



# RE-THINK CONCRETE CONSOLIDATION



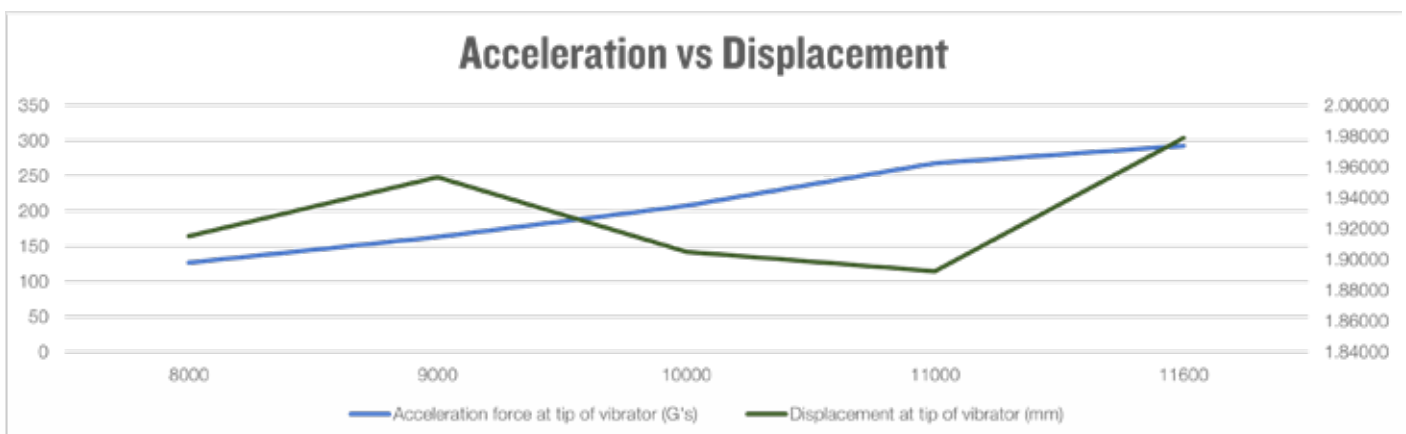


## The problem with conventional vibrators

Before the age of concrete pumps, concrete was typically low slump and was generally poured from a kibble. Conventional vibrators were designed to produce high VPM's to consolidate low slump concrete.

Today with high slump, pumpable mixes, the high rate of vibrations created by conventional vibrators results in forced bleeding, poor consolidation and potential mix separation.

## “Displacement is fully realised at slow speed”



The rate of displacement actually decreases with acceleration up to 11,000 VPM. Displacement only increases by 0.04mm between 8,000 and 11,600 VPM.

Conventional vibrators and high frequency electric vibrators operate at speeds upwards of 11,000 to 16,000 VPM's. The greater speed does little to increase the displacement and leads to a greater risk of excessive bleed water and material separation in concrete.



## Concrete vibration follows seismic properties

There are two main types of seismic waves, P-waves (primary waves) and S-waves (Secondary) waves.

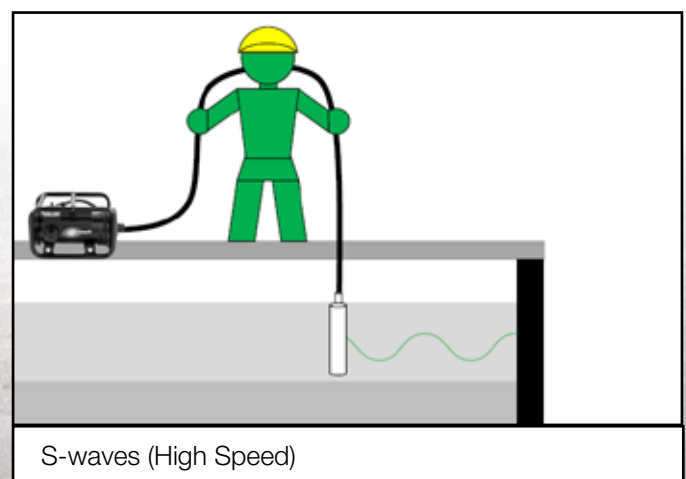
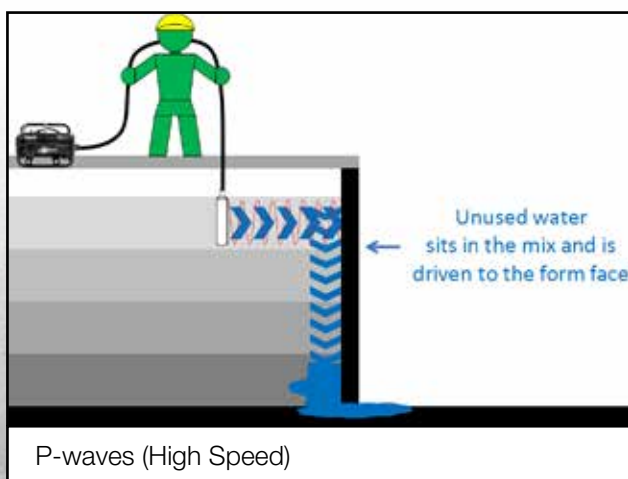
**P-waves** travel fast in a longitudinal direction from point of vibration and travel through solids and liquids.

**S-waves** travel slower in a transverse direction from point of vibration and only travel through solids and not liquids.

When we apply these principles to concrete vibration, the high speed vibrations generated by conventional vibrators travel through both solids and liquids resulting in separation and excessive bleed water.

Slower speeds only affect the solids resulting in more consistent consolidation without affecting the water content of the mix.

In conclusion, if we slow down the vibration speed and increase the impact of the vibration we only move solids (aggregate and sand) not liquids. This focused vibration results in much better consolidation, finish and less forced bleeding.







## Controlled testing



12,5000 VPM - Excessive bleed water



6,000 VPM - Minimal bleed water



12,5000 VPM - Poor consolidation and finish



6,000 VPM - Excellent consolidation and finish



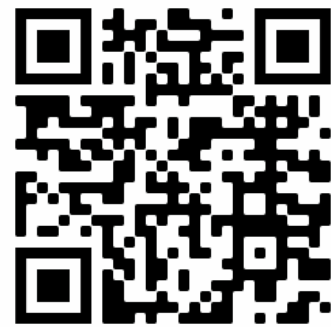
The results speak for themselves



Vibrated at 6,000 VPM

## WATCH THE VIDEO

Scan the QR code with you smartphone camera to watch the video on youtube.



[https://www.youtube.com/watch?v=z\\_1Nx-Q7hJ80](https://www.youtube.com/watch?v=z_1Nx-Q7hJ80)



Vibrated at 10,500 VPM

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# CONCRETE VIBRATOR THE STINGER



Control the CSV (Variable Speed) Stinger from your IOS or Android Device.

Shafts & Heads sold separately

Model	VMED1/VMED1S
VPM	6000-13000 VPMs
Weight	6.6kg
Motor	230v 15A
Shaft Connection	Quick Connect
Variable Speed	VMED1S Only

## Minnich Stinger Electric Flex Shaft Vibrator Motor

The stinger electric flex shaft concrete vibrator brings unmatched results to your hands with a more compatible speed range for today's concrete mix designs. The light weight motor unit is protected knocks and damage by a durable protective cage and can be carried with the simple shoulder strap.

The quick connect shaft systems means you can quickly and simply change out to a different length shaft or different size head depending on the application.

# CONCRETE VIBRATOR BACK PACK VIBRATOR



Shafts & Heads sold separately

Model	VMBP50
Engine	Honda GX50
Power	50cc (2.0hp)
Weight	9.3kg
Shaft Connection	Quick Connect
Fuel	Unleaded

## Minnich 50cc Petrol Back Pack Vibrator

The Minnich back pack vibrator offers power, portability and comfort. Powered by Honda's new GX50 4-stroke petrol engine, the Minnich back pack vibrator provides greater power and compaction than standard portable vibrators.

The double-strap shoulder harness and repositionable throttle control offers total operator comfort and is exclusive to Minnich vibrators.

Stop paying for a worker to drag around a drive unit and get a Minnich back pack.

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# CONCRETE VIBRATOR COMPONENT LIST



## DRIVE MOTORS



CODE	DESCRIPTION
VMED1	The Stinger Drive Motor
VMED1S	The Stinger CSV Drive Motor (Selectable Speed via IOS or Android App)
VMBP50	Honda GX50 Back Pack Vibrator drive unit.

## 22mm FLEX-SHAFT CORE & CASING

Suits 19 & 25mm Heads



CODE	DESCRIPTION
VMS2202	0.6m x 22mm Core & Casing
VMS2205	1.5m x 22mm Core & Casing
VMS2207	2.1m x 22mm Core & Casing
VMS2210	3.0m x 22mm Core & Casing
VMS2214	4.3m x 22mm Core & Casing
VMS2221	6.4m x 22mm Core & Casing

## 30mm FLEX-SHAFT CORE & CASING

Suits 35, 44, 51 & 60mm Heads



CODE	DESCRIPTION
VMS8102	0.6m x 30mm Core & Casing
VMS8105	1.5m x 30mm Core & Casing
VMS8107	2.1m x 30mm Core & Casing
VMS8110	3.0m x 30mm Core & Casing
VMS8114	4.3m x 30mm Core & Casing
VMS8121	6.4m x 30mm Core & Casing

## VIBRATOR HEADS



CODE	DESCRIPTION
VMH19	19 x 330mm Vibrator Head
VMH25	25 x 360mm Vibrator Head (R)
VMH35	35 x 360mm Vibrator Head (R)
VMH44	44 x 280mm Vibrator Head
VMH51	51 x 330mm Vibrator Head (R)
VMH60	60 x 300mm Vibrator Head
	(R) - Resilient head available