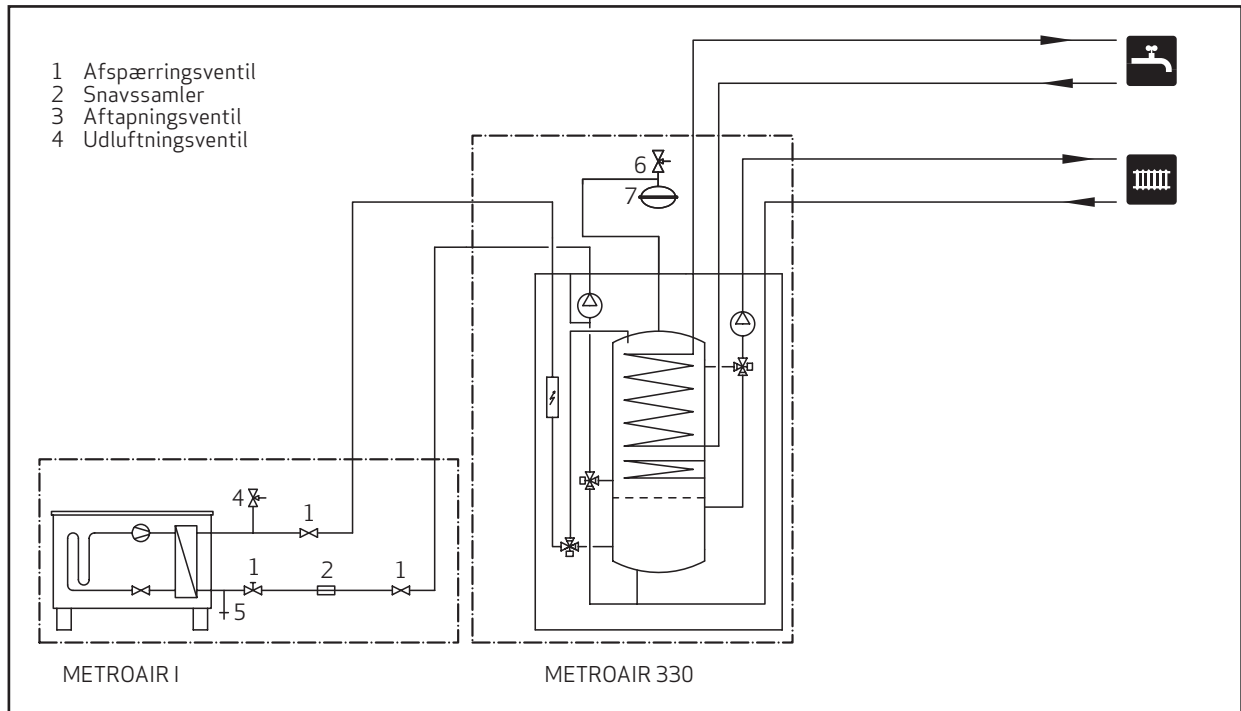


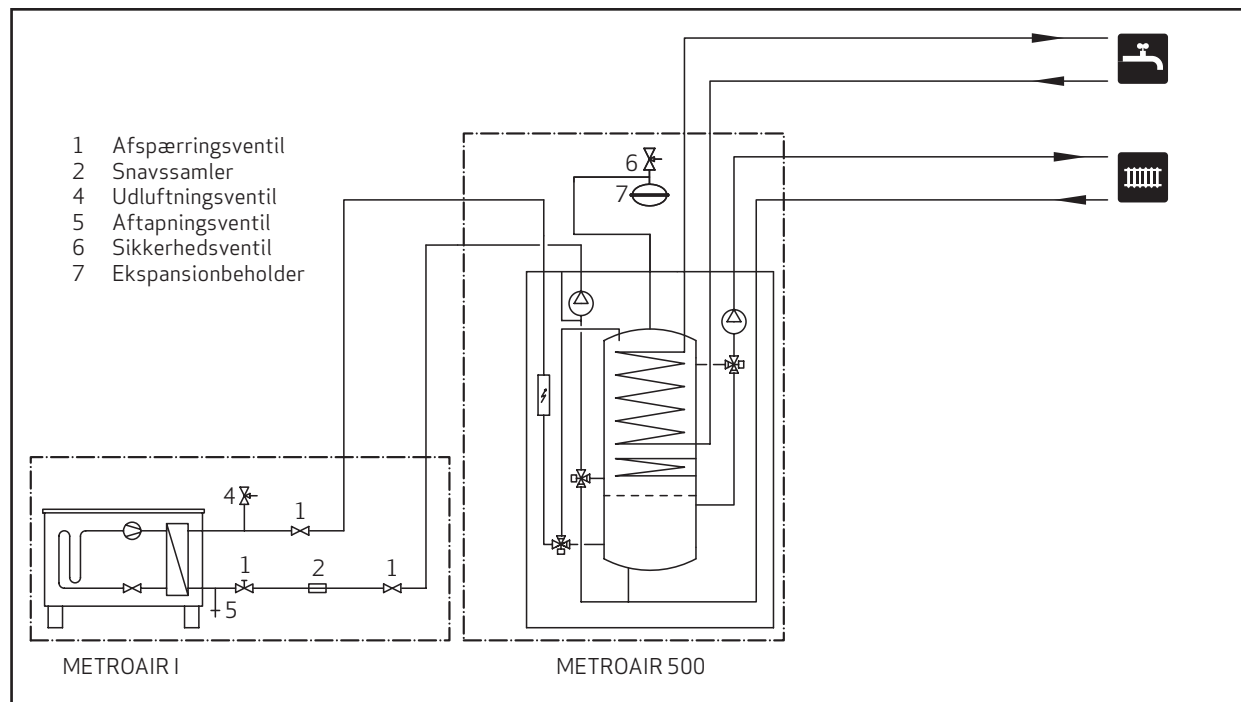
METROAIR I

Datablad

METROAIR I8 og I12




METROAIR I16 og I20



| | | | |
|---|------------------------------------|------------|-----|
| Supplier's name: | METRO THERM A/S | | |
| Model: | Metroair I 8 + Metroair 330 | | |
| Temperature application | 35 | 55 | °C |
| Declared load profile for water heating | XL | | |
| Seasonal space heating energy efficiency class, average climate: | A+++ | A++ | |
| Water heating energy efficiency class, average climate: | A | | |
| Rated heat output, average climate: | 5,9 | 6,3 | kW |
| Annual energy consumption for space heating, average climate | 2544 | 3472 | kWh |
| Annual electricity consumption for water heating, average climate | 1661 | | kWh |
| Seasonal space heating energy efficiency, average climate: | 189 | 147 | % |
| Water heating energy efficiency, average climate: | 101 | | % |
| Sound power level LWA indoors | 35 | | dB |
| Rated heat output, cold climate: | 6,8 | 7,4 | kW |
| Rated heat output, warm climate: | 5,9 | 6,3 | kW |
| Annual energy consumption for space heating, cold climate | 4182 | 5524 | kWh |
| Annual electricity consumption for water heating, cold climate | 1895 | | kWh |
| Annual energy consumption for space heating, warm climate | 1452 | 1939 | kWh |
| Annual electricity consumption for water heating, warm climate | 1473 | | kWh |
| Seasonal space heating energy efficiency, cold climate: | 158 | 130 | % |
| Water heating energy efficiency, cold climate: | 88 | | % |
| Seasonal space heating energy efficiency, warm climate: | 214 | 171 | % |
| Water heating energy efficiency, warm climate: | 114 | | % |
| Sound power level LWA outdoors | 53 | | dB |

Data for package fiche


| | | | |
|--|-------------|-------------|---|
| Controller class | VI | | |
| Controler contribution to efficiency | 4,0 | | % |
| Seasonal space heating energy efficiency of package, average climate: | 193 | 151 | % |
| Seasonal space heating energy efficiency class for package, average climate: | A+++ | A+++ | % |
| Seasonal space heating energy efficiency of package, cold climate: | 162 | 134 | % |
| Seasonal space heating energy efficiency of package, warm climate: | 218 | 175 | % |

| | | | | | | | | | | | |
|--|-------------------|--|-----|---|---|-------------------|-------------------------------|-------------------|-------------------|-----|----|
| Model(s): | | Metroair I 8 + Metroair 330 | |  | | | | | | | |
| Type of heat source/sink: | | Air-to-water | | | | | | | | | |
| Low-temperature heat pump: | | No | | | | | | | | | |
| Equipped with supplementary heater: | | Yes | | | | | | | | | |
| Heat pump combination heater: | | Yes | | | | | | | | | |
| Climate condition: | | Average | | | | | | | | | |
| Temperature application: | | Medium temperature (55 °C) | | | | | | | | | |
| Applied standards: EN14825 and EN16147 | | | | | | | | | | | |
| Rated heat output | | Prated | 6,3 | kW | Seasonal space heating energy efficiency | | η_s | 147 | % | | |
| <i>Declared capacity for part load at outdoor temperature Tj</i> | | | | <i>Declared coefficient of performance for part load at outdoor temperature Tj</i> | | | | | | | |
| Tj = -7 °C | Pdh | 5,5 | kW | Tj = -7 °C | COPd | 2,48 | - | | | | |
| Tj = +2 °C | Pdh | 4,1 | kW | Tj = +2 °C | COPd | 3,80 | - | | | | |
| Tj = +7 °C | Pdh | 2,9 | kW | Tj = +7 °C | COPd | 4,45 | - | | | | |
| Tj = +12 °C | Pdh | 3,3 | kW | Tj = +12 °C | COPd | 5,26 | - | | | | |
| Tj = biv | Pdh | 5,5 | kW | Tj = biv | COPd | 2,48 | - | | | | |
| Tj = TOL | Pdh | 5,7 | kW | Tj = TOL | COPd | 2,34 | - | | | | |
| Tj = -15 °C (if TOL < -20 °C) | Pdh | | kW | Tj = -15 °C (if TOL < -20 °C) | COPd | | - | | | | |
| Bivalent temperature | | | | T _{biv} | -7 | °C | Operation limit temperature | | TOL | -10 | °C |
| Cycling interval capacity for heating | | | | P _{ych} | | kW | Cycling interval efficiency | | COP _{yc} | | - |
| Degradation co-efficient | | | | C _{dh} | 0,99 | - | Heating water operating limit | | WTOL | 65 | °C |
| <i>Power consumption in modes other than active mode</i> | | | | <i>Supplementary heater</i> | | | | | | | |
| Off mode | P _{OFF} | 0,025 | kW | Rated heat output | | P _{sup} | 0,6 | kW | | | |
| Thermostat-off mode | P _{TO} | 0,01 | kW | Type of energy input | | Electric | | | | | |
| Standby mode | P _{SB} | 0,025 | kW | | | | | | | | |
| Crankcase heater mode | P _{CK} | 0,037 | kW | | | | | | | | |
| <i>Other items</i> | | | | | | | | | | | |
| Capacity control | variable | | | Rated air flow rate, outdoors | | | 2300 | m ³ /h | | | |
| Sound power level, indoors/outdoors | L _{WA} | 35/53 | dB | Rated water flow rate, indoor heat exchanger | | | variable | m ³ /h | | | |
| Annual energy consumption | Q _{HE} | 3472 | kWh | Rated brine or water flow rate, outdoor heat exchanger | | | | m ³ /h | | | |
| <i>For heat pump combination heater:</i> | | | | | | | | | | | |
| Declared load profile | | XL | | Water heating energy efficiency | | η_{wh} | 101 | % | | | |
| Daily electricity consumption | Q _{elec} | 7,56 | kWh | Daily fuel consumption | | Q _{fuel} | | kWh | | | |
| Annual electricity consumption | AEC | 1661 | kWh | Annual fuel consumption | | AFC | | GJ | | | |
| Approved by: | | | | | | | | | | | |
| Contact details | | METRO THERM A/S Rundinsvej 55 DK-3200 Helsingør www.metrotherm.dk | | | | | | | | | |

| | | | |
|---|-------------------------------------|------------|-----|
| Supplier's name: | METRO THERM A/S | | |
| Model: | Metroair I 12 + Metroair 330 | | |
| Temperature application | 35 | 55 | °C |
| Declared load profile for water heating | XL | | |
| Seasonal space heating energy efficiency class, average climate: | A+++ | A++ | |
| Water heating energy efficiency class, average climate: | A | | |
| Rated heat output, average climate: | 8 | 8,3 | kW |
| Annual energy consumption for space heating, average climate | 3409 | 4529 | kWh |
| Annual electricity consumption for water heating, average climate | 1661 | | kWh |
| Seasonal space heating energy efficiency, average climate: | 190 | 148 | % |
| Water heating energy efficiency, average climate: | 101 | | % |
| Sound power level LWA indoors | 35 | | dB |
| Rated heat output, cold climate: | 9,3 | 9,8 | kW |
| Rated heat output, warm climate: | 9,2 | 9,2 | kW |
| Annual energy consumption for space heating, cold climate | 5666 | 7239 | kWh |
| Annual electricity consumption for water heating, cold climate | 1895 | | kWh |
| Annual energy consumption for space heating, warm climate | 2241 | 2741 | kWh |
| Annual electricity consumption for water heating, warm climate | 1473 | | kWh |
| Seasonal space heating energy efficiency, cold climate: | 159 | 130 | % |
| Water heating energy efficiency, cold climate: | 88 | | % |
| Seasonal space heating energy efficiency, warm climate: | 216 | 176 | % |
| Water heating energy efficiency, warm climate: | 114 | | % |
| Sound power level LWA outdoors | 53 | | dB |

Data for package fiche


| | | | |
|--|-------------|-------------|---|
| Controller class | VI | | |
| Controler contribution to efficiency | 4,0 | | % |
| Seasonal space heating energy efficiency of package, average climate: | 194 | 152 | % |
| Seasonal space heating energy efficiency class for package, average climate: | A+++ | A+++ | % |
| Seasonal space heating energy efficiency of package, cold climate: | 163 | 134 | % |
| Seasonal space heating energy efficiency of package, warm climate: | 220 | 180 | % |

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|--|------------------|--|-----|---|---|------------------|--|--|-------------------|----------|-------------------|-------------------|
| Model(s): | | Metroair I 12 + Metroair 330 | |  | | | | | | | | |
| Type of heat source/sink: | | Air-to-water | | | | | | | | | | |
| Low-temperature heat pump: | | No | | | | | | | | | | |
| Equipped with supplementary heater: | | Yes | | | | | | | | | | |
| Heat pump combination heater: | | Yes | | | | | | | | | | |
| Climate condition: | | Average | | | | | | | | | | |
| Temperature application: | | Medium temperature (55 °C) | | | | | | | | | | |
| Applied standards: EN14825 and EN16147 | | | | | | | | | | | | |
| Rated heat output | | Prated | 8,3 | kW | Seasonal space heating energy efficiency | | η_s | 148 | % | | | |
| <i>Declared capacity for part load at outdoor temperature Tj</i> | | | | <i>Declared coefficient of performance for part load at outdoor temperature Tj</i> | | | | | | | | |
| Tj = -7 °C | Pdh | 7,3 | kW | Tj = -7 °C | COPd | 2,39 | - | | | | | |
| Tj = +2 °C | Pdh | 4,7 | kW | Tj = +2 °C | COPd | 3,85 | - | | | | | |
| Tj = +7 °C | Pdh | 2,9 | kW | Tj = +7 °C | COPd | 4,48 | - | | | | | |
| Tj = +12 °C | Pdh | 3,3 | kW | Tj = +12 °C | COPd | 5,30 | - | | | | | |
| Tj = biv | Pdh | 7,3 | kW | Tj = biv | COPd | 2,39 | - | | | | | |
| Tj = TOL | Pdh | 7,8 | kW | Tj = TOL | COPd | 2,28 | - | | | | | |
| Tj = -15 °C (if TOL < -20 °C) | Pdh | | kW | Tj = -15 °C (if TOL < -20 °C) | COPd | | - | | | | | |
| Bivalent temperature | | | | T _{biv} | -7 | °C | Operation limit temperature | | TOL | -10 | °C | |
| Cycling interval capacity for heating | | | | P _{ych} | | kW | Cycling interval efficiency | | COP _{yc} | | - | |
| Degradation co-efficient | | | | C _{dh} | 0,99 | - | Heating water operating limit | | WTOL | 65 | °C | |
| <i>Power consumption in modes other than active mode</i> | | | | <i>Supplementary heater</i> | | | | | | | | |
| Off mode | P _{OFF} | 0,025 | kW | Rated heat output | | P _{sup} | 0,5 | kW | | | | |
| Thermostat-off mode | P _{TO} | 0,007 | kW | Type of energy input | | | | Electric | | | | |
| Standby mode | P _{SB} | 0,025 | kW | | | | | | | | | |
| Crankcase heater mode | P _{CK} | 0,037 | kW | | | | | | | | | |
| <i>Other items</i> | | | | | | | | | | | | |
| Capacity control | | | | variable | | | | | | | | |
| Sound power level, indoors/outdoors | | | | L _{WA} | 35/53 | dB | Rated air flow rate, outdoors | | | 3400 | m ³ /h | |
| Annual energy consumption | | | | Q _{HE} | 4529 | kWh | Rated water flow rate, indoor heat exchanger | | | variable | m ³ /h | |
| | | | | | | | | Rated brine or water flow rate, outdoor heat exchanger | | | | m ³ /h |
| <i>For heat pump combination heater:</i> | | | | | | | | | | | | |
| Declared load profile | | XL | | Water heating energy efficiency | | η_{wh} | 101 | % | | | | |
| Daily electricity consumption | | | | Q _{elec} | 7,56 | kWh | Daily fuel consumption | | Q _{fuel} | | kWh | |
| Annual electricity consumption | | | | AEC | 1661 | kWh | Annual fuel consumption | | AFC | | GJ | |
| Approved by: | | | | | | | | | | | | |
| Contact details | | METRO THERM A/S Rundinsvej 55 DK-3200 Helsingør www.metrotherm.dk | | | | | | | | | | |

| | | | |
|---|-------------------------------------|-------------|-----|
| Supplier's name: | METRO THERM A/S | | |
| Model: | Metroair I 16 + Metroair 330 | | |
| Temperature application | 35 | 55 | °C |
| Declared load profile for water heating | XL | | |
| Seasonal space heating energy efficiency class, average climate: | A+++ | A+++ | |
| Water heating energy efficiency class, average climate: | A | | |
| Rated heat output, average climate: | 11 | 12,3 | kW |
| Annual energy consumption for space heating, average climate | 4502 | 6524 | kWh |
| Annual electricity consumption for water heating, average climate | 1616 | | kWh |
| Seasonal space heating energy efficiency, average climate: | 199 | 153 | % |
| Water heating energy efficiency, average climate: | 104 | | % |
| Sound power level LWA indoors | 35 | | dB |
| Rated heat output, cold climate: | 13,0 | 14,0 | kW |
| Rated heat output, warm climate: | 13,0 | 13,0 | kW |
| Annual energy consumption for space heating, cold climate | 7543 | 9765 | kWh |
| Annual electricity consumption for water heating, cold climate | 1758 | | kWh |
| Annual energy consumption for space heating, warm climate | 3153 | 3867 | kWh |
| Annual electricity consumption for water heating, warm climate | 1448 | | kWh |
| Seasonal space heating energy efficiency, cold climate: | 167 | 138 | % |
| Water heating energy efficiency, cold climate: | 95 | | % |
| Seasonal space heating energy efficiency, warm climate: | 217 | 177 | % |
| Water heating energy efficiency, warm climate: | 116 | | % |
| Sound power level LWA outdoors | 55 | | dB |

Data for package fiche


| | | | |
|--|-------------|-------------|---|
| Controller class | VI | | |
| Controller contribution to efficiency | 4,0 | | % |
| Seasonal space heating energy efficiency of package, average climate: | 203 | 157 | % |
| Seasonal space heating energy efficiency class for package, average climate: | A+++ | A+++ | % |
| Seasonal space heating energy efficiency of package, cold climate: | 171 | 142 | % |
| Seasonal space heating energy efficiency of package, warm climate: | 221 | 181 | % |

| | | | | | | | | | | | |
|--|-------------------|--|------|---|---|-------------------|-------------------------------|-------------------|-------------------|-----|----|
| Model(s): | | Metroair I 16 + Metroair 330 | |  | | | | | | | |
| Type of heat source/sink: | | Air-to-water | | | | | | | | | |
| Low-temperature heat pump: | | No | | | | | | | | | |
| Equipped with supplementary heater: | | Yes | | | | | | | | | |
| Heat pump combination heater: | | Yes | | | | | | | | | |
| Climate condition: | | Average | | | | | | | | | |
| Temperature application: | | Medium temperature (55 °C) | | | | | | | | | |
| Applied standards: EN14825 and EN16147 | | | | | | | | | | | |
| Rated heat output | | Prated | 12,3 | kW | Seasonal space heating energy efficiency | | η_s | 153 | % | | |
| <i>Declared capacity for part load at outdoor temperature Tj</i> | | | | <i>Declared coefficient of performance for part load at outdoor temperature Tj</i> | | | | | | | |
| Tj = -7 °C | Pdh | 10,9 | kW | Tj = -7 °C | COPd | 2,48 | - | | | | |
| Tj = +2 °C | Pdh | 6,7 | kW | Tj = +2 °C | COPd | 3,96 | - | | | | |
| Tj = +7 °C | Pdh | 5,9 | kW | Tj = +7 °C | COPd | 4,67 | - | | | | |
| Tj = +12 °C | Pdh | 6,0 | kW | Tj = +12 °C | COPd | 5,67 | - | | | | |
| Tj = biv | Pdh | 10,9 | kW | Tj = biv | COPd | 2,48 | - | | | | |
| Tj = TOL | Pdh | 11,6 | kW | Tj = TOL | COPd | 2,40 | - | | | | |
| Tj = -15 °C (if TOL < -20 °C) | Pdh | | kW | Tj = -15 °C (if TOL < -20 °C) | COPd | | - | | | | |
| Bivalent temperature | | | | T _{biv} | -7 | °C | Operation limit temperature | | TOL | -10 | °C |
| Cycling interval capacity for heating | | | | P _{ych} | | kW | Cycling interval efficiency | | COP _{yc} | | - |
| Degradation co-efficient | | | | Cdh | 0,99 | - | Heating water operating limit | | WTOL | 65 | °C |
| <i>Power consumption in modes other than active mode</i> | | | | <i>Supplementary heater</i> | | | | | | | |
| Off mode | P _{OFF} | 0,025 | kW | Rated heat output | | P _{sup} | 0,7 | kW | | | |
| Thermostat-off mode | P _{TO} | 0,007 | kW | Type of energy input | | Electric | | | | | |
| Standby mode | P _{SB} | 0,025 | kW | | | | | | | | |
| Crankcase heater mode | P _{CK} | 0,037 | kW | | | | | | | | |
| <i>Other items</i> | | | | | | | | | | | |
| Capacity control | variable | | | Rated air flow rate, outdoors | | | 4150 | m ³ /h | | | |
| Sound power level, indoors/outdoors | L _{WA} | 35/55 | dB | Rated water flow rate, indoor heat exchanger | | | variable | m ³ /h | | | |
| Annual energy consumption | Q _{HE} | 6524 | kWh | Rated brine or water flow rate, outdoor heat exchanger | | | | m ³ /h | | | |
| <i>For heat pump combination heater:</i> | | | | | | | | | | | |
| Declared load profile | | XL | | Water heating energy efficiency | | η_{wh} | 104 | % | | | |
| Daily electricity consumption | Q _{elec} | 7,36 | kWh | Daily fuel consumption | | Q _{fuel} | | kWh | | | |
| Annual electricity consumption | AEC | 1616 | kWh | Annual fuel consumption | | AFC | | GJ | | | |
| Approved by: | | | | | | | | | | | |
| Contact details | | METRO THERM A/S Rundinsvej 55 DK-3220 Helsingør www.metrotherm.dk | | | | | | | | | |

| | | | |
|---|-------------------------------------|-------------|-----|
| Supplier's name: | METRO THERM A/S | | |
| Model: | Metroair I 20 + Metroair 330 | | |
| Temperature application | 35 | 55 | °C |
| Declared load profile for water heating | XL | | |
| Seasonal space heating energy efficiency class, average climate: | A+++ | A+++ | |
| Water heating energy efficiency class, average climate: | A | | |
| Rated heat output, average climate: | 11 | 12,3 | kW |
| Annual energy consumption for space heating, average climate | 4502 | 6524 | kWh |
| Annual electricity consumption for water heating, average climate | 1616 | | kWh |
| Seasonal space heating energy efficiency, average climate: | 199 | 153 | % |
| Water heating energy efficiency, average climate: | 104 | | % |
| Sound power level LWA indoors | 35 | | dB |
| Rated heat output, cold climate: | 13,0 | 14,0 | kW |
| Rated heat output, warm climate: | 13,0 | 13,0 | kW |
| Annual energy consumption for space heating, cold climate | 7543 | 9765 | kWh |
| Annual electricity consumption for water heating, cold climate | 1758 | | kWh |
| Annual energy consumption for space heating, warm climate | 3153 | 3867 | kWh |
| Annual electricity consumption for water heating, warm climate | 1448 | | kWh |
| Seasonal space heating energy efficiency, cold climate: | 167 | 138 | % |
| Water heating energy efficiency, cold climate: | 95 | | % |
| Seasonal space heating energy efficiency, warm climate: | 217 | 177 | % |
| Water heating energy efficiency, warm climate: | 116 | | % |
| Sound power level LWA outdoors | 55 | | dB |

Data for package fiche

| | | | |
|--|-------------|-------------|---|
| Controller class | VI | | |
| Controller contribution to efficiency | 4,0 | | % |
| Seasonal space heating energy efficiency of package, average climate: | 203 | 157 | % |
| Seasonal space heating energy efficiency class for package, average climate: | A+++ | A+++ | % |
| Seasonal space heating energy efficiency of package, cold climate: | 171 | 142 | % |
| Seasonal space heating energy efficiency of package, warm climate: | 221 | 181 | % |

| | | | | | | | | | | | |
|--|------------------|-------------------------------------|------|---|---|--|--|-------------|--------------------|-------------------|-------------------|
| Model(s): | | Metroair I 20 + Metroair 330 | |  | | | | | | | |
| Type of heat source/sink: | | Air-to-water | | | | | | | | | |
| Low-temperature heat pump: | | No | | | | | | | | | |
| Equipped with supplementary heater: | | Yes | | | | | | | | | |
| Heat pump combination heater: | | Yes | | | | | | | | | |
| Climate condition: | | Average | | | | | | | | | |
| Temperature application: | | Medium temperature (55 °C) | | | | | | | | | |
| Applied standards: EN14825 and EN16147 | | | | | | | | | | | |
| Rated heat output | | Prated | 12,3 | kW | Seasonal space heating energy efficiency | | η_s | 153 | % | | |
| <i>Declared capacity for part load at outdoor temperature Tj</i> | | | | <i>Declared coefficient of performance for part load at outdoor temperature Tj</i> | | | | | | | |
| Tj = -7 °C | Pdh | 10,9 | kW | Tj = -7 °C | COPd | 2,48 | - | | | | |
| Tj = +2 °C | Pdh | 6,7 | kW | Tj = +2 °C | COPd | 3,96 | - | | | | |
| Tj = +7 °C | Pdh | 5,9 | kW | Tj = +7 °C | COPd | 4,67 | - | | | | |
| Tj = +12 °C | Pdh | 6,0 | kW | Tj = +12 °C | COPd | 5,67 | - | | | | |
| Tj = biv | Pdh | 10,9 | kW | Tj = biv | COPd | 2,48 | - | | | | |
| Tj = TOL | Pdh | 11,6 | kW | Tj = TOL | COPd | 2,40 | - | | | | |
| Tj = -15 °C (if TOL < -20 °C) | Pdh | | kW | Tj = -15 °C (if TOL < -20 °C) | COPd | | - | | | | |
| Bivalent temperature | | | | T _{biv} | -7 | °C | Operation limit temperature | | TOL | -10 | °C |
| Cycling interval capacity for heating | | | | P _{cyh} | | kW | Cycling interval efficiency | | COP _{cyh} | | - |
| Degradation co-efficient | | | | Cdh | 0,99 | - | Heating water operating limit | | WTOL | 65 | °C |
| <i>Power consumption in modes other than active mode</i> | | | | <i>Supplementary heater</i> | | | | | | | |
| Off mode | P _{OFF} | 0,025 | kW | Rated heat output | | P _{sup} | 0,7 | kW | | | |
| Thermostat-off mode | P _{TO} | 0,007 | kW | Type of energy input | | Electric | | | | | |
| Standby mode | P _{SB} | 0,025 | kW | | | | | | | | |
| Crankcase heater mode | P _{CK} | 0,037 | kW | | | | | | | | |
| <i>Other items</i> | | | | | | | | | | | |
| Capacity control | | | | variable | | Rated air flow rate, outdoors | | | 4150 | m ³ /h | |
| Sound power level, indoors/outdoors | | | | L _{WA} | 35/55 | dB | Rated water flow rate, indoor heat exchanger | | | variable | m ³ /h |
| Annual energy consumption | | | | Q _{HE} | 6524 | kWh | Rated brine or water flow rate, outdoor heat exchanger | | | | m ³ /h |
| <i>For heat pump combination heater:</i> | | | | | | | | | | | |
| Declared load profile | | | | XL | | Water heating energy efficiency | | η_{wh} | 104 | % | |
| Daily electricity consumption | | | | Q _{elec} | 7,36 | kWh | Daily fuel consumption | | Q _{fuel} | | kWh |
| Annual electricity consumption | | | | AEC | 1616 | kWh | Annual fuel consumption | | AFC | | GJ |
| Approved by: | | | | | | | | | | | |
| Contact details | | | | METRO THERM A/S Rundinsvej 55 DK-3220 Helsingør www.metrotherm.dk | | | | | | | |