

# Three configurations: Affolter gear hobbing machine AF160 offers ultimate versatility

*Three different spindle configurations make the 8-axes CNC gear hobbing machine AF160 from the Swiss Affolter Group the most flexible machine on the market.*

MALLERAY, SWITZERLAND, May 10, 2023 /EINPresswire.com/ -- When developing the AF160, maximum versatility was the key goal of the Engineering Department of the Swiss family enterprise [Affolter Group](https://www.affoltergroup.ch) ([www.affoltergroup.ch](https://www.affoltergroup.ch)), a world technology leader in high-precision gear hobbing solutions. Vincent

Affolter, Managing Director of the Affolter Group, explains: "The AF160 is designed for high precision manufacturers that need flexibility and efficiency. With its eight axes, sophisticated automation solutions, and an innovative quick-change system, the machine provides exactly that."

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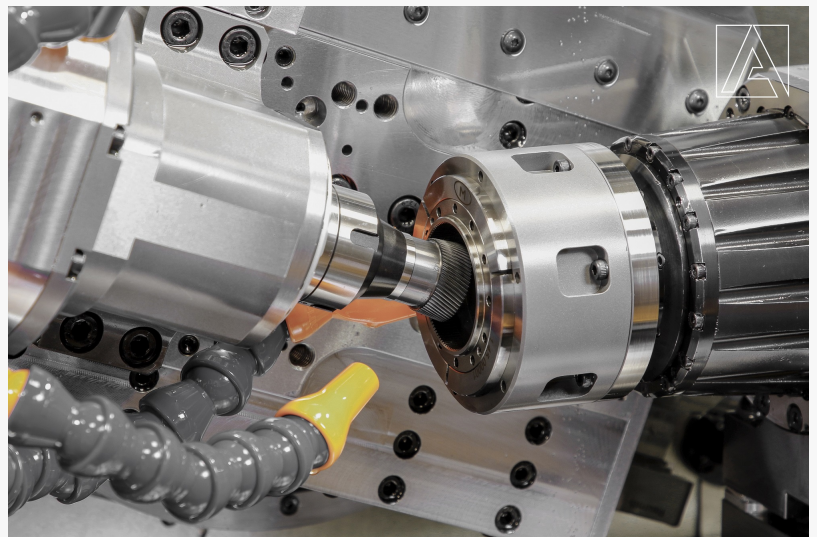
*Vincent Affolter, Managing Director Affolter Group*

## 3 Gear Cutting configurations

With the optional quick-change system, machine operators can switch from one configuration to the next in only 30 minutes. In configuration I, both the C axis and the C' prime axis are equipped with driven spindles. This setup leads to an increased cutting quality, more torque, and more rigidity. This set-up offers the A axis +/- 50° swing.

"This configuration is ideal for the production of spur, helical, bevel, crowned and face gears", reports Mr. Affolter.

With a tailstock on axis C and a spindle on C' prime – configuration II – the operator gets more flexibility. The A axis can move from -50° to +115°, making worm milling possible. This configuration can also be used for all gear types mentioned above. In configuration III, the C axis remains empty, and the C' prime axis is equipped with a driven spindle. Vincent Affolter: "This configuration is designed for the power skiving of internal gears. The production of face gears is



Power skiving of internal gears on the Affolter AF160.

possible, too.”

#### Telescopic Part loader AF72

The part loader AF72 has been specifically designed for the AF160. With its double gripper system for parallel loading and unloading and a telescopic arm, different configurations depending on the volume, product and application can be chosen for an easy and efficient loading of the parts. The AF72 can be equipped with up to five feeding rails, enabling to preload more parts and let the machine work autonomously for more than 24 hours, with a proper configuration. Mr. Affolter: “The telescopic arm ensures that the working area in the machine remains clear. The arm retracts after loading the parts, giving the operator a good view of the processes during machining.”

#### Options for maximum flexibility

The AF160 is configurable for any application. Hobbing options include skiving by sensor detection, integrating the deburring process into the gear production with the addition of the AF54 deburring unit, as well as part orientation and part presence control. Different clamping systems, customizable coolant systems, and chip extraction conveyors provide for added versatility. User friendliness is key: The state-of-the-art digital CNC Control Pegasus ensures extremely fast regulation and integrates IoT. “The intuitive Pegasus controls all machine axes as well as a multitude of peripherals for various options and automations,” underlines Mr. Affolter. Programming is simple, intuitive, and user-friendly with a 19-inch touch screen. Data can be shared on the cloud, streamlining after-sales service support and preventive maintenance, and therefore minimizing downtimes. Software updates can be done remotely.



Eight independent axes make the AF160 the most versatile Affolter gear hobbing center on the market.



The telescopic part loader AF72 with its double gripper system for parallel loading and unloading and a telescopic arm.

## Motion + Power Detroit

The Affolter Group and its US representative Rotec Tools Ltd will be showcasing the innovative Affolter technologies at the Motion + Power trade show in Detroit, from October 17-19, 2023.

### AF160 Technical Characteristics

- 8 axis CNC
- Max. module 2.00 m / 12.7 DP
- Max. cutting length 110-180 mm / 4.33-7.08 in.
- Max. part diameter 60 mm max for module 2. B and C-C' center distance = 65mm\*
- Spindle rotation B 9'000 rpm
- Spindle rotation C-C' 9'000 rpm
- Dimensions LxWxH 1'500x2'010x2'650mm
- Weight 2'700 kg / 5.952 lb

\*With a center distance of 65mm, the AF160 can basically achieve a module 1 on a Ø100mm workpiece with a hob Ø24mm.

About Affolter Group: Tradition meets innovation: The Affolter Group is a family enterprise and world technology leader in high-precision gear hobbing solution with more than 160 employees around the globe. The highly specialized company was founded in 1919 by Louis Affolter in Malleray, Switzerland. The more than 100-year history of the Affolter Group was filled with technological innovations. Today, the fourth generation leads the family enterprise. The Affolter Group operates worldwide with a broad network of distributors. For more information, please visit: [www.affoltergroup.ch](http://www.affoltergroup.ch)

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