



Warm climate and Medium temperature

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|---------------------------------------|--|---------------------------|-------|
| Model(s): | CTC EcoPart 430 + CTC EcoLogic, CTC EcoPart i430 PRO | | |
| Air-to-water heat pump: | No | Energy efficiency class: | - |
| Water-to-water heat pump: | No | Controller class: | VII - |
| Brine-to-water heat pump: | Yes | Controller contribution: | 3,5 % |
| Low-temperature heat pump: | No | Package efficiency: | 140 % |
| Equipped with a supplementary heater: | No | Package efficiency class: | - |
| Heat pump combination heater: | No | | |

Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low-temperature heat pumps, parameters shall be declared for low-temperature application.

| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
|--|--------------------------|-----------|------|--|--------------------------|------------|-------------------|
| Rated heat output (*) | <i>P_{rated}</i> | 30 | kW | Seasonal space heating energy efficiency | η_s | 136 | % |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j | | | | Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j | | | |
| T _j = - 7 °C | <i>P_{dh}</i> | na | kW | T _j = - 7 °C | <i>COP_d</i> | na | - |
| T _j = + 2 °C | <i>P_{dh}</i> | 27,0 | kW | T _j = +2 °C | <i>COP_d</i> | 3,11 | - |
| T _j = + 7 °C | <i>P_{dh}</i> | 27,6 | kW | T _j = +7 °C | <i>COP_d</i> | 3,48 | - |
| T _j = + 12 °C | <i>P_{dh}</i> | 28,4 | kW | T _j = +12 °C | <i>COP_d</i> | 4,12 | - |
| T _j = bivalent temperature | <i>P_{dh}</i> | 27,0 | kW | T _j = bivalent temperature | <i>COP_d</i> | 3,21 | - |
| T _j = operation limit temperature | <i>P_{dh}</i> | na | kW | T _j = operation limit temperature | <i>COP_d</i> | na | - |
| For air-to-water heat pumps: T _j = - 15 °C (if TOL < - 20 °C) | <i>P_{dh}</i> | na | kW | For air-to-water heat pumps: T _j = - 15 °C (if TOL < - 20 °C) | <i>COP_d</i> | na | - |
| Bivalent temperature | <i>T_{biv}</i> | 3 | °C | For air-to-water heat pumps: Operation limit temperature | <i>TOL</i> | na | °C |
| Cycling interval capacity for heating | <i>P_{cych}</i> | na | kW | Cycling interval efficiency | <i>COP_{cyc}</i> | na | - |
| Degradation co-efficient (**) | <i>C_{dh}</i> | 0,99 | - | Heating water operating limit temperature | <i>WTOL</i> | 65 | °C |
| Power consumption in modes other than active mode | | | | Supplementary heater | | | |
| Off mode | <i>P_{OFF}</i> | 0,018 | kW | Rated heat output (*) | <i>P_{sup}</i> | 2,2 | kW |
| Thermostat-off mode | <i>P_{TO}</i> | 0,032 | kW | Type of energy input | Electric | | |
| Standby mode | <i>P_{SB}</i> | 0,018 | kW | | | | |
| Crankcase heater mode | <i>P_{CK}</i> | 0,000 | kW | | | | |
| Other items | | | | | | | |
| Capacity control | Fixed | | | For air-to-water heat pumps: Rated air flow rate, outdoors | - | na | m ³ /h |
| Sound power level, indoors/ outdoors | <i>L_{WA}</i> | 53/na | dB | For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger | - | 3,1/2,1 | m ³ /h |
| Annual energy consumption | <i>Q_{HE}</i> | 10792 | kWh | | | | |

For heat pump combination heater:

| | | | | | | | |
|--|---|----|-----|--|-------------------------|----|-----|
| Declared load profile / Energy efficiency class | na | | | Water heating energy efficiency | η_{wh} | na | % |
| Daily electricity consumption | <i>Q_{elec}</i> | na | kWh | Daily fuel consumption | <i>Q_{fuel}</i> | na | kWh |
| Annual electricity consumption | <i>AEC</i> | na | kWh | Annual fuel consumption | <i>AFC</i> | na | GJ |
| Contact details | Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000 | | | www.ctc.se | | | |

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output *P_{rated}* is equal to the design load for heating *P_{designh}*, and the rated heat output of a supplementary heater *P_{sup}* is equal to the supplementary capacity for heating *sup(T_j)*. (**) If *C_{dh}* is not determined by measurement then the default degradation coefficient is *C_{dh}* = 0,9.



Warm climate and Low temperature

| | | | |
|---------------------------------------|--|---------------------------|-------|
| Model(s): | CTC EcoPart 430 + CTC EcoLogic, CTC EcoPart i430 PRO | | |
| Air-to-water heat pump: | No | Energy efficiency class: | - |
| Water-to-water heat pump: | No | Controller class: | VII |
| Brine-to-water heat pump: | Yes | Controller contribution: | 3,5 % |
| Low-temperature heat pump: | No | Package efficiency: | 174 % |
| Equipped with a supplementary heater: | No | Package efficiency class: | - |
| Heat pump combination heater: | No | | |

Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low-temperature heat pumps, parameters shall be declared for low-temperature application.

| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
|--|--------------------------|-----------|------|--|--------------------------|------------|-------------------|
| Rated heat output (*) | <i>P_{rated}</i> | 32 | kW | Seasonal space heating energy efficiency | η_s | 170 | % |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j | | | | Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j | | | |
| T _j = - 7 °C | <i>P_{dh}</i> | na | kW | T _j = - 7 °C | <i>COP_d</i> | na | - |
| T _j = + 2 °C | <i>P_{dh}</i> | 29,0 | kW | T _j = +2 °C | <i>COP_d</i> | 4,55 | - |
| T _j = + 7 °C | <i>P_{dh}</i> | 29,4 | kW | T _j = +7 °C | <i>COP_d</i> | 4,76 | - |
| T _j = + 12 °C | <i>P_{dh}</i> | 29,6 | kW | T _j = +12 °C | <i>COP_d</i> | 5,02 | - |
| T _j = bivalent temperature | <i>P_{dh}</i> | 29,2 | kW | T _j = bivalent temperature | <i>COP_d</i> | 4,62 | - |
| T _j = operation limit temperature | <i>P_{dh}</i> | na | kW | T _j = operation limit temperature | <i>COP_d</i> | na | - |
| For air-to-water heat pumps: T _j = - 15 °C (if TOL < - 20 °C) | <i>P_{dh}</i> | na | kW | For air-to-water heat pumps: T _j = - 15 °C (if TOL < - 20 °C) | <i>COP_d</i> | na | - |
| Bivalent temperature | <i>T_{biv}</i> | 3 | °C | For air-to-water heat pumps: Operation limit temperature | <i>TOL</i> | na | °C |
| Cycling interval capacity for heating | <i>P_{cych}</i> | na | kW | Cycling interval efficiency | <i>COP_{cyc}</i> | na | - |
| Degradation co-efficient (**) | <i>C_{dh}</i> | 0,96 | - | Heating water operating limit temperature | <i>WTOL</i> | 65 | °C |
| Power consumption in modes other than active mode | | | | Supplementary heater | | | |
| Off mode | <i>P_{OFF}</i> | 0,018 | kW | Rated heat output (*) | <i>P_{sup}</i> | 2,4 | kW |
| Thermostat-off mode | <i>P_{TO}</i> | 0,097 | kW | Type of energy input | Electric | | |
| Standby mode | <i>P_{SB}</i> | 0,018 | kW | | | | |
| Crankcase heater mode | <i>P_{CK}</i> | 0,000 | kW | | | | |
| Other items | | | | | | | |
| Capacity control | Fixed | | | For air-to-water heat pumps: Rated air flow rate, outdoors | - | na | m ³ /h |
| Sound power level, indoors/ outdoors | <i>L_{WA}</i> | 53/na | dB | For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger | - | 3,8/2,6 | m ³ /h |
| Annual energy consumption | <i>Q_{HE}</i> | 9404 | kWh | | | | |

For heat pump combination heater:

| | | | | | | | |
|--|---|----|-----|--|-------------------------|----|-----|
| Declared load profile / Energy efficiency class | na | | | Water heating energy efficiency | η_{wh} | na | % |
| Daily electricity consumption | <i>Q_{elec}</i> | na | kWh | Daily fuel consumption | <i>Q_{fuel}</i> | na | kWh |
| Annual electricity consumption | <i>AEC</i> | na | kWh | Annual fuel consumption | <i>AFC</i> | na | GJ |
| Contact details | Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000 | | | www.ctc.se | | | |

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output *P_{rated}* is equal to the design load for heating *P_{design,h}*, and the rated heat output of a supplementary heater *P_{sup}* is equal to the supplementary capacity for heating *sup(T_j)*. (**) If *C_{dh}* is not determined by measurement then the default degradation coefficient is *C_{dh}* = 0,9.

Average climate and Medium temperature

| | | | |
|---------------------------------------|--|---------------------------|-------|
| Model(s): | CTC EcoPart 430 + CTC EcoLogic, CTC EcoPart i430 PRO | | |
| Air-to-water heat pump: | No | Energy efficiency class: | A++ - |
| Water-to-water heat pump: | No | Controller class: | VII - |
| Brine-to-water heat pump: | Yes | Controller contribution: | 3,5 % |
| Low-temperature heat pump: | No | Package efficiency: | 141 % |
| Equipped with a supplementary heater: | No | Package efficiency class: | A++ - |
| Heat pump combination heater: | No | | |

Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low-temperature heat pumps, parameters shall be declared for low-temperature application.

| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
|--|---|--------------|------|--|--------------------------|----------------|-------------------|
| Rated heat output (*) | <i>P_{rated}</i> | 32 | kW | Seasonal space heating energy efficiency | η_s | 137 | % |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j | | | | Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j | | | |
| T _j = -7 °C | <i>P_{dh}</i> | 27,2 | kW | T _j = -7 °C | <i>COP_d</i> | 3,29 | - |
| T _j = +2 °C | <i>P_{dh}</i> | 27,8 | kW | T _j = +2 °C | <i>COP_d</i> | 3,68 | - |
| T _j = +7 °C | <i>P_{dh}</i> | 28,4 | kW | T _j = +7 °C | <i>COP_d</i> | 4,03 | - |
| T _j = +12 °C | <i>P_{dh}</i> | 28,8 | kW | T _j = +12 °C | <i>COP_d</i> | 4,37 | - |
| T _j = bivalent temperature | <i>P_{dh}</i> | 27,2 | kW | T _j = bivalent temperature | <i>COP_d</i> | 3,34 | - |
| T _j = operation limit temperature | <i>P_{dh}</i> | na | kW | T _j = operation limit temperature | <i>COP_d</i> | na | - |
| For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C) | <i>P_{dh}</i> | na | kW | For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C) | <i>COP_d</i> | na | - |
| Bivalent temperature | <i>T_{biv}</i> | -6 | °C | For air-to-water heat pumps: Operation limit temperature | <i>TOL</i> | na | °C |
| Cycling interval capacity for heating | <i>P_{cych}</i> | na | kW | Cycling interval efficiency | <i>COP_{cyc}</i> | na | - |
| Degradation co-efficient (**) | <i>C_{dh}</i> | 0,99 | - | Heating water operating limit temperature | <i>WTOL</i> | 65 | °C |
| Power consumption in modes other than active mode | | | | Supplementary heater | | | |
| Off mode | <i>P_{OFF}</i> | 0,018 | kW | Rated heat output (*) | <i>P_{sup}</i> | 5,4 | kW |
| Thermostat-off mode | <i>P_{TO}</i> | 0,032 | kW | Type of energy input | Electric | | |
| Standby mode | <i>P_{SB}</i> | 0,018 | kW | | | | |
| Crankcase heater mode | <i>P_{CK}</i> | 0,000 | kW | | | | |
| Other items | | | | | | | |
| Capacity control | Fixed | | | For air-to-water heat pumps: Rated air flow rate, outdoors | - | na | m ³ /h |
| Sound power level, indoors/outdoors | <i>L_{WA}</i> | 53/na | dB | For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger | - | 3,1/2,1 | m ³ /h |
| Annual energy consumption | <i>Q_{HE}</i> | 18316 | kWh | | | | |
| For heat pump combination heater: | | | | | | | |
| Declared load profile / Energy efficiency class | na | | | Water heating energy efficiency | η_{wh} | na | % |
| Daily electricity consumption | <i>Q_{elec}</i> | na | kWh | Daily fuel consumption | <i>Q_{fuel}</i> | na | kWh |
| Annual electricity consumption | <i>AEC</i> | na | kWh | Annual fuel consumption | <i>AFC</i> | na | GJ |
| Contact details | Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000 | | | www.ctc.se | | | |

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output *P_{rated}* is equal to the design load for heating *P_{designh}*, and the rated heat output of a supplementary heater *P_{sup}* is equal to the supplementary capacity for heating *sup(T_j)*. (**) If *C_{dh}* is not determined by measurement then the default degradation coefficient is *C_{dh}* = 0,9.



Average climate and Low temperature

| | | | |
|---------------------------------------|--|---------------------------|--------|
| Model(s): | CTC EcoPart 430 + CTC EcoLogic, CTC EcoPart i430 PRO | | |
| Air-to-water heat pump: | No | Energy efficiency class: | A++ - |
| Water-to-water heat pump: | No | Controller class: | VII - |
| Brine-to-water heat pump: | Yes | Controller contribution: | 3,5 % |
| Low-temperature heat pump: | No | Package efficiency: | 178 % |
| Equipped with a supplementary heater: | No | Package efficiency class: | A+++ - |
| Heat pump combination heater: | No | | |

Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low-temperature heat pumps, parameters shall be declared for low-temperature application.

| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
|--|--------------------------|--------------|------|--|--------------------------|----------------|-------------------|
| Rated heat output (*) | <i>P_{rated}</i> | 32 | kW | Seasonal space heating energy efficiency | η_s | 174 | % |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j | | | | Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j | | | |
| T _j = -7 °C | <i>P_{dh}</i> | 29,2 | kW | T _j = -7 °C | <i>COP_d</i> | 4,64 | - |
| T _j = +2 °C | <i>P_{dh}</i> | 29,4 | kW | T _j = +2 °C | <i>COP_d</i> | 4,81 | - |
| T _j = +7 °C | <i>P_{dh}</i> | 29,6 | kW | T _j = +7 °C | <i>COP_d</i> | 4,97 | - |
| T _j = +12 °C | <i>P_{dh}</i> | 29,8 | kW | T _j = +12 °C | <i>COP_d</i> | 5,13 | - |
| T _j = bivalent temperature | <i>P_{dh}</i> | 29,2 | kW | T _j = bivalent temperature | <i>COP_d</i> | 4,64 | - |
| T _j = operation limit temperature | <i>P_{dh}</i> | na | kW | T _j = operation limit temperature | <i>COP_d</i> | na | - |
| For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C) | <i>P_{dh}</i> | na | kW | For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C) | <i>COP_d</i> | na | - |
| Bivalent temperature | <i>T_{biv}</i> | -7 | °C | For air-to-water heat pumps: Operation limit temperature | <i>TOL</i> | na | °C |
| Cycling interval capacity for heating | <i>P_{cych}</i> | na | kW | Cycling interval efficiency | <i>COP_{cyc}</i> | na | - |
| Degradation co-efficient (**) | <i>C_{dh}</i> | 0,96 | - | Heating water operating limit temperature | <i>WTOL</i> | 65 | °C |
| Power consumption in modes other than active mode | | | | Supplementary heater | | | |
| Off mode | <i>P_{OFF}</i> | 0,018 | kW | Rated heat output (*) | <i>P_{sup}</i> | 4,0 | kW |
| Thermostat-off mode | <i>P_{TO}</i> | 0,097 | kW | Type of energy input | Electric | | |
| Standby mode | <i>P_{SB}</i> | 0,018 | kW | | | | |
| Crankcase heater mode | <i>P_{CK}</i> | 0,000 | kW | | | | |
| Other items | | | | | | | |
| Capacity control | Fixed | | | For air-to-water heat pumps: Rated air flow rate, outdoors | - | na | m ³ /h |
| Sound power level, indoors/outdoors | <i>L_{WA}</i> | 53/na | dB | For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger | - | 3,8/2,6 | m ³ /h |
| Annual energy consumption | <i>Q_{HE}</i> | 14934 | kWh | | | | |

For heat pump combination heater:

| | | | | | | | |
|--|---|-----------|-----|--|-------------------------|-----------|-----|
| Declared load profile / Energy efficiency class | na | | | Water heating energy efficiency | η_{wh} | na | % |
| Daily electricity consumption | <i>Q_{elec}</i> | na | kWh | Daily fuel consumption | <i>Q_{fuel}</i> | na | kWh |
| Annual electricity consumption | <i>AEC</i> | na | kWh | Annual fuel consumption | <i>AFC</i> | na | GJ |
| Contact details | Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000 | | | www.ctc.se | | | |

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output *P_{rated}* is equal to the design load for heating *P_{designh}*, and the rated heat output of a supplementary heater *P_{sup}* is equal to the supplementary capacity for heating *sup(T_j)*. (**) If *C_{dh}* is not determined by measurement then the default degradation coefficient is *C_{dh}* = 0,9.

Cold climate and Medium temperature

| | | | |
|---------------------------------------|--|---------------------------|-------|
| Model(s): | CTC EcoPart 430 + CTC EcoLogic, CTC EcoPart i430 PRO | | |
| Air-to-water heat pump: | No | Energy efficiency class: | - |
| Water-to-water heat pump: | No | Controller class: | VII |
| Brine-to-water heat pump: | Yes | Controller contribution: | 3,5 % |
| Low-temperature heat pump: | No | Package efficiency: | 144 % |
| Equipped with a supplementary heater: | No | Package efficiency class: | - |
| Heat pump combination heater: | No | | |

Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low-temperature heat pumps, parameters shall be declared for low-temperature application.

| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
|--|---|--------------|------|--|--------------------------|----------------|-------------------|
| Rated heat output (*) | <i>P_{rated}</i> | 30 | kW | Seasonal space heating energy efficiency | η_s | 140 | % |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j | | | | Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j | | | |
| T _j = -7 °C | <i>P_{dh}</i> | 27,6 | kW | T _j = -7 °C | <i>COP_d</i> | 3,59 | - |
| T _j = +2 °C | <i>P_{dh}</i> | 28,2 | kW | T _j = +2 °C | <i>COP_d</i> | 3,94 | - |
| T _j = +7 °C | <i>P_{dh}</i> | 28,6 | kW | T _j = +7 °C | <i>COP_d</i> | 4,26 | - |
| T _j = +12 °C | <i>P_{dh}</i> | 29,0 | kW | T _j = +12 °C | <i>COP_d</i> | 4,49 | - |
| T _j = bivalent temperature | <i>P_{dh}</i> | 27,2 | kW | T _j = bivalent temperature | <i>COP_d</i> | 3,28 | - |
| T _j = operation limit temperature | <i>P_{dh}</i> | na | kW | T _j = operation limit temperature | <i>COP_d</i> | na | - |
| For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C) | <i>P_{dh}</i> | na | kW | For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C) | <i>COP_d</i> | na | - |
| Bivalent temperature | <i>T_{biv}</i> | -18 | °C | For air-to-water heat pumps: Operation limit temperature | <i>TOL</i> | na | °C |
| Cycling interval capacity for heating | <i>P_{cych}</i> | na | kW | Cycling interval efficiency | <i>COP_{cyc}</i> | na | - |
| Degradation co-efficient (**) | <i>C_{dh}</i> | 0,99 | - | Heating water operating limit temperature | <i>WTOL</i> | 65 | °C |
| Power consumption in modes other than active mode | | | | Supplementary heater | | | |
| Off mode | <i>P_{OFF}</i> | 0,018 | kW | Rated heat output (*) | <i>P_{sup}</i> | 3,4 | kW |
| Thermostat-off mode | <i>P_{TO}</i> | 0,032 | kW | Type of energy input | Electric | | |
| Standby mode | <i>P_{SB}</i> | 0,018 | kW | | | | |
| Crankcase heater mode | <i>P_{CK}</i> | 0,000 | kW | | | | |
| Other items | | | | | | | |
| Capacity control | Fixed | | | For air-to-water heat pumps: Rated air flow rate, outdoors | - | na | m ³ /h |
| Sound power level, indoors/outdoors | <i>L_{WA}</i> | 53/na | dB | For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger | - | 3,1/2,1 | m ³ /h |
| Annual energy consumption | <i>Q_{HE}</i> | 20278 | kWh | | | | |
| For heat pump combination heater: | | | | Declared load profile / Energy efficiency class | | | |
| Declared load profile / Energy efficiency class | | na | | Water heating energy efficiency | | η_{wh} | |
| Daily electricity consumption | <i>Q_{elec}</i> | na | kWh | Daily fuel consumption | <i>Q_{fuel}</i> | na | kWh |
| Annual electricity consumption | <i>AEC</i> | na | kWh | Annual fuel consumption | <i>AFC</i> | na | GJ |
| Contact details | Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000 | | | www.ctc.se | | | |

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output *P_{rated}* is equal to the design load for heating *P_{designh}*, and the rated heat output of a supplementary heater *P_{sup}* is equal to the supplementary capacity for heating *sup(T_j)*. (**) If *C_{dh}* is not determined by measurement then the default degradation coefficient is *C_{dh}* = 0,9.

Cold climate and Low temperature

| | | | |
|---------------------------------------|--|---------------------------|-------|
| Model(s): | CTC EcoPart 430 + CTC EcoLogic, CTC EcoPart i430 PRO | | |
| Air-to-water heat pump: | No | Energy efficiency class: | - |
| Water-to-water heat pump: | No | Controller class: | VII - |
| Brine-to-water heat pump: | Yes | Controller contribution: | 3,5 % |
| Low-temperature heat pump: | No | Package efficiency: | 180 % |
| Equipped with a supplementary heater: | No | Package efficiency class: | - |
| Heat pump combination heater: | No | | |

Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low-temperature heat pumps, parameters shall be declared for low-temperature application.

| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
|--|--------------------------|--------------|------|--|-------------------------|----------------|-------------------|
| Rated heat output (*) | <i>P_{rated}</i> | 32 | kW | Seasonal space heating energy efficiency | η_s | 176 | % |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j | | | | Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j | | | |
| T _j = - 7 °C | <i>P_{dh}</i> | 29,4 | kW | T _j = - 7 °C | <i>COP_d</i> | 4,84 | - |
| T _j = + 2 °C | <i>P_{dh}</i> | 29,6 | kW | T _j = + 2 °C | <i>COP_d</i> | 4,98 | - |
| T _j = + 7 °C | <i>P_{dh}</i> | 29,8 | kW | T _j = + 7 °C | <i>COP_d</i> | 5,08 | - |
| T _j = + 12 °C | <i>P_{dh}</i> | 29,8 | kW | T _j = + 12 °C | <i>COP_d</i> | 5,11 | - |
| T _j = bivalent temperature | <i>P_{dh}</i> | 29,2 | kW | T _j = bivalent temperature | <i>COP_d</i> | 4,67 | - |
| T _j = operation limit temperature | <i>P_{dh}</i> | na | kW | T _j = operation limit temperature | <i>COP_d</i> | na | - |
| For air-to-water heat pumps: T _j = - 15 °C (if TOL < - 20 °C) | <i>P_{dh}</i> | na | kW | For air-to-water heat pumps: T _j = - 15 °C (if TOL < - 20 °C) | <i>COP_d</i> | na | - |
| Bivalent temperature | <i>T_{biv}</i> | -18 | °C | For air-to-water heat pumps: Operation limit temperature | <i>TOL</i> | na | °C |
| Cycling interval capacity for heating | <i>P_{cych}</i> | na | kW | Cycling interval efficiency | <i>COP_{cy}</i> | na | - |
| Degradation co-efficient (**) | <i>C_{dh}</i> | 0,96 | - | Heating water operating limit temperature | <i>WTOL</i> | 65 | °C |
| Power consumption in modes other than active mode | | | | Supplementary heater | | | |
| Off mode | <i>P_{OFF}</i> | 0,018 | kW | Rated heat output (*) | <i>P_{sup}</i> | 3,6 | kW |
| Thermostat-off mode | <i>P_{TO}</i> | 0,097 | kW | Type of energy input | Electric | | |
| Standby mode | <i>P_{SB}</i> | 0,018 | kW | | | | |
| Crankcase heater mode | <i>P_{CK}</i> | 0,000 | kW | | | | |
| Other items | | | | | | | |
| Capacity control | Fixed | | | For air-to-water heat pumps: Rated air flow rate, outdoors | - | na | m ³ /h |
| Sound power level, indoors/ outdoors | <i>L_{WA}</i> | 53/na | dB | For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger | - | 3,8/2,6 | m ³ /h |
| Annual energy consumption | <i>Q_{HE}</i> | 15539 | kWh | | | | |

For heat pump combination heater:

| Declared load profile / Energy efficiency class | Symbol | Value | Unit | Water heating energy efficiency | Symbol | Value | Unit |
|---|---|-----------|------|---------------------------------|-------------------------|-----------|------|
| | | na | | | η_{wh} | na | % |
| Daily electricity consumption | <i>Q_{elec}</i> | na | kWh | Daily fuel consumption | <i>Q_{fuel}</i> | na | kWh |
| Annual electricity consumption | <i>AEC</i> | na | kWh | Annual fuel consumption | <i>AFC</i> | na | GJ |
| Contact details | Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000 | | | www.ctc.se | | | |

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output *P_{rated}* is equal to the design load for heating *P_{design,h}*, and the rated heat output of a supplementary heater *P_{sup}* is equal to the supplementary capacity for heating *sup(T_j)*. (**) If *C_{dh}* is not determined by measurement then the default degradation coefficient is *C_{dh}* = 0,9.



Warm climate and Medium temperature

| | | | |
|---------------------------------------|-------------------------------------|---------------------------|-------|
| Model(s): | CTC EcoPart 430 + CTC EcoZenith 550 | | |
| Air-to-water heat pump: | No | Energy efficiency class: | - |
| Water-to-water heat pump: | No | Controller class: | VII - |
| Brine-to-water heat pump: | Yes | Controller contribution: | 3,5 % |
| Low-temperature heat pump: | No | Package efficiency: | 124 % |
| Equipped with a supplementary heater: | Yes | Package efficiency class: | - |
| Heat pump combination heater: | Yes | | |

Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low-temperature heat pumps, parameters shall be declared for low-temperature application.

| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
|--|--------------------------|-----------|------|--|--------------------------|------------|-------------------|
| Rated heat output (*) | <i>P_{rated}</i> | 29 | kW | Seasonal space heating energy efficiency | η_s | 120 | % |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j | | | | Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j | | | |
| T _j = - 7 °C | <i>P_{dh}</i> | na | kW | T _j = - 7 °C | <i>COP_d</i> | na | - |
| T _j = + 2 °C | <i>P_{dh}</i> | 26,8 | kW | T _j = +2 °C | <i>COP_d</i> | 2,77 | - |
| T _j = + 7 °C | <i>P_{dh}</i> | 27,2 | kW | T _j = +7 °C | <i>COP_d</i> | 3,09 | - |
| T _j = + 12 °C | <i>P_{dh}</i> | 28,0 | kW | T _j = +12 °C | <i>COP_d</i> | 3,65 | - |
| T _j = bivalent temperature | <i>P_{dh}</i> | 26,9 | kW | T _j = bivalent temperature | <i>COP_d</i> | 2,86 | - |
| T _j = operation limit temperature | <i>P_{dh}</i> | 26,8 | kW | T _j = operation limit temperature | <i>COP_d</i> | 2,77 | - |
| For air-to-water heat pumps: T _j = - 15 °C (if TOL < - 20 °C) | <i>P_{dh}</i> | na | kW | For air-to-water heat pumps: T _j = - 15 °C (if TOL < - 20 °C) | <i>COP_d</i> | na | - |
| Bivalent temperature | <i>T_{biv}</i> | 3 | °C | For air-to-water heat pumps: Operation limit temperature | <i>TOL</i> | na | °C |
| Cycling interval capacity for heating | <i>P_{cych}</i> | na | kW | Cycling interval efficiency | <i>COP_{cyc}</i> | na | - |
| Degradation co-efficient (**) | <i>C_{dh}</i> | 0,98 | - | Heating water operating limit temperature | <i>WTOL</i> | 65 | °C |
| Power consumption in modes other than active mode | | | | Supplementary heater | | | |
| Off mode | <i>P_{OFF}</i> | 0,025 | kW | Rated heat output (*) | <i>P_{sup}</i> | 2,2 | kW |
| Thermostat-off mode | <i>P_{TO}</i> | 0,119 | kW | Type of energy input | Electric | | |
| Standby mode | <i>P_{SB}</i> | 0,025 | kW | | | | |
| Crankcase heater mode | <i>P_{CK}</i> | 0,000 | kW | | | | |
| Other items | | | | | | | |
| Capacity control | Fixed | | | For air-to-water heat pumps: Rated air flow rate, outdoors | - | na | m ³ /h |
| Sound power level, indoors/ outdoors | <i>L_{WA}</i> | 53/na | dB | For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger | - | 3,1/2,1 | m ³ /h |
| Annual energy consumption | <i>Q_{HE}</i> | 12132 | kWh | | | | |

For heat pump combination heater:

| | | | | | | | |
|--|---|-------|-----|--|-------------------------|------------|-----|
| Declared load profile / Energy efficiency class | XXL / A | | | Water heating energy efficiency | η_{wh} | 100 | % |
| Daily electricity consumption | <i>Q_{elec}</i> | 9,851 | kWh | Daily fuel consumption | <i>Q_{fuel}</i> | NA | kWh |
| Annual electricity consumption | <i>AEC</i> | 2167 | kWh | Annual fuel consumption | <i>AFC</i> | NA | GJ |
| Contact details | Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000 | | | www.ctc.se | 170904 | | |

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output *P_{rated}* is equal to the design load for heating *P_{designh}*, and the rated heat output of a supplementary heater *P_{sup}* is equal to the supplementary capacity for heating *sup(T_j)*. (**) If *C_{dh}* is not determined by measurement then the default degradation coefficient is *C_{dh}* = 0,9.



Warm climate and Low temperature

| | | | |
|---------------------------------------|-------------------------------------|---------------------------|-------|
| Model(s): | CTC EcoPart 430 + CTC EcoZenith 550 | | |
| Air-to-water heat pump: | No | Energy efficiency class: | - |
| Water-to-water heat pump: | No | Controller class: | VII - |
| Brine-to-water heat pump: | Yes | Controller contribution: | 3,5 % |
| Low-temperature heat pump: | No | Package efficiency: | 150 % |
| Equipped with a supplementary heater: | Yes | Package efficiency class: | - |
| Heat pump combination heater: | Yes | | |

Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low-temperature heat pumps, parameters shall be declared for low-temperature application.

| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
|--|--------------------------|-----------|------|--|--------------------------|------------|-------------------|
| Rated heat output (*) | <i>P_{rated}</i> | 31 | kW | Seasonal space heating energy efficiency | η_s | 146 | % |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j | | | | Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j | | | |
| T _j = - 7 °C | <i>P_{dh}</i> | na | kW | T _j = - 7 °C | <i>COP_d</i> | na | - |
| T _j = + 2 °C | <i>P_{dh}</i> | 28,6 | kW | T _j = +2 °C | <i>COP_d</i> | 4,03 | - |
| T _j = + 7 °C | <i>P_{dh}</i> | 28,9 | kW | T _j = +7 °C | <i>COP_d</i> | 4,22 | - |
| T _j = + 12 °C | <i>P_{dh}</i> | 29,3 | kW | T _j = +12 °C | <i>COP_d</i> | 4,45 | - |
| T _j = bivalent temperature | <i>P_{dh}</i> | 28,7 | kW | T _j = bivalent temperature | <i>COP_d</i> | 4,09 | - |
| T _j = operation limit temperature | <i>P_{dh}</i> | 28,6 | kW | T _j = operation limit temperature | <i>COP_d</i> | 4,03 | - |
| For air-to-water heat pumps: T _j = - 15 °C (if TOL < - 20 °C) | <i>P_{dh}</i> | na | kW | For air-to-water heat pumps: T _j = - 15 °C (if TOL < - 20 °C) | <i>COP_d</i> | na | - |
| Bivalent temperature | <i>T_{biv}</i> | 3 | °C | For air-to-water heat pumps: Operation limit temperature | <i>TOL</i> | na | °C |
| Cycling interval capacity for heating | <i>P_{cych}</i> | na | kW | Cycling interval efficiency | <i>COP_{cyc}</i> | na | - |
| Degradation co-efficient (**) | <i>C_{dh}</i> | 0,94 | - | Heating water operating limit temperature | <i>WTOL</i> | 65 | °C |
| Power consumption in modes other than active mode | | | | Supplementary heater | | | |
| Off mode | <i>P_{OFF}</i> | 0,025 | kW | Rated heat output (*) | <i>P_{sup}</i> | 2,3 | kW |
| Thermostat-off mode | <i>P_{TO}</i> | 0,357 | kW | Type of energy input | Electric | | |
| Standby mode | <i>P_{SB}</i> | 0,025 | kW | | | | |
| Crankcase heater mode | <i>P_{CK}</i> | 0,000 | kW | | | | |
| Other items | | | | | | | |
| Capacity control | Fixed | | | For air-to-water heat pumps: Rated air flow rate, outdoors | - | na | m ³ /h |
| Sound power level, indoors/ outdoors | <i>L_{WA}</i> | 53/na | dB | For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger | - | 3,8/2,6 | m ³ /h |
| Annual energy consumption | <i>Q_{HE}</i> | 10756 | kWh | | | | |

For heat pump combination heater:

| | | | | | | | |
|--|---|-------|-----|--|-------------------------|-----|-----|
| Declared load profile / Energy efficiency class | XXL / A | | | Water heating energy efficiency | η_{wh} | 100 | % |
| Daily electricity consumption | <i>Q_{elec}</i> | 9,851 | kWh | Daily fuel consumption | <i>Q_{fuel}</i> | NA | kWh |
| Annual electricity consumption | <i>AEC</i> | 2167 | kWh | Annual fuel consumption | <i>AFC</i> | NA | GJ |
| Contact details | Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000 | | | www.ctc.se | 170904 | | |

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output *P_{rated}* is equal to the design load for heating *P_{designh}*, and the rated heat output of a supplementary heater *P_{sup}* is equal to the supplementary capacity for heating *sup(T_j)*. (**) If *C_{dh}* is not determined by measurement then the default degradation coefficient is *C_{dh}* = 0,9.



Average climate and Medium temperature

| | | | |
|---------------------------------------|-------------------------------------|---------------------------|-------|
| Model(s): | CTC EcoPart 430 + CTC EcoZenith 550 | | |
| Air-to-water heat pump: | No | Energy efficiency class: | A+ - |
| Water-to-water heat pump: | No | Controller class: | VII - |
| Brine-to-water heat pump: | Yes | Controller contribution: | 3,5 % |
| Low-temperature heat pump: | No | Package efficiency: | 125 % |
| Equipped with a supplementary heater: | Yes | Package efficiency class: | A++ - |
| Heat pump combination heater: | Yes | | |

Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low-temperature heat pumps, parameters shall be declared for low-temperature application.

| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
|--|--------------------------|--------------|------|--|--------------------------|-------------|------|
| Rated heat output (*) | <i>P_{rated}</i> | 32 | kW | Seasonal space heating energy efficiency | η_s | 121 | % |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j | | | | Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j | | | |
| T _j = -7 °C | <i>P_{dh}</i> | 27,00 | kW | T _j = -7 °C | <i>COP_d</i> | 2,92 | - |
| T _j = +2 °C | <i>P_{dh}</i> | 27,4 | kW | T _j = +2 °C | <i>COP_d</i> | 3,26 | - |
| T _j = +7 °C | <i>P_{dh}</i> | 27,9 | kW | T _j = +7 °C | <i>COP_d</i> | 3,57 | - |
| T _j = +12 °C | <i>P_{dh}</i> | 28,4 | kW | T _j = +12 °C | <i>COP_d</i> | 3,88 | - |
| T _j = bivalent temperature | <i>P_{dh}</i> | 27,1 | kW | T _j = bivalent temperature | <i>COP_d</i> | 2,97 | - |
| T _j = operation limit temperature | <i>P_{dh}</i> | 26,8 | kW | T _j = operation limit temperature | <i>COP_d</i> | 2,77 | - |
| For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C) | <i>P_{dh}</i> | na | kW | For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C) | <i>COP_d</i> | na | - |
| Bivalent temperature | <i>T_{biv}</i> | -6 | °C | For air-to-water heat pumps: Operation limit temperature | <i>TOL</i> | na | °C |
| Cycling interval capacity for heating | <i>P_{cych}</i> | na | kW | Cycling interval efficiency | <i>COP_{cyc}</i> | na | - |
| Degradation co-efficient (**) | <i>C_{dh}</i> | 0,98 | - | Heating water operating limit temperature | <i>WTOL</i> | 65 | °C |
| Power consumption in modes other than active mode | | | | Supplementary heater | | | |
| Off mode | <i>P_{OFF}</i> | 0,025 | kW | Rated heat output (*) | <i>P_{sup}</i> | 5,1 | kW |
| Thermostat-off mode | <i>P_{TO}</i> | 0,119 | kW | Type of energy input Electric | | | |
| Standby mode | <i>P_{SB}</i> | 0,025 | kW | | | | |
| Crankcase heater mode | <i>P_{CK}</i> | 0,000 | kW | For air-to-water heat pumps: Rated air flow rate, outdoors | | | |
| Other items | | | | For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger | | | |
| Capacity control | Fixed | | | - | | | |
| Sound power level, indoors/outdoors | <i>L_{WA}</i> | 53/na | dB | - | | | |
| Annual energy consumption | <i>Q_{HE}</i> | 20510 | kWh | - | | | |

For heat pump combination heater:

| | | | | | | | |
|--|---|--------------|-----|--|-------------------------|------------|-----|
| Declared load profile / Energy efficiency class | XXL / A | | | Water heating energy efficiency | η_{wh} | 100 | % |
| Daily electricity consumption | <i>Q_{elec}</i> | 9,851 | kWh | Daily fuel consumption | <i>Q_{fuel}</i> | NA | kWh |
| Annual electricity consumption | <i>AEC</i> | 2167 | kWh | Annual fuel consumption | <i>AFC</i> | NA | GJ |
| Contact details | Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000 | | | www.ctc.se | 170904 | | |

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output *P_{rated}* is equal to the design load for heating *P_{design,h}*, and the rated heat output of a supplementary heater *P_{sup}* is equal to the supplementary capacity for heating *sup(T_j)*. (**) If *C_{dh}* is not determined by measurement then the default degradation coefficient is *C_{dh}* = 0,9.

Average climate and Low temperature

| | | | |
|---------------------------------------|-------------------------------------|---------------------------|-------|
| Model(s): | CTC EcoPart 430 + CTC EcoZenith 550 | | |
| Air-to-water heat pump: | No | Energy efficiency class: | A++ - |
| Water-to-water heat pump: | No | Controller class: | VII - |
| Brine-to-water heat pump: | Yes | Controller contribution: | 3,5 % |
| Low-temperature heat pump: | No | Package efficiency: | 155 % |
| Equipped with a supplementary heater: | Yes | Package efficiency class: | A++ - |
| Heat pump combination heater: | Yes | | |

Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low-temperature heat pumps, parameters shall be declared for low-temperature application.

| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
|--|---|--------------|------|--|--------------------------|----------------|-------------------|
| Rated heat output (*) | <i>P_{rated}</i> | 34 | kW | Seasonal space heating energy efficiency | η_s | 151 | % |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j | | | | Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j | | | |
| T _j = -7 °C | <i>P_{dh}</i> | 28,70 | kW | T _j = -7 °C | <i>COP_d</i> | 4,11 | - |
| T _j = +2 °C | <i>P_{dh}</i> | 29,0 | kW | T _j = +2 °C | <i>COP_d</i> | 4,27 | - |
| T _j = +7 °C | <i>P_{dh}</i> | 29,2 | kW | T _j = +7 °C | <i>COP_d</i> | 4,41 | - |
| T _j = +12 °C | <i>P_{dh}</i> | 29,5 | kW | T _j = +12 °C | <i>COP_d</i> | 4,55 | - |
| T _j = bivalent temperature | <i>P_{dh}</i> | 28,8 | kW | T _j = bivalent temperature | <i>COP_d</i> | 4,14 | - |
| T _j = operation limit temperature | <i>P_{dh}</i> | 28,6 | kW | T _j = operation limit temperature | <i>COP_d</i> | 4,03 | - |
| For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C) | <i>P_{dh}</i> | na | kW | For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C) | <i>COP_d</i> | na | - |
| Bivalent temperature | <i>T_{biv}</i> | -6 | °C | For air-to-water heat pumps: Operation limit temperature | <i>TOL</i> | na | °C |
| Cycling interval capacity for heating | <i>P_{cych}</i> | na | kW | Cycling interval efficiency | <i>COP_{cyc}</i> | na | - |
| Degradation co-efficient (**) | <i>C_{dh}</i> | 0,94 | - | Heating water operating limit temperature | <i>WTOL</i> | 65 | °C |
| Power consumption in modes other than active mode | | | | Supplementary heater | | | |
| Off mode | <i>P_{OFF}</i> | 0,025 | kW | Rated heat output (*) | <i>P_{sup}</i> | 5,4 | kW |
| Thermostat-off mode | <i>P_{TO}</i> | 0,357 | kW | Type of energy input | Electric | | |
| Standby mode | <i>P_{SB}</i> | 0,025 | kW | | | | |
| Crankcase heater mode | <i>P_{CK}</i> | 0,000 | kW | | | | |
| Other items | | | | | | | |
| Capacity control | Fixed | | | For air-to-water heat pumps: Rated air flow rate, outdoors | - | na | m ³ /h |
| Sound power level, indoors/ outdoors | <i>L_{WA}</i> | 53/na | dB | For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger | - | 3,8/2,6 | m ³ /h |
| Annual energy consumption | <i>Q_{HE}</i> | 17699 | kWh | | | | |
| For heat pump combination heater: | | | | | | | |
| Declared load profile / Energy efficiency class | XXL / A | | | Water heating energy efficiency | η_{wh} | 100 | % |
| Daily electricity consumption | <i>Q_{elec}</i> | 9,851 | kWh | Daily fuel consumption | <i>Q_{fuel}</i> | NA | kWh |
| Annual electricity consumption | <i>AEC</i> | 2167 | kWh | Annual fuel consumption | <i>AFC</i> | NA | GJ |
| Contact details | Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000 | | | www.ctc.se | 170904 | | |

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output *P_{rated}* is equal to the design load for heating *P_{designh}*, and the rated heat output of a supplementary heater *P_{sup}* is equal to the supplementary capacity for heating *sup(T_j)*. (**) If *C_{dh}* is not determined by measurement then the default degradation coefficient is *C_{dh}* = 0,9.

Cold climate and Medium temperature

| | | | |
|---------------------------------------|-------------------------------------|---------------------------|-------|
| Model(s): | CTC EcoPart 430 + CTC EcoZenith 550 | | |
| Air-to-water heat pump: | No | Energy efficiency class: | - |
| Water-to-water heat pump: | No | Controller class: | VII - |
| Brine-to-water heat pump: | Yes | Controller contribution: | 3,5 % |
| Low-temperature heat pump: | No | Package efficiency: | 126 % |
| Equipped with a supplementary heater: | Yes | Package efficiency class: | - |
| Heat pump combination heater: | Yes | | |

Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low-temperature heat pumps, parameters shall be declared for low-temperature application.

| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
|--|---|--------------|------|--|-----------------|----------------|-------------------|
| Rated heat output (*) | P_{rated} | 31 | kW | Seasonal space heating energy efficiency | η_s | 122 | % |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j | | | | Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j | | | |
| T _j = -7 °C | P_{dh} | 27,30 | kW | T _j = -7 °C | COP_d | 3,19 | - |
| T _j = +2 °C | P_{dh} | 27,8 | kW | T _j = +2 °C | COP_d | 3,50 | - |
| T _j = +7 °C | P_{dh} | 28,2 | kW | T _j = +7 °C | COP_d | 3,78 | - |
| T _j = +12 °C | P_{dh} | 28,6 | kW | T _j = +12 °C | COP_d | 3,99 | - |
| T _j = bivalent temperature | P_{dh} | 27,0 | kW | T _j = bivalent temperature | COP_d | 2,95 | - |
| T _j = operation limit temperature | P_{dh} | 26,8 | kW | T _j = operation limit temperature | COP_d | 2,77 | - |
| For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C) | P_{dh} | na | kW | For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C) | COP_d | 3,00 | - |
| Bivalent temperature | T_{biv} | -17 | °C | For air-to-water heat pumps: Operation limit temperature | TOL | na | °C |
| Cycling interval capacity for heating | P_{cych} | na | kW | Cycling interval efficiency | COP_{cyc} | na | - |
| Degradation co-efficient (**) | C_{dh} | 0,98 | - | Heating water operating limit temperature | WTOL | 65 | °C |
| Power consumption in modes other than active mode | | | | Supplementary heater | | | |
| Off mode | P_{OFF} | 0,025 | kW | Rated heat output (*) | P_{sup} | 4,3 | kW |
| Thermostat-off mode | P_{TO} | 0,119 | kW | Type of energy input | Electric | | |
| Standby mode | P_{SB} | 0,025 | kW | | | | |
| Crankcase heater mode | P_{CK} | 0,000 | kW | | | | |
| Other items | | | | | | | |
| Capacity control | Fixed | | | For air-to-water heat pumps: Rated air flow rate, outdoors | - | na | m ³ /h |
| Sound power level, indoors/ outdoors | L_{WA} | 53/na | dB | For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger | - | 3,1/2,1 | m ³ /h |
| Annual energy consumption | Q_{HE} | 23522 | kWh | | | | |
| For heat pump combination heater: | | | | | | | |
| Declared load profile / Energy efficiency class | XXL / A | | | Water heating energy efficiency | η_{wh} | 100 | % |
| Daily electricity consumption | Q_{elec} | 9,851 | kWh | Daily fuel consumption | Q_{fuel} | NA | kWh |
| Annual electricity consumption | AEC | 2167 | kWh | Annual fuel consumption | AFC | NA | GJ |
| Contact details | Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000 | | | www.ctc.se | 170904 | | |

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output P_{rated} is equal to the design load for heating $P_{designh}$, and the rated heat output of a supplementary heater P_{sup} is equal to the supplementary capacity for heating $sup(T_j)$. (**) If C_{dh} is not determined by measurement then the default degradation coefficient is $C_{dh} = 0,9$.

Cold climate and Low temperature

| | | | |
|---------------------------------------|-------------------------------------|---------------------------|-------|
| Model(s): | CTC EcoPart 430 + CTC EcoZenith 550 | | |
| Air-to-water heat pump: | No | Energy efficiency class: | - |
| Water-to-water heat pump: | No | Controller class: | VII - |
| Brine-to-water heat pump: | Yes | Controller contribution: | 3,5 % |
| Low-temperature heat pump: | No | Package efficiency: | 155 % |
| Equipped with a supplementary heater: | Yes | Package efficiency class: | - |
| Heat pump combination heater: | Yes | | |

Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low-temperature heat pumps, parameters shall be declared for low-temperature application.

| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
|--|--------------------------|--------------|------|--|-------------------------|----------------|-------------------|
| Rated heat output (*) | <i>P_{rated}</i> | 33 | kW | Seasonal space heating energy efficiency | η_s | 151 | % |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j | | | | Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j | | | |
| T _j = - 7 °C | <i>P_{dh}</i> | 29,10 | kW | T _j = - 7 °C | <i>COP_d</i> | 4,29 | - |
| T _j = + 2 °C | <i>P_{dh}</i> | 29,3 | kW | T _j = + 2 °C | <i>COP_d</i> | 4,42 | - |
| T _j = + 7 °C | <i>P_{dh}</i> | 29,4 | kW | T _j = + 7 °C | <i>COP_d</i> | 4,51 | - |
| T _j = + 12 °C | <i>P_{dh}</i> | 29,4 | kW | T _j = + 12 °C | <i>COP_d</i> | 4,53 | - |
| T _j = bivalent temperature | <i>P_{dh}</i> | 28,8 | kW | T _j = bivalent temperature | <i>COP_d</i> | 4,16 | - |
| T _j = operation limit temperature | <i>P_{dh}</i> | 28,6 | kW | T _j = operation limit temperature | <i>COP_d</i> | 4,03 | - |
| For air-to-water heat pumps: T _j = - 15 °C (if TOL < - 20 °C) | <i>P_{dh}</i> | na | kW | For air-to-water heat pumps: T _j = - 15 °C (if TOL < - 20 °C) | <i>COP_d</i> | 4,19 | - |
| Bivalent temperature | <i>T_{biv}</i> | -17 | °C | For air-to-water heat pumps: Operation limit temperature | <i>TOL</i> | na | °C |
| Cycling interval capacity for heating | <i>P_{cych}</i> | na | kW | Cycling interval efficiency | <i>COP_{cy}</i> | na | - |
| Degradation co-efficient (**) | <i>C_{dh}</i> | 0,94 | - | Heating water operating limit temperature | <i>WTOL</i> | 65 | °C |
| Power consumption in modes other than active mode | | | | Supplementary heater | | | |
| Off mode | <i>P_{OFF}</i> | 0,025 | kW | Rated heat output (*) | <i>P_{sup}</i> | 4,6 | kW |
| Thermostat-off mode | <i>P_{TO}</i> | 0,357 | kW | Type of energy input Electric | | | |
| Standby mode | <i>P_{SB}</i> | 0,025 | kW | | | | |
| Crankcase heater mode | <i>P_{CK}</i> | 0,000 | kW | For air-to-water heat pumps: Rated air flow rate, outdoors | | | |
| Other items | | | | For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger | | | |
| Capacity control | Fixed | | | - | na | 3,8/2,6 | m ³ /h |
| Sound power level, indoors/ outdoors | <i>L_{WA}</i> | 53/na | dB | - | 3,8/2,6 | | m ³ /h |
| Annual energy consumption | <i>Q_{HE}</i> | 20588 | kWh | | | | |

For heat pump combination heater:

| Declared load profile / Energy efficiency class | XXL / A | | | Water heating energy efficiency | η_{wh} | 100 | % |
|--|---|--------------|-----|---------------------------------|-------------------------|------------|-----|
| Daily electricity consumption | <i>Q_{elec}</i> | 9,851 | kWh | Daily fuel consumption | <i>Q_{fuel}</i> | NA | kWh |
| Annual electricity consumption | <i>AEC</i> | 2167 | kWh | Annual fuel consumption | <i>AFC</i> | NA | GJ |
| Contact details | Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000 | | | www.ctc.se | 170904 | | |

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output *P_{rated}* is equal to the design load for heating *P_{designh}*, and the rated heat output of a supplementary heater *P_{sup}* is equal to the supplementary capacity for heating *sup(T_j)*. (**) If *C_{dh}* is not determined by measurement then the default degradation coefficient is *C_{dh}* = 0,9.