



9th GENERATION

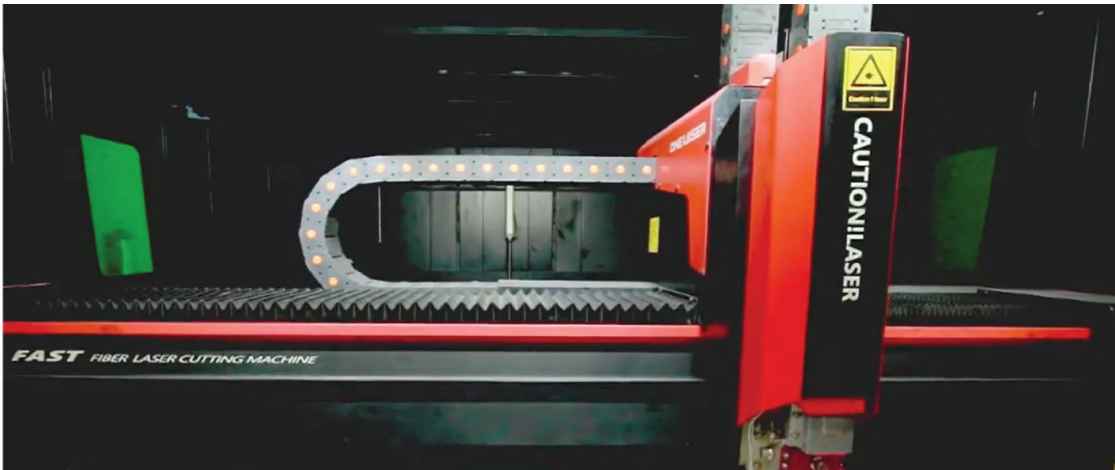
STAINLESS STEEL
EVAPORATIVE CONDENSERS

MORE COST EFFECTIVE
WITH WORLD CLASS QUALITY
10-YEAR WARRANTY LEAK-FREE COIL





EC9
SERIES



MORE PRICE
COMPETITIVE

NEW-DESIGN AND INCREASE
PRODUCTION PERFORMANCE

STAINLESS STEEL WITH QUALITY BASED ON ASME STANDARDS

OUR COIL IS DESIGNED WITH STAINLESS STEEL
WHICH IS SPECIFIED FOR CONDENSER TUBES
IN ACCORDANCE WITH ASME STANDARDS.

OUR SOURCES OF THIS KEY MATERIAL ARE AMONG
THE TOP OF THE INDUSTRY. WHILE OTHER GRADES
MAY LOOK THE SAME AND ARE EVEN APPLICABLE,
WE STICK TO OUR COMMITMENT OF MAKING
LONG LASTING CONDENSERS.

NOT ANY STAINLESS STEEL CAN BE A CONDENSER



PROVEN FIELD TEST

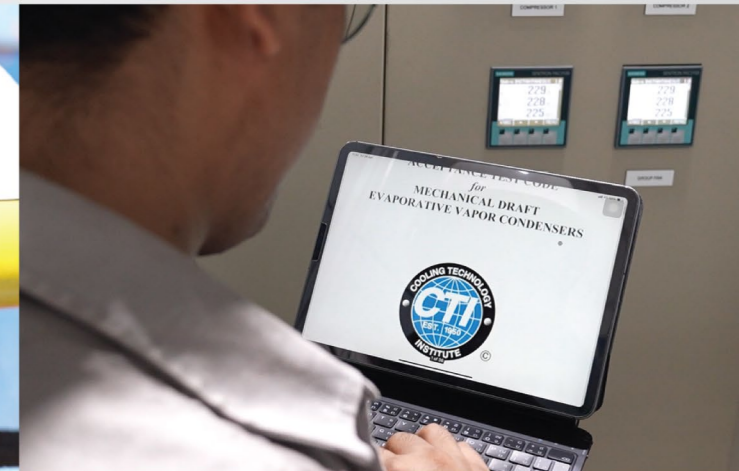
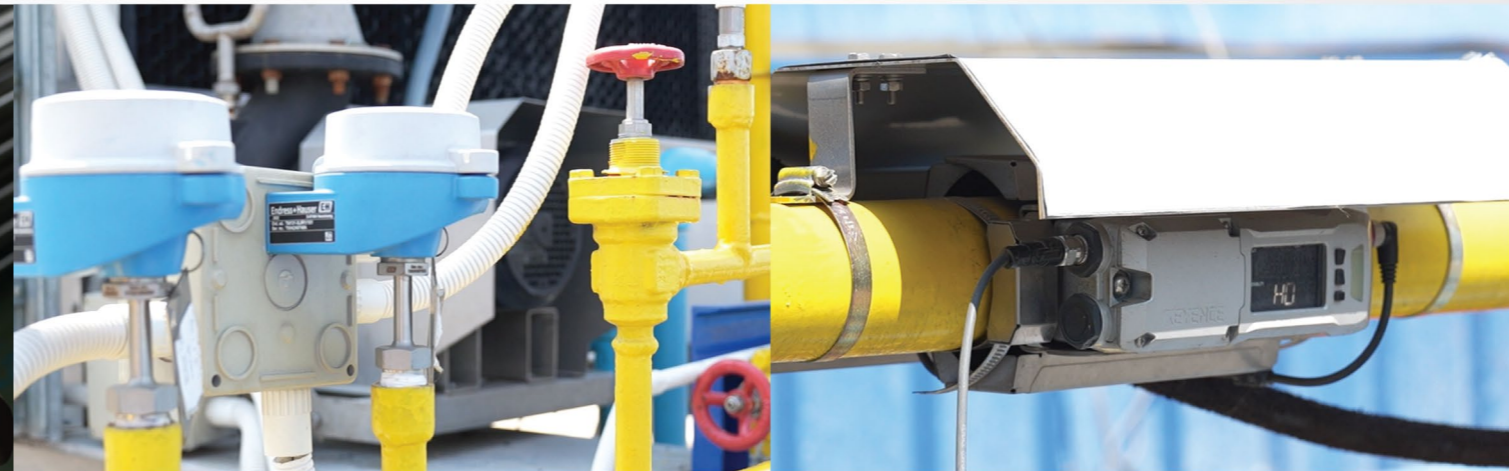


PERFORMANCE RELIABILITY

PERFORMANCE RATINGS ARE BASED ON
TEST PROCEDURE CTI ATC-106,
ACCEPTANCE TEST CODE FOR MECHANICAL
DRAFT EVAPORATIVE VAPOR CONDENSERS

ALL STAINLESS STEEL GRADES LOOK THE SAME. HOW CAN YOU BE 100% SURE YOU GET THE SPECIFICATION IN ACCORDANCE WITH ASME STANDARD ?

WE ASK THE SAME QUESTION AND THAT IS WHY WE INVESTED IN OUR
POSITIVE MATERIAL IDENTIFICATION MACHINE (PMI). THE MACHINE CAN TELL THE EXACT
CHEMICAL COMPOSITION AND ONLY THE MATERIAL PASSING ITS TEST CAN BE MADE INTO COILS.
WE ALSO HAVE IN-HOUSE TESTING FACILITIES THAT CAN PERFORM ASME REQUIRED TESTING PROCEDURE.



STAY EFFICIENT PREVENT BREAKDOWN WITHIN 30 MINS

SPRAY NOZZLES AND BRANCHES CAN BE EASILY REMOVED, CLEANED AND REASSEMBLED FROM OUTSIDE WITHIN 30 MINUTES*.

WATER-SPRAY MUST BE CLEANED AT LEAST ONCE A MONTH TO PREVENT NOZZLE CLOGGING THAT CAN LEAD TO DECREASED EFFICIENCY AND COIL LEAKAGE.



BLEED RATE CALCULATION

Model	EC9-3500
Condensing temperature	38 °C
Wet-bulb temperature	28 °C



	Make up	Max	
Hardness as CaCO ₃	25	300	ppm
Chlorides as Cl	19	250	ppm
Total dissolved solids	220	900	ppm

Heat rejection capacity	2671	kW
Min. Cycles of concentration	8.2	
Bleed rate	0.58	m ³ /hr



BLEED RATE CALCULATION ON CLOUD



EXTEND YOUR PRODUCT LIFETIME WITH PROPER BLEED RATE

SUBSTANDARD WATER CAN DAMAGE STAINLESS STEEL DESPITE ITS ANTI-CORROSION PROPERTIES. THEREFORE, BLEED-OFF NEED TO BE SET AT PROPER RATE AND VERIFIED REGULARLY.



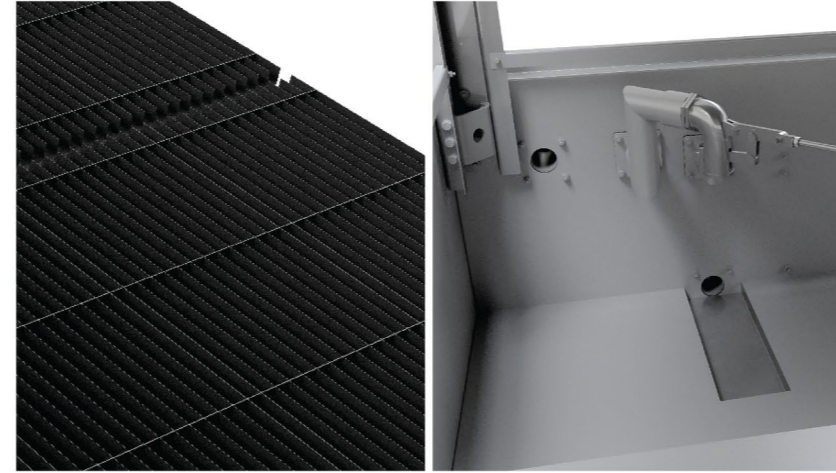
Chloride level (ppm)	Bleed-valve opening	Chloride level (ppm)	Bleed-valve opening
0 - 32	1 1/2	215 - 229	3
33 - 79	1 3/4	230 - 237	3 1/4
80 - 137	2	238 - 242	3 1/2
138 - 169	2 1/4	243 - 255	4
170 - 191	2 1/2	256 - 258	5
192 - 214	2 3/4	259 - 265	6

COMPLIANCE STANDARD



ASME B31.5
STAINLESS STEEL CONDENSER COIL

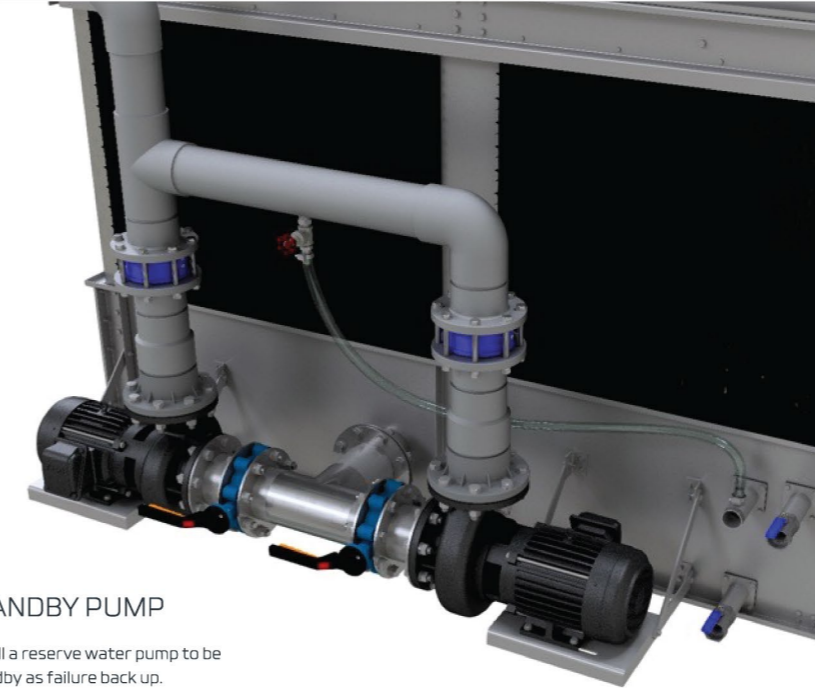
Made of 304 stainless and comply with ASME B31.5.



CTI ATC-140 DRIFT TEST
AIR HANDLING AND WATER SYSTEM

Drift loss of eliminators are certified by EUROVENT, and water system are designed to be compliance with AS/NZS 3666.1.

ADDITIONAL EQUIPMENT



STANDBY PUMP

Install a reserve water pump to be standby as failure back up.



STAINLESS STEEL
ACCESS

Come with platform, handrail, ladder including cage. Made of 304 stainless steel.



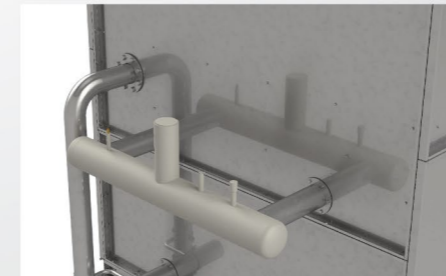
IEC 60034-2-1
FAN & PUMP MOTOR

For energy saving, fan and water motors are provided with IEC standard.



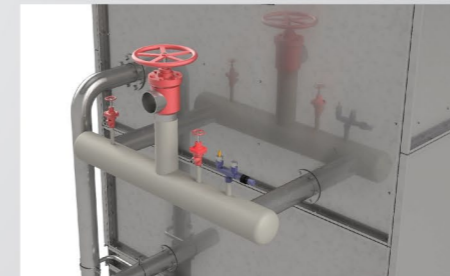
OSHA STANDARD (FIXED PLATFORMS AND LADDERS)
STAINLESS STEEL ACCESS EQUIPMENT

Platform, handrail, and ladder are designed in accordance with OSHA standard.



HOT GAS HEADER*

Reduce welding on-site to save installation cost. 2 material options with A53 carbon steel and 304 stainless steel.



HOT GAS HEADER W/ VALVE*

Come with a stop valve at inlet, purge and equalizer including 3-way valve for connecting safety valve. There are 2 material options: A53 carbon steel and 304 stainless steel.



AUXILIARY COOLING CIRCUIT

Install auxiliary coil configurations available to allow separate process fluid loops through the same unit. Mostly used with water. There 2 options: Single-layer and double-layer.

*Note: Available for model size 8'x9', 8'x12', 8'x18' only

MODEL SELECTION METHOD

EXAMPLE

Refrigerant: Ammonia (R-717)
 Total heat rejection: 1,150 kW
 Condensing temperature: 38°C
 Entering wet bulb temperature: 28°C

SELECTION PROCEDURE

- From table 1: the heat rejection factor for R-717 at 38°C condensing temperature and 28°C entering wet-bulb temperature is 1.31.
- Multiply 1,150 kW x 1.31 = 1,506.5 kW.
- From table 2: select the unit whose base heat rejection capacity is equal or greater than 1,506.5 kW. Model EC9-1520.

TABLE 1: HEAT REJECTION FACTORS FOR AMMONIA (R-717)

Condensing pressure (barg)	Condensing temperature (°C)	Entering wet bulb temperature (°C)										
		20	21	22	23	24	25	26	27	28	29	30
11.73	33	119	127	137	150	163	181	2.03	2.37	2.70	-	-
12.10	34	112	119	127	136	148	161	180	2.06	2.35	-	-
12.49	35	103	108	115	123	130	139	153	1.69	1.90	2.15	2.47
12.88	36	0.96	1.01	1.07	1.13	1.20	1.28	1.39	1.53	1.70	1.91	2.17
13.28	37	0.88	0.92	0.97	1.03	1.08	1.16	1.23	1.36	1.48	1.65	1.88
13.69	38	0.83	0.86	0.90	0.94	1.00	1.05	1.12	1.21	1.31	1.44	1.59
14.11	39	0.78	0.81	0.84	0.88	0.92	0.98	1.03	1.12	1.20	1.31	1.44
14.53	40	0.74	0.76	0.79	0.83	0.87	0.91	0.96	1.02	1.09	1.18	1.29
14.97	41	0.69	0.72	0.74	0.77	0.80	0.84	0.88	0.93	0.99	1.08	1.18
15.41	42	0.66	0.68	0.71	0.74	0.76	0.80	0.84	0.88	0.93	0.99	1.06

REMARK:

- The model selection for other refrigerants, please contact HEATAWAY representative.
- The base heat rejection is based on ammonia (R-717) at 38°C condensing temperature and 24°C entering wet-bulb temperature.
- R-717 operating charge is at 38°C condensing temperature and 33% of coil volume.
- The operating weight includes the water weight at the overflow level and the coil is charged with ammonia (R-717).
- Dimensions are subject to change. Do not use for construction. This catalog includes data current at the time of publication, which should be reconfirmed at the time of purchase.

TABLE 2: BASE HEAT REJECTION CAPACITY

Model	Base heat rejection (kW)	Footprint	Number of trailer & truck*	Total power consumption (kW)	Fan motor		Water pump	
					Q'ty	kW	Q'ty	kW
EC9-0510-0809L-S	510	2.4 x 2.7 m	1X FT	7.7	1	5.5	1	2.2
EC9-0620-0809L-S	620	2.4 x 2.7 m	1X FT	7.7	1	5.5	1	2.2
EC9-0710-0809L-S	710	2.4 x 2.7 m	1X FT	7.7	1	5.5	1	2.2
EC9-0750-0809L-S	750	2.4 x 2.7 m	1X FT	7.7	1	5.5	1	2.2
EC9-0900-0809L-L	900	2.4 x 2.7 m	1X FT	13.2	1	11.0	1	2.2
EC9-0950-0809L-L	950	2.4 x 2.7 m	1X FT	13.2	1	11.0	1	2.2
EC9-0960-0812L-L	960	2.4 x 3.6 m	1X FT	26.0	2	11.0	1	4.0
EC9-1000-0812L-S	1,000	2.4 x 3.6 m	1X FT	15.0	2	5.5	1	4.0
EC9-1120-0812L-M	1,120	2.4 x 3.6 m	1X FT	19.0	2	7.5	1	4.0
EC9-1200-0812L-L	1,200	2.4 x 3.6 m	1X FT	26.0	2	11.0	1	4.0
EC9-1270-0812L-M	1,270	2.4 x 3.6 m	1X FT	19.0	2	7.5	1	4.0
EC9-1300-0818L-S	1,300	2.4 x 5.5 m	1X FT	20.5	3	5.5	1	4.0
EC9-1320-0812L-M	1,320	2.4 x 3.6 m	1X FT	19.0	2	7.5	1	4.0
EC9-1370-0812L-L	1,370	2.4 x 3.6 m	1X FT	26.0	2	11.0	1	4.0
EC9-1400-1012L-S	1,400	3.0 x 3.6 m	1X FT	26.0	4	5.5	1	4.0
EC9-1410-0812L-L	1,410	2.4 x 3.6 m	1X FT	26.0	2	11.0	1	4.0
EC9-1520-0818L-L	1,520	2.4 x 5.5 m	1X FT	37.0	3	11.0	1	4.0
EC9-1570-0818L-S	1,570	2.4 x 5.5 m	1X FT	20.5	3	5.5	1	4.0
EC9-1600-1012L-M	1,600	3.0 x 3.6 m	1X FT	34.0	4	7.5	1	4.0
EC9-1650-1212L-S	1,650	3.6 x 3.6 m	1X FT	27.5	4	5.5	1	5.5
EC9-1660-1012L-L	1,660	3.0 x 3.6 m	1X FT	48.0	4	11.0	1	4.0
EC9-1750-0818L-M	1,750	2.4 x 5.5 m	1X FT	26.5	3	7.5	1	4.0
EC9-1760-0818L-S	1,760	2.4 x 5.5 m	1X FT	20.5	3	5.5	1	4.0
EC9-1840-1012L-M	1,840	3.0 x 3.6 m	1X FT	34.0	4	7.5	1	4.0
EC9-1890-1212L-M	1,890	3.6 x 3.6 m	1X FT	35.5	4	7.5	1	5.5
EC9-1920-1012L-L	1,920	3.0 x 3.6 m	1X FT	48.0	4	11.0	1	4.0
EC9-1980-1212L-L	1,980	3.6 x 3.6 m	1X FT	49.5	4	11.0	1	5.5
EC9-1990-0818L-M	1,990	2.4 x 5.5 m	1X FT	26.5	3	7.5	1	4.0
EC9-2000-1012L-M	2,000	3.0 x 3.6 m	1X FT	34.0	4	7.5	1	4.0
EC9-2060-0818L-M	2,060	2.4 x 5.5 m	[1X FT] & [1X 06'WT]	26.5	3	7.5	1	4.0
EC9-2080-1012L-L	2,080	3.0 x 3.6 m	1X FT	48.0	4	11.0	1	4.0
EC9-2140-0818L-L	2,140	2.4 x 5.5 m	1X FT	37.0	3	11.0	1	4.0
EC9-2150-1212L-M	2,150	3.6 x 3.6 m	1X FT	35.5	4	7.5	1	5.5
EC9-2200-0818L-L	2,200	2.4 x 5.5 m	[1X FT] & [1X 06'WT]	37.0	3	11.0	1	4.0
EC9-2250-1018L-S	2,250	3.0 x 5.5 m	1X FT	38.5	6	5.5	1	5.5
EC9-2350-1212L-M	2,350	3.6 x 3.6 m	1X FT	35.5	4	7.5	1	5.5
EC9-2460-1212L-L	2,460	3.6 x 3.6 m	1X FT	49.5	4	11.0	1	5.5
EC9-2520-1018L-M	2,520	3.0 x 5.5 m	1X FT	50.5	6	7.5	1	5.5
EC9-2550-1018L-S	2,550	3.0 x 5.5 m	1X FT	38.5	6	5.5	1	5.5
EC9-2600-1218L-S	2,600	3.6 x 5.5 m	1X FT	40.5	6	5.5	1	7.5
EC9-2860-1018L-M	2,860	3.0 x 5.5 m	1X FT	50.5	6	7.5	1	5.5
EC9-2950-1218L-S	2,950	3.6 x 5.5 m	1X FT	40.5	6	5.5	1	7.5
EC9-2990-1018L-L	2,990	3.0 x 5.5 m	1X FT	71.5	6	11.0	1	5.5
EC9-3010-1218L-M	3,010	3.6 x 5.5 m	1X FT	52.5	6	7.5	1	7.5
EC9-3120-1018L-M	3,120	3.0 x 5.5 m	[1X FT] & [1X 06'WT]	50.5	6	7.5	1	5.5
EC9-3250-1018L-L	3,250	3.0 x 5.5 m	[1X FT] & [1X 06'WT]	71.5	6	11.0	1	5.5
EC9-3400-1218L-M	3,400	3.6 x 5.5 m	1X FT	52.5	6	7.5	1	7.5
EC9-3730-1218L-M	3,730	3.6 x 5.5 m	[1X FT] & [1X 06'WT]	52.5	6	7.5	1	7.5
EC9-3900-1218L-L	3,900	3.6 x 5.5 m	[1X FT] & [1X 06'WT]	73.5	6	11.0	1	7.5

FT = FLATBED TRAILER / 06'WT = 6-WHEELER TRUCK / 10'WT = 10-WHEELER TRUCK

TABLE 3: TECHNICAL DATA

EC9 SERIES	Footprint	Model	Dimension (mm)			Approximate weight (kg)			R-717 charge (kg)	Water Weight (kg)	Fan motor		Water pump	
			C	U	H	Shipping	Heaviest	Operating			Q'ty	kW	Q'ty	kW
	8' x 9' 2.4 x 2.7 m	EC9-0510-0809L-S	620	2,155	4,475	2,550	1,300	4,097	87	1,460	1	5.5	1	2.2
		EC9-0620-0809L-S	860	2,395	4,715	2,860	1,610	4,432	112	1,460	1	5.5	1	2.2
		EC9-0710-0809L-S	1,100	2,635	4,955	3,170	1,920	4,768	138	1,460	1	5.5	1	2.2
		EC9-0750-0809L-S	1,340	2,875	5,195	3,480	2,230	5,104	164	1,460	1	5.5	1	2.2
		EC9-0900-0809L-L	1,100	2,635	5,155	3,230	1,920	4,828	138	1,460	1	11.0	1	2.2
		EC9-0950-0809L-L	1,340	2,875	5,395	3,540	2,230	5,164	164	1,460	1	11.0	1	2.2
	8' x 12' 2.4 x 3.6 m	EC9-0960-0812L-L	620	2,155	4,675	3,415	1,650	5,496	121	1,960	2	11.0	1	4.0
		EC9-1000-0812L-S	860	2,395	4,715	3,715	2,060	5,831	156	1,960	2	5.5	1	4.0
		EC9-1120-0812L-M	860	2,395	4,915	3,775	2,060	5,891	156	1,960	2	7.5	1	4.0
		EC9-1200-0812L-L	860	2,395	4,915	3,825	2,060	5,941	156	1,960	2	11.0	1	4.0
		EC9-1270-0812L-M	1,100	2,635	5,155	4,185	2,470	6,336	191	1,960	2	7.5	1	4.0
		EC9-1320-0812L-M	1,340	2,875	5,395	4,605	2,890	6,791	226	1,960	2	7.5	1	4.0
8' x 18' 2.4 x 5.5 m	EC9-1370-0812L-L	1,100	2,635	5,155	4,235	2,470	6,386	191	1,960	2	11.0	1	4.0	
	EC9-1410-0812L-L	1,340	2,875	5,395	4,655	2,890	6,841	226	1,960	2	11.0	1	4.0	
	EC9-1300-0818L-S	620	2,155	4,475	4,620	2,310	7,765	175	2,970	3	5.5	1	4.0	
	EC9-1520-0818L-L	620	2,155	4,675	4,810	2,310	7,955	175	2,970	3	11.0	1	4.0	
	EC9-1570-0818L-S	860	2,395	4,715	5,220	2,910	8,418	228	2,970	3	5.5	1	4.0	
	EC9-1750-0818L-M	860	2,395	4,915	5,320	2,910	8,518	228	2,970	3	7.5	1	4.0	
	EC9-1760-0818L-S	1,100	2,635	4,955	5,830	3,520	9,081	281	2,970	3	5.5	1	4.0	
	EC9-1990-0818L-M	1,100	2,635	5,155	5,930	3,520	9,181	281	2,970	3	7.5	1	4.0	
	EC9-2060-0818L-M	1,340	2,875	5,395	6,550	4,140	9,853	333	2,970	3	7.5	1	4.0	
	EC9-2140-0818L-L	1,100	2,635	5,155	6,020	3,520	9,271	281	2,970	3	11.0	1	4.0	
	EC9-2200-0818L-L	1,340	2,875	5,395	6,640	4,140	9,943	333	2,970	3	11.0	1	4.0	
	EC9-1400-1012L-S	860	2,395	4,715	6,100	2,495	8,796	196	2,500	4	5.5	1	4.0	
10' x 12' 3.0 x 3.6 m	EC9-1600-1012L-M	860	2,395	4,915	6,370	2,630	9,066	196	2,500	4	7.5	1	4.0	
	EC9-1660-1012L-L	860	2,395	4,915	6,560	2,725	9,256	196	2,500	4	11.0	1	4.0	
	EC9-1840-1012L-M	1,100	2,635	5,155	6,890	2,890	9,632	242	2,500	4	7.5	1	4.0	
	EC9-1920-1012L-L	1,100	2,635	5,155	7,090	2,990	9,832	242	2,500	4	11.0	1	4.0	
	EC9-2000-1012L-M	1,340	2,875	5,395	7,420	3,155	10,208	288	2,500	4	7.5	1	4.0	
	EC9-2080-1012L-L	1,340	2,875	5,395	7,610	3,250	10,398	288	2,500	4	11.0	1	4.0	
	EC9-2250-1018L-S	860	2,395	4,715	9,570	3,955	13,261	291	3,400	6	5.5	1	5.5	
	EC9-2520-1018L-M	860	2,395	4,915	9,970	4,155	13,661	291	3,400	6	7.5	1	5.5	
	EC9-2550-1018L-S	1,100	2,635	4,955	10,350	4,345	14,110	360	3,400	6	5.5	1	5.5	
	EC9-2860-1018L-M	1,100	2,635	5,155	10,750	4,545	14,510	360	3,400	6	7.5	1	5.5	
	EC9-2990-1018L-L	1,100	2,365	5,155	11,040	4,690	14,800	360	3,400	6	11.0	1	5.5	
	EC9-3120-1018L-M	1,340	2,875	5,395	11,530	4,935	15,360	430	3,400	6	7.5	1	5.5	
10' x 18' 3.0 x 5.5 m	EC9-3250-1018L-L	1,340	2,875	5,395	11,810	5,075	15,640	430	3,400	6	11.0	1	5.5	
	EC9-1650-1212L-S	860	2,395	4,715	6,850	2,760	9,992	242	2,900	4	5.5	1		

HEATAWAY

WORLD CLASS QUALITY

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