Modular Hi-Rise Replacment Series FAN COIL TECHNICAL CATALOG





Modular Hi-Rise Replacement SeriesFAN COIL TECHNICAL CATALOG

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Portfolio

The Modular Hi-Rise Replacement Series allows for the retrofit of aging hi-rise fan coils without waiting for a complete whole room renovation budget. These products are designed to retrofit old IEC units and most competitive units by sliding into existing cabinets that have had their internal components removed. The fast, minimally disruptive installation eliminates downtime, offers energy savings, as well as features that can enhance indoor environmental quality.





MIY - MINI*ReStora* MOD™ Hi-Rise 380 CFM

The MINIReStoraMoD™ fan coil unit comes in one size that is designed to fit into many competitive units where space is tight. The product is available with a standard EC motor to save energy and provide quiet operation.

MRY – ReStora Mod® Hi-Rise 300 CFM to 1200 CFM

The *ReStora*Mo0® fan coil unit comes in several sizes that are designed to fit into IEC units manufactured after 1980 and many competitive units where more space is available in the existing cabinet. The product is available with an optional EC motor to save energy and provide quiet operation.



Features and Benefits

Versatility in Design and Installation

Modular Hi-Rise replacement fan coil units are designed specifically for replacement or retrofit applications. Since these units are designed to slide into existing, older cabinets their unit arrangements will be somewhat dependent upon the configurations of those existing units. Our Modular Hi-Rise Replacement Units still

offer a wide variety of options that can be delivered as a factory-assembled and integrated package. These units provide minimally disruptive installation, while also providing low visual impact in the room. A wide variety of finish options are available to help the product blend with any décor.



Design Features

- 18 gauge galvanized steel cabinet
- 2 Double-deflection supply air grille
 - Removable acoustical return air block-off/ access panel (not shown)
- Tilt-out and removable control box cover (MIY)
- Powder-coated return air access panel
- 6 Removable, slideout motor and blower assembly (MIY)
- 6 Removable motor and blower assembly with quick-connect plug (MRY)
- Removable coil drawthrough coil*
- 3 Insulated drain pan with p-trap (not shown)
 - Available applications are 2-pipe, 4-pipe, 2-pipe auxiliary electric heat, and 2-pipe total electric heat





 $MIY - MINIReStoramod^{m}$

MRY - ReStoramod®



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Features and Benefits, Cont'd.

Application Fit

- Partially-concealed, slide in replacement cabinets with up to 9 standard airflow configurations (many more optional configurations) provide solutions for multiple retrofit applications
- A variety of aesthetically pleasing grille and finish options will blend with most decor
- Units are designed for quiet operation

Design Flexibility

- Product integrated into IEC's computer rating program for quick performance calculations to aid in unit selection
- Wide variety of coil configurations to match the heating and cooling loads of the space
- Standard EC motor/blower assemblies are available for better energy efficiency are available to meet the needs of applications where ductwork is required
- Wide variety of valve packages factory/fieldinstalled to meet desired control specifications
- Higher efficiency MERV rated filter media available to address IAQ requirements
- Extensive offering of control options available, including 24V and line voltage control schemes
- Variety of insulation material available to address IAQ or sound concerns
- Heavy galvanized or stainless steel, insulated drain pan with pre-formed rubber p-trap

Ease of Installation

- Units slide into a variety of existing cabinets configurations where internal components have been removed for fast installation
- Quick Finish Wall Panel covers rough opening to eliminate the need for finish work such as carpentry, drywall, painting, etc.
- MIY control box door is at eye level for ease of field wiring
- Proper project coordination allows for finished installation in 4 hours or less with minimal clean-up.

Ease of Service

- Filters are easily accessible by removing return air panel
- Slide-out motor/blower deck is removable for ease of service (MIY Only)
- Flip-down control box door is also removable for faster service (MIY Only)
- Coil assemblies are removable for easier cleaning and maintenance
- All serviceable components and assemblies are designed to be removed in 15 minutes or less

Quality and Safety

- Rigorous multi-point inspection at the factory for trouble-free start-up
- ETL listed for safety compliance to UL 1995, US & Canada
- AHRI certified for performance to AHRI 440
- All hydronic coils are pressure tested to 300 psig



Product Application

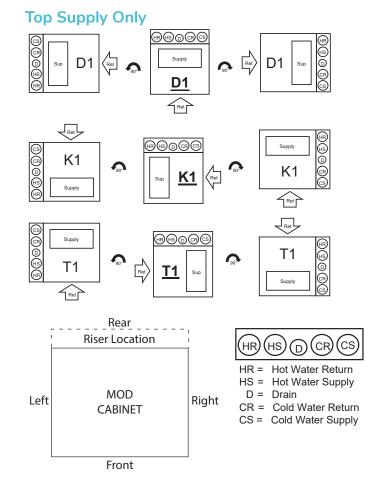
Versatile Standard Unit Arrangement Options

The Modular Hi-Rise Replacement Series is available in a number of different unit configurations to fit most hi-rise retrofit applications. When selecting the best unit design configuration for a specific application, the footprint of the existing cabinet, as well as the stub-out location, will need to be considered to provide the best solution. These units are designed for a minimally disruptive retrofit to keep room downtime to a minimum and save on installation costs.

Modular Hi-Rise Replacement fan coils are designed to be unobtrusive in the room and blend with a wide variety of decors. Units can be specified with up to two discharge openings, as well as a top discharge for ducted applications.

Below are examples of the standard unit arrangement possibilities for the Modular Hi-Rise Replacement fan coil series.

Single-side Supply **A1** Α1 #BOGG 360£ H1 <u>H1</u> 960 GG <u>33066</u> (E) (E) (E) (E) S1 S1 <u>S1</u> Single-side and Top Supply (H)(H)(D)(G)(G) RHO GRE (E) (E) (E) 3300E M2 M2 HRHS D GRGS E E G E E W2 900 W2



NOTES: 1. Risers pictured are shown for reference purposes only and adhere to the IEC standard convention.

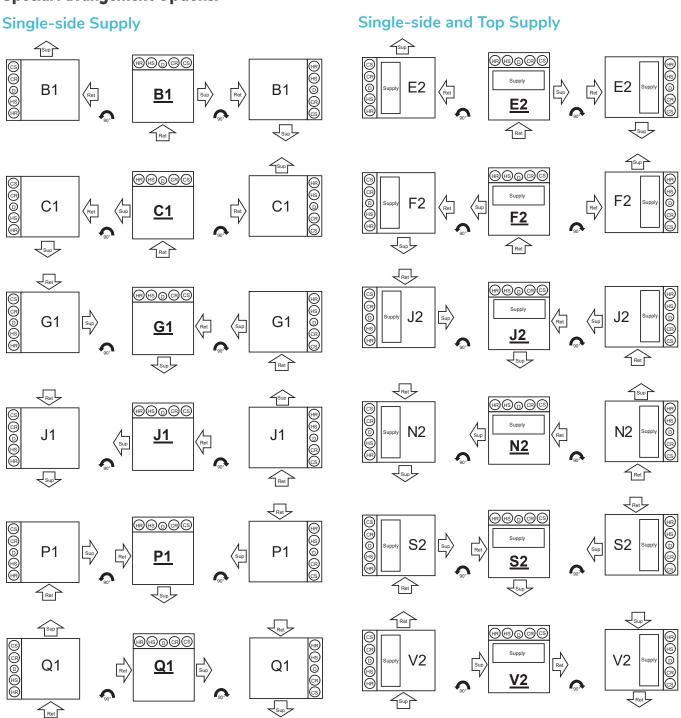
- MIY/MRY equipment is designed to use existing risers, so risers are typically not sold with these models.
- Riser supply-return configurations & temperature should be labeled prior to demolition, and must be verified prior to installation, as they may differ from the IEC standard convention.



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Product Application, Cont'd.

Special Arrangement Options:

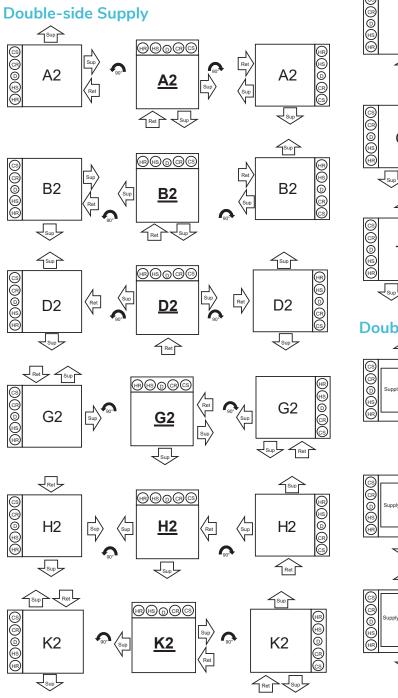


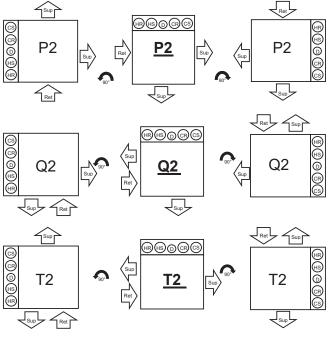
Special Arrangement Options (Cont'd on next page)

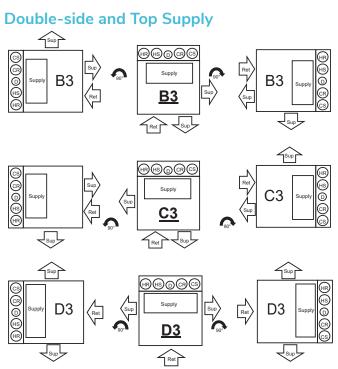


Product Application, Cont'd.

Special Arrangement Options, Cont'd.:







Special Arrangement Options (Cont'd on next page)

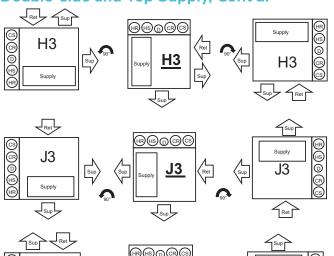


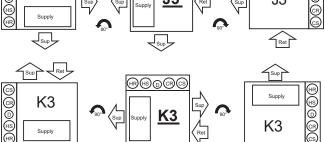
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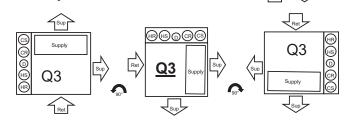
Product Application, Cont'd.

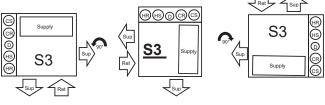
Special Arrangement Options, Cont'd:

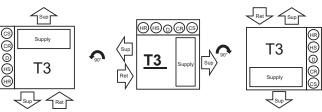
Double-side and Top Supply, Cont'd.



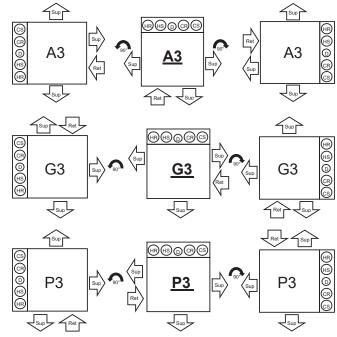




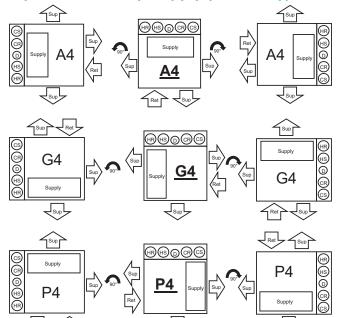




Triple-side Supply



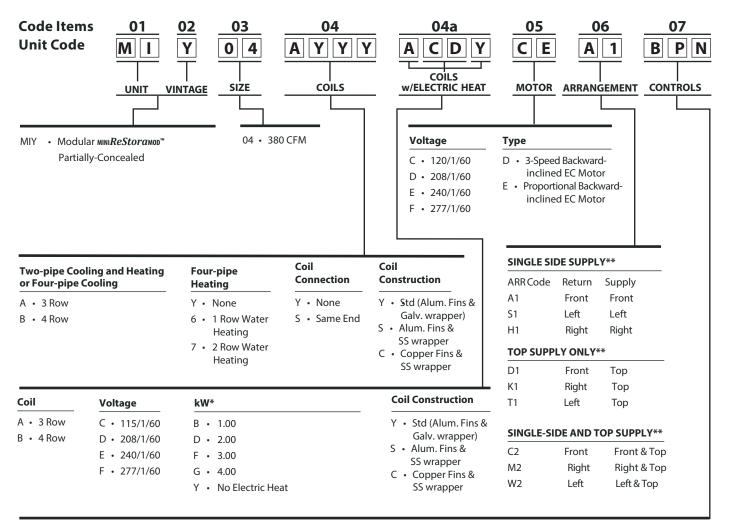
Triple-side and Top Supply (MRY Only)



NOTES: 1. For special supply/return arrangement options, please contact IEC for pricing and availability.

- 2. Any special supply/return arrangement may affect sound and performance.
- 3. Risers pictured are shown for reference purposes only and adhere to the IEC standard convention.
- MIY/MRY equipment is designed to use existing risers, so risers are typically not sold with these models.
- Riser supply-return configurations and temperatures should be labeled prior to demolition, and must be verified prior to installation, as they may differ from the IEC standard convention.
- 6. Special arrangements may require special supply grilles, baffling and lab testing to validate actual performance.

Unit Model Key – Small Footprint Cabinet – MIY



Vo	lta	ge
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System Operation

B • 24V

C • 120 V

208 V

240 V

• 277 V

Function Control

G · 2-Pipe Heat Only

H · 2-Pipe Cool Only

2-Pipe Heat and Cool

M • 2-Pipe Heat and Cool w/ Aux. Elec. Heat

2-Pipe Cool w/ Total Elec. Heat

R • 4-Pipe Heat and Cool

Thermostat Type & Changeover

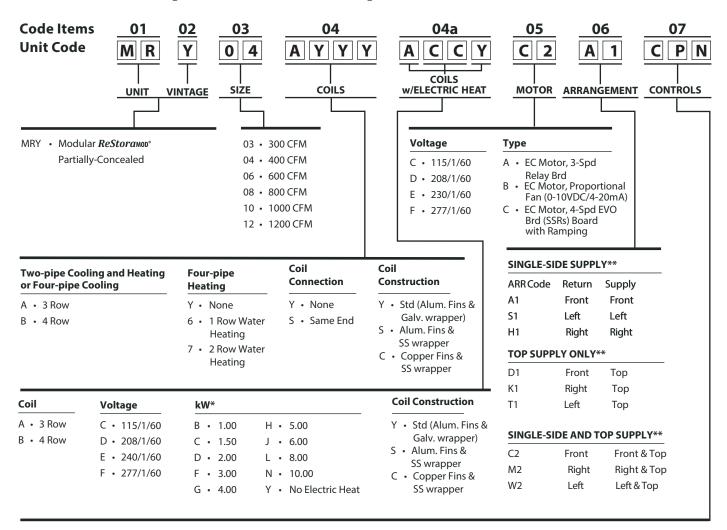
- A TB155 Wall Series, ACO, Vertical Mnt.
- B TB155 Wall Series, ACO, Horizontal Mnt.
- C TB156 Unit Mounted Series, ACO
- P Basic 24V Digital Programmable, ACO
- N Basic 24V Digital Non-Programmable,
- F Premium 24V Digital 7-Day Programmable, with Proportional Fan/Valves Option, ACO
- G Premium 24V Digital BACnet with Proportional Fan/Valves Option, ACO



Note that kWs depend on voltage.

For additional unit arrangements, please consult the factory for pricing and availability.

Unit Model Key – Standard Footprint Cabinet – MRY



B • 24V

C • 120 V

D • 208 V

5 2001

E • 240 V F • 277 V

System Operation

Manual Fan Operation

A1 • Standard Unit Mount (Switch Only)

Function Control

G • 2-Pipe Heat Only

H • 2-Pipe Cool Only

K • 2-Pipe Heat and Cool

M • 2-Pipe Heat and Cool w/ Aux. Elec. Heat

P • 2-Pipe Cool w/ Total Elec. Heat

R • 4-Pipe Heat and Cool

Thermostat Type & Changeover

- P Basic 24V Digital Programmable, ACO
- N Basic 24V Digital Non-Programmable, ACO
- F Premium 24V Digital 7-Day Programmable, with Proportional Fan/Valves Option, ACO
- G Premium 24V Digital BACnet with Proportional Fan/Valves Option, ACO

^{**} For additional unit arrangements, please consult the factory for pricing and availability.



^{*} Note that kWs depend on voltage and unit size.

Ratings and Listings – MIY

AHRI Certification

IEC's Modular Hi-Rise Replacement Series units are certified in compliance with Air-Conditioning, Heating, and Refrigeration Institute (AHRI) industry standard 440 for room fan coil units. Approved standard ratings are tabulated below.



Standard Ratings @AHRI Conditions

Unit Model	Unit Size Coil Ro		Coil Rows EWT (°F)		Cooling Capacity (MBH)		Nominal	Flow Rate	Pressure	Power Input
		Coil Rows		ΩT (°F)	Total	Total Sensible (CFM) (GPM) Drop wg				
	04	3	45	10	12.4	8.4	394	2.6	8.4	63
MIY	04	4	45	10	14.1	8.9	379	2.9	12.0	60

- NOTES: 1. Ratings are based on 80°F DB and 67°F WB EAT, high fan speed of 115/1/60 Motor, under dry coil conditions, with 2-way Taco control valve.
 - Test performed at AHRI-440 conditions WITHOUT filter, supply grille or Quick Finish Wall Panel.
 - 3. For all application ratings, use IEC's Desktop Ratings Program, these catalog ratings or contact your local IEC representative.
 - 4. For additional information, please consult AHRI's website at www.ahrinet.org.

Standard Ratings @Application Conditions

	Unit Model	Unit Size Coil Rows		Coil Rows EWT (°F)	ΩΤ (°F)	Cooling Capacity (MBH)		Nominal	Flow Rate	Pressure	Power Input
			Coil Rows			Total	Sensible	Airflow (CFM)	(GPM)	Drop (ft. wg.)	(Watts)
	MIY	04	3	45	10	12.4	8.4	394	2.6	8.4	63
		04	4	45	10	14.1	8.9	379	2.9	12.0	60

- Ratings are based on 75°F DB and 63°F WB EAT, high fan speed of 115/1/60 Motor, under dry coil conditions, with 2-way Taco control valve.
 - Test performed at AHRI440 conditions WITH filter, supply grille and Quick Finish Wall Panel.
 - 3. For all application ratings, use IEC's Desktop Ratings Program, these catalog ratings or contact your local IEC representative.
 - 4. For additional information, please consult AHRI's website at www.ahrinet.org.

C-ETL-US Listing

IEC's Modular Hi-Rise Replacement Series units are listed by ETL. The C-ETL-US listing signifies that IEC's fan coil units have been examined by ETL and are in compliance with both the U.S. and Canadian applicable standards.



Hydronic Heating - Base Capacity

Unit Model	Unit Size	Coil Rows (Pri/Sec)	Heating Rows	EWT (°F)	ΩT (°F)	Total Capacity (MBH)	Nominal Airflow (CFM)	Flow Rate (GPM)	Pressure Drop (ft. wg.)	Power Input (Watts)
MIY 04		3/0	3	140	17	21.0	407	2.6	7.0	21.0
		4/0	4	140	16	22.5	385	2.9	10.0	22.5
	04	3/1	1	180	40	18.3	388	1.0	1.8	18.3
		3/2	2	180	40	24.4	388	1.3	4.5	24.4

- NOTES: 1. Ratings are based on 70°F DB and 58°F WB EAT, high fan speed of 115/1/60 Motor, under dry coil conditions, with 2-way Taco control valve.
 - Heating performance on a 4/1 coil will be the same as the 3/1 coil.
 - For all application ratings, use IEC's Desktop Ratings Program, these catalog ratings or contact your local IEC representative.
 - 3. Tests performed at AHRI440 conditions WITHOUT filter, supply grille or Quick Finish Wall Panel.



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Ratings and Listings - MRY

AHRI Certification

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Intertek 3061627

HEATING AND COOLING EQUIPMENT

Standard Ratings

		Unit	Nom. CFM		oling acity	Wa	ter	Power Input Watts PSC
Unit Type	Rows	Coil Size		Total MBH	Sen- sible MBH	Flow Rate (GPM)	WPD (ft. wg.)	
	3-Row	03	300	11.5	7.0	2.7	4.4	85
		04	400	13.6	9.0	2.8	5.0	115
		06	600	21.9	14.0	4.1	4.1	135
		08	800	27.5	17.8	4.4	4.7	250
		10	1000	37.7	24.5	6.3	11.9	325
		12	1200	43.1	28.4	6.7	13.4	440
MRY		03	300	12.2	7.3	3.2	8.6	85
		04	400	15.6	9.6	3.5	10.0	115
	4.5	06	600	26.0	15.3	5.1	8.3	135
	4-Row	08	800	31.4	19.5	5.6	9.9	250
		10	1000	42.2	25.6	7.5	9.4	325
		12	1200	46.5	30.5	8.0	10.8	440

- NOTES: 1. Ratings are based on 80°F DB and 67°F WB EAT, 45°F EWT, 10°F water temperature rise, high fan speed, motor voltage 115/1/60, and airflow under dry coil conditions.
 - For all application ratings, use IEC's computer selection program, the quick-selection ratings provided in this catalog, or contact your local IEC representative.
 - For additional information, please consult AHRI's website at www.ahrinet.org.
 Test performance at AHRI440 conditions WITHOUT filter, supply grilled or Quick Finish Wall Panel.

Hydronic Heating – Base Capacity

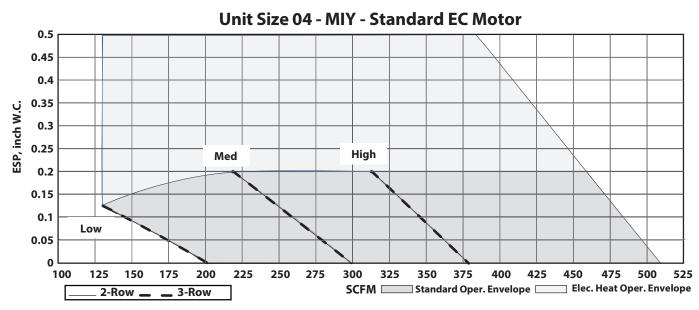
		Unit Coil				GPM			
Rows	EWT	Size	0.5	1.0	2.0	3.0	4.0	6.0	8.0
		03	11.3	14.0	15.8	16.5	_	_	_
		04	11.5	14.4	16.3	17.1	_	_	-
	4.00%	06	_	19.8	23.3	24.7	25.4	_	_
1-Row	160°F	08	-	20.1	23.9	25.4	26.2	_	-
		10	1	25.2	31.1	33.6	34.9	_	_
		12	-	25.4	31.6	34.1	35.5	_	-
		03	15.9	21.0	24.2	_	_	_	-
		04	16.2	21.8	25.6	27.0	-	_	_
2 D	160°F	06	-	27.2	35.5	37.4	39.0	_	-
2-Row		08	-	28.0	36.1	39.5	41.1	_	-
		10	1	33.2	45.5	50.8	53.8	56.9	_
		12	-	33.7	46.6	52.5	55.8	59.3	61.2
		03	14.3	20.0	23.5	24.8	_	_	_
		04	14.6	20.8	25.0	26.5	_	-	_
2 D	1 40°E	06	_	25.1	32.9	36.0	37.7	_	_
3-Row	140°F	08	_	25.7	34.6	38.3	40.3	-	_
		10	_	_	41.7	47.8	51.1	54.6	_
		12	-	-	42.9	49.7	53.5	57.7	-
		03	_	21.0	25.1	_	_	_	_
		04	-	22.0	27.1	28.9	-	-	-
1 Davi	1 40°F	06	_	27.6	36.9	40.4	42.1	_	_
4-Row	140°F	08	-	28.4	39.3	43.7	46.0	-	-
		10	_	-	_	53.1	57.1	61.2	63.3
		12	-	_	-	55.7	60.5	65.5	68.1

NOTES: 1. All base hot water capacities are given in thousands of BTUH (MBH).

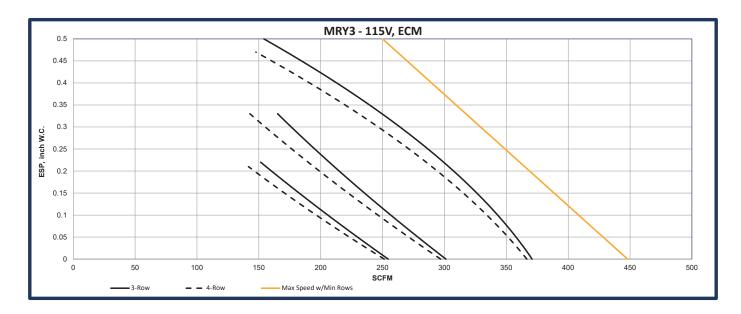
- 2. Ratings are based on nominal CFM at 70°F EAT and 160°F EWT.
- For information regarding performance at specific conditions, please use the IEC rating program or consult your IEC representative for assistance.
- Test performance at AHRI440 conditions WITHOUT filter, supply grilled or Quick Finish Wall Panel.



Fan Performance Curves



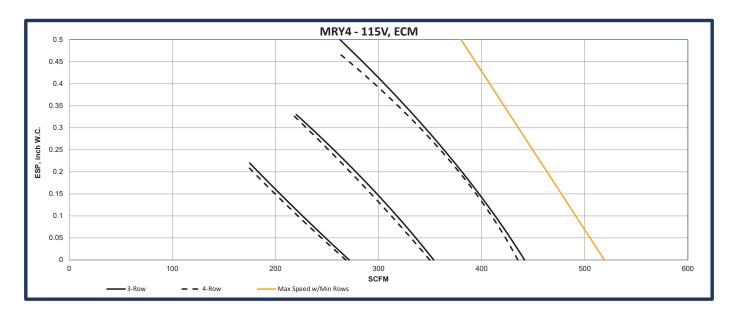
NOTES: Supply air grille and return air panel static pressure losses are included in all fan performance curves for all sizes.

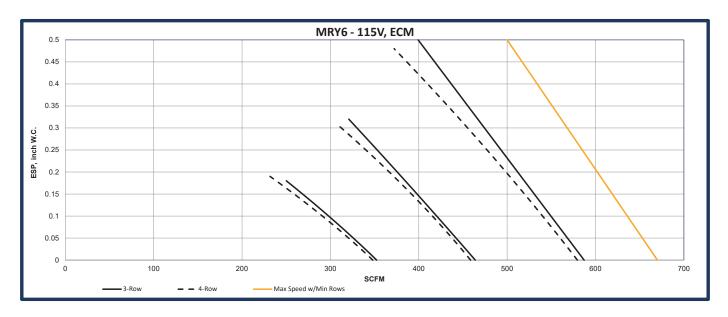




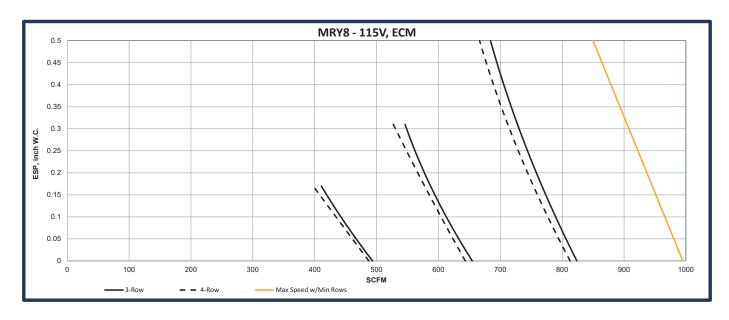
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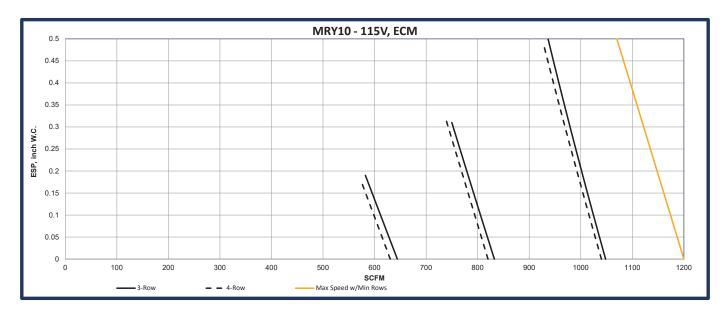
Fan Performance Curves, Cont'd.





Fan Performance Curves, Cont'd.

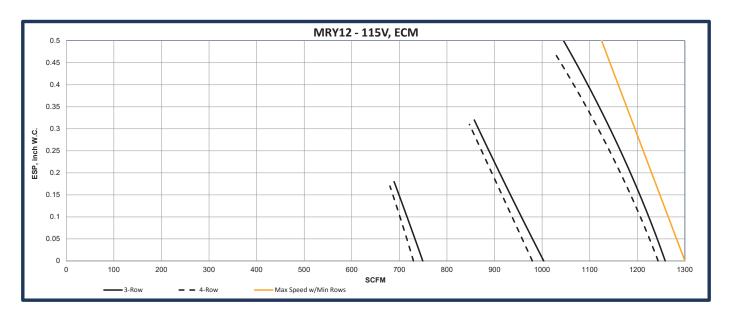






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Fan Performance Curves, Cont'd.





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Electric Heating

Electric heaters are available on IEC Modular Hi-Rise Replacement Series fan coil units for the following applications.

Total Electric Heat

Heating and/or cooling may be available on an individual basis throughout the year. Two-pipe chilled water is used for cooling, and the electric heater is used for heating. Individual room controls can be supplied for either manual or automatic changeover.

Auxiliary Electric Heat

Auxiliary electric heat is ideal for tempering room-air between seasons and during the cooling season when chilled water is being circulated. Individual room controls are supplied to provide electric heat only when a low temperature is sensed on the hot water riser lines. When a boiler is supplying hot water during the normal heating season, the hydronic heating coils will provide heat.

Construction

Heater coils of high-grade resistance wire are supported by ceramic insulators on plated steel brackets. These heating elements are located at the discharge area of the motor/blower. High limit thermal cutouts protect the unit in the event of airflow loss. There are many special applications and control sequences for electric heat. For special applications please consult the factory.

Electric Heater Selection - MIY

Voltage	kW	Unit Size 04
120V	1.0	•
1200	2.0	•
	1.0	•
208V	2.0	•
240V	3.0	•
	4.0	•
	1.0	•
2771/	2.0	•
277V	3.0	•
	4.0	•

Electric Heater Selection - MRY

Valtana	1347			Unit	Size		
Voltage	kW	03	04	06	08	10	12
	1.0	•	•	•	•	•	•
120V	1.5	•	•	•	•	•	•
1200	2.0	•	•	•	•	•	•
	3.0	•	•	•	•	•	•
	1.0	•	•	•	•	•	•
	1.5	•	•	•	•	•	•
	2.0	•	•	•	•	•	•
208V	3.0	•	•	•	•	•	•
2067	4.0	_	•	•	•	•	•
	5.0	-	-	•	•	•	•
	6.0	-	-	•	•	•	•
	8.0	-	-	-	•	•	•
	1.0	•	•	•	•	•	•
	1.5	•	•	•	•	•	•
	2.0	•	•	•	•	•	•
	3.0	•	•	•	•	•	•
240V 277V	4.0	-	•	•	•	•	•
	5.0	1	-	•	•	•	•
	6.0	-	-	•	•	•	•
	8.0	-	_	_	•	•	•
	10.0	-	-	_	_	•	•



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Motor Data

Thermal Overload Protection

The motor is either thermally protected by an internal solid state thermal switch – current sensing device (208V+), or by electronic sensing circuitry (120V). The motor shuts off completely and waits for the temperature to drop back below the set point, at which time the motor powers back up.

All motors furnished by IEC contain internal thermal overload protection. The overload automatically resets when the temperature returns to a safe limit.

Underwriters Laboratories Inc. approves the motor and thermal overload combination at locked rotor conditions only.

MIY — EC Motor and Electrical Performance Data

Unit Model	Unit Size	Motor FLA	Unit-Heater Rating (V/Ph/Hz	Elec. Heater Output (kW)	Heater Current (Amps)	MCA	МОСР	Unit Circuit Breaker
				0.00	-	2.88	5.18	5 AMP SP
MIY	04	2.30	120/1/60	1.00	8.33	13.29	13.51	15 AMP SP
				2.00	16.67	23.71	21.84	25 AMP SP
	04	1.30		0.00	-	1.63	2.93	10 AMP DP
				1.00	4.81	7.63	7.73	10 AMP DP
MIY			208/1/60	2.00	9.62	13.64	12.54	15 AMP DP
				3.00	14.42	19.65	17.35	20 AMP DP
				4.00	19.23	25.66	22.16	25 AMP DP
			240/1/60	0.00	-	1.63	2.93	10 AMP DP
				1.00	4.17	6.83	7.09	10 AMP DP
MIY	04	1.30		2.00	8.33	12.04	11.26	15 AMP DP
				3.00	12.50	17.25	15.43	20 AMP DP
				4.00	16.67	22.46	19.59	25 AMP DP
				0.00	-	1.63	2.93	5 AMP SP
				1.00	3.61	6.14	6.54	5 AMP SP
MIY	04	1.30	277/1/60	2.00	7.22	10.65	10.15	10 AMP SP
				3.00	10.83	15.16	13.76	15 AMP SP
				4.00	14.44	19.68	17.37	20 AMP SP

NOTES: Total unit motor Amps and Watts are shown

Motor Data, Cont'd.

MRY — **ECM** Performance Data

		Unit Size	03	04	06	08	10	12
Voltage	Fan Speed	Nominal HP	1/4	1/4	1/4	1/2	1/2	1/2
	LULE	Amps	0.64	0.94	1.60	2.00	3.20	5.21
	High	Watts	44	68	120	159	257	461
115V	NAIII	Amps	0.43	0.58	0.92	1.18	1.78	2.97
60HZ 1-Phase	Medium	Watts	28	40	64	89	136	259
I Thase	Low	Amps	0.32	0.37	0.54	0.61	0.96	1.4
		Watts	19	23	35	42	69	129
	High	Amps	0.41	0.61	1.02	1.32	1.94	3.27
		Watts	40	67	121	168	253	455
208-240V		Amps	0.30	0.38	0.58	0.79	1.11	1.77
60HZ 1-Phase	Medium	Watts	25	39	63	96	135	245
I Thuse		Amps	0.25	0.27	0.34	0.43	0.58	0.83
	Low	Watts	19	23	31	48	65	119
		Amps	0.36	0.51	0.78	1.10	1.57	2.61
	High	Watts	39	67	116	170	260	447
277V		Amps	0.29	0.36	0.49	0.64	0.91	1.42
60HZ 1-Phase	Medium	Watts	24	39	63	95	143	243
I i iiase		Amps	0.25	0.27	0.33	0.29	0.45	0.65
	Low	Watts	18	22	34	39	64	110

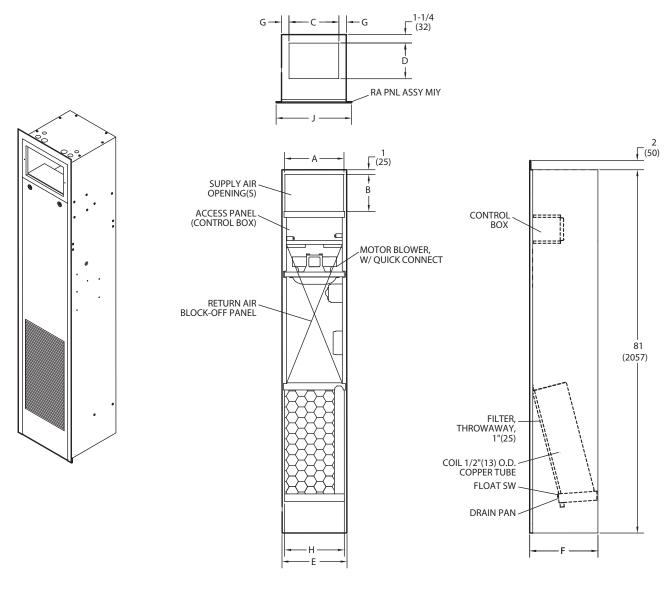
NOTES: All data is based on 3R/14 fpi dry coil with deco, filter and supply grill @ 0.00"ESP. These values are based on Broad Ocean EC motors.



FAN COIL TECHNICAL CATALOG

Submittal Data

MIY - MINIReStoraMoD™ 81 inch Partially-Concealed Hi-Rise



	Dimension – Inches (Millimeters)									
Unit Model	Front 9	Supply	Top S	upply	-	-	F G	Н	J	Unit Weight*
	Α	В	С	D	- E	F				
MIY 04	12 (305)	8 (203)	10.75 (273)	8 (203)	14.5 (368)	15.2 (386)	1.88 (48)	13.5 (343)	17 (432)	140 (64)

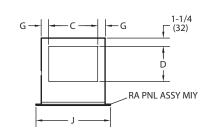
NOTES: * Unit weights are approximate (shown in pounds and kg) and are based on dry coils, minimum rows and exclude packaging, valves or other components.

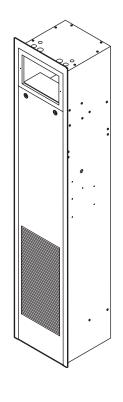
- Units are fabricated of galvanized steel with a 16 gauge galvanized fan deck.
- Thermostats, hoses and isolation/combo valves shipped loose for field connection.
- Blower-motor, coil and filter are accessible through the return air opening. Unit and control box are insulated with 1/2" (13) coated glass-fiber insulation.
- Threaded fittings must be field tightened and tested.
- Unit designed for 39"-55" riser stub-out height.
- Type "U" return air panel shown.
- Quick Finish Wall Panel and frame not shown in front view.
- Dimensions are in inches, dimension in () are in millimeters.

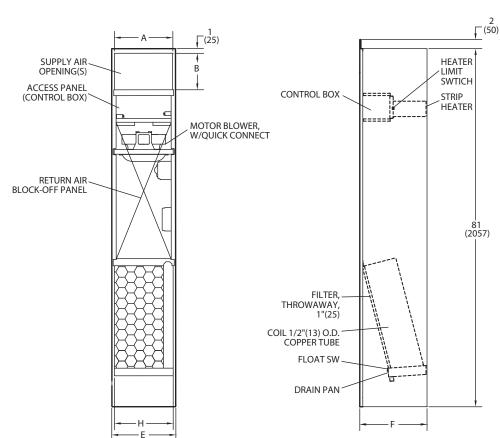


Submittal Data, Cont'd.

MIY - MINIReStoramod™ 81 inch Partially-Concealed Hi-Rise with Electric Heat







	Dimension – Inches (Millimeters)									
Unit Model	Front 9	Supply	oly Top Supply		_	-				Unit Weight*
	А	В	С	D	E	F	G	Н	J	
MIY 04	12 (305)	8 (203)	10.75 (273)	8 (203)	14.5 (368)	15.2 (386)	1.88 (48)	13.5 (343)	17 (432)	140 (64)

NOTES: * Unit weights are approximate (shown in pounds and kg) and are based on dry coils, minimum rows and exclude packaging, valves or other components.

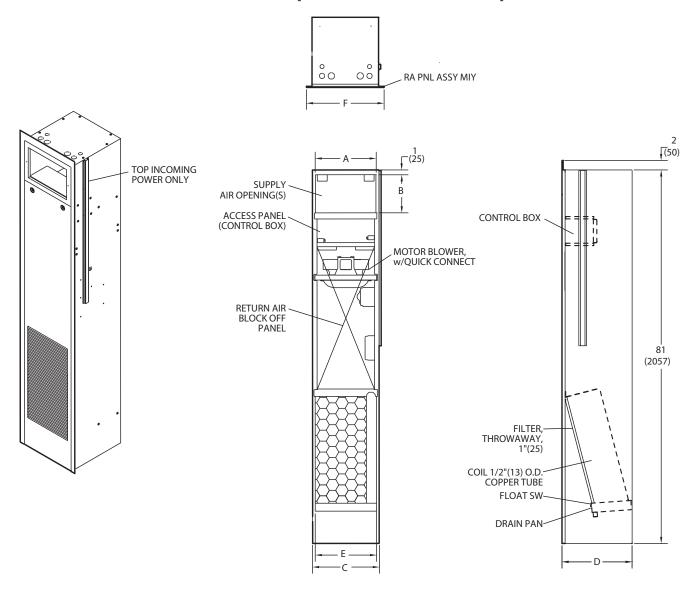
- Units are fabricated of galvanized steel with a 16 gauge galvanized fan deck. Thermostats, hoses and isolation/combo valves shipped loose for field connection.
- Blower-motor, coil and filter are accessible through the return air opening. Unit and control box are insulated with 1/2" (13) coated glass-fiber insulation.
- Threaded fittings must be field tightened and tested.
- Unit designed for 39"-55" riser stub-out height.
- Type "U" return air panel shown.
- Quick Finish Wall Panel and frame not shown in front view.
- Dimensions are in inches, dimension in () are in millimeters.



FAN COIL TECHNICAL CATALOG

Submittal Data, Cont'd.

MIY - MINIReStoramod™ 81 inch Partially-Concealed Hi-Rise with Top Power



Unit Model	Front	Front Supply		Front Supply		Front Supply			_	-	Unit Weight*
	А		C	D	E	F	vveigiit				
MIY 04	12 (305)	8 (203)	14.5 (368)	15.2 (386)	13.5 (343)	17 (432)	140 (64)				

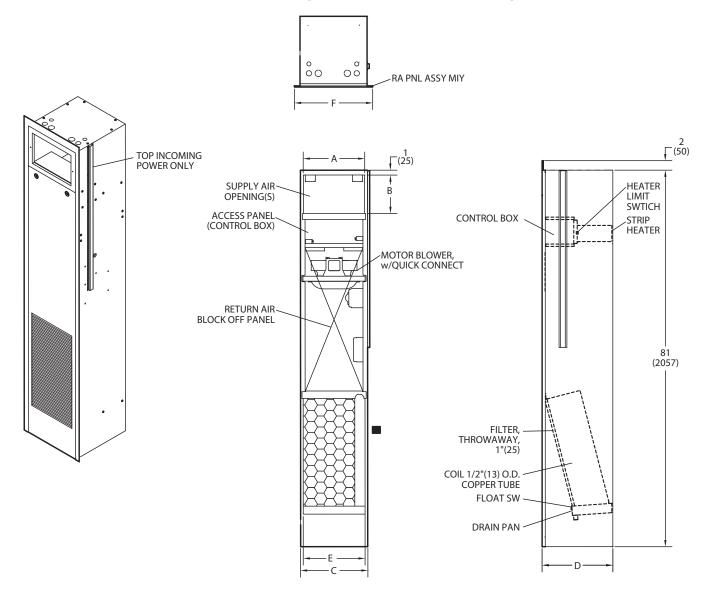
NOTES: Unit weights are approximate (shown in pounds and kg) and are based on dry coils, minimum rows and exclude packaging, valves or other components.

- Units are fabricated of galvanized steel with a 16 gauge galvanized fan deck.
- Thermostats, hoses and isolation/combo valves shipped loose for field connection.
- Blower-motor, coil and filter are accessible through the return air opening. Unit and control box are insulated with 1/2" (13) coated glass-fiber insulation.
- Threaded fittings must be field tightened and tested.
- Unit designed for 39"-55" riser stub-out height.
- Type "U" return air panel shown.
- Quick Finish Wall Panel and frame not shown in front view.
- Dimensions are in inches, dimension in () are in millimeters.



Submittal Data, Cont'd.

MIY – MINIReStoramod™ 81 inch Partially-Concealed Hi-Rise with Top Power and Electric Heat



Unit Model	Front 9	Front Supply		Front Supply		-	_	_	Unit Weight*
	A			D	E	٢	VVeigne		
MIY 04	12 (305)	8 (203)	14.5 (368)	15.2 (386)	13.5 (343)	17 (432)	140 (64)		

NOTES: * Unit weights are approximate (shown in pounds and kg) and are based on dry coils, minimum rows and exclude packaging, valves or other components.

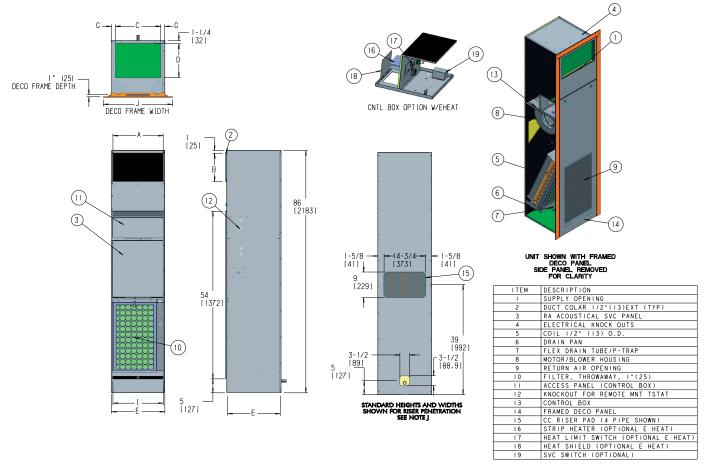
- Units are fabricated of galvanized steel with a 16 gauge galvanized fan deck.
- Thermostats, hoses and isolation/combo valves shipped loose for field connection.
- Blower-motor, coil and filter are accessible through the return air opening. Unit and control box are insulated with 1/2" (13) coated glass-fiber insulation.
- Threaded fittings must be field tightened and tested.
- Unit designed for 39"-55" riser stub-out height.
- Type "U" return air panel shown.
- Quick Finish Wall Panel and frame not shown in front view.
- Dimensions are in inches, dimension in () are in millimeters.



FAN COIL TECHNICAL CATALOG

Submittal Data, Cont'd.

MRY – ReStoramod® 86 inch Partially-Concealed Hi-Rise



	Dimension – Inches (Millimeters)								
Unit Model	Single Supply Top Supply			Unit Weight*					
	Α	В	С	D	Е	G	I	J	vveigne
MRY 03	14 (356)	8 (203)	14 (356)	10 (254)	16 (406)	1 (25.4)	14 (356)	21-1/2 (546)	180 (82)
MRY 04	14 (356)	12 (305)	14 (356)	10 (254)	16 (406)	1 (25.4)	14 (356)	21-1/2 (546)	225 (102)
MRY 06	18 (457)	10 (254)	16 (406)	12 (305)	19 (483)	1-1/2 (38)	18 (457)	24-1/2 (622)	240 (109)
MRY 08	18 (457)	12 (305)	16 (406)	12 (305)	19 (483)	1-1/2 (38)	18 (457)	24-1/2 (622)	260 (118)
MRY 10	22 (559)	16 (406)	18 (457)	16 (406)	23 (584)	2-1/2 (63.5)	22 (559)	28-1/2 (724)	280 (127)
MRY 12	22 (559)	16 (406)	18 (457)	16 (406)	23 (584)	2-1/2 (63.5)	22 (559)	28-1/2 (724)	305 (138)

- NOTES: * Unit weights are approximate (shown in pounds and kg) and are based on dry coils, minimum rows and exclude packaging, valves or other components.
 - Units are fabricated of galvanized steel with a 16 gauge galvanized fan deck.
 - Threaded fittings must be field tightened. В.
 - Thermostats shipped loose for field installation.

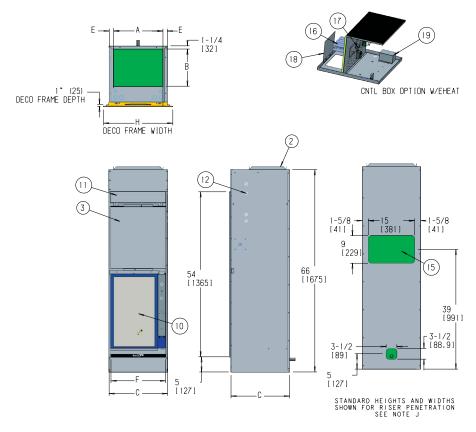
 - All risers ship separately from unit if ordered.
 Blower, motor, valves, coil, and filter are accessible through the return air opening.
 - Standard riser penetration height is 39 inches A.F.F. Contact factory for alternate heights.
 - Deco frame not shown in main view unless otherwise noted for dimension values.
 - Hoses ship with unit (not shown).
 - Opening provided in the back panel for coil connection to permit expansion and contraction of risers. Coil connections to be at the center of the slots. See unit arrangements for supply and return air orientation.

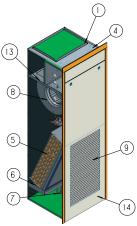
 - Dimensions are in inches, dimension in () are in millimeters.



Submittal Data, Cont'd.

MRY - ReStoramod® 66 inch Partially-Concealed Hi-Rise





UNIT SHOWN WITH FRAMED DECO PANEL SIDE PANEL REMOVED FOR CLARITY

ITEM	DESCRIPTION
I	SUPPLY OPENING
2	DUCT COLAR I"(25)EXT (TYP)
3	RA ACOUSTICAL SVC PANEL
4	ELECTRICAL KNOCK OUTS
5	COIL 1/2" (13) O.D.
6	DRAIN PAN
7	FLEX DRAIN TUBE/P-TRAP
8	MOTOR/BLOWER HOUSING
9	RETURN AIR OPENING
10	FILTER
11	ACCESS PANEL (CONTROL BOX)
12	KNOCKOUT FOR REMOTE MNT TSTAT
13	CONTROL BOX
I 4	FRAMED DECO PANEL
15	CC RISER PAD (4 PIPE SHOWN)
16	STRIP HEATER (OPTIONAL E HEAT)
17	HEAT LIMIT SWITCH (OPTIONAL E HEAT)
18	HEAT SHIELD (OPTIONAL E HEAT)
19	SVC SWITCH (OPTIONAL)

	Dimension – Inches (Millimeters)								
Unit Model	Top Supply			Dimensions					
	А	В	С	E	F	Н			
MRY 03	14 (356)	10 (254)	16 (406)	1 (25.4)	14 (356)	21-1/2 (546)	360 (163)		
MRY 04	14 (356)	10 (254)	16 (406)	1 (25.4)	14 (356)	21-1/2 (546)	450 (204)		
MRY 06	16 (406)	12 (305)	19 (483)	1-1/2 (38)	18 (457)	24-1/2 (622)	480 (217)		
MRY 08	16 (406)	12 (305)	19 (483)	1-1/2 (38)	18 (457)	24-1/2 (622)	520 (236)		
MRY 10	18 (457)	16 (406)	23 (584)	2-1/2 (63.5)	22 (559)	28-1/2 (724)	560 (254)		
MRY 12	18 (457)	16 (406)	23 (584)	2-1/2 (63.5)	22 (559)	28-1/2 (724)	610 (276)		

- NOTES: * Unit weights are approximate (shown in pounds and kg) and are based on dry coils, minimum rows and exclude packaging, valves or other components.
 - Units are fabricated of galvanized steel with a 16 gauge galvanized fan deck.
 - Threaded fittings must be field tightened.
 - Thermostats shipped loose for field installation. All risers ship separately from unit if ordered.
 - Blower, motor, valves, coil, and filter are accessible through the return air opening.
 - Unit and control box are insulated.
 - Standard riser penetration height is 39 inches A.F.F. Contact factory for alternate heights.
 - Deco frame not shown in main view unless otherwise noted for dimension values.
 - Hoses ship with unit (not shown).
 - Opening provided in the back panel for coil connection to permit expansion and contraction of risers. Coil connections to be at the center of the slots.
 - See unit arrangements for supply and return air orientation. Dimensions are in inches, dimension in () are in millimeters.



Modular Hi-Rise Replacement SeriesFAN COIL TECHNICAL CATALOG

Standard Features and Options

		Availability	
Factory-Installed Features & Options	Standard	Optional	Special (SFR Required)
Air Flow Arrangement		1	
See Unit Configurations - A1, H1, S1, D1, C1, T1, C2, M2 & W2	Both	Both	
Other/Special Arrangements			Both
Coils			
3-Rows 2-Pipe	Both		
4-Rows 2-Pipe		Both	
5-Rows 2-Pipe			Both
3/1, 3/2, or 4/1-Rows (CW/HW), 4-Pipe		Both	
Manual Air Vent	Both		
Automatic Air Vent		Both	
Drain Pan			
Galvanized Internally Coated with a 2-part closed cell foam	Both		
Stainless Steel Externally Coated with a 2-part closed cell foam		Both	
Antimicrobial Coating		Both	
Coil Construction	·		
Aluminum Fins with Galvanized Wrapper	Both		
Aluminum Fins with Stainless Steel Wrapper		Both	
Copper Fins with Stainless Wrapper & Bottom Coil Baffle		Both	
Electric Heat			
Nichrome Wire Strip Electric Heater		Both	
Filters			
1" Throwaway non-woven synthetic	Both		
1" Permanent (washable media)		Both	
1" MERV 8 Pleated		Both	
Insulation	<u> </u>	'	
1/2" Standard dual-density fiberglass	Both		
1/2" Premium IAQ Fiberglass, sealed edges			Both
1/2" Foil Face, taped edges		Both	
1/4" Closed Cell		Both	
Other/Special Insulation Types			Both
Motor Type	<u> </u>		
EC Motor w/ 3-Speed Fan Potentiometer Board	MRY		
EC Motor w/Proportional Fan	MIY	MRY	
EC Motor w/4-speed EVO Board (Fan Speed SSRs)		MRY	
Motor Voltage			
120/1/60	Both		
208/230/277/1/60	254.1	Both	
Cabinet Modifications			
81" Cabinet Height	MIY		
86" Cabinet Height	MRY		
66" Cabinet Height	141171	MRY	
Custom Cabinet Height		1-11/1	Both
Cabinet Footprint Upsize (L x W)		MRY	Dout
Cabinet Footprint Opsize (L x vv)		MK1	



Standard Features and Options, Cont'd.

		Availability			
Factory-Installed Features & Options	Standard	Optional	Special (SFR Required)		
Controls					
Service Switch with Lockout Tabs		MRY			
Incoming Power Fusing		MRY			
Integral Circuit Breaker with Lockout Tabs (Service Switch)	MIY				
24V Controls	MIY	MRY			
Line Voltage Controls	MRY	MIY			
Condensate Overflow Switch	MIY	MRY			
Solid State Relays (SSRs) - Electric Heat		MIY	MRY		
DDC/Special/Customer Supplied Control			Both		
Thermostats					
Unit Mounted (Behind RA Panel)			MRY		
Outside Air Dampers					
Manual Controlled Damper			MRY		
Motorized Controlled Damper			MRY		
Supply Grilles			_		
Double Deflection, Aluminum Supply Grille		Both			
Double Deflection, Aluminum Supply Grille w/Opposed Blade Dampers		MRY	MIY		
Custom Supply Grille			Both		
Return Air Panel			_		
Quick Finish Wall Panel Kit, Type "U" (Front/Side Supply)		Both			
Quick Finish Wall Panel Kit, Type "V" (Top Supply Only)		Both			
Custom Return Air Panel			Both		
Paint Options			_		
Arctic White	Both				
Special Color			Both		
Thermostats					
Surface Mounted (with Device Tile Ring on RA Panel Surface)			MRY		
Wall or Remote Mounted		Both			



FAN COIL TECHNICAL CATALOG

Standard Features and Options

As detailed in the table below, we offer a control for most of our customer's needs. Additional controls and devices are available to meet even the most demanding operating logic.

3-speed Fan Control

All of our basic control schemes utilize a thermostat with a 3-speed switch to modulate the cooling output, to maximize the percentage of latent heat removal, and to further minimize the sound level when maximum cooling or heating performance is not required.

Low Voltage Control (24V)

An optional low voltage control is available with all of our control schemes.

Condensate Overflow Switch

This switch shuts down the unit when the water level in the drain pan reaches an unsafe level. Switch is standard on MIY and optional on MIY. New versions of building codes across the US are constantly being adopted, and may require this type of device.

Service Switches

We offer optional service switches (on MIY) for use by maintenance and service personnel.

Fusing

We offer optional incoming power fusing as well as blower motor and control sub-fusing for units that use electric heat.

Thermostats

Contain Commetibility	Thermostat Type*						
System Compatibility	Р	N	F	G			
2-Pipe, Heat Only	Х	X	Х	Х			
2-Pipe, Cool Only	X	X	X	X			
2-Pipe, Heat/Cool	X	X	X	X			
2-Pipe, Heat/Cool with Auxilary Electric Heat	X	X	X	X			
2-Pipe, Cool with Total Electric Heat	X	X	X	X			
4-Pipe, Heat & Cool	X	X	X	X			
	Features						
24VAC	X	X	X	X			
Programmable	X		X				
Non-Programmable		X		X			
Surface Mount	X	X	X	X			
Remote/Wall Mount	X	X	X	X			
3-Speed Fan	X	X	X	X			
Proportional Fan (0-10VDC)			X	X			
Continuous Fan	Opt	Opt	Opt	Opt			
Cycling Fan	Opt	Opt	Opt	Opt			
Remote Temp Sensor	X	X	X	X			
"Adjustable Operating Range (Range Stop Kit)"	SFR	SFR	SFR	SFR			
Digital Display & Buttons	X	X	X	X			
Local Temp. Set-Back	X	X					
Water Temp. Purge Cycle	X	X					
Changeover Pipe Sensor	X	X	X	X			
Aqua Stat							
Proportional Control Valves			Х	X			
Floating Ctrl. Valves (2P Only)			X	X			

NOTE: All manufacturer thermostats are auto-changeover - Thermostat switches between heating and cooling on its own.

- *LEGEND: P Basic 24 V Digital Programmable Venstar

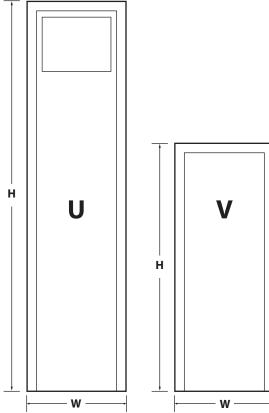
 - N Basic 24 V Digital Non-Programmable Venstar F Premium 24 V Digital 7-Day Programmable
 - w/Proportional Options Neptronic G Premium 24 V Digital BACnet with Proportional Options Neptronic



Standard Features and Options, Cont'd.







	_	Panel Type & Dimensions						
Unit Model	Unit Size	Type "U	J" Panel	Type "V" Panel				
Model	Size	Н	W	Н	W			
MIY	04	83 (2108)	17 (437)	83 (2108)	17 (437)			
MRY	03/04	88.5 (2248)	21.5 (546)	68.5 (1740)	21.5 (546)			
MRY	06/08	88.5 (2248)	24.5 (622)	68.5 (1740)	24.5 (622)			
MRY	10/12	88.5 (2248)	28.5 (724)	68.5 (1740)	28.5 (724)			

NOTE: Dimensions shown in inches and millimeters (inches(mm)).

General Specifications:

- Heavy gauge galvanized steel with arctic white powder-coated finish (standard color)
- Rear of panel is insulated with 1/2" dual density fiberglass
- Integral stamped steel return air grille
- 1/4 turn tamper-proof fasteners for panel removal
- Removal of return air deco and acoustical RA blockoff panels provide service access to all internal components
- Framed panel series requires separate field installation of frame

Return Air/Access Panel Application

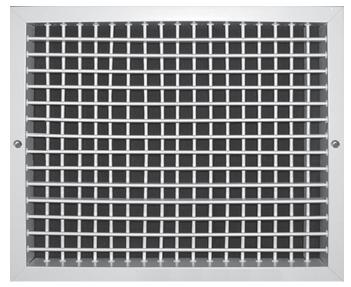
Model	Control Mounting Options	Availability
MRY	1. Surface mounted controls: This requires a tile ring mounted on the return air panel and quick-connect plug wiring on the thermostat. The thermostat plug will be attached to a matching plug in the unit and the thermostat will be fastened to the tile ring.	SFR
MRY	Unit mounted: Thermostat is mounted behind the acoustical RA block-off panel.	SFR
MRY, MIY	3. Remote wall mounted: Thermostat is mounted on a wall remote from the cabinet and wiring from the unit to thermostat is done in the field.	Option



FAN COIL TECHNICAL CATALOG

Standard Features and Options

Supply Air Grilles



NOTE: Standard double-deflection supply air grille shown.

Unit	Unit Size	Nom. CFM	Recommended Grille Sizes			
Model			Single Supply*	Double Supply	Top Supply	
MIY	04	380	12 (3 05) x 8 (203)	Consult Factory	10.75 (273) x 8 (203)	
MRY	03	300	14 (356) x 8 (203)	14 (356) x 6 (152)	14 (356) x 10 (254)	
	04	400	14 (356) × 12 (305)	14 (356) × 6 (152)	14 (356) × 10 (254)	
	06	600	18 (457) x 10 (254)	18 (457) × 6 (152)	16 (406) × 12 (305)	
	08	800	18 (457) x 12 (305)	18 (457) x 6 (152)	16 (406) × 12 (305)	
	10	1000	22 (559) × 16 (406)	22 (559) x 8 (203)	18 (457) × 16 (406)	
	12	1200	22 (559) × 16 (406)	22 (559) x 8 (203)	18 (457) × 16 (406)	

Specifications:

Frame and blades are 6063 extruded aluminum alloy with 200-R1 satin anodized finish. The frame has a typical wall thickness of .050" and is separated from the blades with injection-molded nylon bushings. This method of assembly minimizes corrosion and vibration. The frame mounting holes are dimpled, allowing for a counter-sunk fastener head appearance.

All blades are airfoil in design, individually adjustable and spaced 3/4" on center. At the outer edge of the frame is a specially engineered channel which retains an extruded flexible vinyl bulb gasket that produces a positive air seal at the mounting surface, minimizing smudging.

An optional opposed blade damper is screwdriveroperated through the face of the unit and has the same extruded aluminum construction and injection-molded nylon bushings.

The unit achieves an effective area of 80% with the blades set at a 0° pattern, thus eliminating high velocity and pressure drop at the grille face. Wider deflection with reduced throw may be achieved at the 22° and 45° blade settings with slightly increased sound levels.

Suitable for sidewall application. Available in clear anodized, white or a variety of custom colors. Contact the factory for available optional colors and color chart.

Standard Features and Options

Filters

Unit Model	Unit Size	Cab. Size	Nominal 1" Filter Size		
MIY	04	81"	11 (279) x 24-1/2 (622)		
145)/	03		12-1/2 (318) × 24-1/4 (616)		
	04		12-1/2 (318) x 24-1/4 (616)		
	06	0.0"	15-1/4 (387) × 26-3/4 (679)		
MRY	08	86"	15-1/4 (387) × 26-3/4 (679)		
	10		19-1/2 (495) × 29-1/4 (743)		
	12		19-1/2 (495) x 29-1/4 (743)		
	03		12-1/2 (318) × 24-1/4 (616)		
	04		12-1/2 (318) x 24-1/4 (616)		
MDV	06	66"	15-1/4 (387) x 26-3/4 (679)		
MRY	08	66"	15-1/4 (387) x 26-3/4 (679)		
	10		19-1/2 (495) × 29-1/4 (743)		
	12		19-1/2 (495) x 29-1/4 (743)		

NOTE: Sizes shown are nominal ordering sizes.

Filter Static Resistance (in w.c.)

	Unit Data		Filter Pressure Drop			
Model	Unit Size	Nominal CFM	1" Throwaway	1" Permanent	1" Merv 8	
M*Y	03	300	0.034	0.049	0.11	
	04	400	0.045	0.074	0.13	
	06	600	0.045	0.074	0.13	
	08	800	0.058	0.114	0.16	
	10	1000	0.056	0.106	0.15	
	12	1200	0.065	0.141	0.17	



Modular Hi-Rise Replacement Series FAN COIL TECHNICAL CATALOG

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Modular Hi-Rise Replacement Series FAN COIL TECHNICAL CATALOG

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Modular Hi-Rise Replacement Series FAN COIL TECHNICAL CATALOG



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