A Rollable Water Container for Developing Countries

About the Q Drum

The idea of the Q Drum originated in response to the needs of rural people in developing countries who have a problem carrying adequate quantities of potable water from a reliable source.

A burden which is generally bestowed on the women and children of each community. In Africa for example, many debilitating back and neck injuries are a result of women carrying heavy loads on their heads.

Rolling water in a cylindrical vessel was the only solution that seemed to make sense and allow for a greater quality of life in this regard.

What is it?

The Q Drum is a durable, donut shaped plastic container which when full holds 50 litres of water. Its uniqueness lies in the design of the longitudinal shaft or central hole, through which a rope is tied, to pull or roll the drum along all terrain types. Due to the low-density polyethylene it is made from, it is also practically indestructible and has no removable handles or other metal attachments that could detract from its intended purpose if lost or broken.

The rope can be repaired on the spot or easily replaced by a leather thong, woven plant substance or any other appropriate material. In many rural areas around the world, even a hammer and nail are scarce commodities.

How it's made

The Q Drum is manufactured by means of rotational moulding, leaving a seamless finish. It is made from LLDPE (Linear Low Density Polyethylene) which is compatible to most dry foodstuffs or consumable liquids. The simplicity of the design ensures the ease of use - even a child can pull 50 litres of water without undue strain.
Transport & Storage

Another important characteristic of the Q Drum is that the longitudinal shaft also serves as a vertical support structure which provides added strength and increases the top load compression resistance when filled containers are stacked on top of each other.

Most existing containers can only be stacked two or maybe three high when filled with heavy fluids or other substances as in the chemical and agriculture industries. In a SABS (South African Bureau of Standards) compression test performed on the Q Drum, the maximum load reached before collapse was 3.7 tons which equates to 40 full containers stacked approximately 25 metres high!

This exceeds the international stacking requirements a number of times, making Q Drum an easy vessel to store and transport in large quantities.

Other Uses

Camping and Outdoor Life
The drum can be used for transporting foodstuffs or drinking water.

The Military
During either conflict situations or in peace time, the Q Drum can be used to ensure the easy handling and conveying of large amounts of fuel, oil, drinking water or foodstuffs in hostile and remote areas.

Agriculture
The drum can be used for the transportation of fruit juices, wines, cooking oils and foodstuffs in farmlands.

Mining
Water, fuel, hydraulic fluids and other liquids can be handled with more ease in the restricted space underground and on inclined slopes.

Harbours & Marinas
The Q Drum can serve as a floating device or buoy.

Natural Disasters
The Q Drum can be used to assist in contingency plans executed by organisations or government bodies by means of transporting foodstuffs to areas affected or as a device in which to transport water.

Aid
When food aid is needed in conflict areas or places, one Q Drum can transport 50 kg of food without the use of packets or bags which are in themselves, heavy to carry. Afterwards, it can be utilized for its original intended purpose and make a useful contribution to the worldwide campaign against pollution.