



**probably the best...  
natural water treatment  
in the world**

- The Care-Free Water Conditioner is a water problem solver ○
- Care-Free... 10 year replacement warranty ●
  - Care-Free improves water for all irrigation purposes ●
  - Care-Free reduces salinity in the soil ●
  - Preventative maintenance for industrial use ●

**Improving water  
naturally since 1980**

# The Care-Free Water Conditioner is a water problem solver

## Introduction

With a proven track record since 1980, this totally natural water treatment system has helped tens of thousands of people in Australia and around the world solve their water problems and improve their water quality. They include householders, farmers, vineyards, market gardeners, golf courses, nurseries, local councils, government departments, hospitals, commercial and industrial concerns.

It can also help you...  
improve your water supply.

Along the way, improvements and modifications have been made to the Conditioners, which has resulted in several patents.

One of these discoveries was that the Care-Free system could significantly reduce salinity in the soil – Patent Pending.



## Simple, safe and economical

→The Care-Free Water Conditioner simply becomes part of your pipeline and so delivers a continuous supply of water. Properly maintained it will last you a lifetime. What's more there are no moving parts to wear out or cartridges to replace.

As the name suggests it is a "water conditioner" not a softener or filter. It will help minimize the adverse affect of many of the undesirable substances in your water supply.

As you read through this brochure you'll see what a great benefit the Care-Free Water Conditioner can be to you.

The natural Care-Free process, will condition your water for a lifetime...for a lifetime of savings.

## How does it work?

→The Care-Free Water Conditioner is an in-line catalytic water treatment system.

It operates by a combination of the following.

- 01 Turbulence of the water through a specially designed catalytic chamber.
- 02 By the creation of a small electrical field around the chamber casing.

This combination causes a separation of the mineral particles in the water, which changes their behaviour.

Particles, which were previously attracted to each other, now repel and separate into smaller individual particles. This allows the "separated" mineral particles and salts to flow through the system with minimal interference.

To put it simply, Care-Free Water Conditioners eliminate the cohesion that exists between the mineral particles in the water. This is clearly visible in the microscope photos below.



Before



After

Electron microscope photographs - mag. x 1440

→They reveal mineral particles precipitated from "the same water sample" with a reading of 750mg/l hardness.

Note how the particles are bound together before Care-Free treatment and "separated" after treatment.

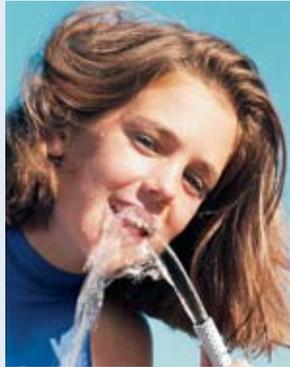
You can compare this reduction in micron size from the size of your fist to the size of your fingernail.

### For optimum performance

- Size the conditioner to recommended flow rates and do not oversize.
- Connection to our specially designed Battery Pak or sacrificial rod is essential.
- Clean the conditioner as per the Maintenance Instructions.

## You don't need bottled water... you can have quality water, all the time, from all your taps!

→Once you have a Care-Free Conditioner installed you will enjoy a glass of water and drink it more often. In fact many people claim that their town water has a more natural taste and feels like spring water, rather than their chlorinated supply. But that's not all Care-Free will do for you...



### CONSIDER THE BENEFITS

- improves the taste of domestic water supplies, makes great tea and coffee and keeps your kettle clean
- helps keep bathtub and shower walls clean with less scrubbing
- water saturates and cleans better, gives whiter, softer clothes with less detergent
- dishwashers and washing machines remain clean and scale free, less maintenance
- stops scaling in piping, removes existing scale, improves water pressure
- lawns and gardens require less water to stay green and healthy
- less water spotting makes car washing easy
- protects water heaters from corrosion, adds years to their lifetime
- reduces salt encrustation on air conditioners



15mm conditioner fitted to a domestic water meter. Note the easy access to unions. The specially made sacrificial rod supplies the electrical current to the conditioner. Keep rod moist.

## Care-Free stops your money going up in smoke

You would never dream of burning your dollars, would you?

→Yet are you aware that only 1.5mm of scale inside your water heater will prevent heat transfer to the water and increase your heating bill by 12.5%. What's more 3mm of scale will increase this to a massive 18.5%.

By keeping your water heater free of scale Care-Free will save you money.



### Before

This amount of scale on your hot water element can **double** your hot water bill.



### After

However, six weeks after installing a Care-Free Conditioner, all scale has been removed!

## Results speak for themselves

→Your hot water heater is fitted with a sacrificial anode to prevent corrosion of the cylinder.

The sacrificial anodes below were installed at the same time by the Victorian Electricity Commission in separate hot water heaters and removed twelve months later for inspection:



"We conclude that it was beneficial to install Care-Free units to lessen the costly replacement of cylinders, anodes, and elements and it would be a real benefit to install a water conditioner on all residences within the Portland Water Board region."

*Technical Officer, Portland Customer Service  
State Electricity Commission Victoria.*

Compare the difference between the Care-Free treated water system on the right and the corroded untreated system.

# Care-Free... 10 year replacement warranty

## Swimming pools

→ Fitted into the circulation system of your pool the Care-Free SWP40 Conditioner will deliver sparkling, crystal clear water for years to come. What's more you'll discover your pool feels and smells more refreshing, will be easy to maintain and a delight to swim in. In fact...

Care-Free gives you water so clear... you can read your newspaper "underwater"



10 metres of clarity

## CONSIDER THE BENEFITS

- reduces pool chemicals by approximately 50%
- gives amazing water clarity
- is ideal for sensitive eyes
- improves filtration
- reduces backwashing
- for salt or chlorine pools
- is inexpensive to install and maintain
- salt chlorinator cleans easily with a garden hose



### Simple to install

The Care-Free SWP40 is preferably fitted after the filter into the pool return line.

Rubber connections are supplied in either 40 or 50mm.

Installation may be vertical or horizontal. Zip ties keep the Battery Pak in place.

## Motor homes and boats

You can improve your water no matter where you go... or how you get there.



→ The portable 6mm Care-Free Water Conditioner is purpose built for your motor home, boat or caravan. You'll find it extremely convenient as it takes only seconds to clip into your water hose.

You can use it for filling your tanks or it can be used on mains pressure if required. If you happen to have a filtration system, you can expect your filters to last two to three times longer.



6mm Care-Free and Battery Pak

What's more you'll love its compact size because when you're ready to move on it is small enough to store in your glove compartment.

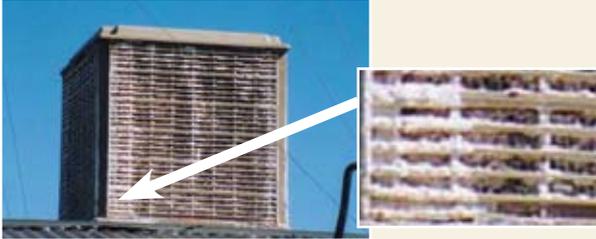
## CONSIDER THE BENEFITS

- water tastes better
- no more "scale" worries
- water feels softer
- keeps water tanks clean
- great cups of tea and coffee
- better lather and soap action
- ideal for washing down your vehicle
- lasts a lifetime

## Good news for evaporative air conditioner owners...

Have you ever wished there was a way to reduce the white mess from collecting on your evaporative air conditioner?

Well, the good news is... there is!



This cooler is only one year old - **look at the mess**



14 year old cooler with two year old pads – **no mess**

These two evap coolers are identical. They are in the same town 400 metres apart, yet the *clean* cooler is 14 years old...*the difference is Care-Free.*



Installation of the AC6 is easy. Simply cut the 20mm hose, push in and place underwater.

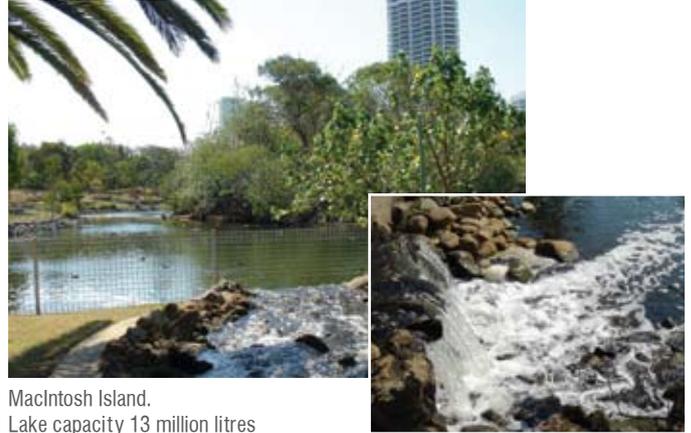
→ It's called a Care-Free AC 6 Water Conditioner - Patent Pending, and it will protect your evap cooler from natural elements by reducing white scale deposits so they are no longer a problem.

What's more pump life is extended and you'll save hundreds on replacement of cooler pads because the AC6 will more than double their life expectancy.

### CONSIDER THE BENEFITS

- reduced white soda deposits
- more than doubles the life of your cooler pads
- slowly removes existing scale deposits
- extends pump life
- lasts a lifetime
- minimal cost

## Algae problem solved... at Gold Coast lake



MacIntosh Island.  
Lake capacity 13 million litres

→ The City Council has installed several Care-Free Water Conditioners over the past few years to solve a variety of water problems.

The lake in Surfers Paradise was one of the problem areas. Algal growth, turbid water and zero visibility spoil the lake's attraction.

Several methods to clean the lake were investigated but were not cost effective.

It was decided to install a Care-Free Conditioner into the lake's re-circulation line.

During the next few weeks the algae disappeared and the water cleared so dramatically that you could see the bottom of the lake



150mm Care-Free Conditioner turns over entire lake every 36 hours.  
Flowrate 6,000 lit/min.

# Care-Free improves water for all irrigation purposes

## Irrigation

→ Since 1980 people in Australia and overseas have enjoyed the benefits of Care-Free water treatment.

Not only is Care-Free continuing to solve hard water problems, but recent studies have proven that Care-Free is able to substantially lower salinity in the soil – Patents Pending.

Crops are being grown and are doing well on water which is normally considered unsuitable for irrigation.

In fact Care-Free is succeeding in making the impossible... possible.

→ Likewise, when you install a Care-Free Water Conditioner, you can look forward to solving your water problems and improving water and soil quality.

### Market gardener saves thousands

→ For example a market gardener whose bore had become brackish with 2,100mg/l salt was facing the prospect of losing his \$30,000 lettuce crop affected with leaf burn.

He installed a 75mm Care-Free Conditioner and after only four days his entire crop was saved. Quick to see the benefits, his neighbours now use our product on their irrigation systems.

### Water penetrates the soil faster

→ Lab tests confirm Care-Free treated water penetrates the soil faster. What this means to you is less evaporation and less water usage – up to 20% in some cases.

### Look at the new growth after only eight weeks

Salts in bore water caused the unsightly encrustation on this Bunya Pine. The difference is obvious when you compare the stunted and deformed foliage with the healthy new growth. (See water analysis).



## CONSIDER THE BENEFITS

- lowers salinity in the soil
- water penetration is improved
- reduces water usage
- encourages plant and crop growth, greater yields
- reduces leaf burn
- less fertilizers required
- reduces the effects of salts and minerals in all water
- stops scale and corrosion of water systems
- drip irrigation lines stay clean
- ball valves and taps operate smoothly
- inhibits algae growth, stock troughs and tanks remain cleaner
- provides a more useable water supply



## Compare the difference

These Fatsia Japonica plants were watered from the same water supply for five months. The only difference being one plant received Care-Free “conditioned” water, the other unconditioned water.

## WATER ANALYSIS

pH	7.60
Conductivity	1.57
Total Salinity	1036mg/l
Total Alkalinity	446mg/l
Hardness (Ca+Mg)	758mg/l
Chloride	230mg/l
Sodium	76mg/l
Calcium	181mg/l
Magnesium	74mg/l

## The simple solution to hard water problems



### Same orchid plant...Same Water

The staining experienced before installing a Care-Free Conditioner has totally disappeared on all new growth.



### Care-Free... becomes part of the pipe line

This 100mm Care-Free Conditioner is installed on a market garden in Victoria and delivers 1,900 lit/min. Because the pump and conditioner are isolated from the ground with poly pipe, a sacrificial rod and copper pipe are used to supply the electrical current. See insert.



### Size according to flowrate not pipe size

It is important not to oversize. This 20mm Care-Free unit is installed into a 25mm line from a pressure system. The attached Battery Pak supplies the electrical current.

## Making the impossible possible

→ Growing melons in the 4,000mg/l salt water was impossible prior to installing a Care-Free Water Conditioner. However the melons thrived on the “conditioned” water and there was no evidence of salt-encrustation around the entire dripper system. Al Dharah – United Arab Emirates.



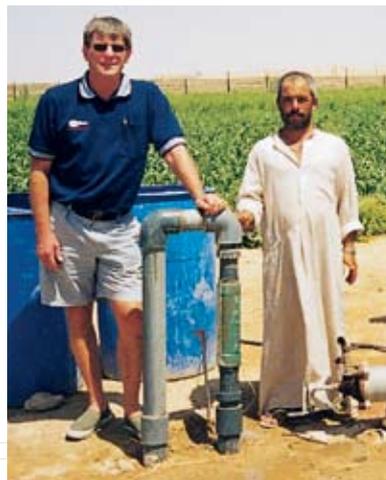
Melons shortly after sowing. No salt encrustation is evident on the drippers.



Before installing a Care-Free Conditioner, the owner could only dream of a melon harvest like this!

## Production increases 340% using 11,000mg/l salt water

→ After installing a 50mm Care-Free Conditioner the production of Salk which is similar to Spinach, increased by 340%. Farm income rose from \$40,000 to \$136,000.



Director of Care-Free – Robert Uden, with farm manager. Sweihan UAE

# Care-Free reduces salinity in the soil

## Effluent irrigation problem solved at golf course

→ At this golf course in Southern New South Wales, the effluent water used to irrigate fairways and greens was continually blocking sprinkler heads and filters. This meant hand cleaning every sprinkler on the 18-hole course every two weeks.

### An expensive problem.

Chlorine injection systems were investigated by the club, but were not a viable option.

Here's what the General Manager of the Shire Council had to say 12 months after installing their Care-Free Water Conditioner:

“Since installation I am pleased to confirm the following results:

- No evidence of fungal growth
- Increased more efficient flow rates
- Less maintenance on entire irrigation system.

The Care-Free Conditioner has proven a useful and cost effective addition to our effluent irrigation system.”



Not a sign of algal growth on sprinkler heads.



100mm Care-Free Conditioner installed into a 150mm line at the golf course. Flowrate: 2700 lit/min Headloss: 41kPa – no orifice.

→ In this installation the pump and conditioner are connected into galvanised pipes which go underground, therefore a single sacrificial rod is sufficient to supply the electrical current to the conditioner.

## Soil salinity down by 89%

→ For several years these paddocks had been irrigated with bore water with a TDS of 1,300mg/l and salinity in the soil was gradually increasing.

After irrigating for only one season with Care-Free Conditioners the Chloride in the soil was reduced by 89% and the Sodium by 53%.



A CF150 and CF100 were manifold together to deliver 4,400 and 2,200 lit/min respectively (9.5meg/day). Headloss 27kPa – no orifice.

### SOILANALYSIS

	Before	After	% Reduction
Sodium – meq/100g	1.3	0.61	↓ 53%
Chloride – mg/kg	220	24	↓ 89%
Elec. Cond. – $\mu$ S/cm	230	70	↓ 69%

## Lucerne crop thrives in 5,600mg/l salt water

→ The farm manger wrote: “Before we installed the Care-Free, our bore water almost killed our flood irrigated lucerne.

Since installing the conditioner, results have been amazing.

The first year we cut hay and reaped seed that yielded as good as the district average.

The second season we achieved two cuts of hay and reaped 400 kgs/ha of seed and grazed cattle.

We are grateful for the advice and assistance you have given.”



A CF75 fitted to a 150mm line.

### WATERANALYSIS

Sodium	1,640mg/l
Chloride	3,400mg/l
Elec. Cond.	11,100 $\mu$ S/cm
TDS	6,400mg/l
NACL	5,600mg/l

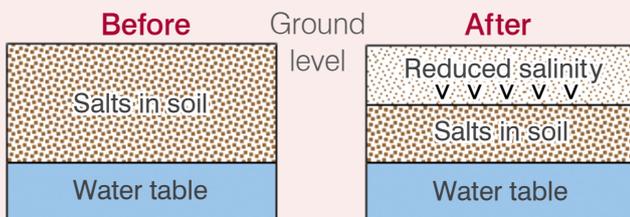
## Care-Free and soil salinity... what do scientists say

→ I will emphasize that there is no difference in EC from input water to output water from a Care-Free Water Conditioner.

What we have found at ANSTO by undertaking a range of tests on the device, in relation to particle size analysis, in the colloidal fraction, is that the distribution of the particle size of colloids is reduced significantly.

That there is an increase in the portion of particles at the lower colloidal size once saline water is passed through the device.

By reducing the size of the particles, the device influences the impact of the saline water, which has stayed the same EC, and allows the salts, or I should say the ions which also vary in ionic radii, to pass downward through the soils below the root zone.



Hence why there are observed reductions of salinity in the soils where trials have taken place.

The irrigated water has had particle size reduction take place, allowing the ions to pass quicker through the soils and not get caught up in the root zone for plants.

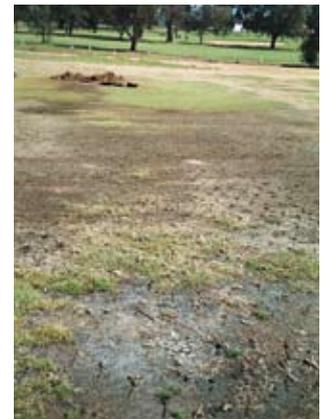
Dr John Bradd  
Hydrogeologist – ANSTO  
ASAN – National Coordinator

## Care-Free lowers salinity at golf club by 66%

→ Rising salinity at a Wagga Wagga Golf Club played havoc with the course for several years despite the good river water used for irrigation. The club agreed to set up a trial area using Care-Free to determine the effect on the surface salts killing the grass. All treatment to the test area ceased during the trial.



CF40 at sprinkler head



Before

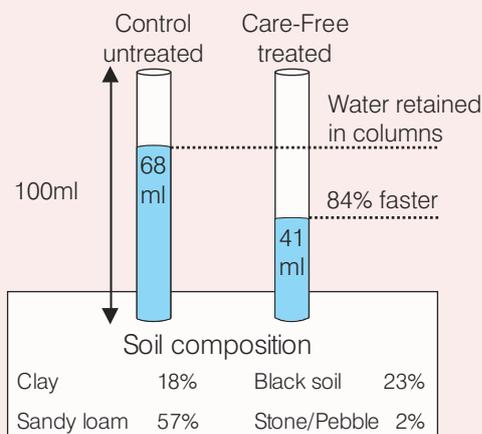


After 6 months



2½ years later

## Lab tests confirm Care-Free improves water penetration



→ This water percolation test was done by Analytic & Biological Laboratories Inc. over 48 hours.

The test confirmed a change in the makeup of the Care-Free conditioned water that allows it to penetrate the various compositions of soil at a faster rate.

### 6 months later...

- surface salt disappeared over entire test area
- couch grass now showing vigorous growth
- soil pH had lowered from 8.6 to 7.1
- sodium in the soil lowered by 25%

### 2½ years later ...

Australian government scientists visited the golf club and took samples of the treated and untreated areas. They were amazed at what they found.

Salts were not only significantly lower in the Care-Free treated area, but were in a completely different form to that of the control area. Below are the results of the initial soil samples taken by the scientists.

### SOILANALYSIS

	Control	Care-Free	%Reduction
Sodium – mg/l	290	167	↓ 42%
Chloride – mg/l	650	220	↓ 66%
Elec. Cond. – $\mu$ S/cm	2620	1170	↓ 55%

# Care-Free...preventative maintenance for industrial use

## → Cooling towers

→It is to be noted that the Care-Free Water Conditioner treats the cause rather than the complaint. When installed on a cooling tower system, it virtually eliminates the biofilm below the water line in which bacteria grows and multiplies. Therefore minimal regular maintenance is required to keep the tower in a "clean" condition. Payback time is usually less than two years.

### Ion exchange water softeners...Boilers

If you have a water softener on your boiler feed water, big savings can be made by installing a Care-Free Conditioner "before" the softener. Not only will the performance of the softener be improved, but regeneration times will be extended which reduces your costs considerably.

### CONSIDER THE BENEFITS

- uses no chemicals whatsoever
- stops scale and corrosion
- keeps cooling towers, piping and condensers clean, thereby saving downtime
- extends the life and improves performance of heating and cooling equipment
- maintains low bacteria levels by eliminating biofilm
- has no filters to harbour bacteria
- is inexpensive to install and maintain
- is 100% environmentally friendly
- does not contribute to toxic aerosols



### Separate circulating pump system

In this system the pump circulates 1500 litres of cooling tower water through a 32mm Care-Free once every 12 minutes. A 15mm Care-Free is also fitted to the make up supply.

## Which would you choose?



### Before... with chemicals

A chemically treated cooling tower "prior" to installation.



### After... without chemicals

Note the water clarity of the cooling tower sump eight months after installing a Care-Free Water Conditioner.



### Before.. without Care-Free



### After... with Care-Free

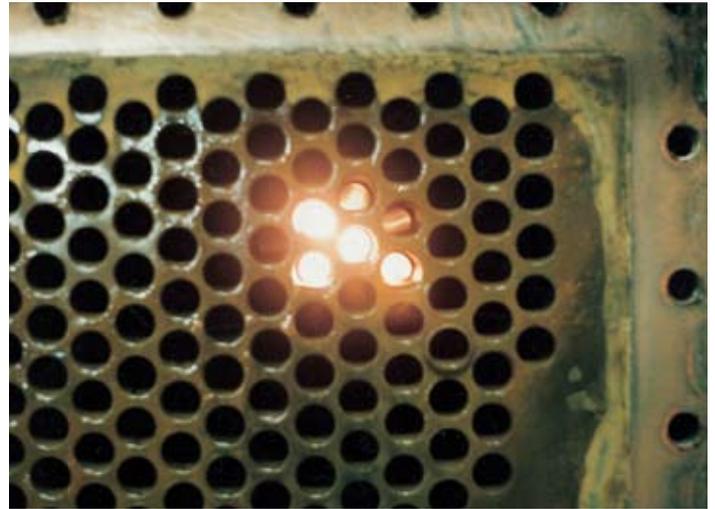
Since installing a CFWC at an Aboriginal Health Service in the Northern Territory this badly calcified commercial dishwasher has remained clean.

## Care-Free keeps condenser tubes “shining like a gun barrel”

→ These condenser tubes are shining like a gun barrel after 15 months of Care-Free water treatment. ▶▶

To give an indication of tube cleanliness a torch light is easily seen through the four meters of condenser tubing. No chemical treatment was used and no scale or pitting was evident. All that was required was a soft brush clean which was more of a formality than a necessity.

The following summary findings were taken from a report by the Benalla Regional Office of the Victorian Health Department after a two year study of the Care-Free Water Conditioner.



### Use of a Water Conditioner to control the Aquatic Environment of Cooling Towers

#### Introduction

This paper represents an alternative non-chemical means of managing the aquatic environment of cooling towers, in a way that appears to preclude the proliferation of bacteriological contaminants.

A water conditioner was sized to the cooling tower circulation rate and reservoir capacity, and installed as a by-pass circuit that would circulate the cooling tower water through the conditioner for 12 hours every day.

Prior to commencement of the experiment, a number of parameters were decided which are as follows:

- (a) an adjacent cooling tower which did not have a water conditioner fitted, would be subject to the same schedule of tests as the cooling tower which did have the water conditioner device fitted.
- (b) both cooling towers would be thoroughly cleaned.
- (c) one cooling tower would continue to use biocide and algacide chemicals and the cooling tower which had the water conditioner device fitted would not use any chemicals.
- (d) a program of tests and inspections was scheduled.
- (e) TBC dip slide tests were taken and recorded.

The test schedules were:

Total Bacteria Count, Legionella Count, Total Dissolved Solids, Alkalinity, and pH.

What was of major significance, and is possibly the most important point of this paper, is that during the two year experiment, no algacide or biocide chemicals were used in the cooling tower with the water conditioner device fitted.

Throughout this time, the test results as provided by a NATA certified testing agency have identified the lowest detectable levels of all legionellas which is <math><10</math> CFU/ml, and the TBC has consistently remained at less than

This is an excellent result for cooling towers which are using chemicals, but is an exceptional result from cooling towers which are using no biocide or algacide chemicals.

#### What are the results of the experiment thus far?

- (a) The device appears to be able to consistently maintain a TBC of below - (b) The cooling tower is visually clean.
- (c) The condenser tubes on the water side of the refrigeration unit condenser allied to this cooling tower, were not cleaned at the commencement of the experiment. However when the condenser end covers were removed for their seasonal inspections and tube cleaning, every tube was observed to be completely clean and shining like a gun barrel.

#### What benefits has the project identified thus far?

- (a) The cooling tower is dispersing neither Legionella or biocide aerosols.
- (b) The cooling tower no longer requires cleaning except for the requirement to desludge the water pan.
- (c) The shell and tube condensers attached to the refrigeration machinery no longer require cleaning or brushing.
- (d) An additional benefit of item (b) is that the compressor efficiency is not impaired or reduced because of dirty or scaled condenser tubes.
- (e) The use of cooling tower chemicals has been eliminated subject to the Total Bacterial and Legionella counts remaining below a specified limit.

The two year field test experiment had thus far substantiated that the aquatic environment of a cooling tower and an evaporative cooler can be controlled using what has traditionally been known as a proprietary device.

The evidence supporting this is the visual results of the experiment and the certified NATA laboratory test results of the water samples.

# Specifications



CODE	SIZE		TYPE	LENGTH mm	Lit/min	NOMINAL CAPACITY		
	mm	Inch				Lit/min No Orifice	G.P.H.	G.P.H. No Orifice
Cf6	6	1/4	Thread	165	10		130	
CF15 Mk II	15	1/2	"	205	29		385	
CF20 Mk II	20	3/4	"	220	58		765	
CF25 Mk II	25	1"	"	270	112		1,480	
CF32 Mk II	32	1 1/4	"	325	215		2,840	
CF40 Mk II	40	1 1/2	"	388	320		4,225	
CF50 Mk II	50	2"	"	400	480		6,340	
CF50+ Mk II	60	2"	"	400	600		7,920	
Cf65 Mk II	65	2 1/2	Table E Flange	360	800	1,100	10,500	14,500
CF75 Mk II	80	3"	"	416	1,150	1,450	15,100	19,100
CF100 Mk II	100	4"	"	440	1,580	2,000	20,800	26,400
CF125-150 Mk II	150	6"	"	500	2,400	3,200	31,700	42,200
CF150 Mk II	150	6"	"	558	3,700	4,800	48,800	63,400
CF200 Mk II	200	8"	"	685	6,500	9,400	85,800	124,000
CF250 Mk II	250	10"	"	720	10,500	15,300	138,600	202,000
SWP40 Mk II	Swim Pool		Rubber	320	250		3,300	
A/C 6	Evap Cooler		Push In	144	20		260	

A tolerance of plus 66% or minus 50% of nominal capacity is permissible on threaded units. On flanged units the tolerance is plus 66% or minus 33%. Headloss @ nominal capacity with orifice = 35kPa - 5PSI. The nominal capacity is increased when the orifice cone is not used. Headloss = 35kPa.

## Installation

→ The Care-Free Water Conditioner is preferably fitted into the main line after the water meter of pump and before any tee junctions, whereby the whole system will benefit. It will operate at any angle and for easy access must be fitted with unions of flanged connections. Install according to instructions.

## Many sizes to choose from

→ The large range of sizes ensure a conditioner to suit most applications, Casings are screwed with BSP threads up to 50mm, larger units have Table E flanges.

We want you to be pleased with your conditioner because... your satisfaction is our success.

## USEFUL CONVERSIONS

Pressure and Head	Flow
100kPa = 14.5 PSI	4.54 litres = 1 imp gallon
	3.78 litres = 1 US gallon
	1 lit/min = 13.2 imp gal/hr
	1 lit/min = 15.8 US gal/hr



### Sole Distributors for India:



**Jireh Exports Pvt Ltd**

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[www.carefree.com.au](http://www.carefree.com.au)