

NEXT-GENERATION 3F ENGINE PLATFORM

Fit for the future—thanks to more than 20 years of technical collaboration

Background

Church foundation Dominikus-Ringeisen-Werk (DRW) helps those with disabilities in more than 30 locations across Bavaria, providing housing, jobs, and a wide variety of training, advice, and services. For more than 20 years, DRW's premises at its largest location in Ursberg, in the Bavarian county of Swabia, have been reliably heated and powered by three Jenbacher Type 3 combined heat and power (CHP) units. The plant's total electrical output is more than 1.6 MW, and excess heat is fed back into the district heating network. The innovative technology of the Jenbacher solution, and its reliability as a standby power-enabled system, were key factors in DRW's purchase decision.

DRW operates the CHP plant using Jenbacher myPlant Performance software, which delivers valuable real-time insights and continuous analytics concerning engine runtime and status, enabling DRW to make swift decisions.

»Jenbacher Type 3 engines have kept us up and running reliably since 2000. Supported by Jenbacher experts with their focus on innovation, we keep pace with the latest developments. This is our second version upgrade, so our engines are now in their third life-cycle. And thanks to the upgrade, they now run even better and longer than before. We look forward to working with Jenbacher experts throughout the next life-cycle and feel well-equipped for the future.«

Thomas Roth, head of Power and Engineering, Dominikus-Ringeisen-Werk (DRW, church foundation under public law)

Solution

The CHP plant originally was installed in late 1999/early 2000. After its first 60,000 hours of operation, DRW upgraded from version B to version C in 2013. Another 60,000 operating hours later, the foundation opted to upgrade to the latest technology again in 2021/22 as part of a major overhaul.

To minimize downtime, DRW chose a Jenbacher reUp longblock engine from the Remanufacturing exchange program. Provided ahead of the existing engine upgrade, the reUp engine was pre-configured in detail at the Jenbacher factory, based on the customer's agreed specifications, to ensure that it would be up and running quickly.



The DRW energy hub in Ursberg supplies up to 4,000 people with power and heat every day

Result

The key features of the next-generation 3F engine version are a new four-valve cylinder head with an improved cooling system and new valve and valve-seat materials, an optimized camshaft, a new piston concept, and an enhanced knock control and ignition system.

With these technological design features, upgrading to the Jenbacher Type 3F engine version means that DRW's Ursberg site is now more efficient and has lower emissions and lower oil costs—with scope for even more savings by using Jenbacher N Oil 40. What's more, the upgrade also means that fewer oil filter changes are required. In addition, because DRW chose to add an optional maintenance interval extension until the next major overhaul, the engines now have a longer service life of 80,000 operating hours compared to the previous 60,000.

»Our past experience of Jenbacher upgrades was so positive that it was an easy decision for us to upgrade to the next generation of the Type 3F. Thanks to the improved fuel usage of the modern 3F generation engine, we have been able to both increase our profitability and reduce our environmental footprint.«

Thomas Roth, head of Power and Engineering, Dominikus-Ringeisen-Werk (DRW, church foundation under public law)

Key Technical Data

Installed Engines (Upgrade: 2013 - 3C version, 2021/22 - 3F version)	3 x J312 (F)
Electrical Output	1.6 MW
Thermal Output	2 MW
Energy Source	Pipeline gas
Commissioning (3B version)	1999/2000

For more information about the next-generation 3F engine platform, visit: www.innio.com/en/j3f



Customer video about the Remanufacturing exchange program:

Scan the QR code for more information on the engine version upgrade at DRW.



3F product video:

Scan the QR code to find out more about the customer benefits of the Jenbacher next-generation 3F engine platform.



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3F upgrade customer benefits

Greater efficiency: up to 2 percentage point improvement in fuel usage

Lower emissions: smaller environmental footprint through compliance support with THC emissions regulations

Reduced oil costs: life-cycle cost reduction due to less consumption and longer lube oil lifetime

Convenient upgrade: to the latest technology during the major overhaul of the installed engines onsite

Greater runtime (optional): maintenance interval extension to 80,000 operating hours before next major overhaul



INNIO is a leading energy solution and service provider that empowers industries and communities to make sustainable energy work today. With our product brands Jenbacher and Waukesha and our digital platform myPlant, INNIO offers innovative solutions for the power generation and compression segments that help industries and communities generate and manage energy sustainably while navigating the fast-changing landscape of traditional and green energy sources. We are individual in scope, but global in scale. With our flexible, scalable, and resilient energy solutions and services, we are enabling our customers to manage the energy transition along the energy value chain wherever they are in their transition journey.

INNIO is headquartered in Jenbach (Austria), with other primary operations in Waukesha (Wisconsin, U.S.) and Welland (Ontario, Canada). A team of more than 3,500 experts provides life-cycle support to the more than 54,000 delivered engines globally through a service network in more than 80 countries.

INNIO's ESG Risk Rating places it number one of more than 500 worldwide companies in the machinery industry assessed by Sustainalytics.

For more information, visit our INNIO company website at www.innio.com or Jenbacher product website at www.jenbacher.com

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