

TECHNICAL PRODUCT SUBMITTAL

AMICUS LAHP-452HTNN ULTRA LOW NOISE AIR SOURCE HEAT PUMP

Data	Unit	LAHP-452HTNN
Heating Data		
Heating Capacity (EN14511) ¹	kW	41.1
Total Power input (EN14511) ¹	kW	8.76
COP (EN14511) ¹	W/W	4.69
Nominal flow rate	m ³ /h	7.107
Pressure drop across the heat pump	kPa	11.5
Design air flow rate	m ³ /h	9433
EcoDesign data ²		
Energy Label Rating Low temperature		A++
SCOP Low Temperature		4.23
Seasonal Efficiency Low temperature	%	166
Energy Label Rating High temperature		A++
SCOP High Temperature		3.42
Seasonal Efficiency High temperature	%	134
Cooling Data (RV units only)		
Cooling Capacity (EN14511) ³	kW	37.1
Total Power input (EN14511) ³	kW	12.6
EER (EN14511) ³	W/W	2.94
Nominal flow rate	m ³ /h	6.387
Pressure drop across the heat pump	kPa	15.6
Design air flow rate	m ³ /h	9792
General data		
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	425
Electrical Data		
Power supply	V/Ph/Hz	400/3+N/50
Maximum input power	kW	19.8
Maximum input current standard unit	A (per phase)	34.2
Peak input current standard unit	A (per phase)	119
Peak input current unit with soft start option fitted	A (per phase)	81
Fuse rating (delayed)	A	100
Fans		
Type		Axial EC
Number of fans (standard unit)	n°	2
Dimensions		
Height	mm	1839
Length	mm	2905
Width	mm	1145
Shipping Weight	Kg	1040

¹=external air+7C 30/35 flow

²=average conditions according to EU/811/2013

³=Cooling external air +35C 12/7 flow

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LAHP-452NN			Heating OUT							Max Outlet
Water Delivery Temperature			35C	40C	45C	50C	55C	60C	*	
Source air temperature	-10	Heat Output (KW)	25	25	25	25	26	26	n/a	59
		Efficiency COP	2.66	2.47	2.28	2.10	1.93	1.81	n/a	
	-8	Heat Output (KW)	26	26	27	27	27	28	28	61
		Efficiency COP	2.82	2.60	2.39	2.20	2.01	1.88	1.83	
	-6	Heat Output (KW)	27	27	28	28	29	29	30	63
		Efficiency COP	2.93	2.71	2.49	2.27	2.08	1.93	1.84	
	-4	Heat Output (KW)	28	29	29	29	30	31	31	63
		Efficiency COP	3.06	2.80	2.58	2.35	2.16	2.00	1.90	
	-2	Heat Output (KW)	30	31	31	32	32	33	34	63
		Efficiency COP	3.31	3.04	2.78	2.54	2.33	2.14	2.03	
	0	Heat Output (KW)	33	33	34	34	35	35	36	63
		Efficiency COP	3.60	3.28	2.99	2.73	2.49	2.28	2.17	
	2	Heat Output (KW)	35	35	36	36	37	38	38	63
		Efficiency COP	3.90	3.54	3.23	2.93	2.66	2.43	2.30	
	4	Heat Output (KW)	38	38	38	39	40	40	41	63
		Efficiency COP	4.20	3.82	3.45	3.13	2.82	2.57	2.43	
	6	Heat Output (KW)	40	40	40	41	42	42	43	63
		Efficiency COP	4.49	4.05	3.64	3.30	2.97	2.69	2.54	
	8	Heat Output (KW)	42	42	43	43	44	44	45	63
		Efficiency COP	4.77	4.29	3.86	3.46	3.11	2.80	2.63	
	25#	Heat Output (KW)	53	53	53	53	54	54	55	63
		Efficiency COP	6.00	5.35	4.77	4.23	3.79	3.37	3.17	

*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

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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
492HTNN	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

