

PRAKLA-SEISMOS GEOMECHANIK GMBH



VVCA

VIBRATOR SYSTEM





The vibrator type VVCA is an all terrain vibrator approved and equipped for driving and vibrating in european countries but can also be equipped to suit the regulations in other countries with desert areas or

other difficult terrain conditions. Nearly 20 years experience in developping, manufacturing, servicing and repairing vibrators has led to the latest generation of these vibrators.

Engine:

The vibrator power unit is an air-cooled KHD diesel engine with direct injection (6 or 8 cylinders). The engine is operated at reduced r.p.m. to extend its life-time and reduce noise emission.

Driving System:

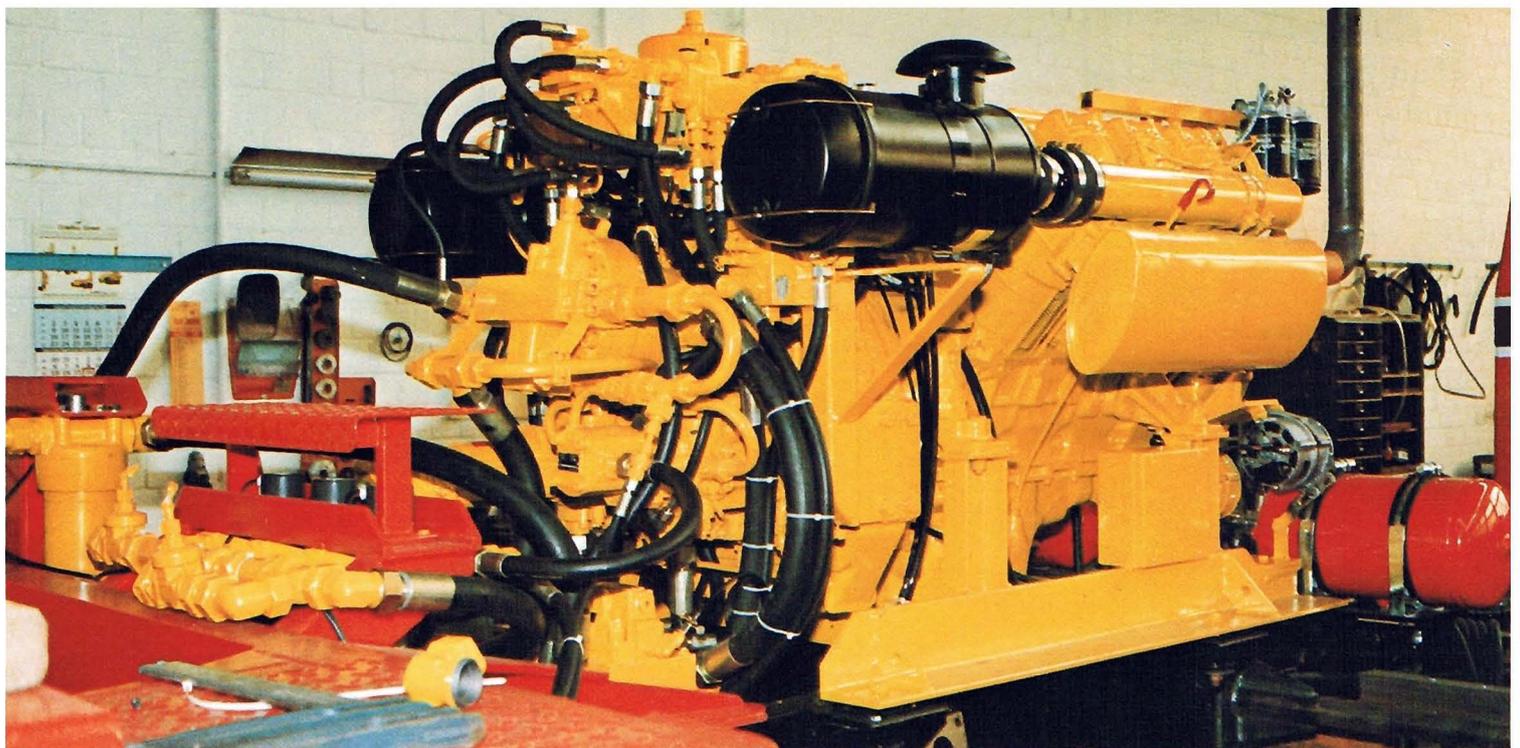
The vehicle is driven using separate, power controlled, hydraulic circuits. The dual circuit braking system controls multiple disk brakes. The brakes are integrated in the axle body and are therefore practically maintenance-free.

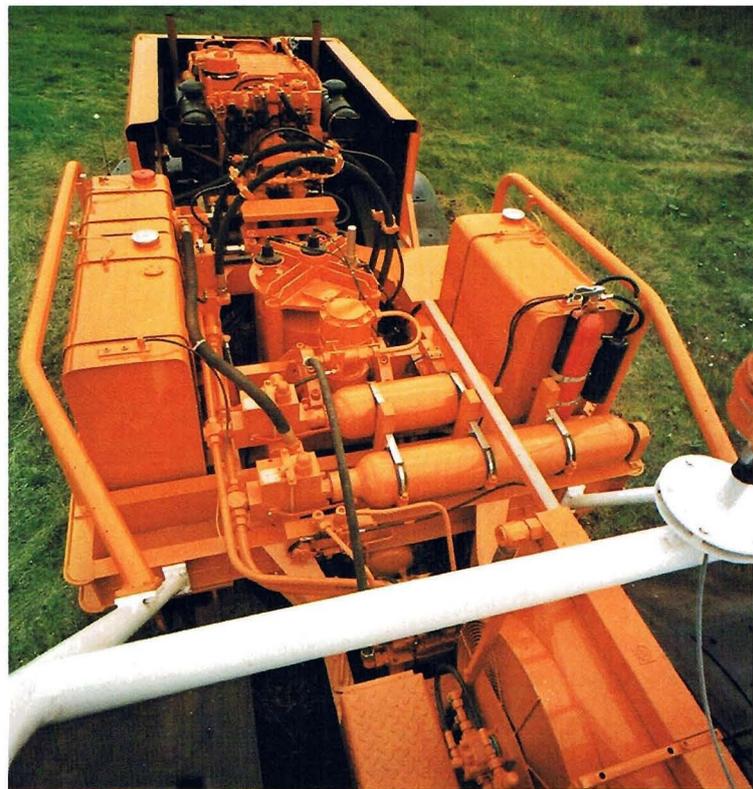
Energy Distribution:

6 hydraulic pumps, driven by the engine, distribute power to the front and rear axles, vibrator aggregate and auxiliary appliances.

Steering System:

Fully hydraulic steering renders three possible ways of driving. On roads the steering only controls the front wheels while the rear wheels are fixed. For rough country the front and rear wheels can be steered either in the same direction or in opposite directions.





Lifting System:

The patented single cylinder lever-arm system is designed to avoid synchronization problems. The flexible vibrator suspension results in an optimum ground to vehicle coupling. 4 air bags which are automatically kept under a predetermined pressure isolate the vehicle from vibration.

Frame:

The vehicle frame is a welded light weight construction made of open sections to achieve a controlled elasticity.

Cabin:

The cabin is isolated to stop vibration and noise. All controls, including the electrical filter fouling display, are in the operators field of view. For added comfort a shock mounted seat is available as an option.

Vibrator Units:

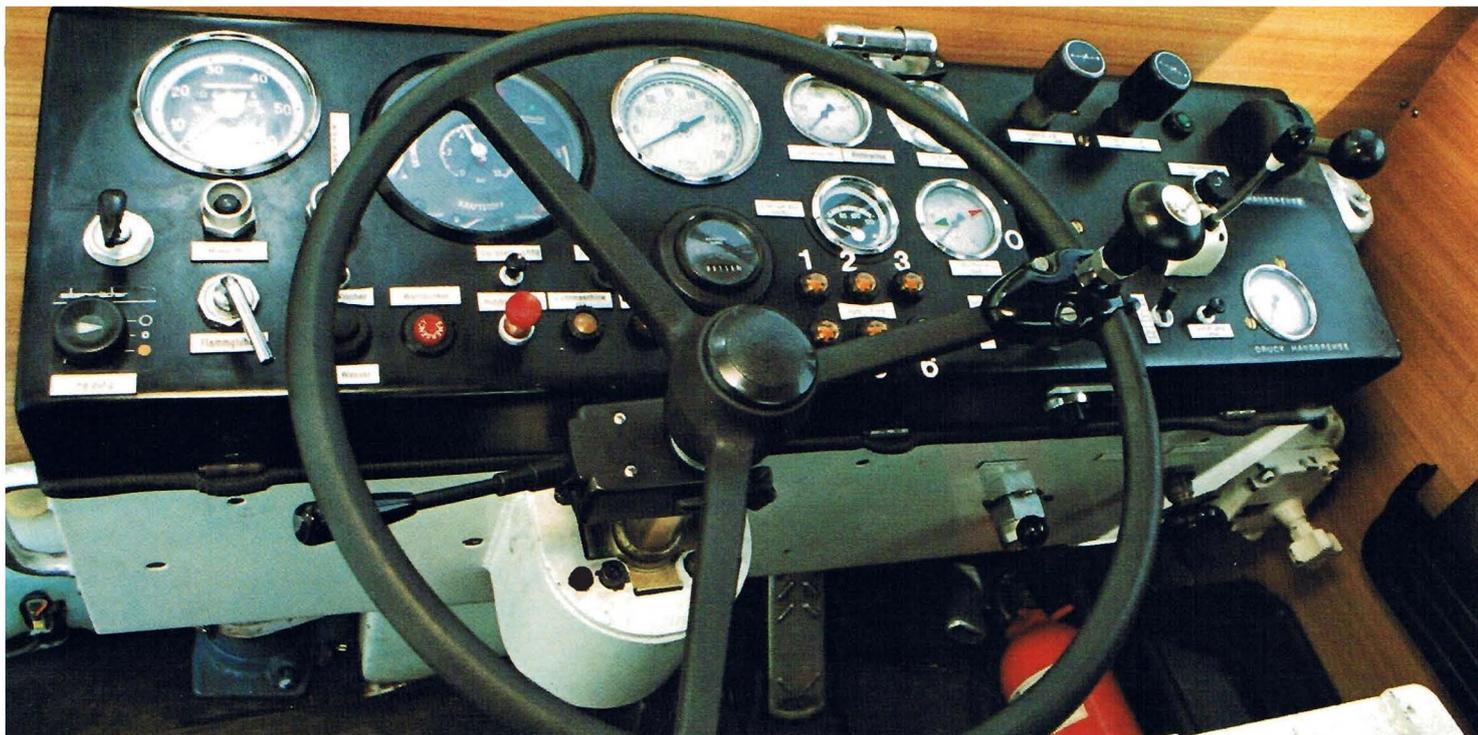
The welded ground plate is a light construction with rounded rims and as an option can be rubber mat covered to reduce road damage. The vibrator unit, together with the lift system, can be changed to adapt the vibrator for specific geophysical problems. The following versions are available (F = peak force):

P-wave vibrator f = 6–105 Hz,
F = 84.5 kN (standard version)

P-wave vibrator f = 10–210 Hz,
F = 84.5 kN (broad-band version)

P-wave vibrator f = 6–105 Hz,
F = 103.9 kN (reinforced standard version)

S-wave vibrator f = 6–80 Hz,
F = 170 kN (available spring 1984).



VIBRATOR-SYSTEM VVCA

Vibrator Specifications

Type	PC 8 S	PC 8 H	PC 10 S
Weight on baseplate	122 500 N	120 000 N	125 000 N
Peak force	84 500 N	84 500 N	103 900 N
Actuator mass	1600 kg	1600 kg	2000 kg
Piston area	40.25 cm ²	40.25 cm ²	49.48 cm ²
Usable stroke	82 mm	50 mm	82 mm
Baseplate area	2.14 m ²	1.85 m ²	2.14 m ²
Lift system	One cylinder lever-arm system (PRAKLA-SEISMOS patent)		
Vibrator isolation	air bags	air bags	air bags
Lift stroke	800 mm	800 mm	800 mm
Pump model	Rexroth Hydromatik A 6 V 117	Rexroth Hydromatik A 6 V 117	Rexroth Hydromatik A 6 V 117 (A 6 V 164)
Pump output	250 l/min	250 l/min	250 (400) l/min

Vehicle Specifications

Vehicle type	4 x 4 crab tractor
Engine type	KHD F 6 L 413 F (KHD F 8 L 413 F)
Engine power (DIN 6270)	107 (142) kW at 2150 rpm
Vehicle dimensions (L x W x H) (without winch)	7200 mm x 2500 mm x 2750 mm
Wheelbase	4000 mm
Tires	20.5 x 25 Continental E 58
Power transmission	hydrostatic, power regulated
Max. Speed	42 km/h (26 mph)
Engine fuel tank capacity	480 l
Hydraulic reservoir capacity	120 l
Turning radius	13.5 m
Total weight *)	144 000 N

*) varies with equipment

Standard Equipment

Automatic air bag pressure fill system	Lighting system, brake system, hydraulic system conform to european regulations
Hydraulic monitor system on front panel	
Separate hydraulic system for steering	

Optional Equipment

Separate electric systems for vehicle and electronics	Air conditioner
Front winch	Cabin heating (fuel)
Brush-guard for cabin and fuel tank	Sound proofing

Further accessories on request
Technical changes without notice



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