



CONDENSE UNIT
EX - CU SERIES

407

The Power of
EXPERIENCE



INTRODUCTION

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Expert Middle East is one of the top leaders in HVAC system instruments fabrication, established in 2015.

Certified by ISO 9001, & ISO 14005, Along our successful & progressive journey, we strive to be the integrated service provider of HVAC system equipment in the Middle East by supplying (AHUs, FCU, Condensing units, package DX units, air outlets, air ducts, and air curtains ... etc.)

Also, by our extension through our major projects in Qatar, Oman.

And we will continue, with full commitment to providing customer focused and professional services.

Our Vision



Our vision is to become the top HVAC equipment fabrication company in the Middle East that positively impact society's lifestyle quality through our continuous innovation delivered by our skilled professional to make our customers delighted.



Our Mission



by providing Quality in every single material used by considering every customer as a priority by helping our market increase the return of building investment

Our Values



01

Customer delight:

we do it perfect, fast and save cost.

02

Priority:

we believe in saying no to thousands, to deliver unbelievable response to you.

03

Continuous improvement:

we always up to date on new trends, technologies & customer needs related to our industry

04

Competitive price:

we focus on selling value not to only profit, so our prices always fair.

05

Professionalism:

we proudly have the technical knowledge leaders through all our organization.

06

Integrity:

We expect to be always honest with ourselves first, then our employees and our customers.

CONDENSING UNIT

- THE EX-CU series Air cooled Condensing units designed to meet different weather conditions with high efficiency and quick response. The unit can be installed safely and easily. Also suitable for HVAC Systems. With indoor unit connected to remote condensing units remote condensing unit located outside on ground or on roof top level.
- The EX-CU-series are supplied with (Hermetic Scroll) Compressor to covering the nominal capacity from 5 to 100 TR in 50 HZ, 380 V.
- The EX-CU series is rated in accordance to AHRI-365.

Component:

- Compressor
- Condenser
- FAN
- REFRIGERANT CIRCUIT
- Pressure control
- FILTER DRYER
- CONTROL PANEL

COMPRESSOR:

Compressors used in EX-CU condensing unit series are hermetically sealed, scroll with the following features:

- Sight glass
- High Efficiency.
- Quiet operation, Low Sound levels.
- Compact and light.
- Limited wear.
- 70% fewer moving parts than comparably sized reciprocating compressors
- Unique ability to handle liquid refrigerant.
- Suction gas motor cooling.
- Two refrigerant circuits on larger units provides efficient part load.



CONDENSER:

- Condenser coils are manufactured of seamless copper tubes mechanically bonded to aluminium fins to ensure optimum heat transfer. We can also using hydrophilic (AL/golden Fins CU) For on Shore
- Installation condition to assure long life and high efficiency resisting corrosion.
- All coils are tested against leakage by air pressure of 450 psi under water. All standard coils are 1,2,3 or 4 rows, with 12 or 14 FPI, 3/8" (9.5mm) O.D. tubes.



FAN:

- condenser provide with axial type fan which directly mounted on the motor, all fans are selected for optimum efficiency to provide Flow rate as per required size



REFRIGERANT_CIRCUIT:

- Entirely deoxidized dehydrated copper tubes with joints brazed by silver brazing alloys independent refrigerant circuits built up of components and materials selected for compatibility, reliability and high efficiency.
- The independent circuits design ensures partial load operation. Insulated suction line with flexible synthetic rubber insulation, which has excellent thermal conductivity, high water diffusion and high sound absorption. Filter driers fitted in liquid lines, efficiently remove moisture, scale, and solder particles and all types of foreign materials from refrigerant circuit.

Pressure_control:

- The valves enable the regulation of system pressure. Pressure valves are used to set the maximum pressure in the circuit and protect it from overloading.
- Pressure control valves permanently maintain the output pressure at the set value while protecting the appliance from overloading.



Filter_dryer:

- A filter-drier in a refrigeration or air conditioning system has two essential functions:
 1. to adsorb system contaminants, such as water, which can create acids
 2. to provide physical filtration. Evaluation of each factor



CONTROL PANEL:

The unit mounted control panel enclosure is fabricated out of heavy gauge sheet steel in phosphatized powder coated baked finish. The enclosure conforms to IP54. The panel is factory wired, labelled, tagged and features 220V / 240V controls.

All units contain of:

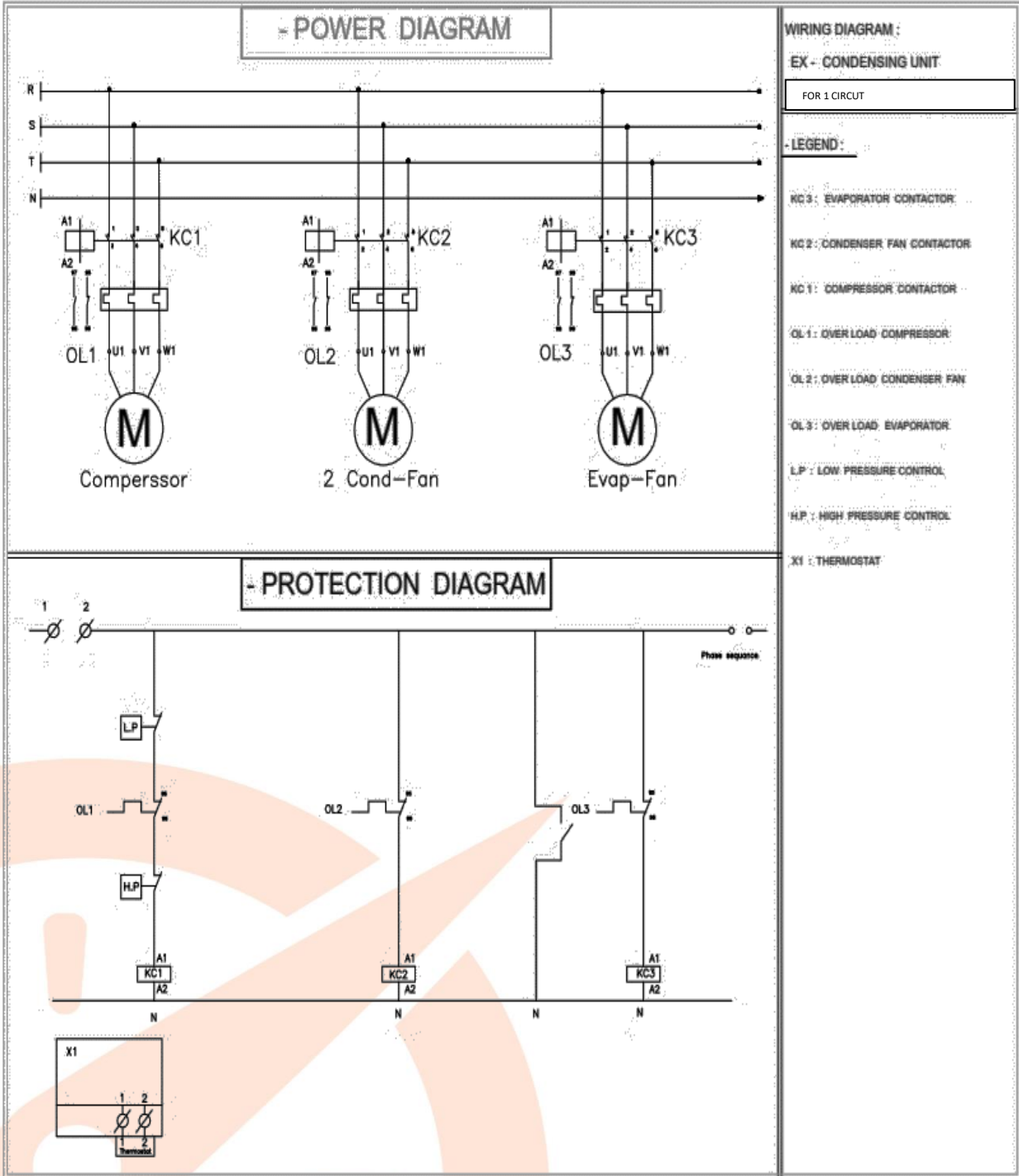
- Individual compressor & condenser fan motor contactors.
- Motor protector circuit breaker for condenser fan motors.
- Voltage monitoring module for protection against under voltage, over voltage, phase loss, phase reversal and phase unbalance of the incoming voltage
- Unit Controller for the operational & safety control.
- Control circuit breaker.
- Control circuit on/off switch.
- Control Relays.
- Power and control terminal blocks.
- Compressor Short Cycling
- High pressure protection.
- low pressure protection

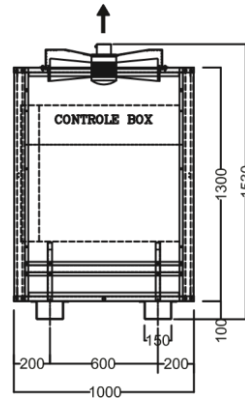
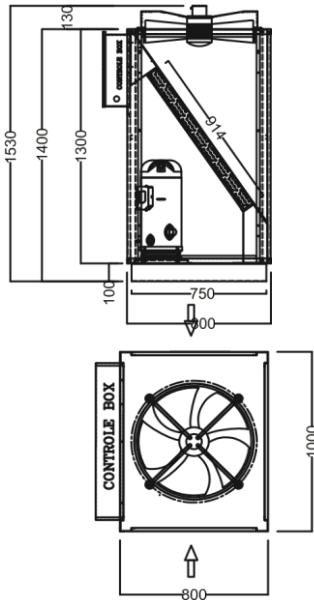
Model	EX-CU	5-T	7.5-T	10.0-T	12.5-T	15.0-T	20-T	25-T
Cooling Capacity (R-22)	Btu/hr	60500	90000	120000	155000	180000	240000	310000
	W	17732	26377	35160	45415	52740	70320	90830
Cooling Capacity (R-407c)	Btu/hr	57475	85500	114000	147250	171000	228000	294500
	W	15072.2	22420.45	29886	38602.75	44829	59772	77205.5
Dimanision (W*L*H)	(m*m*m)	(.8*1*1.43)	(.8*1.45*1.43)	(.8*1.6*1.43)	(.8*1.6*1.43)	(1.45*1.6*1.415)	(1.6*1.6*1.43)	(1.6*1.6*1.43)
Base Height	m	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Compressors	Amp	8.8	13.7	17.6	25.6	27.4	35.2	51.2
	Input Power (Kw)	4.9	7.7	9.8	14.3	15.3	19.7	28.6
	Power supply	380 / 50 HZ / 3Phase						
		Hermetic (Scroll)						
Condenser Fan	Air Flow (m3/h)	7650	11900	14960	18700	23800	29920	37400
	DIA (mm)	630	630	630	630	630	630	630
	No	1	1	2	2	4	4	4
	Motor (Watt)	780	600	800	800	800	600	800
suction side	inch	1 3/8 "	1 3/8 "	1 3/8 "	(2)1 3/8 "	(2)1 3/8 "	(2)1 3/8 "	(2)1 3/8 "
Liquide side	inch	1/2 "	5/8 "	5/8 "	5/8 "	(2) 1/2 "	(2) 5/8 "	(2) 5/8 "
No. of Circuits	NO	1	1	1	1	2	2	2
Ambient Temperature	TEMP	35 C						
Ratings ARI conditions	Evaporating (Temp)	7.2 C						
	Condensing (Temp)	54.4 C						
	Subcooling (Temp)	15 F						
	Super heating cooling Temp	20 F						

Model	EX-CU	30-T	37.5T	40-T	50-T	75-T	100-T
Cooling Capacity (R-22)	Btu/hr	360000	465000	480000	620000	945000	1260000
	W	17732	26377	140640	181660	276885	369180
Cooling Capacity (R-407c)	Btu/hr	342000	441750	456000	589000	897750	1197000
	W	15072.2	22420.45	119544	154411	235352.3	313803
Dimanision (W*L*H)	(m*m*m)	(2.4*1.6*1.43)	(2.4*1.6*1.43)	(3.2*1.6*1.43)	(3.2*1.6*1.43)	(3*2*1.79)	(4*2*1.79)
Base Height	m	0.1	0.1	0.1	0.1	0.1	0.1
Compressors	Amp	52.8	76.8	70.4	102.4	135.3	35.2
	Input Power (Kw)	29.5	42.9	39.3	57.2	75.6	180.4
	Power supply	380 / 50 HZ / 3Phase					
		Hermetic (Scroll)					
Condenser Fan	Air Flow (m3/h)	44880	56100	59840	74800	112200	149600
	DIA (mm)	630	630	630	630	800	800
	No	6	6	8	8	6	8
	Motor (Watt)	800	800	800	800	1790	1790
suction side	INCH	(3)1 3/8 "	(3)1 3/8 "	(4)1 3/8 "	(4)1 3/8 "	(3)1 3/8 "	(4)1 3/8 "
Liquide side	INCH	(3)5/8 "	(3)5/8 "	(4)5/8 "	(4)5/8 "	(3) 1/2 "	(4) 5/8 "
No. of Circuits	NO	3	3	4	4	3	4
Ambient Temperature	TEMP	35 C					
Ratings ARI conditions	Evaporating (Temp)	7.2 C					
	Condensing (Temp)	54.4 C					
	Subcooling Temp	15 F					
	Super heating cooling Temp	20 F					

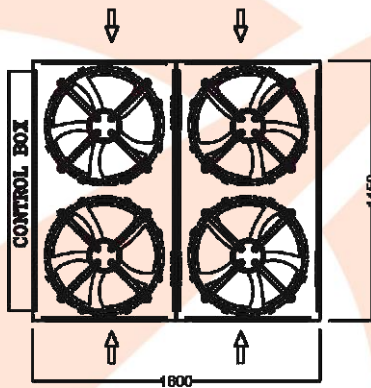
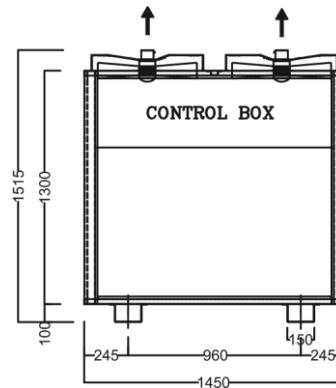
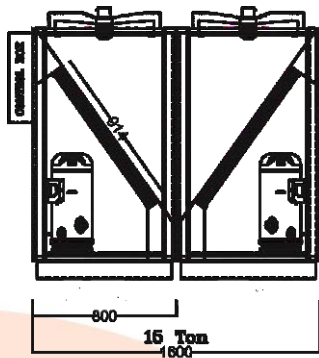
Model	Saturated Suction		95°F (35°C)		105°F (40.6°C)		115°F (46.1°C)		118°F (48°C)		125°F (51.7°C)	
	Temp		Total Capacity		Total Capacity		Total Capacity		Total Capacity		Total Capacity	
	°F	°C	BTU/HR	W	BTU/HR	W	BTU/HR	W	BTU/HR	W	BTU/HR	W
EX-CU-5-T	35	1.7	49200	14416	45450	13317	-	-	-	-	-	-
	40	4.4	54500	15969	50500	14797	46400	13595.2	45068	13204.92	42404	12424.37
	45	7.2	60500	17727	56500	16555	52000	15236	50507	14798.55	47521	13923.65
	50	10	66500	19485	62500	18313	57500	16847.5	558499	163640.2	1560497	457225.6
EX-CU-7.5-T	35	1.7	74250	21755	69000	20217	-	-	-	-	-	-
	40	4.4	82000	24026	76500	22415	90500	26516.5	68476	20063.47	65929	19317.2
	45	7.2	90000	26370	84500	24759	78000	22854	75761	22197.97	73300	21476.9
	50	10	99000	29007	93000	27249	86000	25198	83531	24474.58	80671	23636.6
EX-CU-10-T	35	1.7	98000	28714	90500	26517	-	-	-	-	-	-
	40	4.4	108000	31644	100000	29300	113000	33109	88873	26039.79	83750	24538.75
	45	7.2	120000	35160	111000	32523	128000	37504	99071	29027.8	94250	27615.25
	50	10	132000	38676	123000	36039	144000	42192	109756	32158.51	105250	30838.25
EX-CU-12.5-T	35	1.7	125000	36625	133250	39042	-	-	-	-	-	-
	40	4.4	139000	40727	144100	42221	14100	14100	124325	36427.23	101000	29593
	45	7.2	155000	45415	154950	45400	128000	14100	151521	44395.65	116000	33988
	50	10	171000	50103	165800	48579	144000	14100	167062	48949.17	129000	37797
EX-CU-15-T	35	1.7	148500	43511	138000	40434	-	-	-	-	-	-
	40	4.4	164000	48052	153000	44829	141000	41313	109756	32158.51	131858	38634.39
	45	7.2	240000	70320	169000	49517	156000	45708	124325	36427.23	146600	42953.8
	50	10	198000	58014	186000	54498	172000	50396	139886	40986.6	161342	47273.21
EX-CU-20-T	35	1.7	196000	57428	181000	53033	-	-	-	-	-	-
	40	4.4	216000	63288	200000	58600	183000	53619	183000	53619	167500	49077.5
	45	7.2	278000	81454	222000	65046	204000	59772	204000	59772	182500	53472.5
	50	10	264000	77352	246000	72078	226000	66218	226000	66218	201500	59039.5
EX-CU-25-T	35	1.7	250000	73250	226000	66218	-	-	-	-	-	-
	40	4.4	278000	81454	254000	74422	226000	66218	267000	78231	202000	59186
	45	7.2	310000	90830	284000	83212	256000	75008	256000	75008	232000	67976
	50	10	342000	100206	316000	92588	339000	99327	288000	84384	258000	75594
EX-CU-30-T	35	1.7	294000	86142	271500	79550	-	-	-	-	-	-
	40	4.4	324000	94932	300000	87900	274500	80428.5	274500	80428.5	251250	73616.25
	45	7.2	360000	105480	333000	97569	306000	89658	306000	89658	282750	82845.75
	50	10	396000	116028	369000	108117	339000	99327	339000	99327	315750	92514.75
EX-CU-37.5-T	35	1.7	375000	109875	339000	99327	-	-	-	-	-	-
	40	4.4	417000	122181	381000	111633	339000	99327	390000	114270	303000	88779
	45	7.2	465000	136245	426000	124818	384000	112512	384000	112512	348000	101964
	50	10	513000	150309	474000	138882	432000	126576	432000	126576	387000	113391
EX-CU-40-T	35	1.7	392000	114856	362000	106066	-	-	-	-	-	-
	40	4.4	432000	126576	400000	117200	366000	107238	366000	107238	335000	98155
	45	7.2	480000	140640	444000	130092	432000	126576	408000	119544	377000	110461
	50	10	528000	154704	492000	144156	452000	132436	452000	132436	421000	123353
EX-CU-50-T	35	1.7	500000	146500	452000	132436	-	-	-	-	-	-
	40	4.4	556000	162908	508000	148844	452000	132436	452000	132436	404000	118372
	45	7.2	620000	181660	568000	166424	512000	150016	512000	150016	464000	135952
	50	10	684000	200412	632000	185176	576000	168768	576000	168768	516000	151188
EX-CU-75-T	35	1.7	777000	227661	723000	211839	669000	196017	649792	190389.1	625620	183306.7
	40	4.4	858000	251394	801000	234693	741000	217113	719725	210879.4	692951	203034.6
	45	7.2	945000	276885	885000	259305	825000	241725	801313	234784.7	771504	226050.7
	50	10	1035000	303255	975000	285675	912000	267216	885815	259543.8	852863	249888.9
EX-CU-100-T	35	1.7	1036000	303548	964000	282452	892000	261356	866390	253852.3	834160	244408.9
	40	4.4	1144000	335192	1068000	312924	980000	287140	959633	281172.5	923935	270713
	45	7.2	1260000	369180	1180000	345740	1110000	325230	1068418	313046.5	1028672	301400.9
	50	10	1380000	404340	1300000	380900	1216000	356288	11810873	3460586	1137151	333185.2

ELECTRIC DATA

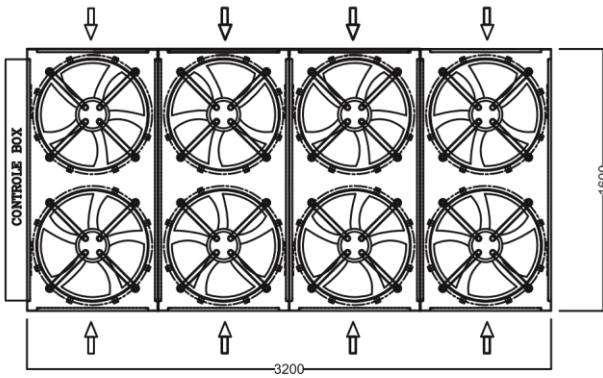
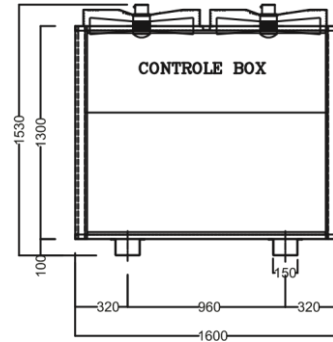
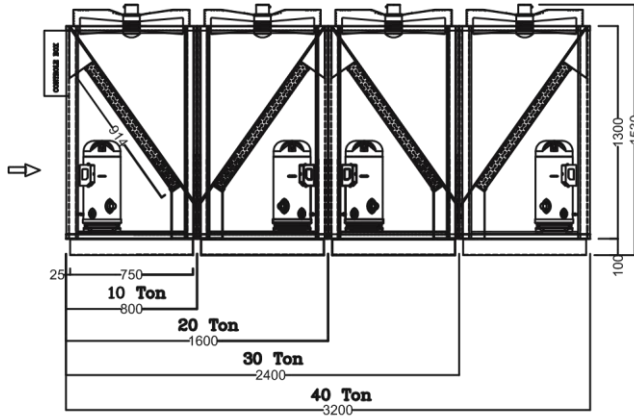




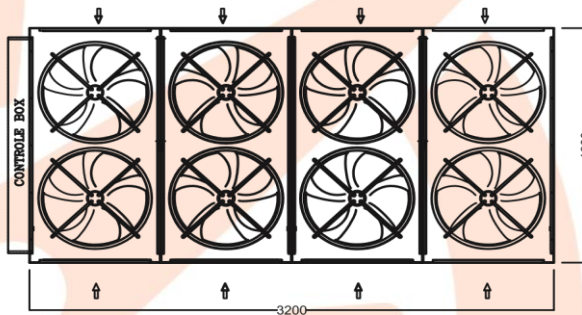
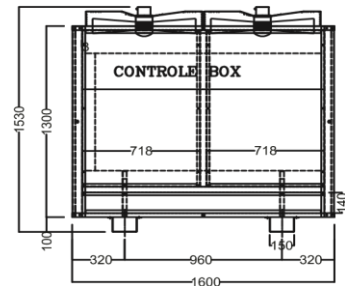
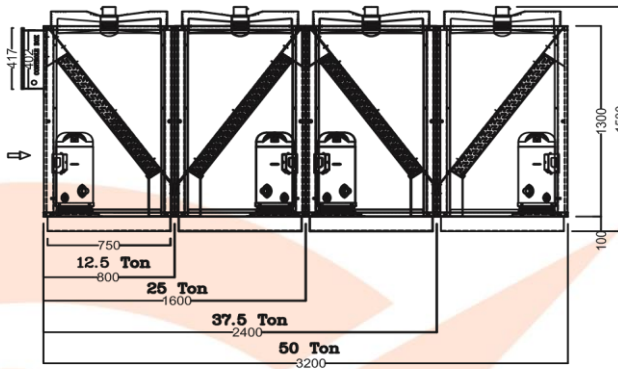
MODEL	NOMINAL REF TONS
ECU-50	5
ECU-75	7.5



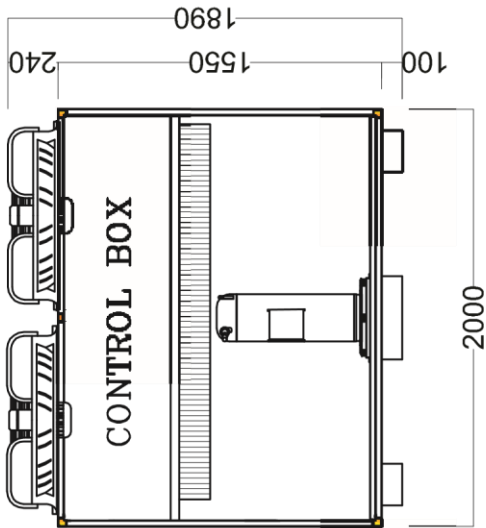
Model	Nominal Ref. tons
ECU150	15



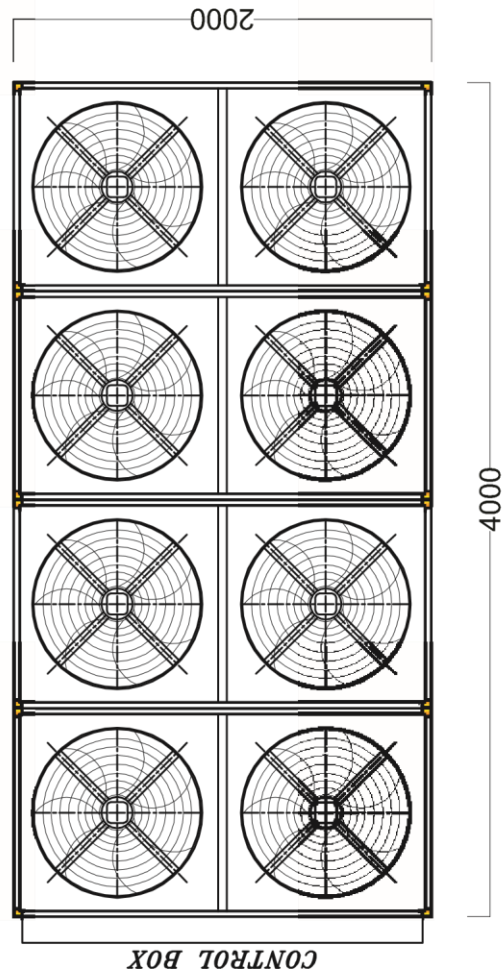
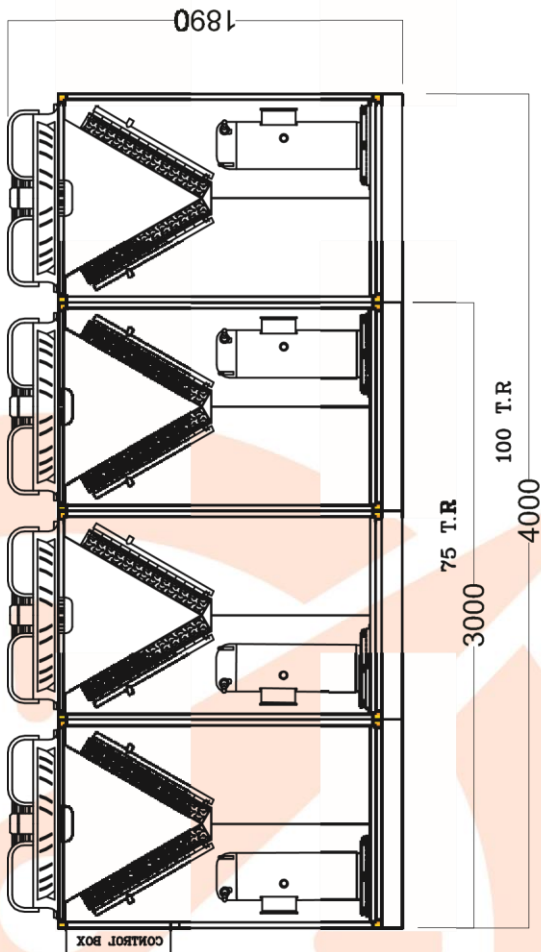
Model	Nominal Ref. tons
ECU100	10
ECU200	20
ECU300	30
ECU400	40



Model	Nominal Ref. tons
ECU125	12.5
ECU250	25
ECU375	37.5
ECU500	50



Model	Nominal Ref. tons
ECU750	75
ECU1000	100





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