



# WSAA PRODUCT APPRAISAL CERTIFICATE

## Tank Solutions Pty Ltd

### Mullaly FRP Sewerage Pump Stations and Emergency Storage Tanks

This Appraisal is for a range of Mullaly packaged Fibre Reinforced Plastics (FRP) sewerage pump stations and emergency storage tanks for water and wastewater applications. Pump station external diameters range from 1.5m to 3.75m and are suitable for depths up to 14m. Emergency storage tank external diameters range from 1.47m to 3.28m in lengths from 3.3m to 20m with 5,000 to 150,000 litres capacity.

The Mullaly FRP solid wall pump stations and ribbed design emergency storage tanks are manufactured by Tank Solutions at its Tomago NSW or Bibra Lake WA manufacturing facility.

The pump stations and storage tanks are manufactured in one piece and are delivered to site pre-packaged and ready for placement. All internal components are supplied as part of the package, precluding the need for on-site joining or sealing. A wide range of pumps, valves, controls and other accessories are provided to suit individual water agency requirements.

The Mullaly pump station designs are certified by an independent composite engineering consultant.

<b>Product Category</b>	FRP Sewerage Pump Stations and Emergency Storage Tanks
<b>PA Number:</b>	PA 1020 Issue 3
<b>Supplier</b>	Tank Solutions Pty Ltd
<b>Brand</b>	Mullaly
<b>Standards</b>	-
<b>WSAA Product Specification</b>	WSA 129:2011 <i>Plastics Collection Tanks for Pressure and Vacuum Sewers</i>
<b>Issue date</b>	15 March 2021
<b>Expiry date</b>	14 March 2026
<b>Recommendations</b>	It is recommended that WSAA members, subject to any specific requirements of the member, accept or authorise the Mullaly packaged Fibre Reinforced Plastics (FRP) pump stations and emergency storage tanks, as detailed in this report, for use in sewerage networks provided the design installation, testing and commissioning are in accordance with relevant WSAA Codes and manufacturer's requirements.
<b>Disclaimer</b>	The disclaimer on Page 2 explains a number of very important limits on your ability to rely on the information in this Product Appraisal Certificate and the assessment criteria used to underlay it. Please read it carefully and take it into account when considering the content in this Certificate.

## **1. Disclaimer**

This Product Appraisal Certificate (Certificate) is issued by WSAA on the understanding that:

This Certificate applies to the product(s) as submitted in Schedule A. Any changes to the product(s) either minor or major shall void this Certificate.

To maintain the recommendations of this Certificate any such changes shall be detailed and notified to the Product Appraisal Manager for consideration and review of the Certificate including the product appraisal criteria underlying it and appropriate action. Appraisals and their recommendations will be the subject of continuous review dependent upon the satisfactory performance of products.

WSAA reserves the right to undertake random audits of product manufacture and installation. Where products fail to maintain appraised performance requirements the appraisal and its recommendations may be modified and reissued. Certificates will be reviewed and reissued at regular intervals not exceeding five (5) years.

WSAA reserves the right to withdraw this Certificate at any time in its sole and absolute discretion for any reason.

The following information explains a number of very important limits on your ability to rely on the information in this Certificate. Please read it carefully and take it into account when considering the contents of this Certificate.

Any enquiries regarding this Certificate should be directed to the Product Appraisal Manager Phone: 03 8605 7601 email [carl.radford@wsaa.asn.au](mailto:carl.radford@wsaa.asn.au).

### **1.1. Issue of Certificate**

This Certificate has been published and/or prepared by WSAA and nominated Project Manager and peer group of technical specialists (the Publishers).

The Certificate and the underlying product appraisal criteria have been prepared for use within Australia only by technical specialists that have expertise in the function of products such as those appraised in the Certificate (the Recipients).

By accepting this Certificate, the Recipient acknowledges and represents to the Publisher(s) and each person involved in the preparation of the Certificate and product appraisal criteria underlying it that the Recipient has understood and accepted the terms of this Disclaimer.

### **1.2. Limits on Reliance on Information and Recommendations**

#### **1.2.1. Disclaimer of liability**

Neither the Publisher(s) nor any person involved in the preparation of the Certificate and product appraisal criteria underlying it accept(s) any liability for any loss or damage suffered by any person however caused (including negligence or the omission by any person to do anything) relating in any way to the Certificate or the product appraisal criteria underlying it. This includes (without limitation) any liability for any recommendation or information in the Certificate or any errors or omissions.

#### **1.2.2. Intellectual Property and other rights**

WSAA does not undertake any assessment of whether the importation, manufacture, sale or use of the Product the subject of this Certificate infringes the intellectual property rights or proprietary rights of any person. Recipients of the Certificate should undertake their own assessment of whether (as relevant) the importation, manufacture, sale or use of the relevant Products infringe the intellectual property rights or other proprietary rights of any person. If the Product infringes intellectual property rights or other proprietary rights there is potential for the supply of the Products to be interrupted.

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#### **1.2.3. Need for independent assessment**

The information and any recommendation contained (expressly or by implication) in this Certificate are provided in good faith (and subject to the limitations noted in this Certificate). However, you should treat the information as indicative only. You should not rely on that information or any such recommendation except to the extent that you reach an agreement to the contrary with the Publisher(s).

This Certificate does not contain all information that a person might require for the purposes of assessing any product discussed or appraised within it. The product appraisal criteria used in preparing this Certificate may not address all relevant aspects of the Product.

Recipients should seek independent evidence of any matter which is material to their decisions in connection with an assessment of the Product and consult their own advisers for any technical information required. Any decision to use the Product should take into account the reliability of that independent evidence obtained by the Recipient regarding the Product. Recipients should also independently verify and assess the appropriateness of any recommendation in the Certificate, especially given that any recommendation will not take into account a Recipient's particular needs or circumstances.

WSAA has not evaluated the extent of the product liability and professional indemnity insurance that the provider of the product maintains. Recipients should ensure that they evaluate the allocation of liability for product defects and any professional advice obtained in relation to the product or its specification including the requirements for product liability and professional indemnity insurance.

### **1.3. No Updating**

Neither the Publisher(s) nor any person involved in the preparation of this Certificate or the product appraisal criteria underlying it [has] [have] any obligation to notify you of any change in the information contained in this Certificate or of any new information concerning the Publisher(s) or the Product or any other matter.

### **1.4. No Warranty**

The Publisher(s) do[es] not, in any way, warrant that steps have been taken to verify or audit the accuracy or completeness of the information in this Certificate, or the accuracy, completeness or reasonableness of any recommendation in this Certificate

## APPENDIX A - QUALITY AND PRODUCT CERTIFICATIONS

Copies of the following Quality and Product Certification Certificates are available from WSAA.

TABLE A1

### TANK SOLUTIONS PTY LTD – MANAGEMENT SYSTEMS

513 Tomago Road Tomago NSW	
Quality Systems Standard	ISO 9001:2105
Certification Licence No.	QEC24768
Certifying Agency	SAI Global
First Date of Certification	20 March 2008
Current Date of Certification	24 December 2019
Expiry Date of Certification	19 March 2023



## APPENDIX B PRODUCT LITERATURE

TECHNICAL DATA SHEET

**MULLALY**  
A TANK SOLUTIONS COMPANY

# FIBREGLASS PUMP STATION

**DESCRIPTION**

A Mullaly Fibreglass Pump Station is manufactured as a one-piece construction to exact project specifications providing a quick and cost-effective installation on site. The integral valve chamber minimises excavation periods and disruption to local flora and fauna as it requires less space in the overall design, resulting in a smaller environmental footprint and reduced installation costs.

In addition Mullaly can supply a separate wet well containing the submersible pump/pumps for the wastewater system where greater flexibility is required when configuring the waste water management solution.

Mullaly Pump stations are engineered and independently verified to withstand internal and external loadings providing a long design life.


**USES**

These FRP pump stations are suitable for a wide range of applications, including;

- Sewage Treatment Plants
- Subdivisions
- Commercial and Industrial Complexes
- Hospitals
- Mining and Construction Sites
- Camping and Caravan Parks
- Sporting Facilities
- Schools

**ADVANTAGES**

- WSAA - Water Services Association of Australia appraised
- Reduces installation time and costs – no need for sealing or coating of surfaces or fittings
- Avoids differential settlement between wet wells and valve pits with a combo unit
- Improves serviceability by lowering confined spaces entry requirements to valve pit
- Long term design life and reduced life cycle costs
- 100% water tight, Solid wall construction from top to bottom



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Mullaly FRP Pump Station Technical Data Sheet  
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## STANDARD SPECIFICATION SUMMARY

The following specification covers the main points to allow for when looking an FRP pump station design. A separate detailed specification can be sent through on request for all of the fit-out pipe work.

The unit shall be constructed as follows:

- An inner corrosion layer 0.5mm thick comprising vinyl ester resin reinforced with "C" glass or synthetic tissue.
- A backing layer 2.0mm thick comprising vinyl ester resin, reinforced with E Glass CSM, minimum 450g/m<sup>2</sup>.
- An external corrosion layer 0.5mm thick comprising vinyl ester resin, reinforced with "C" glass or synthetic tissue.

The following Australian and International design standards shall be complied with:

- **AS 2634-1983** - Chemical Plant Equipment
- **AWWA C950** - Buried Structural Design
- **AS 9001-2008** - Quality systems for design/development, production, installation and servicing
- **AS 1170-1981** - Loading Code
- **BS 4994:1997** - Specification for design and construction of vessels and tanks in reinforced plastics
- **WSA 129:2011** - Industry Standard for Plastics Collection Tanks for Pressure and Vacuum Sewers

STRUCTURAL LAYER OF UNITS – VERTICAL SHAFT	VALUE
Ultimate Tensile Strength	600 MPa
Tensile Modulus	30 GPa
CORROSION BARRIER AND BASE	VALUE
Ultimate Tensile Strength	100 MPa
Tensile Modulus	7 GPa

## STRUCTURAL DESIGN CRITERIA

The structural design of the FRP Walls of the Packaged Pump Stations shall be Solid FRP Construction to the design thickness specified by the Water Authority's approved Registered Practising Composite Engineer.

The FRP pump station must meet the following WSSA standards  
WSA04-2005 V2.1 (or WSA 04:2018 draft) - Sewage Pumping Station Code of Australia

FRP components are to be designed as "stand alone" unit, capable of withstanding all internal and external loadings placed upon it with the exception of the following:

- Hydro static floatation forces, these are to be countered by external ballast material. Walls and base to be designed to withstand loading due to ground and hydrostatic pressures; and
- External loading placed on the roof of the FRP pits, to be taken by reinforced concrete slab spanning the station.
- Installation loads may be mitigated through suitable temporary supports or design assessment.

Prior to final design specific CAD fabrication drawings are to be supplied for the client's approval, with detailed layout, description and locations of all fittings, connections and levels shown.



## PRODUCT RANGE

PRODUCT NAME	DIAMETER (METRES)	DEPTH (METRES)
ME150	1.5	2-14
ME180	1.8	2-14
ME200	2.0	2-14
ME250	2.5	2-14
ME300	3.0	3-14
ME375	3.75	3-14

## SUPPORTING DOCUMENTS

Please contact Mullaly directly for documentation such as installation guides, backfill guidelines, CAD drawings and ballast calculations as well general advice on pump station selection.

**NEW SOUTH WALES**  
P: +61 2 4964 8270  
513 Tomago Rd, Tomago, NSW, 2322

**WESTERN AUSTRALIA**  
P: +61 8 9434 1707  
7 Kalmia Rd, Bibra Lake, WA, 6163

[mullaly.com.au](http://mullaly.com.au)



TECHNICAL DATA SHEET



# FIBREGLASS WATER STORAGE TANKS

## DESCRIPTION

The Mullaly underground water storage tanks have a unique integral rib design which means these Fibreglass tanks are the strongest, most robust underground tanks available, rust and corrosion proof as well as maintenance free.



## USES

These are multiple applications where Mullaly water storage tanks are used, these include:

- Emergency and overflow sewage storage
- Water Harvesting
- Water Storage
- Potable Water
- Stormwater Detention
- Grey Water
- Water Recycling
- Waste Collection

## ADVANTAGES

- **HIGH STRENGTH**  
All water tanks incorporate integral ribs for maximum strength and undergo stringent testing during manufacture and before they leave the factory
- **DURABILITY**  
All tanks are constructed of virgin resin and glass fibre reinforcement providing long term protection and life
- **CUSTOMISABLE**  
Full range of optional equipment and accessories to suit the complete project
- **MEETS INDUSTRY STANDARDS**  
Are manufactured to meet or exceed the requirements of UL 1316 - AS2634
- **TECHNICAL SUPPORT**  
Tank Solutions can provide application and installation technical advice and support for your project
- **LOW MAINTENANCE**  
Smooth walls prevents build up of solids and allows complete drainage. Internal spray system can also be installed as an option

## TANKS ARE SUPPLIED AS STANDARD WITH:

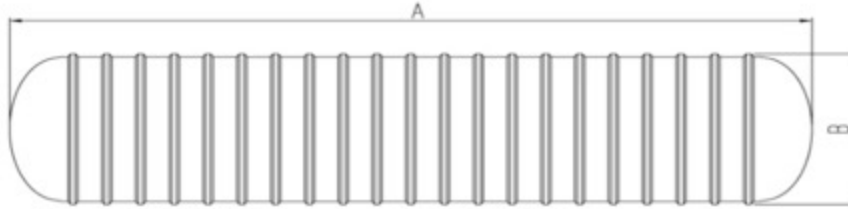
- Lifting slings
- Non slip surface on tank top
- Collar, riser and standard lid
- Class D cast iron driveway covers
- Concrete anchors, nylon hold down straps and galvanised binders
- PVC DWV inlet, overflow and vent points
- Tank tag lines

## OPTIONS AND ACCESSORIES ARE AVAILABLE ON REQUEST INCLUDE:

- FRP flanged inlets / outlets
- Additional collar, riser and standard lid
- Additional Class D cast iron driveway cover
- Lightweight Class D driveway covers



**WATER TANK RANGE – DIMENSIONS AND CAPACITIES**



**CAPACITIES RANGE FROM 5,000 LITRES TO 150,000 LITRES**

TYPE	NOMINAL CAPACITY	ACTUAL CAPACITY (LITRES)	LENGTH OVERALL (A) MM	EXTERNAL DIAMETER (B) MM	SINGLE WALL SHIPPING WEIGHT KG
MSW T5	5000	5300	3300	1470	300
MSW T13	10,000	13,500	3295	2600	950
MSW T15	15,000	15600	3720	2600	1000
MSW T20	20,000	21800	4995	2600	1300
MSW T25	25,000	25900	5845	2600	1500
MSW T30	30,000	30000	6695	2600	1700
MSW T35	35,000	36200	7970	2600	1900
MSW T40	40,000	40300	8820	2600	2100
MSW T45	45,000	46500	10945	2600	2400
MSW T50	50,000	50600	10945	2600	2600
MSW T55	55,000	56800	12200	2600	2900
MSW T60	60,000	60900	13070	2600	3100
MSW T70 2.6	70,000	70900	15200	2600	3600
MSW T70 3.3	70,000	69900	9990	3280	2200
MSW T80	80,000	79800	10865	3280	2600
MSW T90	90,000	91600	12510	3280	2900
MSW T100	100,000	102000	13075	3280	3100
MSW T110	110,000	111200	14700	3280	3300
MSW T125	125,000	125585	16475	3280	4000
MSW T135	135,000	135434	18090	3280	5500
MSW T150	150,000	148800	20075	3280	6500

Weights, Capacities & Dimensions are nominal only. Custom manufactured tanks can be supplied upon request

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## APPENDIX C SUPPLIER CONTACTS

### **Tank Solutions Pty Ltd**

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Email: [sales@tanksolutions.com.au](mailto:sales@tanksolutions.com.au)  
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