



HIGH EFFICIENCY FILTER BOX ENGINEERING MANUAL

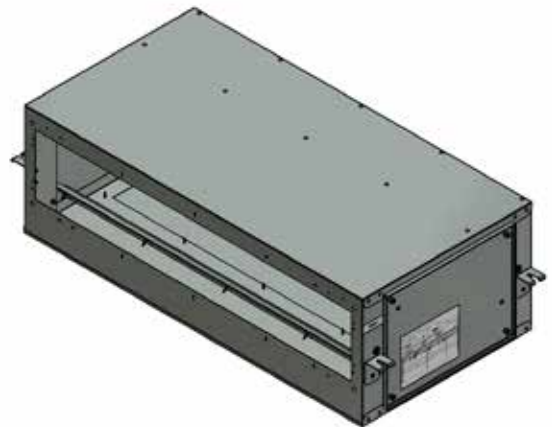
For LG High Static Ducted Indoor Units

ZFBXBH01A

ZFBXBG01A

ZFBXBR01A

ZFBXB801A



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EM_HighEfficiencyFilterBox_7_16

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About LG Electronics, Inc.

LG Electronics, Inc. is a global leader and technology innovator in consumer electronics, mobile communications, and home appliances. LG Electronics comprises four business units—Home Entertainment, Mobile Communications, Home Appliance, and Air Conditioning and Energy Solutions. LG is one of the world's leading producers of flat panel televisions, audio and video products, mobile handsets, compressors, air conditioners, and washing machines. LG's commercial air conditioning business unit was established in 1968 and has built its lineup of residential and commercial products to include VRF, Multi-Zone systems, Duct Free Split Systems, Packaged Terminal Air Conditioners (PTACs), and room air conditioners. In 2011, the air conditioning and energy solutions business unit grew to include LED lighting and solar products. For more information visit www.lg.com.

Variable Refrigerant Flow (VRF) Technology

In the early 1980s, VRF technology was introduced to the world as an alternative method of cooling and heating in commercial structures designed to minimize energy consumption. VRF systems have become the system of choice for designers internationally because these systems offer better comfort at substantially lower operating costs when compared to traditional HVAC systems. Older

systems are being replaced with newer more efficient systems making VRF a viable option. Today, VRF is gaining popularity in the United States. LG air-source systems offer the opportunity to eliminate ductwork in the same configuration. The systems offer zoning without the need for zone damper systems. The advanced controls provide exceptional building dehumidification and temperature control and can rapidly adapt system operating parameters to the ever changing building load.

Quality Commitment

LG is committed to the success of every Multi V project by providing the best industry technical support during project engineering, installation, and commissioning. LG offers a variety of classes designed for engineers, architects, installers, and servicers on Multi V installation. Classes are conducted at LG's training centers and in field locations at various times throughout the year and upon special request.



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Air Technology Products

- Washable/Reusable Filters
- High Efficiency Filter Boxes
- Air Cleaners

Washable/Reusable Filters

LG provides washable, long life, resin-mesh filters from the factory on all high static ducted indoor units.

High Efficiency Filter Boxes

Choose the quality particulate removal that is right for you. LG's line of high capacity filter boxes are engineered to accept any brand of standard MERV rated particulate filters. Filter boxes are designed for use with LG's line of high static ducted indoor units.

Air Cleaners

Lead the industry's move from simple filtration to state-of-the-art air cleaning.

When simple medium - large size particulate filtration is not enough, LG offers two models of low profile high performance air cleaners. **Going beyond MERV 13 performance**, with Environmental Dynamics, Ltd., LG has raised the bar and set a new standard for delivering clean air for VRF applications. In addition to removing MERV 13 size particulate, LG's air cleaners also capture ultra fine 0.1 μm -0.3 μm particulate and dangerous gas-phase contaminants such as volatile organic compounds, vehicle exhaust, smoke, and various biological contaminants.

With a nearly negligible air pressure drop over the life of the filter the air cleaner will provide years of service between media changes.

For more information on our all our air technology products go to www.lg-vrf.com, select Multi-V Products and then select Air Technologies.

Filter Box Features

Generous filter surface area

- Extends filter life
- Quiet - low face velocity
- Minimizes fan energy consumption

Quality construction

- 20-gauge galvanized steel
- Gasketed panel construction
- Gasketed access panel

Versatile Design

- Multiple configurations accommodate all ducted applications
- Horizontal Discharge - engineered to connect directly to the indoor unit

Filter is field provided - you choose the MERV rating

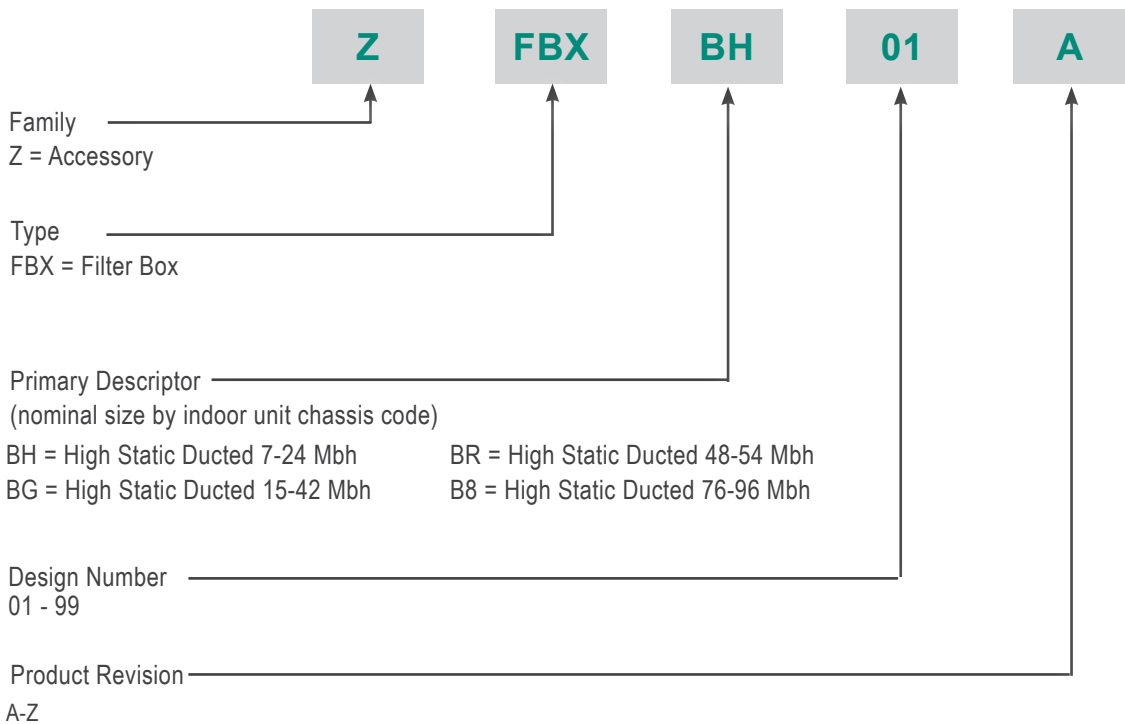
- Engineered to accommodate all industry standard MERV rated filters
- Accepts standard size cartridge filters
 - 1 or 2-inch deep on boxes less than 4-ton nominal capacity
 - 2-inch deep for boxes \geq 4-ton nominal capacity

Easy Installation

- Inlet flange connection
- Four hanger brackets
- Quick-mate connection with all High Static Ducted indoor units
- Pre-drilled matching holes accept field provided #8-#10 self-tap screws

Easy Filter Maintenance Access

- Door on the right side (standard), left side (optional)
- Removable gasketed access panel with safety lanyard
- Quick release, tool-less, 1/2 turn thumb wheel catches
- Filter removal pull strip provides easy filter removal without disturbing captured particulate



Configuration Options*

Right Side Filter Access Panel

Figure 1: Rear

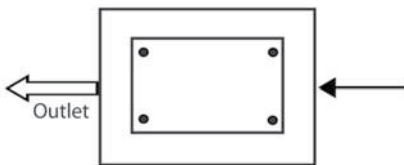


Figure 2: Bottom

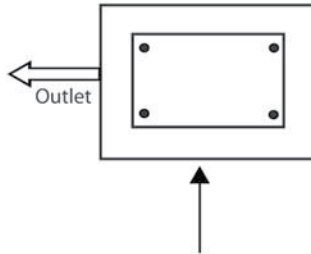
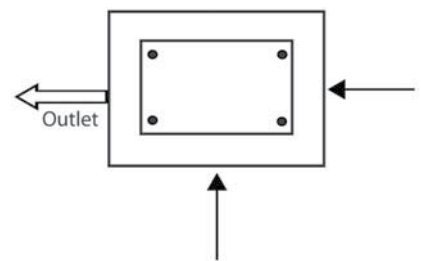


Figure 3: Rear/Bottom



Left Side Filter Access Panel

Figure 4: Rear

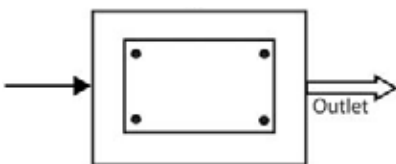


Figure 5: Top

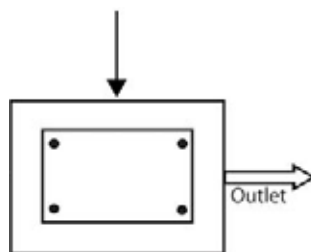
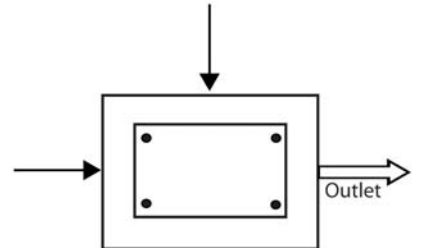


Figure 6: Rear/Top



*All changes are applied in the field. No factory configuration options available.

GENERAL DATA



High Efficiency Filter Box

ZFBXBH01A, ZFBXBG01A, ZFBXBR01A, ZFBB801A

Table 1: High Efficiency Filter Box General Data

| Type | High Efficiency Filter Box | | | |
|--------------------------------------|----------------------------|----------------------------|----------------------------|----------------------|
| | ZFBXBH01A | ZFBXBG01A | ZFBXBR01A | ZFBXB801A |
| Nom Dimensions W x D x H | 40 x 22 x 13 | 45 x 22 x 14 | 47-9/16 x 31-1/16 x 17-1/2 | 57-7/8 x 28 x 20-5/8 |
| Return Duct Connection (in) | 1/2 Flange | 1/2 Flange | 1/2 Flange | 1/2 Flange |
| Hanger Quantity | 4 | 4 | 4 | 4 |
| Net Weight (lbs) | 43 | 50 | 63 | 72 |
| Shipping Weight ¹ (lbs) | Not Available | Not Available | Not Available | Not Available |
| Air Flow Range (CFM) | 247-646 | 915-1218 | 1176-1582 | 2260-2542 |
| Nominal Face Velocity (FPM) | 64-166 | 183-244 | 147-198 | 283-318 |
| Filters | Field Supplied | Field Supplied | Field Supplied | Field Supplied |
| Nominal Depth ² (in) | 1 & 2 | 1 & 2 | 2 | 2 |
| Filter Quantity & Size (in) | 2 - 14 x 20 | 1 - 16 x 20 1 - 16 x 25 | 2 - 24 x 24 | 2 - 24 x 24 |
| Nominal Face Area (ft ²) | 3.89 | 5.0 | 8.0 | 8.0 |

¹Filter boxes are shipped in quantity by project. Individual box shipping weight is not available.

²The FBXBH01A and FBXBG01A models ship configured to accept 1-inch deep filter. Boxes are field convertible to accept 2-inch. Refer to the High Static Ducted Indoor Unit Installation Manual for conversion procedure.

Table 2: LG High Static Ducted Indoor Unit Match Matrix

| Model | ARNU073BHA2 | ARNU093BHA2 | ARNU123BHA2 | ARNU153BHA2 | ARNU153BGA2 | ARNU183BHA2 | ARNU183BGA2 | ARNU243BHA2 | ARNU243BGA2 | ARNU283BGA2 | ARNU363BGA2 | ARNU483BRA2 | ARNU543BRA2 | ARNU763B8A2 | ARNU963B8A2 |
|-----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| FBXBH01A | X | X | X | X | | X | | X | | | | | | | |
| FBXBG01A | | | | | X | | X | | X | X | X | | | | |
| ZFBXBR01A | | | | | | | | | | | | X | X | | |
| ZFBB801A | | | | | | | | | | | | | | X | X |

Table 3: High Efficiency Filter Box Air Pressure Drop (in-wg) with MERV-7 Filters

| Filter Box Model | LG Indoor Unit Model | Filter Box Face Area | High Mode/High Fan Speed | | | MERV-7 | | | | | |
|------------------|--------------------------|----------------------|--------------------------|--------------------------------|----------------------|----------------------|-----------------------------|--------------------------|----------------------|-----------------------------|--------------------------|
| | | | | | | 1 Inch Deep | | | 2 Inch Deep | | |
| | | | Total Static Pressure | Fan Setting Value ¹ | Design Airflow (CFM) | APD w/ Clean Filters | ESP available for field use | Dirty Filter Cond. Δ APD | APD w/ Clean Filters | ESP available for field use | Dirty Filter Cond. Δ APD |
| FBXBH01A | ARUN073BHA2 | 3.9 | 0.47 | 137 | 300 | 0.054 | 0.166 | 0.250 | 0.052 | 0.168 | 0.250 |
| | ARNU093BHA2 | 3.9 | 0.47 | 141 | 353 | 0.068 | 0.152 | 0.250 | 0.064 | 0.156 | 0.250 |
| | ARNU123BHA2 | 3.9 | 0.47 | 146 | 424 | 0.089 | 0.131 | 0.250 | 0.081 | 0.139 | 0.250 |
| | ARNU153BHA2 | 3.9 | 0.47 | 150 | 477 | 0.105 | 0.115 | 0.250 | 0.094 | 0.126 | 0.250 |
| | ARNU183BHA2 | 3.9 | 0.47 | 150 | 547 | 0.128 | 0.092 | 0.250 | 0.112 | 0.108 | 0.250 |
| | ARNU243BHA2 | 3.9 | 0.47 | 150 | 646 | 0.163 | 0.057 | 0.250 | 0.139 | 0.081 | 0.250 |
| FBXBG01A | ARNU153BGA2 | 5.0 | 0.62 | 139 | 487 | 0.083 | 0.287 | 0.250 | 0.048 | 0.322 | 0.250 |
| | ARNU183BGA2 | 5.0 | 0.62 | 141 | 537 | 0.093 | 0.277 | 0.250 | 0.055 | 0.315 | 0.250 |
| | ARNU243BGA2 | 5.0 | 0.62 | 111 | 671 | 0.122 | 0.248 | 0.250 | 0.074 | 0.296 | 0.250 |
| | ARNU283BGA2 | 5.0 | 0.55 | 160 | 915 | 0.178 | 0.122 | 0.250 | 0.114 | 0.186 | 0.250 |
| | ARNU363BGA2 ² | 5.0 | 0.47 | 160 | 1141 | 0.241 | 0.000 | 0.229 | 0.158 | 0.062 | 0.212 |
| | ARNU423BGA2 | -- | Not Available | | | Not Available | | | 0.174 | 0.000 | 0.000 |
| FBXBR01A | ARNU483BRA2 | Not Available | | | Not Available | | | 0.138 | 0.392 | 0.000 | |
| | ARNU543BRA2 | Not Available | | | Not Available | | | 0.169 | 0.201 | 0.000 | |
| FBXB801A | ARNU763B8A2 | Not Available | | | Not Available | | | 0.198 | 0.472 | 0.000 | |
| | ARNU963B8A2 | Not Available | | | Not Available | | | 0.270 | 0.320 | 0.000 | |

¹ Modifying the fan speed may impact the cataloged sound rating.

² 0.00 in-wg external static pressure applications only.

Air pressure drop information provided should not be used for system design. LG Electronics does not endorse any brand or model of particulate filter cartridges. Filters used during air pressure drop testing were chosen at random based on what was available at that time. Air pressure drop tests conducted using Air Handler brand filters - www.grainger.com manufactured for Dayton Electric Mfg. Company, Niles IL

¹" and 2" MERV-7, MERV-11 Standard Capacity Model

¹" and 2" MERV-13 Green Pleat Model

When specifying a brand or model of filter, always refer to the filter manufacturer's air pressure drop technical data to specify clean and change filter air pressure drop conditions.

GENERAL DATA



Fan Setting Data

MERV-11 Filters

Table 4: High Efficiency Filter Box Air Pressure Drop (in-wg) with MERV-11 Filters

| Filter Box Model | LG Indoor Unit Model | Filter Box Face Area | High Mode/High Fan Speed | | | MERV-11 | | | | | |
|------------------|--------------------------|----------------------|--------------------------|--------------------------------|----------------------|----------------------|-----------------------------|--------------------------|----------------------|-----------------------------|--------------------------|
| | | | Total Static Pressure | Fan Setting Value ¹ | Design Airflow (CFM) | 1 Inch Deep | | | 2 Inch Deep | | |
| | | | | | | APD w/ Clean Filters | ESP available for field use | Dirty Filter Cond. Δ APD | APD w/ Clean Filters | ESP available for field use | Dirty Filter Cond. Δ APD |
| FBXBH01A | ARUN073BHA2 | 3.9 | 0.47 | 137 | 300 | 0.048 | 0.172 | 0.250 | 0.036 | 0.184 | 0.250 |
| | ARNU093BHA2 | 3.9 | 0.47 | 141 | 353 | 0.060 | 0.160 | 0.250 | 0.047 | 0.173 | 0.250 |
| | ARNU123BHA2 | 3.9 | 0.47 | 146 | 424 | 0.078 | 0.142 | 0.250 | 0.064 | 0.156 | 0.250 |
| | ARNU153BHA2 | 3.9 | 0.47 | 150 | 477 | 0.093 | 0.127 | 0.250 | 0.077 | 0.143 | 0.250 |
| | ARNU183BHA2 | 3.9 | 0.47 | 150 | 547 | 0.115 | 0.105 | 0.250 | 0.095 | 0.125 | 0.250 |
| | ARNU243BHA2 | 3.9 | 0.47 | 150 | 646 | 0.148 | 0.072 | 0.250 | 0.121 | 0.099 | 0.250 |
| FBXBG01A | ARNU153BGA2 | 5.0 | 0.62 | 139 | 487 | 0.065 | 0.305 | 0.250 | 0.036 | 0.334 | 0.250 |
| | ARNU183BGA2 | 5.0 | 0.62 | 141 | 537 | 0.074 | 0.296 | 0.250 | 0.042 | 0.328 | 0.250 |
| | ARNU243BGA2 | 5.0 | 0.62 | 111 | 671 | 0.099 | 0.271 | 0.250 | 0.058 | 0.312 | 0.250 |
| | ARNU283BGA2 | 5.0 | 0.55 | 160 | 915 | 0.150 | 0.150 | 0.250 | 0.095 | 0.205 | 0.250 |
| | ARNU363BGA2 ² | 5.0 | 0.47 | 160 | 1141 | 0.205 | 0.000 | 0.265 | 0.137 | 0.083 | 0.250 |
| | ARNU423BGA2 | -- | Not Available | | | Not Available | | | 0.153 | 0.000 | 0.237 |
| FBXBR01A | ARNU483BRA2 | Not Available | | | Not Available | | | 0.107 | 0.423 | 0.250 | |
| | ARNU543BRA2 | Not Available | | | Not Available | | | 0.133 | 0.237 | 0.250 | |
| FBXB801A | ARNU763B8A2 | Not Available | | | Not Available | | | 0.156 | 0.514 | 0.250 | |
| | ARNU963B8A2 | Not Available | | | Not Available | | | 0.219 | 0.371 | 0.250 | |

¹ Modifying the fan speed may impact the cataloged sound rating.

² 0.00 in-wg external static pressure applications only.

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¹ and ² MERV-7, MERV-11 Standard Capacity Model

¹ and ² MERV-13 Green Pleat Model

When specifying a brand or model of filter, always refer to the filter manufacturer's air pressure drop technical data to specify clean and change filter air pressure drop conditions.



Table 5: High Efficiency Filter Box Air Pressure Drop (in-wg) with MERV-13 Filters

| Filter Box Model | LG Indoor Unit Model | Filter Box Face Area | High Mode/High Fan Speed | | | MERV-13 | | | | | |
|------------------|--------------------------|----------------------|--------------------------|--------------------------------|----------------------|----------------------|-----------------------------|--------------------------|----------------------|-----------------------------|--------------------------|
| | | | | | | 1 Inch Deep | | | 2 Inch Deep | | |
| | | | Total Static Pressure | Fan Setting Value ¹ | Design Airflow (CFM) | APD w/ Clean Filters | ESP available for field use | Dirty Filter Cond. Δ APD | APD w/ Clean Filters | ESP available for field use | Dirty Filter Cond. Δ APD |
| FBXBH01A | ARUN073BHA2 | 3.9 | 0.47 | 137 | 300 | 0.077 | 0.143 | 0.250 | 0.048 | 0.172 | 0.250 |
| | ARNU093BHA2 | 3.9 | 0.47 | 141 | 353 | 0.094 | 0.126 | 0.250 | 0.060 | 0.160 | 0.250 |
| | ARNU123BHA2 | 3.9 | 0.47 | 146 | 424 | 0.118 | 0.102 | 0.250 | 0.078 | 0.142 | 0.250 |
| | ARNU153BHA2 | 3.9 | 0.47 | 150 | 477 | 0.137 | 0.083 | 0.250 | 0.093 | 0.127 | 0.250 |
| | ARNU183BHA2 | 3.9 | 0.47 | 150 | 547 | 0.163 | 0.057 | 0.250 | 0.115 | 0.105 | 0.250 |
| | ARNU243BHA2 | 3.9 | 0.47 | 150 | 646 | 0.202 | 0.018 | 0.250 | 0.148 | 0.072 | 0.250 |
| FBXBG01A | ARNU153BGA2 | 5.0 | 0.62 | 139 | 487 | 0.090 | 0.280 | 0.250 | 0.053 | 0.317 | 0.250 |
| | ARNU183BGA2 | 5.0 | 0.62 | 141 | 537 | 0.101 | 0.269 | 0.250 | 0.060 | 0.310 | 0.250 |
| | ARNU243BGA2 | 5.0 | 0.62 | 111 | 671 | 0.132 | 0.238 | 0.250 | 0.081 | 0.289 | 0.250 |
| | ARNU283BGA2 | 5.0 | 0.55 | 160 | 915 | 0.192 | 0.108 | 0.250 | 0.123 | 0.177 | 0.250 |
| | ARNU363BGA2 ² | 5.0 | 0.47 | 160 | 1141 | 0.258 | 0.000 | 0.212 | 0.169 | 0.051 | 0.250 |
| | ARNU423BGA2 | -- | Not Available | | | Not Available | | | 0.186 | 0.000 | 0.204 |
| FBXBR01A | ARNU483BRA2 | Not Available | | | Not Available | | | 0.150 | 0.380 | 0.250 | |
| | ARNU543B8A2 | Not Available | | | Not Available | | | 0.196 | 0.174 | 0.250 | |
| FBXB801A | ARNU763B8A2 | Not Available | | | Not Available | | | 0.209 | 0.461 | 0.250 | |
| | ARNU963B8A2 | Not Available | | | Not Available | | | 0.297 | 0.293 | 0.250 | |

¹ Modifying the fan speed may impact the cataloged sound rating.

² 0.00 in-wg external static pressure applications only.

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¹" and 2" MERV-7, MERV-11 Standard Capacity Model

¹" and 2" MERV-13 Green Pleat Model

When specifying a brand or model of filter, always refer to the filter manufacturer's air pressure drop technical data to specify clean and change filter air pressure drop conditions.

PERFORMANCE DATA



ZFBXBH01A, ZFBXBG01A

Figure 1: ZFBXBH01A Filter box air pressure drop with various filter cartridges

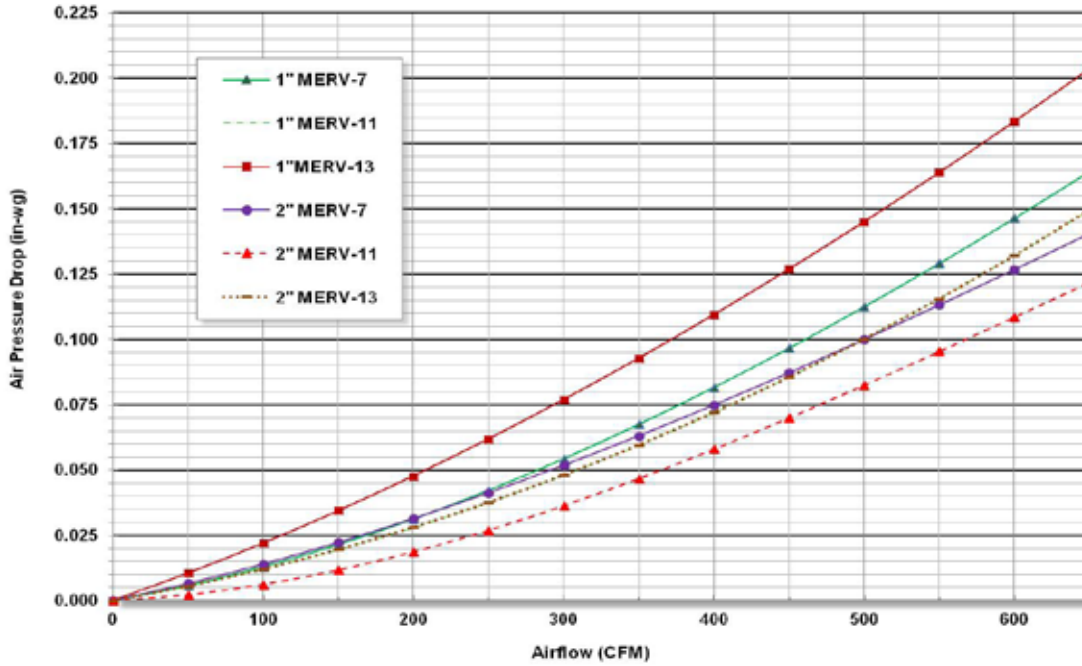
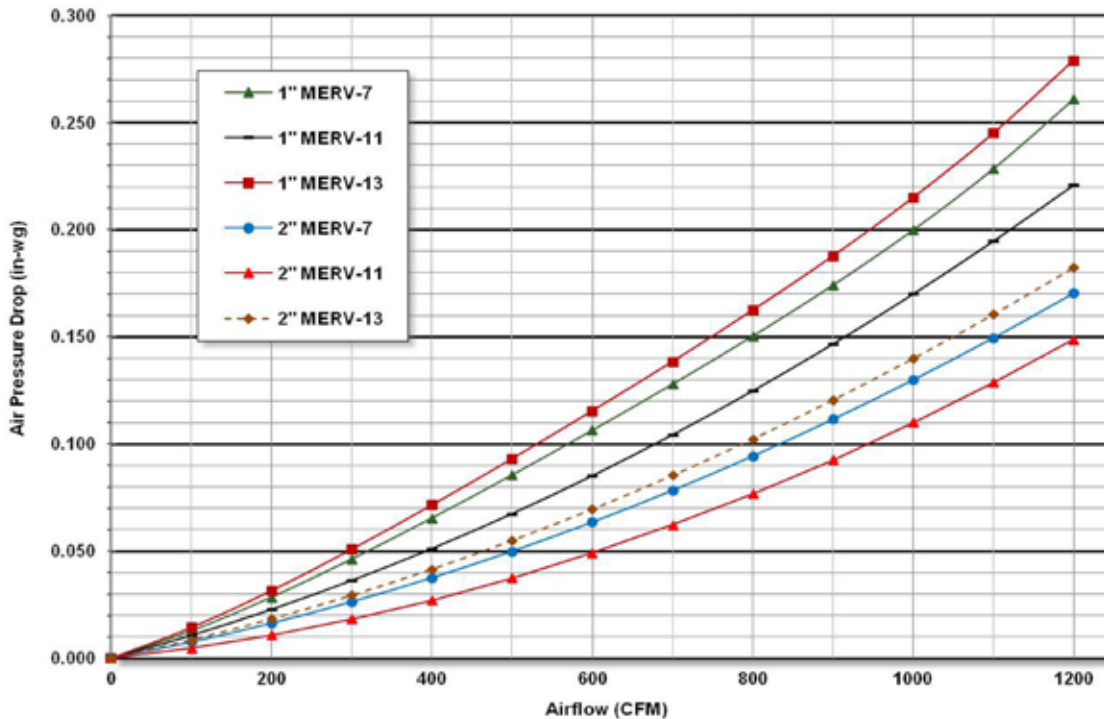


Figure 2: ZFBXBG01A Filter box air pressure drop with various filter cartridges



Air pressure drop information provided should not be used for system design. LG Electronics does not endorse any brand or model of particulate filter cartridges. Filters used during air pressure drop testing were chosen at random based on what was available at that time. Air pressure drop tests conducted using Air Handler brand filters - www.grainger.com manufactured for Dayton Electric Mfg. Company, Niles IL

1" and 2" MERV-7, MERV-11 Standard Capacity Model
 1" and 2" MERV-13 Green Pleat Model

When specifying a brand or model of filter, always refer to the filter manufacturer's air pressure drop technical data to specify clean and change filter air pressure drop conditions.

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Figure 3: ZFBXBR01A Filter box air pressure drop with various filter cartridges

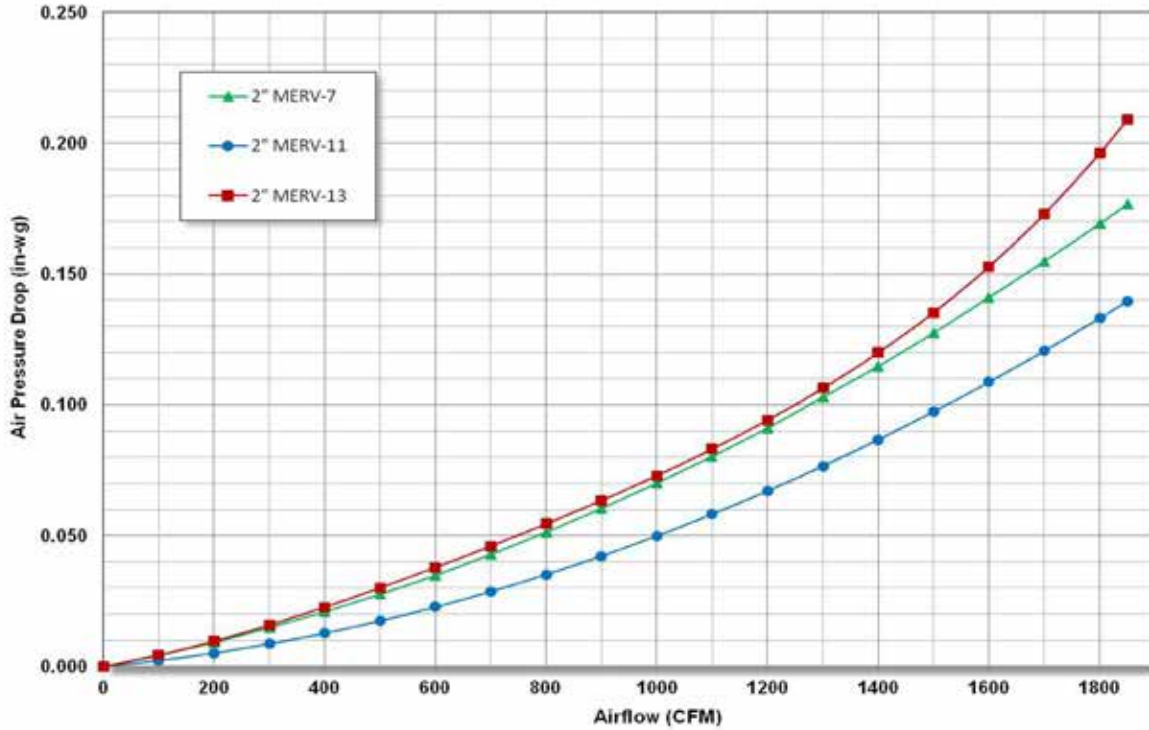
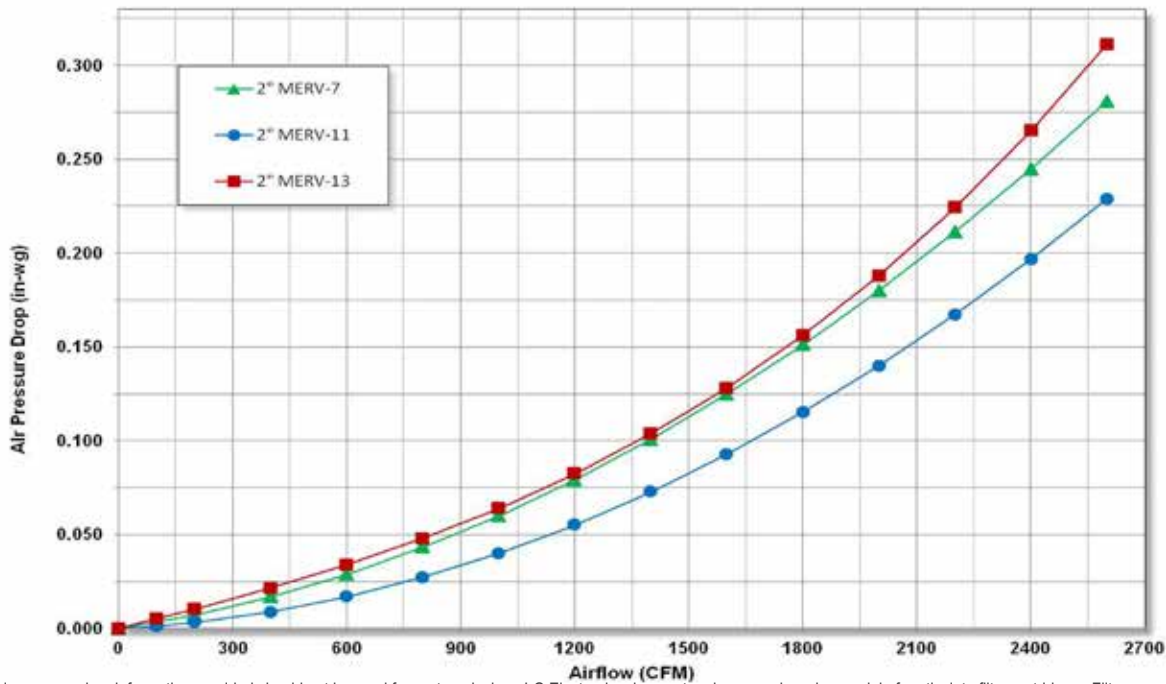


Figure 4: ZFBXB801A Filter box air pressure drop with various filter cartridges



Air pressure drop information provided should not be used for system design. LG Electronics does not endorse any brand or model of particulate filter cartridges. Filters used during air pressure drop testing were chosen at random based on what was available at that time. Air pressure drop tests conducted using Air Handler brand filters - www.grainger.com manufactured for Dayton Electric Mfg. Company, Niles IL

1" and 2" MERV-7, MERV-11 Standard Capacity Model
 1" and 2" MERV-13 Green Pleat Model

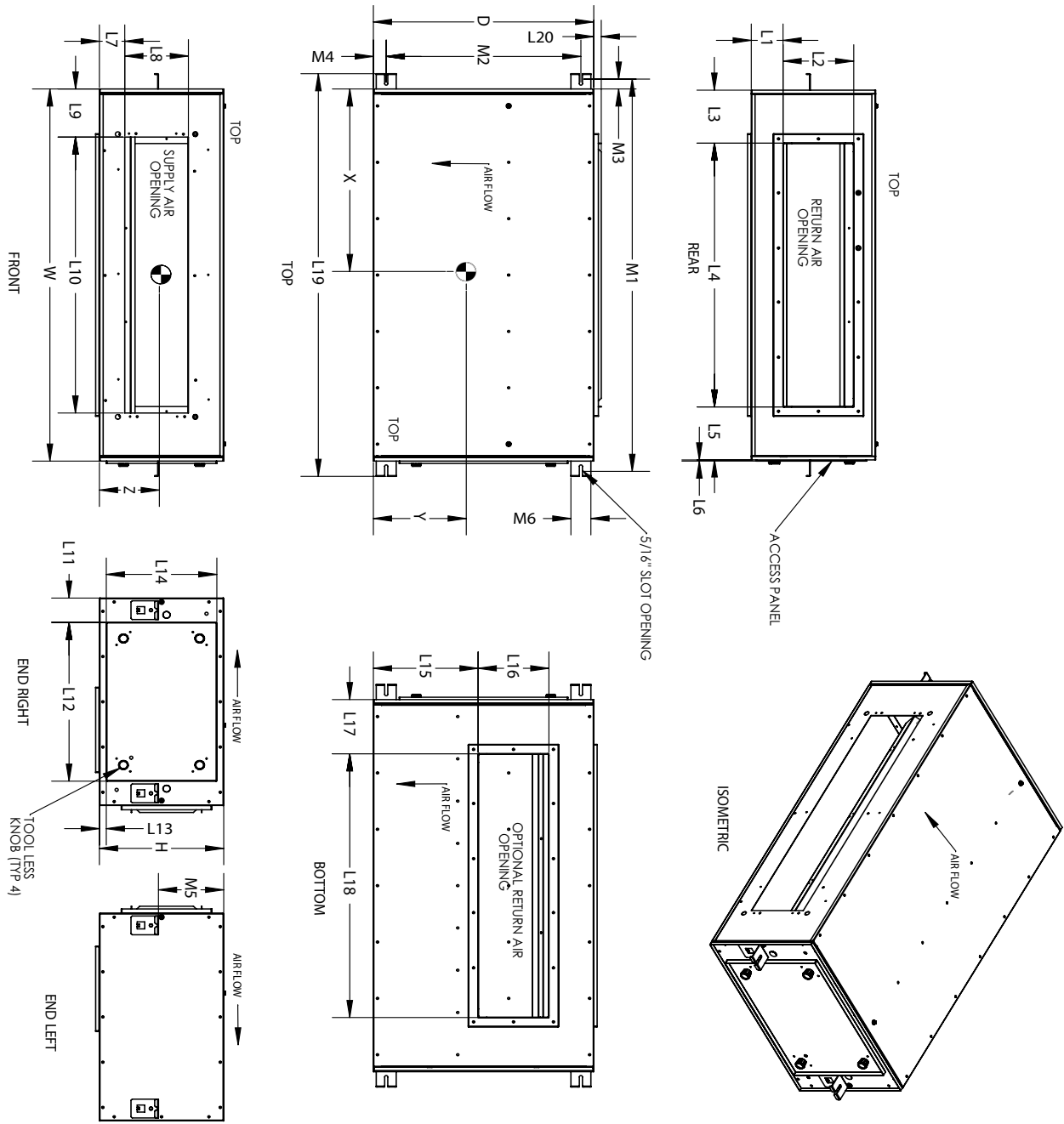
When specifying a brand or model of filter, always refer to the filter manufacturer's air pressure drop technical data to specify clean and change filter air pressure drop conditions.

CUT SHEET



ZFBXBH01A

For Use with LG BH Chassis High Static Indoor Units



DIMENSIONS (IN.)

| | |
|-----|----------|
| W | 39-9/16 |
| D | 22-1/16 |
| H | 12-1/2 |
| L1 | 2-3/16 |
| L2 | 6-15/16 |
| L3 | 5-3/4 |
| L4 | 28 |
| L5 | 5-3/4 |
| L6 | 1/4 |
| L7 | 2-1/2 |
| L8 | 6-3/8 |
| L9 | 5-1/8 |
| L10 | 29-3/8 |
| L11 | 2-5/8 |
| L12 | 16-15/16 |
| L13 | 11/16 |
| L14 | 11-1/16 |
| L15 | 10-7/16 |
| L16 | 7-1/16 |
| L17 | 5-3/4 |
| L18 | 28-1/16 |
| L19 | 42-7/8 |
| L20 | 3/4 |
| M1 | 41-3/4 |
| M2 | 19-1/2 |
| M3 | 1-1/16 |
| M4 | 1-5/16 |
| M5 | 6-1/4 |
| M6 | 2 |

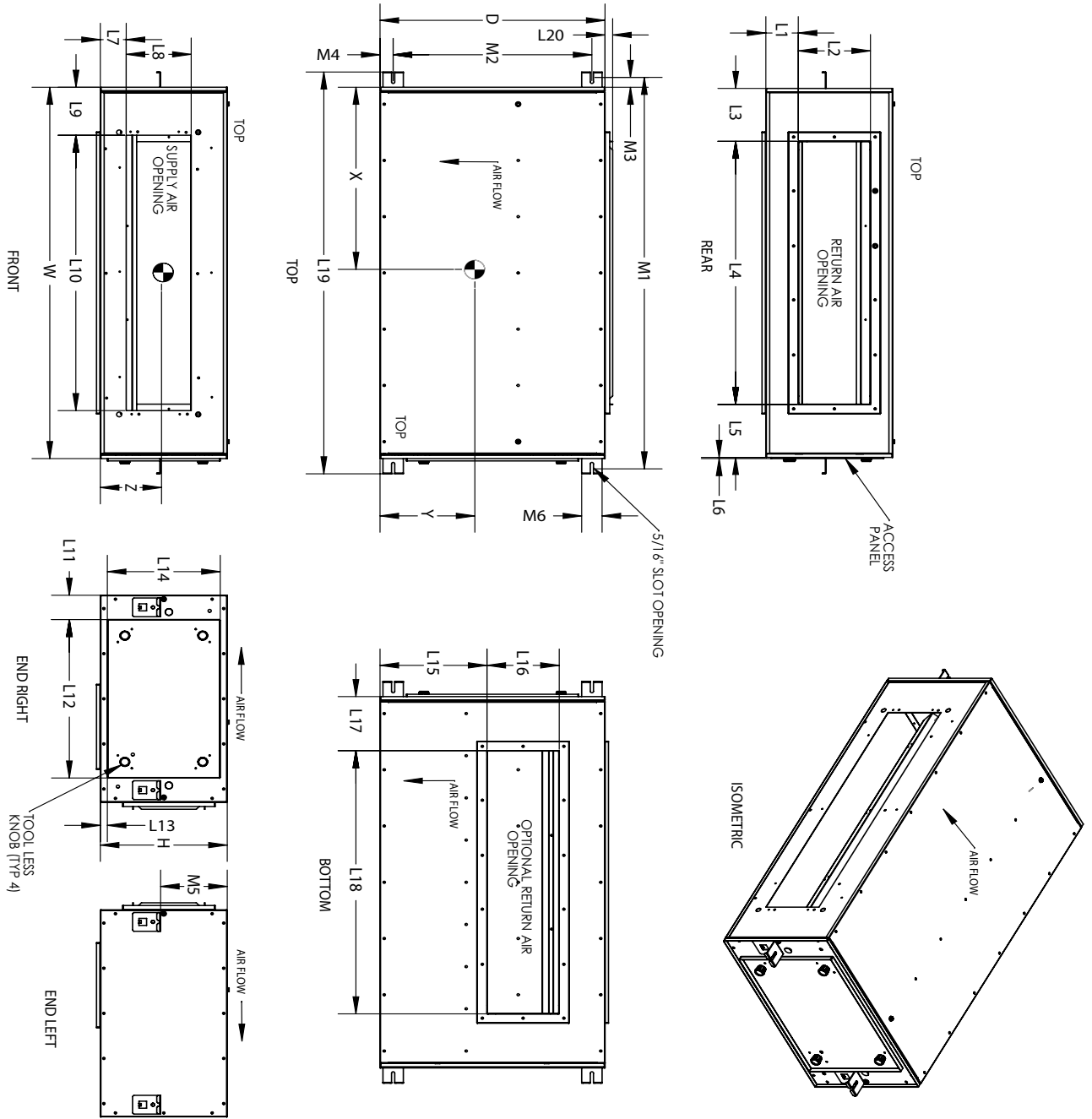
CENTER OF GRAVITY

| | |
|---|--------|
| X | 20-3/8 |
| Y | 11-3/8 |
| Z | 6-1/8 |

TOLERANCE
ALL DIMENSIONS ±0.25"

Field provided filter quantity and nominal size: 2'-14" x 20"
Note: Filter box accepts either 1" or 2" filters. Depending on the capacity of the mating indoor unit, the 1" size may not be allowed. Refer to the High Efficiency Filter Box Engineering or Installation Manual for details.





DIMENSIONS (IN.)

| | |
|-----|----------|
| W | 44-9/16 |
| D | 22-1/8 |
| H | 14-5/16 |
| L1 | 3-1/16 |
| L2 | 8-1/16 |
| L3 | 2-1/4 |
| L4 | 40-1/4 |
| L5 | 2-1/4 |
| L6 | 1/4 |
| L7 | 4-3/8 |
| L8 | 7-7/8 |
| L9 | 1-3/4 |
| L10 | 41-1/8 |
| L11 | 2-5/8 |
| L12 | 16-7/8 |
| L13 | 11/16 |
| L14 | 12-7/8 |
| L15 | 9-11/16 |
| L16 | 8-1/16 |
| L17 | 1-13/16 |
| L18 | 40-1/4 |
| L19 | 47-15/16 |
| L20 | 3/4 |
| M1 | 46-3/4 |
| M2 | 19-9/16 |
| M3 | 1-1/8 |
| M4 | 1-3/8 |
| M5 | 7-1/8 |
| M6 | 2 |

● CENTER OF GRAVITY

| | |
|---|--------|
| X | 22-3/4 |
| Y | 12-1/4 |
| Z | 7 |

TOLERANCE
ALL DIMENSIONS ±0.25"

Field provided filter quantity and nominal size:
1 - 16" x 20" & 1 - 16" x 25"

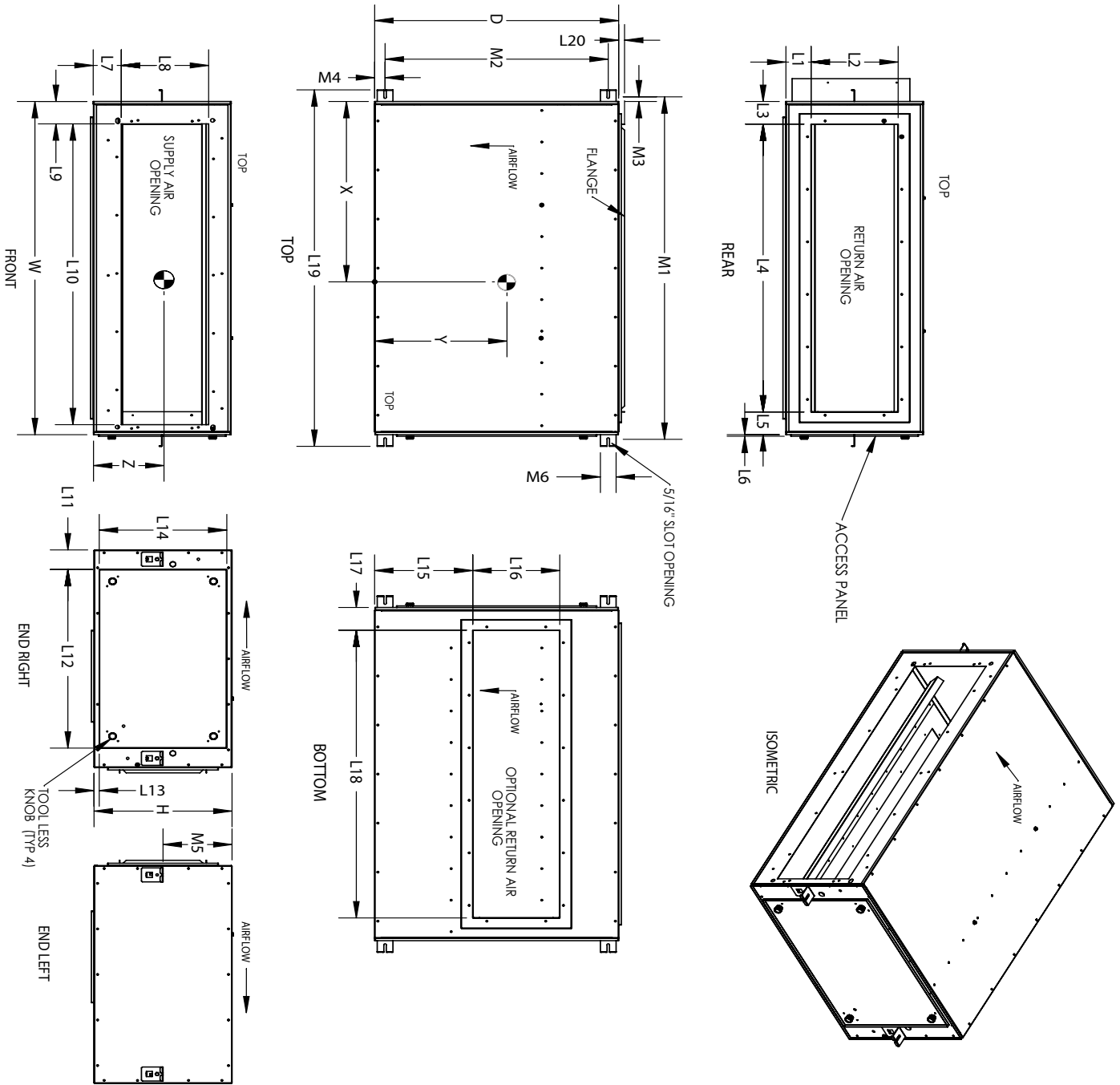
Note: Filter box accepts either "1" or "Z" filters. Depending on the capacity of the mating indoor unit, the "1" size may not be allowed. Refer to the High Efficiency Filter Box Engineering or Installation Manual for details.

CUT SHEET



ZFBXBR01A

For Use with LG BR Chassis High Static Indoor Units



DIMENSIONS (IN.)

| | |
|-----|----------|
| W | 47-9/16 |
| D | 31-1/16 |
| H | 17-7/16 |
| L1 | 3-1/8 |
| L2 | 11-1/8 |
| L3 | 3-1/8 |
| L4 | 41-1/8 |
| L5 | 3-1/8 |
| L6 | 1/4 |
| L7 | 3-9/16 |
| L8 | 11-1/8 |
| L9 | 3-3/16 |
| L10 | 42-15/16 |
| L11 | 2-3/4 |
| L12 | 25-1/2 |
| L13 | 5/8 |
| L14 | 16-1/4 |
| L15 | 12-7/16 |
| L16 | 11-1/16 |
| L17 | 3-1/4 |
| L18 | 41-1/16 |
| L19 | 50-7/8 |
| L20 | 3/4 |
| M1 | 49-3/4 |
| M2 | 28-7/16 |
| M3 | 1-1/16 |
| M4 | 1-3/8 |
| M5 | 8-11/16 |
| M6 | 2 |

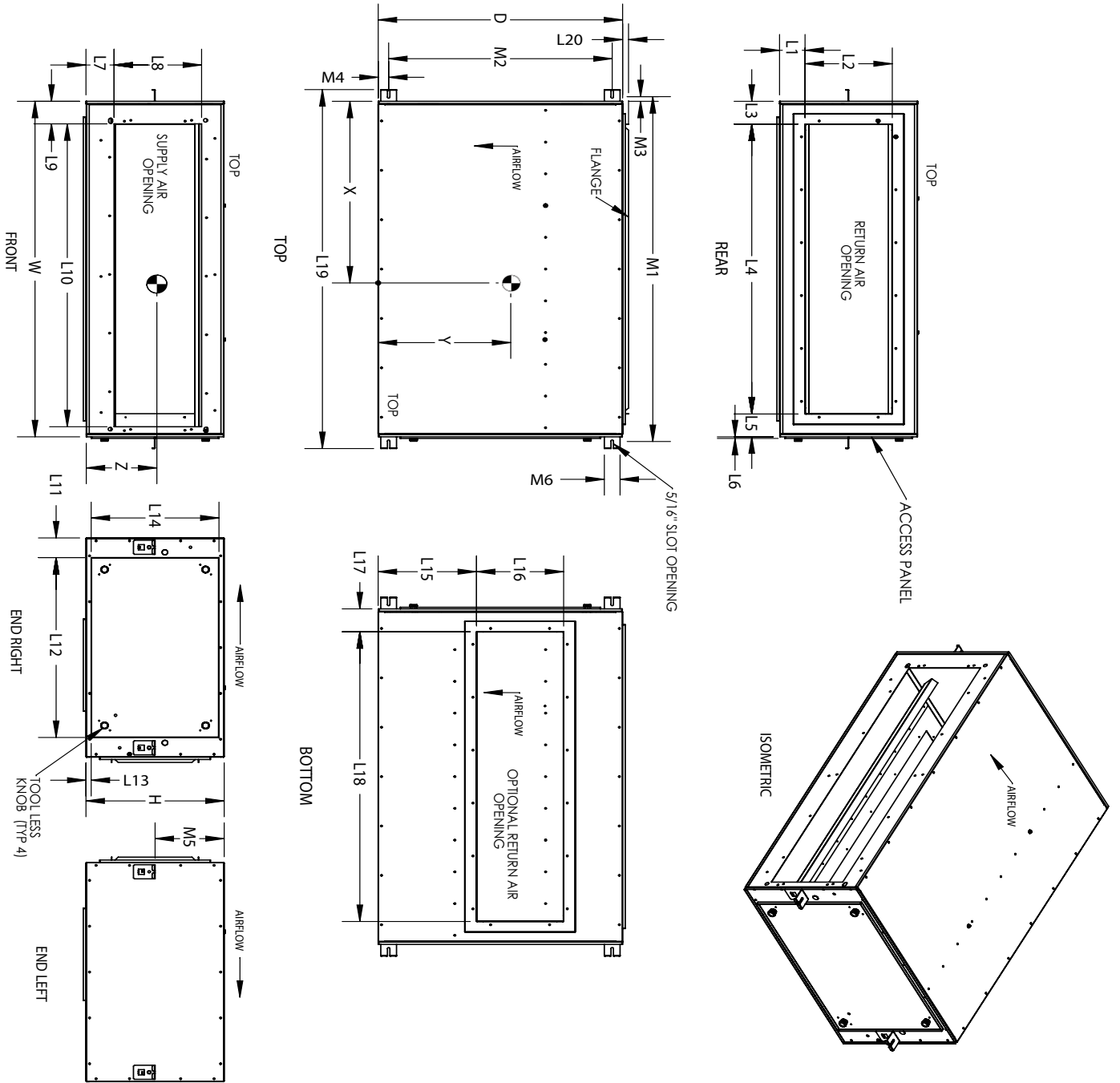
☉ CENTER OF GRAVITY

| | |
|---|--------|
| X | 24-1/2 |
| Y | 16-1/4 |
| Z | 8-5/8 |

TOLERANCE
ALL DIMENSIONS ±0.25"

Field provided filter quantity and nominal size:
2 - 24" x 24" x 2"
Note: "r" filter option is not available. 2" filter cartridges only.





DIMENSIONS (IN.)

| | |
|-----|----------|
| W | 57-5/8 |
| D | 28 |
| H | 20-11/16 |
| L1 | 2-5/8 |
| L2 | 15-7/16 |
| L3 | 1-5/16 |
| L4 | 54-15/16 |
| L5 | 1-5/16 |
| L6 | 5/16 |
| L7 | 3-1/2 |
| L8 | 15-3/8 |
| L9 | 1-3/8 |
| L10 | 54-3/4 |
| L11 | 2-1/2 |
| L12 | 23 |
| L13 | 11/16 |
| L14 | 19-1/4 |
| L15 | 10-1/16 |
| L16 | 15-7/16 |
| L17 | 1-5/16 |
| L18 | 54-15/16 |
| L19 | 61 |
| L20 | 3/4 |
| M1 | 59-13/16 |
| M2 | 25-7/16 |
| M3 | 1-1/16 |
| M4 | 1-5/16 |
| M5 | 10-3/8 |
| M6 | 2 |

☉ CENTER OF GRAVITY

| | |
|---|---------|
| X | 29-5/8 |
| Y | 28-3/4 |
| Z | 10-5/16 |

TOLERANCE
ALL DIMENSIONS ± 0.25"

Field provided filter quantity and nominal size:
2 - 24" x 24" x 2"
Note: 1" filter option is not available, 2" filter
cartridges only.

General

The High Efficiency Filter Boxes are manufactured at an ISO-9001 certified facility located in the United States. The boxes are engineered to mate directly to LG's High Static Ducted indoor units and ship fully assembled. Filter racks are sized to minimize the filter air pressure drop. The filter face velocity does not exceed 320 feet per minute.

Application Configurations

The filter box can be installed in an upright or inverted position. In the upright position, filter service access is from the side of the unit closest to the indoor unit control panel (right side). In the inverted position, filter access is from the side opposite the control panel (left side).

Housing

Structural components are single wall, constructed of heavy-gauge 20-gauge galvanized steel. Filter box side and end panels are directly attached to the top and bottom panels strengthening the entire unit assembly. The air inlet of the filter box shall be equipped with a duct flange connection. The filter box is configured with a canted filter rack at an angle of approximately 30-40 degrees from horizontal to maximize the dust holding capacity of the filter box minimizing the frequency of filter changes.

Gaskets and Seals

Factory provided gaskets are located on the inside surface of the access panel and the opposite end of the filter box to prevent air from bypassing the filter frame. Filter box models that use multiple filters in a single rack are engineered to slightly compress the filters end-to-end with the access panel closed to prevent air passing between filters.

Filter Access

The high efficiency filter box is provided with a filter retrieval tool. When pulled, easily extracts all filters from the mounting channel without the need to touch or pull soiled filters from the box minimizing the risk of disturbing captured particulate. Filters are accessed via a gasketed, removable access panel equipped with 1/2 turn, quick-release tool-less thumb knob catches. A factory mounted safety lanyard secures the access panel to the unit housing to prevent accidental dropping of the access panel while the box is being serviced.

Filter Condition Monitoring

The filter box is provided with two air pressure drop ports and plugs conveniently located next to the filter access panel designed to accept standard size pitot tubes provided by others. These ports are positioned to allow easy measurement of the filter air pressure drop using a field provided magnehelic gauge or inclined manometer. Optionally, filter cleanliness may be actively monitored. The two ports may be used to permanently mount field provided pitot tubes connected to a differential pressure meter.

Filter Media

Filters are not provided with the high capacity box. This feature provides the owner an opportunity to choose the MERV rating and brand of filter used in the box. Filter boxes accept standard-size filters. Filter box models are engineered to mate with LG High Static indoor units with a nominal cooling capacity range up to 3-1/2 tons (BH and BG chassis) and accept either one or two-inch deep filters. Filter boxes ship configured for 1-inch deep filters. Field conversion to accept 2-inch deep filters is required.

Models engineered to mate with LG High Static indoor units with a nominal cooling capacity range 4-tons and up (BR and B8 chassis) accept 2" deep filters.

Insulation

Filter Boxes are shipped without insulation. All insulation shall be field provided and externally applied.

Limited Warranty

All shipments are FOB manufacturing plant dock. Owner has the responsibility to receive and verify count and accuracy. All claims of shortages or damage must be made within 25 days by email to your LG sales representative. Products shall be warranted two years from date of shipment for any part found to be defective in material or workmanship. Warranty does not cover costs of labor for any adjustments or service calls, nor does it include the cost of labor for replacing defective parts or components. This warranty does not apply to any product or part thereof that has been subjected to misuse, abuse, neglect, accident or alteration.

Acronyms

Table 6: Table of Acronyms

| | |
|------|------------------------------------|
| BMS | Building Management System |
| CFM | Cubic Feet per Minute |
| FOB | Freight on Board |
| FPM | Feet Per Minute |
| MERV | Minimum Efficiency Reporting Value |
| VRF | Variable Refrigerant Flow |



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