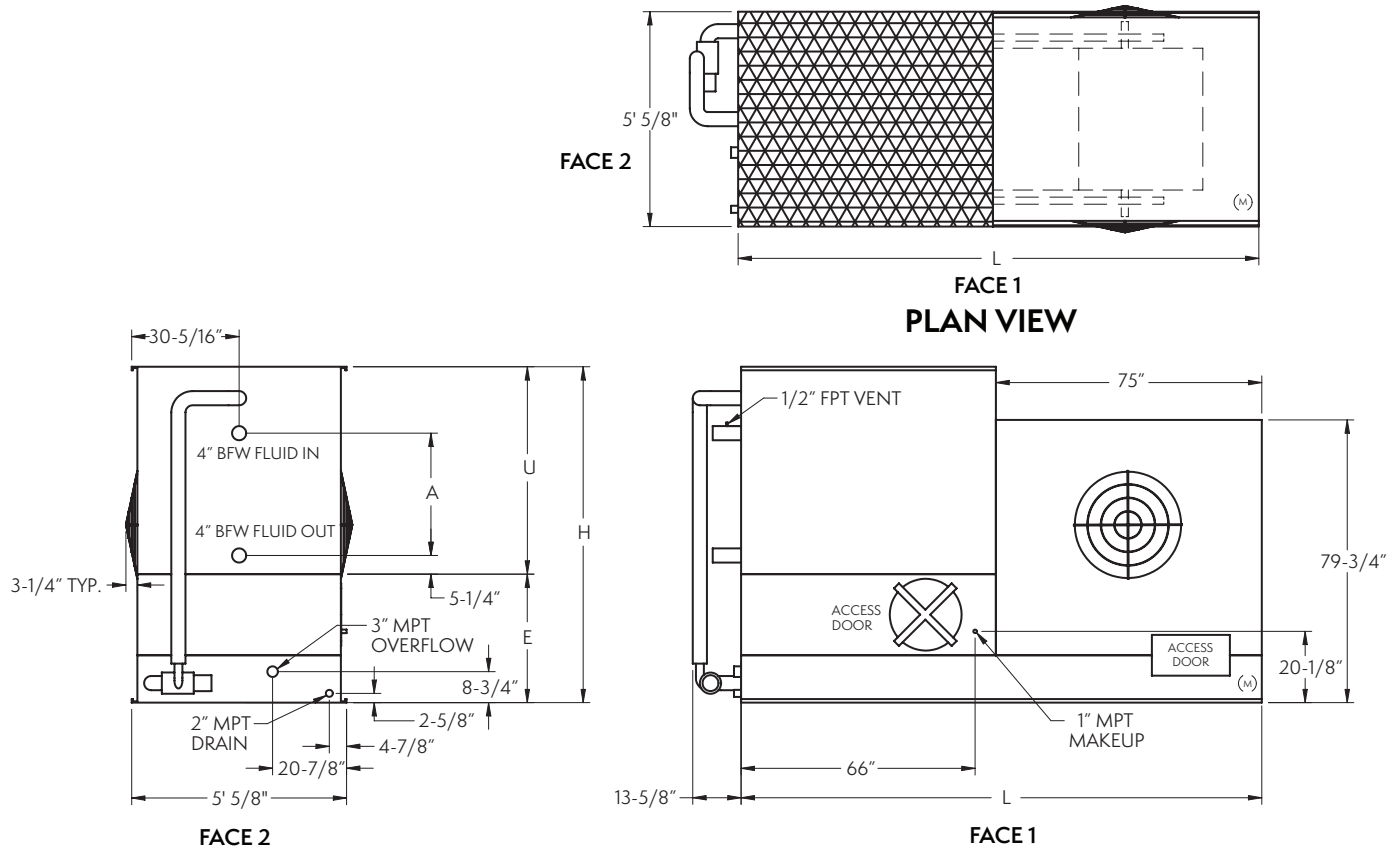
** Gallons shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation (12" would normally be sufficient).

Δ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.

▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration. Coil connections are 4" bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Models: LRWB 5-2F6 to 5-5I6

Closed Circuit Coolers



NOTE: The number of coil connections doubles when the flow rate exceeds 450 gpm on 5x6 models. This required option is referred to as the High Flow coil configuration.

Model No.†	WEIGHTS (LBS)		FANS		SPRAY PUMP		Coil Volume (Gallons)	REMOTE SUMP Δ			DIMENSIONS ▲				
	Shipping	Operating	HP	CFM	HP	GPM		Gallons Req'd**	Conn. Size	Operating Weight (lbs)	Height H	Length L	Lower E	Upper U	Coil A
LRWB 5-2F6	3,280	5,400	3	13,800	1	160	47	120	6"	4,210	6' 1/4"	12' 2-7/8"	3' 1/4"	3'	12"
LRWB 5-2G6	3,290	5,410	5	16,400	1	160	47	120	6"	4,230	6' 1/4"	12' 2-7/8"	3' 1/4"	3'	12"
LRWB 5-2H6	3,340	5,460	7.5	18,700	1	160	47	120	6"	4,270	6' 1/4"	12' 2-7/8"	3' 1/4"	3'	12"
LRWB 5-2I6	3,360	5,480	10	20,600	1	160	47	120	6"	4,310	6' 1/4"	12' 2-7/8"	3' 1/4"	3'	12"
LRWB 5-3F6	3,730	6,010	3	13,500	1	160	66	120	6"	4,880	6' 7-3/4"	12' 2-7/8"	3' 1/4"	3' 7-1/2"	19-1/2"
LRWB 5-3G6	3,740	6,020	5	16,100	1	160	66	120	6"	4,900	6' 7-3/4"	12' 2-7/8"	3' 1/4"	3' 7-1/2"	19-1/2"
LRWB 5-3H6	3,790	6,070	7.5	18,400	1	160	66	120	6"	4,940	6' 7-3/4"	12' 2-7/8"	3' 1/4"	3' 7-1/2"	19-1/2"
LRWB 5-3I6	3,810	6,090	10	20,200	1	160	66	120	6"	4,970	6' 7-3/4"	12' 2-7/8"	3' 1/4"	3' 7-1/2"	19-1/2"
LRWB 5-4G6	4,220	6,660	5	15,700	1	160	85	120	6"	5,600	7' 3-1/4"	12' 2-7/8"	3' 1/4"	4' 3"	27"
LRWB 5-4H6	4,270	6,710	7.5	18,000	1	160	85	120	6"	5,650	7' 3-1/4"	12' 2-7/8"	3' 1/4"	4' 3"	27"
LRWB 5-4I6	4,290	6,730	10	19,800	1	160	85	120	6"	5,680	7' 3-1/4"	12' 2-7/8"	3' 1/4"	4' 3"	27"
LRWB 5-5G6	4,730	7,330	5	15,400	1	160	105	120	6"	6,380	7' 10-3/4"	12' 2-7/8"	3' 1/4"	4' 10-1/2"	34-1/2"
LRWB 5-5H6	4,780	7,380	7.5	17,700	1	160	105	120	6"	6,420	7' 10-3/4"	12' 2-7/8"	3' 1/4"	4' 10-1/2"	34-1/2"
LRWB 5-5I6	4,800	7,400	10	19,400	1	160	105	120	6"	6,450	7' 10-3/4"	12' 2-7/8"	3' 1/4"	4' 10-1/2"	34-1/2"

† Model Number will end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping. Model numbers will include "I" for units with Intake Attenuation, "D" for units with Discharge Attenuation, "F" for units with Full Sound Attenuation, "T" for units with a Tapered Discharge Hood, and "S" for units with an option that negates CTI Certification.

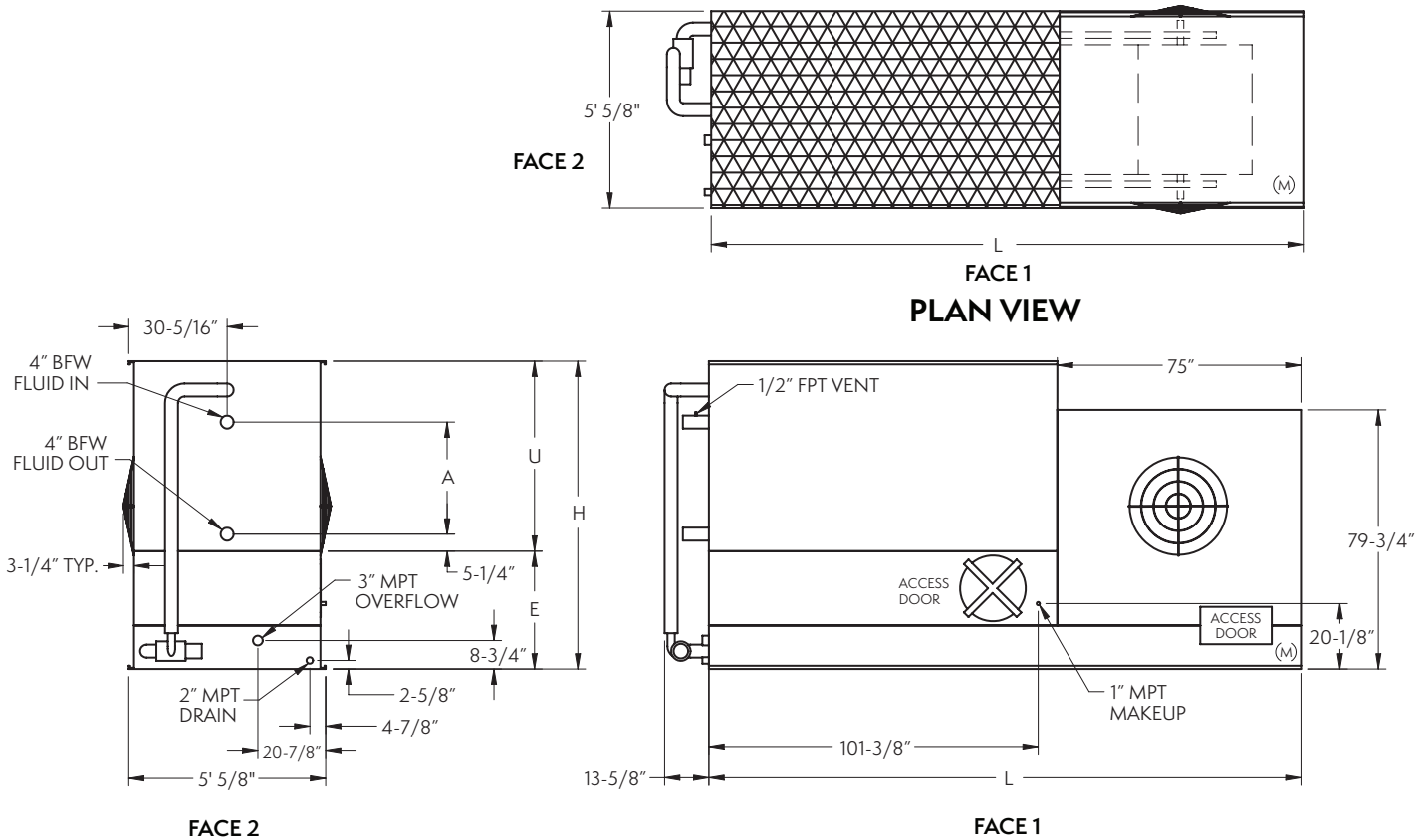
** Gallons shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation (12" would normally be sufficient).

Δ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.

▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration. Coil connections are 4" bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Models: LRWB 5-3H9 to 5-7K9

Closed Circuit Coolers



NOTE: The number of coil connections doubles when the flow rate exceeds 450 gpm on 5x9 models. This required option is referred to as the High Flow coil configuration.

Model No. †	WEIGHTS (LBS)		FANS		SPRAY PUMP		Coil Volume (Gallons)	REMOTE SUMP Δ			DIMENSIONS ▲				
	Shipping	Operating	HP	CFM	HP	GPM		Gallons Req'd**	Conn. Size	Operating Weight (lbs)	Height H	Length L	Lower E	Upper U	Coil A
LRWB 5-3H9	4,850	8,240	7.5	22,500	1.5	255	96	170	6"	6,570	6' 7-3/4"	15' 2-1/4"	3' 1/4"	3' 7-1/2"	19-1/2"
LRWB 5-3I9	4,870	8,260	10	24,700	1.5	255	96	170	6"	6,600	6' 7-3/4"	15' 2-1/4"	3' 1/4"	3' 7-1/2"	19-1/2"
LRWB 5-3J9	4,990	8,380	15	28,300	1.5	255	96	170	6"	6,710	6' 7-3/4"	15' 2-1/4"	3' 1/4"	3' 7-1/2"	19-1/2"
LRWB 5-3K9	5,050	8,440	20	31,100	1.5	255	96	170	6"	6,720	6' 7-3/4"	15' 2-1/4"	3' 1/4"	3' 7-1/2"	19-1/2"
LRWB 5-4I9	5,600	9,230	10	24,200	1.5	255	126	170	6"	7,690	7' 3-1/4"	15' 2-1/4"	3' 1/4"	4' 3"	27"
LRWB 5-4J9	5,720	9,350	15	27,700	1.5	255	126	170	6"	7,800	7' 3-1/4"	15' 2-1/4"	3' 1/4"	4' 3"	27"
LRWB 5-4K9	5,780	9,410	20	30,500	1.5	255	126	170	6"	7,810	7' 3-1/4"	15' 2-1/4"	3' 1/4"	4' 3"	27"
LRWB 5-5I9	6,350	10,230	10	23,800	1.5	255	155	170	6"	8,830	7' 10-3/4"	15' 2-1/4"	3' 1/4"	4' 10-1/2"	34-1/2"
LRWB 5-5J9	6,470	10,350	15	27,200	1.5	255	155	170	6"	8,940	7' 10-3/4"	15' 2-1/4"	3' 1/4"	4' 10-1/2"	34-1/2"
LRWB 5-5K9	6,530	10,410	20	29,900	1.5	255	155	170	6"	8,950	7' 10-3/4"	15' 2-1/4"	3' 1/4"	4' 10-1/2"	34-1/2"
LRWB 5-6I9	6,990	11,110	10	23,300	1.5	255	185	170	6"	9,860	8' 6-1/4"	15' 2-1/4"	3' 1/4"	5' 6"	42"
LRWB 5-6J9	7,110	11,230	15	26,600	1.5	255	185	170	6"	9,970	8' 6-1/4"	15' 2-1/4"	3' 1/4"	5' 6"	42"
LRWB 5-6K9	7,170	11,290	20	29,300	1.5	255	185	170	6"	9,980	8' 6-1/4"	15' 2-1/4"	3' 1/4"	5' 6"	42"
LRWB 5-7I9	7,800	12,170	10	22,800	1.5	255	214	170	6"	11,060	9'	15' 2-1/4"	3' 1/4"	5' 11-3/4"	47-3/4"
LRWB 5-7J9	7,920	12,290	15	26,100	1.5	255	214	170	6"	11,170	9'	15' 2-1/4"	3' 1/4"	5' 11-3/4"	47-3/4"
LRWB 5-7K9	7,980	12,350	20	28,700	1.5	255	214	170	6"	11,180	9'	15' 2-1/4"	3' 1/4"	5' 11-3/4"	47-3/4"

† Model Number will end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping. Model numbers will include "I" for units with Intake Attenuation, "D" for units with Discharge Attenuation, "F" for units with Full Sound Attenuation, "T" for units with a Tapered Discharge Hood, and "S" for units with an option that negates CTI Certification.

** Gallons shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation (12" would normally be sufficient).

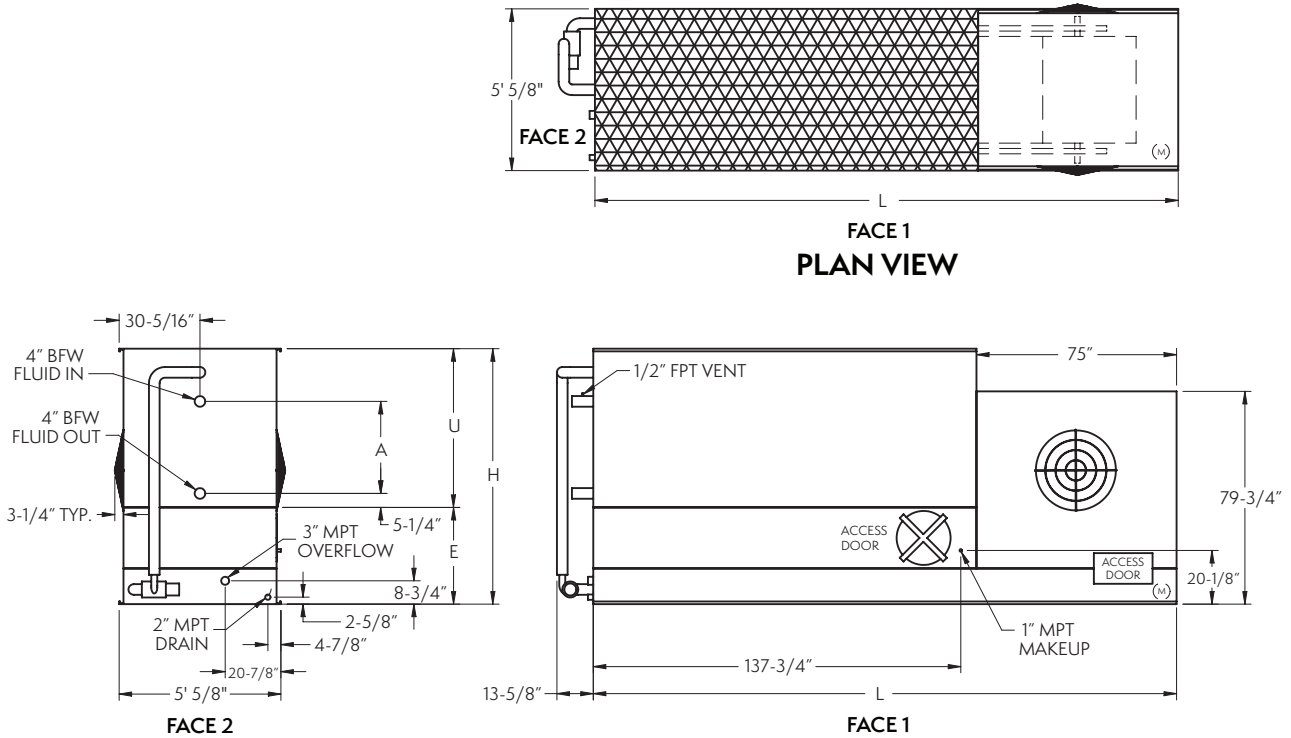
Δ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.

▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration.

Coil connections are 4" bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Models: LRWB 5-3J12 to 5-7N12

Closed Circuit Coolers



NOTE: The number of coil connections doubles when the flow rate exceeds 450 gpm on 5x12 models. This required option is referred to as the High Flow coil configuration.

Model No. †	WEIGHTS (LBS)		FANS		SPRAY PUMP		Coil Volume (Gallons)	REMOTE SUMP Δ			DIMENSIONS ▲				
	Shipping	Operating	HP	CFM	HP	GPM		Gallons Req'd**	Conn. Size	Operating Weight (lbs)	Height H	Length L	Lower E	Upper U	Coil A
LRWB 5-3J12	5,990	10,560	15	31,700	2	345	127	240	8"	8,360	6' 8-3/4"	18' 2-5/8"	3' 1/4"	3' 8-1/2"	19-1/2"
LRWB 5-3K12	6,050	10,620	20	34,900	2	345	127	240	8"	8,380	6' 8-3/4"	18' 2-5/8"	3' 1/4"	3' 8-1/2"	19-1/2"
LRWB 5-3L12	6,080	10,650	25	37,600	2	345	127	240	8"	8,390	6' 8-3/4"	18' 2-5/8"	3' 1/4"	3' 8-1/2"	19-1/2"
LRWB 5-3M12	6,130	10,700	30	39,900	2	345	127	240	8"	8,410	6' 8-3/4"	18' 2-5/8"	3' 1/4"	3' 8-1/2"	19-1/2"
LRWB 5-4J12	6,960	11,860	15	31,100	2	345	166	240	8"	9,850	7' 4-1/4"	18' 2-5/8"	3' 1/4"	4' 4"	27"
LRWB 5-4K12	7,020	11,920	20	34,200	2	345	166	240	8"	9,860	7' 4-1/4"	18' 2-5/8"	3' 1/4"	4' 4"	27"
LRWB 5-4L12	7,050	11,950	25	36,900	2	345	166	240	8"	9,870	7' 4-1/4"	18' 2-5/8"	3' 1/4"	4' 4"	27"
LRWB 5-4M12	7,100	12,000	30	39,200	2	345	166	240	8"	9,890	7' 4-1/4"	18' 2-5/8"	3' 1/4"	4' 4"	27"
LRWB 5-5K12	7,970	13,200	20	33,500	2	345	206	240	8"	11,310	7' 11-3/4"	18' 2-5/8"	3' 1/4"	4' 11-1/2"	34-1/2"
LRWB 5-5L12	8,000	13,230	25	36,100	2	345	206	240	8"	11,320	7' 11-3/4"	18' 2-5/8"	3' 1/4"	4' 11-1/2"	34-1/2"
LRWB 5-5M12	8,050	13,280	30	38,400	2	345	206	240	8"	11,350	7' 11-3/4"	18' 2-5/8"	3' 1/4"	4' 11-1/2"	34-1/2"
LRWB 5-5N12	8,210	13,440	40	42,200	2	345	206	240	8"	11,680	7' 11-3/4"	18' 2-5/8"	3' 1/4"	4' 11-1/2"	34-1/2"
LRWB 5-6L12	8,880	14,440	25	35,400	2	345	245	240	8"	12,710	8' 7-1/4"	18' 2-5/8"	3' 1/4"	5' 7"	42"
LRWB 5-6M12	8,930	14,490	30	37,600	2	345	245	240	8"	12,730	8' 7-1/4"	18' 2-5/8"	3' 1/4"	5' 7"	42"
LRWB 5-6N12	9,090	14,650	40	41,400	2	345	245	240	8"	13,060	8' 7-1/4"	18' 2-5/8"	3' 1/4"	5' 7"	42"
LRWB 5-7L12	10,140	16,030	25	34,600	2	345	285	240	8"	14,280	9' 1"	18' 2-5/8"	3' 1/4"	6' 3/4"	47-3/4"
LRWB 5-7M12	10,190	16,080	30	36,800	2	345	285	240	8"	14,300	9' 1"	18' 2-5/8"	3' 1/4"	6' 3/4"	47-3/4"
LRWB 5-7N12	10,350	16,240	40	40,500	2	345	285	240	8"	14,630	9' 1"	18' 2-5/8"	3' 1/4"	6' 3/4"	47-3/4"

† Model Number will end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping. Model numbers will include "I" for units with Intake Attenuation, "D" for units with Discharge Attenuation, "F" for units with Full Sound Attenuation, "T" for units with a Tapered Discharge Hood, and "S" for units with an option that negates CTI Certification.

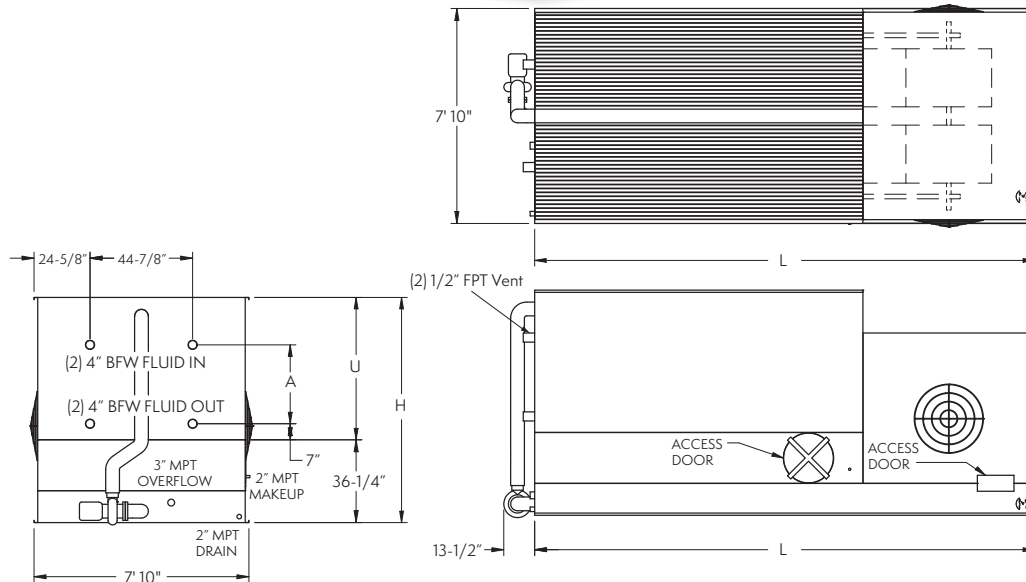
** Gallons shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation (12" would normally be sufficient).

Δ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.

▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration. Coil connections are 4" bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Models: LRWB 8-3J9 to 8-7O12

Closed Circuit Coolers



NOTE: The number of coil connections doubles when the flow rate exceeds 900 gpm on 8x9 and 8x12 models. This required option is referred to as the High Flow coil configuration.

Model No. †	WEIGHTS (LBS)		FANS		SPRAY PUMP		Coil Volume (Gallons)	REMOTE SUMP Δ			DIMENSIONS ▲				
	Shipping	Operating	HP	CFM	HP	GPM		Gallons Req'd**	Conn. Size	Operating Weight (lbs)	Height H	Length L	Lower E	Upper U	Coil A
LRWB 8-3J9	7,430	12,090	15	38,000	2	405	152	250	8"	9,630	6' 11-1/2"	15' 2-1/4"	3' 1/4"	3' 11-1/4"	19-1/2"
LRWB 8-3K9	7,490	12,150	20	41,800	2	405	152	250	8"	9,680	6' 11-1/2"	15' 2-1/4"	3' 1/4"	3' 11-1/4"	19-1/2"
LRWB 8-3L9	7,520	12,180	25	45,100	2	405	152	250	8"	9,690	6' 11-1/2"	15' 2-1/4"	3' 1/4"	3' 11-1/4"	19-1/2"
LRWB 8-3M9	7,570	12,230	30	47,900	2	405	152	250	8"	9,710	6' 11-1/2"	15' 2-1/4"	3' 1/4"	3' 11-1/4"	19-1/2"
LRWB 8-4J9	8,510	13,560	15	37,300	2	405	198	250	8"	11,220	7' 7"	15' 2-1/4"	3' 1/4"	4' 6-3/4"	27"
LRWB 8-4K9	8,570	13,620	20	41,000	2	405	198	250	8"	11,270	7' 7"	15' 2-1/4"	3' 1/4"	4' 6-3/4"	27"
LRWB 8-4L9	8,600	13,650	25	44,200	2	405	198	250	8"	11,280	7' 7"	15' 2-1/4"	3' 1/4"	4' 6-3/4"	27"
LRWB 8-4M9	8,650	13,700	30	46,900	2	405	198	250	8"	11,300	7' 7"	15' 2-1/4"	3' 1/4"	4' 6-3/4"	27"
LRWB 8-5K9	9,930	15,370	20	40,200	2	405	245	250	8"	13,210	8' 2-1/2"	15' 2-1/4"	3' 1/4"	5' 2-1/4"	34-1/2"
LRWB 8-5L9	9,960	15,400	25	43,300	2	405	245	250	8"	13,220	8' 2-1/2"	15' 2-1/4"	3' 1/4"	5' 2-1/4"	34-1/2"
LRWB 8-5M9	10,010	15,450	30	46,000	2	405	245	250	8"	13,240	8' 2-1/2"	15' 2-1/4"	3' 1/4"	5' 2-1/4"	34-1/2"
LRWB 8-4K12	10,260	17,130	20	47,900	3	545	262	360	10"	14,100	7' 7"	18' 2-5/8"	3' 1/4"	4' 6-3/4"	27"
LRWB 8-4L12	10,290	17,160	25	51,600	3	545	262	360	10"	14,110	7' 7"	18' 2-5/8"	3' 1/4"	4' 6-3/4"	27"
LRWB 8-4M12	10,340	17,210	30	54,800	3	545	262	360	10"	14,130	7' 7"	18' 2-5/8"	3' 1/4"	4' 6-3/4"	27"
LRWB 8-4N12	10,500	17,370	40	60,300	3	545	262	360	10"	14,410	7' 7"	18' 2-5/8"	3' 1/4"	4' 6-3/4"	27"
LRWB 8-4O12	10,510	17,380	50	65,000	3	545	262	360	10"	14,470	7' 7"	18' 2-5/8"	3' 1/4"	4' 6-3/4"	27"
LRWB 8-5L12	11,750	19,140	25	50,500	3	545	324	360	10"	16,310	8' 2-1/2"	18' 2-5/8"	3' 1/4"	5' 2-1/4"	34-1/2"
LRWB 8-5M12	11,800	19,190	30	53,700	3	545	324	360	10"	16,330	8' 2-1/2"	18' 2-5/8"	3' 1/4"	5' 2-1/4"	34-1/2"
LRWB 8-5N12	11,960	19,350	40	59,100	3	545	324	360	10"	16,620	8' 2-1/2"	18' 2-5/8"	3' 1/4"	5' 2-1/4"	34-1/2"
LRWB 8-5O12	11,970	19,360	50	63,700	3	545	324	360	10"	16,670	8' 2-1/2"	18' 2-5/8"	3' 1/4"	5' 2-1/4"	34-1/2"
LRWB 8-6M12	13,180	21,090	30	52,600	3	545	386	360	10"	18,460	8' 10"	18' 2-5/8"	3' 1/4"	5' 9-3/4"	42"
LRWB 8-6N12	13,340	21,250	40	57,900	3	545	386	360	10"	18,740	8' 10"	18' 2-5/8"	3' 1/4"	5' 9-3/4"	42"
LRWB 8-6O12	13,350	21,260	50	62,400	3	545	386	360	10"	18,800	8' 10"	18' 2-5/8"	3' 1/4"	5' 9-3/4"	42"
LRWB 8-7M12	14,820	23,250	30	51,500	3	545	448	360	10"	20,880	9' 3-3/4"	18' 2-5/8"	3' 1/4"	6' 3-1/2"	47-3/4"
LRWB 8-7N12	14,980	23,410	40	56,700	3	545	448	360	10"	21,170	9' 3-3/4"	18' 2-5/8"	3' 1/4"	6' 3-1/2"	47-3/4"
LRWB 8-7O12	14,990	23,420	50	61,100	3	545	448	360	10"	21,220	9' 3-3/4"	18' 2-5/8"	3' 1/4"	6' 3-1/2"	47-3/4"

† Model Number will end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping. Model numbers will include "I" for units with Intake Attenuation, "D" for units with Discharge Attenuation, "F" for units with Full Sound Attenuation, "T" for units with a Tapered Discharge Hood, and "S" for units with an option that negates CTI Certification.

** Gallons shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation (12" would normally be sufficient).

Δ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.

▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration. Coil connections are 4" bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Stainless Steel Material Options

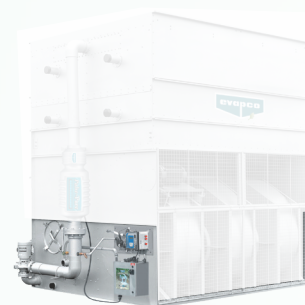
All LSWE and LRWB Series units are constructed with galvanized steel panels as standard. The following pages illustrate the available stainless steel construction material options for this series. Stainless steel options are available in both 304 and 316L stainless steel. Selection of these options only changes the sheet steel; optional accessories such as attenuation, discharge hoods, platforms, etc. are available in stainless steel only by special order. Stainless steel discharge hoods/attenuation have galvanized dampers with a stainless steel linkage. Accessories, coils, and fan shafts **do not** change to stainless steel with these options and are upgraded separately. The strainer in the basin is always 304 stainless steel

LSWE

Stainless Steel Basin up to Overflow Level Option

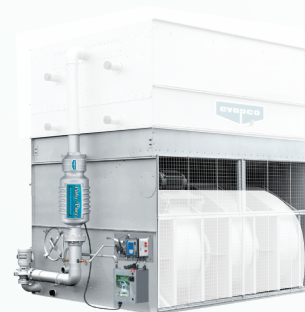
Includes Type 304 stainless steel basin panels up to the overflow level. All panels above the overflow, including the fan discharge cowls are G-235 galvanized steel. Centrifugal fan wheels are **not available** in stainless steel.

This is the first stage of stainless steel on the LS Series units 5' wide and larger. The



Stainless Steel Water Touch Basin

All panels in the pan section in contact with the cooling water including the fan discharge cowls are constructed of Type 304 stainless steel. Remainder of unit constructed of G-235 galvanized steel. All models with this option are furnished with epoxy coated fan wheels and shafts coated with a rust inhibitor. Centrifugal fan wheels are **not available** in stainless steel.



Stainless Steel Water Touch Unit

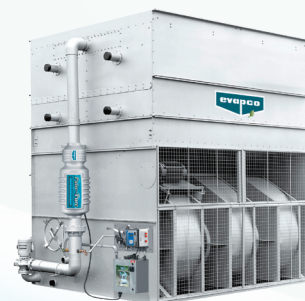
All panels in contact with the cooling water including the upper casing panels are constructed of Type 304 stainless steel. All models with this option are furnished with epoxy coated fan wheels and shafts coated with a rust inhibitor. Centrifugal fan wheels are **not available** in stainless steel.

This option designates the entire water section as stainless. Note that the fan housings and supports are still galvanized in this option.



All Stainless Steel Except Fans Option

All panels including the fan housings and supports are constructed of Type 304 stainless steel. All models with this option are furnished with epoxy coated fan wheels and shafts coated with a rust inhibitor. Centrifugal fan wheels are **not available** in stainless steel. With this option, all sheet metal is stainless including the fan housings and supports.

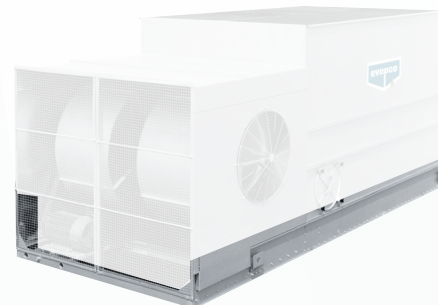


Stainless Steel Material Options

LRWB

Stainless Steel Cold Water Basin

With this option, the lowest section of the unit, as highlighted in the photograph to the right, is constructed of Type 304 stainless steel. On all LRWB units, the fan side inlet screens are PVC coated. Fan screens are galvanized.

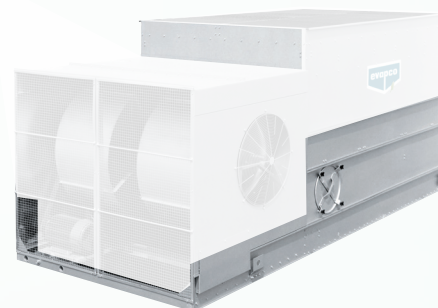


Stainless Steel Water Touch Basin

All panels in the pan section in contact with the cooling water including the fan discharge cowls are constructed of Type 304 stainless steel. The remainder of unit is constructed of G-235 galvanized steel.

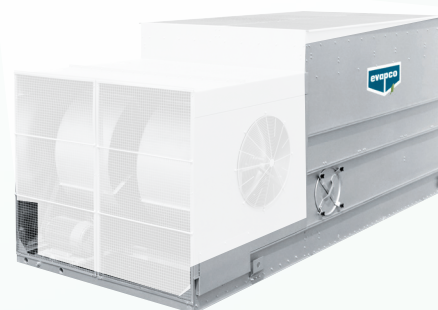
All models with this option are furnished with epoxy coated fan wheels and shafts coated with a rust inhibitor. Centrifugal fan wheels are **not available** in stainless steel. Fan screens are galvanized.

NOTE: LRWB models have carbon steel coils, which are hot dip galvanized after fabrication as standard.



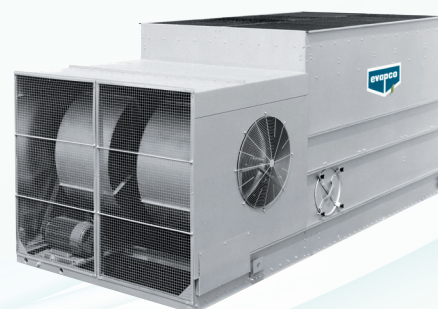
Stainless Steel Water Touch Unit

All panels in contact with the cooling water including the upper casing panels are constructed of Type 304 stainless steel. All models with this option are furnished with epoxy coated fan wheels and shafts coated with a rust inhibitor. Centrifugal fan wheels are **not available** in stainless steel. Fan screens are galvanized. This option designates the entire water section as stainless.



All Stainless Steel Option (Excluding Fans/Coils)

All panels including the fan housings and supports are constructed of Type 304 stainless steel. All models with this option are furnished with epoxy coated fan wheels and shafts coated with a rust inhibitor. Centrifugal fan wheels are **not available** in stainless steel. With this option, all sheet metal is stainless including the Fan Housings and Supports. Fan screens are stainless steel.



Low Sound Solutions

Sound Attenuation Packages

The centrifugal fan design of the LSWE and LRWB models operate at lower sound levels which make these units preferable for installations where noise is a concern. For sound-sensitive applications, the LSWE and LRWB centrifugal fan models may be supplied with various stages of intake and/or discharge attenuation packages which further reduce sound levels.

Consult the factory for certified sound data for each sound attenuation option.

NOTE: Sound attenuation packages may require oversized fan motors.

Fan Side Inlet Attenuation (LRWB Only)

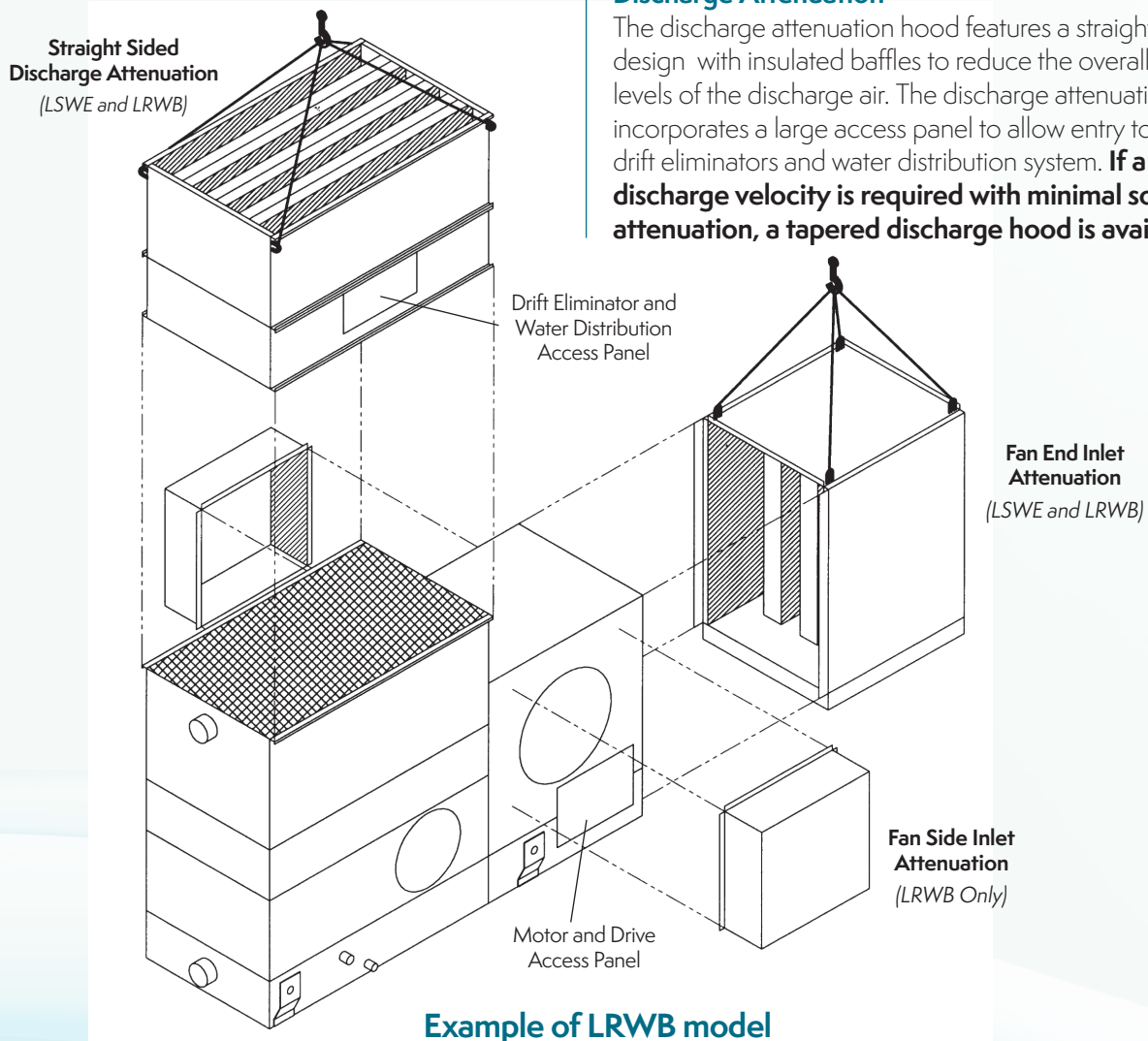
Reduces sound radiated from the fan side air intakes and has an open side to allow for air entry. **This attenuation package ships loose to be mounted in the field on each side of the closed circuit cooler over the fan intakes.**

Fan End Inlet Attenuation

Reduces sound radiated through the end air intakes. It consists of baffled panels that change the path of the air entry and capture the radiated noise thus reducing the overall sound levels generated. In addition, the external belt adjustment mechanism is extended through the inlet attenuator to allow for easy adjustment without having to enter the unit. Solid bottom panels are included with this option to force the inlet air through the attenuator.

Discharge Attenuation

The discharge attenuation hood features a straight-sided design with insulated baffles to reduce the overall sound levels of the discharge air. The discharge attenuation incorporates a large access panel to allow entry to the drift eliminators and water distribution system. **If a higher discharge velocity is required with minimal sound attenuation, a tapered discharge hood is available.**



LSWE Discharge & Intake Attenuation

LSWE Discharge Attenuation Dimensions*

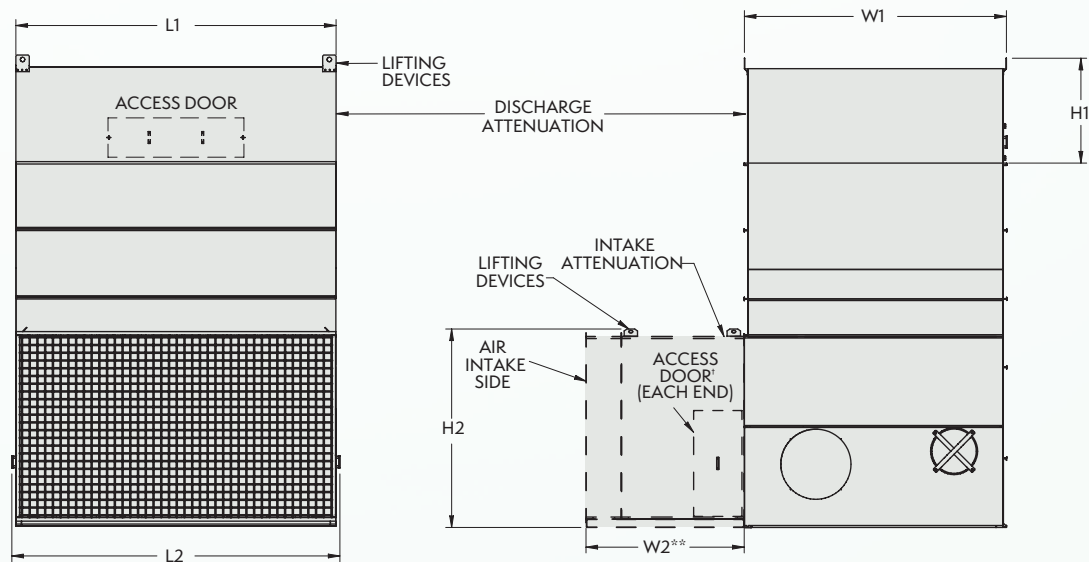
Unit Footprint	H1 (in.)	L1 (in.)	W1 (in.)	Weight (lb.)	No. of Atten.
4' x 6'	47	71-7/8	45-1/2	565	1
4' x 9'	47	107-1/4	45-1/2	745	1
4' x 12'	47	143-1/2	45-1/2	1000	1
4' x 18'	47	216	45-1/2	1370	1
5' x 12'	47	143-1/2	61-7/8	1215	1
5' x 18'	47	216	61-7/8	1660	1
8P' x 12'	71-3/8	143-3/4	92-1/4	2290	1
8P' x 18'	71-3/8	216	92-1/4	3120	1
8P' x 24'	71-3/8	143-3/4	92-1/4	2290	2
8P' x 36'	71-3/8	216	92-1/4	3120	2
10' x 12'	71-3/8	143-1/2	119	2715	1
10' x 18'	71-3/8	216	119	3680	1
10' x 24'	71-3/8	143-1/2	119	2715	2
10' x 36'	71-3/8	216	119	3680	2

LSWE Intake Attenuation Dimensions*

Unit Footprint	H2 (in.)	L2 (in.)	Compact Weight (lb.)	Basic Weight (lb.)	Extended Weight (lb.)	No. of Atten.
4' x 6'	39-3/4	74-5/8	610	760	980	1
4' x 9'	39-3/4	111	870	1070	1350	1
4' x 12'	39-3/4	147-1/4	1120	1360	1710	1
4' x 18'	39-3/4	219-3/4	1750	2060	2520	1
5' x 12'	46-1/4	147-1/4	1380	1570	1850	1
5' x 18'	46-1/4	219-3/4	2130	2370	2720	1
8P' x 12'	81-1/2	147-3/8	1820	2130	2590	1
8P' x 18'	81-1/2	219-3/4	2770	3180	3780	1
8P' x 24'	81-1/2	145-3/8	1820	2115	2555	2
8P' x 36'	81-1/2	217-7/8	2805	3175	3740	2
10' x 12'	89	147-1/2	2020	2330	2780	1
10' x 18'	89	220	2750	3270	4050	1
10' x 24'	89	145-1/2	2030	2320	2745	2
10' x 36'	89	218-1/8	3140	3490	4015	2

* Attenuation dimensions may vary slightly from catalog. See factory certified prints for exact dimensions.

NOTE: Weights provided in the tables above are per attenuator.



LSWE Attenuation

** Measurements for W2 will vary based on selected attenuation (Compact, Basic, or Extended).

† Please note the Compact option has NO access door.

W2 Variations (in.)	
Compact	45
Basic	55-1/2
Extended	71-3/8

NOTE: Intake sound attenuation must be fully supported. If the recommended steel support is being used a third I-beam is required for the intake attenuation. Refer to page 28.

NOTE: Sound attenuation packages may require oversized fan motors.

LRWB Discharge & Intake Attenuation

LRWB Discharge Attenuation Dimensions*

Coil Casing Footprint	H1 (in.)	L1 (in.)	W1 (in.)	Weight per (in.)	Number of Attenuator
3' x 6'	43-3/8"	71-3/4"	40-1/2"	670	1
5' x 6'	43-3/8"	71-1/4"	60-5/8"	850	1
5' x 9'	43-3/8"	107-1/4"	60-5/8"	1,170	1
5' x 12'	43-3/8"	143-5/8"	60-5/8"	1,990	1
8' x 9'	43-3/8"	107-1/4"	94"	1,570	1
8' x 12'	43-3/8"	143-5/8"	94"	2,030	1

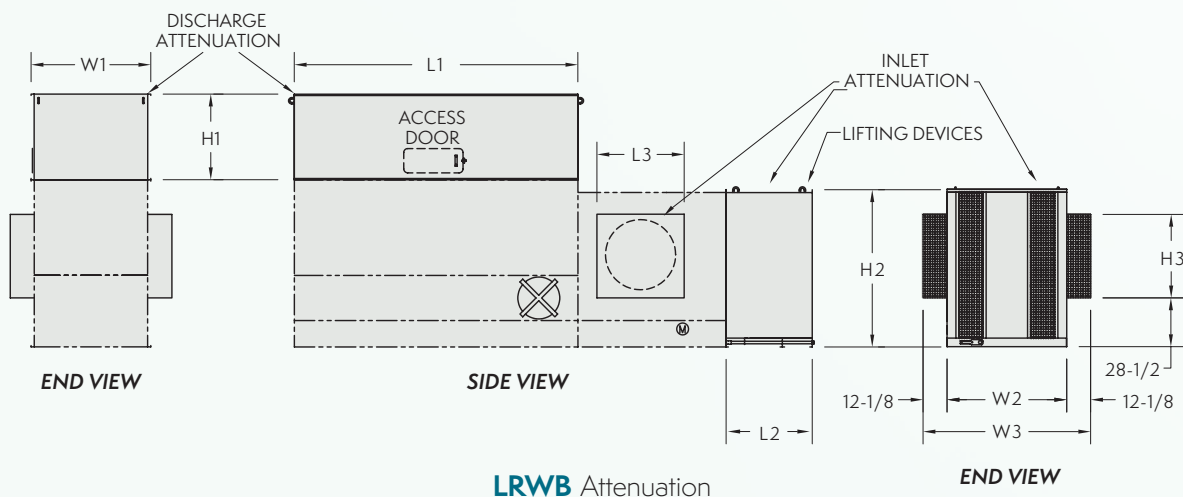
LRWB Fan End Attenuation Dimensions*

Coil Casing Footprint	H2 (in.)	W2 (in.)	L2 (in.)	Weight per (in.)	Number of Attenuator
3' x 6'	63-7/8"	40-1/2"	43-5/8"	810	1
5' x 6'	79-5/8"	60-5/8"	43-1/2"	1280	1
5' x 9'	79-5/8"	60-5/8"	43-1/2"	1280	1
5' x 12'	79-5/8"	60-5/8"	43-1/2"	1280	1
8' x 9'	79-5/8"	94-1/4"	43-5/8"	1530	1
8' x 12'	79-5/8"	94-1/4"	43-5/8"	1530	1

LRWB Fan Side Attenuation Dimensions*

Coil Casing Footprint	H3 (in.)	W3 (in.)	L3 (in.)	Weight per (in.)	Number of Attenuator
3' x 6'	33-5/8"	64-3/4"	34-3/4"	60	2
5' x 6'	36-7/8"	84-7/8"	54"	60	2
5' x 9'	36-7/8"	84-7/8"	54"	60	2
5' x 12'	36-7/8"	84-7/8"	54"	60	2
8' x 9'	42-3/8"	118-1/2"	44-1/8"	60	2
8' x 12'	42-3/8"	118-1/2"	44-1/8"	60	2

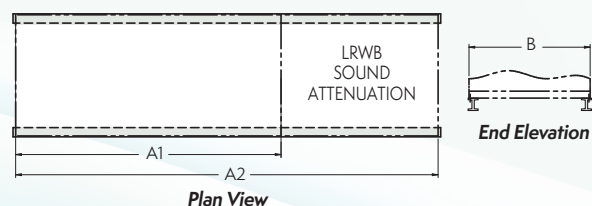
* Attenuation dimensions may vary slightly from catalog. See factory certified prints for exact dimensions.



LRWB Attenuation

NOTE: Intake sound attenuation must be fully supported. If the recommended steel support is being used, extended "I" beams are required for the intake attenuation. Refer to page 28.

NOTE: Sound attenuation packages may require oversized fan motors.



Freeze Protection and Heat Loss

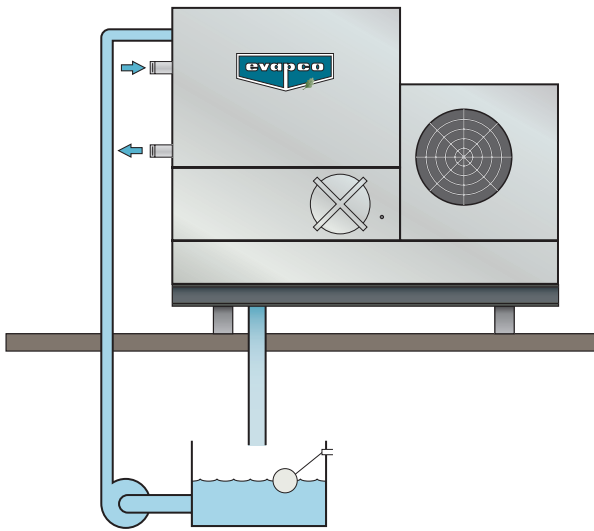
Freeze Protection

If the units are installed in a cold climate and operated year-round, freeze protection must be provided for the heat exchanger coil in the unit as well as for the recirculating water system.

Recirculating Water System Freeze Protection Options

Remote Sump Configuration

The surest way to protect the recirculating water system from freezing is with a remote sump. The remote sump should be located inside the building and below the unit. **When a remote sump arrangement is selected, the spray pump is provided by others and installed at the remote sump.** All water in the closed circuit cooler basin should drain to the remote sump when the spray pump cycles off.



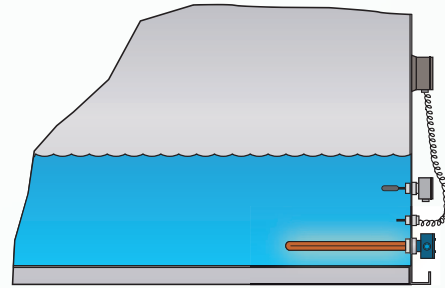
Steam/Hot Water Coils

Steam or hot water coils are available as an alternative to using electric basin heaters or a remote sump. Constructed of galvanized pipe, the coils are installed in the closed circuit cooler basin, and are ready for piping to an external hot water source. **Controls for steam/hot water coils are provided by others and should be interlocked with the water circulating pump to prevent their operation when the pump is energized.**

Basin Heater Package

If a remote sump configuration is not practical, electric basin heater packages are available to keep the pan water from freezing when the unit cycles off. Water lines to and from the unit, spray pump and related piping should be heat traced and insulated up to the overflow level to protect from freezing. **Basin heaters should be interlocked with the water circulating pump to prevent their operation when the pump is energized.**

This unit should not be operated dry (fans on, pump off) unless the basin is completely drained or the heaters have been oversized and the unit has been designed for dry operation. Consult the factory when dry operation is a requirement.



LSWE Basin Heater Sizing

Unit Footprint	kW (0°F)	kW (-20°F)	kW (-40°F)
4' x 6'	(1) 2	(1) 3	(1) 4
4' x 9'	(1) 3	(1) 4	(1) 5
4' x 12'	(1) 3	(1) 5	(1) 7
4' x 18'	(1) 5	(1) 7	(1) 9
5' x 12'	(1) 4	(1) 6	(1) 8
5' x 18'	(2) 3	(2) 4	(1) 12
8P' x 12'	(1) 5	(1) 8	(1) 10
8P' x 18'	(2) 4	(2) 6	(2) 7
8P' x 24'	(2) 5	(2) 7	(2) 10
8P' x 36'	(2) 7	(2) 12	(2) 15
10' x 12'	(1) 7	(1) 10	(1) 15
10' x 18'	(2) 5	(2) 7	(2) 10
10' x 24'	(2) 7	(2) 10	(2) 15
10' x 36'	(2) 10	(4) 7	(4) 9

LRWB Basin Heater Sizing

Unit Footprint	kW (0°F)	kW (-20°F)	kW (-40°F)
3' x 6'	(1) 2	(1) 3	(1) 4
5' x 6'	(1) 3	(1) 5	(1) 6
5' x 9'	(1) 4	(1) 6	(1) 8
5' x 12'	(1) 6	(1) 8	(1) 12
8' x 9'	(1) 7	(1) 9	(1) 12
8' x 12'	(1) 9	(1) 12	(1) 16

Freeze Protection and Heat Loss

Heat Exchanger Coil Freeze Protection Options

The simplest and most foolproof method of protecting the heat exchanger coil from freeze-up is to use a glycol solution. If this is not possible, an auxiliary heat load must be maintained on the coil at all times so that the water temperature does not drop below 50°F when the cooler is shut down and, a minimum recommended flow rate per unit as shown in the table below must be maintained. Refer to Heat Loss Data Table on page 27 for heat loss data.

LSWE Minimum Flows for Freeze Protection

Unit Footprint	Minimum Flow for Freeze	
	Standard Unit	Series Flow Unit (-Z)
4' x 6'	66	33
4' x 9'	66	33
4' x 12'	66	33
4' x 18'	66	33
5' x 12'	94	47
5' x 18'	94	47
8P' x 12'	148	74
8P' x 18'	148	74
8P' x 24'	296	148
8P' x 36'	296	148
10' x 12'	188	94
10' x 18'	188	94
10' x 24'	376	188
10' x 36'	376	188

LRWB Minimum Flows for Freeze Protection

Coil Casing Footprint	Minimum Flow for Freeze	
	Standard Unit	Series Flow Unit (-Z)
3' x 6'	60	30
5' x 6'	94	47
5' x 9'	94	47
5' x 12'	94	47
8' x 9'	148	74
8' x 12'	148	74

If an anti-freeze solution is not used, the coil must be drained immediately whenever the pump is shut down or flow stops. Care must be taken to ensure that the piping is sized to allow the water to flow quickly from the coil. This method of freeze control should only be used in an emergency situation. Coils should not be drained for an extended period of time. Leaving the coil drained and open to the atmosphere can cause corrosion inside the tubes which may lead to premature coil failure.

The amount of glycol required for a system will depend upon the total volume of water in the closed loop and the winter ambient conditions for the installation. The engineering data tables presented on pages 3-19 provide the water volume contained inside the cooler coils to assist in this calculation.

Discharge Hoods with Positive Closure Dampers

When a closed circuit cooler is used in a water-to-air heat pump system or in certain process cooling applications, a method of reducing the heat loss during idle periods of wintertime operation may be required. **For these cases, an optional discharge hood with positive closure dampers and damper actuator is available.**

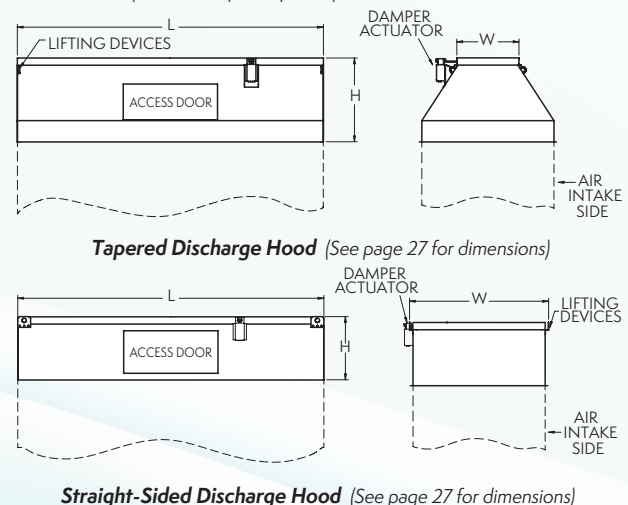
The discharge hood with dampers is designed to minimize the heat loss from convective airflow through an idle cooler. Further reductions in heat loss may be obtained with the addition of insulation to the hood and casing, minimizing conductive heat losses. **Optional insulation may be factory-installed on the hood and casing or field-installed by an insulation contractor.**

The discharge hood and dampers are constructed of hot-dip galvanized steel as standard. Hoods are equipped with access panels to facilitate maintenance on the eliminators and water distribution system. The dampers, damper actuator and linkage are all factory-assembled. **Actuator controls and wiring are field-supplied by others. Damper actuators require 120 volt power supply. Stainless steel discharge hoods with galvanized positive closure dampers are available as an optional accessory.**

The system control sequence should provide for dampers to be fully open before the fans are running and closed when the fans are off; the damper actuator must be interlocked with the temperature control system for this purpose.

When a tapered discharge hood is specified, the next larger size fan motor must be used to overcome the additional static pressure.

Heat loss data is provided for standard units without hoods, with hoods and with hoods and insulation. Table ratings are based on 50°F water in the coil, -10°F ambient and 45 MPH winds (fan and pump off).



Heat Loss & Discharge Hood Dimensions

LSWE Heat Loss Data

LSWE Model	Standard Unit (MBH)	Unit with Hood (MBH)	With Hood & Insulation
4-2x6	37	29	19
4-3x6	50	33	21
4-4x6	61	36	23
4-5x6	68	39	25
4-3x9	76	44	28
4-4x9	92	48	31
4-5x9	104	52	33
4-3x12	103	54	35
4-4x12	124	60	38
4-5x12	140	65	42
4-3x18	155	76	49
4-4x18	188	84	54
4-5x18	211	91	58
5-3x12	147	70	45
5-4x12	178	77	49
5-5x12	200	83	53
5-6x12	213	90	57
5-7x12	231	98	62
5-3x18	223	96	62
5-4x18	269	105	67
5-5x18	303	114	73
5-6x18	322	123	79
5-7x18	349	134	86
8-3x12	227	98	63
8-4x12	276	105	67
8-5x12	309	112	72
8-6x12	329	119	76
8-3x18	311	132	85
8-4x18	376	141	90
8-5x18	468	150	96
8-6x18	499	159	102
8-7x18	541	173	111

LSWE Model	Standard Unit (MBH)	Unit with Hood (MBH)	With Hood & Insulation
8-3x24	454	196	126
8-4x24	552	210	134
8-5x24	618	224	144
8-6x24	658	238	152
8-7x24	713	258	165
8-3x36	688	264	170
8-4x36	834	282	180
8-5x36	936	300	192
8-6x36	998	318	204
8-7x36	1082	345	221
10-3x12	294	109	69
10-4x12	356	117	75
10-5x12	400	125	80
10-6x12	426	134	86
10-7x12	462	146	94
10-3x18	445	143	91
10-4x18	539	153	98
10-5x18	605	164	105
10-6x18	644	175	112
10-7x18	698	190	122
10-3x24	588	217	139
10-4x24	712	234	150
10-5x24	799	251	160
10-6x24	851	267	171
10-7x24	922	290	186
10-3x36	870	285	182
10-4x36	1078	307	196
10-5x36	1210	328	210
10-6x36	1289	349	223
10-7x36	1397	379	242

LRWB Heat Loss Data

LRWB Model	Standard Unit (MBH)	Unit with Hood (MBH)	With Hood & Insulation
3-2x6	33	29	22
3-3x6	46	36	23
3-4x6	54	39	25
3-5x6	62	42	27
5-2x6	52	44	29
5-3x6	72	45	30
5-4x6	87	49	31
5-5x6	98	53	34
5-3x9	110	59	38
5-4x9	133	64	41
5-5x9	149	69	44
5-6x9	159	73	47
5-7x9	162	86	55
5-3x12	147	74	47
5-4x12	178	80	51
5-5x12	200	85	55
5-6x12	213	91	59
5-7x12	217	107	68
8-3x9	170	77	49
8-4x9	205	83	53
8-5x9	231	89	57
8-6x9	246	94	61
8-7x9	250	110	71
8-3x12	228	94	60
8-4x12	276	101	64
8-5x12	310	107	69
8-6x12	330	114	73
8-7x12	336	133	85

Discharge Hood Dimensions

LSWE Tapered Discharge Hood Dimensions

Unit Footprint	H (in.)	L (in.)	W (in.)	Weight per Hood (lbs.)	# of Hoods
4' x 6'	33	71-7/8	21-1/8	205	1
4' x 9'	33	107-1/4	21-1/8	275	1
4' x 12'	33	143-1/2	21-1/8	350	1
4' x 18'	33	216	21-1/8	485	1
5' x 12'	39-1/2	143-1/2	29-1/8	450	1
5' x 18'	39-1/2	216	29-1/8	615	1
8P' x 12'	42-5/8	143-3/4	45-5/8	615	1
8P' x 18'	42-5/8	216	45-5/8	835	1
8P' x 24'	42-5/8	143-3/4	45-5/8	1,230	2
8P' x 36'	42-5/8	216	45-5/8	1,670	2
10' x 12'	50-3/8	143-5/8	58-1/8	775	1
10' x 18'	50-3/8	216	58-1/8	1,055	1
10' x 24'	50-3/8	143-5/8	58-1/8	1,550	2
10' x 36'	50-3/8	216	58-1/8	2,110	2

LSWE Straight-Sided Discharge Hood Dimensions

Unit Footprint	H (in.)	L (in.)	W (in.)	Weight per Hood (lbs.)	# of Hoods
4' x 6'	30	71-7/8	45-1/2	180	1
4' x 9'	30	107-1/4	45-1/2	250	1
4' x 12'	30	143-1/2	45-1/2	300	1
4' x 18'	30	216	45-1/2	395	1
5' x 12'	30	143-1/2	62	330	1
5' x 18'	30	216	62	495	1
8P' x 12'	30	143-3/4	95-1/2	450	1
8P' x 18'	30	216	95-1/2	615	1
8P' x 24'	30	143-3/4	95-1/2	900	2
8P' x 36'	30	216	95-1/2	1,230	2
10' x 12'	30	143-5/8	119-1/8	625	1
10' x 18'	30	216-1/4	119-1/8	855	1
10' x 24'	30	143-5/8	119-1/8	1,250	2
10' x 36'	30	216-1/4	119-1/8	1,710	2

LRWB Tapered Discharge Hood Dimensions

Coil Casing Footprint	H (in.)	L (in.)	W (in.)	Weight per Hood (lbs.)	# of Hoods
3' x 6'	24-1/2	71-7/8	19	235	1
5' x 6'	39-1/4	71-7/8	29	390	1
5' x 9'	39-1/4	107-1/4	29	520	1
5' x 12'	39-1/4	143-5/8	29	680	1
8' x 9'	42-1/2	107-1/4	42-1/2	785	1
8' x 12'	42-1/2	143-5/8	42-1/2	975	1

LRWB Straight-Sided Discharge Hood Dimensions

Coil Casing Footprint	H (in.)	L (in.)	W (in.)	Weight per Hood (lbs.)	# of Hoods
3' x 6'	29-1/2	71-7/8	40-1/2	370	1
5' x 6'	29-1/2	71-7/8	60-5/8	470	1
5' x 9'	29-1/2	107-1/4	60-5/8	680	1
5' x 12'	29-1/2	143-5/8	60-5/8	860	1
8' x 9'	29-1/2	107-1/4	94	985	1
8' x 12'	29-1/2	143-5/8	94	1,245	1

Steel Support

Steel Support

The recommended support for EVAPCO Closed Circuit Coolers is structural I-beams located under the outer flanges and running the entire length of the unit. Mounting holes 3/4" in diameter are located in the bottom channels of the pan section to provide for bolting to the structural steel. (Refer to certified drawings from the factory for bolt hole locations.)

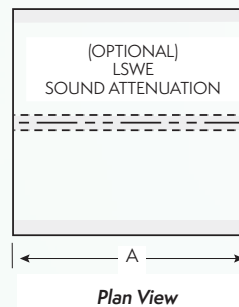
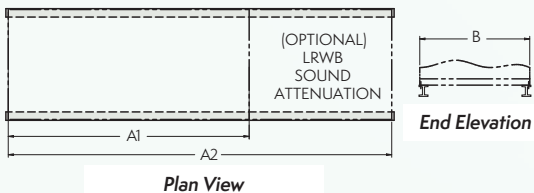
Beams should be level to within 1/360 of unit length, not to exceed 1/2" before setting the unit in place. Do not level the unit by shimming between it and the I-beams as this will not provide proper longitudinal support.

LSWE Dimensions

Coil Casing Footprint	B1 (Unit Only)	B2 (Compact Option)	B3 (Basic Option)	B4 (Extended Option)	A
4' x 6'	4' 5/8"	7' 9-5/8"	8' 8-1/4"	10'	5' 11-7/8"
4' x 9'	4' 5/8"	7' 9-5/8"	8' 8-1/4"	10'	8' 11-1/4"
4' x 12'	4' 5/8"	7' 9-5/8"	8' 8-1/4"	10'	11' 11-1/2"
4' x 18'	4' 5/8"	7' 9-5/8"	8' 8-1/4"	10'	18'
5' x 12'	5' 5"	9' 2"	10' 5/8"	11' 3-15/16"	11' 11-1/2"
5' x 18'	5' 5"	9' 2"	10' 5/8"	11' 3-15/16"	17' 11-7/8"
8P' x 12'	7' 10"	11' 7"	12' 5-5/8"	13' 8-7/8"	11' 11-3/4"
8P' x 18'	7' 10"	11' 7"	12' 5-5/8"	13' 8-7/8"	18'
8P' x 24'	7' 10"	11' 7"	12' 5-5/8"	13' 8-7/8"	24' 1"
8P' x 36'	7' 10"	11' 7"	12' 5-5/8"	13' 8-7/8"	36' 1-1/2"
10' x 12'	9' 9-3/4"	13' 6-3/4"	14' 5-3/8"	15' 8-5/8"	11' 11-3/4"
10' x 18'	9' 9-3/4"	13' 6-3/4"	14' 5-3/8"	15' 8-5/8"	18' 1/4"
10' x 24'	9' 9-3/4"	13' 6-3/4"	14' 5-3/8"	15' 8-5/8"	24' 1-1/8"
10' x 36'	9' 9-3/4"	13' 6-3/4"	14' 5-3/8"	15' 8-5/8"	36' 2-1/8"

LRWB Dimensions

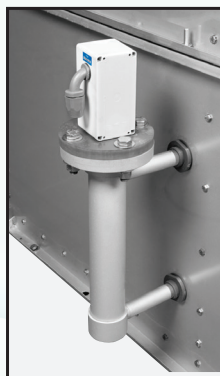
Coil Casing Footprint	A1 (Unit Only)	A2 (Unit with Intake Atten.)	B
3' x 6'	10' 1-7/8"	13' 9-5/8"	3' 4-1/2"
5' x 6'	12' 2-7/8"	15' 10-5/8"	5' 5/8"
5' x 9'	15' 2-1/4"	18' 10"	5' 5/8"
5' x 12'	18' 2-5/8"	21' 10-3/8"	5' 5/8"
8' x 9'	15' 2-1/4"	18' 10"	7' 10"
8' x 12'	18' 2-5/8"	21' 10-3/8"	7' 10"



Optional Equipment

Electric Water Level Control

Closed Circuit Coolers may be ordered with an electric water level control in lieu of the standard mechanical float and make-up assembly. This package provides accurate control of water levels and does not require field adjustment.



Bottom Screens

Protective inlet screens are provided on the sides and/or end of the unit's air intake. Screens are not provided below the fan section since most units are mounted on the roof or at ground level. It is recommended that bottom screens be added to the unit when it will be elevated. These screens can be provided by the factory at an additional cost or added by the installing contractor.

Solid Bottom Panels for Ducted Installations

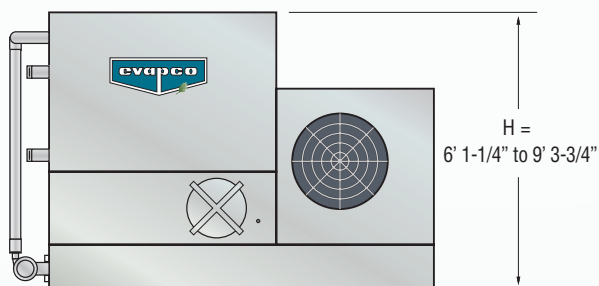
When centrifugal fan units are installed indoors and intake air is ducted to the unit, a solid bottom panel is required to completely enclose the fan section and prevent the unit from drawing air from the room into the fan intakes. When this option is ordered, air inlet screens are omitted and the next larger size fan motor must be used to overcome the additional static pressure.

Specific Design Features

LRWB Reduced Height and Maintenance Accessibility

The LRWB has been designed to satisfy installation requirements where height limits must be observed. The lower profile design of the LRWB does not, however, sacrifice maintenance accessibility for reduced height. Its unique casing design allows the water distribution system, cold water basin, fan section and other unit components to be easily maintained.

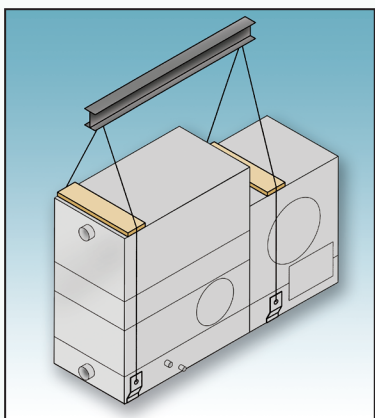
Small, light-weight sections of the drift eliminators can be easily removed to access the water distribution system. A large circular access door is located on the side of the cold water basin to allow adjustment of the float assembly, removal of the stainless steel strainers and cleaning of the basin. The fan motor and drive system are located at one end of the unit and are completely accessible by removing the inlet screens. Routine bearing lubrication and belt tensioning can be performed from the exterior of the unit without removing the inlet screens.



Low Installed Costs

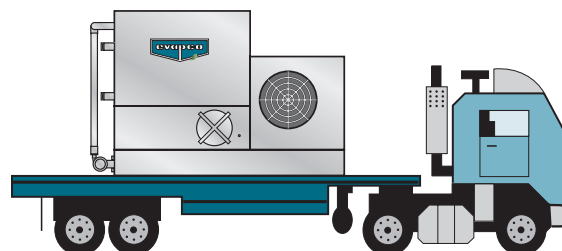
The compact, unitary design of the LRWB closed circuit cooler allows it to be shipped completely assembled. This results in lower transportation costs and no assembly requirements at the job site.

NOTE: Options such as sound attenuation and discharge hoods will require additional lifts and some minor assembly.



Transport of a Pre-Assembled Unit

Since the LRWB ships fully assembled, it is ideal for truck-mounted applications, for remote sites or temporary installations.



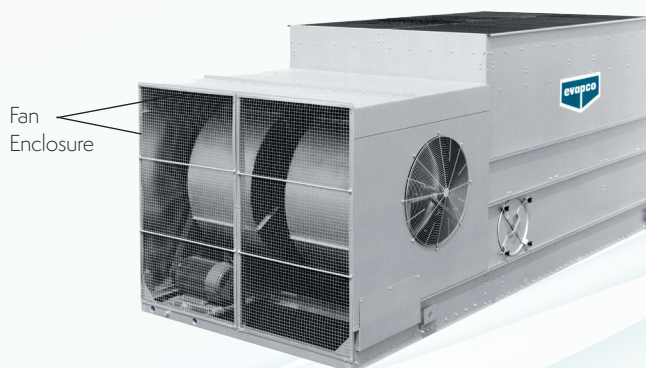
Stainless Steel Cold Water Basin

Stainless steel cold water basins are optional on the LRWB. Additional upgrades to stainless steel water touch basins, stainless steel water touch units and all stainless steel construction are also available on this unit. For more information on stainless steel construction options, refer back to pages 20 and 21 of this catalog.



Integral Fan Enclosure for Lower Sound

The LRWB comes standard with an integral fan enclosure that reduces sound levels by 2 dB. This 3-sided enclosure also protects the fan and drive system for longer equipment life.



General Information

Design

EVAPCO closed circuit coolers are of heavy-duty construction and designed for long trouble-free operation. Proper equipment selection, installation and maintenance is, however, necessary to ensure full unit performance. Some of the major considerations in the application of a cooler are presented below. For additional information, contact the factory.

Air Circulation

It is important that proper air circulation be provided. The best location is on an unobstructed roof top or on ground level away from walls and other barriers. Those closed circuit coolers located in wells, enclosures or adjacent to high walls must be properly located to avoid the problems associated with recirculation.

Recirculation raises the wet bulb temperature of the entering air causing the water temperature to rise above the design. For these cases, the discharge of the unit should be located at a height even with the adjacent wall, thereby reducing the chance of recirculation. For additional information, see the EVAPCO equipment layout manual.

Good engineering practice dictates that the closed circuit cooler discharge air not be directed or located close to or in the vicinity of building air intakes.

Piping

Cooler piping should be designed and installed in accordance with generally accepted engineering practices. The piping layout should be symmetrical on multiple unit systems, and sized for a reasonably low water velocity and pressure drop. The standard closed circuit cooler is recommended only on a closed, pressurized system. The piping system should include an expansion tank to allow for fluid expansion and purging air from the system.

NOTE: *Closed circuit coolers should never be used on an open type system. An open type system with a cooler may result in premature coil failure.*

The piping system should be designed to permit complete drainage of the heat exchanger coil. This will require a vacuum breaker or air vent to be installed at the high point and a drain valve installed at the low point of the piping system. Both must be adequately sized.

All piping should be securely anchored by properly designed hangers and supports. No external loads should be placed upon the cooler connections, nor should any of the pipe supports be anchored to the cooler framework.

Recirculating Water Quality

Proper water treatment is an essential part of the maintenance required for evaporative cooling equipment. A well designed and consistently implemented water treatment program will help to ensure efficient system operation while maximizing the equipment's service life. **If EVAPCO factory mounted water systems are not utilized**, a qualified water treatment company should design a site specific water treatment protocol based on equipment (including all metallurgies in the cooling system), location, makeup water quality, and usage.

Bleed off

Evaporative cooling equipment requires a bleed or blowdown line, located on the discharge side of the recirculating pump, to remove concentrated (cycled up) water from the system. EVAPCO recommends an automated conductivity controller to maximize the water efficiency of your system. **If EVAPCO factory mounted water systems are not utilized**, based on recommendations from your water treatment company, the conductivity controller should open and close a motorized ball or solenoid valve to maintain the conductivity of the recirculating water. If a manual valve is used to control the rate of bleed it should be set to maintain the conductivity of the recirculating water during periods of peak load at the maximum level recommended by your water treatment company.

Water Treatment

The water treatment program prescribed for the given conditions must be compatible with the unit's materials of construction, including any galvanized components. The initial commissioning and passivation period is a critical time for maximizing the service life of galvanized equipment. EVAPCO recommends that the site specific water treatment protocol includes a passivation procedure which details water chemistry, any necessary chemical addition, and visual inspections during the first six (6) to twelve (12) weeks of operation. During this passivation period, recirculating water pH should be maintained above 7.0 and below 8.0 at all times. Batch feeding of chemicals is not recommended.

Control of Biological Contaminants

Evaporative cooling equipment should be inspected regularly to ensure good microbiological control. Inspections should include both monitoring of microbial populations via culturing techniques and visual inspections for evidence of biofouling. Poor microbiological control can result in loss of heat transfer efficiency, increase corrosion potential, and increase the risk of pathogens such as those that cause Legionnaires' disease. Your site specific water treatment protocol should include procedures for routine operation, startup after a shut-down period, and system lay-up, if applicable. If excessive microbiological contamination is detected, a more aggressive mechanical cleaning and/or water treatment program should be undertaken.

Notes

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