

2. EQUIPMENT PACKAGE

A summary of the equipment packages are as follows;

- i. **1 no. 6m Vibrocorer** *Including;*
 - Vibrocore base, frame and legs
 - Pot and vibration motors
 - Cabling and wiring
 - Painting
 - Load testing, pressure testing, testing and commissioning.
- ii. **1 no. Vibrocorer container** *i.e. container to house all tools & equipment required to operate the Vibrocorer. Including;*
 - Container fabrication
 - Electrics and starter panel. Electrical supply required for container on board vessel of 1 x 220V 32A, 1 x 415V 63A 3PH+E 50/60Hz. Container will supply power to umbilical for vibrocorer power.
 - Painting
 - Tools / tool chest
 - Svarog Logo
 - Load testing, testing and commissioning.
- iii. **1 no. Spooler and Umbilical Cable** *i.e. Spooler and Umbilical providing electrical supply for vibrocorer. Including;*
 - Fabrication
 - Supply and fit umbilical. 700 meters umbilical will be supplied. Max water depth achievable – 500m.
 - Fair lead (i.e. umbilical handling)
 - Electrical spares for umbilical spooler and starter panel
 - Load testing, testing and commissioning.
- iv. **Spares and consumables** *detailed below are based on providing spares and consumables for **10 no. Vibrocore tests only.** Including;*
 - Barrells x 5
 - Core catchers x 20
 - Cutting shoes x 5
 - Liners x 20
 - Cable repair kit x 1
 - Core caps (100 x yellow, 100 x black)
- v. **1 no. Offshore Laboratory Container**
 - Purpose build laboratory container to log and test 1m lengths of vibrocore.
 - Svarog Logo

3. SPECIFICATIONS

VIBROCORER - ZENKOVITCH TYPE – STANDARD VC

Zenkovitch type vibrocorers are both robust and extremely compact making them particularly suitable for deployment from relatively small vessels such as workboats, beam trawlers and small supply boats.

Special Features

- Maximum working water depths of 500m
- Easily transported by road, sea or air

Applications

- Pre-dredge surveys
- Cable route surveys
- Environmental investigations
- Mineral/Aggregate prospecting
- Inshore civil engineering site investigations
- Offshore oil and gas pipeline geotechnical investigations

Specification

- Twin linear electric motors, 3 hp, 415 V, 50 Hz minimum 20 kVA
- **FAOL will supply standard liners of 109mm I.D. and 113.5mm O.D. and will supply standard barrels of 117mm I.D. and 127mm O.D.** This meets Svargo requirements as per the following “*The minimum diameter of soil sampling is subject to Russian regulatory documents. According to Russian Doc GOST 12071-2000 the minimum diameter of soil sample of Sand and Very Stiff to Hard Clay is 90mm and minimum diameter of soil sample of Stiff to Soft Clay is 100mm. Due to these conditions it is recommended to get corer equipped with PVC liners 100 mm I.D.*”
- Stainless steel tulip type core catchers.

Equipment Specification

UNIT	HEIGHT (M)	BASE (M)	WEIGHT (KG)
6 metre	7.3	2.9 x 1.8	2,000

OFFSHORE LABORATORY CONTAINER

One purpose built OFFSHORE laboratory container to log and test 1m lengths of vibrocore.

Unit will be a new standard ISO 20' shipping container converted for use as an offshore Laboratory with large bulkhead fitted with large window and door with window, insulated walls, ceiling and floor, walls will be covered in aluminium chequer plate, ceiling covered in laminated board and floor in non slip rubber matting.

Three metre long work benches will run down each side of the unit topped with 3mm stainless steel work surface and fitted with shelving underneath. Ceiling mounted fluorescent lighting will be fitted and multiple 2 pin marine electrical sockets will be fitted above the work surfaces. The unit will have full AC. All electrical ring mains will be connected to a wall mounted consumer unit requiring 230v 1ph 50Hz electrical supply. An industrial sink with taps will be fitted requiring connection to a water supply. A small area will be fitted out as a desk working area for an engineer / geologist.

Container will be painted externally in our standard marine coating system and Svarog corporate logos affixed, both to Client instruction and full international color codes.

Laboratory equipment included in price:

- Liner cutting rig
- Digital electric soil drying ovens
- Digital hand held Thermal conductivity meter
- Torvane kits
- Pocket penetrometer kits
- 10Mp Digital camera with lights
- 2.2kg capacity triple balance scales
- Munsell colour books
- 33.3cm³ Density ring with extruder
- 100cm³ Density ring with extruder
- ASTM Motorised Laboratory mini vane complete with set of calibrated vane Springs, two sets of vanes.

PENETROMETER

NIKEL PLATED, STEEL TESTING PROD, $\text{TON/FT}^2\text{-KG/CM}^2$ GRADUATION, CHROMIUM PLATED HOUSING.

MAINTENANCE

THE SCALE AND THE CALIBRATED SPRING INSIDE THE PENETROMETER SHOULD BE KEPT CLEAN.

FOR DISSEMBLING THE INSTRUMENT, PLEASE:

- ✓ UNPLUG THE PENETROMETER'S PIN
- ✓ EXTRACT THE PENETROMETER'S PISTON, SPRING AND SETTING WASHERS
- ✓ MAKE NECESSARY CLEANING: OIL AND DRY ACCURATELY ALL PARTS WITHOUT DEFORMING THE SPRING
- ✓ RE-ASSEMBLE THE PENETROMETER IN PROPER ORDER AND RE-PLUG THE PIN IN THE SOCKET

INSTRUCTIONS FOR USE

THE PENETROMETER IS USED FOR CLASSIFYING SAMPLES OF SOIL ON THE BASIS OF THEIR RESISTANCE TO COMPRESSION. RESISTANCE IS EXPRESSED IN $\text{TON/FT}^2\text{-KG/CM}^2$ AND CAN BE READ DIRECTLY ON THE SCALE.

1. SHIFT THE SLIDING INDEX RING DOWN TO THE LOWEST VALUE OF THE SCALE;
2. PRESS THE PISTON VERTICALLY AGAINST THE SOIL UNTIL IT PENETRATES UP TO THE REFERENCE LINE ENGRAVED ON THE PISTON;
3. READ THE VALUE ON THE UPPER SIDE OF THE SLIDING INDEX RING. TO GET A GOOD AVERAGE VALUE, IT IS SUGGESTED TO PERFORM SEVERAL TESTS.

THE PENETROMETER DOES NOT REPLACE NORMAL LABORATORY ANALYSIS.



TYPE OF SOIL	ALLOWABLE LOAD IN KG/CM ² AT A DEPTH OF 1÷1,5M
PRIMITIVE HARD ROCKS	20÷150
SOFT ROCKS: TUFA, LIMESTONE, SANDSTONE	7÷20
COMPACT, STRATIFIS GRAVEL	5÷7
SOLIDLY STRATIFIED SAND (1)	3 ÷ 5
MIDDLE SIZE SAND	2÷3
LEAN SANDY CLAY AND COMPACT CHALK (2)	2÷3
VERY LEAN CLAY AND WET CLAY (3)	0,5 ÷ 1
EMBANKMENTS (4)	0,5 ÷ 1
LOAM SOIL (5)	0,5
SLUSHED OR SWAMPY SOIL (6)	0÷0,5

- (1) PRESENCE OF WATER REDUCES RESISTANCE
- (2) ONLY IN ABSOLUTE ABSENCE OF WATER
- (3) DEPENDING ON IMBITION
- (4) DEPENDING ON GROUND SETTING
- (5) NOT SUITABLE FOR STABLE CONSTRUCTIONS
- (6) NOT SUITABLE FOR STABLE CONSTRUCTIONS.

THE MAXIMUM SAFETY LOAD MUST BE CONSIDERED AS $1/3 \div 1/4$ OF THE TEST RESULTS.

General Purpose Ovens



50 litre Oven
MINO/50



50 litre Oven with Digital Controls
OV/50/DIG

The GENLAB General Purpose Ovens offer a range of highly efficient, reliable, cost effective units to suit most drying, warming and general laboratory applications

Specifications

- 10 sizes 6 to 200 litres
- Temperature range: 40 to 250°C
- Fluctuation +/- 0.75°C
- Easy clean powder coated body
- Aluminium coated mild steel chamber
- Direct reading thermostat
- Safety overheat thermostat to DIN 12-880, Class 3.1
- Full two year warranty
- C.E. compliant

Options

- Stainless steel chamber
- Fan circulation (30 litre +)
- Microprocessor digital controller with dual display of set point and actual temperature
- Other accessories available on request

Design

The exterior is constructed from sheet steel finished in an easy clean powder coated paint. The interior chamber is made from mild steel coated with aluminium (CLAD) with a stainless steel chamber available as an option. Fitted with fixed shelf runners and removable chrome plated wire grid shelves. The top vent is fitted with a clip to hold a glass immersion thermometer. The vertical style units are fitted with the controls below the door, the horizontal style units with the controls fitted on the side.

Heating

Heated by Incoloy sheathed elements; positioned below the chamber floor for natural convection units and fitted around the fan on the back or side wall of the chamber for mechanical convection units. The 200 litre units have fan circulation as standard.

Controls

The control system comprises of a direct reading thermostat and overheat thermostat both with calibrated scales and tamper proof locks. They also include main switch with indicator and heat and overheat indicators.

Options include a PID Microprocessor controller with dual displays of set point and actual temperature, which are auto-tuned for each individual unit to optimise the heat up, overshoot and control of temperature.

Specifications

Vertical Style

Genlab ref. Number	Capacity (litres)	Internal dims. (H x W x D cms)	External dims. (H x W x D cms)		No. of Shelves	No. shelf positions	Weight (kg)
			<i>without fan</i>	<i>with fan</i>			
MINO/6	6	15 x 23 x 19	41 x 35 x 33	N/A	1	1	7
MINO/18	18	26 x 26 x 27	52 x 38 x 41	N/A	2	2	14
MINO/30	30	24 x 36 x 35	50 x 48 x 49	50 x 48 x 62	2	2	20
MINO/40	40	32 x 36 x 35	58 x 48 x 49	58 x 48 x 62	2	3	23
MINO/50	50	33 x 49 x 33	59 x 61 x 47	59 x 61 x 59	2	3	26
MINO/75	75	33 x 49 x 45	59 x 61 x 60	59 x 61 x 72	2	3	34

Horizontal Style

Genlab ref. Number	Capacity (litres)	Internal dims. (H x W x D cms)		External dims. (H x W x D cms)	No. of Shelves	No. shelf positions	Weight (kg)
		<i>without fan</i>		<i>with fan</i>			
OV/50	50	42 x 41 x 35	45 x 37 x 34	57 x 73 x 47	2	3	31
OV/75	75	42 x 53 x 35	45 x 49 x 34	57 x 85 x 47	2	3	39
OV/100	100	42 x 53 x 46	45 x 49 x 46	57 x 85 x 59	3	4	48



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Humboldt Shear Strength Testers

Shear Strength Testers are recommended for the rapid de shear strength of cohesive soils, for field or laboratory use simple to use with sample trimming eliminated, enabling i in homogenous clays.

Typical applications include determining wall integrity of p readings from Shelby tube and other thin-wall and split cc methods, and readings of chunk sample pits, trenches and devices are widely used by Safety and OSHA Inspectors, I Operators, Field Testing Technicians and Consulting Engin

The new metal Shear Vane Device is now in-stock and av purchase.

Shear Strength Testers

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Pocket Shear Vane, Metal

The NEW Humboldt H-4212MH Pocket Shear Vane Tester provides a quic shear strength values of cohesionless soils. The Pocket Shear Vane is wid measurements of excavations, including trenches and test pits. It is also split core soil samples. It can also be used in the laboratory for evaluaito and OSHA Inspectors, Back Hoe Operators, Field Testing Technicians, Co

The NEW Humboldt Shear Vane Device comes with three vanes, which ar device with the included L-wrench. We also include a custom, heavy-duty quickly attached to your belt with its belt clip, as well as a laminated inst iinstructions to refer to when doing tests.

The Pocket Shear Vane can be used to gather a large number of readings planes without the need to prepare and trim samples. The device can be is slightly larger than the vane surface being used. The Pocket Shear Van grained soils with an undrained strength independent of normal pressure to stiff consistency. Readings can be made from 0 to 1.0 TSF (1 Kg/cm²) (0.05 Kg/cm²) increments.

[Manual: H-4212MH MAN 0712.pdf](#)[Data Sheet: H-4212MH ShearVane.pdf](#)**Pocket Shear Vane, Metal— H-4212MH**



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Torvane Shear Tester Set, Plastic

Similar to H-4212M, but made of plastic. Comes in plastic case.

Torvane Shear Tester Set, Plastic— H-4212

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1. Introduction

The Laboratory Vane Apparatus is based on the original design by the Transport and Road Research Laboratory (TRRL) where torsional load is applied through one of four calibrated springs to a 12.7 mm x 12.7 mm vane (fitted as standard; other sizes are available). This allows for the determination of shear strength in soft soils of undisturbed and remoulded samples.

The hand operated frame is 590 mm high and has a 200 mm diameter base plate capable of accepting standard specimen moulds and sample tubes. Scales indicate the load application and vane deflection. A motorising attachment is available which produces 12 degrees or rotation per minute.

Features:

- Conforms to BS 1377.
- Manual unit can easily be converted to a motorised version.
- Easy to use.
- Rapid way of determining shear strength in soft soils.

Specification:	
Dimensions (L x W x H):	200 x 240 x 590 mm
Weight:	10 kg

Accessories:	
Part Number	Description
	Motorising Attachment for Laboratory Vane Apparatus
	Attachment to hold sample tubes and glass jars

2. Apparatus

The laboratory vane apparatus is self-contained and consists essentially of the following components (those shown are for the hand operated version):

- a) Frame and stand.
- b) Vane mounting assembly.
- c) Handle for raising and lowering the vane assembly by means of the square-thread lead screw.
- d) Vane, with four blades, 12.7 mm wide and 12.7 mm long.
- e) Handle for rotating vane head.
- f) Graduated scale, marked in degrees.
- g) Rotation pointer.
- h) Vertical shaft attached to knob fitted with pointer carrier on friction sleeve.
- i) Set of four springs of different stiffnesses, to allow for a range of soil strengths.
- j) Base plate.



Figure 1 - Laboratory Vane Apparatus.

The dimensions of the frame and base are large enough to accommodate a standard compaction mould or a CBR mould containing the test specimen. For testing a sample in a long container the frame can be swivelled through 180 degrees so that the vane can hang over the edge of a bench, where the sample tube can be clamped in a suitable position. To reverse the apparatus simply remove the nut holding the base plate to the frame and turn the frame through 180 degrees.



Notes: Counterbalance weight *MUST* be added to the base plate to prevent the apparatus tipping off the bench.

Figure 2 - Laboratory Vane Apparatus Reversed.

3. Test Procedure

This method covers the measurement of the shear strength of a sample of soft to firm cohesive soil without having to remove it from its container or sampling tube. The sample therefore does not suffer disturbance due to preparation of a test specimen. The method may be used for soils that are too soft or too sensitive to enable a satisfactory compression test specimen to be prepared.

The shear strength of the remoulded soil, and hence the sensitivity, can also be determined.

1). Attach the sample.

Attach the sample container to the base of the vane apparatus, with the sample axis vertical and located centrally under the axis of the vane. Trim the upper surface of the sample flat.

2). Select the torsion spring.

The torsion spring used should be selected after examining the sample and accessing its range of probable shear strength. The table below may be used as a general guide:

General Descriptive Term for Strength	Suggested Spring No.	Maximum Shear Stress (kN/m^2)
Very Soft	1 (Weakest)	20
Soft	2	40
Soft to Firm	3	60
Firm	4 (Stiffest)	90

3). Zero the pointer.

Set the pointer and the graduated scale to the zero position, shown below. Ensure that there is no backlash in the mechanism for applying the torque.



Figure 3 - Pointer set to zero.

4). Set vane datum point.

Lower the vane assembly until the end of the vane just touches the surface of the sample. This provides the datum from which the depth of penetration of the vane can be measured.

5). Push vane into sample.

Lower the vane assembly further to push the vane steadily into the sample to the required depth. The top of the vane should be at a distance not less than four times the blade width below the surface. Record the depth of penetration.

6). Shear the sample.

Apply torque to the vane by rotating the torsion head (labelled e on figure 1 above) at a rate of 6-12 degrees per minutes. If you are using the motorised version then toggle the switch and the vane will automatically be rotated at approximately 12 degrees per minute.

7). Record failure.

Record the maximum angular deflection of the torsion spring and the angle of rotation of the vane at the instant of failure. The example shown below has failure at 25 degrees of rotation.



Figure 4 - Example failure at 25 degrees.

8). Remould the sample.

Rotate the vane rapidly through two revolutions so as to remould the soil in the sheared zone.

9). Measurement of remoulded strength.

Repeat steps 3-7 and record the results for the 'remoulded' sample.

10). Remove the vane.

Raise the vane steadily from the sample so as to prevent tearing of the surface.

11). Repeat the test.

Repeat the test procedure above, steps 3-10, with the vane at two or more additional locations in the soil, and record the results for each.

3.1. Calculations

For each result calculate the torque applied to shear the soil, M (in $N\ mm$), by multiplying the maximum angular rotation of the torsion spring (in degrees) by the calibration factor (in $N\ mm$ per degree). This factor can be found on the supplied "Spring Calibration Sheet" an example is shown in the appendix.

To calculate the torque, M (in $N\ mm$):

$$M = \text{maximum angular rotation (degrees)} \times \text{calibration factor (} N\ mm \text{ per degree)}$$

To calculate the vane shear strength of the soil, τ_v (in kPa):

$$\tau_v = \frac{1000M}{K},$$

where K (in mm^3), a constant which depends on the dimensions of the vane, is given by the equation

$$K = \pi D^2 \left(\frac{H}{2} + \frac{D}{6} \right), \text{ and}$$

D is the overall width of the vane measured to 0.1 mm (in mm)

H is the length of the vane measured to 0.1 mm (in mm)

Notes: The vane dimensions should be checked periodically to ensure that the vane is not distorted or worn. Spares can be supplied.

The average value of the vane shear strength of the undisturbed soil, τ_v (in kPa), and remoulded soil, τ_{vr} (in kPa), must both be calculated.

Appendix

Example calibration sheet

Lab Vane Spring Calibration Sheet															
Spring No 1				Spring No 2				Spring No 3				Spring No 4			
Torque		Torque		Torque		Torque		Torque		Torque		Torque		Torque	
kg cm	Deg	N m	Deg	kg cm	Deg	N m	Deg	kg cm	Deg	N m	Deg	kg cm	Deg	N m	Deg
0.25	27	0.025	28	0.25	13	0.025	13	0.50	18	0.050	18	0.50	12	0.050	12
0.50	54	0.050	55	0.50	29	0.050	30	1.00	38	0.100	39	1.00	23	0.100	23
0.75	81	0.075	83	1.00	58	0.100	59	1.50	58	0.150	59	2.00	47	0.200	48
1.00	112	0.100	114	1.50	87	0.150	88	2.00	77	0.200	79	3.00	69	0.300	70
1.25	137	0.125	140	2.00	113	0.200	115	2.50	97	0.250	99	4.00	92	0.400	94
1.50	165	0.150	168	2.50	145	0.250	148	3.00	107	0.300	109	5.00	115	0.500	117
				3.00	172	0.300	175	3.50	137	0.350	140	6.00	139	0.600	142
								4.00	156	0.400	159	7.00	162	0.700	165
								4.50	176	0.450	180	8.00	186	0.800	190
1Deg = 0.0091 kg cm				1Deg = 0.0174 kg cm				1Deg = 0.0266 kg cm				1Deg = 0.0433 kg cm			
1Deg = 0.00089 N m				1Deg = 0.00171 N m				1Deg = 0.00261 N m				1Deg = 0.00424 N m			
1Deg = 0.89 N mm				1Deg = 1.71 N mm				1Deg = 2.61 N mm				1Deg = 4.24 N mm			
Serial No		A111													





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SL003











trend electronics

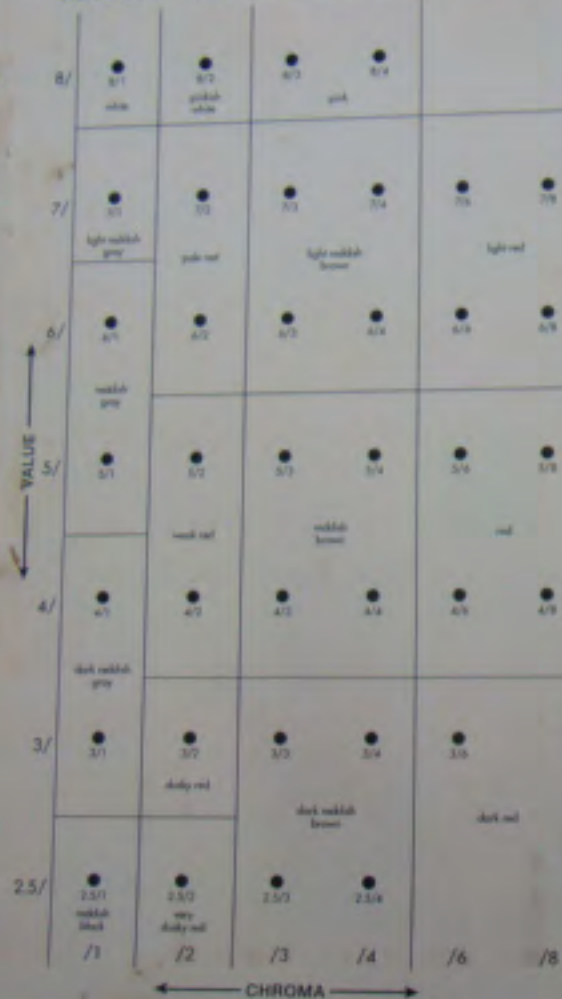
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MUNSELL® SOIL COLOR NAME DIAGRAM



MUNSELL® SOIL COLOR CHART

2.5YR

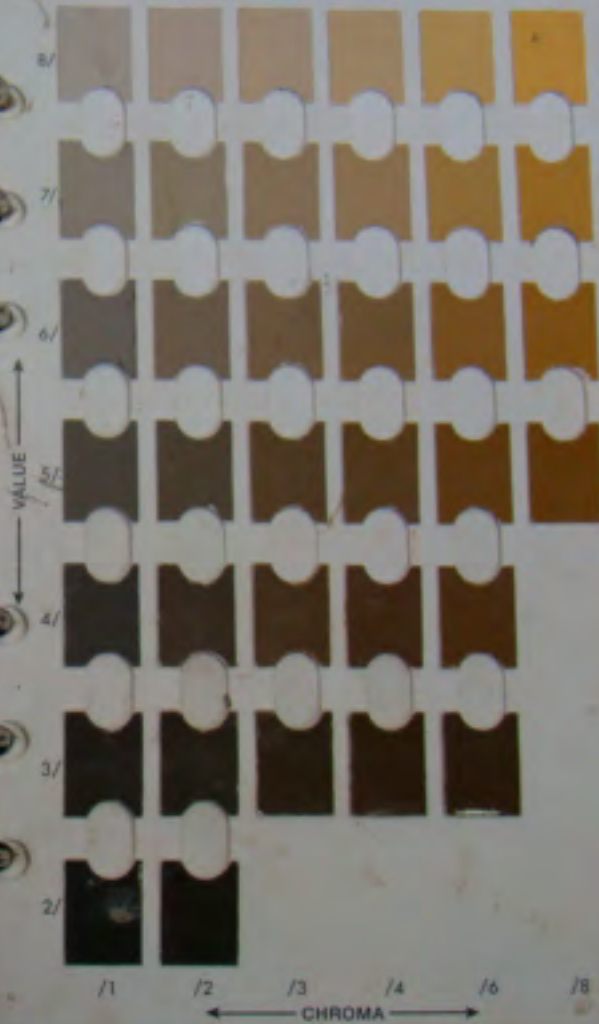


MUNSELL® SOIL COLOR NAME DIAGRAM



MUNSELL® SOIL COLOR CHART

10YR



10YR 2.5Y 5Y

EQUIPMENT ROUTING DOCUMENT - VIBROCORE



CONTRACT No.		SITE
CLIENT		COUNTRY
VESSEL		DATE RQD.

PROJECT REQUIREMENTS

WATER DEPTH	
NUMBER OF TESTS	10
NUMBER OF CREW	

Asset Number	Description	Plant No.	Qty Min
	MAIN ITEMS		
	UMBILICAL BLOCK		1
	UMBILICAL SPOOLER		1
	UMBILICAL SPOOLER LIFT SLING		1
	UMBILICAL (TYPE & LENGTH)		1
	CONTROL CONTAINER		1
	CONTROL CONTAINER LIFT SLING		1
	CORING EQUIPMENT		
	BARREL HANDLING STANDS (VC Type)		1
	BASE + 4M LEGS		1
	CHAINS (SUPPORT)		2
	POT		1
	POT CHAIN (inc HAMMERLOCK)		1
	TRIP CHAINS (Inc HOOK, HAMMERLOCK & SHACKLE)		2
	SAMPLE BASKETS (80 1 METER SAMPLES PER BASKET)		SUPPLIED BY OTHERS
	CORING CONSUMABLES		
	BARREL	6M	5
	LINER	6M	20
56	CAPS - BLACK		100
705	CAPS - YELLOW		100
295	CORE CATCHER		20
304	CUTTING SHOE		5
2150	PENETRATION SPRING (NEW TYPE)		10
2148	PENETRATION SPRING PROTECTIVE END RUBBER		6
163	PISTON STANDARD		2
581	PISTON - LEATHER		2
568	PISTON ROPE (3M LONGER THAN BARRELS)	9 meter	4
	SURFACE CONTROL EQUIPMENT		
	VC STARTER BOX		1
	SURFACE DECK LEADS		
	DECK LEAD 220V Length required - 20M		1
	DECK LEAD 440V Length required - 20M		1
	DECK LEAD FROM HPC STARTER BOX TO UMBILICAL WINCH		1
	DECK LEAD FROM 440V CONTAINER SUPPLY TO UMBILICAL WINCH		1
	CABLES (UK STANDARD)		
68	EO 51H4F-1 MOULDED TO 51H4M-1 8M LONG		1
615	EO B/H MALE 53H4M-1		2
395	EO CABLE TAIL FEMALE 51H4F-1		2
408	EO CABLE TAIL MALE 51H4M-1		1
	ELECTRICAL PLUGS/SOCKETS (UK STANDARD)		
505	PWR. - 220V 16A PLUG 2P+E		1
481	PWR. - 220V 16A SOCKET 2P+E		1
217	PWR. - 220V 32A PLUG 2P+E		1
386	PWR. - 220V 32A SOCKET 2P+E		1
499	PWR. - 415V 32A PLUG 3P +E		2
123	PWR. - 415V 32A PLUG 3P, N+E		2
429	PWR. - 415V 32A SOCKET 3P + E		2
468	PWR. - 415V 32A SOCKET 3P,N + E		2
	CABLE REPAIR		
432	HEATSHRINK JOINT KIT 4 -10mm CABLE	SPS659	6
519	HEATSHRINK JOINT KIT 0.5 - 1.5mm CABLE	SPS165	6
1691	HEATSHRINK KIT (VARIOUS SIZE'S)	397-679	1
2074	LARGE HEATSHRINK (UMBILICAL TERMINATION)		2
	MECHANICAL		
120	BOLT - FLANGE - 1/2" UNF (6 PER BARREL)		30
383	NYLOC - FLANGE - 1/2" UNF (6 PER BARREL)		30
	KELLUM GRIP (size required)		2
590 & 362	JAMMING CLEAT (2 PARTS)		1
	RACHET STRAPS		8
	PIN - HEAD (SPARE)		1
	PINS - FOLDING BASE (HPC)		3
100	PINS - LYNCH		10
	SPILT PINS (VARIOUS SIZES)		BAG
173	O-RING VC POT ID TBC		2

EQUIPMENT ROUTING DOCUMENT - VIBROCORE

Asset Number	Description	Plant No.	Qty Min
TOOLS			
134	ALLEN KEY SET 9 PC METRIC 1.5 - 10mm		1
792	CHAIN WRENCH 12 INCH		2
711	CHAIN WRENCH 24 INCH		1
	CRIMP TOOL BOOTLACE		1
2031	CRIMP TOOL (JOINT KITS)		1
1932	CRIMP TOOL RATCHET RED/BL/YEL		1
1930	CROW BAR 18 INCH		1
647	CUTTERS SIDE 160MM		2
1936	DRAIN ROD SET		1
618	EXTENSION BAR 150mm		1
1992	FILE SET 3 PIECE		1
118	FUNNEL SET		1
235	GRIPS MOLE		1
	GRIPS MOLE LONG NOSE		1
177	HACKSAW		2
570	HACKSAW BLADES		30
209	HAMMER BALL PAIN		1
727	HAMMER LUMP		1
1996	HAMMER RUBBER		1
622	HEAT GUN 110V		1
413	PLIERS (COMBI) 200MM		2
313	PLIERS LONG NOSE 200MM		1
2000	PODGER / PRY BAR SET		1
708	PUNCH SET (LONG DRIVE PIN)		1
140	PRICE PULLER		2
1517	RATCHET STRAPS 8M WITH CLAW HOOK		8
799	SCREWDRIVER SET-ELECT. (8pc)		1
760	SCREWDRIVER SET-ENG. (8 pc)		1
502	SCREWDRIVER SET-PRECISION (6pc)		1
724	SOCKET RATCHET DRIVE (1/2" SQ. DRIVE)		2
2005	SOCKET SET METRIC 24 PIECE		1
450	SOCKET 19MM		2
79	SPANNER ADJUSTABLE 6 INCH		1
187	SPANNER ADJUSTABLE 12 INCH		2
794	SPANNER 19mm		2
2012	SPANNER SET 24 PIECE		1
685	STANLEY BLADES		10
603	STANLEY KNIFE RETRACTABLE		2
	SPLIT-PIPE TOOL FOR EO		1
6	TORCH		1
394	STILSONS 24 INCH		1
458	TAPE MEASURE 8 METER		2
221	WIRE BRUSH		2
696	WIRE STRIPPERS METRIC 150MM		1
DANGEROUS GOODS (COSHH CHEST)			
2087	AIR DUSTER (AMBERSIL)	YES / NO	1
202	IPA (RS)	YES / NO	2
809	EMC PRIMER (PR41)	YES / NO	1
698	SILICONE OIL SPRAY (RS)	YES / NO	2
435	SKOTCHKOTE (3M)	YES / NO	2
88	WD40	YES / NO	2
LUBRICANTS & OTHER CHEMS			
128	AQUA SHIELD LUBE	YES / NO	1
1683	GREASE TUBE (RENOLIT EP2)	YES / NO	1
642	SILICONE GREASE (RS)	YES / NO	3
808	EMC 85 (150gr) 15 Per Termination Check use by Date	YES / NO	15
OILS			
141	OIL - HYDRAULIC TYPE TO BE CONFIRMED	YES / NO	1
PPE			
	FOUL WEATHER SUITS		SUPPLIED BY OTHERS
2146	GLOVES - CUT PROOF - SUMO		SUPPLIED BY OTHERS
421	GLOVES - DISPOSABLE - NITRIL		SUPPLIED BY OTHERS
2147	GLOVES - IMPACT HEAVY DUTY		SUPPLIED BY OTHERS
1704	GLOVES - THERMAL ICE EXTREME		SUPPLIED BY OTHERS
715	GLOVES - WATER PROOF - HYD TUF		SUPPLIED BY OTHERS
445	HARD HAT		SUPPLIED BY OTHERS
	LIFEJACKET CREWSAVER 275N		SUPPLIED BY OTHERS
	LIFEJACKET CREWSAVER 275N		SUPPLIED BY OTHERS
	LIFEJACKET CREWSAVER 275N		SUPPLIED BY OTHERS
	LIFEJACKET CREWSAVER 275N		SUPPLIED BY OTHERS
	LIFEJACKET CREWSAVER 275N		SUPPLIED BY OTHERS
365	SAFETY GLASSES		SUPPLIED BY OTHERS
1518	SAFETY GLASSES TINTED		SUPPLIED BY OTHERS
193	WATER PROOF TROUSERS AND JACKET		SUPPLIED BY OTHERS
	WINTER COAT		SUPPLIED BY OTHERS
SAFETY			
1515	LOCKOUT PLUG GUARD	RS 491-355	1
1516	PADLOCK FOR LOCKOUT PLUG GUARD	RS 432-9349	1
	FIRST AID KIT		SUPPLIED BY OTHERS
	EYEWASH STATION		SUPPLIED BY OTHERS
TEST EQUIPMENT			
	MEGGER BM 100/3/4	RECOMMENDED TO HAVE THESE OR EQUIVILANT ON THE JOB	
	MULTI-METER FLUKE 77	RECOMMENDED TO HAVE THESE OR EQUIVILANT ON THE JOB	

EQUIPMENT ROUTING DOCUMENT - VIBROCORE

Asset Number	Description	Plant No.	Qty Min
GENERAL CONSUMABLES			
	LIFT KIT COLOUR CODE -		
591	3M 4T WEBBING STROP		1
591	3M 4T WEBBING STROP		1
591	3M 4T WEBBING STROP		1
591	3M 4T WEBBING STROP		1
1787	3M 2T WEBBING STROP		1
1787	3M 2T WEBBING STROP		1
48	SAFETY SHACKLE 2T		1
48	SAFETY SHACKLE 2T		1
48	SAFETY SHACKLE 2T		1
48	SAFETY SHACKLE 2T		1
72	SAFETY SHACKLE 4.75T		1
72	SAFETY SHACKLE 4.75T		1
72	SAFETY SHACKLE 4.75T		1
72	SAFETY SHACKLE 4.75T		1
91	SAFETY SHACKLE 6.5T		1
91	SAFETY SHACKLE 6.5T		1
91	SAFETY SHACKLE 6.5T		1
91	SAFETY SHACKLE 6.5T		1
92	SAFETY SHACKLE 8.5T		1
92	SAFETY SHACKLE 8.5T		1
92	SAFETY SHACKLE 8.5T		1
92	SAFETY SHACKLE 8.5T		1
GENERAL CONSUMABLES			
166	BAG - AGG (Large)		20
198	BAG - SAMPLE (Small)		100
398	BATTERY PP3 9V		2
461	BATTERY AA		6
1516	COMBINATION PADLOCK SQUIRE (SPARE)		1
	LIGHT BULBS		6
762	PAPER TOWEL (BLUE ROLL)		1
	SPILL KIT		1
	TAPE - DENSO (HYD FITTINGS)		1
17	TAPE - DUCT (SILVER)		3
477	TAPE - PVC (BLACK)		50
725	TAPE - SELF-AMALGAMATING		3
559	TYWRAPS 188mm x 4.8mm (SMALL)		100
32	TYWRAPS 225mm x 7.6mm (MEDIUM)		100
746	TYWRAPS 300mm x 9mm (LARGE)		200
STATIONARY			
565	NOTEBOOK - WATERPROOF		3
	PAPER A4 (REAM)		1
	PEN - BLACK MARKER		10
	PENCILS		10
	PENS		10
38	STATUS LABEL GREEN		10
401	STATUS LABEL RED		20
MANUALS AND DOCUMENTATION			
	VC MANUAL		1
CONTAINER JOB FILE			
	BLANK SITE FORMS (OPERATOR LOGS)		SUPPLIED BY OTHERS
	EQUIPMENT MAINTENANCE/DEFECT FORMS		SUPPLIED BY OTHERS
	HOC CARDS	HOC_V03	SUPPLIED BY OTHERS
	IMS DISK (COSHH DATA)		SUPPLIED BY OTHERS
	LIFT PLAN FORMS	SF404a	SUPPLIED BY OTHERS
	LIFTING TEST CERTIFICATES (PACK)		1
	TOOL BOX TALK FORMS	DF403a	SUPPLIED BY OTHERS