



ENGINEERING

LG AIR CONDITIONING TECHNOLOGIES

BULLETIN

BULLETIN #082517: DETAILS REGARDING PUBLISHED MIN-RATED-MAX CAPACITY VALUES IN LITERATURE

Distribution Products

To aid in selection of the appropriately sized system for required zone load(s), the Minimum, Rated and Maximum capacity values for duct-free systems are published in the combination tables section of the Home Comfort & Light Commercial Systems Catalog as well as the relevant Engineering Manuals – typically labeled as “Min~Rated~Max”. The following details should help clarify these values so they can be utilized most effectively.

- Min~Rated~Max capacity values are specific to AHRI test conditions and standard pipe length (no derate).
- At Max capacity, there will be a higher Power Input and respective lower efficiency compared to the Rated Capacity
- If the inverter system is unable to satisfy the space load such that it will continuously have to operate at full load (max capacity), the system is probably undersized for the load or something in the space is causing excessive/unexpected load that the system cannot sustain. Continued full load operation with an inverter system would indicate that space temp is not being satisfied. At some point, the space should become conditioned enough to allow the system to reach set point and maintain the space temperature.
- While Max capacity is a nice reference point to know that a peak full load performance profile may accommodate an unexpected or known temporary load spike, the inverter system should be sized based on the Rated capacity (or more ideally, the Corrected Capacity based on design conditions) for system longevity and reliability.
- Pipe and altitude correction factors may be necessary based on your application.
- Multi F ODU capacity will be allocated to operating IDUs based on their nominal size and respective proportion of total IDU connection index.

COMBINATION TABLES

LMU18CHV

Table 1: LMU18CHV with Non-Ducted, Ducted and Mixed Indoor Units – Rated Cooling Combination Table.

No. of Indoor Units	Combination (kBtu/h)				Each Capacity (Btu/h)				Cooling Capacity						Input (W)			EER	SEER	
									Total Capacity											
	IDU 1	IDU 2	IDU 3	IDU 4	Total	Unit 1	Unit 2	Unit 3	Unit 4	Minimum Btu/h	Rated kW	Maximum Btu/h	Min Btu/h	Rated kW	Max Btu/h					
Non-Ducted Indoor Units																				
7	7	-	-	14	7,000	7,000	-	-	-	8,400	2.46	14,000	4.10	16,800	4.92	826	1,180	1,652	11.9	20.1
7	9	-	-	16	7,000	9,000	-	-	-	9,600	2.81	16,000	4.69	19,000	5.57	868	1,240	1,736	12.9	21.9
9	9	-	-	18	8,500	8,500	-	-	-	10,200	3.16	17,000	4.98	19,000	5.57	917	1,310	1,834	13.0	22.0
7	12	-	-	19	6,263	10,737	-	-	-	10,200	2.99	17,000	4.98	19,000	5.57	917	1,310	1,834	13.0	22.0
9	12	-	-	21	7,286	9,714	-	-	-	10,200	3.16	17,000	4.98	19,000	5.57	917	1,310	1,834	13.0	22.0

Table 3: Single Zone Wall Mounted Art Cool Premier System Specifications, continued.

System Model Number (IDU/ODU)	LA180HYV1 (LAN180HYV1/LAU180HYV1)
Cooling Capacity (Min/Rated/Max) (Btu/h)	3,070 ~ 18,200 ~ 29,515
Cooling Power Input ¹ (kW)	1.35
Heating Capacity (Min/Rated/Max) (Btu/h)	3,070 ~ 22,000 ~ 30,709
Heating Power Input ¹ (kW)	1.69
COP	3.81
<i>Maximum Heating Capacity (Btu/h)</i>	
Outdoor 17°F (WB)/Indoor 70°F (DB)	22,340 (102%)
Outdoor 5°F (WB)/Indoor 70°F (DB)	19,300 (88%)
Outdoor -13°F (WB)/Indoor 70°F (DB)	14,060 (64%)

Where can I locate this document?

Product literature with Min~Rated~Max capacity info can be found in the product catalog, and engineering manuals. In addition this information is included on newer submittals. These files are available for download on the LG-DFS.com website:

- LG-DFS.com > Product Support > [Product Literature](#) and then select "Catalogs", "Engineering Manuals", or "Submittals" in the drop down menus.

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Our mailing address is:

LG Electronics U.S.A., Inc., Air Conditioning Technologies
4300 North Point Parkway
Alpharetta, GA 30022

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