

**Condenserless unit  
with semi-hermetic single-screw compressor**

143 ÷ 697 kW



### OMEGA V ECHOS/LC

Condenserless unit in R134a

#### Unit frame

Structural steelwork with baked-on epoxy polyester powder coating.

#### Compressors

Semi-hermetic single screw compressors with continuous capacity control from 30% to 100%; each compressor is equipped with a crankcase heater, lubrication ensured by the pressure difference between discharge and suction sides, independent refrigerant circuits. Unit starts and stops are executed with 12% capacity control.

The motor features built-in electronic protection with temperature sensors located directly in the windings and on the compressor discharge line. Star-delta motor starting.

#### Refrigerant circuit

Includes: compressor delivery shut-off cock, liquid line shut-off valve, charge connection, liquid line sight glass, filter dryer, electronic expansion valve, compressor cooling device with liquid injection, high and low pressure switches, relief valve, liquid line shutoff by means of thermostatic valve.

#### Evaporator

Shell and tube jacket type with dry expansion evaporator; optimised for use with R134a refrigerant; the evaporator is thermally insulated with closed cell expanded material and is equipped with a low freeze protection probe.

#### Electrical panel

With main switch, power and control circuit protection, compressor contactors. Microprocessor control with function display.

#### Testing

Oil charging and a dry run test are carried out in the factory. The units are delivered with the refrigerant circuit charged with nitrogen.

### ACCESSORY VERSIONS

#### OMEGA V ECHOS/LC/DC

This unit, with microprocessor control, includes a 100% heat recovery condenser.

#### OMEGA V ECHOS/LC/DS

Unit with desuperheaters for partial (20%) recovery of rejection heat.

#### OMEGA V ECHOS/LC/LN

Low noise unit: compressor with sound insulating cover made of painted sheet steel clad internally with sound-absorbing matting and high acoustic impedance material.

#### OMEGA V ECHOS/SLN

In addition to the components featured on OMEGA V ECHOS/LN, this model includes: sound insulation of compressor discharge and suction lines with sound absorbing material having an intermediate layer of high acoustic impedance material.

### MAIN ACCESSORIES

- Mechanical flow switch (supplied separately, as part of the standard equipment)
- Liquid receiver
- Dual set point with single electronic thermostatic valve; the set point can be entered from the keyboard or from digital input (please specify type when ordering)
- RS485 microprocessor serial interface for supervision or tele-maintenance via personal computer. Carel or Modbus communication protocols
- Pressure gauges
- Rubber or spring type anti-vibration mounts
- Remote control terminal.

**OMEGA V ECHOS/LC - R134a TECHNICAL DATA**

Unit size		18.1	22.1	31.1	35.1	36.2
<b>Nominal cooling capacity (*)</b>	kW	143,4	180,4	266,0	283,2	293,2
<b>Compressor</b>						
Quantity/Refrigerant circuits	n°	1	1	1	1	2
Cooling power input (*)	kW	44,2	55,6	77,0	84,6	88,7
Capacity steps	%	Continuos	Continuos	Continuos	Continuos	Continuos
<b>Evaporator characteristics</b>						
Water contents	l	49	63	90	90	90
Water flow rate	l/s	6,838	8,602	12,686	13,503	13,982
Pressure drop	kPa	42,9	23,7	43,3	48,8	52,1
<b>Noise level (**)</b>						
Basic unit	dB(A)	68,0	65,2	71,2	75,2	71,0
LN version	dB(A)	63,2	60,4	66,4	70,4	66,2
SLN version	dB(A)	55,9	53,1	59,1	63,1	58,9
<b>Power supply</b>	V/ph/Hz	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50
<b>Dimensions and weight</b>						
Width	mm	2653	2660	3081	3081	3187
Depth	mm	1200	1200	1200	1200	1242
Height	mm	1347	1408	1466	1466	1554
Operating weight	kg	1030	1230	1352	1502	1860

Unit size		41.2	42.1	45.2	53.2	62.2
<b>Nominal cooling capacity (*)</b>	kW	330,6	345,8	367,7	465,2	540,6
<b>Compressor</b>						
Quantity/Refrigerant circuits	n°	2	1	2	2	2
Cooling power input (*)	kW	100,2	106,0	111,8	134,0	154,6
Capacity steps	%	Continuos	Continuos	Continuos	Continuos	Continuos
<b>Evaporator characteristics</b>						
Water contents	l	129	129	113	184	184
Water flow rate	l/s	15,724	16,490	17,535	22,186	25,782
Pressure drop	kPa	58,7	63,9	62,9	52,2	69,7
<b>Noise level (**)</b>						
Basic unit	dB(A)	66,9	80,2	68,2	66,9	74,2
LN version	dB(A)	62,1	75,4	63,4	62,1	69,4
SLN version	dB(A)	54,8	68,1	56,1	54,8	62,1
<b>Power supply</b>	V/ph/Hz	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50
<b>Dimensions and weight</b>						
Width	mm	3187	3061	3187	3809	3809
Depth	mm	1242	1200	1242	1300	1300
Height	mm	1554	1467	1554	1554	1554
Operating weight	kg	1974	1672	2050	2402	2462

Unit size		65.2	69.2	76.2	83.2
<b>Nominal cooling capacity (*)</b>	kW	557,7	574,7	640,3	697,2
<b>Compressor</b>					
Quantity/Refrigerant circuits	n°	2	2	2	2
Cooling power input (*)	kW	162,0	169,5	191,3	212,5
Capacity steps	%	Continuos	Continuos	Continuos	Continuos
<b>Evaporator characteristics</b>					
Water contents	l	184	184	252	252
Water flow rate	l/s	26,598	27,406	30,537	33,247
Pressure drop	kPa	74,0	78,4	74,5	87,9
<b>Noise level (**)</b>					
Basic unit	dB(A)	73,0	78,2	78,4	83,2
LN version	dB(A)	68,2	73,4	73,6	78,4
SLN version	dB(A)	60,9	66,1	66,3	71,1
<b>Power supply</b>	V/ph/Hz	400/3~/50	400/3~/50	400/3~/50	400/3~/50
<b>Dimensions and weight</b>					
Width	mm	3809	3809	3891	3891
Depth	mm	1300	1300	1300	1300
Height	mm	1554	1554	1567	1567
Operating weight	kg	2576	2726	2945	2986

(\*) Condensation temperature 50 °C; evaporator inlet/outlet water temperature 12-7°C.

(\*\*) Sound pressure levels measured in free field conditions at 1m from the unit, according to ISO 3746.

This datasheet gives the characteristic data of the basic and standard versions of the series; for details refer to the specific documentation