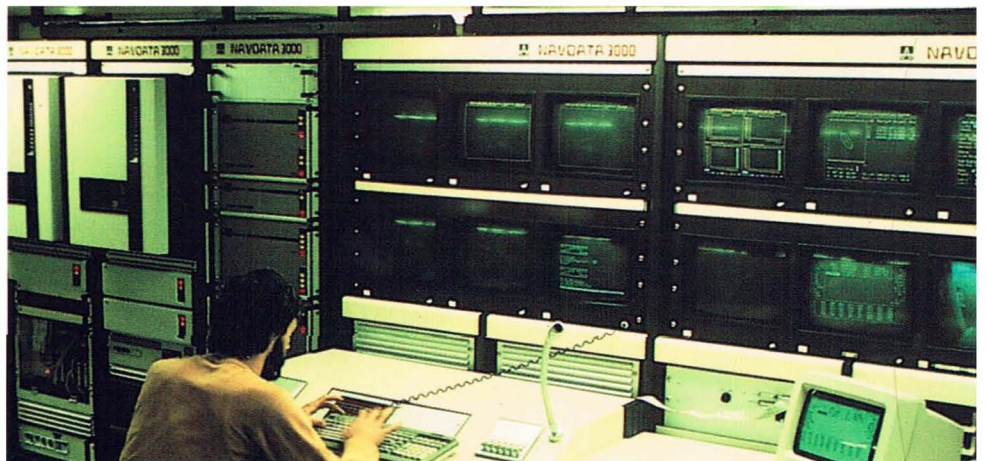
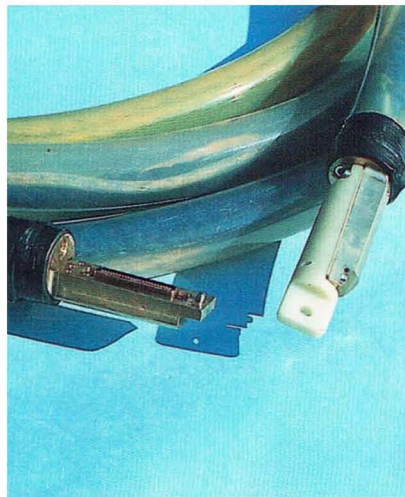




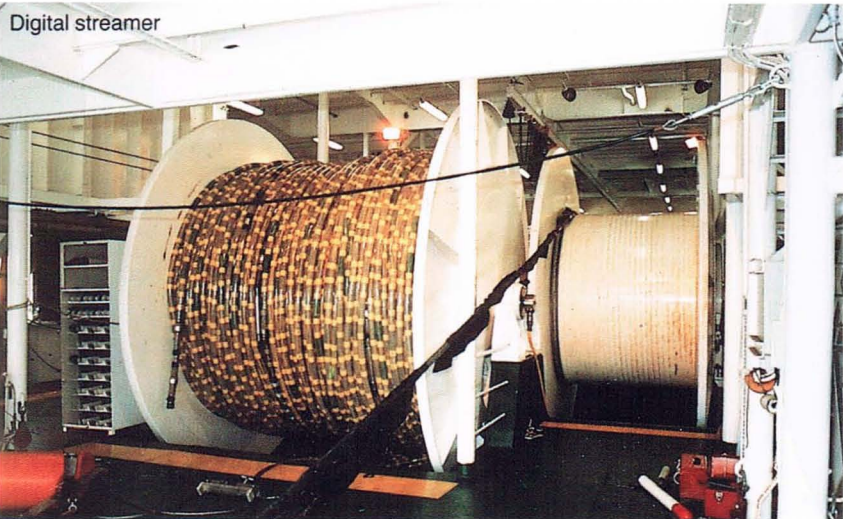
PRAKLA-SEISMOS AG

SALES PROGRAM

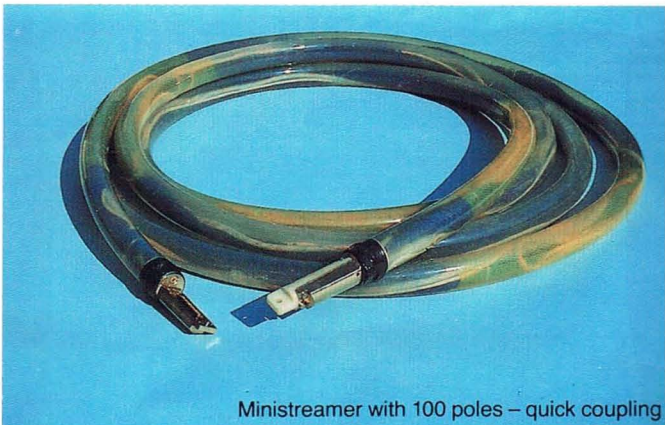


SALES PROGRAM

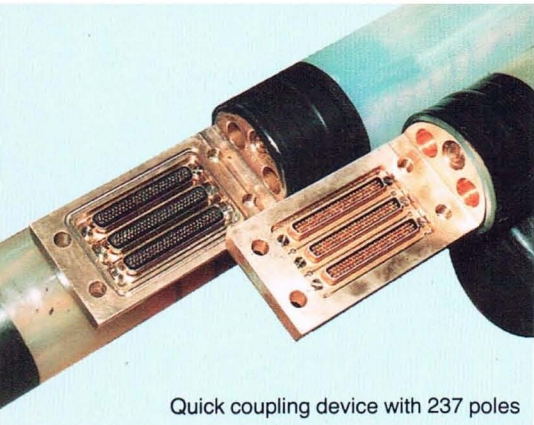
PRAKLA-SEISMOS' experience gained from its activities in exploration geophysics over many decades puts the company in a position to offer instruments, systems and even complete sets of equipment for seismic operations. Both offshore as well as onshore surveys are catered for. Vibrators, streamers and various other equipment have been developed and constructed for many years in our own company laboratories and workshops. These products are used by our own field crews and consequently we are able to offer field proven instruments which boast a high level of technical know-how. The following is not a complete compilation. If you require more information please do not hesitate to contact us.



Digital streamer



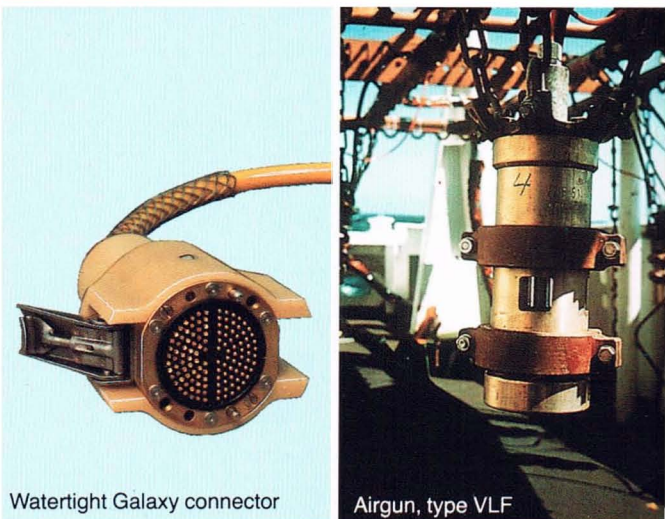
Ministreamer with 100 poles – quick coupling



Quick coupling device with 237 poles



Position direction finding system



Watertight Galaxy connector

Airgun, type VLF

INSTRUMENTS AND SYSTEMS

Offshore Seismics:

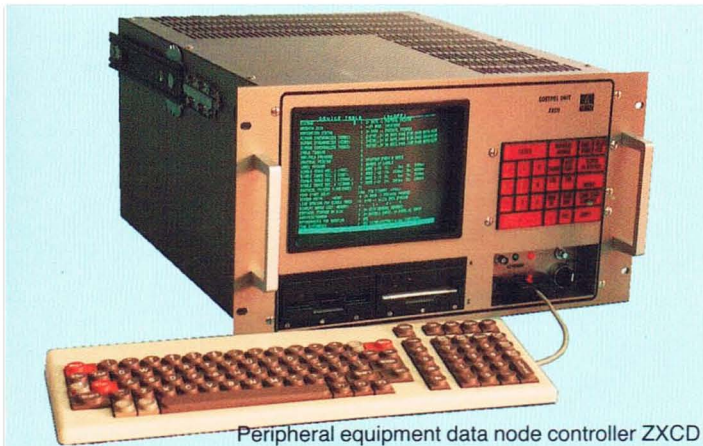
- **PRAKLA-SEISMOS analog streamer systems:** (standard diameter 68 mm) with up to 300 traces using 237, 316, 468 or 624-pole quick couplings; type and number of hydrophones and number of hydrophone groups upon request.
- **PRAKLA-SEISMOS/SYNTRAK digital streamer system:** PRAKLA-SEISMOS' digital streamer sections combined with the SYNTRAK electronic modules offer maximum operating performance and reliability (up to 480 traces).
- **Special streamer outfits:** diameter up to 80 mm, quick couplings made of titanium, coaxial couplings, individual sections up to lengths of 75 m with a maximum of 96 traces per section, etc.
- **PRAKLA-SEISMOS ministreamer system for shallow seismic application:** lead-in cable, length 150 m, diameter 30 mm; stretch section, length 10 m, diameter 48 mm; active section, length 50 m, diameter 34 mm. Total length of hydrophone sections up to 600 m. Number of hydrophones (manufactured by PRAKLA-SEISMOS) per group, group length and number of groups per section upon request. All sections are fitted with 100-pole quick couplings.
- **PRAKLA-SEISMOS baycable:** length of section 336 m, 12 traces per section (hydrophones or geophones), waterproof hermaphrodite connectors (type Galaxy, maximum number of contacts 150). Rugged construction for heavy duty operation in all areas.
- **PRAKLA-SEISMOS airguns:** single guns with chamber volumes from 0,16 l up to 8,0 l, complete airgun arrays.



Seismic survey vessel during a dual streamer operation

- **PRAKLA-SEISMOS binning system:** bin coverage control during offshore seismic 3D multiple streamer operation including extensive quality control of acquired raw data.
- **PRAKLA-SEISMOS position-direction finding system:** for exact streamer tailbuoy bearing measurement (0.1 degree absolute accuracy) yielding additional information during streamer shape calculation. This system is an alternative to radio navigation tailbuoys. Acceptable accuracy independent of onshore based navigation systems.
- **PRAKLA-SEISMOS peripheral equipment controller:** microprocessor based seismic system node controller and extended header data logger; controls and monitors the events and dataflow in the instrument room. Supports remote shooting of multi-vessel operations. Integrates perfectly between the navigation computer, gun synchronizer and seismic field system.

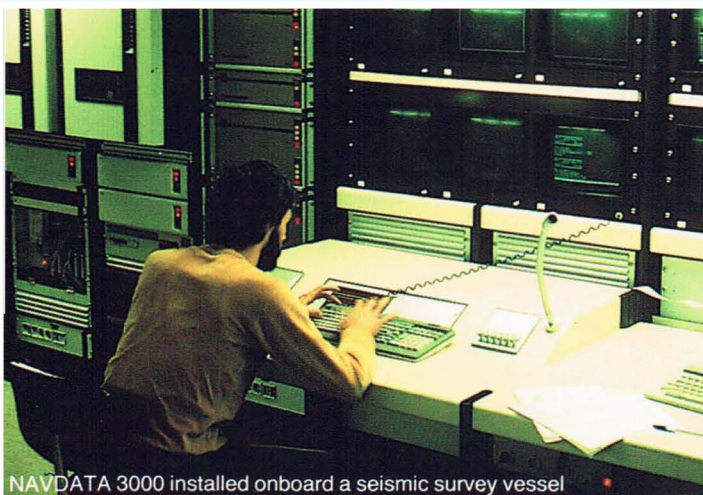
- **PRAKLA-SEISMOS NAVDATA 3000:** integrated navigation and data logging system with outstanding control and quality check features. Flexible and powerful navigation multiprocessor system with integrated QC-package supports multi streamer and two vessel operations. A 64 channel I/O system and 8 or 16 data-lines cover all demands. Up to 6 internal or external radio position fixes available. High security datalogging on disk and tape simultaneously. NAVDATA 3000 can be used in a configuration for small or large vessels.
- **PRAKLA-SEISMOS type 8700 GPS receiver:** operates on civilian C/A-code transmission in single channel multiplex mode. Tracking and processing of up to 5 satellites. Differential mode according to RTCM-SC 104 standard via a communication link from a reference system. LAT/LON or GRID coordinates selectable.
- **PRAKLA-SEISMOS Mobile Star:** a portable differential GPS receiver system for real time application. Accuracies between 5 and 15 m.
- **PRAKLA-SEISMOS Scout navigation processor:** waterproof, compact, portable, stand-alone navigation processor for use under extreme environmental conditions.



Peripheral equipment data node controller ZXCD



Scout navigation processor



NAVDATA 3000 installed onboard a seismic survey vessel



GPS receiver PS 8700

INSTRUMENTS AND SYSTEMS

Onshore Seismics:

- **PRAKLA-SEISMOS wireless seismic data link:** microwave based, wireless network for crossing inaccessible terrain (replaces telemetry cables for SN 348 or SN 368).
- **PRAKLA-SEISMOS line tester for Sercel SN 348 and SN 368:** small, light-weight instrument for quick check of telemetry lines. Capable of counting boxes, measuring line and pilot voltage.
- **PRAKLA-SEISMOS colour trace monitor*:** transputerized quick look quality control of large number of seismic traces simultaneously on one colour screen; displays noisy and faulty channels, signal amplitude and phase at every shot.
- **PRAKLA-SEISMOS shot release control unit*:** high accuracy synchronous release control of seismic instruments over long distances (wireless or via cable). Transfer and storage of shot related data in non-volatile memory for 900 shot events.

* also applicable for offshore seismics

Wireless seismic data link



Vibrator type VVEA



Line tester ZPTA

COMPLETE SYSTEMS TAILORED TO INDIVIDUAL CUSTOMER'S DEMANDS

Offshore Seismics:

Complete systems for shallow water or deep sea seismic vessels comprising:

- PRAKLA-SEISMOS analog or PRAKLA-SEISMOS/ SYNTRAK digital streamer system with quick couplings
- PRAKLA-SEISMOS developed and proven airgun arrays (individually shaped) with compact tow cable, manifolds and array winches
- PRAKLA-SEISMOS integrated navigation system NAVDATA 3000
- PRAKLA-SEISMOS binning control system
- PRAKLA-SEISMOS GPS receiver
- Complete digital recording equipment
- Gun array/streamer position control system
- Compressors

PRAKLA-SEISMOS offers complete assembling, engineering and installation of above systems.

Onshore Seismics:

Complete systems for Vibroseis operations as follows:

PRAKLA-SEISMOS vibrator systems type VVEA (all-terrain) or VVCA (crab type) or heavy duty VVFA (peak force up to 47 000 lbs) equipped with latest electronics (eg PELTON Advance II).

Normal tires or sand tires are available for operation in desert areas.

Recording container suitable for fitting on existing trucks and ready for operation with installed digital data acquisition systems (eg Sercel SN 368, Sercel CS 260 correlator/stacker, PELTON encode sweep generator, radio, field monitor, etc.) as well as heating and air-conditioning.

Field equipment such as Sercel field units, cables, geophones, etc.

Complete systems for dynamite shooting:

Recording container as above with suitable digital recording system, shothole drilling rigs, cables, geophones, etc.



Research vessel Sagar Kanya



Bin Coverage Control System



Seismic recording truck



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