VARIABLE MOMENT VIBRATORY HAMMERS
PRODUCT RANGE

PILING & VIBRO EQUIPMENT

DIESEKO GROUP

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


2335
VM1

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

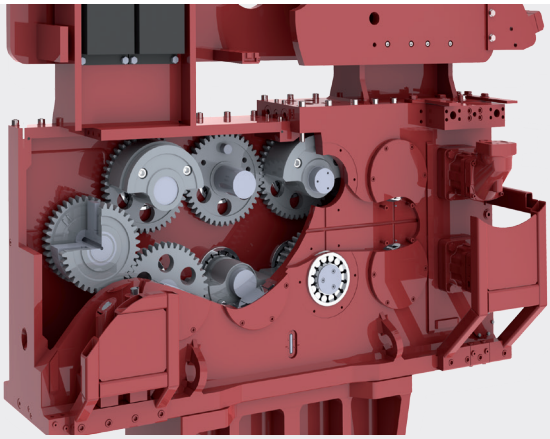
Sustainability is embedded in our R&D, processes and products. Vibration piling is an environmentally friendly foundation technique, as vibrations cause minimal noise and ground disturbance. PVE equipment is developed and manufactured according to the latest regulations. Together we can minimise your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

Suitable piling profiles

Sheet pile | Tube | H-beam | I-beam | Square pile | Round pile

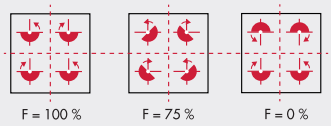
Suitable cranes for variable moment applications

Crawler crane | Telescopic crane | Multi purpose rig | PDS rig | Excavator



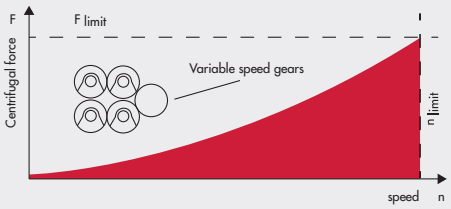
VARIABLE ECCENTRIC MOMENT

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.

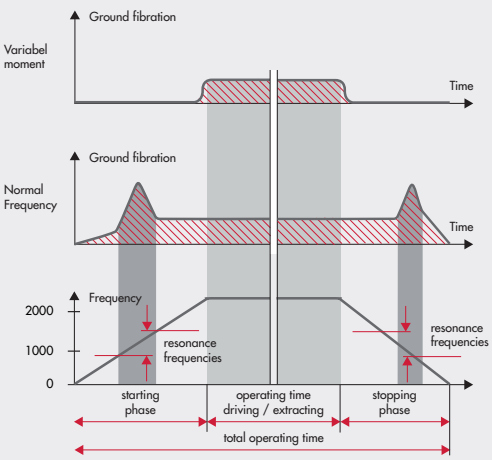


HIGH FREQUENCY

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.

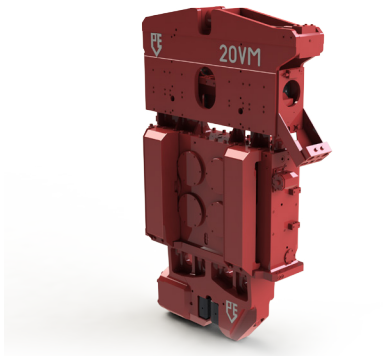


The variable eccentric moment of the vibratory hammer is m x r x sum of eccentric weights.

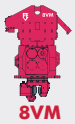
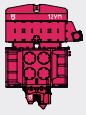
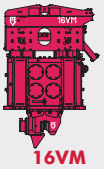
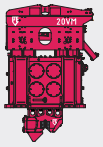
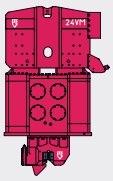
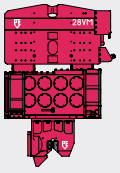


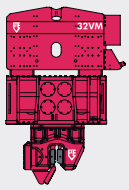
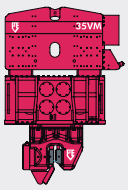
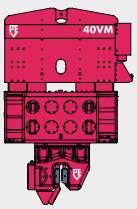
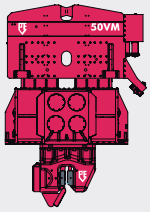
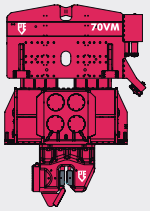
VIBRATORY HAMMERS

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.



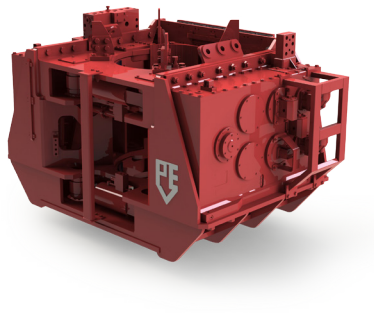
HIGH FREQUENCY VIBRATORY HAMMERS WITH VARIABLE MOMENT

		 8VM	 12VM	 16VM	 20VM	 24VM	 28VM
Eccentric moment	kgm	0 - 7.5	0 - 12	0 - 16	0 - 19	0 - 24	0 - 28
Max. centrifugal force	kN	0 - 435	0 - 700	0 - 928	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	240	240	400	400
Max. oil flow	L/min	185	261	375	498	493	590
Dynamic weight *)	kg	985	1450	2460	2550	3500	3900
Total weight *)	kg	1515	2390	3560	3650	5960	5900
L x W x H *)	mm	1530 x 595 x 1514	1559 x 674 x 1589	1849 x 637 x 2008	1849 x 637 x 2008	1967 x 740 x 2445	2333 x 785 x 2427
Recommended power pack		200	300	400	500	500	600
Recommended Sheet pile clamp		DWK 60TU	DWK 85T	DWK 110T	DWK 150T-L	DWK 200T	DWK 200T
Recommended Tube clamp			PPK55T	PPK80T	PPK80T	PPK100T	PPK100T
Recommended Pile clamp		PLK 60T40	PLK 120T40	PLK 120T40	PLK 120T40	PLK180T50	PLK180T50

		 32VM	 35VM	 40VM	 50VM	 70VM
Eccentric moment	kgm	0 - 32	0 - 35	0 - 40	0 - 50	0 - 70
Max. centrifugal force	kN	0 - 1856	0 - 2030	0 - 1755	0 - 2900	0 - 3070
Max. frequency	rpm	2300	2300	2000	2300	2000
Max. amplitude *)	mm	0 - 15	0 - 16	0 - 19	0 - 15	0 - 21
Max. static line pull	kN	500	500	400	800	800
Max. oil flow	L/min	740	1012	800	1380	1580
Dynamic weight *)	kg	4300	4400	4300	6600	6800
Total weight *)	kg	6750	6800	6760	10000	10200
L x W x H *)	mm	2384 x 825 x 2352	2384 x 825 x 2352	2622 x 709 x 2690	2883 x 985 x 2835	2883 x 985 x 2835
Recommended power pack		800	1000	800	1600	1600
Recommended Sheet pile clamp		DWK 350T	DWK 350T	DWK 350T	DWK 350T	DWK 350T
Recommended Tube clamp		PPK125T	PPK150T	PPK125T	PPK175T	PPK200TC
Recommended Pile clamp		PLK180T50	PLK180T50	PLK180T50	-	-

*) excluding clamp & hoses

LEADER GUIDED VIBRATORY HAMMERS



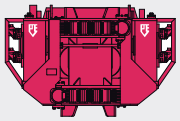
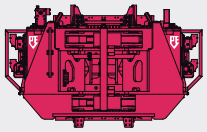
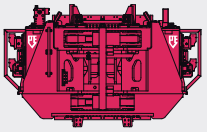
VMR RING VIBRATORY HAMMERS

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.

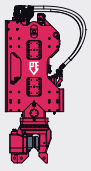
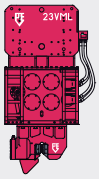
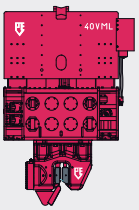
VML LEADER GUIDED VIBRATORY HAMMERS

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

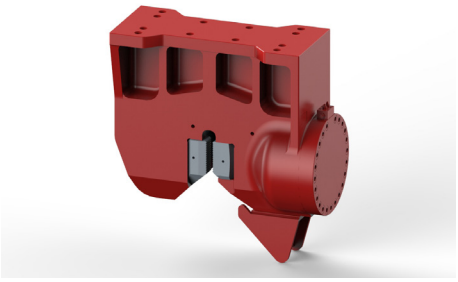
				
		20VMR	**32VMR**	**38VMR**
Eccentric moment	kgm	0 - 20	0 - 32	0 - 38
Max. centrifugal force	kN	0 - 1160	0 - 1800	0 - 2200
Max. frequency	rpm	2300	2300	2300
Max. amplitude	mm	0 - 6	0 - 5	0 - 6
Max. static line pull	kN	300	400	400
Max. oil flow	L/min	550	860	960
Min. tube diameter	mm	406	406	406
Max. tube 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 1480	2650 x 1685 x 1671	2650 x 1685 x 1671
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	1587 x 785 x 2014	2620 x 709 x 2690
Max. pre-tension	kN	240	200	300
Sheet pile clamp		DWK 130TU	DWK 150T	DWK 350T
Tube clamp		-	PPK 80T	PPK125T
Pile clamp		-	-	PLK180T50

*) = excluding clamp & hoses

SHEET PILE, PILE AND TUBE CLAMPS

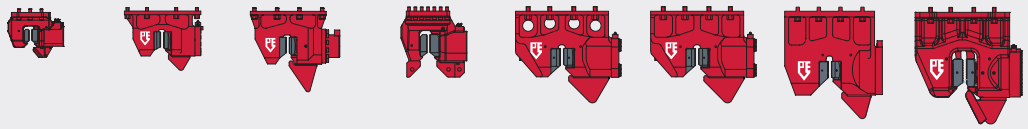


CLAMPS

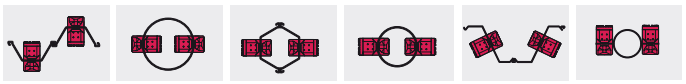
PVE developed a wide range of heavy duty clamping systems, beams and cross beams for driving sheet piles, tubular piles of varying dimensions, concrete piles and even wooden piles. Talk to our experts who can offer advice on the best clamping solutions for your application.

- **DWK series:** sheets pile clamps for single or double sheets and H-beams
- **PPK series:** tube clamps for tubes or multiple sheets
- **PLK series:** pile clamps for concrete, wooden and steel tubes or piles

SHEET PILE CLAMPS

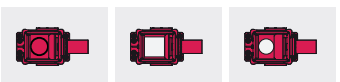


		DWK 60TU	DWK 85T	DWK 110T	DWK 130TU	DWK 150T (-L)	DWK 150T	DWK 200T	DWK 350T
Clamping force	kN	600	850	1100	1300	1500	1500	2000	3500
Working pressure	bar	320	300	300	300	300	300	300	320
Weight	kg	250	600	750	750	1100	1270	2000	2600
L x W x H	mm	615 x 310 x 497	874 x 333 x 500	1048 x 450 x 590	731 x 340 x 730	1133 x 350 x 710	1133 x 350 x 710	1130 x 530 x 920	1242 x 540 x 940

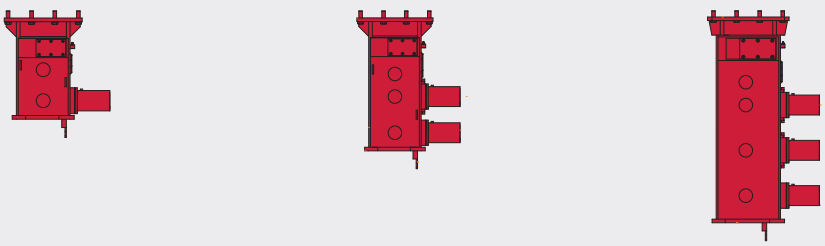


TUBE CLAMPS

		PPK 55T	PPK 80T	PPK 100T	PPK 125T	PPK 150T	PPK 175T	PPK 200TC
Clamping force	kN	550	800	1000	1250	1500	175	2000
Working pressure	bar	300	300	300	300	300	300	320
Weight	kg	310	500	690	900	1300	1400	1350
L x W x H	mm	500 x 320 x 450	587 x 340 x 630	642 x 395 x 555	681 x 400 x 647	797 x 420 x 750	797 x 420 x 750	915 x 430 x 1092
Min. inside tube ø	mm	294	417	480	526	638	638	725



PILE CLAMPS



		PLK 60T40	PLK 120T40	PLK 180T50
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 1130	1180 x 617 x 1470	1270 x 717 x 2275

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 Stage/Tier 4 Final 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.

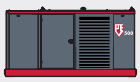
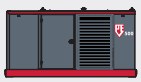
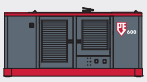
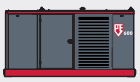
The PVE power pack can be adapted for extreme conditions such as freezing arctic environments or desert conditions with scorching heat. For arctic temperatures the design of this high-tech power packs incorporates insulation, heating and cooling to produce the same reliable performance.

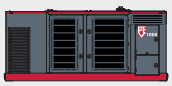
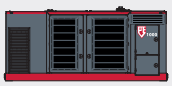
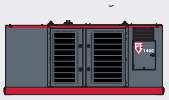
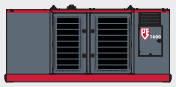
We have developed the power packs to keep up with changing environmental legislation and can be built according to regulatory requirements. To avoid oil leaks the power packs are equipped with a fluid-sealed bottom. Noise and emissions have been reduced. Start-stop intelligence and AdBlue technology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

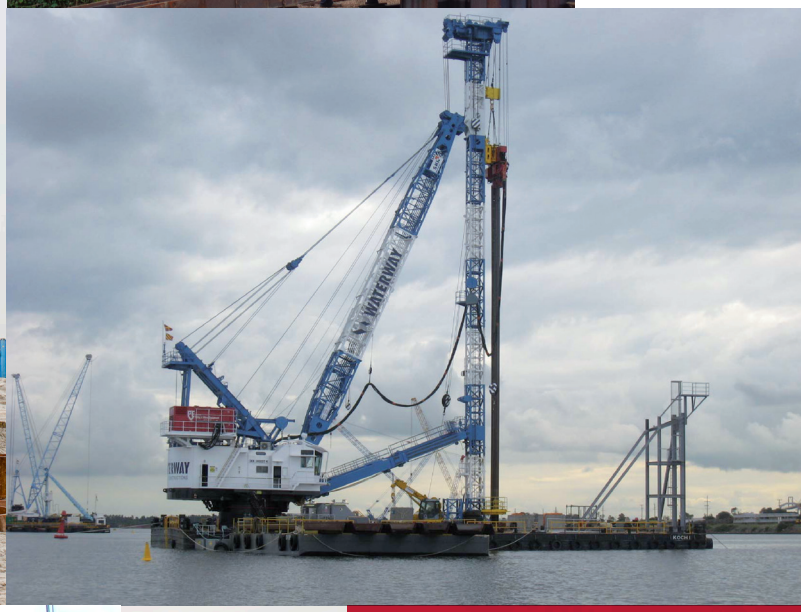
		 200	 200	 300	 300	 400	 400
Diesel engine		Volvo TAD 751 GE	Volvo TAD 572 VE	Volvo TAD 753 GE	Volvo TAD 872 VE	Caterpillar C9	Volvo TAD 873 VE
Emission standard		Stage 3A	Stage 4	Stage 3A	Stage 4	Stage 3A	Stage 4
Max. power	kW/HP	158/214	160/218	212/288	210/286	242/329	235/320
Max. frequency	rpm	1800	2300	1800	2200	2200	2200
Working pressure	bar	350	350	350	350	350	350
Max. oil flow	l/min	201	201	262	262	396	396
Weight	kg	3900	3900	4700	4700	6000	4700
L x W x H	mm	3370 x 1550 x 1980	3370 x 1550 x 1980	3670 x 1600 x 2070	3670 x 1600 x 2070	4000 x 1650 x 2085	3670 x 1600 x 2070

		 500	 500	 600	 600	 800	 800
Diesel engine		Volvo TAD 1352 GE	Volvo TAD 1374 VE	Caterpillar C15	Volvo TAD 1375 VE	Volvo TAD 1643 VE	Volvo TAD 1672 VE
Emission standard		Stage 3A	Stage 4	Stage 3A	Stage 4	Stage -	Stage 4
Max. power	kW/HP	363/494	375/510	403/548	405/551	565/768	515/700
Max. frequency	rpm	1800	1800	2100	1900	1850	1800
Working pressure	bar	350	350	350	350	350	350
Max. oil flow	l/min	505	505	670	617	800	800
Weight	kg	6800	6800	7600	6900	8500	8500
L x W x H	mm	4330 x 1750 x 2280	4330 x 1750 x 2280	4500 x 1740 x 2250	4330 x 1750 x 2280	4820 x 1800 x 2345	4920 x 1900 x 2360

		 900	 900	 1000	 1000	 1400	 1600
Diesel engine		Volvo TAD 1643 VE	Caterpillar C18	Volvo TAD 1352 GE (2x)	Volvo TAD 1374 VE (2x)	Volvo TAD 1353 GE (2x)	Volvo TAD 1643 VE (2x)
Emission standard		Stage 2	Stage 4	Stage 3A	Stage 4	Stage -	Stage -
Max. power	kW/HP	565/768	563/755	726/988	750/1020	898/1222	1130/1536
Max. frequency	rpm	1850	1800	1800	1900	1800	1850
Working pressure	bar	350	350	350	350	350	350
Max. oil flow	l/min	888	888	1000	1000	1380	1600
Weight	kg	9700	11000	13100	13100	13700	13700
L x W x H	mm	5060 x 1800 x 2345	5320 x 1950 x 2400	5370 x 2480 x 2430	5370 x 2480 x 2430	5372 x 2480 x 2427	5470 x 2480 x 2520

PROFESSIONALS
IN THE FIELD


68
69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