

iSERIES Specifications

Outdoor Inverter Units

			
IS18G050	IS24G065	IS30G080	IS36G110
1.5 ton	2.0 ton	2.5 ton	3.0 ton

Description

The Unico System iSERIES line is the first and only multi-split product that combines the best of ducted and ductless together. The iSERIES allows you to combine the advantages of The Unico System — even temperatures, no drafts, more moisture removal, better aesthetics — along with high wall units to help solve any design or construction challenge.

The iSERIES outdoor inverter units, which utilize state-of-the-art inverter technology, are the heart of the iSERIES line. These heat pump (can heat or cool) units range from one to three nominal tons with unsurpassed features including:

-  Combines The Unico System and Multi-Split options with a single outdoor unit
-  Inverter Technology
-  High system efficiency and SEER ratings
-  Ability to operate in a very broad outdoor temperature range
-  Extremely Quiet
-  Cold Draft Prevention
-  Antifreeze Protection
-  Intelligent defrost system
-  Compatible with UniZone zone damper system, up to 3 zones
-  Utilize a wide variety of third party thermostats or wireless remote temperature control
-  Compatible with standard heat pump thermostat
-  Optional handheld remote control thermostat
-  Ability to add upcoming E-Mix option for Domestic Hot Water
-  Up to three stages auxiliary Heat
-  Changeover to hot water heating
-  Can be used in conjunction with a wide variety of home systems
-  **Combines all the efficiencies and performance of the inverter technology with all the feature and benefits of the Unico System.**

iSERIES Performance

The Unico iSeries is a variable capacity system that is constantly adjusting its speed to meet the load in the home. Use the following tables to size the outdoor units based on the building load. The values in the table are maximum capacity. Refer to the AHRI directory at www.ahrinet.org for rated efficiency and capacity.

iSERIES outdoor unit capacity [Btu/hr] For sizing with SDHV units						
	Outdoor Temperature		IS18G050	IS24G065	IS30G080	IS36G110
	°F	(°C)				
Cooling	115	46.1	9400	14750	12300	12200
	105	40.6	10400	17200	14100	26000
	95	35.0	15400	20900	25700	31000
	82	27.8	16800	22650	27800	35000
Heating	47	8.3	18200	25350	29000	35700
	35	1.7	13200	19200	21800	23000
	17	-8.3	11400	15800	18900	26500
	5	-15.0	9400	13075	16350	19600
	-7.6	-22.0	8200	11650	14150	17200
	-25.6	-32.0	5500	6750	7950	9200

iSERIES outdoor unit capacity [Btu/hr] For sizing with non-ducted units						
	Outdoor Temperature		IS18G050	IS24G065	IS30G080	IS36G110
	°F	(°C)				
Cooling	115	46.1	11200	13600	18100	22800
	105	40.6	12400	14800	20150	25400
	95	35.0	18400	22200	30150	38100
	82	27.8	20200	24200	32850	41500
Heating	47	8.3	21200	30550	30000	50000
	35	1.7	16550	24300	24000	37500
	17	-8.3	13150	19350	20900	28300
	5	-15.0	11400	16150	18500	24150
	-7.6	-22.0	10430	14300	16800	21100
	-25.6	-32.0	6100	7500	8850	10200

When using a mix of SDHV and ductless indoor units, use the average between the two tables.

For example, for an IS36G110 with a mix of both non-ducted and SDHV ducted units at 95°F outdoor temperature, the capacity to be used to size the outdoor unit would be:

$$\frac{(31000 + 38100)}{2} = 34550 \text{ Btu/hr}$$

OPERATING LIMITS

■ Cooling Maximum conditions		■ Heating Maximum conditions	
Outdoor temperature :	122 °F (50°C) D.B.	Outdoor temperature :	75 °F (24°C) D.B.
Room temperature :	90 °F (32°C) D.B.	Room temperature :	65 °F (18°C) W.B.
	73 °F (23°C) W.B.		91 °F (27°C) D.B.
■ Cooling Minimum conditions		■ Heating Minimum conditions	
Outdoor temperature :	5 °F (-15°C) D.B.	Outdoor temperature :	-25 °F (-32°C) D.B.
Room temperature :	50 °F (10°C) D.B.	Room temperature :	41 °F (5°C) D.B.
	17 °F (6°C) W.B.		

Specifications

Model			IS18G050	IS24G065	IS30G080	IS36G110
No. of Indoor units when multi-split			1-2	1-3	1-4	1-4
Power Supply	V/Ph/Hz	208-230/1/60				
Power Input (max.)	W/A		1790/7.80	2600/12	3300/15	4400/20
Full Load Current	A		10	12.5	16	22
Minimum Circuit Ampacity (MCA)	A		13	16	20	28
Maximum Overcurrent Protection (MOP)	A		20	25	35	50
Sound Pressure (max.)	dB(A)		41	47	47	48
Refrigerant charge, R-410A	lbs		2.9	6.0	6.4	7.5
Connections	Liquid	in.	1/4 (x2)	1/4 (x3)	1/4 (x4)	1/4 (x4)
	Vapor	in.	3/8 (x2)	3/8 (x2), 1/2 (x1)	3/8 (x3), 1/2 (x1)	3/8 (x3), 1/2 (x1)
Maximum pipe length (system)	Standard	FT	Single: 25 Dual: 50	Single: 65 Multi: 100	Single: 100 Multi: 130	Single: 100 Multi: 130
	w/ Extra Charge	FT	Single: 65 Dual: 100	Single: 115 Multi: 150	Single: 164 Multi: 210	Single: 164 Multi: 210
Maximum pipe length (indoor-outdoor)	Standard	FT	Dual: 40	Dual: 80 Tri: 65	100	100
	w/ Extra charge	FT	Dual: 80	Dual: 100 Tri: 80	100	100
Maximum height difference	Indoor/ Indoor	FT	19	19	19	19
	Indoor/ Outdoor	FT	32	32	32	32
Dimensions H x W x D	Unit	in	24-7/8 x 35-1/4 x 13-5/8	30 x 40-5/8 x 15-3/4	32-7/8 x 48-7/8 x 15-3/4	42-1/8 x 46-7/8 x 15-3/4
	Boxed	in	28 x 39 x 13-5/8	35-1/2 x 44-7/8 x 16-1/2	40 x 50 x 16-5/8	49-1/4 x 50 x 16-5/8
Weight	Unit	lbs	125	143	161	199
	Boxed	lbs	136	155	177	221

iSERIES Indoor Units

				
IS12MPA	IS24MPB	U1218L-1EA2AX	M2430BL1-EA2 + M2430CL1-A	M3036BL1-EA2 + M3036CL1-A
Size A	Size B	Size B	Size C	Size D

Model Number	Description
U1218L-1EA2AX	Fan-coil Unit, heat pump coil, iSERIES, 230V
M2430BL1-EA2	Module, Blower, EC Motor, iSERIES, 230V
M2430CL1-A	Module, Heat Pump Coil, iSERIES
M3036BL1-EA2	Module, Blower, EC Motor, iSERIES, 230V
M3036CL1-A	Module, Heat Pump Coil, iSERIES
IS12MPA	High Wall Unit, 1-Ton
IS24MPB	High Wall Unit, 2-Ton

To match the Unico iSERIES indoor units with the iSERIES outdoor condenser and inverter, the iSERIES indoor units include a special control board to communicate with the iSERIES outdoor inverter control and a unique coil that matches the outdoor condenser to maximize efficiency and performance. Additionally, the Unico iSERIES indoor coil module does not require an expansion valve as the expansion valve on the iSERIES is provided with the iSERIES outdoor units. These design elements match the Unico system to the iSERIES and deliver the improved performance and efficiency of The Unico System iSERIES line.

For these reasons the iSERIES outdoor units can only be used when matched with an iSERIES indoor air handler and coil modules. **A standard Unico coil module will not work with the iSERIES outdoor unit.**

Design Flexibility

-  The iSERIES from Unico System has product match-ups for any project
-  More equipment match-ups than any product on the market today
-  Just four outdoor units allow for over 60 different equipment combinations
-  All units can be used residentially and commercially
-  All units can work in mono-split or multi-split configurations offering high SEER ratings

Compatibility (Outdoor-Indoor Combinations)

Outdoor Model	IS18G050	IS24G065	IS30G080	IS36G110
Single-split	B	B C	B C	B C D
Dual-split	A + A A + B	A + A A + B B + B	A + A A + B A + C B + B	A + A A + B A + C B + B B + C
Tri-split	—	A + A + A A + A + B	A + A + A A + A + B A + B + B	A + A + A A + A + B A + B + B B + B + B
Quad-split	—	—	A + A + A + A A + A + A + B	A + A + A + A A + A + A + B A + A + B + B A + B + B + B

Installation

See Unico Bulletin 30-121 for installation instructions.