



ELFOENERGY GROUND

Reversible heat pump

Water cooled

Indoor installation

Capacity from 6,23 to 33,1 kW

- ✓ Scroll compressor and plate heat exchangers
- ✓ First investment driven and refurbishment applications
- ✓ Refrigerant R410A - GWP = 2088
- ✓ Versatile applications with double set-point and boiler control kits
- ✓ Domestic hot water up to 60°C, low water temperature down to -8°C
- ✓ Energy saving with set-point compensation according to outside enthalpy or air temperature
- ✓ Integrated source and user side hydronic assemblies and three-way valve



Clivet participates in the EUROVENT "Liquid Chilling Packages and Hydronic Heat Pumps". The products concerned feature on the website www.eurovent-certification.com



compliant
ErP

functions and features



Heat pump



Water cooled



Indoor
installation



R-410A



Hermetic
Scroll

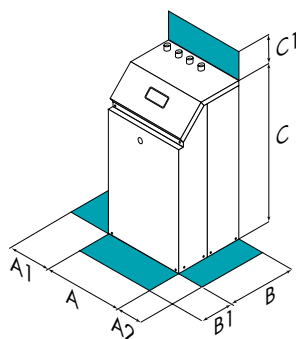


Control4 NRG
management



Vary Flow

dimensions and clearances



Size	►► WSHN-EE	17	21	31	41	51	61	71	81	91	101	121
A - Length	mm	402	402	402	402	402	573	573	573	573	573	573
B - Width	mm	602	602	602	602	602	604	604	604	604	604	604
C - Height	mm	785	785	785	785	785	858	858	858	858	858	858
A1	mm	150	150	150	150	150	150	150	150	150	150	150
A2	mm	150	150	150	150	150	150	150	150	150	150	150
B1	mm	600	600	600	600	600	600	600	600	600	600	600
C1	mm	300	300	300	300	300	300	300	300	300	300	300
Operating weight	kg	81	83	86	90	98	115	129	147	163	164	170

The above mentioned data are referred to standard units for the constructive configurations indicated.
For all the other configurations, refer to the relative Technical Bulletin.

CAUTION!

For trouble-free operation of the unit it is essential to maintain the safety distances indicated by the green areas.

versions and configurations

LOW TEMPERATURE:

-	Low temperature: not required (Standard)
B	Water low temperature
BS	Water low temperature source side

VOLTAGE:

400TN	Supply voltage 400/3N~/50
230OM	Supply voltage 230/1/50 (sizes 17÷51)

HYDRONIC ASSEMBLY SOURCE SIDE:

-	Hydronic assembly source side: not required (Standard)
HYGS	Hydronic assembly source side (sizes 17÷91)

technical data

Size	►► WSHN-EE	17	21	31	41	51	61	71	81	91	101	121
Unit for radiant panels												
W10/W35												
♦ Heating capacity (EN 14511:2022)	kW	6,95	7,49	9,50	12,0	16,0	19,5	24,7	26,7	30,8	36,2	41,2
Total power input (EN 14511:2022)	kW	1,35	1,47	1,83	2,34	3,10	3,83	4,81	5,21	6,04	7,09	8,01
COP (EN 14511:2022)	-	5,15	5,10	5,19	5,11	5,16	5,10	5,13	5,12	5,10	5,11	5,14
W35/W18												
♦ Cooling capacity (EN 14511:2022)	kW	8,37	9,05	10,8	14,0	17,8	22,1	27,1	29,8	33,8	38,1	42,8
Total power input (EN 14511:2022)	kW	1,51	1,70	2,01	2,49	3,32	4,30	5,28	5,65	6,46	7,46	8,39
EER (EN 14511:2022)	-	5,52	5,32	5,37	5,64	5,35	5,14	5,13	5,27	5,22	5,11	5,10
Terminal units												
W10/W45												
♦ Heating capacity (EN 14511:2022)	kW	6,68	7,27	8,83	11,5	15,6	18,9	23,6	25,1	29,3	34,2	38,7
Total power input (EN 14511:2022)	kW	1,59	1,73	2,43	3,01	3,96	4,82	5,94	6,62	7,46	8,85	9,76
COP (EN 14511:2022)	-	4,19	4,19	3,63	3,81	3,94	3,92	3,97	3,79	3,93	3,87	3,97
W35/W7												
♦ Cooling capacity (EN 14511:2022)	kW	6,23	6,57	8,05	10,8	13,2	16,3	20,7	22,3	25,8	29,5	33,1
Total power input (EN 14511:2022)	kW	1,54	1,67	2,04	2,47	3,37	4,21	5,09	5,23	6,25	7,39	8,15
EER (EN 14511:2022)	-	4,04	3,93	3,95	4,39	3,93	3,87	4,07	4,27	4,13	4,00	4,06
SEER	(2)	-	2,35	2,41	2,69	3,01	3,16	3,17	3,55	3,70	3,69	3,50
η _{s,c}	(2)	%	85,9	88,3	99,6	112,4	118,3	118,9	134,0	140,1	139,8	138,5
Radiators												
W10/W55												
♦ Heating capacity (EN 14511:2022)	kW	6,36	7,07	8,57	10,9	14,8	17,4	22,3	23,6	27,9	31,9	36,7
Total power input (EN 14511:2022)	kW	2,06	2,15	3,23	3,82	5,03	6,11	7,47	8,35	9,05	11,0	11,8
COP (EN 14511:2022)	-	3,09	3,29	2,66	2,85	2,94	2,85	2,99	2,83	3,08	2,91	3,11
Refrigeration circuits	Nr						1					
No. of compressors	Nr						1					
Type of compressors							SCROLL					
Refrigerant							R-410A					
Water flow-rate (User side)	(1) l/s	0,29	0,31	0,38	0,51	0,63	0,77	0,96	1,06	1,22	1,39	1,56
Useful pump discharge head	(1) kPa	58	58	56	47	39	62	54	50	44	155	132
Water flow (Source side)	(1) l/s	0,35	0,38	0,46	0,61	0,78	0,95	1,18	1,28	1,50	1,71	1,91
Standard power supply	V		230/1~/50					400/3N~/50				
Sound power level	(3) dB(A)	57	57	57	58	58	60	63	64	65	66	67
Directive ErP (Energy Related Products)												
ErP Energy Class - AVERAGE Climate - W35	-	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++
ErP Energy Class - AVERAGE Climate - W55	-	A+++	A+++	A++	A++	A+++	A+++	A+++	A++	A+++	A++	A+++
SCOP - AVERAGE Climate - W35	(2)	-	5,66	5,77	6,01	6,04	5,93	5,92	5,86	5,80	5,45	6,09
η _{s,H}	(2)	%	223	228	237	239	234	234	231	229	215	248
SCOP - AVERAGE Climate - W55	(2)	-	4,14	4,15	3,79	3,93	4,04	3,94	4,05	3,88	4,12	3,92
η _{s,H}	(2)	%	158	158	144	149	154	150	154	147	157	149

(1) Data referred to the following conditions: Internal exchanger water temperature = 12/7°C; External exchanger water temperature = 30/35°C

External exchanger water temperature = 30/35°C. Performances according to EN 14511:2022

W10/W35 water at the user side heat exchanger 30/35°C; inlet water at the source side heat exchanger 10°C

W10/W45 water at the user side heat exchanger 40/45°C; inlet water at the source side heat exchanger 10°C

W10/W55 water at the user side heat exchanger 45/55°C; inlet water at the source side heat exchanger 10°C

W35/W18 water at the user side heat exchanger 23/18°C; inlet water at the source side heat exchanger 30/35°C

W35/W7 water at the user side heat exchanger 12/7°C; inlet water at the source side heat exchanger 30/35°C

(2) Data calculated according to the EN 14825:2018 Regulation

(3) Sound pressure levels are referred to units operating at nominal load in nominal conditions. Measurements are carried out accordingly to UNI EN ISO 9614-1 at nominal standard conditions defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013.

Sound power level are not Eurovent certified.

The Product is compliant with the Erp (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) No 811/2013 (rated heat output ≤70 kW at specified reference conditions), the Commission delegated Regulation (EU) No 813/2013 (rated heat output ≤400 kW at specified reference conditions).

accessories

3WV	Three-way valve
IVMSX	Source side 2-way modulating valve
IVWX	Water side motorized valve
AMRX	Rubber antivibration mounts
CMMBX	Serial communication module to supervisor (Modbus)
PBLC1X	Service keypad (cable from 1,5 metres)
PMX	Phase monitor
SCP3X	Set point compensation according to the outside enthalpy
SPCX	Set-point compensation with outdoor air temperature probe
SFSTR4N	Disposal for inrush current reduction, for unit 400/3/50+N
KDT3VX	Double temperature control kit, set point compensation with 4-20mA, 3
KDT3V	Double temperature control kit, set point compensation with 4-20mA, 3
3DHWX	Three-way valve for domestic hot water
SFSTR1	Disposal for inrush current reduction, for unit 230/1/50 (sizes 17÷51)

KTFL1X	1" water side hose kit (sizes 17÷71)
KTFL2X	1 1/4" water side hose kit
CACSX	Domestic hot water kit control
ACS300X	300-litre domestic hot water storage tank (sizes 17÷41)
ACS500X	500-litre domestic hot water storage tank (sizes 17÷81)
ACS55X	500-litre domestic hot water storage tank (sizes 17÷81)
ACS35X	300-litre domestic hot water storage tank (sizes 17÷41)
KVMSP1X	Kit for management of radiant panels with connections of 1"(sizes 17÷51)
KVMSP2X	Kit for management of radiant panels with connections of 1 1/4"
KSAX	100-litre circuit breaker
KVICX	Boiler control kit (sizes 17÷81)
KITERAX	Electronic wall-mounting room thermostat
IOTX	IoT industrial module for cloud based interoperability & services

Accessories whose code ends with "X" are supplied separately

Data contained in this document are not binding and may be changed by the Manufacturer without notice

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