

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

| | | |
|---------------------------------------|---------------|---------------------------------|
| Model(s): | Outdoor unit: | PUD-SHWM100YAA(-BS) |
| | Indoor unit: | EHST20D-****D |
| Air-to-water heat pump: | | yes |
| Water-to-water heat pump: | | no |
| Brine-to-water heat pump: | | no |
| Low-temperature heat pump: | | no |
| Equipped with a supplementary heater: | | yes |
| Heat pump combination heater: | | yes |
| Parameters for | | medium-temperature application. |
| Parameters for | | average climate conditions. |

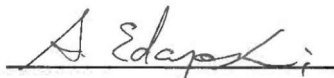
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
|--|----------|-------|------|--|------------|-------|------|
| Rated heat output (*) | Prated | 10.0 | kW | Seasonal space heating energy efficiency | η_s | 135 | % |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj | | | | Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj | | | |
| Tj = - 7 °C | Pdh | 8.9 | kW | Tj = - 7 °C | COPd | 2.18 | - |
| Degradation co-efficient (**) | Cdh | 1.00 | - | Tj = + 2 °C | COPd | 3.27 | - |
| Tj = + 2 °C | Pdh | 5.4 | kW | Tj = + 7 °C | COPd | 4.81 | - |
| Degradation co-efficient (**) | Cdh | 0.99 | - | Tj = +12 °C | COPd | 7.06 | - |
| Tj = + 7 °C | Pdh | 5.2 | kW | Tj = bivalent temperature | COPd | 1.91 | - |
| Degradation co-efficient (**) | Cdh | 0.98 | - | Tj = operation limit temperature (***) | COPd | 1.91 | - |
| Tj = +12 °C | Pdh | 3.6 | kW | Operation limit temperature | TOL | -28 | °C |
| Degradation co-efficient (**) | Cdh | 0.96 | - | Heating water operating limit temperature | WTOL | 60 | °C |
| Tj = bivalent temperature | Pdh | 10.0 | kW | Supplementary heater | | | |
| Tj = operation limit temperature (***) | Pdh | 10.0 | kW | Rated heat output (*) | Psup | 0.0 | kW |
| Bivalent temperature | Tbiv | -10 | °C | Type of energy input | Electrical | | |
| Reference design conditions for space heating | Tdesignh | -10 | °C | Power consumption in modes other than active mode | | | |
| Off mode | | | | P _{OFF} | 0.022 | kW | |
| Thermostat-off mode | | | | P _{TO} | 0.022 | kW | |
| Standby mode | | | | P _{SB} | 0.022 | kW | |
| Crankcase heater mode | | | | P _{CK} | 0.000 | kW | |

| | | | | | | | |
|-------------------------------------|-----------------|---------|-----|-------------------------------|---|------|-------------------|
| Other items | | | | Rated air flow rate, outdoors | - | 2640 | m ³ /h |
| Capacity control | variable | | | | | | |
| Sound power level, indoors/outdoors | L _{WA} | 41 / 59 | dBA | | | | |
| Annual energy consumption | Q _{HE} | 5975 | kWh | | | | |

| | | | | | | | |
|-----------------------------------|-------------------|-------|-----|---------------------------------|-------------|-----|---|
| For heat pump combination heater: | | | | Water heating energy efficiency | η_{wh} | 148 | % |
| Declared load profile | L | | | | | | |
| Daily electricity consumption | Q _{elec} | 3.340 | kWh | | | | |
| Annual electricity consumption | AEC | 736 | kWh | | | | |

Contact details
 MITSUBISHI ELECTRIC AIR CODITIONING SYSTEM EUROPE LTD. Nettlehill Road, Houston Industrial Estate, Livingston, EH54 5EQ, Scotland, U.K.

The identification and signature of the person empowered to bind the supplier:



Atsushi EDAYOSHI
 Manager, Quality Assurance Department
 UNITED KINGDOM

- Details and precautions on installation, maintenance and assembly can be found in the installation and or operation manuals.
- Details and precautions on recycling and/or disposal at end-of-life can be found in the installation and or operation manuals.
- (*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).
- (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.
- (***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

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|---------------------------------------|---------------|------------------------------|
| Model(s): | Outdoor unit: | PUD-SHWM100YAA(-BS) |
| | Indoor unit: | EHST20D-****D |
| Air-to-water heat pump: | | yes |
| Water-to-water heat pump: | | no |
| Brine-to-water heat pump: | | no |
| Low-temperature heat pump: | | no |
| Equipped with a supplementary heater: | | yes |
| Heat pump combination heater: | | yes |
| Parameters for | | low-temperature application. |
| Parameters for | | average climate conditions. |

| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
|--|----------|-------|------|--|------------|-------|------|
| Rated heat output (*) | Prated | 10.0 | kW | Seasonal space heating energy efficiency | η_s | 178 | % |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj | | | | Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj | | | |
| Tj = - 7 °C | Pdh | 8.9 | kW | Tj = - 7 °C | COPd | 3.16 | - |
| Degradation co-efficient (**) | Cdh | 0.99 | - | Tj = + 2 °C | COPd | 4.45 | - |
| Tj = + 2 °C | Pdh | 5.7 | kW | Tj = + 7 °C | COPd | 5.63 | - |
| Degradation co-efficient (**) | Cdh | 0.98 | - | Tj = +12 °C | COPd | 7.89 | - |
| Tj = + 7 °C | Pdh | 5.4 | kW | Tj = bivalent temperature | COPd | 2.92 | - |
| Degradation co-efficient (**) | Cdh | 0.98 | - | Tj = operation limit temperature (***) | COPd | 2.92 | - |
| Tj = +12 °C | Pdh | 4.5 | kW | Operation limit temperature | TOL | -28 | °C |
| Degradation co-efficient (**) | Cdh | 0.96 | - | Heating water operating limit temperature | WTOL | 60 | °C |
| Tj = bivalent temperature | Pdh | 10.0 | kW | Supplementary heater | | | |
| Tj = operation limit temperature (***) | Pdh | 10.0 | kW | Rated heat output (*) | Psup | 0.0 | kW |
| Bivalent temperature | Tbiv | -10 | °C | Type of energy input | Electrical | | |
| Reference design conditions for space heating | Tdesignh | -10 | °C | Power consumption in modes other than active mode | | | |
| Off mode | | | | P _{OFF} | 0.022 | kW | |
| Thermostat-off mode | | | | P _{TO} | 0.022 | kW | |
| Standby mode | | | | P _{SB} | 0.022 | kW | |
| Crankcase heater mode | | | | P _{CK} | 0.000 | kW | |

Other items

| | | | | | | |
|-------------------------------------|-----------------|---------|-------------------------------|---|------|-------------------|
| Capacity control | variable | | Rated air flow rate, outdoors | - | 2640 | m ³ /h |
| Sound power level, indoors/outdoors | L _{WA} | 41 / 59 | dBA | | | |
| Annual energy consumption | Q _{HE} | 4571 | kWh | | | |

For heat pump combination heater:

| | | | | | | |
|--------------------------------|-------------------|-------|---------------------------------|-------------|-----|---|
| Declared load profile | L | | Water heating energy efficiency | η_{wh} | 148 | % |
| Daily electricity consumption | Q _{elec} | 3.340 | kWh | | | |
| Annual electricity consumption | AEC | 736 | kWh | | | |

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Nettlehill Road, Houston Industrial Estate, Livingston, EH54 5EQ, Scotland, U.K.

The identification and signature of the person empowered to bind the supplier;

Atsushi EDAYOSHI

The signature is signed in the average climate / medium-temperature section.

Manager, Quality Assurance Department

UNITED KINGDOM

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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

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| Model(s): | Outdoor unit: | PUD-SHWM100YAA(-BS) |
| | Indoor unit: | EHST20D-****D |
| Air-to-water heat pump: | | yes |
| Water-to-water heat pump: | | no |
| Brine-to-water heat pump: | | no |
| Low-temperature heat pump: | | no |
| Equipped with a supplementary heater: | | yes |
| Heat pump combination heater: | | yes |
| Parameters for | | medium-temperature application. |
| Parameters for | | colder climate conditions. |

| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit | | |
|--|----------|-------|------|--|------------|-------|------|-------|----|
| Rated heat output (*) | Prated | 10.0 | kW | Seasonal space heating energy efficiency | η_s | 114 | % | | |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj | | | | Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj | | | | | |
| Tj = - 7 °C | Pdh | 6.1 | kW | Tj = - 7 °C | COPd | 2.70 | - | | |
| Degradation co-efficient (**) | Cdh | 0.99 | - | Tj = + 2 °C | COPd | 3.30 | - | | |
| Tj = + 2 °C | Pdh | 3.7 | kW | Tj = + 7 °C | COPd | 4.65 | - | | |
| Degradation co-efficient (**) | Cdh | 0.98 | - | Tj = +12 °C | COPd | 6.88 | - | | |
| Tj = + 7 °C | Pdh | 3.8 | kW | Tj = bivalent temperature | COPd | 1.56 | - | | |
| Degradation co-efficient (**) | Cdh | 0.97 | - | Tj = operation limit temperature (***) | COPd | 1.57 | - | | |
| Tj = +12 °C | Pdh | 4.4 | kW | Tj = - 15 °C (if TOL < -20 °C) | COPd | 1.56 | - | | |
| Degradation co-efficient (**) | Cdh | 0.97 | - | Operation limit temperature | TOL | -28 | °C | | |
| Tj = bivalent temperature | Pdh | 8.4 | kW | Heating water operating limit temperature | WTOL | 60 | °C | | |
| Tj = operation limit temperature (***) | Pdh | 8.1 | kW | Supplementary heater | | | | | |
| Tj = - 15 °C (if TOL < -20 °C) | Pdh | 8.5 | kW | Rated heat output (*) | Psup | 2.0 | kW | | |
| Bivalent temperature | Tbiv | -16 | °C | Type of energy input | Electrical | | | | |
| Reference design conditions for space heating | Tdesignh | -22 | °C | Power consumption in modes other than active mode | | | | | |
| Off mode | | | | P _{OFF} | | | | 0.022 | kW |
| Thermostat-off mode | | | | P _{TO} | | | | 0.022 | kW |
| Standby mode | | | | P _{SB} | | | | 0.022 | kW |
| Crankcase heater mode | | | | P _{CK} | | | | 0.000 | kW |

| | | | | | | | |
|-------------------------------------|-----------------|---------|-----|-------------------------------|------|-------------------|--|
| Other items | | | | Rated air flow rate, outdoors | | | |
| Capacity control | variable | | | - | 2640 | m ³ /h | |
| Sound power level, indoors/outdoors | L _{WA} | 41 / 59 | dBA | | | | |
| Annual energy consumption | Q _{HE} | 8411 | kWh | | | | |

| | | | | | | | |
|-----------------------------------|-------------------|-------|-----|---------------------------------|-------------|-----|---|
| For heat pump combination heater: | | | | | | | |
| Declared load profile | L | | | Water heating energy efficiency | η_{wh} | 120 | % |
| Daily electricity consumption | Q _{elec} | 4.090 | kWh | | | | |
| Annual electricity consumption | AEC | 900 | kWh | | | | |

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 Atsushi EDAYOSHI
 The signature is signed in the average climate / medium-temperature section.
 Manager, Quality Assurance Department
 UNITED KINGDOM

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 (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.
 (***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

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|---------------------------------------|---------------|------------------------------|
| Model(s): | Outdoor unit: | PUD-SHWM100YAA(-BS) |
| | Indoor unit: | EHST20D-****D |
| Air-to-water heat pump: | | yes |
| Water-to-water heat pump: | | no |
| Brine-to-water heat pump: | | no |
| Low-temperature heat pump: | | no |
| Equipped with a supplementary heater: | | yes |
| Heat pump combination heater: | | yes |
| Parameters for | | low-temperature application. |
| Parameters for | | colder climate conditions. |

| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
|--|----------|-------|------|--|------------|-------|------|
| Rated heat output (*) | Prated | 10.0 | kW | Seasonal space heating energy efficiency | η_s | 148 | % |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj | | | | Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj | | | |
| Tj = - 7 °C | Pdh | 6.2 | kW | Tj = - 7 °C | COPd | 3.78 | - |
| Degradation co-efficient (**) | Cdh | 0.99 | - | Tj = + 2 °C | COPd | 4.07 | - |
| Tj = + 2 °C | Pdh | 3.9 | kW | Tj = + 7 °C | COPd | 5.45 | - |
| Degradation co-efficient (**) | Cdh | 0.98 | - | Tj = +12 °C | COPd | 7.50 | - |
| Tj = + 7 °C | Pdh | 3.9 | kW | Tj = bivalent temperature | COPd | 2.15 | - |
| Degradation co-efficient (**) | Cdh | 0.97 | - | Tj = operation limit temperature (***) | COPd | 1.86 | - |
| Tj = +12 °C | Pdh | 4.5 | kW | Tj = - 15 °C (if TOL < -20 °C) | COPd | 2.20 | - |
| Degradation co-efficient (**) | Cdh | 0.96 | - | Operation limit temperature | TOL | -28 | °C |
| Tj = bivalent temperature | Pdh | 8.4 | kW | Heating water operating limit temperature | WTOL | 60 | °C |
| Tj = operation limit temperature (***) | Pdh | 8.1 | kW | Supplementary heater | | | |
| Tj = - 15 °C (if TOL < -20 °C) | Pdh | 8.5 | kW | Rated heat output (*) | Psup | 2.0 | kW |
| Bivalent temperature | Tbiv | -16 | °C | Type of energy input | Electrical | | |
| Reference design conditions for space heating | Tdesignh | -22 | °C | Power consumption in modes other than active mode | | | |
| Off mode | | | | P _{OFF} | 0.022 | kW | |
| Thermostat-off mode | | | | P _{TO} | 0.022 | kW | |
| Standby mode | | | | P _{SB} | 0.022 | kW | |
| Crankcase heater mode | | | | P _{CK} | 0.000 | kW | |

Other items

| | | | | | | |
|-------------------------------------|-----------------|---------|-------------------------------|---|------|-------------------|
| Capacity control | variable | | Rated air flow rate, outdoors | - | 2640 | m ³ /h |
| Sound power level, indoors/outdoors | L _{WA} | 41 / 59 | dBA | | | |
| Annual energy consumption | Q _{HE} | 6517 | kWh | | | |

For heat pump combination heater:

| | | | | | | |
|--------------------------------|-------------------|-------|---------------------------------|-------------|-----|---|
| Declared load profile | L | | Water heating energy efficiency | η_{wh} | 120 | % |
| Daily electricity consumption | Q _{elec} | 4.090 | kWh | | | |
| Annual electricity consumption | AEC | 900 | kWh | | | |

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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

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|---------------------------------------|---------------|---------------------------------|
| Model(s): | Outdoor unit: | PUD-SHWM100YAA(-BS) |
| | Indoor unit: | EHST20D-****D |
| Air-to-water heat pump: | | yes |
| Water-to-water heat pump: | | no |
| Brine-to-water heat pump: | | no |
| Low-temperature heat pump: | | no |
| Equipped with a supplementary heater: | | yes |
| Heat pump combination heater: | | yes |
| Parameters for | | medium-temperature application. |
| Parameters for | | warmer climate conditions. |

| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
|--|----------|-------|------|--|------------|-------|------|
| Rated heat output (*) | Prated | 10.0 | kW | Seasonal space heating energy efficiency | η_s | 161 | % |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj | | | | Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj | | | |
| Tj = - 7 °C | Pdh | - | kW | Tj = - 7 °C | COPd | - | - |
| Degradation co-efficient (**) | Cdh | - | - | Tj = + 2 °C | COPd | 2.05 | - |
| Tj = + 2 °C | Pdh | 10.0 | kW | Tj = + 7 °C | COPd | 3.56 | - |
| Degradation co-efficient (**) | Cdh | 1.00 | - | Tj = +12 °C | COPd | 5.70 | - |
| Tj = + 7 °C | Pdh | 6.4 | kW | Tj = bivalent temperature | COPd | 2.05 | - |
| Degradation co-efficient (**) | Cdh | 0.99 | - | Tj = operation limit temperature (***) | COPd | 2.05 | - |
| Tj = +12 °C | Pdh | 4.2 | kW | Operation limit temperature | TOL | -28 | °C |
| Degradation co-efficient (**) | Cdh | 0.97 | - | Heating water operating limit temperature | WTOL | 60 | °C |
| Tj = bivalent temperature | Pdh | 10.0 | kW | Supplementary heater | | | |
| Tj = operation limit temperature (***) | Pdh | 10.0 | kW | Rated heat output (*) | Psup | 0.0 | kW |
| Bivalent temperature | Tbiv | 2 | °C | Type of energy input | Electrical | | |
| Reference design conditions for space heating | Tdesignh | 2 | °C | Power consumption in modes other than active mode | | | |
| Off mode | | | | P _{OFF} | 0.022 | kW | |
| Thermostat-off mode | | | | P _{TO} | 0.022 | kW | |
| Standby mode | | | | P _{SB} | 0.022 | kW | |
| Crankcase heater mode | | | | P _{CK} | 0.000 | kW | |

| | | | | | | | |
|-------------------------------------|-------------------|---------|-----|---------------------------------|-------------|-------------------|---|
| Other items | | | | Rated air flow rate, outdoors | | | |
| Capacity control | variable | | | - | 2640 | m ³ /h | |
| Sound power level, indoors/outdoors | L _{WA} | 41 / 59 | dBA | | | | |
| Annual energy consumption | Q _{HE} | 3252 | kWh | | | | |
| For heat pump combination heater: | | | | | | | |
| Declared load profile | L | | | Water heating energy efficiency | η_{wh} | 162 | % |
| Daily electricity consumption | Q _{elec} | 3.070 | kWh | | | | |
| Annual electricity consumption | AEC | 675 | kWh | | | | |

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|---------------------------------------|---------------|------------------------------|
| Model(s): | Outdoor unit: | PUD-SHWM100YAA(-BS) |
| | Indoor unit: | EHST20D-****D |
| Air-to-water heat pump: | | yes |
| Water-to-water heat pump: | | no |
| Brine-to-water heat pump: | | no |
| Low-temperature heat pump: | | no |
| Equipped with a supplementary heater: | | yes |
| Heat pump combination heater: | | yes |
| Parameters for | | low-temperature application. |
| Parameters for | | warmer climate conditions. |

| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
|--|----------|-------|------|--|------------|-------|------|
| Rated heat output (*) | Prated | 10.0 | kW | Seasonal space heating energy efficiency | η_s | 232 | % |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj | | | | Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj | | | |
| Tj = - 7 °C | Pdh | - | kW | Tj = - 7 °C | COPd | - | - |
| Degradation co-efficient (**) | Cdh | - | - | Tj = + 2 °C | COPd | 3.45 | - |
| Tj = + 2 °C | Pdh | 10.0 | kW | Tj = + 7 °C | COPd | 5.57 | - |
| Degradation co-efficient (**) | Cdh | 0.99 | - | Tj = +12 °C | COPd | 7.55 | - |
| Tj = + 7 °C | Pdh | 6.4 | kW | Tj = bivalent temperature | COPd | 3.45 | - |
| Degradation co-efficient (**) | Cdh | 0.98 | - | Tj = operation limit temperature (***) | COPd | 3.45 | - |
| Tj = +12 °C | Pdh | 4.4 | kW | Operation limit temperature | TOL | -28 | °C |
| Degradation co-efficient (**) | Cdh | 0.96 | - | Heating water operating limit temperature | WTOL | 60 | °C |
| Tj = bivalent temperature | Pdh | 10.0 | kW | Supplementary heater | | | |
| Tj = operation limit temperature (***) | Pdh | 10.0 | kW | Rated heat output (*) | Psup | 0.0 | kW |
| Bivalent temperature | Tbiv | 2 | °C | Type of energy input | Electrical | | |
| Reference design conditions for space heating | Tdesignh | 2 | °C | Power consumption in modes other than active mode | | | |
| Off mode | | | | P _{OFF} | 0.022 | kW | |
| Thermostat-off mode | | | | P _{TO} | 0.022 | kW | |
| Standby mode | | | | P _{SB} | 0.022 | kW | |
| Crankcase heater mode | | | | P _{CK} | 0.000 | kW | |

| | | | | | | | |
|-------------------------------------|-------------------|---------|-----|---------------------------------|-------------|-------------------|---|
| Other items | | | | Rated air flow rate, outdoors | | | |
| Capacity control | variable | | | - | 2640 | m ³ /h | |
| Sound power level, indoors/outdoors | L _{WA} | 41 / 59 | dBA | | | | |
| Annual energy consumption | Q _{HE} | 2273 | kWh | | | | |
| For heat pump combination heater: | | | | | | | |
| Declared load profile | L | | | Water heating energy efficiency | η_{wh} | 162 | % |
| Daily electricity consumption | Q _{elec} | 3.070 | kWh | | | | |
| Annual electricity consumption | AEC | 675 | kWh | | | | |

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 (*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).
 (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.
 (***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

| | | |
|---------------------------------------|---------------|---------------------------------|
| Model(s): | Outdoor unit: | PUD-SHWM100YAA(-BS) |
| | Indoor unit: | EHST20D-MED |
| Air-to-water heat pump: | | yes |
| Water-to-water heat pump: | | no |
| Brine-to-water heat pump: | | no |
| Low-temperature heat pump: | | no |
| Equipped with a supplementary heater: | | no |
| Heat pump combination heater: | | yes |
| Parameters for | | medium-temperature application. |
| Parameters for | | average climate conditions. |

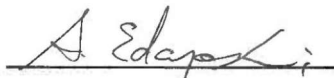
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
|--|----------|-------|------|--|------------|-------|------|
| Rated heat output (*) | Prated | 10.0 | kW | Seasonal space heating energy efficiency | η_s | 135 | % |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj | | | | Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj | | | |
| Tj = - 7 °C | Pdh | 8.9 | kW | Tj = - 7 °C | COPd | 2.18 | - |
| Degradation co-efficient (**) | Cdh | 1.00 | - | Tj = + 2 °C | COPd | 3.27 | - |
| Tj = + 2 °C | Pdh | 5.4 | kW | Tj = + 7 °C | COPd | 4.81 | - |
| Degradation co-efficient (**) | Cdh | 0.99 | - | Tj = +12 °C | COPd | 7.06 | - |
| Tj = + 7 °C | Pdh | 5.2 | kW | Tj = bivalent temperature | COPd | 1.91 | - |
| Degradation co-efficient (**) | Cdh | 0.98 | - | Tj = operation limit temperature (***) | COPd | 1.91 | - |
| Tj = +12 °C | Pdh | 3.6 | kW | Operation limit temperature | TOL | -28 | °C |
| Degradation co-efficient (**) | Cdh | 0.96 | - | Heating water operating limit temperature | WTOL | 60 | °C |
| Tj = bivalent temperature | Pdh | 10.0 | kW | Supplementary heater | | | |
| Tj = operation limit temperature (***) | Pdh | 10.0 | kW | Rated heat output (*) | Psup | 0.0 | kW |
| Bivalent temperature | Tbiv | -10 | °C | Type of energy input | Electrical | | |
| Reference design conditions for space heating | Tdesignh | -10 | °C | Power consumption in modes other than active mode | | | |
| Off mode | | | | P _{OFF} | 0.022 | kW | |
| Thermostat-off mode | | | | P _{TO} | 0.022 | kW | |
| Standby mode | | | | P _{SB} | 0.022 | kW | |
| Crankcase heater mode | | | | P _{CK} | 0.000 | kW | |

| | | | | | | | |
|-------------------------------------|-----------------|---------|-----|-------------------------------|---|------|-------------------|
| Other items | | | | Rated air flow rate, outdoors | - | 2640 | m ³ /h |
| Capacity control | variable | | | | | | |
| Sound power level, indoors/outdoors | L _{WA} | 41 / 59 | dBA | | | | |
| Annual energy consumption | Q _{HE} | 5975 | kWh | | | | |

| | | | | | | | |
|-----------------------------------|-------------------|-------|-----|---------------------------------|-------------|-----|---|
| For heat pump combination heater: | | | | Water heating energy efficiency | η_{wh} | 148 | % |
| Declared load profile | L | | | | | | |
| Daily electricity consumption | Q _{elec} | 3.340 | kWh | | | | |
| Annual electricity consumption | AEC | 736 | kWh | | | | |

Contact details
 MITSUBISHI ELECTRIC AIR CODITIONING SYSTEM EUROPE LTD. Nettlehill Road, Houston Industrial Estate, Livingston, EH54 5EQ, Scotland, U.K.

The identification and signature of the person empowered to bind the supplier:



Atsushi EDAYOSHI
 Manager, Quality Assurance Department
 UNITED KINGDOM

- Details and precautions on installation, maintenance and assembly can be found in the installation and or operation manuals.
 - Details and precautions on recycling and/or disposal at end-of-life can be found in the installation and or operation manuals.
- (*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).
 (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.
 (***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

| | | |
|---------------------------------------|---------------|------------------------------|
| Model(s): | Outdoor unit: | PUD-SHWM100YAA(-BS) |
| | Indoor unit: | EHST20D-MED |
| Air-to-water heat pump: | | yes |
| Water-to-water heat pump: | | no |
| Brine-to-water heat pump: | | no |
| Low-temperature heat pump: | | no |
| Equipped with a supplementary heater: | | no |
| Heat pump combination heater: | | yes |
| Parameters for | | low-temperature application. |
| Parameters for | | average climate conditions. |

| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
|--|----------|-------|------|--|------------|-------|------|
| Rated heat output (*) | Prated | 10.0 | kW | Seasonal space heating energy efficiency | η_s | 178 | % |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj | | | | Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj | | | |
| Tj = - 7 °C | Pdh | 8.9 | kW | Tj = - 7 °C | COPd | 3.16 | - |
| Degradation co-efficient (**) | Cdh | 0.99 | - | Tj = + 2 °C | COPd | 4.45 | - |
| Tj = + 2 °C | Pdh | 5.7 | kW | Tj = + 7 °C | COPd | 5.63 | - |
| Degradation co-efficient (**) | Cdh | 0.98 | - | Tj = +12 °C | COPd | 7.89 | - |
| Tj = + 7 °C | Pdh | 5.4 | kW | Tj = bivalent temperature | COPd | 2.92 | - |
| Degradation co-efficient (**) | Cdh | 0.98 | - | Tj = operation limit temperature (***) | COPd | 2.92 | - |
| Tj = +12 °C | Pdh | 4.5 | kW | Operation limit temperature | TOL | -28 | °C |
| Degradation co-efficient (**) | Cdh | 0.96 | - | Heating water operating limit temperature | WTOL | 60 | °C |
| Tj = bivalent temperature | Pdh | 10.0 | kW | Supplementary heater | | | |
| Tj = operation limit temperature (***) | Pdh | 10.0 | kW | Rated heat output (*) | Psup | 0.0 | kW |
| Bivalent temperature | Tbiv | -10 | °C | Type of energy input | Electrical | | |
| Reference design conditions for space heating | Tdesignh | -10 | °C | Power consumption in modes other than active mode | | | |
| Off mode | | | | P _{OFF} | 0.022 | kW | |
| Thermostat-off mode | | | | P _{TO} | 0.022 | kW | |
| Standby mode | | | | P _{SB} | 0.022 | kW | |
| Crankcase heater mode | | | | P _{CK} | 0.000 | kW | |

| | | | | | | | |
|-------------------------------------|-----------------|---------|-----|-------------------------------|---|------|-------------------|
| Other items | | | | Rated air flow rate, outdoors | - | 2640 | m ³ /h |
| Capacity control | variable | | | | | | |
| Sound power level, indoors/outdoors | L _{WA} | 41 / 59 | dBA | | | | |
| Annual energy consumption | Q _{HE} | 4571 | kWh | | | | |

| | | | | | | | |
|-----------------------------------|-------------------|-------|-----|---------------------------------|-------------|-----|---|
| For heat pump combination heater: | | | | Water heating energy efficiency | η_{wh} | 148 | % |
| Declared load profile | L | | | | | | |
| Daily electricity consumption | Q _{elec} | 3.340 | kWh | | | | |
| Annual electricity consumption | AEC | 736 | kWh | | | | |

Contact details
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 Atsushi EDAYOSHI
 The signature is signed in the average climate / medium-temperature section. Manager, Quality Assurance Department
 UNITED KINGDOM

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 (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.
 (***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

| | | |
|---------------------------------------|---------------|---------------------------------|
| Model(s): | Outdoor unit: | PUD-SHWM100YAA(-BS) |
| | Indoor unit: | EHST20D-MED |
| Air-to-water heat pump: | | yes |
| Water-to-water heat pump: | | no |
| Brine-to-water heat pump: | | no |
| Low-temperature heat pump: | | no |
| Equipped with a supplementary heater: | | no |
| Heat pump combination heater: | | yes |
| Parameters for | | medium-temperature application. |
| Parameters for | | colder climate conditions. |

| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit | | |
|--|----------|-------|------|--|------------|-------|------|-------|----|
| Rated heat output (*) | Prated | 10.0 | kW | Seasonal space heating energy efficiency | η_s | 114 | % | | |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj | | | | Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj | | | | | |
| Tj = - 7 °C | Pdh | 6.1 | kW | Tj = - 7 °C | COPd | 2.70 | - | | |
| Degradation co-efficient (**) | Cdh | 0.99 | - | Tj = + 2 °C | COPd | 3.30 | - | | |
| Tj = + 2 °C | Pdh | 3.7 | kW | Tj = + 7 °C | COPd | 4.65 | - | | |
| Degradation co-efficient (**) | Cdh | 0.98 | - | Tj = +12 °C | COPd | 6.88 | - | | |
| Tj = + 7 °C | Pdh | 3.8 | kW | Tj = bivalent temperature | COPd | 1.56 | - | | |
| Degradation co-efficient (**) | Cdh | 0.97 | - | Tj = operation limit temperature (***) | COPd | 1.57 | - | | |
| Tj = +12 °C | Pdh | 4.4 | kW | Tj = - 15 °C (if TOL < -20 °C) | COPd | 1.56 | - | | |
| Degradation co-efficient (**) | Cdh | 0.97 | - | Operation limit temperature | TOL | -28 | °C | | |
| Tj = bivalent temperature | Pdh | 8.4 | kW | Heating water operating limit temperature | WTOL | 60 | °C | | |
| Tj = operation limit temperature (***) | Pdh | 8.1 | kW | Supplementary heater | | | | | |
| Tj = - 15 °C (if TOL < -20 °C) | Pdh | 8.5 | kW | Rated heat output (*) | Psup | 2.0 | kW | | |
| Bivalent temperature | Tbiv | -16 | °C | Type of energy input | Electrical | | | | |
| Reference design conditions for space heating | Tdesignh | -22 | °C | Power consumption in modes other than active mode | | | | | |
| Off mode | | | | P _{OFF} | | | | 0.022 | kW |
| Thermostat-off mode | | | | P _{TO} | | | | 0.022 | kW |
| Standby mode | | | | P _{SB} | | | | 0.022 | kW |
| Crankcase heater mode | | | | P _{CK} | | | | 0.000 | kW |

| | | | | | | | |
|-------------------------------------|-------------------|---------|-----|---------------------------------|-------------|-------------------|---|
| Other items | | | | Rated air flow rate, outdoors | | | |
| Capacity control | variable | | | - | 2640 | m ³ /h | |
| Sound power level, indoors/outdoors | L _{WA} | 41 / 59 | dBA | | | | |
| Annual energy consumption | Q _{HE} | 8411 | kWh | | | | |
| For heat pump combination heater: | | | | | | | |
| Declared load profile | L | | | Water heating energy efficiency | η_{wh} | 120 | % |
| Daily electricity consumption | Q _{elec} | 4.090 | kWh | | | | |
| Annual electricity consumption | AEC | 900 | kWh | | | | |

Contact details
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 Atsushi EDAYOSHI
 The signature is signed in the average climate / medium-temperature section. Manager, Quality Assurance Department
 UNITED KINGDOM

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 (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.
 (***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

| | | |
|---------------------------------------|---------------|------------------------------|
| Model(s): | Outdoor unit: | PUD-SHWM100YAA(-BS) |
| | Indoor unit: | EHST20D-MED |
| Air-to-water heat pump: | | yes |
| Water-to-water heat pump: | | no |
| Brine-to-water heat pump: | | no |
| Low-temperature heat pump: | | no |
| Equipped with a supplementary heater: | | no |
| Heat pump combination heater: | | yes |
| Parameters for | | low-temperature application. |
| Parameters for | | colder climate conditions. |

| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit | | |
|--|----------|-------|------|--|------------|-------|------|-------|----|
| Rated heat output (*) | Prated | 10.0 | kW | Seasonal space heating energy efficiency | η_s | 148 | % | | |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj | | | | Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj | | | | | |
| Tj = - 7 °C | Pdh | 6.2 | kW | Tj = - 7 °C | COPd | 3.78 | - | | |
| Degradation co-efficient (**) | Cdh | 0.99 | - | Tj = + 2 °C | COPd | 4.07 | - | | |
| Tj = + 2 °C | Pdh | 3.9 | kW | Tj = + 7 °C | COPd | 5.45 | - | | |
| Degradation co-efficient (**) | Cdh | 0.98 | - | Tj = +12 °C | COPd | 7.50 | - | | |
| Tj = + 7 °C | Pdh | 3.9 | kW | Tj = bivalent temperature | COPd | 2.15 | - | | |
| Degradation co-efficient (**) | Cdh | 0.97 | - | Tj = operation limit temperature (***) | COPd | 1.86 | - | | |
| Tj = +12 °C | Pdh | 4.5 | kW | Tj = - 15 °C (if TOL < -20 °C) | COPd | 2.20 | - | | |
| Degradation co-efficient (**) | Cdh | 0.96 | - | Operation limit temperature | TOL | -28 | °C | | |
| Tj = bivalent temperature | Pdh | 8.4 | kW | Heating water operating limit temperature | WTOL | 60 | °C | | |
| Tj = operation limit temperature (***) | Pdh | 8.1 | kW | Supplementary heater | | | | | |
| Tj = - 15 °C (if TOL < -20 °C) | Pdh | 8.5 | kW | Rated heat output (*) | Psup | 2.0 | kW | | |
| Bivalent temperature | Tbiv | -16 | °C | Type of energy input | Electrical | | | | |
| Reference design conditions for space heating | Tdesignh | -22 | °C | Power consumption in modes other than active mode | | | | | |
| Off mode | | | | P _{OFF} | | | | 0.022 | kW |
| Thermostat-off mode | | | | P _{TO} | | | | 0.022 | kW |
| Standby mode | | | | P _{SB} | | | | 0.022 | kW |
| Crankcase heater mode | | | | P _{CK} | | | | 0.000 | kW |

Other items

| | | | | | | |
|-------------------------------------|-----------------|---------|-------------------------------|---|------|-------------------|
| Capacity control | variable | | Rated air flow rate, outdoors | - | 2640 | m ³ /h |
| Sound power level, indoors/outdoors | L _{WA} | 41 / 59 | dBA | | | |
| Annual energy consumption | Q _{HE} | 6517 | kWh | | | |

For heat pump combination heater:

| | | | | | | |
|--------------------------------|-------------------|-------|---------------------------------|-------------|-----|---|
| Declared load profile | L | | Water heating energy efficiency | η_{wh} | 120 | % |
| Daily electricity consumption | Q _{elec} | 4.090 | kWh | | | |
| Annual electricity consumption | AEC | 900 | kWh | | | |

Contact details

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Atsushi EDAYOSHI

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Manager, Quality Assurance Department

UNITED KINGDOM

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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

| | | |
|---------------------------------------|---------------|---------------------------------|
| Model(s): | Outdoor unit: | PUD-SHWM100YAA(-BS) |
| | Indoor unit: | EHST20D-MED |
| Air-to-water heat pump: | | yes |
| Water-to-water heat pump: | | no |
| Brine-to-water heat pump: | | no |
| Low-temperature heat pump: | | no |
| Equipped with a supplementary heater: | | no |
| Heat pump combination heater: | | yes |
| Parameters for | | medium-temperature application. |
| Parameters for | | warmer climate conditions. |

| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
|--|----------|-------|------|--|------------|-------|------|
| Rated heat output (*) | Prated | 10.0 | kW | Seasonal space heating energy efficiency | η_s | 161 | % |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj | | | | Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj | | | |
| Tj = - 7 °C | Pdh | - | kW | Tj = - 7 °C | COPd | - | - |
| Degradation co-efficient (**) | Cdh | - | - | Tj = + 2 °C | COPd | 2.05 | - |
| Tj = + 2 °C | Pdh | 10.0 | kW | Tj = + 7 °C | COPd | 3.56 | - |
| Degradation co-efficient (**) | Cdh | 1.00 | - | Tj = +12 °C | COPd | 5.70 | - |
| Tj = + 7 °C | Pdh | 6.4 | kW | Tj = bivalent temperature | COPd | 2.05 | - |
| Degradation co-efficient (**) | Cdh | 0.99 | - | Tj = operation limit temperature (***) | COPd | 2.05 | - |
| Tj = +12 °C | Pdh | 4.2 | kW | Operation limit temperature | TOL | -28 | °C |
| Degradation co-efficient (**) | Cdh | 0.97 | - | Heating water operating limit temperature | WTOL | 60 | °C |
| Tj = bivalent temperature | Pdh | 10.0 | kW | Supplementary heater | | | |
| Tj = operation limit temperature (***) | Pdh | 10.0 | kW | Rated heat output (*) | Psup | 0.0 | kW |
| Bivalent temperature | Tbiv | 2 | °C | Type of energy input | Electrical | | |
| Reference design conditions for space heating | Tdesignh | 2 | °C | Power consumption in modes other than active mode | | | |
| Off mode | | | | P _{OFF} | 0.022 | kW | |
| Thermostat-off mode | | | | P _{TO} | 0.022 | kW | |
| Standby mode | | | | P _{SB} | 0.022 | kW | |
| Crankcase heater mode | | | | P _{CK} | 0.000 | kW | |

| | | | | | | | |
|-------------------------------------|-----------------|---------|-----|-------------------------------|------|-------------------|--|
| Other items | | | | Rated air flow rate, outdoors | | | |
| Capacity control | variable | | | - | 2640 | m ³ /h | |
| Sound power level, indoors/outdoors | L _{WA} | 41 / 59 | dBA | | | | |
| Annual energy consumption | Q _{HE} | 3252 | kWh | | | | |

| | | | | | | | |
|-----------------------------------|-------------------|-------|-----|---------------------------------|-------------|-----|---|
| For heat pump combination heater: | | | | | | | |
| Declared load profile | L | | | Water heating energy efficiency | η_{wh} | 162 | % |
| Daily electricity consumption | Q _{elec} | 3.070 | kWh | | | | |
| Annual electricity consumption | AEC | 675 | kWh | | | | |

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 UNITED KINGDOM

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 (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.
 (***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

| | | |
|---------------------------------------|---------------|------------------------------|
| Model(s): | Outdoor unit: | PUD-SHWM100YAA(-BS) |
| | Indoor unit: | EHST20D-MED |
| Air-to-water heat pump: | | yes |
| Water-to-water heat pump: | | no |
| Brine-to-water heat pump: | | no |
| Low-temperature heat pump: | | no |
| Equipped with a supplementary heater: | | no |
| Heat pump combination heater: | | yes |
| Parameters for | | low-temperature application. |
| Parameters for | | warmer climate conditions. |

| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
|--|----------|-------|------|--|------------|-------|------|
| Rated heat output (*) | Prated | 10.0 | kW | Seasonal space heating energy efficiency | η_s | 232 | % |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj | | | | Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj | | | |
| Tj = - 7 °C | Pdh | - | kW | Tj = - 7 °C | COPd | - | - |
| Degradation co-efficient (**) | Cdh | - | - | Tj = + 2 °C | COPd | 3.45 | - |
| Tj = + 2 °C | Pdh | 10.0 | kW | Tj = + 7 °C | COPd | 5.57 | - |
| Degradation co-efficient (**) | Cdh | 0.99 | - | Tj = +12 °C | COPd | 7.55 | - |
| Tj = + 7 °C | Pdh | 6.4 | kW | Tj = bivalent temperature | COPd | 3.45 | - |
| Degradation co-efficient (**) | Cdh | 0.98 | - | Tj = operation limit temperature (***) | COPd | 3.45 | - |
| Tj = +12 °C | Pdh | 4.4 | kW | Operation limit temperature | TOL | -28 | °C |
| Degradation co-efficient (**) | Cdh | 0.96 | - | Heating water operating limit temperature | WTOL | 60 | °C |
| Tj = bivalent temperature | Pdh | 10.0 | kW | Supplementary heater | | | |
| Tj = operation limit temperature (***) | Pdh | 10.0 | kW | Rated heat output (*) | Psup | 0.0 | kW |
| Bivalent temperature | Tbiv | 2 | °C | Type of energy input | Electrical | | |
| Reference design conditions for space heating | Tdesignh | 2 | °C | Power consumption in modes other than active mode | | | |
| Off mode | | | | P _{OFF} | 0.022 | kW | |
| Thermostat-off mode | | | | P _{TO} | 0.022 | kW | |
| Standby mode | | | | P _{SB} | 0.022 | kW | |
| Crankcase heater mode | | | | P _{CK} | 0.000 | kW | |

| | | | | | | | |
|-------------------------------------|-----------------|---------|-----|-------------------------------|---|------|-------------------|
| Other items | | | | Rated air flow rate, outdoors | - | 2640 | m ³ /h |
| Capacity control | variable | | | | | | |
| Sound power level, indoors/outdoors | L _{WA} | 41 / 59 | dBA | | | | |
| Annual energy consumption | Q _{HE} | 2273 | kWh | | | | |

| | | | | | | | |
|-----------------------------------|-------------------|-------|-----|---------------------------------|-------------|-----|---|
| For heat pump combination heater: | | | | Water heating energy efficiency | η_{wh} | 162 | % |
| Declared load profile | L | | | | | | |
| Daily electricity consumption | Q _{elec} | 3.070 | kWh | | | | |
| Annual electricity consumption | AEC | 675 | kWh | | | | |

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 Atsushi EDAYOSHI
 The signature is signed in the average climate / medium-temperature section. Manager, Quality Assurance Department
 UNITED KINGDOM

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 · Details and precautions on recycling and/or disposal at end-of-life can be found in the installation and or operation manuals.
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 (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.
 (***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

| | | |
|---------------------------------------|---------------|---------------------------------|
| Model(s): | Outdoor unit: | PUD-SHWM100YAA(-BS) |
| | Indoor unit: | ERST20D-****D |
| Air-to-water heat pump: | | yes |
| Water-to-water heat pump: | | no |
| Brine-to-water heat pump: | | no |
| Low-temperature heat pump: | | no |
| Equipped with a supplementary heater: | | yes |
| Heat pump combination heater: | | yes |
| Parameters for | | medium-temperature application. |
| Parameters for | | average climate conditions. |

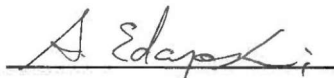
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
|--|----------|-------|------|--|------------|-------|------|
| Rated heat output (*) | Prated | 10.0 | kW | Seasonal space heating energy efficiency | η_s | 135 | % |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj | | | | Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj | | | |
| Tj = - 7 °C | Pdh | 8.9 | kW | Tj = - 7 °C | COPd | 2.18 | - |
| Degradation co-efficient (**) | Cdh | 1.00 | - | Tj = + 2 °C | COPd | 3.27 | - |
| Tj = + 2 °C | Pdh | 5.4 | kW | Tj = + 7 °C | COPd | 4.81 | - |
| Degradation co-efficient (**) | Cdh | 0.99 | - | Tj = +12 °C | COPd | 7.06 | - |
| Tj = + 7 °C | Pdh | 5.2 | kW | Tj = bivalent temperature | COPd | 1.91 | - |
| Degradation co-efficient (**) | Cdh | 0.98 | - | Tj = operation limit temperature (***) | COPd | 1.91 | - |
| Tj = +12 °C | Pdh | 3.6 | kW | Operation limit temperature | TOL | -28 | °C |
| Degradation co-efficient (**) | Cdh | 0.96 | - | Heating water operating limit temperature | WTOL | 60 | °C |
| Tj = bivalent temperature | Pdh | 10.0 | kW | Supplementary heater | | | |
| Tj = operation limit temperature (***) | Pdh | 10.0 | kW | Rated heat output (*) | Psup | 0.0 | kW |
| Bivalent temperature | Tbiv | -10 | °C | Type of energy input | Electrical | | |
| Reference design conditions for space heating | Tdesignh | -10 | °C | Power consumption in modes other than active mode | | | |
| Off mode | | | | P _{OFF} | 0.022 | kW | |
| Thermostat-off mode | | | | P _{TO} | 0.022 | kW | |
| Standby mode | | | | P _{SB} | 0.022 | kW | |
| Crankcase heater mode | | | | P _{CK} | 0.000 | kW | |

| | | | | | | | |
|-------------------------------------|-----------------|---------|-----|-------------------------------|---|------|-------------------|
| Other items | | | | Rated air flow rate, outdoors | - | 2640 | m ³ /h |
| Capacity control | variable | | | | | | |
| Sound power level, indoors/outdoors | L _{WA} | 41 / 59 | dBA | | | | |
| Annual energy consumption | Q _{HE} | 5975 | kWh | | | | |

| | | | | | | | |
|-----------------------------------|-------------------|-------|-----|---------------------------------|-------------|-----|---|
| For heat pump combination heater: | | | | Water heating energy efficiency | η_{wh} | 148 | % |
| Declared load profile | L | | | | | | |
| Daily electricity consumption | Q _{elec} | 3.340 | kWh | | | | |
| Annual electricity consumption | AEC | 736 | kWh | | | | |

Contact details
 MITSUBISHI ELECTRIC AIR CODITIONING SYSTEM EUROPE LTD. Nettlehill Road, Houston Industrial Estate, Livingston, EH54 5EQ, Scotland, U.K.

The identification and signature of the person empowered to bind the supplier:



Atsushi EDAYOSHI
 Manager, Quality Assurance Department
 UNITED KINGDOM

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- (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.
- (***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

| | | |
|---------------------------------------|---------------|------------------------------|
| Model(s): | Outdoor unit: | PUD-SHWM100YAA(-BS) |
| | Indoor unit: | ERST20D-****D |
| Air-to-water heat pump: | | yes |
| Water-to-water heat pump: | | no |
| Brine-to-water heat pump: | | no |
| Low-temperature heat pump: | | no |
| Equipped with a supplementary heater: | | yes |
| Heat pump combination heater: | | yes |
| Parameters for | | low-temperature application. |
| Parameters for | | average climate conditions. |

| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
|--|----------|-------|------|--|------------|-------|------|
| Rated heat output (*) | Prated | 10.0 | kW | Seasonal space heating energy efficiency | η_s | 178 | % |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj | | | | Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj | | | |
| Tj = - 7 °C | Pdh | 8.9 | kW | Tj = - 7 °C | COPd | 3.16 | - |
| Degradation co-efficient (**) | Cdh | 0.99 | - | Tj = + 2 °C | COPd | 4.45 | - |
| Tj = + 2 °C | Pdh | 5.7 | kW | Tj = + 7 °C | COPd | 5.63 | - |
| Degradation co-efficient (**) | Cdh | 0.98 | - | Tj = +12 °C | COPd | 7.89 | - |
| Tj = + 7 °C | Pdh | 5.4 | kW | Tj = bivalent temperature | COPd | 2.92 | - |
| Degradation co-efficient (**) | Cdh | 0.98 | - | Tj = operation limit temperature (***) | COPd | 2.92 | - |
| Tj = +12 °C | Pdh | 4.5 | kW | Operation limit temperature | TOL | -28 | °C |
| Degradation co-efficient (**) | Cdh | 0.96 | - | Heating water operating limit temperature | WTOL | 60 | °C |
| Tj = bivalent temperature | Pdh | 10.0 | kW | Supplementary heater | | | |
| Tj = operation limit temperature (***) | Pdh | 10.0 | kW | Rated heat output (*) | Psup | 0.0 | kW |
| Bivalent temperature | Tbiv | -10 | °C | Type of energy input | Electrical | | |
| Reference design conditions for space heating | Tdesignh | -10 | °C | Power consumption in modes other than active mode | | | |
| Off mode | | | | P _{OFF} | | | |
| Thermostat-off mode | | | | P _{TO} | | | |
| Standby mode | | | | P _{SB} | | | |
| Crankcase heater mode | | | | P _{CK} | | | |

| | | | | | | | |
|-------------------------------------|-------------------|---------|-----|---------------------------------|------|-------------------|--|
| Other items | | | | Rated air flow rate, outdoors | | | |
| Capacity control | variable | | | - | 2640 | m ³ /h | |
| Sound power level, indoors/outdoors | L _{WA} | 41 / 59 | dBA | | | | |
| Annual energy consumption | Q _{HE} | 4571 | kWh | | | | |
| For heat pump combination heater: | | | | | | | |
| Declared load profile | L | | | Water heating energy efficiency | | | |
| Daily electricity consumption | Q _{elec} | 3.340 | kWh | η_{wh} | 148 | % | |
| Annual electricity consumption | AEC | 736 | kWh | | | | |

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 (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.
 (***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

| | | |
|---------------------------------------|---------------|---------------------------------|
| Model(s): | Outdoor unit: | PUD-SHWM100YAA(-BS) |
| | Indoor unit: | ERST20D-****D |
| Air-to-water heat pump: | | yes |
| Water-to-water heat pump: | | no |
| Brine-to-water heat pump: | | no |
| Low-temperature heat pump: | | no |
| Equipped with a supplementary heater: | | yes |
| Heat pump combination heater: | | yes |
| Parameters for | | medium-temperature application. |
| Parameters for | | colder climate conditions. |

| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
|--|----------|-------|------|--|------------|-------|------|
| Rated heat output (*) | Prated | 10.0 | kW | Seasonal space heating energy efficiency | η_s | 114 | % |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj | | | | Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj | | | |
| Tj = - 7 °C | Pdh | 6.1 | kW | Tj = - 7 °C | COPd | 2.70 | - |
| Degradation co-efficient (**) | Cdh | 0.99 | - | Tj = + 2 °C | COPd | 3.30 | - |
| Tj = + 2 °C | Pdh | 3.7 | kW | Tj = + 7 °C | COPd | 4.65 | - |
| Degradation co-efficient (**) | Cdh | 0.98 | - | Tj = +12 °C | COPd | 6.88 | - |
| Tj = + 7 °C | Pdh | 3.8 | kW | Tj = bivalent temperature | COPd | 1.56 | - |
| Degradation co-efficient (**) | Cdh | 0.97 | - | Tj = operation limit temperature (***) | COPd | 1.57 | - |
| Tj = +12 °C | Pdh | 4.4 | kW | Tj = - 15 °C (if TOL < -20 °C) | COPd | 1.56 | - |
| Degradation co-efficient (**) | Cdh | 0.97 | - | Operation limit temperature | TOL | -28 | °C |
| Tj = bivalent temperature | Pdh | 8.4 | kW | Heating water operating limit temperature | WTOL | 60 | °C |
| Tj = operation limit temperature (***) | Pdh | 8.1 | kW | Supplementary heater | | | |
| Tj = - 15 °C (if TOL < -20 °C) | Pdh | 8.5 | kW | Rated heat output (*) | Psup | 2.0 | kW |
| Bivalent temperature | Tbiv | -16 | °C | Type of energy input | Electrical | | |
| Reference design conditions for space heating | Tdesignh | -22 | °C | Power consumption in modes other than active mode | | | |
| Off mode | | | | P _{OFF} | | | |
| Thermostat-off mode | | | | P _{TO} | | | |
| Standby mode | | | | P _{SB} | | | |
| Crankcase heater mode | | | | P _{CK} | | | |

| | | | | | | | |
|-------------------------------------|-----------------|---------|-----|-------------------------------|------|-------------------|--|
| Other items | | | | Rated air flow rate, outdoors | | | |
| Capacity control | variable | | | - | 2640 | m ³ /h | |
| Sound power level, indoors/outdoors | L _{WA} | 41 / 59 | dBA | | | | |
| Annual energy consumption | Q _{HE} | 8411 | kWh | | | | |

| | | | | | | | |
|-----------------------------------|-------------------|-------|-----|---------------------------------|-------------|-----|---|
| For heat pump combination heater: | | | | | | | |
| Declared load profile | L | | | Water heating energy efficiency | η_{wh} | 120 | % |
| Daily electricity consumption | Q _{elec} | 4.090 | kWh | | | | |
| Annual electricity consumption | AEC | 900 | kWh | | | | |

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 (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.
 (***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

| | | |
|---------------------------------------|---------------|------------------------------|
| Model(s): | Outdoor unit: | PUD-SHWM100YAA(-BS) |
| | Indoor unit: | ERST20D-****D |
| Air-to-water heat pump: | | yes |
| Water-to-water heat pump: | | no |
| Brine-to-water heat pump: | | no |
| Low-temperature heat pump: | | no |
| Equipped with a supplementary heater: | | yes |
| Heat pump combination heater: | | yes |
| Parameters for | | low-temperature application. |
| Parameters for | | colder climate conditions. |

| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
|--|----------|-------|------|--|------------|-------|------|
| Rated heat output (*) | Prated | 10.0 | kW | Seasonal space heating energy efficiency | η_s | 148 | % |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj | | | | Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj | | | |
| Tj = - 7 °C | Pdh | 6.2 | kW | Tj = - 7 °C | COPd | 3.78 | - |
| Degradation co-efficient (**) | Cdh | 0.99 | - | Tj = + 2 °C | COPd | 4.07 | - |
| Tj = + 2 °C | Pdh | 3.9 | kW | Tj = + 7 °C | COPd | 5.45 | - |
| Degradation co-efficient (**) | Cdh | 0.98 | - | Tj = +12 °C | COPd | 7.50 | - |
| Tj = + 7 °C | Pdh | 3.9 | kW | Tj = bivalent temperature | COPd | 2.15 | - |
| Degradation co-efficient (**) | Cdh | 0.97 | - | Tj = operation limit temperature (***) | COPd | 1.86 | - |
| Tj = +12 °C | Pdh | 4.5 | kW | Tj = - 15 °C (if TOL < -20 °C) | COPd | 2.20 | - |
| Degradation co-efficient (**) | Cdh | 0.96 | - | Operation limit temperature | TOL | -28 | °C |
| Tj = bivalent temperature | Pdh | 8.4 | kW | Heating water operating limit temperature | WTOL | 60 | °C |
| Tj = operation limit temperature (***) | Pdh | 8.1 | kW | Supplementary heater | | | |
| Tj = - 15 °C (if TOL < -20 °C) | Pdh | 8.5 | kW | Rated heat output (*) | Psup | 2.0 | kW |
| Bivalent temperature | Tbiv | -16 | °C | Type of energy input | Electrical | | |
| Reference design conditions for space heating | Tdesignh | -22 | °C | Power consumption in modes other than active mode | | | |
| Off mode | | | | P _{OFF} | | | |
| Thermostat-off mode | | | | P _{TO} | | | |
| Standby mode | | | | P _{SB} | | | |
| Crankcase heater mode | | | | P _{CK} | | | |

| | | | | | | | |
|-------------------------------------|-----------------|---------|-----|-------------------------------|------|-------------------|--|
| Other items | | | | Rated air flow rate, outdoors | | | |
| Capacity control | variable | | | - | 2640 | m ³ /h | |
| Sound power level, indoors/outdoors | L _{WA} | 41 / 59 | dBA | | | | |
| Annual energy consumption | Q _{HE} | 6517 | kWh | | | | |

| | | | | | | | |
|-----------------------------------|-------------------|-------|-----|---------------------------------|-------------|-----|---|
| For heat pump combination heater: | | | | | | | |
| Declared load profile | L | | | Water heating energy efficiency | η_{wh} | 120 | % |
| Daily electricity consumption | Q _{elec} | 4.090 | kWh | | | | |
| Annual electricity consumption | AEC | 900 | kWh | | | | |

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 (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.
 (***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

| | | |
|---------------------------------------|---------------|---------------------------------|
| Model(s): | Outdoor unit: | PUD-SHWM100YAA(-BS) |
| | Indoor unit: | ERST20D-****D |
| Air-to-water heat pump: | | yes |
| Water-to-water heat pump: | | no |
| Brine-to-water heat pump: | | no |
| Low-temperature heat pump: | | no |
| Equipped with a supplementary heater: | | yes |
| Heat pump combination heater: | | yes |
| Parameters for | | medium-temperature application. |
| Parameters for | | warmer climate conditions. |

| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
|--|----------|-------|------|--|------------|-------|------|
| Rated heat output (*) | Prated | 10.0 | kW | Seasonal space heating energy efficiency | η_s | 161 | % |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj | | | | Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj | | | |
| Tj = - 7 °C | Pdh | - | kW | Tj = - 7 °C | COPd | - | - |
| Degradation co-efficient (**) | Cdh | - | - | Tj = + 2 °C | COPd | 2.05 | - |
| Tj = + 2 °C | Pdh | 10.0 | kW | Tj = + 7 °C | COPd | 3.56 | - |
| Degradation co-efficient (**) | Cdh | 1.00 | - | Tj = +12 °C | COPd | 5.70 | - |
| Tj = + 7 °C | Pdh | 6.4 | kW | Tj = bivalent temperature | COPd | 2.05 | - |
| Degradation co-efficient (**) | Cdh | 0.99 | - | Tj = operation limit temperature (***) | COPd | 2.05 | - |
| Tj = +12 °C | Pdh | 4.2 | kW | Operation limit temperature | TOL | -28 | °C |
| Degradation co-efficient (**) | Cdh | 0.97 | - | Heating water operating limit temperature | WTOL | 60 | °C |
| Tj = bivalent temperature | Pdh | 10.0 | kW | Supplementary heater | | | |
| Tj = operation limit temperature (***) | Pdh | 10.0 | kW | Rated heat output (*) | Psup | 0.0 | kW |
| Bivalent temperature | Tbiv | 2 | °C | Type of energy input | Electrical | | |
| Reference design conditions for space heating | Tdesignh | 2 | °C | Power consumption in modes other than active mode | | | |
| Off mode | | | | P _{OFF} | 0.022 | kW | |
| Thermostat-off mode | | | | P _{TO} | 0.022 | kW | |
| Standby mode | | | | P _{SB} | 0.022 | kW | |
| Crankcase heater mode | | | | P _{CK} | 0.000 | kW | |

| | | | | | | | |
|-------------------------------------|-----------------|---------|-----|-------------------------------|---|------|-------------------|
| Other items | | | | Rated air flow rate, outdoors | - | 2640 | m ³ /h |
| Capacity control | variable | | | | | | |
| Sound power level, indoors/outdoors | L _{WA} | 41 / 59 | dBA | | | | |
| Annual energy consumption | Q _{HE} | 3252 | kWh | | | | |

| | | | | | | | |
|-----------------------------------|-------------------|-------|-----|---------------------------------|-------------|-----|---|
| For heat pump combination heater: | | | | | | | |
| Declared load profile | L | | | Water heating energy efficiency | η_{wh} | 162 | % |
| Daily electricity consumption | Q _{elec} | 3.070 | kWh | | | | |
| Annual electricity consumption | AEC | 675 | kWh | | | | |

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 (***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

| | | |
|---------------------------------------|---------------|------------------------------|
| Model(s): | Outdoor unit: | PUD-SHWM100YAA(-BS) |
| | Indoor unit: | ERST20D-****D |
| Air-to-water heat pump: | | yes |
| Water-to-water heat pump: | | no |
| Brine-to-water heat pump: | | no |
| Low-temperature heat pump: | | no |
| Equipped with a supplementary heater: | | yes |
| Heat pump combination heater: | | yes |
| Parameters for | | low-temperature application. |
| Parameters for | | warmer climate conditions. |

| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
|--|------------------|-------|------|--|------------|-------|------|
| Rated heat output (*) | Prated | 10.0 | kW | Seasonal space heating energy efficiency | η_s | 232 | % |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj | | | | Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj | | | |
| Tj = - 7 °C | Pdh | - | kW | Tj = - 7 °C | COPd | - | - |
| Degradation co-efficient (**) | Cdh | - | - | Tj = + 2 °C | COPd | 3.45 | - |
| Tj = + 2 °C | Pdh | 10.0 | kW | Tj = + 7 °C | COPd | 5.57 | - |
| Degradation co-efficient (**) | Cdh | 0.99 | - | Tj = +12 °C | COPd | 7.55 | - |
| Tj = + 7 °C | Pdh | 6.4 | kW | Tj = bivalent temperature | COPd | 3.45 | - |
| Degradation co-efficient (**) | Cdh | 0.98 | - | Tj = operation limit temperature (***) | COPd | 3.45 | - |
| Tj = +12 °C | Pdh | 4.4 | kW | Operation limit temperature | TOL | -28 | °C |
| Degradation co-efficient (**) | Cdh | 0.96 | - | Heating water operating limit temperature | WTOL | 60 | °C |
| Tj = bivalent temperature | Pdh | 10.0 | kW | Supplementary heater | | | |
| Tj = operation limit temperature (***) | Pdh | 10.0 | kW | Rated heat output (*) | Psup | 0.0 | kW |
| Bivalent temperature | Tbiv | 2 | °C | Type of energy input | Electrical | | |
| Reference design conditions for space heating | Tdesignh | 2 | °C | | | | |
| Power consumption in modes other than active mode | | | | | | | |
| Off mode | P _{OFF} | 0.022 | kW | | | | |
| Thermostat-off mode | P _{TO} | 0.022 | kW | | | | |
| Standby mode | P _{SB} | 0.022 | kW | | | | |
| Crankcase heater mode | P _{CK} | 0.000 | kW | | | | |

| | | | | | | | |
|-------------------------------------|-------------------|---------|-----|---------------------------------|------|-------------------|--|
| Other items | | | | Rated air flow rate, outdoors | | | |
| Capacity control | variable | | | - | 2640 | m ³ /h | |
| Sound power level, indoors/outdoors | L _{WA} | 41 / 59 | dBA | | | | |
| Annual energy consumption | Q _{HE} | 2273 | kWh | | | | |
| For heat pump combination heater: | | | | Water heating energy efficiency | | | |
| Declared load profile | L | | | η_{wh} | 162 | % | |
| Daily electricity consumption | Q _{elec} | 3.070 | kWh | | | | |
| Annual electricity consumption | AEC | 675 | kWh | | | | |

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· Details and precautions on installation, maintenance and assembly can be found in the installation and or operation manuals.
 · Details and precautions on recycling and/or disposal at end-of-life can be found in the installation and or operation manuals.
 (*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).
 (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.
 (***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.