



CONDENSE UNIT

EX - CU SERIES

410

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 44 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.
- Quite 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:

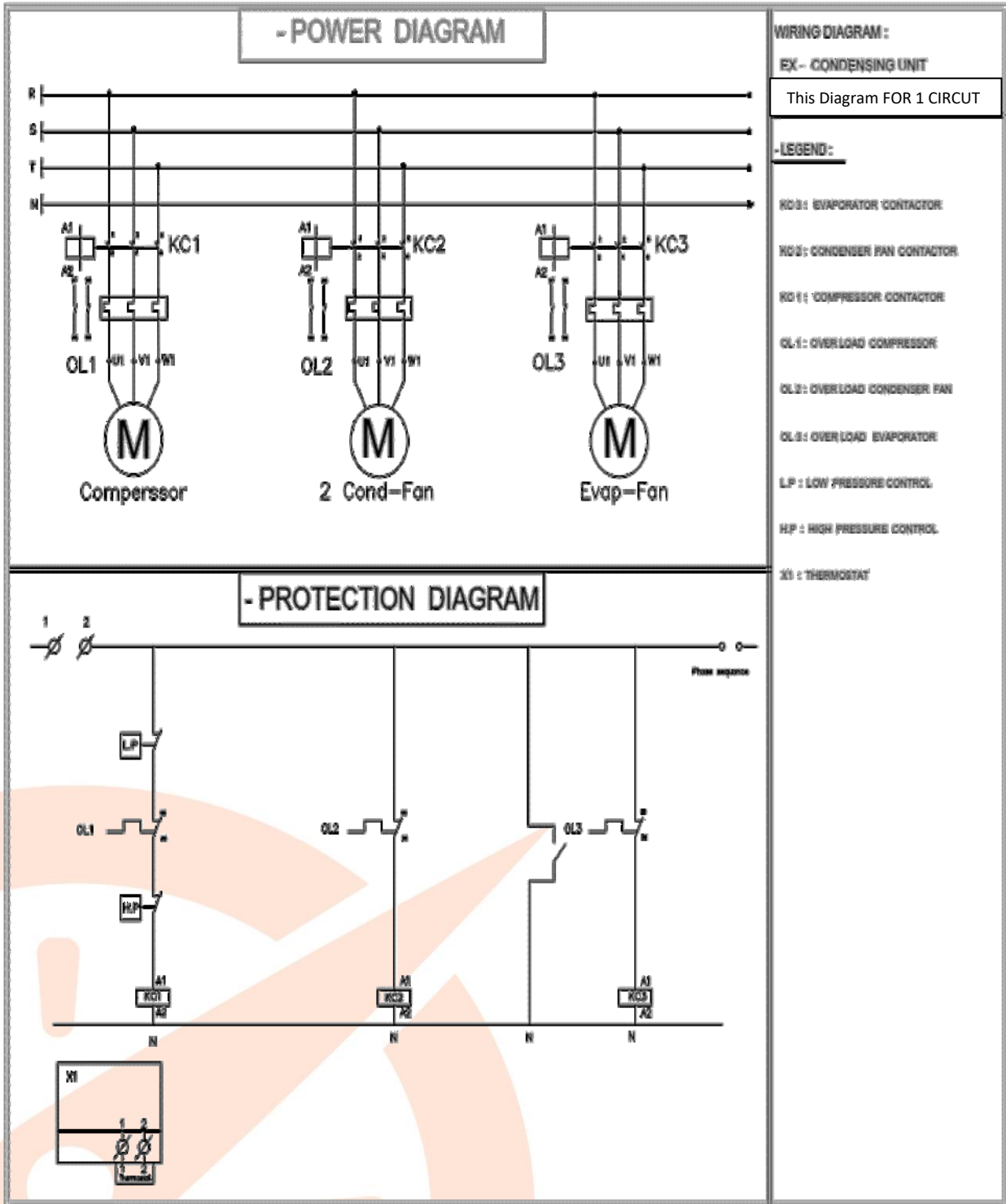
- Individual compressor & condenser fan motor contactors.
- Motor protector circuit breaker for condenser fan motors.
- Voltage monitoring module for protection against under voltage, over voltage, phase loss, phase reversal and phase unbalance of the incoming voltage
- Unit Controller for the operational & 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

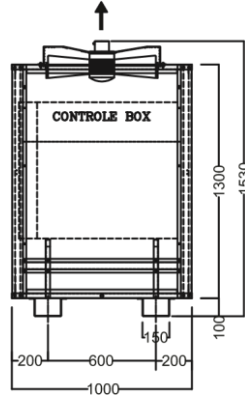
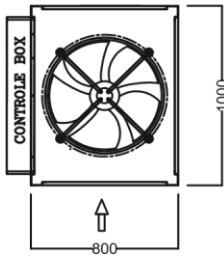
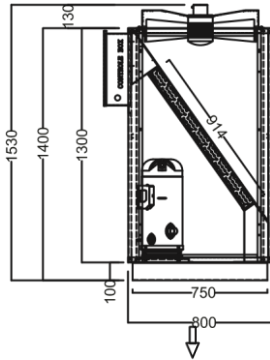
Model	EX-CU	5-T	7-T	8-T	9-T	10-T	12-T	13-T	15-T
Cooling Capacity (R-410A)	Btu/hr	49345	65235	71690	95260	98685	106120	130475	140885
	W	14462	19119	21011	27919	28923	31102	38240	41291
Dimanision (W*L*H)	(m*m*m)	(1.43*.8*1)	(1.43*.8*1)	(1.43*1.6*1)	(1.43*1.6*1)	(1.43*1.6*1)	(1.43*1.6*1)	(1.43*1.6*1)	(1.43*1.6*1)
Base Height	m	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Compressors	Input Power (HP)	6	9	9	12	12	12	15	18
	Power supply	380 / 50 HZ / 3Phase							
		Hermetic (Scroll)							
Condenser Fan	Air Flow (CFM)	4460	6620	9240	8920	8920	8920	13240	13400
	DIA (mm)	628	723	628	628	628	628	723	723
	No	1	1	2	2	2	2	2	2
suction side	INCH	3/4"	3/4"	3/4"	7/8"	7/8"	7/8"	7/8"	7/8"
Liquide side	INCH	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
No. of Circuits	NO	1	1	1	1	1	1	2	2
Ambient Temperature		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	19-T	22-T	24-T	28-T	32-T	36-T	40-T	44-T
Cooling Capacity (R-410A)	Btu/hr	183515	208690	235250	276460	315195	355595	403050	450750
	W	53785	61164	68948	81026	92378	104219	118127	132107
Dimanision (H*W*L)	(m*m*m)	(1.43*1.6*1)	(1.43*1.6*1)	(1.43*1.6*1.45)	(1.43*1.6*1.45)	(1.43*1.6*1.45)	(1.43*1.6*1.45)	(1.43*1.6*1.45)	(1.43*1.6*1.45)
Base Height	m	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Compressors	Input Power (HP)	24	24	30	36	40	50	50	0
	Power supply	380 / 50 HZ / 3Phase							
		Hermetic (Scroll)							
Condenser Fan	Air Flow (CFM)	17360	16400	25200	26160	24780	32040	36480	42880
	DIA (mm)	630	630	630	630	630	630	630	630
	No	2	2	4	4	4	4	4	4
suction side	INCH	7/8"	7/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 3/8"	1 3/8"
Liquide side	INCH	1/2"	1/2"	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"
No. of Circuits	NO	2	2	2	2	2	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							

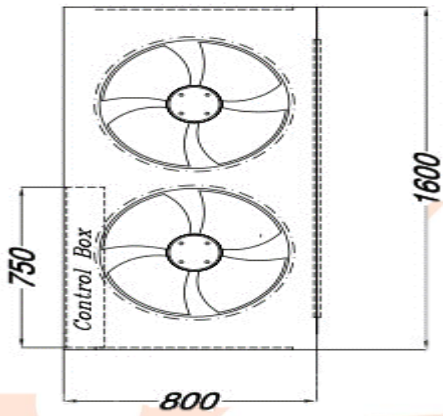
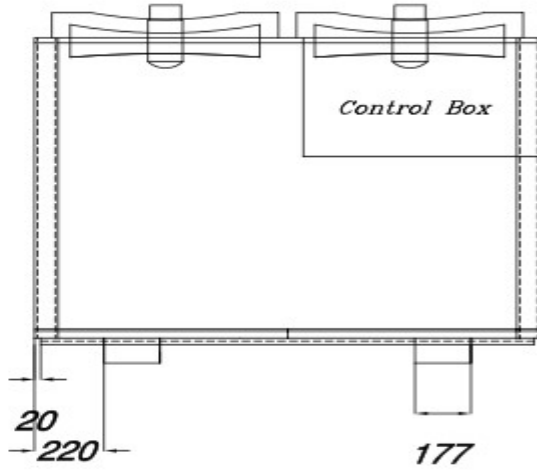
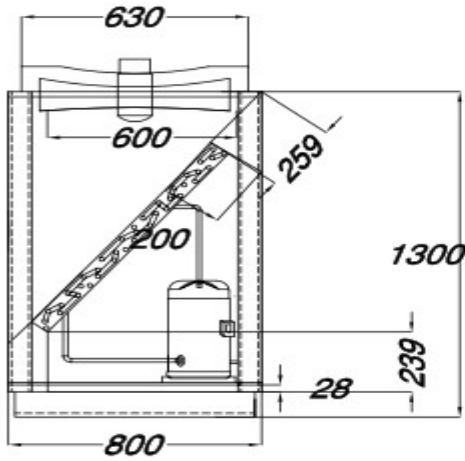
Model	SATURATED SUCTION TEMPERATURE		Condensing Temperature °F (°C)							
			95°F (35°C)		105°F (40.6°C)		115°F (46.1°C)		125°F (51.7°C)	
	°F	°C	Total Capacity		Total Capacity		Total Capacity		Total Capacity	
		BTU/HR	WATT	BTU/HR	WATT	BTU/HR	WATT	BTU/HR	WATT	
EX-CU-5-T	35	1.7	49000	14400	45100	13200	40900	12000	36600	10700
	40	4.4	53700	15700	49400	14500	45000	13200	40500	11900
	45	7.2	58400	17100	53900	15800	49300	14400	44700	13100
	50	10	63300	18600	58600	17200	53700	15800	49000	14400
EX-CU-7-T	35	1.7	63500	18600	58900	17300	54100	15800	49300	14400
	40	4.4	69500	20400	64500	18900	59400	17400	54300	15900
	45	7.2	75800	22200	70500	20700	65000	19100	59600	17500
	50	10	82600	24200	76900	22500	71100	20800	65300	19100
EX-CU-8-T	35	1.7	70400	20600	65500	19200	59800	17500	54100	15800
	40	4.4	76900	22500	71500	20900	65500	19200	59500	17400
	45	7.2	83800	24500	77800	22800	71500	20900	65100	19100
	50	10	91000	26700	84600	24800	77900	22800	71300	20900
EX-CU-9-T	35	1.7	94700	27700	87200	25600	79000	23200	70800	20800
	40	4.4	103600	30400	95600	28000	86800	25500	78200	22900
	45	7.2	112800	33100	104200	30500	95000	27900	86000	25200
	50	10	122400	35900	113300	33200	103700	30400	94300	27600
EX-CU-10-T	35	1.7	98000	28700	90200	26400	81700	24000	73300	21500
	40	4.4	107300	31500	98900	29000	89900	26300	81000	23700
	45	7.2	116800	34200	107900	31600	98500	28900	89300	26200
	50	10	126600	37100	117200	34300	107500	31500	98000	28700
EX-CU-12-T	35	1.7	106100	31100	97500	28600	88400	25900	79400	23300
	40	4.4	115900	34000	106600	31200	96900	28400	87400	25600
	45	7.2	126100	37000	116200	34000	105800	31000	95800	28100
	50	10	136800	40100	126200	37000	115300	33800	104800	30700
EX-CU-13-T	35	1.7	127000	37200	117700	34500	108100	31700	98500	28900
	40	4.4	138900	40700	129000	37800	118800	34800	108600	31800
	45	7.2	151600	44400	141000	41300	130100	38100	119100	34900
	50	10	165200	48400	153900	45100	142200	41700	130600	38300
EX-CU-15-T	35	1.7	139200	40800	129000	37800	117700	34500	106300	31200
	40	4.4	151800	44500	140700	41200	128700	37700	116900	34300
	45	7.2	165100	48400	153100	44900	140400	41200	128000	37500
	50	10	179300	52500	166400	48800	153000	44900	140000	41000
EX-CU-19-T	35	1.7	184300	54000	168900	49500	152600	44700	136600	40000
	40	4.4	201200	59000	184800	54200	167500	49100	150700	44200
	45	7.2	218700	64100	201200	59000	183100	53700	165700	48600
	50	10	237000	69500	218500	64000	199600	58500	181700	53200
EX-CU-22-T	35	1.7	209500	61400	192200	56300	174000	51000	156200	45800
	40	4.4	228600	67000	210000	61600	190800	55900	172000	50400
	45	7.2	248600	72900	228600	67000	208200	61000	188400	55200
	50	10	269400	79000	248200	72700	226600	66400	206100	60400
EX-CU-24-T	35	1.7	236000	69200	217000	63600	196300	57500	175800	51500
	40	4.4	257700	75500	237000	69500	214900	63000	193200	56600
	45	7.2	280500	82200	258200	75700	234700	68800	211800	62100
	50	10	304600	89300	280600	82200	255600	74900	231500	67900
EX-CU-28-T	35	1.7	274400	80400	253500	74300	231500	67800	209800	61500
	40	4.4	299000	87600	276400	81000	253000	74100	230000	67400
	45	7.2	325300	95300	300900	88200	275900	80900	251600	73800
	50	10	352600	103400	326500	95700	299900	87900	274400	80400
EX-CU-32-T	35	1.7	311000	91200	287500	84300	263300	77200	239300	70100
	40	4.4	339700	99600	314200	92100	288100	84400	262500	76900
	45	7.2	370100	108500	342600	100400	314500	92200	287100	84200
	50	10	401900	117800	372200	109100	342300	100300	313200	91800
EX-CU-36-T	35	1.7	348800	102200	322900	94600	296400	86900	270000	79100
	40	4.4	381800	111900	353500	103600	324700	95200	296200	86800
	45	7.2	416700	122100	385900	113100	354800	104000	324100	95000
	50	10	453100	132800	419900	123100	386500	113300	353700	103700
EX-CU-40-T	35	1.7	396100	116100	366800	107500	336400	98600	306200	89800
	40	4.4	433100	126900	401200	117600	368300	107900	335900	98400
	45	7.2	472100	138400	437500	128200	402100	117900	367400	107700
	50	10	513200	150400	475800	139500	437800	128300	400700	117500
EX-CU-44-T	35	1.7	443500	130000	411000	120500	376700	110400	342600	100400
	40	4.4	484500	142000	449100	131600	412100	120800	375700	110100
	45	7.2	527700	154700	489300	143400	449700	131800	410800	120400
	50	10	573600	168100	531900	155900	489400	143400	447900	131300

ELECTRIC DATA

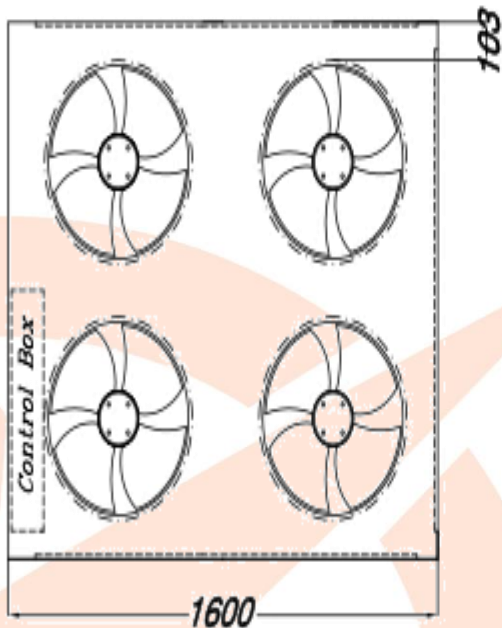
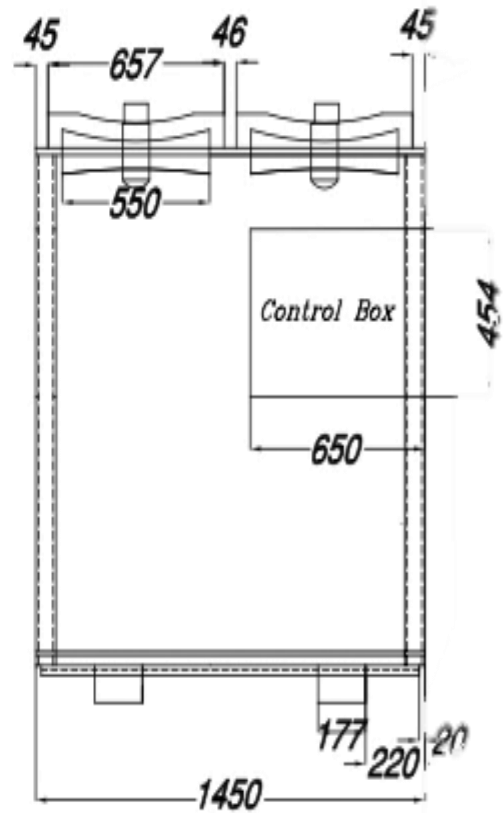
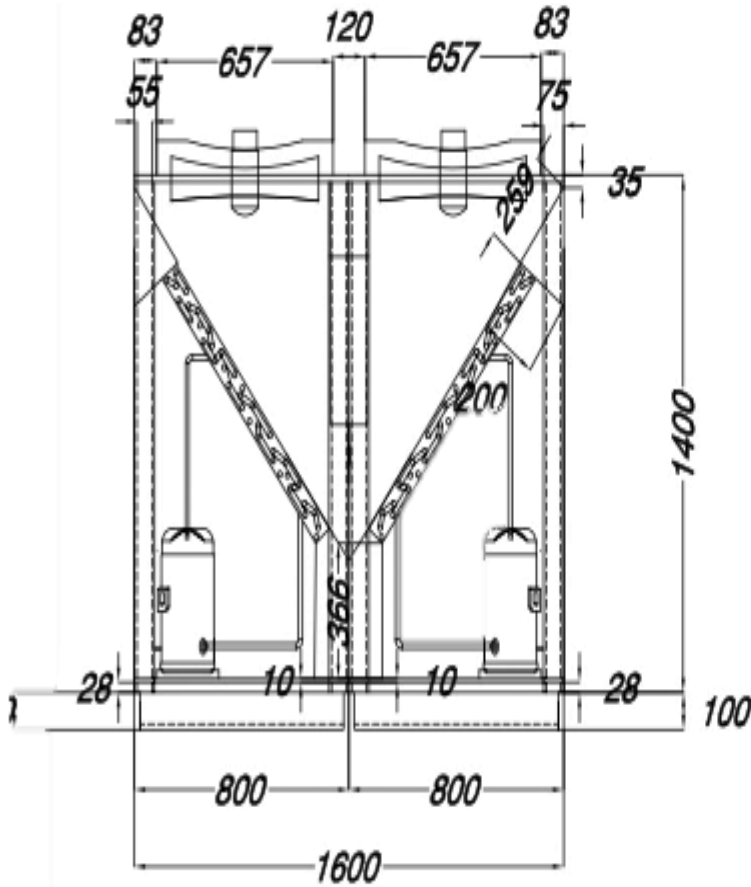




EX-CU-5
 EX-CU-7



EX-CU-8 EX-CU-19
 EX-CU-9 EX-CU-22
 EX-CU-10
 EX-CU-12
 EX-CU-13
 EX-CU-15



- EX-CU-24
- EX-CU-28
- EX-CU-32
- EX-CU-36
- EX-CU-40
- EX-CU-44



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