The Unico System®

Product Catalog 2017

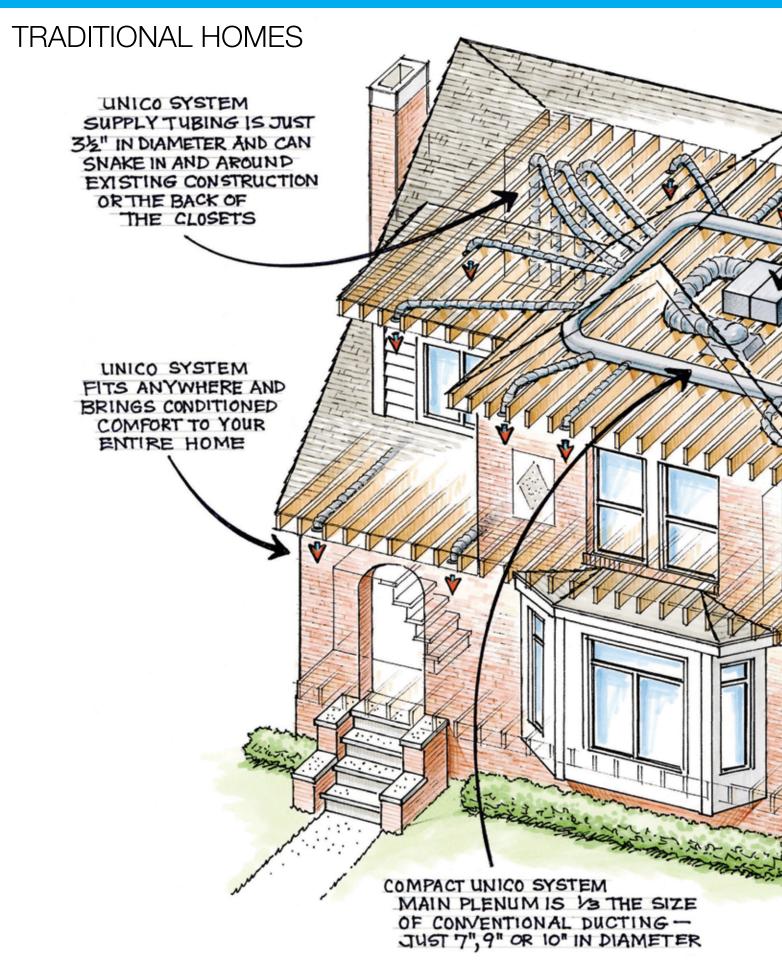
Small-Duct Central Heating & Air Conditioning

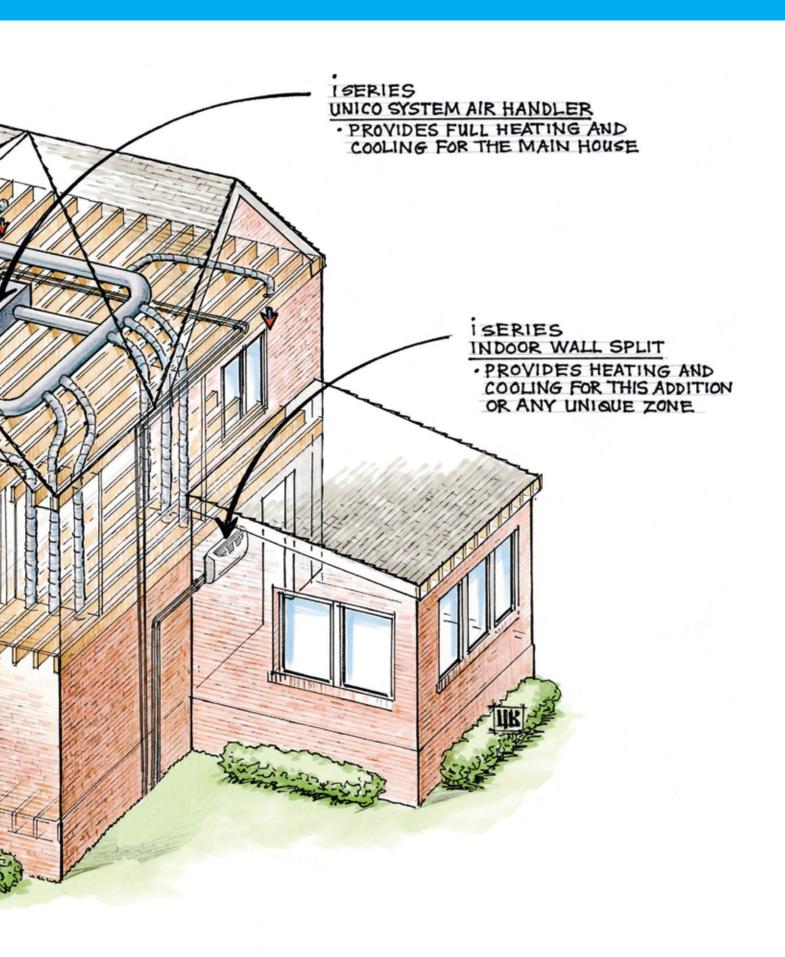


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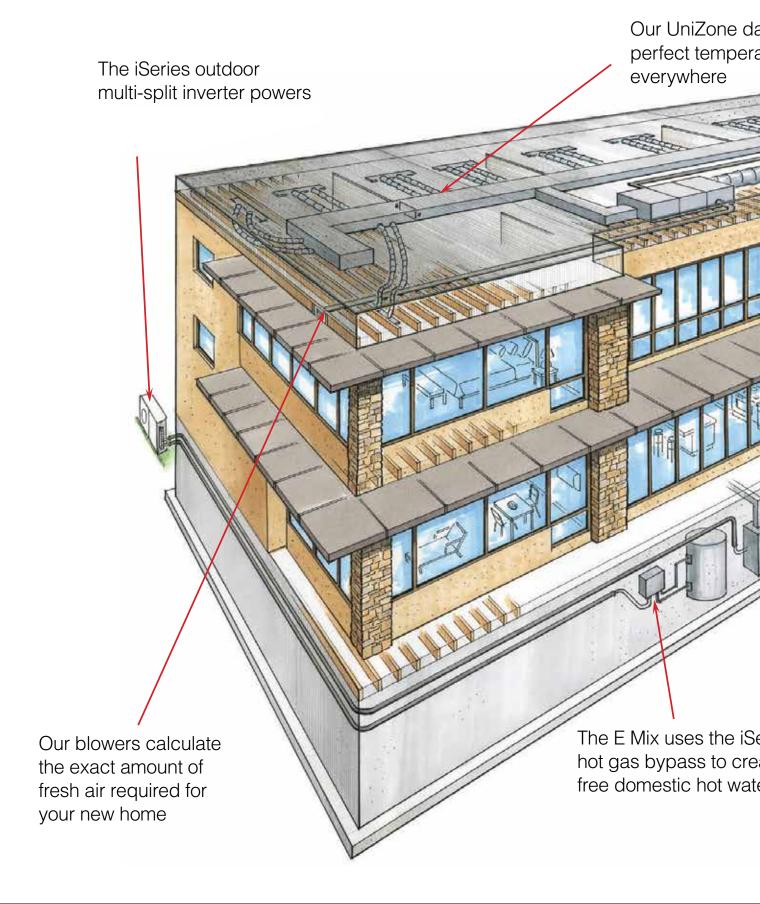
HOW TO APPLY THE UNICO SYSTEM

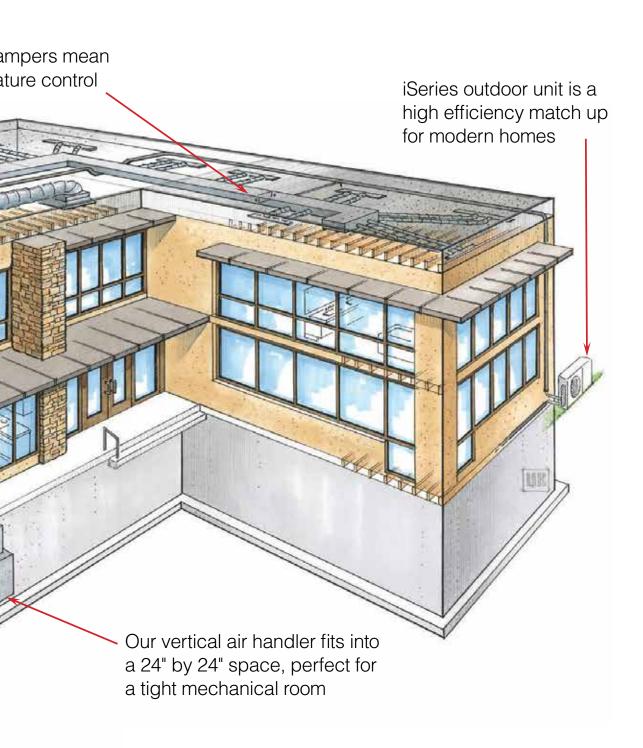




HOW TO APPLY THE UNICO SYSTEM

CUSTOM HOMES

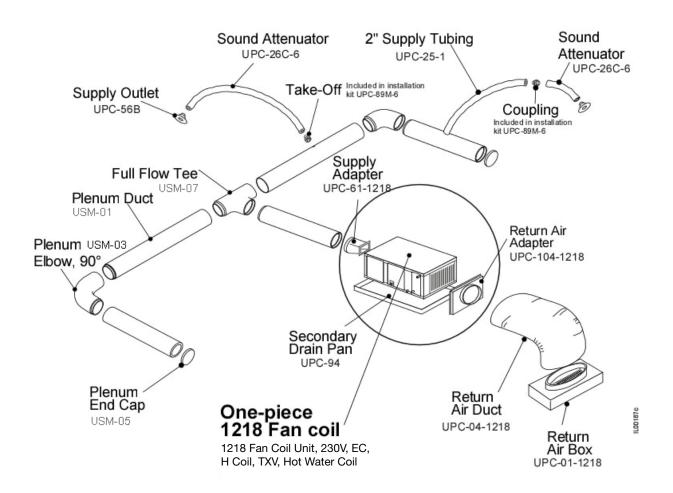




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TYPICAL SYSTEM SHEETS



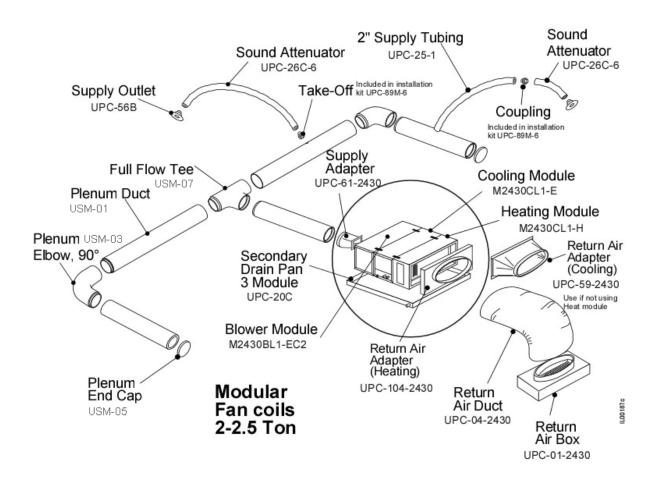
1 Ton Estimated Material List

Each material list assumes the minimum of six 12' runs per ton.

QTY	Part #	Description	List Price
1	U1218L-1EC2EH	1218 Fan Coil Unit, 230V, EC, H Coil, TXV, Hot Water Coil	\$3,024
1	UPC-61-1218	Adapter, Supply, M1218	\$42
1	UPC-94	Drain Pan, Secondary, M1218	\$111
1	UPC-104-1218	Adapter, Return Air, M1218	\$101
1	UPC-04-1218	Return Air Duct, 12" x 10'L	\$138
1	UPC-01-1218	Filter, Grille/Return Box, 14x20	\$200
1	UPC-89M-6	Install Kit, Metal Plenum 2"	\$258
1	UPC-26C-6	Sound Attenuator, 2"x12' (6PCS)(72 Ft Total)	\$323

1.5 Ton Estimated Material List

QTY	Part #	Description	List Price
1	U1218L-1EC2EH	1218 Fan Coil Unit, 230V, EC, H Coil, TXV, Hot Water Coil	\$3,024
1	UPC-61-1218	Adapter, Supply, M1218	\$42
1	UPC-94	Drain Pan, Secondary, M1218	\$111
1	UPC-104-1218	Adapter, Return Air, M1218	\$101
1	UPC-04-1218	Return Air Duct, 12" x 10'L	\$138
1	UPC-01-1218	Filter, Grille/Return Box, 14x20	\$200
1	UPC-89M-6	Install Kit, Metal Plenum 2"	\$258
3	UPC-80M-1	Outlet Kit, Single outlet kit with 12' section of Sound Attenuator	\$111
1	UPC-26C-6	Sound Attenuator, 2"x12' (6PCS)(72 Ft Total)	\$323



2 Ton Estimated Material List

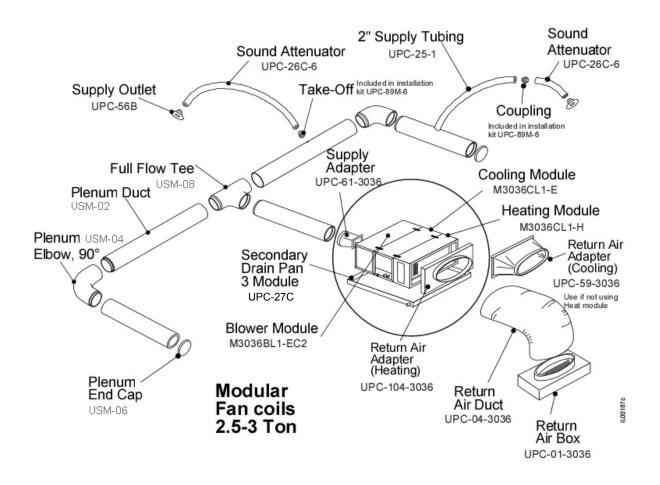
Each material list assumes the minimum of six 12' runs per ton.

QTY	Part #	Description	List Price
1	M2430BL1-EC2	Blower Module, EC Motor, 230V	\$1,788
1	M2430CL1-E	Module, H-coil, R-410A TXV, 2.5T Refrigerant Coil (6 Row) (HP)	\$1,511
1	M2430CL1-H	Module, Coil, Hot water, 2.5T (was MH2430HW)	\$935
1	UPC-61-2430	Adapter, Supply, 2430	\$42
1	UPC-20C	Drain Pan, Secondary, 3 Module, 2430	\$123
1	UPC-104-2430	Adapter, Return Air, Heat or Vertical Module 2430	\$172
1	UPC-04-2430	Return Air Duct, 14" x 10'L	\$170
1	UPC-01-2430	Filter, Grille/Return Box, 14" x 25"	\$215
2	UPC-89M-6	Install Kit, Metal Plenum 2"	\$258
2	UPC-26C-6	Sound Attenuator, 2"x12' (6PCS)(72 Ft Total)	\$323

2.5 Ton Estimated Material List using 2430

QTY	Part #	Description	List Price
1	M2430BL1-EC2	Blower Module, EC Motor, 230V	\$1,788
1	M2430CL1-E	Module, H-coil, R-410A TXV, 2.5T Refrigerant Coil (6 Row) (HP)	\$1,511
1	M2430CL1-H	Module, Coil, Hot water, 2.5T (was MH2430HW)	\$935
1	UPC-61-2430	Adapter, Supply, 2430	\$42
1	UPC-20C	Drain Pan, Secondary, 3 Module, 2430	\$123
1	UPC-104-2430	Adapter, Return Air, Heat or Vertical Module 2430	\$172
1	UPC-04-2430	Return Air Duct, 14" x 10'L	\$170
1	UPC-01-2430	Filter, Grille/Return Box, 14" x 25"	\$215
2	UPC-89M-6	Install Kit, Metal Plenum 2"	\$258
3	UPC-80M-1	Outlet Kit, Single outlet kit with 12' section of Sound Attenuator	\$111
2	UPC-26C-6	Sound Attenuator, 2"x12' (6PCS)(72 Ft Total)	\$323

TYPICAL SYSTEM SHEETS



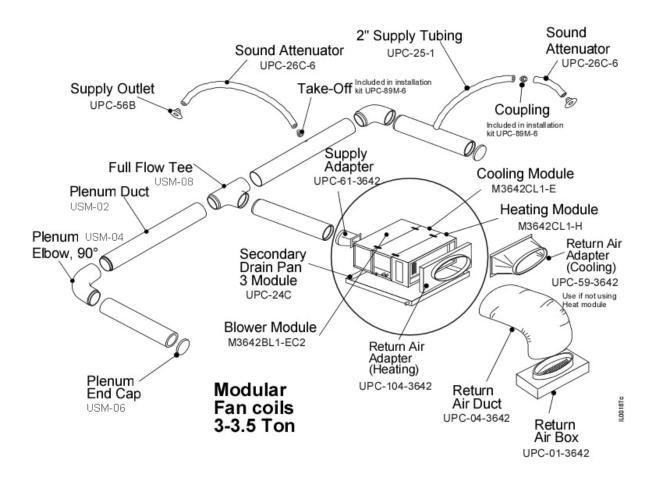
2.5 Ton Estimated Material List using 3036

Each material list assumes the minimum of six 12' runs per ton.

QTY	Part #	Description	List Price
1	M3036BL1-EC2	Blower Module, EC Motor, 230V	\$1,945
1	M3036CL1-E	Module, Refrigerant Coil (6 Row) (HP)	\$1,800
1	M3036CL1-H	Module, Coil, Hot water, 2.5-3.0T	\$1,170
1	UPC-61-3036	Adapter, Supply, 3036	\$45
1	UPC-27C	Drain Pan, Secondary, 3 Module, 3036	\$138
1	UPC-104-3036	Adapter, Return Air, Heat or Vertical Module 3036	\$196
1	UPC-04-3036	Return Air Duct, 16" x 10'L	\$243
1	UPC-01-3036	Filter, Grille/Return Box, 14" x 30"	\$248
2	UPC-89M-6	Install Kit, Metal Plenum 2"	\$258
3	UPC-80M-1	Outlet Kit, Single outlet kit with 12' section of Sound Attenuator	\$111
2	UPC-26C-6	Sound Attenuator, 2"x12' (6PCS)(72 Ft Total)	\$323

3 Ton Estimated Material List using 3036

QTY	Part #	Description	List Price
1	M3036BL1-EC2	Blower Module, EC Motor, 230V	\$1,945
1	M3036CL1-E	Module, Refrigerant Coil (6 Row) (HP)	\$1,800
1	M3036CL1-H	Module, Coil, Hot water, 2.5-3.0T	\$1,170
1	UPC-61-3036	Adapter, Supply, 3036	\$45
1	UPC-27C	Drain Pan, Secondary, 3 Module, 3036	\$138
1	UPC-104-3036	Adapter, Return Air, Heat or Vertical Module 3036	\$196
1	UPC-04-3036	Return Air Duct, 16" x 10'L	\$243
1	UPC-01-3036	Filter, Grille/Return Box, 14" x 30"	\$248
3	UPC-89M-6	Install Kit, Metal Plenum 2"	\$258
3	UPC-26C-6	Sound Attenuator, 2"x12' (6PCS)(72 Ft Total)	\$323



3 Ton Estimated Material List using 3642

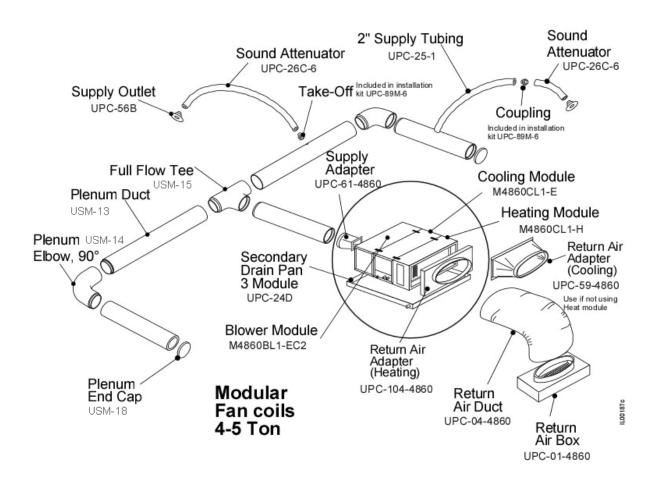
Each material list assumes the minimum of six 12' runs per ton.

QTY	Part #	Description	List Price
1	M3642BL1-EC2	Blower Module, EC Motor, 230V	\$2,014
1	M3642CL1-E	Module, Refrigerant Coil (6 Row) (HP)	\$1,873
1	M3642CL1-H	(Same As MH3660HW) Module, Heating (w/ Hot Water Coil)	\$1,298
1	UPC-61-3642	Adapter, Supply, 3642	\$45
1	UPC-24C	Drain Pan, Secondary, 3 Module, 3642	\$145
1	UPC-104-3642	Adapter, Return Air, Heat or Vertical Module 3642	\$210
1	UPC-04-3642	Return Air Duct, 18" x 10'L	\$243
1	UPC-01-3642	Filter, Grille/Return Box, 14" x 30"	\$248
3	UPC-89M-6	Install Kit, Metal Plenum 2"	\$258
3	UPC-26C-6	Sound Attenuator, 2"x12' (6PCS)(72 Ft Total)	\$323

3.5 Ton Estimated Material List

QTY	Part #	Description	List Price
1	M3642BL1-EC2	Blower Module, EC Motor, 230V	\$2,014
1	M3642CL1-E	Module, Refrigerant Coil (6 Row) (HP)	\$1,873
1	M3642CL1-H	(Same As MH3660HW) Module, HEATING (w/ Hot Water Coil)	\$1,298
1	UPC-61-3642	Adapter, Supply, 3642	\$45
1	UPC-24C	Drain Pan, Secondary, 3 Module, 3642	\$145
1	UPC-104-3642	Adapter, Return Air, Heat or Vertical Module 3642	\$210
1	UPC-04-3642	Return Air Duct, 18" x 10'L	\$243
1	UPC-01-3642	Filter, Grille/Return Box, 14" x 30"	\$248
3	UPC-89M-6	Install Kit, Metal Plenum 2"	\$258
3	UPC-80M-1	Outlet Kit, Single outlet kit with 12' section of Sound Attenuator	\$111
3	UPC-26C-6	Sound Attenuator, 2"x12' (6PCS)(72 Ft Total)	\$323

TYPICAL SYSTEM SHEETS



4 Ton Estimated Material List

Each material list assumes the minimum of six 12' runs per ton.

QTY	Part #	Description	List Price
1	M4860BL1-EC2	Blower Module, EC Motor, 230V	\$2,129
1	M4860CL1-E	Module, Refrigerant Coil (6 Row) (HP)	\$2,412
1	M4860CL1-H	(Same as MH3660HW) Module, Heating (w/ Hot Water Coil)	\$1,298
1	UPC-61-4860	Adapter, Supply, 4860	\$49
1	UPC-24D	Drain Pan, Secondary, 3 Module, 4860	\$161
1	UPC-104-4860	Adapter, Return Air, Heat or Vertical Module 4860	\$210
1	UPC-04-4860	Return Air Duct, 20" x 10'L	\$253
1	UPC-01-4860	Filter, Grille/Return Box, 24" x 30"	\$352
4	UPC-89M-6	Install Kit, Metal Plenum 2"	\$258
4	UPC-26C-6	Sound Attenuator, 2"x12' (6PCS)(72 Ft Total)	\$323

5 Ton Estimated Material List

QTY	Part #	Description	List Price
1	M4860BL1-EC2	Blower Module, EC Motor, 230V	\$2,129
1	M4860CL1-E	Module, Refrigerant Coil (6 Row) (HP)	\$2,412
1	M4860CL1-H	(Same as MH3660HW) Module, Heating (w/ Hot Water Coil)	\$1,298
1	UPC-61-4860	Adapter, Supply, 4860	\$49
1	UPC-24D	Drain Pan, Secondary, 3 Module, 4860	\$161
1	UPC-104-4860	Adapter, Return Air, Heat or Vertical Module 4860	\$210
1	UPC-04-4860	Return Air Duct, 20" x 10'L	\$253
1	UPC-01-4860	Filter, Grille/Return Box, 24" x 30"	\$352
5	UPC-89M-6	Install Kit, Metal Plenum 2"	\$258
5	UPC-26C-6	Sound Attenuator, 2"x12' (6PCS)(72 Ft Total)	\$323

Selection Guides for:

1218 Selection Guide Follow this simple 6 Step Guide to creating a Unico System

STEP ONE:

Choosing a Blower Type

3 Speed motor K3 HP 1700 RPM, 220V

EC Variable Speed Motor. Can be 110V or 220V, use "1" for 115v "2" for 220V iSeries Motor Variable Speed Motor, 220V ONLY Compatible with the iSeries Outdoor Unit, designated "EA2"

STEP TWO:

Choosing a Coil Module

Coil Module

TXV Coil, Can be used with any heat pump or air-conditioning condensing unit:

Item Code "E"

Chilled Water Coil: Item Code "C" Hot Water Coil: Item Code "H"

Example: If we want a single speed blower motor with only a TXV coil this would be code: U1218L-1 ST2EX (1 ST 2 is the Standard Blower, 220v) E is TXV Coil, X means

only one coil

STEP THREE

Choosing Return Air Components

The majority of Unico System installations only require one (1) central return.

There are three components of the return air:

The Return Air Box and Filter

The Return Air Adapter

The Return Air Duct

UPC-01-1218 Return Air Box. The Return Air Box consists of a filter and box, with "Q" bands for easy installation

UPC-04-1218 Return Air Duct. This consists of ten foot long return air duct made out a sound attenuating material that is anywhere from 12 to 20 inches inside diameter

UPC-104-1218 Return Air Adapter for Cooling Module. This is rectangular to elliptical connector that is fastened to the cooling coil module with self-tapping metal screws (included with coil module)

UPC-105-1218 Return Air Adapter for Heating Module. This includes a filter grille, this piece latches to the return air side of the air handler

STEP FOUR:

Choosing Accessories

Secondary Drain Pan: Designed to catch an emergency overflow from the primary drain pan. A must if installing the air handler in a horizontal position: UPC-94 Starting Collar: This piece is used to attach the plenum to the blower module of the air handler:

UPC-61-1218 Round Duct UPC-62-1218 Square Duct

STEP FIVE:

Choosing Supply Air

UPC-80M-1: Metal Plenum Single Installation Kit This consists of one (1) twelve (12) foot length of the sound attenuating tubing and the following items required to make an installation of a single outlet:

Coupling with gaskets and clamps
Two clamps for sound attenuating tubing
Two clamps for aluminum core tubing
Toggles and screws
Winter Supply Shut-off
Balancing orifice kit
Metal take-off with gaskets and tape ring

Gasket for standard white plastic take-off

Standard White Plastic Outlet

A MINIMUM OF SIX (6) outlets per ton are needed (Seven for the iSeries)

STEP SIX:

Choosing an outdoor unit to match your system

IF USING THE TXV COIL (either for air-conditioning or heat pump), use any major third party equipment manufacturer. To check the ratings go to www.ahri-directory.org, then go to "Air-Conditioning" you can select your matchup by going to "Outside Unit" of your choice, then "Indoor Unit" of Unico. If there is no matchup, please call our customer service department at 1-800-527-0896 to check the specifications

IF USING THE iSERIES BY UNICO, you must select the proper matchup from Bulletin 30-127 page one. For example a U1218 is a "B" size and it can be used with the IS18, IS24, IS30 or IS36 as a single split.

EXAMPLE PARTS LIST

We have a customer who wants a one and one-half ton heat pump with a hot water coil. The air handler is installed horizontally, using the variable speed motor and no supply runs are more than twelve feet. Here would be a material list.

IF Using a TXV Coil

1	U1218L-1EC1EH	Fan Coil Module with Variable speed motor, heat pump coil and hot water heating coil
1	UPC-01-1218	Return Air Box with filter and grille, 14" x 20"
1	UPC-104-1218	Return Air Adapter for 12" duct
1	UPC-04-1218	Return Air Duct, 12" D X 10 feet
1	UPC-94	Secondary Drain Pan
9	UPC-80M-1	Single Installation Kit, with tubing
1	ASX160181F	Amana One and One Half Ton Heat Pump*
iSe	ries by Unico	
1	U1218L-1EA2AX	Fan Coil Module for iSeries with Heat Pump Coil
1	LIPC_01_1218	Poturn Air Box with filter and grillo 14" x 20"

1 UPC-01-1218 Return Air Box with filter and grille, 14" x 20
1 UPC-104-1218 Return Air Adapter for 12" duct
1 UPC-04-1218 Return Air Duct, 12" D X 10 feet

1 UPC-94 Secondary Drain Pan

9 UPC-80M-1 Single Installation Kit, with tubing 1 IS18G50 iSeries outdoor inverter Unit

Plus you will need all accessories as with any other A/C System such as Disconnect Box, Thermostat (if using the iSeries be sure to use a 2 stage heat pump thermostat), Tape, Line Set, Etc.

*Used for example only. Unico air handlers match up with the outdoor units of all manufacturers. Call Unico Customer Service for all match ups.

2430 Selection Guide Follow this simple 7 Step Guide to creating a Unico System

STEP ONE:

Choosing a Blower Module

Choose one, all modules are compatible with any major condensing unit/heat pump manufacturer (except iSeries, which MUST be paired an iSeries outdoor unit)

- Single Speed Motor: M2430BL1-ST2 (Single Speed, 1750 RPM, PSC blower with rheostat)
- Variable Speed Motor: True variable speed EC motor, available in either 110V or 220V, can use default settings or be programmed with a laptop computer)

110V M2430BL1-EC1 220V M2430BL1-EC2

 iSeries Motor: EC Motor designed to work with the iSeries inverter outdoor unit M2430BL1-EA2

STEP TWO:

Choosing a Coil Module

Choose one, this is the cooling module, although it can be used for heating with the use of a heat pump compatible with any major condensing unit/heat pump manufacturer, except iSeries which MUST be paired with an iSeries outdoor unit

- Air Conditioning Coil 4-Row Deep: Uses externally balanced TXV, has two bi metal switches to prevent the evaporator coil from freezing and liquid refrigerant from slugging the compressor: M2430CL1-B
- Heat Pump Coil 6-Row Deep: Uses externally balanced TXV, has two bi metal switches to prevent the liquid refrigerant from slugging the compressor, has two additional rows as an accumulator to handle different charge in heating and cooling season: M2430CL1-E
- iSeries Coil Designed specifically for the iSeries outdoor unit, it uses flare fittings and does not have a TXV, and instead the EEV in the outdoor unit which is used to monitor the flow of refrigerant: M2430CL1-A

STEP THREE:

Choosing your return air components

The majority of Unico System installations only require one (1) central return. There are three components of the return air:

The Return Air Box and Filter

The Return Air Adapter

The Return Air Duct

- UPC-01-2430 Return Air Box. The Return Air Box consists of a filter and box, with "Q" bands for easy installation
- UPC-04-2430 Return Air Duct. This consists of ten foot long return air duct made out a sound attenuating material that is 14 inches inside diameter
- UPC-59-2430 Return Air Adapter for Cooling Module. This is rectangular to elliptical connector that is fastened to the cooling coil module with self-tapping metal screws (included with coil module)
- UPC-104-2430 Return Air Adapter for Heating Module. This is a latching adapter that clips to the hot water heating module, the other end then attaches with the "Q" bands included in the return air box
- M2430R1 Multiple Return Air Box: This item attaches to the cooling module or hot water module with the suitcase latches and flanges as other modules. It includes a pleated filter that is easily accessible from either end.

STEP FOUR

Choosing any needed accessories

- Secondary Drain Pan: Designed to catch an emergency overflow from the primary drain pan. A must if
 installing the air handler in a horizontal position: UPC-20B (two modules)
 UPC-20C (three modules)
- Starting Collar: This piece is used to attach the plenum to the blower module of the air handler: UPC-61-2430 Round Duct UPC-62-2430 Square Duct
- Vertical Stand: M2430V1: This stand has a pleated filter grille and space for a hot water coil. It also contains a spacer and fill plate to be placed between the blower module and coil module

STEP FIVE:

Choosing Supply Air

UPC-80M-1: Metal Plenum Single Installation Kit: This consists of one (1) twelve (12) foot length of the sound attenuating tubing and the following items required to make an installation of a single outlet:

Standard White Plastic Outlet

Coupling with gaskets and clamps

Two clamps for sound attenuating tubing

Two clamps for aluminum core tubing

Toggles and screws

Winter Supply Shut-off

Balancing orifice kit

Metal take-off with gaskets and tape ring

Gasket for standard white plastic take-off

A MINIMUM OF SIX (6) outlets per ton are needed (seven for the iSeries)

STEP SIX:

Choosing an outdoor unit to match your system:

IF USING THE TXV COIL (either for air-conditioning or heat pump), use any major third party equipment manufacturer. To check the ratings go to www.ahridirectory.org, then go to "Air-Conditioning" you can select your matchup by going to "Outside Unit" of your choice, then "Indoor Unit" of Unico. If there is no matchup, please call our customer service department at 1-800-527-0896 to check the specifications

IF USING THE iSERIES BY UNICO, you must select the proper matchup from Bulletin 30-127 page one. For example a M2430 is a "C" size and it can be used with the IS24, IS30 or IS36 as a single split.

STEP SEVEN:

Consider an Alternative Air Handler

Vertical Air Handler: V2430, this is a one piece, painted unit that contains the variable speed blower motor, cooling coil and a space for an optional hot water heating coil. It is a fast and easy alternative to using the Vertical Stand

EXAMPLE PARTS LIST

We have a customer who wants a two ton air conditioner. The air handler is installed horizontally, using the variable speed motor and no supply runs are more than twelve feet. Here would be a material list

Qty.	Model Number	Description
1	M2430BL1-EC2	2 to 2 ½ Ton Variable Speed Blower for 230V power
1	M2430CL1-B	2 to 2 ½ Ton Refrigerant Coil (4 Row) for A/C
1	UPC-01-2430	Return Air Box with Grille and Filter
1	UPC-04-2430	Return Air Duct, R 4.2 14"D x 10 feet
1	UPC-59-2430	Return Air Adapter
1	UPC-20B	Secondary Drain Pan
1	UPC-61-2430	Starting Collar for Round Duct
12	UPC-80M-1	Metal Plenum Single Installation Kit
1	Amana Model ASAC-16	0241B Condensing Unit (Made by Daikin, Inc.)*

IF OUR CHOICE WAS THE iSeries by Unico we would have the following bill of material

		,
Qty.	Model Number	Description
1	M2340BL1-EA2	2 to 2 ½ Ton Blower Module for iSeries
1	M2430CL1-A	2 to 2 ½ Ton Coil Module for iSeries
1	UPC-01-2430	Return Air Box with Grille and Filter
1	UPC-04-2430	Return Air Duct, R 4.2, 14" D X 10 feet
1	UPC-59-2430	Return Air Adapter
1	UPC-20B	Secondary Drain Pan
1	UPC-61-2430	Starting Collar for Round Duct
12	UPC-80M-1	Metal Plenum Single Installation Kit
1	IS2465	iSeries Outdoor Unit

Plus you will need all accessories as with any other A/C System such as Disconnect Box, Thermostat (if using the iSeries be sure to use a 2 stage heat pump thermostat), Tape, Line Set, Etc.

^{*}Used for example only. Unico air handlers match up with the outdoor units of all manufacturers. Call Unico Customer Service for all match ups.

3036 Selection Guide Follow this simple 7 Step Guide to creating a Unico System

STEP ONE:

Choosing a Blower Module

Choose one, all modules are compatible with any major condensing unit/heat pump manufacturer (except iSeries, which MUST be paired an iSeries outdoor unit)

- Single Speed Motor: M3036BL1-ST2 (Single Speed, 1750 RPM, PSC blower with rheostat)
- Variable Speed Motor: True variable speed EC motor, available in either 115V or 230V, can use default settings or be programmed with a laptop computer)

110V M3036BL1-EC1 220V M2430 BL1-EC2

• iSeries Motor: EC Motor designed to work with the iSeries inverter outdoor unit M3036BL1-EA2

STEP TWO:

Choosing a Coil Module

Choose one, this is the cooling module, although it can be used for heating with the use of a heat pump compatible with any major condensing unit/heat pump manufacturer, except iSeries which MUST be paired with an iSeries outdoor unit

- Air Conditioning Coil 4-Row Deep: Uses externally balanced TXV, has two bi metal switches to prevent the evaporator coil from freezing and liquid refrigerant from slugging the compressor: M3036CL1-B
- Heat Pump Coil 6-Row Deep: Uses externally balanced TXV, has two bi metal switches to prevent the liquid refrigerant from slugging the compressor, has two additional rows as an accumulator to handle different charge in heating and cooling season: M3036CL1-E
- iSeries Coil Designed specifically for the iSeries outdoor unit, it uses flare fittings and does not have a TXV, and instead the EEV in the outdoor unit is used to monitor the flow of refrigerant: M3036CL1-A

STEP THREE:

Choosing your return air components

The majority of Unico System installations only require one (1) central return. There are three components of the return air:

The Return Air Box and Filter

The Return Air Adapter

The Return Air Duct

- UPC-01-3036 Return Air Box. The Return Air Box consists of a filter and box, with "Q" bands for easy installation
- UPC-04-3036 Return Air Duct. This consists of ten foot long return air duct made out a sound attenuating material that is 16 inches inside diameter
- UPC-59-3036 Return Air Adapter for Cooling Module. This is rectangular to elliptical connector that is fastened to the cooling coil module with self-tapping metal screws (included with coil module)
- UPC-104-3036 Return Air Adapter for Heating Module. This is a latching adapter that clips to the hot water heating module, the other end then attaches with the "Q" bands included in the return air box
- M3036R1 Multiple Return Air Box: This item attaches to the cooling module or hot water module with the suitcase latches and flanges as other modules. It includes a pleated filter that is easily accessible from either end.

STEP FOUR

Choosing any needed accessories

- Secondary Drain Pan: Designed to catch an emergency overflow from the primary drain pan. A must if installing the air handler in a horizontal position: UPC-27B (two modules) UPC-27C (three modules)
- Starting Collar: This piece is used to attach the plenum to the blower module of the air handler: UPC-61-3036 Round Duct

UPC-62-3036 Square Duct

• Vertical Stand: M3036V1: This stand has a pleated filter grille and space for a hot water coil. It also contains a spacer and fill plate to be placed between the blower module and coil module

STEP FIVE:

Choosing Supply Air

UPC-80M-1: Metal Plenum Single Installation Kit: This consists of one (1) twelve (12) foot length of the sound attenuating tubing and the following items required to make an installation of a single outlet:

Standard White Plastic Outlet Coupling with gaskets and clamps

Two clamps for sound attenuating tubing

Two clamps for aluminum core tubing

Toggles and screws Winter Supply Shut-off Balancing orifice kit

Metal take-off with gaskets and tape ring Gasket for standard white plastic take-off

A MINIMUM OF SIX (6) outlets per ton are needed (Seven for the iSeries)

STEP SIX;

Choosing an outdoor unit to match your system:

IF USING THE TXV COIL (either for air-conditioning or heat pump), use any major third party equipment manufacturer. To check the ratings go to www.ahridirectory.org, then go to "Air-Conditioning" you can select your matchup by going to "Outside Unit" of your choice, then "Indoor Unit" of Unico. If there is no matchup, please call our customer service department at 1-800-527-0896 to check the specifications

IF USING THE iSERIES BY UNICO, you must select the proper matchup from Bulletin 30-127 page one. For example a M3036 is a "D" size and it can ONLY be used with the IS36 as a single split.

STEP SEVEN:

Consider an Alternative Air Handler

Vertical Air Handler: V3036, this is a one piece, painted unit that contains the variable speed blower motor, cooling coil and a space for an optional hot water heating coil. It is a fast and easy alternative to using the Vertical Stand

EXAMPLE PARTS LIST

We have a customer who wants a two ton air conditioner. The air handler is installed horizontally, using the variable speed motor and no supply runs are more than twelve feet. Here would be a material list

Qty. Model Number Description

1 M3036BL1-EC2 2 ½ to 3 Ton Variable Speed Blower for 230V power 1 M3036CL1-B 2 ½ to 3 Ton Refrigerant Coil (4 Row) for A/C

1 UPC-01-3036 Return Air Box with Grille and Filter 1 UPC-04-3036 Return Air Duct, R 4.2 16"D x 10 feet

1 UPC-59-3036 Return Air Adapter 1 UPC-27B Secondary Drain Pan

1 UPC-61-3036 Starting Collar for Round Duct
18 UPC-80M-1 Metal Plenum Single Installation Kit

Amana Model ASAC-160301B Condensing Unit (Made by Daikin, Inc.)*

IF OUR CHOICE WAS THE iSeries by Unico we would have the following bill of material

M3036BL1-EA2
M3036CL1-A
UPC-01-3036
UPC-04-3036
Q to 2 ½ Ton Blower Module for iSeries
Return Air Box with Grille and Filter
Return Air Duct, R 4.2, 16" D X 10 feet

1 UPC-59-3036 Return Air Adapter1 UPC-27B Secondary Drain Pan

1 UPC-61-3036 Starting Collar for Round Duct
18 UPC-80M-1 Metal Plenum Single Installation Kit

I IS36G110 3 ton iSeries Outdoor Unit

Plus you will need all accessories as with any other A/C System such as Disconnect Box, Thermostat (if using the iSeries be sure to use a 2 stage heat pump thermostat), Tape, Line Set, Etc.

*Used for example only. Unico air handlers match up with the outdoor units of all manufacturers. Call Unico Customer Service for all match ups.

3642 Selection Guide Follow this simple 7 Step Guide to creating a Unico System

STEP ONE:

Choosing a Blower Module

Choose one, all modules are compatible with any major condensing unit/heat pump manufacturer (except iSeries, which MUST be paired an iSeries outdoor unit)

- Single Speed Motor: M3642BL1-ST2 (Single Speed, 1750 RPM, PSC blower with rheostat)
- Variable Speed Motor: True variable speed EC motor, available in either 115V or 230V, can use default settings or be programmed with a laptop computer)

110V M3642BL1-EC1 220V M3642BL1-EC2

STEP TWO:

Choosing a Coil Module

Choose one, this is the cooling module, although it can be used for heating with the use of a heat pump compatible with any major condensing unit/heat pump manufacturer, except iSeries which MUST be paired with an iSeries outdoor unit

- Air Conditioning Coil 4-Row Deep: Uses externally balanced TXV, has two bi metal switches to prevent the evaporator coil from freezing and liquid refrigerant from slugging the compressor: M3642CL1-B
- Heat Pump Coil 6-Row Deep: Uses externally balanced TXV, has two bi metal switches to prevent the liquid refrigerant from slugging the compressor, has two additional rows as an accumulator to handle different charge in heating and cooling season: M3642CL1-E

STEP THREE:

Choosing your return air components

The majority of Unico System installations only require one (1) central return. There are three components of the return air:

The Return Air Box and Filter

The Return Air Adapter

The Return Air Duct

- UPC-01-3642 Return Air Box. The Return Air Box consists of a filter and box, with "Q" bands for easy installation
- UPC-04-3642 Return Air Duct. This consists of ten foot long return air duct made out a sound attenuating material that is 18 inches inside diameter
- UPC-59-3642 Return Air Adapter for Cooling Module. This is rectangular to elliptical connector that is fastened to the cooling coil module with self-tapping metal screws (included with coil module)
- UPC-104-3642 Return Air Adapter for Heating Module. This is a latching adapter that clips to the hot water heating module, the other end then attaches with the "Q" bands included in the return air box
- M3642R1 Multiple Return Air Box: This item attaches to the cooling module or hot water module with the suitcase latches and flanges as other modules. It includes a pleated filter that is easily accessible from either end.

STEP FOUR

Choosing any needed accessories

- Secondary Drain Pan: Designed to catch an emergency overflow from the primary drain pan.
 A must if installing the air handler in a horizontal position: UPC-24B (two modules) UPC-24C (three modules)
- Starting Collar: This piece is used to attach the plenum to the blower module of the air handler: UPC-61-3642 Round Duct

UPC-62-3642 Square Duct

• Vertical Stand: M3642V1: This stand has a pleated filter grille and space for a hot water coil. It also contains a spacer and fill plate to be placed between the blower module and coil module

STEP FIVE:

Choosing Supply Air

UPC-80M-1: Metal Plenum Single Installation Kit: This consists of one (1) twelve (12) foot length of the sound attenuating tubing and the following items required to make an installation of a single outlet:

Standard White Plastic Outlet

Coupling with gaskets and clamps

Two clamps for sound attenuating tubing

Two clamps for aluminum core tubing

Toggles and screws

Winter Supply Shut-off

Balancing orifice kit

Metal take-off with gaskets and tape ring Gasket for standard white plastic take-off

A MINIMUM OF SIX (6) outlets per ton are needed (Seven for the iSeries)

STEP SIX;

Choosing an outdoor unit to match your system:

IF USING THE TXV COIL (either for air-conditioning or heat pump), use any major third party equipment manufacturer. To check the ratings go to www.ahridirectory.org, then go to "Air-Conditioning" you can select your matchup by going to "Outside Unit" of your choice, then "Indoor Unit" of Unico. If there is no matchup, please call our customer service department at 1-800-527-0896 to check the specifications

STEP SEVEN:

Consider an Alternative Air Handler

Vertical Air Handler: V3642, this is a one piece, painted unit that contains the variable speed blower motor, cooling coil and a space for an optional hot water heating coil. It is a fast and easy alternative to using the Vertical Stand

EXAMPLE PARTS LIST

We have a customer who wants a three and one-half ton air conditioner. The air handler is installed horizontally, using the variable speed motor and no supply runs are more than twelve feet. Here would be a material list

Qtv. Model Number Description

1 M3642BL1-EC2 3 to 3 ½ Ton Variable Speed Blower for 230V power

1 M3642CL1-B 3 to 3 ½ Ton Refrigerant Coil (4 Row) for A/C

1 UPC-01-3642 Return Air Box with Grille and Filter
1 UPC-04-3642 Return Air Duct. R 4.2 18"D x 10 feet

1 UPC-59-3642 Return Air Adapter1 UPC-24B Secondary Drain Pan

1 UPC-61-3642 Starting Collar for Round Duct
21 UPC-80M-1 Metal Plenum Single Installation Kit

1 Amana Model ASAC-160421B Condensing Unit (Made by Daikin, Inc.)

Plus you will need all accessories as with any other A/C System such as Disconnect Box, Thermostat (if using the iSeries be sure to use a 2 stage heat pump thermostat), Tape, Line Set, Etc.

*Used for example only. Unico air handlers match up with the outdoor units of all manufacturers. Call Unico Customer Service for all match ups.

4860 Selection Guide Follow this simple 6 Step Guide to creating a Unico System

STEP ONE:

Choosing a Blower Module

Choose one, all modules are compatible with any major condensing unit/heat pump manufacturer (except iSeries, which MUST be paired an iSeries outdoor unit)

- Single Speed Motor: M4860BL1-ST2 (Single Speed, 1750 RPM, PSC blower with rheostat)
- Variable Speed Motor: True variable speed EC motor, available in either 115V or 230V, can use default settings or be programmed with a laptop computer)

110V M4860BL1-EC2 220V M4860 BL1-EC2

STEP TWO:

Choosing a Coil Module

Choose one, this is the cooling module, although it can be used for heating with the use of a heat pump compatible with any major condensing unit/heat pump manufacturer, except iSeries which MUST be paired with an iSeries outdoor unit

- Air Conditioning Coil 3-Row Deep: Uses externally balanced TXV, has two bi metal switches to prevent the liquid refrigerant from slugging the compressor: M4860CL1-B
- Heat Pump Coil 4-Row Deep: Uses externally balanced TXV, has two bi metal switches to prevent the liquid refrigerant from slugging the compressor, has two additional rows as an accumulator to handle different charge in heating and cooling season: M4860CL1-E

All M4860 Coils have a spacer included to fit between the blower module and coil module, this is needed in both vertical and horizontal applications. If installing horizontally, please be sure to install the drip plate, included with the spacer

STEP THREE:

Choosing your return air components

The majority of Unico System installations only require one (1) central return. There are three components of the return air:

The Return Air Box and Filter

The Return Air Adapter

The Return Air Duct

- UPC-01-4860 Return Air Box. The Return Air Box consists of a filter and box, with "Q" bands for easy installation
- UPC-04-4860 Return Air Duct. This consists of ten foot long return air duct made out a sound attenuating material that is 20 inches inside diameter
- UPC-59-4860 Return Air Adapter for Cooling Module. This is rectangular to elliptical connector that is fastened to the cooling coil module with self-tapping metal screws (included with coil module)
- UPC-104-4860 Return Air Adapter for Heating Module. This is a latching adapter that clips to the hot water heating module, the other end then attaches with the "Q" bands included in the return air box
- M4860R1 Multiple Return Air Box: This item attaches to the cooling module or hot water module with the suitcase latches and flanges as other modules. It includes a pleated filter that is easily accessible from either end.

STEP FOUR

Choosing any needed accessories

- Secondary Drain Pan: Designed to catch an emergency overflow from the primary drain pan. A must if installing the air handler in a horizontal position: UPC-24B (two modules) UPC-24C (three modules)
- Starting Collar: This piece is used to attach the plenum to the blower module of the air handler: UPC-61-4860 Round Duct

UPC-62-4860 Square Duct

• Vertical Stand: M4860V1: This stand has a pleated filter grille and space for a hot water coil. It also contains a spacer and fill plate to be placed between the blower module and coil module

STEP FIVE:

Choosing Supply Air

UPC-80M-1: Metal Plenum Single Installation Kit: This consists of one (1) twelve (12) foot length of the sound attenuating tubing and the following items required to make an installation of a single outlet:

Standard White Plastic Outlet

Coupling with gaskets and clamps

Two clamps for sound attenuating tubing

Two clamps for aluminum core tubing

Toggles and screws

Winter Supply Shut-off

Balancing orifice kit

Metal take-off with gaskets and tape ring

Gasket for standard white plastic take-off

A MINIMUM OF SIX (6) outlets per ton are needed (Seven for the iSeries)

STEP SIX:

Choosing an outdoor unit to match your system:

IF USING THE TXV COIL (either for air-conditioning or heat pump), use any major third party equipment manufacturer. To check the ratings go to www.ahridirectory.org, then go to "Air-Conditioning" you can select your matchup by going to "Outside Unit" of your choice, then "Indoor Unit" of Unico. If there is no matchup, please call our customer service department at 1-800-527-0896 to check the specifications

EXAMPLE PARTS LIST

We have a customer who wants a three and one-half ton air conditioner. The air handler is installed horizontally, using the variable speed motor and no supply runs are more than twelve feet. Here would be a material list

Qty. Model Number Description

1 M4860BL1-EC2 4 to 5 Ton Variable Speed Blower for 230V power

M4860CL1-B
 UPC-01-4860
 UPC-04-4860
 Heturn Air Box with Grille and Filter
 UPC-04-4860
 Return Air Duct, R 4.2 20"D x 10 feet

1 UPC-59-4860 Return Air Adapter
1 UPC-24B Secondary Drain Pan

1 UPC-61-4860 Starting Collar for Round Duct
35 UPC-80M-1 Metal Plenum Single Installation Kit

1 Amana Model ASAC-160601B Condensing Unit (Made by Daikin, Inc.)

Plus you will need all accessories as with any other A/C System such as Disconnect Box, Thermostat (if using the iSeries be sure to use a 2 stage heat pump thermostat), Tape, Line Set, Etc.

*Used for example only. Unico air handlers match up with the outdoor units of all manufacturers. Call Unico Customer Service for all match ups.

INSTALLATION GUIDE

FOLLOW THESE SIMPLE RULES WHEN DESIGNING A UNICO SYSTEM:

This instruction is a summary of the basic rules and applies to most applications. For applications outside the scope of this guide refer to the detailed design rules in the installation and design bulletins.

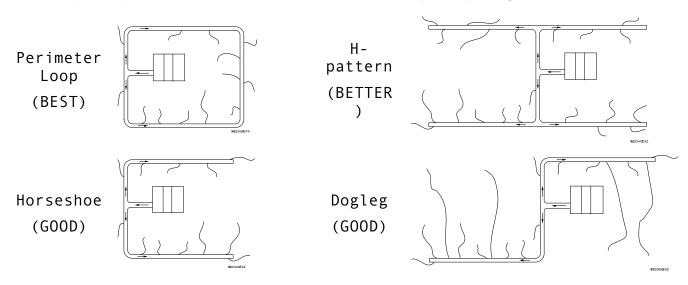
DUCT DESIGN

Outlets

- 6 Per Ton (1.7 per kW). The minimum number of 2-inch (50 mm) outlets is six outlets per nominal ton. This is based on 240 CFM per nominal ton and 40 CFM per outlet. The number of outlets depends on amount of air required and the desired sound level (based on the maximum outlet airflow). To make quieter, use more outlets, switch to the 2.5 inch (63 mm) outlets, or reduce the airflow (but never below 200 CFM per nominal ton [27 L/s per kW]).
- 250 CFM per nominal ton. The Unico System is rated with 250 CFM per nominal ton [33 L/s per kW] for air conditioning applications and 275 CFM per ton [36 L/s per kW] for heat pumps. The minimum airflow for proper operation is 200 CFM per ton [27 L/s per kW]. Chilled and hot water coils are not rated at a specific airflow; refer to Bulletin 20-20.3.
- 20% Rule. A 2.5 inch (63 mm) outlet delivers 20% more air or is 20% quieter. Your choice.
- 10% Rule. For supply ducts longer than 10 feet (3 meter), the air is reduced in that run by 10% for every 5 feet over 10 (every 1.5 meter over 3 meters). For example, a 30 foot [9 meter] run is 60% of an outlet that is 10 foot [3 m] yielding a reduction of 40% (30-10=20, 20÷5=4, 4×10=40%). Refer to Bulletin 20-54 for more information.
- Consider Traffic Pattern. Place outlets out of traffic pattern. A corner, 5-inch [127 mm] from each wall, is a good location, or along walls, or in soffits blowing horizontally. Consider floor outlets (with screens) for units located in basement. Slotted outlets can be used for high wall locations or in ceilings where there is insufficient room for bending tubing.
- **Allow for Aspiration.** Locate outlets so the air stream does not impinge on any objects or people at least 3 feet [1 m] away. Use outlet deflectors and outlet balancing orifices sparingly as they disrupt the aspiration.
- Minimize Length, Minimize Restriction. Keep the supply tubing length as close to 10 feet [3 m] as possible and never less than 6 feet [1.8 meters]. Use the fewest number of bends as possible. Maximize the radius of any bends making sure the bend in the sound attenuator tubing near the outlet is at least 6-inch [152 mm] inside radius.

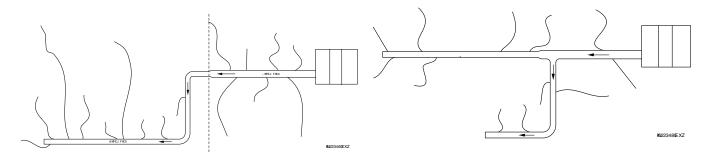
Plenum

- Maximize Length, Minimize Restriction. Run main trunk (plenum) as long as possible; it is better to lengthen the plenum if you can shorten even two supply tubing runs. Use full flow tees with turning vanes (when applicable) and full flow elbows. The maximum total plenum length is 150 ft [45 m]; consider the first tee equal to 30 ft [9 m] and elbows equal to 15 ft [4.6 m]. Refer to Bulletin 40-40 for more detail.
- Use a Plenum Tee. (Best Method). Use a plenum tee at least 24 inches [610 mm] off unit. For the 4860 unit, use 10-inch [254 mm] diameter with a reducer tee; then use 9-inch [229 mm] both directions. For the 3036 and 3642 unit, use 9-inch [229 mm] then 7-inch [178 mm] both directions. For the 1218 and 2430, use 7-inch [178 mm] throughout.



• **60/40 Rule.** When using a tee split the flow as close to 50/50 as possible — no more than 60/40. Always use a turning vane.

• Shotgun Pattern. For the 4860 unit, use 10-inch [254 mm] duct for the first 30 percent; then reduce to 9-inch [229 mm]. For the 3036 and 3642 unit, use 9-inch [229 mm] for the first 40 percent; then reduce to 7-inch [178 mm]. For the 1218 and 2430 unit, use 7-inch [178 mm] throughout. Do not reduce the duct size if plenum is longer than 100 ft [30 m].



- **70/30 Rule.** Turn the tee 90° to make a side branch with no more than 30 percent of the air. Do not use a turning vane
- **24-inch (610 mm) Rule.** Use at least 24-inch [610 mm] of straight plenum before any fitting, such as an elbow, tee, or takeoff. Avoid elbows directly off units.
- **Space Takeoffs Evenly.** Maintain distance between takeoffs as evenly as possible. Space the takeoffs at least 6-inch [152 mm] from each other and 12-inch [305 mm] from end cap.

SOUND

- Sound Attenuators. Always use at least 3 feet [1 m] of the Unico supplied sound attenuator supply tubing (UPC-26C) at the end of each run. For runs up to 12 feet [3658 mm], you may use the sound attenuator for the entire run. For greater lengths, use the aluminum core supply tubing (UPC-25) with a 3 foot [1 m] sound attenuator at the end.
- **35 CFM per outlet.** Outlet sound is a based on the amount of air from the outlet. The recommended airflow for good noise attenuation from a 2-inch (50 mm) outlet is a maximum of 35 CFM [16.5 L/s]. Use this number, adjusted for duct length, plenum static pressure, duct size, and balancing orifices, to fine-tune number of outlets. Refer to Bulletin 20-54 for more detail.
- Return Air Duct Attenuation. Use the Unico acoustical Return Air Duct (UPC-04), fiberglass duct-board, or sheet metal with acoustical duct liner.
- **Isolation.** Isolate the air handler with foam rubber strips under the unit. Either hang the unit from the structure using angle iron framework under unit (do not hang directly with hooks in the cabinet) or set on a platform.

PIPING

- **Secondary Drain Pan.** Always use a secondary drain pan wherever overflow of condensate can cause water damage. Do not trap secondary drain line or connect to primary drainpipe. Place secondary drain line exit so that it is apparent when being used. For example, pipe the drain line so it drips on an outdoor windowsill and causes splashing to be noticed.
- Primary Drain. Always trap primary drain line and run drain line per local plumbing codes.
- **Refrigerant Lines.** Follow outdoor section manufacturer's instructions for running refrigerant lines. Size and trap per their instructions.

STARTUP - DO THIS BEFORE BOXING-IN THE DUCT WORK.

- Check for Full Flow. Inspect each outlet for full flow (except where balancing orifices are used or for long branch ducts); it should be approx. 35 CFM [17 L/s] per outlet. Investigate for blockage or kinks if flow is insufficient.
- **Check Outlet Airflow.** Check the airflow at each outlet with a Turbometer centered over the outlet. Add up the airflow for all outlets it should not differ by +/- 5% from the design airflow.
- Check Blower Airflow. For units with single speed motors, measure the amperage and voltage of the motor, then use the amperage table shipped with each air handler to determine the blower output. For variable speed motors, count the blinks to determine airflow. Compare the blower airflow and the outlet airflow. If the outlet airflow is significantly less than the blower airflow, check for system air leaks.
- Check Static Pressure (optional). Measure the external static pressure in plenum 2 feet [610 mm] from unit and before any fitting. Static pressure above 1.5 inches of water [0.37 kPa] may indicate restrictive plenum or not enough outlets. Correct as necessary.
- Check Refrigerant Charge. Charge unit per outdoor manufacturer's instructions and Unico's Installation instructions. For best results use the subcooling method during the cooling cycle. Heat pumps should be checked in both heating and cooling.

ISERIES

PRODUCT FEATURES

- Uses R410a
- All are equipped for heat pump operation
- Combines the Unico System and Multi-Split options with a single unit
- Inverter Technology
- Broad temperature range
- Quiet (48 dba or less)
- Cold draft protection
- Anti-frost protection
- Intelligent defrost
- Ability to zone with dampers
- Can use a wide variety of third-party thermostats or a wireless remote control
- Auxiliary Heat available with either hot water or electric furnace
- Combines all the efficiencies and performance of the inverter technology with all the features and benefits of the Unico System



IS18G050 Outdoor Inverter Unit, 1.5 Tons



U1218L-1EA2AX Air Handler

iseries outdoor units				
Model Number	IS18G50	IS24G65	IS30G80	IS36G110
Unit Dimensions	24 7/8" X 35 1/4" X 13 5/8"	30" X 40 5/8" X 15 3/4"	33" X 40 5/8" X 16 1/2"	42 1/8" X 47" X 15 3/4"
Box Dimenions	28" X 39" x 13.625"	35.5" x 45" x 16.5"	40" x 50" x 16.875"	49.25" x 50" x 16"
Weight (Lbs)	125	155	177	221
Decibel Rating	41 db	47 db	47 db	48 db
Refrigerant Line Diameter	1/4" (2) x 3/8" (2)	1/4" (2) X 3/8" (2) x 1/2"	1/4" X 3/8"(2) X 1/2" (1)	1/4" X 3/8" (3) X 1/2" (1)
Power Supply		208-230 volts 1 Phase 60 Hz		
Full Load Current (Amps)	13	16	20	28
Maximum Overcurrent Protection	(MOP) 20	25	35	50
Refrigerant Charge (R410A) lbs	2.9	6	6.4	7.5
Capacity in Btu's (at 95F)	18,400	22,000	30,150	38,100
SEER Rating*	20	20	20	20



M2430BL1-EA2 Blower Module



IS12MPA High Wall Split Unit, One Ton



IS24MPA High Wall Split Unit, Two Tons



M2430CL1-A Coil Module



IS24G065 Outdoor Inverter Unit, 2 Tons



M3036BL1-EA2 Blower Module



IS24G085 Outdoor Inverter Unit, 2.5 Tons



IS24G110 Outdoor Inverter Unit, 3 Tons



M3036CL1-A Coil Module

iseries indoor units						
Model Number	IS12MPA	IS24MPB	U1218-1EA2AX	M2430BL1-EA2 + M2430CL1-A	M3036BL1-EA2 + M3036CL1-A	
Size Ratings	А	В	В	С	D	
Unit Dimensions	8" x 31" x 10"	9" x 39" x 11"	20" x 38" x 12"	17.5" x 25" x 13.75"	17.5" x 30" x 13.75"	
Box Dimensions	11" X 32" X 9"	12" x 40" x 10"	27" x 43" X 13"	29" X 16" X 20" + 29" X 16" X 20"	34" X 16" X 20" + 34" X 16" X 20"	
Weight (Lbs)	18	27	92	60 + 73	73 + 78	
Decibel Rating				56	56	
Refrigerant Line Diameter	1/4" X 3/8"	1/4" X 1/2"	1/4" X 1/2"	1/4" X 1/2"	3/8" X 5/8"	
Power Supply 208-	230 volts 1 Phase 60	Hz				
Full Load Current (Amps)	.5 amps	.5 Amps	1.57	3	6.2	
Maximum Overcurrent Protection (MOP)	Fused	Fused	15	15	15	
Capacity in Btu's (at 95F)	22,000	30,150	38,100			
SEER Rating*	20*	20*	18*	18*	18*	

EC BLOWERS

PRODUCT FEATURES

- Balanced Wheels
- Direct Drive Motor
- Shaft Key connection
- Quick Motor Replacement
- Separate Control Box
- Control Voltage Transformer
- Screw terminal connections
- Heat Pump AFS bypass
- Boiler Relay
- Six (6) modes of operation
- Adjustable low airflow mode
- Efficient Ventilation Mode
- Point-to-Point Wiring
- Electric Heater Fan interlock
- Electric heater stage
 3 lockout protection

- Chilled water relay
- Fan cycling
- EAC, ERV, or HRV relay
- Potable water circulation
- Humidifier compatibility
- Soft-start and soft-stop
- Constant airflow
- Low airflow indicator
- Preset airflow rate
- Laptop configurable
- Laptop troubleshooting
- Optimized for zone damper systems
- Optimized for efficiency and sound

Model Number	U1218+	M2430BL1-EC2	M3036BL1-EC2	M3642BL1-EC2	M4860BL1-EC2	
Unit Dimensions	12" X 20" X 38"	17.5" x 25" x 13.75"	17.5" x 30" x 13.75"	17.5" x 38" x 13.75"	17.5" x 38" x 13.75"	
Box Dimensions	27" x 43" x 13"	29"X16"X20"	34"X 16" X20"	42"X 16" X20"	42"X 16" X20"	
Weight (lbs)	91	62	73	73	73	
Decibel Rating		56	56	56	58	
Capacity	1 to 1 1/2 Tons	2 to 2 1/2 Tons	2 1/2 to 3 Tons	3 to 3 1/2 Tons	4 to 5 tons	
Refrigerant Line Sizes	3/8" X 5/8"	3/8" X 7/8"	3/8" X 7/8"	3/8" X 7/8"	3/8" X 7/8"	
Electrical Power	208/230 Volt Single Phase)				
Nominal Air Flow Rate in CFM	300	600	750	900	1250	
SEER	12*	12*	12*	12*	12*	
Decibel Rating Capacity Refrigerant Line Sizes Electrical Power Nominal Air Flow Rate in CFM	1 to 1 1/2 Tons 3/8" X 5/8" 208/230 Volt Single Phase 300	56 2 to 2 1/2 Tons 3/8" X 7/8" 600	56 2 1/2 to 3 Tons 3/8" X 7/8" 750	56 3 to 3 1/2 Tons 3/8" X 7/8" 900	58 4 to 5 tons 3/8" X 7/8"	

^{*} Will vary with Condenser Matchup



U1218L-1EC2EH 1218 Air Handler











STANDARD BLOWERS

PRODUCT FEATURES

- Balanced Wheels
- Direct Drive Motor
- Shaft Key connection
- Quick Motor Replacement
- Separate Control Box
- Control Voltage Transformer
- Adjustable restrictor plate
- Screw terminal connections
- Heat Pump AFS bypass
- Two (2) modes of operation
- Adjustable low airflow mode

STANDARD BLOWER MODULE

Model Number	U1218*	M2430BL1-ST2	M3036BL1-ST2	M3642BL1-ST2	M4860BL1-ST2
Unit Dimensions	12" X 20" X 38"	17.5" x 25" x 13.75"	17.5" x 30" x 13,75"	17.5" x 38" x 13.75"	17.5" x 38" x 13.75"
Box Dimensions	27" x 43" x 13"	29" X 16" X 20"	34" X 16" X 20"	42" X 16" X 20"	42" X 16" X 20"
Weight (lbs)	91	62	73	73	73
Capacity	1 to 1 1/2 Tons	2 to 2 1/2 Tons	2 1/2 to 3 Tons	3 to 3 1/2 Tons	4 to 5 tons
Refrigerant Line Sizes	3/8" X 5/8"	3/8" X 7/8"	3/8" X 7/8"	3/8" X 7/8"	3/8" X 7/8"
Electrical Power	208/230 Volt Single Phase				
Nominal Air Flow Rate in CFM	300	600	750	900	1250
SEER	12**	12**	12**	12**	12**

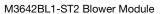
^{*} Many different cominations

^{**} Will vary with Condenser Matchup













HEAT PUMP COILS

PRODUCT FEATURES

- Slant coil for M2430, M3036 and M3642
- "A" Coil for M4860
- Internally mounted TXV easily accessible, uses chatleff thread connections
- Standard Unico System "latch" method
- High Efficiency heat transfer surface
- Two bi-metal switches to prevent freezing
- Stainless Steel Drain Pan
- Four row deep refrigerant coil for cooling only, six rows deep for heat pump, allows for greater temperature drop over the coil
- Compatible for use with R22/R-407C and R410A refrigerants
- Heat pump coil has a 24v relay switch that bypasses anti-frost mode during the heating cycle

REFRIGERANT (COOLING) COILS

Model Number	M2430CL1-E	M3036CL1-E	M3642CL1-E	M4860CL1-E
Unit Dimensions	17.5" x 25" x 13.75"	17.5" x 30" x 13.75"	17.5" x 38" x 13.75"	17.5" x 38" x 24"
Box Dimensions	29" X 16" X 20"	34" X 16" X 20"	42" X 16" X 20"	42" X 26" X 18"
Weight (lbs)	62	78	78	88
Capacity	2 to 2 1/2 Tons	2 1/2 to 3 Tons	3 to 3 1/2 Tons	4 to 5 tons
Refrigerant Line Sizes	3/8" X 7/8"	3/8" X 7/8"	3/8" X 7/8"	3/8" X 7/8"
Compatible Condenser Size in Tons	2 to 2 1/2 Tons	2 1/2 to 3 Tons	3 to 3 1/2 Tons	4 to 5 tons
SEER	12**	12**	12**	12**
Refrigerant Type	R410A or R22			
Condensate Connection	3/4"	3/4"	3/4"	3/4"

^{**} Will vary with Condenser Matchup

Note: Either type may be used with cooling only or with heat pump, please call Customer Service at 1-800-527-0896 for details

^{* &}quot;B" Coil is 4 Rows Deep/3 Row for 4860

^{* &}quot;E" Coil is 6 Rows Deep/4 Row for 4860









REFRIGERANT (COOLING) COILS

112111102111111 (00021110) 00120				
Model Number	M2430CL1-B	M3036CL1-B	M3642CL1-B	M4860CL1-B
Unit Dimensions	17.5" x 25" x 13.75"	17.5" x 30"x 13.75"	17.5" x 38" x 13.75"	17.5" x 38" x 24"
Box Dimensions	29" X 16" X 20"	34" X 16" X 20"	42" X 16" X 20"	42" X 26" X 18"
Weight (lbs)	62	78	78	88
Capacity	2 to 2 1/2 Tons	2 1/2 to 3 Tons	3 to 3 1/2 Tons	4 to 5 tons
Refrigerant Line Sizes	3/8" X 7/8"	3/8" X 7/8"	3/8" X 7/8"	3/8" X 7/8"
Compatible Condenser Size in Tons	2 to 2 1/2 Tons	2 1/2 to 3 Tons	3 to 3 1/2 Tons	4 to 5 tons
SEER	12**	12**	12**	12**
Refrigerant Type	R410A or R22			
Condensate Connection	3/4"	3/4"	3/4"	3/4"

^{**} Will vary with Condenser Matchup

Note: Either type may be used with cooling only or with heat pump, please call Customer Service at 1-800-527-0896 for details

^{* &}quot;B" Coil is 4 Rows Deep/3 Row for 4860

^{* &}quot;E" Coil is 6 Rows Deep/4 Row for 4860

CHILLED WATER COILS

PRODUCT FEATURES

- Can be used for either hot water or chilled water
- 22 gauge construction
- Compatible with ground source chillers for geothermal applications
- Easy snap latches
- Fully lined with closed-cell insulation
- Evenly spaced aluminum fins mechanically bonded to copper
- Full fin collars provide for excellent heat transfer
- Tubes are 3/8" outside diameter
- All water lines are sweat connections extending out of the cabinet

Model Number	M2430CL1-C	M3036CL1-C	M3642CL1-C	M4860CL1-C
Unit Dimensions	25" X 17 1/2" X 13 3/4"	30" X 17 1/2" X 13 3/4"	38" X 17 1/2" X 13 3/4"	38" X 17 1/2" X 24"
Box Dimensions	29" x 16" x 20"	34" x 16" x 20"	42" x 16" x 20"	42" x 26" x 18"
Weight (in lbs.)	53	76	76	76
Water Connections	7/8" (Sweat)	7/8" (Sweat)	7/8" (Sweat)	1-1/8" (Sweat)
Condensate Line Connection	3/4"	3/4"	3/4"	3/4"
Actual Coil Dimensions	13" X 23" X 4 1/2 "	13" X 30" X 4 1/2"	13" X 38" X 4 1/2"	13" X 38" X 4 1/2"
Btu's of Output*	31,200*	35,000*	46,000*	58,100*









HOT WATER COILS

- Can be matched to a blower module for a heating only system or it can be matched with a blower module and cooling module for a system that both heats and cools
- Slide in hot water coil is supplied separately
- 22 gauge galvanized steel construction
- Easy snap latches
- Corrugated aluminum fins mechanically bonded to copper tubes
- Tubes are ½" diameter on staggered centers
- Each system is pressure tested at the factory
- Full-collar fins provide greater tube-fin contact for excellent heat transfer

Hot Water Coils				
Model Number	M2430CL1-H	M3036CL1-H	M3642CL1-H	M4860CL1-H
Unit Dimensions	25" X 17 1/2" X 13 3/4"	30" X 17 1/2" X 13 3/4"	38" X 17 1/2" X 13 3/4"	38" X 17 1/2" X 13 3/4"
Box Dimensions	29" x 14" x 18"	34" x 14" x 18"	42" x 14" x 18"	42" x 14" x 18"
Weight (in lbs.)	53	76	76	76
Water Connections	7/8" (Sweat)	7/8" (Sweat)	7/8" (Sweat)	7/8" (Sweat)
Condensate Line Connection	3/4"	3/4"	3/4"	1-18""
Actual Coil Dimensions	13" X 23" X 4 1/2 "	13" X 30" X 4 1/2"	13" X 38" X 4 1/2"	13" X 38" X 4 1/2"
Btu's of Output*	62,400	74,800	102,300	120,000

^{*} Based on 180F incoming water, 8 GPM and Max CFM











EC UPGRADE KITS

PRODUCT FEATURES

- Available for all Unico System blower modules manufactured after 2003 (These have the motor located in the airstream)
- Available for all size air handlers (except 1218)

M2430

M3036

M3642

M4860

- Uses almost 45% less energy than a PSC Motor
- Soft-Start/Soft-Stop
- Can easily re-adjust airflow with laptop
- Provides the ASHRAE 62.2 Standard for fresh air intake
- Ideal for use with two-speed condensing units
- Dry contacts make wiring a breeze

EC UPGRADE KIT

Model Number	Fits Unico Blower Module Number	Dimensions	Weight (lbs.)	
A01543-K22	M2430	16" X 20" X 29"	20	
A01543-K23	M3036 AND M3642	16" X 20" X 29"	20	
A01543-K24	M4860	16" X 20" X 29"	20	



A01543-K22



A01543-K24

DRAIN PANS

PRODUCT FEATURES

- Made of 22 gauge galvanized steel
- Available for all sizes of air handlers
- Comes in two module and three module sizes
- Condensate line does not need to be trapped

SECONDARY DRAIN PANS

Model Number	UPC-94	UPC-20B	UPC-20C	UPC-27B	UPC-27C	UPC-24B	UPC-24C	UPC-24D
Dimensions	24" X 42"	29" X 31 1/2"	29" X 43 3/4"	34" X 31-1/2"	34"X43-3/4"	42" X 31 1/2"	43" X 41 3/4"	42 X 54"
Weight (in lbs.)	12	11	14	14	20	14	20	24
Matching Air Handler	U1218	M2430	M2430	M3036	M3036	M3642	M3642/M4860	M4860
Number of Modules	N/A	2	3	2	3	2	2 or 3	3



UPC-24B Two Section Drain Pan





RETURN AIR MODULES

- The Return Air Module is designed for easy installation of multiple return air duct systems.
- Module comes without return air opening so that the installing contractor can cut whatever openings are necessary for any number of return ducts.
- The top and three sides of the module can be used for return air connections
- A centrally located disposable air filter is accessible from either side of the cabinet
- The Return Air Module is ideal for providing fresh air from outside, effectively turning it into a mixing box
- Return air ducts can be of any material, provided it is acoustic and sized according to the ACCA Manual "D" guidelines
- The cabinet is fully insulated with a closed cell insulation. There is no exposed fiberglass in the cabinet.
- Uses 24 gauge galvanized steel with removable access panels

Return Air Plenum (RAP Module))						
Model No.	Weight (lbs.)	Unit Dimensions	Box Dimensions	For Unico System	Replacement Filter No.	Filter Size	Filter Type
M2430R1	30	25" x 13.75" x 17.5"	29" X 20" X 21"	M2430	A00097-005	14" X 25" X 1"	Disposible
M3036R1	30	30" x 13.75" x 17.5"	42" X 16" X 20"	M3036	A00097-006	14" X 30" X 1"	Disposible
M3642R1	30	38" x 13.75" x 17.5"	42" X 16" X 20"	M3642	A00097-008	14" X 38" X 1"	Disposible
M4860R1	30	38" x 13.75" x 17.5"	42" X 16" X 20"	M4860	A00097-008	14" X 38" X 1"	Disposible
Vertical Return Plenum Module							
Model No.	Weight (lbs.)	Unit Dimensions	Box Dimensions	For Unico System	Replacement Filter No.	Filter Size	Filer Type
M2430V1	33	25" x 18.25" x 17.5"	29" X 20" X 21"	M2430	A00558-004	18" X 25" X 1"	Pleated
M3036V1	45	30" x 18.25" x 17.5"	41" X 20" X 21"	M3036	A00558-007	18" X 30" X 1"	Pleated
M3642V1*	45	38" x 18.25" x 17.5"	41" X 20" X 21"	M3642	A00558-003	18" X 20" X 1"	Pleated
M4860V1*	45	38" x 18.25" 23"	41" X 20" X 21"	M4860*	A00558-003	18" X 20" X 1"	Pleated
					A00558-005	18" x 18" X 1"	Pleated

^{*} Requires Both Filters (A00558-003 and A00558-005)

- The Vertical Air Handler Module eliminates the need for the installing contractor to build a base plenum to elevate the Unico System air handler to fit in a vertical position
- The Vertical Air Handler Module features a built-in secondary drain pan with a ¾" PVC socket connection
- The Vertical Air Handler Module has a pleated air filter included, which is accessible from either side
- The Vertical Air Handler Module has room for a hot water coil that can be accessible from either side
- The Vertical Air Handler Module has the ability to connect a return air plenum with a heating module return adapter (Unico Part UPC-104) or operated as a "free" or "wild" return
- The both the RAP and vertical air handler are attached with easy snap latch fittings for installation



M2430V1 Vertical Module







VERTICAL UNITS

- Balanced Wheels
- Direct Drive Motor
- Shaft Key Connection
- Fully insulated with 1" closed cell insulation
- 22 gauge painted metal cabinet
- Can be used with R410 or an optional chilled water coil
- Screw Terminal connections
- Control voltage transformer
- Heat pump AFS bypass
- Adjustable low air flow mode
- Programmed constant air flow
- Heating (boiler) relay included
- Cooling (chiller) relay included
- Efficient Ventilation mode
- ASHRAE 62.2 compliance mode
- Point-to-point wiring
- Electric Heater fan interlock

- Electric Heater stage 3 lockout
- EAC, HRV, ERV relay
- Potable water circulation
- Humidifier compatibility
- Soft-start and soft-stop
- Low airflow indicator
- Preset customizable airflow settings
- Built in airflow diagnostics
- Laptop adjustable
- Laptop troubleshooting
- Optimized for zoning with hydronic systems
- Optimized for efficiency and sound
- Designed to fit into any closet only 20 to 23 ¾" wide
- One piece, no assembly required!

VERTICAL UNITS	
----------------	--

Model Number	V2430	V3036	V3642	
Unit Dimensions	20" X 20" X 42"	20" X 24" X 42"	23 3/4" X 25" X 44"	
Box Dimensions	27" x 22" x 44"	27" x 25" x 44"	31" x 26" x 46"	
Weight (Lbs)	169	200	227	
Refrigerant Line Connection	1/2" X 1/4" Male Flare	5/8" X 3/8" Male Flare	3/4" X 3/8" Male Flare	
Compatible Condenser Size (in tons)	2 to 2 1/2	2 1/2 to 3	3 to 3 1/2	
Air Flow Rating (in CFM)	400 to 600	450 to 875	500 to 1000	
SEER	12*	12*	12*	

^{*}Check AHRI directory for matchup



V2430B-1EC2EX 2-2.5 Ton Vertical Air Handler Unit



V3036B-1EC2EX 2.5-3 Ton Vertical Air Handler Unit



V3642B-1EC2EX 3-3.5 Ton Vertical Air Handler Unit

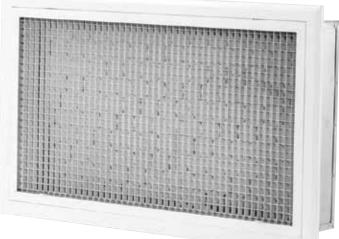
RETURN AIR GRILLE AND FILTERS

- Includes throwaway filter
- Two Duct Bands
- Q Clips
- White Enamel paint
- Lid drops down for easy replacement
- Pleated filters are available from aftermarket suppliers

Return Air Grille and	Filter Choices				
	Return Air Grille	Duct Diameter	Width	Depth	Filter Size Model No. Matchup
Model Number	UPC-01-1218	12"	20 1/4"	14 1/4"	14" X 20" U1218
	UPC-01-2430	14"	25 1/4"	14 1/4"	14" X 25" M2430
	UPC-01-3036	16"	30 1/4"	14 1/4"	14" X 30" M3036
	UPC-01-3642	18"	30 1/4"	14 1/4"	14" X 30" M3642
	UPC-01-4860	20"	30 1/4"	24 1/4"	24" X 30" M4860
	UPC-01-4860NC	20"	30 1/4"	20 1/4"	20" X 30" M4860NC
	Air Filter, Throwaway	Size			
	A00097-011	12" X 16"			
	A00097-007	14" X 20"			
	A00097-005	14" X25"			
	A00097-006	14" X 30"			
	A00097-008	14" X 38"			
	A00097-009	24" X 30"			
	A00097-010	20" X 30"			
	Air Filter, Pleated	Size			
	A00558-003	18" X 20"			
	A00558-004	18" X 25"			
	A00558-005	18" X 18"			
	A00558-002	18" X 30"			











RETURN AIR DUCTS

- Tough Aluminized outer Mylar wrap
- Spun-bonded nylon and helical wire core
- 1" fiberglass insulation
- R4.2
- Sections are 10 (ten) feet long

Return Air Duct				
Model No.	Used On	Diameter	R Factor	Weight (Lbs.)
UPC-04-1218	U1218	12"	4.2	9
UPC-04-2430	M2430	14"	4.2	9
UPC-04-3036	M3036	16"	4.2	14
UPC-04-3642	M3642	18"	4.2	14
UPC-04-4860	M4860	20"	4.2	14
UPC-04R6-1218	U1218	12"	6	12
UPC-04R6-2430	M2430	14"	6	12
UPC-04R6-3036	M3036	16"	6	17
UPC-04R6-3642	M3642	18"	6	17
UPC-04R6-4860	M4860	20"	6	21
UPC-04R8-1218	U1218	12"	8	15
UPC-04R8-2430	M2430	14"	8	20
UPC-04R8-3036	M3036	16"	8	20
UPC-04R8-3642	M3642	18"	8	20
UPC-04R8-4860	M4860	20"	8	24



RETURN AIR ADAPTERS

PRODUCT FEATURES

Unico makes two styles of return air adapters:

- Return Air Adapter for Cooling Module
- Return Air Adapter for Heating Module

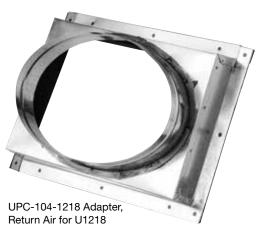
The Return Air Adapter for Cooling Module:

- Has an insulation strip
- Uses self-tapping screws to attach to the cooling module, either refrigerant or chilled water

The Return Air Adapter for Heating Module:

- Mounts directly to the heating module or the vertical plenum module
- No additional fabrication required
- Can be used in either vertical or horizontal installations

ADAPTER, RETURN AIR, COOL	ING MODULE					
MODEL NUMBER	HEIGHT	WIDTH	DEPTH	DUCT DIAMETER	WEIGHT (LBS.)	MATCHES TO:
UPC-59-2430	13 1/2"	22"	11 1/2"	14"	6	M2430CL1-C, B OR E
UPC-59-3036	13 1/2"	27"	11 1/2"	16"	9	M3036CL1-C, B OR E
UPC-59-3642	13 1/2"	35"	10 1/2"	18"	9	M3642CL1-C, B OR E
UPC-59-4860	11 1/2"	35"	15"	20"	14	M4860CL1-C, B OR E
ADAPTER, RETURN AIR, HEAT	ING MODULE					
MODEL NUMBER	HEIGHT	WIDTH	DEPTH	DUCT DIAMETER	WEIGHT	MATCHES TO:
UPC-104-2430	17 1/2"	25"	2"	14"	6	M2430CL1-H/M2430V1
UPC-104-3036	17 1/2"	30"	2"	16"	9	M3036CL1-H/M3036V1
UPC-104-3642	17 1/2"	38"	2"	18"	9	M3642CL1-H/M3642V1
UPC-104-4860	17 1/2"	38"	2"	20"	14	M4860CL1-H/M4860V1

















FILTERS

PRODUCT FEATURES

These are the standard filters supplied with Unico filter grilles.

These are cleanable, using a standard household vacuum cleaner attachment.

The homeowner can replace them as frequently as they choose, depending on system usage. Most end users find that replacing their filters twice a year, generally as part of the service contract offered by the installer, is more than sufficient.

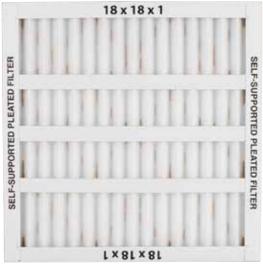
These filters are referred to as disposable panel filters.

The currently available standard panel filters are likely to range from 20-50% arrestance with resistance of .04 to .07 IWC (10 to 18 Pa) and should have acceptable pressure drop for all air handlers at any airflow

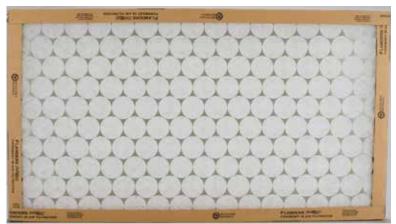
FILTER SIZE CHART					
Part Number	Description	Dimensions	For Unico System Part No.	Filter Type	
A00097-007	Filter	14" X 20" X 1"	UPC-01-1218	Disposable	
A00097-005	Filter	14" X 25" X 1	UPC-01-2430/M2430R1	Disposable	
A00097-006	Filter	14" X 30" X 1"	UPC-01-3036, M3036R1, UPC-01-3642	Disposable	
A00097-008	Filter	14" X 38" X 1"	M3642R1, M4860R1	Disposable	
A00097-009	Filter	24" X 30" X 1"	UPC-01-4860	Disposable	
A00097-010	Filter	20" X 30" X 1"	UPC-01-4860NC	Disposable	
A00558-003	Filter	18" X 20" X1"	M3642V1, M4860V1*	Pleated	
A00558-004	Filter	18" X 25" X 1"	M2430V1	Pleated	
A00558-005	Filter	18" X 18" X 1"	M3642V1, M4860V1*	Pleated	
A00558-007	Filter	18" X 30" X 1"	M3036V1	Pleated	

^{*} Both Filters Required (A00558-003 and A00558-005)

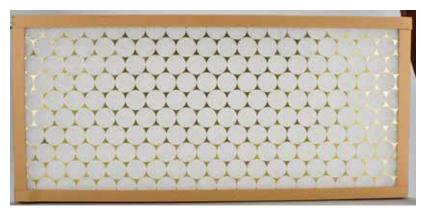
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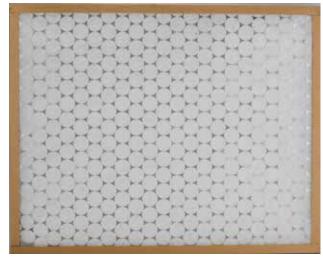
A00558-005 Filter, Pleated for M4860V1, M3642V1



A00097-005 Filter, Throwaway for M2430R1, UPC-01-2430



A00097-006 Filter, Throwaway for M3036R1, UPC-01-3036, UPC-01-3642



A0097-009 Filter, Throwaway for UPC-01-4860



A00558-004 Filter, Pleated for M2430V1



A00558-003 Filter, Pleated for M3642V1< M4890V1

SLOTTED OUTLETS

PRODUCT FEATURES

In addition to the round outlets, the Unico System offers rectangular outlets for 2 inch supply tubing

The rectangular outlets have a narrow (1/8") slot for air flow that gives it a better appearance in a sidewall application.

There are four (4) different types of slotted outlets:

- 90 degree slotted outlets (Part numbers UPC-66 and UPC-67A).
 These are specially designed to quietly turn the air inside a typical stud wall cavity. The UPC-67 is made of plastic and the UPC-66 is made of cast aluminum
- The UPC-66 is made of cast aluminum and is designed for commercial applications that prohibit the use of plastic ducting.
- The UPC-67A is identical to the UPC-66, except it uses plastic and is less expensive
- A straight outlet, the UPC-68 is designed for use where the placement of a round outlet is not practical. A typical application would be placement in a cabinet soffit. The UPC-68 is also made of plastic.

All slotted outlets may be used in the floor and ceiling, as well as high wall applications

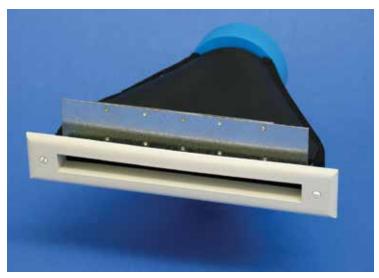
Model No.	Recommended Airflow	Recommended Number of Outlets	Outlet Material	Trim Plate Material	Rough in Hole Size	Weight in Ibs
UPC-66	30-35 CFM	7 per Nominal Ton	Aluminum	Plastic, White, Paintable	1.25" X 9.25	4
UPC-67A	30-35 CFM	7 per Nominal Ton	Plastic HDPE, black	Plastic, White, Paintable	1" X 9.25"	2
UPC-68	30-35 CFM	7 per Nominal Ton	Plastic HDPE, black	Plastic, White, Paintable	1" X 9.25"	2



UPC-66 Outlet Assembly, 90 degree, aluminum



UPC-67 Outlet Assembly, 90 degree, plastic



UPC-68 Outlet Assembly, Straight, Plastic

ROUND OUTLETS

PRODUCT FEATURES

Made in both 2" and 2 ½" sizes All white outlets can be painted to match any décor The outlets can be supplied from the factory in:

Black

Brass Plated

Chrome Plated

Standard installation and outlet kits come with toggles and screws Also available in wood (P/N UPC-57), identical in size to the standard outlet except for a solid wood face, which can be stained and finished to match the floor.

Wood outlets are available in a wide variety

In vaulted ceilings the Unico System offers the 2" white plastic outlet with an angled face. The faceplate can be angled at 15 or 25 degrees.

	Recommended Airflow	Recommended Number of Outlets	Outlet Material	Size of Opening	Weight
2" Outlets	30-35 CFM	6 per Nominal Ton	30% Glass Filled Polyproylene	4"	4.2 oz.
2 1/2" Outlets	40-45 CFM	5 per Nominal Ton	30% Glass Filled Polyproylene	5"	5 oz.







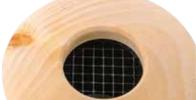




UPC57-PI Round Outlet, Pine



UPC-57-WO, Round Outlet, White Oak



UPC-57-PO Round Outlet, Poplar







UPC-57-MH Round Outlet, Mahogany

UPC-57-K Round Outlet, Knotty Pine

UPC-57-M Round Outlet, Maple







UPC-57-C Round Outlet, Cherry

UPC-57-B Round Outlet, Birch

UPC-56B-CHR Chrome Round Outlet

SPECIALTY OUTLETS

PRODUCT FEATURES

Firestop Duct Outlet for the 2" Supply Duct

ULC-555C 1-Hour fire rating
Designed for use in the ceiling, floor or wall applications where
supply outlets are required by code to have a 1-hour or less
F-Rated structure

Designed for static conditions, meaning that the fire suppression system should turn off the air flow in the event of a fire

A special foam outlet will close off above a certain temperature, shutting off the air flow to the rest of the structure

Same size as our UPC-56B and is installed in the same manner

Part Number	Recommended Airflow	Recommended Number of Outlets	Angle	Size of Opening	Weight
UPC-56FR-1	30-35 CFM	6 per Nominal Ton		4"	1
UPC-58-1-15	30-35 CFM	6 per Nominal Ton	15 degrees	4"	1
UPC-58-1-25	30-35 CFM	6 per Nominal Ton	25 degrees	4"	1







FIBERGLASS DUCT

- Square duct in either 6 ½", 8 ½", or 9 ½"
- Ready for installation in four (4) foot lengths, also available unassembled (flat)
- Available in R4.2 and R 6
- Can be used on all Unico Systems
- Tees and elbows are available prefabricated
- Turning vanes are included with the tees
- End caps and tape are also available

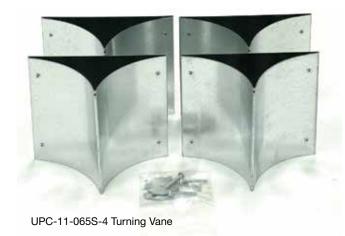
Part No.	Description	Dimensions	Qty.	Weight
UPC-11-065S-4	Turning Vane, Square, 6.5"	13" X 13" X 10.5"	4	5
UPC-11-07R-4 Turning Vane, Round 7"		10" X 10" X 11"	4	5
UPC-11-085S-4	C-11-085S-4 Turning Vane, Square, 8.5"		4	5
UPC-11-095S-4	Turning Vane, Square, 9.5"	23" X 10" X 11"	4	6
UPC-11-09R-4	Turning Vane, Round 9"	13" X 13" X 10.5"	4	5
UPC-11-10R-4	Turning Vane, Round, 10"	13" X 13" X 10.5"	4	5
UPC-12-065R6-4	Duct, Fiberglass,R6 Square 6.5" X 6.5"	73" X 19" X 19"	4	40
UPC-12-065S-4	Duct, Fiberglass, Square, 6.5" X 6.5"	18" X 18" X72"	4	30
UPC12-065S6-8F	Duct, Fiberglass 6.5" X 6.5" Flat, Unassembled	34" X 8" X 72"	8	60
UPC12-085R6-4	Duct, Fiberglass, R6, Square 8.5" X 8.5"	73" X 22" X 22"	4	51
UPC12-085S6-4	Duct, Fiberglass, Square, 8.5" X 8.5"	21 1/2" X 21 1/2" X 72	4	34
UPC-12-085S6-8F	Duct, Fiberglass, 8.5" X 8.5", Flat, Unassembled	42" X 8" X 72"	8	68
UPC-12-095R6-4	Duct, Fiberglass, R6, Square, 9.5" X 9.5"	73" X 24" X 24"	4	56
UPC-12-095S6-4	Duct, Fiberglass, Square 9.5" X 9.5"	24" X 24" X 72"	4	40
UPC-15-065R6-4	End Caps, Fiberglass, for 6.5" R6	11" X 11" X 16"	4	2
UPC-15-065S6-4	5-065S6-4 End Caps, Fiberglass, for 6.5" R4.2		4	1
UPC-15-085R6-4	JPC-15-085R6-4 End Caps, Fiberglass, for 8.5" R6		4	2
UPC-15-085S-4	JPC-15-085S-4 End Caps, Fiberglass, for 8.5" R4.2		4	2
UPC-15-095R6-4	End Caps, Fiberglass, for 9.5" R6	12" X 12" X 16"	4	2
UPC-15-095S-4	End Caps, Fiberglass, for 9.5" R4.2	10" X 11" X 17"	4	2
UPC-16V-065R6-4	Tee, Full Flow, R6, Fiberglass, 6.5" (with turning vane)	36" X25" X22"	4	20
UPC-16V-065S-1	Tee, Fiberglass, 6.5" X 6.5", Single pack, R4.2	14" X 16" X 9"	1	4
UPC-16V-065S-4	Tee, Fiberglass, 6.5" X 6.5", R4.2	32" X 21" X 18"	4	12
UPC-16V-085R6-4	Tee, Fiberglass, R6, 8.5" X 8.5"	40" X 28" X 24"	4	35
UPC-16V-085S-1	Tee, Fiberglass, 8.5" X 8.5" Single Pack R4.2	29" X 16" X 20"	1	5
UPC-16V-085R6-4	C-16V-085R6-4 Tee, Full Flow, Fiberglass, R6, 8.5" X 8.5"		4	14
UPC-16V-095S-1	Tee, Fiberglass 9.5" X 9.5", Single Pack, R4.2	44" X 32" X 26"	1	40
UPC-16V-095-4	Tee, Fiberglass, 9.5" Square, 4 pack, R4.2	29" X 16" X 20"	4	6
UPC-17	Tape, Themloc, 3" x 350'	27" X 20 1/2" X 47"	1	15

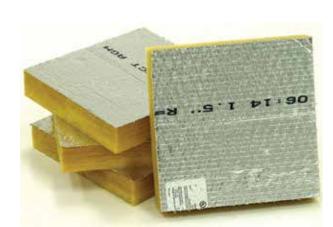




UPC-18-085S-1 Elbow, Fiberglass, 8.5" Single Pack R-4







UPC-15-08R6-4 End Caps, Fiberglass for 8.5" R-6 Duct

UPC-18-065SR6-4 Elbow, Fiberglass, R6.5 Square 4 Pack		8" X 8" X 4"	4	2
UPC-18-065S-1 Elbow, Fiberglass, R4.2, 6.5 Square Single Pack		26" X 25" X 24"	1	14
UPC-18-065S-4	UPC-18-065S-4 Elbow, Fiberglass R4.2, Square 4 Pack		4	2
UPC-18-085R6-4	Elbow, Fiberglass R6, 8.5"Square, 4 Pack	30" X 18" X 18"	4	9
UPC-18-085S-1	Elbow, Fiberlass R4.2, 8.5" Square Single Pack	26" X 25" X 27"	1	20
JPC-18-085S-4 Elbow, Fiberglass, R4.2, 8.5" Square, 4 Pack		29" X 16" X 20"	4	3
UPC-18-095R6-4	Elbow, Fiberglass, R6, 9.5"Square 4 Pack	24" X 23 1/2" X 45"	4	15
UPC-18-095S-1	Elbow, Fiberglass, R4.2, 9.5" Square, Single Pack	32" X 20" X 26"	1	22
UPC-18-095S-4	Elbow, Fiberglass, R4.2, 9.5" Square, 4 Pack	29" X 16" X 20"	4	3

Can be used on all Unico Systems Tees and elbows are available prefabricated Turning vanes are included with the tees End caps and tape are also available

METAL DUCT

PRODUCT FEATURES

Prefabricated 28 gauge metal Includes

Full Flow Tees

Full Flow Elbows

End Caps

Insulation sleeves

Available in 7", 9" and 10"

GALVINIZED DUCT PIECES				
PART NO.	DESCRIPTION	QTY (PER BOX)	DIMENSIONS	WEIGHT (LBS.)
USM-01	Duct, Galvanized 7" X 5' 28 ga	10	11" X 11" X 63"	75
USM-02	Duct, Galvanized 9" X 5' 28 ga	10	11" X 11" X 63"	85
USM-03	Elbow, Galvanized 7" 28 ga.	12	23" X 19" X 22"	16
USM-04	Elbow, Galvanized 9" 28 ga.	12	28" X 24" X 23"	24
USM-05	End Cap Uncrimped 7" ID	12	23" X 19" X 22"	22
USM-06	End Cap Uncrimped 9" ID	12	23" X 19" X 22"	22
USM-07	Tee, Galvanized 7" ID	4	30" X 23" X 32"	11
USM-08	Tee, Galvanized 9" ID	4	30" X 23" X 32"	11
USM-09	Tee, Reducing 9" X 7" X 7"	4	30" X 23" X 32"	11
USM-10	Insulation Sleeve 7' X 5' x 2" (R8)	12	25" X 18" X18"	22
USM-11	Insulation Sleeve 9" X 5' x 2" (R8)	12	25" X 18" X 20"	26
USM-12	Reducer 9" X 7"	12	18" X 18" X 20"	11
USM-13	Duct, Galvanized 10" X 5' 28 ga	10	12" X 12" X 63"	95
USM-14	Elbow, Galvanized 10"	12	24" X 25" X 35"	26
USM-15	Tee, Galvanized 10"	4	30" X 23" X 32"	24
USM-16	Insulation Sleeve 10" X 5' x 2" (R8)	12	32" X 12" X 28"	29
USM-17	Reducer 10" X 9"	12	28" X 24" X 23"	29
USM-18	End Cap 10"	12	23" X 19" X 22"	22
USM-19	Tee, Galvanized Reducer 10" x 9" x 9"	4	30" X 23" X 32"	11



USM-03 Elbow, Galvanized, 7" ID



USM-07 Tee, Galvanized 7" x 7" x 7"



USM-13 Duct, Galvanized 10" ID X 5' 28 gauge



USM-14 Elbow, Galvanized 10"



USM-16 Insulated Sleeve, Silver 10" ID x 5' X 2"



USM-18 End Cap, Galvanized 10"

SUPPLY TUBING

PRODUCT FEATURES

The Supply duct is offered in two inside diameters, 2" and 2 1/2".

There are two styles of supply duct:

Sound Attenuator tubing, sold in 12' lengths

Aluminum Core tubing, sold in 25' lengths

They are all available in R3.3, R4.2, R6 and R8 insulation

Both styles of duct can be cut to length as needed

The inner core layer of the tubing is either:

Two-ply corrugated aluminum

Spun bound nylon

The outer jacket for all is made of a two-ply reinforced reflective mylar; providing a vapor seal to prevent leakage and moisture migration and increases the insulation factor by reducing the radiant heat transfer. A fiberglass blanket insulation then fills the void between the jacket and the core

The R3.3 and R4 duct have one insulation layer and vapor barrier.

The R6 and R8 have two layers of insulation and a double vapor seal

Part No.	Description	Dimensions	Qty.	Weight
UPC-25-1	Supply Tubing, 2" x 25'	32" X 31" X 4" 1		9
UPC-25-4	Supply Tubing, 2" x 25'	31" X 15" X 31"		
UPC-25R4-4	Supply Tubing, 2" x 25' R4.2	32" X 30" X 15"	4	58
UPC-25R6-4	Supply Tubing, 2" X 25' R6	37" X37" X 32"	4	58
UPC-25R8-4	Supply Tubing, 2" X 25' R8	37" X37" X 32"	4	61
UPC-26C-6	Sound Attenuator, 2" X 12'	24" X 24" X23"	6	28
UPC-26CR4-6	Sound Attenuator, 2" X 12' R4.2	24" X 24" X23"	6	32
UPC-26CR6-6	Sound Attenuator, 2" X 12' R6	26" X 26" X 33"	6	36
UPC-26CR8-6	Sound Attenuator, 2" X 12' R8	26" X 26" X 33"	6	40
UPC-225-1	Supply Tubing, 2.5" X 25' 1 Pcs	32" X 31" X 4"	1	9
UPC-225-3	Supply Tubing, 2.5" X 25' 3 Pcs	32" X 34" X 12" 3		30
UPC-225-R4-3	Supply Tubing 2.5" X 25' 3 Pcs R4.2	32" X 34" X 12" 3		58
UPC-225-R6-3	Supply Tubing, 2.5" X 25' 3 Pcs. R6	38" X 38" X 19" 3		58
UPC-225-R8-3	Supply Tubing, 2.5" X 25' 3 Pcs. R8	R8 38" X 38" X 19" 3		61
UPC-226-5	Sound Attenuator, 2.5" X 12'	24" X 24" X23" 5		28
UPC-226-R4-5	Sound Attenuator, 2.5" X 12' R4.2	24" X 24" X23" 5		32
UPC-226-R6-5	Sound Attenuator, 2.5" X 12' R6	26" X 26" X 33" 5		36
JPC-226-R8-5 Sound Attenuator, 2.5" X 12' R8		26" X 26" X 33"	5	40





UPC-25-1 UPC-26C-6







UPC-226-5

SINGLE OUTLET KITS

PRODUCT FEATURES

Includes all parts and pieces to make one (1) supply outlet Can be ordered for fiberglass or metal plenum (ductwork) Includes the following items and quantities

- 1 12 foot long sound attenuator duct
- 1 Supply outlet (white)
- 2 Sound Attenuating tubing clamps (used to attach the supply tubing to the outlet and the take-off)
- 2 Aluminum core tubing clamps (used to attach the aluminum core tubing to the take-off and coupler)
- 2 Toggles and screws (for mounting the supply outlet to a ceiling)
- 1 Winter Supply shutoff (used to prevent cold air from causing condensation in the attic)

Single Supply Outlet KitUPC-80M-1 / UPC-80F-1

Qty.	Item	Description
1	Supply Outlet	White Plastic Outlet (Standard Outlet)
2	"575" Clamps	Clamps for attaching the sound attenuating tubing to the outlet and the takeoff
2	"605" Clamps	Clamps for attaching the aluminum core tubing to the outlet and the takeoff
1	Winter Supply Shutoff	Blocks air flow in the cold weather to prevent condensation
1	Coupling with tape rings	For supply tubing runs over 12 ft.
2	Toggles and Screws	To attach the white plastic outlet to a ceiling
1	Balancing Orifice	Reduces air flow by 15, 35 or 50%
1	Fiberglass Spin-in Takeoff	Attaches the supply tubing to the fiberglass plenum*
1	Metal take-off with gasket	Attaches the supply tubing to the metal plenum**

^{*} Used only with fiberglass plenum

^{**} Used only with metal plenum



UPC-80M-1, Outlet Kit, Metal Plenum including the following part numbers

One 12' Sound Attenuator
One Supply Outlet, white
Two Scrim Core Clamps
Two Supply Tubing Clamps
Two Toggles and Screws

One Winter Supply Shutoff

One Coupling with Tape Rings

One Balancing Orifice Kit
One Metal Take-Off with Gasket and Tape Ring

INSTALL KITS

PRODUCT FEATURES

Unico Installation kits are available for either metal or fiberglass duct

Each installation kit comes all parts and accessories needed to make a Unico System installation

Standard white supply outlets are included, which now have a left-handed spin in fitting for easier installation

Clamps for both sound attenuator tubing and aluminum core tubing are included

Installation kits are sold in packages of six (6), to make a total of six (6) two inch connections. This is also the minimum number of outlets needed per ton

Installation Kit	UPC-89M-6 / UPC-89F-6	
Qty.	Item	Description
6	Supply Outlet	White Plastic Outlet (Standard Outlet)
12	"575" Clamps	Clamps for attaching the sound attenuating tubing to the outlet and the takeoff
12	"605" Clamps	Clamps for attaching the aluminum core tubing to the outlet and the takeoff
6	Winter Supply Shutoff	Blocks air flow in the cold weather to prevent condensation
6	Coupling with tape rings	For supply tubing runs over 12 ft.
12	Toggles and Screws	To attach the white plastic outlet to a ceiling
1	Balancing Orifice	Reduces air flow by 15, 35 or 50%
6	Fiberglass Spin-in Takeoff	Attaches the supply tubing to the fiberglass plenum*
6	Metal take-off with gasket	Attaches the supply tubing to the metal plenum**

^{*} Used only with UPC-89F-6

^{**} Used only with UPC-89M-6



UPC-89F-6
Six Supply Outlets White
Twelve (12) Scrim Core Clamps
Twelve (12) Supply Tubing Clamps
Twelve (12) Toggles and Screws
One Balancing Orifice Kit
Six Winter Supply Shutoffs
Six Couplings with Tape Rings
Six Metal Take-Offs with Gasket and Tape Ring

ELECTRIC FURNACES

PRODUCT FEATURES

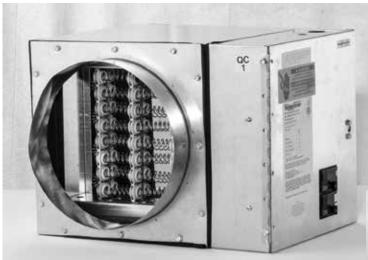
Available from 2 to 20 KW Can be used as either primary or auxiliary heating

Features:

- Galvanized insulated sheet metal cabinet enclosure
- Line level auto limit primary safety set at 165F
- Line level fuse link back-up safety
- Fan interlock control
- Low air flow pressure switch
- Circuit breakers on all units
- Time delay sequencers for a gradual "stepped" power draw, allowing for a softer start
- Low voltage (24v) terminal strip
- Specially designed for use with SDHV
- Single Supply (all units) or dual supply (15 and 20 KW units)

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MODEL NO.	NOMINAL KW RATING	UNICO SYSTEM MATCHUP	MIN. AIRFLOW(CFM)	LENGTH
W0N0202-C	2	ALL SIZES	200	13"
W0N0502-C	5	ALL SIZES	250	13"
W0N0752-C	7.5	ALL SIZES	300	16"
W0N1002-C	10	M2430, M3036, M3642, M4860	500	16"
W0N1502-C	15	M2430, M3036, M3642, M4861	600	21"
W0N2002-C	20	M3036, M3642, M4860	800	24"



WON0502-C



WON1502-C



WON1002-C



WON2002-C

THERMOSTATS

PRODUCT FEATURES

Unico thermostats have easy-to-view, large blue displays for easy programming

A00915-G03/4

- Quick one-button programming
- Configures as manual heat/cool, auto changeover, heat only, or cool only
- Exclusive Cool Savings feature saves energy during peak A/C demand periods
- Hydronic 2 or 3 wire applications
- Three anticipation settings
- Exclusive battery power monitor
- Longer battery life
- Easy-access battery compartment
- 5-Year Warranty

A00915-G05

- All of the above features plus large square blue touchscreen display with 10 second backlight
- Dual fuel heat pump control
- Programmable fan
- Circulator fan cycling
- Automatic daylight savings option



A00915-G03: Single Stage Programmable Thermostat



A00915-G04 Two Stage Programmable Thermostat



A00915-G05 Two Stage Programmable Thermostat with Touch Screen

MISCELLANEOUS PARTS

PRODUCT FEATURES

"Thermolock" Tape, can withstand up to 4" w.c. static pressure, sold in 350' rolls

Turbometer: Only tool recommended for checking the airflow at the outlet for the Unico System. Batteries ARE included

Plaster Frame Kit: Makes installation of Unico Outlets in new construction and "gut" rehab's easy, allows the Unico installer to finish his job and let the drywall contractor know where to cut the outlets

"Cookie Cutter" Sharpened duct connector, easily cuts a hole for use with fiberglass duct installations

Starting Collar: Available for either round or square plenum

Plastic Outlet Balancing Kits: Allows the user to "fine-tune" the airflow at the outlet, especially if there is a big difference between a heating and a cooling load

Hardware Screens: Available in white and unpainted and for the 2" and 2½" outlets, these prevent any unwanted debris from entering the Unico System

Deflector: If an outlet is in an objectionable position, such as directly over someone or something that moves, the deflector cancels the aspiration effect and spreads the air across the ceiling

Mild Weather Kits: Ensure the proper operation of heat pump systems on cooler days by keeping the head pressure to an acceptable level

UPC-55-5 "Cookie Cutters"
UPC-35-15 Take-off balancing orifice package
UPC-235-15 Take-off balancing orifice package for 2 1/2" duc
UPC-65X Mild Weather Kit
UPC-54 Clamp Pliers
UPC-45-5 Deflector Kit
UPC-245-5 Deflector Kit for 2 ½" outlets
UPC-86-5 Plaster Frame Kits



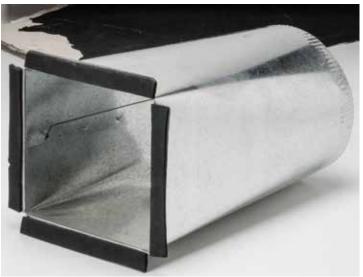
Turbometer: Air Flow Meter



UPC-17: Tape, "Thermoloc", 3" X 350'



UPC-55-5 "Cookie Cutters" for Fiberglass Duct, Five per Package



UPC-61-2430 Starting Collar for Round Plenum



Warranty Policy

- 1. All Unico, Inc. supplied products, including the new iSeries range, ALWAYS include a STANDARD one year warranty on all parts from day of final commissioning.
- 2. An EXTENDED (five year) warranty will be provided for a contractor under the following criteria and under the same limited terms of Unico's STANDARD warranty:
 - a. To qualify for a five year warranty, contractors need to be approved by the local Unico System sales representative and the contractor's main distributor.
 - b. Contractors who currently qualify for a five year warranty on their projects will continue to receive the five year warranty on all Unico System only installations.
 - c. Contractors, who don't currently have a five year warranty, but who would like to receive a five year warranty on Unico System, will need to take and pass Unico: Comprehensive Class on Unico University (https://go.bluevolt.com/unico/CourseDetail/Unico-Comprehensive-Class/50133), to be considered.
 - d. All contractors who would like to receive a five year warranty on the iSeries, will need to take and pass Unico: iSeries on Unico University (https://go.bluevolt.com/unico/CourseDetail/Unico-I-Series/50566), to be considered.
 - e. Only projects that have been registered on The Unico System web site (http://www.unicosystem.com/product-warranty/) by an approved contractor will be eligible for a five year warranty.
- 3. Warranties whether STANDARD or EXTENDED are good only from day of final commissioning.
- 4. Unico reserves the right at its sole discretion to deny an EXTENDED warranty that does not meet the contractor qualification terms or is not designed and installed per the manufacturers requirements as stated in Unico's STANDARD limited warranty.

Company Policy

Lead Time: Orders shipped within 10 working days after receipt.

Expedited Shipments: There will be a \$25.00 charge on all orders that are requested to ship Next Day and 2nd Day. All orders will receive confirmation via fax or e-mail within 24 hours of receipt and will include an anticipated shipment date from St. Louis, MO.

Minimum Order Charge: All orders will be subject to a \$50.00 minimum order charge.

Freight Terms: Unico, Inc. will pay freight for delivery to a SINGLE location in the continental U.S. for all orders received in excess of \$25,000. If an order is a split shipment that is \$25,000 net, Unico, Inc. will pay the freight to the first location and the distributor is responsible for a \$150 drop-off fee, per location, from the first location to subsequent locations within 250 miles of the original drop-off location.

Invoice Payment Terms: 1% 10 days or net 30 days.

Past-Due Terms: An invoice is considered past-due 31 days after the invoice date and subject to a 1.5% monthly service charge.

Special Pricing Policy: A discount of 10% is available for personal use projects. This discount applies to the participating distributor's standard multiplier, that is approved in advance by Unico, Inc. Unico, Inc. strongly recommends that no mark-up be placed on this amount in order that the discount offered by Unico, Inc. is passed along to the end-user; however, this is completely at the purchasing distributor's discretion. All applications for Special Pricing discounts should be submitted and approved in writing in advance of purchase; otherwise, they will not be accepted. Any discounts offered by the distributor for product previously purchased and in stock at the distributor's location will be at the sole discretion of the distributor and Unico, Inc. assumes no obligation for these product sales.

Notes



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Unico, Inc. is the leader in Small Duct High Velocity (SDHV) heating and cooling systems and other high-end HVAC systems. The company manufactures all of its products in St. Louis MO, with over 200,000 square feet of modern manufacturing plants. The company is well known for extensive use in older, architecturally unique homes and buildings as well as elite, high end custom homes. The company is family owned and operated and sells in all 50 United States, all provinces of Canada, and in over 28 countries around the world.













