Australian Government
Department of the Environment and Energy

Cooling Efficiency Improvements in Australia

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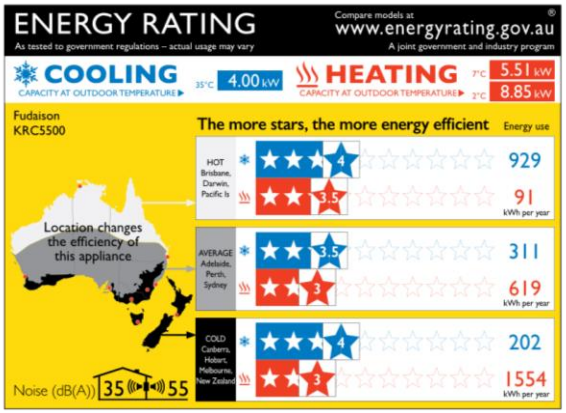
A/C Regulatory Changes

- Improved energy rating label



- Portable products
  - Lower cost appliances
  - No installation required

Energy Rating Label

- Zoned Energy Rating Label (ZERL)
  - Provide consumers, retailers and installers with improved performance information
  - Map-based label
  - Incorporate results from Seasonal Energy Efficiency Ratio (SEER) standard
  - Use regionally-specific climate zones files
  - Enables selection of appliance better suited to consumer's specific climate type

ENERGY RATING

As tested to government regulations – actual usage may vary

Compare models at
www.energyrating.gov.au ®
A joint government and industry program

COOLING

CAPACITY AT OUTDOOR TEMPERATURE ▶

35°C 4.00 kW

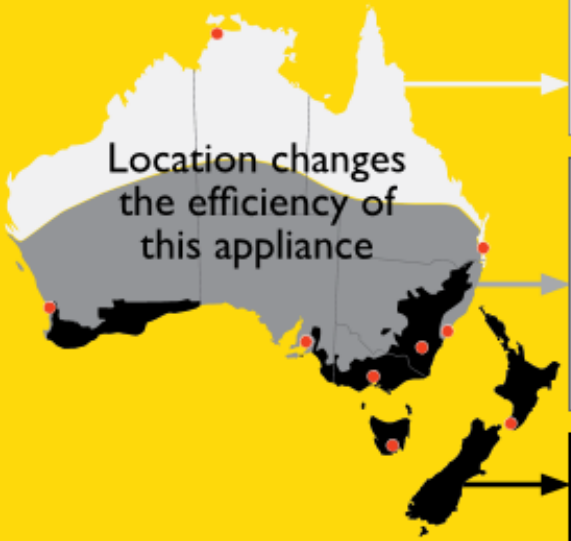
HEATING

CAPACITY AT OUTDOOR TEMPERATURE ▶

7°C 5.51 kW

2°C 8.85 kW

Fudaison
KRC5500



Noise (dB(A)) 35 55

The more stars, the more energy efficient

		Energy use
HOT Brisbane, Darwin, Pacific Is	★★★4	929 kWh per year
	★★3.5	91 kWh per year
AVERAGE Adelaide, Perth, Sydney	★★3.5	311 kWh per year
	★★3	619 kWh per year
COLD Canberra, Hobart, Melbourne, New Zealand	★★★4	202 kWh per year
	★★3	1554 kWh per year

Energy Rating Label

Online tool

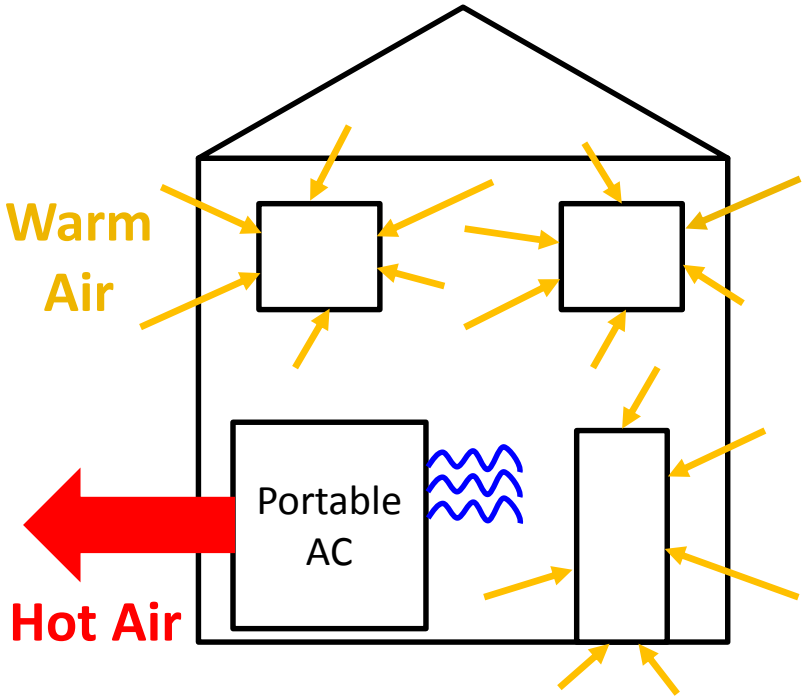
- Consumers/advisers enter region to use location-specific climate data
- Data available for 69 zones in Australia
- Electricity tariffs and location optimised operating hours pre-filled or user entered
- Tailored results enable better product selection

Portable Products

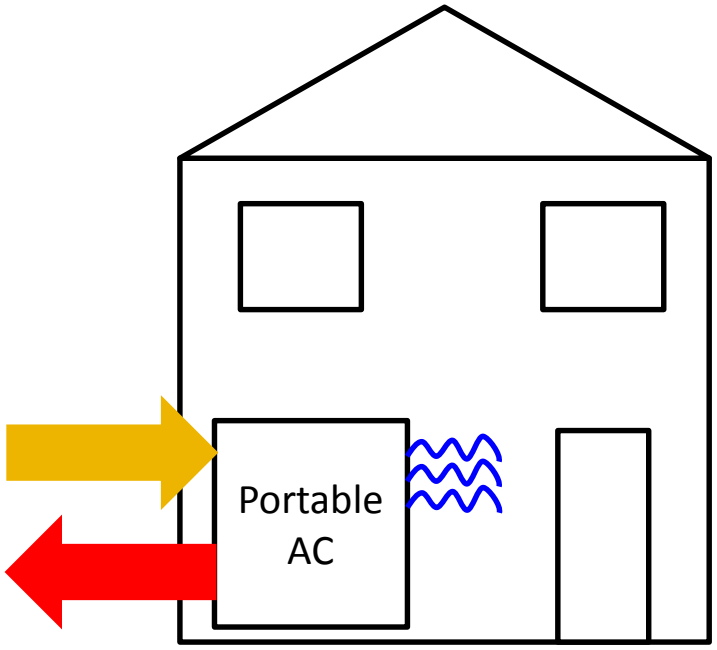
- Limited options for renters if landlord does not install split system
- Low income households may not be able to afford purchase & installation cost for split system
- Portable appliances may be affordable alternatives

Portable Products: Types

Cooling Scenario



Single Duct



Double Duct

Portable Products: Issues

- Double Duct
  - MEPS levels were too strict
  - Limited supply
- Single Duct
  - Existing air enthalpy test standards were not fit for purpose
  - Not regulated for energy efficiency
  - Energy rating label not required

1. Few efficient portable appliances available

2. Unable to determine relative performance between single ducts and double ducts/splits

Portable Products: Policy Response

- Double Duct
  - Reduce (relax) MEPS levels ⟶ Increase supply
  - Apply ZERL
- Single Duct
  - Develop and adopt test standard (AS/NZS 3823.1.5)
  - Apply MEPS
  - Apply ZERL

Portable Products: Policy Response

- ZERL on all portables
- Consumers able to compare relative efficiency of single vs double duct
- Price difference is small
- Consumers easily able to determine they are much better off with double duct

Possible Improvements

Test Points for AS/NZS 3823.4 (ISO 16358)

- Currently 29°C and 35°C test points for SEER
- Add 42°C or 43°C test point

MEPS

- Currently: EER and COP-based MEPS
- Need to understand performance data based on SEER
- In the future: Consider SEER-based MEPS

Resources

News Item: 1 April 2019 - Air Conditioner Regulations Published

www.energyrating.gov.au/news/air-conditioner-determination-signed

Greenhouse and Energy Minimum Standards (Air Conditioners up to 65kW) Determination 2019

www.legislation.gov.au/Details/F2019L00490

Decision Regulation Impact Statement - Air Conditioners

http://energyrating.gov.au/document/decision-ris-air-conditioners