

# WR2 Series (22.4-56kW)

## Simultaneous Heating and Cooling with Double Heat Recovery, Water Cooled Condensing Unit



The City Multi **WR2** Series Heat Recovery VRF system is ideal where a water loop is available and outdoor space is limited. These models utilise water, instead of air, as the energy transfer medium, and benefit from all of the same technology and flexibility as air sourced VRF systems. City Multi WR2 systems provide the ultimate solution for a breadth of applications requiring simultaneous heating and cooling, including hotels, offices, leisure, retail and high end residential.

### Key Features & Benefits

- High efficiency modular systems, with ability to recover energy on the refrigerant circuit and between units on the water circuit, in either a closed or open loop building, or ground source application
- Able to utilise waste heat from commercial sources, such as server cooling, or renewable heat from landlord loops, rivers, lakes or geothermal sources
- Very low impact footprint and service space requirements, ideal for internal location
- Provides continuous heating in winter, without the need for defrost operation

# R410A

| CONDENSING UNITS                                                                     |                       | PQRY-P200YLM-A1  | PQRY-P250YLM-A1  | PQRY-P300YLM-A1   | PQRY-P350YLM-A1    | PQRY-P400YLM-A1    | PQRY-P400YSLM-A1        | PQRY-P450YLM-A1    | PQRY-P450YSLM-A1        | PQRY-P500YLM-A1    | PQRY-P500YSLM-A1        |
|--------------------------------------------------------------------------------------|-----------------------|------------------|------------------|-------------------|--------------------|--------------------|-------------------------|--------------------|-------------------------|--------------------|-------------------------|
| CAPACITY (kW)                                                                        | Heating (nominal max) | 25.0             | 31.5             | 37.5              | 45.0               | 50.0               | 50.0                    | 56.0               | 56.0                    | 63.0               | 63.0                    |
|                                                                                      | Cooling (nominal)     | 22.4             | 28.0             | 33.5              | 40.0               | 45.0               | 45.0                    | 50.0               | 50.0                    | 56.0               | 56.0                    |
| POWER INPUT (kW)                                                                     | Heating (nominal max) | 3.97             | 5.08             | 6.25              | 7.53               | 8.37               | 7.94                    | 9.79               | 6.24                    | 11.43              | 10.16                   |
|                                                                                      | Cooling (nominal)     | 3.71             | 4.90             | 6.04              | 7.14               | 8.03               | 7.70                    | 9.29               | 5.69                    | 11.17              | 10.12                   |
| OPERATING WATER VOLUME (m³/h)                                                        |                       | 3.0 ~ 7.2        | 3.0 ~ 7.2        | 3.0 ~ 7.2         | 4.5 ~ 11.6         | 4.5 ~ 11.6         | 3.0+3.0~7.2+7.2         | 4.5 ~ 11.6         | 3.0+3.0~7.2+7.2         | 4.5 ~ 11.6         | 3.0+3.0~7.2+7.2         |
| GUARANTEED OPERATING RANGE (°C) Heating / Cooling                                    |                       | -5~45 / -5~45    | -5~45 / -5~45    | -5~45 / -5~45     | -5~45 / -5~45      | -5~45 / -5~45      | -5~45 / -5~45           | -5~45 / -5~45      | -5~45 / -5~45           | -5~45 / -5~45      | -5~45 / -5~45           |
| COP / EER (nominal max)                                                              |                       | 6.29 / 6.03      | 6.20 / 5.71      | 6.25 / 5.54       | 5.97 / 5.60        | 5.97 / 5.60        | 6.29 / 5.84             | 5.72 / 5.38        | 6.24 / 5.69             | 5.51 / 5.01        | 6.20 / 5.53             |
| MAX NO. OF CONNECTABLE INDOOR UNITS                                                  |                       | 20               | 25               | 30                | 35                 | 40                 | 40                      | 45                 | 45                      | 50                 | 50                      |
| MAX CONNECTABLE CAPACITY                                                             |                       | 50 ~ 150%        | 50 ~ 150%        | 50 ~ 150%         | 50 ~ 150%          | 50 ~ 150%          | 50 ~ 150%               | 50 ~ 150%          | 50 ~ 150%               | 50 ~ 150%          | 50 ~ 150%               |
| PIPE SIZE mm (in)                                                                    | Gas                   | 19.05 (3/4")     | 22.2 (7/8")      | 22.2 (7/8")       | 28.58 (1 1/8")     | 28.58 (1 1/8")     | 28.58 (1 1/8")          | 28.58 (1 1/8")     | 28.58 (1 1/8")          | 28.58 (1 1/8")     | 28.58 (1 1/8")          |
|                                                                                      | Liquid                | 15.88 (5/8")     | 19.05 (3/4")     | 19.05 (3/4")      | 22.2 (7/8")        | 22.2 (7/8")        | 22.2 (7/8")             | 22.2 (7/8")        | 22.2 (7/8")             | 22.2 (7/8")        | 22.2 (7/8")             |
| SOUND PRESSURE LEVEL (dBA)                                                           |                       | 46               | 48               | 54                | 52                 | 52                 | 49                      | 54                 | 50                      | 54                 | 51                      |
| SOUND POWER LEVEL (dBA)                                                              |                       | 60               | 62               | 68                | 66                 | 66                 | 63                      | 70                 | 64                      | 70.5               | 65                      |
| WEIGHT (kg)                                                                          |                       | 173              | 173              | 173               | 217                | 217                | 173 + 173               | 217                | 173 + 173               | 217                | 173 + 173               |
| DIMENSIONS (mm)                                                                      | Width                 | 880              | 880              | 880               | 880                | 880                | 880 + 880               | 880                | 880 + 880               | 880                | 880 + 880               |
|                                                                                      | Depth                 | 550              | 550              | 550               | 550                | 550                | 550                     | 550                | 550                     | 550                | 550                     |
|                                                                                      | Height                | 1100             | 1100             | 1100              | 1450               | 1450               | 1100                    | 1450               | 1100                    | 1450               | 1100                    |
| ELECTRICAL SUPPLY*1                                                                  |                       | 380~415v, 50Hz   | 380~415v, 50Hz   | 380~415v, 50Hz    | 380~415v, 50Hz     | 380~415v, 50Hz     | 380~415v, 50Hz          | 380~415v, 50Hz     | 380~415v, 50Hz          | 380~415v, 50Hz     | 380~415v, 50Hz          |
| PHASE*1                                                                              |                       | Three            | Three            | Three             | Three              | Three              | Three                   | Three              | Three                   | Three              | Three                   |
| STARTING CURRENT (A)                                                                 |                       | 8                | 8                | 8                 | 8                  | 8                  | 8 / 8                   | 8                  | 8 / 8                   | 8                  | 8 / 8                   |
| NOMINAL SYSTEM RUNNING CURRENT (A)*1 Heating / Cooling [MAX]                         |                       | 6.3 / 5.9 [16.1] | 8.1 / 7.8 [16.1] | 10.0 / 9.6 [18.6] | 12.0 / 11.4 [23.1] | 13.4 / 12.8 [27.6] | 12.7 / 12.3 [16.1+16.1] | 15.7 / 14.8 [32.9] | 14.3 / 14.0 [16.1+16.1] | 18.3 / 17.9 [39.2] | 16.2 / 16.1 [16.1+16.1] |
| FUSE RATING (BS88) - HRC (A)*1                                                       |                       | 1 x 20           | 1 x 20           | 1 x 20            | 1 x 25             | 1 x 32             | 1 x 20 / 1 x 20         | 1 x 40             | 1 x 20 / 1 x 20         | 1 x 40             | 1 x 20 / 1 x 20         |
| MAINS CABLE No. Cores*1                                                              |                       | 4 + earth        | 4 + earth        | 4 + earth         | 4 + earth          | 4 + earth          | 4 + earth               | 4 + earth          | 4 + earth               | 4 + earth          | 4 + earth               |
| CHARGE REFRIGERANT (kg) / CO <sub>2</sub> EQUIVALENT (t)<br>R410A (GWP 2088)         |                       | 5.0 / 10.4       | 5.0 / 10.4       | 5.0 / 10.4        | 6.0 / 12.5         | 6.0 / 12.5         | 10.0 / 20.9             | 6.0 / 12.5         | 10.0 / 20.9             | 6.0 / 12.5         | 10.0 / 20.9             |
| MAX ADDITIONAL REFRIGERANT (kg) / CO <sub>2</sub> EQUIVALENT (t)<br>R410A (GWP 2088) |                       | 28.0 / 58.5      | 30.0 / 62.6      | 31.0 / 64.7       | 46.0 / 96.1        | 47.0 / 98.1        | 50.0 / 104.4            | 47.0 / 98.1        | 51.0 / 106.4            | 48.0 / 100.2       | 51.0 / 106.5            |

Notes: \*SEER/SCOP available separately in the 'City Multi VRF Seasonal Efficiency' document. Based on Ecodesign Lot 21/6 to EN14825 standard. \*1 A separate power supply is required for each module. Where more than one figure is quoted there are multiple modules. These products are made to order, please consult your local sales office for delivery schedule. PQRY-P200/250/300 are stock items.

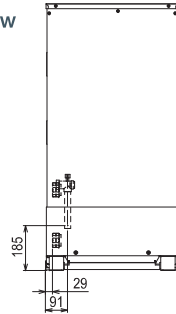
| PIPING RESTRICTIONS                                           | PQRY-P200-500Y(S)LM-A1                                                    |
|---------------------------------------------------------------|---------------------------------------------------------------------------|
| TOTAL PIPING LENGTH                                           | 550m max*3 (300m) for sizes 200-300 / 750m max*3 (500m) for sizes 350-500 |
| FURTHEST PIPING LENGTH                                        | 165m max                                                                  |
| BETWEEN CONDENSING UNIT AND BC CONTROLLER (MAIN) - LENGTH     | 110m max*4                                                                |
| BETWEEN INDOOR AND BC CONTROLLER (MAIN/SUB) - LENGTH          | 60m max*5 (40m)                                                           |
| BETWEEN INDOOR AND CONDENSING UNIT - HEIGHT                   | 50m max (40m*1)                                                           |
| BETWEEN INDOOR AND INDOOR - HEIGHT                            | 30m max (20m*2)                                                           |
| BETWEEN INDOOR AND BC CONTROLLER (MAIN/SUB) - HEIGHT          | 15m max (10m*2)                                                           |
| BETWEEN BC CONTROLLER (MAIN) AND BC CONTROLLER (SUB) - HEIGHT | 15m max (10m*6)                                                           |

Notes: \*1 When condensing unit is below indoor. \*2 In case of P200, P250 indoor unit. \*3 Distance between condensing unit and BC Controller is 10m or less. \*4 Total piping length is 300m or less (500m for sizes 350-500). \*5 Height difference between the Main BC Controller and furthest indoor unit is 0m and no size P200 or P250 indoor unit is used. \*6 When using multiple sub BC Controllers, the height between them should be considered.

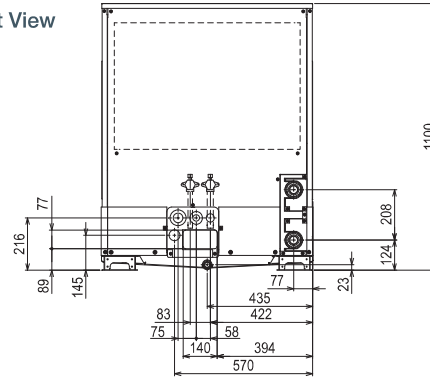
## Product Dimensions

PQRY-P200/250/300YLM-A1

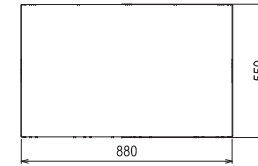
Side View



Front View



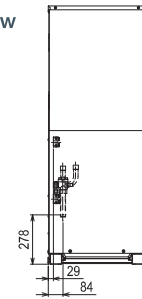
Upper View



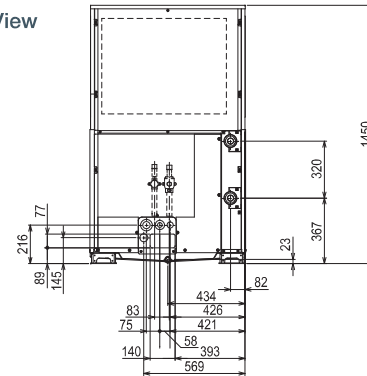
## Product Dimensions

PQRY-P350/400/450/500YLM-A1

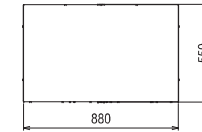
Side View



Front View



Upper View



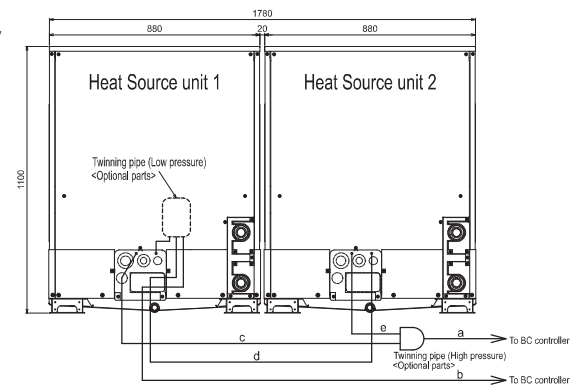
## Product Dimensions

PQRY-P400/450/500YSLM-A1

Side View



Front View



# WR2 Series (63-101kW)

## Simultaneous Heating and Cooling with Double Heat Recovery, Water Cooled Condensing Unit



The City Multi **WR2** Series Heat Recovery VRF system is ideal where a water loop is available and outdoor space is limited. These models utilise water, instead of air, as the energy transfer medium, and benefit from all of the same technology and flexibility as air sourced VRF systems. City Multi WR2 systems provide the ultimate solution for a breadth of applications requiring simultaneous heating and cooling, including hotels, offices, leisure, retail and high end residential.

### Key Features & Benefits

- High efficiency modular systems, with ability to recover energy on the refrigerant circuit and between units on the water circuit, in either a closed or open loop building, or ground source application
- Able to utilise waste heat from commercial sources, such as server cooling, or renewable heat from landlord loops, rivers, lakes or geothermal sources
- Very low impact footprint and service space requirements, ideal for internal location
- Provides continuous heating in winter, without the need for defrost operation

# R410A

| CONDENSING UNITS                                                                     |                       | PQRY-P550YLM-A1    | PQRY-P550YSLM-A1        | PQRY-P600YLM-A1    | PQRY-P600YSLM-A1        | PQRY-P700YSLM-A1        | PQRY-P750YSLM-A1        | PQRY-P800YSLM-A1        | PQRY-P850YSLM-A1        | PQRY-P900YSLM-A1        |
|--------------------------------------------------------------------------------------|-----------------------|--------------------|-------------------------|--------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| CAPACITY (kW)                                                                        | Heating (nominal max) | 69.0               | 69.0                    | 76.5               | 76.5                    | 88.0                    | 95.0                    | 100.0                   | 108.0                   | 113.0                   |
|                                                                                      | Cooling (nominal)     | 63.0               | 63.0                    | 69.0               | 69.0                    | 80.0                    | 85.0                    | 90.0                    | 96.0                    | 101.0                   |
| POWER INPUT (kW)                                                                     | Heating (nominal max) | 12.27              | 11.31                   | 14.51              | 12.75                   | 14.73                   | 15.90                   | 16.75                   | 18.49                   | 19.74                   |
|                                                                                      | Cooling (nominal)     | 12.54              | 11.55                   | 14.49              | 12.84                   | 14.73                   | 15.64                   | 16.57                   | 18.03                   | 19.38                   |
| OPERATING WATER VOLUME (m³/h)                                                        |                       | 6.0 ~ 14.4         | 3.0 + 3.0 ~ 7.2 + 7.2   | 6.0 ~ 14.4         | 3.0 + 3.0 ~ 7.2 + 7.2   | 4.5 + 4.5 ~ 11.6 + 11.6 | 4.5 + 4.5 ~ 11.6 + 11.6 | 4.5 + 4.5 ~ 11.6 + 11.6 | 4.5 + 4.5 ~ 11.6 + 11.6 | 4.5 + 4.5 ~ 11.6 + 11.6 |
| GUARANTEED OPERATING RANGE (°C) Heating / Cooling                                    |                       | -5~45 / -5~45      | -5~45 / -5~45           | -5~45 / -5~45      | -5~45 / -5~45           | -5~45 / -5~45           | -5~45 / -5~45           | -5~45 / -5~45           | -5~45 / -5~45           | -5~45 / -5~45           |
| COP / EER (nominal max)                                                              |                       | 5.62 / 5.02        | 6.10 / 5.45             | 5.27 / 4.76        | 6.00 / 5.37             | 5.97 / 5.43             | 5.97 / 5.43             | 5.97 / 5.43             | 5.84 / 5.32             | 5.72 / 5.21             |
| MAX NO. OF CONNECTABLE INDOOR UNITS                                                  |                       | 50                 | 50                      | 50                 | 50                      | 50                      | 50                      | 50                      | 50                      | 50                      |
| MAX CONNECTABLE CAPACITY                                                             |                       | 50 ~ 150%          | 50 ~ 150%               | 50 ~ 150%          | 50 ~ 150%               | 50 ~ 150%               | 50 ~ 150%               | 50 ~ 150%               | 50 ~ 150%               | 50 ~ 150%               |
| PIPE SIZE mm (in)                                                                    | Gas                   | 28.58 (1 1/8")     | 28.58 (1 1/8")          | 34.93 (1 3/8")     | 34.93 (1 3/8")          | 34.93 (1 3/8")          | 34.93 (1 3/8")          | 34.93 (1 3/8")          | 41.28 (1 5/8")          | 41.28 (1 5/8")          |
|                                                                                      | Liquid                | 22.2 (7/8")**      | 22.2 (7/8")**           | 22.2 (7/8")**      | 22.2 (7/8")**           | 28.58 (1 1/8")          | 28.58 (1 1/8")          | 28.58 (1 1/8")          | 28.58 (1 1/8")          | 28.58 (1 1/8")          |
| SOUND PRESSURE LEVEL (dBA)                                                           |                       | 56.5               | 55                      | 56.5               | 57                      | 55                      | 55                      | 55                      | 56                      | 57                      |
| SOUND POWER LEVEL (dBA)                                                              |                       | 71.5               | 69                      | 73                 | 71                      | 69                      | 69                      | 69                      | 71.5                    | 73                      |
| WEIGHT (kg)                                                                          |                       | 247                | 173 + 173               | 247                | 173 + 173               | 217 + 217               | 217 + 217               | 217 + 217               | 217 + 217               | 217 + 217               |
| DIMENSIONS (mm)                                                                      | Width                 | 880                | 880 + 880               | 880                | 880 + 880               | 880 + 880               | 880 + 880               | 880 + 880               | 880 + 880               | 880 + 880               |
|                                                                                      | Depth                 | 550                | 550                     | 550                | 550                     | 550                     | 550                     | 550                     | 550                     | 550                     |
|                                                                                      | Height                | 1450               | 1100                    | 1450               | 1100                    | 1450                    | 1450                    | 1450                    | 1450                    | 1450                    |
| ELECTRICAL SUPPLY*1                                                                  |                       | 380~415v, 50Hz     | 380~415v, 50Hz          | 380~415v, 50Hz     | 380~415v, 50Hz          | 380~415v, 50Hz          | 380~415v, 50Hz          | 380~415v, 50Hz          | 380~415v, 50Hz          | 380~415v, 50Hz          |
| PHASE*1                                                                              |                       | Three              | Three                   | Three              | Three                   | Three                   | Three                   | Three                   | Three                   | Three                   |
| STARTING CURRENT (A)                                                                 |                       | 8                  | 8 / 8                   | 8                  | 8 / 8                   | 8 / 8                   | 8 / 8                   | 8 / 8                   | 8 / 8                   | 8 / 8                   |
| NOMINAL SYSTEM RUNNING CURRENT (A)*1 Heating / Cooling [MAX]                         |                       | 19.6 / 20.1 [40.5] | 18.1 / 18.5 [18.6+16.1] | 23.2 / 23.2 [40.5] | 20.4 / 20.5 [18.6+18.6] | 23.6 / 23.6 [23.1+23.1] | 25.4 / 25.0 [27.6+23.1] | 26.8 / 26.5 [27.6+27.6] | 29.6 / 28.9 [32.9+27.6] | 31.6 / 31.0 [32.9+32.9] |
| FUSE RATING (BS88) - HRC (A)*1                                                       |                       | 1 x 50             | 1 x 20 / 1 x 20         | 1 x 50             | 1 x 20 / 1 x 20         | 1 x 25 / 1 x 25         | 1 x 32 / 1 x 25         | 1 x 32 / 1 x 32         | 1 x 40 / 1 x 32         | 1 x 40 / 1 x 40         |
| MAINS CABLE No. Cores*1                                                              |                       | 4 + earth          | 4 + earth               | 4 + earth          | 4 + earth               | 4 + earth               | 4 + earth               | 4 + earth               | 4 + earth               | 4 + earth               |
| CHARGE REFRIGERANT (kg) / CO <sub>2</sub> EQUIVALENT (t)<br>R410A (GWP 2088)         |                       | 11.7 / 24.4        | 10.0 / 20.9             | 11.7 / 24.4        | 10.0 / 20.9             | 12.0 / 25.1             | 12.0 / 25.1             | 12.0 / 25.1             | 12.0 / 25.1             | 12.0 / 25.1             |
| MAX ADDITIONAL REFRIGERANT (kg) / CO <sub>2</sub> EQUIVALENT (t)<br>R410A (GWP 2088) |                       | 43.3 / 90.4        | 52.0 / 108.6            | 44.3 / 92.5        | 54.0 / 112.8            | 70.0 / 146.2            | 70.0 / 146.2            | 71.0 / 148.2            | 73.0 / 152.4            | 73.0 / 152.4            |

Notes: \*SEER/SCOP available separately in the 'City Multi VRF Seasonal Efficiency' document. Based on Ecodesign Lot 21/6 to EN14825 standard. \*1 A separate power supply is required for each module. Where more than one figure is quoted there are multiple modules. These products are made to order, please consult your local sales office for delivery schedule.

| PIPING RESTRICTIONS                                           | PQRY-P550-900Y(S)LM-A1 |
|---------------------------------------------------------------|------------------------|
| TOTAL PIPING LENGTH                                           | 750m max*2 (500m)      |
| FURTHEST PIPING LENGTH                                        | 165m max               |
| BETWEEN CONDENSING UNIT AND BC CONTROLLER (MAIN) - LENGTH     | 110m max*3             |
| BETWEEN INDOOR AND BC CONTROLLER (MAIN/SUB) - LENGTH          | 60m max*4 (40m)        |
| BETWEEN INDOOR AND CONDENSING UNIT - HEIGHT                   | 50m max (40m*1)        |
| BETWEEN INDOOR AND INDOOR - HEIGHT                            | 30m max                |
| BETWEEN INDOOR AND BC CONTROLLER (MAIN/SUB) - HEIGHT          | 15m max                |
| BETWEEN BC CONTROLLER (MAIN) AND BC CONTROLLER (SUB) - HEIGHT | 15m max (10m*5)        |

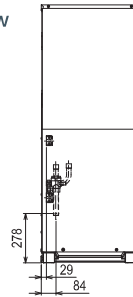
Notes: \*1 When condensing unit is below indoor. \*2 In case of P200, P250 indoor unit. \*3 Distance between condensing unit and BC Controller is 10m or less. \*4 Total piping length is 300m or less (500m for sizes 350-500).

\*5 Height difference between the Main BC Controller and furthest indoor unit is 0m and no size P200 or P250 indoor unit is used. \*6 When using multiple sub BC Controllers, the height between them should be considered.

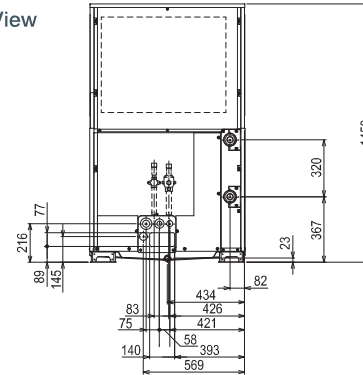
## Product Dimensions

PQRY-P550/600YLM-A1

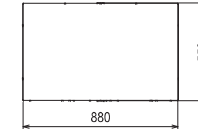
Side View



Front View



Upper View



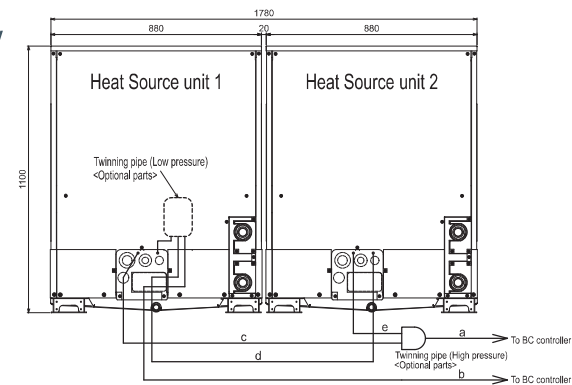
## Product Dimensions

PQRY-P550/600YSLM-A1

Side View



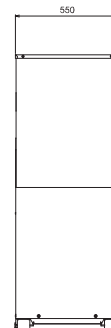
Front View



## Product Dimensions

PQRY-P700/750/800/850/900YSLM-A1

Side View



Front View

