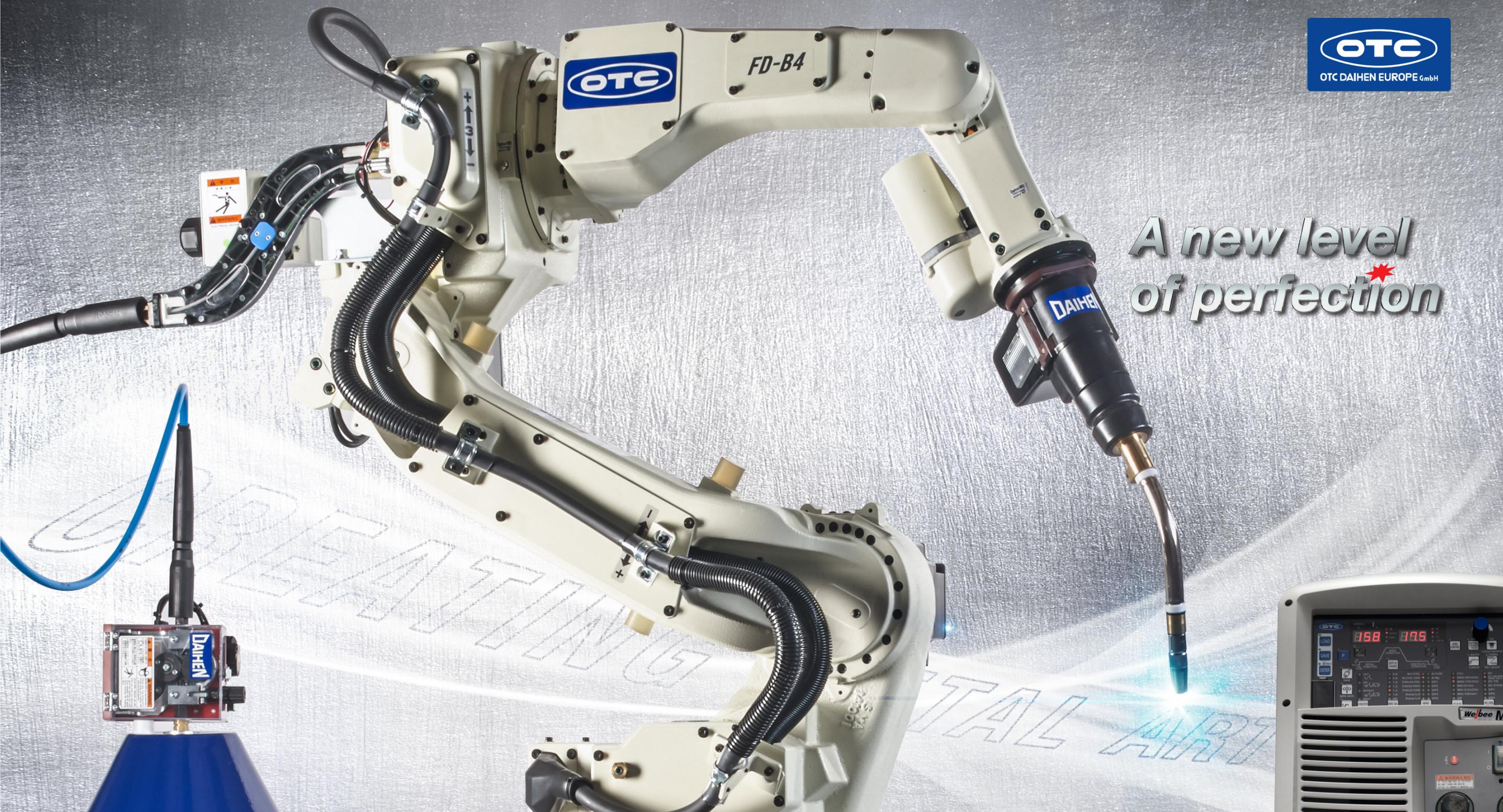




*A new level
of perfection*



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Synchrofeed

WELDING ROBOT PACKAGE

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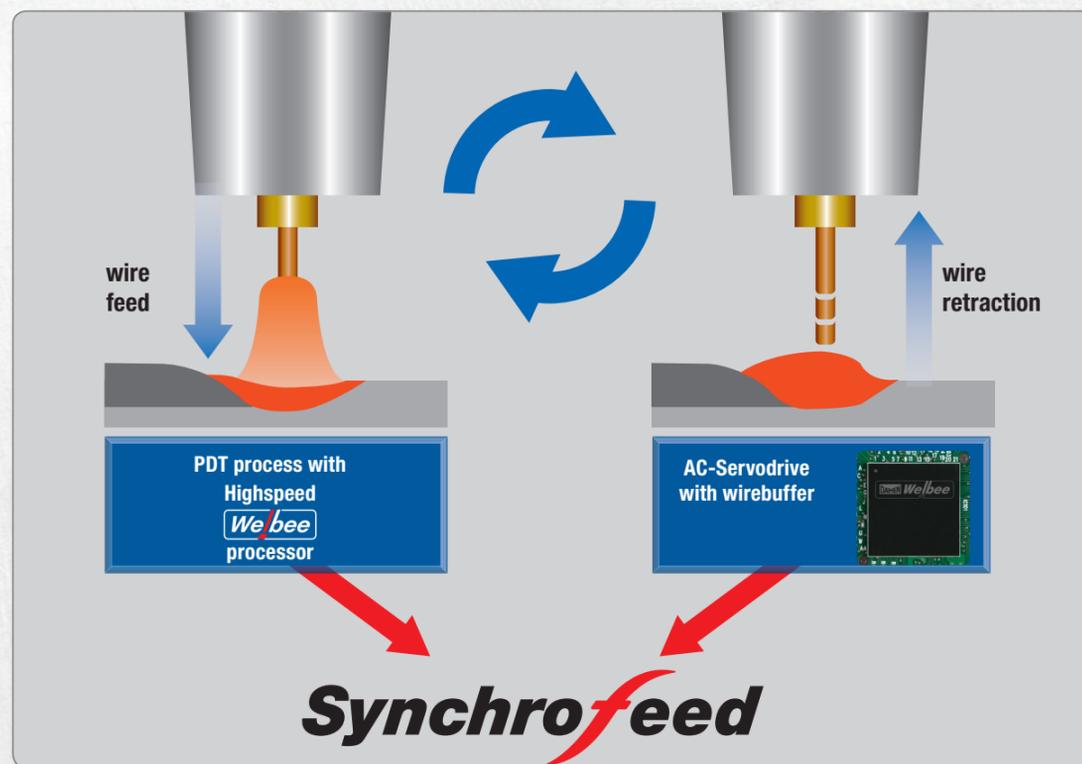


The well-known OTC AC-Servo-robot torch already enables a very precise wire feeding. The further development of this system to the SynchroFeed technique expands the working area of the spatterless welding from thin sheets up to thick materials and increases the cost effectiveness of the production with:

HIGHER WELDING SPEED

INCREASED DEPOSITION EFFICIENCY

AND SIMULTANEOUSLY DRAMATICALLY REDUCED HEAT INPUT



High-speed control of the arc via the OTC *We/bee* processor

A controlled droplet transfer in the short circuit phase can be realised by using the OTC Peak-Dip-Transfer (PDT) process. The PDT process is a precisely controlled short arc which is only possible to reach by using the quick Welbee processor.

High-precisely synchronisation of welding current and wire feeding system

The servo-driven wire feeding system is harmonised with cyclic regulated wire motion via the intelligent wire buffer and is fully integrated in the PDT process.



The complete welding system for automated processes

The OTC system combines the development of welding robots and new welding processes to a perfect synchronized total solution. The developed components are harmonised to each other and lead to optimal easy usability which makes the tuning of welding processes very easy.

Wire buffer L-11610

The sine form Buffer unit with encoder is used for the control of the wire amount and synchronizes the AC-Servo driver units

Push feeder unit ASF-2301

The AC Servo assist feeder in compact design is combined to one unit with the Pull torch and is suitable for the use on wire reels or wire drums

Welding power source Welbee P500L

Digital inverter welding power source with integrated Welbee processor. The unique "Welbee" processor, designed by OTC, is based on trendsetting nano technology. Welbee realizes high quality welding due to precise control of current-/and voltage characteristic via ultra fast control circuits

Roboter FD-B4:

Six axes hollow arm robot with integrated cabling for the minimisation of interference contour

High power neck change welding torch AFPSB-2501

Torch with integrated shock sensor, AC Servo-power unit system as pull-unit: fully integrated in the sixth axis of the robot, compact design to reduce the disturb contours and highest operation comfort

Robot Controller FD-11

Compact modular Robot controller that can control up to 54 axes. The robot controller joints all components of the SynchroFeed system to one harmonized unit.

Wireless Teach Pendant (WiTP)

The Wireless Teach Pendant WiTP realizes the programming of robot movements and welding parameters on up to 5 Systems. It provides the maximum liberty of action combined with the maximum ease of use.



Minimised Spatter generation

In a comparison with different welding arcs SynchroFeed proves the system that generates least spatters.



Short arc



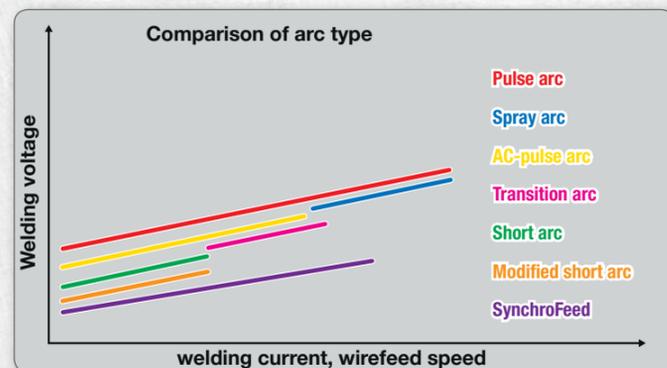
Controlled modified short arc



SynchroFeed

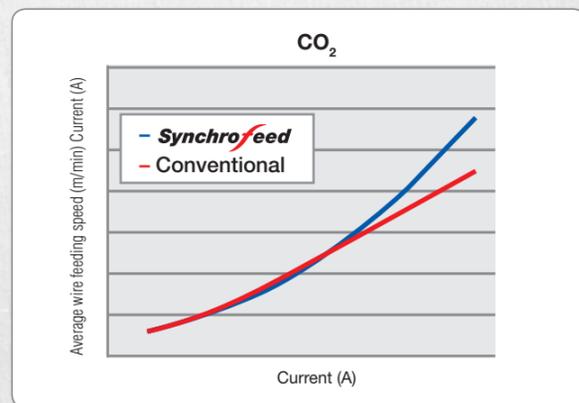
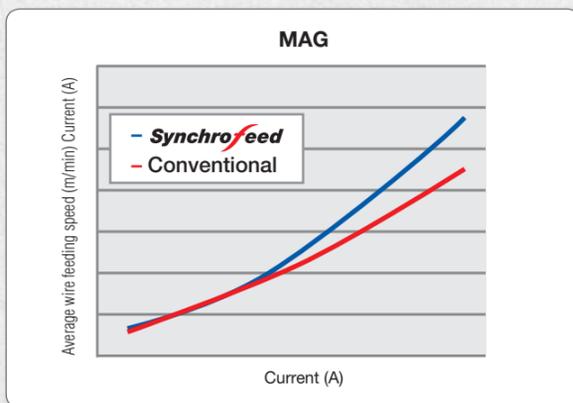
Extended application range

The SynchroFeed system extends the range of applications. The range widens from short arc up to spray arc. The critical transition arc range is bypassed by a combination of the new OTC PDT Process and the SynchroFeed system.



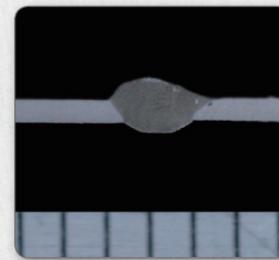
Higher welding speed

Due to the high dynamic control process of the SynchroFeed system a larger wire amount can be provided. As a result the deposition rate in the transition arc range and so the welding speed is increased.



Reduced heat input

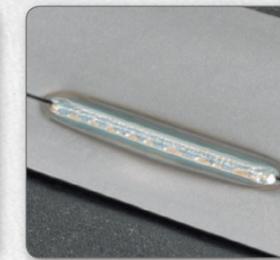
Due to the decreased heat input the SynchroFeed system is ideal for bridging of gaps on very thin material.



Butt joint 0,6 mm

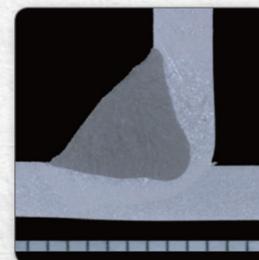


Lap joint 0,6 mm



Defined and specific energy input

On demand the control process provides a defined high energy input and so an optimal penetration. Sheets of middle thickness can so be welded with higher speed and less spatters.



Fillet joint 3 mm



Lap joint 3 mm



Extended Parameter tolerance

The SynchroFeed Process reacts to changes in gap size and Torch orientation far more tolerant than other short arc processes. So welding errors based on work piece tolerances can be reduced dramatically.

