HEATAWAY

BRAND-NEW

9th GENERATION

STAINLESS STEEL EVAPORATIVE CONDENSERS

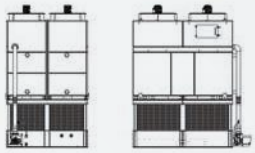
COMPATIBLE FOOTPRINT WITH STAINLESS STEEL

EASIER REPLACEMENT

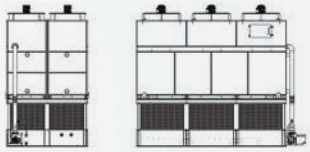
WITH COMPATIBLE FOOTPRINT

4 Available footprints

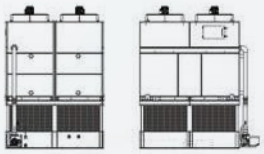
10’x12’
(3.0 x 3.6 m)



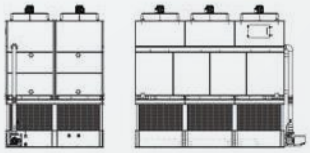
10’x18’
(3.0 x 5.5 m)



12’x12’
(3.6 x 3.6 m)



12’x18’
(3.6 x 5.5 m)

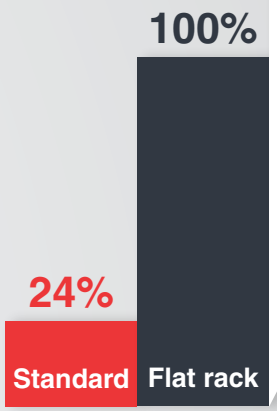


EC9 series has been designed to match with the most widely used footprint to avoid space issue and foundation modification cost including reduce working time at site.

LOWEST SHIPPING COST

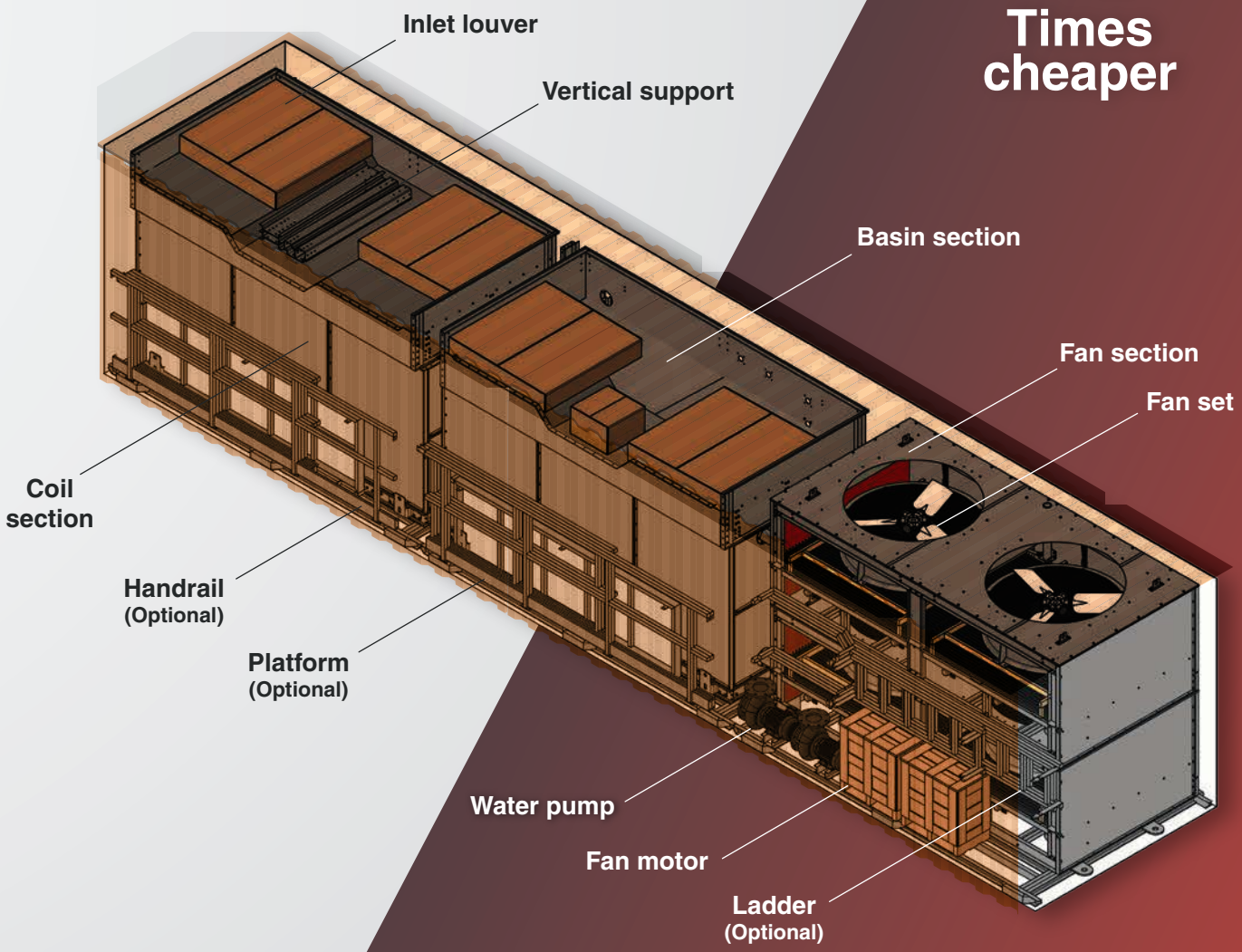
WITH STANDARD CONTAINERS

Footprint	Number of container
10' x 12' (3.0 x 3.6 m) EC9-1400 to EC9-2050	1 x 40'HC container
10' x 18' (3.0 x 5.5 m) EC9-2250 to EC9-3200	2 x 40'HC container
12' x 12' (3.6 x 3.6 m) EC9-1650 to EC9-2400	1 x 40'HC container
12' x 18' (3.6 x 5.5 m) EC9-2600 to EC9-3800	2 x 40'HC container



(CIF SHIPPING COST)

4 Times cheaper



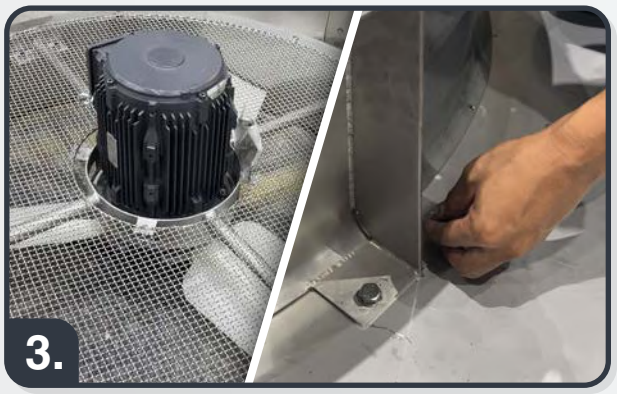
All EC9 models from 1,400-3,800 kW are available to ship in standard shipping containers to greatly reduce the shipping cost while delivering quality of a factory-built unit.

EASIER FIELD ASSEMBLY

WITH ONE-DAY KNOCK-DOWN UNIT

1. Mount rear basin to front basin.

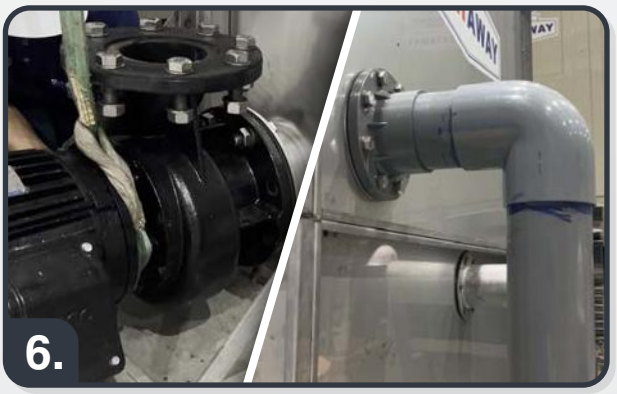
2. Install vertical support and frame in basin.



3. Assembly fan set with motor and mount on fan section.

4. Mount both of fan sections to coil section and bring them to mount on basin section.

5. Install panel support on gap and spray branches inside the unit.



6. Mount water pump and water piping.

EC9 series is containerized condenser and designed for simplified field rigging and assembly. Other brands need 1-2 weeks for assembly, whereas EC9 series is just one day.

Our coil is designed with **304 stainless steel** which is specified for condenser tubes in accordance with ASME standard.

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.

BUT ALL 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.

“ **NOT ANY STAINLESS STEEL CAN BE A CONDENSER** ”

MODEL
SELECTION METHOD

EXAMPLE

REFRIGERANT: AMMONIA (R-717)
TOTAL HEAT REJECTION: 1,150 KW
CONDENSING TEMPERATURE: 38°C
ENTERING WET BULB TEMPERATURE: 28°C

REMARK: THE MODEL SELECTION FOR OTHER REFRIGERANTS, PLEASE CONTACT HEATAWAY REPRESENTATIVE.

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 TABLES 2: SELECT THE UNIT WHOSE BASE HEAT REJECTION CAPACITY IS EQUAL OR GREATER THAN 1,506.5 KW. MODEL EC9-1550.

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

Condensing pressure (barg)	Condensing temperature	Entering wet bulb temperature (°C)										
		20	21	22	23	24	25	26	27	28	29	30
11.73	33	1.19	1.27	1.37	1.50	1.63	1.81	2.03	2.37	2.70	-	-
12.10	34	1.12	1.19	1.27	1.36	1.48	1.61	1.80	2.06	2.35	-	-
12.49	35	1.03	1.08	1.15	1.23	1.30	1.39	1.53	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

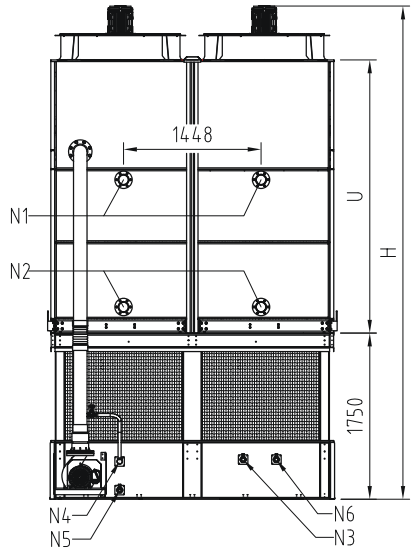
TABLE 2: BASE HEAT REJECTION CAPACITY

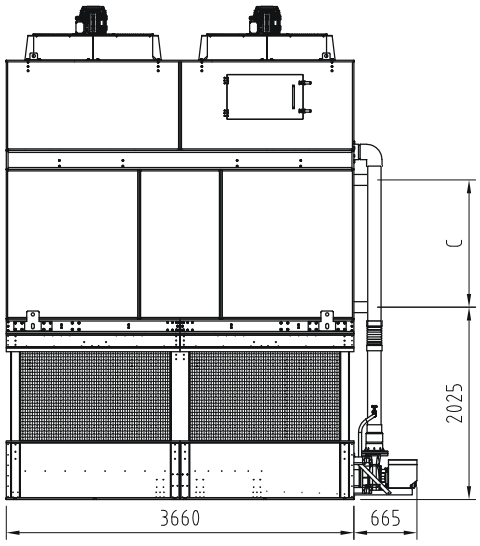
Footprint	Model	Based heat rejection (kW)
10' x 12' (3.0 x 3.6 m) 1 x 40'HC Container	EC9-1400	1,400
	EC9-1550	1,550
	EC9-1645	1,645
	EC9-1790	1,790
	EC9-1900	1,900
	EC9-1960	1,960
	EC9-2050	2,050
12' x 12' (3.6 x 3.6 m) 1 x 40'HC Container	EC9-1650	1,650
	EC9-1800	1,800
	EC9-1950	1,950
	EC9-2030	2,030
	EC9-2220	2,220
	EC9-2400	2,400

Footprint	Model	Based heat rejection (kW)
10' x 18' (3.0 x 5.5 m) 2 x 40'HC Container	EC9-2250	2,250
	EC9-2450	2,450
	EC9-2550	2,550
	EC9-2790	2,790
	EC9-2960	2,960
	EC9-3000	3,000
	EC9-3200	3,200
12' x 18' (3.6 x 5.5 m) 2 x 40'HC Container	EC9-2600	2,600
	EC9-2800	2,800
	EC9-2950	2,950
	EC9-3210	3,210
	EC9-3500	3,500
	EC9-3800	3,800

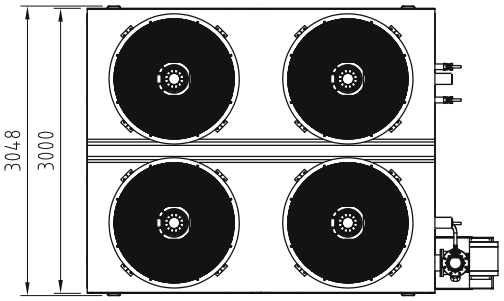
TECHNICAL DATA

FOOTPRINT : 10’ x 12’ / 3.0 x 3.6 m





PIPING CONNECTION					
MARK	DESCRIPTION	Q'TY	SIZE	THREAD	VALVE
N1	REFRIGERANT INLET	2	4"	-	-
N2	REFRIGERANT OUTLET	2	4"	-	-
N3	MAKE UP WATER	1	2"	BSPT(F)	BALL VALVE
N4	OVER FLOW	1	2"	BSPT(M)	-
N5	DRAIN	1	2"	BSPT(F)	BALL VALVE
N6	QUICK REFILL	1	2"	BSPT(F)	BALL VALVE



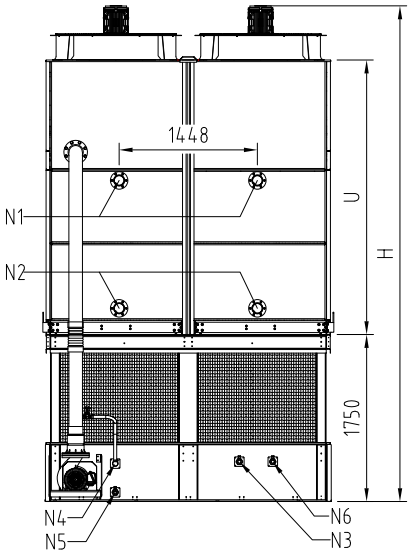
Model	Base heat rejection (kW)	Dimension (mm)			Approximate weight (kg)			R-717 operating charge	Water	Fan motor		Water pump	
		C	U	H	Shipping	Heaviest	Operating		Weight (kg)	Q'ty	Power (kW)	Q'ty	Power (kW)
EC9-1400	1,400	860	2,395	4,715	6,100	2,495	8,796	196	2,500	4	5.5	1	4.0
EC9-1550	1,550	860	2,395	4,915	6,370	2,630	9,066	196	2,500	4	7.5	1	4.0
EC9-1645	1,645	860	2,395	4,915	6,560	2,725	9,256	196	2,500	4	11.0	1	4.0
EC9-1790	1,790	1,100	2,635	5,155	6,890	2,890	9,632	242	2,500	4	7.5	1	4.0
EC9-1900	1,900	1,100	2,635	5,155	7,090	2,990	9,832	242	2,500	4	11.0	1	4.0
EC9-1960	1,960	1,340	2,875	5,395	7,420	3,155	10,208	288	2,500	4	7.5	1	4.0
EC9-2050	2,050	1,340	2,875	5,395	7,610	3,250	10,398	288	2,500	4	11.0	1	4.0

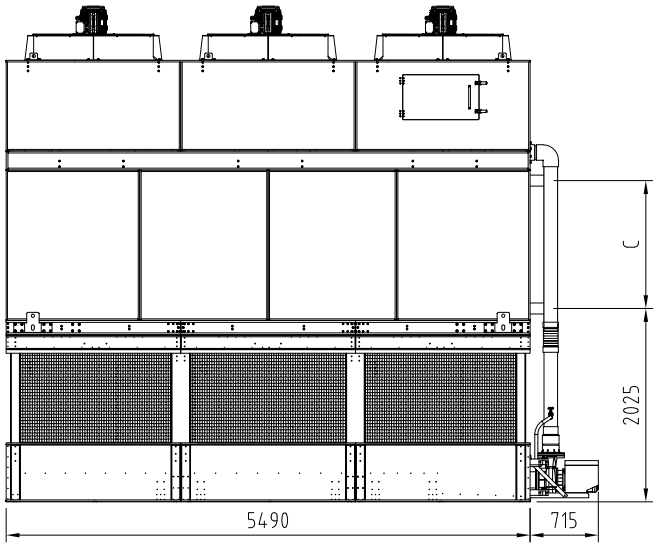
REMARK:
1. THE BASE HEAT REJECTION IS BASED ON AMMONIA (R-717) AT 38°C CONDENSING TEMPERATURE AND 24°C ENTERING WET-BULB TEMPERATURE.
2. THE HEAVIEST WEIGHT IS COIL SECTION WITH FAN SECTION.
3. R-717 OPERATING CHARGE IS AT 38°C CONDENSING TEMPERATURE AND 33% OF COIL VOLUME.
4. THE OPERATING WEIGHT INCLUDES THE WATER WEIGHT AT THE OVERFLOW LEVEL AND THE COIL IS CHARGED WITH AMMONIA (R-717).
5. DIMENSIONS AND POWER ARE FOR STANDARD FAN MOTOR AND STANDARD WATER PUMP. THE DATA OF HIGH EFFICIENCY OPTION IS SUBJECT TO CHANGE.

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.

TECHNICAL DATA

FOOTPRINT : 10’ x 18’ / 3.0 x 5.5 m





PIPING CONNECTION					
MARK	DESCRIPTION	Q'TY	SIZE	THREAD	VALVE
N1	REFRIGERANT INLET	2	4"	-	-
N2	REFRIGERANT OUTLET	2	4"	-	-
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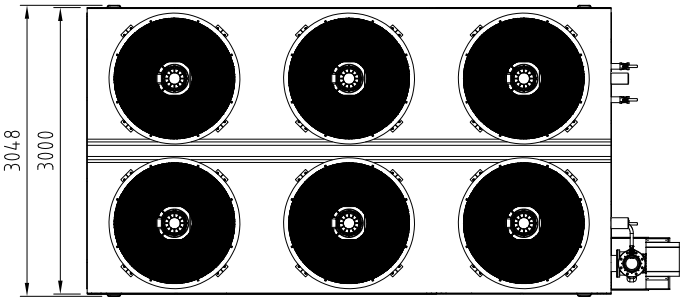
N4	OVER FLOW	1	2"	BSPT(M)	-
N5	DRAIN	1	2"	BSPT(F)	BALL VALVE
N6	QUICK REFILL	1	2"	BSPT(F)	BALL VALVE



Model	Base heat rejection (kW)	Dimension (mm)			Approximate weight (kg)			R-717 operating charge	Water	Fan motor		Water pump	
		C	U	H	Shipping	Heaviest	Operating		Weight (kg)	Q'ty	Power (kW)	Q'ty	Power (kW)
EC9-2250	2,250	860	2,395	4,715	9,570	3,955	13,261	291	3,400	6	5.5	1	5.5
EC9-2450	2,450	860	2,395	4,915	9,970	4,155	13,661	291	3,400	6	7.5	1	5.5
EC9-2550	2,550	1,100	2,635	4,955	10,350	4,345	14,110	360	3,400	6	5.5	1	5.5
EC9-2790	2,790	1,100	2,635	5,155	10,750	4,545	14,510	360	3,400	6	7.5	1	5.5
EC9-2960	2,960	1,100	2,365	5,155	11,040	4,690	14,800	360	3,400	6	11.0	1	5.5
EC9-3000	3,000	1,340	2,875	5,395	11,530	4,935	15,360	430	3,400	6	7.5	1	5.5
EC9-3200	3,200	1,340	2,875	5,395	11,810	5,075	15,640	430	3,400	6	11.0	1	5.5

REMARK:
1. THE BASE HEAT REJECTION IS BASED ON AMMONIA (R-717) AT 38°C CONDENSING TEMPERATURE AND 24°C ENTERING WET-BULB TEMPERATURE.
2. THE HEAVIEST WEIGHT IS COIL SECTION WITH FAN SECTION.
3. R-717 OPERATING CHARGE IS AT 38°C CONDENSING TEMPERATURE AND 33% OF COIL VOLUME.
4. THE OPERATING WEIGHT INCLUDES THE WATER WEIGHT AT THE OVERFLOW LEVEL AND THE COIL IS CHARGED WITH AMMONIA (R-717).
5. DIMENSIONS AND POWER ARE FOR STANDARD FAN MOTOR AND STANDARD WATER PUMP. THE DATA OF HIGH EFFICIENCY OPTION IS SUBJECT TO CHANGE.

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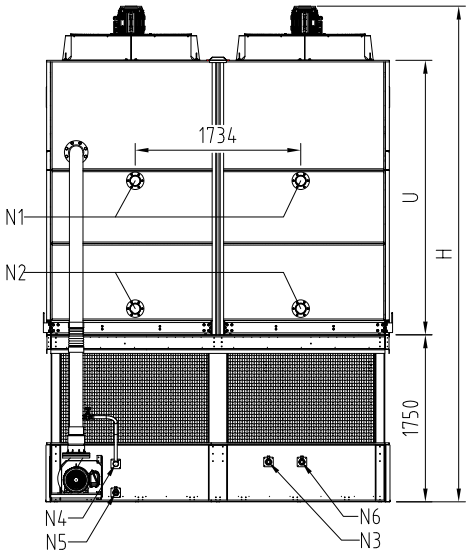
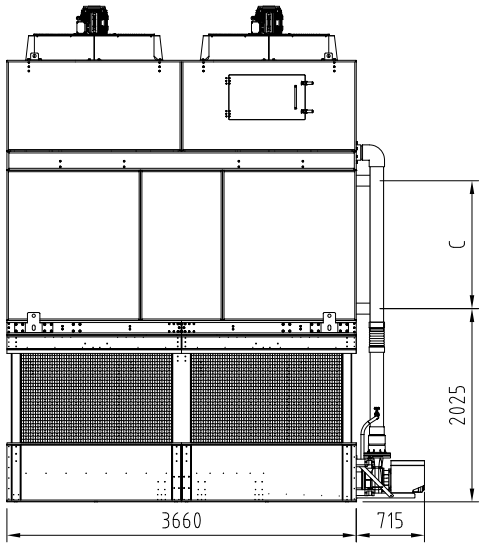
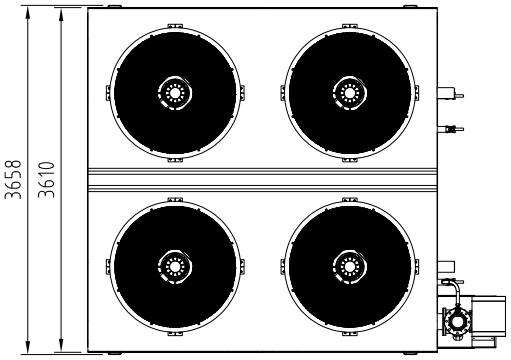




PIPING CONNECTION					
MARK	DESCRIPTION	Q'TY	SIZE	THREAD	VALVE
N1	REFRIGERANT INLET	2	4"	-	-
N2	REFRIGERANT OUTLET	2	4"	-	-
N3	MAKE UP WATER	1	2"	BSPT(F)	BALL VALVE
N4	OVER FLOW	1	2"	BSPT(M)	-
N5	DRAIN	1	2"	BSPT(F)	BALL VALVE
N6	QUICK REFILL	1	2"	BSPT(F)	BALL VALVE



Model	Base heat rejection (kW)	Dimension (mm)			Approximate weight (kg)			R-717 operating charge	Water	Fan motor		Water pump	
		C	U	H	Shipping	Heaviest	Operating		Weight (kg)	Q'ty	Power (kW)	Q'ty	Power (kW)
EC9-1650	1,650	860	2,395	4,715	6,850	2,760	9,992	242	2,900	4	5.5	1	5.5
EC9-1800	1,800	860	2,395	4,915	7,120	2,895	10,262	242	2,900	4	7.5	1	5.5
EC9-1950	1,950	860	2,395	4,915	7,310	2,990	10,452	242	2,900	4	11.0	1	5.5
EC9-2030	2,030	1,100	2,635	5,155	7,740	3,205	10,936	296	2,900	4	7.5	1	5.5
EC9-2220	2,220	1,340	2,875	5,395	8,380	3,525	11,630	350	2,900	4	7.5	1	5.5
EC9-2400	2,400	1,340	2,875	5,395	8,570	3,620	11,820	350	2,900	4	11.0	1	5.5

REMARK:
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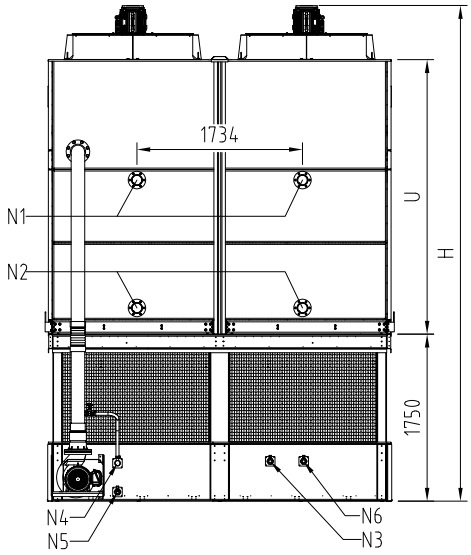

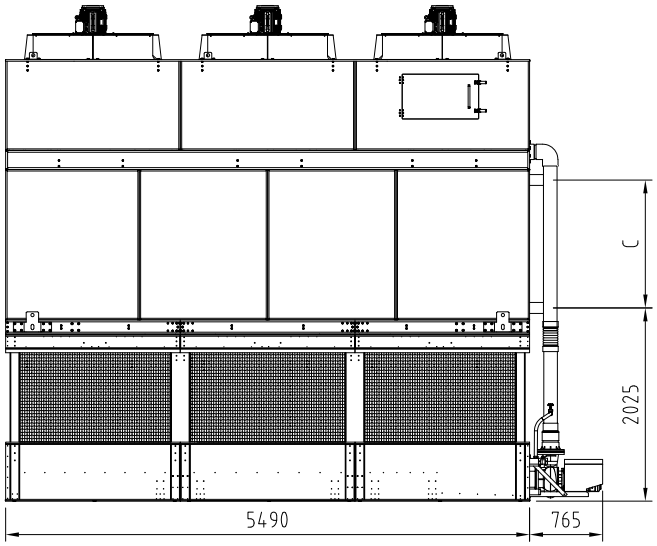

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N5	DRAIN	1	2"	BSPT(F)	BALL VALVE
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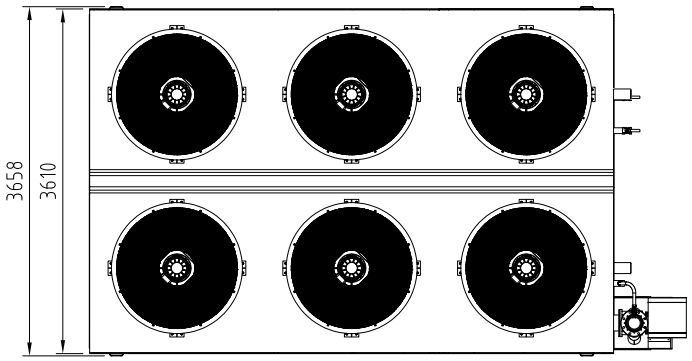

Model	Base heat rejection (kW)	Dimension (mm)			Approximate weight (kg)			R-717 operating charge	Water	Fan motor		Water pump	
		C	U	H	Shipping	Heaviest	Operating		Weight (kg)	Q'ty	Power (kW)	Q'ty	Power (kW)
EC9-2600	2,600	860	2,395	4,715	10,800	4,350	15,154	354	4,000	6	5.5	1	7.5
EC9-2800	2,800	860	2,395	4,915	11,200	4,550	15,554	354	4,000	6	7.5	1	7.5
EC9-2950	2,950	1,100	2,635	4,955	11,730	4,815	16,166	436	4,000	6	5.5	1	7.5
EC9-3210	3,210	1,100	2,635	5,155	12,130	5,015	16,566	436	4,000	6	7.5	1	7.5
EC9-3500	3,500	1,340	2,875	5,395	13,080	5,490	17,598	518	4,000	6	7.5	1	7.5
EC9-3800	3,800	1,340	2,875	5,395	13,370	5,635	17,888	518	4,000	6	11.0	1	7.5

REMARK:

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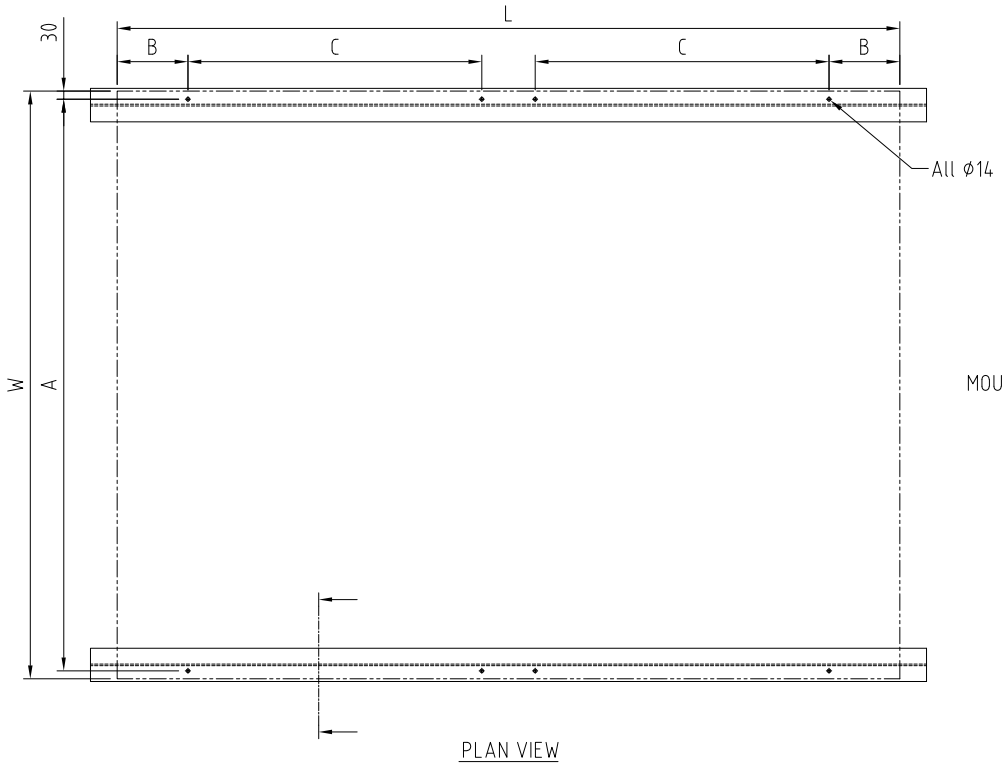
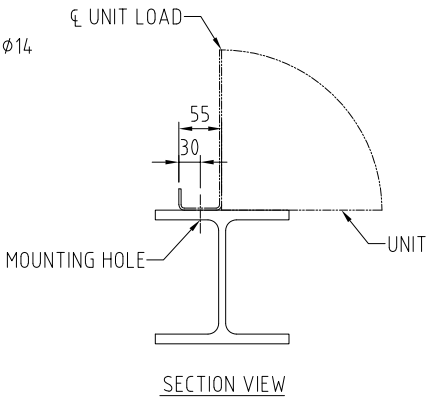
STRUCTURAL SUPPORT

The recommended arrangement for supporting the EC9 series consists of parallel structural support members positioned as shown on the drawing and table below.





Footprint	Model	L	W	A	B	C	Anchor bolt Quantity
10' x 12' 3.0 x 3.6 m	EC9-1400	3,660	3,000	2,940	240	-	4
	EC9-1550	3,660	3,000	2,940	240	-	4
	EC9-1645	3,660	3,000	2,940	240	-	4
	EC9-1790	3,660	3,000	2,940	240	-	4
	EC9-1900	3,660	3,000	2,940	240	-	4
	EC9-1960	3,660	3,000	2,940	240	-	4
	EC9-2050	3,660	3,000	2,940	240	-	4
12' x 12' 3.6 x 3.6 m	EC9-1650	3,660	3,610	3,550	240	-	4
	EC9-1800	3,660	3,610	3,550	240	-	4
	EC9-1950	3,660	3,610	3,550	240	-	4
	EC9-2030	3,660	3,610	3,550	240	-	4
	EC9-2220	3,660	3,610	3,550	240	-	4
	EC9-2400	3,660	3,610	3,550	240	-	4

Footprint	Model	L	W	A	B	C	Anchor bolt Quantity
10' x 18' 3.0 x 5.5 m	EC9-2250	5,490	3,000	2,940	240	2,440	8
	EC9-2450	5,490	3,000	2,940	240	2,440	8
	EC9-2550	5,490	3,000	2,940	240	2,440	8
	EC9-2790	5,490	3,000	2,940	240	2,440	8
	EC9-2960	5,490	3,000	2,940	240	2,440	8
	EC9-3000	5,490	3,000	2,940	240	2,440	8
	EC9-3200	5,490	3,000	2,940	240	2,440	8
12' x 18' 3.6 x 5.5 m	EC9-2600	5,490	3,610	3,550	240	2,440	8
	EC9-2800	5,490	3,610	3,550	240	2,440	8
	EC9-2950	5,490	3,610	3,550	240	2,440	8
	EC9-3210	5,490	3,610	3,550	240	2,440	8
	EC9-3500	5,490	3,610	3,550	240	2,440	8
	EC9-3800	5,490	3,610	3,550	240	2,440	8

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