APE Mid-Atlantic Makes Old ACE Vibros New Again

150’ Wick Drains and 150’ of Snow in Canada

ConExpo Guide

We Don’t Need No Stinkin’ Dampener

Cat Power

Underwater Vibros in the Gulf of Campeche
WE DON'T NEED NO STINKIN' DAMPENER
MidWest Branch manager offers some insights when in search of the right words

When dealing with situations like this know the facts and options available. As consumers all to often we are lead into a direction that subsequently creates a need for a market that is not entirely needed. So the next time you face a project that requires you to utilize an external damping system contact your local APE office, or just say, “We don’t need no stinkin’ dampener, we use an APE.”

MIDATLANTIC BRANCH TAKES ON A LABOR OF LOVE
30 Year APE customer has original “ACE” equipment restored

The Vibration Damper was originally made for the Tunkers Vibratory hammer. The Tunkers vibratory hammer does NOT have a built in vibration suppressor system. One thing a dampener may do is throttle your vibro’s efficiency!

Some claim that a vibration dampener must be used with a vibro to suppress the vibration to the crane. This is not true when using APE Vibros on the job. Our 2 stage/dual stage suppression system makes a damper redundant and uneccessary.

The Vibrator hammer was PUT to work without the damper. APE has used it’s proven 2 stage/dual stage suppression system that not only reduces the return vibration traveling through the crane line back to the boom, but it also allows you to obtain a higher line pull rating than any vibro in its class. This technology has saved customers thousands of unnecessarily spent dollars and eliminates an added safety concern.

When APE started it was initially called American Construction Equipment, or ACE. Due to similarities with another equipment company, the name was changed to American Pile-driving Equipment or, APE as we are known today. We received this ACE Vibro hammer and ACE power unit from one of our good customers “Carolina Bridge” from Orangeburg SC. They have had it for many years and still use it each day.

APE Vibros are designed to increase line pull, reduce operator noise and fatigue, and increase efficiency. APE Vibros are the only vibros in their class.

When asked the question “do you sell or rent dampeners/isolators?”, I respond “Yes we do. They are built into our vibros.”

You see for over 20 years APE has used its proven 2 stage/dual stage suppression system that not only reduces the return vibration traveling through the crane line back to the boom, but it also allows you to obtain a higher line pull rating than any vibro in its class.

Contact Jimmy Deemer at: jimmyd@americanpiledriving.com

Contact Jake Palmer at: jakep@americanpiledriving.com

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Our 2 stage/dual stage suppression system makes a damper redundant and uneccessary.

But don’t take our word for it, call Liebherr and ask if they require the use of a dampener on their cranes.
In March 2019, the Government of Ontario announced that it would be investing $1.3 billion to help rebuild and restore 123 highway projects across the province, of which $291 million has been earmarked to support infrastructure renewal projects throughout northeastern Ontario. One of these important projects was the replacement of the Blanche River Bridge on Highway 569, near New Liskeard.

“Our government is delivering on our commitment to be open for business and open for jobs,” said Jeff Yurek, Ontario’s Minister of Transportation at the time of the announcement. “We are determined to improve our transportation infrastructure renewal projects throughout northeast Ontario. One of these projects was the.

The general contractor for the project, EXP Global, has tasked Ontario-based Facca Inc. with replacing the bridge, relying on Facca’s 60-plus years of experience in heavy civil construction, as well as its well-deserved reputation as an industry specialist in bridge and embankment loads and - most importantly - to reduce the effects of down-drain on the piles at the new structure abutments,” said Steve Gardonio, project manager at Facca.

When ground pressure is added to the area that a structure is being built upon, the water underneath will make its way to surface through seepage and the soils will naturally compress and settle from the weight that has been mechanically applied; with the soil matrix gradually taking up the pressure change and shrinking in volume. This laborious consolidation of water-saturated clays or soils is a progression that can take years or even decades to achieve. In the meantime, this process can potentially delay or stop any future plans for development in the immediate area until the required soil density is attained through settlement. However, this is a progression that can be significantly sped up by installing Prefabricated Vertical Drains (PVD) – or wick drains – in the ground.

“The use of wick drains will accelerate the time of settlement from a span of years to mere months, and any damage to roadways, embankments and structures resulting from the project, EXP Global, has called for wick drains of

Drain installation equipment. required the installation of Wick Drains using APE wick drain installation equipment.

In completing this project, Facca teamed up with American Piledriving Equipment Inc. (APE), a world leader in research and development, production and sale of foundation equipment. APE produces some of the world’s largest pile drivers and has offices in every corner of the US, Canada and Asia, with a worldwide distribution network. The company is renowned for its commitment to providing outstanding products and service. APE’s dedication to assisting clients is the key to its success, and has established the company as being an industry leader in patents issued worldwide.

“The bridge on Highway 569 is being constructed with a different alignment from the original structure, and that requires new embankments to be. This means that additional load will be applied to the soft, underlying clays that run deep throughout the region.

“Because of this additional load, the bridge design has called for wick drains of a maximum depth of 150 feet in the areas of new embankment construction in order to accelerate the settlement caused by the embankment loads and - most importantly - to reduce the effects of down-drain on the piles at the new structure abutments,” said Eric “Wiggy” Legault, Canadian regional manager at APE.

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**J&M Top Drive Auger Model 100K**
- **Heavy Duty Trip System**
- **Advanced Vortex Cooling**
- Ready for Bolt on Flare Kit
- Capacity
- Increased Fuel and Lube Extension
- Bolt on Upper Cylinder Fuel Control
- Helical Drill Model HD40
  - Light Weight
  - Highest Power Density in the Industry
  - Easily Integrated to Most Excavators
  - Through Hole, Groat, Water, and Air Capability
  - Versatility: Auger Attachment, Down the Hole Hammer, Any Drilling Tool
  - Mount to Sled or Front Rider Application
  - Excavator or Mobile Mast
  - Depth & Groat Data Monitoring

**Vibro Model 20E**
- Easily Adapts to Most Excavators
- Light Weight Design for Smaller Excavators
- High Pressure Piston Motor
- Single Stage Suppressor
- Perfectly Balanced with Lowest Center of Gravity
- Can Achieve up to 1950 VPM
- Direct Drive Hydraulic Motor

**Helical Drill Model HD40**
- Light Weight
- Highest Power Density in the Industry
- Easily Integrated to Most Excavators
- Through Hole, Groat, Water, and Air Capability
- Versatility: Auger Attachment, Down the Hole Hammer, Any Drilling Tool
- Mount to Sled or Front Rider Application
- Excavator or Mobile Mast
- Depth & Groat Data Monitoring

**Vibro Model 300-4**
- Highest Driving Force in its Class
- 2 Stage Suppressor
- Variable Deceleration Stops Vibro Faster, Minimize Stress on the Crane
- Silverback™ Radiant Technology
- Balanced and Blueprinted Design
- State of the Art Design to Maximize Vibro Performance and Efficiency

**What is Silverback™ Radiant Technology? Turn Page...**

**Power Unit Model 800**
- Tier IV Stage V Dual Certified
- Advanced Hydraulic Fan Drive
- Protective Hydraulic Circuits
- Hydraulic Fluid Conditioning
- Smart Control System with Remote Monitoring, GPS Tracking, Data Logging
- Custom Power Unit Available
- Maximum Efficiency
What is Silverback Technology?

Ok Boomer, What’s Silverback technology?

Silverback Technology is the result of leaving a lot of skin and blood on a lot of bolts and steel.

Silverback Technology is listening, hearing and asking questions.

Silverback Technology is ideas, innovation and adjustments.

Silverback Technology is born in the field and an understanding that keeping your customers running is job #1.

New aluminum radiating bearing covers by APE increase run-time of vibrators before overheating - with no moving parts. Will vastly improve bearing life, production.

APE Supports and are members of:

APE - Caterpillar Cooperation

No one puts a product through the ringer like Caterpillar. For almost 90 years, they’ve designed and manufactured engines to power the biggest, toughest machines in the planet’s harshest environments — from desert heat to arctic cold, from deep below ground to thin-air elevations.

Caterpillar and its dealers, work with equipment manufacturers from all over the world, providing power solutions with a full range of engines from 0.5L to 32L. Over the last 20+ years, APE has been working with Pacific Northwest Cat dealer NC Power to find the best engine solution for a variety of products. Now featured in over 10 different models, Cat is a prominent engine brand due to its reliability and industry leading support network. Now as an authorized partner, look for the Cat Power logo on future APE materials and machines.

#GoAPE PoweredByCat

WHO IS CONSTRUCT MARKETING?

When APE runs an ad, attends an event, publishes a newsletter or posts to social media, Construct Marketing is behind the scenes harassing APE’s personnel to take photos of projects, and get stories. We’re making sure people and exhibit materials get in and out of events successfully, setting budgets, getting creative, posting posts, etc.

We’re APE’s and other construction industry companies’ marketing department, and we bridge the span between marketing and heavy construction.

www.constructmarketing.com

WHAT IS SILVERBACK TECHNOLOGY?

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APE Silverback™

Thank you APE!

Contact Eric “Wiggy” Legault: eric@americanpiledriving.com

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APE MEXICO
Four Piles Driven into the Seabed for Pemex Platform in the Gulf of Campeche, Mexico

APE Equipment was critical to the completion of a oil drilling platform being constructed for Pemex in the Gulf of Campeche.

The footings for a template for the ONEL-B platform to be constructed in the Gulf of Campeche, Mexico, were four 30’ pipe piles driven deep into the gulf bed by a submerged APE Model 400 King Kong Vibratory Driver/Extractor.

During the operations of installation of the template and the substructure, the acting forces both in structural elements and in tubular joints and piles were to be kept below the admissible forces, established in the applicable and current regulations.

Design of the base plate and foundation piles of the underwater template and substructure require a guarantee of its stability on the seabed.

Evaluation of the resistance of the soil to penetration by the pile sleeve trunnion and the conductor guide trunnions, in order to verify that the submerged weight of the underwater template is sufficient to bring the base plate down to the elevation of the seabed.

Using the ultimate axial capacity curve of a 30 inch diameter pile and the maximum acting load of 39.0 kips (0.17 MN), a penetration length of 130.00 ft (39.624 m) is determined for the 4 piles considering a safety factor at penetration of 1.65 the pile will have a capacity to support a vertical load of the order of 400 tons, which could be generated by an uncontrolled coupling of the substructure with the pile.

Analysis of pile driving, in order to review the dynamic behavior during the driving, through which the installation equipment is selected to ensure that the design penetration is reached, keeping the acting forces during the maneuvers, below the admissible forces.

Wave analyses at the installation site of the subsea jig, to obtain the forces transmitted to the four (4) foundation piles (0=30’), were performed considering the gravitational loads on the subsea jig in addition to the lateral forces produced by the installation wave, for 8 wave incidence directions.

For the installation of the piles of the ONEL-B platform jig, some design aids are required so that the crane boom can move the piles from the barge to the jig (pile length 45,752 m). For this a false structure must be designed that can temporarily support the weight of the pile plus the weight of the hammer that will be used for the installation.

The APE equipment met all criteria and considerations as described and performed flawlessly.

Contact Franki Segura at: frankis@americanpiledriving.com

PROJECT CONSIDERATIONS

Based on the dynamic pile driving analysis with the APE 400 “Vibro Driver”. The maximum frequency required for driving the piles in both axes will be 23.33 1/s and an eccentric moment of 132.49 kg-m.

The piles were designed with ASTM A36 type structural steel pipe, 0=30” with variable thickness.

Determination of the lateral force that is generated during the encroachment of the substructure on the foundation pile (pivot) by the effects of waves, current and wind, for an installation sea state.

Structural design of the foundation piles, by lateral load and by vertical load produced by the pile itself and by the installation equipment (Vibro Hammer) during the driving.

Determinations of the lateral resistance to penetration of the pile into the sand layer will increase strongly so it is recommended to consider as rejection in a time interval of 15 minutes in a foot / penetration.

GOT THE APE-APP?
The information you need is at your fingertips...

Whether you’re at an estimating meeting, at the design table or under the shadow of a giant set of leads, get the APE app.

Includes: steel and concrete pile calculators, specs, APE links, APE communications and the full APE Field Catalog.

AVAILABLE AT THE APPLE STORE & GOOGLE PLAY

STAY IN TOUCH WITH APE-mail

Sign up for APE’s E-mail news at GoAPEhammers.com or Send request to news@americanpiledriving.com
WIN AN APE-CARHARTT PILEDRIVER’S JACKET
Visit GoAPEhammers.com to Enter!

For Thanksgiving, APE and Equipment & Contracting magazine ran an Instagram contest to win one of ten APE Carhartt Piledriver Jackets.

The contest was so successful, we’re doing it every month!

APE RULES FOR DRIVING SHEET...
Visit GoAPEhammers.com for your copy!

1. Never stand under foundation equipment.
2. Start with piles in good condition.
3. Put all clamp teeth in contact with pile.
4. Drive in steps eight feet or less.
5. Keep sheets plumb.
6. Come up to speed before doing work.
7. No dancing – avoid densification.
8. Drive past obstacles and then go back.
9. Backhoe on site to remove obstacles.
10. Lead with the ball of the sheet pile.
11. Probe the pile if it appears stuck.
12. Never rush the sheet pile foreman.
13. Slow and plumb and the job will get done.
14. Melted inner locks = piles out of plumb.
15. Low clamp pressure means jaw failures.
16. Wait for vibro to get to full speed then pull.
17. Don’t over excavate – lower the ring.
18. Look at the jaws during driving.
20. In sandy soils drive faster.
21. In clay amplitude is everything.
22. Low drive pressure means easy work.
23. High pressure means friction on piles.
25. No amplitude means bigger hammer needed.
26. Caissons need heavy wall to avoid flex.
27. Check clamp bolts each morning.
28. Read the manual – know your machine.
29. Attach whip line to pile when pulling.
30. Know your line pull.
31. Extract straight – look at boom and cable.
32. Give boom stops some room.
33. Stalled engine means dirty fuel filters.
34. Never stand under foundation equipment.
35. GoAPE!

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APE WILL BE GIVING AWAY ONE APE CARHARTT PILEDRIVERS JACKET EVERY MONTH!

1.66 billion people on average log onto Facebook daily.