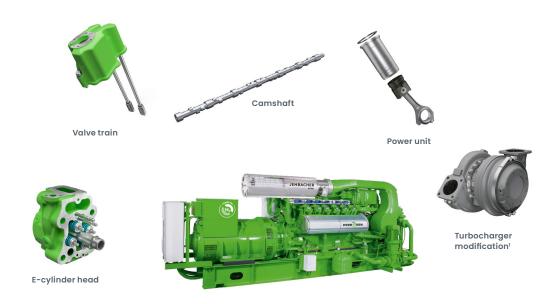
# INNOVATIVE DESIGN FEATURES ALLOW FOR HIGHER OUTPUT & EFFICIENCY

# E-version upgrade for Jenbacher Type 4 engines

When you upgrade your Jenbacher Type 4B/C engines to the latest E-version technology, you can increase your engine's total efficiency while reducing its fuel consumption.



## **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.

Performance & Efficiency

# **JENBACHER**

#### **Product details**

Our performance upgrade can be applied anytime—ideally during a minor or major overhaul.

Key features of the Type 4E engine are: a new four-valve cylinder head for improved cooling, an optimized camshaft for better gas exchange, a new power unit for enhanced combustion, and new cylinder heads combined with a roller tappet for improved reliability.

# Choose from two different E-version upgrade packages to meet your specific needs:

- Full scope (applicable to 4B versions)
- Light scope (applicable to 4B/C versions)

#### Full scope:

- E-cylinder head
- Camshaft (LIVC 629)
- Valve train (roller tappets)
- Power unit (steel pistons and related parts: liner, cooling nozzle, etc.), enabling more start/stops, up to three times more often than an aluminum piston
- Turbocharger modification, depending on engine version and application
- Optional update to 30k/70k oph (combined with minor overhaul) or 40k/80k oph (combined with major overhaul) maintenance plan in combination with dedicated components
- OEM documentation update

#### Light scope:

- E-cylinder head
- Camshaft (LIVC 629)
- Valve train (roller tappets)
- Turbocharger modification, depending on engine version and application
- OEM documentation update

#### **Customer benefits**

#### Greater efficiency<sup>2</sup>

The 4E upgrade delivers as much as 4% more output—up to 1,560 kW—and up to 1% point of additional electrical efficiency increase.

#### Improved reliability

The new 4E technology includes a more robust E-cylinder head combined with the roller tappet.

#### **Amortization period**

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

#### Convenient upgrade

This simple upgrade can be applied at your site anytime (such as during a minor overhaul) or at the Jenbacher Overhaul Technology Center as part of a major overhaul.

#### Future-proof fuel flexibility<sup>3</sup>

The upgrade prepares your engine for our "Ready for Hydrogen" option, facilitating your move from conventional fuels today to  $\rm H_2$  operation tomorrow, once  $\rm H_2$  becomes more readily available.

## Applicable units<sup>4</sup>

Type 2	Type 4	<b>~</b>
Туре 3	Туре 6	

 $<sup>^2</sup>$  Depending on version and scope, the feasibility of the necessary electrical output increase must be checked with the existing plant installation (BoP) in advance.

The upgrade is applicable on serial release for the following Type 4C versions with a production year before 2021: J412: C05, C25; J416: C05, C25, C209; J420: C05, C11, C25. The upgrade is available for special release on a case-by-case basis for all other Type 4B/C versions.



Upgrade your engine

Enhancing performance jenbacher.com/upgrades



# Contact us: jenbacher.com/en/contact

For more information, visit INNIO Group's website at innio.com, the Jenbacher website at jenbacher.com, or the Jenbacher Services website at jenbacher.com/en/services

Follow INNIO Group and its brands on  $\mathbb X$  (formerly known as Twitter) and  $\operatorname{in}$ 

© Copyright 2025 INNIO. Information provided is subject to change without notice.

INNIO, Jenbacher, Waukesha, and myplant are trademarks or registered trademarks of the INNIO Group, or one of its subsidiaries, in the European Union, the United States and in other countries. For a list of INNIO Group trademarks, please click **here.** All other trademarks and company names are the property of their respective owners.

<sup>3 &</sup>quot;Ready for H<sub>2</sub>" = Optional scope on demand

<sup>&</sup>lt;sup>4</sup> The upgrade is applicable on serial release for the following Type 4B versions with a production year before 2022: J412: B02, B05, B25; J416: B02, B05, B25; J420: B02, B05, B11, B25, B121.