



## Air Cooled Packaged Units Technical Data

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OPA 465, OPA 550, OPA 705, OPA 800, OPA 855, OPA 960

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Cooling Capacity  
46.7kW - 96.0kW

Heating Capacity  
43.5kW - 90.0kW

# Air cooled packaged units

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# Air cooled packaged units

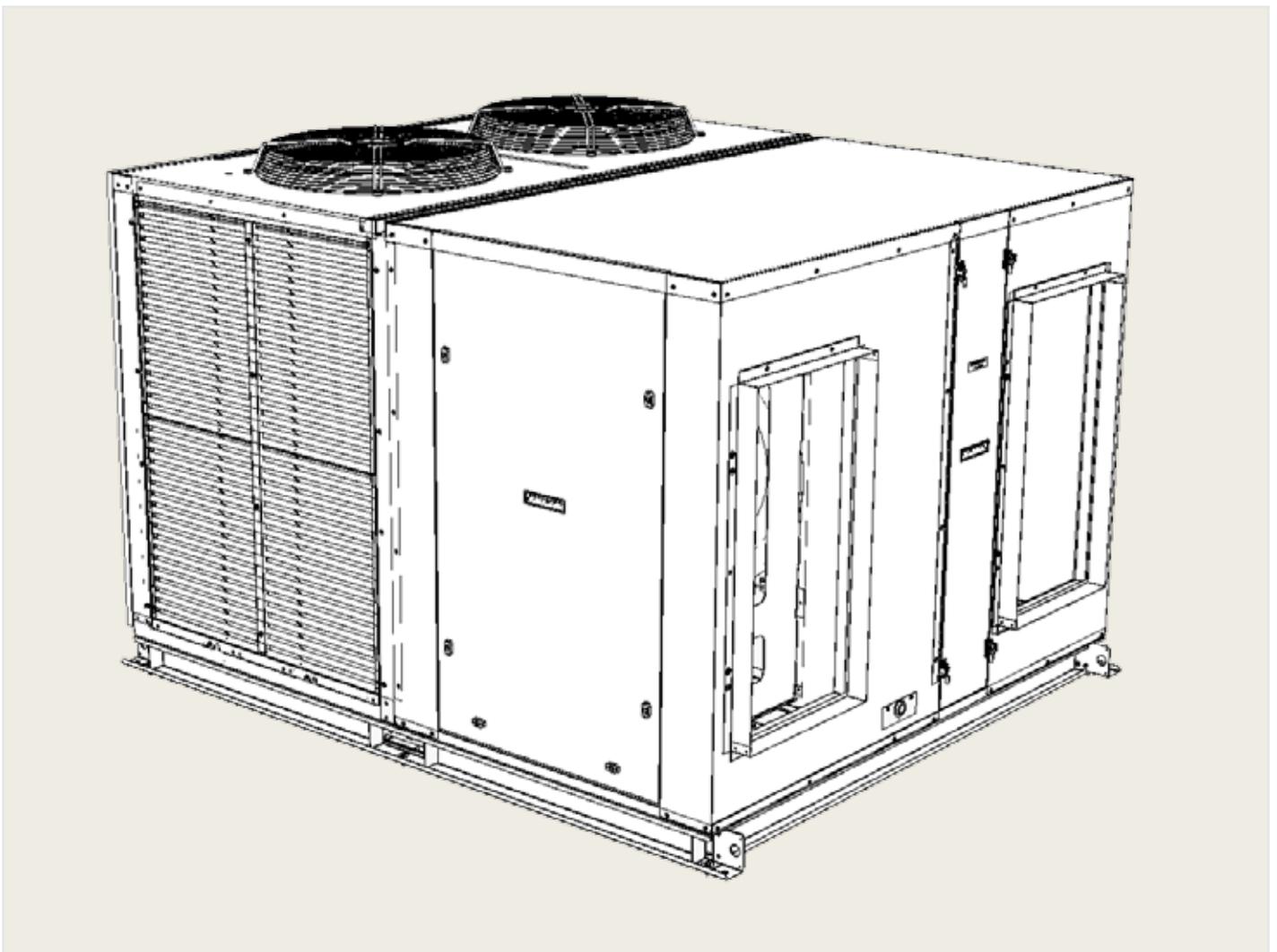
OPA 465 - 960



Reverse Cycle (heat pump) packaged air conditioners

Complies with AS/NZS 3823 specified conditions

Designed and tested to operate at 50°C ambient in cooling mode and -15°C in heating mode



# Air cooled packaged units

## OPA 465 - 960



### Applications

Specifically developed for air conditioning of commercial premises i.e. supermarkets, shopping malls, auditoriums and restaurants

### AIR FLOW SELECTION

If air returning to the indoor coil is regularly expected to be above 50% relative humidity then the coil face velocity should be limited to 2.5m/s or less (refer fan curves page 8 & 9).

Consideration must be given to selecting a airflow and coil face velocity that avoids water carry - over problems, i.e. in high humidity (tropical/subtropical) conditions or when heavily moisture laden fresh air is introduced.

Applications using complete or high proportion of fresh air should be discussed with a Temperzone sales engineer to establish the correct selection of unit.

### FEATURES

#### Refrigerant R410A

R410A used which has zero ozone depletion potential.

#### Economy

The units have 2 independent refrigeration circuits to provide the flexibility & economy of 2 stage operation i.e. utilizing 1 or 2 circuits as conditions vary plus staggered starting.

An economiser option is available to comply with the National Construction Code.

#### Efficiency

Heat exchange coils incorporate inner grooved (rifled) tube for superior heat transfer.

The indoor coil is interlaced for efficient part load performance.

#### Performance

An adjustable pulley is fitted on the indoor fan motor to allow for easy adjusting of the airflow during air balancing & commissioning

A variable speed head pressure control is used, ensuring the condenser airflow is

suited to the pressures within the refrigerant circuit. This also allows for reliable operation in Cooling Mode at ambients below 20°C, and Heating mode above 15°C.

#### Quiet

Generous use of insulation ensures a quiet unit.

#### Insulation

Closed cell foam insulation is used in indoor air section to ensure no particles in the air stream. The insulation is foil faced & meets fire test standards AS1530.3 (1999) & BS 476 parts 6 & 7.

#### Durable

The cabinet and drain tray are constructed from high grade galvanized steel-polyester powdered coated (Grey) for all weather protection. External fasteners are stainless steel.

Heat exchange coils comprise aluminium plate fins on mechanically expanded rifled copper tube.

Outdoor & indoor coil fins are epoxy coated for extra protection in corrosive environments i.e. salt laden sea air.

Fan motor bearings are sealed for life so as not to incur regular maintenance.

#### Easy Access

These packaged outdoor units are typically installed on a rooftop, where maintenance access is relatively easy during operating hours.

#### Self Diagnosis

The unit controller (UC6) has a display of LEDS to indicate faults & running conditions. A common fault indicator is included for interface to external systems.

# Air cooled packaged units

## OPA 465 - 960



### CONFIGURATIONS

The units are supplied as standard as left hand supply air (as facing the supply air spigot), with right hand available as an option. We can also supply alternative location for of the supply air and return air openings as per the chart below

#### Spigot Position

| Models  | Supply Air |     |      |        | Return Air |     |      |        |
|---------|------------|-----|------|--------|------------|-----|------|--------|
|         | Front      | Top | Side | Bottom | Front      | Top | Side | Bottom |
| OPA 465 | Std        | Opt | Opt  | Opt    | Std        | Opt | Opt  | Opt    |
| OPA 550 | Std        | Opt | Opt  | Opt    | Std        | Opt | Opt  | Opt    |
| OPA 705 | Std        | Opt | Opt  | Opt    | Std        | Opt | Opt  | Opt    |
| OPA 800 | Std        | Opt | Opt  | Opt    | Std        | Opt | Opt  | Opt    |
| OPA 855 | Std        | Opt | Opt  | Opt    | Std        | Opt | Opt  | Opt    |
| OPA 960 | Std        | Opt | Opt  | Opt    | Std        | Opt | Opt  | Opt    |

### OPTIONAL EQUIPMENT

1. Plug fan / EC Motor
2. Coil protection guards protect against accidental damage or vandalism; supplied on OPA465
3. TZT-100 thermostat
4. Digital compressor replaces one of the 2 compressors – for close control applications
5. Filters rated to AS1324.1.2001
6. Factory fitted economiser -includes dampers,weatherhood
7. Electronic control systems (available by arrangement) for temperature and economy cycle
8. Adjustable fresh air damper and weatherhood
9. Interface to BMS via Modbus 485 or BACnet/UCP/IP networks

### SAFETY FEATURES

1. HP & loss of refrigerant protection
2. Anti rapid cycle timer internal overload for compressor protection
3. Circuit breaker control circuits
4. Time & temperature controlled electronic de-ice switch prevents icing up of the outdoor coil during heating cycle
5. Frost protection on cooling cycle
6. Sensor fault indication
7. Crankcase heater prevents liquid refrigerant condensing in the compressors during the "off" cycle
8. Compressor minimum run time to ensure oil return
9. 24V control circuit
10. Phase rotation protection device

### COMPRESSOR

Each high efficiency scroll type compressor is hermetically sealed quiet running and supported on rubber mounts to minimize vibration

### REFRIGERATION SYSTEM

Factory charged with HFC-410A (R410A) refrigerant.

### WIRING

The electrical supply required (including voltage fluctuation limits) is 3 phase 342-436V ac 50Hz.

The units control panel is fully wired ready to accept the main power supply.

### ECONOMISER OPTION

The factory fitted Economizer Damper Option is supplied with Drive Open / Drive Closed damper motors. Temperzone can supply or supply and fit controls to manage the operation of the Economy Cycle, using either temperature or enthalpy to control the operation of the dampers. For the best result, discuss with your Temperzone Sales Engineer.

# Air cooled packaged units

## Performance Data



### COOLING CAPACITY (KW)

Total = Total Capacity (kW).  
 Sens. = Sensible Capacity (kW).  
 E.A.T. = Entering Air Temperature.  
 ○ = Nominal Capacity (kW).

**Note:** Capacities are **gross** and do not include allowance for fan motor heat loss.

See below for Indoor Air Flow Correction factors

| Models  | Indoor Fan | Indoor coil |         | Outdoor coil entering air temperature °C D.B. |       |       |       |       |       |       |       |       |       |       |       |
|---------|------------|-------------|---------|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|         |            | E.A.T.      |         | 23  |       | 27    |       | 31    |       | 35    |       | 39    |       | 43    |       |
|         |            | D.B. °C     | W.B. °C | Total   | Sens. | Total | Sens. | Total | Sens. | Total | Sens. | Total | Sens. | Total | Sens. |
| OPA 465 | 2500       | 21          | 15      | 45.8  | 36.2  | 45.2  | 36.2  | 43.9  | 35.5  | 41.9  | 34.3  | 39.1  | 32.4  | 35.7  | 29.9  |
|         |            | 23          | 17      | 48.2  | 35.4  | 47.6  | 35.4  | 46.3  | 34.8  | 44.3  | 33.7  | 41.5  | 32.0  | 38.1  | 29.7  |
|         |            | 27          | 19      | 50.7  | 40.5  | 50.1  | 40.6  | 48.8  | 40.0  | 46.7  | 38.8  | 44.0  | 36.9  | 40.5  | 34.4  |
|         |            | 31          | 21      | 53.1  | 48.0  | 52.5  | 48.0  | 51.2  | 47.4  | 49.1  | 46.1  | 46.4  | 44.0  | 42.9  | 41.2  |
| OPA 550 | 2800       | 21          | 15      | 55.1  | 43.5  | 54.3  | 43.5  | 52.8  | 42.7  | 50.3  | 41.2  | 47.0  | 39.0  | 42.9  | 36.0  |
|         |            | 23          | 17      | 58.0  | 42.5  | 57.3  | 42.5  | 55.7  | 41.8  | 53.2  | 40.5  | 49.9  | 38.4  | 45.7  | 35.7  |
|         |            | 27          | 19      | 60.9  | 48.7  | 60.2  | 48.7  | 58.6  | 48.0  | 56.1  | 46.6  | 52.8  | 44.4  | 48.7  | 41.4  |
|         |            | 31          | 21      | 63.8  | 57.7  | 63.1  | 57.7  | 61.5  | 57.0  | 59.1  | 55.4  | 55.8  | 52.9  | 51.6  | 50.1  |
| OPA 705 | 3700       | 21          | 15      | 68.3  | 53.9  | 67.4  | 53.9  | 65.4  | 53.0  | 62.4  | 51.1  | 58.3  | 48.4  | 53.1  | 44.6  |
|         |            | 23          | 17      | 71.9  | 52.7  | 71.0  | 52.7  | 69.0  | 51.9  | 66.0  | 50.2  | 61.9  | 47.7  | 56.8  | 44.2  |
|         |            | 27          | 19      | 75.5  | 60.4  | 74.6  | 60.4  | 72.7  | 59.6  | 69.7  | 57.8  | 65.5  | 55.1  | 60.4  | 51.3  |
|         |            | 31          | 21      | 79.1  | 71.5  | 78.2  | 71.6  | 76.3  | 70.7  | 73.3  | 68.7  | 69.2  | 65.6  | 64.0  | 61.5  |
| OPA 800 | 4250       | 21          | 15      | 77.2  | 61.0  | 76.2  | 61.0  | 74.0  | 59.9  | 70.6  | 57.9  | 66.0  | 54.7  | 60.1  | 50.5  |
|         |            | 23          | 17      | 81.3  | 59.6  | 80.3  | 59.6  | 78.1  | 58.7  | 74.7  | 56.8  | 70.1  | 53.9  | 64.2  | 50.0  |
|         |            | 27          | 19      | 85.4  | 68.4  | 84.4  | 68.4  | 82.2  | 67.4  | 78.7  | 65.4  | 74.1  | 62.3  | 68.3  | 58.1  |
|         |            | 31          | 21      | 89.5  | 80.9  | 88.5  | 81.0  | 86.3  | 80.0  | 82.9  | 77.7  | 78.2  | 74.3  | 72.4  | 69.5  |
| OPA 855 | 4200       | 21          | 15      | 83.9  | 65.9  | 82.9  | 62.5  | 80.4  | 64.4  | 76.7  | 62.2  | 71.6  | 59.0  | 65.4  | 54.3  |
|         |            | 23          | 17      | 88.4  | 64.4  | 87.3  | 64.4  | 85.1  | 63.4  | 81.1  | 61.2  | 76.3  | 58.3  | 69.8  | 53.9  |
|         |            | 27          | 19      | 92.8  | 74.1  | 91.7  | 73.9  | 89.5  | 72.3  | 85.1  | 70.6  | 80.7  | 67.0  | 74.1  | 62.6  |
|         |            | 31          | 21      | 97.5  | 87.3  | 96.4  | 87.3  | 93.9  | 86.2  | 90.2  | 83.6  | 85.1  | 80.0  | 78.9  | 74.9  |
| OPA 960 | 5200       | 21          | 15      | 94.8  | 74.4  | 93.5  | 74.4  | 90.6  | 72.8  | 86.5  | 70.3  | 80.8  | 66.6  | 73.7  | 61.3  |
|         |            | 23          | 17      | 99.7  | 72.8  | 98.5  | 72.8  | 96.0  | 71.5  | 91.5  | 69.1  | 86.1  | 65.8  | 78.7  | 60.9  |
|         |            | 27          | 19      | 104.6   | 83.6  | 103.4 | 83.4  | 100.9 | 82.1  | 96.0  | 79.7  | 91.1  | 75.6  | 83.6  | 70.7  |
|         |            | 31          | 21      | 110.0   | 98.5  | 108.8 | 98.5  | 105.9 | 97.3  | 101.8 | 94.4  | 96.0  | 90.3  | 89.0  | 84.6  |

### INDOOR AIR FLOW CORRECTION FACTORS @ NOMINAL CONDITIONS

#### Indoor Air Flow (%)

|                   | -20% | -10%  | Rated | +10%  |
|-------------------|------|-------|-------|-------|
| Total Capacity    | 0.95 | 0.975 | 1.0   | 1.025 |
| Sensible Capacity | 0.89 | 0.950 | 1.0   | 1.050 |

# Air cooled packaged units

## Performance Data



### HEATING CAPACITY (KW)

G = Gross Heating Capacity kW, based on nominal air flow.

N = Net Heating Capacity kW allowing for average defrost.

○ = Nominal Capacity (kW).

| Models  | Indoor<br>Entering Air<br>Temp. °C |      | Outdoor coil entering air temperature °C D.B. |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|---------|------------------------------------|------|---|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|         | D.B.                               | -5   |   | -3   |      | -1   |      | 1    |      | 3    |      | 5    |      | 7    |      | 9    |      |
|         |                                    | G    | N.  | G    | N.   | G    | N.   | G    | N.   | G    | N.   | G    | N.   | G    | N.   | G    | N.   |
| OPA 465 | 15                                 | 29.7 | 25.5  | 32.2 | 27.2 | 34.4 | 27.5 | 36.6 | 28.2 | 38.8 | 28.5 | 41.7 | 33.3 | 44.4 | 44.4 | 46.6 | 46.6 |
|         | 20                                 | 29.2 | 25.1  | 31.6 | 26.6 | 33.7 | 26.9 | 35.9 | 27.6 | 38.1 | 28.0 | 40.9 | 30.7 | 43.5 | 43.5 | 45.7 | 45.7 |
|         | 25                                 | 28.1 | 24.1  | 30.4 | 25.7 | 32.5 | 26.0 | 34.6 | 26.6 | 36.7 | 26.9 | 39.4 | 29.5 | 41.9 | 41.9 | 44.0 | 44.0 |
| OPA 550 | 15                                 | 33.9 | 29.1  | 36.6 | 31.0 | 39.2 | 31.3 | 41.7 | 32.1 | 44.2 | 32.5 | 47.5 | 37.9 | 50.5 | 50.5 | 53.1 | 53.1 |
|         | 20                                 | 33.2 | 28.5  | 35.9 | 30.3 | 38.4 | 30.7 | 40.9 | 31.5 | 43.3 | 31.9 | 46.6 | 34.9 | 49.5 | 49.5 | 52.0 | 52.0 |
|         | 25                                 | 32.0 | 27.5  | 34.6 | 29.2 | 37.0 | 29.6 | 39.4 | 30.3 | 41.7 | 30.7 | 44.8 | 33.6 | 47.7 | 47.7 | 50.1 | 50.1 |
| OPA 705 | 15                                 | 46.1 | 41.4  | 49.8 | 44.8 | 53.3 | 47.4 | 56.7 | 48.7 | 60.1 | 51.4 | 64.6 | 61.4 | 68.7 | 68.7 | 72.2 | 72.2 |
|         | 20                                 | 45.1 | 40.6  | 48.9 | 44.0 | 52.2 | 46.5 | 55.6 | 47.8 | 59.0 | 50.4 | 63.3 | 60.2 | 67.5 | 67.4 | 70.8 | 70.8 |
|         | 25                                 | 43.5 | 39.1  | 47.0 | 42.3 | 50.3 | 44.8 | 53.5 | 46.0 | 56.8 | 48.5 | 61.0 | 57.3 | 64.9 | 64.9 | 68.1 | 68.1 |
| OPA 800 | 15                                 | 48.3 | 43.4  | 52.3 | 47.1 | 55.9 | 49.7 | 59.5 | 51.2 | 63.1 | 54.0 | 67.8 | 64.4 | 72.1 | 72.1 | 75.7 | 75.7 |
|         | 20                                 | 47.4 | 42.6  | 51.3 | 46.1 | 54.8 | 48.8 | 58.3 | 50.2 | 61.9 | 52.9 | 66.5 | 63.1 | 70.7 | 70.7 | 74.2 | 74.2 |
|         | 25                                 | 45.6 | 41.1  | 49.4 | 44.4 | 52.8 | 47.0 | 56.2 | 48.3 | 59.6 | 50.9 | 64.0 | 60.2 | 68.1 | 68.1 | 71.5 | 71.5 |
| OPA 855 | 15                                 | 58.8 | 51.5  | 62.1 | 50.9 | 65.5 | 51.7 | 68.8 | 55.0 | 72.2 | 62.0 | 75.6 | 73.9 | 78.9 | 78.9 | 82.3 | 82.3 |
|         | 20                                 | 57.9 | 50.8  | 61.3 | 50.2 | 64.6 | 51.0 | 68.0 | 54.3 | 71.3 | 61.4 | 74.7 | 73.2 | 78.0 | 78.0 | 81.4 | 81.4 |
|         | 25                                 | 56.1 | 49.4  | 59.4 | 48.7 | 62.8 | 49.5 | 66.1 | 52.9 | 69.5 | 59.9 | 72.8 | 71.7 | 76.2 | 76.2 | 79.5 | 79.5 |
| OPA 960 | 15                                 | 61.5 | 53.8  | 66.6 | 57.2 | 71.2 | 58.7 | 75.8 | 59.9 | 80.3 | 60.7 | 86.3 | 67.1 | 91.8 | 71.6 | 96.4 | 96.4 |
|         | 20                                 | 60.3 | 52.7  | 65.3 | 56.2 | 69.8 | 57.5 | 74.3 | 58.7 | 78.8 | 59.5 | 84.6 | 61.7 | 90.0 | 70.2 | 94.5 | 94.5 |
|         | 25                                 | 58.1 | 50.9  | 62.8 | 54.0 | 67.1 | 55.4 | 71.5 | 56.5 | 75.9 | 57.2 | 81.5 | 59.5 | 86.7 | 67.6 | 91.0 | 91.0 |

# Air cooled packaged units

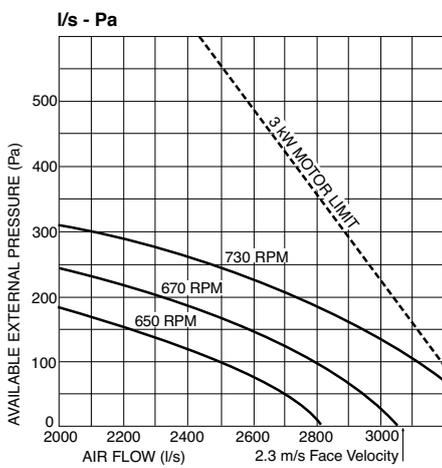
## Performance Data



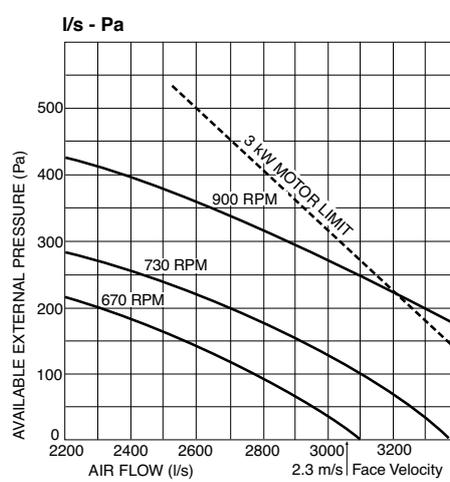
### AIR HANDLING – BELT DRIVE MODELS

**Note:** Airflows are for a dry coil. Reduce airflow by 5% in high moisture removal conditions. In a free blow or low resistance application, beware of exceeding indoor fan motor's full load amp limit (refer to page 18). As filters are optional, the fan air flows given are for units installed without filters.

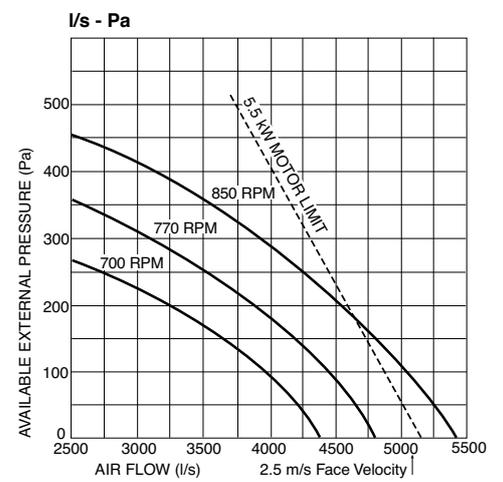
OPA 465RKTB



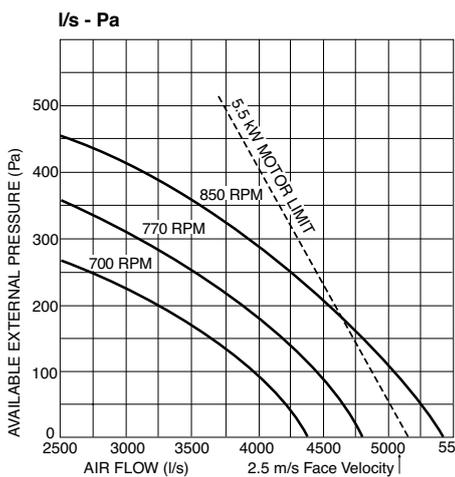
OPA 550RKTB



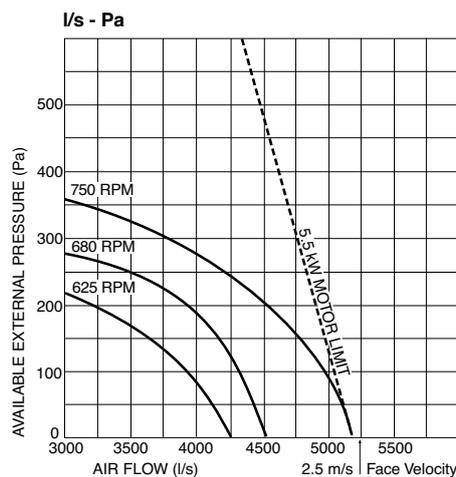
OPA 705RKTB



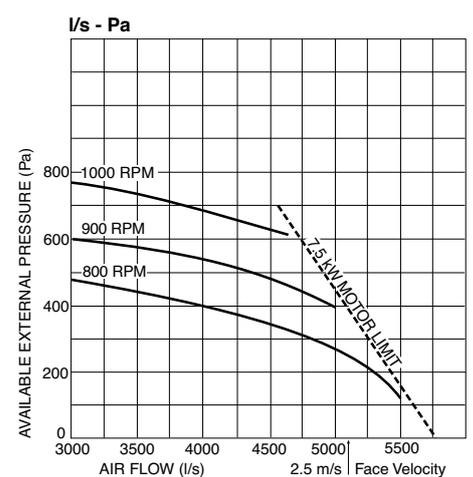
OPA 800RKTB



OPA 855RKTB



OPA 960RKTB



| Model :           |     | OPA 465 | OPA 550 | OPA 705 | OPA 800 | OPA 855 | OPA 960 |
|-------------------|-----|---------|---------|---------|---------|---------|---------|
| Std Motor Size    | kW  | 3       | 3       | 5.5     | 5.5     | 5.5     | 7.5     |
| Max. D.O.L. Motor | kW  | 4       | 4       | 7.5     | 7.5     | 7.5     | 7.5     |
| Max. Fan Speed    | RPM | 850     | 950     | 1000    | 1000    | 950     | 1000    |
| Std Pulley Range  | RPM | 610–765 | 690–875 | 780–970 | 780–970 | 600–750 | 780–970 |
| Factory Setting   | RPM | 685     | 785     | 825     | 825     | 680     | 825     |

# Air cooled packaged units

## Performance Data

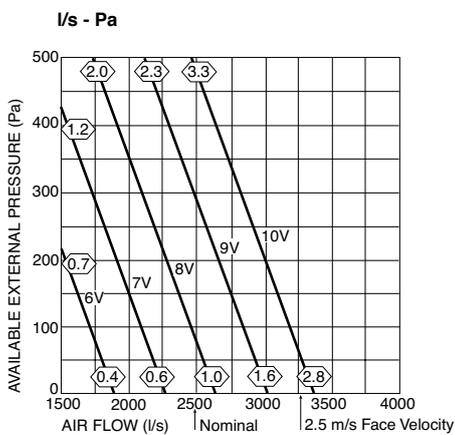


### AIR HANDLING - PLUG FAN OPTION

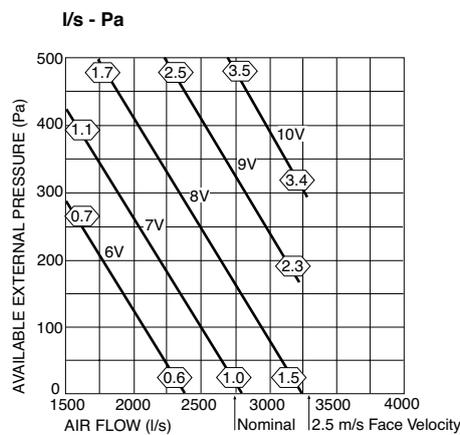
**Note:** Airflows are for a dry coil. Reduce airflow by 5% in high moisture removal conditions. In a free blow or low resistance application, beware of exceeding indoor fan motor's full load amp limit (refer to page 18). As filters are optional, the fan air flows given are for units installed without filters.

Kilowatts

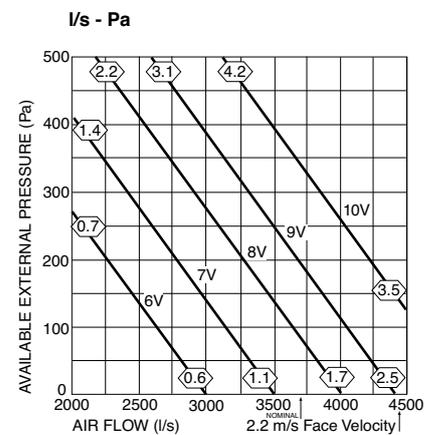
#### OPA 465RKTG-P



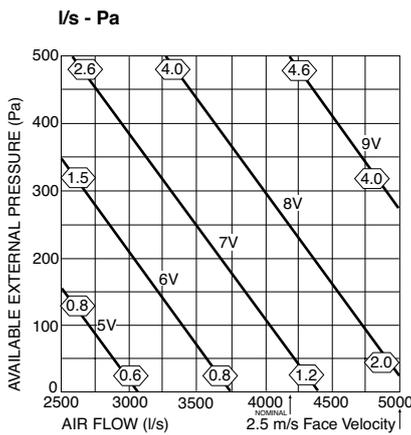
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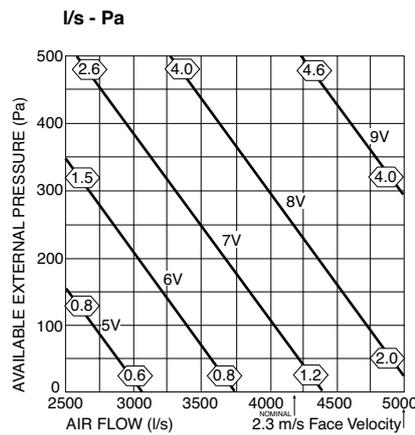
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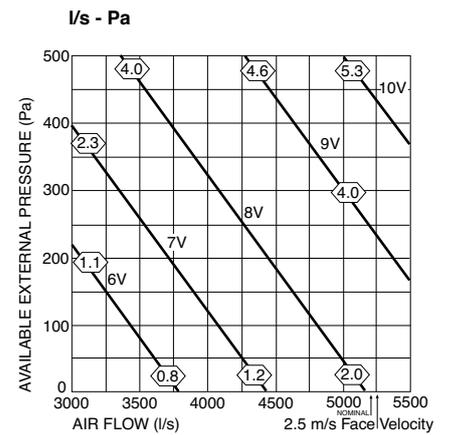
#### OPA 800RKTG-P



#### OPA 855RKTG-P



#### OPA 960RKTG-P



# Air cooled packaged units

## Performance Data



### SOUND LEVELS - OUTDOOR

#### Sound Power Levels (SWL) - Radiated

Measured in decibels re 1 picowatt, at nominal airflow.

| Models  | OUTDOOR<br>FAN SPEED | SWL dB(A) | OCTAVE BAND FREQUENCY Hz |     |     |    |    |    |
|---------|----------------------|-----------|--------------------------|-----|-----|----|----|----|
|         |                      |           | 125                      | 250 | 500 | 1K | 2K | 4K |
| OPA 465 | HIGH                 | 78        | 84                       | 78  | 76  | 74 | 69 | 61 |
| OPA 550 | HIGH                 | 84        | 85                       | 80  | 80  | 79 | 77 | 69 |
| OPA 705 | HIGH                 | 82        | 84                       | 83  | 78  | 75 | 67 | 61 |
| OPA 800 | HIGH                 | 82        | 85                       | 80  | 79  | 78 | 73 | 66 |
| OPA 855 | HIGH                 | 84        | 82                       | 81  | 82  | 79 | 76 | 71 |
| OPA 960 | HIGH                 | 85        | 78                       | 77  | 80  | 81 | 79 | 77 |

#### Sound Pressure Levels (SPL)

Measured in decibels re 20  $\mu$ Pa, at nominal airflow.

| Models  | OUTDOOR<br>FAN SPEED | SPL @ 3m dB(A) | OCTAVE BAND FREQUENCY Hz |     |     |    |    |    |
|---------|----------------------|----------------|--------------------------|-----|-----|----|----|----|
|         |                      |                | 125                      | 250 | 500 | 1K | 2K | 4K |
| OPA 465 | HIGH                 | 62             | 68                       | 62  | 60  | 58 | 54 | 47 |
| OPA 550 | HIGH                 | 68             | 69                       | 64  | 64  | 63 | 61 | 53 |
| OPA 705 | HIGH                 | 64             | 68                       | 67  | 62  | 59 | 51 | 45 |
| OPA 800 | HIGH                 | 66             | 69                       | 64  | 63  | 62 | 57 | 50 |
| OPA 855 | HIGH                 | 66             | 64                       | 63  | 64  | 61 | 58 | 53 |
| OPA 960 | HIGH                 | 67             | 73                       | 66  | 64  | 62 | 57 | 49 |

# Air cooled packaged units

## Performance Data



### SOUND LEVELS - INDOOR

#### Sound Power Levels (SWL) - Supply Air Outlet

**Test Conditions:** BS 848 PT2 1985.

Direct method of measurement (reverberant room).

Installation Type A (free inlet and outlet).

Measured in decibels re 1 picowatt.

| Models  | INDOOR FAN<br>SPEED | SWL dB(A) | OCTAVE BAND FREQUENCY Hz    |     |     |    |    |    |
|---------|---------------------|-----------|-----------------------------|-----|-----|----|----|----|
|         |                     |           | 125                         | 250 | 500 | 1K | 2K | 4K |
|         |                     |           | SOUND POWER LEVELS (SWL) dB |     |     |    |    |    |
| OPA 465 | 750 RPM             | 83        | 79                          | 79  | 78  | 79 | 76 | 75 |
| OPA 550 | 830 RPM             | 85        | 79                          | 77  | 79  | 81 | 78 | 77 |
| OPA 705 | 750 RPM             | 81        | 80                          | 81  | 78  | 78 | 76 | 73 |
| OPA 800 | 850RPM              | 86        | 87                          | 85  | 82  | 88 | 80 | 77 |
| OPA 855 | 750 RPM             | 84        | 82                          | 83  | 82  | 79 | 76 | 72 |
|         | 800 RPM             | 90        | 88                          | 89  | 88  | 86 | 82 | 78 |
| OPA 960 | 800 RPM             | 86        | 84                          | 85  | 84  | 81 | 78 | 74 |
|         | 850 RPM             | 92        | 90                          | 91  | 90  | 87 | 84 | 80 |

# Air cooled packaged units

## Performance Data



### SOUND LEVELS - OUTDOOR - PLUG FAN OPTION

#### Sound Power Levels (SWL) - Radiated

Measured in decibels re 1 picowatt, at nominal airflow.

| Models  | OUTDOOR<br>FAN SPEED | SWL dB(A) | OCTAVE BAND FREQUENCY Hz |     |     |    |    |    |
|---------|----------------------|-----------|--------------------------|-----|-----|----|----|----|
|         |                      |           | 125                      | 250 | 500 | 1K | 2K | 4K |
| OPA 465 | HIGH                 | 78        | 84                       | 78  | 76  | 74 | 69 | 61 |
| OPA 550 | HIGH                 | 84        | 85                       | 80  | 80  | 79 | 77 | 69 |
| OPA 705 | HIGH                 | 82        | 82                       | 81  | 82  | 79 | 76 | 71 |
| OPA 800 | HIGH                 | 82        | 85                       | 80  | 79  | 78 | 73 | 66 |
| OPA 855 | HIGH                 | 84        | 82                       | 81  | 82  | 79 | 76 | 71 |
| OPA 960 | HIGH                 | 85        | 78                       | 77  | 80  | 81 | 79 | 77 |

#### Sound Pressure Levels (SPL)

Measured in decibels re 20  $\mu$ Pa, at nominal airflow.

| Models  | OUTDOOR<br>FAN SPEED | SPL @ 3m dB(A) | OCTAVE BAND FREQUENCY Hz |     |     |    |    |    |
|---------|----------------------|----------------|--------------------------|-----|-----|----|----|----|
|         |                      |                | 125                      | 250 | 500 | 1K | 2K | 4K |
| OPA 465 | HIGH                 | 62             | 68                       | 62  | 60  | 58 | 54 | 47 |
| OPA 550 | HIGH                 | 68             | 69                       | 64  | 64  | 63 | 61 | 53 |
| OPA 705 | HIGH                 | 66             | 64                       | 63  | 64  | 61 | 58 | 53 |
| OPA 800 | HIGH                 | 66             | 69                       | 64  | 63  | 62 | 57 | 50 |
| OPA 855 | HIGH                 | 66             | 64                       | 63  | 64  | 61 | 58 | 53 |
| OPA 960 | HIGH                 | 67             | 73                       | 66  | 64  | 62 | 57 | 49 |

### SOUND LEVELS - INDOOR - PLUG FAN OPTION

#### Sound Power Levels (SWL) - Supply Air Outlet

Test Conditions: BS 848 PT2 1985.

Installation Type A (free inlet and outlet).

Direct method of measurement (reverberant room).

Measured in decibels re 1 picowatt.

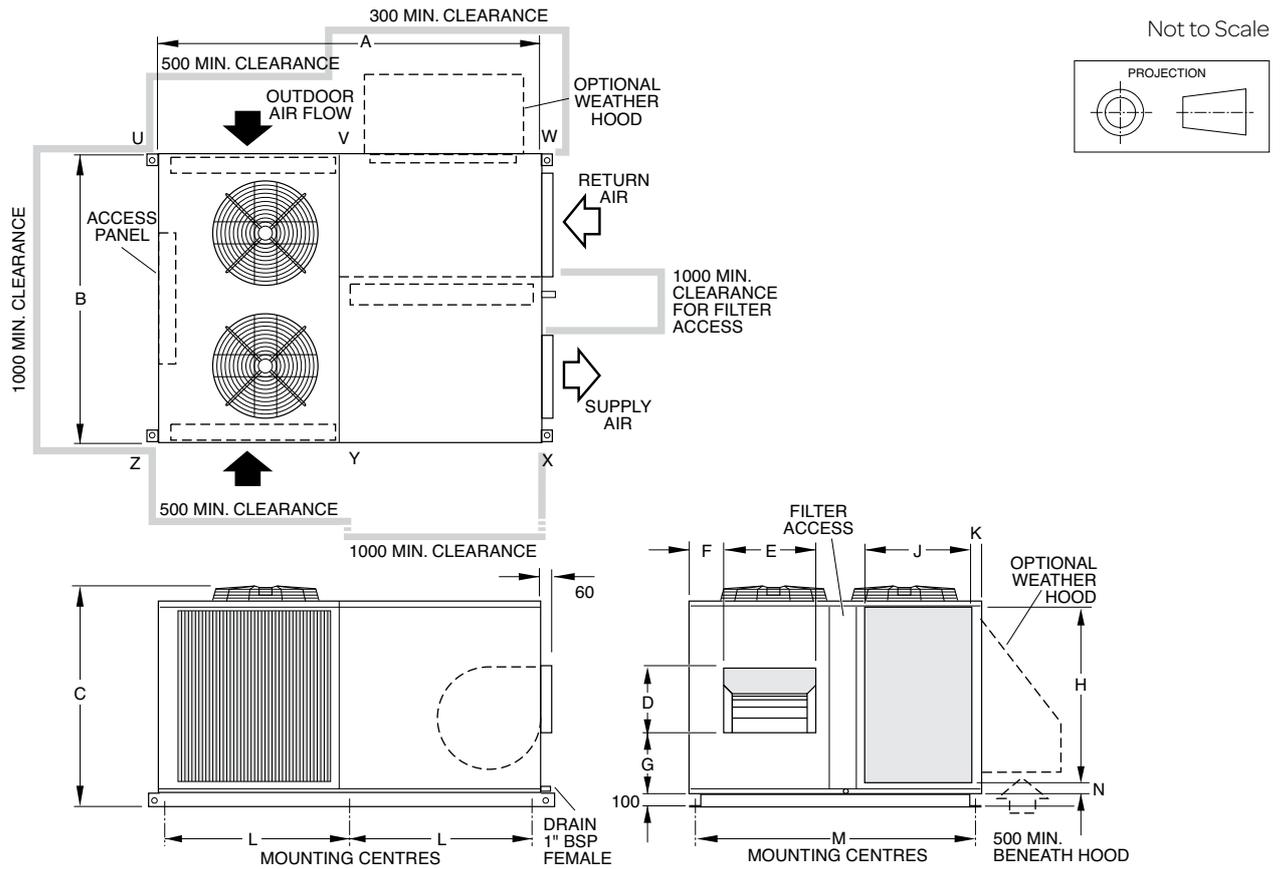
| Models  | INDOOR<br>AIRFLOW<br>@ 300Pa Static | SWL dB(A) | OCTAVE BAND FREQUENCY Hz |     |     |    |    |    |
|---------|-------------------------------------|-----------|--------------------------|-----|-----|----|----|----|
|         |                                     |           | 125                      | 250 | 500 | 1K | 2K | 4K |
| OPA 465 | 2500 l/s                            | 83        | 84                       | 81  | 81  | 77 | 73 | 70 |
| OPA 550 | 2800 l/s                            | 79        | 77                       | 78  | 77  | 73 | 70 | 64 |
| OPA 705 | 3700 l/s                            | 83        | 81                       | 81  | 82  | 79 | 72 | 69 |
| OPA 800 | 4250 l/s                            | 83        | 84                       | 82  | 83  | 78 | 74 | 70 |
| OPA 855 | 4200 l/s                            | 83        | 84                       | 82  | 83  | 78 | 74 | 70 |
| OPA 960 | 5200 l/s                            | 87        | 87                       | 85  | 86  | 82 | 78 | 75 |

# Air cooled packaged units

## Dimensions (mm)



**FIG. 1 OPA \*RKTBH - HORIZONTAL SUPPLY & RETURN AIR**



| MODEL   | A    | B    | C    | D   | E   | F   | G   | H    | J   | K   | L    | M    | N   |
|---------|------|------|------|-----|-----|-----|-----|------|-----|-----|------|------|-----|
| OPA 465 | 2225 | 1950 | 1635 | 532 | 443 | 195 | 585 | 955  | 497 | 135 | 1080 | 1879 | 210 |
| OPA 550 | 2225 | 1950 | 1750 | 535 | 483 | 190 | 590 | 955  | 497 | 135 | 1080 | 1879 | 210 |
| OPA 705 | 2790 | 2150 | 1860 | 479 | 558 | 235 | 615 | 1200 | 596 | 130 | 1364 | 2079 | 266 |
| OPA 855 | 2790 | 2150 | 1860 | 479 | 558 | 235 | 615 | 1200 | 596 | 130 | 1364 | 2079 | 266 |
| OPA 960 | 2790 | 2150 | 1860 | 479 | 558 | 235 | 615 | 1200 | 596 | 130 | 1364 | 2079 | 266 |

### POINT LOAD (kg)

| Model   | U   | V   | W   | X   | Y   | Z   |
|---------|-----|-----|-----|-----|-----|-----|
| OPA 465 | 130 | 120 | 110 | 134 | 147 | 159 |
| OPA 550 | 160 | 136 | 111 | 132 | 148 | 164 |
| OPA 705 | 189 | 179 | 179 | 214 | 213 | 226 |
| OPA 855 | 172 | 172 | 184 | 207 | 207 | 221 |
| OPA 960 | 206 | 194 | 194 | 231 | 230 | 246 |

**Note:** The OPA 705, 855, 960 models have four outdoor air fans.

**Note:** The manufacturer reserves the right to make changes in specifications at any time without notice or obligation. Certified data is available on request.

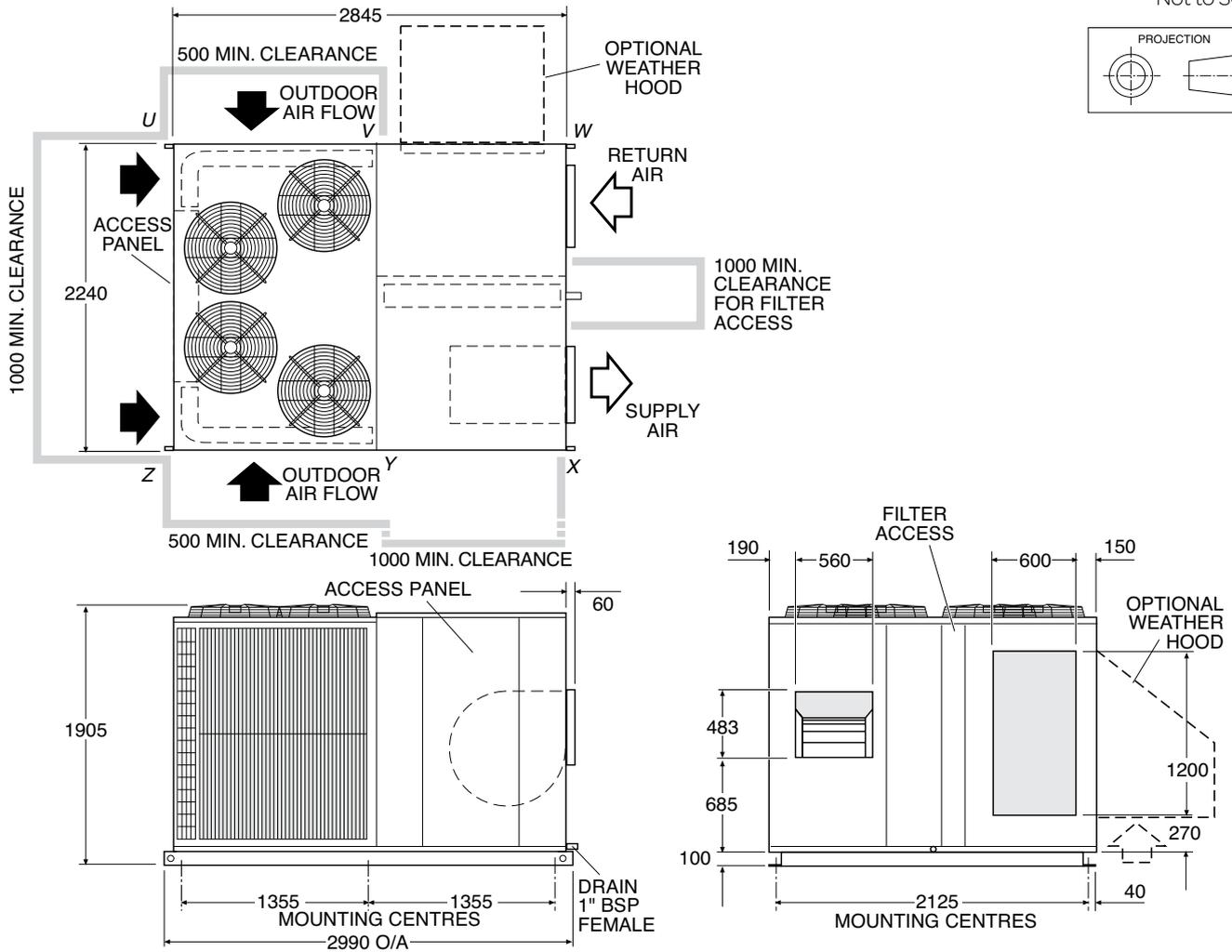
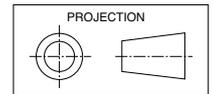
# Air cooled packaged units

## Dimensions (mm)



**FIG. 2 OPA 800KTB01 - HORIZONTAL SUPPLY & RETURN AIR**

Not to Scale



**POINT LOAD (kg)**

| U   | V   | W   | X   | Y   | Z   |
|-----|-----|-----|-----|-----|-----|
| 243 | 189 | 135 | 249 | 222 | 195 |

**Note:** A 2 m clearance is required above the condenser air fans.

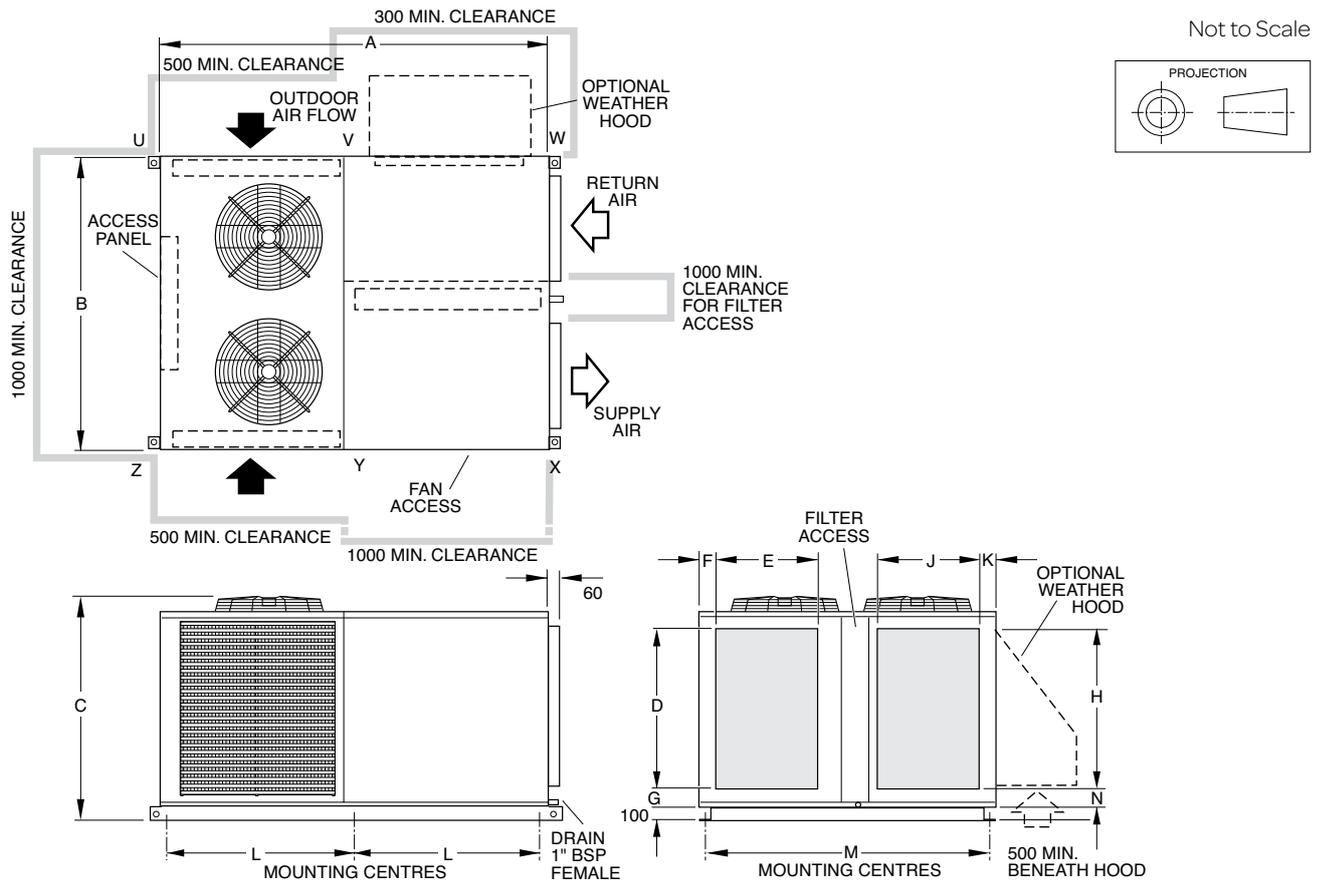
**Note:** The manufacturer reserves the right to make changes in specifications at any time without notice or obligation. Certified data is available on request.

# Air cooled packaged units

## Dimensions (mm)



**FIG. 3 OPA \*RKTBG-P : HORIZONTAL SUPPLY & RETURN AIR (PLUG FAN OPTION)**



| MODEL   | A    | B    | C    | D    | E   | F   | G   | H    | J   | K   | L    | M    | N   |
|---------|------|------|------|------|-----|-----|-----|------|-----|-----|------|------|-----|
| OPA 465 | 2225 | 1950 | 1635 | 957  | 502 | 55  | 210 | 957  | 502 | 130 | 1080 | 1879 | 210 |
| OPA 550 | 2225 | 1950 | 1750 | 958  | 502 | 70  | 210 | 958  | 502 | 130 | 1080 | 1879 | 210 |
| OPA 705 | 2790 | 2150 | 1860 | 1200 | 600 | 115 | 265 | 1200 | 600 | 130 | 1364 | 2079 | 265 |
| OPA 855 | 2790 | 2150 | 1860 | 1200 | 600 | 115 | 265 | 1200 | 600 | 130 | 1364 | 2079 | 265 |
| OPA 960 | 2790 | 2150 | 1860 | 1200 | 600 | 115 | 265 | 1200 | 600 | 130 | 1364 | 2079 | 265 |

### POINT LOAD (kg)

| Model   | U   | V   | W   | X   | Y   | Z   |
|---------|-----|-----|-----|-----|-----|-----|
| OPA 465 | 126 | 115 | 105 | 131 | 142 | 154 |
| OPA 550 | 159 | 134 | 109 | 131 | 146 | 162 |
| OPA 705 | 165 | 164 | 176 | 199 | 198 | 212 |
| OPA 855 | 165 | 164 | 176 | 199 | 198 | 212 |
| OPA 960 | 169 | 168 | 180 | 206 | 204 | 220 |

**Note:** The OPA 705, 855, 960 models have four outdoor air fans.

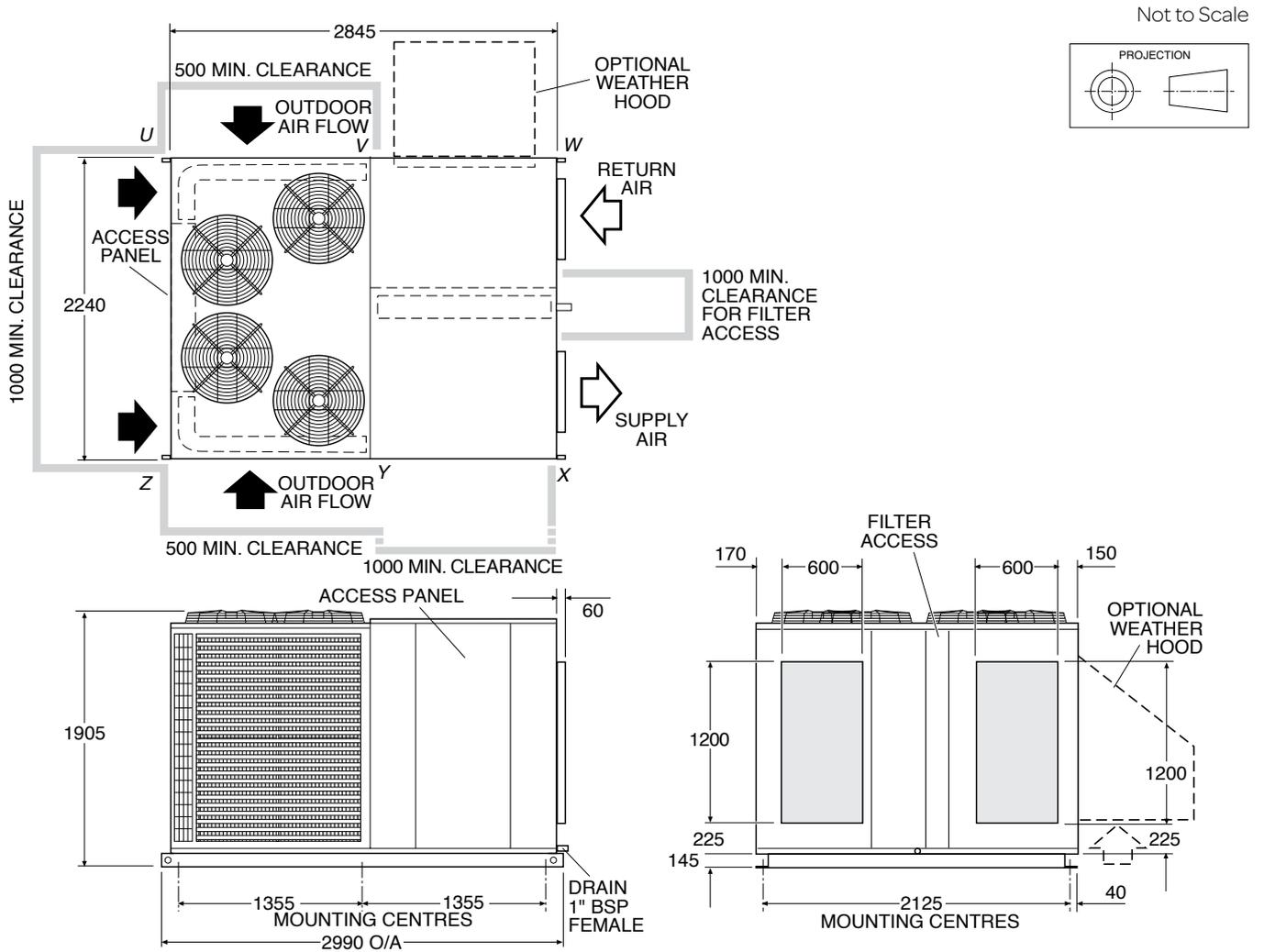
**Note:** The manufacturer reserves the right to make changes in specifications at any time without notice or obligation. Certified data is available on request.

# Air cooled packaged units

## Dimensions (mm)



**FIG. 4 OPA 800RKTBG-P : HORIZONTAL SUPPLY & RETURN AIR (PLUG FAN OPTION)**



### POINT LOAD (kg)

| U   | V   | W   | X   | Y   | Z   |
|-----|-----|-----|-----|-----|-----|
| 234 | 180 | 126 | 240 | 203 | 186 |

**Note:** A 2 m clearance is required above the exhaust air fans.

**Note:** The manufacturer reserves the right to make changes in specifications at any time without notice or obligation. Certified data is available on request.

# Air cooled packaged units

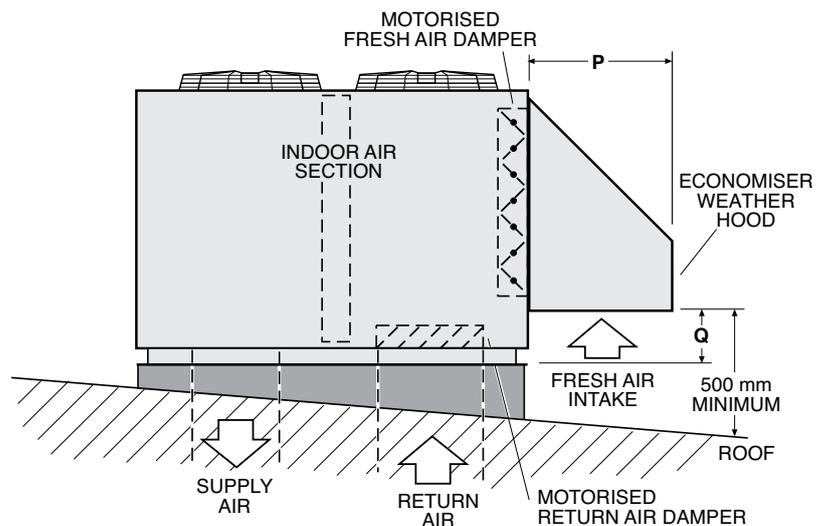
## Dimensions (mm)



### OPTIONS

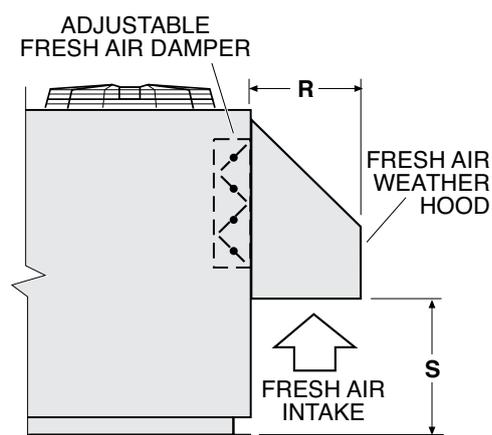
#### Economiser

| MODEL   | P   | Q   |
|---------|-----|-----|
| OPA 465 | 735 | 335 |
| OPA 550 | 735 | 335 |
| OPA 705 | 975 | 370 |
| OPA 800 | 975 | 370 |
| OPA 855 | 875 | 310 |
| OPA 960 | 875 | 310 |



#### Fresh Air Damper

| MODEL   | R   | S   |
|---------|-----|-----|
| OPA 465 | 435 | 785 |
| OPA 550 | 435 | 785 |
| OPA 705 | 260 | 835 |
| OPA 800 | 260 | 835 |
| OPA 855 | 430 | 810 |
| OPA 960 | 430 | 810 |



**Note:** The manufacturer reserves the right to make changes in specifications at any time without notice or obligation. Certified data is available on request.

# Air cooled packaged units

## Specifications



| Model   | OPA 465                      | OPA 550        | OPA 705      | OPA 800 * <sup>5</sup> | OPA 855        | OPA 960        |
|---|------------------------------|----------------|--------------|------------------------|----------------|----------------|
| <b>System</b>   |                              |                |              |                        |                |                |
| Nominal Cooling Capacity * <sup>1</sup> kW              | 46.7                         | 56.1           | 69.7         | 78.7                   | 85.1           | 96.0           |
| Net Cooling Capacity (MEPS) kW                          | 44.6                         | 53.9           | 67.9         | 74.2                   | 79.4           | 87.9           |
| Heating Capacity * <sup>2</sup> kW                      | 43.5                         | 49.5           | 67.5         | 70.7                   | 78.0           | 90.0           |
| EER (cooling) ECO Plug fan version                      | 3.16                         | 3.21           | 3.30         | -                      | 3.10           | 2.99           |
| EER (cooling) Standard Beltdrive version                | 2.96                         | 3.05           | 3.20         | 2.99                   | 2.90           | 2.80           |
| Air Flow * <sup>3</sup> l/s                             | 2500                         | 2800           | 3700         | 4250                   | 4200           | 5200           |
| Power Source * <sup>4</sup>                             | 3 phase 342-436 V a.c. 50 Hz |                |              |                        |                |                |
| Recom'd External Protection A/ph.                       | 50                           | 80             | 100          | 120                    | 100            | 120            |
| <b>ECO Plug / EC Motor S/A fan version</b>              |                              |                |              |                        |                |                |
| Indoor Fan Full Load Amps A/ph.                         | 5.7                          | 5.7            | 4.0 x 2      | 5.7 x 2                | 4.18 x 2       | 5.7 x 2        |
| Running Amps (Total System) A/ph.                       | 26.5/31.1/26.4               | 29.5/37.7/28.5 | 40 / 40 / 40 | 35.2/45.2/35.2         | 43 / 50 / 43   | 56.6/65.6/56.6 |
| <b>Std Belt Drive Supply Air fan version</b>            |                              |                |              |                        |                |                |
| Indoor Fan Full Load Amps A/ph.                         | 6.5/6.5/6.5                  | 6.5/6.5/6.5    | 11/11/11     | 11/11/11               | 10.3/10.3/10.3 | 13.8/13.8/13.8 |
| Running Amps (Total System) A/ph.                       | 27.3/31.9/27.2               | 30.3/38.5/29.3 | 42 / 42 / 42 | 40 / 50 / 40           | 43 / 50 / 43   | 59 / 68 / 59   |
| <b>Finish</b>   |                              |                |              |                        |                |                |
| Exterior  | grey polyester powder coat   |                |              |                        |                |                |
| <b>Weight (kg) - Belt Drive Supply Air Fan</b>          |                              |                |              |                        |                |                |
| Net Weight  | 800                          | 851            | 1167         | 1234                   | 1210           | 1167           |
| Shipping Weight (approx.)                               | 905                          | 960            | 1259         | 1379                   | 1264           | 1259           |
| <b>Weight (kg) - Plug Fan / EC Motor Supply Air Fan</b> |                              |                |              |                        |                |                |
| Net Weight  | 774                          | 840            | 1139         | 1170                   | 1170           | 1148           |
| Shipping Weight (approx.)                               | 869                          | 949            | 1241         | 1315                   | 1215           | 1240           |

### Notes:

\*<sup>1</sup> Nominal Cooling Capacity at AS/NZS 3823 conditions:  
 - Indoor Entering Air Temperature 27°C D.B., 19°C W.B.;  
 - Outdoor Entering Air Temperature 35°C D.B.  
 Net Cooling Capacity at AS/NZS 3823 includes an allowance for indoor fan motor heat loss.

\*<sup>3</sup> Supply air flow at Nominal Cooling Capacity conditions stated above.

\*<sup>4</sup> Power source includes voltage limits.

\*<sup>5</sup> Available in New Zealand only.

\*<sup>2</sup> Heating Capacity at AS/NZS 3823 conditions:  
 - Indoor Entering Air Temperature 21°C D.B.;  
 - Outdoor Entering Air Temperature 7°C D.B., 6°C W.B.

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