TECHNICAL SPECIFICATIONS

ESSENTIAL 21 SEER2
DUCTLESS COOLING SERIES

10 YEAR LIMITED WARRANTY
PARTS AND COMPRESSOR

R454B

AHRI CERTIFIED



FEATURES

- **Higher Efficiency Rating**
  Achieve optimal energy savings with a high 21 SEER rating, reducing overall operating costs.
- **Available Capacities**
  Options of 12,000 BTU/h, 18,000 BTU/h, and 24,000 BTU/h to fit different home sizes and heating/cooling requirements.
- **Works Even at 50ºC (122ºF)**
  Reliable operation even in high-temperature environments, ensuring consistent comfort.
- **Efficient and Contemporary Indoor Units**
  Sleek and modern design, seamlessly blending with any room's decor.
- **Wi-Fi Kit Included**
  Remote control functionality allows adjustments from anywhere for added convenience.
- **User-Friendly Remote Control**
  Easily adjust settings like Sleep Mode, LED light, room temperature, and on/off controls for personalized comfort.

ENVIRONMENTALLY RESPONSIBLE

Napoleon uses R-454B refrigerant, which offers improved energy efficiency and reduces greenhouse gas (GHG) emissions. This refrigerant has a significantly lower Global Warming Potential (GWP), no ozone depletion potential (ODP), and low toxicity. R-454B's GWP is over 75% lower than its predecessor , R-410A, and it exceeds EPA requirements for low-GWP refrigerants (<700 GWP).

NOMENCLATURE

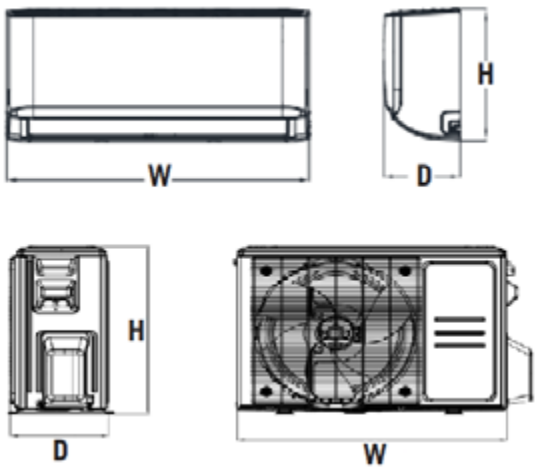
ESSENTIAL 21 SEER2
COOLING SERIES



							A			I
N	D	C	A	S	21	B	C	- 24	-	0
Brand	Configuration	Type (Heat Pump/ or Cool Only)	Sales Channel	Single/Multi	Efficiency	Refrigerant	Revision	Capacity in 000 BTU/h		Indoor/ Outdoor
N = Napoleon	*Ductless*	*Cool Only*	*Distribution*	*Single*	*21 = 21 SEER2*	*B= R454B*	*A = Without Leak Sensor B = With Leak Sensor C = Without Leak Sensor, 110V*	*12 or 18 or 24*		*I = Indoor O = Outdoor*

DUCTLESS SPECIFICATIONS

DIMENSIONS			
INDOOR DIMENSIONS	NDCAS21BC-12-I	NDCAS21BA-18-I	NDCAS21BA-24-I
Width (mm/in)	802/31.6	971/38.23	1082/42.6
Depth (mm/in)	200/7.87	228/8.98	234/9.21
Height (mm/in)	295/11.61	321/12.64	337/13.27
Net weight (lb/kg)	19.62/8.9	24.91/11.3	30.86/14
Gross weight (lb/kg)	25.35/11.5	34.85/14.9	39.9/18.1
OUTDOOR DIMENSIONS	NDCAS21BC-12-O	NDCAS21BA-18-O	NDCAS21BA-24-O
Width (mm/in)	720/28.35	765/30.12	805/31.69
Depth (mm/in)	270/10.63	303/11.93	330/12.99
Height (mm/in)	495/19.49	555/21.85	554/21.81
Net weight (lb/kg)	47.84/21.7	59.97/27.2	67.02/30.4
Gross weight (lb/kg)	52.47/23.8	65.26/29.6	73.19/33.2



SYSTEM DATA			
	NDCAS21BA-12	NDCAS21BA-18	NDCAS21BA-24
	NDCAS21BC-12 Ductless Shipped in 2 PCS. NDCAS21BC-12-I, NDCAS21BC-12-O	NDCAS21BA-18 Ductless Shipped in 2 PCS. NDCAS21BA-18-I, NDCAS21BA-18-O	NDCAS21BA-24 Ductless Shipped in 2 PCS. NDCAS21BA-24-I, NDCAS21BA-24-O
AHRI NUMBER	217890536	215931376	215931377
INDOOR SKU	NDCAS21BC-12-I	NDCAS21BA-18-I	NDCAS21BA-24-I
OUTDOOR SKU	NDCAS21BC-12-O	NDCAS21BA-18-O	NDCAS21BA-24-O
Cooling Capacity Rated BTU (Range)	11500 (2600~12300)	17500 (3100~18400)	22000 (5800~22600)
Heating Capacity Rated BTU (Range)	N/A	N/A	N/A
SEER2	21.4	22.2	21.1
EER2	12	11.7	10.2
Dehumidify (L/h)	1.2	2.10	2.3
Voltage	115V,1Ph,60Hz	208/230V,1Ph,60Hz	208/230V,1Ph,60Hz
Indoor noise level (Hi/Mi/Lo) dBA	41/36/20	44/37/21	46.5/40/26.5
Outdoor noise level dBA	53	57	57
Compressor & Parts Limited Warranty	10 years	10 years	10 years
Max. refrigerant pipe length (m)	25	30	30
Max. refrigerant pipe length (ft)	82	98.4	98.4
Max. difference in elevation (m)	15	20	20
Max. difference in elevation (ft)	49.2	65.6	65.6
Refrigeration GAS PIPE (mm/inch)	9.52mm(3/8in)	12.7mm(1/2in)	15.9mm(5/8in)
Refrigeration LIQUID PIPE (mm/in)	6.35mm(1/4in)	6.35mm(1/4in)	9.52mm(3/8in)
Connection Wiring	14AWG*4 Stranded, unshielded	14AWG*4 Stranded, unshielded	14AWG*4 Stranded, unshielded
Refridgerant Gas (oz/kg)	R454B 19.75/0.56	R454B 27.51/0.78	R454B 32.1/0.91
Additional charge per metre (oz/ft)(g/m)	0.16/15	0.16/15	0.32/30
Compressor	Rotary	Rotary	Rotary
MAX FUSE (A)	15	20	20
Minimum Circuit Capacity	14	16	19
Rated Cooling Current (A)	4.3	6.8	8.7
Indoor air flow (Hi/Mi/Lo) CFM	329.6/232.5/194.2	470.9/353.2/306.1	588.6/470.9/400.2
Outdoor air flow CFM	1058.8	1235.3	1352.9
Outdoor Cooling Range	-15ºC (5ºF) to 50ºC (122ºF)	-15ºC (5ºF) to 50ºC (122ºF)	-15ºC (5ºF) to 50ºC (122ºF)
Indoor Cooling Range	16ºC (60ºF) ~ 32ºC (90ºF)	16ºC (60ºF) ~ 32ºC (90ºF)	16ºC (60ºF) ~ 32ºC (90ºF)

PERFORMANCE DATA – COOLING

DB – Dry Bulb WB – Wet Bulb TC:Total Cooling Capacity (BTU/hr) S/T:Sensible Cooling Capacity Ratio PI:Power Input(kW) Input – Total Power (kW)

COOLING		INDOOR CONDITIONS																			
	ID WB (ºF)	60.8ºF(16.0ºC)					64.4ºF(18.0ºC)					67ºF(19.4ºC)					71.6ºF(22.0ºC)				
OUTDOOR DB (ºF)	ID DB (ºF)	73.4ºF (23.0ºC)	77.0ºF (25.0ºC)	80.0ºF (26.7ºC)	80.6ºF (27.0ºC)	84.2ºF (29.0ºC)	73.4ºF (23.0ºC)	77.0ºF (25.0ºC)	80.0ºF(26.7ºC)	80.6ºF (27.0ºC)	84.2ºF (29.0ºC)	73.4ºF (23.0ºC)	77.0ºF (25.0ºC)	80.0ºF (26.7ºC)	80.6ºF (27.0ºC)	84.2ºF (29.0ºC)	73.4ºF (23.0ºC)	77.0ºF (25.0ºC)	80.0ºF (26.7ºC)	80.6ºF (27.0ºC)	84.2ºF (29.0ºC)
NDCAS21BC-12-I/NDCAS21BC-12-O																					
5ºF (-15.0ºC)	TC	10990	11005	11017	11018	11032	11653	11667	11678	11680	11694	12349	12365	12379	12381	12395	13093	13107	13121	13124	13140
	S/T	0.49	0.57	0.65	0.65	0.74	0.51	0.60	0.69	0.69	0.78	0.55	0.64	0.73	0.73	0.83	0.58	0.68	0.77	0.77	0.88
	PI	0.51	0.51	0.51	0.51	0.51	0.54	0.54	0.54	0.54	0.54	0.57	0.57	0.57	0.57	0.57	0.61	0.61	0.61	0.61	0.61
17ºF (-8.3ºC)	TC	11966	11982	11995	11995	12012	12687	12702	12715	12717	12732	13445	13462	13477	13480	13495	14255	14271	14286	14288	14306
	S/T	0.49	0.57	0.65	0.65	0.74	0.52	0.61	0.69	0.69	0.79	0.55	0.64	0.73	0.73	0.83	0.58	0.68	0.78	0.78	0.88
	PI	0.48	0.48	0.48	0.48	0.48	0.51	0.51	0.51	0.51	0.51	0.54	0.54	0.54	0.54	0.54	0.57	0.57	0.57	0.57	0.57
35ºF (1.7ºC)	TC	11427	11442	11454	11455	11470	12115	12130	12142	12144	12158	12839	12856	12870	12872	12887	13613	13627	13642	13644	13661
	S/T	0.49	0.58	0.66	0.66	0.75	0.52	0.61	0.70	0.70	0.79	0.55	0.65	0.74	0.74	0.84	0.59	0.69	0.78	0.78	0.89
	PI	0.63	0.63	0.63	0.63	0.63	0.67	0.67	0.67	0.67	0.67	0.71	0.71	0.71	0.71	0.71	0.75	0.75	0.75	0.75	0.75
47ºF (8.3ºC)	TC	10754	10769	10780	10781	10795	11402	11416	11427	11429	11443	12083	12099	12113	12115	12128	12811	12825	12839	12841	12857
	S/T	0.50	0.58	0.66	0.66	0.75	0.53	0.62	0.70	0.70	0.80	0.56	0.65	0.74	0.74	0.85	0.59	0.69	0.79	0.79	0.90
	PI	0.41	0.41	0.41	0.41	0.41	0.43	0.43	0.43	0.43	0.43	0.46	0.46	0.46	0.46	0.46	0.48	0.48	0.48	0.48	0.48
82ºF (27.8ºC)	TC	11344	11359	11371	11372	11387	12027	12041	12053	12056	12070	12746	12762	12776	12779	12793	13514	13528	13543	13545	13562
	S/T	0.53	0.62	0.70	0.70	0.80	0.56	0.66	0.75	0.75	0.85	0.59	0.70	0.79	0.79	0.90	0.63	0.74	0.84	0.84	0.95
	PI	0.62	0.62	0.62	0.62	0.62	0.65	0.65	0.65	0.65	0.65	0.69	0.69	0.69	0.69	0.69	0.73	0.73	0.73	0.73	0.74
95ºF (35.0ºC)	TC	10909	10923	10935	10936	10950	11566	11580	11591	11593	11607	12257	12273	12287	12289	12303	12996	13010	13024	13026	13042
	S/T	0.53	0.63	0.71	0.71	0.81	0.57	0.66	0.75	0.75	0.86	0.60	0.70	0.80	0.80	0.91	0.64	0.75	0.85	0.85	0.97
	PI	0.94	0.94	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.06	1.06	1.06	1.06	1.06	1.12	1.12	1.12	1.12	1.12
110ºF (43.0ºC)	TC	8809	8821	8831	8831	8843	9340	9351	9360	9362	9373	9898	9911	9922	9924	9935	10495	10506	10517	10519	10532
	S/T	0.57	0.67	0.76	0.76	0.86	0.60	0.71	0.80	0.80	0.91	0.64	0.75	0.85	0.85	0.97	0.68	0.79	0.90	0.90	1.00
	PI	0.94	0.94	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.05	1.06	1.06	1.06	1.06	1.12	1.12	1.12	1.12	1.12
122ºF (50.0ºC)	TC	5956	5964	5970	5970	5978	6315	6322	6328	6330	6337	6692	6701	6708	6709	6717	7095	7103	7110	7112	7120
	S/T	0.59	0.69	0.78	0.78	0.89	0.62	0.73	0.83	0.83	0.95	0.66	0.77	0.88	0.88	1.00	0.70	0.82	0.93	0.93	1.00
	PI	0.78	0.78	0.78	0.78	0.78	0.82	0.82	0.82	0.82	0.83	0.87	0.87	0.87	0.87	0.87	0.92	0.93	0.93	0.93	0.93
NDCAS21BA-18-I/NDCAS21BA-18-O																					
5ºF (-15.0ºC)	TC	16716	16738	16756	16757	16780	17723	17744	17762	17765	17786	18782	18806	18827	18831	18852	19914	19935	19957	19960	19985
	S/T	0.49	0.57	0.65	0.65	0.74	0.51	0.60	0.69	0.69	0.78	0.55	0.64	0.73	0.73	0.83	0.58	0.68	0.77	0.77	0.88
	PI	0.98	0.98	0.98	0.98	0.98	1.04	1.04	1.04	1.04	1.04	1.10	1.10	1.10	1.10	1.10	1.16	1.17	1.17	1.17	1.17
17ºF (-8.3ºC)	TC	17225	17248	17266	17267	17291	18263	18284	18302	18306	18328	19354	19379	19401	19404	19426	20520	20542	20565	20568	20593
	S/T	0.49	0.57	0.65	0.65	0.74	0.52	0.61	0.69	0.69	0.79	0.55	0.64	0.73	0.73	0.83	0.58	0.68	0.78	0.78	0.88
	PI	0.96	0.96	0.96	0.96	0.97	1.02	1.02	1.02	1.02	1.02	1.08	1.08	1.08	1.08	1.08	1.15	1.15	1.15	1.15	1.15
35ºF (1.7ºC)	TC	19097	19123	19143	19144	19170	20248	20272	20292	20296	20320	21457	21485	21509	21513	21537	22750	22775	22800	22803	22832
	S/T	0.49	0.58	0.66	0.66	0.75	0.52	0.61	0.70	0.70	0.79	0.55	0.65	0.74	0.74	0.84	0.59	0.69	0.78	0.78	0.89
	PI	0.84	0.84	0.84	0.84	0.84	0.89	0.89	0.89	0.89	0.89	0.94	0.94	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00
47ºF (8.3ºC)	TC	14929	14949	14965	14965	14986	15828	15847	15863	15866	15885	16774	16796	16814	16817	16836	17784	17804	17823	17826	17848
	S/T	0.50	0.58	0.66	0.66	0.75	0.53	0.62	0.70	0.70	0.80	0.56	0.65	0.74	0.74	0.85	0.59	0.69	0.79	0.79	0.90
	PI	0.65	0.66	0.66	0.66	0.66	0.69	0.69	0.70	0.70	0.70	0.74	0.74	0.74	0.74	0.74	0.78	0.78	0.78	0.78	0.78
82ºF (27.8ºC)	TC	16581	16603	16621	16622	16645	17580	17601	17619	17622	17643	18631	18655	18676	18679	18700	19753	19775	19796	19799	19824
	S/T	0.53	0.62	0.70	0.70	0.80	0.56	0.66	0.75	0.75	0.85	0.59	0.70	0.79	0.79	0.90	0.63	0.74	0.84	0.84	0.95
	PI	0.87	0.87	0.87	0.87	0.87	0.92	0.92	0.93	0.93	0.93	0.98	0.98	0.98	0.98	0.98	1.04	1.04	1.04	1.04	1.04
95ºF (35.0ºC)	TC	16329	16351	16368	16369	16391	17313	17333	17350	17354	17374	18347	18371	18391	18395	18415	19453	19474	19495	19498	19522
	S/T	0.53	0.63	0.71	0.71	0.81	0.57	0.66	0.75	0.75	0.86	0.60	0.70	0.80	0.80	0.91	0.64	0.75	0.85	0.85	0.97
	PI	1.42	1.43	1.43	1.43	1.43	1.51	1.51	1.51	1.51	1.52	1.60	1.60	1.61	1.61	1.61	1.70	1.70	1.70	1.70	1.70
110ºF (43.0ºC)	TC	13172	13189	13203	13204	13222	13965	13982	13996	13998	14015	14800	14819	14835	14838	14855	15691	15708	15725	15728	15748
	S/T	0.57	0.67	0.76	0.76	0.86	0.60	0.71	0.80	0.80	0.91	0.64	0.75	0.85	0.85	0.97	0.68	0.79	0.90	0.90	1.00
	PI	1.38	1.38	1.38	1.38	1.39	1.46	1.47	1.47	1.47	1.47	1.55	1.55	1.56	1.56	1.56	1.64	1.65	1.65	1.65	1.65
122ºF (50.0ºC)	TC	7173	7183	7191	7191	7201	7606	7615	7622	7624	7633	8060	8071	8080	8081	8090	8546	8555	8564	8566	8576
	S/T	0.59	0.69	0.78	0.78	0.89	0.62	0.73	0.83	0.83	0.95	0.66	0.77	0.88	0.88	1.00	0.70	0.82	0.93	0.93	1.00
	PI	0.86	0.86	0.86	0.86	0.86	0.91	0.91	0.91	0.91	0.91	0.96	0.96	0.97	0.97	0.97	1.02	1.02	1.02	1.02	1.03
NDCAS21BA-24-I/NDCAS21BA-24-O																					
5ºF (-15.0ºC)	TC	12566	12583	12596	12597	12614	13323	13339	13352	13355	13371	14119	14137	14153	14156	14172	14970	14986	15002	15005	15023
	S/T	0.49	0.57	0.65	0.65	0.74	0.51	0.60	0.69	0.69	0.78	0.55	0.64	0.73	0.73	0.83	0.58	0.68	0.77	0.77	0.88
	PI	1.29	1.29	1.29	1.29	1.29	1.37	1.37	1.37	1.37	1.37	1.45	1.45	1.45	1.45	1.45	1.54	1.54	1.54	1.54	1.54
17ºF (-8.3ºC)	TC	19014	19040	19060	19061	19087	20160	20184	20204	20208	20232	21365	21392	21416	21420	21444	22652	22676	22701	22705	22733
	S/T	0.49	0.57	0.65	0.65	0.74	0.52	0.61	0.69	0.69	0.79	0.55	0.64	0.73	0.73	0.83	0.58	0.68	0.78	0.78	0.88
	PI	0.58	0.58	0.58	0.58	0.58	0.61	0.61	0.61	0.61	0.61	0.65	0.65	0.65	0.65	0.65	0.69	0.69	0.69	0.69	0.69
35ºF (1.7ºC)	TC	19671	19697	19718	19719	19746	20856	20881	20902	20906	20930	22102	22131	22156	22160	22184	23434	23459	23485	23489	23518
	S/T	0.49	0.58	0.66	0.66	0.75	0.52	0.61	0.70	0.70	0.79	0.55	0.65	0.74	0.74	0.84	0.59	0.69	0.78	0.78	0.89
	PI	1.09	1.09	1.09	1.09	1.10	1.16	1.16	1.16	1.16	1.16	1.23	1.23	1.23	1.23	1.23	1.30	1.30	1.30	1.30	1.31
47ºF (8.3ºC)	TC	19570	19596	19617	19618	19644	20749	20773	20794	20798	20823	21989	22017	22042	22046	22070	23313	23339	23364	23368	23397
	S/T	0.50	0.58	0.66	0.66	0.75	0.53	0.62	0.70	0.70	0.80	0.56	0.65	0.74	0.74	0.85	0.59	0.69	0.79	0.79	0.90
	PI	1.12	1.12	1.12	1.12	1.12	1.19	1.19	1.19	1.19	1.19	1.26	1.26	1.26	1.26	1.26	1.33	1.34	1.34	1.34	1.34
82ºF (27.8ºC)	TC	21796	21825	21849	21850	21879	23109	23137	23160	23164	23192	24490	24522	24549	24554	24581	25966	25994	26022	26026	26059
	S/T	0.53	0.62	0.70	0.70	0.80	0.56	0.66	0.75	0.75	0.85	0.59	0.70	0.79	0.79	0.90	0.63	0.74	0.84	0.84	0.95
	PI	1.27	1.27	1.27	1.27	1.27	1.34	1.35	1.35	1.35	1.35	1.42	1.43	1.43	1.43	1.43	1.51	1.51	1.51	1.51	1.52
95ºF (35.0ºC)	TC	20109	20136	20158	20159	20186	21321	21346	21367	21372	21397	22595	22624	22649	22654	22679	23956	23982	24008	24012	24042
	S/T	0.53	0.63	0.71	0.71	0.81	0.57	0.66	0.75	0.75	0.86	0.60	0.70	0.80	0.80	0.91	0.64	0.75	0.85	0.85	0.97
	PI	1.74	1.75	1.75	1.75	1.75	1.85	1.85	1.85	1.85	1.85	1.96	1.96	1.96	1.96	1.97	2.08	2.08	2.08	2.08	2.08
110ºF (43.0ºC)	TC	16659	16682	16700	16701	16723	17663	17684	17702	17705	17726	18719	18743	18764	18767	18788	19847	19868	19890	19893	19918
	S/T	0.57	0.67	0.76	0.76	0.86	0.60	0.71	0.80	0.80	0.91	0.64	0.75	0.85	0.85	0.97	0.68	0.79	0.90	0.90	1.00
	PI	1.76	1.76	1.76	1.76	1.76	1.86	1.86	1.86	1.87	1.87	1.97	1.97	1.98	1.98	1.98	2.09	2.09	2.10	2.10	2.10
122ºF (50.0ºC)	TC	12782	12799	12813	12813	12831	13552	13568	13582	13584	13600	14362	14380	14397	14399	14415	15227	15244	15260	15263	15282
	S/T	0.59	0.69	0.78	0.78	0.89	0.62	0.73	0.83	0.83	0.95	0.66	0.77	0.88	0.88	1.00	0.70	0.82	0.93	0.93	1.00
	PI	1.64	1.64	1.65	1.65	1.65	1.74	1.74	1.75	1.75	1.75	1.85	1.85	1.85	1.85	1.85	1.96	1.96	1.96	1.96	1.96