



# VARIABLE MOMENT VIBRATORY HAMMERS PRODUCT RANGE

**DIESEKO GROUP**



**PILING & VIBRO EQUIPMENT**

# FOUNDATION EQUIPMENT FROM **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 and Woltman Piling & Drilling Rigs. Dieseko Group also supplies Bell Dredging equipment.

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 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

NORMAL FREQUENCY



PRESSING

VARIABLE MOMENT



RESONATING

HEAVY DUTY



PILE DRIVING

EXCAVATOR MOUNTED



DRILLING



# PVE VARIABLE MOMENT STARTING AND STOPPING RESONANCE FREE

## APPLICATIONS

- Urban areas and vibration sensitive projects
- Safe working close to existing buildings, under structures, railways etc.
- General pile driving projects
- Suitable for most soil types

## ADVANTAGES

- Forced lubrication system
- Cooling system
- Excellent quality
- Wide range of clamping solutions
- Silent power packs
  - Open loop hydraulic system
  - Advanced iQan intelligence and management
  - Tier/Stage 2 to 4-final compliant
  - Suitable for other hydraulic equipment
- Suspendable from telescopic mobile crane

## 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



INDUSTRIAL



OFFSHORE



## THE URBAN AREA

Due to the minimal impact on soil conditions and surroundings, the VM vibratory hammer is perfectly suited to operate in urban areas.

## AREAS SENSITIVE TO VIBRATION

Due to its high frequency, variable eccentric moment and amplitude this hammer type can adapt to every driving and extracting situation with minimal vibration. You can work safely close to railways, vulnerable piping systems, under structures, and historic buildings.

## DIFFERENT SOIL CONDITIONS

A PVE Variable Moment hammer can be infinitely adapted to varying soil conditions, which makes it very versatile.

## CRANE MOUNTING

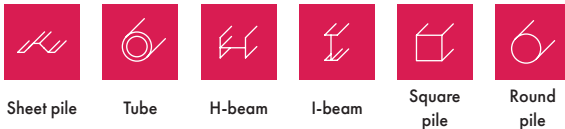
A PVE VM vibratory hammer can be suspended from a telescopic mobile crane, a major advantage when you have to deal with a lack of working space or you have to execute your project speedily.

The vibratory hammer can be used free hanging from a crawler crane or mounted on leader guided piling rigs. Mounting to an excavator is also an option if it has sufficient hydraulic power, or with an additional power pack.

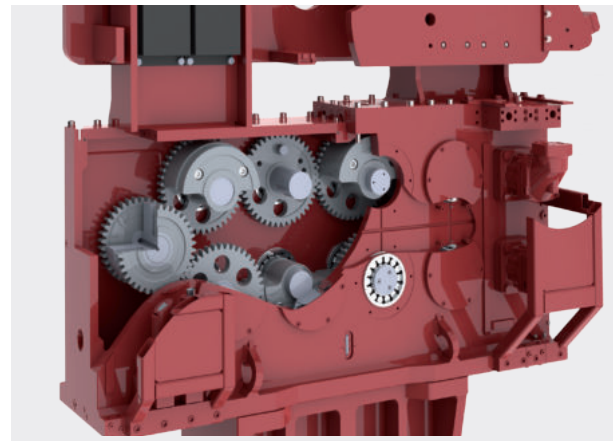
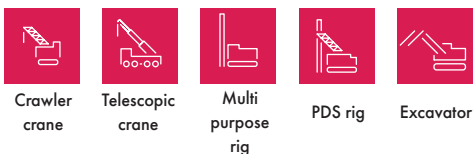
## CARBON FOOTPRINT

Sustainability is embedded in our R&D, processes and products. Vibration piling is an environmentally friendly foundation technique, as vibrations cause minimal noise and ground disturbance. PVE equipment is developed and manufactured according to the latest regulations. Together we can minimise your carbon footprint.

### Suitable piling profiles



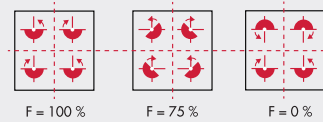
### Suitable cranes for variable moment applications



## VARIABLE ECCENTRIC MOMENT

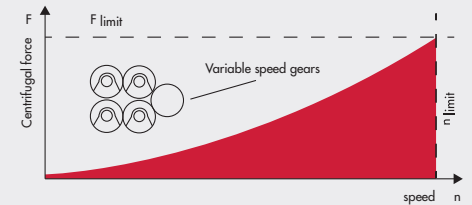
The principle of a variable moment vibratory hammer is based on adjustable eccentrics to achieve resonance free starting and stopping. During startup an adjustment motor shifts the eccentrics in to a zero moment position.

When the vibratory hammer reaches the desirable speed, eccentrics can infinitely be rotated and set to the eccentric moment. As a result the vibratory hammer will start to vibrate.

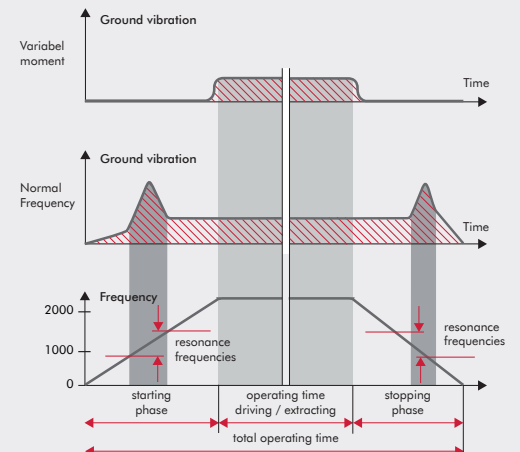


## HIGH FREQUENCY

Due to a high rotational speed - as a result of which the vibratory hammer works further away from the soil's resonance frequency - and due to the smaller amplitude, these vibratory hammers are less harmful to the surroundings. The ability to adjust both the moment and frequency makes a VM type vibrator the perfect hammer for different soil types and different profiles.

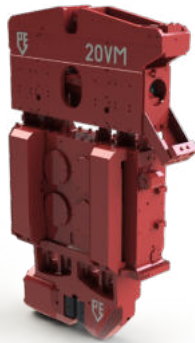


The variable eccentric moment of the vibratory hammer is  $m \times r \times \sum$  sum of eccentric weights.

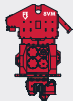
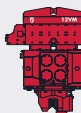
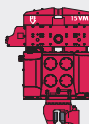
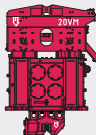
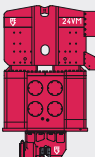
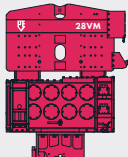


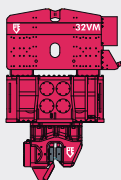
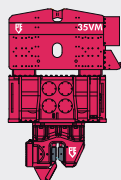
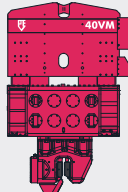
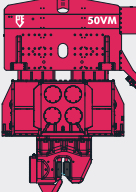
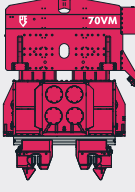
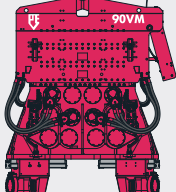
# VIBRATORY HAMMERS

The variable eccentric moment of this series results in resonance free starting and stopping of the machine. This makes the PVE VM hammer ideal for pile driving in vibration sensitive areas. The maximum eccentric moment varies from 7.5 to 70 kgm.



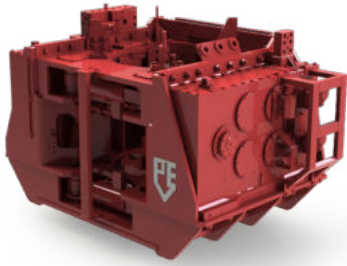
## HIGH FREQUENCY VIBRATORY HAMMERS WITH VARIABLE MOMENT

							
		<b>8VM</b>	<b>12VM</b>	<b>15VM</b>	<b>20VM</b>	<b>24VM</b>	<b>28VM</b>
Eccentric moment	kgm	0 - 7.5	0 - 12	0 - 15	0 - 19	0 - 24	0 - 28
Max. centrifugal force	kN	0 - 435	0 - 700	0 - 870	0 - 1100	0 - 1400	0 - 1600
Max. frequency	rpm	2300	2300	2300	2300	2300	2300
Max. amplitude *)	mm	0 - 15.2	0 - 17	0 - 13	0 - 15	0 - 14	0 - 14
Max. static line pull	kN	120	250	270	240	400	400
Max. oil flow	L/min	185	261	340	498	493	590
Dynamic weight *)	kg	985	1450	2130	2550	3500	3500
Total weight *)	kg	1515	2396	2900	3650	6020	5920
L x W x H *)	mm	1426 x 595 x 1514	1557 x 675 x 1595	1680 x 695 x 1718	1882 x 637 x 2008	1968 x 750 x 2443	2336 x 805 x 2427
Recommended power pack		200	300	400	500	500	600
Recommended sheet pile clamp		60TU	85TU	110TU	150TUL	200TUP	200TUP
Recommended tube clamp sets			55TC	55TC	80TC	100TC	100TC
Recommended pile clamp		60TP	120TP	120TP	120TP	180TP	180TP

							
		<b>32VM</b>	<b>35VM</b>	<b>40VM</b>	<b>50VM</b>	<b>70VM</b>	<b>90VM</b>
Eccentric moment	kgm	0 - 32	0 - 35	0 - 40	0 - 50	0 - 70	0 - 90
Max. centrifugal force	kN	0 - 1856	0 - 2030	0 - 1755	0 - 2900	0 - 3070	0 - 4477
Max. frequency	rpm	2300	2300	2000	2300	2000	2130
Max. amplitude *)	mm	0 - 15	0 - 16	0 - 19	0 - 15	0 - 21	0 - 13,3
Max. static line pull	kN	500	500	400	800	800	1500
Max. oil flow	L/min	740	1012	800	1380	1580	2062
Dynamic weight *)	kg	4300	4400	4300	6600	6800	13500
Total weight *)	kg	6800	6850	6760	10060	10260	18500
L x W x H *)	mm	2337 x 828 x 2347	2337 x 828 x 2347	2622 x 710 x 2690	2913 x 991 x 2835	2913 x 991 x 2835	3455 x 1600 x 3300
Recommended power pack		800	1000	800	1600	1600	1000 [2x]
Recommended sheet pile clamp		350TU	350TU	350TU	350TU	-	-
Recommended tube clamp set		125TC	150TC	125TC	175TC	210TC	150TC
Recommended pile clamp		180TP	180TP	180TP	-	-	-

\*) excluding clamp & hoses

## LEADER GUIDED VIBRATORY HAMMERS



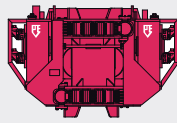
## VMR RING VIBRATORY HAMMERS

Using the PVE ring vibratory hammer is a highly efficient way of piling: you only need a short leader to drive long tubes. Closed end tubes for stone column piles and cast-in-situ piles can be constructed. The PVE ring vibratory hammer with variable moment is patented with a MDC – Moment Difference Control – system. This, together with a centrifugal force of up to 2200 kN, makes this type of machine suitable for numerous projects in many different applications. The resonance free starting and stopping of the machine makes it ideal for pile driving in vibration sensitive areas.

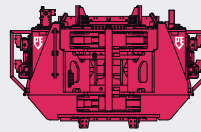
## VML LEADER GUIDED VIBRATORY HAMMERS

VML leader guided vibratory hammers are perfectly suited to drive sheet piles in areas with limited space. These vertical, linear designed type of vibratory hammers can be combined with leaders of all well-known brands. The resonance free starting and shut down of the machine makes it ideal for pile driving in vibration sensitive areas.

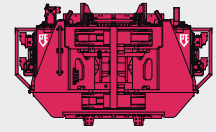
### RING VIBRATORY HAMMERS WITH VARIABLE MOMENT



**20VMR**



**32VMR**



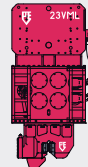
**38VMR**

Eccentric moment	kgm	0 - 20	0 - 32	0 - 38
Max. centrifugal force	kN	0 - 1160	0 - 1800	0 - 2200
Max. frequency	rpm	2300	2300	2300
Max. amplitude	mm	0 - 6	0 - 5	0 - 6
Max. static line pull	kN	300	400	400
Max. oil flow	L/min	550	860	960
Min. tube diameter	mm	406	406	406
Max. tube diameter	mm	508	610	610
Dynamic weight	kg	6500	12000	12400
Total weight	kg	6900	12500	12900
L x W x H *)	mm	2368 x 1320 x 1515	2602 x 1581 x 1740	2802 x 1720 x 1740
Max. pre-tension	kN	250	400	400

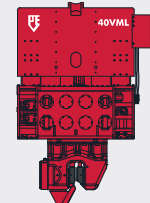
### LEADER GUIDED VIBRATORY HAMMERS WITH VARIABLE MOMENT



**17VML**



**23VML**



**40VML**

Eccentric moment	kgm	0 - 17,4	0 - 23	0 - 40
Max. centrifugal force	kN	0 - 1100	0 - 1350	0 - 1750
Max. frequency	rpm	2400	2300	2000
Max. amplitude *)	mm	0 - 16,8	0 - 17	0 - 19
Max. static line pull	kN	240	300	400
Max. oil flow	L/min	600	543	800
Dynamic weight *)	kg	2070	2700	4300
Total weight *)	kg	2590	3600	6760
L x W x H *)	mm	1420 x 560 x 2051	1460 x 785 x 2100	2580 x 710 x 2690
Max. pre-tension	kN	240	200	300
Recommended sheet pile clamp		130TU	150TU	350TU
Recommended tube clamp set		-	80TC	125TC
Recommended pile clamp		-	-	180TP

\*) = excluding clamp & hoses

## POWER PACKS



## PVE POWER PACKS VERSATILE POWER

PVE power packs are driven by superb top brand engines and hydraulic pumps and meet Tier 2 to durable Tier 4F and Stage V regulations.






The PVE open loop hydraulic and cooling systems ensure a safe and reliable hydraulic operation and prevents overheating. The intelligent iQan management assures a reliable performance and our interface is available in most common languages.






The PVE power pack can be adapted for extreme conditions such as freezing arctic environments or desert conditions with scorching heat. For arctic temperatures the design of this high-tech power packs incorporates insulation, heating and cooling to produce the same reliable performance.





We have developed the power packs to keep up with changing environmental legislation and can be built according to regulatory requirements. To avoid oil leaks the power packs are equipped with a fluid-sealed bottom. Noise and emissions have been reduced. Start-stop intelligence and AdBlue technology can be adopted.

Other hydraulic equipment such as the PVE Impact Hammers, winches and pumps can also be driven using the PVE power packs.

### POWER PACKS

		 <b>200XS</b>	 <b>200</b>	 <b>200</b>	 <b>300</b>	 <b>300</b>
Diesel engine		Caterpillar C71	Volvo TAD 582 VE	Volvo TAD 751 GE	Volvo TAD 882 VE	Volvo TAD 753 GE
Emission standard		Stage V / Tier 4F	Stage V / Tier 4F	Stage IIIA / Tier 3	Stage V / Tier 4F	Stage IIIA / Tier 3
Max. power	kW/HP	168/249	160/218	158/214	210/286	212/288
Max. frequency	rpm	2200	2300	1800	2200	1800
Working pressure	bar	350	350	350	350	350
Max. oil flow	l/min	280	211	252	324	324
Weight filled up	kg	3900	4250	4350	5150	5150
L x W x H	mm	3100 x 1500 x 1775	3375 x 1550 x 1970	3370 x 1550 x 1980	3672 x 1600 x 2055	3670 x 1600 x 2070





		 <b>400</b>	 <b>400</b>	 <b>500</b>	 <b>500</b>	 <b>600</b>
Diesel engine		Volvo TAD 884 VE	Caterpillar C9	Volvo TAD 1384 VE	Volvo TAD 1352 GE	Volvo TAD 1385 VE
Emission standard		Stage V / Tier 4F	Stage IIIA / Tier 3	Stage V / Tier 4F	Stage IIIA / Tier 3	Stage V / Tier 4F
Max. power	kW/HP	250/340	242/329	375/510	363/494	405/551
Max. frequency	rpm	2200	2200	1900	1800	1900
Working pressure	bar	350	350	350	350	350
Max. oil flow	l/min	396	396	520	520	644
Weight filled up	kg	5150	6000	7600	7500	7600
L x W x H	mm	3672 x 1600 x 2055	4000 x 1650 x 2065	4330 x 1750 x 2290	4330 x 1750 x 2290	4330 x 1750 x 2290





		 <b>600</b>	 <b>800</b>	 <b>800</b>	 <b>800</b>
Diesel engine		Caterpillar C15	Volvo TWD 1683 VE	Caterpillar C18	Volvo TAD 1643 VE-B
Emission standard		Stage IIIA / Tier 3	Stage V / Tier 4F	Stage V / Tier 4F	Stage - / Tier 2
Max. power	kW/HP	403/540	585/796	563/755	565/768
Max. frequency	rpm	2100	1900	1800	1900
Working pressure	bar	350	350	350	350
Max. oil flow	l/min	672	810	810	810
Weight filled up	kg	7600	10400	8700	10000
L x W x H	mm	4500 x 1740 x 2250	5062 x 1900 x 2330	4750 x 1900 x 2420	5060 x 1900 x 2345









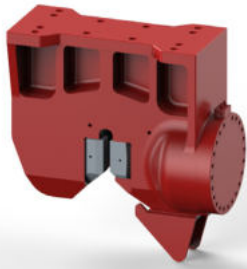
## POWER PACKS

				
	<b>900</b>	<b>900</b>	<b>900</b>	<b>1000</b>
Diesel engine	Volvo TWD 1683 VE	Caterpillar C18	Volvo TAD 1643 VE-B	Volvo TAD 1384 VE (2x)
Emission standard	Stage V / Tier 4F	Stage V / Tier 4F	Stage - / Tier 2	Stage V / Tier 4F
Max. power	kW/HP 585/796	563/755	565/768	750/1020
Max. frequency	rpm 1900	1800	1900	1900
Working pressure	bar 350	350	350	350
Max. oil flow	l/min 972	972	972	1051
Weight filled up	kg 10400	10650	10000	14000
L x W x H	mm 5062 x 1900 x 2330	5320 x 1950 x 2420	5060 x 1900 x 2345	5372 x 2480 x 2406

				
	<b>1000</b>	<b>1000</b>	<b>1400</b>	<b>1600 short</b>
Diesel engine	Caterpillar C27	Volvo TAD 1352 GE (2x)	Volvo TAD 1353GE (2x)	Volvo TWD 1683 VE (2x)
Emission standard	Stage V / Tier 4F	Stage IIIA / Tier 3	Stage - / Tier 3	Stage V / Tier 4F
Max. power	kW/HP 709/950	726/988	820/1116	1170/1592
Max. frequency	rpm 1800	1800	1800	1900
Working pressure	bar 350	350	350	350
Max. oil flow	l/min 1100	1051	1476	1710
Weight filled up	kg 12700	13870	13870	18900
L x W x H	mm 5075 x 2300 x 2415	5372 x 2480 x 2430	5370 x 2480 x 2430	5875 x 2900 x 2510

				
	<b>1600</b>	<b>1600</b>	<b>1600</b>	<b>3200</b>
Diesel engine	Volvo TWD 1683 VE (2x)	Caterpillar C18 (2x)	Volvo TAD 1643 VE (2x)	Volvo TAD 1643 VE (4x)
Emission standard	Stage V / Tier 4F	Stage V / Tier 4F	Stage - / Tier 2	Stage - / Tier 2
Max. power	kW/HP 1170/1592	1126/1510	1130/1536	2260/3072
Max. frequency	rpm 1900	1800	1850	1850
Working pressure	bar 350	350	350	350
Max. oil flow	l/min 1620	1620	1665	3330
Weight filled up	kg 18000	18000	15000	31000
L x W x H	mm 8075 x 2200 x 2540	8075 x 2200 x 2540	5470 x 2480 x 2520	9075 x 2500 x 2693

# SHEET PILE, PILE AND TUBE CLAMPS



## CLAMPS

PVE developed a wide range of heavy duty clamping systems, beams and cross beams for driving sheet piles, tubular piles of varying dimensions, concrete piles and even wooden piles. Talk to our experts who can offer advice on the best clamping solutions for your application.

- **TU series:** sheets pile clamps for single or double sheets and H-beams
- **TC series:** tube clamps for tubes or multiple sheets
- **TP series:** pile clamps for concrete, wooden and steel tubes or piles
- **CP series:** concrete sheet pile clamps on request.

### SHEET PILE CLAMPS



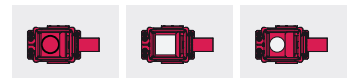
		60TU	85TU	130TUP	130TU	150TUL	150TU	200TUP	350TU
Clamping force	kN	600	850	1300	1300	1500	1500	2000	3500
Working pressure	bar	320	300	300	320	300	300	300	320
Weight	kg	250	600	750	610	1100	1270	2000	2600
L x W x H	mm	615 x 310 x 497	874 x 333 x 500	1013 x 450 x 898	731 x 340 x 730	1133 x 350 x 985	1133 x 350 x 985	1130 x 530 x 1165	1242 x 540 x 1230

### TUBE CLAMPS



		55TC	80TC	100TC	125TC	150TC	175TC	200TC	210TC
Clamping force	kN	550	800	1000	1250	1500	1750	2000	2000
Working pressure	bar	300	300	300	300	300	300	320	320
Weight	kg	310	500	690	900	1300	1400	1350	1600
L x W x H	mm	500 x 320 x 702	587 x 340 x 842	642 x 395 x 858	681 x 400 x 950	797 x 420 x 1040	797 x 420 x 1040	915 x 430 x 1092	975 x 430 x 1102
Min. inside tube ø	mm	294	417	480	526	638	638	725	860

### PILE CLAMPS



		60TP	120TP	180TP
Clamping force	kN	600	1200	1800
Working pressure	bar	300	300	300
Weight	kg	1240	1650	2820
L x W x H	mm	1180 x 617 x 1238	1180 x 617 x 1668	1270 x 717 x 2474



**PROFESSIONALS  
IN THE FIELD**





## GLOBAL SERVICE NETWORK

### **Dieseko Group B.V.**

(headquarters)  
Lelystraat 49  
3364 AH Sliedrecht, the Netherlands  
Tel: (+31) 184 410 333  
info@diesekogroup.com  
www.diesekogroup.com

### **Woltman Piling & Drilling Rigs**

Ambachtsweg 16  
3381 LN Giessenburg, the Netherlands  
Tel: (+31) 184-652044  
info@woltmanrigs.com  
www.woltmanrigs.com

### **PVE Equipment USA Inc.**

5011 Vernon Road  
Jacksonville, FL 32209, USA  
Tel: (+1) 904 765 66 86  
info@pveusa.com  
www.pveusa.com

### **Pilequip Pty. Ltd.**

39 Chapman Road  
Vineyard NSW 2765, Australia  
Tel: +61 2 9838 3144  
info@pilequip.com.au  
www.pilequip.com.au

### **Dieseko Polska Spółka z o.o.**

Siruga 61  
70-784 Szczecin, Poland  
Tel: +48 736 241 696  
polska@diesekogroup.com  
www.diesekogroup.com

### **Shanghai ICE Construction Equipment Trading Company**

No.88, Building 31, ChuanSha International Industrial Garden,  
6999 ChuanSha Road, PuDong District,  
201202 Shanghai, P.R. China  
Tel: (+86) 21 3468 8990  
info@icevibro.com  
www.icevibro.com

**Dieseko Group certified dealer:**

## **DIESEKO GROUP**



**PILING & VIBRO EQUIPMENT**