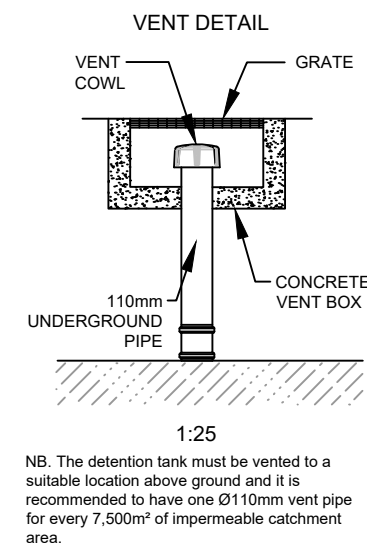
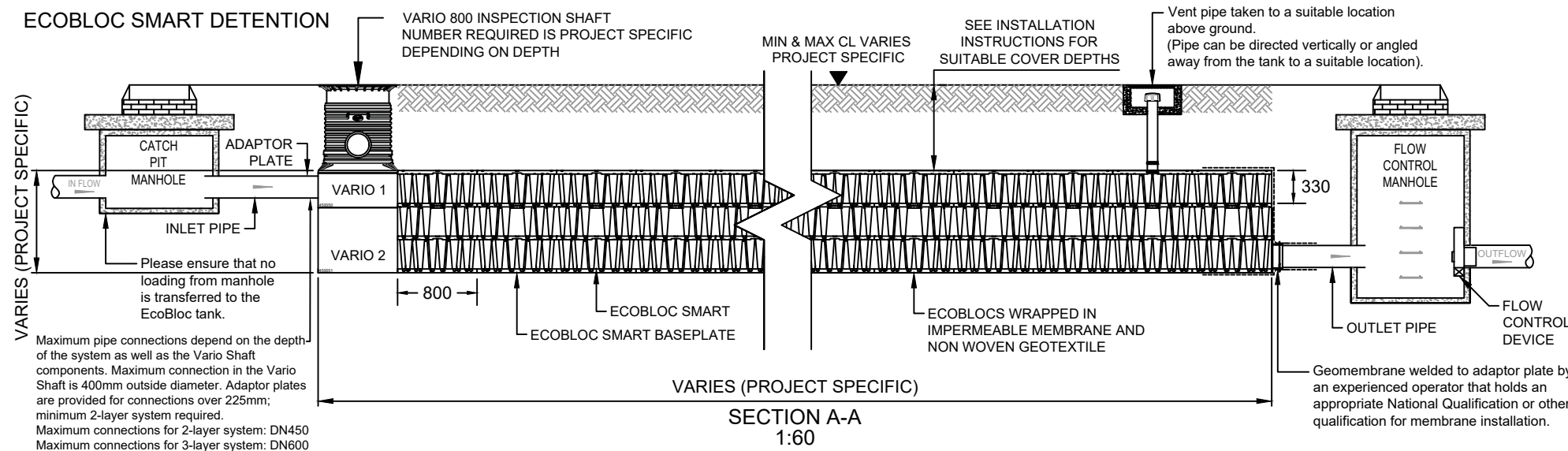


ECOBLOC SMART DETENTION



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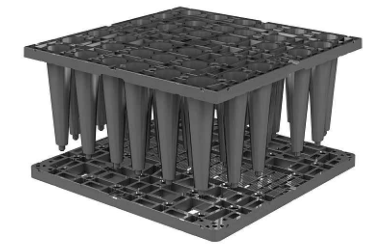
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details shown on this drawing in relation to a particular scheme.

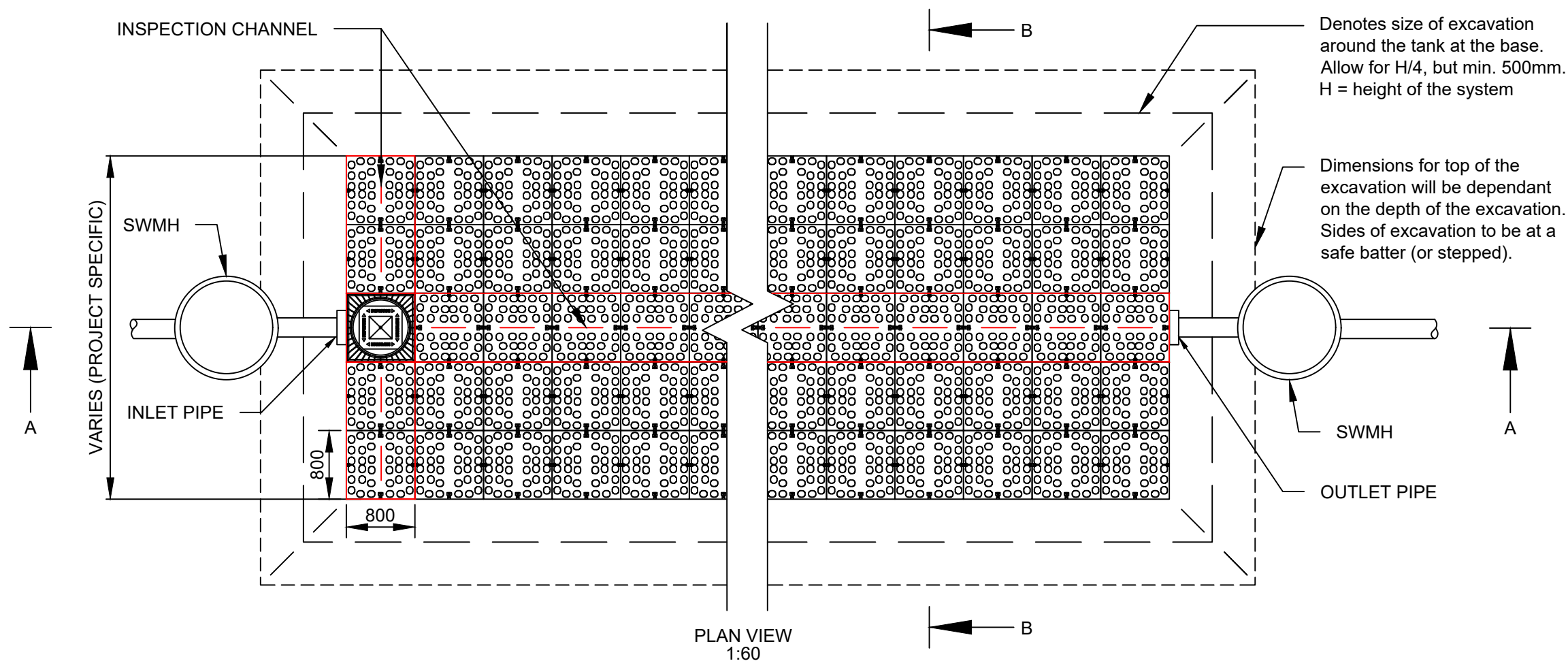
NOTES:-

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ECOBLOC SMART



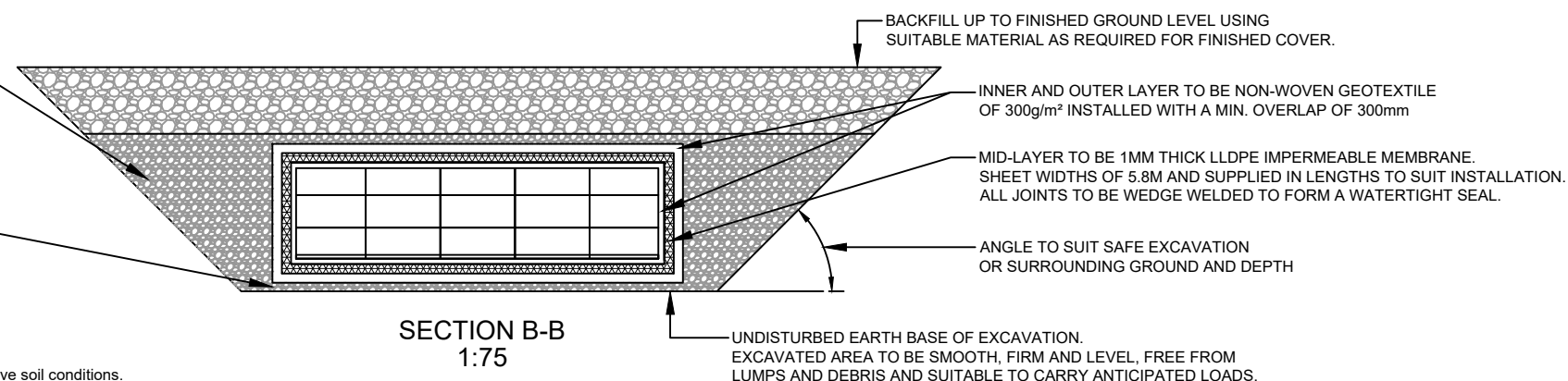
	Ecobloc	Baseplate
Dimensions (mm)	800 x 800 x 330	800 x 800 x 40
Gross Volume	0.211m³	0.024m³
Net Volume	0.203m³	0.021m³
Material	Polypropylene	Polypropylene
Weight	9.9kg	4.0kg
Void Ratio	>96% depending on number of layers	
Inspectable	Yes	
Comply to load requirements of AS5100. For further information, see installation instructions.		



NOTE: EXCAVATION TO EXCEED TANK SIZE BY 500MM ON ALL SIDES TO ALLOW FOR ACCESS

NON-COHESIVE, COMPRESSIBLE GRANULAR MATERIAL
(GRAVEL, CRUSHED STONE, SAND, ETC.) *
MAX. PARTICLE SIZE 63mm
MIN. FRICTION ANGLE 32°
MAX. BULK UNIT WEIGHT 20kN/m³

MIN. 80mm BASE LAYER TO BE GRANULAR MATERIAL
(GRAVEL, CRUSHED ROCKS, SAND, ETC.) *
MAX. PARTICLE SIZE 63mm



* Cohesive soils (loam/clay, etc.) are NOT suitable backfilling materials.
Please contact GRAF Technical Department for more details on installation in cohesive soil conditions.

2		AW	10.09.2024
1		MV	15.09.2022
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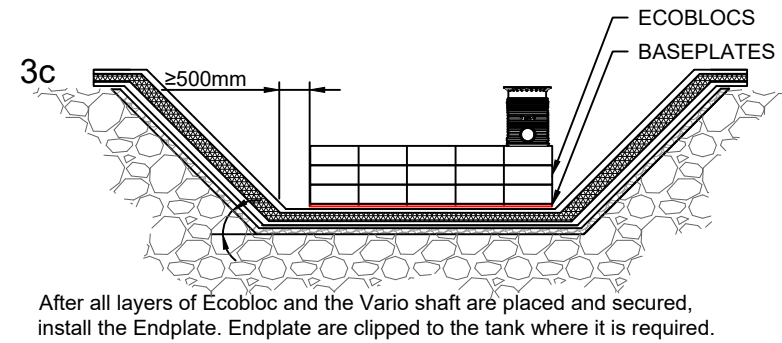
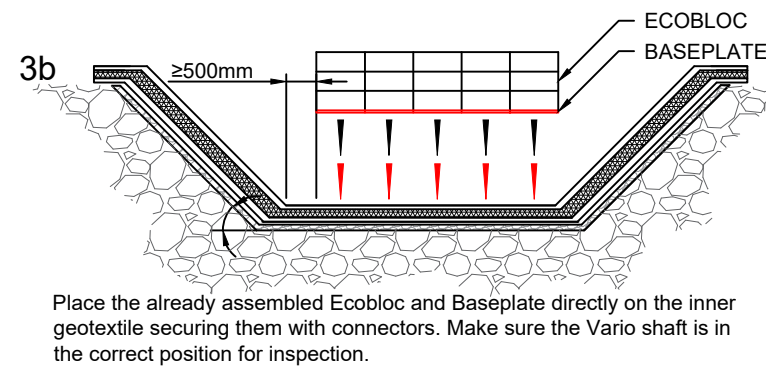
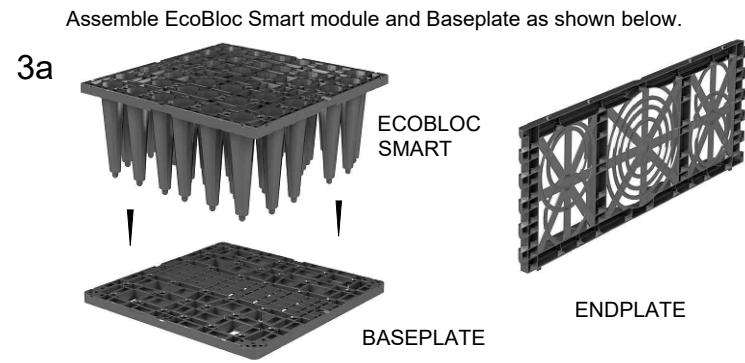
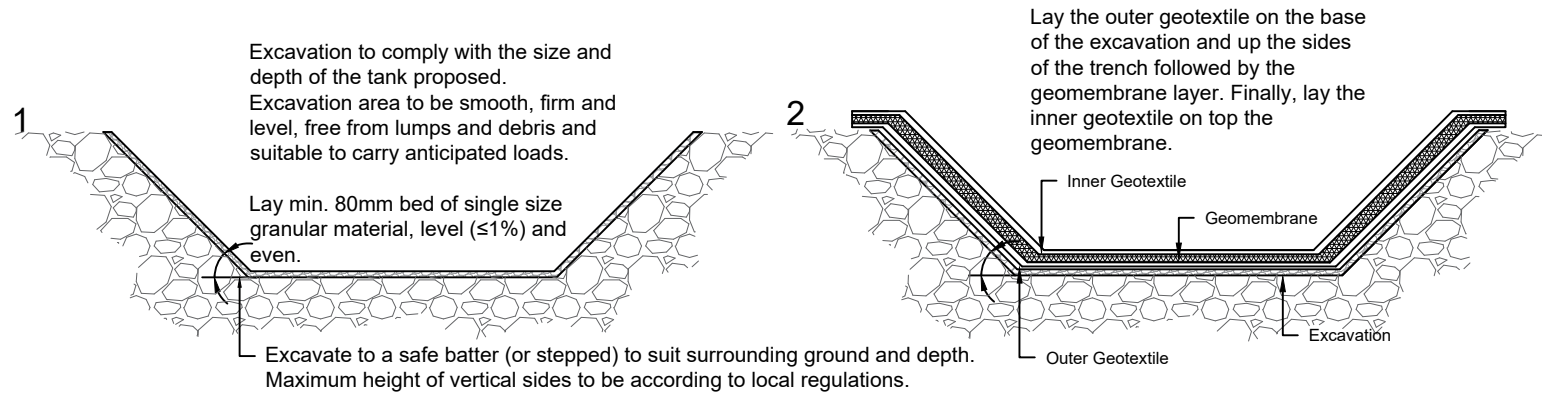


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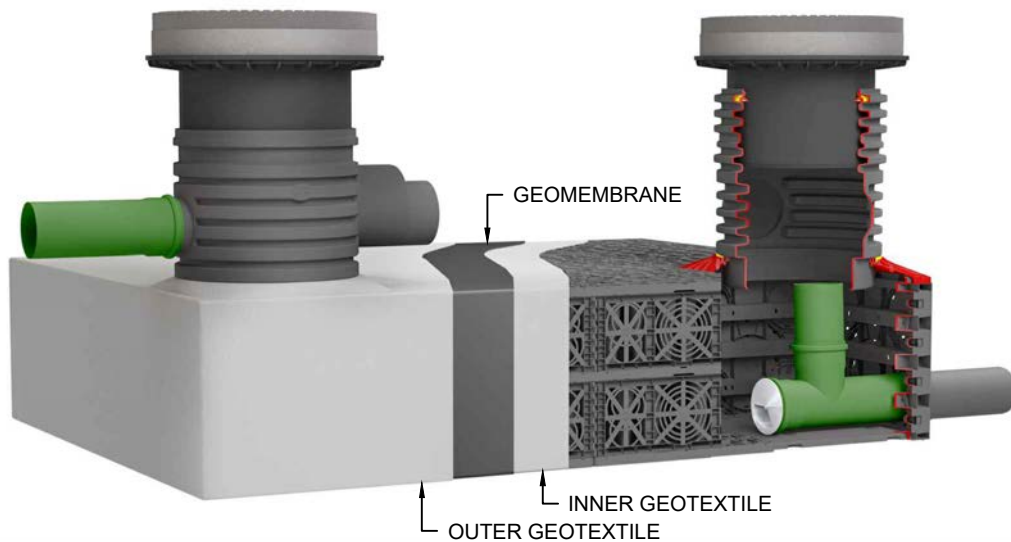
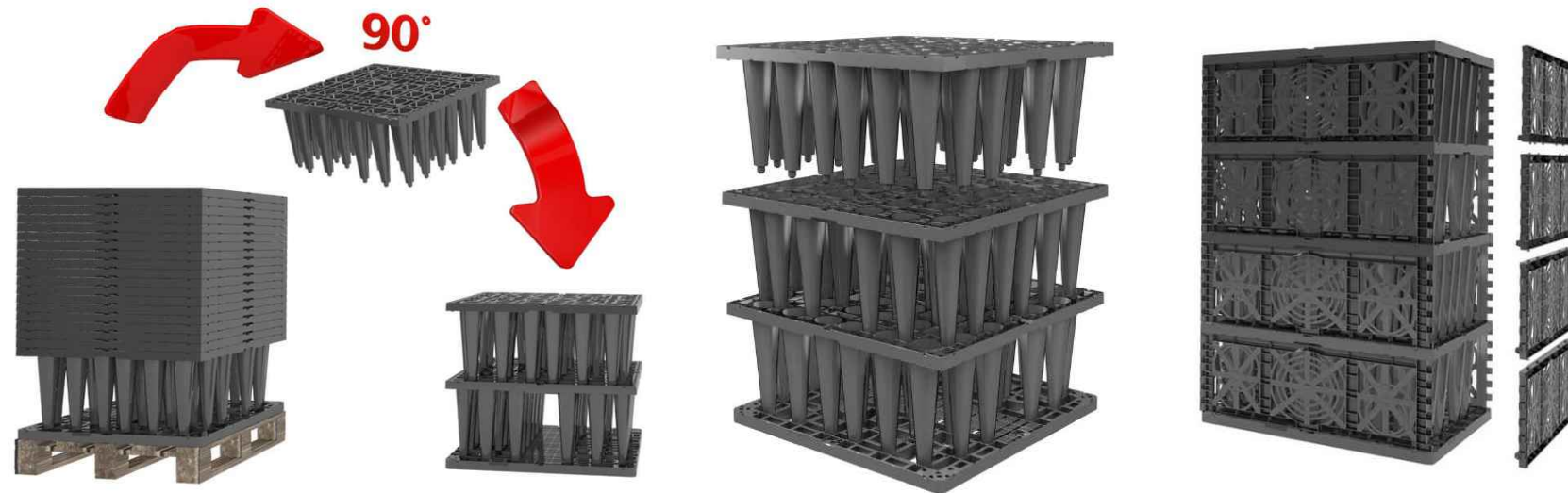
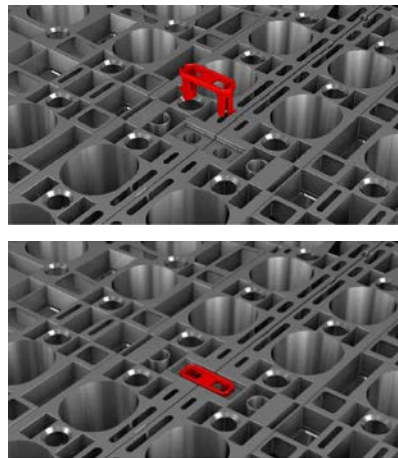
PROJECT	GRAF STANDARD DETAILS
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DESCRIPTION	DETENTION TANK using GRAF ECOBLOC SMART & VARIO SHAFT
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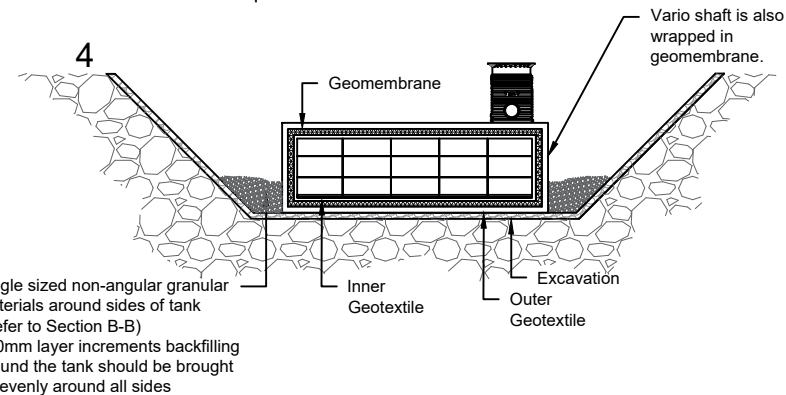
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Before installing the next layer, ensure that the connector clips are clipped locking the Ecobloc together.



Finally, wrap the blocs with the inner geotextile followed by the geomembrane ensuring it is heat welded then wrap with the outer geotextile to protect the geomembrane. Geomembrane must be joined by an experienced operator that holds an appropriate National Qualification or other qualification for membrane installation.



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INSTALLATION METHOD:

- a) Excavate the trench with a safe batter (or stepped) ensuring the footprint allows for sufficient space between tank and the sides (height of the system divided by 4, but at least 500mm around all sides of the tank).
b) Mark out the position of the tank including pipe connections.
c) Lay min. 80mm of single sized non-angular granular material (max. 63mm) as a base for the tank. This can be laid to a maximum fall of 1%.
- a) Lay the outer geotextile over the base of the excavation and up the sides of the trench, overlapping any joins by a minimum of 300mm.
b) Lay the geomembrane on top of the outer geotextile.
c) Geomembrane must be joined by thermal fusion heated wedge welding by an experienced operator that holds an appropriate National Qualification or other qualification for membrane installation. It is recommended that the Dual Seam method is used as this generates an unwelded channel which can be pressured with air to check the integrity of the weld.
d) Lay the inner geotextile over the geomembrane.
e) The geomembrane and geotextile used must meet the specification stated on the drawing.
- a) Assemble EcoBloc Smart and Baseplate, position leg ends into corresponding holes in the Baseplate. The bloc will only fit in the correct orientation. Push down firmly to ensure the EcoBloc is located correctly. Assemble the row of EcoBloc Smart with Baseplate where inspection run is required. If Vario shaft is included within the tank, ensure that the Vario 800 Base is in position located (Vario shaft does not require EcoBloc Baseplate). Please note that Vario type 2 (2-layer system) is required for inspection in EcoBloc Smart tank.
b) Install already assembled EcoBloc Smart and Baseplate onto the inner geotextile until the first layer is complete. Insert retaining clips into each adjacent bloc.
c) Check and ensure that the row of EcoBlocs Smart is in the correct located position where inspection run is required.
d) To install the next layer of bloc, remove from the stack and turn 90° and position directly above the bloc below. Push down firmly to ensure the bloc is located correctly.
e) Continue until all EcoBloc Smart have been installed, ensuring clips are used to secure each bloc.
f) Fit Endplate to the sides of each bloc by positioning the bottom in place then pushing firmly on the top section.
g) Vario 800, type 1 & 2, consist of 4 walls which can be assembled in push fit manner. Please refer to Page 3 of this document for better visualization on Vario shaft installation.
- a) Fix adaptor plates to the sides of the bloc in the required position for the pipe connections if required.
b) Cut a hole in the geomembrane and geotextile for pipe connections.
c) Pull geomembrane up around the sides and fully wrap the bloc, securing the top in place by heated wedge welding to the side panels.
d) Cover the top and sides with the outer geotextile to protect the geomembrane.
e) Install vent pipe connections into the top layer of the tank and direct to suitable locations.
f) Backfill around the tank in 300mm layers increments using non-cohesive, compressible granular material (gravel, crushed rock, sand, etc with max. particle size of 63mm). The backfill should be brought up evenly around all sides.
g) Connect pipe connections and weld/glue them to be watertight.
h) It is recommended that stormwater treatment system or pre-filtration is installed upstream of the tank to reduce debris, silt, etc. entering the tank. These should be regularly maintained.

N.B. Installation method may vary depending on depth of the tank and is project specific. For more information or technical questions please contact our Technical Department at Graf Australia.

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PROJECT	GRAF STANDARD DETAILS
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DESCRIPTION	DETENTION TANK using GRAF ECOBLOC SMART & VARIO SHAFT
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DRAWING No.	DWG-359	REV.	2 (Pg.2)
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VARIO 800 TYPE 1

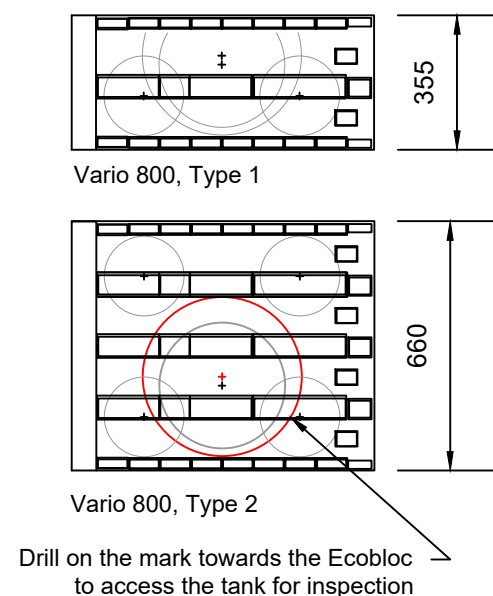
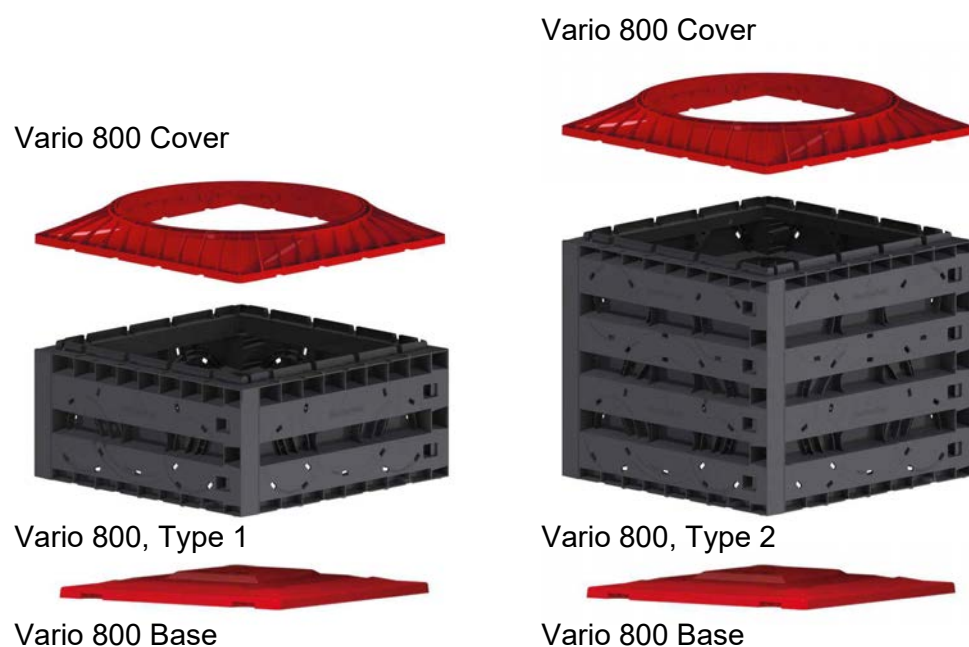
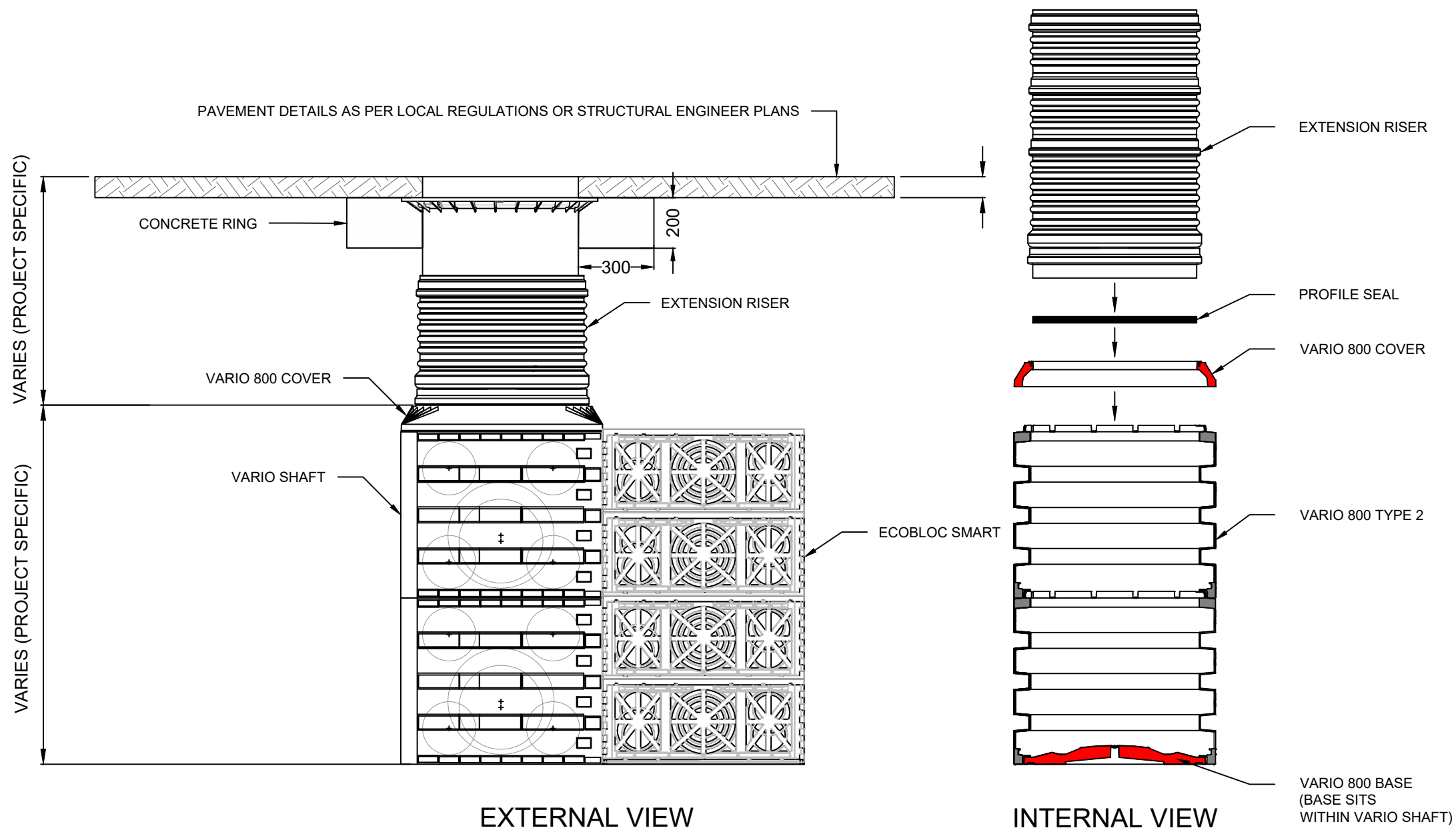
Dimensions (mm) 800 x 800 x 355
Volume 230L
Weight 14kg

VARIO 800 TYPE 2

Dimensions (mm) 800 x 800 x 660
Volume 420L
Weight 24kg

VARIO 800 BASE/COVER SET

Dimensions (mm) 800 x 800 x 100
Weight 11kg



Vario 800 are modular and are easily assembled in a push fit manner.

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DRAWING No.	DWG-359	REV.	2
			(Pg.3)