

ELFOEnergy Ground Medium²

Liquid chiller

WSH-XEE2: cooling only

WSHN-XEE2: Reversible heat pump

Water cooled

Indoor installation

Capacity from 34,5 to 356 kW



- ✓ Scroll compressors and plate heat exchangers
- ✓ Solution for multi-family and commercial buildings
- ✓ Refrigerant R410A - GWP = 2088
- ✓ Solution for multi-family and commercial buildings
- ✓ Domestic hot water up to 60°C, low water temperature down to -8°C
- ✓ Modular operation management, up to 8 units in cascade
- ✓ Integrated source and user side hydronic assemblies and partial recovery



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



Cooling only
(WSH-XEE2)



Heat pump
(WSHN-XEE2)



Water cooled



Indoor
installation



R-410A



Hermetic
Scroll



Electronic
expansion
valve

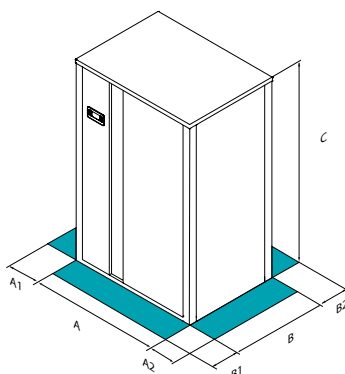


Vary Flow



Intelliplant

dimensions and clearances



CAUTION!

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

Size	▶▶ WSH-XEE2													
	12.2	16.2	19.2	22.2	27.2	35.2	40.2	45.2	55.2	60.2	70.2	80.2	100.2	120.2
A - Length	mm	837	837	837	837	1110	1110	1110	1110	1110	1110	1110	1110	1110
B - Width	mm	607	607	607	607	885	885	885	885	885	885	1035	1035	1038
C - Height	mm	1483	1483	1483	1483	1910	1910	1910	1910	1910	1910	1910	1910	1910
A1	mm	100	100	100	100	150	150	150	150	150	150	150	150	150
A2	mm	100	100	100	100	150	150	150	150	150	150	150	150	150
B1	mm	500	500	500	500	500	500	500	500	500	500	500	500	500
B2	mm	300	300	300	300	350	350	350	350	350	350	350	350	350
Operating weight	kg	212	276	295	308	421	510	557	572	700	733	771	809	1085

Size	▶▶ WSHN-XEE2													
	12.2	16.2	19.2	22.2	27.2	35.2	40.2	45.2	55.2	60.2	70.2	80.2	100.2	120.2
A - Length	mm	837	837	837	837	1110	1110	1110	1110	1110	1110	1110	1110	1110
B - Width	mm	607	607	607	607	885	885	885	885	885	885	1035	1035	1038
C - Height	mm	1483	1483	1483	1483	1910	1910	1910	1910	1910	1910	1910	1910	1910
A1	mm	100	100	100	100	150	150	150	150	150	150	150	150	150
A2	mm	100	100	100	100	150	150	150	150	150	150	150	150	150
B1	mm	500	500	500	500	500	500	500	500	500	500	500	500	500
B2	mm	300	300	300	300	350	350	350	350	350	350	350	350	350
Operating weight	kg	223	290	309	322	441	519	580	581	728	743	808	820	1119

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.

versions and configurations

VERSION:

GW	Groundwater version (Standard)
GEO	Version for Geothermal application

ENERGY RECOVERY:

-	Energy recovery: not required (Standard)
D	Partial energy recovery

OPERATION (WSH-XEE2 ONLY):

OCO	Cooling-only operation (Standard)
OHO	Heating-only operation
OHI	Operation with water circuit change-over

technical data

Size		WSH-XEE2	12.2	16.2	19.2	22.2	27.2	35.2	40.2	45.2	55.2	60.2	70.2	80.2	100.2	120.2
◆ Cooling capacity (EN 14511:2022)	(1)	kW	35,6	49,8	59,3	68,4	84,2	109	124	147	173	197	222	250	305	356
Total power input (EN 14511:2022)	(1)	kW	7,50	10,6	12,5	15,7	17,5	23,7	26,8	31,8	38,1	43,2	48,6	55,3	68,4	82,3
EER (EN 14511:2022)	(1)	-	4,75	4,68	4,74	4,36	4,82	4,59	4,61	4,62	4,54	4,56	4,57	4,52	4,46	4,32
SEER	(4)	-	5,36	5,25	5,30	5,25	5,59	5,77	5,87	5,72	5,38	5,38	5,51	5,30	5,46	5,39
η _{sc}	(4)	%	206,4	202,0	204,0	202,0	215,6	222,8	226,8	220,8	207,2	207,2	212,4	204,0	210,4	207,6
◆ Heating capacity (EN 14511:2022)	(2)	kW	41,3	57,6	68,4	80,7	96,5	125	143	169	200	228	256	289	354	419
Total power input (EN 14511:2022)	(2)	kW	9,54	13,3	15,7	19,3	21,8	29,0	32,8	39,0	46,5	52,4	59,2	67,1	83,1	101
COP (EN 14511:2022)	(2)	-	4,33	4,35	4,35	4,19	4,44	4,31	4,34	4,32	4,29	4,36	4,33	4,30	4,26	4,17
Refrigeration circuits		Nr	1													
No. of compressors		Nr	2													
Type of compressors		-	SCROLL													
Refrigerant		-	R-410A													
Standard power supply		V	400/3~/50													
Sound power level		dB(A)	60	64	65	64	64	74	74	74	77	77	79	80	81	82
Size		WSHN-XEE2	12.2	16.2	19.2	22.2	27.2	35.2	40.2	45.2	55.2	60.2	70.2	80.2	100.2	120.2
◆ Cooling capacity (EN 14511:2022)	(1)	kW	34,5	48,6	58,0	68,1	82,3	102	120	139	168	187	218	241	293	348
Total power input (EN 14511:2022)	(1)	kW	7,42	10,5	12,4	15,4	17,5	23,8	26,9	32,0	38,1	43,0	48,7	55,1	67,8	81,7
EER (EN 14511:2022)	(1)	-	4,65	4,61	4,67	4,41	4,69	4,29	4,45	4,34	4,42	4,34	4,47	4,37	4,32	4,26
SEER	(4)	-	5,38	4,78	5,01	4,97	5,30	5,18	5,36	5,37	5,16	5,05	5,25	4,97	5,08	4,95
η _{sc}	(4)	%	207,1	183,0	192,6	191,0	204,2	199,3	206,5	206,9	198,3	194,0	201,9	190,9	195,1	190,1
◆ Heating capacity (EN 14511:2022)	(2)	kW	40,3	56,6	66,8	79,2	93,6	119	139	162	195	217	251	278	342	407
Total power input (EN 14511:2022)	(2)	kW	9,47	13,2	15,8	19,1	21,3	28,4	32,3	38,4	45,8	52,0	58,1	65,6	82,6	100
COP (EN 14511:2022)	(2)	-	4,25	4,28	4,24	4,15	4,40	4,18	4,29	4,22	4,25	4,18	4,32	4,25	4,15	4,06
Refrigeration circuits		Nr	1													
No. of compressors		Nr	2													
Type of compressors		-	SCROLL													
Refrigerant		-	R-410A													
Standard power supply		V	400/3~/50													
Sound power level		dB(A)	60	64	65	64	64	74	74	74	77	77	79	80	81	82
Directive ErP (Energy Related Products)																
ErP Energy Class - AVERAGE Climate - W35		-	A+++	A+++	-											
ErP Energy Class - AVERAGE Climate - W35		-	A+++	A+++	A+++											
SCOP - AVERAGE Climate - W35	(4)	%	5,69	5,45	5,47	4,85	5,97	5,67	5,84	5,68	5,68	5,55	5,63	5,45	5,76	5,61
η _{SH}	(4)	%	225	215	216	191	231	219	226	219	219	214	217	210	222	216
SCOP - AVERAGE Climate - W35	(4)	%	4,51	4,35	4,36	4,40	4,83	4,60	4,69	4,67	4,64	4,61	4,69	4,65	4,67	4,52
η _{SH}	(4)	%	172	166	166	168	185	176	180	179	178	176	180	178	179	173

(1) Data calculated according to EN 14511:2022 referred to the following conditions: Internal exchanger water temperature = 12/7°C; External exchanger water temperature = 30/35°C

(2) Data calculated according to EN 14511:2022 referred to the following conditions Water to internal exchanger = 40/45°C; Water temperature to external exchanger = 10/7°C

(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.

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

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) and the Commission delegated Regulation (EU) No 2016/2281, also known as Ecodesign Lot21.

accessories

SDV	Cutoff valve on compressor supply and return (sizes 12.2÷80.2)
MOBMAG	Larger units
MF2	Multi-function phase monitor
RCTX	Remote control
CMSC10	Serial communication module for LonWorks supervisor
CMSC8	Serial communication module for BACnet supervisor
CMSC9	Serial communication module for Modbus supervisor
CMMBX	Serial communication module to supervisor (Modbus)
CMSLWX	LonWorks serial communication module
BACX	Serial communication module for BACnet supervisor
SPCX	Set-point compensation with outdoor air temperature probe
IFWX	Steel mesh strainer on the water side
SFSTR	Disposal for inrush current reduction
PFCP	Power factor correction capacitors (cosfi > 0.9)
AVIBX	Anti-vibration mount support

Only WSH-XEE2:

VS2MC	Cooling side 2-way modulating valve (sizes 12.2÷80.2)
VS2MCX	Cooling side 2-way modulating valve
VS3MC	Cooling side 2-way modulating valve
VS3MCX	Cooling side 3-way modulating valve
VARYC	VARYFLOW + (cooling side 2 inverter pumps)
VS2MH	Cooling side 3-way modulating valve (sizes 12.2÷80.2)
VS2MHX	Heating side 2-way modulating valve
VS3MH	Cooling side 3-way modulating valve
VS3MHX	Heating side 3-way modulating valve
VARYH	VARYFLOW + (heating side 2 inverter pumps)
VACSHX	Heating side DHW switching valve

Only WSHN-XEE2:

VACSUX	User side DHW switching valve
VARYU	VARYFLOW + (user side 2 inverter pumps)
VS2M	Source side 2-way modulating valve (sizes 12.2÷80.2)
VS2MX	Source side 2-way modulating valve
VS3M	Source side 3-way modulating valve (sizes 12.2÷80.2)
VS3MX	Source side 3-way modulating valve
VARYS	VARYFLOW + (source side 2 inverter pumps)

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