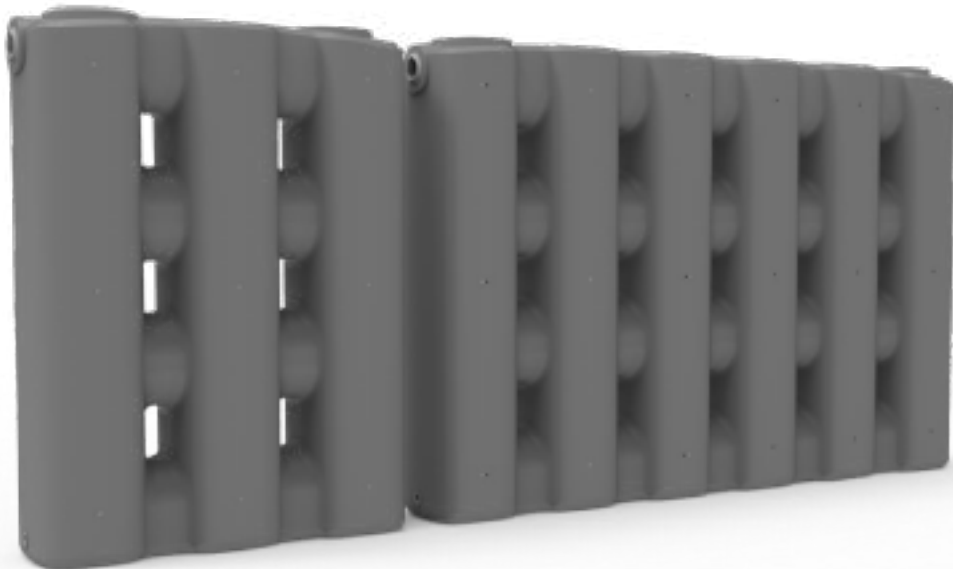


RELIABLE
STORMWATER
MANAGEMENT

INSTALLATION GUIDE

V1.1



*storm***PANEL** 

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INSTALLATION NOTES

A full Devan stormPANEL tank is extremely heavy (up to 2 tonnes). Be thoughtful in selecting your tank location.

When installing the tank, choose a firm and level area that is free from any projections. Elevated locations must have a solid floor and be strong enough to withstand wind loads in conjunction with the weight of a full tank. Its is critical that the base is perfectly level as the tank is narrow and tall.

It is suggested to install on a concrete base min 100 mm thick, with nominal ductile mesh reinforcement if subsoils are in accordance with NZS3604 classification for "good ground".

Alternative options such as paving slabs laid on a firm compacted sand & gravel base are acceptable if subsoils are in accordance with NZS3604 classification for "good ground".

The tanks can be sunk down into the ground by up to a maximum of 500 mm to reduce the overall visual height of the tanks, Clean back fill with particals <7mm is required

Do not install water tanks over buried pipes, cables or any other utility connections which may require servicing or maintenance.

Do not install water tanks over underground structures such as cellars, septic tanks, sewage canals, etc.

Do not install water tanks where they could pose a potential hazard to life or property. eg under foundations or within a building.

Where the tank needs to be lifted into place, all lifting eyes must be used in doing so. The lifting eyes are not rated sufficiently to be used with any water in the tank.

Seismic and Wind restraint

Seismic and wind restraints are required, the tanks are narrow and could blow over if empty or topple over in a seismic event.



Lifting eye detail - 16mm shackle

CONNECTION DETAIL

Connecting to the tank

There are specially designed mounting areas on the side of the tank at the top for inlet and overflow plumbing. Inlet pipes can also be installed in the roof of the tank

We recommend the use of Universal seals® or Wallace seals with all top plumbing and care should be taken when drilling the corresponding hole size. Proper hole saws must be used.

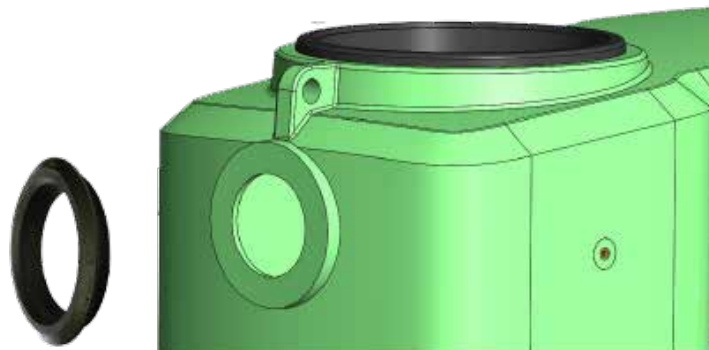
Universal seals®, Wallace Seals and overflow kits are available from Devan (25mm to 100mm).

The overflow should be piped away from the foundation to avoid erosion.

Overflows

An overflow must be installed in all instances to let excess water out of the tank. This is also important if the tank is filled from a float valve in case it sticks open.

The overflow needs to be equal to or larger than the inlet pipes feeding the tanks



90mm seal install (not included)



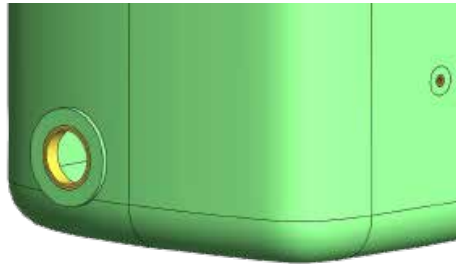
90mm overflow kit (not included)

Bottom outlet

Devan stormPANEL tanks come with two 50mm, BSP (female) outlets. It is recommended to use flexible plumbing, kitsets are available from Devan. Flexible connections allow for expansion and contraction of the tank, both thermal and over time.

For connection of multiple tanks, the bottom outlet connections need to use a Plumquick or similar rubber socket.

Connection kit-sets are available from Devan



50mm Outlet



50mm stormPANEL connection kitset - SPAB50

50mm Hansen Union
50mm Hansen Nipple
50mm x 150mm Nipple
Thread Tape

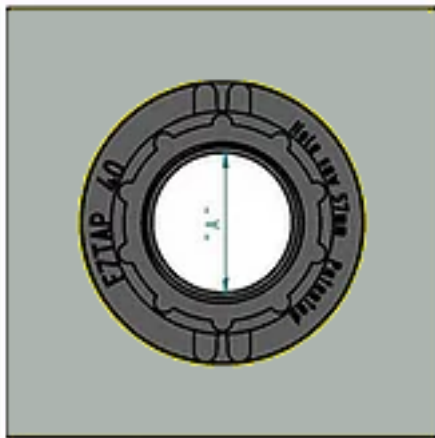


SPAB50 - 50mm Connection Kit

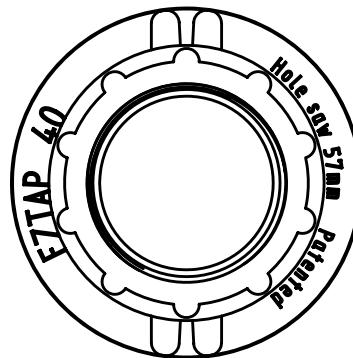
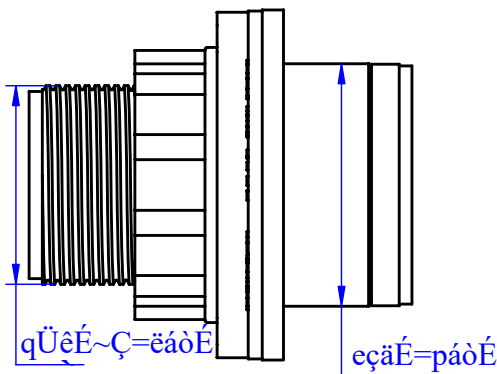
Extra outlets

If additional outlets are required up to 50mm diameter, these can be installed in the side wall of the tanks using an EZTAP fitting (available from Devan) as long as they are a minimum of 200mm away from another outlet.

EZYTAPs are installed from the outside of the tank and do not require access from the inside to complete installation



Code	Description	Thread Size	Required Hole size
TAF20ET	20mm EZY Tap	20mm BSP	35mm
TAF25ET	25mm EZY Tap	25mm BSP	41mm
TAF32ET	32mm EZY Tap	32mm BSP	51mm
TAF40ET	40mm EZY Tap	40mm BSP	57mm
TAF50ET	50mm EZY Tap	50mm BSP	70mm



RESTRAINT DETAIL

Restraint of tank

With a stormPANEL, restraints are required to prevent toppling over during a seismic event or blowing over in a high wind zone.

Easy to use post and wall brackets kit sets are available from Devan. The installation drawings must be followed.

Devan Kitsets:

- Wall mount Kit set - for installation to suitable wall
- Post kit - for installation when tank is installed on gravel bedding or pavers
- Pad kit - For installation on suitable concrete pad

If timber posts are preferred, these and the fixtures are supplied by others and must be a minimum of:

1,000L Tank = H5 125mm x 75mm following the same footing and length dimensions as the galvanised option

2,000L Tanks = H5 150mm x 100mm following the same footing and length dimensions as the galvanised option

There are specially designed mounting areas on the side of the tank to fit a restraint system. Devan recommends our restraint systems that are effective for wind and seismic events assuming the installation drawings are followed.

If the installation drawings are followed for each method above and the ground conditions meet the requirements indicated on the drawings the standard PS1 available with your purchase will apply.

Note: In all instances after installation of seismic restraints and the tank is full, settlement of the base needs to be checked and the restraints adjusted if required to prevent undue pressure on the tank.



1,000L with Pad restraint kit (SPAKPA)

INSTALLATION OF SCREENING

Screen mounting system

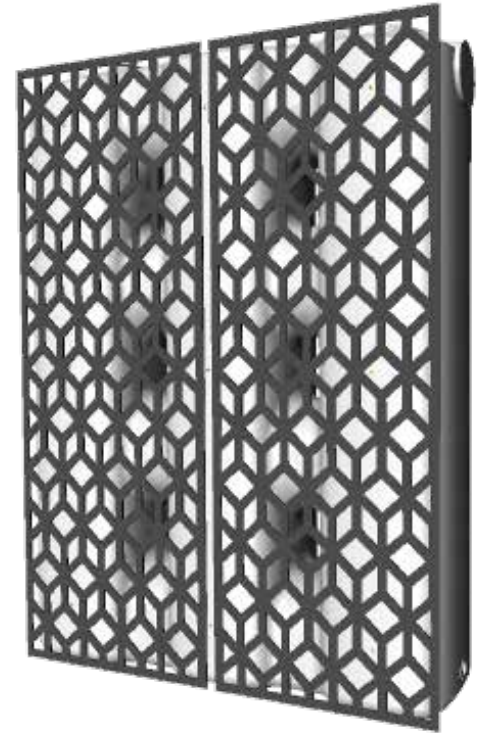
Devan's range of stormPANEL tanks have been designed with threaded M5 mounting points on one side to allow the fitting of custom art work, wooden trellis or other screening (not supplied with tank).

Please note that the attachments must be supported at ground level as the tank is not designed to have weight hanging off the tank.

The M5 brass inserts must not be drilled deeper as this will cause water to leak from the tank.

Screening can be used to help the stormPANEL blend in to your surrounds and assist in training plants to further disguise your tank.

Note: Screening should only be fitted after the tank has been filled and any settlement has occurred. If this is not possible the screening should allow for the movement with vertically slotted holes or be adjusted after the first 3 months.



1,000L with Screen fitted (sold separately)

INSTALLATION OF PUMPS

Screen mounting system

Devan's range of stormPANEL tanks are suitable for a waterpump for added pressure. These can be fitted with ease. stormPANEL tanks are suitable for both external pressure pumps and internal submersible pumps.

Devan carry a large range of pumps so please talk to one of our team to determine the best solution for your installation.

External Pumps

Do not directly install water pumps to the side of your water tank. The water pump and its motor must be self-supported on its own mount and connected to the tank via flexible hose to isolate any vibration or movement by the pumping unit itself.

Internal Pumps

Do not hang your pump from the roof of the tank, the pump needs to sit on the base of the tank. If you require your pump to sit higher a stand should be used.

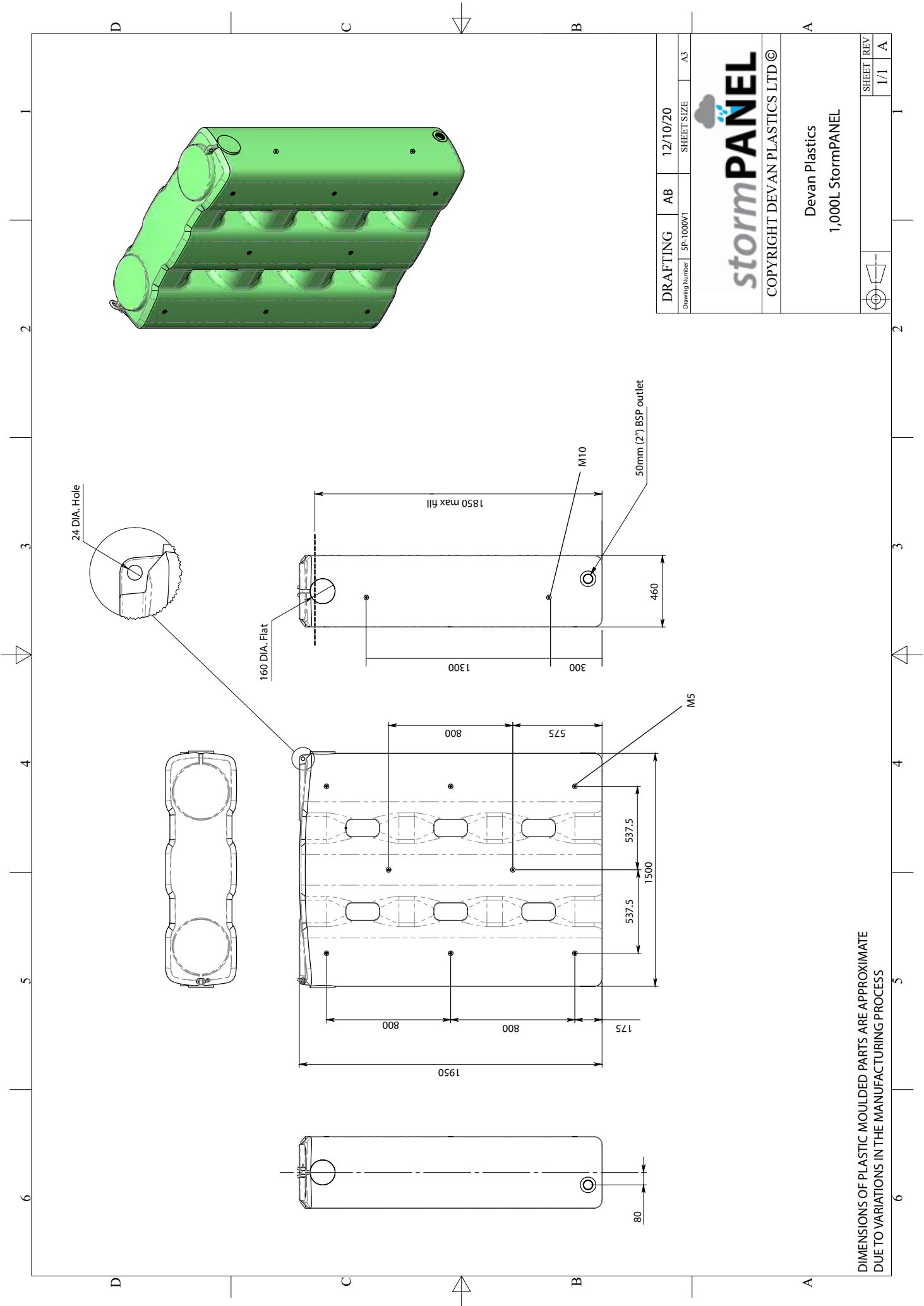
Mains water cut over devices

Devan carry a range of mains water cut over devices and mains water top up valves if required, please talk to one of our team to find the solution that meets your needs



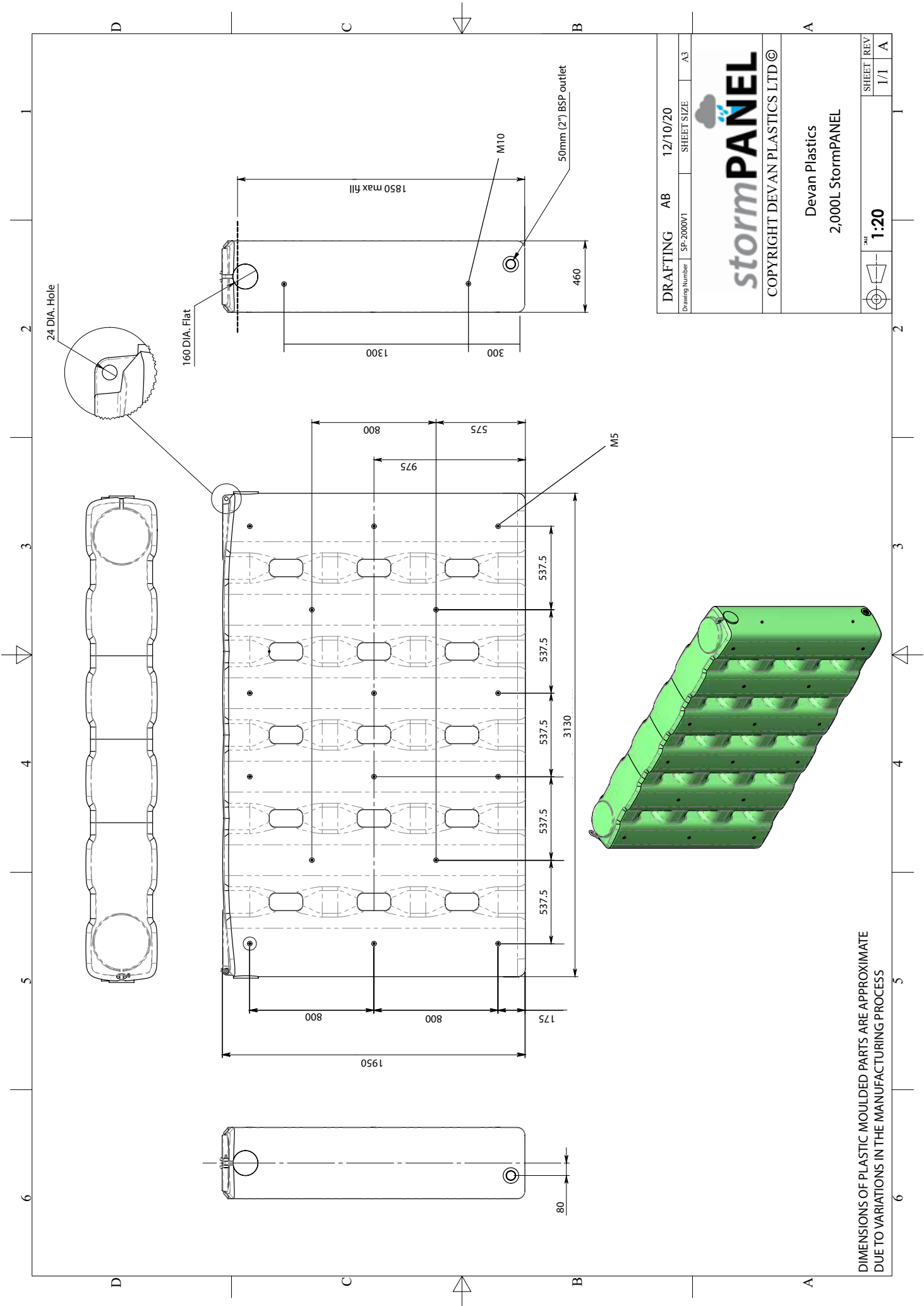
External pressure pump inside pump cover, both sold separately

PRODUCT DRAWINGS



DRAFTING	AB	12/10/20
Drawing Number	SP-1000V1	SHEET SIZE
		A3
COPYRIGHT DEVAN PLASTICS LTD ©		
Devan Plastics 1,000L StormPANEL		
		SHEET REV
		1/1 A

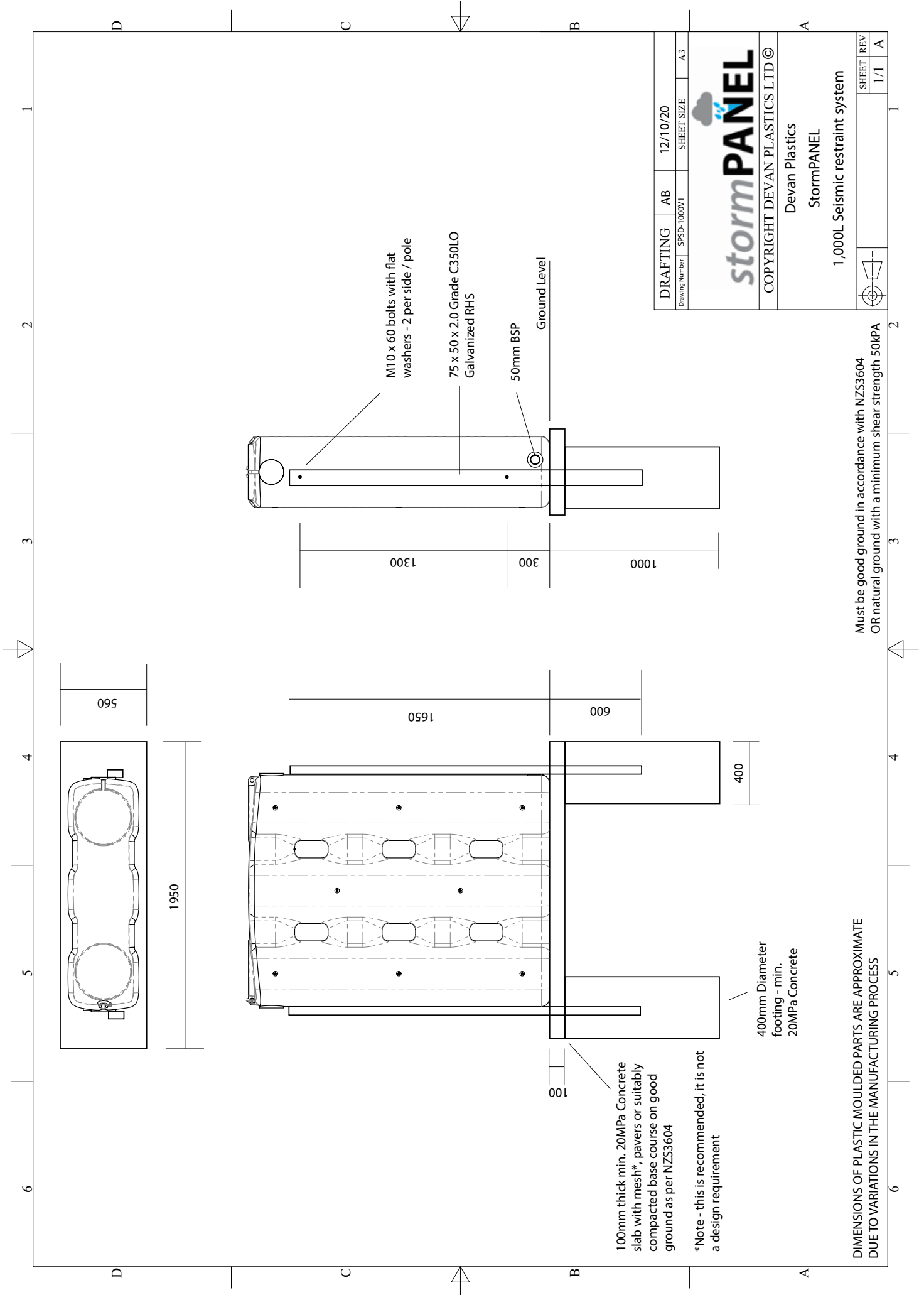
DIMENSIONS OF PLASTIC MOULDED PARTS ARE APPROXIMATE
DUE TO VARIATIONS IN THE MANUFACTURING PROCESS

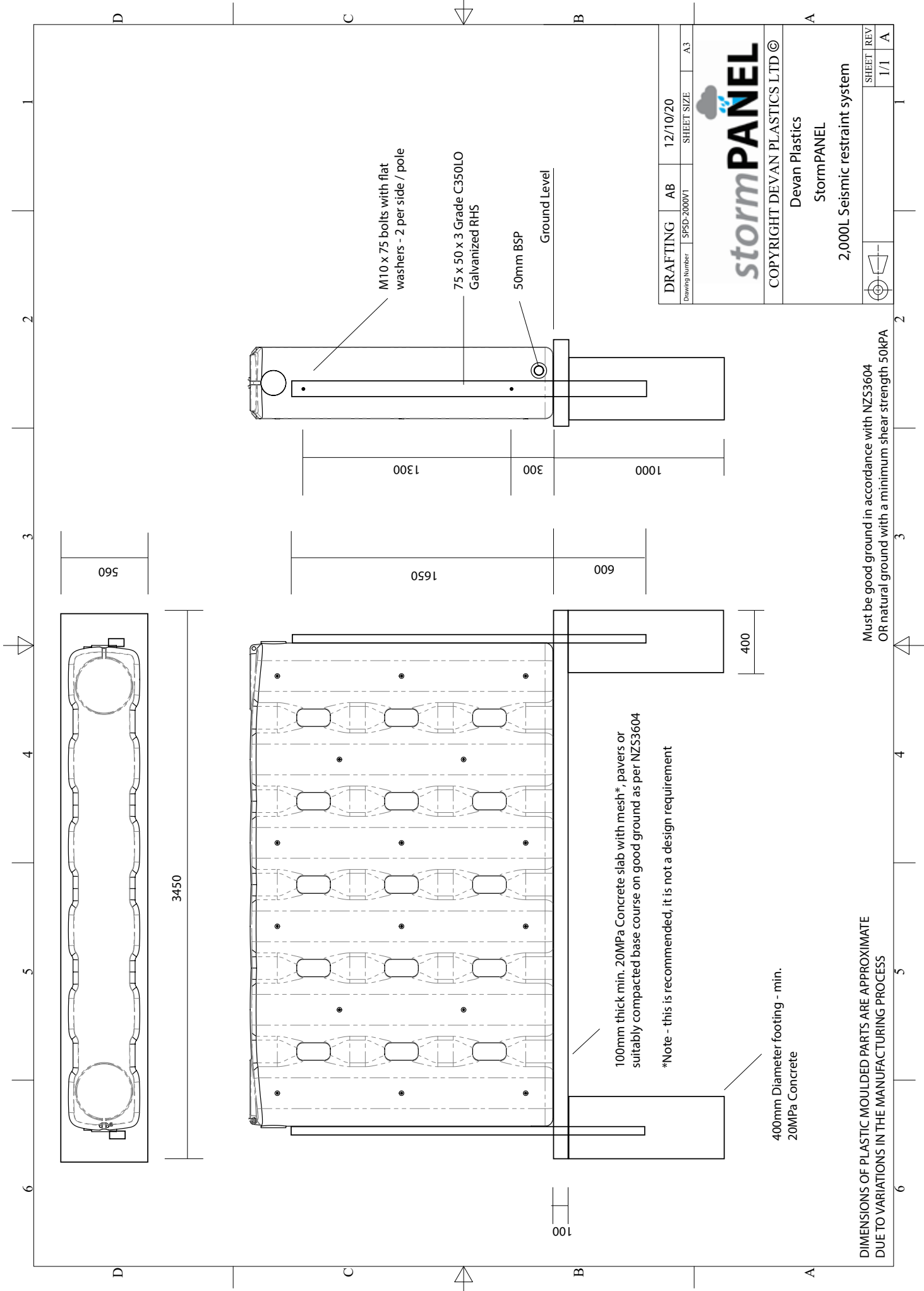


DRAFTING	AB	12/10/20
Drawing Number	SP-2000V1	SHEET SIZE
		A3
stormPANEL		
COPYRIGHT DEVAN PLASTICS LTD ©		
Devan Plastics		
2,000L StormPANEL		
SCALE		SHEET REV
1:20		1/1

DIMENSIONS OF PLASTIC MOULDED PARTS ARE APPROXIMATE
DUE TO VARIATIONS IN THE MANUFACTURING PROCESS

INSTALLATION DRAWINGS





DRAFTING	AB	12/10/20
Drawing Number	SPSD-2000V1	SHEET SIZE
		A3

stormPANEL
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Devan Plastics
 StormPANEL
 2,000L Seismic restraint system

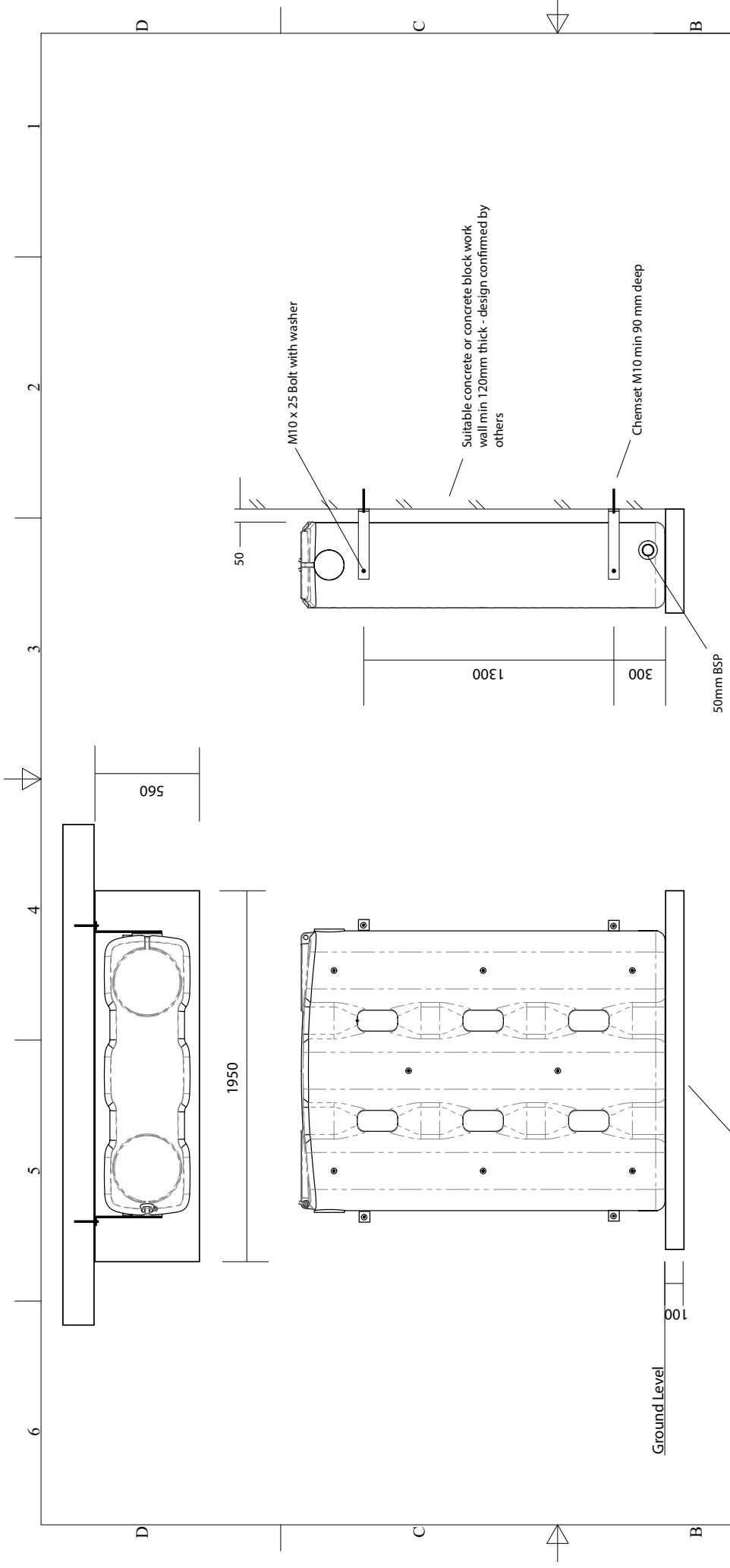
		SHEET REV
		1/1
		A

100mm thick min. 20MPa Concrete slab with mesh*, pavers or suitably compacted base course on good ground as per NZS3604
 *Note - this is recommended, it is not a design requirement

400mm Diameter footing - min. 20MPa Concrete

Must be good ground in accordance with NZS3604
 OR natural ground with a minimum shear strength 50kPa

DIMENSIONS OF PLASTIC MOULDED PARTS ARE APPROXIMATE
 DUE TO VARIATIONS IN THE MANUFACTURING PROCESS



M10 x 25 Bolt with washer

Suitable concrete or concrete block work wall min 120mm thick - design confirmed by others

Chemset M10 min 90 mm deep

50mm BSP

1950

560

1300

300

Ground Level

100

100mm thick min. 20MPa Concrete slab with mesh*, pavers or suitably compacted base course on good ground as per NZS3604

*Note - this is recommended, it is not a design requirement

DRAFTING	AB	12/10/20	SHEET SIZE	A3
Drawing Number	SPWB-1000V1			



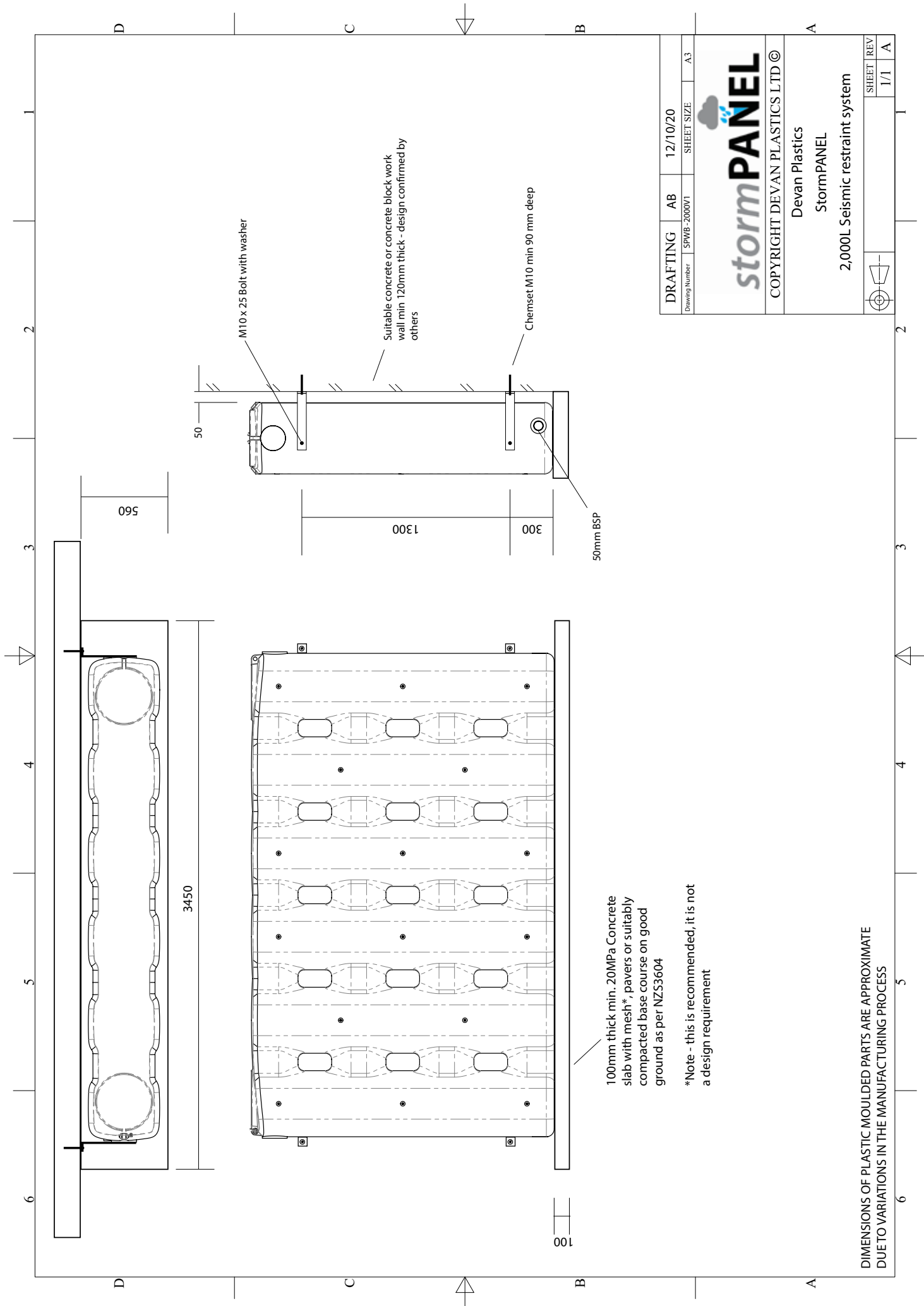
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Devan Plastics
StormPANEL

1,000L Seismic restraint system

	SHEET	REV
	1/1	A

DIMENSIONS OF PLASTIC MOULDED PARTS ARE APPROXIMATE DUE TO VARIATIONS IN THE MANUFACTURING PROCESS



DRAFTING	AB	12/10/20
Drawing Number	SPWB-2000V1	SHEET SIZE
		A3



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StormPANEL

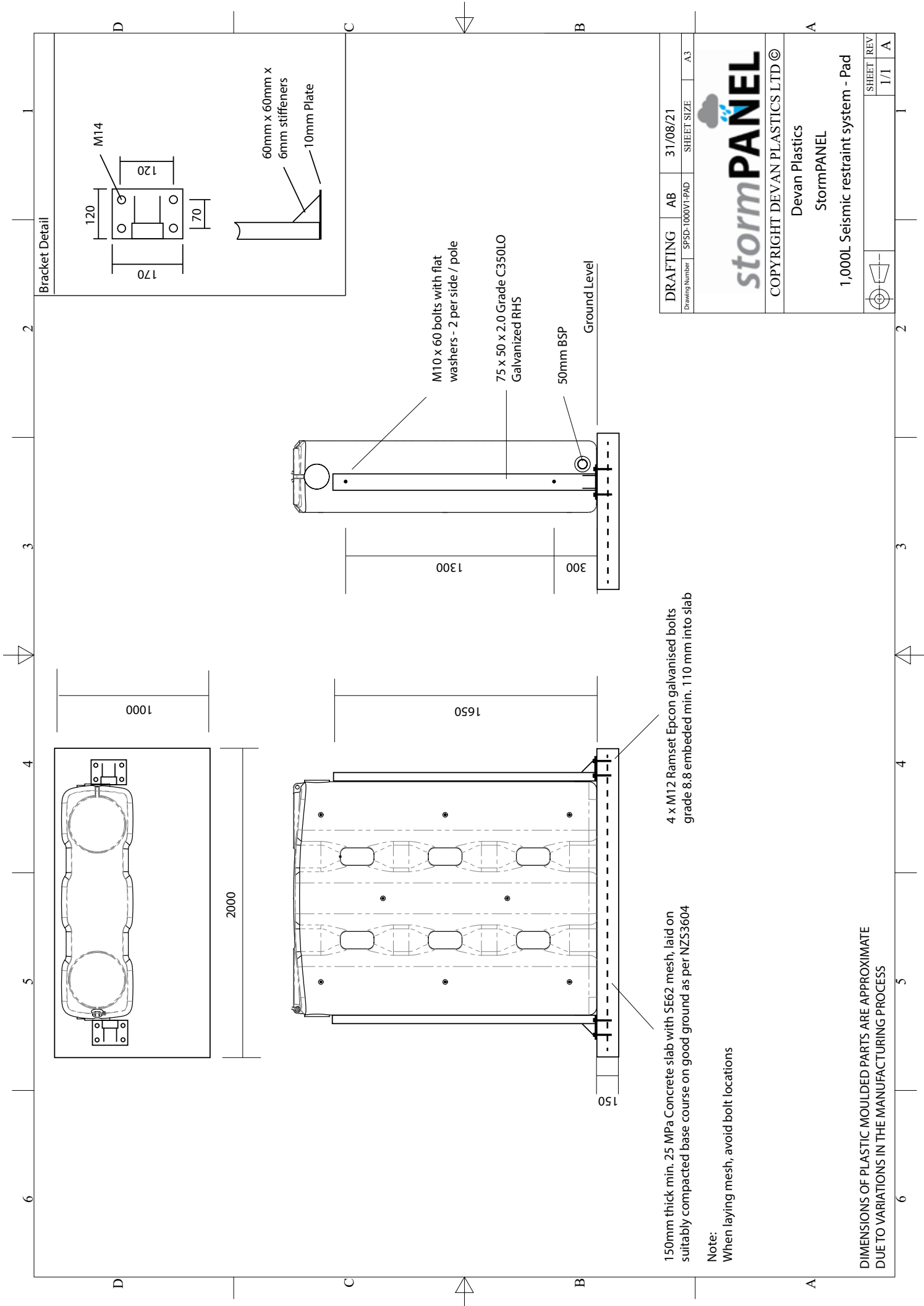
2,000L Seismic restraint system

	SHEET	REV
	1/1	A

100mm thick min. 20MPa Concrete slab with mesh*, pavers or suitably compacted base course on good ground as per NZS3604

*Note - this is recommended, it is not a design requirement

DIMENSIONS OF PLASTIC MOULDED PARTS ARE APPROXIMATE DUE TO VARIATIONS IN THE MANUFACTURING PROCESS



150mm thick min. 25 MPa Concrete slab with SE62 mesh, laid on suitably compacted base course on good ground as per NZS3604

4 x M12 Ramset Epcon galvanised bolts grade 8.8 embedded min. 110 mm into slab

Note:
When laying mesh, avoid bolt locations

DRAFTING AB 31/08/21
Drawing Number SPSPD-1000V1-PAD SHEET SIZE A3

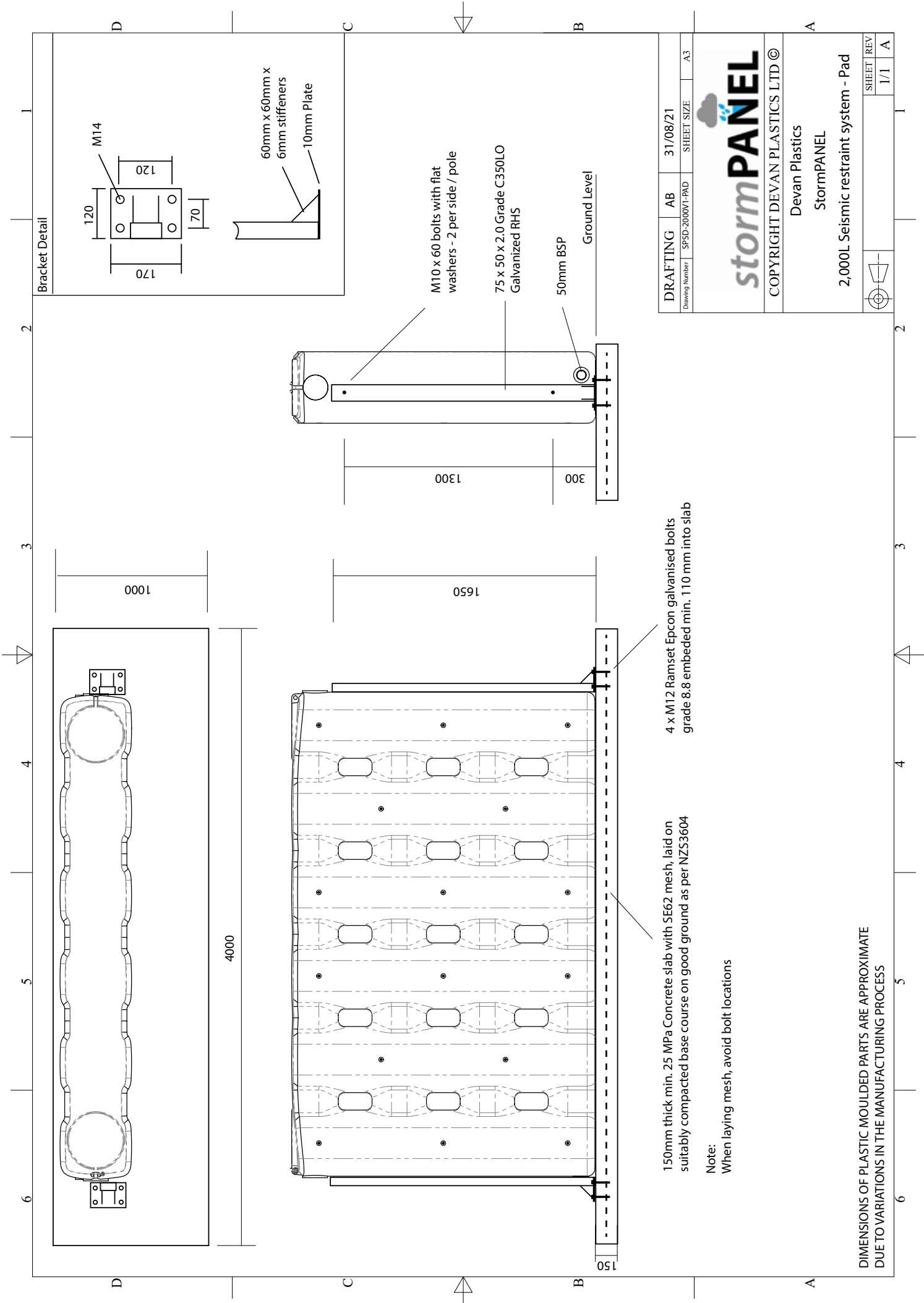


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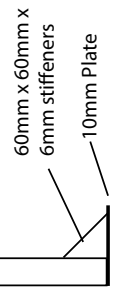
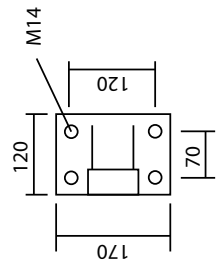
1,000L Seismic restraint system - Pad

DIMENSIONS OF PLASTIC MOULDED PARTS ARE APPROXIMATE
DUE TO VARIATIONS IN THE MANUFACTURING PROCESS

SHEET	REV
1/1	A



Bracket Detail



M10 x 60 bolts with flat washers - 2 per side / pole

75 x 50 x 2.0 Grade C350LO Galvanized RHS

50mm BSP

Ground Level

4 x M12 Ramset Epcon galvanised bolts grade 8.8 embedded min. 110 mm into slab

150mm thick min. 25 MPa Concrete slab with SE62 mesh, laid on suitably compacted base course on good ground as per NZS3604

Note:
When laying mesh, avoid bolt locations

DRAFTING	AB	31/08/21
Drawing Number	SPSD-2000VI-PAD	SHEET SIZE
		A3



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Devan Plastics
StormPANEL

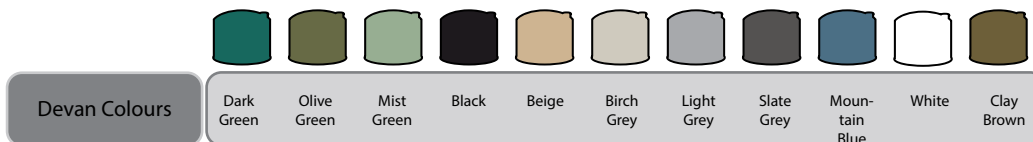
2,000L Seismic restraint system - Pad

DIMENSIONS OF PLASTIC MOULDED PARTS ARE APPROXIMATE
DUE TO VARIATIONS IN THE MANUFACTURING PROCESS

	SHEET	REV
	1/1	A

ACCESSORIES

Code	Product	Height	Width	Depth	Weight
SPT1	1,000L	1,950mm	1,520mm	460mm	60 kg
SPT2	2,000L	1,950mm	3,130mm	460mm	120 kg
SPAKRP	Restraint pole kit	2,250mm	75mm	50mm	30 kg
SPAKPA	Restraint pad kit	1,650mm	75mm	50mm	20kg
SPAKWB	Wall bracket restraint kit	-	-	-	2 kg
SPAKC50	50mm Multi-tank Connection Kit	-	-	-	< 1 kg
TAF20ET	20mm EZTAP	-	-	-	< 1 kg
TAF25ET	25mm EZTAP	-	-	-	< 1 kg
TAF32ET	32mm EZTAP	-	-	-	< 1 kg
TAF50ET	50mm EZTAP	-	-	-	< 1 kg
TAS80W	80mm Wallace Seal	-	-	-	< 1 kg
TAS90W	90mm Wallace Seal	-	-	-	< 1 kg
TAS100W	100mm Wallace Seal	-	-	-	< 1 kg
TAKOH90	90mm Flanged Elbow - High Overflow	-	-	-	< 1 kg
TAKOV80	80mm Overflow Vent Kit	-	-	-	< 1 kg
TAKOV90	90mm Overflow Vent Kit	-	-	-	< 1 kg
TAKOV100	100mm Overflow Vent Kit	-	-	-	< 1 kg



Please note that the colours represented above are the best match possible within screen and printing variations.

WARRANTY

Your Devan product has been manufactured to the highest standards utilising advanced technology and production procedures. Devan Plastics Limited ("Devan") offers a warranty to the original purchaser that their products to be free of defects in workmanship or materials for the period of 10 years in domestic applications and 5 years in commercial applications, provided the provisions detailed below have been complied with.

A third party manufacturers' warranty applies to all other components used in the manufacture of Devan products. Third party manufacturer's warrant their products are free from defects in material and workmanship at the time of shipment and will make good, by repair or at its option replacement, any defects which occur during the warrantable period as defined in Appendix A provided the provisions below have been complied with.

Necessary provisions

In order for a warranty claim to be accepted by Devan or a third party manufacturer the following provisions must be met:

- 1) The equipment was correctly installed and in proper use as was intended by the manufacturer in accordance with the Installation and operating instructions supplied, and generally accepted code of practice or national standard/s.
- 2) The warranty period from the date of invoice to the end user has not lapsed.
- 3) The claim for goods under warranty arises solely from faulty material or manufacturers' workmanship.
- 4) The customer or agent of the customer must return goods under warranty (where appropriate), stating the date and place of purchase promptly and within the product warranty period.
- 5) No repairs must be entered into by anybody other than a specified distributor or repairer as agreed and appointed by Devan.
- 6) Devan must be given a reasonable opportunity to inspect the tank and, if deemed necessary by Devan to have an independent engineering or other expert analysis of the cause of failure carried out.

Exclusions

Both the Devan warranty and third party manufacturer's warranty do not cover the following exclusions:

- 1) Except where otherwise stated by law, the manufacturer shall not be under liability for any injury, damage, or loss, including consequential damage or loss resulting from the use of its products, or resulting from defects therein. This may specifically refer to the cost of but not limited to lifting, installation, electrical or plumbing requirements.
- 2) Damage caused by abnormal operating conditions, war, violence, cataclysm, or any force majeure.
- 3) Damage caused by the equipment being used for an application for which it is not manufactured or recommended by the original manufacturer or Devan.
- 4) Damage caused by sand or abrasive materials, corrosion due to salt water, hazardous liquids, electrolytic action, and liquid temperatures beyond the recommended range, cavitation, and improper power supply voltage or outages.
- 5) Attempted repair, dismantling or any other tampering with any component of the system without the prior written approval of Devan will void any warranty.
- 6) If the Devan product or third party component has not been maintained in accordance with Devan.
- 7) Ingress of water or insect infestation to electrical components due to post-manufacture electrical penetrations not being appropriately protected.
- 8) Incorrect installation or negligent practices of the installer of the product.
- 9) Tank colour that may change or fade over time.
- 10) Any transport, insurance and freight costs.

This warranty does not exclude any condition or warranty implied by the Consumer Guarantees Act 1993, Fair Trading Act 1986, and the Commerce Act 1986 and is in addition to any rights the purchaser may have at law.



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