

mMinnich

CONCRETE VIBRATORS & DOWEL PIN DRILLS

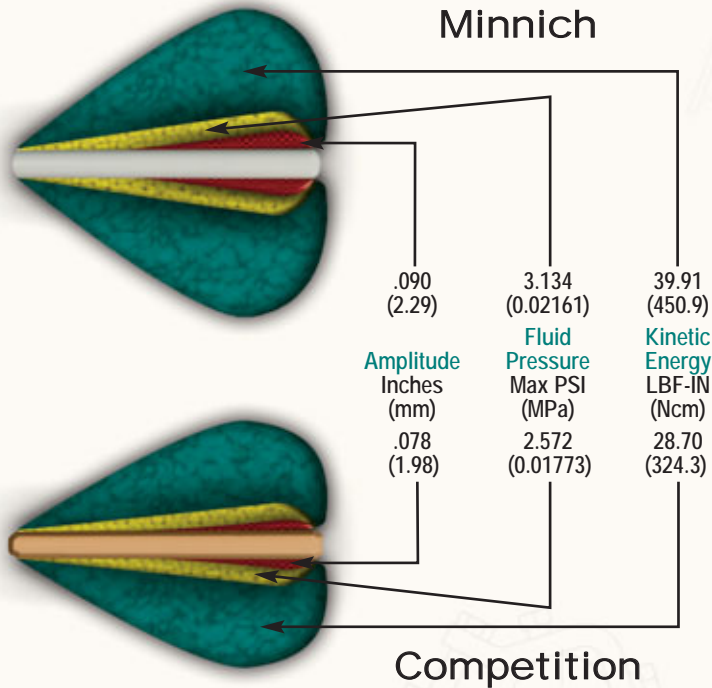
Hydraulic Vibrators



Vibrators & Monitoring

This is what the research shows!

Vibrator Effectiveness In Concrete



* Research data available upon request

Round vibrator heads produce:

- Better Consolidation
- Greater Amplitude
- Greater Velocity
- Greater Influence

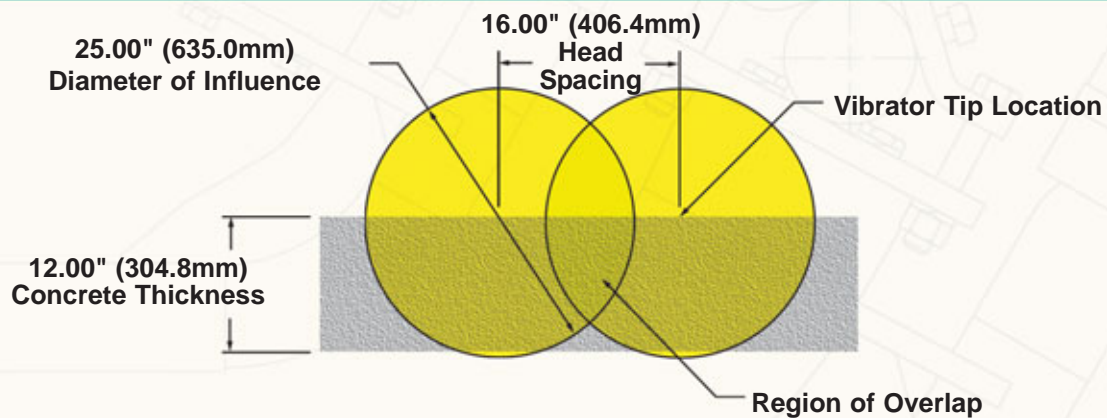
An independent research firm, hired by Minnich Manufacturing, conducted a thorough study comparing the round vibrator head to other existing shapes available on the market today. The results provided, gave clear evidence that the Minnich round design offered greater amplitude, greater fluid pressure, and greater kinetic energy, resulting in a greater diameter of influence.*

Specifications @ 10,500VPM:

Maximum Flow: ----- 4GPM (15.14 l/min)
 Normal Operating Pressure: --- 800-1300PSI (5.51-8.96MPa)
 Back Pressure Maximum: ----- 150PSI (1.03MPa)
 Rated for Operation up to 2500PSI (17.24MPa)

These are normal values and will vary depending on the size and range of aggregate and the slump of the concrete.

Effects of Vibrator Spacing on Consolidation



Model	HV-3 Series	HV-2 Series	HV-4 Series	HV-4H Series
Head Dia.	1 3/4" (44.45mm)	2 5/8" (66.67mm)	3" (76.20mm)	3" (76.20mm)
Centrifugal Force	796 lbs. (3540.78N)	1902 lbs. (8460.51N)	2580 lbs. (11476.41N)	3102 lbs. (13798.38N)
Amplitude	0.040" (1.01mm)	0.126" (3.20mm)	0.127" (3.22mm)	0.161" (4.08mm)
Diameter of Influence 10,000 VPM	11.00" - 16.00" (279.4mm - 406.4mm)	26.50" - 30.50" (673.1mm - 774.7mm)	32.00" - 36.00" (812.8mm - 914.4mm)	34.00" - 36.00" (863.6mm - 914.4mm)
Diameter of Influence 8,000 VPM	9.00" - 13.00" (228.6mm - 330.2mm)	20.25" - 24.25" (514.3mm - 615.9mm)	24.50" - 28.50" (622.3mm - 723.9mm)	26.50" - 30.50" (673.1mm - 774.7mm)

* The above are nominal values and will vary depending on the size and range of aggregate and the slump of the concrete

Popular paving configurations shown. Many standard and custom mounts are available.



Minnich Vibrator Advantages Include:

Block Isolator

- standard on all paving models
- better shear spring rate
- less area for concrete build up
- greater rubber to steel bond area

Armor coated hydraulic hose

- for greater wear resistance

Minnich designed and built hydraulic motor

- three gear motor provides hydrostatic balance for longer motor life
- case hardened steel drive shaft and gear set
- designed to provide greater starting torque
- easy access to seal without complete teardown

Easy to repair

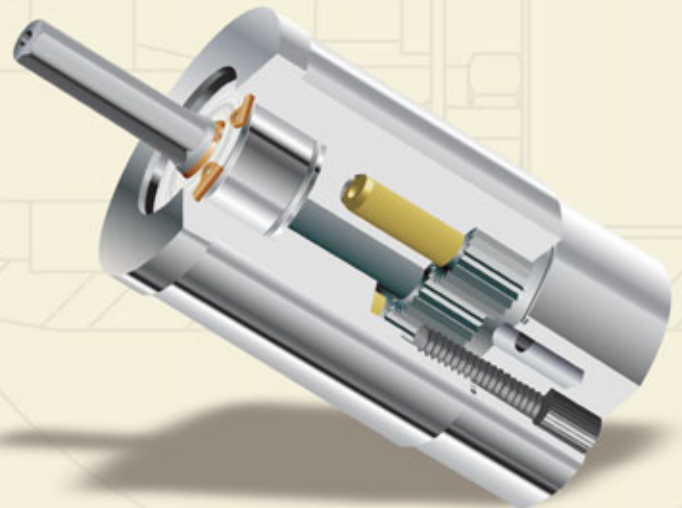
- factory repair schools and repair videos available
- factory-qualified dealer/repair network
- any up-grades can be retrofitted to existing vibrators

Same day shipping

- on standard parts and most vibrator orders

Seven day a week, 24 hour a day test lab

- for product testing and on-going product improvement



Manifolds



Available in 4, 6 or
8 Bank Models

External Vibrators



Model	M-1700	M-1200	M-1350
VPM	9000	9000	6000
Maximum Flow	5.30GPM (20.1l/min)	5.30GPM (20.1l/min)	3.53GPM (13.4l/min)
Centrifugal Force	1700 lbs. (7561.98N)	1200 lbs. (5337.87N)	235.0-1350 lbs. (1045.33-6005.10N)
Weight	20.1lbs. (9.12kg)	17.8lbs. (8.07kg)	21.1lbs. (9.57kg)

Vibrator Monitoring



Auto Vibe III Features

- Turn all vibrators on & off with one button
- Programmable VPM set point
- Convenient vibrator speed adjustment
- Programmable set point on ground speed for automatic control of vibrators (requires ground speed option)
- Graphical interface
- Real time readout
- VPM readout of up to 62 vibrators
- Alarm range settings to maintain proper operation
- Display centrifugal force
- Input slump and air entrainment for data log
- Optional monitoring of temperature and relative humidity
- Optional monitoring of ground speed and distance traveled

Auto Vibe II Features

- Graphical interface
- Real time readout
- VPM readout of up to 62 vibrators
- Alarm range settings to maintain proper operation
- Display centrifugal force
- Input slump and air entrainment for data log
- Optional monitoring of temperature and relative humidity
- Optional monitoring of ground speed and distance traveled



Auto Vibe III Manifold



Auto Vibe monitors are interchangeable

Monitor software can be upgraded

Auto Vibe systems can be installed on any new or existing Minnich hydraulic vibrator system.

Screen Displays in Four Languages

English - Spanish - French - German

Download log data to your computer and then print a hard copy for your records.

Hand Held Digital Tachometer



- Easy-to-read backlit digital display
- Durable, lightweight, highly visible casing
- Comfortable pistol grip
- Rechargeable nickel metal hydride battery pack
- Detachable, impact resistant urethane coated 5g-50g vibrator sensor
- Can be used with Auto Vibe sensor equipped vibrators
- 115VAC wall charger for continuous and overnight charging
- 12VDC cigarette lighter charger

