

SPECIFICATIONS

ULTRA CLEAR WASTEWATER TREATMENT SYSTEMS

ABN 93 090 907 725 ACN 090 907 725

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| MODEL | CT20 TWO TANK SYSTEM Suitable to deal with WC's and all wastewater on premises for up to 20 persons, i.e. up to 3,500 litres per day. |
| SEPTIC TANK | 7100 litre capacity (including baffle volume) reinforced concrete tank baffles 2:1 manufactured by Highland Concrete Tanks AS/NZS 1546.1:2008 |
| COLLECTION WELL | 7100 litre capacity reinforced concrete tank - 3000 litre aerobic chamber one 1275 litre aerobic chamber two 1275 litre aerobic chamber three 433 litre settling chamber 591 litre combined settling, disinfection & pump chamber HCT Australian Standards AS/NZS 1546.1:2008 |
| BAFFLES | Steel fibre or mesh reinforced concrete baffles. Fixed in place with concrete mix and/or two part mega epoxy. Manufactured by Highland Concrete Tanks. Primary tank - single baffle 2:1. Treatment tank - * baffle 1 - main baffle to lid. * insert - 230mm above water level. - partitions installed to create settling & disinfection pump chambers. - base tapered to accommodate sludge returns. |
| LIDS | Primary tank lid constructed of 80mm thick reinforced concrete. 2530mm diameter with 2 x manhole openings and over inlet & outlet. Treatment tank lid constructed of 80mm thick reinforced concrete. 2530mm diameter with 3 manholes and lids. |
| AEROBIC CHAMBER 1 | First treatment chamber using aerobic bacteria, containing one media pack and two air diffusers. |
| AEROBIC CHAMBER 2 | Second treatment chamber using aerobic bacteria, containing one media pack and two air diffusers. |
| AEROBIC CHAMBER 3 | Third treatment chamber using aerobic bacteria, containing one media pack and two air diffusers. |
| SETTLING CHAMBER | Solids settle to bottom of chamber to be picked up by venturi operated sludge return and returned to primary inlet of septic tank. Scum skimmer to return floatable matter to aerobic chamber one. |
| CHLORINATOR | Effluent flows through 100mm sewer pipe at a controlled rate, where the water passes through the chlorine inside the three to five chlorinator tubes, through flow slots, controlled by end cap for disinfection strength. The chlorinator is situated above the water level of the disinfection chamber. Trichloroisocyanuric acid is the disinfectant agent used, with 20 tablets in each tube, to be regulated by service technician. |

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| DISINFECTION CHAMBER | Disinfection & pump chamber allows a retention time of greater than 30 minutes where chlorine destroys any final bacteria not previously removed. |
| PUMP CHAMBER | Treated effluent is contained until water levels rise and activate irrigation pump for automatic disposal onto irrigation area. |
| AIR LINES | 15mm Class 9 Pressure Pipe PVC connecting lines between air diffusers, situated at four points at bottom of tank, controlled by 15mm ball valve taps. |
| DIFFUSERS | 20mm x 150mm nylon micro air diffusers, to diffuse air into aerobic chambers one and two. |
| SLUDGE RETURN | 25mm PVC SWV pipe situated in sediment chamber. |
| SCUM RETURN | 20mm PVC pipe situated in sediment chamber. |
| MEDIA | 4 packs of BTM200 Code 60022IR Bio Tube .50 cubic metre with total surface area of 180 square metres, to contain bacteria growth in both aerobic chambers. |
| MEDIA FIXINGS | Aluminium brackets and megapoxy. 40mm pipe work for legs to contain media pack in place, to provide free flow of air diffused water. |
| BRACKETS | Plastic brackets and non-corrosive steel pins to hold pipe work in place. |
| FLOAT SWITCH | 15mm pipe fixed in pump chamber to activate pressure switch when water level is high. |
| CONCRETE COVER BOX | Situated on top of tank to house blower and electrical control panel. |
| ELECTRICAL CONTROL PANEL | Mounted inside concrete box on top of tank by electrician, to provide electrical outlet for irrigation pump and air blower. |
| ALARM PANEL | Mounted in house by electrician in visible location. Provides audible and visible indication of electrical, blower or pump failure. With 24 hour reset muting device. |
| AIR BLOWER | Hiblow HP-100 air pump producing a nominal 100 litres air per minute. Located in concrete box on top of tank. |
| IRRIGATION PUMP | 10 to 35 metre head submersible irrigation pump with automatic pump control. 80 to 120 litre variable water flow cycle dependent on flow adjustment. Located in pump chamber. |

MODEL CT20

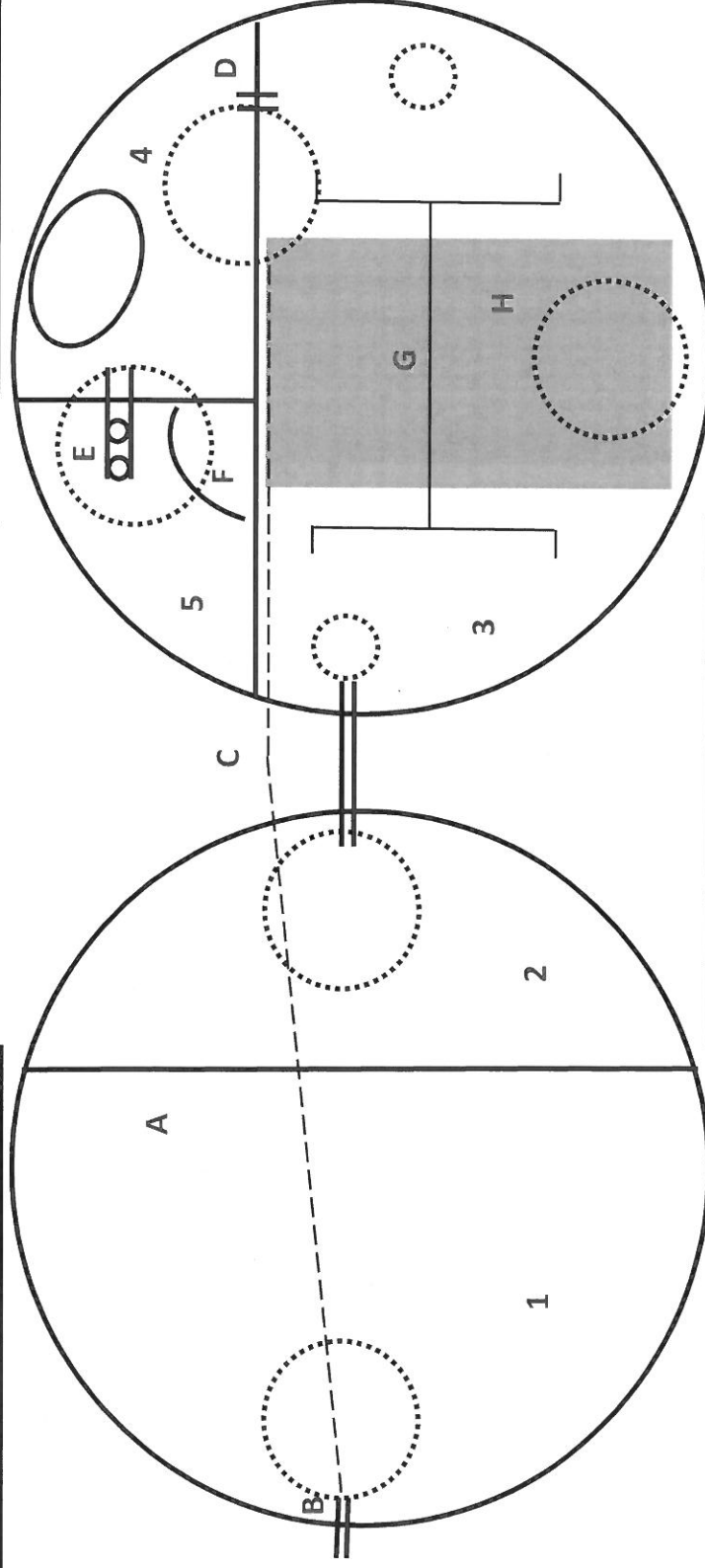
AERATED WASTEWATER TREATMENT SYSTEM
SUITABLE TO DEAL WITH WC'S AND ALL WASTE
UP TO 3,500 LITRES PER DAY

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| Chamber Total | | Capacity |
|---------------|-------------|---------------------------|
| No. | Capacity | Description |
| 1 | 4700 litres | Primary Chamber 1 |
| 2 | 2400 litres | Primary Chamber 2 |
| 3 | 4800 litres | Aerobic Chamber |
| 4 | 1500 litres | Settling Chamber |
| 5 | 700 litres | Disinfection Pump Chamber |

| No. | Description Parts | No. | Description Parts |
|-----|--------------------|-----|---------------------|
| A | Baffle | E | Chlorinator |
| B | Inlet Square | F | Pump Ledge and Pump |
| C | Sludge Return Pipe | G | Air Diffuser Line |
| D | Flow Pipe Aeration | H | Media Pack |



2 x 7100 litre **COLLECTION WELLS**
COLLECTION WELLS approved by NSW Health

All internal and sundries supplied and installed by
Ultra Clear Wastewater Treatment Systems
UCCT20SASM 108 23/06/2015

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COLLECTION WELLS manufactured by **Highland Concrete Tanks**
All Septic Tanks & Collection Wells are manufactured to comply with
Australian Standards AS/NZS 1546.1:2008 Licence No. SMK20582