



AWA HP XEA/SEA Air-to-Water Heat Pump





AWA HP XEA/SEA Air-to-Water Heat Pump



Cooling capacity: 128-680 kW

Heating capacity: 127-700 kW

- Sustainable and reliable cooling and heating, all year round
- Air-sourced renewable technology
- High efficiency at full load and part load with variable volume scroll compressor technology and variable speed fans
- The unique Thermocold SLHX system (patent pending) offers higher efficiency without increasing unit footprint
- Highly configurable: adapts perfectly to your performance requirements and budget needs



The future of sustainable heating

At Thermocold, we believe in electrification of heating as an important global contributor to mitigate climate change and reduce carbon footprint. The AWA HP XEA/SEA provides best-in-class efficiency levels at Eurovent Class A full load performance.

AWA HP XEA/SEA models comply with ErP 2021 efficiency thresholds, using the most innovative technology on the market.

AWA HP XEA/SEA uses ambient air as its heat source, resulting in a substantially lower carbon footprint and no emissions compared to fossil fuel boilers.



Flexible, reliable and simple

Thermocold AWA HP XEA/SEA heat pumps are built on Thermocold's well-known AWA platform, which means they share many of the same components and technologies – all with a proven reliability record.

ThermoLogic Controller unit controller ensures smooth operation and reliable comfort for building users, while also allowing for easy maintenance, keeping costs to a minimum.

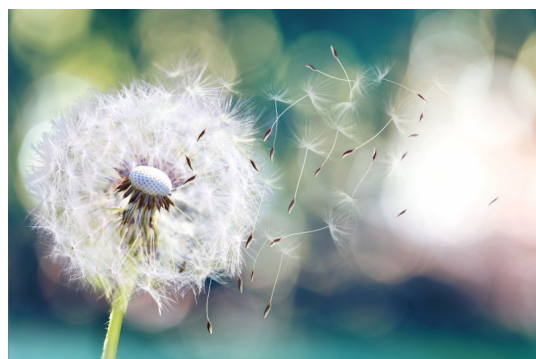


Improved performance at all operating conditions with Thermocold LESSS (patent pending)

The Thermocold Low Energy Super Subcooler system (LESSS) is a unique heat pump refrigerant system which makes intelligent usage of superheat generation and mass flow control to optimize the refrigerant charge under any operating conditions.

Fully designed and tested by Thermocold, the net capacity of the unit is increased by up to 7%, improving energy efficiency across all seasons. Thermocold LESSS also enhances system reliability by improving compressor lubrication and preventing liquid slugging.

Thanks to Thermocold's most recent innovation, the unit efficiency is higher without needing to oversize the heat exchanger section. In short, you can do more with LESSS.



Low noise operation

With variable volume scroll compressors, variable speed fans and insulation options to reduce sound even further, AWA HP XEA/SEA heat pumps are the ideal choice to keep your building warm or cool - quietly and efficiently.

Range description

- Model AWA HP XEA/SEA is available in two efficiency versions XEA and SEA, which can be coupled with three low noise packages (SN, LN, XLN). You can also choose between AC, EC and EC Axitop fans to improve the efficiency of your system within budget.

Technical specifications

Cooling capacity	128-680 kW
Heating capacity	127-700 kW
Eurovent certification	●
ErP Certification	●
Refrigerants	R454B R410A
Operating mode	Cooling only Heat pump
Energy saving	Heat recovery Adaptive Frequency™ Drive
Compressor	Scroll

Product data

AWA HP XEA LN

	Pc	Pec	EER	SEER	ηsc	Ph	Peh	COP	Ph	Peh	COP	SCOP	ηsh	LwO	Refrigerant	L	W	H	OW
	(1)	(1)	(1)	(2)	(2)	(3)	(3)	(3)	(4)	(4)	(4)	(5)	(5)	(6)		(7)	(7)	(7)	(4)
	kW	kW			%	kW	kW			kW	kW		%	dB(A)		mm	mm	mm	kg
AWA HP XEA 042 SE AC LN R454B	127,5	43,4	2,94	4,70	184,9	128,0	41,3	3,10	-	-	-	3,69	144,7	86	R454B	2505	1997	2412	1327
AWA HP XEA 050 SE AC LN R454B	155,6	50,8	3,06	4,49	176,4	158,1	51,9	3,05	-	-	-	3,45	134,9	88	R454B	2505	1997	2412	1435
AWA HP XEA 055 SE AC LN R454B	179,9	61,4	2,93	4,52	177,7	184,3	59,5	3,10	-	-	-	3,53	138,3	89	R454B	2505	1997	2412	1549
AWA HP XEA 060 SE AC LN R454B	200,8	73,0	2,75	4,31	169,5	208,6	68,0	3,07	-	-	-	3,58	140,3	89	R454B	2505	1997	2412	1630
AWA HP XEA 061 SE AC LN R454B	217,5	69,5	3,13	4,65	183,0	221,6	67,6	3,28	-	-	-	3,55	138,9	91	R454B	3255	2232	2531	2044
AWA HP XEA 070 SE AC LN R454B	238,1	77,5	3,07	4,54	178,5	243,0	74,1	3,28	-	-	-	3,65	142,9	91	R454B	3255	2232	2531	2044
AWA HP XEA 074 SE AC LN R454B	260,7	91,5	2,85	4,41	173,3	269,5	84,5	3,19	-	-	-	3,65	142,8	93	R454B	3255	2232	2531	2030
AWA HP XEA 075 SE AC LN R454B	264,4	83,2	3,18	4,61	181,6	278,6	83,7	3,33	-	-	-	3,59	140,5	91	R454B	3255	2232	2531	2190
AWA HP XEA 080 SE AC LN R454B	279,2	82,4	3,39	4,95	195,2	275,6	82,5	3,34	289,0	69,0	4,19	3,66	143,3	88	R454B	4520	2200	2530	2835
AWA HP XEA 085 SE AC LN R454B	288,7	96,9	2,98	4,59	180,4	309,4	94,3	3,28	-	-	-	3,62	141,8	92	R454B	3255	2232	2531	2316
AWA HP XEA 090 SE AC LN R454B	304,8	95,2	3,20	4,88	192,3	305,9	93,3	3,28	318,9	77,6	4,11	3,67	143,8	90	R454B	4520	2200	2530	2934
AWA HP XEA 095 SE AC LN R454B	314,3	111,1	2,83	4,34	170,8	339,2	104,7	3,24	-	-	-	3,64	142,6	93	R454B	3255	2232	2531	2702
AWA HP XEA 100 SE AC LN R454B	334,2	108,8	3,07	4,76	187,3	337,1	103,4	3,26	349,8	85,5	4,09	3,73	146,1	91	R454B	4520	2200	2530	3078
AWA HP XEA 110 SE AC LN R454B	376,8	125,2	3,01	4,79	188,4	379,4	116,0	3,27	393,0	96,6	4,07	3,73	146,2	92	R454B	4520	2200	2530	3168
AWA HP XEA 130 SE AC LN R454B	415,2	141,7	2,93	4,66	183,2	417,5	126,9	3,29	431,4	106,3	4,06	3,83	150,3	93	R454B	4520	2200	2530	3235
AWA HP XEA 140 SE AC LN R454B	463,3	153,9	3,01	4,76	187,5	467,2	143,7	3,25	483,8	118,9	4,07	3,59	140,4	92	R454B	5645	2200	2530	3876
AWA HP XEA 150 SE AC LN R454B	489,6	168,3	2,91	4,71	185,5	494,8	153,7	3,22	510,5	127,0	4,02	3,61	141,3	93	R454B	5645	2200	2530	4060
AWA HP XEA 165 SE AC LN R454B	524,2	185,2	2,83	4,72	185,8	532,1	165,3	3,22	548,8	136,9	4,01	3,70	145,2	93	R454B	5645	2200	2530	4100
AWA HP XEA 180 SE AC LN R454B	582,8	195,6	2,98	4,80	189,0	589,7	179,2	3,29	610,9	149,7	4,08	3,68	144,4	94	R454B	6770	2200	2530	4554
AWA HP XEA 190 SE AC LN R454B	619,9	211,6	2,93	4,78	188,1	627,7	190,2	3,30	649,8	159,3	4,08	3,75	147,2	94	R454B	6770	2200	2530	4628

Pc: Cooling capacity

SEER: Seasonal Energy Efficiency Ratio

Peh: Total power input in heating

η_{sh}: Seasonal space heating energy efficiency

L: Length

OW : Operating Weight

Pec: Total power input in cooling

η_{sc}: Seasonal space cooling energy efficiency

COP: Coefficient Of Performance (heating)

LwO: A-weighted sound power level outside

W: Width

EER: Energy Efficiency Ratio (cooling)

Ph: Heating capacity

SCOP: Seasonal Coefficient Of Performance

Refrigerant: Refrigerant type

H: Height

(1): Cooling: outdoor air temperature 35°C and chilled water temperature 12°C/7°C. (EN 14511:2022)

(2): Ecodesign rating for comfort chiller - Fan coil application. Outdoor air temperature 35°C and chilled water temperature in/ out: 12°C/7°C. η_{sc}/SEER as defined in Ecodesign requirements for Comfort Chillers with 2000 kW maximum capacity - REGULATION (EU) N° 2016/2281 of 20 December 2016.

(3): Outdoor air temperature 7°C - hot water temperature in/out 40/45°C. (EN 14511:2022)

(4): Outdoor air temperature 7°C - hot water temperature in/out 30/35°C. (EN 14511:2022)

(5): Ecodesign rating at low temperature conditions. Outdoor temperature: 7°C dry bulb/6°C wet bulb and hot water temperature in/out: 30°C/35°C. η_{sh} / SCOP as defined in Directive 2009/125/EC of the European Parliament and of the Council with regard to Ecodesign requirements for Space heaters and combination heaters with Prated < 400kW - COMMISSION REGULATION (EU) N° 813/2013 of 2 August 2013

(6): According ISO 9614:2009. Eurovent conditions, with 1pW reference sound power (without accessories)

(7): Basic unit without accessories

AWA HP SEA LN

	Pc	Pec	EER	SEER	ηsc	Ph	Peh	COP	Ph	Peh	COP	SCOP	ηsh	LwO	Refrigerant	L	W	H	OW
	(1)	(1)	(1)	(2)	(2)	(3)	(3)	(3)	(4)	(4)	(4)	(5)	(5)	(6)		(7)	(7)	(7)	(4)
	kW	kW			%	kW	kW			kW	kW		%	dB(A)		mm	mm	mm	kg
AWA HP SEA 042 HE EC LN R454B	127,9	43,1	2,97	4,79	188,5	128,3	41,1	3,12	-	-	-	3,76	147,3	87	R454B	2505	1997	2412	1327
AWA HP SEA 050 HE EC LN R454B	155,7	50,4	3,09	4,83	190,0	158,3	51,4	3,08	-	-	-	3,52	137,9	89	R454B	2505	1997	2412	1435
AWA HP SEA 055 HE EC LN R454B	180,1	61,0	2,95	4,81	189,4	184,4	59,1	3,12	-	-	-	3,61	141,2	90	R454B	2505	1997	2412	1549
AWA HP SEA 060 HE EC LN R454B	201,1	72,3	2,78	4,48	176,3	208,7	67,3	3,10	-	-	-	3,65	142,9	90	R454B	2505	1997	2412	1630
AWA HP SEA 061 HE EC LN R454B	217,8	68,9	3,16	5,07	199,9	221,7	67,0	3,31	-	-	-	3,63	142,1	92	R454B	3255	2232	2531	2044
AWA HP SEA 070 HE EC LN R454B	238,3	76,9	3,10	4,80	188,9	243,1	73,5	3,31	-	-	-	3,71	145,3	92	R454B	3255	2232	2531	2044
AWA HP SEA 074 HE EC LN R454B	261,1	90,6	2,88	4,60	181,0	269,6	84,0	3,21	-	-	-	3,69	144,8	93	R454B	3255	2232	2531	2030
AWA HP SEA 075 HE EC LN R454B	264,5	82,7	3,20	4,89	192,6	278,9	82,8	3,37	-	-	-	3,66	143,2	91	R454B	3255	2232	2531	2190
AWA HP SEA 080 HE AC LN R454B	272,9	82,2	3,32	4,74	186,5	284,4	80,3	3,54	297,7	67,5	4,41	3,90	152,9	88	R454B	4520	2200	2530	2885
AWA HP SEA 085 HE EC LN R454B	288,8	96,0	3,01	4,75	186,8	309,7	93,6	3,31	-	-	-	3,69	144,4	93	R454B	3255	2232	2531	2316
AWA HP SEA 090 HE AC LN R454B	297,9	94,9	3,14	4,67	183,9	313,4	90,8	3,45	326,8	76,0	4,30	3,91	153,3	90	R454B	4520	2200	2530	2984
AWA HP SEA 095 HE EC LN R454B	314,5	110,3	2,85	4,54	178,7	339,6	103,9	3,27	-	-	-	3,70	145,0	93	R454B	3255	2232	2531	2702
AWA HP SEA 100 HE AC LN R454B	326,9	108,2	3,02	4,56	179,4	344,5	100,1	3,44	357,3	83,5	4,28	3,96	155,2	91	R454B	4520	2200	2530	3138
AWA HP SEA 110 HE AC LN R454B	368,4	124,5	2,96	4,51	177,4	386,3	112,3	3,44	400,3	94,2	4,25	3,94	154,6	92	R454B	4520	2200	2530	3228
AWA HP SEA 130 HE AC LN R454B	405,9	140,9	2,88	4,45	175,1	423,6	122,8	3,45	438,2	103,4	4,24	4,03	158,2	93	R454B	4520	2200	2530	3295
AWA HP SEA 140 HE AC LN R454B	452,0	153,2	2,95	4,68	184,4	474,8	138,8	3,42	492,1	115,5	4,26	3,80	149,2	92	R454B	5645	2200	2530	3956
AWA HP SEA 150 HE AC LN R454B	477,5	167,6	2,85	4,60	181,1	502,2	148,1	3,39	518,6	123,2	4,21	3,82	149,8	93	R454B	5645	2200	2530	4140
AWA HP SEA 165 HE AC LN R454B	511,2	183,9	2,78	4,62	181,6	538,3	159,3	3,38	555,6	132,9	4,18	3,92	153,6	93	R454B	5645	2200	2530	4180
AWA HP SEA 180 HE AC LN R454B	567,4	194,3	2,92	4,72	185,7	597,5	173,7	3,44	619,4	146,1	4,24	3,92	153,8	94	R454B	6770	2200	2530	4639
AWA HP SEA 190 HE AC LN R454B	603,2	210,2	2,87	4,69	184,8	634,7	184,5	3,44	657,5	155,4	4,23	3,97	156,0	94	R454B	6770	2200	2530	4713

Pc: Cooling capacity

SEER: Seasonal Energy Efficiency Ratio

Peh: Total power input in heating

η_{sh}: Seasonal space heating energy efficiency

L: Length

OW : Operating Weight

Pec: Total power input in cooling

η_{sc}: Seasonal space cooling energy efficiency

COP: Coefficient Of Performance (heating)

LwO: A-weighted sound power level outside

W: Width

EER: Energy Efficiency Ratio (cooling)

Ph: Heating capacity

SCOP: Seasonal Coefficient Of Performance

Refrigerant: Refrigerant type

H: Height

(1): Cooling: outdoor air temperature 35°C and chilled water temperature 12°C/7°C. (EN 14511:2022)

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(5): Ecodesign rating at low temperature conditions. Outdoor temperature: 7°C dry bulb/6°C wet bulb and hot water temperature in/out: 30°C/35°C. η_{sh}/ SCOP as defined in Directive 2009/125/EC of the European Parliament and of the Council with regard to Ecodesign requirements for Space heaters and combination heaters with Prated < 400kW - COMMISSION REGULATION (EU) N° 813/2013 of 2 August 2013

(6): According ISO 9614:2009. Eurovent conditions, with 1pW reference sound power (without accessories)

(7): Basic unit without accessories



Product data shown in this document are not binding.
Thermocold shall have the right to introduce at any time whatever modifications deemed necessary to the improvement of the product.



70026 Modugno – Bari
Via dei Ciclamini, 25 – Z.I.
Tel. 080/5312623
Internet: <http://www.Thermocold.it>
E-Mail: info@Thermocold.it