



Submittal for:

22-063 Merck

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Submittal by:

KELLER EQUIPMENT - YORK

Christine Smith

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Prepared on: 03/14/2022

Updated on: 03/11/2022

Prepared on: March 14, 2022
Project: 22-063 Merck
Worksheet: 22-063 Merck

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Evaporator Section

DAPA-0334-AO	MINI PLUS AIR-COOLED 3 TON 3 PH 460 V W/DRCU
Evap. Tag #:	HVAC-301-23
Quantity:	1
Voltage:	460
Phase:	3
Hertz:	60

Cabinet Data:

Configuration:	Ceiling Mounted
Depth (in.):	26.50
Length (in.):	51.00
Height (in.):	24.00
Shipping Weight (lbs):	460

Entering Air Conditions:

Entering Air DB (°F):	75.0
Entering Air WB (°F):	61.0
Relative Humidity (%):	45.0
Altitude (ft):	0

Evaporator Coil

Face Area (sq ft):	3.00
Face Velocity (ft/min)	433.3
Rows:	4
Fins per (in.):	12.0
Fin Type:	Aluminum

Calculated Data

Gross Total Capacity (Btu/hr):	39,950
Gross Sensible Capacity (Btu/hr):	34,370
Net Total Capacity (Btu/hr):	37,400
Net Sensible Capacity (Btu/hr):	31,820
Air Out Dry Bulb (°F):	52.1
Air Out Wet Bulb (°F):	50.3

* Net Coil Capacity equals gross capacity minus motor heat.

Evaporator Blower:

CFM:	1,300
ESP (inch of water):	0.50
Motor Horsepower:	1.0
Motor FLA:	1.6
Motor Quantity:	1
Blower Quantity:	1
Air Flow:	Optional Airflow #1

Reheat:

Type:	Electric
Capacity (BTU/hr):	20,500
kW:	6.0

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Filters:

Quantity:	<u>Size 1</u>
Size (inches):	1
Efficiency:	20" x 25" x 2"
	MERV 8

Connection Sizes:

Liquid Line (in. Nom.):	1/2
Suction Line (in. Nom.):	3/4
Condensate (in. Nom.):	3/4

Electrical Data:

Unit Total Amps:	9.1
Unit MCA:	11.5
Unit MOP:	15

Controls:

Mini dap4Touch, DAS, DAP, DAL

Accessories:

Model Number: DAPA-0334-AO MINI PLUS AIR-COOLED 3 TON 3 PH 460 V W/DRCU
Tag Number: HVAC-301-23

<u>Qty</u>	<u>Option</u>	<u>Description</u>
1	OPT-112-460V6KW	6KW Electric Reheat
1	OPT-8155	Mini dap4Touch, DAS, DAP, DAL
1	OPT-8142	Remote dap4Touch Display Cable, 35'
1	OPT-7314	Remote Mount Temperature/Humidity Sensor, 35ft
1	OPT-132-1-3	High Efficiency Motor 1 hp, Three Phase
1	OPT-5221	3 Phase
1	OPT-5063	Voltage 460V
1	OPT-5132	2" MERV 8 Efficient Filters
1	OPT-5431	Evaporator Coil
1	OPT-5760	Air Flow - Optional #1
1	OPT-7936	Thru-Door Disc Switch 0-30 amp
1	OPT-6026	Refrigerant R-410A
1	OPT-5823	CIRCUIT-SINGLE
1	OPT-37-MINI	Smoke Detector, Mini & MiniPlus
1	OPT-7326	Ethernet Comm Card, BACNet IP/SNMP/Modbus TCP-IP, dap4

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Remote Condensing Unit

Model #: DRCU-0334-3
 OUTDOOR REMOTE CONDENSING UNIT 3 TON 3 PH 460 V
 HE Tag #: CU-301-23
 Qty: 1
 Ambient: 95
 Altitude (ft): 0
 Voltage: 460
 Phase: 3

Electrical Section

FLA: 22.8
 MCA: 28.1
 MOP: 45.0

Compressor:

Type: Scroll
 Number: 1
 Refrigerant Type: REFRIGERANT, R-410A
 FLA: 7.7

Connection Sizes

Liquid (in. Nom.): 1/2
 Suction (in. Nom.): 3/4

Condenser Fan

Num Of Motors: 1
 Number Of Fans: 1
 HP: 0.75
 Motor FLA: 1.80
 CFM: 5,000
 RPM: 1,075

Dimensions

Depth (in.): 29.0
 Length (in.): 36.0
 Height (in.): 33.0

Weight

Shipping Weight (lbs): 349

Remote Condensing Unit Accessories

Qty	Option	Description
1	OPT-6193DRCU	COMP-SCR 3T,460V/3Ph R410A
1	OPT-5221	3 Phase
1	OPT-5063	Voltage 460V
1	OPT-7936	Thru-Door Disc Switch 0-30 amp
1	OPT-5958	Ambient 95
1	OPT-8049DRCU	Hot Gas Bypass qty 1
1	OPT-5823	CIRCUIT-SINGLE
1	OPT-4043DARC	Coil,Assmly,Cond,Sm, 3 Ton
1	OPT-6785	Low Ambient Receiver, Mounted qty 1,SM,R410A
1	OPT-6026	Refrigerant R-410A
1	OPT-5294	5 Years Compressor Warranty

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Refrigerant Charge – Air Cooled Calculator

1. For Data Aire gForce Ultra dual circuit units, variable speed compressor is used in circuit 1, fixed speed compressor is used in circuit 2. Circuit 1 is normally 25 -50% more capacity than circuit 2.
2. This liquid receiver list is based on standard sizing of the condenser and can be varied based on job specific.
3. As a good practice, charge the unit to about 80% of the estimated charge, then add additional charge to get 10-12°F subcool at maximum compressor speed.

Here is the link to the Data Aire website for the refrigerant charge estimating calculator for Data Aire air-cooled systems.

<http://psgeval.dataaire.com/RefrigerantChargeCalculator/EstimatingRefrigerantChargeInput.aspx>

Disclaimer: All calculations are estimated and may change based on application. Assumed operating condition: 45°F evap temp, 125°F condensing temp, 10°F subcool, 12°F superheat, 65°F to 95°F ambient, 160°F hot gas temperature and 350psi head pressure.