

Split units with EC compressor

DLI 06 - 16 kW



PLUS

- » Twin-rotary compressor driven by an electric EC motor
- » EC hydraulic pump
- » EC axial fan
- » Advanced system management and adjustment strategies
- » Access to tax deductions

High efficiency full inverter heat pumps

DLI is a range of heat pumps consisting of 5 unit sizes and 7 models, equipped with a state-of-the-art inverter compressor capable of efficiently meeting the cooling or thermal power requirements of residential or light commercial buildings.

All models, that access to tax deductions provided for by actual law, takes full advantage of some of the most innovative HVAC technologies: in fact, all the units are full-inverter and the extended use of electrical motors with permanent magnets driven by inverters with direct current, even for the accessory components – such as fans and water circulators – drastically reduces electrical power consumption and minimizes it under every operating condition, ensuring an energy efficiency level that puts them solidly in class A++ or A+++. Thanks to the advanced management strategies that have been implemented, the control electronics integrate the functioning of the units' key components, thereby optimizing interaction between the main parts: compressor, fan, and water circulator.

The DLI system always consists of: an outdoor unit (OLI identification code) which is combined with an indoor unit (ILI identification code).

Double option for indoor unit

It is possible to choose between two different options: ILI*M wall-mounted indoor unit with reduced dimensions and connections arranged in the lower part to simplify the installation phase, and ILI*S all-in-one floor-standing indoor unit with 240 l tank, resistance electric power of 3 kW and built-in three-way valve for the direct production of domestic hot water.

MAIN COMPONENTS

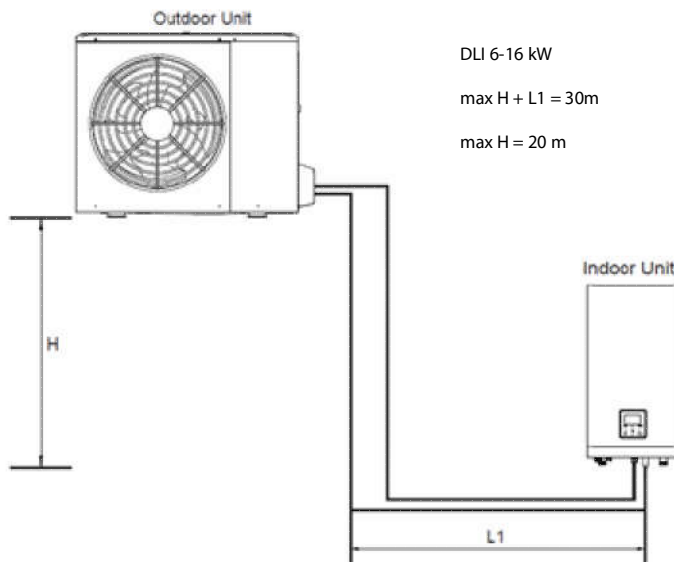
Control unit

The user terminal of the DLI series heat pumps is not a simple remote control, but a sophisticated controller that is capable of extending the basic functions implemented in the unit's electronics. It allows you not only to manage with absolute ease the basic daily functions the machine is intended to provide (on and off, setting the operating mode, instant activation of predefined comfort settings), but also to access advanced programming levels. Customized time slots according to real usage needs and the ability to implement climatic curves on the basis of which to modulate the operation of the unit in order to maximize the overall efficiency of the heating and air-conditioning system, in addition to the ability to manage external equipment such as dehumidifiers, additional hydraulic circulators for primary/secondary loop systems, 3-way valves for the production of domestic hot water and boilers or external backup devices, are just some of the advantages offered to users by this powerful interface. The clear and ergonomic display of the main parameters and the ability to provide in-depth diagnoses of operation are a valuable aid for the maintenance and service operations, it is also possible to remotely control the main functions via smartphone, through the dedicated app.



COMBINATIONS

OLI	006M	
ILI	010S	006M
OLI	008M	
ILI	010S	010M
OLI	010M	
ILI	010S	010M
OLI	012 / 012M	
ILI	016S	016M
OLI	016 / 016M	
ILI	016S	016M



DLI 6-16 kW

max H + L1 = 30m

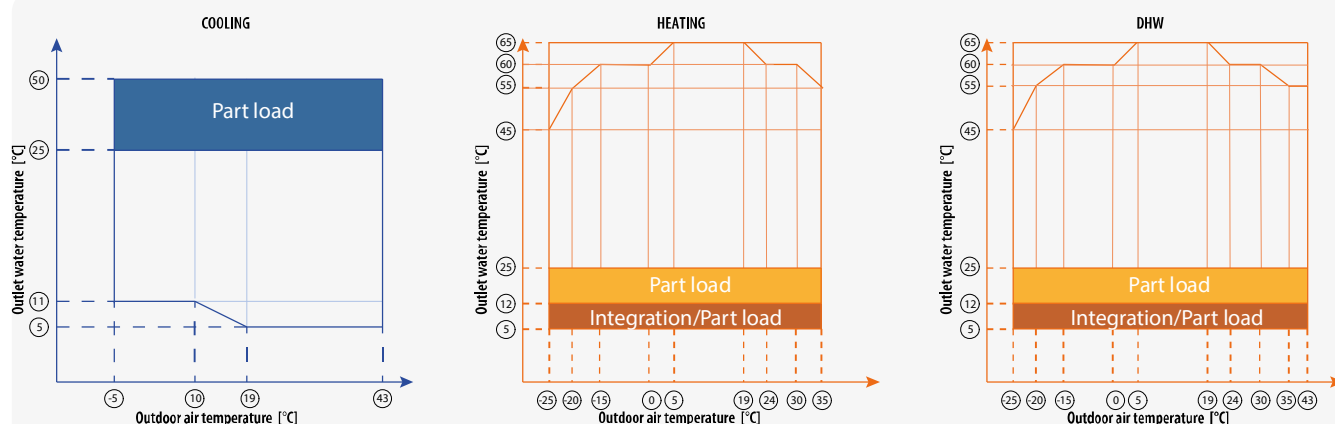
max H = 20 m

The maximum total length of the pipes for the connection between the outdoor unit and the indoor unit is 30 meters. The maximum difference in height allowed between the two units is instead 20 metres.

EXTENDED OPERATING RANGE FOR EACH APPLICATION

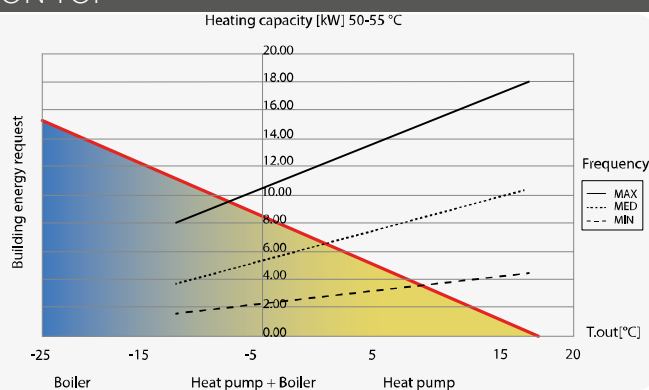
DLI series heat pumps were designed to ensure maximum flexibility in every application. Thanks to their extremely wide operating range ensuring the operation even in particularly cold climates and allowing them to produce water up to a maximum of 65 °C and to the advanced adjustment logics provided by the electronic control, they are able to ensure not only winter heating and summer air conditioning, but also the production of thermal energy to be used for domestic hot water production.

The high efficiency values that characterize them make it possible, in many cases, to cover the share of renewable energy required by the most recent regulations on limiting energy consumption and to benefit from the tax credits offered by the legislation of many countries that are dedicated to promoting equipment that meets the highest standards.



PERFORMANCE AND FUNCTIONALITY ALWAYS ON TOP

The control unit is able to activate an alternative heat generator (boiler or heating element) and employ its operation according to various user-configurable logics in unfavorable weather conditions and particularly high thermal loads, in order to integrate the missing heat capacity or to completely replace heat generation. This feature can also be used during the defrost phases, in order to balance the energy extracted from the heat transfer fluid to melt the ice present on the outside of the heat exchanger, or in the case of machine stoppage due to malfunction or maintenance.



All the models of the DLI range feature extremely compact size and low weight, which allow them to be installed even in environments with high population density and particularly small installation spaces. The units' structural metalwork was designed to facilitate maintenance operations and allow easy access to the main internal parts even in the case of limited clearance.



Air Chiller and PDC with low GWP chiller DLI

RATED TECHNICAL DATA OUTDOOR UNIT OLI

DLI			006M	008M	010M	012
Power supply		V-ph-Hz	230-1-50	230-1-50	230-1-50	400-3N-50
Cooling capacity	(1)(E)	kW	7,00	7,40	8,20	11,6
Total power input	(1)(E)	kW	2,33	2,19	2,48	4,22
EER	(1)(E)		3,00	3,38	3,31	2,75
SEER	(2)(E)		5,34	5,83	5,98	4,87
η_{sc}	(2)(E)		209	229	234	195
Water flow	(1)	l/h	1204	1273	1410	1995
Available pressure head - LP pumps	(1)(E)	kPa	83	82	80	64
Heating capacity	(3)(E)	kW	6,35	8,20	10,0	12,3
Total power input	(3)(E)	kW	1,69	2,08	2,63	3,24
COP	(3)(E)		3,76	3,94	3,80	3,80
SCOP	(4)(E)		4,95	5,21	5,19	4,81
η_{sh}	(4)(E)		195	206	205	189
Heating energy efficiency class	(5)		A+++			
SCOP	(6)(E)		3,52	3,36	3,49	3,45
η_{sh}	(6)(E)		138	132	137	135
Heating energy efficiency class	(7)		A++			
Water flow	(3)	l/h	1092	1410	1720	2116
Available pressure head - LP pumps	(3)(E)	kPa	85	80	70	65
Cooling capacity	(8)(E)	kW	6,55	8,40	10,0	12,0
Total power input	(8)(E)	kW	1,34	1,66	2,08	3,00
EER	(8)(E)		4,89	5,06	4,81	4,00
Heating capacity	(9)(E)	kW	6,20	8,30	10,0	12,1
Total power input	(9)(E)	kW	1,24	1,60	2,00	2,44
COP	(9)(E)		5,00	5,19	5,00	4,96
Maximum current absorption		A	18	19	19	14
Compressors / circuits			1/1			
Expansion vessel volume		dm ³	8	8	8	8
Sound power level	(10)(E)	dB(A)	58	59	60	68
Refrigerant charge	(11)	kg	1,50	1,65	1,65	1,84
Weight		kg	63,5	89	89	112

(1) Outdoor air temperature 35°C, water temperature 12°C / 7°C (EN14511:2022)

(2) η efficiency values for heating and cooling are respectively calculated by the following formulas: $[\eta = SCOP / 2,5 - F(1) - F(2)]$ e $[\eta = SEER / 2,5 - F(1) - F(2)]$. For further information, please refer to the technical document "ErP 2009/125/EC DIRECTIVE" in the catalogue introducing pages, or to the EN14825:2022 regulation.

(3) Outdoor air temperature dry bulb 7°C / wet bulb 6°C, water temperature 40°C / 45°C (EN14511:2022)

(4) η efficiency values for heating and cooling are respectively calculated by the following formulas: $[\eta = SCOP / 2,5 - F(1) - F(2)]$ e $[\eta = SEER / 2,5 - F(1) - F(2)]$. For further information, please refer to the technical document "ErP 2009/125/EC DIRECTIVE" in the catalogue introducing pages, or to the EN14825:2022 regulation. Low temperature conditions.

(5) Seasonal energy efficiency class for LOW TEMPERATURE room heating under AVERAGE climatic conditions [EUROPEAN REGULATION No 811/2013]

(6) η efficiency values for heating and cooling are respectively calculated by the following formulas: $[\eta = SCOP / 2,5 - F(1) - F(2)]$ e $[\eta = SEER / 2,5 - F(1) - F(2)]$. For further information, please refer to the technical document "ErP 2009/125/EC DIRECTIVE" in the catalogue introducing pages, or to the EN14825:2022 regulation. Medium temperature conditions.

(7) Seasonal energy efficiency class for MEDIUM TEMPERATURE room heating under AVERAGE climatic conditions [EUROPEAN REGULATION No 811/2013]

(8) Outdoor air temperature 35°C, water temperature 23°C / 18°C (EN14511:2022)

(9) Outdoor air temperature dry bulb 7°C / wet bulb 6°C, water temperature 30°C / 35°C (EN14511:2022)

(10) Sound power level measured according to ISO 9614

(11) Kg gas value is estimated. For the exact value refer to the plate data on the unit.

(E) EUROVENT certified data

RATED TECHNICAL DATA OUTDOOR UNIT OLI

DLI			012M	016	016M
Power supply		V-ph-Hz	230-1-50	400-3N-50	230-1-50
Cooling capacity	(1)(E)	kW	11,6	14,0	14,0
Total power input	(1)(E)	kW	4,22	5,71	5,71
EER	(1)(E)		2,75	2,45	2,45
SEER	(2)(E)		4,89	4,67	4,69
η_{sc}	(2)(E)		194	184	183
Water flow	(1)	l/h	1995	2408	2408
Available pressure head - LP pumps	(1)(E)	kPa	64	49	49
Heating capacity	(3)(E)	kW	12,3	16,0	16,0
Total power input	(3)(E)	kW	3,24	4,44	4,44
COP	(3)(E)		3,80	3,60	3,60
SCOP	(4)(E)		4,81	4,62	4,62
η_{sh}	(4)(E)		189	182	182
Heating energy efficiency class	(5)		A+++		
SCOP	(6)(E)		3,45	3,41	3,41
η_{sh}	(6)(E)		135	133	133
Heating energy efficiency class	(7)		A++		
Water flow	(3)	l/h	2116	2752	2752
Available pressure head - LP pumps	(3)(E)	kPa	64	49	49
Cooling capacity	(8)(E)	kW	12,0	14,9	14,9
Total power input	(8)(E)	kW	3,00	4,38	4,38
EER	(8)(E)		4,00	3,40	3,40
Heating capacity	(9)(E)	kW	12,1	16,0	16,0
Total power input	(9)(E)	kW	2,44	3,56	3,56
COP	(9)(E)		4,96	4,49	4,49
Maximum current absorption		A	30	14	30
Compressors / circuits			1/1		
Expansion vessel volume		dm ³	8	8	8
Sound power level	(10)(E)	dB(A)	64	68	64
Refrigerant charge	(11)	kg	1,84	1,84	1,84
Weight		kg	97	112	97

(1) Outdoor air temperature 35°C, water temperature 12°C / 7°C (EN14511:2022)

(2) η efficiency values for heating and cooling are respectively calculated by the following formulas: $[\eta = SCOP / 2,5 - F(1) - F(2)]$ e $[\eta = SEER / 2,5 - F(1) - F(2)]$. For further information, please refer to the technical document "ErP 2009/125/EC DIRECTIVE" in the catalogue introducing pages, or to the EN14825:2022 regulation.

(3) Outdoor air temperature dry bulb 7°C / wet bulb 6°C, water temperature 40°C / 45°C (EN14511:2022)

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(9) Outdoor air temperature dry bulb 7°C / wet bulb 6°C, water temperature 30°C / 35°C (EN14511:2022)

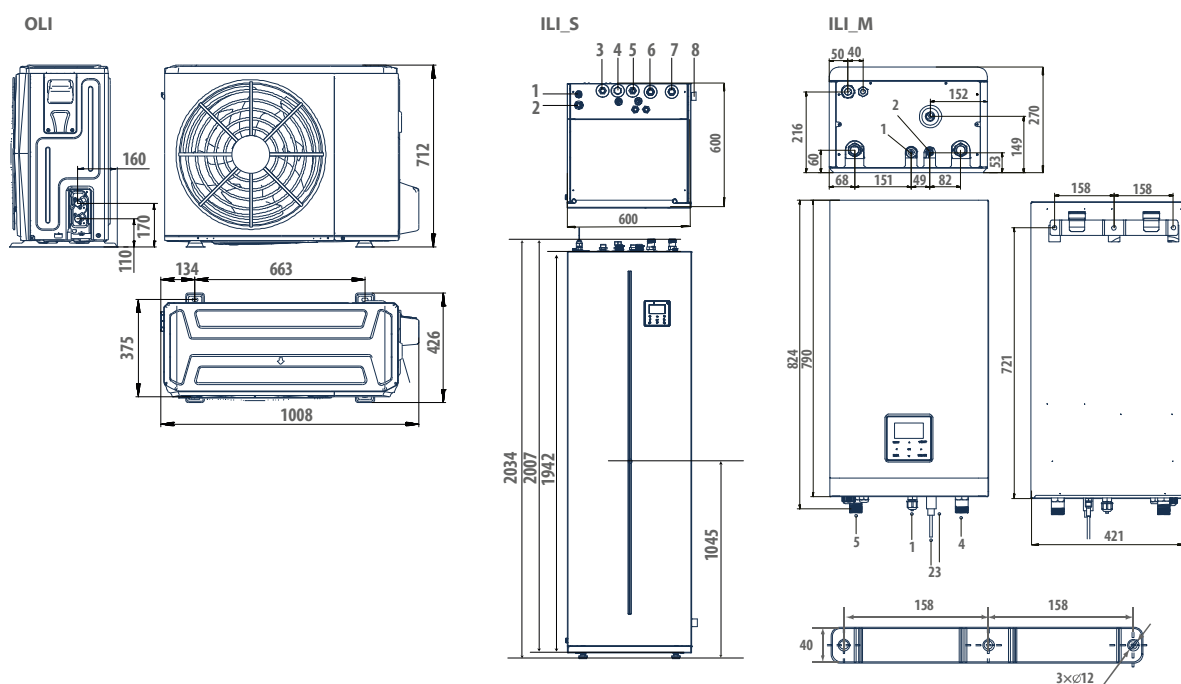
(10) Sound power level measured according to ISO 9614

(11) Kg gas value is estimated. For the exact value refer to the plate data on the unit.

(E) EUROVENT certified data

DIMENSIONAL DRAWINGS

DLI 006



LEGENDA ILI M

- | | |
|---|---|
| 1 | Connection gas refrigerant 5/8" - 18 UNF |
| 2 | Connection liquid refrigerant 1/4" - 28 UNF |
| 3 | Condensate discharge Ø 25 mm |
| 4 | Water inlet R1" |
| 5 | Water outlet R1" |

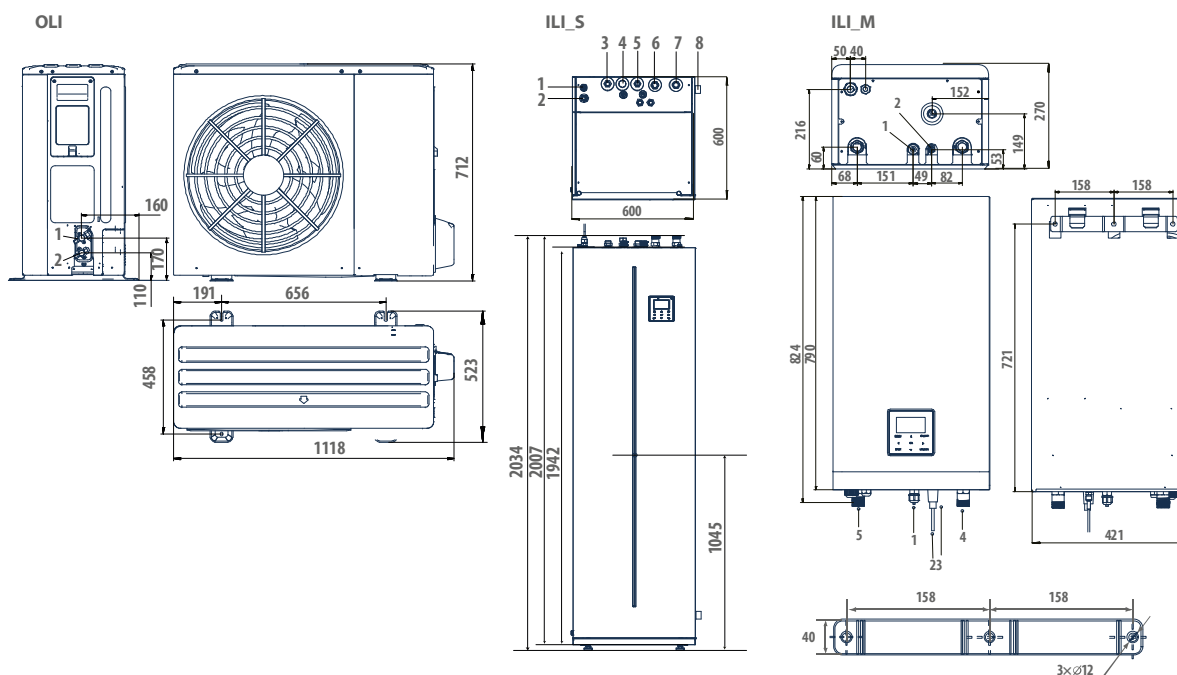
LEGENDA ILI S

- | | |
|---|---|
| 1 | Connection gas refrigerant 5/8" - 18 UNF |
| 2 | Connection liquid refrigerant 3/8" - 24 UNF |
| 3 | Domestic hot water outlet R3/4" |
| 4 | Domestic hot water recirculation inlet (connection with dice) |
| 5 | Domestic hot water inlet R3/4" |
| 6 | Hot / cold system water inlet R1" |
| 7 | Hot / cold system water outlet R1" |
| 8 | Condensate discharge Ø 25 mm |

OLI		006M	
ILI		010S	006M
OLI - Weight	kg	63,5	
ILI - Weight	kg	170	43
OLI - Sound pressure level Lw	db(A)	58	
ILI - Sound power level	db(A)	38	38

DIMENSIONAL DRAWINGS

DLI 008-016



LEGENDA ILI M

- 1 Connection gas refrigerant 5/8" - 18 UNF
- 2 Connection liquid refrigerant 3/8" - 24 UNF
- 3 Condensate discharge Ø 25 mm
- 4 Water inlet R1"
- 5 Water outlet R1"

LEGENDA ILI S

- 1 Connection gas refrigerant 5/8" - 18 UNF
- 2 Connection liquid refrigerant 3/8" - 24 UNF
- 3 Domestic hot water outlet R3/4"
- 4 Domestic hot water recirculation inlet (connection with dice)
- 5 Domestic hot water inlet R3/4"
- 6 Hot / cold system water inlet R1"
- 7 Hot / cold system water outlet R1"
- 8 Condensate discharge Ø 25 mm

OLI	008M	
ILI	010S	010M
OLI	010M	
ILI	010S	010M
OLI	012 / 012M	
ILI	016S	016M
OLI	016 / 016M	
ILI	016S	016M

	OLI	008M		010M		012M		016M		016	
	ILI	010S	010M	010S	010M	016S	016M	016S	016M	016S	016M
OLI - Weight	kg	89		89		97		112		112	
ILI - Weight	kg	170	43	170	43	172	45	172	45	172	45
OLI - Sound pressure level Lw	db(A)	59		60		64		68		68	
ILI - Sound power level	db(A)	40	42	40	42	42	43	42	43	44	43