

English Instruction

for ZYC420B-B1 Pile Driving Machine

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Contents

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2.1. Capacity of Pile Driving

2.1.1 When two principle pile driving cylinder are working

2.1.1a At the fast speed position

Maximum pile driving force

1000KN

Speed of pile driving

8.5m/min

2.1.1b At the normal speed position

Maximum pile driving force		2000KN
Speed of pile driving		4.5m/min
2.1.2	When two principle cylinders and two auxiliary cylinders are working:	
Maximum pile driving force		4200KN
Speed of pile driving(slow speed)		1.6m/min
2.1.3	Depth of pile driving	
Maximum depth of each pile driving		1.9m
2.2.	Moving Capacity	
Distance of each movement: longitudinal		3.6m
horizontal		0.6m
each turning angle:		11°
speed of moving:	forward	7m/min
	backward	11.5m/min
	left	7m/min
	right	11.5m/min
2.3.	Distance of Ascending and Descending	
		1.0m
2.4.	Size of Piles	
pipe pile:	maximum	ø600mm
square pile:	maximum	□550mm
length of single pile:	a)	≥3.0 m, ≤14 m (middle pile)
	b)	≥3.0 m, ≤9 m (side pile)
2.5.	Hydraulic System	
rated pressure:		22(18) MPa
rated flow:		473(158) L/min
Note: the number outside the brackets for the main engine and the number in the brackets for the crane.		
2.6.	Electrical System	
rated horsepower:		37X3+30=141 kw
rated voltage:		380 V
rated current:		70.4X3+56.8=268A
frequency:		50 Hz
input cable:		YCW-3×70+1×25+1×16
2.7.	Weight	

total weight: 420t

heaviest component: 46t

2.8. Dimensions when Working

length $\times$ width $\times$ height = 12.5m $\times$ 7m $\times$ 16m

2.9. Distance of Side Piles to the Building 1.25m

2.10. Pressure on Land:

long boa: 123KN/m²

short boat: 131KN/m²

2.11. Crane

maximum lifting weight: 12tf

maximum speed of ascending: 11m/min

maximum rotating speed: 3 r/min

Relation between Ascending Angle and the Allowed Lifting Weight

Ascending Angle (degree)	Long Arm		Short Arm	
	Lifting Weight (t)	Rotating Radius (m)	Lifting Weight (t)	Rotating Radius (m)
0	2.7	15.2	3.8	11.6
20	3.7	14.3	6.0	11.0
30	4.4	13.1	7.0	10.0
40	5.0	11.5	8.0	9.0
50	5.5	9.6	9.5	7.3
60	8.0	7.4	12.0	5.5
70	11.0	4.9	12.0	
75	12.0	3.6	12.0	

Note: Be sure to operate the machine as stated in the above form and not to change at will the adjusted pressure of the relief valve for angle changing. (Here the angle refers to the angle of lifting arm of the crane to the land)