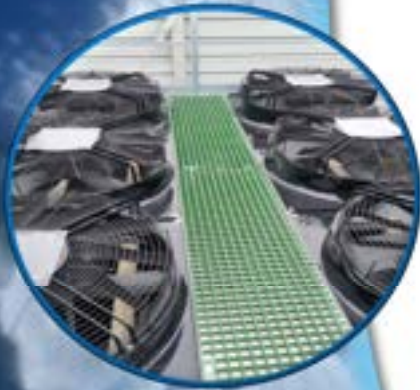


FIBREFLOW COOLING TOWERS

Australian made Cooling Towers

Induced Draft

EC Fans



Product Catalogue | 2024



Disclaimer

The information or advice contained in this catalogue is intended for use only by persons who have had adequate technical training in the field to which the catalogue relates. The information in this catalogue is a guide only and not to be used for construction. The user should also establish the applicability of the information or advice in relation to any specific circumstances. While the information or advice is believed to be correct the employees and agents disclaim responsibility for any inaccuracies contained within the document including those due to any negligence in the preparation and publication of the catalogue.

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Company Profile

Fibreflow Cooling Towers is wholly Australian owned and made, and was established in response to the demand for a quality HVAC manufacturer in Australia and develop and design composite and stainless steel products and related manufacturing methods. Various production methods include cold pressing heavy section FRP moldings and forming hollow and complex one piece FRP sections.

Our production methods use the best isophthalic, vinyl ester resins, gelcoats and high quality reinforcements. Our products are developed to stand the test of time with the quality, life-cycle and performance that goes above and beyond the expectations of our customers.

With experience of over 35 years in the industry, we have formed an insight as to what is required of our products, thus meeting the market with the best solutions for the application.

Typical applications include cooling tower structures and components, support assemblies, motor mounts and bearing housing mounts in a variety of materials to suit the clients' requirements.

Our range of FRP and Stainless steel cooling towers are developed and manufactured right here in Australia. With benefits ranging from low cost of ownership to long service life, high quality materials and virtually no maintenance, we can provide a tailored solution for your application.

Fibreflow Cooling Towers™ Pty Ltd

ABN 82 155 558 268

Head office

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Ormeau QLD 4208

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Nomenclature page for model numbers

CTEC - AX - 0707 - A

1

2

3

4

1. Open Cooling towers

CT Cooling Tower

EC EC fans Electronically Commutated (EC)

2. EC Fan Configuration

AX Axial induced draft

CE Centrifugal forced Draft

3. Box size

Internal nominal dimension in feet. 0707 is approximately 7ft x 7ft internally

4. Series

Model series





COUNTERFLOW COOLING TOWERS - Induced Draft



Cooling Towers are an open system design. The principle of operation is the same however cooling towers can be arranged differently. There are two basic types of tower; Crossflow and Counterflow.

Counterflow design is when the water travels vertically downwards over the cooling media and the air travels vertically upwards over the media.

Fibreflow Cooling TowersTM manufactures a large range of sizes and capacities to suit each individual application.

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COOLING TOWER QUICK SELECTION GUIDE AXIAL FAN INDUCED DRAFT

Hot Water	35	35	35	35	35	35	35
Cold Water	29.5	29.5	29.5	29.5	29.5	29.5	29.5
Wet Bulb	22	23	24	25	26	27	28
Model Number CTEC-AX	Water Flow in litres per second						
0505	11.9	11.1	10.0	8.9	7.8	6.4	5.0
0508	22.6	21.0	18.9	16.8	14.7	12.1	9.4
0512	34.8	32.4	29.2	25.9	22.7	18.6	14.6
0707	37.2	34.6	31.1	27.7	24.2	19.9	15.6
0712	58.1	54.0	48.6	43.2	37.8	31.1	24.3

COUNTERFLOW COOLING TOWERS - Induced Draft



Engineering Data— CTEC-AX Model

Tower Model	0505	0508	0512	0707	0712
Length	1320	2540	3760	2300	3760
Width	1630	1630	1630	2300	2300
Height	3700	3700	3700	3700	3700
Fan OD	910	910	910	910	910
Fan Qty	1	2	3	4	6
Motor Kw nameplate	3.25	6.5	9.75	13.0	19.5
FLA	5	10	15	20	30
Airflow set point	6.1	11.8	18.1	19.64	29.82
Inlet NB	100	150	150	150	150
Outlet NB	100	150	150	150	150
Make up	25	25	25	38	38
Drain	50	50	50	50	50
Overflow	50	50	50	50	50
Weight Dry	850	1350	1900	2200	2900
Weight Wet	1350	2200	3000	3400	3400
Sound Power dBa	98	101	105	108	113

NOTE:

Consult factory or representative for fan motor consumed kilowatts and air speed to suit specific project.

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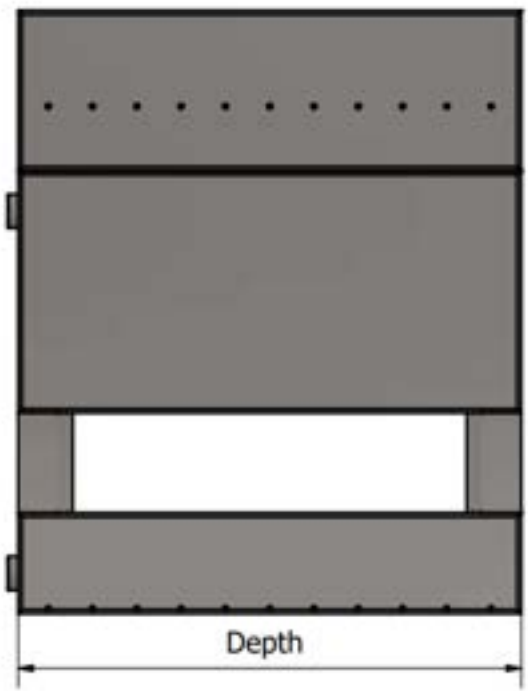
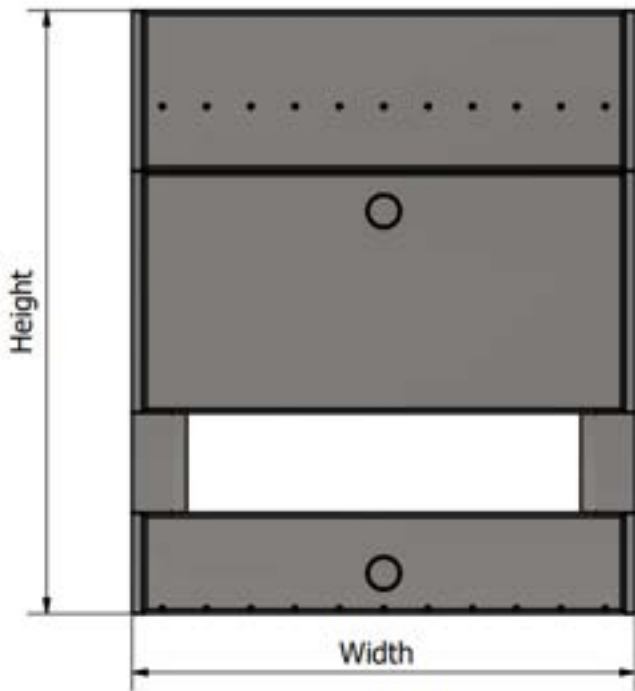
Bleed line must be installed to prevent solids build up. Always consult a water treatment company

Minimum 2000mm all around clearances. Unit must be mounted on at least 300mm high plinths.

The structure of the tower can not be used for any supports

All connections either screwed or bevelled for welding.

Towers must be assessed by seismic engineer for location mounting and must be secured to a solid surface.





CROSSFLOW COOLING TOWERS - Induced Draft



Cooling Towers are an open system design. The principle of operation is the same however cooling towers can be arranged differently. There are two basic types of tower; Crossflow and Counterflow.

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COOLING TOWER QUICK SELECTION GUIDE AXIAL FAN INDUCED DRAFT

Hot Water	35	35	35	35	35	35	35
Cold Water	29.5	29.5	29.5	29.5	29.5	29.5	29.5
Wet Bulb	22	23	24	25	26	27	28
Model Number CTEC-AX	Water Flow in litres per second						
071706	45.1	42.0	37.8	33.6	29.4	24.1	18.9
071708	53.8	50.0	45.0	40.0	35.0	28.8	22.5

CROSSFLOW COOLING TOWERS - Induced Draft



Engineering Data— CTEC-AX Model

Tower Model	071706	071708
Length	5100	5100
Width	2300	2300
Height	3000	3300
Fan OD	910	910
Fan Qty	4	4
Motor Kw nameplate	13.0	13.0
FLA	20	20
Airflow set point	27.2	29.5
Inlet NB	150	150
Outlet NB	150	150
Make up	38	38
Drain	50	50
Overflow	50	50
Weight Dry	2900	4400
Weight Wet	3400	4800
Sound Power dBa	113	116

NOTE:

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Minimum 2000mm all around clearances. Unit must be mounted on at least 300mm high plinths.

The structure of the tower can not be used for any supports

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COUNTERFLOW COOLING TOWERS - Forced Draft



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COOLING TOWER QUICK SELECTION GUIDE CENTRIFUGAL FAN FORCED DRAFT

Hot Water	35	35	35	35	35	35	35
Cold Water	29.5	29.5	29.5	29.5	29.5	29.5	29.5
Wet Bulb	22	23	24	25	26	27	28
Model Number CTEC-CE	Water Flow in litres per second						
0506	25.0	23.1	21.1	19.0	16.9	14.2	11.4
0508	36.9	34.2	31.4	28.3	25.3	21.3	17.2
0510	48.3	44.7	41.1	36.9	32.8	27.6	22.5
0512	59.4	55.0	50.6	45.4	40.3	33.9	27.5

COUNTERFLOW COOLING TOWERS - Forced Draft



Engineering Data— CTEC-CE Model

Tower Model	0506	0508	0510	0512
Length	1935	2540	3150	3760
Width	1630	1630	1630	1630
Height	3100	3100	3100	3100
Fan OD	560	560	560	560
Fan Qty	2	3	4	5
Motor Kw nameplate	10	15	20	25
FLA	15.4	23.1	30.8	38.5
Motor Kw set point	5.0	8.0	13.0	16.5
FLA set point	7.6	12.8	18.2	25.0
Airflow set point	21.0	31.9	41.3	50.6
Set Point V	0.5	0.55	0.6	0.65
Inlet NB	100	150	150	150
Outlet NB	100	150	150	150
Make up	25	25	38	38
Drain	50	50	50	50
Overflow	50	50	50	50
Weight Dry	1250	1750	2300	2800
Weight Wet	2000	2800	3400	4100
Sound Power dBa	103	108	112	117

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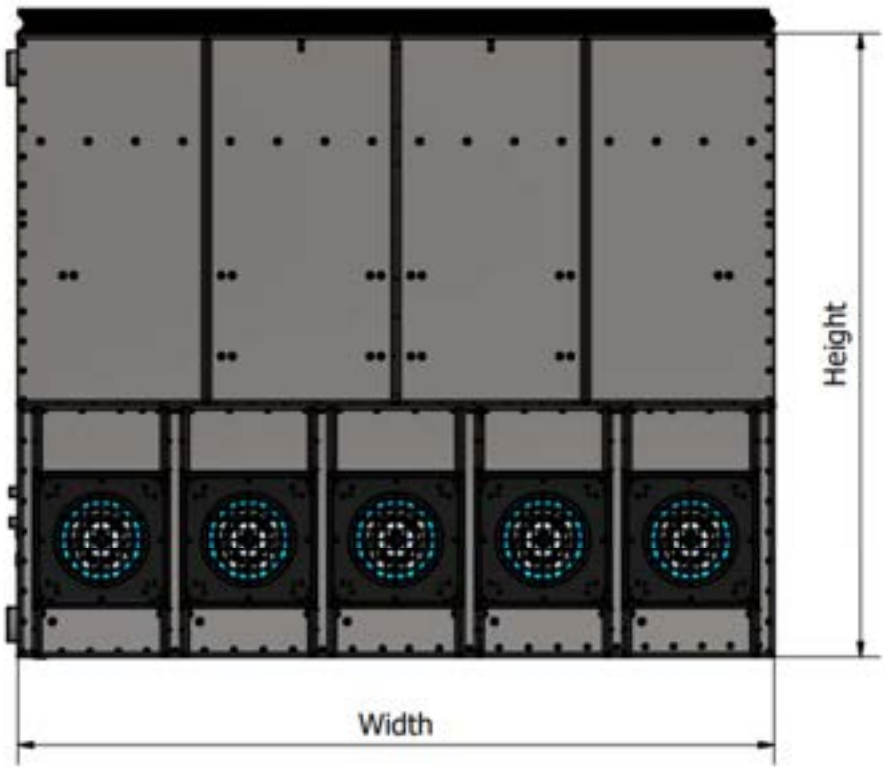
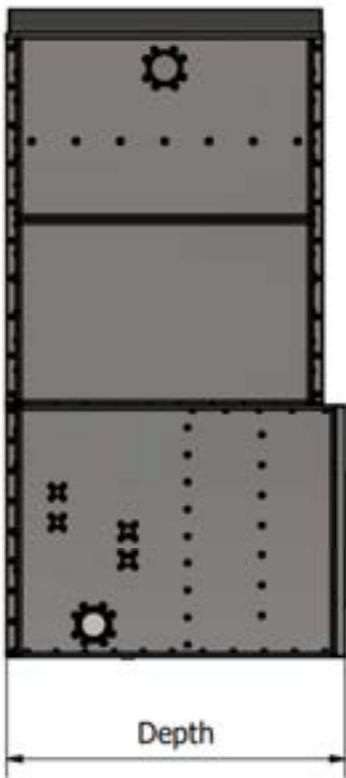
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Access & Maintenance



HEALTH AND SAFETY

Fibreflow Cooling Towers recommends local government regulations with regards to health and safety are complied to fully.

WORKING PLATFORMS

Fibreflow Cooling Towers offers a full range of working platforms with access ladders, low level and high level, multiple cell platforms and movable working platforms.

CONFIGURATION

Standard configurations are available as shown, as well as custom-made to suit a specific location.

MATERIALS

Material including hot dipped galvanized steel, aluminium, stainless steel and fibreglass.

CRANE MOUNTING

Davit cranes mounted on platforms for motor removal are also available as shown.





Cooling Towers - Sound Power Levels

The noise that humans hear covers a frequency from 20Hz to 10,000Hz. There are exceptions, however these levels have become accepted for most practical purposes. This audio band has been divided into eight bands called "octave bands".

The noise of cooling towers is controlled by many contributing factors such as layout, adjacent structures, variable speed drives etc.

Low noise options are available. Consult your representative for further assistance.



Cooling Towers - EC FANS



With the different options on the market, it may not be clear which technology is best. Today, variable speed drives (VSDs)—also referred to as variable frequency drives or VFDs—and electrically commutated (EC) fans are two of the most effective fan improvement technologies available.

Variable speed fan technologies save energy by enabling cooling towers to adjust fan speed to meet the changing demand, which allows them to operate more efficiently.

While cooling towers are typically sized for peak demand, peak demand conditions are limited to summer hot durations, in most applications. VSDs and EC fans more effectively match airflow output with load requirements, adjusting speeds based on changing needs. This prevents overcooling and generates significant energy savings.

With VSDs, drives are added to the fixed speed motors that propel the axial or centrifugal fans. The drives enable fan speed to be adjusted based on operating conditions, reducing fan speed and power draw as load decreases. Energy consumption changes dramatically as fan speed is decreased or increased due to the fan laws. For this reason, a 20 percent reduction in fan speed provides nearly 50 percent savings in fan power consumption.

EC fans are direct drive fans that are integrated into the cooling tower by replacing the axial or centrifugal fans and motor assemblies. They are inherently more efficient than traditional axial or centrifugal fans because of their unique design, which uses a brushless EC motor in a backward curved motorized impeller. EC fans achieve speed control by varying the DC voltage delivered to the fan.

Advantage of EC fans in cooling towers

1. No pullies , belts and bearings
2. No separate VFD required.
3. Fan and motor are one unit so easy to replace
4. Multiple fan , instead of one large fan provide redundancy in case of a failure. If there is a failure in a multiple fan unit the cooling tower, keeps running. If a failure in a single fan cooling tower the building is offline. Most significant with building that have only one cooling tower.

Cooling Towers - Compliance With Standards

Compliance with Standards

Fibreflow Cooling Towers are designed and constructed to meet the following Standards:

- AS4180.1 - Drift Test
- AS1170 - Wind Loads
- AS1657 - Code for platforms, ladders, stairways and walkways
- AS3666 - Air Handling and Water Systems of Buildings – Microbial Control
- AS3500 - Australian Plumbing Code
- CTI STD 136 - PVC materials for use with fill, louvres and drift eliminators
- BCA - Building Code of Australia
- MEPS - Electric Motor Standard Compliance

Performance Guaranteed

- Fibreflow Cooling Towers guarantee the **THERMAL PERFORMANCE** of our cooling towers
- The performance evaluation is taken as per CTI Test Code ATC 105
- The thermal performance guaranteed is that submitted in the technical data on which the purchase order was based in free field conditions unless otherwise stated



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