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| Summary of          | R32 monobloc(2nd) 5 7 9 kW                              | Reg. No.            | 011-1W0471  |  |  |
|---------------------|---|---------------------|-------------|--|--|
| Certificate Holder  | Certificate Holder                                      |                     |             |  |  |
| Name                | LG Electronics Inc.                                     | LG Electronics Inc. |             |  |  |
| Address             | 84, Wanam-ro, seongsan-gu                               | Zip                 | 51554       |  |  |
| City                | Changwon-si   | Country             | South Korea |  |  |
| Certification Body  | DIN CERTCO Gesellschaft für Konformitätsbewertung mbH   |                     |             |  |  |
| Subtype title       | R32 monobloc(2nd) 5 7 9 kW                              |                     |             |  |  |
| Heat Pump Type      | Outdoor Air/Water                                       |                     |             |  |  |
| Refrigerant         | R32   |                     |             |  |  |
| Mass of Refrigerant | 1.4 kg  |                     |             |  |  |
| Certification Date  | 05.07.2021  | 05.07.2021          |             |  |  |
| Testing basis       | European KEYMARK Scheme for Heat Pumps Rev. 8 (2020-09) |                     |             |  |  |



## Model: HM051MR U44

| Configure model                     |                       |  |
|-------------------------------------|-----------------------|--|
| Model name                          | HM051MR U44           |  |
| Application                         | Heating (medium temp) |  |
| Units                               | Outdoor               |  |
| Climate Zone                        | n/a                   |  |
| Reversibility                       | No                    |  |
| Cooling mode application (optional) | n/a                   |  |

| General Data |             |  |
|--------------|-------------|--|
| Power supply | 1x230V 50Hz |  |

#### Heating

| EN 14511-2  |                 |                    |
|-------------|-----------------|--------------------|
|             | Low temperature | Medium temperature |
| Heat output | 5.50 kW         | 5.50 kW            |
| El input    | 1.17 kW         | 2.04 kW            |
| СОР         | 4.70            | 2.70               |

| EN 14511-4                                 |        |
|--|--------|
| Shutting off the heat transfer medium flow | passed |
| Complete power supply failure              | passed |
| Defrost test                               | passed |
| Starting and operating test                | passed |

# **Average Climate**





| EN 12102-1                |                 |                    |  |
|---------------------------|-----------------|--------------------|--|
|                           | Low temperature | Medium temperature |  |
| Sound power level outdoor | 57 dB(A)        | 57 dB(A)           |  |

| EN 14825       |                 |                    |
|----------------|-----------------|--------------------|
|                | Low temperature | Medium temperature |
| $\eta_{s}$     | 175 %           | 125 %              |
| Prated         | 6.00 kW         | 7.00 kW            |
| SCOP           | 4.46            | 3.20               |
| Tbiv           | -10 °C          | -7 °C              |
| TOL            | -10 °C          | -10 °C             |
| Pdh Tj = -7°C  | 4.90 kW         | 5.90 kW            |
| COP Tj = -7°C  | 2.90            | 2.07               |
| Cdh Tj = -7 °C | 0.900           | 0.900              |
| Pdh Tj = +2°C  | 3.00 kW         | 3.60 kW            |
| COP Tj = +2°C  | 4.20            | 3.10               |
| Cdh Tj = +2 °C | 0.900           | 0.900              |
| Pdh Tj = +7°C  | 2.60 kW         | 2.90 kW            |
| COP Tj = +7°C  | 6.20            | 4.18               |
| Cdh Tj = +7 °C | 0.900           | 0.900              |
| Pdh Tj = 12°C  | 2.70 kW         | 3.30 kW            |

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| COP Tj = 12°C                                       | 8.80        | 6.26        |
|---|-------------|-------------|
| Cdh Tj = +12 °C                                     | 0.900       | 0.900       |
| Pdh Tj = Tbiv                                       | 5.50 kW     | 5.90 kW     |
| COP Tj = Tbiv                                       | 2.57        | 2.07        |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 5.50 kW     | 6.70 kW     |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.57        | 1.77        |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.900       | 0.900       |
| WTOL  | 65 °C       | 65 °C       |
| Poff  | 10 W        | 10 W        |
| PTO   | 20 W        | 20 W        |
| PSB   | 10 W        | 10 W        |
| PCK   | o w         | o w         |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 0.50 kW     | 0.30 kW     |
| Annual energy consumption Qhe                       | 2548 kWh    | 4324 kWh    |

## Model: HM071MR U44

| Configure model                     |                       |  |
|-------------------------------------|-----------------------|--|
| Model name                          | HM071MR U44           |  |
| Application                         | Heating (medium temp) |  |
| Units                               | Outdoor               |  |
| Climate Zone                        | n/a                   |  |
| Reversibility                       | No                    |  |
| Cooling mode application (optional) | n/a                   |  |

| General Data |             |  |
|--------------|-------------|--|
| Power supply | 1x230V 50Hz |  |

#### Heating

| EN 14511-2  |                 |                    |
|-------------|-----------------|--------------------|
|             | Low temperature | Medium temperature |
| Heat output | 7.00 kW         | 5.50 kW            |
| El input    | 1.49 kW         | 2.04 kW            |
| СОР         | 4.70            | 2.70               |

| EN 14511-4                                 |        |
|--|--------|
| Shutting off the heat transfer medium flow | passed |
|  |        |
| Complete power supply failure              | passed |
| Defrost test                               | passed |
| Starting and operating test                | passed |

#### **Average Climate**



| EN 12102-1                |                 |                    |
|---------------------------|-----------------|--------------------|
|                           | Low temperature | Medium temperature |
| Sound power level outdoor | 57 dB(A)        | 57 dB(A)           |

|                        | EN 14825        |                    |
|------------------------|-----------------|--------------------|
|                        | Low temperature | Medium temperature |
| $\eta_{s}$             | 176 %           | 125 %              |
| Prated                 | 6.00 kW         | 7.00 kW            |
| SCOP                   | 4.48            | 3.20               |
| Tbiv                   | -10 °C          | -7 °C              |
| TOL                    | -10 °C          | -10 °C             |
| Pdh Tj = -7°C          | 5.10 kW         | 6.00 kW            |
| COP Tj = -7°C          | 2.96            | 2.04               |
| Cdh Tj = -7 °C         | 0.900           | 0.900              |
| Pdh Tj = +2°C          | 3.10 kW         | 3.70 kW            |
| COP Tj = +2°C          | 4.13            | 3.10               |
| Cdh Tj = +2 °C         | 0.900           | 0.900              |
| Pdh Tj = +7°C          | 2.60 kW         | 3.10 kW            |
| $COP Tj = +7^{\circ}C$ | 6.34            | 4.25               |
| Cdh Tj = +7 °C         | 0.900           | 0.900              |
| Pdh Tj = 12°C          | 2.80 kW         | 3.30 kW            |

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|   | <u>.                                      </u> | · · · · · · · · · · · · · · · · · · · |
|---|--|---------------------------------------|
| COP Tj = 12°C                                       | 9.00   | 6.26                                  |
| Cdh Tj = +12 °C                                     | 0.900  | 0.900                                 |
| Pdh Tj = Tbiv                                       | 5.80 kW  | 6.00 kW                               |
| COP Tj = Tbiv                                       | 2.61   | 2.04                                  |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 5.80 kW  | 6.80 kW                               |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.61   | 1.74                                  |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.900  | 0.900                                 |
| WTOL  | 65 °C  | 65 °C                                 |
| Poff  | 10 W   | 10 W                                  |
| РТО   | 20 W   | 20 W                                  |
| PSB   | 10 W   | 10 W                                  |
| PCK   | 0 W  | o w                                   |
| Supplementary Heater: Type of energy input          | Electricity                                    | Electricity                           |
| Supplementary Heater: PSUP                          | 0.20 kW  | 0.20 kW                               |
| Annual energy consumption Qhe                       | 2654 kWh                                       | 4386 kWh                              |



## Model: HM091MR U44

| Configure model                     |                       |  |
|-------------------------------------|-----------------------|--|
| Model name                          | HM091MR U44           |  |
| Application                         | Heating (medium temp) |  |
| Units                               | Outdoor               |  |
| Climate Zone                        | n/a                   |  |
| Reversibility                       | No                    |  |
| Cooling mode application (optional) | n/a                   |  |

| General Data             |  |  |  |
|--------------------------|--|--|--|
| Power supply 1x230V 50Hz |  |  |  |

#### Heating

| EN 14511-2  |                 |                    |  |
|-------------|-----------------|--------------------|--|
|             | Low temperature | Medium temperature |  |
| Heat output | 9.00 kW         | 5.50 kW            |  |
| El input    | 1.96 kW         | 2.04 kW            |  |
| СОР         | 4.60            | 2.70               |  |

| EN 14511-4                                 |        |  |
|--|--------|--|
| Shutting off the heat transfer medium flow | passed |  |
| Complete power supply failure              | passed |  |
| Defrost test                               | passed |  |
| Starting and operating test                | passed |  |

#### **Average Climate**



| EN 12102-1                |                 |                    |
|---------------------------|-----------------|--------------------|
|                           | Low temperature | Medium temperature |
| Sound power level outdoor | 57 dB(A)        | 57 dB(A)           |

| EN 14825       |                 |                    |
|----------------|-----------------|--------------------|
|                | Low temperature | Medium temperature |
| $\eta_{s}$     | 179 %           | 125 %              |
| Prated         | 6.00 kW         | 7.00 kW            |
| SCOP           | 4.55            | 3.20               |
| Tbiv           | -10 °C          | -7 °C              |
| TOL            | -10 °C          | -10 °C             |
| Pdh Tj = -7°C  | 5.30 kW         | 6.10 kW            |
| COP Tj = -7°C  | 2.87            | 1.96               |
| Cdh Tj = -7 °C | 0.900           | 0.900              |
| Pdh Tj = +2°C  | 3.20 kW         | 3.70 kW            |
| COP Tj = +2°C  | 4.25            | 3.16               |
| Cdh Tj = +2 °C | 0.900           | 0.900              |
| Pdh Tj = +7°C  | 2.60 kW         | 3.50 kW            |
| COP Tj = +7°C  | 6.50            | 4.25               |
| Cdh Tj = +7 °C | 0.900           | 0.900              |
| Pdh Tj = 12°C  | 2.80 kW         | 3.30 kW            |

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| COP Tj = 12°C                                       | 9.00     | 6.26        |
|---|----------|-------------|
| Cdh Tj = +12 °C                                     | 0.900    | 0.900       |
| Pdh Tj = Tbiv                                       | 6.00 kW  | 6.10 kW     |
| COP Tj = Tbiv                                       | 2.47     | 1.96        |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 6.00 kW  | 6.90 kW     |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.47     | 1.75        |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.900    | 0.900       |
| WTOL  | 65 °C    | 65 °C       |
| Poff  | 10 W     | 10 W        |
| РТО   | 20 W     | 20 W        |
| PSB   | 10 W     | 10 W        |
| PCK   | o w      | o w         |
| Supplementary Heater: Type of energy input          | n/a      | Electricity |
| Supplementary Heater: PSUP                          | 0.00 kW  | 0.10 kW     |
| Annual energy consumption Qhe                       | 2727 kWh | 4448 kWh    |