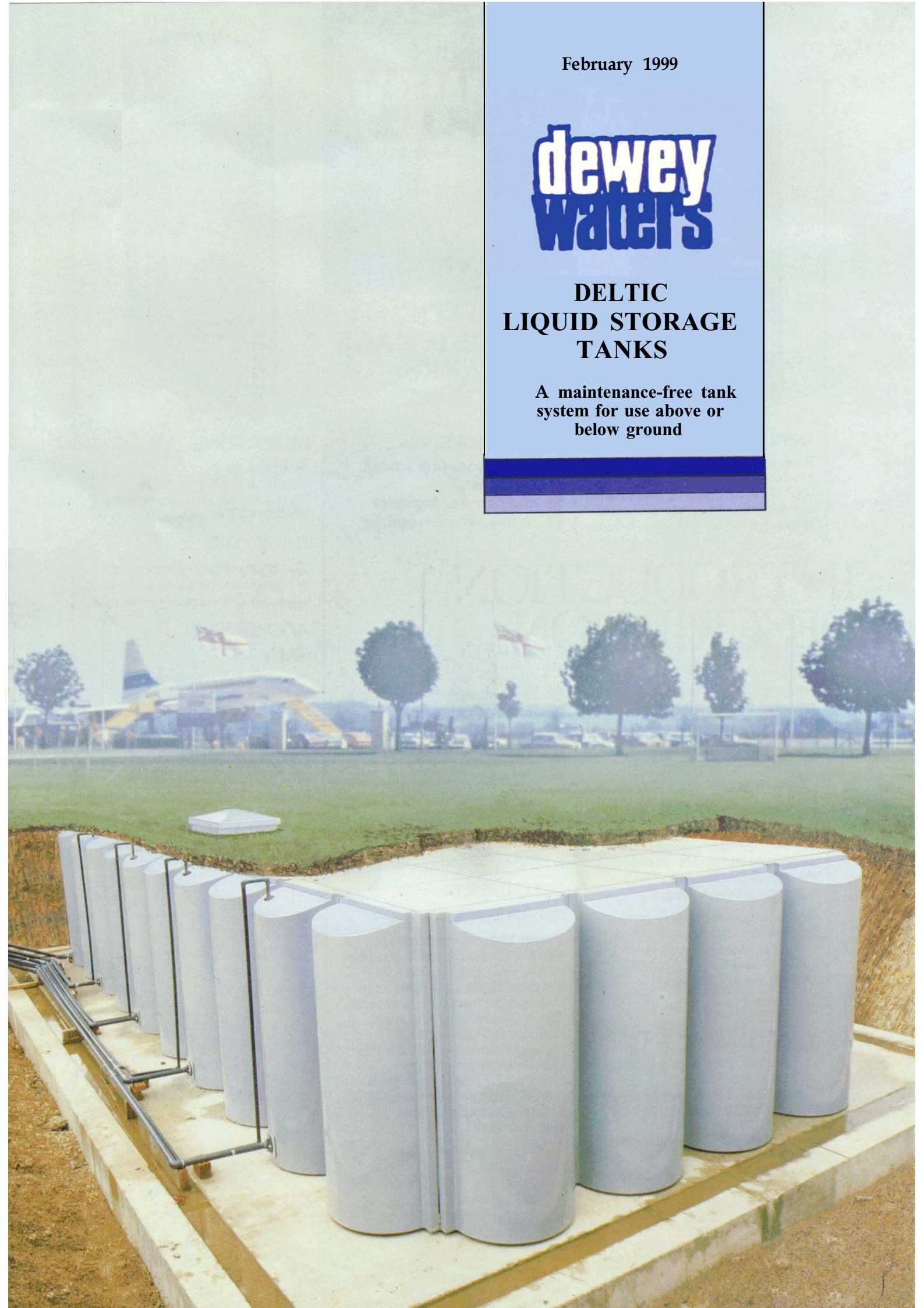


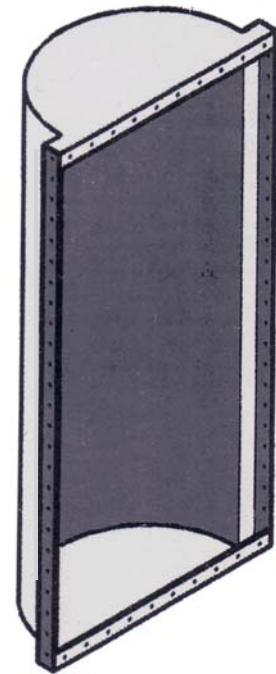
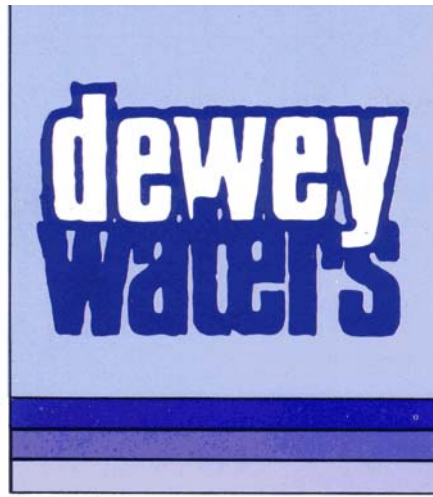
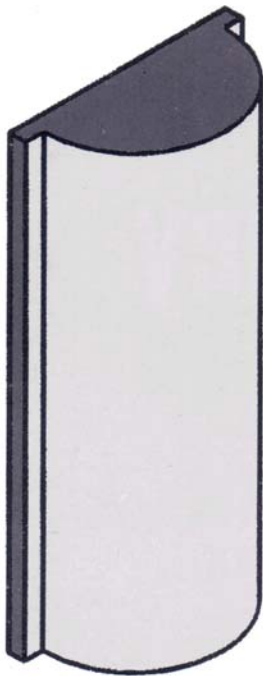
February 1999

**dewey  
waters**

**DELTIC  
LIQUID STORAGE  
TANKS**

**A maintenance-free tank  
system for use above or  
below ground**





## DELTAIC LIQUID STORAGE TANKS

### INTRODUCTION

Dewey Waters Deltic tanks are a product of 40 years experience in GRP liquid storage containment and tanking. They are designed primarily for buried sites, where

### ADVANTAGES

- Withstands below ground pressures
- Wide range of capacities
- No maintenance required.

### DIMENSIONS

Standard sizes:  
Height: from 1.0 to 3.0 m (max.) in 150 mm increments.  
Width: 1.22 m standard,

### CAPACITIES

The table overleaf gives a range of capacities, volumes and plan sizes. Larger sizes are available.

### ACCESSORIES

#### TANK LIDS

Standard lid panels can be supplied for both above and below ground applications.

#### PARTITIONING

Internal partitioning can be provided in the form of standard Sectional Tank panels. Depending on height, internal partitions may require stainless steel support work.

# INTRODUCTION, DESCRIPTION

below-ground storage is required for climatic or environmental reasons, but are equally well suited to use above ground and have the advantage of an unusually neat and attractive appearance. The Deltic tank is assembled from standard GRP components and the units can provide a storage capacity of 15,000 litres and upwards. The necessary support is provided by the normal method of a flat concrete slab as a base.

Deltic tanks and panels are covered by Patent application, U.K. Registered design No. 1014257 and Copyright 1983, Dewey Waters Limited

### STANDARDS

All Dewey Waters GRP products comply with the specifications in BS 4549: Part 1, Workshop quality control. Raw material and supply comply with BS 3532 (Resin), BS 3496 and BS 3691 (Glass reinforcement). Stainless steel components are to BS 1449 Part 2 and BS 970: Part 4.

- Environmentally acceptable
- Durable and rot-proof
- Equally suitable for above or below ground installations
- Does not require an exterior steelwork support system
- Easily erected
- All fastenings completely within the tank

### DESCRIPTION

#### COMPOSITION

Dewey Waters Deltic storage tanks are constructed from glass reinforced plastic containing approximately 35% glass fibre content and top polyester resins. The walls are formed of rigid, flanged, self-supporting hemi-cylindrical sections. The base is constructed from standard GRP Sectional Tank panels. Tank panel connection bolts are of marine grade stainless steel.

## APPEARANCE

Although designed to be sited underground, the unique appearance of the tank sections makes them attractive when exposed or mounted on framework. The superior external surface finish is available in a wide choice of colours to BS 5252.

Inside, the tanks are generally free of obstruction and have a clean, clear interior.

## CONNECTIONS

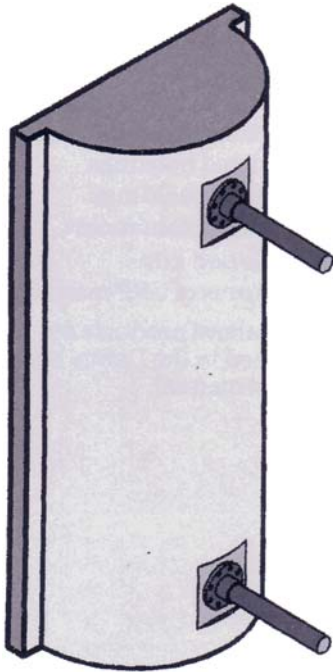
A standard flat area is available for connections up to 100 mm in diameter. These can be set at any angle up to 45° from centre. The position for connections must be given at the time of order.

### LARGE PIPES

These can be accommodated, but require a specially strengthened area. Advice on the positioning and on additional costs will be given by the Sales Office on request.

### LATER ADDITIONS

Bolt-on connection boxes providing similar flats are available for later addition of connections.



## PERFORMANCE AND PROPERTIES

### STRENGTH

Deltic tank panels are designed to withstand normal ground pressures, including static water pressure from saturated soils, in both the full and empty state.

Although designed to withstand normal hydrostatic pressure from water contained within the tank, they are not intended for use in circumstances where there is an additional head of water due to a supply input or header tank at a higher level than the top of the Deltic panels.

Where such a requirement exists, please contact our technical service department, who will give advice on this aspect.

### LIGHT

(for above ground applications)

The colour fastness of the pigments used is rated 6/7 to BS 1006. The panels are ultra violet stabilised.

### COMPATIBILITY

The GRP tank panels are compatible with all materials with which they are likely to come into contact.

### MAINTENANCE

No maintenance whatsoever is required. A Deltic tank can remain buried for life and inspections, if required, can be carried out from within the tank.

### APPLICATION, DESIGN

Dewey Waters Deltic tanks are made of non-toxic materials and can be safely used for the storage of all forms of water

# PERFORMANCE, PROPERTIES

### CHEMICAL RESISTANCE

Dewey Waters GRP tank panels have excellent resistance to most types of chemicals found in an industrial or below-ground environment. Nevertheless any special information regarding known or likely chemical pollutants should be given by the specifier.

### BIOLOGICAL

Dewey Waters tank panels are rot free and resistant to mould growth.

### THERMAL PROPERTIES

Coefficient of thermal expansion:  $2.2-3.6 \times 10^{-6}/^{\circ}\text{C}$

Coefficient of thermal conductivity:  $0.2-0.3\text{W}/\text{m}^{\circ}\text{C}$ .

Heat resistance: The GRP tank units will resist heat up to  $62^{\circ}\text{C}$ .

### FROST

Low temperatures have little effect, though the material may become brittle in temperatures below minus  $40^{\circ}\text{C}$ .

Our technical service department can give advice on specific needs. There are also facilities for partitioning tanks for dual storage, reserve stocks and cleaning needs.

With the extreme flexibility of the Deltic modular system, the units can be assembled to accommodate almost any capacity.

TABLE OF NOMINAL CAPACITIES IN 1000 LITRE UNITS OR VOLUME IN m<sup>3</sup>

No. of panels in 1.2m modules L × W	Minimum base size (m)	Height in metres (min)													
		1.00	1.15	1.30	1.45	1.60	1.75	1.90	2.05	2.20	2.35	2.50	2.65	2.80	2.95
1 × 1	2.60 × 2.60	2.95	3.39	3.84	4.28	4.72	5.17	5.61	6.05	6.49	6.94	7.38	7.82	8.27	8.71
1 × 2	2.60 × 3.82	5.17	5.95	6.72	7.50	8.28	9.05	9.83	10.6	11.3	12.1	12.9	13.7	14.4	15.2
2 × 2	3.82 × 3.82	8.88	10.2	11.5	12.8	14.2	15.5	16.8	18.2	19.5	20.8	22.2	23.5	24.8	26.2
2 × 3	3.82 × 5.04	12.5	14.4	16.3	18.2	20.1	22.0	23.9	25.8	27.6	29.5	31.4	33.3	35.2	37.1
2 × 4	3.82 × 6.26	16.3	18.7	21.1	23.6	26.0	28.5	30.9	33.4	35.8	38.3	40.7	43.1	45.6	48.0
3 × 3	5.04 × 5.04	17.7	20.4	23.1	25.7	28.4	31.1	33.7	36.4	39.1	41.7	44.4	47.1	49.8	52.4
2 × 5	3.82 × 7.48	20.0	23.0	26.0	29.0	32.0	35.0	38.0	41.0	44.0	47.0	50.0	53.0	56.0	59.0
3 × 4	5.04 × 6.26	22.9	26.4	29.8	33.3	36.7	40.2	43.6	47.1	50.5	54.0	57.4	60.9	64.3	67.7
3 × 5	5.04 × 7.48	28.1	32.4	36.6	40.8	45.0	49.3	53.5	57.7	61.9	66.2	70.4	74.6	78.8	83.1
4 × 4	6.26 × 6.26	29.6	34.1	38.5	43.0	47.4	51.9	56.3	60.8	65.2	69.7	74.1	78.6	83.0	87.5
3 × 6	5.04 × 8.70	33.3	38.3	43.3	48.3	53.4	58.4	63.4	68.4	73.4	78.4	83.4	88.4	93.4	98.4
4 × 5	6.26 × 7.48	36.3	41.8	47.2	52.7	58.1	63.6	69.0	74.5	79.9	85.4	90.8	96.3	101	107
4 × 6	6.26 × 8.70	43.0	49.4	55.9	62.4	68.8	75.3	81.7	88.2	94.6	101	107	114	120	126
5 × 5	7.48 × 7.48	44.5	51.2	57.8	64.5	71.2	77.9	84.5	91.2	97.9	104	111	117	124	131
5 × 6	7.48 × 8.70	52.6	60.6	68.5	76.4	84.3	92.2	100	108	115	123	131	139	147	155
6 × 6	8.70 × 8.70	62.3	71.7	81.0	90.4	99.7	109	118	127	137	146	155	165	174	183
5 × 8	7.48 × 11.14	69.0	79.3	89.7	100	110	120	131	141	151	162	172	182	193	203
6 × 8	8.70 × 11.14	81.6	93.9	106	118	130	142	155	167	179	191	204	216	228	240
5 × 10	7.48 × 13.58	85.3	98.1	110	123	136	149	162	175	187	200	213	226	239	251
6 × 10	8.70 × 13.58	100	116	131	146	161	176	191	207	222	237	252	267	282	297
8 × 8	11.14 × 11.14	106	122	139	155	171	187	203	219	235	251	267	283	299	315
6 × 12	8.70 × 16.02	120	138	156	174	192	210	228	246	264	282	300	318	336	354
8 × 10	11.14 × 13.58	132	152	171	191	211	231	251	271	290	310	330	350	370	390
8 × 12	11.14 × 16.02	157	181	204	228	251	275	299	322	346	370	393	417	440	464
10 × 10	13.58 × 13.58	163	187	212	236	261	286	310	335	359	384	408	433	457	482
8 × 14	11.14 × 18.46	182	210	237	265	292	319	347	374	402	429	456	484	511	539
10 × 12	13.58 × 16.02	194	223	253	282	311	340	369	399	428	457	486	515	545	574
8 × 16	11.14 × 20.90	208	239	270	301	332	364	395	426	457	488	520	551	582	613
12 × 12	16.02 × 16.02	231	266	301	336	370	405	440	475	510	544	579	614	649	683
10 × 16	13.58 × 20.90	257	295	334	372	411	449	488	527	565	604	642	681	719	758
12 × 16	16.02 × 20.90	306	352	398	443	489	535	581	627	673	719	765	811	857	903
10 × 20	13.58 × 25.78	319	367	415	463	511	559	607	655	703	750	798	846	894	942
12 × 18	16.02 × 23.34	343	394	446	497	549	600	652	703	755	806	858	909	961	1012
12 × 20	16.02 × 25.78	380	437	494	551	608	665	723	780	837	894	951	1008	1065	1122

## SITWORK

### HANDLING

Deltic tank units are light and easily handled by two men. Although extremely tough and durable they should be stored away from areas of possible impact damage.

### INSTALLATION

Deltic tanks can be erected on a suitable concrete base. They are designed to withstand normal pressures, full or empty, exerted by the backfill. They are not suitable for installation in areas of high ground water due to floatation problems if emptied. A topsoil cover of 300mm is advised.

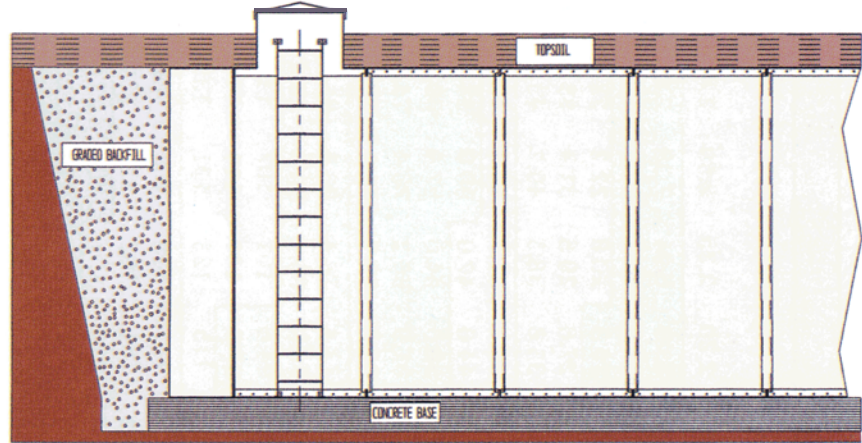
Installation is normally carried out by Dewey Waters own erection staff or by our approved contractors. but erection is simple. requiring no special tools or site equipment. and is

well within the competence of any general contractor.

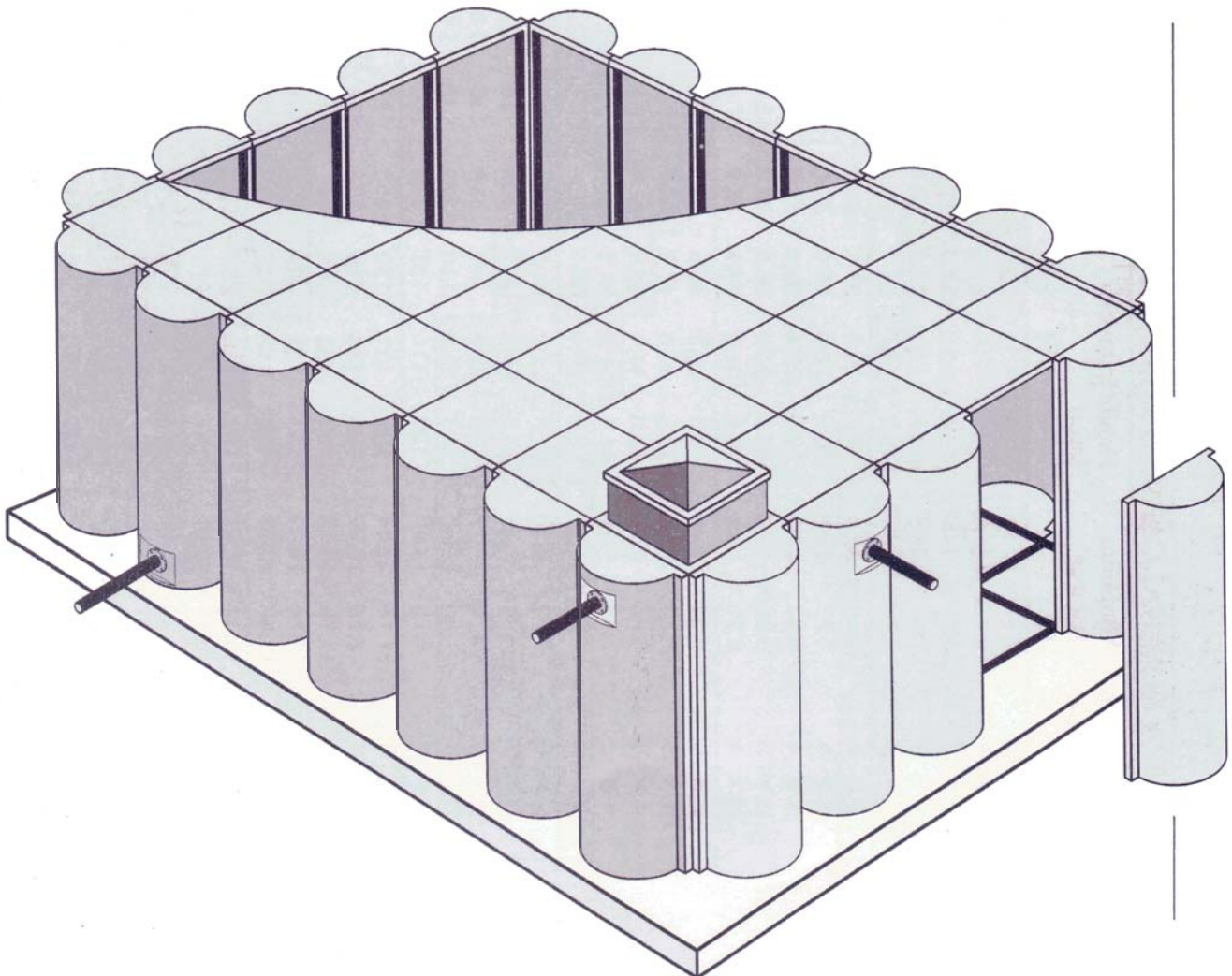
Since Deltic tank modules are secured internally, only a small external working area need be allowed for when excavating the installation site. Concrete bases should be dimensioned to extend to the extremities of the radiused panels at the perimeters. Excavations should

conform to all safety requirements and working practices.

Unless returned excavated material is of suitable quality, it is recommended that a graded backfill be used, such as pea shingle or gravel. Graded backfill should in any case be used for return around pipes or other services.



## SITWORK



# SUPPLY, PRICES & CONDITIONS OF SALE

## SUPPLY, PRICES AND CONDITIONS OF SALE

Every enquiry is followed by a quotation folder. This includes not only a detailed price breakdown, but also important notes on installation and handling and the cost of installation if required.

In addition, full terms and conditions are laid out at the back of the folder.

Dewey Waters products undergo a continuing process of development and improvement. We therefore reserve the right to change product specifications at any time without prior notice.

## SERVICE

Dewey Waters offer a complete design, manufacture, deliver and fix service and are only too pleased to discuss requirements and prepare quotations for installations anywhere in the world. In the first instance please contact our Sales Office.

## OTHER DEWEY WATERS PRODUCTS

- Sectional storage tanks
- Insulated cladding for sectional tanks
- Steel towers for sectional tanks
- One piece storage and handling tanks
- Insulated housings
- Modular buildings
- Modular plant rooms
- Insulation kits
- All forms of GRP mouldings

All the above products are contained in the Dewey Waters product manual.



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