



**ENVIRONMENTAL PUMPING SYSTEMS**

**GeoCanister™**

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**PASSIVE PRODUCT ONLY  
RECOVERY SYSTEM**





## GROUNDWATER REMEDIATION

# GeoCanister™

## PASSIVE PRODUCT RECOVERY

The **MGS Geo-Canister™** is designed to recover passively free-floating hydrocarbon (LNAPL) from groundwater, and is available in diameters of 50 and 100 mm.

It features a floating intake which moves with water level fluctuations up to 500 mm for tidal applications.

A hydrophobic filter is mounted on the top of the **Geo-Canister™** which only allows hydrocarbon to pass through and into the recovery canister mounted underneath.

Depending on the viscosity and relative density it can reduce the product layer down to 0.25 mm.

### FEATURES

- ◆ Low cost
- ◆ Ideal for up-front site investigation
- ◆ Uses no power
- ◆ Clear canister for easy product identification
- ◆ Replaceable filter element
- ◆ Range of sizes & capacities
- ◆ Up to 500 mm travel
- ◆ Available in special high capacity versions
- ◆ Can be easily upgraded to active system





## 1.0 INSTALLATION

### PASSIVE PRODUCT ONLY RECOVERY

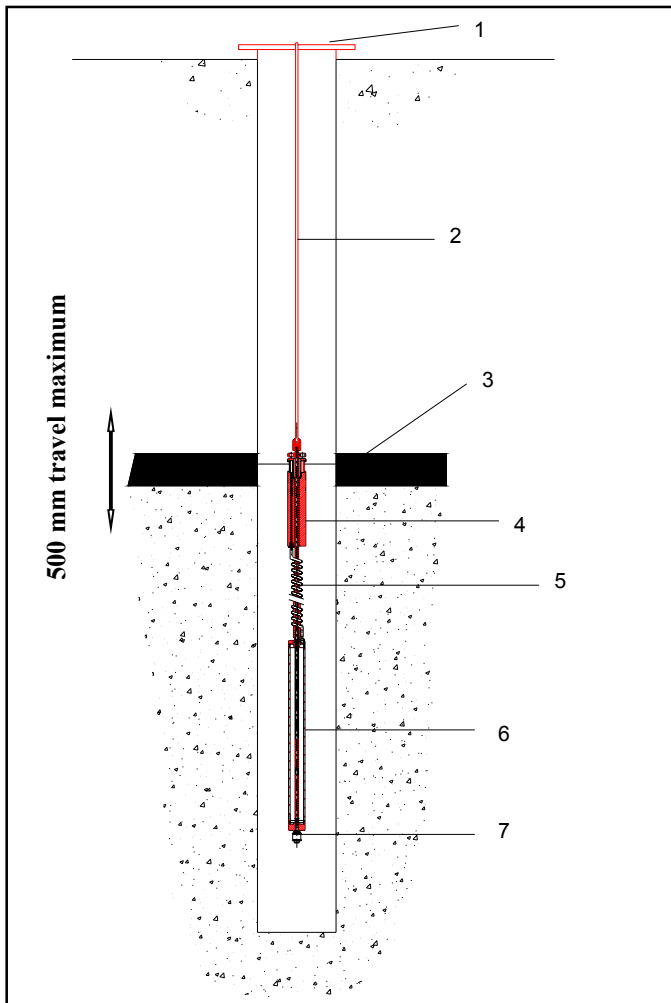
Product only can be collected passively (without a pump) by installing a GeoCanister

### MAIN COMPONENTS

1. Wellhead flange
2. Support rope
3. Floating hydrocarbon (LNAPL)
4. GeoCanister buoy
5. Coiled tubing
6. Product canister (reservoir)
7. Drain valve

### INSTALLATION

1. Make sure the maximum and minimum water fluctuation levels are known.
2. Take product & water level readings with an oil/water interface probe.
3. The **GeoCanister** is designed to allow the floating buoy to be placed at the mid-point of its travel to allow for water table fluctuations in both directions.
4. Lower the **GeoCanister** into the well. The **GeoCanister** will be at the bottom of its travel length.  
  
From the oil/water interface reading adjust the depth (mm) as below so that the **GeoCanister** is placed at its mid-point.
5. Once the **GeoCanister** is in the correct position secure the support rope.



Ensure that the rope is secure.

GeoCanister	High	Low
50-500	+250	-250
100-500	+250	-250
50-1000	+500	-500
100-1000	+500	-500



When reinstalling make sure the drain valve is closed.

### EMPTYING

To empty, simply remove it from the well, open the bottom drain valve and transfer the recovered product into a suitable container.

## 2.0 OPERATION & MAINTENANCE



The **GeoCanister** has been designed for minimum maintenance but the amount of maintenance will depend on individual site conditions.

The **GeoCanister** consists of a hydrophobic filter element which is mounted on the top of the floating buoy. The element has a fine micron mesh which, after time may become clogged with fine particles or biological growth.

The product recovered passes down the coiled tube into the clear reservoir below. Depending on the type of product the reservoir may become discoloured after time and may require cleaning. The discolouration will not however affect the performance of the **GeoCanister**.

If a noticeable reduction in product recovery occurs although there is plenty of product in the well it is likely that the screen has become clogged.

If the flow reduces and the product thickness reduces then it is likely that this is the maximum flow achievable from the **GeoCanister**.

The special hydrophobic filter is designed to be disposable and therefore should be replaced rather than cleaned as follows:-

1. Unscrew and remove the Quick Connect on top of the **GeoCanister**.
2. Undo the socket set screw in the side of the support disc & remove disc.
3. Unscrew filter cap and remove the filter.
4. Replace with new filter element and re-assemble.
5. Check the free movement of the buoy and the condition of the coiled tube.
6. Check the operation of the bottom valve.
7. Clean and replace in well.

## 3.0 GENERAL SPECIFICATIONS - GEOCANISTERS

MODEL	GC-50-500	GC-100-500
Max outside diameter	45 mm	95 mm
Overall length	1550 mm	1160 mm
Capacity	380 ml	1400 ml
Materials of construction	Stainless steel 316 Nylon PVC Polyethylene	Stainless steel 316 Nylon PVC Polyethylene
Fitting type	Quick connect	Quick connect
Float range	500 mm	500 mm
Minimum water depth required for operation	1015 mm	1050 mm
Weight Kg	2.9	5.7



## 4.0 FAULT FINDING - GEOCANISTER

Problem					
No recovery	X				
Very slow recovery		X			
Water in canister			X	X	X

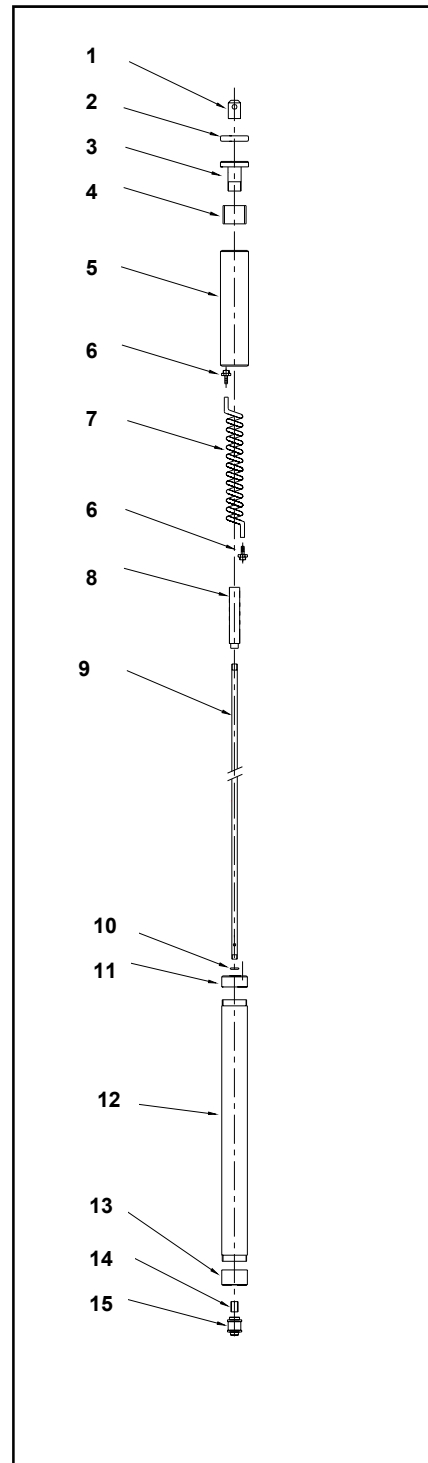
Remedy Letter	a	b	c	d	e
Possible Cause	No product in well	Hydrophobic filter blocked	Water fluctuation more than 500mm	Damage to canister or 'O' ring	Bottom valve left open

Remedy	
a	Check presence/absence of product with oil/water interface probe
b	Remove hydrophobic filter & replace
c	Check water fluctuation level
d	Check canister and 'O' rings for damage
e	Empty canister & close bottom valve



**5.0 SPARE PARTS - GEOCANISTER MODEL GC50/500/380**

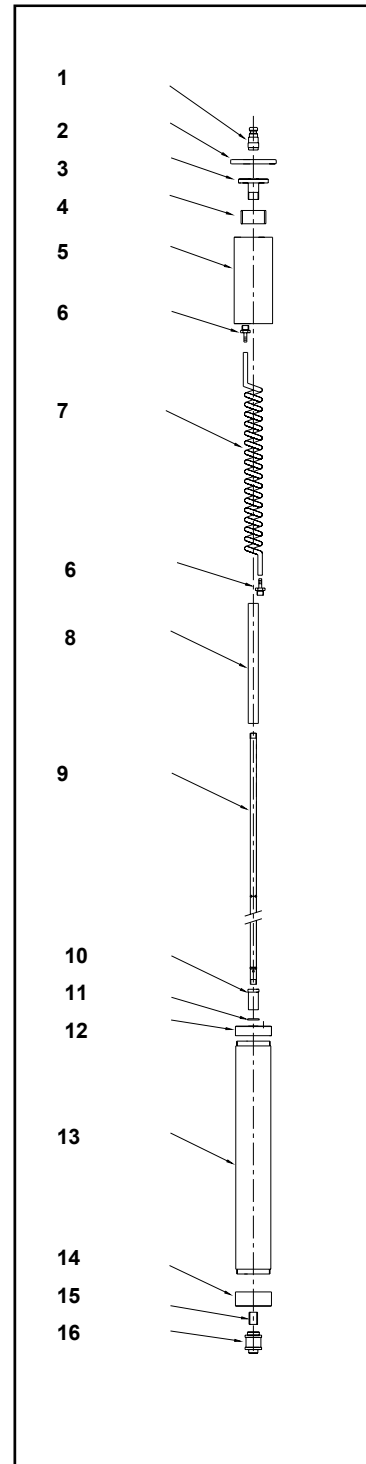
Item	Part number	Description	Qty
1	G0024	Lifting adaptor	1
2	G0035	Support ring	1
3	G0021	Filter cap	1
4	G0027	Hydrophobic filter	1
5	G0016	Float type 100-HP	1
6	K21-001	Hosetail	2
7	G0014/G	Coiled tube GC-50	1
8	G0045	Stop rod	1
9	G0043A	SS central tube GC-50-380	1
10	L10-008	'O' ring	1
11	G0041	Canister top plug	1
12	G0044A	Canister - 380 ml	1
13	G0040	Canister bottom plug	1
14	K24-075	Brass nipple	1
15	N19-001	Drain valve	1





### 6.0 SPARE PARTS - GEOCANISTER MODEL GC100/500/1400

Item	Part number	Description	Qty
1	R18-001	Quick connect	1
2	G0033	Support disc	1
3	G0018	Filter cap	1
4	G0020	Hydrophobic filter	1
5	G0016	Float type 100-HP	1
6	K21-002	Hose-tail	2
7	G0006/G	Coiled tube GC-100	1
8	G0045	Stop rod	1
9	G0050A	SS central tube GC-100-500	1
10	G0053	Slide valve	
11	L10-002	'O' ring	2
	L10-010	'O' ring (not illustrated)	1
	L10-011	'O' ring (not illustrated)	1
12	G0041	Canister top plug	1
13	G0051A	Canister - 1400 ml	1
14	G0047	Canister bottom plug	1
15	K24-075	Brass nipple	1
16	N19-002	Drain valve	1



# Environmental Pumping Systems



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