



CMT Additive Pro

Fronius Additive

Individual components

Layer by layer

Wire and arc-based manufacturing by building up layers allows for individual geometries of moderate to high complexity to be produced. This makes the manufacture or modification of components more flexible, economical, and resource-efficient.

Additive manufacturing of metal components is associated with a set of rather specific challenges, including:

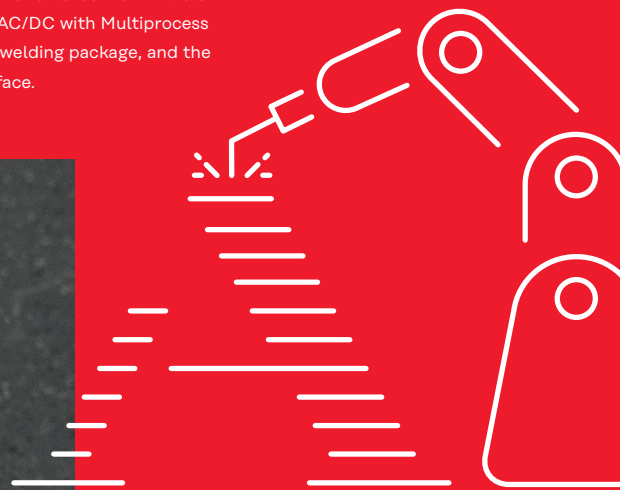
- Achieving the target geometry
- Adequate material properties
- Heat dissipation and distortion
- Process stability and feedback

All consolidated in a single welding characteristic

The new additive features help to overcome the challenges posed by additive manufacturing:

- Deposition rate stabilizer
- Power correction
- CTWD measurement
- Pulsed HotStart

The new additive features are available on the iWave AC/DC with Multiprocess Pro, the CMT welding package, and the new AM interface.



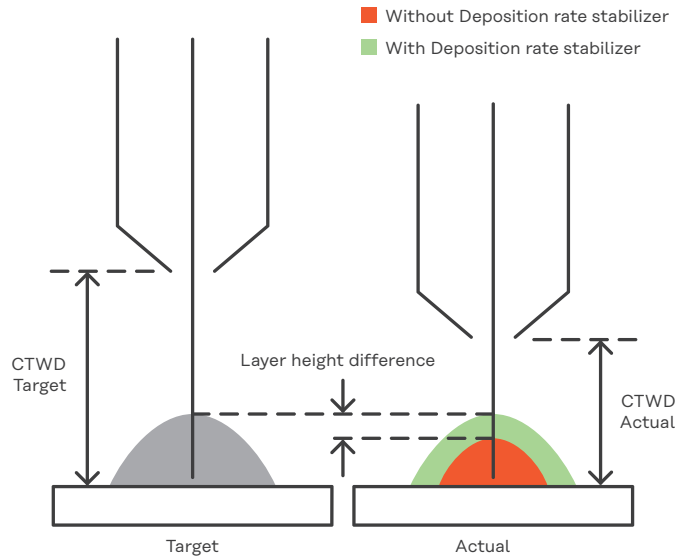
Deposition rate stabilizer

More constant deposition rate

Thanks to the Deposition rate stabilizer, the wire feed speed remains almost constant throughout the process, allowing you to achieve the desired deposition rate despite varying external influences.

Advantages

- Simplified welding path planning
- Optimized transferability of welding parameters
- Increased reproducibility



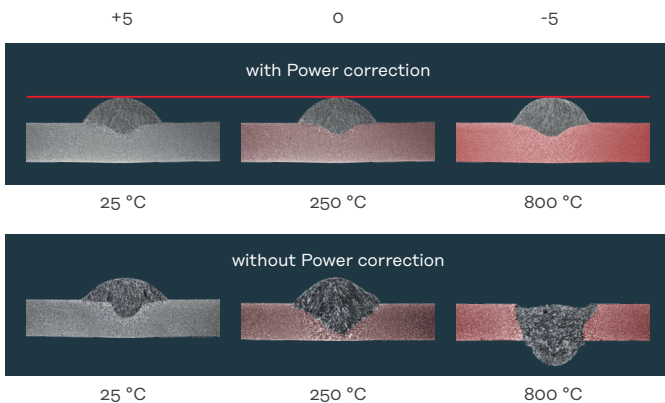
Power correction

Controllable heat input

With this new feature, it is possible to change the wire feed speed and power independently of each other—and all consolidated in a single welding characteristic.

Advantages

- Less reinforcement due to improved layer height consistency at connecting points
- Improved control of the weld seam flow at the same deposition rate
- Energy input can be reduced at higher interpass temperatures



CTWD measurement

Additional signal for manipulator control and position correction

Initial detection of the CTWD during setup expands the spectrum of available signals. This facilitates a comparison between manipulator position and the deposited structure without the need for external sensors.

Pulsed HotStart

Welding start in pulsed arc

Advantages

- Sufficient penetration and adhesion without adjusting the operating point
- Layer height is almost constant in the welding start area
- Fewer fusion defects