Everhard Industries Pty Ltd

NEW SERIES 300 POLYMER DISTRIBUTION BOX

WHY USE A DISTRIBUTION BOX?

In most domestic Septic systems which incorporate an on-site treated waste-water disposal arrangement, partially treated fluid from the Septic tank outlet is directed through underground piping to final treatment and dispersal in evapo-transpiration trenches or beds, or other approved installations. Australian standard AS/NZS1547 requires these to accommodate the expected flow from the treatment tank. They must have an adequate surface area to permit collected fluid to soak into the ground and be taken up by vegetation, without causing surface "ponding". The amount of ground area required will depend upon the size of the household and the permeability of the soil. Where it is not possible to have a single trench or bed, then multiple, usually parallel, lines must be excavated. It will then be necessary to provide a means of splitting the flow of fluid from the Tank to enable the waste-water to be evenly directed into each trench. This has traditionally been done by directing the pipe from the tank into Distribution Boxes, usually small concrete or masonry lined pits, from which a number of pipes feed fluid to each trench.

EXISTING TYPES OF DISTRIBUTION BOX

EVERHARD has been supplying these pre-cast reinforced concrete Distribution Boxes to the building and plumbing industries for many years, and a number of types have been available. The most common sizes requested have been 300mm x 300mm and 450mm x 450mm, and these concrete units, although durable and strong, are also heavy and clumsy, and therefore not easily handled on site.

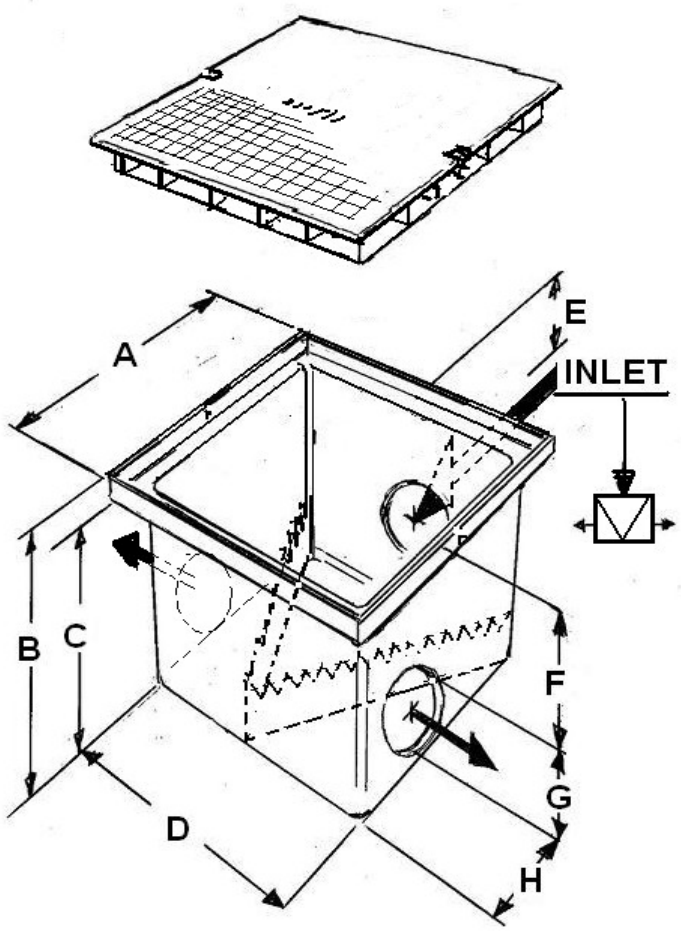
To remedy this problem, EVERHARD injection moulded Polymer Distribution Boxes have been available in these sizes for some time, manufactured in an engineered Polypropylene blend for maximum durability and rigidity with polyethylene Top Covers able to withstand the shock of most accidental impacts. These materials contain additives to help protect the unit against severe deterioration from ultra-violet exposure.

NEW DESIGN

As part of our continuing process of improving our product range, the latest Series 300 Distribution Box now features an all-new, attractive, and particularly durable, injection moulded Polypropylene Top Cover with a slip-resistant surface and self-locking arrangement to reduce the risk of unauthorised entry. This Cover has been tested and complies with AS 3996 Class A requirements for pedestrian areas.

	NEW SERIES 300
A	**357**
B	**326**
C	**300**
D	**290**
E	**160**
F	**210**
G	**110 diameter**
H	**90**

Another significant new feature is the rigid "Saw-Tooth" Vee baffle welded to the floor of the unit. This is also in Polypropylene, replacing the old pattern internal divider made from uPVC and locked into place.

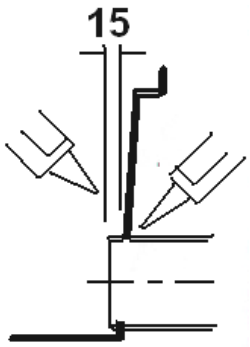


INSTALLING THE NEW SERIES 300 POLYMER DISTRIBUTION BOX

Pipe from a Waste-water Treatment Tank must have fairly constant "fall" towards the disposal system. This dictates depth of pipe at Distribution Boxes where pipes to the trenches are laid. Distribution Boxes should be close to trench inlets, and equi-distant from them if possible. A hole 50mm at least deeper than the Box outlet pipe invert is required. A layer of bedding sand should be placed and compacted and the Box positioned so that pipes have the correct "fall". The incoming pipe must be fitted into the highest hole. Boxes are made with one inlet and two outlets, allowing the main incoming flow to be directed to left and right. A third (straight ahead) outlet can be very easily cut on site with a jigsaw, or hand keyhole saw if required. Should an outlet need to be closed, a short section of pipe with a cap can be readily fitted into the unwanted hole.

100mm pipes are now generally accepted as standard for distribution networks, rather than 90mm, which was once common. AS/NZS1547 states that all the trench and bed layouts are based on 100mm pipes, and AS/NZS 3500, the National Plumbing & Drainage Code, specifies that main drains must be not less than 100mm. Brisbane City Council Policy for Evapo-transpiration systems also specifies 100mm pipes. Should some local authorities permit smaller pipes, adaptor reducers may be fitted into the pipelines.

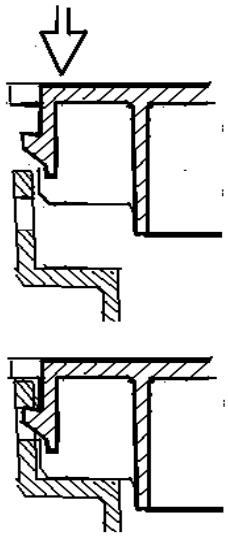
PIPE CONNECTIONS



The pipe should be a close fit into the hole in the side of the Box. It is strongly recommended that, where possible, the pipe should penetrate the box by at least 15mm. A generous bead of suitable adhesive/sealant, such as Fuller's "Max-Seal", Silastic 732, or an effective equivalent, around the join will help prevent leaks. Where movement of the Box and/or pipes in the ground is possible, a mechanical joint method is recommended. In such cases a "flange" type of fitting solvent cemented to the pipe, and attached to the sides of the Box with stainless steel screws (point OUTWARDS), will help to provide positive security against leakage.

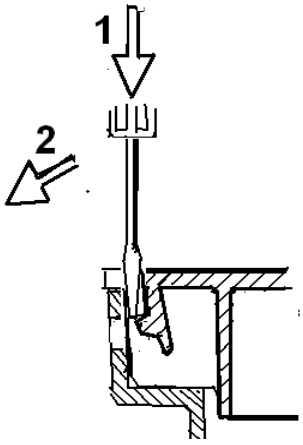
BOX DESIGN FEATURES

The new Series 300 Box has a Vee-shaped Baffle arrangement with a "Saw-tooth" upper edge. This is permanently attached to the Box floor, dividing the Box into an inlet chamber and two outlet chambers. The "Saw-tooth" pattern is intended to assist in reducing the effect of incoming fluid surges and helps to evenly split flow to both outlets The new Baffle replaces earlier types of loose Baffles and Weirs attached with screws or rivets.



The Box Cover is positioned so that the two sides with moulded cut-outs are above the holes pre-drilled in the Distribution Box rim. The Cover is then simply pressed down until the locating pins moulded at the cut-outs engage with the drilled holes.

To remove the Cover for maintenance, A screwdriver tip is inserted into the space between each cut-out and the Box rim. Push down and lever the screwdriver outwards to disengage the locating pin and lift out the Cover.



BACKFILL

The excavation around the Box should be backfilled with a stabilised soil/sand mix and moderately compacted. Boxes must NOT be completely buried, as access may be required. If necessary, a standard 150mm high Riser can be fitted to bring the Cover up to ground level.

When a Riser is fitted, a concrete collar should be poured around the junction of the Riser and the Box to provide extra rigidity and to prevent the ingress of groundwater.

Note - Holes like those in the Box rim must be drilled in the Riser rim to allow the Cover to be locked.

SURFACE PROTECTION

It is strongly recommended that a concrete collar should also be poured around the Box Rim at surface level to provide protection against accidental damage, but this must only be poured after the pipes are all connected and finished, and the Cover is securely in place.

Distribution Boxes must **NOT** be exposed to livestock, vehicular and regular pedestrian traffic.