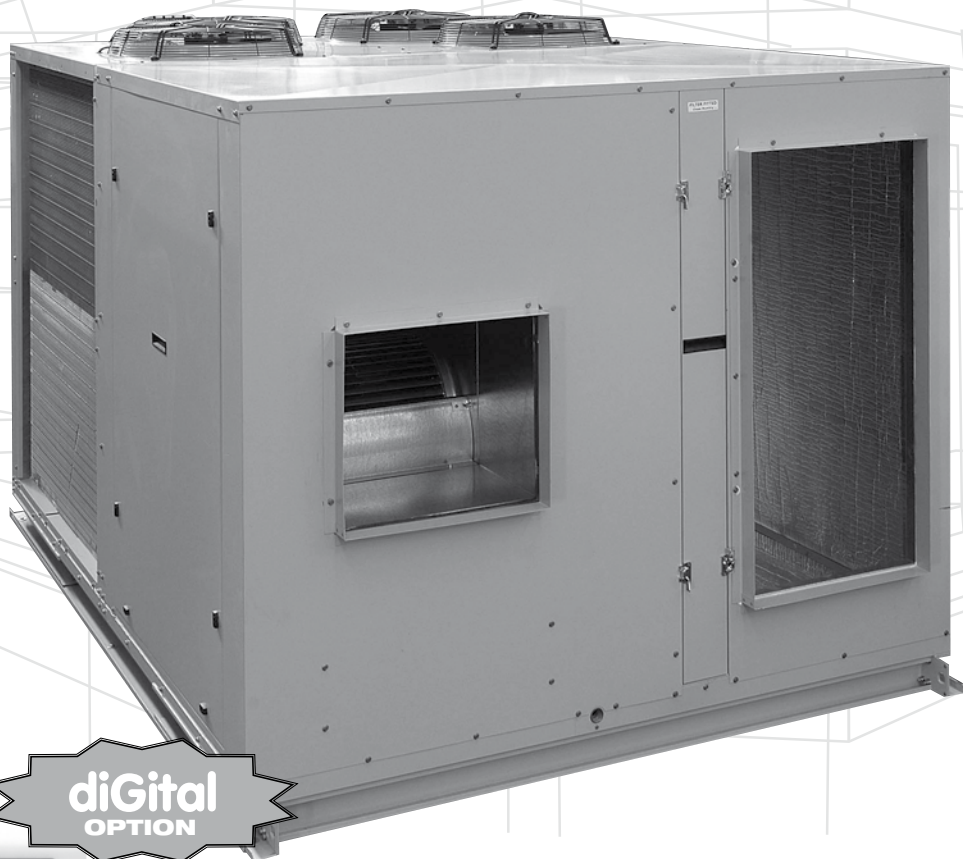


**Ducted Three Phase  
Packaged Air Conditioners**

**Technical Data**  
**OPA 440 – 960**

**R410A**

Twin System Enables Staging  
Extra Long Life  
Epoxy Coated Outdoor Coil



**diGital**  
OPTION



**TZT-100 Controller &  
Digital Scroll Compressor  
for close temperature control**

**Nominal Cooling Capacity  
44 kW – 96 kW**

## OPA 440, 550, 595, 650, 850, 960 - DUCTED PACKAGED ROOF TOP AIR CONDITIONER

### GENERAL

This OPA Series is a range of reverse cycle (heat pump) packaged roof top air conditioner designed and developed to comply with AS/NZS 3823 specified conditions. The system has been tested and proven for cooling operation in outdoor temperatures up to 50°C.

OPA 440 is available with or without a **digital** scroll type compressor:

**OPA 440RKTB** - standard version

**OPA 440RKTBGD** - digital version c/w digital compressor & TZT-100 Controller.

Refer to **temperzone** engineering for made-to-order digital versions of the other models.

### APPLICATIONS

These units have been specifically developed for air conditioning of commercial premises, e.g. banks, supermarkets, shopping malls, food outlets, auditoriums and restaurants.

### Air Flow Selection

If the air returning to the indoor coil is regularly expected to be above 50%RH, then the coil face velocity should be limited to be 2.5 m/s or less (refer Air Flow graph; 2.5 m/s is clearly marked).

High humidity levels can occur in tropical or subtropical conditions, and/or when heavily moisture laden fresh air is introduced. Consideration must always be given to selecting an air flow and face velocity that avoids water carry-over problems.

Applications using full or high proportions of fresh air should be referred to your nearest **temperzone** sales office to establish the correct selection of units.

### FEATURES

**Refrigerant R410A.** Each system uses refrigerant R410A which is deemed to have zero ozone depletion potential.

**Economy.** Each OPA unit has two independent refrigeration circuits to provide the flexibility and economy of two stage operation, i.e. utilising one or two circuits as conditions vary, plus the advantage of staggered starting. An economiser option is available to lower operating costs further during the cooling cycle.

**Efficient.** Heat exchange coils incorporate inner grooved (rifled) tube for better heat transfer. The indoor air coil is interlaced for efficient part load performance.

**Performance.** An adjustable pulley on the indoor air fan motor enables fine tuning to match the supply air requirements. The system includes a temperature sensing head pressure control which enables the system to compensate for outdoor ambient temperatures below 20°C on cooling cycle, and above 15°C on heating cycle.

**Quiet.** The unit's generous insulation ensures a quiet unit.

**Durable.** The cabinet and drain tray are constructed from high grade galvanised steel - polyester powder coated (colour Grey) for increased durability. External fasteners are stainless steel. Heat exchange coils comprise aluminium plate fins on mechanically expanded rifled copper tube. The outdoor coil fins are epoxy coated for extra protection in corrosive environments, e.g. salt laden sea air. Coil protection guards are supplied. Fan motor bearings are sealed for life so as not to incur regular maintenance.

**Insulation.** Closed cell foam insulation has been used in the indoor air section to ensure no particles are introduced into the air stream. The insulation is foil faced and meets fire test standards AS 1530.3 (1989) and BS 476 parts 6 & 7.

**Self Diagnostics.** The OPA's Outdoor Unit Controller (OUC) has a display of LEDs to indicate faults and running conditions. A non-specific fault indicator is included for interface to external systems.

### CONFIGURATIONS

Two standard versions are available for each model:

1. Horizontal supply/return air with box mounting channel (OPA\*RKTBH),
2. Downward supply/return air with box mounting channel (OPA\*RKTBU).

### OPTIONAL EQUIPMENT

1. **temperzone** TZT-100 Controller kit, or SAT-2 Controller kit.
2. Filters (rated EU4).
3. Economiser (factory fitted)  
- includes dampers, weatherhood.
4. Adjustable fresh air damper and weatherhood.
5. Electronic control systems  
- available by special arrangement.
6. Digital compressor replaces one of two compressors - for close control applications.

### SAFETY FEATURES

1. HP and loss of refrigerant protection.
2. Anti-rapid cycle timer and internal overload for compressor protection.
3. Circuit breaker control circuits.
4. Time-and-temperature controlled electronic de-ice 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. Phase rotation protection device.
10. 24V control circuit

### COMPRESSOR

Each high efficiency scroll type compressor is hermetically sealed and supported on rubber mounts to minimise vibration.

### REFRIGERATION SYSTEM

The OPA units are factory charged with HFC-410A (R410A) refrigerant.

### WIRING

The electrical supply required is: 3 phase 380-415 V a.c. 50 Hz with neutral and earth. The units control panel is fully wired ready to accept the main power supply.

### ECONOMISER OPTION

If the outdoor air heat content or temperature is below that of the return air, the fresh air damper opens and the return air damper closes to provide the first stage of cooling. The compressor(s) will then operate to provide more cooling if required. An alternative way of removing return air may be required when operating on 100% fresh air.

### OPA 440 Digital Version:

**Digital Scroll Compressor.** 'Digital' systems include one conventional scroll compressor and one digital scroll compressor. The digital version of this unit provides a variable capacity ability that enables closer control of room temperature. This is achieved by avoiding on/off cycling of the compressor. These compressors have proven very reliable because of their design simplicity. Electrical harmonic noise is very low.

**Extended Capability.** Digitals are particularly suitable for applications requiring full or high proportions of fresh air, VAV, close control and supply air temperature control.

**User Friendly.** Each digital air conditioning system is supplied the TZT-100 Controller. This thermostat has been designed to maintain a high level of comfort for room occupants. Emphasis has been placed on providing controls that are easy to use — despite the sophisticated microprocessor system that runs it. Use of the Auto and Timer function settings allows you to "set it and forget it".

The manufacturer operates a quality management system that conforms to AS/NZS ISO 9001:2008.

*Also available:  
OPA 225–385 models (23–38 kW)*

**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. For fan motor heat loss refer to Air Handling graphs.

| MODEL   | INDOOR FAN |         | INDOOR COIL E.A.T. |         | OUTDOOR COIL ENTERING AIR TEMPERATURE °C D.B. |       |       |       |       |       |       |       |       |       |       |       |
|---------|------------|---------|--------------------|---------|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|         | SPEED      | AIR l/s | D.B. °C            | W.B. °C | 23  |       | 27    |       | 31    |       | 35    |       | 39    |       | 43    |       |
|         |            |         |                    |         | Total   | Sens. | Total | Sens. | Total | Sens. | Total | Sens. | Total | Sens. | Total | Sens. |
| OPA 440 | HIGH       | 2350    | 21                 | 15      | 43.8  | 34.7  | 43.3  | 34.6  | 42.0  | 34.0  | 40.1  | 32.9  | 37.5  | 31.1  | 34.2  | 26.7  |
|         |            |         | 23                 | 17      | 46.2  | 33.9  | 45.6  | 33.9  | 44.4  | 33.3  | 42.4  | 32.3  | 39.8  | 30.6  | 36.5  | 28.4  |
|         |            |         | 27                 | 19      | 48.5  | 38.8  | 48.0  | 38.8  | 46.7  | 38.3  | 44.7  | 37.1  | 42.1  | 35.4  | 38.8  | 33.0  |
|         |            |         | 31                 | 21      | 50.9  | 46.0  | 50.3  | 46.0  | 49.0  | 45.4  | 47.1  | 44.1  | 44.4  | 42.2  | 41.1  | 39.5  |
| OPA 550 | HIGH       | 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 595 | HIGH       | 3000    | 21                 | 15      | 55.9  | 44.2  | 55.2  | 44.2  | 53.6  | 43.4  | 51.1  | 41.9  | 47.8  | 39.6  | 43.5  | 36.5  |
|         |            |         | 23                 | 17      | 58.9  | 43.2  | 58.2  | 43.2  | 56.6  | 42.5  | 54.1  | 41.2  | 50.7  | 39.1  | 46.5  | 36.2  |
|         |            |         | 27                 | 19      | 61.9  | 49.5  | 61.1  | 49.5  | 59.4  | 48.8  | 57.0  | 47.4  | 53.7  | 45.1  | 49.5  | 42.0  |
|         |            |         | 31                 | 21      | 64.8  | 58.6  | 64.1  | 58.7  | 62.5  | 57.9  | 60.0  | 56.3  | 56.7  | 53.8  | 52.4  | 50.4  |
| OPA 650 | HIGH       | 3500    | 21                 | 15      | 62.8  | 47.7  | 61.0  | 47.5  | 59.2  | 46.8  | 57.4  | 46.0  | 55.6  | 45.3  | 53.4  | 44.2  |
|         |            |         | 23                 | 17      | 65.9  | 48.5  | 64.6  | 47.5  | 62.8  | 46.8  | 61.0  | 46.0  | 59.2  | 45.3  | 57.4  | 44.5  |
|         |            |         | 27                 | 19      | 70.3  | 55.2  | 68.2  | 54.7  | 66.4  | 53.7  | 64.6  | 53.6  | 62.8  | 52.9  | 60.6  | 52.2  |
|         |            |         | 31                 | 21      | 74.3  | 62.7  | 72.2  | 61.9  | 70.4  | 61.2  | 68.5  | 60.9  | 66.4  | 60.2  | 64.2  | 59.4  |
| OPA 850 | HIGH       | 4200    | 21                 | 15      | 82.7  | 62.8  | 80.3  | 62.5  | 78.0  | 61.6  | 75.6  | 60.6  | 73.2  | 59.7  | 70.4  | 58.2  |
|         |            |         | 23                 | 17      | 86.8  | 63.9  | 85.1  | 62.5  | 82.7  | 61.6  | 80.3  | 60.6  | 78.0  | 59.7  | 75.6  | 58.6  |
|         |            |         | 27                 | 19      | 92.6  | 72.8  | 89.8  | 72.1  | 87.5  | 70.7  | 85.1  | 70.6  | 82.7  | 69.6  | 79.8  | 68.7  |
|         |            |         | 31                 | 21      | 97.9  | 82.6  | 95.1  | 81.6  | 92.7  | 80.7  | 90.3  | 80.2  | 87.5  | 79.3  | 84.6  | 78.3  |
| OPA 960 | HIGH       | 5200    | 21                 | 15      | 93.3  | 70.8  | 90.6  | 70.5  | 87.9  | 69.5  | 85.3  | 68.4  | 82.6  | 67.3  | 79.4  | 65.7  |
|         |            |         | 23                 | 17      | 97.9  | 72.1  | 96.0  | 70.5  | 93.3  | 69.5  | 90.6  | 68.4  | 87.9  | 67.3  | 85.3  | 66.1  |
|         |            |         | 27                 | 19      | 104.5   | 82.1  | 101.3 | 81.3  | 98.7  | 79.8  | 96.0  | 79.7  | 93.3  | 78.6  | 90.1  | 77.5  |
|         |            |         | 31                 | 21      | 110.4   | 93.2  | 107.2 | 92.0  | 104.5 | 91.0  | 101.9 | 90.4  | 98.7  | 89.4  | 95.4  | 88.3  |

**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 |

**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)

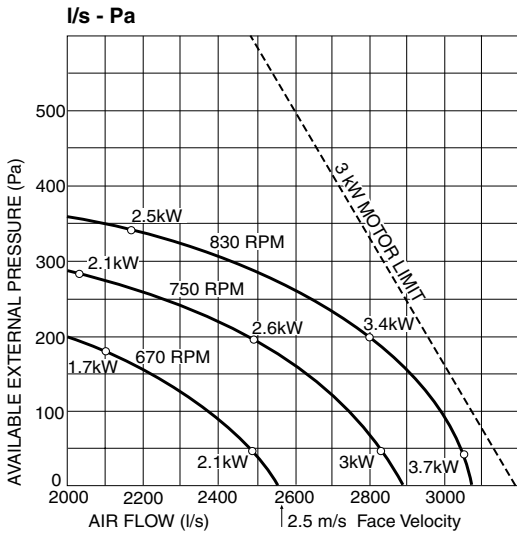
| MODEL   | INDOOR ENTERING AIR TEMP. °C D.B. | OUTDOOR COIL ENTERING AIR TEMPERATURE (E.A.T.) °C D.B. |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|---------|-----------------------------------|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|         |                                   | -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 440 | 15                                | 29.6   | 26.0 | 32.1 | 27.6 | 34.3 | 28.3 | 36.5 | 28.9 | 38.7 | 29.2 | 41.6 | 32.3 | 44.3 | 34.5 | 46.5 | 46.5 |
|         | 20                                | 29.1   | 25.4 | 31.5 | 27.1 | 33.6 | 27.8 | 35.8 | 28.3 | 38.0 | 28.7 | 40.8 | 29.8 | 43.4 | 33.9 | 45.6 | 45.6 |
|         | 25                                | 28.0   | 24.5 | 30.3 | 26.1 | 32.4 | 26.7 | 34.5 | 27.2 | 36.6 | 27.6 | 39.3 | 28.7 | 41.8 | 32.6 | 43.9 | 43.9 |
| 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 595 | 15                                | 34.3   | 29.5 | 37.1 | 31.3 | 39.6 | 31.7 | 42.2 | 32.5 | 44.8 | 32.9 | 48.1 | 38.4 | 51.1 | 51.1 | 53.7 | 53.7 |
|         | 20                                | 33.6   | 28.9 | 36.4 | 30.7 | 38.9 | 31.1 | 41.4 | 31.9 | 43.9 | 32.3 | 47.1 | 35.4 | 50.1 | 50.1 | 52.7 | 52.7 |
|         | 25                                | 32.4   | 27.8 | 35.0 | 29.6 | 37.4 | 29.9 | 39.8 | 30.7 | 42.3 | 31.1 | 45.4 | 34.0 | 48.3 | 48.3 | 50.7 | 50.7 |
| OPA 650 | 15                                | 41.6   | 36.4 | 45.0 | 38.7 | 48.1 | 39.7 | 51.2 | 40.5 | 54.4 | 41.0 | 58.4 | 45.3 | 62.1 | 48.5 | 65.2 | 65.2 |
|         | 20                                | 40.8   | 35.7 | 44.2 | 38.0 | 47.2 | 38.9 | 50.2 | 39.7 | 53.3 | 40.2 | 57.2 | 41.8 | 60.9 | 47.5 | 63.9 | 63.9 |
|         | 25                                | 39.3   | 34.4 | 42.5 | 36.6 | 45.5 | 37.5 | 48.4 | 38.2 | 51.3 | 38.7 | 55.1 | 40.2 | 58.6 | 45.7 | 61.6 | 61.6 |
| OPA 850 | 15                                | 57.1   | 49.9 | 61.7 | 53.1 | 66.0 | 54.5 | 70.3 | 55.5 | 74.5 | 56.3 | 80.1 | 62.2 | 85.2 | 66.4 | 89.4 | 89.4 |
|         | 20                                | 55.9   | 49.0 | 60.5 | 52.1 | 64.7 | 53.4 | 68.9 | 54.4 | 73.1 | 55.2 | 78.5 | 57.3 | 83.5 | 65.1 | 87.7 | 87.7 |
|         | 25                                | 53.9   | 47.1 | 58.3 | 50.1 | 62.3 | 51.4 | 66.3 | 52.4 | 70.4 | 53.1 | 75.6 | 55.2 | 80.4 | 62.7 | 84.4 | 84.4 |
| OPA 960 | 15                                | 61.5   | 53.8 | 66.6 | 57.2 | 71.1 | 58.7 | 75.7 | 59.8 | 80.3 | 60.6 | 86.3 | 67.0 | 91.8 | 71.6 | 96.4 | 96.4 |
|         | 20                                | 60.3   | 52.8 | 65.3 | 56.1 | 69.8 | 57.5 | 74.3 | 58.7 | 78.8 | 59.5 | 84.6 | 61.8 | 90.0 | 70.2 | 94.5 | 94.5 |
|         | 25                                | 58.1   | 50.8 | 62.8 | 54.0 | 67.2 | 55.4 | 71.5 | 56.5 | 75.8 | 57.3 | 81.5 | 59.5 | 86.7 | 67.6 | 91.0 | 91.0 |

## PERFORMANCE DATA

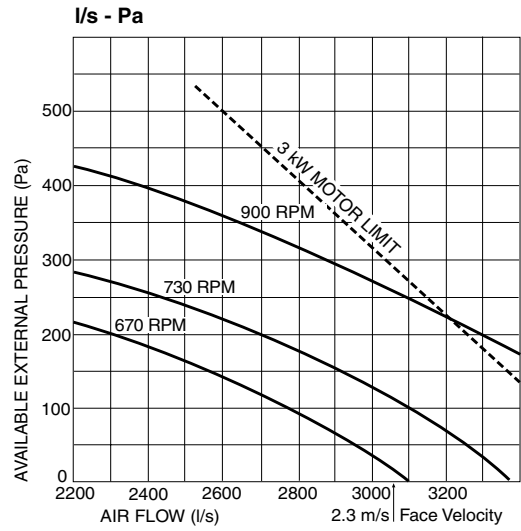
## AIR HANDLING

**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 back page). As filters are optional, the fan air flows given are for units installed without filters.

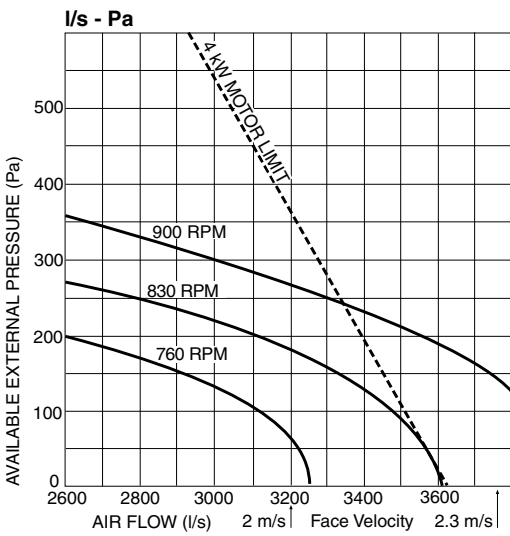
### OPA 440



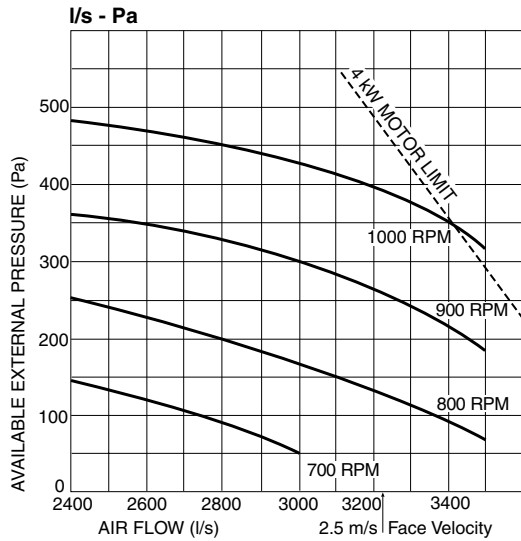
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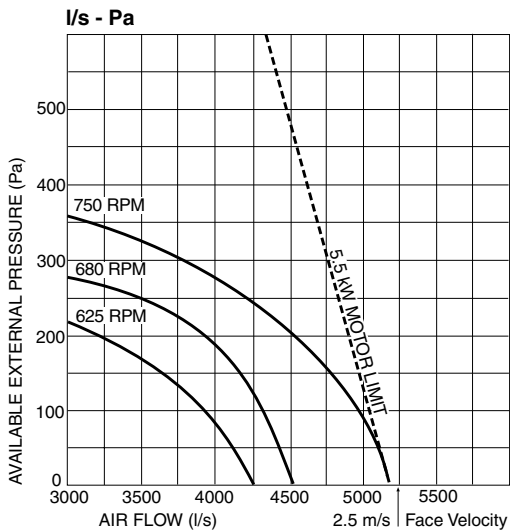
### OPA 595



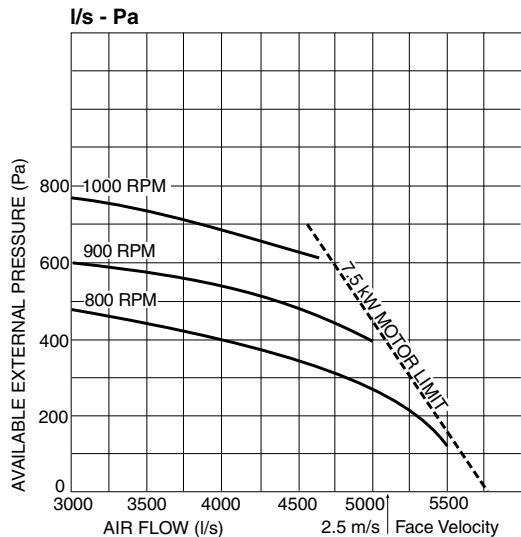
### OPA 650



### OPA 850



### OPA 960

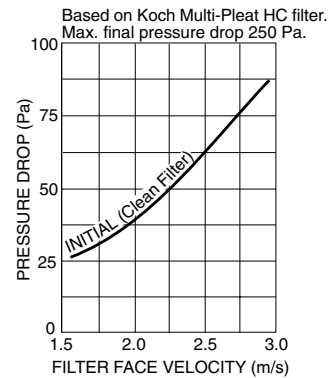


## PERFORMANCE DATA

| Model :              | OPA 440 | OPA 550 | OPA 595 | OPA 650  |
|----------------------|---------|---------|---------|----------|
| Std Motor Size kW    | 3       | 3       | 4       | 4        |
| Max. D.O.L. Motor kW | 4       | 4       | 4       | 4        |
| Max. Fan Speed RPM   | 850     | 900     | 900     | 1000     |
| Std Pulley Range RPM | 670–850 | 670–900 | 750–900 | 850–1000 |
| Factory Setting RPM  | 750     | 750     | 830     | 925      |

| Model :              | OPA 850 | OPA 960 |
|----------------------|---------|---------|
| Std Motor Size kW    | 5.5     | 7.5     |
| Max. D.O.L. Motor kW | 7.5     | 7.5     |
| Max. Fan Speed RPM   | 950     | 1000    |
| Std Pulley Range RPM | 600–750 | 780–970 |
| Factory Setting RPM  | 680     | 825     |

## OPTIONAL FILTERS - PRESSURE DROP



## SOUND LEVELS

### RADIATED

### Sound Power Levels (SWL)

Measured in decibels re 1 picowatt.

| MODEL   | OUTDOOR FAN SPEED | SWL dB(A) | OCTAVE BAND FREQUENCY Hz    |     |     |     |     |     |
|---------|-------------------|-----------|-----------------------------|-----|-----|-----|-----|-----|
|         |                   |           | 125                         | 250 | 500 | 1 k | 2 k | 4 k |
|         |                   |           | SOUND POWER LEVELS (SWL) dB |     |     |     |     |     |
| OPA 440 | HIGH              | 78        | 84                          | 78  | 76  | 74  | 69  | 61  |
| OPA 550 | HIGH              | 82        | 85                          | 80  | 80  | 79  | 77  | 69  |
| OPA 595 | HIGH              | 82        | 85                          | 80  | 80  | 79  | 77  | 69  |
| OPA 650 | HIGH              | 82        | 85                          | 80  | 80  | 79  | 77  | 69  |
| OPA 850 | 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 µPa.

| MODEL   | OUTDOOR FAN SPEED | SPL @ 3 m dB(A) | OCTAVE BAND FREQUENCY Hz       |     |     |     |     |     |
|---------|-------------------|-----------------|--------------------------------|-----|-----|-----|-----|-----|
|         |                   |                 | 125                            | 250 | 500 | 1 k | 2 k | 4 k |
|         |                   |                 | SOUND PRESSURE LEVELS (SPL) dB |     |     |     |     |     |
| OPA 440 | HIGH              | 62              | 68                             | 62  | 60  | 58  | 54  | 47  |
| OPA 550 | HIGH              | 66              | 69                             | 64  | 64  | 63  | 61  | 53  |
| OPA 595 | HIGH              | 66              | 69                             | 64  | 64  | 63  | 61  | 53  |
| OPA 650 | HIGH              | 66              | 69                             | 64  | 64  | 63  | 61  | 53  |
| OPA 850 | HIGH              | 66              | 64                             | 63  | 64  | 61  | 58  | 53  |
| OPA 960 | HIGH              | 67              | 73                             | 66  | 64  | 62  | 57  | 49  |

### Sound Power Levels (SWL)

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.

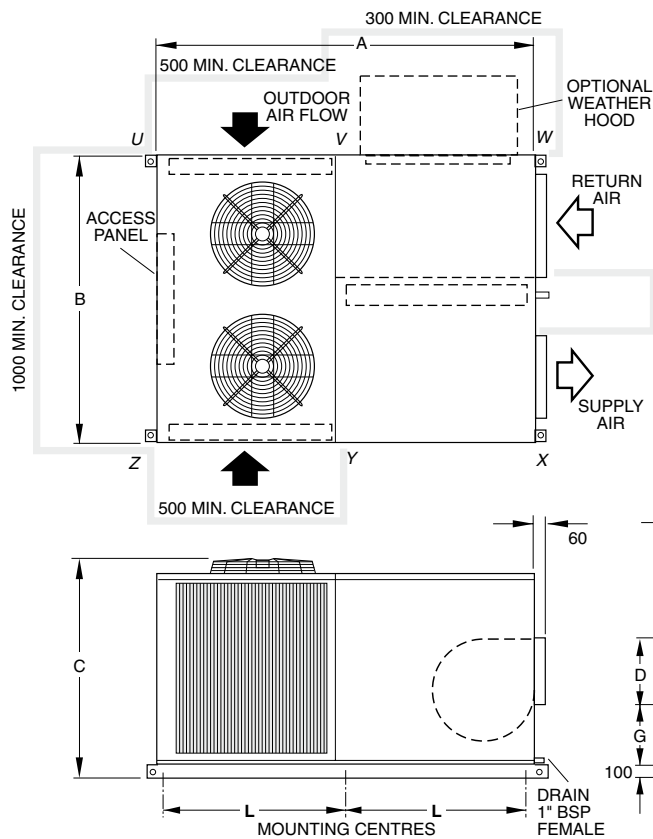
### SUPPLY AIR OUTLET

| MODEL   | INDOOR FAN SPEED | SWL dB(A) | OCTAVE BAND FREQUENCY Hz    |     |     |     |     |     |
|---------|------------------|-----------|-----------------------------|-----|-----|-----|-----|-----|
|         |                  |           | 125                         | 250 | 500 | 1 k | 2 k | 4 k |
|         |                  |           | SOUND POWER LEVELS (SWL) dB |     |     |     |     |     |
| OPA 440 | 830 RPM          | 85        | 79                          | 77  | 79  | 81  | 78  | 77  |
| OPA 550 | 830 RPM          | 88        | 79                          | 77  | 79  | 81  | 78  | 77  |
| OPA 595 | 750 RPM          | 84        | 83                          | 81  | 79  | 79  | 78  | 76  |
|         | 900 RPM          | 85        | 83                          | 82  | 79  | 80  | 78  | 76  |
| OPA 650 | 800 RPM          | 84        | 83                          | 81  | 79  | 79  | 78  | 76  |
|         | 1000 RPM         | 89        | 86                          | 84  | 82  | 84  | 83  | 81  |
| OPA 850 | 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  |

**DIMENSIONS (mm)**

Not to Scale

**Fig. 1 Horizontal Supply & Return Air  
OPA \*RKTBH**

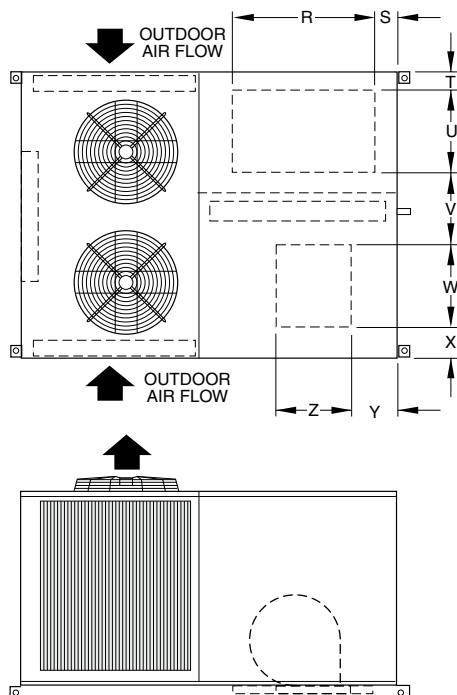


| MODEL   | A    | B    | C    | D   | E   | F   | G   | H    | J   | K   | L    | M    | N   |
|---------|------|------|------|-----|-----|-----|-----|------|-----|-----|------|------|-----|
| OPA 440 | 1970 | 1675 | 1550 | 480 | 490 | 155 | 605 | 772  | 420 | 95  | 953  | 1614 | 335 |
| OPA 550 | 2225 | 1950 | 1750 | 535 | 483 | 190 | 590 | 955  | 497 | 135 | 1080 | 1879 | 210 |
| OPA 595 | 2225 | 1950 | 1860 | 405 | 473 | 220 | 570 | 955  | 497 | 135 | 1080 | 1879 | 385 |
| OPA 650 | 2225 | 1950 | 1860 | 405 | 473 | 220 | 570 | 955  | 497 | 135 | 1080 | 1879 | 385 |
| OPA 850 | 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 |

**Note:**  
The OPA 850 & 960 models have four outdoor air fans.

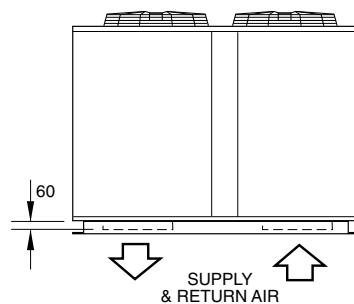
| MODEL   | POINT LOADS (kg) |     |     |     |     |     |
|---------|------------------|-----|-----|-----|-----|-----|
|         | U                | V   | W   | X   | Y   | Z   |
| OPA 440 | 106              | 109 | 113 | 121 | 125 | 129 |
| OPA 550 | 111              | 136 | 160 | 132 | 148 | 164 |
| OPA 595 | 146              | 135 | 135 | 154 | 154 | 166 |
| OPA 650 | 146              | 135 | 135 | 154 | 154 | 166 |
| OPA 850 | 184              | 172 | 172 | 207 | 207 | 221 |
| OPA 960 | 183              | 183 | 195 | 220 | 219 | 235 |

**Fig. 2 Downward Supply Air & Return Air  
OPA \*RKTBU**



| MODEL   | R    | S   | T   | U   | V   | W   | X   | Y   | Z   |
|---------|------|-----|-----|-----|-----|-----|-----|-----|-----|
| OPA 440 | 745  | 105 | 155 | 365 | 525 | 440 | 180 | 115 | 480 |
| OPA 550 | 930  | 120 | 205 | 475 | 608 | 435 | 215 | 185 | 485 |
| OPA 595 | 930  | 120 | 210 | 475 | 560 | 470 | 225 | 305 | 405 |
| OPA 650 | 930  | 120 | 210 | 475 | 560 | 470 | 225 | 305 | 405 |
| OPA 850 | 1165 | 160 | 220 | 575 | 545 | 567 | 235 | 415 | 475 |
| OPA 960 | 1165 | 160 | 220 | 575 | 545 | 567 | 235 | 415 | 475 |

**Note:**  
The OPA 850 & 960 models have four outdoor air fans. Refer to Fig.1 for overall dimensions.

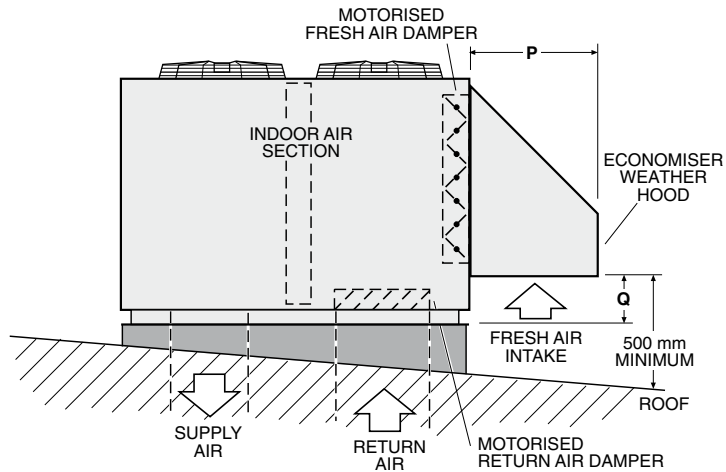


**NOTE**  
The manufacturer reserves the right to make changes in specifications at any time without notice or obligation. Certified data is available on request.

**Fig. 3 Economiser Option**

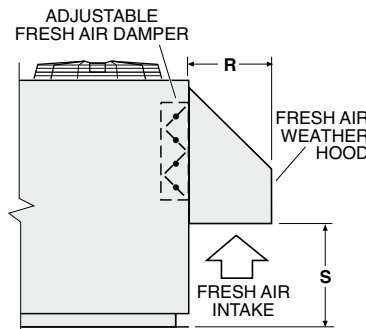
| MODEL   | P   | Q   |
|---------|-----|-----|
| OPA 440 | 580 | 490 |
| OPA 550 | 735 | 305 |
| OPA 595 | 735 | 560 |
| OPA 650 | 735 | 560 |
| OPA 850 | 875 | 310 |
| OPA 960 | 875 | 310 |

Dimensions (mm)



**Fig. 4 Fresh Air Damper Option**

| MODEL   | R   | S    |
|---------|-----|------|
| OPA 440 | 335 | 940  |
| OPA 550 | 435 | 1005 |
| OPA 595 | 435 | 1005 |
| OPA 650 | 435 | 1005 |
| OPA 850 | 430 | 810  |
| OPA 960 | 430 | 810  |



**Nomenclature**

e.g. **O P A 4 4 0 R K T B G D H**

|  |   |   |
|--|---|---|
| <p><i>Series</i></p> <p><b>O</b> - Outdoor<br/><b>P</b> - Packaged<br/><b>A</b> - Air Cooled</p> | <p><i>Size</i></p> <p>Divide by 10 to get approx. nominal Capacity in kilowatts</p> | <p><i>Type</i></p> <p><b>R</b> - Reverse cycle<br/><b>K</b> - Refrigerant R410A<br/><b>T</b> - Three phase power supply<br/><b>B</b> - Twin compressor system (twin circuit)<br/><b>G</b> - Digital compressor system (single)<br/><b>D</b> - TZT-701 Room Temp. Controller<br/><b>H</b> - Horizontal discharge supply air fan<br/><b>U</b> - Downward discharge supply air fan</p> |
|--|---|---|

## SPECIFICATIONS

| Model                       |       | OPA 440 *4                   | OPA 550      | OPA 595      | OPA 650      | OPA 850      | OPA 960      |
|-----------------------------|-------|------------------------------|--------------|--------------|--------------|--------------|--------------|
| Nominal Cooling Capacity *1 | kW    | 44.7                         | 56.1         | 57.0         | 64.6         | 85.1         | 96.0         |
| Net Cooling Capacity        | kW    | 42.7                         | 53.9         | 53.9         | 60.5         | 80.1         | 87.9         |
| Heating Capacity *2         | kW    | 43.4                         | 49.5         | 50.1         | 60.9         | 83.5         | 90.0         |
| E.E.R. (Cooling)            |       | 2.93                         | 3.05         | 2.92         | 2.75         | 3.04         | 2.80         |
| Air Flow *3                 | l/s   | 2350                         | 2800         | 3000         | 3500         | 4200         | 5200         |
| Power Source                |       | 3 phase 380-415 V a.c. 50 Hz |              |              |              |              |              |
| Indoor Fan Full Load Amps   | A/ph. | 6.1                          | 6.5          | 8.0          | 8.0          | 10.3         | 13.8         |
| Running Amps (Total System) | A/ph. | 31 / 26 / 26                 | 39 / 30 / 29 | 38 / 34 / 34 | 50 / 40 / 40 | 51 / 46 / 46 | 68 / 59 / 59 |
| Recom'd External Protection | A/ph. | 50                           | 80           | 80           | 80           | 100          | 120          |
| Finish                      |       | Grey polyester powder coat   |              |              |              |              |              |
| Net Weight                  | kg    | 703                          | 851          | 890          | 890          | 1162         | 1233         |
| Shipping Weight             | kg    | 778                          | 960          | 975          | 975          | 1264         | 1325         |

### Notes:

\*1 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.

\*2 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.

\*3 Supply air flow at Nominal Cooling Capacity conditions stated above.

\*4 Digital version available, ie one of two compressors supplied is digital type .

### NOTE

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