

technical data



Altherma

ERYQ005-007A

EKHBH007A / EKHBX007A

EKSWW150-300

R-410A

9

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Altherma

ERYQ005-007A

EKHBH007A / EKHBX007A

EKSWW150-300

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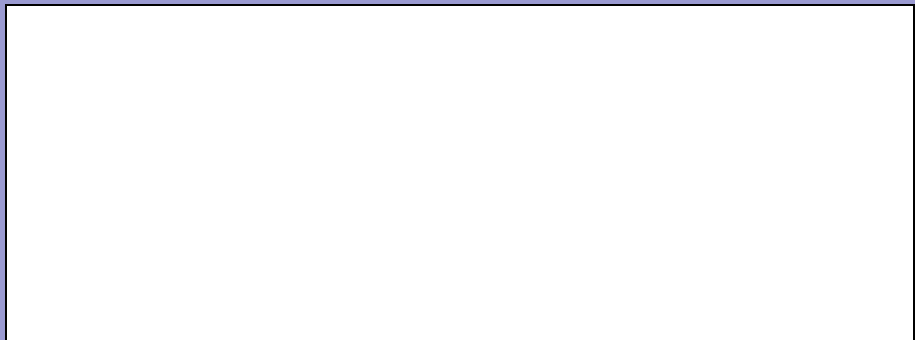
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technical data



Altherma

ERYQ005-007A

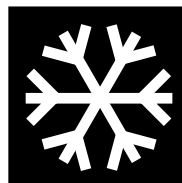
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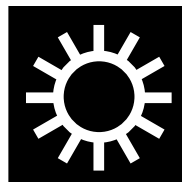
R-410A

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Cooling only



Heating only



Heat pump



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ERYQ

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1 Features

- Cost effective alternative to a fossil fuel boiler
- Low energy bills and low CO2 emissions
- Easy to install
- Total solution for year round comfort



2 Specifications

| 2-1 NOMINAL CAPACITY AND NOMINAL INPUT | | | | EKHBH* | | | EKHBX* | | |
|--|------------------|---------|----|--|------------|------------|------------|------------|------------|
| | | | | ERYQ005A | ERYQ006A | ERYQ007A | ERYQ005A | ERYQ006A | ERYQ007A |
| Indoor Units | | | | EKHBH007A* | EKHBH007A* | EKHBH007A* | EKHBX007A* | EKHBX007A* | EKHBX007A* |
| Condition 1 | Heating capacity | Minimum | kW | 4.36 | 4.36 | 4.36 | 4.36 | 4.36 | 4.36 |
| | | Nominal | kW | 5.75 | 6.84 | 8.43 | 5.75 | 6.84 | 8.43 |
| | | Maximum | kW | 7.45 | 8.79 | 9.58 | 7.45 | 8.79 | 9.58 |
| | Cooling capacity | Minimum | kW | - | - | - | 3.67 | 3.67 | 3.67 |
| | | Nominal | kW | - | - | - | 5.12 | 5.86 | 6.08 |
| | | Maximum | kW | - | - | - | 5.12 | 6.13 | 7.10 |
| | Heating PI | Nominal | kW | 1.26 | 1.58 | 2.08 | 1.26 | 1.58 | 2.08 |
| | Cooling PI | Nominal | kW | - | - | - | 2.16 | 2.59 | 2.75 |
| | COP | Nominal | - | 4.56 | 4.34 | 4.05 | 4.56 | 4.34 | 4.05 |
| | EER | Nominal | - | - | - | - | 2.37 | 2.26 | 2.21 |
| Condition 2 | Heating | Minimum | kW | 3.87 | 3.87 | 3.87 | 3.87 | 3.87 | 3.87 |
| | | Nominal | kW | 5.03 | 6.10 | 7.64 | 5.03 | 6.10 | 7.64 |
| | | Maximum | kW | 6.68 | 7.98 | 8.76 | 6.68 | 7.98 | 8.76 |
| | Cooling | Minimum | kW | - | - | - | 4.82 | 4.82 | 4.82 |
| | | Nominal | kW | - | - | - | 7.20 | 8.16 | 8.37 |
| | | Maximum | kW | - | - | - | 7.20 | 8.50 | 8.91 |
| | Heating PI | Nominal | kW | 1.58 | 1.95 | 2.54 | 1.58 | 1.95 | 2.54 |
| | Cooling PI | Nominal | kW | - | - | - | 2.16 | 2.59 | 2.75 |
| | COP | Nominal | - | 3.18 | 3.13 | 3.00 | 3.18 | 3.13 | 3.00 |
| | EER | Nominal | - | - | - | - | 3.33 | 3.15 | 3.04 |
| Notes | | | | *Condition 1 - cooling Ta 35°C - LWE 7°C - heating Ta DB/WB 7°C/6°C - LWC 35°C (DT = 5°C) *Condition 2 - cooling Ta 35°C - LWE 18°C (DT = 5°C) - heating Ta DB/WB 7°C/6°C - LWC 45°C (DT = 5°C) | | | | | |

| 2-2 TECHNICAL SPECIFICATIONS | | | | ERYQ005A (+ EKHBH) | ERYQ006A (+ EKHBH) | ERYQ007A (+ EKHBH) | ERYQ005A (+ EKHBX) | ERYQ006A (+ EKHBX) | ERYQ007A (+ EKHBX) |
|------------------------------|-------------|-------------------------------|----|--------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Casing | Colour | | | Ivory white | | | | | |
| | Material | | | Polyester painted galvanised steel | | | | | |
| Dimensions | Unit | Height | mm | 797 | | | | | |
| | | Width | mm | 960 | | | | | |
| | | Depth | mm | 390 | | | | | |
| | Packing | Height | mm | 735 | | | | | |
| | | Width | mm | 825 | | | | | |
| | | Depth | mm | 300 | | | | | |
| Weight | Unit | | kg | 56 | | | | | |
| | Packed Unit | | kg | 61 | | | | | |
| Packing | Material | | | EPS | | | | | |
| | | | | Carton | | | | | |
| | Weight | | kg | 5 | | | | | |
| Heat Exchanger | Dimensions | Length | mm | 845 | | | | | |
| | | Nr of Rows | | 2 | | | | | |
| | | Fin Pitch | mm | 1.8 | | | | | |
| | | Nr of Stages | | 32 | | | | | |
| | Tube type | | | Hi-Xa(8) | | | | | |
| | Fin | Type | | WF fin | | | | | |
| Treatment | | Anti-corrosion treatment (PE) | | | | | | | |
| Fan | Type | | | Propeller | | | | | |
| | Quantity | | | 1 | | | | | |
| | Motor | Quantity | | 1 | | | | | |
| | | Output | W | 53 | | | | | |
| Compressor | Quantity | | | 1 | | | | | |
| | Motor | Model | | 2YC63BXD#C | | | | | |
| | | Type | | Hermetically sealed swing compressor | | | | | |
| | Motor | Output | W | 1920 | | | | | |

2 Specifications

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| 2-2 TECHNICAL SPECIFICATIONS | | | | ERYQ005A (+ EKHBH) | ERYQ006A (+ EKHBH) | ERYQ007A (+ EKHBH) | ERYQ005A (+ EKHBX) | ERYQ006A (+ EKHBX) | ERYQ007A (+ EKHBX) | |
|----------------------------------|-------------------------------|----------------|---|----------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----|
| Operation Range | Heating | Min | °CWB | -20 | | | | | | |
| | | Max | °CWB | 25 | | | | | | |
| | Cooling | Min | °CDB | | | | | 7 | | |
| | | Max | °CDB | | | | | 20 | | |
| | Sanitary water | Min | °CDB | -20 | | | | | | |
| | | Max | °CDB | 43 | | | | | | |
| Sound Level (nominal) | Heating | Sound Power | dBA | 64 | 64 | 66 | 64 | 64 | 66 | |
| | | Sound Pressure | dBA | 48 | 48 | 52 | 48 | 48 | 52 | |
| | Cooling | Sound Power | dBA | | | | | 63 | 64 | 66 |
| | | Sound Pressure | dBA | | | | | 47 | 47 | 53 |
| Refrigerant | Type | | | R-410A | | | | | | |
| | Charge | kg | | 1.7 | | | | | | |
| | Control | | | Expansion valve(electronic type) | | | | | | |
| | Nr of Circuits | | | 1 | | | | | | |
| Refrigerant Oil | Type | | | FVC50K | | | | | | |
| | Charged Volume | l | | 0.75 | | | | | | |
| Piping connections | Liquid (OD) | Type | | Flare connection | | | | | | |
| | | Diameter (OD) | mm | 6,35 | | | | | | |
| | Gas | Type | | Flare connection | | | | | | |
| | | Diameter (OD) | mm | 15,9 | | | | | | |
| | Drain | Quantity | | 1 | | | | | | |
| | | Type | | Socket | | | | | | |
| | | Diameter (OD) | mm | 18 | | | | | | |
| | Piping Length | Minimum | m | 3 | | | | | | |
| | | Maximum | m | 30 | | | | | | |
| | Additional Refrigerant Charge | | kg/m | 0.02 IF > 10m | | | | | | |
| Installation height difference | Maximum | m | 15 | | | | | | | |
| Max. internunit level difference | | m | 20 | | | | | | | |
| Defrost Method | | | Reverse cycle | | | | | | | |
| Defrost Control | | | Sensor for outdoor heat exchanger temperature | | | | | | | |
| Capacity Control Method | | | Inverter controlled | | | | | | | |
| Standard Accessories | Item | | Installation manual | | | | | | | |
| | Quantity | | 1 | | | | | | | |
| | Item | | Drain plug | | | | | | | |
| | Quantity | | 1 | | | | | | | |

2 Specifications

| 2-3 ELECTRICAL SPECIFICATIONS | | | ERYQ005A (+ EKHBH) | ERYQ006A (+ EKHBH) | ERYQ007A (+ EKHBH) | ERYQ005A (+ EKHBX) | ERYQ006A (+ EKHBX) | ERYQ007A (+ EKHBX) | |
|-------------------------------|----------------------------|----------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--|
| Power Supply | Name | | V1 | | | | | | |
| | Phase | | 1 | | | | | | |
| | Frequency | Hz | 50 | | | | | | |
| | Voltage | | V | | | | | | |
| | Voltage range | Maximum | V | | | | | | |
| Current | Maximum running Current | Cooling | A | | | | 11 | | |
| | | Heating | A | | | | 11 | | |
| | | Cooling | A | | | | 16.25 | | |
| | | Heating | A | | | | 18 | | |
| | Recommended fuses | | A | | 20 | | | | |
| Wiring connections | For Power Supply | Quantity | | 3 | | | | | |
| | For connection with indoor | Quantity | | 4 | | | | | |
| | | Remark | | Included earth wiring | | | | | |

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2

3 Capacity tables

3 - 1 Cooling/Heating capacity tables

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3

COOLING

| Model | Tamb (°C) | 20 | | 25 | | 30 | | 35 | | 40 | | 43 | |
|-------|-----------|------|------|-------|------|-------|------|------|------|------|------|------|------|
| | LWE (°C) | CC | PI | CC | PI | CC | PI | CC | PI | CC | PI | CC | PI |
| 005 | 7 | 6.01 | 1.56 | 5.73 | 1.75 | 5.43 | 1.95 | 5.12 | 2.16 | 4.80 | 2.39 | 4.59 | 2.53 |
| | 11 | 6.81 | 1.57 | 6.50 | 1.77 | 6.17 | 1.98 | 5.83 | 2.21 | 5.30 | 2.32 | 4.98 | 2.38 |
| | 13 | 7.23 | 1.57 | 6.90 | 1.78 | 6.56 | 2.00 | 6.20 | 2.23 | 5.56 | 2.28 | 5.18 | 2.30 |
| | 16 | 7.88 | 1.56 | 7.54 | 1.78 | 7.17 | 2.01 | 6.79 | 2.26 | 5.95 | 2.22 | 5.46 | 2.18 |
| | 20 | 8.80 | 1.55 | 8.42 | 1.79 | 8.03 | 2.03 | 7.63 | 2.29 | 6.48 | 2.13 | 5.82 | 1.99 |
| 006 | 7 | 7.15 | 2.05 | 6.84 | 2.28 | 6.50 | 2.52 | 6.13 | 2.77 | 5.35 | 2.68 | 4.89 | 2.59 |
| | 11 | 8.09 | 2.09 | 7.73 | 2.34 | 7.34 | 2.59 | 6.94 | 2.87 | 5.84 | 2.62 | 5.21 | 2.43 |
| | 13 | 8.57 | 2.11 | 8.20 | 2.36 | 7.79 | 2.63 | 7.36 | 2.91 | 6.09 | 2.59 | 5.36 | 2.34 |
| | 16 | 9.33 | 2.13 | 8.92 | 2.40 | 8.49 | 2.68 | 8.03 | 2.97 | 6.46 | 2.53 | 5.57 | 2.20 |
| | 20 | 10.4 | 2.16 | 9.9 | 2.44 | 9.48 | 2.73 | 8.99 | 3.04 | 6.96 | 2.44 | 5.82 | 1.99 |
| 007 | 7 | 8.24 | 2.43 | 7.90 | 2.68 | 7.52 | 2.94 | 7.10 | 3.23 | 5.68 | 2.86 | 4.87 | 2.59 |
| | 11 | 9.26 | 2.49 | 8.87 | 2.76 | 8.45 | 3.05 | 7.79 | 3.31 | 6.12 | 2.80 | 5.18 | 2.43 |
| | 13 | 9.79 | 2.52 | 9.38 | 2.80 | 8.93 | 3.10 | 8.14 | 3.36 | 6.34 | 2.77 | 5.33 | 2.35 |
| | 16 | 10.6 | 2.57 | 10.17 | 2.86 | 9.69 | 3.17 | 8.68 | 3.41 | 6.67 | 2.71 | 5.55 | 2.20 |
| | 20 | 11.7 | 2.63 | 11.3 | 2.94 | 10.75 | 3.26 | 9.39 | 3.48 | 7.09 | 2.61 | 5.80 | 1.99 |

HEATING (Peak values)

| Model | LWC | 30 | | 35 | | 40 | | 45 | | 50 | |
|-------|-----|------|------|------|------|------|------|------|------|------|------|
| | | HC | PI | HC | PI | HC | PI | HC | PI | HC | PI |
| 005 | -15 | 3.93 | 1.48 | 3.67 | 1.59 | 3.47 | 1.71 | 3.33 | 1.84 | 3.25 | 1.99 |
| | -10 | 4.65 | 1.52 | 4.32 | 1.65 | 4.07 | 1.79 | 3.89 | 1.94 | 3.78 | 2.10 |
| | -7 | 5.14 | 1.54 | 4.77 | 1.68 | 4.49 | 1.83 | 4.28 | 1.99 | 4.15 | 2.16 |
| | -2 | 6.06 | 1.57 | 5.62 | 1.72 | 5.28 | 1.88 | 5.03 | 2.06 | 4.87 | 2.25 |
| | 2 | 6.89 | 1.57 | 6.38 | 1.74 | 6.00 | 1.91 | 5.72 | 2.11 | 5.53 | 2.31 |
| | 7 | 8.03 | 1.57 | 7.45 | 1.75 | 7.00 | 1.94 | 6.68 | 2.15 | 6.47 | 2.37 |
| 006 | -15 | 4.87 | 1.82 | 4.62 | 1.94 | 4.43 | 2.08 | 4.30 | 2.23 | 4.24 | 2.40 |
| | -10 | 5.67 | 1.88 | 5.34 | 2.02 | 5.09 | 2.18 | 4.92 | 2.36 | 4.82 | 2.55 |
| | -7 | 6.21 | 1.91 | 5.83 | 2.07 | 5.55 | 2.24 | 5.35 | 2.42 | 5.23 | 2.63 |
| | -2 | 7.23 | 1.95 | 6.77 | 2.13 | 6.42 | 2.32 | 6.17 | 2.52 | 6.02 | 2.75 |
| | 2 | 8.14 | 1.97 | 7.61 | 2.16 | 7.21 | 2.37 | 6.92 | 2.59 | 6.74 | 2.83 |
| | 7 | 9.40 | 1.98 | 8.79 | 2.19 | 8.32 | 2.42 | 7.98 | 2.66 | 7.78 | 2.92 |
| 007 | -15 | 5.42 | 2.06 | 5.16 | 2.19 | 4.97 | 2.34 | 4.86 | 2.51 | 4.80 | 2.70 |
| | -10 | 6.27 | 2.13 | 5.93 | 2.29 | 5.68 | 2.46 | 5.51 | 2.65 | 5.42 | 2.86 |
| | -7 | 6.84 | 2.17 | 6.46 | 2.34 | 6.17 | 2.53 | 5.97 | 2.73 | 5.86 | 2.95 |
| | -2 | 7.92 | 2.22 | 7.45 | 2.41 | 7.10 | 2.62 | 6.85 | 2.85 | 6.70 | 3.10 |
| | 2 | 8.9 | 2.26 | 8.35 | 2.46 | 7.93 | 2.69 | 7.65 | 2.93 | 7.47 | 3.20 |
| | 7 | 10.2 | 2.28 | 9.58 | 2.51 | 9.10 | 2.76 | 8.76 | 3.02 | 8.56 | 3.31 |

HEATING (integrated values*)

| Model | LWC | 30 | | 35 | | 40 | | 45 | | 50 | |
|-------|-----|------|------|------|------|------|------|------|------|------|------|
| | | HC | PI | HC | PI | HC | PI | HC | PI | HC | PI |
| 005 | -15 | 3.50 | 1.40 | 3.27 | 1.51 | 3.09 | 1.62 | 2.97 | 1.75 | 2.89 | 1.89 |
| | -10 | 4.14 | 1.45 | 3.85 | 1.56 | 3.62 | 1.70 | 3.46 | 1.84 | 3.36 | 2.00 |
| | -7 | 4.52 | 1.45 | 4.20 | 1.58 | 3.95 | 1.72 | 3.77 | 1.87 | 3.65 | 2.03 |
| | -2 | 5.27 | 1.46 | 4.89 | 1.60 | 4.59 | 1.75 | 4.38 | 1.92 | 4.24 | 2.10 |
| | 2 | 5.92 | 1.45 | 5.49 | 1.60 | 5.16 | 1.76 | 4.92 | 1.94 | 4.76 | 2.13 |
| | 7 | 8.03 | 1.57 | 7.45 | 1.75 | 7.00 | 1.94 | 6.68 | 2.15 | 6.47 | 2.37 |
| 006 | -15 | 4.34 | 1.73 | 4.11 | 1.85 | 3.94 | 1.98 | 3.83 | 2.12 | 3.77 | 2.28 |
| | -10 | 5.04 | 1.79 | 4.75 | 1.92 | 4.53 | 2.07 | 4.38 | 2.24 | 4.29 | 2.42 |
| | -7 | 5.46 | 1.80 | 5.13 | 1.94 | 4.88 | 2.10 | 4.71 | 2.28 | 4.60 | 2.47 |
| | -2 | 6.29 | 1.81 | 5.89 | 1.98 | 5.59 | 2.15 | 5.37 | 2.35 | 5.23 | 2.56 |
| | 2 | 7.00 | 1.81 | 6.55 | 1.99 | 6.20 | 2.18 | 5.96 | 2.38 | 5.80 | 2.61 |
| | 7 | 9.40 | 1.98 | 8.79 | 2.19 | 8.32 | 2.42 | 7.98 | 2.66 | 7.78 | 2.92 |
| 007 | -15 | 4.82 | 1.96 | 4.59 | 2.08 | 4.43 | 2.23 | 4.32 | 2.39 | 4.27 | 2.56 |
| | -10 | 5.58 | 2.03 | 5.28 | 2.17 | 5.06 | 2.34 | 4.91 | 2.52 | 4.82 | 2.72 |
| | -7 | 6.02 | 2.04 | 5.69 | 2.20 | 5.43 | 2.37 | 5.26 | 2.57 | 5.15 | 2.78 |
| | -2 | 6.89 | 2.07 | 6.48 | 2.25 | 6.17 | 2.44 | 5.96 | 2.65 | 5.83 | 2.88 |
| | 2 | 7.6 | 2.08 | 7.18 | 2.27 | 6.82 | 2.47 | 6.58 | 2.70 | 6.43 | 2.94 |
| | 7 | 10.2 | 2.28 | 9.58 | 2.51 | 9.10 | 2.76 | 8.76 | 3.02 | 8.56 | 3.31 |

* The integrated heating capacity and power input, is the average heating capacity and power input during 1 cycle. (from end of defrost till end of the next defrost).

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SYMBOLS

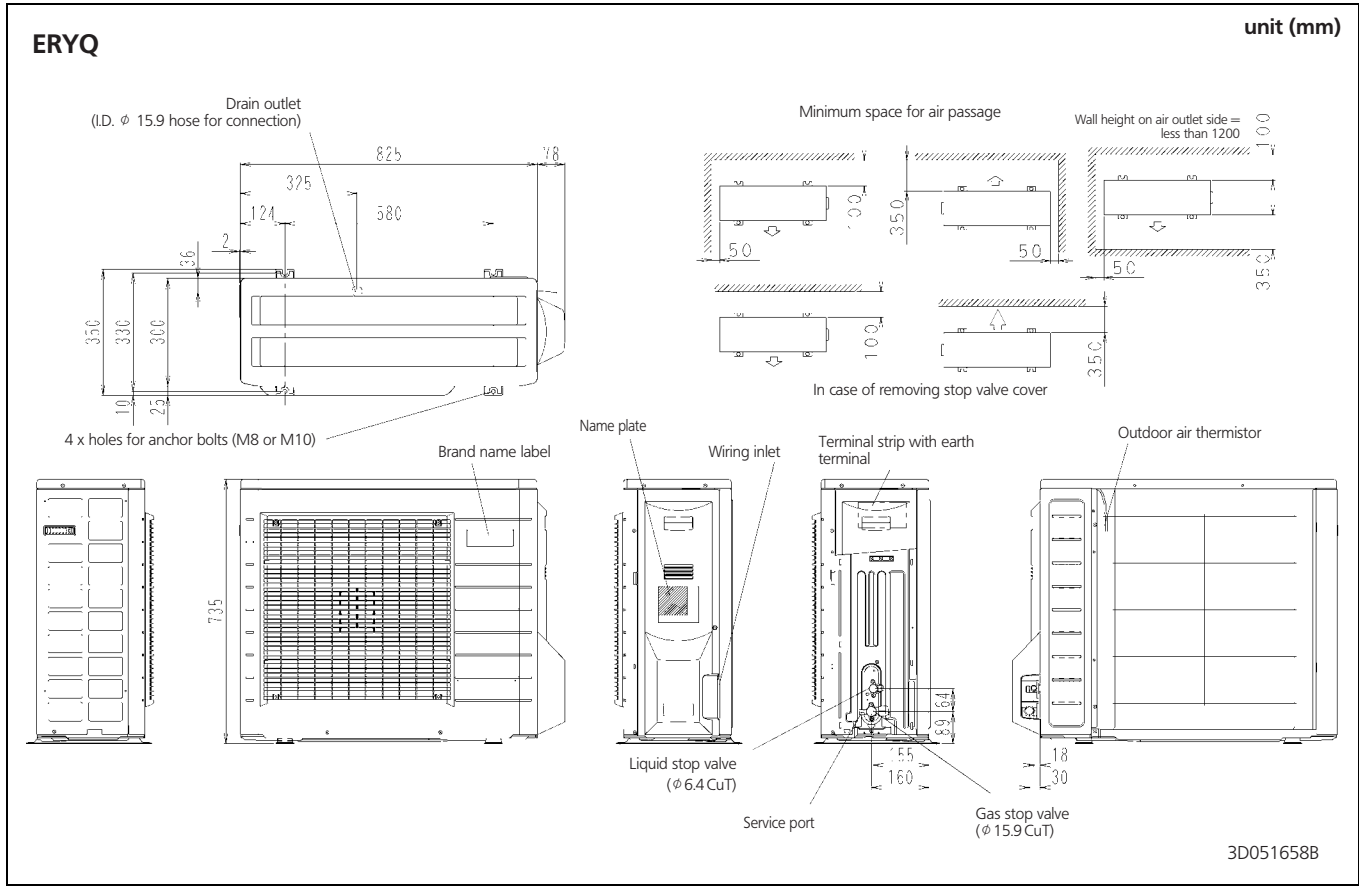
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|------|---|
| CC | : Cooling capacity at maximum operating frequency, measured acc. Eurovent 6/C/003-2006 (kW) |
| HC | : Heating capacity at maximum operating frequency, measured acc. Eurovent 6/C/003-2006 (kW) |
| PI | : Power input (kW) |
| LWE | : Leaving Water Evaporator temperature (°C) |
| LWC | : Leaving Water Condensor temperature (°C) |
| Tamb | : Ambient temperature (°C) RH=85% |

NOTES

- Cooling capacity**
Capacity is according to Eurovent rating standard 6/C/003-2006 and valid for chilled water range Dt = 3–8°C
- Heating capacity**
Capacity is according to Eurovent rating standard 6/C/003-2006 and valid for chilled water range Dt = 3–8°C
- Power input**
Power input is total input according to Eurovent rating standard 6/C/003-2006

4 Dimensional drawing & centre of gravity

4 - 1 Dimensional drawing

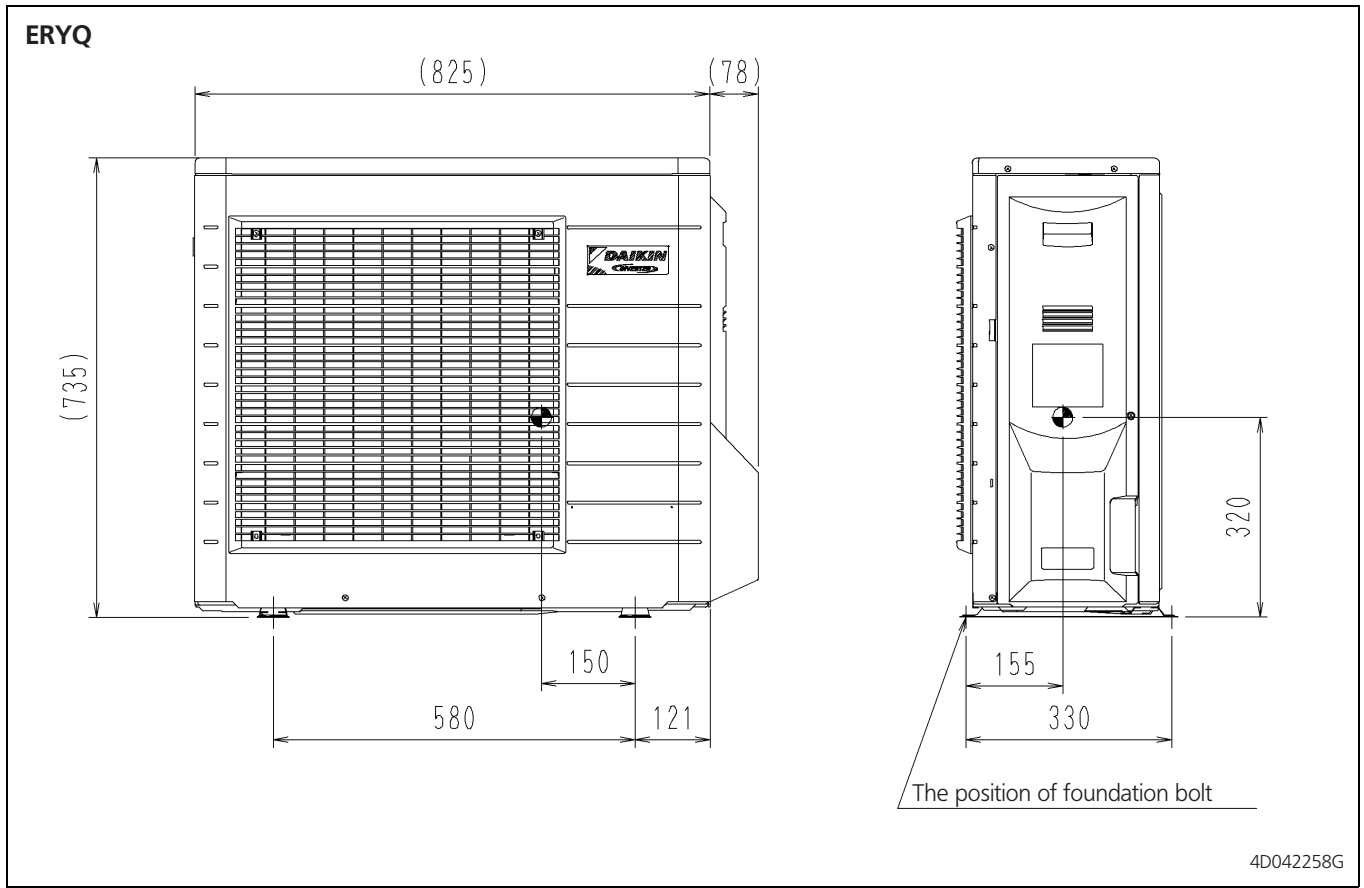


4 Dimensional drawing & centre of gravity

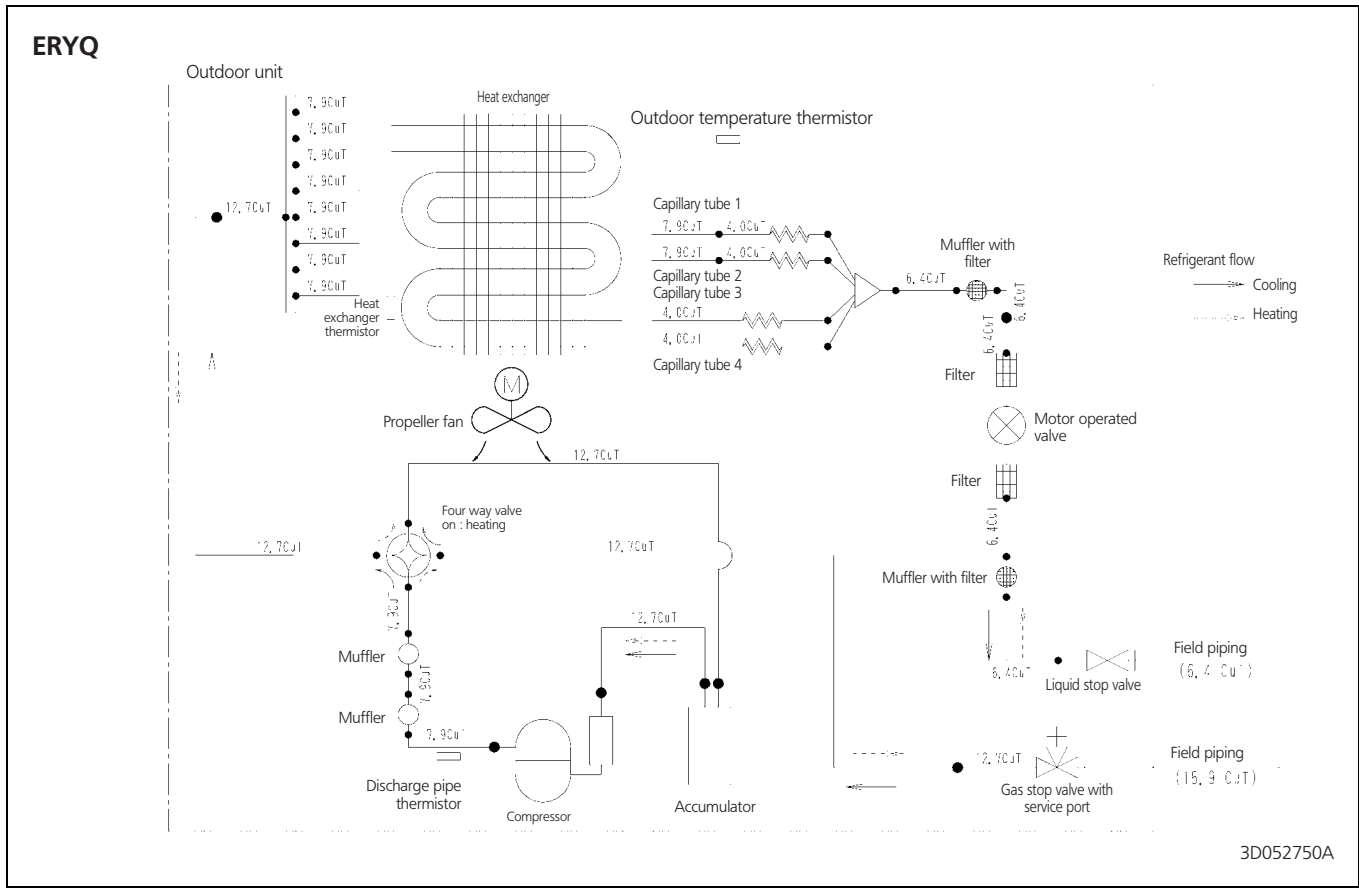
4 - 2 Centre of gravity

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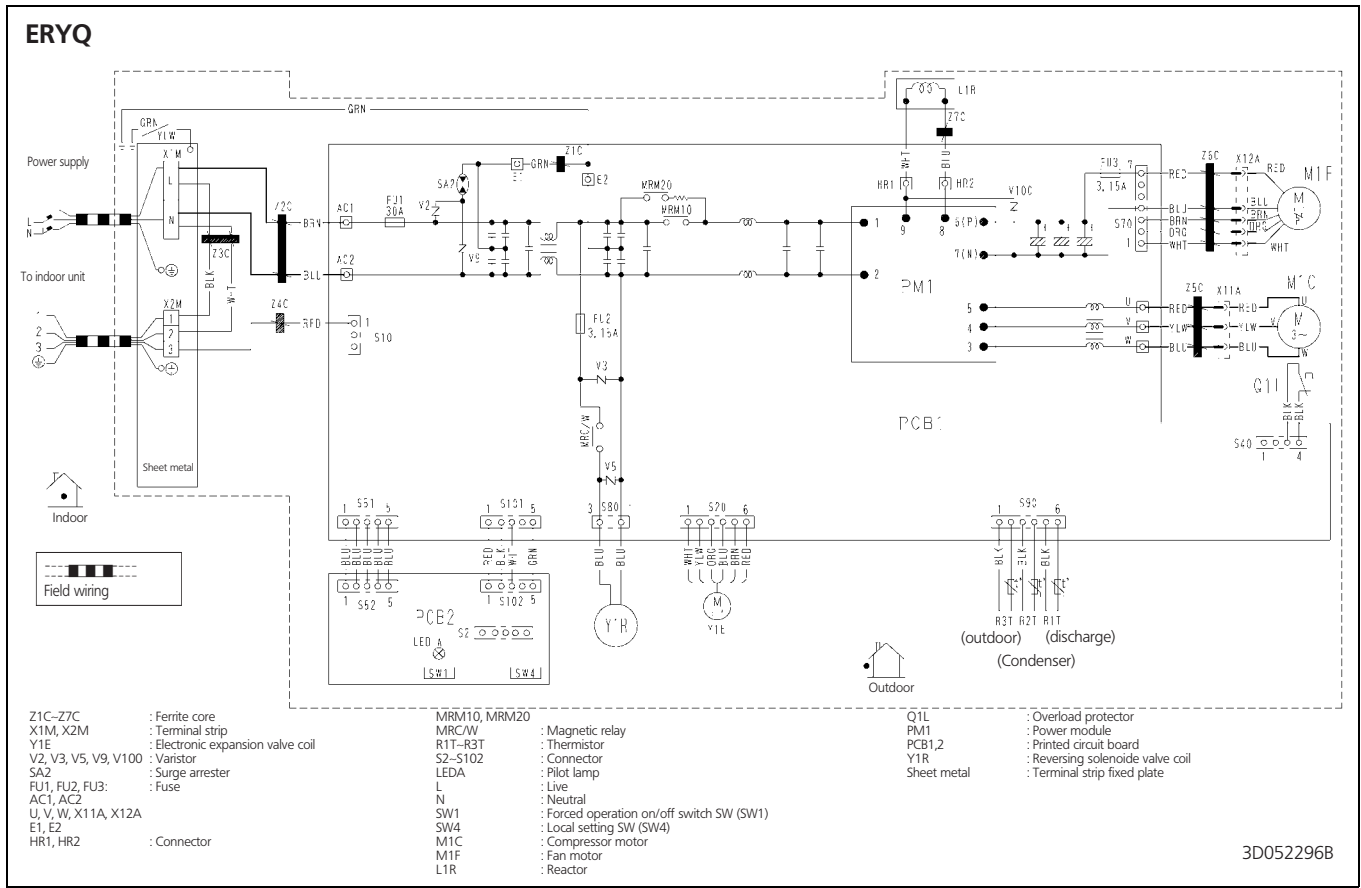
5 Piping diagram



6 Wiring diagram

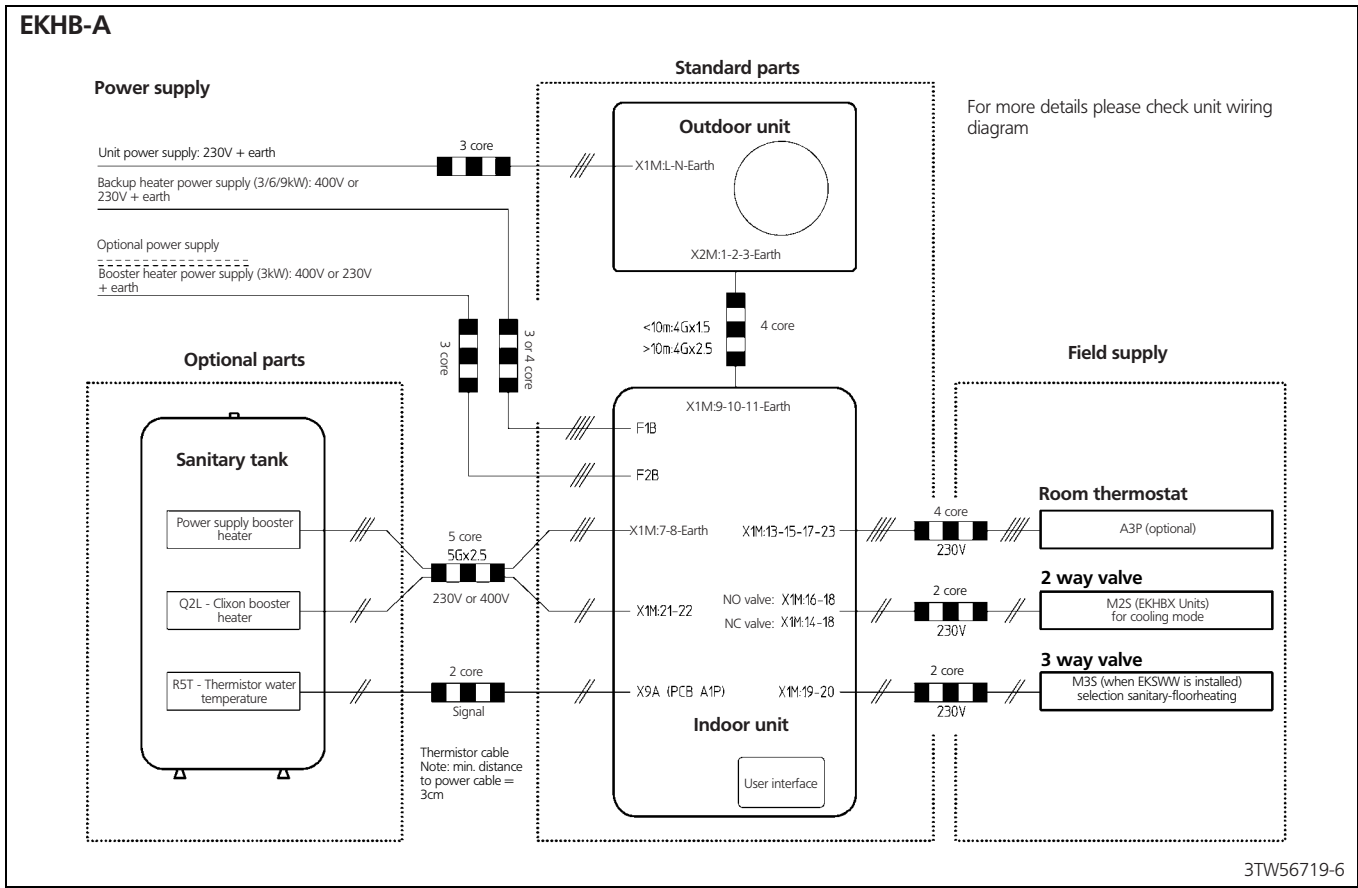
6 - 1 Wiring diagram

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6 Wiring diagram

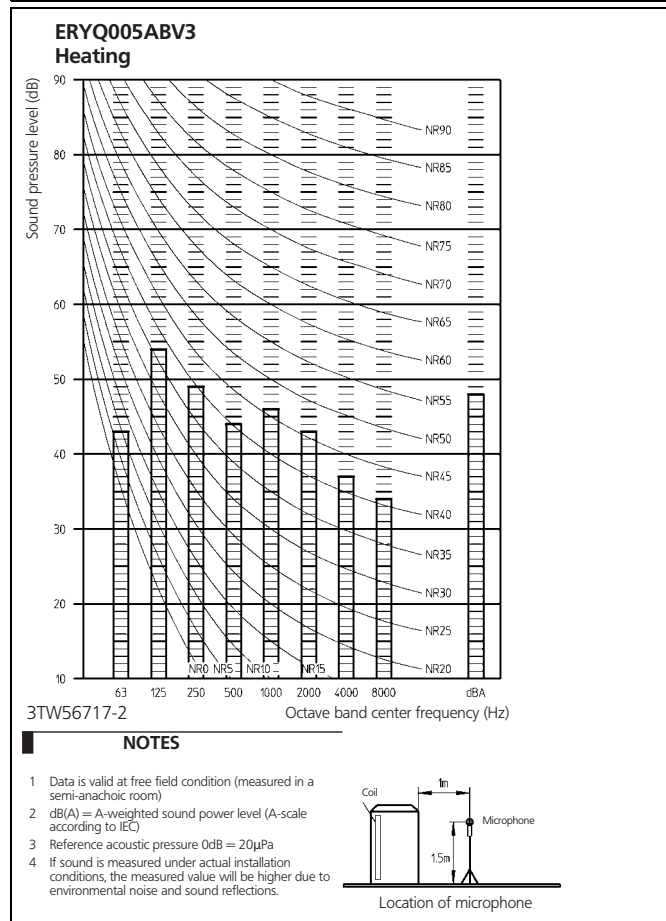
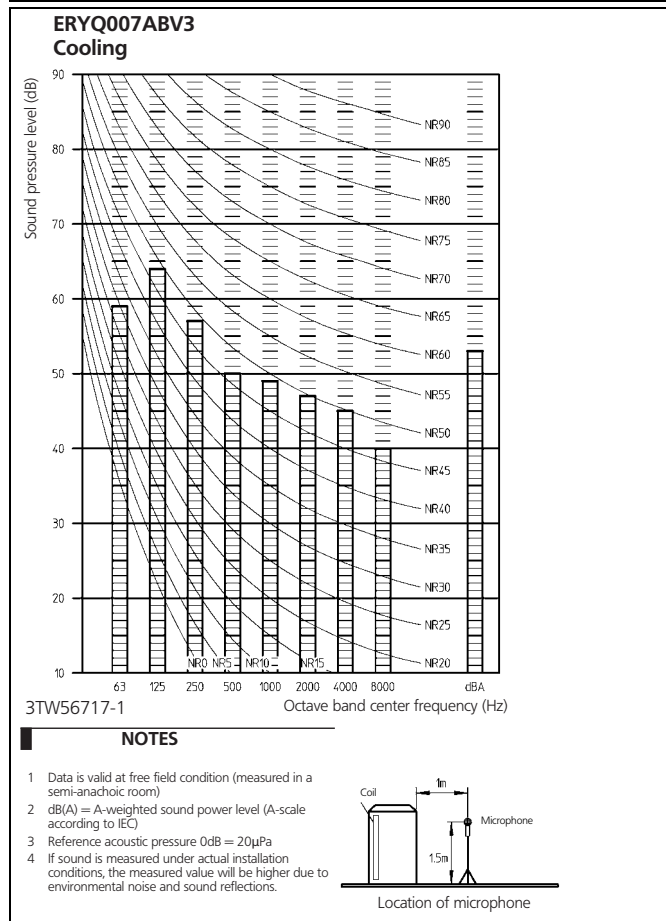
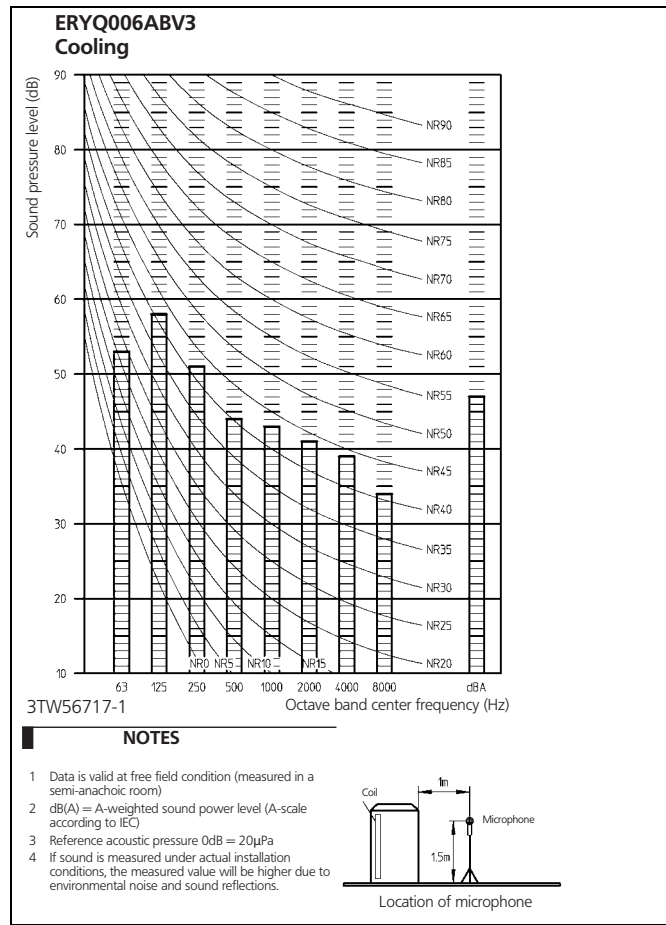
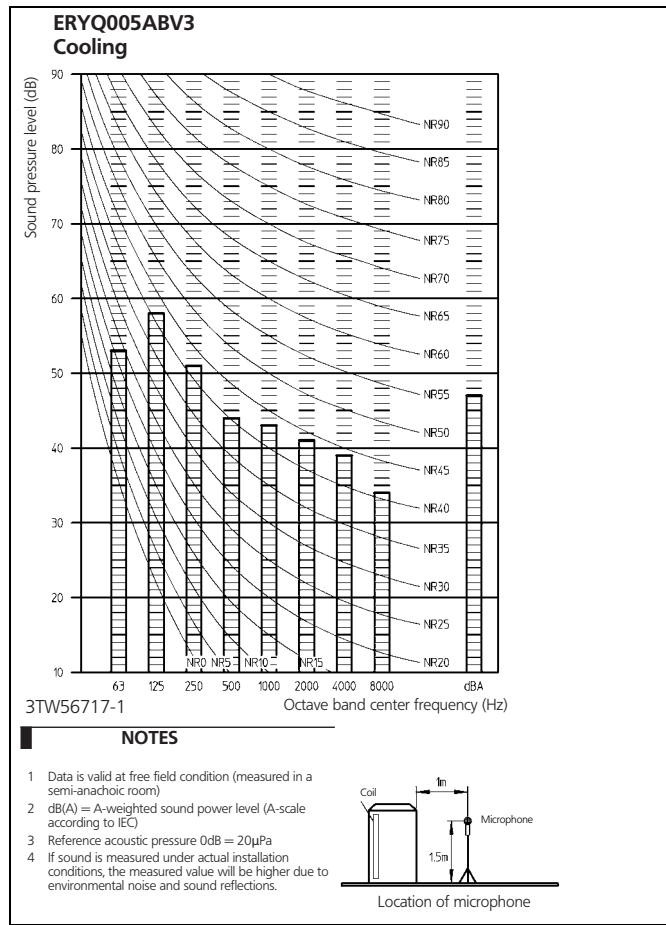
6 - 2 External connection diagram



7 Sound data

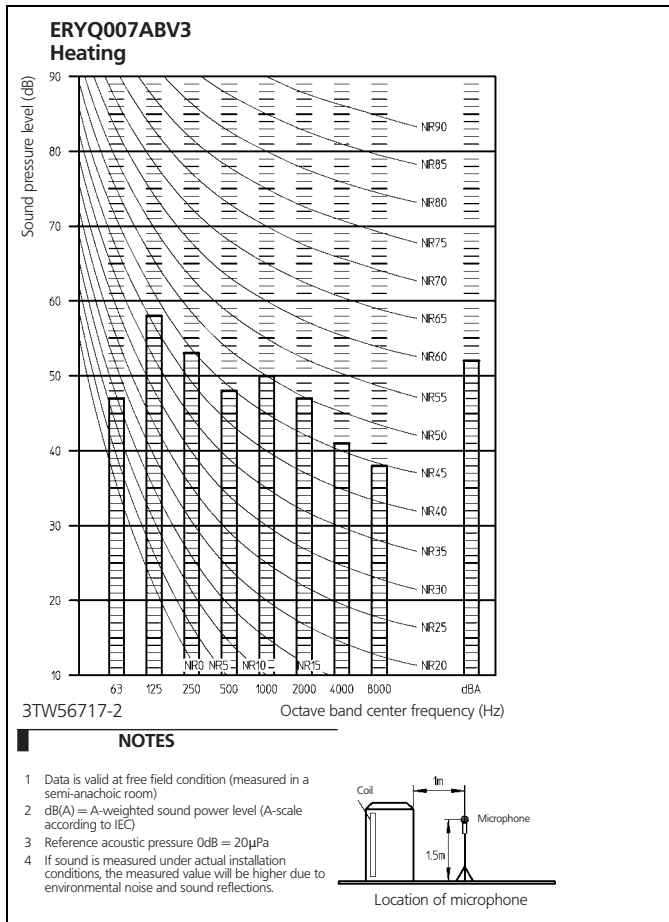
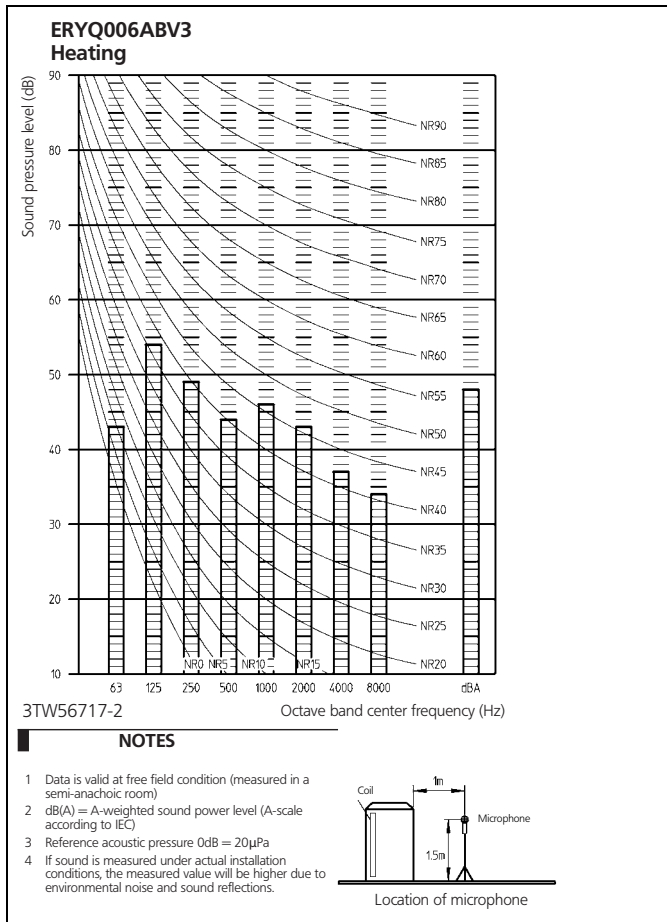
7 - 1 Sound pressure spectrum

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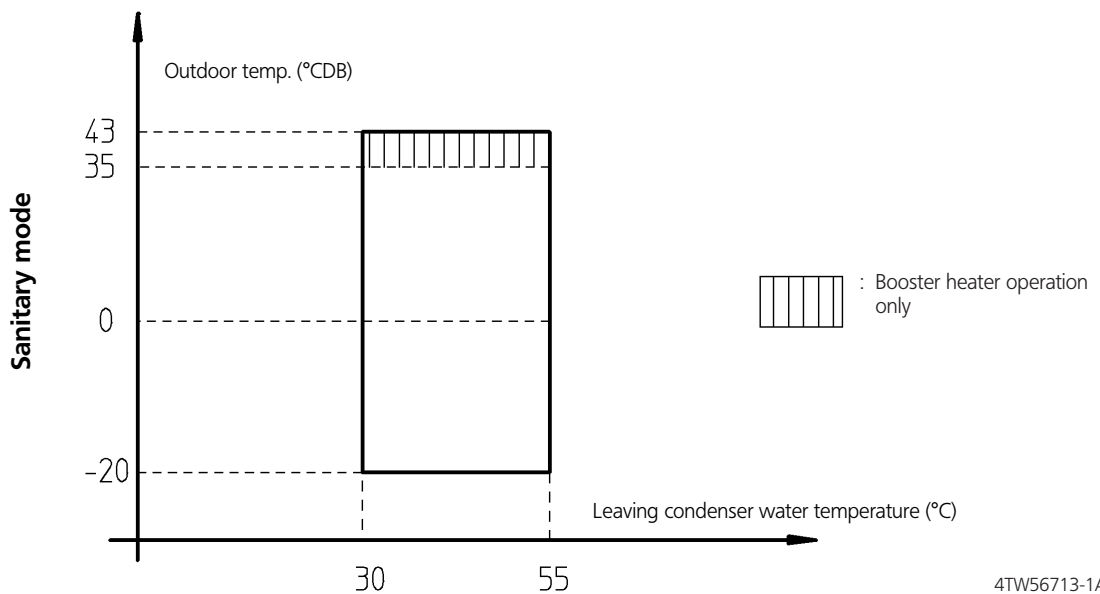
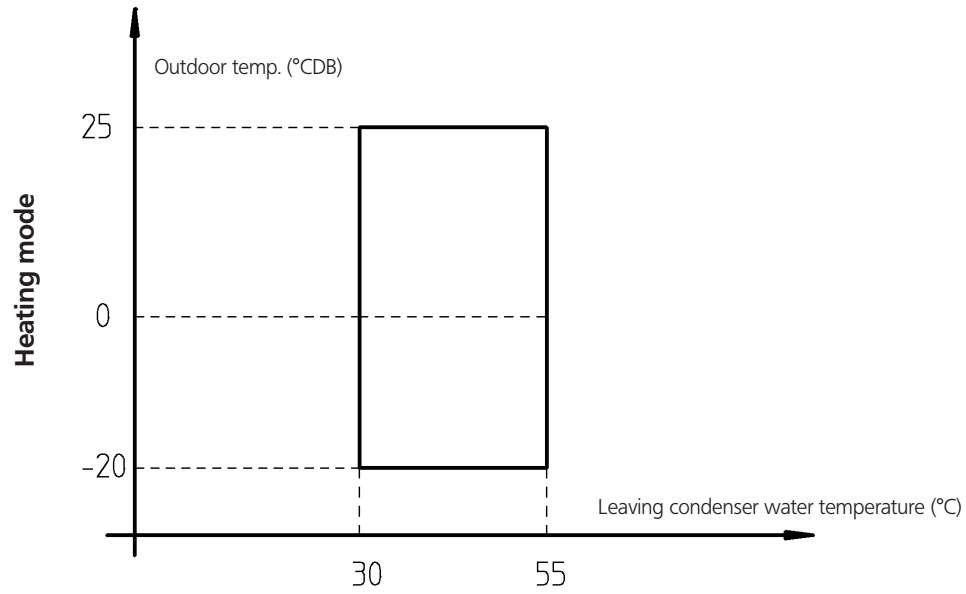
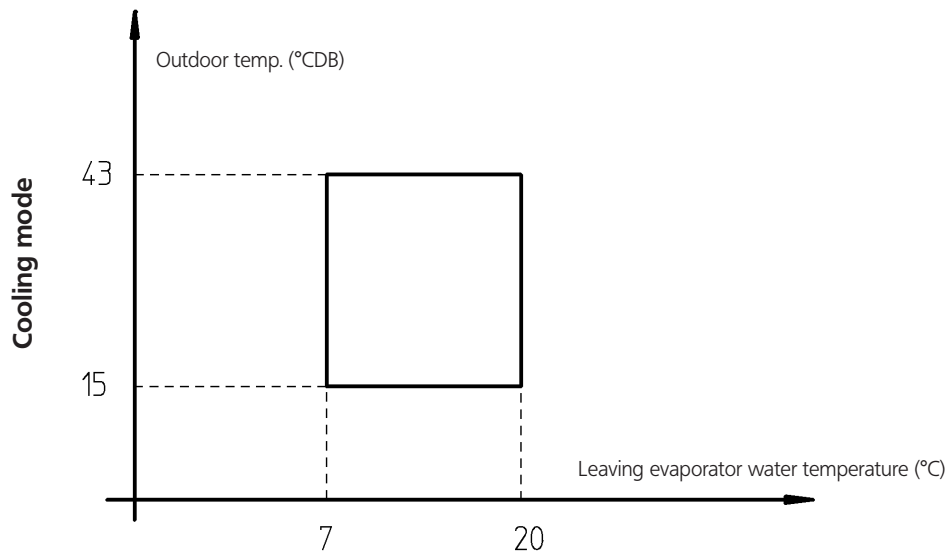
7 Sound data

7 - 1 Sound pressure spectrum



8 Operation range

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EKHBH / EKHBX

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1 Features

- Cost effective alternative to a fossil fuel boiler
- Low energy bills and low CO2 emissions
- Easy to install
- Total solution for year round comfort

2

1



2 Specifications

| 2-1 TECHNICAL SPECIFICATIONS | | | | EKHBH007A (+ERYQ005A) | EKHBH007A (+ERYQ006A) | EKHBH007A (+ERYQ007A) | EKHBX007A (+ERYQ005A) | EKHBX007A (+ERYQ006A) | EKHBX007A (+ERYQ007A) |
|------------------------------|-----------------------------|---------------------------|--------|------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Outdoor units | | | | ERYQ005A | ERYQ006A | ERYQ007A | ERYQ005A | ERYQ006A | ERYQ007A |
| Nominal input (Indoor only) | | | W | 230 | | | | | |
| Casing | Colour | | | RAL9010 | | | | | |
| | Material | | | Polyester painted galvanised steel | | | | | |
| Dimensions | Packing | Height | mm | 1225 | | | | | |
| | | Width | mm | 660 | | | | | |
| | | Depth | mm | 595 | | | | | |
| | Unit | Height | mm | 895 | | | 936 | | |
| | | Width | mm | 487 | | | 487 | | |
| | | Depth | mm | 361 | | | 461 | | |
| Weight | Unit | | kg | 55 | | | 65 | | |
| | Packed Unit | | kg | 65 | | | 75 | | |
| Packing | Material | | | EPS | | | | | |
| | | | | Wood | | | | | |
| | | | | Carton | | | | | |
| | | | | PS(straps) | | | | | |
| Weight | | | kg | 10 | | | | | |
| Main components | Pump | Type | | Water cooled | | | | | |
| | | Nr. of speed | | 3 | | | | | |
| Pump | Nominal ESP unit | Cooling | kPa | | | | 49.9 | 46.5 | 44.4 |
| | | Heating | kPa | 46.5 | 40.1 | 29.0 | 46.5 | 40.1 | 29.0 |
| Main components | Pump | Power input | W | 130 | | | | | |
| | | Water side Heat exchanger | Type | | Brazen plate | | | | |
| | Qty | | 1 | | | | | | |
| | Water volume | | l | 0.67 | | | | | |
| | Water flow rate Min. | | l/min | 12 | | | | | |
| Water side Heat exchanger | Water flow rate Nom. | Cooling | l/min | | | | 14.7 | 16.5 | 17.6 |
| | | Heating | l/min | 16.5 | 19.6 | 24.2 | 16.5 | 19.6 | 24.2 |
| Main components | Water side Heat exchanger | Insulation material | | Polyurethane foam | | | | | |
| | | Expansion vessel | Volume | l | 10 | | | | |
| | Max. water pressure | | bar | 3 | | | | | |
| | Pre pressure | | bar | 1 | | | | | |
| | Water filter | Diameter perforations | mm | 1 | | | | | |
| Material | | Brass | | | | | | | |
| Water circuit | Piping connections diameter | | inch | 1"MBSP | | | | | |
| | Piping | | inch | 1"MBSP | | | | | |
| | Safety valve | | bar | 3 | | | | | |
| | Manometer | | | Yes | | | | | |
| | Drain valve / Fill valve | | | Yes | | | | | |
| | Shut off valve | | | Yes | | | | | |
| | Air purge valve | | | Yes | | | | | |

2 Specifications

| 2-1 TECHNICAL SPECIFICATIONS | | | EKHBH007A (+ERYQ005A) | EKHBH007A (+ERYQ006A) | EKHBH007A (+ERYQ007A) | EKHBX007A (+ERYQ005A) | EKHBX007A (+ERYQ006A) | EKHBX007A (+ERYQ007A) |
|------------------------------|----------------------|---------|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Refrigerant Circuit | Gas side diameter | mm | 15,9 | | | | | |
| | Liquid side diameter | mm | (2) | | | | | |
| Sound Level | Sound Pressure | dBA | 27 | | | | | |
| Operation range | Waterside | Cooling | °C | 7 ~ 20 | | | | |
| | | Heating | °C | 30 ~ 55 | | | | |
| Notes | | | The sound pressure level is measured via a microphone at a certain distance from the unit. It is a relative value, depending on the distance and acoustic environment. | | | | | |
| | | | ERYQ = 6.35 mm EKHB = 9.52 mm (flare connection) | | | | | |

2

2

2 Specifications

| 2-2 ELECTRICAL SPECIFICATIONS | | | | EKHBH007A (+ERYQ005A) | EKHBH007A (+ERYQ006A) | EKHBH007A (+ERYQ007A) | EKHBX007A (+ERYQ005A) | EKHBX007A (+ERYQ006A) | EKHBX007A (+ERYQ007A) | |
|-------------------------------|--------------|-----------------|----|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--|
| Electric heater | Type | | | 3V3 | | | | | | |
| | Power Supply | Phase | | | 1 | | | | | |
| | | Frequency | Hz | | 50 | | | | | |
| | | Voltage | V | | 230 | | | | | |
| | Current | Running Current | A | | 13 | | | | | |
| Electric heater | Type | | | 6V3 | | | | | | |
| | Power Supply | Phase | | | 1 | | | | | |
| | | Frequency | Hz | | 50 | | | | | |
| | | Voltage | V | | 230 | | | | | |
| | Current | Running Current | A | | 26 | | | | | |
| Electric heater | Type | | | 6W1 | | | | | | |
| | Power Supply | Phase | | | 3N | | | | | |
| | | Frequency | Hz | | 50 | | | | | |
| | | Voltage | V | | 400 | | | | | |
| | Current | Running Current | A | | 8.6 | | | | | |
| Electric heater | Type | | | 6T1 | | | | | | |
| | Power Supply | Phase | | | 3 | | | | | |
| | | Frequency | Hz | | 50 | | | | | |
| | | Voltage | V | | 230 | | | | | |
| | Current | Running Current | A | | 15 | | | | | |
| Electric heater | Type | | | 9W1 | | | | | | |
| | Power Supply | Phase | | | 3N | | | | | |
| | | Frequency | Hz | | 50 | | | | | |
| | | Voltage | V | | 400 | | | | | |
| | Current | Running Current | A | | 13 | | | | | |
| Electric heater | Type | | | 9T1 | | | | | | |
| | Power Supply | Phase | | | 3 | | | | | |
| | | Frequency | Hz | | 50 | | | | | |
| | | Voltage | V | | 230 | | | | | |
| | Current | Running Current | A | | 23 | | | | | |

3 Options

2

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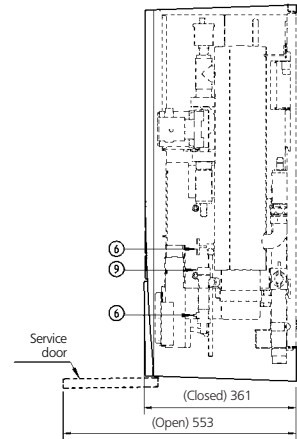
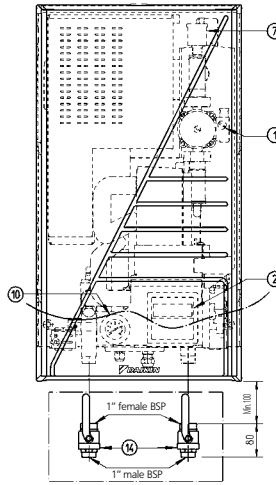
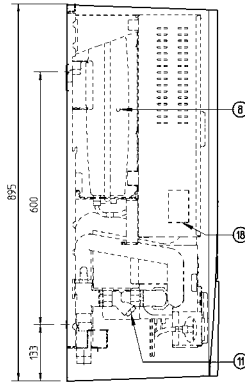
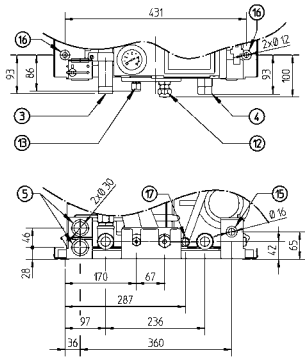
| Optional equipment for EKHB(H/X)007* | | | | | | | Availability |
|--------------------------------------|--|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| Reference | Description | Number | | | | | Availability |
| | Heating only model Reversible model | EKHBH007A3V3 EKHBX007A3V3 | EKHBH007A6V3 EKHBX007A6V3 | EKHBH007A6W1 EKHBX007A6W1 | EKHBH007A6T1 EKHBX007A6T1 | EKHBH007A9W1 EKHBX007A9W1 | EKHBH007A9T1 EKHBX007A9T1 |
| | Available options | | | | | | |
| 3V3 | Back up heater 3kW 1~230 V | ○ | — | — | — | — | — |
| 6V3 | Back up heater 6kW 1~230 V | — | ○ | — | — | — | — |
| 6W1 | Back up heater 6kW 3~400 V + N | — | — | ○ | — | — | — |
| 6T1 | Back up heater 6kW 3~230 V | — | — | — | ○ | — | — |
| 9W1 | Back up heater 9kW 3~400 V + N | — | — | — | — | ○ | — |
| 9T1 | Back up heater 9kW 3~230 V | — | — | — | — | — | ○ |
| | Available kits | | | | | | |
| EKSWW150V3 | Sanitary warm water tank 150 230 V | ○ | ○ | ○ | ○ | ○ | ○ |
| EKSWW200V3 | Sanitary warm water tank 200 230 V | ○ | ○ | ○ | ○ | ○ | ○ |
| EKSWW300V3 | Sanitary warm water tank 300 230 V | ○ | ○ | ○ | ○ | ○ | ○ |
| EKSWW200Z2 | Sanitary warm water tank 200 400 V | — | — | ○ | — | ○ | — |
| EKSWW300Z2 | Sanitary warm water tank 300 400 V | — | — | ○ | — | ○ | — |
| EKWSWW150 | Wall bracket for EKSWW150V3 | | | | | | |

3TW56719-5

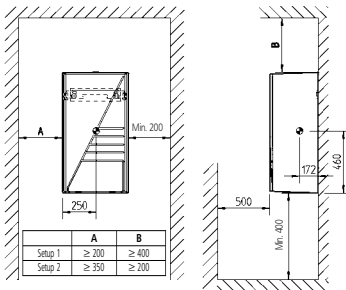
4 Dimensional drawing & centre of gravity

4 - 1 Dimensional drawing

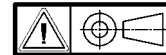
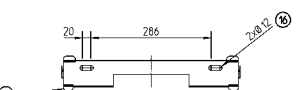
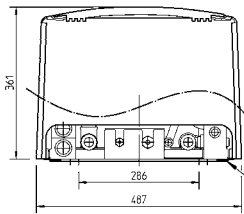
EKHBH-A



Minimum space for service & ventilation

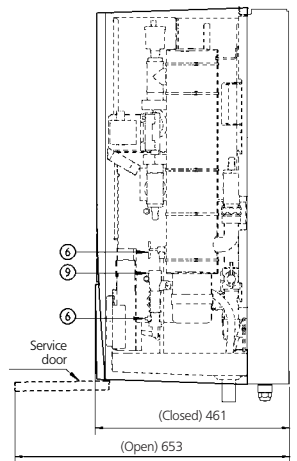
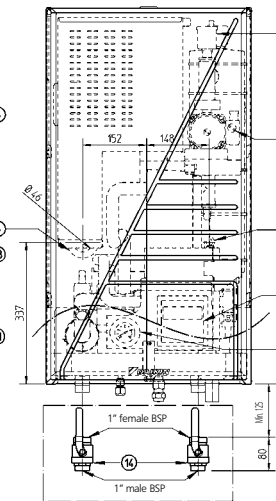
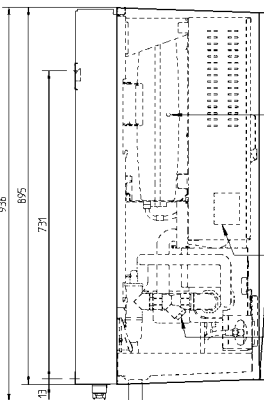
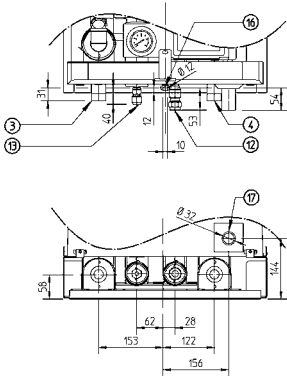


- Center of gravity
- ① Pump + switch for speed setting
- ② Remocon
- ③ Water IN connection 1" M BSP
- ④ Water OUT connection 1" M BSP
- ⑤ Power supply intake (+ sanitary warm water tank)
- ⑥ Drain / fill valve
- ⑦ Air purge
- ⑧ Expansion vessel + nipple
- ⑨ Blow off valve
- ⑩ Pressure gauge
- ⑪ Water filter
- ⑫ Suction pipe connection ϕ 15.9 flare connection
- ⑬ Liquid pipe connection ϕ 9.52 flare connection
- ⑭ Shut off valves (delivered with unit)
- ⑮ Thermistor connection (+ sanitary warm water tank)
- ⑯ Holes for fixation
- ⑰ Blow off drain
- ⑱ Switchbox connection terminals
- ⑳ Wallbracket

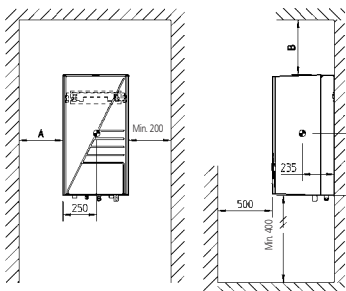


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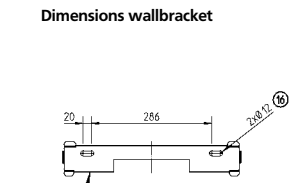
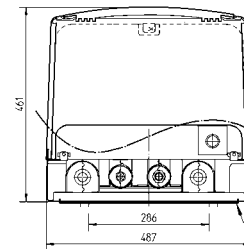
EKHBX-A



Minimum space for service & ventilation



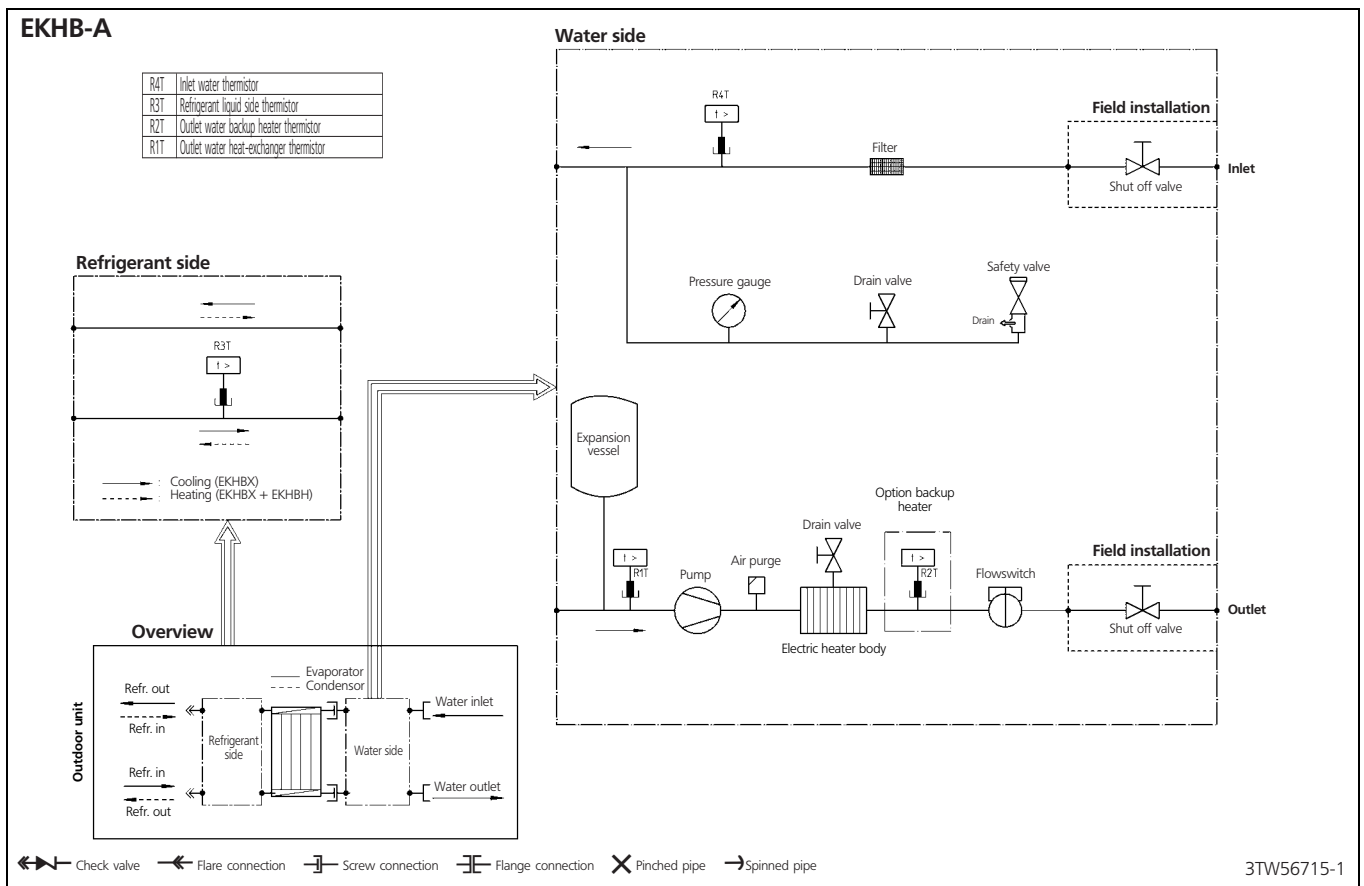
- Center of gravity
- ① Pump + switch for speed setting
- ② Remocon
- ③ Water IN connection 1" M BSP
- ④ Water OUT connection 1" M BSP
- ⑤ Power supply intake (+ sanitary warm water tank)
- ⑥ Drain / fill valve
- ⑦ Air purge
- ⑧ Expansion vessel + nipple
- ⑨ Blow off valve
- ⑩ Pressure gauge
- ⑪ Water filter
- ⑫ Suction pipe connection ϕ 15.9 flare connection
- ⑬ Liquid pipe connection ϕ 9.52 flare connection
- ⑭ Shut off valves (delivered with unit)
- ⑮ Thermistor connection (+ sanitary warm water tank)
- ⑯ Holes for fixation
- ⑰ Blow off drain / drain of drainpan
- ⑱ Switchbox connection terminals
- ⑳ Wallbracket



3TW56724-1A

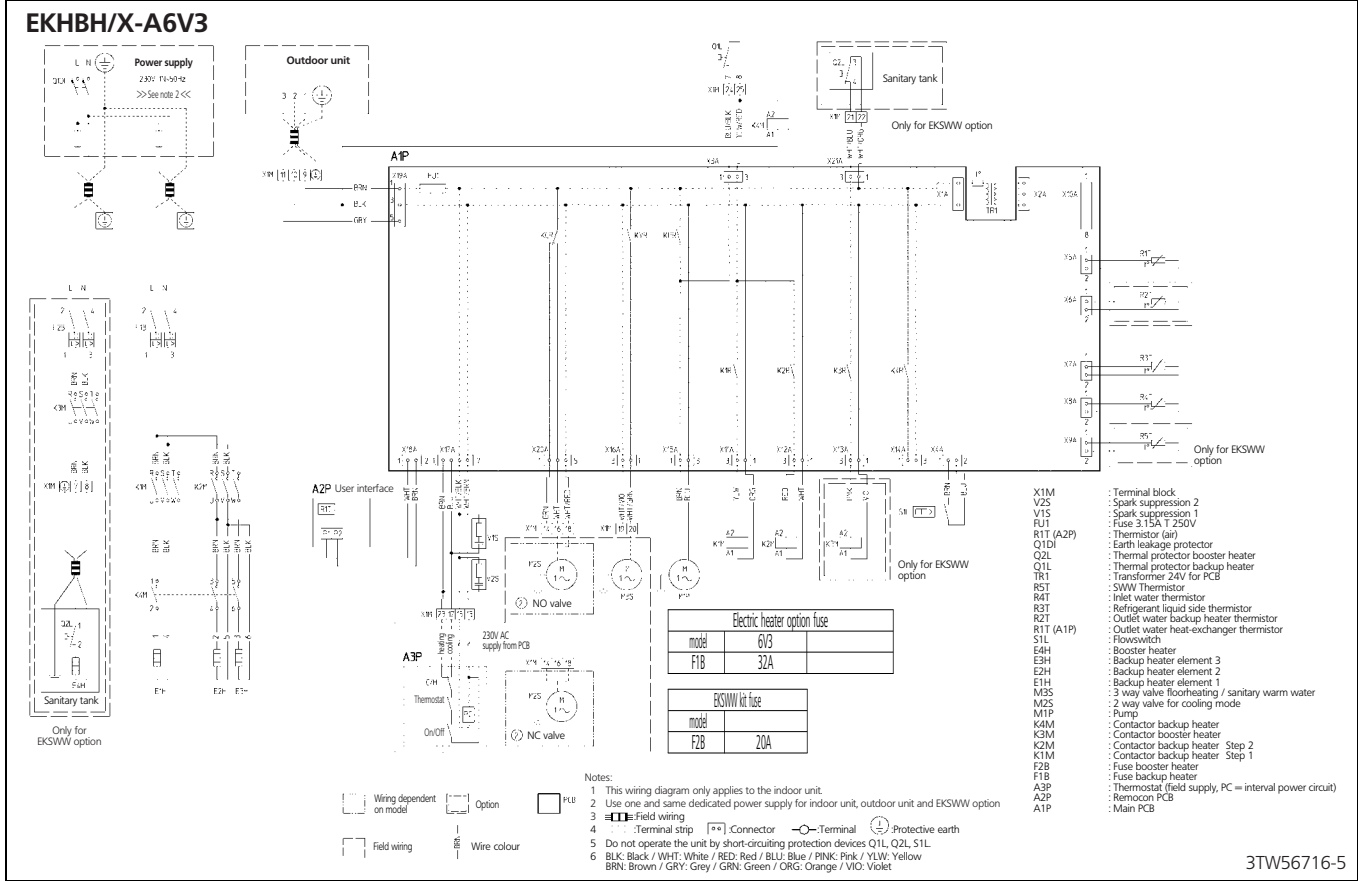
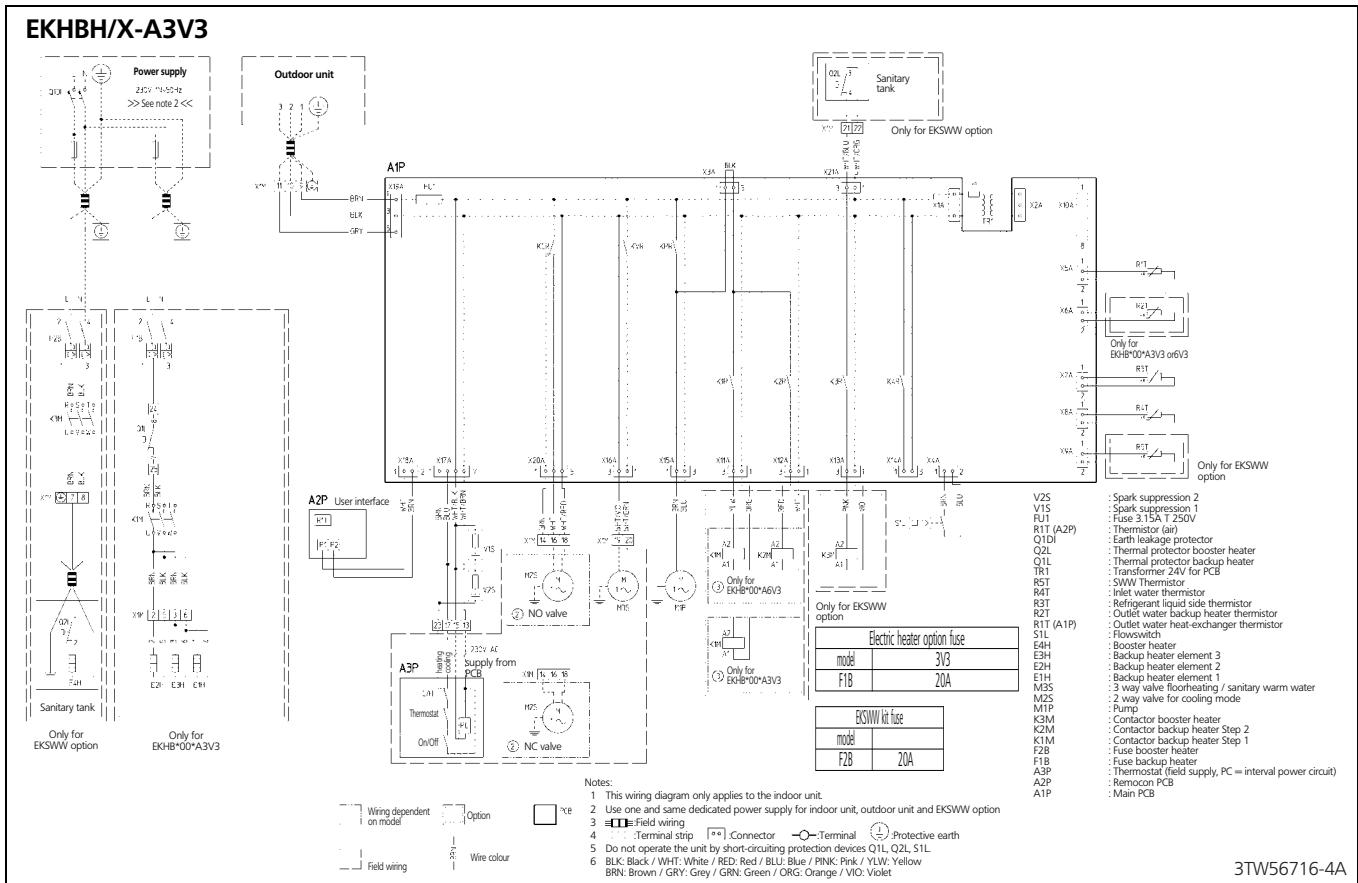
5 Piping diagram

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6 Wiring diagram

6 - 1 Wiring diagram

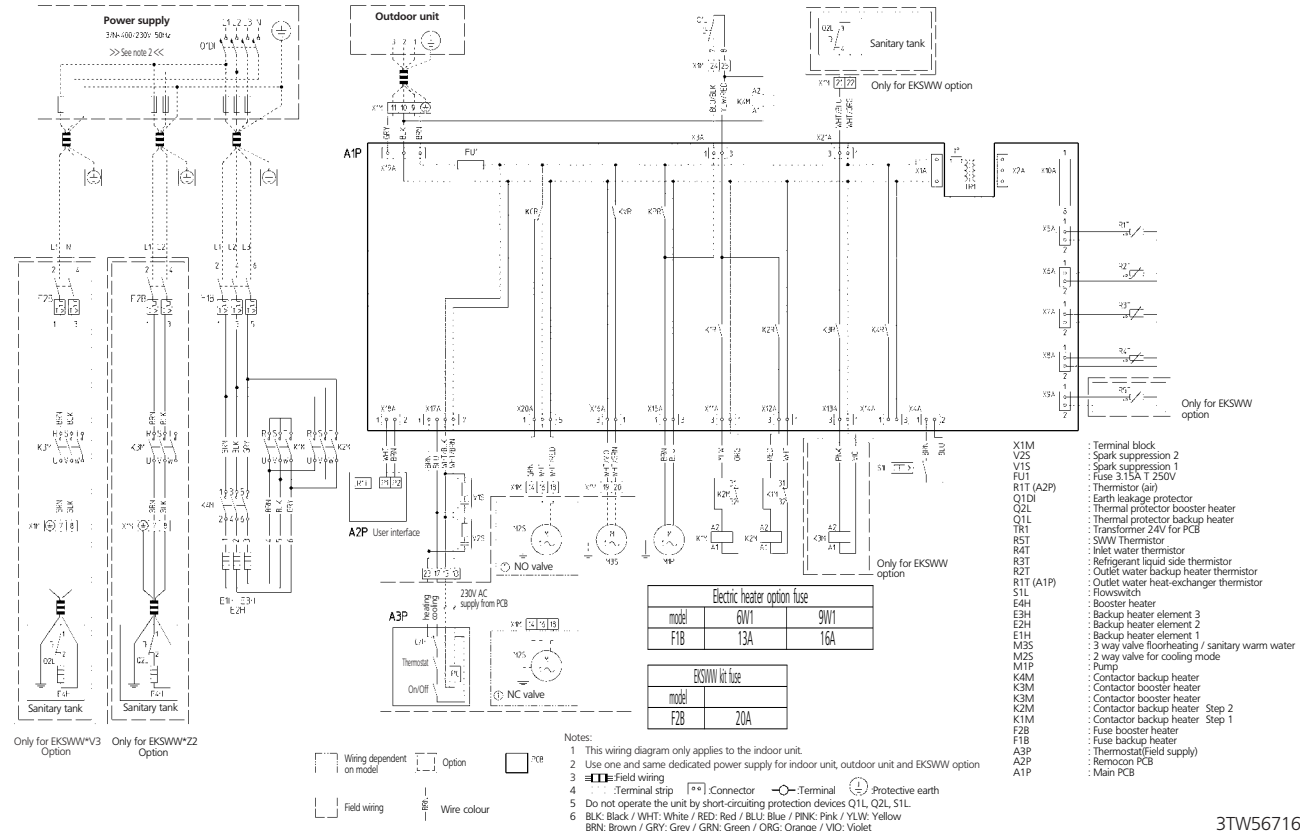


6 Wiring diagram

6 - 1 Wiring diagram

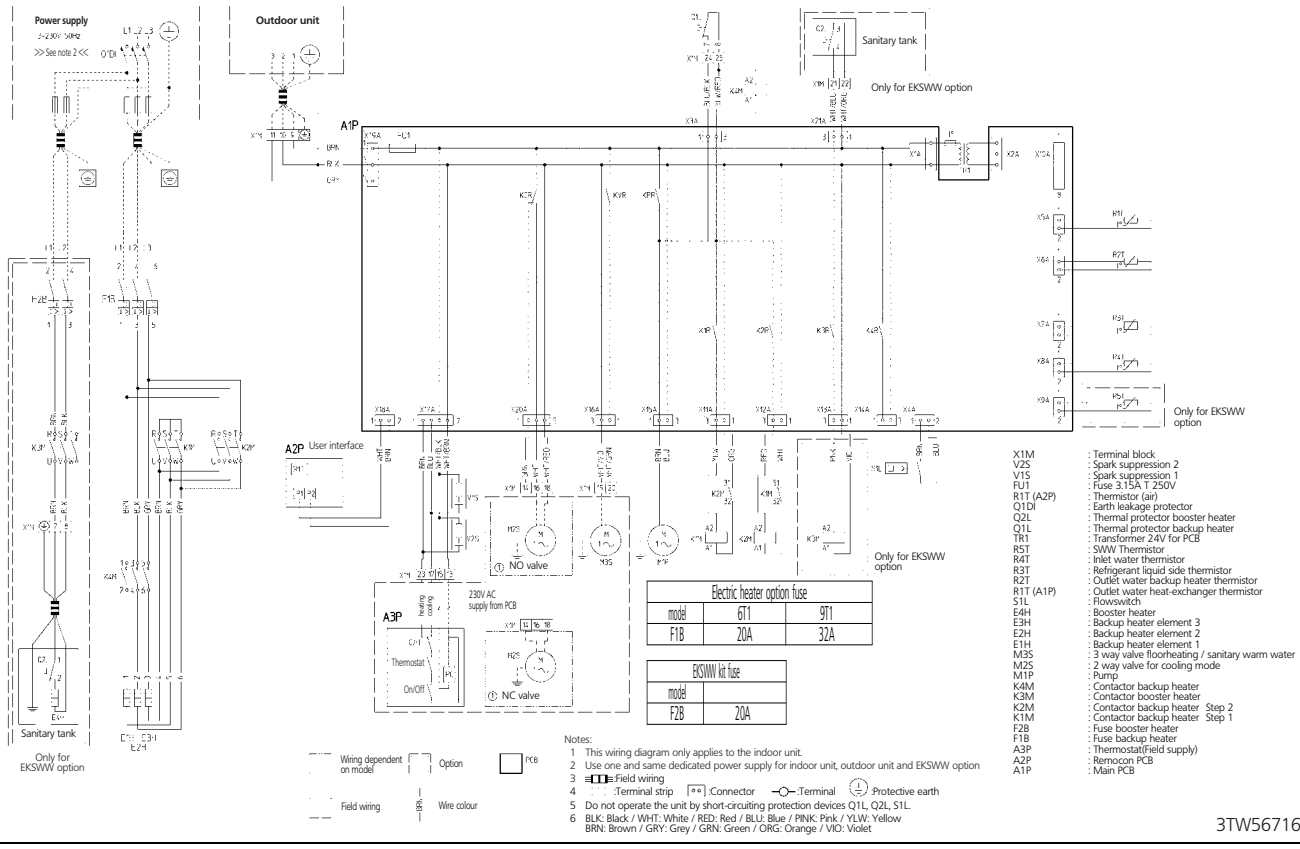
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EKHBH/X-A6W1/9W1



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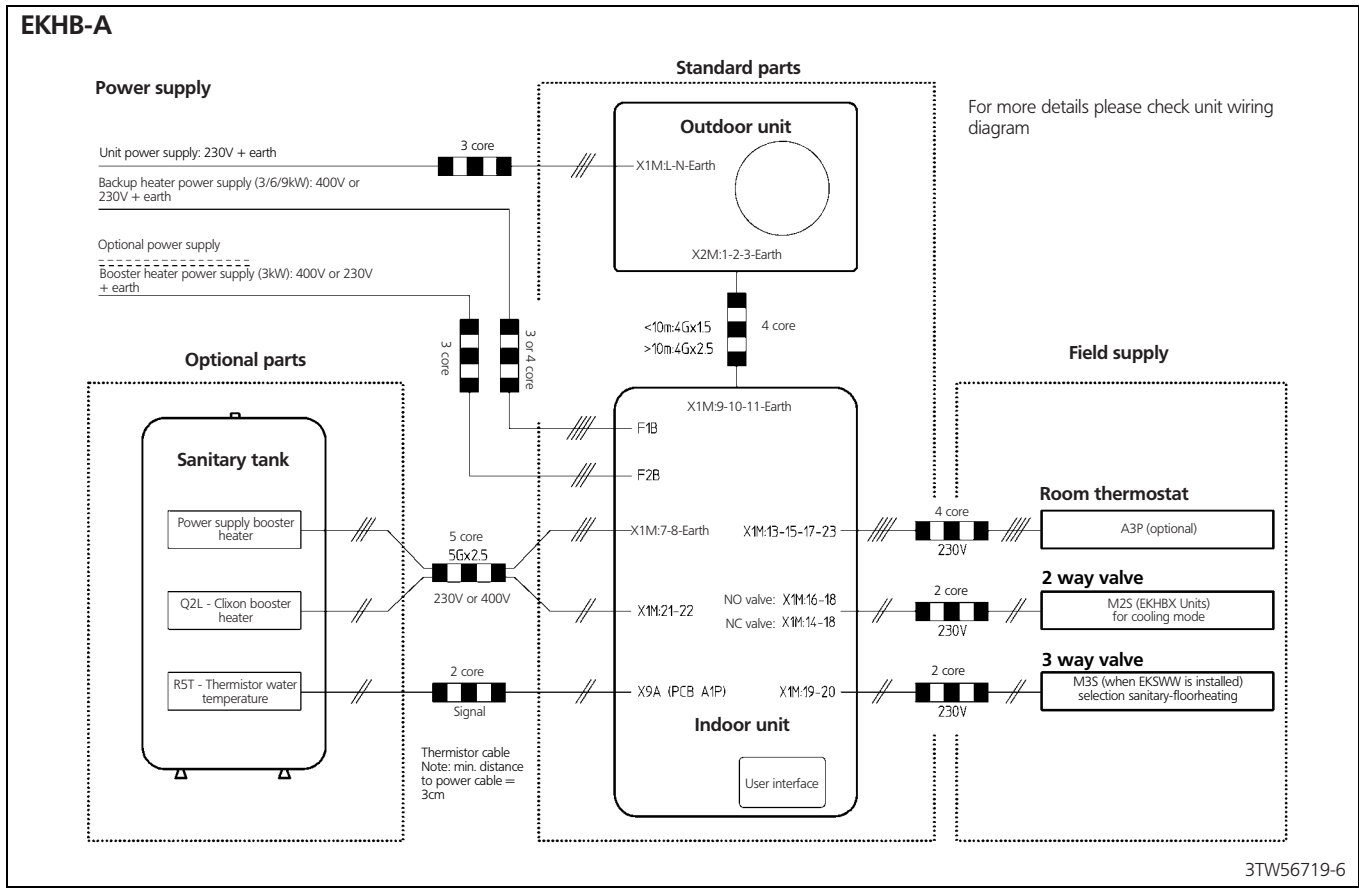
EKHBH/X-A6T1/9T1



3TW56716-3B

6 Wiring diagram

6 - 2 External connection diagram

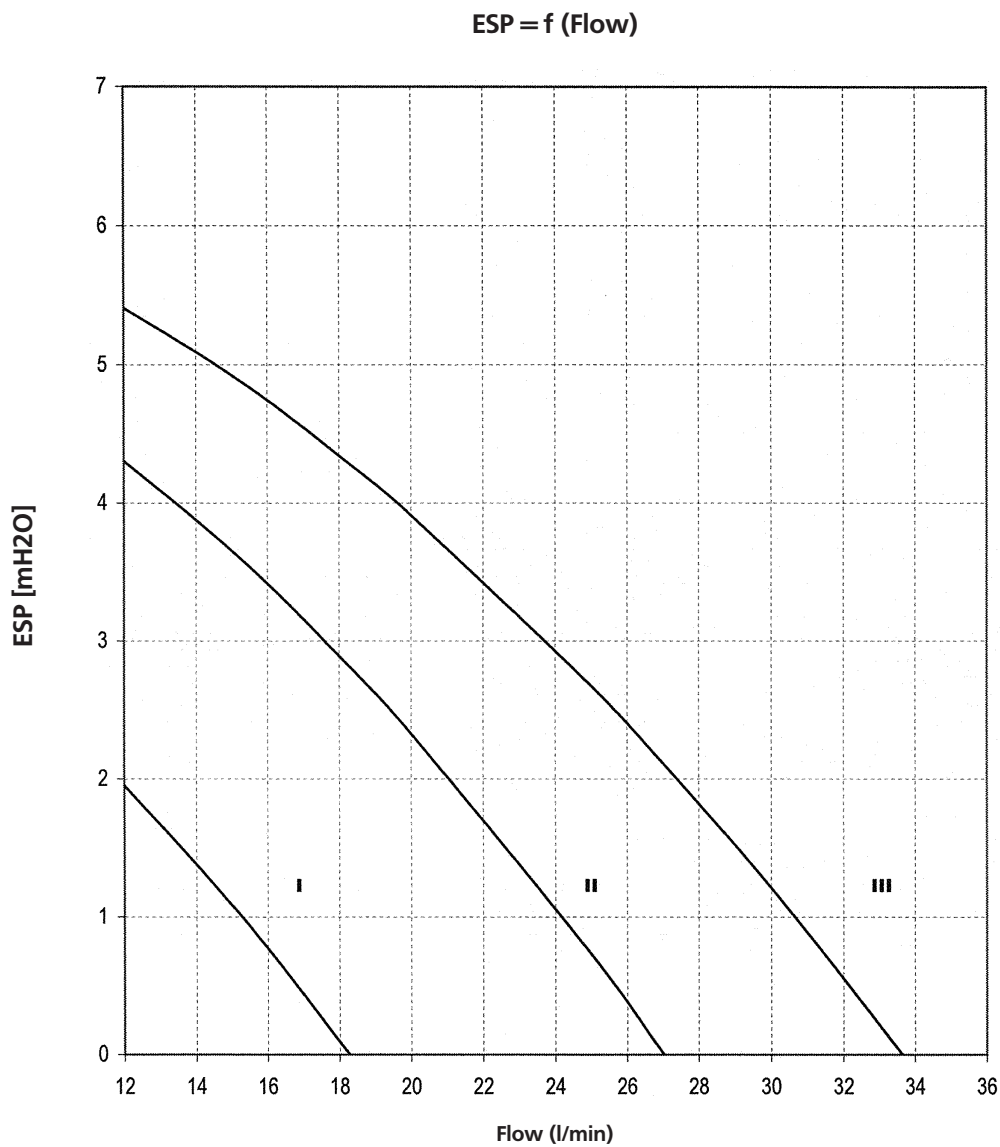


7 Hydraulic performance

7 - 1 Static pressure drop unit

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- I: low speed setting pump
- II: medium speed setting pump
- III: high speed setting pump

ESP: External static pressure
Flow: waterflow trough the unit

Warning: Selecting a flow outside the curves can cause damage to or malfunction of the unit. See also minimum and maximum allowed water flowrate in the technical specifications.

4TW56749-2

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EKSWW

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1 Features

- Cost effective alternative to a fossil fuel boiler
- Low energy bills and low CO2 emissions
- Easy to install
- Total solution for year round comfort

3

1



2 Specifications

| 2-1 TECHNICAL SPECIFICATIONS | | | | EKSWW150V3 | EKSWW200V3 | EKSWW300V3 | EKSWW200Z2 | EKSWW300Z2 | |
|------------------------------|---------------------------|----------------|------|-------------------------|------------------------------|------------|------------|------------|--|
| Casing | Colour | | | Neutral white | | | | | |
| | Material | | | Epoxy-coated mild steel | | | | | |
| Dimensions | Packing | Height | mm | 950 | 1200 | 1650 | 1200 | 1650 | |
| | | Width | mm | 600 | 600 | 600 | 600 | 600 | |
| | | Depth | mm | 600 | 600 | 600 | 600 | 600 | |
| | Unit | Height | mm | 900 | 1150 | 1600 | 1150 | 1600 | |
| | | Width | mm | 580 | 580 | 580 | 580 | 580 | |
| | | Depth | mm | 580 | 580 | 580 | 580 | 580 | |
| Weight | Unit | | kg | 37 | 45 | 59 | 45 | 59 | |
| | Packed Unit | | kg | 40 | 49 | 64 | 49 | 64 | |
| Packing | Material | | | EPS | | | | | |
| | Weight | | | Carton | | | | | |
| Main components | Tank | Water volume | l | 150 | 200 | 300 | 200 | 300 | |
| | | Material | | | Stainless steel (DIN 1.4521) | | | | |
| | Max. temperature | °C | 85 | | | | | | |
| | Max. water pressure | bar | 10 | | | | | | |
| Tank | Insulation | Material | | | Polyurethane foam | | | | |
| | | Min. thickness | mm | 40 | | | | | |
| Main components | Heat exchanger | Quantity | | | 1 | | | | |
| | | Material | | | Stainless steel (DIN 1.4401) | | | | |
| | Booster heater | Quantity | | | 1 | | | | |
| | | Capacity | kW | | 3 | | | | |
| Temperature sensor | Cable length | | m | 12 | | | | | |
| Piping connections | Water inlet H/E Diameter | | inch | 3/4" FBSP | | | | | |
| | Water outlet H/E Diameter | | inch | 3/4" FBSP | | | | | |
| | Cold water in Diameter | | inch | 3/4" FBSP | | | | | |
| | Hot water out Diameter | | inch | 3/4" FBSP | | | | | |

| 2-2 ELECTRICAL SPECIFICATIONS | | | | EKSWW150V3 | EKSWW200V3 | EKSWW300V3 | EKSWW200Z2 | EKSWW300Z2 |
|-------------------------------|-------------------------|-----------|----|------------|------------|------------|------------|------------|
| Unit | Power Supply | Phase | | 1 | | | | 2 |
| | | Frequency | Hz | 50 | | | | 50 |
| | | Voltage | V | 230 | | | | 400 |
| | Nominal running current | | A | 13 | | | | 7.5 |
| | Fuse | Size | A | 20 | | | | 20 |
| | | Phase | | 1 | | | | 2 |

3 Capacity tables

3 - 1 Cooling capacity tables

The ALTHERMA by Daikin heat-pump in combination with the optional sanitary tank provide hot water for household usage. The below mentioned data allow a proper selection of the sanitary tank size for maximum comfort and efficiency.

(1) Sanitary hot water volume:

The volume of hot water available for domestic sanitary usage depends on the physical volume of the sanitary tank, on the sanitary water setpoint temperature and on the temperature spreading in the tank. Therefor we define the equivalent hot water volume (EHVV).

Definition:

EHVV = The volume of hot water available for domestic sanitary usage at a temperature of 40°C. 40°C is considered a comfortable sanitary hot water temperature.

| Tank | Setpoint temp. (°C) | EHVV (l) | Usage pattern | | |
|------|---------------------|----------|---------------|--------|------|
| | | | Modest | Medium | High |
| 150L | 55 | 110 | - | - | - |
| | 65 | 150 | + | - | - |
| | 75 | 175 | ++ | + | - |
| 200L | 55 | 160 | + | - | - |
| | 65 | 200 | ++ | + | - |
| | 75 | 240 | ++ | ++ | - |
| 300L | 55 | 295 | ++ | ++ | - |
| | 65 | 385 | ++ | ++ | + |
| | 75 | 435 | ++ | ++ | ++ |

Grade ++ Excessive availability of sanitary hot water.
 + Sufficient availability of sanitary hot water.
 - Temporary shortage of sanitary hot water can occur.

Usage pattern
Modest Daily demand up to 220 l -> typical 2-persons usage pattern.
Medium Daily demand up to 325 l -> typical 3 to 4 persons usage pattern.
High Daily demand up to 550 l -> 4 to 6 persons usage pattern.

(2) Heat-up time:

Definition:

Heat-up time The time required to reheat the sanitary tank to 55°C after tapping a certain volume of hot water at 40°C. note: changing the field settings (see installation manual) can influence the heat-up time.

| Tank | Setpoint temp. (°C) | Heat-up time for 150 L (bath) <min> | Heat-up time for 50 L (shower) <min> |
|------|---------------------|-------------------------------------|--------------------------------------|
| 150L | 55 | 60 | 45 |
| 200L | 55 | 60 | 40 |
| 300L | 55 | 50 | 30 |

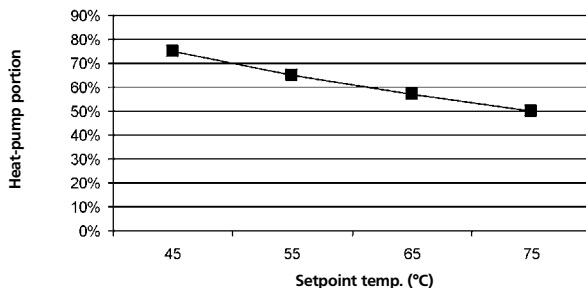
Conditions for testing: Ta = 7°CDB / 6°CWB, Troom = 20°C, Tstart = 10°C, outdoor unit type: ERYQ007

(3) Efficiency of sanitary hot water production:

In the ALTHERMA by Daikin system both the heat-pump and the electric booster heater supply the energy to produce sanitary hot water. The higher the portion of energy supplied by the heat-pump, the more energy efficient the system is. Lowering the setpoint temperature increases the portion of energy supplied by the heat-pump and thus the efficiency of the system.

Definition:

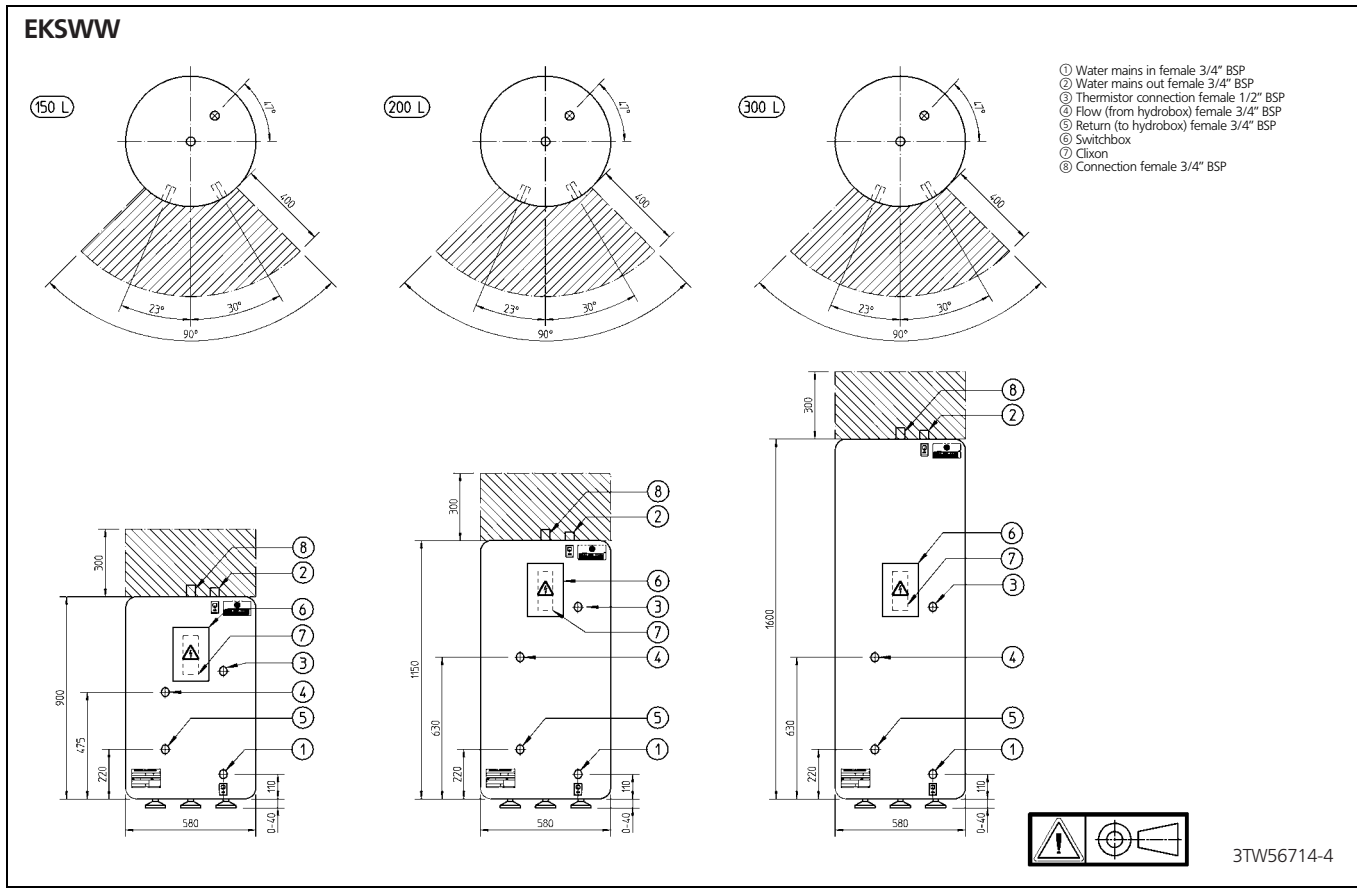
Heat-pump portion Percentage of energy supplied by the heat-pump in the total energy need for sanitary hot water.



Conditions: Real life condition Simulation of a daily usage based upon 'medium' usage pattern.
 Outdoor temperature 7°CDB / 6°CWB
 Room temperature 20°CDB
 Outdoor unit type ERYQ007
 Tank type 200l
 Field settings Default field settings (see installation manual).

4 Dimensional drawing & centre of gravity

4 - 1 Dimensional drawing



5 Wiring diagram

5 - 1 External connection diagram

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5

