

# Engineering Data Book

# Air to Water Heat Pump

**ESTiA**



## Hydro Unit

-Wall Mounted Type-

HWT-601XWHM3W-E

HWT-601XWHT6W-E

HWT-1101XWHM3W-E

HWT-1101XWHT6W-E

HWT-1101XWHT9W-E

-All In One Type-

HWT-601F21SM3W-E

HWT-601F21ST6W-E

HWT-1101F21SM3W-E

HWT-1101F21MM3W-E

HWT-1101F21ST6W-E

HWT-1101F21MT6W-E

HWT-1101F21ST9W-E

HWT-1101F21MT9W-E



4/6 kw



8/11 kw

## Outdoor Unit

HWT-401HW-E

HWT-601HW-E

HWT-801HW-E

HWT-1101HW-E

HWT-801HRW-E

HWT-1101HRW-E



## Hot Water Cylinder

HWS-1501CSHM3-E

HWS-2101CSHM3-E

HWS-3001CSHM3-E

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## **1. SYSTEM OVERVIEW**

# 1-1. System combination

## Combination

| Hydro unit        | Outdoor unit       |             |             |              |                                     |               | Backup heater |
|-------------------|--------------------|-------------|-------------|--------------|-------------------------------------|---------------|---------------|
|                   | HWT-401HW-E        | HWT-601HW-E | HWT-801HW-E | HWT-1101HW-E | HWT-801HRW-E                        | HWT-1101HRW-E |               |
| HWT-601XWHM3W-E   | ○                  | ○           |             |              |                                     |               | ~, 3 kW       |
| HWT-601XWHT6W-E   | ○                  | ○           |             |              |                                     |               | 3N~, 6 kW     |
| HWT-601F21SM3W-E  | ○                  | ○           |             |              |                                     |               | ~, 3 kW       |
| HWT-601F21ST6W-E  | ○                  | ○           |             |              |                                     |               | 3N~, 6 kW     |
| HWT-1101XWHM3W-E  |                    |             | ○           | ○            | ○                                   | ○             | ~, 3 kW       |
| HWT-1101XWHT6W-E  |                    |             | ○           | ○            | ○                                   | ○             | 3N~, 6 kW     |
| HWT-1101XWHT9W-E  |                    |             | ○           | ○            | ○                                   | ○             | 3N~, 9 kW     |
| HWT-1101F21SM3W-E |                    |             | ○           | ○            | ○                                   | ○             | ~, 3 kW       |
| HWT-1101F21MM3W-E |                    |             | ○           | ○            | ○                                   | ○             | ~, 3 kW       |
| HWT-1101F21ST6W-E |                    |             | ○           | ○            | ○                                   | ○             | 3N~, 6 kW     |
| HWT-1101F21MT6W-E |                    |             | ○           | ○            | ○                                   | ○             | 3N~, 6 kW     |
| HWT-1101F21ST9W-E |                    |             | ○           | ○            | ○                                   | ○             | 3N~, 9 kW     |
| HWT-1101F21MT9W-E |                    |             | ○           | ○            | ○                                   | ○             | 3N~, 9 kW     |
|                   | Single phase model |             |             |              | Single phase model with Cord Heater |               |               |

|            |                   | Hot water cylinder |                  |                  |
|------------|-------------------|--------------------|------------------|------------------|
|            |                   | HWS-1501 CSHM3-E   | HWS-2101 CSHM3-E | HWS-3001 CSHM3-E |
| Hydro unit | HWT-601XWHM3W-E   | ○                  |                  |                  |
|            | HWT-601XWHT6W-E   |                    |                  |                  |
|            | HWT-601F21SM3W-E  | -                  |                  |                  |
|            | HWT-601F21ST6W-E  |                    |                  |                  |
|            | HWT-1101XWHM3W-E  | ○                  |                  |                  |
|            | HWT-1101XWHT6W-E  |                    |                  |                  |
|            | HWT-1101XWHT9W-E  |                    |                  |                  |
|            | HWT-1101F21SM3W-E | -                  |                  |                  |
|            | HWT-1101F21MM3W-E |                    |                  |                  |
|            | HWT-1101F21ST6W-E |                    |                  |                  |
|            | HWT-1101F21MT6W-E |                    |                  |                  |
|            | HWT-1101F21ST9W-E |                    |                  |                  |
|            | HWT-1101F21MT9W-E |                    |                  |                  |

## Options

| No. | Part name                 | Model name      | Application                                                           |
|-----|---------------------------|-----------------|-----------------------------------------------------------------------|
| 1   | Second remote controller  | HWS-AMSU51-E    | Wired remote controller for room air temperature control              |
| 2   | Central remote controller | TCB-SC640U-E    | Wired remote controller for central control (Coming Soon)             |
| 3   | Connectors (For CN32)     | TCB-KBCN32VEE   | Wire for connecting between Hydro PCB and Central remote controller   |
| 4   | 0-10 V interface          | HWS-IFAIP01U-E  | Interface for 0-10 V Analog input                                     |
| 5   | Modbus interface          | TCB-IFMB0EW-E   | Interface for Modbus building management control system (Coming Soon) |
| 6   | KNX interface             | TCB-IFKX0EW-E   | Interface for KNX(R) building management control system (Coming Soon) |
| 7   | Wireless interface        | HWS-IWF0010UP-E | Interface for Toshiba Control AC APP via Wifi (Coming Soon)           |

## 1-2. System specification

### Wall Mounted Type

| Outdoor unit                                             |                       |       | HWT-401HW-E       | HWT-601HW-E | HWT-801H(R)W-E   | HWT-1101H(R)W-E |
|----------------------------------------------------------|-----------------------|-------|-------------------|-------------|------------------|-----------------|
| Hydro unit                                               |                       |       | HWT-601XWH**W-E   |             | HWT-1101XWH**W-E |                 |
| Rated Heating condition<br>LWT=35°C<br>dT=5deg<br>TO=7°C | Capacity              | kW    | 4.0               | 6.0         | 8.0              | 11.0            |
|                                                          | Input                 | kW    | 0.77              | 1.25        | 1.54             | 2.39            |
|                                                          | COP                   | W/W   | 5.20              | 4.80        | 5.19             | 4.60            |
|                                                          | Rated water flow rate | L/min | 11.6              | 17.3        | 23.1             | 31.8            |
| Rated Cooling condition<br>LWT=7°C<br>dT=5deg<br>TO=35°C | Capacity              | kW    | 4.0               | 5.0         | 6.0              | 8.0             |
|                                                          | Input                 | kW    | 1.16              | 1.52        | 1.88             | 2.86            |
|                                                          | COP                   | (W/W) | 3.45              | 3.30        | 3.20             | 2.80            |
|                                                          | Rated water flow rate | L/min | 11.5              | 14.3        | 17.2             | 22.9            |
| Power supply                                             |                       |       | 220-240 V ~ 50 Hz |             |                  |                 |
| Maximum current                                          |                       | A     | 14.6              | 14.6        | 20.3             | 20.3            |

\* Rated condition capacity and power input are the data at rated compressor operating frequency.

\* Power input does not include water pump power.

\* Capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (°C)

LWT : Leaving water temperature (°C)

dT : Delta temperature (deg)

Leaving water temperature - Return water temperature (Heating)

Return water temperature - Leaving water temperature (Cooling)

## All In One Type

| Outdoor unit                                             |                       |       | HWT-401HW-E       | HWT-601HW-E | HWT-801H(R)W-E                         | HWT-1101H(R)W-E |
|----------------------------------------------------------|-----------------------|-------|-------------------|-------------|----------------------------------------|-----------------|
| Hydro unit                                               |                       |       | HWT-601F21S**W-E  |             | HWT-1101F21S**W-E<br>HWT-1101F21M**W-E |                 |
| Rated Heating condition<br>LWT=35°C<br>dT=5deg<br>TO=7°C | Capacity              | kW    | 4.0               | 6.0         | 8.0                                    | 11.0            |
|                                                          | Input                 | kW    | 0.77              | 1.25        | 1.54                                   | 2.39            |
|                                                          | COP                   | W/W   | 5.20              | 4.80        | 5.19                                   | 4.60            |
|                                                          | Rated water flow rate | L/min | 11.6              | 17.3        | 23.1                                   | 31.8            |
| Rated Cooling condition<br>LWT=7°C<br>dT=5deg<br>TO=35°C | Capacity              | kW    | 4.0               | 5.0         | 6.0                                    | 8.0             |
|                                                          | Input                 | kW    | 1.16              | 1.52        | 1.88                                   | 2.86            |
|                                                          | COP                   | (W/W) | 3.45              | 3.30        | 3.20                                   | 2.80            |
|                                                          | Rated water flow rate | L/min | 11.5              | 14.3        | 17.2                                   | 22.9            |
| Power supply                                             |                       |       | 220-240 V ~ 50 Hz |             |                                        |                 |
| Maximum current                                          |                       | A     | 14.6              | 14.6        | 20.3                                   | 20.3            |

\* Rated condition capacity and power input are the data at rated compressor operating frequency.

\* Power input does not include water pump power.

\* Capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (°C)

LWT : Leaving water temperature (°C)

dT : Delta temperature (deg)

Leaving water temperature - Return water temperature (Heating)

Return water temperature - Leaving water temperature (Cooling)

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## **2. HYDRO UNIT**

## 2-1. Specification

### 2-1-1. Hydro unit specifications

#### Wall Mounted Type

| Hydro unit                             |                    |           | HWT-601XWHM3W-E                                                                                        | HWT-601XWHT6W-E     |
|----------------------------------------|--------------------|-----------|--------------------------------------------------------------------------------------------------------|---------------------|
| Back up heater                         | back up heater     | kW        | 3.0                                                                                                    | 6.0                 |
|                                        | Power supply       |           | 1~ 220-240 V 50 Hz                                                                                     | 3N~ 380-415 V 50 Hz |
|                                        | Maximum current    | A         | 13                                                                                                     | 13 (13A*2P)         |
| Hot water cylinder heater*             | Power supply       |           | 1~ 220-240 V 50 Hz                                                                                     |                     |
|                                        | Maximum current    | A         | 12                                                                                                     |                     |
| Appearance                             | Color              |           | White                                                                                                  |                     |
|                                        | Material           |           | Painted steel sheet                                                                                    |                     |
| Outer dimension                        | Height             | mm        | 720                                                                                                    |                     |
|                                        | Width              | mm        | 450                                                                                                    |                     |
|                                        | Depth              | mm        | 235                                                                                                    |                     |
| Unit weight                            |                    | kg        | 27                                                                                                     |                     |
| Packing dimension                      | Height             | mm        | 846                                                                                                    |                     |
|                                        | Width              | mm        | 534                                                                                                    |                     |
|                                        | Depth              | mm        | 309                                                                                                    |                     |
| Total weight                           | Unit and packing   | kg        | 30                                                                                                     |                     |
| Heat exchanger                         | Type               |           | Brazed plate                                                                                           |                     |
|                                        | Water volume       | litres    | 0.67                                                                                                   |                     |
|                                        | Minimum flow rate  | L/min     | 11                                                                                                     |                     |
| Water pump                             | Power input (Max)  | W         | 60                                                                                                     |                     |
|                                        | Delivery head      | m         | 7.5                                                                                                    |                     |
| Expansion vessel                       | Volume             | litres    | 8                                                                                                      |                     |
|                                        | Initial pressure   | Mpa (bar) | 0.1 (1)                                                                                                |                     |
| Pressure relief valve                  | Operating pressure | Mpa (bar) | 0.43 (4.3)                                                                                             |                     |
| Sound pressure level (Cooling/Heating) | MAX                | dB(A)     | 29/29                                                                                                  |                     |
|                                        | Rated              | dB(A)     | 29/29                                                                                                  |                     |
|                                        | Low noise          | dB(A)     | 29/29                                                                                                  |                     |
| Sound power level (Cooling/Heating)    | MAX                | dB(A)     | 40/40                                                                                                  |                     |
|                                        | Rated              | dB(A)     | 40/40                                                                                                  |                     |
|                                        | Low noise          | dB(A)     | 40/40                                                                                                  |                     |
| Operation water Temp.                  | heating            | °C        | 20-55                                                                                                  |                     |
|                                        | Cooling            | °C        | 7-25                                                                                                   |                     |
| Water pipe                             | Outlet             | mm        | 25.4                                                                                                   |                     |
|                                        | Inlet              | mm        | 25.4                                                                                                   |                     |
| Refrigerant pipe                       | Gas                | mm        | 12.7                                                                                                   |                     |
|                                        | Liquid             | mm        | 6.4                                                                                                    |                     |
| Drain port                             |                    | mm        | 16.0 inner diameter for drain hose                                                                     |                     |
| Note                                   |                    |           | * The electric heater, incorporated in the hot water cylinder, requires separate supply to hydro unit. |                     |

## Wall Mounted Type

| Hydro unit                             |                    |           | HWT-1101XWHM3W-E                                                                                       | HWT-1101XWHT6W-E    | HWT-1101XWHT9W-E    |
|----------------------------------------|--------------------|-----------|--------------------------------------------------------------------------------------------------------|---------------------|---------------------|
| Back up heater                         | back up heater     | kW        | 3.0                                                                                                    | 6.0                 | 9.0                 |
|                                        | Power supply       |           | 1~ 220-240 V 50 Hz                                                                                     | 3N~ 380-415 V 50 Hz | 3N~ 380-415 V 50 Hz |
|                                        | Maximum current    | A         | 13                                                                                                     | 13 (13A*2P)         | 13 (13A*3P)         |
| Hot water cylinder heater*             | Power supply       |           | 1~ 220-240 V 50 Hz                                                                                     |                     |                     |
|                                        | Maximum current    | A         | 12                                                                                                     |                     |                     |
| Appearance                             | Color              |           | White                                                                                                  |                     |                     |
|                                        | Material           |           | Painted steel sheet                                                                                    |                     |                     |
| Outer dimension                        | Height             | mm        | 720                                                                                                    |                     |                     |
|                                        | Width              | mm        | 450                                                                                                    |                     |                     |
|                                        | Depth              | mm        | 235                                                                                                    |                     |                     |
| Unit weight                            |                    | kg        | 27                                                                                                     |                     |                     |
| Packing dimension                      | Height             | mm        | 846                                                                                                    |                     |                     |
|                                        | Width              | mm        | 534                                                                                                    |                     |                     |
|                                        | Depth              | mm        | 309                                                                                                    |                     |                     |
| Total weight                           | Unit and packing   | kg        | 30                                                                                                     |                     |                     |
| Heat exchanger                         | Type               |           | Brazen plate                                                                                           |                     |                     |
|                                        | Water volume       | litres    | 0.67                                                                                                   |                     |                     |
|                                        | Minimum flow rate  | L/min     | 14                                                                                                     |                     |                     |
| Water pump                             | Power input (Max)  | W         | 60                                                                                                     |                     |                     |
|                                        | Delivery head      | m         | 7.5                                                                                                    |                     |                     |
| Expansion vessel                       | Volume             | litres    | 8                                                                                                      |                     |                     |
|                                        | Initial pressure   | Mpa (bar) | 0.1 (1)                                                                                                |                     |                     |
| Pressure relief valve                  | Operating pressure | Mpa (bar) | 0.43 (4.3)                                                                                             |                     |                     |
| Sound pressure level (Cooling/Heating) | MAX                | dB(A)     | 29/29                                                                                                  |                     |                     |
|                                        | Rated              | dB(A)     | 29/29                                                                                                  |                     |                     |
|                                        | Low noise          | dB(A)     | 29/29                                                                                                  |                     |                     |
| Sound power level (Cooling/Heating)    | MAX                | dB(A)     | 40/40                                                                                                  |                     |                     |
|                                        | Rated              | dB(A)     | 40/40                                                                                                  |                     |                     |
|                                        | Low noise          | dB(A)     | 40/40                                                                                                  |                     |                     |
| Operation water Temp.                  | heating            | °C        | 20-65                                                                                                  |                     |                     |
|                                        | Cooling            | °C        | 7-25                                                                                                   |                     |                     |
| Water pipe                             | Outlet             | mm        | 25.4                                                                                                   |                     |                     |
|                                        | Inlet              | mm        | 25.4                                                                                                   |                     |                     |
| Refrigerant pipe                       | Gas                | mm        | 15.9                                                                                                   |                     |                     |
|                                        | Liquid             | mm        | 6.4                                                                                                    |                     |                     |
| Drain port                             |                    | mm        | 16.0 inner diameter for drain hose                                                                     |                     |                     |
| Note                                   |                    |           | * The electric heater, incorporated in the hot water cylinder, requires separate supply to hydro unit. |                     |                     |

## All In One Type

| Hydro unit                                |                    |           | HWT-601F21SM3W-E                   | HWT-601F21ST6W-E    |
|-------------------------------------------|--------------------|-----------|------------------------------------|---------------------|
| Back up heater                            | back up heater     | kW        | 3.0                                | 6.0                 |
|                                           | Power supply       |           | 1~ 220-240 V 50 Hz                 | 3N~ 380-415 V 50 Hz |
|                                           | Maximum current    | A         | 13                                 | 13 (13A*2P)         |
| Appearance                                | Color              |           | White                              |                     |
|                                           | Material           |           | Painted steel sheet                |                     |
| Outer dimension                           | Height             | mm        | 1700                               |                     |
|                                           | Width              | mm        | 600                                |                     |
|                                           | Depth              | mm        | 670                                |                     |
| Unit weight                               |                    | kg        | 157                                |                     |
| Packing dimension                         | Height             | mm        | 1950                               |                     |
|                                           | Width              | mm        | 615                                |                     |
|                                           | Depth              | mm        | 695                                |                     |
| Total weight                              | Unit and packing   | kg        | 173                                |                     |
| Heat exchanger                            | Type               |           | Brazed plate                       |                     |
|                                           | Water volume       | litres    | 0.67                               |                     |
|                                           | Minimum flow rate  | L/min     | 11                                 |                     |
| Water pump                                | Power input (Max)  | W         | 60                                 |                     |
|                                           | Delivery head      | m         | 7.5                                |                     |
| Expansion vessel                          | Volume             | litres    | 8                                  |                     |
|                                           | Initial pressure   | Mpa (bar) | 0.05 (0.5)                         |                     |
| Pressure relief valve                     | Operating pressure | Mpa (bar) | 0.25 (2.5)                         |                     |
| Sound pressure level<br>(Cooling/Heating) | MAX                | dB(A)     | 31/31                              |                     |
|                                           | Rated              | dB(A)     | 31/31                              |                     |
|                                           | Low noise          | dB(A)     | 31/31                              |                     |
| Sound power level<br>(Cooling/Heating)    | MAX                | dB(A)     | 42/42                              |                     |
|                                           | Rated              | dB(A)     | 42/42                              |                     |
|                                           | Low noise          | dB(A)     | 42/42                              |                     |
| Operation water Temp.                     | heating            | °C        | 20-55                              |                     |
|                                           | Cooling            | °C        | 7-25                               |                     |
| Water pipe                                | Outlet             | mm        | 22                                 |                     |
|                                           | Inlet              | mm        | 22                                 |                     |
| Refrigerant pipe                          | Gas                | mm        | 12.7                               |                     |
|                                           | Liquid             | mm        | 6.4                                |                     |
| Drain port                                |                    | mm        | 16.0 inner diameter for drain hose |                     |
| Note                                      |                    |           | —                                  |                     |

## All In One Type

| Hydro unit                                |                    |           | HWT-1101F21SM3W-E<br>HWT-1101F21MM3W-E | HWT-1101F21ST6W-E<br>HWT-1101F21MT6W-E | HWT-1101F21ST9W-E<br>HWT-1101F21MT9W-E |
|-------------------------------------------|--------------------|-----------|----------------------------------------|----------------------------------------|----------------------------------------|
| Back up heater                            | back up heater     | kW        | 3.0                                    | 6.0                                    | 9.0                                    |
|                                           | Power supply       |           | 1~ 220-240 V 50 Hz                     | 3N~ 380-415 V 50 Hz                    | 3N~ 380-415 V 50 Hz                    |
|                                           | Maximum current    | A         | 13                                     | 13 (13A*2P)                            | 13 (13A*3P)                            |
| Appearance                                | Color              |           | White                                  |                                        |                                        |
|                                           | Material           |           | Painted steel sheet                    |                                        |                                        |
| Outer dimension                           | Height             | mm        | 1700                                   |                                        |                                        |
|                                           | Width              | mm        | 600                                    |                                        |                                        |
|                                           | Depth              | mm        | 670                                    |                                        |                                        |
| Unit weight                               |                    | kg        | 157 (1101F21S) , 162 (1101F21M)        |                                        |                                        |
| Packing dimension                         | Height             | mm        | 1950                                   |                                        |                                        |
|                                           | Width              | mm        | 615                                    |                                        |                                        |
|                                           | Depth              | mm        | 695                                    |                                        |                                        |
| Total weight                              | Unit and packing   | kg        | 173 (1101F21S) , 178 (1101F21M)        |                                        |                                        |
| Heat exchanger                            | Type               |           | Brazed plate                           |                                        |                                        |
|                                           | Water volume       | litres    | 0.67                                   |                                        |                                        |
|                                           | Minimum flow rate  | L/min     | 14                                     |                                        |                                        |
| Water pump                                | Power input (Max)  | W         | 60 (1101F21S) , 60 × 2 (1101F21M)      |                                        |                                        |
|                                           | Delivery head      | m         | 7.5                                    |                                        |                                        |
| Expansion vessel                          | Volume             | litres    | 8                                      |                                        |                                        |
|                                           | Initial pressure   | Mpa (bar) | 0.05 (0.5)                             |                                        |                                        |
| Pressure relief valve                     | Operating pressure | Mpa (bar) | 0.25 (2.5)                             |                                        |                                        |
| Sound pressure level<br>(Cooling/Heating) | MAX                | dB(A)     | 32/32                                  |                                        |                                        |
|                                           | Rated              | dB(A)     | 32/32                                  |                                        |                                        |
|                                           | Low noise          | dB(A)     | 32/32                                  |                                        |                                        |
| Sound power level<br>(Cooling/Heating)    | MAX                | dB(A)     | 44/44                                  |                                        |                                        |
|                                           | Rated              | dB(A)     | 44/44                                  |                                        |                                        |
|                                           | Low noise          | dB(A)     | 44/44                                  |                                        |                                        |
| Operation water Temp.                     | heating            | °C        | 20-65                                  |                                        |                                        |
|                                           | Cooling            | °C        | 7-25                                   |                                        |                                        |
| Water pipe                                | Outlet             | mm        | 22.2                                   |                                        |                                        |
|                                           | Inlet              | mm        | 22.2                                   |                                        |                                        |
| Refrigerant pipe                          | Gas                | mm        | 15.9                                   |                                        |                                        |
|                                           | Liquid             | mm        | 6.4                                    |                                        |                                        |
| Note                                      |                    |           | —                                      |                                        |                                        |

## 2-1-2. Electrical supply / cable specifications

### Wall Mounted Type

#### ▼ Wiring specifications

| Description                 |                                        | Model name<br>HWT- | POWER<br>SUPPLY        | Maximum<br>current  | Installation<br>fuse rating | Power wire                  | Connection<br>destination                               |      |
|-----------------------------|----------------------------------------|--------------------|------------------------|---------------------|-----------------------------|-----------------------------|---------------------------------------------------------|------|
| Outdoor Unit<br>power       | Power<br>input                         | 1101H(R)W-E        | 220-240 V ~<br>50 Hz   | 20.3 A              | 25 A                        | 2.5 mm <sup>2</sup> or more | Ⓐ, Ⓑ                                                    |      |
|                             |                                        | 801H(R)W-E         | 220-240 V ~<br>50 Hz   | 20.3 A              | 25 A                        | 2.5 mm <sup>2</sup> or more |                                                         |      |
|                             |                                        | 601HW-E            | 220-240 V ~<br>50 Hz   | 14.6 A              | 16 A                        | 1.5 mm <sup>2</sup> or more |                                                         |      |
|                             |                                        | 401HW-E            | 220-240 V ~<br>50 Hz   | 14.6 A              | 16 A                        | 1.5 mm <sup>2</sup> or more |                                                         |      |
| Hydro inlet<br>heater power | Power<br>input for<br>backup<br>heater | 1101XWHM3W-E       | 220-240 V ~<br>50 Hz   | 13 A                | 16 A                        | 1.5 mm <sup>2</sup> or more | Ⓐ, Ⓑ                                                    | TB03 |
|                             |                                        | 1101XWHT6W-E       | 380-415 V<br>3N~ 50 Hz | 13 A<br>(13 A x 2P) | 16 A                        | 1.5 mm <sup>2</sup> or more | Ⓐ <sup>1</sup> , Ⓑ <sup>2</sup> ,<br>Ⓒ <sup>3</sup> , Ⓓ |      |
|                             |                                        | 1101XWHT9W-E       | 380-415 V<br>3N~ 50 Hz | 13 A<br>(13 A x 3P) | 16 A                        | 1.5 mm <sup>2</sup> or more | Ⓐ <sup>1</sup> , Ⓑ <sup>2</sup> ,<br>Ⓒ <sup>3</sup> , Ⓓ |      |
|                             |                                        | 601XWHM3W-E        | 220-240 V ~<br>50 Hz   | 13 A                | 16 A                        | 1.5 mm <sup>2</sup> or more | Ⓐ, Ⓑ                                                    |      |
|                             |                                        | 601XWHT6W-E        | 380-415 V<br>3N~ 50 Hz | 13 A<br>(13 A x 2P) | 16 A                        | 1.5 mm <sup>2</sup> or more | Ⓐ <sup>1</sup> , Ⓑ <sup>2</sup> ,<br>Ⓒ <sup>3</sup> , Ⓓ |      |
|                             | Power input for cylinder heater        |                    | 220-240 V ~<br>50 Hz   | 12 A                | 16 A                        | 1.5 mm <sup>2</sup> or more | Ⓐ, Ⓑ                                                    | TB02 |
| Outdoor-Hydro Unit          |                                        | Connection         |                        |                     |                             | 1.5 mm <sup>2</sup> or more | ①, ②, ③                                                 | TB01 |
| Hydro-Cylinder              |                                        | Connection         |                        |                     |                             | 1.5 mm <sup>2</sup> or more | ①, ②                                                    | TB02 |

## ▼ Wiring specifications (control line)

| Description              | Line spec            | Maximum current | Maximum length | Power wire                   | Connection destination |
|--------------------------|----------------------|-----------------|----------------|------------------------------|------------------------|
| 3-way valve control      | 2 line or 3 line     | 100 mA          | 12 m           | 0.75 mm <sup>2</sup> or more | ⑧, ⑨, ⑩ (CN23)         |
| 2-way valve control      | 2 line               | 100 mA          | 12 m           | 0.75 mm <sup>2</sup> or more | ③, ④ (CN23)            |
| Mixing valve control     | 3 line               | 100 mA          | 12 m           | 0.75 mm <sup>2</sup> or more | ⑧, ⑨, ⑩ (CN22)         |
| 2-zone thermo sensor     | 2 line               | 100 mA          | 5 m            | 0.75 mm <sup>2</sup> or more | ③, ④ (CN20)            |
| Cylinder thermo sensor   | 2+GND(shielded wire) | 100 mA          | 5 m            | 0.75 mm <sup>2</sup> or more | ①, ② (CN20)            |
| Second remote controller | 2 line               | 50 mA           | 50 m           | 0.5 mm <sup>2</sup> or more  | (TB04)                 |
| Group control (total)    | 2 line               | 50 mA           | 50 m           | 0.5 mm <sup>2</sup> or more  | (TB04)                 |
| Open protocol interface  | 2 line               | 100 mA          | 50 m           | 0.5 mm <sup>2</sup> or more  | (TB04)                 |

## ▼ Control parts specifications

|                                       | Power    | Maximum current | Type                                                                                                                                                                          |
|---------------------------------------|----------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Motorized 3-way valve (for hot water) | AC 230 V | 100 mA          | Default: 2-wire spring return valve or 3 wire SPST valve<br>Note: 3 wire SPDT valve can be used by changing DN 6B4.                                                           |
| Motorized 2-way valve (for cooling)   | AC 230 V | 100 mA          | spring return type (normally open)                                                                                                                                            |
| Motorized mixing valve (for 2-zone)   | AC 230 V | 100 mA          | Default: Drive time = 60sec to 90°<br>Note: 3 wire SPST or SPDT valves, with drive times between 30 and 240 seconds, can be used. Valve drive time can be changed using DN 0C |

## ▼ Output line specifications

| Description               | Output               | Maximum current | Max voltage | Maximum length |                                                                   |
|---------------------------|----------------------|-----------------|-------------|----------------|-------------------------------------------------------------------|
| External pump No.1        | AC230 V              | 1 A             | —           | 12 m           |                                                                   |
| External boost heater     | AC230 V              | 1 A             | —           | 12 m           | Output as required when outdoor air temperature is -20 °C or less |
| Digital outputs from CN22 | Non-voltage contacts | 0.5 A           | AC230 V     | 12 m           |                                                                   |
|                           |                      | 1 A             | DC24 V      | 12 m           |                                                                   |

## ▼ Input line specifications

| Description            | Input       | Maximum length |
|------------------------|-------------|----------------|
| Digital inputs to CN21 | Non-voltage | 12 m           |

## All In One Type

### ▼ Wiring specifications

| Description                       |                                        | Model name<br>HWT- | POWER<br>SUPPLY         | Maximum<br>current  | Installation<br>fuse rating | Power wire                  | Connection<br>destination |      |
|-----------------------------------|----------------------------------------|--------------------|-------------------------|---------------------|-----------------------------|-----------------------------|---------------------------|------|
| Outdoor<br>Unit<br>power          | Power<br>input                         | 1101H(R)W-E        | 220-240 V<br>~ 50 Hz    | 20.3 A              | 25 A                        | 2.5 mm <sup>2</sup> or more | Ⓐ, Ⓑ                      |      |
|                                   |                                        | 801H(R)W-E         | 220-240 V<br>~ 50 Hz    | 20.3 A              | 25 A                        | 2.5 mm <sup>2</sup> or more |                           |      |
|                                   |                                        | 601HW-E            | 220-240 V<br>~ 50 Hz    | 14.6 A              | 16 A                        | 1.5 mm <sup>2</sup> or more |                           |      |
|                                   |                                        | 401HW-E            | 220-240 V<br>~ 50 Hz    | 14.6 A              | 16 A                        | 1.5 mm <sup>2</sup> or more |                           |      |
| Hydro<br>inlet<br>heater<br>power | Power<br>input for<br>backup<br>heater | 1101F21SM3W-E      | 220-240 V<br>~ 50 Hz    | 13 A                | 16 A                        | 1.5 mm <sup>2</sup> or more | Ⓐ, Ⓑ                      | TB03 |
|                                   |                                        | 1101F21MM3W-E      | 220-240 V<br>~ 50 Hz    | 13 A                | 16 A                        | 1.5 mm <sup>2</sup> or more | Ⓐ, Ⓑ                      |      |
|                                   |                                        | 1101F21ST6W-E      | 380-415 V<br>3N ~ 50 Hz | 13 A<br>(13 A x 2P) | 16 A                        | 1.5 mm <sup>2</sup> or more | Ⓐ, Ⓑ, Ⓒ, Ⓓ                |      |
|                                   |                                        | 1101F21MT6W-E      | 380-415 V<br>3N ~ 50 Hz | 13 A<br>(13 A x 3P) | 16 A                        | 1.5 mm <sup>2</sup> or more | Ⓐ, Ⓑ, Ⓒ, Ⓓ                |      |
|                                   |                                        | 1101F21ST9W-E      | 380-415 V<br>3N ~ 50 Hz | 13 A<br>(13 A x 3P) | 16 A                        | 1.5 mm <sup>2</sup> or more | Ⓐ, Ⓑ, Ⓒ, Ⓓ                |      |
|                                   |                                        | 1101F21MT9W-E      | 380-415 V<br>3N ~ 50 Hz | 13 A<br>(13 A x 3P) | 16 A                        | 1.5 mm <sup>2</sup> or more | Ⓐ, Ⓑ, Ⓒ, Ⓓ                |      |
|                                   |                                        | 601F21SM3W-E       | 220-240 V<br>~ 50 Hz    | 13 A                | 16 A                        | 1.5 mm <sup>2</sup> or more | Ⓐ, Ⓑ                      |      |
|                                   |                                        | 601F21ST6W-E       | 380-415 V<br>3N ~ 50 Hz | 13 A<br>(13 A x 2P) | 16 A                        | 1.5 mm <sup>2</sup> or more | Ⓐ, Ⓑ, Ⓒ, Ⓓ                |      |

### ▼ Wiring specifications (control line)

| Description              | Line spec | Maximum current | Maximum<br>length | Power wire                  | Connection<br>destination |
|--------------------------|-----------|-----------------|-------------------|-----------------------------|---------------------------|
| Second remote controller | 2 line    | 50 mA           | 50 m              | 0.5 mm <sup>2</sup> or more | (TB04)                    |
| Group control (total)    | 2 line    | 50 mA           | 50 m              | 0.5 mm <sup>2</sup> or more | (TB04)                    |
| Open protocol interface  | 2 line    | 100 mA          | 50 m              | 0.5 mm <sup>2</sup> or more | (TB04)                    |

### ▼ Control parts specifications

|                                        | Power    | Maximum current | Type                               |
|----------------------------------------|----------|-----------------|------------------------------------|
| Motorized 2-way valve<br>(for cooling) | AC 230 V | 100 mA          | spring return type (normally open) |

### ▼ Output line specifications

| Description               | Output                  | Maximum<br>current | Max<br>voltage | Maximum<br>length |                                                                      |
|---------------------------|-------------------------|--------------------|----------------|-------------------|----------------------------------------------------------------------|
| External boost heater     | AC230 V                 | 1 A                | —              | 12 m              | Output as required when outdoor air temperature<br>is -20 °C or less |
| Digital outputs from CN22 | Non-voltage<br>contacts | 0.5 A              | AC230 V        | 12 m              |                                                                      |
|                           |                         | 1 A                | DC24 V         | 12 m              |                                                                      |

### ▼ Input line specifications

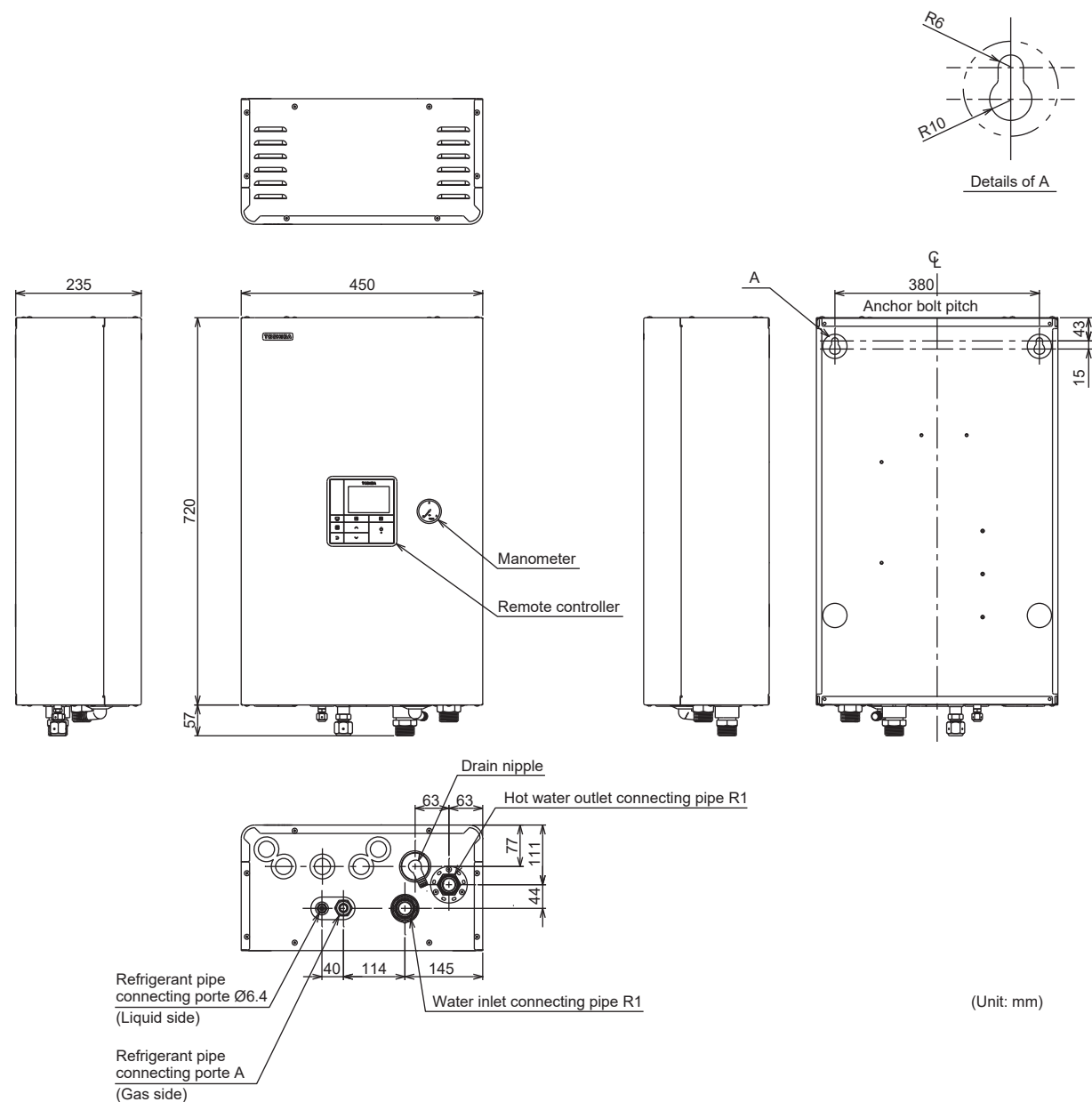
| Description            | Input       | Maximum length |
|------------------------|-------------|----------------|
| Digital inputs to CN21 | Non-voltage | 12 m           |

## 2-2. Dimension

### Hydro unit - Wall Mounted Type

HWT-601XWHM3W-E, HWT-601XWHT6W-E

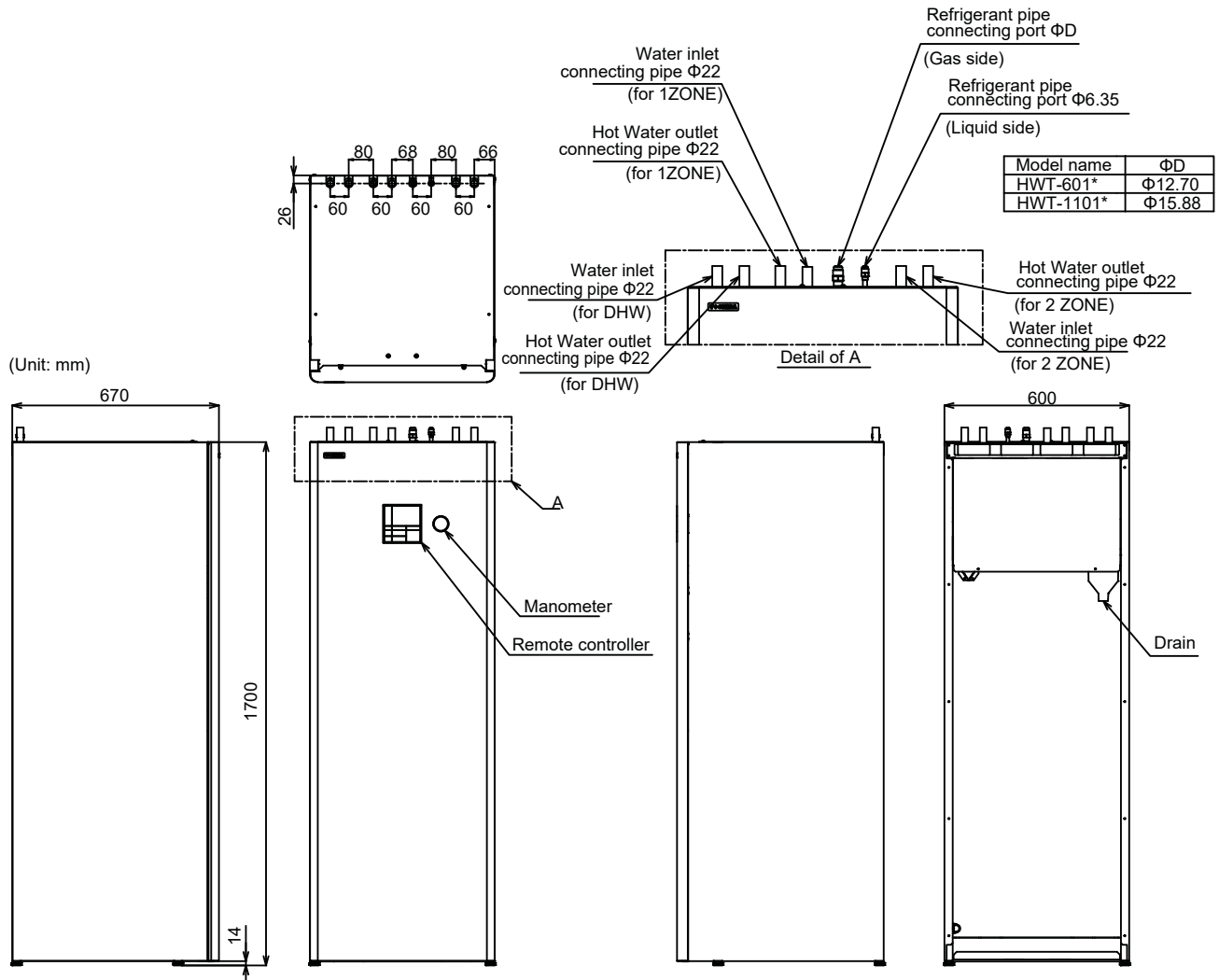
HWT-1101XWHM3W-E, HWT-1101XWHT6W-E, HWT-1101XWHT9W-E



| Model name | A                  |
|------------|--------------------|
| HWT-601    | $\varnothing 12.7$ |
| HWT-1101   | $\varnothing 15.9$ |

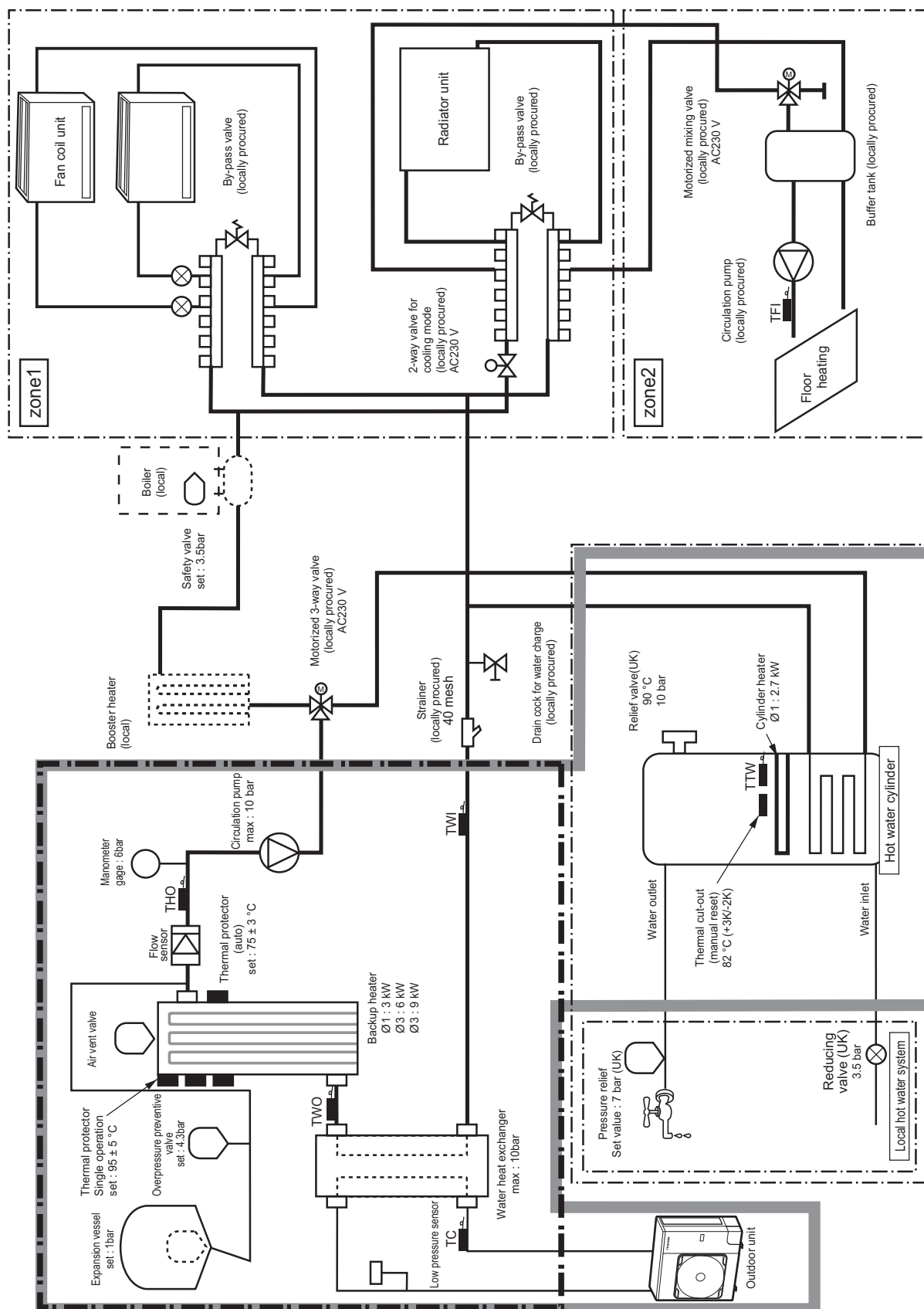
## Hydro unit - All In One Type

HWT-601F21SM3W-E, HWT-601F21ST6W-E, HWT-1101F21SM3W-E,  
HWT-1101F21MM3W-E, HWT-1101F21ST6W-E, HWT-1101F21MT6W-E,  
HWT-1101F21ST9W-E, HWT-1101F21MT9W-E



## 2-3. Piping Diagram

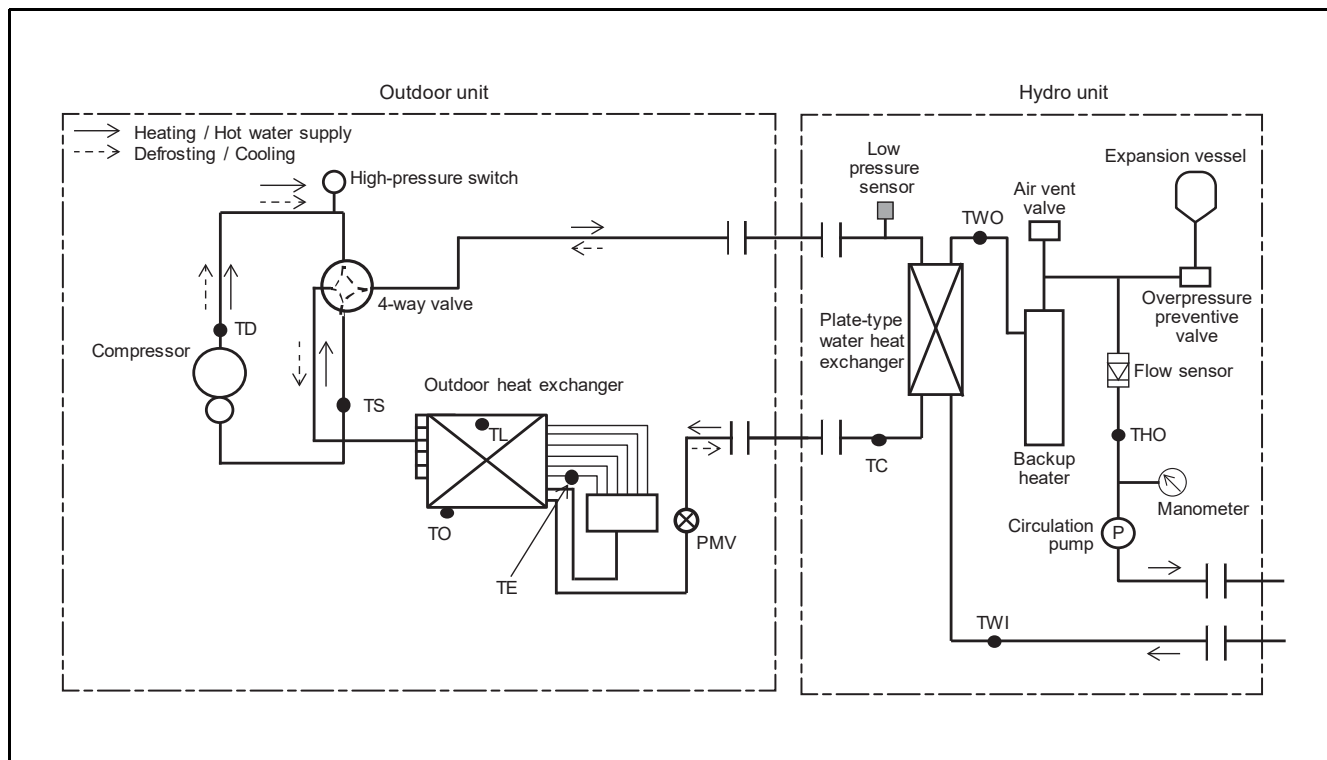
### Water system diagram - Wall Mounted Type



## Refrigeration cycle system diagram - Wall Mounted Type

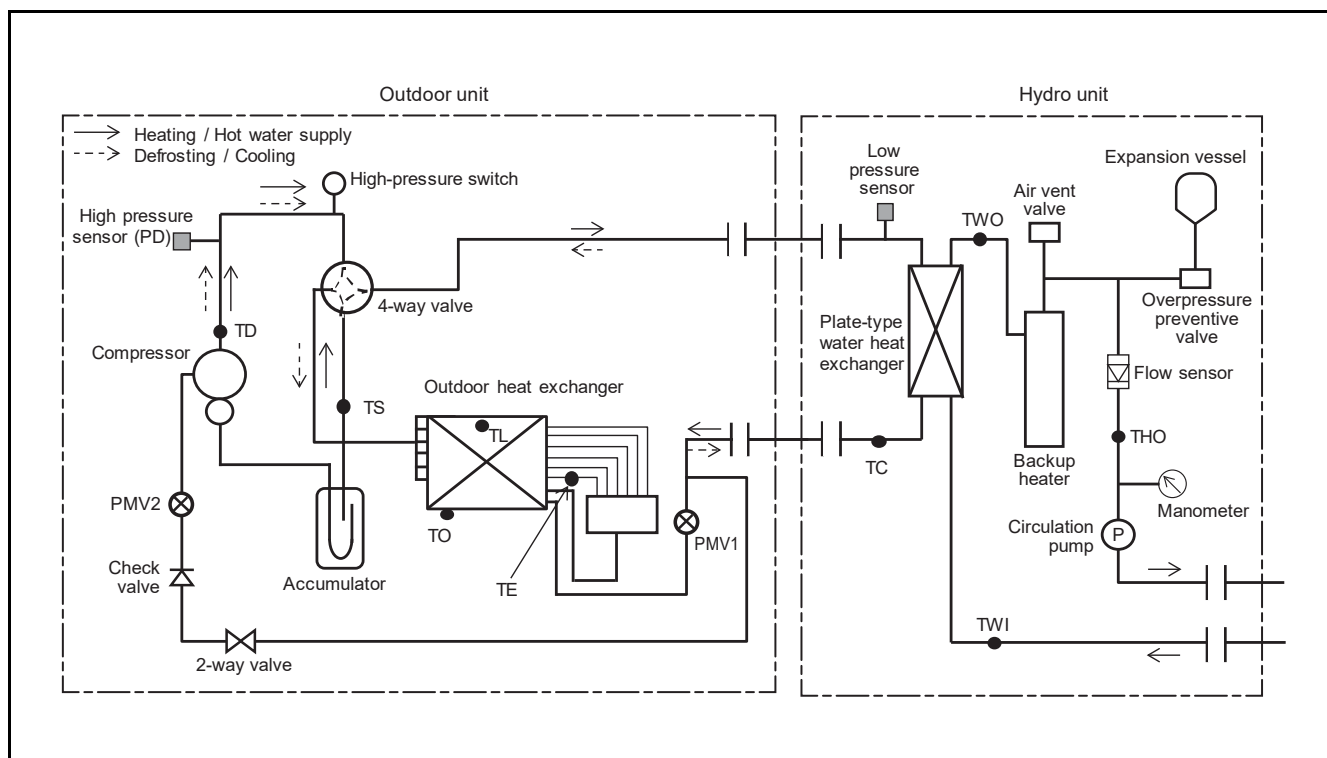
HWT-601XWHM3W-E, HWT-601XWHT6W-E

HWT-401HW-E, HWT-601HW-E

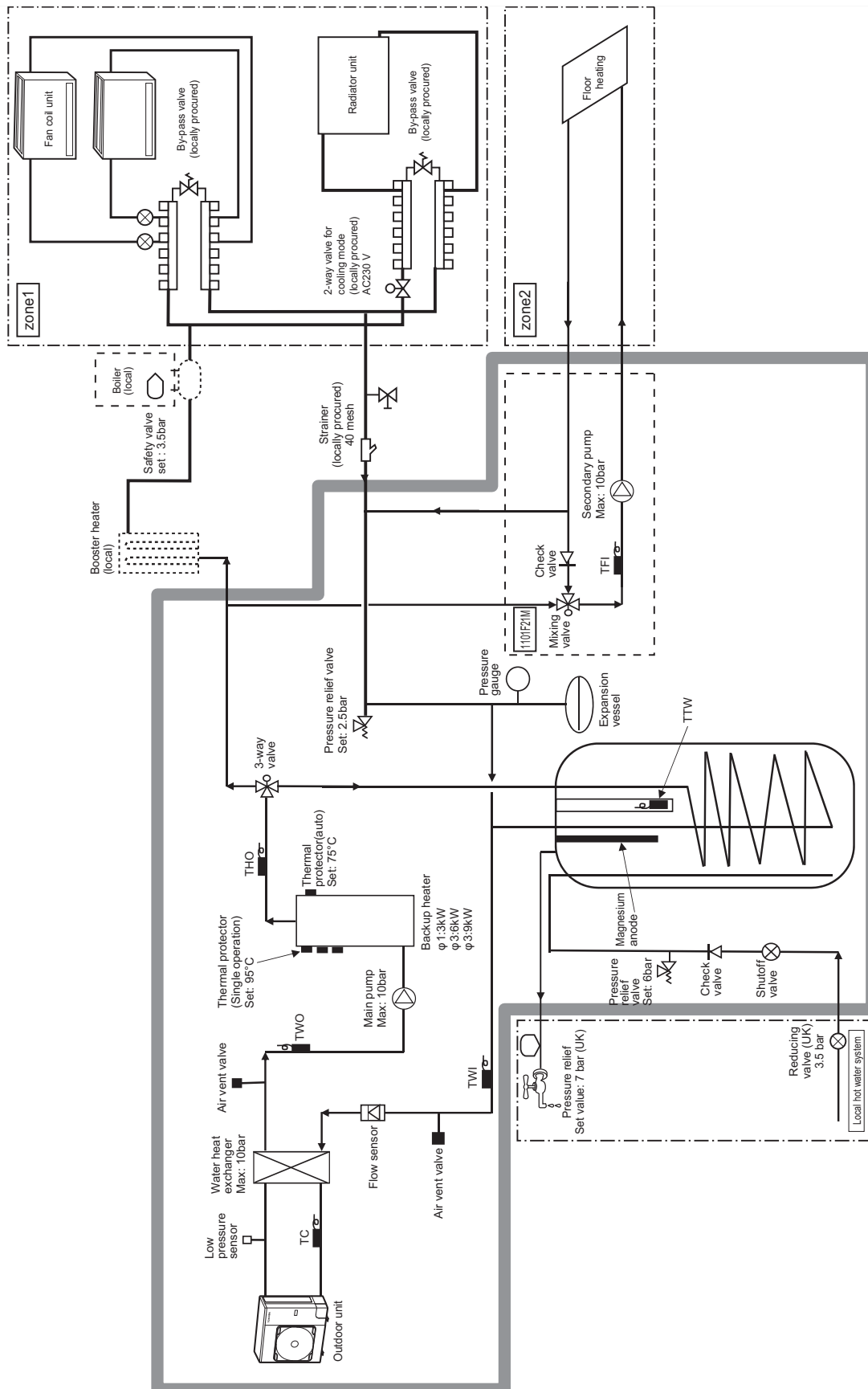


HWT-1101XWHM3W-E, HWT-1101XWHT6W-E, HWT-1101XWHT9W-E

HWT-801H(R)W-E, HWT-1101H(R)W-E



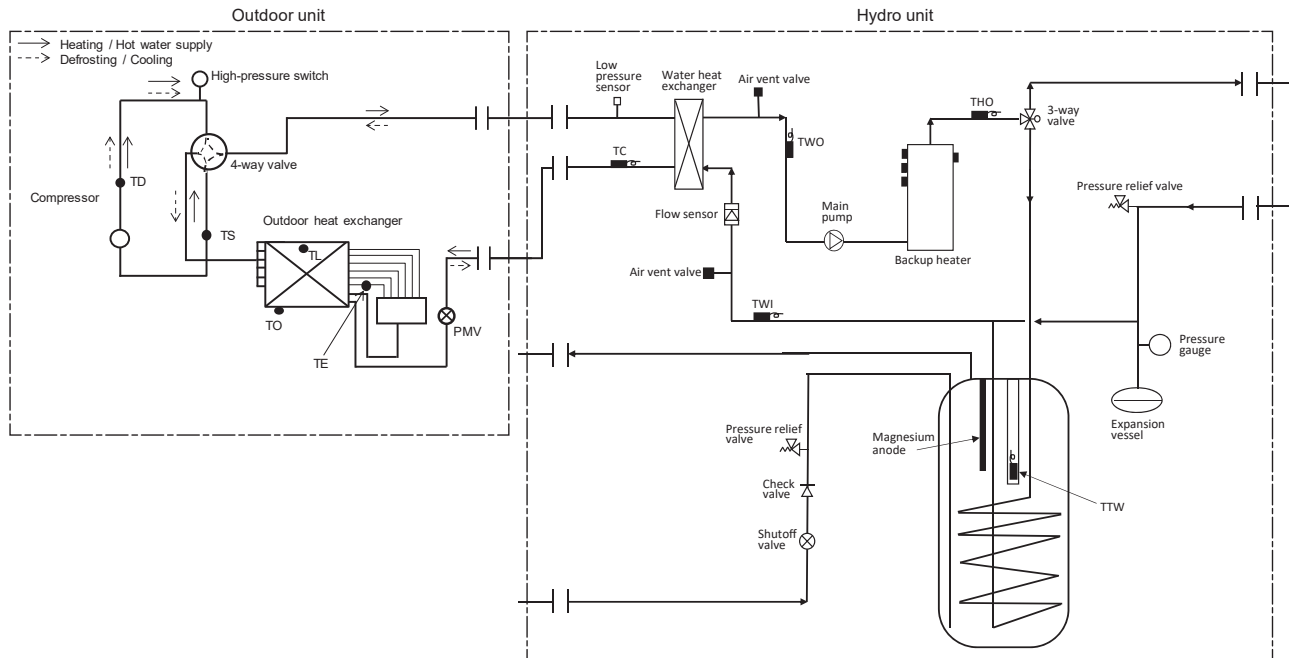
## Water system diagram - All In One Type



## Refrigeration cycle system diagram - All In One Type

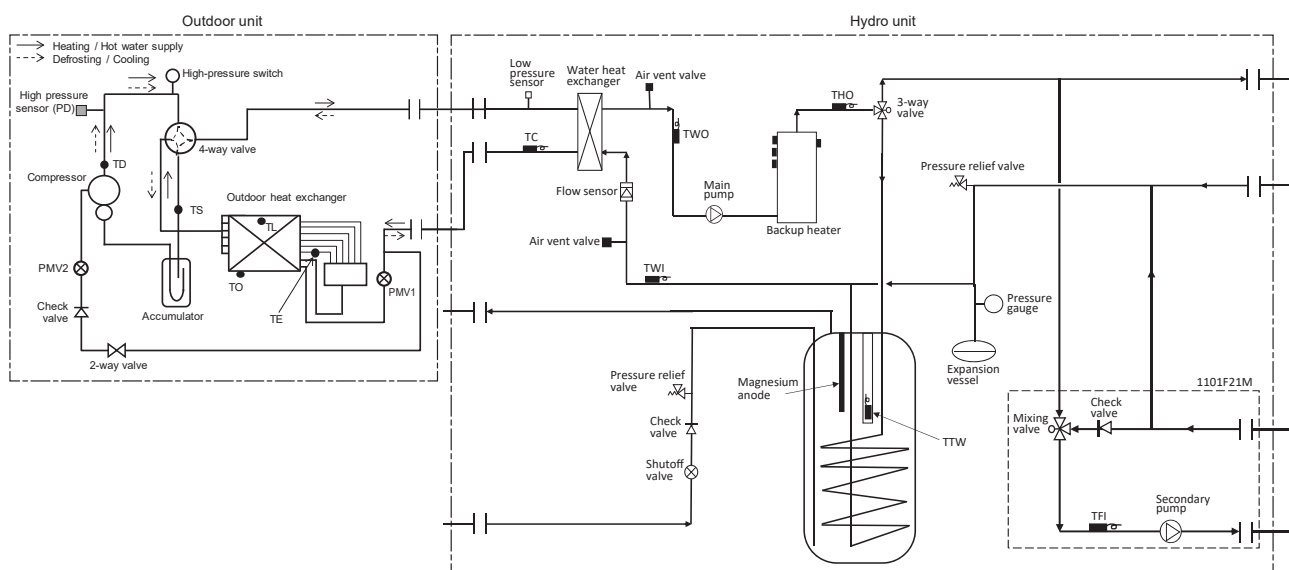
HWT-601F21SM3W-E, HWT-601F21ST6W-E

HWT-401HW-E, HWT-601HW-E



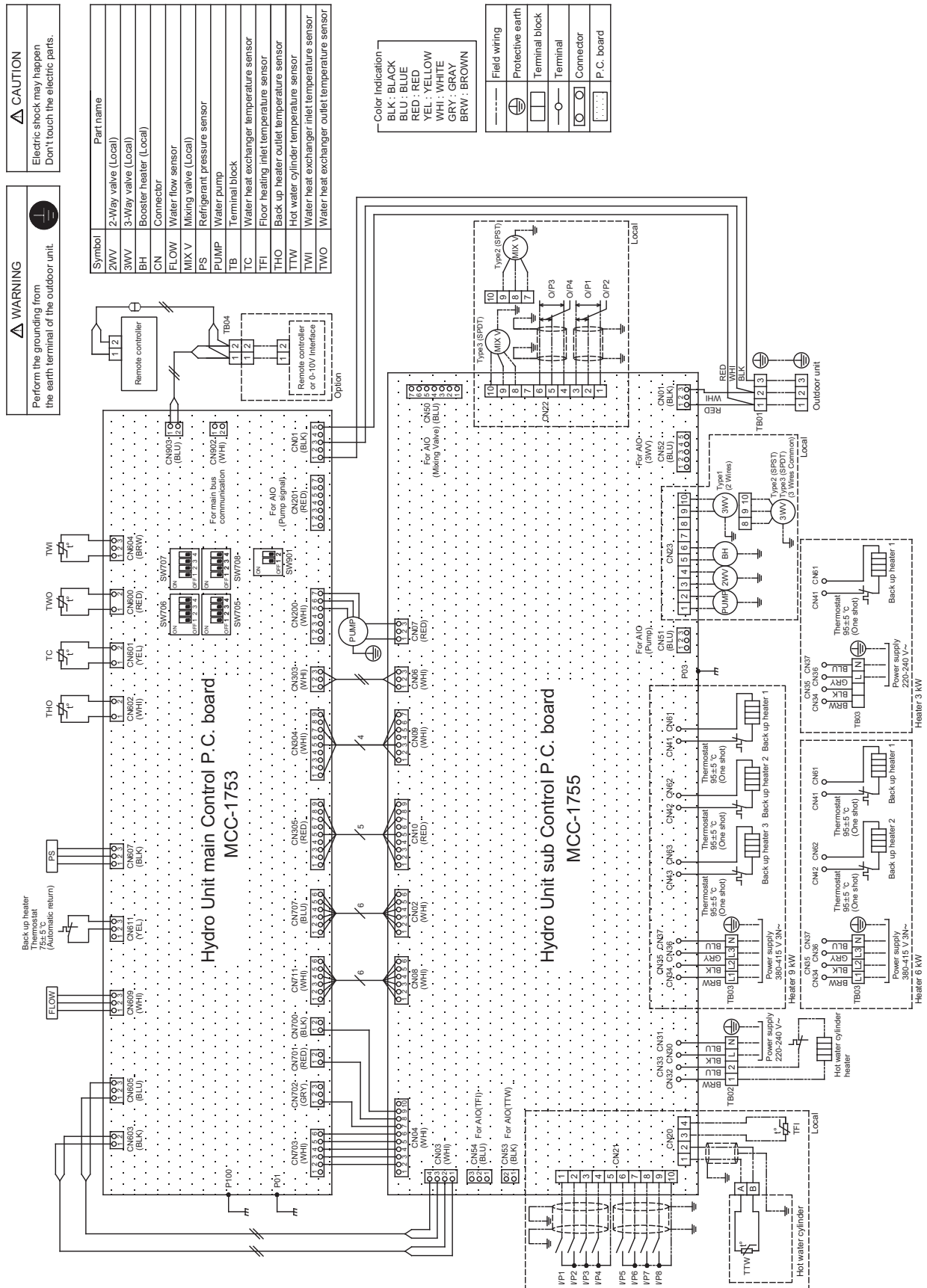
HWT-1101F21SM3W-E, HWT-1101F21ST6W-E, HWT-1101F21ST9W-E  
HWT-1101F21MM3W-E, HWT-1101F21MT6W-E, HWT-1101F21MT9W-E  
HWT-801H(R)W-E, HWT-1101H(R)W-E

2

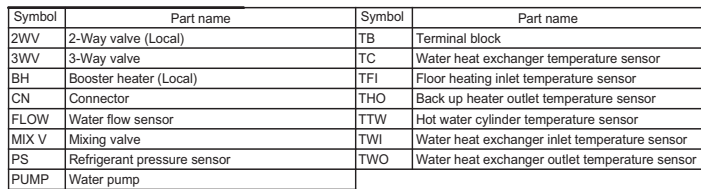


## 2-4. Wiring Diagram

### 2-4-1. Hydro unit - Wall Mounted Type



## 2



## 2-4-2. Power line

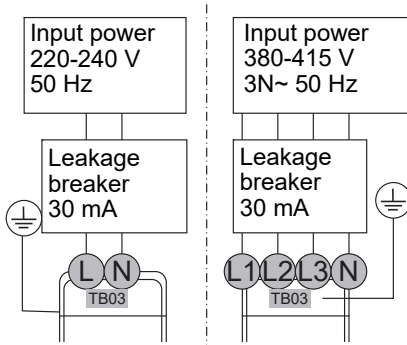
### Hydro unit - Wall Mounted Type

#### Electrical connection to Hydro Unit

- Remove the front cover and the electrical box cover from the Hydro Unit.
- The Hydro Unit power cable must be sized in accordance with refer to “Electrical supply/cable specifications”.
- Connect the Hydro Unit power cable to Terminal 03 as shown below.

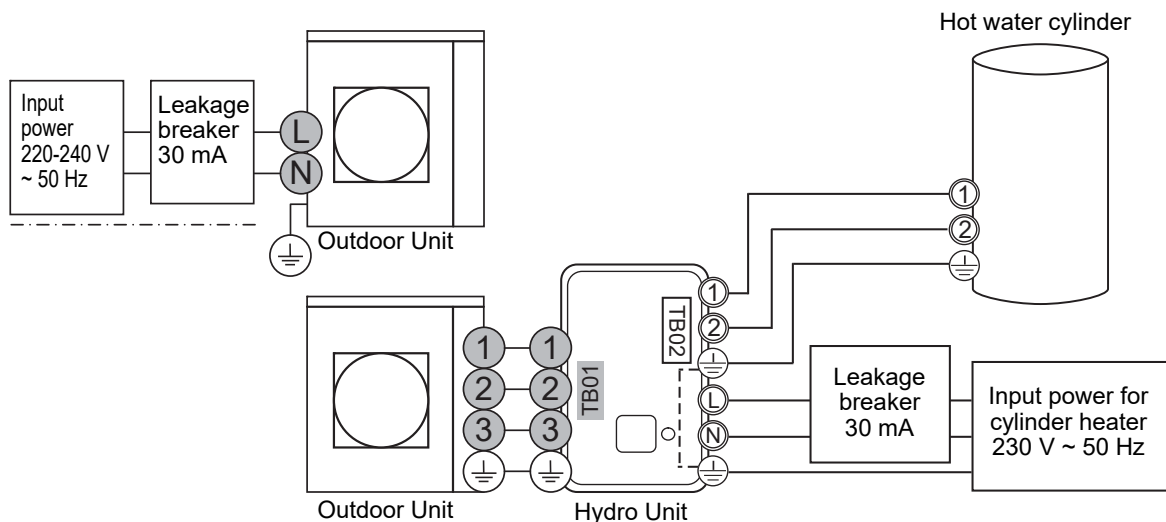
Backup heater  
220-240 V ~ type  
(3 kW type)

Backup heater  
380-415 V 3N~  
type  
(6,9 kW type)



- Ensure the Hydro Unit power cable is secured using the cable clamp fitted in the electrical box.
- Ensure the Hydro Unit power cable connection terminals are tight.

#### Outdoor Unit to Hydro Unit electrical connection



- Ensure electrical circuits are isolated before commencing work.
- The Outdoor Unit to Hydro Unit interconnecting cable must be sized in accordance with refer to “Electrical supply/cable specifications”.
- Connect the Outdoor Unit to Hydro Unit interconnecting cable as shown in the diagram above.
- Ensure the Outdoor Unit to Hydro Unit interconnecting cable is secured using the cable clamp fitted in the electrical box.
- Ensure the Outdoor Unit to Hydro Unit interconnecting cable connection terminals are tight.

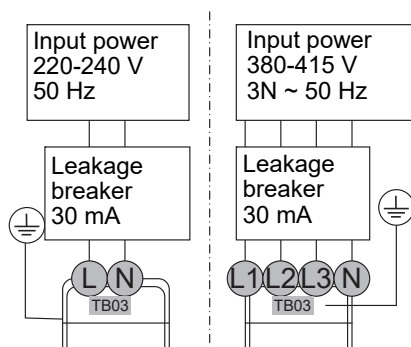
## Hydro unit - All In One Type

### Electrical connection to Hydro Unit for backup heater

- Remove the front cover and the electrical box cover from the Hydro Unit.
- The Hydro Unit power cable must be sized in accordance with refer to “Electrical supply/cable specifications”.
- Connect the Hydro Unit power cable to Terminal 03 as shown below.

Backup heater  
220-240 V ~ type  
(3 kW type)

Backup heater  
380-415 V 3N~  
type  
(6,9 kW type)



- Ensure the Hydro Unit power cable is secured using the cable clamp fitted in the electrical box.
- Ensure the Hydro Unit power cable connection terminals are tight.

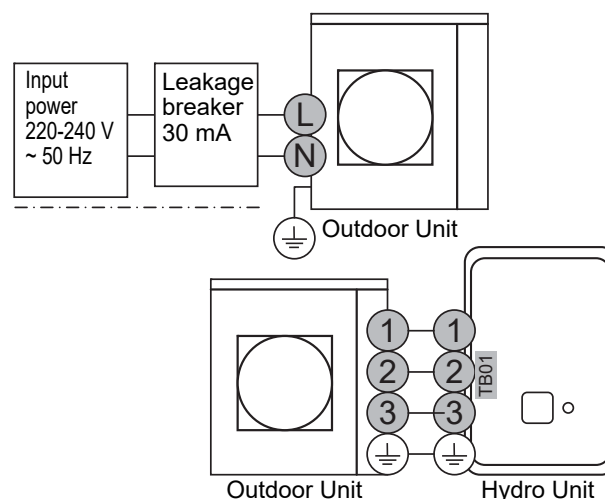
#### 3 kW type

| TB03 |   |   |   |
|------|---|---|---|
| 1    | 2 | 3 | 4 |
|      |   | L | N |

#### 6 kW, 9 kW type

| TB03 |    |    |   |
|------|----|----|---|
| 1    | 2  | 3  | 4 |
| L1   | L2 | L3 | N |

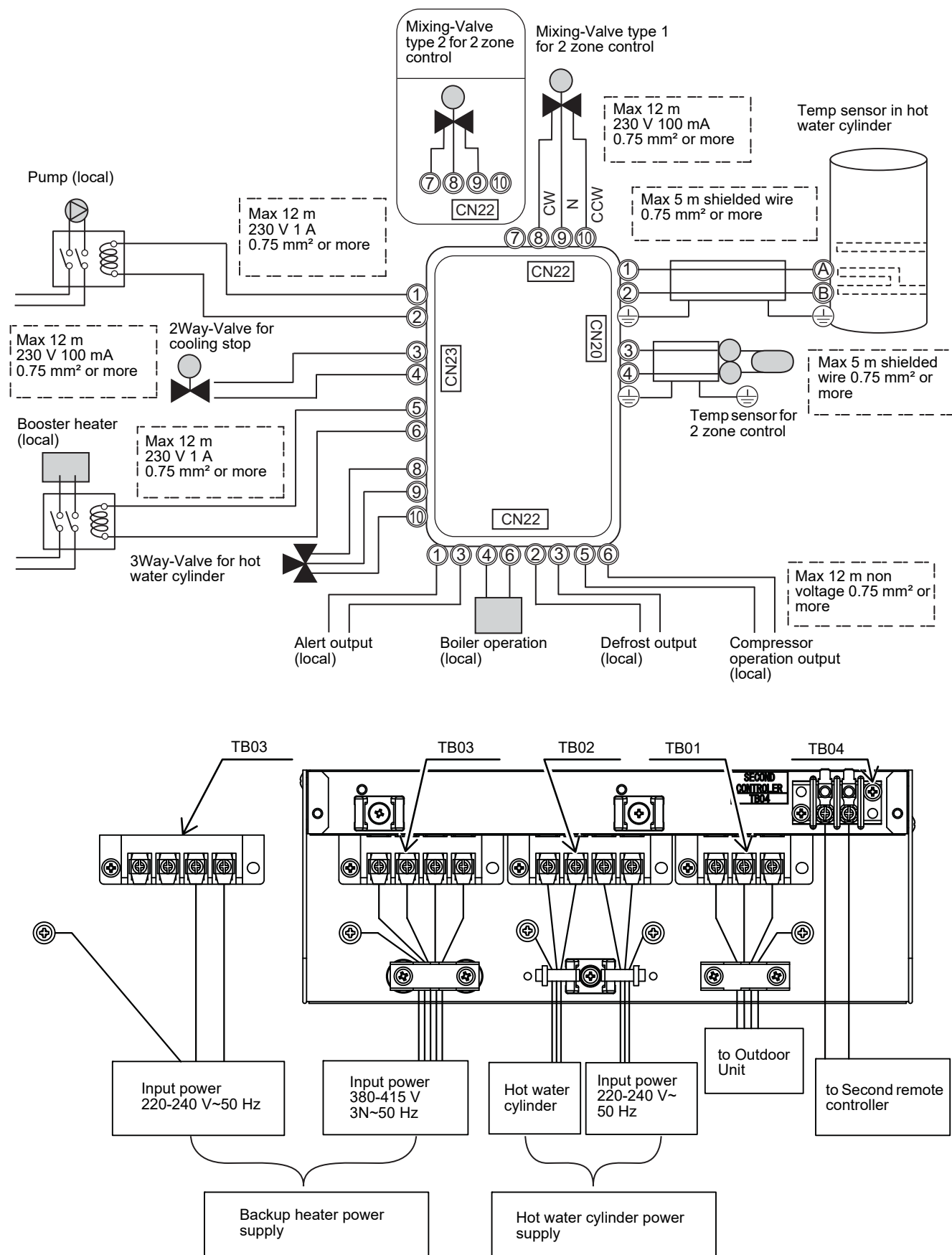
### Outdoor Unit to Hydro Unit electrical connection



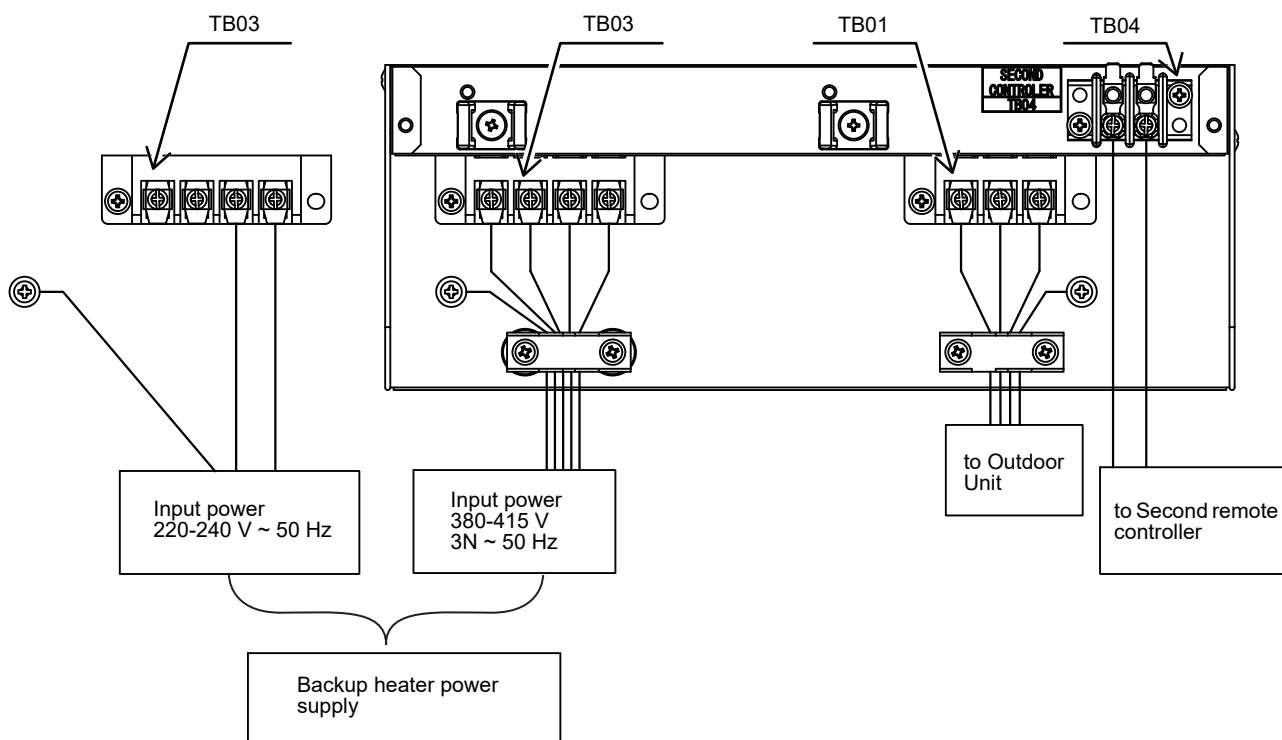
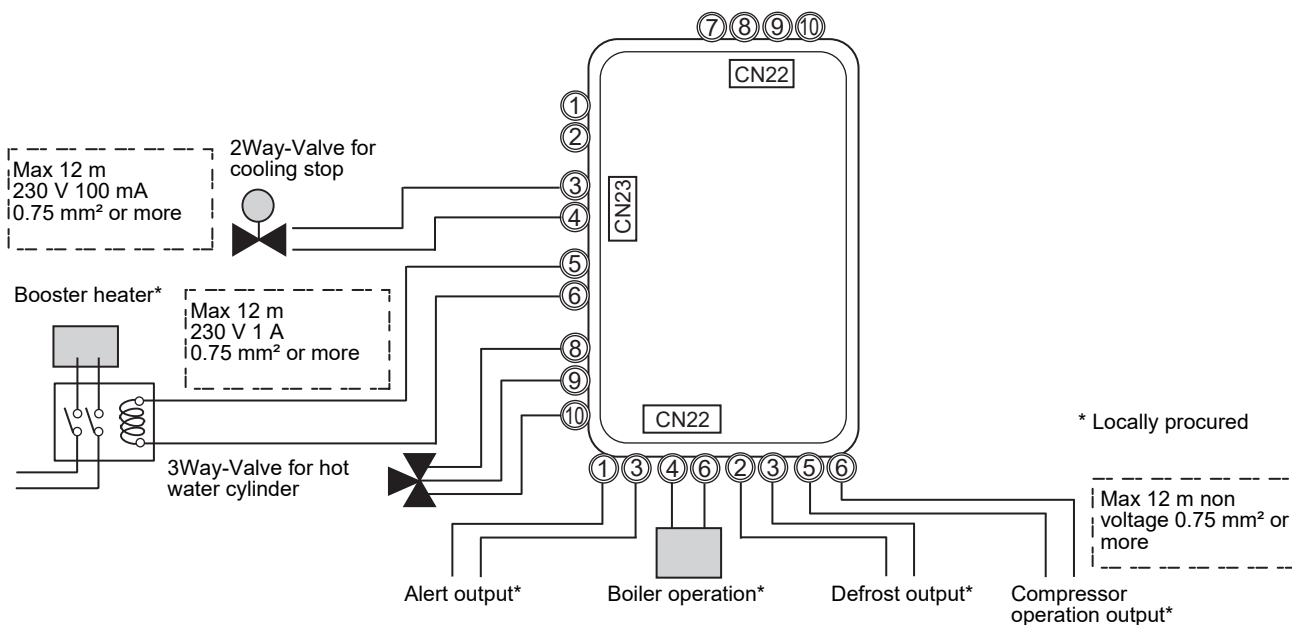
- Ensure electrical circuits are isolated before commencing work.
- The Outdoor Unit to Hydro Unit interconnecting cable must be sized in accordance with refer to “Electrical supply/cable specifications”.
- Connect the Outdoor Unit to Hydro Unit interconnecting cable as shown in the diagram above.
- Ensure the Outdoor Unit to Hydro Unit interconnecting cable is secured using the cable clamp fitted in the electrical box.
- Ensure the Outdoor Unit to Hydro Unit interconnecting cable connection terminals are tight.

## 2-4-3. Control line

### Hydro unit - Wall Mounted Type



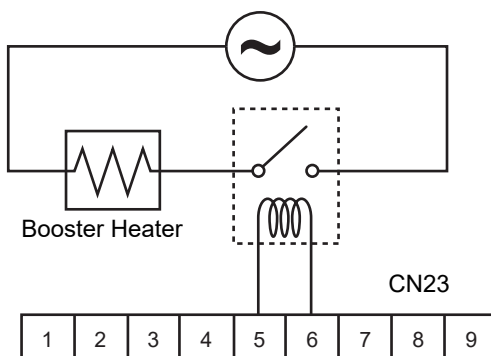
## Hydro unit - All In One Type



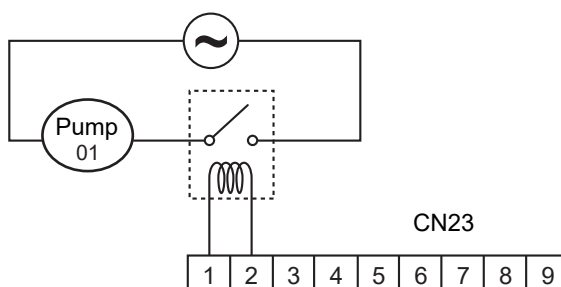
## 2-4-4. External Device

### Hydro unit - Wall Mounted Type

#### Electrical connection for external booster heater

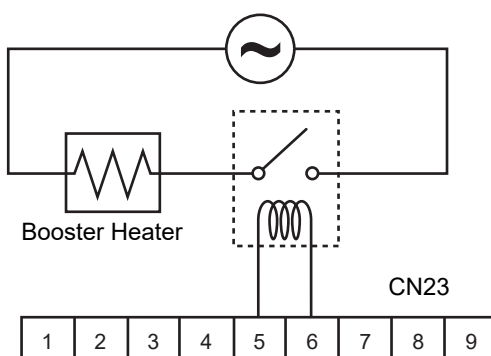


#### Electrical connection for external additional pumps



### Hydro unit - All In One Type

#### Electrical connection for external booster heater



## Hydro unit - Wall Mounted Type

### 3-way valve (diverter) connection

#### Required Valve Specification:

Electrical Specification: 230 V; 50 Hz; <100 mA

Valve Diameters: Port A, Port B: Ø 1 1/4"

Return Mechanism: 3 types of 3-way valve (diverter) can be used.

Set the 3-way valve in use with the DN 6B4.

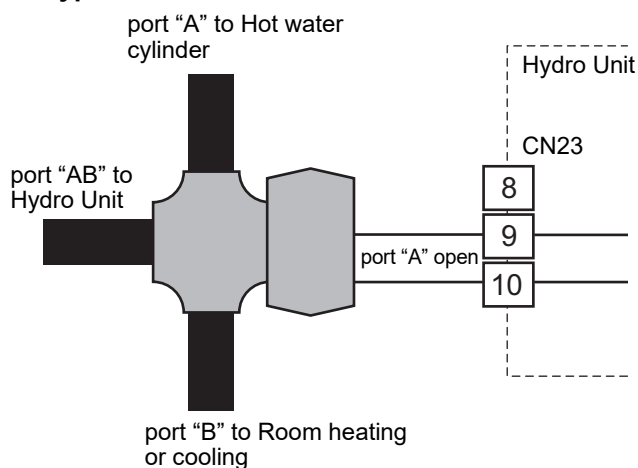
|        |                      | 6B4 |
|--------|----------------------|-----|
| Type 1 | 2-wire spring return | 0   |
| Type 2 | 3-wire SPST          | 0   |
| Type 3 | 3-wire SPDT          | 1   |

#### NOTE

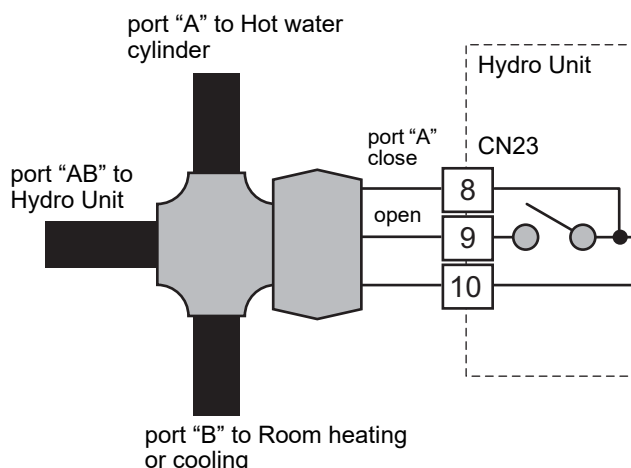
Continuous operation of the valve motor at the fully open position is not recommended.

- The 3-way diverter valve is used to select either domestic hot water or space heating.
- Connect the 3-way diverter valve to terminals 8, 9 and 10 on CN23.
- Connect the 3-way diverter valve in accordance with the diagram below:

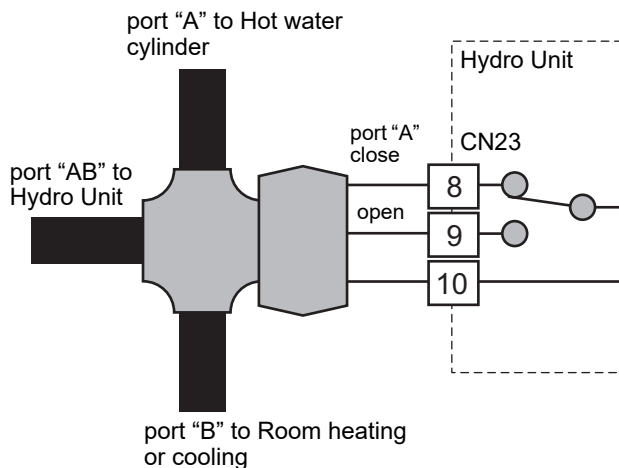
#### Type 1: SPRING RETURN



#### Type 2: SPST



#### Type 3: SPDT



## Hydro unit - Wall Mounted Type

### 3-way mixing valve connection

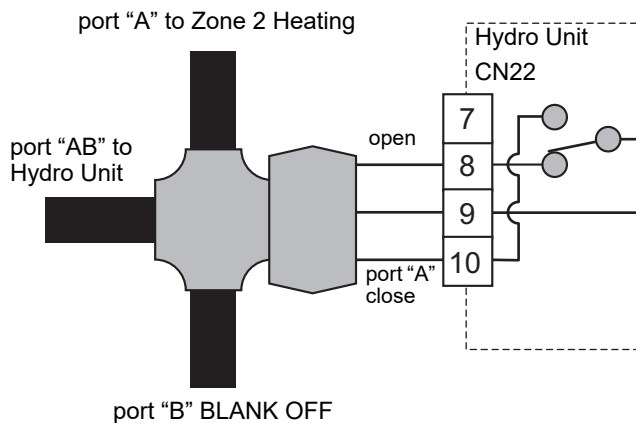
#### Required Actuator Specification

Electrical Specification: 230 V; 50 Hz; <100 mA

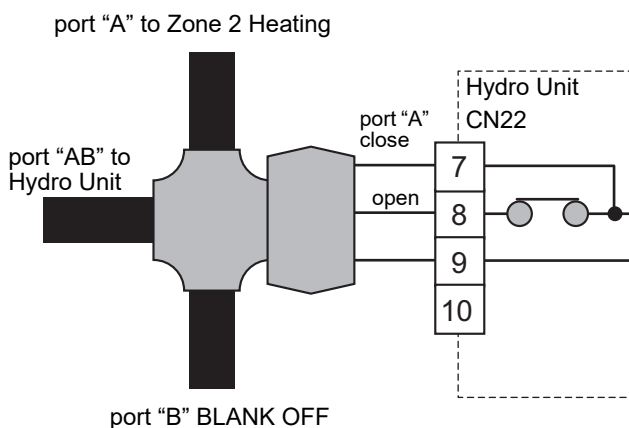
The 3-way mixing valve is used to achieve the temperature differential needed in a 2-zone heating system.

- Connect the 3-way mixing valve to terminals 8, 9 and 10 on CN22 (for Type 1 mixing valve) or on terminals 7, 8 and 9 on CN22 (for Type 2 mixing valve).
- Connect the 3-way mixing valve in accordance with the diagrams below:

#### Type 1: SPDT



#### Type 2: SPST

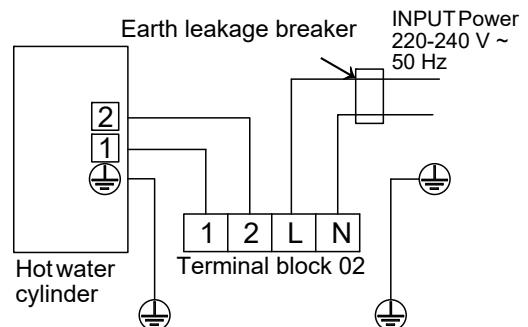


### Hot water cylinder connection (optional)

- Please refer to “Electrical supply/cable specifications” for fuse/cable size and for connection details.

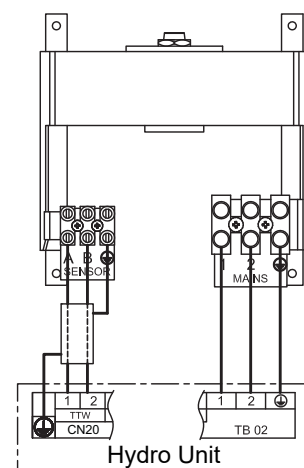
### Electrical Connection (Hot Water Cylinder Electric Heater)

- The electric heater, incorporated in the hot water cylinder, requires a separate supply to Hydro Unit.
- Connect the hot water cylinder heater electrical supply in accordance with shown below:  
Live conductor: Terminal L on Terminal Block 02  
Neutral conductor: Terminal N on Terminal Block 02  
Earth Conductor: Earth terminal on Terminal Block 02
- Connect the hot water cylinder heater to the Hydro Unit as shown below:  
Live conductor to hot water cylinder: Terminal 1 on Terminal Block 03  
Neutral conductor to hot water cylinder: Terminal 2 on Terminal Block 03  
Earth conductor to hot water cylinder: Earth terminal on Terminal Block 03



### Electrical Connection (Hot Water Cylinder temperature Sensor)

- Connect the hot water cylinder temperature sensor as shown below to terminals 1 & 2 on CN20 in the Hydro Unit.
- Please ensure that the interconnecting cable, between the Hydro Unit and the hot water cylinder, is connected to earth at both ends of the cable using the shield wire.



## 2-5. Capacity Tables

### Heating capacity and input specifications

Outdoor unit HWT-401HW-E

#### Rated heating capacity and power input

|                                                          |                       |       |      |
|----------------------------------------------------------|-----------------------|-------|------|
| Rated Heating condition<br>LWT=35°C<br>dT=5deg<br>TO=7°C | Capacity              | kW    | 4.0  |
|                                                          | Input                 | kW    | 0.77 |
|                                                          | COP                   | (W/W) | 5.20 |
|                                                          | Rated water flow rate | L/min | 11.6 |

\* Rated condition capacity and power input are the data at rated compressor operating frequency.

\* Power input does not include water pump power.

\* Capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (°C)

LWT : Leaving water temperature (°C)

dT : Delta temperature (deg)

Leaving water temperature - Return water temperature (Heating)

Return water temperature - Leaving water temperature (Cooling)

## Average heating capacity and power input

| Capacity (kW) |     | LWT (°C) |      |      |      |      |      |
|---------------|-----|----------|------|------|------|------|------|
|               |     | 30       | 35   | 40   | 45   | 50   | 55   |
| TO<br>(°C)    | -20 | 2.97     | 2.88 | 2.79 | —    | —    | —    |
|               | -15 | 3.57     | 3.43 | 3.29 | 3.15 | —    | —    |
|               | -10 | 4.04     | 3.94 | 3.85 | 3.76 | 3.66 | —    |
|               | -7  | 4.32     | 4.25 | 4.19 | 4.12 | 4.02 | 3.91 |
|               | -2  | 4.49     | 4.54 | 4.60 | 4.65 | 4.52 | 4.38 |
|               | 2   | 4.63     | 4.78 | 4.93 | 5.08 | 4.92 | 4.76 |
|               | 7   | 6.12     | 7.25 | 7.11 | 6.97 | 6.74 | 6.51 |
|               | 10  | 8.11     | 7.95 | 7.80 | 7.64 | 7.41 | 7.18 |
|               | 12  | 8.53     | 8.42 | 8.26 | 8.09 | 7.86 | 7.62 |
|               | 15  | 8.76     | 8.63 | 8.47 | 8.31 | 8.05 | 7.79 |
|               | 20  | 9.13     | 8.98 | 8.83 | 8.67 | 8.37 | 8.06 |

| Power input (kW) |     | LWT (°C) |      |      |      |      |      |
|------------------|-----|----------|------|------|------|------|------|
|                  |     | 30       | 35   | 40   | 45   | 50   | 55   |
| TO<br>(°C)       | -20 | 1.18     | 1.28 | 1.38 | —    | —    | —    |
|                  | -15 | 1.26     | 1.35 | 1.44 | 1.53 | —    | —    |
|                  | -10 | 1.29     | 1.38 | 1.49 | 1.62 | 1.80 | —    |
|                  | -7  | 1.25     | 1.39 | 1.53 | 1.67 | 1.80 | 1.93 |
|                  | -2  | 1.19     | 1.35 | 1.51 | 1.66 | 1.82 | 1.97 |
|                  | 2   | 1.14     | 1.31 | 1.49 | 1.66 | 1.84 | 2.01 |
|                  | 7   | 1.22     | 1.49 | 1.66 | 1.82 | 1.99 | 2.15 |
|                  | 10  | 1.31     | 1.48 | 1.66 | 1.83 | 2.00 | 2.17 |
|                  | 12  | 1.31     | 1.48 | 1.66 | 1.84 | 2.02 | 2.19 |
|                  | 15  | 1.31     | 1.48 | 1.66 | 1.84 | 2.02 | 2.19 |
|                  | 20  | 1.31     | 1.48 | 1.67 | 1.85 | 2.02 | 2.18 |

| COP        |     | LWT (°C) |      |      |      |      |      |
|------------|-----|----------|------|------|------|------|------|
|            |     | 30       | 35   | 40   | 45   | 50   | 55   |
| TO<br>(°C) | -20 | 2.52     | 2.25 | 2.02 | —    | —    | —    |
|            | -15 | 2.83     | 2.54 | 2.28 | 2.06 | —    | —    |
|            | -10 | 3.14     | 2.86 | 2.59 | 2.31 | 2.04 | —    |
|            | -7  | 3.45     | 3.06 | 2.74 | 2.47 | 2.23 | 2.03 |
|            | -2  | 3.79     | 3.38 | 3.06 | 2.80 | 2.48 | 2.22 |
|            | 2   | 4.08     | 3.65 | 3.32 | 3.06 | 2.68 | 2.37 |
|            | 7   | 5.02     | 4.87 | 4.30 | 3.83 | 3.40 | 3.03 |
|            | 10  | 6.19     | 5.36 | 4.70 | 4.17 | 3.70 | 3.30 |
|            | 12  | 6.51     | 5.69 | 4.97 | 4.40 | 3.90 | 3.48 |
|            | 15  | 6.68     | 5.83 | 5.10 | 4.51 | 3.99 | 3.56 |
|            | 20  | 6.97     | 6.07 | 5.30 | 4.69 | 4.15 | 3.70 |

\* Heating capacity and power input are include defrost cycle data.

\* Heating capacity and power input are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Heating capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## Heating peak capacity and power input

| Capacity (kW) |     | LWT (°C) |      |      |      |      |      |
|---------------|-----|----------|------|------|------|------|------|
|               |     | 30       | 35   | 40   | 45   | 50   | 55   |
| TO<br>(°C)    | -20 | 3.22     | 3.10 | 2.98 | —    | —    | —    |
|               | -15 | 3.91     | 3.73 | 3.55 | 3.37 | —    | —    |
|               | -10 | 4.57     | 4.40 | 4.23 | 4.06 | 3.90 | —    |
|               | -7  | 4.96     | 4.80 | 4.64 | 4.48 | 4.40 | 4.31 |
|               | -2  | 5.89     | 5.70 | 5.51 | 5.32 | 5.15 | 4.98 |
|               | 2   | 6.64     | 6.42 | 6.21 | 5.99 | 5.76 | 5.52 |
|               | 7   | 7.39     | 7.25 | 7.11 | 6.97 | 6.74 | 6.51 |
|               | 10  | 8.11     | 7.95 | 7.80 | 7.64 | 7.41 | 7.18 |
|               | 12  | 8.53     | 8.42 | 8.26 | 8.09 | 7.86 | 7.62 |
|               | 15  | 8.76     | 8.63 | 8.47 | 8.31 | 8.05 | 7.79 |
|               | 20  | 9.13     | 8.98 | 8.83 | 8.67 | 8.37 | 8.06 |

| Power input (kW) |     | LWT (°C) |      |      |      |      |      |
|------------------|-----|----------|------|------|------|------|------|
|                  |     | 30       | 35   | 40   | 45   | 50   | 55   |
| TO<br>(°C)       | -20 | 1.22     | 1.32 | 1.42 | —    | —    | —    |
|                  | -15 | 1.32     | 1.41 | 1.51 | 1.60 | —    | —    |
|                  | -10 | 1.38     | 1.46 | 1.56 | 1.69 | 1.85 | —    |
|                  | -7  | 1.37     | 1.49 | 1.61 | 1.73 | 1.88 | 2.03 |
|                  | -2  | 1.37     | 1.51 | 1.65 | 1.79 | 1.95 | 2.11 |
|                  | 2   | 1.37     | 1.52 | 1.68 | 1.83 | 2.00 | 2.17 |
|                  | 7   | 1.33     | 1.49 | 1.66 | 1.82 | 1.99 | 2.15 |
|                  | 10  | 1.31     | 1.48 | 1.66 | 1.83 | 2.00 | 2.17 |
|                  | 12  | 1.31     | 1.48 | 1.66 | 1.84 | 2.02 | 2.19 |
|                  | 15  | 1.31     | 1.48 | 1.66 | 1.84 | 2.02 | 2.19 |
|                  | 20  | 1.31     | 1.48 | 1.67 | 1.85 | 2.02 | 2.18 |

| COP        |     | LWT (°C) |      |      |      |      |      |
|------------|-----|----------|------|------|------|------|------|
|            |     | 30       | 35   | 40   | 45   | 50   | 55   |
| TO<br>(°C) | -20 | 2.64     | 2.35 | 2.10 | —    | —    | —    |
|            | -15 | 2.97     | 2.65 | 2.36 | 2.11 | —    | —    |
|            | -10 | 3.30     | 3.01 | 2.71 | 2.41 | 2.11 | —    |
|            | -7  | 3.62     | 3.22 | 2.88 | 2.59 | 2.34 | 2.12 |
|            | -2  | 4.31     | 3.78 | 3.35 | 2.98 | 2.65 | 2.36 |
|            | 2   | 4.86     | 4.22 | 3.70 | 3.27 | 2.88 | 2.54 |
|            | 7   | 5.58     | 4.87 | 4.30 | 3.83 | 3.40 | 3.03 |
|            | 10  | 6.19     | 5.36 | 4.70 | 4.17 | 3.70 | 3.30 |
|            | 12  | 6.51     | 5.69 | 4.97 | 4.40 | 3.90 | 3.48 |
|            | 15  | 6.68     | 5.83 | 5.10 | 4.51 | 3.99 | 3.56 |
|            | 20  | 6.97     | 6.07 | 5.30 | 4.69 | 4.15 | 3.70 |

\* Heating capacity and power input are include defrost cycle data.

\* Heating capacity and power input are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Heating capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## **Cooling capacity and input specifications**

**Outdoor unit HWT-401HW-E**

### **Rated Cooling capacity and power input**

|                                                          |                       |       |      |
|----------------------------------------------------------|-----------------------|-------|------|
| Rated Cooling condition<br>LWT=7°C<br>dT=5deg<br>TO=35°C | Capacity              | kW    | 4.0  |
|                                                          | Input                 | kW    | 1.16 |
|                                                          | COP                   | (W/W) | 3.45 |
|                                                          | Rated water flow rate | L/min | 11.5 |

\* Rated condition capacity and power input are the data at rated compressor operating frequency.

\* Power input does not include water pump power.

\* Capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (°C)

LWT : Leaving water temperature (°C)

dT : Delta temperature (deg)

Leaving water temperature - Return water temperature (Heating)

Return water temperature - Leaving water temperature (Cooling)

## Cooling capacity and power input

| Capacity (kW) |    | LWT (°C) |      |      |      |      |
|---------------|----|----------|------|------|------|------|
|               |    | 7        | 10   | 13   | 15   | 18   |
| TO<br>(°C)    | 20 | 5.47     | 5.86 | 6.24 | 6.62 | 7.19 |
|               | 27 | 5.13     | 5.56 | 5.98 | 6.31 | 6.79 |
|               | 30 | 4.98     | 5.43 | 5.87 | 6.17 | 6.62 |
|               | 35 | 4.74     | 5.22 | 5.69 | 5.95 | 6.34 |
|               | 40 | 4.00     | 4.58 | 5.16 | 5.44 | 5.87 |
|               | 43 | 3.56     | 4.20 | 4.84 | 5.14 | 5.59 |

| Power input (kW) |    | LWT (°C) |      |      |      |      |
|------------------|----|----------|------|------|------|------|
|                  |    | 7        | 10   | 13   | 15   | 18   |
| TO<br>(°C)       | 20 | 1.03     | 1.11 | 1.18 | 1.16 | 1.13 |
|                  | 27 | 1.20     | 1.25 | 1.30 | 1.29 | 1.28 |
|                  | 30 | 1.27     | 1.31 | 1.35 | 1.35 | 1.34 |
|                  | 35 | 1.39     | 1.41 | 1.43 | 1.44 | 1.45 |
|                  | 40 | 1.51     | 1.54 | 1.57 | 1.58 | 1.59 |
|                  | 43 | 1.58     | 1.62 | 1.65 | 1.66 | 1.68 |

| COP        |    | LWT (°C) |      |      |      |      |
|------------|----|----------|------|------|------|------|
|            |    | 7        | 10   | 13   | 15   | 18   |
| TO<br>(°C) | 20 | 5.31     | 5.30 | 5.29 | 5.71 | 6.36 |
|            | 27 | 4.28     | 4.45 | 4.61 | 4.89 | 5.31 |
|            | 30 | 3.92     | 4.15 | 4.36 | 4.59 | 4.93 |
|            | 35 | 3.41     | 3.70 | 3.98 | 4.14 | 4.37 |
|            | 40 | 2.65     | 2.98 | 3.29 | 3.45 | 3.68 |
|            | 43 | 2.25     | 2.60 | 2.93 | 3.09 | 3.33 |

\* Cooling capacity and power input are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Cooling capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## Heating capacity and input specifications

Outdoor unit HWT-601HW-E

### Rated heating capacity and power input

|                                                          |                       |       |      |
|----------------------------------------------------------|-----------------------|-------|------|
| Rated Heating condition<br>LWT=35°C<br>dT=5deg<br>TO=7°C | Capacity              | kW    | 6.0  |
|                                                          | Input                 | kW    | 1.25 |
|                                                          | COP                   | (W/W) | 4.80 |
|                                                          | Rated water flow rate | L/min | 17.3 |

\* Rated condition capacity and power input are the data at rated compressor operating frequency.

\* Power input does not include water pump power.

\* Capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (°C)

LWT : Leaving water temperature (°C)

dT : Delta temperature (deg)

Leaving water temperature - Return water temperature (Heating)

Return water temperature - Leaving water temperature (Cooling)

## Average heating capacity and power input

| Capacity (kW) |     | LWT (°C) |      |      |      |      |      |
|---------------|-----|----------|------|------|------|------|------|
|               |     | 30       | 35   | 40   | 45   | 50   | 55   |
| TO<br>(°C)    | -20 | 3.66     | 3.63 | 3.60 | —    | —    | —    |
|               | -15 | 4.78     | 4.39 | 4.01 | 3.62 | —    | —    |
|               | -10 | 5.15     | 4.93 | 4.72 | 4.50 | 4.29 | —    |
|               | -7  | 5.38     | 5.26 | 5.15 | 5.03 | 4.92 | 4.80 |
|               | -2  | 4.49     | 4.54 | 4.60 | 4.65 | 4.89 | 5.12 |
|               | 2   | 4.63     | 4.78 | 4.93 | 5.08 | 5.23 | 5.37 |
|               | 7   | 6.12     | 7.25 | 7.11 | 6.97 | 7.25 | 7.53 |
|               | 10  | 8.11     | 7.95 | 7.80 | 7.64 | 7.82 | 8.00 |
|               | 12  | 8.53     | 8.42 | 8.26 | 8.09 | 8.20 | 8.31 |
|               | 15  | 8.76     | 8.63 | 8.47 | 8.31 | 8.26 | 8.22 |
|               | 20  | 9.13     | 8.98 | 8.83 | 8.67 | 8.37 | 8.06 |

| Power input (kW) |     | LWT (°C) |      |      |      |      |      |
|------------------|-----|----------|------|------|------|------|------|
|                  |     | 30       | 35   | 40   | 45   | 50   | 55   |
| TO<br>(°C)       | -20 | 1.49     | 1.65 | 1.81 | —    | —    | —    |
|                  | -15 | 1.69     | 1.71 | 1.73 | 1.75 | —    | —    |
|                  | -10 | 1.68     | 1.75 | 1.83 | 1.94 | 2.06 | —    |
|                  | -7  | 1.64     | 1.77 | 1.90 | 2.03 | 2.25 | 2.47 |
|                  | -2  | 1.19     | 1.35 | 1.51 | 1.66 | 2.04 | 2.42 |
|                  | 2   | 1.14     | 1.31 | 1.49 | 1.66 | 2.02 | 2.38 |
|                  | 7   | 1.22     | 1.49 | 1.66 | 1.82 | 2.22 | 2.61 |
|                  | 10  | 1.31     | 1.48 | 1.66 | 1.83 | 2.22 | 2.60 |
|                  | 12  | 1.31     | 1.48 | 1.66 | 1.84 | 2.22 | 2.59 |
|                  | 15  | 1.31     | 1.48 | 1.66 | 1.84 | 2.14 | 2.44 |
|                  | 20  | 1.31     | 1.48 | 1.67 | 1.85 | 2.02 | 2.18 |

| COP        |     | LWT (°C) |      |      |      |      |      |
|------------|-----|----------|------|------|------|------|------|
|            |     | 30       | 35   | 40   | 45   | 50   | 55   |
| TO<br>(°C) | -20 | 2.46     | 2.20 | 1.99 | —    | —    | —    |
|            | -15 | 2.83     | 2.57 | 2.32 | 2.07 | —    | —    |
|            | -10 | 3.07     | 2.82 | 2.57 | 2.32 | 2.08 | —    |
|            | -7  | 3.28     | 2.97 | 2.71 | 2.48 | 2.18 | 1.94 |
|            | -2  | 3.79     | 3.38 | 3.06 | 2.80 | 2.39 | 2.11 |
|            | 2   | 4.08     | 3.65 | 3.32 | 3.06 | 2.59 | 2.26 |
|            | 7   | 5.02     | 4.87 | 4.30 | 3.83 | 3.27 | 2.89 |
|            | 10  | 6.19     | 5.36 | 4.70 | 4.17 | 3.53 | 3.08 |
|            | 12  | 6.51     | 5.69 | 4.97 | 4.40 | 3.70 | 3.21 |
|            | 15  | 6.68     | 5.83 | 5.10 | 4.51 | 3.86 | 3.37 |
|            | 20  | 6.97     | 6.07 | 5.30 | 4.69 | 4.15 | 3.70 |

\* Heating capacity and power input are include defrost cycle data.

\* Heating capacity and power input are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Heating capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## Heating peak capacity and power input

| Capacity (kW) |     | LWT (°C) |      |      |      |      |      |
|---------------|-----|----------|------|------|------|------|------|
|               |     | 30       | 35   | 40   | 45   | 50   | 55   |
| TO<br>(°C)    | -20 | 4.13     | 4.03 | 3.93 | —    | —    | —    |
|               | -15 | 5.11     | 4.75 | 4.39 | 4.03 | —    | —    |
|               | -10 | 5.79     | 5.57 | 5.35 | 5.14 | 4.92 | —    |
|               | -7  | 6.19     | 6.06 | 5.93 | 5.80 | 5.61 | 5.42 |
|               | -2  | 5.89     | 5.70 | 5.51 | 5.32 | 5.56 | 5.80 |
|               | 2   | 6.64     | 6.42 | 6.21 | 5.99 | 6.05 | 6.10 |
|               | 7   | 7.39     | 7.25 | 7.11 | 6.97 | 7.25 | 7.53 |
|               | 10  | 8.11     | 7.95 | 7.80 | 7.64 | 7.82 | 8.00 |
|               | 12  | 8.53     | 8.42 | 8.26 | 8.09 | 8.20 | 8.31 |
|               | 15  | 8.76     | 8.63 | 8.47 | 8.31 | 8.26 | 8.22 |
|               | 20  | 9.13     | 8.98 | 8.83 | 8.67 | 8.37 | 8.06 |

| Power input (kW) |     | LWT (°C) |      |      |      |      |      |
|------------------|-----|----------|------|------|------|------|------|
|                  |     | 30       | 35   | 40   | 45   | 50   | 55   |
| TO<br>(°C)       | -20 | 1.58     | 1.73 | 1.88 | —    | —    | —    |
|                  | -15 | 1.77     | 1.79 | 1.82 | 1.84 | —    | —    |
|                  | -10 | 1.81     | 1.89 | 1.99 | 2.11 | 2.26 | —    |
|                  | -7  | 1.79     | 1.95 | 2.10 | 2.25 | 2.46 | 2.66 |
|                  | -2  | 1.37     | 1.51 | 1.65 | 1.79 | 2.18 | 2.58 |
|                  | 2   | 1.37     | 1.52 | 1.68 | 1.83 | 2.18 | 2.52 |
|                  | 7   | 1.33     | 1.49 | 1.66 | 1.82 | 2.22 | 2.61 |
|                  | 10  | 1.31     | 1.48 | 1.66 | 1.83 | 2.22 | 2.60 |
|                  | 12  | 1.31     | 1.48 | 1.66 | 1.84 | 2.22 | 2.59 |
|                  | 15  | 1.31     | 1.48 | 1.66 | 1.84 | 2.14 | 2.44 |
|                  | 20  | 1.31     | 1.48 | 1.67 | 1.85 | 2.02 | 2.18 |

| COP        |     | LWT (°C) |      |      |      |      |      |
|------------|-----|----------|------|------|------|------|------|
|            |     | 30       | 35   | 40   | 45   | 50   | 55   |
| TO<br>(°C) | -20 | 2.61     | 2.33 | 2.09 | —    | —    | —    |
|            | -15 | 2.90     | 2.65 | 2.42 | 2.19 | —    | —    |
|            | -10 | 3.20     | 2.94 | 2.69 | 2.43 | 2.18 | —    |
|            | -7  | 3.45     | 3.12 | 2.83 | 2.58 | 2.29 | 2.04 |
|            | -2  | 4.31     | 3.78 | 3.35 | 2.98 | 2.55 | 2.25 |
|            | 2   | 4.86     | 4.22 | 3.70 | 3.27 | 2.78 | 2.42 |
|            | 7   | 5.58     | 4.87 | 4.30 | 3.83 | 3.27 | 2.89 |
|            | 10  | 6.19     | 5.36 | 4.70 | 4.17 | 3.53 | 3.08 |
|            | 12  | 6.51     | 5.69 | 4.97 | 4.40 | 3.70 | 3.21 |
|            | 15  | 6.68     | 5.83 | 5.10 | 4.51 | 3.86 | 3.37 |
|            | 20  | 6.97     | 6.07 | 5.30 | 4.69 | 4.15 | 3.70 |

\* Heating capacity and power input are include defrost cycle data.

\* Heating capacity and power input are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Heating capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

**Cooling capacity and input specifications****Outdoor unit HWT-601HW-E****Rated Cooling capacity and power input**

|                                                          |                       |       |      |
|----------------------------------------------------------|-----------------------|-------|------|
| Rated Cooling condition<br>LWT=7°C<br>dT=5deg<br>TO=35°C | Capacity              | kW    | 5.0  |
|                                                          | Input                 | kW    | 1.52 |
|                                                          | COP                   | (W/W) | 3.30 |
|                                                          | Rated water flow rate | L/min | 14.3 |

\* Rated condition capacity and power input are the data at rated compressor operating frequency.

\* Power input does not include water pump power.

\* Capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (°C)

LWT : Leaving water temperature (°C)

dT : Delta temperature (deg)

Leaving water temperature - Return water temperature (Heating)

Return water temperature - Leaving water temperature (Cooling)

## Cooling capacity and power input

| Capacity (kW) |    | LWT (°C) |      |      |      |      |
|---------------|----|----------|------|------|------|------|
|               |    | 7        | 10   | 13   | 15   | 18   |
| TO<br>(°C)    | 20 | 5.72     | 6.18 | 6.63 | 6.98 | 7.51 |
|               | 27 | 5.54     | 6.06 | 6.57 | 6.88 | 7.33 |
|               | 30 | 5.46     | 6.01 | 6.55 | 6.83 | 7.25 |
|               | 35 | 5.33     | 5.92 | 6.51 | 6.75 | 7.12 |
|               | 40 | 4.81     | 5.42 | 6.04 | 6.26 | 6.60 |
|               | 43 | 4.49     | 5.12 | 5.75 | 5.97 | 6.29 |

| Power input (kW) |    | LWT (°C) |      |      |      |      |
|------------------|----|----------|------|------|------|------|
|                  |    | 7        | 10   | 13   | 15   | 18   |
| TO<br>(°C)       | 20 | 1.12     | 1.17 | 1.21 | 1.22 | 1.23 |
|                  | 27 | 1.40     | 1.44 | 1.48 | 1.49 | 1.51 |
|                  | 30 | 1.52     | 1.56 | 1.59 | 1.60 | 1.62 |
|                  | 35 | 1.72     | 1.75 | 1.78 | 1.80 | 1.82 |
|                  | 40 | 1.86     | 1.90 | 1.94 | 1.95 | 1.97 |
|                  | 43 | 1.94     | 1.99 | 2.03 | 2.04 | 2.06 |

| COP        |    | LWT (°C) |      |      |      |      |
|------------|----|----------|------|------|------|------|
|            |    | 7        | 10   | 13   | 15   | 18   |
| TO<br>(°C) | 20 | 5.11     | 5.30 | 5.48 | 5.73 | 6.11 |
|            | 27 | 3.96     | 4.21 | 4.45 | 4.62 | 4.87 |
|            | 30 | 3.59     | 3.86 | 4.12 | 4.26 | 4.47 |
|            | 35 | 3.10     | 3.38 | 3.66 | 3.76 | 3.91 |
|            | 40 | 2.59     | 2.86 | 3.12 | 3.21 | 3.35 |
|            | 43 | 2.31     | 2.58 | 2.83 | 2.92 | 3.05 |

\* Cooling capacity and power input are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Cooling capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## Heating capacity and input specifications

Outdoor unit HWT-801H(R)W-E

### Rated heating capacity and power input

|                                                          |                       |       |      |
|----------------------------------------------------------|-----------------------|-------|------|
| Rated Heating condition<br>LWT=35°C<br>dT=5deg<br>TO=7°C | Capacity              | kW    | 8.0  |
|                                                          | Input                 | kW    | 1.54 |
|                                                          | COP                   | (W/W) | 5.19 |
|                                                          | Rated water flow rate | L/min | 23.1 |

\* Rated condition capacity and power input are the data at rated compressor operating frequency.

\* Power input does not include water pump power.

\* Capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (°C)

LWT : Leaving water temperature (°C)

dT : Delta temperature (deg)

Leaving water temperature - Return water temperature (Heating)

Return water temperature - Leaving water temperature (Cooling)

## Average heating capacity and power input

| Capacity (kW) |     | LWT (°C) |       |       |       |       |       |       |      |
|---------------|-----|----------|-------|-------|-------|-------|-------|-------|------|
|               |     | 30       | 35    | 40    | 45    | 50    | 55    | 60    | 65   |
| TO<br>(°C)    | -25 | 4.04     | 4.06  | 4.08  | 4.10  | 4.17  | 4.23  | 4.11  | —    |
|               | -20 | 5.00     | 5.01  | 5.03  | 4.70  | 5.08  | 5.11  | 4.93  | —    |
|               | -15 | 5.95     | 5.96  | 5.98  | 6.00  | 6.00  | 5.99  | 5.75  | —    |
|               | -10 | 6.80     | 6.74  | 6.77  | 6.80  | 6.66  | 6.52  | 6.24  | —    |
|               | -7  | 7.31     | 7.21  | 7.25  | 7.28  | 7.06  | 6.83  | 6.54  | —    |
|               | -2  | 8.13     | 8.08  | 8.08  | 8.08  | 7.99  | 7.90  | 7.07  | —    |
|               | 2   | 8.57     | 8.49  | 8.53  | 8.57  | 8.38  | 8.19  | 7.49  | —    |
|               | 7   | 12.39    | 11.90 | 11.83 | 11.75 | 10.86 | 9.96  | 9.07  | 5.08 |
|               | 10  | 13.02    | 12.57 | 12.46 | 12.36 | 11.56 | 10.76 | 9.96  | 5.09 |
|               | 12  | 13.44    | 13.01 | 12.89 | 12.77 | 12.03 | 11.29 | 10.55 | 5.09 |
|               | 15  | 13.69    | 13.22 | 13.04 | 12.87 | 12.11 | 11.36 | 10.60 | 5.08 |
|               | 20  | 14.10    | 13.57 | 13.30 | 13.03 | 12.25 | 11.47 | 10.69 | 5.06 |

| Power input (kW) |     | LWT (°C) |      |      |      |      |      |      |      |
|------------------|-----|----------|------|------|------|------|------|------|------|
|                  |     | 30       | 35   | 40   | 45   | 50   | 55   | 60   | 65   |
| TO<br>(°C)       | -25 | 1.87     | 2.09 | 2.31 | 2.53 | 2.82 | 3.11 | 3.06 | —    |
|                  | -20 | 2.07     | 2.29 | 2.53 | 2.64 | 2.98 | 3.20 | 3.28 | —    |
|                  | -15 | 2.28     | 2.48 | 2.74 | 3.00 | 3.15 | 3.29 | 3.49 | —    |
|                  | -10 | 2.40     | 2.60 | 2.86 | 3.11 | 3.25 | 3.39 | 3.54 | —    |
|                  | -7  | 2.47     | 2.67 | 2.93 | 3.18 | 3.32 | 3.45 | 3.57 | —    |
|                  | -2  | 2.29     | 2.52 | 2.78 | 3.03 | 3.23 | 3.43 | 3.63 | —    |
|                  | 2   | 2.19     | 2.41 | 2.72 | 3.02 | 3.15 | 3.28 | 3.31 | —    |
|                  | 7   | 2.41     | 2.62 | 3.01 | 3.39 | 3.43 | 3.47 | 3.51 | 2.19 |
|                  | 10  | 2.42     | 2.63 | 3.00 | 3.38 | 3.42 | 3.47 | 3.52 | 2.06 |
|                  | 12  | 2.42     | 2.63 | 3.00 | 3.37 | 3.42 | 3.47 | 3.52 | 1.98 |
|                  | 15  | 2.42     | 2.63 | 3.01 | 3.39 | 3.42 | 3.46 | 3.49 | 1.90 |
|                  | 20  | 2.42     | 2.62 | 3.02 | 3.42 | 3.43 | 3.44 | 3.45 | 1.76 |

| COP        |     | LWT (°C) |      |      |      |      |      |      |      |
|------------|-----|----------|------|------|------|------|------|------|------|
|            |     | 30       | 35   | 40   | 45   | 50   | 55   | 60   | 65   |
| TO<br>(°C) | -25 | 2.16     | 1.94 | 1.77 | 1.62 | 1.48 | 1.36 | 1.34 | —    |
|            | -20 | 2.41     | 2.19 | 1.99 | 1.78 | 1.70 | 1.60 | 1.51 | —    |
|            | -15 | 2.61     | 2.40 | 2.18 | 2.00 | 1.91 | 1.82 | 1.65 | —    |
|            | -10 | 2.83     | 2.59 | 2.37 | 2.18 | 2.05 | 1.92 | 1.76 | —    |
|            | -7  | 2.95     | 2.70 | 2.48 | 2.29 | 2.13 | 1.98 | 1.83 | —    |
|            | -2  | 3.54     | 3.21 | 2.91 | 2.67 | 2.47 | 2.30 | 1.95 | —    |
|            | 2   | 3.91     | 3.52 | 3.14 | 2.84 | 2.66 | 2.50 | 2.26 | —    |
|            | 7   | 5.14     | 4.54 | 3.94 | 3.47 | 3.16 | 2.87 | 2.58 | 2.32 |
|            | 10  | 5.39     | 4.79 | 4.15 | 3.66 | 3.38 | 3.10 | 2.83 | 2.46 |
|            | 12  | 5.55     | 4.95 | 4.30 | 3.79 | 3.52 | 3.25 | 3.00 | 2.57 |
|            | 15  | 5.66     | 5.03 | 4.34 | 3.80 | 3.54 | 3.28 | 3.03 | 2.68 |
|            | 20  | 5.84     | 5.18 | 4.40 | 3.81 | 3.57 | 3.33 | 3.10 | 2.88 |

\* Heating capacity and power input are include defrost cycle data.

\* Heating capacity and power input are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Heating capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## Heating peak capacity and power input

| Capacity (kW) |     | LWT (°C) |       |       |       |       |       |       |      |
|---------------|-----|----------|-------|-------|-------|-------|-------|-------|------|
|               |     | 30       | 35    | 40    | 45    | 50    | 55    | 60    | 65   |
| TO<br>(°C)    | -25 | 4.37     | 4.43  | 4.49  | 4.55  | 4.61  | 4.67  | 4.51  | —    |
|               | -20 | 5.40     | 5.45  | 5.50  | 5.27  | 5.54  | 5.54  | 5.31  | —    |
|               | -15 | 6.42     | 6.46  | 6.50  | 6.54  | 6.48  | 6.41  | 6.10  | —    |
|               | -10 | 7.60     | 7.49  | 7.47  | 7.45  | 7.23  | 7.00  | 6.67  | —    |
|               | -7  | 8.30     | 8.11  | 8.06  | 8.00  | 7.68  | 7.35  | 7.01  | —    |
|               | -2  | 9.35     | 9.24  | 9.20  | 9.15  | 8.97  | 8.79  | 7.78  | —    |
|               | 2   | 10.50    | 10.30 | 10.28 | 10.26 | 9.88  | 9.50  | 8.40  | —    |
|               | 7   | 12.39    | 11.90 | 11.83 | 11.75 | 10.86 | 9.96  | 9.07  | 5.08 |
|               | 10  | 13.02    | 12.57 | 12.46 | 12.36 | 11.56 | 10.76 | 9.96  | 5.09 |
|               | 12  | 13.44    | 13.01 | 12.89 | 12.77 | 12.03 | 11.29 | 10.55 | 5.09 |
|               | 15  | 13.69    | 13.22 | 13.04 | 12.87 | 12.11 | 11.36 | 10.60 | 5.08 |
|               | 20  | 14.10    | 13.57 | 13.30 | 13.03 | 12.25 | 11.47 | 10.69 | 5.06 |

| Power input (kW) |     | LWT (°C) |      |      |      |      |      |      |      |
|------------------|-----|----------|------|------|------|------|------|------|------|
|                  |     | 30       | 35   | 40   | 45   | 50   | 55   | 60   | 65   |
| TO<br>(°C)       | -25 | 1.99     | 2.22 | 2.45 | 2.68 | 2.98 | 3.27 | 3.21 | —    |
|                  | -20 | 2.14     | 2.41 | 2.68 | 2.83 | 3.15 | 3.36 | 3.41 | —    |
|                  | -15 | 2.30     | 2.60 | 2.91 | 3.21 | 3.33 | 3.44 | 3.61 | —    |
|                  | -10 | 2.55     | 2.78 | 3.04 | 3.31 | 3.43 | 3.54 | 3.67 | —    |
|                  | -7  | 2.70     | 2.88 | 3.13 | 3.37 | 3.49 | 3.60 | 3.71 | —    |
|                  | -2  | 2.48     | 2.71 | 2.99 | 3.26 | 3.46 | 3.65 | 3.61 | —    |
|                  | 2   | 2.57     | 2.77 | 3.08 | 3.38 | 3.47 | 3.56 | 3.53 | —    |
|                  | 7   | 2.41     | 2.62 | 3.01 | 3.39 | 3.43 | 3.47 | 3.51 | 2.19 |
|                  | 10  | 2.42     | 2.63 | 3.00 | 3.38 | 3.42 | 3.47 | 3.52 | 2.06 |
|                  | 12  | 2.42     | 2.63 | 3.00 | 3.37 | 3.42 | 3.47 | 3.52 | 1.98 |
|                  | 15  | 2.42     | 2.63 | 3.01 | 3.39 | 3.42 | 3.46 | 3.49 | 1.90 |
|                  | 20  | 2.42     | 2.62 | 3.02 | 3.42 | 3.43 | 3.44 | 3.45 | 1.76 |

| COP        |     | LWT (°C) |      |      |      |      |      |      |      |
|------------|-----|----------|------|------|------|------|------|------|------|
|            |     | 30       | 35   | 40   | 45   | 50   | 55   | 60   | 65   |
| TO<br>(°C) | -25 | 2.20     | 2.00 | 1.83 | 1.70 | 1.55 | 1.43 | 1.40 | —    |
|            | -20 | 2.52     | 2.26 | 2.05 | 1.86 | 1.76 | 1.65 | 1.56 | —    |
|            | -15 | 2.80     | 2.48 | 2.24 | 2.04 | 1.95 | 1.86 | 1.69 | —    |
|            | -10 | 2.98     | 2.70 | 2.46 | 2.25 | 2.11 | 1.98 | 1.82 | —    |
|            | -7  | 3.07     | 2.82 | 2.58 | 2.37 | 2.20 | 2.04 | 1.89 | —    |
|            | -2  | 3.78     | 3.41 | 3.08 | 2.81 | 2.60 | 2.41 | 2.16 | —    |
|            | 2   | 4.08     | 3.72 | 3.34 | 3.04 | 2.85 | 2.67 | 2.38 | —    |
|            | 7   | 5.14     | 4.54 | 3.94 | 3.47 | 3.16 | 2.87 | 2.58 | 2.32 |
|            | 10  | 5.39     | 4.79 | 4.15 | 3.66 | 3.38 | 3.10 | 2.83 | 2.46 |
|            | 12  | 5.55     | 4.95 | 4.30 | 3.79 | 3.52 | 3.25 | 3.00 | 2.57 |
|            | 15  | 5.66     | 5.03 | 4.34 | 3.80 | 3.54 | 3.28 | 3.03 | 2.68 |
|            | 20  | 5.84     | 5.18 | 4.40 | 3.81 | 3.57 | 3.33 | 3.10 | 2.88 |

\* Heating capacity and power input are include defrost cycle data.

\* Heating capacity and power input are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Heating capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## Cooling capacity and input specifications

Outdoor unit HWT-801H(R)W-E

### Rated Cooling capacity and power input

|                                                          |                       |       |      |
|----------------------------------------------------------|-----------------------|-------|------|
| Rated Cooling condition<br>LWT=7°C<br>dT=5deg<br>TO=35°C | Capacity              | kW    | 6.0  |
|                                                          | Input                 | kW    | 1.88 |
|                                                          | COP                   | (W/W) | 3.20 |
|                                                          | Rated water flow rate | L/min | 17.2 |

\* Rated condition capacity and power input are the data at rated compressor operating frequency.

\* Power input does not include water pump power.

\* Capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (°C)

LWT : Leaving water temperature (°C)

dT : Delta temperature (deg)

Leaving water temperature - Return water temperature (Heating)

Return water temperature - Leaving water temperature (Cooling)

## Cooling capacity and power input

| Capacity (kW) |    | LWT (°C) |      |      |      |       |
|---------------|----|----------|------|------|------|-------|
|               |    | 7        | 10   | 13   | 15   | 18    |
| TO<br>(°C)    | 20 | 7.79     | 8.42 | 8.97 | 9.46 | 10.09 |
|               | 27 | 7.30     | 7.90 | 8.49 | 8.91 | 9.51  |
|               | 30 | 7.08     | 7.68 | 8.28 | 8.67 | 9.26  |
|               | 35 | 6.73     | 7.31 | 7.94 | 8.27 | 8.85  |
|               | 40 | 5.54     | 6.22 | 7.00 | 7.36 | 8.04  |
|               | 43 | 4.82     | 5.57 | 6.43 | 6.81 | 7.56  |

| Power input (kW) |    | LWT (°C) |      |      |      |      |
|------------------|----|----------|------|------|------|------|
|                  |    | 7        | 10   | 13   | 15   | 18   |
| TO<br>(°C)       | 20 | 1.71     | 1.71 | 1.77 | 1.71 | 1.71 |
|                  | 27 | 1.93     | 1.95 | 1.99 | 1.97 | 1.98 |
|                  | 30 | 2.03     | 2.05 | 2.09 | 2.08 | 2.10 |
|                  | 35 | 2.19     | 2.22 | 2.25 | 2.26 | 2.29 |
|                  | 40 | 2.40     | 2.44 | 2.50 | 2.50 | 2.54 |
|                  | 43 | 2.53     | 2.57 | 2.65 | 2.65 | 2.69 |

| COP        |    | LWT (°C) |      |      |      |      |
|------------|----|----------|------|------|------|------|
|            |    | 7        | 10   | 13   | 15   | 18   |
| TO<br>(°C) | 20 | 4.56     | 4.92 | 5.07 | 5.53 | 5.90 |
|            | 27 | 3.77     | 4.06 | 4.26 | 4.53 | 4.80 |
|            | 30 | 3.49     | 3.75 | 3.96 | 4.17 | 4.42 |
|            | 35 | 3.07     | 3.30 | 3.53 | 3.66 | 3.86 |
|            | 40 | 2.30     | 2.55 | 2.80 | 2.94 | 3.17 |
|            | 43 | 1.91     | 2.16 | 2.43 | 2.57 | 2.81 |

\* Cooling capacity and power input are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Cooling capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## Heating capacity and input specifications

Outdoor unit HWT-1101H(R)W-E

### Rated heating capacity and power input

|                                                          |                       |       |      |
|----------------------------------------------------------|-----------------------|-------|------|
| Rated Heating condition<br>LWT=35°C<br>dT=5deg<br>TO=7°C | Capacity              | kW    | 11.0 |
|                                                          | Input                 | kW    | 2.39 |
|                                                          | COP                   | (W/W) | 4.60 |
|                                                          | Rated water flow rate | L/min | 31.8 |

\* Rated condition capacity and power input are the data at rated compressor operating frequency.

\* Power input does not include water pump power.

\* Capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (°C)

LWT : Leaving water temperature (°C)

dT : Delta temperature (deg)

Leaving water temperature - Return water temperature (Heating)

Return water temperature - Leaving water temperature (Cooling)

## Average heating capacity and power input

| Capacity (kW) |     | LWT (°C) |       |       |       |       |       |       |      |
|---------------|-----|----------|-------|-------|-------|-------|-------|-------|------|
|               |     | 30       | 35    | 40    | 45    | 50    | 55    | 60    | 65   |
| TO<br>(°C)    | -25 | 4.66     | 4.70  | 4.74  | 4.78  | 4.80  | 4.82  | 4.54  | —    |
|               | -20 | 5.70     | 5.74  | 5.77  | 5.53  | 5.71  | 5.61  | 5.15  | —    |
|               | -15 | 6.74     | 6.77  | 6.80  | 6.83  | 6.62  | 6.40  | 5.75  | —    |
|               | -10 | 7.67     | 7.51  | 7.43  | 7.35  | 7.01  | 6.67  | 6.24  | —    |
|               | -7  | 8.27     | 7.95  | 7.81  | 7.66  | 7.17  | 6.83  | 6.54  | —    |
|               | -2  | 9.14     | 8.89  | 8.81  | 8.72  | 8.31  | 7.90  | 7.07  | —    |
|               | 2   | 9.55     | 9.28  | 9.08  | 8.87  | 8.53  | 8.19  | 7.49  | —    |
|               | 7   | 14.01    | 13.24 | 12.83 | 12.41 | 11.29 | 10.17 | 9.05  | 5.08 |
|               | 10  | 14.62    | 13.86 | 13.39 | 12.92 | 11.88 | 10.84 | 9.80  | 5.09 |
|               | 12  | 15.03    | 14.28 | 13.77 | 13.26 | 12.28 | 11.29 | 10.31 | 5.09 |
|               | 15  | 15.30    | 14.51 | 13.87 | 13.23 | 12.30 | 11.36 | 10.42 | 5.08 |
|               | 20  | 15.76    | 14.90 | 14.05 | 13.19 | 12.33 | 11.47 | 10.61 | 5.06 |

| Power input (kW) |     | LWT (°C) |      |      |      |      |      |      |      |
|------------------|-----|----------|------|------|------|------|------|------|------|
|                  |     | 30       | 35   | 40   | 45   | 50   | 55   | 60   | 65   |
| TO<br>(°C)       | -25 | 2.19     | 2.43 | 2.68 | 2.92 | 3.20 | 3.48 | 3.44 | —    |
|                  | -20 | 2.44     | 2.71 | 2.97 | 3.19 | 3.37 | 3.50 | 3.47 | —    |
|                  | -15 | 2.70     | 2.98 | 3.27 | 3.55 | 3.54 | 3.52 | 3.49 | —    |
|                  | -10 | 2.92     | 3.07 | 3.28 | 3.49 | 3.49 | 3.48 | 3.54 | —    |
|                  | -7  | 3.05     | 3.13 | 3.30 | 3.46 | 3.47 | 3.45 | 3.57 | —    |
|                  | -2  | 2.74     | 2.88 | 3.14 | 3.39 | 3.41 | 3.43 | 3.43 | —    |
|                  | 2   | 2.67     | 2.79 | 3.00 | 3.20 | 3.24 | 3.28 | 3.31 | —    |
|                  | 7   | 3.03     | 3.15 | 3.43 | 3.71 | 3.67 | 3.62 | 3.58 | 2.19 |
|                  | 10  | 3.02     | 3.12 | 3.37 | 3.61 | 3.57 | 3.53 | 3.49 | 2.06 |
|                  | 12  | 3.01     | 3.10 | 3.33 | 3.55 | 3.51 | 3.47 | 3.43 | 1.98 |
|                  | 15  | 3.00     | 3.09 | 3.31 | 3.53 | 3.50 | 3.46 | 3.42 | 1.90 |
|                  | 20  | 2.99     | 3.08 | 3.29 | 3.50 | 3.47 | 3.44 | 3.41 | 1.76 |

| COP        |     | LWT (°C) |      |      |      |      |      |      |      |
|------------|-----|----------|------|------|------|------|------|------|------|
|            |     | 30       | 35   | 40   | 45   | 50   | 55   | 60   | 65   |
| TO<br>(°C) | -25 | 2.13     | 1.93 | 1.77 | 1.64 | 1.50 | 1.39 | 1.32 | —    |
|            | -20 | 2.34     | 2.12 | 1.94 | 1.73 | 1.69 | 1.60 | 1.48 | —    |
|            | -15 | 2.50     | 2.27 | 2.08 | 1.92 | 1.87 | 1.82 | 1.65 | —    |
|            | -10 | 2.63     | 2.44 | 2.26 | 2.10 | 2.01 | 1.92 | 1.76 | —    |
|            | -7  | 2.72     | 2.54 | 2.37 | 2.21 | 2.07 | 1.98 | 1.83 | —    |
|            | -2  | 3.33     | 3.09 | 2.81 | 2.57 | 2.44 | 2.30 | 2.06 | —    |
|            | 2   | 3.58     | 3.33 | 3.03 | 2.77 | 2.63 | 2.50 | 2.26 | —    |
|            | 7   | 4.62     | 4.20 | 3.74 | 3.35 | 3.08 | 2.81 | 2.53 | 2.32 |
|            | 10  | 4.84     | 4.44 | 3.98 | 3.57 | 3.33 | 3.07 | 2.81 | 2.46 |
|            | 12  | 5.00     | 4.61 | 4.14 | 3.74 | 3.50 | 3.25 | 3.00 | 2.57 |
|            | 15  | 5.10     | 4.69 | 4.19 | 3.75 | 3.52 | 3.28 | 3.04 | 2.68 |
|            | 20  | 5.27     | 4.84 | 4.27 | 3.77 | 3.55 | 3.33 | 3.11 | 2.88 |

\* Heating capacity and power input are include defrost cycle data.

\* Heating capacity and power input are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Heating capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## Heating peak capacity and power input

| Capacity (kW) |     | LWT (°C) |       |       |       |       |       |       |      |
|---------------|-----|----------|-------|-------|-------|-------|-------|-------|------|
|               |     | 30       | 35    | 40    | 45    | 50    | 55    | 60    | 65   |
| TO<br>(°C)    | -25 | 5.12     | 5.20  | 5.28  | 5.36  | 5.35  | 5.33  | 5.06  | —    |
|               | -20 | 6.21     | 6.29  | 6.36  | 6.25  | 6.26  | 6.07  | 5.58  | —    |
|               | -15 | 7.30     | 7.37  | 7.45  | 7.52  | 7.17  | 6.81  | 6.10  | —    |
|               | -10 | 8.70     | 8.45  | 8.27  | 8.10  | 7.62  | 7.15  | 6.67  | —    |
|               | -7  | 9.56     | 9.10  | 8.77  | 8.44  | 7.86  | 7.72  | 7.01  | —    |
|               | -2  | 10.65    | 10.28 | 10.16 | 10.03 | 9.41  | 9.23  | 7.78  | —    |
|               | 2   | 11.95    | 11.46 | 11.06 | 10.66 | 10.08 | 9.98  | 8.40  | —    |
|               | 7   | 14.01    | 13.24 | 12.83 | 12.41 | 11.29 | 10.17 | 9.05  | 5.08 |
|               | 10  | 14.62    | 13.86 | 13.39 | 12.92 | 11.88 | 10.84 | 9.80  | 5.09 |
|               | 12  | 15.03    | 14.28 | 13.77 | 13.26 | 12.28 | 11.29 | 10.31 | 5.09 |
|               | 15  | 15.30    | 14.51 | 13.87 | 13.23 | 12.30 | 11.36 | 10.42 | 5.07 |
|               | 20  | 15.76    | 14.90 | 14.05 | 13.19 | 12.33 | 11.47 | 10.61 | 5.06 |

| Power input (kW) |     | LWT (°C) |      |      |      |      |      |      |      |
|------------------|-----|----------|------|------|------|------|------|------|------|
|                  |     | 30       | 35   | 40   | 45   | 50   | 55   | 60   | 65   |
| TO<br>(°C)       | -25 | 2.32     | 2.60 | 2.89 | 3.17 | 3.43 | 3.69 | 3.63 | —    |
|                  | -20 | 2.58     | 2.89 | 3.19 | 3.49 | 3.59 | 3.68 | 3.62 | —    |
|                  | -15 | 2.85     | 3.17 | 3.50 | 3.82 | 3.75 | 3.67 | 3.61 | —    |
|                  | -10 | 3.17     | 3.32 | 3.53 | 3.74 | 3.68 | 3.63 | 3.67 | —    |
|                  | -7  | 3.35     | 3.41 | 3.55 | 3.69 | 3.68 | 3.78 | 3.71 | —    |
|                  | -2  | 3.05     | 3.17 | 3.43 | 3.69 | 3.67 | 3.83 | 3.61 | —    |
|                  | 2   | 3.16     | 3.24 | 3.42 | 3.59 | 3.58 | 3.74 | 3.53 | —    |
|                  | 7   | 3.03     | 3.15 | 3.43 | 3.71 | 3.67 | 3.62 | 3.58 | 2.19 |
|                  | 10  | 3.02     | 3.12 | 3.37 | 3.61 | 3.57 | 3.53 | 3.49 | 2.06 |
|                  | 12  | 3.01     | 3.10 | 3.33 | 3.55 | 3.51 | 3.47 | 3.43 | 1.98 |
|                  | 15  | 3.00     | 3.09 | 3.31 | 3.53 | 3.50 | 3.46 | 3.42 | 1.90 |
|                  | 20  | 2.99     | 3.08 | 3.29 | 3.50 | 3.47 | 3.44 | 3.41 | 1.76 |

| COP        |     | LWT (°C) |      |      |      |      |      |      |      |
|------------|-----|----------|------|------|------|------|------|------|------|
|            |     | 30       | 35   | 40   | 45   | 50   | 55   | 60   | 65   |
| TO<br>(°C) | -25 | 2.21     | 2.00 | 1.83 | 1.69 | 1.56 | 1.44 | 1.39 | —    |
|            | -20 | 2.41     | 2.18 | 1.99 | 1.79 | 1.74 | 1.65 | 1.54 | —    |
|            | -15 | 2.56     | 2.32 | 2.13 | 1.97 | 1.91 | 1.86 | 1.69 | —    |
|            | -10 | 2.74     | 2.55 | 2.34 | 2.17 | 2.07 | 1.97 | 1.82 | —    |
|            | -7  | 2.86     | 2.67 | 2.47 | 2.29 | 2.14 | 2.04 | 1.89 | —    |
|            | -2  | 3.49     | 3.24 | 2.96 | 2.72 | 2.56 | 2.41 | 2.16 | —    |
|            | 2   | 3.78     | 3.54 | 3.24 | 2.97 | 2.82 | 2.67 | 2.38 | —    |
|            | 7   | 4.62     | 4.20 | 3.74 | 3.35 | 3.08 | 2.81 | 2.53 | 2.32 |
|            | 10  | 4.84     | 4.44 | 3.98 | 3.57 | 3.33 | 3.07 | 2.81 | 2.46 |
|            | 12  | 5.00     | 4.61 | 4.14 | 3.74 | 3.50 | 3.25 | 3.00 | 2.57 |
|            | 15  | 5.10     | 4.69 | 4.19 | 3.75 | 3.52 | 3.28 | 3.04 | 2.67 |
|            | 20  | 5.27     | 4.84 | 4.27 | 3.77 | 3.55 | 3.33 | 3.11 | 2.88 |

\* Heating capacity and power input are include defrost cycle data.

\* Heating capacity and power input are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Heating capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## Cooling capacity and input specifications

Outdoor unit HWT-1101H(R)W-E

### Rated Cooling capacity and power input

|                                                          |                       |       |      |
|----------------------------------------------------------|-----------------------|-------|------|
| Rated Cooling condition<br>LWT=7°C<br>dT=5deg<br>TO=35°C | Capacity              | kW    | 8.0  |
|                                                          | Input                 | kW    | 2.86 |
|                                                          | COP                   | (W/W) | 2.80 |
|                                                          | Rated water flow rate | L/min | 22.9 |

\* Rated condition capacity and power input are the data at rated compressor operating frequency.

\* Power input does not include water pump power.

\* Capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (°C)

LWT : Leaving water temperature (°C)

dT : Delta temperature (deg)

Leaving water temperature - Return water temperature (Heating)

Return water temperature - Leaving water temperature (Cooling)

## Cooling capacity and power input

| Capacity (kW) |    | LWT (°C) |      |      |      |       |
|---------------|----|----------|------|------|------|-------|
|               |    | 7        | 10   | 13   | 15   | 18    |
| TO<br>(°C)    | 20 | 8.12     | 8.79 | 9.47 | 9.90 | 10.57 |
|               | 27 | 7.91     | 8.60 | 9.37 | 9.74 | 10.43 |
|               | 30 | 7.83     | 8.52 | 9.32 | 9.67 | 10.36 |
|               | 35 | 8.00     | 8.38 | 9.25 | 9.56 | 10.26 |
|               | 40 | 5.97     | 6.68 | 7.49 | 7.86 | 8.57  |
|               | 43 | 4.95     | 5.66 | 6.43 | 6.85 | 7.56  |

| Power input (kW) |    | LWT (°C) |      |      |      |      |
|------------------|----|----------|------|------|------|------|
|                  |    | 7        | 10   | 13   | 15   | 18   |
| TO<br>(°C)       | 20 | 1.85     | 1.84 | 1.83 | 1.81 | 1.80 |
|                  | 27 | 2.25     | 2.29 | 2.37 | 2.35 | 2.39 |
|                  | 30 | 2.42     | 2.48 | 2.60 | 2.58 | 2.64 |
|                  | 35 | 2.86     | 2.81 | 2.98 | 2.96 | 3.06 |
|                  | 40 | 2.69     | 2.72 | 2.77 | 2.79 | 2.83 |
|                  | 43 | 2.67     | 2.68 | 2.65 | 2.68 | 2.69 |

| COP        |    | LWT (°C) |      |      |      |      |
|------------|----|----------|------|------|------|------|
|            |    | 7        | 10   | 13   | 15   | 18   |
| TO<br>(°C) | 20 | 4.39     | 4.79 | 5.17 | 5.46 | 5.87 |
|            | 27 | 3.52     | 3.76 | 3.96 | 4.14 | 4.37 |
|            | 30 | 3.23     | 3.43 | 3.59 | 3.75 | 3.93 |
|            | 35 | 2.80     | 2.99 | 3.10 | 3.22 | 3.35 |
|            | 40 | 2.22     | 2.45 | 2.70 | 2.82 | 3.03 |
|            | 43 | 1.85     | 2.12 | 2.43 | 2.55 | 2.81 |

\* Cooling capacity and power input are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Cooling capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## 2-6. Part Load Tables

### Specifications part load heating capacity and input (Peak)LWT (°C) =35°C

Outdoor unit HWT-401HW-E

| Capacity (kW) |     | Load (%) |      |      |      |      |      |      |      |      |      |
|---------------|-----|----------|------|------|------|------|------|------|------|------|------|
|               |     | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)    | -20 | 3.10     | 2.80 | 2.49 | 2.19 | 1.88 | 1.58 | 1.28 | 0.98 | 0.98 | 0.98 |
|               | -15 | 3.73     | 3.37 | 3.00 | 2.64 | 2.27 | 1.91 | 1.54 | 1.17 | 1.17 | 1.17 |
|               | -10 | 4.40     | 3.99 | 3.57 | 3.16 | 2.75 | 2.34 | 1.89 | 1.45 | 1.45 | 1.45 |
|               | -7  | 4.80     | 4.36 | 3.92 | 3.47 | 3.03 | 2.59 | 2.08 | 1.61 | 1.61 | 1.61 |
|               | -2  | 5.70     | 5.11 | 4.51 | 3.92 | 3.33 | 2.78 | 2.20 | 1.64 | 1.50 | 1.50 |
|               | 2   | 6.42     | 5.71 | 4.99 | 4.28 | 3.56 | 2.93 | 2.30 | 1.67 | 1.04 | 1.04 |
|               | 7   | 7.25     | 6.47 | 5.69 | 4.90 | 4.12 | 3.45 | 2.79 | 2.12 | 1.46 | 0.79 |
|               | 10  | 7.95     | 7.08 | 6.20 | 5.33 | 4.46 | 3.74 | 3.03 | 2.31 | 1.60 | 0.88 |
|               | 12  | 8.42     | 7.49 | 6.55 | 5.62 | 4.68 | 3.93 | 3.18 | 2.44 | 1.69 | 0.94 |
|               | 15  | 8.63     | 7.70 | 6.77 | 5.84 | 4.91 | 4.13 | 3.36 | 2.58 | 1.80 | 1.03 |
|               | 20  | 8.98     | 8.06 | 7.14 | 6.21 | 5.29 | 4.47 | 3.64 | 2.82 | 1.99 | 1.17 |

| Power input (kW) |     | Load (%) |      |      |      |      |      |      |      |      |      |
|------------------|-----|----------|------|------|------|------|------|------|------|------|------|
|                  |     | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)       | -20 | 1.32     | 1.21 | 1.09 | 0.98 | 0.86 | 0.75 | 0.64 | 0.52 | 0.52 | 0.52 |
|                  | -15 | 1.41     | 1.28 | 1.16 | 1.03 | 0.91 | 0.78 | 0.67 | 0.55 | 0.55 | 0.55 |
|                  | -10 | 1.46     | 1.34 | 1.21 | 1.08 | 0.94 | 0.81 | 0.69 | 0.56 | 0.56 | 0.56 |
|                  | -7  | 1.49     | 1.36 | 1.22 | 1.09 | 0.95 | 0.82 | 0.70 | 0.57 | 0.57 | 0.57 |
|                  | -2  | 1.51     | 1.35 | 1.19 | 1.04 | 0.88 | 0.75 | 0.62 | 0.49 | 0.48 | 0.48 |
|                  | 2   | 1.52     | 1.35 | 1.17 | 1.00 | 0.82 | 0.69 | 0.56 | 0.43 | 0.30 | 0.30 |
|                  | 7   | 1.49     | 1.31 | 1.13 | 0.95 | 0.77 | 0.65 | 0.54 | 0.42 | 0.30 | 0.23 |
|                  | 10  | 1.48     | 1.30 | 1.12 | 0.94 | 0.76 | 0.65 | 0.54 | 0.43 | 0.31 | 0.22 |
|                  | 12  | 1.48     | 1.30 | 1.12 | 0.94 | 0.76 | 0.65 | 0.54 | 0.43 | 0.32 | 0.21 |
|                  | 15  | 1.48     | 1.30 | 1.12 | 0.93 | 0.75 | 0.64 | 0.53 | 0.42 | 0.31 | 0.20 |
|                  | 20  | 1.48     | 1.30 | 1.11 | 0.93 | 0.74 | 0.63 | 0.52 | 0.41 | 0.30 | 0.19 |

| COP        |     | Load (%) |      |      |      |      |      |      |      |      |      |
|------------|-----|----------|------|------|------|------|------|------|------|------|------|
|            |     | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C) | -20 | 2.35     | 2.32 | 2.28 | 2.24 | 2.18 | 2.11 | 2.02 | 1.88 | 1.88 | 1.88 |
|            | -15 | 2.65     | 2.62 | 2.59 | 2.56 | 2.51 | 2.45 | 2.32 | 2.13 | 2.13 | 2.13 |
|            | -10 | 3.01     | 2.98 | 2.96 | 2.94 | 2.91 | 2.89 | 2.73 | 2.56 | 2.56 | 2.56 |
|            | -7  | 3.22     | 3.21 | 3.20 | 3.19 | 3.18 | 3.16 | 3.00 | 2.82 | 2.82 | 2.82 |
|            | -2  | 3.78     | 3.78 | 3.78 | 3.78 | 3.78 | 3.72 | 3.55 | 3.34 | 3.14 | 3.14 |
|            | 2   | 4.22     | 4.24 | 4.26 | 4.30 | 4.34 | 4.25 | 4.11 | 3.88 | 3.47 | 3.47 |
|            | 7   | 4.87     | 4.94 | 5.03 | 5.16 | 5.35 | 5.29 | 5.21 | 5.08 | 4.85 | 3.43 |
|            | 10  | 5.36     | 5.43 | 5.52 | 5.65 | 5.83 | 5.75 | 5.62 | 5.44 | 5.11 | 4.04 |
|            | 12  | 5.69     | 5.76 | 5.85 | 5.97 | 6.16 | 6.05 | 5.90 | 5.67 | 5.28 | 4.48 |
|            | 15  | 5.83     | 5.93 | 6.06 | 6.25 | 6.52 | 6.43 | 6.30 | 6.10 | 5.77 | 5.07 |
|            | 20  | 6.07     | 6.22 | 6.43 | 6.72 | 7.15 | 7.09 | 7.00 | 6.87 | 6.65 | 6.16 |

\* Heating capacity and power input are shown peak value during operation.

\* Heating capacity and power input at 100% load are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Heating capacity and power input at 100% load are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## Specifications part load heating capacity and input (Peak)LWT (°C) =45°C

### Outdoor unit HWT-401HW-E

| Capacity (kW) |     | Load (%) |      |      |      |      |      |      |      |      |      |
|---------------|-----|----------|------|------|------|------|------|------|------|------|------|
|               |     | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)    | -20 | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|               | -15 | 3.37     | 3.41 | 3.08 | 2.76 | 2.43 | 1.75 | 1.40 | 1.05 | 1.05 | 1.05 |
|               | -10 | 4.06     | 3.68 | 3.30 | 2.92 | 2.54 | 2.16 | 1.73 | 1.29 | 1.29 | 1.29 |
|               | -7  | 4.48     | 4.06 | 3.65 | 3.23 | 2.82 | 2.40 | 1.92 | 1.44 | 1.44 | 1.44 |
|               | -2  | 5.32     | 4.76 | 4.21 | 3.66 | 3.10 | 2.68 | 2.22 | 1.77 | 1.77 | 1.77 |
|               | 2   | 5.99     | 5.33 | 4.66 | 4.00 | 3.33 | 2.90 | 2.46 | 2.03 | 2.03 | 2.03 |
|               | 7   | 6.97     | 6.18 | 5.39 | 4.60 | 3.81 | 3.13 | 2.44 | 2.44 | 2.44 | 2.44 |
|               | 10  | 7.64     | 6.78 | 5.93 | 5.07 | 4.21 | 3.45 | 2.69 | 2.69 | 2.69 | 2.69 |
|               | 12  | 8.09     | 7.19 | 6.29 | 5.38 | 4.48 | 3.67 | 2.86 | 2.86 | 2.86 | 2.86 |
|               | 15  | 8.31     | 7.41 | 6.51 | 5.61 | 4.72 | 3.85 | 2.98 | 2.98 | 2.98 | 2.98 |
|               | 20  | 8.67     | 7.78 | 6.89 | 6.00 | 5.11 | 4.14 | 3.17 | 3.17 | 3.17 | 3.17 |

| Power input (kW) |     | Load (%) |      |      |      |      |      |      |      |      |      |
|------------------|-----|----------|------|------|------|------|------|------|------|------|------|
|                  |     | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)       | -20 | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|                  | -15 | 1.60     | 1.46 | 1.32 | 1.18 | 1.04 | 0.90 | 0.77 | 0.64 | 0.63 | 0.63 |
|                  | -10 | 1.69     | 1.54 | 1.39 | 1.23 | 1.08 | 0.95 | 0.82 | 0.67 | 0.67 | 0.67 |
|                  | -7  | 1.73     | 1.58 | 1.43 | 1.27 | 1.12 | 0.97 | 0.83 | 0.69 | 0.68 | 0.68 |
|                  | -2  | 1.79     | 1.60 | 1.42 | 1.24 | 1.06 | 0.93 | 0.80 | 0.67 | 0.67 | 0.67 |
|                  | 2   | 1.83     | 1.63 | 1.42 | 1.22 | 1.01 | 0.89 | 0.78 | 0.66 | 0.66 | 0.66 |
|                  | 7   | 1.82     | 1.61 | 1.40 | 1.19 | 0.98 | 0.83 | 0.68 | 0.68 | 0.68 | 0.68 |
|                  | 10  | 1.83     | 1.62 | 1.41 | 1.19 | 0.98 | 0.82 | 0.67 | 0.67 | 0.67 | 0.67 |
|                  | 12  | 1.84     | 1.63 | 1.41 | 1.20 | 0.98 | 0.82 | 0.66 | 0.66 | 0.66 | 0.66 |
|                  | 15  | 1.84     | 1.63 | 1.41 | 1.19 | 0.98 | 0.82 | 0.66 | 0.66 | 0.66 | 0.66 |
|                  | 20  | 1.85     | 1.63 | 1.41 | 1.19 | 0.97 | 0.81 | 0.65 | 0.65 | 0.65 | 0.65 |

| COP        |     | Load (%) |      |      |      |      |      |      |      |      |      |
|------------|-----|----------|------|------|------|------|------|------|------|------|------|
|            |     | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C) | -20 | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|            | -15 | 2.11     | 2.33 | 2.33 | 2.34 | 2.34 | 1.94 | 1.82 | 1.64 | 1.67 | 1.67 |
|            | -10 | 2.41     | 2.39 | 2.38 | 2.36 | 2.35 | 2.28 | 2.10 | 1.92 | 1.92 | 1.92 |
|            | -7  | 2.59     | 2.58 | 2.56 | 2.54 | 2.51 | 2.47 | 2.31 | 2.09 | 2.12 | 2.12 |
|            | -2  | 2.98     | 2.97 | 2.96 | 2.95 | 2.93 | 2.89 | 2.78 | 2.63 | 2.64 | 2.64 |
|            | 2   | 3.27     | 3.28 | 3.28 | 3.29 | 3.30 | 3.24 | 3.17 | 3.08 | 3.08 | 3.08 |
|            | 7   | 3.83     | 3.84 | 3.85 | 3.87 | 3.89 | 3.77 | 3.59 | 3.59 | 3.59 | 3.59 |
|            | 10  | 4.17     | 4.19 | 4.22 | 4.25 | 4.30 | 4.19 | 4.03 | 4.03 | 4.03 | 4.03 |
|            | 12  | 4.40     | 4.42 | 4.46 | 4.50 | 4.57 | 4.48 | 4.33 | 4.33 | 4.33 | 4.33 |
|            | 15  | 4.51     | 4.55 | 4.62 | 4.71 | 4.83 | 4.71 | 4.54 | 4.54 | 4.54 | 4.54 |
|            | 20  | 4.69     | 4.77 | 4.89 | 5.04 | 5.27 | 5.11 | 4.88 | 4.88 | 4.88 | 4.88 |

\* Heating capacity and power input are shown peak value during operation.

\* Heating capacity and power input at 100% load are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Heating capacity and power input at 100% load are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## Specifications part load heating capacity and input (Peak)LWT (°C) =55°C

### Outdoor unit HWT-401HW-E

| Capacity (kW) |     | Load (%) |      |      |      |      |      |      |      |      |      |
|---------------|-----|----------|------|------|------|------|------|------|------|------|------|
|               |     | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)    | -20 | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|               | -15 | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|               | -10 | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|               | -7  | 4.31     | 3.86 | 3.40 | 3.40 | 3.40 | 3.40 | 3.40 | 3.40 | 3.40 | 3.40 |
|               | -2  | 4.98     | 4.49 | 4.01 | 3.72 | 3.44 | 3.15 | 2.92 | 2.92 | 2.92 | 2.92 |
|               | 2   | 5.52     | 5.01 | 4.49 | 3.98 | 3.46 | 2.95 | 2.54 | 2.54 | 2.54 | 2.54 |
|               | 7   | 6.51     | 5.77 | 5.04 | 4.30 | 3.56 | 3.11 | 2.67 | 2.22 | 2.22 | 2.22 |
|               | 10  | 7.18     | 6.37 | 5.57 | 4.77 | 3.96 | 3.31 | 2.66 | 2.48 | 2.48 | 2.48 |
|               | 12  | 7.62     | 6.77 | 5.93 | 5.08 | 4.23 | 3.44 | 2.65 | 2.65 | 2.65 | 2.65 |
|               | 15  | 7.79     | 6.94 | 6.09 | 5.24 | 4.39 | 3.59 | 2.80 | 2.80 | 2.80 | 2.80 |
|               | 20  | 8.06     | 7.21 | 6.36 | 5.51 | 4.66 | 3.85 | 3.04 | 3.04 | 3.04 | 3.04 |

| Power input (kW) |     | Load (%) |      |      |      |      |      |      |      |      |      |
|------------------|-----|----------|------|------|------|------|------|------|------|------|------|
|                  |     | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)       | -20 | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|                  | -15 | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|                  | -10 | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|                  | -7  | 2.03     | 1.87 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 |
|                  | -2  | 2.11     | 1.93 | 1.75 | 1.64 | 1.53 | 1.43 | 1.36 | 1.36 | 1.36 | 1.36 |
|                  | 2   | 2.17     | 1.98 | 1.78 | 1.59 | 1.39 | 1.20 | 1.08 | 1.08 | 1.08 | 1.08 |
|                  | 7   | 2.15     | 1.91 | 1.67 | 1.43 | 1.19 | 1.07 | 0.96 | 0.84 | 0.84 | 0.84 |
|                  | 10  | 2.17     | 1.93 | 1.68 | 1.44 | 1.19 | 1.07 | 0.95 | 0.90 | 0.90 | 0.90 |
|                  | 12  | 2.19     | 1.94 | 1.69 | 1.44 | 1.19 | 1.07 | 0.94 | 0.94 | 0.94 | 0.94 |
|                  | 15  | 2.19     | 1.94 | 1.69 | 1.44 | 1.20 | 1.05 | 0.90 | 0.90 | 0.90 | 0.90 |
|                  | 20  | 2.18     | 1.94 | 1.70 | 1.45 | 1.21 | 1.02 | 0.83 | 0.83 | 0.83 | 0.83 |

| COP        |     | Load (%) |      |      |      |      |      |      |      |      |      |
|------------|-----|----------|------|------|------|------|------|------|------|------|------|
|            |     | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C) | -20 | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|            | -15 | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|            | -10 | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|            | -7  | 2.12     | 2.06 | 1.99 | 1.99 | 1.99 | 1.99 | 1.99 | 1.99 | 1.99 | 1.99 |
|            | -2  | 2.36     | 2.33 | 2.29 | 2.27 | 2.24 | 2.21 | 2.15 | 2.15 | 2.15 | 2.15 |
|            | 2   | 2.54     | 2.53 | 2.52 | 2.51 | 2.48 | 2.46 | 2.35 | 2.35 | 2.35 | 2.35 |
|            | 7   | 3.03     | 3.02 | 3.01 | 3.01 | 2.99 | 2.90 | 2.79 | 2.64 | 2.64 | 2.64 |
|            | 10  | 3.30     | 3.31 | 3.31 | 3.32 | 3.33 | 3.10 | 2.81 | 2.75 | 2.75 | 2.75 |
|            | 12  | 3.48     | 3.49 | 3.51 | 3.53 | 3.55 | 3.23 | 2.82 | 2.82 | 2.82 | 2.82 |
|            | 15  | 3.56     | 3.58 | 3.60 | 3.63 | 3.67 | 3.43 | 3.11 | 3.11 | 3.11 | 3.11 |
|            | 20  | 3.70     | 3.72 | 3.75 | 3.79 | 3.85 | 3.77 | 3.66 | 3.66 | 3.66 | 3.66 |

\* Heating capacity and power input are include defrost cycle data.

\* Heating capacity and power input are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Heating capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## Specifications Low noise operation

### Outdoor unit HWT-401HW-E

| Capacity (kW) |     | LWT (°C) |      |      |
|---------------|-----|----------|------|------|
|               |     | 35       | 45   | 55   |
| TO<br>(°C)    | -20 | 1.35     | —    | —    |
|               | -15 | 1.54     | 1.40 | —    |
|               | -10 | 1.63     | 1.46 | —    |
|               | -7  | 1.68     | 1.49 | 1.30 |
|               | -2  | 2.04     | 1.82 | 1.61 |
|               | 2   | 2.32     | 2.09 | 1.86 |
|               | 7   | 2.85     | 2.53 | 2.20 |
|               | 10  | 3.00     | 2.74 | 2.43 |
|               | 12  | 3.10     | 2.88 | 2.58 |
|               | 15  | 3.24     | 3.09 | 2.80 |
|               | 20  | 3.49     | 3.44 | 3.18 |

| Power input (kW) |     | LWT (°C) |      |      |
|------------------|-----|----------|------|------|
|                  |     | 35       | 45   | 55   |
| TO<br>(°C)       | -20 | 0.64     | —    | —    |
|                  | -15 | 0.66     | 0.77 | —    |
|                  | -10 | 0.61     | 0.72 | —    |
|                  | -7  | 0.58     | 0.70 | 0.81 |
|                  | -2  | 0.59     | 0.71 | 0.84 |
|                  | 2   | 0.59     | 0.73 | 0.87 |
|                  | 7   | 0.59     | 0.77 | 0.94 |
|                  | 10  | 0.59     | 0.76 | 0.94 |
|                  | 12  | 0.58     | 0.76 | 0.94 |
|                  | 15  | 0.58     | 0.76 | 0.94 |
|                  | 20  | 0.57     | 0.75 | 0.94 |

| COP        |     | LWT (°C) |      |      |
|------------|-----|----------|------|------|
|            |     | 35       | 45   | 55   |
| TO<br>(°C) | -20 | 2.11     | —    | —    |
|            | -15 | 2.33     | 1.82 | —    |
|            | -10 | 2.69     | 2.02 | —    |
|            | -7  | 2.90     | 2.14 | 1.60 |
|            | -2  | 3.48     | 2.55 | 1.91 |
|            | 2   | 3.93     | 2.86 | 2.14 |
|            | 7   | 4.83     | 3.30 | 2.34 |
|            | 10  | 5.12     | 3.59 | 2.58 |
|            | 12  | 5.32     | 3.79 | 2.74 |
|            | 15  | 5.62     | 4.09 | 2.98 |
|            | 20  | 6.12     | 4.59 | 3.38 |

\* Heating capacity and power input are include defrost cycle data.

\* Heating capacity and power input are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Heating capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## Specifications part load cooling capacity and input LWT (°C) =7°C

### Outdoor unit HWT-401HW-E

| Capacity (kW) |    | Load (%) |      |      |      |      |      |      |      |      |      |
|---------------|----|----------|------|------|------|------|------|------|------|------|------|
|               |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)    | 20 | 5.47     | 4.92 | 4.38 | 3.83 | 3.24 | 2.65 | 2.07 | 1.48 | 0.89 | 0.89 |
|               | 27 | 5.13     | 4.64 | 4.16 | 3.67 | 3.17 | 2.61 | 2.06 | 1.51 | 0.96 | 0.96 |
|               | 30 | 4.98     | 4.41 | 3.96 | 3.50 | 3.02 | 2.50 | 1.98 | 1.46 | 0.99 | 0.99 |
|               | 35 | 4.74     | 4.33 | 3.91 | 3.50 | 3.08 | 2.57 | 2.06 | 1.55 | 1.04 | 1.04 |
|               | 40 | 4.00     | 3.64 | 3.28 | 2.91 | 2.55 | 2.13 | 1.70 | 1.28 | 1.09 | 1.09 |
|               | 43 | 3.56     | 3.23 | 2.90 | 2.56 | 2.23 | 1.86 | 1.49 | 1.12 | 1.12 | 1.12 |

| Power input (kW) |    | Load (%) |      |      |      |      |      |      |      |      |      |
|------------------|----|----------|------|------|------|------|------|------|------|------|------|
|                  |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)       | 20 | 1.03     | 0.89 | 0.76 | 0.62 | 0.53 | 0.43 | 0.34 | 0.24 | 0.15 | 0.15 |
|                  | 27 | 1.20     | 1.07 | 0.93 | 0.80 | 0.69 | 0.59 | 0.48 | 0.37 | 0.27 | 0.27 |
|                  | 30 | 1.27     | 1.14 | 1.01 | 0.87 | 0.76 | 0.66 | 0.55 | 0.42 | 0.33 | 0.33 |
|                  | 35 | 1.39     | 1.26 | 1.14 | 1.01 | 0.88 | 0.76 | 0.64 | 0.52 | 0.40 | 0.40 |
|                  | 40 | 1.51     | 1.38 | 1.24 | 1.11 | 0.98 | 0.89 | 0.77 | 0.57 | 0.53 | 0.53 |
|                  | 43 | 1.58     | 1.45 | 1.31 | 1.18 | 1.04 | 0.97 | 0.84 | 0.60 | 0.60 | 0.60 |

| COP        |    | Load (%) |      |      |      |      |      |      |      |      |      |
|------------|----|----------|------|------|------|------|------|------|------|------|------|
|            |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C) | 20 | 5.31     | 5.51 | 5.78 | 6.18 | 6.16 | 6.14 | 6.11 | 6.06 | 5.93 | 5.93 |
|            | 27 | 4.28     | 4.36 | 4.46 | 4.59 | 4.58 | 4.47 | 4.31 | 4.05 | 3.60 | 3.60 |
|            | 30 | 3.92     | 3.88 | 3.94 | 4.01 | 3.99 | 3.82 | 3.63 | 3.49 | 3.03 | 3.03 |
|            | 35 | 3.41     | 3.43 | 3.44 | 3.47 | 3.50 | 3.38 | 3.22 | 2.98 | 2.60 | 2.60 |
|            | 40 | 2.65     | 2.64 | 2.63 | 2.62 | 2.60 | 2.39 | 2.22 | 2.25 | 2.08 | 2.08 |
|            | 43 | 2.25     | 2.23 | 2.21 | 2.18 | 2.14 | 1.93 | 1.77 | 1.87 | 1.87 | 1.87 |

\* Cooling capacity and power input at 100% load are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Cooling capacity and power input at 100% load are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## Specifications part load cooling capacity and input LWT (°C) =13°C

### Outdoor unit HWT-401HW-E

| Capacity (kW) |    | Load (%) |      |      |      |      |      |      |      |      |      |
|---------------|----|----------|------|------|------|------|------|------|------|------|------|
|               |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)    | 20 | 6.24     | 5.66 | 5.08 | 4.50 | 3.91 | 3.31 | 2.72 | 2.13 | 1.53 | 0.94 |
|               | 27 | 5.98     | 5.44 | 4.89 | 4.35 | 3.80 | 3.21 | 2.62 | 2.03 | 1.45 | 1.13 |
|               | 30 | 5.87     | 5.27 | 4.75 | 4.22 | 3.69 | 3.13 | 2.56 | 2.00 | 1.43 | 1.19 |
|               | 35 | 5.69     | 5.19 | 4.68 | 4.18 | 3.67 | 3.09 | 2.51 | 1.93 | 1.35 | 1.35 |
|               | 40 | 5.16     | 4.71 | 4.25 | 3.80 | 3.35 | 2.85 | 2.36 | 1.86 | 1.37 | 1.37 |
|               | 43 | 4.84     | 4.42 | 4.00 | 3.57 | 3.15 | 2.71 | 2.27 | 1.82 | 1.38 | 1.38 |

| Power input (kW) |    | Load (%) |      |      |      |      |      |      |      |      |      |
|------------------|----|----------|------|------|------|------|------|------|------|------|------|
|                  |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)       | 20 | 1.18     | 0.99 | 0.80 | 0.61 | 0.53 | 0.44 | 0.36 | 0.27 | 0.19 | 0.10 |
|                  | 27 | 1.30     | 1.13 | 0.96 | 0.80 | 0.69 | 0.58 | 0.48 | 0.38 | 0.27 | 0.23 |
|                  | 30 | 1.35     | 1.20 | 1.04 | 0.88 | 0.76 | 0.65 | 0.54 | 0.43 | 0.32 | 0.29 |
|                  | 35 | 1.43     | 1.29 | 1.15 | 1.01 | 0.87 | 0.75 | 0.62 | 0.50 | 0.37 | 0.37 |
|                  | 40 | 1.57     | 1.42 | 1.28 | 1.14 | 1.00 | 0.87 | 0.75 | 0.62 | 0.50 | 0.50 |
|                  | 43 | 1.65     | 1.51 | 1.36 | 1.22 | 1.07 | 0.95 | 0.83 | 0.70 | 0.58 | 0.58 |

| COP        |    | Load (%) |      |      |      |      |      |      |      |      |      |
|------------|----|----------|------|------|------|------|------|------|------|------|------|
|            |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C) | 20 | 5.29     | 5.72 | 6.35 | 7.38 | 7.44 | 7.53 | 7.66 | 7.88 | 8.29 | 9.40 |
|            | 27 | 4.61     | 4.81 | 5.08 | 5.46 | 5.53 | 5.51 | 5.48 | 5.43 | 5.34 | 5.01 |
|            | 30 | 4.36     | 4.40 | 4.58 | 4.82 | 4.88 | 4.82 | 4.73 | 4.61 | 4.41 | 4.10 |
|            | 35 | 3.98     | 4.02 | 4.07 | 4.13 | 4.22 | 4.15 | 4.05 | 3.90 | 3.65 | 3.65 |
|            | 40 | 3.29     | 3.30 | 3.32 | 3.34 | 3.36 | 3.27 | 3.15 | 2.98 | 2.73 | 2.73 |
|            | 43 | 2.93     | 2.94 | 2.94 | 2.94 | 2.94 | 2.86 | 2.75 | 2.59 | 2.38 | 2.38 |

\* Cooling capacity and power input at 100% load are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Cooling capacity and power input at 100% load are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

**Specifications part load cooling capacity and input LWT (°C) =18°C****Outdoor unit HWT-401HW-E**

| Capacity (kW) |    | Load (%) |      |      |      |      |      |      |      |      |      |
|---------------|----|----------|------|------|------|------|------|------|------|------|------|
|               |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)    | 20 | 7.19     | 6.45 | 5.72 | 4.98 | 4.34 | 3.69 | 3.05 | 2.41 | 1.76 | 1.12 |
|               | 27 | 6.79     | 6.09 | 5.38 | 4.67 | 4.06 | 3.46 | 2.85 | 2.24 | 1.64 | 1.29 |
|               | 30 | 6.62     | 5.89 | 5.20 | 4.51 | 3.92 | 3.33 | 2.74 | 2.15 | 1.63 | 1.37 |
|               | 35 | 6.34     | 5.67 | 4.99 | 4.32 | 3.75 | 3.19 | 2.62 | 2.06 | 1.49 | 1.49 |
|               | 40 | 5.87     | 5.23 | 4.59 | 3.95 | 3.42 | 2.90 | 2.37 | 1.84 | 1.63 | 1.63 |
|               | 43 | 5.59     | 4.97 | 4.35 | 3.73 | 3.23 | 2.72 | 2.22 | 1.71 | 1.71 | 1.71 |

| Power input (kW) |    | Load (%) |      |      |      |      |      |      |      |      |      |
|------------------|----|----------|------|------|------|------|------|------|------|------|------|
|                  |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)       | 20 | 1.13     | 0.95 | 0.78 | 0.60 | 0.52 | 0.43 | 0.35 | 0.26 | 0.18 | 0.09 |
|                  | 27 | 1.28     | 1.09 | 0.91 | 0.72 | 0.63 | 0.53 | 0.44 | 0.35 | 0.25 | 0.21 |
|                  | 30 | 1.34     | 1.16 | 0.97 | 0.78 | 0.68 | 0.58 | 0.48 | 0.39 | 0.30 | 0.27 |
|                  | 35 | 1.45     | 1.25 | 1.06 | 0.86 | 0.76 | 0.65 | 0.55 | 0.44 | 0.34 | 0.34 |
|                  | 40 | 1.59     | 1.39 | 1.19 | 0.99 | 0.87 | 0.75 | 0.63 | 0.52 | 0.48 | 0.48 |
|                  | 43 | 1.68     | 1.47 | 1.27 | 1.06 | 0.94 | 0.81 | 0.69 | 0.56 | 0.56 | 0.56 |

| COP        |    | Load (%) |      |      |      |      |      |      |      |       |       |
|------------|----|----------|------|------|------|------|------|------|------|-------|-------|
|            |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20    | 10    |
| TO<br>(°C) | 20 | 6.36     | 6.77 | 7.36 | 8.30 | 8.42 | 8.59 | 8.84 | 9.26 | 10.08 | 12.44 |
|            | 27 | 5.31     | 5.57 | 5.93 | 6.48 | 6.48 | 6.48 | 6.48 | 6.49 | 6.49  | 6.25  |
|            | 30 | 4.93     | 5.07 | 5.35 | 5.76 | 5.74 | 5.70 | 5.65 | 5.58 | 5.37  | 5.09  |
|            | 35 | 4.37     | 4.52 | 4.73 | 5.02 | 4.97 | 4.89 | 4.78 | 4.63 | 4.38  | 4.38  |
|            | 40 | 3.68     | 3.76 | 3.86 | 4.01 | 3.94 | 3.86 | 3.74 | 3.56 | 3.41  | 3.41  |
|            | 43 | 3.33     | 3.37 | 3.43 | 3.52 | 3.45 | 3.36 | 3.23 | 3.05 | 3.05  | 3.05  |

\* Cooling capacity and power input at 100% load are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Cooling capacity and power input at 100% load are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## Specifications Low noise operation

### 40.2Hz

#### Outdoor unit HWT-401HW-E

| Capacity (kW) |    | LWT ( °C ) |      |      |
|---------------|----|------------|------|------|
|               |    | 7          | 13   | 18   |
| TO<br>( °C )  | 20 | 4.12       | 4.86 | 5.34 |
|               | 27 | 3.54       | 4.23 | 4.85 |
|               | 30 | 3.29       | 3.95 | 4.65 |
|               | 35 | 2.87       | 3.50 | 4.30 |
|               | 40 | 2.16       | 2.90 | 3.32 |
|               | 43 | 1.74       | 2.54 | 2.73 |

| Power input (kW) |    | LWT ( °C ) |      |      |
|------------------|----|------------|------|------|
|                  |    | 7          | 13   | 18   |
| TO<br>( °C )     | 20 | 0.78       | 0.79 | 0.80 |
|                  | 27 | 0.92       | 0.94 | 0.98 |
|                  | 30 | 0.98       | 1.01 | 1.05 |
|                  | 35 | 1.08       | 1.12 | 1.18 |
|                  | 40 | 1.16       | 1.21 | 1.14 |
|                  | 43 | 1.20       | 1.27 | 1.12 |

| COP          |    | LWT ( °C ) |      |      |
|--------------|----|------------|------|------|
|              |    | 7          | 13   | 18   |
| TO<br>( °C ) | 20 | 5.28       | 6.15 | 6.68 |
|              | 27 | 3.84       | 4.48 | 4.97 |
|              | 30 | 3.35       | 3.91 | 4.41 |
|              | 35 | 2.66       | 3.13 | 3.64 |
|              | 40 | 1.87       | 2.39 | 2.90 |
|              | 43 | 1.45       | 2.00 | 2.44 |

\* Cooling capacity and power input at 100% load are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Cooling capacity and power input at 100% load are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## Specifications part load heating capacity and input (Peak)LWT (°C) =35°C

### Outdoor unit HWT-601HW-E

| Capacity (kW) |     | Load (%) |      |      |      |      |      |      |      |      |      |
|---------------|-----|----------|------|------|------|------|------|------|------|------|------|
|               |     | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)    | -20 | 4.03     | 3.62 | 3.21 | 2.81 | 2.40 | 1.99 | 1.58 | 1.17 | 0.98 | 0.98 |
|               | -15 | 4.75     | 4.28 | 3.80 | 3.33 | 2.86 | 2.38 | 1.91 | 1.17 | 1.17 | 1.17 |
|               | -10 | 5.57     | 4.99 | 4.42 | 3.84 | 3.27 | 2.69 | 2.07 | 1.45 | 1.45 | 1.45 |
|               | -7  | 6.06     | 5.42 | 4.79 | 4.15 | 3.52 | 2.88 | 2.59 | 1.61 | 1.61 | 1.61 |
|               | -2  | 5.70     | 5.58 | 4.90 | 4.22 | 3.54 | 2.91 | 2.43 | 1.64 | 1.50 | 1.50 |
|               | 2   | 6.42     | 5.71 | 4.99 | 4.28 | 3.56 | 2.93 | 2.30 | 1.67 | 1.04 | 1.04 |
|               | 7   | 7.25     | 6.47 | 5.69 | 4.90 | 4.12 | 3.46 | 2.79 | 2.13 | 1.46 | 0.80 |
|               | 10  | 7.95     | 7.08 | 6.20 | 5.33 | 4.46 | 3.74 | 3.03 | 2.31 | 1.60 | 0.88 |
|               | 12  | 8.42     | 7.49 | 6.55 | 5.62 | 4.68 | 3.93 | 3.18 | 2.44 | 1.69 | 0.94 |
|               | 15  | 8.63     | 7.70 | 6.77 | 5.84 | 4.91 | 4.13 | 3.36 | 2.58 | 1.80 | 1.03 |
|               | 20  | 8.98     | 8.06 | 7.14 | 6.21 | 5.29 | 4.47 | 3.64 | 2.82 | 1.99 | 1.17 |

| Power input (kW) |     | Load (%) |      |      |      |      |      |      |      |      |      |
|------------------|-----|----------|------|------|------|------|------|------|------|------|------|
|                  |     | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)       | -20 | 1.73     | 1.57 | 1.40 | 1.24 | 1.08 | 0.91 | 0.75 | 0.59 | 0.52 | 0.52 |
|                  | -15 | 1.79     | 1.62 | 1.45 | 1.29 | 1.12 | 0.95 | 0.78 | 0.55 | 0.55 | 0.55 |
|                  | -10 | 1.89     | 1.72 | 1.55 | 1.37 | 1.18 | 0.99 | 0.78 | 0.56 | 0.56 | 0.56 |
|                  | -7  | 1.95     | 1.76 | 1.57 | 1.38 | 1.20 | 1.01 | 0.82 | 0.57 | 0.57 | 0.57 |
|                  | -2  | 1.51     | 1.53 | 1.35 | 1.17 | 0.99 | 0.83 | 0.68 | 0.49 | 0.48 | 0.48 |
|                  | 2   | 1.52     | 1.35 | 1.17 | 1.00 | 0.82 | 0.69 | 0.56 | 0.43 | 0.30 | 0.30 |
|                  | 7   | 1.49     | 1.31 | 1.13 | 0.95 | 0.77 | 0.65 | 0.54 | 0.42 | 0.30 | 0.23 |
|                  | 10  | 1.48     | 1.30 | 1.12 | 0.94 | 0.76 | 0.65 | 0.54 | 0.43 | 0.31 | 0.22 |
|                  | 12  | 1.48     | 1.30 | 1.12 | 0.94 | 0.76 | 0.65 | 0.54 | 0.43 | 0.32 | 0.21 |
|                  | 15  | 1.48     | 1.30 | 1.12 | 0.93 | 0.75 | 0.64 | 0.53 | 0.42 | 0.31 | 0.20 |
|                  | 20  | 1.48     | 1.30 | 1.11 | 0.93 | 0.74 | 0.63 | 0.52 | 0.41 | 0.30 | 0.19 |

| COP        |     | Load (%) |      |      |      |      |      |      |      |      |      |
|------------|-----|----------|------|------|------|------|------|------|------|------|------|
|            |     | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C) | -20 | 2.33     | 2.31 | 2.29 | 2.26 | 2.23 | 2.18 | 2.11 | 2.00 | 1.88 | 1.88 |
|            | -15 | 2.65     | 2.64 | 2.62 | 2.59 | 2.56 | 2.51 | 2.45 | 2.13 | 2.13 | 2.13 |
|            | -10 | 2.94     | 2.90 | 2.86 | 2.81 | 2.77 | 2.73 | 2.65 | 2.56 | 2.56 | 2.56 |
|            | -7  | 3.12     | 3.09 | 3.05 | 3.00 | 2.94 | 2.86 | 3.16 | 2.82 | 2.82 | 2.82 |
|            | -2  | 3.78     | 3.65 | 3.64 | 3.62 | 3.59 | 3.50 | 3.60 | 3.34 | 3.14 | 3.14 |
|            | 2   | 4.22     | 4.24 | 4.26 | 4.30 | 4.34 | 4.25 | 4.11 | 3.88 | 3.47 | 3.47 |
|            | 7   | 4.87     | 4.94 | 5.03 | 5.16 | 5.35 | 5.30 | 5.22 | 5.10 | 4.88 | 3.48 |
|            | 10  | 5.36     | 5.43 | 5.52 | 5.65 | 5.83 | 5.75 | 5.63 | 5.44 | 5.12 | 4.06 |
|            | 12  | 5.69     | 5.76 | 5.85 | 5.97 | 6.16 | 6.05 | 5.90 | 5.67 | 5.28 | 4.48 |
|            | 15  | 5.83     | 5.93 | 6.06 | 6.25 | 6.52 | 6.43 | 6.30 | 6.10 | 5.77 | 5.07 |
|            | 20  | 6.07     | 6.22 | 6.43 | 6.72 | 7.15 | 7.09 | 7.00 | 6.87 | 6.65 | 6.16 |

\* Heating capacity and power input are shown peak value during operation.

\* Heating capacity and power input at 100% load are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Heating capacity and power input at 100% load are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## Specifications part load heating capacity and input (Peak)LWT (°C) =45°C

### Outdoor unit HWT-601HW-E

| Capacity (kW) |     | Load (%) |      |      |      |      |      |      |      |      |      |
|---------------|-----|----------|------|------|------|------|------|------|------|------|------|
|               |     | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)    | -20 | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|               | -15 | 4.03     | 3.65 | 3.27 | 2.89 | 2.51 | 2.13 | 1.75 | 1.05 | 1.05 | 1.05 |
|               | -10 | 5.14     | 4.64 | 4.14 | 3.65 | 3.15 | 2.65 | 1.97 | 1.29 | 1.29 | 1.29 |
|               | -7  | 5.80     | 5.23 | 4.67 | 4.10 | 3.53 | 2.97 | 2.40 | 1.44 | 1.44 | 1.44 |
|               | -2  | 5.32     | 5.28 | 4.66 | 4.04 | 3.42 | 2.68 | 2.44 | 1.77 | 1.77 | 1.77 |
|               | 2   | 5.99     | 5.33 | 4.66 | 4.00 | 3.33 | 2.90 | 2.46 | 2.03 | 2.03 | 2.03 |
|               | 7   | 6.97     | 6.18 | 5.39 | 4.60 | 3.81 | 3.13 | 2.44 | 2.44 | 2.44 | 2.44 |
|               | 10  | 7.64     | 6.78 | 5.93 | 5.07 | 4.21 | 3.45 | 2.69 | 2.69 | 2.69 | 2.69 |
|               | 12  | 8.09     | 7.19 | 6.29 | 5.38 | 4.48 | 3.67 | 2.86 | 2.86 | 2.86 | 2.86 |
|               | 15  | 8.31     | 7.41 | 6.51 | 5.61 | 4.72 | 3.85 | 2.98 | 2.98 | 2.98 | 2.98 |
|               | 20  | 8.67     | 7.78 | 6.89 | 6.00 | 5.11 | 4.14 | 3.17 | 3.17 | 3.17 | 3.17 |

| Power input (kW) |     | Load (%) |      |      |      |      |      |      |      |      |      |
|------------------|-----|----------|------|------|------|------|------|------|------|------|------|
|                  |     | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)       | -20 | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|                  | -15 | 1.84     | 1.68 | 1.53 | 1.37 | 1.21 | 1.06 | 0.90 | 0.64 | 0.64 | 0.64 |
|                  | -10 | 2.11     | 1.92 | 1.73 | 1.54 | 1.34 | 1.14 | 0.93 | 0.67 | 0.67 | 0.67 |
|                  | -7  | 2.25     | 2.04 | 1.82 | 1.61 | 1.40 | 1.18 | 0.97 | 0.69 | 0.69 | 0.69 |
|                  | -2  | 1.79     | 1.81 | 1.60 | 1.39 | 1.18 | 1.02 | 0.87 | 0.68 | 0.67 | 0.67 |
|                  | 2   | 1.83     | 1.63 | 1.42 | 1.22 | 1.01 | 0.90 | 0.78 | 0.67 | 0.67 | 0.67 |
|                  | 7   | 1.82     | 1.61 | 1.40 | 1.19 | 0.98 | 0.83 | 0.68 | 0.68 | 0.68 | 0.68 |
|                  | 10  | 1.83     | 1.62 | 1.41 | 1.19 | 0.98 | 0.82 | 0.67 | 0.67 | 0.67 | 0.67 |
|                  | 12  | 1.84     | 1.63 | 1.41 | 1.20 | 0.98 | 0.82 | 0.66 | 0.66 | 0.66 | 0.66 |
|                  | 15  | 1.84     | 1.63 | 1.41 | 1.19 | 0.98 | 0.82 | 0.66 | 0.66 | 0.66 | 0.66 |
|                  | 20  | 1.85     | 1.63 | 1.41 | 1.19 | 0.97 | 0.81 | 0.65 | 0.65 | 0.65 | 0.65 |

| COP        |     | Load (%) |      |      |      |      |      |      |      |      |      |
|------------|-----|----------|------|------|------|------|------|------|------|------|------|
|            |     | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C) | -20 | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|            | -15 | 2.19     | 2.17 | 2.14 | 2.11 | 2.07 | 2.02 | 1.94 | 1.64 | 1.64 | 1.64 |
|            | -10 | 2.43     | 2.41 | 2.39 | 2.37 | 2.34 | 2.32 | 2.12 | 1.92 | 1.92 | 1.92 |
|            | -7  | 2.58     | 2.57 | 2.56 | 2.55 | 2.53 | 2.51 | 2.47 | 2.09 | 2.09 | 2.09 |
|            | -2  | 2.98     | 2.92 | 2.92 | 2.91 | 2.89 | 2.61 | 2.81 | 2.60 | 2.64 | 2.64 |
|            | 2   | 3.27     | 3.28 | 3.28 | 3.29 | 3.30 | 3.23 | 3.14 | 3.03 | 3.03 | 3.03 |
|            | 7   | 3.83     | 3.84 | 3.85 | 3.87 | 3.89 | 3.77 | 3.59 | 3.59 | 3.59 | 3.59 |
|            | 10  | 4.17     | 4.19 | 4.22 | 4.25 | 4.30 | 4.19 | 4.03 | 4.03 | 4.03 | 4.03 |
|            | 12  | 4.40     | 4.42 | 4.46 | 4.50 | 4.57 | 4.48 | 4.33 | 4.33 | 4.33 | 4.33 |
|            | 15  | 4.51     | 4.55 | 4.62 | 4.71 | 4.83 | 4.71 | 4.54 | 4.54 | 4.54 | 4.54 |
|            | 20  | 4.69     | 4.77 | 4.89 | 5.04 | 5.27 | 5.11 | 4.88 | 4.88 | 4.88 | 4.88 |

\* Heating capacity and power input are shown peak value during operation.

\* Heating capacity and power input at 100% load are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Heating capacity and power input at 100% load are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## Specifications part load heating capacity and input (Peak)LWT (°C) =55°C

### Outdoor unit HWT-601HW-E

| Capacity (kW) |     | Load (%) |      |      |      |      |      |      |      |      |      |
|---------------|-----|----------|------|------|------|------|------|------|------|------|------|
|               |     | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)    | -20 | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|               | -15 | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|               | -10 | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|               | -7  | 5.42     | 4.92 | 4.41 | 3.91 | 3.40 | 3.40 | 3.40 | 3.40 | 3.40 | 3.40 |
|               | -2  | 5.80     | 5.22 | 4.65 | 4.07 | 3.50 | 3.15 | 2.92 | 2.92 | 2.92 | 2.92 |
|               | 2   | 6.10     | 5.47 | 4.84 | 4.21 | 3.58 | 2.95 | 2.54 | 2.54 | 2.54 | 2.54 |
|               | 7   | 7.53     | 6.74 | 5.94 | 5.15 | 4.35 | 3.56 | 2.89 | 2.22 | 2.22 | 2.22 |
|               | 10  | 8.00     | 7.19 | 6.38 | 5.58 | 4.77 | 3.96 | 3.22 | 2.48 | 2.48 | 2.48 |
|               | 12  | 8.31     | 7.49 | 6.68 | 5.86 | 5.05 | 4.23 | 3.44 | 2.65 | 2.65 | 2.65 |
|               | 15  | 8.22     | 7.39 | 6.56 | 5.73 | 4.90 | 4.09 | 3.29 | 2.80 | 2.80 | 2.80 |
|               | 20  | 8.06     | 7.21 | 6.36 | 5.51 | 4.66 | 3.85 | 3.04 | 3.04 | 3.04 | 3.04 |

| Power input (kW) |     | Load (%) |      |      |      |      |      |      |      |      |      |
|------------------|-----|----------|------|------|------|------|------|------|------|------|------|
|                  |     | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)       | -20 | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|                  | -15 | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|                  | -10 | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|                  | -7  | 2.66     | 2.42 | 2.19 | 1.95 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 |
|                  | -2  | 2.58     | 2.33 | 2.08 | 1.83 | 1.57 | 1.43 | 1.36 | 1.36 | 1.36 | 1.36 |
|                  | 2   | 2.52     | 2.26 | 1.99 | 1.73 | 1.46 | 1.20 | 1.08 | 1.08 | 1.08 | 1.08 |
|                  | 7   | 2.61     | 2.33 | 2.04 | 1.76 | 1.47 | 1.19 | 1.02 | 0.84 | 0.84 | 0.84 |
|                  | 10  | 2.60     | 2.32 | 2.03 | 1.75 | 1.47 | 1.19 | 1.01 | 0.83 | 0.83 | 0.83 |
|                  | 12  | 2.59     | 2.31 | 2.03 | 1.75 | 1.47 | 1.19 | 1.01 | 0.83 | 0.83 | 0.83 |
|                  | 15  | 2.44     | 2.17 | 1.90 | 1.64 | 1.37 | 1.13 | 0.94 | 0.83 | 0.83 | 0.83 |
|                  | 20  | 2.18     | 1.94 | 1.70 | 1.45 | 1.21 | 1.02 | 0.83 | 0.83 | 0.83 | 0.83 |

| COP        |     | Load (%) |      |      |      |      |      |      |      |      |      |
|------------|-----|----------|------|------|------|------|------|------|------|------|------|
|            |     | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C) | -20 | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|            | -15 | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|            | -10 | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|            | -7  | 2.04     | 2.03 | 2.02 | 2.01 | 1.99 | 1.99 | 1.99 | 1.99 | 1.99 | 1.99 |
|            | -2  | 2.25     | 2.24 | 2.24 | 2.23 | 2.22 | 2.21 | 2.15 | 2.15 | 2.15 | 2.15 |
|            | 2   | 2.42     | 2.42 | 2.43 | 2.44 | 2.45 | 2.46 | 2.35 | 2.35 | 2.35 | 2.35 |
|            | 7   | 2.89     | 2.90 | 2.91 | 2.93 | 2.95 | 2.99 | 2.85 | 2.64 | 2.64 | 2.64 |
|            | 10  | 3.08     | 3.10 | 3.14 | 3.18 | 3.24 | 3.33 | 3.18 | 2.97 | 2.97 | 2.97 |
|            | 12  | 3.21     | 3.24 | 3.29 | 3.35 | 3.43 | 3.55 | 3.41 | 3.19 | 3.19 | 3.19 |
|            | 15  | 3.37     | 3.40 | 3.44 | 3.50 | 3.57 | 3.63 | 3.49 | 3.37 | 3.37 | 3.37 |
|            | 20  | 3.70     | 3.72 | 3.75 | 3.79 | 3.85 | 3.77 | 3.66 | 3.66 | 3.66 | 3.66 |

\* Heating capacity and power input are shown peak value during operation.

\* Heating capacity and power input at 100% load are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Heating capacity and power input at 100% load are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## Specifications Low noise operation

### Outdoor unit HWT-601HW-E

| Capacity (kW) |     | LWT (°C) |      |      |
|---------------|-----|----------|------|------|
|               |     | 35       | 45   | 55   |
| TO<br>(°C)    | -20 | 1.93     | —    | —    |
|               | -15 | 2.08     | 1.92 | —    |
|               | -10 | 2.46     | 2.27 | —    |
|               | -7  | 2.69     | 2.48 | 2.04 |
|               | -2  | 3.18     | 2.97 | 2.56 |
|               | 2   | 3.58     | 3.36 | 2.97 |
|               | 7   | 4.29     | 4.12 | 3.61 |
|               | 10  | 4.54     | 4.38 | 3.74 |
|               | 12  | 4.71     | 4.55 | 3.82 |
|               | 15  | 4.86     | 4.71 | 4.13 |
|               | 20  | 5.11     | 4.98 | 4.65 |

| Power input (kW) |     | LWT (°C) |      |      |
|------------------|-----|----------|------|------|
|                  |     | 35       | 45   | 55   |
| TO<br>(°C)       | -20 | 0.83     | —    | —    |
|                  | -15 | 0.86     | 1.00 | —    |
|                  | -10 | 0.89     | 1.05 | —    |
|                  | -7  | 0.90     | 1.07 | 1.23 |
|                  | -2  | 0.91     | 1.10 | 1.29 |
|                  | 2   | 0.91     | 1.12 | 1.33 |
|                  | 7   | 0.92     | 1.15 | 1.39 |
|                  | 10  | 0.91     | 1.15 | 1.40 |
|                  | 12  | 0.91     | 1.15 | 1.41 |
|                  | 15  | 0.91     | 1.15 | 1.42 |
|                  | 20  | 0.91     | 1.16 | 1.44 |

| COP        |     | LWT (°C) |      |      |
|------------|-----|----------|------|------|
|            |     | 35       | 45   | 55   |
| TO<br>(°C) | -20 | 2.33     | —    | —    |
|            | -15 | 2.42     | 1.92 | —    |
|            | -10 | 2.78     | 2.17 | —    |
|            | -7  | 2.99     | 2.32 | 1.66 |
|            | -2  | 3.52     | 2.70 | 1.99 |
|            | 2   | 3.93     | 3.00 | 2.23 |
|            | 7   | 4.66     | 3.58 | 2.60 |
|            | 10  | 4.97     | 3.81 | 2.66 |
|            | 12  | 5.18     | 3.96 | 2.71 |
|            | 15  | 5.34     | 4.08 | 2.91 |
|            | 20  | 5.62     | 4.29 | 3.23 |

\* Heating capacity and power input are shown peak value during operation.

\* Heating capacity and power input at 100% load are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Heating capacity and power input at 100% load are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## Specifications part load cooling capacity and input LWT (°C) =7°C

### Outdoor unit HWT-601HW-E

| Capacity (kW) |    | Load (%) |      |      |      |      |      |      |      |      |      |
|---------------|----|----------|------|------|------|------|------|------|------|------|------|
|               |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)    | 20 | 5.72     | 5.09 | 4.46 | 3.83 | 3.24 | 2.65 | 2.07 | 1.48 | 0.89 | 0.89 |
|               | 27 | 5.54     | 4.94 | 4.34 | 3.74 | 3.17 | 2.61 | 2.06 | 1.51 | 0.96 | 0.96 |
|               | 30 | 5.37     | 4.79 | 4.22 | 3.65 | 3.09 | 2.56 | 2.03 | 1.51 | 0.99 | 0.99 |
|               | 35 | 5.33     | 4.77 | 4.21 | 3.64 | 3.08 | 2.57 | 2.06 | 1.55 | 1.04 | 1.04 |
|               | 40 | 4.81     | 4.31 | 3.82 | 3.32 | 2.83 | 2.36 | 1.94 | 1.51 | 1.09 | 1.09 |
|               | 43 | 4.49     | 4.04 | 3.59 | 3.13 | 2.68 | 2.23 | 1.86 | 1.49 | 1.12 | 1.12 |

| Power input (kW) |    | Load (%) |      |      |      |      |      |      |      |      |      |
|------------------|----|----------|------|------|------|------|------|------|------|------|------|
|                  |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)       | 20 | 1.12     | 0.95 | 0.79 | 0.62 | 0.53 | 0.43 | 0.34 | 0.24 | 0.15 | 0.15 |
|                  | 27 | 1.40     | 1.21 | 1.03 | 0.84 | 0.69 | 0.59 | 0.48 | 0.37 | 0.27 | 0.27 |
|                  | 30 | 1.51     | 1.32 | 1.13 | 0.94 | 0.78 | 0.67 | 0.55 | 0.44 | 0.33 | 0.33 |
|                  | 35 | 1.72     | 1.51 | 1.30 | 1.09 | 0.88 | 0.76 | 0.64 | 0.52 | 0.40 | 0.40 |
|                  | 40 | 1.86     | 1.67 | 1.48 | 1.28 | 1.09 | 0.94 | 0.80 | 0.66 | 0.53 | 0.53 |
|                  | 43 | 1.94     | 1.76 | 1.58 | 1.40 | 1.22 | 1.04 | 0.89 | 0.75 | 0.60 | 0.60 |

| COP        |    | Load (%) |      |      |      |      |      |      |      |      |      |
|------------|----|----------|------|------|------|------|------|------|------|------|------|
|            |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C) | 20 | 5.11     | 5.34 | 5.67 | 6.18 | 6.16 | 6.14 | 6.11 | 6.06 | 5.93 | 5.93 |
|            | 27 | 3.96     | 4.07 | 4.23 | 4.46 | 4.58 | 4.47 | 4.31 | 4.05 | 3.60 | 3.60 |
|            | 30 | 3.57     | 3.64 | 3.74 | 3.87 | 3.94 | 3.84 | 3.68 | 3.44 | 3.03 | 3.03 |
|            | 35 | 3.10     | 3.16 | 3.23 | 3.34 | 3.50 | 3.38 | 3.22 | 2.98 | 2.60 | 2.60 |
|            | 40 | 2.59     | 2.59 | 2.59 | 2.59 | 2.59 | 2.52 | 2.42 | 2.29 | 2.08 | 2.08 |
|            | 43 | 2.31     | 2.29 | 2.27 | 2.24 | 2.20 | 2.14 | 2.08 | 2.00 | 1.87 | 1.87 |

\* Cooling capacity and power input at 100% load are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Cooling capacity and power input at 100% load are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## Specifications part load cooling capacity and input LWT (°C) =13°C

### Outdoor unit HWT-601HW-E

| Capacity (kW) |    | Load (%) |      |      |      |      |      |      |      |      |      |
|---------------|----|----------|------|------|------|------|------|------|------|------|------|
|               |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)    | 20 | 6.63     | 5.92 | 5.21 | 4.50 | 3.91 | 3.31 | 2.72 | 2.13 | 1.53 | 0.94 |
|               | 27 | 6.57     | 5.86 | 5.15 | 4.44 | 3.80 | 3.21 | 2.62 | 2.03 | 1.45 | 1.13 |
|               | 30 | 6.45     | 5.77 | 5.08 | 4.40 | 3.77 | 3.19 | 2.60 | 2.02 | 1.43 | 1.19 |
|               | 35 | 6.51     | 5.80 | 5.09 | 4.38 | 3.67 | 3.09 | 2.51 | 1.93 | 1.35 | 1.35 |
|               | 40 | 6.04     | 5.44 | 4.85 | 4.26 | 3.67 | 3.13 | 2.54 | 1.96 | 1.37 | 1.37 |
|               | 43 | 5.75     | 5.23 | 4.71 | 4.19 | 3.67 | 3.15 | 2.56 | 1.97 | 1.38 | 1.38 |

| Power input (kW) |    | Load (%) |      |      |      |      |      |      |      |      |      |
|------------------|----|----------|------|------|------|------|------|------|------|------|------|
|                  |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)       | 20 | 1.21     | 1.01 | 0.81 | 0.61 | 0.53 | 0.44 | 0.36 | 0.27 | 0.19 | 0.10 |
|                  | 27 | 1.48     | 1.26 | 1.05 | 0.84 | 0.69 | 0.58 | 0.48 | 0.38 | 0.27 | 0.23 |
|                  | 30 | 1.59     | 1.37 | 1.16 | 0.95 | 0.79 | 0.67 | 0.55 | 0.44 | 0.32 | 0.29 |
|                  | 35 | 1.78     | 1.55 | 1.33 | 1.10 | 0.87 | 0.75 | 0.62 | 0.50 | 0.37 | 0.37 |
|                  | 40 | 1.94     | 1.73 | 1.53 | 1.32 | 1.12 | 0.95 | 0.80 | 0.65 | 0.50 | 0.50 |
|                  | 43 | 2.03     | 1.84 | 1.65 | 1.45 | 1.26 | 1.07 | 0.91 | 0.74 | 0.58 | 0.58 |

| COP        |    | Load (%) |      |      |      |      |      |      |      |      |      |
|------------|----|----------|------|------|------|------|------|------|------|------|------|
|            |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C) | 20 | 5.48     | 5.86 | 6.43 | 7.38 | 7.44 | 7.53 | 7.66 | 7.88 | 8.29 | 9.40 |
|            | 27 | 4.45     | 4.64 | 4.91 | 5.31 | 5.53 | 5.51 | 5.48 | 5.43 | 5.34 | 5.01 |
|            | 30 | 4.06     | 4.21 | 4.38 | 4.64 | 4.80 | 4.78 | 4.71 | 4.60 | 4.41 | 4.10 |
|            | 35 | 3.66     | 3.74 | 3.84 | 3.99 | 4.22 | 4.15 | 4.05 | 3.90 | 3.65 | 3.65 |
|            | 40 | 3.12     | 3.14 | 3.18 | 3.23 | 3.29 | 3.30 | 3.18 | 3.01 | 2.73 | 2.73 |
|            | 43 | 2.83     | 2.85 | 2.86 | 2.88 | 2.91 | 2.94 | 2.82 | 2.65 | 2.38 | 2.38 |

\* Cooling capacity and power input at 100% load are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Cooling capacity and power input at 100% load are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## Specifications part load cooling capacity and input LWT(°C) =18°C

### Outdoor unit HWT-601HW-E

| Capacity (kW) |    | Load (%) |      |      |      |      |      |      |      |      |      |
|---------------|----|----------|------|------|------|------|------|------|------|------|------|
|               |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)    | 20 | 7.51     | 6.67 | 5.82 | 4.98 | 4.34 | 3.69 | 3.05 | 2.41 | 1.76 | 1.12 |
|               | 27 | 7.33     | 6.55 | 5.78 | 5.00 | 4.33 | 3.66 | 2.98 | 2.31 | 1.64 | 1.29 |
|               | 30 | 7.25     | 6.41 | 5.66 | 4.91 | 4.24 | 3.57 | 2.89 | 2.21 | 1.63 | 1.37 |
|               | 35 | 7.12     | 6.42 | 5.72 | 5.02 | 4.32 | 3.61 | 2.91 | 2.20 | 1.49 | 1.49 |
|               | 40 | 6.60     | 5.94 | 5.28 | 4.61 | 3.95 | 3.27 | 2.58 | 1.89 | 1.63 | 1.63 |
|               | 43 | 6.29     | 5.65 | 5.01 | 4.37 | 3.73 | 3.06 | 2.38 | 1.71 | 1.71 | 1.71 |

| Power input (kW) |    | Load (%) |      |      |      |      |      |      |      |      |      |
|------------------|----|----------|------|------|------|------|------|------|------|------|------|
|                  |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)       | 20 | 1.23     | 1.02 | 0.81 | 0.60 | 0.52 | 0.43 | 0.35 | 0.26 | 0.18 | 0.09 |
|                  | 27 | 1.51     | 1.28 | 1.06 | 0.83 | 0.68 | 0.57 | 0.46 | 0.36 | 0.25 | 0.21 |
|                  | 30 | 1.62     | 1.38 | 1.15 | 0.93 | 0.75 | 0.63 | 0.51 | 0.40 | 0.30 | 0.27 |
|                  | 35 | 1.82     | 1.58 | 1.34 | 1.10 | 0.86 | 0.73 | 0.60 | 0.47 | 0.34 | 0.34 |
|                  | 40 | 1.97     | 1.72 | 1.48 | 1.23 | 0.99 | 0.83 | 0.68 | 0.53 | 0.48 | 0.48 |
|                  | 43 | 2.06     | 1.81 | 1.56 | 1.31 | 1.06 | 0.89 | 0.73 | 0.56 | 0.56 | 0.56 |

| COP        |    | Load (%) |      |      |      |      |      |      |      |       |       |
|------------|----|----------|------|------|------|------|------|------|------|-------|-------|
|            |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20    | 10    |
| TO<br>(°C) | 20 | 6.11     | 6.54 | 7.19 | 8.30 | 8.42 | 8.59 | 8.84 | 9.26 | 10.08 | 12.44 |
|            | 27 | 4.87     | 5.11 | 5.46 | 6.00 | 6.40 | 6.41 | 6.43 | 6.45 | 6.49  | 6.25  |
|            | 30 | 4.47     | 4.63 | 4.90 | 5.31 | 5.68 | 5.66 | 5.62 | 5.58 | 5.37  | 5.09  |
|            | 35 | 3.91     | 4.06 | 4.27 | 4.56 | 5.02 | 4.95 | 4.84 | 4.68 | 4.38  | 4.38  |
|            | 40 | 3.35     | 3.45 | 3.57 | 3.75 | 4.01 | 3.92 | 3.80 | 3.60 | 3.41  | 3.41  |
|            | 43 | 3.05     | 3.12 | 3.21 | 3.34 | 3.52 | 3.42 | 3.28 | 3.05 | 3.05  | 3.05  |

\* Cooling capacity and power input at 100% load are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Cooling capacity and power input at 100% load are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## Specifications Low noise operation

### Outdoor unit HWT-601HW-E

| Capacity (kW) |    | LWT (°C) |      |      |
|---------------|----|----------|------|------|
|               |    | 7        | 13   | 18   |
| TO<br>(°C)    | 20 | 4.12     | 4.86 | 5.34 |
|               | 27 | 3.54     | 4.23 | 4.85 |
|               | 30 | 3.29     | 3.95 | 4.65 |
|               | 35 | 2.87     | 3.50 | 4.30 |
|               | 40 | 2.16     | 2.90 | 3.32 |
|               | 43 | 1.74     | 2.54 | 2.73 |

| Power input (kW) |    | LWT (°C) |      |      |
|------------------|----|----------|------|------|
|                  |    | 7        | 13   | 18   |
| TO<br>(°C)       | 20 | 0.78     | 0.79 | 0.80 |
|                  | 27 | 0.92     | 0.94 | 0.98 |
|                  | 30 | 0.98     | 1.01 | 1.05 |
|                  | 35 | 1.08     | 1.12 | 1.18 |
|                  | 40 | 1.16     | 1.21 | 1.14 |
|                  | 43 | 1.20     | 1.27 | 1.12 |

| COP        |    | LWT (°C) |      |      |
|------------|----|----------|------|------|
|            |    | 7        | 13   | 18   |
| TO<br>(°C) | 20 | 5.28     | 6.15 | 6.68 |
|            | 27 | 3.84     | 4.48 | 4.97 |
|            | 30 | 3.35     | 3.91 | 4.41 |
|            | 35 | 2.66     | 3.13 | 3.64 |
|            | 40 | 1.87     | 2.39 | 2.90 |
|            | 43 | 1.45     | 2.00 | 2.44 |

\* Cooling capacity and power input at 100% load are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Cooling capacity and power input at 100% load are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## Specifications part load heating capacity and input (peak)LWT (°C) =35°C

### Outdoor unit HWT-801H(R)W-E

| Capacity (kW) |     | Load (%) |       |       |      |      |      |      |      |      |      |
|---------------|-----|----------|-------|-------|------|------|------|------|------|------|------|
|               |     | 100      | 90    | 80    | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)    | -25 | 4.43     | 3.99  | 3.54  | 3.10 | 2.65 | 2.21 | 1.76 | 1.76 | 1.76 | 1.76 |
|               | -20 | 5.45     | 4.87  | 4.29  | 3.72 | 3.14 | 2.56 | 2.34 | 2.34 | 2.34 | 2.34 |
|               | -15 | 6.46     | 5.75  | 5.04  | 4.34 | 3.63 | 2.92 | 2.92 | 2.92 | 2.92 | 2.92 |
|               | -10 | 7.49     | 6.69  | 5.89  | 5.08 | 4.28 | 3.48 | 3.07 | 2.67 | 2.67 | 2.67 |
|               | -7  | 8.11     | 7.25  | 6.39  | 5.53 | 4.67 | 3.81 | 3.17 | 2.52 | 2.52 | 2.52 |
|               | -2  | 9.24     | 8.29  | 7.34  | 6.38 | 5.43 | 4.48 | 3.53 | 2.58 | 2.58 | 2.58 |
|               | 2   | 10.30    | 9.20  | 8.11  | 7.01 | 5.91 | 4.81 | 3.72 | 2.62 | 2.62 | 2.62 |
|               | 7   | 11.90    | 10.69 | 9.48  | 8.27 | 7.06 | 5.85 | 4.64 | 3.43 | 2.22 | 1.01 |
|               | 10  | 12.57    | 11.61 | 10.36 | 9.10 | 7.85 | 6.59 | 5.24 | 3.88 | 2.53 | 1.17 |
|               | 12  | 13.01    | 11.76 | 10.51 | 9.25 | 8.00 | 6.75 | 5.38 | 4.02 | 2.65 | 1.28 |
|               | 15  | 13.22    | 11.97 | 10.73 | 9.48 | 8.23 | 6.99 | 5.60 | 4.22 | 2.83 | 1.45 |
|               | 20  | 13.57    | 12.33 | 11.09 | 9.86 | 8.62 | 7.38 | 5.97 | 4.55 | 3.14 | 1.72 |

| Power input (kW) |     | Load (%) |      |      |      |      |      |      |      |      |      |
|------------------|-----|----------|------|------|------|------|------|------|------|------|------|
|                  |     | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)       | -25 | 2.22     | 2.03 | 1.84 | 1.65 | 1.45 | 1.26 | 1.07 | 1.07 | 1.07 | 1.07 |
|                  | -20 | 2.41     | 2.17 | 1.93 | 1.68 | 1.44 | 1.20 | 1.11 | 1.11 | 1.11 | 1.11 |
|                  | -15 | 2.60     | 2.31 | 2.02 | 1.72 | 1.43 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 |
|                  | -10 | 2.78     | 2.45 | 2.13 | 1.80 | 1.48 | 1.15 | 1.04 | 0.92 | 0.92 | 0.92 |
|                  | -7  | 2.88     | 2.54 | 2.19 | 1.85 | 1.50 | 1.16 | 0.98 | 0.79 | 0.79 | 0.79 |
|                  | -2  | 2.71     | 2.42 | 2.14 | 1.85 | 1.57 | 1.28 | 0.99 | 0.71 | 0.71 | 0.71 |
|                  | 2   | 2.77     | 2.47 | 2.16 | 1.86 | 1.55 | 1.25 | 0.94 | 0.64 | 0.64 | 0.64 |
|                  | 7   | 2.62     | 2.36 | 2.10 | 1.85 | 1.59 | 1.33 | 1.07 | 0.82 | 0.56 | 0.30 |
|                  | 10  | 2.63     | 2.33 | 2.03 | 1.73 | 1.43 | 1.13 | 0.92 | 0.71 | 0.50 | 0.29 |
|                  | 12  | 2.63     | 2.33 | 2.02 | 1.72 | 1.41 | 1.11 | 0.90 | 0.70 | 0.49 | 0.28 |
|                  | 15  | 2.63     | 2.32 | 2.01 | 1.70 | 1.39 | 1.08 | 0.88 | 0.68 | 0.47 | 0.27 |
|                  | 20  | 2.62     | 2.30 | 1.99 | 1.67 | 1.36 | 1.04 | 0.84 | 0.65 | 0.45 | 0.25 |

| COP        |     | Load (%) |      |      |      |      |      |      |      |      |      |
|------------|-----|----------|------|------|------|------|------|------|------|------|------|
|            |     | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C) | -25 | 2.00     | 1.96 | 1.93 | 1.88 | 1.82 | 1.75 | 1.64 | 1.64 | 1.64 | 1.64 |
|            | -20 | 2.26     | 2.25 | 2.23 | 2.21 | 2.18 | 2.13 | 2.12 | 2.12 | 2.12 | 2.12 |
|            | -15 | 2.48     | 2.49 | 2.50 | 2.52 | 2.53 | 2.56 | 2.56 | 2.56 | 2.56 | 2.56 |
|            | -10 | 2.70     | 2.73 | 2.77 | 2.82 | 2.90 | 3.02 | 2.96 | 2.90 | 2.90 | 2.90 |
|            | -7  | 2.82     | 2.86 | 2.92 | 2.99 | 3.11 | 3.28 | 3.25 | 3.19 | 3.19 | 3.19 |
|            | -2  | 3.41     | 3.42 | 3.43 | 3.45 | 3.47 | 3.50 | 3.55 | 3.64 | 3.64 | 3.64 |
|            | 2   | 3.72     | 3.73 | 3.75 | 3.77 | 3.81 | 3.86 | 3.94 | 4.09 | 4.09 | 4.09 |
|            | 7   | 4.54     | 4.53 | 4.50 | 4.48 | 4.44 | 4.39 | 4.32 | 4.20 | 3.97 | 3.35 |
|            | 10  | 4.77     | 4.98 | 5.10 | 5.26 | 5.49 | 5.85 | 5.71 | 5.49 | 5.08 | 4.07 |
|            | 12  | 4.95     | 5.06 | 5.20 | 5.39 | 5.66 | 6.08 | 5.96 | 5.78 | 5.43 | 4.57 |
|            | 15  | 5.03     | 5.17 | 5.34 | 5.57 | 5.91 | 6.45 | 6.36 | 6.23 | 5.99 | 5.38 |
|            | 20  | 5.18     | 5.35 | 5.58 | 5.89 | 6.36 | 7.10 | 7.08 | 7.05 | 7.01 | 6.88 |

\* Heating capacity and power input are shown peak value during operation.

\* Heating capacity and power input at 100% load are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Heating capacity and power input at 100% load are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

**Specifications part load heating capacity and input (peak)LWT (°C) =45°C****Outdoor unit HWT-801H(R)W-E**

| Capacity (kW) |     | Load (%) |       |       |      |      |      |      |      |      |      |
|---------------|-----|----------|-------|-------|------|------|------|------|------|------|------|
|               |     | 100      | 90    | 80    | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)    | -25 | 4.55     | 4.09  | 3.63  | 3.18 | 2.72 | 2.26 | 1.80 | 1.80 | 1.80 | 1.80 |
|               | -20 | 5.27     | 5.00  | 4.46  | 3.92 | 3.37 | 2.83 | 2.29 | 2.29 | 2.29 | 2.29 |
|               | -15 | 6.54     | 5.91  | 5.28  | 4.66 | 4.03 | 3.40 | 2.77 | 2.77 | 2.77 | 2.77 |
|               | -10 | 7.45     | 6.67  | 5.89  | 5.11 | 4.33 | 3.55 | 2.90 | 2.50 | 2.50 | 2.50 |
|               | -7  | 8.00     | 7.13  | 6.26  | 5.38 | 4.51 | 3.64 | 2.99 | 2.33 | 2.33 | 2.33 |
|               | -2  | 9.15     | 8.20  | 7.24  | 6.29 | 5.34 | 4.38 | 3.43 | 2.48 | 2.48 | 2.48 |
|               | 2   | 10.26    | 9.20  | 8.14  | 7.08 | 6.02 | 4.96 | 3.58 | 2.60 | 2.60 | 2.60 |
|               | 7   | 11.75    | 10.48 | 9.22  | 7.95 | 6.68 | 5.41 | 4.15 | 2.88 | 2.88 | 2.88 |
|               | 10  | 12.36    | 11.44 | 10.17 | 8.90 | 7.63 | 6.37 | 4.73 | 3.10 | 3.10 | 3.10 |
|               | 12  | 12.77    | 11.52 | 10.27 | 9.01 | 7.76 | 6.51 | 4.88 | 3.24 | 3.24 | 3.24 |
|               | 15  | 12.87    | 11.64 | 10.41 | 9.18 | 7.96 | 6.73 | 5.09 | 3.46 | 3.46 | 3.46 |
|               | 20  | 13.03    | 11.84 | 10.65 | 9.47 | 8.28 | 7.09 | 5.46 | 3.82 | 3.82 | 3.82 |

| Power input (kW) |     | Load (%) |      |      |      |      |      |      |      |      |      |
|------------------|-----|----------|------|------|------|------|------|------|------|------|------|
|                  |     | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)       | -25 | 2.68     | 2.43 | 2.18 | 1.93 | 1.68 | 1.43 | 1.18 | 1.18 | 1.18 | 1.18 |
|                  | -20 | 2.83     | 2.66 | 2.38 | 2.10 | 1.82 | 1.54 | 1.26 | 1.26 | 1.26 | 1.26 |
|                  | -15 | 3.21     | 2.90 | 2.59 | 2.28 | 1.96 | 1.65 | 1.34 | 1.34 | 1.34 | 1.34 |
|                  | -10 | 3.31     | 2.95 | 2.58 | 2.22 | 1.86 | 1.49 | 1.25 | 1.12 | 1.12 | 1.12 |
|                  | -7  | 3.37     | 2.98 | 2.58 | 2.19 | 1.79 | 1.40 | 1.19 | 0.98 | 0.98 | 0.98 |
|                  | -2  | 3.26     | 2.93 | 2.59 | 2.26 | 1.93 | 1.59 | 1.26 | 0.92 | 0.92 | 0.92 |
|                  | 2   | 3.38     | 2.99 | 2.61 | 2.22 | 1.84 | 1.45 | 1.20 | 0.88 | 0.88 | 0.88 |
|                  | 7   | 3.39     | 3.02 | 2.65 | 2.27 | 1.90 | 1.53 | 1.16 | 0.79 | 0.79 | 0.79 |
|                  | 10  | 3.38     | 2.97 | 2.58 | 2.18 | 1.79 | 1.40 | 1.09 | 0.77 | 0.77 | 0.77 |
|                  | 12  | 3.37     | 2.98 | 2.58 | 2.19 | 1.79 | 1.40 | 1.08 | 0.76 | 0.76 | 0.76 |
|                  | 15  | 3.39     | 2.99 | 2.59 | 2.19 | 1.79 | 1.40 | 1.07 | 0.75 | 0.75 | 0.75 |
|                  | 20  | 3.42     | 3.01 | 2.61 | 2.20 | 1.80 | 1.39 | 1.06 | 0.72 | 0.72 | 0.72 |

| COP        |     | Load (%) |      |      |      |      |      |      |      |      |      |
|------------|-----|----------|------|------|------|------|------|------|------|------|------|
|            |     | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C) | -25 | 1.70     | 1.68 | 1.67 | 1.65 | 1.62 | 1.58 | 1.53 | 1.53 | 1.53 | 1.53 |
|            | -20 | 1.86     | 1.88 | 1.87 | 1.86 | 1.85 | 1.84 | 1.81 | 1.81 | 1.81 | 1.81 |
|            | -15 | 2.04     | 2.04 | 2.04 | 2.05 | 2.05 | 2.06 | 2.07 | 2.07 | 2.07 | 2.07 |
|            | -10 | 2.25     | 2.26 | 2.28 | 2.30 | 2.33 | 2.38 | 2.33 | 2.24 | 2.24 | 2.24 |
|            | -7  | 2.37     | 2.40 | 2.42 | 2.46 | 2.52 | 2.60 | 2.51 | 2.38 | 2.38 | 2.38 |
|            | -2  | 2.81     | 2.80 | 2.79 | 2.78 | 2.77 | 2.75 | 2.73 | 2.68 | 2.68 | 2.68 |
|            | 2   | 3.04     | 3.07 | 3.12 | 3.19 | 3.28 | 3.42 | 2.99 | 2.95 | 2.95 | 2.95 |
|            | 7   | 3.47     | 3.47 | 3.48 | 3.50 | 3.51 | 3.54 | 3.58 | 3.67 | 3.67 | 3.67 |
|            | 10  | 3.66     | 3.86 | 3.95 | 4.07 | 4.26 | 4.54 | 4.35 | 4.02 | 4.02 | 4.02 |
|            | 12  | 3.79     | 3.87 | 3.98 | 4.12 | 4.33 | 4.65 | 4.51 | 4.26 | 4.26 | 4.26 |
|            | 15  | 3.80     | 3.89 | 4.02 | 4.19 | 4.43 | 4.82 | 4.76 | 4.64 | 4.64 | 4.64 |
|            | 20  | 3.81     | 3.93 | 4.09 | 4.30 | 4.61 | 5.10 | 5.17 | 5.31 | 5.31 | 5.31 |

\* Heating capacity and power input are shown peak value during operation.

\* Heating capacity and power input at 100% load are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Heating capacity and power input at 100% load are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## Specifications part load heating capacity and input(peak)LWT(°C) =55°C

### Outdoor unit HWT-801H(R)W-E

| Capacity (kW) |     | Load (%) |       |      |      |      |      |      |      |      |      |
|---------------|-----|----------|-------|------|------|------|------|------|------|------|------|
|               |     | 100      | 90    | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)    | -25 | 4.67     | 4.19  | 3.70 | 3.22 | 2.73 | 2.25 | 1.76 | 1.76 | 1.76 | 1.76 |
|               | -20 | 5.54     | 4.99  | 4.44 | 3.89 | 3.34 | 2.79 | 2.24 | 2.24 | 2.24 | 2.24 |
|               | -15 | 6.41     | 5.79  | 5.18 | 4.56 | 3.94 | 3.33 | 2.71 | 2.71 | 2.71 | 2.71 |
|               | -10 | 7.00     | 6.29  | 5.58 | 4.86 | 4.15 | 3.44 | 2.82 | 2.35 | 2.35 | 2.35 |
|               | -7  | 7.35     | 6.58  | 5.81 | 5.05 | 4.28 | 3.51 | 2.88 | 2.14 | 2.14 | 2.14 |
|               | -2  | 8.79     | 7.89  | 6.99 | 6.08 | 5.18 | 4.28 | 3.38 | 2.47 | 2.47 | 2.47 |
|               | 2   | 9.50     | 8.53  | 7.56 | 6.59 | 5.62 | 4.65 | 3.71 | 2.74 | 2.74 | 2.74 |
|               | 7   | 9.96     | 8.95  | 7.94 | 6.93 | 5.91 | 4.90 | 3.89 | 2.88 | 2.88 | 2.88 |
|               | 10  | 10.76    | 9.59  | 8.42 | 7.26 | 6.09 | 5.05 | 4.01 | 2.96 | 2.96 | 2.96 |
|               | 12  | 11.29    | 10.02 | 8.75 | 7.48 | 6.21 | 5.15 | 4.08 | 3.02 | 3.02 | 3.02 |
|               | 15  | 11.36    | 10.13 | 8.91 | 7.68 | 6.46 | 5.39 | 4.31 | 3.24 | 3.24 | 3.24 |
|               | 20  | 11.47    | 10.32 | 9.17 | 8.02 | 6.87 | 5.78 | 4.70 | 3.61 | 3.61 | 3.61 |

| Power input (kW) |     | Load (%) |      |      |      |      |      |      |      |      |      |
|------------------|-----|----------|------|------|------|------|------|------|------|------|------|
|                  |     | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)       | -25 | 3.27     | 2.96 | 2.64 | 2.33 | 2.01 | 1.70 | 1.38 | 1.38 | 1.38 | 1.38 |
|                  | -20 | 3.36     | 3.04 | 2.73 | 2.42 | 2.11 | 1.80 | 1.49 | 1.49 | 1.49 | 1.49 |
|                  | -15 | 3.44     | 3.13 | 2.82 | 2.52 | 2.21 | 1.90 | 1.59 | 1.59 | 1.59 | 1.59 |
|                  | -10 | 3.54     | 3.18 | 2.83 | 2.47 | 2.11 | 1.76 | 1.54 | 1.33 | 1.33 | 1.33 |
|                  | -7  | 3.60     | 3.21 | 2.83 | 2.44 | 2.06 | 1.67 | 1.52 | 1.17 | 1.17 | 1.17 |
|                  | -2  | 3.65     | 3.30 | 2.95 | 2.60 | 2.25 | 1.90 | 1.55 | 1.20 | 1.20 | 1.20 |
|                  | 2   | 3.56     | 3.19 | 2.83 | 2.46 | 2.10 | 1.73 | 1.56 | 1.23 | 1.23 | 1.23 |
|                  | 7   | 3.47     | 3.14 | 2.80 | 2.47 | 2.13 | 1.80 | 1.46 | 1.13 | 1.13 | 1.13 |
|                  | 10  | 3.47     | 3.08 | 2.68 | 2.29 | 1.89 | 1.61 | 1.34 | 1.06 | 1.06 | 1.06 |
|                  | 12  | 3.47     | 3.04 | 2.60 | 2.17 | 1.73 | 1.49 | 1.26 | 1.02 | 1.02 | 1.02 |
|                  | 15  | 3.46     | 3.03 | 2.60 | 2.17 | 1.73 | 1.49 | 1.25 | 1.01 | 1.01 | 1.01 |
|                  | 20  | 3.44     | 3.02 | 2.59 | 2.17 | 1.74 | 1.49 | 1.24 | 0.99 | 0.99 | 0.99 |

| COP        |     | Load (%) |      |      |      |      |      |      |      |      |      |
|------------|-----|----------|------|------|------|------|------|------|------|------|------|
|            |     | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C) | -25 | 1.43     | 1.42 | 1.40 | 1.38 | 1.36 | 1.32 | 1.28 | 1.28 | 1.28 | 1.28 |
|            | -20 | 1.65     | 1.64 | 1.62 | 1.61 | 1.58 | 1.55 | 1.51 | 1.51 | 1.51 | 1.51 |
|            | -15 | 1.86     | 1.85 | 1.83 | 1.81 | 1.79 | 1.75 | 1.70 | 1.70 | 1.70 | 1.70 |
|            | -10 | 1.98     | 1.97 | 1.97 | 1.97 | 1.97 | 1.96 | 1.83 | 1.77 | 1.77 | 1.77 |
|            | -7  | 2.04     | 2.05 | 2.06 | 2.07 | 2.08 | 2.10 | 1.90 | 1.83 | 1.83 | 1.83 |
|            | -2  | 2.41     | 2.39 | 2.37 | 2.34 | 2.30 | 2.25 | 2.17 | 2.06 | 2.06 | 2.06 |
|            | 2   | 2.67     | 2.67 | 2.67 | 2.68 | 2.68 | 2.69 | 2.37 | 2.23 | 2.23 | 2.23 |
|            | 7   | 2.87     | 2.85 | 2.83 | 2.81 | 2.78 | 2.73 | 2.67 | 2.56 | 2.56 | 2.56 |
|            | 10  | 3.10     | 3.12 | 3.14 | 3.18 | 3.22 | 3.13 | 2.99 | 2.79 | 2.79 | 2.79 |
|            | 12  | 3.25     | 3.30 | 3.37 | 3.45 | 3.59 | 3.45 | 3.25 | 2.96 | 2.96 | 2.96 |
|            | 15  | 3.28     | 3.35 | 3.43 | 3.55 | 3.72 | 3.61 | 3.45 | 3.21 | 3.21 | 3.21 |
|            | 20  | 3.33     | 3.42 | 3.54 | 3.70 | 3.95 | 3.88 | 3.79 | 3.65 | 3.65 | 3.65 |

\* Heating capacity and power input are shown peak value during operation.

\* Heating capacity and power input at 100% load are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Heating capacity and power input at 100% load are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## Specifications Low noise operation

### Outdoor unit HWT-801H(R)W-E

| Capacity (kW) |     | LWT (°C) |      |      |
|---------------|-----|----------|------|------|
|               |     | 35       | 45   | 55   |
| TO<br>(°C)    | -25 | 2.58     | 2.37 | 2.39 |
|               | -20 | 3.12     | 2.92 | 2.91 |
|               | -15 | 3.65     | 3.46 | 3.43 |
|               | -10 | 3.75     | 3.51 | 3.45 |
|               | -7  | 3.81     | 3.54 | 3.46 |
|               | -2  | 4.55     | 4.26 | 4.02 |
|               | 2   | 5.15     | 4.84 | 4.46 |
|               | 7   | 5.93     | 5.62 | 5.36 |
|               | 10  | 6.29     | 5.99 | 5.74 |
|               | 12  | 6.54     | 6.24 | 5.99 |
|               | 15  | 6.90     | 6.62 | 6.36 |
|               | 20  | 7.51     | 7.24 | 6.99 |

| Power input (kW) |     | LWT (°C) |      |      |
|------------------|-----|----------|------|------|
|                  |     | 35       | 45   | 55   |
| TO<br>(°C)       | -25 | 1.37     | 1.59 | 1.91 |
|                  | -20 | 1.44     | 1.66 | 1.98 |
|                  | -15 | 1.51     | 1.73 | 2.05 |
|                  | -10 | 1.36     | 1.58 | 1.89 |
|                  | -7  | 1.28     | 1.50 | 1.79 |
|                  | -2  | 1.20     | 1.44 | 1.77 |
|                  | 2   | 1.14     | 1.39 | 1.75 |
|                  | 7   | 1.10     | 1.42 | 1.72 |
|                  | 10  | 1.09     | 1.41 | 1.72 |
|                  | 12  | 1.08     | 1.40 | 1.73 |
|                  | 15  | 1.06     | 1.40 | 1.73 |
|                  | 20  | 1.04     | 1.38 | 1.74 |

| COP        |     | LWT (°C) |      |      |
|------------|-----|----------|------|------|
|            |     | 35       | 45   | 55   |
| TO<br>(°C) | -25 | 1.88     | 1.49 | 1.25 |
|            | -20 | 2.16     | 1.76 | 1.47 |
|            | -15 | 2.42     | 2.00 | 1.67 |
|            | -10 | 2.77     | 2.23 | 1.84 |
|            | -7  | 2.98     | 2.36 | 1.93 |
|            | -2  | 3.79     | 2.96 | 2.27 |
|            | 2   | 4.52     | 3.48 | 2.55 |
|            | 7   | 5.39     | 3.96 | 3.12 |
|            | 10  | 5.80     | 4.25 | 3.33 |
|            | 12  | 6.07     | 4.44 | 3.47 |
|            | 15  | 6.49     | 4.74 | 3.67 |
|            | 20  | 7.22     | 5.25 | 4.02 |

\* Heating capacity and power input are shown peak value during operation.

\* Heating capacity and power input at 100% load are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Heating capacity and power input at 100% load are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## Specifications part load cooling capacity and input LWT (°C) =7°C

### Outdoor unit HWT-801H(R)W-E

| Capacity (kW) |    | Load (%) |      |      |      |      |      |      |      |      |      |
|---------------|----|----------|------|------|------|------|------|------|------|------|------|
|               |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)    | 20 | 7.79     | 6.99 | 6.19 | 5.39 | 4.59 | 3.78 | 2.98 | 2.18 | 1.38 | 1.38 |
|               | 27 | 7.30     | 6.57 | 5.84 | 5.11 | 4.38 | 3.65 | 2.93 | 2.20 | 1.47 | 1.47 |
|               | 30 | 7.08     | 6.39 | 5.69 | 4.99 | 4.30 | 3.60 | 2.90 | 2.20 | 1.51 | 1.51 |
|               | 35 | 6.73     | 6.09 | 5.44 | 4.80 | 4.15 | 3.51 | 2.86 | 2.22 | 1.57 | 1.57 |
|               | 40 | 5.54     | 5.00 | 4.47 | 3.93 | 3.39 | 2.86 | 2.32 | 2.08 | 1.84 | 1.84 |
|               | 43 | 4.82     | 4.35 | 3.88 | 3.41 | 2.94 | 2.47 | 2.00 | 2.00 | 2.00 | 2.00 |

| Power input (kW) |    | Load (%) |      |      |      |      |      |      |      |      |      |
|------------------|----|----------|------|------|------|------|------|------|------|------|------|
|                  |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)       | 20 | 1.71     | 1.53 | 1.34 | 1.16 | 0.98 | 0.79 | 0.61 | 0.42 | 0.24 | 0.24 |
|                  | 27 | 1.93     | 1.74 | 1.55 | 1.36 | 1.17 | 0.98 | 0.79 | 0.60 | 0.41 | 0.41 |
|                  | 30 | 2.03     | 1.84 | 1.64 | 1.45 | 1.26 | 1.06 | 0.87 | 0.67 | 0.48 | 0.48 |
|                  | 35 | 2.19     | 1.99 | 1.79 | 1.59 | 1.40 | 1.20 | 1.00 | 0.80 | 0.60 | 0.60 |
|                  | 40 | 2.40     | 2.16 | 1.92 | 1.68 | 1.44 | 1.20 | 0.96 | 0.88 | 0.81 | 0.81 |
|                  | 43 | 2.53     | 2.26 | 2.00 | 1.73 | 1.46 | 1.20 | 0.93 | 0.93 | 0.93 | 0.93 |

| COP        |    | Load (%) |      |      |      |      |      |      |      |      |      |
|------------|----|----------|------|------|------|------|------|------|------|------|------|
|            |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C) | 20 | 4.56     | 4.58 | 4.61 | 4.65 | 4.70 | 4.78 | 4.91 | 5.15 | 5.75 | 5.75 |
|            | 27 | 3.77     | 3.77 | 3.76 | 3.75 | 3.74 | 3.73 | 3.71 | 3.67 | 3.60 | 3.60 |
|            | 30 | 3.49     | 3.48 | 3.46 | 3.45 | 3.42 | 3.39 | 3.34 | 3.27 | 3.14 | 3.14 |
|            | 35 | 3.07     | 3.06 | 3.03 | 3.01 | 2.97 | 2.93 | 2.87 | 2.77 | 2.62 | 2.62 |
|            | 40 | 2.30     | 2.31 | 2.33 | 2.34 | 2.36 | 2.39 | 2.43 | 2.36 | 2.28 | 2.28 |
|            | 43 | 1.91     | 1.92 | 1.94 | 1.97 | 2.01 | 2.06 | 2.15 | 2.15 | 2.15 | 2.15 |

\* Cooling capacity and power input at 100% load are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Cooling capacity and power input at 100% load are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

**Specifications part load cooling capacity and input LWT (°C) =13°C****Outdoor unit HWT-801H(R)W-E**

| Capacity (kW) |    | Load (%) |      |      |      |      |      |      |      |      |      |
|---------------|----|----------|------|------|------|------|------|------|------|------|------|
|               |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)    | 20 | 8.97     | 8.10 | 7.22 | 6.35 | 5.47 | 4.60 | 3.72 | 2.85 | 1.97 | 1.1  |
|               | 27 | 8.49     | 7.64 | 6.79 | 5.94 | 5.09 | 4.24 | 3.39 | 2.54 | 2.08 | 1.61 |
|               | 30 | 8.28     | 7.44 | 6.61 | 5.77 | 4.93 | 4.09 | 3.25 | 2.41 | 2.12 | 1.83 |
|               | 35 | 7.94     | 7.12 | 6.30 | 5.48 | 4.65 | 3.83 | 3.01 | 2.19 | 2.19 | 2.19 |
|               | 40 | 7.00     | 6.27 | 5.55 | 4.83 | 4.11 | 3.39 | 2.67 | 2.36 | 2.36 | 2.36 |
|               | 43 | 6.43     | 5.77 | 5.11 | 4.45 | 3.78 | 3.12 | 2.46 | 2.46 | 2.46 | 2.46 |

| Power input (kW) |    | Load (%) |      |      |      |      |      |      |      |      |      |
|------------------|----|----------|------|------|------|------|------|------|------|------|------|
|                  |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)       | 20 | 1.77     | 1.59 | 1.41 | 1.23 | 1.05 | 0.88 | 0.70 | 0.52 | 0.34 | 0.16 |
|                  | 27 | 1.99     | 1.79 | 1.58 | 1.37 | 1.16 | 0.95 | 0.75 | 0.54 | 0.44 | 0.35 |
|                  | 30 | 2.09     | 1.87 | 1.65 | 1.43 | 1.21 | 0.99 | 0.77 | 0.55 | 0.49 | 0.43 |
|                  | 35 | 2.25     | 2.01 | 1.77 | 1.53 | 1.28 | 1.04 | 0.80 | 0.56 | 0.56 | 0.56 |
|                  | 40 | 2.50     | 2.23 | 1.96 | 1.68 | 1.41 | 1.14 | 0.87 | 0.78 | 0.78 | 0.78 |
|                  | 43 | 2.65     | 2.36 | 2.07 | 1.78 | 1.49 | 1.20 | 0.91 | 0.91 | 0.91 | 0.91 |

| COP        |    | Load (%) |      |      |      |      |      |      |      |      |      |
|------------|----|----------|------|------|------|------|------|------|------|------|------|
|            |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C) | 20 | 5.07     | 5.09 | 5.11 | 5.15 | 5.19 | 5.25 | 5.34 | 5.50 | 5.83 | 6.88 |
|            | 27 | 4.26     | 4.28 | 4.30 | 4.34 | 4.38 | 4.45 | 4.55 | 4.73 | 4.69 | 4.64 |
|            | 30 | 3.96     | 3.98 | 4.01 | 4.04 | 4.08 | 4.14 | 4.24 | 4.41 | 4.36 | 4.28 |
|            | 35 | 3.53     | 3.54 | 3.56 | 3.59 | 3.62 | 3.68 | 3.76 | 3.91 | 3.91 | 3.91 |
|            | 40 | 2.80     | 2.82 | 2.84 | 2.87 | 2.91 | 2.97 | 3.07 | 3.03 | 3.03 | 3.03 |
|            | 43 | 2.43     | 2.44 | 2.47 | 2.50 | 2.54 | 2.60 | 2.70 | 2.70 | 2.70 | 2.70 |

\* Cooling capacity and power input at 100% load are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Cooling capacity and power input at 100% load are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

**Specifications part load cooling capacity and input LWT (°C) =18°C****Outdoor unit HWT-801H(R)W-E**

| Capacity (kW) |    | Load (%) |      |      |      |      |      |      |      |      |      |
|---------------|----|----------|------|------|------|------|------|------|------|------|------|
|               |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)    | 20 | 10.09    | 9.02 | 7.95 | 6.88 | 5.81 | 4.74 | 3.67 | 2.60 | 1.53 | 1.53 |
|               | 27 | 9.51     | 8.53 | 7.55 | 6.56 | 5.58 | 4.60 | 3.62 | 2.63 | 2.06 | 2.06 |
|               | 30 | 9.26     | 8.32 | 7.37 | 6.43 | 5.48 | 4.54 | 3.59 | 2.65 | 2.29 | 2.29 |
|               | 35 | 8.85     | 7.97 | 7.08 | 6.20 | 5.32 | 4.44 | 3.55 | 2.67 | 2.67 | 2.67 |
|               | 40 | 8.04     | 7.23 | 6.43 | 5.62 | 4.81 | 4.00 | 3.19 | 2.86 | 2.86 | 2.86 |
|               | 43 | 7.56     | 6.80 | 6.03 | 5.27 | 4.50 | 3.74 | 2.97 | 2.97 | 2.97 | 2.97 |

| Power input (kW) |    | Load (%) |      |      |      |      |      |      |      |      |      |
|------------------|----|----------|------|------|------|------|------|------|------|------|------|
|                  |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)       | 20 | 1.71     | 1.51 | 1.31 | 1.11 | 0.92 | 0.72 | 0.52 | 0.32 | 0.12 | 0.12 |
|                  | 27 | 1.98     | 1.76 | 1.53 | 1.31 | 1.08 | 0.86 | 0.64 | 0.41 | 0.31 | 0.31 |
|                  | 30 | 2.10     | 1.86 | 1.63 | 1.39 | 1.16 | 0.92 | 0.69 | 0.45 | 0.39 | 0.39 |
|                  | 35 | 2.29     | 2.04 | 1.78 | 1.53 | 1.28 | 1.03 | 0.77 | 0.52 | 0.52 | 0.52 |
|                  | 40 | 2.54     | 2.26 | 1.97 | 1.69 | 1.41 | 1.12 | 0.84 | 0.75 | 0.75 | 0.75 |
|                  | 43 | 2.69     | 2.39 | 2.09 | 1.79 | 1.48 | 1.18 | 0.88 | 0.88 | 0.88 | 0.88 |

| COP        |    | Load (%) |      |      |      |      |      |      |      |       |       |
|------------|----|----------|------|------|------|------|------|------|------|-------|-------|
|            |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20    | 10    |
| TO<br>(°C) | 20 | 5.90     | 5.97 | 6.06 | 6.18 | 6.35 | 6.62 | 7.09 | 8.16 | 12.75 | 12.75 |
|            | 27 | 4.80     | 4.86 | 4.92 | 5.02 | 5.15 | 5.34 | 5.68 | 6.38 | 6.72  | 6.72  |
|            | 30 | 4.42     | 4.47 | 4.53 | 4.62 | 4.74 | 4.92 | 5.22 | 5.84 | 5.92  | 5.92  |
|            | 35 | 3.86     | 3.91 | 3.97 | 4.05 | 4.16 | 4.32 | 4.60 | 5.13 | 5.13  | 5.13  |
|            | 40 | 3.17     | 3.21 | 3.26 | 3.32 | 3.42 | 3.56 | 3.80 | 3.84 | 3.84  | 3.84  |
|            | 43 | 2.81     | 2.85 | 2.89 | 2.95 | 3.03 | 3.16 | 3.38 | 3.38 | 3.38  | 3.38  |

\* Cooling capacity and power input at 100% load are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Cooling capacity and power input at 100% load are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## Specifications Low noise operation

### Outdoor unit HWT-801H(R)W-E

| Capacity (kW) |    | LWT (°C) |      |      |
|---------------|----|----------|------|------|
|               |    | 7        | 13   | 18   |
| TO<br>(°C)    | 20 | 5.70     | 6.47 | 7.12 |
|               | 27 | 5.20     | 6.03 | 6.72 |
|               | 30 | 4.98     | 5.83 | 6.55 |
|               | 35 | 4.62     | 5.51 | 6.26 |
|               | 40 | 3.99     | 4.90 | 5.67 |
|               | 43 | 3.61     | 4.54 | 5.31 |

| Power input (kW) |    | LWT (°C) |      |      |
|------------------|----|----------|------|------|
|                  |    | 7        | 13   | 18   |
| TO<br>(°C)       | 20 | 0.91     | 0.89 | 0.87 |
|                  | 27 | 1.12     | 1.11 | 1.10 |
|                  | 30 | 1.22     | 1.21 | 1.20 |
|                  | 35 | 1.37     | 1.36 | 1.36 |
|                  | 40 | 1.53     | 1.54 | 1.55 |
|                  | 43 | 1.63     | 1.65 | 1.67 |

| COP        |    | LWT (°C) |      |      |
|------------|----|----------|------|------|
|            |    | 7        | 13   | 18   |
| TO<br>(°C) | 20 | 6.26     | 7.29 | 8.18 |
|            | 27 | 4.62     | 5.43 | 6.12 |
|            | 30 | 4.09     | 4.84 | 5.47 |
|            | 35 | 3.37     | 4.04 | 4.60 |
|            | 40 | 2.60     | 3.18 | 3.65 |
|            | 43 | 2.21     | 2.75 | 3.18 |

\* Cooling capacity and power input at 100% load are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Cooling capacity and power input at 100% load are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## Specifications part load heating capacity and input (peak)LWT (°C) =35°C

### Outdoor unit HWT-1101H(R)W-E

| Capacity (kW) |     | Load (%) |       |       |       |      |      |      |      |      |      |
|---------------|-----|----------|-------|-------|-------|------|------|------|------|------|------|
|               |     | 100      | 90    | 80    | 70    | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)    | -25 | 5.20     | 4.71  | 4.22  | 3.73  | 3.23 | 2.74 | 2.25 | 1.76 | 1.76 | 1.76 |
|               | -20 | 6.29     | 5.67  | 5.05  | 4.44  | 3.82 | 3.20 | 2.59 | 2.34 | 2.34 | 2.34 |
|               | -15 | 7.37     | 6.63  | 5.89  | 5.15  | 4.40 | 3.66 | 2.92 | 2.92 | 2.92 | 2.92 |
|               | -10 | 8.45     | 7.62  | 6.79  | 5.96  | 5.13 | 4.31 | 3.48 | 2.67 | 2.67 | 2.67 |
|               | -7  | 9.10     | 8.22  | 7.34  | 6.46  | 5.57 | 4.69 | 3.81 | 2.52 | 2.52 | 2.52 |
|               | -2  | 10.28    | 9.42  | 8.57  | 7.71  | 6.86 | 6.00 | 5.15 | 4.29 | 3.44 | 2.58 |
|               | 2   | 11.46    | 10.36 | 9.25  | 8.15  | 7.05 | 5.94 | 4.84 | 3.73 | 2.63 | 2.63 |
|               | 7   | 13.24    | 11.88 | 10.52 | 9.16  | 7.80 | 6.44 | 5.08 | 3.72 | 2.36 | 1.01 |
|               | 10  | 13.86    | 12.62 | 11.11 | 9.61  | 8.10 | 6.59 | 5.20 | 3.86 | 2.51 | 1.17 |
|               | 12  | 14.28    | 12.77 | 11.27 | 9.76  | 8.26 | 6.75 | 5.38 | 4.02 | 2.65 | 1.28 |
|               | 15  | 14.51    | 13.01 | 11.50 | 10.00 | 8.49 | 6.99 | 5.66 | 4.25 | 2.85 | 1.45 |
|               | 20  | 14.90    | 13.40 | 11.89 | 10.39 | 8.88 | 7.38 | 6.11 | 4.65 | 3.18 | 1.72 |

| Power input (kW) |     | Load (%) |      |      |      |      |      |      |      |      |      |
|------------------|-----|----------|------|------|------|------|------|------|------|------|------|
|                  |     | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)       | -25 | 2.60     | 2.38 | 2.16 | 1.94 | 1.73 | 1.51 | 1.29 | 1.07 | 1.07 | 1.07 |
|                  | -20 | 2.89     | 2.61 | 2.33 | 2.05 | 1.77 | 1.49 | 1.21 | 1.11 | 1.11 | 1.11 |
|                  | -15 | 3.17     | 2.83 | 2.49 | 2.16 | 1.82 | 1.48 | 1.14 | 1.14 | 1.14 | 1.14 |
|                  | -10 | 3.32     | 2.96 | 2.60 | 2.24 | 1.88 | 1.51 | 1.15 | 0.92 | 0.92 | 0.92 |
|                  | -7  | 3.41     | 3.04 | 2.66 | 2.29 | 1.91 | 1.54 | 1.16 | 0.79 | 0.79 | 0.79 |
|                  | -2  | 3.17     | 2.90 | 2.62 | 2.35 | 2.08 | 1.80 | 1.53 | 1.26 | 0.99 | 0.71 |
|                  | 2   | 3.24     | 2.92 | 2.59 | 2.27 | 1.95 | 1.62 | 1.30 | 0.97 | 0.65 | 0.65 |
|                  | 7   | 3.15     | 2.83 | 2.52 | 2.20 | 1.88 | 1.57 | 1.25 | 0.93 | 0.62 | 0.30 |
|                  | 10  | 3.12     | 2.71 | 2.31 | 1.92 | 1.52 | 1.13 | 0.92 | 0.71 | 0.50 | 0.29 |
|                  | 12  | 3.10     | 2.70 | 2.30 | 1.91 | 1.51 | 1.11 | 0.90 | 0.70 | 0.49 | 0.28 |
|                  | 15  | 3.09     | 2.69 | 2.29 | 1.89 | 1.49 | 1.08 | 0.88 | 0.68 | 0.47 | 0.27 |
|                  | 20  | 3.08     | 2.67 | 2.26 | 1.86 | 1.45 | 1.04 | 0.84 | 0.65 | 0.45 | 0.25 |

| COP        |     | Load (%) |      |      |      |      |      |      |      |      |      |
|------------|-----|----------|------|------|------|------|------|------|------|------|------|
|            |     | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C) | -25 | 2.00     | 1.98 | 1.95 | 1.92 | 1.87 | 1.82 | 1.75 | 1.64 | 1.64 | 1.64 |
|            | -20 | 2.18     | 2.17 | 2.17 | 2.16 | 2.16 | 2.15 | 2.13 | 2.12 | 2.12 | 2.12 |
|            | -15 | 2.32     | 2.34 | 2.36 | 2.39 | 2.42 | 2.48 | 2.56 | 2.56 | 2.56 | 2.56 |
|            | -10 | 2.55     | 2.58 | 2.62 | 2.67 | 2.74 | 2.84 | 3.02 | 2.90 | 2.90 | 2.90 |
|            | -7  | 2.67     | 2.71 | 2.76 | 2.82 | 2.92 | 3.06 | 3.28 | 3.19 | 3.19 | 3.19 |
|            | -2  | 3.24     | 3.25 | 3.27 | 3.28 | 3.30 | 3.33 | 3.36 | 3.41 | 3.49 | 3.62 |
|            | 2   | 3.54     | 3.55 | 3.57 | 3.59 | 3.62 | 3.66 | 3.73 | 3.83 | 4.05 | 4.05 |
|            | 7   | 4.20     | 4.19 | 4.18 | 4.17 | 4.14 | 4.11 | 4.07 | 3.99 | 3.84 | 3.36 |
|            | 10  | 4.44     | 4.66 | 4.80 | 5.01 | 5.32 | 5.85 | 5.67 | 5.45 | 5.05 | 4.07 |
|            | 12  | 4.61     | 4.73 | 4.89 | 5.12 | 5.47 | 6.08 | 5.96 | 5.78 | 5.43 | 4.57 |
|            | 15  | 4.69     | 4.83 | 5.02 | 5.30 | 5.72 | 6.45 | 6.43 | 6.29 | 6.03 | 5.38 |
|            | 20  | 4.84     | 5.01 | 5.25 | 5.60 | 6.14 | 7.10 | 7.26 | 7.21 | 7.12 | 6.88 |

\* Heating capacity and power input are shown peak value during operation.

\* Heating capacity and power input at 100% load are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Heating capacity and power input at 100% load are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

**Specifications part load heating capacity and input (peak)LWT (°C) =45°C****Outdoor unit HWT-1101H(R)W-E**

| Capacity (kW) |     | Load (%) |       |       |      |      |      |      |      |      |      |
|---------------|-----|----------|-------|-------|------|------|------|------|------|------|------|
|               |     | 100      | 90    | 80    | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)    | -25 | 5.36     | 4.85  | 4.34  | 3.83 | 3.33 | 2.82 | 2.31 | 1.80 | 1.80 | 1.80 |
|               | -20 | 6.25     | 5.79  | 5.14  | 4.49 | 3.84 | 3.19 | 2.54 | 2.29 | 2.29 | 2.29 |
|               | -15 | 7.52     | 6.73  | 5.94  | 5.15 | 4.35 | 3.56 | 2.77 | 2.77 | 2.77 | 2.77 |
|               | -10 | 8.10     | 7.30  | 6.50  | 5.70 | 4.91 | 4.11 | 3.31 | 2.50 | 2.50 | 2.50 |
|               | -7  | 8.44     | 7.64  | 6.84  | 6.04 | 5.24 | 4.44 | 3.64 | 2.33 | 2.33 | 2.33 |
|               | -2  | 10.03    | 8.95  | 7.87  | 6.79 | 5.71 | 4.64 | 3.56 | 2.48 | 2.48 | 2.48 |
|               | 2   | 10.66    | 9.52  | 8.38  | 7.24 | 6.10 | 4.96 | 4.31 | 2.60 | 2.60 | 2.60 |
|               | 7   | 12.41    | 11.22 | 10.03 | 8.84 | 7.64 | 6.45 | 5.26 | 4.07 | 2.88 | 2.88 |
|               | 10  | 12.92    | 11.90 | 10.51 | 9.13 | 7.75 | 6.37 | 5.41 | 4.46 | 3.10 | 3.10 |
|               | 12  | 13.26    | 11.91 | 10.56 | 9.21 | 7.86 | 6.51 | 5.42 | 4.33 | 3.24 | 3.24 |
|               | 15  | 13.23    | 11.93 | 10.63 | 9.33 | 8.03 | 6.73 | 5.43 | 4.14 | 3.46 | 3.46 |
|               | 20  | 13.19    | 11.97 | 10.75 | 9.53 | 8.31 | 7.09 | 5.46 | 3.82 | 3.82 | 3.82 |

| Power input (kW) |     | Load (%) |      |      |      |      |      |      |      |      |      |
|------------------|-----|----------|------|------|------|------|------|------|------|------|------|
|                  |     | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)       | -25 | 3.17     | 2.89 | 2.60 | 2.32 | 2.03 | 1.75 | 1.46 | 1.18 | 1.18 | 1.18 |
|                  | -20 | 3.49     | 3.15 | 2.80 | 2.45 | 2.10 | 1.75 | 1.40 | 1.26 | 1.26 | 1.26 |
|                  | -15 | 3.82     | 3.41 | 2.99 | 2.58 | 2.17 | 1.75 | 1.34 | 1.34 | 1.34 | 1.34 |
|                  | -10 | 3.74     | 3.35 | 2.95 | 2.56 | 2.16 | 1.77 | 1.38 | 1.12 | 1.12 | 1.12 |
|                  | -7  | 3.69     | 3.31 | 2.93 | 2.55 | 2.16 | 1.78 | 1.40 | 0.98 | 0.98 | 0.98 |
|                  | -2  | 3.69     | 3.29 | 2.90 | 2.50 | 2.11 | 1.71 | 1.32 | 0.92 | 0.92 | 0.92 |
|                  | 2   | 3.59     | 3.16 | 2.73 | 2.31 | 1.88 | 1.45 | 1.37 | 0.88 | 0.88 | 0.88 |
|                  | 7   | 3.71     | 3.34 | 2.98 | 2.61 | 2.25 | 1.88 | 1.52 | 1.15 | 0.79 | 0.79 |
|                  | 10  | 3.61     | 3.13 | 2.70 | 2.27 | 1.83 | 1.40 | 1.22 | 1.04 | 0.77 | 0.77 |
|                  | 12  | 3.55     | 3.12 | 2.69 | 2.26 | 1.83 | 1.40 | 1.19 | 0.97 | 0.76 | 0.76 |
|                  | 15  | 3.53     | 3.10 | 2.68 | 2.25 | 1.82 | 1.40 | 1.14 | 0.88 | 0.75 | 0.75 |
|                  | 20  | 3.50     | 3.08 | 2.66 | 2.23 | 1.81 | 1.39 | 1.06 | 0.72 | 0.72 | 0.72 |

| COP        |     | Load (%) |      |      |      |      |      |      |      |      |      |
|------------|-----|----------|------|------|------|------|------|------|------|------|------|
|            |     | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C) | -25 | 1.69     | 1.68 | 1.67 | 1.65 | 1.64 | 1.61 | 1.58 | 1.53 | 1.53 | 1.53 |
|            | -20 | 1.79     | 1.84 | 1.84 | 1.83 | 1.83 | 1.82 | 1.81 | 1.81 | 1.81 | 1.81 |
|            | -15 | 1.97     | 1.98 | 1.98 | 1.99 | 2.01 | 2.03 | 2.07 | 2.07 | 2.07 | 2.07 |
|            | -10 | 2.17     | 2.18 | 2.20 | 2.23 | 2.27 | 2.32 | 2.41 | 2.24 | 2.24 | 2.24 |
|            | -7  | 2.29     | 2.31 | 2.34 | 2.37 | 2.42 | 2.49 | 2.60 | 2.38 | 2.38 | 2.38 |
|            | -2  | 2.72     | 2.72 | 2.71 | 2.71 | 2.71 | 2.70 | 2.70 | 2.68 | 2.68 | 2.68 |
|            | 2   | 2.97     | 3.01 | 3.07 | 3.14 | 3.25 | 3.42 | 3.15 | 2.95 | 2.95 | 2.95 |
|            | 7   | 3.35     | 3.35 | 3.37 | 3.38 | 3.40 | 3.43 | 3.47 | 3.54 | 3.67 | 3.67 |
|            | 10  | 3.58     | 3.80 | 3.90 | 4.03 | 4.22 | 4.54 | 4.44 | 4.30 | 4.02 | 4.02 |
|            | 12  | 3.74     | 3.82 | 3.93 | 4.08 | 4.30 | 4.65 | 4.57 | 4.45 | 4.26 | 4.26 |
|            | 15  | 3.75     | 3.84 | 3.97 | 4.15 | 4.40 | 4.82 | 4.78 | 4.71 | 4.64 | 4.64 |
|            | 20  | 3.77     | 3.89 | 4.05 | 4.27 | 4.59 | 5.10 | 5.17 | 5.31 | 5.31 | 5.31 |

\* Heating capacity and power input are shown peak value during operation.

\* Heating capacity and power input at 100% load are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Heating capacity and power input at 100% load are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## Specifications part load heating capacity and input (peak)LWT (°C) =55°C

### Outdoor unit HWT-1101H(R)W-E

| Capacity (kW) |     | Load (%) |       |      |      |      |      |      |      |      |      |
|---------------|-----|----------|-------|------|------|------|------|------|------|------|------|
|               |     | 100      | 90    | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)    | -25 | 5.33     | 4.82  | 4.31 | 3.80 | 3.29 | 2.78 | 2.27 | 1.76 | 1.76 | 1.76 |
|               | -20 | 6.07     | 5.47  | 4.88 | 4.28 | 3.68 | 3.09 | 2.49 | 2.24 | 2.24 | 2.24 |
|               | -15 | 6.81     | 6.13  | 5.44 | 4.76 | 4.08 | 3.39 | 2.71 | 2.71 | 2.71 | 2.71 |
|               | -10 | 7.15     | 6.41  | 5.68 | 4.94 | 4.20 | 3.47 | 2.82 | 2.35 | 2.35 | 2.35 |
|               | -7  | 7.72     | 6.88  | 6.04 | 5.19 | 4.35 | 3.51 | 2.88 | 2.14 | 2.14 | 2.14 |
|               | -2  | 9.23     | 8.26  | 7.30 | 6.33 | 5.37 | 4.40 | 3.44 | 2.47 | 2.47 | 2.47 |
|               | 2   | 9.98     | 8.91  | 7.85 | 6.78 | 5.72 | 4.65 | 3.71 | 2.74 | 2.74 | 2.74 |
|               | 7   | 10.17    | 9.13  | 8.09 | 7.05 | 6.00 | 4.96 | 3.92 | 2.88 | 2.88 | 2.88 |
|               | 10  | 10.84    | 9.66  | 8.48 | 7.31 | 6.13 | 5.07 | 4.02 | 2.96 | 2.96 | 2.96 |
|               | 12  | 11.29    | 10.02 | 8.75 | 7.48 | 6.21 | 5.15 | 4.08 | 3.02 | 3.02 | 3.02 |
|               | 15  | 11.36    | 10.13 | 8.91 | 7.68 | 6.46 | 5.39 | 4.31 | 3.24 | 3.24 | 3.24 |
|               | 20  | 11.47    | 10.32 | 9.17 | 8.02 | 6.87 | 5.78 | 4.70 | 3.61 | 3.61 | 3.61 |

| Power input (kW) |     | Load (%) |      |      |      |      |      |      |      |      |      |
|------------------|-----|----------|------|------|------|------|------|------|------|------|------|
|                  |     | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)       | -25 | 3.69     | 3.36 | 3.03 | 2.70 | 2.37 | 2.04 | 1.71 | 1.38 | 1.38 | 1.38 |
|                  | -20 | 3.68     | 3.34 | 3.00 | 2.67 | 2.33 | 1.99 | 1.65 | 1.49 | 1.49 | 1.49 |
|                  | -15 | 3.67     | 3.32 | 2.98 | 2.63 | 2.28 | 1.94 | 1.59 | 1.59 | 1.59 | 1.59 |
|                  | -10 | 3.63     | 3.26 | 2.88 | 2.51 | 2.14 | 1.77 | 1.54 | 1.33 | 1.33 | 1.33 |
|                  | -7  | 3.78     | 3.36 | 2.93 | 2.51 | 2.09 | 1.67 | 1.52 | 1.17 | 1.17 | 1.17 |
|                  | -2  | 3.83     | 3.46 | 3.08 | 2.71 | 2.33 | 1.96 | 1.58 | 1.20 | 1.20 | 1.20 |
|                  | 2   | 3.74     | 3.34 | 2.94 | 2.53 | 2.13 | 1.73 | 1.56 | 1.23 | 1.23 | 1.23 |
|                  | 7   | 3.62     | 3.26 | 2.91 | 2.55 | 2.19 | 1.84 | 1.48 | 1.13 | 1.13 | 1.13 |
|                  | 10  | 3.53     | 3.13 | 2.72 | 2.32 | 1.92 | 1.63 | 1.35 | 1.06 | 1.06 | 1.06 |
|                  | 12  | 3.47     | 3.04 | 2.60 | 2.17 | 1.73 | 1.49 | 1.26 | 1.02 | 1.02 | 1.02 |
|                  | 15  | 3.46     | 3.03 | 2.60 | 2.17 | 1.73 | 1.49 | 1.25 | 1.01 | 1.01 | 1.01 |
|                  | 20  | 3.44     | 3.02 | 2.59 | 2.17 | 1.74 | 1.49 | 1.24 | 0.99 | 0.99 | 0.99 |

| COP        |     | Load (%) |      |      |      |      |      |      |      |      |      |
|------------|-----|----------|------|------|------|------|------|------|------|------|------|
|            |     | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C) | -25 | 1.44     | 1.43 | 1.42 | 1.41 | 1.39 | 1.36 | 1.33 | 1.28 | 1.28 | 1.28 |
|            | -20 | 1.65     | 1.64 | 1.62 | 1.61 | 1.58 | 1.55 | 1.51 | 1.51 | 1.51 | 1.51 |
|            | -15 | 1.86     | 1.84 | 1.83 | 1.81 | 1.79 | 1.75 | 1.70 | 1.70 | 1.70 | 1.70 |
|            | -10 | 1.97     | 1.97 | 1.97 | 1.97 | 1.96 | 1.96 | 1.83 | 1.77 | 1.77 | 1.77 |
|            | -7  | 2.04     | 2.05 | 2.06 | 2.07 | 2.08 | 2.10 | 1.90 | 1.83 | 1.83 | 1.83 |
|            | -2  | 2.41     | 2.39 | 2.37 | 2.34 | 2.30 | 2.25 | 2.17 | 2.06 | 2.06 | 2.06 |
|            | 2   | 2.67     | 2.67 | 2.67 | 2.68 | 2.68 | 2.69 | 2.37 | 2.23 | 2.23 | 2.23 |
|            | 7   | 2.81     | 2.80 | 2.78 | 2.76 | 2.74 | 2.70 | 2.65 | 2.56 | 2.56 | 2.56 |
|            | 10  | 3.07     | 3.09 | 3.12 | 3.15 | 3.20 | 3.11 | 2.98 | 2.79 | 2.79 | 2.79 |
|            | 12  | 3.25     | 3.30 | 3.37 | 3.45 | 3.59 | 3.45 | 3.25 | 2.96 | 2.96 | 2.96 |
|            | 15  | 3.28     | 3.35 | 3.43 | 3.55 | 3.72 | 3.61 | 3.45 | 3.21 | 3.21 | 3.21 |
|            | 20  | 3.33     | 3.42 | 3.54 | 3.70 | 3.95 | 3.88 | 3.79 | 3.65 | 3.65 | 3.65 |

\* Heating capacity and power input are shown peak value during operation.

\* Heating capacity and power input at 100% load are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Heating capacity and power input at 100% load are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## Specifications Low noise operation

### Outdoor unit HWT-1101H(R)W-E

| Capacity (kW) |     | LWT (°C) |      |      |
|---------------|-----|----------|------|------|
|               |     | 35       | 45   | 55   |
| TO<br>(°C)    | -25 | 2.92     | 2.88 | 2.93 |
|               | -20 | 3.54     | 3.47 | 3.51 |
|               | -15 | 4.15     | 4.05 | 4.09 |
|               | -10 | 4.94     | 4.76 | 4.75 |
|               | -7  | 5.42     | 5.19 | 5.15 |
|               | -2  | 6.31     | 6.05 | 6.04 |
|               | 2   | 7.03     | 6.73 | 6.76 |
|               | 7   | 8.28     | 7.97 | 7.79 |
|               | 10  | 8.70     | 8.40 | 8.22 |
|               | 12  | 8.98     | 8.69 | 8.51 |
|               | 15  | 9.40     | 9.13 | 8.93 |
|               | 20  | 10.10    | 9.85 | 9.65 |

| Power input (kW) |     | LWT (°C) |      |      |
|------------------|-----|----------|------|------|
|                  |     | 35       | 45   | 55   |
| TO<br>(°C)       | -25 | 1.54     | 1.80 | 2.18 |
|                  | -20 | 1.62     | 1.88 | 2.28 |
|                  | -15 | 1.70     | 1.95 | 2.38 |
|                  | -10 | 1.77     | 2.06 | 2.48 |
|                  | -7  | 1.80     | 2.11 | 2.54 |
|                  | -2  | 1.75     | 2.10 | 2.52 |
|                  | 2   | 1.71     | 2.09 | 2.51 |
|                  | 7   | 1.65     | 2.07 | 2.51 |
|                  | 10  | 1.65     | 2.07 | 2.52 |
|                  | 12  | 1.64     | 2.07 | 2.53 |
|                  | 15  | 1.64     | 2.08 | 2.54 |
|                  | 20  | 1.63     | 2.08 | 2.56 |

| COP        |     | LWT (°C) |      |      |
|------------|-----|----------|------|------|
|            |     | 35       | 45   | 55   |
| TO<br>(°C) | -25 | 1.90     | 1.60 | 1.34 |
|            | -20 | 2.18     | 1.85 | 1.54 |
|            | -15 | 2.44     | 2.08 | 1.72 |
|            | -10 | 2.80     | 2.32 | 1.91 |
|            | -7  | 3.01     | 2.46 | 2.03 |
|            | -2  | 3.61     | 2.88 | 2.40 |
|            | 2   | 4.11     | 3.22 | 2.69 |
|            | 7   | 5.02     | 3.85 | 3.10 |
|            | 10  | 5.29     | 4.06 | 3.26 |
|            | 12  | 5.47     | 4.19 | 3.36 |
|            | 15  | 5.74     | 4.40 | 3.52 |
|            | 20  | 6.20     | 4.74 | 3.77 |

\* Heating capacity and power inputs are shown peak value during operation.

\* Heating capacity and power input at 100% load are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Heating capacity and power input at 100% load are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## Specifications part load cooling capacity and input LWT (°C) =7°C

### Outdoor unit HWT-1101H(R)W-E

| Capacity (kW) |    | Load (%) |      |      |      |      |      |      |      |      |      |
|---------------|----|----------|------|------|------|------|------|------|------|------|------|
|               |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)    | 20 | 8.12     | 7.28 | 6.44 | 5.59 | 4.75 | 3.91 | 3.07 | 2.22 | 1.38 | 1.38 |
|               | 27 | 7.91     | 7.11 | 6.30 | 5.50 | 4.69 | 3.89 | 3.08 | 2.27 | 1.47 | 1.47 |
|               | 30 | 7.83     | 7.04 | 6.25 | 5.46 | 4.67 | 3.88 | 3.09 | 2.30 | 1.51 | 1.51 |
|               | 35 | 8.00     | 7.20 | 6.39 | 5.59 | 4.79 | 3.98 | 3.18 | 2.37 | 1.57 | 1.57 |
|               | 40 | 5.97     | 5.38 | 4.79 | 4.19 | 3.60 | 3.01 | 2.41 | 2.13 | 1.84 | 1.84 |
|               | 43 | 4.95     | 4.46 | 3.97 | 3.48 | 2.98 | 2.49 | 2.00 | 2.00 | 2.00 | 2.00 |

| Power input (kW) |    | Load (%) |      |      |      |      |      |      |      |      |      |
|------------------|----|----------|------|------|------|------|------|------|------|------|------|
|                  |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)       | 20 | 1.85     | 1.65 | 1.45 | 1.25 | 1.05 | 0.84 | 0.64 | 0.44 | 0.24 | 0.24 |
|                  | 27 | 2.25     | 2.02 | 1.79 | 1.56 | 1.33 | 1.10 | 0.87 | 0.64 | 0.41 | 0.41 |
|                  | 30 | 2.42     | 2.18 | 1.94 | 1.69 | 1.45 | 1.21 | 0.97 | 0.72 | 0.48 | 0.48 |
|                  | 35 | 2.86     | 2.54 | 2.27 | 1.99 | 1.72 | 1.43 | 1.16 | 0.88 | 0.60 | 0.60 |
|                  | 40 | 2.69     | 2.40 | 2.12 | 1.84 | 1.56 | 1.28 | 1.00 | 0.91 | 0.81 | 0.81 |
|                  | 43 | 2.67     | 2.38 | 2.09 | 1.80 | 1.51 | 1.22 | 0.93 | 0.93 | 0.93 | 0.93 |

| COP        |    | Load (%) |      |      |      |      |      |      |      |      |      |
|------------|----|----------|------|------|------|------|------|------|------|------|------|
|            |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C) | 20 | 4.39     | 4.41 | 4.45 | 4.49 | 4.55 | 4.63 | 4.77 | 5.04 | 5.75 | 5.75 |
|            | 27 | 3.52     | 3.52 | 3.52 | 3.52 | 3.53 | 3.54 | 3.55 | 3.56 | 3.60 | 3.60 |
|            | 30 | 3.23     | 3.23 | 3.22 | 3.22 | 3.21 | 3.21 | 3.20 | 3.18 | 3.14 | 3.14 |
|            | 35 | 2.80     | 2.83 | 2.82 | 2.81 | 2.79 | 2.78 | 2.75 | 2.70 | 2.62 | 2.62 |
|            | 40 | 2.22     | 2.24 | 2.25 | 2.27 | 2.30 | 2.34 | 2.40 | 2.35 | 2.28 | 2.28 |
|            | 43 | 1.85     | 1.87 | 1.90 | 1.93 | 1.98 | 2.04 | 2.15 | 2.15 | 2.15 | 2.15 |

\* Cooling capacity and power input at 100% load are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Cooling capacity and power input at 100% load are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## Specifications part load cooling capacity and input LWT (°C) =13°C

### Outdoor unit HWT-1101H(R)W-E

| Capacity (kW) |    | Load (%) |      |      |      |      |      |      |      |      |      |
|---------------|----|----------|------|------|------|------|------|------|------|------|------|
|               |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)    | 20 | 9.47     | 8.54 | 7.61 | 6.68 | 5.75 | 4.82 | 3.89 | 2.96 | 2.03 | 1.1  |
|               | 27 | 9.37     | 8.46 | 7.55 | 6.64 | 5.74 | 4.83 | 3.92 | 3.01 | 2.10 | 1.61 |
|               | 30 | 9.32     | 8.43 | 7.53 | 6.63 | 5.73 | 4.83 | 3.93 | 3.04 | 2.14 | 1.83 |
|               | 35 | 9.25     | 8.37 | 7.49 | 6.60 | 5.72 | 4.84 | 3.96 | 3.07 | 2.19 | 2.19 |
|               | 40 | 7.49     | 6.74 | 6.00 | 5.25 | 4.51 | 3.77 | 3.02 | 2.69 | 2.36 | 2.36 |
|               | 43 | 6.43     | 5.77 | 5.11 | 4.45 | 3.78 | 3.12 | 2.46 | 2.46 | 2.46 | 2.46 |

| Power input (kW) |    | Load (%) |      |      |      |      |      |      |      |      |      |
|------------------|----|----------|------|------|------|------|------|------|------|------|------|
|                  |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)       | 20 | 1.83     | 1.64 | 1.46 | 1.27 | 1.09 | 0.90 | 0.72 | 0.53 | 0.35 | 0.16 |
|                  | 27 | 2.37     | 2.13 | 1.89 | 1.65 | 1.41 | 1.17 | 0.93 | 0.69 | 0.45 | 0.35 |
|                  | 30 | 2.60     | 2.33 | 2.07 | 1.81 | 1.54 | 1.28 | 1.02 | 0.75 | 0.49 | 0.43 |
|                  | 35 | 2.98     | 2.68 | 2.38 | 2.07 | 1.77 | 1.47 | 1.17 | 0.86 | 0.56 | 0.56 |
|                  | 40 | 2.77     | 2.48 | 2.18 | 1.89 | 1.60 | 1.30 | 1.01 | 0.89 | 0.78 | 0.78 |
|                  | 43 | 2.65     | 2.36 | 2.07 | 1.78 | 1.49 | 1.20 | 0.91 | 0.91 | 0.91 | 0.91 |

| COP        |    | Load (%) |      |      |      |      |      |      |      |      |      |
|------------|----|----------|------|------|------|------|------|------|------|------|------|
|            |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C) | 20 | 5.17     | 5.19 | 5.22 | 5.25 | 5.29 | 5.34 | 5.43 | 5.57 | 5.87 | 6.88 |
|            | 27 | 3.96     | 3.98 | 4.00 | 4.04 | 4.08 | 4.14 | 4.23 | 4.39 | 4.72 | 4.64 |
|            | 30 | 3.59     | 3.61 | 3.64 | 3.67 | 3.71 | 3.78 | 3.87 | 4.04 | 4.37 | 4.28 |
|            | 35 | 3.10     | 3.13 | 3.15 | 3.19 | 3.23 | 3.30 | 3.39 | 3.56 | 3.91 | 3.91 |
|            | 40 | 2.70     | 2.72 | 2.75 | 2.78 | 2.83 | 2.90 | 3.00 | 3.01 | 3.03 | 3.03 |
|            | 43 | 2.43     | 2.44 | 2.47 | 2.50 | 2.54 | 2.60 | 2.70 | 2.70 | 2.70 | 2.70 |

\* Cooling capacity and power input at 100% load are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Cooling capacity and power input at 100% load are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

**Specifications part load cooling capacity and input LWT (°C) =18°C****Outdoor unit HWT-1101H(R)W-E**

| Capacity (kW) |    | Load (%) |      |      |      |      |      |      |      |      |      |
|---------------|----|----------|------|------|------|------|------|------|------|------|------|
|               |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)    | 20 | 10.57    | 9.44 | 8.31 | 7.18 | 6.05 | 4.92 | 3.79 | 2.66 | 1.53 | 1.53 |
|               | 27 | 10.43    | 9.32 | 8.21 | 7.10 | 5.99 | 4.88 | 3.77 | 2.66 | 2.06 | 2.06 |
|               | 30 | 10.36    | 9.26 | 8.16 | 7.06 | 5.97 | 4.87 | 3.77 | 2.67 | 2.29 | 2.29 |
|               | 35 | 10.26    | 9.18 | 8.09 | 7.01 | 5.92 | 4.84 | 3.75 | 2.67 | 2.67 | 2.67 |
|               | 40 | 8.57     | 7.69 | 6.80 | 5.92 | 5.03 | 4.15 | 3.26 | 2.86 | 2.86 | 2.86 |
|               | 43 | 7.56     | 6.80 | 6.03 | 5.27 | 4.50 | 3.74 | 2.97 | 2.97 | 2.97 | 2.97 |

| Power input (kW) |    | Load (%) |      |      |      |      |      |      |      |      |      |
|------------------|----|----------|------|------|------|------|------|------|------|------|------|
|                  |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| TO<br>(°C)       | 20 | 1.80     | 1.59 | 1.38 | 1.17 | 0.96 | 0.75 | 0.54 | 0.33 | 0.12 | 0.12 |
|                  | 27 | 2.39     | 2.11 | 1.83 | 1.54 | 1.26 | 0.98 | 0.70 | 0.42 | 0.31 | 0.31 |
|                  | 30 | 2.64     | 2.33 | 2.02 | 1.70 | 1.39 | 1.08 | 0.77 | 0.46 | 0.39 | 0.39 |
|                  | 35 | 3.06     | 2.45 | 2.04 | 1.67 | 1.33 | 1.04 | 0.77 | 0.52 | 0.52 | 0.52 |
|                  | 40 | 2.83     | 2.50 | 2.18 | 1.85 | 1.53 | 1.21 | 0.88 | 0.75 | 0.75 | 0.75 |
|                  | 43 | 2.69     | 2.39 | 2.09 | 1.79 | 1.48 | 1.18 | 0.88 | 0.88 | 0.88 | 0.88 |

| COP        |    | Load (%) |      |      |      |      |      |      |      |       |       |
|------------|----|----------|------|------|------|------|------|------|------|-------|-------|
|            |    | 100      | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20    | 10    |
| TO<br>(°C) | 20 | 5.87     | 5.94 | 6.02 | 6.14 | 6.30 | 6.56 | 7.02 | 8.06 | 12.75 | 12.75 |
|            | 27 | 4.37     | 4.42 | 4.50 | 4.60 | 4.74 | 4.97 | 5.39 | 6.36 | 6.72  | 6.72  |
|            | 30 | 3.93     | 3.98 | 4.05 | 4.15 | 4.28 | 4.50 | 4.90 | 5.84 | 5.92  | 5.92  |
|            | 35 | 3.35     | 3.74 | 3.97 | 4.20 | 4.45 | 4.67 | 4.90 | 5.13 | 5.13  | 5.13  |
|            | 40 | 3.03     | 3.07 | 3.12 | 3.19 | 3.29 | 3.44 | 3.70 | 3.84 | 3.84  | 3.84  |
|            | 43 | 2.81     | 2.85 | 2.89 | 2.95 | 3.03 | 3.16 | 3.38 | 3.38 | 3.38  | 3.38  |

\* Cooling capacity and power input at 100% load are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Cooling capacity and power input at 100% load are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## Specifications Low noise operation

### Outdoor unit HWT-1101H(R)W-E

| Capacity (kW) |    | LWT (°C) |      |      |
|---------------|----|----------|------|------|
|               |    | 7        | 13   | 18   |
| TO<br>(°C)    | 20 | 5.70     | 6.47 | 7.12 |
|               | 27 | 5.20     | 6.03 | 6.72 |
|               | 30 | 4.98     | 5.83 | 6.55 |
|               | 35 | 4.62     | 5.51 | 6.26 |
|               | 40 | 3.99     | 4.90 | 5.67 |
|               | 43 | 3.61     | 4.54 | 5.31 |

| Power input (kW) |    | LWT (°C) |      |      |
|------------------|----|----------|------|------|
|                  |    | 7        | 13   | 18   |
| TO<br>(°C)       | 20 | 0.91     | 0.89 | 0.87 |
|                  | 27 | 1.12     | 1.11 | 1.10 |
|                  | 30 | 1.22     | 1.21 | 1.20 |
|                  | 35 | 1.37     | 1.36 | 1.36 |
|                  | 40 | 1.53     | 1.54 | 1.55 |
|                  | 43 | 1.63     | 1.65 | 1.67 |

| COP        |    | LWT (°C) |      |      |
|------------|----|----------|------|------|
|            |    | 7        | 13   | 18   |
| TO<br>(°C) | 20 | 6.26     | 7.29 | 8.18 |
|            | 27 | 4.62     | 5.43 | 6.12 |
|            | 30 | 4.09     | 4.84 | 5.47 |
|            | 35 | 3.37     | 4.04 | 4.60 |
|            | 40 | 2.60     | 3.18 | 3.65 |
|            | 43 | 2.21     | 2.75 | 3.18 |

\* Cooling capacity and power input at 100% load are shown at maximum compressor operating frequency.

\* Power input does not include water pump power.

\* Cooling capacity and power input at 100% load are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

## 2-7. Sound Data

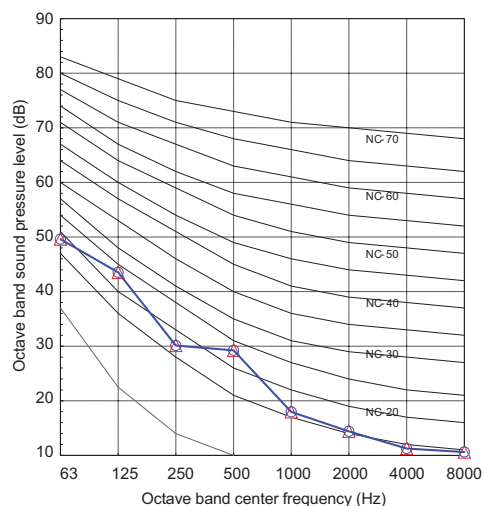
### 2-7-1. Sound Characteristics (NC Curve)

#### ▼ HWT-601HWH(M3,T6)W-E HWT-1101XWH(M3,T6,T9)W-E

- Maximum/Rated/Silent operation

| Sound pressure level (dB(A)) | Cooling | Heating |
|------------------------------|---------|---------|
|                              | 29      | 29      |

△ Heating  
○ Cooling

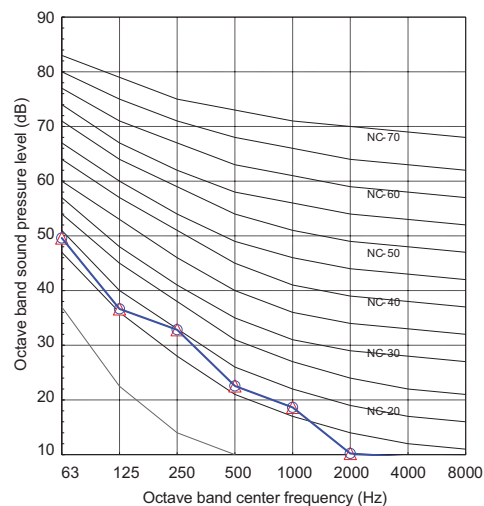


#### ▼ HWT-601F21S(M3,T6)W-E HWT-1101F21S(M3,T6,T9)W-E

- Maximum/Rated/Silent operation

| Sound pressure level (dB(A)) | Cooling | Heating |
|------------------------------|---------|---------|
|                              | 31      | 31      |

△ Heating  
○ Cooling

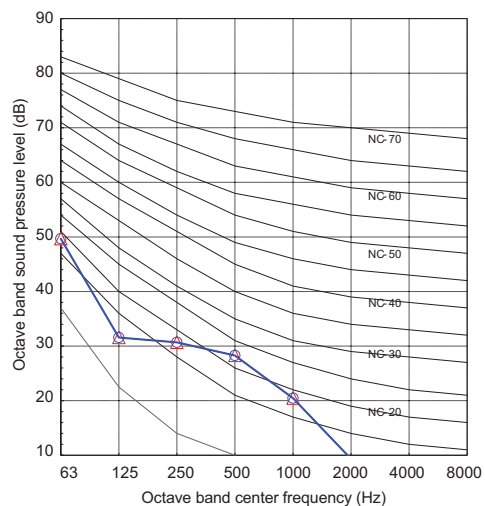


#### ▼ HWT-1101F21M(M3,T6,T9)W-E

- Maximum/Rated/Silent operation

| Sound pressure level (dB(A)) | Cooling | Heating |
|------------------------------|---------|---------|
|                              | 32      | 32      |

△ Heating  
○ Cooling



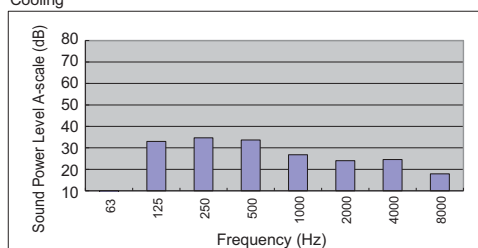
## 2-7-2. Sound Power

### ▼ HWT-601HWH(M3,T6)W-E HWT-1101XWH(M3,T6,T9)W-E

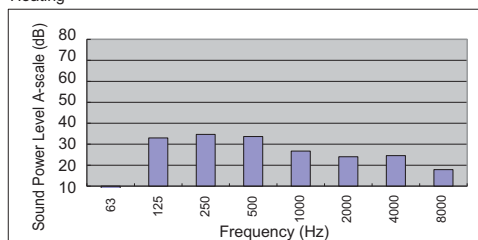
- Maximum/Rated/Silent operation

| Sound power level (dB(A)) | Cooling | Heating |
|---------------------------|---------|---------|
|                           | 40      | 40      |

Cooling



Heating

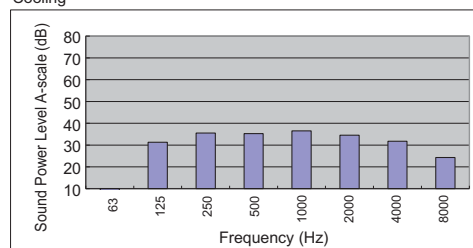


### ▼ HWT-601F21S(M3,T6)W-E HWT-1101F21S(M3,T6,T9)W-E

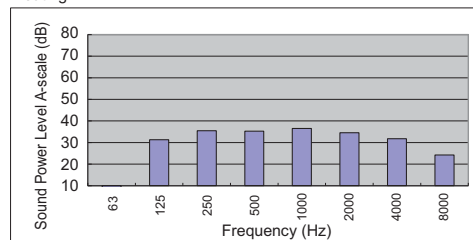
- Maximum/Rated/Silent operation

| Sound power level (dB(A)) | Cooling | Heating |
|---------------------------|---------|---------|
|                           | 42      | 42      |

Cooling



Heating

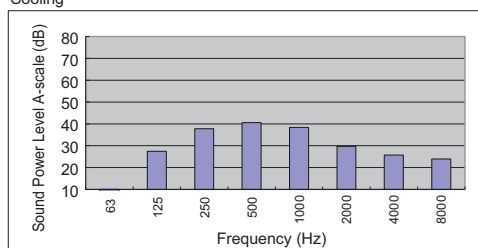


### ▼ HWT-1101F21M(M3,T6,T9)W-E

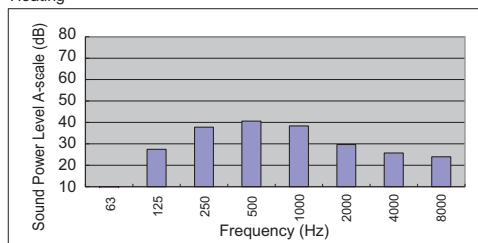
- Maximum/Rated/Silent operation

| Sound power level (dB(A)) | Cooling | Heating |
|---------------------------|---------|---------|
|                           | 44      | 44      |

Cooling



Heating



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### **3. OUTDOOR UNIT**

## 3-1. Specification

### 3-1-1. Outdoor unit specifications

#### Wall Mounted Type

| Unit name                              |                                                    |                                | HWT-601XWHM3W-E, HWT-601XWHT6W-E                         |         |             |         |
|----------------------------------------|----------------------------------------------------|--------------------------------|----------------------------------------------------------|---------|-------------|---------|
| Outdoor unit                           |                                                    |                                | HWT-401HW-E                                              |         | HWT-601HW-E |         |
| Heating capacity *1 (kW)               |                                                    |                                | 4.0                                                      |         | 6.0         |         |
| Cooling capacity *2 (kW)               |                                                    |                                | 4.0                                                      |         | 5.0         |         |
| Variable range of compressor frequency |                                                    |                                | 10 - 80 Hz                                               |         | 10 - 100 Hz |         |
| Power source                           |                                                    |                                | 1 phase 50 Hz 220-240 V                                  |         |             |         |
| Operation mode                         |                                                    |                                | Heating                                                  | Cooling | Heating     | Cooling |
| Electric characteristic *1 *2          | Total                                              | Current (A)                    | 4.08                                                     | 5.38    | 5.78        | 7.11    |
|                                        |                                                    | Power (kW)                     | 0.77                                                     | 1.15    | 1.25        | 1.52    |
|                                        |                                                    | Power factor (%)               | 82                                                       | 93      | 94          | 93      |
| Operating noise sound power level      | Hydro unit (dB(A))                                 |                                | 40                                                       | 40      | 40          | 40      |
|                                        | Outdoor unit                                       | Max (1) (dB(A))                | 65                                                       | 62      | 65          | 62      |
|                                        |                                                    | Rated (2) (dB(A))              | 59                                                       | 60      | 62          | 61      |
|                                        |                                                    | Silent (3) (dB(A))             | 54                                                       | 55      | 58          | 57      |
| Coefficient of performance *1 *2       |                                                    |                                | 5.20                                                     | 3.45    | 4.80        | 3.30    |
| Hydro unit                             | Outer dimension                                    | Height (mm)                    | 720                                                      |         |             |         |
|                                        |                                                    | Width (mm)                     | 450                                                      |         |             |         |
|                                        |                                                    | Depth (mm)                     | 235                                                      |         |             |         |
|                                        | Net weight (kg)                                    |                                | 27                                                       |         |             |         |
|                                        | Color                                              |                                | White                                                    |         |             |         |
|                                        | Remote controller<br>Outer dimension *3            | Height (mm)                    | 120                                                      |         |             |         |
|                                        |                                                    | Width (mm)                     | 120                                                      |         |             |         |
|                                        |                                                    | Depth (mm)                     | 16                                                       |         |             |         |
|                                        | Circulation pump                                   | Motor output (W)               | 60 (MAX)                                                 |         |             |         |
|                                        |                                                    | Rated flow rate(L/min)         | 11.6                                                     | 11.5    | 17.3        | 14.3    |
|                                        |                                                    | Type                           | Non-self-suction centrifugal pump                        |         |             |         |
|                                        | Heat exchanger                                     |                                | Plate-type heat exchange                                 |         |             |         |
| Outdoor unit                           | Outer dimension                                    | Height (mm)                    | 630                                                      |         |             |         |
|                                        |                                                    | Width (mm)                     | 800                                                      |         |             |         |
|                                        |                                                    | Depth (mm)                     | 300                                                      |         |             |         |
|                                        | Net weight (kg)                                    |                                | 42                                                       |         |             |         |
|                                        | Color                                              |                                | Silky shade                                              |         |             |         |
|                                        | Compressor                                         | Motor output (W)               | 1100                                                     |         |             |         |
|                                        |                                                    | Type                           | Twin rotary type with DC-inverter variable speed control |         |             |         |
|                                        |                                                    | Model                          | DX150A1T-21F                                             |         |             |         |
|                                        | Fan motor                                          | Standard air capacity (m³/min) | 33.6                                                     | 36.4    | 33.6        | 36.4    |
|                                        |                                                    | Motor output (W)               | 43                                                       |         |             |         |
| Refrigerant piping                     | Connection method                                  |                                | Flare connection                                         |         |             |         |
|                                        | Hydro unit                                         | Liquid                         | Ø6.4                                                     |         |             |         |
|                                        |                                                    | Gas                            | Ø12.7                                                    |         |             |         |
|                                        | Outdoor unit                                       | Liquid                         | Ø6.4                                                     |         |             |         |
|                                        |                                                    | Gas                            | Ø12.7                                                    |         |             |         |
|                                        | Maximum length (m)                                 |                                | 30                                                       |         |             |         |
|                                        | Maximum chargeless length (m)                      |                                | 20                                                       |         |             |         |
|                                        | Maximum height difference (m)                      |                                | ±30                                                      |         |             |         |
| Minimum length (m)                     |                                                    | 5                              |                                                          |         |             |         |
| Refrigerant                            | Refrigerant name                                   |                                | R32                                                      |         |             |         |
|                                        | Charge amount (kg)                                 |                                | 0.9                                                      |         |             |         |
| Water piping                           | Pipe diameter                                      |                                | R1                                                       |         |             |         |
|                                        | Maximum length (m)                                 |                                | None (Need the flow rate 11 L/min or more)               |         |             |         |
|                                        | Maximum height difference (m)                      |                                | ±7                                                       |         |             |         |
|                                        | Maximum working water pressure (kPa) *4            |                                | 430                                                      |         |             |         |
| Operating temperature range            | Hydro unit (°C) *5 (Cooling / Heating / Hot water) |                                | 5-32 / 5-32 / 5-32                                       |         |             |         |
|                                        | Outdoor unit (°C) (Cooling / Heating / Hot water)  |                                | 10-43 / -20-25 / -20-43                                  |         |             |         |
| Operating humidity range               | Hydro unit (%)                                     |                                | 15-85                                                    |         |             |         |
|                                        | Outdoor unit (%)                                   |                                | 15-100                                                   |         |             |         |
| Wiring connection                      | Power wiring                                       |                                | 3 wires: including earth wire (Outdoor unit)             |         |             |         |
|                                        | Connecting line                                    |                                | 4 wires: including earth wire                            |         |             |         |

\*1 Heating performance measurement conditions: outside air temperature 7°C, water supply temperature 30°C, outlet water temperature 35°C, refrigerant piping length 7.5 m (no height difference).

\*2 Cooling performance measurement conditions: outside air temperature 35°C, water supply temperature 12°C, outlet water temperature 7°C, refrigerant piping length 7.5 m (no height difference).

\*3 • The remote controller should be shipped with the hydro unit.

• Use two 1.5-meter wires to connect the hydro unit with the remote controller.

\*4 Check the water piping for leakage under the maximum operating pressure.

\*5 Do not leave the hydro unit at 5°C or below.

(1)Max operation

Heating: outside air temperature 7°C, water supply temperature 47°C, outlet water temperature 55°C.

Cooling: outside air temperature 35°C, water supply temperature 12°C, outlet water temperature 7°C.

(2)Rated operation

Heating: outside air temperature 7°C, water supply temperature 30°C, outlet water temperature 35°C.

Cooling: outside air temperature 35°C, water supply temperature 12°C, outlet water temperature 7°C.

(3)Silent operation

Heating: outside air temperature 7°C, outlet water temperature 35°C.

Cooling: outside air temperature 35°C, outlet water temperature 7°C.

## Wall Mounted Type

| Unit name                              |                                                    |                                | Hydro unit   |   | HWT-1101XWHM3W-E, HWT-1101XWHT6W-E, HWT-1101XWHT9W-E     |         |                 |         |
|----------------------------------------|----------------------------------------------------|--------------------------------|--------------|---|----------------------------------------------------------|---------|-----------------|---------|
|                                        |                                                    |                                | Outdoor unit |   | HWT-801H(R)W-E                                           |         | HWT-1101H(R)W-E |         |
| Heating capacity *1 (kW)               |                                                    |                                |              |   | 8.0                                                      |         | 11.0            |         |
| Cooling capacity *2 (kW)               |                                                    |                                |              |   | 6.0                                                      |         | 8.0             |         |
| Variable range of compressor frequency |                                                    |                                |              |   | 10 - 90 Hz                                               |         | 10 - 100 Hz     |         |
| Power source                           |                                                    |                                |              |   | 1 phase 50 Hz 220-240 V                                  |         |                 |         |
| Operation mode                         |                                                    |                                |              |   | Heating                                                  | Cooling | Heating         | Cooling |
| Electric characteristic *1 *2          | Total                                              | Current (A)                    |              |   | 7.05                                                     | 8.51    | 10.60           | 12.82   |
|                                        |                                                    | Power (kW)                     |              |   | 1.54                                                     | 1.88    | 2.39            | 2.86    |
|                                        |                                                    | Power factor (%)               |              |   | 95                                                       | 96      | 98              | 97      |
|                                        |                                                    |                                |              |   |                                                          |         |                 |         |
| Operating noise sound power level      | Hydro unit (dB(A))                                 |                                |              |   | 40                                                       | 40      | 40              | 40      |
|                                        | Outdoor unit                                       | Max (1) (dB(A))                |              |   | 65                                                       | 63      | 65              | 64      |
|                                        |                                                    | Rated (2) (dB(A))              |              |   | 63                                                       | 62      | 64              | 62      |
|                                        |                                                    | Silent (3) (dB(A))             |              |   | 58                                                       | 59      | 62              | 60      |
| Coefficient of performance *1 *2       |                                                    |                                |              |   | 5.19                                                     | 3.20    | 4.60            | 2.80    |
| Hydro unit                             | Outer dimension                                    | Height (mm)                    |              |   | 720                                                      |         |                 |         |
|                                        |                                                    | Width (mm)                     |              |   | 450                                                      |         |                 |         |
|                                        |                                                    | Depth (mm)                     |              |   | 235                                                      |         |                 |         |
|                                        | Net weight (kg)                                    |                                |              |   | 27                                                       |         |                 |         |
|                                        | Color                                              |                                |              |   | White                                                    |         |                 |         |
|                                        | Remote controller<br>Outer dimension *3            | Height (mm)                    |              |   | 120                                                      |         |                 |         |
|                                        |                                                    | Width (mm)                     |              |   | 120                                                      |         |                 |         |
|                                        |                                                    | Depth (mm)                     |              |   | 16                                                       |         |                 |         |
|                                        | Circulation pump                                   | Motor output (W)               |              |   | 60 (MAX)                                                 |         |                 |         |
|                                        |                                                    | Rated flow rate (L/min)        |              |   | 23.0                                                     | 16.7    | 32.1            | 22.7    |
|                                        |                                                    | Type                           |              |   | Non-self-suction centrifugal pump                        |         |                 |         |
|                                        | Heat exchanger                                     |                                |              |   | Plate-type heat exchange                                 |         |                 |         |
| Outdoor unit                           | Outer dimension                                    | Height (mm)                    |              |   | 1050                                                     |         |                 |         |
|                                        |                                                    | Width (mm)                     |              |   | 1010                                                     |         |                 |         |
|                                        |                                                    | Depth (mm)                     |              |   | 370                                                      |         |                 |         |
|                                        | Net weight (kg)                                    |                                |              |   | 75                                                       |         |                 |         |
|                                        | Color                                              |                                |              |   | Silky shade                                              |         |                 |         |
|                                        | Compressor                                         | Motor output (W)               |              |   | 2000                                                     |         |                 |         |
|                                        |                                                    | Type                           |              |   | Twin rotary type with DC-inverter variable speed control |         |                 |         |
|                                        |                                                    | Model                          |              |   | NX220A1FJ-20N                                            |         |                 |         |
|                                        | Fan motor                                          | Standard air capacity (m³/min) |              |   | 52.4                                                     | 52.4    | 58.4            | 52.4    |
|                                        |                                                    | Motor output (W)               |              |   | 60                                                       |         |                 |         |
| Refrigerant piping                     | Connection method                                  |                                |              |   | Flare connection                                         |         |                 |         |
|                                        | Hydro unit                                         | Liquid                         |              |   | Ø6.4                                                     |         |                 |         |
|                                        |                                                    | Gas                            |              |   | Ø15.9                                                    |         |                 |         |
|                                        | Outdoor unit                                       | Liquid                         |              |   | Ø6.4                                                     |         |                 |         |
|                                        |                                                    | Gas                            |              |   | Ø15.9                                                    |         |                 |         |
|                                        | Maximum length (m)                                 |                                |              |   | 30                                                       |         |                 |         |
|                                        | Maximum chargeless length (m)                      |                                |              |   | 8                                                        |         |                 |         |
|                                        | Maximum height difference (m)                      |                                |              |   | ±30                                                      |         |                 |         |
| Minimum length (m)                     |                                                    |                                |              | 5 |                                                          |         |                 |         |
| Refrigerant                            | Refrigerant name                                   |                                |              |   | R32                                                      |         |                 |         |
|                                        | Charge amount (kg)                                 |                                |              |   | 1.25                                                     |         |                 |         |
| Water piping                           | Pipe diameter                                      |                                |              |   | R1                                                       |         |                 |         |
|                                        | Maximum length (m)                                 |                                |              |   | None (Need the flow rate 14 L/min or more)               |         |                 |         |
|                                        | Maximum height difference (m)                      |                                |              |   | ±7                                                       |         |                 |         |
|                                        | Maximum working water pressure (kPa) *4            |                                |              |   | 430                                                      |         |                 |         |
| Operating temperature range            | Hydro unit (°C) *5 (Cooling / Heating / Hot water) |                                |              |   | 5-32 / 5-32 / 5-32                                       |         |                 |         |
|                                        | Outdoor unit (°C) (Cooling / Heating / Hot water)  |                                |              |   | 10-43 / -25-25 / -25-43                                  |         |                 |         |
| Operating humidity range               | Hydro unit (%)                                     |                                |              |   | 15-85                                                    |         |                 |         |
|                                        | Outdoor unit (%)                                   |                                |              |   | 15-100                                                   |         |                 |         |
| Wiring connection                      | Power wiring                                       |                                |              |   | 3 wires: including earth wire (Outdoor unit)             |         |                 |         |
|                                        | Connecting line                                    |                                |              |   | 4 wires: including earth wire                            |         |                 |         |

\*1 Heating performance measurement conditions: outside air temperature 7°C, water supply temperature 30°C, outlet water temperature 35°C, refrigerant piping length 7.5 m (no height difference).

\*2 Cooling performance measurement conditions: outside air temperature 35°C, water supply temperature 12°C, outlet water temperature 7°C, refrigerant piping length 7.5 m (no height difference).

\*3 • The remote controller should be shipped with the hydro unit.

• Use two 1.5-meter wires to connect the hydro unit with the remote controller.

\*4 Check the water piping for leakage under the maximum operating pressure.

\*5 Do not leave the hydro unit at 5°C or below.

(1)Max operation

Heating: outside air temperature 7°C, water supply temperature 47°C, outlet water temperature 55°C.

Cooling: outside air temperature 35°C, water supply temperature 12°C, outlet water temperature 7°C.

(2)Rated operation

Heating: outside air temperature 7°C, water supply temperature 30°C, outlet water temperature 35°C.

Cooling: outside air temperature 35°C, water supply temperature 12°C, outlet water temperature 7°C.

(3)Silent operation

Heating: outside air temperature 7°C, outlet water temperature 35°C.

Cooling: outside air temperature 35°C, outlet water temperature 7°C.

## All In One Type

| Unit name                              |                                                    |                                | HWT-601F21SM3W-E, HWT-601F21T6W-E                        |         |             |         |
|----------------------------------------|----------------------------------------------------|--------------------------------|----------------------------------------------------------|---------|-------------|---------|
| Hydro unit                             |                                                    |                                |                                                          |         |             |         |
| Outdoor unit                           |                                                    |                                | HWT-401HW-E                                              |         | HWT-601HW-E |         |
| Heating capacity *1 (kW)               |                                                    |                                | 4.0                                                      |         | 6.0         |         |
| Cooling capacity *2 (kW)               |                                                    |                                | 4.0                                                      |         | 5.0         |         |
| Variable range of compressor frequency |                                                    |                                | 10 - 80 Hz                                               |         | 10 - 100 Hz |         |
| Power source                           |                                                    |                                | 1 phase 50 Hz 220-240 V                                  |         |             |         |
| Operation mode                         |                                                    |                                | Heating                                                  | Cooling | Heating     | Cooling |
| Electric characteristic *1 *2          | Total                                              | Current (A)                    | 4.08                                                     | 5.38    | 5.78        | 7.11    |
|                                        |                                                    | Power (kW)                     | 0.77                                                     | 1.15    | 1.25        | 1.52    |
|                                        |                                                    | Power factor (%)               | 82                                                       | 93      | 94          | 93      |
|                                        |                                                    |                                |                                                          |         |             |         |
| Operating noise sound power level (1)  | Hydro unit (dB(A))                                 |                                | 42                                                       | 42      | 42          | 42      |
|                                        | Outdoor unit (dB(A))                               |                                | 65                                                       | 62      | 65          | 62      |
| Coefficient of performance *1 *2       |                                                    |                                | 5.20                                                     | 3.45    | 4.80        | 3.30    |
| Hydro unit                             | Outer dimension                                    | Height (mm)                    | 1700                                                     |         |             |         |
|                                        |                                                    | Width (mm)                     | 600                                                      |         |             |         |
|                                        |                                                    | Depth (mm)                     | 670                                                      |         |             |         |
|                                        |                                                    |                                |                                                          |         |             |         |
|                                        | Net weight (kg)                                    |                                | 157                                                      |         |             |         |
|                                        | Color                                              |                                | White                                                    |         |             |         |
|                                        | Remote controller<br>Outer dimension *3            | Height (mm)                    | 120                                                      |         |             |         |
|                                        |                                                    | Width (mm)                     | 120                                                      |         |             |         |
|                                        |                                                    | Depth (mm)                     | 16                                                       |         |             |         |
|                                        | Circulation pump                                   | Motor output (W)               | 60 (MAX)                                                 |         |             |         |
|                                        |                                                    | Rated flow rate (L/min)        | 11.6                                                     | 11.5    | 17.3        | 14.3    |
|                                        |                                                    | Type                           | Non-self-suction centrifugal pump                        |         |             |         |
|                                        | Heat exchanger                                     |                                | Plate-type heat exchange                                 |         |             |         |
|                                        | Tank                                               | Water volume(L)                | 210                                                      |         |             |         |
|                                        |                                                    | Maximum water temperature (°C) | 65                                                       |         |             |         |
|                                        |                                                    | Maximum water Pressure (bar)   | 6                                                        |         |             |         |
| Corrosion protection                   |                                                    | Enamel                         |                                                          |         |             |         |
| Outdoor unit                           | Outer dimension                                    | Height (mm)                    | 630                                                      |         |             |         |
|                                        |                                                    | Width (mm)                     | 800                                                      |         |             |         |
|                                        |                                                    | Depth (mm)                     | 300                                                      |         |             |         |
|                                        |                                                    |                                |                                                          |         |             |         |
|                                        | Net weight (kg)                                    |                                | 42                                                       |         |             |         |
|                                        | Color                                              |                                | Silky shade                                              |         |             |         |
|                                        | Compressor                                         | Motor output (W)               | 1100                                                     |         |             |         |
|                                        |                                                    | Type                           | Twin rotary type with DC-inverter variable speed control |         |             |         |
|                                        |                                                    | Model                          | DX150A1T-21F                                             |         |             |         |
|                                        | Fan motor                                          | Standard air capacity (m³/min) | 33.6                                                     | 36.4    | 33.6        | 36.4    |
|                                        |                                                    | Motor output (W)               | 43                                                       |         |             |         |
| Refrigerant piping                     | Connection method                                  |                                | Flare connection                                         |         |             |         |
|                                        | Hydro unit                                         | Liquid                         | Ø6.4                                                     |         |             |         |
|                                        |                                                    | Gas                            | Ø12.7                                                    |         |             |         |
|                                        | Outdoor unit                                       | Liquid                         | Ø6.4                                                     |         |             |         |
|                                        |                                                    | Gas                            | Ø12.7                                                    |         |             |         |
|                                        | Maximum length (m)                                 |                                | 30                                                       |         |             |         |
|                                        | Maximum chargeless length (m)                      |                                | 20                                                       |         |             |         |
|                                        | Maximum height difference (m)                      |                                | ±30                                                      |         |             |         |
|                                        | Minimum length (m)                                 |                                | 5                                                        |         |             |         |
| Refrigerant                            | Refrigerant name                                   |                                | R32                                                      |         |             |         |
|                                        | Charge amount (kg)                                 |                                | 0.9                                                      |         |             |         |
| Water piping                           | Pipe diameter                                      |                                | Φ22 (Bare tube)                                          |         |             |         |
|                                        | Maximum length (m)                                 |                                | None (Need the flow rate 11 L/min or more)               |         |             |         |
|                                        | Maximum height difference (m)                      |                                | ±7                                                       |         |             |         |
|                                        | Maximum working water pressure (bar) *4            |                                | 2.5                                                      |         |             |         |
| Operating temperature range            | Hydro unit (°C) *5 (Cooling / Heating / Hot water) |                                | 5-32 / 5-32 / 5-32                                       |         |             |         |
|                                        | Outdoor unit (°C) (Cooling / Heating / Hot water)  |                                | 10-43 / -20-25 / -20-43                                  |         |             |         |
| Operating humidity range               | Hydro unit (%)                                     |                                | 15-85                                                    |         |             |         |
|                                        | Outdoor unit (%)                                   |                                | 15-100                                                   |         |             |         |
| Wiring connection                      | Power wiring                                       |                                | 3 wires: including earth wire (Outdoor unit)             |         |             |         |
|                                        | Connecting line                                    |                                | 4 wires: including earth wire                            |         |             |         |

\*1 Heating performance measurement conditions: outside air temperature 7°C, water supply temperature 30°C, outlet water temperature 35°C, refrigerant piping length 7.5 m (no height difference).

\*2 Cooling performance measurement conditions: outside air temperature 35°C, water supply temperature 12°C, outlet water temperature 7°C, refrigerant piping length 7.5 m (no height difference).

\*3 • The remote controller should be shipped with the hydro unit.

• Use two 1.5-meter wires to connect the hydro unit with the remote controller.

\*4 Check the water piping for leakage under the maximum operating pressure.

\*5 Do not leave the hydro unit at 5°C or below.

(1). Max operation

Heating: outside air temperature 7°C, water supply temperature 47°C, outlet water temperature 55°C.

Cooling: outside air temperature 35°C, water supply temperature 12°C, outlet water temperature 7°C.

## All In One Type

| Unit name                              |                                                    |                                | Hydro unit   |                          | HWT-1101F21SM3W-E, HWT-1101F21MM3W-E<br>HWT-1101F21ST6W-E, HWT-1101F21MT6W-E<br>HWT-1101F21ST9W-E, HWT-1101F21MT9W-E |      |                         |  |
|----------------------------------------|----------------------------------------------------|--------------------------------|--------------|--------------------------|----------------------------------------------------------------------------------------------------------------------|------|-------------------------|--|
|                                        |                                                    |                                | Outdoor unit |                          | HWT-801H (R)W-E                                                                                                      |      | HWT-1101H (R)W-E        |  |
| Heating capacity *1 (kW)               |                                                    |                                |              |                          | 8.0                                                                                                                  |      | 11.0                    |  |
| Cooling capacity *2 (kW)               |                                                    |                                |              |                          | 6.0                                                                                                                  |      | 8.0                     |  |
| Variable range of compressor frequency |                                                    |                                |              |                          | 10 - 90 Hz                                                                                                           |      | 10 - 100 Hz             |  |
| Power source                           |                                                    |                                |              |                          | 1 phase 50 Hz 220-240 V                                                                                              |      |                         |  |
| Operation mode                         |                                                    |                                |              |                          | Heating                                                                                                              |      | Cooling                 |  |
| Electric characteristic *1 *2          | Total                                              | Current (A)                    |              |                          | 7.05                                                                                                                 |      | 8.51                    |  |
|                                        |                                                    | Power (kW)                     |              |                          | 1.54                                                                                                                 |      | 1.88                    |  |
|                                        |                                                    | Power factor (%)               |              |                          | 95                                                                                                                   |      | 96                      |  |
| Operating noise sound power level (1)  | Hydro unit (dB(A))                                 |                                |              |                          | 42 (F21S),<br>44 (F21M)                                                                                              |      | 42 (F21S),<br>44 (F21M) |  |
|                                        | Outdoor unit (dB(A))                               |                                |              |                          | 65                                                                                                                   |      | 63                      |  |
| Coefficient of performance *1 *2       |                                                    |                                |              |                          | 5.19                                                                                                                 |      | 3.20                    |  |
| Hydro unit                             | Outer dimension                                    | Height (mm)                    |              |                          | 1700                                                                                                                 |      |                         |  |
|                                        |                                                    | Width (mm)                     |              |                          | 600                                                                                                                  |      |                         |  |
|                                        |                                                    | Depth (mm)                     |              |                          | 670                                                                                                                  |      |                         |  |
|                                        | Net weight (kg)                                    |                                |              |                          | 157 (1101F21S) , 162 (1101F21M)                                                                                      |      |                         |  |
|                                        | Color                                              |                                |              |                          | White                                                                                                                |      |                         |  |
|                                        | Remote controller<br>Outer dimension *3            | Height (mm)                    |              |                          | 120                                                                                                                  |      |                         |  |
|                                        |                                                    | Width (mm)                     |              |                          | 120                                                                                                                  |      |                         |  |
|                                        |                                                    | Depth (mm)                     |              |                          | 16                                                                                                                   |      |                         |  |
|                                        | Circulation pump                                   | Motor output (W)               |              |                          | 60 (1101F21S) , 60 x 2 (1101F21M)                                                                                    |      |                         |  |
|                                        |                                                    | Rated flow rate (L/min)        |              |                          | 11.6                                                                                                                 |      | 11.5                    |  |
|                                        |                                                    | Type                           |              |                          | 17.3                                                                                                                 |      | 14.3                    |  |
|                                        | Heat exchanger                                     |                                |              |                          | Non-self-suction centrifugal pump                                                                                    |      |                         |  |
|                                        | Tank                                               |                                |              | Plate-type heat exchange |                                                                                                                      |      |                         |  |
|                                        |                                                    | Water volume (L)               |              |                          | 210                                                                                                                  |      |                         |  |
|                                        |                                                    | Maximum water temperature (°C) |              |                          | 65                                                                                                                   |      |                         |  |
|                                        |                                                    | Maximum water Pressure (bar)   |              |                          | 6                                                                                                                    |      |                         |  |
| Corrosion protection                   |                                                    |                                |              | Enamel                   |                                                                                                                      |      |                         |  |
| Outdoor unit                           | Outer dimension                                    | Height (mm)                    |              |                          | 1050                                                                                                                 |      |                         |  |
|                                        |                                                    | Width (mm)                     |              |                          | 1010                                                                                                                 |      |                         |  |
|                                        |                                                    | Depth (mm)                     |              |                          | 370                                                                                                                  |      |                         |  |
|                                        | Net weight (kg)                                    |                                |              |                          | 75                                                                                                                   |      |                         |  |
|                                        | Color                                              |                                |              |                          | Silky shade                                                                                                          |      |                         |  |
|                                        | Compressor                                         | Motor output (W)               |              |                          | 2000                                                                                                                 |      |                         |  |
|                                        |                                                    | Type                           |              |                          | Twin rotary type with DC-inverter variable speed control                                                             |      |                         |  |
|                                        |                                                    | Model                          |              |                          | NX220A1FJ-20N                                                                                                        |      |                         |  |
|                                        | Fan motor                                          | Standard air capacity (m³/min) |              |                          | 52.4                                                                                                                 |      | 52.4                    |  |
| Motor output (W)                       |                                                    |                                |              | 58.4                     |                                                                                                                      | 52.4 |                         |  |
| Refrigerant piping                     | Connection method                                  |                                |              |                          | Flare connection                                                                                                     |      |                         |  |
|                                        | Hydro unit                                         | Liquid                         |              |                          | Ø6.4                                                                                                                 |      |                         |  |
|                                        |                                                    | Gas                            |              |                          | Ø15.9                                                                                                                |      |                         |  |
|                                        | Outdoor unit                                       | Liquid                         |              |                          | Ø6.4                                                                                                                 |      |                         |  |
|                                        |                                                    | Gas                            |              |                          | Ø15.9                                                                                                                |      |                         |  |
|                                        | Maximum length (m)                                 |                                |              |                          | 30                                                                                                                   |      |                         |  |
|                                        | Maximum chargeless length (m)                      |                                |              |                          | 8                                                                                                                    |      |                         |  |
|                                        | Maximum height difference (m)                      |                                |              |                          | ±30                                                                                                                  |      |                         |  |
|                                        | Minimum length (m)                                 |                                |              |                          | 5                                                                                                                    |      |                         |  |
| Refrigerant                            | Refrigerant name                                   |                                |              |                          | R32                                                                                                                  |      |                         |  |
|                                        | Charge amount (kg)                                 |                                |              |                          | 1.25                                                                                                                 |      |                         |  |
| Water piping                           | Pipe diameter                                      |                                |              |                          | Φ22 (Bare tube)                                                                                                      |      |                         |  |
|                                        | Maximum length (m)                                 |                                |              |                          | None (Need the flow rate 14 L/min or more)                                                                           |      |                         |  |
|                                        | Maximum height difference (m)                      |                                |              |                          | ±7                                                                                                                   |      |                         |  |
|                                        | Maximum working water pressure (bar) *4            |                                |              |                          | 2.5                                                                                                                  |      |                         |  |
| Operating temperature range            | Hydro unit (°C) *5 (Cooling / Heating / Hot water) |                                |              |                          | 5-32 / 5-32 / 5-32                                                                                                   |      |                         |  |
|                                        | Outdoor unit (°C) (Cooling / Heating / Hot water)  |                                |              |                          | 10-43 / -25-25 / -25-43                                                                                              |      |                         |  |
| Operating humidity range               | Hydro unit (%)                                     |                                |              |                          | 15-85                                                                                                                |      |                         |  |
|                                        | Outdoor unit (%)                                   |                                |              |                          | 15-100                                                                                                               |      |                         |  |
| Wiring connection                      | Power wiring                                       |                                |              |                          | 3 wires: including earth wire (Outdoor unit)                                                                         |      |                         |  |
|                                        | Connecting line                                    |                                |              |                          | 4 wires: including earth wire                                                                                        |      |                         |  |

\*1 Heating performance measurement conditions: outside air temperature 7°C, water supply temperature 30°C, outlet water temperature 35°C, refrigerant piping length 7.5 m (no height difference).

\*2 Cooling performance measurement conditions: outside air temperature 35°C, water supply temperature 12°C, outlet water temperature 7°C, refrigerant piping length 7.5 m (no height difference).

\*3 • The remote controller should be shipped with the hydro unit.

• Use two 1.5-meter wires to connect the hydro unit with the remote controller.

\*4 Check the water piping for leakage under the maximum operating pressure.

\*5 Do not leave the hydro unit at 5°C or below.

(1). Max operation

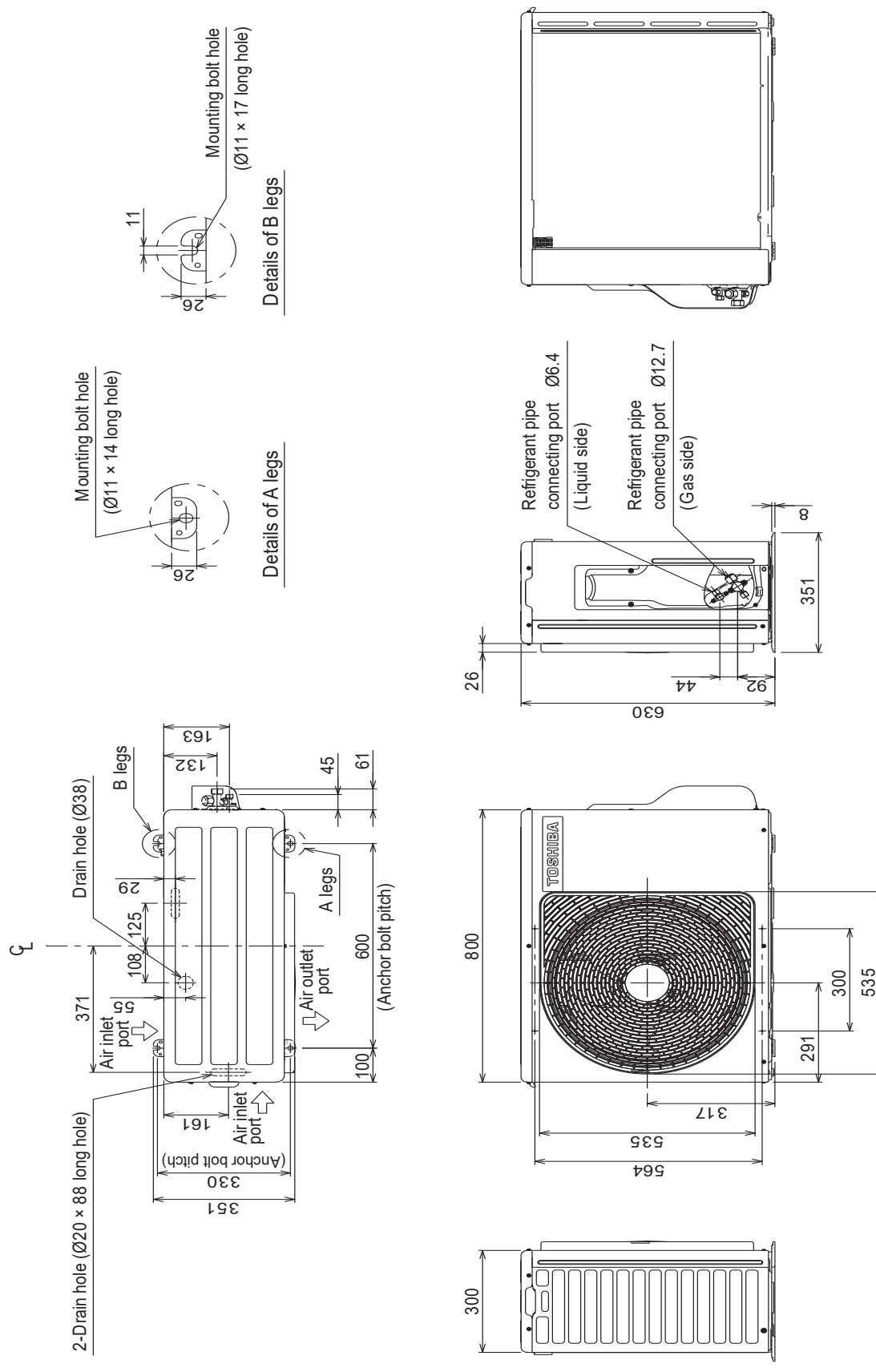
Heating: outside air temperature 7°C, water supply temperature 47°C, outlet water temperature 55°C.

Cooling: outside air temperature 35°C, water supply temperature 12°C, outlet water temperature 7°C.

### 3-2. Dimension

## HWT-401HW-E, HWT-601HW-E

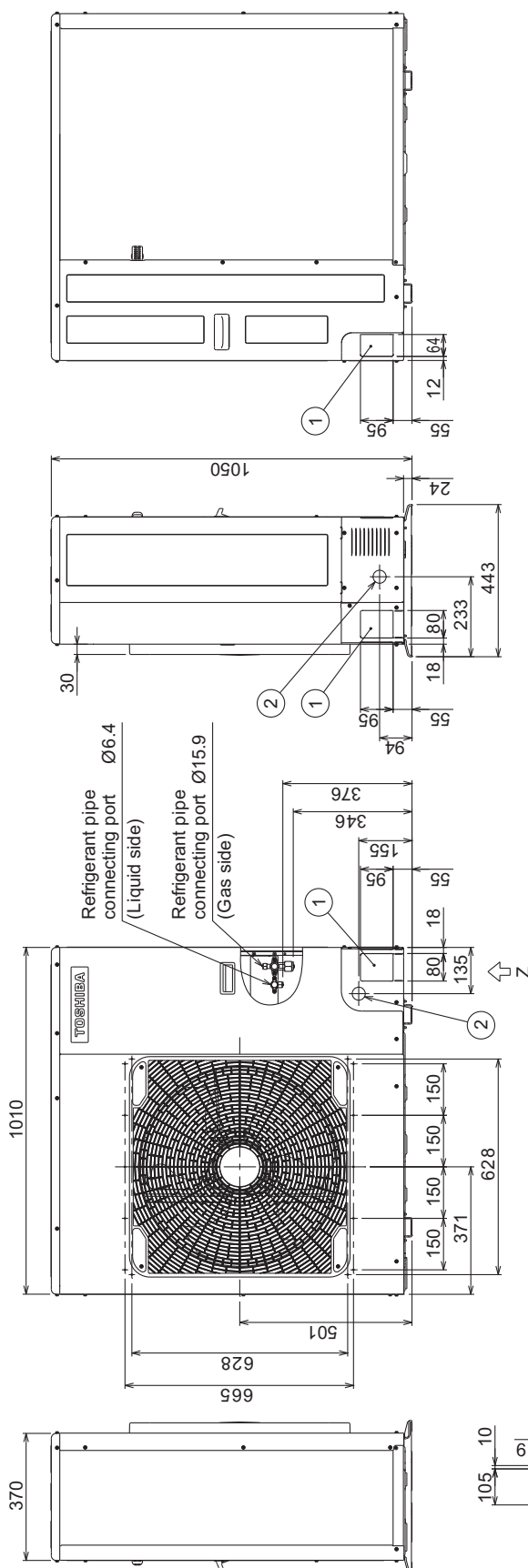
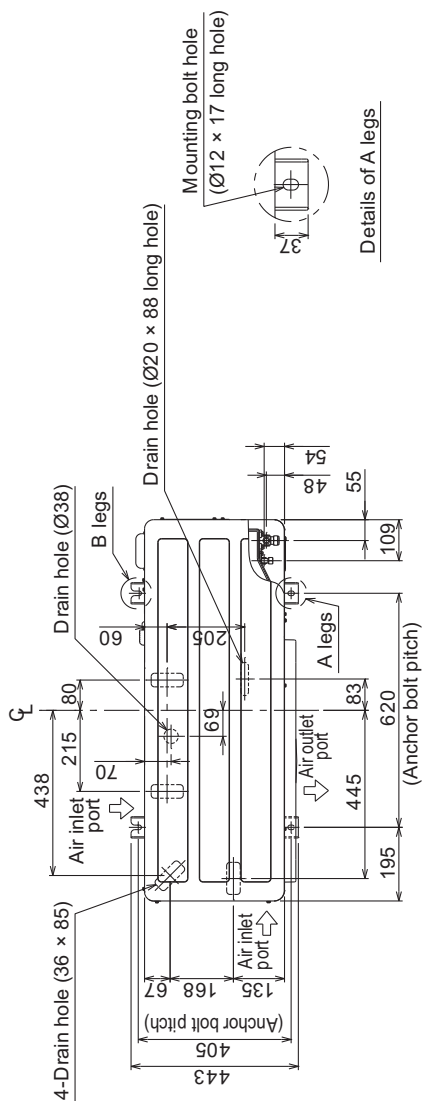
Unit: mm



# HWT-801HW-E, HWT-1101HW-E HWT-801HRW-E, HWT-1101HRW-E

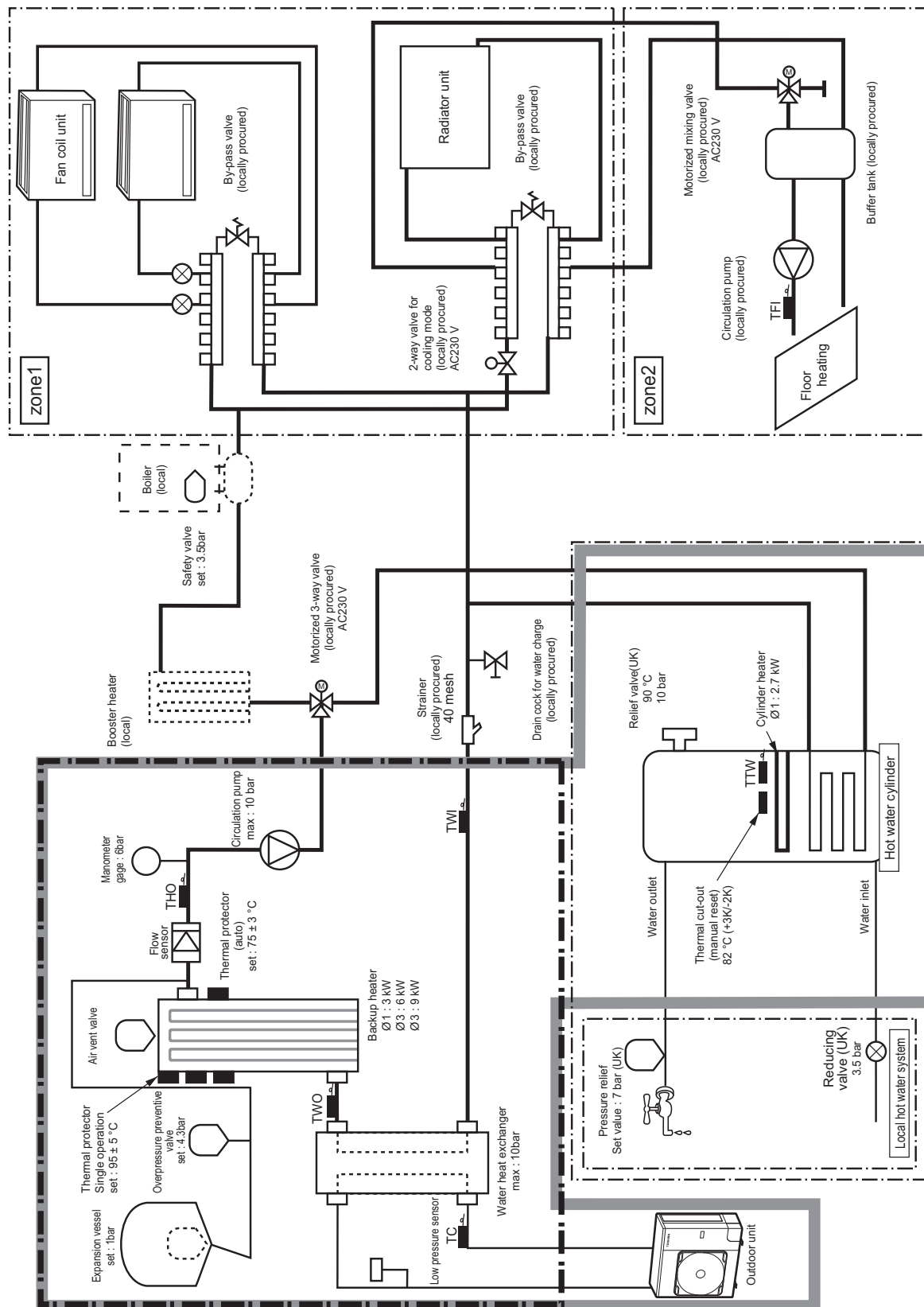
Unit: mm

|   | Name                                                                             | Note              |
|---|----------------------------------------------------------------------------------|-------------------|
| ① | Refrigerant pipe hole<br>Hydro Unit / Outdoor Unit<br>connecting wire inlet hole | —                 |
| ② | Power supply inlet hole                                                          | Ø38 Knockout hole |



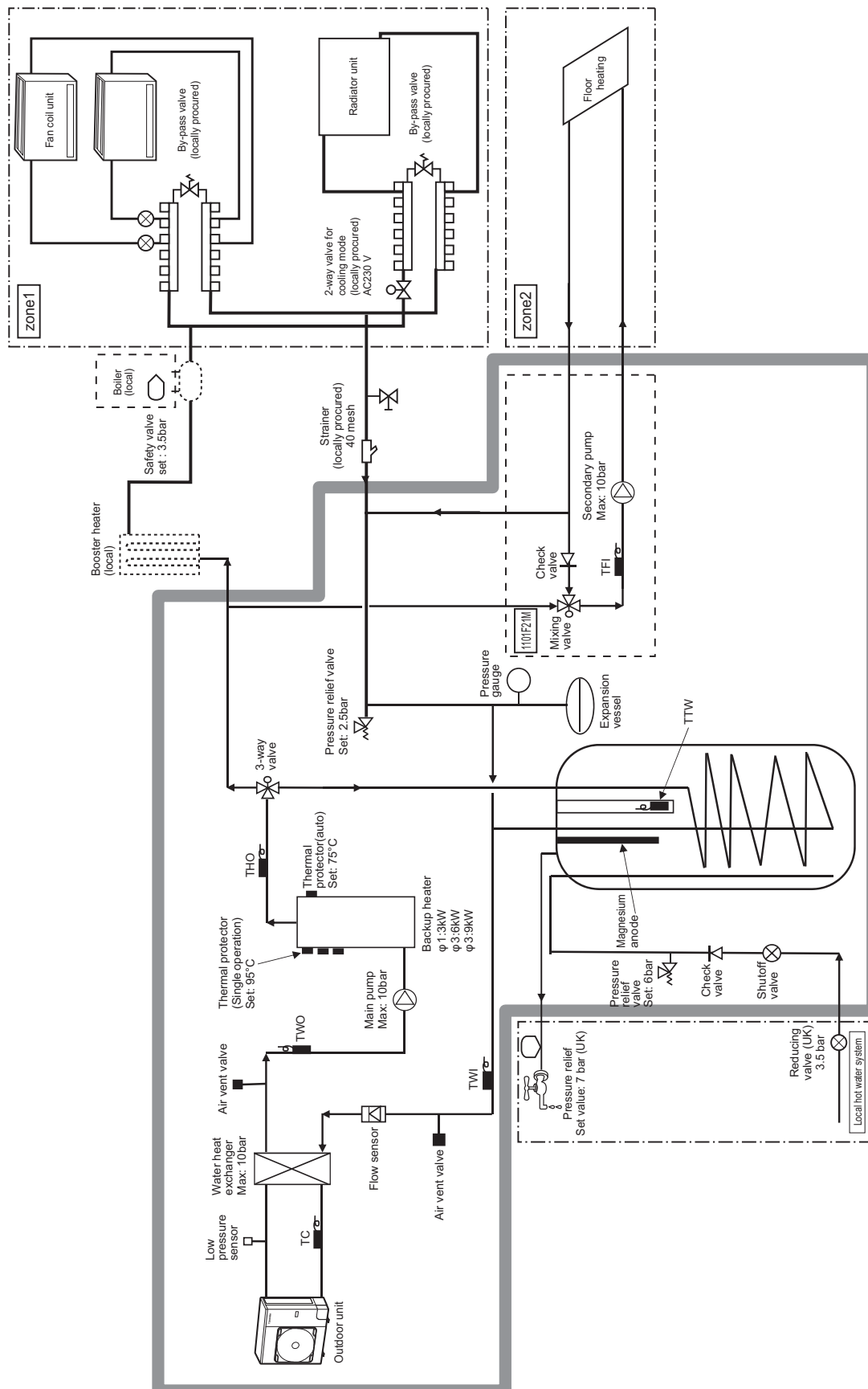
### 3-3. Piping Diagram

#### Hydro unit - Wall Mounted Type



## Hydro unit - All In One Type

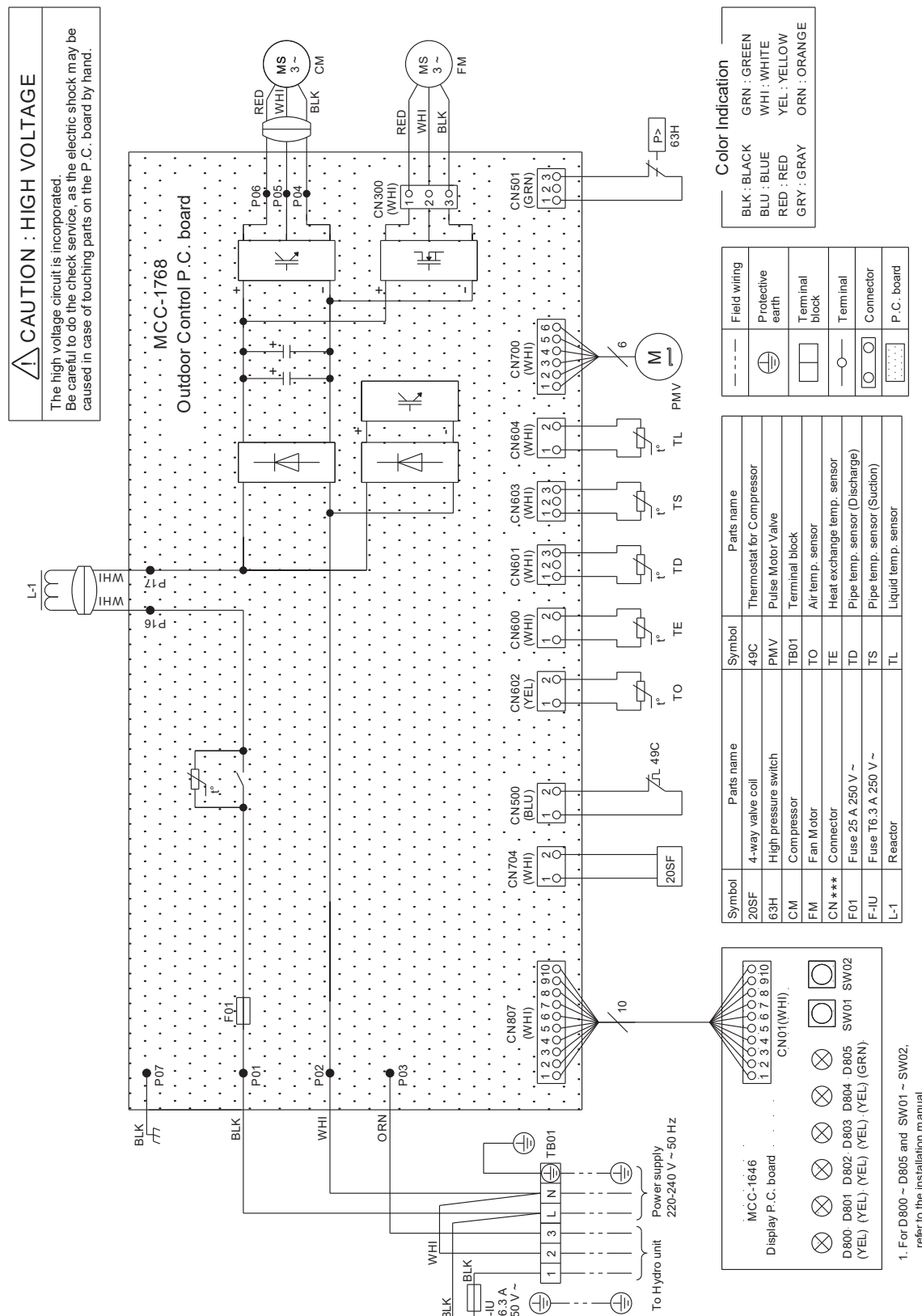
### ▼ Water system diagram



## 3-4. Wiring Diagram

### 3-4-1. Outdoor Unit (Single phase type)

#### ▼HWT-401HW-E, HWT-601HW-E



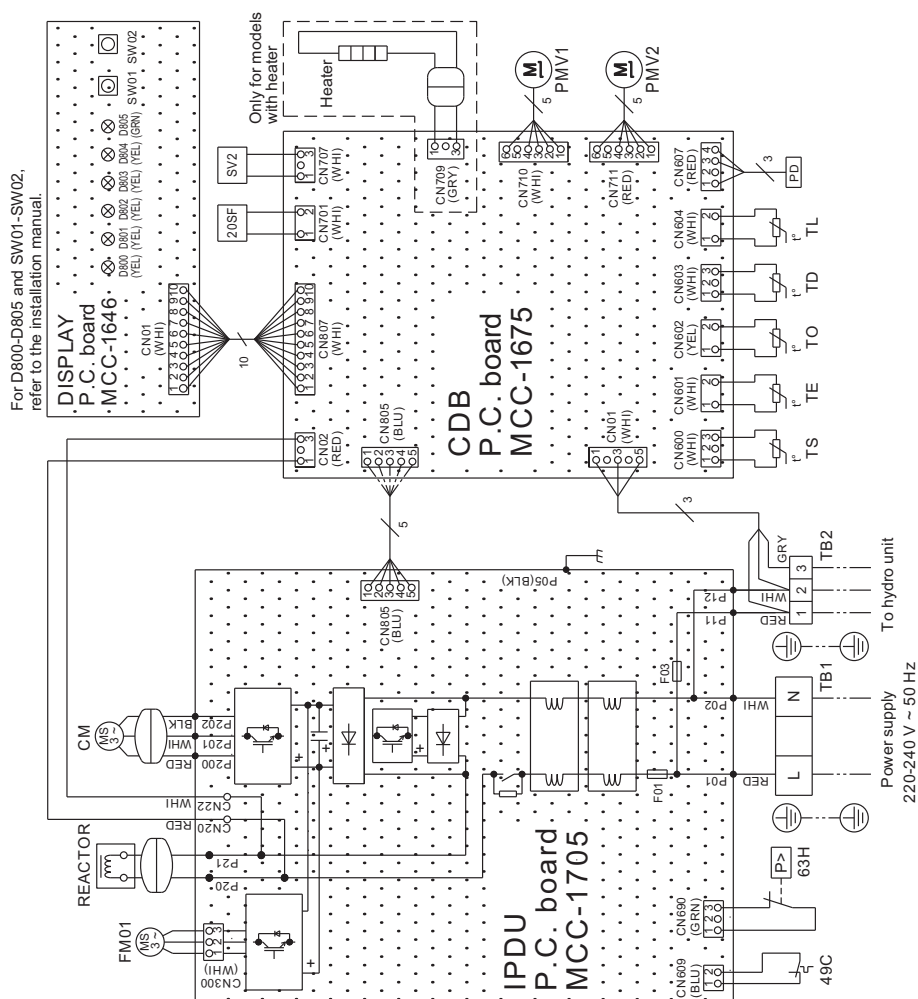
# ▼HWT-801HW-E, HWT-801HRW-E HWT-1101HW-E, HWT-1101HRW-E

**⚠ CAUTION : HIGH VOLTAGE**  
The high voltage circuit is incorporated.  
Be careful to do the check service,  
as the electric shock may be  
caused in case of touching parts  
on the P.C. board by hand.

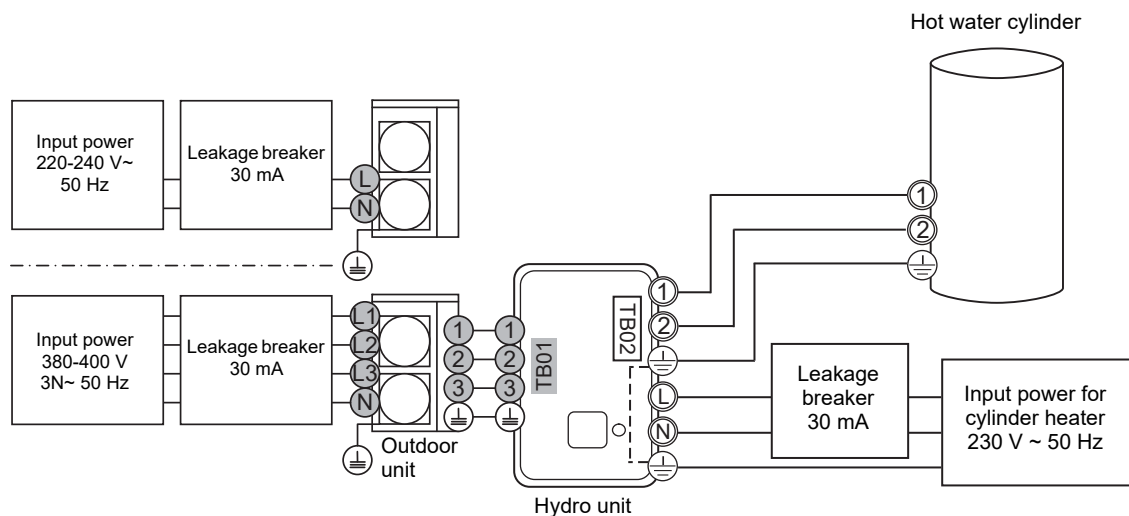
| Symbol | Part name                           |
|--------|-------------------------------------|
| CM     | Compressor                          |
| FM01   | Fan motor                           |
| F01    | Fuse 25 A 250 V ~                   |
| F03    | Fuse 10 A 250 V ~                   |
| PMV1   | Pulse motor valve 1                 |
| PMV2   | Pulse motor valve 2                 |
| TB1    | Terminal (Power supply)             |
| TB2    | Terminal (To hydro unit)            |
| TD     | Pipe temperature sensor (Discharge) |
| TE     | Heat exchanger sensor 1             |
| TL     | Heat exchanger sensor 2             |
| TO     | Outside temperature sensor          |
| TS     | Pipe temperature sensor (Suction)   |
| PD     | High-pressure sensor                |
| SV2    | 2-way valve coil                    |
| 20SF   | 4-way valve coil                    |
| 49C    | Compressor case thermostat          |
| 63H    | High-pressure switch                |

**Color Indication**  
BLK : BLACK  
BLU : BLUE  
RED : RED  
YEL : YELLOW  
WHI : WHITE  
GRY : GRAY  
GRN : GREEN

|     |                  |
|-----|------------------|
| --- | Field wiring     |
|     | Protective earth |
|     | Terminal block   |
|     | Terminal         |
|     | Connector        |
|     | P.C. board       |



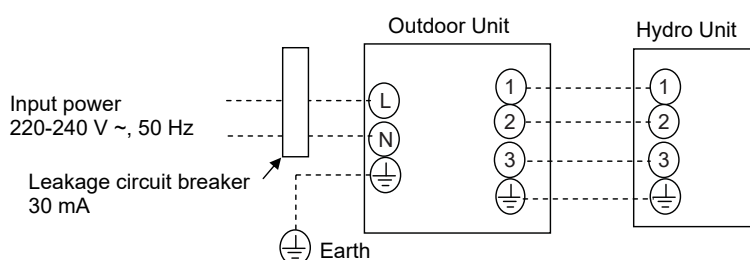
### 3-4-2. Power line



### 3-4-3. Wiring between Hydro Unit and Outdoor Unit

The dashed lines show on-site wiring.

Connect the system interconnection wires to the identical terminal numbers on the terminal block of each unit. Incorrect connection may cause a failure.

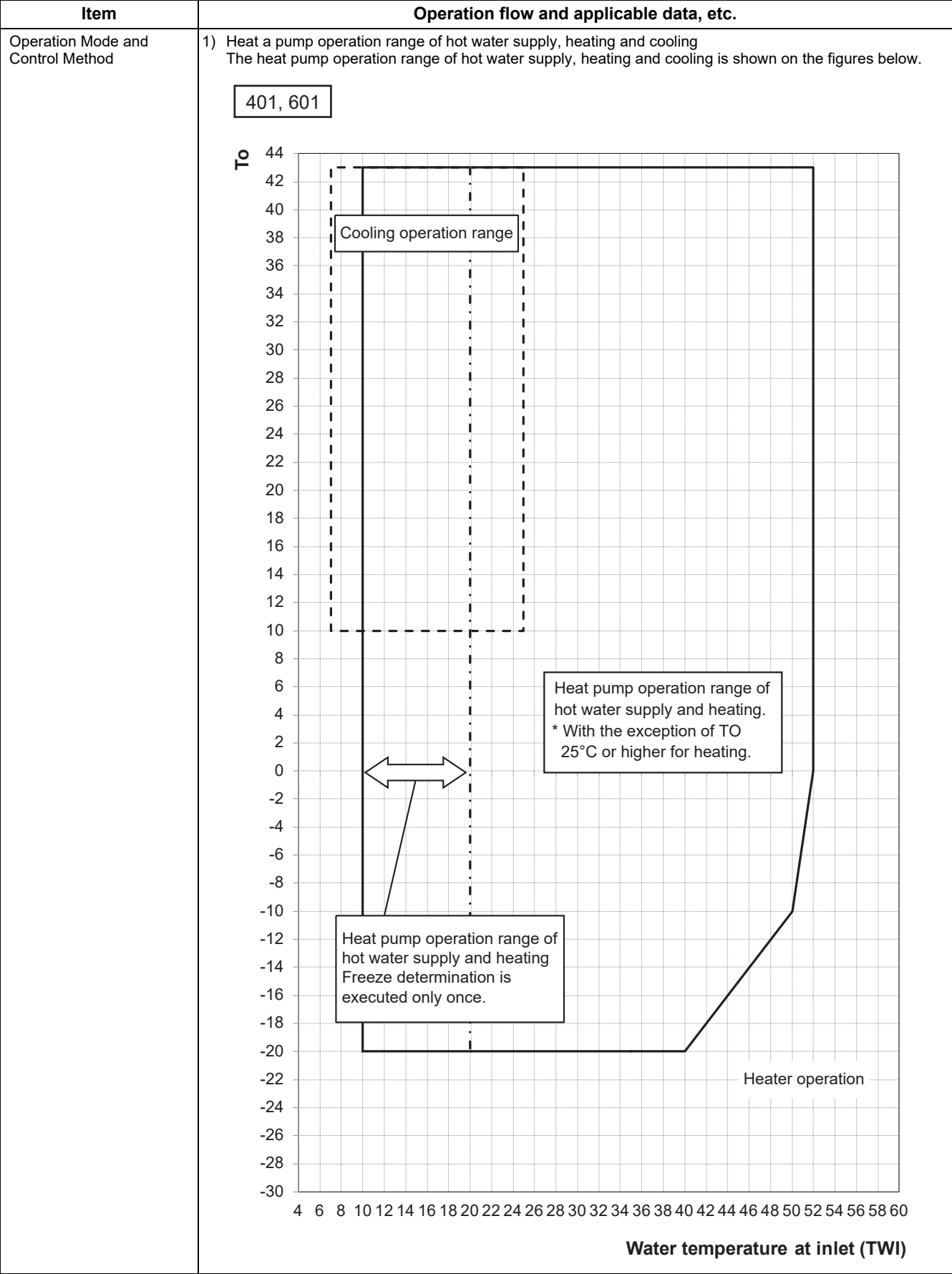


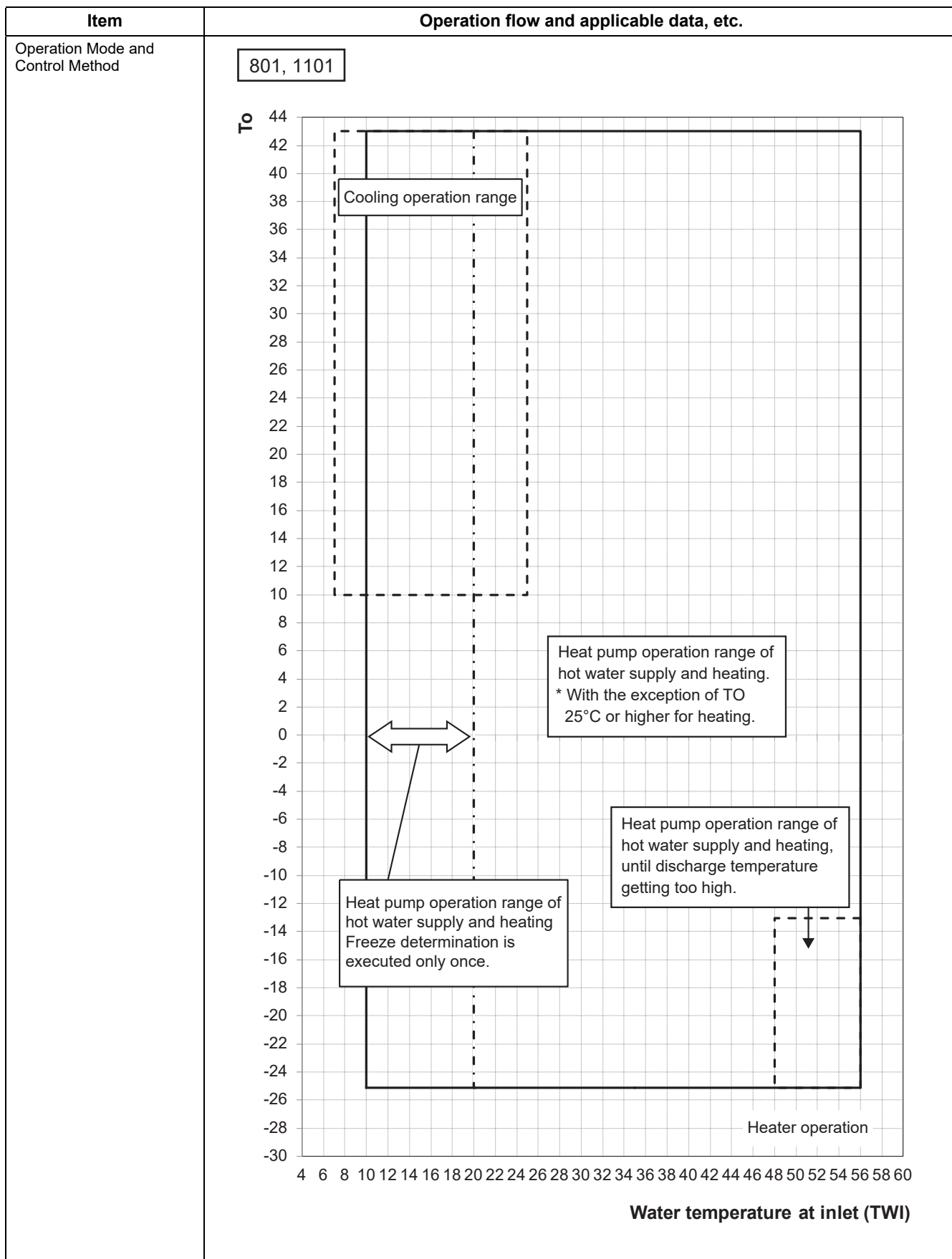
For the Air to Water Heat Pump, connect a power wire with the following specifications.

| Model                             | HWT- | 401HW-E                                                       | 601HW-E | 801H(R)W-E | 1101H(R)W-E |
|-----------------------------------|------|---------------------------------------------------------------|---------|------------|-------------|
| Power supply                      |      | 220-240 V ~<br>50 Hz                                          |         |            |             |
| Maximum running current           |      | 14.6 A                                                        |         | 20.3 A     |             |
| Recommended field fuse            |      | 16 A                                                          |         | 25 A       |             |
| Power supply wire*                |      | 2 × 2.5 mm <sup>2</sup> or more<br>(H07 RN-F or 60245 IEC 66) |         |            |             |
| Outdoor earth wire                |      | 1 × 2.5 mm <sup>2</sup> or more                               |         |            |             |
| Hydro / Outdoor connecting wires* |      | 4 × 1.5 mm <sup>2</sup> or more<br>(H07 RN-F or 60245 IEC 66) |         |            |             |

\* Number of wire × wire size

3-5. Operation Range





## 3-6. Sound Data

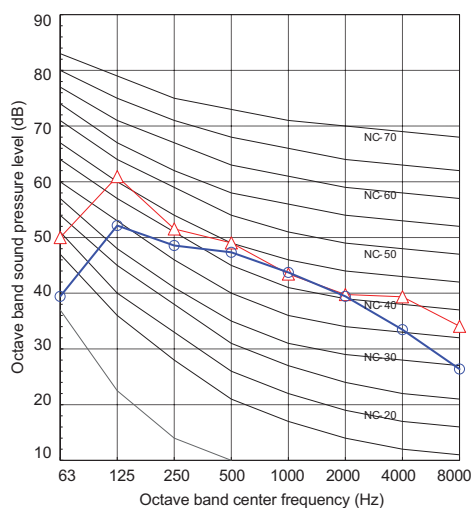
### 3-6-1. Sound Characteristics (NC Curve)

#### ▼ HWT-401HW-E

- Maximum operation

| Sound pressure level (dB(A)) | Cooling | Heating |
|------------------------------|---------|---------|
|                              | 49      | 52      |

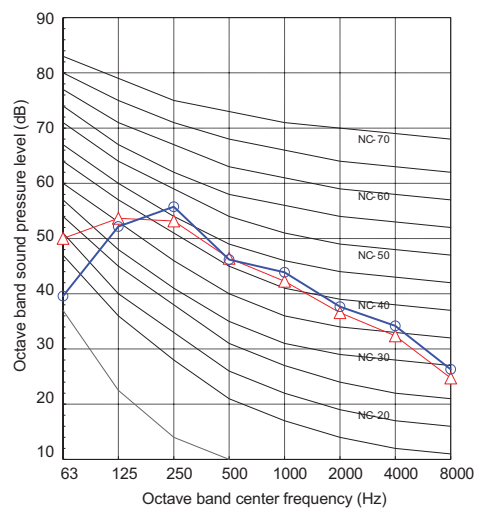
△ Heating  
○ Cooling



- Rated operation

| Sound pressure level (dB(A)) | Cooling | Heating |
|------------------------------|---------|---------|
|                              | 46      | 45      |

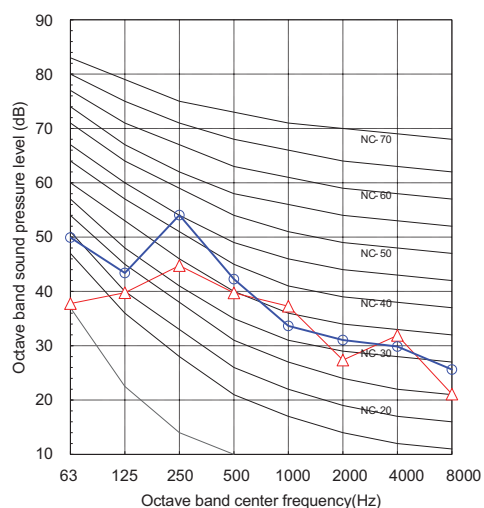
△ Heating  
○ Cooling



- Silent operation

| Sound pressure level (dB(A)) | Cooling | Heating |
|------------------------------|---------|---------|
|                              | 41      | 40      |

△ Heating  
○ Cooling

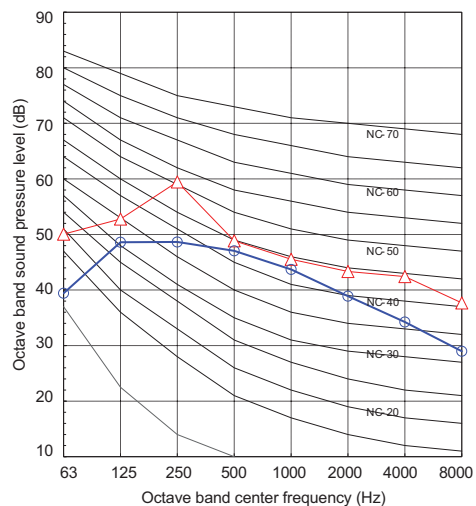


## ▼ HWT-601HW-E

- Maximum operation

| Sound pressure level (dB(A)) | Cooling | Heating |
|------------------------------|---------|---------|
|                              | 49      | 53      |

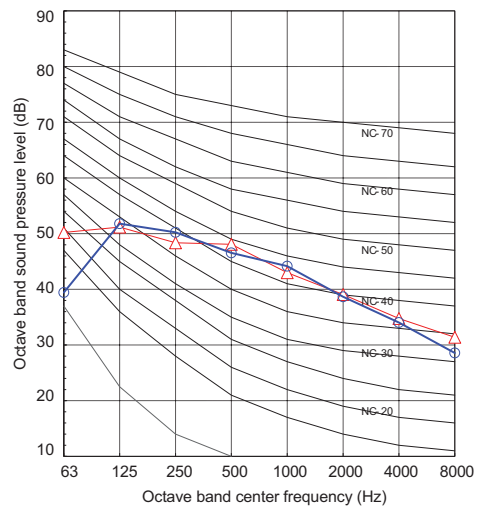
△ Heating  
○ Cooling



- Rated operation

| Sound pressure level (dB(A)) | Cooling | Heating |
|------------------------------|---------|---------|
|                              | 46      | 46      |

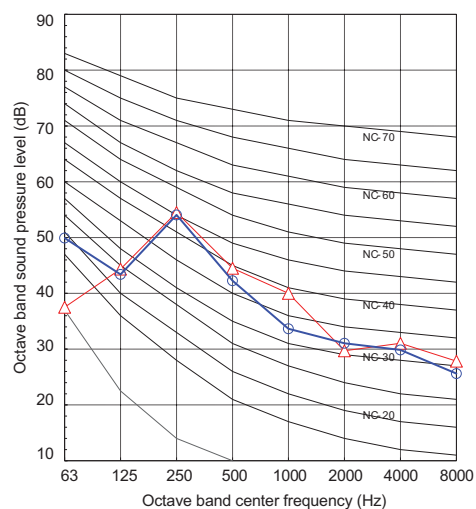
△ Heating  
○ Cooling



- Silent operation

| Sound pressure level (dB(A)) | Cooling | Heating |
|------------------------------|---------|---------|
|                              | 41      | 42      |

△ Heating  
○ Cooling

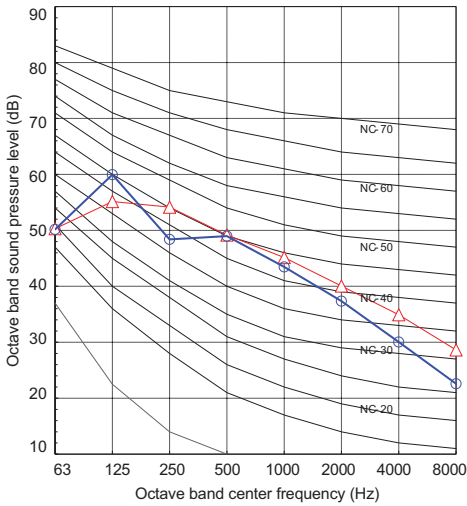


▼ HWT-801H(R)W-E

- Maximum operation

| Sound pressure level (dB(A)) | Cooling | Heating |
|------------------------------|---------|---------|
|                              | 50      | 52      |

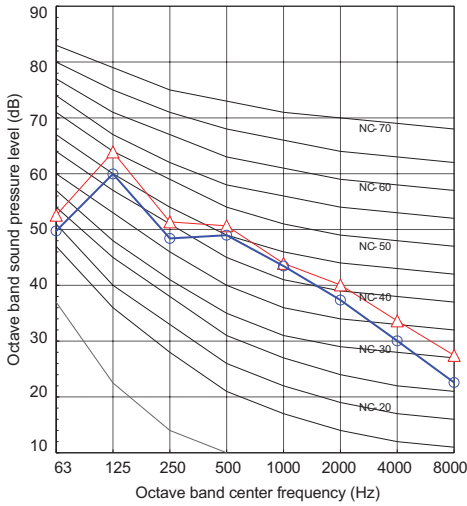
△ Heating  
○ Cooling



- Rated operation

| Sound pressure level (dB(A)) | Cooling | Heating |
|------------------------------|---------|---------|
|                              | 50      | 51      |

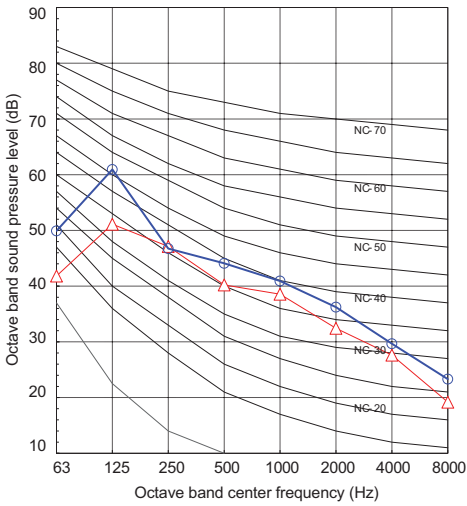
△ Heating  
○ Cooling



- Silent operation

| Sound pressure level (dB(A)) | Cooling | Heating |
|------------------------------|---------|---------|
|                              | 47      | 46      |

△ Heating  
○ Cooling

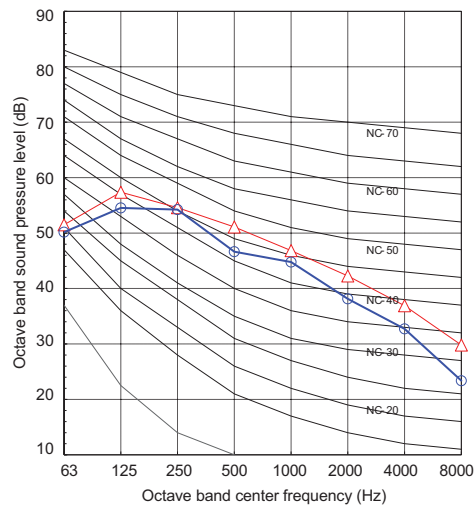


▼ HWT-1101H(R)W-E

- Maximum operation

| Sound pressure level (dB(A)) | Cooling | Heating |
|------------------------------|---------|---------|
|                              | 51      | 53      |

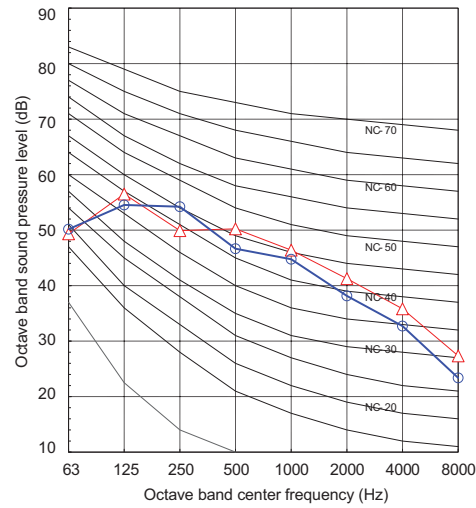
△ Heating  
○ Cooling



- Rated operation

| Sound pressure level (dB(A)) | Cooling | Heating |
|------------------------------|---------|---------|
|                              | 51      | 51      |

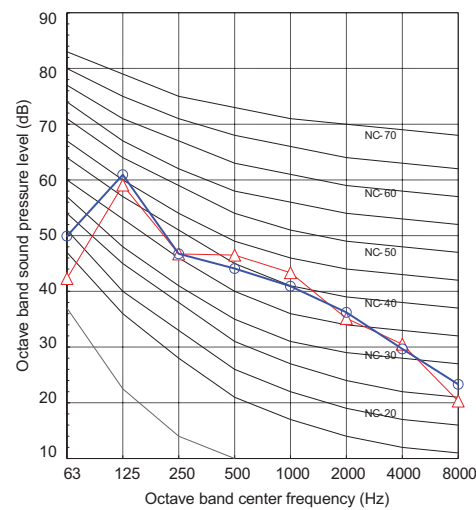
△ Heating  
○ Cooling



- Silent operation

| Sound pressure level (dB(A)) | Cooling | Heating |
|------------------------------|---------|---------|
|                              | 47      | 49      |

△ Heating  
○ Cooling



## 3-6-2. Sound Power

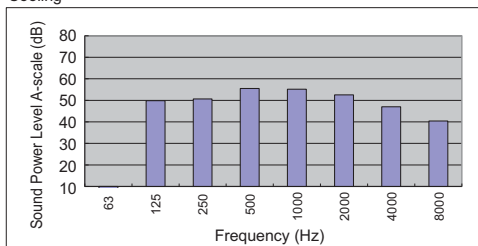
### ▼ HWT-401HW-E

- Maximum operation

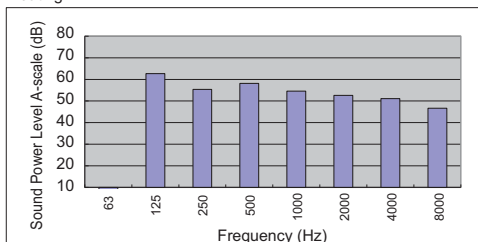
| Condition |       |        |
|-----------|-------|--------|
| Cooling   | A35/- | W12/7  |
| Heating   | A7/6  | W47/55 |

| Sound power level (dB(A)) | Condition |         |
|---------------------------|-----------|---------|
|                           | Cooling   | Heating |
|                           | 62        | 65      |

Cooling



Heating

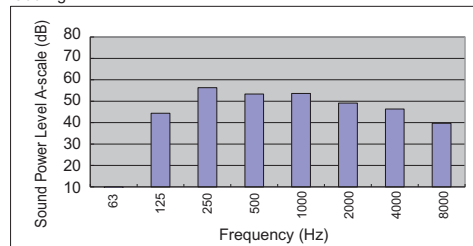


- Rated operation

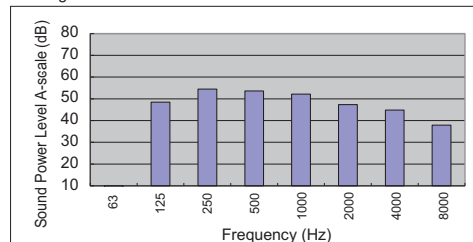
| Condition |       |        |
|-----------|-------|--------|
| Cooling   | A35/- | W12/7  |
| Heating   | A7/6  | W30/35 |

| Sound power level (dB(A)) | Condition |         |
|---------------------------|-----------|---------|
|                           | Cooling   | Heating |
|                           | 60        | 59      |

Cooling



Heating

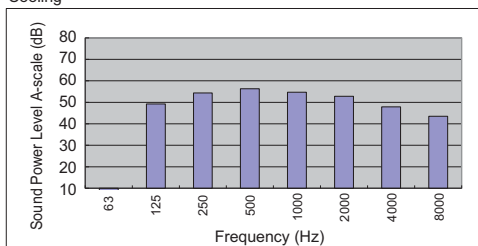


- Silent operation

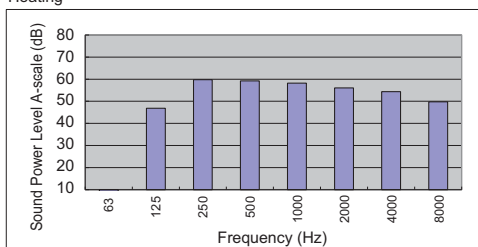
| Condition |       |        |
|-----------|-------|--------|
| Cooling   | A35/- | W12/7  |
| Heating   | A7/6  | W30/35 |

| Sound power level (dB(A)) | Condition |         |
|---------------------------|-----------|---------|
|                           | Cooling   | Heating |
|                           | 55        | 54      |

Cooling



Heating



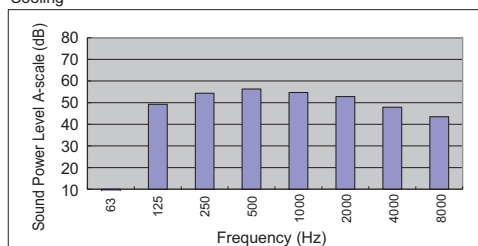
## ▼ HWT-601HW-E

- Maximum operation

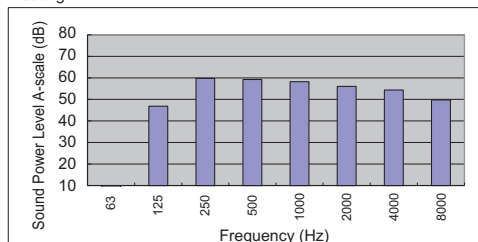
| Condition |       |        |
|-----------|-------|--------|
| Cooling   | A35/- | W12/7  |
| Heating   | A7/6  | W47/55 |

| Sound power level (dB(A)) | Cooling | Heating |
|---------------------------|---------|---------|
|                           | 62      | 65      |

Cooling



Heating

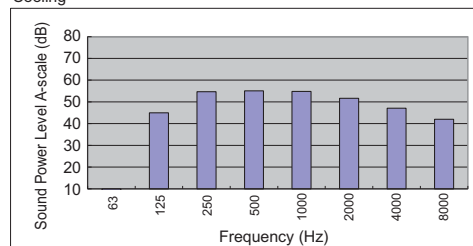


- Rated operation

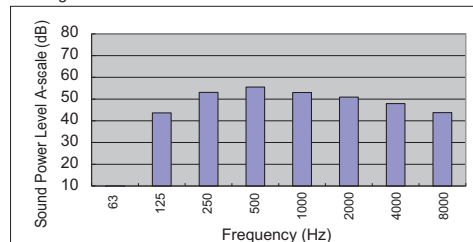
| Condition |       |        |
|-----------|-------|--------|
| Cooling   | A35/- | W12/7  |
| Heating   | A7/6  | W30/35 |

| Sound power level (dB(A)) | Cooling | Heating |
|---------------------------|---------|---------|
|                           | 61      | 62      |

Cooling



Heating

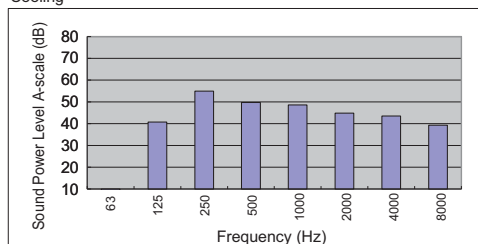


- Silent operation

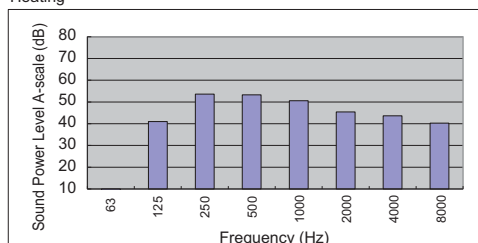
| Condition |       |        |
|-----------|-------|--------|
| Cooling   | A35/- | W12/7  |
| Heating   | A7/6  | W30/35 |

| Sound power level (dB(A)) | Cooling | Heating |
|---------------------------|---------|---------|
|                           | 57      | 58      |

Cooling



Heating



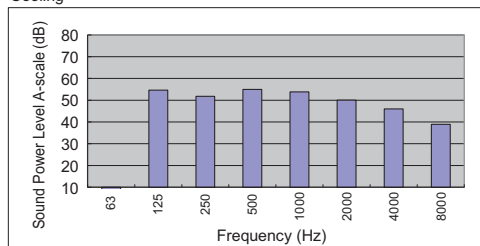
## ▼ HWT-801H(R)W-E

- Maximum operation

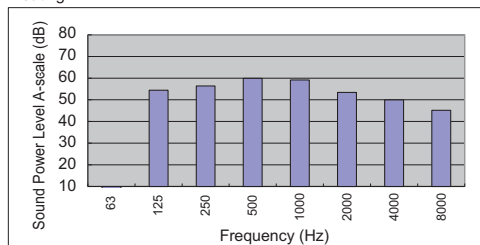
| Condition |       |        |
|-----------|-------|--------|
| Cooling   | A35/- | W12/7  |
| Heating   | A7/6  | W47/55 |

| Sound power level (dB(A)) | Cooling | Heating |
|---------------------------|---------|---------|
|                           | 63      | 65      |

Cooling



Heating

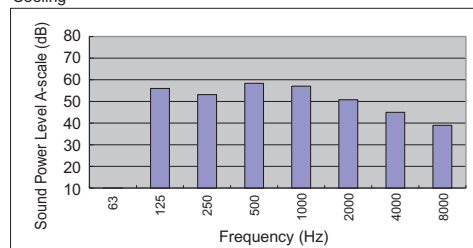


- Rated operation

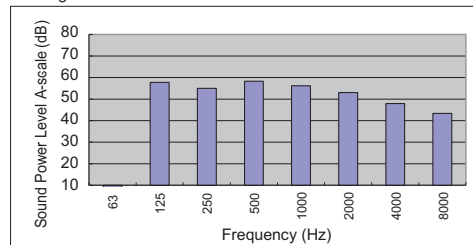
| Condition |       |        |
|-----------|-------|--------|
| Cooling   | A35/- | W12/7  |
| Heating   | A7/6  | W30/35 |

| Sound power level (dB(A)) | Cooling | Heating |
|---------------------------|---------|---------|
|                           | 62      | 63      |

Cooling



Heating

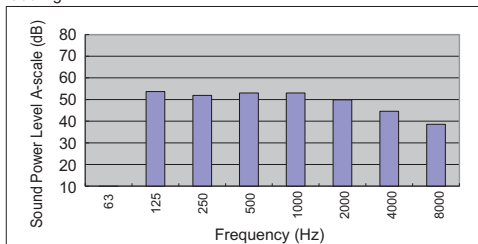


- Silent operation

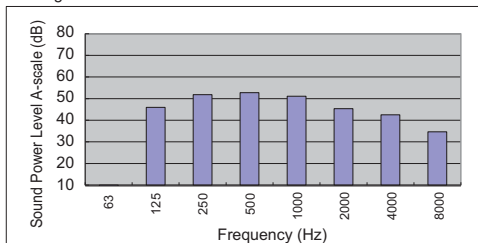
| Condition |       |        |
|-----------|-------|--------|
| Cooling   | A35/- | W12/7  |
| Heating   | A7/6  | W30/35 |

| Sound power level (dB(A)) | Cooling | Heating |
|---------------------------|---------|---------|
|                           | 59      | 58      |

Cooling



Heating



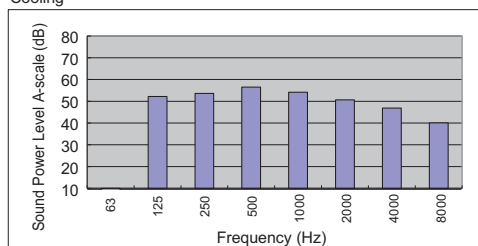
## ▼ HWT-1101H(R)W-E

- Maximum operation

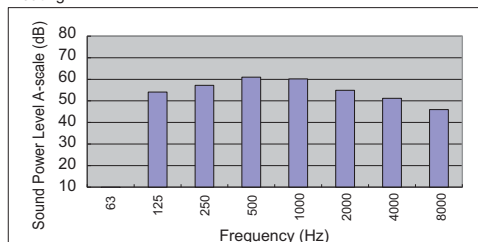
| Condition |       |        |
|-----------|-------|--------|
| Cooling   | A35/- | W12/7  |
| Heating   | A7/6  | W47/55 |

| Sound power level (dB(A)) | Cooling | Heating |
|---------------------------|---------|---------|
|                           | 64      | 65      |

Cooling



Heating

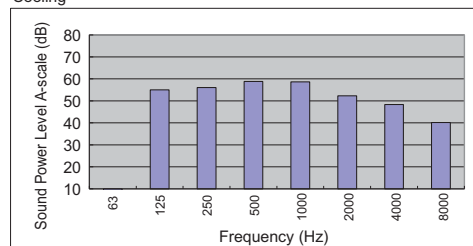


- Rated operation

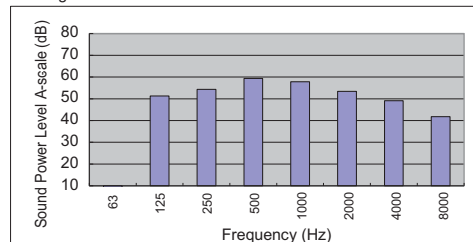
| Condition |       |        |
|-----------|-------|--------|
| Cooling   | A35/- | W12/7  |
| Heating   | A7/6  | W30/35 |

| Sound power level (dB(A)) | Cooling | Heating |
|---------------------------|---------|---------|
|                           | 62      | 64      |

Cooling



Heating

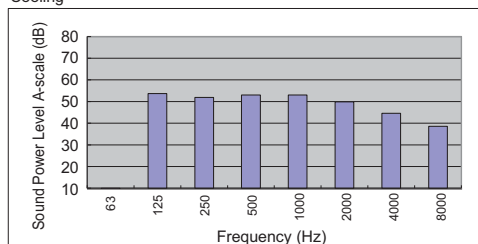


- Silent operation

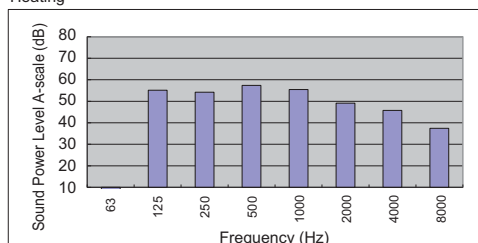
| Condition |       |        |
|-----------|-------|--------|
| Cooling   | A35/- | W12/7  |
| Heating   | A7/6  | W30/35 |

| Sound power level (dB(A)) | Cooling | Heating |
|---------------------------|---------|---------|
|                           | 60      | 62      |

Cooling



Heating



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## **4. HOT WATER CYLINDER**

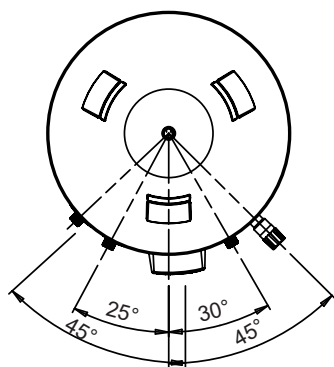
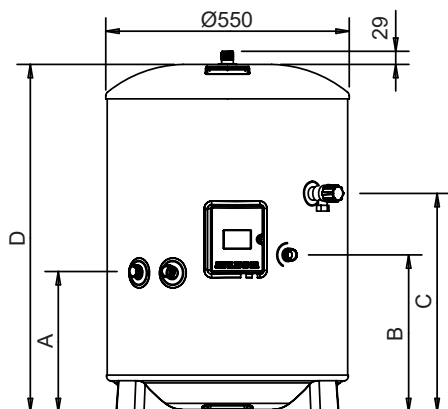
## 4-1. Specification

### Hot water cylinder specifications

| Hot water cylinder                    |                  |        | HWS-1501<br>CSHM3-E                        | HWS-2101<br>CSHM3-E | HWS-3001<br>CSHM3-E |
|---------------------------------------|------------------|--------|--------------------------------------------|---------------------|---------------------|
| Water volume                          |                  | litres | 150                                        | 210                 | 300                 |
| Appearance                            | Color            |        | White                                      |                     |                     |
|                                       | Material         |        | Plastic coated steel                       |                     |                     |
| Cylinder                              | Material         |        | Stainless steel                            |                     |                     |
| Insulation                            | Material         |        | Flame retardant expanded polyurethane foam |                     |                     |
|                                       | Thickness        | mm     | 50                                         |                     |                     |
| Heat exchanger                        | Material         |        | Stainless steel tube                       |                     |                     |
| Immersion heater                      | Type             |        | Single straight, Alloy 825 sheathed        |                     |                     |
|                                       | Capacity         | kW     | 2.75                                       |                     |                     |
| Outer dimension                       | Height           | mm     | 1,090                                      | 1,474               | 2,040               |
|                                       | Diameter         | mm     | 550                                        |                     |                     |
| Unit weight                           |                  | kg     | 31                                         | 41                  | 59                  |
| Packing dimension                     | Height           | mm     | 1,213                                      | 1,781               | 2,118               |
|                                       | Width            | mm     | 576                                        |                     |                     |
|                                       | Depth            | mm     | 640                                        |                     |                     |
| Total weight                          | unit and packing | kg     | 37                                         | 44                  | 59                  |
| Maximum water temperature             |                  | °C     | 75                                         |                     |                     |
| Maximum water pressure                |                  | bar    | 10                                         |                     |                     |
| Water pipe<br>Hydro-cylinder          | Inlet            | mm     | 22                                         |                     |                     |
|                                       | Outlet           | mm     | 22                                         |                     |                     |
| Water pipe<br>Domestic water-cylinder | Inlet            | mm     | 22                                         |                     |                     |
|                                       | Outlet           | mm     | 22                                         |                     |                     |
| Standard accessories                  | Expansion Vessel | litres | Not included                               |                     |                     |
|                                       |                  |        | Installation manual                        |                     |                     |
|                                       |                  |        | Safety group NF7bar                        |                     |                     |
|                                       |                  |        | Compression nuts and olives                |                     |                     |
|                                       |                  |        | Cylinder heater key spanner                |                     |                     |

## 4-2. Dimension

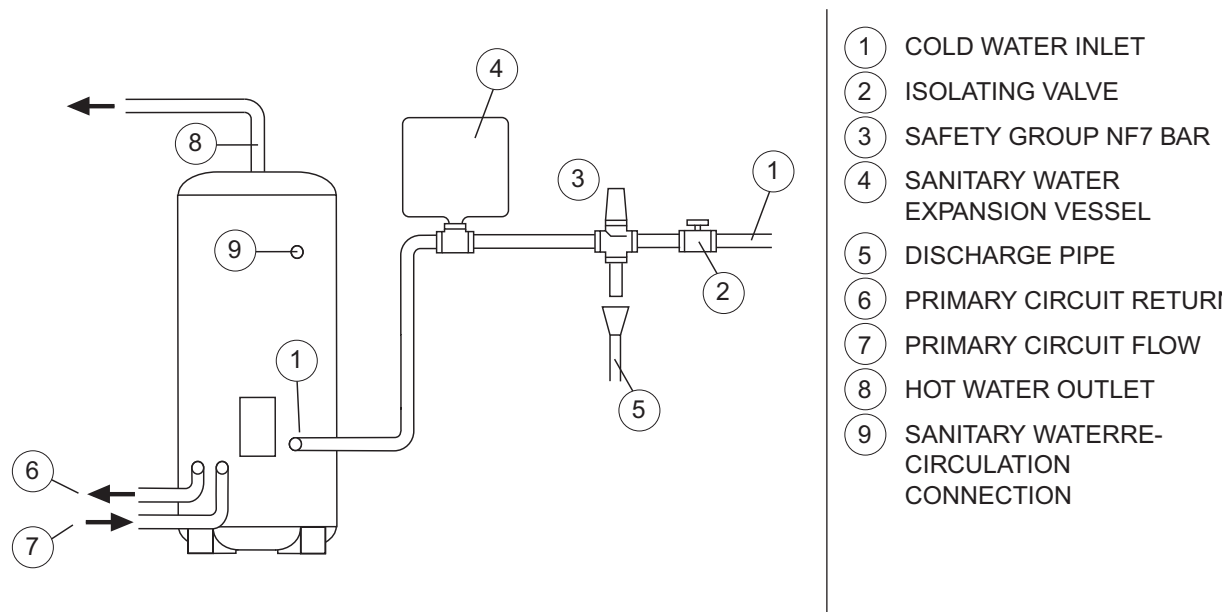
### General dimensions and performance



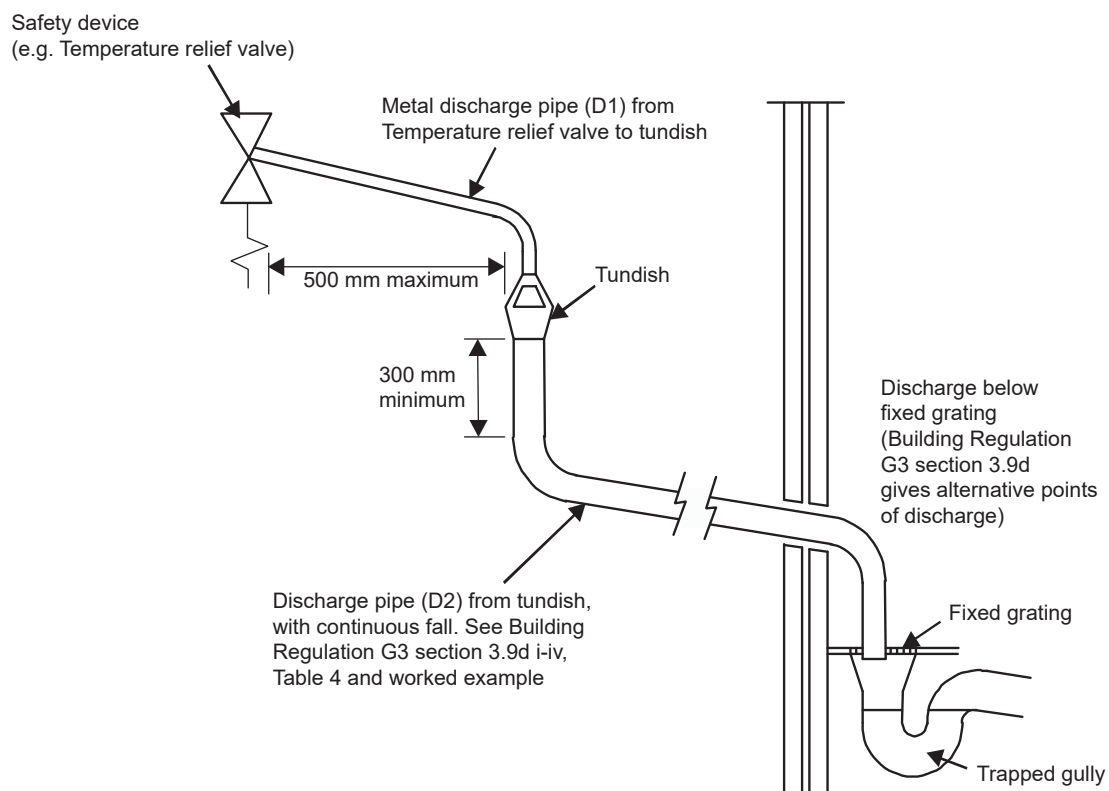
| MODEL                                                                  | HWS-1501CSHM3-E | HWS-2101CSHM3-E | HWS-3001CSHM3-E |
|------------------------------------------------------------------------|-----------------|-----------------|-----------------|
| NOMINAL CAPACITY (litres)                                              | 150             | 210             | 300             |
| A (mm)                                                                 | 315             | 315             | 315             |
| B (mm)                                                                 | 354             | 354             | 354             |
| C (mm)                                                                 | 800             | 1184            | 1474            |
| D (mm)                                                                 | 1090            | 1474            | 2040            |
| SURFACE AREA (sq.m)                                                    | 0.65            | 0.79            | 0.79            |
| HOT WATER OUTPUT AT 60°C (litres)                                      | 102             | 163             | 254             |
| MIXED HOT WATER OUTPUT AT 40°C (litres)                                | 243             | 329.5           | 476             |
| HEATLOSS (kWh/24h)                                                     | 1.45            | 1.91            | 2.52            |
| HEATING TIME 15°C TO 60°C - USING ELECTRIC CYLINDER HEATER ONLY (mins) | 123             | 188             | 262             |
| CAPACITY HEATED USING ELECTRIC CYLINDER HEATER ONLY (litres)           | 102             | 163             | 254             |

## 4-3. Piping Diagram

### ▼HWS-1501CSHM3-E, HWS-2101CSHM3-E, HWS-3001CSHM3-E

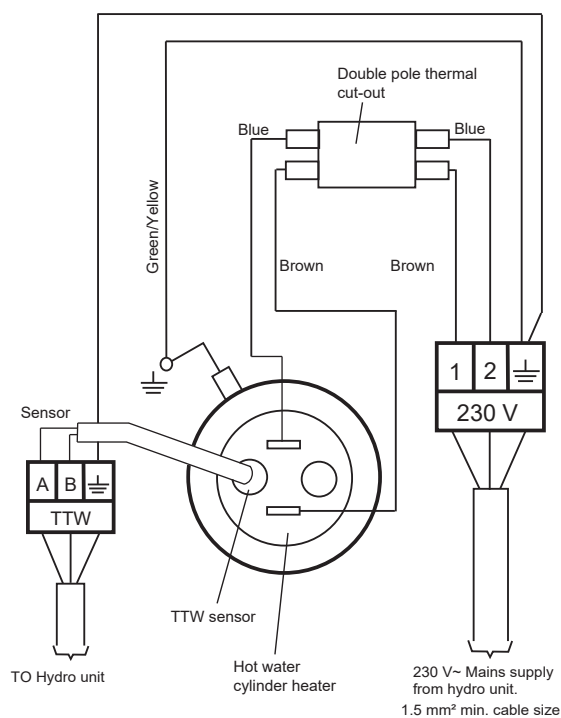


### **Typical discharge pipe arrangement** **(extract from Building Regulation G3 Guidance section 3.9)**

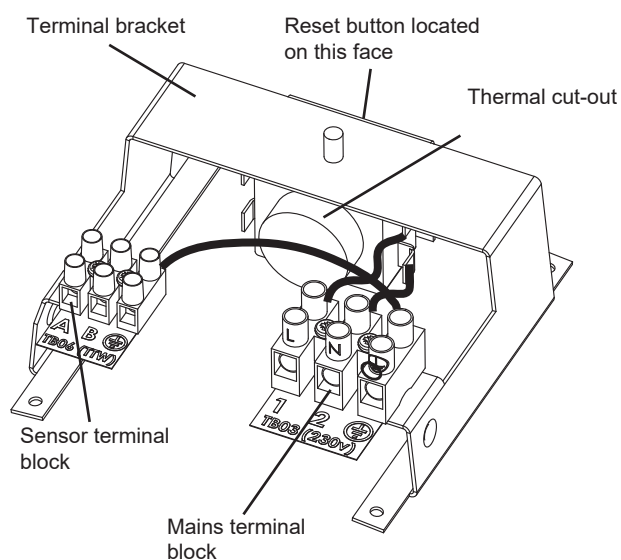


## 4-4. Wiring Diagram

### ▼HWS-1501CSHM3-E, HWS-2101CSH3-E, HWS-3001CSHM3-E Electrical Connections (Schematic)



### Thermal cut-out



**NOTE:**

The cover and element assembly have been removed from this view for clarity

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## Air to Water Heat Pump Engineering Data Book

**Feb, 2022**

Model name:

Outdoor unit

HWT-401HW-E

HWT-601HW-E

HWT-801HW-E

HWT-1101HW-E

HWT-801HRW-E

HWT-1101HRW-E

Hydro Unit

-Wall Mounted Type-

HWT-601XWHM3W-E

HWT-601XWHT6W-E

HWT-1101XWHM3W-E

HWT-1101XWHT6W-E

HWT-1101XWHT9W-E

Hydro Unit

-All In One Type-

HWT-601F21SM3W-E

HWT-601F21ST6W-E

HWT-1101F21SM3W-E

HWT-1101F21MM3W-E

HWT-1101F21ST6W-E

HWT-1101F21MT6W-E

HWT-1101F21ST9W-E

HWT-1101F21MT9W-E

Hot Water Cylinder

HWS-1501CSHM3-E

HWS-2101CSHM3-E

HWS-3001CSHM3-E

**Toshiba Carrier Corporation**