

HIGHER EFFICIENCY WITH INNOVATIVE DESIGN FEATURES

F-version upgrade for Jenbacher Type 2 engines

When you upgrade your Jenbacher Type J208 engine to the latest F-version technology, you can increase total efficiency while reducing the engine's fuel consumption.



Camshaft

- Increased charge efficiency
- Enhanced Miller timing
- Reduced hydrocarbon emissions



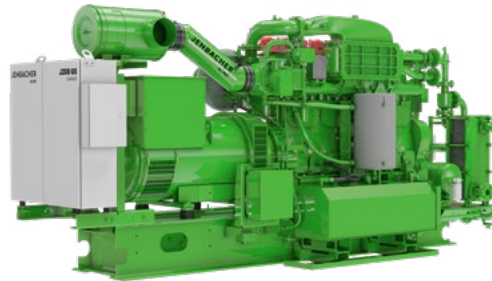
Valve train (4v)

- Better gas exchange in combination with cylinder head (4v)
- New valve train with floating bridge



Cylinder head (4v)

- Better gas exchange with cooling upgrade
- Reduced THC emissions
- Enhanced material selection for valves and seat rings



Ignition box

- Enhanced combustion with new ignition box



Power unit

- New aluminium piston design
 - > Decreased crevice volume
 - > Reduced hydrocarbon emissions
 - > Revised piston bowl shape
 - > Reduced oil consumption
- New liner and scraper ring



Intercooler

- Increased performance by up to 40%, enabling 70°C ICWT for special versions
- Greater efficiency and reduced component stress with new turbocharger bypass location (cold side of mixture)

Upgrades: Enhancing performance

Our innovative solutions are constantly upgraded to increase your plant's sustainability and bring you top economic results. Let INNIO Group—your Jenbacher system's original equipment manufacturer (OEM)—partner with you for the unique insights you need to always stay up to date. Building on your constant feedback, we offer a broad range of upgrade packages for your Jenbacher products. That is why we also continuously develop our engine versions for you.

Product details

The efficiency upgrade can be applied anytime—ideally during a minor or major overhaul—and includes an engine upgrade, control software, and settings update. A key feature of the Type 2F engine is a new four-valve cylinder head and enhanced camshaft for better gas exchange. Paired with a new power unit that delivers improved combustion, the upgrade results in significantly increased fuel efficiency and lower total hydrocarbon content (THC). Its enhanced cooling concept, along with new valve and valve seat materials, translates to a robust package that can handle challenging applications.

Typical engine upgrade scope:

- Carryover of 3F-design camshaft and 4V cylinder head exchange (including valve train adaption)
- New pistons and liner
- New intercooler
- Turbocharger modification, depending on engine version and application (version C with new turbocharger)
- Crankcase ventilation system upgrade, if applicable
- Ignition and knock system upgrade
- OEM documentation update

Applicable units¹

Type 208¹ ✓ Type 4

Type 3 Type 6

¹ For 2025, a special release workflow is required for respective 2F upgrade requests. The upgrade is applicable to all J208 C- and D-version engines with a corresponding F-version engine released according to the new unit product program (for instance, C05 versions can be upgraded to F05). The minimum requirement is DIANE XT3 control management.

Customer benefits

Greater efficiency and high output

Up to 3% points efficiency increase (based on engine version) and up to 360 kWel

Lower THC emissions

A smaller environmental footprint with the carryover of the 3F-technology. This helps you comply with your country's THC-emission regulations (such as the requirements of the 44th BImSchV in Germany).

Reduced oil cost

Less oil management requirements and lower oil life-cycle costs with smaller lube oil consumption and a longer lube oil lifetime. Moreover, the use of Jenbacher oils enables the extension of both filter life and service intervals.

Amortization period

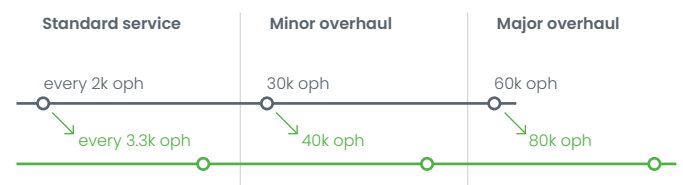
In average within two years (pending on application and initial engine version)

Convenient upgrade

Applied at your site during a minor overhaul or at the Jenbacher Overhaul Technology Center as part of a major overhaul

Greater runtime (optional)

Maintenance schedule updated to 3.3k–40k–80k oph if your engine still runs on a 2k–30k–60k oph maintenance plan.



Upgrade your engine
Enhancing performance
jenbacher.com/upgrades



Contact us:
jenbacher.com/en/contact

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