



BROAD AIR CONDITIONING

greener + cleaner

innovative air conditioning
cooling | heating | hot water



energy
conservation
systems

using green energy waste heat | gas | solar

greener air conditioning + innovations

Air conditioning is a large energy consumer in commercial facilities. Efficient air conditioning runs only when it's needed, runs only as hard as it needs to and doesn't use poor control strategies that can see heating and cooling operating simultaneously.

ECS can assess, design and implement improvements to your existing air conditioning system while ensuring a high level of comfort and performance.

Improved control through smart building management systems, more control options with variable speed drives and even occupancy based controls can all be combined to improve efficiency.

Changing from a traditional electric chiller to an absorption non-electric chiller can make a huge difference to facility greenhouse emissions.

Running on gas, waste heat or even solar energy the BROAD range of chillers make great commercial sense, have a lower impact on the environment and can save running costs.

innovative air conditioning + BROAD

The world is demanding innovative design and more environmentally friendly outcomes from buildings, facilities and energy systems. In creating cooling for air conditioning or a process choice has been limited to electric chillers, a good solution when there was excess electricity supply and global warming wasn't considered a problem.

Now there's a real choice, absorption chillers use heat as the primary energy source and use environmentally friendly refrigerants. Waste heat from a process, solar hot water or even direct fired gas absorption chillers reduce greenhouse emissions and avoid adding to peak electricity supply problems.

BROAD's tenth generation absorption chillers embody the very latest in chiller design and manufacture. Each BROAD machine, from the very smallest at 23 kW through to massive 11.6 MW in refrigeration capacity, carries the advantage of years of dedicated R&D into the absorption cycle. Modern controls and smart design result in absorption chillers that are more reliable, more efficient and more cost effective than ever.

If you have a need for cooling but also need to reduce greenhouse emissions, cut energy bills or reduce electricity demand, BROAD chillers are the choice for you. BROAD is represented in Australia by Energy Conservation Systems, Australia's leading energy and water efficiency company.



absorption chillers + benefits

■ Choice of fuel source

- + Lowers dependency on stretched electricity supplies
- + Reduces energy costs
- + Improves system reliability
- + Cuts greenhouse emissions

■ Absorption cycle

- + Uses water as the refrigerant, no ozone depletion or expensive leak detection systems
- + Very few moving parts, quiet operation and less maintenance

■ Heating and cooling from one machine

Avoids the need for a separate boiler, saving money and space in the plantroom

■ World's largest range

Choose the machine that matches your load, don't pay for more chiller than you need

■ Smart on-board controls

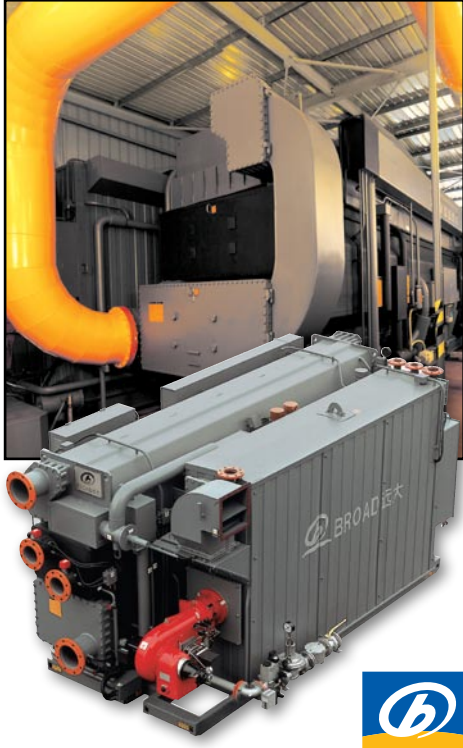
Optimise efficiency and keep maintenance to a minimum

■ Xth generation

Optimum efficiency and reliability with continual improvement in technology

technologies + solutions

absorption non-electric chiller



Broad Absorption chiller sets are capable of providing cooling, heating and hot water for any central air conditioning system serving numerous types of buildings. A vast range of energy streams can be utilised, ranging from natural gas, LPG, waste hot water, steam, exhaust, solar and biogas. Cooling, heating and hot water are the primary functions of these chiller sets

Applications

Providing cooling, heating and hot water for all commercial buildings, educational, industrial and retail applications. Especially, suitable for large-scale buildings, commercial offices, hospitals, data centres and mining applications.

Function

Cooling, heating and hot water

Energy source

- Natural gas, town gas, LPG, biogas
 - Power generation or industrial waste heat (like steam, hot water, exhaust, etc.)
 - Solar energy
- Electricity consumption for chilled water and cooling water distribution is less than 3% of the cooling capacity

Cooling Capacities

233 kW ~ 11,630 kW

Product Type

BROAD-X Absorption Chiller
BROAD-X DFA Direct-Fired Absorption Chiller



micro gas air conditioning



With its main source of energy generated from natural gas, these smaller capacity air conditioning units provide heating, cooling and hot water for residential, light commercial, education, health and leisure users. Like all BROAD products alternative energy sources can also be utilised.

Applications

To provide air conditioning for residential, light commercial, educational, and retail applications. Especially, suitable for medium & small sized hotels, restaurants, commercial offices and leisure facilities.

Function

Cooling, heating and hot water

Energy source

Natural Gas, Town Gas, Biogas, LPG, Diesel
(Steam, hot water and exhaust can also be used for special orders)

Cooling Capacities

23 kW ~ 115 kW

Product Type

BROAD BCT Micro Gas Air Con





absorption cooling | waste heat | gas | solar



broad around Australia + outcomes

Large-scale Cooling Systems

Canberra Airport Green Precinct

Public Facilities

Ipswich Hospital

Austin Hospital

Green Square North Tower

World-class Hotels

IBIS Hotel Darling Harbour

Industrial Sites

SA Water HQ



1.



2.



3.



4.

1. **IBIS Hotel Darling Harbour, Australia.**
2. **Austin Hospital, Australia.**
3. **Green Square North Tower, Australia.**
4. **Ipswich Hospital, Australia.**



broad around the world + outcomes

Large-scale Cooling Systems

Forum Barcelona 2004 (Spain)

Madrid Airport (Spain)

Austin Energy (USA)

Putrajaya New Government City (Malaysia)

Bangkok International Airport (Thailand)

Public Facilities

Centre Leclerc, Colmar (France)

Bronx Zoo (USA)

Clinica Las Condes (Chile)

New Delhi Mall (India)

National Commercial Bank (Saudi Arabia)

Shanghai Information Tower (China)

World-class Hotels

Holiday Inn Crown-Plaza (France)

STEVANATO Restaurant (Italy)

Ledra Marriott (Greece)

Alex Hotel (USA)

Colleges/Universities

Saint Die des Vosges (France)

University ULM (Germany)

Brookdale College (USA)

Fudan University (China)

Industrial Sites

European Institute for Energy Research (France)

Schering AG Berlin (Germany)



5.



6.



7.

5. & 6. **Madrid Airport, Spain.** air-conditioning area : 500,000m²
7. **Boehringer Ingelheim Pharmaceuticals, Inc., Germany.** air-conditioning area : 58,000m²



ECS partners with organisations to implement 'best practice' energy systems and technology by offering cost-effective and sustainable solutions:

Integrated Occupancy Control

An integrated approach through occupancy sensors to manage the electrical, lighting, mechanical and security services within a building or facility.

Monitoring & Verification System

Web-based automated metering solution for electricity, gas and water. Real-time energy and water consumption monitoring, management and billing provides energy and water data, usage patterns and benchmark information to ensure continued effective and efficient use.

Water Management

ECS evaluates, designs and implements solutions to reduce consumption of fresh, potable water for all market sectors. ECS is a leader in commercial rainwater harvesting schemes in Australia.

Building Performance Ratings

With trained raters and experienced engineers around the country, ECS can guarantee energy upgrades and provide Australian Building Greenhouse Ratings (ABGR) and National Australian Built Environment Rating Systems (NABERS).

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