



EEDEN07-432

# technical data



Fan Coil Units

FWT - wall mounted unit

# FWT - wall mounted unit



Daikin's unique position as a manufacturer of air conditioning equipment, compressors and refrigerants has led to its close involvement in environmental issues. For several years Daikin has had the intention to become a leader in the provision of products that have limited impact on the environment. This challenge demands the eco design and development of a wide range of products and an energy management system, resulting in energy conservation and a reduction of waste.



Daikin Europe N.V. is approved by LRQA for its Quality Management System in accordance with the ISO9001 standard. ISO9001 pertains to quality assurance regarding design, development, manufacturing as well as to services related to the product.



ISO14001 assures an effective environmental management system in order to help protect human health and the environment from the potential impact of our activities, products and services and to assist in maintaining and improving the quality of the environment.



Daikin units comply with the European regulations that guarantee the safety of the product.



Daikin Europe N.V. participates in the Eurovent Certification Programme for Air Conditioners (AC), Liquid Chilling Packages (LCP) and Fan Coil Units (FC); the certified data of certified models are listed in the Eurovent Directory.

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# technical data



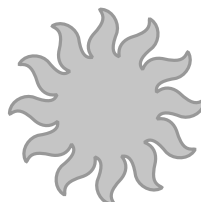
Fan coil units

## FWT - wall mounted unit

Cooling only



Heating only



Heat pump



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## FWT

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# 1 Features

- Wide operating range
- Quiet operation with auto-swing comfort
- Easy to install and maintain
- 3 speed fan motor
- Double-intake centrifugal fans
- Excellent air flow and air distribution
- Flexibility via interchangeable water connection side
- High power air flow
- Insulated with self-extinguishing class 1 heat insulation
- Removable washable air filter (self-extinguishing class 1)
- Slim and compact aesthetic design
- Wireless remote control up to 9m distance, availability of a wired or simplified controller
- LED indicator gives an indication on the (normal or wrong) operation of the unit



## 2 Specifications

| 2-1 NOMINAL CAPACITY AND NOMINAL INPUT |                   |        |    | FWT02AT | FWT03AT | FWT04AT | FWT05AT | FWT06AT |
|----------------------------------------|-------------------|--------|----|---------|---------|---------|---------|---------|
| Power Input                            | High              |        | W  | 24      | 25      | 29      | 66      | 69      |
|                                        | Medium            |        | W  | 22      | 22      | 23      | 46      | 47      |
|                                        | Low               |        | W  | 20      | 20      | 21      | 39      | 39      |
| Cooling capacity                       | Total capacity    | High   | kW | 2.34    | 2.78    | 3.22    | 4.54    | 5.28    |
|                                        |                   | Medium | kW | 2.23    | 2.68    | 2.74    | 4.10    | 4.95    |
|                                        |                   | Low    | kW | 2.10    | 2.20    | 2.20    | 3.95    | 4.25    |
|                                        | Sensible capacity | High   | kW | 1.74    | 2.03    | 2.35    | 3.65    | 4.33    |
|                                        |                   | Medium | kW | 1.51    | 1.82    | 2.00    | 3.21    | 3.95    |
|                                        |                   | Low    | kW | 1.29    | 1.61    | 1.70    | 3.04    | 3.44    |
| Heating capacity (2-pipe)              | High              |        | kW | 3.02    | 3.75    | 4.10    | 6.01    | 6.74    |
|                                        | Medium            |        | kW | 2.71    | 3.31    | 3.40    | 5.01    | 6.18    |
|                                        | Low               |        | kW | 2.38    | 2.64    | 2.78    | 4.63    | 5.33    |

| 2-2 TECHNICAL SPECIFICATIONS |                     |        |      | FWT02AT                         | FWT03AT | FWT04AT | FWT05AT      | FWT06AT      |
|------------------------------|---------------------|--------|------|---------------------------------|---------|---------|--------------|--------------|
| Dimensions                   | Unit                | Height | mm   | 260                             | 260     | 260     | 304          | 304          |
|                              |                     | Width  | mm   | 799                             | 899     | 899     | 1,062        | 1,062        |
|                              |                     | Depth  | mm   | 198                             | 198     | 198     | 222          | 222          |
|                              | Unit with packing   | Height | mm   | 337                             | 337     | 337     | 378          | 378          |
|                              |                     | Width  | mm   | 857                             | 957     | 957     | 1,130        | 1,130        |
|                              |                     | Depth  | mm   | 270                             | 270     | 270     | 292          | 292          |
| Weight                       | Machine weight      |        | kg   | 10.0                            | 12.0    | 12.0    | 16.0         | 16.0         |
|                              | Operation weight    |        | kg   | 10.0                            | 13.0    | 13.0    | 17.0         | 17.0         |
|                              | Gross weight        |        | kg   | 11.0                            | 13.0    | 13.0    | 17.0         | 17.0         |
| Material                     |                     |        |      | High impact polysterene         |         |         |              |              |
| Sound level                  | Sound pressure      | High   | dBA  | 40                              | 39      | 42      | 49           | 50           |
|                              |                     | Medium | dBA  | 35                              | 34      | 36      | 44           | 48           |
|                              |                     | Low    | dBA  | 29                              | 28      | 29      | 42           | 45           |
|                              | Sound power         | High   | dBA  | 53                              | 53      | 55      | 61           | 64           |
|                              |                     | Medium | dBA  | 48                              | 47      | 49      | 57           | 61           |
|                              |                     | Low    | dBA  | 44                              | 43      | 44      | 55           | 59           |
| Water flow                   | Cooling             |        | l/h  | 402                             | 478     | 554     | 781          | 908          |
|                              | Heating             |        | l/h  | 402                             | 478     | 554     | 781          | 908          |
| Water pressure drop          | Cooling             |        | kPa  | 48.3                            | 64.7    | 69.3    | 50.3         | 69.3         |
|                              | Heating             |        | kPa  | 42                              | 58.6    | 60.6    | 50.6         | 70.6         |
| Fan                          | Type                |        |      | Direct drive cross flow fan     |         |         |              |              |
|                              | Air flow rate       | High   | m³/h | 467                             | 510     | 586     | 1,070        | 1,121        |
|                              |                     | Medium | m³/h | 382                             | 425     | 484     | 833          | 985          |
|                              |                     | Low    | m³/h | 297                             | 340     | 374     | 748          | 799          |
|                              | Speed               |        |      | 3 steps : high, medium, low     |         |         |              |              |
|                              | Quantity            |        |      | 1                               | 1       | 1       | 1            | 1            |
| Motor                        | Type                |        |      | Induction                       |         |         |              |              |
| Standard heat exchanger      | Rows                |        | mm   | 2                               | 2       | 2       | 2            | 2            |
|                              | Stages              |        | mm   | 8                               | 8       | 8       | 8*(2)+ 4*(4) | 8*(2)+ 4*(4) |
|                              | Fin pitch           |        | mm   | 1.41                            | 1.41    | 1.41    | 1.41         | 1.41         |
|                              | Face area           |        | m²   | 0.20                            | 0.23    | 0.23    | 0.33         | 0.33         |
|                              | Water volume        |        | l    | 0.49                            | 0.57    | 0.57    | 0.85         | 0.85         |
| Air filter                   |                     |        |      | Washable Sarannet (nano filter) |         |         |              |              |
| Insulation material          |                     |        |      | PE                              |         |         |              |              |
| Vibration insulation         |                     |        |      | CR Rubber (Fan Motor)           |         |         |              |              |
| Water connections            | Std. heat exchanger |        | inch | 1/2"                            |         |         |              |              |
| Drain                        |                     |        | mm   | 16                              | 16      | 16      | 20           | 20           |

## 2 Specifications

| 2-2 TECHNICAL SPECIFICATIONS |  |  |  | FWT02AT                                                                                                                | FWT03AT | FWT04AT | FWT05AT | FWT06AT |
|------------------------------|--|--|--|------------------------------------------------------------------------------------------------------------------------|---------|---------|---------|---------|
| Notes                        |  |  |  | Rating conditions cooling 2 pipe: air 27                                                                               |         |         |         |         |
|                              |  |  |  | Rating conditions heating 2 pipe : air 20                                                                              |         |         |         |         |
|                              |  |  |  | Sound power level according to ISO3741                                                                                 |         |         |         |         |
|                              |  |  |  | Sound pressure measured at 1 m in front of the unit and 0.8 m below the vertical centre line of the unit. (JIS C 9612) |         |         |         |         |
|                              |  |  |  | Sound pressure measured at 1,4m below the facia (JIS C 9612)                                                           |         |         |         |         |
|                              |  |  |  | Sound pressure measured at 1,5m below the facia (JIS B 8615)                                                           |         |         |         |         |
|                              |  |  |  | Rating conditions heating 4 pipe : air 20                                                                              |         |         |         |         |

| 2-3 ELECTRICAL SPECIFICATIONS |        |  |                 | FWT02AT          | FWT03AT | FWT04AT | FWT05AT | FWT06AT |
|-------------------------------|--------|--|-----------------|------------------|---------|---------|---------|---------|
| Current input                 | High   |  | A               | 0.11             | 0.11    | 0.13    | 0.29    | 0.30    |
|                               | Medium |  | A               | 0.08             | 0.09    | 0.10    | 0.19    | 0.25    |
|                               | Low    |  | A               | 0.07             | 0.08    | 0.09    | 0.17    | 0.24    |
| Required power supply         |        |  | V / f / Hz      | 220-240 / 1 / 50 |         |         |         |         |
| Required fuses                |        |  | A               | 2                | 2       | 2       | 2       | 2       |
| Required wire section         |        |  | mm <sup>2</sup> | 1.5              | 1.5     | 1.5     | 1.5     | 1.5     |

### 3 Control systems

#### Control systems for FWC-FWF-FWT

| Controller | Application | Operation mode |           | Basic Controls      |                     |                            | Energy saving mode | Timer setting | Air distribution    | Faster cooling/heating |
|------------|-------------|----------------|-----------|---------------------|---------------------|----------------------------|--------------------|---------------|---------------------|------------------------|
|            |             | Manual         | Automatic | Temperature setting | Automatic Fan Speed | Fan speed: high/medium/low | Sleep mode         | ON/OFF        | Automatic air swing | Turbo                  |
| WRC        | 2-pipe      | x              |           | x                   | x                   | x                          | x                  | x             | option              | x                      |
|            | 4-pipe      | x              | x         | x                   | x                   | x                          | x                  | x             | option              | x                      |
| SRC        | 2-pipe      | x              |           | x                   | x                   | x                          | x                  | x             | option              |                        |
|            | 4-pipe      | x              | x         | x                   | x                   | x                          | x                  | x             | x                   |                        |
| MERCA      | 2-pipe      | x              |           | x                   | x                   | x                          | x                  | x             | x                   |                        |
|            | 4-pipe      | x              | x         | x                   | x                   | x                          | x                  | x             | x                   |                        |

#### Operation mode:

- Cooling only: Cool, Dry and Fan
- Heating mode: Auto, Cool, Dry, Fan and Heat
- Automode is only available for 4-pipe applications

**Temperature Setting:** To set the desired room temperature

**Fan speed:** high, medium, low or automatic

**Sleep Mode:** energy saving option while optimising comfort conditions by temperature adjustment

**Timer setting:** to turn ON/OFF the air conditioner at the desired time

**Automatic air swing:** air distribution according to a specific direction

# Capacity tables

## 4 - 1 Cooling capacity tables

### Cooling capacities FWT (2 pipe)

1

4

| Air temperature (°C DB - °C WB)<br>Water temperature (Entering °C - Leaving °C) |                   | 22-16                              |                                       |                        |                                  |                                    |                                       |                        |                                  |                                    |                                       |                        |                                  |                                    |                                       |                        |                                  |
|---------------------------------------------------------------------------------|-------------------|------------------------------------|---------------------------------------|------------------------|----------------------------------|------------------------------------|---------------------------------------|------------------------|----------------------------------|------------------------------------|---------------------------------------|------------------------|----------------------------------|------------------------------------|---------------------------------------|------------------------|----------------------------------|
| Model                                                                           | Air Flow<br>m³/hr | 6-11                               |                                       |                        |                                  | 7-12                               |                                       |                        |                                  | 8-13                               |                                       |                        |                                  | 9-14                               |                                       |                        |                                  |
|                                                                                 |                   | Total<br>cooling<br>capacity<br>kW | Sensible<br>cooling<br>capacity<br>kW | Water<br>flow<br>m³/hr | Water<br>pressure<br>drop<br>kPa | Total<br>cooling<br>capacity<br>kW | Sensible<br>cooling<br>capacity<br>kW | Water<br>flow<br>m³/hr | Water<br>pressure<br>drop<br>kPa | Total<br>cooling<br>capacity<br>kW | Sensible<br>cooling<br>capacity<br>kW | Water<br>flow<br>m³/hr | Water<br>pressure<br>drop<br>kPa | Total<br>cooling<br>capacity<br>kW | Sensible<br>cooling<br>capacity<br>kW | Water<br>flow<br>m³/hr | Water<br>pressure<br>drop<br>kPa |
| FWT02AT                                                                         | 467               | 1.77                               | 1.65                                  | 0.31                   | 29.86                            | 1.59                               | 1.55                                  | 0.27                   | 24.74                            | 1.45                               | 1.45                                  | 0.25                   | 21.22                            | 1.35                               | 1.35                                  | 0.23                   | 18.83                            |
|                                                                                 | 382               | 1.69                               | 1.43                                  | 0.29                   | 27.37                            | 1.51                               | 1.35                                  | 0.26                   | 22.72                            | 1.31                               | 1.26                                  | 0.22                   | 17.84                            | 1.17                               | 1.17                                  | 0.20                   | 15.05                            |
|                                                                                 | 297               | 1.59                               | 1.23                                  | 0.27                   | 24.92                            | 1.43                               | 1.15                                  | 0.25                   | 20.73                            | 1.24                               | 1.08                                  | 0.21                   | 16.34                            | 1.04                               | 1.00                                  | 0.18                   | 12.52                            |
| FWT03AT                                                                         | 510               | 1.94                               | 1.94                                  | 0.33                   | 39.75                            | 1.88                               | 1.77                                  | 0.32                   | 38.01                            | 1.60                               | 1.60                                  | 0.28                   | 30.46                            | 1.43                               | 1.43                                  | 0.25                   | 26.15                            |
|                                                                                 | 425               | 1.81                               | 1.74                                  | 0.31                   | 36.28                            | 1.81                               | 1.59                                  | 0.31                   | 36.16                            | 1.44                               | 1.44                                  | 0.25                   | 26.26                            | 1.29                               | 1.29                                  | 0.22                   | 22.53                            |
|                                                                                 | 340               | 1.54                               | 1.54                                  | 0.26                   | 29.01                            | 1.49                               | 1.40                                  | 0.26                   | 27.66                            | 1.27                               | 1.27                                  | 0.22                   | 22.21                            | 1.14                               | 1.14                                  | 0.20                   | 19.04                            |
| FWT04AT                                                                         | 586               | 2.44                               | 2.23                                  | 0.42                   | 46.36                            | 2.07                               | 2.05                                  | 0.36                   | 36.60                            | 1.85                               | 1.85                                  | 0.32                   | 31.10                            | 1.65                               | 1.65                                  | 0.28                   | 26.35                            |
|                                                                                 | 484               | 2.07                               | 1.92                                  | 0.36                   | 36.82                            | 1.77                               | 1.77                                  | 0.30                   | 29.22                            | 1.59                               | 1.59                                  | 0.27                   | 25.18                            | 1.42                               | 1.42                                  | 0.24                   | 21.34                            |
|                                                                                 | 374               | 1.66                               | 1.60                                  | 0.29                   | 26.92                            | 1.47                               | 1.47                                  | 0.25                   | 22.55                            | 1.33                               | 1.33                                  | 0.23                   | 19.42                            | 1.19                               | 1.19                                  | 0.20                   | 16.44                            |
| FWT05AT                                                                         | 1070              | 3.51                               | 3.51                                  | 0.60                   | 31.50                            | 3.28                               | 3.28                                  | 0.56                   | 27.72                            | 3.01                               | 3.01                                  | 0.52                   | 23.70                            | 2.74                               | 2.74                                  | 0.47                   | 19.99                            |
|                                                                                 | 833               | 3.12                               | 3.12                                  | 0.54                   | 25.44                            | 2.91                               | 2.91                                  | 0.50                   | 22.40                            | 2.67                               | 2.67                                  | 0.46                   | 19.16                            | 2.44                               | 2.44                                  | 0.42                   | 16.17                            |
|                                                                                 | 748               | 2.93                               | 2.91                                  | 0.50                   | 22.79                            | 2.71                               | 2.71                                  | 0.47                   | 19.73                            | 2.49                               | 2.49                                  | 0.43                   | 16.88                            | 2.27                               | 2.27                                  | 0.39                   | 14.25                            |
| FWT06AT                                                                         | 1121              | 4.20                               | 4.20                                  | 0.72                   | 45.62                            | 3.96                               | 3.96                                  | 0.68                   | 40.82                            | 3.70                               | 3.70                                  | 0.64                   | 35.99                            | 3.44                               | 3.44                                  | 0.59                   | 31.46                            |
|                                                                                 | 985               | 3.89                               | 3.83                                  | 0.67                   | 39.69                            | 3.61                               | 3.61                                  | 0.62                   | 34.55                            | 3.37                               | 3.37                                  | 0.58                   | 30.47                            | 3.14                               | 3.14                                  | 0.54                   | 26.64                            |
|                                                                                 | 799               | 3.34                               | 3.33                                  | 0.57                   | 30.05                            | 3.14                               | 3.14                                  | 0.54                   | 26.87                            | 2.94                               | 2.94                                  | 0.51                   | 23.71                            | 2.73                               | 2.73                                  | 0.47                   | 20.74                            |

| Air temperature (°C DB - °C WB)<br>Water temperature (Entering °C - Leaving °C) |                   | 25-18                              |                                       |                        |                                  |                                    |                                       |                        |                                  |                                    |                                       |                        |                                  |                                    |                                       |                        |                                  |
|---------------------------------------------------------------------------------|-------------------|------------------------------------|---------------------------------------|------------------------|----------------------------------|------------------------------------|---------------------------------------|------------------------|----------------------------------|------------------------------------|---------------------------------------|------------------------|----------------------------------|------------------------------------|---------------------------------------|------------------------|----------------------------------|
| Model                                                                           | Air Flow<br>m³/hr | 6-11                               |                                       |                        |                                  | 7-12                               |                                       |                        |                                  | 8-13                               |                                       |                        |                                  | 9-14                               |                                       |                        |                                  |
|                                                                                 |                   | Total<br>cooling<br>capacity<br>kW | Sensible<br>cooling<br>capacity<br>kW | Water<br>flow<br>m³/hr | Water<br>pressure<br>drop<br>kPa | Total<br>cooling<br>capacity<br>kW | Sensible<br>cooling<br>capacity<br>kW | Water<br>flow<br>m³/hr | Water<br>pressure<br>drop<br>kPa | Total<br>cooling<br>capacity<br>kW | Sensible<br>cooling<br>capacity<br>kW | Water<br>flow<br>m³/hr | Water<br>pressure<br>drop<br>kPa | Total<br>cooling<br>capacity<br>kW | Sensible<br>cooling<br>capacity<br>kW | Water<br>flow<br>m³/hr | Water<br>pressure<br>drop<br>kPa |
| FWT02AT                                                                         | 467               | 2.27                               | 1.72                                  | 0.39                   | 46.09                            | 2.09                               | 1.62                                  | 0.36                   | 39.60                            | 1.87                               | 1.52                                  | 0.32                   | 32.61                            | 1.66                               | 1.42                                  | 0.29                   | 26.34                            |
|                                                                                 | 382               | 2.16                               | 1.49                                  | 0.37                   | 42.10                            | 1.99                               | 1.40                                  | 0.34                   | 36.20                            | 1.78                               | 1.32                                  | 0.31                   | 29.86                            | 1.57                               | 1.23                                  | 0.27                   | 24.17                            |
|                                                                                 | 297               | 2.04                               | 1.27                                  | 0.35                   | 38.19                            | 1.88                               | 1.20                                  | 0.32                   | 32.88                            | 1.68                               | 1.12                                  | 0.29                   | 27.17                            | 1.49                               | 1.05                                  | 0.26                   | 22.04                            |
| FWT03AT                                                                         | 510               | 2.70                               | 2.03                                  | 0.47                   | 62.62                            | 2.48                               | 1.86                                  | 0.43                   | 55.47                            | 2.07                               | 1.69                                  | 0.36                   | 43.32                            | 1.67                               | 1.52                                  | 0.29                   | 32.13                            |
|                                                                                 | 425               | 2.61                               | 1.82                                  | 0.45                   | 59.54                            | 2.39                               | 1.66                                  | 0.41                   | 52.75                            | 2.00                               | 1.51                                  | 0.34                   | 41.21                            | 1.61                               | 1.36                                  | 0.28                   | 30.57                            |
|                                                                                 | 340               | 2.14                               | 1.61                                  | 0.37                   | 45.43                            | 1.96                               | 1.47                                  | 0.34                   | 40.30                            | 1.64                               | 1.34                                  | 0.28                   | 31.52                            | 1.32                               | 1.21                                  | 0.23                   | 23.37                            |
| FWT04AT                                                                         | 586               | 3.19                               | 2.33                                  | 0.55                   | 68.53                            | 2.84                               | 2.15                                  | 0.49                   | 57.54                            | 2.36                               | 1.95                                  | 0.41                   | 43.98                            | 1.88                               | 1.75                                  | 0.32                   | 31.74                            |
|                                                                                 | 484               | 2.72                               | 2.00                                  | 0.47                   | 54.23                            | 2.41                               | 1.85                                  | 0.42                   | 45.61                            | 2.01                               | 1.68                                  | 0.35                   | 34.94                            | 1.60                               | 1.51                                  | 0.28                   | 25.25                            |
|                                                                                 | 374               | 2.18                               | 1.67                                  | 0.38                   | 39.53                            | 1.94                               | 1.54                                  | 0.33                   | 33.30                            | 1.61                               | 1.40                                  | 0.28                   | 25.55                            | 1.28                               | 1.26                                  | 0.22                   | 18.46                            |
| FWT05AT                                                                         | 1070              | 4.47                               | 3.63                                  | 0.77                   | 48.91                            | 4.01                               | 3.40                                  | 0.69                   | 40.03                            | 3.69                               | 3.13                                  | 0.64                   | 34.36                            | 3.38                               | 2.87                                  | 0.58                   | 29.11                            |
|                                                                                 | 833               | 4.06                               | 3.23                                  | 0.70                   | 41.09                            | 3.65                               | 3.02                                  | 0.63                   | 33.65                            | 3.36                               | 2.78                                  | 0.58                   | 28.90                            | 3.07                               | 2.55                                  | 0.53                   | 24.50                            |
|                                                                                 | 748               | 3.87                               | 3.01                                  | 0.67                   | 37.70                            | 3.48                               | 2.82                                  | 0.60                   | 30.88                            | 3.20                               | 2.60                                  | 0.55                   | 26.53                            | 2.93                               | 2.37                                  | 0.50                   | 22.49                            |
| FWT06AT                                                                         | 1121              | 5.26                               | 4.33                                  | 0.90                   | 68.89                            | 4.71                               | 4.08                                  | 0.81                   | 56.22                            | 4.07                               | 3.83                                  | 0.70                   | 42.85                            | 3.58                               | 3.58                                  | 0.62                   | 33.85                            |
|                                                                                 | 985               | 4.93                               | 3.95                                  | 0.85                   | 61.22                            | 4.42                               | 3.72                                  | 0.76                   | 49.97                            | 3.82                               | 3.49                                  | 0.66                   | 38.11                            | 3.27                               | 3.27                                  | 0.56                   | 28.66                            |
|                                                                                 | 799               | 4.23                               | 3.44                                  | 0.73                   | 46.26                            | 3.79                               | 3.24                                  | 0.65                   | 37.79                            | 3.27                               | 3.04                                  | 0.56                   | 28.86                            | 2.84                               | 2.84                                  | 0.49                   | 22.31                            |

| Air temperature (°C DB - °C WB)<br>Water temperature (Entering °C - Leaving °C) |                   | 27-19                              |                                       |                        |                                  |                                    |                                       |                        |                                  |                                    |                                       |                        |                                  |                                    |                                       |                        |                                  |
|---------------------------------------------------------------------------------|-------------------|------------------------------------|---------------------------------------|------------------------|----------------------------------|------------------------------------|---------------------------------------|------------------------|----------------------------------|------------------------------------|---------------------------------------|------------------------|----------------------------------|------------------------------------|---------------------------------------|------------------------|----------------------------------|
| Model                                                                           | Air Flow<br>m³/hr | 6-11                               |                                       |                        |                                  | 7-12                               |                                       |                        |                                  | 8-13                               |                                       |                        |                                  | 9-14                               |                                       |                        |                                  |
|                                                                                 |                   | Total<br>cooling<br>capacity<br>kW | Sensible<br>cooling<br>capacity<br>kW | Water<br>flow<br>m³/hr | Water<br>pressure<br>drop<br>kPa | Total<br>cooling<br>capacity<br>kW | Sensible<br>cooling<br>capacity<br>kW | Water<br>flow<br>m³/hr | Water<br>pressure<br>drop<br>kPa | Total<br>cooling<br>capacity<br>kW | Sensible<br>cooling<br>capacity<br>kW | Water<br>flow<br>m³/hr | Water<br>pressure<br>drop<br>kPa | Total<br>cooling<br>capacity<br>kW | Sensible<br>cooling<br>capacity<br>kW | Water<br>flow<br>m³/hr | Water<br>pressure<br>drop<br>kPa |
| FWT02AT                                                                         | 467               | 2.52                               | 1.84                                  | 0.43                   | 55.56                            | 2.34                               | 1.74                                  | 0.40                   | 48.38                            | 2.12                               | 1.64                                  | 0.37                   | 40.59                            | 1.91                               | 1.54                                  | 0.33                   | 33.52                            |
|                                                                                 | 382               | 2.40                               | 1.60                                  | 0.41                   | 50.69                            | 2.22                               | 1.51                                  | 0.38                   | 44.17                            | 2.02                               | 1.42                                  | 0.35                   | 37.10                            | 1.81                               | 1.34                                  | 0.31                   | 30.68                            |
|                                                                                 | 297               | 2.27                               | 1.37                                  | 0.39                   | 45.92                            | 2.10                               | 1.29                                  | 0.36                   | 40.05                            | 1.91                               | 1.22                                  | 0.33                   | 33.69                            | 1.71                               | 1.14                                  | 0.30                   | 27.91                            |
| FWT03AT                                                                         | 510               | 3.11                               | 2.21                                  | 0.54                   | 76.19                            | 2.78                               | 2.03                                  | 0.48                   | 64.92                            | 2.38                               | 1.86                                  | 0.41                   | 52.26                            | 1.98                               | 1.70                                  | 0.34                   | 40.53                            |
|                                                                                 | 425               | 3.00                               | 1.98                                  | 0.52                   | 72.41                            | 2.68                               | 1.82                                  | 0.46                   | 61.72                            | 2.29                               | 1.67                                  | 0.39                   | 49.71                            | 1.91                               | 1.52                                  | 0.33                   | 38.56                            |
|                                                                                 | 340               | 2.46                               | 1.76                                  | 0.42                   | 55.15                            | 2.20                               | 1.61                                  | 0.38                   | 47.08                            | 1.88                               | 1.48                                  | 0.32                   | 37.98                            | 1.57                               | 1.35                                  | 0.27                   | 29.49                            |
| FWT04AT                                                                         | 586               | 3.57                               | 2.52                                  | 0.61                   | 80.72                            | 3.22                               | 2.35                                  | 0.55                   | 69.18                            | 2.74                               | 2.15                                  | 0.47                   | 54.46                            | 2.25                               | 1.95                                  | 0.39                   | 41.06                            |
|                                                                                 | 484               | 3.04                               | 2.17                                  | 0.52                   | 63.78                            | 2.74                               | 2.03                                  | 0.47                   | 54.74                            | 2.33                               | 1.85                                  | 0.40                   | 43.19                            | 1.92                               | 1.68                                  | 0.33                   | 32.63                            |
|                                                                                 | 374               | 2.44                               | 1.81                                  | 0.42                   | 46.39                            | 2.20                               | 1.69                                  | 0.38                   | 39.89                            | 1.87                               | 1.54                                  | 0.32                   | 31.54                            | 1.54                               | 1.40                                  | 0.26                   | 23.86                            |
| FWT05AT                                                                         | 1070              | 5.01                               | 3.88                                  | 0.86                   | 60.31                            | 4.54                               | 3.65                                  | 0.78                   | 50.21                            | 4.35                               | 3.38                                  | 0.75                   | 46.26                            | 4.16                               | 3.12                                  | 0.72                   | 42.47                            |
|                                                                                 | 833               | 4.55                               | 3.45                                  | 0.78                   | 50.64                            | 4.13                               | 3.24                                  | 0.71                   | 42.18                            | 3.95                               | 3.01                                  | 0.68                   | 38.87                            | 3.78                               | 2.77                                  | 0.65                   | 35.70                            |
|                                                                                 | 748               | 4.34                               | 3.22                                  | 0.75                   | 46.45                            | 3.94                               | 3.02                                  | 0.68                   | 38.70                            | 3.77                               | 2.80                                  | 0.65                   | 35.66                            | 3.60                               | 2.58                                  | 0.62                   | 32.76                            |
| FWT06AT                                                                         | 1121              | 5.81                               | 4.60                                  | 1.00                   | 82.83                            | 5.28                               | 4.33                                  | 0.91                   | 69.21                            | 4.65                               | 4.10                                  | 0.80                   | 54.60                            | 4.01                               | 3.86                                  | 0.69                   | 41.66                            |
|                                                                                 | 985               | 5.45                               | 4.19                                  | 0.94                   | 73.59                            | 4.95                               | 3.95                                  | 0.85                   | 61.50                            | 4.36                               | 3.74                                  | 0.74                   | 48.54                            | 3.76                               | 3.53                                  | 0.65                   | 37.05                            |
|                                                                                 | 799               | 4.68                               | 3.65                                  | 0.80                   | 55.58                            | 4.25                               | 3.44                                  | 0.73                   | 46.47                            | 3.74                               | 3.25                                  | 0.64                   | 36.71                            | 3.23                               | 3.07                                  | 0.56                   | 28.06                            |

| Air temperature (°C DB - °C WB)              |                   | 30-22                              |                                       |                        |                                  |                                    |                                       |                        |                                  |                                    |                                       |                        |                                  |                                    |                                       |                        |                                  |
|----------------------------------------------|-------------------|------------------------------------|---------------------------------------|------------------------|----------------------------------|------------------------------------|---------------------------------------|------------------------|----------------------------------|------------------------------------|---------------------------------------|------------------------|----------------------------------|------------------------------------|---------------------------------------|------------------------|----------------------------------|
| Water temperature (Entering °C - Leaving °C) |                   | 6-11                               |                                       |                        |                                  | 7-12                               |                                       |                        |                                  | 8-13                               |                                       |                        |                                  | 9-14                               |                                       |                        |                                  |
| Model                                        | Air Flow<br>m³/hr | Total<br>cooling<br>capacity<br>kW | Sensible<br>cooling<br>capacity<br>kW | Water<br>flow<br>m³/hr | Water<br>pressure<br>drop<br>kPa | Total<br>cooling<br>capacity<br>kW | Sensible<br>cooling<br>capacity<br>kW | Water<br>flow<br>m³/hr | Water<br>pressure<br>drop<br>kPa | Total<br>cooling<br>capacity<br>kW | Sensible<br>cooling<br>capacity<br>kW | Water<br>flow<br>m³/hr | Water<br>pressure<br>drop<br>kPa | Total<br>cooling<br>capacity<br>kW | Sensible<br>cooling<br>capacity<br>kW | Water<br>flow<br>m³/hr | Water<br>pressure<br>drop<br>kPa |
| FWT02AT                                      | 467               | 3.32                               | 2.02                                  | 0.57                   | 91.81                            | 3.14                               | 1.94                                  | 0.54                   | 82.45                            | 2.92                               | 1.84                                  | 0.50                   | 72.10                            | 2.71                               | 1.74                                  | 0.47                   | 62.48                            |
|                                              | 382               | 3.16                               | 1.76                                  | 0.54                   | 83.57                            | 2.98                               | 1.68                                  | 0.51                   | 75.08                            | 2.78                               | 1.60                                  | 0.48                   | 65.69                            | 2.57                               | 1.51                                  | 0.44                   | 56.96                            |
|                                              | 297               | 2.99                               | 1.50                                  | 0.51                   | 75.50                            | 2.82                               | 1.44                                  | 0.49                   | 67.86                            | 2.63                               | 1.37                                  | 0.45                   | 59.41                            | 2.43                               | 1.29                                  | 0.42                   | 51.55                            |
| FWT03AT                                      | 510               | 4.11                               | 2.45                                  | 0.71                   | 112.66                           | 3.78                               | 2.28                                  | 0.65                   | 99.66                            | 3.38                               | 2.11                                  | 0.58                   | 84.91                            | 2.98                               | 1.95                                  | 0.51                   | 71.02                            |
|                                              | 425               | 3.97                               | 2.19                                  | 0.68                   | 106.96                           | 3.64                               | 2.04                                  | 0.63                   | 94.65                            | 3.26                               | 1.90                                  | 0.56                   | 80.68                            | 2.87                               | 1.75                                  | 0.49                   | 67.51                            |
|                                              | 340               | 3.26                               | 1.94                                  | 0.56                   | 81.07                            | 2.99                               | 1.81                                  | 0.51                   | 71.85                            | 2.68                               | 1.68                                  | 0.46                   | 61.36                            | 2.36                               | 1.54                                  | 0.41                   | 51.45                            |
| FWT04AT                                      | 586               | 4.54                               | 2.75                                  | 0.78                   | 115.11                           | 4.17                               | 2.55                                  | 0.72                   | 101.22                           | 3.74                               | 2.38                                  | 0.64                   | 85.79                            | 3.30                               | 2.22                                  | 0.57                   | 71.36                            |
|                                              | 484               | 3.86                               | 2.37                                  | 0.66                   | 90.62                            | 3.55                               | 2.20                                  | 0.61                   | 79.78                            | 3.18                               | 2.05                                  | 0.55                   | 67.73                            | 2.81                               | 1.91                                  | 0.48                   | 56.45                            |
|                                              | 374               | 3.10                               | 1.97                                  | 0.53                   | 65.59                            | 2.85                               | 1.83                                  | 0.49                   | 57.85                            | 2.55                               | 1.71                                  | 0.44                   | 49.22                            | 2.26                               | 1.59                                  | 0.39                   | 41.11                            |
| FWT05AT                                      | 1070              | 6.55                               | 4.30                                  | 1.13                   | 98.61                            | 6.05                               | 4.05                                  | 1.04                   | 84.97                            | 5.48                               | 3.78                                  | 0.94                   | 70.21                            | 4.92                               | 3.52                                  | 0.85                   | 57.72                            |
|                                              | 833               | 5.95                               | 3.82                                  | 1.02                   | 82.75                            | 5.50                               | 3.60                                  | 0.95                   | 71.31                            | 4.98                               | 3.36                                  | 0.86                   | 59.36                            | 4.47                               | 3.13                                  | 0.77                   | 48.47                            |
|                                              | 748               | 5.68                               | 3.56                                  | 0.98                   | 75.87                            | 5.25                               | 3.35                                  | 0.90                   | 65.39                            | 4.75                               | 3.13                                  | 0.82                   | 54.44                            | 4.26                               | 2.91                                  | 0.73                   | 44.46                            |
| FWT06AT                                      | 1121              | 7.58                               | 5.10                                  | 1.30                   | 134.83                           | 7.08                               | 4.83                                  | 1.22                   | 118.58                           | 6.41                               | 4.56                                  | 1.10                   | 98.57                            | 5.75                               | 4.30                                  | 0.99                   | 80.33                            |
|                                              | 985               | 7.11                               | 4.65                                  | 1.22                   | 119.78                           | 6.64                               | 4.41                                  | 1.14                   | 105.34                           | 6.01                               | 4.16                                  | 1.03                   | 87.57                            | 5.39                               | 3.92                                  | 0.93                   | 71.37                            |
|                                              | 799               | 6.10                               | 4.05                                  | 1.05                   | 90.39                            | 5.70                               | 3.84                                  | 0.98                   | 79.50                            | 5.16                               | 3.62                                  | 0.89                   | 66.10                            | 4.62                               | 3.41                                  | 0.80                   | 53.90                            |

## 4 Capacity tables

### 4 - 2 Capacity tables with glycol for process cooling applications

#### Glycol correction factor

| FWT                           | Cooling capacity |       |       |       | Pressure Drop |
|-------------------------------|------------------|-------|-------|-------|---------------|
|                               | 0                | 20    | 40    | 60    |               |
| Entering water temperature °C | 1                | 1     | 1     | 1     | 1             |
| 0%                            | 0.955            | 0.969 | 0.973 | 0.980 | 1.060         |
| 10%                           | 0.929            | 0.941 | 0.955 | 0.964 | 1.120         |
| 20%                           | 0.898            | 0.913 | 0.929 | 0.939 | 1.180         |
| 30%                           | 0.863            | 0.882 | 0.899 | 0.911 | 1.240         |

## 4 Capacity tables

### 4 - 3 Heating capacity tables

#### Heating capacities FWT (2 pipe)

| Air temperature (°C DB - °C WB)              |                                | 20                        |                                     |                                  |                           |                                     |                                  |                           |                                     |                                  |
|----------------------------------------------|--------------------------------|---------------------------|-------------------------------------|----------------------------------|---------------------------|-------------------------------------|----------------------------------|---------------------------|-------------------------------------|----------------------------------|
| Water temperature (Entering °C - Leaving °C) |                                | 50 - 45                   |                                     |                                  | 60 - 50                   |                                     |                                  | 70 - 60                   |                                     |                                  |
| Model                                        | Air Flow<br>m <sup>3</sup> /HR | Heating<br>capacity<br>kW | Water<br>flow<br>m <sup>3</sup> /hr | Water<br>pressure<br>drop<br>kPa | Heating<br>capacity<br>kW | Water<br>flow<br>m <sup>3</sup> /hr | Water<br>pressure<br>drop<br>kPa | Heating<br>capacity<br>kW | Water<br>flow<br>m <sup>3</sup> /hr | Water<br>pressure<br>drop<br>kPa |
| FWT02AT                                      | 467                            | 3.20                      | 0.55                                | 74.08                            | 2.90                      | 0.25                                | 18.37                            | 3.31                      | 0.28                                | 21.97                            |
|                                              | 382                            | 2.85                      | 0.49                                | 60.34                            | 2.49                      | 0.21                                | 14.45                            | 2.86                      | 0.25                                | 17.34                            |
|                                              | 297                            | 2.48                      | 0.42                                | 46.88                            | 2.05                      | 0.18                                | 10.78                            | 2.38                      | 0.20                                | 12.92                            |
| FWT03AT                                      | 510                            | 3.98                      | 0.68                                | 96.36                            | 3.77                      | 0.32                                | 33.23                            | 4.25                      | 0.37                                | 37.69                            |
|                                              | 425                            | 3.46                      | 0.59                                | 79.28                            | 3.18                      | 0.27                                | 26.41                            | 3.61                      | 0.31                                | 30.21                            |
|                                              | 340                            | 2.78                      | 0.48                                | 58.51                            | 2.41                      | 0.21                                | 18.11                            | 2.76                      | 0.24                                | 20.93                            |
| FWT04AT                                      | 586                            | 4.31                      | 0.74                                | 92.26                            | 3.99                      | 0.34                                | 29.29                            | 4.53                      | 0.39                                | 33.76                            |
|                                              | 484                            | 3.59                      | 0.62                                | 70.51                            | 3.16                      | 0.27                                | 21.01                            | 3.62                      | 0.31                                | 24.51                            |
|                                              | 374                            | 3.00                      | 0.51                                | 54.35                            | 2.50                      | 0.22                                | 15.08                            | 2.88                      | 0.25                                | 17.75                            |
| FWT05AT                                      | 1070                           | 6.50                      | 1.11                                | 96.71                            | 5.58                      | 0.48                                | 20.07                            | 6.47                      | 0.56                                | 25.28                            |
|                                              | 833                            | 5.40                      | 0.92                                | 68.73                            | 4.21                      | 0.36                                | 12.14                            | 4.98                      | 0.43                                | 15.77                            |
|                                              | 748                            | 4.90                      | 0.84                                | 57.56                            | 3.62                      | 0.31                                | 9.27                             | 4.31                      | 0.37                                | 12.19                            |
| FWT06AT                                      | 1121                           | 7.21                      | 1.24                                | 124.02                           | 6.19                      | 0.53                                | 25.64                            | 7.20                      | 0.62                                | 32.48                            |
|                                              | 985                            | 6.57                      | 1.13                                | 104.58                           | 5.39                      | 0.46                                | 20.02                            | 6.36                      | 0.55                                | 25.95                            |
|                                              | 799                            | 5.71                      | 0.98                                | 80.76                            | 4.25                      | 0.37                                | 13.08                            | 5.13                      | 0.44                                | 17.62                            |

| Air temperature (°C DB - °C WB)              |                                | 22                        |                                     |                                  |                           |                                     |                                  |                           |                                     |                                  |
|----------------------------------------------|--------------------------------|---------------------------|-------------------------------------|----------------------------------|---------------------------|-------------------------------------|----------------------------------|---------------------------|-------------------------------------|----------------------------------|
| Water temperature (Entering °C - Leaving °C) |                                | 50 - 45                   |                                     |                                  | 60 - 50                   |                                     |                                  | 70 - 60                   |                                     |                                  |
| Model                                        | Air Flow<br>m <sup>3</sup> /HR | Heating<br>capacity<br>kW | Water<br>flow<br>m <sup>3</sup> /hr | Water<br>pressure<br>drop<br>kPa | Heating<br>capacity<br>kW | Water<br>flow<br>m <sup>3</sup> /hr | Water<br>pressure<br>drop<br>kPa | Heating<br>capacity<br>kW | Water<br>flow<br>m <sup>3</sup> /hr | Water<br>pressure<br>drop<br>kPa |
| FWT02AT                                      | 467                            | 2.98                      | 0.51                                | 65.12                            | 2.69                      | 0.23                                | 16.30                            | 3.13                      | 0.27                                | 19.99                            |
|                                              | 382                            | 2.66                      | 0.46                                | 53.06                            | 2.30                      | 0.20                                | 12.81                            | 2.70                      | 0.23                                | 15.75                            |
|                                              | 297                            | 2.29                      | 0.39                                | 41.06                            | 1.89                      | 0.16                                | 9.59                             | 2.23                      | 0.19                                | 11.73                            |
| FWT03AT                                      | 510                            | 3.70                      | 0.63                                | 87.15                            | 3.52                      | 0.30                                | 30.30                            | 4.03                      | 0.35                                | 35.10                            |
|                                              | 425                            | 3.23                      | 0.55                                | 71.85                            | 2.96                      | 0.25                                | 23.98                            | 3.42                      | 0.29                                | 28.03                            |
|                                              | 340                            | 2.58                      | 0.44                                | 52.81                            | 2.24                      | 0.19                                | 16.37                            | 2.60                      | 0.22                                | 19.33                            |
| FWT04AT                                      | 586                            | 4.01                      | 0.69                                | 83.01                            | 3.72                      | 0.32                                | 26.47                            | 4.29                      | 0.37                                | 31.23                            |
|                                              | 484                            | 3.34                      | 0.57                                | 63.43                            | 2.93                      | 0.25                                | 18.87                            | 3.41                      | 0.29                                | 22.54                            |
|                                              | 374                            | 2.78                      | 0.48                                | 48.63                            | 2.32                      | 0.20                                | 13.49                            | 2.71                      | 0.23                                | 16.26                            |
| FWT05AT                                      | 1070                           | 6.04                      | 1.03                                | 84.40                            | 5.12                      | 0.44                                | 17.19                            | 6.07                      | 0.52                                | 22.52                            |
|                                              | 833                            | 5.00                      | 0.86                                | 59.74                            | 3.83                      | 0.33                                | 10.24                            | 4.63                      | 0.40                                | 13.86                            |
|                                              | 748                            | 4.52                      | 0.77                                | 49.74                            | 3.28                      | 0.28                                | 7.78                             | 4.00                      | 0.34                                | 10.65                            |
| FWT06AT                                      | 1121                           | 6.68                      | 1.14                                | 107.61                           | 5.66                      | 0.49                                | 21.82                            | 6.75                      | 0.58                                | 28.89                            |
|                                              | 985                            | 6.10                      | 1.05                                | 91.14                            | 4.89                      | 0.42                                | 16.80                            | 5.93                      | 0.51                                | 22.86                            |
|                                              | 799                            | 5.29                      | 0.91                                | 70.16                            | 3.81                      | 0.33                                | 10.75                            | 4.74                      | 0.41                                | 15.26                            |

## 4 Capacity tables

### 4 - 4 Capacity correction factor

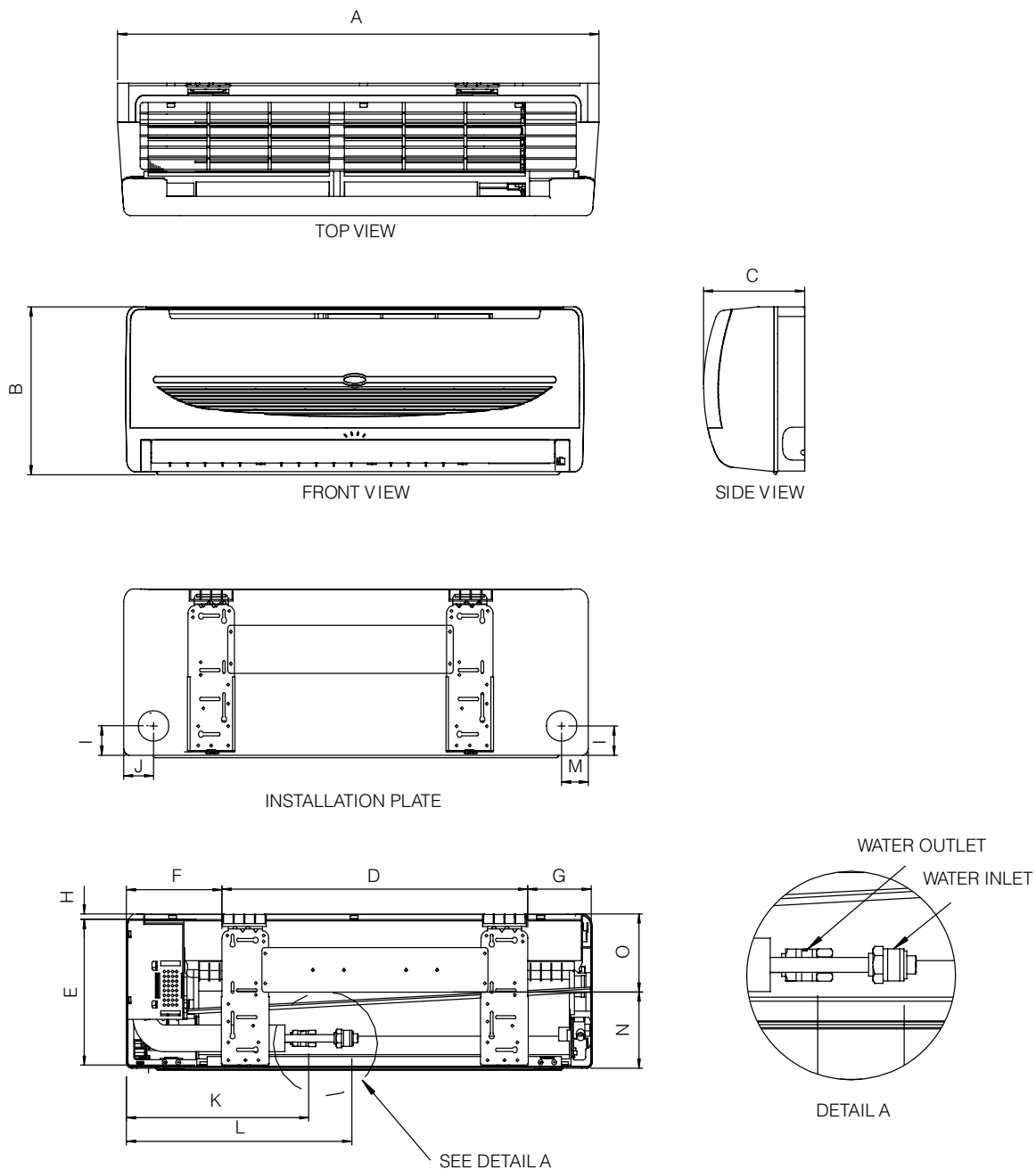
#### Heating correction factor

| FWT                            |                               |       |       |       |       |       |       |       |       |       |       |       |       |
|--------------------------------|-------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Entering Air temperature<br>°C | Entering Water temperature °C |       |       |       |       |       |       |       |       |       |       |       |       |
|                                | 37.8                          | 43.3  | 45.0  | 48.8  | 50.0  | 54.4  | 60.0  | 65.5  | 70.0  | 71.1  | 76.7  | 82.2  | 87.7  |
| 4.4                            | 1.338                         | 1.376 | 1.388 | 1.414 | 1.422 | 1.452 | 1.491 | 1.529 | 1.559 | 1.569 | 1.605 | 1.643 | 1.683 |
| 7.2                            | 1.257                         | 1.297 | 1.310 | 1.338 | 1.347 | 1.379 | 1.421 | 1.462 | 1.497 | 1.507 | 1.547 | 1.586 | 1.630 |
| 10.0                           | 1.176                         | 1.221 | 1.235 | 1.265 | 1.275 | 1.311 | 1.356 | 1.401 | 1.433 | 1.444 | 1.488 | 1.531 | 1.577 |
| 12.7                           | 1.093                         | 1.140 | 1.155 | 1.187 | 1.198 | 1.235 | 1.284 | 1.331 | 1.370 | 1.381 | 1.426 | 1.476 | 1.523 |
| 15.5                           | 1.010                         | 1.061 | 1.077 | 1.113 | 1.124 | 1.165 | 1.217 | 1.268 | 1.306 | 1.318 | 1.368 | 1.420 | 1.471 |
| 18.3                           | 0.958                         | 0.999 | 1.013 | 1.044 | 1.054 | 1.095 | 1.149 | 1.199 | 1.242 | 1.255 | 1.308 | 1.363 | 1.419 |
| 20.0                           | 0.877                         | 0.933 | 0.950 | 0.989 | 1.000 | 1.046 | 1.103 | 1.159 | 1.204 | 1.216 | 1.274 | 1.330 | 1.386 |
| 21.1                           | 0.824                         | 0.890 | 0.910 | 0.953 | 0.965 | 1.014 | 1.074 | 1.134 | 1.179 | 1.192 | 1.251 | 1.308 | 1.364 |
| 23.9                           | 0.758                         | 0.819 | 0.838 | 0.880 | 0.894 | 0.943 | 1.005 | 1.066 | 1.115 | 1.129 | 1.191 | 1.252 | 1.312 |
| 26.7                           | 0.677                         | 0.741 | 0.761 | 0.806 | 0.820 | 0.871 | 0.937 | 1.001 | 1.052 | 1.067 | 1.133 | 1.197 | 1.259 |

## 5 Dimensional drawing & centre of gravity

### 5 - 1 Dimensional drawing

#### FWT (02, 03, 04)

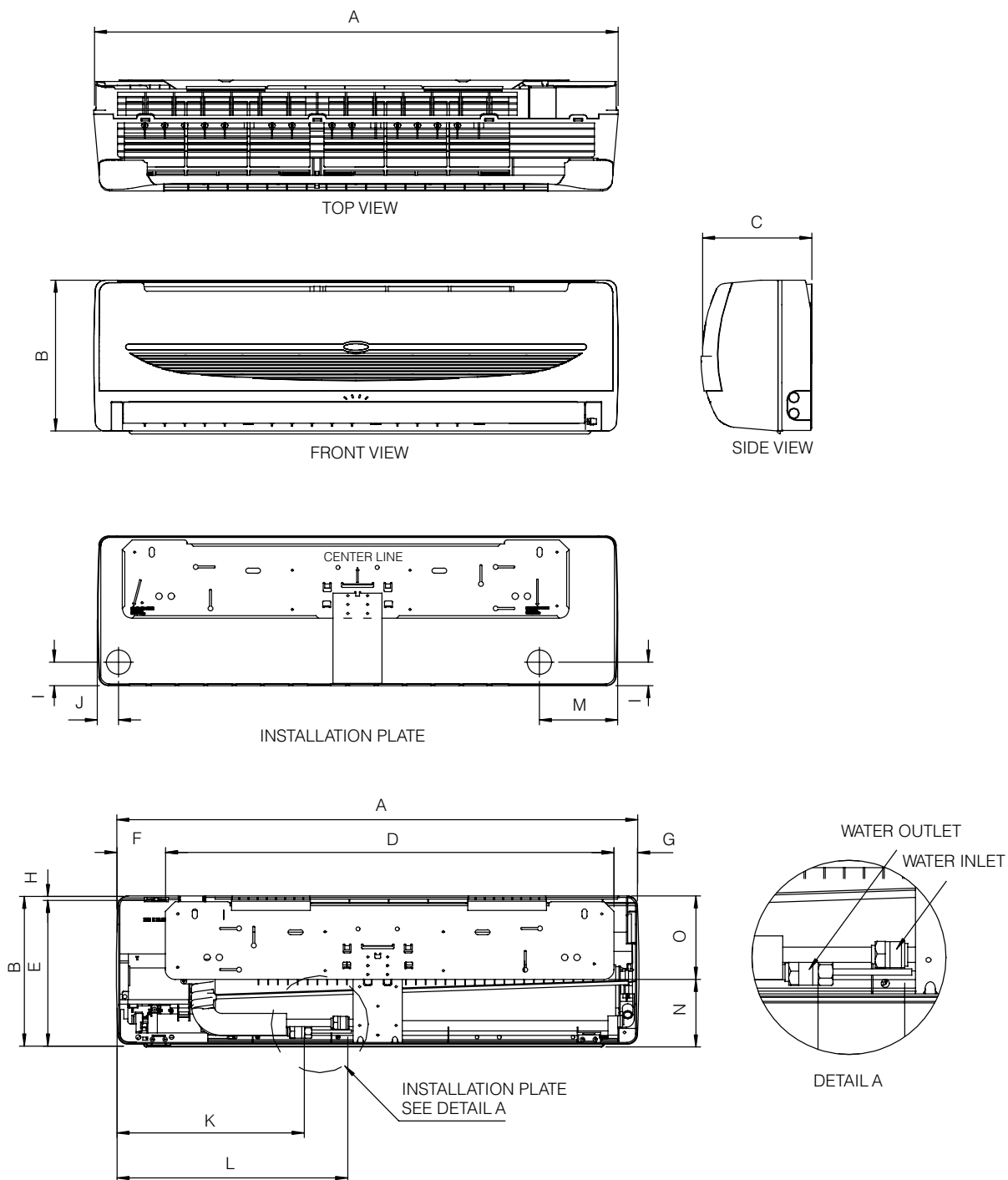


| Dimension                      | A             | B             | C            | D             | E            | F            | G            | H          | I           | J           | K             | L             | M           | N            | O            |
|--------------------------------|---------------|---------------|--------------|---------------|--------------|--------------|--------------|------------|-------------|-------------|---------------|---------------|-------------|--------------|--------------|
| FWT02AATNMV1                   | 799<br>(31,5) | 260<br>(10,2) | 198<br>(7,8) | 379<br>(15,0) | 246<br>(9,7) | 185<br>(7,3) | 124<br>(4,9) | 8<br>(0,3) | 56<br>(2,2) | 50<br>(2,0) | 350<br>(13,8) | 379<br>(15,0) | 50<br>(2,0) | 128<br>(5,1) | 132<br>(5,2) |
| FWT03AATNMV1 /<br>FWT04AATNMV1 | 899<br>(35,4) | 260<br>(10,2) | 198<br>(7,8) | 590<br>(23,2) | 246<br>(9,7) | 185<br>(7,3) | 124<br>(4,9) | 8<br>(0,3) | 56<br>(2,2) | 50<br>(2,0) | 435<br>(17,1) | 495<br>(19,5) | 50<br>(2,0) | 128<br>(5,1) | 132<br>(5,2) |

## 5 Dimensional drawing & centre of gravity

### 5 - 1 Dimensional drawing

**FWT (05, 06)**

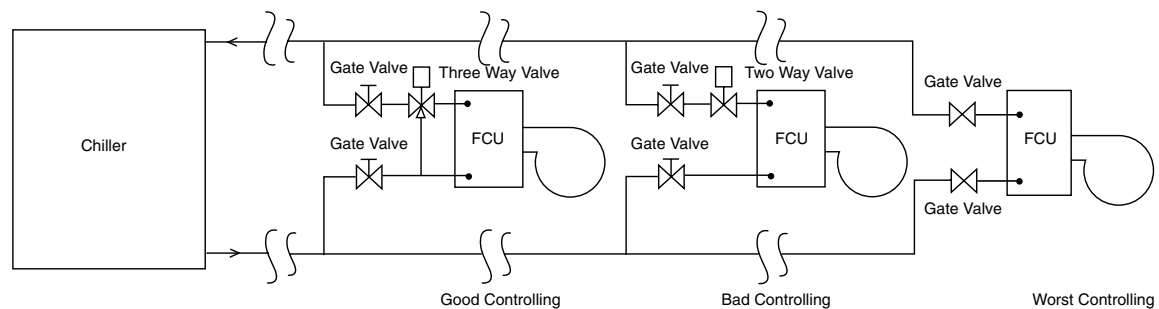


| Dimension                      | A              | B             | C            | D             | E             | F           | G           | H          | I           | J           | K             | L             | M            | N            | O            |
|--------------------------------|----------------|---------------|--------------|---------------|---------------|-------------|-------------|------------|-------------|-------------|---------------|---------------|--------------|--------------|--------------|
| FWT05AATNMV1 /<br>FWT06AATNMV1 | 1060<br>(41,7) | 310<br>(12,2) | 220<br>(8,6) | 912<br>(35,9) | 294<br>(11,6) | 99<br>(3,9) | 51<br>(2,0) | 8<br>(0,3) | 48<br>(1,9) | 43<br>(1,7) | 369<br>(14,5) | 453<br>(17,8) | 160<br>(6,3) | 138<br>(5,4) | 160<br>(6,3) |

## 6 Piping diagram

1  
6

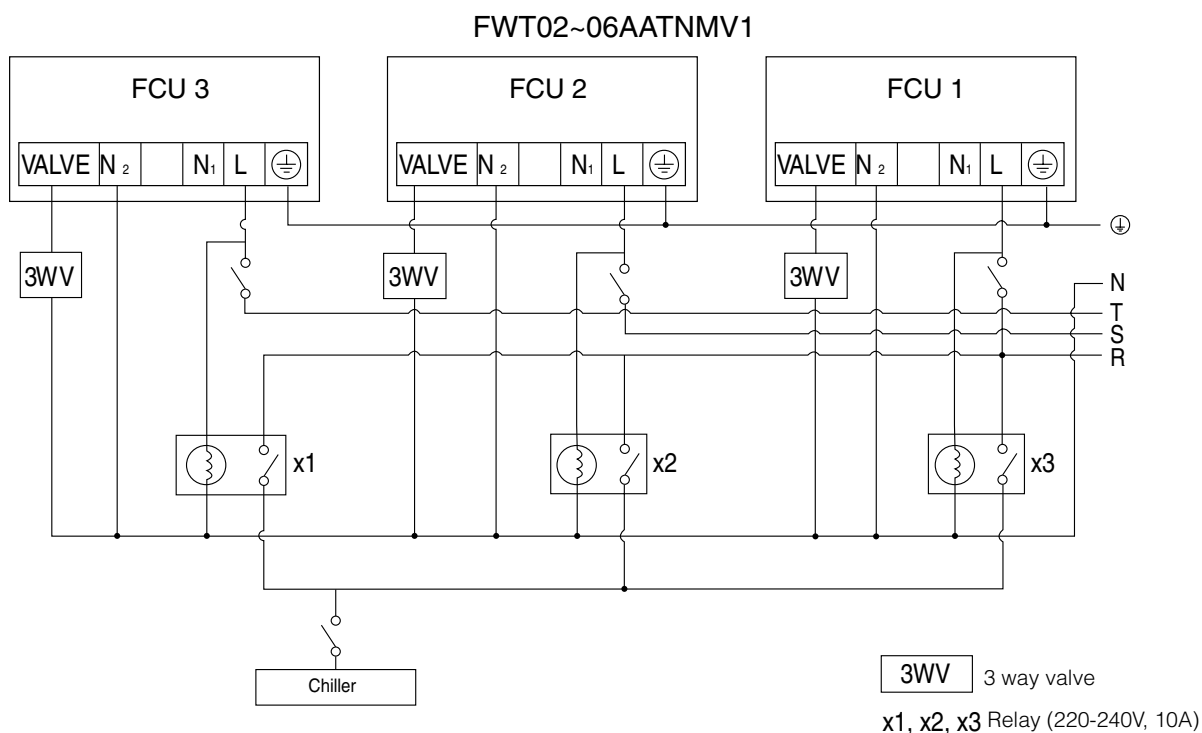
**FWT (Water piping diagram)**



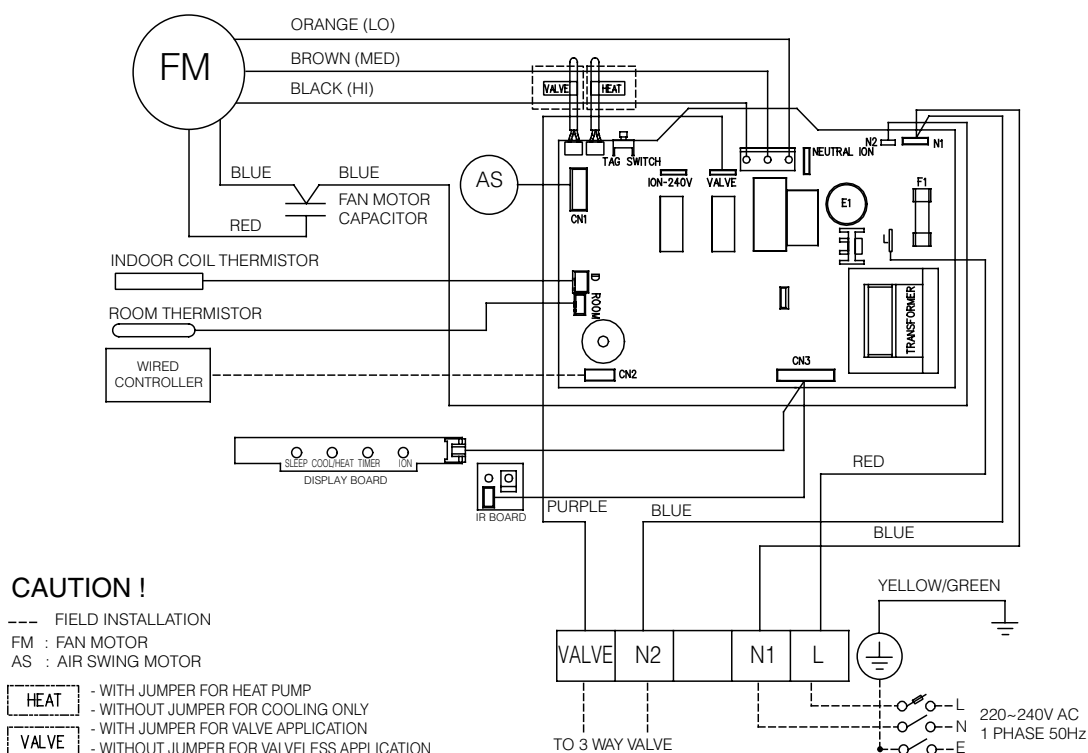
## 7 Wiring diagram

### 7 - 1 Wiring diagram

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7



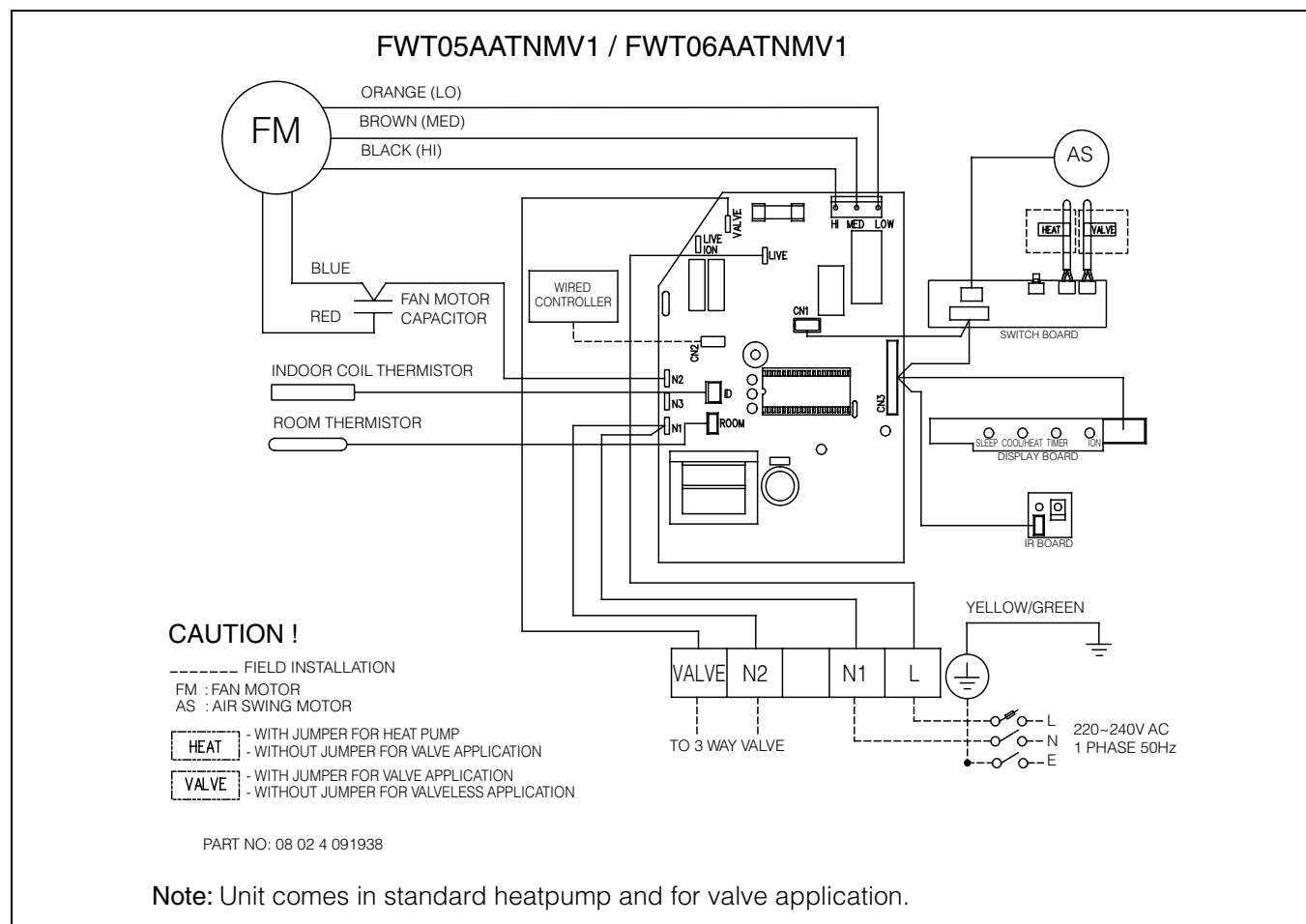
#### FWT02AATNMV1 / FWT03AATNMV1 / FWT04AATNMV1



PART NO: 08 02 4 091934

## 7 Wiring diagram

### 7 - 1 Wiring diagram



## 8 Sound data

### 8 - 1 Sound power spectrum

#### FWT (2 PIPE)

| Model   | Freq | 1/1 Octave Sound Power Level (dB, reference 1pW) |     |     |      |      |      |      | Overall (dBA) |
|---------|------|--------------------------------------------------|-----|-----|------|------|------|------|---------------|
|         |      | 125                                              | 250 | 500 | 1000 | 2000 | 4000 | 8000 |               |
| FWT02AT | Hi   | 49                                               | 48  | 51  | 50   | 42   | 34   | 29   | 53            |
|         | Me   | 47                                               | 45  | 47  | 44   | 36   | 30   | 28   | 48            |
|         | Lo   | 46                                               | 42  | 43  | 40   | 32   | 29   | 27   | 44            |
| FWT03AT | Hi   | 50                                               | 48  | 50  | 50   | 41   | 31   | 28   | 53            |
|         | Me   | 47                                               | 44  | 46  | 43   | 35   | 29   | 27   | 47            |
|         | Lo   | 45                                               | 42  | 43  | 38   | 30   | 27   | 26   | 43            |
| FWT04AT | Hi   | 51                                               | 49  | 52  | 52   | 43   | 33   | 29   | 55            |
|         | Me   | 48                                               | 45  | 48  | 45   | 37   | 30   | 27   | 49            |
|         | Lo   | 46                                               | 43  | 43  | 39   | 31   | 28   | 26   | 44            |
| FWT05AT | Hi   | 58                                               | 60  | 60  | 56   | 50   | 43   | 34   | 61            |
|         | Me   | 56                                               | 57  | 56  | 53   | 47   | 39   | 32   | 57            |
|         | Lo   | 54                                               | 54  | 54  | 50   | 44   | 38   | 31   | 55            |
| FWT06AT | Hi   | 57                                               | 60  | 61  | 57   | 54   | 46   | 38   | 64            |
|         | Me   | 55                                               | 59  | 60  | 56   | 53   | 44   | 37   | 61            |
|         | Lo   | 53                                               | 55  | 57  | 53   | 50   | 42   | 35   | 59            |

Microphone position: FWT 1m in front and 0.8m below the vertical centre line of the unit

## 9 Operation range

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### FWT

#### OPERATING RANGE

##### Operating Limits:

Thermal carrier : Water

Water temperature : 5 ~50°C

Maximum water pressure : 16 bar

Air temperature : (as below)

##### Cooling Mode

| Temperature                 | Ts °C/°F     | Th °C/°F    |
|-----------------------------|--------------|-------------|
| Minimum indoor temperature  | 16.0 / 60.8  | 11.0 / 51.8 |
| Maximum indoor temperature  | 32.0 / 89.6  | 23.0 / 73.4 |
| Minimum outdoor temperature | 16.0 / 60.8  | -           |
| Maximum outdoor temperature | 46.0 / 114.8 | -           |

##### Heating Mode

| Temperature                 | Ts °C/°F    | Th °C/°F    |
|-----------------------------|-------------|-------------|
| Minimum indoor temperature  | 16.0 / 60.8 | -           |
| Maximum indoor temperature  | 30.0 / 86.0 | -           |
| Minimum outdoor temperature | -5.0 / 23.0 | -6.0 / 21.2 |
| Maximum outdoor temperature | 24.0 / 75.2 | 18.0 / 64.4 |

Ts: Dry bulb temperature.

Th: Wet bulb temperature.

## 10 Hydraulic performance

### 10 - 1 Water pressure drop curve evaporator

FWT

| FWT (2 PIPE) cooling             |                           |         |         |         |         |
|----------------------------------|---------------------------|---------|---------|---------|---------|
| Water flow<br>m <sup>3</sup> /hr | Water pressure drop (kPa) |         |         |         |         |
|                                  | FWT02AT                   | FWT03AT | FWT02AT | FWT03AT | FWT02AT |
| 0.1                              | 1.98                      | 7.14    | 5.53    | 1.18    | 1.24    |
| 0.2                              | 10.98                     | 19.72   | 16.07   | 4.36    | 4.56    |
| 0.3                              | 24.95                     | 34.27   | 28.64   | 8.95    | 9.36    |
| 0.4                              | 43.82                     | 50.71   | 43.15   | 14.94   | 15.62   |
| 0.5                              | 67.51                     | 68.94   | 59.51   | 22.30   | 23.32   |
| 0.6                              | 95.94                     | 88.87   | 77.64   | 31.01   | 32.42   |
| 0.7                              | 129.02                    | 110.43  | 97.46   | 41.04   | 42.91   |
| 0.8                              |                           | 133.51  | 118.88  | 52.36   | 54.75   |
| 0.9                              |                           |         | 141.82  | 64.96   | 67.92   |
| 1.0                              |                           |         |         | 78.80   | 82.39   |
| 1.1                              |                           |         |         | 93.87   | 98.15   |
| 1.2                              |                           |         |         | 110.14  | 115.16  |
| 1.3                              |                           |         |         | 127.58  | 133.40  |
| 1.4                              |                           |         |         |         | 152.84  |
| 1.5                              |                           |         |         |         | 173.45  |

FWT

| FWC-T (2 PIPE) heating           |                           |         |         |         |         |
|----------------------------------|---------------------------|---------|---------|---------|---------|
| Water flow<br>m <sup>3</sup> /hr | Water pressure drop (kPa) |         |         |         |         |
|                                  | FWT02AT                   | FWT03AT | FWT04AT | FWT05AT | FWT06AT |
| 0.1                              | 2.65                      | 6.47    | 4.83    | 1.19    | 1.26    |
| 0.2                              | 10.85                     | 17.86   | 14.06   | 4.38    | 4.64    |
| 0.3                              | 23.20                     | 31.04   | 25.05   | 9.00    | 9.54    |
| 0.4                              | 39.63                     | 45.92   | 37.73   | 15.03   | 15.92   |
| 0.5                              | 60.05                     | 62.44   | 52.04   | 22.43   | 23.76   |
| 0.6                              | 84.40                     | 80.49   | 67.89   | 31.18   | 33.03   |
| 0.7                              | 112.60                    | 100.01  | 85.22   | 41.27   | 43.71   |
| 0.8                              | 144.56                    | 120.92  | 103.95  | 52.66   | 55.77   |
| 0.9                              | 180.21                    | 143.13  | 124.01  | 65.33   | 69.19   |
| 1.0                              |                           | 166.56  | 145.33  | 79.25   | 83.93   |
| 1.1                              |                           |         | 167.83  | 94.40   | 99.98   |
| 1.2                              |                           |         |         | 110.76  | 117.31  |
| 1.3                              |                           |         |         | 128.30  | 135.88  |
| 1.4                              |                           |         |         | 147.00  | 155.68  |
| 1.5                              |                           |         |         | 166.83  | 176.68  |