



# NORMAL FREQUENCY PRODUCT RANGE

**DIESEKO GROUP**

**G** **GÁNDARA**  
SU EQUIPO EN CIMENTACIÓN

**ICE**  
INTERNATIONAL CONSTRUCTION EQUIPMENT



# AN INTRODUCTION TO **DIESEKO GROUP** FOUNDATION EQUIPMENT

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**

**NORMAL FREQUENCY**



**PRESSING**

**VARIABLE MOMENT**



**RESONATING**

**OFFSHORE**

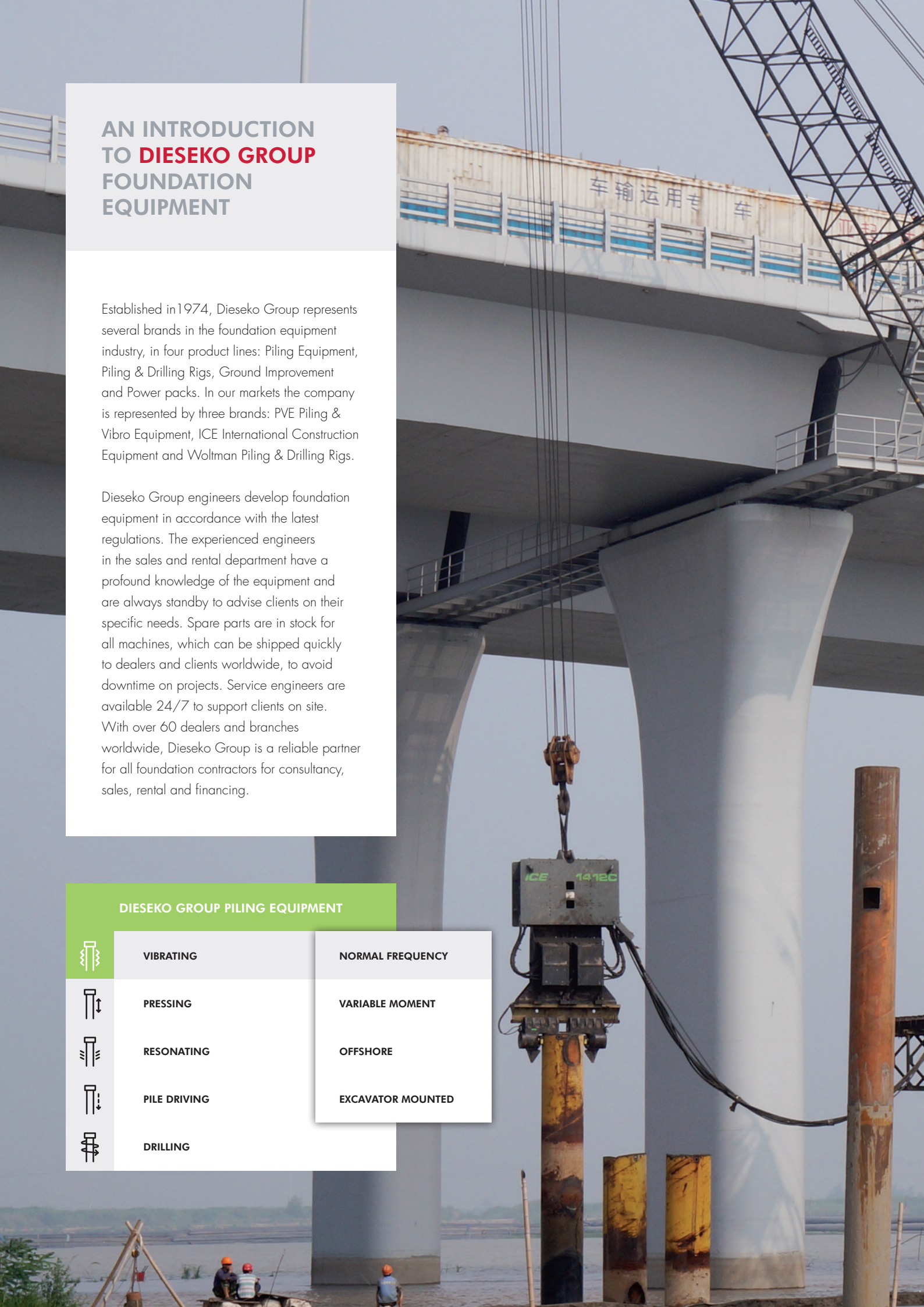


**PILE DRIVING**

**EXCAVATOR MOUNTED**



**DRILLING**







# DESIGNED FOR YOUR PROJECTS

## APPLICATIONS

- General driving and extraction of steel piles and casings
- Suitable for compaction
- Suitable for most soil types

## ADVANTAGES

- Excellent quality
- Easy maintenance
- Forced lubrication system
- Additional gearbox cooling system
- Open loop hydraulic system
- Wide range of clamping solutions
- Silent power packs
- Advanced iQan operating system
- Tier/Stage 2 to 4-final compliant
- Power pack suitable for other hydraulic equipment

## DIESEKO GROUP

- Known for robust and reliable equipment
- Over 40 years 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





# CHOOSE ICE VIBRATORY HAMMERS

ICE vibro technology is a proven method for fast and accurate pile driving.

The ICE NF standard range covers centrifugal force from 14 kgm up to 300 kgm. ICE also provides bespoke solutions by offering design and engineering advice to manufacture tailor-made products to meet your specific requirements.

## APPLICATIONS

A NF vibratory hammer can be used to drive or extract a variety of steel profiles, such as sheet piles, casings and tubes.

With a speed of 1400 - 1700 rpm and a fixed eccentric moment, the relatively high amplitude makes this type of hammer suitable for heavy soil conditions.

To determine the right vibratory hammer, you need to take into account soil conditions, resistance and the weight of steel foundations.

Amplitude during vibration of hammer and sheet pile:

$$\text{Amplitude} = \frac{2000 \times \text{Eccentric moment}}{\text{Dynamic weight incl. clamp} + \text{weight sheet pile}}$$

Example:

ICE 416L vibratory hammer + sheet pile (2000 kg)

$$\text{Amplitude} = \frac{2000 \times 23}{2840 + 2000} = 9,5 \text{ mm}$$

Centrifugal force:

$$\text{Centrifugal force} = 0.011 \times (\text{rpm})^2 \times \text{eccentric moment}$$

Example:

ICE 416L vibratory hammer working with a frequency of 1600 rpm:

$$\text{Centrifugal force} = 0.011 \times (1600)^2 \times 23 = 647680 \text{ N} = 647 \text{ KN}$$





### EXTENDED RANGE

Not only have foundations become larger, caissons bigger in diameter, piles longer but a new line of sheet piles has been produced with greater sections, cross sectional areas and weights. The result of this is a change in demand for wider range of hammers. ICE responds to this demand by introducing innovative solutions and new additions to our range of high performance vibratory hammers.

### MAXIMUM PERFORMANCE

ICE hammers are paired up with powerful power packs supplying a steady hydraulic flow that allows you to work at maximum working pressure - even in tough driving conditions. We ensure you are able to drive your steel to depth, according to our philosophy, with a surplus of driving power for maximum performance.

### VIBRO PILE DRIVABILITY PREDICTION AND POST PILING ANALYSIS

Dieseko Group works with reputable third parties to undertake vibro pile drivability predictions. After piling, our measuring equipment, which can record amplitude, acceleration, centrifugal force and hydraulic pressure, is examined and a post piling report can be supplied upon request. This enables us, geotechnical experts and the industry in general, to benefit from our experience on numerous projects onshore and offshore.

### 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.

ICE equipment is developed and produced according to the latest regulations. Together we can minimise your carbon footprint.





## PRODUCT RANGE NORMAL FREQUENCY




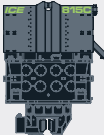



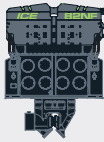
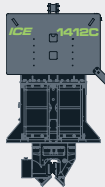
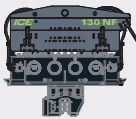
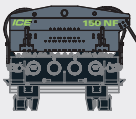
## NORMAL FREQUENCY VIBRATORY HAMMERS

Due to their robust structure, ICE's wide range of normal frequency hammers can be used for onshore, harbour and offshore projects. The fixed eccentric moment makes this type of hammer a perfect fit for less sensitive, heavy duty jobs. ICE vibratory hammers are known for their reliability and power, especially when paired with an ICE power pack. These sets have been carefully attuned to each other to ensure optimal performance.

Our experts are available to help you find the most suitable vibratory hammer for your project.

## LOW FREQUENCY VIBRATORY HAMMERS

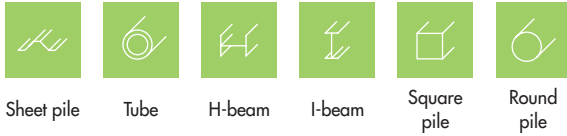
						
		<b>1423C</b>	<b>416L</b>	<b>32NF</b>	<b>815C</b>	<b>55NF</b>
Eccentric moment	kgm	14.0	23.0	32.0	46.0	54.0
Max. centrifugal force	kN	812	647	955	1250	1711
Max. frequency	rpm	2300	1600	1650	1570	1700
Max. amplitude *)	mm	16.5	19.6	27.2	23.3	30.1
Max. static line pull	kN	240	400	400	400	800
Max. oil flow	L/min	370	359	370	610	617
Dynamic weight *)	kg	1700	2350	2350	3950	3580
Total weight *)	kg	2750	3550	4600	7450	5700
L x W x H *)	mm	1919 x 738 x 1620	2548 x 495 x 1567	2548 x 495 x 1567	2658 x 840 x 2595	2642 x 678 x 1939
Recommended power pack		400 series	400 series	400 series	600 series	600 series
Recommended sheet pile clamp		100TU	100TU	130TU	160TU	200TU
Recommended tube clamp		55TC (2X)	81TC (2X)	81TC (2X)	81TC (2X)	100TC (2X)
Recommended pile clamp		120TP	120TP	120TP	180TP	180TP

					
		<b>82NF</b>	<b>1412C</b>	<b>130NF</b>	<b>150NF</b>
Eccentric moment	kgm	81.0	110.0	130	150
Max. centrifugal force	kN	2567	2300	2794	3224
Max. frequency	rpm	1700	1380	1400	1400
Max. amplitude *)	mm	30.0	34.9	25	39
Max. static line pull	kN	800	800 (1200 optional)	1260	1260
Max. oil flow	L/min	888	830	1293	1293
Dynamic weight *)	kg	5400	6400	10420	10520
Total weight *)	kg	7900	10750	16900	17000
L x W x H *)	mm	2662 x 721 x 2427	2657 x 1101 x 3588	3862 x 1217 x 2425	3862 x 1217 x 2425
Recommended power pack		900 series	900 series	1400	1400
Recommended sheet pile clamp		320TU	320TU	DWK 350T	-
Recommended tube clamp		200TC (2X)	200TC (2X)	PPK 175T (2X)	200TC (2X)
Recommended pile clamp		-	-	-	-

\*) excluding clamp & hoses



## Suitable piling profiles



Sheet pile

Tube

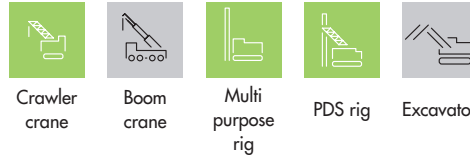
H-beam

I-beam

Square pile

Round pile

## Suitable cranes for normal frequency applications



Crawler crane

Boom crane

Multi purpose rig

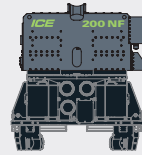
PDS rig

Excavator

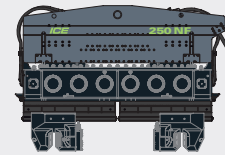
## LOW FREQUENCY VIBRATORY HAMMERS



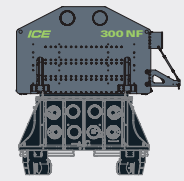
170NF



200NF



250NF



300NF

Eccentric moment	kgm	170	200	250	286
Max. centrifugal force	kN	3654	4300	5374	6150
Max. frequency	rpm	1400	1400	1400	1400
Max. amplitude *)	mm	32	19	32	21
Max. static line pull	kN	1260	1800	2270	4000
Max. oil flow	L/min	1293	1680	1600	3200
Dynamic weight *)	kg	10555	21000	15820	27250
Total weight *)	kg	17050	30000	25250	47000
L x W x H *)	mm	3862 x 1217 x 2425	3856 x 1600 x 3295	5122 x 1217 x 2335	5035 x 1800 x 4395
Recommended power pack		1400	1600	1600	3200
Recommended Sheet pile clamp		-	-	-	-
Recommended Tube clamp		PPK 350T (2X)	PPK 150T (4X)	PPK 350T (2X)	200TC (4X)
Recommended pile clamp		-	-	-	-

\*) = excluding clamp & hoses





## PRODUCT RANGE HYDRAULIC CLAMPS




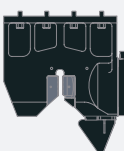
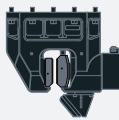
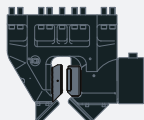
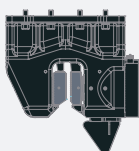


## CLAMPS




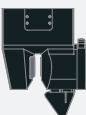

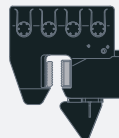
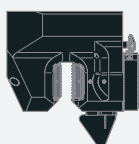
ICE has developed a wide range of heavy duty clamping systems, beams and cross beams for driving sheet piles, tubular piles of varying dimensions, concrete piles and even wooden piles. Talk to our experts for advice on the best clamping solution.

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


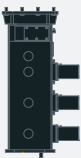
### SHEET PILE CLAMPS

								
		100TU	130TU	160TU	DWK 200T	200TU	320TU	DWK 350T
Clamping force	kN	1000	1300	1600	2000	2000	3200	3500
Working pressure	bar	320	320	320	300	320	320	320
Weight	kg	490	610	1100	2000	1300	2500	2600
Lx W x H	mm	686 x 310 x 706	731 x 340 x 730	1138 x 340 x 894	1130 x 530 x 920	1143 x 360 x 1046	1363 x 460 x 1102	1242 x 540 x 940

### TUBE CLAMPS

								
		55TC	81TC	100TC	PPK 150T	PPK 175T	200TC	PPK 350T
Clamping force	kN	550	800	1000	1500	1750	2000	3500
Working pressure	bar	300	320	300	300	300	320	320
Weight	kg	310	480	690	1300	1400	1350	2980
Lx W x H	mm	500 x 320 x 450	611 x 300 x 775	642 x 395 x 555	797 x 420 x 750	797 x 420 x 750	915 x 430 x 1092	1228 x 600 x 925

### PILE CLAMPS

			
		120TP	180TP
Clamping force	kN	1200	1800
Working pressure	bar	300	320
Weight	kg	1650	2820
Lx W x H	mm	1180 x 617 x 1470	1270 x 717 x 2275

## PRODUCT RANGE POWER PACKS



## ICE POWER PACKS: VERSATILE POWER




Our aim is to ensure you can always drive your steel – even in tough conditions. To that aim, our ICE vibratory hammers are paired up with powerful power packs with a surplus of driving power to perform. ICE power packs meet Tier 2 to durable Tier 4 Final regulations.



An ICE power pack can be adapted for extreme conditions such as freezing arctic environments or desert conditions with scorching heat. We can also customize your power pack to enable crane counter mounting or deck mounting. Our open loop hydraulic system and cooling system ensures a safe and reliable hydraulic operation and prevents overheating. The intelligent iQan management assures a reliable performance and the interface is available in most common languages.




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. Stop-start 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 ICE power packs.

### POWER PACKS

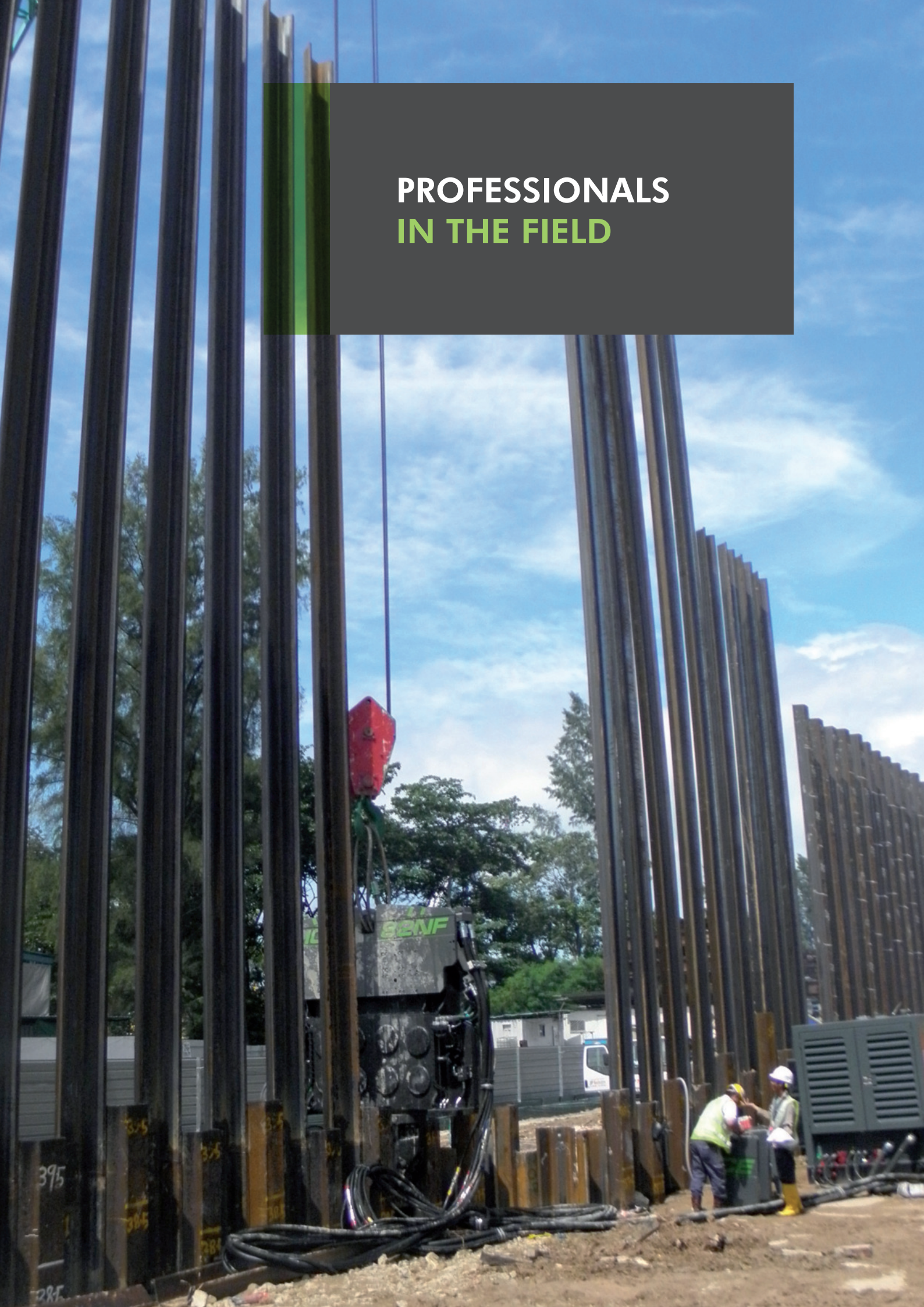
					
		400	400	600	600
Diesel engine		Caterpillar C9	Volvo TAD 873 VE	Caterpillar C15	Volvo TAD 1375 VE
Emission standard		Stage 3A	Stage 4	Stage 3A	Stage 4
Max. power	kW/HP	242/329	235/320	403/548	405/551
Max. frequency	rpm	2200	2200	2100	1900
Working pressure	bar	350	350	350	350
Max. oil flow	l/min	396	396	670	617
Weight	kg	6000	4700	7600	7600
L x W x H	mm	4000 x 1650 x 2085	3670 x 1600 x 2070	4500 x 1740 x 2250	4330 x 1750 x 2280

			
		900	900
Diesel engine		Volvo TAD 1643 VE	Caterpillar C18
Emission standard		Stage 2	Stage 4
Max. power	kW/HP	565/768	563/755
Max. frequency	rpm	1850	1800
Working pressure	bar	350	350
Max. oil flow	l/min	888	888
Weight	kg	9700	11000
L x W x H	mm	5060 x 1800 x 2345	5320 x 1950 x 2400

				
		1400	1600	3200
Diesel engine		Volvo TAD 1353GE (2x)	Volvo TAD 1643 VE (2x)	Volvo TAD 1643 VE (4x)
Emission standard		Stage -	Stage -	Stage -
Max. power	kW/HP	898/1222	1130/1536	2260/3072
Max. frequency	rpm	1800	1850	1850
Working pressure	bar	350	350	350
Max. oil flow	l/min	1400	1600	3200
Weight	kg	13100	13700	31000
L x W x H	mm	5372 x 2480 x 2427	5470 x 2480 x 2520	9075 x 2500 x 2695



# PROFESSIONALS IN THE FIELD











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