

## Aqua Cooling 206/6 180 - 280 kW Air Blast Coolers

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Stock No	<a href="#">CT493</a>
Model	206/6
Year of Manufacture	1999
Serial	99052 B1 / 99052 B2
Ave. cooling capacity	180 - 280 kW @ 26°C ambient
Ave. Water Flow Rate	6 - 8 l/s
External Dimensions (WxDxH mm)	2300 x 4720 x 1600mm

### Description

Dry Air Blast Coolers

The Aqua Cooling air blast coolers has been developed and built to give extremely reliable and robust performance and are designed for fast-track installation.



Air blast coolers offers an advanced level of energy saving and the highest efficiency ratings available. air blast coolers can be installed alongside an existing cooling system to provide a low cost, environmentally friendly method of free cooling.

Utilising air blast coolers to achieve Free Cooling is most effective for process applications requiring a higher set point of 10 -15°C+ or for low cost seasonal cooling in the winter months.

The units provide corrosion-free process fluid, operate at low costs, with no evaporation loss. The units have an anti-freeze facility for external units, as well as no water treatment costs and no chemical dosing resulting in low maintenance costs.

Air Blast Process Coolers - Re-circulating coolant passes through air blown heat exchange radiators where process heat is transferred to ambient.

Air Blast Radiator (Dry air cooler) - Hot water from the equipment to be cooled is pumped through a matrix of extended surface area tubes to maximise efficiency. Cool ambient air is induced (or forced) across the cooling matrix of the air blast radiator and is exhausted without any contact between the air and the water. Cooled uncontaminated water is then returned to the equipment to be cooled.

Self contained dry coolers are non-refrigerated cooling systems. They are an alternative to recirculating chillers for applications where precise temperature control and cooling below ambient temperature are not required. Typically, coolant will be delivered back to the process at approximately 10°C below ambient, however, this is variable dependant on process load and external conditions.

## Free Cooling

Free Cooling is an economic method of utilising low external air temperatures to assist in chilling water, which can then be used for industrial processes or air conditioning.

Aqua's range of free cooling water chillers reduces electrical usage by utilising low ambient air temperatures to cool the return water whenever possible. The chillers have an inbuilt electronic controller which modulates a three way valve in the water return line. When the ambient air temperature drops below that of the return water it is diverted through a free cooling coil and automatically reduces the load on the system, resulting in partial or total free cooling.

The air blast cooler can be either integrated into an existing chiller circuit or as a 'bolt on' free cooler. The free cooler enables the free cooling principle to be retro fitted to an existing unit/system. Once a unit/system is upgraded by the bolt on free cooler it will achieve all the associated advantages of free cooling and is an excellent option for clients wishing to reap the benefits of free cooling without investing in any replacement equipment.

## Technical Specification

### Construction

#### Fins

Aluminium,

**Tube**

electro-tinned copper

**Headers**

Copper,

**Casing**

2.5mm galvanised steel,

**Legs**

80 x 80 x 3mm box section

**Fans**

**Motor Insulation**

6 x 1.5kW Class 'F' and class 'H'

**Integrated external Lowara standby and duty pump set**

Twin 24-50 m<sup>3</sup>/hr 11kW Lowara stainless steel headed pumps with fitted valves, pressure relief valve and expansion vessel.

**Stage control panel**

3 stage fan controls with switchgear for a 'plug and play' solution

**Local fan isolator**

Provide individual isolation of fans to allow for safe maintenance

**Common terminal box**

Where controls are sited and bringing cabling for all fans to a common point

**Hinged fan plates**

Offers easy access to fin block for cleaning

**Typical designed duty information calculated by Aqua cooling**

**Duty 1:**

Heat to be dissipated = 176kW

Medium to be cooled = Water / 30% Ethylene Glycol Solution

Flow Rate = 7.53 l/s

Fluid to be cooled from = 36°C

Fluid to be cooled to = 30°C

Design Ambient Temperature = 26°C

**Duty 25:**

Heat to be dissipated = 281kW

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*Machine Datasheet*



Medium to be cooled = Water / 30% Ethylene Glycol Solution

Flow Rate = 6.27 l/s

Fluid to be cooled from = 43.5C

Fluid to be cooled to = 32°C

Design Ambient Temperature = 26°C

**Photographs taken prior refurbishment. Our refurbishment service is not available on all machines.**



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Association

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