Engineering Submittal Data Sheet:
4.12.2023

Document No. 2023.59.5.48K.001.A

Submittal Data Sheet: WMMS-48CH-U2B(59)5

OUTDOOR UNIT

HEATS DOWN to -22°F

WMMS-48CH-U2B(59)5
2 to 4 zones

Job Name:		Tag #:	
Location		Date:	
General Contractor:		Mechanical Contractor:	
Sales Representative:		Sales Engineer:	
Submitted by:		Drawing #:	
Reference		PO #:	

The CHOIR (59)5 outdoor condensing unit can heat down to -22 °F at 80% efficiency, and has a 21 SEER rating. With a 48k Btu/h capacity it is capable of heating and cooling 2 to 4 zones. The (59)5 requires 208-230v, 1 phase, 60Hz power supply. Its compact design allows for installation on the ground, on a wall, or under a deck or a balcony.

Model		WMMS-48CH-U2B(59)5
Power supply	v / Hz / ph	208-230 / 60 / 1
Cooling capacity	Btu/h	34,000 - 47,600
Heating capacity	Btu/h	36,000 - 50,400
Cooling Power Input	W	2830
Heating Power Input	W	2960
Cooling Current Input	A	12.56
Heating Current Input	A	13.13
Rated Power Input	W	4600/5200
Rated Current	A	20.41/22.61
EER	(Btu/h)/W	12.00
COP	(Btu/h)/W	12.16
SEER		21.00(SEER) 21.00(SEER2)
HSPF		10.00(HSPF) 10.00(HSPF2)
Connectable IDU Capacity Btu/h Total-Ranges:		
Residential	Btu/h	34,000 - 54,000
Commercial	Btu/h	34,000 - 48,000
Outdoor Unit	Compressor Trademark	Zhuhai Landa Compressor Co, LTD
	Compressor Model	QXFS-D280zX070C
	Compressor Refrigerant Oil Type	FW68DA or equivalent
	Compressor Type	Twin Rotary
	L.R.A	A /
	Compressor Rated Load Amp (RLA)	A 18.2
	Compressor Power Input	W 2294
	Compressor Thermal Protector	KSD115OC HPC115/95U1
	Throttling Method	Electron expansion valve
	Cooling Operation Ambient Temperature Range	°F -22~118
	Heating Operation Ambient Temperature Range	°F -22~75.2
	Condenser Material	Aluminum Fin-copper Tube
	Condenser Pipe Diameter	mm 7.94
	Rows-Fin Gap(mm)	mm 3-1.6
	Condenser Length × Height × Width	mm 1066×792×57.1
	Fan Motor Speed (rpm)	rpm cooling:860 heating:860
	Output of Fan Motor	W 130
	Fan Motor RLA	A /
	Fan Motor Capacitor	μF /
	Air Flow Volume of Outdoor Unit	CFM 3413
	Fan Type-Piece	Axial-flow
	Fan Diameter	mm 550-205
	Defrosting Method	Automatic Defrosting
	Climate Type	T1
	Isolation	I
	Moisture Protection	IPX4
	Permissible Excessive Operating Pressure for the Discharge Side	PSIG 550
	Permissible Excessive Operating Pressure for the Suction Side	PSIG 240
	Cross-sectional Area of Power Cable Conductor	sq in 0.008215(AWG10)
	Recommended Power Cable(Core)	N 3
	Outer Diameter Liquid Pipe1| Pipe 2 | Pipe 3 | Pipe 4	inch 1/4" | 1/4" | 1/4" | 1/4"
	Outer Diameter Gas Pipe1| Pipe 2 | Pipe 3 | Pipe 4	inch 3/8" | 3/8" | 3/8" | 3/8"
	Connection Pipe Max. Height Distance (indoor and outdoor and indoor up)	ft 82.0
	Connection Pipe Max. Length Distance(total length)	ft 262.5

ACCESSORIES

- ☐ MOUNTING BRACKETS
- ☐ FOOT RISERS
- ☐ COPPER/WIRE/ACC.SET
- ☐ LINESET COVERS
- ☐ WINTER WIND BAFFLE

Model		WMMS-48CH-U2B(59)5
Dimension (WXDXH)	inch	40 5/32 x 16 13/16 x 32 33/64
Dimension of Package (LXWXH)	inch	42 29/32 x 19 29/64 x 34 1/4
Dimension of Package(LXWXH)	inch	43 1/32 x 19 9/16 x 34 27/32
Net Weight	lb	172.0
Gross Weight	lb	187.4
Liquid Pipe Valve Sizes	in.	4 x 1/4"
Gas Pipe Valve Sizes	in.	4 x 3/8"
Connection Pipe Connection Method	-	Flare Connection
R410A Refrigerant Charge	oz	130.5
Not Additional Gas Connection Pipe Length	ft	131.2
Connection Pipe Gas Additional Charge	oz/ft.	0.2
Connection Pipe Max. Height Distance(indoor and indoor)	ft	82.0
Max. equivalent connection pipe length(outdoor to last indoor)	ft	82.0

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COOLING PERFORMANCE

DB / WB		Indoor Ambient Tempterature											
		70°F (21°C) 59°F (15°C)			75°F (24°C) 63°F (17°C)			80°F (27°C) 67°F (19°C)			90°F (32°C) 73°F (23°C)		
		TC (BtuH)	SC (BtuH)	Input Power (watts)	TC (BtuH)	SC (BtuH)	Input Power (watts)	TC (BtuH)	SC (BtuH)	Input Power (watts)	TC (BtuH)	SC (BtuH)	Input Power (watts)
Outdoor Ambient Temperature (DB)	-0.4 (-18°C)	20,420	16,010	1200	23,030	18,060	1270	24,152	19,090	1320	27,430	21,510	1410
	5 (-15°C)	20,940	16,420	1200	23,620	18,530	1280	24,995	19,820	1320	28,130	22,030	1410
	14 (-10°C)	21,690	17,010	1220	24,470	19,190	1300	25,908	20,280	1340	29,150	22,860	1440
	23 (-5°C)	23,770	18,640	1220	27,080	21,240	1300	26,896	22,840	1330	32,040	25,130	1430
	32 (0°C)	24,979	19,588	1222	28,455	22,319	1291	29,178	22,943	1335	33,681	25,057	1395
	41 (5°C)	26,260	20,593	1285	29,914	23,463	1358	31,822	24,119	1403	32,409	26,342	1467
	50 (10°C)	27,355	21,451	1338	31,161	24,441	1414	32,125	25,124	1462	33,884	27,440	1528
	59 (15°C)	28,820	22,600	1410	32,830	25,750	1490	36,785	26,470	1540	38,860	28,910	1610
	68 (20°C)	32,620	29,556	2010	33,422	30,044	1995	34,444	31,733	2010	37,526	33,695	2025
	77 (25°C)	35,145	30,300	2450	36,240	31,409	2435	38,763	32,791	2440	40,040	34,872	2430
	86 (30°C)	35,486	30,368	3120	37,438	32,364	3125	38,082	33,012	3160	39,211	34,650	3185
	95 (35°C)	32,176	28,781	3300	35,827	31,255	3400	34,060	31,921	3335	41,014	34,275	3405
	104 (40°C)	27,451	26,444	3075	29,095	28,543	3085	31,617	29,856	3115	33,452	32,671	3145
	113 (45°C)	23,544	23,203	2765	25,642	24,926	2790	27,174	25,779	2800	28,686	28,833	2825
	118 (48°C)	16,382	16,232	1856	17,504	17,242	1911	20,471	18,354	1986	21,186	19,923	2023

HEATING PERFORMANCE

DB / WB		Indoor Ambient Tempterature											
		70°F (21°C) 59°F (15°C)			75°F (24°C) 63°F (17°C)			80°F (27°C) 67°F (19°C)			90°F (32°C) 73°F (23°C)		
		TC (BtuH)	SC (BtuH)	Input Power (watts)	TC (BtuH)	SC (BtuH)	Input Power (watts)	TC (BtuH)	SC (BtuH)	Input Power (watts)	TC (BtuH)	SC (BtuH)	Input Power (watts)
Outdoor Ambient Temperature (DB)	-5 (-21°C)	34,123	21,908	6281	35,621	21,749	6354	37,413	21,350	6521	39,436	20,871	6689
	0 (-18°C)	35,179	23,744	6544	36,798	23,571	6683	38,441	23,119	6839	39,879	22,600	6945
	5 (-15°C)	36,610	25,047	7112	38,076	24,861	7254	39,486	24,396	7349	41,874	23,837	7527
	7 (-14°C)	38,494	26,085	7039	39,697	25,899	7187	41,546	25,407	7348	43,846	24,835	7528
	17 (-8°C)	42,452	26,870	6983	44,145	26,684	7167	46,723	26,165	7354	48,831	25,580	7545
	28 (-2°C)	45,768	30,142	6891	47,854	30,302	7115	49,456	29,783	7248	51,476	29,184	7397
	38 (3°C)	46,879	37,910	6408	47,337	38,070	6574	48,698	37,538	6672	49,718	36,939	6789
	47 (8°C)	47,423	42,566	6453	48,792	42,247	6587	49,143	41,395	6618	51,878	40,411	6724
	57 (14°C)	48,324	43,976	5173	48,763	43,630	5291	50,249	42,752	5360	51,476	41,741	5499
	68 (20°C)	49,121	45,758	4707	50,147	45,413	4895	51,874	44,495	4967	52,127	43,444	5234
	77 (25°C)	48,320	46,823	3451	49,768	46,463	3654	50,048	45,532	3842	51,176	44,455	4037

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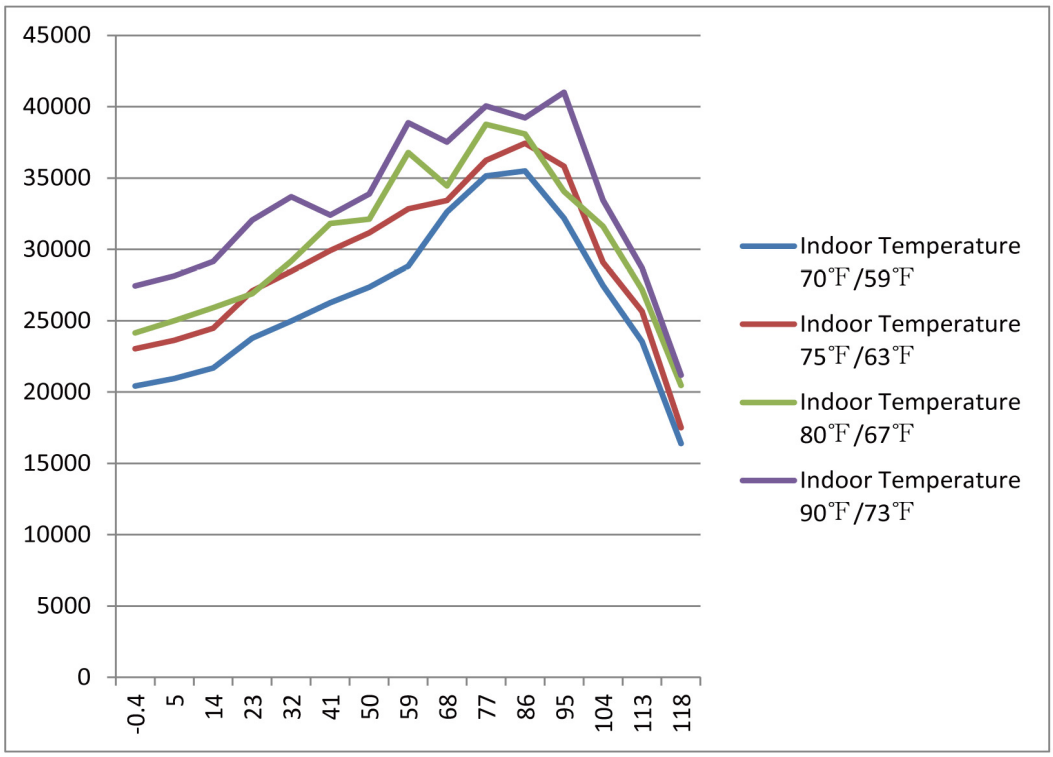
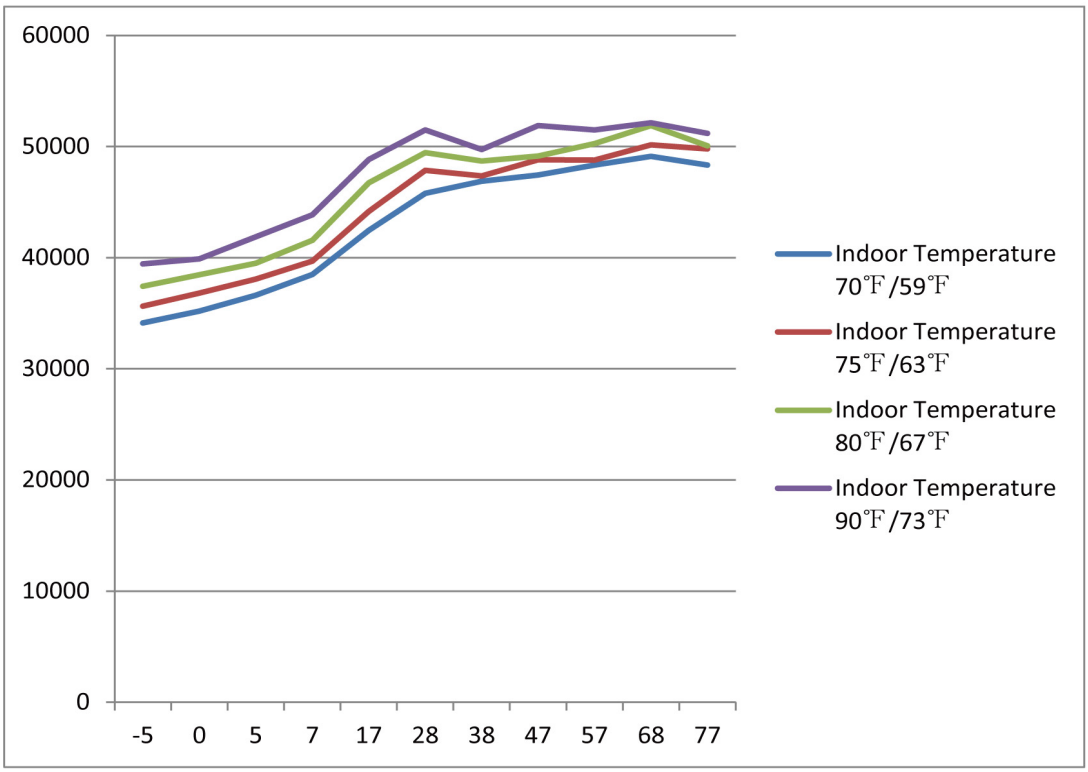
Cooling Capacity (Btu)



Heating Capacity (Btu)



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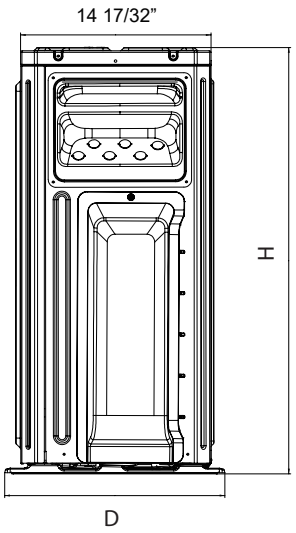
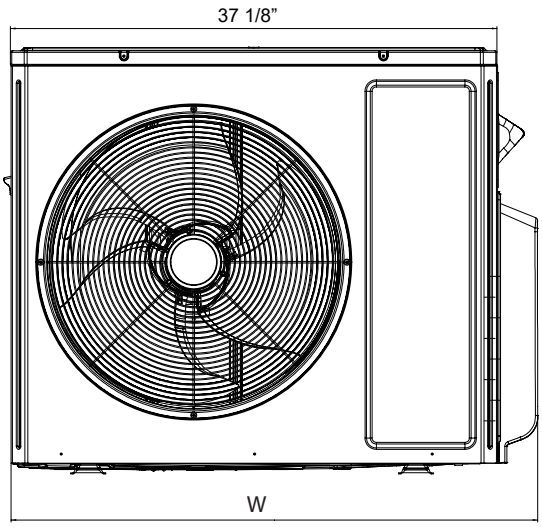
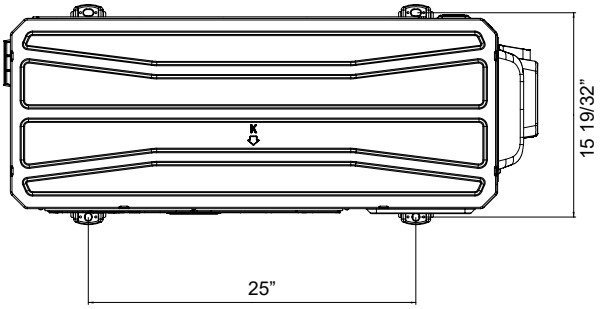
Submittal Data Sheet: WMMS-48CH-U2B(59)5

OUTDOOR UNIT

Dimensions (inches)	
W	40 5/32”
H	32 33/64”
D	16 13/16”

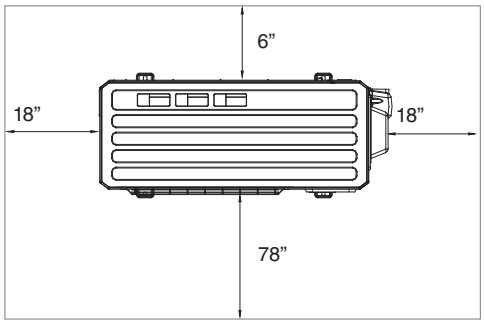


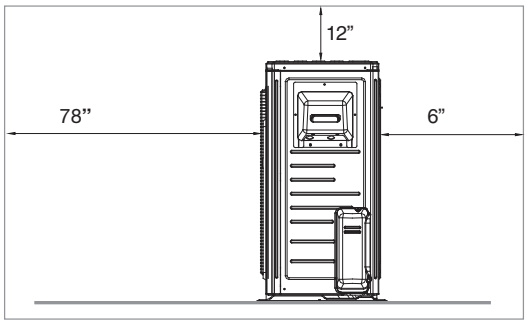




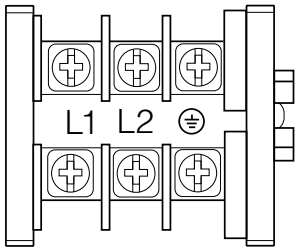
Unit: inch

CLEARANCES





TERMINAL BLOCK



FEATURES

- Heats down to -22 °F
- 208-230/1/60 power input
- Quiet and efficient heating & cooling.
- DC Inverter technology
- Wide working ambient temperature ranges
- Compact outdoor unit with side discharge
- Outdoor unit ships pre-charged.
- High quality compressors
- Durable powder coated cabinet
- Standard flare brass connection valves
- Built to ETL/UL/CSA/AHRI standards
- Easy installation and maintenance

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