



**ULTRA HEAT**

**ULTRA COOL**

**MULTI<sup>+</sup>ULTRA**

Multi-Room Ductless heat-pump systems 42,000 BTU

**Submittal Data: MULTIU42HP230V1DO Heat Pump System**

Job Name Location Date

Purchaser Engineer

Submitted To For  Reference  Approval  Construction

Unit Designation Schedule No.

**GENERAL FEATURES**

- Up to Five Indoor Units (5-Port)
- G10 DC Inverter Technology - 2 Stage / 3 Cylinder
- Quiet Operation - Both Indoor & Outdoor
- Blue Fin Coil Coating
- Intelligent Defrost
- Auto Restart on Power Outages
- Mult-point Diagnostics
- Limited 5 yr Parts & Compressor Warranty-Residential Only



AHRI Certified Ref No: [204288781](#), [204630895](#), [204664398](#)

**System Ratings**

Rated Cooling Capacity	42,000 BTUH
Cooling Capacity (min-max)	8,871-42,991 BTUH
Rated Heating Capacity	42,000 BTUH
Heating Capacity (min-max)	8,871-46,062 BTUH
SEER/EER	23.0 / 9.0
HSPF/COP	10.0 / 3.4

**Operating Range**

Cooling	(min-max)	0 - 115°F
		-18 - 46°C
Heating	(min-max)	-31 - 75°F
		-35 - 24°C

**Power Supply**

Normal Operational Voltage	208/230 V, 1 Phase, 60 Hz
Voltage Range	187 - 253 V
Main Power Wire Size	8-2 AWG
Interconnecting Cable Wire Size	14-4 AWG
MCA	38.0 A
MOCP/Breaker Size	60 A

**Outdoor Unit Data**

<b>Compressor</b>	Type	DC Inverter Driven Rotary
	RLA	28.5 A
	Starting Current	5.0 A
<b>Fan Motor</b>	Output Power	90 W
	FLA	1.0 A
	Air Flow (Max)	3,060 CFM
<b>Sound Pressure Level</b>		
	Cooling	62 dB(A)
	Heating	62 dB(A)
<b>Dimensions &amp; Weights</b>		
	Unit Dimensions Overall (WxDxH)*	42.8 x 17.3 x 43.4-in
	* including Valve Covers and Grilles	
	Weight (Net/Shipping)	282.2/300-lbs
	Min. Number of Indoor Units	2
	Max. Number of Indoor Units	5

**Refrigerant Piping Data**

Refrigerant Type	R410A
Refrigerant Charge	176.4-oz
Additional Charge Per Line Length	0.21-oz/ft
Connection Method-Flared	1/4 x 3/8-in
Factory Charge for Total Line Length	131-ft
Total Refrigerant Pipe Length	262-ft
Max Refrigerant Piping Length to any Indoor Unit	82-ft
Min Refrigerant Piping Length to any Indoor Unit	10-ft
Max Elevation between Indoor Units	49-ft
Max Lift from Outdoor to Indoor Unit	49-ft
Max Drop from Outdoor to Indoor Unit	49-ft



**ULTRA HEAT****ULTRA COOL****SYSTEM FEATURES**

Compressor Type	Inverter Rotary
Core Technology Three Cylinder Two Stage Compressor	G10
Ultra Low Frequency Torque Control	YES
Power Factor Correction	YES
Refrigerant Type	R410A
Electronic Expansion Valve (EEV)	4
Basepan With Electric Heater	YES
Compressor Preheat	YES
Compressor With Electric Heater (-40°F)	YES
-40°F Wiring UL Approved	YES
Multi "Independent" Port Design	YES
Condenser Fan	Axial
Condenser Motor Type	DC
Condenser Motor Drive	Direct
Condenser Coil	Aluminum Fin/Copper Tube
Outdoor Fin Coating (Blue)	Acrylic Resin
Intelligent Defrosting	YES
Low Voltage Startup	YES
Memory/Power Failure Recovery	YES
Self Diagnosis	YES
Ultra Heating (-22°F - 75°F)	YES
Ultra Cooling (0°F - 115°F)	YES
XK19 Wired Controller Interface	YES

**REMOTE CONTROLLER FUNCTIONS<sup>1</sup>**See individual Indoor Unit  
Controllers Functions<sup>1</sup> Not all Remote Controller functions are supported.**XK19 WIRED CONTROLLER FUNCTIONS<sup>2</sup>**

On/Off	YES
Operating Mode	YES
Fan Speed	YES
Room Setpoint	YES
Model Numbers	YES
Timer Mode	YES
Sleep Mode	YES
Turbo Mode	YES
X-Fan Mode	YES
Privacy Lock	YES

<sup>2</sup> Note: Some indoor models may not support specific system features or functions.

# OUTDOOR UNIT DIMENSIONAL SPECIFICATIONS

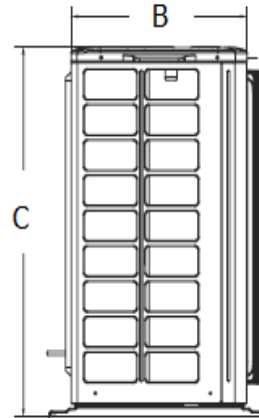
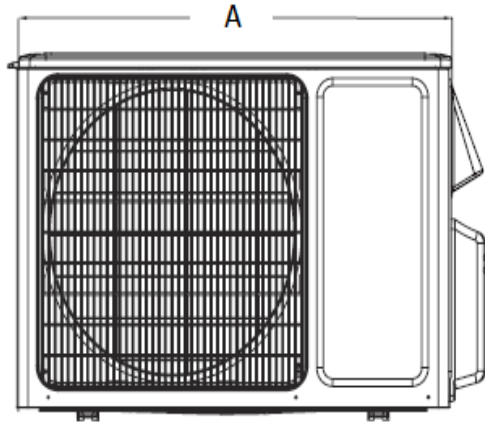
# MULTIU42HP230V1DO

**ULTRA HEAT** **ULTRA COOL**

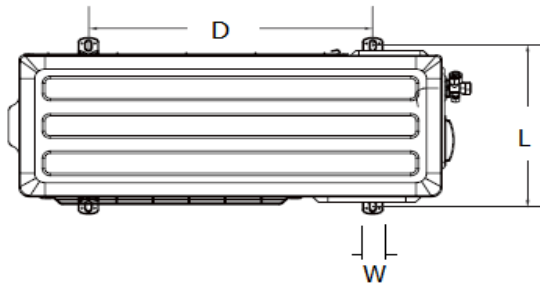
## 42,000 BTUH MODEL

Model # MULTIU42HP230V1CO 42,000 BTUH 230V

Units: inch



A (in)	40
B (in)	17.3
C (in)	43.5



D (in)	24.8
L (in)	16.2
W (in)	3.1

### Suction/Gas Line Port Size

Port A	3/8-in OD Flared
Port B	3/8-in OD Flared
Port C	3/8-in OD Flared
Port D	3/8-in OD Flared
Port E	3/8-in OD Flared

Weight (Net/Shipping) 282/300 lbs

### Factory Supplied Piping Adapters

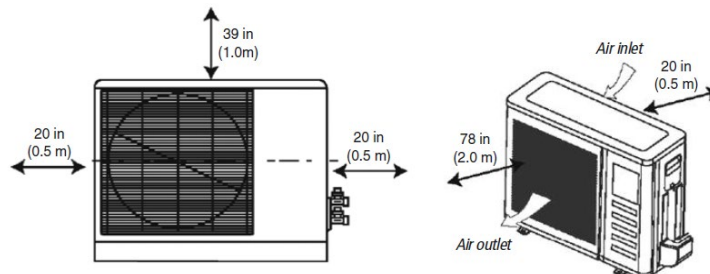
Adapter	P/N	Qty
3/8 (F) to 5/8 (M)	6654100009	3
3/8 (F) to 1/2 (M)	6654100013	4
1/4 (F) to 3/8 (M)	6654104	2

### Liquid Line Port Size

Port A	1/4-in OD Flared
Port B	1/4-in OD Flared
Port C	1/4-in OD Flared
Port D	1/4-in OD Flared
Port E	1/4-in OD Flared

## MINIMUM SPACING REQUIREMENTS

Units: inch (mm)



### Notes:

1. Recommended Interconnecting Cable Type Stranded Copper Conductors THHN 600V Unshielded Wire
2. Power wiring cable size must comply with applicable national and local codes.
3. Test conditions are based on AHRI 210/240.

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# EXTENDED RATINGS

# MULTIU42HP230V1DO

## ULTRA COOL

### COOLING PERFORMANCE (BtuH)\*

Outdoor Ambient Temperature (DB) °F	Indoor Entering Air Temperatures					
	68°F DB		73°F DB		80°F DB	
	57°F WB		61°FWB		67°FWB	
	TC	SHC	TC	SHC	TC	SHC
0°F	24000	19500	26000	20500	28900	22300
5°F	25582	20062	27045	21189	29782	23368
14°F	26796	21016	28308	22193	31948	25057
23°F	29358	23030	31402	24632	35980	28220
32°F	30051	53625	32274	57590	37327	66603
41°F	27549	76709	29773	82901	34704	96626
50°F	25141	95143	27343	103477	32122	121561
59°F	35602	27922	38080	29865	41706	32701
68°F	40320	31623	42840	33594	45780	35906
77°F	39844	31254	42378	33240	45360	35580
86°F	37884	29709	40404	31694	44100	34587
95°F	35854	28121	38360	30078	42000	32942
104°F	34118	26759	36610	28716	40908	32091
113°F	32368	25384	34860	27341	39172	30716

## ULTRA HEAT

### HEATING PERFORMANCE (BtuH)\*

Outdoor Ambient Temperature (DB)	Indoor Entering Air Temperatures								
	68°F DB			73°F DB			80°F DB		
	57°FWB			61°FWB			67°FWB		
	TC	Power Input (KW)	COP	TC	Power Input (KW)	COP	TC	Power Input (KW)	COP
-31°F	27000	5.50	1.44	28000	5.70	1.44	26000	5.85	1.30
-22°F	28744	5.57	1.51	29134	5.73	1.49	27998	5.91	1.39
-13°F	32450	5.65	1.68	31904	5.81	1.61	30689	5.99	1.50
-5°F	37824	5.64	1.97	37188	5.79	1.88	35799	5.98	1.76
0°F	40580	5.73	2.08	39905	5.89	1.99	38349	6.08	1.85
5°F	40771	5.70	2.10	40085	5.86	2.00	38558	6.05	1.87
10°F	44700	5.76	2.27	43955	5.92	2.18	42258	6.11	2.03
17°F	42723	5.72	2.19	42011	5.88	2.10	40352	6.06	1.95
19°F	42686	5.50	2.28	41988	5.65	2.18	40320	5.83	2.03
24°F	41296	5.42	2.23	40671	5.58	2.14	39250	5.75	2.00
32°F	40132	5.19	2.27	39589	5.33	2.18	38348	5.50	2.04
41°F	41630	5.11	2.39	41141	5.26	2.29	39959	5.42	2.16
43°F	42751	5.10	2.46	42248	5.24	2.36	41093	5.41	2.23
47°F	46460	5.22	2.61	45655	5.36	2.50	43789	5.53	2.32
53°F	46920	4.74	2.90	46101	4.87	2.77	44234	5.03	2.58
59°F	43198	4.78	2.65	42435	4.92	2.53	40703	5.07	2.35
64°F	44117	4.39	2.95	43341	4.51	2.82	41582	4.65	2.62
70°F	44945	4.46	2.96	44169	4.58	2.83	42358	4.73	2.63
75°F	45579	4.07	3.28	44777	4.19	3.14	42965	4.32	2.92
78°F	45993	4.11	3.28	45191	4.22	3.14	43353	4.36	2.92

\* Maximum system capacity  
 TC- Total Capacity ( BtuH)  
 COP- Coefficient of Performance

**ULTRA COOL**

COOLING CAPACITY (BTUH)

Indoor Units Combinations	Rated System (BtuH)	Indoor Unit A (BtuH)	Indoor Unit B (BtuH)	Indoor Unit C (BtuH)	Indoor Unit D (BtuH)	Indoor Unit E (BtuH)
9K+12K	21,000	9,000	12,000	NA	NA	NA
9K+18K	26,000	8,000	18,000	NA	NA	NA
9K+24K	29,000	9,000	20,000	NA	NA	NA
12K+12K	24,000	12,000	12,000	NA	NA	NA
12K+18K	27,000	10,000	17,000	NA	NA	NA
12K+24K	31,000	11,000	20,000	NA	NA	NA
18K+18K	31,000	15,500	15,500	NA	NA	NA
18K+24K	35,000	15,000	20,000	NA	NA	NA
24K+24K	38,000	19,000	19,000	NA	NA	NA
9K+9K+9K	27,000	9,000	9,000	9,000	NA	NA
9K+9K+12K	29,000	9,000	9,000	11,000	NA	NA
9K+9K+18K	33,000	8,500	8,500	16,000	NA	NA
9K+9K+24K	37,000	8,500	8,500	20,000	NA	NA
9K+12K+12K	32,000	8,000	12,000	12,000	NA	NA
9K+12K+18K	36,000	9,000	12,000	15,000	NA	NA
9K+12K+24K	37,500	7,500	10,000	20,000	NA	NA
9K+18K+18K	37,500	7,500	15,000	15,000	NA	NA
9K+18K+24K	39,500	9,000	13,500	17,000	NA	NA
9K+24K+24K	42,000	8,000	17,000	17,000	NA	NA
12K+12K+12K	33,000	11,000	11,000	11,000	NA	NA
12K+12K+18K	37,000	10,500	10,500	16,000	NA	NA
12K+12K+24K	38,000	9,500	9,500	19,000	NA	NA
12K+18K+18K	38,000	9,000	14,500	14,500	NA	NA
12K+18K+24K	39,500	10,000	13,000	16,500	NA	NA
12K+24K+24K	42,000	9,000	16,500	16,500	NA	NA
18K+18K+18K	39,600	13,200	13,200	13,200	NA	NA
18K+18K+24K	42,000	13,000	13,000	16,000	NA	NA
9K+9K+9K+9K	36,000	9,000	9,000	9,000	9,000	NA
9K+9K+9K+12K	36,500	8,500	8,500	8,500	11,000	NA
9K+9K+9K+18K	37,500	7,500	7,500	7,500	15,000	NA
9K+9K+9K+24K	41,000	8,000	8,000	8,000	17,000	NA
9K+9K+12K+12K	37,000	8,000	8,000	10,500	10,500	NA
9K+9K+12K+18K	38,000	7,500	7,500	9,000	14,000	NA
9K+9K+12K+24K	41,500	7,500	7,500	10,000	16,500	NA
9K+9K+18K+18K	41,000	7,000	7,000	13,500	13,500	NA
9K+9K+18K+24K	42,000	7,000	7,000	12,000	16,000	NA
9K+12K+12K+12K	37,500	7,500	10,000	10,000	10,000	NA
9K+12K+12K+18K	41,000	8,000	9,500	9,500	14,000	NA
9K+12K+12K+24K	42,000	7,000	9,000	9,000	17,000	NA
9K+12K+18K+18K	42,000	6,500	8,500	13,500	13,500	NA
9K+12K+18K+24K	43,000	6,000	8,000	13,000	16,000	NA
9K+18K+18K+18K	42,000	6,000	12,000	12,000	12,000	NA
12K+12K+12K+12K	38,000	9,500	9,500	9,500	9,500	NA
12K+12K+12K+18K	41,000	9,000	9,000	9,000	14,000	NA
12K+12K+12K+24K	42,000	9,000	9,000	9,000	15,000	NA
12K+12K+18K+18K	42,000	9,000	9,000	12,000	12,000	NA
9K+9K+9K+9K+9K	42,000	8,400	8,400	8,400	8,400	8,400
9K+9K+9K+9K+12K	42,800	8,200	8,200	8,200	8,200	10,000
9K+9K+9K+9K+18K	43,000	7,500	7,500	7,500	7,500	13,000
9K+9K+9K+9K+24K	43,000	7,000	7,000	7,000	7,000	15,000
9K+9K+9K+12K+12K	43,000	8,000	8,000	8,000	9,500	9,500
9K+9K+9K+12K+18K	43,000	6,500	6,500	6,500	9,500	14,000
9K+9K+9K+12K+24K	43,000	6,500	6,500	6,500	8,500	15,000
9K+9K+9K+18K+18K	42,900	6,300	6,300	6,300	12,000	12,000
9K+9K+12K+12K+12K	43,000	6,500	6,500	10,000	10,000	10,000
9K+9K+12K+12K+18K	43,000	6,500	6,500	9,000	9,000	12,000
9K+12K+12K+12K+12K	43,000	7,000	9,000	9,000	9,000	9,000
9K+12K+12K+12K+18K	43,000	6,000	9,000	9,000	9,000	10,000
12K+12K+12K+12K+12K	43,000	8,600	8,600	8,600	8,600	8,600

Note:

1) It is critical to size the outdoor unit for the entire building load and each indoor unit for its individual zone load.

Cooling Nominal Test Conditions: Indoor: 80°F DB/67°F WB Outdoor: 95°F DB/75°F WB

**ULTRA HEAT**

HEATING CAPACITY (BTUH)

Indoor Units Combinations	Rated System (BtuH)	Indoor Unit A (BtuH)	Indoor Unit B (BtuH)	Indoor Unit C (BtuH)	Indoor Unit D (BtuH)	Indoor Unit E (BtuH)
9K+12K	21,000	9,000	12,000	NA	NA	NA
9K+18K	26,000	8,000	18,000	NA	NA	NA
9K+24K	30,000	9,000	21,000	NA	NA	NA
12K+12K	24,000	12,000	12,000	NA	NA	NA
12K+18K	30,000	12,000	18,000	NA	NA	NA
12K+24K	31,000	11,000	20,000	NA	NA	NA
18K+18K	31,000	15,500	15,500	NA	NA	NA
18K+24K	37,000	17,000	20,000	NA	NA	NA
24K+24K	40,000	20,000	20,000	NA	NA	NA
9K+9K+9K	27,000	9,000	9,000	9,000	NA	NA
9K+9K+12K	29,000	9,000	9,000	11,000	NA	NA
9K+9K+18K	34,500	9,000	9,000	16,500	NA	NA
9K+9K+24K	37,000	8,500	8,500	20,000	NA	NA
9K+12K+12K	31,000	9,000	11,000	11,000	NA	NA
9K+12K+18K	36,000	8,500	11,500	16,000	NA	NA
9K+12K+24K	39,000	8,000	11,000	20,000	NA	NA
9K+18K+18K	39,000	8,000	15,500	15,500	NA	NA
9K+18K+24K	41,000	8,000	15,000	18,000	NA	NA
9K+24K+24K	44,000	8,000	18,000	18,000	NA	NA
12K+12K+12K	34,500	11,500	11,500	11,500	NA	NA
12K+12K+18K	37,000	11,000	11,000	15,000	NA	NA
12K+12K+24K	40,000	10,000	10,000	20,000	NA	NA
12K+18K+18K	40,000	10,000	15,000	15,000	NA	NA
12K+18K+24K	42,500	10,000	14,500	18,000	NA	NA
12K+24K+24K	44,000	9,000	17,500	17,500	NA	NA
18K+18K+18K	42,000	14,000	14,000	14,000	NA	NA
18K+18K+24K	44,000	13,000	13,000	18,000	NA	NA
9K+9K+9K+9K	36,000	9,000	9,000	9,000	9,000	NA
9K+9K+9K+12K	36,500	8,500	8,500	8,500	11,000	NA
9K+9K+9K+18K	39,000	8,000	8,000	8,000	15,000	NA
9K+9K+9K+24K	41,500	8,000	8,000	8,000	17,500	NA
9K+9K+12K+12K	38,000	8,000	8,000	11,000	11,000	NA
9K+9K+12K+18K	40,000	7,500	7,500	10,000	15,000	NA
9K+9K+12K+24K	42,500	8,000	8,000	9,500	17,000	NA
9K+9K+18K+18K	42,000	8,000	8,000	13,000	13,000	NA
9K+9K+18K+24K	45,000	7,000	7,000	13,000	18,000	NA
9K+12K+12K+12K	38,900	8,000	10,300	10,300	10,300	NA
9K+12K+12K+18K	41,500	7,500	10,000	10,000	14,000	NA
9K+12K+12K+24K	44,000	7,000	9,000	9,000	19,000	NA
9K+12K+18K+18K	44,000	6,500	8,500	14,500	14,500	NA
9K+12K+18K+24K	46,000	6,000	8,000	13,000	19,000	NA
9K+18K+18K+18K	45,000	6,000	13,000	13,000	13,000	NA
12K+12K+12K+12K	40,000	10,000	10,000	10,000	10,000	NA
12K+12K+12K+18K	42,500	9,500	9,500	9,500	14,000	NA
12K+12K+12K+24K	44,500	8,500	8,500	8,500	19,000	NA
12K+12K+18K+18K	44,000	9,000	9,000	13,000	13,000	NA
9K+9K+9K+9K+9K	42,000	8,400	8,400	8,400	8,400	8,400
9K+9K+9K+9K+12K	42,800	8,200	8,200	8,200	8,200	10,000
9K+9K+9K+9K+18K	45,000	7,500	7,500	7,500	7,500	15,000
9K+9K+9K+9K+24K	46,000	7,000	7,000	7,000	7,000	18,000
9K+9K+9K+12K+12K	43,000	8,000	8,000	8,000	9,500	9,500
9K+9K+9K+12K+18K	44,000	7,000	7,000	7,000	10,000	13,000
9K+9K+9K+12K+24K	46,000	6,500	6,500	6,500	8,500	18,000
9K+9K+9K+18K+18K	45,500	6,500	6,500	6,500	13,000	13,000
9K+9K+12K+12K+12K	44,000	7,000	7,000	10,000	10,000	10,000
9K+9K+12K+12K+18K	45,000	7,000	7,000	9,000	9,000	13,000
9K+12K+12K+12K+12K	45,000	7,000	9,500	9,500	9,500	9,500
9K+12K+12K+12K+18K	45,500	6,500	9,000	9,000	9,000	12,000
12K+12K+12K+12K+12K	45,000	9,000	9,000	9,000	9,000	9,000

Note:

- 1) It is critical to size the outdoor unit for the entire building load and each indoor unit for its individual zone load

Cooling Nominal Test Conditions: Indoor: 80°F DB/67°F WB Outdoor: 95°F DB/75°F WB

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