

TECHNICAL SPECIFICATIONS



NDHAS22 - 22 SEER DUCTLESS HEAT PUMP SERIES



FEATURES AND BENEFITS

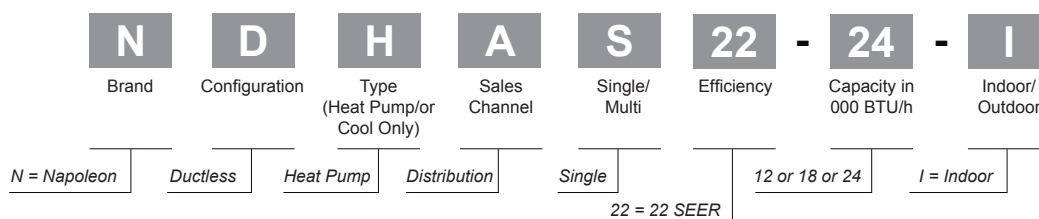
- Efficient and contemporary looking indoor units
- Available capacities : 12,000 BTU/h, 18,000 BTU/h, 24,000 BTU/h
- Energy Star & NEEP certified
- All indoor units compatible to Multizone Outdoor unit
- Operating range -25°C (-13°F) to 50°C (122°F)
- Wi-Fi Capable (NDWC-KT to be purchased separately)
- Includes remote control for conveniently adjusting the settings for Sleep Mode, LED light, and room temperature, as well as turning the unit on/off
- Higher efficiency rating, 22 SEER

ENVIRONMENTALLY RESPONSIBLE

NDHAS22 Heat Pump Series are ranked among the most energy-efficient and cost-effective ways of heating and cooling a home. Napoleon's ductless heat pumps use a high efficiency direct current compressor motor for a smooth, quiet operation that reduces energy consumption.

NOMENCLATURE

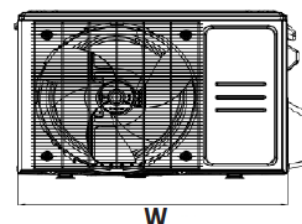
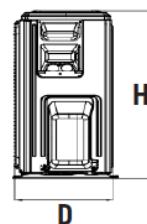
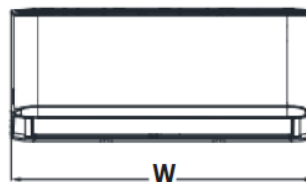
NDHAS22 - 22 SEER
HEAT PUMP SERIES



DUCTLESS SPECIFICATIONS

DIMENSIONS

INDOOR UNIT INFORMATION	NDHAS22-12-I	NDHAS22-18-I	NDHAS22-24-I
Width (mm/in)	802/31.6	1083/42.64	1082/42.64
Depth (mm/in)	200/7.87	244/9.61	234/9.22
Height (mm/in)	295/11.61	315/13.23	337/13.29
Net weight (lb/kg)	18.7/8.5	29.54/13.4	29.98/13.6
Gross weight (lb/kg)	24.25/11	37.48/17	38.14/17.3
OUTDOOR UNIT INFORMATION	NDHAS22-12-O	NDHAS22-18-O	NDHAS22-24-O
Width (mm/in)	765/30.12	890/35.04	946/37.24
Depth (mm/in)	303/11.93	342/13.46	410/16.14
Height (mm/in)	555/21.85	673/26.5	810/31.89
Net weight (lb/kg)	63.71/28.9	94.36/42.8	124.78/56.6
Gross weight (lb/kg)	69/31.3	100.97/45.8	134.92/61.2



SYSTEM DATA

	NDHAS22-12	NDHAS22-18	NDHAS22-24
	NDHAS22-12 Ductless Heat Pump - Shipped in 2 PCS. NDHAS22-12-I, NDHAS22-12-O	NDHAS22-18 Ductless Heat Pump - Shipped in 2 PCS. NDHAS22-18-I, NDHAS22-18-O	NDHAS22-24 Ductless Heat Pump - Shipped in 2 PCS. NDHAS22-24-I, NDHAS22-24-O
AHRI Number	207683230	207683231	207683232
Indoor SKU	NDHAS22-12-I	NDHAS22-18-I	NDHAS22-24-I
Outdoor SKU	NDHAS22-12-O	NDHAS22-18-O	NDHAS22-24-O
Cooling Capacity Rated BTU (Range)	12000 (3600~13300)	18000 (1980~19500)	24000 (9200~25000)
Heating Capacity Rated BTU (Range)	12000 (4500~13500)	18000 (6620~21200)	26000 (10350~26410)
SEER	22.2	23.5	21
EER	13	13.5	13
HSPF (Region IV)	10.8	11	10
Heating at 17F (-8.33°C) BTU	12000	14880	19960
Heating at 5F (-15°C) BTU	9500	10140	17600
Heating at 5F (-15°C) COP	1.8	1.8	2.04
Gas Pipe (mm/inch)	12.7 (1/2)	12.7 (1/2)	15.9 (5/8)
Liquid Pipe (mm/in)	6.35 (1/4)	6.35 (1/4)	9.52 (3/8)
Max. refrigerant pipe length (m)	25	30	50
Max. refrigerant pipe length (ft)	82.02	98.42	164.04
Max. difference in level (m)	10	20	25
Max. difference in level (ft)	32.81	65.62	82.02
Connection Wiring	16#x4	16#x4	16#x4
Refrigerant Gas (oz/kg)	R410A 38.1/1.08	R410A 56.44/1.6	R410A 82.89/2.35
Additional charge per metre (oz/ft)(g/m)	0.16/15	0.16/15	0.32/30
Max Fuse	15	30	30
Minimum Circuit Capacity	13	19	22
Power Supply	208/230V, 1Ph, 60Hz	208/230V, 1Ph, 60Hz	208/230V, 1Ph, 60Hz
Indoor air flow (Hi/Mi/Lo) CFM	291.35/194.23/153.03	530.9/459.09/382.57	601.53/459.09/382.57
Indoor noise level (Hi/Mi/Lo) dBA	42/36/25	45.5/41/24.5	48/40/28
Outdoor air flow CFM	1294.12	2058.82	2235.29
Outdoor noise level dBA	54.5	59	62
Indoor (cooling/heating)	60-90°F / 32-86°F 17-32°C / 0-30°C	60-90°F / 32-86°F 17-32°C / 0-30°C	60-90°F / 32-86°F 17-32°C / 0-30°C
Outdoor (cooling/heating)	-13-122°F / -13-75°F -15-50°C / -25-24°C	-13-122°F / -13-75°F -15-50°C / -25-24°C	-13-122°F / -13-75°F -15-50°C / -25-24°C



COMPRESSOR, PARTS & SYSTEM
LIMITED WARRANTY



PERFORMANCE DATA — COOLING

DB – Dry Bulb WB – Wet Bulb TC – Total Net Capacity (1000 Btu/hour) SC – Sensible Capacity (1000 Btu/hour) Input – Total Power (kW)

COOLING			OUTDOOR CONDITIONS (DB)																		
INDOOR			-13°F	-4°F	0°F	5°F	17°F	25°F	35°F	47°F	55°F	65°F	75°F	80°F	85°F	95°F	105°F	110°F	115°F	122°F	
DB	WB		-25°C	-20°C	-17.8°C	-15°C	-8.3°C	-3.9°C	1.7°C	8.3°C	12.8°C	18.3°C	24°C	26.7°C	29.4°C	35°C	40.5°C	43.3°C	46°C	50°C	
NDHAS22-12-I / NDHAS22-012-O	65°F (18.3°C)	54°F (12.2°C)	TC	10.12	10.82	10.74	10.93	11.10	11.17	11.28	11.07	11.10	11.28	11.10	11.06	11.37	11.99	11.30	10.60	9.80	8.69
			SC	6.63	7.26	7.29	7.48	7.86	8.00	8.46	8.23	8.67	8.73	8.76	8.81	9.05	9.80	9.75	9.55	9.16	8.70
			Input	0.57	0.66	0.67	0.72	0.74	0.77	0.79	0.83	0.86	0.90	0.94	0.99	1.09	1.23	1.20	1.16	1.19	1.20
	70°F (21.1°C)	63°F (17.2°C)	TC	10.58	11.33	11.32	11.44	11.59	11.84	11.79	11.69	11.60	11.79	11.72	11.73	12.09	12.49	11.84	11.22	10.29	9.12
			SC	6.89	7.55	7.64	7.79	8.16	8.44	8.80	8.63	9.01	9.08	9.19	9.28	9.57	10.15	10.16	10.05	9.56	9.10
			Input	0.57	0.65	0.67	0.72	0.74	0.77	0.78	0.82	0.85	0.89	0.95	0.98	1.09	1.20	1.20	1.17	1.19	1.20
	75°F (23.9°C)	63°F (17.2°C)	TC	11.23	11.87	12.00	12.06	12.18	12.43	12.47	12.33	12.31	12.30	12.33	12.40	12.59	13.19	12.40	11.85	10.85	9.59
			SC	7.28	7.88	8.07	8.16	8.52	8.82	9.25	9.06	9.51	9.42	9.63	9.76	9.93	10.67	10.59	10.56	10.02	9.53
			Input	0.57	0.65	0.68	0.71	0.75	0.76	0.78	0.83	0.86	0.89	0.95	0.98	1.07	1.21	1.18	1.17	1.19	1.20
	80°F (26.7°C)	67°F (19.4°C)	TC	11.95	12.44	12.63	12.83	12.93	13.11	13.26	12.98	13.00	13.02	13.04	13.06	13.39	13.74	13.09	12.37	11.43	10.11
			SC	7.69	8.21	8.44	8.63	9.00	9.24	9.79	9.49	9.98	9.91	10.12	10.22	10.50	11.05	11.13	10.96	10.49	9.99
			Input	0.58	0.64	0.67	0.71	0.75	0.77	0.80	0.83	0.86	0.90	0.95	0.99	1.14	1.19	1.19	1.17	1.19	1.18
NDHAS22-18-I / NDHAS22-18-O	65°F (18.3°C)	54°F (12.2°C)	TC	15.81	16.89	16.63	17.01	17.48	17.25	17.55	17.53	17.89	18.21	18.53	18.85	18.03	16.57	16.52	15.23	14.16	12.92
			SC	9.96	11.03	11.43	11.94	12.23	12.17	12.52	12.75	13.94	14.16	14.50	14.83	13.97	13.49	13.89	13.54	13.23	12.87
			Input	0.57	0.66	0.68	0.73	0.77	0.81	0.90	1.00	1.06	1.11	1.17	1.24	1.45	1.65	1.72	1.64	1.72	1.76
	70°F (21.1°C)	59°F (15°C)	TC	16.73	17.80	17.61	17.95	18.43	18.35	18.64	18.30	18.82	19.09	19.69	19.88	18.86	17.61	17.25	16.10	14.89	13.73
			SC	10.48	11.55	12.03	12.53	12.84	12.86	13.21	13.25	14.59	14.77	15.32	15.57	14.53	14.25	14.42	14.23	13.85	13.63
			Input	0.57	0.66	0.68	0.73	0.77	0.82	0.90	0.99	1.05	1.11	1.17	1.23	1.45	1.65	1.69	1.65	1.72	1.79
	75°F (23.9°C)	63°F (17.2°C)	TC	17.69	18.54	18.50	18.89	19.30	19.44	19.70	19.32	19.64	20.29	20.62	20.91	20.02	18.65	17.96	16.88	15.74	14.40
			SC	11.01	11.96	12.56	13.10	13.38	13.55	13.89	13.92	15.14	15.62	15.96	16.27	15.33	15.01	14.94	14.82	14.55	14.25
			Input	0.58	0.65	0.68	0.72	0.77	0.83	0.91	0.99	1.05	1.12	1.17	1.23	1.46	1.68	1.69	1.65	1.71	1.79
	80°F (26.7°C)	67°F (19.4°C)	TC	18.60	19.37	19.68	19.97	20.23	20.42	20.58	20.29	20.72	21.13	21.57	22.01	20.85	19.68	18.75	17.71	16.55	15.13
			SC	11.51	12.42	13.31	13.78	13.94	14.15	14.43	14.53	15.87	16.19	16.59	17.03	15.87	15.74	15.49	15.48	15.22	14.89
			Input	0.59	0.65	0.69	0.72	0.77	0.83	0.91	0.99	1.05	1.10	1.17	1.24	1.57	1.68	1.67	1.64	1.71	1.80
NDHAS22-24-I / NDHAS22-24-O	65°F (18.3°C)	54°F (12.2°C)	TC	24.26	25.51	26.03	26.11	27.32	27.75	28.05	26.87	27.12	26.93	26.22	26.08	26.72	28.11	26.20	25.01	23.52	21.30
			SC	15.17	16.64	17.45	18.14	19.73	19.51	20.59	19.62	20.62	20.68	20.77	20.94	21.07	22.44	21.86	21.95	22.22	21.21
			Input	1.15	1.31	1.41	1.43	1.55	1.59	1.69	1.75	1.80	1.88	1.88	1.95	2.43	3.24	3.11	3.13	3.27	3.28
	70°F (21.1°C)	59°F (15°C)	TC	25.35	26.74	27.43	27.51	28.98	29.03	29.62	28.38	28.28	28.43	27.80	27.74	28.09	29.31	27.47	26.27	24.86	22.35
			SC	15.78	17.35	18.27	18.99	20.83	20.28	21.61	20.60	21.37	21.72	21.90	22.16	22.02	23.29	22.79	22.91	23.38	22.17
			Input	1.14	1.30	1.40	1.43	1.56	1.60	1.70	1.74	1.79	1.87	1.90	1.95	2.43	3.23	3.13	3.12	3.30	3.27
	75°F (23.9°C)	63°F (17.2°C)	TC	26.82	28.00	28.76	29.20	30.50	30.24	31.08	29.84	29.76	29.99	29.32	29.23	29.73	30.72	28.73	27.59	26.14	23.72
			SC	16.60	18.07	19.04	20.07	21.81	21.03	22.54	21.55	22.37	22.77	22.99	23.24	23.18	24.29	23.69	23.94	24.47	23.44
			Input	1.14	1.28	1.39	1.43	1.56	1.57	1.70	1.75	1.81	1.87	1.90	1.97	2.44	3.21	3.12	3.14	3.28	3.30
	80°F (26.7°C)	67°F (19.4°C)	TC	28.50	29.69	30.17	30.61	31.77	32.10	32.44	31.61	31.43	31.24	31.06	30.87	31.49	32.21	30.47	28.99	27.29	24.87
			SC	17.56	19.06	19.89	20.91	22.59	22.18	23.42	22.70	23.51	23.59	24.23	24.39	24.44	25.31	24.98	24.99	25.38	24.47
			Input	1.17	1.30	1.37	1.44	1.53	1.60	1.67	1.75	1.80	1.85	1.90	1.96	2.99	3.18	3.12	3.11	3.23	3.31

PERFORMANCE DATA — HEATING

DB – Dry Bulb TC – Total Net Capacity (1000 Btu/hour) SC – Sensible Capacity (1000 Btu/hour) Input – Total Power (kW)

HEATING			OUTDOOR CONDITIONS (DB)													
INDOOR CONDITIONS DB		-13°F	-4°F	0°F	5°F	10°F	17°F	20°F	25°F	32°F	35°F	40°F	47°F	50°F	57°F	
		-25°C	-20°C	-17.8°C	-15°C	-12.2.°C	-8.3°C	-6.7°C	-3.9°C	0°C	1.7°C	4.4°C	8.3°C	10°C	13.9°C	
NDHAS22-12- / NDHAS22-12-O	60°F (15.6°C)	TC	6.79	7.55	7.87	8.17	9.30	10.44	11.22	11.93	12.67	13.24	13.96	14.61	15.04	15.34
		Input	1.17	1.11	1.09	1.07	1.13	1.17	1.22	1.25	1.28	1.31	1.29	1.25	1.21	1.19
	65°F (18.3°C)	TC	6.58	7.29	7.61	7.97	9.03	10.19	10.84	11.56	12.31	12.90	13.49	14.19	14.54	14.94
		Input	1.20	1.13	1.12	1.09	1.16	1.20	1.26	1.28	1.32	1.35	1.32	1.29	1.25	1.22
	70°F (21.1°C)	TC	6.37	7.08	7.39	7.70	8.81	9.84	10.54	11.21	11.90	12.52	13.13	13.80	14.12	14.49
		Input	1.23	1.17	1.14	1.11	1.19	1.24	1.28	1.32	1.36	1.38	1.35	1.33	1.29	1.26
	75°F (23.9°C)	TC	6.10	6.82	7.08	7.35	8.44	9.43	10.17	10.71	11.39	11.95	12.61	13.30	13.62	13.97
		Input	1.26	1.20	1.18	1.15	1.22	1.27	1.31	1.37	1.40	1.43	1.39	1.37	1.33	1.30
NDHAS22-18- / NDHAS22-18-O	60°F (15.6°C)	TC	11.34	12.72	13.32	13.72	15.72	17.48	18.16	18.83	19.60	20.18	22.23	23.96	24.44	25.21
		Input	1.61	1.52	1.49	1.44	1.62	1.81	1.85	1.86	1.90	1.91	1.80	1.74	1.68	1.64
	65°F (18.3°C)	TC	11.06	12.36	12.96	13.39	15.19	16.99	17.72	18.34	18.94	19.59	21.48	23.31	23.84	24.40
		Input	1.65	1.56	1.52	1.48	1.65	1.85	1.89	1.90	1.95	1.96	1.83	1.78	1.72	1.68
	70°F (21.1°C)	TC	10.79	11.99	12.55	13.03	14.70	16.51	17.14	17.73	18.38	18.98	20.83	22.54	23.12	23.67
		Input	1.68	1.60	1.56	1.53	1.71	1.90	1.93	1.96	1.99	2.02	1.89	1.82	1.77	1.73
	75°F (23.9°C)	TC	10.37	11.57	12.00	12.45	14.11	15.81	16.44	17.10	17.69	18.19	19.92	21.60	22.31	22.72
		Input	1.73	1.65	1.61	1.58	1.76	1.95	1.99	2.02	2.06	2.08	1.94	1.88	1.82	1.79
NDHAS22-24- / NDHAS22-24-O	60°F (15.6°C)	TC	13.92	15.44	16.12	16.75	18.83	20.96	21.26	21.83	22.23	22.40	27.83	33.76	34.45	35.79
		Input	2.90	2.76	2.68	2.64	2.59	2.59	2.60	2.63	2.62	2.64	2.85	3.00	2.91	2.87
	65°F (18.3°C)	TC	13.54	14.93	15.62	16.25	18.19	20.35	20.72	21.23	21.48	21.83	27.01	32.84	33.58	34.78
		Input	2.97	2.82	2.73	2.69	2.66	2.65	2.66	2.70	2.70	2.72	2.92	3.07	3.00	2.93
	70°F (21.1°C)	TC	13.09	14.54	15.11	15.80	17.66	19.71	20.12	20.51	20.89	21.26	26.20	32.00	32.72	33.60
		Input	3.03	2.89	2.82	2.75	2.73	2.72	2.74	2.76	2.78	2.79	2.98	3.16	3.07	3.00
	75°F (23.9°C)	TC	12.55	13.96	14.55	15.19	16.88	18.89	19.39	19.61	20.04	20.41	25.23	30.88	31.55	32.16
		Input	3.14	2.98	2.90	2.83	2.81	2.80	2.84	2.84	2.87	2.89	3.05	3.24	3.16	3.10