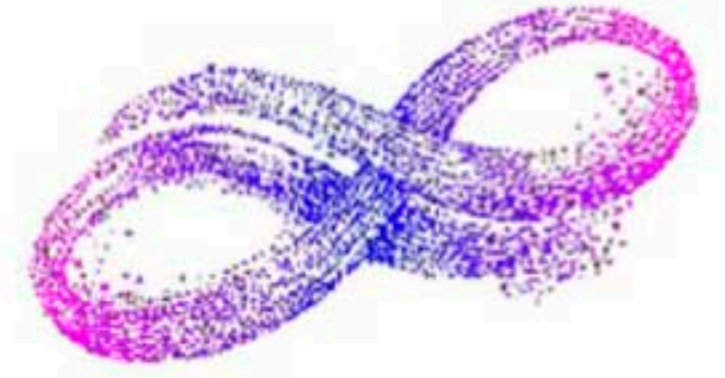


PRODUCT INFORMATION



JARNA FLOWFORMS

Living Water Flowforms

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FLOWFORMS

Flowforms are vessels that seek to emulate the swirls and vortices of the mountain stream, enabling water to reoxygenate, revitalise and rejuvenate itself, to bring it back to its more natural state – thereby assisting both the human and the plant kingdom. They form a cascade of water that flows into a tank or pool. The water can be recirculated as many times as desired.

The secret of the Flowform lies in it creating a “figure of 8” movement in the water - the lemniscate. This movement is one of the foundation patterns of all life. Oxygen is folded into the water, and the microorganisms are aided in breaking down the “unwanted matter” in a natural and gentle way.

In addition, the psychological effect of the contraction and expansion of the rhythmical movements of the Flowforms is of a calming quality and can produce an enlivening and awakening of the senses.

This dynamic movement, which calls forth the sounds of a mountain stream or small waves on a beach, through the rhythms, sounds and pulses the water produces, gives rise to a breathing quality.

The Jarnas are the “industrial” model, used for stirring BioDynamic preparations, treating dairy effluent and grey water and black water systems. Their flow rate is 50 litres per minute and are available in both concrete and fibreglass. Concrete Jarna’s are joined together and need to be placed either on a ladder frame or landscaped in a line. Fibreglass Jarna’s are assembled and screwed to a frame ready for use.

Usually 7 bowls are used with an entry bowl. Wheat germination tests have shown 8 bowls plus entry to be the most effective.



Jarna Flowforms

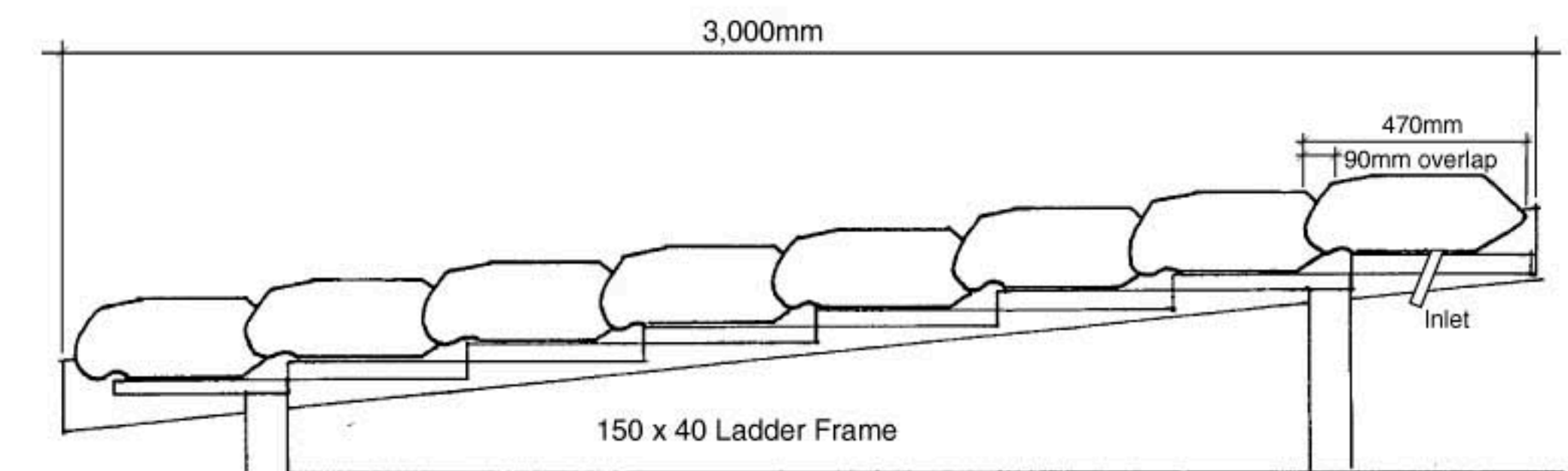


THE KITS

The kits are designed to enable quick and easy assembly. Comprising pre drilled quality second hand hardwood frames, the assembly time is short. Pumps and plumbing can be included if required.

The fibreglass Jarna flowforms are pre-assembled and crated in fibre board with recycled styrene packing. This enables portability which means you can easily move them from dam to tank or from pool to pond for all types of water enlivening. Organic and Bio Dynamic farmers find this particularly convenient for larger acreages and orchards.

Once assembled, the kit is quite robust and is designed to last for many years. The fibreglass has a food grade gel coat (top surface) and being of marine grade is capable of handling years of service. The flexible hose from the pump to a "T" fitting with a 1" gate valve allows evacuation whilst a 1 1/4" valve at the entry to the flowform controls flow rate through the flowforms.



USES OF FLOWFORMS

- Revitalising drinking water - Flowforms are used on town water, tank water and dams to enhance water's life giving properties.
- Grey water and sewage treatment - use Flowforms in conjunction with reed beds, to create useable water which can then be used in the garden or paddock.
- Removing smells and oxygenating contaminated water.
- Sewage treatment trials have proved increases in dissolved oxygen thereby assisting micro-organisms to digest nutrients
- Swimming pools - use Flowforms to keep the water more alive and needing less chemicals.
- Bio-dynamic preparations - are effectively stirred using Flowforms, as has been proven through extensive usage by Bio-dynamic farmers in Australia and New Zealand since 1987.
- Dairy and piggery effluent - are treated using Flowforms to create useable water, able to be sprayed on the paddock.
- Aquaculture - Flowforms oxygenate and revitalise water that creates a healthy environment that fish thrive in.
- Air conditioning plants - the use of Flowforms assists in the revitalising of water in these delicate living systems.
- Microorganisms move in spinning and spiralling movements and processes. The rhythms of water created by the Flowform shape and proportion relates to these micro movements which supports life needed for vital water.
- Fish emulsions, seaweed, and liquid manures are just some of the solutions dramatically energised by the flowforms. Worm juice manufacturers have reported more than significant improvements by using flowforms which is reflected in their crop yields.



CASE STUDIES

Tony Franken's Dairy. Comboyne, N.S.W

The contribution of Tony's dairy effluent treatment plant at Comboyne has made a large reduction in effluent turn around time and 1000ltrs per day is used to hose out the dairy after milking. Rank weed growth and smelly muck soaked areas at the back of his dairy was the norm. Not now though. Tony is able to use this valuable resource to irrigate his farm. Recycling the water and applying the manure waste to his irrigation equipment has many benefits. Traditional dairy effluent processing which relies on anaerobic decomposition can take up to four months, then the question arises, "What to do with the mess?"

Tony's plant relies on aerobic decomposition (flowform and Bio Dynamic Manure Concentrate) and produces a ready to spray liquid in one week. By slightly opening the sprinkler jets the whole liquid is sprayed onto the paddock. The cows then immediately graze on this grass. An unheard of scenario using traditional methods.

The plant comprises of 2 x 9000ltr concrete site cast tanks with 14 Jarna flowforms and phi ratio spoon. The spoon enables the water to be directed to either left or right hand tanks. Between the tanks is a triangular pump chamber and by opening or closing the valves, either left or right tanks are aerated. Tony runs the 14 flowforms at night which enables the introduction of more oxygen.

One of the tanks is filled from the shed via a sump and coarse strainer. When full, the 14 Jarnas are activated and left to run for 5-6 nights as the other tank fills. Once sufficiently processed the first tank is used for irrigation whilst the second one fills. The Bio Dynamic Manure Concentrate is used in the tank to expedite the aerobic decomposition and is available from the BDFGA Association for \$30 per kilogram or made very cheaply on the farm.

Tony is quite pleased with his plant and is enjoying the benefits brought to his herd of cows.

Sunny Brand Chicken Abattoir in Byron Bay NSW

The Flowform installed at Sunny Brand Chicken abattoir in Byron Bay NSW proved the Vortex Flowform to be the saviour of the plant.

This abattoir slaughters 26,000 chickens three to five times per week. The washing from the slaughter room goes through a clarifier into a 4.3 megalitre pond and has done so for nineteen years. From there water is used for irrigation on an on site turf farm. The stench was unbearable the neighbours were complaining loudly and the Environmental Protection Agency were about to close them down.

To make matters worse this whole plant is right on the edge of a large wetland area, a sensitive environment.

Dissolved oxygen readings were ZERO we checked again ZERO (most unusual). We installed three sets of seven Vortex Flowforms and within two weeks of continuous running the dissolved oxygen was 2.3 ppm. By the end of the sixth week we had readings of 6.3 ppm. The neighbours rang to inquire where the smells had gone. The Environmental Protection Agency has extended their license, with the added construction of gravel filters and reed beds, Sunny Brand Chickens look forward to staying in production for many years to come.





STIRRING KITS

		Jarna	
Number of flowforms		8	
Material		Concrete	Fibreglass
Colour		Off White	White
Flow Rate - litres/minute		45-50	
Maximum volume for Bio-dynamic stirs/hour (litres)		500	
To Spray Acres		33	
Pump Supplied		Vip Vort 180/6 submersible Vortex pump (Italian)	
Plumbing Description		1.2 metre x 40mm flexible hose, 1 1/4" + 1" gate valves & fittings & 2.8 metres of polypipe.	
Dimensions (mm) (Length x Width x Height)		3,000 x 960, 1,500	2,650 x 960, 1,500
Crate or packing Dimension (mm)	Fibreglass	3,000 x 600 x 250 in box plus 2 boards 3,000mm long	
	Concrete	1,160 x 1,160 x 650 crate plus 2 boards 3,000mm long	
Total Shipping Weight	Fibreglass	40 kg	
	Concrete	250 kg	
Frame	Fibreglass	Quality second hand hardwood frame supplied pre-drilled and assembled.	
	Concrete	Quality second hand hardwood frame supplied pre-drilled.	
Hose Clamps		Stainless steel super clamps used on all hoses	
Options		<ul style="list-style-type: none"> • Tanks of 250 - 4,500 litres capacity • Colours • Inline pumps 	

About Phil Sedgman

Phil spent 20 years in Tasmania exploring the natural environment and farming the land. His love of nature and inquiring mind led him to Bio - Dynamics. Intrigued by Flowforms, he became acquainted with moulds, forms and plugs and developed his own Flowform design in 1996. Struck by the magic, he wishes to impart this to you as a method of enlivening water and giving it life. He is now a Board member and technical adviser of the Biodynamic AgriCulture Australia and conducts lectures and workshops on Flowforms.