

# Technical Data Sheet for Size 045 PWS



Job Information	Technical Data Sheet
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<b>Job Name</b>	Reedsburg Medical replacement - Sauk P Health
<b>Date</b>	8/4/2022
<b>Submitted By</b>	Stu Grendahl
<b>Software Version</b>	08.20
<b>Unit Tag</b>	Size 045 PWS

### Unit Overview

Model Number	Voltage V/Hz/Phase	Design Cooling Capacity Btu/hr	AHRI 360 Standard Efficiency	ASHRAE 90.1
RPS045D	460/60/3	550067	10.4	2016 Compliant

### Unit

<b>Model Number:</b>	RPS045D
<b>Altitude:</b>	0 ft
<b>Heat Type:</b>	Hot Water
<b>Condenser Type:</b>	Air-Cooled
<b>Approval</b>	ETL/MEA-USA unit

### Physical

Unit				
Length	Height	Width	Weight	Estimated Lifting Lugs
515 in	73.0 in	99.0 in	12339 lb	3 per side

### Electrical

Voltage	MCA Circuit #1	MCA Circuit #2	MROPD Circuit #1	MROPD Circuit #2	SCCR Circuit #1	SCCR Circuit #2
460/60/3	90.0 A	40.6 A	100 A	60 A	10 kAIC	10 kAIC

**Circuit #1:** Compressors, Condenser Fans

**Circuit #2:** Fans, Controls

**Note 1:** 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
0-100% Economizer	0.37 inH <sub>2</sub> O	Electric Actuator

**Return Air Option**

**Return Air Location:** Bottom

Fan				
Type	Fan Diameter	Vibration Isolation	Drive Type	Fan Efficiency Index
SWSI AF	40 in	Spring Isolation	Standard Service Factor, Fixed Drive	0.768

Motor		
Horsepower	Type	Full Load Current
7.5 HP	ODP, Premium Efficiency	10.0 A

Performance			
Air Flow CFM	External Static Pressure inH <sub>2</sub> O	Fan Speed rpm	Brake Horsepower HP
16000	1.0	603	4.51

# Technical Data Sheet for Size 045 PWS

Filter Section					
Blender					
Blender Size			Air Pressure Drop		
High CFM			0.13		
Physical					
Type	(Quantity)	Height x Width x Depth	Face Area	Face Velocity	Air Pressure Drop
2 in. Angular rack only, No Filter media	(7)	16 in x 20 in x 2 in	73.9 ft <sup>2</sup>	216.5 ft/min	0.00 inH <sub>2</sub> O
	(21)	16 in x 25 in x 2 in			

DX Cooling Coil								
Physical								
Fins per Inch	Rows	Face Area	Face Velocity	Air Pressure drop	Drain Pan Material	Casing Material		
10	6	39.5 ft <sup>2</sup>	405.1 ft/min	0.70 inH <sub>2</sub> O	Painted Galvanized	Galv. Steel		
Cooling Performance								
Total Capacity Btu/hr	Sensible Btu/hr	Refrigerant Type	Indoor Air Temperature				Ambient Air Temperature	
			Entering		Leaving		Dry Bulb °F	Wet Bulb °F
550067	407867	R410A	Dry Bulb °F	Wet Bulb °F	Dry Bulb °F	Wet Bulb °F	95.0	75.0
			80.0	67.0	56.7	56.0		

Blank Section	
Section Length:	48.0 in
Notes:	

Fan Section			
Fan			
Type	Fan Wheel Diameter	Fan Isolation	Fan Efficiency Index
AF DWDI	30 in	Spring	0.915
Performance			
Airflow	Total Static Pressure	Fan Speed	Brake Horsepower
16000 CFM	4.34 inH <sub>2</sub> O	1222 rpm	15.30 HP
Motor			Drive
Type	Horsepower	FLA	Type
ODP, Premium Efficiency	20.0 hp	23.5 A	Standard service factor, Fixed drive

Hot Water Heat Section						
Physical						
Fins per Inch	Number of Rows	Face Area	Face Velocity	Air Pressure Drop		
9FPI	1	29.7 ft <sup>2</sup>	538.7 ft/min	0.18 inH <sub>2</sub> O		
Performance						
Total Capacity Btu/hr	Heat Airflow CFM	Temperature				Fluid °F
		Entering		Leaving		
606070	16000	Air Dry Bulb °F	Fluid °F	Air Dry Bulb °F	Fluid °F	160.2
		55.0	180.0	89.6		
Type		Fluid Flow Rate gpm	Pressure Drop ft H <sub>2</sub> O			
Water		61.2	3.3			

# Technical Data Sheet for Size 045 PWS

## Final Filter Section

		Physical		
Type	(Quantity) Height x Width x Depth	Face Area	Face Velocity	Air Pressure Drop
Flat 95% Cartridge (MERV 14)	(8) 24 in x 24 in x 12 in (4) 12 in x 24 in x 12 in	40.0 ft <sup>2</sup>	400.0 ft/min	0.46 inH <sub>2</sub> O

## Discharge Plenum

Discharge Location: Bottom

## Unit Discharge Conditions

		Air Temperature		
DX coil Configuration:	Draw-thru Coil	Unit Leaving Dry Bulb °F	Unit Leaving Wet Bulb °F	Unit Leaving Dewpoint °F
Motor Heat Btu/hr	Moisture Removal lb/h			
49646	122.8	59.2	56.9	55.6

## Condensing Section

		Compressor		
Type	Quantity	Total Power	Capacity Control	Compressor Isolation
Scroll	4	40.6 kW	4 stage	Resilient

### Compressor Amps:

Fixed Speed Compressor 1	19.2 A
Fixed Speed Compressor 2	19.2 A
Fixed Speed Compressor 3	19.2 A
Fixed Speed Compressor 4	19.2 A

Piping Options: Hot gas bypass, circuit 1, Replaceable core filter drier

### Condenser Coil

Type	Fin per Inch	Fin Material	Refrigerant Charge
Aluminum tube MicroChannel	21	Aluminum	100.7 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
10.4	14.3	2016 Compliant

## Sound

		Sound Power (db)						
Frequency	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	87	86	83	78	76	70	62	54
Discharge	85	81	76	71	64	54	41	26
Radiated	-	94	91	89	89	86	83	82

# Technical Data Sheet for Size 045 PWS

## Supply Fan Total Pressure Drop Calculation

<b>External Static Pressure:</b>	2.00 inH <sub>2</sub> O
<b>Filter:</b>	0.00 inH <sub>2</sub> O
<b>Blender:</b>	0.13 inH <sub>2</sub> O
<b>Outside Air:</b>	0.37 inH <sub>2</sub> O
<b>DX Coil:</b>	0.70 inH <sub>2</sub> O
<b>Hot Water Heat:</b>	0.18 inH <sub>2</sub> O
<b>Final Filter:</b>	0.46 inH <sub>2</sub> O
<b>Dirty Final Filter:</b>	0.50 inH <sub>2</sub> O
<b>Total Static Pressure:</b>	4.34 inH <sub>2</sub> O

## Return/Exhaust Fan Total Pressure Drop Calculation

<b>External Static Pressure:</b>	1.00 inH <sub>2</sub> O
<b>Total Static Pressure:</b>	1.00 inH <sub>2</sub> O

### Options

#### Unit

<b>Unit Exterior:</b>	Prepainted Galvanized Steel
<b>Insulation and Liners:</b>	2", 1 1/2# nominal insulation, full solid liners, perf in fan sections
<b>Fan Shaft Grounding:</b>	Fan motors are provided with shaft grounding rings and class H insulation.

#### Electrical

<b>Electrical Connection Option:</b>	Dual Disconnect. Fans & Controls/Balance of unit
<b>GFI 115v Receptacle:</b>	Field powered

#### Controls

<b>Application:</b>	Variable Volume - Discharge Air Control
<b>Temperature Control:</b>	Power Package, No Controls
<b>Fan Speed Control:</b>	Factory mounted Inverter
<b>Inverter Manufacturer:</b>	Danfoss
<b>Inverter Location:</b>	Inverter(s) in fan section
<b>Airflow Control:</b>	Duct high limit sensor
<b>Economizer Control:</b>	Outside Air Dry Bulb and Enthalpy Control
<b>Low Ambient:</b>	Fantrol, operation to 45 deg F (7.22 deg C)

### Warranty

<b>Parts:</b>	Standard 1 year
<b>Compressor:</b>	Extended 4 year, 5 year total

## AHRI Certification

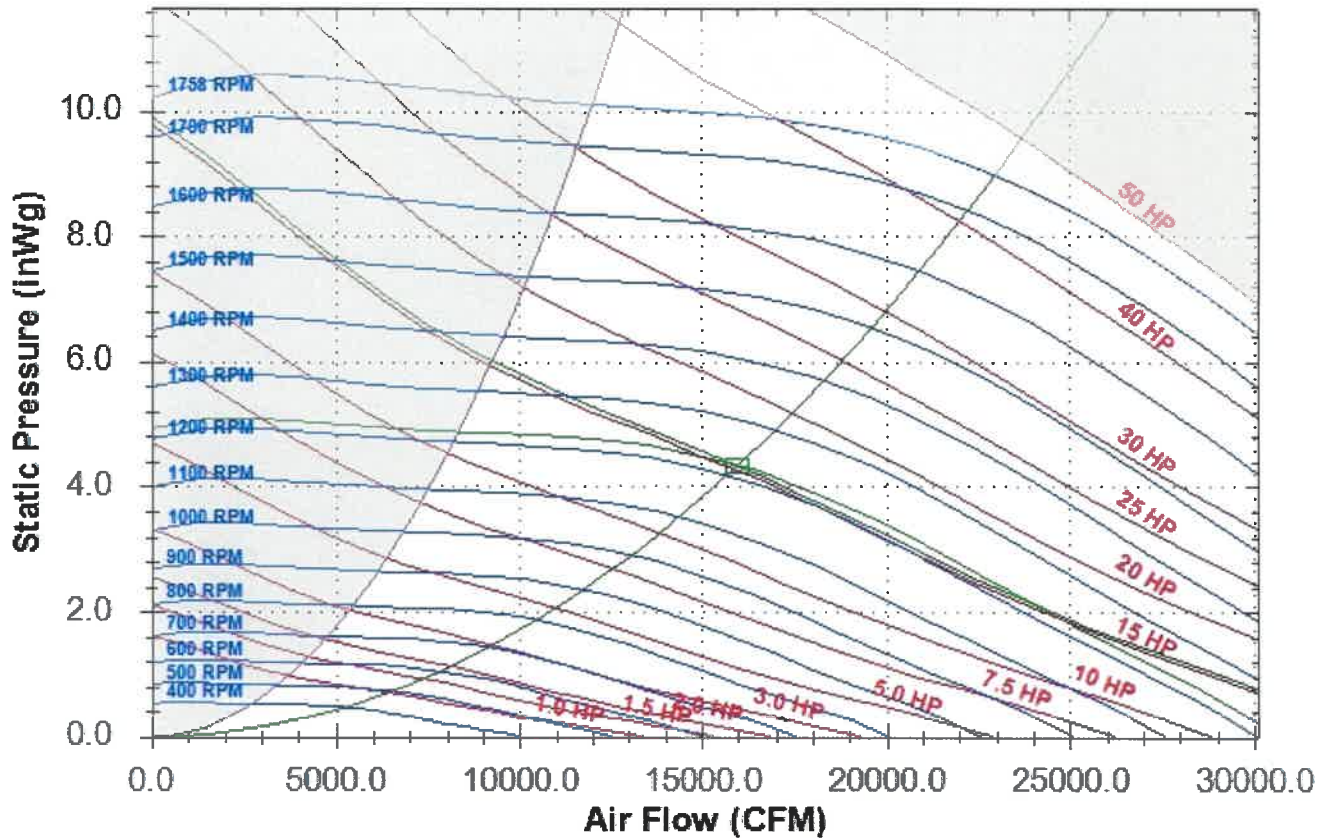


All equipment is rated and certified in accordance with AHRI 360.

## Notes

Fan Curve - Supply for Size 045 PWS

### Daikin Rooftop Packaged Fan Selection

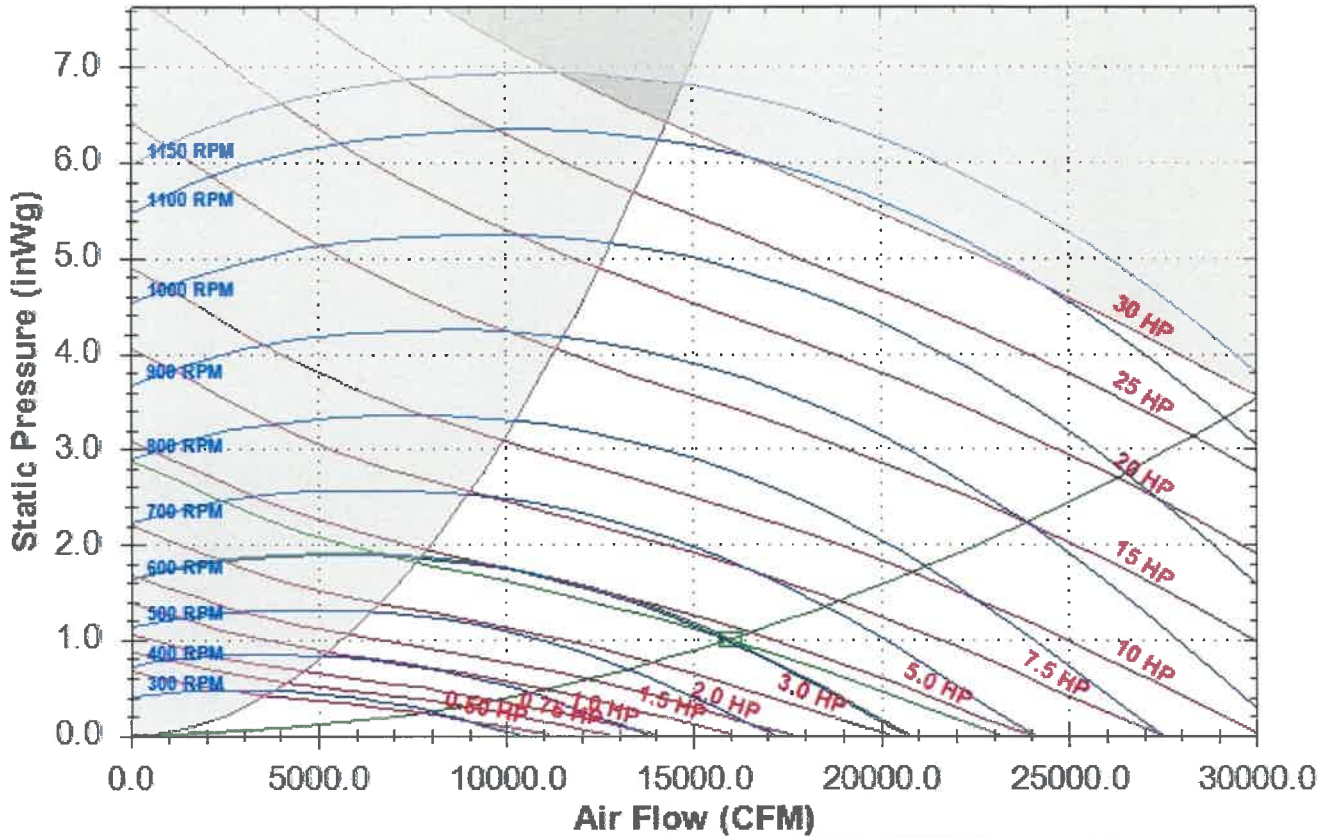


30.0 DWDI - Airfoil Supply Fan at Standard Conditions								
Base Tag	Size 045 PWS				Date	Aug-04-2022		
Job Name	Reedsburg Medical replacement - S...				Time	5:11 PM		
Air Volume	16000	CFM			Fan Speed	1222	RPM	
Total Static	4.34	inWg			Max Speed	1758	RPM	
Brake Horsepower	15.30	HP			Efficiency	71	%	
Unit Sound Power	63hz	125hz	250hz	500hz	1000hz	2000hz	4000hz	8000hz
Inlet Sound Power	87	86	83	78	76	70	62	54
Outlet Sound Power	85	81	76	71	64	54	41	26
Radiated Sound Power	0	94	91	89	89	86	83	82



Fan Curve - Return for Size 045 PWS

### Daikin Rooftop Packaged Fan Selection

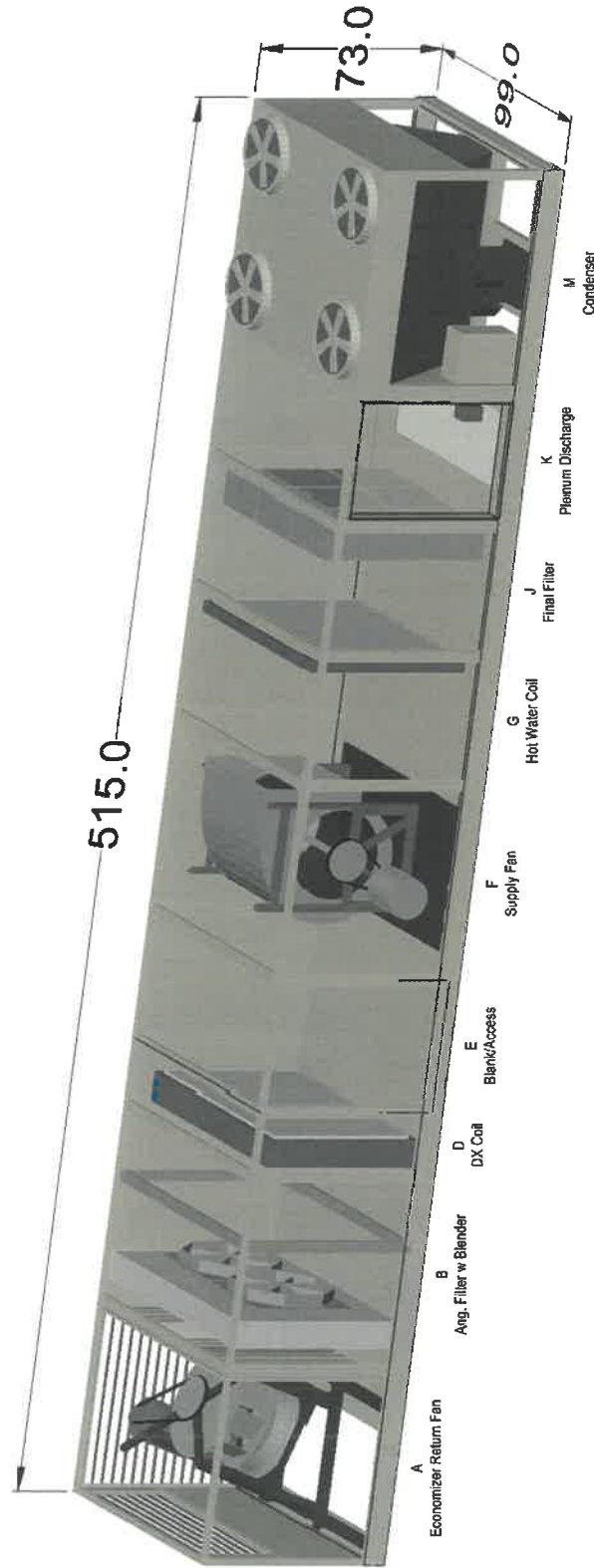


40.0 SWSI - Plenum Return Fan at Standard Conditions

Base Tag	Size 045 PWS			Date	Aug-04-2022			
Job Name	Reedsburg Medical replacement - S...			Time	5:11 PM			
Air Volume	16000	CFM		Fan Speed	603	RPM		
Total Static	1.00	inWg		Max Speed	1150	RPM		
Brake Horsepower	4.51	HP		Efficiency	56	%		
Unit Sound Power	63hz	125hz	250hz	500hz	1000hz	2000hz	4000hz	8000hz
Inlet Sound Power	87	86	83	78	76	70	62	54
Outlet Sound Power	85	81	76	71	64	54	41	26
Radiated Sound Power	0	94	91	89	89	86	83	82



Drawings(1) for Size 045 PWS

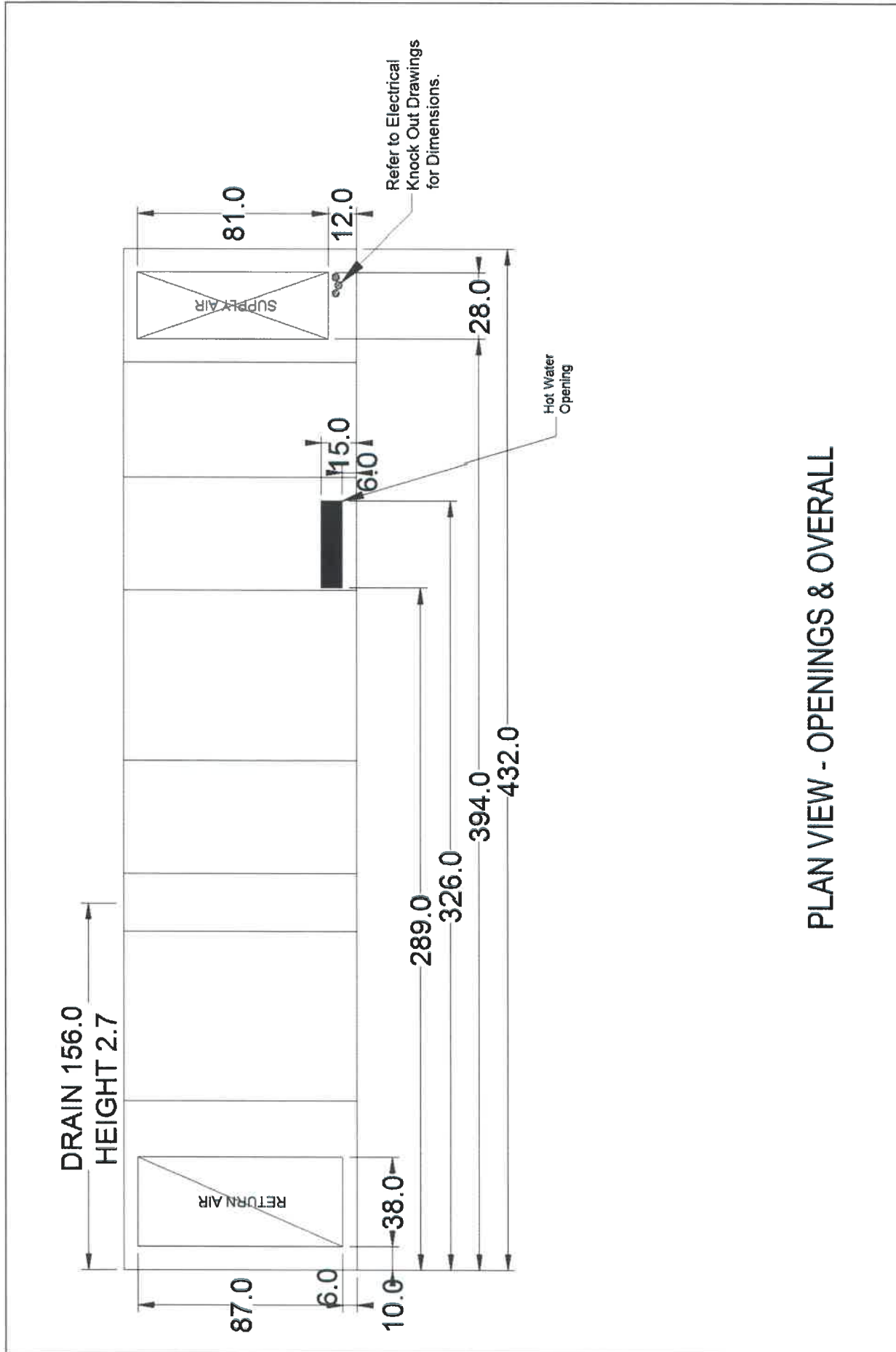


**DAIKIN**  
 13600 Industrial Park Blvd. Minneapolis, MN 55441  
 www.DaikinApplied.com Software Version: 08.20

Unit Tag: Size 045 PWS  
 Project Name: Reedsburg Medical  
 Aug. 04, 2022 Ver/Rev: Sheet: 1 of 1  
 Sales Office: Masters Building Solutions  
 Sales Engineer:  
 Scale: NTS Tolerance: +/- 0.25" Dwg Units: in [mm]

Product Drawing  
 Product:  
 Model: RPS045D

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.



PLAN VIEW - OPENINGS & OVERALL

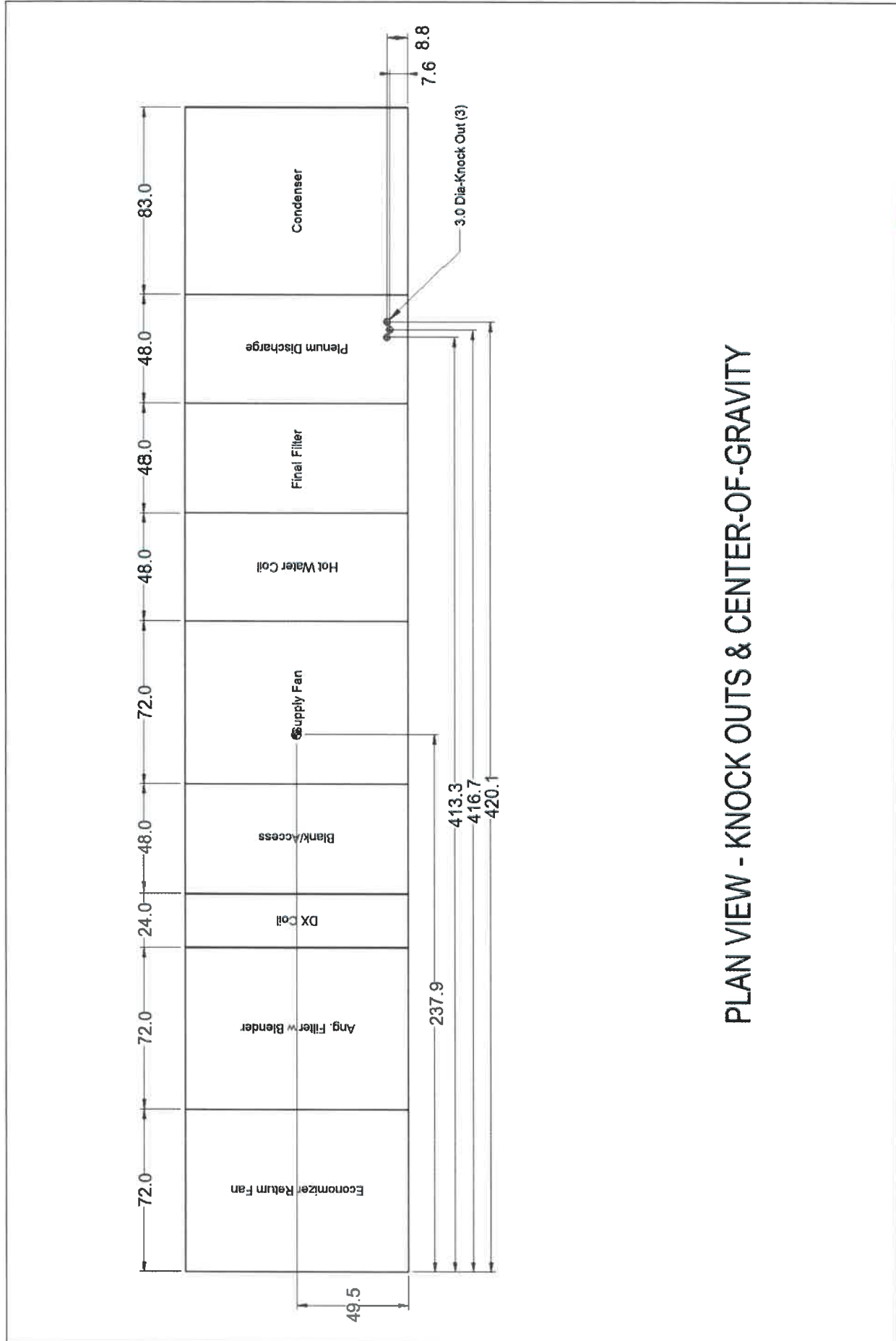
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Product:		Sales Engineer:	
Model: RPS045D	Unit Tag: Size 045 PWS	Scale: NTS	Dwg Units: in [mm]
	Project Name: Reedsburg Medical	Tolerance: +/- 0.25"	
	Aug. 04, 2022	Ver/Rev:	Sheet: 1 of 1

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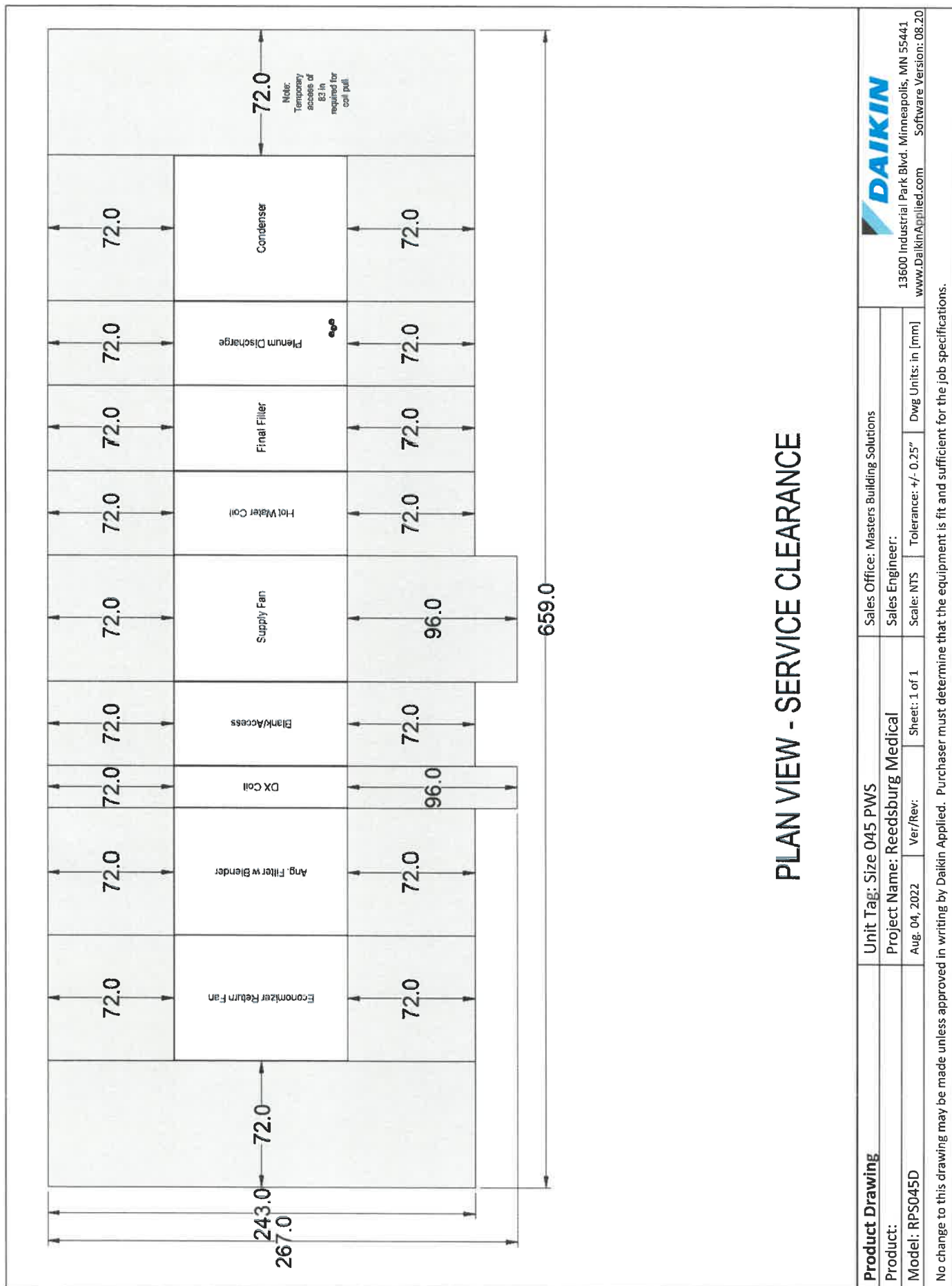


PLAN VIEW - KNOCK OUTS & CENTER-OF-GRAVITY

<b>Product Drawing</b>		Unit Tag: Size 045 PWS		Sales Office: Masters Building Solutions	
Product:		Project Name: Reedsburg Medical		Sales Engineer:	
Model: RPS045D		Aug. 04, 2022 Ver/Rev:		Scale: NTS	
		Sheet: 1 of 1		Dwg Units: in [mm]	
Tolerance: +/- 0.25"					
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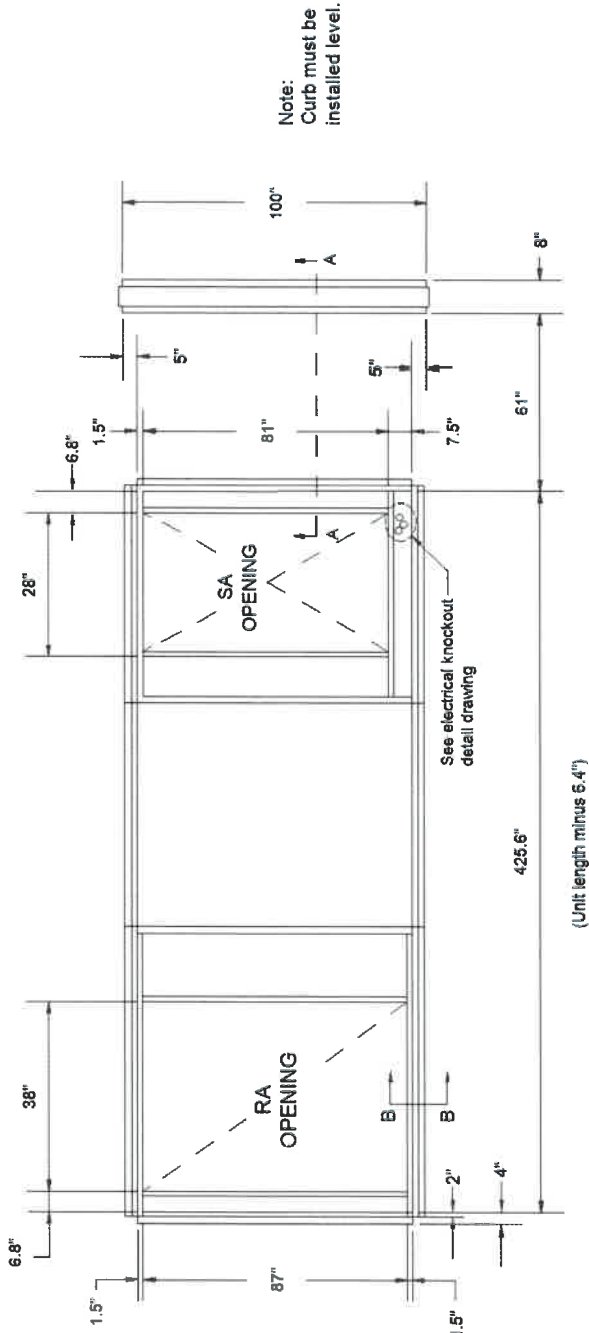
## PLAN VIEW - SERVICE CLEARANCE

  
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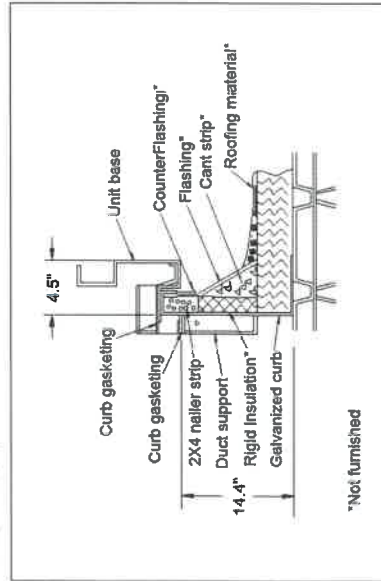
<b>Product Drawing</b>	Unit Tag: Size 045 PWS			Sales Office: Masters Building Solutions		
<b>Product:</b>	Project Name: Reedsburg Medical			Sales Engineer:		
<b>Model:</b> RPS045D	Aug. 04, 2022	Ver/Rev:	Sheet: 1 of 1	Scale: NTS	Tolerance: +/- 0.25"	Dwg Units: in [mm]

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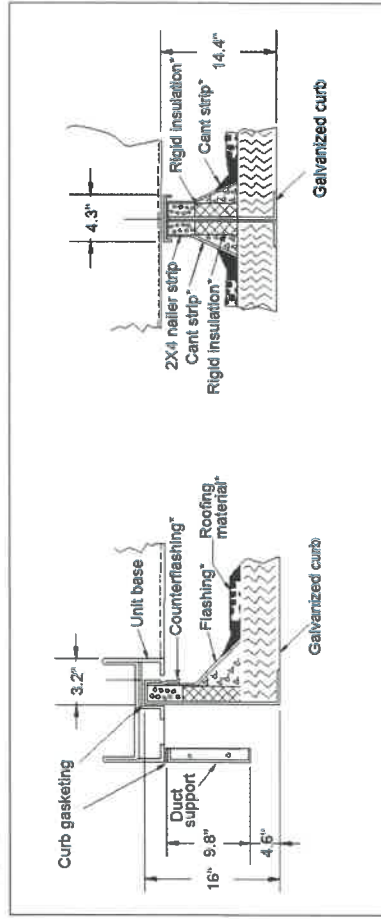
Curb Weight: 994.16 lbs.



Cross-section B-B



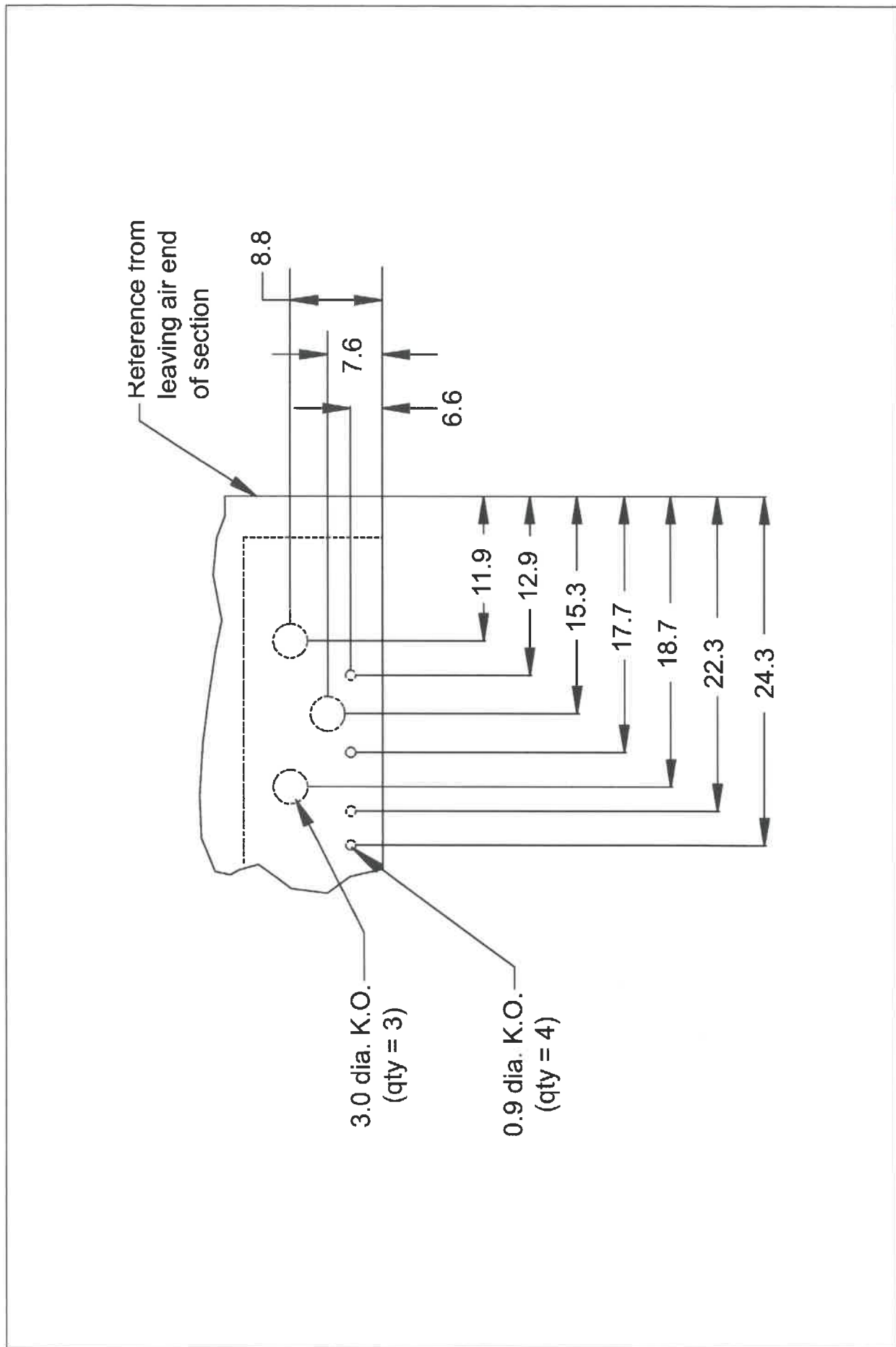
Cross-Section A-A



<b>Product Drawing</b>		Unit Tag: Size 045 PWS		Sales Office: Masters Building Solutions	
Product:		Project Name: Reedsburg Medical		Sales Engineer:	
Model: RPS045D		Aug. 04, 2022 Ver/Rev:		Scale: NTS Tolerance: +/- 0.25" Dwg Units: in (mm)	
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Unit Knockout, Large Box for Size 045 PWS



<b>Product Drawing</b>		Sales Office: Masters Building Solutions	
Product:	Unit Tag: Size 045 PWS	Sales Engineer:	
Model: RPS045D	Project Name: Reedsburg Medical	Scale: NTS	Dwg Units: in [mm]
	Aug. 04, 2022	Ver/Rev:	Tolerance: +/- 0.25"
		Sheet: 1 of 1	

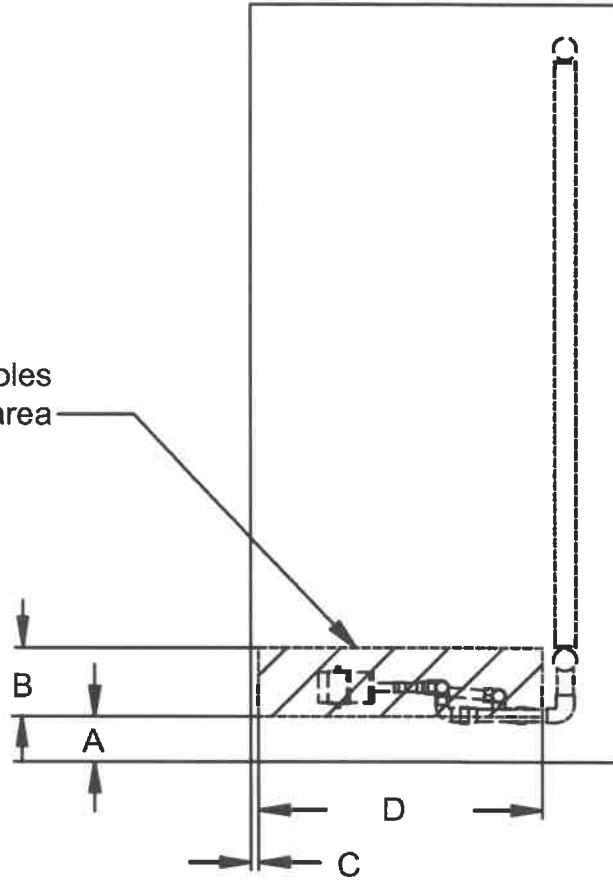
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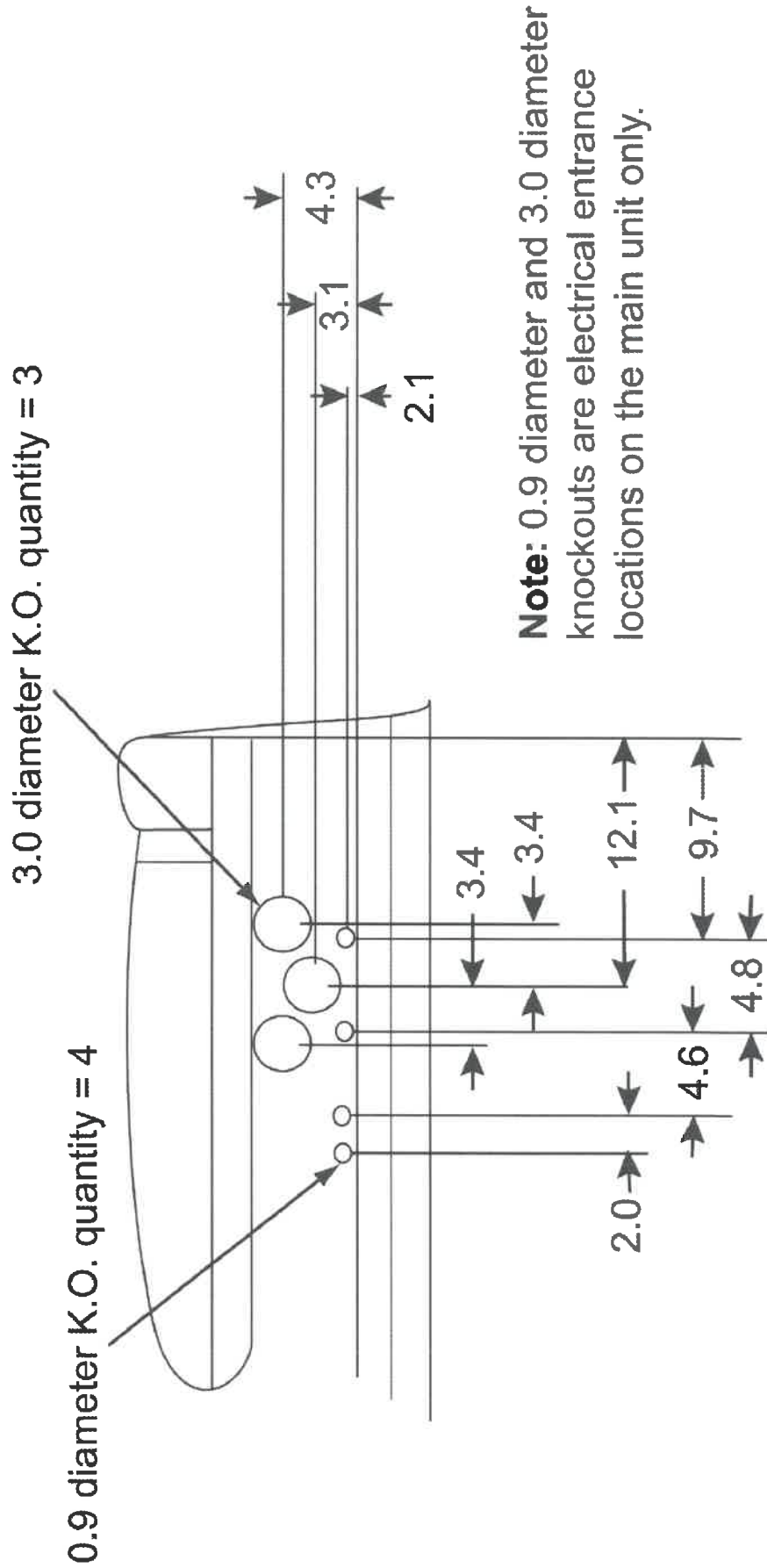
Unit Knockout, Steam\_Hotwater Heat, Large box for Size 045 PWS

All piping entrance holes should fall within this area



Unit Size	A	B	C	D
045-150	6.0"	9.0"	1.0"	37.0"

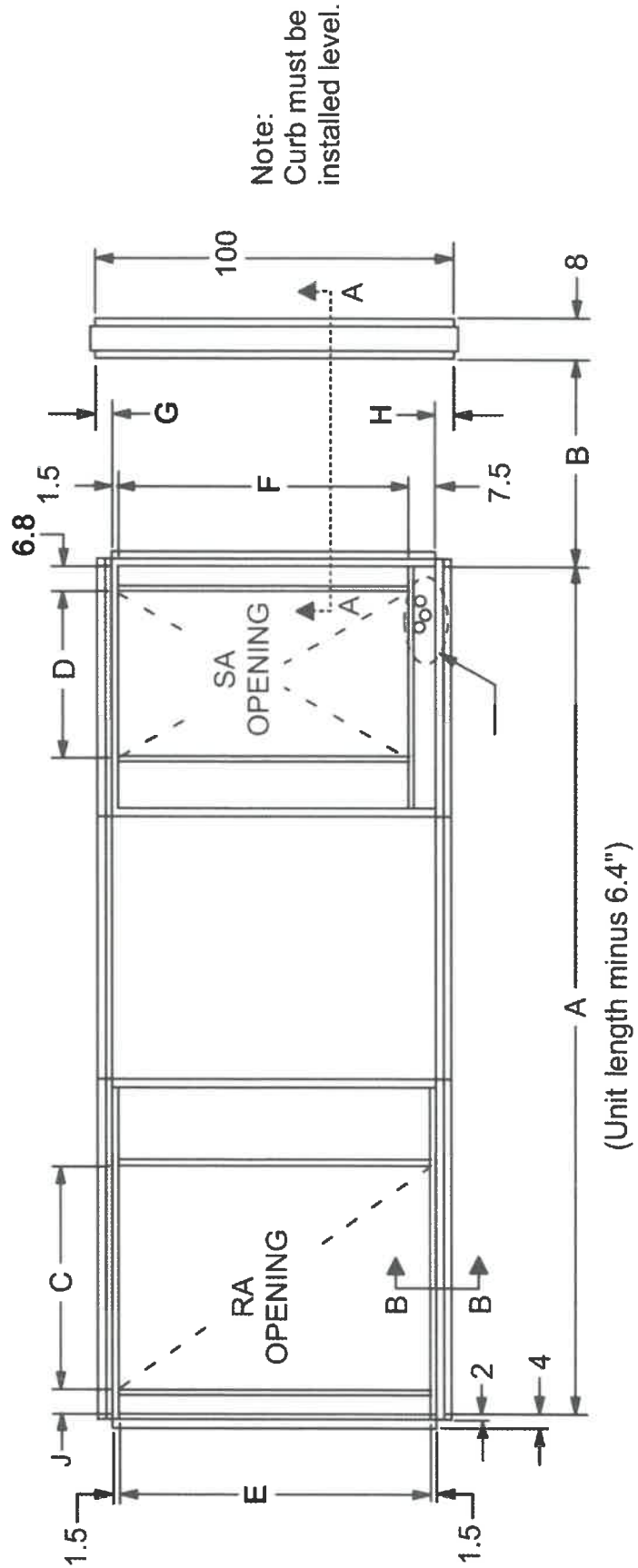
<b>Product Drawing</b>	Unit Tag: Size 045 PWS			 13600 Industrial Park Blvd. Minneapolis, MN 55441 www.DaikinApplied.com Software Version: 08.20		
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Model: RPS045D	Aug. 04, 2022 Ver/Rev:	Scale: NTS	www.DaikinApplied.com Software Version: 08.20
Sheet: 1 of 1		Tolerance: +/- 0.25"	Dwg Units: in [mm]
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# Roofcurb Dimensions for Size 045 PWS

Dimensions		
Description	Letter	Dimensions (in)
Curb Length	A	425.6
Condenser Rail	B	61.0
Return Air Opening Length	C	38.0
Supply Air Opening Length	D	28.0
Return Air Opening Width	E	87.0
Supply Air Opening Width	F	81.0
Condenser Rail Overhang	G	5.0
Condenser Rail Overhang	H	5.0
Return Air Opening Location	J	6.8



<b>Product Drawing</b>		Unit Tag: Size 045 PWS		Sales Office: Masters Building Solutions	
Product:		Project Name: Reedsburg Medical		Sales Engineer:	
Model: RPS045D		Aug. 04, 2022 Ver/Rev:		Scale: NTS	
		Sheet: 1 of 1		Dwg Units: (in)	
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