



# Inverter Compressor Technology for Refrigerator

Reciprocating



# Why LG Inverter Compressor

## Technology

LG compressors are continuously evolving group of high-precision machining and assembly technologies from accumulated techniques for generating sustainable world best compressor. Especially we are enabling to give our customers technical support in order to provide best performance compressor through design mechanism and produce key technology of compressor, inverter motor and drive that makes you to achieve optimized product.

## Quality

With the product quality and safety evaluation system that performs basic quality and safety evaluation for products at every production stage. Under the quality gate system, all our products undergo a safety check at each quality gate based on a checklist, preventing shipments of products with quality or safety issues. We also have achieved recognition our quality and sustainability from Europe, North America, China and Japan.

## Customer Support

LG compressors promise to deliver a satisfaction level for all your business stage from research, development to the spec-in that exceeds our customers expectations, and strives to provide the highest value to our customers through a fast, accurate and differentiated service & solution as your business partner.

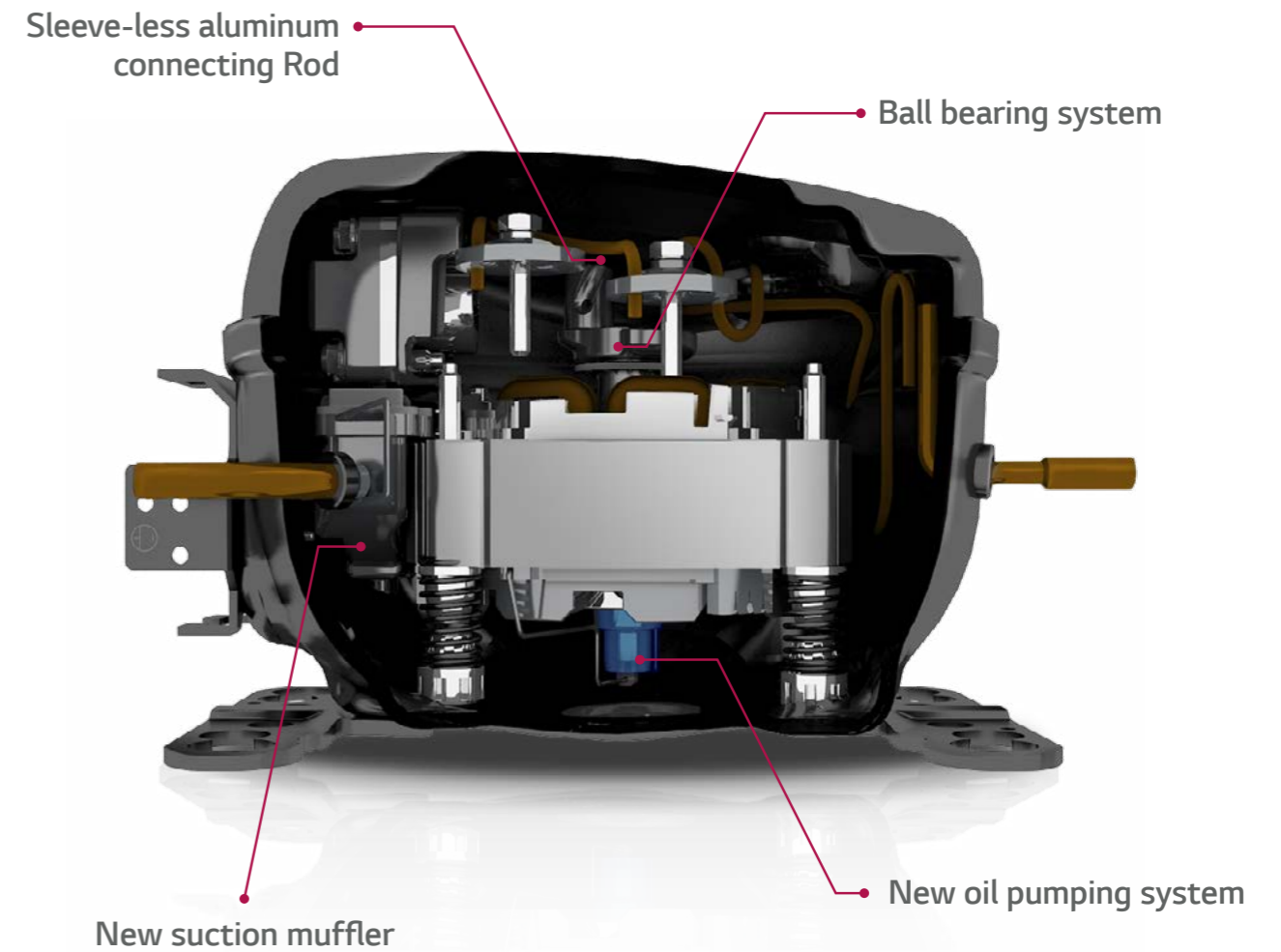




# Reciprocating Inverter

## Feature

### BMG Series



#### High efficiency

- New connecting-rod design
- Ball bearing
- High efficiency BLDC motor

#### Lowest operating sound

- New muffler design
- Low pulsation and vibration

#### Wide operating range

- New oil pumping system
- 1,200~4,500rpm

#### Compact size

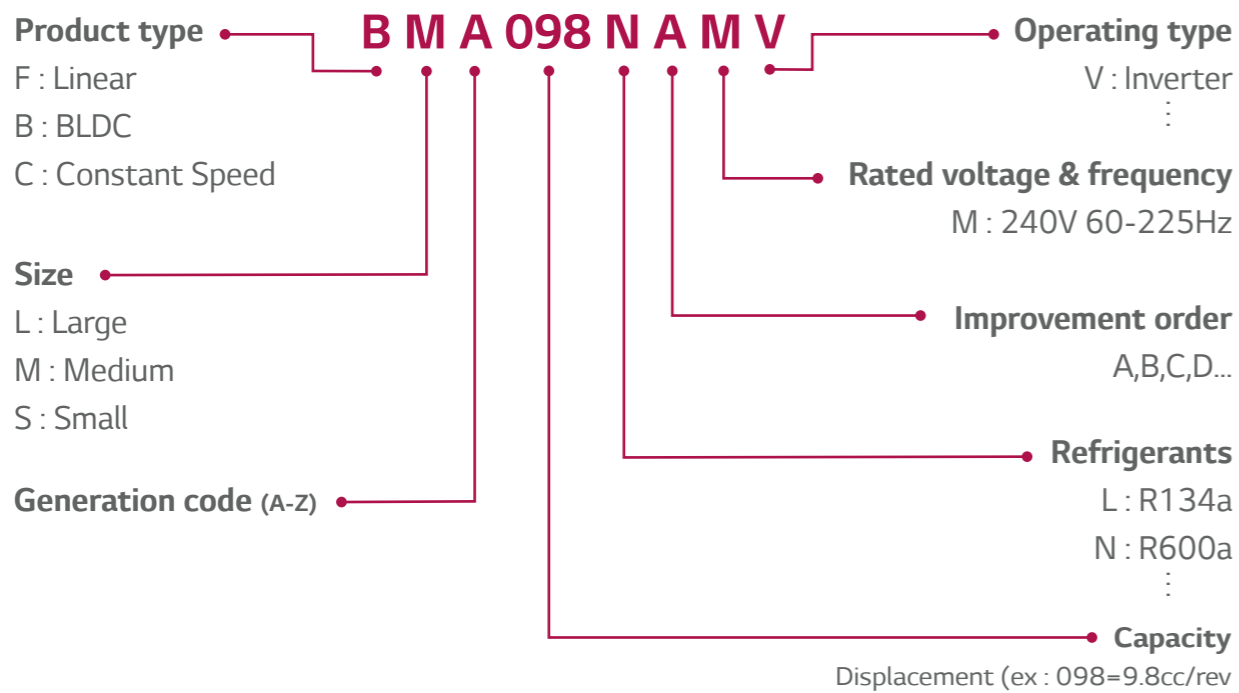
- Height 139mm

## Product Range

Test condition : Te/Tc = -23.3/54.4°C, RT32°C

| Capacity [w] |                       | 0 | 100   | 200  | 300  | 400 |
|--------------|-----------------------|---|-------|------|------|-----|
| R134a        | <b>BMA</b>            |   | ●●●●● |      |      |     |
|              | Displacement [cc/rev] |   | 5.0   | 6.9  | 8.2  |     |
| R600a        | <b>BMA</b>            |   | ●●●●● |      |      |     |
|              | Displacement [cc/rev] |   | 9.8   | 12.1 | 14.0 |     |
|              | <b>BMG</b>            |   | ●●●●● |      |      |     |
|              | Displacement [cc/rev] |   | 6.9   | 8.9  | 11.0 |     |

## Nomenclature



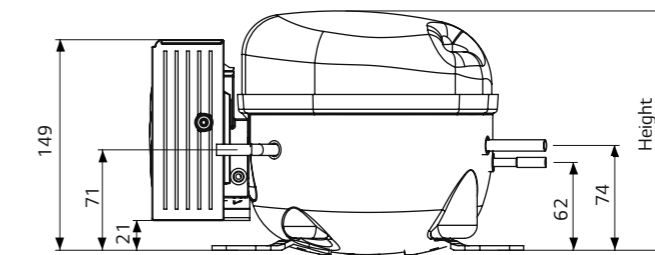
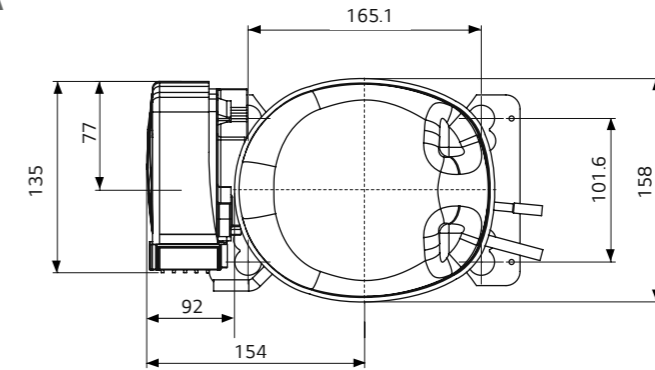
## Specification

| Refrigerant | Series     | Model       | Speed range | Speed      | Operating condition          |          |         |            |                                |        |      |      | Dimension |
|-------------|------------|-------------|-------------|------------|------------------------------|----------|---------|------------|--------------------------------|--------|------|------|-----------|
|             |            |             |             |            | Te/Tc = -23.3/54.4°C, RT32°C |          |         |            | Te/Tc = -23.3/40.6°C, RT32.2°C |        |      |      |           |
|             |            |             |             |            | Capacity                     |          | EER     | COP        | Capacity                       |        | EER  | COP  |           |
| [rpm]       | [rpm]      | [Btu/hr]    | [Watts]     | [Btu/W/hr] | [W/W]                        | [Btu/hr] | [Watts] | [Btu/W/hr] | [W/W]                          | Height |      |      |           |
| R134a       | BMA        | BMA050LAMV  | 1,200-4,500 | 4,500      | 760                          | 223      | -       | -          | 826                            | 242    | -    | -    | 172       |
|             |            |             |             | 3,000      | 507                          | 148      | 5.99    | 1.76       | 551                            | 161    | 7.50 | 2.20 |           |
|             |            |             |             | 1,800      | 323                          | 95       | 6.33    | 1.86       | 351                            | 103    | 7.93 | 2.32 |           |
|             |            |             |             | 1,500      | 264                          | 77       | 6.34    | 1.86       | 287                            | 84     | 7.94 | 2.33 |           |
|             | BMA        | BMA069LAMV  | 1,200-4,500 | 4,500      | 1,049                        | 307      | -       | -          | 1,140                          | 334    | -    | -    | 172       |
|             |            |             |             | 3,000      | 699                          | 205      | 5.99    | 1.76       | 760                            | 223    | 7.50 | 2.20 |           |
|             |            |             |             | 1,800      | 446                          | 131      | 6.33    | 1.86       | 485                            | 142    | 7.93 | 2.32 |           |
|             |            |             |             | 1,500      | 364                          | 107      | 6.34    | 1.86       | 396                            | 116    | 7.94 | 2.33 |           |
|             | BMA        | BMA069LHMV  | 1,200-4,500 | 4,500      | 1,049                        | 307      | -       | -          | 1,140                          | 334    | -    | -    | 172       |
|             |            |             |             | 3,000      | 699                          | 205      | 5.66    | 1.66       | 760                            | 223    | 7.17 | 2.10 |           |
|             |            |             |             | 1,800      | 446                          | 131      | 6.00    | 1.76       | 485                            | 142    | 7.60 | 2.23 |           |
|             |            |             |             | 1,500      | 364                          | 107      | 6.05    | 1.77       | 396                            | 116    | 7.65 | 2.24 |           |
|             | BMA        | BMA082LAMV  | 1,200-4,500 | 4,500      | 1,250                        | 366      | -       | -          | 1,359                          | 398    | -    | -    | 180       |
|             |            |             |             | 3,000      | 833                          | 244      | 5.99    | 1.76       | 906                            | 265    | 7.50 | 2.20 |           |
|             |            |             |             | 1,800      | 540                          | 158      | 6.33    | 1.86       | 587                            | 172    | 7.93 | 2.32 |           |
|             |            |             |             | 1,500      | 452                          | 132      | 6.40    | 1.88       | 492                            | 144    | 8.00 | 2.34 |           |
| BMA         | BMA082LBMV | 1,200-4,500 | 4,500       | 1,250      | 366                          | -        | -       | 1,359      | 398                            | -      | -    | 180  |           |
|             |            |             | 3,000       | 833        | 244                          | 6.04     | 1.77    | 906        | 265                            | 7.55   | 2.21 |      |           |
|             |            |             | 1,800       | 540        | 158                          | 6.38     | 1.87    | 587        | 172                            | 7.98   | 2.34 |      |           |
|             |            |             | 1,500       | 452        | 132                          | 6.50     | 1.90    | 492        | 144                            | 8.10   | 2.37 |      |           |

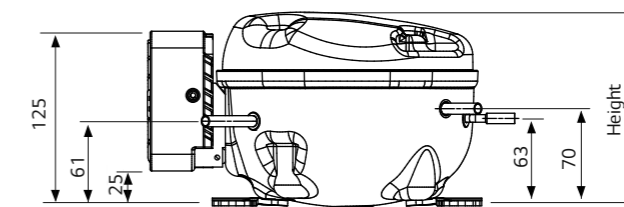
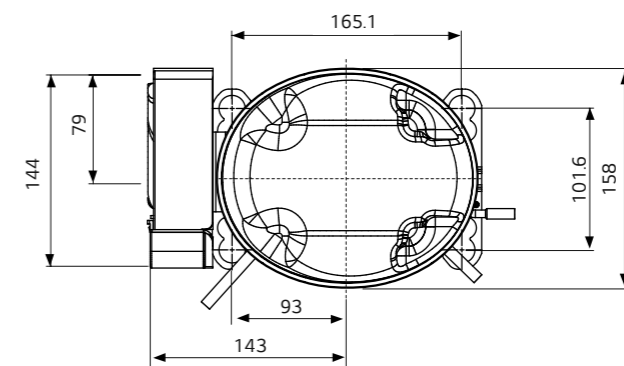
## Dimension

| Refrigerant | Series     | Model       | Speed range | Speed      | Operating condition          |          |         |            |                          |        |      |      | Dimension |
|-------------|------------|-------------|-------------|------------|------------------------------|----------|---------|------------|--------------------------|--------|------|------|-----------|
|             |            |             |             |            | Te/Tc = -23.3/54.4°C, RT32°C |          |         |            | Te/Tc = -29/31°C, RT25°C |        |      |      |           |
|             |            |             |             |            | Capacity                     |          | EER     | COP        | Capacity                 |        | EER  | COP  |           |
| [rpm]       | [rpm]      | [Btu/hr]    | [Watts]     | [Btu/W/hr] | [W/W]                        | [Btu/hr] | [Watts] | [Btu/W/hr] | [W/W]                    | Height |      |      |           |
| R600a       | BMA        | BMA098NAMV  | 1,200-4,500 | 4,500      | 915                          | 268      | -       | -          | 801                      | 234    | -    | -    | 172       |
|             |            |             |             | 3,000      | 627                          | 184      | 6.76    | 1.98       | 548                      | 161    | 7.77 | 2.28 |           |
|             |            |             |             | 1,800      | 376                          | 110      | 7.10    | 2.08       | 329                      | 96     | 8.17 | 2.39 |           |
|             |            |             |             | 1,500      | 318                          | 93       | 6.80    | 1.99       | 278                      | 81     | 7.82 | 2.29 |           |
|             | BMA        | BMA098NHMV  | 1,200-4,500 | 4,500      | 915                          | 268      | -       | -          | 801                      | 234    | -    | -    | 172       |
|             |            |             |             | 3,000      | 627                          | 184      | 6.46    | 1.89       | 548                      | 161    | 7.43 | 2.18 |           |
|             |            |             |             | 1,800      | 376                          | 110      | 6.80    | 1.99       | 329                      | 96     | 7.82 | 2.29 |           |
|             |            |             |             | 1,500      | 318                          | 93       | 6.50    | 1.90       | 278                      | 81     | 7.48 | 2.19 |           |
|             | BMA        | BMA121NAMV  | 1,200-4,500 | 4,500      | 1,115                        | 327      | -       | -          | 976                      | 286    | -    | -    | 172       |
|             |            |             |             | 3,000      | 810                          | 237      | 6.66    | 1.95       | 709                      | 208    | 7.66 | 2.24 |           |
|             |            |             |             | 1,800      | 486                          | 142      | 7.00    | 2.05       | 425                      | 125    | 8.05 | 2.36 |           |
|             |            |             |             | 1,500      | 392                          | 115      | 6.90    | 2.02       | 343                      | 100    | 7.94 | 2.32 |           |
|             | BMG        | BMG069NAMV  | 1,200-4,500 | 4,500      | 566                          | 166      | -       | -          | 497                      | 146    | -    | -    | 139       |
|             |            |             |             | 3,000      | 443                          | 130      | 7.02    | 2.06       | 388                      | 114    | 8.12 | 2.38 |           |
|             |            |             |             | 1,800      | 265                          | 78       | 7.35    | 2.15       | 233                      | 68     | 8.50 | 2.49 |           |
|             |            |             |             | 1,500      | 221                          | 65       | 7.29    | 2.14       | 194                      | 57     | 8.42 | 2.47 |           |
| BMG         |            | BMG069NHMV  | 1,200-4,500 | 4,500      | 566                          | 166      | -       | -          | 497                      | 146    | -    | -    | 139       |
|             |            |             |             | 3,000      | 443                          | 130      | 6.33    | 1.86       | 388                      | 114    | 7.32 | 2.15 |           |
|             |            |             |             | 1,800      | 265                          | 78       | 6.62    | 1.94       | 233                      | 68     | 7.66 | 2.24 |           |
|             |            |             |             | 1,500      | 221                          | 65       | 6.56    | 1.92       | 194                      | 57     | 7.57 | 2.22 |           |
| BMG         |            | BMG089NAMV  | 1,200-4,500 | 4,500      | 731                          | 214      | -       | -          | 642                      | 188    | -    | -    | 139       |
|             |            |             |             | 3,000      | 570                          | 167      | 7.10    | 2.08       | 502                      | 147    | 8.31 | 2.44 |           |
|             |            |             |             | 1,800      | 341                          | 100      | 7.43    | 2.18       | 300                      | 88     | 8.70 | 2.55 |           |
|             |            |             |             | 1,500      | 287                          | 84       | 7.37    | 2.16       | 249                      | 73     | 8.63 | 2.53 |           |
| BMG         | BMG089NHMV | 1,200-4,500 | 4,500       | 731        | 214                          | -        | -       | 641        | 188                      | -      | -    | 139  |           |
|             |            |             | 3,000       | 571        | 167                          | 6.39     | 1.87    | 501        | 147                      | 7.48   | 2.19 |      |           |
|             |            |             | 1,800       | 343        | 100                          | 6.71     | 1.96    | 300        | 88                       | 7.80   | 2.30 |      |           |
|             |            |             | 1,500       | 285        | 84                           | 6.63     | 1.94    | 250        | 73                       | 7.76   | 2.27 |      |           |
| BMG         | BMG110NAMV | 1,200-4,500 | 4,500       | 884        | 259                          | -        | -       | 775        | 227                      | -      | -    | 139  |           |
|             |            |             | 3,000       | 681        | 200                          | 7.02     | 2.06    | 597        | 175                      | 8.16   | 2.39 |      |           |
|             |            |             | 1,800       | 420        | 123                          | 7.27     | 2.13    | 369        | 108                      | 8.45   | 2.48 |      |           |
|             |            |             | 1,500       | 350        | 103                          | 7.35     | 2.15    | 307        | 90                       | 8.55   | 2.51 |      |           |
| BMG         | BMG110NHMV | 1,200-4,500 | 4,500       | 884        | 259                          | -        | -       | 775        | 227                      | -      | -    | 139  |           |
|             |            |             | 3,000       | 681        | 200                          | 6.32     | 1.85    | 597        | 175                      | 7.35   | 2.15 |      |           |
|             |            |             | 1,800       | 420        | 123                          | 6.54     | 1.92    | 369        | 108                      | 7.60   | 2.23 |      |           |
|             |            |             | 1,500       | 350        | 103                          | 6.62     | 1.94    | 307        | 90                       | 7.70   | 2.26 |      |           |

BMA



BMG



Unit : mm

## Specification

### Drive

| Contents                       | Detail                     |
|--------------------------------|----------------------------|
| Rated input power              | 220~240 Vac                |
| Maximum input current          | 3.0A                       |
| Maximum input power            | 260W                       |
| Operating compressor Hz        | 20~75Hz                    |
| Compressor connection color    | Black(U)/Blue(V)/Yellow(W) |
| Ambient operating temperature  | -5~43°C                    |
| Storage temperature            | -25~85°C                   |
| Max. storage relative humidity | 85%                        |

### Noise Filter

| Contents   | Detail   |
|------------|----------|
| Inductance | 4A, 26mH |

### Reactor

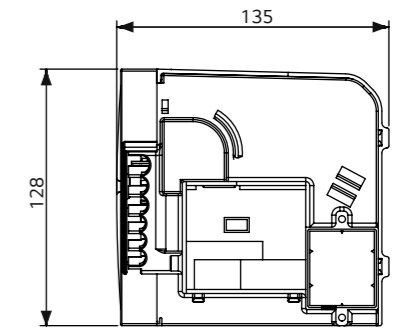
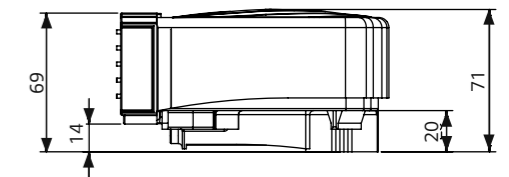
| Contents              | Detail |
|-----------------------|--------|
| Inductance            | 0.8mH  |
| Wire diameter         | 0.8mm  |
| Maximum input current | 5A     |

### OLP

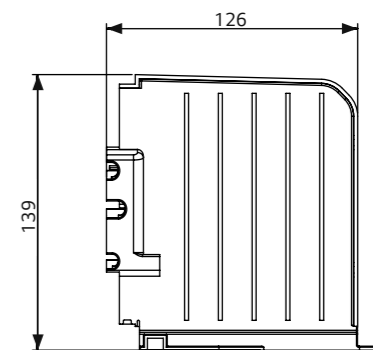
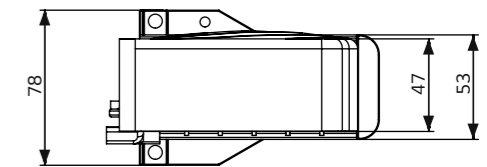
| Contents | Detail               |
|----------|----------------------|
| Type     | External type (3/4") |

## Dimension

### Attached Drive

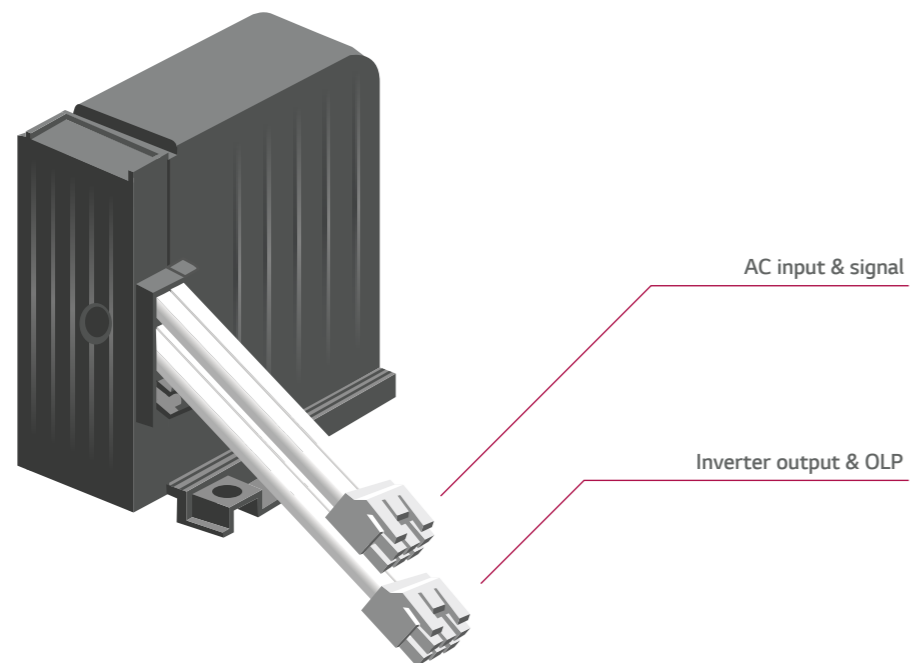
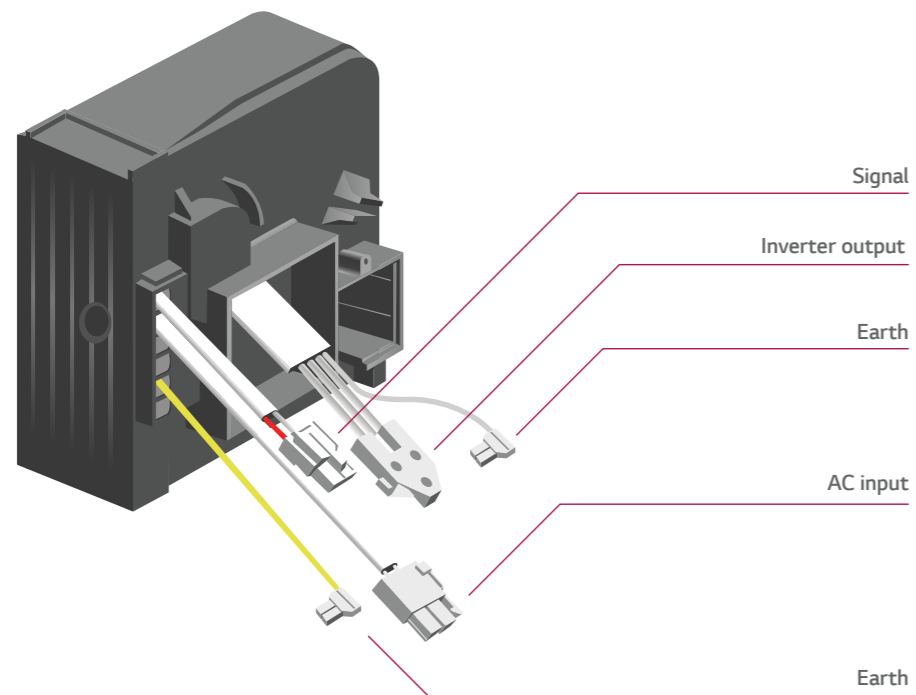


### Separated Drive

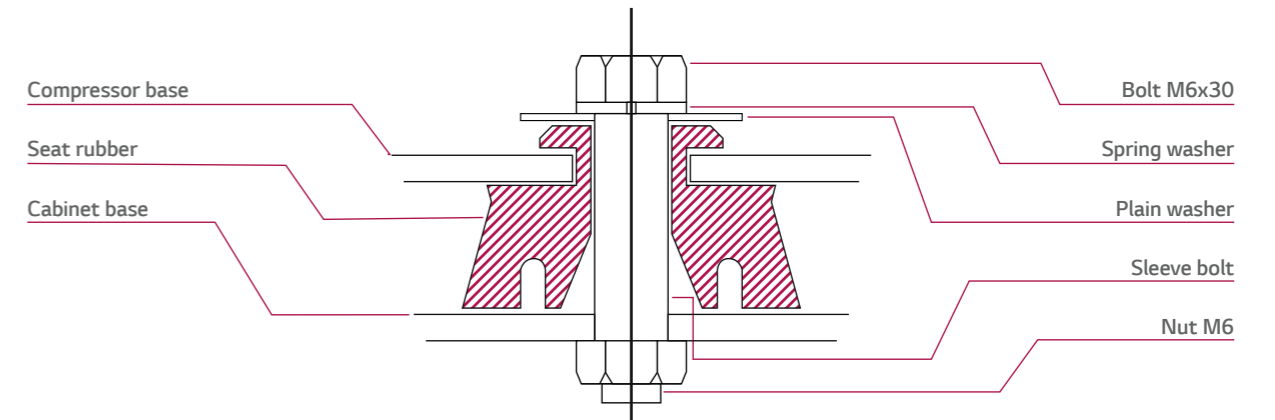


Unit : mm

## Drive Cable Connection



## Mounting



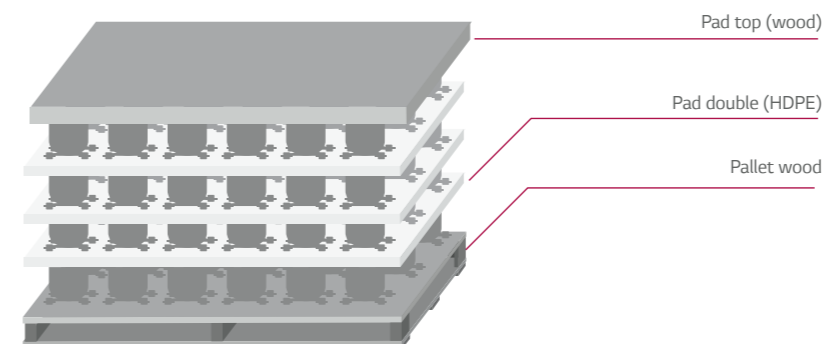
## Packing & Container Stuffing Quantity

Unit : mm

| Model   | Carton   |         |                |     |     | Container (20ft)<br>Below 15.3 Ton | Container (20ft)<br>Below 17.5 Ton |
|---------|----------|---------|----------------|-----|-----|------------------------------------|------------------------------------|
|         | Quantity | Array   | Dimension (mm) |     |     | Quantity                           | Quantity                           |
|         | (EA)     | (WxDxH) | W              | D   | H   | (EA)                               | (EA)                               |
| BMG**NH | 90       | 3x6x5   | 1,100          | 800 | 916 | 1,890                              | 2,160                              |
| BMG**NA | 90       | 3x6x5   | 1,100          | 800 | 916 | 1,890                              | 1,980                              |
| BMA     | 72       | 3x6x4   | 1,100          | 800 | 916 | 1,368                              | 1,584                              |

Note : Packing conditions are subjects to change without notice for customer's convenience.

### Carton dimension & packing method





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## Global Network

### Changwon Plant, Korea

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Fax +82-55-268-4896  
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### Taizhou Plant, China

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### Noida Plant, India

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