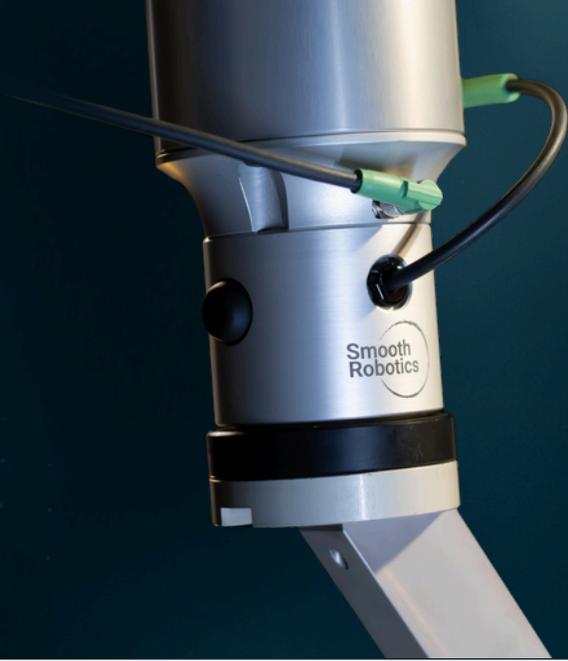# SmoothTool

## Technical Product Sheet

## Made for Welders, Built for Efficiency

SmoothTool is a comprehensive welding automation package developed for Universal Robots. It combines an intuitive URCap software interface with a dedicated programming flange, enabling users to program, teach and execute complex welding operations with ease.

Designed for both productivity and usability, SmoothTool streamlines the programming process, reduces setup time and improves overall weld quality, making it ideal for different environments and repetitive production lines.

It includes ongoing access to software updates, ensuring that users benefit from continuous feature improvements and enhanced performance. A dedicated end-user platform provides detailed documentation, guides and best practices to support daily operations.

Professional technical support is also available, offering reliable assistance throughout installation, operation and system expansion. Additionally, the software supports over 15 languages, including English, Spanish, German, French and Italian, ensuring accessibility for operators worldwide.

| No-code intuitive programming interface | Powerful features even for complex welding paths | Smooth and easy experience with full support | Compatible with all welding power source brands |

# SmoothTool

## Features and Benefits

SmoothTool offers a wide array of features designed to simplify and accelerate welding automation. Operators can easily set up complex welds using intuitive tools within the software. Combined with a flexible program structure and an efficient teaching process, these allow for precise and repeatable welds with minimal training. The result is faster deployment, reduced programming overhead and improved consistency in weld quality.

### 3D Visualization
Visualize and touch up your program in 3D

### Weaving
Add weaving patterns to linear/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

### Surfacing
Apply hardfacing and cladding for durability

### Seam Tracking
Auto-adjust the path with arc seam tracking

### External Axis
Add linear or rotary axis with external axis support

### Profile System
Create, save and reuse welding parameters

## Integration with Power Sources

SmoothTool supports a growing list of pre-integrated power sources and its flexible configuration also allows easy adaptation to new or custom welding setups.
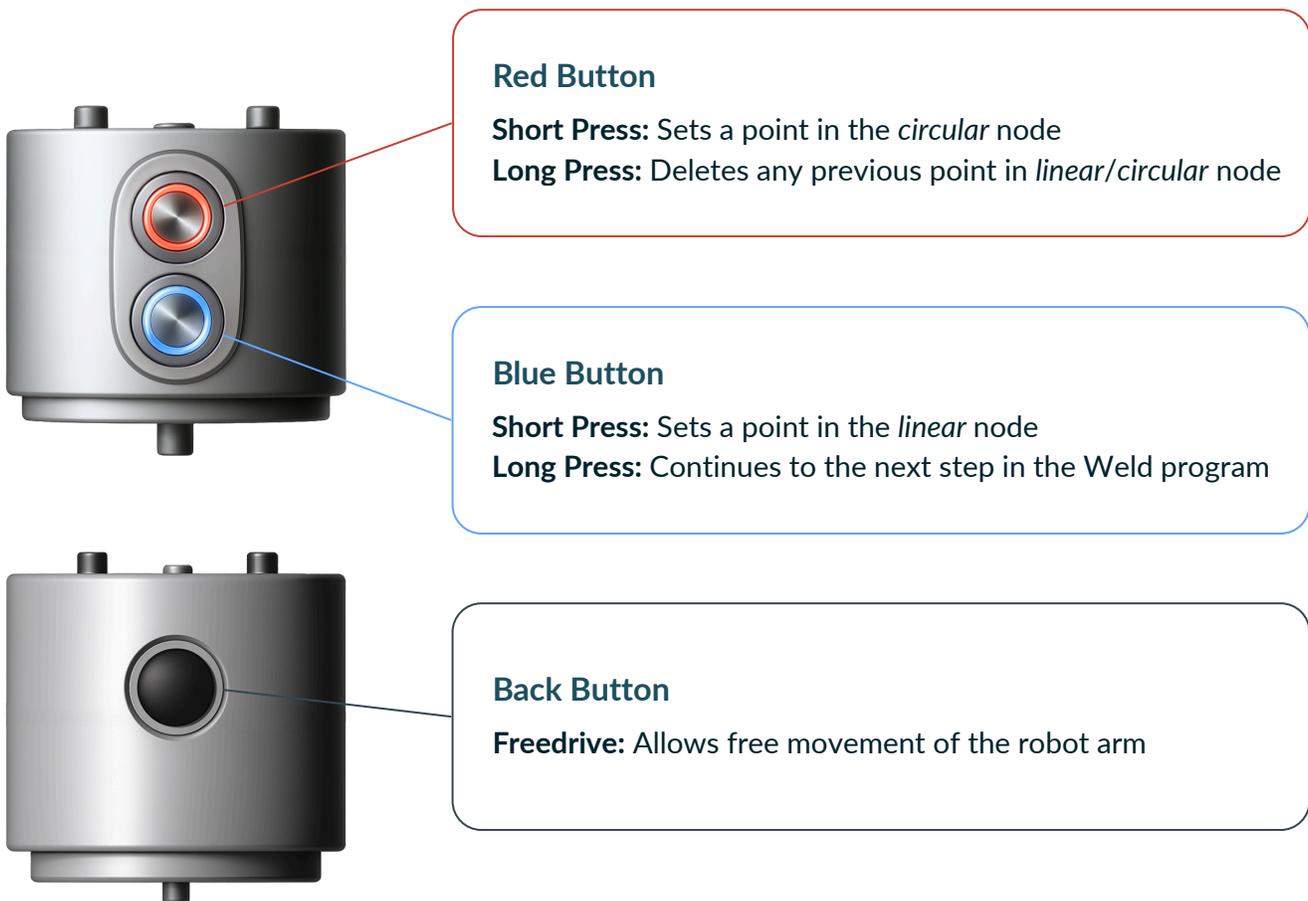
SCAN OR CLICK
TO LEARN MORE

# SmoothTool

## How the Programming Flange Works

The SmoothTool programming flange is a key component that simplifies robot path teaching for welding operations. Mounted on the robot arm, the flange enables Freedrive mode, allowing operators to manually guide the robot by hand to define the desired weld path. This hands-on approach eliminates the need for complex coordinate entry or offline programming.

Once the robot is in position, weld points and path segments can be saved directly through the SmoothTool interface. This greatly accelerates the programming process, particularly for complex welds, and ensures accurate, repeatable motion based on real-world alignment.

### Red Button

**Short Press:** Sets a point in the *circular* node
**Long Press:** Deletes any previous point in *linear/circular* node

### Blue Button

**Short Press:** Sets a point in the *linear* node
**Long Press:** Continues to the next step in the Weld program

### Back Button

**Freedrive:** Allows free movement of the robot arm

# SmoothTool

## Flange Technical Data

✓ UR10

| Material | Weight | Cable Type | Buttons |
|---|---|---|---|
| Anodized aluminium | 520 g | PUR 8 x 0,14 | 1x freedrive, 2x programming |

| Diameter | Total Height | Cable Length | Connection |
|---|---|---|---|
| 74 mm | 66,50 mm | 140 mm | SAC-8P M8 female |



| | | |
|---|---|---|
| **Smooth Robotics** | Revision description: - | Created by / date: FAN / 22-10-2024 |
| | | Approved by / date: FAN / 23-10-2024 |
| | Surface treatment: | Dimensions in mm / Format: A4 |
| | Tolerance: DS/ISO 2768-1 | Projection method: / Scale: 1:2 |
| This drawing remains property of Smooth Robotics Aps, and may not be copied or given to any other party, without our written consent. | Material: / Weight: 0.46 kg | Sheet: 1/1 |
| | Description: SmoothTool, UR10 | Item No.: 101133 / Revision: 00.00 |

## Compatibility with UR Robots

SmoothTool is fully compatible with all Universal Robots (UR) collaborative robot models and includes dedicated hardware for the UR20 to ensure optimal integration. This broad compatibility makes SmoothTool suitable for a wide range of robotic welding applications, regardless of robot size or reach.