Vision in Focus

In-house Manufacturing of Wacker's Generator Lines Abound with Customer Benefits

By Rick Zettler

Reduced operating sound levels, improved motor starting capabilities, enhanced durability and more flexibility than ever before are not the only customer benefits anchoring Wacker Corporation's new line of mobile generators. As a matter of fact, the generator redesign isn't even the beginning of the story.

While it is commonplace to read about many companies outsourcing more and more equipment manufacturing to countries outside the U.S., Wacker is bucking this trend by adding more power to its ISO 9001-2000 certified facility in Menomonee Falls, WI. The company has brought in-house the manufacturing of all its generator equipment. Most recently, Wacker's plant has added 16 mobile generator production stations to its already existing 6 portable generator stations, creating a full line Power Generation Focus Factory.

"If you do it efficiently, it can be cost-effective to manufacture in the United States," says Marc Leupi, product manager power, pump and light for the Wacker Corporation. "The decision to manufacture the mobile generators in Menomonee Falls was an easy one as it gives Wacker more control over quality and allows us to be more responsive to customer needs."

The Focus Factory

Wacker's unique Focus Factory concept merges all aspects of an equipment line's production process into a single area of concentration. More than 30,000 square feet of manufacturing space is dedcated solely to the production of portable and mobile generators. This generator factory is further divided into a series of 22 production stations for the company's mobile and portable lines.

More than 30,000 square feet of factory space are dedicated to manufacturing generators.

Every employee on the line knows the process to follow at each of the stations, so the worker can move with the product from start to finish. Since starting its first Focus Factory in 1995, Wacker has realized significant gains in the manufacturing process.

"Lead times have been significantly reduced, and our inventory levels are much lower," says Parvinder Singh Sangha, Wacker's project manager for manufacturing engineering. "For the generators, lead times are now hours rather than days." A generator's housing can be fabricated in the morning and fully assembled in the afternoon.

The final station of the generator Focus Factory ends with the testing lab. Every generator goes through complete full-load testing to ensure that the generator will operate properly in the field. The mobile generator lab tests up to two generators at one time, simulating situations customers may encounter in the field.

New Prime Power

Powering jobsites for over 10 years, Wacker's prime power line features six mobile generators, offering output ranges from 19.5 to 128 kW (24.4 to 160 kVA). Four newly redesigned models – G25, G50, G70 and G85 – use the latest manufacturing technology available to deliver a higher quality, quieter and more durable generator.

Wacker engineers employed the most advanced sound mapping technology to reduce operating sound emissions by nearly 10%. Through the use of modern sound dampening material and a unique airflow pattern, these new models feature operating sound levels as low as normal conversational speech. Wacker's mobile generators will now be found on a wider variety of applications from general rental to special event and party rental.

Designed specifically for the generator they power, environmentally friendly Tier 2 diesel engines – Isuzu for the G25 and John Deere for the G50-G85 – generate lower exhaust emissions. A new standard generator end includes a separate integral excitation winding that maintains dedicated power to the automatic voltage regulator (AVR) and thus continuous excitation voltage to the rotor during high surge loads like motor starting or during a short circuit load condition of 350% of rated current.

Because this excitation winding is isolated from the load windings, the performance

Wacker's mobile generator line delivers output ranges from 19.5 to 128kW.

of the state of the art AVR remains fast and clean even when the load is distorted or non-linear.

Commitment to Quality

Wacker's commitment to building a reliable and durable power generation product shines through in the use of long-lasting stainless steel hardware and hinges and heavy-duty galvanized door handles. The rear intake vent panel is treated with an auto-grade coating for years of corrosion-resistant service. A one-piece roof grants unobstructed access to vital components for servicing, while an integral lifting structure eliminates external hardware.

A modular mobile skid design allows these new generators to be equipped with a fluid containment system, creating an environmentally safe "green machine." In addition, a number of options are also available that allow the generators to be custom designed to the application.

For arctic/sub-arctic environments, a special cold weather package – including temperature-activated shutters, electronic governor, LCD strip heater, lube level maintainer with low oil shutdown, low coolant shutdown, and a block heater – keeps the generator operating at peak performance all year long, even at temperatures reaching a reported 70 degrees below zero Fahrenheit (-57 degrees Celsius).

All Wacker mobile generators continue to include market-leading features like a digital engine controller (ECM) and a LCD data management display which is fully illuminated, easy to read, and eliminates the need for several analog gauges and indicator lights. This simplifies the layout of the control panel and makes it easier for a variety of users from different industries to understand and to operate the generator.

Since its introduction ten years ago, the information available on the LCD includes generator Volts, Amps, and Hertz for each output leg which eliminates the need for a meter switch. Other conditions displayed are fuel level, oil pressure, coolant temperature, battery voltage, run hours, and time to next service hours. It also identifies pre-alarm conditions and a specific reason for a fault - should one occur. Other manufacturers only supply an indicator light which is not flexible or as informative as the actual data values and text messages available on the LCD. More information equals less down time.

The versatile data management LCD can easily adapt to changing technologies in the market place without additional components in the layout of the control panel. With the introduction of the Tier 2 electronic engines, several items monitored by the engine control unit (ECU) are now viewable on the LCD. Three of them include percent engine load, fuel consumption rate, and the history of past engine faults which will help determine what conditions the generator was operating under while it was out on rent or at a job site. Competitor machines with analog gauges require a lap top computer and software to view this same engine information.

Generator auto start, remote start, and remote data monitoring via a RS 485 connection port are all standard features of the ECM. These features are limited and expensive options from competitors with analog gauge machines.

Further evidence of Wacker's renewed focus on the generator market can also be seen through a stronger mobile generator distribution network. Prime power is a specialized market, requiring an in-depth knowledge of electrical generation. Wacker is filling its distribution network with many dealers who specialize in power generation to ensure customers receive the right equipment for the application.

For more WACKER information visit www.wackergroup.com.

Wacker's newly redesigned mobile generators are more durable, quieter and more flexible than ever before.

Focus Factory – Huge Advantages

Although a staple of the power market for 10 years, Wacker's mobile generator line was private labeled for much of this time. That was until recently, when the company started to build them in its 30,000 square foot generator Focus Factory.

By building in-house, Wacker almost immediately realized many benefits for the customer as well as the manufacturer. "We can build a mixture of any mobile generator model at one time, allowing us to be more responsive to customer requirements," says Leupi. Lead times have shrunk from days or weeks to just hours. As soon as a generator is built, it is ready for shipment to the customer, thus lowering required inventory levels.

In-house Focus Factory production also gives the company more control. Wacker now has ultimate direction over the production process, generator quality and equipment delivery. "If we see a problem on the line, we can fix it immediately," explains Sangha.

The Focus Factory has also increased Wacker's ability to offer a number of options for its mobile generators, increasing equipment flexibility. The small G25 and medium G50, G70 and G85 offer a number of available extras, including cold weather package, electronic governor, camlock panel and fluid containment options. Mobile generators can be custom designed for specific needs, so customers will have the right equipment for the application.