

## Subtype CTC GSi 612

|                     |                                                            |
|---------------------|------------------------------------------------------------|
| Certificate Holder  | CTC AB                                                     |
| Address             | Box 309, Näsvägen                                          |
| ZIP                 | SE-341 26                                                  |
| City                | Ljungby                                                    |
| Country             | SE                                                         |
| Certification Body  | RISE CERT                                                  |
| Subtype title       | CTC GSi 612                                                |
| Registration number | 012-C700087                                                |
| Heat Pump Type      | Brine/Water                                                |
| Refrigerant         | R407c                                                      |
| Mass of Refrigerant | 2.4 kg                                                     |
| Certification Date  | 11.12.2023                                                 |
| Testing basis       | EN 14511:2013, EN 14825:2013, EN 12102:2013, EN 16147:2011 |

| Model CTC GSi 612                          |                          |                    |
|--------------------------------------------|--------------------------|--------------------|
| Model name                                 | CTC GSi 612              |                    |
| Application                                | Heating + DHW + low temp |                    |
| Units                                      | Indoor                   |                    |
| Climate zone (for heating)                 | Colder Climate           |                    |
| Cooling mode application (optional)        | n/a                      |                    |
| Any additional heat sources                | n/a                      |                    |
| General data                               |                          |                    |
| Power supply                               | 3x400V 50Hz              |                    |
| Off-peak product                           | No                       |                    |
| Brine/Water                                |                          |                    |
| EN 16147   Average Climate                 |                          |                    |
| Declared load profile                      | XL                       |                    |
| Efficiency $\eta_{DHW}$                    | 100 %                    |                    |
| COP                                        | 2.50                     |                    |
| Heating up time                            | 1:45 h:min               |                    |
| Standby power input                        | 59.0 W                   |                    |
| Reference hot water temperature            | 49.5 °C                  |                    |
| Mixed water at 40°C                        | 235 l                    |                    |
| EN 16147   Colder Climate                  |                          |                    |
| Declared load profile                      | XL                       |                    |
| Efficiency $\eta_{DHW}$                    | 100 %                    |                    |
| COP                                        | 2.50                     |                    |
| Heating up time                            | 1:45 h:min               |                    |
| Standby power input                        | 59.0 W                   |                    |
| Reference hot water temperature            | 49.5 °C                  |                    |
| Mixed water at 40°C                        | 235 l                    |                    |
| EN 14511-4   Heating                       |                          |                    |
| Shutting off the heat transfer medium flow | passed                   |                    |
| Complete power supply failure              | passed                   |                    |
| EN 14511-2   Heating                       |                          |                    |
|                                            | Low temperature          | Medium temperature |
| Heat output                                | 6.08 kW                  | 5.24 kW            |
| El input                                   | 1.27 kW                  | 1.78 kW            |
| COP                                        | 4.78                     | 2.95               |
| EN 12102-1   Average Climate               |                          |                    |
|                                            | Low temperature          | Medium temperature |
| Sound power level indoor                   | 39 dB(A)                 | 39 dB(A)           |
| EN 14825   Average Climate                 |                          |                    |

|                                                     | Low temperature | Medium temperature |
|-----------------------------------------------------|-----------------|--------------------|
| $\eta_s$                                            | 208 %           | 155 %              |
| Prated                                              | 9.81 kW         | 6.80 kW            |
| SCOP                                                | 5.40            | 4.10               |
| Tbiv                                                | -10 °C          | -10 °C             |
| TOL                                                 | -10 °C          | -10 °C             |
| Pdh Tj = -7°C                                       | 8.80 kW         | 6.00 kW            |
| COP Tj = -7°C                                       | 4.59            | 3.25               |
| Cdh Tj = -7 °C                                      |                 |                    |
| Pdh Tj = +2°C                                       | 5.40 kW         | 3.70 kW            |
| COP Tj = +2°C                                       | 5.60            | 4.18               |
| Cdh Tj = +2 °C                                      |                 |                    |
| Pdh Tj = +7°C                                       | 3.50 kW         | 2.40 kW            |
| COP Tj = +7°C                                       | 6.05            | 4.70               |
| Cdh Tj = +7 °C                                      |                 |                    |
| Pdh Tj = 12°C                                       | 2.40 kW         | 2.40 kW            |
| COP Tj = 12°C                                       | 6.03            | 5.34               |
| Cdh Tj = +12 °C                                     |                 |                    |
| Pdh Tj = Tbiv                                       | 9.80 kW         | 6.70 kW            |
| COP Tj = Tbiv                                       | 4.30            | 3.00               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 9.94 kW         | 6.66 kW            |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.28            | 2.99               |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970           | 0.980              |
| WTOL                                                | 65 °C           | 65 °C              |
| Poff                                                | 23 W            | 23 W               |
| PTO                                                 | 0 W             | 6 W                |
| PSB                                                 | 0 W             | 0 W                |
| PCK                                                 | 0 W             | 0 W                |
| Supplementary Heater: Type of energy input          | Electricity     | Electricity        |
| Supplementary Heater: PSUP                          | 0.00 kW         | 0.00 kW            |
| Annual energy consumption Qhe                       | 3800 kWh        | 3444 kWh           |

#### EN 12102-1 | Colder Climate

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

#### EN 14825 | Colder Climate

|          | Low temperature | Medium temperature |
|----------|-----------------|--------------------|
| $\eta_s$ | 208 %           | 155 %              |
| Prated   | 11.40 kW        | 7.20 kW            |
| SCOP     | 5.50            | 4.30               |
| Tbiv     | -22 °C          | -22 °C             |
| TOL      | -22 °C          | -22 °C             |

|                                                     |             |             |
|-----------------------------------------------------|-------------|-------------|
| Pdh Tj = -7°C                                       | 7.00 kW     | 4.46 kW     |
| COP Tj = -7°C                                       | 5.33        | 4.01        |
| Pdh Tj = +2°C                                       | 4.20 kW     | 2.70 kW     |
| COP Tj = +2°C                                       | 5.90        | 4.66        |
| Pdh Tj = +7°C                                       | 2.80 kW     | 2.40 kW     |
| COP Tj = +7°C                                       | 5.95        | 5.17        |
| Pdh Tj = 12°C                                       | 2.40 kW     | 2.40 kW     |
| COP Tj = 12°C                                       | 5.74        | 5.51        |
| Pdh Tj = Tbiv                                       | 11.50 kW    | 7.50 kW     |
| COP Tj = Tbiv                                       | 3.93        | 2.86        |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.45 kW    | 7.54 kW     |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.93        | 2.86        |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.96        | 0.98        |
| WTOL                                                | 65 °C       | 65 °C       |
| Poff                                                | 13 W        | 23 W        |
| PTO                                                 | 34 W        | 0 W         |
| PSB                                                 | 0 W         | 0 W         |
| PCK                                                 | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe                       | 3800 kWh    | 3444 kWh    |

## Model CTC EcoPart 612M

|                                     |                       |
|-------------------------------------|-----------------------|
| Model name                          | CTC EcoPart 612M      |
| Application                         | Heating (medium temp) |
| Units                               | Indoor                |
| Climate zone (for heating)          | Colder Climate        |
| Cooling mode application (optional) | n/a                   |
| Any additional heat sources         | n/a                   |

## General data

|                  |             |
|------------------|-------------|
| Power supply     | 3x400V 50Hz |
| Off-peak product | No          |

## Brine/Water

### EN 14511-4 | Heating

|                                            |        |
|--------------------------------------------|--------|
| Shutting off the heat transfer medium flow | passed |
| Complete power supply failure              | passed |

### EN 14511-2 | Heating

|             | Low temperature | Medium temperature |
|-------------|-----------------|--------------------|
| Heat output | 6.08 kW         | 5.24 kW            |
| El input    | 1.27 kW         | 1.78 kW            |
| COP         | 4.78            | 2.95               |

### EN 12102-1 | Average Climate

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

### EN 14825 | Average Climate

|                | Low temperature | Medium temperature |
|----------------|-----------------|--------------------|
| $\eta_s$       | 208 %           | 155 %              |
| Prated         | 9.81 kW         | 6.80 kW            |
| SCOP           | 5.40            | 4.10               |
| Tbiv           | -10 °C          | -10 °C             |
| TOL            | -10 °C          | -10 °C             |
| Pdh Tj = -7°C  | 8.80 kW         | 6.00 kW            |
| COP Tj = -7°C  | 4.59            | 3.25               |
| Cdh Tj = -7 °C |                 |                    |
| Pdh Tj = +2°C  | 5.40 kW         | 3.70 kW            |
| COP Tj = +2°C  | 5.60            | 4.18               |
| Cdh Tj = +2 °C |                 |                    |
| Pdh Tj = +7°C  | 3.50 kW         | 2.40 kW            |
| COP Tj = +7°C  | 6.05            | 4.70               |
| Cdh Tj = +7 °C |                 |                    |
| Pdh Tj = 12°C  | 2.40 kW         | 2.40 kW            |

|                                                     |             |             |
|-----------------------------------------------------|-------------|-------------|
| COP Tj = 12°C                                       | 6.03        | 5.34        |
| Cdh Tj = +12 °C                                     |             |             |
| Pdh Tj = Tbiv                                       | 9.80 kW     | 6.70 kW     |
| COP Tj = Tbiv                                       | 4.30        | 3.00        |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 9.94 kW     | 6.66 kW     |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.28        | 2.99        |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970       | 0.980       |
| WTOL                                                | 65 °C       | 65 °C       |
| Poff                                                | 23 W        | 23 W        |
| PTO                                                 | 0 W         | 6 W         |
| PSB                                                 | 0 W         | 0 W         |
| PCK                                                 | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe                       | 3800 kWh    | 3444 kWh    |

#### EN 12102-1 | Colder Climate

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

#### EN 14825 | Colder Climate

|                                                     | Low temperature | Medium temperature |
|-----------------------------------------------------|-----------------|--------------------|
| $\eta_s$                                            | 208 %           | 155 %              |
| Prated                                              | 11.40 kW        | 7.20 kW            |
| SCOP                                                | 5.50            | 4.30               |
| Tbiv                                                | -22 °C          | -22 °C             |
| TOL                                                 | -22 °C          | -22 °C             |
| Pdh Tj = -7°C                                       | 7.00 kW         | 4.46 kW            |
| COP Tj = -7°C                                       | 5.33            | 4.01               |
| Pdh Tj = +2°C                                       | 4.20 kW         | 2.70 kW            |
| COP Tj = +2°C                                       | 5.90            | 4.66               |
| Pdh Tj = +7°C                                       | 2.80 kW         | 2.40 kW            |
| COP Tj = +7°C                                       | 5.95            | 5.17               |
| Pdh Tj = 12°C                                       | 2.40 kW         | 2.40 kW            |
| COP Tj = 12°C                                       | 5.74            | 5.51               |
| Pdh Tj = Tbiv                                       | 11.50 kW        | 7.50 kW            |
| COP Tj = Tbiv                                       | 3.93            | 2.86               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.45 kW        | 7.54 kW            |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.93            | 2.86               |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.96            | 0.98               |

|                                            |             |             |
|--------------------------------------------|-------------|-------------|
| WTOL                                       | 65 °C       | 65 °C       |
| Poff                                       | 13 W        | 23 W        |
| PTO                                        | 34 W        | 0 W         |
| PSB                                        | 0 W         | 0 W         |
| PCK                                        | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP                 | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe              | 3800 kWh    | 3444 kWh    |

## Model CTC EcoPart i612M

|                                     |                       |
|-------------------------------------|-----------------------|
| Model name                          | CTC EcoPart i612M     |
| Application                         | Heating (medium temp) |
| Units                               | Indoor                |
| Climate zone (for heating)          | Colder Climate        |
| Cooling mode application (optional) | n/a                   |
| Any additional heat sources         | n/a                   |

## General data

|                  |             |
|------------------|-------------|
| Power supply     | 3x400V 50Hz |
| Off-peak product | No          |

## Brine/Water

### EN 14511-4 | Heating

|                                            |        |
|--------------------------------------------|--------|
| Shutting off the heat transfer medium flow | passed |
| Complete power supply failure              | passed |

### EN 14511-2 | Heating

|             | Low temperature | Medium temperature |
|-------------|-----------------|--------------------|
| Heat output | 6.08 kW         | 5.24 kW            |
| El input    | 1.27 kW         | 1.78 kW            |
| COP         | 4.78            | 2.95               |

### EN 12102-1 | Average Climate

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

### EN 14825 | Average Climate

|                | Low temperature | Medium temperature |
|----------------|-----------------|--------------------|
| $\eta_s$       | 208 %           | 155 %              |
| Prated         | 9.81 kW         | 6.80 kW            |
| SCOP           | 5.40            | 4.10               |
| Tbiv           | -10 °C          | -10 °C             |
| TOL            | -10 °C          | -10 °C             |
| Pdh Tj = -7°C  | 8.80 kW         | 6.00 kW            |
| COP Tj = -7°C  | 4.59            | 3.25               |
| Cdh Tj = -7 °C |                 |                    |
| Pdh Tj = +2°C  | 5.40 kW         | 3.70 kW            |
| COP Tj = +2°C  | 5.60            | 4.18               |
| Cdh Tj = +2 °C |                 |                    |
| Pdh Tj = +7°C  | 3.50 kW         | 2.40 kW            |
| COP Tj = +7°C  | 6.05            | 4.70               |
| Cdh Tj = +7 °C |                 |                    |
| Pdh Tj = 12°C  | 2.40 kW         | 2.40 kW            |

|                                                     |             |             |
|-----------------------------------------------------|-------------|-------------|
| COP Tj = 12°C                                       | 6.03        | 5.34        |
| Cdh Tj = +12 °C                                     |             |             |
| Pdh Tj = Tbiv                                       | 9.80 kW     | 6.70 kW     |
| COP Tj = Tbiv                                       | 4.30        | 3.00        |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 9.94 kW     | 6.66 kW     |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.28        | 2.99        |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970       | 0.980       |
| WTOL                                                | 65 °C       | 65 °C       |
| Poff                                                | 23 W        | 23 W        |
| PTO                                                 | 0 W         | 6 W         |
| PSB                                                 | 0 W         | 0 W         |
| PCK                                                 | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe                       | 3800 kWh    | 3444 kWh    |

#### EN 12102-1 | Colder Climate

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

#### EN 14825 | Colder Climate

|                                                     | Low temperature | Medium temperature |
|-----------------------------------------------------|-----------------|--------------------|
| ηs                                                  | 208 %           | 155 %              |
| Prated                                              | 11.40 kW        | 7.20 kW            |
| SCOP                                                | 5.50            | 4.30               |
| Tbiv                                                | -22 °C          | -22 °C             |
| TOL                                                 | -22 °C          | -22 °C             |
| Pdh Tj = -7°C                                       | 7.00 kW         | 4.46 kW            |
| COP Tj = -7°C                                       | 5.33            | 4.01               |
| Pdh Tj = +2°C                                       | 4.20 kW         | 2.70 kW            |
| COP Tj = +2°C                                       | 5.90            | 4.66               |
| Pdh Tj = +7°C                                       | 2.80 kW         | 2.40 kW            |
| COP Tj = +7°C                                       | 5.95            | 5.17               |
| Pdh Tj = 12°C                                       | 2.40 kW         | 2.40 kW            |
| COP Tj = 12°C                                       | 5.74            | 5.51               |
| Pdh Tj = Tbiv                                       | 11.50 kW        | 7.50 kW            |
| COP Tj = Tbiv                                       | 3.93            | 2.86               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.45 kW        | 7.54 kW            |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.93            | 2.86               |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.96            | 0.98               |

|                                            |             |             |
|--------------------------------------------|-------------|-------------|
| WTOL                                       | 65 °C       | 65 °C       |
| Poff                                       | 13 W        | 23 W        |
| PTO                                        | 34 W        | 0 W         |
| PSB                                        | 0 W         | 0 W         |
| PCK                                        | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP                 | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe              | 3800 kWh    | 3444 kWh    |