

WDN

**Water cooled chillers and heat pumps
Motoevaporating units
Capacities from 40 to 360 kW**

The WDN series is a product that has been designed for the climate control of medium to large areas such as offices, shops, pubs and restaurants. The carefully manufactured product uses a water-type condensation process through a brazed plate heat exchanger thereby creating the conditions for the construction of compact units that are efficient and extremely quiet compared with radial and axial fans ones.

The available versions make it possible to select the model and the solution best adapted for the type of system served.




>Versions


- WDN** cooling only version available in 20 different sizes.
- WDN-HP** heat pump version available in 20 different sizes.
- WDN-EV** motoevaporating version available in 20 different sizes.

>Accessories

- LS version:** low noise version with the compressor housed in a special soundproof compartment.
- Desuperheater.**
- A1NT hydraulic kit:** pump only hydraulic kit on the evaporator side.
- Compressor shut-off valves.**
- Remote panel.**
- Antivibration mounts.**
- Refrigerant pressure gauges.**
- Pressure switch valve for cooling only version.**

>Main technical data

WDN		039	045	050	060	070	080	090	110	120	130
Cooling capacity ¹	kW	41,1	50,0	58,0	64,6	71,2	86,9	101,2	115,5	130,3	145,1
Compr. input power ¹	kW	9,8	11,9	13,5	15,3	17,0	20,3	23,6	27,0	30,3	33,6
Cooling capacity EV ¹	kW	37,0	45,1	52,3	58,2	64,1	78,4	91,0	103,7	116,2	128,6
Compr. input power EV ¹	kW	12,0	14,3	16,4	18,4	20,5	24,6	28,5	32,3	36,2	40,1
Heating capacity HP ²	kW	51,5	62,4	72,0	80,4	88,7	108,0	125,5	143,1	160,6	178,1
Power supply	400V - 3 - 50 Hz										
Nominal input current	A	27	30,6	32,0	34,7	37,4	47,2	53,9	58,4	67,3	76,4
Compressors type	Hermetic Scroll										
Compressors / Circuits	n°	2/1	2/1	2/1	2/1	2/1	2/1	2/1	2/1	2/1	2/1
Capacity steps		2	2	2	2	2	2	2	2	2	2
Evaporator / number	Plate heat exchanger / 1										
Water flow	m ³ /h	7,1	8,6	10,0	11,1	12,2	15,0	17,4	19,9	22,4	25,0
Condenser / number	Plate heat exchanger / 1 (EV version excluded)										
Water flow	m ³ /h	8,8	10,7	12,3	13,8	15,2	18,4	21,5	24,5	27,6	30,7
Sound pressure 	dB(A)	52	52	53	54	54	55	55	56	56	57
Max. current	A	34	40	44	49	54	64	73	82	93	104
Starting current	A	116	143	149	189	194	230	257	266	313	324

WDN		152	162	144	164	190	210	240	260	300	320
Cooling capacity ¹	kW	162,8	180,5	158,1	173,8	202,4	231,1	260,6	290,1	325,5	360,9
Compr. input power ¹	kW	36,9	40,1	37,3	40,6	47,3	54,0	60,6	67,3	73,8	80,3
Cooling capacity EV ¹	kW	145,1	161,5	142,6	156,8	182,1	207,3	232,3	257,3	290,1	322,9
Compr. input power EV ¹	kW	44,0	47,9	45,1	49,3	56,9	64,6	72,4	80,3	88,0	95,8
Heating capacity HP ²	kW	199,6	221,2	196,7	216,0	251,1	286,2	321,2	356,1	399,3	442,4
Power supply	400V - 3 - 50 Hz										
Nominal input current	A	83,9	91,4	86,0	94,4	105,0	122,4	134,6	152,8	167,8	182,8
Compressors type	Hermetic Scroll										
Compressors / Circuits	n°	2/1	2/1	4/2	4/2	4/2	4/2	4/2	4/2	4/2	4/2
Capacity steps		2	2	4	4	4	4	4	4	4	4
Evaporator / number	Plate heat exchanger / 1										
Water flow	m ³ /h	28,0	31,1	27,2	29,9	34,8	39,8	44,8	49,9	56,0	62,1
Condenser / number	Plate heat exchanger / 1 (EV version excluded)										
Water flow	m ³ /h	34,4	38,0	33,6	36,9	43,0	49,0	55,3	61,5	68,7	75,9
Sound pressure 	dB(A)	57	57	57	57	58	60	60	60	62	62
Max. current	A	114,5	125	109,6	128	146	164	186	208	229	250
Starting current	A	362	372,5	279,8	294	330	348	406	428	476,5	497,5


cooling

heating

¹ Cond in/out temp. 30/35°C, evap. in/out temp. 12/7°C.

EV version: cond. temp. 50°C, evap. in/out temp. 12/7°C.

² Cond. in/out temp. 40/45°C, evap. in/out temp. 15/10°C.

 Sound pressure in free field at a distance of 10 m, Q=2, ISO 3746 norm.

>Characteristics

Compressors: hermetic scroll complete with internal thermal protection. Direct start up. Cooling capacity control through capacity steps depending on the number of compressors installed. The compressors are housed in a special soundproof compartment.

Evaporators: of the brazed plate stainless steel heat exchanger type with anti-condensate closed-cell polyurethane insulation. A differential pressure switch is installed on all the units to protect the exchanger.

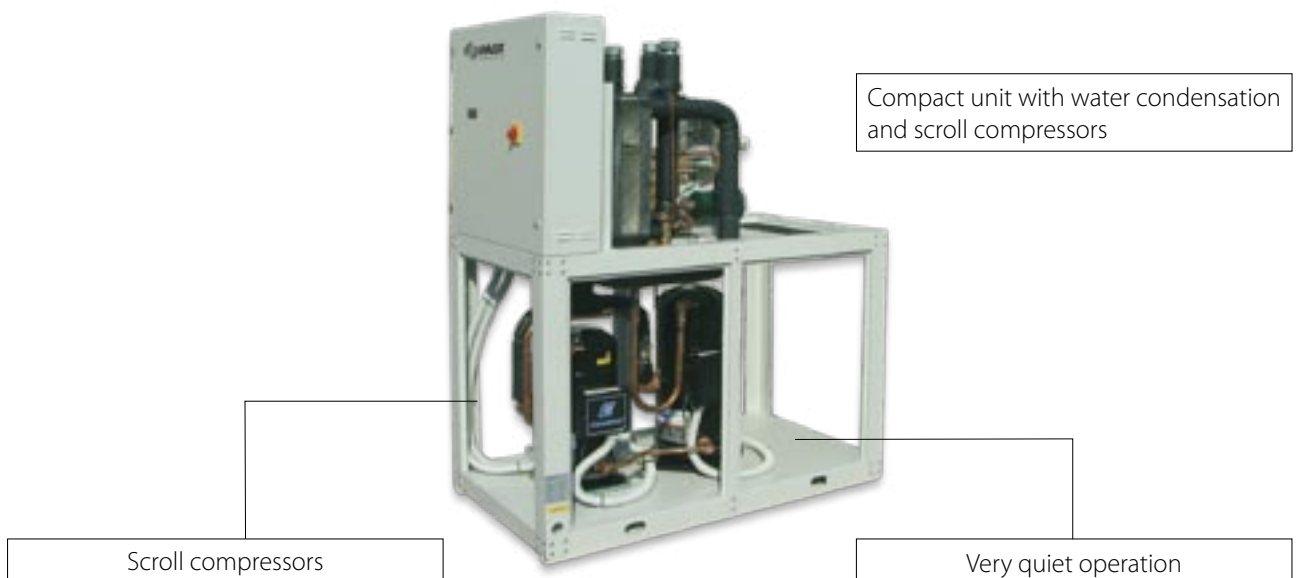
Condensers: stainless steel plate type. In the HW version, a differential pressure switch is installed to protect the exchanger.

Control and safety devices: microprocessor type, different for the single and twin circuit units but in both cases including the control of the cooling capacity on one or more cooling capacity steps based on the monitoring of the water back from the system, setting of the operating parameters, display of the evaporator inlet and outlet temperature and display of the alarms. setting of the compressor protection timing, reset of the alarms, automatic start up after power failure.

Electrical panel: made with double door execution, it includes an automatic general switch, thermomagnetic switches to protect the auxiliary circuit, contactors for compressors and fans. Terminal plate.

Cooling circuit: all the cooling circuit components are welded. It includes: drier-filter, thermostatic expansion valve, manual reset high pressure switch, automatic reset low pressure switch, high and low pressure safety valves.

Structure: base and structural part made of high-thickness galvanised steel sheet, epoxy painted, external panels made of aluminium up to size 110, galvanised steel sheet epoxy painted for all the other sizes. Stainless steel bolts and screws.

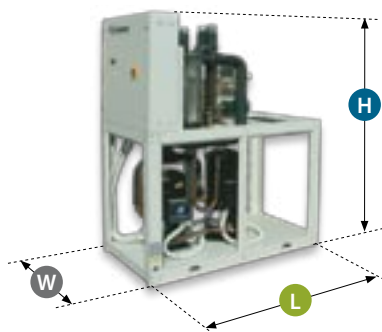




>Sizes and weights

			039	045	050	060	070	080	090	110	120	130
Length	L	mm	800	800	800	800	800	800	800	1.478	1.478	1.478
Width	W	mm	800	800	800	800	800	800	800	800	800	800
Height	H	mm	1.855	1.855	1.855	1.855	1.855	1.855	1.855	1.855	1.855	1.855
Weight		kg	430	440	460	470	480	490	580	600	630	650

			152	162	144	164	190	210	240	260	300	320
Length	L	mm	1.478	1.478	2.480	2.480	2.480	2.480	2.480	2.480	2.480	2.480
Width	W	mm	800	800	800	800	800	800	800	800	800	800
Height	H	mm	1.855	1.855	1.855	1.855	1.855	1.855	1.855	1.855	1.855	1.855
Weight		kg	730	760	1.020	1.090	1.170	1.210	1.270	1.320	1.390	1.430



>Accessories compatibility

	039-090	110-162	144-190	210-320
Main switch	●	●	●	●
Microprocessor	●	●	●	●
Low noise version	○	○	○	○
A1NT pump only hydraulic kit	○	○	○	○
Desuperheater	○	○	○	○
Rubber/spring antivibration mounts	○	○	○	○
Refrigerant pressure gauges	○	○	○	○
Solenoid valve on liquid line	○	○	○	○
Pressostatic valve (cooling only version)	○	○	○	○
Remote panel	○	○	○	○
Compressors shut-off valves	○	○	○	○
RS485 interface card	○	○	○	○

● Standard, ○ Optional, – Not available.