

Subtype R290 monobloc 9, 12, 14 ,16kW 1 phase & 3phases

| | |
|---------------------|--|
| Certificate Holder | LG Electronics Inc. |
| Address | 84, Wanam-ro, seongsan-gu |
| ZIP | 51554 |
| City | Changwon-si |
| Country | KR |
| Certification Body | DIN CERTCO Gesellschaft für Konformitätsbewertung mbH |
| Subtype title | R290 monobloc 9, 12, 14 ,16kW 1 phase & 3phases |
| Registration number | 011-1W0689 |
| Heat Pump Type | Outdoor Air/Water |
| Refrigerant | R290 |
| Mass of Refrigerant | 1.2 kg |
| Certification Date | 25.09.2023 |
| Testing basis | European KEYMARK Scheme for Heat Pumps Rev. 12 (as of 2023-03) |

Model HM161HF UB60 / HN1616HC NK0

| | |
|-------------------------------------|-----------------------------|
| Model name | HM161HF UB60 / HN1616HC NK0 |
| Application | Heating (medium temp) |
| Units | Indoor, Outdoor |
| Climate zone (for heating) | n/a |
| Cooling mode application (optional) | n/a |
| Any additional heat sources | n/a |

General data

| | |
|------------------|-------------|
| Power supply | 1x230V 50Hz |
| Off-peak product | n/a |

Outdoor Air/Water

EN 14511-4 | Heating

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

EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor | 39 dB(A) | 39 dB(A) |
| Sound power level outdoor | 52 dB(A) | 52 dB(A) |

EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|-----------------|-----------------|--------------------|
| η_s | 201 % | 154 % |
| Prated | 11.70 kW | 11.70 kW |
| SCOP | 5.11 | 3.92 |
| Tbiv | -10 °C | -7 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 10.40 kW | 10.40 kW |
| COP Tj = -7°C | 3.12 | 2.34 |
| Cdh Tj = -7 °C | 0.900 | 0.900 |
| Pdh Tj = +2°C | 6.30 kW | 6.30 kW |
| COP Tj = +2°C | 5.02 | 3.90 |
| Cdh Tj = +2 °C | 0.900 | 0.900 |
| Pdh Tj = +7°C | 4.10 kW | 4.20 kW |
| COP Tj = +7°C | 6.70 | 5.05 |
| Cdh Tj = +7 °C | 0.900 | 0.900 |
| Pdh Tj = 12°C | 3.70 kW | 3.60 kW |
| COP Tj = 12°C | 8.45 | 6.75 |
| Cdh Tj = +12 °C | 0.900 | 0.900 |
| Pdh Tj = Tbiv | 11.70 kW | 10.40 kW |
| COP Tj = Tbiv | 2.80 | 2.34 |

| | | |
|---|----------|-------------|
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.70 kW | 11.40 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.80 | 2.30 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.900 | 0.900 |
| WTOL | 75 °C | 75 °C |
| Poff | 10 W | 10 W |
| PTO | 30 W | 30 W |
| PSB | 10 W | 10 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | n/a | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.30 kW |
| Annual energy consumption Qhe | 4735 kWh | 6162 kWh |

Model HM141HF UB60 / HN1616HC NK0

| | |
|-------------------------------------|-----------------------------|
| Model name | HM141HF UB60 / HN1616HC NK0 |
| Application | Heating (medium temp) |
| Units | Indoor, Outdoor |
| Climate zone (for heating) | n/a |
| Cooling mode application (optional) | n/a |
| Any additional heat sources | n/a |

General data

| | |
|------------------|-------------|
| Power supply | 1x230V 50Hz |
| Off-peak product | n/a |

Outdoor Air/Water

EN 14511-4 | Heating

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

EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor | 39 dB(A) | 39 dB(A) |
| Sound power level outdoor | 51 dB(A) | 51 dB(A) |

EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|-----------------|-----------------|--------------------|
| η_s | 212 % | 155 % |
| Prated | 11.00 kW | 11.00 kW |
| SCOP | 5.38 | 3.96 |
| Tbiv | -7 °C | -10 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 9.70 kW | 9.70 kW |
| COP Tj = -7°C | 3.30 | 2.45 |
| Cdh Tj = -7 °C | 0.900 | 0.900 |
| Pdh Tj = +2°C | 5.90 kW | 5.90 kW |
| COP Tj = +2°C | 5.18 | 3.84 |
| Cdh Tj = +2 °C | 0.900 | 0.900 |
| Pdh Tj = +7°C | 3.80 kW | 3.80 kW |
| COP Tj = +7°C | 7.38 | 5.40 |
| Cdh Tj = +7 °C | 0.900 | 0.900 |
| Pdh Tj = 12°C | 3.60 kW | 3.60 kW |
| COP Tj = 12°C | 9.15 | 6.15 |
| Cdh Tj = +12 °C | 0.900 | 0.900 |
| Pdh Tj = Tbiv | 9.70 kW | 11.00 kW |
| COP Tj = Tbiv | 3.30 | 2.20 |

| | | |
|---|-------------|----------|
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.70 kW | 11.00 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.95 | 2.20 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.900 | 0.900 |
| WTOL | 75 °C | 75 °C |
| Poff | 10 W | 10 W |
| PTO | 30 W | 30 W |
| PSB | 10 W | 10 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | Electricity | n/a |
| Supplementary Heater: PSUP | 0.30 kW | 0.00 kW |
| Annual energy consumption Qhe | 4223 kWh | 5741 kWh |

Model HM121HF UB60 / HN1616HC NK0

| | |
|-------------------------------------|-----------------------------|
| Model name | HM121HF UB60 / HN1616HC NK0 |
| Application | Heating (medium temp) |
| Units | Indoor, Outdoor |
| Climate zone (for heating) | n/a |
| Cooling mode application (optional) | n/a |
| Any additional heat sources | n/a |

General data

| | |
|------------------|-------------|
| Power supply | 1x230V 50Hz |
| Off-peak product | n/a |

Outdoor Air/Water

EN 14511-4 | Heating

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

EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor | 39 dB(A) | 39 dB(A) |
| Sound power level outdoor | 49 dB(A) | 49 dB(A) |

EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|-----------------|-----------------|--------------------|
| η_s | 215 % | 156 % |
| Prated | 10.00 kW | 10.00 kW |
| SCOP | 5.45 | 3.97 |
| Tbiv | -10 °C | -10 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 8.90 kW | 8.90 kW |
| COP Tj = -7°C | 3.54 | 2.54 |
| Cdh Tj = -7 °C | 0.900 | 0.900 |
| Pdh Tj = +2°C | 5.40 kW | 5.40 kW |
| COP Tj = +2°C | 5.17 | 3.92 |
| Cdh Tj = +2 °C | 0.900 | 0.900 |
| Pdh Tj = +7°C | 3.50 kW | 3.50 kW |
| COP Tj = +7°C | 7.37 | 5.22 |
| Cdh Tj = +7 °C | 0.900 | 0.900 |
| Pdh Tj = 12°C | 3.60 kW | 3.60 kW |
| COP Tj = 12°C | 9.24 | 5.58 |
| Cdh Tj = +12 °C | 0.900 | 0.900 |
| Pdh Tj = Tbiv | 10.00 kW | 10.00 kW |
| COP Tj = Tbiv | 3.21 | 2.36 |

| | | |
|---|----------|----------|
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.00 kW | 10.00 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.21 | 2.36 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.900 | 0.900 |
| WTOL | 75 °C | 75 °C |
| Poff | 10 W | 10 W |
| PTO | 30 W | 30 W |
| PSB | 10 W | 10 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | n/a | n/a |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 3789 kWh | 5211 kWh |

Model HM163HF UB60 / HN1639HC NK0

| | |
|-------------------------------------|-----------------------------|
| Model name | HM163HF UB60 / HN1639HC NK0 |
| Application | Heating (medium temp) |
| Units | Indoor, Outdoor |
| Climate zone (for heating) | n/a |
| Cooling mode application (optional) | n/a |
| Any additional heat sources | n/a |

General data

| | |
|------------------|-------------|
| Power supply | 3x400V 50Hz |
| Off-peak product | n/a |

Outdoor Air/Water

EN 14511-4 | Heating

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

EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor | 39 dB(A) | 39 dB(A) |
| Sound power level outdoor | 52 dB(A) | 52 dB(A) |

EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|-----------------|-----------------|--------------------|
| η_s | 201 % | 154 % |
| Prated | 11.70 kW | 11.70 kW |
| SCOP | 5.11 | 3.92 |
| Tbiv | -10 °C | -7 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 10.40 kW | 10.40 kW |
| COP Tj = -7°C | 3.12 | 2.34 |
| Cdh Tj = -7 °C | 0.900 | 0.900 |
| Pdh Tj = +2°C | 6.30 kW | 6.30 kW |
| COP Tj = +2°C | 5.02 | 3.90 |
| Cdh Tj = +2 °C | 0.900 | 0.900 |
| Pdh Tj = +7°C | 4.10 kW | 4.20 kW |
| COP Tj = +7°C | 6.70 | 5.05 |
| Cdh Tj = +7 °C | 0.900 | 0.900 |
| Pdh Tj = 12°C | 3.70 kW | 3.60 kW |
| COP Tj = 12°C | 8.45 | 6.75 |
| Cdh Tj = +12 °C | 0.900 | 0.900 |
| Pdh Tj = Tbiv | 11.70 kW | 10.40 kW |
| COP Tj = Tbiv | 2.80 | 2.34 |

| | | |
|---|----------|-------------|
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.70 kW | 11.40 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.80 | 2.30 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.900 | 0.900 |
| WTOL | 75 °C | 75 °C |
| Poff | 10 W | 10 W |
| PTO | 30 W | 30 W |
| PSB | 10 W | 10 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | n/a | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.30 kW |
| Annual energy consumption Qhe | 4735 kWh | 6162 kWh |

Model HM143HF UB60 / HN1639HC NK0

| | |
|-------------------------------------|-----------------------------|
| Model name | HM143HF UB60 / HN1639HC NK0 |
| Application | Heating (medium temp) |
| Units | Indoor, Outdoor |
| Climate zone (for heating) | n/a |
| Cooling mode application (optional) | n/a |
| Any additional heat sources | n/a |

General data

| | |
|------------------|-------------|
| Power supply | 3x400V 50Hz |
| Off-peak product | n/a |

Outdoor Air/Water

EN 14511-4 | Heating

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

EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor | 39 dB(A) | 39 dB(A) |
| Sound power level outdoor | 51 dB(A) | 51 dB(A) |

EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|-----------------|-----------------|--------------------|
| η_s | 212 % | 155 % |
| Prated | 11.00 kW | 11.00 kW |
| SCOP | 5.38 | 3.96 |
| Tbiv | -7 °C | -10 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 9.70 kW | 9.70 kW |
| COP Tj = -7°C | 3.30 | 2.45 |
| Cdh Tj = -7 °C | 0.900 | 0.900 |
| Pdh Tj = +2°C | 5.90 kW | 5.90 kW |
| COP Tj = +2°C | 5.18 | 3.84 |
| Cdh Tj = +2 °C | 0.900 | 0.900 |
| Pdh Tj = +7°C | 3.80 kW | 3.80 kW |
| COP Tj = +7°C | 7.38 | 5.40 |
| Cdh Tj = +7 °C | 0.900 | 0.900 |
| Pdh Tj = 12°C | 3.60 kW | 3.60 kW |
| COP Tj = 12°C | 9.15 | 6.15 |
| Cdh Tj = +12 °C | 0.900 | 0.900 |
| Pdh Tj = Tbiv | 9.70 kW | 11.00 kW |
| COP Tj = Tbiv | 3.30 | 2.20 |

| | | |
|---|-------------|----------|
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.70 kW | 11.00 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.95 | 2.20 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.900 | 0.900 |
| WTOL | 75 °C | 75 °C |
| Poff | 10 W | 10 W |
| PTO | 30 W | 30 W |
| PSB | 10 W | 10 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | Electricity | n/a |
| Supplementary Heater: PSUP | 0.30 kW | 0.00 kW |
| Annual energy consumption Qhe | 4223 kWh | 5741 kWh |

Model HM123HF UB60 / HN1639HC NK0

| | |
|-------------------------------------|-----------------------------|
| Model name | HM123HF UB60 / HN1639HC NK0 |
| Application | Heating (medium temp) |
| Units | Indoor, Outdoor |
| Climate zone (for heating) | n/a |
| Cooling mode application (optional) | n/a |
| Any additional heat sources | n/a |

General data

| | |
|------------------|-------------|
| Power supply | 3x400V 50Hz |
| Off-peak product | n/a |

Outdoor Air/Water

EN 14511-4 | Heating

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

EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor | 39 dB(A) | 39 dB(A) |
| Sound power level outdoor | 49 dB(A) | 49 dB(A) |

EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|-----------------|-----------------|--------------------|
| η_s | 215 % | 156 % |
| Prated | 10.00 kW | 10.00 kW |
| SCOP | 5.45 | 3.97 |
| Tbiv | -10 °C | -10 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 8.90 kW | 8.90 kW |
| COP Tj = -7°C | 3.54 | 2.54 |
| Cdh Tj = -7 °C | 0.900 | 0.900 |
| Pdh Tj = +2°C | 5.40 kW | 5.40 kW |
| COP Tj = +2°C | 5.17 | 3.92 |
| Cdh Tj = +2 °C | 0.900 | 0.900 |
| Pdh Tj = +7°C | 3.50 kW | 3.50 kW |
| COP Tj = +7°C | 7.37 | 5.22 |
| Cdh Tj = +7 °C | 0.900 | 0.900 |
| Pdh Tj = 12°C | 3.60 kW | 3.60 kW |
| COP Tj = 12°C | 9.24 | 5.58 |
| Cdh Tj = +12 °C | 0.900 | 0.900 |
| Pdh Tj = Tbiv | 10.00 kW | 10.00 kW |
| COP Tj = Tbiv | 3.21 | 2.36 |

| | | |
|---|----------|----------|
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.00 kW | 10.00 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.21 | 2.36 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.900 | 0.900 |
| WTOL | 75 °C | 75 °C |
| Poff | 10 W | 10 W |
| PTO | 30 W | 30 W |
| PSB | 10 W | 10 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | n/a | n/a |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 3789 kWh | 5211 kWh |

Model HM093HFX UB60 / HN1639HC NK0

| | |
|-------------------------------------|------------------------------|
| Model name | HM093HFX UB60 / HN1639HC NK0 |
| Application | Heating (medium temp) |
| Units | Indoor, Outdoor |
| Climate zone (for heating) | n/a |
| Cooling mode application (optional) | n/a |
| Any additional heat sources | n/a |

General data

| | |
|------------------|-------------|
| Power supply | 3x400V 50Hz |
| Off-peak product | n/a |

Outdoor Air/Water

EN 14511-4 | Heating

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

EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor | 39 dB(A) | 39 dB(A) |
| Sound power level outdoor | 49 dB(A) | 49 dB(A) |

EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|-----------------|-----------------|--------------------|
| η_s | 206 % | 147 % |
| Prated | 9.00 kW | 9.00 kW |
| SCOP | 5.23 | 3.75 |
| Tbiv | -10 °C | -10 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 8.00 kW | 8.00 kW |
| COP Tj = -7°C | 3.48 | 2.50 |
| Cdh Tj = -7 °C | 0.900 | 0.900 |
| Pdh Tj = +2°C | 4.90 kW | 4.90 kW |
| COP Tj = +2°C | 5.04 | 3.72 |
| Cdh Tj = +2 °C | 0.900 | 0.900 |
| Pdh Tj = +7°C | 3.10 kW | 3.10 kW |
| COP Tj = +7°C | 6.75 | 4.85 |
| Cdh Tj = +7 °C | 0.900 | 0.900 |
| Pdh Tj = 12°C | 3.60 kW | 3.60 kW |
| COP Tj = 12°C | 8.80 | 5.00 |
| Cdh Tj = +12 °C | 0.900 | 0.900 |
| Pdh Tj = Tbiv | 9.00 kW | 9.00 kW |
| COP Tj = Tbiv | 3.20 | 2.28 |

| | | |
|---|----------|----------|
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 9.00 kW | 9.00 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.20 | 2.28 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.900 | 0.900 |
| WTOL | 75 °C | 75 °C |
| Poff | 10 W | 10 W |
| PTO | 30 W | 30 W |
| PSB | 10 W | 10 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | n/a | n/a |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 3554 kWh | 4965 kWh |