

# TECHNICAL PRODUCT SUBMITTAL

## AMICUS LAHP-502HTNN ULTRA LOW NOISE AIR SOURCE HEAT PUMP

Data	Unit	LAHP-502HTNN
<b>Heating Data</b>		
Heating Capacity (EN14511) <sup>1</sup>	kW	54.2
Total Power input (EN14511) <sup>1</sup>	kW	11.7
COP (EN14511) <sup>1</sup>	W/W	4.63
Nominal flow rate	m <sup>3</sup> /h	9.368
Pressure drop across the heat pump	kPa	10.5
Design air flow rate	m <sup>3</sup> /h	17924
<b>EcoDesign data <sup>2</sup></b>		
Energy Label Rating Low temperature		A++
SCOP Low Temperature		4.1
Seasonal Efficiency Low temperature	%	161
Energy Label Rating High temperature		A++
SCOP High Temperature		3.34
Seasonal Efficiency High temperature	%	131
<b>Cooling Data (RV units only)</b>		
Cooling Capacity (EN14511) <sup>3</sup>	kW	46.4
Total Power input (EN14511) <sup>3</sup>	kW	14.9
EER (EN14511) <sup>3</sup>	W/W	3.11
Nominal flow rate	m <sup>3</sup> /h	7.980
Pressure drop across the heat pump	kPa	8.2
Design air flow rate	m <sup>3</sup> /h	20623
<b>General data</b>		
Refrigerant		R410A
Compressor Type		E.V.I. Scroll
Number of Compressors		2
Number of Circuits		1
Capacity steps		2
Minimum capacity step	%	50
Sound power level	dB(A)	71
Sound pressure level (10m)	dB(A)	39
Minimum water content in the user circuit	litre	510
<b>Electrical Data</b>		
Power supply	V/Ph/Hz	400/3+N/50
Maximum input power	kW	23.9
Maximum input current standard unit	A (per phase)	40.0
Peak input current standard unit	A (per phase)	149
Peak input current unit with soft start option fitted	A (per phase)	99
Fuse rating (delayed)	A	100
<b>Fans</b>		
Type		Axial EC
Number of fans (standard unit)	n°	2
<b>Dimensions</b>		
Height	mm	1892
Length	mm	2905
Width	mm	1145
Shipping Weight	Kg	1050

<sup>1</sup>=external air+7C 30/35 flow

<sup>2</sup>=average conditions according to EU/811/2013

<sup>3</sup>=Cooling external air +35C 12/7 flow

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LAHP-502NN			Heating OUT						Max Outlet	
Water Delivery Temperature		35C	40C	45C	50C	55C	60C	*		
Source air temperature	-10	Heat Output (KW)	31	31	31	32	32	33	n/a	59
		Efficiency COP	2.73	2.48	2.28	2.09	1.95	1.84	n/a	
	-8	Heat Output (KW)	33	33	33	33	34	35	35	61
		Efficiency COP	2.82	2.59	2.36	2.18	2.02	1.88	1.85	
	-6	Heat Output (KW)	34	35	35	35	36	36	37	63
		Efficiency COP	2.94	2.70	2.46	2.26	2.09	1.95	1.86	
	-4	Heat Output (KW)	37	37	38	38	39	39	40	63
		Efficiency COP	3.19	2.90	2.65	2.44	2.26	2.09	1.99	
	-2	Heat Output (KW)	41	41	41	42	42	43	43	63
		Efficiency COP	3.44	3.16	2.89	2.66	2.44	2.25	2.14	
	0	Heat Output (KW)	44	44	44	45	45	46	46	63
		Efficiency COP	3.73	3.40	3.11	2.87	2.62	2.41	2.30	
	2	Heat Output (KW)	47	48	48	49	49	50	50	63
		Efficiency COP	4.02	3.67	3.36	3.11	2.83	2.59	2.46	
	4	Heat Output (KW)	51	51	51	52	52	53	53	63
		Efficiency COP	4.35	3.97	3.62	3.29	2.99	2.73	2.59	
	6	Heat Output (KW)	53	53	54	54	54	55	55	63
		Efficiency COP	4.54	4.13	3.77	3.43	3.11	2.82	2.67	
8	Heat Output (KW)	55	55	56	56	56	56	57	63	
	Efficiency COP	4.72	4.29	3.89	3.53	3.20	2.92	2.76		
25#	Heat Output (KW)	73	73	73	73	73	73	74	63	
	Efficiency COP	6.01	5.47	4.92	4.44	4.01	3.63	3.43		

\*Performance at max flow temperature

# Use for DHW performance in summer months

Amicus air to water heat pumps must be installed and maintained in line with the Installation Commissioning and Maintenance Instructions which are available on the Literature & Downloads section of [www.lochinvar.ltd.uk](http://www.lochinvar.ltd.uk)

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model	octave bands (hz)								lw		lp
	63	125	250	500	1k	2k	4k	8k	db	db	db
	db	db	db	db	db	db	db	db			
252HTNN	80.1	72.3	66.2	64.7	63.6	58.2	54.8	45.7	81.9	68	36
302HTNN	81.1	73.3	67.2	65.7	64.6	59.2	55.8	46.7	82.9	69	37
452HTNN	83.1	75.3	69.2	67.7	66.6	61.2	57.8	48.7	84.9	71	39
502HTNN	83.1	75.3	69.2	67.7	66.6	61.2	57.8	48.7	84.9	71	39
602HTNN	83.1	75.3	69.2	67.7	66.6	61.2	57.8	48.7	84.9	71	39
752HTNN	85.1	76.3	70.2	68.7	67.6	62.2	58.8	49.7	85.9	72	40
852HTNN	85.1	76.3	69.2	67.7	66.6	61.2	57.8	48.7	84.9	71	39
1002HTNN	85.1	76.3	70.2	68.7	67.6	62.2	58.8	49.7	85.9	72	40
1202HTNN	85.1	76.3	70.2	68.7	67.6	62.2	58.8	49.7	85.9	72	40
1454HTNN	87.1	78.3	72.2	70.7	69.6	64.2	60.8	51.7	87.9	74	42
1654HTNN	87.1	78.3	72.2	70.7	69.6	64.2	60.8	51.7	87.9	74	42
1854HTNN	88.1	79.3	73.2	71.7	70.6	65.2	61.8	52.7	88.9	75	43
2154HTNN	88.1	79.3	73.2	71.7	70.6	65.2	61.8	52.7	88.9	75	43

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