

Crawler-type Low Head Vibro Hammer

CHV

CHV-200

CHV-300

CHV-400



Operating at limited overhead clearance

The Vibro Hammer CHV can work efficiently with low noise and low vibration.

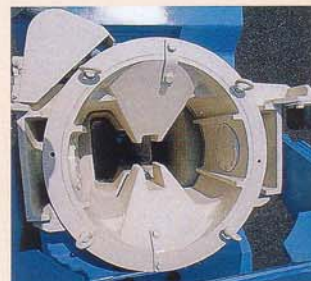
Mounted on a crawler-type base machine, it can perform pile driving and extraction operations efficiently in a space with limited vertical and horizontal distances as it takes up a center-hole structure to mitigate the limit of overhead clearance at sites.

In addition, with the vibro rotating unit incorporated in the hammer system, the more free movability under extremely restricted working space conditions is secured for improved working efficiency and shortened work periods.

Features

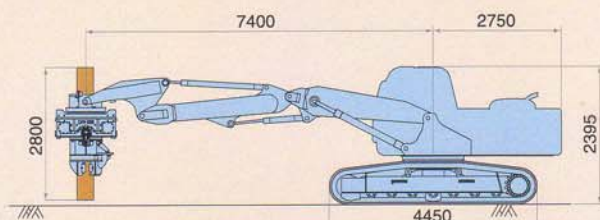
(1) Center-hole structure

The vibrator is designed with a vertical hole to allow the chucking of piles having the same length as the effective working height. In addition, the total number of jointed pile, if any are required, can be reduced.

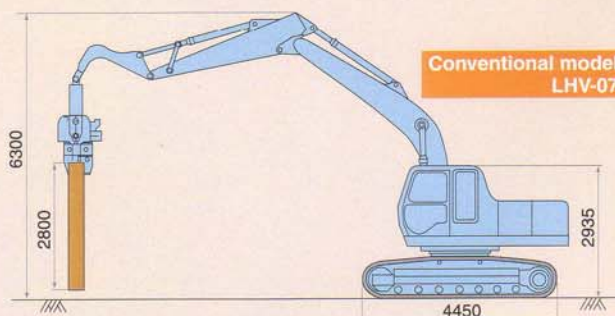


Comparison of working heights

CHV-200

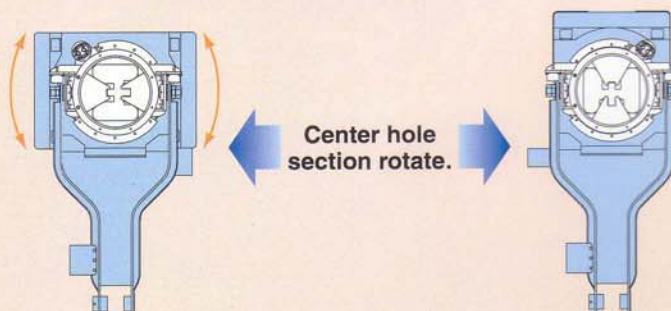


Conventional model LHV-07



(2) Vibro rotating unit

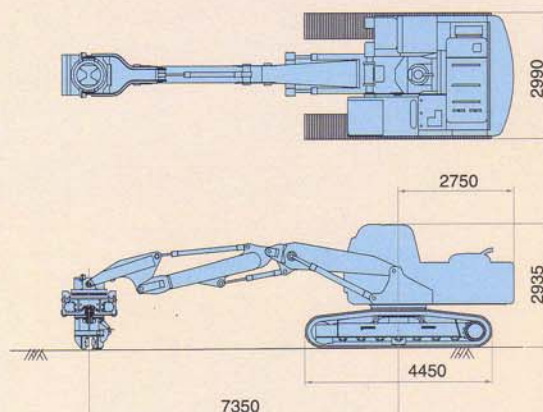
The center hole section can rotate within a range of 90° for easy engagement of joints and normal line adjustment.



(3) Strong pile-driving force

With the center hole structure taken up and the center of the vibrator aligned with the center of the pile chuck, the vibration energy of the vibro hammer is transmitted certainly to the pile, resulting in the strong pressing force of the arm from the base machine output via the extension arm to drive the pile powerfully.

Drawing



Base machine specification example

Item	Value and the like
Hydraulic excavator	20ton class
Special specifications (special boom and arm for demolition use)	Additional weight
	Long crawler
	Special piping for the vibro hammer

*The specifications above may differ partially depending on the excavator manufacturers.

*The excavator must be designed with special specifications to support CHV installation.

Examples of piling work

Piling under a tree or on a river bed



Piling in a narrow working space under a girder



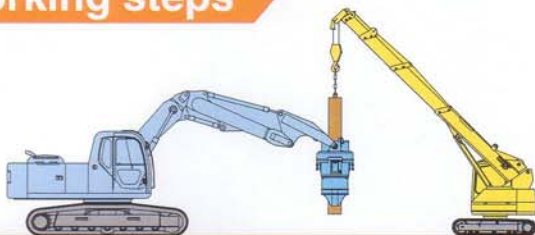
Piling in the water under a bridge



Piling in a narrow working space on an uneven ground



Working steps



Suspended pile chucking

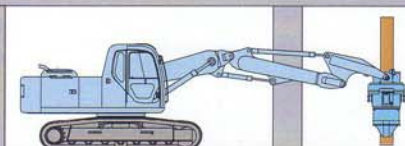
The pile is suspended at a point away from the girder and chucked easily by the chucking mechanism.



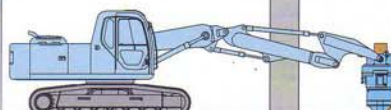
Move to the pile driving point



Pile is hammered and driven in place



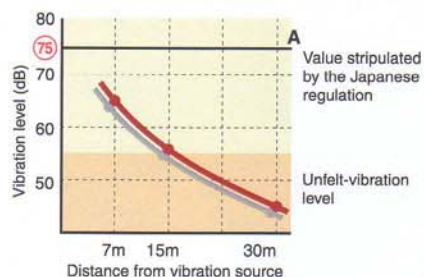
Pile is moved into position by a crawler-type base machine.



Pile is driven by making the most of the effective working height

Levels of vibration and noise by CHV-200

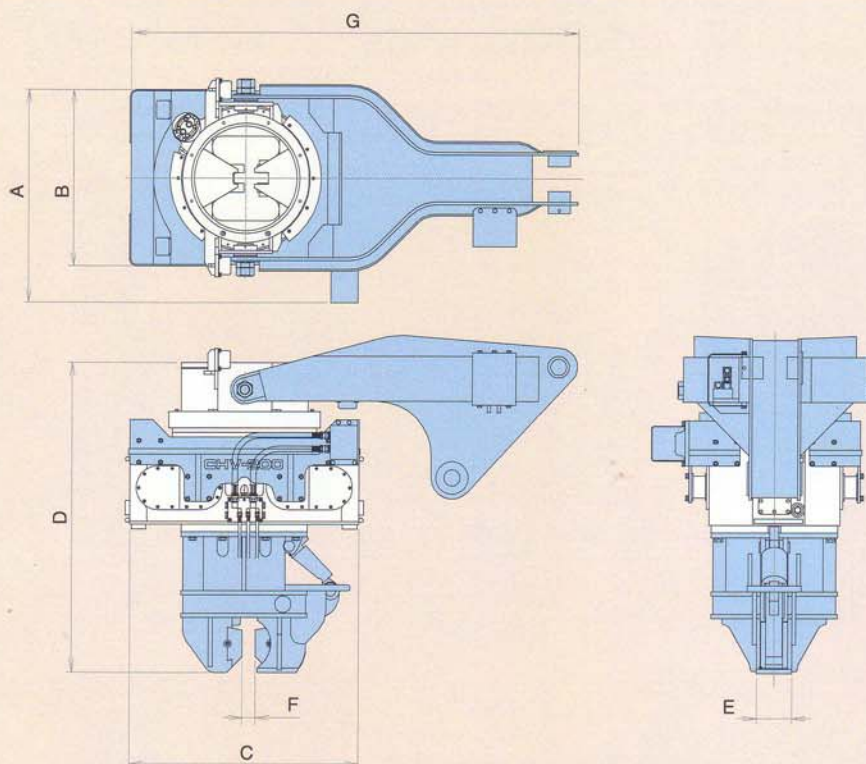
Vibration Level



Noise Level

	Equivalent sound level (LpAeq)			Acoustic power level (LwA)
	First time	Second time	Third time	
Average energy	68	68	68	96

Radius of measured point (10m)



Specifications

Item	Unit	CHV-200	CHV-300	CHV-400
Eccentric moment	N·m	37.3	49.0	58.8
Frequency	Hz	33.3	33.3	33.3
Centrifugal force	KN	166.7	219.3	273.8
Total weight *1	kg	3,000	4,000	4,750
Amplitude during idling	mm	2.1	2.4	2.7
Acceleration during idling	g'	9.5	10.7	12.1
Applicable piles *2	Steel sheet pile	400mm width	400/500mm width	400/500/600mm width
	H-section steel	250~350	250~400	250~400
Hydraulic excavator base machine		20 ton class	30 ton class	40 ton class

*1 Including the extension arm. *2 The chucking jaws must be changed depending on the type of the pile.

Dimensions

	A	B	C	D	E	F	G
CHV-200	1,168	962	1,270	1,712	196	75	2,483
CHV-300	1,356	1,156	1,546	1,693	171	60	2,656
CHV-400	1,500	1,400	1,800	1,750	200	60	2,900

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