

ANGI Energy debuts NG100E FleetPro

Company turned concept into reality in one year. By **DJ Slater**

The back of a napkin tends to be good starting point for a new product. At least, that's where the concept for ANGI Energy's new CNG package began.

In August 2017, a customer approached ANGI Energy, looking for a CNG compression product that could be quickly deployed in a compact package with the latest technology.

The ideas swirled, which soon birthed a concept in the form of ink on a napkin. By August 2018, ANGI Energy had a new package that met the customer's need and also expanded the company's NG series of CNG systems.

Enter the NG100E FleetPro, a skid package that features duplex compressors and a CNG-fueling system. It is designed for small- to medium-sized heavy duty and industrial fleets. The package also works for intermittent traffic fueling sites, such as travel plazas and convenience stores.

"This was largely driven by customer

Two Ariel compressors are part of the NG100E FleetPro package. The KB100 compressor is purpose-built for low-flow CNG applications utilizing 100 hp (75 kW) or 125 hp (93.2 kW) main drivers.

ANGI Energy's NG100E FleetPro, designed for small- to medium-sized heavy duty and industrial fleets, fits between the company's NG50 and NG300 products.

demand for a scalable and quickly deployable natural gas fueling solution," said John Barker, sales manager for ANGI Energy. "It cuts down on construction costs, and reduces mobilization and demobilization costs. Additionally, site design costs are lowered by bringing site features onto one common platform."

Ariel compressors key

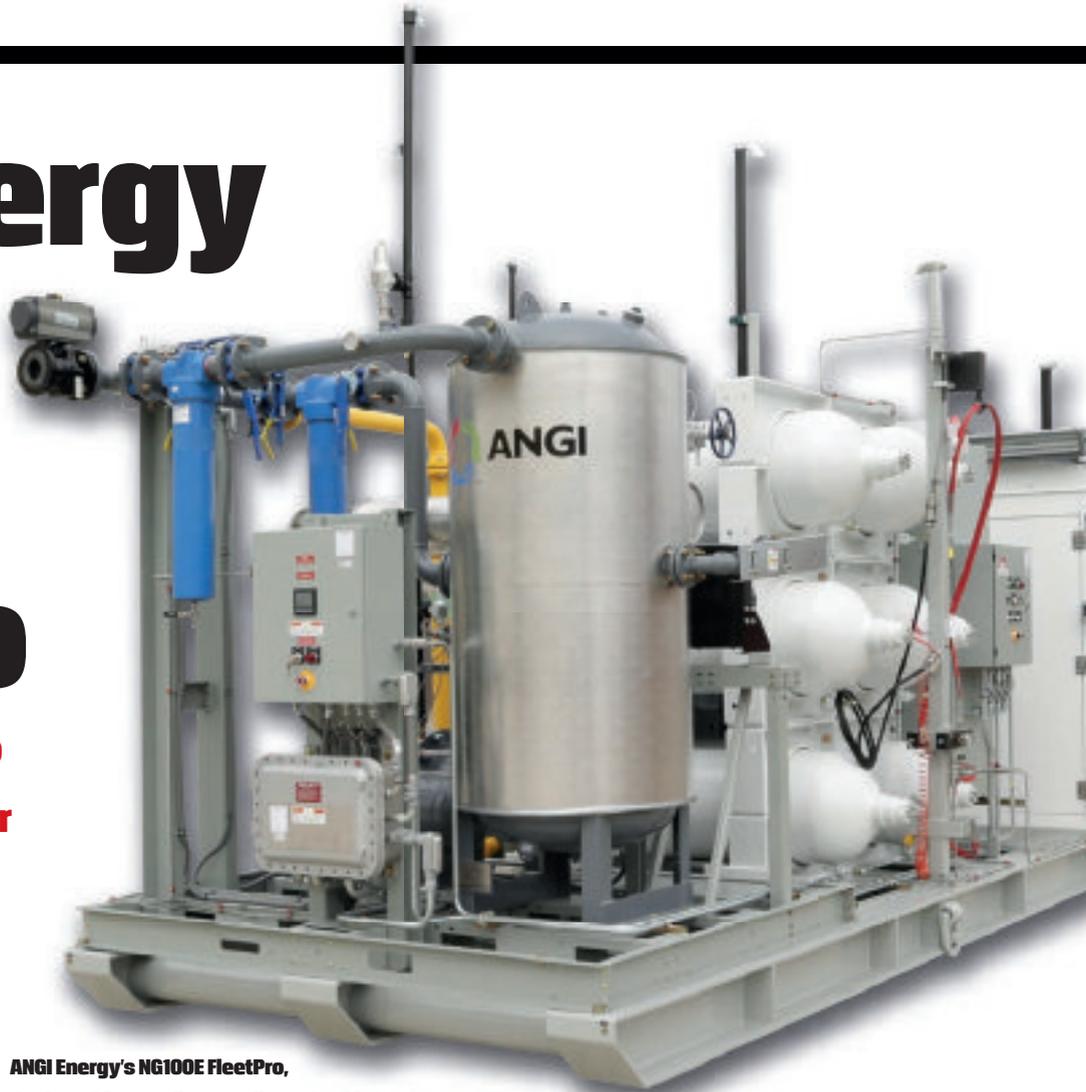
At the heart of the package are two Ariel KB100 reciprocating gas compressors. The

KB100 compressor is purpose-built for low-flow CNG applications utilizing 100 hp (75 kW) or 125 hp (93.2 kW) main drivers, with a maximum rpm of 1800. It features a 3 in. (76.2 mm) stroke, a 900 fpm (4.6 m/s) piston speed. The two-throw compressor also has a 5700 lbs (25,365 N) tension rod load; 6700 lbs (29,815 N) compression rod load; and a total rod load of 11,400 lbs (50,730 N).

The KB100 compressor also features a frame-driven lube oil pump that provides cooled oil to all moving parts in the frame. All loaded joints have grade 8 bolting and the connected rods are made from ductile iron. The compressors are housed in a sound attenuating enclosure.

Ariel compressors were a natural choice for ANGI Energy, who has been an Ariel packager since 1989. The Ariel compressors also provide an inlet pressure range from 3 to 39 psi (0.2 to 2.7 bar).

"Having two compressors makes the





The NG100E FleetPro features two Ariel compressors, a gas dryer, a storage assembly, valve panel and a defuel gas capture system.

package more flexible," Barker said. "It's designed to facilitate timefill between 20 to 40 truck count fleets with only one compressor, while maintaining a 100% redundant standby unit. Both units can run simultaneously for fast-fill applications."

The package is not limited to only two compressors. The package's inlet piping and gas dryer can accommodate a third compressor, a useful perk if a fleet or CNG station grows, Barker said.

Outside of the compressors and gas dryer, the NG100E FleetPro also includes a storage assembly, valve panel and a defuel gas capture system. This device can recapture natural gas from vehicles during maintenance events and allow the operator to reuse it.

"What we're trying to do in this industry is push the environmental benefits of our product lines," Barker said. "The gas capture system is an environmental and monetary benefit."

Recapturing valuable gases

Keeping methane out of the atmosphere makes the system environmentally friendly, but it also gives operators the opportunity to recapture other more valuable gases, such as biogas or renewable natural gas (RNG), Barker said. These gases come from renewable feedstock, such as landfills, anaerobic digesters and wastewater treatment plants, and have high value in the marketplace.

"The system makes sure these guys don't lose gas during a maintenance event," he said.

The package has a variety of equipment options. It can include a single tower dryer with manual regeneration designed for two compressor flow; the CP-400 remote monitoring system with ANGI CNG Live! mobile app access; and a defueling panel with dual hose connection.

The NG100E FleetPro fits between two of ANGI Energy's existing NG series of products – the NG50 and NG300. The NG50 supports a 50 hp (37.3 kW) driver, while the NG300 accommodates a 125 to 300 hp (93.2 to 224 kW) driver.

In addition to filling in the gaps of ANGI Energy's NG series, Barker said the NG100E FleetPro also adds an asset to the CNG industry.

"This market segment was only serviced by converted air compressors," he said. "There were other equipment manufacturers in this space, but they were all taking air compressors and retrofitting them to handle high pressure natural gas.

"The long-term life wasn't there," Barker said. "We are offering the market a heavy duty solution with long life."

With customers already requesting the new package, Barker reflected on how quickly this project went from pen on a napkin to CNG equipment on a skid.

"We were able to take it from conception to a delivered product in one year," he said. "It's exciting because it allows us to further expand the natural gas fueling infrastructure in the U.S. and opens up new fleet demographics that have a viable fueling situation."

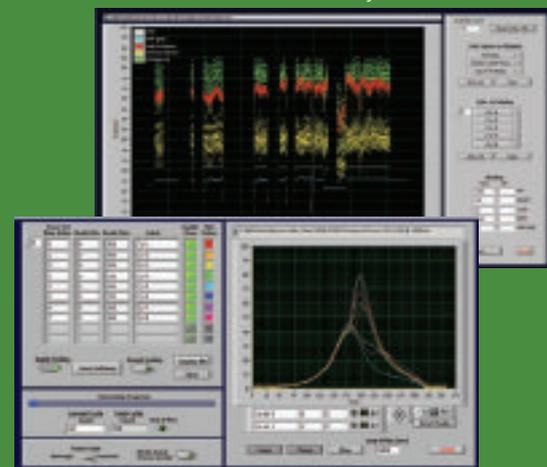
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