Vthermo

CATALOGUE

EVAPORATOR & CONDENSER

WWW.QUANGTHANG.COM.VN

WWW.VTHERMO.VN

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VTHERMO INTRODUCTION

VTHERMO is the brand name of heat exchanger equipment of Quang Thang Electrical Refrigeration Co., Ltd. Established in 1997 with over 20 years of experience in the field of mechanical and electrical construction and installation, Quang Thang Company has accumulated a lot of experience from products of leading refrigeration equipment manufacturers in the world. The company has also built a team of human resources and a corporate governance system, a quality management system according to international standards.

In 2017, Quang Thang Company decided to invest in a refrigeration equipment factory with the modern technology to manufacture condensers, evaporators and heat exchanger coils.

The company always selects raw materials and equipment from the reputable suppliers whose highest quality for production.

We have the capacity to manufacture and supply condensers, evaporators, industrial air-conditioners at international quality, for domestic and export markets.

We look forward to receiving the support and cooperation of domestic and foreign customers.

TÜV NORD Vietnam

CHỨNG NHẬN

Hệ thống quản lý theo
ISO 9001 : 2015

Tổ chức chứng nhận TUV NORD Việt Nam căn cứ theo kết quả đánh giá, thẩm định và quyết định chứng nhận đáp ứng yêu cầu tiêu chuẩn ISO/IEC 17021-1:2015, xác nhận

CÔNG TY TNHH CƠ ĐIỆN LẠNH QUANG THẮNG
Thôn Mỹ Tranh, Xã Nam Sơn, Huyện An Dương,
Thành phố Hải Phòng,
Việt Nam

QUANG THANG

vận hành hệ thống quản lý phù hợp với các yêu cầu tiêu chuẩn ISO 9001:2015 và sẽ được đánh giá xác nhận tính phù hợp trong thời hạn hiệu lực 3 năm của Giấy chứng nhận.

Phạm vi chứng nhận

Sản xuất dàn ngưng tụ, dàn bay hơi và vỉ dàn trao đổi nhiệt

Số chứng chỉ TNV164210279
Số báo cáo No. 2.5-VN40138/2021

Hiệu lực từ 2021-07-30
Hiệu lực đến 2024-07-29
Chứng nhận lần đầu 2021-07-30

Lê Sỹ Trung - Tổng Giám đốc
TUV NORD Việt Nam

TUV NORD Việt Nam
Tầng 12, tòa nhà T.I.D, số 4 Liễu Giai,
Ba Đình, Hà Nội, Việt Nam
2021-07-30

TUV NORD Việt Nam, thành viên của tập đoàn TÜV NORD (CHLB Đức).

VNA VN40138 CA 0180

TÜV NORD Vietnam

CERTIFICATE

Management system as per
ISO 9001 : 2015

The Certification Body TUV NORD Vietnam hereby confirms as a result of the audit, assessment and certification decision according to ISO/IEC 17021-1:2015, that the organization

QUANG THANG COMPANY LIMITED
My Tranh Village, Nam Son Ward,
An Duong District, Hai Phong City,
Vietnam

QUANG THANG

operates a management system in accordance with the requirements of ISO 9001:2015 and will be assessed for conformity within the 3 year term of validity of the certificate.

Scope

Manufacturing of condenser, evaporator and heat exchanging coil

Certificate Registration No. TNV164210279
Audit Report No. 2.5-VN40138/2021

Valid from 2021-07-30
Valid until 2024-07-29
Initial Certification 2021-07-30

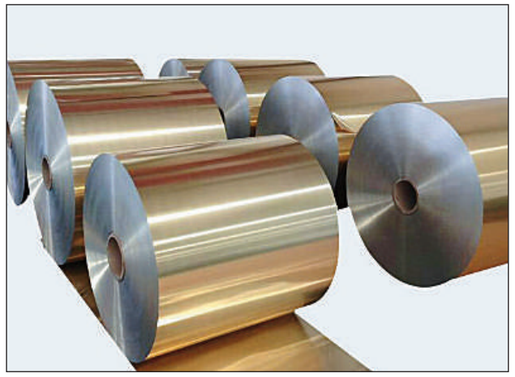
Le Sy Trung - General Manager
TUV NORD Vietnam Ltd.

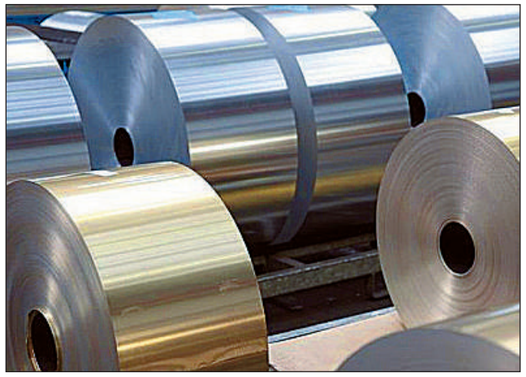
TUV NORD Vietnam Ltd.,
Floor 12th, T.I.D Building, No. 4 Lieu Giai,
Ba Dinh District, Hanoi, Vietnam
2021-07-30

TUV NORD Vietnam, a member of TÜV NORD Group.

VNA VN40138 CA 0180

MATERIALS





thyssenkrupp · HOA SEN GROUP · HOA PHAT · TOAN PHAT · DUNLI GROUP

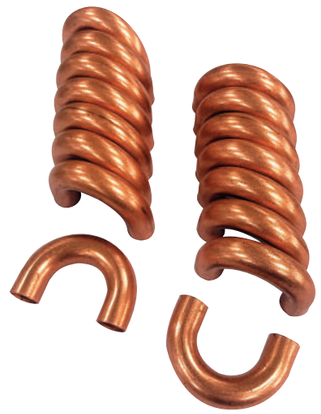
ZIEHL-ABEGG · ebmpapst · Danfoss · Bitzer

KOBELCO · EMERSON Climate Technologies · altec · computair

PRODUCTION LINE

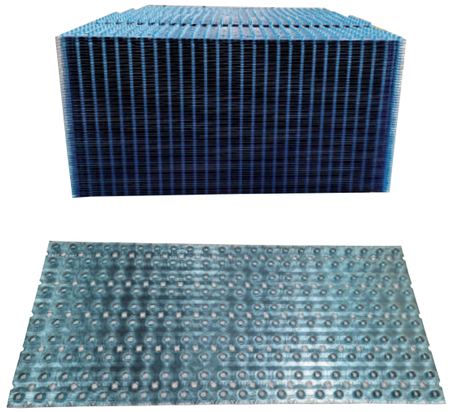
1/ LONG U TUBE BENDING MACHINE

2/ SHORT U TUBE BENDING MACHINE



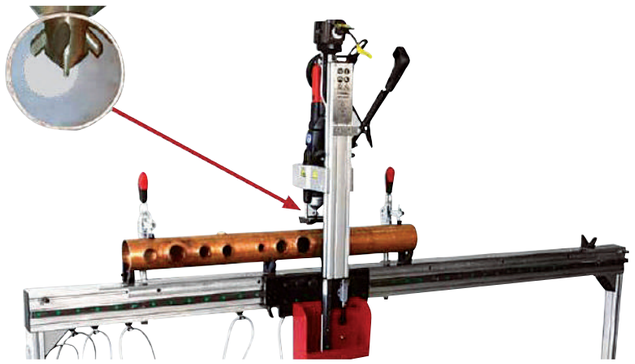
3/ WELDING RING ASSEMBLING MACHINE

4/ FIN PRESSING MACHINE

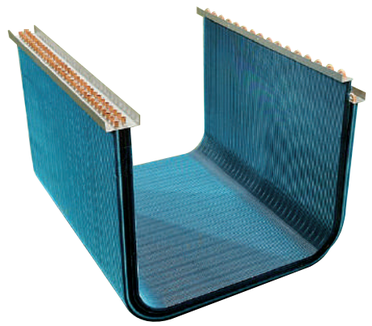


5/ TUBE EXPANDING MACHINE

6/ T-DRILL



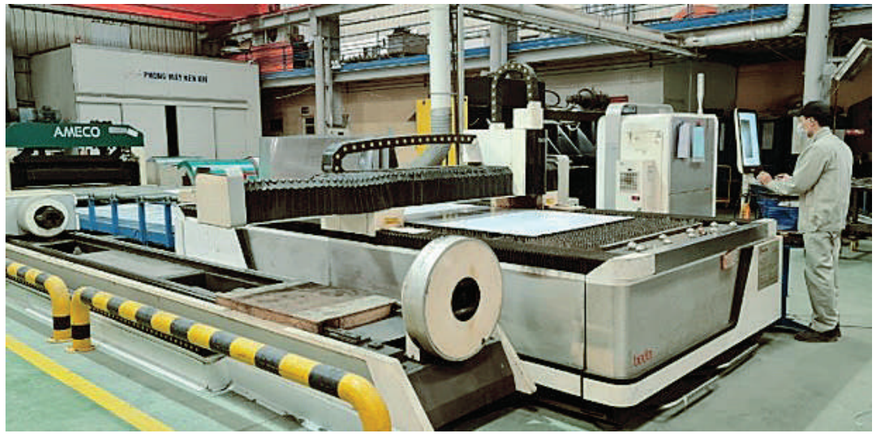
7/ COIL BENDING MACHINE



8/ TUBE 3D BENDING MACHINE

9/ COIL WASHING AND TESTING

10/ LASER CUTTING



11/ CNC PUNCHING

12/ FAN EDGE EXPANDING MACHINE

13/ CNC FOLDING

14/ PAINTING LINE

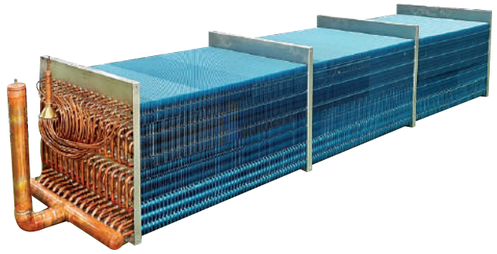
15/ ASSEMBLING LINE

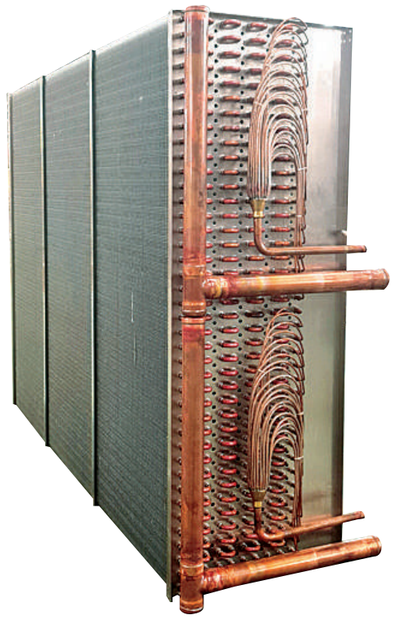
16/ PACKING

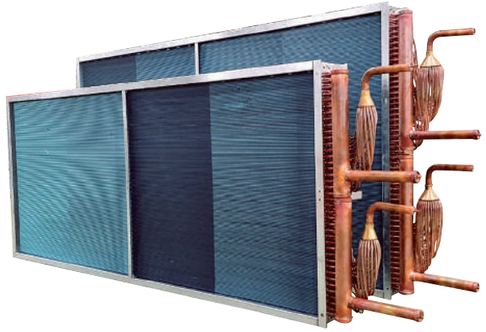
PROCDUCT

I/ HEAT EXCHANGER COIL

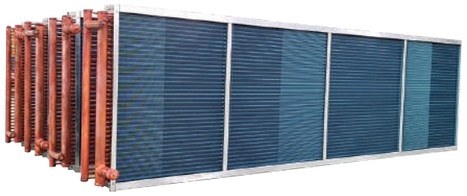
1.1/ EVAPORATING COIL



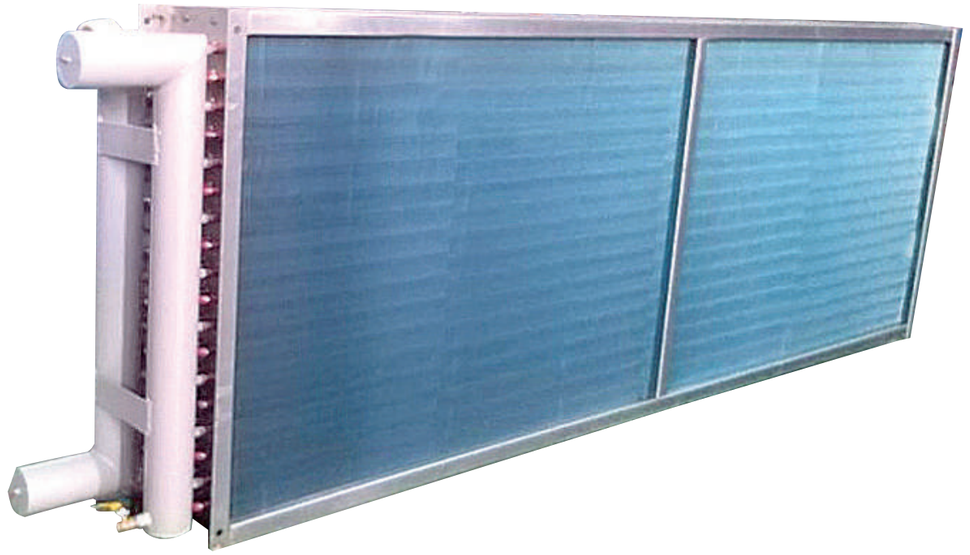




1.2/ CONDENSING COIL



1.3/ WATER COIL



1.4/ TECHNICAL DATASHEET

No	Tube		Fin				Note
	Outside diameter (mm)	Material	Material	Column distance (mm)	Row distance (mm)	Fin pitch (mm)	
1	9.52	Copper	Aluminum	21.65	25.00	1.50 ÷ 6.35	Δ
2	12.7	Copper	Aluminum	33.00	38.10	2.00 ÷ 9.00	Δ
3	15.88	Copper	Aluminum	50.00	50.00	2.5 ÷ 11.00	□

II/ EVAPORATOR MODEL EEL, EED AND EEJ

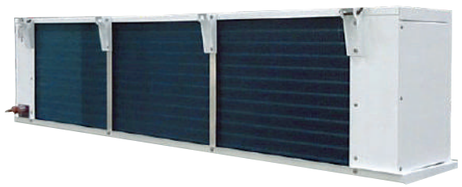
Evaporator model EEL, EED, EEJ are the standard compact air cooled models mounting on the ceiling of the storage, air exhausting through coil, fan blowing horizontal.

Defrostation: by electricity (E), by water (W) or by air (A)

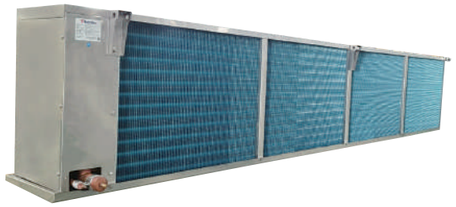
Evaporator case is made of steel (S), Aluminum (A) or stailess steel (I)

Copper tube, aluminum epoxy coated fin

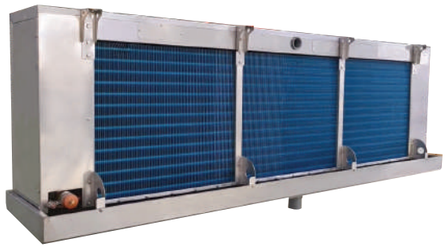
EVAPORATOR WITH CASE MADE OF POWDER COATING STEEL (S) OR ALUMINUM (A)



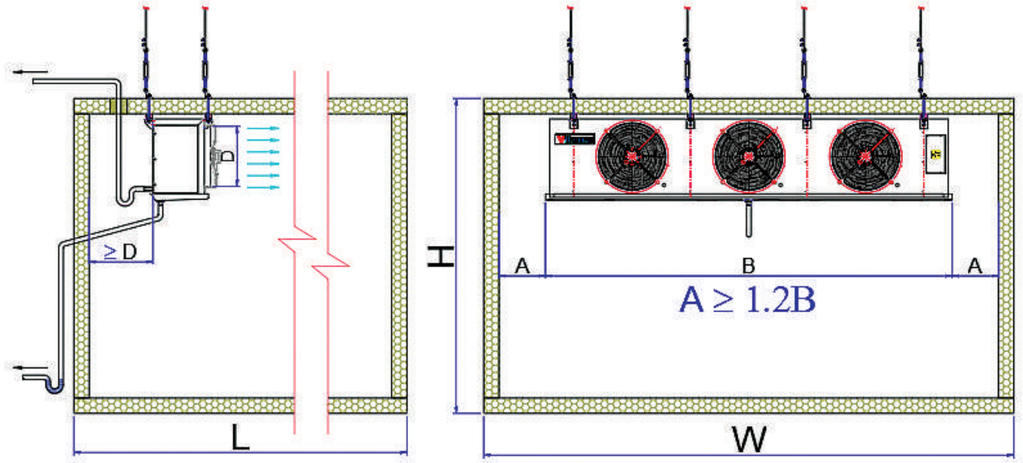
EVAPORATOR WITH CASE MADE OF INOX 304



EVAPORATOR WITH CASE MADE OF INOX 304, DEFROSTED BY WATER



INSTALLATION GUIDELINES

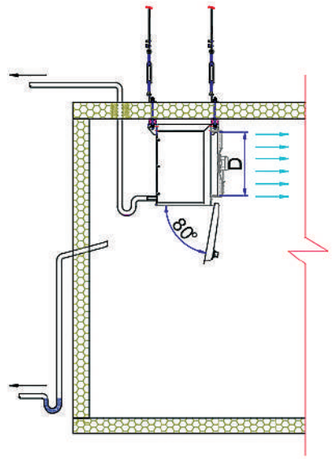


- Move the pack of evaporator to the installation position.
- Remove the packing, put the accessories outside, and remove the connection between the evaporator and the package.
- Check and read carefully the instruction documents.
- Take the mark, install the bolts, brackets, evaporator cables.
- Raise the evaporator to the ceiling, assemble and tighten the mounting bolts, check the balance.

Note:

- Defrost tray can be removed and rotated easily.
- The evaporative suspension bolts should be arranged with vibration damping pads and anti-floating nut.

- Connect the inlet and outlet gas pipes.
- Check, test closed
- Assemble the defrost drain tray
- Connect the defrost water pipe.
- Connect the power supply for the fan, the defrost resistor (The power supply must have a neutral wire and a ground wire).



2.1/ EVAPORATOR MODEL EEL

Evaporator model EEL with fin pitch 3.17-4.23mm is used for cool storage, buffer room, seafood production room, agricultural products, food.

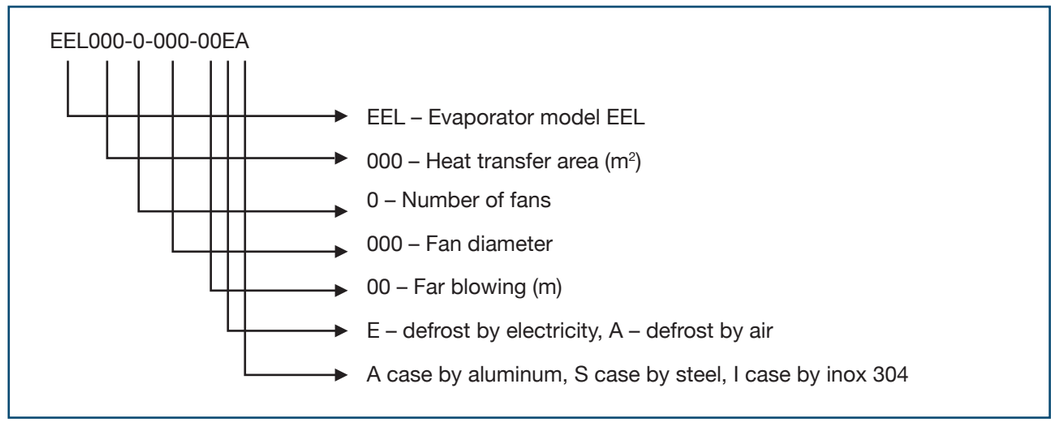
Room temperature: -10 ÷ +25^{0}C

Evaporator model EEL has the following types:

- Electric defrosting:
  - + Powder coated galvanized steel case,
  - + Powder coated aluminum case,
  - + Inox 304 stainless steel case.
- Without defrosting:
  - + Powder coated galvanized steel case,
  - + Powder coated aluminum case,
  - + Inox 304 stainless steel case.
- Copper heat exchanger tubes, epoxy coated aluminum fins, fin pitch 4.23mm (FPI=6)

Evaporator model EEL without resistor defrosting 3.17mm radiator (FPI=8) is used for storage warehouses with temperature ≥ +5 and rooms for seafood, agricultural and food production.

EEL Symbols:



TECHNICAL DATASHEET OF EVAPORATOR MODEL EEL-E

(Defrost by electricity)

No	Model	Capacity (Kw)		Heat transfer area (m^2)	Airflow (m^3/h)	Fan					Defrost	
		R22	R404			Number of fans	Fan diameter (mm)	Fan capacity (W)	Power source	Far blowing (m)	Number of resistors	Capacity (Kw)
1	2	3	4	5	6	7	8	9	10	11	12	13
1	EEL014-1-350-15E…	4.1	4.2	13.7	3,000	1.0	350	170.0	380v/3Ph/50Hz	15	4	1.6
2	EEL018-1-400-15E…	5.2	5.2	18.3	3,800	1.0	400	250.0	380v/3Ph/50Hz	15	5	2.0
3	EEL028-2-350-15E…	8.3	8.4	27.5	6,000	2.0	350	170.0	380v/3Ph/50Hz	15	4	3.2
4	EEL036-2-400-15E…	10.8	10.9	36.6	7,600	2.0	400	250.0	380v/3Ph/50Hz	15	5	4.0
5	EEL041-3-350-15E…	12.5	12.6	41.2	9,000	3.0	350	170.0	380v/3Ph/50Hz	15	4	4.8
6	EEL055-3-400-15E…	15.9	16.1	54.9	11,400	3.0	400	250.0	380v/3Ph/50Hz	15	4	4.8
7	EEL076-2-450-20E…	15.1	15.2	76.3	11,200	2.0	450	380.0	380v/3Ph/50Hz	20	5	6.0
8	EEL087-2-450-25E…	17.6	17.7	87.2	13,000	2.0	450	430.0	380v/3Ph/50Hz	25	5	7.0
9	EEL098-2-500-28E…	19.3	19.5	98.0	14,000	2.0	500	550.0	380v/3Ph/50Hz	28	5	8.0
10	EEL114-3-450-20E…	22.8	23.4	114.4	16,800	3.0	450	380.0	380v/3Ph/50Hz	20	5	9.0
11	EEL130-3-450-25E…	26.6	27.0	130.7	19,500	3.0	450	430.0	380v/3Ph/50Hz	25	5	10.0
12	EEL147-3-500-28E…	29.3	29.6	147.1	21,000	3.0	500	550.0	380v/3Ph/50Hz	28	5	11.0
13	EEL152-4-450-20E…	30.8	31.1	152.5	22,400	4.0	450	380.0	380v/3Ph/50Hz	20	5	12.0
14	EEL174-4-450-25E…	35.1	35.6	174.3	26,000	4.0	450	430.0	380v/3Ph/50Hz	25	5	13.0
15	EEL196-4-500-28E…	38.2	38.8	196.1	28,000	4.0	500	550.0	380v/3Ph/50Hz	28	5	15.0
16	EEL262-4-500-30E…	50.7	51.0	261.5	36,800	4.0	500	850.0	380v/3Ph/50Hz	30	6	18.0
17	EEL294-3-630-35E…	58.1	59.1	294.1	43,500	3.0	630	1400.0	380v/3Ph/50Hz	35	7	21.0

Note:

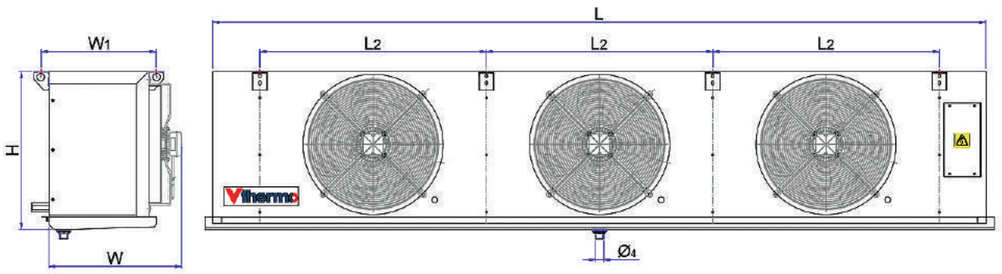
Conditions for calculating and checking capacity of evaporator model EEL-E

- Evaporating temperature: - 5^{0}C
- Superheat: 5^{0}C
- Temperature difference Δt: 7^{0}C
- Room temperature: 7^{0}C
- Condensing temperature: 40^{0}C

INSTALLATION SIZE TABLE EEL-E

(Defrost by electricity)

No	Model	Size (mm)			Bulk (mm)			Pipe (mm)		Water pipe (mm)	
		L	W	H	W1	L2	∅	Inlet	Outlet	Inlet	outlet
1	2	3	4	5	6	7	8	9	10	11	11
1	EEL014-1-350-15E…	924	509	493	392	535	13	12.7	19.1		27.0
2	EEL018-1-400-15E…	930	519	646	392	535	13	12.7	22.2		27.0
3	EEL028-2-350-15E…	1,443	509	493	392	518	13	12.7	28.6		34.0
4	EEL036-2-400-15E…	1,443	519	646	392	518	13	12.7	28.6		34.0
5	EEL041-3-350-15E…	1,943	509	493	392	512	13	12.7	28.6		34.0
6	EEL055-3-400-15E…	1,962	519	646	392	512	13	15.9	34.9		34.0
7	EEL076-2-450-20E…	1,882	595	636	460	720	13	15.9	34.9		34.0
8	EEL087-2-450-25E…	2,082	595	636	460	820	13	15.9	34.9		34.0
9	EEL098-2-500-28E…	2,282	590	636	460	920	13	15.9	34.9		34.0
10	EEL114-3-450-20E…	2,582	595	636	460	713	13	15.9	34.9		34.0
11	EEL130-3-450-25E…	2,882	595	636	460	813	13	15.9	34.9		34.0
12	EEL147-3-500-28E…	3,194	590	636	460	913	13	15.9	41.3		34.0
13	EEL152-4-450-20E…	3,294	595	636	460	710	13	15.9	41.3		34.0
14	EEL174-4-450-25E…	3,694	595	636	460	810	13	15.9	41.3		34.0
15	EEL196-4-500-28E…	4,094	590	636	460	910	13	15.9	41.3		34.0
16	EEL262-4-500-30E…	4,132	590	836	460	910	13	22.2	54.0		42.0
17	EEL294-3-630-35E…	4,132	630	936	460	1,213	13	22.2	54.0		42.0



TECHNICAL DATASHEET OF EVAPORATOR MODEL EEL-A

(Defrost by air)

No	Model	Capacity (Kw)		Heat transfer area (m^2)	Airflow (m^3/h)	Fan				
		R22	R404			Number of fans	Fan diameter	Capacity	Power source	Far blowing (m)
1	2	3	4	5	6	7	8	9	10	11
1	EEL018-1-350-15A…	4.8	4.9	17.9	3000	1.0	350	170.0	380v/3Ph/50Hz	15
2	EEL024-1-400-15A…	6.1	6.1	23.9	3800	1.0	400	250.0	380v/3Ph/50Hz	15
3	EEL036-2-350-15A…	9.6	9.8	35.9	6000	2.0	350	170.0	380v/3Ph/50Hz	15
4	EEL048-2-400-15A…	12.6	12.8	47.8	7600	2.0	400	250.0	380v/3Ph/50Hz	15
5	EEL054-3-350-15A…	14.6	14.5	53.8	9000	3.0	350	170.0	380v/3Ph/50Hz	15
6	EEL072-3-400-15A…	18.6	19.0	71.7	11400	3.0	400	250.0	380v/3Ph/50Hz	15
7	EEL100-2-450-20A…	19.5	19.7	100.3	11200	2.0	450	380.0	380v/3Ph/50Hz	20
8	EEL115-2-450-25A…	22.8	23.4	114.6	13000	2.0	450	430.0	380v/3Ph/50Hz	25
9	EEL129-2-500-28A…	25.3	25.7	129.0	14000	2.0	500	550.0	380v/3Ph/50Hz	28
10	EEL150-3-450-20A…	30.1	30.8	150.5	16800	3.0	450	380.0	380v/3Ph/50Hz	20
11	EEL172-3-450-25A…	34.7	35.6	171.9	19500	3.0	450	430.0	380v/3Ph/50Hz	25
12	EEL193-3-500-28A…	38.3	38.2	193.4	21000	3.0	500	550.0	380v/3Ph/50Hz	28
13	EEL200-4-450-20A…	40.1	41.0	200.6	22400	4.0	450	380.0	380v/3Ph/50Hz	20
14	EEL229-4-450-25A…	45.8	46.5	229.3	26000	4.0	450	430.0	380v/3Ph/50Hz	25
15	EEL256-4-500-28A…	49.9	50.5	257.9	28000	4.0	500	550.0	380v/3Ph/50Hz	28
16	EEL387-3-500-30A…	68.7	70.6	386.9	27600	3.0	500	850.0	380v/3Ph/50Hz	30
17	EEL516-4-500-30A…	92.7	94.7	515.8	36800	4.0	500	850.0	380v/3Ph/50Hz	30
18	EEL580-3-630-35A…	106.2	110.1	580.3	43500	3.0	630	1400.0	380v/3Ph/50Hz	35

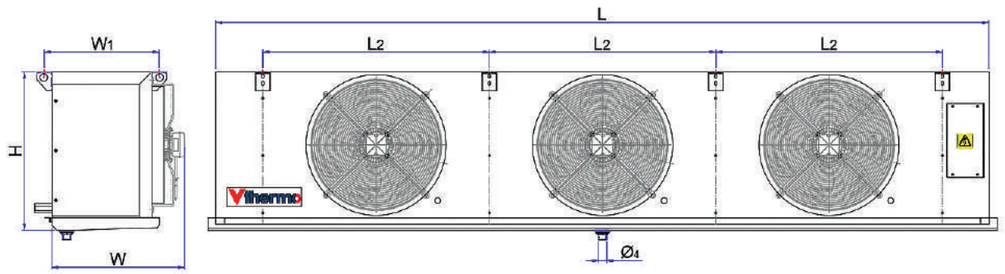
Note:

Conditions for calculating and checking capacity of evaporator model EEL-A.

- Evaporating temperature: +5^{0}C
- Superheat: 5^{0}C
- Temperature difference Δt: 7^{0}C
- Room temperature: 17^{0}C
- Condensing temperature: 40^{0}C

INSTALLATION SIZE TABLE EEL-A

No	Model	Size (mm)			Bulk (mm)			Gas pipe (mm)		Water pipe (mm)	
		L	W	H	W1	L2	∅	Inlet	Outlet	Inlet	Outlet
1	2	3	4	5	6	7	8	9	10	11	11
1	EEL018-1-350-15A…	924	509	493	392	535	13	12.7	19.1		27.0
2	EEL024-1-400-15A…	924	519	646	392	535	13	12.7	19.1		27.0
3	EEL036-2-350-15A…	1,430	509	493	392	518	13	12.7	22.2		27.0
4	EEL048-2-400-15A…	1,443	519	646	392	518	13	12.7	28.6		27.0
5	EEL054-3-350-15A…	1,943	509	493	392	512	13	12.7	28.6		27.0
6	EEL072-3-400-15A…	1,943	519	646	392	512	13	12.7	28.6		27.0
7	EEL100-2-450-20A…	1,869	595	636	460	720	13	15.9	28.6		34.0
8	EEL115-2-450-25A…	2,082	595	636	460	820	13	15.9	34.9		34.0
9	EEL129-2-500-28A…	2,282	590	636	460	920	13	15.9	34.9		34.0
10	EEL150-3-450-20A…	2,594	595	636	460	713	13	22.2	34.9		34.0
11	EEL172-3-450-25A…	2,907	595	636	460	813	13	22.2	41.3		34.0
12	EEL193-3-500-28A…	3,207	590	636	460	913	13	22.2	41.3		34.0
13	EEL200-4-450-20A…	3,307	595	636	460	710	13	22.2	41.3		34.0
14	EEL229-4-450-25A…	3,707	595	636	460	810	13	22.2	41.3		34.0
15	EEL256-4-500-28A…	4,107	590	636	460	910	13	22.2	41.3		34.0
16	EEL387-3-500-30A…	3,232	690	836	560	913	13	22.2	54.0		34.0
17	EEL516-4-500-30A…	4,132	690	836	560	910	13	22.2	54.0		34.0
18	EEL580-3-630-35A…	4,158	730	936	560	1,213	13	22.2	66.7		34.0



2.2/ EVAPORATOR MODEL EED

Evaporator model EED fin pitch 6.35mm is used for frozen storage.

Storage temperature: -10 ÷ -25^{0}C

EED evaporator has the following types:

- Electric defrosting:
  - + Powder coated galvanized steel case,
  - + Powder coated aluminum case,
  - + Inox 304 stainless steel case.
- Water defrosting:
  - + Powder coated galvanized steel case,
  - + Powder coated aluminum case,
  - + Inox 304 stainless steel case.

Copper heat exchanger tubes, epoxy coated aluminum fins, fin pitch 6.35mm (FPI=4).

EED SYMBOLS

EED000-0-000-00EA

- EED – Evaporator model EED
- 000 – Heat transfer area (m^2)
- 0 – Number of fans
- 000 – Fan diameter
- 00 – Far blowing (m)
- E – defrost by electricity, A – defrost by air
- A case by aluminum, S case by steel, I case by inox 304

TECHNICAL DATASHEET OF EVAPORATOR MODEL EED-E

(Defrost by electricity)

No	Model	Capacity (Kw)		Heat transfer area (m^2)	Airflow (m^3/h)	Fan					Defrost	
		R22	R404			Number of fans	Fan diameter (mm)	Capacity (W)	Power source	Far blowing (m)	Number of resistors	Capacity (Kw)
1	2	3	4	5	6	7	8	9	10	11	12	13
1	EED010-1-350-15E…	3.2	3.2	9.5	3,000	1.0	350	170.0	380v/3Ph/50Hz	15	4	1.6
2	EED012-1-400-15E…	3.9	3.9	12.6	3,800	1.0	400	250.0	380v/3Ph/50Hz	15	5	2.0
3	EED019-2-350-15E…	6.3	6.3	18.9	6,000	2.0	350	170.0	380v/3Ph/50Hz	15	4	3.2
4	EED025-2-400-15E…	8.2	8.2	25.2	7,600	2.0	400	250.0	380v/3Ph/50Hz	15	5	4.0
5	EED028-3-350-15E…	9.4	9.5	28.4	9,000	3.0	350	170.0	380v/3Ph/50Hz	15	4	4.8
6	EED038-3-400-15E…	12.2	12.3	37.9	211,400	3.0	400	250.0	380v/3Ph/50Hz	15	4	4.8
7	EED052-2-450-20E…	11.2	11.2	51.9	11,200	2.0	450	380.0	380v/3Ph/50Hz	20	5	6.0
8	EED060-2-450-25E…	12.8	13.2	59.4	13,000	2.0	450	430.0	380v/3Ph/50Hz	25	5	7.0
9	EED067-2-500-28E…	14.0	14.4	66.8	14,000	2.0	500	550.0	380v/3Ph/50Hz	28	5	8.0
10	EED074-4-400-15E…	15.6	16.2	74.2	15,200	4.0	400	250.0	380v/3Ph/50Hz	15	5	8.0
11	EED078-3-450-20E…	16.6	17.3	77.9	16,800	3.0	450	380.0	380v/3Ph/50Hz	20	5	9.0
12	EED089-3-450-25E…	19.1	20.1	89.0	19,500	3.0	450	430.0	380v/3Ph/50Hz	25	5	10.0
13	EED100-3-500-28E…	21.5	22.0	100.2	21,000	3.0	500	550.0	380v/3Ph/50Hz	28	5	11.0
14	EED104-4-450-20E…	22.5	23.0	103.9	22,400	4.0	450	450.0	380v/3Ph/50Hz	20	5	12.0
15	EED119-4-450-25E…	25.9	26.0	118.7	26,000	4.0	450	430.0	380v/3Ph/50Hz	25	5	13.0
16	EED134-4-500-28E…	28.1	29.5	133.6	28,000	4.0	500	550.0	380v/3Ph/50Hz	28	5	15.0
17	EED200-3-500-30E…	38.3	40.4	200.4	27,600	3.0	500	850.0	380v/3Ph/50Hz	30	8	17.6
18	EED200-4-500-28E…	38.7	40.6	200.4	28,000	4.0	500	550.0	380v/3Ph/50Hz	28	7	21.0
19	EED267-4-500-30E…	51.5	54.3	267.1	36,800	4.0	500	850.0	380v/3Ph/50Hz	30	8	24.0
20	EED300-3-630-35E…	59.9	63.4	300.5	43,500	3.0	630	1400.0	380v/3Ph/50Hz	35	9	27.0

Note:

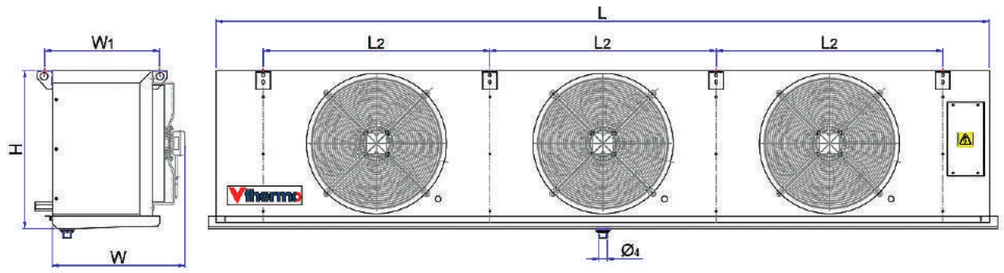
Conditions for calculating and checking capacity of evaporator model EED-E.

- Evaporating temperature: -18^{0}C
- Superheat: 5^{0}C
- Temperature difference Δt: 7^{0}C
- Room temperature: -6^{0}C
- Condensing temperature: 40^{0}C

INSTALLATION SIZE TABLE EED-E

(Defrost by electricity)

No	Model	Size (mm)			Bulk (mm)			Gas pipe (mm)		Water pipe (mm)	
		L	W	H	W1	L2	∅	Inlet	Outlet	Inlet	Outlet
1	2	3	4	5	6	7	8	9	10	11	11
1	EED010-1-350-15E…	924	509	493	392	535	13	12.7	19.1		34.0
2	EED012-1-400-15E…	930	519	646	392	535	13	12.7	22.2		34.0
3	EED019-2-350-15E…	1,430	509	493	392	518	13	12.7	22.2		34.0
4	EED025-2-400-15E…	1,443	519	646	392	518	13	12.7	28.6		34.0
5	EED028-3-350-15E…	1,943	509	493	392	512	13	12.7	28.6		34.0
6	EED038-3-400-15E…	1,949	519	646	392	512	13	15.9	28.6		34.0
7	EED052-2-450-20E…	1,869	595	636	460	720	13	15.9	28.6		34.0
8	EED060-2-450-25E…	2,069	595	636	460	820	13	15.9	28.6		34.0
9	EED067-2-500-28E…	2,282	590	636	460	920	13	15.9	34.9		34.0
10	EED074-4-400-15E…	2,482	587	636	460	510	13	15.9	34.9		34.0
11	EED078-3-450-20E…	2,582	595	636	460	713	13	15.9	34.9		34.0
12	EED089-3-450-25E…	2,882	595	636	460	813	13	15.9	34.9		34.0
13	EED100-3-500-28E…	3,182	590	636	460	913	13	15.9	34.9		34.0
14	EED104-4-450-20E…	3,294	595	636	460	710	13	15.9	41.3		34.0
15	EED119-4-450-25E…	3,707	595	636	460	810	13	22.2	41.3		34.0
16	EED134-4-500-28E…	4,107	590	636	460	910	13	22.2	41.3		34.0
17	EED200-3-500-30E…	3,232	690	836	560	913	13	22.2	54.0		34.0
18	EED200-4-500-28E…	4,132	690	636	560	910	13	22.2	54.0		34.0
19	EED267-4-500-30E…	4,132	690	836	560	910	13	22.2	54.0		34.0
20	EED300-3-630-35E…	4,132	730	936	560	1,213	13	22.2	54.0		34.0



TECHNICAL DATASHEET OF EVAPORATOR MODEL EED-W

(Defrost by water)

No	Model	Capacity (Kw)		Heat transfer area (m^2)	Airflow (m^3/h)	Fan					Water defrost	
		R22	R404			Number of fans	Fan diameter (mm)	Capacity (W)	Power source	Far blowing (m)	Flow (m^3/h)	Temperature (°C)
1	2	3	4	5	6	7	8	9	10	11	12	13
1	EED060-2-450-25W…	12.8	13.2	59.4	13,000	2	450	430	380v/3Ph/50Hz	25	9.7	25.0
2	EED067-2-500-28W…	14.0	14.4	66.8	14,000	2	500	550	380v/3Ph/50Hz	28	10.9	25.0
3	EED078-3-450-20W…	16.6	17.3	77.9	16,800	3	450	380	380v/3Ph/50Hz	20	12.7	25.0
4	EED089-3-450-25W…	19.1	20.1	89.0	19,500	3	450	430	380v/3Ph/50Hz	25	14.5	25.0
5	EED100-3-500-28W…	21.5	22.0	100.2	21,000	3	500	550	380v/3Ph/50Hz	28	16.3	25.0
6	EED104-4-450-20W…	22.5	23.0	103.9	22,400	4	450	380	380v/3Ph/50Hz	20	16.9	25.0
7	EED119-4-450-25W…	25.9	26.0	118.7	26,000	4	450	430	380v/3Ph/50Hz	25	19.3	25.0
8	EED134-4-500-28W…	28.1	29.5	133.6	28,000	4	500	550	380v/3Ph/50Hz	28	21.7	25.0
9	EED200-3-500-30W…	38.3	40.4	200.4	27,600	3	500	850	380v/3Ph/50Hz	30	24.5	25.0
10	EED200-4-500-28W…	38.7	40.6	200.4	28,000	4	500	550	380v/3Ph/50Hz	28	32.6	25.0
11	EED267-4-500-30W…	51.5	54.3	267.1	36,800	4	500	850	380v/3Ph/50Hz	30	32.7	25.0
12	EED300-3-630-35W…	59.9	63.4	300.5	43,500	3	630	1,400	380v/3Ph/50Hz	35	32.7	25.0

Note:

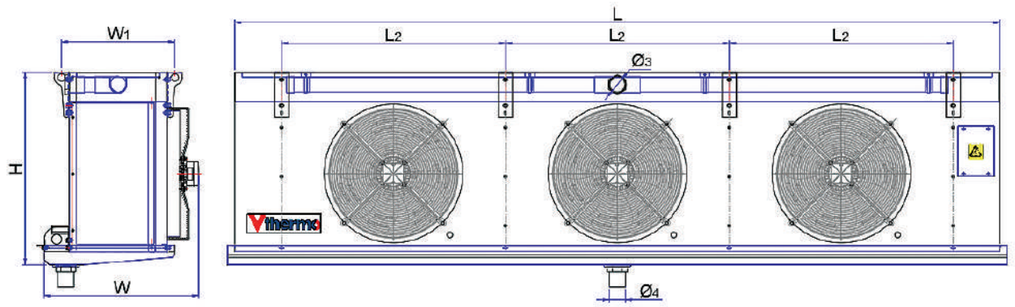
Conditions for calculating and checking capacity of evaporator model EED-W.

- Evaporating temperature: -18°C
- Superheat: 5°C
- Temperature difference Δt: 7°C
- Room temperature: -6°C
- Condensing temperature: 40°C

INSTALLATION SIZE TABLE EED-W

(Defrost by water)

No	Model	Size (mm)			Bulk (mm)			Gas pipe (mm)		Water pipe (mm)	
		L	W	H	W1	L2	∅	Inlet	Outlet	Inlet	Outlet
1	2	3	4	5	6	7	8	9	10	11	11
1	EED060-2-450-25W…	2,069	636	785	460	820	13	15.9	28.6	27.0	48.0
2	EED067-2-500-28W…	2,282	632	786	460	920	13	15.9	34.9	27.0	42.0
3	EED078-3-450-20W…	2,582	636	785	460	713	13	15.9	34.9	27.0	42.0
4	EED089-3-450-25W…	2,882	636	785	460	813	13	15.9	34.9	34.0	60.0
5	EED100-3-500-28W…	3,182	630	785	460	913	13	15.9	34.9	34.0	60.0
6	EED104-4-450-20W…	3,294	636	785	460	710	13	15.9	41.3	34.0	60.0
7	EED119-4-450-25W…	3,707	636	785	460	810	13	22.2	41.3	34.0	60.0
8	EED134-4-500-28W…	4,107	632	786	460	910	13	22.2	41.3	42.0	76.0
9	EED200-3-500-30W…	3,232	732	986	560	913	13	22.2	54.0	42.0	76.0
10	EED200-4-500-28W…	4,132	732	786	560	910	13	22.2	54.0	42.0	76.0
11	EED267-4-500-30W…	4,132	732	986	560	910	13	22.2	54.0	42.0	76.0
12	EED300-3-630-35W…	4,132	772	1,086	560	1,213	13	22.2	54.0	42.0	76.0



2.3/ EVAPORATOR MODEL EEJ

The EEJ evaporator with fin pitch 9-11mm is used for cold storage with a lot of moisture.

Storage temperature: -10 ÷ -25^{0}C

EEJ evaporator has the following types:

- Electric defrosting:
  + Powder coated galvanized steel case,
  + Powder coated aluminum case,
  + Inox 304 stainless steel case.
- Water defrosting:
  + Powder coated galvanized steel case,
  + Powder coated aluminum case,
  + Inox 304 stainless steel case.
- Copper heat exchanger tubes, epoxy coated aluminum fins, fin pitch 9mm and 11mm.

EEJ SYMBOL

EEJ000-0-000-00EA

- EEJ – Evaporator model EEJ
- 000 – Heat transfer area (m^2)
- 0 – Number of fans
- 000 – Fan diameter
- 00 – Far blowing (m)
- E – defrost by electricity, A – defrost by air
- A case by aluminum, S case by steel, I case by inox 304

TECHNICAL DATASHEET OF EVAPORATOR MODEL EEJ-E

(Defrost by electricity)

No	Model	Capacity (Kw)		Heat transfer area (m^2)	Airflow (m^3/h)	Fan					Defrost	
		R22	R404			Number of fans	Fan diameter (mm)	Fan capacity (W)	Power source	Far blowing (m)	Number of resistors	Capacity (Kw)
1	2	3	4	5	6	7	8	9	10	11	12	13
1	EEJ007-1-350-15E…	2.5	2.5	7.0	3,000	1.0	350	170.0	380v/3Ph/50Hz	15	4	1.6
2	EEJ009-1-400-15E…	3.1	3.1	9.3	3,800	1.0	400	250.0	380v/3Ph/50Hz	15	4	1.6
3	EEJ014-2-350-15E…	5.2	5.2	13.9	6,000	2.0	350	170.0	380v/3Ph/50Hz	15	4	3.2
4	EEJ019-2-400-15E…	6.5	6.5	18.6	7,600	2.0	400	250.0	380v/3Ph/50Hz	15	4	3.2
5	EEJ021-3-350-15E…	7.5	7.4	20.9	9,000	3.0	350	170.0	380v/3Ph/50Hz	15	4	4.8
6	EEJ028-3-400-15E…	9.1	9.1	27.9	11,400	3.0	400	250.0	380v/3Ph/50Hz	15	4	4.8
7	EEJ043-2-450-25E…	10.7	10.6	43.0	13,000	2.0	450	430.0	380v/3Ph/50Hz	25	5	7.0
8	EEJ048-2-500-28E…	11.6	11.6	48.4	14,000	2.0	500	550.0	380v/3Ph/50Hz	28	5	8.0
9	EEJ056-3-450-20E…	13.4	13.3	56.5	16,800	3.0	450	380.0	380v/3Ph/50Hz	20	4	7.2
10	EEJ064-3-450-25E…	16.0	15.9	64.5	19,500	3.0	450	430.0	380v/3Ph/50Hz	25	4	8.0
11	EEJ073-3-500-28E…	17.4	17.3	72.6	21,000	3.0	500	550.0	380v/3Ph/50Hz	28	5	11.0
12	EEJ075-4-450-20E…	18.2	18.0	75.3	22,400	4.0	450	380.0	380v/3Ph/50Hz	20	5	12.0
13	EEJ086-4-450-25E…	20.4	20.8	86.0	26,000	4.0	450	430.0	380v/3Ph/50Hz	25	5	13.0
14	EEJ097-4-500-28E…	22.0	22.5	96.8	28,000	4.0	500	550.0	380v/3Ph/50Hz	28	5	15.0
15	EEJ145-3-500-30E…	32.5	33.3	145.2	27,600	3.0	500	850.0	380v/3Ph/50Hz	30	8	17.6
16	EEJ194-4-500-30E…	43.3	43.1	193.6	36,800	4.0	500	850.0	380v/3Ph/50Hz	30	8	24.0
17	EEJ218-3-630-35E…	49.3	48.9	217.8	43,500	3.0	630	1400.0	380v/3Ph/50Hz	35		

Note:

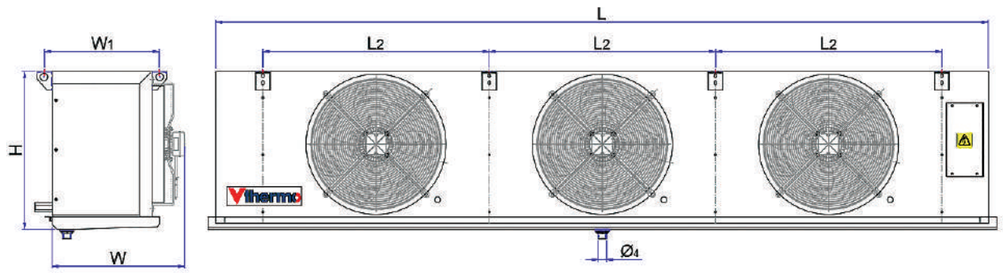
Conditions for calculating and checking capacity of evaporator model EEJ-E.

- Evaporating temperature: -25^{0}C
- Superheat: 5^{0}C
- Temperature difference Δt: 7^{0}C
- Room temperature: -13^{0}C
- Condensing temperature: 40^{0}C

INSTALLATION SIZE TABLE EEJ-E

(Defrost by electricity)

No	Model	Size (mm)			Bulk (mm)			Pipe (mm)		Water pipe (mm)	
		L	W	H	W1	L2	∅	Inlet	Outlet	Inlet	Outlet
1	2	3	4	5	6	7	8	9	10	11	11
1	EEJ007-1-350-15E…	924	509	493	392	535	13	12.7	19.1		27.0
2	EEJ009-1-400-15E…	924	519	646	392	535	13	12.7	19.1		27.0
3	EEJ014-2-350-15E…	1,430	509	493	392	518	13	12.7	22.2		27.0
4	EEJ019-2-400-15E…	1,443	519	646	392	518	13	12.7	28.6		27.0
5	EEJ021-3-350-15E…	1,943	509	493	392	512	13	12.7	28.6		34.0
6	EEJ028-3-400-15E…	1,943	519	646	392	512	13	12.7	28.6		34.0
7	EEJ043-2-450-25E…	2,082	596	636	460	820	13	22.2	28.6		34.0
8	EEJ048-2-500-28E…	2,294	590	636	460	920	13	22.2	34.9		34.0
9	EEJ056-3-450-20E…	2,594	596	636	460	713	13	22.2	34.9		34.0
10	EEJ064-3-450-25E…	2,894	596	636	460	813	13	22.2	34.9		34.0
11	EEJ073-3-500-28E…	3,194	590	636	460	913	13	22.2	34.9		34.0
12	EEJ075-4-450-20E…	3,307	596	636	460	710	13	22.2	41.3		34.0
13	EEJ086-4-450-25E…	3,707	596	636	460	810	13	22.2	41.3		34.0
14	EEJ097-4-500-28E…	4,107	590	636	460	910	13	22.2	41.3		34.0
15	EEJ145-3-500-30E…	3,232	690	836	560	913	13	22.2	54.0		34.0
16	EEJ194-4-500-30E…	4,132	690	836	560	910	13	22.2	54.0		34.0
17	EEJ218-3-630-35E…	4,132	730	936	560	1,213	13	22.2	54.0		42.0



TECHNICAL DATASHEET OF EVAPORATOR MODEL EEJ-W

(Defrost by water)

No	Model	Capacity (Kw)		Heat transfer area (m^2)	Air flow (m^3/h)	Fan					Water defrost	
		R22	R404			Number of fans	Fan diameter (mm)	Fan capacity (W)	Power source	Far blowing (m)	Flow (m^3/h)	Temperature (°C)
1	2	3	4	5	6	7	8	9	10	11	12	13
1	EEJ048-2-500-28W…	11.6	11.6	48.4	14,000	2.0	500	550	380v/3Ph/50Hz	28	10.9	25.0
2	EEJ056-3-450-20W…	13.4	13.3	56.5	16,800	3.0	450	380	380v/3Ph/50Hz	20	12.7	25.0
3	EEJ064-3-450-25W…	16.0	15.9	64.5	19,500	3.0	450	430	380v/3Ph/50Hz	25	14.5	25.0
4	EEJ073-3-500-28W…	17.4	17.3	72.6	21,000	3.0	500	550	380v/3Ph/50Hz	28	16.3	25.0
5	EEJ075-4-450-20W…	18.2	18.0	75.3	22,400	4.0	450	380	380v/3Ph/50Hz	20	16.9	25.0
6	EEJ086-4-450-25W…	20.4	20.8	86.0	26,000	4.0	450	430	380v/3Ph/50Hz	25	19.3	25.0
7	EEJ097-4-500-28W…	22.0	22.5	96.8	28,000	4.0	500	550	380v/3Ph/50Hz	28	21.7	25.0
8	EEJ145-3-500-30W…	32.5	33.3	145.2	27,600	3.0	500	850	380v/3Ph/50Hz	30	24.5	25.0
9	EEJ194-4-500-30W…	43.3	43.1	193.6	36,800	4.0	500	850	380v/3Ph/50Hz	30	32.7	25.0
10	EEJ218-3-630-35W…	49.3	48.9	217.8	43,500	3.0	630	1,400	380v/3Ph/50Hz	35	32.7	25.0

Note:

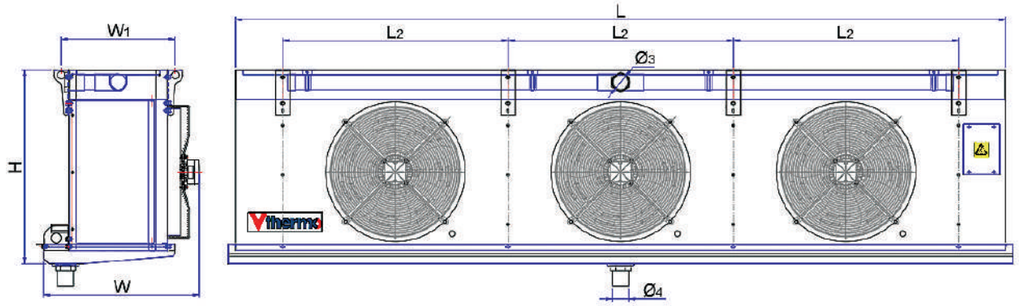
Conditions for calculating and checking capacity of evaporator model EEJ-W

- Evaporating temperature: -25°C
- Superheat: 5°C
- Temperature difference Δt: 7°C
- Room temperature: -13°C
- Condensing temperature: 40°C

INSTALLATION SIZE TABLE EEJ-W

(Defrost by water)

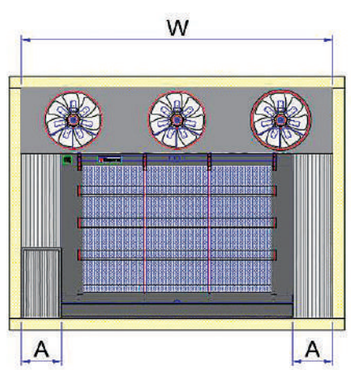
No	Model	Size (mm)			Bulk (mm)			Gas pipe (mm)		Water pipe (mm)	
		L	W	H	W1	L2	∅	Inlet	Outlet	Inlet	Outlet
1	2	3	4	5	6	7	8	9	10	11	11
1	EEJ048-2-500-28W…	2,282	632	786	460	920	13	15.9	34.9	34.0	60.0
2	EEJ056-3-450-20W…	2,582	638	786	460	713	13	15.9	34.9	34.0	60.0
3	EEJ064-3-450-25W…	2,894	638	786	460	813	13	22.2	34.9	34.0	60.0
4	EEJ073-3-500-28W…	3,194	632	786	460	913	13	22.2	34.9	34.0	60.0
5	EEJ075-4-450-20W…	3,307	638	786	460	710	13	22.2	41.3	34.0	60.0
6	EEJ086-4-450-25W…	3,707	638	786	460	810	13	22.2	41.3	34.0	60.0
7	EEJ097-4-500-28W…	4,107	632	786	460	910	13	22.2	41.3	34.0	60.0
8	EEJ145-3-500-30W…	3,232	732	986	560	913	13	22.2	54.0	42.0	76.0
9	EEJ194-4-500-30W…	4,132	732	986	560	910	13	22.2	54.0	42.0	76.0
10	EEJ218-3-630-35W…	4,132	772	1,086	560	1,213	13	22.2	54.0	42.0	76.0

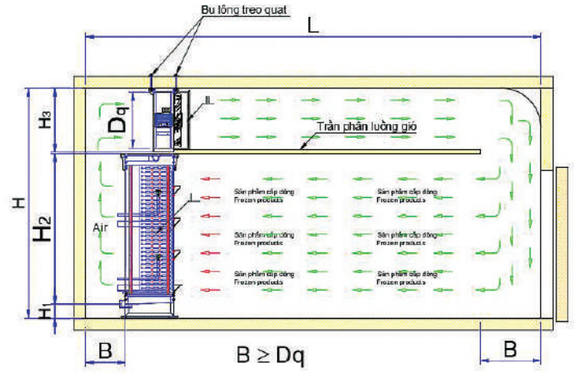


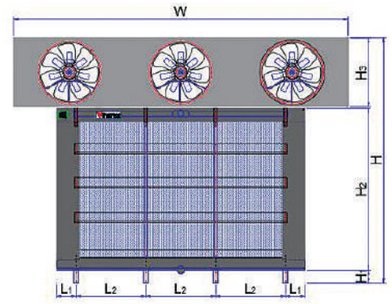
3/ BLAST FREEZER

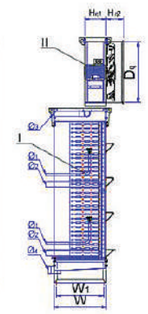
The Blast freezer is customized for each project depending on the room for air freezing.

3.1/ Blast freezer model EEJ-WI-T (Font suction type)









BLAST FREEZER SYMBOLS:

EEJ000-00-0-O000-WI-T

- EEJ – Blast Freezer model EEJ
- 000 – Heat transfer area (m^2)
- 00 – Fin pitch (mm)
- 0 – Number of fans
- 000 – Fan diameter
- W – Defrost by water
- I – Case by inox 304, A Case by powder coating aluminum
- T – Upper fan

TECHNICAL DATASHEET OF BLAST FREEZER MODEL EEJ-WI-T

(Defrost by water)

No	Model	Capacity (Kw)		Heat transfer area (m^2)	Airflow (m^3/h)	Fan				Water defrost	
		R22	R404			Number of fans	Fan diameter (mm)	Fan capacity (W)	Power source	Flow (m^3/h)	Temperature (°C)
1	2	3	4	5	6	7	8	9	10	12	13
1	EEJ141-11-4-O500-WI-T	31.8	33.8	141.4	36,800	4	500	1,100	380v/3Ph/50Hz	16.2	≥15
2	EEJ147-11-2-O600-WI-T	31.6	33.9	146.6	30,000	2	600	1,500	380v/3Ph/50Hz	16.8	≥15
3	EEJ224-11-5-O500-WI-T	49.6	51.6	224.4	46,000	5	500	1,100	380v/3Ph/50Hz	30.0	≥15
4	EEJ230-11-3-O600-WI-T	50.1	52.4	230.4	45,000	3	600	1,500	380v/3Ph/50Hz	26.4	≥15
5	EEJ269-11-6-O500-WI-T	56.6	64.0	269.3	55,200	6	500	1,100	380v/3Ph/50Hz	36.0	≥15
6	EEJ293-11-4-O600-WI-T	66.5	68.6	293.2	60,000	4	600	1,500	380v/3Ph/50Hz	33.6	≥15
7	EEJ311-11-3-O700-WI-T	69.0	69.9	311.2	60,000	3	700	2,200	380v/3Ph/50Hz	31.2	≥15
8	EEJ366-11-5-O600-WI-T	83.4	83.2	366.5	75,000	5	600	1,500	380v/3Ph/50Hz	42.0	≥15
9	EEJ383-11-4-O700-WI-T	83.0	86.7	383.0	80,000	4	700	2,200	380v/3Ph/50Hz	38.4	≥15
10	EEJ479-11-5-O700-WI-T	105.2	114.1	478.8	100,000	5	700	2,200	380v/3Ph/50Hz	48.0	≥15
11	EEJ574-11-4-O700-WI-T	124.4	121.1	574.5	80,000	4	700	2,200	380v/3Ph/50Hz	57.6	≥15
12	EEJ718-11-5-O700-WI-T	148.7	152.8	718.1	100,000	5	700	2,200	380v/3Ph/50Hz	72.0	≥15

Note:

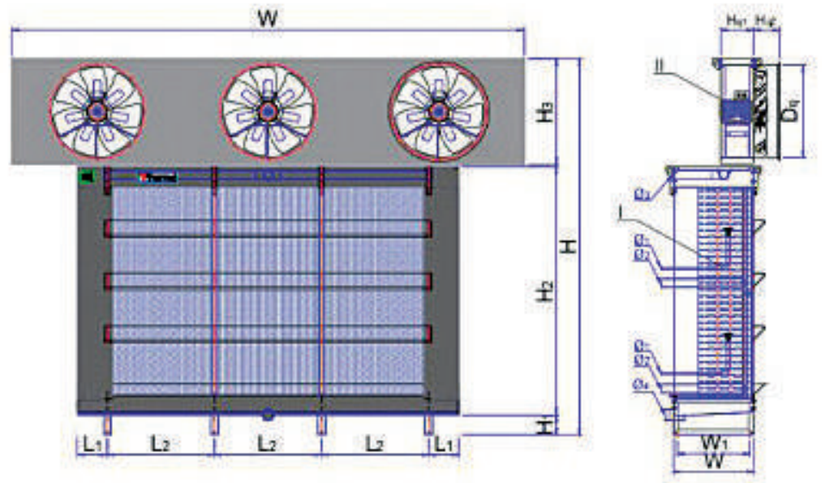
Conditions for calculating and checking capacity of blast freezer model EEJ-WI-T.

- Evaporating temperature: -35°C
- Superheat: 5°C
- Temperature difference Δt: 7°C
- Room temperature: -23°C
- Condensing temperature: 40°C

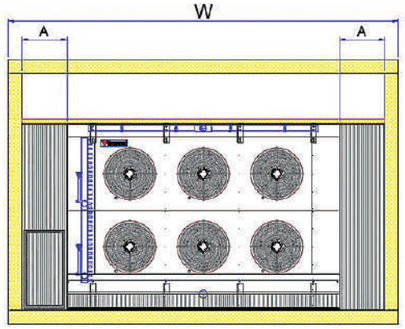
INSTALLATION SIZE TABLE EEJ-WI-T

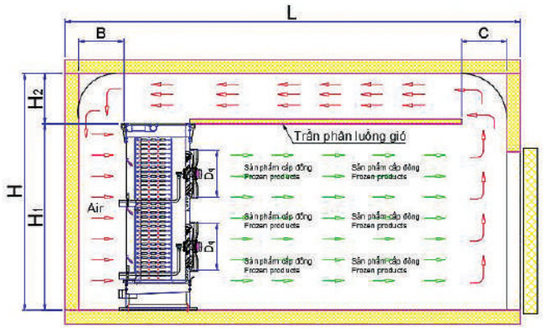
(Defrost by water)

No	Model	Size (mm)			Bulk (mm)			Inlet Pipe		Outlet pipe		Water pipe (mm)	
		L	W	H	W1	L2	∅	Quantity	Diameter (mm)	Quantity	Diameter (mm)	Inlet	Outlet
1	2	3	4	5	6	7	8	9	9	10	10	11	11
1	EEJ141-11-4-O500-WI-T	2,248	510	2,650	450	920	17	2	22.2	2	41.3	1x34	1x76
2	EEJ147-11-2-O600-WI-T	1,848	610	2,680	550	720	17	2	22.2	2	41.3	1x34	1x76
3	EEJ224-11-5-O500-WI-T	2,948	610	2,450	550	1,270	17	2	22.2	2	54.0	1x34	1x90
4	EEJ230-11-3-O600-WI-T	2,648	610	2,680	550	1,120	17	2	22.2	2	54.0	1x34	1x90
5	EEJ269-11-6-O500-WI-T	3,448	610	2,450	550	1,520	17	2	22.2	2	54.0	1x48	2x76
6	EEJ293-11-4-O600-WI-T	3,248	610	2,680	550	1,420	17	2	22.2	2	54.0	1x48	2x76
7	EEJ311-11-3-O700-WI-T	3,048	610	2,980	550	1,320	17	2	22.2	2	54.0	1x48	2x76
8	EEJ366-11-5-O600-WI-T	3,948	610	2,680	550	1,770	17	2	22.2	2	66.7	1x48	2x90
9	EEJ383-11-4-O700-WI-T	3,648	610	2,980	550	1,620	17	2	22.2	2	66.7	1x48	2x90
10	EEJ479-11-5-O700-WI-T	4,448	610	2,980	550	2,020	17	4	22.2	4	54.0	1x60	2x90
11	EEJ574-11-4-O700-WI-T	3,648	810	2,980	750	1,620	17	4	22.2	4	54.0	1x60	2x90
12	EEJ718-11-5-O700-WI-T	4,448	810	2,980	750	2,020	17	4	22.2	4	66.7	1x60	2x114

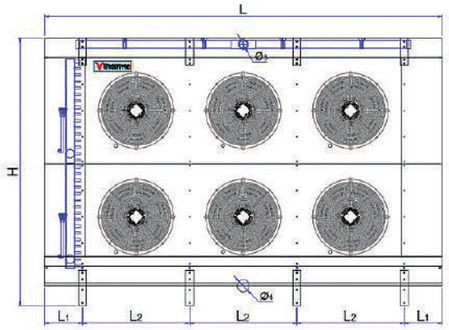


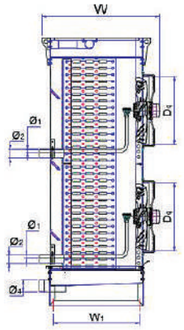
3.2/ Blast Freezer model EEJ-WI-N (Floor mounted type)





B ≥ Dq, H2 ≥ Dq





BLAST FREEZER SYMBOLS

EEJ000-00-0-000-WI-N

- EEJ – Blast Freezer model EEJ
- 000 – Heat transfer area (m^2)
- 00 – Fin pitch (mm)
- 0 – Number of fans
- 000 – Fan diameter
- W – Defrost by water
- I – Case by inox 304, A Case by powder coating aluminum
- N – Fan in front

TECHNICAL DATASHEET OF BLAST FREEZER MODEL EEJ-WI-N

(Defrost by water)

No	Model	Capacity (Kw)		Heat transfer area (m^2)	Airflow (m^3/h)	Fan				Water defrost	
		R22	R404			Number of fans	Fan diameter (mm)	Capacity (W)	Power source	Flow (m^3/h)	Temperature (^oC)
1	2	3	4	5	6	7	8	9	10	12	13
1	EEJ136-11-4-450-WI-N	29.1	29.2	136.1	26,000	4	450	430	380v/3Ph/50Hz	15.6	>15
2	EEJ178-11-4-550-WI-N	40.0	39.0	178.0	34,000	4	550	750	380v/3Ph/50Hz	20.4	>15
3	EEJ192-11-4-500-WI-N	39.8	41.5	191.5	36,800	4	500	850	380v/3Ph/50Hz	19.2	>15
4	EEJ204-11-6-450-WI-N	45.0	43.6	204.2	39,000	6	450	430	380v/3Ph/50Hz	23.4	>15
5	EEJ267-11-6-550-WI-N	55.6	58.3	267.1	51,000	6	550	750	380v/3Ph/50Hz	30.6	>15
6	EEJ287-11-4-630-WI-N	66.0	63.9	287.3	58,000	4	630	1,400	380v/3Ph/50Hz	28.8	>15
7	EEJ287-11-6-500-WI-N	64.7	62.7	287.3	55,200	6	500	850	380v/3Ph/50Hz	28.8	>15
8	EEJ431-11-6-630-WI-N	95.1	102.7	430.9	87,000	6	630	1,400	380v/3Ph/50Hz	43.2	>15
9	EEJ646-11-6-630-WI-N	134.9	130.7	646.3	87,000	6	630	1,400	380v/3Ph/50Hz	64.8	>15

Note:

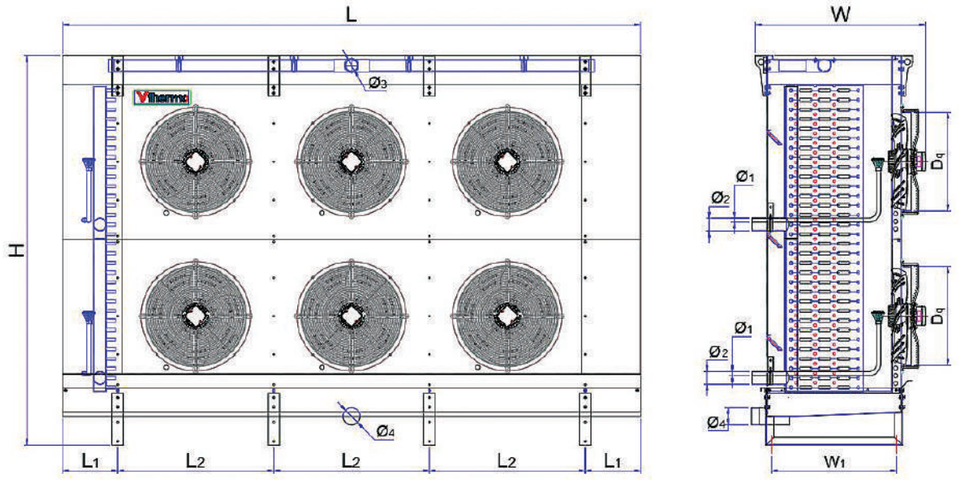
Conditions for calculating and checking capacity of blast freezer model EEJ-WI-N.

- Evaporating temperature: -35^{o}C
- Superheat: 5^{o}C
- Temperature difference Δt: 7^{o}C
- Room temperature: -23^{o}C
- Condensing temperature: 40 ^{o}C

INSTALLATION SIZE TABLE EEJ-WI-N

(Defrost by water)

No	Model	Size (mm)			Bulk (mm)			Inlet Pipe		Outlet pipe		Water pipe (mm)	
		L	W	H	W1	L2	∅	Quantity	Diameter (mm)	Quantity	Diameter (mm)	Inlet	Outlet
1	2	3	4	5	6	7	8	9	9	10	10	11	11
1	EEJ136-11-4-450-WI-N	1,747	943	1,830	690	204	16	2	22.2	2	41.3	42	76
2	EEJ178-11-4-550-WI-N	2,147	947	1,830	690	870	16	2	22.2	2	41.3	48	76
3	EEJ192-11-4-500-WI-N	2,047	937	2,030	690	820	16	2	22.2	2	41.3	48	76
4	EEJ204-11-6-450-WI-N	2,397	943	1,830	690	663	16	2	22.2	2	41.3	60	90
5	EEJ267-11-6-550-WI-N	3,022	947	1,830	690	863	16	2	22.2	2	54.0	60	90
6	EEJ287-11-4-630-WI-N	2,872	977	2,030	690	1,220	16	2	22.2	2	54.0	60	90
7	EEJ287-11-6-500-WI-N	2,872	937	2,030	690	813	16	2	22.2	2	54.0	60	90
8	EEJ431-11-6-630-WI-N	4,072	977	2,030	690	1,213	16	4	22.2	4	54.0	76	2x90
9	EEJ646-11-6-630-WI-N	4,072	1,177	2,030	890	1,213	16	4	22.2	4	54.0	2x60	2x90



III/ CONDENSER

3.1/ CONDENSER MODEL EC

EC condensers are air-cooled standard condensers with fan air exhausting through coil, fan blowing horizontal.

The case is made of galvanized steel with powder coating. Copper pipes, epoxy coated aluminum fin.

EC SYMBOL

EC000-0-000S

- EC – Condenser model EC
- 000 – Heat transfer area (m^2)
- 0 – Number of fans
- 000 – Fan diameter
- S – case by powder coating steel, I – case by inox 304

TECHNICAL DATASHEET OF CONDENSER MODEL EC

No	Model	Capacity (Kw)		Heat transfer area (m^2)	Fan					Inlet pipe (mm)	Outlet pipe (mm)
		R22	R404A		Power source (V)	Capacity (W)	Fan diameter (mm)	Quantity (piece)	Air flow (m^3/h)		
1	2	3	4	5	6	7	8	9	10	11	12
1	EC010-1-350S	3.7	3.9	10.1	380	135	350	1	2,700	15.88	12.70
2	EC013-1-350S	4.8	5.1	13.4	380	135	350	1	2,700	15.88	12.70
3	EC017-1-400S	6.4	6.9	17.4	380	190	400	1	3,500	15.88	12.70
4	EC022-1-400S	7.6	8.3	21.8	380	190	400	1	3,500	15.88	12.70
5	EC026-2-350S	9.6	10.3	26.8	380	135	350	2	5,400	19.05	12.70
6	EC034-2-350S	11.7	12.7	33.6	380	135	350	2	5,400	19.05	15.88
7	EC035-2-400S	13.2	14.3	34.8	380	190	400	2	7,000	22.23	15.88
8	EC044-2-400S	15.5	16.8	43.6	380	190	400	2	7,000	22.23	15.88
9	EC050-2-450S	18.7	20.1	49.6	380	250	450	2	10,000	22.23	15.88
10	EC062-2-450S	22.4	24.3	61.9	380	250	450	2	10,000	22.23	19.05
11	EC065-2-500S	24.9	26.9	64.1	380	420	500	2	13,000	28.58	19.05
12	EC074-2-550S	28.6	30.9	74.3	380	550	550	2	15,000	28.58	22.23
13	EC081-2-500S	29.5	32.1	81.3	380	420	500	2	13,000	28.58	22.23
14	EC093-2-550S	34.0	36.9	92.9	380	550	550	2	15,000	28.58	22.23
15	EC099-4-450S	37.4	40.3	99.1	380	250	450	4	20,000	34.93	22.23
16	EC124-4-450S	44.6	48.6	123.9	380	250	450	4	20,000	34.93	22.23
17	EC128-4-500S	50.4	54.5	127.8	380	420	500	4	26,000	34.93	22.23
18	EC160-4-500S	59.2	64.3	159.7	380	420	500	4	26,000	34.93	22.23

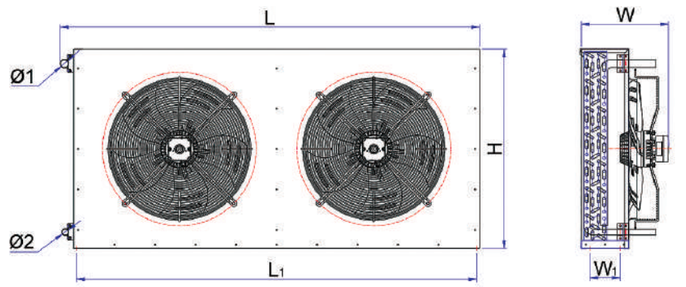
Note:

Conditions for calculating and checking capacity of Condenser model EC

- Condensing temperature: 45^0C
- Supercool: 3^0C
- Temperature difference Δt: 7^0C
- Air temperature: 35^0C
- Humidity: 80%

INSTALLATION SIZE TABLE CONDENSER MODEL EC

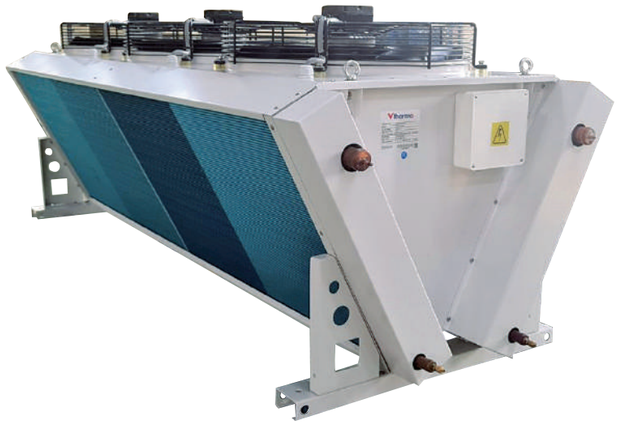
No	Model	L	W	H	W1	L1	∅	Inlet pipe (mm)	Outlet pipe (mm)
1	2	3	4	5	6	7	8		
1	EC010-1-350S	675.9	290.0	440.0	91.7	550.0	12	15.88	12.70
2	EC013-1-350S	675.9	311.6	440.0	113.3	550.0	12	15.88	12.70
3	EC017-1-400S	695.9	321.6	540.0	113.3	570.0	12	15.88	12.70
4	EC022-1-400S	695.9	343.3	540.0	135.0	570.0	2 12	15.88	12.70
5	EC026-2-350S	1,199.1	311.6	440.0	113.3	1,070.0	12	19.05	12.70
6	EC034-2-350S	1,199.1	333.3	440.0	135.0	1,070.0	12	19.05	15.88
7	EC035-2-400S	1,242.2	321.6	540.0	113.3	1,110.0	12	22.23	15.88
8	EC044-2-400S	1,242.2	343.3	540.0	135.0	1,110.0	12	22.23	15.88
9	EC050-2-450S	1,442.2	329.6	640.0	113.3	1,310.0	12	22.23	15.88
10	EC062-2-450S	1,442.2	351.3	640.0	135.0	1,310.0	12	22.23	19.05
11	EC065-2-500S	1,608.6	323.6	740.0	113.3	1,470.0	12	28.58	19.05
12	EC074-2-550S	1,608.6	333.6	840.0	113.3	1,470.0	12	28.58	22.23
13	EC081-2-500S	1,608.6	345.3	740.0	135.0	1,470.0	12	28.58	22.23
14	EC093-2-550S	1,608.6	355.3	840.0	135.0	1,470.0	12	28.58	22.23
15	EC099-4-450S	1,454.9	329.6	1,240.0	113.3	1,310.0	12	34.93	22.23
16	EC124-4-450S	1,454.9	351.3	1,240.0	135.0	1,310.0	12	34.93	22.23
17	EC128-4-500S	1,824.9	323.6	1,240.0	113.3	1,680.0	12	34.93	22.23
18	EC160-4-500S	1,824.9	345.3	1,240.0	135.0	1,680.0	12	34.93	22.23



3.2/ CONDENSER MODEL VC

VC Condensers are V-shaped air cooled condensers with fan air exhausting through coil, fan blowing vertical.

The case is made of galvanized steel with powder coating. Copper pipes, epoxy coated aluminum fin.



VC SYMBOL:

VC000-0-000S

- VC – Condenser model VC
- 000 – Heat transfer area (m^2)
- 0 – Number of fans
- 000 – Fan diameter
- S – case by powder coating steel, I – case by inox 304

TECHNICAL DATASHEET OF CONDENSER MODEL VC

NO	Model	Capacity (Kw)		Heat transfer area (m^2)	Fan					Inlet pipe (mm)	Outlet pipe (mm)
		R22	R404A		Power source	Capacity (W)	Fan diameter (mm)	Quantity (piece)	Air flow (m^3/h)		
1	2	3	4	5	6	7	8	9	10	11	12
1	VC068-2-500S	23.9	25.7	68.7	380	420	500	2	13,000	22.23	19.05
2	VC074-2-550S	27.3	29.4	74.4	380	550	550	2	15,000	22.23	19.05
3	VC092-2-500S	28.9	31.4	91.6	380	420	500	2	13,000	22.23	19.05
4	VC100-2-550S	32.9	35.7	99.2	380	550	550	2	15,000	25.40	22.23
5	VC103-3-500S	35.9	38.6	103.0	380	420	500	3	19,500	25.40	22.23
6	VC112-2-630S	37.6	40.3	111.4	380	850	630	2	21,600	28.58	22.23
7	VC112-3-550S	41.1	44.1	111.6	380	550	550	3	22,500	28.58	22.23
8	VC137-3-500S	42.7	47.2	137.3	380	420	500	3	19,500	28.58	22.23
9	VC148-2-630S	46.4	50.4	148.5	380	850	630	2	21,600	28.58	22.23
10	VC148-3-550S	49.5	53.8	148.8	380	550	550	3	22,500	28.58	22.23
11	VC137-4-500S	49.9	53.8	137.3	380	420	500	4	26,000	28.58	22.23
12	VC148-4-550S	56.6	61.1	148.8	380	550	550	4	30,000	34.93	22.23
13	VC183-4-500S	59.1	64.1	183.1	380	420	500	4	26,000	34.93	22.23
14	VC167-3-630S	61.0	65.7	167.1	380	850	630	3	32,400	34.93	22.23
15	VC198-4-550S	66.7	72.1	198.4	380	550	550	4	30,000	34.93	22.23
16	VC222-3-630S	72.8	78.9	222.8	380	850	630	3	32,400	34.93	22.23
17	VC222-4-630S	75.3	80.6	222.8	380	850	630	4	43,200	34.93	22.23
18	VC297-4-630S	93.0	101.0	297.1	380	850	630	4	43,200	34.93	22.23
19	VC371-5-630S	120.0	130.3	371.3	380	850.0	630.0	5.0	54,000.0	41.28	28.58

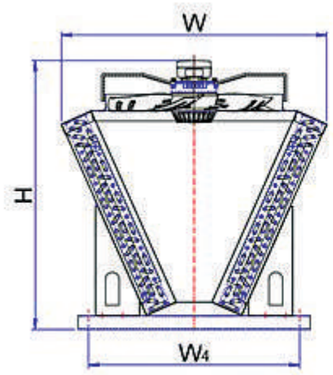
Note:

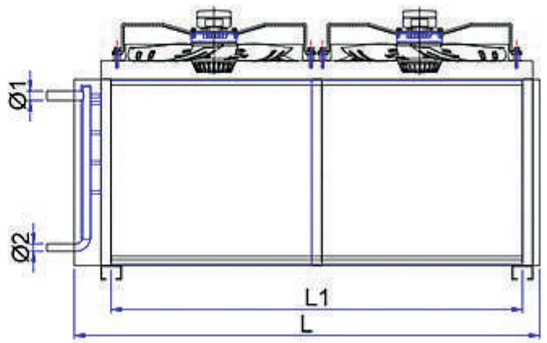
Conditions for calculating and checking capacity of Condenser model VC

- Condensing temperature: 45°C
- Supercool: 3°C
- Temperature difference Δt: 7°C
- Air temperature: 35°C
- Humidity: 80 %

INSTALLATION SIZE TABLE CONDENSER MODEL VC

No	Model	L	W	H	W4	L1	∅	**Inlet pipe** (mm)	**Outlet pipe** (mm)
1	2	3	4	5	6	7	8	9	10
1	VC068-2-500S	1,352	773	782	613	1,200	13	22.23	19.05
2	VC074-2-550S	1,452	820	784	660	1,300	13	22.23	19.05
3	VC092-2-500S	1,352	813	791	653	1,200	13	22.23	19.05
4	VC100-2-550S	1,455	858	794	698	1,300	13	25.40	22.23
5	VC103-3-500S	1,955	773	782	613	1,800	13	25.40	22.23
6	VC112-2-630S	1,619	905	976	745	1,460	13	28.58	22.23
7	VC112-3-550S	2,109	820	784	660	1,950	13	28.58	22.23
8	VC137-3-500S	1,959	813	791	653	1,800	13	28.58	22.23
9	VC148-2-630S	1,619	945	985	785	1,460	13	28.58	22.23
10	VC148-3-550S	2,109	858	794	698	1,950	13	28.58	22.23
11	VC137-4-500S	2,559	773	782	613	2,400	13	28.58	22.23
12	VC148-4-550S	2,765	820	784	660	2,600	13	34.93	22.23
13	VC183-4-500S	2,565	813	791	653	2,400	13	34.93	22.23
14	VC167-3-630S	2,355	905	976	745	2,190	13	34.93	22.23
15	VC198-4-550S	2,765	858	794	698	2,600	13	34.93	22.23
16	VC222-3-630S	2,355	945	985	785	2,190	13	34.93	22.23
17	VC222-4-630S	3,085	905	976	745	1,460	13	34.93	22.23
18	VC297-4-630S	3,085	945	985	785	1,460	13	34.93	22.23
19	VC371-5-630S	3,821	945	985	785	913	13	41.28	28.58





3.3/ CONDENSER MODEL HC

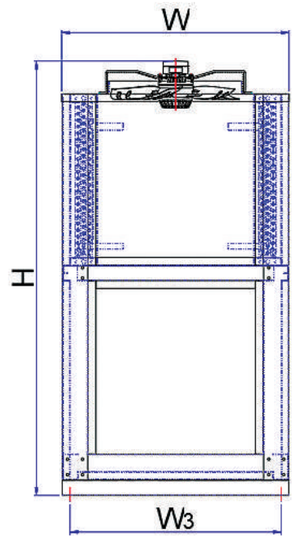
HC Condensers are H-shaped air cooled condensers with fan air exhausting through coil, fan blowing vertical.

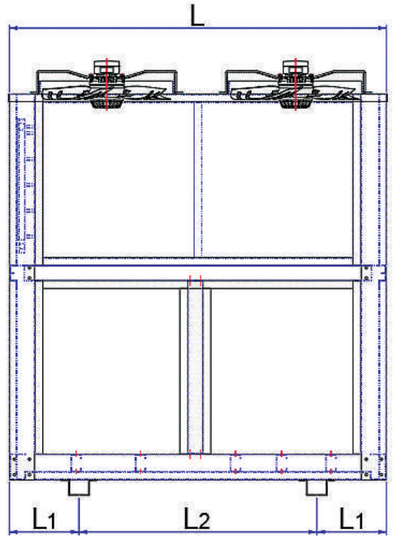
The case is made of galvanized steel with powder coating. Copper pipes, epoxy coated aluminum fin.

HC SYMBOL

HC000-0-000S

- HC – Condenser model HC
- 000 – Heat transfer area (m^2)
- 0 – Number of fans
- 000 – Fan diameter
- S – case by powder coating steel, I – case by inox 304





TECHNICAL DATASHEET OF CONDENSER MODEL HC

No	Model	Capacity (Kw)		Heat transfer area (m^2)	Fan					Inlet pipe (mm)	Outlet pipe (mm)
		R22	R404A		Power source (V)	Capacity (W)	Fan diameter (mm)	Quantity (piece)	Air flow (m^3/h)		
1	2	3	4	5	6	7	8	9	10	11	12
1	HC034-1-500S	10.8	11.5	34.3	380	420	500	1	6,500	22.23	15.88
2	HC037-1-550S	13.5	14.5	37.2	380	550	550	1	7,500	22.23	15.88
3	HC046-1-500S	14.3	15.5	45.8	380	420	500	1	6,500	22.23	15.88
4	HC050-1-550S	16.2	17.6	49.6	380	550	550	1	7,500	22.23	15.88
5	HC056-1-630S	18.8	20.1	55.7	380	850	630	1	10,800	22.23	19.05
6	HC068-2-500S	23.9	25.7	68.7	380	420	500	2	13,000	28.58	19.05
7	HC074-1-630S	23.1	25.1	74.3	380	850	630	1	10,800	22.23	19.05
8	HC074-2-550S	27.3	29.4	74.4	380	550	550	2	15,000	28.58	22.23
9	HC092-2-500S	28.9	31.4	91.6	380	420	500	2	13,000	28.58	22.23
10	HC100-2-550S	32.9	35.7	99.2	380	550	550	2	15,000	28.58	22.23
11	HC103-3-500S	35.9	38.6	103.0	380	420	500	3	19,500	28.58	22.23
12	HC112-2-630S	37.6	40.3	111.4	380	850	630	2	21,600	28.58	22.23
13	HC112-3-550S	41.1	44.1	111.6	380	550	550	3	22,500	34.93	22.23
14	HC137-3-500S	42.7	47.2	137.3	380	420	500	3	19,500	28.58	22.23
15	HC137-4-500S	49.9	53.8	137.3	380	420	500	4	26,000	34.93	22.23
16	HC148-2-630S	46.4	50.4	148.5	380	850	630	2	21,600	28.58	22.23
17	HC148-3-550S	49.5	53.8	148.8	380	550	550	3	22,500	34.93	22.23
18	HC148-4-550S	56.6	61.1	148.8	380	550	550	4	30,000	34.93	22.23
19	HC167-3-630S	61.0	65.7	167.1	380	850	630	3	32,400	34.93	22.23
20	HC183-4-500S	59.1	64.1	183.1	380	420	500	4	26,000	34.93	22.23
21	HC198-4-550S	66.7	72.1	198.4	380	550	550	4	30,000	34.93	22.23
22	HC222-3-630S	72.8	72.8	222.8	380	850	630	3	32,400	34.93	22.23
23	HC222-4-630S	75.3	80.6	222.8	380	850	630	4	43,200	41.28	25.40
24	HC297-4-630S	93.0	101.0	297.1	380	850	630	4	43,200	41.28	25.40
25	HC371-5-630S	120.0	130.3	371.3	380	850	630	5	54,000	41.28	25.40

Note:

Conditions for calculating and checking capacity of Condenser model HC

- Condensing temperature: 45 ^{0}C
- Supercool: 3 ^{0}C
- Temperature difference Δt: 7 ^{0}C
- Air temperature: 35 ^{0}C
- Humidity: 80 %

INSTALLATION SIZE TABLE CONDENSER MODEL HC

No	Model	L	W	H	W3	L2	∅	Inlet pipe (mm)	Outlet pipe (mm)
1	2	3	4	5	6	7	8	9	10
1	HC034-1-500S	864	874	1,679	814	600	13	22.23	15.88
2	HC037-1-550S	914	924	1,689	864	650	13	22.23	15.88
3	HC046-1-500S	864	917	1,679	857	600	13	22.23	15.88
4	HC050-1-550S	914	967	1,689	907	650	13	22.23	15.88
5	HC056-1-630S	994	1,004	1,885	944	730	13	22.23	19.05
6	HC068-2-500S	1,464	874	1,679	814	600	13	28.58	19.05
7	HC074-1-630S	994	1,047	1,885	987	730	13	22.23	19.05
8	HC074-2-550S	1,564	924	1,689	864	650	13	28.58	22.23
9	HC092-2-500S	1,464	917	1,679	857	600	13	28.58	22.23
10	HC100-2-550S	1,564	967	1,689	907	650	13	28.58	22.23
11	HC103-3-500S	2,064	874	1,679	814	600	13	28.58	22.23
12	HC112-2-630S	1,724	1,004	1,885	944	730	13	28.58	22.23
13	HC112-3-550S	2,214	924	1,689	864	650	13	34.93	22.23
14	HC137-3-500S	2,064	917	1,679	857	600	13	28.58	22.23
15	HC137-4-500S	2,664	874	1,679	814	600	13	34.93	22.23
16	HC148-2-630S	1,724	1,047	1,885	987	730	13	28.58	22.23
17	HC148-3-550S	2,214	967	1,689	907	650	13	34.93	22.23
18	HC148-4-550S	2,864	924	1,689	864	650	13	34.93	22.23
19	HC167-3-630S	2,454	1,004	1,885	944	730	13	34.93	22.23
20	HC183-4-500S	2,664	917	1,679	857	600	13	34.93	22.23
21	HC198-4-550S	2,864	967	1,689	907	650	13	34.93	22.23
22	HC222-3-630S	2,454	1,047	1,885	987	730	13	34.93	22.23
23	HC222-4-630S	3,184	1,004	1,885	944	730	13	41.28	25.40
24	HC297-4-630S	3,184	1,047	1,885	987	730	13	41.28	25.40
25	HC371-5-630S	3,914	1,047	1,885	987	730	13	41.28	25.40

3.4/ CONDENSER MODEL UC

UC Condensers are U-shaped air cooled condensers with fan air exhausting through coil, fan blowing vertical.

The case is made of galvanized steel with powder coating. Copper pipes, epoxy coated aluminum fin.

UC SYMBOL

UC000-0-000S

- UC – Condenser model UC
- 000 – Heat transfer area (m^2)
- 0 – Number of fans
- 000 – Fan diameter
- S – case by powder coating steel, I – case by inox 304

TECHNICAL DATASHEET OF CONDENSER MODEL UC

No	Model	Capacity (Kw)		Heat transfer area (m^2)	Quạt					Inlet pipe (mm)	Outlet pipe (mm)
		R22	R404A		Power source (V)	Capacity (W)	Fan diameter (mm)	Quantity (piece)	Air flow (m^3/h)		
1	2	3	4	5	6	7	8	9	10	11	12
1	UC041-1-450S	9.9	10.7	40.7	380	250	450	1	5,000	15.88	12.70
2	UC060-1-500S	13.7	14.7	60.2	380	420	500	1	6,500	15.88	12.70
3	UC066-1-550S	15.8	16.9	66.2	380	550	550	1	7,500	19.05	15.88
4	UC085-1-630S	21.4	23.0	85.1	380	850	630	1	10,800	19.05	15.88
5	UC084-2-500S	22.6	24.1	83.9	380	420	500	2	13,000	19.05	15.88
6	UC092-2-550S	26.2	28.0	91.8	380	550	550	2	15,000	19.05	15.88
7	UC117-2-630S	37.2	39.6	117.5	380	850	630	2	21,600	22.23	15.88

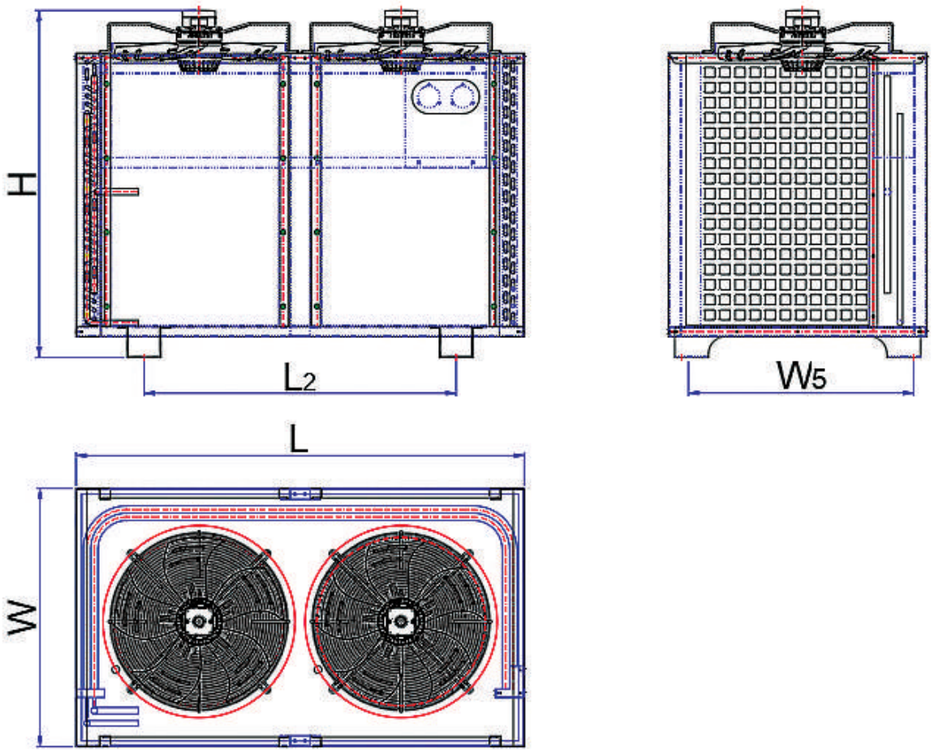
Note:

Conditions for calculating and checking capacity of Condenser model UC

- Condensing temperature: 45^0C
- Supercool: 3^0C
- Temperature difference Δt: 7^0C
- Air temperature: 35^0C
- Humidity: 80%

INSTALLATION SIZE TABLE CONDENSER MODEL UC

No	Model	L	W	H	W5	L2	∅	Inlet pipe (mm)	Outlet pipe (mm)
1	2	3	4	5	6	7	8	9	10
1	UC041-1-450S	683	713	834	635	477	13	15.88	12.70
2	UC060-1-500S	733	763	1,028	685	527	13	15.88	12.70
3	UC066-1-550S	783	819	1,038	741	577	13	19.05	15.88
4	UC085-1-630S	863	899	1,134	821	657	13	19.05	15.88
5	UC084-2-500S	1,333	769	1,028	691	1,127	13	19.05	15.88
6	UC092-2-550S	1,433	819	1,038	741	1,227	13	19.05	15.88
7	UC117-2-630S	1,593	902	1,134	824	1,387	13	22.23	15.88



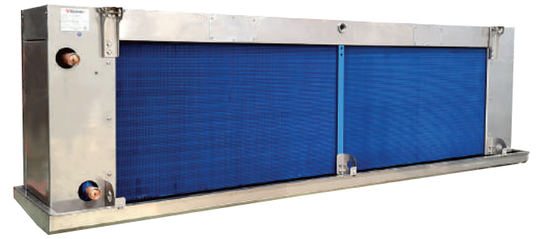
IV/ FAN COIL UNIT

Fan Coil Unit (using cold water, glycol, salt water) with fin pitch 3.17 (FPI = 8 mm) is used for cooling the production rooms of seafood, agricultural food factory, as well as cool storages.

Room temperature 15-25^{0}C

Case made of galvanized steel with powder coating (S); powder coated aluminum (A), stainless steel (I)

Copper tube, epoxy coated aluminum fin.



FAN COIL UNIT SYMBOL

ECW000-0-000-00A

- ECW – Fan Coil Unit ECW
- 000 – Heat transfer area (m^2)
- 0 – Number of fans
- 000 – Fan Diameter
- 00 – Far blowing (m)
- A – case by aluminum, S – case by steel, I – case by stainless steel

TECHNICAL DATASHEET OF FAN COIL UNIT ECW

No	Model	Capacity (Kw)		Heat transfer area (m^2)	Air flow (m^3/h)	Fan				
		Water	Glycol			Quantity	Fan Diameter (mm)	Capacity (W)	Power source	Far blowing (m)
1	2	3	4	5	6	7	8	9	10	11
1	ECW048-2-400-12…	12.0	11.5	48.4	7,000	2.0	400	190.0	380v/3Ph/50Hz	12
2	ECW072-2-400-12…	18.2	17.9	71.7	7,000	2.0	400	190.0	380v/3Ph/50Hz	12
3	ECW086-2-450-12…	22.5	21.7	86.1	10,000	2.0	450	250.0	380v/3Ph/50Hz	12
4	ECW086-3-400-12…	23.8	23.1	86.1	10,500	3.0	400	190.0	380v/3Ph/50Hz	12
5	ECW120-2-500-12…	30.8	29.9	119.5	13,000	2.0	500	420.0	380v/3Ph/50Hz	12
6	ECW120-3-450-12…	33.7	32.8	119.5	15,000	3.0	450	250.0	380v/3Ph/50Hz	12
7	ECW179-3-500-12…	45.2	43.5	179.3	19,500	3.0	500	420.0	380v/3Ph/50Hz	12

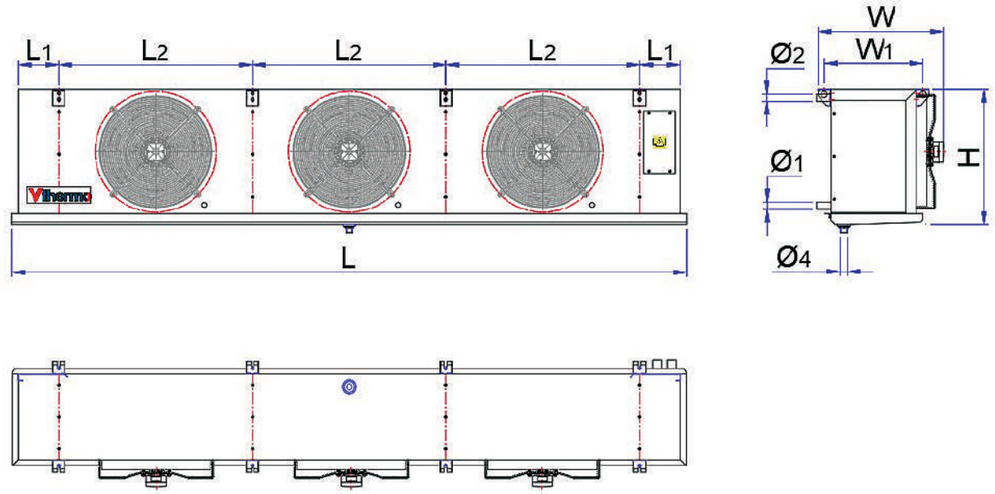
Note

Conditions for calculating and checking capacity of Fan Coil Unit ECW

- Inlet temperature of water: 8^0C
- Outlet temperature of water: 12^0C
- Air temperature: 20^0C
- Humidity: 65%

INSTALLATION SIZE TABLE FAN COIL UNIT ECW

No	Model	Size (mm)			Bolt (mm)			Water Pipe (mm)		Outlet condensing water pipe (mm)
		L	W	H	W1	L2	Æ	Inlet	Outlet	
1	2	3	4	5	6	7	8	9	10	11
1	ECW048-2-400-12…	2,274	487	493	359	918	13	28.6	28.6	34.0
2	ECW072-2-400-12…	2,100	553	493	425	818	13	34.9	34.9	34.0
3	ECW086-2-450-12…	2,300	528	646	392	918	13	34.9	34.9	34.0
4	ECW086-3-400-12…	2,900	520	493	392	812	13	34.9	34.9	34.0
5	ECW120-2-500-12…	3,025	522	646	392	1,268	13	41.3	41.3	34.0
6	ECW120-3-450-12…	3,025	528	646	392	845	13	41.3	41.3	34.0
7	ECW179-3-500-12…	4,326	522	646	392	1,262	13	54.0	54.0	34.0



Vthermo

QUANG THANG

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CATALOGUE

EVAPORATOR & CONDENSER

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