Dewey Waters Limited, Heritage Works,
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DEWEY WATERS LIMITED
HERITAGE WORKS, WINTERSTOKE ROAD, WESTON-SUPER-MARE BS24 9AN

HOT PRESS GRP SECTIONAL WHOLESOME COLD WATER STORAGE TANKS (CISTERNS) - SPECIFICATION

General

Tanks shall be provided as agreed with the client and in accordance with the contracted applicable schedule/bills of quantities. They shall comply with the Water Supply (Water Fittings) Regulations 1999 (England and Wales) and the Water Byelaws 2000 (Scotland), together with BS EN 13280: 2001 - Specification for glass fibre reinforced cisterns of one piece and sectional construction, for the storage, above ground of cold water.

The tanks themselves and all materials used in their manufacture and which come into contact with the stored water shall be approved for use in contact with wholesome water under the Water Regulations Advisory Scheme (WRAS). The tank WRAS approval certificate number is 0807043.

In conjunction with the appropriate fixtures and fittings the cisterns (tanks) are also suitable for use as suction (sprinkler) tanks (eg to LPS.1276), biofilters and break tanks. They can also be used for the storage of liquids other than water and at temperatures up to 35 degrees centigrade (refer to DWL Technical Department for specific advice).

The cisterns (tanks) are manufactured under a quality management system registered by the LPCB under the UKAS scheme to BS EN ISO.9001: 2000 with specific quality control arrangements being based upon BS4549-1: 1997 - QC requirements for reinforced plastic mouldings.

Panels

Panels shall be produced from SMC processed by hot press moulding.

Panels shall be manufactured in either 1000 mm (metric) or 1220 mm (imperial) square format with half and quarter panel variations as required. For wholesome water storage applications side and lid panels shall be integrally insulated at manufacture as may base panels (externally flanged only).

Un-insulated side and lid panels may be used in non-wholesome water storage applications (eg sprinkler tanks / biofilters).

Where applied insulation shall be CFC / HCFC free, of a minimum 25 mm thickness and be fully encapsulated within a waterproof and rodent proof membrane to meet BS 5422: 2001 and current building regulations.

Association of Tank and Cistern Manufacturers

Quality Systems Certificate No: 135

Registered Office:
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Sidewall panels shall flat or truncated and be externally flanged except where space restrictions are such that a totally internally flanged tank design (TIF) is necessary. The maximum height of tanks is 4m. The maximum capacity is 576 000 liters (tanks over this capacity can be supplied but they will have to be inspected by WRAS upon completion and approved).

Lid panels shall be of a heavy duty flat design and which is slightly truncated in profile. Standard flat lid panels are used for un-insulated tanks.

Hot Press Tanks Base Panel Options:

Tank Type	Flange Type	Foundation Type *	Max Depth
Imperial	Internal	Continuous flat	2.44 m
Imperial	Internal	Supports at 406 mm (16″) centers (4 x 4 ft panels) Support at 610 mm (24″) (where a 4 x 2 ft panel is incorporated into the base)	2.44 m
Imperial	External	Supports at 610 mm (24″) centers (4 x 2 ft panels)	2.44 m
Metric	External	Supports at 1000 mm centers Panels may be insulated	3.00 m
Metric	External	Supports at 500 mm centers	4.00 m
Metric	Internal	Continuous flat	4.00 m
Metric	Internal	Supports at 500 mm centers	4.00 m
Metric	External	Supports at 1000 mm centers Fully self draining Panels may be insulated	1.5 m

* See Foundation / Support requirements below.

Partition or division panels shall be un-insulated. They shall be capable of supporting the applied water pressure from either side at the working depth and shall remain fully watertight. Partitions shall be of full height.

ATCM
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Standard panel colour shall be RAL 9001 (cream).

Tank construction

Reinforcement of the tank sidewalls shall be by means of a maintenance free internal stainless steel tie-rod system, thus eliminating the need for external steel support members. The stainless steel shall be grade 316 to BS 970 Part 1 1996.

All internal bolts, nuts and washers shall be stainless steel grade A4 (BS 3692: 2001). External bolts, nuts and washers shall be 4.6 galvanized mild steel (BS 3692: 2001 / BS EN ISO 1461: 1999). Stainless steel bolting etc throughout may be utilized if specified by the client.

Lid panels shall be supported by tubular UPVC internal support pillars .The resulting lid structure shall be capable of roof loading as defined in BS6399 Part 1 1996.

Tanks shall have an access manway with a clear aperture of 620 mm x 620 mm with a separate screened vent built into the moulding and which shall incorporate 0.65 mm insect proof mesh.

Inspection hatches with a minimum 350 mm x 350 mm aperture and a bolted and sealed cover plate may be provided as required. Raised valve chambers to maximize holding capacity may also be incorporated into the tank roof design.

Side, base and lid sealant shall be a WRAS approved material and used to affect a watertight seal between the modular panels.

Connections including inlet valves

Provision for connections within the panels shall be made at the time of manufacture. On site cutting through the insulation shall not be permitted. It is the responsibility of the client to advise Dewey Waters Ltd of the required location of connections and their sizes thus enabling production drawings to be produced.

Overflows and warning pipes shall be designed to meet water regulations and water byelaws and shall incorporate "Intersect" screened overflow units in order to prevent the ingress of insects and/or other material into the stored water. Threaded or flanged UPVC/ABS connections shall normally be fitted on site. Fittings above the working water level such as overflows and warning pipes may be of the tank connector type. Fittings below the working water level shall be flanged to the tank wall. Inlet valves shall be supplied as required.

Access Ladders and Railings

Tanks with depths of 1500 mm or more may be provided with internal and external ladders at the request of the client.

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External ladders: As Dewey Waters Limited (DWL) are not in a position to determine how an individual tank is maintained the onus is on the client to determine a safe system of work to be implemented when access to the manway or ball valve is required. This may involve fixed ladders or other means of access such as portable tower scaffolds may be utilized.

If external ladders are selected then DWL will advise on the type of ladders available and suitable for the specific application and which may be hooped, where space permits, to BS.4211: 2005 or to DWL own design. They shall be manufactured from galvanized steel or other approved material including aluminium.

The length of fixed external ladders shall be tank height for tanks installed on flat concrete bases. Where tanks are to be installed on piers or steels etc then the client must advise the additional height.

Internal ladders: Shall be of stainless steel 316 grade or WRAS approved GRP.

Railing: Tank top railing and gates are available if required by the client safe system of work.

Working Space

Provision for working clearances around all sectional tanks shall meet the minimum clearances stated in the DWL site requirements leaflet.

Foundation / Support

All tanks shall be supported on a foundation, provided by the Client, the surface of which should be flat and level and to the tolerances stated in BS EN 13280:2001 Annex M paragraph M2, OP.41: Specification For Sectional Module 1000 Tank Foundation (Support) / OP.42: Specification For Sectional Module 1200 Tank Foundation (Support) and in the DWL site requirements leaflet.

Commissioning

Commissioning (ie the filling of the tank with water) is the responsibility of the Client. If contracted Dewey Waters Ltd will commission the tank at the time of installation otherwise it should be completed within 10-days. If this is the case and leakage occurs then Dewey Waters Ltd will attend and rectify without charge. Tanks commissioned outside this 10-day period will be rectified by Dewey Waters Ltd but a site attendance charge may be applied.

Marking

All tanks shall be clearly and durably marked by a waterproof adhesive label conforming to BS EN 13280:2001 paragraph 11. The label shall state Dewey Waters Ltd name, address, logo, tank capacity, BS EN number and type, model number and job number. A WRAS approved label shall also be applied.

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