

# Operation & Maintenance Manual 2017

## Domino VGS-P



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# DOMINO VGS RANGE

## Introduction

### PRODUCT OVERVIEW

- The Domino VGS-P is an oil/water separator developed to effectively remove free oil, grease and suspended solids from wastewater.
- The Domino VGS-P operates by ingenious control of both fluid velocity and pressure. These forces gently coax non-emulsified impurities from water by allowing high density contaminants to fall into a sludge retaining area at the bottom of the vessel, and oil droplets and low density suspended solids to rise to the top of the vessel. The oil and suspended solids then drain of into a waste tank .
- Acclaimed by major water authorities around the world as "the best technology of its kind", the Domino VGS-P can be used as a stand-alone separator or to supplement the performance of existing systems.
- Because it stays clean it maintains its performance!

### FEATURES & BENEFITS

#### Performance

- Due to its ingenious design the Domino VGS-P is capable of continually meeting the performance standards set by the EPA and other regulatory authorities.

#### Suspended Solids

- Low density suspended solids are encapsulated by the oil and progress to the top of the Domino VGS for discharge to the waste tank. Heavy solids settle to the base of the unit and are removed from the system by the way of a control valve.

#### Flammability

- The turbulent flow principle of the Domino VGS ensures the vapour content of the wastewater being treated is always reduced to safe levels.

#### Construction

- By utilizing a vertical cylinder design the Domino requires far less floor space compared to other systems.

#### Maintenance

- Unique design features enable quick, on-line cleaning of the unit; a feature only found on the Domino VGS. The need to remove plates and use high-pressure jets or chemicals to clean conventional separators has been eradicated.

### PRINCIPLE OF OPERATION

The Domino VGS-P is a flooded system in which the inlet and outlet columns form a U - tube configuration.. The free oil and low - density suspended solids are trapped on one side of the main body and the treated water flows out the other side through a secondary hydrocarbon removal filter.

The main body of the unit contains an oleophilic polyethylene cone set. Stainless steel cone sets are available if required. The secondary filter contains a stainless steel trash basket and permakleen filter.

At the top of the main body free oil and low density suspended solids are held and eventually they flow out of the system into a waste tank.

The partially cleaned water is directed to the outside of the cones. It then follows a tortuous pattern cascading down and around the cone set.

Here the lower density fluid (oil) is drawn up the incline of the oleophilic surface of the cone set and back into the low-pressure centre of the Domino VGS-P, where it co-mingles with the incoming fluid and is redirected to the top of the main body.

Convection current is thus created by the density variation down the fluid column and the upward flow of the incoming oily water.

The "treated" water will enter the output leg, at a point when the fluid is most free of contaminants, and flow up and out of the system into the secondary filter and on to approved discharge point.

Heavy solids and sludge are removed from the system via a sludge valve at the base of the main body

DV-0700



DV1500-3000NG

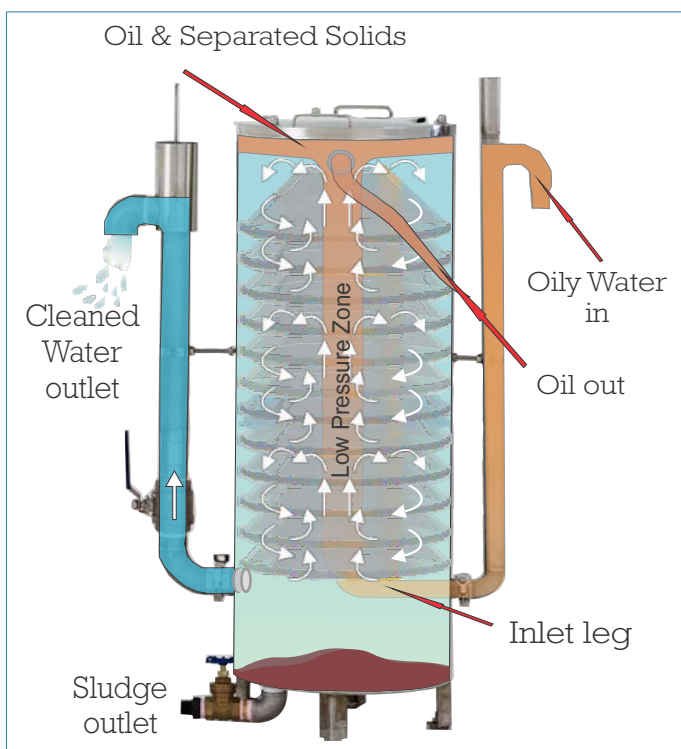


**\*\*\* USE ONLY LICENCED ELECTRICIAN FOR ELECTRICAL WORK \*\*\***

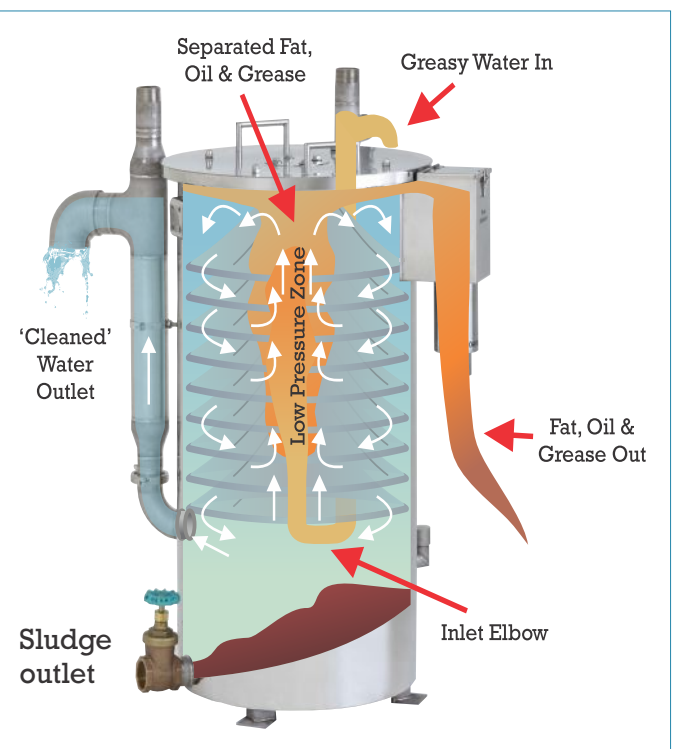
- Position separator on level slab and bolt down.
- Connect inlet pipe to pump.
- Connect outlet pipe to clean water outlet. Ensure that suitable sampling stations are available to suit your councils requirements. Also ensure an uninterrupted vertical fall from this outlet for some distance. (MIN 300mm)
- Connect waste oil outlet pipe to suit drum size.
- Position pump from skimmer into desired position and bolt down.
- Use barrel unions either side of pump for easy removal.
- Fit pump suction line to end 300mm from bottom of holding tank and fit a swing check valve above high water line if skimmer not supplied.
- Install floating skimmer if supplied and fit swing check valve above high water line.
- Install float level switch to deactivate pump when level of holding tank falls to within 300mm of the bottom of the tank. Install second float switch to activate at high water level point.
- The pump should turn on when the liquid level is approx. 750mm above the bottom of the tank. When levels are set, fix float level switches firmly ensuring that its travel is not hampered in any way.
- Fill pump before starting up.
- Fill VGS and permakleen filter with clean water until water flows from the clean water outlet and then follow the startup procedure sheet.

## How a Domino VGS Works

**DV-0700**



**DV1500-3000NG**



## About Domino Skimmer

The Domino range of stainless steel oil and grease skimmers improve overall system efficiencies and prevent the build up of oil and grease in the collection pits. The skimmers ensure a balanced oil/water feed ratio for delivery to the above ground oil separators and waste water recyclers.



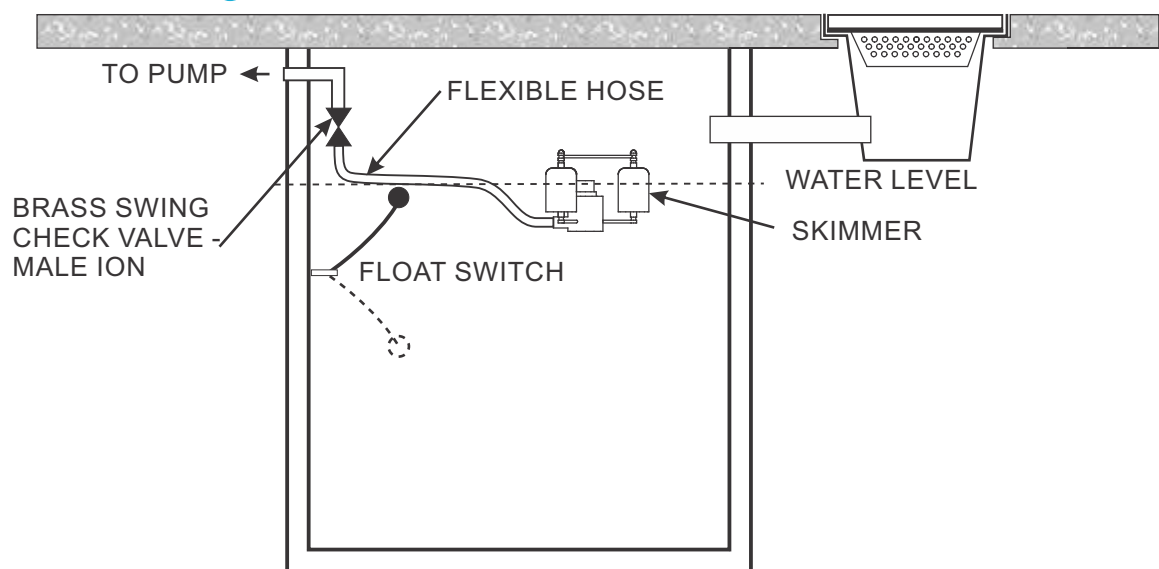
## Installation Instructions

### In the Tank

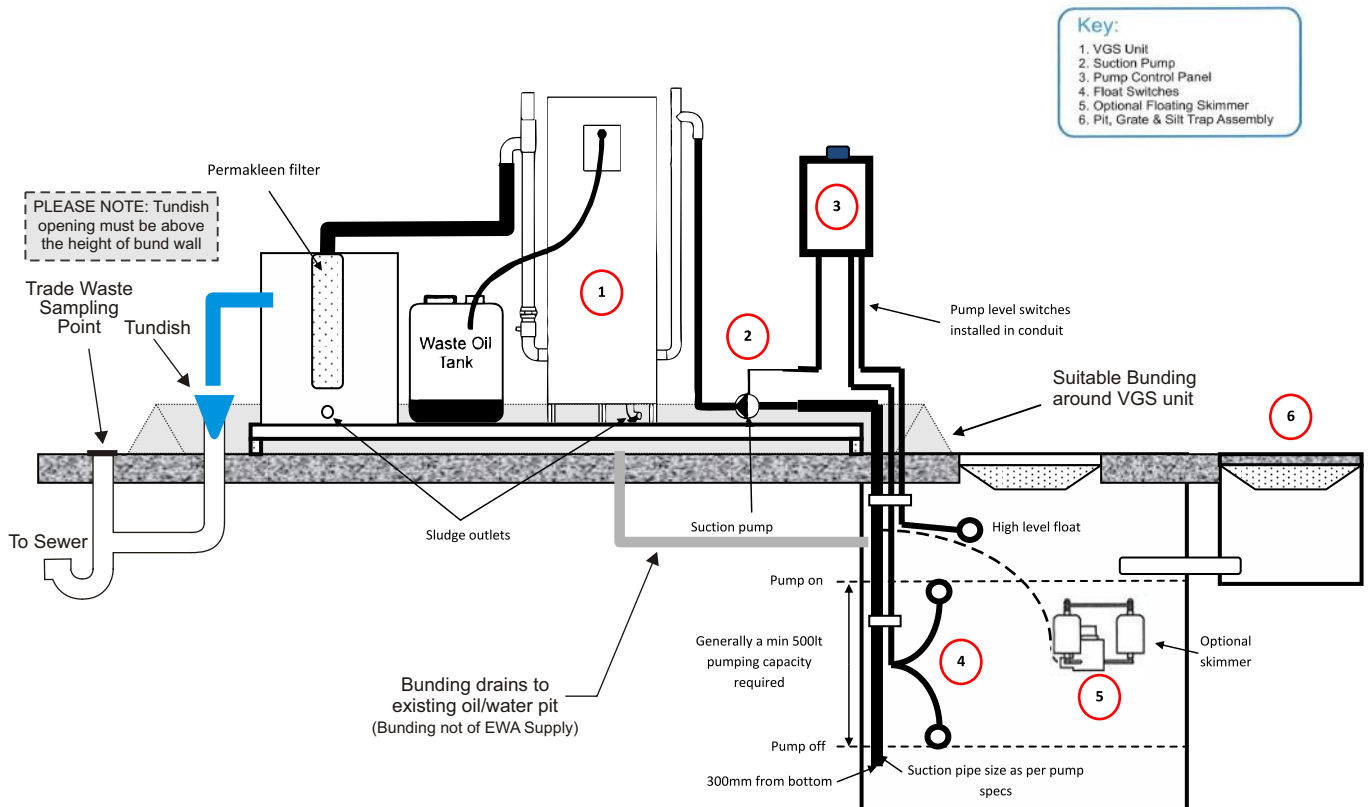
The suction line should be hard plumbed from the pump to the tank. SK130-32mm, SK100-25mm. This line requires a swing check valve installed in the vertical part of the line inside the tank. Terminate the line at or near to the high water mark with a 90° elbow. Connect the nut on the flexible hose to this point.

1. Remove inlet pipe and apply anti seize to the thread. This should be performed monthly.
2. The skimmer can be adjusted for its level in the water by both the 3 S/S buoyancy floats and the inlet pipe. Start with the inlet pipe having at least 25mm of exposed thread. Adjust the 3 floats by changing the position of the locking nuts until it is level and the inlet tube just under the water.
3. The skimmer levels need to be checked when under suction. Adjust accordingly. The skimmer must not suck air. This will cause pump wear and possible foaming in the separator.
4. The trash screen should be cleaned regularly. Open the bottom catch and remove mesh screen. Clear debris and replace.

## Installation Diagram



## TYPICAL VGS-P INSTALLATION



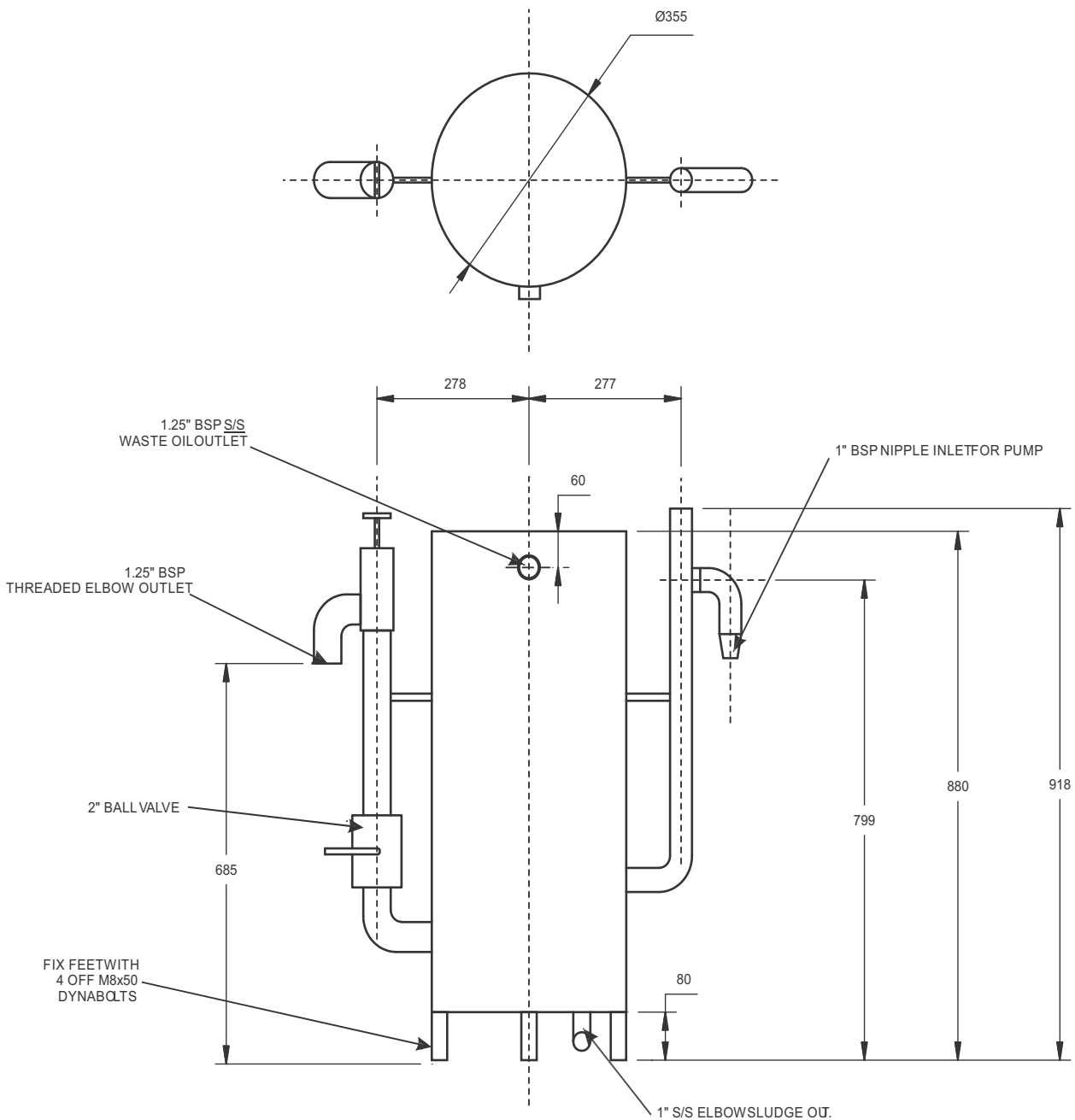




# DOMINO VGS RANGE

## DV-0700 Technical Specifications

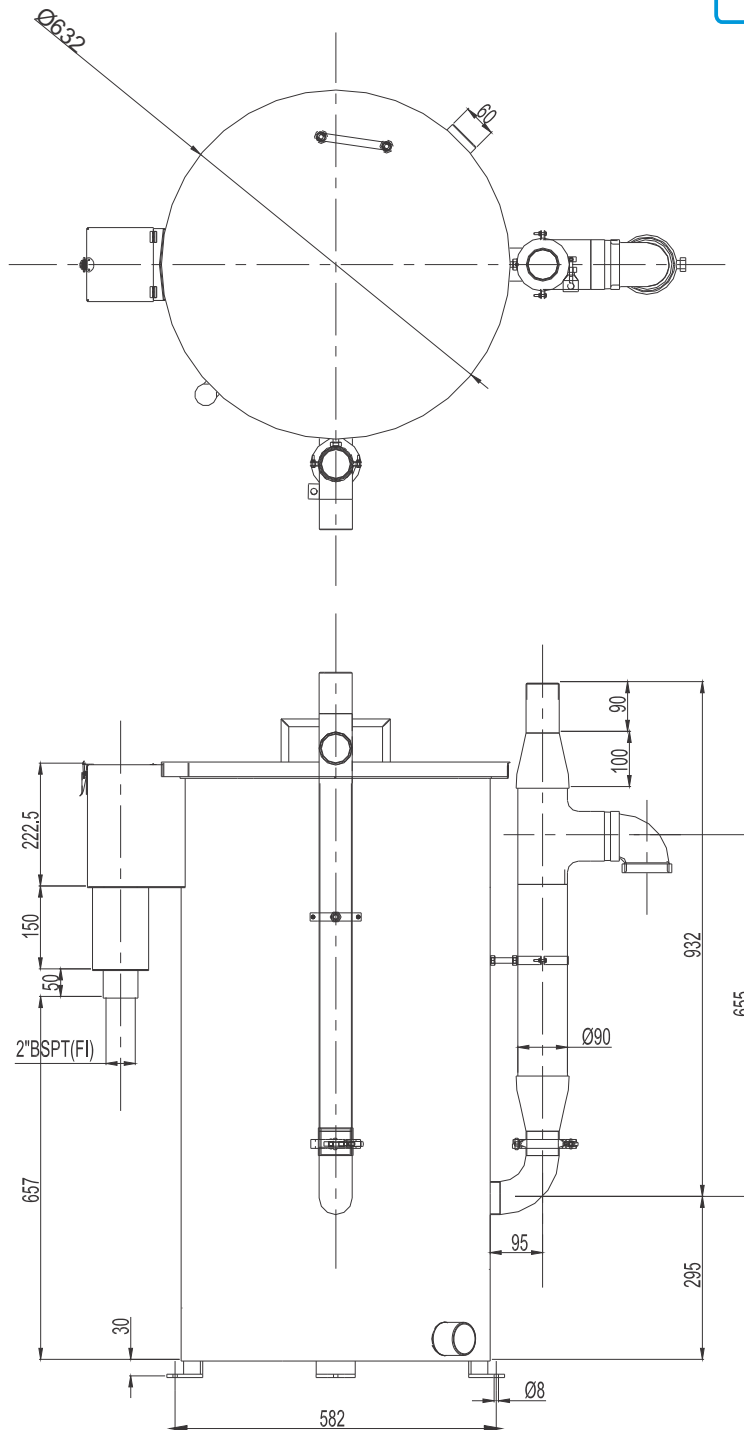
Height:	918mm
Diameter:	355mm
Weight:	60kg
Gauge:	2.0mm



# DOMINO DV-1500 AND DV-3000NG

## Technical Specifications

Height:	1257mm
Diameter:	632mm
Weight:	89kg
Gauge:	2.0mm







# DOMINO VGS RANGE

## Installation & Operation

### **INSTALLATION**

The DOMINO Separator is an above ground unit, which will generally be installed externally in a location adjacent to the collection pit.

Where the DOMINO Separator is to be retrofitted to an existing installation co-ordination with the pump out contractor is required due to modification of the existing grease trap.

- Prior to commencing an installation the following procedures need to be carried out:
- Notify the local water authority of the proposed installation.
- Initial site inspection by both the manufacturer/supplier and the client's representative.
- Preparation of detailed design drawings for the proposed installation.
- Co-ordination with the client and pump out contractor.

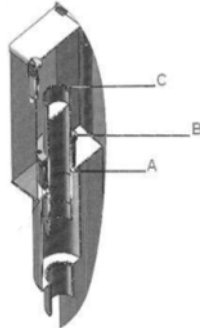
### **SERVICE & MAINTENANCE**

- The DOMINO Separator must be maintained on a strict and regular basis to ensure continual trouble-free operation.
- Any customer proposing to install a DOMINO Separator must commit their business to having a current service contract to maintain the unit to Everything Water's standard of service.
- The pumping out of the collection pit can be integrated into any existing system such as the "Waste Safe system" used by the Sydney Water Corporation, Australia.
- After the first 12 months of operation in coordination with the local Trade Waste Officer, the frequency of service may be altered dependant on the store demand and effluent quality.

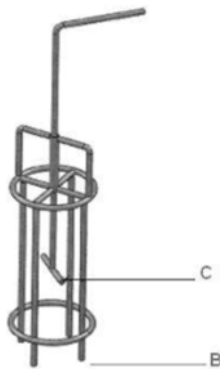
### **Regular Service (every Three Months)**

- Overall visual inspection of the unit.
- Organise a pump out and scrape of the collection pit.
- Flush the unit and check and replace Permakleen filters
- Remove and replace disposable portion of the suction strainer. (If fitted)
- Flush and clean all 'lines' with water.
- Inspect and clean level sensing equipment.
- Check electrical components.
- Inspect the level of solid build up in the pit to assess pump out frequency.
- Check and test automatic sequences. (If fitted)
- Clean the exterior of the unit and surrounding area.
- Complete an inspection report.

**(DV1500-3000NG only)**



**Flow Adjuster  
Detail**



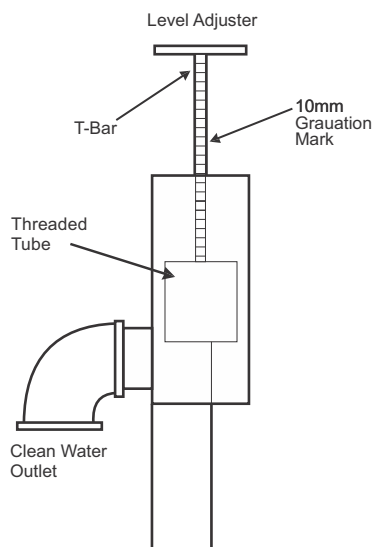
**Tool Detail**

### FOR DV1500-3000NG

1. Using the tool provided place (B) on the locking nut and loosen the nut.
2. Using the Tool place the © bar in the threaded slot (C) on the flow adjuster in a "ANTI-CLOCKWISE" direction, thus raising the thread (C) until the water flows out of the oil outlet.
3. Rotate the threaded bar in a "CLOCKWISE" direction, thus lowering the threaded bar until the flow from the oil outlet is reduced to a "drip".
4. Using the tool provided continue to rotate the threaded bar 10mm (approximately) above the water line.
5. Tighten the lock nut (B) ensuring the rubber ring (A) is secure and causes no water to "drip" into the oil collector.

**\*NOTE: oil will not be seen to discharge from the oil outlet until sufficient oil has built up in the top of the separator this may take some time depending on the amount of the oil present in the waste water being treated.**

**(DV-0700 Only)**



### For DV-0700

1. Loosen the adjuster locking screw.
2. Rotate the "T-Bar" in an ANTICLOCKWISE direction, thus raising the "T-Bar" until water flow out of the oil outlet. Slowly adjust the "T-Bar" until the water is only a drip from the oil outlet.
3. Continue to Raise the "T-Bar" 10mm then lock off.

The Domino VGS is now set correctly and will perform without further adjustment

**\*NOTE: oil will not be seen to discharge from the oil outlet until sufficient oil has built up in the top of the separator this may take some time depending on the amount of the oil present in the waste water being treated.**



# DOMINO VGS RANGE

## Maintenance

The objective of regular maintenance/cleaning of the Domino VGS is to:

- Fluidise (break-up) any encrustation of surface sludge so it will flow out the OIL OUTLET.
- Remove any sludge that has built up on the cones.
- Remove settled sludge from the bottom of the unit.

### Daily

- Check and clean trash screen of skimmer
- Check the level of the oily waste in the waste tank.
- Check control panel for high level light

### Monthly

- Carry out a the routine Maintenance Procedure as detailed below:

**Step 1** Ensure the waste tank is empty and situated under the oil outlet.

**Step 2** Open the Sludge/Solids Outlet valve at the base of the unit and drain until the sludge is removed.

**Step 3** Turn the pump on. (Using the manual switch position if operated through a control box with a manual/off/auto switch fitted).

**Step 4** Close the Clean Water Outlet Valve

**Step 5** Grip the stirring handles on the lid of the unit & rotate the lid back and forth for approximately 15 seconds. This will break up any encrusted surface sludge.

**Step 6** Waste oil will flow into the slops tank. Allow this to continue until only water flows into the slops tank. This indicates that the unit is fully backwashed.

**Step 7** Open the water outlet valve

**Step 8** Turn the pump off. (Switch back to auto position) . Ensure that oil, sludge and water outlets are free of blockages at all times.

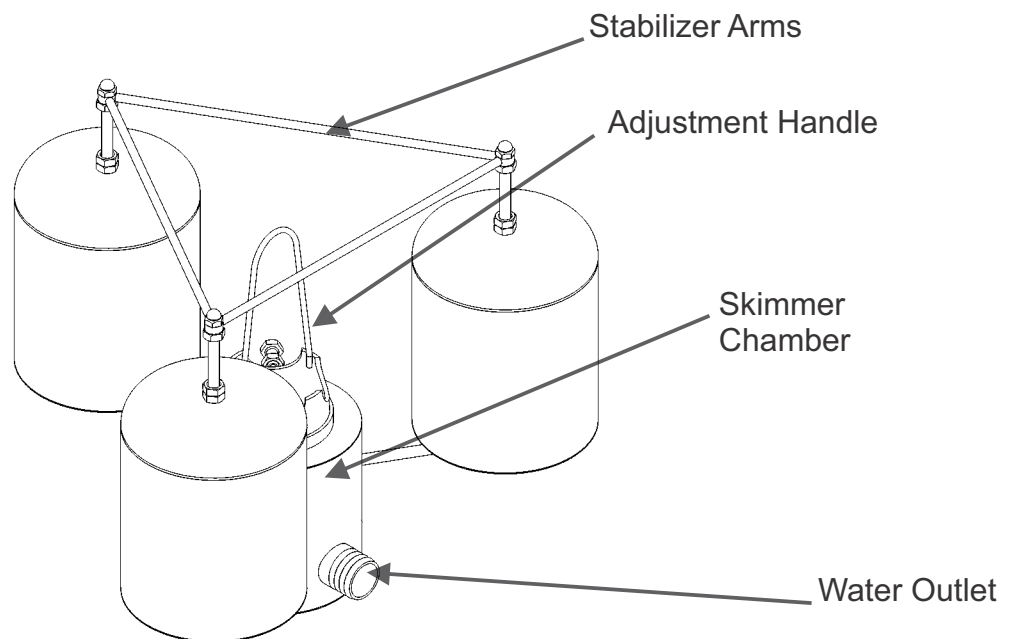
- Remove the cones from the Domino VGS and inspect the plates.
- Replace any cracked or distorted cones.

### Cleaning the Oil & Grease Skimmer

1. Pull the skimmer out of the tank via the adjustment handle or stabilizer arms.
2. Unlock Skimmer latch on the side and open door.
3. Pull basket out of skimmer.
4. Pull out all rubbish and Clean Basket. (Ensure all Rubbish is cleaned out. even the smallest bit can affect the performance of the skimmer)
5. Place basket inside Skimmer chamber.
6. Close door and lock hatch.
7. Place Skimmer back inside tank. ensure skimmer floats upright.



**(note:when taking skimmer out of tank. Move skimmer away from opening.)**





# DOMINO VGS RANGE Manufactures Warranty

1. The Domino range of Vertical Gravity Separator (VGS) manufactured by Everything Water Australia Pty Ltd (EWA) are covered by warranty for a period of 3 years from delivery.
2. EWA will make good by repair, or at their option, the replacement of faulty parts under warranty, provided always that:
  - a. The equipment was correctly installed and properly used in accordance with EWA installation and operating instructions and accepted codes of good engineering practice.
  - b. Any claim under warranty arises solely from faulty design, material or workmanship.
  - c. Repairs are carried out with the written approval of EWA who may chose to carry out the repairs themselves or at their option nominate an approved repairer for the purpose.
  - d. All costs other than the direct repair costs are borne by the purchaser
3. Auxiliary equipment not of EWA manufacture but supplied by EWA as part of a package will be protected by the original manufacturers warranty. EWA warranty is limited to that extent. Copies of these warranties are available upon request.
4. EWA warranty does not include any of the following:
  - a. Claims for third party liability for damage caused by the failure of any of the company's products
  - b. Damage caused by abnormal operating conditions, war, terrorism, violence, storm cataclysm or any other force.
  - c. Damage caused by equipment being used for an application for which the product is not recommended.
5. The decision of EWA in relation to any claims or disputes over warranty is final
6. The warranty is in lieu of all other warranties and conditions expressed or implied, written or oral, statutory or otherwise, which are hereby negated and excluded.
7. This express warranty does not exclude any conditions or warranty implied by the Trade Practices Act 1974 or separate state laws and is in addition to any other right that the original purchasers or any subsequent purchaser may have at law.

In case of claim please contact Everything Water Australia Pty Ltd  
at [sales@everythingwater.com](mailto:sales@everythingwater.com) or call us at 1300 368 108