TRUMPF

TruArc Weld 1000

Get started with automated welding

Easy automation of manual welding

Do you manually weld standard sheet metal components using electric arc? Then you'll be familiar with the following scenario: It's hard to find welding experts and programming is not usually worthwhile for small quantities and short seams. The specialist knowledge required for setting up a welding robot is also often lacking. All this can be remedied by the TruArc Weld 1000. It is profitable even for small lot sizes, is easy to program, and can afterwards be operated by non-expert workers. This frees up your welding specialists' time for more complex tasks.

Every detail considered

The welding cell is delivered as a fully equipped machine tool, TÜV-approved and CE-compliant. Alternatively, you can integrate the cabinless version into an existing welding workstation.

Fully intuitive

No training is required to start, program or operate the welding cell – e-learnings are sufficient.

Fully flexible

Use as a one- or two-station operation according to requirements. You can then work on one larger component or smaller components in large series parallel to production.

- **Radically easy programming**
- **Automated welding – profitable from the first part**
- **Productive in two-station operation**

The welding-cell practice test

Use easy automation instead of manual welding workstations – it pays off because the TruArc Weld 1000 is suitable for many components you currently weld manually, especially those that can be welded using simple fixtures. Programming is so quick that it is profitable even for small quantities.

“The TruArc Weld 1000 provides optimum quality with a noticeable reduction in processing time.”

Erik Westphal, Production Manager,
Pfannenberg GmbH, Germany

www.trumpf.com/en_INT/solutions/success-stories/the-success-story-of-our-customer-pfannenberg

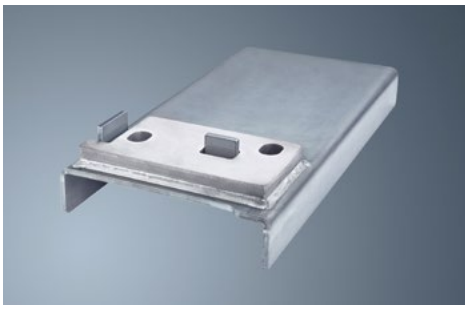
“It is so easy to operate the system, you don’t even need any CNC expertise to weld complex parts. I could start as soon as I had downloaded the virtual training onto my cell phone.”

David Falkner, welding technician,
SANO Transportgeräte GmbH, Austria

www.trumpf.com/en_INT/solutions/success-stories/the-success-story-of-our-customer-sano-transportgeraete

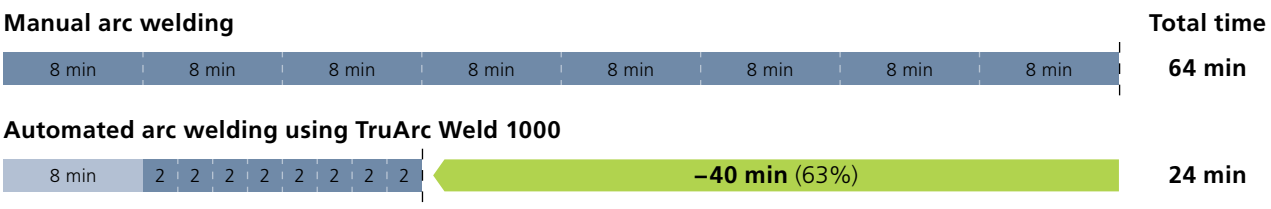
Profitable already from lot size 1

Time savings in welding and reworking can be achieved with the TruArc Weld 1000 for single parts as well as for small series. Simple weld seams can be programmed and welded in less than a minute.



Support bracket, single part with 5 weld seams.

Shipping brace, 8 items with 10 weld seams.



Programming Welding Reworking Time saving

TruArc Weld 1000

Quick programming, high-productivity welding: The flexible solution for an easy introduction to automated arc welding.

01

Easy

operation and programming

02

Secure and networked

according to TRUMPF standards

03

Fast

setup and start

04

Productive

welding

05

Flexible

working and positioning

01

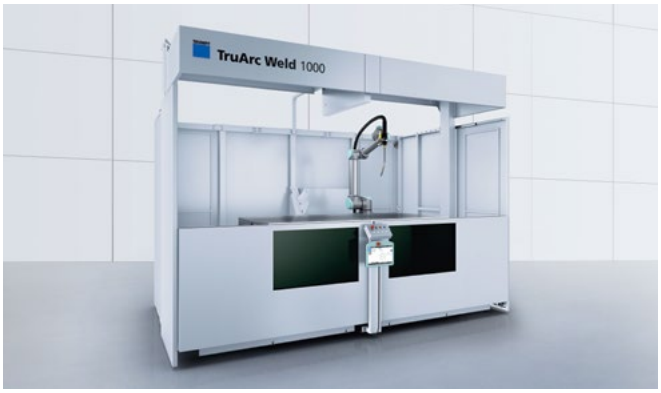
Easy
operation and programming

The welding cell's wild card is its extremely easy programming. The welding start and end points are input via buttons on the welding torch. The robotic arm is then manually moved from point to point. Pendulum movements can also be easily adjusted. Welding parameters and templates for welding programs are included. The intelligent online seam tracking feature Smart Seam Tracking makes programming even faster.

02

Secure and networked
according to TRUMPF standards

With Extension Cube Weld, you can integrate the machine into your networked manufacturing environment. The collaborative robot has collision protection and a reduced traverse speed in the cab-free version. As an option, select the complete package including a safety cabin. We provide you with a CE- and TÜV-approved welding cell with safety control, automatically opening anti-glare protection, self-cleaning suction system and LED lighting. Doors provide easy access to the working area from all sides. The roof can be retracted so that you can load large and heavy components with a crane.



03

Fast
setup and start

Plug in and start welding. Your machine comes with everything you need – from wire coils to welding parameters. You can set it up wherever it's needed and put it into operation by yourself within hours. No training is required – e-learnings are sufficient to program and operate the machine. If your hall plan changes, simply reposition the machine.

04

Productive
welding

In two-station operation, you can set up parallel to production and carry out highly productive processing for small to large batches. In this process, it does not matter whether you weld the same component on both sides or different ones. Speed is ensured by high-performance equipment from Fronius. For thin materials, the CMT welding technology package ensures higher process reliability, less weld spatter and distortion.

05

Flexible
working and positioning

Depending on the component and lot size, you can use the welding cell as a one- or two-station unit. Components can be placed flexibly and precisely on the 3D welding table. The optional rotary axis allows components to be aligned with precision.

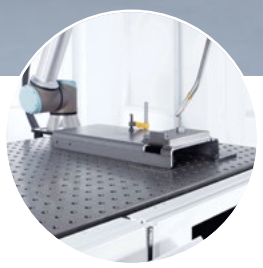
More information on the TruArc Weld 1000 is available here: www.trumpf.info/2stm8z

Attention to every detail

The basic machine

Programming, operation and networking

Programming times are minimized by an intuitive operating unit on the welding torch combined with simple programming directly in the robot control. The machine's main operating unit has a simple and clear layout. The Extension Cube Weld is an easy-to-install hardware extension that enables integration into networked production.



Robot and linear axis

Collaborative 6 axis robot with force-torque sensor. The robot is positioned to the left or right along a linear axis.

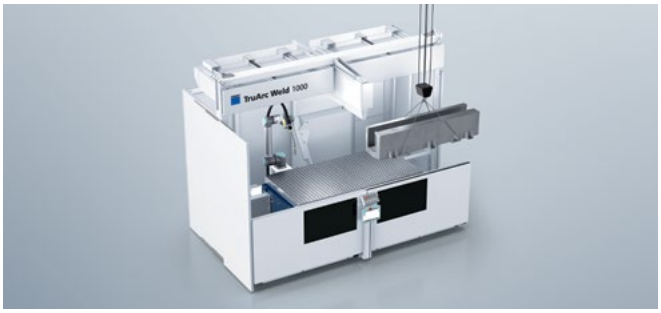
Work table

3D welding table with hole pattern D16 in a 50 × 50 mm grid and hardened surface. Dimensions: 2000 × 1000 × 100 mm.

Welding equipment

High-performance welding equipment from Fronius: TPS 320i C PULSE welding source, including welding package PMC, water-cooled 350 A torch, and external wire feed system.

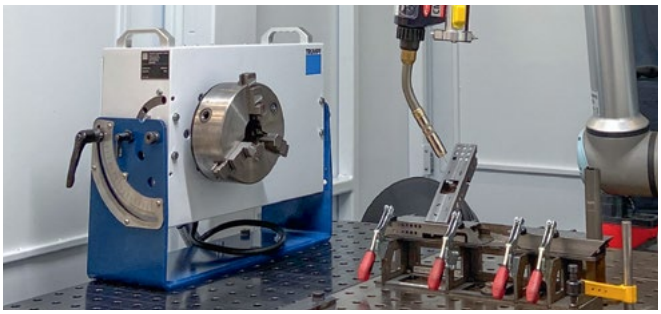
Safety cabin option



Fully equipped machine tool

The safety cabin option includes:

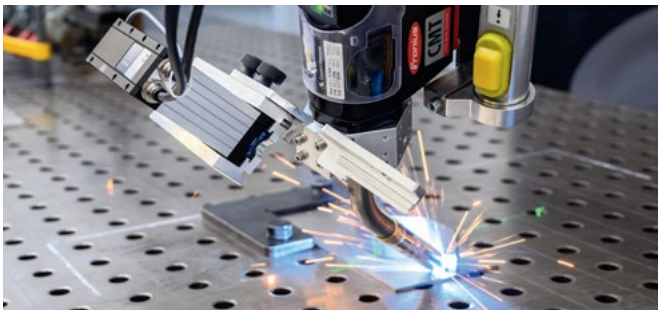
- Sheet metal housing with integrated suction system
- Automatically activated anti-glare protection and lighting
- Center partition to divide the work area as needed for a two-station operation
- Retractable roof for loading by crane



Programmable rotary axis

The TruArc Weld 1000 with safety cabin allows you to integrate an additional programmable rotary axis on one or both sides. The scope of delivery includes a work table extension (1000 × 500 mm), a 3-jaw collet chuck, and a roller block for tube welding.

Technology options



CMT (Cold Metal Transfer)

The CMT welding technology package ensures greater process reliability and energy-efficient welding of thin sheets with fewer weld spatters and minimal distortion. The option includes a CMT robot welding torch, a push-pull wire feed system, and welding parameters for commonly used materials and sheet thicknesses.

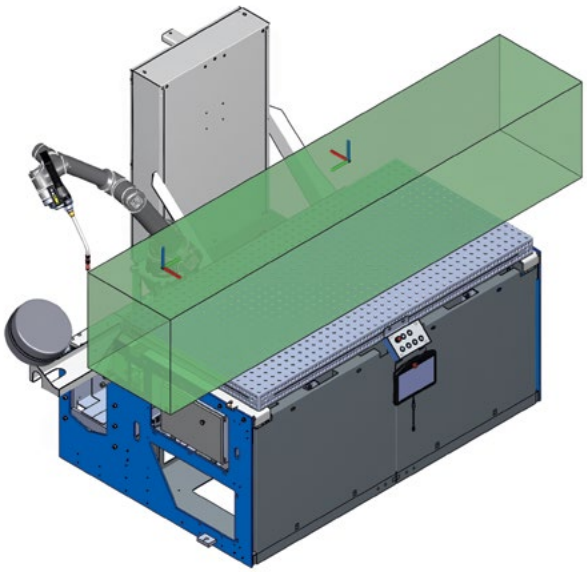
Smart Seam Tracking

Smart Seam Tracking revolutionizes teaching on the TruArc Weld 1000. This intelligent online seam tracking system allows you to simply move the welding torch to the starting position. The cobot then takes over, controlling the welding distance and torch orientation. The welding torch remains perfectly aligned along the entire seam, and the welding path is adjusted in real time during welding.

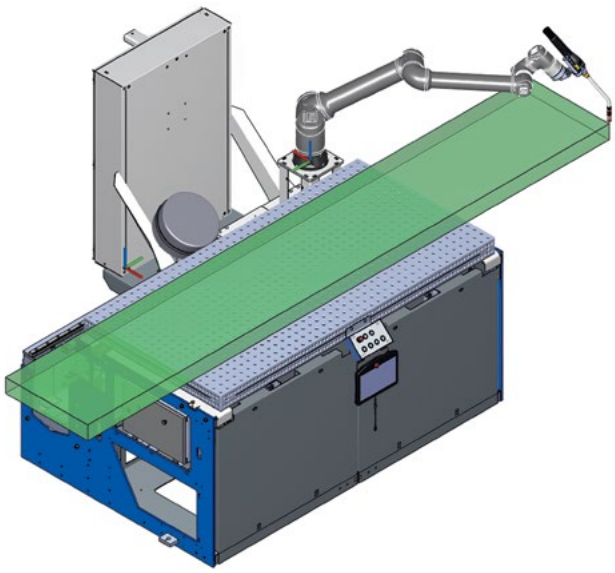
Technical data

Axis data		
Model		Collaborative industrial robotic arm
Number of axes		6
Range	mm	1300
Repeatability	mm	±0.05
Welding source		
Model		Fronius TPS 320i C PULSE
MIG/MAG welding current range	A	3–320
Dimensions and weights		
Basic version (without cabin, cobot in transport position)	mm	2540 × 2250 × 1600
Weight of basic version	kg	1317
Cabin dimensions	mm	3605 × 2454 ×2818
Weight including cabin	kg	2940
Work area[1]		
Basic version	mm	Open space, therefore no physical outer perimeter
Cabin with open center partition	mm	3200 × 1000 × 1150
Cabin with closed center partition	mm	1600 × 1000 × 1150

[1] The actual allowable part size depends on the cobot's ability to reach the areas to be welded. Typical maximum component sizes in the basic version without safety cabin can be, for example, 3000 × 600 × 600 mm or 3800 × 600 × 100 mm. If the part is welded in several steps, an even longer component is also feasible.



Component size 3000 × 600 × 600 mm



Component size 3800 × 600 × 100 mm

The next step: Laser welding

Do you weld a lot and for long periods of time? Do your parts need to look good? Then laser welding is for you. The following rule of thumb applies to getting started: The longer the welding time or reworking, the more worthwhile laser welding is.

TruLaser Weld 5000

Automated laser welding:
Productive and flexible

Deliver top quality

- Visually high-quality and extremely stable seams
- Low distortion
- Reproducible results

Save on time and costs

- Hardly any rework required
- Less consumables
- Enormous time advantage

More information on laser welding is available under:
www.trumpf.com/s/trulaserweld5000

You will find exclusive tips on laser welding and numerous practical examples in the **WeldGuide:**

weldguide.trumpf.com

TRUMPF is certified to ISO 9001
(Find out more: www.trumpf.com/s/quality)

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