



SUBMITTAL DATA

for

Warrenton HS Rooftop Unit Replacement

Prepared for

Warren County R-III SD



SUBMITTAL DATA

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Job Number: ME7001
 Job Name: Warrenton HS Replacement

Date: 1/27/21

Prepared Date:

www.DaikinApplied.com 2/8/2021

Product Drawing	Unit Tag: RTU-7 & 8			Sales Office: Daikin TMI LLC (St. Louis)			 13600 Industrial Park Blvd. Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 07.31
Product:	Project Name: Warrenton HS Replacment			Sales Engineer:			
Model: RPS042D	Feb. 08, 2021	Ver/Rev:	Sheet: 1 of 1	Scale: NTS	Tolerance: +/- 0.25"	Dwg Units: in [mm]	

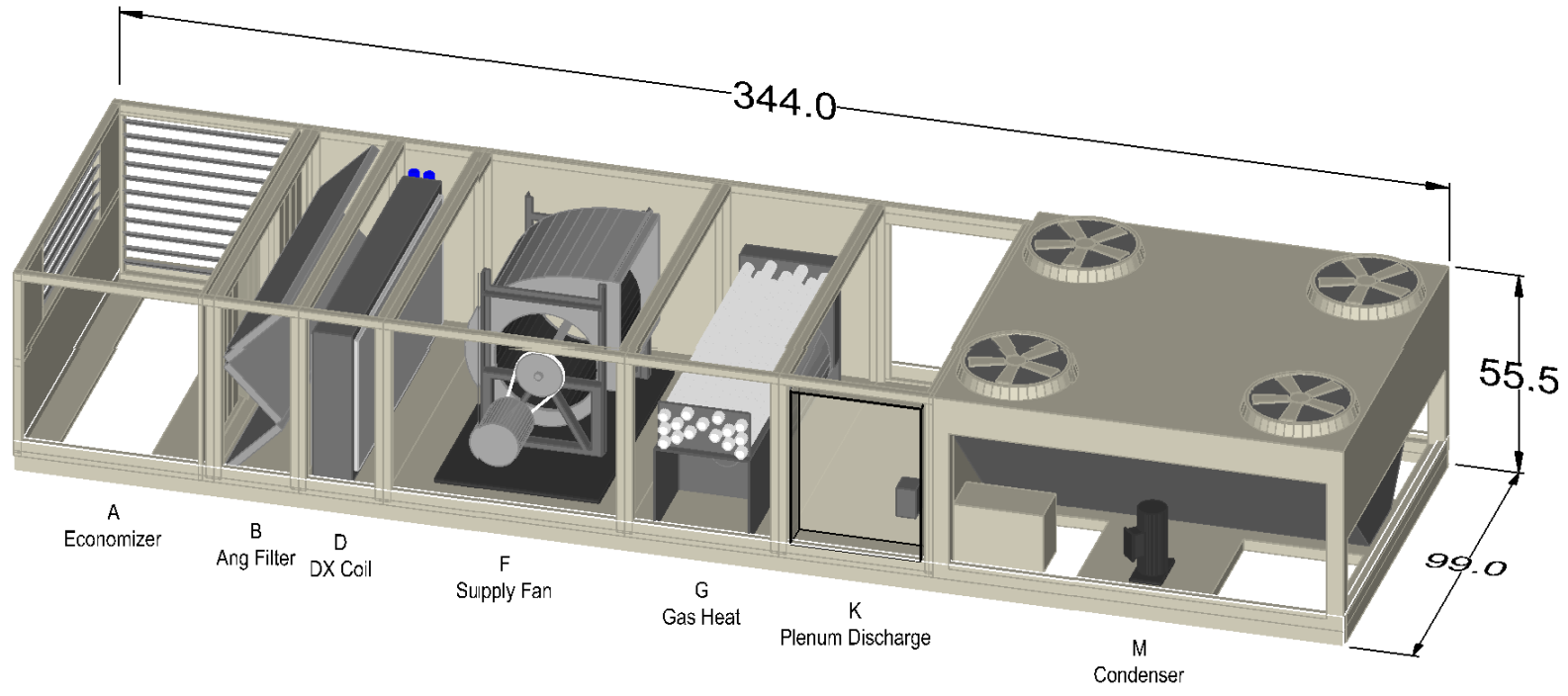
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Job Number: MEZ001
Job Name: Warranton HS Parliament

Date: 2/27/20

Prepared Date:

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2/2/2021




Job Number: ME7001
 Job Name: Warrenton HS Replacement

Date: 6/27/21

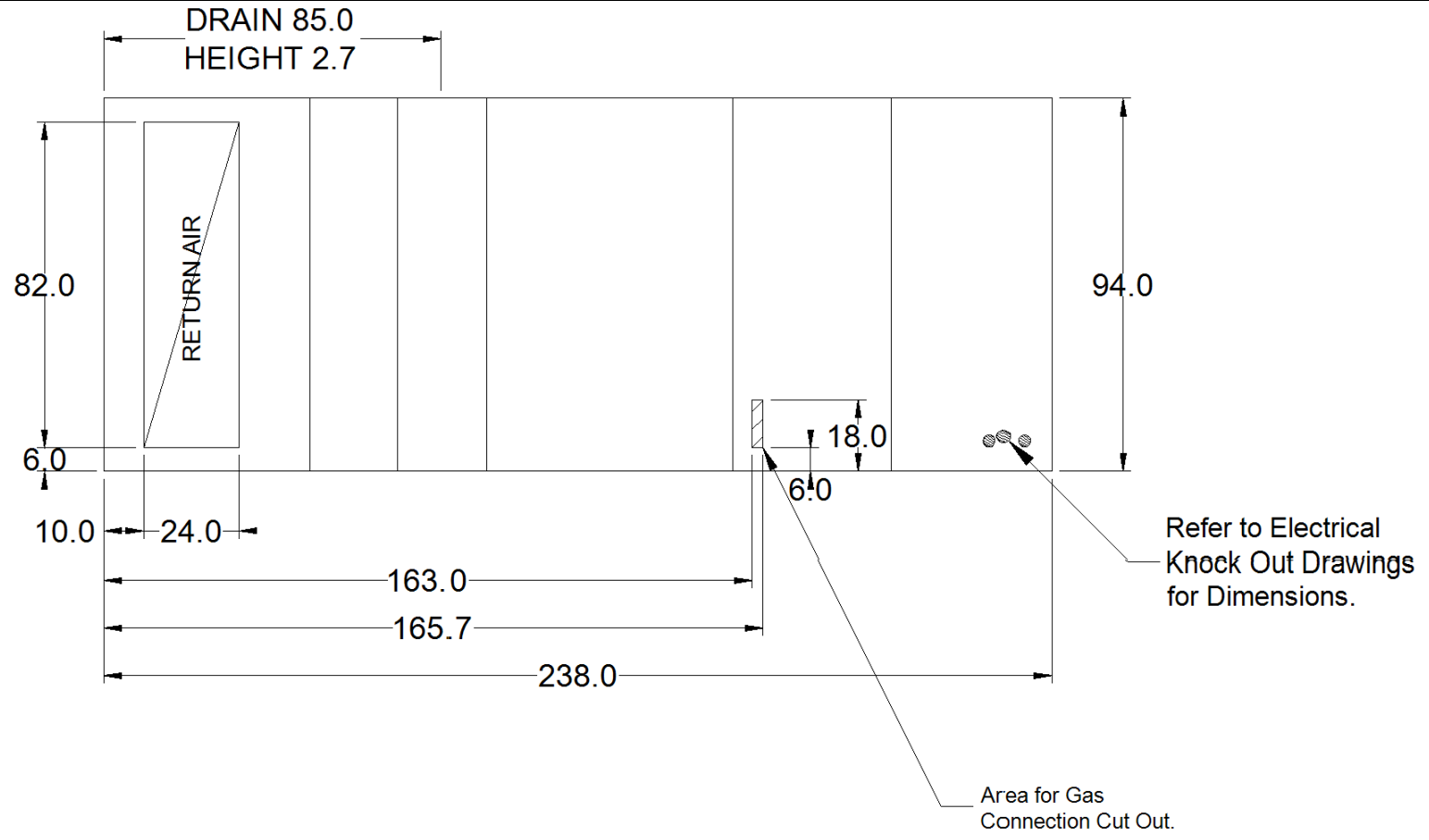
Prepared Date:

2/9/2021
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Product Drawing	Unit Tag: RTU-7 & 8			Sales Office: Daikin TMI LLC (St. Louis)			 13600 Industrial Park Blvd. Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 07.31
Product:	Project Name: Warrenton HS Replacment			Sales Engineer:			
Model: RPS042D	Feb. 08, 2021	Ver/Rev:	Sheet: 1 of 1	Scale: NTS	Tolerance: +/- 0.25"	Dwg Units: in [mm]	

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Drawings(2) for RTU-7 & 8



PLAN VIEW - OPENINGS & OVERALL


Job Number: MEZ7001
Job Name: Warrington UC Danlarmant
Date: 7 of 70
Prepared Date:
www.DaikinApplied.com
2/8/2011

Job Number: MEZ001
 Job Name: Warrenton HS Replacement

Date: 2/9/21

Prepared Date:

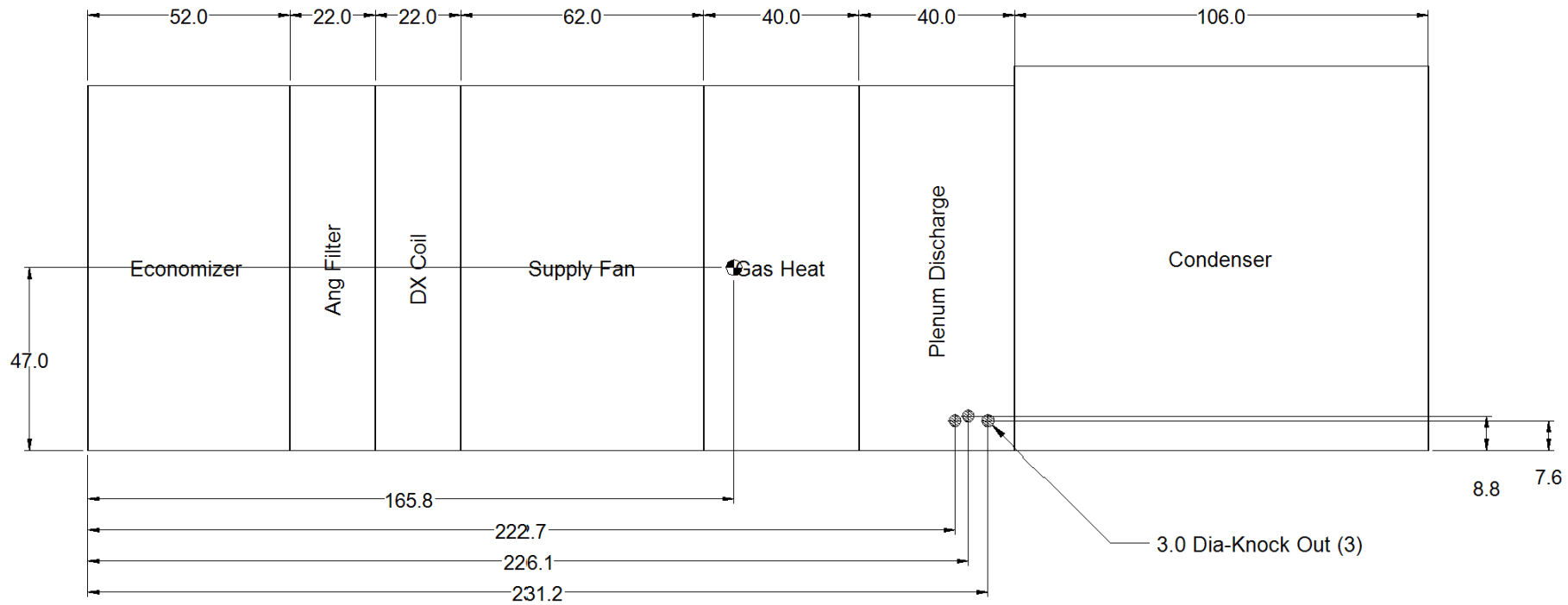
www.DaikinApplied.com 2/9/2021

Product Drawing	Unit Tag: RTU-7 & 8			Sales Office: Daikin TMI LLC (St. Louis)			 13600 Industrial Park Blvd. Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 07.31
Product:	Project Name: Warrenton HS Replacment			Sales Engineer:			
Model: RPS042D	Feb. 08, 2021	Ver/Rev:	Sheet: 1 of 1	Scale: NTS	Tolerance: +/- 0.25"	Dwg Units: in [mm]	

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Drawings(3) for RTU-7 & 8

Job Number: MEZ001
Job Name: Waterfront MC Parliament
Date: 0 0 70
Prepared Date:
www.DaikinApplied.com
2/8/2011




PLAN VIEW - KNOCK OUTS & CENTER-OF-GRAVITY

Job Number: ME7001
 Job Name: Warrenton HS Replacement

Date: 10 of 20

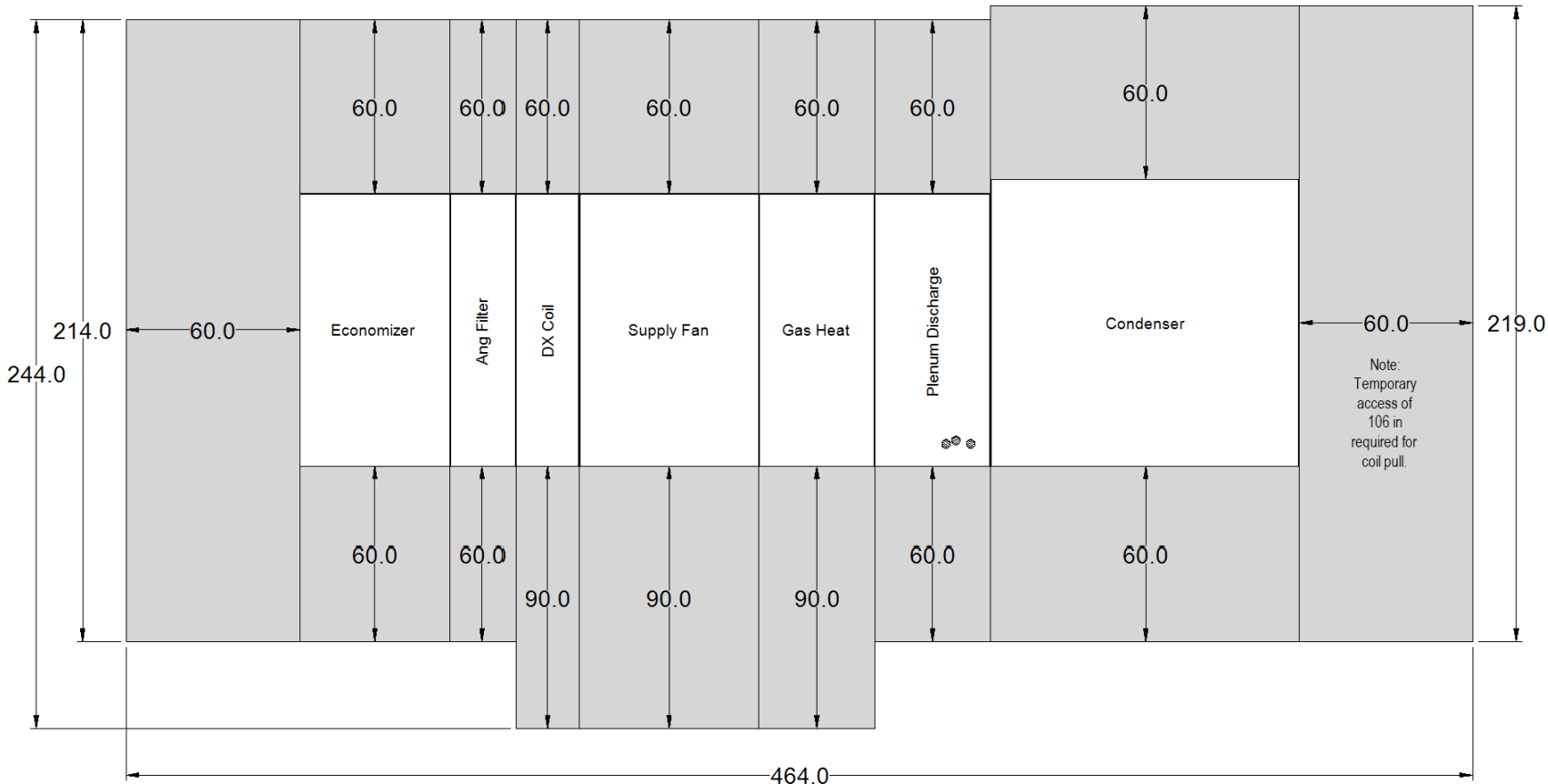
Prepared Date:

www.DaikinApplied.com 2/8/2021

Product Drawing	Unit Tag: RTU-7 & 8			Sales Office: Daikin TMI LLC (St. Louis)			 13600 Industrial Park Blvd. Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 07.31
Product:	Project Name: Warrenton HS Replacment			Sales Engineer:			
Model: RPS042D	Feb. 08, 2021	Ver/Rev:	Sheet: 1 of 1	Scale: NTS	Tolerance: +/- 0.25"	Dwg Units: in [mm]	

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Drawings(4) for RTU-7 & 8



PLAN VIEW - SERVICE CLEARANCE

Job Number: MEZ001
Job Name: Warrington UC Parliament

Date: 11 of 70

Prepared Date:


www.DaikinApplied.com
2/8/2011

Job Number: ME7001
 Job Name: Warrenton HS Replacement

Date: 11/27/20

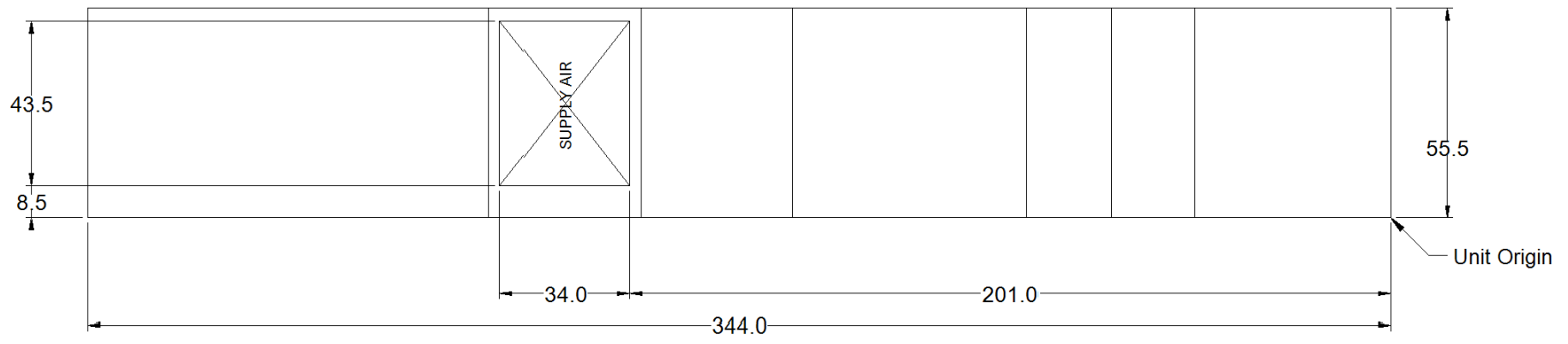
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Product Drawing	Unit Tag: RTU-7 & 8			Sales Office: Daikin TMI LLC (St. Louis)			 13600 Industrial Park Blvd. Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 07.31
Product:	Project Name: Warrenton HS Replacment			Sales Engineer:			
Model: RPS042D	Feb. 08, 2021	Ver/Rev:	Sheet: 1 of 1	Scale: NTS	Tolerance: +/- 0.25"	Dwg Units: in [mm]	

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Job Number: MEZ7001
Job Name: Warrington MC Plantroom
Date: 12 of 70
Prepared Date:
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2/8/2011




ELEVATION VIEW - UNIT FACE DETAIL

Job Number: MEZ001
 Job Name: Warrenton HS Replacement

Date: 1/1/20

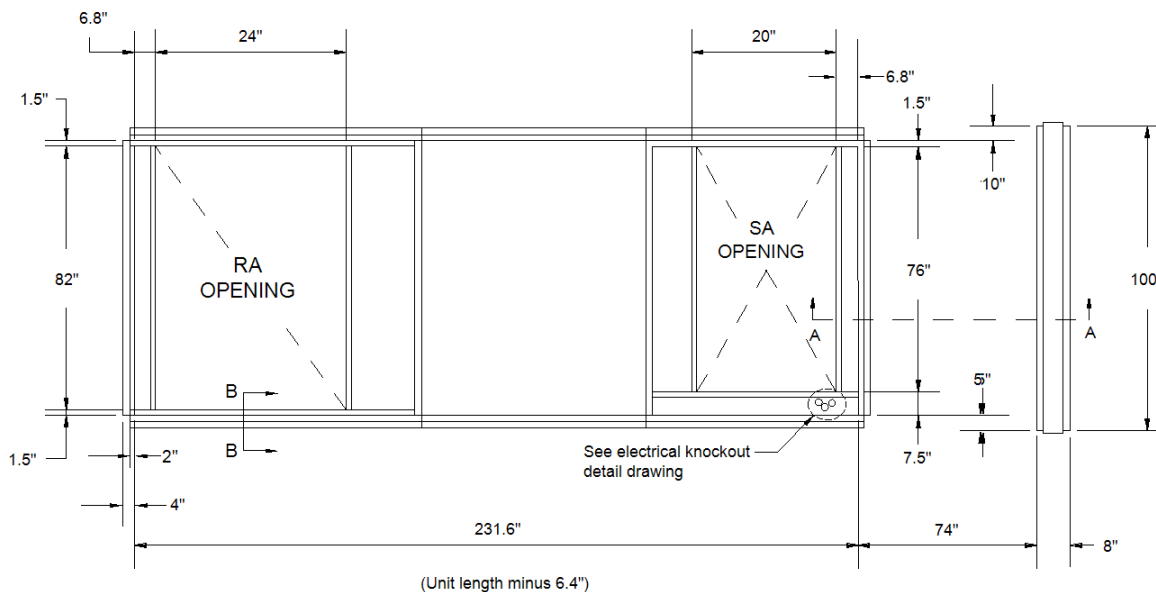
Prepared Date:

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Product Drawing	Unit Tag: RTU-7 & 8			Sales Office: Daikin TMI LLC (St. Louis)			 13600 Industrial Park Blvd. Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 07.31
Product:	Project Name: Warrenton HS Replacment			Sales Engineer:			
Model: RPS042D	Feb. 08, 2021	Ver/Rev:	Sheet: 1 of 1	Scale: NTS	Tolerance: +/- 0.25"	Dwg Units: in [mm]	

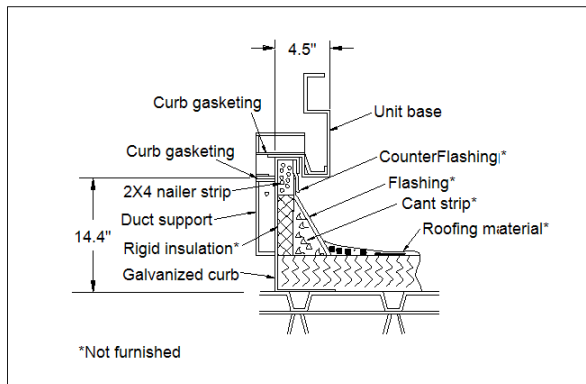
No change to this drawing may be made unless approved in writing by Daikin Applied. Purchaser must determine that the equipment is fit and sufficient for the job specifications.

Curb Weight: 647.04 lbs.

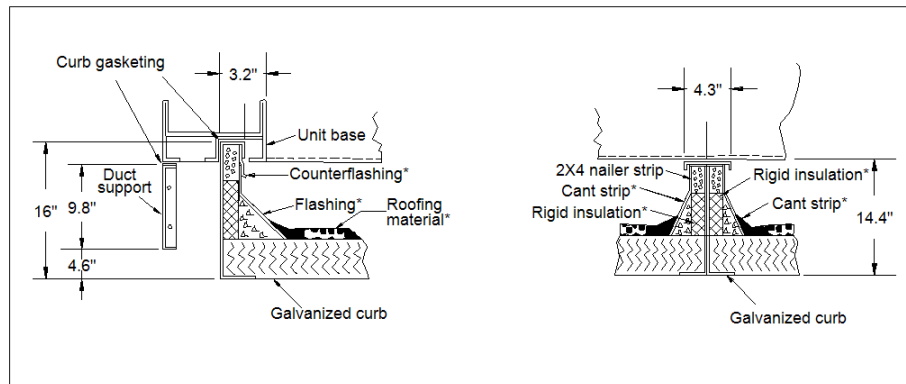


Note:
Curb must be installed level.

Cross-section B-B



Cross-Section A-A




Roofcurb Dimensions_Drawing for RTU-7 & 8

Job Number: MEZ001
 Job Name: Warrenton HS Replacement

Date: 16 of 70

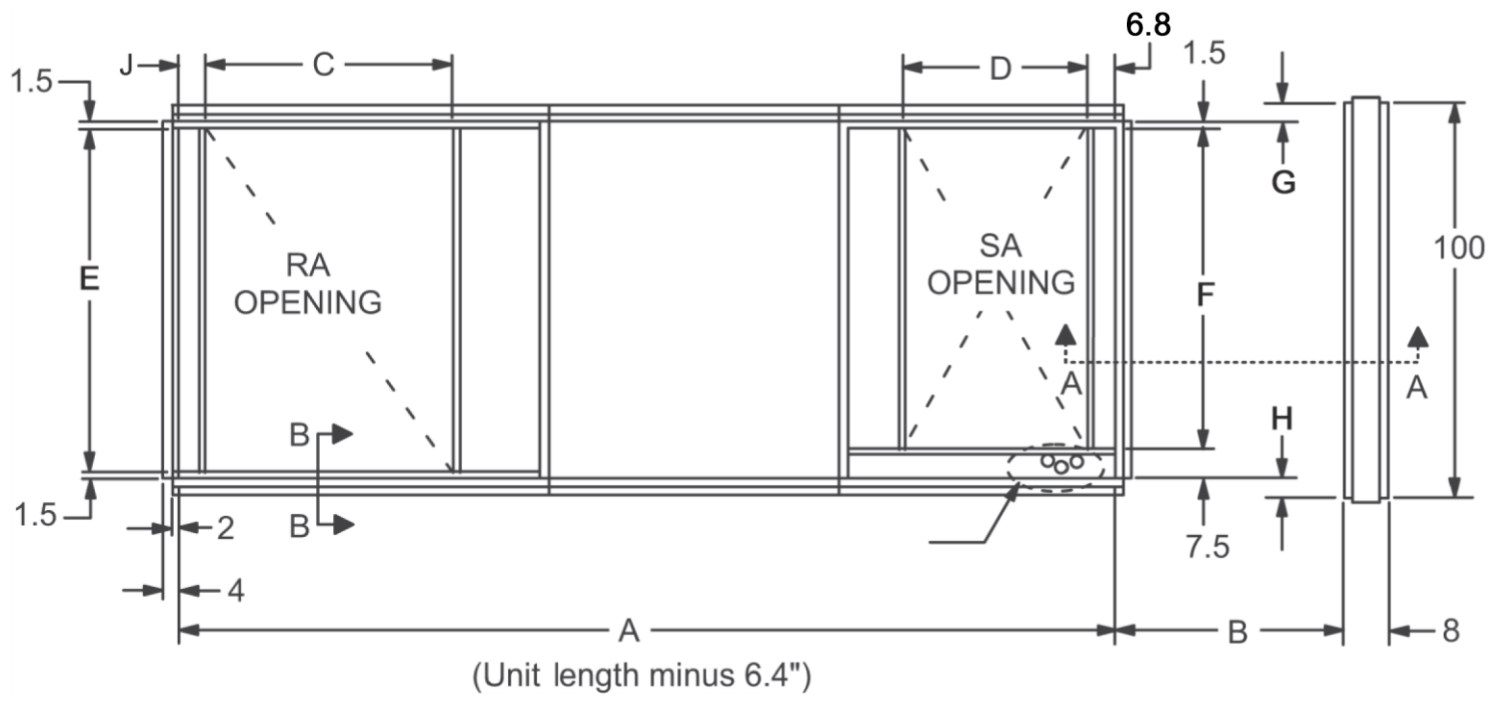
Prepared Date:

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Product Drawing	Unit Tag: RTU-7 & 8			Sales Office: Daikin TMI LLC (St. Louis)			 13600 Industrial Park Blvd. Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 07.31
Product:	Project Name: Warrenton HS Replacment			Sales Engineer:			
Model: RPS042D	Feb. 08, 2021	Ver/Rev:	Sheet: 1 of 1	Scale: NTS	Tolerance: +/- 0.25"	Dwg Units: (in)	

No change to this drawing may be made unless approved in writing by Daikin Applied. Purchaser must determine that the equipment is fit and sufficient for the job specifications.

Dimensions		
Description	Letter	Dimensions (in)
Curb Length	A	231.6
Condenser Rail	B	74.0
Return Air Opening Length	C	24.0
Supply Air Opening Length	D	20.0
Return Air Opening Width	E	82.0
Supply Air Opening Width	F	76.0
Condenser Rail Overhang	G	10.0
Condenser Rail Overhang	H	5.0
Return Air Opening Location	J	6.8



Note:
Curb must be installed level.

Job Number: MEZ001
 Job Name: Warehouse UC Parlourment
 Date: 17 of 70
 Prepared Date:
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 2/8/2011


Roofcurb Knockout small box_Drawing for RTU-7 & 8

Job Number: MEZ001
 Job Name: Warrenton HS Replacement

Date: 19 of 70

Prepared Date:

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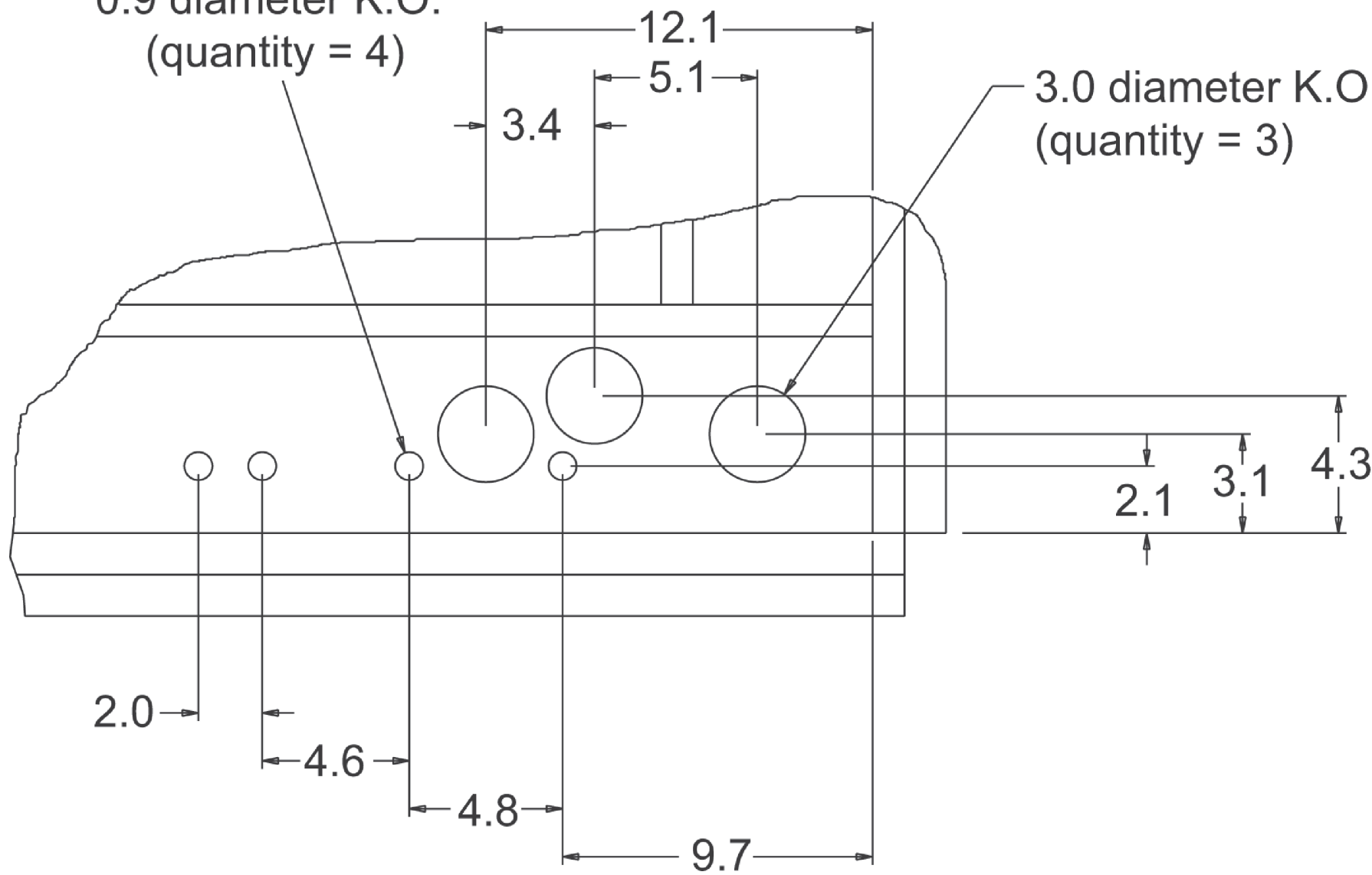
Product Drawing	Unit Tag: RTU-7 & 8			Sales Office: Daikin TMI LLC (St. Louis)			 13600 Industrial Park Blvd. Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 07.31
Product:	Project Name: Warrenton HS Replacment			Sales Engineer:			
Model: RPS042D	Feb. 08, 2021	Ver/Rev:	Sheet: 1 of 1	Scale: NTS	Tolerance: +/- 0.25"	Dwg Units: in [mm]	

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Roofcurb Knockout small box_Drawing for RTU-7 & 8

0.9 diameter K.O.
(quantity = 4)

3.0 diameter K.O.
(quantity = 3)



Job Number: MEZ7001
Job Name: Warrington MS Parliament
Date: 10 of 70
Prepared Date:
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2/8/2011

Technical Data Sheet for RTU-7 & 8



Job Information		Technical Data Sheet
Job Name	Warrenton HS Replacment	
Date	2/8/2021	
Submitted By	Chris Swallow	
Software Version	07.31	
Unit Tag	RTU-7 & 8	

Unit Overview				
Model Number	Voltage V/Hz/Phase	Design Cooling Capacity Btu/hr	AHRI 360 Standard Efficiency	ASHRAE 90.1
RPS042D	460/60/3	484971	10	2016 Compliant

Unit	
Model Number:	RPS042D
Altitude:	0 ft
Heat Type:	Gas
Condenser Type:	Air-Cooled
Approval	ETL/MEA-USA unit

Physical				
Unit				
Length	Height	Width	Weight	Estimated Lifting Lugs
344 in	55.5 in	94.0 in	8919 lb	2 per side

Electrical			
Voltage	MCA	MROPD	SCCR
460/60/3	97.0 A	125 A	10 kAIC
Note:	Use only copper supply wires with ampacity based on 75° C conductor rating. Connections to terminals must be made with copper lugs and copper wire.		

Return/Outside/Exhaust Air		
Outside Air Option		
Type	Pressure Drop	Damper Actuator
California and 90.1 Compliant Economizer	0.55 inH ₂ O	Electric Actuator
Return Air Option		
Return Air Location:	Bottom	

Filter Section				
Physical				
Type	(Quantity) Height x Width x Depth	Face Area	Face Velocity	Air Pressure Drop
2 in. 30% Nominal Efficiency (MERV 8)	(10) 16 in x 20 in x 2 in (10) 16 in x 25 in x 2 in	50.0 ft ²	320.0 ft/min	0.15 inH ₂ O

Technical Data Sheet for RTU-7 & 8

DX Cooling Coil								
Physical								
Fins per Inch	Rows	Face Area	Face Velocity	Air Pressure drop	Drain Pan Material	Casing Material		
12	6	27.0 ft ²	592.6 ft/min	1.52 inH ₂ O	Painted Galvanized	Galv. Steel		
Cooling Performance								
Capacity		Refrigerant Type	Indoor Air Temperature				Ambient Air Temperature	
Total Btu/hr	Sensible Btu/hr		Entering		Leaving		Dry Bulb °F	Wet Bulb °F
			Dry Bulb °F	Wet Bulb °F	Dry Bulb °F	Wet Bulb °F		
484971	384263	R410A	80.0	67.0	58.0	57.5	95.0	75.0

Fan Section			
Fan			
Type	Fan Wheel Diameter	Fan Isolation	
AF DWDI	24 in	Rubber in Shear	
Performance			
Airflow	Total Static Pressure	Fan Speed	Brake Horsepower
16000 CFM	3.36 inH ₂ O	1577 rpm	12.09 HP
Motor			Drive
Type	Horsepower	FLA	Type
ODP, Premium Efficiency	15.0 hp	17.7 A	Standard service factor, Fixed drive

Gas Heat Section					
Physical					
Gas Heat Size	Heat Exchanger Material	Modulation	Gas Pressure		
			Minimum In WC	Maximum Psi	
800 MBH	Type 321 Stainless Steel	Hi Turndown - 20:1	6.5	0.5	
Performance					
Gas Heat Airflow CFM	Input Capacity Btu/hr	Output Capacity Btu/hr	Air Temperature Dry Bulb		Air Pressure Drop inH ₂ O
			Entering °F	Leaving °F	
16000	1000000	800000	60.0	106.1	0.12

Discharge Plenum	
Discharge Location:	Left - Opposite Drive Side

Unit Discharge Conditions				
Air Temperature				
DX coil Configuration:	Draw-thru Coil			
Motor Heat Btu/hr	Moisture Removal lb/h	Unit Leaving Dry Bulb °F	Unit Leaving Wet Bulb °F	Unit Leaving Dewpoint °F
34612	85.8	60.0	58.1	57.1

Technical Data Sheet for RTU-7 & 8

Condensing Section				
Compressor				
Type	Quantity	Total Power	Capacity Control	Compressor Isolation
Variable And Fixed speed Scroll	3	33.2 kW	Modulating	Resilient
Compressor Amps:				
Fixed Speed Compressor 1			15.7 A	
Variable Speed Compressor 2			30.1 A	
Fixed Speed Compressor 3			15.7 A	
Condenser Coil				
Type	Fins per Inch	Fin Material	Refrigerant Charge	
Aluminum tube MicroChannel	21	Aluminum	82.0 lb	
Condenser Coil Options: Build in Hail Protection				
Condenser Fan Motors				
Number of Motors		Full Load Current (each)		
4		2.1 A		
AHRI 360 Certified Data at AHRI 360 Standard Conditions				
EER	IEER		ASHRAE 90.1	
10	14.9		2016 Compliant	

Sound								
Sound Power (db)								
Frequency	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	80	78	78	70	67	60	52	44
Discharge	78	74	71	66	63	57	49	41
Radiated	-	94	91	89	89	85	83	82

Supply Fan Total Pressure Drop Calculation	
External Static Pressure:	1.00 inH ₂ O
Filter:	0.15 inH ₂ O
Outside Air:	0.55 inH ₂ O
DX Coil:	1.52 inH ₂ O
Gas Heat:	0.12 inH ₂ O
Total Static Pressure:	3.36 inH₂O

Options	
Unit	
Unit Exterior:	Prepainted Galvanized Steel
Insulation and Liners:	2", 1 1/2# nominal insulation, full solid liners
Electrical	
Electrical Connection Option:	Single thru door disconnect switch
GFI 115v Receptacle:	Field powered
Controls	
Application:	Variable Volume - Space Temperature Control
Temperature Control:	Space VAV control, BACNet MSTP communication card
Fan Speed Control:	Factory mounted Inverter
Inverter Manufacturer:	Daikin
Inverter Location:	Inverter(s) in fan section
Economizer Control:	Outside Air Dry Bulb and Enthalpy Control
Low Ambient:	Speedtrol, operation to 0 deg F (-18 deg C)

Technical Data Sheet for RTU-7 & 8

Warranty

Parts:	Standard 1 year
Compressor:	Extended 4 year, 5 year total
Gas Heat Exchanger:	Additional 9 year heat exchanger warranty, 10 year total

AHRI Certification



All equipment is rated and certified in accordance with AHRI 360.

Notes

As a standalone component, unit meets or exceeds the requirements of ASHRAE 90.1.2010. The approving authority is responsible for compliance of multi-component building systems.

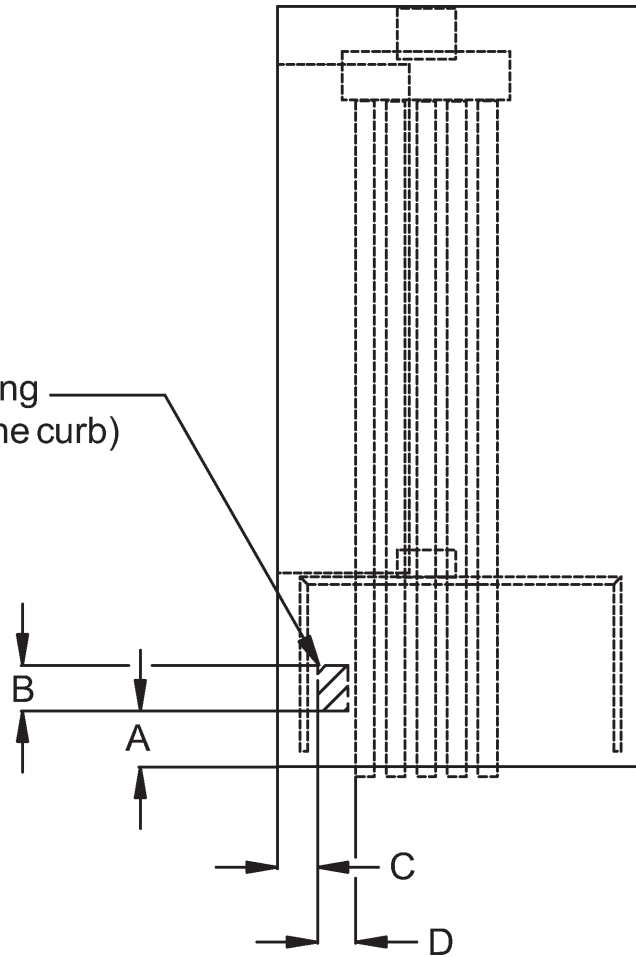
Unit Knockout, Gas Heat, Small Box_Drawing for RTU-7 & 8

Product Drawing	Unit Tag: RTU-7 & 8			 13600 Industrial Park Blvd. Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 07.31		
Product:	Project Name: Warrenton HS					
Model: RPS042D	Sales Office: Daikin TMI LLC (St. Louis)			Scale: NTS	Tolerance: +/-0.25"	Dwg Units: in [mm]
Sales Engineer:	Feb. 08, 2021	Ver/Rev:	Sheet 1 of 1			

Unit Knockout, Gas Heat, Small Box_Drawing for RTU-7 & 8

No change to this drawing may be made unless approved in writing by Daikin Applied. Purchaser must determine that the equipment is fit and sufficient for the job specifications.

Recommended piping entrance (through the curb)



Unit Size	A	B	C	D
015D-042D	6.0"	12.0"	5.0"	2.7"


Unit Knockout, Small Box_Drawing for RTU-7 & 8

Job Number: MEZ001
 Job Name: Warrenton HS Replacement

Date: 02/09/21

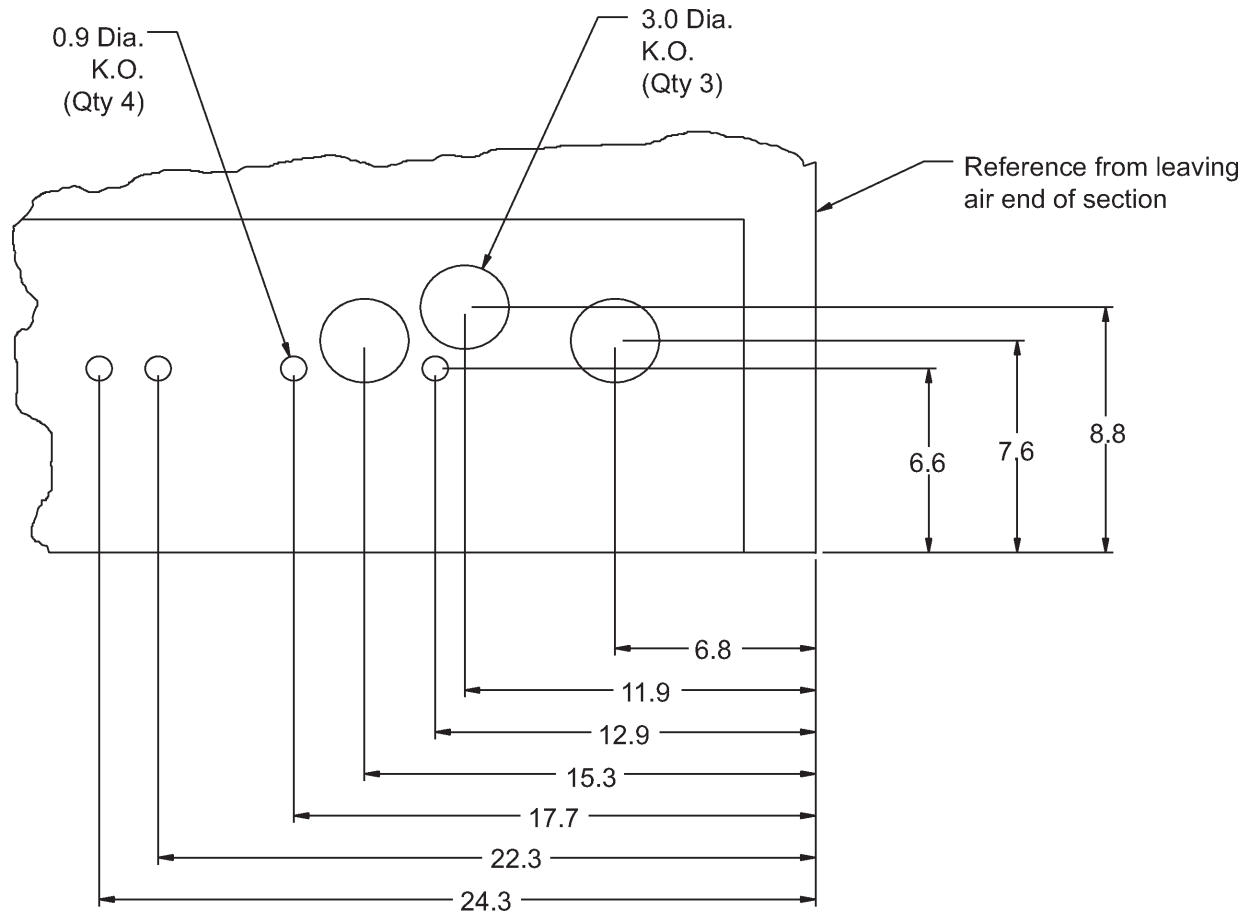
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Product Drawing	Unit Tag: RTU-7 & 8			Sales Office: Daikin TMI LLC (St. Louis)			 13600 Industrial Park Blvd. Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 07.31
Product:	Project Name: Warrenton HS Replacment			Sales Engineer:			
Model: RPS042D	Feb. 08, 2021	Ver/Rev:	Sheet: 1 of 1	Scale: NTS	Tolerance: +/- 0.25"	Dwg Units: in [mm]	

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Unit Knockout, Small Box_Drawing for RTU-7 & 8




Job Number: MEZ001
Job Name: Warrington MC Parliament
Date: 27 of 70
Prepared Date:
www.DaikinApplied.com
2/8/2011

Job Number: MEZ001
 Job Name: Warrenton HS Replacement

Date: 2/9/21

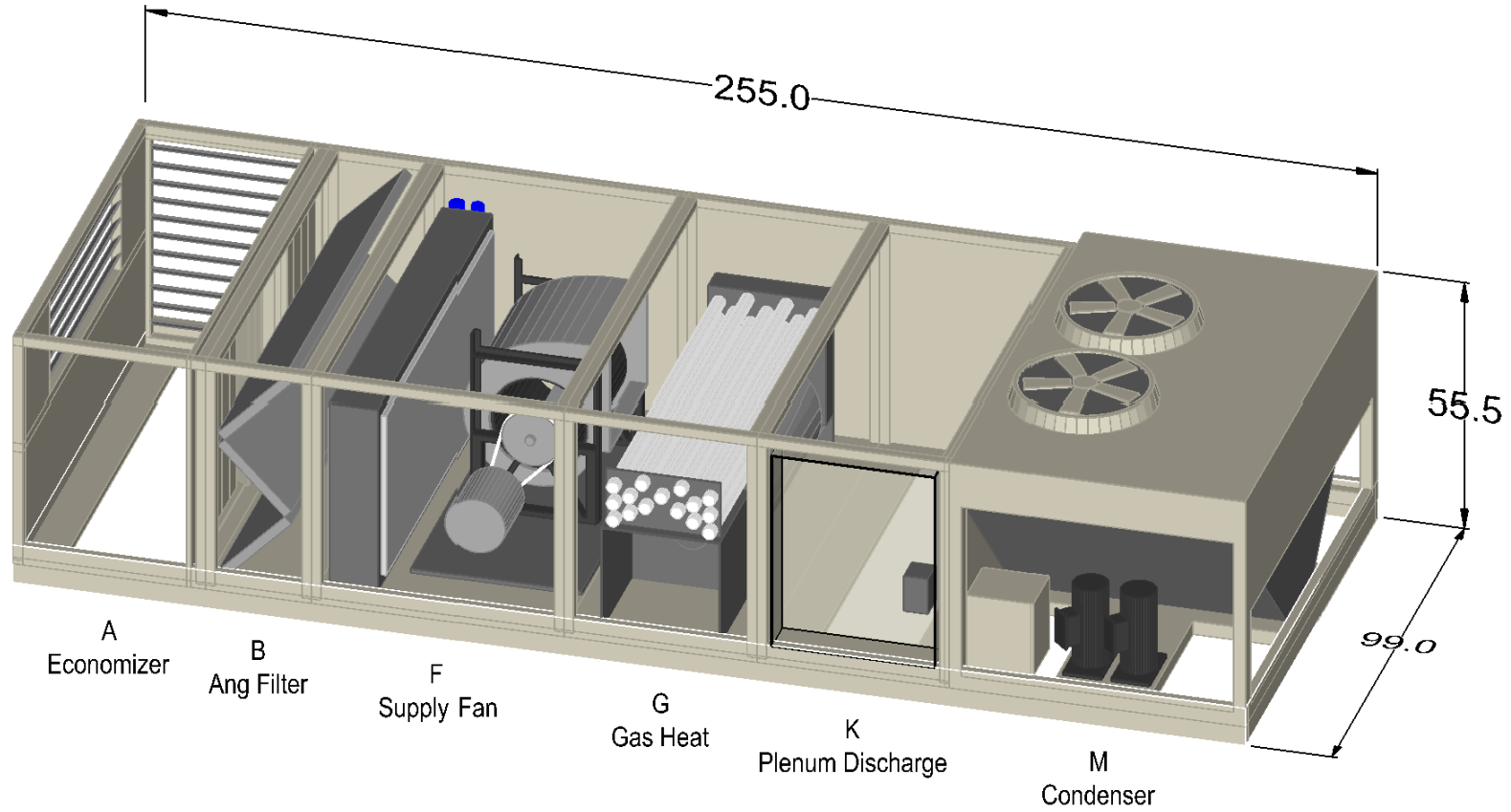
Prepared Date:

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Product Drawing	Unit Tag: RTU-4 & 5			Sales Office: Daikin TMI LLC (St. Louis)			 13600 Industrial Park Blvd. Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 07.31
Product:	Project Name: Warrenton HS Replacment			Sales Engineer:			
Model: RPS020D	Feb. 08, 2021	Ver/Rev:	Sheet: 1 of 1	Scale: NTS	Tolerance: +/- 0.25"	Dwg Units: in [mm]	

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Drawings(1) for RTU-4 & 5



Job Number

MEZ001

Warranton HC Parliament

Date
20 of 70

Prepared Date:


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2/8/2011

Job Number: MEZ001
 Job Name: Warrenton HS Replacement

Date: 20 of 70

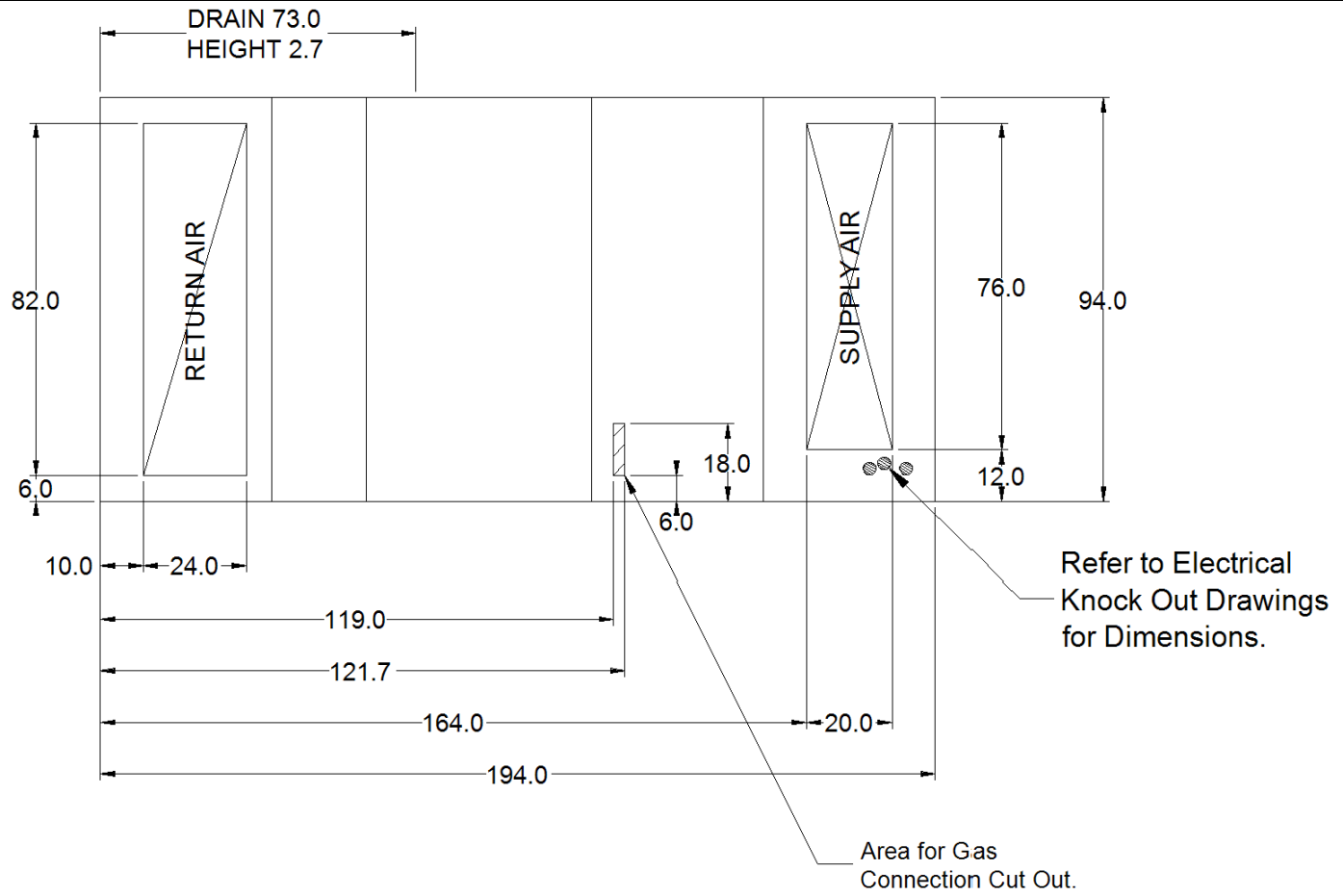
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Job Number: MEZ7001
Job Name: Waterston HS Parliament
Date: 21 of 70
Prepared Date:
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2/8/2011




PLAN VIEW - OPENINGS & OVERALL

Job Number: MEZ001
 Job Name: Warrenton HS Replacement

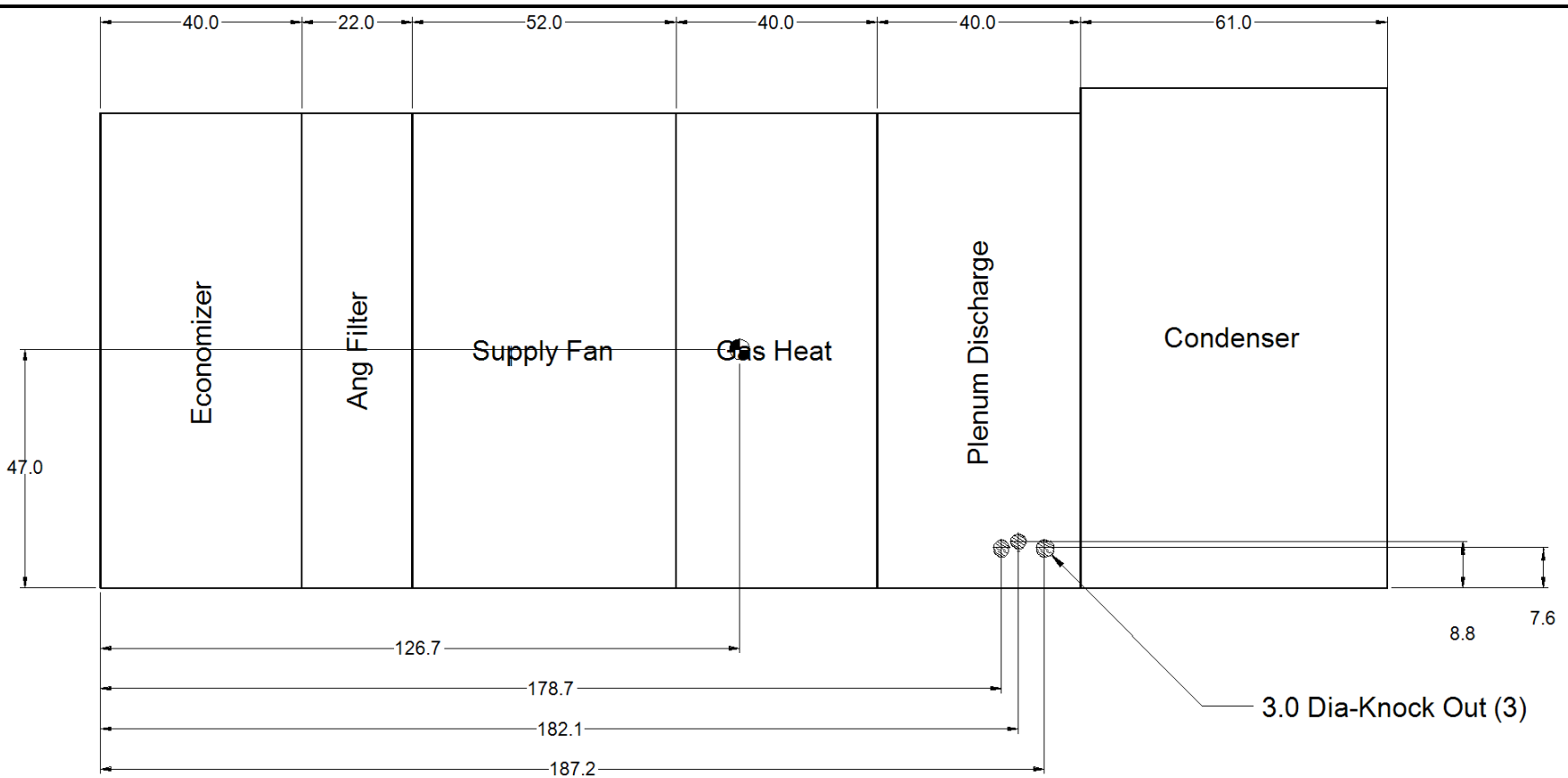
Date: 27 of 70

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Product Drawing	Unit Tag: RTU-4 & 5			Sales Office: Daikin TMI LLC (St. Louis)			 13600 Industrial Park Blvd. Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 07.31
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PLAN VIEW - KNOCK OUTS & CENTER-OF-GRAVITY

Job Number: MEZ001
Job Name: Warrington MC Parliament
Date: 22 of 70
Prepared Date:
www.DaikinApplied.com
2/8/2011


Drawings(3) for RTU-4 & 5

Job Number: MEZ001
 Job Name: Warrenton HS Replacement

Date: 2/9/2021

Prepared Date:

www.DaikinApplied.com 2/9/2021

Product Drawing	Unit Tag: RTU-4 & 5			Sales Office: Daikin TMI LLC (St. Louis)			 13600 Industrial Park Blvd. Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 07.31
Product:	Project Name: Warrenton HS Replacment			Sales Engineer:			
Model: RPS020D	Feb. 08, 2021	Ver/Rev:	Sheet: 1 of 1	Scale: NTS	Tolerance: +/- 0.25"	Dwg Units: in [mm]	

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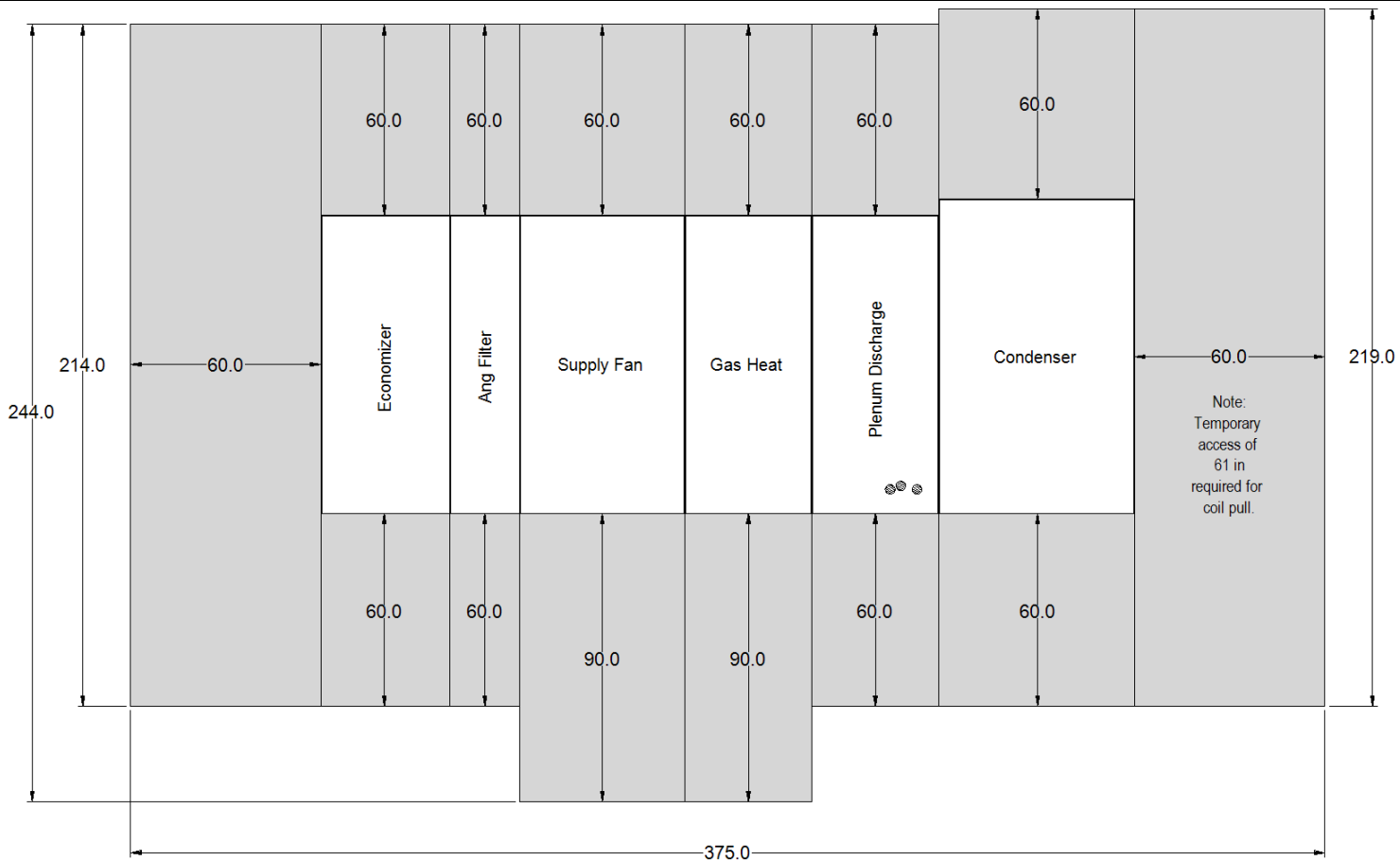
Drawings(4) for RTU-4 & 5

Job Number: MEZ7001
Job Name: Warrington MC Plantroom

Date: 25 of 70

Prepared Date:

www.DaikinApplied.com
2/8/2011




PLAN VIEW - SERVICE CLEARANCE

Job Number: MEZ001
 Job Name: Warrenton HS Replacement

Date: 26 of 70

Prepared Date:

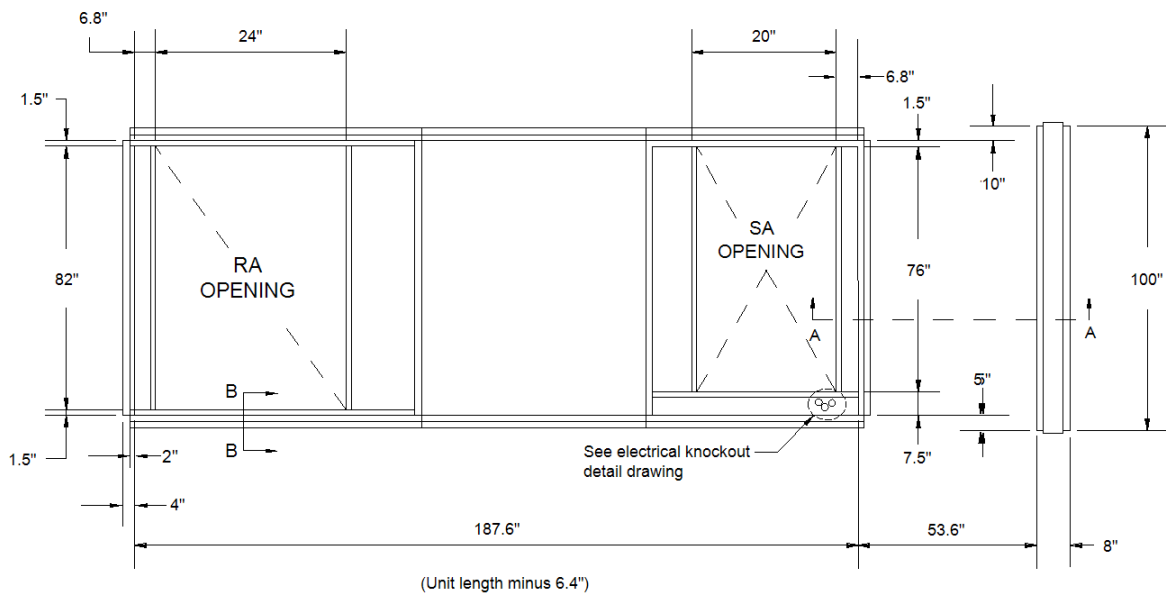
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Product Drawing	Unit Tag: RTU-4 & 5			Sales Office: Daikin TMI LLC (St. Louis)			 13600 Industrial Park Blvd. Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 07.31
Product:	Project Name: Warrenton HS Replacment			Sales Engineer:			
Model: RPS020D	Feb. 08, 2021	Ver/Rev:	Sheet: 1 of 1	Scale: NTS	Tolerance: +/- 0.25"	Dwg Units: in [mm]	

No change to this drawing may be made unless approved in writing by Daikin Applied. Purchaser must determine that the equipment is fit and sufficient for the job specifications.

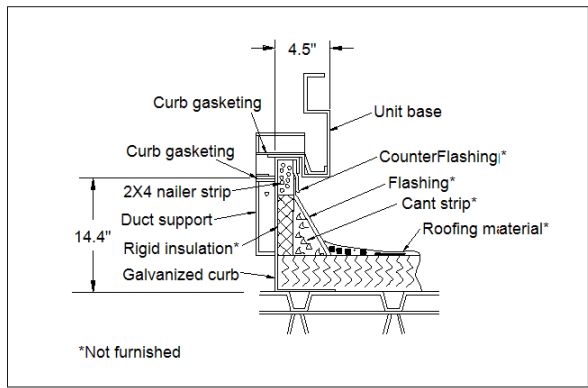
Drawings(5) for RTU-4 & 5

Curb Weight: 581.92 lbs.

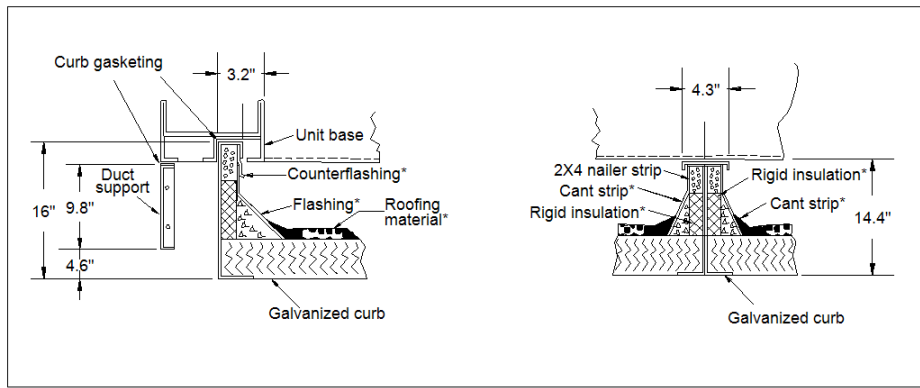


Note:
Curb must be installed level.

Cross-section B-B



Cross-Section A-A



Job Number: MEZ001
Job Name: Warrington NC Parliament

Date: 27 of 70

Prepared Date:

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Roofcurb Dimensions_Drawing for RTU-4 & 5

Job Number: MEZ001
 Job Name: Warrenton HS Replacement

Date: 29 of 70

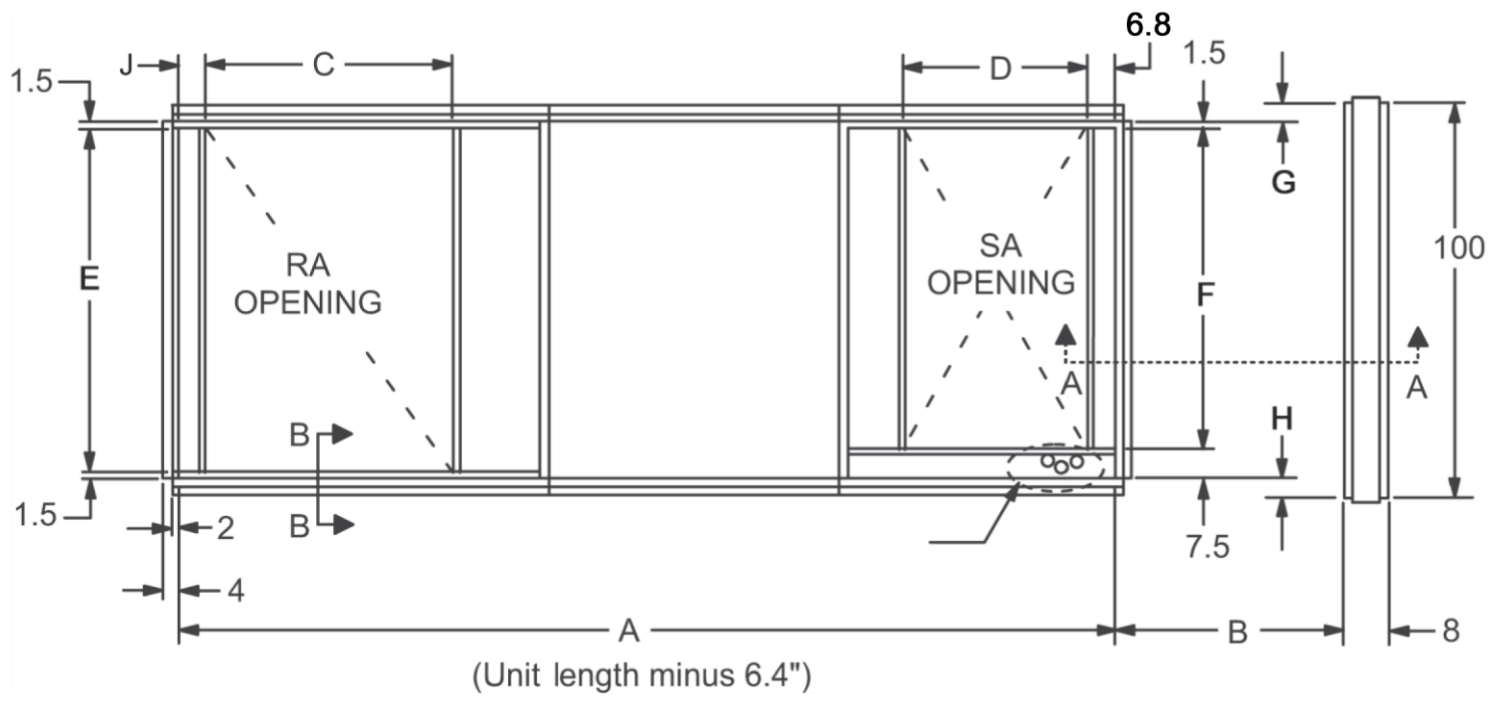
Prepared Date:

www.DaikinApplied.com 2/9/2021

Product Drawing	Unit Tag: RTU-4 & 5			Sales Office: Daikin TMI LLC (St. Louis)			 13600 Industrial Park Blvd. Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 07.31
Product:	Project Name: Warrenton HS Replacment			Sales Engineer:			
Model: RPS020D	Feb. 08, 2021	Ver/Rev:	Sheet: 1 of 1	Scale: NTS	Tolerance: +/- 0.25"	Dwg Units: (in)	

No change to this drawing may be made unless approved in writing by Daikin Applied. Purchaser must determine that the equipment is fit and sufficient for the job specifications.

Dimensions		
Description	Letter	Dimensions (in)
Curb Length	A	187.6
Condenser Rail	B	53.6
Return Air Opening Length	C	24.0
Supply Air Opening Length	D	20.0
Return Air Opening Width	E	82.0
Supply Air Opening Width	F	76.0
Condenser Rail Overhang	G	10.0
Condenser Rail Overhang	H	5.0
Return Air Opening Location	J	6.8



Job Number: MEZ001
 Job Name: Warrington NC Parliament
 Date: 20 of 70
 Prepared Date:
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 2/8/2011


Roofcurb Knockout small box_Drawing for RTU-4 & 5

Job Number: MEZ001
 Job Name: Warrenton HS Replacement

Date: 10 of 20

Prepared Date:

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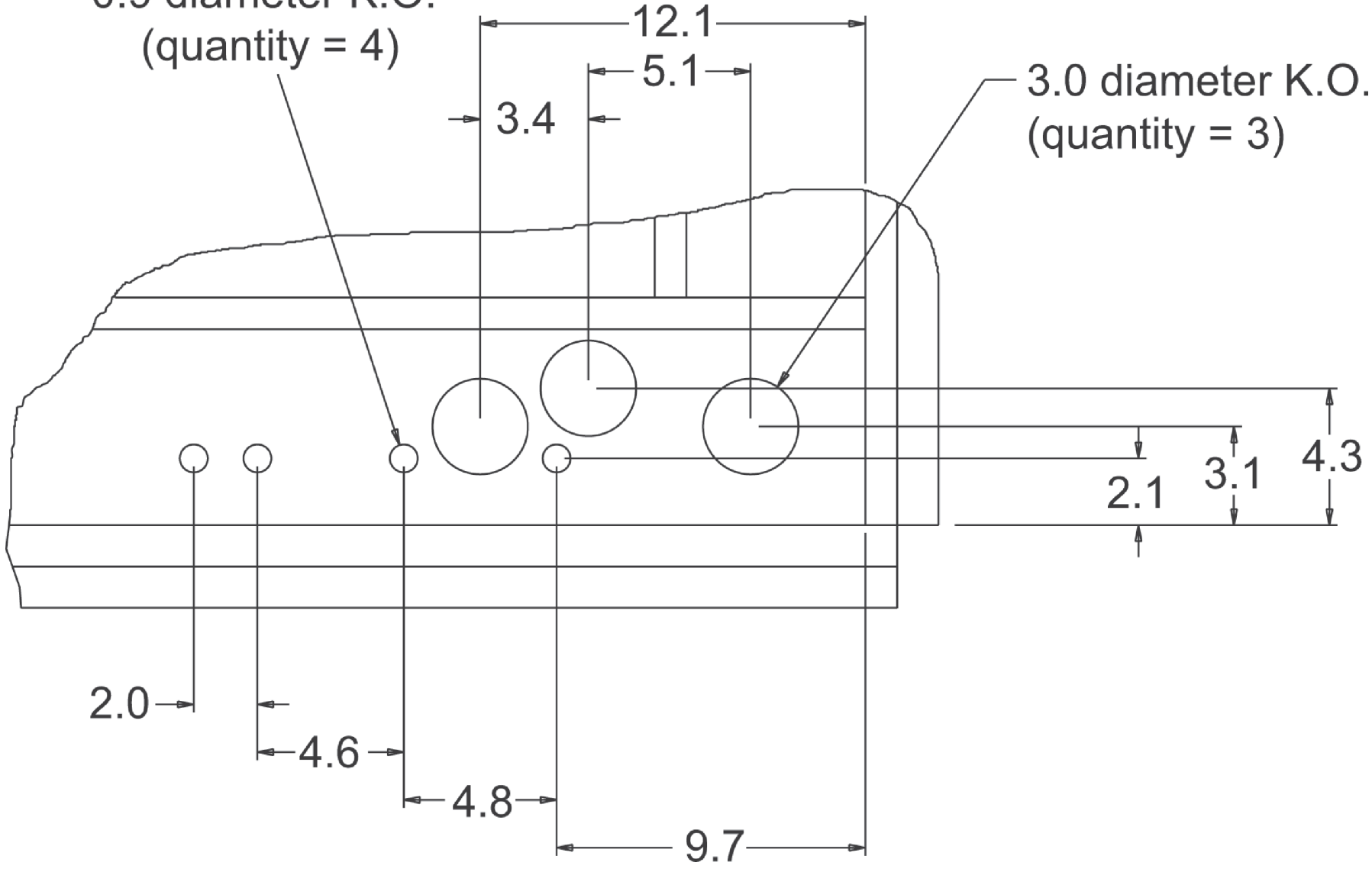
Product Drawing	Unit Tag: RTU-4 & 5			Sales Office: Daikin TMI LLC (St. Louis)			 13600 Industrial Park Blvd. Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 07.31
Product:	Project Name: Warrenton HS Replacment			Sales Engineer:			
Model: RPS020D	Feb. 08, 2021	Ver/Rev:	Sheet: 1 of 1	Scale: NTS	Tolerance: +/- 0.25"	Dwg Units: in [mm]	

No change to this drawing may be made unless approved in writing by Daikin Applied. Purchaser must determine that the equipment is fit and sufficient for the job specifications.

Roofcurb Knockout small box_Drawing for RTU-4 & 5

0.9 diameter K.O.
(quantity = 4)

3.0 diameter K.O.
(quantity = 3)



Job Number: MEZ7001
Job Name: Warrington MS Parliament
Date: 11 of 70
Prepared Date:
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2/8/2011

Technical Data Sheet for RTU-4 & 5

Job Information		Technical Data Sheet
Job Name	Warrenton HS Replacment	
Date	2/8/2021	
Submitted By	Chris Swallow	
Software Version	07.31	
Unit Tag	RTU-4 & 5	



Unit Overview				
Model Number	Voltage V/Hz/Phase	Design Cooling Capacity Btu/hr	AHRI 360 Standard Efficiency	ASHRAE 90.1
RPS020D	460/60/3	253615	9.8	2016 Compliant

Unit	
Model Number:	RPS020D
Altitude:	0 ft
Heat Type:	Gas
Condenser Type:	Air-Cooled
Approval	ETL/MEA-USA unit

Physical				
Unit				
Length	Height	Width	Weight	Estimated Lifting Lugs
255 in	55.5 in	94.0 in	7150 lb	2 per side

Electrical			
Voltage	MCA	MROPD	SCCR
460/60/3	60.7 A	80 A	10 kAIC
Note:	Use only copper supply wires with ampacity based on 75° C conductor rating. Connections to terminals must be made with copper lugs and copper wire.		

Return/Outside/Exhaust Air		
Outside Air Option		
Type	Pressure Drop	Damper Actuator
California and 90.1 Compliant Economizer	0.26 inH ₂ O	Electric Actuator
Return Air Option		
Return Air Location:	Bottom	

Filter Section				
Physical				
Type	(Quantity) Height x Width x Depth	Face Area	Face Velocity	Air Pressure Drop
2 in. 30% Nominal Efficiency (MERV 8)	(10) 16 in x 20 in x 2 in (10) 16 in x 25 in x 2 in	50.0 ft ²	130.0 ft/min	0.04 inH ₂ O

Technical Data Sheet for RTU-4 & 5

DX Cooling Coil								
Physical								
Fins per Inch	Rows	Face Area	Face Velocity	Air Pressure drop	Drain Pan Material	Casing Material		
12	5	27.0 ft ²	240.7 ft/min	0.49 inH ₂ O	Painted Galvanized	Galv. Steel		
Cooling Performance								
Capacity		Refrigerant Type	Indoor Air Temperature				Ambient Air Temperature	
Total Btu/hr	Sensible Btu/hr		Entering		Leaving		Dry Bulb °F	Wet Bulb °F
			Dry Bulb °F	Wet Bulb °F	Dry Bulb °F	Wet Bulb °F		
253615	179002	R410A	80.0	67.0	54.8	54.3	95.0	75.0

Fan Section			
Fan			
Type	Fan Wheel Diameter	Fan Isolation	
AF DWDI	20 in	Rubber in Shear	
Performance			
Airflow	Total Static Pressure	Fan Speed	Brake Horsepower
6500 CFM	1.84 inH ₂ O	1488 rpm	3.20 HP
Motor			Drive
Type	Horsepower	FLA	Type
ODP, Premium Efficiency	5.0 hp	6.8 A	Standard service factor, Fixed drive

Gas Heat Section					
Physical					
Gas Heat Size	Heat Exchanger Material	Modulation	Gas Pressure		
			Minimum In WC	Maximum Psi	
250 MBH	Type 321 Stainless Steel	Hi Turndown - 20:1	5.5	0.5	
Performance					
Gas Heat Airflow CFM	Input Capacity Btu/hr	Output Capacity Btu/hr	Air Temperature Dry Bulb		Air Pressure Drop inH ₂ O
			Entering °F	Leaving °F	
6500	312500	250000	60.0	95.4	0.05

Discharge Plenum	
Discharge Location:	Bottom

Unit Discharge Conditions				
Air Temperature				
DX coil Configuration:	Draw-thru Coil			
Motor Heat Btu/hr	Moisture Removal lb/h	Unit Leaving Dry Bulb °F	Unit Leaving Wet Bulb °F	Unit Leaving Dewpoint °F
9419	64.9	56.2	54.8	54.0

Technical Data Sheet for RTU-4 & 5

Condensing Section				
Compressor				
Type	Quantity	Total Power	Capacity Control	Compressor Isolation
Variable And Fixed speed Scroll	2	18.6 kW	Modulating	Resilient
Compressor Amps:				
Fixed Speed Compressor 1		19.2 A		
Variable Speed Compressor 2		22.9 A		
Condenser Coil				
Type	Fins per Inch	Fin Material	Refrigerant Charge	
Aluminum tube MicroChannel	21	Aluminum	60.7 lb	
Condenser Coil Options:	Build in Hail Protection			
Condenser Fan Motors				
Number of Motors		Full Load Current (each)		
2		2.1 A		
AHRI 360 Certified Data at AHRI 360 Standard Conditions				
EER	IEER	ASHRAE 90.1		
9.8	13.2	2016 Compliant		

Sound								
Sound Power (db)								
Frequency	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	80	78	78	70	67	60	52	44
Discharge	78	74	71	66	63	57	49	41
Radiated	-	91	88	86	86	82	80	79

Supply Fan Total Pressure Drop Calculation	
External Static Pressure:	1.00 inH ₂ O
Filter:	0.04 inH ₂ O
Outside Air:	0.26 inH ₂ O
DX Coil:	0.49 inH ₂ O
Gas Heat:	0.05 inH ₂ O
Total Static Pressure:	1.84 inH ₂ O

Options	
Unit	
Unit Exterior:	Prepainted Galvanized Steel
Insulation and Liners:	2", 1 1/2# nominal insulation, full solid liners
Electrical	
Electrical Connection Option:	Single thru door disconnect switch
GFI 115v Receptacle:	Field powered
Controls	
Application:	Variable Volume - Space Temperature Control
Temperature Control:	Space VAV control, BACNet MSTP communication card
Fan Speed Control:	Factory mounted Inverter
Inverter Manufacturer:	Daikin
Inverter Location:	Inverter(s) in fan section
Economizer Control:	Outside Air Dry Bulb and Enthalpy Control
Low Ambient:	Speedtrol, operation to 0 deg F (-18 deg C)

Technical Data Sheet for RTU-4 & 5

Warranty

Parts:	Standard 1 year
Compressor:	Extended 4 year, 5 year total
Gas Heat Exchanger:	Additional 9 year heat exchanger warranty, 10 year total

AHRI Certification




All equipment is rated and certified in accordance with AHRI 360.

Notes

As a standalone component, unit meets or exceeds the requirements of ASHRAE 90.1.2010. The approving authority is responsible for compliance of multi-component building systems.

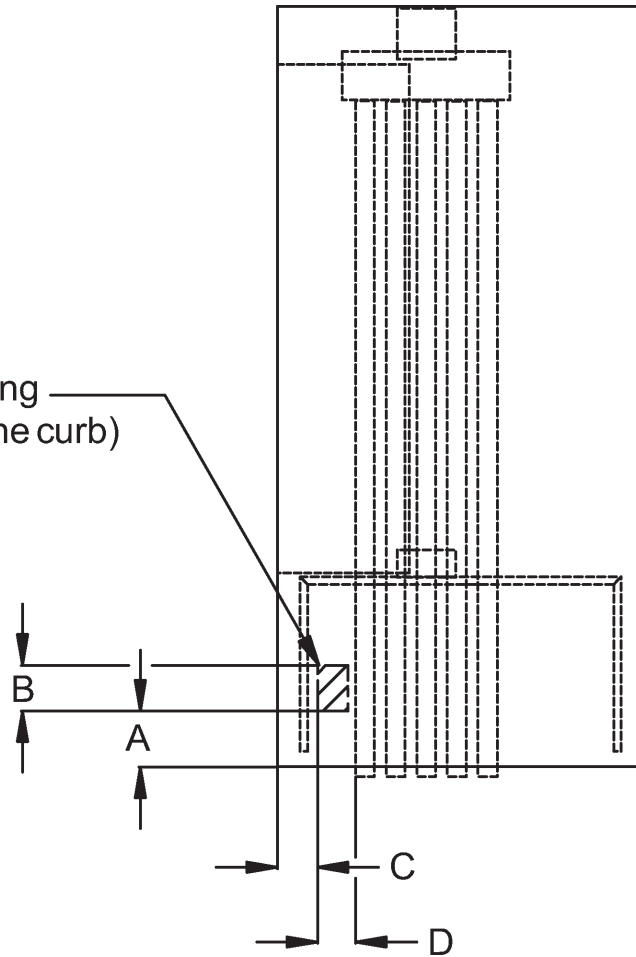
Unit Knockout, Gas Heat, Small Box_Drawing for RTU-4 & 5

Product Drawing	Unit Tag: RTU-4 & 5			 13600 Industrial Park Blvd. Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 07.31		
Product:	Project Name: Warrenton HS					
Model: RPS020D	Sales Office: Daikin TMI LLC (St. Louis)			Scale: NTS	Tolerance: +/-0.25"	Dwg Units: in [mm]
Sales Engineer:	Feb. 08, 2021	Ver/Rev:	Sheet 1 of 1			

Unit Knockout, Gas Heat, Small Box_Drawing for RTU-4 & 5

No change to this drawing may be made unless approved in writing by Daikin Applied. Purchaser must determine that the equipment is fit and sufficient for the job specifications.

Recommended piping entrance (through the curb)



Unit Size	A	B	C	D
015D-042D	6.0"	12.0"	5.0"	2.7"


Unit Knockout, Small Box_Drawing for RTU-4 & 5

Job Number: MEZ001
 Job Name: Warrenton HS Replacement

Date: 12/21/20

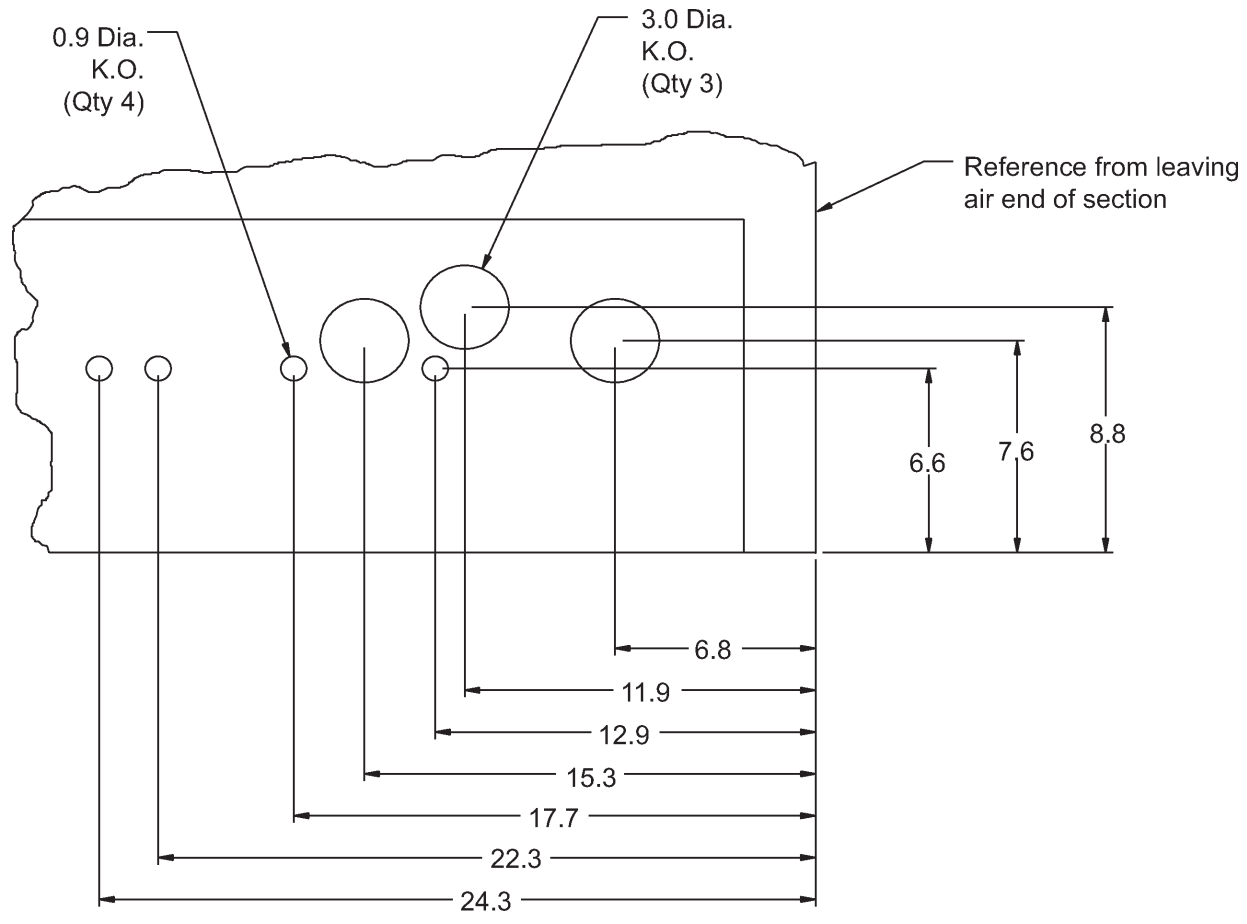
Prepared Date:

2/2/2021
 www.DaikinApplied.com

Product Drawing	Unit Tag: RTU-4 & 5			Sales Office: Daikin TMI LLC (St. Louis)			 13600 Industrial Park Blvd. Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 07.31
Product:	Project Name: Warrenton HS Replacment			Sales Engineer:			
Model: RPS020D	Feb. 08, 2021	Ver/Rev:	Sheet: 1 of 1	Scale: NTS	Tolerance: +/- 0.25"	Dwg Units: in [mm]	

No change to this drawing may be made unless approved in writing by Daikin Applied. Purchaser must determine that the equipment is fit and sufficient for the job specifications.

Unit Knockout, Small Box_Drawing for RTU-4 & 5



Job Number: MEZ001
Job Name: Warrington MC Panelment
Date: 10 of 70
Prepared Date:
www.DaikinApplied.com
2/8/2011


Base Section Cross Section_Drawing for Large Carrier

Job Number: MEZ001
 Job Name: Warrenton HS Replacement

Date: 02/08/2021

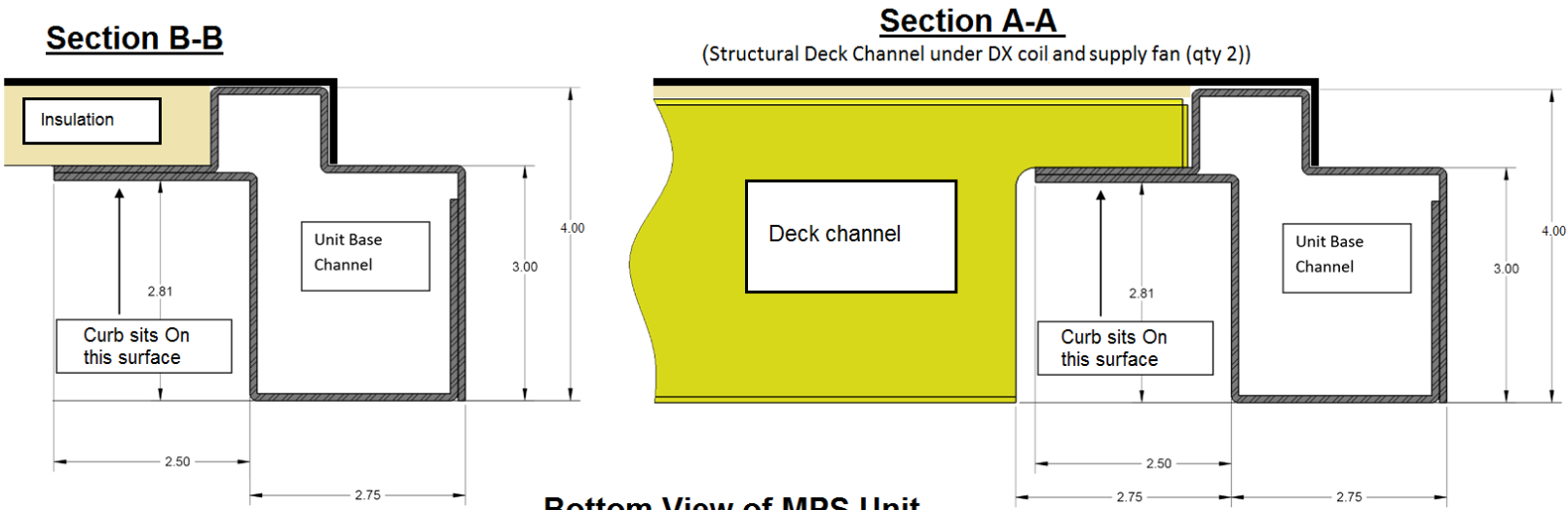
Prepared Date:

www.DaikinApplied.com 2/8/2021

Product Drawing	Unit Tag: Large Carrier			Sales Office: Daikin TMI LLC (St. Louis)			 13600 Industrial Park Blvd. Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 10.21
Product:	Project Name: Warrenton HS Replacment			Sales Engineer:			
Model: MPS030F	Feb. 08, 2021	Ver/Rev:	Sheet: 1 of 1	Scale: NTS	Tolerance: +/- 0.25"	Dwg Units: in [mm]	

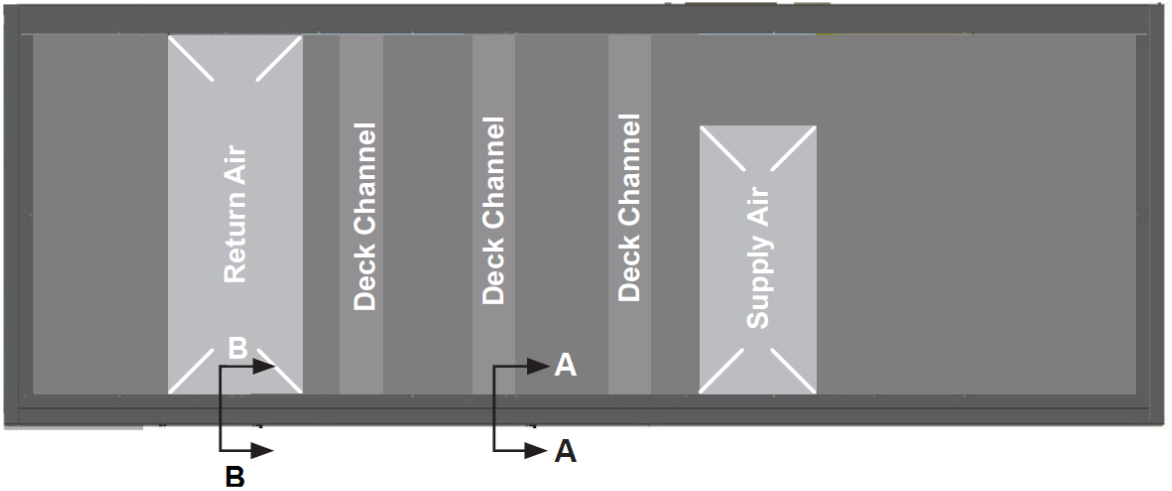
No change to this drawing may be made unless approved in writing by Daikin Applied. Purchaser must determine that the equipment is fit and sufficient for the job specifications.

Base Section Cross Section_Drawing for Large Carrier



Bottom View of MPS Unit

(Note: Return air opening not provided on 100% OA units)



Job Number: MEZ001
Job Name: Warrington MS Parliament

Page: 1 of 70

Prepared Date:

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Drawings(1) for Large Carrier

Job Number: MEZ001
 Job Name: Warrenton HS Replacement

Date: 07/07/21

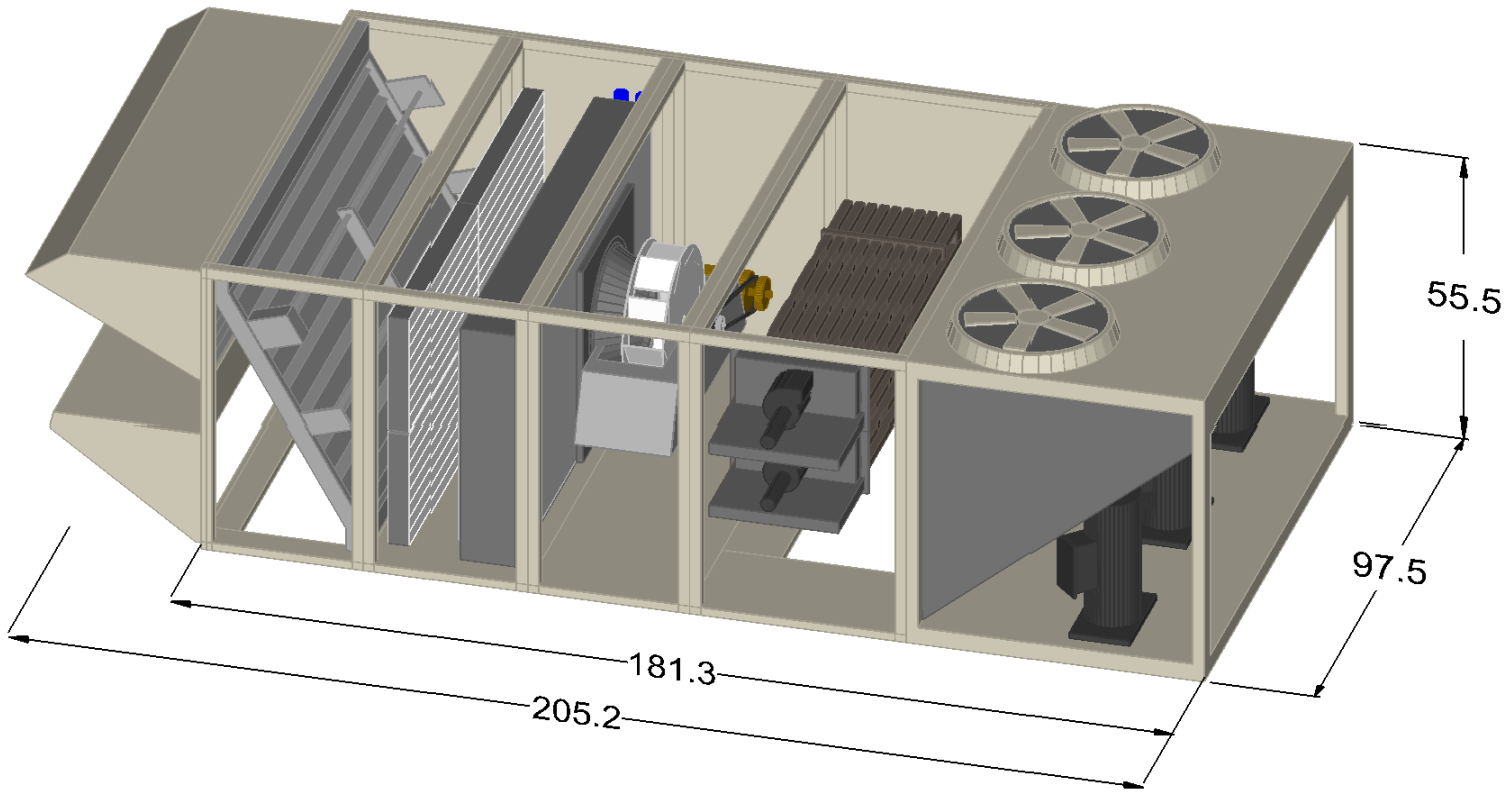
Prepared Date:

www.DaikinApplied.com 7/8/2021

Product Drawing	Unit Tag: Large Carrier			Sales Office: Daikin TMI LLC (St. Louis)			 13600 Industrial Park Blvd. Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 10.21
Product:	Project Name: Warrenton HS Replacment			Sales Engineer:			
Model: MPS030F	Feb. 08, 2021	Ver/Rev:	Sheet: 1 of 1	Scale: NTS	Tolerance: +/- 0.25"	Dwg Units: in [mm]	

No change to this drawing may be made unless approved in writing by Daikin Applied. Purchaser must determine that the equipment is fit and sufficient for the job specifications.

Drawings(1) for Large Carrier



Job Number: MEZ7001
Job Name: Warrington UC Parliament
Date: 02 of 70
Prepared Date:
www.DaikinApplied.com
2/8/2011


Drawings(2) for Large Carrier

Job Number: MEZ001
 Job Name: Warrenton HS Replacement

Date: 2/9/2021

Prepared Date:

www.DaikinApplied.com

Product Drawing	Unit Tag: Large Carrier			Sales Office: Daikin TMI LLC (St. Louis)			 13600 Industrial Park Blvd. Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 10.21
Product:	Project Name: Warrenton HS Replacment			Sales Engineer:			
Model: MPS030F	Feb. 08, 2021	Ver/Rev:	Sheet: 1 of 1	Scale: NTS	Tolerance: +/- 0.25"	Dwg Units: in [mm]	

No change to this drawing may be made unless approved in writing by Daikin Applied. Purchaser must determine that the equipment is fit and sufficient for the job specifications.

Drawings(2) for Large Carrier



PLAN VIEW - OPENINGS & OVERALL

Job Number: MEZ7001
Job Name: Warrington UC Parliament
Date: 22 of 70
Prepared Date:
www.DaikinApplied.com
2/8/2011


Drawings(3) for Large Carrier

Job Number: ME7001
 Job Name: Warrenton HS Replacement

Date: 02/08/21

Prepared Date:

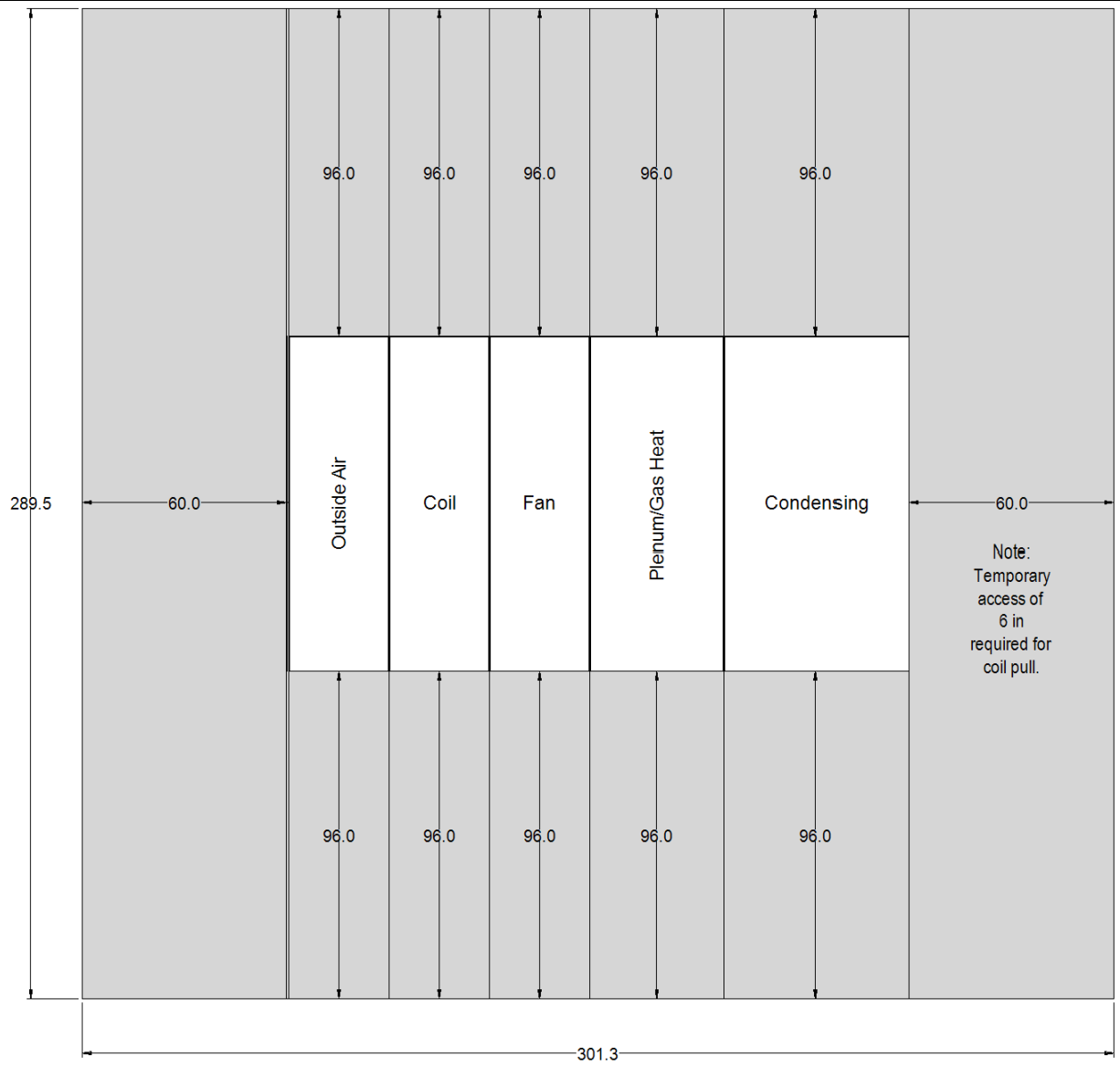
www.DaikinApplied.com 2/8/2021

Product Drawing	Unit Tag: Large Carrier			Sales Office: Daikin TMI LLC (St. Louis)			 13600 Industrial Park Blvd. Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 10.21
Product:	Project Name: Warrenton HS Replacment			Sales Engineer:			
Model: MPS030F	Feb. 08, 2021	Ver/Rev:	Sheet: 1 of 1	Scale: NTS	Tolerance: +/- 0.25"	Dwg Units: in [mm]	

No change to this drawing may be made unless approved in writing by Daikin Applied. Purchaser must determine that the equipment is fit and sufficient for the job specifications.


Drawings(3) for Large Carrier

Job Number: MEZ7001
Job Name: Warrington NC Parliament
Date: 07 of 70
Prepared Date:
www.DaikinApplied.com
2/8/2011



PLAN VIEW - SERVICE CLEARANCE

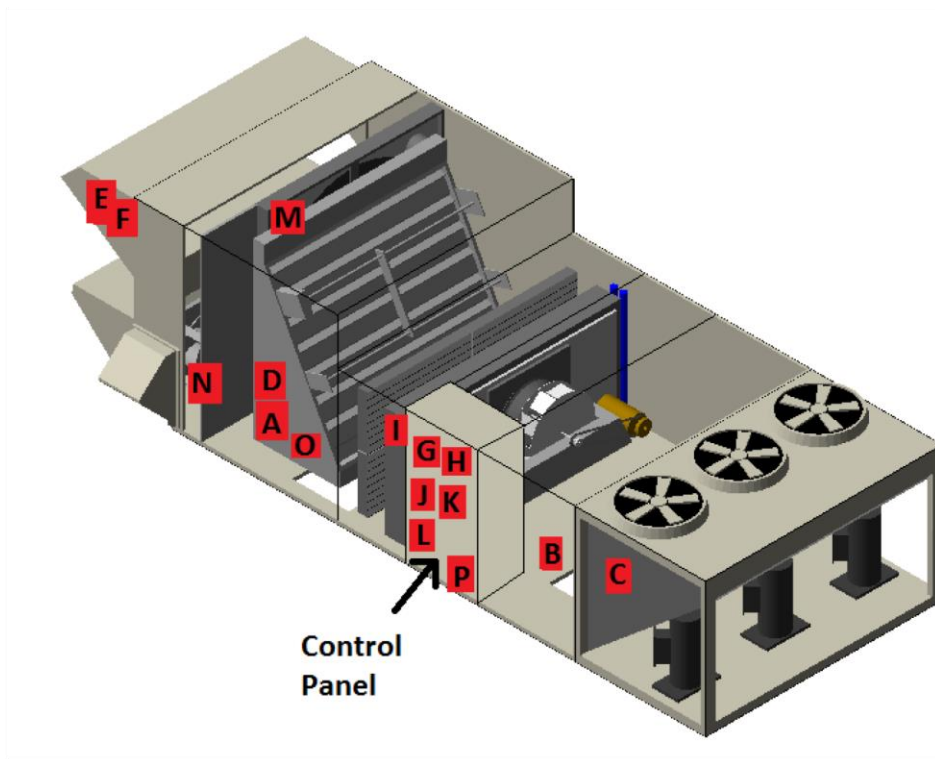
MPS II Sensor Location_Drawing for Large Carrier

Product Drawing	Unit Tag: Large Carrier			 13600 Industrial Park Blvd. Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 10.21		
Product:	Project Name: Warrenton HS					
Model: MPS030F	Sales Office: Daikin TMI LLC (St. Louis)			Scale: NTS	Tolerance: +/-0.25"	Dwg Units: in [mm]
Sales Engineer:	Feb. 08, 2021	Ver/Rev:	Sheet 1 of 1			

MPS II Sensor Location_Drawing for Large Carrier

No change to this drawing may be made unless approved in writing by Daikin Applied. Purchaser must determine that the equipment is fit and sufficient for the job specifications.

Maverick II 15-50 Tons Factory Installed Sensor Locations¹



SENSOR DESCRIPTION	LABEL
Return Air Temp Sensor	A
Discharge Air Temp Sensor	B
Outside Air Temp Sensor	C
Return air Enthalpy Sensor	D
Outside Air Enthalpy Sensor	E
Ebtron Gold OAFMS	F
Dirty Filter On/Off Switch	G
Airflow Proving Switch	H
Leaving Coil/Entering Fan Temp Sensor	I
Duct High Limit Switch	J
Duct Static Pressure Sensor	K
Building static pressure sensor	L
Supply Leaving Wheel Temp Sensor	M
Exhaust Leaving Wheel Temp Sensor	N
Return Air Relative Humidity Sensor	O
Energy Wheel VFD	P

1) Sensors provided are based on unit selection. Refer to unit specific technical data sheet for selection specific sensor list.


MPS II Weight Distribution_Drawing for Large Carrier

Job Number: MEZ001
 Job Name: Warrenton HS Replacement

Date: 02/08/21

Prepared Date:

www.DaikinApplied.com 2/8/2021

Product Drawing	Unit Tag: Large Carrier			Sales Office: Daikin TMI LLC (St. Louis)			 13600 Industrial Park Blvd. Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 10.21
Product:	Project Name: Warrenton HS Replacment			Sales Engineer:			
Model: MPS030F	Feb. 08, 2021	Ver/Rev:	Sheet: 1 of 1	Scale: NTS	Tolerance: +/- 0.25"	Dwg Units: in [mm]	

No change to this drawing may be made unless approved in writing by Daikin Applied. Purchaser must determine that the equipment is fit and sufficient for the job specifications.

Weight Distribution for Maverick® II (15-50 ton)

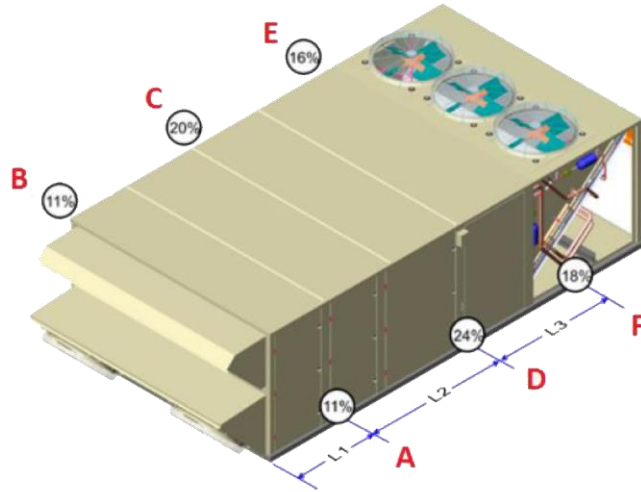



Table 1: Weight Distribution Locations

Unit (Tons)	Distance		
	L1	L2	L3
015-035 Ton Unit	35.5	62	52
040-050 Ton Unit	40	69	89

Table 2: Weight Distribution % per location

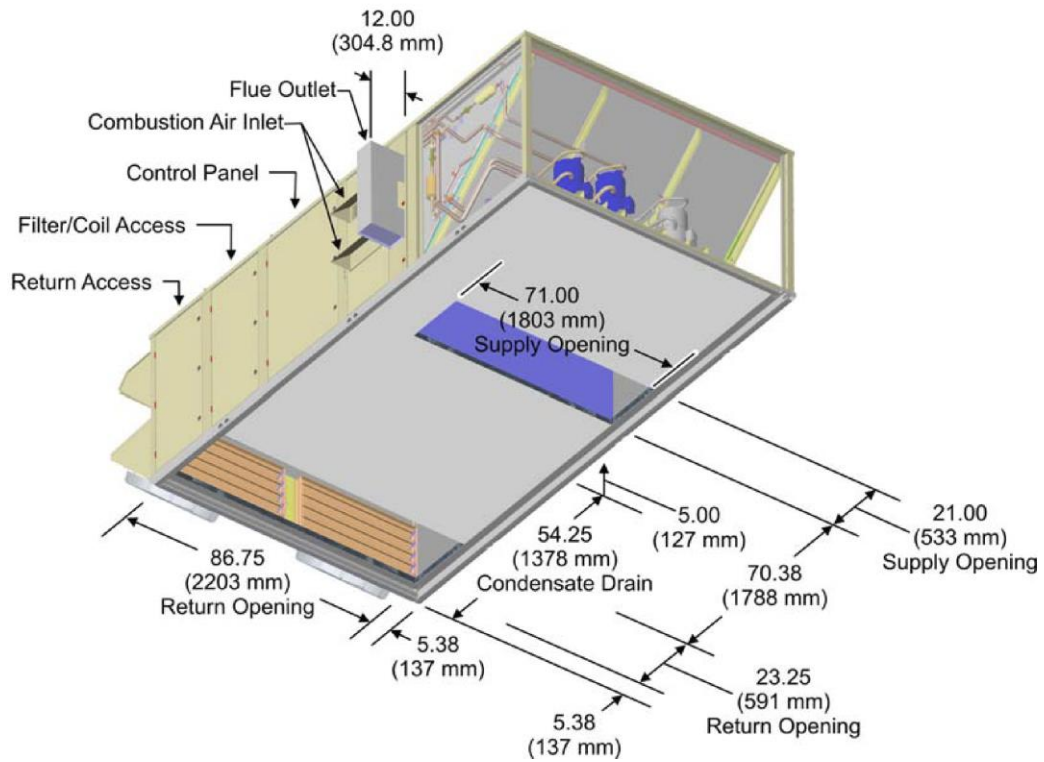
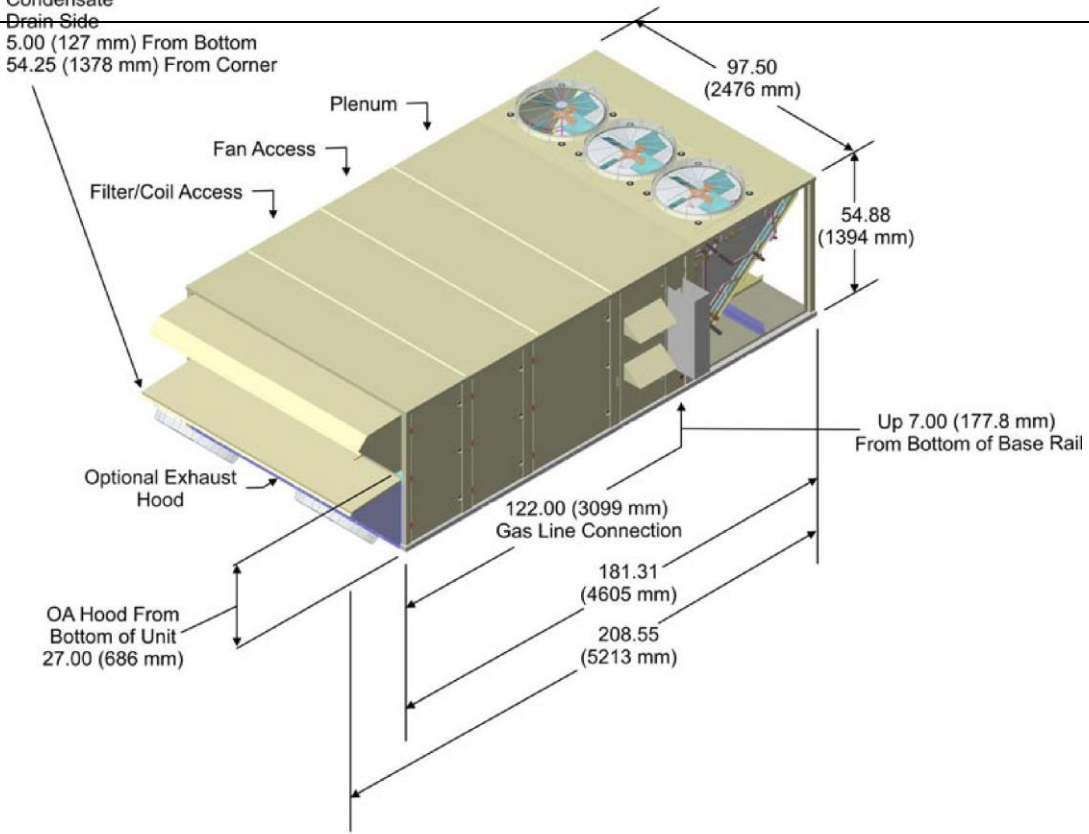
Unit	Point and Percent of total					
	A	B	C	D	E	F
015-050 Without Energy Wheel	11	11	20	24	16	18
015-035 with Energy Wheel	13	12	20	21	17	17

MPS030-035A Gas heat_Drawing for Large Carrier

Product Drawing	Unit Tag: Large Carrier			 13600 Industrial Park Blvd. Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 10.21		
Product:	Project Name: Warrenton HS					
Model: MPS030F	Sales Office: Daikin TMI LLC (St. Louis)			Scale: NTS	Tolerance: +/-0.25"	Dwg Units: in [mm]
Sales Engineer:	Feb. 08, 2021	Ver/Rev:	Sheet 1 of 1			

MPS030-035A Gas heat_Drawing for Large Carrier

No change to this drawing may be made unless approved in writing by Daikin Applied. Purchaser must determine that the equipment is fit and sufficient for the job specifications.




MPSII Service Clearance_Drawing for Large Carrier

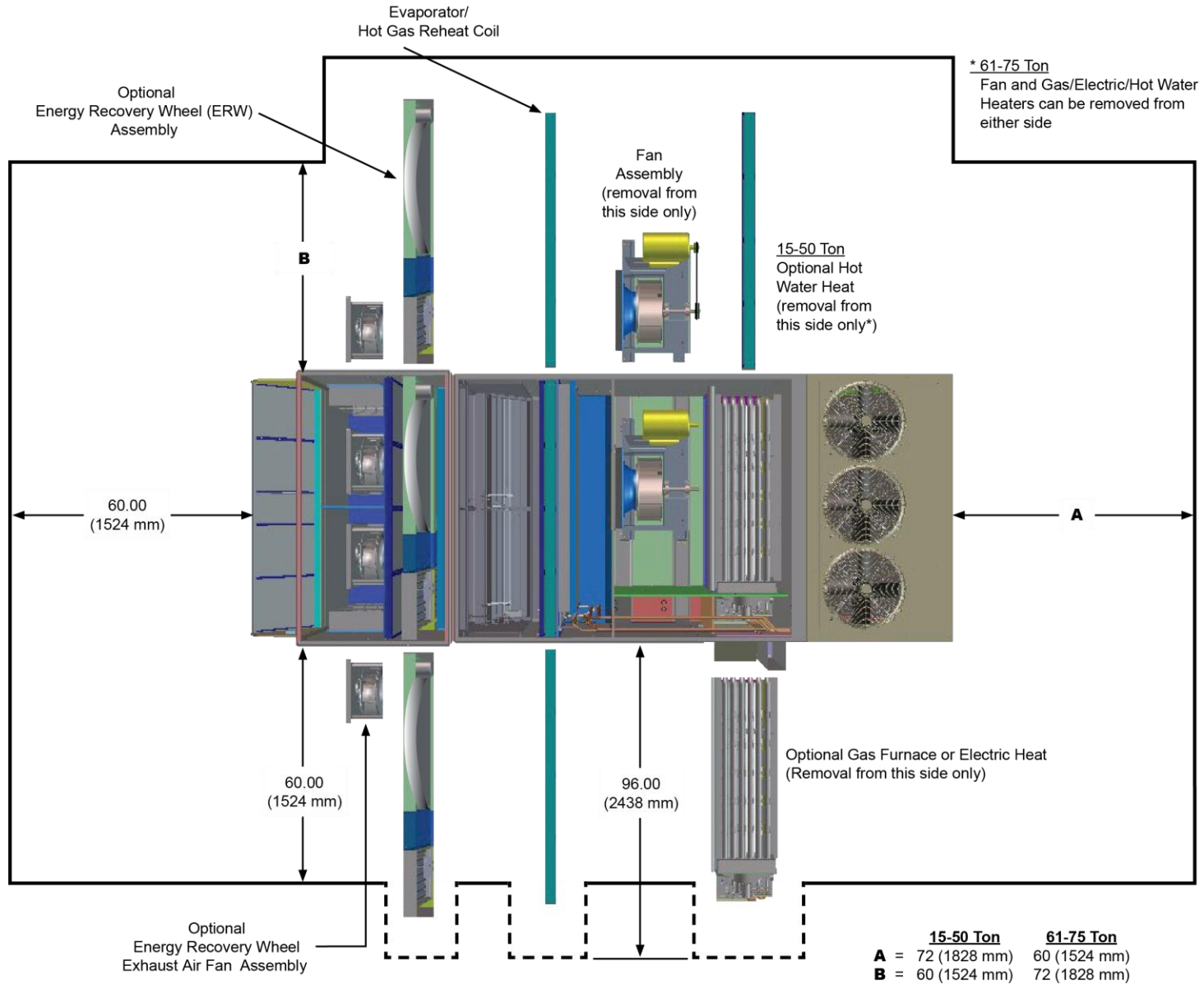
Job Number: MEZ001
 Job Name: Warrenton HS Replacement

Date: 01 of 70

Prepared Date:

www.DaikinApplied.com 2/8/2021

Product Drawing	Unit Tag: Large Carrier			Sales Office: Daikin TMI LLC (St. Louis)			 13600 Industrial Park Blvd. Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 10.21
Product:	Project Name: Warrenton HS Replacment			Sales Engineer:			
Model: MPS030F	Feb. 08, 2021	Ver/Rev:	Sheet: 1 of 1	Scale: NTS	Tolerance: +/- 0.25"	Dwg Units: in[mm]	



Job Number

MEZ001

Warrington DC Parliament

Date

Prepared Date:

www.dalvin.com
2/8/2011

Technical Data Sheet for Large Carrier

Job Information		Technical Data Sheet
Job Name	Warrenton HS Replacment	
Date	2/8/2021	
Submitted By	Chris Swallow	
Software Version	10.21	
Unit Tag	Large Carrier	



Unit Overview					
Model Number	Voltage	Design Cooling Capacity	AHRI 360 Standard Efficiency		ASHRAE 90.1
			EER	IEER	
MPS030F	460/60/3	351239 Btu/hr	10.2	12.6	2016 Compliant

Unit	
Model Number:	MPS030F
Model Type:	Cooling, Standard Efficiency
Heat Type:	Natural gas heat
Application:	Variable volume, w/ VFD, Space Control
Altitude:	0 ft
Approval	cETLus

Physical					
Unit Dimensions and Weights					
Unit Length	Unit Height	Unit Width	Unit Weight		
205.2 in	55.5 in	97.5 in	4175 lb		
Unit Construction					
Exterior:	Prepainted Galv Steel	Doors:	Fan, Filter, Control Panel, and Heat Vestibule sections		
Insulation:	R-value of 4.0	Drain Pan Material	Stainless Steel		
Liners:	Double wall construction				
Unit Electrical Data					
Voltage	SCCR	FLA	MCA	MROPD	
460/60/3 v	10 kAIC	61.8 A	66.4 A	80 A	
Note:	Use only copper supply wires with ampacity based on 75° C conductor rating. Connections to terminals must be made with copper lugs and copper wire.				

Return/Outside/Exhaust Air				
Outside Air Option				
Type	Damper	Damper Pressure Drop	Leakage Rate	
0-100% Econ with dry bulb control	Low leak with blade and jamb seals	0.14 inH ₂ O	1.5 cfm/sq ft @1" differential pressure	
Ventilation Control:	None			
Draw Through Filters				
Efficiency	Quantity/Size	Face Area ft ²	Face Velocity ft/min	Air Pressure Drop inH ₂ O
30% MERV 8	8 / 24 in x 24 in x 2 in	32.0	344	0.13

Technical Data Sheet for Large Carrier

Cooling Coil						
Fins per Inch	Rows	Face Area ft ²	Face Velocity ft/min	Condensate Connection Size	Air Pressure drop inH ₂ O	
12	4	25.4	433	1.0 in. Male NPT	0.42	
Cooling Performance						
Total Capacity Btu/hr	Sensible Capacity Btu/hr	Entering Air Temperature		Leaving Air Temperature		Ambient Air Temp °F
		Dry Bulb °F	Wet Bulb °F	Dry Bulb °F	Wet Bulb °F	
351239	268737	80.0	67.0	57.7	56.9	95.0
Fan Section						
Type	Fan Wheel Diameter		Vibration Isolation			
AF SWSI	24 in		1 inch spring, seismic			
Fan Performance						
Air Flow	Total Static Pressure	Fan Speed	Brake Horsepower	Altitude		
11000 CFM	2.04 inH ₂ O	1588 RPM	6.3 HP	0 ft		
Motor						
Horsepower	Type	Efficiency		Full Load Current		
7.5 HP	Open drip proof, Premium efficiency	91.0		9.7 A		
Drives						
Type	Service Factor					
Belt Drive	120%					
Gas Heat Section						
Type	Main Gas Pressure	Material		Gas Type		
Tubular Heat exchanger with in-shot burner manifold	7-14 inH ₂ O	Stainless steel		Natural Gas		
Ignition	Combustion Blower	Heat Stages		Gas Piping Connection Size		
Electric	Induced draft blower	Modulating		3/4 in. Female NPT		
Heating Performance						
Input Size	Heat Airflow	Total Capacity	Steady State Efficiency	Entering Air Dry Bulb	Leaving Air Dry Bulb	
600 MBH Input/480 MBH Output	11000 CFM	480000 Btu/hr	81%	60.0 °F	100.2 °F	
Unit Discharge Conditions						
Air Temperature						
Motor Heat Btu/hr	Moisture Removal lb/h	Unit Leaving Dry Bulb °F	Unit Leaving Wet Bulb °F	Unit Leaving Dewpoint °F		
17931	71.8	59.2	57.4	56.2		

Technical Data Sheet for Large Carrier

Condensing Section							
Compressor							
Type	Quantity	Refrigerant Charge		Total Power	Capacity Control	Refrigerant Type	
		Circuit1	Circuit 2				
Scroll	3	22.8lbs	12.1 lbs	26.4 kW	5 steps	R410A	
Compressor Amps:							
Compressor 1		Fixed Speed			18.6 A		
Compressor 2		Fixed Speed			13.1 A		
Compressor 3		Fixed Speed			13.1 A		
Condenser Coil							
Type	Fins Per Inch	Rows	Fin Material	Refrigerant Valves			
Aluminum tube micro channel	18	Micro Channel	Aluminum	None			
Low Ambient Control:	Std low ambient control to 0 F (-17.7 C)						
Condenser Fan Motors							
Number of Motors				Full Load Current			
3				2.0 A			
AHRI 360 Certified Data at AHRI 360 Standard Conditions							
Net Capacity		Efficiency		ASHRAE 90.1			
316000 Btu/hr		10.2 EER		12.6 IEER		2016 Compliant	
Internal Static Pressure Drop Calculation							
External Static Pressure:		1.00					
Outside Air Damper:		0.14					
Filter:		0.13					
Cooling Coil:		0.42					
Energy Wheel and Filters:		0.00					
Gas Heat:		0.34					
Total Static Pressure:		2.04 inH ₂ O					
Sound Power							
Inlet							
63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
73	74	84	79	74	70	67	62
Outlet							
63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
78	82	91	88	85	80	75	70
Radiated							
63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
90	92	90	89	87	84	86	81
Options							
Unit							
Hot Gas Bypass:	Hot Gas Bypass, Circuit 1						
Electrical							
Field Connection:	Non-Fused Disc Sw, Field powered 115V GFI outlet						
Power Options:	Phase Failure Monitor						
Controls							
Temperature Controls:	DDC controls, FACTORY installed BACnet/MSTP card						

Technical Data Sheet for Large Carrier

Factory Installed Sensors

Leaving Coil/Entering Fan Temp Sensor
Duct High Limit Switch
Return Air Temperature Sensor
Discharge Air Temperature Sensor
Outside Air Temperature Sensor
Dirty Filter On/Off Switch
Airflow Proving Switch

Warranty

Parts Warranty:	Standard one year
Compressor Warranty:	Four year extended, five year total
Heat Exchanger Warranty:	Additional nine year, ten total

AHRI Certification



All equipment is rated and certified in accordance with AHRI 340/360

Notes

Document Summary Page

Technical Data Sheet for RTU-1

Job Information		Technical Data Sheet
Job Name	Warrenton RTUs	
Date	2/2/2021	
Submitted By	Erin Hibbits	
Software Version	10.21	
Unit Tag	RTU-1	



Unit Overview					
Model Number	Voltage	Design Cooling Capacity	AHRI 360 Standard Efficiency		ASHRAE 90.1
			EER	IEER	
MPSA12D	460/60/3	158354 Btu/hr	10.8	14.0	2016 Compliant

Unit	
Model Number:	MPSA12D
Model Type:	Cooling, Standard Efficiency
Heat Type:	Natural gas heat
Application:	2 Speed SAF Control
Altitude:	0 ft
Approval	cULus

Physical			
Unit Dimensions and Weights			
Unit Length	Unit Height	Unit Width	Unit Weight
89.0 in	60.0 in	57.8 in	1256 lb
Unit Construction			
Exterior:	Prepainted Galv Steel	Doors:	Removable Panels
Insulation:	3/4" foil face with mechanical fasteners, R value of 3.6	Drain Pan Material	Polymer
Liners:	Single wall construction		
Unit Electrical Data			
Voltage	SCCR	MCA	MROPD
460/60/3 v	5 kAIC	34.0 A	40.0 A

Return/Outside/Exhaust Air				
Outside Air Option				
Type:	Factory Installed Econ, vertical return			
Draw Through Filters				
Type	Quantity/Size	Face Area ft ²	Face Velocity ft/min	Air Pressure Drop
2" Disposable	(4) 2x20x20	11.1	450	Included In Fan Performance

Technical Data Sheet for RTU-1

Cooling Coil					
Fins per Inch	Rows	Face Area ft ²	Face Velocity ft/min	Condensate Connection Size	Air Pressure drop inH ₂ O
18	2	13.5	370	0.75 in. Male NPT	Included In Fan Performance

Cooling Performance						
Total Capacity Btu/hr	Sensible Capacity Btu/hr	Entering Air Temperature		Leaving Air Temperature		Ambient Air Temp °F
		Dry Bulb °F	Wet Bulb °F	Dry Bulb °F	Wet Bulb °F	
158354	121149	80.0	67.0	57.6	56.9	95.0

Fan Section			
Type	Fan Wheel Diameter	Quantity	Vibration Isolation
FC	15 in	1	Rigid

Fan Performance					
Air Flow	External Static Pressure	Design Fan Speed	Drive Package Speed	Brake Horsepower	Altitude
5000 CFM	0.50 inH ₂ O	1114 RPM	994-1220	4.2 HP	0 ft

Motor			
Horsepower	Type	Efficiency	Full Load Current
5.0 HP	Open drip proof, EPAct	89.5	10.0 A

Drives	
Type	Service Factor
Adjustable Sheave	120%

Gas Heat Section			
Type	Material	Gas Type	
Tubular Heat exchanger with in-shot burner manifold	Aluminized steel	Natural Gas	
Ignition	Combustion Blower	Heat Stages	Gas Piping Connection Size
Electric	Induced draft blower	2 Stage	1/2 in. Female NPT

Heating Performance					
Input Size	Heat Airflow	Total Capacity	Steady State Efficiency	Entering Air Dry Bulb	Leaving Air Dry Bulb
150 MBH	5000 CFM	121500 Btu/hr	81%	60.0 °F	82.4 °F

Unit Discharge Conditions				
Air Temperature				
Motor Heat Btu/hr	Moisture Removal lb/h	Unit Leaving Dry Bulb °F	Unit Leaving Wet Bulb °F	Unit Leaving Dewpoint °F
11885	31.7	59.8	57.6	56.3

Technical Data Sheet for RTU-1

Condensing Section				
Compressor				
Type	Quantity	Refrigerant Charge	Capacity Control	Refrigerant Type
Scroll	2	11.63 lbs	2 steps	R410A
Compressor Amps:				
Compressor 1		Fixed Speed		12.8 A
Compressor 2		Fixed Speed		12.8 A
Compressor Options:	None			
Condenser Coil				
Type	Fins Per Inch	Rows	Fin Material	Refrigerant Valves
Aluminum tube micro channel	23	1	Aluminum	None
Low Ambient Control:	None			
Condenser Fan Motors				
Number of Motors		Full Load Current		
2		2.3 A		
AHRI 360 Certified Data at AHRI 360 Standard Conditions				
Net Capacity	Efficiency		ASHRAE 90.1	
142000 Btu/hr	10.8 EER	14.0 IEER	2016 Compliant	

Internal Static Pressure Drop Calculation	
External Static Pressure:	0.50
Internal Static Pressure:	0.39
Total Static Pressure:	0.89

Options	
Electrical	
Field Connection:	Power Block
Power Options:	None
Controls	
Temperature Controls:	DDC Controls

Warranty	
Parts Warranty:	Standard one year
Compressor Warranty:	Standard five year
Heat Exchanger Warranty:	Standard ten year

AHRI Certification	
	All equipment is rated and certified in accordance with AHRI 340/360

Notes

MPSA07-012D Gas Heat Duct Connections_Drawing for RTU-1

SUPPLY AND RETURN DIMENSIONS FOR HORIZONTAL APPLICATIONS

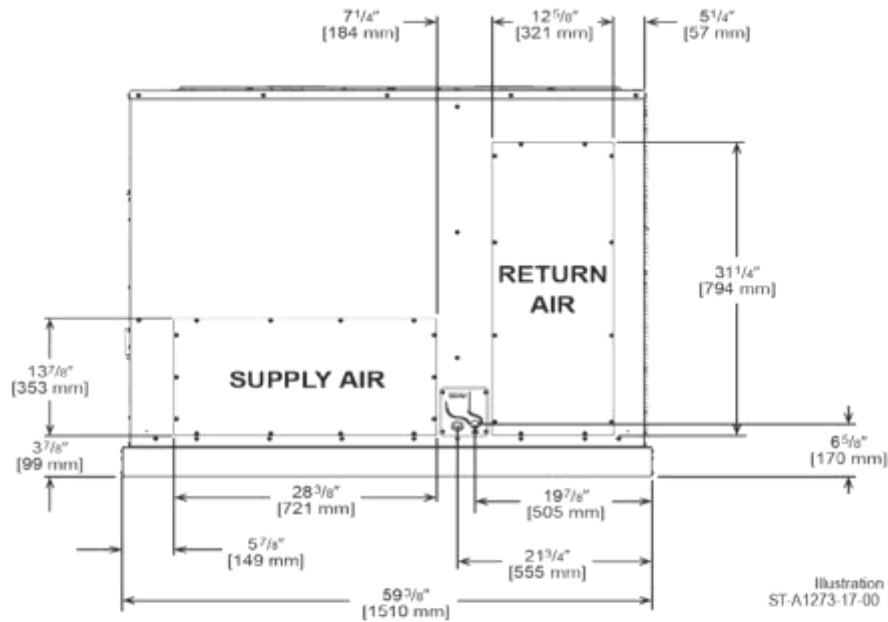
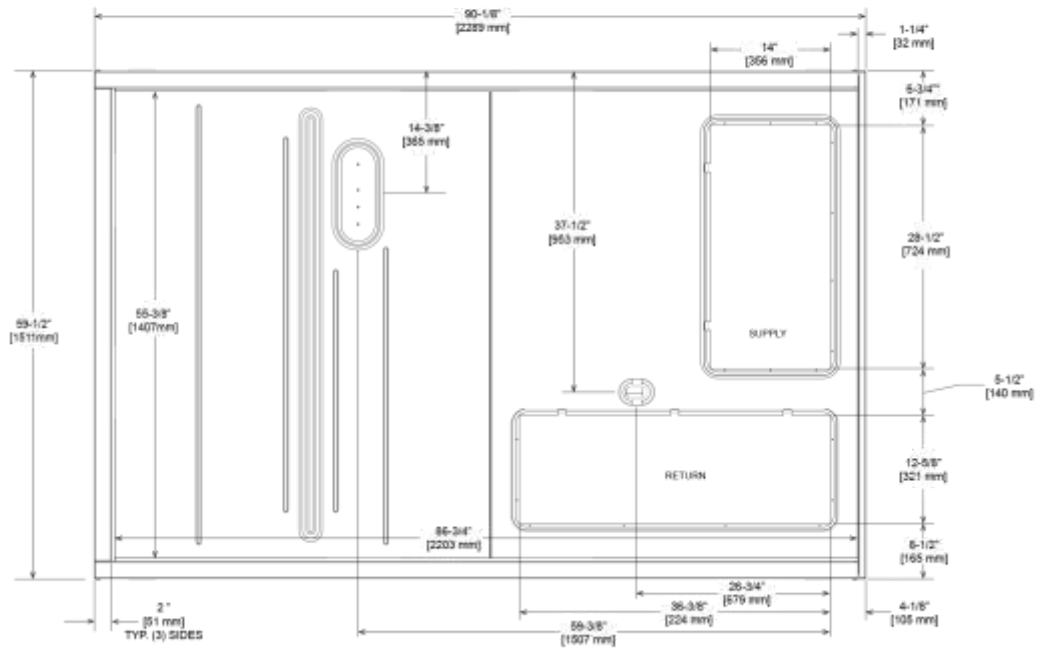



Illustration ST-A1273-17-00

SUPPLY AND RETURN DIMENSIONS FOR DOWNFLOW APPLICATIONS



ST-A1273-01_A-00

Product Drawing	Unit Tag: RTU-1			 13600 Industrial Park Blvd. Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 10.21		
Product:	Project Name: Warrenton RTUs					
Model: MPSA12D	Sales Office: Daikin TMI LLC (St. Louis)			Scale: NTS	Tolerance: +/-0.25"	Dwg Units: in [mm]
Sales Engineer:	Feb. 02, 2021	Ver/Rev:	Sheet 1 of 1			
No change to this drawing may be made unless approved in writing by Daikin Applied. Purchaser must determine that the equipment is fit and sufficient for the job specifications.						

MPSA07-012D Gas Heat only_Drawing for RTU-1

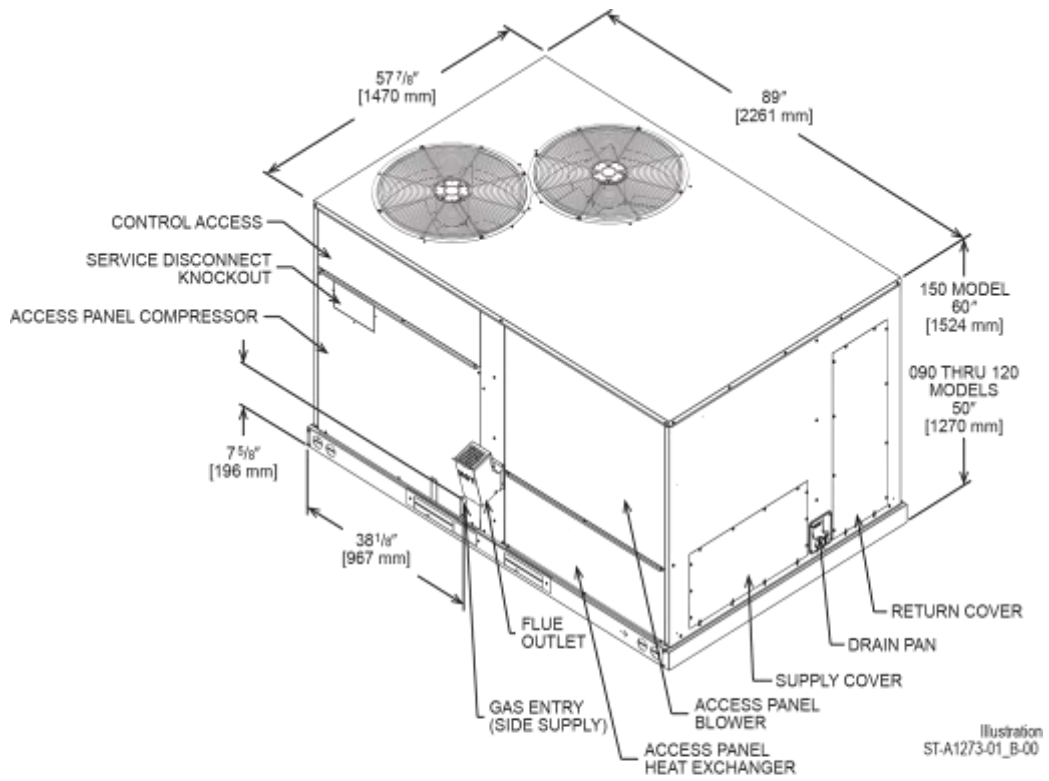


Illustration
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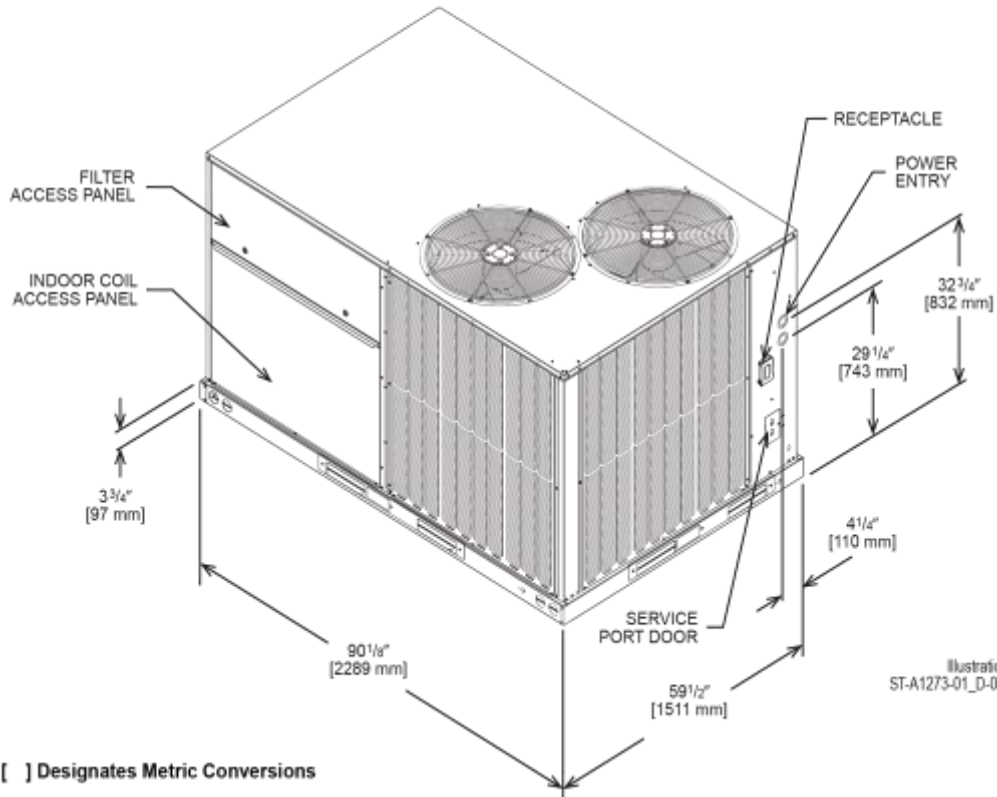



Illustration
ST-A1273-01_D-00

[] Designates Metric Conversions

Product Drawing		Unit Tag: RTU-1		 13600 Industrial Park Blvd. Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 10.21		
Product:		Project Name: Warrenton RTUs				
Model: MPSA12D		Sales Office: Daikin TMI LLC (St. Louis)		Scale: NTS	Tolerance: +/-0.25"	Dwg Units: in [mm]
Sales Engineer:		Feb. 02, 2021	Ver/Rev:	Sheet 1 of 1		
No change to this drawing may be made unless approved in writing by Daikin Applied. Purchaser must determine that the equipment is fit and sufficient for the job specifications.						

Technical Data Sheet for RTU-2,3



Job Information		Technical Data Sheet
Job Name	Warrenton RTUs	
Date	2/2/2021	
Submitted By	Erin Hibbits	
Software Version	10.21	
Unit Tag	RTU-2,3	

Unit Overview					
Model Number	Voltage	Design Cooling Capacity	AHRI 210/240 Standard Efficiency		ASHRAE 90.1
			EER	SEER	
MPSA05C	460/60/3	62007 Btu/hr	11.6	14.0	2016 Compliant

Unit	
Model Number:	MPSA05C
Model Type:	Cooling, Standard Efficiency
Heat Type:	Natural gas heat
Application:	Constant volume
Altitude:	0 ft
Approval	cULus

Physical			
Unit Dimensions and Weights			
Unit Length	Unit Height	Unit Width	Unit Weight
75.5 in	35.0 in	46.5 in	597 lb
Unit Construction			
Exterior:	Powder Coat Galvanized	Doors:	Removable Panels
Insulation:	3/4" foil face with mechanical fasteners, R value of 3.6	Drain Pan Material	Polymer
Liners:	Single wall construction		
Unit Electrical Data			
Voltage	SCCR	MCA	MROPD
460/60/3 v	5 kAIC	13.0 A	20.0 A

Return/Outside/Exhaust Air				
Outside Air Option				
Type:	Factory Installed Econ, vertical return, DDC Controls			
Draw Through Filters				
Type	Quantity/Size	Face Area ft ²	Face Velocity ft/min	Air Pressure Drop
1" Disposable	(2) 16x25x1	5.1	392	Included In Fan Performance

Technical Data Sheet for RTU-2,3

Cooling Coil					
Fins per Inch	Rows	Face Area ft ²	Face Velocity ft/min	Condensate Connection Size	Air Pressure drop inH ₂ O
20	Micro Channel	4.8	417	3/4 in. Male NPT	Included In Fan Performance

Cooling Performance						
Total Capacity Btu/hr	Sensible Capacity Btu/hr	Entering Air Temperature		Leaving Air Temperature		Ambient Air Temp °F
		Dry Bulb °F	Wet Bulb °F	Dry Bulb °F	Wet Bulb °F	
62007	45970	80.0	67.0	58.7	57.1	95.0

Fan Section			
Type	Fan Wheel Diameter	Quantity	Vibration Isolation
FC	10 in	1	Rigid

Fan Performance					
Air Flow	External Static Pressure	Design Fan Speed	Drive Package Speed	Brake Horsepower	Altitude
2000 CFM	0.50 inH ₂ O	1158 RPM	1250	1.0 HP	0 ft

Motor			
Horsepower	Type	Efficiency	Full Load Current
1.0 HP	Open drip proof, EPAct	80.0	1.9 A

Drives	
Type	Service Factor
Belt Drive	120%

Gas Heat Section			
Type	Material	Gas Type	
Tubular Heat exchanger with in-shot burner manifold	Aluminized steel	Natural Gas	
Ignition	Combustion Blower	Heat Stages	Gas Piping Connection Size
Electric	Induced draft blower	1 Stage	1/2 in. Female NPT

Heating Performance					
Input Size	Heat Airflow	Total Capacity	Steady State Efficiency	Entering Air Dry Bulb	Leaving Air Dry Bulb
135 MBH	2000 CFM	109400 Btu/hr	81%	60.0 °F	110.4 °F

Unit Discharge Conditions				
Air Temperature				
Motor Heat Btu/hr	Moisture Removal lb/h	Unit Leaving Dry Bulb °F	Unit Leaving Wet Bulb °F	Unit Leaving Dewpoint °F
2887	13.8	60.1	57.6	56.0


Technical Data Sheet for RTU-2,3

Condensing Section				
Compressor				
Type	Quantity	Refrigerant Charge	Capacity Control	Refrigerant Type
Scroll	1	12.19 lbs	1 step	R410A
Compressor Amps:				
Compressor 1		Fixed Speed		5.8 A
Compressor Options: LP, HP switch				
Condenser Coil				
Type	Fins Per Inch	Rows	Fin Material	Refrigerant Valves
Aluminum tube micro channel	23	Micro Channel	Aluminum	None
Low Ambient Control: Std low ambient control to 40 F (4.44 C)				
Condenser Fan Motors				
Number of Motors		Full Load Current		
1		0.7 A		
AHRI 210/240 Certified Data at AHRI 210/240 Standard Conditions				
Net Capacity	Efficiency		ASHRAE 90.1	
58500 Btu/hr	11.6 EER	14.0 SEER	2016 Compliant	

Internal Static Pressure Drop Calculation	
External Static Pressure:	0.50
Internal Static Pressure:	0.33
Total Static Pressure:	0.83

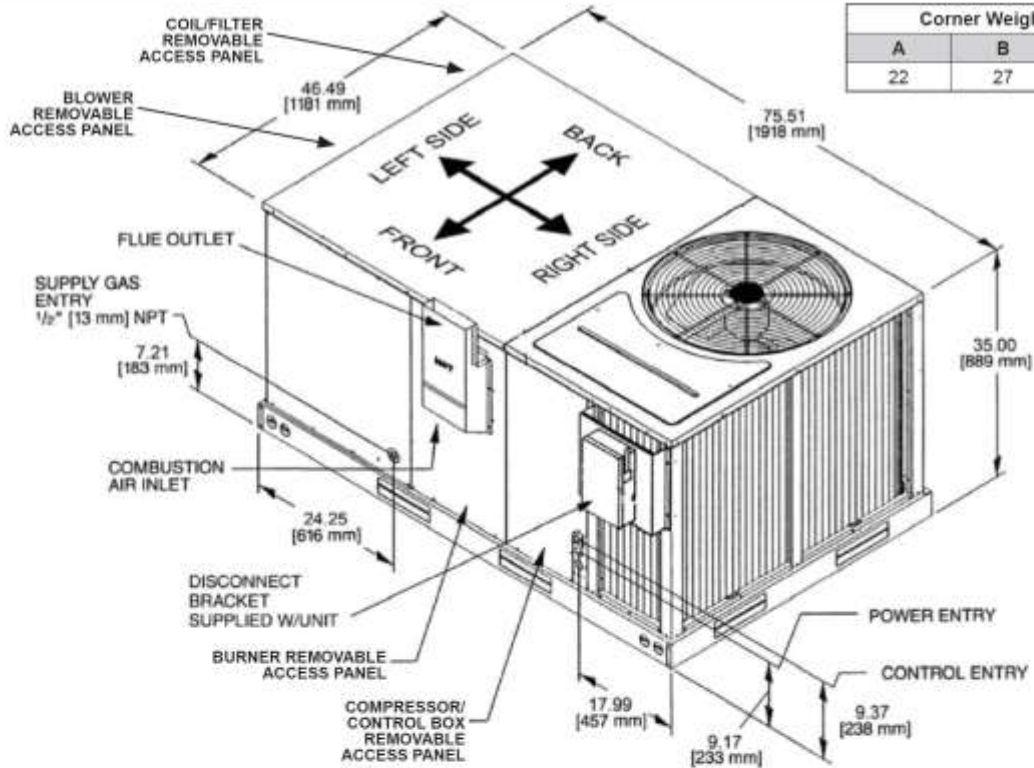
Options	
Electrical	
Field Connection:	Power Block
Power Options:	None
Controls	
Temperature Controls:	DDC controls, no BAS communication card

Warranty	
Parts Warranty:	Standard one year
Compressor Warranty:	Standard five year
Heat Exchanger Warranty:	Standard ten year

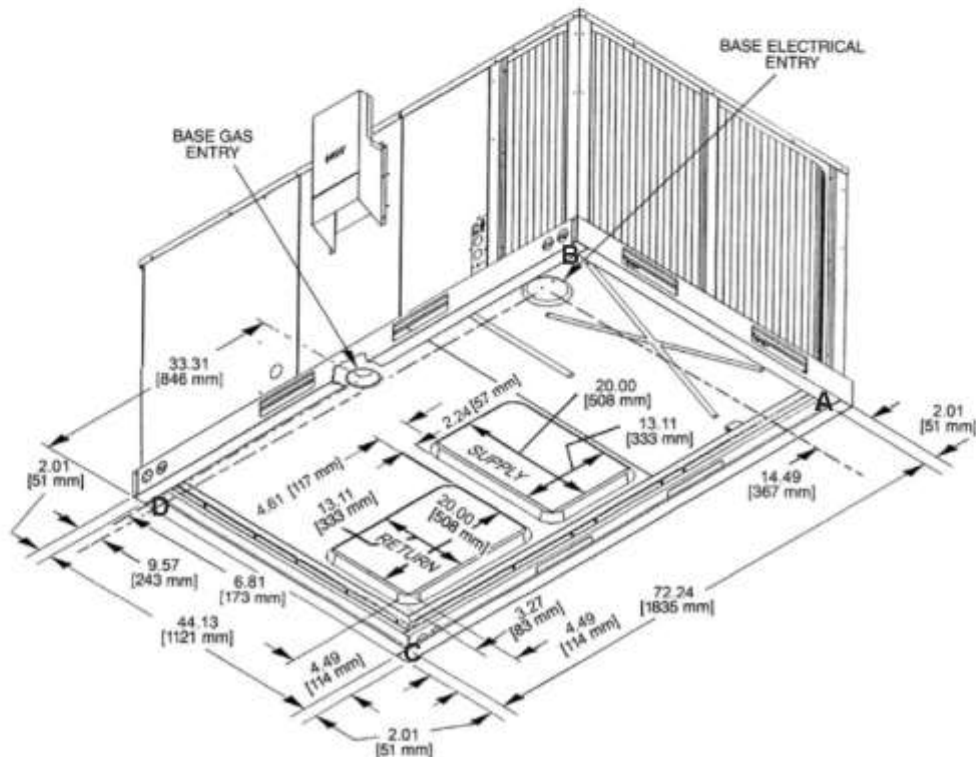
AHRI Certification	
	All equipment is rated and certified in accordance with AHRI 210/240


Notes

MPS003-005A Gas heat_Drawing for RTU-2,3



Corner Weights by Percentage			
A	B	C	D
22	27	23	28



Product Drawing	Unit Tag: RTU-2,3			 13600 Industrial Park Blvd. Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 10.21		
Product:	Project Name: Warrenton RTUs					
Model: MPSA05C	Sales Office: Daikin TMI LLC (St. Louis)			Scale: NTS	Tolerance: +/-0.25"	Dwg Units: in [mm]
Sales Engineer:	Feb. 02, 2021	Ver/Rev:	Sheet 1 of 1	No change to this drawing may be made unless approved in writing by Daikin Applied. Purchaser must determine that the equipment is fit and sufficient for the job specifications.		

Technical Data Sheet for RTU-4



Job Information		Technical Data Sheet
Job Name	Warrenton RTUs	
Date	2/2/2021	
Submitted By	Erin Hibbits	
Software Version	10.21	
Unit Tag	RTU-4	

Unit Overview					
Model Number	Voltage	Design Cooling Capacity	AHRI 360 Standard Efficiency		ASHRAE 90.1
			EER	IEER	
MPS015B	460/60/3	187532 Btu/hr	11.1	12.4	2016 Compliant

Unit	
Model Number:	MPS015B
Model Type:	Cooling, Standard Efficiency
Heat Type:	Natural gas heat
Application:	2 Speed SAF Control
Altitude:	0 ft
Approval	cULus

Physical			
Unit Dimensions and Weights			
Unit Length	Unit Height	Unit Width	Unit Weight
152.0 in	57.0 in	86.0 in	2146 lb
Unit Construction			
Exterior:	Powder Coat Galvanized	Doors:	Fan, Filter, Coil, Control Panel, and Economizer section
Insulation:	3/4" foil face with mechanical fasteners, R value of 3.6	Drain Pan Material	Polymer
Liners:	Single wall construction		
Unit Electrical Data			
Voltage	SCCR	MCA	MROPD
460/60/3 v	5 kAIC	40.0 A	50.0 A

Return/Outside/Exhaust Air				
Outside Air Option				
Type:	Factory Installed Econ, vertical return, DDC Controls			
Draw Through Filters				
Type	Quantity/Size	Face Area ft ²	Face Velocity ft/min	Air Pressure Drop
2" Disposable	(8) 2x25x20	27.8	216	Included In Fan Performance

Technical Data Sheet for RTU-4

Cooling Coil					
Fins per Inch	Rows	Face Area ft ²	Face Velocity ft/min	Condensate Connection Size	Air Pressure drop inH ₂ O
18	2	26.7	225	1.0 in. Male NPT	Included In Fan Performance

Cooling Performance						
Total Capacity Btu/hr	Sensible Capacity Btu/hr	Entering Air Temperature		Leaving Air Temperature		Ambient Air Temp °F
		Dry Bulb °F	Wet Bulb °F	Dry Bulb °F	Wet Bulb °F	
187532	141245	80.0	67.0	58.2	57.0	95.0

Fan Section			
Type	Fan Wheel Diameter	Quantity	Vibration Isolation
Twin FC	18 in	2	Rigid

Fan Performance					
Air Flow	External Static Pressure	Design Fan Speed	Drive Package Speed	Brake Horsepower	Altitude
6000 CFM	0.50 inH ₂ O	699 RPM	840	2.4 HP	0 ft

Motor			
Horsepower	Type	Efficiency	Full Load Current
5.0 HP	Open drip proof, EPAct	80.0	10.0 A

Drives	
Type	Service Factor
Adjustable Sheave	120%

Gas Heat Section			
Type	Material	Gas Type	
Tubular Heat exchanger with in-shot burner manifold	Aluminized steel	Natural Gas	
Ignition	Combustion Blower	Heat Stages	Gas Piping Connection Size
Electric	Induced draft blower	2 Stage	3/4 in. Female NPT

Heating Performance					
Input Size	Heat Airflow	Total Capacity	Steady State Efficiency	Entering Air Dry Bulb	Leaving Air Dry Bulb
350 MBH	6000 CFM	284000 Btu/hr	81%	60.0 °F	103.6 °F

Unit Discharge Conditions				
Air Temperature				
Motor Heat Btu/hr	Moisture Removal lb/h	Unit Leaving Dry Bulb °F	Unit Leaving Wet Bulb °F	Unit Leaving Dewpoint °F
7330	39.6	59.3	57.4	56.2

Technical Data Sheet for RTU-4

Condensing Section				
Compressor				
Type	Quantity	Refrigerant Charge	Capacity Control	Refrigerant Type
Scroll	2	12.81 - 13.19 lbs	2 steps	R410A
Compressor Amps:				
Compressor 1		Fixed Speed		12.2 A
Compressor 2		Fixed Speed		12.2 A
Compressor Options:	LP, HP switch			
Condenser Coil				
Type	Fins Per Inch	Rows	Fin Material	Refrigerant Valves
Copper tube	22	1	Aluminum	None
Low Ambient Control:	Std low ambient control to 40 F (4.44 C)			
Condenser Fan Motors				
Number of Motors		Full Load Current		
4		0.7 A		
AHRI 360 Certified Data at AHRI 360 Standard Conditions				
Net Capacity	Efficiency		ASHRAE 90.1	
182000 Btu/hr	11.1 EER	12.4 IEER	2016 Compliant	

Internal Static Pressure Drop Calculation	
External Static Pressure:	0.50
Internal Static Pressure:	0.36
Total Static Pressure:	0.86

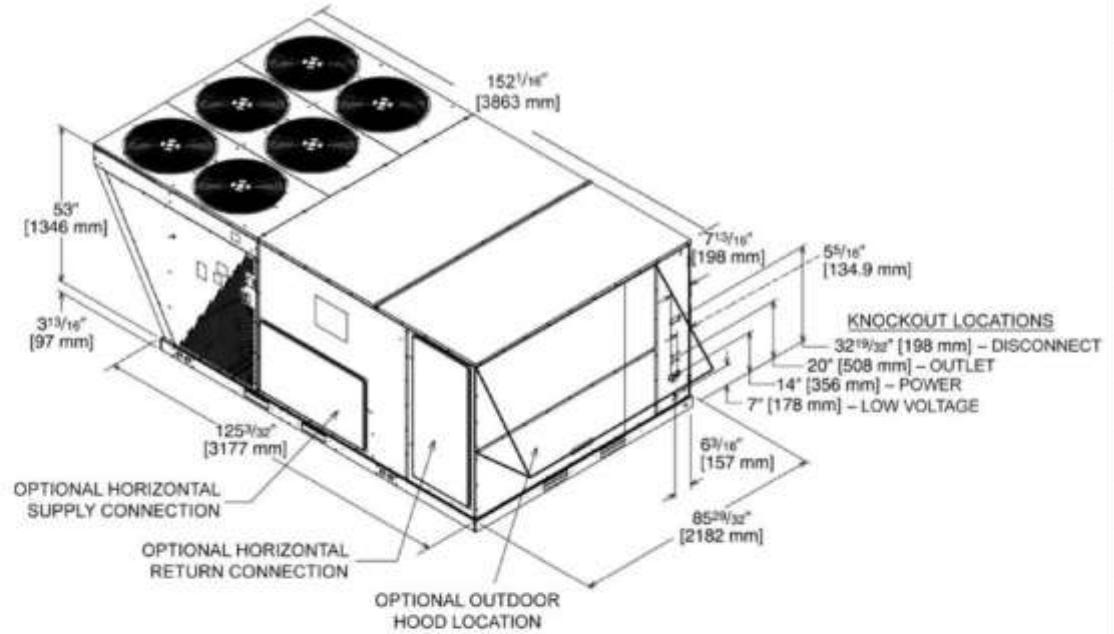
Options	
Electrical	
Field Connection:	Power Block
Power Options:	None
Controls	
Temperature Controls:	DDC controls, no BAS communication card

Warranty	
Parts Warranty:	Standard one year
Compressor Warranty:	Standard five year
Heat Exchanger Warranty:	Standard ten year

AHRI Certification	
	All equipment is rated and certified in accordance with AHRI 340/360

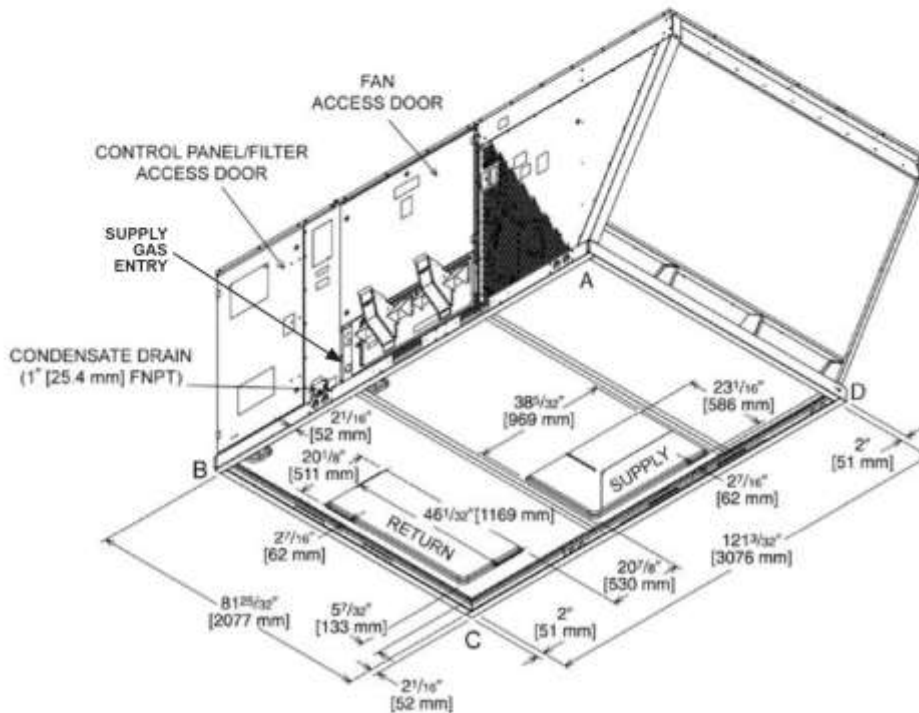
Notes	


MPS015-020B Gas Heat_Drawing for RTU-4



Corner Weights by Percentage			
A	B	C	D
32	27	16	24

Corner Weights Measured at Base of Unit



Product Drawing		Unit Tag: RTU-4		 13600 Industrial Park Blvd. Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 10.21		
Product:		Project Name: Warrenton RTUs				
Model: MPS015B		Sales Office: Daikin TMI LLC (St. Louis)		Scale: NTS	Tolerance: +/-0.25"	Dwg Units: in [mm]
Sales Engineer:		Feb. 02, 2021	Ver/Rev:	Sheet 1 of 1		
No change to this drawing may be made unless approved in writing by Daikin Applied. Purchaser must determine that the equipment is fit and sufficient for the job specifications.						

Document Summary Page

Certified Drawing	MHC-MHW-FT-HS-L-009 Specs
The Water Source Heat Pump product represented on this document will conform to the drawings and specifications set out below, in accordance with the express, written Limited Warranty. Purchaser's acceptance of this drawing certifies that the conforming equipment meets the order specifications. No changes may be made to this document without the prior, express, written authorization of the manufacturer.	Group: WSHP
	Type: Console
	Date: August 2017

Console Water Source Heat Pump – Flat Top Unit, High Sill, Left Hand Models MHC/MHW – Unit Size 009

Cabinets – Selectable flat top or slope top cabinet configuration with multiple grille options. Individual panels- top, front and end panels are designed for easy removal and provides easy access to unit components for service and maintenance.

Compressor - High efficiency rotary type, using R-410A refrigerant with zero ozone depletion potential or phase-out date.

Gentleflo™ Fan – User selectable, multi-speed tangential fan system provides high efficiency and very quiet operation suitable for noise sensitive applications.

LED Annunciator – LED status lights display fault conditions to provide easy troubleshooting and diagnosis. Accessed by removing the left or right end panel to the control enclosure.

Filter– Units come standard with a 1/2" (12.7mm) thick disposable filter that is easy to access and replace without removing panels.

Hinged Control Box– Provides added accessibility to plumbing end compartment for easier access for service.

MicroTech® III Unit Controller – Designed for flexibility, the main control board is used in standalone applications. An optional I/O expansion module can be used to control electric heat and multiple fan speeds. A separate LONWORKS® or BACnet® communication module can be easily snapped onto the board to accommodate the building automation system of your choice.

Double-Sloped Drain Pan – Made of durable, non-corrosive polymer, promotes positive condensate drainage for superior Indoor Air Quality (IAQ). Drain Pan is easy to remove for cleaning.

Air Dampers (Field-installed Accessory) – Motorized or manually operated outside air dampers provide ventilation air.

Unit Flexibility– Selectable for standard (boiler/tower) or extended range (geothermal) applications to achieve the highest efficiency for your application requirements.

Options (Factory Installed)

Indoor Air Quality (IAQ)

- Non-Fibrous Insulation - Closed-cell type (Rubatex)

Controls

- MicroTech III Unit Controller - Standalone operation
 LONWORKS® Communication Module
 BACnet® Communication Module

Warranty

- Ext. 4-Yr. Parts (Compressor Only)
 Ext. 4-Yr. Parts (Refrigerant Circuit)

2-Way Motorized Valve Packages (Option)

Factory-installed or field-installed accessory for variable pumping applications. Other valve options available upon request.

Extended End Pocket (Option)

Selectable end pocket provides 11" of additional area inside the left or right hand end of the unit for piping, or a field-installed pump.

Multi-Directional Grilles (Option)

Selectable plastic Multi-Directional Grilles can rotate 90, 180 or 270 degrees for added control of discharge air direction.

Physical Data

Unit Size	009
Fan Wheel - D x W (In.)	4½ x 27¼
Fan Motor Horsepower	1/30
Coil Face Area (Sq. Ft.)	1.67
Coil Rows	2
Refrigerant Charge (Oz.)	19.2
Filter, (Qty.) Size (Nominal)	(1) 29¼W x 9¼D
Water Connections (In.)	5/8 O.D.
Condensate Connections (In.)	3/4 I.D.
Weight, Operating (Lbs.)	144
Weight, Shipping (Lbs.)	164

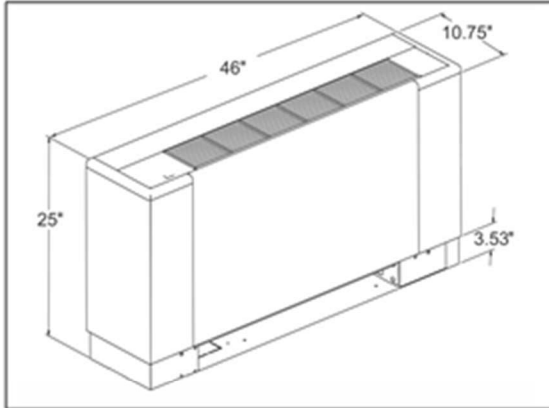


MHC-W_009_HS_F_L_Features-Dim-Phys_Data_Drawing for C - Size 9

Flat Top Unit, High Sill, Left Hand Piping – Size 009

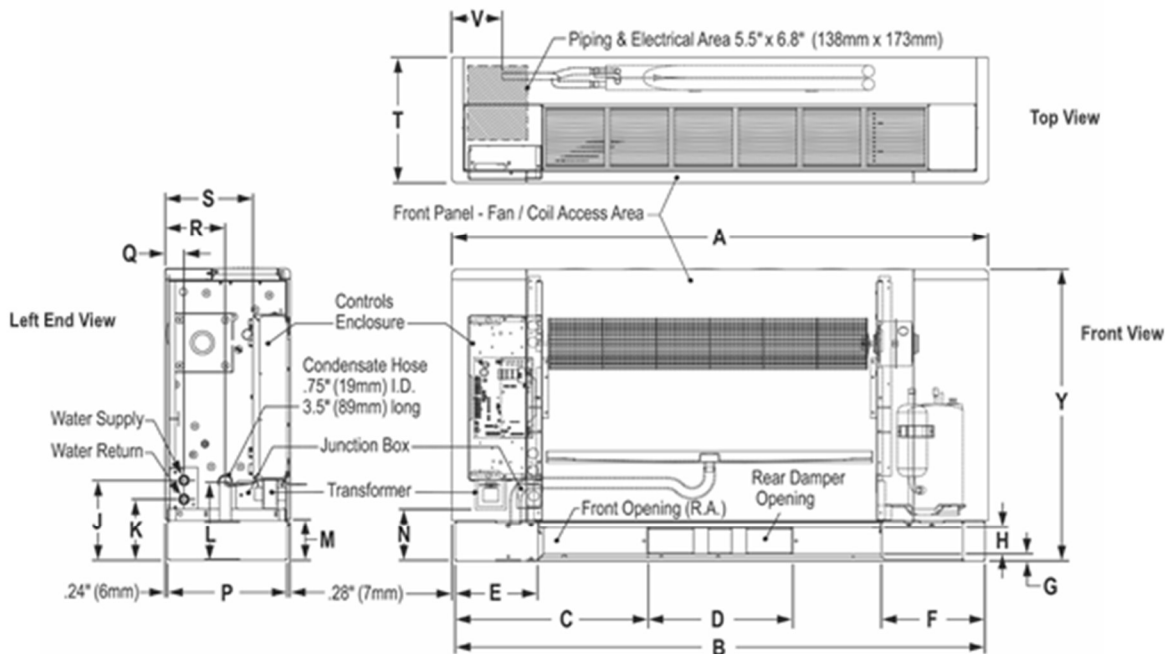
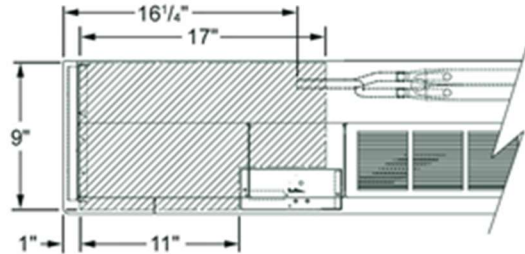
Left and right hand piping determined by facing the front of the unit.

Overall Unit Dimensions: 25"H x 46"W x 10 1/4"D



Extended End Pocket (Option) – Dimensions

Overall Unit Dimensions with Extended End Pocket: 25"H x 58"W x 10 1/4"D



Dimensions

Unit Size	A	B	C	D	E	F	G	H	J	K	L	M
009	46" (1168mm)	45 1/4" (1153mm)	16 1/2" (418mm)	12 1/2" (318mm)	7" (181mm)	8 1/4" (225mm)	0.6" (14mm)	2 1/4" (57mm)	6 1/8" (175mm)	5 1/8" (132mm)	6 1/4" (172mm)	3 1/2" (90mm)
	N	P	Q	R	S	T	V	Y				
	4 1/4" (108mm)	10 1/4" (260mm)	1 1/8" (41mm)	5 1/4" (134mm)	7 1/2" (192mm)	10 1/4" (273mm)	4 1/8" (118mm)	25" (635mm)				

Note: Dimensions are approximate



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MHC-MHW-FT-HS-L-009 Spacs / Page 2 of 2

Certified Drawing		Room Temp Sensor CI-Wrm Specs
The Water Source Heat Pump product represented on this document will conform to the drawings and specifications set out below, in accordance with the express, written Limited Warranty. Purchaser's acceptance of this drawing certifies that the conforming equipment meets the order specifications. No changes may be made to this document without the prior, express, written authorization of the manufacturer.		Group: WSHP
		Type: Accessory
		Date: May 2016

Room Temperature Sensor – Adjustable Cool/Warm With Occupancy Switch – P/N 910121753
 For Use With Daikin Enfinity™ And SmartSource® Water Source Heat Pump Units With
 MicroTech® III Controls

Overview

The Adjustable Cool/Warm Sensor with Occupancy Switch can be used for 2-stage heating, 2-stage cooling, and 2-stage electric heat applications. Unit status is provided through a flashing LED located on the thermostat while timed tenant override and fault reset are provided through the override button. Changing the system mode, fan mode and occupancy is easily accomplished through the slider switches.

Note: For complete installation, operation and maintenance information for the Room Temperature Sensor, refer to IOM 1177



Sensor Functions



This sensor is used for water source heat pump applications requiring the following functionality:

- **Cool/Warm Room Temperature Adjustment** – This slide adjustment is used to set the desired room temperature. To increase the desired room temperature, move the slide to the right toward "Warm". To decrease the desired room temperature, move the slide to the left toward "Cool".
- **Occupancy Switch** – Move the switch to the "Occ" to allow the unit to operate in the occupied mode. Move the switch to the "Unoc" to allow the unit to operate in the unoccupied mode. Move the switch to the "Off" so heating, cooling and the fan remain off.
- **System Switch** – Set to "Heat" for heating only operation. Set to "Auto" for operation of heating or cooling as needed to satisfy the room setpoint conditions. Set to "Cool" for cooling only operation. The output voltage on Terminal 2 will change based on the system mode selection.



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Room_Temp_Sensor_CI-Wrm_Specs_Drawing for C - Size 9

- **Fan Switch** – Set to "Auto" to allow the fan to on when heat or cool are on. Set to "On" to allow the fan to operate continuously in the occupied mode and cycle on a call for heat or cool in the unoccupied mode.
- **Status LED** – This green LED will light to indicate the system status. See [Table 8](#) for unit status LED definitions.
- **Override Button** – When the "Override" button is pressed, the thermistor sensor across terminal 4 is shorted. If held for more than 5 seconds but less than 11 seconds, it puts the water source heat pump controller into a timed Occupied Override. If the unit is in alarm, then holding the "Override" Button for more than 11 seconds will clear all alarms in the water source heat pump controller but only if the cause of the alarm has already returned to its non-alarm condition. Some alarms will not reset from the room sensor.

In this case, power to the unit must be cycled off for 5 seconds to clear the alarm. Continuously resetting alarms from the room sensor could damage the controller. Please call a service technician when repeated alarm resets are required to keep the unit operational.

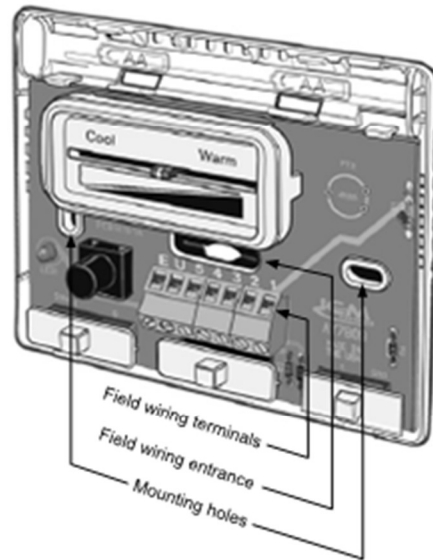
Table 1: WSHP unit status LED definition

Status LED		Unit Status	Unit Operation
ON	OFF		
0.5 seconds	0.5 seconds	Controller Off (or Network "Wink" operation active)	"Alarm"
0.0 seconds	Continuous	Unit running in Night Setback Override Mode or no power to the sensor	"Override"
0.5 seconds	5.5 seconds	Unoccupied Mode	"Unoccupied"
5.5 seconds	0.5 seconds	Standby Mode	"Energy Save" or "Load Shed" command from Energy Management System
Continuous	0.0 seconds	Occupied Mode	"Occupied"

Termination

Daikin McQuay recommends using twisted pair of at least 22AWG and sealant filled connectors for all wire connections. Larger gauge wire may be required for long runs. All wiring must comply with the National Electric Code (NEC) and local codes. Do NOT run this device's wiring in the same conduit as AC power wiring. Fluctuating and inaccurate signal levels are possible when AC power wiring is present in the same conduit as the signal lines. If you are experiencing any of these difficulties, please contact your Daikin McQuay representative.

Figure 1: Field mounting and wiring termination



Terminal Descriptions

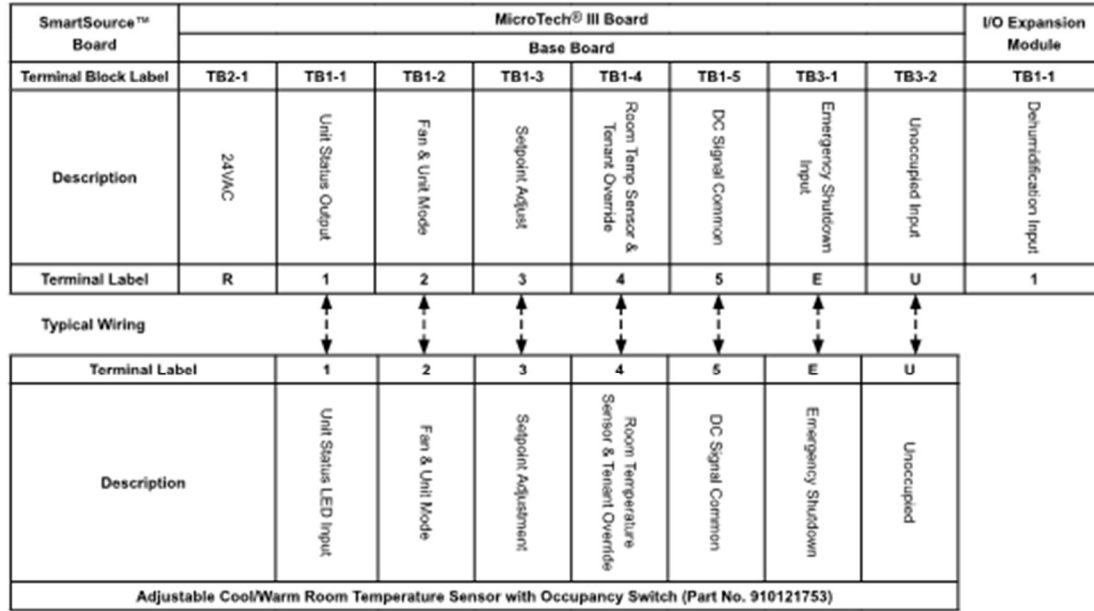
- 1 – Unit Status Indicator Input from the MicoTech III SmartSource Unit Controller. (5VDC)
 - 2 - Output Signal, Fan and Unit Mode (0 to 5VDC)
 - 3 - Output Signal, Setpoint Adjustment
 - 4 - Output Signal, Room Temp Thermistor Sensor. (10K ATP Z curve, 10K-2)
 - 5 - Ground or Neutral. Common Reference for All Signal Terminals
- E – Emergency Shutdown. (Terminal grounded when in System "Off" mode, VDC only)
- U - Unoccupied Contact. (Terminal grounded when in Unoccupied, VDC only)

Room_Temp_Sensor_CI-Wrm_Specs_Drawing for C - Size 9

Wiring

Wiring between the sensor and the water source heat pump unit for typical heating and cooling operation is shown in Figure 2.

Figure 2: Field wiring



Applications

The display sensor can be used on the products shown in [Table 2](#).

Table 2: Product usage guide

Units	Product		Models	Controls	Used with Digitally Adjustable Sensor with Temperature and Humidity Display
Water Source Heat Pumps	Horizontal	Enfinity™	W. CCH, CCW	MicroTech III Unit Controller	Yes
	Vertical		W. VFC, VFW		
	Vertical Stacked		W. VHC		
	Console		W. MHC, MHW		
	Horizontal & Vertical	SmartSource 1-Stage	W. GSH, GSV	MicroTech III SmartSource Unit Controller	
		SmartSource 2-Stage	W. GTH, GTV		

The display sensor for water source heat pump applications is shown in [Table 3](#)

Table 3: Water source heat pump application guide

Units	Product	Models	Applications											
			Cooling	Heating	Dehumidification					Electric Heat			Water-side Economizer	
			Stages	Smart Dehumidification	Hot Gas Reheat	Simplified	Humidistat Controlled	Dehumidification Only	Boilerless	Supplemental	Primary	3-Way Valve Control		
Water Source Heat Pumps	Horizontal	Enfinity	W. CCH, CCW	1	1	No	No	No	No	No	No	No	No	No
	Vertical		W. VFC, VFW	1	1	No	Yes	No	No	No	Yes ¹	Yes	No	No
	Vertical Stacked		W. VHC	1	1	No	No	No	No	No	No	No	No	No
	Console		W. MHC, MHW	1	1	No	No	No	No	No	Yes ¹	Yes	No	No
	Horizontal & Vertical	Smart-Source 1-Stage	W. GSH, GSV	3	4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Horizontal & Vertical	Smart-Source 2-Stage	W. GTH, GTV	3	4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: ¹With optional Boilerless controls



Technical Data Sheet for C - Size 9



Job Information		Technical Data Sheet
Job Name	Daniel Boone	
Date	1/13/2021	
Submitted By	Chris Swallow	
Software Version	09.30	
Unit Tag	C - Size 9	

Unit Overview							
Model Number	Voltage V/Hz/Phase	Air Flow CFM	Fluid Flow gpm	Cooling Capacity Btu/hr	Cooling Efficiency EER @ design	Heating Capacity Btu/hr	Heating Efficiency COP @ design
WMHW2009	208-230/60/1	345	2.40	9722	14.68	10912	5.04

Unit	
Model Number:	WMHW2009
Unit Type:	Console Geothermal Range
Unit Construction:	Standard Fiberglass Insulation
Approval:	None
Refrigerant Type	Refrigerant Weight
R-410A	21.0 oz

Unit Performance									
Air & Water Flow									
Airflow		Fluid Flow		Fluid Type		Fluid Pressure Drop			
345 CFM		2.40 gpm / 3.20 gpm/ton		Water		3.13 ft H ₂ O			
Cooling Performance									
Fluid Temperature		Air Temperature				Capacity		Heat of Rejection Btu/hr	EER @ design
Entering °F	Leaving °F	Entering		Leaving		Total Btu/hr	Sensible Btu/hr		
		Dry Bulb °F	Wet Bulb °F	Dry Bulb °F	Wet Bulb °F				
85.0	95.0	80.0	67.0	61.1	57.8	9722	6916	11982	14.68
Heating Performance									
Fluid Temperature		Air Temperature		Capacity		Heat of Absorption Btu/hr	COP @ design		
Entering °F	Leaving °F	Entering	Leaving	Total Btu/hr					
		Dry Bulb °F	Dry Bulb °F						
70.0	62.7	70.0	99.3	10912	8749	5.04			

Electrical			
Unit Voltage	Minimum Voltage	Total Unit MCA	Total Unit Full Load Current
208-230/60/1	187 V	4.9 A	4.0 A
Compressor RLA	Compressor LRA	Motor FLA	Maximum Recommended Fuse Size / HACR Breaker Size
3.60 A	21.0 A	0.4 A	15 A

Power Connection
Unit Mounted Plug & Cord w/Non-Fused Disconnect Sw

*Short-Circuit Current = 5 kA rms symmetrical, 600 V maximum


Technical Data Sheet for C - Size 9

Physical						
Unit						
Length	Height	Width	Weight		Connections	
			Shipping	Operating	Water, OD	Condensate, ID
46.0 in	25.0 in	10.8 in	164 lb	144 lb	0.625 in	0.75 in
Cabinet						
Construction Type			Cabinet Type			
Standard Fiberglass Insulation			Flat Top			
Piping Hand		Cabinet Height		Discharge Grille		
Left Hand		High Sill - 25"		Standard 1-piece Steel		
Color						
Cabinet		Subbase		Grille		
Antique Ivory		Oxford Brown		Oxford Brown		
Fan					Controls	
Type	Motor		Drive		Type	
	Type	Horsepower	Type			
Tangential	Standard PSC	0.033 HP	Direct		Microtech III Series 2 w/BACnet Comm Module	
(1) 29.25 in x 9.75 in x 0.5 in						

Options	
Heating	
Heat Exchanger:	Copper Inner Tube / Steel Outer Tube
Controls	
Thermostat Mounting:	Wall Mounted Space Sensor w/NSB Override
Power Connection:	Unit Mounted Plug & Cord w/Non-Fused Disconnect Sw
Flow Control:	2-Way Mtrzd 1/2" Isolat'n Vlv High Close Press. (N.C.)
Control Transformer:	50VA Control Transformer

Water Pressure Drop Calculation	
Base Unit Pressure Drop:	3.13 ft H ₂ O
Motorized Valve Pressure Drop:	1.08 ft H ₂ O
Total Pressure Drop:	4.21 ft H ₂ O

Warranty	
Unit Warranty:	1st Year Labor Allowance

AHRI Certification	
	All equipment is rated and certified in accordance with AHRI / ISO 13256-1 and tested, investigated, and determined to comply with the requirements of the standards for Heating and Cooling Equipment UL-1995 for the United States and CAN/CSA-C22.2 NO.236 for Canada.

Accessories	
Optional	
Part Number	Description
668817704	Hose, Kit, Supply/Return, 0.5" x 24" (FSWTxNPT)
910121753	Wall Sensor, Adjstbl Cool/Warm, Occpncy Swtch

Certified Drawing	MHC-MHW-FT-HS-L-009 Specs
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	Type: Console
	Date: August 2017

Console Water Source Heat Pump – Flat Top Unit, High Sill, Left Hand Models MHC/MHW – Unit Size 009

Cabinets – Selectable flat top or slope top cabinet configuration with multiple grille options. Individual panels- top, front and end panels are designed for easy removal and provides easy access to unit components for service and maintenance.

Compressor - High efficiency rotary type, using R-410A refrigerant with zero ozone depletion potential or phase-out date.

Gentleflo™ Fan – User selectable, multi-speed tangential fan system provides high efficiency and very quiet operation suitable for noise sensitive applications.

LED Annunciator – LED status lights display fault conditions to provide easy troubleshooting and diagnosis. Accessed by removing the left or right end panel to the control enclosure.

Filter– Units come standard with a 1/2" (12.7mm) thick disposable filter that is easy to access and replace without removing panels.

Hinged Control Box– Provides added accessibility to plumbing end compartment for easier access for service.

MicroTech® III Unit Controller – Designed for flexibility, the main control board is used in standalone applications. An optional I/O expansion module can be used to control electric heat and multiple fan speeds. A separate LONWORKS® or BACnet® communication module can be easily snapped onto the board to accommodate the building automation system of your choice.

Double-Sloped Drain Pan – Made of durable, non-corrosive polymer, promotes positive condensate drainage for superior Indoor Air Quality (IAQ). Drain Pan is easy to remove for cleaning.

Air Dampers (Field-installed Accessory) – Motorized or manually operated outside air dampers provide ventilation air.

Unit Flexibility– Selectable for standard (boiler/tower) or extended range (geothermal) applications to achieve the highest efficiency for your application requirements.

Options (Factory Installed)

Indoor Air Quality (IAQ)

- Non-Fibrous Insulation - Closed-cell type (Rubatex)

Controls

- MicroTech III Unit Controller - Standalone operation
 LONWORKS® Communication Module
 BACnet® Communication Module

Warranty

- Ext. 4-Yr. Parts (Compressor Only)
 Ext. 4-Yr. Parts (Refrigerant Circuit)

2-Way Motorized Valve Packages (Option)

Factory-installed or field-installed accessory for variable pumping applications. Other valve options available upon request.

Extended End Pocket (Option)

Selectable end pocket provides 11" of additional area inside the left or right hand end of the unit for piping, or a field-installed pump.

Multi-Directional Grilles (Option)

Selectable plastic Multi-Directional Grilles can rotate 90, 180 or 270 degrees for added control of discharge air direction.

Physical Data

Unit Size	009
Fan Wheel - D x W (In.)	4½ x 27¼
Fan Motor Horsepower	1/30
Coil Face Area (Sq. Ft.)	1.67
Coil Rows	2
Refrigerant Charge (Oz.)	19.2
Filter, (Qty.) Size (Nominal)	(1) 29¼W x 9¼D
Water Connections (In.)	5/8 O.D.
Condensate Connections (In.)	3/4 I.D.
Weight, Operating (Lbs.)	144
Weight, Shipping (Lbs.)	164

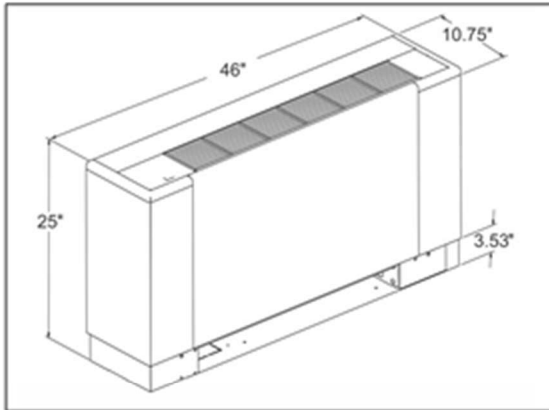


WSHP2Tier_Combined_Drawings for C - Size 9

Flat Top Unit, High Sill, Left Hand Piping – Size 009

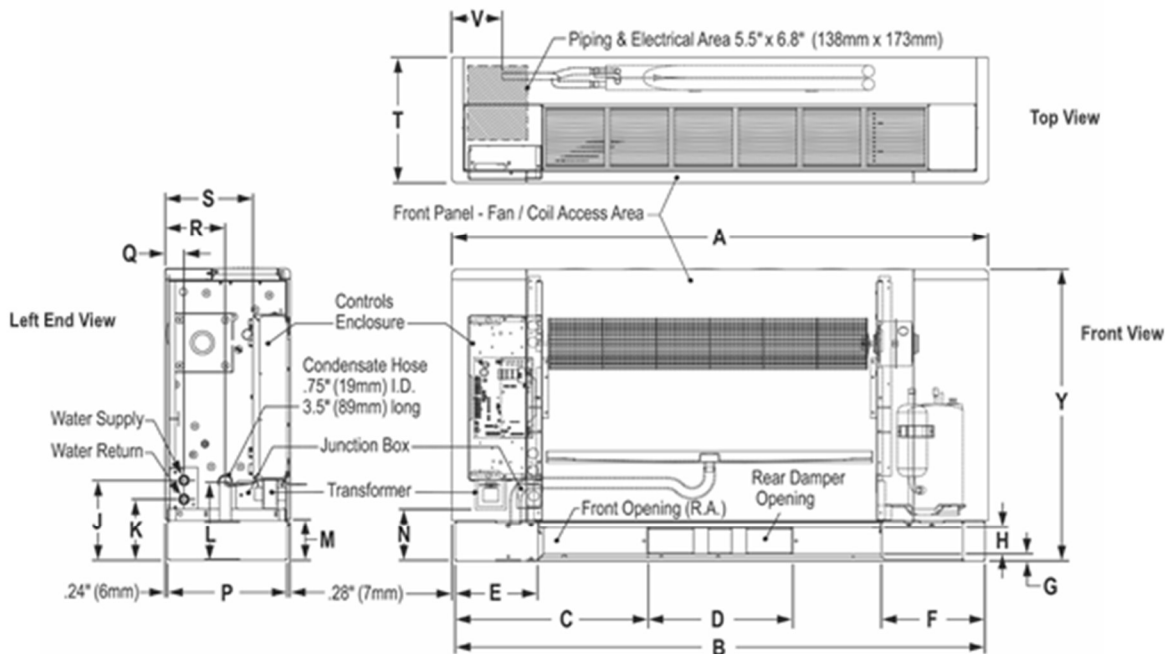
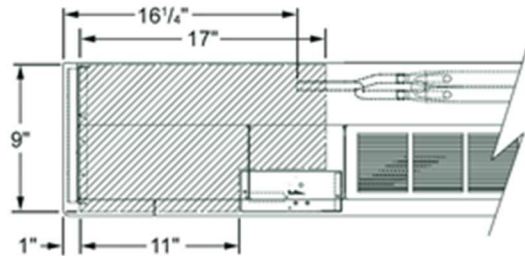
Left and right hand piping determined by facing the front of the unit.

Overall Unit Dimensions: 25"H x 46"W x 10 1/2"D



Extended End Pocket (Option) – Dimensions

Overall Unit Dimensions with Extended End Pocket: 25"H x 58"W x 10 1/2"D



Dimensions

Unit Size	A	B	C	D	E	F	G	H	J	K	L	M
009	46" (1168mm)	45 1/2" (1153mm)	16 1/2" (418mm)	12 1/2" (318mm)	7" (181mm)	8 1/4" (225mm)	0.6" (14mm)	2 1/4" (57mm)	6 1/8" (175mm)	5 1/8" (132mm)	6 1/4" (172mm)	3 1/2" (90mm)
N	P	Q	R	S	T	V	Y					
4 1/4" (108mm)	10 1/4" (260mm)	1 1/8" (41mm)	5 1/4" (134mm)	7 1/2" (192mm)	10 1/4" (273mm)	4 1/8" (118mm)	25" (635mm)					

Note: Dimensions are approximate



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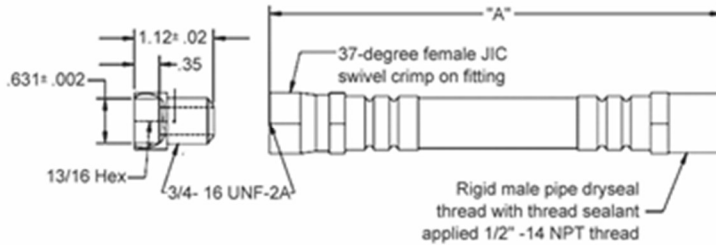
MHC-MHW-FT-HS-L-009 Spacs / Page 2 of 2

Certified Drawing	Efin Hose Kit 3 - Specs
The Water Source Heat Pump product represented on this document will conform to the drawings and specifications set out below, in accordance with the express, written Limited Warranty. Purchaser's acceptance of this drawing certifies that the conforming equipment meets the order specifications. No changes may be made to this document without the prior, express, written authorization of the manufacturer.	Group: WSHP
	Type: Hose Kit
	Date: June 2014

Fire Rated Supply & Return Console WSHP Hose Kits
Hose Kit #3 (2 hoses per kit)

Features

- Fixed Male NPT x Female JIC Swivel with 5/8 ID Female Sweat Adapter



Specifications:

Hose Connection Sizes	.....1/2"
Inner Tube	.....EPTF - White Santoprene with UL-94 VO Fire Rating
Outer Braid	.....302/304 Stainless Steel
Hose Fittings	.....Plated Steel
Hose/Adapter Connection	.....Male 37-degree JIC Metal to Metal Seal (no O-ring or gaskets)
Fixed End Fitting	.....MNPT ¹
Swivel End Fitting	.....5/8" Sweat Brass
Temperature Range	.....-40°F to 212°F

Table 1: Hose kit #3 part numbers and data

Part Number	Connection Size ¹ (inches)	Length ² (inches) "A"	Hose Min Bend Radius (inches)	Hose Working Pressure Min Bend Radius (psi)	Hose Burst Pressure (psi)
668817701	1/2	9	2.5	400	1600
668817702	1/2	12	2.5	400	1600
668817703	1/2	18	2.5	400	1600
668817704	1/2	24	2.5	400	1600

- Notes: ¹ Male pipe thread fittings have sealant pre-applied.
² Length is for the hose only and does not include the adapter.
³ Fitting size, not actual hose diameter.

Legend:

- NPT - National Pipe Thread
- JIC - Joint Industrial Committee
- EPTF - Ethylene Propylene Thermoplastic Rubber
- MNPT - Male National Pipe Thread
- FNPT - Female National Pipe Thread



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Efin Hose Kit 3 - Specs

Certified Drawing		Room Temp Sensor CI-Wrm Specs
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		Type: Accessory
		Date: May 2016

Room Temperature Sensor – Adjustable Cool/Warm With Occupancy Switch – P/N 910121753

For Use With Daikin Enfinity™ And SmartSource® Water Source Heat Pump Units With MicroTech® III Controls

Overview

The Adjustable Cool/Warm Sensor with Occupancy Switch can be used for 2-stage heating, 2-stage cooling, and 2-stage electric heat applications. Unit status is provided through a flashing LED located on the thermostat while timed tenant override and fault reset are provided through the override button. Changing the system mode, fan mode and occupancy is easily accomplished through the slider switches.

Note: For complete installation, operation and maintenance information for the Room Temperature Sensor, refer to IOM 1177



Sensor Functions



This sensor is used for water source heat pump applications requiring the following functionality:

- **Cool/Warm Room Temperature Adjustment** – This slide adjustment is used to set the desired room temperature. To increase the desired room temperature, move the slide to the right toward "Warm". To decrease the desired room temperature, move the slide to the left toward "Cool".
- **Occupancy Switch** – Move the switch to the "Occ" to allow the unit to operate in the occupied mode. Move the switch to the "Unoc" to allow the unit to operate in the unoccupied mode. Move the switch to the "Off" so heating, cooling and the fan remain off.
- **System Switch** – Set to "Heat" for heating only operation. Set to "Auto" for operation of heating or cooling as needed to satisfy the room setpoint conditions. Set to "Cool" for cooling only operation. The output voltage on Terminal 2 will change based on the system mode selection.



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- **Fan Switch** – Set to "Auto" to allow the fan to on when heat or cool are on. Set to "On" to allow the fan to operate continuously in the occupied mode and cycle on a call for heat or cool in the unoccupied mode.
- **Status LED** – This green LED will light to indicate the system status. See [Table 8](#) for unit status LED definitions.
- **Override Button** – When the "Override" button is pressed, the thermistor sensor across terminal 4 is shorted. If held for more than 5 seconds but less than 11 seconds, it puts the water source heat pump controller into a timed Occupied Override. If the unit is in alarm, then holding the "Override" Button for more than 11 seconds will clear all alarms in the water source heat pump controller but only if the cause of the alarm has already returned to its non-alarm condition. Some alarms will not reset from the room sensor.

In this case, power to the unit must be cycled off for 5 seconds to clear the alarm. Continuously resetting alarms from the room sensor could damage the controller. Please call a service technician when repeated alarm resets are required to keep the unit operational.

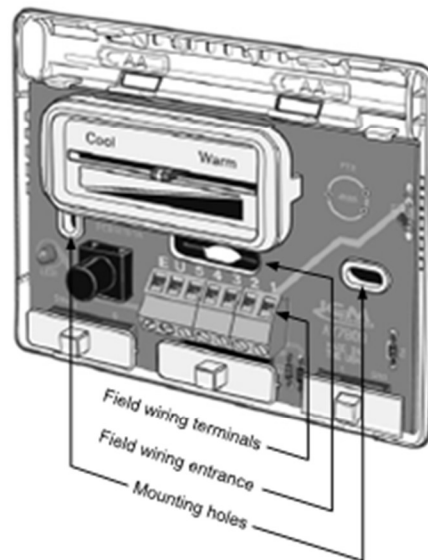
Table 1: WSHP unit status LED definition

Status LED		Unit Status	Unit Operation
ON	OFF		
0.5 seconds	0.5 seconds	Controller Off (or Network "Wink" operation active)	"Alarm"
0.0 seconds	Continuous	Unit running in Night Setback Override Mode or no power to the sensor	"Override"
0.5 seconds	5.5 seconds	Unoccupied Mode	"Unoccupied"
5.5 seconds	0.5 seconds	Standby Mode	"Energy Save" or "Load Shed" command from Energy Management System
Continuous	0.0 seconds	Occupied Mode	"Occupied"

Termination

Daikin McQuay recommends using twisted pair of at least 22AWG and sealant filled connectors for all wire connections. Larger gauge wire may be required for long runs. All wiring must comply with the National Electric Code (NEC) and local codes. Do NOT run this device's wiring in the same conduit as AC power wiring. Fluctuating and inaccurate signal levels are possible when AC power wiring is present in the same conduit as the signal lines. If you are experiencing any of these difficulties, please contact your Daikin McQuay representative.

Figure 1: Field mounting and wiring termination



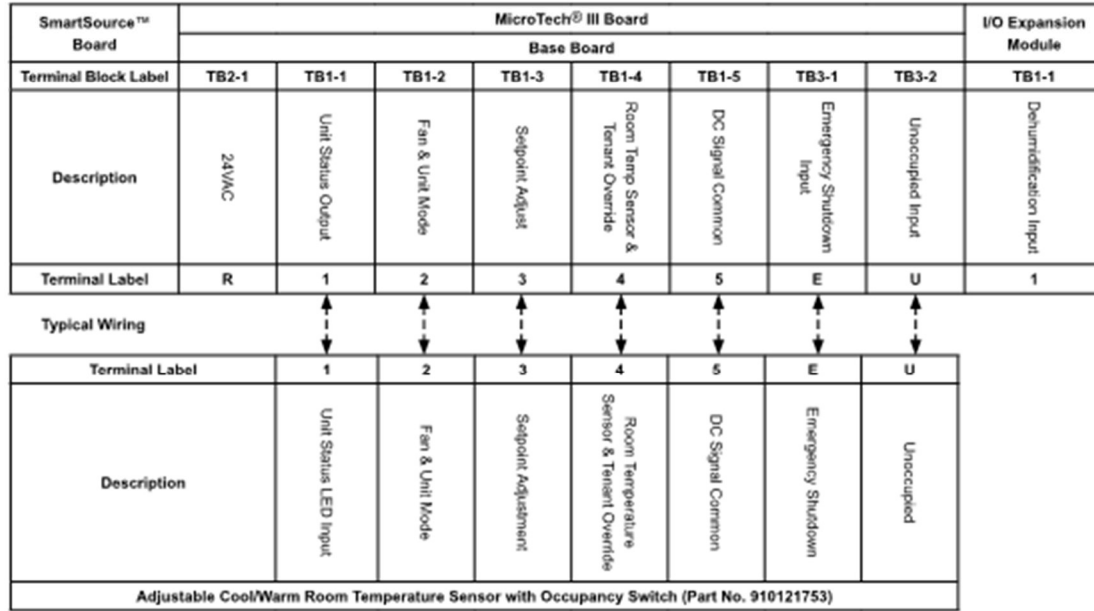
Terminal Descriptions

- 1 – Unit Status Indicator Input from the MicoTech III SmartSource Unit Controller. (5VDC)
- 2 - Output Signal, Fan and Unit Mode (0 to 5VDC)
- 3 - Output Signal, Setpoint Adjustment
- 4 - Output Signal, Room Temp Thermistor Sensor. (10K ATP Z curve, 10K-2)
- 5 - Ground or Neutral. Common Reference for All Signal Terminals
- E – Emergency Shutdown. (Terminal grounded when in System "Off" mode, VDC only)
- U - Unoccupied Contact. (Terminal grounded when in Unoccupied, VDC only)

Wiring

Wiring between the sensor and the water source heat pump unit for typical heating and cooling operation is shown in Figure 2.

Figure 2: Field wiring



Applications

The display sensor can be used on the products shown in [Table 2](#).

Table 2: Product usage guide

Units	Product		Models	Controls	Used with Digitally Adjustable Sensor with Temperature and Humidity Display
Water Source Heat Pumps	Horizontal	Enfinity™	W. CCH, CCW	MicroTech III Unit Controller	Yes
	Vertical		W. VFC, VFW		
	Vertical Stacked		W. VHC		
	Console		W. MHC, MHW		
	Horizontal & Vertical	SmartSource 1-Stage	W. GSH, GSV	MicroTech III SmartSource Unit Controller	
		SmartSource 2-Stage	W. GTH, GTV		

The display sensor for water source heat pump applications is shown in [Table 3](#)

Table 3: Water source heat pump application guide

Units	Product	Models	Applications											
			Cooling	Heating	Dehumidification					Electric Heat			Water-side Economizer	
			Stages	Smart Dehumidification	Hot Gas Reheat	Simplified	Humidistat Controlled	Dehumidification Only	Boilerless	Supplemental	Primary	3-Way Valve Control		
Water Source Heat Pumps	Horizontal	Enfinity	W. CCH, CCW	1	1	No	No	No	No	No	No	No	No	No
	Vertical		W. VFC, VFW	1	1	No	Yes	No	No	No	Yes ¹	Yes	No	No
	Vertical Stacked		W. VHC	1	1	No	No	No	No	No	No	No	No	No
	Console		W. MHC, MHW	1	1	No	No	No	No	No	Yes ¹	Yes	No	No
	Horizontal & Vertical	Smart-Source 1-Stage	W. GSH, GSV	3	4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Horizontal & Vertical	Smart-Source 2-Stage	W. GTH, GTV	3	4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: ¹With optional Boilerless controls



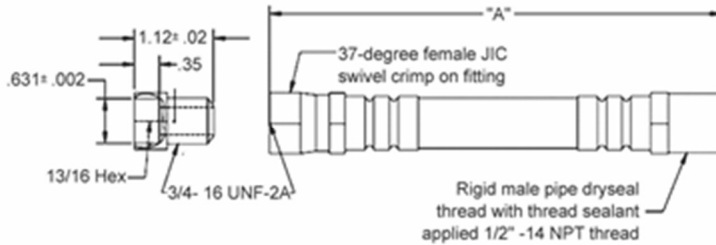
Hose Kits - Supply and Return Console - Dwg #3_Drawing for C - Size 15

Certified Drawing	Efin Hose Kit 3 - Specs
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	Type: Hose Kit
	Date: June 2014

Fire Rated Supply & Return Console WSHP Hose Kits Hose Kit #3 (2 hoses per kit)

Features

- Fixed Male NPT x Female JIC Swivel with 5/8 ID Female Sweat Adapter



Specifications:

Hose Connection Sizes	.....1/2"
Inner Tube	.....EPTF - White Santoprene with UL-94 VO Fire Rating
Outer Braid	.....302/304 Stainless Steel
Hose Fittings	.....Plated Steel
Hose/Adapter Connection	.....Male 37-degree JIC Metal to Metal Seal (no O-ring or gaskets)
Fixed End Fitting	.....MNPT ¹
Swivel End Fitting	.....5/8" Sweat Brass
Temperature Range	.....-40°F to 212°F

Table 1: Hose kit #3 part numbers and data

Part Number	Connection Size ¹ (inches)	Length ² (inches) "A"	Hose Min Bend Radius (inches)	Hose Working Pressure Min Bend Radius (psi)	Hose Burst Pressure (psi)
668817701	1/2	9	2.5	400	1600
668817702	1/2	12	2.5	400	1600
668817703	1/2	18	2.5	400	1600
668817704	1/2	24	2.5	400	1600

- Notes: ¹ Male pipe thread fittings have sealant pre-applied.
² Length is for the hose only and does not include the adapter.
³ Fitting size, not actual hose diameter.

Legend:

- NPT - National Pipe Thread
- JIC - Joint Industrial Committee
- EPTF - Ethylene Propylene Thermoplastic Rubber
- MNPT - Male National Pipe Thread
- FNPT - Female National Pipe Thread



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Efin Hose Kit 3 - Specs

Certified Drawing	MHC-MHW-FT-HS-L-015 Specs
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	Type: Console
	Date: August 2017

Console Water Source Heat Pump – Flat Top Unit, High Sill, Left Hand Models MHC/MHW – Unit Size 015

Cabinets – Selectable flat top or slope top cabinet configuration with multiple grille options. Individual panels- top, front and end panels are designed for easy removal and provides easy access to unit components for service and maintenance.

Compressor - High efficiency rotary type, using R-410A refrigerant with zero ozone depletion potential or phase-out date.

Gentleflo™ Fan – User selectable, multi-speed tangential fan system provides high efficiency and very quiet operation suitable for noise sensitive applications.

LED Annunciator – LED status lights display fault conditions to provide easy troubleshooting and diagnosis. Accessed by removing the left or right end panel to the control enclosure.

Filter– Units come standard with a 1/2" (12.7mm) thick disposable filter that is easy to access and replace without removing panels.

Hinged Control Box– Provides added accessibility to plumbing end compartment for easier access for service.

MicroTech® III Unit Controller – Designed for flexibility, the main control board is used in standalone applications. An optional I/O expansion module can be used to control electric heat and multiple fan speeds. A separate LONWORKS® or BACnet® communication module can be easily snapped onto the board to accommodate the building automation system of your choice.

Double-Sloped Drain Pan – Made of durable, non-corrosive polymer, promotes positive condensate drainage for superior Indoor Air Quality (IAQ). Drain Pan is easy to remove for cleaning.

Air Dampers (Field-installed Accessory) – Motorized or manually operated outside air dampers provide ventilation air.

Unit Flexibility– Selectable for standard (boiler/tower) or extended range (geothermal) applications to achieve the highest efficiency for your application requirements.

Options (Factory Installed)

Indoor Air Quality (IAQ)

- Non-Fibrous Insulation - Closed-cell type (Rubatex)

Controls

- MicroTech III Unit Controller - Standalone operation
- LONWORKS® Communication Module
- BACnet® Communication Module

Warranty

- Ext. 4-Yr. Parts (Compressor Only)
- Ext. 4-Yr. Parts (Refrigerant Circuit)

2-Way Motorized Valve Packages (Option)

Factory-installed or field-installed accessory for variable pumping applications. Other valve options available upon request.

Extended End Pocket (Option)

Selectable end pocket provides 11" of additional area inside the left or right hand end of the unit for piping, or a field-installed pump.

Multi-Directional Grilles (Option)

Selectable plastic Multi-Directional Grilles can rotate 90, 180 or 270 degrees for added control of discharge air direction.

Physical Data

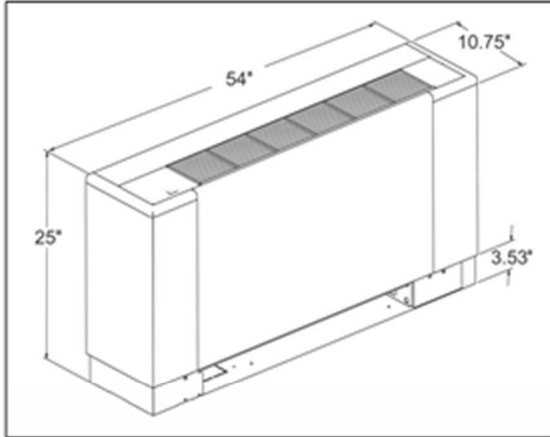
Unit Size	015
Fan Wheel - D x W (In.)	4 1/4 x 3 5/16
Fan Motor Horsepower	1/18
Coil Face Area (Sq. Ft.)	2.22
Coil Rows	2
Refrigerant Charge (Oz.)	29.9
Filter, (Qty.) Size (Nominal)	(1) 37 1/4" W x 9 1/2" D
Water Connections (In.)	5/8 O.D.
Condensate Connections (In.)	3/4 I.D.
Weight, Operating (Lbs.)	166
Weight, Shipping (Lbs.)	196



Flat Top Unit, High Sill, Left Hand Piping – Size 015

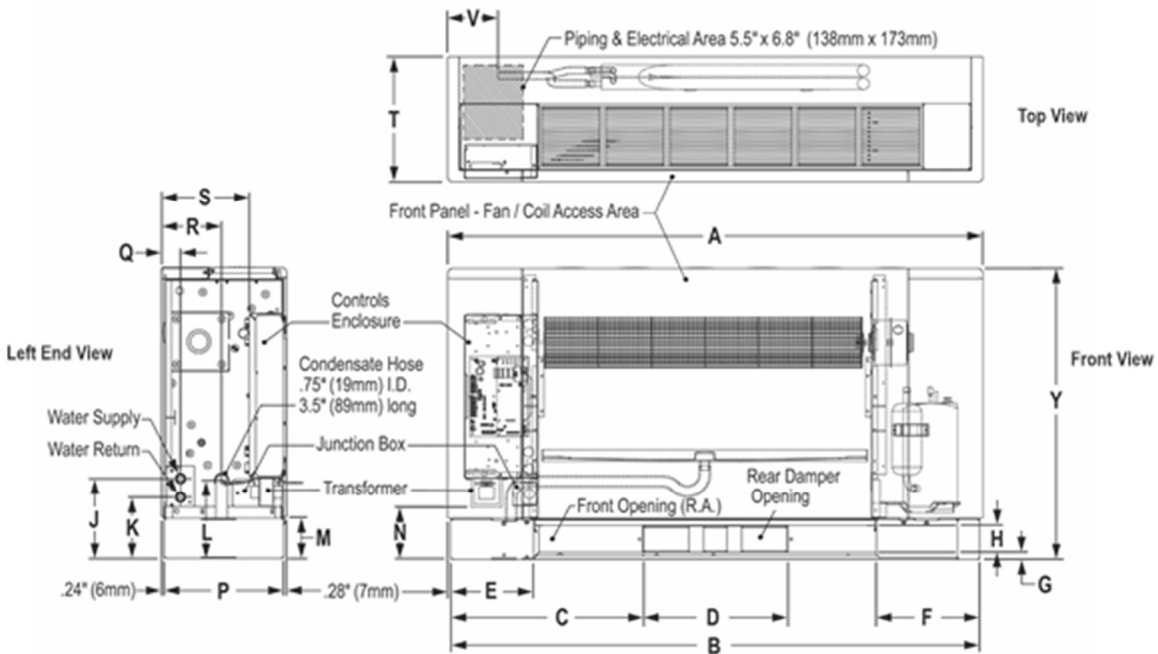
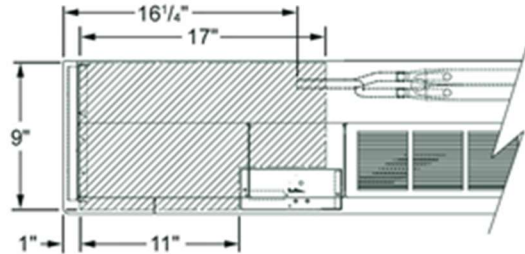
Left and right hand piping determined by facing the front of the unit.

Overall Unit Dimensions: 25”H × 54”W × 10½”D



Extended End Pocket (Option) – Dimensions

Overall Unit Dimensions with Extended End Pocket: 25”H × 66”W × 10½”D



Dimensions

Unit Size	A	B	C	D	E	F	G	H	J	K	L	M
015	54" (1372mm)	53½" (1356mm)	20½" (519mm)	12½" (318mm)	7" (181mm)	8¼" (225mm)	0.6" (14mm)	2¼" (57mm)	6¼" (175mm)	5½" (132mm)	6¼" (172mm)	3½" (90mm)
	N	P	Q	R	S	T	V	Y				
	4¼" (108mm)	10¼" (260mm)	1½" (41mm)	5¼" (134mm)	7½" (192mm)	10¼" (273mm)	4¼" (118mm)	25" (635mm)				



Certified Drawing		Room Temp Sensor CI-Wrm Specs
The Water Source Heat Pump product represented on this document will conform to the drawings and specifications set out below, in accordance with the express, written Limited Warranty. Purchaser's acceptance of this drawing certifies that the conforming equipment meets the order specifications. No changes may be made to this document without the prior, express, written authorization of the manufacturer.		Group: WSHP
		Type: Accessory
		Date: May 2016

Room Temperature Sensor – Adjustable Cool/Warm With Occupancy Switch – P/N 910121753
 For Use With Daikin Enfinity™ And SmartSource® Water Source Heat Pump Units With
 MicroTech® III Controls

Overview

The Adjustable Cool/Warm Sensor with Occupancy Switch can be used for 2-stage heating, 2-stage cooling, and 2-stage electric heat applications. Unit status is provided through a flashing LED located on the thermostat while timed tenant override and fault reset are provided through the override button. Changing the system mode, fan mode and occupancy is easily accomplished through the slider switches.

Note: For complete installation, operation and maintenance information for the Room Temperature Sensor, refer to IOM 1177



Sensor Functions



This sensor is used for water source heat pump applications requiring the following functionality:

- **Cool/Warm Room Temperature Adjustment** – This slide adjustment is used to set the desired room temperature. To increase the desired room temperature, move the slide to the right toward "Warm". To decrease the desired room temperature, move the slide to the left toward "Cool".
- **Occupancy Switch** – Move the switch to the "Occ" to allow the unit to operate in the occupied mode. Move the switch to the "Unoc" to allow the unit to operate in the unoccupied mode. Move the switch to the "Off" so heating, cooling and the fan remain off.
- **System Switch** – Set to "Heat" for heating only operation. Set to "Auto" for operation of heating or cooling as needed to satisfy the room setpoint conditions. Set to "Cool" for cooling only operation. The output voltage on Terminal 2 will change based on the system mode selection.



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- **Fan Switch** – Set to "Auto" to allow the fan to on when heat or cool are on. Set to "On" to allow the fan to operate continuously in the occupied mode and cycle on a call for heat or cool in the unoccupied mode.
- **Status LED** – This green LED will light to indicate the system status. See Table 8 for unit status LED definitions.
- **Override Button** – When the "Override" button is pressed, the thermistor sensor across terminal 4 is shorted. If held for more than 5 seconds but less than 11 seconds, it puts the water source heat pump controller into a timed Occupied Override. If the unit is in alarm, then holding the "Override" Button for more than 11 seconds will clear all alarms in the water source heat pump controller but only if the cause of the alarm has already returned to its non-alarm condition. Some alarms will not reset from the room sensor.

In this case, power to the unit must be cycled off for 5 seconds to clear the alarm. Continuously resetting alarms from the room sensor could damage the controller. Please call a service technician when repeated alarm resets are required to keep the unit operational.

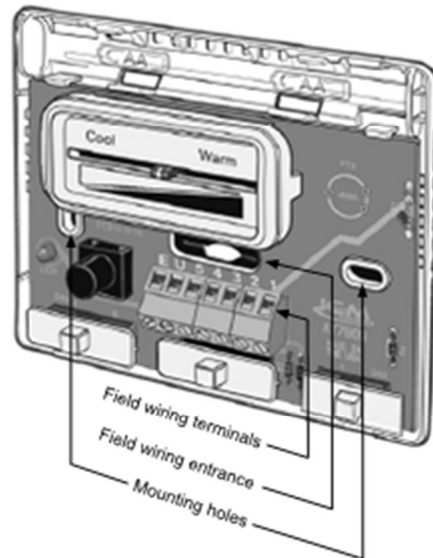
Table 1: WSHP unit status LED definition

Status LED		Unit Status	Unit Operation
ON	OFF		
0.5 seconds	0.5 seconds	Controller Off (or Network "Wink" operation active)	"Alarm"
0.0 seconds	Continuous	Unit running in Night Setback Override Mode or no power to the sensor	"Override"
0.5 seconds	5.5 seconds	Unoccupied Mode	"Unoccupied"
5.5 seconds	0.5 seconds	Standby Mode	"Energy Save" or "Load Shed" command from Energy Management System
Continuous	0.0 seconds	Occupied Mode	"Occupied"

Termination

Daikin McQuay recommends using twisted pair of at least 22AWG and sealant filled connectors for all wire connections. Larger gauge wire may be required for long runs. All wiring must comply with the National Electric Code (NEC) and local codes. Do NOT run this device's wiring in the same conduit as AC power wiring. Fluctuating and inaccurate signal levels are possible when AC power wiring is present in the same conduit as the signal lines. If you are experiencing any of these difficulties, please contact your Daikin McQuay representative.

Figure 1: Field mounting and wiring termination



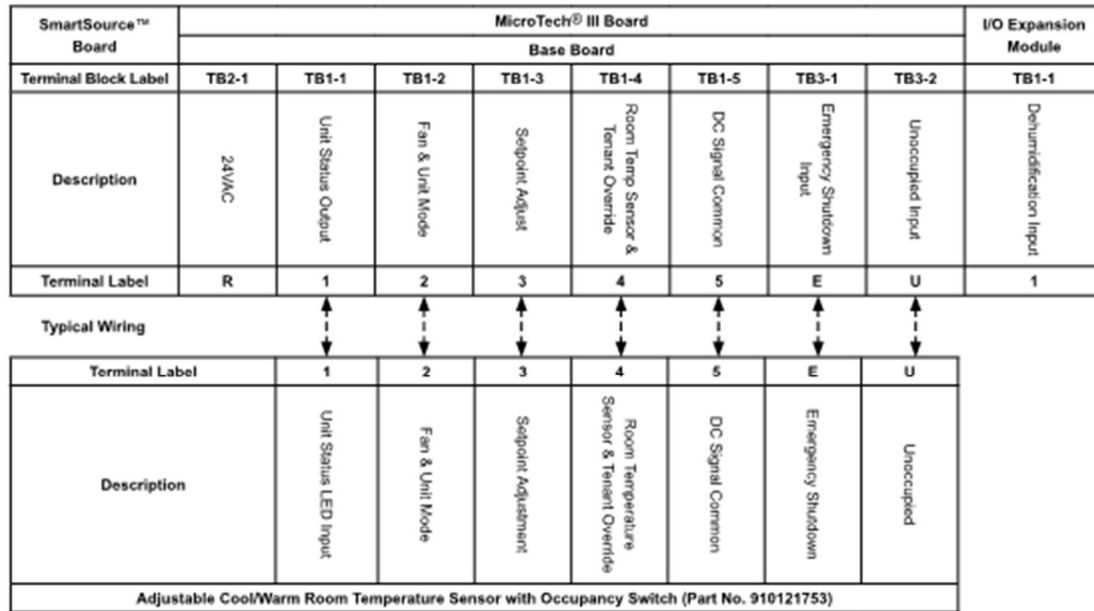
Terminal Descriptions

- 1 – Unit Status Indicator Input from the MicoTech III SmartSource Unit Controller. (5VDC)
- 2 - Output Signal, Fan and Unit Mode (0 to 5VDC)
- 3 - Output Signal, Setpoint Adjustment
- 4 - Output Signal, Room Temp Thermistor Sensor. (10K ATP Z curve, 10K-2)
- 5 - Ground or Neutral. Common Reference for All Signal Terminals
- E – Emergency Shutdown. (Terminal grounded when in System "Off" mode, VDC only)
- U - Unoccupied Contact. (Terminal grounded when in Unoccupied, VDC only)

Wiring

Wiring between the sensor and the water source heat pump unit for typical heating and cooling operation is shown in Figure 2.

Figure 2: Field wiring



Applications

The display sensor can be used on the products shown in [Table 2](#).

Table 2: Product usage guide

Units	Product		Models	Controls	Used with Digitally Adjustable Sensor with Temperature and Humidity Display
Water Source Heat Pumps	Horizontal	Enfinity™	W. CCH, CCW	MicroTech III Unit Controller	Yes
	Vertical		W. VFC, VFW		
	Vertical Stacked		W. VHC		
	Console		W. MHC, MHW		
	Horizontal & Vertical	SmartSource 1-Stage	W. GSH, GSV	MicroTech III SmartSource Unit Controller	
		SmartSource 2-Stage	W. GTH, GTV		

The display sensor for water source heat pump applications is shown in [Table 3](#)

Table 3: Water source heat pump application guide

Units	Product	Models	Applications												
			Cooling	Heating	Dehumidification					Electric Heat			Water-side Economizer		
			Stages	Smart Dehumidification	Hot Gas Reheat	Simplified	Humidistat Controlled	Dehumidification Only	Boilerless	Supplemental	Primary	3-Way Valve Control			
Water Source Heat Pumps	Horizontal	Enfinity	W. CCH, CCW	1	1	No	No	No	No	No	No	No	No	No	No
	Vertical		W. VFC, VFW	1	1	No	Yes	No	No	No	Yes ¹	Yes	No	No	
	Vertical Stacked		W. VHC	1	1	No	No	No	No	No	No	No	No	No	
	Console		W. MHC, MHW	1	1	No	No	No	No	No	Yes ¹	Yes	No	No	
	Horizontal & Vertical	Smart-Source 1-Stage	W. GSH, GSV	3	4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
	Horizontal & Vertical	Smart-Source 2-Stage	W. GTH, GTV	3	4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	

Note: ¹With optional Boilerless controls



Technical Data Sheet for C - Size 15



Job Information		Technical Data Sheet
Job Name	Daniel Boone	
Date	1/13/2021	
Submitted By	Chris Swallow	
Software Version	09.30	
Unit Tag	C - Size 15	

Unit Overview							
Model Number	Voltage V/Hz/Phase	Air Flow CFM	Fluid Flow gpm	Cooling Capacity Btu/hr	Cooling Efficiency EER @ design	Heating Capacity Btu/hr	Heating Efficiency COP @ design
WMHW2015	208-230/60/1	525	3.70	14247	17.10	18271	4.81

Unit	
Model Number:	WMHW2015
Unit Type:	Console Geothermal Range
Unit Construction:	Standard Fiberglass Insulation
Approval:	None
Refrigerant Type	Refrigerant Weight
R-410A	30.0 oz

Unit Performance									
Air & Water Flow									
Airflow		Fluid Flow		Fluid Type		Fluid Pressure Drop			
525 CFM		3.70 gpm / 2.96 gpm/ton		Water		2.42 ft H ₂ O			
Cooling Performance									
Fluid Temperature		Air Temperature				Capacity		Heat of Rejection Btu/hr	EER @ design
Entering °F	Leaving °F	Entering		Leaving		Total Btu/hr	Sensible Btu/hr		
		Dry Bulb °F	Wet Bulb °F	Dry Bulb °F	Wet Bulb °F				
85.0	94.2	80.0	67.0	64.0	58.2	14247	8892	17091	17.10
Heating Performance									
Fluid Temperature		Air Temperature		Capacity	Heat of Absorption Btu/hr	COP @ design			
Entering °F	Leaving °F	Entering	Leaving	Total					
		Dry Bulb °F	Dry Bulb °F	Btu/hr					
70.0	62.2	70.0	102.3	18271	14478	4.81			

Electrical			
Unit Voltage	Minimum Voltage	Total Unit MCA	Total Unit Full Load Current
208-230/60/1	187 V	6.7 A	5.5 A
Compressor RLA	Compressor LRA	Motor FLA	Maximum Recommended Fuse Size / HACR Breaker Size
5.00 A	30.0 A	0.5 A	15 A

Power Connection
Unit Mounted Plug & Cord w/Non-Fused Disconnect Sw

*Short-Circuit Current = 5 kA rms symmetrical, 600 V maximum


Technical Data Sheet for C - Size 15

Physical						
Unit						
Length	Height	Width	Weight		Connections	
			Shipping	Operating	Water, OD	Condensate, ID
54.0 in	25.0 in	10.8 in	196 lb	166 lb	0.625 in	0.75 in
Cabinet						
Construction Type			Cabinet Type			
Standard Fiberglass Insulation			Flat Top			
Piping Hand		Cabinet Height		Discharge Grille		
Left Hand		High Sill - 25"		Standard 1-piece Steel		
Color						
Cabinet		Subbase		Grille		
Antique Ivory		Oxford Brown		Oxford Brown		
Fan					Controls	
Type	Motor		Drive		Type	
	Type	Horsepower	Type			
Tangential	Standard PSC	0.056 HP	Direct		Microtech III Series 2 w/BACnet Comm Module	
(1) 37.25 in x 9.75 in x 0.5 in						

Options	
Heating	
Heat Exchanger:	Copper Inner Tube / Steel Outer Tube
Controls	
Thermostat Mounting:	Wall Mounted Space Sensor w/NSB Override
Power Connection:	Unit Mounted Plug & Cord w/Non-Fused Disconnect Sw
Flow Control:	2-Way Mtrzd 1/2" Isolat'n Vlv High Close Press. (N.C.)
Control Transformer:	50VA Control Transformer

Water Pressure Drop Calculation	
Base Unit Pressure Drop:	2.42 ft H ₂ O
Motorized Valve Pressure Drop:	2.58 ft H ₂ O
Total Pressure Drop:	5.00 ft H ₂ O

Warranty	
Unit Warranty:	1st Year Labor Allowance

AHRI Certification	
	All equipment is rated and certified in accordance with AHRI / ISO 13256-1 and tested, investigated, and determined to comply with the requirements of the standards for Heating and Cooling Equipment UL-1995 for the United States and CAN/CSA-C22.2 NO.236 for Canada.

Accessories	
Optional	
Part Number	Description
668817704	Hose, Kit, Supply/Return, 0.5" x 24" (FSWTxNPT)
910121753	Wall Sensor, Adjstbl Cool/Warm, Occpncy Swtch

Certified Drawing	MHC-MHW-FT-HS-L-015 Specs
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	Type: Console
	Date: August 2017

Console Water Source Heat Pump – Flat Top Unit, High Sill, Left Hand Models MHC/MHW – Unit Size 015

Cabinets – Selectable flat top or slope top cabinet configuration with multiple grille options. Individual panels- top, front and end panels are designed for easy removal and provides easy access to unit components for service and maintenance.

Compressor - High efficiency rotary type, using R-410A refrigerant with zero ozone depletion potential or phase-out date.

Gentleflo™ Fan – User selectable, multi-speed tangential fan system provides high efficiency and very quiet operation suitable for noise sensitive applications.

LED Annunciator – LED status lights display fault conditions to provide easy troubleshooting and diagnosis. Accessed by removing the left or right end panel to the control enclosure.

Filter– Units come standard with a 1/2" (12.7mm) thick disposable filter that is easy to access and replace without removing panels.

Hinged Control Box– Provides added accessibility to plumbing end compartment for easier access for service.

MicroTech® III Unit Controller – Designed for flexibility, the main control board is used in standalone applications. An optional I/O expansion module can be used to control electric heat and multiple fan speeds. A separate LONWORKS® or BACnet® communication module can be easily snapped onto the board to accommodate the building automation system of your choice.

Double-Sloped Drain Pan – Made of durable, non-corrosive polymer, promotes positive condensate drainage for superior Indoor Air Quality (IAQ). Drain Pan is easy to remove for cleaning.

Air Dampers (Field-installed Accessory) – Motorized or manually operated outside air dampers provide ventilation air.

Unit Flexibility– Selectable for standard (boiler/tower) or extended range (geothermal) applications to achieve the highest efficiency for your application requirements.

Options (Factory Installed)

Indoor Air Quality (IAQ)

- Non-Fibrous Insulation - Closed-cell type (Rubatex)

Controls

- MicroTech III Unit Controller - Standalone operation
- LONWORKS® Communication Module
- BACnet® Communication Module

Warranty

- Ext. 4-Yr. Parts (Compressor Only)
- Ext. 4-Yr. Parts (Refrigerant Circuit)

2-Way Motorized Valve Packages (Option)

Factory-installed or field-installed accessory for variable pumping applications. Other valve options available upon request.

Extended End Pocket (Option)

Selectable end pocket provides 11" of additional area inside the left or right hand end of the unit for piping, or a field-installed pump.

Multi-Directional Grilles (Option)

Selectable plastic Multi-Directional Grilles can rotate 90, 180 or 270 degrees for added control of discharge air direction.

Physical Data

Unit Size	015
Fan Wheel - D x W (In.)	4 1/4 x 3 5/16
Fan Motor Horsepower	1/18
Coil Face Area (Sq. Ft.)	2.22
Coil Rows	2
Refrigerant Charge (Oz.)	29.9
Filter, (Qty.) Size (Nominal)	(1) 37 1/4" W x 9 1/2" D
Water Connections (In.)	5/8 O.D.
Condensate Connections (In.)	3/4 I.D.
Weight, Operating (Lbs.)	166
Weight, Shipping (Lbs.)	196

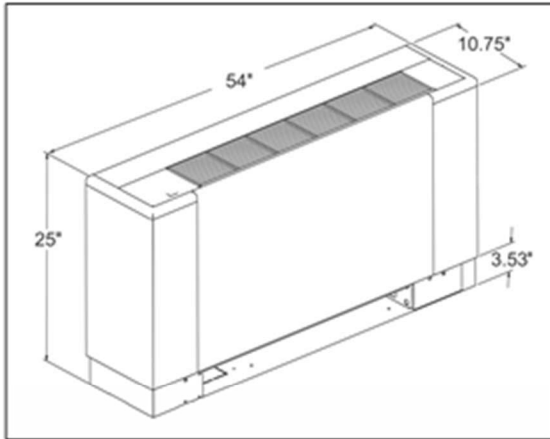


WSHP2Tier_Combined_Drawings for C - Size 15

Flat Top Unit, High Sill, Left Hand Piping – Size 015

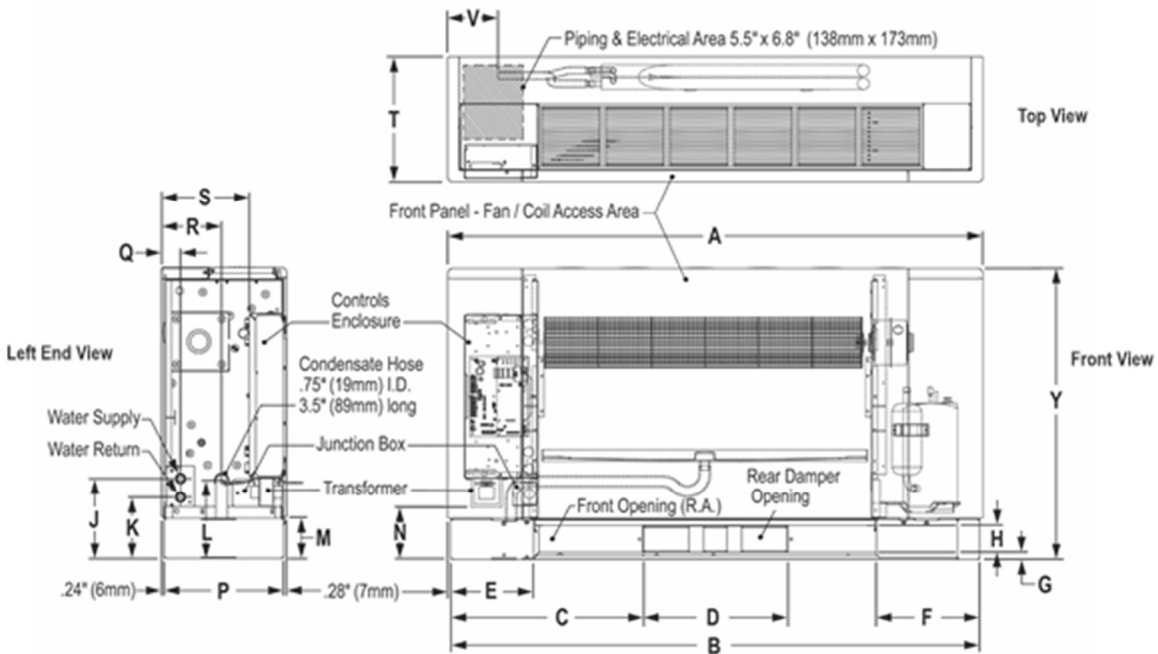
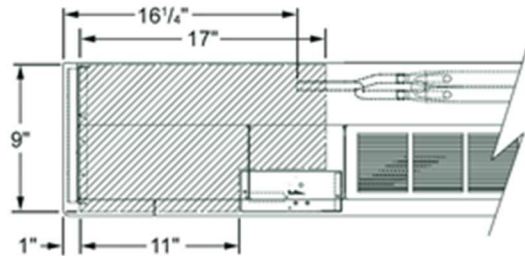
Left and right hand piping determined by facing the front of the unit.

Overall Unit Dimensions: 25"H × 54"W × 10½"D



Extended End Pocket (Option) – Dimensions

Overall Unit Dimensions with Extended End Pocket: 25"H × 66"W × 10½"D



Dimensions

Unit Size	A	B	C	D	E	F	G	H	J	K	L	M
015	54" (1372mm)	53½" (1356mm)	20½" (519mm)	12½" (318mm)	7" (181mm)	8¼" (225mm)	0.6" (14mm)	2¼" (57mm)	6¼" (175mm)	5½" (132mm)	6¼" (172mm)	3½" (90mm)
	N	P	Q	R	S	T	V	Y				
	4¼" (108mm)	10¼" (260mm)	1½" (41mm)	5¼" (134mm)	7½" (192mm)	10¼" (273mm)	4¼" (118mm)	25" (635mm)				



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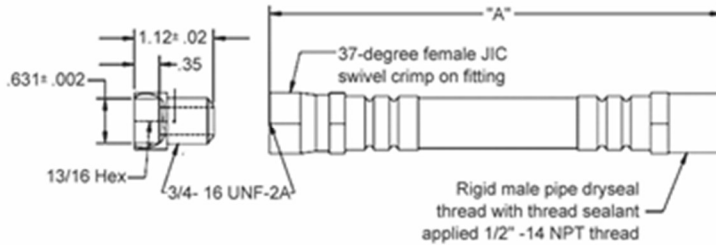
MHC-MHW-FT-HS-L-015 Specs / Page 2 of 2

Certified Drawing	Efin Hose Kit 3 - Specs
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	Type: Hose Kit
	Date: June 2014

Fire Rated Supply & Return Console WSHP Hose Kits
Hose Kit #3 (2 hoses per kit)

Features

- Fixed Male NPT x Female JIC Swivel with 5/8 ID Female Sweat Adapter



Specifications:

Hose Connection Sizes	.....1/2"
Inner Tube	.....EPTF - White Santoprene with UL-94 VO Fire Rating
Outer Braid	.....302/304 Stainless Steel
Hose Fittings	.....Plated Steel
Hose/Adapter Connection	.....Male 37-degree JIC Metal to Metal Seal (no O-ring or gaskets)
Fixed End Fitting	.....MNPT ¹
Swivel End Fitting	.....5/8" Sweat Brass
Temperature Range	.....-40°F to 212°F

Table 1: Hose kit #3 part numbers and data

Part Number	Connection Size ¹ (inches)	Length ² (inches) "A"	Hose Min Bend Radius (inches)	Hose Working Pressure Min Bend Radius (psi)	Hose Burst Pressure (psi)
668817701	1/2	9	2.5	400	1600
668817702	1/2	12	2.5	400	1600
668817703	1/2	18	2.5	400	1600
668817704	1/2	24	2.5	400	1600

- Notes: ¹ Male pipe thread fittings have sealant pre-applied.
² Length is for the hose only and does not include the adapter.
³ Fitting size, not actual hose diameter.

Legend:

- NPT - National Pipe Thread
- JIC - Joint Industrial Committee
- EPTF - Ethylene Propylene Thermoplastic Rubber
- MNPT - Male National Pipe Thread
- FNPT - Female National Pipe Thread



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Efin Hose Kit 3 - Specs

Certified Drawing		Room Temp Sensor CI-Wrm Specs
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		Type: Accessory
		Date: May 2016

Room Temperature Sensor – Adjustable Cool/Warm With Occupancy Switch – P/N 910121753
 For Use With Daikin Enfinity™ And SmartSource® Water Source Heat Pump Units With MicroTech® III Controls

Overview

The Adjustable Cool/Warm Sensor with Occupancy Switch can be used for 2-stage heating, 2-stage cooling, and 2-stage electric heat applications. Unit status is provided through a flashing LED located on the thermostat while timed tenant override and fault reset are provided through the override button. Changing the system mode, fan mode and occupancy is easily accomplished through the slider switches.

Note: For complete installation, operation and maintenance information for the Room Temperature Sensor, refer to IOM 1177



Sensor Functions



This sensor is used for water source heat pump applications requiring the following functionality:

- **Cool/Warm Room Temperature Adjustment** – This slide adjustment is used to set the desired room temperature. To increase the desired room temperature, move the slide to the right toward "Warm". To decrease the desired room temperature, move the slide to the left toward "Cool".
- **Occupancy Switch** – Move the switch to the "Occ" to allow the unit to operate in the occupied mode. Move the switch to the "Unoc" to allow the unit to operate in the unoccupied mode. Move the switch to the "Off" so heating, cooling and the fan remain off.
- **System Switch** – Set to "Heat" for heating only operation. Set to "Auto" for operation of heating or cooling as needed to satisfy the room setpoint conditions. Set to "Cool" for cooling only operation. The output voltage on Terminal 2 will change based on the system mode selection.



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- **Fan Switch** – Set to "Auto" to allow the fan to on when heat or cool are on. Set to "On" to allow the fan to operate continuously in the occupied mode and cycle on a call for heat or cool in the unoccupied mode.
- **Status LED** – This green LED will light to indicate the system status. See [Table 8](#) for unit status LED definitions.
- **Override Button** – When the "Override" button is pressed, the thermistor sensor across terminal 4 is shorted. If held for more than 5 seconds but less than 11 seconds, it puts the water source heat pump controller into a timed Occupied Override. If the unit is in alarm, then holding the "Override" Button for more than 11 seconds will clear all alarms in the water source heat pump controller but only if the cause of the alarm has already returned to its non-alarm condition. Some alarms will not reset from the room sensor.

In this case, power to the unit must be cycled off for 5 seconds to clear the alarm. Continuously resetting alarms from the room sensor could damage the controller. Please call a service technician when repeated alarm resets are required to keep the unit operational.

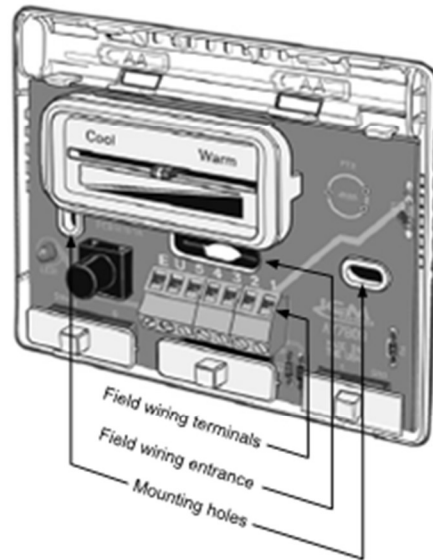
Table 1: WSHP unit status LED definition

Status LED		Unit Status	Unit Operation
ON	OFF		
0.5 seconds	0.5 seconds	Controller Off (or Network "Wink" operation active)	"Alarm"
0.0 seconds	Continuous	Unit running in Night Setback Override Mode or no power to the sensor	"Override"
0.5 seconds	5.5 seconds	Unoccupied Mode	"Unoccupied"
5.5 seconds	0.5 seconds	Standby Mode	"Energy Save" or "Load Shed" command from Energy Management System
Continuous	0.0 seconds	Occupied Mode	"Occupied"

Termination

Daikin McQuay recommends using twisted pair of at least 22AWG and sealant filled connectors for all wire connections. Larger gauge wire may be required for long runs. All wiring must comply with the National Electric Code (NEC) and local codes. Do NOT run this device's wiring in the same conduit as AC power wiring. Fluctuating and inaccurate signal levels are possible when AC power wiring is present in the same conduit as the signal lines. If you are experiencing any of these difficulties, please contact your Daikin McQuay representative.

Figure 1: Field mounting and wiring termination



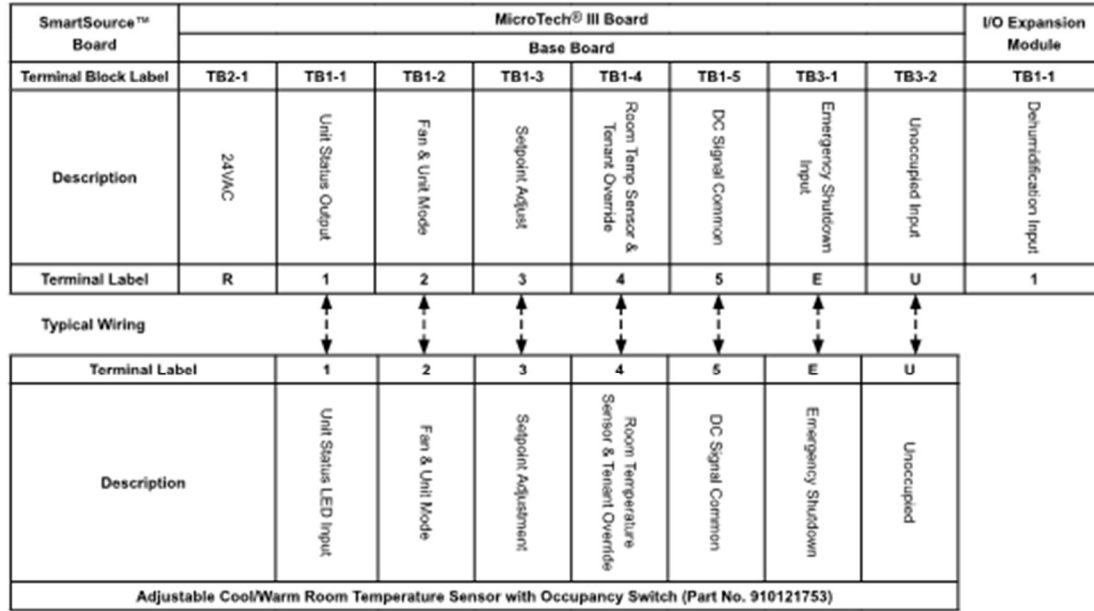
Terminal Descriptions

- 1 – Unit Status Indicator Input from the MicoTech III SmartSource Unit Controller. (5VDC)
- 2 - Output Signal, Fan and Unit Mode (0 to 5VDC)
- 3 - Output Signal, Setpoint Adjustment
- 4 - Output Signal, Room Temp Thermistor Sensor. (10K ATP Z curve, 10K-2)
- 5 - Ground or Neutral. Common Reference for All Signal Terminals
- E – Emergency Shutdown. (Terminal grounded when in System "Off" mode, VDC only)
- U - Unoccupied Contact. (Terminal grounded when in Unoccupied, VDC only)

Wiring

Wiring between the sensor and the water source heat pump unit for typical heating and cooling operation is shown in Figure 2.

Figure 2: Field wiring



Applications

The display sensor can be used on the products shown in [Table 2](#).

Table 2: Product usage guide

Units	Product		Models	Controls	Used with Digitally Adjustable Sensor with Temperature and Humidity Display
Water Source Heat Pumps	Horizontal	Enfinity™	W. CCH, CCW	MicroTech III Unit Controller	Yes
	Vertical		W. VFC, VFW		
	Vertical Stacked		W. VHC		
	Console		W. MHC, MHW		
	Horizontal & Vertical	SmartSource 1-Stage	W. GSH, GSV	MicroTech III SmartSource Unit Controller	
		SmartSource 2-Stage	W. GTH, GTV		

The display sensor for water source heat pump applications is shown in [Table 3](#)

Table 3: Water source heat pump application guide

Units	Product	Models	Applications											
			Cooling	Heating	Dehumidification					Electric Heat			Water-side Economizer	
			Stages	Smart Dehumidification	Hot Gas Reheat	Simplified	Humidistat Controlled	Dehumidification Only	Boilerless	Supplemental	Primary	3-Way Valve Control		
Water Source Heat Pumps	Horizontal	Enfinity	W. CCH, CCW	1	1	No	No	No	No	No	No	No	No	No
	Vertical		W. VFC, VFW	1	1	No	Yes	No	No	No	Yes ¹	Yes	No	No
	Vertical Stacked		W. VHC	1	1	No	No	No	No	No	No	No	No	No
	Console		W. MHC, MHW	1	1	No	No	No	No	No	Yes ¹	Yes	No	No
	Horizontal & Vertical	Smart-Source 1-Stage	W. GSH, GSV	3	4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Horizontal & Vertical	Smart-Source 2-Stage	W. GTH, GTV	3	4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: ¹With optional Boilerless controls



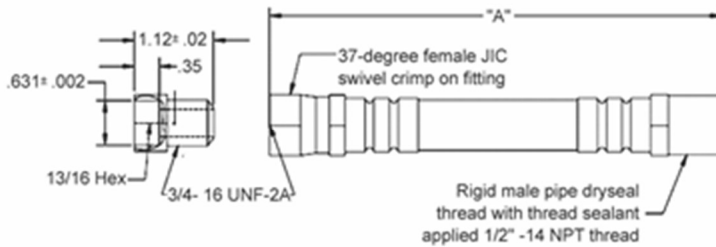
Hose Kits - Supply and Return Console - Dwg #3_Drawing for C - Size 18

Certified Drawing	Efin Hose Kit 3 - Specs
The Water Source Heat Pump product represented on this document will conform to the drawings and specifications set out below, in accordance with the express, written Limited Warranty. Purchaser's acceptance of this drawing certifies that the conforming equipment meets the order specifications. No changes may be made to this document without the prior, express, written authorization of the manufacturer.	Group: WSHP
	Type: Hose Kit
	Date: June 2014

Fire Rated Supply & Return Console WSHP Hose Kits Hose Kit #3 (2 hoses per kit)

Features

- Fixed Male NPT x Female JIC Swivel with 5/8 ID Female Sweat Adapter



Specifications:

Hose Connection Sizes	.....1/2"
Inner Tube	.....EPTF - White Santoprene with UL-94 VO Fire Rating
Outer Braid	.....302/304 Stainless Steel
Hose Fittings	.....Plated Steel
Hose/Adapter Connection	.....Male 37-degree JIC Metal to Metal Seal (no O-ring or gaskets)
Fixed End Fitting	.....MNPT ¹
Swivel End Fitting	.....5/8" Sweat Brass
Temperature Range	.....-40°F to 212°F

Table 1: Hose kit #3 part numbers and data

Part Number	Connection Size ¹ (inches)	Length ² (inches) "A"	Hose Min Bend Radius (inches)	Hose Working Pressure Min Bend Radius (psi)	Hose Burst Pressure (psi)
668817701	1/2	9	2.5	400	1600
668817702	1/2	12	2.5	400	1600
668817703	1/2	18	2.5	400	1600
668817704	1/2	24	2.5	400	1600

- Notes: ¹ Male pipe thread fittings have sealant pre-applied.
² Length is for the hose only and does not include the adapter.
³ Fitting size, not actual hose diameter.

Legend:

- NPT - National Pipe Thread
- JIC - Joint Industrial Committee
- EPTF - Ethylene Propylene Thermoplastic Rubber
- MNPT - Male National Pipe Thread
- FNPT - Female National Pipe Thread



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Efin Hose Kit 3 - Specs

Certified Drawing	MHC-MHW-FT-HS-L-018 Specs
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	Type: Console
	Date: August 2017

Console Water Source Heat Pump – Flat Top Unit, High Sill, Left Hand Models MHC/MHW – Unit Size 018

Cabinets – Selectable flat top or slope top cabinet configuration with multiple grille options. Individual panels- top, front and end panels are designed for easy removal and provides easy access to unit components for service and maintenance.

Compressor - High efficiency rotary type, using R-410A refrigerant with zero ozone depletion potential or phase-out date.

Gentleflo™ Fan – User selectable, multi-speed tangential fan system provides high efficiency and very quiet operation suitable for noise sensitive applications.

LED Annunciator – LED status lights display fault conditions to provide easy troubleshooting and diagnosis. Accessed by removing the left or right end panel to the control enclosure.

Filter– Units come standard with a 1/2" (12.7mm) thick disposable filter that is easy to access and replace without removing panels.

Hinged Control Box– Provides added accessibility to plumbing end compartment for easier access for service.

MicroTech® III Unit Controller – Designed for flexibility, the main control board is used in standalone applications. An optional I/O expansion module can be used to control electric heat and multiple fan speeds. A separate LONWORKS® or BACnet® communication module can be easily snapped onto the board to accommodate the building automation system of your choice.

Double-Sloped Drain Pan – Made of durable, non-corrosive polymer, promotes positive condensate drainage for superior Indoor Air Quality (IAQ). Drain Pan is easy to remove for cleaning.

Air Dampers (Field-installed Accessory) – Motorized or manually operated outside air dampers provide ventilation air.

Unit Flexibility– Selectable for standard (boiler/tower) or extended range (geothermal) applications to achieve the highest efficiency for your application requirements.

Options (Factory Installed)

Indoor Air Quality (IAQ)

- Non-Fibrous Insulation - Closed-cell type (Rubatex)

Controls

- MicroTech III Unit Controller - Standalone operation
 LONWORKS® Communication Module
 BACnet® Communication Module

Warranty

- Ext. 4-Yr. Parts (Compressor Only)
 Ext. 4-Yr. Parts (Refrigerant Circuit)

2-Way Motorized Valve Packages (Option)

Factory-installed or field-installed accessory for variable pumping applications. Other valve options available upon request.

Extended End Pocket (Option)

Selectable end pocket provides 11" of additional area inside the left or right hand end of the unit for piping, or a field-installed pump.

Multi-Directional Grilles (Option)

Selectable plastic Multi-Directional Grilles can rotate 90, 180 or 270 degrees for added control of discharge air direction.

Physical Data

Unit Size	018
Fan Wheel - D x W (In.)	4 3/4 x 35 7/16
Fan Motor Horsepower	1/18
Coil Face Area (Sq. Ft.)	2.22
Coil Rows	3
Refrigerant Charge (Oz.)	32
Filter, (Qty.) Size (Nominal)	(1) 37 1/2" W x 9 1/4" D
Water Connections (In.)	5/8 O.D.
Condensate Connections (In.)	3/4 I.D.
Weight, Operating (Lbs.)	171
Weight, Shipping (Lbs.)	201

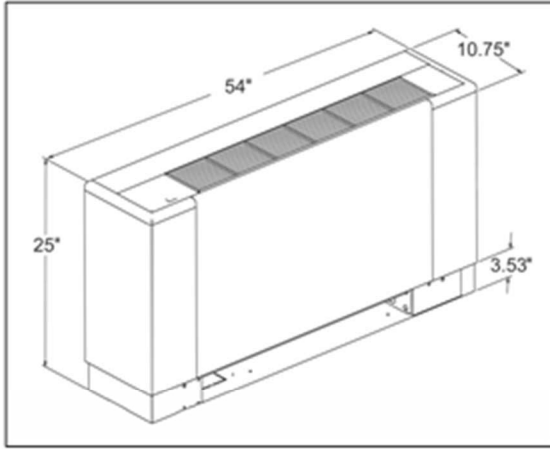


MHC-W_018_HS_F_L_Features-Dim-Phys_Data_Drawing for C - Size 18

Flat Top Unit, High Sill, Left Hand Piping – Size 018

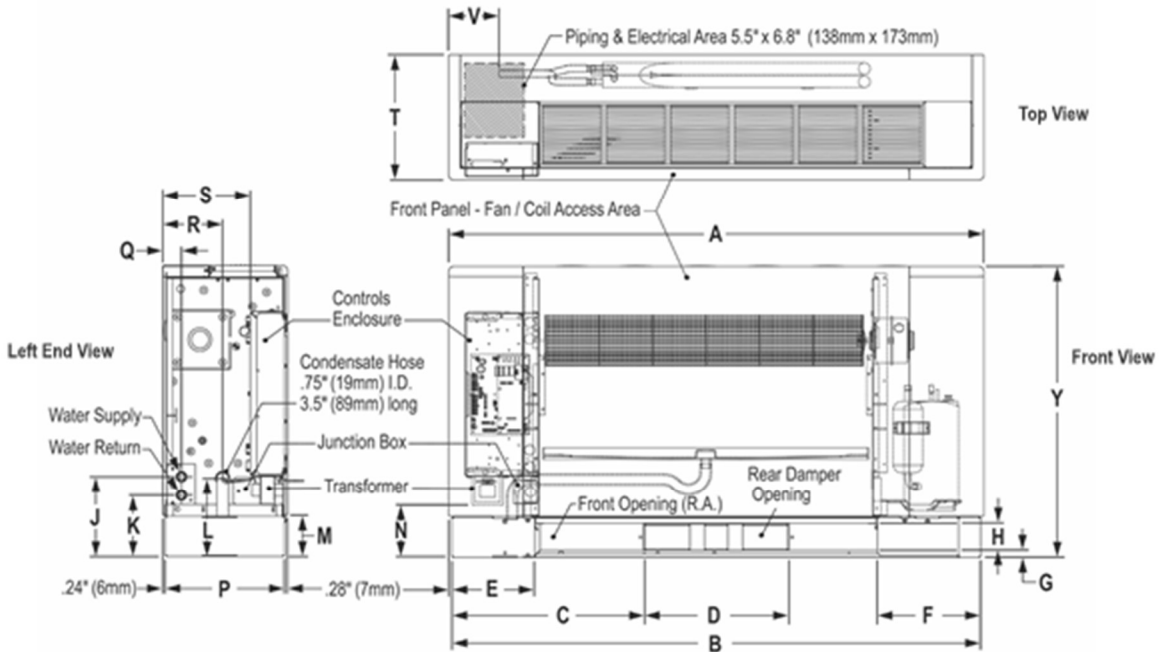
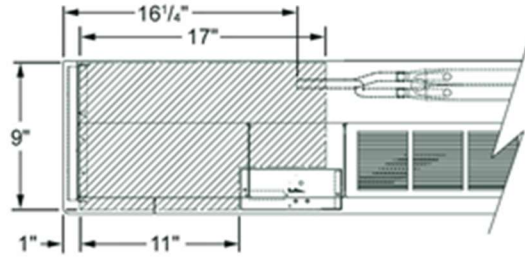
Left and right hand piping determined by facing the front of the unit.

Overall Unit Dimensions: 25"H × 54"W × 10½"D



Extended End Pocket (Option) – Dimensions

Overall Unit Dimensions with Extended End Pocket: 25"H × 66"W × 10½"D



Dimensions

Unit Size	A	B	C	D	E	F	G	H	J	K	L	M
018	54" (1372mm)	53½" (1356mm)	20½" (519mm)	12½" (318mm)	7" (181mm)	8½" (225mm)	0.6" (14mm)	2¼" (57mm)	6½" (175mm)	5½" (132mm)	6¼" (172mm)	3½" (90mm)
	N	P	Q	R	S	T	V	Y				
	4¼" (108mm)	10¼" (260mm)	1½" (41mm)	5¼" (134mm)	7½" (192mm)	10¼" (273mm)	4½" (118mm)	25" (635mm)				



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MHC-MHW-FT-HS-L-018 Specs / Page 2 of 2

Certified Drawing		Room Temp Sensor CI-Wrm Specs
The Water Source Heat Pump product represented on this document will conform to the drawings and specifications set out below, in accordance with the express, written Limited Warranty. Purchaser's acceptance of this drawing certifies that the conforming equipment meets the order specifications. No changes may be made to this document without the prior, express, written authorization of the manufacturer.		Group: WSHP
		Type: Accessory
		Date: May 2016

Room Temperature Sensor – Adjustable Cool/Warm With Occupancy Switch – P/N 910121753
 For Use With Daikin Enfinity™ And SmartSource® Water Source Heat Pump Units With
 MicroTech® III Controls

Overview

The Adjustable Cool/Warm Sensor with Occupancy Switch can be used for 2-stage heating, 2-stage cooling, and 2-stage electric heat applications. Unit status is provided through a flashing LED located on the thermostat while timed tenant override and fault reset are provided through the override button. Changing the system mode, fan mode and occupancy is easily accomplished through the slider switches.

Note: For complete installation, operation and maintenance information for the Room Temperature Sensor, refer to IOM 1177



Sensor Functions



This sensor is used for water source heat pump applications requiring the following functionality:

- **Cool/Warm Room Temperature Adjustment** – This slide adjustment is used to set the desired room temperature. To increase the desired room temperature, move the slide to the right toward "Warm". To decrease the desired room temperature, move the slide to the left toward "Cool".
- **Occupancy Switch** – Move the switch to the "Occ" to allow the unit to operate in the occupied mode. Move the switch to the "Unoc" to allow the unit to operate in the unoccupied mode. Move the switch to the "Off" so heating, cooling and the fan remain off.
- **System Switch** – Set to "Heat" for heating only operation. Set to "Auto" for operation of heating or cooling as needed to satisfy the room setpoint conditions. Set to "Cool" for cooling only operation. The output voltage on Terminal 2 will change based on the system mode selection.



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- **Fan Switch** – Set to "Auto" to allow the fan to on when heat or cool are on. Set to "On" to allow the fan to operate continuously in the occupied mode and cycle on a call for heat or cool in the unoccupied mode.
- **Status LED** – This green LED will light to indicate the system status. See [Table 8](#) for unit status LED definitions.
- **Override Button** – When the "Override" button is pressed, the thermistor sensor across terminal 4 is shorted. If held for more than 5 seconds but less than 11 seconds, it puts the water source heat pump controller into a timed Occupied Override. If the unit is in alarm, then holding the "Override" Button for more than 11 seconds will clear all alarms in the water source heat pump controller but only if the cause of the alarm has already returned to its non-alarm condition. Some alarms will not reset from the room sensor.

In this case, power to the unit must be cycled off for 5 seconds to clear the alarm. Continuously resetting alarms from the room sensor could damage the controller. Please call a service technician when repeated alarm resets are required to keep the unit operational.

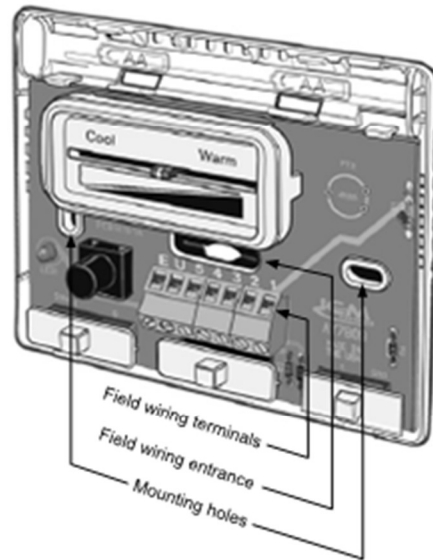
Table 1: WSHP unit status LED definition

Status LED		Unit Status	Unit Operation
ON	OFF		
0.5 seconds	0.5 seconds	Controller Off (or Network "Wink" operation active)	"Alarm"
0.0 seconds	Continuous	Unit running in Night Setback Override Mode or no power to the sensor	"Override"
0.5 seconds	5.5 seconds	Unoccupied Mode	"Unoccupied"
5.5 seconds	0.5 seconds	Standby Mode	"Energy Save" or "Load Shed" command from Energy Management System
Continuous	0.0 seconds	Occupied Mode	"Occupied"

Termination

Daikin McQuay recommends using twisted pair of at least 22AWG and sealant filled connectors for all wire connections. Larger gauge wire may be required for long runs. All wiring must comply with the National Electric Code (NEC) and local codes. Do NOT run this device's wiring in the same conduit as AC power wiring. Fluctuating and inaccurate signal levels are possible when AC power wiring is present in the same conduit as the signal lines. If you are experiencing any of these difficulties, please contact your Daikin McQuay representative.

Figure 1: Field mounting and wiring termination



Terminal Descriptions

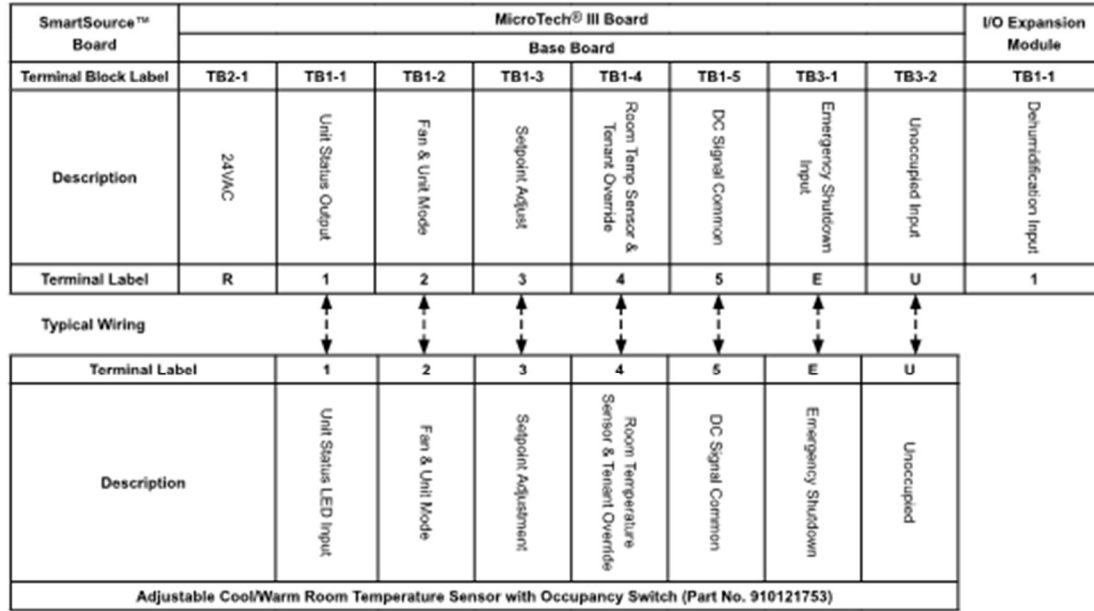
- 1 – Unit Status Indicator Input from the MicoTech III SmartSource Unit Controller. (5VDC)
- 2 - Output Signal, Fan and Unit Mode (0 to 5VDC)
- 3 - Output Signal, Setpoint Adjustment
- 4 - Output Signal, Room Temp Thermistor Sensor. (10K ATP Z curve, 10K-2)
- 5 - Ground or Neutral. Common Reference for All Signal Terminals
- E – Emergency Shutdown. (Terminal grounded when in System "Off" mode, VDC only)
- U - Unoccupied Contact. (Terminal grounded when in Unoccupied, VDC only)

Room_Temp_Sensor_CI-Wrm_Specs_Drawing for C - Size 18

Wiring

Wiring between the sensor and the water source heat pump unit for typical heating and cooling operation is shown in Figure 2.

Figure 2: Field wiring



Applications

The display sensor can be used on the products shown in [Table 2](#).

Table 2: Product usage guide

Units	Product		Models	Controls	Used with Digitally Adjustable Sensor with Temperature and Humidity Display
Water Source Heat Pumps	Horizontal	Enfinity™	W. CCH, CCW	MicroTech III Unit Controller	Yes
	Vertical		W. VFC, VFW		
	Vertical Stacked		W. VHC		
	Console		W. MHC, MHW		
	Horizontal & Vertical	SmartSource 1-Stage	W. GSH, GSV	MicroTech III SmartSource Unit Controller	
		SmartSource 2-Stage	W. GTH, GTV		

The display sensor for water source heat pump applications is shown in [Table 3](#)

Table 3: Water source heat pump application guide

Units	Product	Models	Applications											
			Cooling	Heating	Dehumidification					Electric Heat			Water-side Economizer	
			Stages	Smart Dehumidification	Hot Gas Reheat	Simplified	Humidistat Controlled	Dehumidification Only	Boilerless	Supplemental	Primary	3-Way Valve Control		
Water Source Heat Pumps	Horizontal	Enfinity	W. CCH, CCW	1	1	No	No	No	No	No	No	No	No	No
	Vertical		W. VFC, VFW	1	1	No	Yes	No	No	No	Yes ¹	Yes	No	No
	Vertical Stacked		W. VHC	1	1	No	No	No	No	No	No	No	No	No
	Console		W. MHC, MHW	1	1	No	No	No	No	No	Yes ¹	Yes	No	No
	Horizontal & Vertical	Smart-Source 1-Stage	W. GSH, GSV	3	4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		Smart-Source 2-Stage	W. GTH, GTV	3	4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: ¹With optional Boilerless controls



Technical Data Sheet for C - Size 18

Job Information		Technical Data Sheet
Job Name	Daniel Boone	
Date	1/13/2021	
Submitted By	Chris Swallow	
Software Version	09.30	
Unit Tag	C - Size 18	



Unit Overview							
Model Number	Voltage V/Hz/Phase	Air Flow CFM	Fluid Flow gpm	Cooling Capacity Btu/hr	Cooling Efficiency EER @ design	Heating Capacity Btu/hr	Heating Efficiency COP @ design
WMHW2018	208-230/60/1	475	4.60	16837	16.63	20876	4.88

Unit	
Model Number:	WMHW2018
Unit Type:	Console Geothermal Range
Unit Construction:	Standard Fiberglass Insulation
Approval:	None
Refrigerant Type	Refrigerant Weight
R-410A	33.0 oz

Unit Performance									
Air & Water Flow									
Airflow		Fluid Flow		Fluid Type		Fluid Pressure Drop			
475 CFM		4.60 gpm / 3.07 gpm/ton		Water		3.45 ft H ₂ O			
Cooling Performance									
Fluid Temperature		Air Temperature				Capacity		Heat of Rejection Btu/hr	EER @ design
Entering °F	Leaving °F	Entering		Leaving		Total Btu/hr	Sensible Btu/hr		
		Dry Bulb °F	Wet Bulb °F	Dry Bulb °F	Wet Bulb °F				
85.0	93.8	80.0	67.0	59.8	55.1	16837	10192	20293	16.63
Heating Performance									
Fluid Temperature		Air Temperature		Capacity		Heat of Absorption Btu/hr	COP @ design		
Entering °F	Leaving °F	Entering	Leaving	Total Btu/hr					
		Dry Bulb °F	Dry Bulb °F						
70.0	62.8	70.0	110.8	20876	16597	4.88			

Electrical			
Unit Voltage	Minimum Voltage	Total Unit MCA	Total Unit Full Load Current
208-230/60/1	187 V	8.2 A	6.7 A
Compressor RLA	Compressor LRA	Motor FLA	Maximum Recommended Fuse Size / HACR Breaker Size
6.20 A	32.0 A	0.5 A	15 A

Power Connection
Unit Mounted Plug & Cord w/Non-Fused Disconnect Sw

*Short-Circuit Current = 5 kA rms symmetrical, 600 V maximum


Technical Data Sheet for C - Size 18

Physical						
Unit						
Length	Height	Width	Weight		Connections	
			Shipping	Operating	Water, OD	Condensate, ID
54.0 in	25.0 in	10.8 in	201 lb	171 lb	0.625 in	0.75 in
Cabinet						
Construction Type			Cabinet Type			
Standard Fiberglass Insulation			Flat Top			
Piping Hand		Cabinet Height		Discharge Grille		
Left Hand		High Sill - 25"		Standard 1-piece Steel		
Color						
Cabinet		Subbase		Grille		
Antique Ivory		Oxford Brown		Oxford Brown		
Fan					Controls	
Type	Motor		Drive		Type	
	Type	Horsepower	Type			
Tangential	Standard PSC	0.056 HP	Direct		Microtech III Series 2 w/BACnet Comm Module	
(1) 37.25 in x 9.75 in x 0.5 in						

Options	
Heating	
Heat Exchanger:	Copper Inner Tube / Steel Outer Tube
Controls	
Thermostat Mounting:	Wall Mounted Space Sensor w/NSB Override
Power Connection:	Unit Mounted Plug & Cord w/Non-Fused Disconnect Sw
Flow Control:	2-Way Mtrzd 1/2" Isolat'n Vlv High Close Press. (N.C.)
Control Transformer:	50VA Control Transformer

Water Pressure Drop Calculation	
Base Unit Pressure Drop:	3.45 ft H ₂ O
Motorized Valve Pressure Drop:	3.98 ft H ₂ O
Total Pressure Drop:	7.43 ft H ₂ O

Warranty	
Unit Warranty:	1st Year Labor Allowance

AHRI Certification	
	<p>All equipment is rated and certified in accordance with AHRI / ISO 13256-1 and tested, investigated, and determined to comply with the requirements of the standards for Heating and Cooling Equipment UL-1995 for the United States and CAN/CSA-C22.2 NO.236 for Canada.</p>

Accessories	
Optional	
Part Number	Description
668817704	Hose, Kit, Supply/Return, 0.5" x 24" (FSWTxNPT)
910121753	Wall Sensor, Adjstbl Cool/Warm, Occpncy Swtch

Certified Drawing	MHC-MHW-FT-HS-L-018 Specs
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	Type: Console
	Date: August 2017

Console Water Source Heat Pump – Flat Top Unit, High Sill, Left Hand Models MHC/MHW – Unit Size 018

Cabinets – Selectable flat top or slope top cabinet configuration with multiple grille options. Individual panels- top, front and end panels are designed for easy removal and provides easy access to unit components for service and maintenance.

Compressor - High efficiency rotary type, using R-410A refrigerant with zero ozone depletion potential or phase-out date.

Gentleflo™ Fan – User selectable, multi-speed tangential fan system provides high efficiency and very quiet operation suitable for noise sensitive applications.

LED Annunciator – LED status lights display fault conditions to provide easy troubleshooting and diagnosis. Accessed by removing the left or right end panel to the control enclosure.

Filter– Units come standard with a 1/2" (12.7mm) thick disposable filter that is easy to access and replace without removing panels.

Hinged Control Box– Provides added accessibility to plumbing end compartment for easier access for service.

MicroTech® III Unit Controller – Designed for flexibility, the main control board is used in standalone applications. An optional I/O expansion module can be used to control electric heat and multiple fan speeds. A separate LONWORKS® or BACnet® communication module can be easily snapped onto the board to accommodate the building automation system of your choice.

Double-Sloped Drain Pan – Made of durable, non-corrosive polymer, promotes positive condensate drainage for superior Indoor Air Quality (IAQ). Drain Pan is easy to remove for cleaning.

Air Dampers (Field-installed Accessory) – Motorized or manually operated outside air dampers provide ventilation air.

Unit Flexibility– Selectable for standard (boiler/tower) or extended range (geothermal) applications to achieve the highest efficiency for your application requirements.

Options (Factory Installed)

Indoor Air Quality (IAQ)

- Non-Fibrous Insulation - Closed-cell type (Rubatex)

Controls

- MicroTech III Unit Controller - Standalone operation
 LONWORKS® Communication Module
 BACnet® Communication Module

Warranty

- Ext. 4-Yr. Parts (Compressor Only)
 Ext. 4-Yr. Parts (Refrigerant Circuit)

2-Way Motorized Valve Packages (Option)

Factory-installed or field-installed accessory for variable pumping applications. Other valve options available upon request.

Extended End Pocket (Option)

Selectable end pocket provides 11" of additional area inside the left or right hand end of the unit for piping, or a field-installed pump.

Multi-Directional Grilles (Option)

Selectable plastic Multi-Directional Grilles can rotate 90, 180 or 270 degrees for added control of discharge air direction.

Physical Data

Unit Size	018
Fan Wheel - D x W (In.)	4 1/4 x 35 7/16
Fan Motor Horsepower	1/18
Coil Face Area (Sq. Ft.)	2.22
Coil Rows	3
Refrigerant Charge (Oz.)	32
Filter, (Qty.) Size (Nominal)	(1) 37 1/2W x 9 1/2D
Water Connections (In.)	5/8 O.D.
Condensate Connections (In.)	3/4 I.D.
Weight, Operating (Lbs.)	171
Weight, Shipping (Lbs.)	201

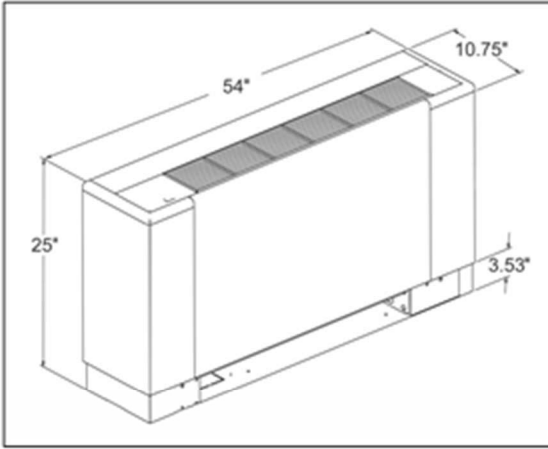


WSHP2Tier_Combined_Drawings for C - Size 18

Flat Top Unit, High Sill, Left Hand Piping – Size 018

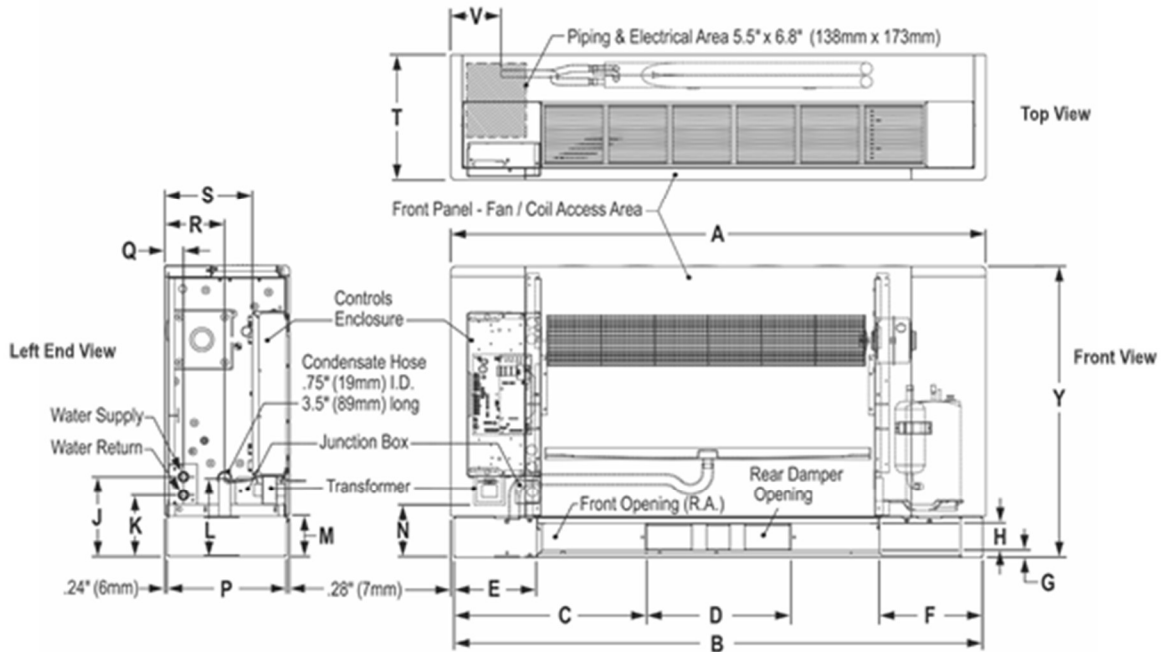
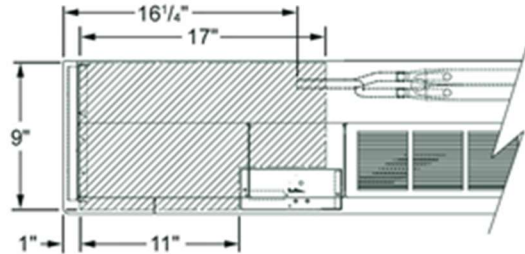
Left and right hand piping determined by facing the front of the unit.

Overall Unit Dimensions: 25"H × 54"W × 10½"D



Extended End Pocket (Option) – Dimensions

Overall Unit Dimensions with Extended End Pocket: 25"H × 66"W × 10½"D



Dimensions

Unit Size	A	B	C	D	E	F	G	H	J	K	L	M
018	54" (1372mm)	53½" (1356mm)	20½" (519mm)	12½" (318mm)	7" (181mm)	8½" (225mm)	0.6" (14mm)	2¼" (57mm)	6½" (175mm)	5½" (132mm)	6¾" (172mm)	3½" (90mm)
	N	P	Q	R	S	T	V	Y				
	4¼" (108mm)	10¼" (260mm)	1½" (41mm)	5¼" (134mm)	7½" (192mm)	10¼" (273mm)	4½" (118mm)	25" (635mm)				



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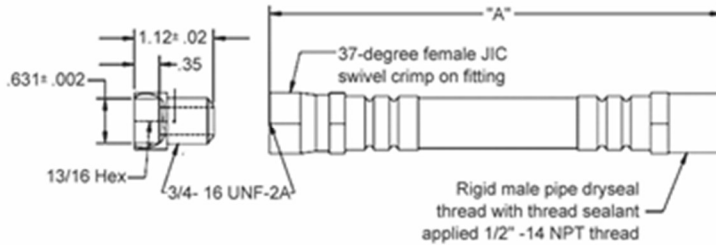
MHC-MHW-FT-HS-L-018 Specs / Page 2 of 2

Certified Drawing	Efin Hose Kit 3 - Specs
The Water Source Heat Pump product represented on this document will conform to the drawings and specifications set out below, in accordance with the express, written Limited Warranty. Purchaser's acceptance of this drawing certifies that the conforming equipment meets the order specifications. No changes may be made to this document without the prior, express, written authorization of the manufacturer.	Group: WSHP
	Type: Hose Kit
	Date: June 2014

Fire Rated Supply & Return Console WSHP Hose Kits
Hose Kit #3 (2 hoses per kit)

Features

- Fixed Male NPT x Female JIC Swivel with 5/8 ID Female Sweat Adapter



Specifications:

Hose Connection Sizes	.....1/2"
Inner Tube	.....EPTF - White Santoprene with UL-94 VO Fire Rating
Outer Braid	.....302/304 Stainless Steel
Hose Fittings	.....Plated Steel
Hose/Adapter Connection	.....Male 37-degree JIC Metal to Metal Seal (no O-ring or gaskets)
Fixed End Fitting	.....MNPT ¹
Swivel End Fitting	.....5/8" Sweat Brass
Temperature Range	.....-40°F to 212°F

Table 1: Hose kit #3 part numbers and data

Part Number	Connection Size ¹ (inches)	Length ² (inches) "A"	Hose Min Bend Radius (inches)	Hose Working Pressure Min Bend Radius (psi)	Hose Burst Pressure (psi)
668817701	1/2	9	2.5	400	1600
668817702	1/2	12	2.5	400	1600
668817703	1/2	18	2.5	400	1600
668817704	1/2	24	2.5	400	1600

- Notes:**
- ¹ Male pipe thread fittings have sealant pre-applied.
 - ² Length is for the hose only and does not include the adapter.
 - ³ Fitting size, not actual hose diameter.

Legend:

- NPT - National Pipe Thread
- JIC - Joint Industrial Committee
- EPTF - Ethylene Propylene Thermoplastic Rubber
- MNPT - Male National Pipe Thread
- FNPT - Female National Pipe Thread



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Efin Hose Kit 3 - Specs

Certified Drawing		Room Temp Sensor CI-Wrm Specs
The Water Source Heat Pump product represented on this document will conform to the drawings and specifications set out below, in accordance with the express, written Limited Warranty. Purchaser's acceptance of this drawing certifies that the conforming equipment meets the order specifications. No changes may be made to this document without the prior, express, written authorization of the manufacturer.		Group: WSHP
		Type: Accessory
		Date: May 2016

Room Temperature Sensor – Adjustable Cool/Warm With Occupancy Switch – P/N 910121753
 For Use With Daikin Enfinity™ And SmartSource® Water Source Heat Pump Units With MicroTech® III Controls

Overview

The Adjustable Cool/Warm Sensor with Occupancy Switch can be used for 2-stage heating, 2-stage cooling, and 2-stage electric heat applications. Unit status is provided through a flashing LED located on the thermostat while timed tenant override and fault reset are provided through the override button. Changing the system mode, fan mode and occupancy is easily accomplished through the slider switches.

Note: For complete installation, operation and maintenance information for the Room Temperature Sensor, refer to IOM 1177



Sensor Functions



This sensor is used for water source heat pump applications requiring the following functionality:

- **Cool/Warm Room Temperature Adjustment** – This slide adjustment is used to set the desired room temperature. To increase the desired room temperature, move the slide to the right toward "Warm". To decrease the desired room temperature, move the slide to the left toward "Cool".
- **Occupancy Switch** – Move the switch to the "Occ" to allow the unit to operate in the occupied mode. Move the switch to the "Unoc" to allow the unit to operate in the unoccupied mode. Move the switch to the "Off" so heating, cooling and the fan remain off.
- **System Switch** – Set to "Heat" for heating only operation. Set to "Auto" for operation of heating or cooling as needed to satisfy the room setpoint conditions. Set to "Cool" for cooling only operation. The output voltage on Terminal 2 will change based on the system mode selection.



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- **Fan Switch** – Set to "Auto" to allow the fan to on when heat or cool are on. Set to "On" to allow the fan to operate continuously in the occupied mode and cycle on a call for heat or cool in the unoccupied mode.
- **Status LED** – This green LED will light to indicate the system status. See [Table 8](#) for unit status LED definitions.
- **Override Button** – When the "Override" button is pressed, the thermistor sensor across terminal 4 is shorted. If held for more than 5 seconds but less than 11 seconds, it puts the water source heat pump controller into a timed Occupied Override. If the unit is in alarm, then holding the "Override" Button for more than 11 seconds will clear all alarms in the water source heat pump controller but only if the cause of the alarm has already returned to its non-alarm condition. Some alarms will not reset from the room sensor.

In this case, power to the unit must be cycled off for 5 seconds to clear the alarm. Continuously resetting alarms from the room sensor could damage the controller. Please call a service technician when repeated alarm resets are required to keep the unit operational.

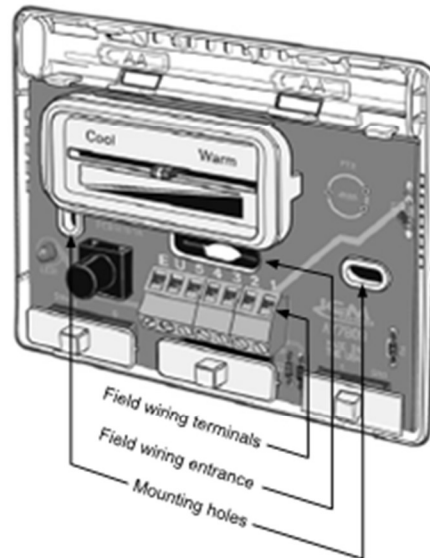
Table 1: WSHP unit status LED definition

Status LED		Unit Status	Unit Operation
ON	OFF		
0.5 seconds	0.5 seconds	Controller Off (or Network "Wink" operation active)	"Alarm"
0.0 seconds	Continuous	Unit running in Night Setback Override Mode or no power to the sensor	"Override"
0.5 seconds	5.5 seconds	Unoccupied Mode	"Unoccupied"
5.5 seconds	0.5 seconds	Standby Mode	"Energy Save" or "Load Shed" command from Energy Management System
Continuous	0.0 seconds	Occupied Mode	"Occupied"

Termination

Daikin McQuay recommends using twisted pair of at least 22AWG and sealant filled connectors for all wire connections. Larger gauge wire may be required for long runs. All wiring must comply with the National Electric Code (NEC) and local codes. Do NOT run this device's wiring in the same conduit as AC power wiring. Fluctuating and inaccurate signal levels are possible when AC power wiring is present in the same conduit as the signal lines. If you are experiencing any of these difficulties, please contact your Daikin McQuay representative.

Figure 1: Field mounting and wiring termination



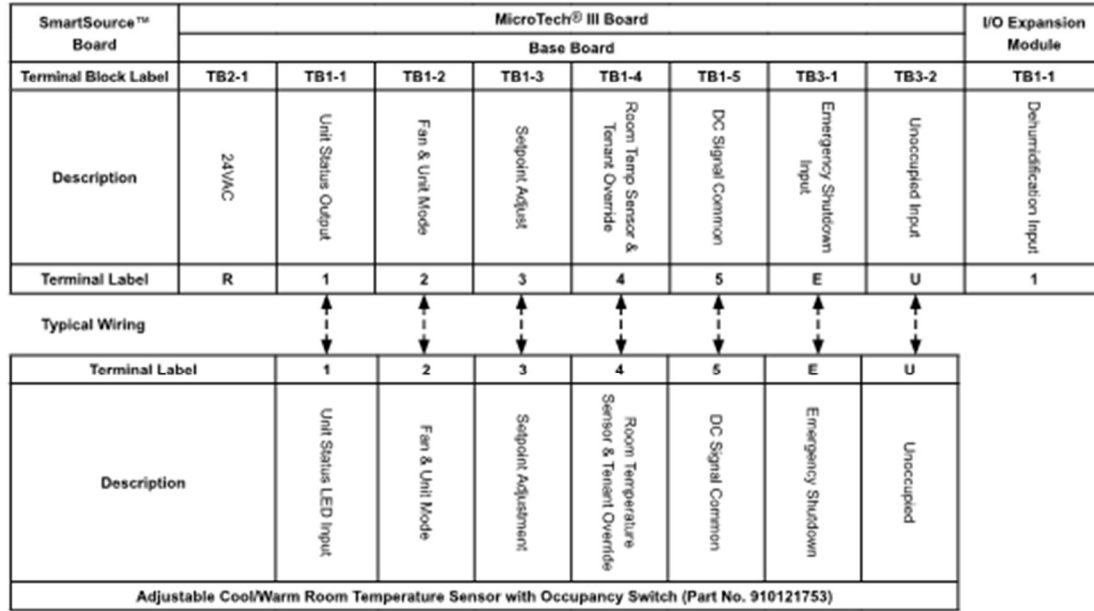
Terminal Descriptions

- 1 – Unit Status Indicator Input from the MicoTech III SmartSource Unit Controller. (5VDC)
- 2 - Output Signal, Fan and Unit Mode (0 to 5VDC)
- 3 - Output Signal, Setpoint Adjustment
- 4 - Output Signal, Room Temp Thermistor Sensor. (10K ATP Z curve, 10K-2)
- 5 - Ground or Neutral. Common Reference for All Signal Terminals
- E – Emergency Shutdown. (Terminal grounded when in System "Off" mode, VDC only)
- U - Unoccupied Contact. (Terminal grounded when in Unoccupied, VDC only)

Wiring

Wiring between the sensor and the water source heat pump unit for typical heating and cooling operation is shown in Figure 2.

Figure 2: Field wiring



Applications

The display sensor can be used on the products shown in [Table 2](#).

Table 2: Product usage guide

Units	Product		Models	Controls	Used with Digitally Adjustable Sensor with Temperature and Humidity Display
Water Source Heat Pumps	Horizontal	Enfinity™	W. CCH, CCW	MicroTech III Unit Controller	Yes
	Vertical		W. VFC, VFW		
	Vertical Stacked		W. VHC		
	Console		W. MHC, MHW		
	Horizontal & Vertical	SmartSource 1-Stage	W. GSH, GSV	MicroTech III SmartSource Unit Controller	
		SmartSource 2-Stage	W. GTH, GTV		

The display sensor for water source heat pump applications is shown in [Table 3](#)

Table 3: Water source heat pump application guide

Units	Product	Models	Applications											
			Cooling	Heating	Dehumidification					Electric Heat			Water-side Economizer	
			Stages	Smart Dehumidification	Hot Gas Reheat	Simplified	Humidistat Controlled	Dehumidification Only	Boilerless	Supplemental	Primary	3-Way Valve Control		
Water Source Heat Pumps	Horizontal	Enfinity	W. CCH, CCW	1	1	No	No	No	No	No	No	No	No	No
	Vertical		W. VFC, VFW	1	1	No	Yes	No	No	No	Yes ¹	Yes	No	No
	Vertical Stacked		W. VHC	1	1	No	No	No	No	No	No	No	No	No
	Console		W. MHC, MHW	1	1	No	No	No	No	No	Yes ¹	Yes	No	No
	Horizontal & Vertical	Smart-Source 1-Stage	W. GSH, GSV	3	4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Horizontal & Vertical	Smart-Source 2-Stage	W. GTH, GTV	3	4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: ¹With optional Boilerless controls



Document Summary Page

Project Submittal Package

Warrenton School Kitchen
Reznor RPBL-500



Gas Fired Packaged Heating & Ventilating Unit Schedule

Line No.	Qty	Unit Tags	Reznor Model-Size	Type	MBH Output	EAT °F	LAT °F	Fuel Type	CFM	Mtr HP	Fan RPM	Ext. SP "WC	Total SP "WC	Voltage & Phase	Unit Notes
1	1	Kitchen MAU	RPBL-500	Outdoor	400	0	89.9	NG	4,100	3	976	1.2	1.491	480/3/60	

Unit Notes:

- 1)
- 2)
- 3)
- 4)
- 5)

Date: 2/4/2021

Job Name:	Warrenton School Kitchen
Location:	Warrenton, MO
Unit Tag:	Kitchen MAU
RPBL-500 <i>outdoor heating & ventilating unit, power vent, spark ignition, curb cap, 24v controls</i>	
AA1	<i>Natural Gas</i>
AB1	<i>0 to 2000 ft Elevation</i>
AC2	<i>409 Stainless Steel Heat Exchanger</i>
AD2	<i>409 Stainless Steel Burners</i>
AF2	<i>409 Stainless Steel Drip Pan</i>
AG15	<i>2 Stg ea furnace, Ductstat, Remote Dial</i>
AJ2	<i>Right hand controls (facing discharge)</i>
AK7	<i>460/3/60 voltage</i>
AL9	<i>3 HP ODP Motor</i>
AM12	<i>1000 rpm, 4100 CFM, 1.20" ESP, 1.49" TS</i>
AN10	<i>IEC Motor Starter</i>
AQ5	<i>Downturn Plenum</i>
AR8	<i>2 pos. motorized 100% O/A damper</i>
AS2	<i>100% O/A rain baffled intake hood</i>
AW7	<i>Filter Rack w/2" Throwaway Filters</i>
AY2	<i>Cabinet Insulation, Single Wall</i>
BE2	<i>Discharge temp low limit (freezestat)</i>
BG9	<i>Relay Contacts to Start Exhaust Fan</i>
BW1	<i>Air Flow Proving Switch</i>
BY1	<i>US Certification to ANSI Standards</i>
DR2	<i>Adjustable V-Belt Drive Blower</i>
PC12	<i>Motor Mount Vibration Isolation 1-10hp</i>
RC4	<i>Panel w/Blwr, Brnr, Filt Lts, On/Off Sw</i>
RCM	<i>Mount Discharge Temp Dial on Panel</i>
SH1	<i>Prepare Unit for Flatbed Shipment Only</i>
SWD1	<i>Show N.C. smoke/alarm contact on WD</i>
XW3	<i>10 year heat exchanger warranty</i>

The bill of material above is all that is being submitted for acceptance. Supporting pages attached may have other options not included in the listing above. They are not being offered for this submittal.

REZNOR®

Extended Capacity, Power Vented, Gas
Fired, Outdoor, Packaged Duct Furnace(s)
/ Blower unit Combination

Model RPBL



Description:

Reznor Model series RPBL is a factory-designed assembly of one, two, or three duct furnace(s) and a large-capacity blower cabinet and a variety of control options for heating, makeup air or a combination of these functions. Pre-engineered design allows for single unit installation, provides unified appearance and saves customer engineering time and assembly costs.

Models are available for outdoor use in heating capacities from 400,000 through 1,200,000 BTUH gas input. Model RPBL systems are available for use with either natural or propane gas, as specified. Each unit is equipped with all required limit safety controls. Controls and wiring are accessible through lift-away side panels. Model RPBL systems are completely weather sealed. No additional protective covering is required. Each packaged unit is designed for installation on a full roof curb or field supplied supports. RPBL units feature an integral power vented system for use where environmental conditions pose a problem for gravity-vented units.

Notes:

- Regulated combination redundant gas valve consists of combination pilot solenoid valve, electric gas valve, pilot filter, pressure regulator, pilot shut-off and manual shut-off all in one body. Gas supply pressure must not exceed 0.5 PSI (8 oz. - 14" W.C.). Minimum inlet pressure for natural gas is 5" W.C. Minimum inlet pressure for propane gas is 11" W.C.
- Not certified for residential use.



Features:

- Orifices for selected gas type
- 24-volt control transformer
- Redundant gas valve on each furnace
- Intermittent spark pilot
- Fan and limit safety controls
- Reverse air flow limit
- Twin centrifugal blowers
- Adjustable belt drive
- Pre-wired to terminal blocks
- Power venter
- Weatherized, galvalume steel cabinet with interlocking joint construction for outdoor mounting
- Horizontal discharge air opening with duct flanges
- Curb cap base
- Horizontal inlet air opening
- Insulated blower cabinet
- Side access to burner(s) and controls

Included Options

AA1: Unit equipped for natural gas

Natural gas is a naturally occurring gas mixture consisting primarily of methane and includes varying volumes of alkanes, carbon dioxide, nitrogen, and hydrogen sulfide.

1 Therm = 100,000 BTU = 29.3 kWh

AB1: Burner orifices for elevations 0-2000 Feet

AC2: Heat exchanger is manufactured from die-formed halves of 409 (E-3) Stainless Steel. Design for improved corrosion resistance over standard heat exchanger material.

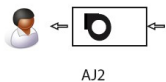
AD2: Units supplied with steel die-formed atmospheric burners constructed with 409 E-3 stainless steel ribbon inserts. Burners are designed with a die-formed flared venturi inlet ports. Units provided with 409 E-3 stainless steel burner body construction.

AF2: Burner drip pan and unit bottom panel of 409 (E-3) stainless steel are provided to manage condensation from heat exchanger cells.

AG15: Gas controls for the furnace are designed for makeup air heating applications. Each furnace is provided with a 24 volt, two stage combination gas valve which provides for low fire or high fire operation controlled by a two-stage field installed electronic Remote Temperature Selector and Stage Adders. The Remote Temperature Selector and Stage Adder sensor are mounted so as to monitor outlet air. The first stage (low fire) is energized when discharge air temperature drops to a setpoint, if low fire cannot satisfy the ductstat setting, the Stage Adder Module(s) will energize high fire. Setpoint is field adjustable within a range from 50 to 130 degrees (F) in continuous adjustment. The ductstat is connected to a factory installed electronic sensor. The valve includes a servo regulator which controls both high and low stages, maintaining constant gas input under wide variations in gas supply pressure. The valve also includes the safety pilot valve, and the manual shutoff valve. The Manufacturer will furnish a field-installed DPST wall switch for On-Off Control of unit.



AJ2: Right side control location (facing airstream)



AK7: 460 Volt, Three Phase, 60 cycle supply voltage.

AL9: 3 HP 3450 RPM open style blower motor

AM12: Fan/drive at 951-1000 RPM

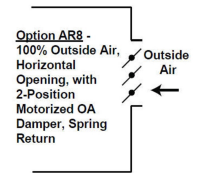
AN10: Motor starter, IEC open, for single-speed motors



AQ5: Downturn plenum Supply Air cabinet with bottom discharge and no discharge dampers.

AR8: 100% outside air damper with damper motor (on/off, spring return closed) electrically interlocked with supply fan contactor. Damper must open to 80% before the fan is allowed to operate.

Construction: The air control damper is low leak with blade and jamb seals. The damper air leakage will not exceed 10 cfm per square foot at 4" sp. The damper is constructed of 16 gage galvanized steel with reinforcement to insure structural integrity. Blade edge seals are PVC coated polyester fabric suitable for -25°F to +180°F (-32°C to +83°C) mechanically locked into the blade edge. Jamb seals are flexible stainless steel metal, compression type to prevent leakage between end of the blade and the damper frame. Bearings are corrosion resistant.



AS2: 100% outside air screened inlet hood with moisture eliminator louvers



AW7: Filter rack with 2" disposable filters

AY2: Single wall with insulation

BE2: One factory-installed freeze stat, adjustable reset with time delay relay



BG9: Exhaust fan interlock relay



BW1: Air flow proving switch (pressure sensitive - proves air flow across heat exchanger)

BY1: Units to be supplied from factory certified by AGA and US standards of ANSI.

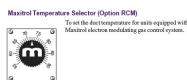
DR2: Adjustable V-Belt Drive Blower

PC12: Rubber vibration isolation for blower motor

RC4: Blower-on indicator light, burner-on indicator light, dirty filter indicator light and on/off control switch. Remote console to be shipped separately for field installation.



RCM: Mount AG option Maxitrol dial on console



SH1: Ship Via Flatbed (no crating)

SWD1: Show N.C. smoke/alarm contact on WD

XW3: 10 Year Heat Exchanger Warranty,(Non-Prorated)

MODEL(S)
 -RPBL 500
 -RPBL 600

RPBL_B_DT

