

## APPLIED SYSTEM

### AWS FAMILY FOR LARGE APPLICATIONS

Capacity from 600 to 2010

PRODUCT  
LEAFLET



Большая библиотека технической документации  
<http://splitoff.ru/tehn-doc.html>  
каталоги, инструкции, сервисные мануалы, схемы.

# AWS



Designed to exceed the HVAC industry standards for operating efficiency, this range offers flexible solutions for a wide range of applications thanks to its advanced design with multiple efficiency and sound combinations.

Capacity range 619 ~ 2.008 kW

## FEATURES & BENEFITS

- **Application flexibility.** No matter what the application, our series can provide the ideal solution thanks to its wide range of capacities (from 619-2.008 kW) and ambient operating temperatures (**from -18°C to +52°C**), while having one of the smallest footprint in the market.
- **Low operating cost.** Reduced operating costs are achieved by our unique single screw compressor that provides maximum efficiency under both full and partial load conditions.
- **Outstanding reliability.** Innovative technology (eg. advanced composite compressor gaterotors) reduce the wear within the equipment contributing to increased equipment life and low total-cost-of-ownership.
- **Superior control logic.** The easy-to-use controls allow you to programme the system for maximum efficiency while, at the same time, providing a complete history of the unit's operations.
- **Low operating sound level.** Reduced sound levels under full and partial operating conditions are achieved by the latest compressor technology and a unique fan design that moves large volumes of air almost silently, providing quiet operation for installation in even residential neighborhoods.

## Integrated Control Systems

Achieving absolute control over the operations of our 'AWS' series of chillers is achieved by using the MicroTech III control units. These units provide a simple, user-friendly set of controls that allow you to set and monitor every aspect of the chiller's operations and to retain a long-term record for use by the maintenance engineers. To provide a total solution, the controllers easily integrate with the building automation system using LonTalk, BACnet, Modbus or other ethernet TCP/IP communication protocols.

## Option availability

Since we offer a variety of combinations of capacities, efficiencies and sound control, we also offer an extensive list of options to optimise the 'AWS' chillers for your specific application and requirements. We found that our customers almost always selected many of these and so we now supply them as standard-however, there is a new range of options to enable you **to tailor** the system to your exact specifications. Notable amongst these is the **'Heat Recovery'** option for increased energy savings and to extend the application possibilities in hotels, etc.

EFFICIENCY	SOUND LEVEL dB(A)	CAPACITY RANGE					
		600	800	1000	1500	2000	2500
Standard - Std sound	down to 79.0						
Standard - Low sound	down to 75.5			647 ÷ 1922 kW - EER up to 2.99 & ESEER up to 4.06			
Standard - Reduced sound	down to 71.0			619 ÷ 1833 kW - EER up to 2.78 & ESEER up to 4.10			
High - Std sound	down to 79.7						
High - Low sound	down to 76.3			756 ÷ 2008 kW - EER up to 3.20 & ESEER up to 4.33			
High - Reduced sound	down to 71.5			736 ÷ 1952 kW - EER up to 3.20 & ESEER up to 4.43			
Premium - Std sound	down to 79.5						
Premium - Low sound	down to 76.9			821 ÷ 1562 kW EER up to 3.64 & ESEER up to 4.53			
Premium - Reduced sound	down to 71.2			609 ÷ 1521 kW - EER up to 3.70 & ESEER up to 4.63			

# AWS INVERTER



With exceptional energy values, our new range cost-effective solution for use in systems with variable load requirements such or comfort applications.

Capacity range 635 ~ 1.802 kW

## FEATURES & BENEFITS

- Inverter technology.** The use of inverter driven screw compressors in the new 'AWS Inverter' range allows the units to deliver the highest partial load efficiency scores in their class with an **ESEER up to 5.8**, substantially reducing CO<sub>2</sub> emissions and decreasing annual operating costs.
- Application flexibility.** Our new range, which is available in thirteen sizes, can be used in a variety of combinations to provide the optimal solution for applications where a reliable and top-performing chiller is essential.
- Extensive option list.** The units now come ready fitted with an wide range of features but there is also an **extensive option list** that includes:
  - fan speed regulation for an increased energy efficiency
  - rapid restart option for facilities that cannot afford to loose cooling after a power failure.
- Outstanding reliability.** Even when maintenance activity is taking place, there is no loss of cooling 'back up' as the 'AWS Inverter' chillers, depending on their size, have either two or three truly independent refrigerant circuits. Moreover, each component is chosen with a maximum attention to ensure the highest level of reliability to satisfy ever the most demanding requirements.

## Why an Inverter?

Our market-leading inverter technology enables **the unit to continuously regulate** its thermal transfer flow by altering the speed of the compressor in response to the cooling demand. This is ideal for applications with variable load requirements such as comfort applications, where the high partial load efficiency of our solutions allows substantially reduced CO<sub>2</sub> emissions and decreased annual operating costs, hence much quicker system payback times.

Further, the use of inverter technology also contributes to **quieter sound levels** and precise chiller water temperatures, as well as lower starting current requirements, optimum power factors (always above 0.95), a reduction of water tanks for the hydraulic system and increased reliability thanks to fewer compressor startups and shut downs.

EFFICIENCY	SOUND LEVEL	CAPACITY RANGE						
	dB(A)	600	800	1000	1500	2000	2500	
High - Std sound	down to 81.0							
High - Low sound	down to 77.5	672 ÷ 1802 kW - EER up to 3.14 & ESEER up to 5.24						
High - Reduced sound	down to 73.5	635 ÷ 1712 kW - EER up to 2.91 & ESEER up to 5.79						



# AWS FREE COOLING

With the introduction of the new “free cooling” range to the AWS chiller series, we deliver on our commitment to supply superior solutions, suitable for diverse applications, requiring the highest levels of energy efficiency, savings and comfort.

Capacity range 602 ~ 1.555 kW

## FEATURES & BENEFITS

- **Increased energy efficiency.** Using a ‘free cooling’ chiller the consumption of energy by the cooling units is significantly reduced during the colder seasons. In fact, when outside temperatures are cold enough - 3°C or lower depending our model - the chillers compressors are fully shut down and cooling is practically for free. This leads to dramatically **reduced** load on the compressors and **annual operating costs** as savings of up to 75% in energy consumption can be achieved.

Moreover, cutting the compressor usage is also contributing to extend the chillers’ operating life, minimising even further the overall cost of an installation.

- **Lowered carbon footprint.** Because our ‘free cooling’ chillers use the colder outside air to precool the water used, they use significantly less input energy thus **reducing the global environmental impact** of the system and helping deliver the EU’s energy targets while, at the same time improving your company’s **green profile**.

## Data Centre Market

During the 1980s, computers started to be deployed everywhere, and as IT operations started to grow in complexity, companies became aware of the need to place servers in a specific room inside the company or even to create specific facilities to house them. These facilities, or data centres, consume massive amounts of power and generate a great deal of heat and this has to be managed carefully to optimise performance of the equipment.

Over the years, data centres have become one of the biggest producers of greenhouse emissions in the business sector - and this is set to rise even further and the EU now wants to see a reduction in the power consumption and environmental impact of these facilities. One very important part of the solution is the use of highly energy efficient cooling systems such as the ‘AWS Free Cooling’ series.

## What’s Free Cooling?

Free cooling is an economical method of using low external air temperatures to assist in chilling water, which is then used for the air conditioning systems in data centres or industrial processes. When the ambient air temperature drops below the set temperature, all or part of the chilled water bypasses the existing chiller and runs through the ‘Free Cooling System’. This enables the chiller system to use less power resulting in energy savings, without compromising cooling requirements.

EFFICIENCY	SOUND LEVEL	CAPACITY RANGE					
	dB(A)	600	800	1000	1500	2000	2500
High - Std sound	down to 79.0						
High - Low sound	down to 75.5	640 ÷ 1555 kW - EER up to 3.19 & ESEER up to 4.01					
High - Reduced sound	down to 71.0	602 ÷ 1476 kW - EER up to 3.05 & ESEER up to 4.13					

# THE 'AWS' SERIES OFFERS TOP EFFICIENCY, LOW SOUND LEVELS AND FLEXIBLE SOLUTIONS FOR A WIDE RANGE OF APPLICATIONS

We equipped the new air-cooled series with a number of in-house developed technological innovations - such as the unique single-screw compressor and advanced high efficiency fans - offering you extremely cost-effective solutions for use in comfort and other applications where a top level chiller in terms of performance and reliability is needed.



# PRODUCT LEAFLET



**McQuay Italia S.p.A.** - Via Piani di Santa Maria, 72 - 00040 Ariccia - Roma - Italy  
T. +39 06.937311 - F. +39 06.9374014 - [www.mcquayeurope.com](http://www.mcquayeurope.com)  
**McQuay (UK) Ltd.** - 69 Questor Estate - Pearsons Way - Dartford - Kent DA1 1JN  
T. +44 01322.424950 - F. +44 01322.424951 - [info@mcquay.co.uk](mailto:info@mcquay.co.uk)



**McQuay**<sup>®</sup>  
**International**  
a member of **DAIKIN** group

*A Global Leader In System Solutions for Air Conditioning, Heating, Ventilating and Refrigeration*

Все каталоги и инструкции здесь: <http://splitoff.ru/tehn-doc.html>