



NEW



Company Profile

NAC Machinery & Equipment Pte Ltd is a leading company which manufactures hydraulic foundation equipment. Providing and serving the piling industry for the past 30 years, we have accumulated valuable experience in hydraulics to continuously serve not only the piling industry but also to marine industry, Oil & Gas industry and Power generation industry.

Our expertise involves designing and customizing hydraulic system to customer needs. We pride ourselves in providing outstanding customer service as we have a strong after-sales service team to assist customers.

Products and services

- Sales/Rental/Trade-in/Repairing/Reconditioning of Hydraulic impact hammer
- Sales/Rental/Trade-in/Repairing/Reconditioning of Hydraulic Powerpack
- Sales/Repairing/Reconditioning of Hydraulic Jack in piler
- Sales of Hydraulic Auger
- Customization of hydraulic powerpack
- Design and implementation of hydraulic system
- Electrical works on construction equipment
- Customization and fabrication of Radiator, After-cooler and Oil cooler
- Steel work fabrication for carbon steel and stainless steel

Jack-in Piler



NAC Control System

- Equipped with remote control system (optional) and standard control system
- Equipped with electrical level meter with warning function (optional)
- Remote control system enables operator to better analyze the surrounding
- Lower operation cost by reducing up to 2 operators

Driven by diesel engine

- High performance capability
- Easily modified to increase JIP speed and pressing force
- integrated into structure of JIP thus creating more space
- Possibility of adding hydraulic tools to increase productivity. E.g. Hydraulic breakers
- Large clamping cylinder to distribute forces on a larger area and prevent shearing of piles

NAC JIP Structure

- Strengthened structural integrity to withstand higher load but with a smaller foot print
- Capable of working in a constraint working area but produce high piling force
- Foldable operator cabin and lifting cylinder for ease in transporting the equipment

Assembly and transportation

- Transportation do not require the removal of short stabilizer which reduces mobilization time

Productivity

- 20% productivity increment by using NAC hydraulic power unit

NAC Counterweight

- Using steel plate counterweight, higher tonnage is obtained

Environmental friendly

- Utilised tier 2 engine for low carbon emission
- Sound insulated power pack chassis to reduce noise pollution

Additional feature

- Enable machine to perform load test which substitute current load test structure

PRODUCT SPECIFICATIONS

Model	NAC 80	NAC 120S	NAC 180S	NAC 240S	NAC 320S	NAC 420S	NAC 500S	NAC 600S	NAC 680S	NAC 800S	
Max Piling Force (t)	80	120	180	240	320	420	500	600	680	800	
Max Oil Pressure of Main Machine (bar)	250	250	250	250	250	250	250	250	250	250	
Max Theory Piling Speed (m/min)	6.1	14.7	14.7	9.4	8.6	9.1	9.1	10.8	10.8	8.8	
Max Piling Stroke (m)	2	2	2	2	1.8	1.8	1.8	1.8	1.8	1.8	
Max Longitudinal Shift (m)	2	2.4	2.4	2.4	3	3	3.5	3.5	3.5	3.5	
Max Horizontal Shift (m)	0.5	0.55	0.55	0.55	0.65	0.65	0.7	0.7	0.7	0.7	
Max Turning Angle (°)	14	14	14	14	13	13	12	12	12	11	
Raise/Lower Stroke (m)	1.1	1.1	1.1	1.1	1.1	1.05	1.05	1.05	1.05	1.05	
Min Square Pile	150	150	250	250	250	250	250	300	300	300	
Max Square Pile	250	400	400	400	500	500	500	500	500	500	
Min Spun Pile	N/A	300	300	300	300	300	300	300	300	300	
Max Spun Pile	N/A	400	400	400	500	500	500	600	600	600	
Min Side Pile Distance (m)	0.7	0.8	0.9	0.9	1.2	1.2	1.2	1.3	1.3	1.3	
Max Side Piling Theory Force(t)	50	70	100	130	160	210	250	280	280	280	
Ground Pressure Ratio of Long Boat (t/m ²)	9.5	9.5	9	10.2	10.2	10.9	12	12.6	13.1	14	
Ground Pressure Ratio of Short Boat (t/m ²)	10.2	10.4	10	10.2	11.1	12.8	14.1	15.2	16.1	17.8	
Machine Weight without Side Pile(t)	24	35	47	55	65	80	92	103	120	143	
Side Pile Frame Weight (t)	2	2	2	2	3	3	3	4	4	4	
Counterweight Required(t)	56	85	133	185	255	340	408	479	560	657	
Dimensions during operation	Length with Side Frame (m)	-	6.5	7.5	9	9	13.2	13.6	14	14.4	14.8
	Length without Side Frame (m)	5.7	5.1	6.1	7.6	7.6	12	12.7	12.7	13.5	13.5
	Width (m)	2.7	4.4	4.7	5	5.1	5.3	5.3	5.3	5.3	5.3
	Height (m)	2.8	2.9	2.9	2.9	3.1	3.15	3.15	3.25	3.25	3.25
Clamping Cylinders (No. · OD/ID)	4-220 /160	4-250 /200	4-300 /220	4-340 /280	4-340 /280	4-340 /280	8-340 /260	8-360 /280	8-380 /280	8-400 /280	

Hydraulic Auger

NAC hydraulic auger offers high torque capability in a compact package. With safety system integrated into the hydraulic system, NAC hydraulic auger will protect itself from overloading which promotes a safer working environment.

- Forward/reverse capability
- High/low speed function (optional)
- Automatic switch to low speed when drilling harder ground (optional)
- Able to mount on excavator and piling machine
- Easy to mount/demount



PRODUCT SPECIFICATIONS

Description		NAC5000	NAC8000
Max Working Pressure	bar	300	320
Min. Flow Rate	L/min	200	200
Torque Range	kNm	17.6-52.6	25.0-80.2
Speed Range	rpm	20 - 45	12-31
Connecting Joint`		125mm Hexagon	125mm Hexagon
Height	mm	2000	2000
Width	mm	1500	1500
Weight	kg	1380	1500
Recommended Drilling Diameter Range	mm	300-800	300-800
		Electrical Control	

For diameter more than 800mm, please consult us for further information. Due to continuous research and development, we reserve the right to make amendments to the specifications without prior notice.

Hydraulic Power Pack

Through years of researches, developments and countless onsite testing, NAC has developed its own range of powerpack catered for the piling industry. Furthermore, to value add our products, we incorporated additional feature which enables our powerpack to drive other types of equipment. e.g., Hydraulic Jack-in Piler, Continuous Flight Auger, Vibro hammer, Winch and etc.

Understanding the importance of safety, our range of powerpack includes multiple safety system to safeguard operators as well as protecting valuable equipment. The safety systems are:

- Low Hydraulic Oil Level Cut
- High Hydraulic Oil Temperature Cut
- Hydraulic Pipe/Hose Burst Cut
- Engine Overheat Cut
- High Engine Oil Pressure cut



Other important features are:

- Individual filtration system for all hydraulic oil return line
- Sound insulated skid to lower noise during operation
- Concealed exhaust which helps in stowing away equipment and lower noise during operation
- Variable engine speed controller which lower diesel consumption when low operating requirement is needed
- Electrical control box to operate at a safe distance while retaining important functions such as emergency stop, piling speed and piling stroke.
- Independent flow control to control flow rate
- Adhere to tier II nonroad diesel engine emission standard in compliance with EPA regulation
- We also provide services to customize powerpack to suit customer requirements

PRODUCT SPECIFICATIONS

Specifications		NAC1100	NAC1600	NAC2100
Engine Power	H/P	220	350	420
Engine Speed	rpm	1800	1800	1800
Max Operating Pressure	bar	350	350	350
Max Flow Rate	L/min	260	520	680
L X W X H	mm	3000 x 1400 x 1900	3200 x 1400 x 1900	3300 x 1400 x 2300
Overall Weight	kg	3500	4200	5000

*Due to continuous research and development, we reserve the right to make amendments to the specifications without prior notice

Impact Hammer



With many years of on-site experience, NAC has developed a wide range of hydraulic impact hammer that is well suited to tackle many different types of piling requirements. Important features of our hydraulic impact hammer:

- High energy transfer to the pile with the use of advance piling cushion
- Reduced operating noise with the use of advance piling cushion
- Adjustable stroke length and blow rate to match energy requirement
- Can be leader mounted or crane suspended
- Easy access to add/remove ram mass
- Simple design and high reliability

PRODUCT SPECIFICATIONS

Model		NAC7-L	NAC9-L	NAC11-L
Ram Mass	ton	7	9	11
Max Energy	Kj	82.4	105.9	129.5
Blow Rate		43	40	38
Max Stroke	mm	1200	1200	1200
Operating Pressure	bar	220	240	260
Flow Rate	L/min	340	340	340
Hammer Weight	kg	12500	14500	16500
Hammer Length	mm	7500	7500	7500
Powerpack		NAC1100		

Model		NAC10-M	NAC13-M	NAC16-M	NAC16	NAC20
Ram Mass	ton	10	13	16	16	20
Max Energy	Kj	117.7	153.0	188.4	188.4	235.4
Blow Rate		40	37	34	34	32
Max Stroke	mm	1200	1200	1200	1200	1200
Operating Pressure	bar	200	220	250	210	260
Flow Rate	L/min	520	520	520	650	650
Hammer Weight	kg	16000	19000	22000	29000	34000
Hammer Length	mm	7950	7950	7950	8400	8400
Powerpack		NAC1600			NAC2100	

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Design & Build



Build to Design

1. Hydraulic breaker hammer for demolishing and breaking of reinforced concrete

2 & 3. Hydraulic excavator hammer piling in obstructed and inaccessible ground

4. Fabrication of 55,000 litres stainless steel scavenger tank

5. Modification of excavator to Jet grouting machine

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