

SCANNED

Manual # 478

Plant # 2301

Portable Toilet -
sewer connect.

**FORM-IT SERVICES
PTY.LTD.**

**FRESH WATER FLUSH
MOBILE TOILET
MODEL: ULTRA 2001
LIFTING FRAME**

CERTIFICATION

**DATE: 12 SEPTEMBER 2003
JOB NO: 2002-07-2872
OUR REF: 2872-LD01-REV1
CERT. DRG. REF: LD01**

1.0 CERTIFICATION

In accordance with your request we submit the following information.

1. Certification prepared by Structural Engineer
Shane Linton
Bachelor of Engineering, Civil
University of Newcastle.

Supervising Engineer
Anthony Robert Dockrill
Bachelor of Engineering, Civil Engineering - Honours.
University of Newcastle.
Chartered Professional Engineer NPER-3.
Member of the Institution of Engineers Australia (Reg No.210112).
2. This document should be read in conjunction with drawing number LD01, Rev 0, shown in Appendix A.
3. Design Basis
Our office was instructed to carry out site measurements and design calculations, and provide a certification for the Fresh Water Flush Mobile Toilet, Model: Ultra 2001, lifting frame.
All design work was carried out in accordance with;
AS4100-1998 Steel Structures.
4. Design Loadings
The design calculations for the lifting of the mobile toilet were based on a worst case scenario of waste tank full (400 litres) and fresh water tank full (110 litres). A full capacity weight of 652kg was used in our design calculations. The dry weight of the Toilet and its tank capacities were provided by Form-It Services Pty. Ltd.
Design loadings are as determined by SAA Loading Codes.

We certify that the lifting frame for the Fresh Water Flush Mobile Toilet, Model: Ultra 2001, (Dry weight 142kg waste tank 400 litres and fresh water tank 110 litres), as sketched on drawing number LD01, Rev 1, is structurally satisfactory for lifting, provided the following are satisfied:

1. When Lifting, ensure the load is evenly distributed between all four lifting hooks with the use of a spreader bar.
2. Minimum sling length to be used is 2 metres.
3. The frame is inspected every 12 months (maximum), or as otherwise required, to ensure no structural damage is evident.
4. The above certificate is applicable only if the device is not effected by heat, adverse chemicals, excessive vibrations or other external factors unknown and not noted to the certifying engineer.

We trust the above information satisfies your requirements.

Should you require any further information please do not hesitate to contact this office.

Yours faithfully

A handwritten signature in black ink, appearing to read 'A. R. Dockrill', written in a cursive style.

Tony Dockrill B.E.(Civil)(Hons.) M.I.E.Aust., C.P.Eng. (Reg.),
Director.

APPENDIX A
CERTIFICATION DRAWING
DRG. No: LD01-REV1

