

CHURCH



AIR CONDITIONING

State of the Art Comfort Guide

Since 1958



For Home & Office

Designed to suit your individual needs

The Greater Head Office Hamilton



Experience the difference

The Church Air Commitment

As our client

"You are the Boss!"

We are here to look after you.

- 1) Your home or office, and your desires, will be respected and not taken for granted. We will keep in touch, be honest and up front at all times to meet your convenience and needs.
- 2) Our products & services will always be of an exceptional quality and design. This means your family and visitors will enjoy staying "cool & cosy warm" As well as adding value to your home or office for many years.
- 3) You are always welcome in our showroom and we'd be delighted to "Show and Tell" our systems to you. We are proud of our people, products & the seamless way we put it all together for your new level of quiet comfort.
- 4) Be assured during "Warranty Period", we will fix products we sell in reasonable time, or if the manufacturer can not supply the parts we will renew the whole unit at our cost (conventional non-inverter systems only).
- 5) For your peace of mind now and for many years to come, we will always be available and act on any communication, even after hours.
- 6) We believe your feedback is critical for our continued improvement. If you believe we could have performed better, please tell us.



Church Air
Showroom & Workshop,
Hamilton



Greg Smith
Managing Director



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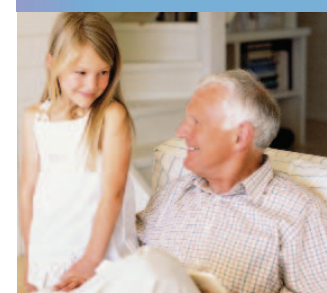
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Basics

What is "Reverse Cycle" Air Conditioning ?

The ability to heat with the same cooling equipment. Approx. 3 times better than electric heaters.

Inverter technology

Advantages:

- Smooth temperatures $\pm 0.5^{\circ}\text{c}$ (standard $\pm 1.5^{\circ}\text{c}$)
- Energy savings, 5 to 8 years payback period.
- Quieter when on low loads.
- Heating is 25% stronger than standard.
- Softer starting for larger units (no lights dimming).
- Multi units can have several indoor heads.

Disadvantages:

- Extra cost up front.
- Breakdowns can be complex and expensive if variable frequency drive or PC boards fail.
- Parts availability could increase down time.

Energy Efficiency

- CEILING INSULATION?** YES! The more the better.
- GLASS SHADING**, Tinting & Curtains? YES, especially western windows.
- ROOF VENTS?** YES, whirlybirds relieve heat.
- CLOSE DOORS** to rooms not needed.
- STAIRWAYS** close off if possible to reduce HOT AIR RISING & COLD AIR FALLING.

You can spend extra money on a larger air conditioner, electricity and wear and tear OR...
 ...install R3 batts (\$800-\$1000). This will keep your new comfort in and actually save yourself money.

Running Costs

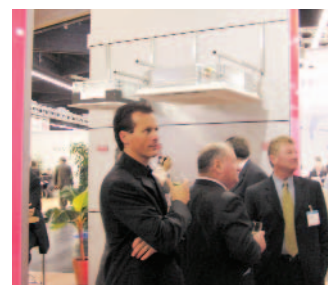
Approx Quarterly Electricity Bill (Heavy Usage)

1 HP - \$ 40	4 HP - \$150
2.5 HP - \$ 75	6 HP - \$205

Big savings with Reverse Cycle Heating.

Spare Parts

Some brands are expensive and difficult to repair. During "Warranty Period", we will fix products we sell in reasonable time' or if the manufacturer can not supply the parts we will renew the whole unit at our cost (conventional non-inverter systems).



The Church Air Difference

If you install a 5HP, 15KW Unit, does this mean that you will enjoy 15KW of cooling & heating comfort inside your homes?

With a Standard "cheaper" option:

- PROBABLY NOT.

With Upgraded ductwork , insulation, pipe, filter, dampers, good design and commissioning:

- YES!

You will minimise the capacity losses, improve performance and be cooler with a smaller electricity bill during summer & benefit in winter heating too.

Six Steps to Higher performance

- 1) A/C Unit Rating
Accuracy of rating & to 43°C conditions?
- 2) Is the system designed to suit your needs?
We tailor your overall design to best suit your individual needs, useage & budget.
- 3) Quality Components
We select the best performing controls, duct, grilles, filters, pipes, dampers etc and take care to size them to work properly.
- 4) Quality Workmanship
Installed (especially in your roof) to ensure minimum capacity losses.
- 5) Commissioning
The final "QA" commissioning, air balancing & tuning can "MAKE OR BREAK" the systems performance.
- 6) Ongoing Maintenance
And backup supports keeps it "in tune" & performing.

The combination of the above, results in:

- Refreshingly cool on a "summer stinker"
- Toasty warm in winter.
- Energy efficient (saves electricity \$\$)
- Quiet and discrete.
- Lasts for decades (not just 1 week post warranty)

Our trained & experienced staff will work closely with you to ensure the product you select suits your needs, your property and your budget.



Tailor designed for you.



Happy Customers



Sizing Equipment

We aim to properly distribute cooled (or heated) filtered air without creating a draught, noise disturbances or eyesores in your home.

The "Undersized" A.C. System

It would never be adequate when you really need it and would over dry the air. The system runs continually, wearing out, breaking down and running up your power bill.

The "Oversized" A.C. System

This can be uncomfortable with rapid temperature changes, drafts and insufficient humidity being removed. If you would like to "spill over" to adjacent rooms; Do NOT oversize the system, more than 75%.

Approximate Guide:

15m ²	23m ²	32m ²	45m ²	50m ²	60m ²	72m ²	90m ²	110m ²	135m ²
2.5kw	3.5kw	5.0kw	6.5kw	8kw	10kw	12kw	15kw	18kw	22kw
1.25HP	1.5HP	2HP	2.5HP	3HP	3.5HP	4HP	5HP	7HP	8HP

The Outdoor Unit Location

Careful thought to allow good ventilation and ensure not to blow onto a fence 0.5m away causing hot air recirculation. Also considering noise for you, or neighbours, as after 10pm NO RESIDENTIAL NOISE IS PERMITTED. Other factors are aesthetics and water drainage (in winter).

Designing For Temperature Improvement

Most contractors aim for a temperature improvement of 10 to 12°C design. With the increase in our summer temperatures, we suggest 14 to 16°C design.

10 - 12°C DESIGN TEMP. DROP

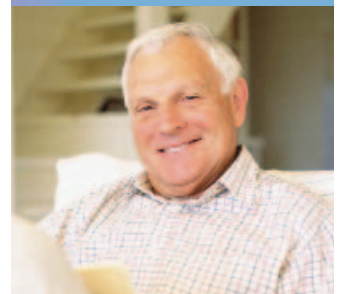
Outside 35°C - 12 =  23°C Inside = Lovely 😊😊

BUT Outside 40°C - 12 =  28°C Inside = Not Happy 😞😞

14 - 16°C DESIGN TEMP. DROP

Outside 40°C - 16 =  24°C Inside = Very Nice 😊😊

To achieve this higher performance requires a larger motor and also upgrades to ductwork, insulation, pipes sizes, filters and dampers. The duct layout and then final commissioning also affects the peak load performance.



The "Genie" Ducted Controls

The "Genie" is an energy smart control system (maximum 6 thermostats) that grants you accurate personalised temperature control within each area of your home or office.

It grants you **WHAT** you want, **WHERE** you want it & **WHEN** you want it, without conflicting with anyone else, without wasting energy anywhere else, and without you even having to touch it.

Just wish your "Genie" to do it for you !!

How does it work?

The "Genie" cleverly directs more heating or cooling to those colder or hotter rooms. One thermostat in the hallway can not satisfy everyone.

Your "Genie" is always monitoring heat loads and personal settings automatically, summer & winter.

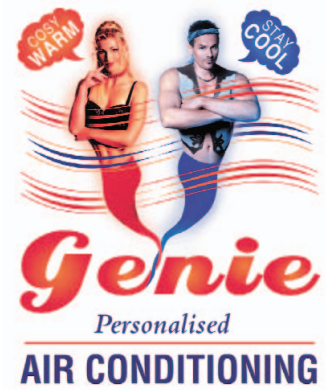
Your "Genie" Grants you 3 wishes:

1. MORE COMFORT – Different temperatures can be set throughout your home or office to best suit the variety of needs of your entire family or staff.

Automatically give more cooling to that hot room.

2. SAVES MONEY - The latest energy smart technology so it only runs when and where it is needed. This saves energy, with smaller power bills.

3. SET & FORGET - Easy to use & simple to override.



Ducted Air Conditioning

The outdoor unit is positioned by an outside wall with adequate ventilation. The indoor unit and ductwork is placed either in the roof cavity or under the floor cavity.

Ducted Systems are suitable for several rooms i.e. whole homes (& larger rooms that would need 2 or 3 "splits") and can be zoned to switch areas on/off or fully automatic with desired comfort levels in each zone. (Genie)

Typical Cost?

Fully Installed, Wired & Balanced	
3 HP	\$7,000 - \$8,000
4 HP	\$8,000 - \$10,000
6 HP	\$10,000 - \$12,000
8 HP	\$12,000 - \$14,000

Quietness

Can be the quietest form of air conditioning available, depending upon the quality and sizes of materials and installation. The old saying applies here ... You only get what you pay for! Beware there are many poor performing installations of ducted systems on the market that leave customers very disappointed every hot day for a lot of years.

The team at Church Air can show you how to get the maximum benefit from your system when working on a budget.

The Performance Level

Absolutely the highest level of comfort available. To maximise performance from your ducted system we recommend upgrading ductwork, insulation etc. Also warranties go up to 10 & 25 years with better upgraded components.

A big variable is the thermostat type and location as it is the controlling brain of the system. In some cases the Genie Smart Multizone control is a solution to zone problems.

Electrical Requirements

Single phase units are available up to 5 HP (15kw). Three phase is always the best option if available.

SUPPLY AIR VENTS

In Ceiling



In Wall



In Floor



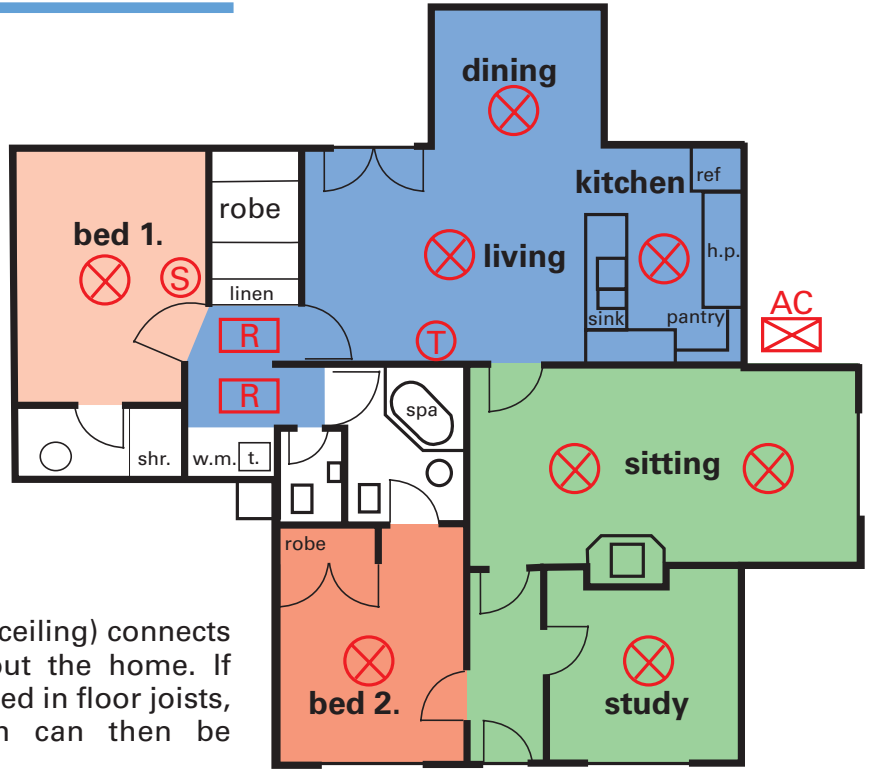
Return Air Vent



Location of controls is a big factor.



Care & attention to detail on every Church system to ensure each component is sized & located for your needs & best performance.



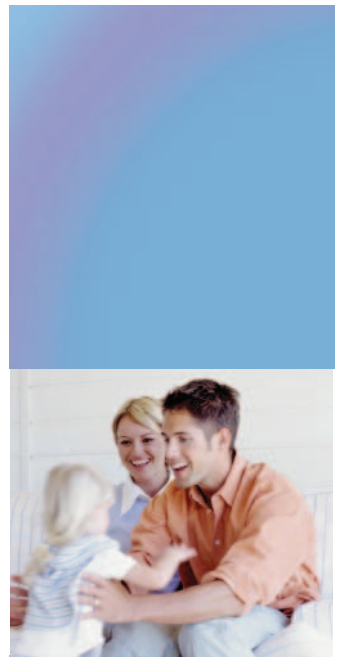
Installation

The indoor unit and ductwork (in ceiling) connects to the various grilles throughout the home. If needed, some ducts can be installed in floor joists, cupboards or bulkhead, which can then be gyprocked and painted. Control thermostats and switches are mounted in various positions in the house depending upon personal usage and sun loads. This is very, very important. You might have picked this up by now!

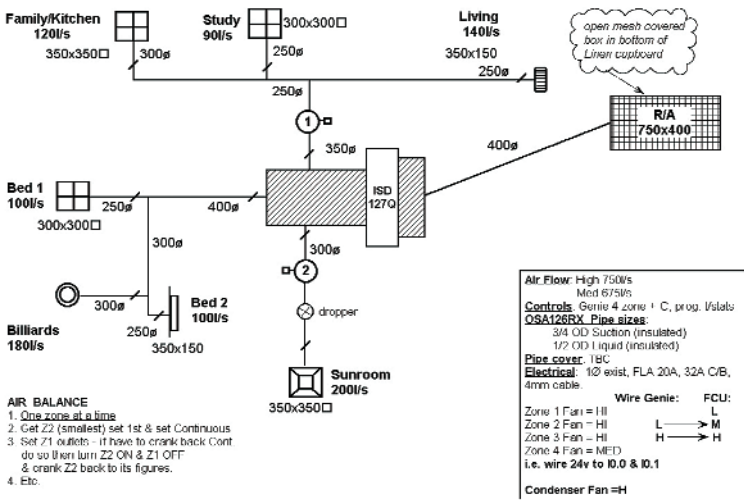
Which Brand Is The Best?

The better quality systems obviously last longer and continue to perform as the years go by. Church Air Conditioning provides free extended warranties with upgrades of duct, dampers & filters.

There are many cheaper brands available. The main known names offer good quiet performance, added features & affordable backup spares. Fujitsu and Temperzone are our favourites.



Ducting Layout - Tailor designed for you.



Split Air Conditioners

Suitable for one per room.

“Splits” are made up of an indoor unit and an outdoor unit. The outdoor unit is positioned by the outside wall, close to the indoor unit if possible. Various types of indoor units can be mounted on the wall (high), floor, under ceiling or recessed in the ceiling (“cassettes”).

Typical cost?

Fully Installed & Wired	
Bedroom	\$1600 - \$1800
Lounge room	\$2000 - \$3500

Quietness?

Whisper Quiet... Split's are quiet due to the motor being housed in a separate unit outside and the indoor fan being larger and at a slower speed, than an RAC.

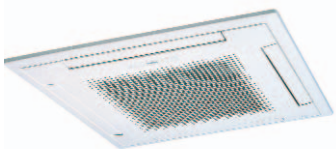
The Performance Level?

Split systems are the most efficient form of air conditioning available. Three dimensional control over the air direction swing ensures a good distribution over a wide area to cool or heat all areas of the room. Split's include timers and many other features, such as “warm starts” & auto fans, to ensure you have maximum control over your comfort.

High Wall Split



Cassette Split (Recessed into ceiling)



Multi Heads for one motor requirements



Installation

In the majority of cases, the indoor unit needs to be mounted on an external wall. (or if inside wall, cut & patch gyprock for the drain hose)

A small hole is cut in the wall behind the indoor unit for the pipes and power cable. The pipes then run up or down the outside wall and covered with your choice of colourbond metal cover.

A drain pipe must go down from the indoor unit to a suitable drainage point.

The outdoor unit is mounted on a concrete pad or with brackets in a position that is close to the indoor unit but takes into account noise, aesthetic and drainage factors and space to expel hot air away.

Electrical Requirements

Up to 3 HP (8kw) require only single phase power.

We recommend the power is run to the meter box, where it is kept on it's own circuit and protected by a circuit breaker, not to damage appliances & risk electrical fire.

Which Brand Is The Best?

There are many cheaper brands of Split's available. The main known names offer good quiet performance, added features & affordable backup spares.

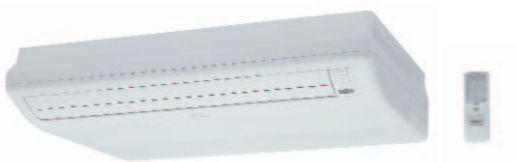
Fujitsu is our favourite.



Floor Split



Underceiling Split



Room Air Conditioners (RAC's)

"RAC's" are compact as the whole system is housed in a box shaped casing installed through a window or wall. Suitable for single rooms up to 45 m sq.

Compared to other types of air conditioning ie, Split and Ducted, RAC's are not known for their quietness or life span.

Typical cost?

A RAC is the lowest initial cost option:

Fully Installed & Wired

\$900 - \$1500

Installation

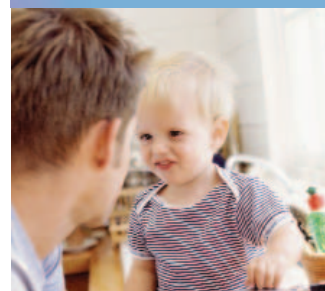
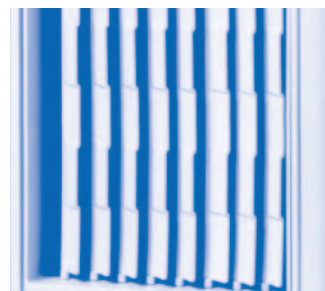
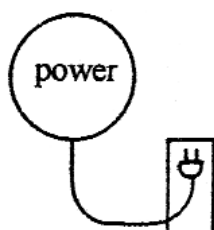
A hole is cut in the wall, or the window is opened to suit the size of the unit. If in a window, the gap is filled with either glass or timber. A wooden architrave is placed around the unit on the inside to give a neat finish, and the unit is sealed on the outside. Depending on location, the drain for the moisture may be piped away.

Electrical Requirements

Up to 1.75 HP need a standard 10 Amp power point.

2 HP etc require a 15 Amp power point and separate circuit breaker (very important in order not to damage appliances and risk an electrical fire).

Room Air Conditioner Unit



Ongoing Maintenance

All Air Conditioning Systems require regular maintenance to ensure:

- Clean comfort
- Good performance (minimising running costs)
- Reliability with less breakdowns and longer equipment life (and protect warranty)

The basic needs are not too demanding:

- Regularly clean the filter/s (monthly)
- Gently wash the outside coil (twice / year)
- Flush and clean the drains (once or twice / year)

Optional

Our trained Servicemen are available to do a full service & any adjustments as required to match your personal needs. Once or twice per year, Pre Summer / Winter (estimate \$120 - \$165) Special sanitising products are available.

A Full Service also includes:

1. New filters
2. Flush and clean the drains.
3. Check compressor compartment for oil stains
4. indicating refrigerant leaks
Check suction and discharge operating
5. pressures
6. Check the tightness of electrical connections
Check for correct operation of all electrical equipment i.e. de-ice control, H.P. and L.P. safety controls and compressor contactor
7. Check all refrigerant piping for chafing and vibration
8. Check air supply at all diffusers (adjust if required)
9. Check for noise and vibration
10. Check the tightness of all fan and motor mountings
11. Check for insulation and duct damage
12. Wash outdoor coil fins
13. Touch up paintwork damage to prevent corrosion
14. Minor repairs and adjustments



Happy Customers

I was impressed by the dedication of all your staff from the design stage to the installation, and beyond. Nothing was ever too much trouble and your service was always provided with a smile. This combination of speed of service, professionalism, friendliness and expertise has led me to personally recommend you to a number of business colleagues and I will continue to recommend you to anyone seeking the best.

Frank Adoranti

Just a note to say thank you for all your great service. You are all so kind and helpful and it's very much appreciated. The Brown Family

We chose your firm mainly by word of mouth and have not been disappointed. Your public relations before, during and after the installation has been most professional. The tradesmen who installed the unit were obviously most capable and carried out the work with minimum disruption. They were courteous and helpful and found no request too much trouble. At the end of the job there was no mess left and the whole operation went smoothly.

Joy & Peter Cummings

A great big thank you to your team for the way they presented themselves during the installation of the system. The communication, professionalism, thoughtfulness and helpfulness of all the team was simply brilliant. I will not hesitate to recommend Church Air for not only the products, but the professional attitude to whomever, whenever. Once again, well done and thank you.

Brett Jackson, Instant Access

I have appreciated the personal and efficient methods of your staff from quoting to installation. I look forward to doing further business with your firm.

Glenda Walker

Our unit has been functioning for a few weeks now and we are extremely pleased with the results. We are most happy with your firm and your work and would not hesitate to recommend Church Air to all our family, friends and work colleagues.

Mr & Mrs Morris

The system was very neatly installed, they made it look easy as nothing went wrong and they all knew their jobs. I have no hesitation in recommending your company to other customers in the future.

Mr & Mrs Falcocchio


Seal Of Approval



Important

Office Efficiency.....with Comfort!

Apart from the obvious benefits of enjoying a work environment with good air conditioning, there are staff productivity & health benefits.

Fresh Air & OH&S

It is a must to consider how a room(s) will be kept fresh for the occupants. People breathing out, odours and chemicals being released from carpet, furniture, paint, dust, smoking etc.

Home systems rely on natural ventilation for this freshness.

Offices which have a much greater concentration of people, furniture etc require a "filtered fresh air intake" from a fresh source.

The other "Healthy Building" factors are:

- Air Movement and Distribution
- Air Filtration
- Correct Cooling / Heating Capacity
- Regular Maintenance and Cleaning
- Special Sanitising products are available.

The Ozone Layer?

Refrigerant gases have been found to be one of a number of substances which are attacking the ozone layer, in the upper atmosphere, 25 km above the earth.

Air conditioning use R22. This gas is one of the least damaging gases, but is still being phased out. Replacements are now available. (R410a etc)

"The Code of Practice" could be summarised by:

1. Bringing back the "good old quality", which does mean costing a little more initially, with extra valves, driers, brackets, purging with nitrogen etc, but it will be well worth the cost for the protection of our environment. It will also save you money in the long term by reducing breakdowns & maximising performance.
2. Recovering gases (when a system requires emptying) and sending them back to the manufacturer for recycling.

Trade Licensing

Trade Licensing is now law in the Air Conditioning and Refrigeration trades.

Church Air Conditioning holds a gold licence No. 22222C. And only use fully trained & licenced technicians & electricians to look after our planet.



Northwing & York Luxury Apartments
 - Newcastle Beach



Newcastle City Council
 - NEW CHILLERS.





As Quiet as a.... CHURCH mouse

Notes



Since 1958

From the Showground, just over the Donald Street (Newcastle Road) Bridge, turn left.

Showroom & Service

3 Samdon Street, Hamilton
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FREE Helpline

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Fax: Residential: 02 4969 8741
Commercial: 02 4961 5094
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Greg Smith
Managing Director

Experience the difference!