



RESONATOR PRODUCT RANGE

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

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
- Silent power packs
 - Open loop hydraulic system
 - Advanced iQan intelligence
- Reduced power consumption
- Suspendable from telescopic mobile crane
- Leader guided option

DIESEKO GROUP

- Known for robust and reliable equipment
- Over 40 years of experience with a proven track record
- 24/7 worldwide support
- Large spare parts inventory
- World's largest rental fleet
- Consultancy and financing
- ISO 9001 certified



URBAN



RURAL



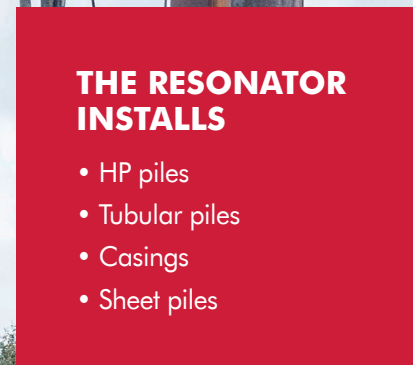
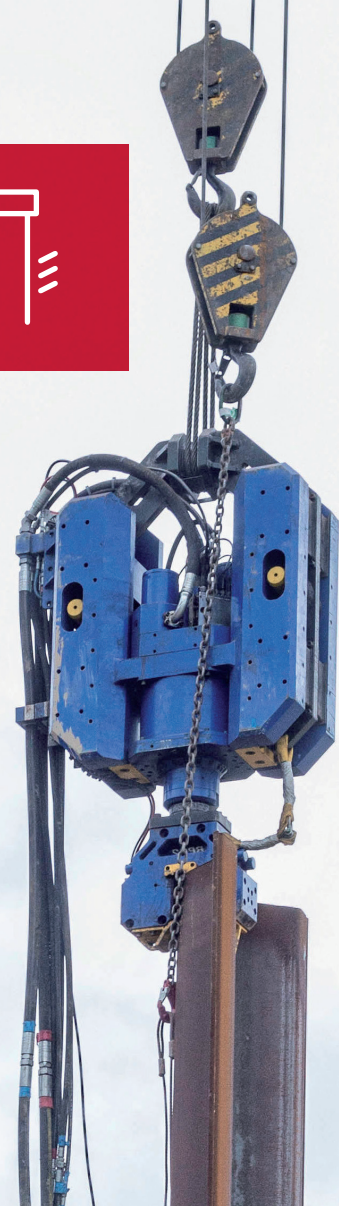
HARBOR



OFFSHORE

THE RESONATOR INSTALLS

- HP piles
- Tubular piles
- Casings
- Sheet piles



PRODUCT RANGE RESONATOR



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 Resonator RD260, we now offer a zero vibration solution for delicate applications such as inner city foundation projects.

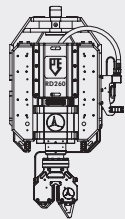
THE PRINCIPLE

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	RD560
Hydraulic power	kN/Hp	260/375	430/575	560/750
Frequency	Hz	40-180	40-180	40-180
Max. amplitude	mm	3-8	3-8	3-8
Max. pull down	kN	200	200	200
Max. static line-pull	kN	200	200	200
Hydraulic pressure	bar	310	310	310
Max. oil flow	l/min	410	700	900
Total weight excl. clamp & hoses	kg	3750	6800	9200
Recommended power pack		450 RTI	700 RTI	900 RTI



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.



Established in 1974, Dieseko Group represents several brands in the foundation equipment industry, in four product lines: Piling Equipment, Piling & Drilling Rigs, Ground Improvement and Power packs. In our markets the company is represented by three brands: PVE Piling & Vibro Equipment, ICE International Construction Equipment and Woltman Piling & Drilling Rigs.

Dieseko Group engineers develop 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 standby 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 consultancy, sales, rental and financing.

DIESEKO GROUP PILING EQUIPMENT



VIBRATING



PRESSING



RESONATING



PILE DRIVING



DRILLING



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