



Waterwall

***Products
For The
Fire & Emergency
Services***

Cintec International Limited

Waterwall Isolation Units

Acetylene Isolator

The Acetylene Isolator was designed and tested to be deployed and inflated around an acetylene cylinder that has been accidentally heated and is considered unstable.

The 335 mm PVC coated and internally reinforced Waterwall comprises of three walls and a roof section with a separate door section that is added once the main structure is in position. All the panels are fitted with pressure relief valves to avoid over filling and indicating when full of water.

The product has been tested by the Royal College of Science test range in Wiltshire United Kingdom in 2008 when acetylene bottles were heated to destruction inside a standard Waterwall unit.

The Waterwall units can be configured to cover acetylene cylinders that are standing prone, laying horizontally or against a wall.

It is recommended that the Waterwall is positioned after the heat source has been removed using the Cintec robot that has been especially designed for the task.



Specifications:

External Height	External Width	External Depth	Internal Height	Internal Width	Internal Depth
2035mm	1670mm	1470mm	1700mm	1000mm	800mm
80"	66"	58"	67"	39"	31"
Wall Thickness	Water Volume	Weight Empty	Weight Full	Packed size in valise	
335mm	3900 litres	44 kgs	3944 kgs		
13"	1030 US Gal	97 lbs	8695 lbs		

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Waterwall Robotic Deployment

Remote Deployment Vehicle

This is the first inexpensive robot dedicated to positioning and placing of Waterwall products over suspicious objects located in public areas. The robot is able to carry an un-inflated Waterwall on a portable jig through a standard door opening guided by video cameras that have day and night capability. The robot is able to turn on its tracks and climb a 40 degree pitch or stair way and lift. Connected to the Waterwall is a standard un-inflated water hose or standard garden hose, depending on local source, that is towed behind from a hose reel under the control of an operator.

The robot also has a fire fighting movable spray nozzle. Once the robot is close to the object in question, the Waterwall is inflated with air and positioned over the object. As soon as it is in position water is pumped into the Waterwall under local water pressure until the pressure relief valves are activated indicating that the Waterwall is full.

Sensors can be fitted to the internal sides of the Waterwall to monitor the anticipated threat and relay any information back to the operator.

In most cases the suspicious object will not be an improvised explosive or dirty device and the object may be removed safely. However, should the object present a problem the situation will continued to be monitored until expert help arrives?



Waterwall®

Waterwall Water Storage Units

Hexagon Water Dams

The hexagon water storage dams are designed To provide rapid storage capabilities for fire fighting appliances.

Due to the limited water storage of a fire appliance it is necessary to provide additional water to the appliance if a mains supply is not available. This storage unit allows a bowser or tanker to fill the unit and leave to refill ,while the fire appliance can draw the water from the storage unit.

The Waterwall dam is able to be used even on uneven ground and gentle slopes.

Waterwall dams are bespoke designs that can be made to suit the clients requirements and can vary in size and capacity.

The Waterwall dam comes flat packed in its own valise it is then inflated using an air pump or a compressed air supply. As soon as the dam is inflated it is ready to receive water.



Specifications: 10,000 Litre Unit

External Height	External Width	External Depth	Internal Height	Internal Width	Internal Depth
1000mm	4346mm	3764mm	1000mm	4000mm	3464mm
39"	171"	148"	39"	157"	136"
Wall Thickness	Water Volume	Weight Empty	Weight Full	Packed size in valise	
150mm	10,392 litres	58kg			
6"	2745 US Gallons	127 lbs			

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Water Dam Deployment Instructions



Inflation



Remove ground sheet from valise
And lay out on floor in required
position. Remove dam from valise



Lay out main unit, on ground
sheet, in required position. Do not
drag on floor



Insert and tighten the 3 A5 valves



Remove internal caps before
inflation and hang over outside
edge



Attach air line from cylinder to the
high pressure fitting (OBAC) and
inflate the unit.



The pressure relief valve will
blow when the required pressure
has been reached.

Operation



Unscrew protective caps from external male 4" fittings



Attach 4" female butterfly valves To each side of dam



Attach suction hoses as required



If two dams are to be deployed, join the two units with a short male-male suction hose



Tighten all connections with suction wrench



Open valves and fill dams

Emptying



All valves must be removed before the deflation process.



Allow the water to drain out completely before lifting the unit



After the unit has been used ensure as much water as possible has been drained..



Raise the unit and hold to drain more water out. Take care not to damage the outlet pipes.



Turn the unit on its side away from the outlet pipes. And then completely over to remove all the water.



Replace the internal plastic caps Before deflation.

Deflation



To deflate unit, remove grey protective cover from the B7 valve.



Push in the centre of the grey B7 Valve and turn anti-clockwise to release the initial pressure from the dam



Unscrew the 3 A5 valves to deflate the dam quicker.



Fold each corner of the unit in the same direction and flatten the fold.



Fold the side of the unit into the centre

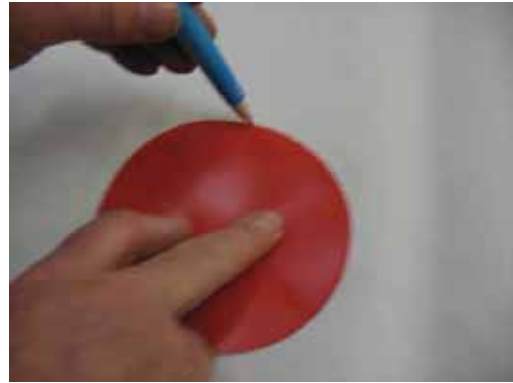


Fold the opposite side over the first fold and roll the unit up. Replace in valise.

Repairing



Thoroughly clean area around tear.



Place patch over tear and mark around with pen.



Apply glue within the marked area. Wait 20 minutes and apply second coat



Apply glue to the patch. Wait 20 minutes and apply second coat



Once the second coat has become touch dry (about 2 mins.) place over the tear.



Roll the patch firmly. Allow at least 24 hours before inflation and re-use.

Components

A5 Valve



B7 Valve



OBAC Valve



Pressure Relief Valve



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Flood Defence System

Initial trials



CINTEC



The illustrations show the first Test of the product at Maindee Fire Station on 12th March 2009. The test was achieved by forming the units into an unbroken rectangle to enable water to be introduced into the preformed enclosure that would be sufficiently water tight to enable the barriers to work successfully. The entire exercise took two and a half hours, demonstrating the speed of erection and ease of assembly. The product is very quickly dismantled and stored for future use.





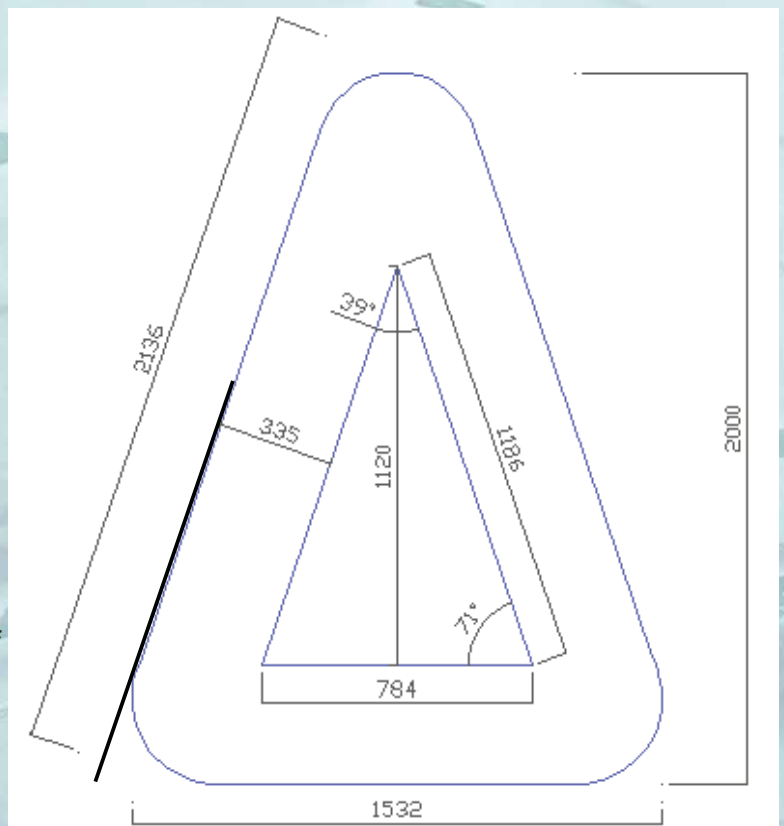
The modular system of 'A' frames which are inflated with air are positioned next to each other across the low lying area, the joins are sealed with PVC strips which are attached to each unit. The bottom edge is fitted with a PVC skirt which spreads in front of the units to form a seal with the ground. Once in position the units are filled with water, displacing the air from the units through pressure relief valves, which maintains the shape during filling.



Cintec International Ltd. Have extended its pneumatic and fabric technology to produce a bespoke, novel, temporary flood barrier known as Fortress.

The newly patented system is designed to create internal shear into fabric walls using internal reinforcement that allows water to form walls of the desired shape and size. The individual wall sections come flat packed in a valise and are quickly inflated to the desired shape using an air pump. Once the walls have been erected they are joined together to form a wall similar to a castle fortress. This can be in a straight line or in the shape of a coffer dam or any other configuration that may be required. Once in position the units are individually pumped with water, displacing the air through relief valves and providing a solid structure that is capable of withstanding water pressure to a height of 60". If additional support is required, the inner triangle section can also be air or water filled to give additional strength and support. The construction joints are waterproofed using PVC flaps attached to the Waterwalls using velcro strips at both sides and the base of each unit, covering 'T' shaped PVC profiles.

Each unit measures 79" high x 60" deep x 61" wide and holds 449 US gallons of water, which forms a solid wall of water able to withstand water to a height of 60". Each unit weighs 71 lbs and can be easily transported and erected. The units can be formed into a straight wall or, using the shaped corner units, be placed completely around a building or structure, to create a dry area within.





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