

**City of Portland, Oregon - Bureau of Development Services**1900 SW Fourth Avenue · Portland, Oregon 97201 | 503-823-7300 | www.portlandoregon.gov/bds**Permit Revision Submittal Requirements and Application**

A Permit Revision is required when there are proposed changes to the project after the permit has been issued. This may arise due to discrepancies between the city-approved permit drawings and actual field conditions, or the customer has changed their mind about an aspect of the project. In all cases, a revision to the existing permit must be submitted, reviewed and approved.

Applicants will provide:☐ A copy of this application☐ Three (3) sets of plans that clearly reflect the proposed change(s).

Drawings and calculations must be stamped and signed by the Architect and/or the Engineer of Record, if applicable.

☐ One (1) copy of the original city approved permit drawings. (NOTE: If your project has an assigned process manager please contact them regarding submittal of the revision).

☐ Two (2) sets of calculations, if applicable

☐ Inspector's correction notice, if revision is due to an inspection correction

☐ Revision fee (paid at time of submittal)**Contact Information:**Contact name Josiah HenleyAddress 110 SE 8th AveCity Portland State OR Zip Code 97214Phone (503) 233-9856 Email jhenley@holstarc.comValue of proposed revision No value added Issued permit # 19-106492-CO 19-106524-MTJob site address 3506 N VANCOUVER AVE, PORTLAND, OR 97227Description of revision ADDING A NEW ROOFTOP MECH HEAT PUMP TO SERVE GROUND LVL**Fees:**

The Permit Revisions are subject to fees associated with plan review, processing and any increase in project value. Additional fees may apply if adding plumbing fixtures.

The Bureau of Development Services fee schedule is available under the fees tab on the BDS web site at: www.portlandoregon.gov/bds. Fees are updated annually on July 1st.

Helpful Information:**Bureau of Development Services**

City of Portland, Oregon
1900 SW 4th Avenue, Portland, OR 97201
www.portlandoregon.gov/bds

Submit your plans in person to:

Development Services Center (DSC), First Floor,
For Hours Call 503-823-7310

Important Telephone Numbers:

BDS main number503-823-7300
DSC automated information line503-823-7310
Building code information503-823-1456
BDS 24 hour inspection request line503-823-7000
Residential information for
one and two family dwelling503-823-7388
General Permit Processing and
Fee Estimate info503-823-7357
City of Portland TTY503-823-6868

Job Name/Location:

Tag No.:

Date:

For: ☐ File ☐ Resubmit
☐ Approval ☐ Other _____

PO No.:

Architect:

GC:

Engr:

Mech:

Rep:

(Company)

(Project Manager)

ARUM241DTE5

Multi V™ 5 with LGRED° 460V ODU

20 Ton Single Frame Heat Pump and Heat Recovery

Performance:

Cooling Mode:

Nominal Capacity (Btu/h)	233,100
Power Input (kW)	16.80

Heating Mode:

Nominal Capacity (Btu/h)	243,000
Power Input (kW)	17.75

Rated capacity is certified under AHRI Standard 1230. Ratings are subject to change without notice. Current certified ratings are available at www.ahridirectory.org.

Electrical:

Frame	ARUM241DTE5
Power Supply (V/Hz/Ø) ¹	460/60/3
MOP (A)	50
MCA (A)	41.4
Rated Amps (A)	37.2
Compressor A (A)	16.9
Compressor B (A)	15.3
Fan (A)	5.0

Piping:²

Frame	ARUM241DTE5
Refrigerant Charge (lbs.)	37.5
Liquid (in., O.D.)	5/8 Braze
High Pressure Vapor (Heat Recov only; in., O.D.)	1-1/8 Braze
Low Pressure Vapor (in., O.D.)	1-3/8 Braze

Standard Features:

- Advanced Smart Load Control
- Intelligent Heating
- HiPOR (High Pressure Oil Return)
- Smart Oil Control
- Night Quiet Operation
- Fault Detection and Diagnosis
- Active Refrigerant Control
- Variable Heat Path Exchanger
- Subcooling and Vapor Injection Control
- Liquid Cooled Inverter Controller
- Advanced Comfort Cooling

Optional Accessories:

- ☐ Air Guide - ZAGDKA52A (2 required)
- ☐ Hail Guard Kit - ZHGDKA52A (2 required)
- ☐ Low Ambient Baffle Kit - ZLABKA52A (2), Control Kit - PRVC2 (1 per system)
- ☐ Base Pan Heater - ZPLT2A51A

****Cooling range with the Low Ambient Baffle Kit (sold separately) is -9.9°F to +122°F and is achieved only when all indoor units are operating in cooling mode. Does not impact heat recovery system synchronous operating range.**

For continual product development, LG reserves the right to change specifications without notice.

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**Operating Range:**

Cooling (°F DB)**	5 - 122
Heating (°F WB)	-22 - 61
Synchronous	
Cooling Based (°F DB)	14 - 81
Heating Based (°F WB)	14 - 61

Unit Data:

Refrigerant Type	R410A
Refrigerant Control	EEV
Max. Number of Indoor Units	39
Sound Pressure ⁴ dB(A)	65.0
Weight	
Frame	ARUM241DTE5
Net (lbs.)	666
Shipping (lbs.)	694
Communication Cable (No x AWG) ⁵	2 x 18
Heat Exchanger Coating	Black Coated Fin™

Compressor:

Type	HSS DC Scroll
Quantity	2
Oil / Type	PVE / FVC68D

Fan:

Type	Propeller
Quantity	2
Motor Drive	Brushless Digitally Controlled Direct
Air Flow Rate (CFM)	11,300

Notes:

1. Power wiring cable size must comply with the applicable local and national codes. Cables terminate at each frame.
2. For main pipe segment size, refer to the LATS Multi V tree diagram.
3. The combination ratio must be between 50-130%.
4. Sound pressure levels are tested in an anechoic chamber under ISO Standard 3745 for the combination of outdoor units.
5. Communication cable between ODU and IDUs must be 2-conductor, 18 AWG, twisted, stranded, and shielded. Ensure the communication cable shield is properly grounded to the Master ODU chassis only. Do not ground the communication cable at any other point. Wiring must comply with all applicable local and national codes.
6. Acceptable operating voltage: 414 - 528V
7. Low ambient performance with LGRED° heat technology is included in Multi V 5 units produced after February 2019.

LGRED°
Powerful Heat Technology



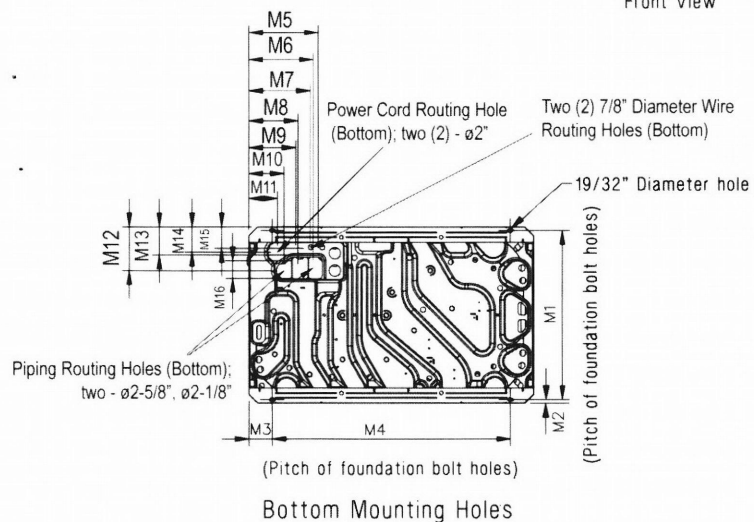
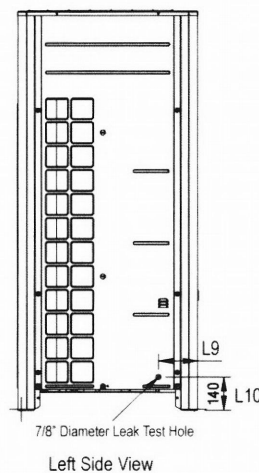
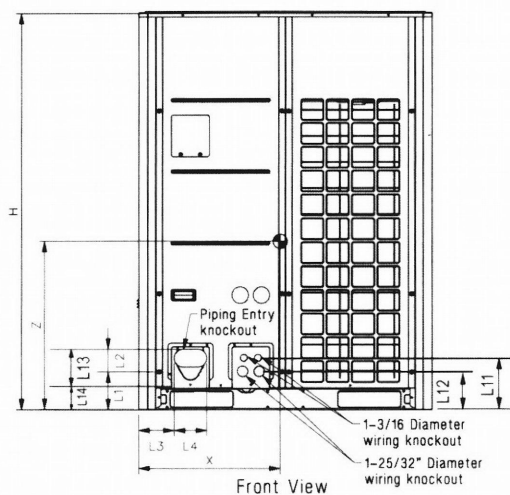
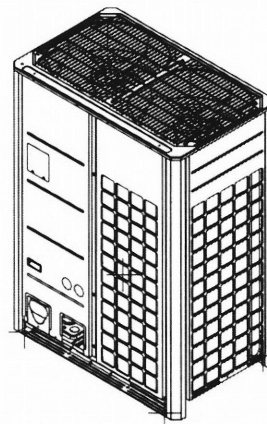
Inverter



SB_MultiV_5_ODU_ARUM241DTE5_2019_01_10_085719

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20 Ton Single Frame Heat Pump and Heat Recovery



W	48-13/16"
H	66-17/32"
D	29-29/32"
L1	6-5/16"
L2	3-3/4"
L3	5-29/32"
L4	5-13/32"
L5	2-25/32"
L6	24-9/32"
L7	2-25/32"
L8	4-1/32"
L9	6-1/2"
L10	5-9/16"
L11	8-5/8"
L12	6-7/16"
L13	9-15/16"
L14	3-5/8"

Center of Gravity

X	$23-7/32"$
Y	$15-5/8"$
Z	$25-9/16"$

All dimensions have a tolerance of ± 0.25 in.
[Unit: inch]



\bullet = Center of Gravity

M1	28-25/32"
M2	5/8"
M3	3-15/16"
M4	40-15/16"
M5	11-15/16"
M6	11-1/16"
M7	10-1/2"
M8	8-7/16"
M9	8-1/8"
M10	6-1/16"
M11	4-15/16"
M12	7-1/2"
M13	4-13/16"
M14	4-5/16"
M15	3-5/8"
M16	3"