



**ELECTRICAL, SOLAR
& AIR-CONDITIONING**

Air Conditioning 101

YOUR BRISBANE GUIDE TO COOL
SAVINGS & SMART CHOICES

Why This Guide

Your Trusted Partner in HVAC Solutions

Welcome to Cool Comfort , your guide to smarter air conditioning in Brisbane. Whether you're building a new home or upgrading your current system, this book will help you choose, install, and use air conditioning efficiently - especially when paired with solar power.

In Australia's warmer climate, staying cool doesn't have to mean high bills. With the right system, smart design, and efficient usage, you can enjoy comfort without breaking the bank

HVAC

Heating, Ventilation, and Air Conditioning
(whole-home climate control).

AC

Cooling only (split systems, ducted, etc.).

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Types of AC Systems

Understanding Air Conditioning Systems

Split Systems

A split system consists of two main components: an indoor unit (mounted on the wall) and an outdoor unit. These are ideal for cooling one room or open space. They're easy to install, quiet, and energy-efficient - making them the most popular choice in Brisbane

Multi-Head Systems

These are essentially an extension of split systems, with one outdoor unit connected to multiple indoor units. This allows you to control the temperature in different rooms independently, offering flexibility and efficiency whilst saving on outdoor locations, perfect for small units or offices.

Ducted Systems

Ducted systems provide whole-house cooling through a network of ducts hidden in the ceiling. Controlled by a central thermostat, they offer seamless cooling or heating across all rooms. While more expensive upfront, they are excellent for larger homes



What's Right For You

How to decide

Single Room Cooling

For small spaces like bedrooms or studies, a split system is perfect. It's cost-effective and efficient, allowing you to cool only the areas you need.

Multiple Rooms or Open Plan Areas

Split systems give you control over several rooms while keeping installation costs lower than a full ducted setup

Full House Cooling

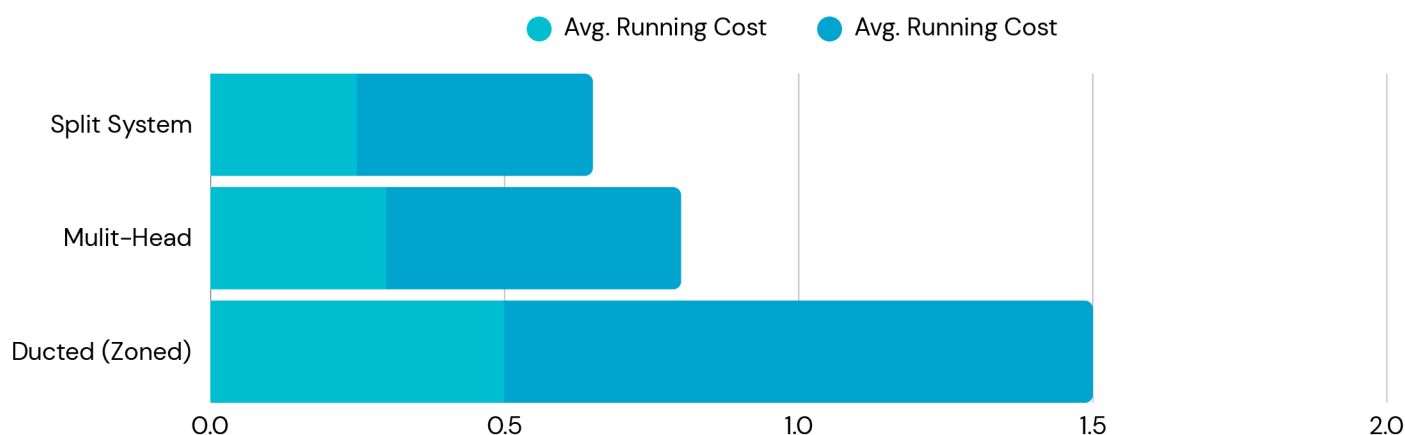
For complete comfort across your entire home, a ducted system offers zoned control and even cooling throughout with-out the need of wall-mounted units through-out the home

SYSTEM TYPE	BEST FOR	EFFICIENCY	UPFRONT COST
Split	Single Room	High	Low
Hulti-Head	2-4 Rooms	High	Medium
Ducted	Entire House	Medium-High	High

Energy Efficiency Deep Dive

Control your usage

- **Inverter Technology:** “Like cruise control for your AC - saves energy by adjusting output.”
- **Star Ratings Decoded:** “More stars = more savings. A 5-star ducted system uses 40% less power than 3-star.”
- **Installation Hacks:**
 - “North-facing outdoor units overheat – keep them shaded!”
 - “Seal ducts to prevent leaks (common in older Brisbane homes).”



Key Efficiency Factors:

- **Inverter Technology:** Saves 30–50% energy vs. fixed-speed.
- **Zoning:** Ducted systems let you cool only occupied rooms.
- **Installation Quality:** Poor sealing adds 20% to bills.

Pro Tip: A 5-star ducted system beats three 3-star split systems!

Smart Design + Installation Tips

Leadership You Can Trust

Smart Cooling Strategies:

- **Pre-Cooling:** Run AC during off-peak solar hours (10 AM–2 PM).
- **Thermostat Settings:** 24°C = sweet spot for savings (every 1°C lower = +10% cost).
- **Fan Combo:** Ceiling fans let you raise the thermostat by 3°C.

Myth Busting:

- “Leaving AC on all day vs. blasting it when hot?”
 - **Winner:** Pre-cool + maintain 24°C (saves 20% vs. on/off cycling).

Location Matters

Place your outdoor unit in a shaded area to improve efficiency. Direct sunlight can make your system work harder and use more energy

Zoning for Efficiency

Zoning lets you cool only the rooms you're using. In a ducted system, you can close vents in unused areas to save energy

Correct Sizing

An oversized unit wastes energy, while an undersized one never reaches the desired temperature. Always consult a licensed technician to ensure correct sizing.

Pro Tip

- Opt. for better insulation when it comes to ducted air conditioning ducts to prevent humidity in the ceiling during the brutal summers.
- Using a pair coil that is UV protected will help with efficiency as it won't break down leaving the pipes exposed to the harsh sunlight.



MAINTENANCE

Clean filters regularly – Dirty filters restrict airflow and increase energy use.

Use ceiling fans – They circulate cool air, letting you set your thermostat higher.

When it comes to choosing the right air conditioning system for your Brisbane home, cost is always a key factor. Not just the upfront price, but how much you'll spend over time on electricity and maintenance. In this section, we break down the average costs of different air conditioning systems, show you how solar integration can reduce running costs, and explain the payback periods so you can make an informed decision.

Seal windows and doors – Prevent cool air from escaping.

Set timers & use sleep mode – Avoid unnecessary cooling when you're not home or asleep.



Cost Comparison & Real Savings

Leadership You Can Trust

When it comes to choosing the right air conditioning system for your Brisbane home, cost is always a key factor. Not just the upfront price, but how much you'll spend over time on electricity and maintenance. In this section, we break down the **average costs of different air conditioning systems**, show you how **solar integration can reduce running costs**, and explain the **payback periods** so you can make an informed decision.

Understanding Upfront Costs

Every type of air conditioner has a different installation price depending on size

SYSTEM TYPE	AVERAGE UPFRONT COST
Split System	\$1,500 - \$2,500
Multi-Head System	\$3,000 - \$4,500
Ducted System	\$8,000 - \$15,000+

These prices include both equipment and professional installation. Ducted systems are more expensive due to the complexity of installing ductwork and zoning controls, while split and multi-head systems are more affordable and easier to install



Annual Running Cost

Proactive vs. Reactive cooling

Proactive cooling involves maintaining a steady indoor temperature (e.g., 24°C) throughout the day using air conditioning, which minimizes energy spikes by reducing heat transfer in well-insulated homes. For a **3-bedroom home**, this approach typically costs **\$1.50–\$2.12/hour** for a zoned ducted system (16kW) and **\$1.20–\$1.65/hour** for split systems (3x 2.5 + 1x 8kW).

In contrast, **reactive cooling** - waiting until the house reaches 30–32°C before cooling it to 24°C—requires full-capacity operation, costing **\$2.50–\$3.50/hour** for ducted systems and **\$2.00–\$2.75/hour** for split systems due to higher compressor workload. Proactive cooling reduces energy use by **40–60%** compared to reactive methods, as systems cycle on/off rather than running continuously at peak load.

While split systems are cheaper upfront and more efficient for targeted cooling, ducted systems offer seamless whole-house comfort but require careful zoning to avoid overcooling unoccupied areas.

Pairing either system with solar (e.g., 6.6kW) can **offset 80–100% of running costs**, especially during proactive cooling.

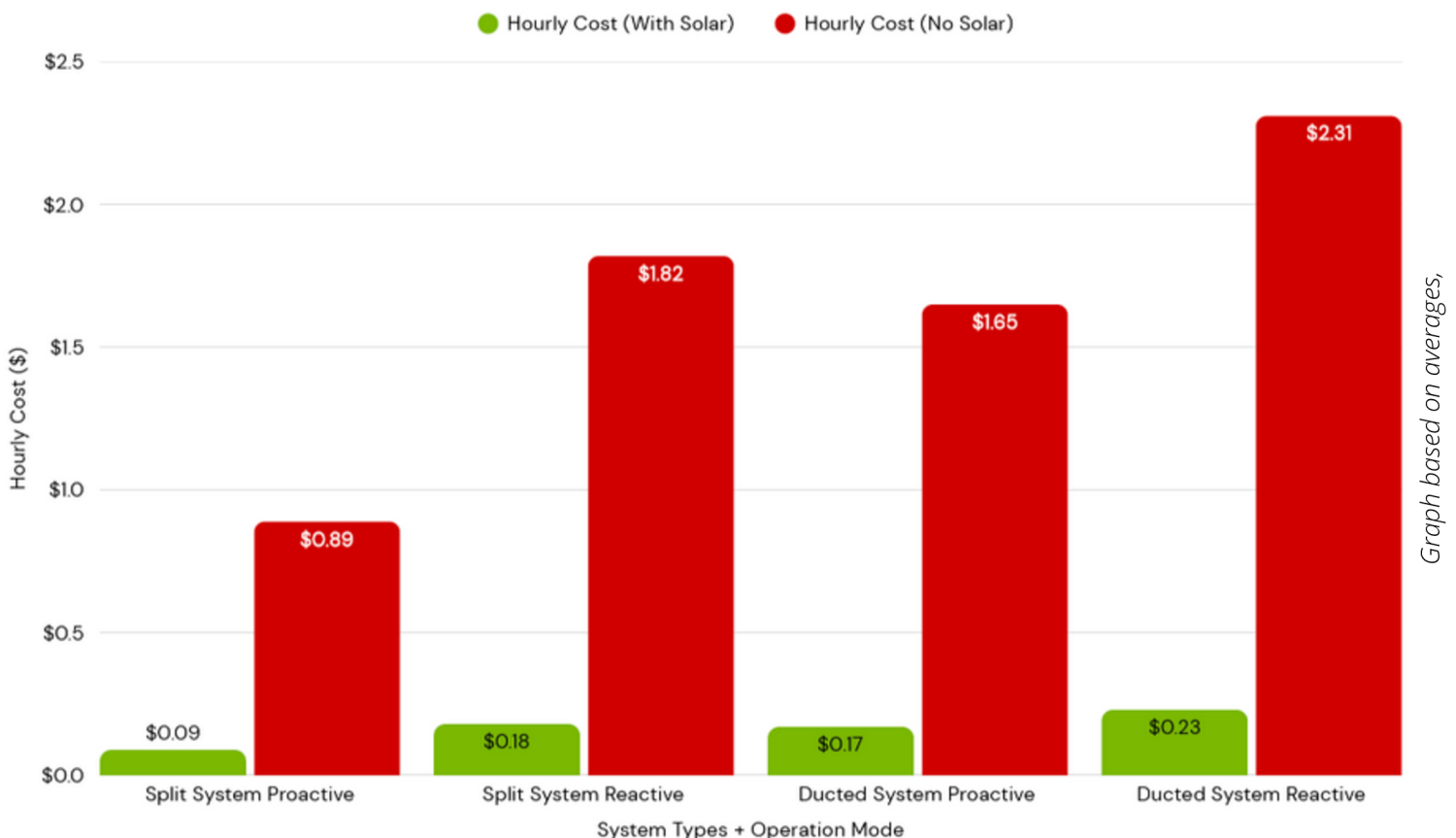




Image: 20kW Ducted Install - Fortitude Valley

Reach Out

Let's Build the Future Together

At CK Electrical, Solar & Air Conditioning, we are committed to delivering **exceptional results** for every project. Whether you're planning a new build, upgrade, or renewable energy solution, we have the expertise to make it happen.



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