www.ecso-klimatechnik.de

environmental complex solution

Fresh solutions in the world of climate

CONDENSING UNITS

ECSO GMBH
Wetterssteimstr. 53 D- 90471,
Nürnberg, Deutschland
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Tel/Fax: +49 (0) 911/818 9917

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OPERATING MODE

- Only cooling
- Cooling – heating
- Only Heating

CONDENSER

- Air cooled
- Water cooled
- Condenserless

COMPRESSOR

- Scroll
- Reciprocating
- Twin screw or screw

MOUNTING METHOD

- External (Outside)
- Internal (Inside)
- Roof top

OPTIONS

- Reversal on water
- FC — Free-Cooling
- Anti-freeze
- HYDRO PACK — Hydro pack
- Soft fan — ECSO Soft Fan
- EEV — Electronic thermotatic valve
- Direct connect fan
- Variable expense
- Thermo dynamic heat recycling

VENTILATION (ROOF TOPS)

- Filtration
- Fan
- Mixing
- Recovery
- Heating
- Cooling
- Heat pump
- Noise reduction
- Moisture

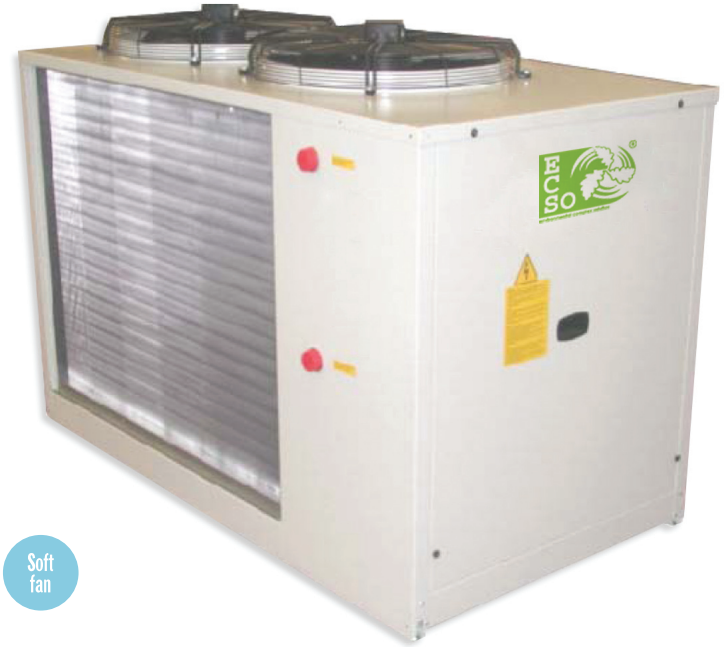
We have devised this table of symbols, indicating all the basic functions and characteristics of the unit, to make the use of this guide easy.

EMMAE

Air cooled condensing units

Reversible heat pumps
from 20 kW to 45 kW

EMMAE air cooled condensing units
EMMAE...H air cooled reversible heat pumps



General features

FRAME
Self-supporting galvanized steel frame protected with polyester powder painting. Panels are easily removable for maintenance and service activities.

COMPRESSORS
Hermetic “scroll” type with overload protection by a klixon and complete with oil sight glass. They are installed on vibrations absorbing rubber and placed within a closed compartment to reduce sound level and to allow service and maintenance activities while unit is in operation.

CONDENSER
Copper tube and aluminium finned coil. As option a protection grid/filter is available.

FANS
Axial fans with aerodynamic outline blade section made of Al/Mg, directly coupled to a single-phase electric motor with external rotor. A safety fan guard is fitted on air flow discharge.

REFRIGERANT CIRCUIT
Each unit is complete with 2 service valves (one on the suction line and one on the discharge line).
To protect the refrigerant circuit the following device are installed: man. reset high pressure switch, aut. reset low pressure switch.
The heat pump units version (EMMAE…H) contain, in addition: safety thermostat on compressor discharge line, 4-ways valve, check valve, solenoid valve.

ELECTRICAL BOARD
Weather proof type with protection grade IP54 installed in the compressor box to enable service and maintenance activities while unit is in operation. It includes:
- Main circuit automatic breaker with locking door device, main fuses, compressor contactor, fans fuses and contactors, auxiliary circuits trafo.
- Microprocessor to control automatically the unit with a visual system to display the function as well as failures.

Versions

DS
Partial condensing heat recovery. It includes adesuperheater insulated and installed in series between the compressor and the condenser.

RCS - RCP
On request.

LN
Low noise version, it includes: pressostatic fan speed control, compressor insulated with a high sound absorbing layer.

VLN
On request.

Options
- Liquid line kit (not mounted): dryer, sight glass, solenoid valve, shut off valve
- Suction/liquid line shut off valves
- Liquid receiver
- Solenoid valve
- T-connections for HGBP-valve.
- Thermostatic valves (not mounted).
- Power factor condensing capacitors.
- Fans speed regulator.
- Cu/Cu condensing coils.
- Coils protection grid.
- Gauges.
- Programmer clock.
- Remote control panel.
- Rubber antivibrators.
- High sensibility AV mounts
- Wooden crate packing.

SIZE		21/1	25/1	30/1	40/1	45/1
COOLING MODE EMMAE						
Cooling capacity	kW	21,5	25	30,5	36	44,5
Abs. Power (1)	kW	7,2	9	9,5	12,4	15
HEATING MODE EMMAE…H						
Heating capacity	kW	22	26	31	37	45
Abs. Power (1)	kW	7,3	9,3	11	13,6	15,8
COMPRESSOR (SCROLL TYPE)						
Quantity	n°			1		
Refrigerant circuit	n°			1		
Capacity step	n°			1		
Refrigerant				R407C		
CONDENSER (STD/LN VERSION) (2)						
Refrigerant (5)	kg	5	5	7	8	9
Axial fans	n°	1	1	2	2	2
Nominal air flow (3)	m^3/s	2,1	2,1	4,7	4,7	4,2
Max abs. power	kW	0,5	0,5	0,5	0,5	0,5
Max abs. current	A	2,5	2,5	2,5	2,5	2,5
CONDENSER (VLN VERSION)						
Axial fans	n°			(9)		
Nominal air flow	m/s					
Max abs. power	kW					
Max abs. current	A					
UNIT ELECTRICAL DATA (5)						
Max abs. current	A	18	21	23	28	33
LRC	A	100	124	128	168	199
Electrical supply	V/f/Hz			400/3+N/50		
SOUND PRESSURE LEVEL AT 1 M (4)						
STD version	dB(A)	58	58	61	61	61
LN version	dB(A)	55	55	58	58	58
VLN version	dB(A)			(9)		
DIMENSHIONS						
Length	mm	1860	1860	1860	1860	1860
Width	mm	1000	1000	1000	1000	1000
Height	mm	1200	1200	1200	1200	1200
Weight	kg	720	735	750	760	820

Performances in cooling mode:
- evaporating temp. 7°C (dew point)
- ambient air temp. 35°C
- subcooling 5K

Performances in heating mode:
- condensing temp. 45°C (dew point)
- ambient air temp. 7°C db / 6 wb
- subcooling 5K

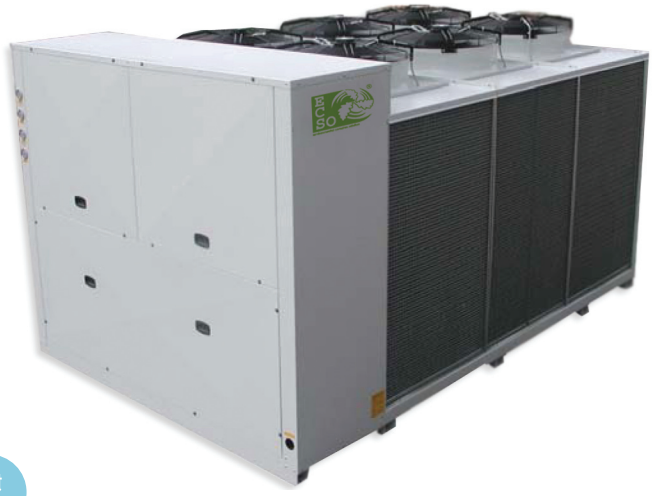
The performances don't consider the outside pipes pressure drop.

Remarks:
1) Compressors + fans;
2) As version EMMAE….H (heat pump) it works as evaporating unit.
3) Max air flow in case of LN version.
4) Compressor site and according to ISO 3744.
5) This data has only to be considered to charge the system as the unit leaves the factory changed with nitrogen.

ESMAE

Air cooled condensing units
Reversible heat pump
from 50 kW to 355 kW

ESMAE air cooled condensing unit
ESMAE..H reversible heat pump



General features

FRAME
Self-supporting galvanized steel frame protected with polyester powder painting. Panels are easily removable for maintenance and service activities.

COMPRESSORS
Hermetic “scroll” type with overload protection by a klaxon and complete with oil sight glass. They are installed on vibration absorbing rubbers and placed within a closed compartment to reduce sound level and to allow service and maintenance activities while unit is in operation.

CONDENSER / EVAPORATOR
Copper tube and aluminium finned coil. As option a protection grid is available.

FANS
Axial fans with aerodynamic outline blade section made of Al/Mg, directly coupled to a three phase electric motor with external rotor. A safety fan guard is fitted on air flow discharge.

REFRIGERANT CIRCUIT
Units from mod. 51 to mod. 181 are manufactured with 1 refrigerant circuit.
Units from mod. 212 to 352 are manufactured with 2 refrigerant circuits.
Each refrigerant circuit is complete with 2 service valves: 1 off on the suction line, 1 off on the discharge line.
To protect the refrigerant circuits, following devices are installed: manual reset high pressure switch and manual reset low pressure switch. Besides, where foreseen, manual reset safety pressure switches and safety valves.
In the heat pump unit (H-version) the refrigerant circuit contains, in addition: safety thermostat on compressor discharge line, 4-way-valve, thermostatic valve, dryer, no return valve, solenoid valve, liquid separator on compressor suction line.

ELECTRICAL BOARD
Weather proof type with protection grade IP54 installed in the compressor box to enable service and maintenance activities while unit is in operation.
It includes:
- Main circuit automatic breaker with locking door device, main fuses, compressor contactor and fuses, auxiliary circuits trafo, free contact to the room thermostat. Moreover microprocessor to control automatically the unit with a visual system to display the function as well as failures.

Versions

DS
Partial condensing heat recovery. Each refrigerant circuit includes a desuperheater insulated and installed in series between the compressor and the condenser.

RCS
(not available for heat pump units)
Condensing heat recovery from 70% to 90%. Each refrigerant circuit includes a heat exchanger insulated and mounted in series between compressor and condenser.
Condensing control through pressure transducer.

RCP
(not available for heat pump units)
100% condensing heat recovery. Each refrigerant circuit includes: a heat exchanger insulated and mounted in parallel to the condenser and the relevant solenoid valves.

LN
Low noise version, it includes: pressostatic fan speed control and sound proof material covering the compressor.

VLN (not available for heat pump units)
Very low noise version. Further to the LN devices, this version is equipped with a bigger surface condensing coil and low speed fans.

OPTIONS
- Liquid line kit (not mounted): dryer, sight glass, solenoid valve, shut off valve.
- Suction/liquid line shut off valves.
- Liquid receiver.
- Solenoid valve on liquid line (units cooling only).
- T-connection for HGBP-valve.
- Thermostatic valve (not mounted).
- Power factor condensing capacitors.
- Fans speed control.
- Cu/Cu condensing coils.
- Coils protection grid.
- Compressor suction and discharge shut-off valves.
- Gauges with shut-off valves.
- Programmer clock.
- Remote control panel.
- Rubber antivibrators.
- Wooden crate packing

SIZE		51	61	81	91	111	131	151
COOLING MODE ESMAE								
Cooling capacity	kW	48	59	72	83	95	108	130
Cooling capacity each circuit	kW	48	59	72	83	95	108	130
Abs. Power (1)	kW	17,3	19,3	26,6	31	36,4	40,9	47,8
HEATIG MODE ESMAE…H								
Heating capacity	kW	49	60	76	85	103	115	133
Heating capacity each circuit	kW	49	60	76	85	103	115	133
Abs. Power (1)	kW	13,5	16,5	20,8	23,8	27,8	30,8	35,9
COMPRESSOR (SCROLL TYPE)								
Quantity	n°	2						
Refrigerant circuit	n°	1						
Capacity steps	n°	2						
Refrigerant	-	R407C						
CONDENSER (VERS. STD/LN) (2)								
Refrigerant (5)	kg	13	13	15	17	25	25	33
Condenser internal volume	lt	15	15	15	20	18	24	31
Axial fan	n°	1	2	2	2	2	2	3
Nominal air flow (3)	m^3/s	3,66	6,77	6,77	6,53	10	9,44	9,42
Max abs power	kW	0,98	1,96	1,96	1,96	4	4	2,94
Max abs current	A	1,75	3,50	3,50	3,50	7	7	5,25
CONDENSER (VERS. VLN) (2)								
Refrigerant charge (5)	kg	Increase the STD/LN data of 25%						
Axial fans	n°	2	2	2	2	3	3	3
Nominal flow air	m^3/s	3,47	5,28	5,28	8,06	7,66	7,66	8,8
Max abs power	kW	0,32	1,4	1,4	4	2,1	2,1	6
Max abs current	A	0,90	2,3	2,3	7	3,45	3,45	10,5
UNIT ELECTRICAL DATA								
Max abs current	A	42	47	57	68	80	89	111
LRC	A	145	152	197	233	264	273	331
Electrical supply	V/f/Hz	400/3/50						
SOUND PRESSURE LEVEL AT 1 M (4)								
STD version	dB(A)	69	72	72	72	77	77	74
LN version	dB(A)	66	69	69	69	74	71	71
VLN version	dB(A)	61	64	64	64	66	66	66
DIMENSIONS								
Length	mm	2550	2550	2550	2550	2550	2550	3550
Width	mm	1150	1150	1150	1150	1150	1150	1150
Height	mm	2030	2030	2030	2030	2260	2260	2030
Weight	kg	684	724	755	831	991	1060	1105

Performances in cooling mode:
- evaporating temp. 7°C (dew point)
- ambient air temperature 35°C
- subcooling 5K

Performances in heating mode:
- condensing temperature 45°C (dew point)
- ambient air temperature 7°C db / 6 wb
- subcooling 5K

The performances don't consider the outside pipes pressure drop

Remarks: 1) Compressors + fans.
2) As version ESMAE…H (condensing unit) it works as evaporating unit.
3) Max air flow in case of LN version.
4) Compressor site and according to ISO 3744.
5) This data has only to be considered to charge the system as the unit leaves the factory with nitrogen.

SIZE		181	212	242	262	292	322	352
COOLING MODE ESMAE								
Cooling capacity	kW	164	190	216	238	260	324	352
Cooling capacity each circuit	kW	164	95+95	108+108	119+119	130+130	162+162	176+176
Abs. Power (1)	kW	61,6	71,8	81,9	88,8	95,7	107.8	121,5
HEATIG MODE ESMAE…H								
Heating capacity	kW	170	202	230	248	268	310	336
Heating capacity each circuit	kW	170	101+101	115+115	124+124	134+134	155+155	168+168
Abs. Power (1)	kW	47,7	54,7	61,6	66,7	71,7	88,7	94,9
COMPRESSOR (SCROLL TYPE)								
Quantity	n°	2	4					
Refrigerant circuit	n°	1	2					
Capacity steps	n°	2	4					
Refrigerant	-	R-407C						
CONDENSER (VERS. STD/LN) (2)								
Refrigerant (5)	kg	36	23+23	25+25	29+29	33+33	34+34	36+36
Condenser internal volume	lt	37	47	47	47	63	75	75
Axial fan	n°	3	5	6	6	6	6	6
Nominal air flow (3)	m^3/s	14,4	16	20	19,41	18,83	28,9	28,9
Max abs power	kW	6	5	5,88	5,88	5,88	12	12
Max abs current	A	10,5	9,5	10,5	10,5	10,5	21	21
CONDENSER (VERS. VLN) (2)								
Refrigerant charge (5)	kg	Increase the STD/LN data of 25%						
Axial fans	n°	3	6	6	6	6		
Nominal flow air	m^3/s	13,06	15,72	15,33	23,12	23,12		
Max abs power	kW	3,9	4,2	4,2	9,6	9,6		
Max abs current	A	7	6,9	6,9	16,8	16,8		
UNIT ELECTRICAL DATA								
Max abs current	A	136	162	180	203	224	260	280
LRC	A	383	345	364	423	446	505	527
Electrical supply	V/f/Hz	400/3/50						
SOUND PRESSURE LEVEL AT 1 M (4)								
STD version	dB(A)	79	75	77	77	77	82	82
LN version	dB(A)	72	72	74	74	74	79	79
VLN version	dB(A)	67	67	66	68	68	-	-
DIMENSIONS								
Length	mm	3550	3550	3550	3550	3550	3550	3550
Width	mm	1150	2295	2295	2295	2295	2295	2295
Height	mm	2260	2030	2030	2030	2030	2260	2260
Weight	kg	1350	1860	2053	2150	2250	2400	2650

Performances in cooling mode:
- evaporating temp. 7°C (dew point)
- ambient air temperature 35°C
- subcooling 5K

Performances in heating mode:
- condensing temperature 45°C (dew point)
- ambient air temperature 7°C db / 6 wb
- subcooling 5K

The performances don't consider the outside pipes pressure drop

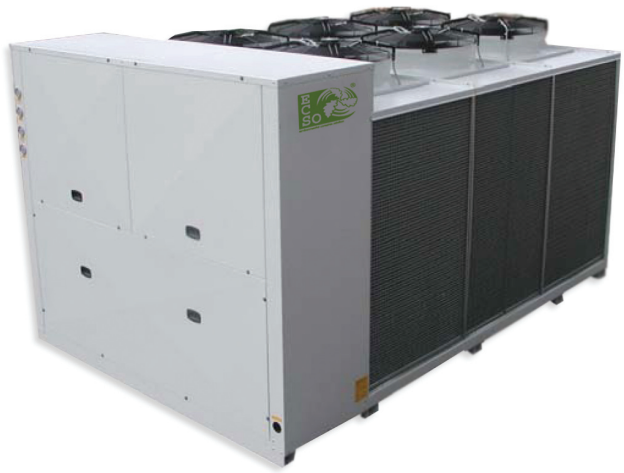
Remarks: 1) Compressors + fans.
2) As version ESMAE…H (condensing unit) it works as evaporating unit.
3) Max air flow in case of LN version.
4) Compressor site and according to ISO 3744.
5) This data has only to be considered to charge the system as the unit leaves the factory with nitrogen.

ESMAEY

Air cooled condensing units

Reversible head pumps
from 50 kW to 360 kW

ESMAEY air cooled condensing units
ESMAEY...H air cooled reversible head pumps



General features

FRAME
Self-supporting galvanized steel frame protected with polyester powder painting. Panels are easly removable for maintenance and service activities.

COMPRESSORS
Hermetic «scroll» type with overload protection by a klixon and complete with oil sight glass. They are installed on vibra- tion absorbing rubbers and placed within a closed compart- ment to reduce sound level and to allow service and mainte- nance activities while unit is in operation.

CONDENSER / EVAPORATOR
Copper tube and aluminium finned coil. As option a protection grid is available.

FANS
Axial fans with aerodynamic out line blade section made of Al/Mg, directly coupled to a three phase electric motor with external rotor. A safety fan guard is fitted on air flow discharge.

REFRIGERANT CIRCUIT
Each unit is equipped with one or two refrigerants circuits. Each refrigerant circuit is complete with 2 service valves: 1 off on the suction line, 1 off on the discharge line.
To protect the refrigerant circuits, following devices are installed: manual reset high pressure switch and manual reset low pressure switch. Besides, where foreseen, manual reset safety pressure switches and safety valves.
In the heat pump unit (H-version) the refrigerant circuit contains, in addition: safety thermostat on compressor discharge line, 4-way-valve, thermostatic valve, dryer, no-return valve, solenoid valve, liquid separator on compressor suction line.

ELECTRICAL BOARD
Weather proof type with protection grade IP54 installed in the compressor box to enable service and maintenance activities while unit is in operation.
It includes:
- Main circuit automatic breaker with locking door device, main fuses, compressor contactor and fuses, auxiliary circuits trafo, free contact to the room thermostat. Moreover microprocessor to control automatically the unit with a visual system to display the function as well as failures.

Versions

DS
Partial condensing heat recovery. Each refrigerant circuit includes a desuperheater insulated and installed in series between the compressor and the condenser.

RCS
(Not available for heat pump units).
Condensing heat recovery from 70% to 90%. Each refrigerant circuit includes a heat exchanger insulated and mounted in series between compressor and condenser. Condensing control through pressure transducer.

RCP
(Not available for heat pump units).
100% condensing heat recovery. Each refrigerant circuit includes: a heat exchanger insulated and mounted in parallel to the condenser and the relevant solenoid valves.

LN
Low noise version, it includes: pressostatic fan speed control and sound proof material covering the compressor.

VLN
(Not available for heat pump units).
Very low noise version. Further to the LN devices, this version is equipped with a bigger surface condensing coil and low speed fans.

OPTIONS

- Power factor correction.
- Fans speed control.
- Remote control panel.
- Programmer clock.
- RS 485 card.
- Compressor suction and discharge shut-off valves.
- Suction/liquid line shut off valve.
- Gauges with shut-off valves.
- Cu/Cu condensing coils.
- Coils protection grid.
- Liquid line kit (not mounted): dryer, sight glass, solenoid valve, shut off valve.
- Liquid receiver.
- T-connection for HGBP-valve.
- Thermostatic valve(not mounted).
- Power factor condensing capacitors.
- Solenoid valve on liquid line (units cooling only).
- Rubber antivibrators.
- High sensibility AV mounts.
- Wooden crate packing.

SIZE		61	71	81	91	101	121
COOLING MODE ESMAEY STD/LN							
Cooling capacity (1)	kW	51	57	68	73	90	107
Abs. power (2)	kW	17	21	22	26	29	34
EER (2)	-	3	2,7	3	2,8	3,1	3,1
COOLING MODE ESMAEY VLN							
Cooling capacity (1)	KW	49	54	65	70	85	100
Abs. power (2)	KW	17,7	30,6	23,1	26,3	30,1	34,7
HEATING MODE ESMAEY...H							
Heating capacity (1)	kW	53	58	70	76	93	107
Abs. power (2)	kW	14,6	16,8	18,6	20,4	23,8	29,1
COP	kW	3,6	3,4	3,7	3,7	3,9	3,7
COMPRESSOR (SCROLL TYPE)							
Quantity	n°	2					
Refrigerant circuit	n°	1					
Capacity step	n°	2					
Refrigerant	-	R410A					
Refrigerant charge (5)	Kg	13	13	15	17	24	25
CONDENSER (VERS. STD/LN) (3)							
Axial fan	n°	2	2	2	2	2	2
Max abs power	kW	1,95	1,95	1,95	1,95	1,95	4
Max abs current	A	3,5	3,5	3,5	3,5	3,5	7
CONDENSER (VERS. VLN) (2)							
Axial fans	n°	2	2	2	2	2	2
Max abs power	kW	1,5	1,5	1,5	1,5	1,5	2,6
Max abs current	A	2,8	2,8	2,8	2,8	2,8	5
UNIT ELECTRICAL DATA							
Max abs current	A	42,6	48,8	53,6	58,8	69,2	78,7
LRC	A	136,3	146,4	148,8	173,4	212,6	267,2
Electrical supply	V/f/Hz	400/3/50					
SOUND PRESSURE LEVEL AT 1 M (4)							
STD version	dB(A)	69	72	72	72	77	77
LN version	dB(A)	66	69	69	69	74	74
VLN version	dB(A)	61	64	64	64	66	66
DIMENSIONS							
Length	mm	2550	2550	2550	2550	2550	2550
Width	mm	1150	1150	1150	1150	1150	1150
Height	mm	2000	2000	2000	2000	2260	2260
Weight	kg	650	680	690	730	865	1050

Performances in cooling mode:
- evaporating temp. 7°C (dew point);
- ambient air temperature 35°C;
- subcooling 5K.

Performances in heating mode:
- condensing temperature 45°C (dew point);
- ambient air temperature 7°C db / 6 wb;
- subcooling 5K.

The performances don't consider the outside pipes pressure drop.

Remarks: Compressors + fans.
1) As version ESMAEY…H (condensing unit) it works as evaporating unit.
2) Max air flow in case of LN version.
3) Compressor site and according to ISO 3744.
4) This data has only to be considered to charge the system as the unit

SIZE		131	141	151	161	191	222
COOLING MODE ESMAEY STD/LN							
Cooling capacity (1)	kW	113	126	134	156	181	215
Abs. power (2)	kW	39,8	43,9	50,3	56,4	64,4	69
EER(2)	-	2,8	2,9	2,7	2,8	2,8	3,1
COOLING MODE ESMAEY VLN							
Cooling capacity (1)	KW	108	121	129	148	172	199
Abs. power (2)	KW	40,4	45,5	51,8	59,1	66,6	69,4
HEATING MODE ESMAEY…H							
Heating capacity (1)	kW	117	132	144	165	187	214
Abs. power (2)	kW	32,2	34,8	38,5	43,4	50,2	58,2
COP(2)	kW	3,6	3,8	3,7	3,8	3,7	3,7
COMPRESSOR (SCROLL TYPE)							
Quantity	n°			2			4
Refrigerant circuit	n°			1			2
Capacity step	n°			2			4
Refrigerant	-			R410A			
Refrigerant charge (5)	Kg	25	3	36	38	39	23+23
CONDENSER (VERS. STD/LN) (3)							
Axial fan	n°	2	3	3	3	3	4
Max abs power	kW	4	2,9	2,9	2,9	6	8
Max abs current	A	7	5,2	5,2	5,2	10,5	14
CONDENSER (VERS. VLN) (2)							
Axial fans	n°	2	3	3	3	3	4
Max abs power	kW	2,6	2,2	2,2	2,2	4,8	5,2
Max abs current	A	5	4,2	4,2	4,2	7,5	10
UNIT ELECTRICAL DATA							
Max abs current	A	81	91,6	99,7	114,1	133,9	154,4
LRC	A	269,5	319	327,1	365,1	384,9	342,9
Electrical supply	V/f/Hz			400/3/50			
SOUND PRESSURE LEVEL AT 1 M (4)							
STD version	dB(A)	77	74	74	74	79	82
LN version	dB(A)	74	71	71	71	72	75
VLN version	dB(A)	66	66	66	66	67	70
DIMENSIONS							
Length	mm	2550	3550	3550	3550	3550	2550
Width	mm	1150	1150	1150	2295	2295	2295
Height	mm	2260	2060	2260	2030	2030	2030
Weight	kg	1090	1150	1260	1440	1530	1920

Performances in cooling mode:
- evaporating temp. 7°C (dew point);
- ambient air temperature 35°C;
- subcooling 5K.

Performances in heating mode:
- condensing temperature 45°C (dew point);
- ambient air temperature 7°C db / 6 wb;
- subcooling 5K.

The performances don't consider the outside pipes pressure drop.

Remarks: Compressors + fans.
1) As version ESMAEY…H (condensing unit) it works as evaporating unit.
2) Max air flow in case of LN version.
3) Compressor site and according to ISO 3744.
4) This data has only to be considered to charge the system as the unit

SIZE		242	262	282	312	342	382
COOLING MODE ESMAEY STD/LN							
Cooling capacity (1)	kW	226	250	272	309	334	361
Abs. power (2)	kW	79,6	88	89,2	96	111,6	128,8
EER (2)	-	2,8	2,8	3	3,2	3	2,8
COOLING MODE ESMAEY VLN							
Cooling capacity (1)	KW	216	240	255	287	317	345
Abs. power (2)	KW	80,8	91	89,8	97,6	114,2	133,2
HEATING MODE ESMAEY…H							
Heating capacity (1)	kW	235	264	271	304	339	374
Abs. power (2)	kW	64,4	69,8	76	83,6	93,4	102,8
COP (2)	kW	3,6	3,8	3,6	3,6	3,6	3,6
COMPRESSOR (SCROLL TYPE)							
Quantity	n°	4					
Refrigerant circuit	n°	2					
Capacity step	n°	4					
Refrigerant	-	R410A					
Refrigerant charge (5)	Kg	23+23	25+25	26+26	33+33	34+34	36+36
CONDENSER (VERS. STD/LN) (3)							
Axial fan	n°	4	6	6	6	6	6
Max abs power	kW	8	5,8	12	12	12	12
Max abs current	A	14	10,4	21	21	21	21
CONDENSER (VERS. VLN) (2)							
Axial fans	n°	4	6	6	6	6	6
Max abs power	kW	5,2	4,4	9,6	9,6	9,6	9,6
Max abs current	A	10	8,4	15	15	15	15
UNIT ELECTRICAL DATA							
Max abs current	A	166,2	180,2	191	207,2	236	264,8
LRC	A	354,7	407,6	418,4	434,6	487	515,8
Electrical supply	V/f/Hz	400/3/50					
SOUND PRESSURE LEVEL AT 1 M (4)							
STD version	dB(A)	82	77	85	85	85	85
LN version	dB(A)	75	74	78	78	78	78
VLN version	dB(A)	70	68	73	73	73	73
DIMENSIONS							
Length	mm	2550	3550	3550	3550	3550	3550
Width	mm	2295	2295	2295	2295	2295	2295
Height	mm	2260	2260	2260	2260	2260	2260
Weight	kg	2120	2180	2290	2540	2690	2910

Performances in cooling mode:
- evaporating temp. 7°C (dew point);
- ambient air temperature 35°C;
- subcooling 5K.

Performances in heating mode:
- condensing temperature 45°C (dew point);
- ambient air temperature 7°C db / 6 wb;
- subcooling 5K.

The performances don't consider the outside pipes pressure drop.

Remarks:
1) Compressors + fans.
2) As version ESMAEY…H (condensing unit) it works as evaporating unit.
3) Max air flow in case of LN version.
4) Compressor site and according to ISO 3744.
5) This data has only to be considered to charge the system as the unit