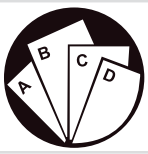
enex technologies

USER MANUAL

EC/OC/BC

INDUSTRIAL EVAPORATORS / BRINE COOLERS



Multiple instructions:
Consult the specific part

Read and understand the instructions before undertaking any work on the unit

RETAIN FOR FUTURE REFERENCE

Declaration of conformity

We declare under our own responsibility that the below equipment complies in all parts with the CEE and EN directives. The declaration of conformity is enclosed to the technical booklet enclosed with the unit.

INDEX

1. INTRODUCTION

1.1 General information

These installation, operation and maintenance instructions are given as a guide to good practice in the installation, putting into service, operation, and maintenance by the user of 'EC-OC-BC' units.
They do not contain full service procedures necessary for the continued successful operation of this equipment. The services of a qualified technician should be employed through the medium of a maintenance contract with a reputable service company.

1.2 Cautions & Warnings

Cautions and warnings appear at appropriate places in this instruction manual. Your personal safety and the proper operation of this machine require that you fallow them carefully. The manufacturer assumes no liability far installations or servicing performed by unqualified personnel.

1.3 Reception & inspection of the unit

On arrival , inspect the unit before signing the delivery note. Specify any damage on the delivery note, and send a registered letter of protest to the last carrier of the goods within 72 hours of delivery.
Notify immediately to the company. The unit should be totally inspected within 7 days of delivery. If any concealed damage is discover, send a registered letter of protest to the carrier within 7 days of delivery and Notify immediately to the company. Units are shipped with 1.5 bar of Nitrogen and should be examined pressing the schrader valve and hearing the sound of charge of nitrogen or with an electronic leak detector to determine the hermetic integrity of the unit.

1.4 Refrigerant

The unit is sent without refrigerant. The refrigerant charge must be done by a certified company and qualified personnel. After the installation of the system, this must be checked far any possible leak by qualified personal. Not complying with any of these requirements, or not justifying them with the compulsory data registration in the units will void the warranty.

1.5 Warranty

Warranty is based on the general terms and conditions of the attached ENEX TECHNOLOGIES warranty policy far Authorized Dealers of ENEX TECHNOLOGIES. The warranty is void if the equipment is repaired or modified without the written approval of ENEX TECHNOLOGIES, if the operating limits are exceeded or if the control system or the electrical wiring is modified.
Damage due to misuse, lack of maintenance or failure to comply with the manufacturer's instructions or recommendations is not covered by the warranty obligation. If the user does not conform to the rules of chapter "Maintenance", it may entail cancellation of warranty and liabilities by ENEX TECHNOLOGIES.

1.6 Unit identification

Each unit has a rating plate that provides key information regarding the machine. The rating plate may differ from the one shown below as the example is for a standard unit without accessories. For all electrical information not provided on the label, refer to the wiring diagram. A facsimile of the label is shown below:

enex technologies			UKCA CE Directive 2014/68/UE	
MODEL				
MODEL REF				
SERIAL NUMBER				
Fluid group / type				
Internal volume				L
Range of temperature				°C
PS / PT				bar(g)
Weight				Kg
ELECTRICAL MOTOR DATA				
Conn.	N°	V/Ph/Hz	A	kW
ELECTRICAL DEFROSTING				
Conn.	N°	V/Ph/Hz	A	kW

2. ABOUT PRODUCT

2.1 EC-OC-BC description

2.1.1 Finned coils

- Built with copper tubes Ø 3/8”, 12mm and 5/8 are built in compliance with CUPROCLIMA specifications.
- The square arrangement of copper tubes across selfspaced corrugated fins accurately links tubes and fins for high coil performance.
- All coils are subjected to resistance and leakage tests under a rated pressure of, EC; 43bar (PS 30bar), OC; 86bar (PS 60bar) / 115 bar (PS 80bar), BC; 23bar (PS 16bar), and pressurized using nitrogen at 2 bar to avoid inner surface corrosion of the copper tubes.
- A wide range of fin spacings is available: 3mm / 4mm / 5,5mm / 7,5mm / 10mm.

2.1.2 Casework

- The case structure of the unit is manufactured in prepainted alluminium, giving it a high protection against corrosion even in extreme environmental conditions, also allowing the casing to meet more demanding food hygiene standards.
- Includes double-drip tray for easier drainage of water resulting from defrost.
- For better maintenance, the drip tray and fan plates are easily dismounted from the casework for faster access to the inside of the unit cooler.

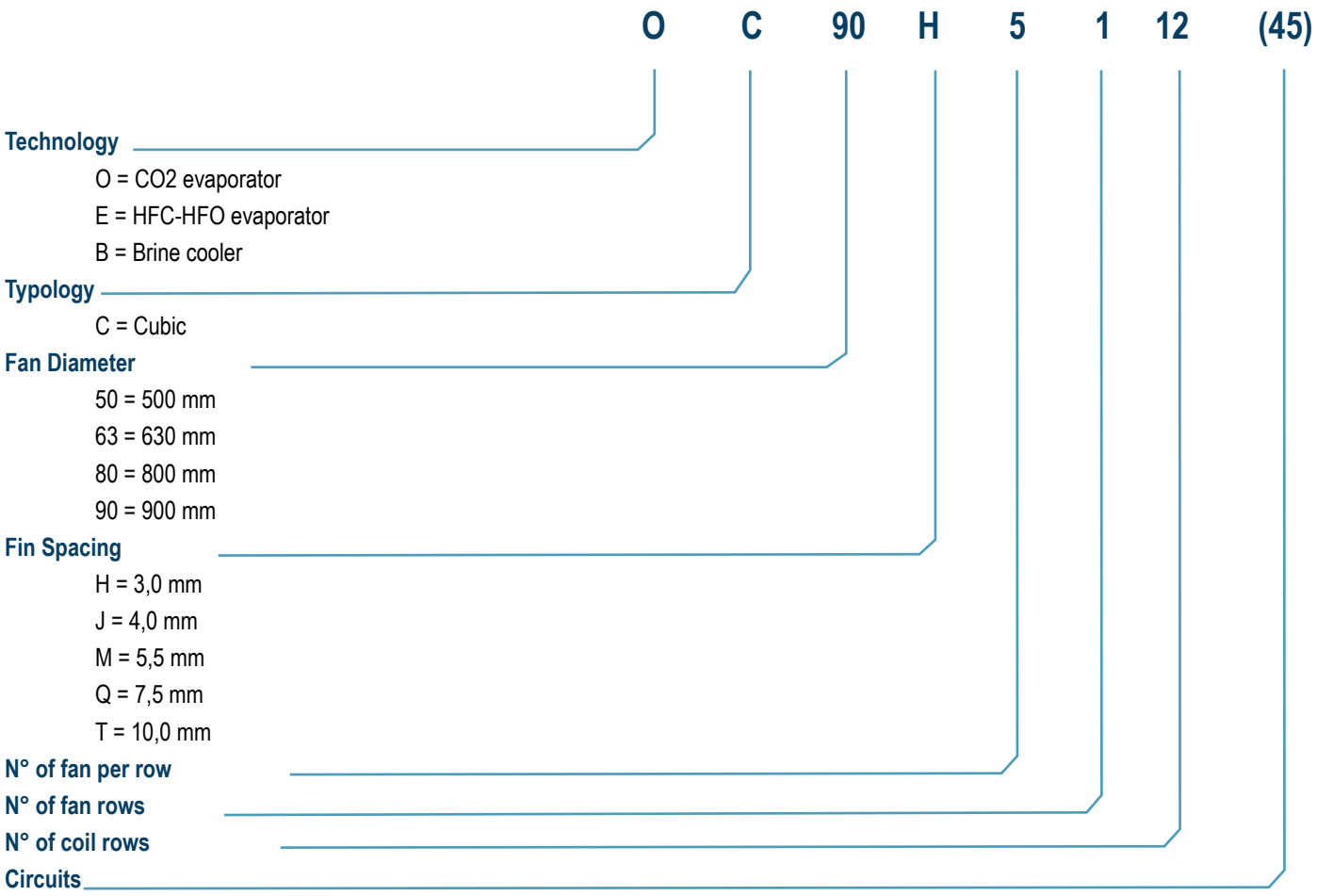
2.1.3 Fans

- Available fans’ diameters: Ø 500 / 630 / 800 / 900mm.
- Axial fans with external rotor 400V III @ 50Hz (for Ø 630 / 800 / 900 mm) and 400V III @ 50/60Hz (for Ø 500mm).
- Equipped as standard with AC fan motors with excellent acoustic performance.
- All motors have class B insulation, grade IP-54 protection, a thermal protection device and operate at a temperature range from –40° C up to + 60° C.
- Painted fan guards are made of zinc-plated steel wire and support a watertight fan motor terminal box.

2.1.4 Electric defrost

- Electric heaters are optional for all series and are recommended for use below 2° C air inlet temperature.
- Heaters are strategically located across the finned coil to provide suitable and uniform defrosting.

2.2 Nomenclature



2.3 Options & accessories

2.3.1 Coil

- PS=45bar (for EC)
- PS=80bar (for OC)
- Copper Fins
- Coated Fins
- Other material
- AquaAero treatment
- Blygold treatment
- Cataphoresis treatment
- Stainless-steel headers (for OC PS=60bar)
- Cooling connections on top

2.3.2 Casing

- Stainless-steel casing
- Legs
- Textile ducts
- Insulated drip tray
- Dust filter G4
- Back cover + shut up
- Streamers

2.3.3 Defrost

- Water defrost
- Hot gas defrost
- Hot gas defrost in coil and electric in tray
- Electric defrost (wired)
- Stronger electric defrost (wired)
- Fan ring heaters

2.3.4 Other

- EC fans
- Wiring into centralized box
- Service switch
- Blowing fans

2.4 Technical data

2.4.1 CO_2 Evaporators

Fin pitch 4mm, Fan Ø= 500 mm, RPM = 1.300

Model	Capacity (kW)			Surface	Internal Volume	Air Flow	Air Throw	Fans Data			Electrical defrost		Inlet	Outlet	Weight
	SC2	SC3	SC4	m²	dm³	m³/h	m	N°	kW	A	kW	A	mm	mm	kg
OC50J114	9,7	7,4	6,2	41,1	4,3	7.312	23	1	0,7	1,6	3,4	5,0	12	12	60
OC50J116	12,9	9,8	8,4	61,7	6,5	6.914	22	1	0,7	1,6	6,0	8,7	12	12	72
OC50J118	15,2	11,4	9,8	82,2	8,7	6.511	20	1	0,7	1,6	7,7	11,2	12	12	83
OC50J11C	17,4	12,9	11,2	123,3	13,0	5.763	17	1	0,7	1,7	11,9	17,4	16	22	106
OC50J214	19,5	15,0	12,8	82,2	8,7	14.598	23	2	1,4	3,3	6,8	9,9	12	12	108
OC50J216	26,1	19,7	16,8	123,3	13,0	13.802	22	2	1,4	3,3	11,9	17,4	16	22	131
OC50J218	30,5	22,9	19,6	164,4	17,4	13.001	20	2	1,4	3,3	15,3	22,3	22	28	154
OC50J21C	34,9	26,0	22,5	246,7	26,1	11.512	17	2	1,5	3,4	23,8	34,7	22	28	200
OC50J314	29,1	22,6	19,1	123,3	13,0	21.844	23	3	2,0	4,9	10,2	14,9	16	22	155
OC50J316	39,0	29,7	25,4	185,0	19,6	20.648	22	3	2,1	4,9	17,9	26,0	22	28	189
OC50J318	45,8	34,3	29,5	246,7	26,1	19.452	20	3	2,1	4,9	23,0	33,5	22	28	224
OC50J31C	52,4	39,2	33,7	370,0	39,1	17.232	17	3	2,2	5,1	35,7	52,1	28	35	293
OC50J414	39,2	30,2	25,6	164,4	17,4	29.053	23	4	2,7	6,5	13,6	19,8	22	28	202
OC50J416	52,2	39,6	33,8	246,7	26,1	27.458	22	4	2,8	6,6	23,8	34,7	22	28	248
OC50J418	61,1	45,9	39,4	328,9	34,8	25.869	20	4	2,8	6,6	30,6	44,6	28	35	294
OC50J41C	69,8	52,3	45,0	493,3	52,1	22.925	17	4	2,9	6,8	47,6	69,4	28	35	386
OC50J514	49,0	37,6	31,8	205,5	21,7	36.233	23	5	3,4	8,1	17,0	24,8	22	28	249
OC50J516	65,2	49,5	42,2	308,3	32,6	34.234	21	5	3,5	8,2	29,8	43,4	28	35	307
OC50J518	76,3	57,4	49,3	411,1	43,5	32.254	20	5	3,5	8,2	38,3	55,8	28	35	364
OC50J51C	87,1	65,3	56,2	616,6	65,2	28.599	17	5	3,7	8,5	59,5	86,8	28	35	479

Fin pitch 4mm, Fan Ø= 630 mm, RPM = 1.330

Model	Capacity (kW)			Surface	Internal Volume	Air Flow	Air Throw	Fans Data			Electrical defrost		Inlet	Outlet	Weight
	SC2	SC3	SC4	m²	dm³	m³/h	m	N°	kW	A	kW	A	mm	mm	kg
OC63J114	19,5	15,2	12,9	76,2	8,1	16.312	54	1	2,4	4,6	6,3	9,2	12	12	109
OC63J116	26,6	20,3	17,2	114,3	12,1	15.658	51	1	2,4	4,6	9,5	13,8	16	22	126
OC63J118	31,9	24,2	#N/D	152,3	16,1	15.044	49	1	2,5	4,7	13,7	19,9	22	28	142
OC63J11C	38,2	28,5	24,5	228,5	24,2	13.704	43	1	2,5	4,7	21,0	30,6	22	28	176
OC63J214	38,5	30,6	25,9	152,3	16,1	32.544	54	2	4,8	9,2	12,6	18,4	22	28	193
OC63J216	53,4	40,9	34,8	228,5	24,2	31.234	51	2	4,8	9,3	18,9	27,6	22	28	226
OC63J218	64,3	48,6	41,5	304,7	32,2	30.014	48	2	4,9	9,3	27,3	39,8	28	35	260
OC63J21C	76,8	57,1	49,2	457,0	48,3	27.340	43	2	5,0	9,5	42,0	61,3	28	35	327
OC63J314	59,0	45,9	38,9	228,5	24,2	48.666	54	3	7,2	13,7	18,9	27,6	22	28	277
OC63J316	80,2	61,6	52,3	342,8	36,2	46.704	51	3	7,3	13,9	28,4	41,4	28	35	327
OC63J318	96,4	73,1	62,4	457,0	48,3	44.887	48	3	7,4	14,0	41,0	59,7	28	35	378
OC63J31C	115,2	86,0	74,2	685,6	72,5	40.876	43	3	7,5	14,3	63,0	91,9	35	35	478
OC63J414	78,8	61,3	51,9	304,7	32,2	64.716	54	4	9,6	18,3	25,2	36,8	28	35	361
OC63J416	106,8	82,0	69,8	456,5	47,2	62.089	51	4	9,7	18,5	37,8	55,1	28	35	428
OC63J418	128,6	97,3	83,0	609,4	64,4	59.679	48	4	9,8	18,7	54,6	79,6	35	35	495
OC63J41C	153,1	114,6	98,9	914,1	96,6	54.334	42	4	10,1	19,0	84,0	122,5	35	35	630
OC63J514	98,4	76,7	64,8	380,9	40,3	80.835	54	5	12,0	22,9	31,5	46,0	28	35	445
OC63J516	133,7	102,9	87,4	571,3	60,4	77.527	51	5	12,1	23,2	47,3	68,9	35	35	529
OC63J518	160,3	122,0	104,2	761,7	80,5	74.500	48	5	12,3	23,4	68,3	99,6	35	35	613
OC63J51C	191,0	143,5	123,8	1142,6	120,8	67.758	42	5	12,6	23,8	105,0	153,2	35	35	781

Fin pitch 4mm, Fan Ø= 800 mm, RPM = 900

Model	Capacity (kW)			Surface	Internal Volume	Air Flow	Air Throw	Fans Data			Electrical defrost		Inlet	Outlet	Weight
	SC2	SC3	SC4	m²	dm³	m³/h	m	N°	kW	A	kW	A	mm	mm	kg
OC80J116	38,0	28,3	24,2	159,2	26,7	18.472	51	1	1,8	3,9	13,8	20,1	16	22	213
OC80J118	43,1	32,0	27,5	212,3	35,6	16.921	45	1	1,8	3,9	18,8	27,4	22	28	241
OC80J11A	45,9	34,0	29,3	265,3	44,5	15.661	41	1	1,8	3,9	25,0	36,5	28	35	270
OC80J11C	46,6	35,1	30,0	318,4	53,4	14.467	37	1	1,8	3,9	30,0	43,8	28	35	299
OC80J216	76,2	56,9	48,6	318,4	53,4	36.782	50	2	3,5	7,7	27,5	40,1	28	35	382
OC80J218	86,4	64,1	55,3	424,5	71,2	33.730	45	2	3,6	7,8	37,5	54,7	35	35	439
OC80J21A	92,1	68,3	58,8	530,6	89,0	31.248	41	2	3,6	7,8	50,0	72,9	35	35	497
OC80J21C	93,3	70,4	60,2	636,8	106,8	28.880	36	2	3,5	7,8	60,0	87,5	35	35	555
OC80J316	114,2	85,5	73,1	477,6	80,1	54.872	50	3	5,3	11,6	41,3	60,2	35	35	551
OC80J318	129,4	96,3	82,9	636,8	106,8	50.383	45	3	5,3	11,7	56,3	82,1	35	35	638
OC80J31A	137,5	102,3	88,3	796,0	133,5	46.723	40	3	5,4	11,7	75,0	109,4	35	35	724
OC80J31C	140,0	105,7	90,4	955,2	160,2	43.200	36	3	5,3	11,6	90,0	131,3	35	35	811
OC80J416	151,3	114,3	97,9	635,6	103,8	72.785	50	4	7,0	15,4	55,0	80,2	35	35	720
OC80J418	172,0	128,4	110,8	847,4	138,4	66.905	44	4	7,1	15,6	75,0	109,4	35	35	836
OC80J41A	183,7	136,9	117,7	1061,3	178,0	62.096	40	4	7,1	15,6	100,0	145,9	35	35	951
OC80J41C	186,6	141,5	120,6	1273,1	212,6	57.446	36	4	7,1	15,5	120,0	175,1	35	35	1066

Fin pitch 4mm, Fan Ø= 900 mm, RPM =880

Model	Capacity (kW)			Surface	Internal Volume	Air Flow	Air Throw	Fans Data			Electrical defrost		Inlet	Outlet	Weight
	SC2	SC3	SC4	m²	dm³	m³/h	m	N°	kW	A	kW	A	mm	mm	kg
OC90J116	45,0	33,6	28,7	190,9	31,8	21.645	56	1	1,7	4,2	16,2	23,6	22	28	260
OC90J118	51,4	38,1	32,7	254,7	42,7	20.150	51	1	1,8	4,2	23,0	33,5	28	35	296
OC90J11A	55,4	40,8	35,1	318,4	53,4	18.925	47	1	1,8	4,3	29,7	43,3	28	35	331
OC90J11C	57,4	42,6	36,4	382,1	64,1	17.906	44	1	1,8	4,3	35,1	51,2	28	35	367
OC90J216	90,1	67,4	57,6	382,1	64,1	43.116	56	2	3,4	8,4	32,4	47,3	35	35	468
OC90J218	103,3	76,4	65,8	509,4	85,4	40.176	51	2	3,5	8,5	45,9	67,0	35	35	539
OC90J21A	111,0	81,9	70,5	636,8	106,8	37.765	47	2	3,6	8,6	59,4	86,7	35	35	610
OC90J21C	115,0	85,7	72,9	764,1	128,1	35.747	44	2	3,7	8,6	70,2	102,4	35	35	681
OC90J316	135,4	101,3	86,7	573,1	96,1	64.370	56	3	5,1	12,6	48,6	70,9	35	35	676
OC90J318	154,4	114,7	98,9	762,8	124,9	60.040	51	3	5,3	12,7	68,9	100,4	35	35	782
OC90J31A	166,2	123,0	105,8	954,5	158,6	56.486	47	3	5,4	12,8	89,1	130,0	35	35	889
OC90J31C	172,3	128,7	109,5	1146,2	192,2	53.493	43	3	5,5	12,9	105,3	153,6	35	35	995
OC90J416	179,8	135,1	115,6	764,1	128,1	85.461	55	4	6,9	16,8	64,8	94,5	35	35	884
OC90J418	206,2	153,1	131,9	1018,8	170,9	79.768	50	4	7,1	17,0	91,8	133,9	35	35	1026
OC90J41A	221,7	164,3	141,4	1273,5	213,6	75.110	47	4	7,2	17,1	118,8	173,3	35	35	1168
OC90J41C	229,7	171,7	146,1	1528,3	256,3	71.163	43	4	7,4	17,3	140,4	204,8	35	35	1310

Note: For technical information on equipment with different fin pitch than the mentioned before, or different calculation conditions, please consult our selection software: https://unilab.roenest.com/ETS_Selector_Sales.zip

Fin pitch 10mm, Fan Ø= 500 mm, RPM = 1.300

Model	Capacity (kW)			Surface	Internal Volume	Air Flow	Air Throw	Fans Data			Electrical defrost		Inlet	Outlet	Weight
	SC2	SC3	SC4	m²	dm³	m³/h	m	N°	kW	A	kW	A	mm	mm	kg
OC50T114	5,9	4,5	3,8	17,7	4,3	7.613	25	1	0,7	1,6	3,4	5,0	12	12	47
OC50T116	8,5	6,4	5,4	26,6	6,5	7.394	24	1	0,7	1,6	6,0	8,7	12	12	56
OC50T118	10,6	7,9	6,8	35,5	8,7	7.161	23	1	0,7	1,6	7,7	11,2	12	12	65
OC50T11C	13,8	10,2	8,8	53,2	13,0	6.675	21	1	0,7	1,6	11,9	17,4	16	22	83
OC50T214	12,0	9,1	7,7	35,3	8,5	15.225	25	2	1,3	3,2	6,8	9,9	12	12	85
OC50T216	17,2	12,8	10,9	53,2	13,0	14.759	24	2	1,3	3,2	11,9	17,4	16	22	103
OC50T218	21,5	15,9	13,6	70,7	16,9	14.288	23	2	1,4	3,3	15,3	22,3	16	22	121
OC50T21C	28,1	20,6	17,7	106,4	26,1	13.315	21	2	1,4	3,3	23,8	34,7	22	28	158
OC50T314	18,1	13,6	11,6	53,2	13,0	22.797	25	3	2,0	4,8	10,2	14,9	16	22	123
OC50T316	25,7	19,1	16,3	79,8	19,6	22.082	24	3	2,0	4,9	17,9	26,0	16	22	150
OC50T318	32,4	24,0	20,5	106,4	26,1	21.364	23	3	2,1	4,9	23,0	33,5	22	28	178
OC50T31C	42,2	31,0	26,6	159,6	39,1	19.905	21	3	2,1	4,9	35,7	52,1	22	28	233
OC50T414	23,9	18,2	15,4	70,9	17,4	30.332	25	4	2,7	6,5	13,6	19,8	16	22	161
OC50T416	34,4	25,7	21,9	106,4	26,1	29.367	24	4	2,7	6,5	23,8	34,7	22	28	197
OC50T418	42,9	31,9	27,3	141,4	33,9	28.398	23	4	2,7	6,5	30,6	44,6	28	35	234
OC50T41C	56,3	41,5	35,6	212,5	51,7	26.451	20	4	2,8	6,6	47,6	69,4	28	35	308
OC50T514	30,2	22,7	19,3	88,6	21,7	37.842	25	5	3,3	8,1	17,0	24,8	22	28	198
OC50T516	43,1	32,1	27,4	133,0	32,6	36.624	23	5	3,4	8,1	29,8	43,4	22	28	244
OC50T518	53,9	40,1	34,2	177,3	43,5	35.400	22	5	3,4	8,2	38,3	55,8	28	35	290
OC50T51C	70,3	51,8	44,5	265,9	65,2	32.968	20	5	3,5	8,2	59,5	86,8	28	35	382

Fin pitch 10mm, Fan Ø= 630 mm, RPM = 1.330

Model	Capacity (kW)			Surface	Internal Volume	Air Flow	Air Throw	Fans Data			Electrical defrost		Inlet	Outlet	Weight
	SC2	SC3	SC4	m²	dm³	m³/h	m	N°	kW	A	kW	A	mm	mm	kg
OC63T114	12,0	9,1	7,7	32,8	8,1	16.812	56	1	2,4	4,5	6,3	9,2	12	12	109
OC63T116	17,3	13,0	11,1	49,3	12,1	16.444	55	1	2,4	4,6	9,5	13,8	16	22	126
OC63T118	22,0	16,4	14,0	65,7	16,1	16.062	53	1	2,4	4,6	13,7	19,9	16	22	142
OC63T11C	29,5	21,7	18,6	98,5	24,2	15.303	50	1	2,4	4,7	21,0	30,6	22	28	176
OC63T214	24,2	18,3	15,5	65,7	16,1	33.623	56	2	4,7	9,1	12,6	18,4	16	22	193
OC63T216	34,8	26,2	22,3	98,5	24,2	32.831	55	2	4,8	9,1	18,9	27,6	22	28	226
OC63T218	44,2	32,9	28,1	131,4	32,2	32.029	53	2	4,8	9,2	27,3	39,8	22	28	260
OC63T21C	59,1	43,6	37,4	197,1	48,3	30.509	49	2	4,9	9,3	42,0	61,3	28	35	327
OC63T314	36,2	27,6	23,4	98,5	24,2	50.349	56	3	7,1	13,6	18,9	27,6	22	28	277
OC63T316	52,1	39,4	33,5	147,8	36,2	49.097	54	3	7,1	13,7	28,4	41,4	28	35	327
OC63T318	66,2	49,6	42,3	196,9	47,9	47.879	53	3	7,2	13,8	41,0	59,7	28	35	378
OC63T31C	88,2	65,5	56,1	294,7	70,5	45.597	49	3	7,3	14,0	63,0	91,9	28	35	478
OC63T414	48,5	36,7	31,2	131,4	32,2	66.987	56	4	9,4	18,2	25,2	36,8	22	28	361
OC63T416	69,7	52,4	44,6	197,1	48,3	65.284	54	4	9,5	18,3	37,8	55,1	28	35	428
OC63T418	88,3	66,0	56,3	262,8	64,4	63.645	52	4	9,6	18,4	54,6	79,6	28	35	495
OC63T41C	118,0	87,4	74,7	394,2	96,6	60.602	49	4	9,8	18,6	84,0	122,5	35	35	630
OC63T514	60,6	45,9	38,9	164,2	40,3	83.592	56	5	11,8	22,7	31,5	46,0	28	35	445
OC63T516	86,7	65,3	55,7	245,7	59,0	81.429	54	5	11,9	22,9	47,3	68,9	28	35	529
OC63T518	110,3	82,6	70,4	328,5	80,5	79.362	52	5	12,0	23,0	68,3	99,6	35	35	613
OC63T51C	147,4	109,3	93,5	492,7	120,8	75.550	49	5	12,2	23,3	105,0	153,2	35	35	781

Fin pitch 10mm, Fan Ø= 800 mm, RPM = 900

Model	Capacity (kW)			Surface	Internal Volume	Air Flow	Air Throw	Fans Data			Electrical defrost		Inlet	Outlet	Weight
	SC2	SC3	SC4	m²	dm³	m³/h	m	N°	kW	A	kW	A	mm	mm	kg
OC80T116	26,1	19,3	16,5	70,1	26,7	20.728	59	1	1,7	3,8	13,8	20,1	16	22	170
OC80T118	32,1	23,6	20,2	93,5	35,6	19.588	55	1	1,7	3,8	18,8	27,4	22	28	195
OC80T11A	36,9	26,9	23,1	116,8	44,5	18.472	51	1	1,8	3,9	25,0	36,5	28	35	219
OC80T11C	39,9	29,2	25,2	140,2	53,4	17.485	47	1	1,8	3,9	30,0	43,8	28	35	243
OC80T216	53,0	38,8	33,1	140,2	53,4	41.274	59	2	3,4	7,6	27,5	40,1	28	35	312
OC80T218	65,1	47,3	40,6	186,9	71,2	38.935	54	2	3,5	7,7	37,5	54,7	28	35	360
OC80T21A	74,3	54,2	46,3	233,7	89,0	36.734	50	2	3,5	7,7	50,0	72,9	35	35	408
OC80T21C	81,2	59,5	50,6	280,4	106,8	34.790	47	2	3,5	7,8	60,0	87,5	35	35	457
OC80T316	79,1	58,2	49,8	210,3	80,1	61.527	58	3	5,1	11,4	41,3	60,2	28	35	453
OC80T318	97,4	71,0	60,8	280,4	106,8	57.983	54	3	5,2	11,5	56,3	82,1	35	35	525
OC80T31A	111,1	81,2	69,4	350,5	133,5	54.733	50	3	5,3	11,6	75,0	109,4	35	35	598
OC80T31C	121,5	89,4	76,0	420,6	160,2	51.871	46	3	5,3	11,6	90,0	131,3	35	35	670
OC80T416	105,6	77,4	66,2	280,4	106,8	81.554	58	4	6,9	15,3	55,0	80,2	35	35	594
OC80T418	129,5	94,8	81,1	373,9	142,4	76.810	53	4	7,0	15,4	75,0	109,4	35	35	691
OC80T41A	147,8	108,6	92,8	467,3	178,0	72.535	49	4	7,0	15,4	100,0	145,9	35	35	787
OC80T41C	161,5	119,3	101,5	560,8	213,6	68.791	46	4	7,1	15,5	120,0	175,1	35	35	884

Fin pitch 10mm, Fan Ø= 900 mm, RPM =880

Model	Capacity (kW)			Surface	Internal Volume	Air Flow	Air Throw	Fans Data			Electrical defrost		Inlet	Outlet	Weight
	SC2	SC3	SC4	m²	dm³	m³/h	m	N°	kW	A	kW	A	mm	mm	kg
OC90T116	31,0	22,7	19,4	84,1	32,0	23.830	64	1	1,6	4,1	16,2	23,6	16	22	221
OC90T118	38,2	27,8	23,8	112,2	42,7	22.699	60	1	1,7	4,1	23,0	33,5	22	28	252
OC90T11A	43,8	31,9	27,3	140,2	53,4	21.641	56	1	1,7	4,2	29,7	43,3	28	35	283
OC90T11C	48,2	35,2	30,0	168,2	64,1	20.697	53	1	1,7	4,2	35,1	51,2	28	35	314
OC90T216	62,1	45,5	38,9	168,2	64,1	47.400	64	2	3,2	8,2	32,4	47,3	28	35	402
OC90T218	76,4	55,8	47,8	224,3	85,4	45.154	60	2	3,3	8,3	45,9	67,0	35	35	464
OC90T21A	87,8	64,0	54,9	280,0	105,7	43.060	56	2	3,4	8,4	59,4	86,7	35	35	527
OC90T21C	96,7	70,8	60,2	336,5	128,1	41.198	53	2	3,5	8,4	70,2	102,4	35	35	589
OC90T316	93,0	68,3	58,5	252,4	96,1	70.699	63	3	4,9	12,3	48,6	70,9	35	35	584
OC90T318	114,6	83,6	71,5	336,5	128,1	67.324	59	3	5,0	12,5	68,9	100,4	35	35	677
OC90T31A	131,6	96,3	82,1	420,6	160,2	64.222	56	3	5,1	12,6	89,1	130,0	35	35	771
OC90T31C	144,7	106,3	90,3	504,7	192,2	61.475	52	3	5,2	12,7	105,3	153,6	35	35	864
OC90T416	123,8	91,2	78,0	336,5	128,1	93.798	63	4	6,5	16,4	64,8	94,5	35	35	766
OC90T418	152,1	111,7	95,9	448,6	170,9	89.296	59	4	6,7	16,6	91,8	133,9	35	35	890
OC90T41A	174,8	128,2	109,9	559,9	211,4	85.210	55	4	6,9	16,8	118,8	173,3	35	35	1014
OC90T41C	192,6	141,9	120,6	673,0	256,3	81.601	52	4	7,0	16,9	140,4	204,8	35	35	1139

Note: For technical information on equipment with different fin pitch than the mentioned before, or different calculation conditions, please consult our selection software: https://unilab.roenest.com/ETS_Selector_Sales.zip

2.4.2 HFC-HFO Evaporators

Fin pitch 4mm, Fan Ø= 500 mm, RPM = 1.300, R404A*

Model	Capacity (kW)			Surface	Internal Volume	Air Flow	Air Throw	Fans Data			Electrical defrost		Inlet	Outlet	Weight
	SC2	SC3	SC4	m²	dm³	m³/h	m	N°	kW	A	kW	A	mm	mm	kg
EC50J114	9,1	7,2	6,0	40,1	7,7	7.135	23	1	0,7	1,6	3,4	5,0	16	22	53
EC50J116	12,1	9,6	8,0	60,1	11,5	6.643	21	1	0,7	1,6	6,0	8,7	16	22	63
EC50J118	14,1	11,0	9,3	80,2	15,3	6.170	19	1	0,7	1,7	7,7	11,2	22	28	73
EC50J11C	15,9	12,1	10,3	120,3	23,0	5.277	15	1	0,8	1,7	11,9	17,4	28	35	93
EC50J214	18,4	14,7	12,4	80,2	15,3	14.229	23	2	1,4	3,3	6,8	9,9	22	28	94
EC50J216	24,4	19,2	16,2	120,3	23,0	13.248	21	2	1,4	3,3	11,9	17,4	28	35	114
EC50J218	28,5	22,2	18,9	160,4	30,7	12.310	19	2	1,4	3,3	15,3	22,3	35	42	134
EC50J21C	32,0	24,4	20,9	240,6	46,0	10.539	15	2	1,5	3,4	23,8	34,7	35	42	174
EC50J314	27,5	22,2	18,8	120,1	22,4	21.268	22	3	2,1	4,9	10,2	14,9	35	42	135
EC50J316	36,7	28,9	24,1	180,4	34,5	19.802	20	3	2,1	4,9	17,9	26,0	35	42	165
EC50J318	42,5	32,7	27,8	240,2	44,8	18.407	19	3	2,2	5,0	23,0	33,5	35	42	195
EC50J31C	47,9	36,8	31,4	360,8	69,0	15.774	15	3	2,3	5,1	35,7	52,1	35	42	255
EC50J414	36,6	29,3	24,5	160,4	30,7	28.263	22	4	2,7	6,5	13,6	19,8	35	42	176
EC50J416	48,4	38,4	32,7	240,6	46,0	26.311	20	4	2,8	6,6	23,8	34,7	35	42	216
EC50J418	56,4	44,6	38,1	320,7	61,3	24.466	18	4	2,9	6,7	30,6	44,6	35	42	256
EC50J41C	63,9	48,9	42,0	481,1	92,0	20.988	15	4	3,0	6,9	47,6	69,4	35	42	336
EC50J514	46,2	35,6	29,5	200,5	38,3	35.238	22	5	3,4	8,2	17,0	24,8	35	42	217
EC50J516	61,2	46,4	38,5	300,7	57,5	32.790	20	5	3,5	8,2	29,8	43,4	35	42	267
EC50J518	71,4	54,0	45,7	400,9	76,6	30.504	18	5	3,6	8,3	38,3	55,8	35	42	317
EC50J51C	80,0	61,0	52,3	601,4	115,0	26.189	15	5	3,8	8,6	59,5	86,8	35	42	417

Fin pitch 4mm, Fan Ø= 630 mm, RPM = 1.330, R404A*

Model	Capacity (kW)			Surface	Internal Volume	Air Flow	Air Throw	Fans Data			Electrical defrost		Inlet	Outlet	Weight
	SC2	SC3	SC4	m²	dm³	m³/h	m	N°	kW	A	kW	A	mm	mm	kg
EC63J114	18,2	13,4	12,6	74,3	14,2	16.014	53	1	2,4	4,6	6,3	9,2	28	35	104
EC63J116	24,7	17,5	16,9	111,3	20,8	15.246	49	1	2,4	4,7	9,5	13,8	28	35	120
EC63J118	29,9	20,2	20,0	148,6	28,4	14.511	46	1	2,5	4,7	13,7	19,9	35	42	136
EC63J11C	35,2	22,3	23,1	222,5	41,7	12.802	39	1	2,6	4,8	21,0	30,6	35	42	168
EC63J214	37,0	26,8	24,9	148,6	28,4	31.915	53	2	4,8	9,2	12,6	18,4	35	42	184
EC63J216	50,0	35,0	33,8	222,5	41,7	30.383	49	2	4,9	9,3	18,9	27,6	35	42	216
EC63J218	60,3	40,7	40,4	297,2	56,8	28.895	46	2	5,0	9,4	27,3	39,8	35	42	248
EC63J21C	71,1	44,6	46,6	445,7	85,2	25.532	39	2	5,2	9,7	42,0	61,3	35	42	312
EC63J314	54,9	40,3	37,5	222,9	42,6	47.687	52	3	7,2	13,8	18,9	27,6	35	42	264
EC63J316	74,8	52,7	50,9	334,3	63,9	45.399	49	3	7,3	14,0	28,4	41,4	35	42	312
EC63J318	89,9	61,2	60,8	445,7	85,2	43.139	46	3	7,4	14,1	41,0	59,7	35	42	360
EC63J31C	106,4	66,7	70,0	668,6	127,8	38.172	39	3	7,8	14,6	63,0	91,9	35	42	456
EC63J414	74,2	51,3	48,4	297,2	56,8	63.424	52	4	9,6	18,4	25,2	36,8	35	42	344
EC63J416	100,8	67,8	63,8	445,7	85,2	60.339	49	4	9,8	18,7	37,8	55,1	35	42	408
EC63J418	120,5	79,1	75,8	594,3	113,6	57.282	45	4	9,9	18,8	54,6	79,6	35	42	472
EC63J41C	142,1	89,6	91,7	891,5	170,4	50.760	39	4	10,3	19,4	84,0	122,5	35	42	600
EC63J514	89,7	67,5	64,1	371,5	71,0	79.218	52	5	12,1	23,1	31,5	46,0	35	42	424
EC63J516	122,7	88,2	85,8	557,2	106,5	75.367	49	5	12,3	23,3	47,3	68,9	35	42	504
EC63J518	147,7	99,7	100,2	742,9	142,0	71.500	45	5	12,4	23,5	68,3	99,6	35	42	584
EC63J51C	175,9	108,7	114,4	1114,4	213,0	63.336	39	5	12,9	24,3	105,0	153,2	35	42	744

Fin pitch 4mm, Fan Ø= 800 mm, RPM = 900, R404A*

Model	Capacity (kW)			Surface	Internal Volume	Air Flow	Air Throw	Fans Data			Electrical defrost		Inlet	Outlet	Weight
	SC2	SC3	SC4	m²	dm³	m³/h	m	N°	kW	A	kW	A	mm	mm	kg
EC80J116	32,9	26,0	22,0	159,2	30,4	18.350	50	1	1,8	3,9	13,8	20,1	35	42	170
EC80J118	38,2	29,8	25,4	212,3	40,6	16.825	45	1	1,8	3,9	18,8	27,4	35	42	193
EC80J11A	41,5	32,1	27,2	265,3	50,7	15.587	40	1	1,8	3,9	25,0	36,5	35	42	216
EC80J11C	43,1	33,1	28,1	318,4	60,9	14.403	36	1	1,8	3,9	30,0	43,8	35	42	239
EC80J216	66,0	52,3	43,6	318,4	60,9	36.455	50	2	3,5	7,7	27,5	40,1	35	42	305
EC80J218	76,6	59,3	50,5	424,5	81,2	33.486	44	2	3,6	7,8	37,5	54,7	35	42	351
EC80J21A	83,2	64,3	55,0	530,6	101,4	31.060	40	2	3,6	7,8	50,0	72,9	35	42	397
EC80J21C	86,4	66,6	56,8	636,8	121,7	28.721	36	2	3,5	7,7	60,0	87,5	35	42	443
EC80J316	98,9	77,3	65,3	477,6	91,3	54.319	49	3	5,3	11,6	41,3	60,2	35	42	440
EC80J318	114,8	89,1	76,0	636,8	121,7	49.975	44	3	5,3	11,7	56,3	82,1	35	42	509
EC80J31A	124,7	96,7	82,8	796,0	152,2	46.418	40	3	5,4	11,7	75,0	109,4	35	42	578
EC80J31C	129,4	100,1	85,4	955,2	182,6	42.954	36	3	5,3	11,6	90,0	131,3	TBD	TBD	647
EC80J416	130,7	104,8	87,5	636,8	121,7	72.181	49	4	7,0	15,5	55,0	80,2	35	42	575
EC80J418	152,5	117,2	99,2	849,0	162,3	66.413	44	4	7,1	15,6	75,0	109,4	35	42	667
EC80J41A	166,4	124,2	106,4	1061,3	202,9	61.733	40	4	7,1	15,6	100,0	145,9	35	42	759
EC80J41C	172,9	127,9	110,6	1273,5	243,5	57.151	36	4	7,1	15,5	120,0	175,1	TBD	TBD	851

Fin pitch 4mm, Fan Ø= 900 mm, RPM =880, R404A*

Model	Capacity (kW)			Surface	Internal Volume	Air Flow	Air Throw	Fans Data			Electrical defrost		Inlet	Outlet	Weight
	SC2	SC3	SC4	m²	dm³	m³/h	m	N°	kW	A	kW	A	mm	mm	kg
EC90J116	39,2	31,0	26,2	191,0	36,5	21.525	56	1	1,7	4,2	16,2	23,6	35	42	208
EC90J118	45,6	35,7	30,3	254,3	47,5	20.054	51	1	1,8	4,2	23,0	33,5	35	42	236
EC90J11A	50,2	38,7	32,7	318,2	60,3	18.850	47	1	1,8	4,3	29,7	43,3	35	42	264
EC90J11C	53,0	40,1	34,1	382,1	73,0	17.842	43	1	1,8	4,3	35,1	51,2	35	42	293
EC90J216	78,6	62,3	52,6	382,1	73,0	42.802	55	2	3,4	8,4	32,4	47,3	35	42	374
EC90J218	91,8	71,1	59,8	509,2	96,8	39.929	51	2	3,5	8,5	45,9	67,0	35	42	430
EC90J21A	100,6	76,5	64,9	636,3	120,5	37.577	47	2	3,6	8,6	59,4	86,7	35	42	487
EC90J21C	106,3	80,3	68,6	764,1	146,1	35.590	43	2	3,7	8,6	70,2	102,4	35	42	544
EC90J316	117,9	90,3	75,2	573,1	109,6	63.854	55	3	5,2	12,6	48,6	70,9	35	42	540
EC90J318	137,8	105,2	89,2	764,1	146,1	59.636	50	3	5,3	12,7	68,9	100,4	35	42	625
EC90J31A	151,1	115,3	98,0	955,2	182,6	56.190	46	3	5,4	12,9	89,1	130,0	35	42	710
EC90J31C	159,3	120,7	103,3	1146,2	219,1	53.253	43	3	5,5	12,9	105,3	153,6	TBD	TBD	795
EC90J416	153,5	124,8	105,6	764,1	146,1	84.971	55	4	6,9	16,8	64,8	94,5	35	42	706
EC90J418	180,8	142,5	120,0	1018,8	194,8	79.344	50	4	7,1	17,0	91,8	133,9	35	42	819
EC90J41A	199,4	151,6	129,3	1273,5	243,5	74.771	46	4	7,3	17,1	118,8	173,3	35	42	932
EC90J41C	211,0	156,9	135,2	1528,3	292,2	70.890	43	4	7,4	17,3	140,4	204,8	TBD	TBD	1046

Note: For technical information on equipment with different fin pitch than the mentioned before, or different calculation conditions, please consult our selection software: https://unilab.roenest.com/ETS_Selector_Sales.zip

*Cooling capacity calculated with R404A refrigerant, only as a reference. The use of this refrigerant is prohibited in the territory of the European Union, by the latest revision of the regulation F-GAS 517/2014.

Fin pitch 10mm, Fan Ø= 500 mm, RPM = 1.300, R404A*

Model	Capacity (kW)			Surface	Internal Volume	Air Flow	Air Throw	Fans Data			Electrical defrost		Inlet	Outlet	Weight
	SC2	SC3	SC4	m²	dm³	m³/h	m	N°	kW	A	kW	A	mm	mm	kg
EC50T114	5,9	4,6	3,8	17,7	7,7	7.510	24	1	0,7	1,6	3,4	5,0	16	22	41
EC50T116	8,4	6,4	5,4	26,5	11,5	7.235	23	1	0,7	1,6	6,0	8,7	16	22	49
EC50T118	10,4	8,0	6,7	35,3	15,3	6.937	22	1	0,7	1,6	7,7	11,2	22	28	57
EC50T11C	13,5	10,0	8,4	53,0	23,0	6.350	19	1	0,7	1,7	11,9	17,4	28	35	73
EC50T214	11,9	9,2	7,7	35,3	15,3	14.994	24	2	1,3	3,2	6,8	9,9	22	28	74
EC50T216	17,0	13,0	11,0	53,0	23,0	14.425	23	2	1,4	3,3	11,9	17,4	28	35	90
EC50T218	21,0	16,1	13,5	70,3	29,9	13.828	22	2	1,4	3,3	15,3	22,3	35	42	106
EC50T21C	27,1	20,2	17,1	105,9	46,0	12.653	19	2	1,4	3,3	23,8	34,7	35	42	138
EC50T314	18,0	13,8	11,6	53,0	23,0	22.426	24	3	2,0	4,9	10,2	14,9	28	35	107
EC50T316	25,5	19,6	16,3	79,4	34,5	21.555	23	3	2,0	4,9	17,9	26,0	35	42	131
EC50T318	31,8	24,0	20,0	105,9	46,0	20.662	22	3	2,1	4,9	23,0	33,5	35	42	155
EC50T31C	40,7	30,5	25,7	158,9	69,0	18.896	19	3	2,1	5,0	35,7	52,1	35	42	203
EC50T414	23,9	18,4	15,2	70,3	29,9	29.822	24	4	2,7	6,5	13,6	19,8	35	42	140
EC50T416	34,0	25,5	21,4	105,9	46,0	28.638	23	4	2,7	6,5	23,8	34,7	35	42	172
EC50T418	42,1	31,4	26,4	140,7	59,8	27.452	22	4	2,8	6,6	30,6	44,6	35	42	204
EC50T41C	54,2	40,7	34,4	211,9	92,0	25.094	19	4	2,8	6,6	47,6	69,4	35	42	268
EC50T514	29,7	23,2	19,6	88,3	38,3	37.196	24	5	3,4	8,1	17,0	24,8	35	42	173
EC50T516	42,0	32,7	27,6	132,4	57,5	35.694	23	5	3,4	8,2	29,8	43,4	35	42	213
EC50T518	52,1	40,4	34,0	176,5	76,6	34.212	21	5	3,5	8,2	38,3	55,8	35	42	253
EC50T51C	67,6	50,8	42,8	264,8	115,0	31.256	19	5	3,6	8,3	59,5	86,8	35	42	333

Fin pitch 10mm, Fan Ø= 630 mm, RPM = 1.330, R404A*

Model	Capacity (kW)			Surface	Internal Volume	Air Flow	Air Throw	Fans Data			Electrical defrost		Inlet	Outlet	Weight
	SC2	SC3	SC4	m²	dm³	m³/h	m	N°	kW	A	kW	A	mm	mm	kg
EC63T114	10,5	7,5	7,0	32,8	8,1	16.807	56	1	2,4	4,5	6,3	9,2	28	35	104
EC63T116	15,2	10,7	10,0	49,3	12,1	16.394	55	1	2,4	4,6	9,5	13,8	35	42	120
EC63T118	19,4	13,4	12,7	65,7	16,1	15.989	53	1	2,4	4,6	13,7	19,9	35	42	136
EC63T11C	26,3	17,6	17,1	98,5	24,2	15.224	49	1	2,4	4,7	21,0	30,6	35	42	168
EC63T214	21,2	15,1	14,2	65,7	16,1	33.496	56	2	4,7	9,1	12,6	18,4	35	42	184
EC63T216	30,6	21,5	20,3	98,5	24,2	32.643	54	2	4,8	9,1	18,9	27,6	35	42	216
EC63T218	39,0	26,8	25,5	131,4	32,2	31.822	52	2	4,8	9,2	27,3	39,8	35	42	248
EC63T21C	52,8	35,1	33,7	197,1	48,3	30.295	49	2	4,9	9,3	42,0	61,3	35	42	312
EC63T314	31,9	22,6	20,5	98,5	24,2	50.101	56	3	7,1	13,6	18,9	27,6	35	42	264
EC63T316	46,0	32,2	29,6	147,8	36,2	48.791	54	3	7,2	13,7	28,4	41,4	35	42	312
EC63T318	58,5	40,4	37,7	197,1	48,3	47.545	52	3	7,2	13,8	41,0	59,7	35	42	360
EC63T31C	79,1	52,8	50,7	295,6	72,5	45.254	49	3	7,4	14,0	63,0	91,9	35	42	456
EC63T414	41,8	30,3	28,5	131,4	32,2	66.746	56	4	9,4	18,2	25,2	36,8	35	42	344
EC63T416	60,4	43,1	40,7	197,1	48,3	64.980	54	4	9,5	18,3	37,8	55,1	35	42	408
EC63T418	77,1	53,4	51,1	262,8	64,4	63.302	52	4	9,6	18,4	54,6	79,6	35	42	472
EC63T41C	104,8	68,5	67,5	394,2	96,6	60.226	49	4	9,8	18,7	84,0	122,5	35	42	600
EC63T514	52,2	38,2	35,4	164,2	40,3	83.398	56	5	11,8	22,7	31,5	46,0	35	42	424
EC63T516	75,3	54,3	50,9	246,4	60,4	81.184	54	5	11,9	22,9	47,3	68,9	35	42	504
EC63T518	95,8	68,0	64,6	328,5	80,5	79.085	52	5	12,1	23,1	68,3	99,6	TBD	TBD	584
EC63T51C	129,6	88,8	87,0	492,7	120,8	75.242	49	5	12,3	23,3	105,0	153,2	TBD	TBD	744

Fin pitch 10mm, Fan Ø= 800 mm, RPM = 900, R404A*

Model	Capacity (kW)			Surface	Internal Volume	Air Flow	Air Throw	Fans Data			Electrical defrost		Inlet	Outlet	Weight
	SC2	SC3	SC4	m²	dm³	m³/h	m	N°	kW	A	kW	A	mm	mm	kg
EC80T116	23,1	17,9	14,8	70,1	30,4	20.604	59	1	1,7	3,8	13,8	20,1	28	35	136
EC80T118	28,8	21,9	18,3	93,5	40,6	19.425	54	1	1,7	3,8	18,8	27,4	35	42	155
EC80T11A	33,1	24,9	20,9	116,8	50,7	18.323	50	1	1,8	3,9	25,0	36,5	35	42	174
EC80T11C	36,6	27,4	23,0	140,2	60,9	17.350	47	1	1,8	3,9	30,0	43,8	35	42	194
EC80T216	46,6	35,9	30,0	140,2	60,9	40.886	58	2	3,4	7,6	27,5	40,1	35	42	249
EC80T218	57,6	43,9	36,5	186,9	81,2	38.508	54	2	3,5	7,7	37,5	54,7	35	42	287
EC80T21A	66,4	49,9	42,1	233,7	101,4	36.348	50	2	3,5	7,7	50,0	72,9	35	42	326
EC80T21C	73,2	55,0	46,5	280,4	121,7	34.452	46	2	3,5	7,8	60,0	87,5	35	42	364
EC80T316	69,8	53,9	45,1	210,3	91,3	60.886	58	3	5,2	11,5	41,3	60,2	35	42	361
EC80T318	86,3	66,0	54,9	280,4	121,7	57.311	53	3	5,2	11,5	56,3	82,1	35	42	419
EC80T31A	99,5	74,5	62,6	350,5	152,2	54.129	49	3	5,3	11,6	75,0	109,4	35	42	477
EC80T31C	109,9	81,5	68,4	420,6	182,6	51.347	46	3	5,3	11,7	90,0	131,3	35	42	535
EC80T416	93,0	70,2	58,9	280,4	121,7	80.740	57	4	6,9	15,3	55,0	80,2	35	42	474
EC80T418	114,8	86,7	73,2	373,9	162,3	75.957	53	4	7,0	15,4	75,0	109,4	35	42	551
EC80T41A	132,1	100,3	84,7	467,3	202,9	71.762	49	4	7,0	15,5	100,0	145,9	35	42	628
EC80T41C	145,7	110,4	93,5	560,8	243,5	68.121	45	4	7,1	15,5	120,0	175,1	TBD	TBD	705

Fin pitch 10mm, Fan Ø= 900 mm, RPM =880, R404A*

Model	Capacity (kW)			Surface	Internal Volume	Air Flow	Air Throw	Fans Data			Electrical defrost		Inlet	Outlet	Weight
	SC2	SC3	SC4	m²	dm³	m³/h	m	N°	kW	A	kW	A	mm	mm	kg
EC90T116	27,3	21,0	17,6	84,1	36,5	23.675	64	1	1,6	4,1	16,2	23,6	35	42	176
EC90T118	34,0	25,7	21,4	112,2	48,7	22.545	60	1	1,7	4,1	23,0	33,5	35	42	201
EC90T11A	39,4	29,6	24,8	140,2	60,9	21.495	56	1	1,7	4,2	29,7	43,3	35	42	226
EC90T11C	43,7	32,6	27,3	168,2	73,0	20.563	53	1	1,7	4,2	35,1	51,2	35	42	251
EC90T216	54,9	42,2	35,5	168,2	73,0	47.014	63	2	3,3	8,2	32,4	47,3	35	42	321
EC90T218	68,1	51,9	43,4	224,3	97,4	44.755	59	2	3,4	8,3	45,9	67,0	35	42	371
EC90T21A	78,9	59,5	49,7	280,4	121,7	42.692	55	2	3,4	8,4	59,4	86,7	35	42	420
EC90T21C	87,5	65,0	54,7	336,5	146,1	40.868	52	2	3,5	8,5	70,2	102,4	35	42	470
EC90T316	81,7	63,3	53,4	252,4	109,6	70.094	62	3	4,9	12,3	48,6	70,9	35	42	466
EC90T318	101,4	78,1	65,3	336,2	145,2	66.709	58	3	5,1	12,5	68,9	100,4	35	42	541
EC90T31A	117,5	89,5	74,8	420,0	180,8	63.657	55	3	5,2	12,6	89,1	130,0	35	42	615
EC90T31C	130,8	97,6	82,2	504,7	219,1	60.966	52	3	5,3	12,7	105,3	153,6	35	42	690
EC90T416	109,6	81,3	68,0	336,5	146,1	93.040	62	4	6,6	16,5	64,8	94,5	35	42	611
EC90T418	135,9	101,0	84,8	448,6	194,8	88.527	58	4	6,7	16,6	91,8	133,9	35	42	710
EC90T41A	157,3	116,7	98,7	560,8	243,5	84.509	55	4	6,9	16,8	118,8	173,3	35	42	810
EC90T41C	174,4	130,3	109,9	673,0	292,2	80.973	51	4	7,0	16,9	140,4	204,8	TBD	TBD	909

Note: For technical information on equipment with different fin pitch than the mentioned before, or different calculation conditions, please consult our selection software: https://unilab.roenest.com/ETS_Selector_Sales.zip

*Cooling capacity calculated with R404A refrigerant, only as a reference. The use of this refrigerant is prohibited in the territory of the European Union, by the latest revision of the regulation F-GAS 517/2014.

2.4.3 Brine coolers

Fin pitch 4mm, Fan Ø= 500 mm, RPM = 1.300

Model	Capacity (kW)	Surface	Internal Volume	Fluid Flow	Air Flow	Air Throw	Fans Data			Electrical defrost		Manifolds**	Weight
	SC*	m²	dm³	m³/h	m³/h	m	N°	kW	A	kW	A	mm	kg
BC50J114	8,5	40,1	7,7	2,0	7.059	22	1	0,7	1,6	3,4	5,0	18	53
BC50J116	8,9	60,1	11,5	2,1	6.578	20	1	0,7	1,6	6,0	8,7	28	63
BC50J118	15,3	80,2	15,3	3,6	6.119	18	1	0,7	1,7	7,7	11,2	22	73
BC50J11C	17,8	120,3	23,0	4,2	5.238	15	1	0,8	1,7	11,9	17,4	28	93
BC50J214	11,3	80,2	15,3	2,7	14.118	22	2	1,4	3,3	6,8	9,9	28	94
BC50J216	27,1	120,3	23,0	6,4	13.156	20	2	1,4	3,3	11,9	17,4	28	114
BC50J218	30,2	160,4	30,7	7,1	12.237	18	2	1,4	3,3	15,3	22,3	35	134
BC50J21C	35,3	240,6	46,0	8,3	10.475	15	2	1,5	3,4	23,8	34,7	35	174
BC50J314	29,3	120,1	22,4	6,9	21.177	22	3	2,1	4,9	10,2	14,9	28	135
BC50J316	36,6	180,4	34,5	8,6	19.733	20	3	2,1	4,9	17,9	26,0	35	165
BC50J318	27,2	240,2	44,8	6,4	18.355	18	3	2,2	5,0	23,0	33,5	42	195
BC50J31C	52,8	360,8	69,0	12,4	15.712	15	3	2,3	5,1	35,7	52,1	42	255
BC50J414	17,9	160,4	30,7	4,2	28.236	22	4	2,7	6,5	13,6	19,8	35	176
BC50J416	24,9	240,6	46,0	5,9	26.311	20	4	2,8	6,6	23,8	34,7	42	216
BC50J418	31,2	320,7	61,3	7,3	24.473	18	4	2,9	6,7	30,6	44,6	48	256
BC50J41C	70,2	481,1	92,0	16,5	20.949	15	4	3,0	6,9	47,6	69,4	48	336
BC50J514	48,6	200,5	38,3	11,4	35.295	22	5	3,4	8,2	17,0	24,8	35	217
BC50J516	62,5	300,7	57,5	14,7	32.888	20	5	3,5	8,2	29,8	43,4	42	267
BC50J518	68,9	400,9	76,6	16,2	30.592	18	5	3,6	8,3	38,3	55,8	48	317
BC50J51C	51,3	601,4	115,0	12,1	26.187	15	5	3,8	8,6	59,5	86,8	54	417

Fin pitch 4mm, Fan Ø= 630 mm, RPM = 1.330

Model	Capacity (kW)	Surface	Internal Volume	Fluid Flow	Air Flow	Air Throw	Fans Data			Electrical defrost		Manifolds**	Weight
	SC*	m²	dm³	m³/h	m³/h	m	N°	kW	A	kW	A	mm	kg
BC63J114	8,8	116,2	14,4	2,1	16.009	53	1	2,4	4,6	6,3	9,2	28	119
BC63J116	21,7	174,5	22,4	5,1	15.319	50	1	2,4	4,7	9,5	13,8	28	138
BC63J118	25,9	232,4	28,9	6,1	14.680	47	1	2,5	4,7	13,7	19,9	28	156
BC63J214	31,7	232,4	28,9	7,5	32.018	53	2	4,8	9,2	12,6	18,4	28	211
BC63J216	42,5	349,0	44,9	10,0	30.637	50	2	4,9	9,3	18,9	27,6	35	248
BC63J218	60,6	465,5	60,1	14,2	29.359	47	2	4,9	9,4	27,3	39,8	42	285
BC63J314	51,8	348,6	43,3	12,2	48.027	53	3	7,2	13,8	18,9	27,6	35	303
BC63J316	70,4	523,9	68,5	16,6	45.955	50	3	7,3	14,0	28,4	41,4	42	358
BC63J318	84,4	698,2	90,2	19,9	44.038	47	3	7,4	14,1	41,0	59,7	48	413
BC63J414	56,0	465,7	60,9	13,2	64.036	53	4	9,6	18,4	25,2	36,8	42	395
BC63J416	75,2	698,1	89,8	17,7	61.273	50	4	9,8	18,6	37,8	55,1	54	469
BC63J418	83,3	931,4	121,9	19,6	58.717	47	4	9,9	18,7	54,6	79,6	67	542
BC63J514	85,0	582,1	76,2	20,0	80.045	53	5	12,0	23,0	31,5	46,0	42	487
BC63J516	116,5	872,6	112,2	27,4	76.591	50	5	12,2	23,3	47,3	68,9	54	579
BC63J518	140,5	1164,2	152,3	33,0	73.396	47	5	12,3	23,4	68,3	99,6	67	671

Fin pitch 4mm, Fan Ø= 800 mm, RPM = 900

Model	Capacity (kW)	Surface	Internal Volume	Fluid Flow	Air Flow	Air Throw	Fans Data			Electrical defrost		Manifolds**	Weight
	SC*	m²	dm³	m³/h	m³/h	m	N°	kW	A	kW	A	mm	kg
BC80J116	17,5	251,3	31,5	4,1	18.656	51	1	1,7	3,9	13,8	20,1	35	191
BC80J118	40,3	335,3	43,0	9,5	17.254	46	1	1,8	3,9	18,8	27,4	35	217
BC80J216	64,3	503,1	64,9	15,1	37.311	51	2	3,5	7,7	27,5	40,1	42	344
BC80J218	74,5	671,1	87,8	17,5	34.508	46	2	3,5	7,8	37,5	54,7	48	396
BC80J316	38,4	754,6	97,4	9,0	55.966	51	3	5,2	11,6	41,3	60,2	54	496
BC80J318	119,7	1005,9	128,9	28,2	51.761	46	3	5,3	11,6	56,3	82,1	54	574
BC80J416	119,0	1006,1	129,8	28,0	74.621	51	4	7,0	15,4	55,0	80,2	54	648
BC80J418	137,5	1342,2	175,6	32,4	69.015	46	4	7,1	15,5	75,0	109,4	67	752

Fin pitch 4mm, Fan Ø= 900 mm, RPM =880

Model	Capacity (kW)	Surface	Internal Volume	Fluid Flow	Air Flow	Air Throw	Fans Data			Electrical defrost		Manifolds**	Weight
	SC*	m²	dm³	m³/h	m³/h	m	N°	kW	A	kW	A	mm	kg
BC90J116	37,3	307,1	39,7	8,8	21.958	57	1	1,7	4,2	16,2	23,6	35	236
BC90J118	47,5	409,7	53,6	11,2	20.618	53	1	1,7	4,2	23,0	33,5	35	268
BC90J216	80,5	613,9	78,3	18,9	43.916	57	2	3,4	8,3	32,4	47,3	42	425
BC90J218	94,2	819,3	107,2	22,2	41.235	53	2	3,5	8,4	45,9	67,0	48	489
BC90J316	46,9	921,7	120,6	11,0	65.874	57	3	5,1	12,5	48,6	70,9	67	613
BC90J318	58,7	1229,0	160,8	13,8	61.852	53	3	5,2	12,7	68,9	100,4	67	710
BC90J416	149,7	1229,0	160,8	35,2	87.831	57	4	6,8	16,7	64,8	94,5	67	802
BC90J418	175,9	1638,6	214,4	41,4	82.469	53	4	7,0	16,9	91,8	133,9	67	931

*Conditions: Air Inlet Temperature 2°C, Fluid Inlet Temperature -8°C, Fluid Outlet Temperature -4°C, Ethylene Glycol 35%.
** Sections size can change drastically by fluid used and boundary conditions

Note: For technical information on equipment with different fin pitch than the mentioned before, or different calculation conditions, please consult our selection software: https://unilab.roenest.com/ETS_Selector_Sales.zip

Fin pitch 10mm, Fan Ø= 500 mm, RPM = 1.300

Model	Capacity (kW)	Surface	Internal Volume	Fluid Flow	Air Flow	Air Throw	Fans Data			Electrical defrost		Manifolds**	Weight
	SC*	m²	dm³	m³/h	m³/h	m	N°	kW	A	kW	A	mm	kg
BC50T114	5,0	17,7	7,7	1,2	7.423	24	1	0,7	1,6	3,4	5,0	18	41
BC50T116	8,7	26,5	11,5	2,1	7.121	23	1	0,7	1,6	6,0	8,7	18	49
BC50T118	11,3	35,2	14,9	2,7	6.823	21	1	0,7	1,6	7,7	11,2	18	57
BC50T11C	12,9	52,8	22,4	3,0	6.227	19	1	0,7	1,7	11,9	17,4	22	73
BC50T214	8,8	35,3	15,3	2,1	14.846	24	2	1,3	3,2	6,8	9,9	22	74
BC50T216	17,2	53,0	23,0	4,1	14.241	23	2	1,4	3,3	11,9	17,4	28	90
BC50T218	16,7	70,3	29,9	3,9	13.645	21	2	1,4	3,3	15,3	22,3	28	106
BC50T21C	28,9	105,8	45,6	6,8	12.453	19	2	1,4	3,3	23,8	34,7	35	138
BC50T314	18,4	53,0	23,0	4,3	22.269	24	3	2,0	4,9	10,2	14,9	28	107
BC50T316	25,7	79,4	34,5	6,0	21.361	23	3	2,1	4,9	17,9	26,0	28	131
BC50T318	23,4	105,9	46,0	5,5	20.468	21	3	2,1	4,9	23,0	33,5	35	155
BC50T31C	45,0	158,9	69,0	10,6	18.679	19	3	2,1	5,0	35,7	52,1	35	203
BC50T414	24,6	70,3	29,9	5,8	29.692	24	4	2,7	6,5	13,6	19,8	28	140
BC50T416	34,2	105,9	46,0	8,0	28.481	23	4	2,7	6,5	23,8	34,7	35	172
BC50T418	29,0	140,7	59,8	6,8	27.290	21	4	2,8	6,6	30,6	44,6	42	204
BC50T41C	40,2	211,9	92,0	9,5	24.905	19	4	2,9	6,6	47,6	69,4	48	268
BC50T514	16,8	88,3	38,3	4,0	37.115	24	5	3,4	8,1	17,0	24,8	35	173
BC50T516	24,5	132,4	57,5	5,8	35.601	23	5	3,4	8,2	29,8	43,4	42	213
BC50T518	31,7	176,5	76,6	7,5	34.112	21	5	3,5	8,2	38,3	55,8	48	253
BC50T51C	74,8	264,8	115,0	17,6	31.132	19	5	3,6	8,3	59,5	86,8	48	333

Fin pitch 10mm, Fan Ø= 630 mm, RPM = 1.330

Model	Capacity (kW)	Surface	Internal Volume	Fluid Flow	Air Flow	Air Throw	Fans Data			Electrical defrost		Manifolds**	Weight
	SC*	m²	dm³	m³/h	m³/h	m	N°	kW	A	kW	A	mm	kg
BC63T114	6,5	48,8	14,4	1,5	16.592	55	1	2,4	4,6	6,3	9,2	28	119
BC63T116	15,1	73,3	22,0	3,6	16.121	53	1	2,4	4,6	9,5	13,8	22	138
BC63T118	13,4	97,6	28,9	3,2	15.675	51	1	2,4	4,6	13,7	19,9	28	156
BC63T214	21,8	97,6	28,9	5,1	33.184	55	2	4,7	9,1	12,6	18,4	28	211
BC63T216	31,4	146,4	43,3	7,4	32.242	53	2	4,8	9,2	18,9	27,6	28	248
BC63T218	39,9	195,2	57,7	9,4	31.349	51	2	4,8	9,2	27,3	39,8	35	285
BC63T314	32,6	146,4	43,3	7,7	49.775	55	3	7,1	13,7	18,9	27,6	28	303
BC63T316	47,0	220,3	67,3	11,0	48.362	53	3	7,2	13,8	28,4	41,4	35	358
BC63T318	59,6	294,2	91,4	14,0	47.023	51	3	7,3	13,9	41,0	59,7	42	413
BC63T414	43,4	195,2	57,7	10,2	66.367	55	4	9,5	18,2	25,2	36,8	35	395
BC63T416	62,4	294,2	91,4	14,7	64.483	53	4	9,6	18,4	37,8	55,1	42	469
BC63T418	79,3	391,8	120,3	18,7	62.697	51	4	9,7	18,5	54,6	79,6	48	542
BC63T514	42,0	245,1	76,2	9,9	82.959	55	5	11,8	22,8	31,5	46,0	42	487
BC63T516	36,3	367,2	112,2	8,5	80.603	53	5	12,0	22,9	47,3	68,9	54	579
BC63T518	47,4	490,3	152,3	11,1	78.372	51	5	12,1	23,1	68,3	99,6	67	671

Fin pitch 10mm, Fan Ø= 800 mm, RPM = 900

Model	Capacity (kW)	Surface	Internal Volume	Fluid Flow	Air Flow	Air Throw	Fans Data			Electrical defrost		Manifolds**	Weight
	SC*	m²	dm³	m³/h	m³/h	m	N°	kW	A	kW	A	mm	kg
BC80T116	13,5	105,6	31,5	3,2	20.589	59	1	1,7	3,8	13,8	20,1	35	153
BC80T118	26,7	141,0	43,0	6,3	19.520	55	1	1,7	3,8	18,8	27,4	28	175
BC80T216	42,5	210,9	62,0	10,0	41.177	59	2	3,4	7,6	27,5	40,1	35	280
BC80T218	52,9	282,1	85,9	12,4	39.039	55	2	3,5	7,7	37,5	54,7	42	324
BC80T316	58,7	317,9	98,8	13,8	61.765	59	3	5,1	11,4	41,3	60,2	48	408
BC80T318	85,9	423,9	131,7	20,2	58.558	55	3	5,2	11,5	56,3	82,1	48	473
BC80T416	40,6	423,4	129,8	9,5	82.354	59	4	6,8	15,2	55,0	80,2	54	535
BC80T418	52,3	565,2	175,6	12,3	78.077	55	4	6,9	15,4	75,0	109,4	67	622

Fin pitch 10mm, Fan Ø= 900 mm, RPM =880

Model	Capacity (kW)	Surface	Internal Volume	Fluid Flow	Air Flow	Air Throw	Fans Data			Electrical defrost		Manifolds**	Weight
	SC*	m²	dm³	m³/h	m³/h	m	N°	kW	A	kW	A	mm	kg
BC90T116	17,1	129,2	39,7	4,0	23.777	64	1	1,6	4,1	16,2	23,6	35	200
BC90T118	33,0	172,0	51,5	7,8	22.769	60	1	1,7	4,1	23,0	33,5	35	228
BC90T216	52,3	257,9	77,3	12,3	47.554	64	2	3,2	8,2	32,4	47,3	42	365
BC90T218	65,5	343,9	103,1	15,4	45.537	60	2	3,3	8,3	45,9	67,0	42	422
BC90T316	73,8	388,2	120,6	17,4	71.331	64	3	4,8	12,3	48,6	70,9	48	530
BC90T318	92,2	516,7	157,7	21,7	68.306	60	3	5,0	12,4	68,9	100,4	54	615
BC90T416	49,1	517,5	160,8	11,6	95.108	64	4	6,5	16,4	64,8	94,5	67	695
BC90T418	63,0	690,1	214,4	14,8	91.074	60	4	6,7	16,6	91,8	133,9	67	808

*Conditions: Air Inlet Temperature 2°C, Fluid Inlet Temperature -8°C, Fluid Outlet Temperature -4°C, Ethylene Glycol 35%.

** Sections size can change drastically by fluid used and boundary conditions

Note: For technical information on equipment with different fin pitch than the mentioned before, or different calculation conditions, please consult our selection software: https://unilab.roenest.com/ETS_Selector_Sales.zip

2.5 Heat exchanger information

The heat exchanger coils are manufactured according to state of art and to be incorporated to a product submitted to Machinery Directive 2006/42/EC.

- The heat exchanger is designed and manufactured under the EN-14276-2 norm in combination with section 5.2.2.2 of the EN-378-2 norm.
- The heat exchanger coil must be used correctly and for the purpose for which it has been designed.
- Care should be taken to avoid damage due to sharp edges, and excessive vibration should be avoided.
- The heat exchanger coil must be used within the operating limits of PS (maximum allowable pressure) and TS (maximum allowable temperature) as indicated on the unit's nameplate.
- Every single coil is tested under its corresponding PT (1,43 times its PS).
- We regularly carry out some bursting tests up to 3 times its PS.
- The heat exchanger will be protected by the regulatory safety elements in the design of an installation
- Periodic maintenance must be carried out on the installation to ensure correct working conditions, since cumulative dirt or possible leaks will lead to loss efficiency.
- Heat exchanger coils are fragile and must only be handled by a competent engineer, who should be suitably protected against the sharp edges of the coil (appropriate personnel protective equipment).

3. INSTALLATION

Installation responsibilities

Generally, the contractor must do the following when installing the unit:

1. Install the units on a flat surface, level (within 1/4" [6 mm] across the length of the unit), and strong enough to support unit loading.
2. Install any optional sensors and make electrical connections when needed.
3. Connect the unit to the system.
4. Provide and install field wiring.
5. Start the unit under the supervision of a qualified service technician.

Storage

If the unit is stored for a long period of time prior to installation, store the unit in a safe place sheltered from bad weat her.

Bedplate

Provide rigid, non-warping mounting pads for concrete foundation of sufficient strength and mass to support the unit's operating weight (that is, including completed piping, and full operating char ges of refrigerant, oil, and wat er). After it is in place, the unit must be levelled within 1/4" (6 mm) over its length and width. Use shims if necessary.

The manufacturer is not responsible for equipment problems resulting from an improperly designed or constructed foundation.

The unit must be positioned so that the airflow through the condensation coils is not hindered by any obstacle. The condensation coils must be protected from side winds when their speed exceeds 16 km/h.

Never install, temporally or premanently, objects over the unit (tarp or roof) over the unit, because recycling of hot air would reduce the capacity of the condensation coils. Discharged air from the fans must not be obstructed.

Releasing the Nitrogen Holding Charge

The nitrogen holding charge can be released into the atmosphere.

When releasing nitrogen holding charge, ventilate the room. Avoid breathing in the nitrogen.

Isolation

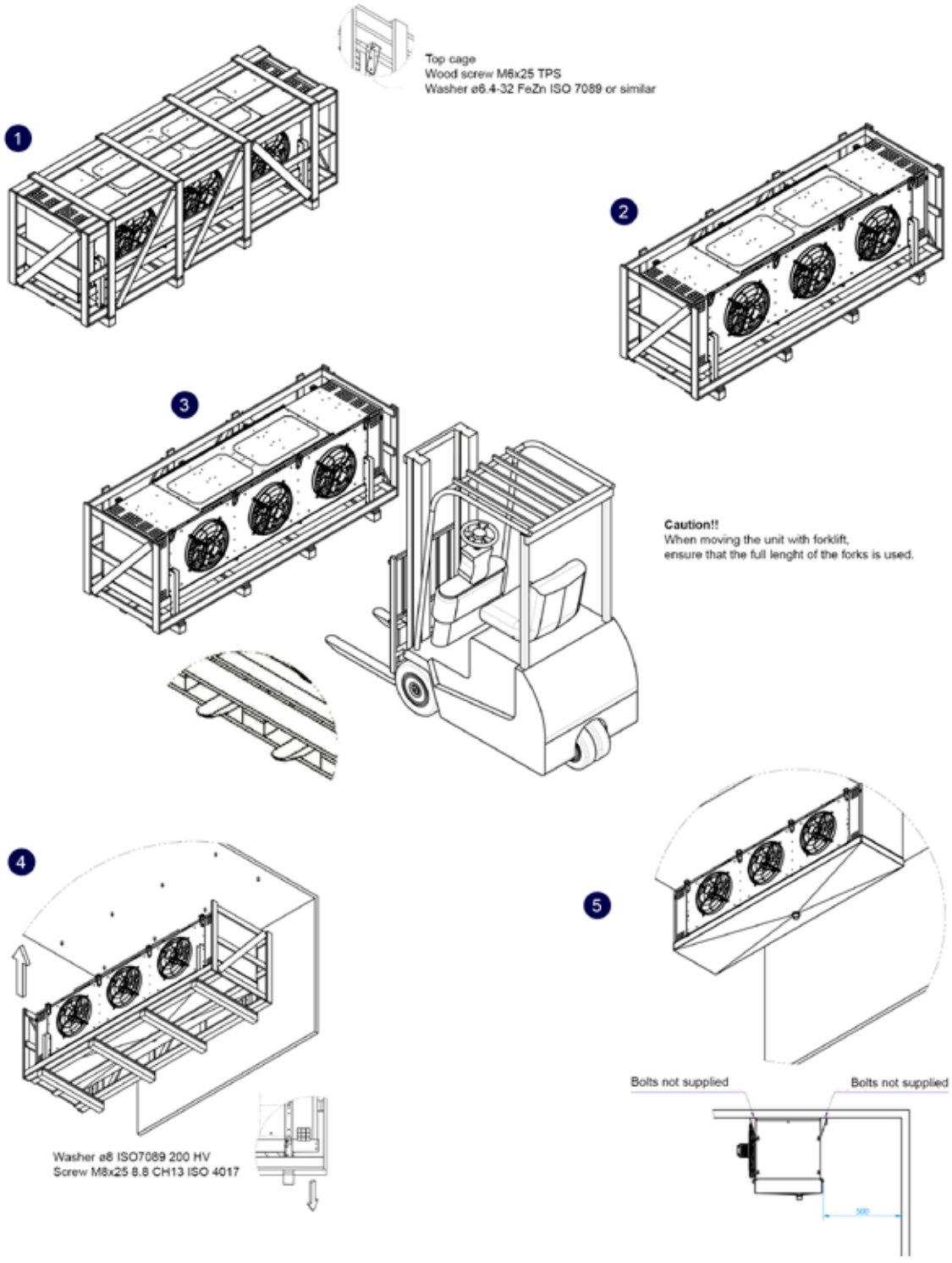
The most effective form of isolation is to locate the unit away from any sound-sensitive area. Structurally transmitted sound can be reduced by elastomeric vibration eliminators. Consult an acoustical engineer in critical sound applications. For maximum isolation effect, isolate electrical conduit. Wall sleeves and rubber-isolated piping hangers can be used to reduce the sound transmitted through refrigerant piping. To reduce the sound transmitted through electrical conduit, use flexible electrical conduit. State and local codes on sound emissions should always be considered.

Special Lifting and Moving Instructions. Ø500mm / Ø630mm

The following instructions comprehension is a must for transporting, manipulating and installing the unit:

1. Remove screws and washers from top & remove straps
2. Remove roof and side cage coil ready to install
3. Use forklift or scaffold for to lift coil
4. After having secured and fix the cooler, remove screw m8x25 from all legs. the forks may be lowered with cage and legs.
5. Caution!! Provide sufficient space for air intake.

NOTE: All lifting procedures must be carefully carried out by qualified personnel, ensuring safety at all times.

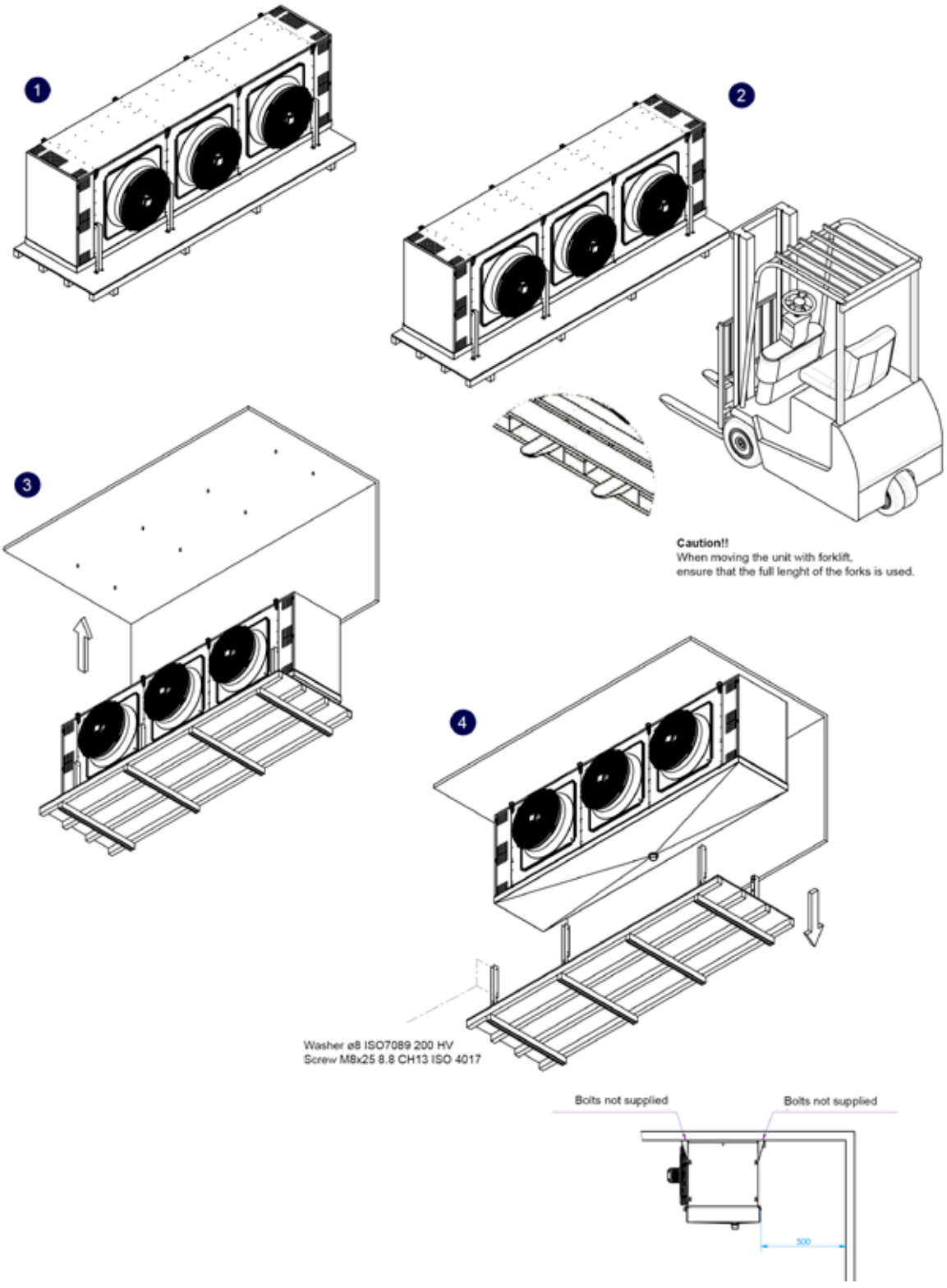


Special Lifting and Moving Instructions. Ø800mm / Ø900mm

The following instructions comprehension is a must for transporting, manipulating and installing the unit:

1. Remove metallic strapping and wooden profile from roof and the coil will be ready to install
2. Use forklift or scaffold for to lift coil
3. After having secured and fix the cooler, remove screw m8x25 from all legs. the forks may be lowered with pallet and legs.
4. Provide sufficient space for air intake

NOTE: All lifting procedures must be carefully carried out by qualified personnel, ensuring safety at all times.



3.1 Installation advices

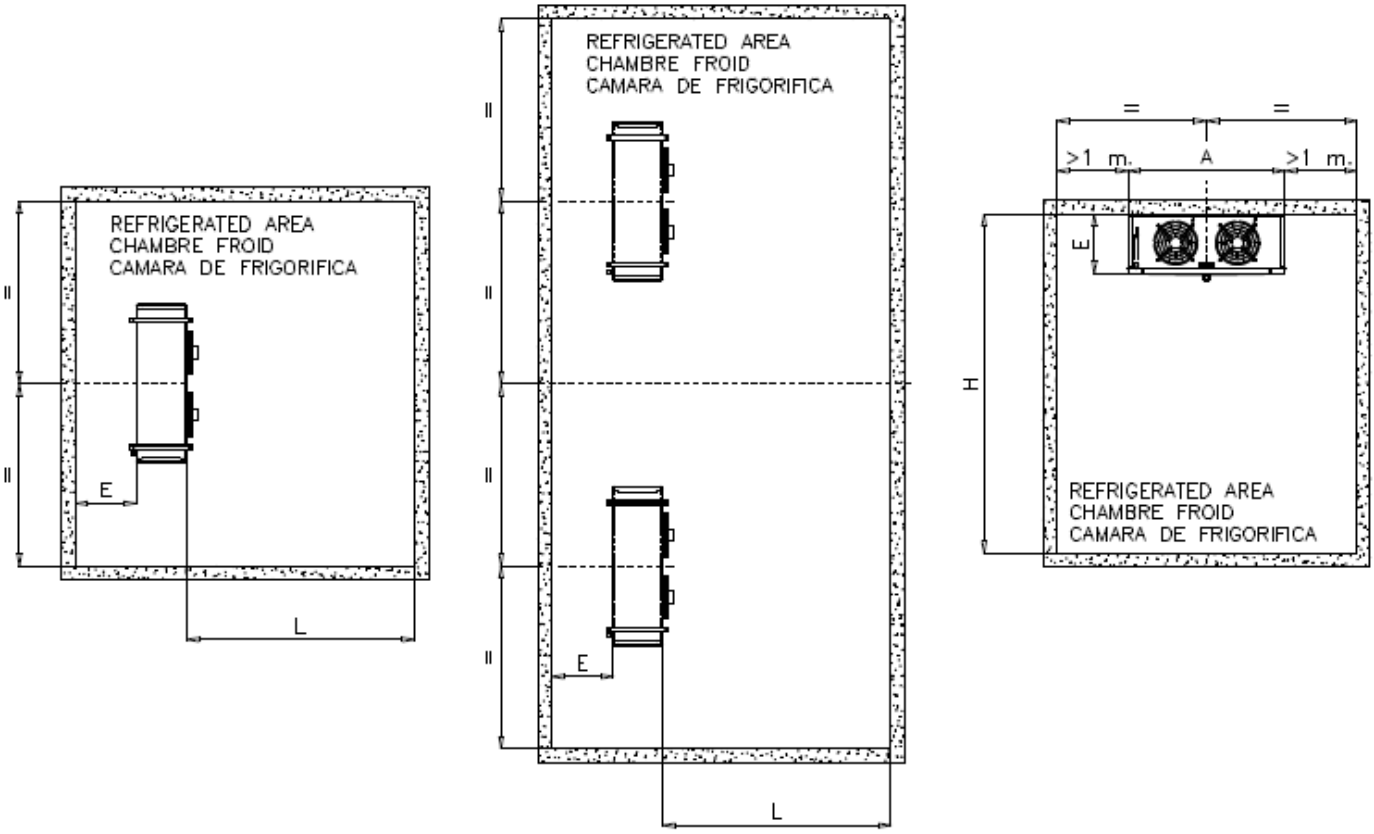
3.1.1 Location

Provide enough space around the unit to allow the installation and maintenance personnel unrestricted access to all service points. Unobstructed flow of unit air is essential to maintain the capacity and operating efficiency. When determining unit placement, give careful consideration to ensuring a sufficient flow of air across the unit heat-transfer surface.

Recommended minimum clearances for installation.

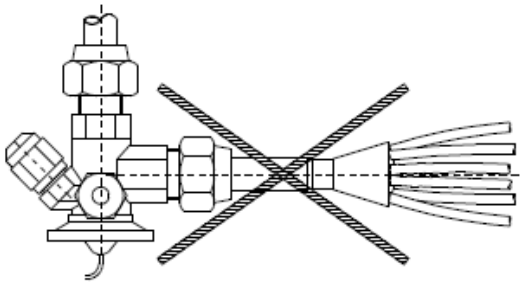
NOTICE: If the unit has electric defrost, >1 m will be > A, in order to allows the change of heaters.

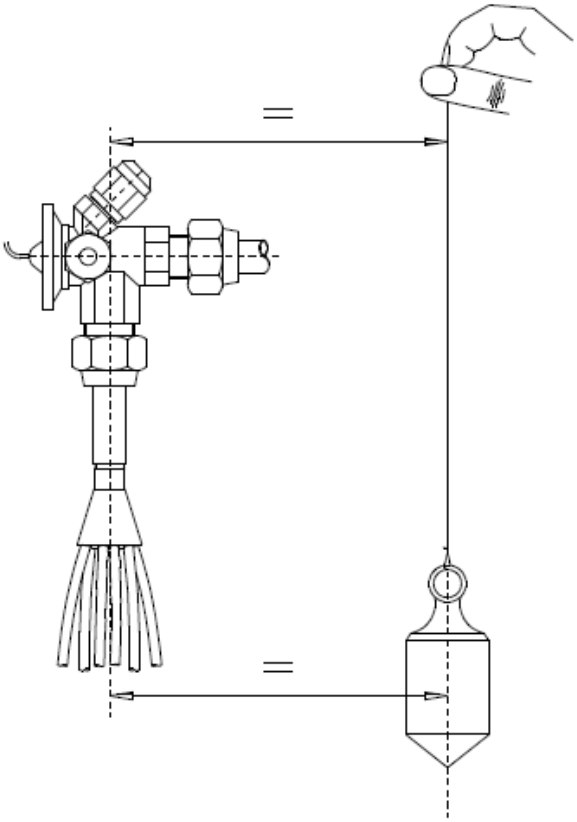
H> L/4



3.1.2 Thermostatic valve assembly

The expansion valve must be installed in the liquid line before the evaporator, with its bulb close to the suction line as close as possible to the evaporator.

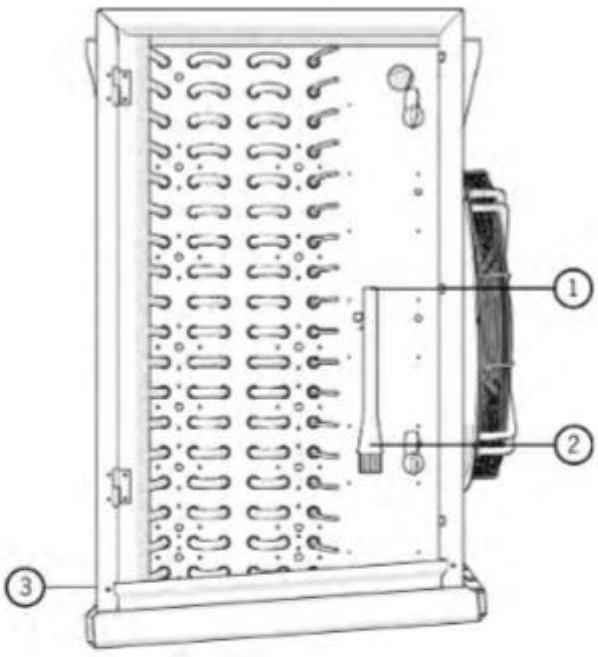




3.2 Operating modes

3.2.1 Direct expansion operating principle

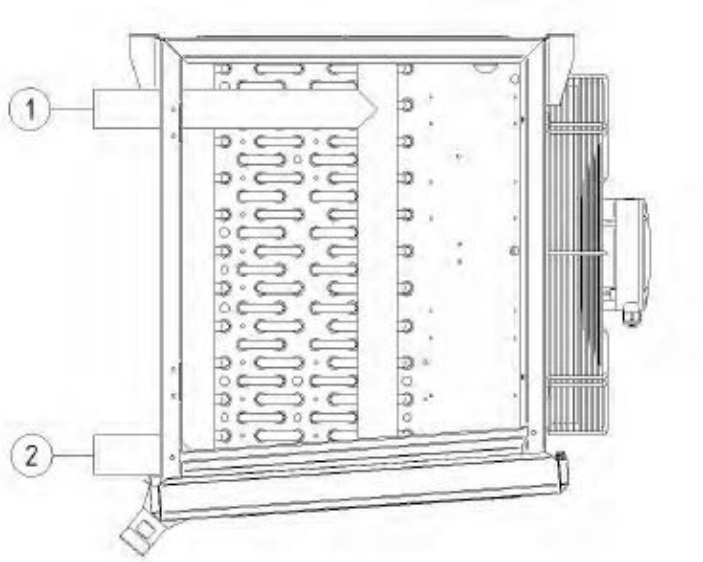
With direct expansion, the liquid working fluid evaporates in the evaporator. The working fluid enters the evaporator via the expansion valve (1) and is evenly distributed in the pipingsystem through a distributor (2) (if applicable). At the same time, the working fluid absorbsheat and evaporates. The compressor sucks in the working fluid gas; the working fluid leavesthe evaporator via the outlet (3). The working fluid is compressed under high pressure in thecompressor, thus raising the temperature level. The working fluid is liquefied again in the condenser. During this process, it releases the absorbed evaporation and compressor heat again.The expansion valve expands the working fluid, and the cycle starts again from the beginning.



	Description
1	Inlet of refrigerant via expansion valve
2	Distributor
3	Outlet of refrigerant

3.2.2 Pump (forced circulation) operating principle

With pump operating principle, the liquid working fluid absorbs heat as it passes through the brine cooler without changing its state of matter. It leaves the unit as liquid working fluid.



	Description
1	Inlet of cold brine (brine cooler) / refrigerant (evaporator)
2	Outlet of cold brine (brine cooler) / refrigerant (evaporator)

4. ELECTRICAL CONNECTIONS

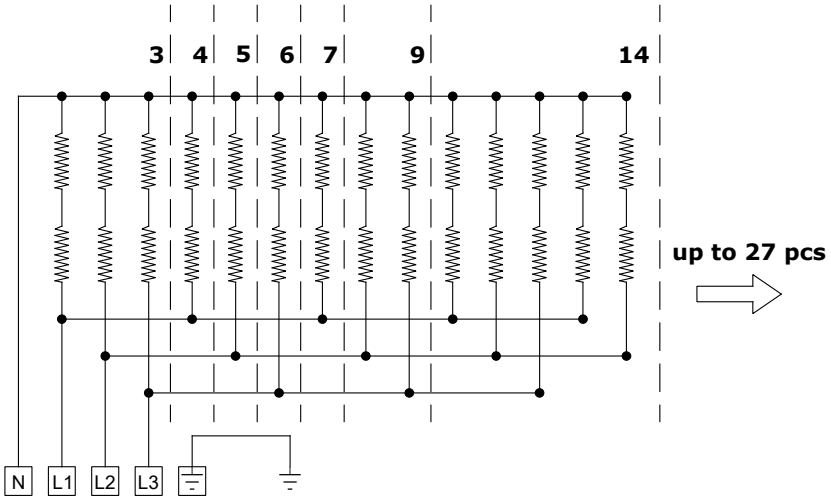
4.1 Electrical connections performed by the installer

All wiring must comply with local codes.
Specific electrical schematics and connection diagrams are shipped with the unit.

To connect fans, follow attached fan instructions and consider:
To avoid corrosion and overheating at terminal connections, use copper conductors only. Failure to do so may result in damage to the equipment. Do not allow conduit to interfere with other compo nents, structural members or equipment. Control voltage (10 V) wiring in conduit must be separate from conduit carrying low voltage (<30 V) wiring. To prevent control malfunctions, do not run low voltage wiring (<30 V) in conduit with conductors carrying more than 30 V.

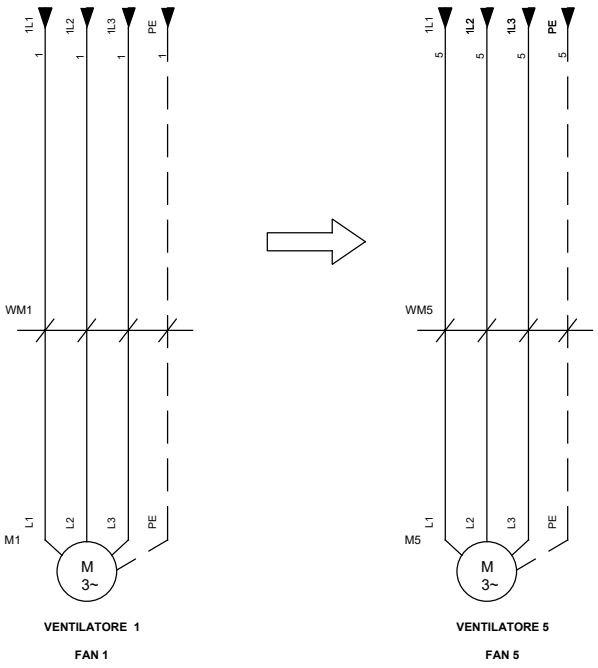
4.2 Electrical heaters connections · 400 V / 3 PH / 50 HZ

(From 3 up to 27 heaters)



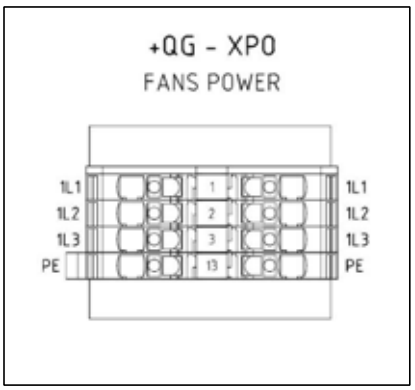
4.3 Fan electrical connections · 400 V / 3 PH / 50 HZ

(From 1 fan to 5 fans)

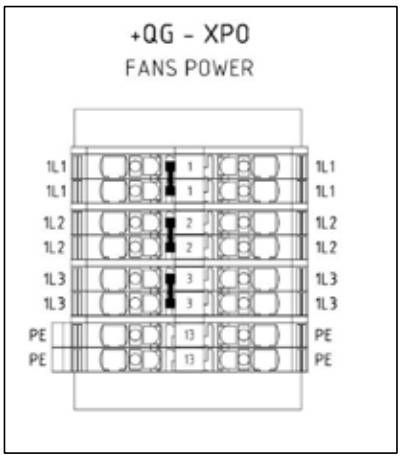


4.4 Standard electrical boxes diagrams · AC Fans

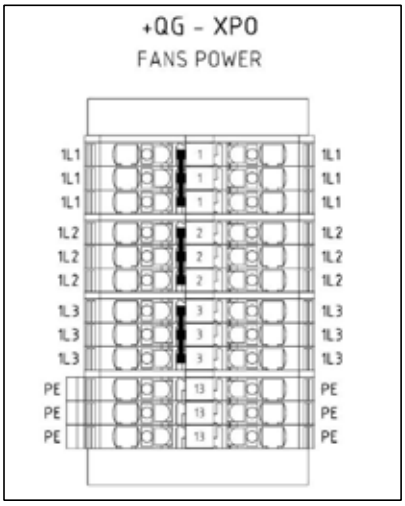
(From 1 fan to 5 fans)



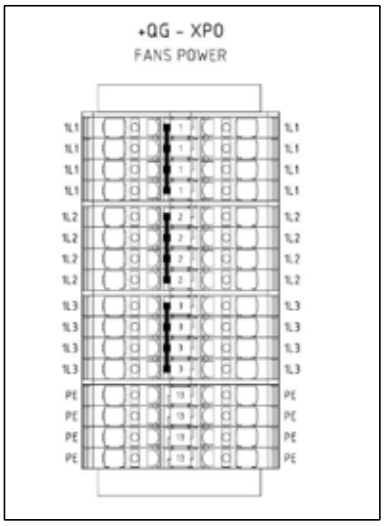
1 FAN



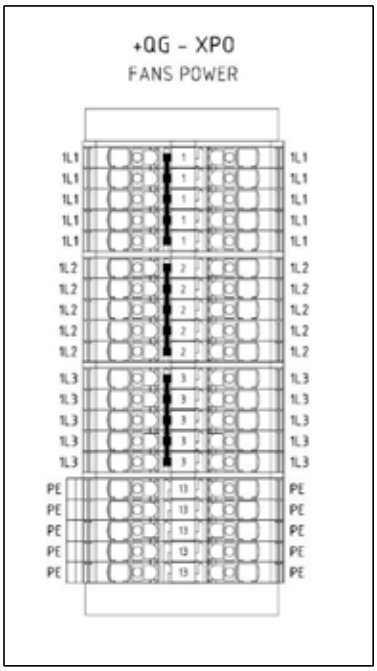
2 FAN



3 FAN



4 FAN



5 FAN

4.5 Connecting the unit to the system

Danger of injuries and damage to property with escaping refrigerant!
Incorrect installation risks working fluid escaping when the unit is operated, causing injuries or damage to property.
Prevent working fluid from escaping from the unit into the environment.

- Secure all working fluid carrying lines against mechanical damage.
- In areas that are used for internal traffic, only lay the pipelines to and from the unit with connections and fittings that cannot be removed.

Ensure that the on site connections do not exercise any forces upon the distribution and header points.
This can cause leaks on the working fluid connection points of the unit and on connection points of the on-site pipe-laying.

Danger of injuries and damage to property!
Improper connection to the the system causes hazards:

- Leaks result in escaping refrigerant.
- Soldering and welding work on pressurised parts can result in fires or explosions.
- Ensure that stresses and vibrations from the system are not passed on to the unit.
- Only lay working fluid side connections stress free! The on site pipeline system must be braced be fore connecting to the unit!
- Soldering and welding work is only permitted on unpressurised units!
- Low permissible water content in a refrigeration system! Ensure that the unit's level of dryness corresponds with the low permissible water content in a refrigeration system!
- The use of open fire at the installation site is forbidden. Fire extinguishers and extinguishing agents used to protect the equipment and the operating staff must comply with the requirements of EN 378-3.
- Install the pipes in acc. with EN 378-1 and EN 378-3. Ensure here: Avoid transmitting vibrations to the unit via conduits or pipes. If necessary, use vibration dampers.

5. START UP

5.1 Pre-start checks

When installation is complete, but prior to putting the unit into service, the fallowing pre-start procedures must be reviewed and verified:

- Inspect all wiring connections to be sure they are clean and tight.
- Disconnect all electric power, including remote disconnects, before servicing. Failure to disconnect power before servicing can cause severe personal injury or death.

5.2 Unit Voltage Imbalance

Excessive voltage imbalance between the phases of a threephase system can cause motors to overheat and eventually fail. The maximum allowable imbalance is 2%.
Voltage imbalance is determined using the fallowing calculations:

- % Imbalance = [(Vx -V ave) x 100]/V ave
- V ave= (Vl + V2 + V3)/3
- Vx = phase with the greatest difference from V ave (without regard to the sign)

For example, if the three measured voltages are 391, 407, and 402 volts, the average would be:

- (391+407+402)/3 = 400

The percentage of the imbalance is then:

- [100(400-391)]/400 = 2.25%
- This exceeds the maximum allowable (2%) by 0.25%

6. MAINTENANCE

6.1 Coil Maintenance

Cleaning four times a year may be required or even more if conditions are very poor or if corrosion damage begins to occur. To clean the coils, use a soft brush and a sprayer (garden pumpup type). A high-quality detergent is recommended for both standard and coils with aluminum coating. Follow the directions included with the detergent.

6.2 Caution!

If the detergent used is strongly alkaline (pH greater than 8.5), an inhibitor must be added. Rinse the coil thoroughly after cleaning. Failure to completely flush the detergent from the coil can result in accelerated coil corrosion. Blow excess water from the coil using low-pressure air. The water used to clean the coils should always be clean, fresh water (it should not be brackish, or contain excessive dissolved minerals, chlorine, or water softener salts).

6.3 Safety recommendations

To avoid accidents and damage, the following recommendations should be observed during maintenance and service visits.

- Disconnect the main supply before any servicing on the unit.
- Service work on the refrigeration system and the electrical system should be carried out only by qualified and experienced personnel.

6.4 Maintenance contract

It is strongly recommended that you sign a maintenance contract with your local Service Agency. This contract provides regular maintenance of your installation by a specialist in our equipment. Regular maintenance ensures that any malfunction is detected and corrected in good time and minimizes the possibility that serious damage will occur. Finally, regular maintenance ensures the maximum operating life of your equipment. We would remind you that failure to respect these installation and maintenance instructions may result in immediate cancellation of the warranty.

7. SPARE PARTS

EC50/OC50/BC50 - Ø500mm

Model description			Fan code	Electrical Heater code
EC50*114	OC50*114	BC50*114	2202100237	2202120248
EC50*116	OC50*116	BC50*116	2202100237	2202120248
EC50*118	OC50*118	BC50*118	2202100237	2202120248
EC50*11C	OC50*11C	BC50*11C	2202100237	2202120248
EC50*214	OC50*214	BC50*214	2202100237	2202120249
EC50*216	OC50*216	BC50*216	2202100237	2202120249
EC50*218	OC50*218	BC50*218	2202100237	2202120249
EC50*21C	OC50*21C	BC50*21C	2202100237	2202120249
EC50*314	OC50*314	BC50*314	2202100237	2202120250
EC50*316	OC50*316	BC50*316	2202100237	2202120250
EC50*318	OC50*318	BC50*318	2202100237	2202120250
EC50*31C	OC50*31C	BC50*31C	2202100237	2202120250
EC50*414	OC50*414	BC50*414	2202100237	2202120251
EC50*416	OC50*416	BC50*416	2202100237	2202120251
EC50*418	OC50*418	BC50*418	2202100237	2202120251
EC50*41C	OC50*41C	BC50*41C	2202100237	2202120251
EC50*514	OC50*514	BC50*514	2202100237	2202120252
EC50*516	OC50*516	BC50*516	2202100237	2202120252
EC50*518	OC50*518	BC50*518	2202100237	2202120252
EC50*51C	OC50*51C	BC50*51C	2202100237	2202120252

EC63/OC63/BC63 - Ø630mm

Model description			Fan code	Electrical Heater code
EC63*114	OC63*114	BC63*114	2202100030	2202120245
EC63*116	OC63*116	BC63*116	2202100030	2202120245
EC63*118	OC63*118	BC63*118	2202100030	2202120245
EC63*11C	OC63*11C	BC63*11C	2202100030	2202120245
EC63*214	OC63*214	BC63*214	2202100030	2202120253
EC63*216	OC63*216	BC63*216	2202100030	2202120253
EC63*218	OC63*218	BC63*218	2202100030	2202120253
EC63*21C	OC63*21C	BC63*21C	2202100030	2202120253
EC63*314	OC63*314	BC63*314	2202100030	2202120254
EC63*316	OC63*316	BC63*316	2202100030	2202120254
EC63*318	OC63*318	BC63*318	2202100030	2202120254
EC63*31C	OC63*31C	BC63*31C	2202100030	2202120254
EC63*414	OC63*414	BC63*414	2202100030	2202120252
EC63*416	OC63*416	BC63*416	2202100030	2202120252
EC63*418	OC63*418	BC63*418	2202100030	2202120252
EC63*41C	OC63*41C	BC63*41C	2202100030	2202120252
EC63*514	OC63*514	BC63*514	2202100030	2202120255
EC63*516	OC63*516	BC63*516	2202100030	2202120255
EC63*518	OC63*518	BC63*518	2202100030	2202120255
EC63*51C	OC63*51C	BC63*51C	2202100030	2202120255

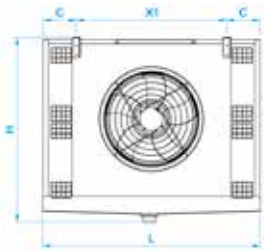
EC80/OC80/BC80 - Ø800mm

Model description			Fan code		Electrical Heater code
EC80*116	OC80*116	BC80*116	2202101183	2202101179	2202120256
EC80*118	OC80*118	BC80*118	2202101183	2202101179	2202120256
EC80*11A	OC80*11A	BC80*11A	2202101183	2202101179	2202120256
EC80*11C	OC80*11C	BC80*11C	2202101183	2202101179	2202120256
EC80*216	OC80*216	BC80*216	2202101183	2202101179	2202120250
EC80*218	OC80*218	BC80*218	2202101183	2202101179	2202120250
EC80*21A	OC80*21A	BC80*21A	2202101183	2202101179	2202120250
EC80*21C	OC80*21C	BC80*21C	2202101183	2202101179	2202120250
EC80*316	OC80*316	BC80*316	2202101183	2202101179	2202120257
EC80*318	OC80*318	BC80*318	2202101183	2202101179	2202120257
EC80*31A	OC80*31A	BC80*31A	2202101183	2202101179	2202120257
EC80*31C	OC80*31C	BC80*31C	2202101183	2202101179	2202120257
EC80*416	OC80*416	BC80*416	2202101183	2202101179	2202120258
EC80*418	OC80*418	BC80*418	2202101183	2202101179	2202120258
EC80*41A	OC80*41A	BC80*41A	2202101183	2202101179	2202120258
EC80*41C	OC80*41C	BC80*41C	2202101183	2202101179	2202120258

EC90/OC90/BC90 - Ø900mm

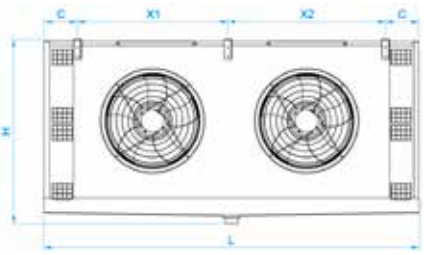
Model description			Fan code		Electrical Heater code
EC90*116	OC90*116	BC90*116	2202101182	2202101178	2202120260
EC90*118	OC90*118	BC90*118	2202101182	2202101178	2202120260
EC90*11A	OC90*11A	BC90*11A	2202101182	2202101178	2202120260
EC90*11C	OC90*11C	BC90*11C	2202101182	2202101178	2202120260
EC90*216	OC90*216	BC90*216	2202101182	2202101178	2202120247
EC90*218	OC90*218	BC90*218	2202101182	2202101178	2202120247
EC90*21A	OC90*21A	BC90*21A	2202101182	2202101178	2202120247
EC90*21C	OC90*21C	BC90*21C	2202101182	2202101178	2202120247
EC90*316	OC90*316	BC90*316	2202101182	2202101178	2202120261
EC90*318	OC90*318	BC90*318	2202101182	2202101178	2202120261
EC90*31A	OC90*31A	BC90*31A	2202101182	2202101178	2202120261
EC90*31C	OC90*31C	BC90*31C	2202101182	2202101178	2202120261
EC90*416	OC90*416	BC90*416	2202101182	2202101178	2202120262
EC90*418	OC90*418	BC90*418	2202101182	2202101178	2202120262
EC90*41A	OC90*41A	BC90*41A	2202101182	2202101178	2202120262
EC90*41C	OC90*41C	BC90*41C	2202101182	2202101178	2202120262

8. DRAWINGS



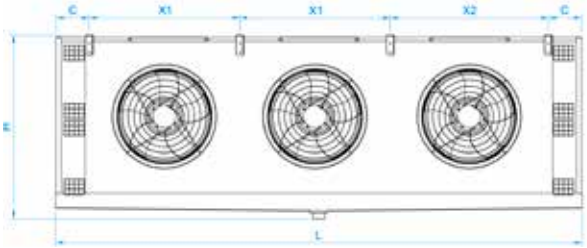
MODEL	L	S	H	X1	X2	X3	C
**50_11	1380	880	930	900	0	719	240
**63_11	1580	1061	1280	1100	0	839	240
**80_11	1780	1245	1490	1300	0	927	240
**90_11	1880	1295	1630	1400	0	977	240

EC/OC/BC



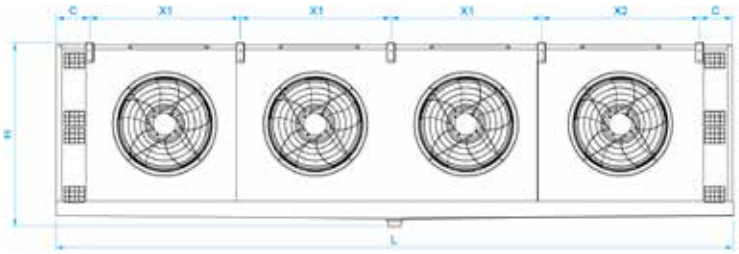
MODEL	L	S	H	X1	X2	X3	C
**50_21	2230	880	930	850	900	719	240
**63_21	2630	1061	1280	1050	1100	839	240
**80_21	3030	1245	1490	1250	1300	927	240
**90_21	3230	1295	1630	1350	1400	977	240

EC/OC/BC



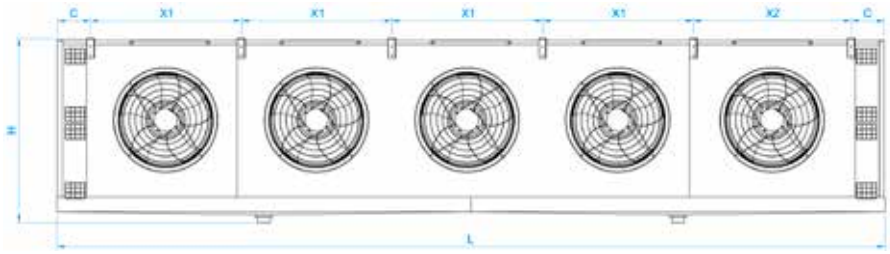
MODEL	L	S	H	X1	X2	X3	C
**50_31	3080	880	930	850	900	719	240
**63_31	3680	1061	1280	1050	1100	839	240
**80_31	4280	1245	1490	1250	1300	927	240
**90_31	4580	1295	1630	1350	1400	977	240

EC/OC/BC



MODEL	L	S	H	X1	X2	X3	C
**50_41	3930	880	930	850	900	719	240
**63_41	4730	1061	1280	1050	1100	839	240
**80_41	5530	1245	1490	1250	1300	927	240
**90_41	5930	1295	1630	1350	1400	977	240

** EC/OC/BC



MODEL	L	S	H	X1	X2	X3	C
**50_51	4780	880	930	850	900	719	240
**63_51	5780	1061	1280	1050	1100	839	240

** EC/OC/BC

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