

Fronius Velocity Assistant MIG/MAG welding

With the new Velo velocity assistant, Fronius is taking manual MIG/MAG welding to a whole new level. Velo offers assisted torch guidance and constant welding speed, supporting reproducible high-quality seams while reducing physical strain on welders.

Long welds pose challenges even for experienced welders, because while consistent speed and precise torch guidance are crucial for seam quality, they are difficult to maintain and, above all, strenuous over longer distances.

This is precisely where Velo comes into its own, as the Velocity Assistant enables control of welding travel speed during manual GMAW welding. As a result, it supports a wide range of applications, especially where long, even welds are required, for applications in commercial transportation, heavy-duty machinery or steel construction, for example.

Velo is suitable for thin-sheet applications as well as for thick-sheet welding in steel, CrNi, or high-strength steel.

At the heart of Velo is a second wire, the Velo wire, without an arc and without additional gas. This wire touches the workpiece in its solid state and generates a forward movement through friction. The travel speed of the Velo wire determines the welding speed.



The Velo wire 'pushes' the torch along the weld to maintain a constant welding speed and a constant contact-tip-to-workpiece distance.

The Velo wire also keeps the distance between the workpiece and the contact tip constant as it 'pushes' the torch along the seam, without requiring any special seam preparation. The Velo wire adds minimal additional material to the seam: the wire consumption exactly matches the seam length.

"If you allow yourself to relinquish some control, you can now produce perfect welds in manual welding at unprecedented speed by simply holding the torch," explains Franziska Eichhorn, Strategic Product Manager at Fronius International. "Test users confirm noticeably less strain and a significant increase in precision and welding quality."

Velo is a real game-changer: while beginners quickly achieve high-quality welds thanks to the supportive guidance, professionals benefit from the relief provided for long or complex welding tasks. Cramping and fatigue are a thing of the past, and the seam quality remains consistently high. Under certain conditions, Velo can achieve welding speeds comparable to robotic welding, significantly increasing productivity.

Velo is compatible with existing TPS/i welding equipment from 320 A and iWave Multiprocess PRO systems, and is easily retrofitted. All that is needed is:

- A wire feeder for the Velo wire.
- A suitable torch adaptor and a Velo wire feeding system.
- Corresponding software.

Integration into existing systems is quick and uncomplicated, without the need for complex conversions.

Ergonomic and flexible

The Velo holder can be rotated 360° without tools and locks securely into place. If accessibility is restricted, the Velo system components can be simply unclipped from the holder and set to one side. Thanks to its flexibility, the system is suitable for all positions, including pipe welds with 360° seams and multi-layer applications.

The five-meter-long Velo wire-feeding system ensures a large operating range. The system is activated directly on the welding torch, meaning it can be deactivated at any time to switch flexibly between manual and assisted guidance.



TPS/i devices from 320 A and iWave Multiprocess PRO systems can be retrofitted to include the wirefeeder for the Velo wire, the appropriate torch adaptor and Velo wire feeding system, and the corresponding software.