

COBOT WELDING



Struggling to Find Skilled Welders?

The shortage of experienced welders is a challenge across the industry, slowing production and increasing costs. If you're feeling the impact, you're not alone.

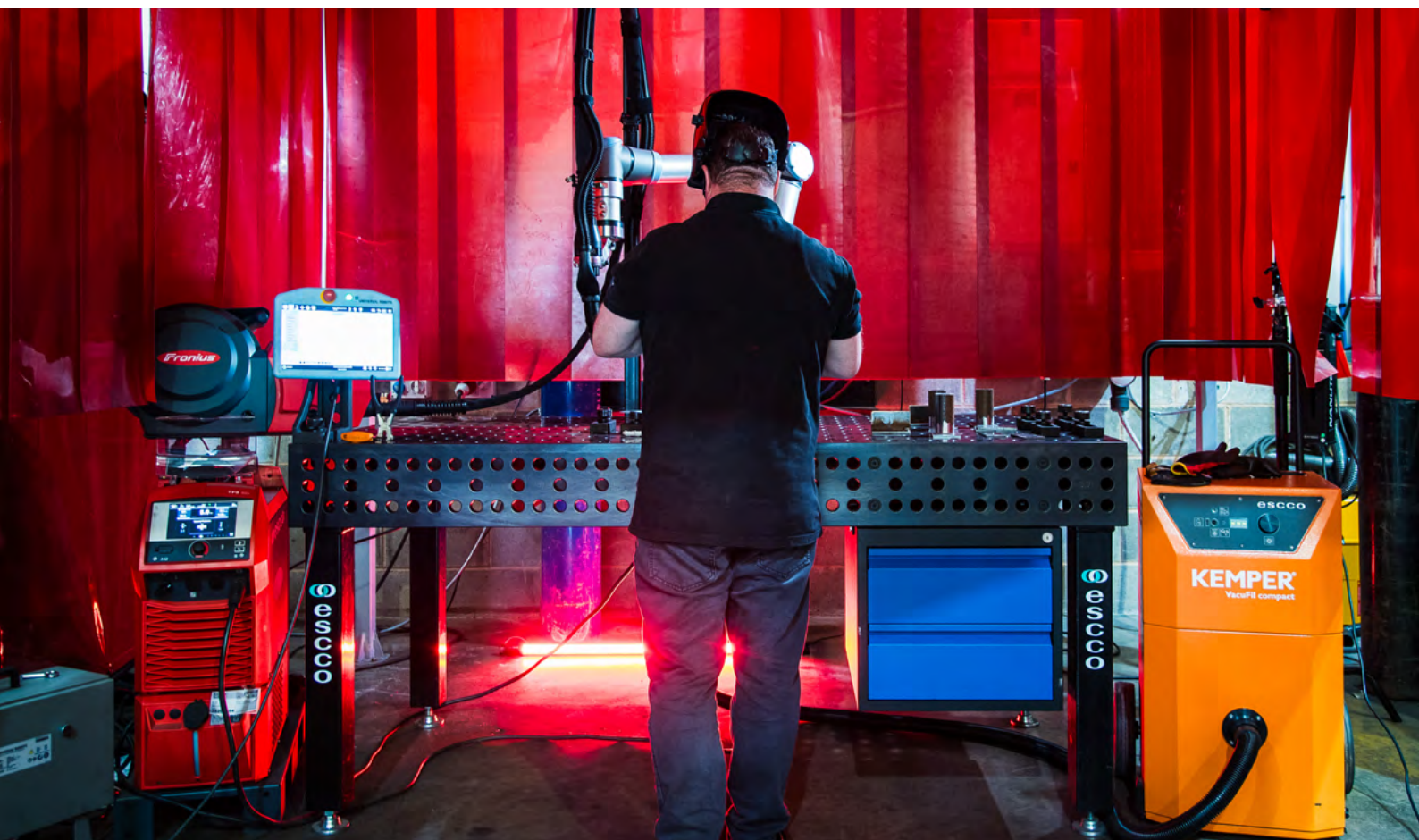
That's where collaborative welding robots (cobots) come in. With easy setup, consistent weld quality, and the flexibility to handle a wide range of jobs, cobot welding solutions help bridge the skills gap, allowing your team to boost productivity without needing additional highly skilled welders.

Are you ready to see how cobot welding can support your workforce and keep your projects moving forward?

Industry Leading Brands



In partnership with industry-leading brands, our Cobot Welding System includes a Universal Robots cobot arm, Smooth Robotics welding software, Fronius or Miller automated MiG welder, & a Siegmund Welding table to bring it all together.



Customer Case Study

Real Results from Our Cobot Welding System.

We visited our customer Dan, at Mettech Precision to get his honest feedback on how our Cobot Welding System has helped improve production in his business.

Saving Time and Increasing Production

A cobot welding system is essential for repeatable jobs because it delivers consistent, precise results every single time. Unlike manual welding, where variations can occur between operators or even between individual welds, the cobot follows the exact same programmed path and parameters without deviation.

"It's just repeatable. It just does the same thing every time. We've gone from manually welding it to doing it **four times faster** with a cobot so it's exponentially helped our production."

Package Specification

Universal Robots 10e Robot Arm, Fronius Welding MIG Welder, Siegmund Welding Tables, Shaver Industries Welding Curtains.



Robot Arms

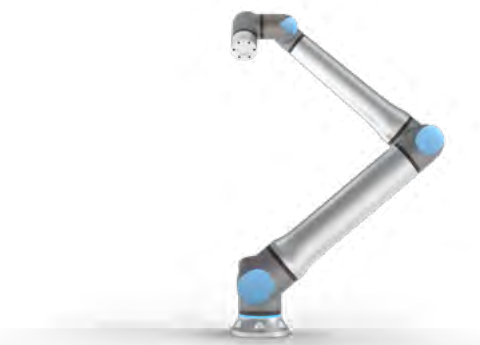


ESCCO partners with Universal Robots as a dedicated OEM. All cobot arms have a working range of $\pm 360^\circ$ across all 6 axes and are accurate to at least ± 0.1 mm (per ISO 9283).

All UR cobots come with a minimum of 17 built-in safety features, including force-sensing and collision detection. Generally, these features allow people and cobots to work together without the need for additional safety barriers. Increasing productivity and providing a safe working environment. Typically, our cobot welding packages feature at least one of the following arms:

UR20

The fastest, heavy payload cobot. With a reach of 1,750 mm and a base payload of 20 kg. UR20 bridges the gap between traditional industrial robotics and collaborative automation. UR20 delivers up to 30% more speed and torque compared to earlier UR models.



UR12e

Medium-sized and versatile. The UR12e is a medium-duty collaborative robot that combines a 1300 mm reach and 12.5 kg payload. The UR12e is an upgrade to the most popular cobot model ever, the UR10e.

UR8 Long

Long reach. Lean footprint. No compromise. The UR8 Long offers a 1750 mm reach in a compact, lightweight design. Its compact wrist and 8 kg capacity provide the best balance of reach, speed, and accessibility. **Recommended by ESCCO for welding.**



Smooth Robotics



SmoothTool is the ultimate welding automation solution. Designed for anyone to use, you no longer need to be a programmer to achieve high-quality welds.

Developed exclusively for Universal Robots, it simplifies complex welding processes, allowing you to focus on what matters. Finished parts. SmoothTool is plug-and-play for a variety of power sources, including our preferred partners, Fronius & Miller. Whilst we recommend these two manufacturers, any power source can be used with SmoothTool via the RetroFit Kit.

The benefit of using pre-integrated options is that they provide a higher level of input and output options. For example, changing the power source parameters at any point in the program.

Key Features



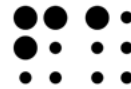
3D Visualisation

Visualize and touch up your program in 3D



Weaving

Add weaving patterns to linear and circular paths



Multipass

Easily create a weld with multiple passes



Angle System

Insert the desired work and travel angles



Stitching

Control stitching with custom parameters



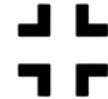
Touch Sense

Locate your piece and adjust the path



Offset

Copy and offset in all directions and rotation



Tacking

Make precise consistent tacks for superior quality



Seam Tracking

Auto-adjust the path with through the arc seam tracking



External Axis

Add linear or rotary axis with external axis support



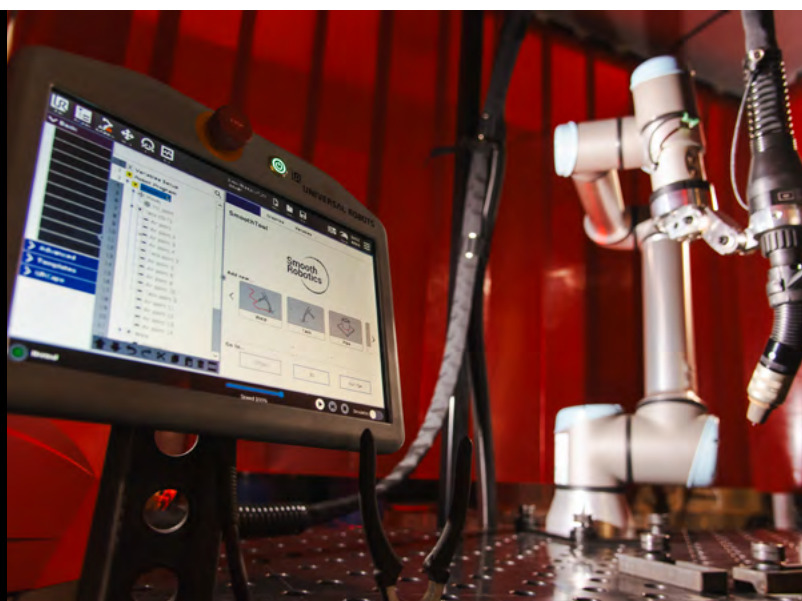
Profile System

Create, save and reuse welding parameters



Surfacing

Apply hardfacing and cladding for durability



Siegmund Welding Tables

siegmund

The World's Strongest Welding Tables.

Siegmund manufactures the toughest, most versatile, and precise welding tables on the market. Their high accuracy and tight tolerances are perfect for automation. The cobot can only be as accurate as the welding table and jig it's using.

The most popular tables are the System 16 (16 mm borehole), which are used for more intricate light-duty fabrication & the System 28 (28 mm borehole), the strongest table with the tightest tolerances for heavy-duty welding.



Siegmund Welding Cell

Kyrus Automation

 **KYRUS**

We partner with Kyrus Automation, who design and supply modular linear track systems specifically suited to Universal Robots applications. Systems are built for reliable integration, allowing the robot and track to operate together while maintaining accuracy, repeatability, and a compact overall footprint.



Welding Power Sources



Fronius integrates seamlessly with the Smooth Robotics Welding Software. Their “Welding Packages” allow for maximum flexibility and the ability to upgrade and adapt as your requirements change.

The standard or pulse processes are available as basic packages. The advanced Welding Packages: LSC (Low Spatter Control), PMC (Pulse Multi Control), or CMT (Cold Metal Transfer) are available for particularly demanding welding tasks.



Fronius TPS 400i

Miller are one of the world’s largest manufacturers of welding and cutting equipment.

Serving world-class welding equipment & consumables to those in fabrication, construction, aviation, motorsports, education, agriculture, marine & more.



Miller Migmatic / Miller Auto Deltaweld

Fume Extraction

KEMPER

Extraction of welding fumes is different for every application. Our longstanding relationship with KEMPER means we are best placed to offer an ideal solution. From mobile LEV to on-torch extraction or even dedicated welding cells.



KEMPER VarioHood



On-torch Extraction



KEMPER SmartFil

Demonstration, Installation, Commissioning & Training

ESCCO offers our automated Cobot Welding Package as a complete turnkey solution.

From an initial demonstration, available at ESCCO or your workplace.
To onsite installation, commissioning, and training of operators, to ensure you get the most out of your Cobot.

All Cobot Welding Packages are highly configurable and can incorporate a range of welders, fixture tables, extraction options, and additional axes.

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