



RESONATOR PRODUCT RANGE

PVE RD260
PVE RD260 RESONATING-DRILLING
PVE RD430

DIESEKO GROUP



PILING & VIBRO EQUIPMENT

RESONATING FOUNDATION TECHNIQUE



APPLICATIONS

- Urban areas and vibration sensitive projects
- The ideal tool for safe working adjacent to heritage structures, transportation links or major utilities
- Suitable for most soil types
- Pile driving and pile drilling options

RESONATING ADVANTAGES

- Unique technology working without eccentric mass
- Absence of measured ground borne vibration during driving
- Starts without 'run up and run down' vibration
- No bearings that experience high levels of vibration
- Light and compact construction
- High production speeds because of rapid insertion
- Great versatility
- Excellent quality
- Unique algorithm software adjusts automatic into the resonance frequency
- Suitable for even the smallest pile sizes
- Hydraulic cooling system
- Reduced power consumption
- Suspendable from telescopic mobile crane
- Leader guided option

RESONATING-DRILLING

With a soil-displacing drilling technique in combination with the PVE RD 260, anchor piles and small diameter piles (lost bit) can be installed controlled and vibration-free to a great depth. With only a very small torque, and without water-jetting. A sustainable new application for sensitive areas where heavy equipment is not allowed.



CONSTRUCTION



INFRASTRUCTURE

THE RESONATOR INSTALLS

- HP piles
- Tubular piles
- Casings
- Sheet piles

PRODUCT RANGE RESONATOR



PVE RD260



PVE RD430



Hire the Dieseko Group Resonator team with experienced operators to succeed your project.

RESONANCE TECHNOLOGY WHEN ZERO VIBRATIONS ARE A MUST

A new era is dawning in the world of foundation engineering with the introduction of the resonance technique. With the PVE Resonance technology, we now offer a zero vibration solution for delicate applications such as inner city foundation projects.

THE PRINCIPLE

The resonance technique has a high-frequency piston cylinder arrangement that operates at between 100 and 180 Hz (6000 to 10000 rpm). The main difference compared to the vibrating technique is the absence of eccentric mass. The sonic frequency causes the steel to resonate, which makes the pile act like a spring that drives itself, without any vibration!

The Resonator is innovative in several ways:

- The mechanism does not use eccentric masses, but instead a piston and cylinder arrangement with a unique valve. Thus the vibrating shaft bearings, are eliminated.
- The new technology is able to oscillate a pile at its resonant (or natural) frequency to produce elevated levels of acceleration and force.
- A proprietary algorithm is used to maintain constant tuning of the driver frequency to the resonant frequency of the pile and ground. Both the algorithm and the piston cylinder geometry are unique.
- The piston cylinder arrangement allows for rapid tuning of the frequency, independent of the adjustable flow rate which defines the amplitude of vibration, and the pressure defines the force of vibration.
- The elimination of ground vibration during driving makes the Resonator the ideal tool adjacent to heritage structures, transportation links or major utilities.
- The Resonator reduces ground vibration to almost zero. Vibration monitoring has proven the Resonator will minimize ground vibrations to well below the world's most stringent urban vibration requirements. The Resonator guarantees urban vibration levels will not be exceeded even during start up and end of driving. Unlike conventional equipment that requires many different sizes to drive a wide range of piles, the Resonator drivers can easily be used on a wide range of piles and cross-sections, thus reducing capital costs. Other benefits include reduced power consumption and lower emissions.

RESONATOR

		RD260	RD430
Hydraulic power	kW	260	430
Frequency	Hz	60 - 160	60 - 160
Max. amplitude (in resonance)	mm	3 - 6	3 - 6
Max. static line-pull	kN	200	400
Max. operating pressure	bar	320	350
Max. oil flow	l/min	380	550
Total weight (Incl. clamp / backing mass)	kg	4124	6649
Total weight (Excl. clamp & additional mass)	kg	3764	5328
Universal clamp		RPC2	RPC3
Recommended power pack		450 RTI	600 RTI
Drilling unit			
Torque	ton/m	0,95	
Max. oil flow	l/min	200	
Max. operating pressure	bar	205	
Max. speed	rpm	60	
Possible to turn clockwise + counter clockwise			



For the application of the resonance technique, Dieseko Group collaborated with our highly trusted Canadian partner Resonance Technology International. After ample years of research, development and testing, the resonance technique is brought around the world by Dieseko Group.

The Dieseko Group, which was established in 1974, is a manufacturer of a wide range of products for the foundation industry. The range is divided into five product lines: vibratory hammers and impact hammers, piling and drilling rigs, soil improvement equipment, dredging equipment and hydraulic power units. Dieseko Group is owner of the brands PVE Piling & Vibro Equipment, ICE International Construction Equipment, Woltman Piling & Drilling Rigs and Bell Dredging equipment.

Dieseko Group engineers develop innovative foundation equipment in accordance with the latest regulations. The experienced engineers in the sales and rental department have a profound knowledge of the equipment and are always standing by to advise clients on their specific needs. Spare parts are in stock for all machines, which can be shipped quickly to dealers and clients worldwide, to avoid downtime on projects. Service engineers are available 24/7 to support clients on site. With over 60 dealers and branches worldwide, Dieseko Group is a reliable partner for all foundation contractors for consultation, sales, rental and financing.

DIESEKO GROUP PILING EQUIPMENT



VIBRATING



PRESSING



RESONATING



PILE DRIVING



DRILLING

DIESEKO GROUP

- Known for robust and reliable equipment
- Over 45 years of experience with a proven track record
- 24/7 worldwide support
- Large spare parts inventory
- World's largest rental fleet
- ISO 9001 certified

GLOBAL SERVICE NETWORK

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Dieseko Group certified dealer:

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PILING & VIBRO EQUIPMENT