

## BRUCE Vibro Ensures the Fundamentals of Wall Design

# BRUCE VIBRATORY HAMMER SGV-300

The BRUCE Vibro Hammer, a crane suspended type with 92 tons of Centrifugal force and Power Pack PQ-400V with 400 liter per minute of Maximum Flow works at Kimpo, Korea involves the installation of steel sheet pile to form a three storey steel intensive underground basement as a part of a major apartment.



The right selection of the most productive and economical vibrating equipment that meets the construction designer's criterion can only be accomplished after a proper definition of the job site conditions and performance and longevity goals are defined. Therefore the first step to a successful design is to clearly establish and document the goals and end users of the project and the wall structure itself.

The BRUCE Vibro can answer a series of questions regarding the desired final result of your project about "What is the main purpose of the structure?" and "What are the specific performance goals needed to successfully achieve the main purpose?" by investigating into any possible environmental effects the structure may have, and ensure that the structure comply with all regulations or permits that may be associated with the project.



12 meter of sheet piles were installed to form a medium dense soil filled temporary cofferdam over a 50 meter. The sheet piles were installed using a 70 tons of Leader fitted with a 0.866 inch of maximum amplitude of Vibro Hammer SGV-300.

BRUCE SGV-300 boasted of a high powered hydraulic clamp with 140 tons of clamping force that it once grip a pile, never let it go until the clamp switch is pressed off by the operators. In the permanent state, the sheet piles were driven to resist the earth and water pressure when supported at basement and intermediate floor slab levels. The piles have also been assessed for their vertical load carrying capacity that has been accounted for in the basement structure and foundation design.



0.866 inch of Maximum Amplitude delivered on the pile liquefies the soil particles to lose their frictional grip on the pile to ease the Vibro moves down and moves up.  
 (Driving & Extracting)

<b>SGV-300 Vibratory Hammer Specification</b>	
<b>Centrifugal Force</b>	92 tons (901 kN)
<b>Max. Frequency</b>	1600 vpm
<b>Amplitude (free hanging)</b>	22 mm (0.866 inch)
<b>Max. Line Pull for Extraction</b>	50 tons (490 kN)
<b>Max. Hydraulic Power</b>	375 HP (276 kW)
<b>Max. Operating Pressure</b>	320 bar (4641 psi)
<b>Max. Oil Flow</b>	400 lpm (106 gpm)
<b>Total Weight with Clamp</b>	5216 kg (11499 lbs)

<b>Job Briefing</b>	
<b>Job Title</b>	Underground Basement
<b>Materials of Piles</b>	Steel Sheet Piles
<b>Pile Length</b>	12 meter
<b>Pile Size</b>	400(L)*150(H)*13.1(T)