

A complete range of  
**vibracore services**



# Market leading **products and services**

**Alpine is a world leader in the manufacture and use of vibracore sampling equipment.**

## **The most flexible range of products and services**

Alpine manufactures both pneumatic and electric vibracores, allowing clients to perfectly match equipment to suit their needs. Our vibracores range from units which can be easily deployed from a small platform in shallow

water, to electric systems capable of securing 40 ft samples (sediment permitting) in 1000 ft of water.

We also provide a full range of vibracoring services worldwide to companies and government organizations. Activities range from cable, pipeline and offshore platform installations right through to environmental monitoring and seafloor resource mining.

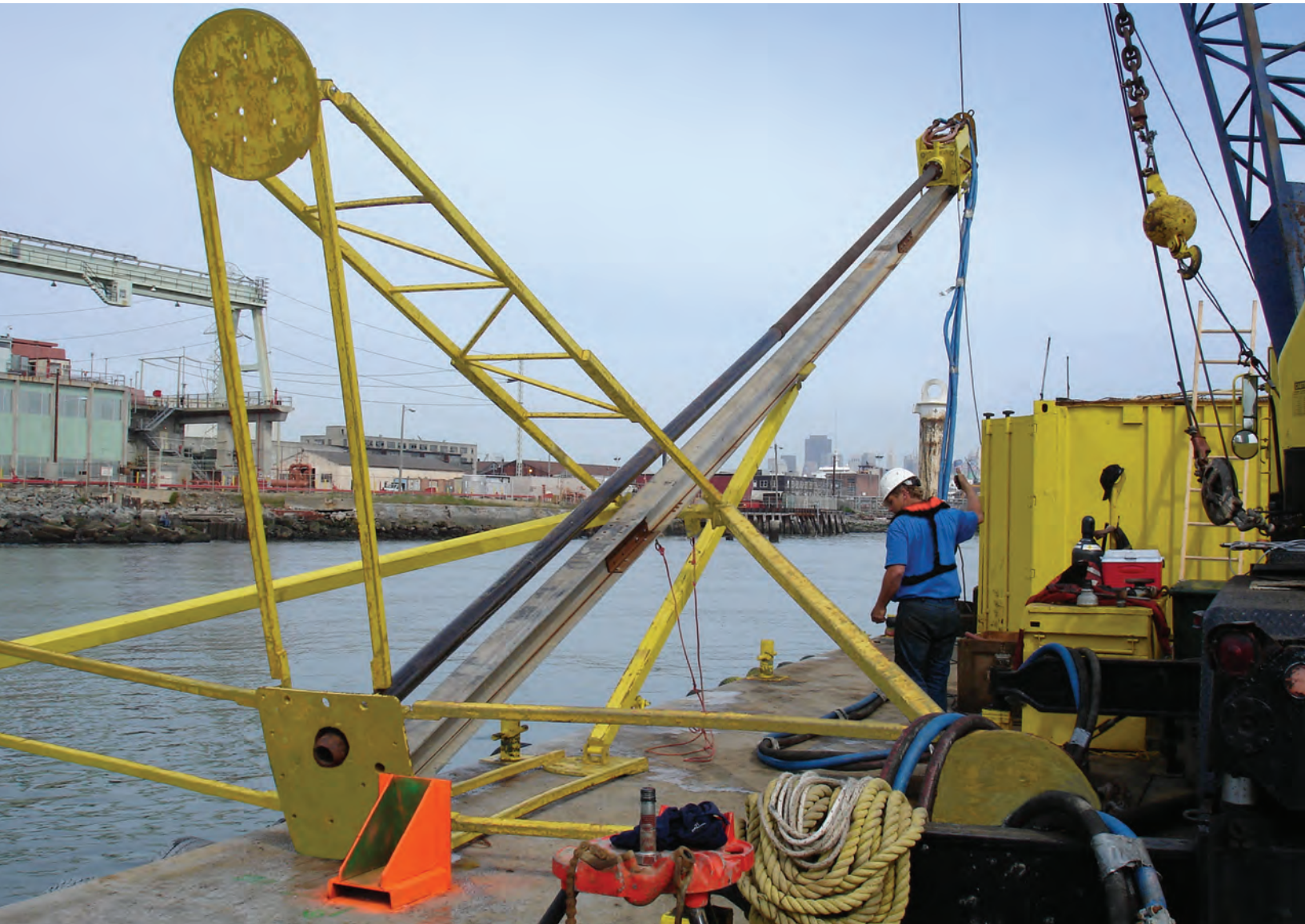
## **Unique solutions**

Alpine currently offers several features not found on other systems:

### **Core Log® system**

Alpine Core Log® software and the affiliated hardware provide a real time display and permanent record of the vibracore's penetration into the sediment. The data can be immediately processed into graphical format for review or stored for later analysis.

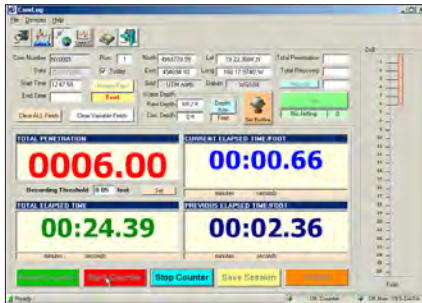
*Below: A 40' Alpine Model P pneumatic vibracore is prepared for deployment*





# Unique solutions

**Below:** Core Log® Real Time Data Acquisition Display



The information also allows a geologist to determine if the sediment has compacted or expanded in the core pipe, providing a more accurate description of the sub-bottom geology.

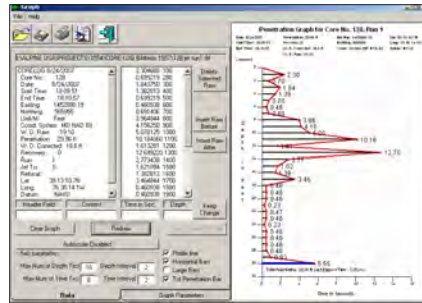
## Jetting system

For use in water depths under 300 ft, Alpine vibracores can be equipped with a high pressure water jetting system which virtually guarantees target sample recovery in most sediment. Jetting is used to achieve deeper core penetration when the Alpine vibracore encounters refusal during the first coring attempt.

**Above:** Field logging of a core



**Below:** Core Log® Data Review and Penetration Graph Display



High pressure water is injected into the core barrel to stop sediment from collecting whilst the vibracore penetrates to the sediment depth where refusal was previously encountered.

When the Core Log® software indicates that the depth of previous refusal has been achieved, the high pressure water is turned off and the vibracore continues into the seafloor collecting sediment.

**Above:** Alpine Model M pneumatic mini-vibracore in operation



**Below:** Alpine Model E electric vibracore head



## Variable frequency control

Alpine's electric vibracore is equipped with variable frequency control which allows the operator to adjust the motor speed to provide a vibration of the vibracore which is best suited to penetrate a particular geology. This feature allows the electric vibracore to penetrate deeper into sediments.

# Vibracore specifications

**Alpine Vibracore Model P** is a complete, self-contained pneumatic powered corer. It includes a self-supporting tower which can be lengthened by attaching 'H' beam and core pipe to obtain 20, 30 and 40 ft core samples. This Alpine vibracore model is especially effective in taking cores in sand, gravel, and relatively compact sediments to a maximum water depth of 300 ft.

<b>Weight:</b>	20 ft rig:	3600 lb.
	40 ft rig:	4000 lb.
<b>Height overall:</b>	20 ft rig:	26 ft
<b>Height overall:</b>	40 ft rig:	46 ft
<b>Core pipe:</b>	4" standard steel	
<b>Core liner:</b>	3 7/8" OD x 1/8" lexan	
<b>Cutting edge:</b>	5" OD	4" NPT
<b>Core retainer:</b>	stainless steel	

**Alpine Vibracore Model E** is designed to sample compact sediments in water depths up to 1000 feet. This model is a complete, self-contained electric powered corer with a support tower similar to the Model P. Power is supplied by a single electric cable through a variable frequency controller. The unit can be configured to take 20, 30, or 40 feet core samples.

<b>Weight:</b>	20' rig:	4600 lb
	40' rig:	5000 lb.
<b>Height overall:</b>	20' rig:	26 ft
<b>Height overall:</b>	40' rig:	46 ft
<b>Core pipe:</b>	4" standard steel	
<b>Core liner:</b>	3 7/8" OD x 1/8" lexan	
<b>Cutting edge:</b>	5" OD	
<b>Core retainer:</b>	stainless steel	
<b>Electric motor:</b>	10 HP, 220 VAC, 3 phase	
<b>Electric cable:</b>	4 conductor # 10 SOJ	

**Alpine Vibracore Model M** is a smaller five inch compact version of the eight inch Alpine Vibracore Model P. It is a lightweight, self-contained unit designed to take up to 12 ft core samples in water depths to 50 ft, and is generally used for sampling in lakes, ponds, streams and small rivers. This model is deployable with or without a vertical support and guide.

<b>Weight:</b>	250 lb.	
<b>Height overall:</b>	12' rig	15 ft
<b>Core pipe:</b>	3 1/2" aluminum, 6' or 12' long	
<b>Core liner:</b>	3 1/4" OD x 1/16" lexan	
<b>Cutting edge:</b>	3 1/4" stainless steel	
<b>Core retainer:</b>	stainless steel	

## Power requirements

### *Air compressor:*

250 CFM at 120 PSI minimum.

## Deployment methods (specifications dependant on vessel, deployment environment and sediment conditions)

### *Winch with A-frame:*

Minimum 5 ton SWL winch with 3/4" wire rope.

Gallows or A-frame with 5 ton SWL capacity.

Power boom or small crane for equipment maneuvering.

### *Standalone crane:*

5 ton SWL at operating boom position during deployment and retrieval of equipment from seafloor.

## Power requirements

### *Power:*

230 VAC, 3 phase, 30 amp service

## Deployment methods (specifications dependant on vessel, deployment environment and sediment conditions)

### *Winch with A-frame:*

Minimum 5 ton SWL winch with 3/4 in wire rope.

Gallows or A-frame with 5 ton SWL capacity.

Power boom or small crane for equipment maneuvering.

### *Standalone crane:*

5 ton SWL at operating boom position during deployment and retrieval of equipment from seafloor.

## Power requirements

### *Air compressor:*

Portable unit, 25 CFM minimum at 100 PSI

## Deployment methods (specifications dependant on vessel, deployment environment and sediment conditions)

### *Winch with A-frame:*

Minimum 0.5 ton SWL winch/hoist with appropriate wire rope.

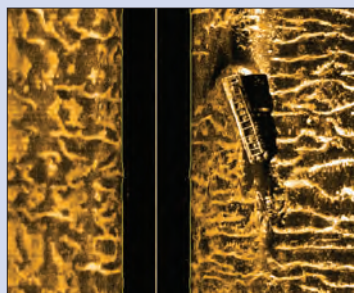
Gallows or A-frame with 0.5 ton SWL capacity.

### *Standalone crane:*

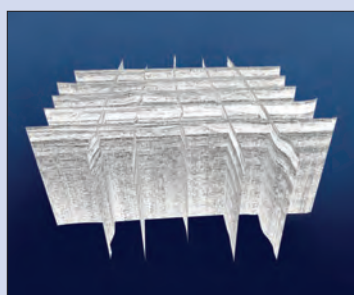
1 ton SWL power boom or small crane.

# Our complete range of services

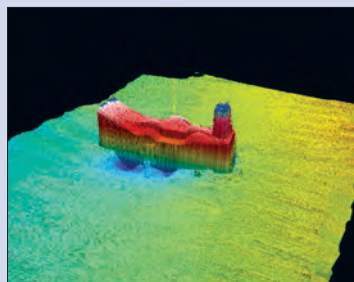
**Below:** Side scan sonar image of wreck in sand wave field



**Below:** Fence diagram of sparker data



**Below:** Multi-beam image of wreck



**Below:** Seafloor image of brittlestar bed



## Survey services

- / Desk top studies
- / Geophysical surveys
- / Hydrographic surveys
- / Oceanographic surveys
- / Geotechnical surveys
- / Environmental surveys
- / Benthic habitat data collection
- / Sampling for chemical and contaminant analysis
- / Subsea construction monitoring
- / Subsea structure inspection (cable, platform and seawall etc.)
- / Surface and underwater positioning services
- / Unexploded ordnance surveys

## Survey applications

- / Cable and pipeline construction, installation and monitoring
- / Offshore platform construction, installation and monitoring (renewables, oil & gas)
- / Seawall and port construction and monitoring
- / Bridge and tunnel construction and monitoring
- / Environmental assessment and remediation
- / Unexploded ordnance clearance
- / Dredging projects
- / Borrow area investigations
- / Beach replenishment and reconstruction
- / Offshore mining

## Equipment

### Geophysical & hydrographic

- / Multi-beam and single beam
- / Side scan sonars
- / Sub-bottom profilers
- / Boomers
- / Sparkers
- / Air guns
- / High resolution multi-channel
- / Magnetometers and gradiometers
- / ROVs
- / AUVs

### Benthic & oceanographic

- / CTD and SVPs
- / ADCPs
- / Water sampling systems
- / Turbidity monitoring systems
- / Benthic grabs
- / Box corers
- / Drop down cameras (up to 3000 m)
- / Towed camera systems
- / Freshwater lens cameras
- / Truck mounted drill rigs for environmental testing

### Geotechnical

- / Pneumatic and electric vibracores (10 ft - 40 ft)
- / CPTs (1 to 20 tons)
- / Heave compensated drill rigs
- / Piston corers
- / Jumbo corers
- / Drop cores
- / Grab samplers

Get in touch



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