



WATER STORAGE SOLUTIONS



AQUATANK 'APT' SERIES ONE & TWO PIECE BREAK TANKS



WATER PRESSURE BOOSTER SETS

AQUATANK 'APT' SERIES ONE & TWO PIECE BREAK TANKS

OVERVIEW

Aquatanks are designed and constructed in accordance with BSEN 13280 and are approved for drinking water storage under WRAS. All tanks are factory insulated with CFC free, ODP zero, low-density polyurethane foam as standard, thicker insulation is available if required. The tanks are all designed utilising finite element analysis and proven by water test.

All tanks comply with clause 16-4 of the Water Regulations and are equipped with a raised inlet valve chamber and weir to provide a type AB airgap. The weirs are fitted with a fine mesh screen and light cowl to maintain the stored water quality. The size and arrangement of weirs and inlet valves is in accordance with BSEN 13077; for smaller valve sizes this is achieved by simple weirs set within the inlet valve chamber, for larger valve sizes a large weir set into the side wall of the tank is required.

Features

- 90 - 5400 Litres capacity standard range
- Glass reinforced polyester composite construction
- Smooth, uniform, corrosion proof internal surfaces
- Factory pre-insulated
- WRAS approved product
- Water Supply Regulations compliant
- BSEN 13280 compliant product
- BSEN 13077 compliant Type AB Airgap protection

DESIGN

The tank structure is laminated using unfilled ambient curing polyester resin reinforced with E-glass reinforcements, the reinforcements include random and woven fibres determined by the design analysis.

Depending upon size, external horizontal ribs are used, the rib sizing and spacing being optimised by finite element analysis to the requirements of BSEN 13280, and best practice for composite structures under permanent load.

For the standard size range all tanks are free of internal structure.

The tanks require full continuous support in accordance with the Water Regulations. Fully structural bases are also available on request.

PRODUCTION

The internal surfaces (in contact with the water) are a dense uniform glossy barrier layer of controlled thickness; this minimises the risk of biomass accumulation and resulting bacteriological growth. The barrier layer is a high performance isophthalic polyester system formulated and proven for prolonged water exposure.

The laminates are produced to BS4549:1997 in a controlled composites production environment; laminate production is by contact moulding and semi-automated resin transfer moulding. All insulation is fully encapsulated to prevent environmental deterioration.

Tanks are factory ready for pipework connections by trimming and sealing the insulation with purpose made trimmer rings. Lids include air vents and an inlet valve chamber with service hatch. For capacities exceeding 1000 litres a separate tank access hatch is also fitted.

All materials have passed BS6920-1:2000 as suitable for potable water contact. The tanks are finished to be opaque, dust proof and vermin proof.

QUALITY

All products undergo in-process and final inspection; they are produced to lamination schedules and drawings conforming with the design. All products are traceable and proven.

PERFORMANCE

All tanks are designed and constructed for the long-term storage of drinking water at cold temperatures. The standard (25mm) insulation system provides a U value of better than 0.85 W/m²K over the walls and cover. Base insulation is available on request.

TWO PIECE TANKS

Two-piece tanks are split horizontally at mid-height; this facilitates installation through limited access routes. The joint is sealed and bolted on site. The flanges are moulded on precision tooling and are match-bored to ensure they mate precisely and are not deformed when tightened.

INSTALLATION

The standard tanks require installation on a flat, continuous, rigid support. All pipework requires bracketing to avoid straining the tank wall. A range of steel up-stands are available to support Aquatanks above booster sets. These are supplied in kit form for site assembly.

AQUATANK 'APT' SERIES ONE & TWO PIECE BREAK TANKS

1 PIECE BREAKTANKS			ALL DIMENSIONS IN MM UNLESS STATED OTHERWISE					
TANK REF.	NOM. CAP LITRES	ACT. CAP LITRES	EXTERNAL DIMENSIONS				HEIGHT OF 2 PIECE SECTIONS (S1/S2/RFVC)	DRY WEIGHT KG
			LENGTH	WIDTH	HEIGHT with RFVC	RFVC HEIGHT		
APT90	90	70	730	430	715	205	N/A	15
APT160	160	110	880	580	665	205	N/A	19
APT225	225	170	730	730	815	205	N/A	24
APT340	340	255	1035	730	815	205	N/A	31
APT455	455	330	1340	730	815	205	N/A	40

1 & 2 PIECE BREAKTANKS			ALL DIMENSIONS IN MM UNLESS STATED OTHERWISE					
TANK REF.	NOM. CAP LITRES	ACT. CAP LITRES	EXTERNAL DIMENSIONS				HEIGHT OF 2 PIECE SECTIONS (S1/S2/RFVC)	DRY WEIGHT KG
			LENGTH	WIDTH	HEIGHT with RFVC	RFVC HEIGHT		
APT570	570	420	1085	880	1095	305	395 / 395 / 305	44
APT680	680	490	1210	985	1065	305	380 / 380 / 305	50
APT910	910	710	1290	1010	1195	305	445 / 445 / 305	76
APT1135	1135	840	1675	1065	1115	305	405 / 405 / 305	81
APT1364	1364	1045	1530	1252	1215	305	455 / 455 / 305	94
APT1590	1590	1230	1675	1295	1215	305	455 / 455 / 305	109
APT1820	1820	1590	1370	1370	1525	305	610 / 610 / 305	130
APT2275	2275	1730	1980	1370	1325	305	510 / 510 / 305	137
APT2725	2725	2140	1980	1370	1525	305	610 / 610 / 305	168
APT3185	3185	2542	2600	1370	1385	305	540 / 540 / 305	175
APT3635	3635	3180	2645	1425	1525	305	610 / 610 / 305	240
APT4545	4545	3365	2645	1730	1525	305	610 / 610 / 305	265
APT5454	5454	4545	2645	2035	1525	305	610 / 610 / 305	289



Typical APT tank installation shown with optional upstand and AquaTech Pressmain FEP fire set. Interconnecting pipework by others.

PRE – INSULATION

Tank walls and lids are pre – insulated with an integral CFC/ HCFC free polyurethane foam core, sandwiched between the inner and outer GRP laminates to achieve the following range of 'U' values.

25mm insulation, Standard tank 'U' value 0.83 w/m2
 50mm insulation, Option 'U' value 0.43 w/m2
 70mm insulation, Option 'U' value 0.27 w/m2

Tank bases can also be pre-insulated when specifically requested.

For ease of installation provision is made at production stage to prepare non-insulated pad areas for connection of fittings in order to prevent the penetration of the outer skin and insulation.

BASE SUPPORT

All tanks must be fully supported over their entire base area. The support system must be designed to accept and maintain support of the tank and lid together with the weight of the tank contents and associated pipework.

A range of steel upstands to support APT tanks above booster sets are also available. These are supplied in kit form for easy site assembly.

TWO PIECE TANKS

Two piece tanks have a flanged joint midway up the main tank. This allows the tank to be taken through smaller entrances than a one piece tank. Everything required to join the two halves is provided.

For further information relating to optional features, see data sheet 505.

Please feel free to discuss any special requirements with our sales team.

AQUATANK 'APT' SERIES TANK CONTROLS AND OTHER EQUIPMENT

LEVEL SWITCH 'LS' SERIES

Applications:

Ideal for sensing the rising or falling level of conductive liquids in tank, sumps, pipework, etc with volt free signal relay to interface with your application.

Examples:

Low water level alarm in tank, dry run protection for pumps, high water level alarm, emptying or filling of tank between two levels, water presence detection for sumps.

General:

PVC construction with built in stainless steel sensing probes for direct tank/pipework mounting. Can be supplied with extension probes for mounting in tank lid. Power by 240Vac supply as standard, the unit contains a single pole changeover relay with timer that can be configured in various modes to suit application.



"TANKMATIC" TANK LEVEL & TEMPERATURE MONITOR/CONTROLLERS

Applications:

Ideal for continuous display and control of the level and/or temperature of liquids in tanks, sumps, etc. with output signals to interface with your application.

Examples:

Constant monitoring of level, temperature or volume of water (or any liquid such as fuel oil) in tank(s), with analogue and digital outputs for BMS, for high & low liquid level and high & low liquid temperature. Outputs also available to switch pumps, valves alarms etc.

General:

Tank lid or wall mounted control panel with either submersible or tank/pipework mounted level and temperature sensors. Optional remote display available for mounting in suitable location up to 1500m away.



The information in this specification is correct at time of issue; as AquaTech Pressmain design and development programmes are continuous, we reserve the right to make any changes to this specification without prior notice.



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Leaders in the design, manufacture and assembly of packaged fluid pumping equipment and control systems.

Applications: Cold Water Supply; Fire Fighting; Heating & Chilled System Pressurisation; Tank Level Monitoring.