

# Engineering Databook

By Toshiba Carrier (Thailand) Co., Ltd.

**TOSHIBA**  
Leading Innovation >>>

Feb 07, 2012

TCTC 12-001

## SKV2 Series

**RAS-10SKV2-A / RAS-10SAVR-A**

**RAS-13SKV2-A1 / RAS-13SAV2-A1**

**RAS-16SKV2-A1 / RAS-16SAV2-A1**

**RAS-18SKV-A / RAS-18SAV2-A**

**RAS-22SKV2-A1 / RAS-22SAV2-A1**

**RAS-24SKV2-A / RAS-24SAV2-A**

|                                        |       |
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## Specifications

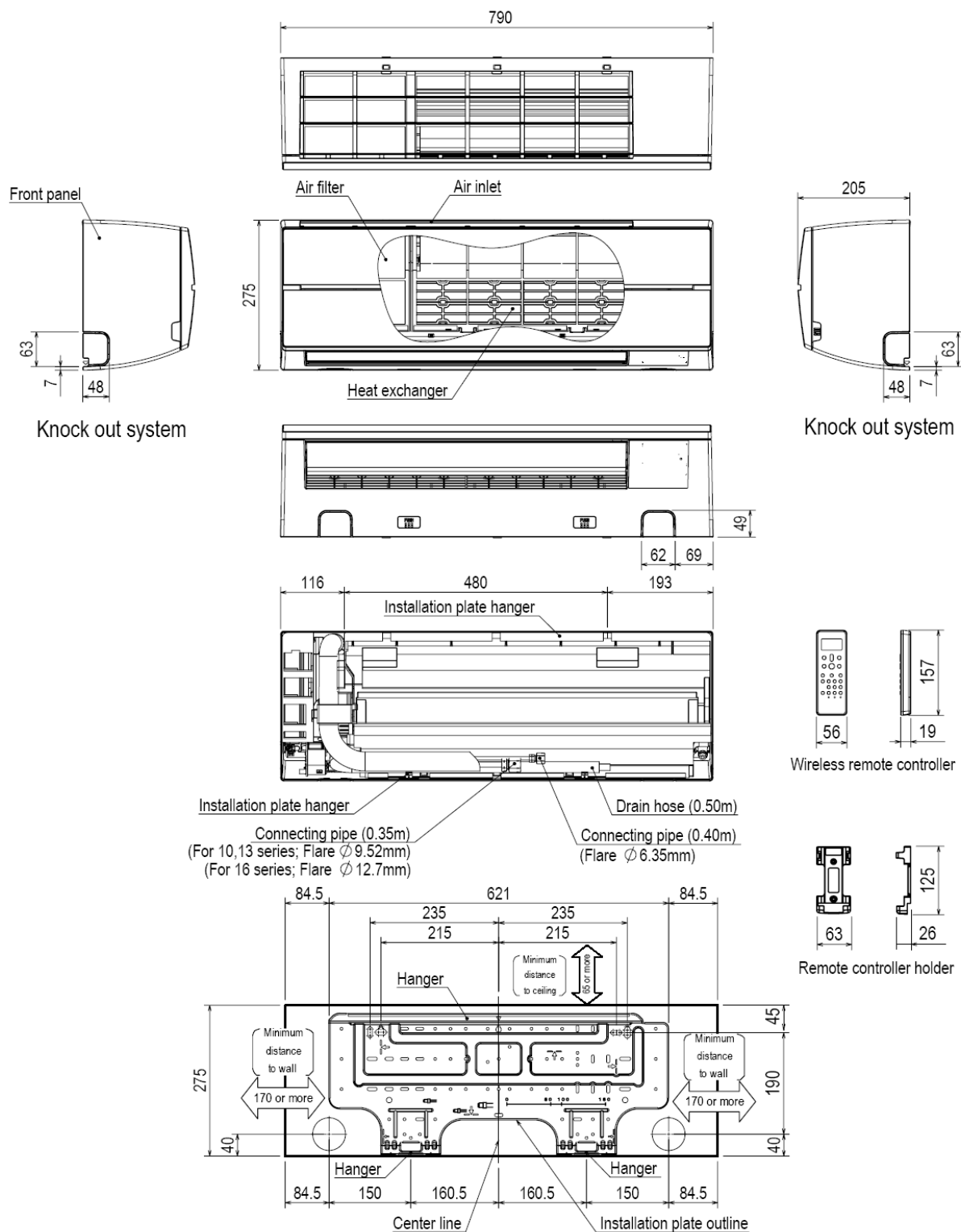
Technical specification **Heat Pump**

|                                  |                 |    |              |                        |                        |                        |                        |                        |                        |
|----------------------------------|-----------------|----|--------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| Indoor Unit                      |                 |    |              | RAS-10SKV2-A           | RAS-13SKV2-A1          | RAS-16SKV2-A1          | RAS-18SKV-A            | RAS-22SKV2-A1          | RAS-24SKV2-A           |
| Outdoor Unit                     |                 |    |              | RAS-10SAVR-A           | RAS-13SAV2-A1          | RAS-16SAV2-A1          | RAS-18SAV2-A           | RAS-22SAV2-A1          | RAS-24SAV2-A           |
| Cooling Capacity                 | - Rated         | CO | (kW)         | 2.5                    | 3.4                    | 4.4                    | 5.0                    | 6.0                    | 7.1                    |
| Cooling Capacity                 | - Range         | CO | (kW)         | 1.10-3.10              | 2.00-4.10              | 0.80-5.00              | 1.10-6.00              | 1.20-6.70              | 1.50-7.70              |
| Power Consumption                | (min-rated-max) | CO | (kW)         | 0.25-0.598-0.82        | 0.49-0.92-1.30         | 0.15-1.34-1.72         | 0.18-1.42-2.00         | 0.20-1.83-2.65         | 0.30-2.33-2.90         |
| Operating Current                | (min-rated-max) | CO | (A)          | 1.36-2.89-3.75         | 2.80-4.20-6.31         | 0.88-6.06-7.62         | 1.06-6.41-8.90         | 1.16-8.19-11.78        | 1.78-10.65-12.85       |
| EER                              | (min-rated-max) | CO |              | 3.78-4.18-4.40         | 3.15-3.70-4.08         | 2.91-3.28-5.33         | 3.00-3.52-6.11         | 2.53-3.28-6.00         | 2.66-3.05-5.00         |
| AEEER                            |                 | CO |              | 4.06                   | 3.62                   | 3.23                   | 3.48                   | 3.23                   | 3.02                   |
| Star Rating                      |                 |    |              | 3                      | 2.5                    | 1.5                    | 2                      | 1.5                    | 1.5                    |
| Heating Capacity                 | - Rated         | RC | (kW)         | 3.2                    | 4.2                    | 5.3                    | 5.8                    | 7.0                    | 8.1                    |
| Heating Capacity                 | - Range         | RC | (kW)         | 0.90-4.80              | 1.80-5.60              | 0.90-6.30              | 0.80-6.30              | 1.00-7.50              | 1.60-9.00              |
| Power Consumption                | (min-rated-max) | RC | (kW)         | 0.17-0.75-1.40         | 0.38-1.12-1.69         | 0.15-1.50-1.98         | 0.14-1.56-1.70         | 0.18-1.98-2.21         | 0.30-2.45-3.30         |
| Operating Current                | (min-rated-max) | RC | (A)          | 0.92-3.51-6.21         | 2.11-5.01-7.55         | 0.89-6.71-8.77         | 0.84-6.97-7.58         | 1.06-8.87-9.79         | 1.81-11.20-14.62       |
| COP                              |                 | RC |              | 3.43-4.27-5.29         | 3.31-3.75-4.74         | 3.18-3.53-6.00         | 3.71-3.72-5.71         | 3.39-3.54-5.56         | 2.73-3.31-5.33         |
| ACOP                             | (min-rated-max) | RC |              | 4.17                   | 3.69                   | 3.48                   | 3.67                   | 3.49                   | 3.28                   |
| Star Rating                      |                 |    |              | 3.5                    | 2.5                    | 2                      | 2.5                    | 2                      | 1.5                    |
| Indoor Unit                      |                 |    |              | RAS-10SKV2-A           | RAS-13SKV2-A1          | RAS-16SKV2-A1          | RAS-18SKV-A            | RAS-22SKV2-A1          | RAS-24SKV2-A           |
| Airflow Volume                   | (h)             | CO | (m³/h - l/s) | 516-143                | 624-173                | 684-190                | 954-265                | 1098-305               | 1008-280               |
| Mositure removal                 |                 |    | (l/h)        | 1.5                    | 2.0                    | 2.5                    | 2.8                    | 3.5                    | 3.8                    |
| Sound Pressure                   | (h-l)           | CO | dB(A)        | 38-26                  | 45-30                  | 47-32                  | 44-32                  | 47-35                  | 45-36                  |
| Dimension                        | (HxWxD)         |    | (mm)         | 275x790x205            | 275x790x205            | 275x790x205            | 320x1050x228           | 320x1050x228           | 320x1050x228           |
| Net weight                       |                 |    | (kg)         | 9                      | 9                      | 9                      | 13                     | 13                     | 13                     |
| Sound Power                      | (h)             | CO | dB(A)        | 51                     | 60                     | 62                     | 59                     | 62                     | 58                     |
| Fan Motor Output                 |                 |    | (W)          | 20                     | 20                     | 30                     | 30                     | 30                     | 30                     |
| Outdoor Unit                     |                 |    |              | RAS-10SAVR-A           | RAS-13SAV2-A1          | RAS-16SAV2-A1          | RAS-18SAV2-A           | RAS-22SAV2-A1          | RAS-24SAV2-A           |
| Dimension                        | (HxWxD)         |    | (mm)         | 550x780x290            | 550x780x290            | 550x780x290            | 550x780x290            | 630x800x300            | 890x900x320            |
| Net weight                       |                 |    | (kg)         | 35                     | 37                     | 38                     | 41                     | 43                     | 65                     |
| Refrigerant type                 |                 |    |              | R410a                  | R410a                  | R410a                  | R410a                  | R410a                  | R410a                  |
| Sound Pressure                   | (h)             | CO | dB(A)        | 46                     | 49                     | 51                     | 49                     | 53                     | 52                     |
| Sound Power                      | (h)             | CO | dB(A)        | 59                     | 64                     | 66                     | 64                     | 68                     | 65                     |
| Operating Range                  |                 | CO | °C           | -10-46                 | -10-46                 | -10-46                 | -10-46                 | -10-46                 | -10-46                 |
| Sound Pressure                   | (h)             | RC | dB(A)        | 47                     | 50                     | 52                     | 50                     | 52                     | 52                     |
| Sound Power                      | (h)             | RC | dB(A)        | 60                     | 65                     | 67                     | 65                     | 67                     | 65                     |
| Operating Range                  |                 | RC | °C           | -15-24                 | -15-24                 | -15-24                 | -15-24                 | -15-24                 | -15-24                 |
| Pipe Size                        |                 |    |              |                        |                        |                        |                        |                        |                        |
| Liquide side                     |                 |    | (mm/inch)    | 6.35(1/4")             | 6.35(1/4")             | 6.35(1/4")             | 6.35(1/4")             | 6.35(1/4")             | 9.52(3/8")             |
| Gas side                         |                 |    | (mm/inch)    | 9.52(3/8")             | 9.52(3/8")             | 12.70(1/2")            | 12.70(1/2")            | 12.70(1/2")            | 15.88(5/8")            |
| Maximum Piping Length            |                 |    | (m)          | 20(extra charge 20g/m) | 20(extra charge 20g/m) | 20(extra charge 20g/m) | 20(extra charge 20g/m) | 20(extra charge 20g/m) | 30(extra charge 30g/m) |
| Maximum Piping Height difference |                 |    | (m)          | 10                     | 10                     | 10                     | 10                     | 10                     | 20                     |
| Chargeless Length                |                 |    | (m)          | 15                     | 15                     | 15                     | 15                     | 15                     | 20                     |
| Compressor type                  |                 |    |              | DC Rotary              | DC Rotary              | DC Tw in Rotary        | DC Tw in Rotary        | DC Tw in Rotary        | DC Tw in Rotary        |
| Power Supply                     |                 |    | (Ph/Hz/V)    | 220-240/1/50           | 220-240/1/50           | 220-240/1/50           | 220-240/1/50           | 220-240/1/50           | 220-240/1/50           |

\* The specification may be subject to change without notice for purpose of improvement.

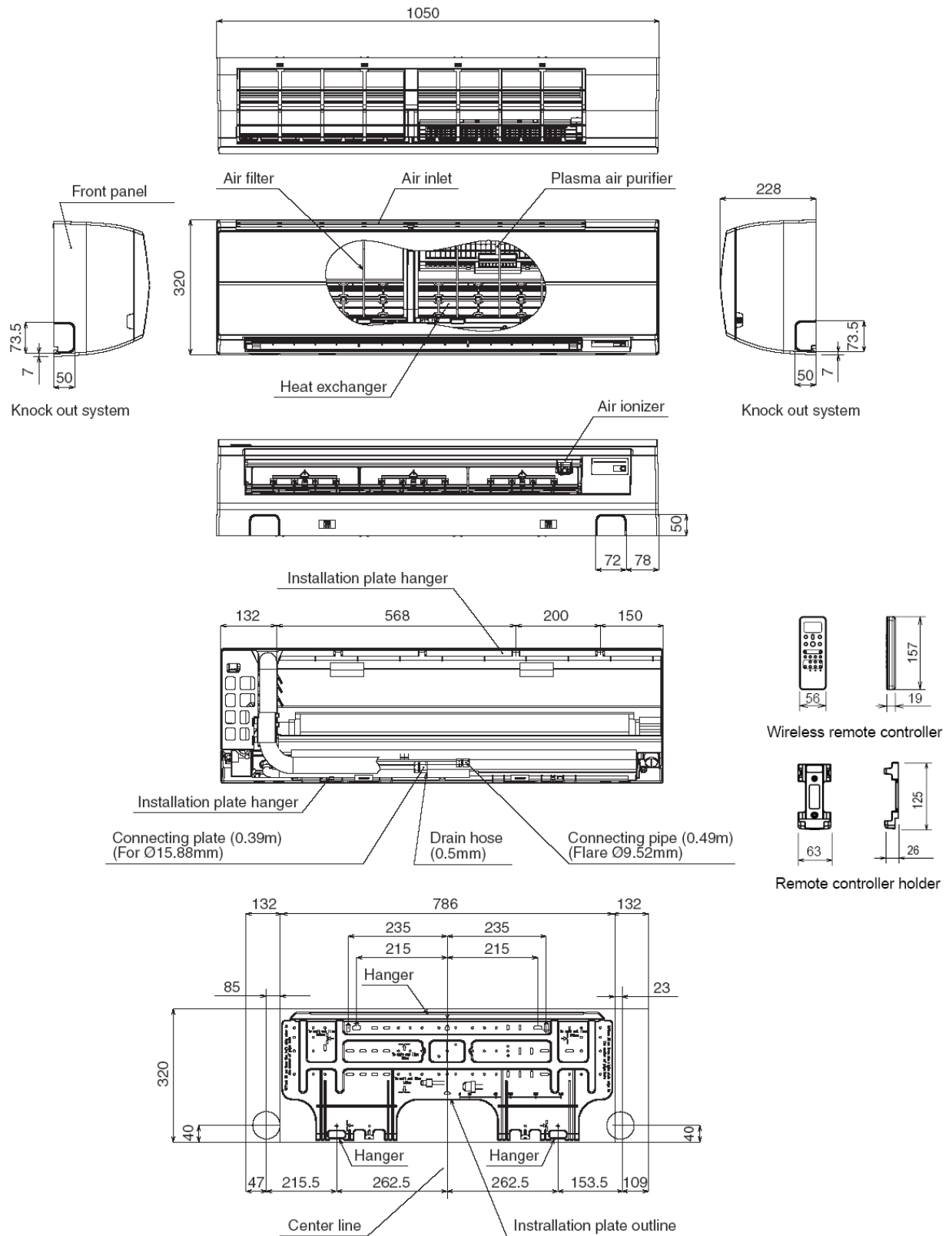
## Dimensions of Indoor and Outdoor units

### Indoor unit: RAS-10SKV2-A, RAS-13SKV2-A1, RAS-16SKV2-A1



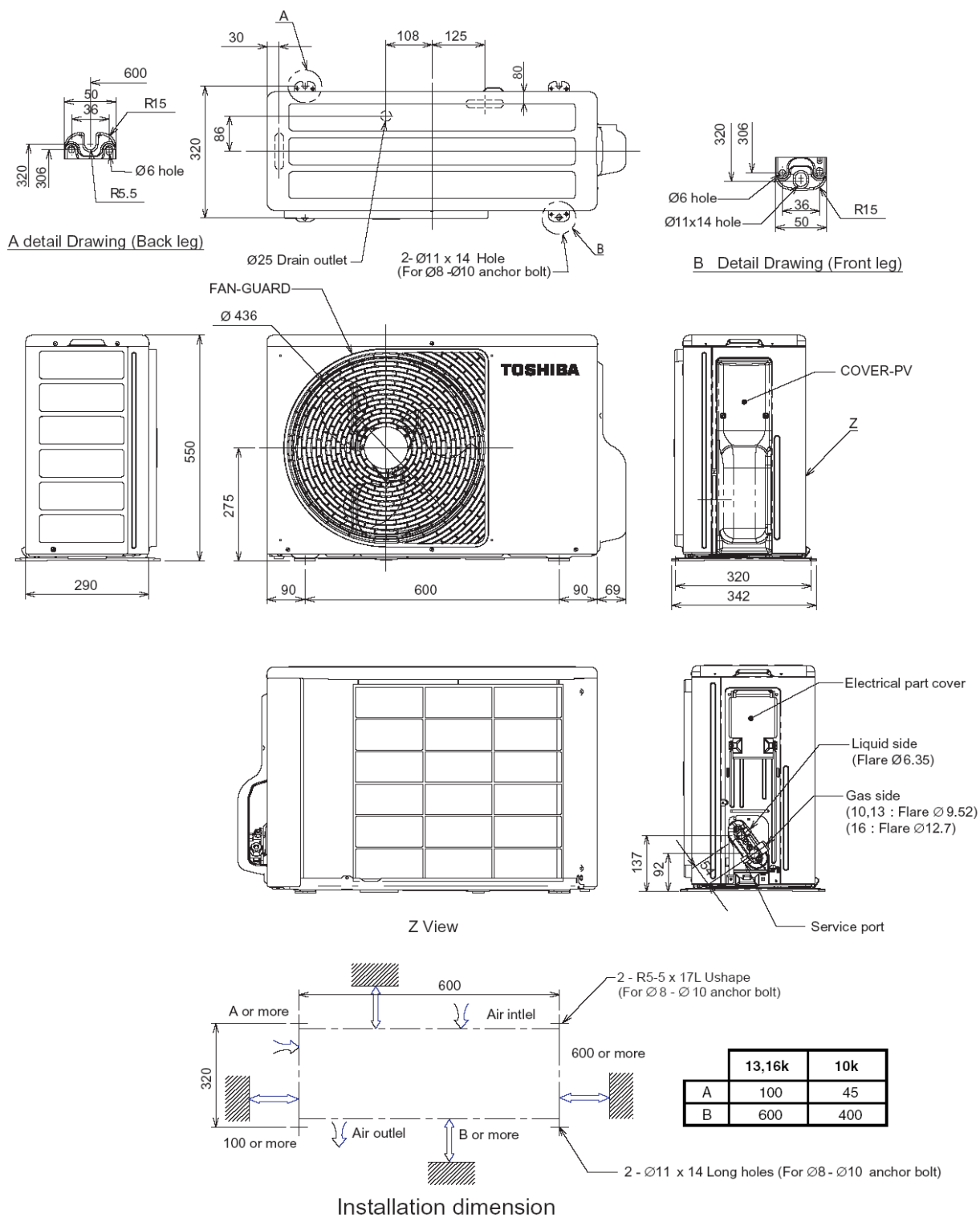
## Dimensions of Indoor and Outdoor units

### Indoor unit: RAS-18SKV-A, RAS-22SKV2-A1, RAS-24SKV2-A



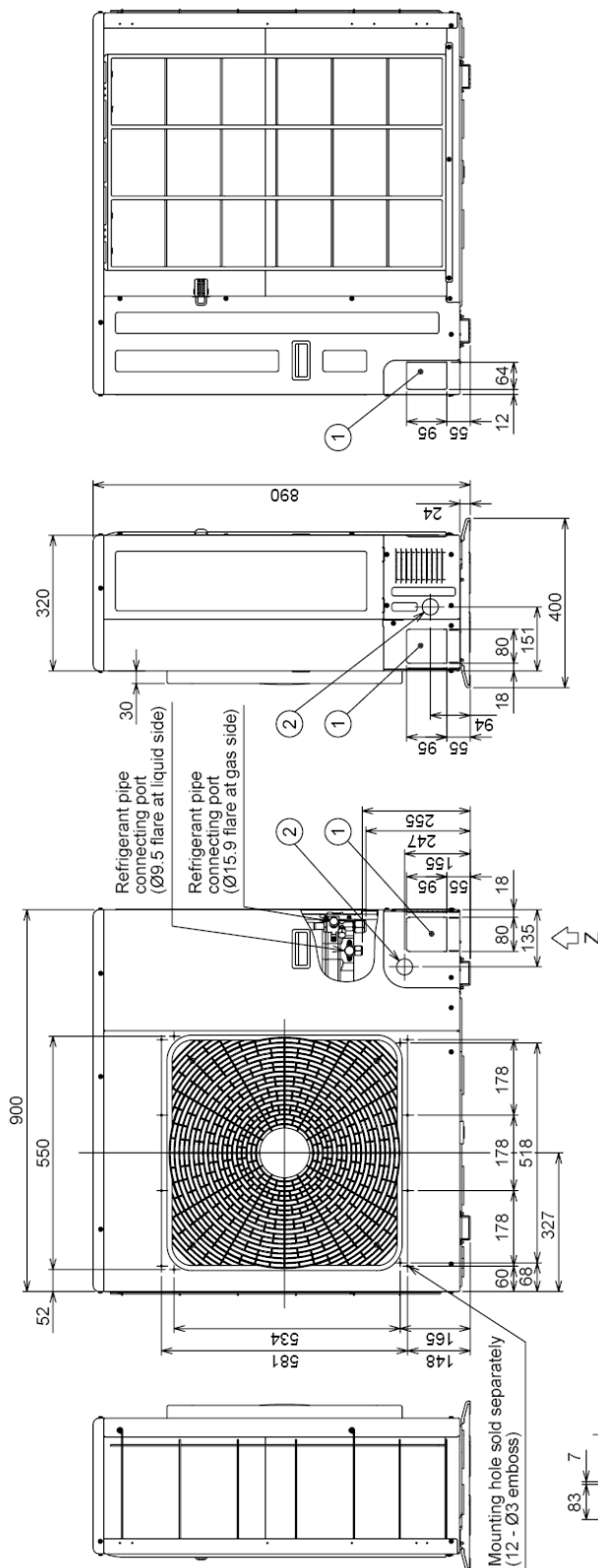
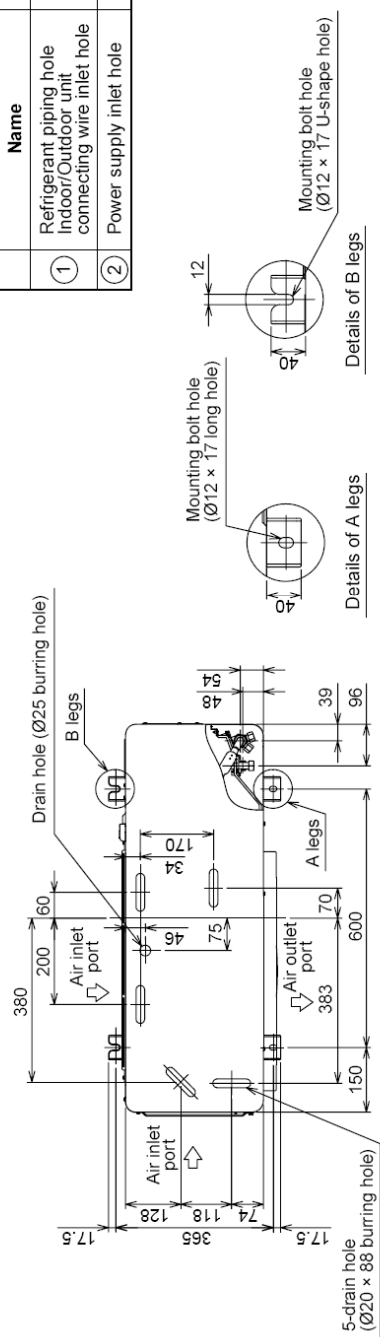
## Dimensions of Indoor and Outdoor units

### Outdoor unit: RAS-10SAVR-A, RAS-13SAV2-A1, RAS-16SAV2-A1, RAS-18SAV2-A



[illegible]

|   | Name                                                                         | Note              |
|---|------------------------------------------------------------------------------|-------------------|
| ① | Refrigerant piping hole<br>Indoor/Outdoor unit<br>connecting wire inlet hole | —                 |
| ② | Power supply inlet hole                                                      | Ø38 Knockout hole |



Unit : mm

### Z views

### Knockout for downward piping

**COMPRESSOR**

**CM**

**P.C. BOARD (MCC-5009)**

**FAN MOTOR**

**FM**

**PMV**

**PULSE MOTOR VALVE**

**INDOOR TERMINAL BLOCK**

**POWER SUPPLY (From outdoor Unit)**

**SHEET METAL**

**Heat Exchanger Sensor (TC)**

**Thermo Sensor (TA)**

**Varistor**

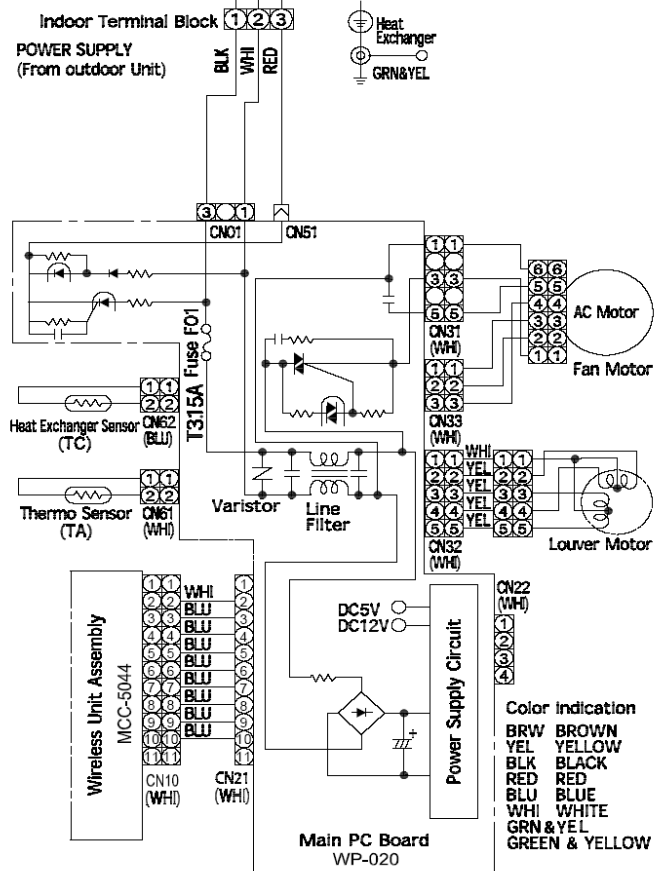
**Line Filter**

**Wireless Unit Assembly MCC-5044**

**Main P.C. Board MCC-5048**

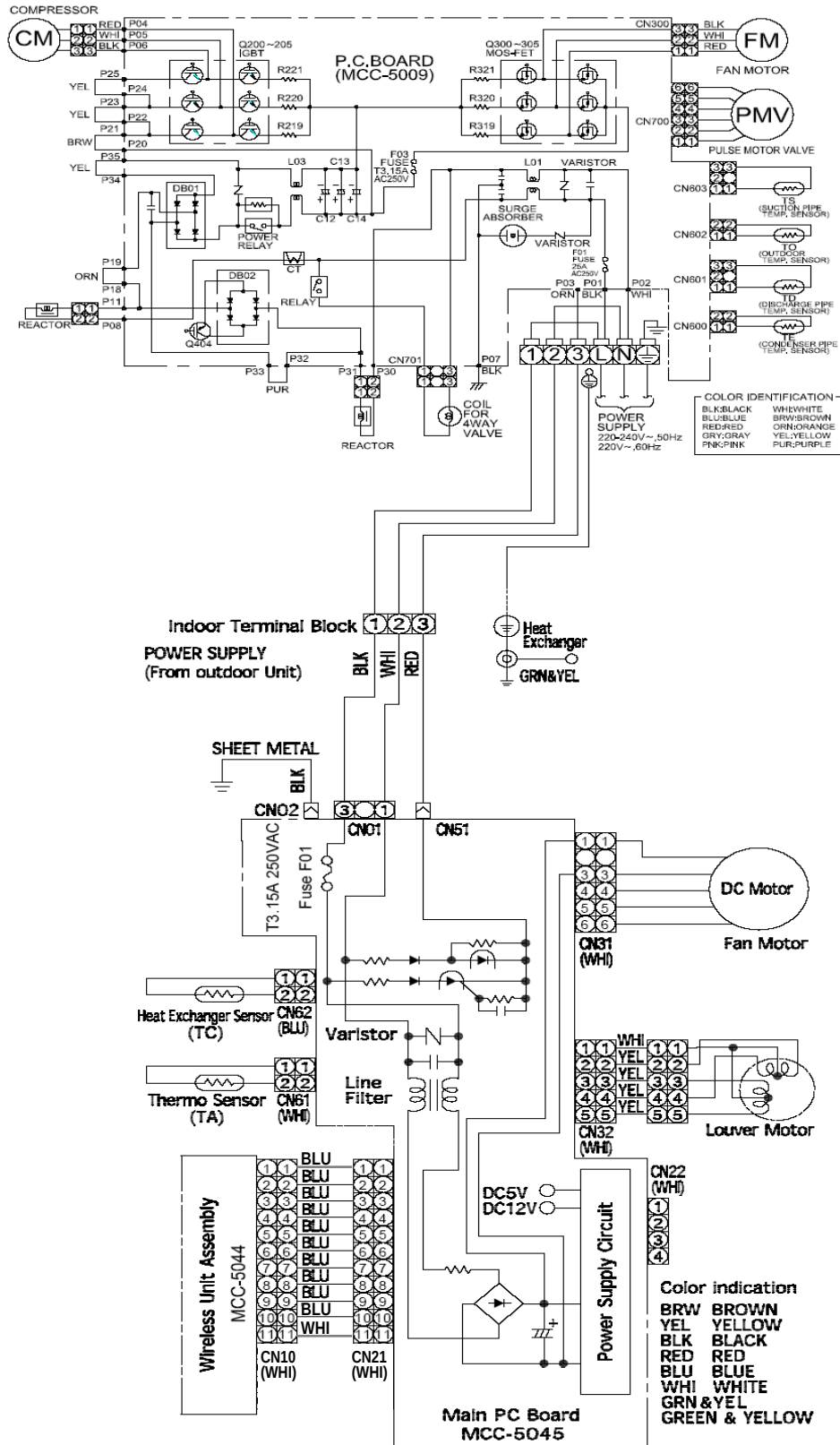
**Color Identification**

BRW BROWN  
YEL YELLOW  
BLK BLACK  
RED RED  
BLU BLUE  
WHI WHITE  
GRN & YEL GREEN & YELLOW



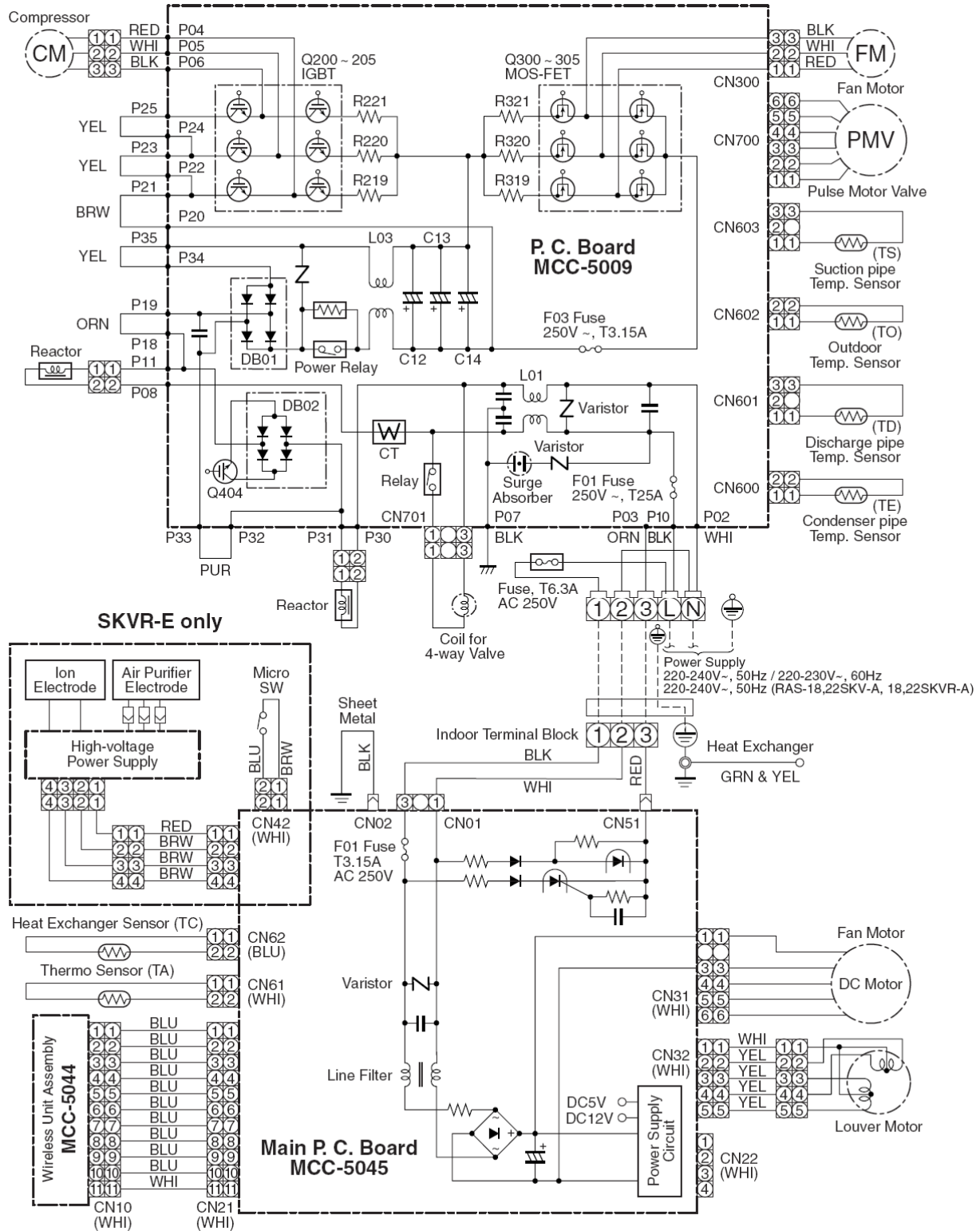
## Wiring Diagram

## RAS-16SKV2-A1 / RAS-16SAV2-A1



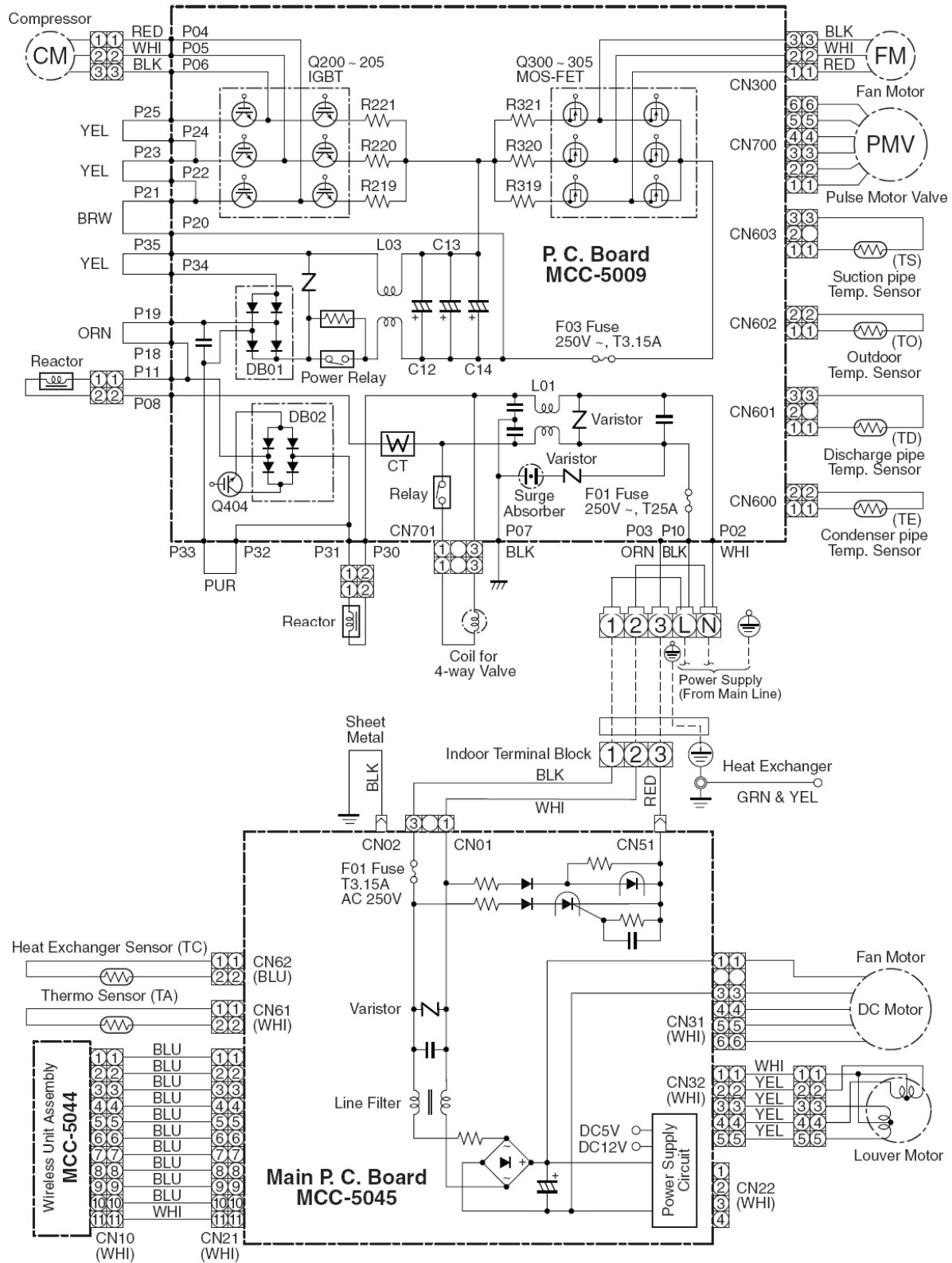
## Wiring Diagram

## RAS-18SKV-A / RAS-18SAV2-A



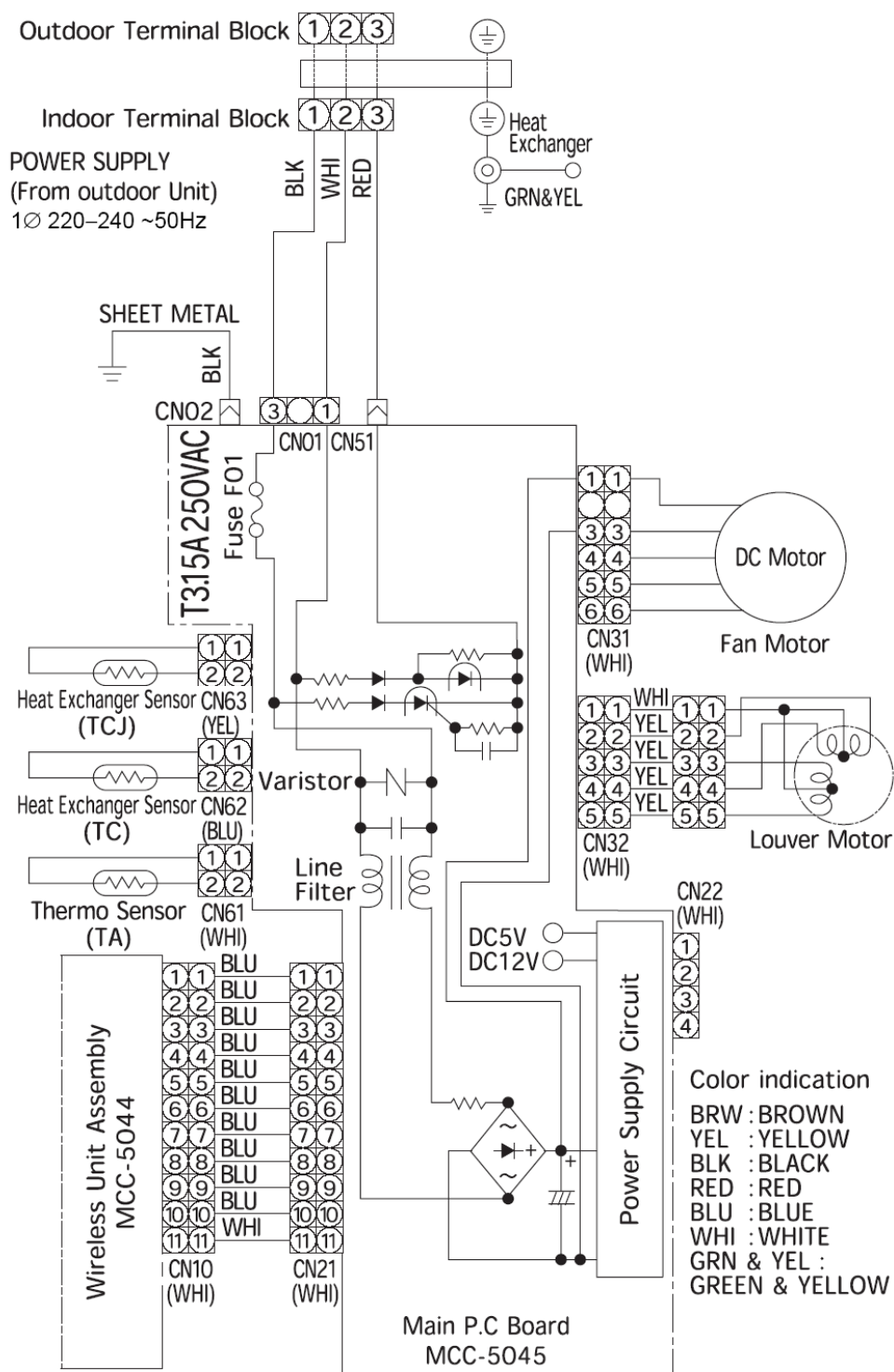
## Wiring Diagram

## RAS-22SKV2-A1 / RAS-22SAV2-A1



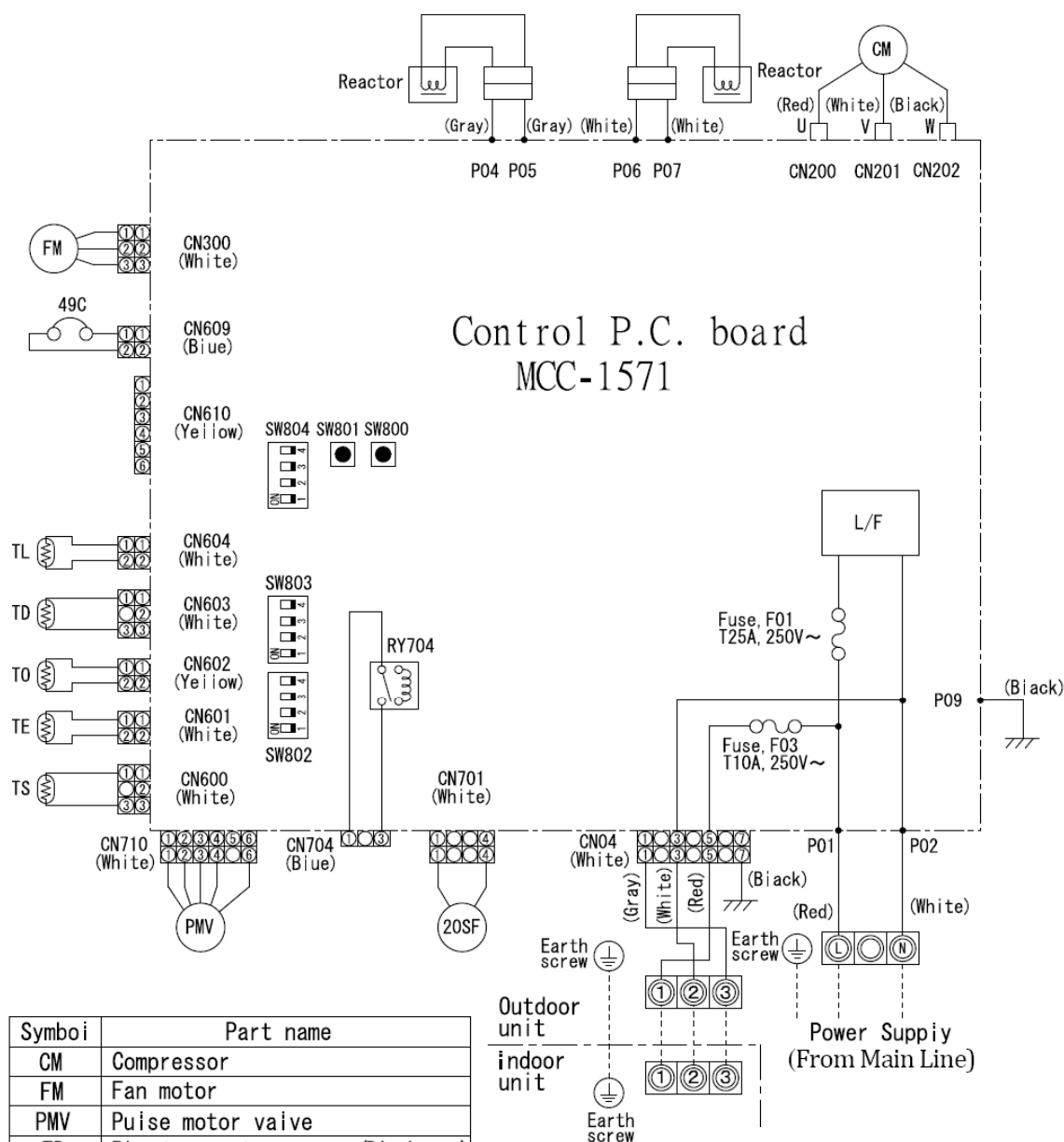
# Wiring Diagram

## Indoor unit: RAS-24SKV2-A



# Wiring Diagram

## Outdoor unit: RAS-24SAV2-A



1. © indicates the terminal block. Alphanumeric characters in the circle indicate the terminal No.
2. The two-dot chain line indicates the wiring procured locally.
3. [ ] indicates the P.C. board.
4. For the indoor unit circuit, refer to the wiring diagram of the indoor unit.

## Sensible Capacity Table

### Trend of Total & Sensible Heat Capacity / Indoor Air & Outdoor Air temperature.

Product models : RAS-10SKV2-A / RAS-10SAVR-A

Specification of product at standard condition.

|                    |         |                 |                              |         |
|--------------------|---------|-----------------|------------------------------|---------|
| Standard Condition | Indoor  | 27°CDB / 19°CWB | Total Cooling Capacity (TC)  | 2.50 kW |
|                    | Outdoor | 35°CDB / 24°CWB | Sensible Heat Capacity (SHC) | 1.99 kW |

| Outdoor<br>air temp.<br>CDB | Indoor air temp.     |      |                      |      |                      |      |                      |      |                      |      |                      |      |                      |      |
|-----------------------------|----------------------|------|----------------------|------|----------------------|------|----------------------|------|----------------------|------|----------------------|------|----------------------|------|
|                             | 14.0°CWB<br>20.0°CDB |      | 16.0°CWB<br>23.0°CDB |      | 18.0°CWB<br>26.0°CDB |      | 19.0°CWB<br>27.0°CDB |      | 20.0°CWB<br>28.0°CDB |      | 22.0°CWB<br>30.0°CDB |      | 24.0°CWB<br>32.0°CDB |      |
|                             | TC                   | SHC  | TC                   | SHC  | TC                   | SHC  | TC                   | SHC  | TC                   | SHC  | TC                   | SHC  | TC                   | SHC  |
| 21.0                        | 2.42                 | 2.08 | 2.68                 | 2.21 | 2.86                 | 2.35 | 2.95                 | 2.35 | 3.03                 | 2.35 | 3.21                 | 2.32 | 3.36                 | 2.28 |
| 23.0                        | 2.37                 | 2.03 | 2.62                 | 2.16 | 2.80                 | 2.30 | 2.89                 | 2.30 | 2.97                 | 2.29 | 3.14                 | 2.27 | 3.29                 | 2.23 |
| 25.0                        | 2.32                 | 1.99 | 2.56                 | 2.12 | 2.74                 | 2.25 | 2.82                 | 2.25 | 2.90                 | 2.24 | 3.07                 | 2.22 | 3.21                 | 2.18 |
| 27.0                        | 2.26                 | 1.94 | 2.50                 | 2.07 | 2.68                 | 2.20 | 2.76                 | 2.19 | 2.84                 | 2.19 | 3.00                 | 2.17 | 3.14                 | 2.13 |
| 29.0                        | 2.21                 | 1.89 | 2.44                 | 2.02 | 2.62                 | 2.15 | 2.69                 | 2.14 | 2.77                 | 2.14 | 2.93                 | 2.12 | 3.07                 | 2.08 |
| 31.0                        | 2.16                 | 1.85 | 2.38                 | 1.97 | 2.55                 | 2.10 | 2.63                 | 2.09 | 2.70                 | 2.09 | 2.86                 | 2.07 | 2.99                 | 2.03 |
| 33.0                        | 2.11                 | 1.80 | 2.33                 | 1.92 | 2.49                 | 2.04 | 2.56                 | 2.04 | 2.64                 | 2.04 | 2.79                 | 2.02 | 2.92                 | 1.98 |
| 35.0                        | 2.05                 | 1.76 | 2.27                 | 1.88 | 2.43                 | 1.99 | 2.50                 | 1.99 | 2.57                 | 1.99 | 2.72                 | 1.97 | 2.85                 | 1.93 |
| 37.0                        | 2.00                 | 1.71 | 2.21                 | 1.83 | 2.37                 | 1.94 | 2.44                 | 1.94 | 2.51                 | 1.94 | 2.65                 | 1.92 | 2.78                 | 1.88 |
| 39.0                        | 1.95                 | 1.67 | 2.15                 | 1.78 | 2.30                 | 1.89 | 2.37                 | 1.89 | 2.44                 | 1.89 | 2.58                 | 1.87 | 2.70                 | 1.83 |
| 41.0                        | 1.90                 | 1.62 | 2.09                 | 1.73 | 2.24                 | 1.84 | 2.31                 | 1.84 | 2.37                 | 1.84 | 2.51                 | 1.82 | 2.63                 | 1.78 |
| 43.0                        | 1.84                 | 1.58 | 2.03                 | 1.68 | 2.18                 | 1.79 | 2.24                 | 1.79 | 2.31                 | 1.78 | 2.44                 | 1.77 | 2.56                 | 1.73 |

### Trend of Total & Sensible Heat Capacity / Indoor Air & Outdoor Air temperature.

Product models : RAS-13SKV2-A1 / RAS-13SAV2-A1

Specification of product at standard condition.

|                    |         |                 |                              |         |
|--------------------|---------|-----------------|------------------------------|---------|
| Standard Condition | Indoor  | 27°CDB / 19°CWB | Total Cooling Capacity (TC)  | 3.40 kW |
|                    | Outdoor | 35°CDB / 24°CWB | Sensible Heat Capacity (SHC) | 2.70 kW |

| Outdoor<br>air temp.<br>CDB | Indoor air temp.   |      |                    |      |                    |      |                    |      |                    |      |                    |      |                    |      |
|-----------------------------|--------------------|------|--------------------|------|--------------------|------|--------------------|------|--------------------|------|--------------------|------|--------------------|------|
|                             | 14.0CWB<br>20.0CDB |      | 16.0CWB<br>23.0CDB |      | 18.0CWB<br>26.0CDB |      | 19.0CWB<br>27.0CDB |      | 20.0CWB<br>28.0CDB |      | 22.0CWB<br>30.0CDB |      | 24.0CWB<br>32.0CDB |      |
|                             | TC                 | SHC  | TC                 | SHC  | TC                 | SHC  | TC                 | SHC  | TC                 | SHC  | TC                 | SHC  | TC                 | SHC  |
| 21.0                        | 3.07               | 2.62 | 3.39               | 2.79 | 3.63               | 2.97 | 3.73               | 2.96 | 3.84               | 2.96 | 4.07               | 2.93 | 4.25               | 2.88 |
| 23.0                        | 3.04               | 2.60 | 3.35               | 2.77 | 3.59               | 2.94 | 3.70               | 2.93 | 3.80               | 2.93 | 4.03               | 2.90 | 4.21               | 2.85 |
| 25.0                        | 3.00               | 2.57 | 3.32               | 2.74 | 3.55               | 2.91 | 3.66               | 2.90 | 3.76               | 2.90 | 3.98               | 2.87 | 4.16               | 2.82 |
| 27.0                        | 2.97               | 2.54 | 3.28               | 2.70 | 3.51               | 2.87 | 3.61               | 2.87 | 3.71               | 2.87 | 3.93               | 2.84 | 4.11               | 2.78 |
| 29.0                        | 2.93               | 2.50 | 3.23               | 2.67 | 3.46               | 2.84 | 3.56               | 2.83 | 3.67               | 2.83 | 3.88               | 2.80 | 4.06               | 2.74 |
| 31.0                        | 2.88               | 2.47 | 3.19               | 2.63 | 3.41               | 2.79 | 3.51               | 2.79 | 3.61               | 2.79 | 3.83               | 2.76 | 4.00               | 2.71 |
| 33.0                        | 2.84               | 2.43 | 3.14               | 2.59 | 3.36               | 2.75 | 3.46               | 2.75 | 3.56               | 2.74 | 3.77               | 2.72 | 3.94               | 2.66 |
| 35.0                        | 2.79               | 2.39 | 3.08               | 2.54 | 3.30               | 2.71 | 3.40               | 2.70 | 3.50               | 2.70 | 3.70               | 2.67 | 3.87               | 2.62 |
| 37.0                        | 2.74               | 2.34 | 3.03               | 2.50 | 3.24               | 2.65 | 3.34               | 2.65 | 3.43               | 2.65 | 3.63               | 2.62 | 3.80               | 2.57 |
| 39.0                        | 2.68               | 2.29 | 2.96               | 2.45 | 3.17               | 2.60 | 3.27               | 2.59 | 3.36               | 2.59 | 3.56               | 2.57 | 3.72               | 2.52 |
| 41.0                        | 2.64               | 2.25 | 2.91               | 2.40 | 3.12               | 2.55 | 3.21               | 2.55 | 3.30               | 2.55 | 3.50               | 2.52 | 3.66               | 2.47 |
| 43.0                        | 2.58               | 2.21 | 2.85               | 2.35 | 3.05               | 2.50 | 3.14               | 2.49 | 3.23               | 2.49 | 3.42               | 2.47 | 3.58               | 2.42 |
| 45.0                        | 2.52               | 2.15 | 2.78               | 2.29 | 2.98               | 2.44 | 3.06               | 2.43 | 3.15               | 2.43 | 3.34               | 2.41 | 3.49               | 2.36 |
| 46.0                        | 2.49               | 2.13 | 2.75               | 2.27 | 2.95               | 2.41 | 3.03               | 2.41 | 3.12               | 2.41 | 3.30               | 2.38 | 3.46               | 2.34 |

## Sensible Capacity Table

### Trend of Total & Sensible Heat Capacity / Indoor Air & Outdoor Air temperature.

Product models : RAS-16SKV2-A1 / RAS-16SAV2-A1

#### Specification of product at standard condition.

|                    |         |                 |                              |         |
|--------------------|---------|-----------------|------------------------------|---------|
| Standard Condition | Indoor  | 27°CDB / 19°CWB | Total Cooling Capacity (TC)  | 4.40 kW |
|                    | Outdoor | 35°CDB / 24°CWB | Sensible Heat Capacity (SHC) | 3.30 kW |

| Outdoor<br>air temp.<br>CDB | Indoor air temp.   |      |                    |      |                    |      |                    |      |                    |      |                    |      |                    |      |
|-----------------------------|--------------------|------|--------------------|------|--------------------|------|--------------------|------|--------------------|------|--------------------|------|--------------------|------|
|                             | 14.0CWB<br>20.0CDB |      | 16.0CWB<br>23.0CDB |      | 18.0CWB<br>26.0CDB |      | 19.0CWB<br>27.0CDB |      | 20.0CWB<br>28.0CDB |      | 22.0CWB<br>30.0CDB |      | 24.0CWB<br>32.0CDB |      |
|                             | TC                 | SHC  | TC                 | SHC  | TC                 | SHC  | TC                 | SHC  | TC                 | SHC  | TC                 | SHC  | TC                 | SHC  |
| 21.0                        | 3.97               | 3.22 | 4.38               | 3.42 | 4.69               | 3.64 | 4.83               | 3.62 | 4.97               | 3.61 | 5.26               | 3.56 | 5.50               | 3.48 |
| 23.0                        | 3.93               | 3.19 | 4.34               | 3.39 | 4.65               | 3.60 | 4.78               | 3.59 | 4.92               | 3.58 | 5.21               | 3.53 | 5.45               | 3.44 |
| 25.0                        | 3.89               | 3.15 | 4.29               | 3.35 | 4.59               | 3.56 | 4.73               | 3.55 | 4.87               | 3.54 | 5.15               | 3.49 | 5.39               | 3.41 |
| 27.0                        | 3.84               | 3.11 | 4.24               | 3.31 | 4.54               | 3.52 | 4.67               | 3.50 | 4.81               | 3.50 | 5.09               | 3.45 | 5.32               | 3.36 |
| 29.0                        | 3.79               | 3.07 | 4.18               | 3.27 | 4.48               | 3.47 | 4.61               | 3.46 | 4.74               | 3.45 | 5.02               | 3.40 | 5.25               | 3.32 |
| 31.0                        | 3.73               | 3.03 | 4.12               | 3.22 | 4.42               | 3.42 | 4.55               | 3.41 | 4.68               | 3.40 | 4.95               | 3.35 | 5.18               | 3.27 |
| 33.0                        | 3.68               | 2.98 | 4.06               | 3.17 | 4.35               | 3.37 | 4.47               | 3.36 | 4.60               | 3.35 | 4.87               | 3.30 | 5.10               | 3.22 |
| 35.0                        | 3.61               | 2.93 | 3.99               | 3.12 | 4.27               | 3.31 | 4.40               | 3.30 | 4.53               | 3.29 | 4.79               | 3.25 | 5.01               | 3.17 |
| 37.0                        | 3.55               | 2.87 | 3.92               | 3.06 | 4.19               | 3.25 | 4.32               | 3.24 | 4.44               | 3.23 | 4.70               | 3.18 | 4.92               | 3.11 |
| 39.0                        | 3.47               | 2.82 | 3.84               | 3.00 | 4.11               | 3.18 | 4.23               | 3.17 | 4.35               | 3.16 | 4.61               | 3.12 | 4.82               | 3.04 |
| 41.0                        | 3.41               | 2.77 | 3.77               | 2.94 | 4.03               | 3.13 | 4.15               | 3.12 | 4.27               | 3.11 | 4.52               | 3.06 | 4.73               | 2.99 |
| 43.0                        | 3.34               | 2.71 | 3.69               | 2.88 | 3.95               | 3.06 | 4.07               | 3.05 | 4.18               | 3.04 | 4.43               | 3.00 | 4.63               | 2.93 |
| 45.0                        | 3.26               | 2.64 | 3.60               | 2.81 | 3.85               | 2.98 | 3.96               | 2.97 | 4.08               | 2.97 | 4.32               | 2.92 | 4.52               | 2.85 |
| 46.0                        | 3.22               | 2.61 | 3.56               | 2.78 | 3.81               | 2.95 | 3.92               | 2.94 | 4.04               | 2.94 | 4.28               | 2.90 | 4.47               | 2.83 |

### Trend of Total & Sensible Heat Capacity / Indoor Air & Outdoor Air temperature.

Product models : RAS-18SKV-A / RAS-18SAV2-A

#### Specification of product at standard condition.

|                    |         |                 |                              |         |
|--------------------|---------|-----------------|------------------------------|---------|
| Standard Condition | Indoor  | 27°CDB / 19°CWB | Total Cooling Capacity (TC)  | 5.00 kW |
|                    | Outdoor | 35°CDB / 24°CWB | Sensible Heat Capacity (SHC) | 3.60 kW |

| Outdoor<br>air temp.<br>CDB | Indoor air temp.   |      |                    |      |                    |      |                    |      |                    |      |                    |      |                    |      |
|-----------------------------|--------------------|------|--------------------|------|--------------------|------|--------------------|------|--------------------|------|--------------------|------|--------------------|------|
|                             | 14.0CWB<br>20.0CDB |      | 16.0CWB<br>23.0CDB |      | 18.0CWB<br>26.0CDB |      | 19.0CWB<br>27.0CDB |      | 20.0CWB<br>28.0CDB |      | 22.0CWB<br>30.0CDB |      | 24.0CWB<br>32.0CDB |      |
|                             | TC                 | SHC  | TC                 | SHC  | TC                 | SHC  | TC                 | SHC  | TC                 | SHC  | TC                 | SHC  | TC                 | SHC  |
| 21.0                        | 4.51               | 3.52 | 4.98               | 3.74 | 5.33               | 3.97 | 5.49               | 3.95 | 5.65               | 3.94 | 5.98               | 3.87 | 6.25               | 3.76 |
| 23.0                        | 4.46               | 3.49 | 4.93               | 3.70 | 5.28               | 3.93 | 5.44               | 3.91 | 5.59               | 3.90 | 5.92               | 3.83 | 6.19               | 3.73 |
| 25.0                        | 4.42               | 3.45 | 4.88               | 3.66 | 5.22               | 3.89 | 5.38               | 3.87 | 5.53               | 3.86 | 5.85               | 3.79 | 6.12               | 3.69 |
| 27.0                        | 4.36               | 3.41 | 4.82               | 3.62 | 5.16               | 3.84 | 5.31               | 3.82 | 5.46               | 3.81 | 5.78               | 3.74 | 6.05               | 3.64 |
| 29.0                        | 4.30               | 3.36 | 4.75               | 3.57 | 5.09               | 3.79 | 5.24               | 3.77 | 5.39               | 3.76 | 5.71               | 3.69 | 5.97               | 3.59 |
| 31.0                        | 4.24               | 3.31 | 4.69               | 3.52 | 5.02               | 3.74 | 5.17               | 3.72 | 5.31               | 3.70 | 5.63               | 3.64 | 5.88               | 3.54 |
| 33.0                        | 4.18               | 3.26 | 4.61               | 3.46 | 4.94               | 3.68 | 5.09               | 3.66 | 5.23               | 3.65 | 5.54               | 3.58 | 5.79               | 3.49 |
| 35.0                        | 4.11               | 3.21 | 4.54               | 3.41 | 4.86               | 3.62 | 5.00               | 3.60 | 5.14               | 3.59 | 5.45               | 3.52 | 5.70               | 3.43 |
| 37.0                        | 4.03               | 3.15 | 4.45               | 3.34 | 4.76               | 3.55 | 4.91               | 3.53 | 5.05               | 3.52 | 5.34               | 3.46 | 5.59               | 3.36 |
| 39.0                        | 3.95               | 3.08 | 4.36               | 3.27 | 4.67               | 3.48 | 4.81               | 3.46 | 4.94               | 3.45 | 5.23               | 3.39 | 5.47               | 3.30 |
| 41.0                        | 3.88               | 3.03 | 4.28               | 3.22 | 4.59               | 3.42 | 4.72               | 3.40 | 4.85               | 3.39 | 5.14               | 3.33 | 5.38               | 3.24 |
| 43.0                        | 3.79               | 2.96 | 4.19               | 3.15 | 4.49               | 3.34 | 4.62               | 3.33 | 4.75               | 3.31 | 5.03               | 3.26 | 5.26               | 3.17 |
| 45.0                        | 3.70               | 2.89 | 4.09               | 3.07 | 4.38               | 3.26 | 4.51               | 3.24 | 4.63               | 3.23 | 4.91               | 3.18 | 5.13               | 3.09 |
| 46.0                        | 3.66               | 2.86 | 4.05               | 3.04 | 4.33               | 3.23 | 4.46               | 3.21 | 4.59               | 3.20 | 4.86               | 3.14 | 5.08               | 3.06 |

## Sensible Capacity Table

### Trend of Total & Sensible Heat Capacity / Indoor Air & Outdoor Air temperature.

Product models : RAS-22SKV2-A1 / RAS-22SAV2-A1

#### Specification of product at standard condition.

|                    |         |                 |                              |         |
|--------------------|---------|-----------------|------------------------------|---------|
| Standard Condition | Indoor  | 27°CDB / 19°CWB | Total Cooling Capacity (TC)  | 6.00 kW |
|                    | Outdoor | 35°CDB / 24°CWB | Sensible Heat Capacity (SHC) | 4.30 kW |

| Outdoor<br>air temp.<br>CDB | Indoor air temp.   |      |                    |      |                    |      |                    |      |                    |      |                    |      |                    |      |
|-----------------------------|--------------------|------|--------------------|------|--------------------|------|--------------------|------|--------------------|------|--------------------|------|--------------------|------|
|                             | 14.0CWB<br>20.0CDB |      | 16.0CWB<br>23.0CDB |      | 18.0CWB<br>26.0CDB |      | 19.0CWB<br>27.0CDB |      | 20.0CWB<br>28.0CDB |      | 22.0CWB<br>30.0CDB |      | 24.0CWB<br>32.0CDB |      |
|                             | TC                 | SHC  | TC                 | SHC  | TC                 | SHC  | TC                 | SHC  | TC                 | SHC  | TC                 | SHC  | TC                 | SHC  |
| 21.0                        | 5.41               | 4.21 | 5.98               | 4.47 | 6.40               | 4.75 | 6.59               | 4.72 | 6.78               | 4.70 | 7.18               | 4.62 | 7.51               | 4.49 |
| 23.0                        | 5.36               | 4.17 | 5.92               | 4.42 | 6.34               | 4.70 | 6.52               | 4.67 | 6.71               | 4.66 | 7.10               | 4.57 | 7.43               | 4.45 |
| 25.0                        | 5.30               | 4.12 | 5.85               | 4.37 | 6.27               | 4.65 | 6.45               | 4.62 | 6.63               | 4.60 | 7.03               | 4.52 | 7.35               | 4.40 |
| 27.0                        | 5.23               | 4.07 | 5.78               | 4.32 | 6.19               | 4.59 | 6.37               | 4.57 | 6.55               | 4.55 | 6.94               | 4.47 | 7.26               | 4.35 |
| 29.0                        | 5.16               | 4.02 | 5.70               | 4.26 | 6.11               | 4.53 | 6.29               | 4.51 | 6.47               | 4.49 | 6.85               | 4.41 | 7.16               | 4.29 |
| 31.0                        | 5.09               | 3.96 | 5.62               | 4.20 | 6.02               | 4.47 | 6.20               | 4.44 | 6.38               | 4.42 | 6.75               | 4.35 | 7.06               | 4.23 |
| 33.0                        | 5.01               | 3.90 | 5.54               | 4.14 | 5.93               | 4.40 | 6.10               | 4.37 | 6.28               | 4.36 | 6.65               | 4.28 | 6.95               | 4.16 |
| 35.0                        | 4.93               | 3.83 | 5.44               | 4.07 | 5.83               | 4.32 | 6.00               | 4.30 | 6.17               | 4.28 | 6.54               | 4.21 | 6.84               | 4.09 |
| 37.0                        | 4.83               | 3.76 | 5.34               | 3.99 | 5.72               | 4.24 | 5.89               | 4.22 | 6.05               | 4.20 | 6.41               | 4.13 | 6.71               | 4.01 |
| 39.0                        | 4.74               | 3.68 | 5.23               | 3.91 | 5.60               | 4.15 | 5.77               | 4.13 | 5.93               | 4.12 | 6.28               | 4.04 | 6.57               | 3.93 |
| 41.0                        | 4.65               | 3.62 | 5.14               | 3.84 | 5.50               | 4.08 | 5.66               | 4.06 | 5.83               | 4.04 | 6.17               | 3.97 | 6.45               | 3.86 |
| 43.0                        | 4.55               | 3.54 | 5.03               | 3.76 | 5.39               | 3.99 | 5.54               | 3.97 | 5.70               | 3.96 | 6.04               | 3.89 | 6.32               | 3.78 |
| 45.0                        | 4.44               | 3.45 | 4.90               | 3.67 | 5.25               | 3.89 | 5.41               | 3.87 | 5.56               | 3.86 | 5.89               | 3.79 | 6.16               | 3.69 |
| 46.0                        | 4.40               | 3.42 | 4.85               | 3.63 | 5.20               | 3.86 | 5.35               | 3.84 | 5.51               | 3.82 | 5.83               | 3.75 | 6.10               | 3.65 |

### Trend of Total & Sensible Heat Capacity / Indoor Air & Outdoor Air temperature.

Product models : RAS-24SKV2-A / RAS-24SAV2-A

#### Specification of product at standard condition.

|                    |         |                 |                              |         |
|--------------------|---------|-----------------|------------------------------|---------|
| Standard Condition | Indoor  | 27°CDB / 19°CWB | Total Cooling Capacity (TC)  | 7.10 kW |
|                    | Outdoor | 35°CDB / 24°CWB | Sensible Heat Capacity (SHC) | 5.42 kW |

| Outdoor<br>air temp.<br>CDB | Indoor air temp.   |      |                    |      |                    |      |                    |      |                    |      |                    |      |                    |      |
|-----------------------------|--------------------|------|--------------------|------|--------------------|------|--------------------|------|--------------------|------|--------------------|------|--------------------|------|
|                             | 14.0CWB<br>20.0CDB |      | 16.0CWB<br>23.0CDB |      | 18.0CWB<br>26.0CDB |      | 19.0CWB<br>27.0CDB |      | 20.0CWB<br>28.0CDB |      | 22.0CWB<br>30.0CDB |      | 24.0CWB<br>32.0CDB |      |
|                             | TC                 | SHC  | TC                 | SHC  | TC                 | SHC  | TC                 | SHC  | TC                 | SHC  | TC                 | SHC  | TC                 | SHC  |
| 21.0                        | 6.40               | 5.28 | 7.07               | 5.62 | 7.57               | 5.97 | 7.80               | 5.95 | 8.02               | 5.94 | 8.49               | 5.86 | 8.88               | 5.73 |
| 23.0                        | 6.34               | 5.22 | 7.00               | 5.56 | 7.50               | 5.91 | 7.72               | 5.89 | 7.94               | 5.88 | 8.41               | 5.81 | 8.79               | 5.67 |
| 25.0                        | 6.27               | 5.17 | 6.92               | 5.50 | 7.41               | 5.85 | 7.63               | 5.83 | 7.85               | 5.81 | 8.31               | 5.74 | 8.70               | 5.61 |
| 27.0                        | 6.19               | 5.10 | 6.84               | 5.43 | 7.32               | 5.77 | 7.54               | 5.76 | 7.76               | 5.74 | 8.21               | 5.67 | 8.59               | 5.54 |
| 29.0                        | 6.11               | 5.04 | 6.75               | 5.36 | 7.23               | 5.70 | 7.44               | 5.68 | 7.65               | 5.67 | 8.11               | 5.60 | 8.48               | 5.47 |
| 31.0                        | 6.02               | 4.97 | 6.65               | 5.28 | 7.12               | 5.62 | 7.33               | 5.60 | 7.54               | 5.59 | 7.99               | 5.52 | 8.36               | 5.39 |
| 33.0                        | 5.93               | 4.89 | 6.55               | 5.20 | 7.01               | 5.53 | 7.22               | 5.51 | 7.43               | 5.50 | 7.87               | 5.43 | 8.23               | 5.31 |
| 35.0                        | 5.83               | 4.81 | 6.44               | 5.12 | 6.90               | 5.44 | 7.10               | 5.42 | 7.30               | 5.41 | 7.73               | 5.34 | 8.09               | 5.22 |
| 37.0                        | 5.72               | 4.72 | 6.32               | 5.02 | 6.77               | 5.33 | 6.97               | 5.32 | 7.16               | 5.31 | 7.59               | 5.24 | 7.94               | 5.12 |
| 39.0                        | 5.60               | 4.62 | 6.19               | 4.92 | 6.63               | 5.23 | 6.82               | 5.21 | 7.02               | 5.20 | 7.43               | 5.13 | 7.77               | 5.02 |
| 41.0                        | 5.51               | 4.54 | 6.08               | 4.83 | 6.51               | 5.13 | 6.70               | 5.12 | 6.89               | 5.11 | 7.30               | 5.04 | 7.64               | 4.93 |
| 43.0                        | 5.39               | 4.44 | 5.95               | 4.73 | 6.37               | 5.02 | 6.56               | 5.01 | 6.75               | 5.00 | 7.15               | 4.94 | 7.47               | 4.82 |
| 45.0                        | 5.25               | 4.33 | 5.80               | 4.61 | 6.21               | 4.90 | 6.40               | 4.88 | 6.58               | 4.87 | 6.97               | 4.81 | 7.29               | 4.70 |
| 46.0                        | 5.20               | 4.29 | 5.74               | 4.56 | 6.15               | 4.85 | 6.33               | 4.83 | 6.51               | 4.83 | 6.90               | 4.76 | 7.22               | 4.66 |

## Part Load Performance

Single Split Type

Indoor: RAS-10SKV2-A

Outdoor: RAS-10SAVR-A

|         | Cooling |     | Heating |      |
|---------|---------|-----|---------|------|
|         | Q       | W   | Q       | W    |
| MINIMUM | 1100    | 250 | 900     | 170  |
| RATING  | 2500    | 598 | 3200    | 750  |
| MAXIMUM | 3100    | 820 | 4800    | 1400 |

### Cooling

| OD temp. |   | Load(%) |      |      |      |      |      |      |      |      |      |
|----------|---|---------|------|------|------|------|------|------|------|------|------|
|          |   | 100     | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| 46       | Q | 2146    | 1932 | 1717 | 1502 | 1288 | 1073 | 944  | 944  | 944  | 944  |
|          | W | 688     | 616  | 545  | 473  | 402  | 330  | 288  | 288  | 288  | 288  |
| 43       | Q | 2240    | 2016 | 1792 | 1568 | 1344 | 1120 | 985  | 985  | 985  | 985  |
|          | W | 667     | 598  | 529  | 459  | 390  | 321  | 279  | 279  | 279  | 279  |
| 40       | Q | 2344    | 2110 | 1875 | 1641 | 1407 | 1172 | 1031 | 1031 | 1031 | 1031 |
|          | W | 638     | 572  | 505  | 439  | 373  | 307  | 267  | 267  | 267  | 267  |
| 35       | Q | 2500    | 2250 | 2000 | 1750 | 1500 | 1250 | 1100 | 1100 | 1100 | 1100 |
|          | W | 598     | 536  | 474  | 412  | 349  | 287  | 250  | 250  | 250  | 250  |
| 30       | Q | 2657    | 2391 | 2125 | 1860 | 1594 | 1328 | 1169 | 1169 | 1169 | 1169 |
|          | W | 558     | 500  | 442  | 384  | 326  | 268  | 233  | 233  | 233  | 233  |
| 25       | Q | 2823    | 2540 | 2258 | 1976 | 1694 | 1411 | 1242 | 1242 | 1242 | 1242 |
|          | W | 508     | 455  | 403  | 350  | 297  | 244  | 213  | 213  | 213  | 213  |
| 20       | Q | 2964    | 2667 | 2371 | 2075 | 1778 | 1482 | 1304 | 1304 | 1304 | 1304 |
|          | W | 469     | 421  | 372  | 323  | 274  | 226  | 196  | 196  | 196  | 196  |

### Heating

| OD temp. |   | Load(%) |      |      |      |      |      |      |      |      |      |
|----------|---|---------|------|------|------|------|------|------|------|------|------|
|          |   | 100     | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| 20       | Q | 4272    | 3845 | 3418 | 2990 | 2563 | 2136 | 1709 | 1282 | 1202 | 1202 |
|          | W | 901     | 804  | 707  | 610  | 513  | 416  | 319  | 222  | 204  | 204  |
| 15       | Q | 3859    | 3473 | 3087 | 2701 | 2316 | 1930 | 1544 | 1158 | 1085 | 1085 |
|          | W | 843     | 752  | 662  | 571  | 480  | 389  | 299  | 208  | 191  | 191  |
| 10       | Q | 3450    | 3105 | 2760 | 2415 | 2070 | 1725 | 1380 | 1035 | 970  | 970  |
|          | W | 780     | 696  | 612  | 528  | 444  | 360  | 276  | 193  | 177  | 177  |
| 7        | Q | 3200    | 2880 | 2560 | 2240 | 1920 | 1600 | 1280 | 960  | 900  | 900  |
|          | W | 750     | 669  | 589  | 508  | 427  | 347  | 266  | 185  | 170  | 170  |
| 5        | Q | 2430    | 2187 | 1944 | 1701 | 1458 | 1215 | 972  | 729  | 683  | 683  |
|          | W | 690     | 616  | 542  | 467  | 393  | 319  | 245  | 170  | 156  | 156  |
| 2        | Q | 2320    | 2088 | 1856 | 1624 | 1392 | 1160 | 928  | 696  | 653  | 653  |
|          | W | 660     | 589  | 518  | 447  | 376  | 305  | 234  | 163  | 150  | 150  |
| 0        | Q | 2240    | 2016 | 1792 | 1568 | 1344 | 1120 | 896  | 672  | 630  | 630  |
|          | W | 650     | 580  | 510  | 440  | 370  | 300  | 230  | 160  | 147  | 147  |
| -5       | Q | 2050    | 1845 | 1640 | 1435 | 1230 | 1025 | 820  | 615  | 576  | 576  |
|          | W | 600     | 535  | 471  | 406  | 342  | 277  | 213  | 148  | 136  | 136  |
| -7       | Q | 1980    | 1782 | 1584 | 1386 | 1188 | 990  | 792  | 594  | 557  | 557  |
|          | W | 580     | 517  | 455  | 393  | 330  | 268  | 205  | 143  | 131  | 131  |
| -10      | Q | 1800    | 1620 | 1440 | 1260 | 1080 | 900  | 720  | 540  | 506  | 506  |
|          | W | 550     | 491  | 431  | 372  | 313  | 254  | 195  | 136  | 125  | 125  |
| -15      | Q | 1380    | 1242 | 1104 | 966  | 828  | 690  | 552  | 414  | 388  | 388  |
|          | W | 490     | 437  | 384  | 332  | 279  | 226  | 174  | 121  | 111  | 111  |
| -20      | Q | 970     | 873  | 776  | 679  | 582  | 485  | 388  | 291  | 273  | 273  |
|          | W | 437     | 390  | 343  | 296  | 249  | 202  | 155  | 108  | 99   | 99   |

## Part Load Performance

Single Split Type

Indoor: RAS-13SKV2-A1

Outdoor: RAS-13SAV2-A1

|         | Cooling |      | Heating |      |
|---------|---------|------|---------|------|
|         | Q       | W    | Q       | W    |
| MINIMUM | 2000    | 490  | 1800    | 380  |
| RATING  | 3400    | 920  | 4200    | 1120 |
| MAXIMUM | 4100    | 1300 | 5600    | 1690 |

### Cooling

| OD temp. |   | Load(%) |      |      |      |      |      |      |      |      |      |
|----------|---|---------|------|------|------|------|------|------|------|------|------|
|          |   | 100     | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| 46       | Q | 2919    | 2627 | 2335 | 2043 | 1751 | 1717 | 1717 | 1717 | 1717 | 1717 |
|          | W | 1058    | 938  | 818  | 698  | 578  | 564  | 564  | 564  | 564  | 564  |
| 43       | Q | 3046    | 2741 | 2437 | 2132 | 1827 | 1792 | 1792 | 1792 | 1792 | 1792 |
|          | W | 1027    | 910  | 794  | 677  | 561  | 547  | 547  | 547  | 547  | 547  |
| 40       | Q | 3188    | 2869 | 2551 | 2232 | 1913 | 1875 | 1875 | 1875 | 1875 | 1875 |
|          | W | 982     | 870  | 759  | 647  | 536  | 523  | 523  | 523  | 523  | 523  |
| 35       | Q | 3400    | 3060 | 2720 | 2380 | 2040 | 2000 | 2000 | 2000 | 2000 | 2000 |
|          | W | 920     | 816  | 711  | 607  | 502  | 490  | 490  | 490  | 490  | 490  |
| 30       | Q | 3613    | 3252 | 2890 | 2529 | 2168 | 2125 | 2125 | 2125 | 2125 | 2125 |
|          | W | 858     | 761  | 663  | 566  | 469  | 457  | 457  | 457  | 457  | 457  |
| 25       | Q | 3839    | 3455 | 3071 | 2687 | 2303 | 2258 | 2258 | 2258 | 2258 | 2258 |
|          | W | 782     | 693  | 604  | 516  | 427  | 417  | 417  | 417  | 417  | 417  |
| 20       | Q | 4031    | 3628 | 3225 | 2821 | 2418 | 2371 | 2371 | 2371 | 2371 | 2371 |
|          | W | 722     | 640  | 558  | 476  | 394  | 385  | 385  | 385  | 385  | 385  |

### Heating

| OD temp. |   | Load(%) |      |      |      |      |      |      |      |      |      |
|----------|---|---------|------|------|------|------|------|------|------|------|------|
|          |   | 100     | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| 20       | Q | 5607    | 5046 | 4486 | 3925 | 3364 | 2804 | 2403 | 2403 | 2403 | 2403 |
|          | W | 1345    | 1190 | 1034 | 879  | 723  | 567  | 456  | 456  | 456  | 456  |
| 15       | Q | 5065    | 4559 | 4052 | 3546 | 3039 | 2533 | 2171 | 2171 | 2171 | 2171 |
|          | W | 1259    | 1113 | 968  | 822  | 677  | 531  | 427  | 427  | 427  | 427  |
| 10       | Q | 4528    | 4075 | 3622 | 3169 | 2717 | 2264 | 1940 | 1940 | 1940 | 1940 |
|          | W | 1165    | 1030 | 895  | 761  | 626  | 491  | 395  | 395  | 395  | 395  |
| 7        | Q | 4200    | 3780 | 3360 | 2940 | 2520 | 2100 | 1800 | 1800 | 1800 | 1800 |
|          | W | 1120    | 991  | 861  | 732  | 602  | 473  | 380  | 380  | 380  | 380  |
| 5        | Q | 3189    | 2870 | 2551 | 2232 | 1913 | 1595 | 1367 | 1367 | 1367 | 1367 |
|          | W | 1030    | 911  | 792  | 673  | 554  | 435  | 350  | 350  | 350  | 350  |
| 2        | Q | 3045    | 2741 | 2436 | 2132 | 1827 | 1523 | 1305 | 1305 | 1305 | 1305 |
|          | W | 986     | 872  | 758  | 644  | 530  | 416  | 334  | 334  | 334  | 334  |
| 0        | Q | 2940    | 2646 | 2352 | 2058 | 1764 | 1470 | 1260 | 1260 | 1260 | 1260 |
|          | W | 970     | 858  | 746  | 633  | 521  | 409  | 329  | 329  | 329  | 329  |
| -5       | Q | 2690    | 2421 | 2152 | 1883 | 1614 | 1345 | 1153 | 1153 | 1153 | 1153 |
|          | W | 896     | 792  | 689  | 585  | 482  | 378  | 304  | 304  | 304  | 304  |
| -7       | Q | 2598    | 2338 | 2078 | 1819 | 1559 | 1299 | 1113 | 1113 | 1113 | 1113 |
|          | W | 866     | 766  | 666  | 565  | 465  | 365  | 294  | 294  | 294  | 294  |
| -10      | Q | 2363    | 2126 | 1890 | 1654 | 1418 | 1181 | 1013 | 1013 | 1013 | 1013 |
|          | W | 821     | 726  | 631  | 536  | 441  | 346  | 279  | 279  | 279  | 279  |
| -15      | Q | 1811    | 1630 | 1449 | 1268 | 1087 | 906  | 776  | 776  | 776  | 776  |
|          | W | 731     | 647  | 562  | 478  | 393  | 309  | 248  | 248  | 248  | 248  |
| -20      | Q | 1273    | 1145 | 1018 | 891  | 764  | 636  | 545  | 545  | 545  | 545  |
|          | W | 652     | 576  | 501  | 426  | 350  | 275  | 221  | 221  | 221  | 221  |

## Part Load Performance

Single Split Type

Indoor: RAS-16SKV2-A1

Outdoor: RAS-16SAV2-A1

|         | Cooling |      | Heating |      |
|---------|---------|------|---------|------|
|         | Q       | W    | Q       | W    |
| MINIMUM | 800     | 150  | 900     | 150  |
| RATING  | 4400    | 1340 | 5300    | 1500 |
| MAXIMUM | 5000    | 1720 | 6300    | 1980 |

### Cooling

| OD temp. |   | Load(%) |      |      |      |      |      |      |      |      |     |
|----------|---|---------|------|------|------|------|------|------|------|------|-----|
|          |   | 100     | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10  |
| 46       | Q | 3777    | 3400 | 3022 | 2644 | 2266 | 1889 | 1511 | 1133 | 755  | 687 |
|          | W | 1541    | 1374 | 1206 | 1039 | 872  | 705  | 537  | 370  | 203  | 173 |
| 43       | Q | 3942    | 3547 | 3153 | 2759 | 2365 | 1971 | 1577 | 1182 | 788  | 717 |
|          | W | 1495    | 1333 | 1171 | 1008 | 846  | 684  | 522  | 359  | 197  | 167 |
| 40       | Q | 4126    | 3713 | 3301 | 2888 | 2476 | 2063 | 1650 | 1238 | 825  | 750 |
|          | W | 1430    | 1275 | 1119 | 964  | 809  | 654  | 499  | 343  | 188  | 160 |
| 35       | Q | 4400    | 3960 | 3520 | 3080 | 2640 | 2200 | 1760 | 1320 | 880  | 800 |
|          | W | 1340    | 1195 | 1049 | 904  | 758  | 613  | 467  | 322  | 176  | 150 |
| 30       | Q | 4675    | 4208 | 3740 | 3273 | 2805 | 2338 | 1870 | 1403 | 935  | 850 |
|          | W | 1250    | 1115 | 979  | 843  | 707  | 572  | 436  | 300  | 165  | 140 |
| 25       | Q | 4968    | 4471 | 3974 | 3477 | 2981 | 2484 | 1987 | 1490 | 994  | 903 |
|          | W | 1139    | 1015 | 892  | 768  | 644  | 521  | 397  | 274  | 150  | 128 |
| 20       | Q | 5216    | 4695 | 4173 | 3651 | 3130 | 2608 | 2086 | 1565 | 1043 | 948 |
|          | W | 1052    | 938  | 824  | 709  | 595  | 481  | 367  | 253  | 139  | 118 |

### Heating

| OD temp. |   | Load(%) |      |      |      |      |      |      |      |      |      |
|----------|---|---------|------|------|------|------|------|------|------|------|------|
|          |   | 100     | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| 20       | Q | 7076    | 6368 | 5660 | 4953 | 4245 | 3538 | 2830 | 2123 | 1415 | 1202 |
|          | W | 1802    | 1606 | 1411 | 1216 | 1020 | 825  | 630  | 434  | 239  | 180  |
| 15       | Q | 6392    | 5753 | 5113 | 4474 | 3835 | 3196 | 2557 | 1918 | 1278 | 1085 |
|          | W | 1686    | 1503 | 1320 | 1138 | 955  | 772  | 589  | 407  | 224  | 169  |
| 10       | Q | 5713    | 5142 | 4571 | 3999 | 3428 | 2857 | 2285 | 1714 | 1143 | 970  |
|          | W | 1560    | 1391 | 1222 | 1053 | 884  | 714  | 545  | 376  | 207  | 156  |
| 7        | Q | 5300    | 4770 | 4240 | 3710 | 3180 | 2650 | 2120 | 1590 | 1060 | 900  |
|          | W | 1500    | 1337 | 1175 | 1012 | 850  | 687  | 524  | 362  | 199  | 150  |
| 5        | Q | 4024    | 3622 | 3219 | 2817 | 2415 | 2012 | 1610 | 1207 | 805  | 683  |
|          | W | 1380    | 1230 | 1081 | 931  | 782  | 632  | 482  | 333  | 183  | 138  |
| 2        | Q | 3843    | 3458 | 3074 | 2690 | 2306 | 1921 | 1537 | 1153 | 769  | 653  |
|          | W | 1320    | 1177 | 1034 | 891  | 748  | 605  | 461  | 318  | 175  | 132  |
| 0        | Q | 3710    | 3339 | 2968 | 2597 | 2226 | 1855 | 1484 | 1113 | 742  | 630  |
|          | W | 1299    | 1158 | 1017 | 877  | 736  | 595  | 454  | 313  | 172  | 130  |
| -5       | Q | 3395    | 3055 | 2716 | 2376 | 2037 | 1697 | 1358 | 1018 | 679  | 576  |
|          | W | 1200    | 1070 | 940  | 810  | 680  | 550  | 419  | 289  | 159  | 120  |
| -7       | Q | 3279    | 2951 | 2623 | 2295 | 1967 | 1639 | 1311 | 984  | 656  | 557  |
|          | W | 1160    | 1034 | 908  | 782  | 657  | 531  | 405  | 280  | 154  | 116  |
| -10      | Q | 2981    | 2683 | 2385 | 2087 | 1789 | 1491 | 1193 | 894  | 596  | 506  |
|          | W | 1100    | 980  | 861  | 742  | 623  | 504  | 384  | 265  | 146  | 110  |
| -15      | Q | 2286    | 2057 | 1829 | 1600 | 1372 | 1143 | 914  | 686  | 457  | 388  |
|          | W | 980     | 873  | 767  | 661  | 555  | 449  | 342  | 236  | 130  | 98   |
| -20      | Q | 1606    | 1445 | 1285 | 1124 | 964  | 803  | 642  | 482  | 321  | 273  |
|          | W | 873     | 778  | 684  | 589  | 494  | 400  | 305  | 211  | 116  | 87   |

## Part Load Performance

### Single Split Type

Indoor: RAS-18SKV-A

Outdoor: RAS-18SAV2-A

|         | Cooling |      | Heating |      |
|---------|---------|------|---------|------|
|         | Q       | W    | Q       | W    |
| MINIMUM | 1100    | 180  | 800     | 140  |
| RATING  | 5000    | 1420 | 5800    | 1560 |
| MAXIMUM | 6000    | 2000 | 6300    | 1700 |

#### Cooling

| OD temp. |   | Load(%) |      |      |      |      |      |      |      |      |      |
|----------|---|---------|------|------|------|------|------|------|------|------|------|
|          |   | 100     | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| 46       | Q | 4293    | 3863 | 3434 | 3005 | 2576 | 2146 | 1717 | 1288 | 944  | 944  |
|          | W | 1633    | 1450 | 1267 | 1085 | 902  | 719  | 536  | 353  | 207  | 207  |
| 43       | Q | 4479    | 4031 | 3583 | 3135 | 2687 | 2240 | 1792 | 1344 | 985  | 985  |
|          | W | 1585    | 1407 | 1230 | 1052 | 875  | 698  | 520  | 343  | 201  | 201  |
| 40       | Q | 4689    | 4220 | 3751 | 3282 | 2813 | 2344 | 1875 | 1407 | 1031 | 1031 |
|          | W | 1515    | 1346 | 1176 | 1006 | 837  | 667  | 497  | 328  | 192  | 192  |
| 35       | Q | 5000    | 4500 | 4000 | 3500 | 3000 | 2500 | 2000 | 1500 | 1100 | 1100 |
|          | W | 1420    | 1261 | 1102 | 943  | 784  | 625  | 466  | 307  | 180  | 180  |
| 30       | Q | 5313    | 4782 | 4250 | 3719 | 3188 | 2657 | 2125 | 1594 | 1169 | 1169 |
|          | W | 1325    | 1177 | 1028 | 880  | 732  | 583  | 435  | 287  | 168  | 168  |
| 25       | Q | 5645    | 5081 | 4516 | 3952 | 3387 | 2823 | 2258 | 1694 | 1242 | 1242 |
|          | W | 1207    | 1072 | 937  | 802  | 666  | 531  | 396  | 261  | 153  | 153  |
| 20       | Q | 5928    | 5335 | 4742 | 4149 | 3557 | 2964 | 2371 | 1778 | 1304 | 1304 |
|          | W | 1115    | 990  | 865  | 740  | 616  | 491  | 366  | 241  | 141  | 141  |

#### Heating

| OD temp. |   | Load(%) |      |      |      |      |      |      |      |      |      |
|----------|---|---------|------|------|------|------|------|------|------|------|------|
|          |   | 100     | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| 20       | Q | 7743    | 6969 | 6194 | 5420 | 4646 | 3872 | 3097 | 2323 | 1549 | 1068 |
|          | W | 1874    | 1676 | 1478 | 1280 | 1082 | 884  | 687  | 489  | 291  | 168  |
| 15       | Q | 6995    | 6295 | 5596 | 4896 | 4197 | 3497 | 2798 | 2098 | 1399 | 965  |
|          | W | 1753    | 1568 | 1383 | 1198 | 1013 | 828  | 643  | 457  | 272  | 157  |
| 10       | Q | 6252    | 5627 | 5002 | 4377 | 3751 | 3126 | 2501 | 1876 | 1250 | 862  |
|          | W | 1622    | 1451 | 1280 | 1108 | 937  | 766  | 595  | 423  | 252  | 146  |
| 7        | Q | 5800    | 5220 | 4640 | 4060 | 3480 | 2900 | 2320 | 1740 | 1160 | 800  |
|          | W | 1560    | 1395 | 1231 | 1066 | 901  | 736  | 572  | 407  | 242  | 140  |
| 5        | Q | 4404    | 3964 | 3523 | 3083 | 2642 | 2202 | 1762 | 1321 | 881  | 607  |
|          | W | 1435    | 1284 | 1132 | 981  | 829  | 677  | 526  | 374  | 223  | 129  |
| 2        | Q | 4205    | 3785 | 3364 | 2944 | 2523 | 2103 | 1682 | 1262 | 841  | 580  |
|          | W | 1373    | 1228 | 1083 | 938  | 793  | 648  | 503  | 358  | 213  | 123  |
| 0        | Q | 4060    | 3654 | 3248 | 2842 | 2436 | 2030 | 1624 | 1218 | 812  | 560  |
|          | W | 1351    | 1208 | 1066 | 923  | 780  | 638  | 495  | 352  | 210  | 121  |
| -5       | Q | 3715    | 3343 | 2972 | 2600 | 2229 | 1857 | 1486 | 1114 | 743  | 512  |
|          | W | 1248    | 1116 | 984  | 853  | 721  | 589  | 457  | 326  | 194  | 112  |
| -7       | Q | 3588    | 3229 | 2870 | 2512 | 2153 | 1794 | 1435 | 1076 | 718  | 495  |
|          | W | 1206    | 1079 | 951  | 824  | 697  | 569  | 442  | 315  | 187  | 108  |
| -10      | Q | 3263    | 2936 | 2610 | 2284 | 1958 | 1631 | 1305 | 979  | 653  | 450  |
|          | W | 1143    | 1023 | 902  | 781  | 661  | 540  | 419  | 298  | 178  | 103  |
| -15      | Q | 2502    | 2251 | 2001 | 1751 | 1501 | 1251 | 1001 | 750  | 500  | 345  |
|          | W | 1019    | 911  | 804  | 696  | 588  | 481  | 373  | 266  | 158  | 91   |
| -20      | Q | 1757    | 1582 | 1406 | 1230 | 1054 | 879  | 703  | 527  | 351  | 242  |
|          | W | 908     | 812  | 716  | 620  | 524  | 429  | 333  | 237  | 141  | 81   |

## Part Load Performance

Single Split Type

Indoor: RAS-22SKV2-A1

Outdoor: RAS-22SAV2-A1

|         | Cooling |      | Heating |      |
|---------|---------|------|---------|------|
|         | Q       | W    | Q       | W    |
| MINIMUM | 1200    | 200  | 1000    | 180  |
| RATING  | 6000    | 1830 | 7000    | 1980 |
| MAXIMUM | 6700    | 2650 | 7500    | 2210 |

### Cooling

| OD temp. |   | Load(%) |      |      |      |      |      |      |      |      |      |
|----------|---|---------|------|------|------|------|------|------|------|------|------|
|          |   | 100     | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| 46       | Q | 5151    | 4636 | 4121 | 3606 | 3091 | 2576 | 2060 | 1545 | 1030 | 1030 |
|          | W | 2105    | 1870 | 1636 | 1402 | 1167 | 933  | 699  | 464  | 230  | 230  |
| 43       | Q | 5375    | 4837 | 4300 | 3762 | 3225 | 2687 | 2150 | 1612 | 1075 | 1075 |
|          | W | 2042    | 1815 | 1588 | 1360 | 1133 | 905  | 678  | 451  | 223  | 223  |
| 40       | Q | 5626    | 5064 | 4501 | 3938 | 3376 | 2813 | 2250 | 1688 | 1125 | 1125 |
|          | W | 1953    | 1735 | 1518 | 1300 | 1083 | 866  | 648  | 431  | 213  | 213  |
| 35       | Q | 6000    | 5400 | 4800 | 4200 | 3600 | 3000 | 2400 | 1800 | 1200 | 1200 |
|          | W | 1830    | 1626 | 1423 | 1219 | 1015 | 811  | 608  | 404  | 200  | 200  |
| 30       | Q | 6376    | 5738 | 5100 | 4463 | 3825 | 3188 | 2550 | 1913 | 1275 | 1275 |
|          | W | 1707    | 1517 | 1327 | 1137 | 947  | 757  | 567  | 377  | 187  | 187  |
| 25       | Q | 6774    | 6097 | 5419 | 4742 | 4064 | 3387 | 2710 | 2032 | 1355 | 1355 |
|          | W | 1556    | 1382 | 1209 | 1036 | 863  | 690  | 516  | 343  | 170  | 170  |
| 20       | Q | 7113    | 6402 | 5690 | 4979 | 4268 | 3557 | 2845 | 2134 | 1423 | 1423 |
|          | W | 1437    | 1277 | 1117 | 957  | 797  | 637  | 477  | 317  | 157  | 157  |

### Heating

| OD temp. |   | Load(%) |      |      |      |      |      |      |      |      |      |
|----------|---|---------|------|------|------|------|------|------|------|------|------|
|          |   | 100     | 90   | 80   | 70   | 60   | 50   | 40   | 30   | 20   | 10   |
| 20       | Q | 9345    | 8411 | 7476 | 6542 | 5607 | 4673 | 3738 | 2804 | 1869 | 1335 |
|          | W | 2378    | 2126 | 1874 | 1621 | 1369 | 1117 | 865  | 613  | 360  | 216  |
| 15       | Q | 8442    | 7598 | 6754 | 5909 | 5065 | 4221 | 3377 | 2533 | 1688 | 1206 |
|          | W | 2226    | 1989 | 1753 | 1517 | 1281 | 1045 | 809  | 573  | 337  | 202  |
| 10       | Q | 7546    | 6791 | 6037 | 5282 | 4528 | 3773 | 3018 | 2264 | 1509 | 1078 |
|          | W | 2059    | 1841 | 1622 | 1404 | 1186 | 967  | 749  | 530  | 312  | 187  |
| 7        | Q | 7000    | 6300 | 5600 | 4900 | 4200 | 3500 | 2800 | 2100 | 1400 | 1000 |
|          | W | 1980    | 1770 | 1560 | 1350 | 1140 | 930  | 720  | 510  | 300  | 180  |
| 5        | Q | 5315    | 4784 | 4252 | 3721 | 3189 | 2658 | 2126 | 1595 | 1063 | 759  |
|          | W | 1822    | 1628 | 1435 | 1242 | 1049 | 856  | 662  | 469  | 276  | 166  |
| 2        | Q | 5075    | 4568 | 4060 | 3553 | 3045 | 2538 | 2030 | 1523 | 1015 | 725  |
|          | W | 1742    | 1558 | 1373 | 1188 | 1003 | 818  | 634  | 449  | 264  | 158  |
| 0        | Q | 4900    | 4410 | 3920 | 3430 | 2940 | 2450 | 1960 | 1470 | 980  | 700  |
|          | W | 1715    | 1533 | 1351 | 1169 | 987  | 805  | 624  | 442  | 260  | 156  |
| -5       | Q | 4484    | 4035 | 3587 | 3138 | 2690 | 2242 | 1793 | 1345 | 897  | 641  |
|          | W | 1584    | 1416 | 1248 | 1080 | 912  | 744  | 576  | 408  | 240  | 144  |
| -7       | Q | 4330    | 3897 | 3464 | 3031 | 2598 | 2165 | 1732 | 1299 | 866  | 619  |
|          | W | 1531    | 1368 | 1206 | 1044 | 881  | 719  | 557  | 394  | 232  | 139  |
| -10      | Q | 3938    | 3544 | 3150 | 2756 | 2363 | 1969 | 1575 | 1181 | 788  | 563  |
|          | W | 1451    | 1297 | 1143 | 990  | 836  | 682  | 528  | 374  | 220  | 132  |
| -15      | Q | 3019    | 2717 | 2415 | 2113 | 1811 | 1510 | 1208 | 906  | 604  | 431  |
|          | W | 1293    | 1156 | 1019 | 882  | 744  | 607  | 470  | 333  | 196  | 118  |
| -20      | Q | 2121    | 1909 | 1697 | 1485 | 1273 | 1061 | 848  | 636  | 424  | 303  |
|          | W | 1152    | 1030 | 908  | 786  | 663  | 541  | 419  | 297  | 175  | 105  |

## Part Load Performance

### Single Split Type

Indoor: RAS-24SKV2-A

Outdoor: RAS-24SAV2-A

|         | Cooling |      | Heating |      |
|---------|---------|------|---------|------|
|         | Q       | W    | Q       | W    |
| MINIMUM | 1500    | 300  | 1600    | 300  |
| RATING  | 7100    | 2330 | 8100    | 2450 |

### Cooling

| OD temp.  |          | Load(%)     |             |             |             |             |             |             |             |             |             |
|-----------|----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|           |          | 100         | 90          | 80          | 70          | 60          | 50          | 40          | 30          | 20          | 10          |
| 46        | Q        | 5538        | 4984        | 4430        | 3877        | 3323        | 2769        | 2215        | 1661        | 1170        | 1170        |
|           | W        | 2167        | 1928        | 1688        | 1449        | 1209        | 970         | 731         | 491         | 279         | 279         |
| 43        | Q        | 6369        | 5732        | 5095        | 4458        | 3821        | 3184        | 2547        | 1911        | 1346        | 1346        |
|           | W        | 2598        | 2311        | 2024        | 1737        | 1450        | 1163        | 876         | 589         | 335         | 335         |
| 40        | Q        | 6646        | 5981        | 5316        | 4652        | 3987        | 3323        | 2658        | 1994        | 1404        | 1404        |
|           | W        | 2498        | 2222        | 1946        | 1670        | 1394        | 1118        | 842         | 566         | 322         | 322         |
| <b>35</b> | <b>Q</b> | <b>7100</b> | <b>6390</b> | <b>5680</b> | <b>4970</b> | <b>4260</b> | <b>3550</b> | <b>2840</b> | <b>2130</b> | <b>1500</b> | <b>1500</b> |
|           | <b>W</b> | <b>2330</b> | <b>2073</b> | <b>1815</b> | <b>1558</b> | <b>1301</b> | <b>1043</b> | <b>786</b>  | <b>528</b>  | <b>300</b>  | <b>300</b>  |
| 30        | Q        | 7554        | 6799        | 6044        | 5288        | 4533        | 3777        | 3022        | 2266        | 1596        | 1596        |
|           | W        | 2162        | 1923        | 1685        | 1446        | 1207        | 968         | 729         | 490         | 278         | 278         |
| 25        | Q        | 8009        | 7208        | 6407        | 5606        | 4805        | 4004        | 3204        | 2403        | 1692        | 1692        |
|           | W        | 1997        | 1776        | 1556        | 1335        | 1115        | 894         | 673         | 453         | 257         | 257         |
| 20        | Q        | 8470        | 7623        | 6776        | 5929        | 5082        | 4235        | 3388        | 2541        | 1790        | 1790        |
|           | W        | 1829        | 1627        | 1425        | 1223        | 1021        | 819         | 617         | 415         | 236         | 236         |

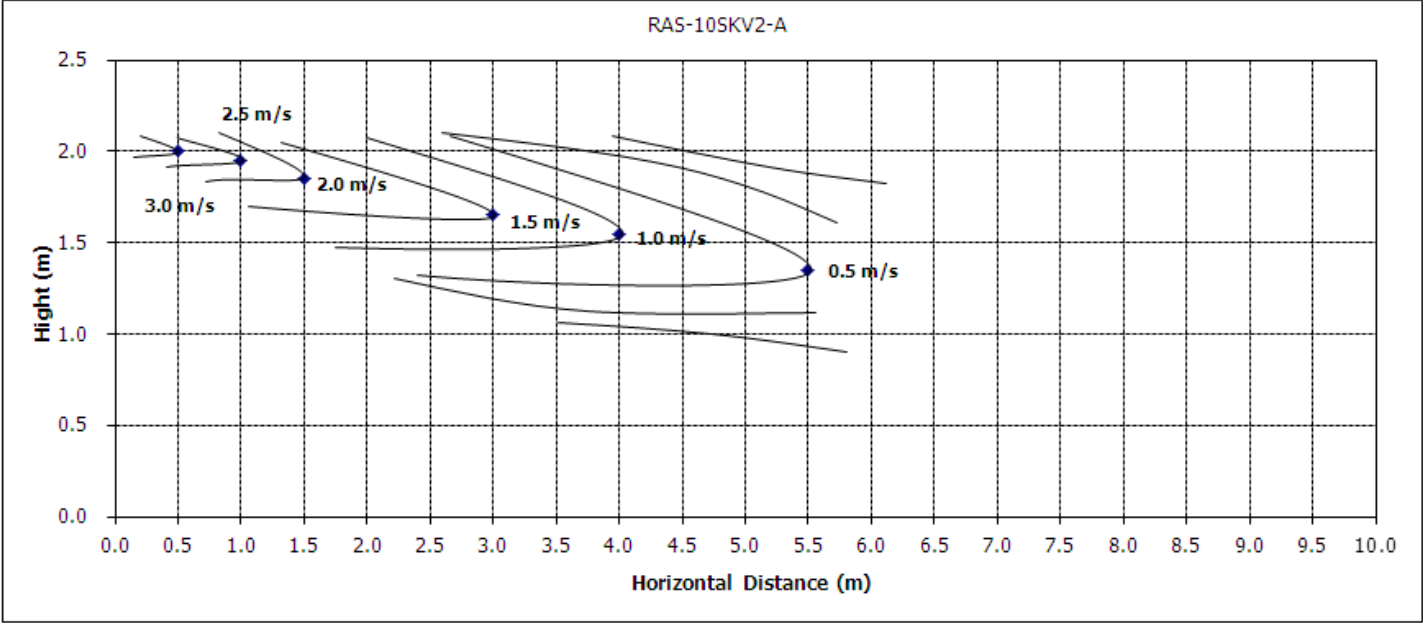
### Heating

| OD temp. |          | Load(%)     |             |             |             |             |             |             |             |             |             |
|----------|----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|          |          | 100         | 90          | 80          | 70          | 60          | 50          | 40          | 30          | 20          | 10          |
| 20       | Q        | 10743       | 9669        | 8594        | 7520        | 6446        | 5372        | 4297        | 3223        | 2149        | 2122        |
|          | W        | 2873        | 2559        | 2245        | 1930        | 1616        | 1302        | 988         | 674         | 360         | 352         |
| 15       | Q        | 9773        | 8795        | 7818        | 6841        | 5864        | 4886        | 3909        | 2932        | 1955        | 1930        |
|          | W        | 2754        | 2452        | 2151        | 1850        | 1549        | 1248        | 947         | 646         | 345         | 337         |
| 10       | Q        | 8727        | 7854        | 6982        | 6109        | 5236        | 4363        | 3491        | 2618        | 1745        | 1724        |
|          | W        | 2564        | 2284        | 2003        | 1723        | 1442        | 1162        | 882         | 601         | 321         | 314         |
| <b>7</b> | <b>Q</b> | <b>8100</b> | <b>7290</b> | <b>6480</b> | <b>5670</b> | <b>4860</b> | <b>4050</b> | <b>3240</b> | <b>2430</b> | <b>1620</b> | <b>1600</b> |
|          | <b>W</b> | <b>2450</b> | <b>2182</b> | <b>1914</b> | <b>1646</b> | <b>1378</b> | <b>1110</b> | <b>842</b>  | <b>575</b>  | <b>307</b>  | <b>300</b>  |
| 5        | Q        | 6158        | 5542        | 4926        | 4310        | 3695        | 3079        | 2463        | 1847        | 1232        | 1216        |
|          | W        | 2256        | 2009        | 1762        | 1516        | 1269        | 1022        | 776         | 529         | 282         | 276         |
| 2        | Q        | 5869        | 5282        | 4695        | 4108        | 3522        | 2935        | 2348        | 1761        | 1174        | 1159        |
|          | W        | 2168        | 1931        | 1694        | 1457        | 1220        | 983         | 746         | 508         | 271         | 266         |
| 0        | Q        | 5677        | 5110        | 4542        | 3974        | 3406        | 2839        | 2271        | 1703        | 1135        | 1121        |
|          | W        | 2110        | 1879        | 1648        | 1418        | 1187        | 956         | 726         | 495         | 264         | 258         |
| -5       | Q        | 5196        | 4677        | 4157        | 3637        | 3118        | 2598        | 2078        | 1559        | 1039        | 1026        |
|          | W        | 1964        | 1749        | 1535        | 1320        | 1105        | 890         | 675         | 461         | 246         | 241         |
| -7       | Q        | 5004        | 4504        | 4003        | 3503        | 3003        | 2502        | 2002        | 1501        | 1001        | 988         |
|          | W        | 1906        | 1697        | 1489        | 1281        | 1072        | 864         | 655         | 447         | 239         | 233         |
| -10      | Q        | 4547        | 4092        | 3637        | 3183        | 2728        | 2273        | 1819        | 1364        | 909         | 898         |
|          | W        | 1805        | 1608        | 1410        | 1213        | 1016        | 818         | 621         | 423         | 226         | 221         |
| -15      | Q        | 3502        | 3151        | 2801        | 2451        | 2101        | 1751        | 1401        | 1050        | 700         | 692         |
|          | W        | 1616        | 1439        | 1262        | 1086        | 909         | 732         | 556         | 379         | 202         | 198         |
| -20      | Q        | 2456        | 2210        | 1965        | 1719        | 1474        | 1228        | 982         | 737         | 491         | 485         |
|          | W        | 1426        | 1270        | 1114        | 958         | 802         | 646         | 490         | 334         | 178         | 175         |

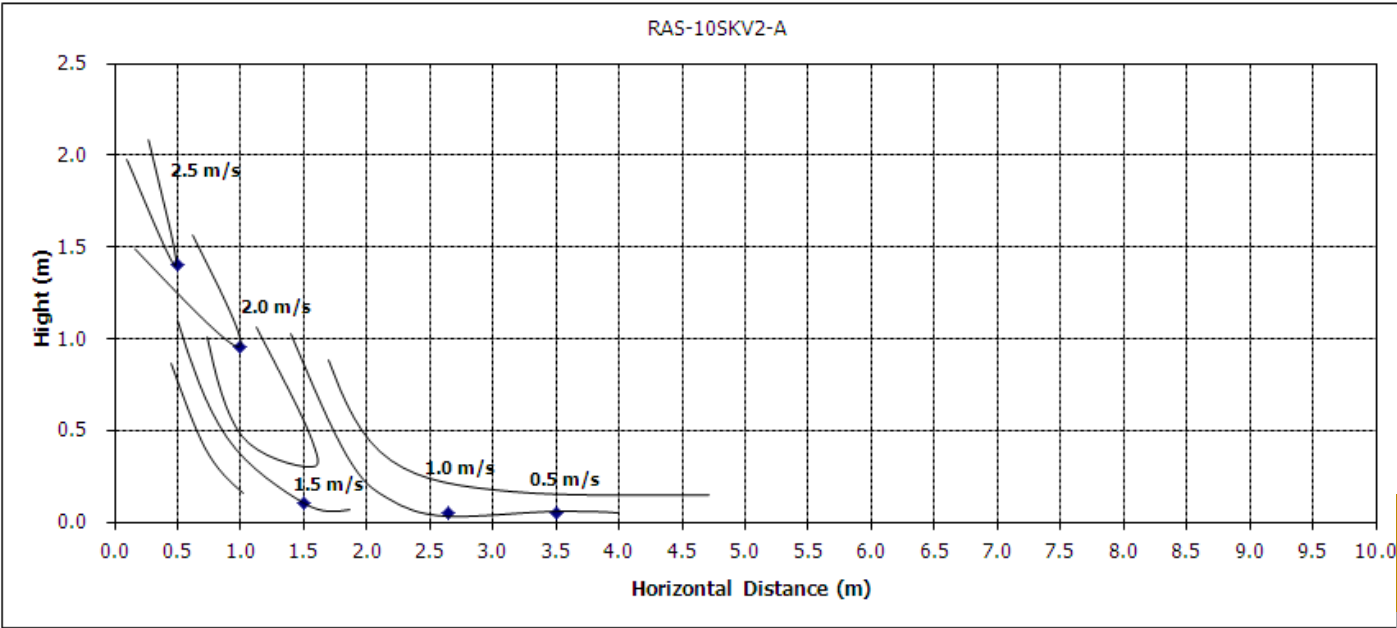
Air Speed Distribution

RAS-10SKV2-A / RAS-10SAVR-A

Cooling



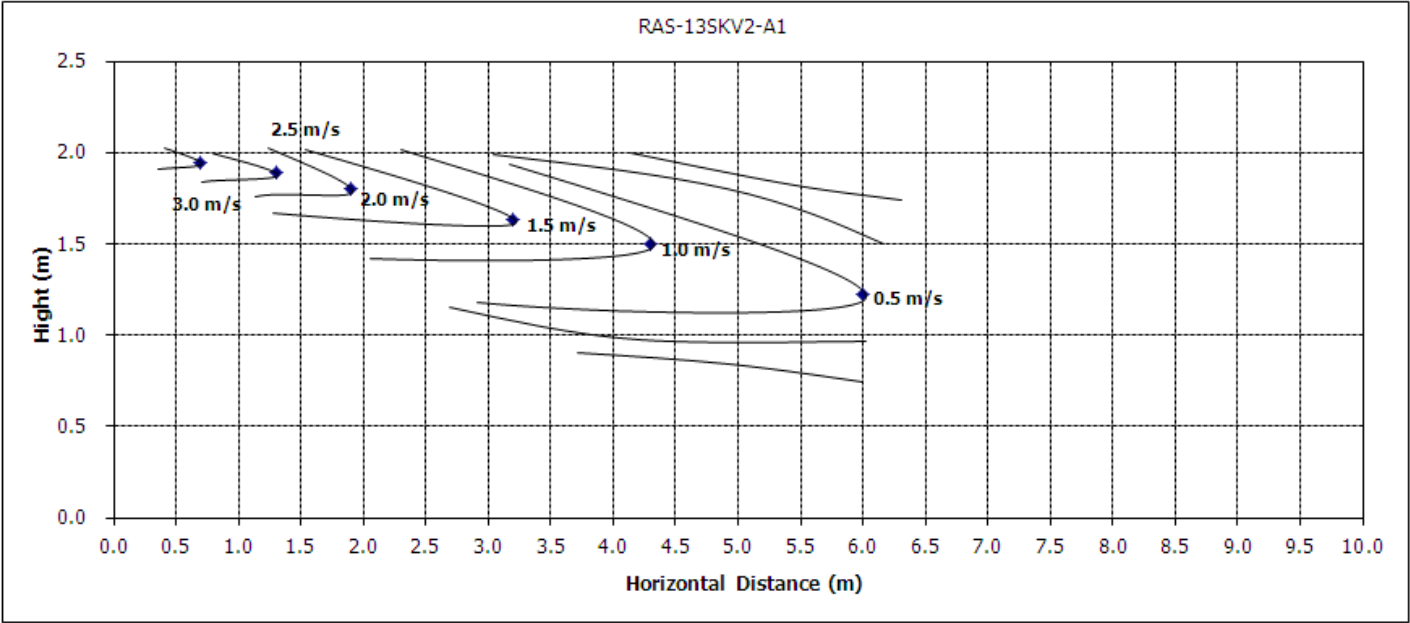
Heating



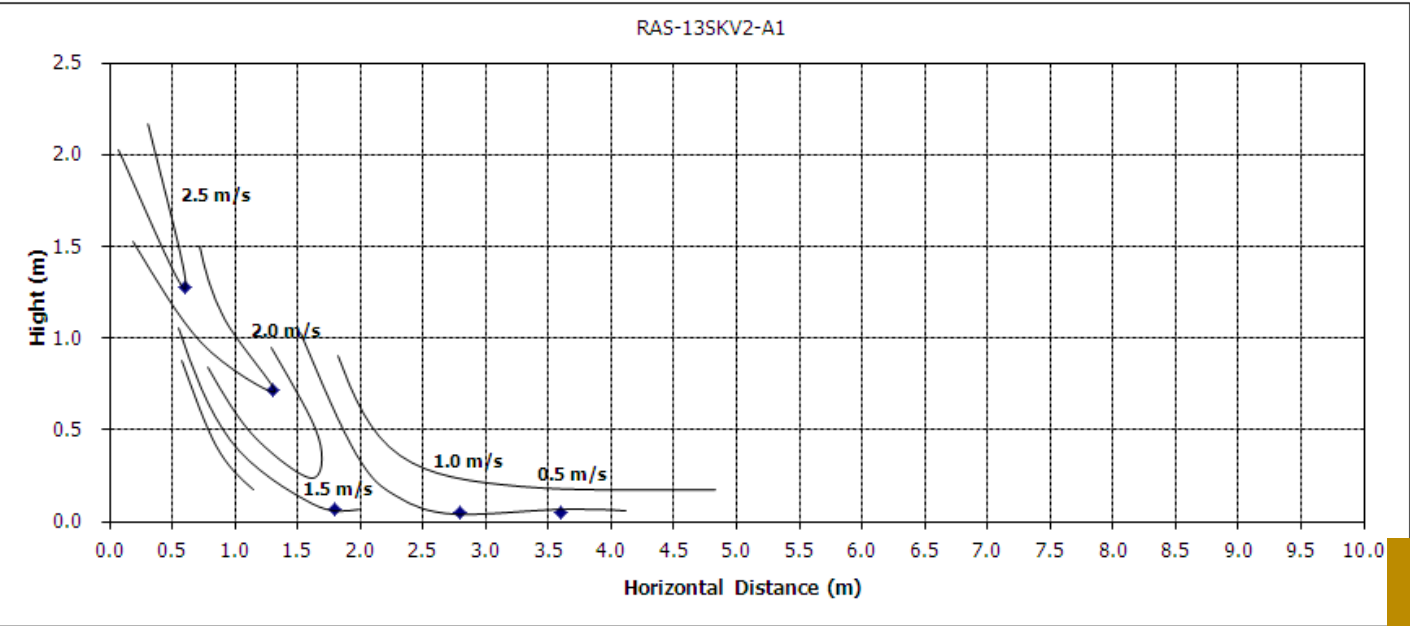
Air Speed Distribution

RAS-13SKV2-A1 / RAS-13SAV2-A1

Cooling



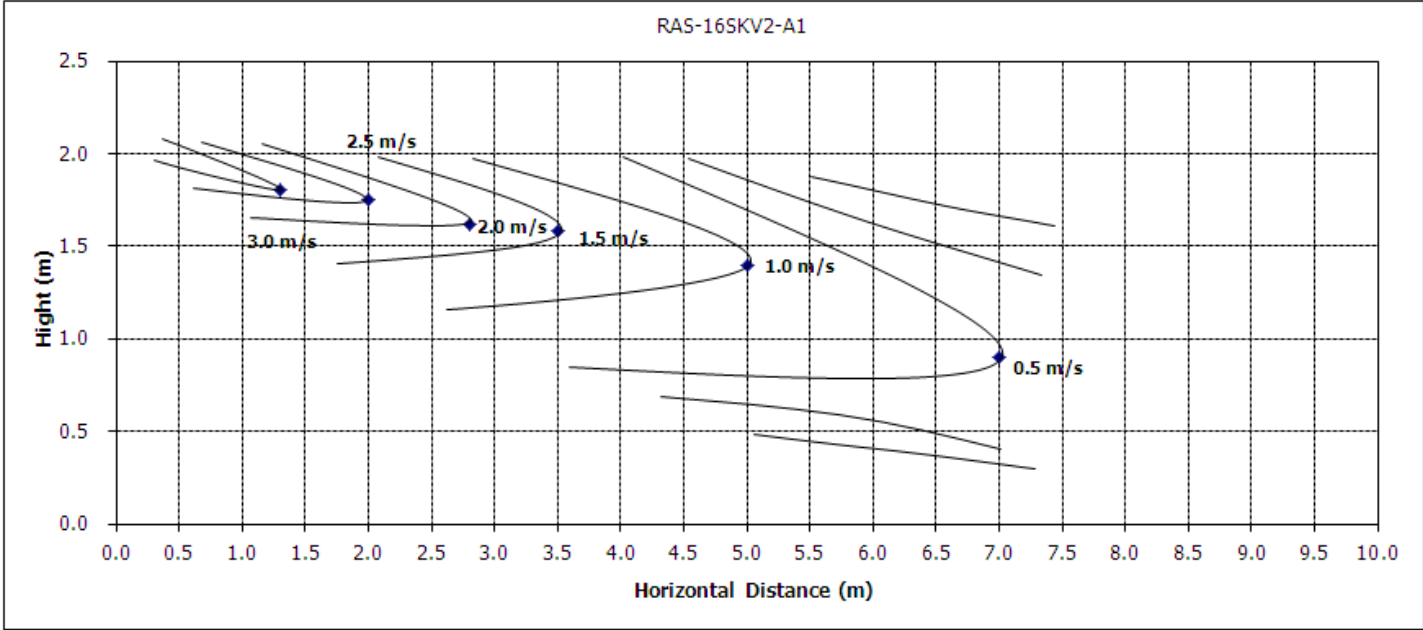
Heating



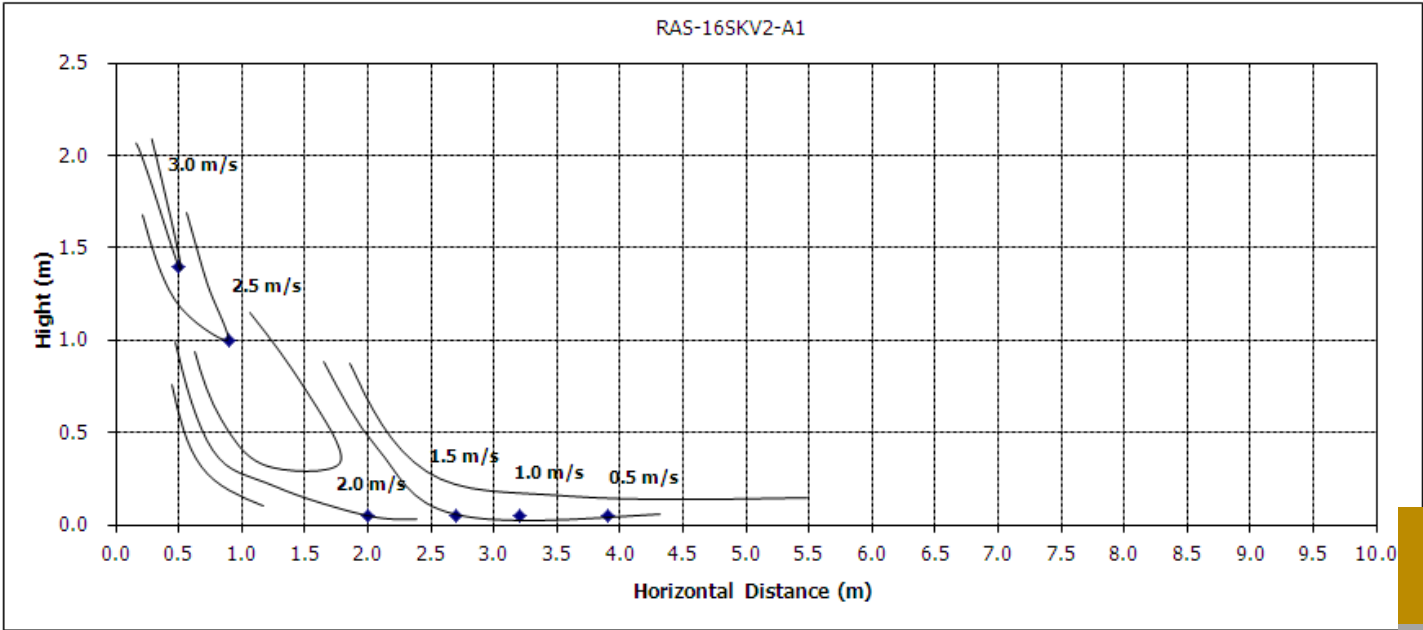
Air Speed Distribution

RAS-16SKV2-A1 / RAS-16SAV2-A1

Cooling



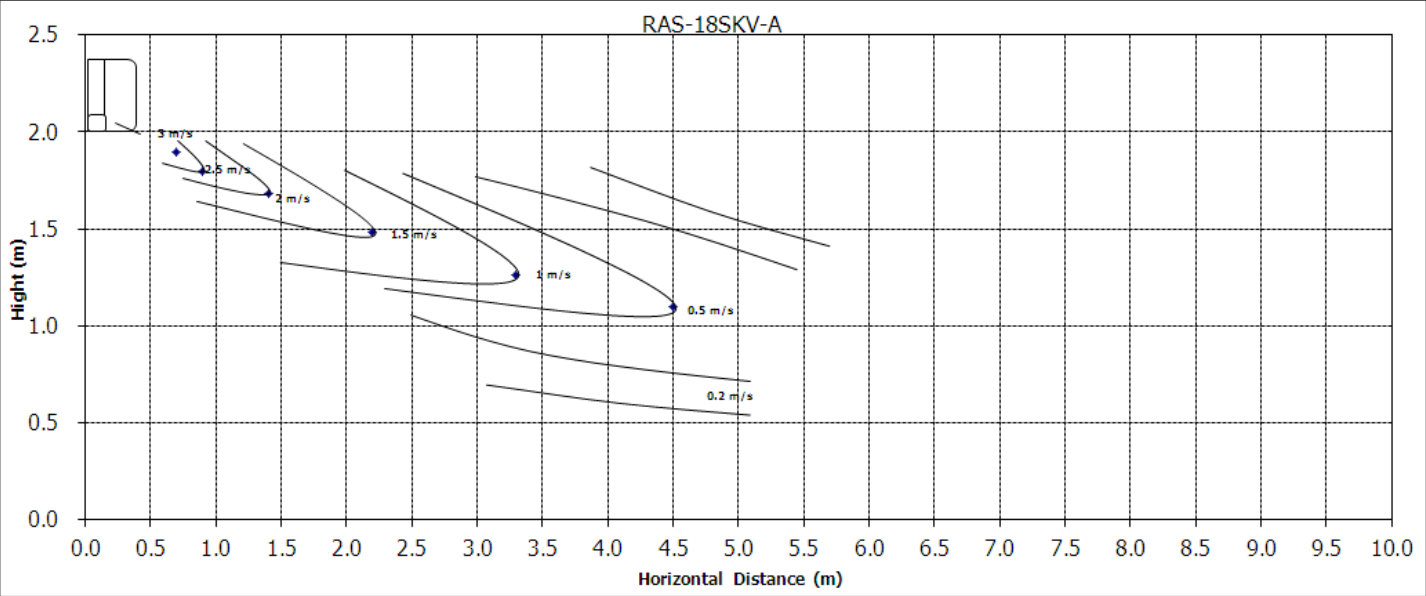
Heating



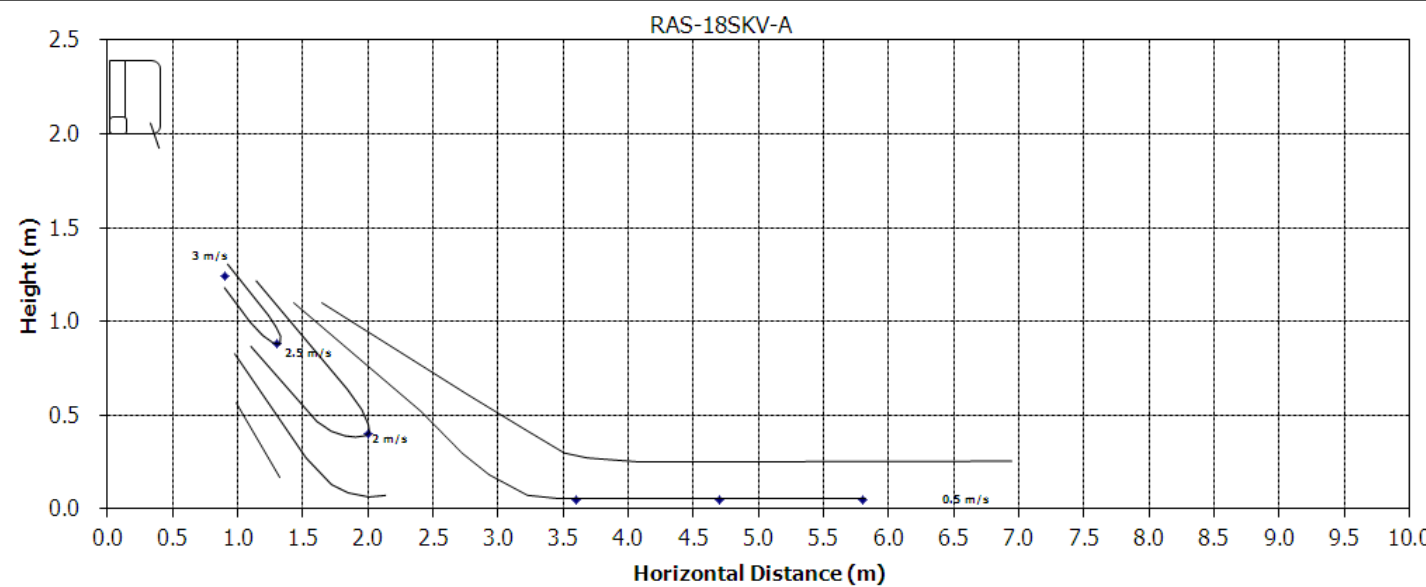
# Air Speed Distribution

## RAS-18SKV-A / RAS-18SAV2-A

Cooling

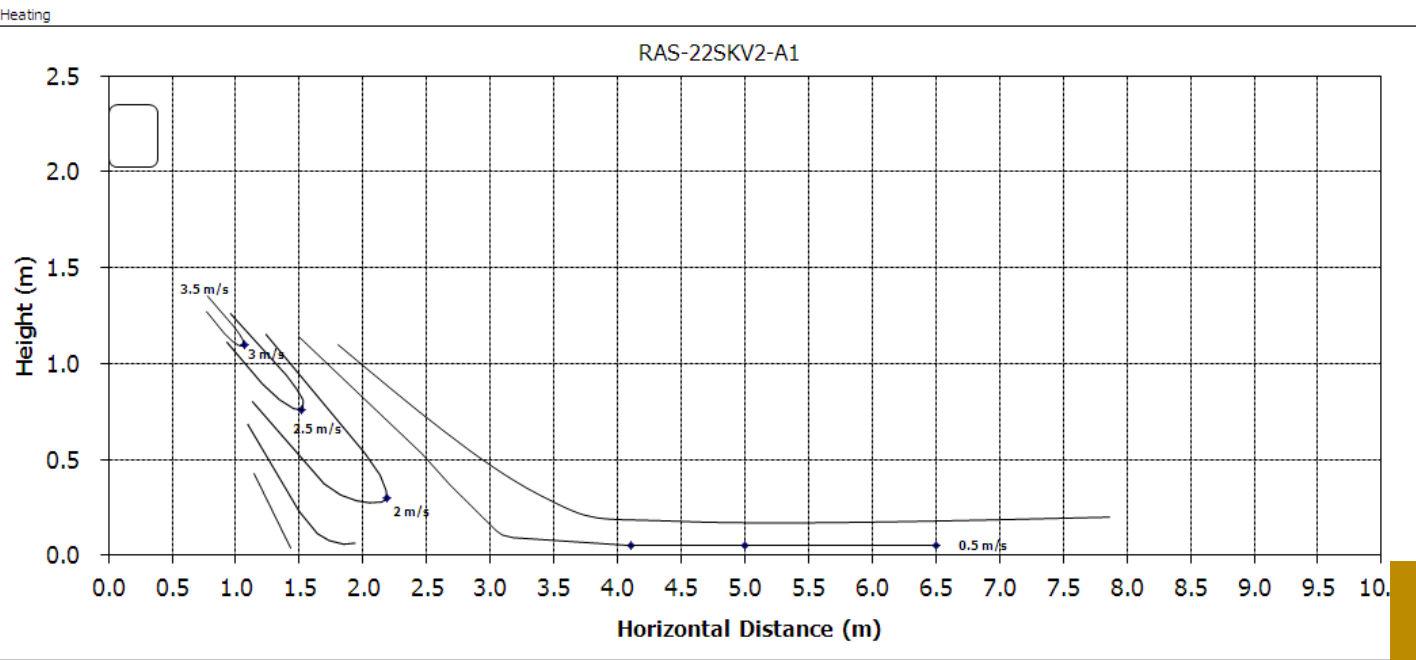
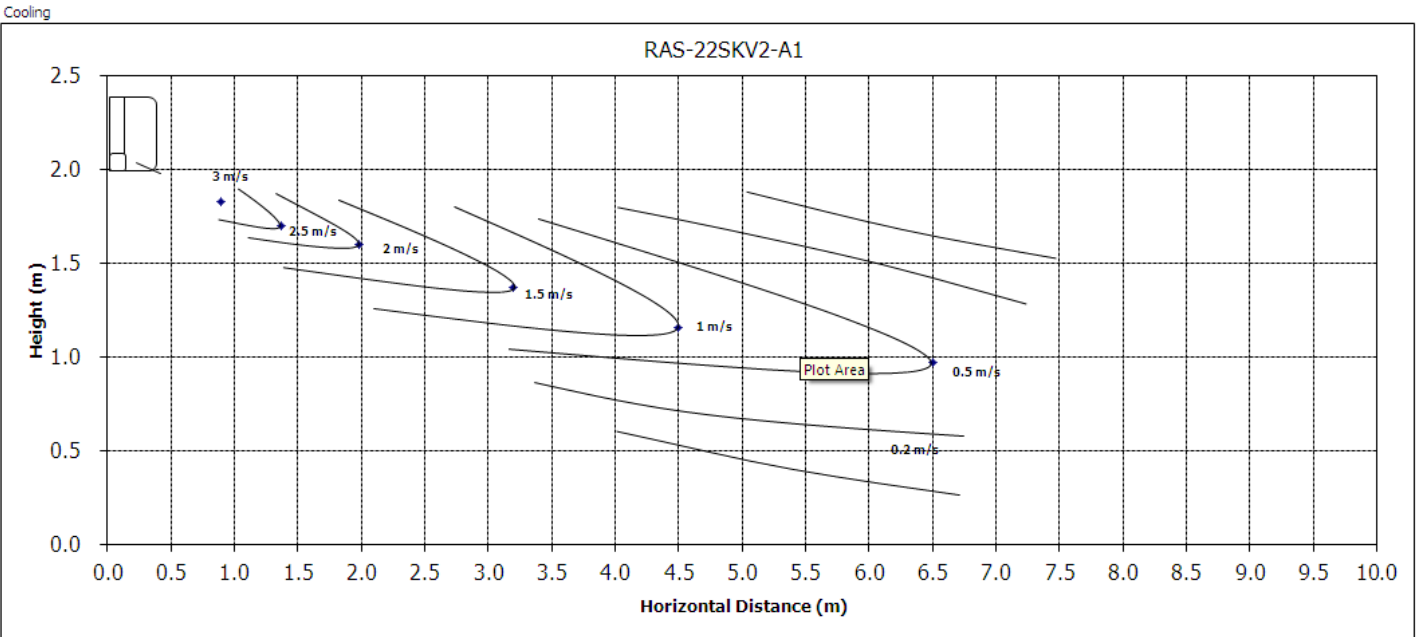


Heating



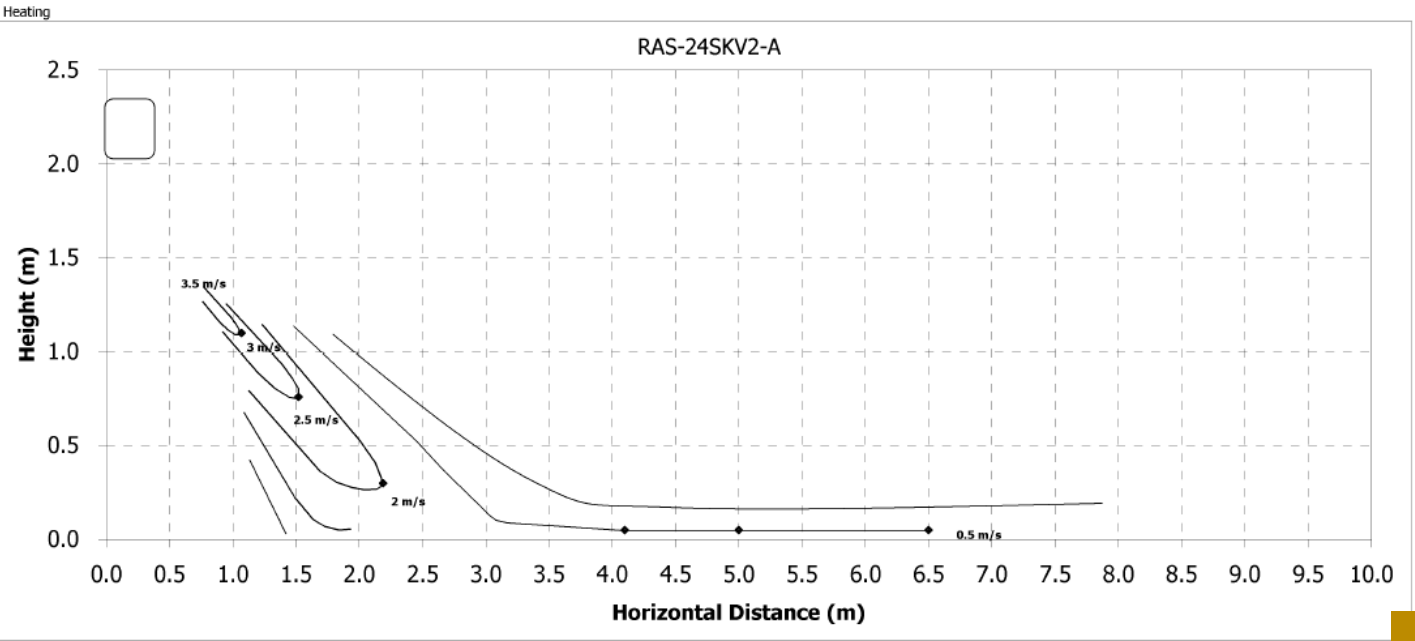
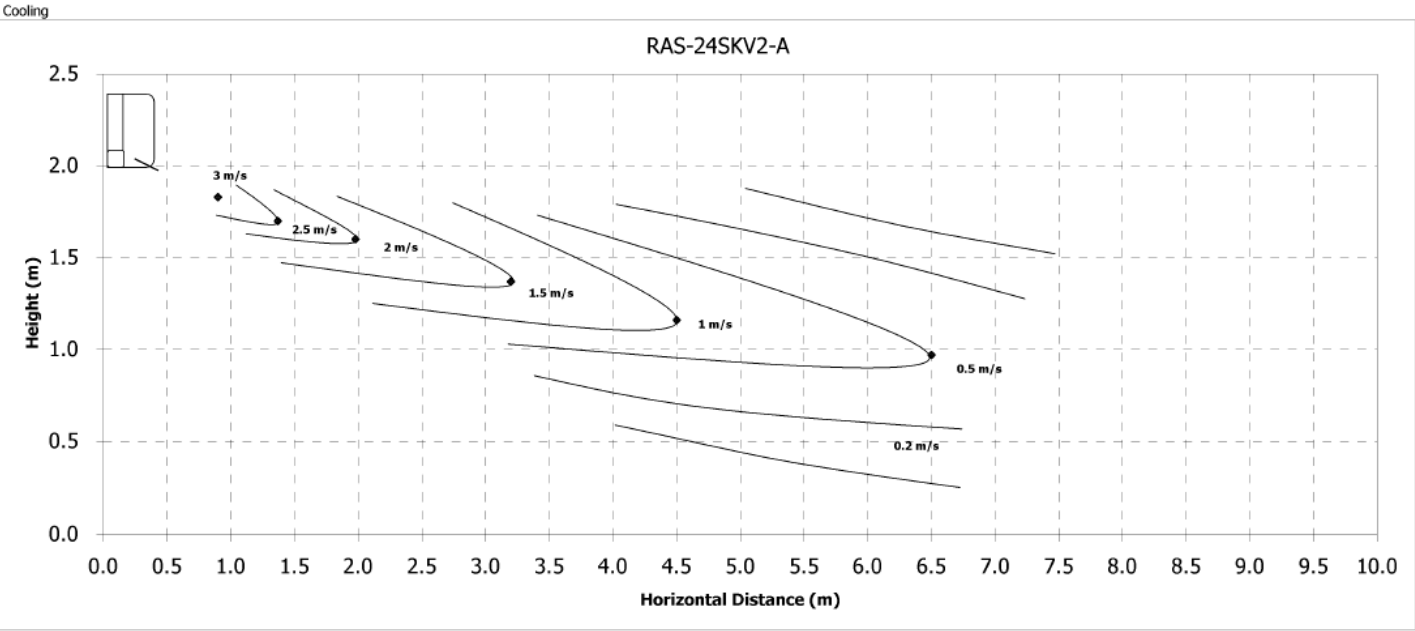
Air Speed Distribution

RAS-22SKV2-A1 / RAS-22SAV2-A1



Air Speed Distribution

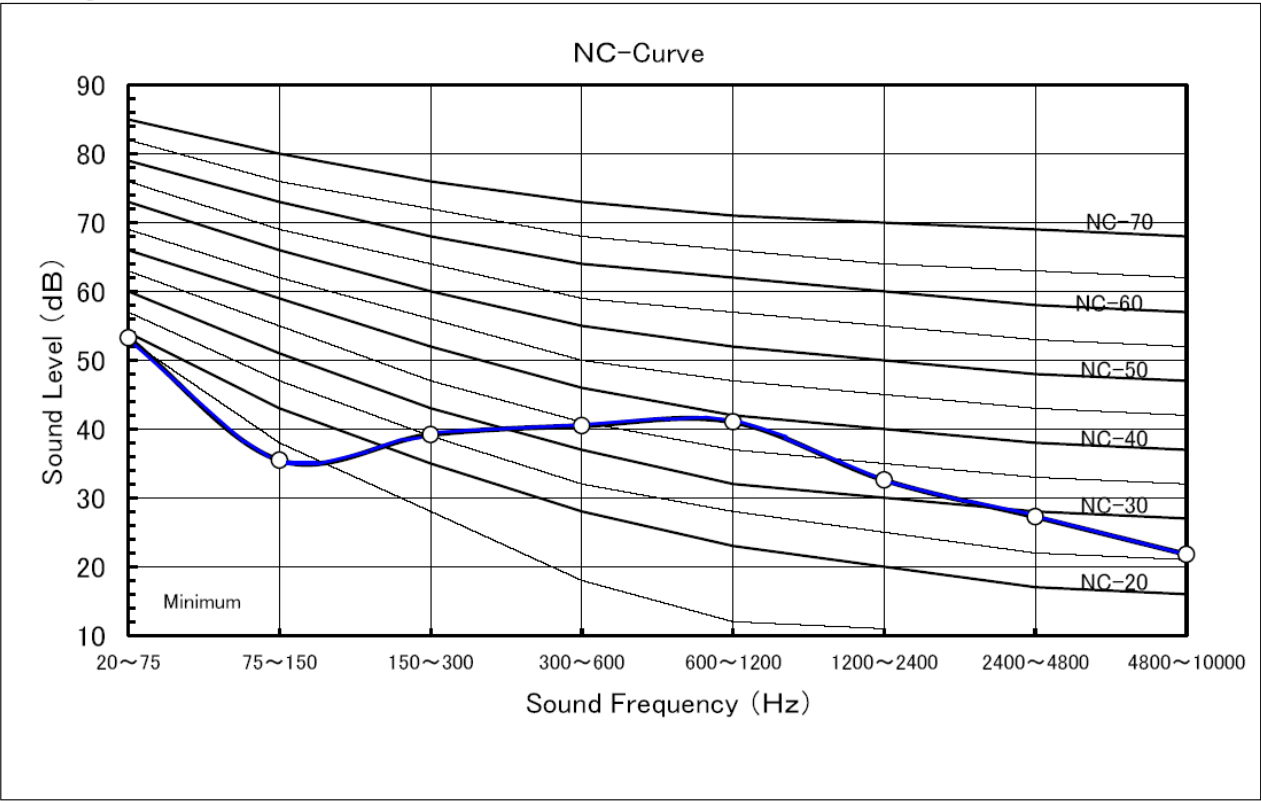
RAS-24SKV2-A / RAS-24SAV2-A



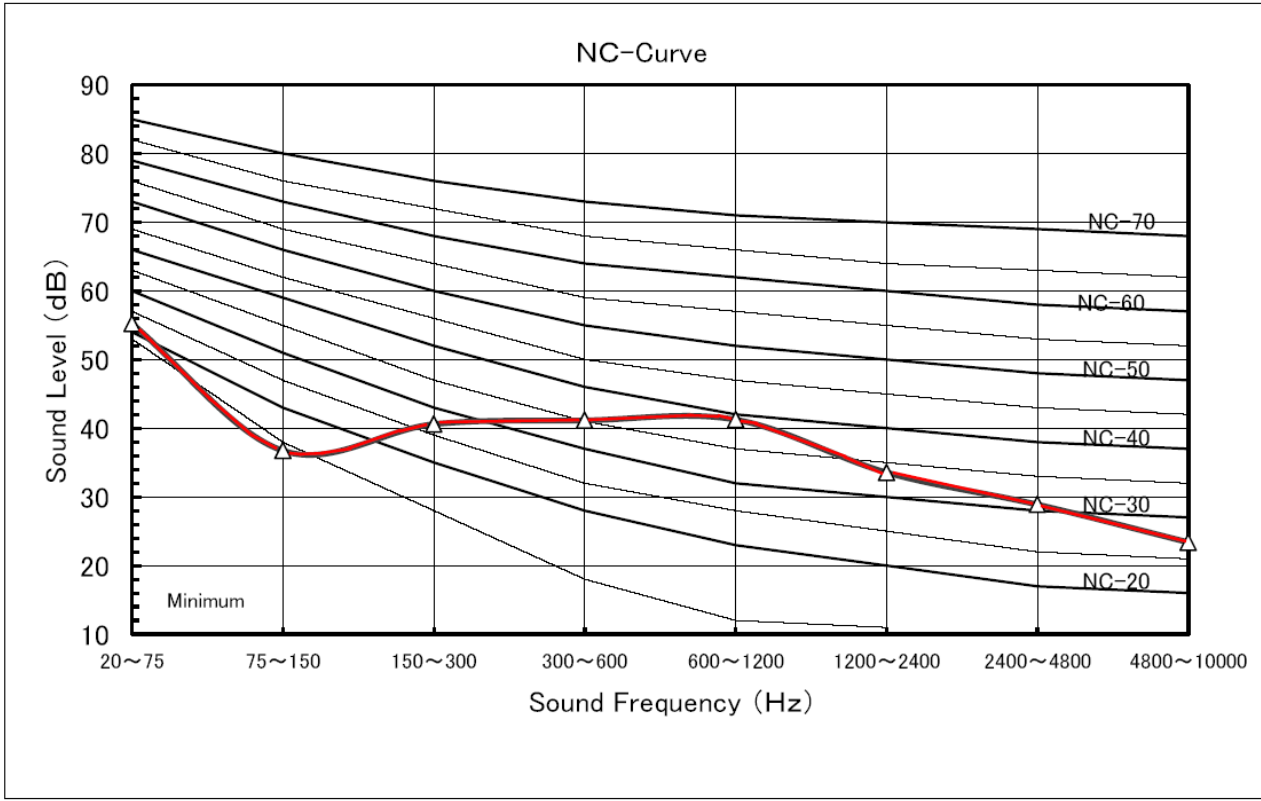
Sound Characteristics (NC Curve)

RAS-10SKV2-A / RAS-10SAVR-A

Cooling



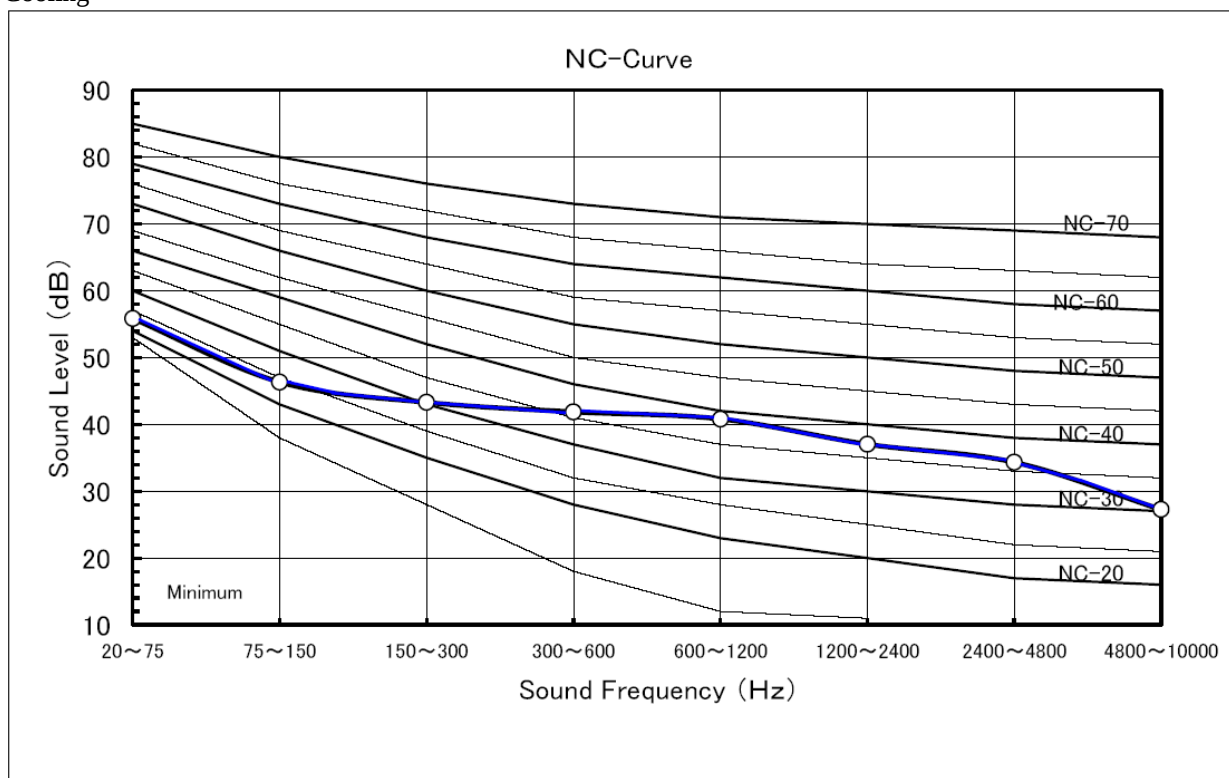
Heating



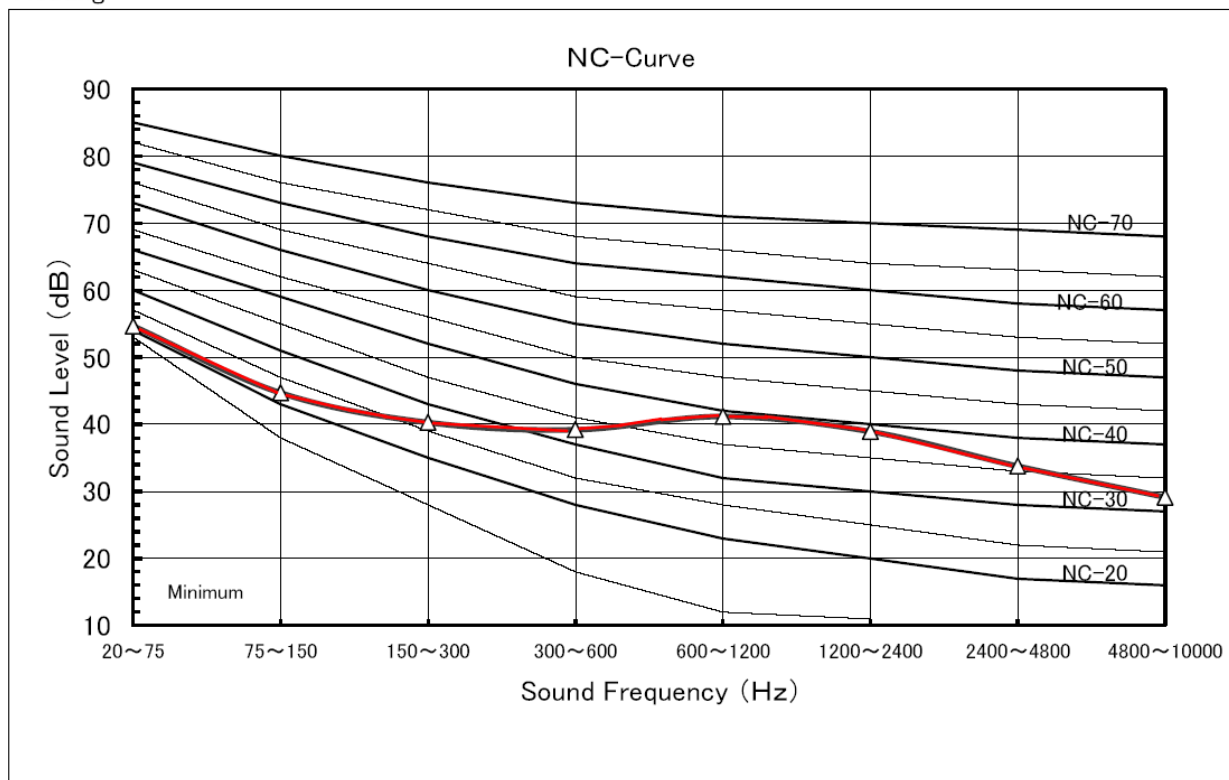
## Sound Characteristics (NC Curve)

### RAS-13SKV2-A1 / RAS-13SAV2-A1

Cooling



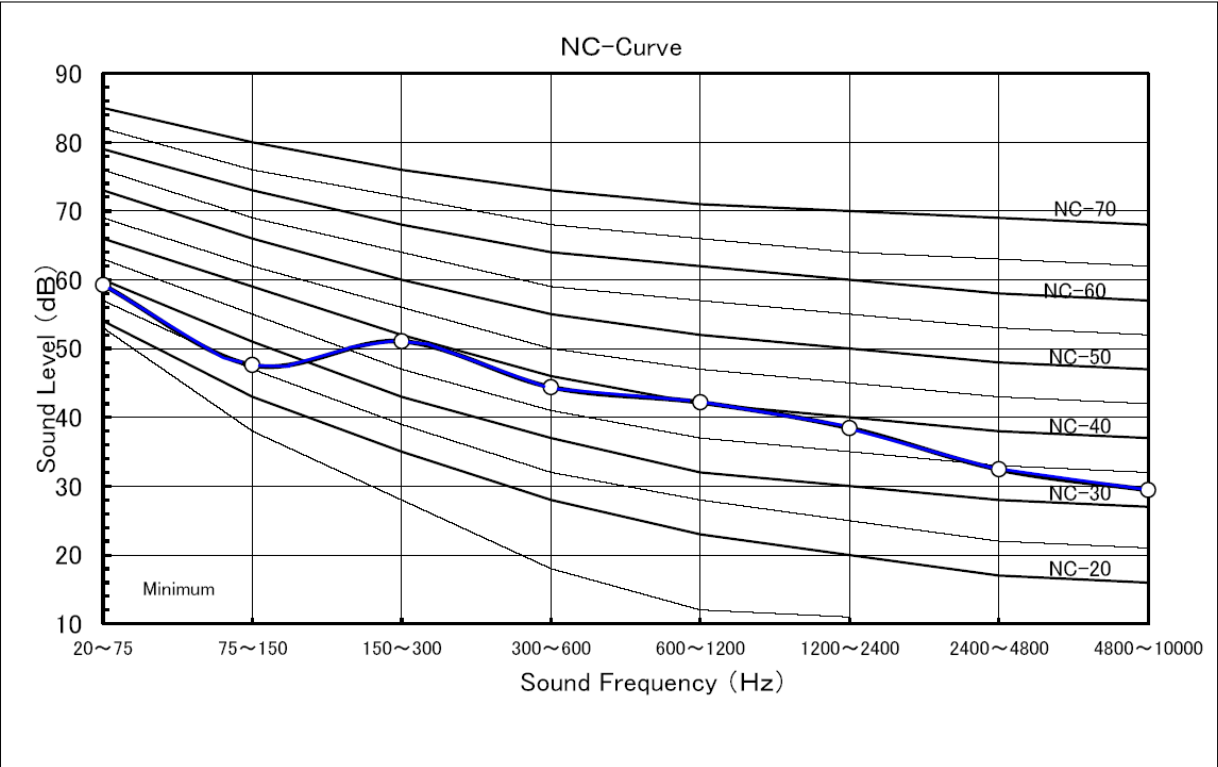
Heating



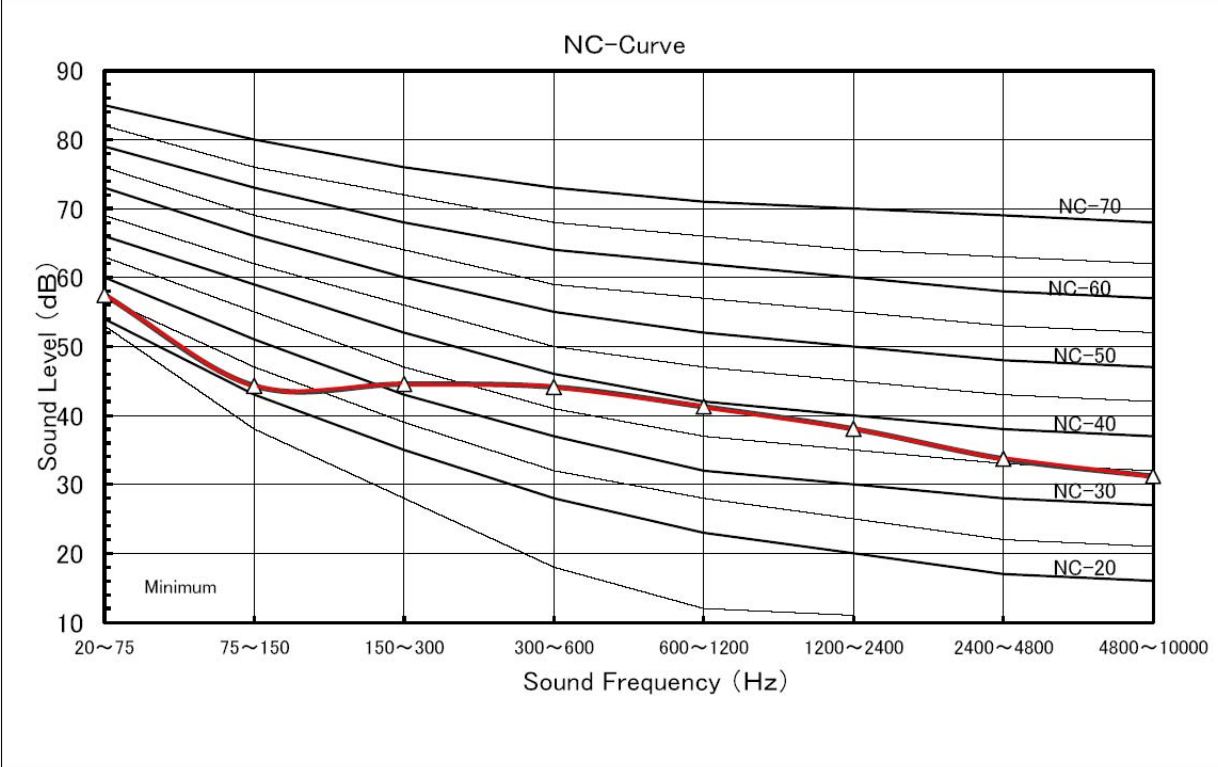
Sound Characteristics (NC Curve)

RAS-16SKV2-A1 / RAS-16SAV2-A1

Cooling

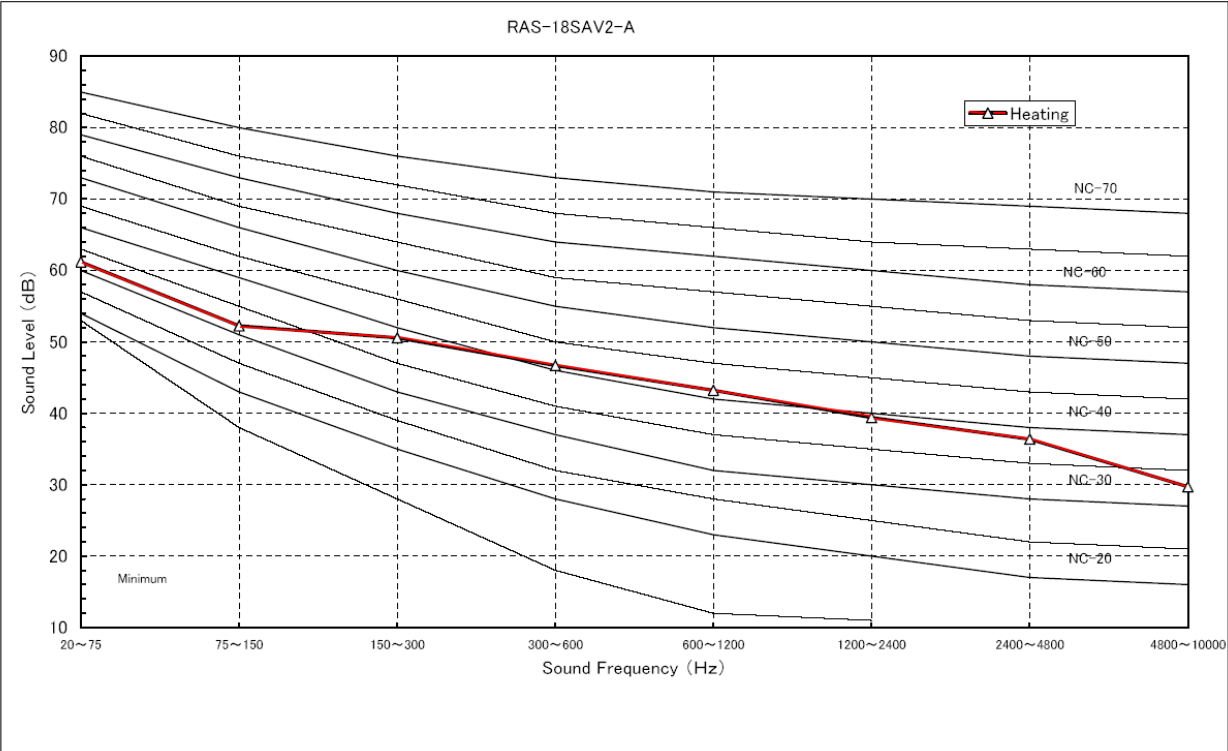
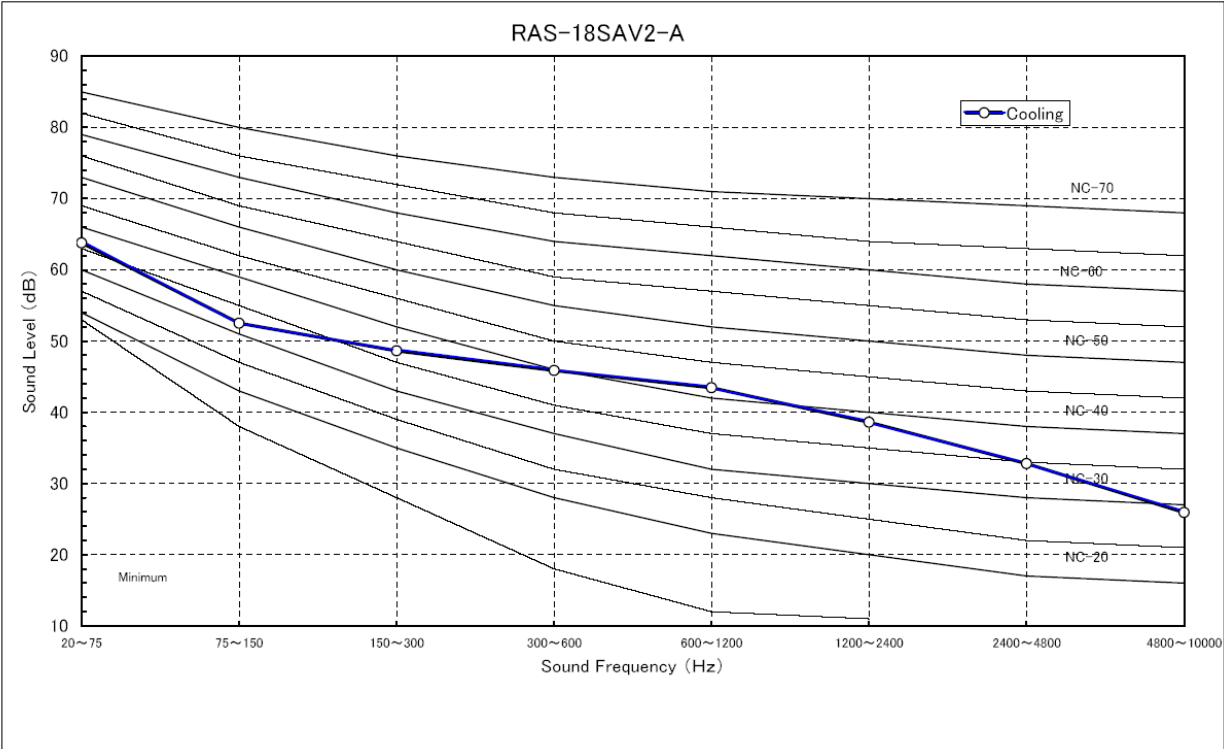


Heating



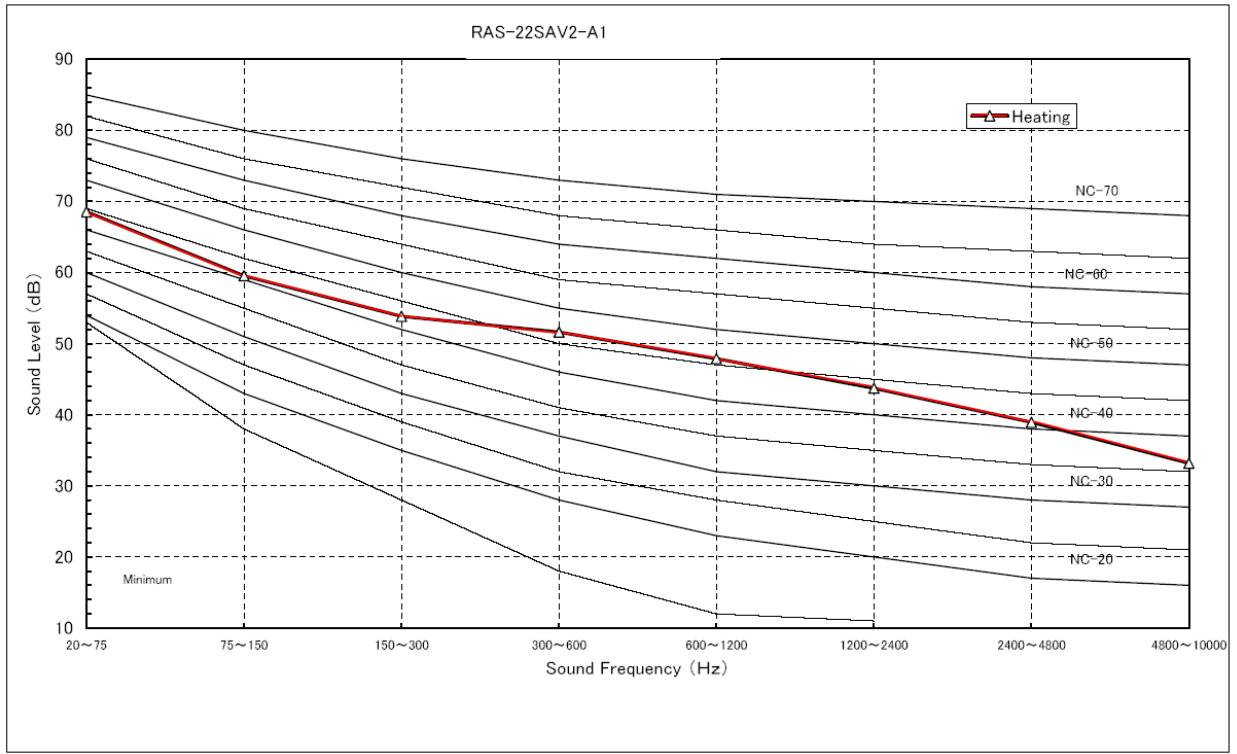
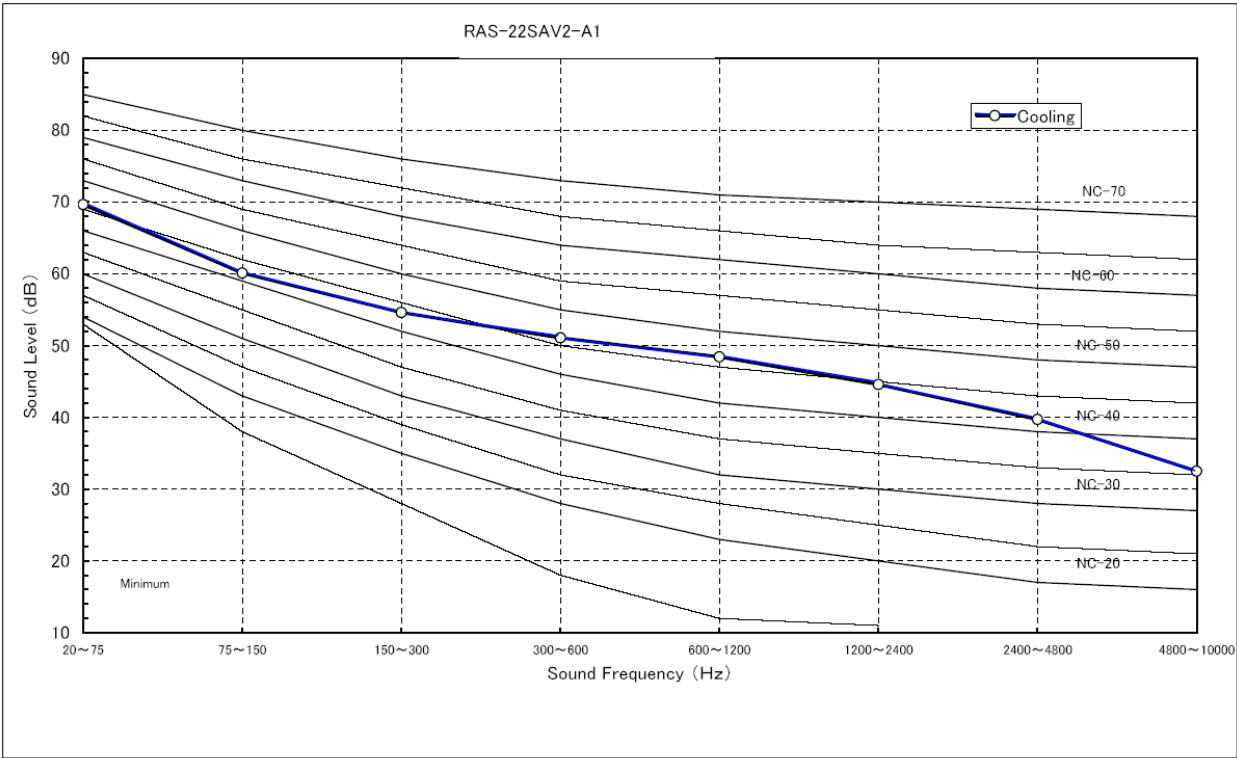
Sound Characteristics (NC Curve)

RAS-18SKV-A / RAS-18SAV2-A



Sound Characteristics (NC Curve)

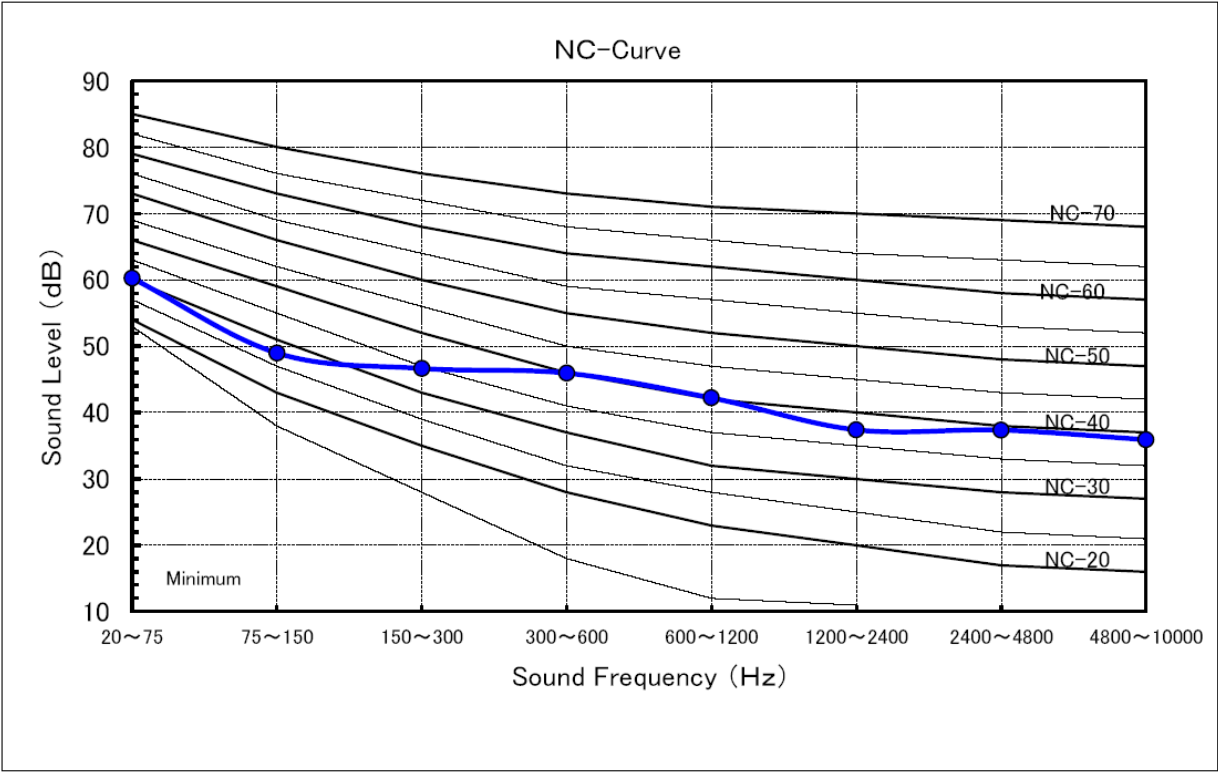
RAS-22SKV2-A1 / RAS-22SAV2-A1



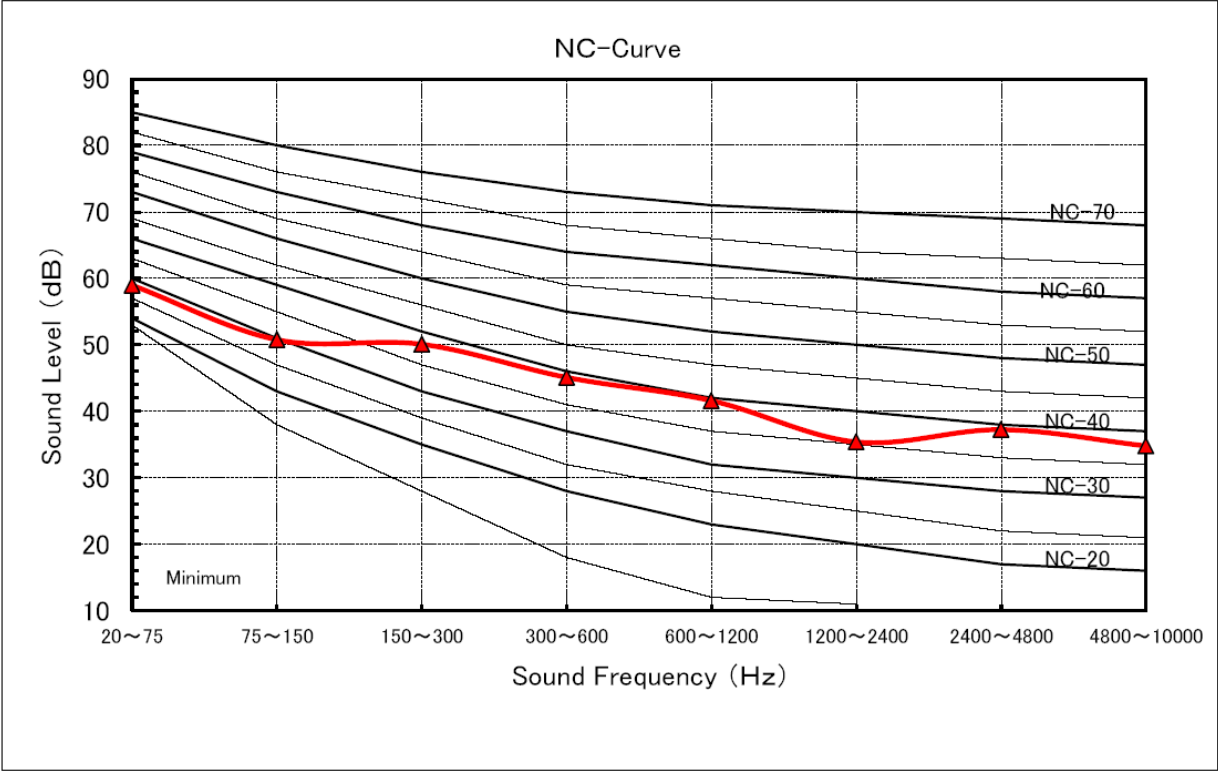
Sound Characteristics (NC Curve)

RAS-24SKV2-A / RAS-24SAV2-A

Cooling



Heating



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