



PVE Piling and Drilling Rigs

Powerful, Versatile and Efficient



PVE Piling and Drilling Rigs B.V.
Worldwide supply of specialized foundation machines





PVE Piling and Drilling Rigs

PVE Piling and Drilling Rigs BV is a specialist when it comes to foundation equipment. The state of the art PVE Piling and Drilling rigs are sophisticated and yet easy to operate in restricted and urban surroundings. The rigs can be delivered in many different versions and if necessary customized to the customer's needs. All machines have access to a powerful engine and hydraulic system. This makes it possible to power an impact- or vibratory hammer or rotary head directly by the system of the machine without the need of an additional power pack. PVE uses Caterpillar engines combined with Bosch-Rexroth hydraulics. In case more hydraulic power is required a power pack can be mounted on the rear side of the machine. PVE offers a wide range of machines with leader lengths exceeding 50 meters. Most of the machines are specifically designed for the installation of raked piles. The 5021 piling machine is also suitable for the installation of piles with a sideward inclination.

PVE offers rigs dedicated for Piling and for Drilling. The leaders for the piling rigs are made from a light weight construction and can handle a moderate torque up till 150 kNm. Some of the drilling rigs can handle a torque up till 500 kNm and are

designed for large diameter CFA and full displacement drilling. The winches are synchronized and a Pull Down system is part of the supply as well. PVE offers a wide range of rotary heads from 30 kNm up till 500 kNm. PVE also offers a wide range of hydraulic powered auger cleaners to make the CFA operations even more efficient.

Useful power

The PVE pull down system on the drilling rigs guarantees a higher efficiency. Some job reports show a positive difference of 30% compared to conventional machines. The bigger PVE drilling rigs are equipped with powerful diesel engines to guarantee optimum performance in heavy soil conditions.

Service

PVE Piling and Drilling Rigs has a full service warehouse which is 24 hours, 7 days a week available for your support. PVE Piling and Drilling Rigs are supported all over the world through different offices of PVE and through local dealers and partners. All of our technicians are specially trained in the PVE Education centre and have many years of practical experience.



PVE Piling Rigs

The PVE pile driving machines can be used for the installation of different kind of piles. The most common application is the installation of precast concrete piles. These piles can either be square, round or octagonal. Other applications are the installation of timber piles, sheet piles and steel casings and H-beams. The compact size of the PVE machines enables the machines to work in areas that are hard to reach. Their excellent mobility makes it possible to complete several small jobs in one day. The machines are fitted with a self-erecting type leader which reduces the time of assembly considerably. The PVE piling rigs are under constant development and are adapted to the latest demands of the market. There is a focus on the latest environmental related

solutions when it comes to save fuel and to reduce emissions. PVE pile driving machines are designed for pile driving from the start which makes them unique compared to many other machines. Features like the high stability, a width undercarriage and a low centre of gravity make the PVE machines unique and fully dedicated.

PVE also offers Mini Piling machines which can be used for bottom drive piling and which are especially designed for jobsites with limited height and difficult access. These type of machines are equipped with a free-fall type winch and are manufactured upon order. This gives the most flexibility. Please contact PVE directly in case you have an inquiry for a limited headroom machine.

PVE Piling Rigs

Model	30 PR	40 PR	50 PR	90 PR	160 PR
Standard leader length (mtr)	17,5	21,8	24,8	30,0	46,0
Maximum leader length (mtr)	19,5	24,8	27,8	36,0	51,0
Max. weight for pile + hammer (ton)	10,0	13,0	18,5	20,0	60,0
Capacity of hammer winch (ton)	7,0	8,0	6,0	12,5	15,0
Capacity of pile winch (ton)	6,0	6,0	6,0	10,0	15,0
Capacity of optional auxiliary winch	3,0	3,0	4,0	6,0	10,0
Diesel engine	CAT	CAT	CAT	CAT	CAT
Standard engine output (HP)	200	250	250	350	350
Operational width (mm)	3.600	4.100	4.400	4.800	5.300
Transport width (mm)	3.000	3.300	3.450	3.500	3.750
Operational weight excl. hammer (ton)	30,0	40,0	51,0	90,0	160,0
Recommended PVE impact hammer	3NL	4/5NL	5/7NL	7/10NL	10/12NL

PVE Piling Rigs available with leader system for sideways inclined piles up to 14 degrees (4:1)





PVE Drilling Rigs

The drilling rigs of PVE are designed for the installation of the most common types of drilling. The machines are used to install CFA piles, semi- and full displacement piles and different kinds of injection drilling methods. All the machines of PVE are equipped with a powerful engine connected to a sophisticated hydraulic system which is designed to power the rotary head directly without the need of an additional power pack. The PVE drilling rigs have a very high mobility and can be assembled and disassembled in a very short period of time. The rigs are very suitable to be used in urban surroundings and jobsites with limited access. The largest PVE drilling rigs can be used with the unique 500 kNm (50 ton/mtr) rotary head. This rotary head is designed specifically for the installation of large diameter CFA and full displacement piles.

Model	35 DR	45 DR	55 DR	65 DR	90 DR	160 DR
Standard leader length (mtr)	17,5	21,8	24,8	27,0	30,0	46,0
Maximum leader length (mtr)	19,5	24,8	27,8	30,0	36,0	51,0
Max. weight for rotary + auger (ton)	5,9	7,4	12,0	13,0	20,0	40,0
Capacity of rotary winch (ton)	7,0	10,0	10,0	15,0	12,5	15,0
Capacity of pull-down winch (ton)	5,0	6,0	6,0	10,0	10,0	15,0
Capacity of optional auxiliary winch	3,0	3,0	4,0	5,0	6,0	10,0
Diesel engine	CAT	CAT	CAT	CAT	CAT	CAT
Standard engine output (HP)	275	475	475	588	765	350
Operational width (mm)	3.600	4.100	4.400	4.800	4.800	5.300
Transport width (mm)	3.000	3.300	3.450	3.480	3.500	3.750
Operational weight excl. rotary (ton)	30,0	49,0	55,0	70,0	90,0	160,0
Recommended rotary head	RH-8	RH-15	RH-15	RH-25	RH-40/50	RH-40/50

PVE Rotary heads and accessories

PVE offers a wide range of hydraulic powered rotary heads. All of the rotary heads can be used for CFA drilling and the bigger models are also used for full displacement drilling and semi-displacement drilling. PVE rotary heads have a variable speed and are equipped with A-brand components. The rotary heads are designed in a way that it is possible to work very close to adjacent buildings.

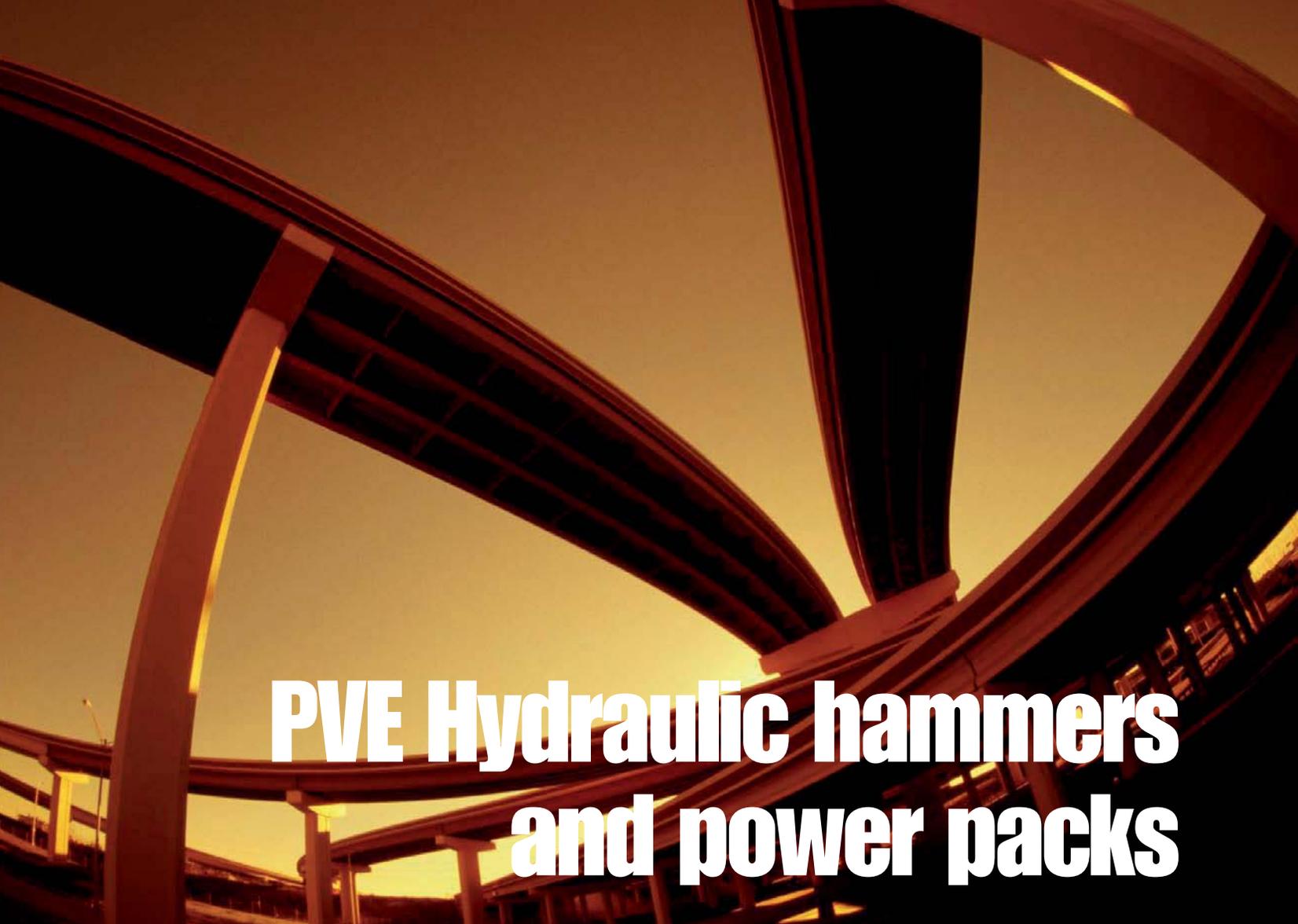
PVE offers a wide range of different auger cleaners for CFA operations. These auger cleaners are hydraulically powered and have been designed according years of field experience. In order to work safe the use of this unique auger cleaner is highly recom-

mended. Further the auger cleaner can also work as a guide to prevent the auger from drifting away while drilling. The standard range of auger cleaners exists of the BS-600, BS-800 and the BS-1000. Upon request smaller and bigger models scan be offered.

For pre-drilling operations, PVE offers the WG-4 hydraulic rotary head which can optionally be ordered with the PVE 5021 pile driving machine. In that case the WG-4 is installed at the side of the leader which makes it possible to pre-drill without having to dismantle the hydraulic hammer. The WG-4 rotary heads creates a torque of 3,2 ton/meter.

	RH-8	RH-15	RH-25	RH-40	RH-50
Maximum torque	8 TM	15 TM	25 TM	40 TM	50 TM
Maximum speed	0-40 Rpm	0-30 Rpm	0-24 Rpm	0-20 Rpm	0-16 Rpm
Maximum shaft diameter	340 mm	340 mm	500 mm	500 mm	600 mm
Maximum pressure	300 Bar	325 Bar	350 Bar	350 Bar	350 Bar
Maximum oilflow	350 l/min.	520 l/min.	610 l/min.	800 l/min.	800 l/min.
Height	1.575 mm	1.575 mm	1.575 mm	2.000 mm	2.220 mm
Depth	1.080 mm	1.058 mm	1.171 mm	1.150 mm	1.150 mm
Width	1.115 mm	1.281 mm	1.500 mm	1.650 mm	1.740 mm
Weight	2.400 kg	3.400 kg	4.500 kg	7.000 kg	8.000 kg





PVE Hydraulic hammers and power packs

PVE hydraulic impact hammers are high quality hammers with very low maintenance costs. The hammers can be offered with the PVE pile driving machines but are also offered separately with or without a hydraulic power pack. The hammers can be offered with a diversity of pile sleeves and drive caps. The most common application is found in the installation of precast concrete piles and the installation of steel casings. With the proper accessories it is also possible to drive sheet piles or to use the hammers for Driven Cast in Situ operations. The bigger PVE hammers are mostly used in civil works and offshore projects like the construction of Jetties or the installation of conductors. The PVE hammers are now manufactured in the new facility of PVE in the Netherlands. The biggest hammer in the standard range is the PVE 18L which has a ram weight of 18 tons, bigger and customized hammers can be offered as well.

PVE hydraulic hammers and the 'MeasureStrike' system

PVE's strategy is to integrate the latest available environmental friendly technologies to optimize performance and efficiency. The new line of 'NL' type hammers are accelerated, low noise and offer a very high quality. Still the hammers are versatile in use, easy to maintain and light in weight. The new 'NL' hammers are able to give very small blows and are also offered with the unique 'MeasureStrike' system. The 'MeasureStrike' system provides data measurement and registration on the energy, blow count and parameters like depth, driving time and pile number.

Unique product features:

Cylinder assembly in a way that minimizes wear and tear on bearings

- High grade steel of ramweight
- Wear and tear strips on the ramweight

- Very durable and quickly exchangeable drive cap and helmet system
- Shock-resistant electronic connectors & HQ electronic cable
- Accelerated principle to increase the efficiency
- High frequent blow rate is possible with the new 'NL' models

The 'NL' hammers are not only very efficient and fast in their operation, they are also offered with sound insulation which makes the noise decrease by 25%. With help of the new type of cylinder the impact hammers are accelerated by 20% creating a higher efficiency and a higher daily pile production. PVE is also able to offer hydraulic power packs with bio-degradable oil, Tier 4 engines and full sound insulation. PVE offers the 'NL' hammers in a range of 3 till 40 tons dropweight. Separate datasheets on the PVE 'NL' hammers are available.

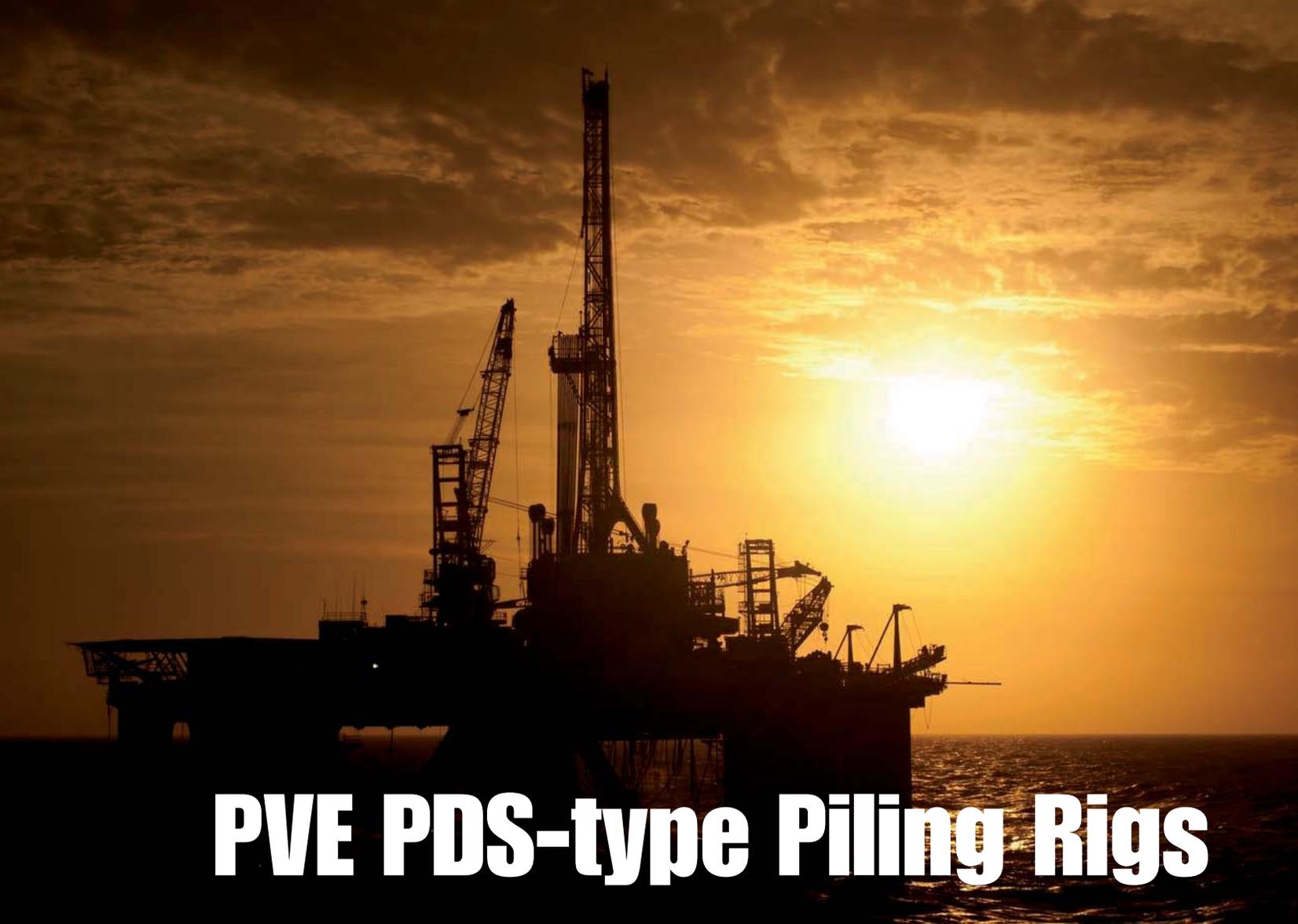
PVE hydraulic impact hammers

Model	3 NL	4 NL	5 NL	7 NL	9 NL	12 NL	14 NL	16 NL	18 NL
Maximum potential energy (kJ)	43	57	72	101	127	212	247	282	318
Maximum net. energy (kJ)	36	48	60	84	106	177	206	235	265
Maximum stroke (mm)	1.200	1.200	1.200	1.200	1.200	1.500	1.500	1.500	1.500
Minimum stroke (mm)	200	200	200	200	200	200	200	200	200
Blowrate at max. stroke (bl/min)	40	40	40	40	40	30	30	30	30
Ram weight (ton)	3	4	5	7	9	12	14	16	18
Hammer weight excl. sleeve (ton)	6	8,5	9,5	11,5	13,9	21,8	23,8	26,8	29,8
Maximum pressure (bar)	140	155	165	185	235	170	200	230	260
Required oilflow (ltr/min)	390	390	390	390	390	650	650	650	650
Length indication (mm)	5.940	5.940	5.940	6.640	7.740	8.690	8.690	9.490	10.290
Max. width indication (mm)	940	940	940	940	940	1.500	1.500	1.500	1.500
Max. height indication (mm)	904	940	940	940	940	1.500	1.500	1.500	1.500

Recommended power pack

Model	250 NL	500 NL	500 NL	500 NL	500 NL				
Engine output (HP) min.	220	220	220	220	220	470	470	470	470
Max. oilflow (ltr/min)	400	400	400	400	400	800	800	800	800
Max. working pressure (bar)	250	250	250	250	250	250	250	250	250
Operational weight (kg)	5.500	5.500	5.500	5.500	5.500	6.900	6.900	6.900	6.900
Length indication (mm)	3.500	3.500	3.500	3.500	3.500	4.255	4.255	4.255	4.255
Width indication (mm)	1.540	1.540	1.540	1.540	1.540	1.750	1.750	1.750	1.750
Height indication (mm)	2.045	2.045	2.045	2.045	2.045	2.115	2.115	2.115	2.115



A large offshore piling rig is silhouetted against a dramatic sunset sky. The sun is low on the horizon, creating a bright orange and yellow glow. The rig's complex structure, including cranes and a tall central tower, is clearly visible against the bright background. The ocean surface is dark and textured in the foreground.

PVE PDS-type Piling Rigs

PVE offers the unique and patented PDS-type machines which offer the perfect solution for projects in which pile driving and lifting work are combined. The PDS machines are versatile in use because they can be used with and without a leader. Without the leader the PDS machines work as a normal HD lifting crane but can also be used in combination with a vibratory hammer or impact hammer. The leader can be installed quickly when leader guided pile driving is desired or more efficient. Especially when it comes to the installation of raked piles the PDS machines

prove their point. With help of the outriggers that are mounted to the rear of the boom of the crane, bigger rake positions are achieved and less working space is required compared to traditional pile driving installations. The PDS machines can be used onshore but also offshore on a barge, pontoon or Jack up barge. PVE offers different models of which the PDS 1000 and 1200 are still easy to transport by low-bed trailer. The PDS 3000 is designed more specifically to work permanently from a barge or ship for offshore and harbor work.

PVE PDS-type Piling Rigs

Technical specifications	PDS 1000	PDS 1200	PDS 2800
Max. pile & hammer weight	37 ton	48 ton	65 ton
Max. lifting capacity at 4,2 m	100 ton	120 ton	280 ton
Capacity hammer winch	15,0 ton	15,0 ton	20,0 ton
Capacity auxiliary winch	6,0 ton	7,5 ton	10,0 ton
Standard diesel engine	CAT C-13	CAT C-13	CAT C-13
Output diesel engine	475 HP	475 HP	475 HP
Hydraulic system	Open Loop	Open Loop	Open Loop
Hydraulic pumps	Bosch-Rexroth	Bosch-Rexroth	Bosch-Rexroth
Hydraulic valve blocks	Bosch-Rexroth	Bosch-Rexroth	Bosch-Rexroth
Transport width	3.500 mm (11,48 ft)	3.980 mm (13,06 ft)	upon request*
Transport length	20.100 mm (65,94 ft)	15.900 mm (52,16 ft)	upon request*
Transport height	4.120 mm (13,52 ft)	3.550 mm (11,65 ft)	upon request*
Transport weight	80 ton (176,370 lbs)	66 ton (216,535 lbs*)	upon request*

* this machine can be transported in different configurations, detailed packing lists are available.





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PVE Piling and Drilling Rigs is a business unit of the Van Es Holding Group. The Van Es Holding Group has offices and yards with technical support all over the world. With this worldwide network and a big number of dedicated dealers the best possible service and response is guaranteed.

All companies that are part of or affiliated with the Van Es Holding Group are specialized in the worldwide supply of heavy construction equipment. A brief overview of some of the products offered for rent and sales are:

Jack up barges (modular and monohull)

www.jackupbarge.com

Tug boats, pontoons and other heavy equipment

www.wwefareast.com

www.worldwidecaribbean.com

Vibratory hammers, power packs and accessories

www.diesekogroup.com

Crawler cranes (50 – 1000 tons capacity)

www.pvecranes.com

Piling and drilling rigs, impact hammers & power packs

www.pvepiling.com



PVE Piling & Drilling Rigs B.V.

Everdenberg 17

4902 TT Oosterhout

The Netherlands

T: +31 (0)184 - 425 949

F: +31 (0)184 - 424 820

www.pvepiling.com

info@pvepiling.com