

OMEGA V ECHOS

Water/water cooled chillers and heat pumps
172÷1527 kW



General information

Water-cooled water chillers with hermetic screw compressors and tube bundle heat exchangers. Designed for installation indoors.

Configuration

/A: High performance unit

/LC: Motoevaporator

/DC: Unit with recovery condenser

/DS: Unit with desuperheater

/LN: Low-noise unit

/SLN: Super low-noise unit

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TECHNICAL FEATURES

COMPRESSORS

Semi-hermetic screw compressors with continuous capacity reduction from 50% to 100% which maximizes energy efficiency in all operating conditions. Machine start-up and shutdown occur with a 25% capacity reduction and by switching the electric winding "delta-star".

Each compressor is equipped with a crankcase heater and lubrication is provided by the difference between delivery and intake pressure; the units with more compressors have separate refrigerant circuits.

The engine has a full electronic protection with temperature sensors placed directly in the windings and on compressor delivery line.

The compressor is installed on rubber anti-vibration mounts to prevent vibration transmission to the unit.

EVAPORATOR AND CONDENSER

Sleeve tube bundle type with dry expansion evaporator; optimized for operation with R134a, enhance the COP value of the unit, reducing the refrigerant load and the overall dimensions.

The evaporator is insulated with closed cell foam and is equipped with antifreeze protection temperature probe.

COOLING CIRCUIT

Each cooling circuit consists of: compressor delivery valve, shut-off valve on fluid line, feeding plug, fluid sight glass, dehydrating filter, electronic thermostatic expansion valve, compressor cooling device with fluid injection, high pressure switches (the low pressure control is provided by the pressure transducers), safety valve.

ELECTRICAL PANEL

The electrical board consists of:

- main disconnect switch;
- fuses for main and auxiliary power circuit protection;
- compressor remote switches;
- microprocessor to control the following functions:
 - control of ingoing water temperature;
 - anti-freeze protection;
 - compressor operation timers;
 - automatic rotation of compressor start-up sequence;
 - alarm signals;
 - alarm reset;
 - cumulative alarm contact for remote signaling;
 - forced capacity reduction according to pressure limits;
 - alarm history recording;
- display of:
 - outgoing water temperature;
 - currently set temperature and differential;
 - alarm description;
 - hour counter for operation, compressor and unit start-ups;

- alarm history.

- Power supply [V/f/Hz]: 400/3~/50 ±5%.

CONTROL AND SAFETY DEVICES

- manual reset high pressure controller;
- automatic reset high pressure safety switch with limited trip controlled by the microprocessor;
- automatic reset low pressure safety switch with limited trip controlled by the microprocessor;
- high pressure safety valve;
- anti-freeze probe on evaporator outlet;
- cooled water temperature control probe on evaporator outlet;
- compressor overtemperature protection;
- compressor cooling device with fluid injection;
- forced capacity reduction at high pressure.

TESTING

The units are factory-tested and supplied complete with oil and refrigerant.

VERSIONS

OMEGA V ECHOS /LC:

motoevaporator

The unit is not equipped with the water-cooled condenser and therefore it can not be connected to a remote air-cooled condenser.

The fluid receiver and the solenoid valve of the fluid line are available as accessories. The unit is supplied without refrigerant charge but pre-charged with nitrogen.

ACCESSORY VERSIONS

OMEGA V ECHOS /DC:

unit with recovery condenser

Available for all models, enables the full recovery of condensation heat.

In addition to OMEGA V ECHOS / OMEGA V ECHOS A standard version, the unit has a heat recovery condenser on each cooling line used exclusively for the production of domestic hot water.

The recovery water temperature and the recovery safety valve disablement are controlled automatically by the microprocessor.

OMEGA V ECHOS /DS:

unit with desuperheater

Available for all models, enables the partial recovery of condensation heat.

In addition to the components of OMEGA V ECHOS / OMEGA V ECHOS A standard version, the unit has a heat recovery condenser (up to 20%) on each cooling line used for the production of domestic hot water, (10% OMEGA V ECHOS A).

OMEGA V ECHOS /LN:

Low-noise unit

In addition to the components of OMEGA V ECHOS version, the unit has soundproof housing consisting of a hard external hook in galvanized painted steel sheet, insulated internally with soundproof material and a high impedance material interposed;

OMEGA V ECHOS /SLN:

Super low-noise unit

In addition to OMEGA V ECHOS /LN version, the unit has the compressor delivery and intake pipes insulated with high impedance soundproof material.

OMEGA V ECHOS /A:

high performance unit

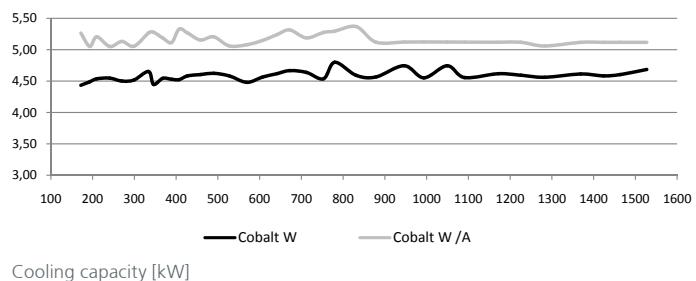
The increased interest of customers in energy savings and the standards more and more stringent concerning the environmental impact of industrialized products have led The company to create a new range of high efficiency water/ water cooled chillers.

Available for all standard units.

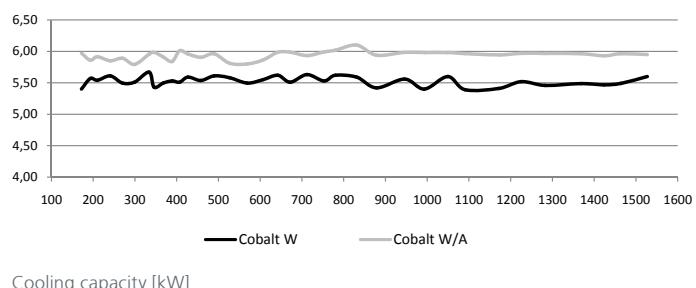
The values of EER and ESEER are diagrammed below and com-

pared with the standard range. It is noted that even at part load energy efficiency is kept at high values.

EER at 100% load



ESEER



ACCESSORIES

REFRIGERANT CIRCUIT ACCESSORIES

- pressure relief valve for condensation control;
- dual set point (high/low temperature) with a single electronic expansion valve. The unit evaporator is sized according to high temperature operation. The set point can be changed from the keyboard or the digital input, in this case it must be specified in the order;
- high and low pressure switches are available for all models; The intake and delivery pressures are detected by transducers, which allow the relative values to be read on the control display.
- compressor intake valves;
- solenoid valve on the fluid line;
- kit for evaporator low water temperatures.

ELECTRICAL ACCESSORIES

- Bacnet, LonWorks, Ethernet, Modbus, SNMP, FTP, HTTP serial interface.
- power factor correction $\cos\varphi \geq 0.9$ under nominal operating conditions; supplied as standard
- remote user terminal (in addition to the standard one);
- remote signal variable set point (0-1V, 0-10V, 0-4mA,0-20mA);
- Operation voltage-free contacts;
- Automatic circuit breakers;
- Maximum and minimum voltage relè;
- Power supply 415/3/50
- Absorbed current limit;
- Relè Management PSM;
- Electronic soft-starter;
- Automatic circuit breakers for compressors;
- SMARTLINK.

MISCELLANEOUS ACCESSORIES

- Rubber antivibration mounts;
- Spring anti-vibration mounts;
- Packaging in wooden crates;
- Supplied pre-assembled.

DOUBLE SET-POINT

The microprocessor enables you to set two set temperatures for the production of cold and hot water. Unless specified otherwise in the order, the default values are 12/7 °C and 15/10 °C for chiller mode and 40/45 °C and 35/40 °C for heat pump mode. The set temperatures must, in any case, remain within the operating ranges of the unit.

Use either the keypad or the digital input to switch between the first and second set. For series that do not permit the simultaneous selection of "Select summer/winter mode with digital input" and "Double set point with digital input", summer/winter mode can be selected only on the keypad while the double set point still uses the digital input, as per our standard

"BRINE KIT" ACCESSORY

It is applied if the evaporator output temperature is included within +3°C and -8°C. It consists in a higher thermal insulation of the exchanger and piping, a specific calibration of the low pressure switches and of the anti-freeze alarm, and dimensioning check of the mechanical thermostatic valve.

If it is not included in the set-up, the "Check condensation" accessory must be added.

TECHNICAL DATA OMEGA V ECHOS

Unit size		18.1	20.1	22.1	24.1	27.1	31.1	35.1	36.2	38.2	41.2	42.1	45.2	
Cooling (Gross values)														
Nominal cooling capacity	(1)	kW	172	193	210	241	270	299	334	346	368	389	407	427
Total power input for cooling	(1)	kW	39	43	46	53	60	66	72	78	81	86	90	93
EER	(1)		4,43	4,49	4,54	4,55	4,50	4,52	4,65	4,45	4,54	4,53	4,52	4,58
ESEER			5,40	5,57	5,54	5,61	5,50	5,51	5,67	5,43	5,50	5,53	5,51	5,59
Efficiency class			C	C	C	C	C	B	C	C	C	C	C	
Cooling (EN 14511 values)														
Nominal cooling capacity	(1)(5)	kW	171	192	209	240	269	298	333	345	367	388	405	425
EER	(1)(5)		4,27	4,30	4,35	4,38	4,34	4,34	4,48	4,29	4,39	4,38	4,37	4,41
ESEER	(5)		4,81	4,89	4,85	4,95	4,84	4,78	4,97	4,78	4,86	4,87	4,84	4,88
Efficiency class			C	C	C	C	C	C	C	C	C	C	C	
Compressors														
Type								Screw						
Quantity/Cooling circuits	n°/h°		1	1	1	1	1	1	1	2	2	2	1	2
Capacity steps	n°							Continue						
Total oil load	l		14	16	16	16	15	18	20	28	30	32	20	32
Refrigerant total load	kg		32	32	30	34	40	46	79	62	62	62	74	60
Evaporator														
Water flow	(1)	lh	29.579	33.190	36.113	41.445	46.432	51.419	57.438	59.501	63.285	66.896	69.991	73.431
Pressure drop	(2)	kPa	35	51	49	44	43	52	40	48	43	47	47	52
Condenser														
Water flow	(1)	lh	36.251	40.585	44.076	50.559	56.750	62.803	69.785	72.880	77.214	81.668	85.469	89.458
Pressure drop		kPa	29	29	32	30	33	37	38	29	29	29	31	32
Noise levels														
Noise power level	(3)	dB(A)	84	84	84	87	89	91	93	89	87	87	97	87
Noise pressure level	(4)	dB(A)	67	67	67	70	72	74	75	71	69	69	79	69
Noise power level (LN version)	(3)	dB(A)	80	80	80	82	84	87	88	85	83	83	93	82
Noise pressure level (LN version)	(4)	dB(A)	63	63	63	65	67	70	70	67	65	65	75	64
Noise power level (SLN version)	(3)	dB(A)	73	73	73	76	78	80	81	78	76	75	86	76
Noise pressure level (SLN version)	(4)	dB(A)	56	56	56	59	61	63	63	60	58	57	68	58
Basic version dimensions and weights														
Length		mm	3.410	3.410	3.410	2.440	2.440	2.440	3.430	3.630	3.630	3.630	3.530	3.630
Depth		mm	900	900	900	1.200	1.200	1.200	1.250	1.250	1.250	1.250	1.260	1.250
Height		mm	1.370	1.370	1.370	1.460	1.460	1.460	1.400	1.580	1.600	1.600	1.420	1.600
Operating weight		kg	1.224	1.318	1.297	1.471	1.596	1.669	1.648	2.097	2.192	2.285	1.779	2.243

(1) Water temperature at evaporator inlet-outlet 12-7°C; water temperature at condenser inlet-outlet 30-35°C;

(2) Water temperature at evaporator inlet-outlet 12-7°C

(3) Calculated according to ISO 3744 under nominal operating conditions.

(4) Sound pressure levels measured at 1 metres from the unit in free field under nominal working

conditions, according to ISO 3744

(5) Values in compliance with EN 14511-3:2011

This data sheet shows the data of the basic and standard series; for further details refer to the specific documentation.

TECHNICAL DATA OMEGA V ECHOS

Unit size		46.2	49.2	53.2	57.2	62.2	65.2	69.2	72.2	76.2	78.2	83.2	88.2	
Cooling (Gross values)														
Nominal cooling capacity	(1)	kW	458	490	527	569	607	642	672	712	753	780	831	878
Total power input for cooling	(1)	kW	100	106	115	127	133	139	144	154	166	163	181	192
EER	(1)		4,60	4,62	4,58	4,48	4,56	4,62	4,67	4,64	4,54	4,80	4,59	4,57
ESEER			5,54	5,61	5,58	5,50	5,55	5,62	5,51	5,63	5,53	5,62	5,59	5,42
Efficiency class			C	C	C	C	C	B	C	C	B	C	C	
Cooling (EN 14511 values)														
Nominal cooling capacity	(1)(5)	kW	457	488	525	567	604	640	670	710	751	778	828	875
EER	(1)(5)		4,46	4,47	4,43	4,32	4,39	4,48	4,52	4,50	4,40	4,65	4,45	4,39
ESEER	(5)		4,90	4,94	4,92	4,78	4,81	4,97	4,84	4,99	4,89	4,96	4,92	4,65
Efficiency class			C	C	C	C	C	C	C	C	B	C	C	
Compressors														
Type									Screw					
Quantity/Cooling circuits	n°h°		2	2	2	2	2	2	2	2	2	2	2	
Capacity steps	n°								Continue					
Total oil load	l		32	32	30	33	36	38	40	43	46	40	51	56
Refrigerant total load	kg		60	71	81	83	76	129	160	142	146	160	180	190
Evaporator														
Water flow	(1)	lh	78.762	84.265	90.628	97.850	104.385	110.404	115.563	122.442	129.493	134.136	142.906	151.055
Pressure drop	(2)	kPa	38	42	43	55	60	37	39	36	40	41	46	48
Condenser														
Water flow	(1)	lh	95.873	102.494	110.404	119.690	127.257	134.308	140.327	148.839	158.040	162.081	174.033	184.141
Pressure drop		kPa	33	33	32	33	33	33	38	33	32	32	31	51
Noise levels														
Noise power level	(3)	dB(A)	87	87	87	91	93	91	96	96	97	98	100	100
Noise pressure level	(4)	dB(A)	69	69	69	73	75	72	77	77	78	79	81	81
Noise power level (LN version)	(3)	dB(A)	82	82	82	87	88	87	91	92	92	93	95	95
Noise pressure level (LN version)	(4)	dB(A)	64	64	64	69	70	68	72	73	73	74	76	76
Noise power level (SLN version)	(3)	dB(A)	76	76	75	80	81	80	84	85	85	86	88	89
Noise pressure level (SLN version)	(4)	dB(A)	58	58	57	62	63	61	65	66	66	67	69	70
Basic version dimensions and weights														
Length		mm	3.640	3.640	3.640	3.640	3.640	4.070	4.070	4.060	4.060	4.060	4.060	4.770
Depth		mm	1.250	1.250	1.250	1.250	1.250	1.280	1.280	1.280	1.280	1.280	1.280	1.460
Height		mm	1.690	1.690	1.690	1.690	1.690	1.900	1.900	1.950	1.950	1.950	1.950	2.150
Operating weight		kg	2.431	2.469	2.730	2.807	2.887	3.138	3.097	3.303	3.371	3.365	3.354	3.975

(1) Water temperature at evaporator inlet-outlet 12-7°C; water temperature at condenser inlet-outlet 30-35°C;

(2) Water temperature at evaporator inlet-outlet 12-7°C

(3) Calculated according to ISO 3744 under nominal operating conditions.

(4) Sound pressure levels measured at 1 metres from the unit in free field under nominal working

conditions, according to ISO 3744

(5) Values in compliance with EN 14511-3:2011

This data sheet shows the data of the basic and standard series; for further details refer to the specific documentation.

TECHNICAL DATA OMEGA V ECHOS

Unit size		95.2	100.2	105.2	110.2	117.2	124.2	130.3	137.3	143.3	147.3	153.3	
Cooling (Gross values)													
Nominal cooling capacity	(1)	kW	946	993	1049	1091	1171	1225	1282	1369	1424	1464	1527
Total power input for cooling	(1)	kW	199	218	221	239	254	267	281	297	311	318	326
EER	(1)		4,74	4,55	4,74	4,56	4,62	4,59	4,56	4,61	4,58	4,60	4,68
ESEER			5,56	5,40	5,60	5,39	5,41	5,52	5,46	5,49	5,47	5,49	5,60
Efficiency class			B	C	B	C	C	C	C	C	C	C	B
Cooling (EN 14511 values)													
Nominal cooling capacity	(1)(5)	kW	942	989	1044	1087	1167	1221	1278	1364	1418	1457	1520
EER	(1)(5)		4,55	4,35	4,52	4,40	4,44	4,41	4,39	4,43	4,39	4,40	4,47
ESEER	(5)		4,73	4,56	4,71	4,65	4,62	4,68	4,67	4,68	4,61	4,62	4,76
Efficiency class			C	C	C	C	C	C	C	C	C	C	C
Compressors													
Type								Screw					
Quantity/Cooling circuits	n°h°		2	2	2	2	2	2	3	3	3	3	
Capacity steps	n°							Continue					
Total oil load	l	40	51	56	56	56	56	74	79	84	84	84	
Refrigerant total load	kg	160	180	190	195	220	230	225	250	270	280	290	
Evaporator													
Water flow	(1)	lh	134.136	142.906	151.055	162.683	201.431	210.711	220.546	235.409	244.911	251.752	262.622
Pressure drop	(2)	kPa	41	46	48	54	50	55	53	58	69	72	75
Condenser													
Water flow	(1)	lh	162.081	174.033	184.141	196.973	245.059	256.592	268.904	286.450	298.359	306.438	318.684
Pressure drop		kPa	32	31	51	54	54	57	50	50	54	54	54
Noise levels													
Noise power level	(3)	dB(A)	98	100	100	100	101	101	101	101	101	101	101
Noise pressure level	(4)	dB(A)	79	81	81	81	81	81	81	81	81	81	81
Noise power level (LN version)	(3)	dB(A)	93	95	95	95	96	96	96	96	96	97	97
Noise pressure level (LN version)	(4)	dB(A)	74	76	76	76	76	76	76	76	76	77	77
Noise power level (SLN version)	(3)	dB(A)	86	88	89	89	90	91	91	91	91	91	91
Noise pressure level (SLN version)	(4)	dB(A)	67	69	70	70	70	71	71	71	71	71	71
Basic version dimensions and weights													
Length		mm	4.060	4.060	4.770	4.770	4.770	4.770	4.450	4.450	4.450	4.450	4.450
Depth		mm	1.280	1.280	1.460	1.460	1.420	1.420	2.130	2.130	2.130	2.130	2.130
Height		mm	1.950	1.950	2.150	2.150	2.220	2.220	2.300	2.300	2.300	2.300	2.300
Operating weight		kg	3.365	3.354	3.975	4.080	4.772	4.810	6.192	6.297	6.402	6.492	6.581

(1) Water temperature at evaporator inlet-outlet 12-7°C; water temperature at condenser inlet-outlet 30-35°C;

(2) Water temperature at evaporator inlet-outlet 12-7°C

(3) Calculated according to ISO 3744 under nominal operating conditions.

(4) Sound pressure levels measured at 1 metres from the unit in free field under nominal working

conditions, according to ISO 3744

(5) Values in compliance with EN 14511-3:2011

This data sheet shows the data of the basic and standard series; for further details refer to the specific documentation.

TECHNICAL DATA OMEGA V ECHOS /A

Unit size		18.1	20.1	22.1	24.1	27.1	31.1	35.1	36.2	38.2	41.2	42.1	45.2	
Cooling (Gross values)														
Nominal cooling capacity	(1)	kW	186	206	223	256	284	317	364	368	391	413	419	448
Total power input for cooling	(1)	kW	35	39	42	49	54	61	69	70	74	79	79	85
EER	(1)		5,32	5,28	5,27	5,26	5,28	5,23	5,27	5,28	5,28	5,23	5,33	5,27
ESEER			5,97	5,86	5,91	5,85	5,89	5,79	5,96	5,98	5,91	5,84	6,01	5,96
Efficiency class			A	A	A	A	A	A	A	A	A	A	A	
Cooling (EN 14511 values)														
Nominal cooling capacity	(1)(5)	kW	185	205	222	255	283	315	362	367	389	411	417	446
EER	(1)(5)		5,09	5,08	5,09	5,07	5,09	5,07	5,08	5,11	5,10	5,06	5,13	5,09
ESEER	(5)		5,24	5,17	5,27	5,14	5,22	5,16	5,23	5,34	5,23	5,18	5,24	5,27
Efficiency class			A	A	A	A	A	A	A	A	A	A	A	
Compressors														
Type									Screw					
Quantity/Cooling circuits	n°/h°		1	1	1	1	1	1	1	2	2	2	1	2
Capacity steps	n°								Continue					
Total oil load	l		14	16	16	16	15	18	20	28	30	32	20	32
Refrigerant total load	kg		35	35	33	37	44	51	87	68	68	68	81	66
Evaporator														
Water flow	(1)	lh	31.860	34.662	37.863	43.254	48.443	53.368	62.592	63.354	66.711	70.001	71.991	77.007
Pressure drop	(2)	kPa	67	59	59	50	60	52	57	58	66	57	56	65
Condenser														
Water flow	(1)	lh	37.913	41.524	45.137	51.818	57.884	63.927	74.475	75.357	79.574	83.689	85.508	91.625
Pressure drop		kPa	13	14	7	22	11	11	18	7	8	12	24	9
Noise levels														
Noise power level	(3)	dB(A)	84	84	84	87	89	91	93	89	87	87	97	87
Noise pressure level	(4)	dB(A)	67	67	67	70	72	74	75	71	69	69	79	69
Noise power level (LN version)	(3)	dB(A)	80	80	80	82	84	87	88	85	83	83	93	82
Noise pressure level (LN version)	(4)	dB(A)	63	63	63	65	67	70	70	67	65	65	75	64
Noise power level (SLN version)	(3)	dB(A)	73	73	73	76	78	80	81	78	76	75	86	76
Noise pressure level (SLN version)	(4)	dB(A)	56	56	56	59	61	63	63	60	58	57	68	58
Basic version dimensions and weights														
Length		mm	3.420	3.420	3.420	2.450	2.450	2.450	3.530	3.890	3.890	3.890	3.530	3.890
Depth		mm	960	960	960	1.340	1.340	1.340	1.350	1.380	1.380	1.380	1.350	1.380
Height		mm	1.370	1.370	1.400	1.460	1.540	1.540	1.470	1.730	1.730	1.730	1.470	1.730
Operating weight		kg	1.240	1.278	1.398	1.374	1.704	1.774	1.605	2.335	2.361	2.441	1.792	2.497

(1) Water temperature at evaporator inlet-outlet 12-7°C; water temperature at condenser inlet-outlet 30-35°C;

(2) Water temperature at evaporator inlet-outlet 12-7°C

(3) Calculated according to ISO 3744 under nominal operating conditions.

(4) Sound pressure levels measured at 1 metres from the unit in free field under nominal working

conditions, according to ISO 3744

(5) Values in compliance with EN 14511-3:2011

This data sheet shows the data of the basic and standard series; for further details refer to the specific documentation.

TECHNICAL DATA OMEGA V ECHOS /A

Unit size		46.2	49.2	53.2	57.2	62.2	65.2	69.2	72.2	76.2	78.2	83.2	88.2	
Cooling (Gross values)														
Nominal cooling capacity	(1)	kW	487	521	569	603	639	692	730	755	795	822	858	931
Total power input for cooling	(1)	kW	93	99	109	115	122	132	137	144	151	155	160	178
EER	(1)		5,26	5,24	5,22	5,24	5,26	5,24	5,31	5,24	5,27	5,29	5,37	5,23
ESEER			5,91	5,96	5,81	5,80	5,86	5,98	5,99	5,93	5,99	6,02	6,10	5,94
Efficiency class		A	A	A	A	A	A	A	A	A	A	A	A	
Cooling (EN 14511 values)														
Nominal cooling capacity	(1)(5)	kW	485	519	567	600	636	690	728	753	793	820	855	928
EER	(1)(5)		5,10	5,07	5,06	5,08	5,09	5,07	5,16	5,09	5,10	5,12	5,17	5,06
ESEER	(5)		5,22	5,24	5,15	5,14	5,17	5,27	5,28	5,22	5,25	5,23	5,27	5,13
Efficiency class		A	A	A	A	A	A	A	A	A	A	A	A	
Compressors														
Type									Screw					
Quantity/Cooling circuits	n°/h°		2	2	2	2	2	2	2	2	2	2	2	
Capacity steps	n°								Continue					
Total oil load	l	32	32	30	33	36	38	40	43	46	43	40	51	
Refrigerant total load	kg	66	78	89	91	84	142	176	156	161	172	176	198	
Evaporator														
Water flow	(1)	lh	82.784	88.967	96.067	101.662	108.694	119.077	125.584	129.444	136.767	141.402	147.521	158.320
Pressure drop	(2)	kPa	49	55	56	62	68	52	56	45	48	50	53	57
Condenser														
Water flow	(1)	lh	98.846	106.061	115.052	121.679	129.812	141.794	149.212	154.397	162.700	168.109	175.002	189.240
Pressure drop	kPa		18	18	12	10	10	18	16	23	25	29	33	29
Noise levels														
Noise power level	(3)	dB(A)	87	87	87	91	93	91	96	96	97	98	100	100
Noise pressure level	(4)	dB(A)	69	69	69	73	75	72	77	77	78	79	81	81
Noise power level (LN version)	(3)	dB(A)	82	82	82	87	88	87	91	92	92	93	95	95
Noise pressure level (LN version)	(4)	dB(A)	64	64	64	69	70	68	72	73	73	74	76	76
Noise power level (SLN version)	(3)	dB(A)	76	76	75	80	81	80	84	85	85	86	88	89
Noise pressure level (SLN version)	(4)	dB(A)	58	58	57	62	63	61	65	66	66	67	69	70
Basic version dimensions and weights														
Length		mm	3.890	3.890	3.890	3.890	3.890	4.250	4.250	4.250	4.250	4.250	4.250	4.770
Depth		mm	1.380	1.380	1.380	1.380	1.380	1.380	1.380	1.380	1.380	1.380	1.380	1.460
Height		mm	1.780	1.780	1.780	1.780	1.780	2.040	2.040	2.000	2.000	2.000	2.000	2.150
Operating weight		kg	2.547	2.592	2.870	3.004	3.102	3.266	3.244	3.261	3.310	3.282	3.272	3.971

(1) Water temperature at evaporator inlet-outlet 12-7°C; water temperature at condenser inlet-outlet 30-35°C;

(2) Water temperature at evaporator inlet-outlet 12-7°C

(3) Calculated according to ISO 3744 under nominal operating conditions.

(4) Sound pressure levels measured at 1 metres from the unit in free field under nominal working

conditions, according to ISO 3744

(5) Values in compliance with EN 14511-3:2011

This data sheet shows the data of the basic and standard series; for further details refer to the specific documentation.

TECHNICAL DATA OMEGA V ECHOS /A

Unit size		95.2	100.2	105.2	110.2	117.2	124.2	130.3	137.3	143.3	147.3	153.3
Cooling (Gross values)												
Nominal cooling capacity	(1) kW	994	1048	1093	1160	1233	1296	1349	1428	1480	1525	1575
Total power input for cooling	(1) kW	189	200	208	221	235	247	258	271	283	291	299
EER	(1)	5,26	5,24	5,25	5,25	5,25	5,25	5,23	5,27	5,23	5,24	5,27
ESEER		5,98	5,98	5,98	5,96	5,94	5,97	5,97	5,96	5,93	5,96	5,95
Efficiency class		A	A	A	A	A	A	A	A	A	A	A
Cooling (EN 14511 values)												
Nominal cooling capacity	(1)(5) kW	990	1044	1089	1156	1229	1291	1345	1423	1476	1520	1569
EER	(1)(5)	5,08	5,07	5,09	5,08	5,07	5,06	5,06	5,07	5,09	5,08	5,10
ESEER	(5)	5,16	5,21	5,21	5,16	5,10	5,10	5,12	5,03	5,23	5,13	5,11
Efficiency class		A	A	A	A	A	A	A	A	A	A	A
Compressors												
Type								Screw				
Quantity/Cooling circuits	n°h°	1	2	2	2	2	2	3	3	3	3	3
Capacity steps	n°							Continue				
Total oil load	l	56	56	56	56	56	56	74	79	84	84	84
Refrigerant total load	kg	209	215	223	231	242	253	248	275	297	308	319
Evaporator												
Water flow	(1) l/h	169.449	178.248	186.346	197.253	209.657	220.213	228.421	242.416	251.844	259.664	267.484
Pressure drop	(2) kPa	64	53	57	49	59	64	57	70	42	58	61
Condenser												
Water flow	(1) l/h	202.536	213.038	222.734	235.774	250.620	263.240	273.580	289.793	301.061	310.412	319.762
Pressure drop	kPa	27	26	24	33	34	35	36	43	24	33	29
Noise levels												
Noise power level	(3) dB(A)	100	100	100	100	101	101	101	101	101	101	101
Noise pressure level	(4) dB(A)	81	81	81	80	81	81	81	81	81	81	81
Noise power level (LN version)	(3) dB(A)	95	95	95	96	96	96	96	96	96	97	97
Noise pressure level (LN version)	(4) dB(A)	76	76	76	76	76	76	76	76	76	77	77
Noise power level (SLN version)	(3) dB(A)	89	89	90	90	90	91	91	91	91	91	91
Noise pressure level (SLN version)	(4) dB(A)	70	70	71	70	70	71	71	71	71	71	71
Basic version dimensions and weights												
Length	mm	4.770	4.770	4.770	4.770	4.770	4.770	4.450	4.450	4.450	4.450	4.450
Depth	mm	1.460	1.460	1.460	1.420	1.420	1.420	2.130	2.130	2.130	2.130	2.130
Height	mm	2.150	2.150	2.150	2.220	2.220	2.220	2.300	2.300	2.300	2.300	2.300
Operating weight	kg	4.088	4.213	4.302	4.724	4.754	4.784	6.282	6.377	6.507	6.627	6.734

(1) Water temperature at evaporator inlet-outlet 12-7°C; water temperature at condenser inlet-outlet 30-35°C;

(2) Water temperature at evaporator inlet-outlet 12-7°C

(3) Calculated according to ISO 3744 under nominal operating conditions.

(4) Sound pressure levels measured at 1 metres from the unit in free field under nominal working

conditions, according to ISO 3744

(5) Values in compliance with EN 14511-3:2011

This data sheet shows the data of the basic and standard series; for further details refer to the specific documentation.

TECHNICAL DATA OMEGA V ECHOS /LC

Unit size		18.1	20.1	22.1	24.1	27.1	31.1	35.1	36.2	38.2	41.2	42.1	45.2
Cooling (Gross values)													
Nominal cooling capacity	(1) kW	143	172	180	214	236	266	283	293	322	340	341	368
Total power input for cooling	(1) kW	44	50	53	61	69	77	84	87	94	99	96	106
EER	(1)	3,30	3,47	3,40	3,51	3,43	3,45	3,37	3,37	3,44	3,43	3,55	3,47
Cooling (EN 14511 values)													
Nominal cooling capacity	(1),(5) kW	143	171	180	213	236	265	282	292	321	339	340	366
EER	(1),(5)	3,25	3,40	3,34	3,45	3,37	3,40	3,33	3,32	3,39	3,38	3,50	3,42
Compressors													
Type													Screw
Quantity/Cooling circuits	n°/h°	1/1	1/1	1/1	1/1	1/1	1/1	1/1	2/2	2/2	2/2	1/1	2/2
Capacity steps	n°												Continue
Total oil load	l	14	16	16	16	15	18	20	28	30	32	20	32
Evaporator													
Water flow	(1) l/h	24.660	29.531	31.006	36.822	40.650	45.727	48.702	50.421	55.324	58.469	58.641	63.250
Pressure drop	(2) kPa	28	41	40	37	36	43	33	40	34	38	38	42
Noise levels													
Noise power level	(3) dB(A)	84	84	84	87	89	91	93	89	87	87	97	87
Noise pressure level	(4) dB(A)	67	67	67	70	72	74	75	71	69	69	79	69
Noise power level (LN version)	(3) dB(A)	80	80	80	82	84	87	88	85	83	83	93	82
Noise pressure level (LN version)	(4) dB(A)	63	63	63	65	67	70	70	67	65	65	75	64
Noise power level (SLN version)	(3) dB(A)	73	73	73	76	78	80	81	78	76	75	86	76
Noise pressure level (SLN version)	(4) dB(A)	56	56	56	59	61	63	63	60	58	57	68	58
Basic version dimensions and weights													
Length	mm	2.500	2.500	2.500	2.600	2.600	2.600	3.600	3.600	3.600	3.600	3.600	3.600
Depth	mm	1.200	1.200	1.200	1.200	1.200	1.200	1.250	1.250	1.250	1.250	1.250	1.250
Height	mm	1.250	1.250	1.250	1.320	1.320	1.320	1.370	1.250	1.250	1.250	1.370	1.250
Operating weight	kg	1.190	1.278	1.256	1.296	1.417	1.487	1.471	1.809	1.895	1.981	1.516	1.938

Grandezza unità		46.2	49.2	53.2	57.2	62.2	65.2	69.2	72.2	76.2	78.2	83.2	88.2
Cooling (Gross values)													
Nominal cooling capacity	(1) kW	402	426	465	506	541	558	575	620	640	665	697	769
Total power input for cooling	(1) kW	115	122	137	146	154	162	169	177	183	188	193	216
EER	(1)	3,51	3,49	3,39	3,47	3,51	3,45	3,40	3,51	3,50	3,54	3,61	3,56
Cooling (EN 14511 values)													
Nominal cooling capacity	(1),(5) kW	401	425	464	504	539	556	573	619	639	663	695	767
EER	(1),(5)	3,47	3,45	3,35	3,41	3,45	3,41	3,36	3,48	3,46	3,50	3,56	3,51
Compressors													
Type													Screw
Quantity/Cooling circuits	n°/h°	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2
Capacity steps	n°												Continue
Total oil load	l	32	32	30	33	36	38	40	43	46	43	40	51
Evaporator													
Water flow	(1) l/h	69.087	73.279	79.983	87.042	92.984	95.924	98.831	106.638	110.129	114.294	119.897	132.244
Pressure drop	(2) kPa	31	35	35	44	49	31	34	28	30	32	38	40
Noise levels													
Noise power level	(3) dB(A)	87	87	87	91	93	91	96	96	97	98	100	100
Noise pressure level	(4) dB(A)	69	69	69	73	75	72	77	77	78	79	81	81
Noise power level (LN version)	(3) dB(A)	82	82	82	87	88	87	91	92	92	93	95	95
Noise pressure level (LN version)	(4) dB(A)	64	64	64	69	70	68	72	73	73	74	76	76
Noise power level (SLN version)	(3) dB(A)	76	76	75	80	81	80	84	85	85	86	88	89
Noise pressure level (SLN version)	(4) dB(A)	58	58	57	62	63	61	65	66	66	67	69	70
Basic version dimensions and weights													
Length	mm	3.700	3.700	3.700	3.700	3.700	4.070	4.070	4.070	4.070	4.070	4.070	4.710
Depth	mm	1.250	1.250	1.250	1.250	1.250	1.280	1.280	1.280	1.280	1.280	1.280	1.350
Height	mm	1.360	1.360	1.360	1.360	1.360	1.570	1.570	1.550	1.550	1.550	1.550	1.630
Operating weight	kg	2.118	2.148	2.389	2.458	2.529	2.781	2.741	2.800	2.861	2.846	2.826	3.415

(1) Water temperature at evaporator inlet-outlet 12-7°C; water temperature at condenser inlet-outlet 30-35°C;

(2) Water temperature at evaporator inlet-outlet 12-7°C

(3) Calculated according to ISO 3744 under nominal operating conditions.

(4) Sound pressure levels measured at 1 metres from the unit in free field under nominal working

conditions, according to ISO 3744

(5) Values in compliance with EN 14511-3:2011

This data sheet shows the data of the basic and standard series; for further details refer to the specific documentation.

TECHNICAL DATA OMEGA V ECHOS /LC

Unit size		95.2	100.2	105.2	110.2	117.2	124.2	130.3	137.3	143.3	147.3	153.3
Cooling (Gross values)												
Nominal cooling capacity	(1) kW	833	895	941	991	1062	1112	1154	1202	1271	1300	1357
Total power input for cooling	(1) kW	227	243	258	268	285	301	317	329	342	353	372
EER	(1)	3,67	3,69	3,65	3,70	3,73	3,69	3,65	3,66	3,72	3,68	3,65
Cooling (EN 14511 values)												
Nominal cooling capacity	(1)(5) kW	830	892	937	989	1059	1108	1150	1198	1266	1294	1351
EER	(1)(5)	3,62	3,63	3,58	3,65	3,68	3,64	3,59	3,60	3,65	3,61	3,58
Compressors												
Type							Screw					
Quantity/Cooling circuits	n°/h°	2/2	2/2	2/2	2/2	2/2	2/2	3/3	3/3	3/3	3/3	3/3
Capacity steps	n°						Continue					
Total oil load	l	56	56	56	56	56	56	74	79	84	84	84
Evaporator												
Water flow	(1) l/h	143.272	153.994	161.758	170.447	182.648	191.152	198.454	206.681	218.512	223.504	233.302
Pressure drop	(2) kPa	44	55	58	35	40	41	44	47	57	60	63
Noise levels												
Noise power level	(3) dB(A)	100	100	100	100	101	101	101	101	101	101	101
Noise pressure level	(4) dB(A)	81	81	81	80	81	81	81	81	81	81	81
Noise power level (LN version)	(3) dB(A)	95	95	95	96	96	96	96	96	96	97	97
Noise pressure level (LN version)	(4) dB(A)	76	76	76	76	76	76	76	76	76	77	77
Noise power level (SLN version)	(3) dB(A)	89	89	90	90	90	91	91	91	91	91	91
Noise pressure level (SLN version)	(4) dB(A)	70	70	71	70	70	71	71	71	71	71	71
Basic version dimensions and weights												
Length	mm	4.710	4.710	4.710	4.770	4.770	4.770	4.450	4.450	4.450	4.450	4.450
Depth	mm	1.350	1.350	1.350	1.350	1.350	1.350	2.130	2.130	2.130	2.130	2.130
Height	mm	1.630	1.630	1.630	1.700	1.700	1.700	1.770	1.770	1.770	1.770	1.770
Operating weight	kg	3508	3600	3690	4116	4158	4188	5800	5958	6118	6172	6220

(1) Water temperature at evaporator inlet-outlet 12-7°C; water temperature at condenser inlet-outlet 30-35°C;

(2) Water temperature at evaporator inlet-outlet 12-7°C

(3) Calculated according to ISO 3744 under nominal operating conditions.

(4) Sound pressure levels measured at 1 metres from the unit in free field under nominal working

conditions, according to ISO 3744

(5) Values in compliance with EN 14511-3:2011

This data sheet shows the data of the basic and standard series; for further details refer to the specific documentation.

ELECTRICAL DATA OMEGA V ECHOS

Unit size			18.1	20.1	22.1	24.1	27.1	31.1	35.1	36.2	38.2	41.2	42.1	45.2
Maximum absorbed power	(1)	kW	63	72	78	89	100	112	123	126	135	144	140	155
Maximum absorbed current	(2)	A	104	118	127	146	164	183	202	207	222	236	229	254
Maximum input current	(3)	A	167	208	240	230	282	282	271	312	326	305	335	335
Main power supply	V/ph/Hz	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50
Auxiliary power supply	V/ph/Hz	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50

Unit size			46.2	49.2	53.2	57.2	62.2	65.2	69.2	72.2	76.2	78.2	83.2	88.2
Maximum absorbed power	(1)	kW	166	178	200	212	224	235	246	256	265	272	279	315
Maximum absorbed current	(2)	A	273	291	327	347	367	385	403	419	435	447	458	517
Maximum input current	(3)	A	367	386	394	446	465	465	484	507	523	523	534	706
Main power supply	V/ph/Hz	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50
Auxiliary power supply	V/ph/Hz	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50

Unit size			95.2	100.2	105.2	110.2	117.2	124.2	130.3	137.3	143.3	147.3	153.3
Maximum absorbed power	(1)	kW	339	358	376	393	415	437	460	485	509	527	546
Maximum absorbed current	(2)	A	557	587	617	644	681	717	755	795	835	865	896
Maximum input current	(3)	A	745	776	807	867	1.015	1.052	944	984	1.024	1.055	1.085
Main power supply	V/ph/Hz	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50
Auxiliary power supply	V/ph/Hz	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50

ELECTRICAL DATA OMEGA V ECHOS /A

Unit size			18.1	20.1	22.1	24.1	27.1	31.1	35.1	36.2	38.2	41.2	42.1	45.2
Maximum absorbed power	(1)	kW	63	72	78	89	100	112	123	126	135	144	140	155
Maximum absorbed current	(2)	A	104	118	127	146	164	183	202	207	222	236	229	254
Maximum input current	(3)	A	167	208	208	240	230	282	282	271	312	326	305	335
Main power supply	V/ph/Hz	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50
Auxiliary power supply	V/ph/Hz	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50

Unit size			46.2	49.2	53.2	57.2	62.2	65.2	69.2	72.2	76.2	78.2	83.2	88.2
Maximum absorbed power	(1)	kW	166	178	200	212	224	235	246	256	265	272	279	315
Maximum absorbed current	(2)	A	273	291	327	347	367	385	403	419	435	447	458	517
Maximum input current	(3)	A	367	386	394	446	465	465	484	507	523	523	534	706
Main power supply	V/ph/Hz	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50
Auxiliary power supply	V/ph/Hz	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50

Unit size			95.2	100.2	105.2	110.2	117.2	124.2	130.3	137.3	143.3	147.3	153.3
Maximum absorbed power	(1)	kW	339	358	376	393	415	437	460	485	509	527	546
Maximum absorbed current	(2)	A	557	587	617	644	681	717	755	795	835	865	896
Maximum input current	(3)	A	745	776	807	867	1.015	1.052	944	984	1.024	1.055	1.085
Main power supply	V/ph/Hz	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50
Auxiliary power supply	V/ph/Hz	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50

(1) Electrical power that must be supplied by the mains to power the unit

(2) Is the maximum current absorbed by the unit. This value is never exceeded and must be used to size the line and its protections (refer to the electric diagram supplied with the unit).

(3) Maximum input current calculated considering the power of the compressor with the higher

power and the maximum current absorbed by all other devices
This data sheet shows the data of the basic and standard series; for further details refer to the specific documentation.

ELECTRICAL DATA OMEGA V ECHOS /LC

Unit size			18.1	20.1	22.1	24.1	27.1	31.1	35.1	36.2	38.2	41.2	42.1	45.2
Maximum absorbed power	(1)	kW	63	72	78	89	100	112	123	126	135	144	140	155
Maximum absorbed current	(2)	A	104	118	127	146	164	183	202	207	222	236	229	254
Maximum input current	(3)	A	167	208	208	240	230	282	282	271	312	326	305	335
Main power supply	V/ph/Hz	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50
Auxiliary power supply	V/ph/Hz	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50

Unit size			46.2	49.2	53.2	57.2	62.2	65.2	69.2	72.2	76.2	78.2	83.2	88.2
Maximum absorbed power	(1)	kW	166	178	200	212	224	235	246	256	265	272	279	315
Maximum absorbed current	(2)	A	273	291	327	347	367	385	403	419	435	447	458	517
Maximum input current	(3)	A	367	386	394	446	465	465	484	507	523	523	534	706
Main power supply	V/ph/Hz	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50
Auxiliary power supply	V/ph/Hz	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50

Unit size			95.2	100.2	105.2	110.2	117.2	124.2	130.3	137.3	143.3	147.3	153.3
Maximum absorbed power	(1)	kW	339	358	376	393	415	437	460	485	509	527	546
Maximum absorbed current	(2)	A	557	587	617	644	681	717	755	795	835	865	896
Maximum input current	(3)	A	745	776	807	867	1.015	1.052	944	984	1.024	1.055	1.085
Main power supply	V/ph/Hz	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50
Auxiliary power supply	V/ph/Hz	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50

(1) Electrical power that must be supplied by the mains to power the unit

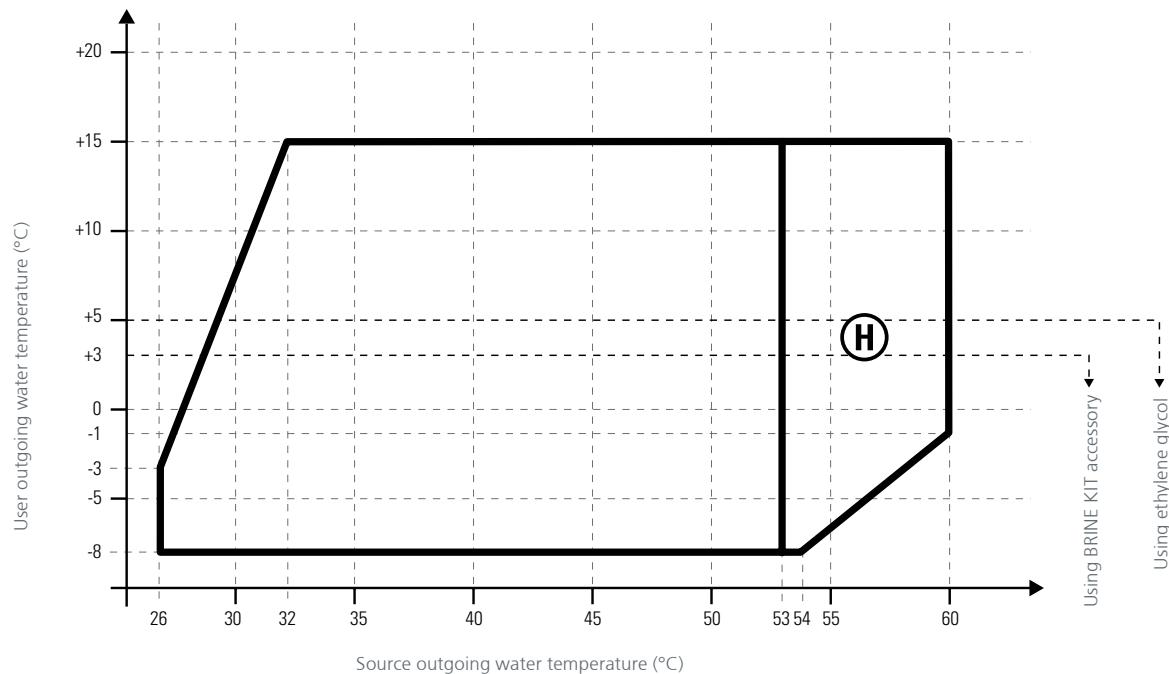
(2) Is the maximum current absorbed by the unit. This value is never exceeded and must be used to size the line and its protections (refer to the electric diagram supplied with the unit).

(3) Maximum input current calculated considering the power of the compressor with the higher

power and the maximum current absorbed by all other devices

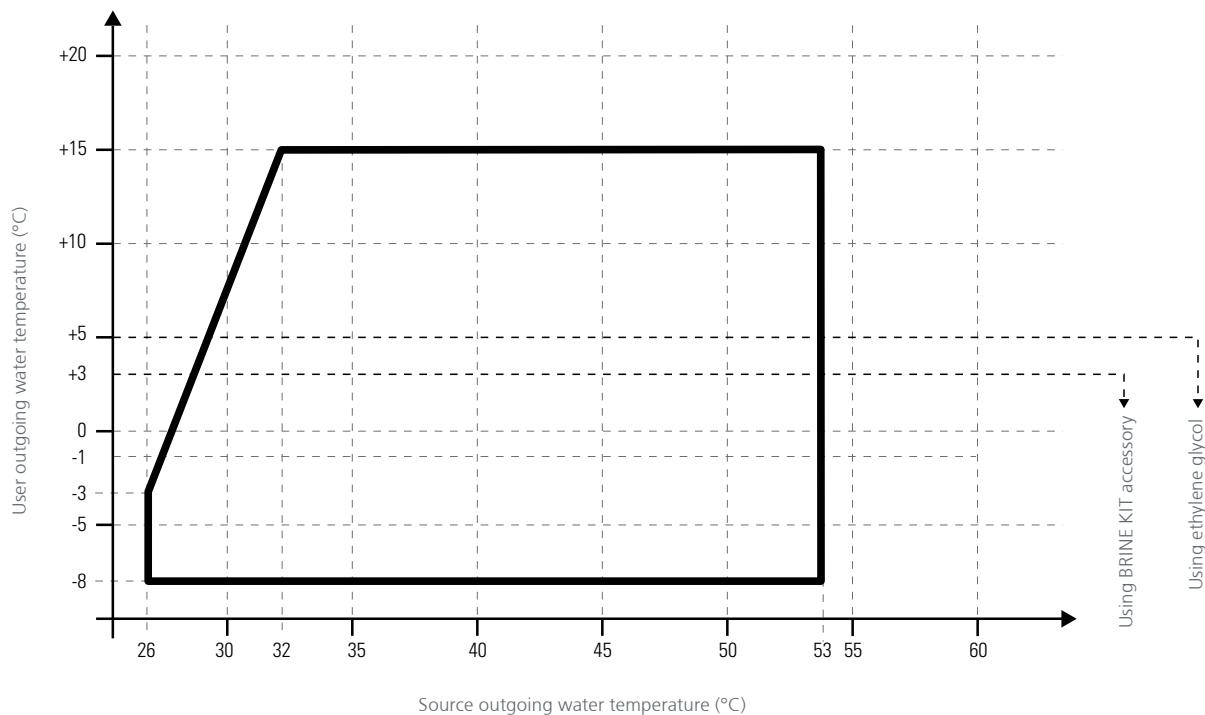
This data sheet shows the data of the basic and standard series; for further details refer to the specific documentation.

OPERATING LIMITS - COOLING - OMEGA V ECHOS OMEGA V ECHOS/A



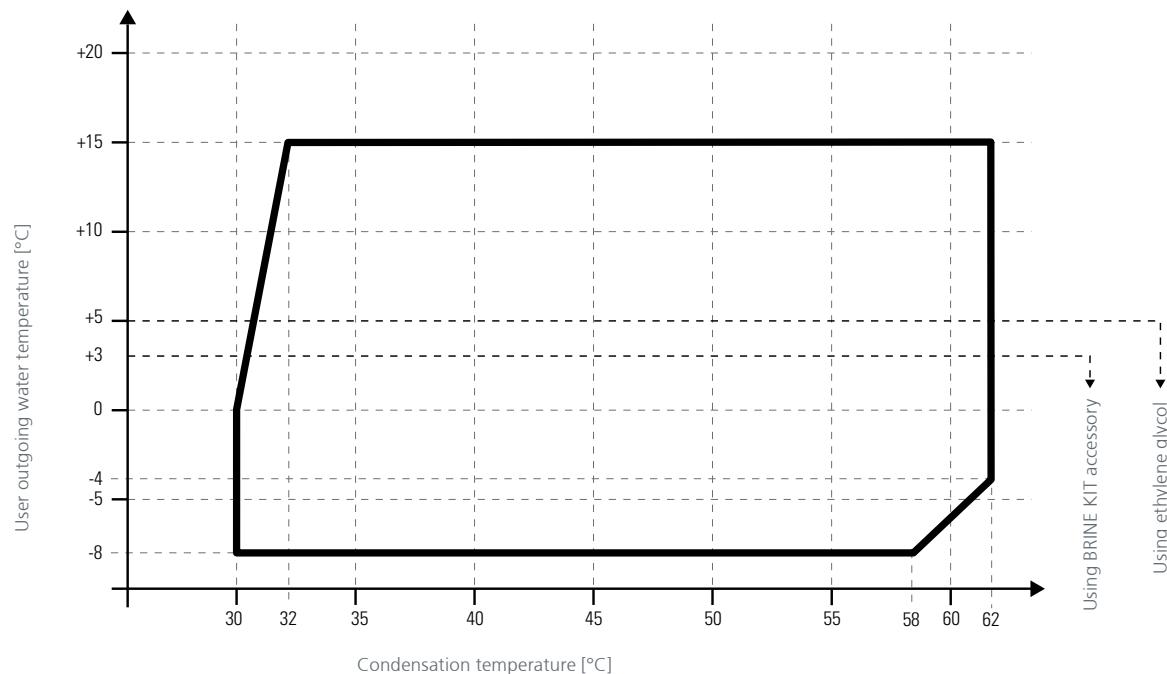
(H) Please ALWAYS contact our office if you need the "heating only" version; Operating limits for the "heating only" version: the limits for produced hot water exceeding 53°C must be validated by our office.

OPERATING LIMITS - RECOVERY - OMEGA V ECHOS OMEGA V ECHOS/A



THE THERMAL HEAD OF WATER FOR ALL VERSIONS MUST BE BETWEEN: min:4 °C max: 7°C
BY USING THE PRESSURE RELIEF VALVE ACCESSORY, THE LOWER LIMITS OF INGOING SOURCE WATER TEMPERATURE DECREASE

OPERATING LIMITS - COOLING - OMEGA V ECHOS /LC



COOLING CAPACITY - OMEGA V ECHOS

Model	To [°C]	Condenser outgoing water temperature [°C]														
		30			35			40			45			50		
		Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr
18.1	6	176	36	212	166	38	205	157	42	198	147	45	192	135	51	186
	7	182	36	218	172	39	211	162	42	204	152	46	198	140	51	192
	8	188	37	225	177	39	217	168	42	210	158	46	204	146	52	198
	9	194	37	231	183	40	223	173	43	216	163	47	210	151	52	203
20.1	10	200	38	238	189	40	230	179	44	222	169	47	217	157	53	209
	6	197	40	237	187	43	229	177	46	223	165	51	216	153	57	209
	7	204	40	244	193	43	236	183	46	229	171	51	222	158	57	215
	8	211	40	251	200	43	243	189	47	236	177	52	229	164	58	222
22.1	9	218	41	258	207	44	250	195	48	243	183	52	235	170	58	228
	10	225	41	266	213	44	258	202	48	250	189	53	242	176	59	234
	6	214	43	257	202	46	248	191	50	241	178	55	233	165	61	226
	7	221	43	265	210	46	256	198	50	248	185	55	240	171	62	233
24.1	8	230	44	273	217	47	264	205	51	256	192	56	248	177	62	240
	9	238	44	282	224	48	271	213	51	264	199	57	255	183	64	246
	10	246	45	290	231	48	279	220	52	272	205	58	262	189	64	253
	6	246	49	295	233	52	285	219	57	276	203	63	267	187	71	258
24.1	7	255	49	304	241	53	294	226	58	284	211	64	275	194	71	265
	8	263	50	313	249	54	303	234	58	293	218	65	283	201	72	273
	9	272	50	323	257	54	312	242	59	301	226	65	291	208	73	281
	10	281	51	332	266	55	321	250	60	310	233	66	299	215	74	289
27.1	6	276	55	331	261	59	320	245	64	309	228	71	298	209	79	288
	7	286	56	342	270	60	330	254	65	319	236	72	308	217	80	297
	8	296	57	353	280	61	340	263	66	329	245	73	317	225	81	306
	9	306	57	363	289	62	351	272	67	339	253	74	327	233	82	315
31.1	10	317	58	375	299	62	362	281	68	349	262	75	337	241	83	325
	6	307	61	368	290	65	355	273	70	343	254	78	332	232	88	320
	7	317	62	379	299	66	365	282	72	353	262	79	341	241	89	329
	8	328	62	390	310	67	377	292	73	364	271	80	352	250	90	339
35.1	9	339	63	402	320	68	388	302	74	375	281	81	362	259	91	350
	10	351	64	415	331	69	400	312	75	387	291	82	374	268	92	360
	6	342	66	409	323	71	394	303	77	380	283	85	368	260	95	355
	7	354	67	421	334	72	406	314	78	392	293	86	379	268	97	365
36.2	8	366	68	434	347	72	419	324	79	404	302	88	389	277	98	376
	9	380	68	448	359	73	433	336	80	416	312	89	401	287	100	387
	10	394	69	462	370	75	444	347	81	429	323	90	413	297	101	398
	6	355	72	426	335	77	412	316	83	399	296	91	387	273	101	374
36.2	7	367	72	440	346	78	424	327	84	411	307	92	398	283	102	386
	8	380	73	453	358	79	437	339	85	424	318	93	411	294	103	397
	9	392	74	466	370	80	450	349	86	435	330	93	424	305	104	409
	10	404	75	479	382	81	463	361	87	448	342	95	436	315	106	421
38.2	6	376	75	451	356	80	436	337	86	423	315	95	410	291	106	397
	7	389	75	465	368	81	449	348	88	436	327	96	422	302	107	409
	8	403	76	479	381	82	463	360	89	449	339	97	436	313	108	421
	9	416	77	493	394	83	477	373	90	462	351	98	449	325	109	434
41.2	10	430	78	508	408	84	492	386	91	476	364	99	463	336	111	447
	6	397	79	476	376	85	461	356	92	447	332	101	433	306	113	419
	7	411	80	491	389	86	475	368	93	461	344	102	446	318	114	432
	8	425	81	506	403	87	490	381	94	475	356	104	460	330	115	445
42.1	9	440	82	522	418	88	505	395	95	490	369	105	474	342	116	459
	10	456	82	539	432	89	521	409	96	505	383	106	489	355	118	472
	6	415	83	498	393	89	482	370	97	466	344	107	451	315	121	436
	7	429	84	514	407	90	497	383	98	481	355	109	464	327	122	449
42.1	8	445	85	530	421	91	512	395	100	494	368	110	478	339	124	462
	9	461	86	546	434	93	527	408	101	509	380	112	492	351	126	476
	10	474	87	562	449	94	542	422	102	524	394	113	507	363	127	490
	6	435	86	521	412	92	504	389	100	489	363	110	473	335	123	458
45.2	7	450	87	537	427	93	520	403	101	504	376	112	488	348	124	472
	8	468	88	555	442	94	537	418	102	520	391	113	503	360	126	486
	9	484	89	573	456	96	552	433	103	537	404	114	518	373	127	501
	10	499	90	589	471	97	569	449	104	553	419	115	534	384	130	514

Pf: cooling capacity [kW]

Pe: electrical power absorbed by the compressors [kW]

Pr: condenser heating capacity [kW]

To: evaporator outgoing water temperature [°C] Evaporator thermal gap = 5°C

COOLING CAPACITY - OMEGA V ECHOS

Model	To [°C]	Condenser outgoing water temperature [°C]															
		30			35			40			45			50			
		Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr	
46.2	6	467	92	559	442	98	540	416	107	523	387	118	505	356	132	488	
	7	485	93	577	458	100	558	431	108	539	402	119	521	370	133	503	
	8	502	94	595	473	101	574	447	109	556	417	121	537	382	136	518	
	9	518	95	613	490	102	592	463	111	574	430	123	553	396	137	534	
	10	536	96	632	507	104	610	478	113	591	445	125	570	410	139	550	
49.2	6	500	98	598	473	105	577	443	114	558	412	127	538	378	142	520	
	7	519	99	617	490	106	596	460	116	575	427	128	555	393	143	536	
	8	537	100	637	508	107	615	476	117	594	443	130	573	407	145	552	
	9	556	101	657	526	109	634	494	119	612	459	131	591	422	147	569	
	10	575	102	677	544	110	654	511	120	631	476	133	609	438	149	587	
53.2	6	538	106	644	509	114	622	478	123	601	445	136	581	409	152	561	
	7	557	107	665	527	115	642	495	125	620	461	138	599	425	154	578	
	8	577	109	685	546	116	662	513	127	640	478	140	618	440	156	596	
	9	597	110	707	565	118	683	531	128	659	495	141	637	456	158	614	
	10	617	111	728	584	119	704	549	130	679	512	144	656	472	160	632	
57.2	6	583	117	700	551	126	677	518	137	655	482	151	633	445	168	613	
	7	601	119	720	569	127	696	535	138	673	499	152	652	461	170	631	
	8	621	120	741	587	128	716	553	140	693	517	154	671	476	172	648	
	9	641	121	762	606	130	736	572	141	713	534	156	689	491	175	666	
	10	661	122	783	626	131	757	590	143	733	551	158	709	507	177	684	
62.2	6	623	123	746	589	132	721	553	143	697	516	158	674	474	177	652	
	7	642	124	766	607	133	740	571	145	716	532	160	692	492	178	671	
	8	662	125	788	627	134	761	589	147	736	552	161	713	509	180	690	
	9	683	127	810	646	136	782	610	148	757	570	163	733	527	182	709	
	10	704	128	832	666	137	804	630	149	779	588	165	753	540	186	726	
65.2	6	656	129	785	620	137	757	582	149	731	542	164	706	499	183	682	
	7	679	130	809	642	139	781	603	151	754	563	166	729	518	185	704	
	8	703	131	835	665	141	806	626	152	778	583	168	751	537	188	725	
	9	728	133	861	690	142	832	648	154	803	604	170	774	556	191	747	
	10	754	134	888	714	144	857	670	157	827	625	173	798	577	193	770	
69.2	6	687	133	820	649	142	791	609	155	763	567	170	737	522	190	712	
	7	711	135	846	672	144	816	631	157	787	589	172	761	542	192	734	
	8	736	136	872	696	146	842	656	158	813	611	174	785	559	196	755	
	9	762	138	900	723	147	870	680	160	839	630	177	808	580	199	778	
	10	790	139	929	748	148	897	700	163	863	652	180	832	601	201	802	
72.2	6	725	143	867	686	152	838	646	165	810	602	181	783	553	204	756	
	7	751	144	895	712	154	866	669	167	836	622	185	806	572	207	779	
	8	779	145	924	736	156	892	691	170	860	644	187	831	593	210	803	
	9	805	147	952	760	158	918	715	172	887	667	190	857	615	212	827	
	10	832	149	980	787	160	947	740	174	914	691	192	883	637	215	852	
76.2	6	766	154	921	727	164	981	683	178	861	637	196	833	583	221	804	
	7	795	156	951	753	166	919	708	180	889	657	200	857	605	224	829	
	8	824	157	981	777	169	946	731	183	914	681	202	884	628	227	854	
	9	850	159	1009	804	171	975	757	186	942	706	205	911	651	230	880	
	10	880	161	1040	832	173	1005	783	188	971	731	208	939	674	233	907	
78.2	6	794	151	945	752	161	913	708	174	882	659	192	851	604	216	820	
	7	823	152	976	780	163	943	734	176	910	682	195	877	627	219	846	
	8	853	154	1007	807	165	971	759	179	938	706	198	904	650	222	872	
	9	884	155	1039	834	167	1001	784	182	966	731	201	932	674	225	899	
	10	913	157	1070	862	169	1031	812	184	996	757	203	960	699	228	926	
83.2	6	851	169	1019	803	179	982	753	194	947	699	214	913	638	240	878	
	7	880	170	1050	831	181	1012	776	197	973	719	217	936	659	243	902	
	8	911	171	1082	858	183	1041	800	200	1000	743	220	962	681	246	927	
	9	940	173	1113	883	186	1068	826	202	1028	767	222	989	704	248	952	
	10	967	175	1142	910	188	1098	852	204	1056	791	225	1016	727	251	978	
88.2	6	902	178	1080	852	191	1043	802	207	1008	746	229	975	687	256	943	
	7	929	180	1109	878	192	1071	826	209	1036	769	231	1001	710	259	969	
	8	957	182	1139	907	194	1101	854	211	1065	795	234	1029	732	263	995	
	9	988	183	1171	935	196	1132	882	213	1095	819	237	1056	756	266	1022	
	10	1018	185	1203	965	198	1163	909	216	1125	844	240	1084	780	269	1049	

Pf: cooling capacity [kW]

Pe: electrical power absorbed by the compressors [kW]

Pr: condenser heating capacity [kW]

To: evaporator outgoing water temperature [°C] Evaporator thermal gap = 5°C

COOLING CAPACITY - OMEGA V ECHOS

Model	To [°C]	Condenser outgoing water temperature [°C]														
		30			35			40			45			50		
		Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr
95.2	6	971	185	1156	920	198	1117	865	215	1079	800	239	1039	736	268	1004
	7	999	187	1186	946	199	1145	887	218	1104	823	242	1065	759	271	1030
	8	1031	188	1219	973	202	1175	915	220	1135	850	245	1095	784	274	1058
	9	1059	191	1250	1003	205	1207	943	223	1166	877	248	1124	809	277	1086
100.2	10	1092	193	1285	1034	207	1241	972	225	1198	903	250	1154	834	281	1114
	6	1020	203	1223	965	216	1182	908	235	1143	847	259	1106	781	289	1070
	7	1049	204	1254	993	218	1212	935	237	1172	872	261	1133	804	292	1097
	8	1084	206	1290	1026	221	1247	966	240	1205	901	264	1165	831	296	1127
105.2	9	1119	208	1327	1059	223	1282	997	242	1240	931	268	1198	859	299	1158
	10	1155	210	1365	1094	225	1319	1030	245	1275	961	271	1232	888	303	1191
	6	1077	206	1283	1020	219	1239	959	238	1197	894	262	1156	824	293	1117
	7	1108	207	1316	1049	221	1271	987	240	1227	920	265	1185	849	296	1145
110.2	8	1145	209	1354	1084	224	1308	1020	243	1263	952	268	1220	878	299	1178
	9	1182	211	1394	1120	226	1346	1054	246	1299	983	271	1254	908	303	1211
	10	1220	213	1434	1156	228	1384	1088	248	1336	1016	274	1290	938	307	1245
	6	1116	222	1338	1056	237	1293	992	257	1250	925	284	1208	852	318	1169
110.2	7	1152	224	1376	1091	239	1330	1026	260	1286	956	287	1243	881	321	1202
	8	1190	226	1416	1126	242	1368	1059	263	1322	988	291	1278	911	325	1236
	9	1228	228	1456	1162	245	1407	1093	266	1359	1020	294	1314	941	329	1270
	10	1266	230	1496	1198	247	1445	1128	269	1397	1052	297	1350	971	333	1304
117.2	6	1199	235	1434	1135	251	1386	1067	273	1340	992	302	1294	913	338	1251
	7	1238	237	1475	1171	254	1425	1101	276	1377	1025	305	1330	944	342	1286
	8	1278	240	1517	1209	256	1466	1137	279	1416	1058	309	1368	976	346	1322
	9	1318	242	1560	1248	259	1507	1174	282	1456	1093	313	1406	1008	350	1358
124.2	10	1360	244	1604	1287	262	1549	1211	286	1497	1128	317	1444	1040	355	1395
	6	1255	247	1502	1187	264	1451	1116	287	1403	1036	318	1354	953	357	1310
	7	1295	249	1544	1225	267	1492	1152	290	1442	1069	322	1392	985	361	1346
	8	1337	252	1588	1265	270	1535	1189	294	1483	1105	326	1431	1018	365	1383
130.3	9	1379	254	1633	1305	273	1578	1227	297	1524	1140	330	1470	1051	370	1421
	10	1422	257	1679	1346	276	1621	1266	300	1566	1176	334	1510	1085	374	1459
	6	1313	261	1574	1243	278	1521	1169	302	1471	1091	333	1424	1006	372	1378
	7	1354	263	1618	1282	281	1564	1206	306	1512	1126	337	1463	1039	376	1415
137.3	8	1398	266	1664	1324	284	1608	1245	309	1554	1163	340	1504	1074	381	1454
	9	1442	268	1710	1366	287	1653	1285	312	1597	1201	344	1545	1109	385	1494
	10	1487	271	1757	1408	290	1698	1325	316	1641	1239	348	1587	1144	389	1534
	6	1401	276	1677	1327	294	1621	1248	319	1567	1165	351	1516	1074	393	1467
143.3	7	1446	278	1724	1369	297	1666	1288	322	1611	1202	355	1558	1109	397	1506
	8	1492	281	1773	1413	300	1713	1330	326	1656	1242	359	1601	1147	402	1548
	9	1539	283	1822	1458	303	1761	1373	329	1702	1282	363	1645	1184	406	1590
	10	1587	286	1873	1503	306	1809	1416	333	1748	1323	367	1690	1222	411	1633
143.3	6	1459	288	1747	1381	308	1689	1300	334	1634	1213	368	1581	1118	411	1530
	7	1504	291	1795	1424	311	1735	1341	337	1678	1251	372	1623	1155	416	1570
	8	1553	294	1847	1471	314	1785	1386	341	1727	1293	376	1670	1194	421	1615
	9	1603	297	1900	1519	317	1836	1431	345	1776	1336	381	1717	1234	426	1660
147.3	10	1654	299	1953	1567	321	1888	1477	349	1825	1379	385	1765	1275	431	1706
	6	1499	295	1795	1420	315	1735	1336	342	1678	1246	377	1623	1149	421	1571
	7	1546	298	1844	1464	318	1782	1378	345	1723	1286	381	1667	1186	426	1612
	8	1596	301	1897	1512	321	1833	1424	349	1773	1329	385	1714	1227	431	1658
147.3	9	1648	303	1951	1561	325	1886	1470	353	1823	1373	390	1763	1268	436	1704
	10	1700	306	2007	1611	328	1939	1517	357	1874	1417	394	1812	1310	441	1751
153.3	6	1564	303	1867	1481	323	1804	1394	350	1744	1300	386	1686	1199	432	1631
	7	1613	305	1918	1527	326	1853	1437	354	1791	1341	390	1731	1237	436	1674
	8	1665	308	1974	1577	329	1907	1485	358	1843	1386	395	1781	1280	442	1721
	9	1719	311	2030	1628	333	1961	1533	362	1895	1432	399	1831	1323	447	1769
	10	1773	314	2087	1680	336	2016	1582	366	1948	1478	404	1882	1366	452	1818

Pf: cooling capacity [kW]

Pe: electrical power absorbed by the compressors [kW]

Pr: condenser heating capacity [kW]

To: evaporator outgoing water temperature [°C] Evaporator thermal gap = 5°C

COOLING CAPACITY - OMEGA V ECHOS /A

Model	To [°C]	Condenser outgoing water temperature [°C]														
		30			35			40			45			50		
		Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr
18.1	6	187	33	219	179	35	214	170	37	208	162	41	202	151	45	196
	7	193	33	226	186	35	220	177	38	215	168	41	209	157	46	203
	8	200	33	233	192	35	227	183	38	221	174	42	215	163	46	209
	9	207	33	240	199	36	234	190	38	228	180	42	222	169	47	216
20.1	10	214	34	248	206	36	242	197	39	235	187	42	229	175	47	222
	6	208	36	245	199	39	238	190	42	231	179	46	225	167	51	218
	7	216	37	252	206	39	245	196	42	238	185	46	231	173	52	224
	8	223	37	260	213	39	253	203	42	246	192	47	238	179	52	231
22.1	9	231	37	268	220	40	260	210	43	253	199	47	246	186	53	238
	10	238	38	276	228	40	268	217	43	261	205	48	253	193	53	246
	6	225	39	264	215	42	257	205	45	251	194	50	244	182	55	237
	7	233	40	273	223	42	265	213	46	258	201	50	251	189	56	245
24.1	8	241	40	281	231	43	274	220	46	267	208	51	259	196	57	252
	9	249	40	290	239	43	282	228	47	275	216	51	267	203	57	260
	10	258	41	299	248	43	291	237	47	284	224	52	276	211	58	268
	6	259	45	304	247	48	295	235	52	287	221	58	279	206	64	270
27.1	7	268	46	314	256	49	305	243	53	296	229	58	287	214	65	279
	8	277	46	324	265	49	314	252	53	305	237	59	296	222	66	287
	9	287	47	334	274	50	324	261	54	315	246	59	305	230	66	296
	10	297	47	344	284	50	334	270	54	325	255	60	315	238	67	305
27.1	6	287	50	337	274	53	327	259	58	317	244	63	307	227	70	297
	7	298	51	349	284	54	338	269	58	327	253	64	317	236	71	307
	8	309	51	360	295	54	349	279	59	338	262	65	327	245	72	316
	9	320	52	372	305	55	360	289	59	349	272	65	338	254	72	327
31.1	10	332	52	384	317	55	372	300	60	360	283	66	349	264	73	337
	6	320	57	376	305	60	365	289	65	354	272	71	343	253	79	332
	7	332	57	389	317	61	377	300	65	366	282	72	354	263	80	343
	8	344	57	402	328	61	389	312	66	378	293	73	366	272	81	354
35.1	9	357	58	415	339	62	401	322	67	389	303	74	377	283	82	365
	10	370	59	428	351	63	414	334	68	402	314	75	389	293	83	376
	6	368	64	432	351	68	420	334	74	408	316	82	397	295	91	386
	7	382	65	447	364	69	433	346	75	421	327	82	409	306	92	398
36.2	8	395	66	461	377	70	447	359	76	434	339	83	423	318	93	410
	9	410	66	476	391	70	461	372	76	448	352	84	436	329	94	423
	10	424	67	491	405	71	476	386	77	463	365	85	450	340	95	436
	6	371	65	437	355	69	424	338	75	412	320	82	401	298	91	389
38.2	7	385	66	451	368	70	438	350	75	426	332	82	414	310	92	402
	8	399	66	465	382	70	452	363	76	440	344	83	427	322	93	414
	9	413	67	480	395	71	466	376	77	453	356	84	440	334	93	428
	10	427	67	495	409	72	481	390	78	467	369	85	454	346	94	441
41.2	6	394	69	464	377	73	451	359	79	438	339	87	426	317	97	413
	7	409	70	478	391	74	465	372	80	452	352	88	440	329	98	427
	8	424	70	494	405	75	480	386	81	467	365	88	453	342	99	440
	9	438	71	509	419	75	495	400	81	481	378	89	467	354	100	454
42.1	10	454	71	526	434	76	510	414	82	496	392	90	482	368	100	468
	6	417	74	491	398	78	477	379	84	464	359	93	451	336	103	439
	7	432	74	507	413	79	492	393	85	479	372	94	466	348	105	453
	8	448	75	523	428	80	508	408	86	494	385	95	480	361	106	467
42.1	9	463	76	539	443	81	523	422	87	509	398	96	494	374	107	481
	10	480	76	556	459	81	540	437	88	525	413	97	510	388	108	496
42.1	6	423	73	496	404	78	482	383	84	467	362	92	455	339	103	442
	7	438	74	512	419	79	497	398	85	483	376	93	469	352	104	456
	8	454	75	529	434	79	513	413	86	498	390	94	484	365	105	471
	9	470	75	545	449	80	529	427	86	514	403	95	498	378	107	484
45.2	10	487	76	563	466	81	546	443	87	530	417	96	513	391	108	499
	6	453	79	532	432	84	516	411	91	502	388	100	488	363	111	474
	7	470	80	549	448	85	533	427	92	518	403	101	504	377	113	489
	8	486	81	567	464	86	549	442	93	534	417	102	519	391	113	504
45.2	9	504	81	585	481	86	568	458	94	551	432	103	535	405	114	520
	10	522	82	604	499	87	586	474	95	569	449	104	552	420	116	536

Pf: cooling capacity [kW]

Pe: electrical power absorbed by the compressors [kW]

Pr: condenser heating capacity [kW]

To: evaporator outgoing water temperature [°C] Evaporator thermal gap = 5°C

COOLING CAPACITY - OMEGA V ECHOS /A

Model	To [°C]	Condenser outgoing water temperature [°C]														
		30			35			40			45			50		
		Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr
46.2	6	492	86	579	470	92	561	446	99	545	419	109	528	391	121	512
	7	511	87	598	487	93	580	462	100	562	435	110	545	406	123	529
	8	529	88	617	505	93	598	479	101	580	451	111	563	422	124	546
	9	548	88	637	523	94	618	497	102	599	468	112	581	438	125	563
	10	568	89	657	542	95	637	515	103	618	486	113	599	454	126	580
49.2	6	527	93	620	502	98	601	476	107	582	447	118	564	416	131	547
	7	547	93	640	521	99	620	494	108	601	464	119	582	433	132	565
	8	566	94	660	540	100	640	512	109	620	481	120	601	449	134	583
	9	587	95	682	559	101	661	530	110	640	500	121	621	466	135	601
	10	608	96	704	579	103	682	550	111	661	518	122	641	484	136	620
53.2	6	575	102	677	549	108	656	520	117	636	488	128	617	455	142	597
	7	597	103	699	569	109	678	539	118	657	507	130	636	473	144	617
	8	618	104	721	589	110	699	559	119	678	525	131	656	491	145	636
	9	640	104	745	611	111	722	579	120	699	546	132	678	509	147	656
	10	663	105	769	633	112	745	600	122	721	566	134	699	528	149	677
57.2	6	611	107	719	583	114	697	553	123	676	520	135	656	485	151	636
	7	631	108	740	603	115	718	572	124	697	539	137	676	503	152	656
	8	652	109	762	623	116	739	592	126	717	558	138	696	522	154	675
	9	674	110	784	644	117	761	612	127	739	577	139	717	540	155	695
	10	697	111	808	666	118	784	633	128	761	597	141	738	559	157	715
62.2	6	649	114	763	619	120	739	587	130	717	552	143	695	515	160	675
	7	669	114	783	639	122	761	607	131	738	572	145	716	534	161	695
	8	691	115	807	661	123	783	628	133	761	592	146	738	553	163	716
	9	714	116	830	683	124	807	649	134	783	613	147	760	574	164	738
	10	738	117	855	705	125	830	671	135	806	634	149	783	594	166	759
65.2	6	701	123	824	668	131	799	633	141	774	594	155	750	554	173	727
	7	727	124	851	692	132	825	656	143	799	617	157	774	575	175	750
	8	753	126	878	717	133	851	680	144	824	640	159	799	597	177	774
	9	780	127	906	743	135	878	705	146	851	664	160	824	620	178	799
	10	808	128	935	771	136	907	731	147	878	689	162	851	642	181	823
69.2	6	740	128	868	705	136	841	668	147	815	627	162	789	585	180	765
	7	766	129	896	730	137	868	692	149	840	650	164	814	607	182	789
	8	794	131	925	757	139	896	717	150	868	675	165	841	630	184	814
	9	823	132	954	784	140	925	744	152	896	701	167	868	654	186	840
	10	852	133	985	813	141	955	772	153	925	727	168	896	676	189	865
72.2	6	764	135	899	728	143	871	689	154	843	648	169	817	603	188	792
	7	792	136	928	755	144	899	716	155	871	673	171	844	627	190	817
	8	821	137	958	783	145	929	743	157	900	699	172	871	649	193	842
	9	851	138	989	812	147	958	769	159	928	723	175	898	674	195	869
	10	882	139	1021	841	148	989	795	161	956	749	177	926	698	198	896
76.2	6	805	141	946	767	149	916	726	161	887	683	177	860	636	197	833
	7	834	142	977	795	151	946	754	163	917	709	179	888	661	199	860
	8	865	143	1008	825	152	977	783	164	947	736	181	917	684	202	886
	9	896	144	1041	855	153	1008	811	166	977	761	183	944	710	204	914
	10	929	146	1074	885	155	1040	838	168	1006	789	185	974	735	207	942
78.2	6	832	145	977	793	154	947	751	166	917	707	182	889	658	203	861
	7	863	147	1009	822	155	978	780	168	947	734	184	918	683	205	888
	8	894	148	1042	853	157	1009	809	169	978	761	186	947	709	207	916
	9	926	149	1075	884	158	1042	838	171	1009	789	188	977	735	210	945
	10	960	150	1110	916	159	1075	869	172	1041	816	190	1007	762	212	974
83.2	6	863	149	1012	829	158	987	790	171	961	744	188	932	692	209	902
	7	892	150	1043	858	160	1018	819	173	992	773	190	963	720	211	931
	8	923	152	1075	887	161	1049	849	174	1023	802	192	994	748	214	962
	9	954	153	1107	919	162	1081	878	176	1054	832	194	1025	775	217	992
	10	986	154	1140	949	164	1113	908	178	1086	860	196	1056	804	219	1023
88.2	6	949	165	1114	901	176	1077	853	191	1044	800	211	1011	743	236	979
	7	978	167	1145	931	178	1109	881	193	1074	828	213	1041	769	238	1008
	8	1010	168	1179	962	180	1142	911	195	1107	857	215	1072	797	241	1038
	9	1044	170	1213	994	182	1176	942	198	1140	886	218	1104	825	244	1069
	10	1077	171	1249	1027	184	1210	973	200	1173	916	220	1137	854	247	1100

Pf: cooling capacity [kW]

Pe: electrical power absorbed by the compressors [kW]

Pr: condenser heating capacity [kW]

To: evaporator outgoing water temperature [°C] Evaporator thermal gap = 5°C

COOLING CAPACITY - OMEGA V ECHOS /A

Model	To [°C]	Condenser outgoing water temperature [°C]														
		30			35			40			45			50		
		Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr
95.2	6	1014	176	1190	965	187	1152	913	203	1116	857	224	1080	796	250	1046
	7	1043	177	1221	994	189	1183	942	205	1147	885	226	1111	824	253	1077
	8	1078	179	1257	1027	191	1218	974	207	1181	916	229	1144	853	256	1109
	9	1114	180	1294	1061	193	1253	1006	209	1215	947	231	1178	882	259	1141
100.2	10	1150	182	1332	1095	195	1290	1039	212	1250	978	234	1212	912	262	1174
	6	1068	186	1254	1016	198	1214	961	215	1175	901	237	1138	837	265	1102
	7	1101	188	1289	1048	200	1248	992	217	1209	931	239	1170	866	268	1134
	8	1138	189	1328	1083	202	1286	1026	219	1245	963	242	1205	897	271	1168
	9	1177	191	1368	1120	204	1324	1060	222	1282	997	245	1241	928	274	1202
105.2	10	1215	193	1408	1157	206	1363	1096	224	1320	1030	248	1278	960	277	1237
	6	1114	194	1308	1060	206	1266	1002	223	1225	940	246	1186	873	276	1149
	7	1149	195	1344	1093	208	1301	1034	226	1259	970	249	1219	902	279	1181
	8	1188	197	1385	1130	210	1340	1069	228	1298	1004	252	1256	934	282	1216
	9	1227	199	1426	1168	212	1381	1105	231	1336	1039	255	1293	966	285	1251
110.2	10	1268	201	1469	1207	214	1422	1143	233	1376	1074	258	1332	1000	288	1288
	6	1179	206	1385	1121	219	1340	1060	237	1297	995	262	1257	924	292	1216
	7	1219	207	1427	1160	221	1381	1097	240	1336	1029	264	1293	956	296	1251
	8	1260	209	1470	1199	223	1423	1135	242	1377	1065	267	1332	990	299	1289
	9	1302	211	1513	1239	226	1465	1173	245	1418	1102	270	1372	1025	303	1328
117.2	10	1345	213	1558	1280	228	1508	1212	248	1460	1139	274	1413	1061	306	1367
	6	1254	218	1473	1192	233	1425	1127	252	1379	1055	279	1333	979	312	1291
	7	1297	220	1517	1233	235	1468	1166	255	1421	1092	282	1373	1013	315	1329
	8	1340	222	1562	1274	237	1512	1205	258	1463	1129	285	1414	1050	319	1369
	9	1384	224	1609	1317	240	1557	1246	261	1507	1168	288	1457	1086	323	1409
124.2	10	1430	227	1656	1361	242	1603	1288	264	1551	1208	292	1500	1124	327	1450
	6	1319	230	1548	1253	244	1498	1184	265	1450	1107	294	1401	1028	329	1357
	7	1363	232	1595	1296	247	1543	1225	268	1493	1146	297	1443	1064	333	1396
	8	1409	234	1643	1340	250	1590	1267	271	1538	1186	301	1486	1101	337	1438
	9	1456	236	1692	1385	252	1637	1310	274	1584	1226	304	1530	1140	341	1481
130.3	10	1503	238	1742	1430	255	1685	1354	277	1631	1267	308	1575	1179	345	1524
	6	1373	240	1613	1305	255	1560	1233	277	1510	1156	305	1461	1075	342	1416
	7	1419	242	1661	1349	258	1607	1275	280	1555	1196	309	1505	1111	345	1457
	8	1467	244	1711	1395	261	1655	1318	283	1602	1238	312	1551	1151	349	1500
	9	1516	246	1762	1441	263	1705	1363	286	1650	1281	316	1597	1191	354	1545
137.3	10	1565	249	1814	1489	266	1755	1408	290	1698	1324	320	1644	1232	358	1590
	6	1454	252	1705	1381	268	1650	1306	291	1597	1224	321	1545	1136	359	1495
	7	1502	254	1756	1428	271	1699	1350	294	1644	1267	325	1591	1176	363	1539
	8	1553	256	1809	1476	274	1750	1396	298	1694	1311	328	1639	1218	368	1585
	9	1604	259	1863	1526	277	1802	1443	301	1744	1355	332	1688	1260	372	1632
143.3	10	1657	261	1918	1576	280	1855	1491	304	1795	1401	336	1737	1304	376	1680
	6	1506	263	1769	1432	280	1712	1353	304	1657	1269	334	1604	1180	374	1554
	7	1557	266	1822	1480	283	1763	1400	307	1707	1313	338	1652	1220	378	1599
	8	1610	268	1878	1531	286	1817	1449	310	1759	1360	342	1702	1264	383	1647
	9	1664	270	1935	1583	289	1872	1498	314	1812	1407	346	1753	1309	387	1696
147.3	10	1720	273	1993	1636	292	1928	1549	317	1866	1456	350	1806	1355	392	1747
	6	1552	271	1823	1475	288	1763	1395	312	1707	1308	344	1652	1214	385	1599
	7	1604	273	1877	1525	291	1816	1442	316	1758	1353	348	1701	1258	389	1647
	8	1659	276	1935	1578	294	1872	1493	319	1812	1401	352	1753	1303	394	1697
	9	1715	278	1993	1631	297	1928	1544	323	1866	1450	356	1806	1349	398	1747
153.3	10	1772	281	2053	1686	300	1986	1596	326	1922	1500	360	1860	1396	403	1799
	6	1603	278	1881	1524	296	1820	1440	321	1761	1351	354	1704	1254	396	1650
	7	1656	281	1937	1575	299	1874	1489	324	1814	1398	358	1755	1299	400	1699
	8	1713	283	1996	1629	302	1931	1541	328	1869	1447	362	1809	1346	405	1750
	9	1771	286	2057	1685	305	1990	1594	332	1925	1497	366	1863	1393	409	1803
	10	1830	288	2119	1741	308	2050	1648	335	1983	1549	370	1919	1442	414	1856

Pf: cooling capacity [kW]

Pe: electrical power absorbed by the compressors [kW]

Pr: condenser heating capacity [kW]

To: evaporator outgoing water temperature [°C] Evaporator thermal gap = 5°C

COOLING CAPACITY - OMEGA V ECHOS /LC

Model	To [°C]	Average condensation temperature [°C]																	
		35			40			45			50			55			60		
		Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr
18.1	5	162	33	195	153	36	188	143	39	182	133	43	176	122	48	170	111	54	165
	6	167	34	201	158	36	194	148	39	187	138	43	181	127	48	175	115	55	170
	7	174	34	208	164	36	200	154	39	193	143	44	187	132	49	181	120	55	175
	8	180	34	214	170	36	207	160	40	200	149	44	193	137	49	186	125	55	181
	9	187	34	221	177	37	213	166	40	206	155	44	199	143	49	192	130	56	186
20.1	10	194	35	228	183	37	220	172	40	212	161	44	205	148	50	198	136	56	192
	5	192	38	230	182	40	222	171	44	215	159	49	208	147	55	201	133	62	195
	6	199	38	237	189	41	230	178	44	222	165	49	215	153	55	208	139	62	201
	7	207	38	245	196	41	237	184	45	229	172	50	221	159	55	214	145	62	207
	8	214	39	253	203	41	244	191	45	236	178	50	228	165	56	220	150	63	213
22.1	9	222	39	260	210	42	252	198	45	243	185	50	235	171	56	227	156	63	219
	10	229	39	268	217	42	259	205	46	251	191	51	242	177	57	234	162	64	226
	5	203	41	243	192	43	235	180	47	227	168	52	220	154	59	213	140	66	206
	6	210	41	251	198	44	242	186	48	234	173	53	226	160	59	219	145	66	212
	7	218	41	259	206	44	250	194	48	241	180	53	233	166	59	226	151	67	218
24.1	8	226	41	267	214	44	258	201	48	249	187	53	241	173	60	233	158	67	225
	9	234	42	276	222	45	266	209	49	257	195	54	248	180	60	240	164	68	232
	10	243	42	285	230	45	275	216	49	265	202	54	256	187	61	247	171	68	239
	5	241	47	287	228	50	277	213	54	268	198	60	258	182	67	249	165	76	241
	6	250	47	297	236	50	286	222	55	276	206	61	267	190	68	257	172	76	248
27.1	7	259	47	306	245	51	296	230	55	285	214	61	275	197	68	265	179	77	256
	8	269	48	316	254	51	305	239	56	294	222	61	284	205	69	274	186	78	264
	9	278	48	326	263	51	315	248	56	304	231	62	293	213	69	282	194	78	272
	10	288	48	337	273	52	325	257	56	313	239	62	302	221	70	291	202	79	280
	5	266	53	319	251	57	308	236	62	297	219	68	287	201	76	277	182	85	267
31.1	6	276	54	329	261	57	318	244	62	307	227	68	296	209	76	285	189	86	275
	7	286	54	340	271	58	328	254	63	317	236	69	305	217	77	294	197	86	284
	8	297	54	352	281	58	339	264	63	327	246	70	315	226	78	304	206	87	293
	9	309	55	364	292	59	351	274	64	338	256	70	326	236	78	314	214	88	302
	10	320	55	376	303	59	362	285	64	349	266	71	336	245	79	324	223	88	312
35.1	5	299	59	359	283	63	346	265	69	333	246	76	322	225	85	310	204	96	300
	6	311	60	370	294	64	357	275	69	344	256	76	332	235	86	320	213	97	310
	7	323	60	383	305	64	369	286	70	356	266	77	343	245	86	331	222	98	320
	8	335	61	396	317	65	381	297	70	367	277	78	354	255	87	342	232	98	330
	9	348	61	409	329	65	394	309	71	380	288	78	366	265	87	353	241	99	340
36.2	10	361	61	422	341	66	407	321	71	392	299	79	378	276	88	364	252	100	351
	5	321	65	385	303	69	372	284	75	359	264	83	346	242	93	335	220	105	325
	6	331	65	396	313	69	382	293	75	369	272	83	356	251	93	344	228	106	333
	7	343	66	409	325	70	394	304	76	380	283	84	367	261	94	355	237	106	344
	8	356	66	422	337	70	407	316	77	393	294	85	379	271	95	366	247	107	354
38.2	9	369	66	436	349	71	420	328	77	405	306	85	391	282	95	377	257	108	365
	10	382	67	449	362	71	434	340	78	418	317	86	403	293	96	389	268	109	376
	5	331	67	398	313	71	384	293	78	371	272	86	358	250	96	346	227	109	336
	6	342	67	410	324	72	395	303	78	381	282	86	368	259	97	356	236	109	345
	7	355	68	423	336	72	408	315	79	394	293	87	380	270	97	367	246	110	356
41.2	8	369	68	437	349	73	422	327	79	407	305	88	392	281	98	379	256	111	367
	9	382	69	451	362	73	435	340	80	420	317	88	405	292	99	391	266	112	378
	10	396	69	465	375	74	449	353	80	433	329	89	418	304	100	403	277	112	390
	5	358	72	430	339	76	415	318	83	401	296	92	388	272	103	375	247	116	363
	6	373	72	446	353	77	430	332	84	416	309	93	402	285	104	389	260	117	377
42.1	7	387	73	460	367	78	444	345	85	429	322	94	415	297	105	402	271	118	389
	8	402	73	475	381	78	459	358	85	443	334	94	429	309	105	414	282	119	401
	9	416	74	490	395	79	473	372	86	457	347	95	442	321	106	427	293	120	413
	10	432	74	506	409	79	488	385	86	472	360	96	456	334	107	441	305	121	426
	5	382	76	458	362	81	443	340	88	428	316	98	414	291	109	400	264	123	387
45.2	6	395	76	471	374	82	455	351	89	440	327	98	425	302	110	412	275	124	399
	7	410	77	487	388	82	470	365	90	454	340	99	439	314	111	425	286	125	411
	8	426	77	503	403	83	486	379	90	469	353	100	453	326	112	438	298	126	424
	9	442	78	520	418	83	502	393	91	484	367	100	467	339	112	451	310	127	436
	10	458	78	537	434	84	518	408	92	500	381	101	482	353	113	466	322	127	449
42.1	5	384	74	458	363	79	442	341	86	426	317	95	412	291	106	397	264	120	384
	6	397	74	471	375	79	455	352	86	439	328	95	423	302	107	409	276	121	396
	7	412	75	487	390	80	469	366	87	453	341	96	437	314	108	422	287	122	409
	8	427</td																	

COOLING CAPACITY - OMEGA V ECHOS /LC

Model	To [°C]	Average condensation temperature [°C]																	
		35			40			45			50			55			60		
		Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr
46.2	5	453	88	541	429	94	522	402	102	504	374	113	487	344	126	470	311	143	454
	6	468	88	556	442	94	537	415	103	518	386	114	500	356	127	483	323	143	466
	7	486	89	575	460	95	555	431	104	535	402	115	516	370	128	498	336	144	481
	8	505	89	594	477	96	573	448	104	553	418	115	533	385	129	514	351	145	496
	9	524	90	614	496	96	592	466	105	571	434	116	550	401	130	531	365	146	511
49.2	10	543	91	634	514	97	612	484	106	590	451	117	568	416	131	547	380	147	527
	5	481	93	574	455	100	554	427	109	535	396	120	517	364	135	499	330	152	482
	6	497	94	591	470	100	570	441	109	550	410	121	531	377	135	512	342	153	494
	7	516	95	611	488	101	589	458	110	568	426	122	548	392	136	529	356	154	510
	8	536	95	631	507	102	609	476	111	587	443	123	566	408	138	546	371	155	526
53.2	9	556	96	652	526	103	629	495	112	607	461	124	585	425	139	564	387	156	543
	10	577	97	674	546	104	650	514	113	627	479	125	604	442	140	582	403	157	560
	5	525	106	630	496	113	609	465	122	588	433	135	568	398	150	548	361	169	530
	6	541	106	647	512	113	625	481	123	604	447	136	583	411	152	563	374	170	544
	7	562	107	669	532	114	646	499	124	624	465	137	602	429	153	581	390	172	561
57.2	8	583	108	691	552	115	667	519	125	644	484	138	622	446	154	600	406	173	579
	9	605	109	714	573	116	689	539	126	665	503	139	642	464	155	619	423	174	597
	10	628	110	738	595	117	712	560	127	687	522	140	663	483	156	639	441	176	616
	5	569	112	681	538	120	658	505	130	635	470	144	614	433	161	594	393	182	575
	6	589	113	703	558	121	678	524	131	655	488	145	633	450	162	612	409	183	592
62.2	7	610	114	724	578	122	699	543	132	675	506	146	652	467	163	630	425	184	609
	8	632	115	747	598	122	721	563	133	696	525	147	672	484	164	649	442	185	627
	9	654	115	769	619	123	743	583	134	717	544	148	692	502	165	668	458	186	645
	10	677	116	793	641	124	765	603	135	738	563	149	712	521	167	687	476	188	664
	5	609	118	727	575	126	702	540	137	677	503	152	654	463	170	633	420	193	613
65.2	6	631	119	750	597	127	724	560	138	698	521	153	674	480	171	652	437	194	631
	7	653	120	773	618	128	746	580	139	720	541	154	695	499	173	671	454	195	650
	8	675	121	796	640	129	768	601	140	741	561	155	716	518	174	691	472	196	668
	9	699	122	820	662	130	792	623	141	764	581	156	737	537	175	712	490	198	688
	10	723	122	845	685	131	815	644	142	786	602	157	759	556	176	732	509	199	708
69.2	5	628	124	753	593	132	726	556	144	700	516	159	675	473	178	651	428	202	630
	6	652	125	777	616	133	749	577	145	722	536	160	696	492	180	672	446	203	649
	7	677	126	803	640	134	774	600	146	746	558	162	719	513	181	694	466	204	670
	8	703	127	830	665	135	800	624	147	771	580	163	743	534	182	716	486	206	692
	9	730	128	858	690	136	827	648	148	796	603	164	767	556	184	740	506	207	714
72.2	10	757	129	886	716	137	854	673	149	823	627	165	792	579	185	764	528	209	736
	5	648	130	778	611	138	750	573	151	723	531	166	698	487	187	674	441	211	652
	6	672	131	803	635	140	774	595	152	746	552	168	720	507	188	695	460	213	672
	7	698	132	830	659	141	800	618	153	771	575	169	744	528	189	718	480	214	694
	8	725	133	857	685	142	827	643	154	797	598	170	768	550	191	741	500	215	716
76.2	9	752	134	886	711	143	854	668	155	823	622	172	793	573	192	765	522	217	739
	10	780	135	915	738	144	882	694	156	850	646	173	819	596	193	790	544	218	762
	5	697	136	833	659	145	803	618	157	775	574	174	748	527	195	722	478	220	698
	6	723	137	860	683	146	829	641	158	799	596	175	771	548	196	744	498	222	719
	7	751	138	888	710	147	857	666	160	826	620	177	797	571	198	769	519	223	743
78.2	8	779	139	918	737	148	885	693	161	853	645	178	823	595	199	794	541	225	766
	9	809	140	948	766	149	915	719	162	882	671	179	850	619	201	819	564	227	791
	10	839	141	980	795	150	945	747	163	911	697	181	877	644	202	846	588	228	816
	5	720	141	861	680	150	830	638	163	801	593	180	773	544	202	746	493	229	722
	6	747	142	888	706	151	857	662	164	826	615	182	797	566	203	769	514	230	744
83.2	7	775	143	918	733	152	885	688	166	854	640	183	823	590	205	795	536	232	768
	8	805	144	949	762	153	915	715	167	882	666	184	850	614	206	820	559	233	792
	9	835	145	980	791	154	945	743	168	911	693	186	878	639	208	847	583	235	818
	10	867	146	1013	821	156	976	772	169	941	720	187	907	665	209	874	607	236	844
	5	748	144	892	706	154	860	662	167	829	615	185	800	565	207	772	512	234	746
88.2	6	775	145	920	733	155	887	687	168	855	639	186	825	587	208	796	533	236	769
	7	805	146	951	761	156	917	714	170	884	665	188	852	612	210	822	556	237	794
	8	836	147	983	791	157	948	742	171	913	691	189	880	637	212	849	580	239	819
	9	867	148	1016	821	158	979	771	172	944	719	190	909	663	213	876	605	241	845
	10	900	149	1049	852	159	1011	801	173	975	747	192	939	690	215	905	630	242	872
83.2	5	790	149	938	745	158	903	696	172	869	645	190	836	591	213	804	534	241	775
	6	821	150</																

COOLING CAPACITY - OMEGA V ECHOS /LC

Model	To [°C]	Average condensation temperature [°C]																	
		35			40			45			50			55			60		
		Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr
95.2	5	943	175	1118	891	186	1078	836	203	1039	777	224	1001	715	251	966	648	284	932
	6	975	176	1151	922	188	1110	866	204	1070	806	226	1031	742	253	995	674	286	960
	7	1006	177	1183	952	189	1141	895	205	1100	833	227	1060	768	254	1022	700	288	987
	8	1041	178	1219	985	190	1175	926	207	1133	863	229	1092	797	256	1053	726	289	1016
	9	1076	179	1255	1019	191	1210	958	208	1166	894	230	1124	825	258	1083	754	291	1045
100.2	10	1111	180	1292	1053	193	1245	990	209	1200	924	232	1156	855	259	1114	781	293	1074
	5	1014	187	1201	959	199	1158	900	216	1116	836	239	1076	769	268	1037	698	303	1001
	6	1049	188	1237	992	200	1192	931	218	1149	867	241	1108	798	270	1068	725	305	1030
	7	1082	189	1271	1024	202	1225	962	219	1181	895	243	1138	826	272	1097	752	307	1059
	8	1120	190	1310	1060	203	1263	996	221	1217	928	244	1172	856	273	1130	781	309	1090
105.2	9	1159	191	1350	1097	204	1301	1031	222	1254	961	246	1207	888	275	1163	810	311	1121
	10	1199	193	1392	1135	206	1341	1068	224	1292	996	248	1244	920	277	1197	840	313	1153
	5	1068	199	1267	1010	212	1222	947	230	1178	881	255	1135	810	286	1095	734	323	1057
	6	1103	200	1303	1044	213	1257	980	232	1212	912	256	1168	839	287	1126	763	325	1088
	7	1138	201	1339	1076	215	1291	1011	233	1244	941	258	1199	867	289	1156	789	327	1116
110.2	8	1178	203	1381	1115	216	1331	1048	235	1283	976	260	1235	900	291	1191	819	329	1148
	9	1220	204	1424	1155	218	1372	1085	237	1322	1012	262	1273	934	293	1226	851	331	1182
	10	1262	205	1467	1195	219	1414	1124	238	1362	1048	263	1312	968	295	1263	884	333	1217
	5	1117	206	1323	1056	220	1276	991	239	1230	921	264	1185	847	296	1143	768	335	1103
	6	1157	208	1365	1094	221	1316	1027	241	1268	956	266	1222	879	298	1178	799	337	1136
117.2	7	1198	209	1407	1134	223	1357	1065	242	1307	991	268	1259	913	300	1213	831	339	1170
	8	1241	210	1451	1174	224	1399	1104	244	1348	1028	270	1298	948	302	1250	864	342	1205
	9	1284	212	1495	1216	226	1442	1143	246	1389	1066	272	1337	984	304	1288	897	344	1241
	10	1327	213	1540	1257	227	1485	1183	247	1430	1103	274	1377	1020	306	1326	931	346	1277
	5	1197	219	1417	1132	234	1366	1062	254	1317	988	281	1269	909	315	1224	825	356	1181
124.2	6	1240	221	1460	1173	235	1408	1101	256	1357	1025	283	1308	943	317	1261	857	359	1216
	7	1283	222	1505	1214	237	1451	1141	258	1398	1062	285	1347	979	319	1298	891	361	1252
	8	1328	224	1552	1257	239	1496	1182	260	1441	1101	287	1388	1016	321	1337	926	363	1289
	9	1374	225	1599	1301	240	1541	1224	261	1485	1141	289	1430	1054	323	1377	962	365	1327
	10	1421	226	1647	1346	242	1588	1266	263	1529	1182	291	1473	1092	326	1418	998	368	1366
130.3	5	1254	232	1485	1185	247	1432	1112	268	1381	1034	297	1331	951	333	1284	863	376	1239
	6	1298	233	1531	1228	249	1476	1153	270	1423	1073	299	1371	987	335	1322	897	379	1276
	7	1343	235	1578	1271	250	1521	1194	272	1466	1112	301	1413	1024	337	1362	932	381	1313
	8	1390	236	1626	1316	252	1568	1237	274	1511	1152	303	1455	1063	339	1402	969	384	1352
	9	1438	238	1676	1362	254	1616	1280	276	1556	1194	305	1499	1102	342	1444	1006	386	1392
137.3	10	1487	239	1726	1409	255	1664	1325	278	1603	1236	307	1544	1143	344	1486	1044	388	1432
	5	1302	244	1546	1232	260	1491	1156	282	1438	1075	312	1387	989	350	1338	897	396	1293
	6	1348	245	1593	1275	261	1536	1197	284	1481	1114	314	1428	1026	352	1378	932	398	1331
	7	1394	247	1641	1319	263	1582	1239	286	1525	1154	317	1471	1064	355	1418	968	401	1369
	8	1442	248	1691	1365	265	1630	1283	288	1572	1196	319	1515	1103	357	1460	1006	403	1409
143.3	9	1492	250	1741	1413	267	1679	1328	290	1619	1239	321	1560	1144	359	1503	1044	406	1450
	10	1542	251	1793	1461	268	1729	1374	292	1666	1282	323	1605	1185	361	1547	1083	408	1491
	5	1356	253	1609	1283	269	1552	1204	293	1497	1119	324	1443	1030	363	1393	934	411	1345
	6	1404	254	1658	1328	271	1599	1247	295	1542	1160	326	1487	1068	366	1434	971	414	1385
	7	1452	256	1708	1374	273	1647	1291	297	1588	1202	329	1530	1108	368	1476	1008	416	1424
147.3	8	1502	258	1760	1422	275	1697	1337	299	1636	1246	331	1576	1149	370	1519	1047	419	1466
	9	1553	259	1813	1471	277	1748	1383	301	1685	1290	333	1623	1191	373	1564	1087	421	1508
	10	1606	261	1867	1521	279	1800	1431	303	1734	1335	335	1670	1234	375	1609	1127	424	1551
	5	1436	263	1699	1358	281	1638	1274	305	1580	1185	337	1523	1090	378	1469	990	428	1418
	6	1485	265	1750	1405	282	1687	1319	307	1626	1228	340	1568	1131	381	1511	1028	431	1458
153.3	7	1534	267	1801	1452	284	1737	1364	309	1674	1271	342	1613	1171	383	1554	1066	433	1499
	8	1589	268	1857	1504	286	1790	1414	311	1725	1318	344	1662	1216	386	1601	1108	436	1544
	9	1644	270	1914	1557	288	1845	1464	314	1778	1366	347	1712	1261	388	1649	1151	439	1590
	10	1700	272	1972	1611	290	1901	1516	316	1831	1415	349	1764	1308	391	1698	1195	441	1636
	5	1469	272	1741	1389	290	1679	1304	315	1619	1213	348	1561	1115	390	1506	1013	442	1454
147.3	6	1519	273	1792	1437	292	1729	1349	317	1667	1256	351	1607	1157	393	1549	1051	444	1496
	7	1570	275	1845	1485	294	1779	1396	319	1715	1300	353	1653	1198	395	1593	1090	447	1537
	8	1625	277	1902	1538	296	1834	1446	322	1768									

RECOVERY CAPACITY - OMEGA V ECHOS /DC

Model	To [°C]	Condenser outgoing water temperature [°C]														
		30			35			40			45			50		
		Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr
18.1	6	173	36	209	166	39	204	158	42	200	150	45	195	140	51	191
	7	179	37	216	172	39	211	164	42	206	155	46	201	145	51	197
	8	186	37	222	178	39	217	170	42	212	161	46	207	151	52	203
	9	192	37	229	184	40	224	176	43	219	167	47	214	157	52	209
20.1	10	199	37	236	191	40	231	182	43	225	173	47	220	163	53	215
	6	195	40	235	186	42	229	178	46	223	167	50	218	156	56	212
	7	202	40	242	193	43	236	184	46	230	173	51	224	162	57	219
	8	209	41	250	200	43	243	190	47	237	180	51	231	168	57	225
22.1	9	216	41	257	207	44	250	197	47	244	186	52	238	174	58	232
	10	223	41	264	213	44	258	204	48	251	193	52	245	180	58	239
	6	212	43	255	203	46	249	194	49	243	183	54	237	172	60	232
	7	220	43	263	210	46	256	201	50	250	190	55	245	178	61	239
24.1	8	227	44	271	218	46	264	208	50	258	197	55	252	185	61	246
	9	235	44	279	226	47	273	216	51	266	204	56	260	192	62	254
	10	243	44	288	234	47	281	223	51	274	212	56	268	199	63	261
	6	244	49	293	233	52	285	221	57	278	208	63	271	194	70	264
24.1	7	252	50	302	241	53	294	229	57	286	216	63	279	201	71	272
	8	261	50	311	250	53	303	237	58	295	224	64	287	209	71	280
	9	270	51	321	258	54	312	246	59	304	231	65	296	216	72	289
	10	280	51	331	267	54	322	254	59	313	240	65	305	224	73	297
27.1	6	273	56	329	260	59	320	247	64	311	232	70	302	216	78	294
	7	283	57	340	270	60	330	256	65	321	240	71	312	224	79	303
	8	294	57	351	280	61	341	266	66	331	250	72	322	233	80	313
	9	304	58	362	290	61	352	275	66	342	259	73	332	242	81	323
31.1	10	316	58	374	301	62	363	285	67	352	269	74	342	251	82	333
	6	302	62	364	288	66	354	273	71	345	257	78	335	239	87	326
	7	313	63	376	299	67	366	284	72	356	267	79	346	248	88	337
	8	325	63	388	310	67	377	294	73	367	277	80	357	257	90	347
35.1	9	337	64	401	320	68	389	304	74	378	286	81	368	267	91	358
	10	349	65	413	332	69	401	315	75	390	297	82	379	277	92	369
	6	338	67	405	323	71	394	307	77	384	290	85	375	271	94	366
	7	350	68	418	334	72	406	318	78	396	300	86	386	281	95	377
36.2	8	363	68	431	346	72	419	330	79	408	312	86	398	292	96	388
	9	376	69	445	359	73	432	342	79	421	323	87	410	303	97	400
	10	390	69	459	372	74	446	354	80	434	335	88	423	313	99	412
	6	349	73	422	333	77	410	317	83	400	300	91	391	280	101	381
38.2	7	361	73	435	346	78	424	329	84	413	311	92	403	291	102	393
	8	375	74	449	359	79	437	341	85	426	323	93	416	302	103	405
	9	388	75	462	371	79	450	353	86	439	335	94	428	314	104	418
	10	401	75	476	384	80	464	366	86	452	347	95	441	325	105	431
38.2	6	371	75	447	355	80	435	338	86	424	319	95	414	298	106	404
	7	385	76	461	368	81	449	350	87	438	331	96	427	310	107	416
	8	399	77	475	381	82	463	363	88	451	343	97	440	321	108	429
	9	413	77	490	395	82	477	376	89	465	356	98	453	333	109	442
41.2	10	427	78	505	408	83	491	389	90	479	369	99	467	346	110	456
	6	393	80	473	375	85	460	357	92	449	338	101	438	316	112	428
	7	407	81	488	389	86	475	371	93	463	350	102	452	328	114	442
	8	422	81	503	403	87	490	384	93	478	363	103	466	340	115	455
42.1	9	436	82	518	417	87	505	398	94	492	375	104	479	353	116	468
	10	452	83	535	432	88	520	412	95	507	389	105	494	366	117	483
	6	411	84	495	393	89	482	373	96	469	352	106	458	330	118	448
	7	426	85	511	407	90	497	387	97	484	366	107	472	342	119	461
42.1	8	441	86	527	422	91	513	401	98	499	379	108	487	355	120	476
	9	457	86	543	437	91	528	415	99	514	392	109	501	367	122	489
	10	473	87	560	453	92	545	430	100	530	405	110	516	380	123	504
	6	432	87	519	412	92	504	392	100	492	370	110	480	346	122	469
45.2	7	448	88	535	427	93	520	407	101	508	384	111	495	359	124	483
	8	464	89	552	442	94	536	421	102	523	398	112	509	373	125	497
	9	481	89	570	459	95	554	437	103	539	412	113	525	386	126	512
	10	498	90	588	476	96	572	452	104	556	428	114	542	401	127	528

Pf: cooling capacity [kW]

Pe: electrical power absorbed by the compressors [kW]

Pr: condenser heating capacity [kW]

To: evaporator outgoing water temperature [°C] Evaporator thermal gap = 5°C

RECOVERY CAPACITY - OMEGA V ECHOS /DC

Model	To [°C]	Condenser outgoing water temperature [°C]															
		30			35			40			45			50			
		Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr	
46.2	6	463	93	556	441	99	540	419	106	525	394	117	511	368	131	498	
	7	480	93	574	458	99	557	435	108	542	409	118	527	382	132	514	
	8	497	94	592	475	100	575	451	109	559	424	120	544	397	133	530	
	9	516	95	611	492	101	593	467	110	577	440	121	561	411	134	546	
	10	534	96	630	509	102	612	484	111	595	457	122	579	427	136	563	
49.2	6	496	99	594	472	105	577	447	114	561	420	125	545	392	140	531	
	7	514	100	614	490	106	596	464	115	579	436	127	563	407	141	548	
	8	532	101	633	507	107	615	481	116	597	453	128	581	423	143	565	
	9	552	101	653	526	108	634	499	117	616	470	129	599	438	144	582	
	10	571	102	674	545	109	654	517	119	636	488	131	618	455	146	600	
53.2	6	533	107	640	508	114	622	481	123	605	453	135	588	421	150	572	
	7	553	108	661	527	115	642	500	124	624	470	137	606	438	152	590	
	8	572	109	682	546	116	662	518	126	643	487	138	625	455	153	608	
	9	593	110	703	566	117	683	536	127	663	505	140	645	472	155	627	
	10	615	111	726	586	118	705	555	129	684	524	141	665	489	157	646	
57.2	6	577	118	695	550	125	676	522	135	657	491	149	640	458	166	624	
	7	596	119	715	569	126	695	540	137	677	509	150	659	475	167	642	
	8	615	120	735	588	128	715	558	138	696	526	152	678	492	169	661	
	9	636	121	757	608	129	737	577	139	717	545	153	698	509	170	680	
	10	657	122	779	628	130	758	597	141	738	563	155	718	527	172	699	
62.2	6	616	125	741	588	132	720	557	143	700	525	157	682	489	175	665	
	7	635	126	761	607	133	740	576	144	720	543	159	702	507	177	684	
	8	656	127	783	627	134	762	596	146	742	562	160	722	526	179	704	
	9	678	128	806	649	136	784	617	147	764	582	162	744	545	180	725	
	10	701	129	829	670	137	807	637	148	786	602	163	765	564	182	746	
65.2	6	650	130	779	619	137	757	586	149	735	551	163	714	513	182	695	
	7	673	131	804	642	139	780	608	150	758	572	165	737	533	184	717	
	8	697	132	829	665	140	805	630	152	782	593	167	760	553	186	739	
	9	723	133	856	689	142	831	654	153	807	616	168	784	575	188	762	
	10	748	134	883	714	143	857	678	155	832	638	170	808	595	190	785	
69.2	6	681	134	815	648	143	791	614	154	768	577	170	747	538	189	726	
	7	705	136	840	672	144	816	636	156	792	598	171	770	558	191	749	
	8	730	137	867	696	145	842	660	158	817	621	173	794	580	193	772	
	9	757	138	895	721	147	868	685	159	844	645	175	820	602	195	797	
	10	784	139	923	748	148	896	710	160	871	669	176	846	622	198	820	
72.2	6	721	143	864	687	152	839	650	164	814	612	180	792	569	200	770	
	7	748	145	892	712	153	866	676	165	841	635	182	817	592	203	794	
	8	775	146	921	739	155	894	701	167	868	659	184	843	613	206	818	
	9	803	147	950	766	156	922	726	169	895	683	186	869	636	208	844	
	10	832	148	980	794	158	951	751	171	922	707	188	895	659	210	869	
76.2	6	762	155	917	725	164	890	687	178	865	647	195	841	602	217	819	
	7	790	157	946	753	166	919	714	179	893	671	197	868	625	219	844	
	8	818	158	976	781	167	948	741	181	921	697	199	895	647	222	870	
	9	848	159	1007	809	169	978	767	183	950	720	202	922	672	225	897	
	10	879	160	1039	838	171	1008	793	185	978	747	204	950	696	228	924	
78.2	6	789	152	941	752	161	913	712	174	886	670	190	861	624	212	836	
	7	818	153	972	780	162	942	740	175	915	696	192	888	648	214	863	
	8	848	155	1002	809	164	973	767	177	944	722	194	916	672	217	889	
	9	879	156	1034	839	165	1004	795	179	974	749	196	945	697	220	917	
	10	911	157	1068	869	167	1036	824	180	1005	775	199	974	723	222	945	
83.2	6	836	169	1005	803	179	982	765	194	959	720	213	933	671	237	908	
	7	864	170	1035	831	181	1012	793	196	989	749	215	964	697	240	937	
	8	894	172	1066	860	183	1042	822	197	1019	777	217	994	725	242	967	
	9	924	173	1097	890	184	1074	851	199	1050	806	219	1025	751	246	996	
	10	955	174	1130	919	186	1105	880	201	1081	833	223	1055	779	248	1027	
88.2	6	894	178	1073	850	190	1040	804	206	1011	755	227	982	701	254	955	
	7	922	180	1102	878	192	1070	831	208	1040	781	230	1011	726	257	983	
	8	953	182	1135	908	194	1102	860	211	1070	808	232	1041	752	260	1012	
	9	984	183	1167	938	196	1134	888	213	1102	836	235	1071	778	263	1041	
	10	1016	185	1201	968	198	1166	918	215	1133	864	238	1102	805	266	1072	

Pf: cooling capacity [kW]

Pe: electrical power absorbed by the compressors [kW]

Pr: condenser heating capacity [kW]

To: evaporator outgoing water temperature [°C] Evaporator thermal gap = 5°C

RECOVERY CAPACITY - OMEGA V ECHOS /DC

Model	To [°C]	Condenser outgoing water temperature [°C]														
		30			35			40			45			50		
		Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr	Pf	Pe	Pr
95.2	6	965	186	1150	918	198	1116	869	214	1083	815	236	1052	757	264	1022
	7	993	187	1180	946	200	1145	896	216	1113	842	239	1081	784	267	1051
	8	1026	189	1214	977	202	1179	927	219	1145	871	241	1113	812	270	1082
	9	1060	191	1250	1009	204	1213	957	221	1178	901	244	1145	840	273	1113
100.2	10	1094	192	1287	1042	206	1248	989	224	1212	931	247	1178	868	277	1145
	6	1012	202	1214	963	216	1178	910	234	1144	854	258	1112	793	288	1081
	7	1043	204	1247	993	218	1211	940	236	1176	882	260	1143	821	291	1112
	8	1079	206	1285	1027	220	1246	972	239	1210	913	263	1176	850	295	1144
	9	1115	208	1323	1061	222	1283	1005	241	1246	944	266	1211	879	298	1177
105.2	10	1152	210	1361	1096	224	1321	1038	244	1282	976	269	1246	910	301	1211
	6	1069	206	1275	1017	219	1236	961	238	1199	902	262	1164	838	293	1131
	7	1103	208	1310	1049	221	1270	992	240	1232	931	265	1196	866	297	1163
	8	1140	210	1349	1085	224	1308	1026	243	1269	964	268	1232	897	300	1197
	9	1178	212	1389	1121	226	1347	1061	246	1307	997	271	1268	928	303	1231
110.2	10	1217	213	1430	1158	228	1387	1097	248	1345	1031	274	1305	960	307	1267
	6	1109	222	1331	1055	236	1291	997	256	1253	936	282	1218	869	316	1185
	7	1147	224	1371	1091	238	1329	1032	259	1290	968	285	1253	899	319	1218
	8	1185	226	1411	1128	241	1369	1067	262	1329	1002	289	1290	931	323	1254
	9	1225	228	1452	1166	243	1409	1103	264	1368	1036	292	1328	964	326	1291
110.2	10	1265	230	1494	1204	246	1450	1140	267	1407	1072	295	1367	998	330	1328
	6	1191	235	1427	1132	251	1383	1070	272	1342	1002	300	1302	930	336	1266
	7	1231	238	1469	1171	253	1424	1107	275	1382	1037	304	1340	963	340	1302
	8	1272	240	1512	1210	256	1466	1144	278	1422	1072	307	1380	997	344	1341
	9	1315	242	1557	1251	258	1509	1183	281	1464	1109	311	1420	1032	348	1380
117.2	10	1358	244	1602	1292	261	1553	1223	284	1507	1147	315	1461	1067	352	1419
	6	1246	248	1494	1185	264	1449	1120	287	1406	1047	317	1364	972	355	1328
	7	1288	250	1538	1225	267	1492	1158	290	1448	1083	321	1404	1006	359	1365
	8	1332	252	1584	1267	270	1536	1198	293	1491	1121	325	1445	1041	364	1405
	9	1376	255	1631	1309	272	1581	1238	296	1534	1159	329	1488	1078	368	1446
124.2	10	1421	257	1678	1352	275	1627	1279	300	1579	1198	333	1531	1114	373	1487
	6	1305	261	1566	1240	278	1518	1171	302	1473	1099	333	1432	1021	372	1394
	7	1348	264	1612	1282	281	1563	1211	305	1517	1137	337	1474	1056	376	1433
	8	1394	266	1660	1325	284	1610	1253	309	1562	1177	340	1517	1094	381	1475
	9	1440	269	1709	1370	287	1657	1295	312	1608	1217	344	1562	1132	385	1518
137.3	10	1487	271	1758	1415	290	1705	1338	316	1654	1258	348	1607	1171	390	1561
	6	1393	275	1668	1324	293	1617	1251	318	1569	1173	351	1524	1089	392	1481
	7	1440	277	1717	1369	296	1665	1294	321	1615	1214	355	1569	1127	397	1524
	8	1488	280	1768	1415	299	1714	1338	325	1663	1256	359	1615	1167	402	1569
	9	1537	283	1820	1462	302	1764	1383	329	1712	1299	363	1662	1208	406	1615
143.3	10	1588	285	1873	1510	306	1816	1429	332	1762	1343	367	1710	1250	411	1661
	6	1449	288	1737	1377	307	1684	1302	332	1635	1221	366	1588	1136	410	1545
	7	1498	291	1789	1424	310	1734	1347	336	1683	1264	370	1634	1174	414	1589
	8	1549	294	1843	1473	313	1786	1394	340	1733	1308	375	1683	1217	419	1636
	9	1601	296	1898	1523	316	1840	1442	343	1785	1354	379	1733	1260	424	1684
147.3	10	1655	299	1954	1574	320	1894	1491	347	1838	1401	383	1784	1304	429	1733
	6	1490	296	1786	1416	316	1732	1339	342	1681	1256	377	1632	1166	421	1587
	7	1540	299	1839	1464	319	1783	1385	346	1730	1299	381	1680	1208	426	1634
	8	1593	302	1894	1514	322	1836	1433	349	1782	1345	385	1731	1251	431	1682
	9	1646	305	1951	1566	325	1891	1482	353	1835	1392	390	1782	1295	436	1732
153.3	10	1701	307	2009	1619	329	1947	1532	357	1890	1440	394	1834	1341	441	1782
	6	1554	304	1857	1477	323	1800	1396	350	1746	1310	386	1695	1216	432	1648
	7	1606	306	1912	1527	326	1853	1444	354	1798	1355	390	1745	1260	437	1696
	8	1661	309	1970	1580	330	1909	1494	358	1852	1403	395	1798	1305	442	1746
	9	1717	312	2029	1633	333	1966	1546	362	1907	1452	399	1851	1351	447	1798
	10	1774	315	2089	1688	336	2025	1598	366	1964	1502	404	1906	1398	452	1850

Pf: cooling capacity [kW]

Pe: electrical power absorbed by the compressors [kW]

Pr: condenser heating capacity [kW]

To: evaporator outgoing water temperature [°C] Evaporator thermal gap = 5°C

SOUND LEVEL - OMEGA V ECHOS /A /LC - STANDARD UNIT

MODEL	Octave bande [dB]																Total [dB(A)]	
	63 Hz		125 Hz		250 Hz		500 Hz		1000 Hz		2000 Hz		4000 Hz		8000 Hz			
	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp
18.1	70	53	69	52	73	56	71	54	81	64	78	61	73	56	62	45	84	67
20.1	70	53	69	52	73	56	71	54	81	64	78	61	73	56	62	45	84	67
22.1	70	53	69	52	73	56	71	54	81	64	78	61	73	56	62	45	84	67
24.1	73	56	71	54	76	59	74	57	84	67	81	64	76	59	65	48	87	70
27.1	75	58	73	56	78	61	76	59	86	69	83	66	78	61	66	49	89	72
31.1	77	60	75	58	79	62	78	61	88	71	85	68	80	63	68	51	91	74
35.1	78	60	77	59	81	63	79	61	90	72	87	69	82	64	69	51	93	75
36.2	75	57	74	56	78	60	76	58	86	68	83	65	78	60	67	49	89	71
38.2	73	55	72	54	76	58	74	56	84	66	81	63	76	58	65	47	87	69
41.2	73	55	72	54	76	58	74	56	84	66	81	63	76	58	65	47	87	69
42.1	82	64	80	62	85	67	83	65	94	76	91	73	85	67	73	55	97	79
45.2	73	55	72	54	76	58	74	56	84	66	81	63	76	58	65	47	87	69
46.2	73	55	72	54	76	58	74	56	84	66	81	63	76	58	65	47	87	69
49.2	73	55	72	54	76	58	74	56	84	66	81	63	76	58	65	47	87	69
53.2	73	55	72	54	76	58	74	56	84	66	81	63	76	58	65	47	87	69
57.2	77	59	75	57	80	62	78	60	88	70	85	67	80	62	69	51	91	73
62.2	79	61	77	59	82	64	80	62	90	72	87	69	82	64	70	52	93	75
65.2	77	58	75	57	80	61	78	59	88	69	85	67	80	61	69	50	91	72
69.2	81	63	80	61	84	66	82	64	93	74	90	72	85	66	72	54	96	77
72.2	81	63	80	61	84	66	82	64	93	74	90	72	85	66	72	54	96	77
76.2	82	64	80	62	85	67	83	65	94	76	91	73	86	67	73	55	97	78
78.2	83	64	81	62	86	67	84	65	95	76	92	73	86	67	74	55	98	79
83.2	85	66	83	64	88	69	86	67	97	78	94	75	88	69	76	57	100	81
88.2	85	66	83	64	88	69	86	67	97	78	94	75	88	69	76	57	100	81
95.2	85	66	83	64	88	69	86	67	97	78	94	75	88	69	76	57	100	81
100.2	85	66	83	64	88	69	86	67	97	78	94	75	88	69	76	57	100	81
105.2	85	66	83	64	88	69	86	67	97	78	94	75	88	69	76	57	100	81
110.2	85	65	83	63	88	68	86	66	97	77	94	74	88	68	76	56	100	80
117.2	86	66	84	64	89	69	87	67	98	78	95	75	89	69	76	56	101	81
124.2	86	66	84	64	89	69	87	67	98	78	95	75	89	69	76	56	101	81
130.3	86	66	84	64	89	69	87	67	98	78	95	75	89	69	77	57	101	81
137.3	86	66	84	64	89	69	87	67	98	78	95	75	89	69	77	57	101	81
143.3	86	66	84	64	89	69	87	67	98	78	95	75	89	69	77	57	101	81
147.3	86	66	84	64	89	69	87	67	98	78	95	75	89	69	77	57	101	81
153.3	86	66	84	64	89	69	87	67	98	78	95	75	89	69	77	57	101	81

Lw:noise power levels measured in free field according to standard ISO 3744.

Lp: sound pressure levels measured at 1 metres from the unit in free field under nominal working conditions, according to ISO 3744

Data acquired with unit operating at the following conditions: A 35°C; W12/7°C

SOUND LEVEL - OMEGA V ECHOS /A /LC - LOW NOISE UNIT

MODEL	Octave bande [dB]																Total [dB(A)]	
	63 Hz		125 Hz		250 Hz		500 Hz		1000 Hz		2000 Hz		4000 Hz		8000 Hz			
	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp
18.1	67	50	65	48	69	52	68	51	76	59	74	57	69	52	60	43	80	63
20.1	67	50	65	48	69	52	68	51	76	59	74	57	69	52	60	43	80	63
22.1	67	50	65	48	69	52	68	51	76	59	74	57	69	52	60	43	80	63
24.1	69	52	67	50	71	54	70	53	78	61	76	59	71	54	61	44	82	65
27.1	71	54	69	52	73	56	71	54	80	63	78	61	73	56	63	46	84	67
31.1	73	56	71	54	76	59	74	57	84	67	81	64	76	59	65	48	87	70
35.1	74	56	72	54	77	59	75	57	85	67	82	64	77	59	66	48	88	70
36.2	72	54	70	52	74	56	72	54	81	63	79	61	74	56	64	46	85	67
38.2	70	52	68	50	72	54	71	53	79	61	77	59	72	54	63	45	83	65
41.2	70	52	68	50	72	54	71	53	79	61	77	59	72	54	63	45	83	65
42.1	79	61	77	59	81	63	79	61	90	72	87	69	82	64	70	52	93	75
45.2	69	51	68	50	71	53	70	52	78	60	76	58	72	54	62	44	82	64
46.2	69	51	68	50	71	53	70	52	78	60	76	58	72	54	62	44	82	64
49.2	69	51	68	50	71	53	70	52	78	60	76	58	72	54	62	44	82	64
53.2	69	51	67	49	71	53	70	52	78	60	76	58	71	53	62	44	82	64
57.2	73	55	72	54	76	58	74	56	84	66	81	63	76	58	66	48	87	69
62.2	74	56	73	55	77	59	75	57	85	67	82	64	77	59	67	49	88	70
65.2	73	55	72	53	76	57	74	56	84	65	81	63	76	58	66	47	87	68
69.2	77	59	75	57	80	61	78	59	88	69	85	67	80	61	69	50	91	72
72.2	78	59	76	58	81	62	79	60	89	70	86	68	81	62	70	51	92	73
76.2	78	59	76	58	81	62	79	60	89	70	86	68	81	62	70	51	92	73
78.2	79	60	77	58	82	63	80	61	90	71	87	68	82	63	70	51	93	74
83.2	81	62	79	60	84	65	82	63	92	73	89	70	84	65	72	53	95	76
88.2	81	62	79	60	84	65	82	63	92	73	89	70	84	65	72	53	95	76
95.2	81	62	79	60	84	65	82	63	92	73	89	70	84	65	72	53	95	76
100.2	81	62	79	60	84	65	82	63	92	73	89	70	84	65	72	53	95	76
105.2	81	62	79	60	83	64	81	62	92	73	89	70	84	65	72	53	95	76
110.2	82	62	80	60	84	64	82	62	93	73	90	70	85	65	73	53	96	76
117.2	82	62	80	60	84	64	82	62	93	73	90	70	85	65	73	53	96	76
124.2	82	62	80	60	84	64	82	62	93	73	90	70	85	65	73	53	96	76
130.3	82	62	80	60	85	65	83	63	93	73	90	70	85	65	73	53	96	76
137.3	82	62	80	60	85	65	83	63	93	73	90	70	85	65	73	53	96	76
143.3	82	62	80	60	85	65	83	63	93	73	90	70	85	65	73	53	96	76
147.3	83	63	81	61	85	65	83	63	94	74	91	71	86	66	74	54	97	77
153.3	83	63	81	61	85	65	83	63	94	74	91	71	86	66	74	54	97	77

Lw:noise power levels measured in free field according to standard ISO 3744.

Lp: sound pressure levels measured at 1 metres from the unit in free field under nominal working conditions, according to ISO 3744

Data acquired with unit operating at the following conditions: A 35°C; W12/7°C

SOUND LEVEL - OMEGA V ECHOS /A /LC - SUPER LOW NOISE UNIT

MODEL	Octave bande [dB]																Total [dB(A)]	
	63 Hz		125 Hz		250 Hz		500 Hz		1000 Hz		2000 Hz		4000 Hz		8000 Hz			
	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp
18.1	61	44	60	43	63	46	61	44	69	52	67	50	63	46	55	38	73	56
20.1	61	44	60	43	63	46	61	44	69	52	67	50	63	46	55	38	73	56
22.1	61	44	60	43	63	46	61	44	69	52	67	50	63	46	55	38	73	56
24.1	64	47	62	45	66	49	64	47	72	55	70	53	66	49	57	40	76	59
27.1	65	48	64	47	68	51	66	49	74	57	72	55	68	51	59	42	78	61
31.1	67	50	66	49	69	52	68	51	76	59	74	57	70	53	60	43	80	63
35.1	68	50	67	49	70	52	69	51	77	59	75	57	71	53	61	43	81	63
36.2	66	48	64	46	68	50	66	48	74	56	72	54	68	50	59	41	78	60
38.2	64	46	62	44	66	48	64	46	72	54	70	52	66	48	58	40	76	58
41.2	63	45	62	44	65	47	63	45	71	53	69	51	65	47	57	39	75	57
42.1	73	55	71	53	75	57	73	55	82	64	80	62	75	57	65	47	86	68
45.2	64	46	62	44	66	48	64	46	72	54	70	52	66	48	58	40	76	58
46.2	64	46	62	44	66	48	64	46	72	54	70	52	66	48	57	39	76	58
49.2	64	46	62	44	66	48	64	46	72	54	70	52	66	48	57	39	76	58
53.2	63	45	62	44	65	47	63	45	71	53	69	51	65	47	57	39	75	57
57.2	67	49	66	48	70	52	68	50	76	58	74	56	70	52	61	43	80	62
62.2	68	50	67	49	71	53	69	51	77	59	75	57	71	53	61	43	81	63
65.2	67	49	66	47	70	51	68	50	76	58	74	55	70	51	61	42	80	61
69.2	71	52	69	51	73	55	72	53	80	62	78	59	73	55	64	45	84	65
72.2	72	53	70	52	74	56	73	54	81	63	79	60	74	56	64	46	85	66
76.2	72	53	70	52	74	56	73	54	81	63	79	60	74	56	65	46	85	66
78.2	73	54	71	52	75	56	74	55	82	63	80	61	75	56	65	46	86	67
83.2	75	56	73	54	77	58	75	56	84	65	82	63	77	58	67	48	88	69
88.2	75	56	74	55	78	59	76	57	86	67	83	64	78	59	68	49	89	70
95.2	75	56	74	55	78	59	76	57	86	67	83	64	78	59	68	49	89	70
100.2	75	56	74	55	78	59	76	57	86	67	83	64	78	59	68	49	89	70
105.2	76	57	75	56	79	60	77	58	87	68	84	65	79	60	68	49	90	71
110.2	76	56	75	55	79	59	77	57	87	67	84	64	79	59	68	48	90	70
117.2	76	56	75	55	79	59	77	57	87	67	84	64	79	59	68	48	90	70
124.2	77	57	75	55	80	60	78	58	88	68	85	65	80	60	69	49	91	71
130.3	77	57	76	56	80	60	78	58	88	68	85	65	80	60	69	49	91	71
137.3	77	57	76	56	80	60	78	58	88	68	85	65	80	60	69	49	91	71
143.3	77	57	76	56	80	60	78	58	88	68	85	65	80	60	69	49	91	71
147.3	77	57	76	56	80	60	78	58	88	68	85	65	80	60	69	49	91	71
153.3	77	57	76	56	80	60	78	58	88	68	85	65	80	60	69	49	91	71

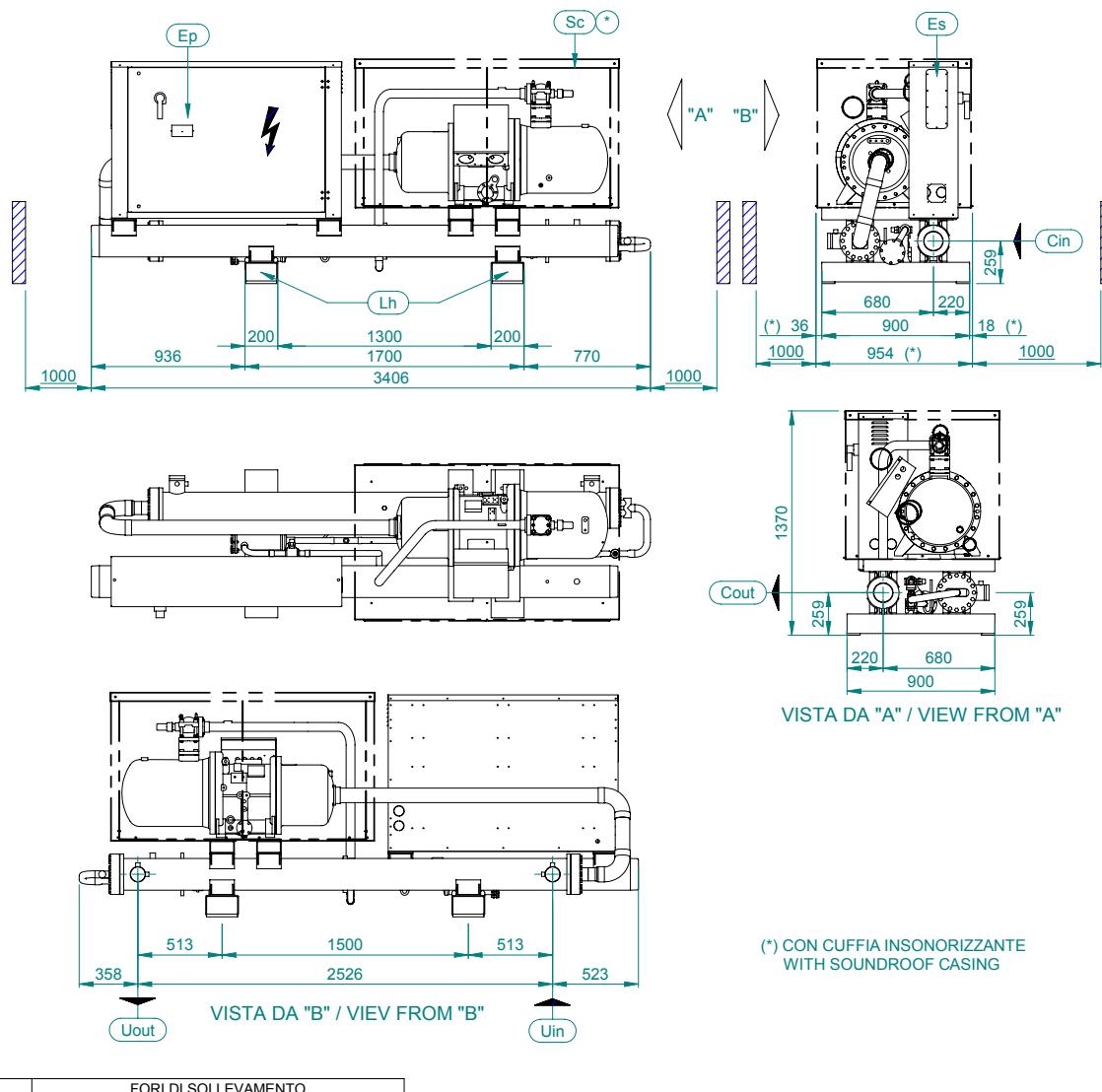
Lw:noise power levels measured in free field according to standard ISO 3744.

Lp: sound pressure levels measured at 1 metres from the unit in free field under nominal working conditions, according to ISO 3744

Data acquired with unit operating at the following conditions: A 35°C; W12/7°C

DIMENSIONAL DATA

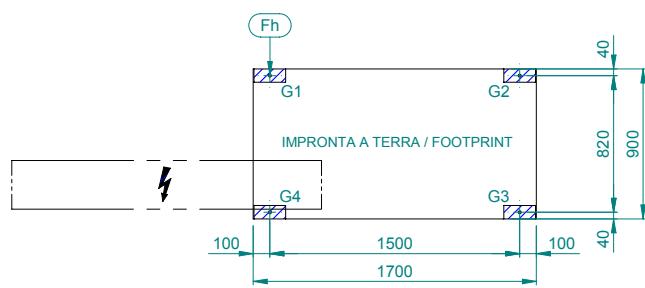
OMEGA V ECHOS 18.1-22.1



Lh	FORI DI SOLLEVAMENTO LIFTING HOLES			
Ep	QUADRO ELETTRICO ELECTRICAL PANEL	Cin	INGR. ACQUA CONDENSAZIONE CONDENSING WATER INLET	G 4"
Es	INGRESSO ALIMENTAZIONE ELETTRICA ELECTRICAL SUPPLY INLET	Cout	USCITA ACQUA CONDENSAZIONE CONDENSING WATER OUTLET	G 4"
Sc	CUFFIA INSONORIZZANTE SOUNDPROOF CASING	Uin	INGRESSO ACQUA UTILIZZO USER WATER INLET	OD 88.9
	SPAZI DI INSTALLAZIONE CLEARANCES	Uout	USCITA ACQUA UTILIZZO USER WATER OUTLET	OD 88.9
			*	OPTIONAL

A4C237A

OMEGA V ECHOS 18.1-22.1

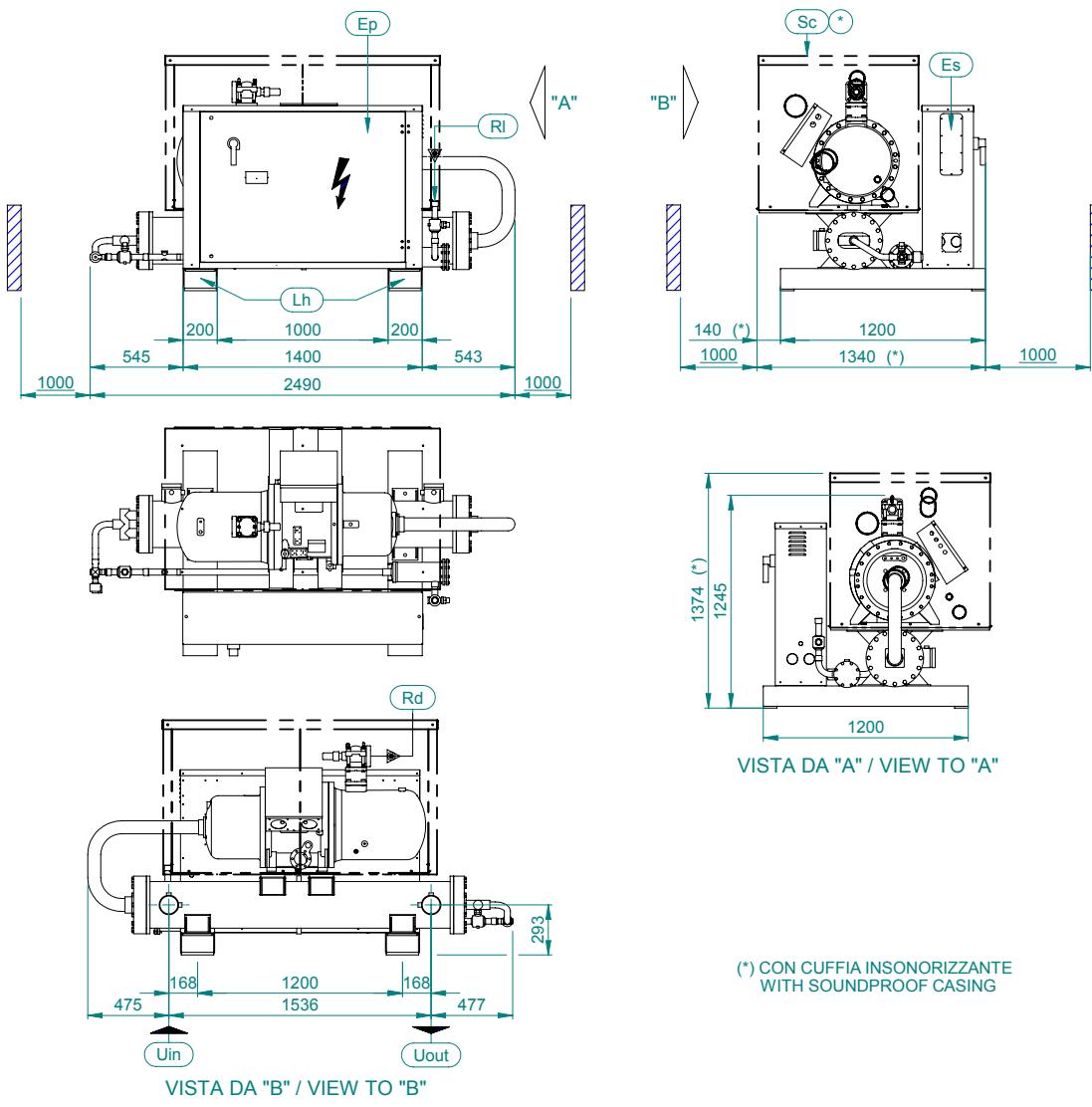


MODELLO MODEL	PESO (kg) WEIGHT(kg)	PESO IN FUNZIONE (kg) OPERATING WEIGHT (kg)	G1 (kg)	G2 (kg)	G3 (kg)	G4 (kg)
OMEGA V ECHOS 18.1	1152	1224	268	388	336	232
OMEGA V ECHOS 18.1 LN	1351	1423	275	483	424	241
OMEGA V ECHOS 20.1	1244	1318	278	433	370	237
OMEGA V ECHOS 20.1 LN	1445	1519	285	529	458	247
OMEGA V ECHOS 22.1	1223	1297	276	422	362	237
OMEGA V ECHOS 22.1 LN	1423	1497	283	517	450	247

Fh	FORI DI FISSAGGIO FIXING HOLES	Ø22
G..	PUNTI DI APPOGGIO ANTIVIBRANTI VIBRATION DAMPER FOOT HOLDS	

A4C237A

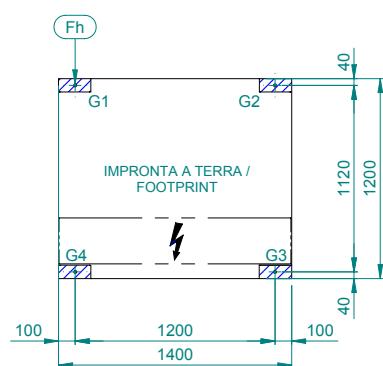
OMEGA V ECHOS /LC 18.1-22.1



Lh	FORI DI SOLLEVAMENTO LIFTING HOLES		
Ep	QUADRO ELETTRICO ELECTRICAL PANEL	Ri	CONNESSIONI REFRIGERANTE (LIQUIDO) REFRIGERANT CONNECTIONS (LIQUID)
Es	INGRESSO ALIMENTAZIONE ELETTRICA ELECTRICAL SUPPLY INLET	Rd	CONNESSIONI REFRIGERANTE (MANDATA) REFRIGERANT CONNECTIONS (DISCHARGE)
Sc	CUFFIA INSONORIZZANTE SOUNDPREOF CASING	Uin	INGRESSO ACQUA UTILIZZO USER WATER INLET
	SPAZI DI INSTALLAZIONE CLEARANCES	Uout	OD 114.3
			*
			OPTIONAL

A4C423A

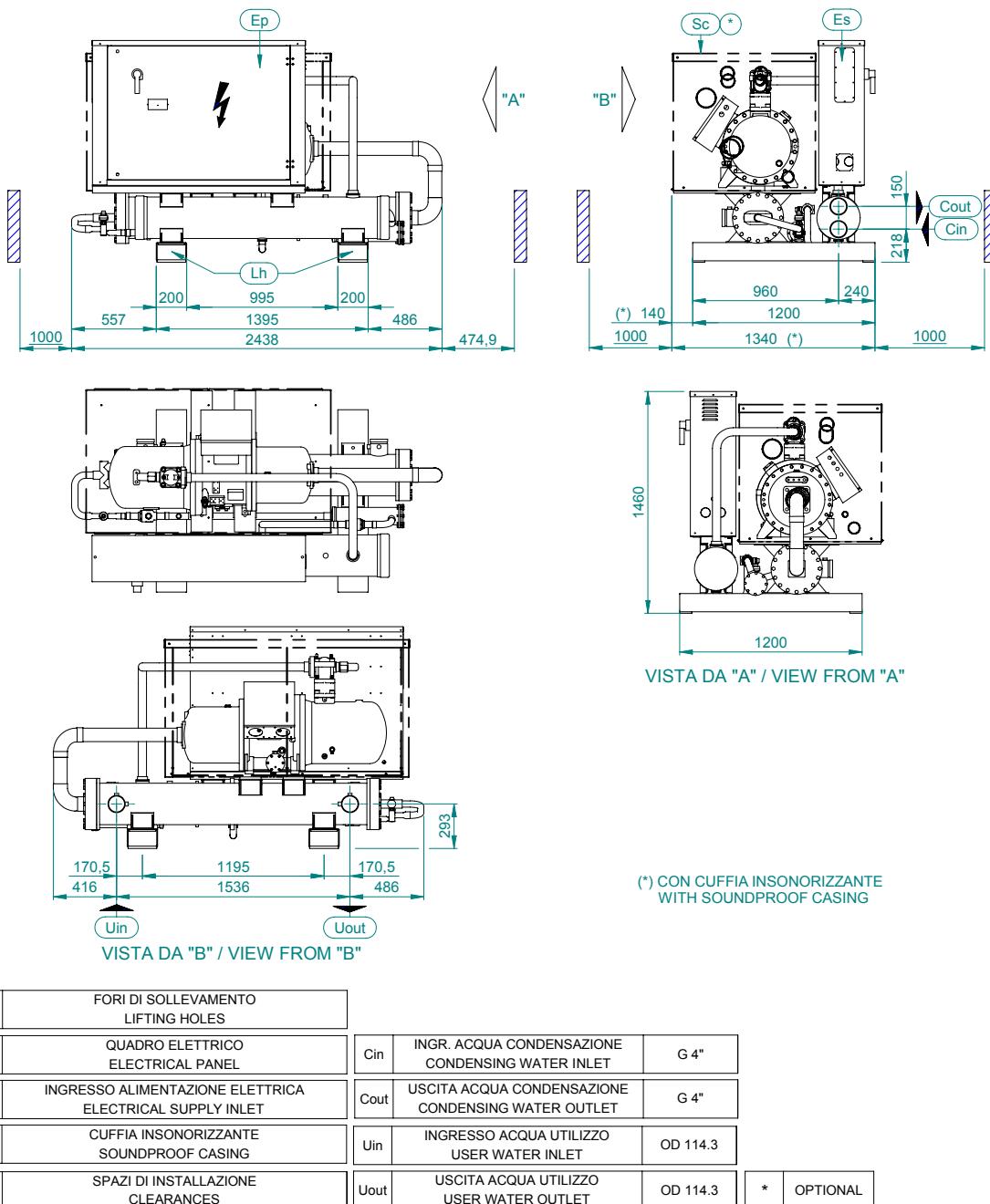
OMEGA V ECHOS /LC 18.1-22.1



MODELLO MODEL	PESO (kg) WEIGHT(kg)	PESO IN FUNZIONE (kg) OPERATING WEIGHT (kg)	G1 (kg)	G2 (kg)	G3 (kg)	G4 (kg)
OMEGA V ECHOS 18.1 LC	1190	1190	346	330	251	263
OMEGA V ECHOS 18.1 LC LN	1389	1389	425	397	274	293
OMEGA V ECHOS 20.1 LC	1278	1278	375	358	266	279
OMEGA V ECHOS 20.1 LC LN	1477	1477	455	424	289	309
OMEGA V ECHOS 22.1 LC	1256	1256	368	351	262	275
OMEGA V ECHOS 22.1 LC LN	1456	1456	448	418	285	305

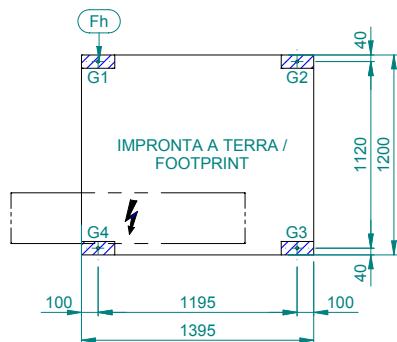
A4C423A

OMEGA V ECHOS 24.1-31.1



A4C358A

OMEGA V ECHOS 24.1-31.1

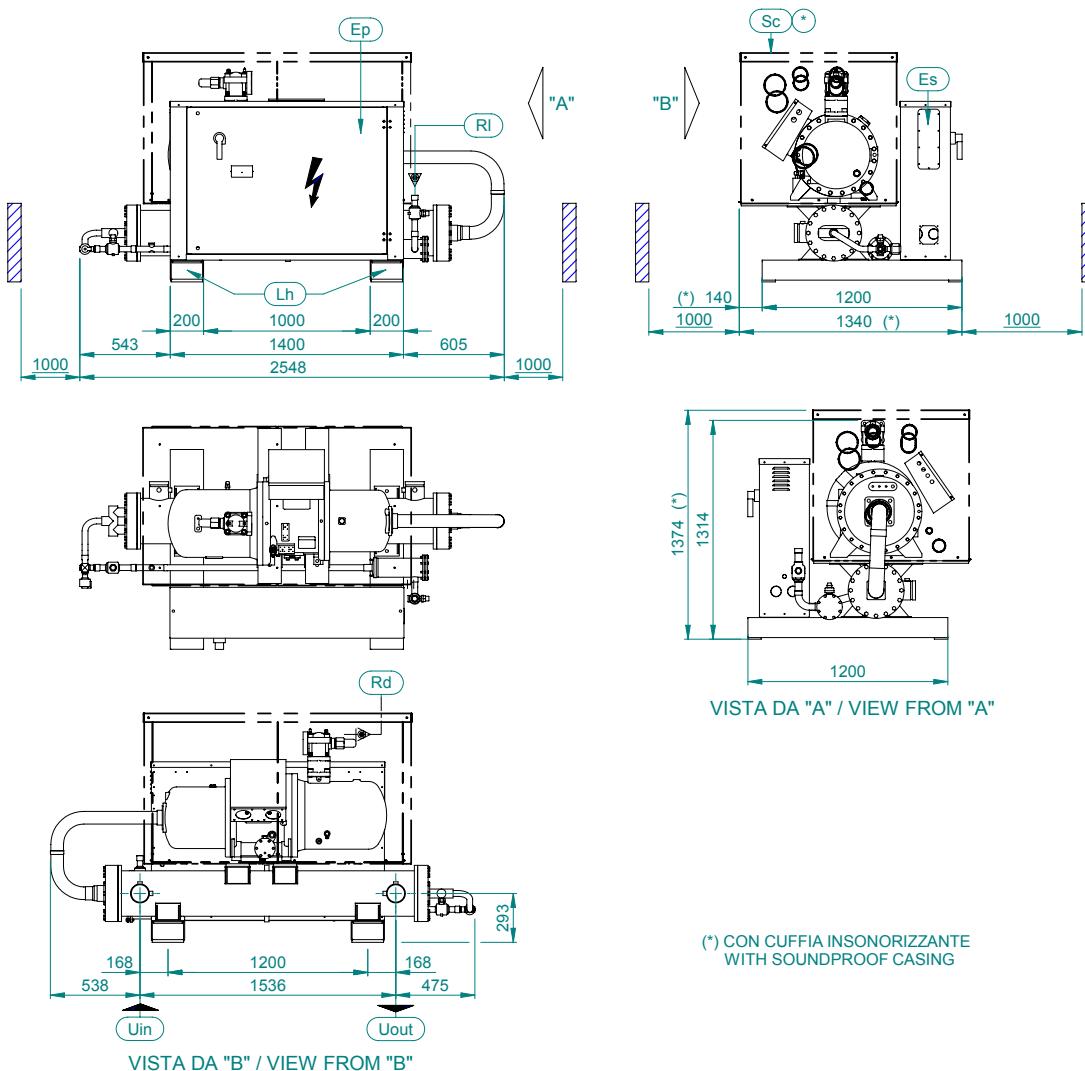


MODELLO MODEL	PESO (kg) WEIGHT(kg)	PESO IN FUNZIONE (kg) OPERATING WEIGHT (kg)	G1 (kg)	G2 (kg)	G3 (kg)	G4 (kg)
OMEGA V ECHOS 24.1	1373	1471	481	296	264	430
OMEGA V ECHOS 24.1 LN	1573	1671	591	332	269	479
OMEGA V ECHOS 27.1	1498	1596	535	321	277	463
OMEGA V ECHOS 27.1 LN	1697	1795	646	356	282	511
OMEGA V ECHOS 31.1	1570	1669	567	335	285	482
OMEGA V ECHOS 31.1 LN	1771	1870	678	371	290	531

Fh	FORI DI FISSAGGIO FIXING HOLES	Ø22
G..	PUNTI DI APPOGGIO ANTIVIBRANTI VIBRATION DAMPER FOOT HOLDS	

A4C358A

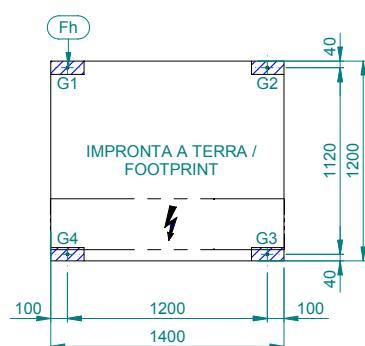
OMEGA V ECHOS /LC 24.1-31.1



Lh	FORI DI SOLLEVAMENTO LIFTING HOLES		
Ep	QUADRO ELETTRICO ELECTRICAL PANEL	Rd	CONNESSIONI REFRIGERANTE (MANDATA) REFRIGERANT CONNECTIONS (DISCHARGE)
Es	INGRESSO ALIMENTAZIONE ELETTRICA ELECTRICAL SUPPLY INLET	Ri	CONNESSIONI REFRIGERANTE (LIQUIDO) REFRIGERANT CONNECTIONS (LIQUID)
Sc	CUFFIA INSONORIZZANTE SOUNDPREOF CASING	Uin	INGRESSO ACQUA UTILIZZO USER WATER INLET OD 114.3
	SPAZI DI INSTALLAZIONE CLEARANCES	Uout	USCITA ACQUA UTILIZZO USER WATER OUTLET OD 114.3
		*	OPTIONAL

A49454A

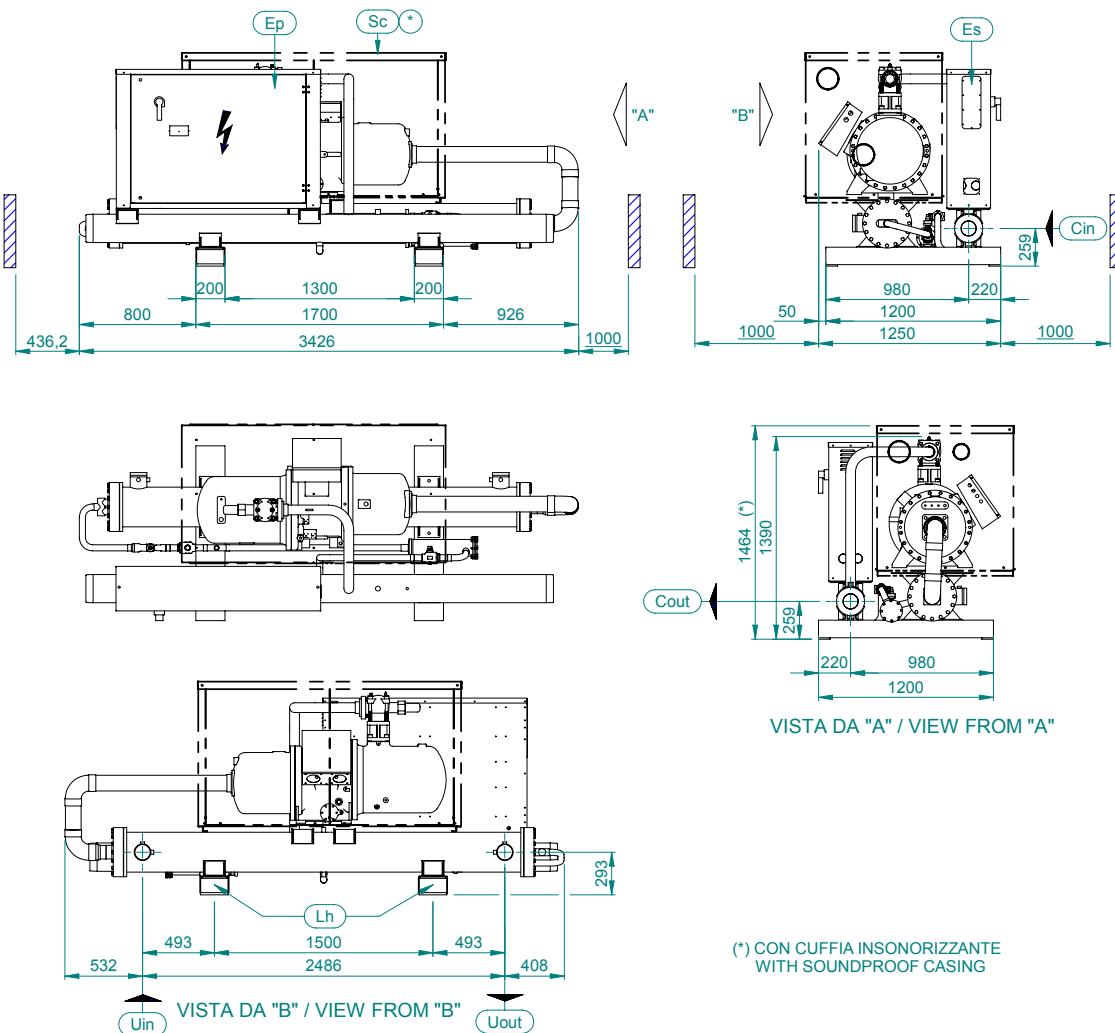
OMEGA V ECHOS /LC 24.1-31.1



MODELLO MODEL	PESO (kg) WEIGHT(kg)	PESO IN FUNZIONE (kg) OPERATING WEIGHT (kg)	G1 (kg)	G2 (kg)	G3 (kg)	G4 (kg)
OMEGA V ECHOS 24.1 LC	1222	1296	381	364	269	282
OMEGA V ECHOS 24.1 LC LN	1422	1496	461	431	292	312
OMEGA V ECHOS 27.1 LC	1345	1417	423	401	289	304
OMEGA V ECHOS 27.1 LC LN	1545	1617	502	468	312	335
OMEGA V ECHOS 31.1 LC	1415	1487	447	423	300	317
OMEGA V ECHOS 31.1 LC LN	1615	1687	526	490	324	347

A4C424A

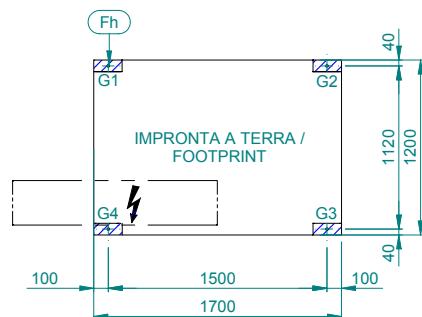
OMEGA V ECHOS 35.1



Lh	FORI DI SOLLEVAMENTO LIFTING HOLES	
Ep	QUADRO ELETTRICO ELECTRICAL PANEL	Cin INGR. ACQUA CONDENSAZIONE CONDENSING WATER INLET G 5"
Es	INGRESSO ALIMENTAZIONE ELETTRICA ELECTRICAL SUPPLY INLET	Cout USCITA ACQUA CONDENSAZIONE CONDENSING WATER OUTLET G 5"
Sc	CUFFIA INSONORIZZANTE SOUNDPROOF CASING	Uin INGRESSO ACQUA UTILIZZO USER WATER INLET OD 114.3
	SPAZI DI INSTALLAZIONE CLEARANCES	Uout USCITA ACQUA UTILIZZO USER WATER OUTLET OD 114.3
		* OPTIONAL

A4C365A

OMEGA V ECHOS 35.1

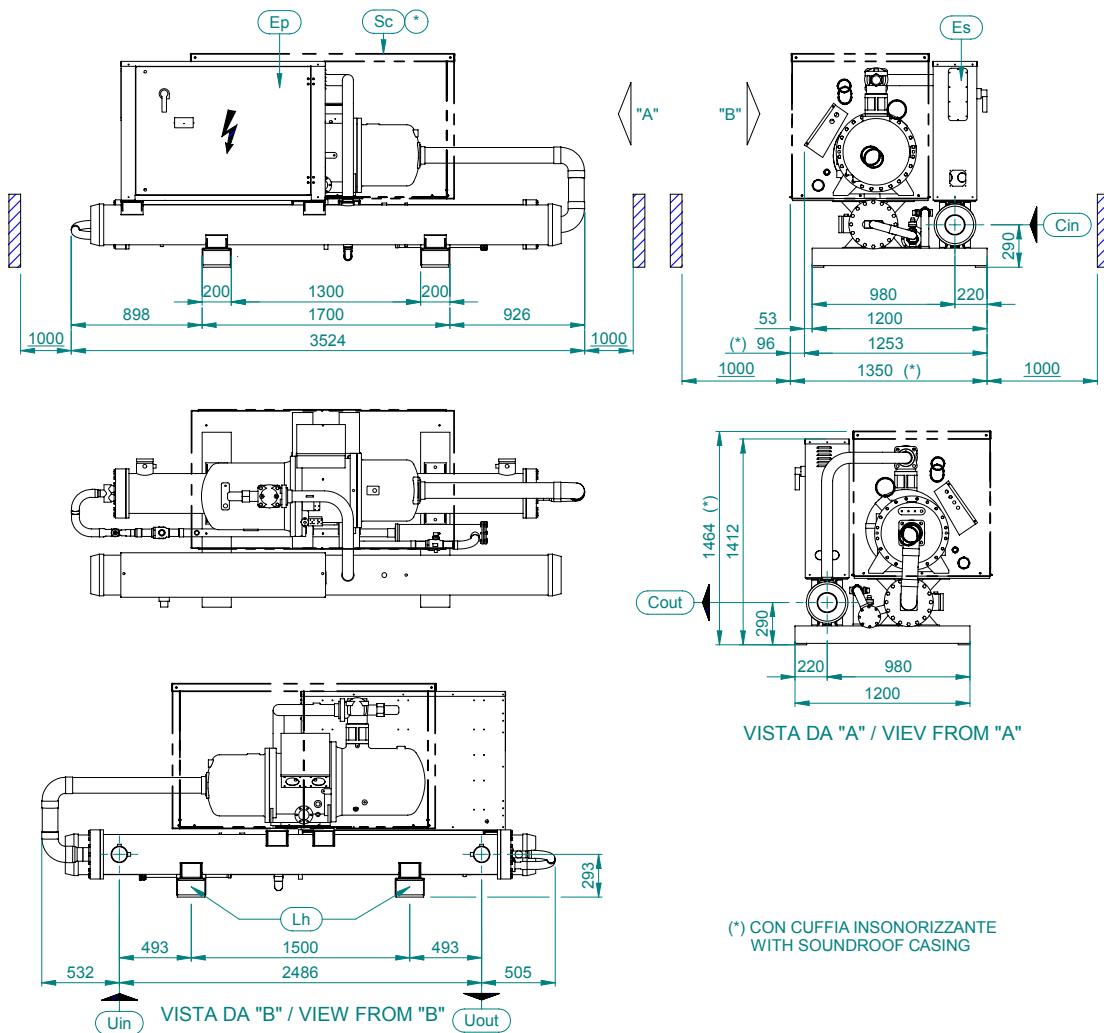


MODELLO MODEL	PESO (kg) WEIGHT(kg)	PESO IN FUNZIONE (kg) OPERATING WEIGHT (kg)	G1 (kg)	G2 (kg)	G3 (kg)	G4 (kg)
OMEGA V ECHOS 35.1	1509	1648	497	408	335	408
OMEGA V ECHOS 35.1 LN	1769	1908	600	500	367	441

Fh	FORI DI FISSAGGIO FIXING HOLES	Ø22
G..	PUNTI DI APPOGGIO ANTIVIBRANTI VIBRATION DAMPER FOOT HOLDS	

A4C365A

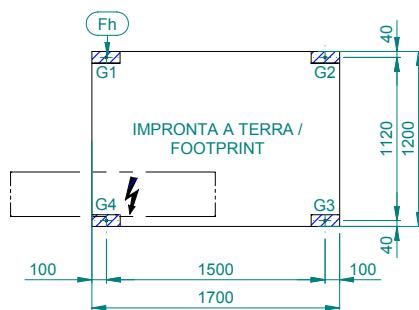
OMEGA V ECHOS 42.1



Lh	FORI DI SOLLEVAMENTO LIFTING HOLES	
Ep	QUADRO ELETTRICO ELECTRICAL PANEL	Cin INGR. ACQUA CONDENSATION CONDENSING WATER INLET G 5"
Es	INGRESSO ALIMENTAZIONE ELETTRICA ELECTRICAL SUPPLY INLET	Cout USCITA ACQUA CONDENSATION CONDENSING WATER OUTLET G 5"
Sc	CUFFIA INSONORIZZANTE SOUNDPROOF CASING	Uin INGRESSO ACQUA UTILIZZO USER WATER INLET OD 114.3
	SPAZI DI INSTALLAZIONE CLEARANCES	Uout USCITA ACQUA UTILIZZO USER WATER OUTLET OD 114.3
		* OPTIONAL

A4C325A

OMEGA V ECHOS 42.1

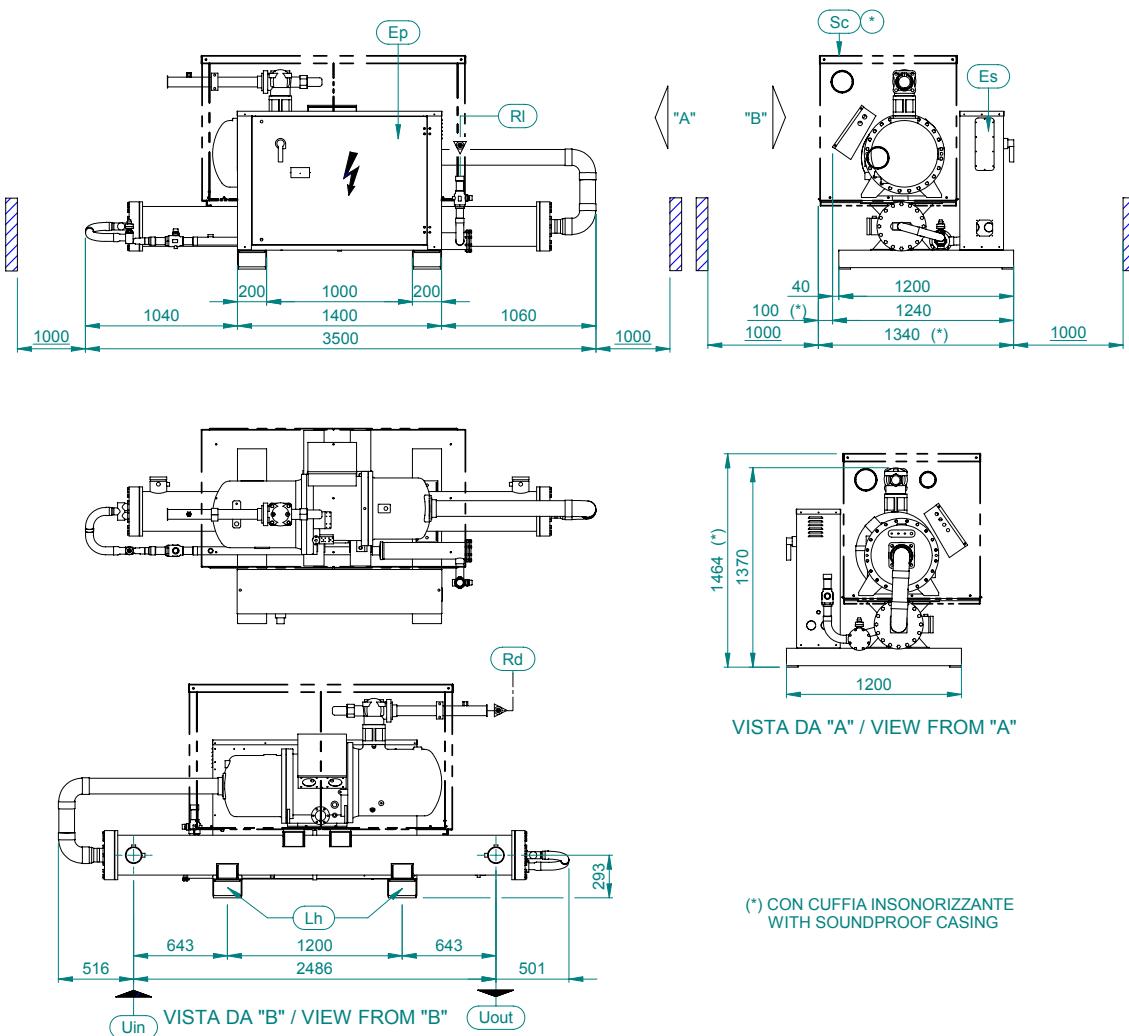


MODELLO MODEL	PESO (kg) WEIGHT(kg)	PESO IN FUNZIONE (kg) OPERATING WEIGHT (kg)	G1 (kg)	G2 (kg)	G3 (kg)	G4 (kg)
OMEGA V ECHOS 42.1	1631	1779	518	430	377	454
OMEGA V ECHOS 42.1 LN	1891	2039	621	522	409	487

Fh	FORI DI FISSAGGIO FIXING HOLES	Ø22
G.	PUNTI DI APPOGGIO ANTIVIBRANTI VIBRATION DAMPER FOOT HOLDS	

A4C325A

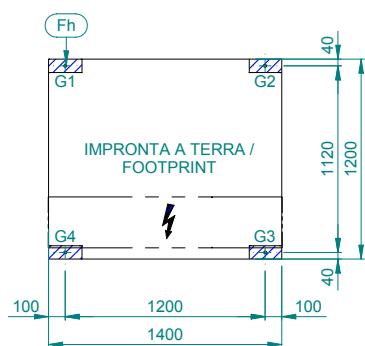
OMEGA V ECHOS /LC 35.1-42.1

(*) CON CUFFIA INSONORIZZANTE
WITH SOUNDPREOF CASING

Lh	FORI DI SOLLEVAMENTO LIFTING HOLES	
Ep	QUADRO ELETTRICO ELECTRICAL PANEL	Rd CONNESSIONI REFRIGERANTE (MANDATA) REFRIGERANT CONNECTIONS (DISCHARGE)
Es	INGRESSO ALIMENTAZIONE ELETTRICA ELECTRICAL SUPPLY INLET	Rl CONNESSIONI REFRIGERANTE (LIQUIDO) REFRIGERANT CONNECTIONS (LIQUID)
Sc	CUFFIA INSONORIZZANTE SOUNDPREOF CASING	Uin INGRESSO ACQUA UTILIZZO USER WATER INLET OD 114.3
	SPAZI DI INSTALLAZIONE CLEARANCES	Uout USCITA ACQUA UTILIZZO USER WATER OUTLET OD 114.3
		*
		OPTIONAL

A4C425A

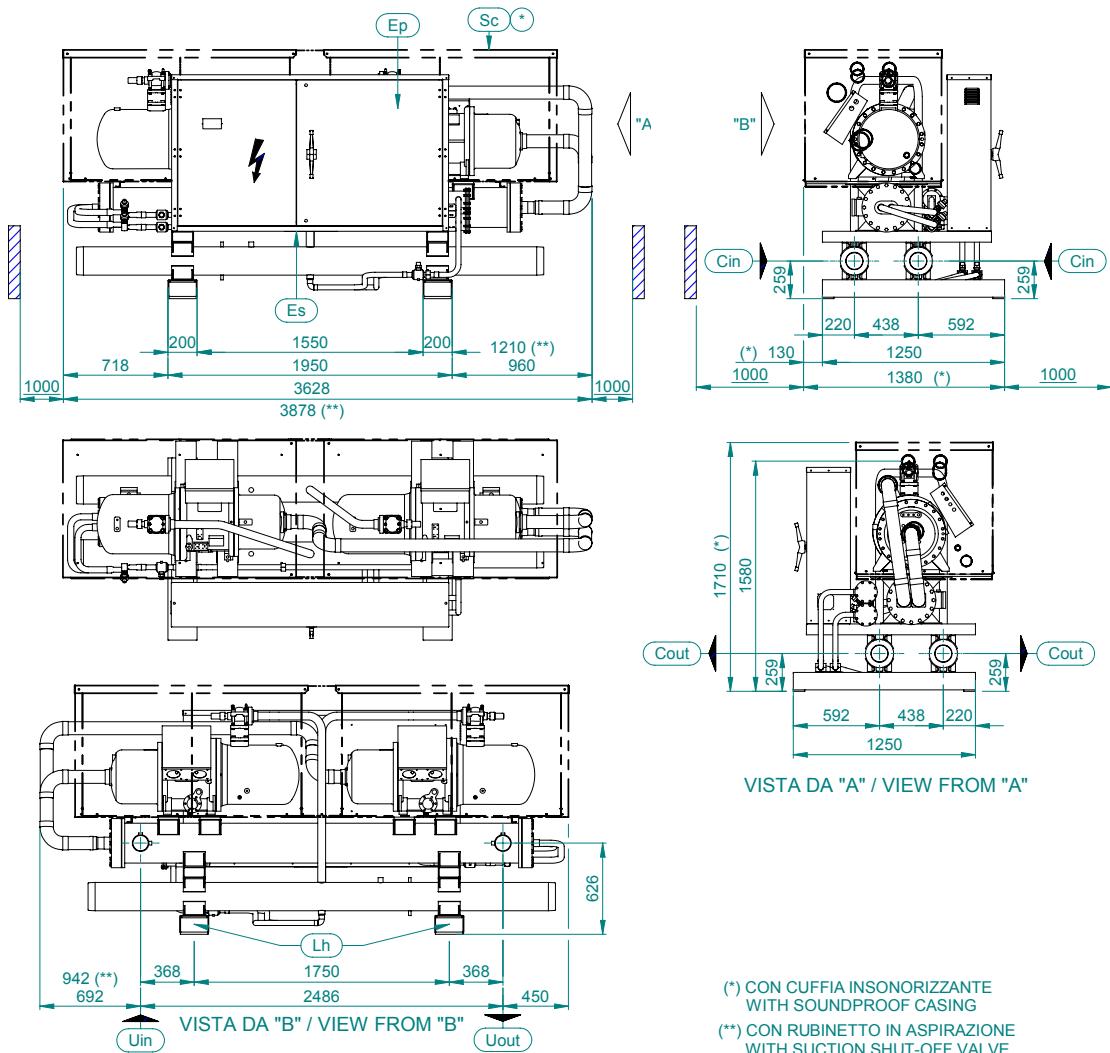
OMEGA V ECHOS /LC 35.1-42.1



MODELLO MODEL	PESO (kg) WEIGHT(kg)	PESO IN FUNZIONE (kg) OPERATING WEIGHT (kg)	G1 (kg)	G2 (kg)	G3 (kg)	G4 (kg)
OMEGA V ECHOS 35.1 LC	1358	1471	450	427	289	305
OMEGA V ECHOS 35.1 LC LN	1618	1731	552	520	320	339
OMEGA V ECHOS 42.1 LC	1403	1516	465	441	297	313
OMEGA V ECHOS 42.1 LC LN	1662	1775	567	534	327	347

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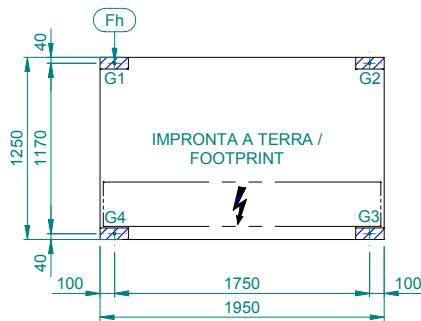
OMEGA V ECHOS 36.2-45.2



FORI DI SOLLEVAMENTO LIFTING HOLES	
Lh	
Ep	QUADRO ELETTRICO ELECTRICAL PANEL
Es	INGRESSO ALIMENTAZIONE ELETTRICA ELECTRICAL SUPPLY INLET
Sc	CUFFIA INSONORIZZANTE SOUNDPREOF CASING
	SPAZI DI INSTALLAZIONE CLEARANCES
Cin	INGR. ACQUA CONDENSAZIONE CONDENSING WATER INLET
Cout	USCITA ACQUA CONDENSAZIONE CONDENSING WATER OUTLET
Uin	INGRESSO ACQUA UTILIZZO USER WATER INLET
Uout	USCITA ACQUA UTILIZZO USER WATER OUTLET
	* OPTIONAL

A4C314A

OMEGA V ECHOS 36.2-45.2

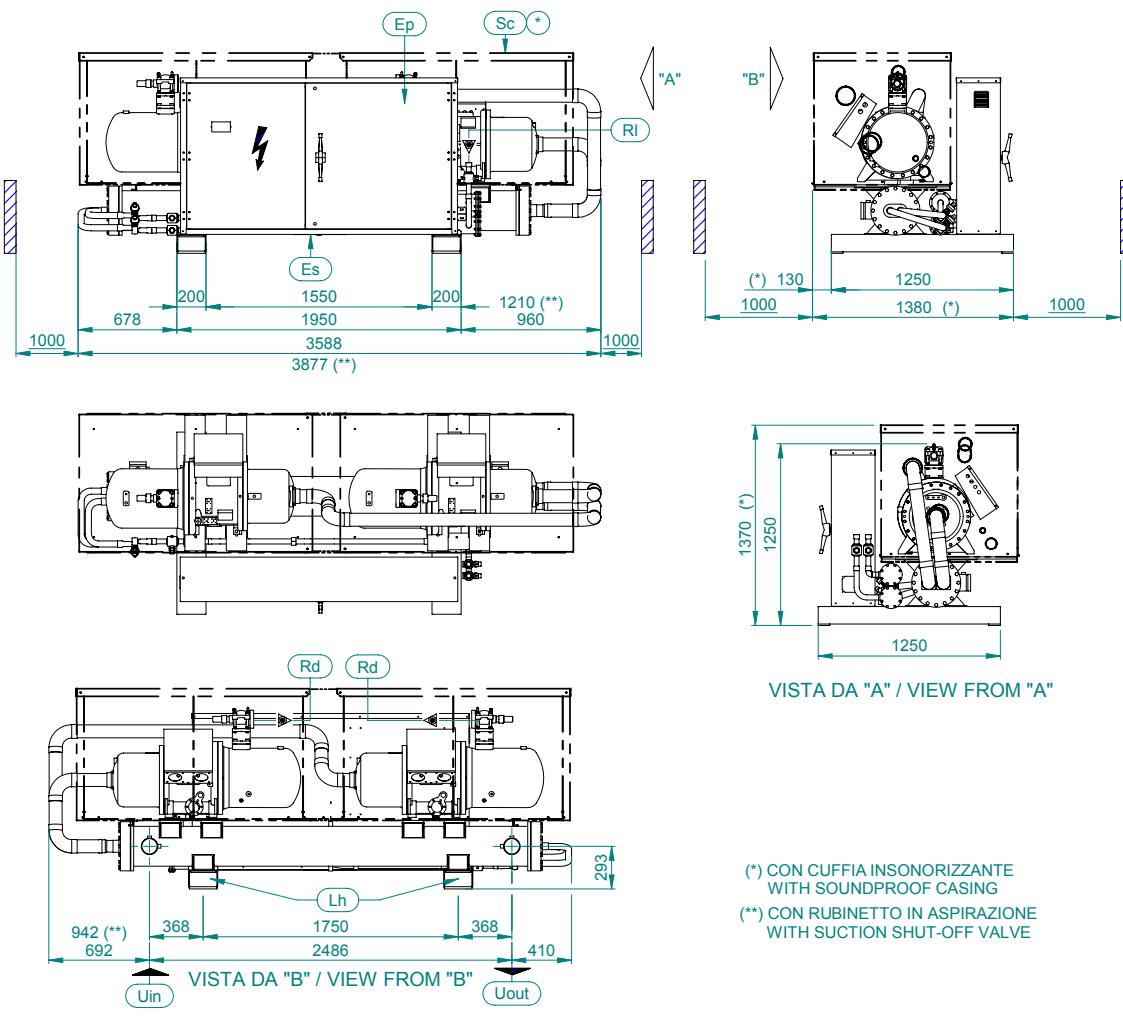


MODELLO MODEL	PESO (kg) WEIGHT(kg)	PESO IN FUNZIONE (kg) OPERATING WEIGHT (kg)	G1 (kg)	G2 (kg)	G3 (kg)	G4 (kg)
OMEGA V ECHOS 36.2	1954	2097	594	677	440	386
OMEGA V ECHOS 36.2 LN	2304	2447	721	807	485	434
OMEGA V ECHOS 38.2	2051	2192	598	737	473	384
OMEGA V ECHOS 38.2 LN	2400	2541	725	867	517	432
OMEGA V ECHOS 41.2	2142	2285	648	746	477	414
OMEGA V ECHOS 41.2 LN	2493	2636	776	876	522	462
OMEGA V ECHOS 45.2	2100	2243	636	731	468	408
OMEGA V ECHOS 45.2 LN	2451	2594	764	861	513	456

Fh	FORI DI FISSAGGIO FIXING HOLES	Ø22
G..	PUNTI DI APPOGGIO ANTIVIBRANTI VIBRATION DAMPER FOOT HOLDS	

A4C314A

OMEGA V ECHOS /LC 36.2-45.2



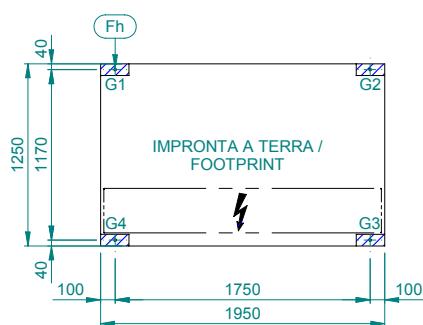
(*) CON CUFFIA INSONORIZZANTE
WITH SOUNDPREOF CASING

(**) CON RUBINETTO IN ASPIRAZIONE
WITH SUCTION SHUT-OFF VALVE

Lh	FORI DI SOLLEVAMENTO LIFTING HOLES	Rd	CONNESSIONI REFRIGERANTE (MANDATA) REFRIGERANT CONNECTIONS (DISCHARGE)
Ep	QUADRO ELETTRICO ELECTRICAL PANEL	Rd	CONNESSIONI REFRIGERANTE (MANDATA) REFRIGERANT CONNECTIONS (DISCHARGE)
Es	INGRESSO ALIMENTAZIONE ELETTRICA ELECTRICAL SUPPLY INLET	Ri	CONNESSIONI REFRIGERANTE (LIQUIDO) REFRIGERANT CONNECTIONS (LIQUID)
Sc	CUFFIA INSONORIZZANTE SOUNDPREOF CASING	Uin	INGRESSO ACQUA UTILIZZO USER WATER INLET OD 114.3
	SPAZI DI INSTALLAZIONE CLEARANCES	Uout	USCITA ACQUA UTILIZZO USER WATER OUTLET OD 114.3
		*	OPTIONAL

A4C426A

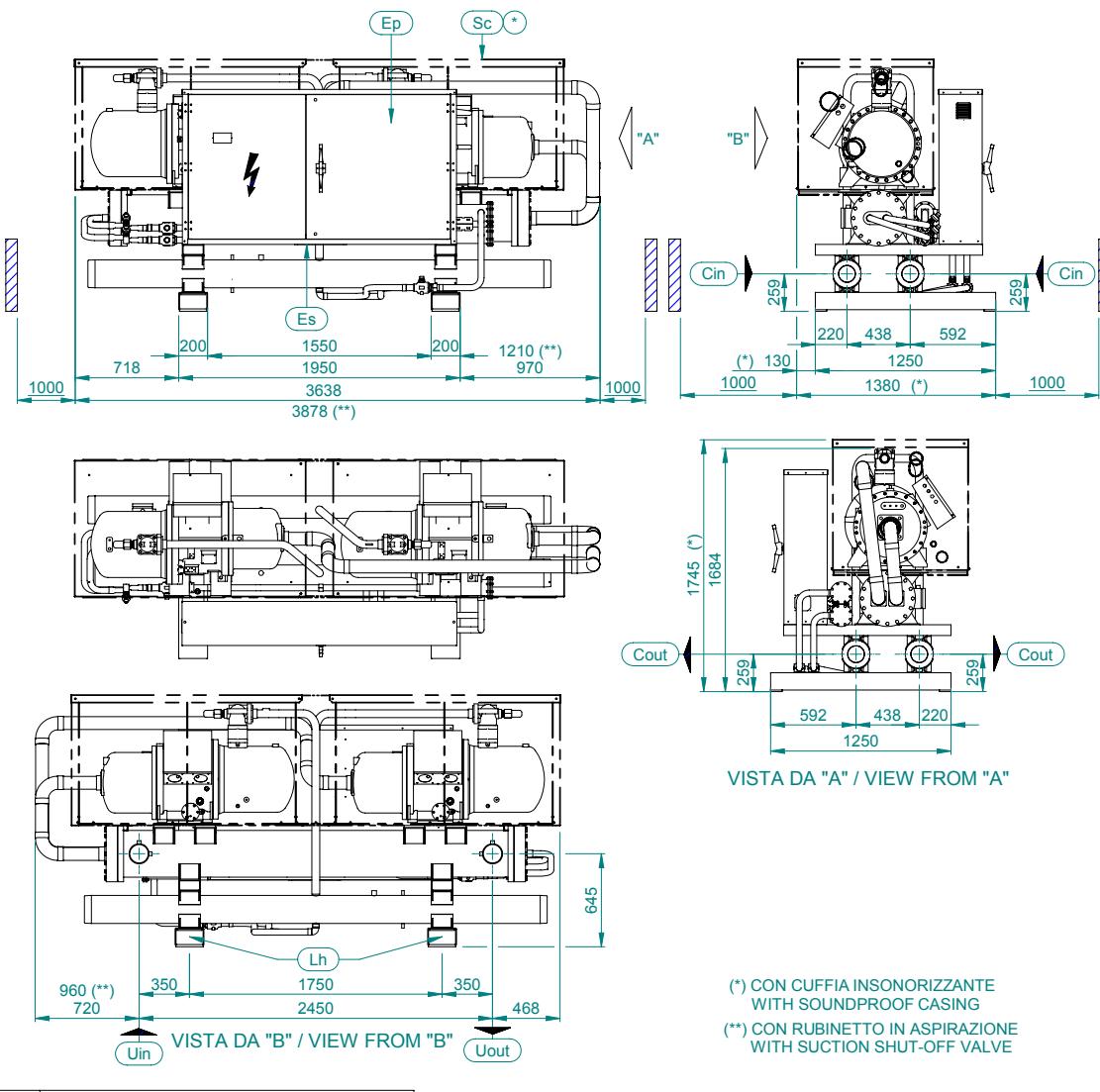
OMEGA V ECHOS /LC 36.2-45.2



MODELLO MODEL	PESO (kg) WEIGHT(kg)	PESO IN FUNZIONE (kg) OPERATING WEIGHT (kg)	G1 (kg)	G2 (kg)	G3 (kg)	G4 (kg)
OMEGA V ECHOS 36.2 LC	1696	1809	503	578	389	339
OMEGA V ECHOS 36.2 LC LN	2045	2158	630	708	434	386
OMEGA V ECHOS 38.2 LC	1787	1895	504	634	422	335
OMEGA V ECHOS 38.2 LC LN	2137	2245	630	765	466	384
OMEGA V ECHOS 41.2 LC	1873	1981	552	642	423	364
OMEGA V ECHOS 41.2 LC LN	2222	2330	679	772	468	411
OMEGA V ECHOS 45.2 LC	1830	1938	540	626	415	357
OMEGA V ECHOS 45.2 LC LN	2180	2288	667	756	460	405

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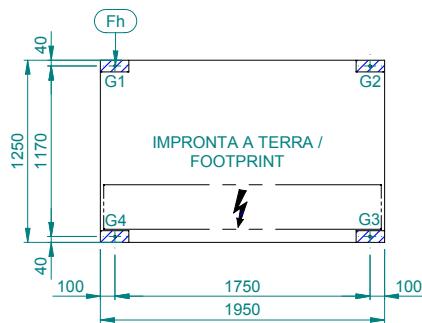
OMEGA V ECHOS 46.2-62.2



Lh	FORI DI SOLLEVAMENTO LIFTING HOLES	
Ep	QUADRO ELETTRICO ELECTRICAL PANEL	Cin INGR. ACQUA CONDENSATION CONDENSING WATER INLET G 4"
Es	INGRESSO ALIMENTAZIONE ELETTRICA ELECTRICAL SUPPLY INLET	Cout USCITA ACQUA CONDENSATION CONDENSING WATER OUTLET G 4"
Sc	CUFFIA INSONORIZZANTE SOUNDPREOF CASING	Uin INGRESSO ACQUA UTILIZZO USER WATER INLET OD 139.7
	Spazi di installazione CLEARANCES	Uout USCITA ACQUA UTILIZZO USER WATER OUTLET OD 139.7
		* OPTIONAL

A4C359A

OMEGA V ECHOS 46.2-62.2

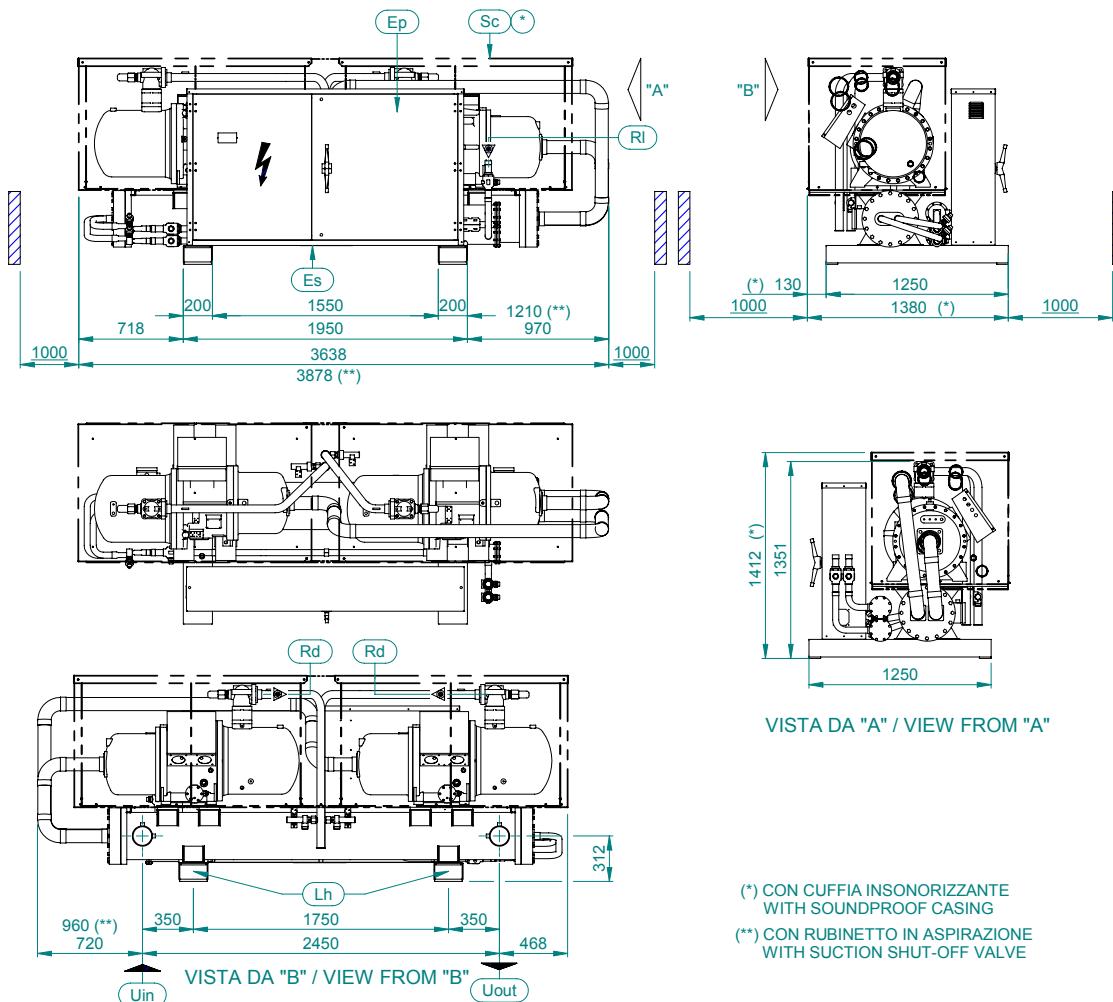


MODELLO MODEL	PESO (kg) WEIGHT(kg)	PESO IN FUNZIONE (kg) OPERATING WEIGHT (kg)	G1 (kg)	G2 (kg)	G3 (kg)	G4 (kg)
OMEGA V ECHOS 46.2	2228	2431	715	771	490	455
OMEGA V ECHOS 46.2 LN	2578	2781	843	900	536	502
OMEGA V ECHOS 49.2	2264	2469	740	771	489	469
OMEGA V ECHOS 49.2 LN	2615	2820	869	900	535	516
OMEGA V ECHOS 53.2	2524	2730	823	860	535	512
OMEGA V ECHOS 53.2 LN	2874	3080	951	989	581	559
OMEGA V ECHOS 57.2	2601	2807	826	909	562	510
OMEGA V ECHOS 57.2 LN	2952	3158	954	1039	607	558
OMEGA V ECHOS 62.2	2678	2887	873	913	563	538
OMEGA V ECHOS 62.2 LN	3029	3238	1001	1043	609	585

Fh	FORI DI FISSAGGIO FIXING HOLES	Ø22
G..	PUNTI DI APPOGGIO ANTIVIBRANTI VIBRATION DAMPER FOOT HOLDS	

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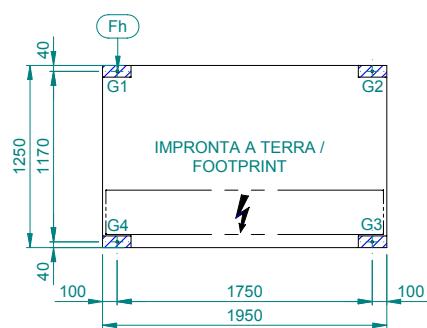
OMEGA V ECHOS /LC 46.2-62.2



Lh	FORI DI SOLLEVAMENTO LIFTING HOLES	
Ep	QUADRO ELETTRICO ELECTRICAL PANEL	Rd CONNESSIONI REFRIGERANTE (MANDATA) REFRIGERANT CONNECTIONS (DISCHARGE)
Es	INGRESSO ALIMENTAZIONE ELETTRICA ELECTRICAL SUPPLY INLET	Ri CONNESSIONI REFRIGERANTE (LIQUIDO) REFRIGERANT CONNECTIONS (LIQUID)
Sc	CUFFIA INSONORIZZANTE SOUNDPREOF CASING	Uin INGRESSO ACQUA UTILIZZO USER WATER INLET
	SPAZI DI INSTALLAZIONE CLEARANCES	Uout USCITA ACQUA UTILIZZO USER WATER OUTLET
		* OPTIONAL

A4C427A

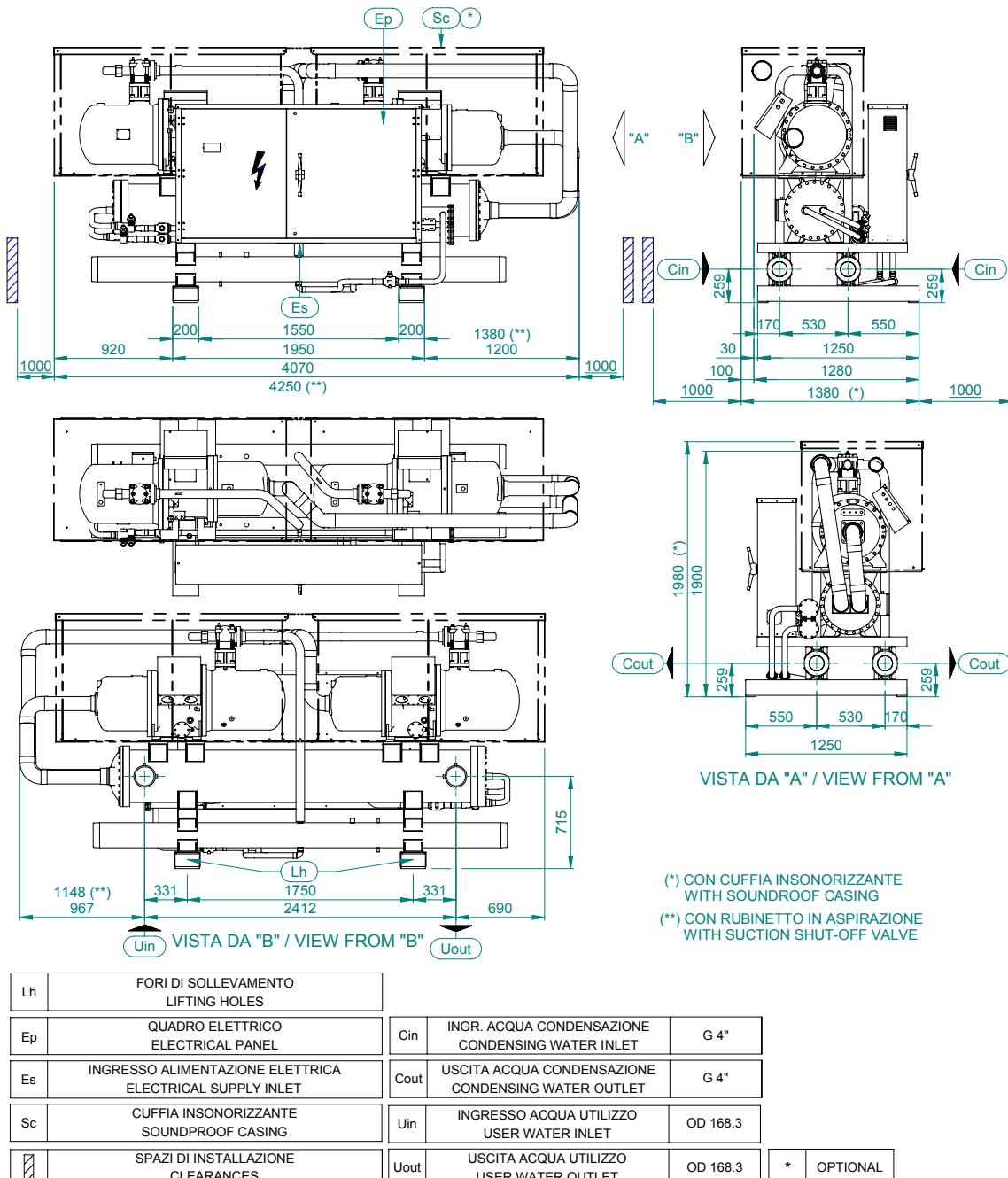
OMEGA V ECHOS /LC 46.2-62.2



MODELLO MODEL	PESO (kg) WEIGHT(kg)	PESO IN FUNZIONE (kg) OPERATING WEIGHT (kg)	G1 (kg)	G2 (kg)	G3 (kg)	G4 (kg)
OMEGA V ECHOS 46.2 LC	1953	2118	612	666	438	402
OMEGA V ECHOS 46.2 LC LN	2301	2466	739	795	483	449
OMEGA V ECHOS 49.2 LC	1983	2148	635	665	434	414
OMEGA V ECHOS 49.2 LC LN	2333	2498	763	794	480	461
OMEGA V ECHOS 53.2 LC	2229	2389	711	747	477	454
OMEGA V ECHOS 53.2 LC LN	2580	2740	839	877	523	501
OMEGA V ECHOS 57.2 LC	2301	2458	711	793	503	451
OMEGA V ECHOS 57.2 LC LN	2653	2810	839	923	549	499
OMEGA V ECHOS 62.2 LC	2372	2529	755	795	502	477
OMEGA V ECHOS 62.2 LC LN	2721	2878	883	924	548	523

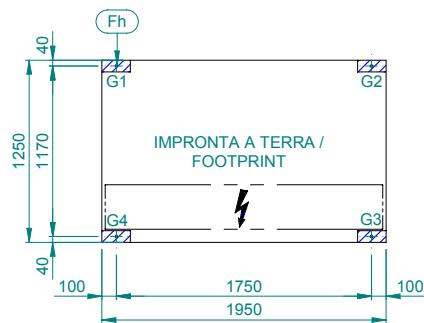
A4C427A

OMEGA V ECHOS 65.2-69.2



A4C366A

OMEGA V ECHOS 65.2-69.2

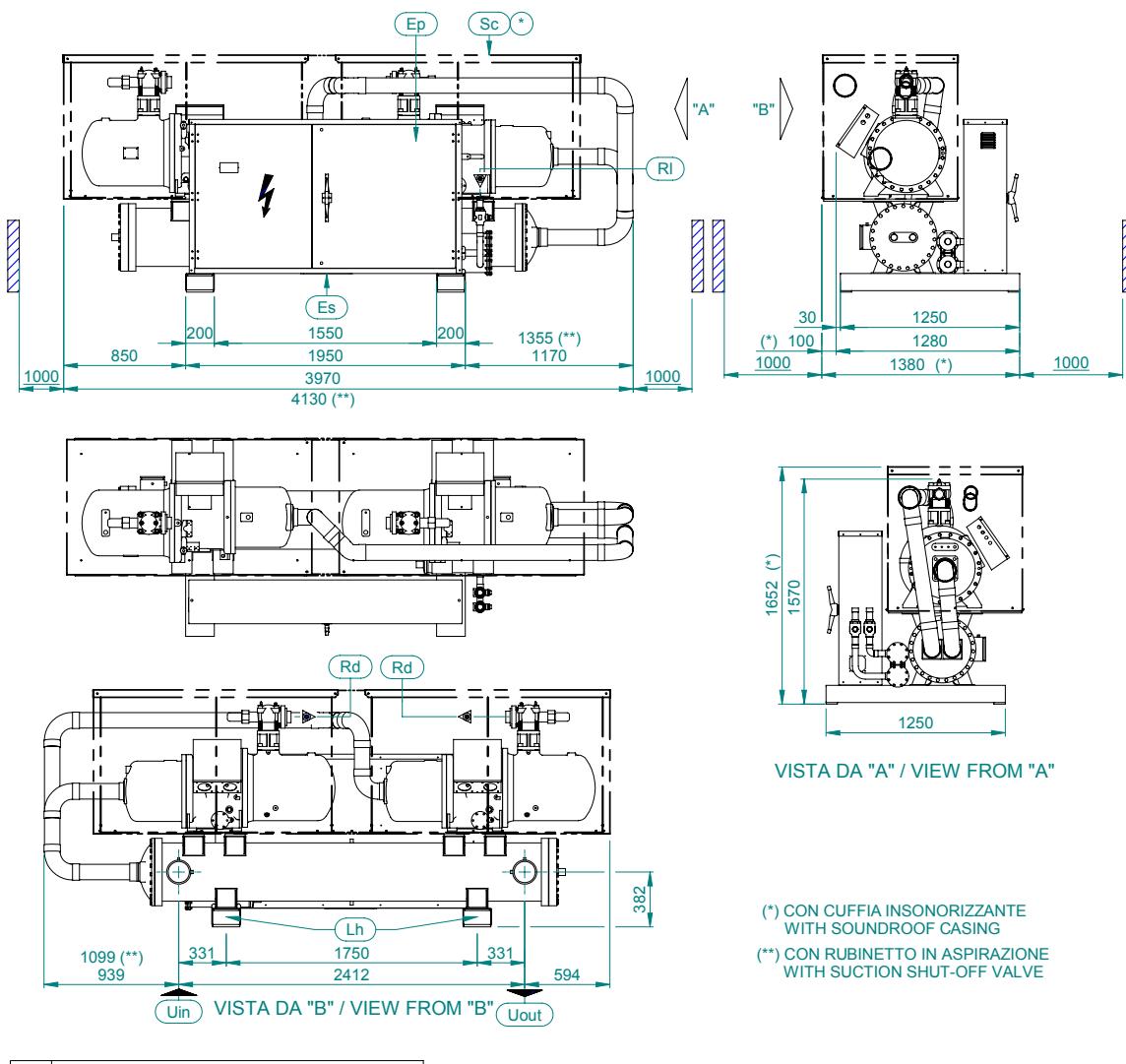


MODELLO MODEL	PESO (kg) WEIGHT(kg)	PESO IN FUNZIONE (kg) OPERATING WEIGHT (kg)	G1 (kg)	G2 (kg)	G3 (kg)	G4 (kg)
OMEGA V ECHOS 65.2	2816	3138	973	975	596	594
OMEGA V ECHOS 65.2 LN	3216	3538	1120	1122	649	647
OMEGA V ECHOS 69.2	2775	3097	947	974	596	580
OMEGA V ECHOS 69.2 LN	3175	3497	1094	1121	649	633

Fh	FORI DI FISSAGGIO FIXING HOLES	Ø22
G..	PUNTI DI APPOGGIO ANTIVIBRANTI VIBRATION DAMPER FOOT HOLDS	

A4C366A

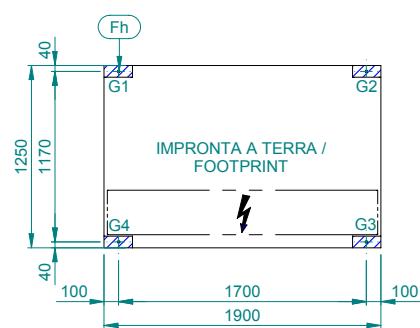
OMEGA V ECHOS /LC 65.2-69.2



Lh	FORI DI SOLLEVAMENTO LIFTING HOLES	
Ep	QUADRO ELETTRICO ELECTRICAL PANEL	Rd CONNESSIONI REFRIGERANTE (MANDATA) REFRIGERANT CONNECTIONS (DISCHARGE)
Es	INGRESSO ALIMENTAZIONE ELETTRICA ELECTRICAL SUPPLY INLET	Rl CONNESSIONI REFRIGERANTE (LIQUIDO) REFRIGERANT CONNECTIONS (LIQUID)
Sc	CUFFIA INSONORIZZANTE SOUNDPROOF CASING	Uin INGRESSO ACQUA UTILIZZO USER WATER INLET OD 168.3
	SPAZI DI INSTALLAZIONE CLEARANCES	Uout USCITA ACQUA UTILIZZO USER WATER OUTLET OD 168.3
		*
		OPTIONAL

A4C428A

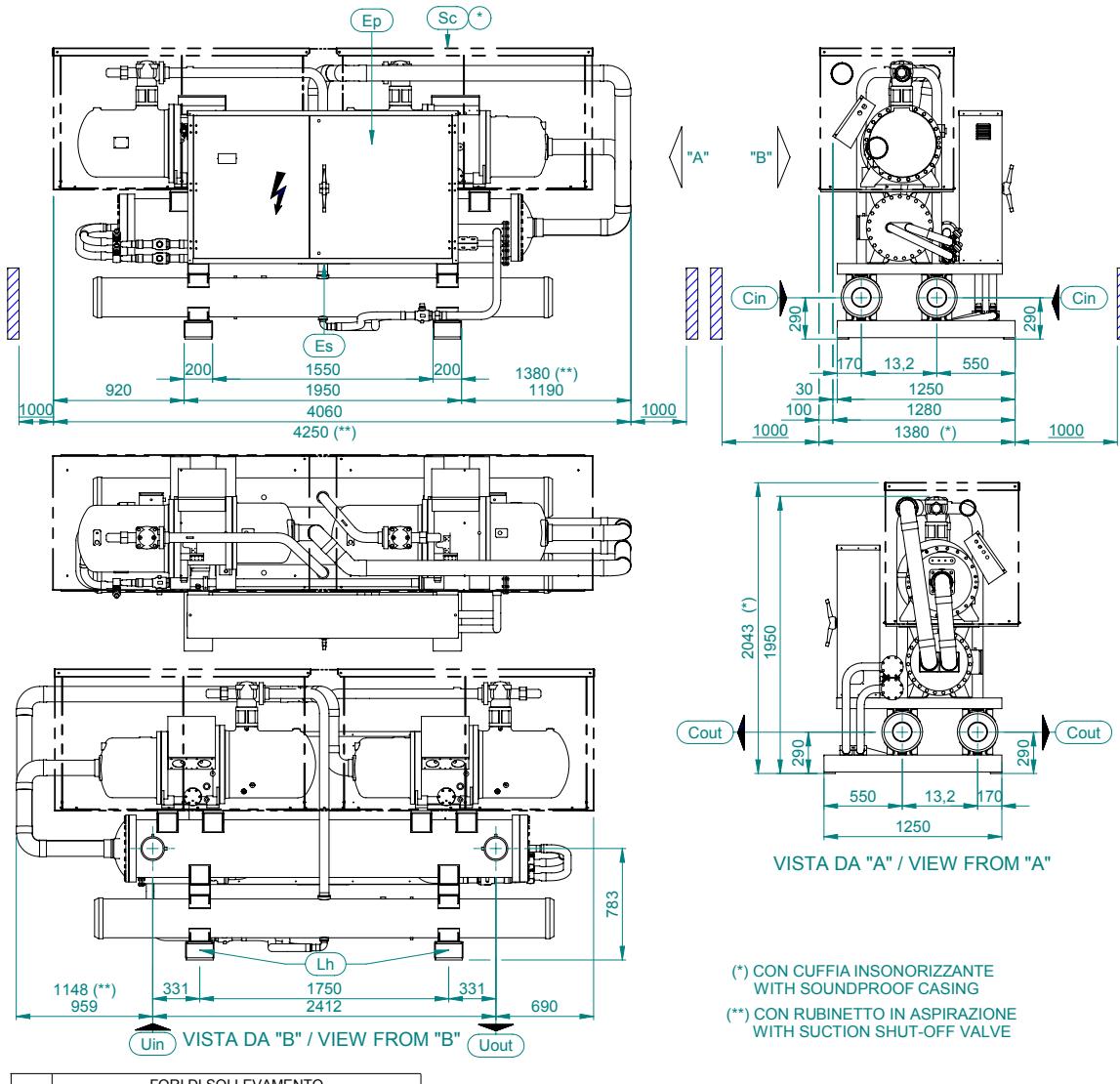
OMEGA V ECHOS /LC 65.2-69.2



MODELLO MODEL	PESO (kg) WEIGHT(kg)	PESO IN FUNZIONE (kg) OPERATING WEIGHT (kg)	G1 (kg)	G2 (kg)	G3 (kg)	G4 (kg)
OMEGA V ECHOS 65.2 LC	2510	2781	855	857	535	534
OMEGA V ECHOS 65.2 LC LN	2910	3181	1002	1004	588	587
OMEGA V ECHOS 69.2 LC	2470	2741	829	856	536	520
OMEGA V ECHOS 69.2 LC LN	2870	3141	976	1003	589	573

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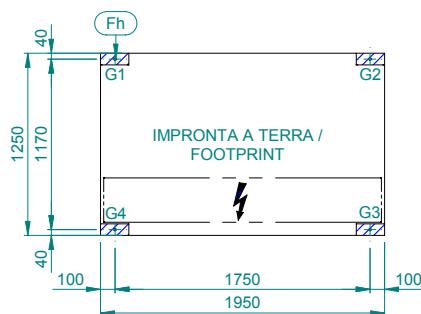
OMEGA V ECHOS 72.2-83.2



Lh	FORI DI SOLLEVAMENTO LIFTING HOLES		
Ep	QUADRO ELETTRICO ELECTRICAL PANEL	Cin	INGR. ACQUA CONDENSAZIONE CONDENSING WATER INLET
Es	INGRESSO ALIMENTAZIONE ELETTRICA ELECTRICAL SUPPLY INLET	Cout	USCITA ACQUA CONDENSAZIONE CONDENSING WATER OUTLET
Sc	CUFFIA INSONORIZZANTE SOUNDPROOF CASING	Uin	INGRESSO ACQUA UTILIZZO USER WATER INLET
	SPAZI DI INSTALLAZIONE CLEARANCES	Uout	USCITA ACQUA UTILIZZO USER WATER OUTLET
			*
			OPTIONAL

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OMEGA V ECHOS 72.2-83.2

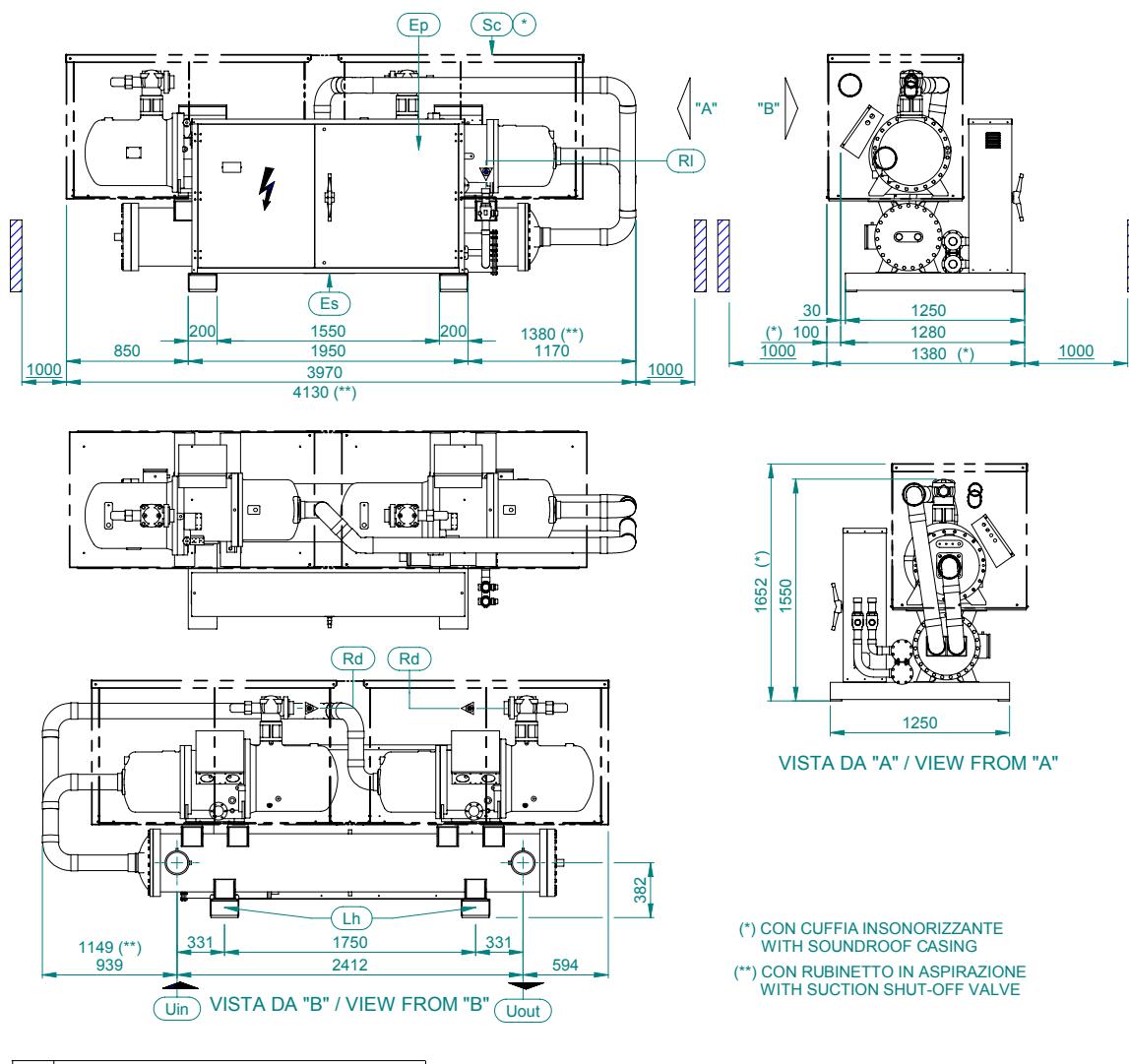


MODELLO MODEL	PESO (kg) WEIGHT(kg)	PESO IN FUNZIONE (kg) OPERATING WEIGHT (kg)	G1 (kg)	G2 (kg)	G3 (kg)	G4 (kg)
OMEGA V ECHOS 72.2	2987	3303	996	1063	642	602
OMEGA V ECHOS 72.2 LN	3385	3701	1142	1210	694	655
OMEGA V ECHOS 76.2	3052	3371	1036	1066	643	626
OMEGA V ECHOS 76.2 LN	3452	3771	1183	1213	696	679
OMEGA V ECHOS 78.2	3043	3365	1040	1060	638	627
OMEGA V ECHOS 78.2 LN	3443	3765	1187	1207	691	680
OMEGA V ECHOS 83.2	3043	3354	1031	1060	640	623
OMEGA V ECHOS 83.2 LN	3443	3754	1178	1207	693	676

Fh	FORI DI FISSAGGIO FIXING HOLES	Ø22
G..	PUNTI DI APPOGGIO ANTIVIBRANTI VIBRATION DAMPER FOOT HOLDS	

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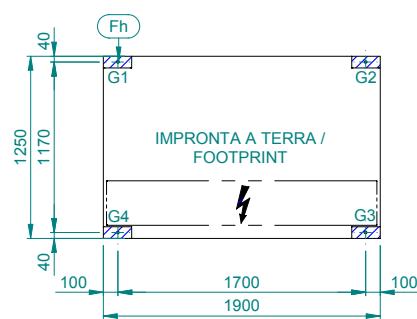
OMEGA V ECHOS /LC 72.2-83.2



Lh	FORI DI SOLLEVAMENTO LIFTING HOLES		
Ep	QUADRO ELETTRICO ELECTRICAL PANEL	Rd	CONNESSIONI REFRIGERANTE (MANDATA) REFRIGERANT CONNECTIONS (DISCHARGE)
Es	INGRESSO ALIMENTAZIONE ELETTRICA ELECTRICAL SUPPLY INLET	Ri	CONNESSIONI REFRIGERANTE (LIQUIDO) REFRIGERANT CONNECTIONS (LIQUID)
Sc	CUFFIA INSONORIZZANTE SOUNDPROOF CASING	Uin	INGRESSO ACQUA UTILIZZO USER WATER INLET OD 168.3
	SPAZI DI INSTALLAZIONE CLEARANCES	Uout	USCITA ACQUA UTILIZZO USER WATER OUTLET OD 168.3
		*	OPTIONAL

A4C429A

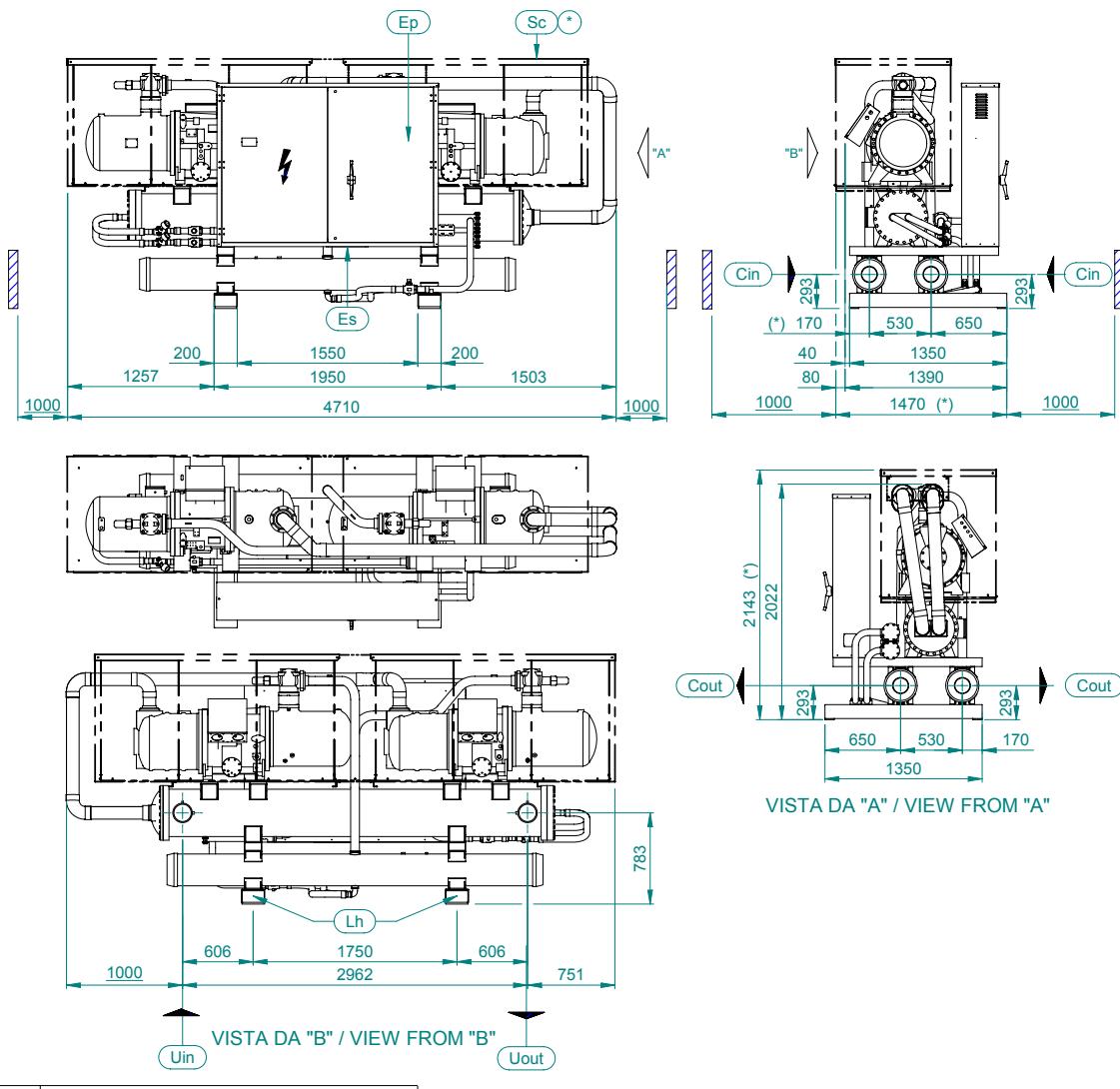
OMEGA V ECHOS /LC 72.2-83.2



MODELLO MODEL	PESO (kg) WEIGHT(kg)	PESO IN FUNZIONE (kg) OPERATING WEIGHT (kg)	G1 (kg)	G2 (kg)	G3 (kg)	G4 (kg)
OMEGA V ECHOS 72.2 LC	2545	2800	803	921	575	501
OMEGA V ECHOS 72.2 LC LN	2947	3202	945	1074	629	554
OMEGA V ECHOS 76.2 LC	2606	2861	841	923	574	523
OMEGA V ECHOS 76.2 LC LN	3006	3261	984	1074	628	575
OMEGA V ECHOS 78.2 LC	2591	2846	841	913	568	524
OMEGA V ECHOS 78.2 LC LN	2990	3245	984	1064	622	575
OMEGA V ECHOS 83.2 LC	2585	2826	830	911	568	517
OMEGA V ECHOS 83.2 LC LN	2985	3226	973	1062	622	569

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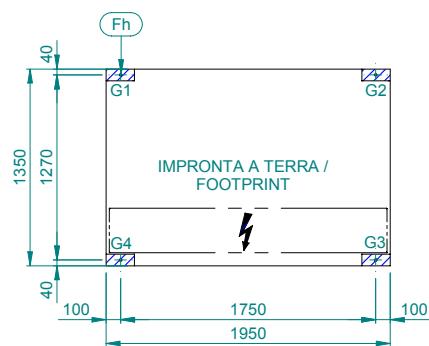
OMEGA V ECHOS 88.2-105.2



Lh	FORI DI SOLLEVAMENTO LIFTING Holes		
Ep	QUADRO ELETTRICO ELECTRICAL PANEL	Cin	INGR. ACQUA CONDENSAZIONE CONDENSING WATER INLET
Es	INGRESSO ALIMENTAZIONE ELETTRICA ELECTRICAL SUPPLY INLET	Cout	USCITA ACQUA CONDENSAZIONE CONDENSING WATER OUTLET
Sc	CUFFIA INSONORIZZANTE SOUNDPROOF CASING	Uin	INGRESSO ACQUA UTILIZZO USER WATER INLET
	SPAZI DI INSTALLAZIONE CLEARANCES	Uout	USCITA ACQUA UTILIZZO USER WATER OUTLET
			OD 168.3
			OD 168.3
		*	OPTIONAL

A4C377B

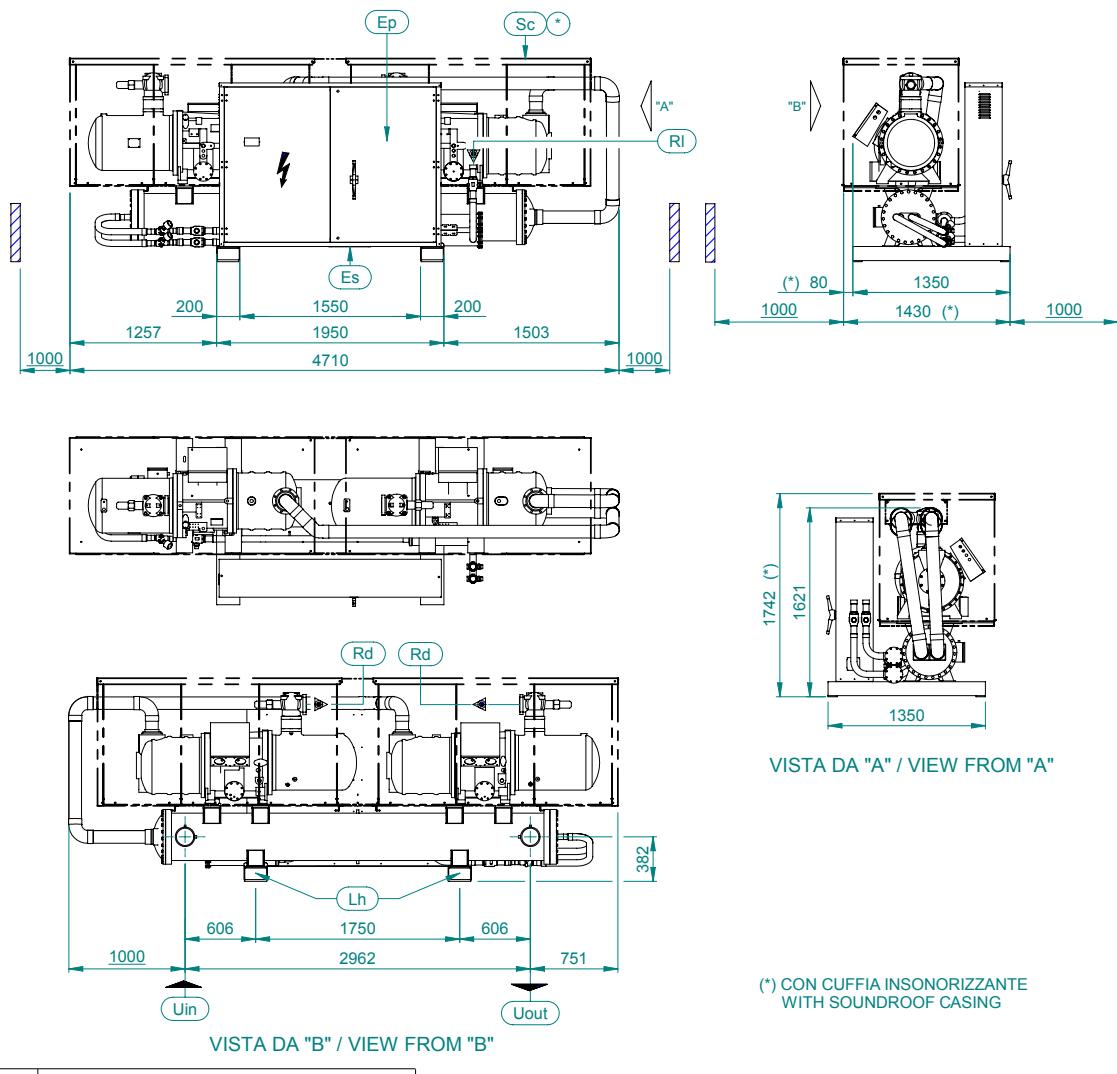
OMEGA V ECHOS 88.2-105.2



MODELLO MODEL	PESO (kg) WEIGHT(kg)	PESO IN FUNZIONE (kg) OPERATING WEIGHT (kg)	G1 (kg)	G2 (kg)	G3 (kg)	G4 (kg)
OMEGA V ECHOS 88.2	3611	3975	1326	1299	668	682
OMEGA V ECHOS 88.2 LN	4131	4495	1534	1506	721	734
OMEGA V ECHOS 95.2	3713	4080	1491	1328	594	667
OMEGA V ECHOS 95.2 LN	4232	4599	1700	1534	647	718
OMEGA V ECHOS 100.2	3819	4180	1476	1418	630	656
OMEGA V ECHOS 100.2 LN	4338	4699	1684	1625	683	707
OMEGA V ECHOS 105.2	3913	4277	1569	1394	618	696
OMEGA V ECHOS 105.2 LN	4434	4798	1779	1600	672	747

A4C377B

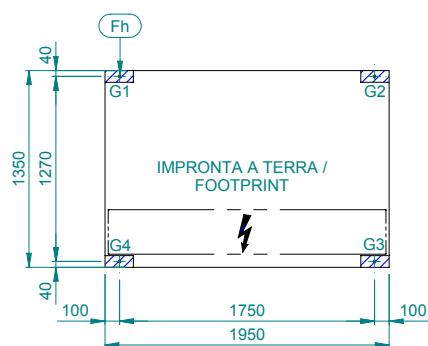
OMEGA V ECHOS /LC 88.2-105.2



Lh	FORI DI SOLLEVAMENTO LIFTING HOLES	
Ep	QUADRO ELETTRICO ELECTRICAL PANEL	Rd CONNESSIONI REFRIGERANTE (MANDATA) REFRIGERANT CONNECTIONS (DISCHARGE)
Es	INGRESSO ALIMENTAZIONE ELETTRICA ELECTRICAL SUPPLY INLET	RI CONNESSIONI REFRIGERANTE (LIQUIDO) REFRIGERANT CONNECTIONS (LIQUID)
Sc	CUFFIA INSONORIZZANTE SOUNDOOF CASING	Uin INGRESSO ACQUA UTILIZZO USER WATER INLET OD 168.3
	SPAZI DI INSTALLAZIONE CLEARANCES	Uout USCITA ACQUA UTILIZZO USER WATER OUTLET OD 168.3
		*
		OPTIONAL

A4D362A

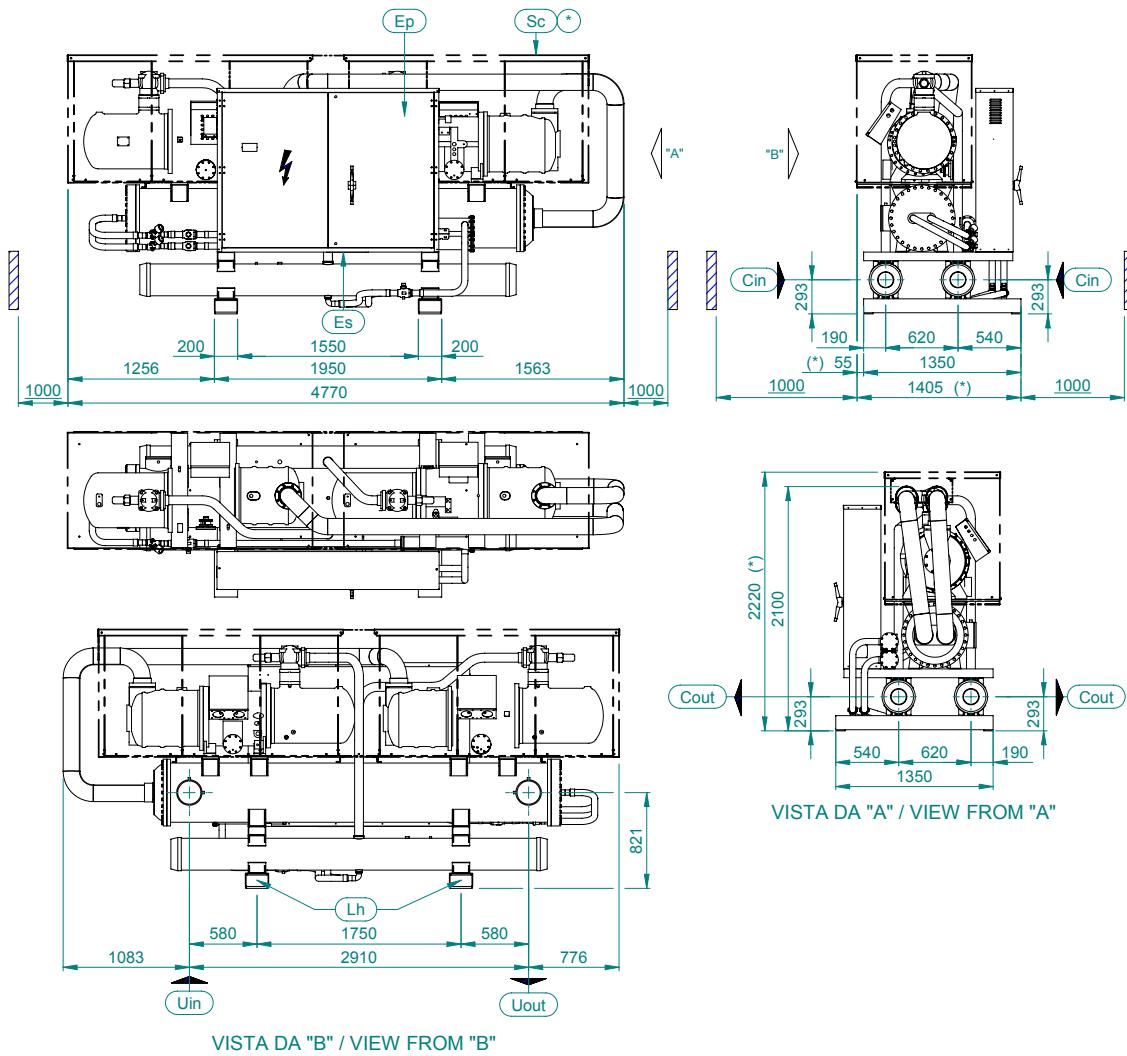
OMEGA V ECHOS /LC 88.2-105.2



MODELLO MODEL	PESO (kg) WEIGHT(kg)	PESO IN FUNZIONE (kg) OPERATING WEIGHT (kg)	G1 (kg)	G2 (kg)	G3 (kg)	G4 (kg)
OMEGA V ECHOS 88.2 LC	3112	3415	1178	1150	537	550
OMEGA V ECHOS 88.2 LC LN	3631	3934	1386	1357	589	602
OMEGA V ECHOS 95.2 LC	3205	3508	1278	1118	519	593
OMEGA V ECHOS 95.2 LC LN	3725	4028	1487	1324	573	644
OMEGA V ECHOS 100.2 LC	3306	3600	1259	1203	556	582
OMEGA V ECHOS 100.2 LC LN	3826	4120	1467	1411	609	633
OMEGA V ECHOS 105.2 LC	3396	3690	1126	984	736	844
OMEGA V ECHOS 105.2 LC LN	3916	4210	1559	1384	596	671

A4D362A

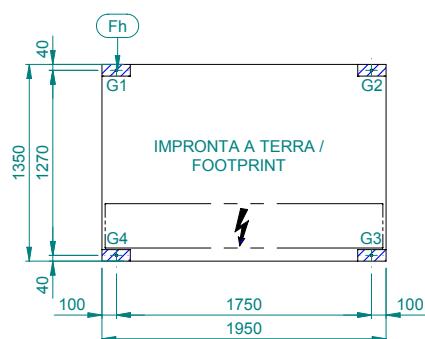
OMEGA V ECHOS 110.2-124.2



Lh	FORI DI SOLLEVAMENTO LIFTING HOLES	
Ep	QUADRO ELETTRICO ELECTRICAL PANEL	Cin INGR. ACQUA CONDENSAZIONE CONDENSING WATER INLET G 5"
Es	INGRESSO ALIMENTAZIONE ELETTRICA ELECTRICAL SUPPLY INLET	Cout USCITA ACQUA CONDENSAZIONE CONDENSING WATER OUTLET G 5"
Sc	CUFFIA INSONORIZZANTE SOUNDPROOF CASING	Uin INGRESSO ACQUA UTILIZZO USER WATER INLET OD 219.1
	SPAZI DI INSTALLAZIONE CLEARANCES	Uout USCITA ACQUA UTILIZZO USER WATER OUTLET OD 219.1
		* OPTIONAL

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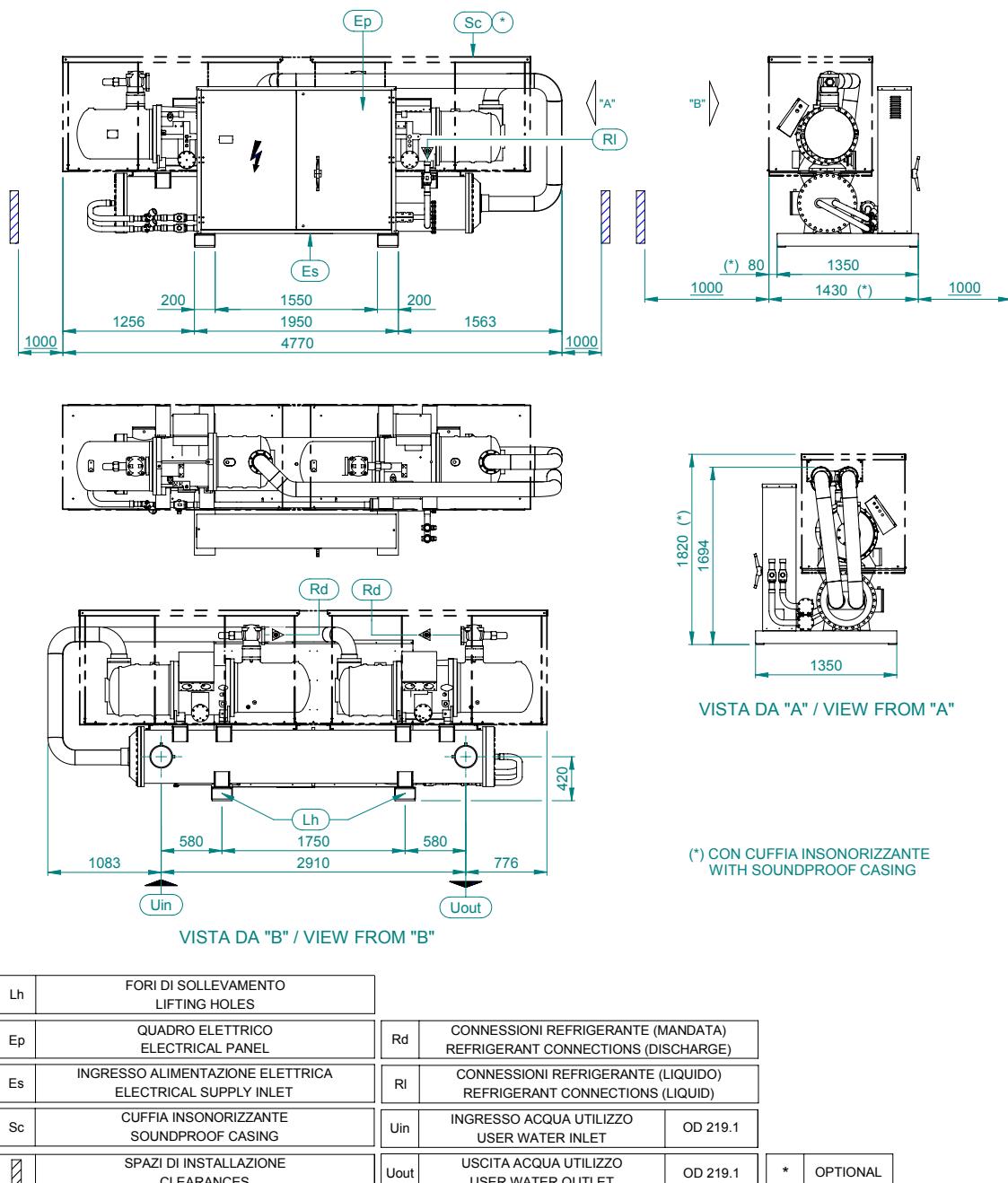
OMEGA V ECHOS 110.2-124.2



MODELLO MODEL	PESO (kg) WEIGHT(kg)	PESO IN FUNZIONE (kg) OPERATING WEIGHT (kg)	G1 (kg)	G2 (kg)	G3 (kg)	G4 (kg)
OMEGA V ECHOS 110.2	4146	4721	1585	1533	788	815
OMEGA V ECHOS 110.2 LN	4596	5171	1758	1705	841	867
OMEGA V ECHOS 117.2	4194	4772	1592	1563	801	816
OMEGA V ECHOS 117.2 LN	4593	5171	1739	1710	854	868
OMEGA V ECHOS 124.2	4229	4810	1616	1563	802	829
OMEGA V ECHOS 124.2 LN	4630	5211	1764	1710	855	882

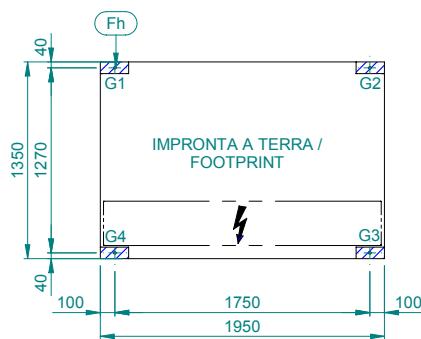
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OMEGA V ECHOS /LC 110.2-124.2



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OMEGA V ECHOS /LC 110.2-124.2

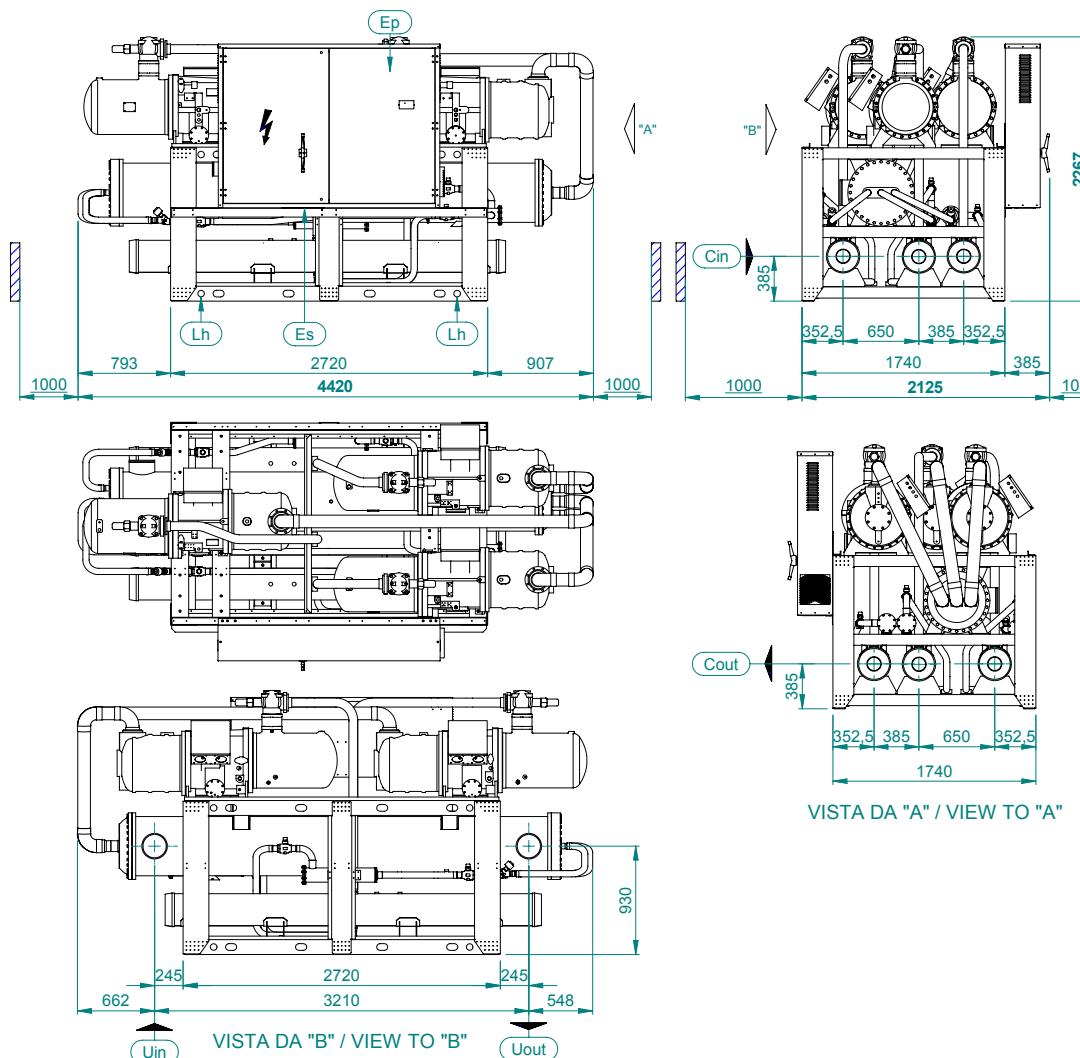


MODELLO MODEL	PESO (kg) WEIGHT(kg)	PESO IN FUNZIONE (kg) OPERATING WEIGHT (kg)	G1 (kg)	G2 (kg)	G3 (kg)	G4 (kg)
OMEGA V ECHOS 110.2 LC	3615	4116	1410	1357	662	687
OMEGA V ECHOS 110.2 LC LN	4066	4567	1584	1530	714	739
OMEGA V ECHOS 117.2 LC	3657	4158	1413	1384	673	688
OMEGA V ECHOS 117.2 LC LN	4057	4558	1560	1531	727	740
OMEGA V ECHOS 124.2 LC	3687	4188	1436	1382	672	698
OMEGA V ECHOS 124.2 LC LN	4088	4589	1584	1529	725	751

Fh	FORI DI FISSAGGIO FIXING HOLES	Ø22
G..	PUNTI DI APPOGGIO ANTIVIBRANTI VIBRATION DAMPER FOOT HOLDS	

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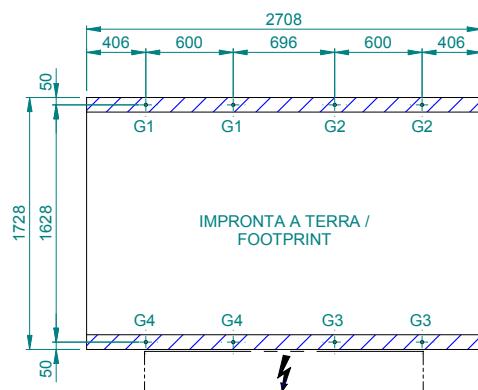
OMEGA V ECHOS 130.3-153.3



Lh	FORI DI SOLLEVAMENTO LIFTING HOLES	Cin	INGR. ACQUA CONDENSATORE CONDENSER WATER INLET	G 4"
Ep	QUADRO ELETTRICO ELECTRICAL PANEL	Cout	USCITA ACQUA CONDENSATORE CONDENSER WATER OUTLET	G 4"
Es	INGRESSO ALIMENTAZIONE ELETTRICA ELECTRICAL SUPPLY INLET	Uin	INGRESSO ACQUA EVAPORATORE EVAPORATOR WATER INLET	OD 219.1
	SPAZI DI INSTALLAZIONE CLEARANCES	Uout	USCITA ACQUA EVAPORTORE EVAPORATOR WATER OUTLET	OD 219.1
		*	OPTIONAL	

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OMEGA V ECHOS 130.3-153.3

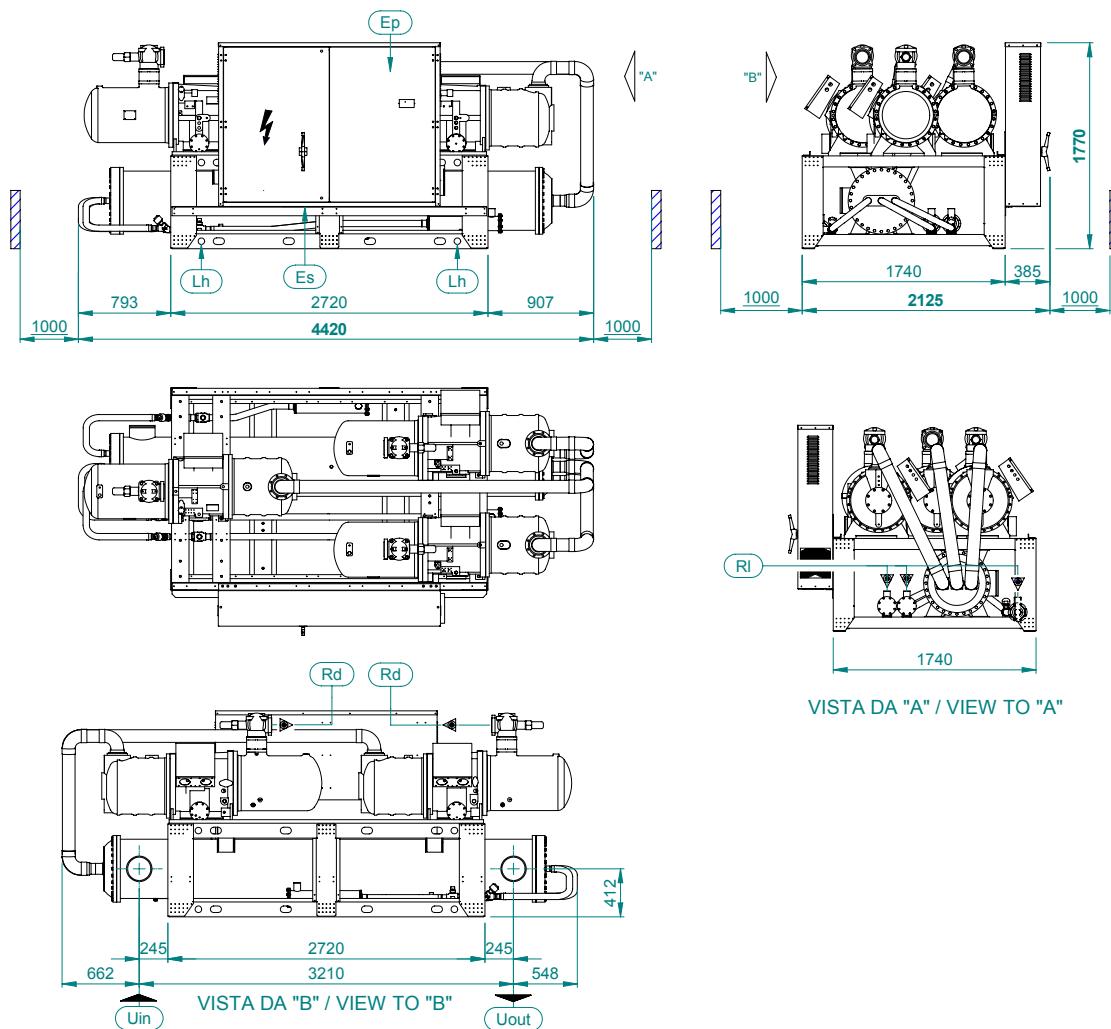


MODELLO MODEL	PESO (kg) WEIGHT(kg)	PESO IN FUNZIONE (kg) OPERATING WEIGHT (kg)	G1 (kg)	G2 (kg)	G3 (kg)	G4 (kg)
OMEGA V ECHOS 130.3	6024	6630	586	961	1099	669
OMEGA V ECHOS 137.3	6187	6796	583	1024	1141	650
OMEGA V ECHOS 143.3	6352	6964	636	1013	1126	707
OMEGA V ECHOS 147.3	6413	7028	633	1025	1147	709
OMEGA V ECHOS 153.3	6464	7082	634	1042	1160	705

Fh	FORI DI FISSAGGIO FIXING HOLES	Ø22
G..	PUNTI DI APPOGGIO ANTIVIBRANTI VIBRATION DAMPER FOOT HOLDS	

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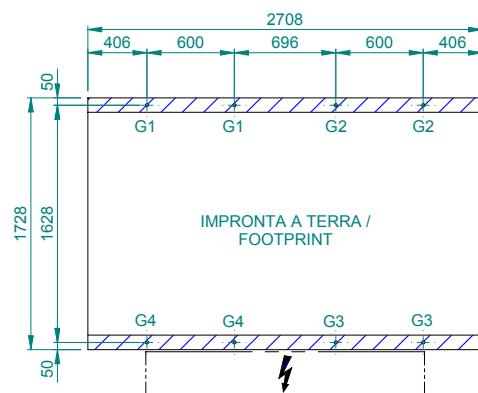
OMEGA V ECHOS /LC 130.3-153.3



Lh	FORI DI SOLLEVAMENTO LIFTING HOLES	
Ep	QUADRO ELETTRICO ELECTRICAL PANEL	Rd CONNESSIONI REFRIGERANTE (MANDATA) REFRIGERANT CONNECTIONS (DISCHARGE)
Es	INGRESSO ALIMENTAZIONE ELETTRICA ELECTRICAL SUPPLY INLET	Rl CONNESSIONI REFRIGERANTE (LIQUIDO) REFRIGERANT CONNECTIONS (LIQUID)
Sc	CUFFIA INSONORIZZANTE SOUNDPROOF CASING	Uin INGRESSO ACQUA UTILIZZO USER WATER INLET OD 219.1
	SPAZI DI INSTALLAZIONE CLEARANCES	Uout USCITA ACQUA UTILIZZO USER WATER OUTLET OD 219.1
		*
		OPTIONAL

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OMEGA V ECHOS /LC 130.3-153.3



MODELLO MODEL	PESO (kg) WEIGHT(kg)	PESO IN FUNZIONE (kg) OPERATING WEIGHT (kg)	G1 (kg)	G2 (kg)	G3 (kg)	G4 (kg)
OMEGA V ECHOS 130.3 LC	5284	5800	473	879	1006	542
OMEGA V ECHOS 137.3 LC	5442	5958	469	941	1047	522
OMEGA V ECHOS 143.3 LC	5602	6118	520	929	1032	578
OMEGA V ECHOS 147.3 LC	5656	6172	517	940	1051	578
OMEGA V ECHOS 153.3 LC	5704	6220	517	957	1063	573

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INSTALLATION GUIDELINES

POSITIONING

Strictly comply with the clearance areas indicated in the catalogue.

Make sure that there are no obstructions near the finned coil suction line or the fan delivery line.

Place the unit in a manner that assures the lowest environmental impact (noise, integration with nearby structures, etc.).

ELECTRICAL CONNECTIONS

Always consult the enclosed wiring diagram, which provides all the instructions required for making the electrical connections.

Power the unit (by turning the main switch off) at least 12 hours before start-up to supply the crankcase heaters.

Do not cut off the power from the unit during short stops.

Before turning on the disconnect switch, stop the unit by turning off all the operating switches or, if none, using the remote control.

Before accessing the inner components, cut the power off by turning on the main switch.

The power supply must be fitted with all protections according to the standards in force.

Electrical connections: three-pole power cable + earth, or three pole cable + neutral + earth; external interlock; remote alarm signalling.

HYDRAULIC CONNECTIONS

Carefully vent the hydraulic system with the pumps switched off, by operating the air valves. This procedure is particularly important, as even small air bubbles may cause the evaporator to freeze.

Drain the hydraulic system during winter stops or use special anti-freeze solutions. During short stops, it is advisable to install an electric heater (defroster) on the evaporator and the hydraulic circuit.

Assemble the hydraulic circuit with all the components shown in the diagrams (expansion vessel, flow switch, storage tank, air valve, shut-off valves, anti-vibrating connections, etc. Please refer to the user, installation and maintenance manual).

Connect the flow switch when supplied in the kit, following carefully the instructions provided with the units.

START-UP AND MAINTENANCE

Strictly follow the instructions given in the use and maintenance manual. These operations must be carried out by qualified personnel only.



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