



RE-THINK CONCRETE CONSOLIDATION



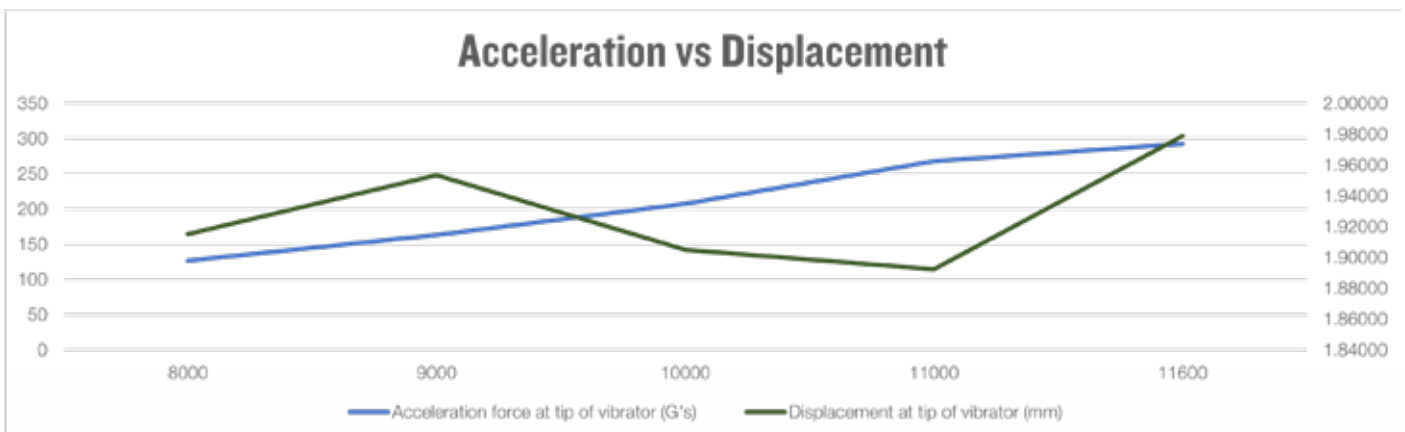


The problem with conventional vibrators

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.

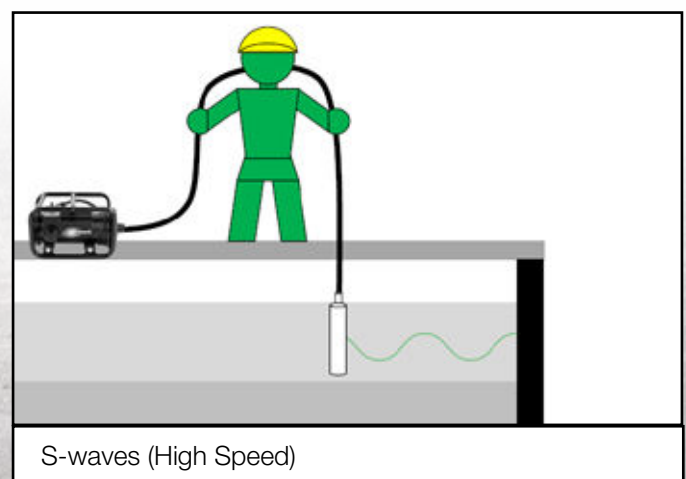
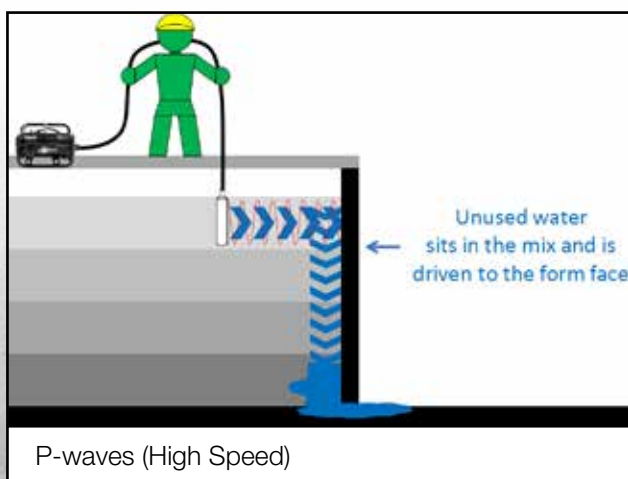
P-waves travel fast in a longitudinal direction from point of vibration and travel through solids and liquids.

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



12,500 VPM - Excessive bleed water



6,000 VPM - Minimal bleed water



12,500 VPM - Poor consolidation and finish



6,000 VPM - Excellent consolidation and finish



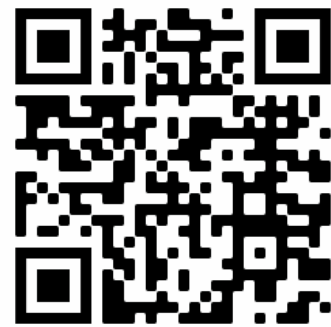
The results speak for themselves



Vibrated at 6,000 VPM

WATCH THE VIDEO

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



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 |