POLYETHYLENE UNDERGROUND TANKS INSTALLATION GUIDE

FREEPHONE 0800 77 66 21
visit www.promaxplastics.co.nz
Polyethylene Underground Tanks Installation Guide

Promax polyethylene Underground Tanks must be installed according to these instructions. Local Council regulations may apply and should be consulted. Failure to follow these installation instructions will void the warranty and may result in tank failure. Proper installation of underground tanks is required to prevent tank damage and insure long term trouble free service. It is imperative to read and understand the instructions below prior to any installation commences.

Promax will not be held liable for any cost associated with poor installation. Customer must check all ground conditions and installation guide with an engineer before installation of tanks.

1) HANDLING

DO NOT ROLL OR DROP TANK.
ONLY USE APPROPRIATE LIFTING EQUIPMENT WITH ENOUGH EVENLY SPACED BANDED STROPS TO UNLOAD, LIFT OR MOVE TANKS - SEE HANDLING DIAGRAM BELOW
DO NOT STAND ON TANK WHILE BEING LIFTED. ALWAYS PLACE TANKS ON SMOOTH GROUND, FREE OF ROCKS AND HARMFUL OBJECTS. TANKS MUST BE SECURED IN HIGH WIND AREAS TO PREVENT DAMAGE BEFORE BEING INSTALLED.
ANY MISHANDLING MAKES VOID ALL WARRANTIES GIVEN.

Handling Diagram
2. TANK LOCATION • PROXIMITY TO NEARBY STRUCTURES:
THE LOCATION OF THE TANK EXCAVATION IS THE RESPONSIBILITY OF THE CONTRACTOR AND THE TANK OWNER. THE CONTRACTOR IS TO FOLLOW THE LIMITATIONS OF THE DIAGRAMS SHOWN OR NOTIFY A CHARTERED PROFESSIONAL ENGINEER FOR A SITE SPECIFIC CONSULTATION. CONTRACTOR TO ENSURE NEARBY FOUNDATIONS OF NEW AND/OR EXISTING STRUCTURES ARE NOT UNDERMINED BY THE EXCAVATION FOR THE TANK.

IF TANK EXCAVATION LOCATION DOES NOT COMPLY WITH THE REQUIREMENTS BELOW - CONTRACTOR TO NOTIFY CHARTERED PROFESSIONAL ENGINEER FOR A SITE SPECIFIC CONSULTATION:
- TANK POSITION NEAR HOUSE: 45 DEGREE LINE OF INFLUENCE TO BEGIN 1000MM MIN FROM EDGE OF HOUSE FOUNDATIONS. CONTRACTOR TO DETERMINE FOUNDATION DEPTHS/LOCATIONS PRIOR TO EXCAVATION.
- TANK POSITION NEAR RETAINING WALL: 45 DEGREE LINE OF INFLUENCE TO BEGIN AT A DISTANCE OF A MINIMUM OF TWICE THE HEIGHT RETAINING AWAY FROM THE EDGE OF THE RETAINING WALL POSTS. CONTRACTOR TO DETERMINE PRIOR TO EXCAVATION.

3. EXCAVATION CLEARANCE:
CONTRACTOR TO ENSURE A MINIMUM OF 150MM BETWEEN EDGE OF TANK AND EDGE OF EXCAVATION WALL AT THE NARROWEST LOCATION.

4. BACKFILL AND BASE COURSE:
BACKFILL AND BASE COURSE MATERIAL TO BE EITHER;
CRUSHED STONE OR GRAVEL: WASHED, WITH ANGULAR PARTICLE SIZES NO LARGER THAN 13.2MM WITH NO MORE THAN 5% PASSING A 2.36MM SIEVE. DRY DENSITY MUST NOT BE LESS THAN 1500KG/CUBIC METER.
APPROVED BACKFILL SHOULD NOT BE MIXED WITH SAND OR NATIVE SOILS AND SHOULD ALWAYS BE BROUGHT UP TO AT LEAST THE TANK CROWN LEVEL. THE USE OF NON-SPECIFIED BACKFILL MATERIAL COULD RESULT IN TANK FAILURE. (I.E. GAP 7).
NATURALLY ROUNDED GRAVEL: CLEAN NATURALLY-ROUNDED AGGREGATE WITH PARTICLE SIZES NO LARGER THAN 19MM WITH NO MORE THAN 5% PASSING A 2.36MM SIEVE. DRY DENSITY MUST NOT BE LESS THAN 1500KG/ CUBIC METER.
CONTRACTOR TO WORK IN MAXIMUM BACKFILL LIFTS OF 300MM. AFTER EACH LIFT, CONTRACTOR TO USE LONG HANDLED PROBE TO WORK THE BACKFILL MATERIAL UNDER THE ENTIRE LENGTH OF THE TANK AND WITHIN ANY RIBS.
ALL VOIDS AND SPACES SHOULD BE FILLED TO ENSURE ADEQUATE SUPPORT OF TANK.

5. BURIAL DEPTH & COVER
SEE ATTACHED RELEVANT DRAWINGS
MAXIMUM BURIAL DEPTH - (ALL SIZE TANKS), DEPTH OF COVER FOR TANKS IN BOTH TRAFFIC CONDITIONS & NON-TRAFFIC MUST NOT EXCEED 2M OVER TANK TOP.

6. ANCHORING
FOR TANK BURIAL WHERE THE NEED FOR ANCHORING HAS BEEN EVALUATED AND FOUND ADVISABLE USE THE PROMAX DEADMAN ANCHOR SOLUTION.
THE WEIGHT OF OVERBURDEN ON TOP OF THE DEADMAN AND TANK PROVIDES THE ANCHORING FORCE. LAY DEADMAN ALONG EACH SIDE AND PARALLEL TO TANK. THE TANK MUST NOT ‘OVERSHADOW’ THE DEADMAN ANCHOR. DEADMAN ANCHORS ARE AVAILABLE FROM PROMAX PLASTICS.

A) BACKFILL
WHEN USING ANCHORS, TANKS MUST BE BACKFILLED WITH APPROVED DRAINAGE METAL TO BE EFFECTIVE

B) HOLD DOWN STRAPPING
USE THE HOLD-DOWN STRAPS PROVIDED IN BETWEEN RIBS USING 1M SPACING (500MM WITH 1900MM DIA TANKS) STRAPS SHOULD BE SNUG BUT CAUSE NO TANK DEFLECTION.

7. MANHOLE ACCESS POINTS
THE STANDARD MANWAY IS 600 MM IN DIAMETER AND CAN BE EXTENDED USING ADDITION MANHOLE EXTENSION RISERS.
TANK WILL COME WITH STANDARD POLYETHYLENE LID WHICH IS SUITABLE FOR GARDEN APPLICATION ONLY.
IF BEING USED IN A PEDESTRIAN OR TRAFFICABLE AREA A STEEL MANHOLE LID IS ADVISABLE.
USING THE PROMAX ADJUSTABLE HEIGHT RISER MAKES THIS SIMPLE, IT HAS A RECESS FOR CONCRETE TO ELIMINATE DIRECT TRAFFIC LOADING ONTO THE TANK FROM VEHICLES.

8. REFER TO STRUCTURAL SPECIFICATIONS SHEET FOR CONCRETE REINFORCING & OTHER NOTES
CONTRACTOR TO CONFIRM ALL LEVELS AND DIMENSIONS AND LOCATE AND MARK ALL SERVICES AND DRAINS ON SITE BEFORE COMMENCING WORK.
CONTRACTOR TO FOLLOW MATERIALS SPECIFICATION AND LIMITS OF LOCATION WITH RELATION TO STRUCTURES AND RETAINING WALLS.
CONTRACTOR TO NOTIFY A CHARTERED PROFESSIONAL ENGINEER IF ANY OF THE DESIGN REQUIREMENTS OUTLINED IN THIS DRAWING PACKAGE ARE NOT ACHIEVABLE.
100mm TOPSOIL BACKFILL OVER TANK WITH CLAY OR NATIVE SOIL

CRUSHED STONE OR GRAVEL BACKFILL TO 150mm ABOVE TANK CROWN LEVEL. MIN. DEPTH OF COVER FOR TANKS MUST NOT EXCEED 2000mm OVER TANK TOP. MATERIAL TO SPECIFICATION (GAP 7 SUITABLE).

MINIMUM CLEARANCE = D/6 OR 150mm.

100mm COMPACTED BASE COURSE MATERIAL TO SPECIFICATION.

CRUSHED STONE OR GRAVEL BACKFILL TO 150mm ABOVE TANK CROWN LEVEL. MIN. DEPTH OF COVER FOR TANKS MUST NOT EXCEED 2000mm OVER TANK TOP. MATERIAL TO SPECIFICATION (GAP 7 SUITABLE).

MINIMUM CLEARANCE = D/6 OR 150mm.

100mm COMPACTED BASE COURSE MATERIAL TO SPECIFICATION.
TANK INSTALLATION UNDER RESIDENTIAL DRIVEWAY (2500KG VEHICLE OR LESS)

NOTE ABOUT DESIGN CRITERIA UNDER RESIDENTIAL DRIVEWAY: SLAB DESIGNED FOR LIVE LOAD AS PER NZS1170.1 TABLE 3.1, "LIGHT VEHICLE TRAFFIC AREAS": 2.5 kPa AND POINT LOAD OF 13 kN.

IF DRIVEWAY IS EXISTING, SCABBLE EDGE AND TIE WITH D12 DRILL & EPOXY STARTERS AT 400MM CRS. EMBED MIN OF 100MM INTO EXISTING AND LAP 600MM INTO NEW TOPPING SLAB.

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SLAB SAWCUTS (SO):
1. SAWCUTS SHOULD BE PLACED AT 5m MAX CENTRES
2. PLACE 25mm DEEP SAWCUTS WITHIN 24-48 HOURS AFTER POURING CONCRETE

DETAIL - A

SLAB STRENGTHENING AROUND MANHOLE OPENING

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DEDETAILER: UNDER RESIDENTIAL DRIVEWAY

PROJECT:

750x7 - 1250mm DIAMETER TANK INSTALLATION GUIDE
TANK INSTALLATION UNDER COMMERCIAL DRIVEWAY (VEHICLE NOT EXCEEDING 10000 KG)

NOTE: ABOUT DESIGN CRITERIA UNDER COMMERCIAL DRIVEWAY: SLAB DESIGNED FOR LIVE LOAD AS PER NZS1170.1 TABLE 3.1: "MEDIUM VEHICLE TRAFFIC AREAS", 5 kPa AND POINT LOAD OF 31 kN.

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DETAIL - A

SLAB STRENGTHENING AROUND MANHOLE OPENING

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DESIGNER

PROJECT:
750mm - 1200mm DIAMETER TANK INSTALLATION GUIDE

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NOTE: ABOUT DESIGN CRITERIA UNDER COMMERCIAL DRIVEWAY: SLAB DESIGNED FOR LIVE LOAD AS PER NZS1170.1 TABLE 3.1: "MEDIUM VEHICLE TRAFFIC AREAS", 5 kPa AND POINT LOAD OF 31 kN.

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SLAB SAWCUTS (SC):
1. SAWCUTS SHOULD BE PLACED AT 5m MAX CENTRES
2. PLACE 25mm DEEP SAWCUTS WITHIN 24-48 HOURS AFTER POURING CONCRETE

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IF DRIVEWAY IS EXISTING: SCABBLE EDGE AND TIE WITH D12 DRILL & EPOXY STARTERS AT 400mm CRS. EMBED MIN OF 100MM INTO EXISTING AND LAP 600MM INTO NEW TOPPING SLAB.

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200mm REINFORCED CONCRETE SLAB, CONCRETE STRENGTH = 25MPA.
SLAB REINFORCED WITH HD2 BARS AT 300mm CRS ALONG THE TANK.
IMPORTANT: HD2 BARS TO BE PLACED AT 300mm BOTTOM COVER, HD2 BARS TO BE PLACED ABOVE HD2 BARS.

CRUSHED STONE OR GRAVEL BASED ON TANK BASE LEVEL, MIN. DEPTH OF COVER FOR TANK MUST NOT EXCEED 2000mm OVER TANK TOP.
MATERIAL TO SPECIFICATION (SAP) SUITABLE.

100mm COMPACTED BASE COURSE MATERIAL TO SPECIFICATION.

LONG STEEL PLACED ALONG HD2 BARS
PROVIDE 50MM HOOP TO EACH END OF BAR
ENSURE HD2 BARS AT BOTTOM

RETAINING CEIL WASH ANCHOR ALONG TANK LENGTH, ENSURE ANCHOR AT LEAST 2000mm CLEAR OF TANK EDGE, AND BE MOUNTED ON ADEQUATE ELEVATION ABOVE THE TANK BASEMENT.

B14D16 BARS ADDITIONAL TO SLAB REINFORCING, ARRANGE AS SHOWN, FULL 1000mm LAP EACH WAY.

NO SAWCUTS IN THIS AREA.
1.9m Diameter

UNDER LAWN INSTALLATION GUIDE

NTS

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PROJECT: 1900mm DIAMETER TANK INSTALLATION GUIDE

DESIGNER

DWS

DETAIL: UNDER LAWN INSTALLATION (ALL NEW ZEALAND LOCATIONS)
TANK INSTALLATION UNDER RESIDENTIAL DRIVEWAY (2500KG VEHICLE OR LESS)

DETAIL - A

SLAB STRENGTHENING AROUND MANHOLE OPENING

IF DRIVEWAY IS EXISTING, SCABBLE EDGE AND TIE WITH D12 DRILL & EPOXY STARTERS AT 400MM CRS, EMBED MIN OF 100MM INTO EXISTING AND LAP 600MM INTO NEW TOPPING SLAB.

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1. SAWCUTS SHOULD BE PLACED AT 5mm MAX CENTRES
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PROMAX UNDERGROUND TANKS

INSTALLATION AGREEMENT

Please carefully read the attached installation instructions for the Promax Underground Tank.

Please sign the agreement below acknowledging that you have read and understood and agree to install the tanks as per the instructions:

I have read and understood these instructions and agree that the Promax Underground tanks will be installed as per these instructions.

Name__________________________________

Signed_________________________________

Date__________________________

If you are in doubt at all about any details of the installation instructions, please call Promax Plastics on 0800 77 66 29 to clarify.
CONFIRMATION OF CORRECT INSTALLATION

During installation and following the completion of installation the Engineer supervising the installation must confirm that installation instructions have been followed:

I ___________________________(name), have read and understood the installation instructions and have overseen the installation of the tank. I can confirm that the tank was installed as per the installation instructions.

Signed___________________________________

Date_____________________________________

If you have any concerns during the installation of the tank, please phone Promax Plastics on 0800 77 66 29 to discuss and confirm correct installation.