

LSN

**Air cooled water chillers and heat pumps
and condensing units
with axial fans
Capacities from 4 to 40 kW**

The LSN series is a product that has been designed for the climate control of small areas such as houses, offices, shops and bars. The product, that has been very carefully constructed in all its parts, provides efficiency and quiet operation for the various applications. The available versions enable the user to identify the most suitable model and solution for the installation to be served, also thanks to a wide range of accessories. The hydraulic kit, provided as accessory, complete with pump and tank provides the installer with a unit complete with components that have been suitably sized and adapted to the performance required.



> Versions

LSN versione base solo freddo
disponibile in 11 diverse grandezze.

LSN-HP versione in pompa di calore
disponibile in 11 diverse grandezze.

LSN-CN versione motocondensante
solo freddo disponibile in 11
diverse grandezze.

> Accessories

Water filter.
Evaporator electric heater.
Coil protection grille.
Remote control.



>Main technical data

LSN - LSN-HP versions		04	05	07	09	13	15	20	25	30	35	40
Cooling capacity ¹	kW	4	5,2	7,3	8,8	12,9	15,1	19,1	23,3	27,5	32,5	40,2
Compr. input power ¹	kW	1,3	1,5	2,6	2,9	4,2	5,2	6,5	7,7	8,5	11,4	13,9
Heating capacity ² (LSN-HP)	kW	3,8	4,9	7,4	8,7	12,9	15,5	19,8	24,3	28,1	34,8	42,4
Compr. input power ² (LSN-HP)	kW	1,4	1,7	2,5	3	4,2	4,9	6,4	7,6	8,7	10,9	13,2
Input power		230V - 1 - 50 Hz				400V - 3 - 50 Hz						
Nominal input current	A	6,8	9,4	12,3	15,5	13,7	14,7	19,5	21,6	20	24	29
Compressors / Circuits	n°	Hermetic 1/1				Scroll 1/1						
Fans	n°	1	1	1	1	2	2	2	2	2	2	2
Total air flow	m ³ /h	3.000	3.000	3.000	3.000	5.400	5.400	8.000	8.000	10.800	10.800	10.800
Sound pressure	dB(A)	40	40	40	40	41	41	46	46	51	51	51
Max. current	A	9	11,5	14,5	17,5	16,7	16,7	21,1	24	26,4	30,4	36,3
Starting current	A	34,5	42	68	75	70,7	78,7	105	129	137	177	208

cooling

heating

- 1 External air 35°C, evap. in/out temp. 12/7°C.
 2 Water temp. 40/45°C, external air temp. 8,3°C (bs), 6,1°C (bu).
 Sound pressure in free field at a distance of 10 m, Q = 2, ISO 3746 norm.

LSN - CN versions		04	05	07	09	13	15	20	25	30	35	40
Cooling capacity ¹	kW	4,5	5,8	8,3	10	14,6	17	21,6	26,3	30,9	39,4	45,2
Compr. input power ¹	kW	1,3	1,5	2,6	2,9	4,2	5,2	6,4	7,7	8,5	11,4	13,9
Input power		230V - 1 - 50 Hz				400V - 3 - 50 Hz						
Nominal input current	A	6,2	8,8	11,3	14,5	11,4	11,9	16,7	18,8	17,2	21,2	26,2
Compressors / Circuits	n°	Hermetic 1/1				Scroll 1/1						
Fans	n°	1	1	1	1	1	1	1	1	1	1	1
Total air flow	m ³ /h	3.000	3.000	3.000	3.000	5.400	5.400	8.000	8.000	10.800	10.800	10.800
Sound pressure	dB(A)	40	40	40	40	41	41	46	46	51	51	51
Max. current	A	8,4	10,9	13,5	16,5	14,4	15,9	18,3	21,2	23,6	27,6	33,5
Starting current	A	33,9	41,4	67	74	68,4	75,9	102,2	126,2	134,2	174,2	205,2

cooling

heating

- 1 External air 35°C, evap temp. 5°C.
 Sound pressure in free field at a distance of 10 m, Q = 2, ISO 3746 norm.

> Characteristics

Compressors: hermetic compressors for sizes 04 and 09. Hermetic scroll compressors complete with internal thermal protection for all the other sizes. Direct start up. In the LS version the compressors are housed in a special soundproof compartment.

Evaporator (only LSN and LSN-HP versions): of the brazed plate stainless steel heat exchanger type with anti-condensate closed-cell polyurethane insulation. A flow switch is installed on all the units to protect the exchanger.

Fans: fans directly coupled to the motor shaft with internal thermal protection and with protection mesh.

Condensers: made with mechanically expanded copper pipes with aluminium fins with louvred surfaces.

Control and safety devices: microprocessor type including the control of the cooling capacity based on the monitoring of the water back from the system, setting of the operating parameters, display of the evaporator inlet and outlet temperature, display of the alarms, setting of the compressor protection timing functions, alarm reset, automatic start up after power failures.

Electrical panel: made in special wheaterproof compartment, it includes power supply board and automatic general switch; automatic fan and secondary circuit switch; compressor contactor.

Cooling circuit (only LSN and LSN-HP versions) all the cooling circuit components are welded. It includes: drier-filter, thermostatic expansion valve, manual reset high pressure switch, low pressure switch with automatic reset. In the H version there are also a four-way valve and liquid receiver.

Cooling circuit (LSN-CN versions) all the cooling circuit components are welded. It includes: drier-filter, manual reset high pressure switch, low pressure switch with automatic reset and liquid line and suction shut-off valves. In the MH version there are also a four-way valve and liquid receiver.

Structure: base and structural part made of high-thickness galvanised steel sheet epoxy painted and aluminium external panels. Stainless steel bolts and screws.

Hydraulic kit
It includes: storage tank with integrated expansion tank, circulation pump, air relief valve, water drainage tap, flow switch.

3 available version

Hydraulic kit as accessory



Single-phase or three-phases power supply

> Sizes and weights

			04	05	07	09	13	15	20	25	30	35	40
Length	L	mm	920	920	1.103	1.103	1.203	1.203	1.453	1.453	1.870	1.870	1.870
Width	W	mm	380	380	380	380	423	423	473	473	850	850	850
Height	H	mm	889	889	989	989	1.324	1.324	1.423	1.423	1.406	1.406	1.406
Weight LSN		kg	88	95	104	118	127	133	188	209	330	345	360
Weight LSN + hydraulic kit		kg	142	148	163	179	207	212	267	286	440	495	520
Weight LSN-CN		kg	80	85	94	108	115	120	172	193	310	325	340



> Accessories compatibility

LSN - LSN-HP versions	04	05	07	09	13	15	20	25	30	35	40
Main switch	●	●	●	●	●	●	●	●	●	●	●
Flow switch	●	●	●	●	●	●	●	●	●	●	●
Microprocessor	●	●	●	●	●	●	●	●	●	●	●
LS low noise version	●	●	●	●	○	○	○	○	○	○	○
Desuperheater	-	-	-	-	○	○	○	○	○	○	○
Fan speed control	○	○	○	○	○	○	○	○	○	○	○
Hydraulic kit pump and tank	○	○	○	○	○	○	○	○	○	○	○
Rubber/spring antivibration mounts	○	○	○	○	○	○	○	○	○	○	○
Evaporator electric heater (LSN)	○	○	○	○	○	○	○	○	○	○	○
Antifreeze kit (for versions with hydraulic kit)	○	○	○	○	○	○	○	○	○	○	○
Refrigerant pressure gauges	○	○	○	○	○	○	○	○	○	○	○
Solenoid valve on liquid line	○	○	○	○	○	○	○	○	○	○	○
Evaporator electric heater	○	○	○	○	○	○	○	○	○	○	○
Condensate drain pan (LSN-HP version only)	○	○	○	○	○	○	○	○	○	○	○
Coil protection grille with metallic filter	○	○	○	○	○	○	○	○	○	○	○
Remote panel	○	○	○	○	○	○	○	○	○	○	○
RS485 interface card	○	○	○	○	○	○	○	○	○	○	○

LSN-CN version	04	05	07	09	13	15	20	25	30	35	40
Main switch	●	●	●	●	●	●	●	●	●	●	●
Microprocessor	●	●	●	●	●	●	●	●	●	●	●
Solenoid valve on liquid line	●	●	●	●	●	●	●	●	●	●	●
Rubber/spring antivibration mounts	○	○	○	○	○	○	○	○	○	○	○
Fan speed control	○	○	○	○	○	○	○	○	○	○	○
Coil protection grille with metallic filter	○	○	○	○	○	○	○	○	○	○	○
RS485 interface card	○	○	○	○	○	○	○	○	○	○	○
Remote panel	○	○	○	○	○	○	○	○	○	○	○
Thermostatic expansion valve	○	○	○	○	○	○	○	○	○	○	○