



# Cladding

## Systems

to unleash your  
welding potential



# Innovative technology

At a time when materials are being exposed to ever more demanding loads, protecting surfaces is becoming increasingly important. Cladding is an innovative welding technology that provides a solution to the challenges associated with the wear, erosion, and corrosion of components.

Cladding, also known as overlay welding, is a technologically challenging process whereby components are protected through the application of additional special alloys, which also extends their service life. We offer modern systems and customized welding processes that help you to achieve the necessary level of quality.



for  
protecting  
surfaces

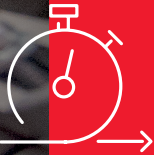


## The advantages for you

An ergonomic design makes the systems easier to operate and maintain.



Setup times are reduced due to automatic determination of the component position or the quick and easy torch change function.



The new high-performance SpeedClad 2.0® welding process delivers outstanding welding speeds.



Extremely precise and synchronized movement axes enable a variety of bore geometries to be cladded.



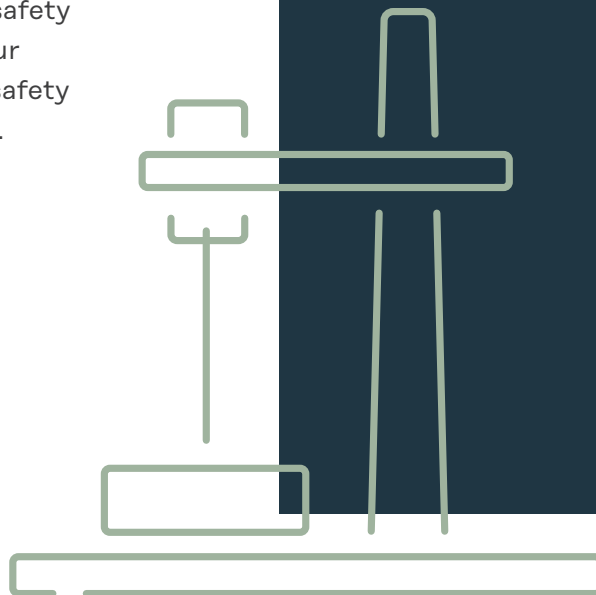
The HMI-T21 system controls—the brains of our cladding systems—offer smart operation and numerous intelligent functions.

The right

# cladding system

for every application

Our cladding systems set new standards of functionality and productivity by ensuring the best cladding performance with significantly reduced setup times, synchronized movement axes, and compatibility with SpeedClad 2.0®. Size, component geometry, and application determine which system is right for you. In addition to a high-quality result, safety is our top priority, which is why all our cladding systems meet the highest safety standards for hazard-free operation.





## Compact Cladding Cell (CCC)

**Ergonomic design:** The welding torch quick-change system and a wirepool holder at working height make the Compact Cladding Cell especially user-friendly.

**Compact and mobile:** Every component is pre-assembled on a platform, facilitating fast commissioning and mobile use of the system.

**Configurable:** Options such as a safety curtain, mast extension, switch cabinet air conditioning, and useful software options mean that the system can be optimally adapted to the respective requirements.



## Conventional Cladding System (CCS)

**Maximum precision:** New control and drive technology for an even more precise cladding process.

**Optimum welding position:** Motorized tiltable welding torch axis (up to 90°) in combination with mandatory turntables or tilt and turn tables integrated into the system controls to maintain the optimal welding position.

**High degree of standardization:** Predefined welding machine configurations cover a wide range of customer requirements.

# Endless Torch Rotation Systems

## ETR-S

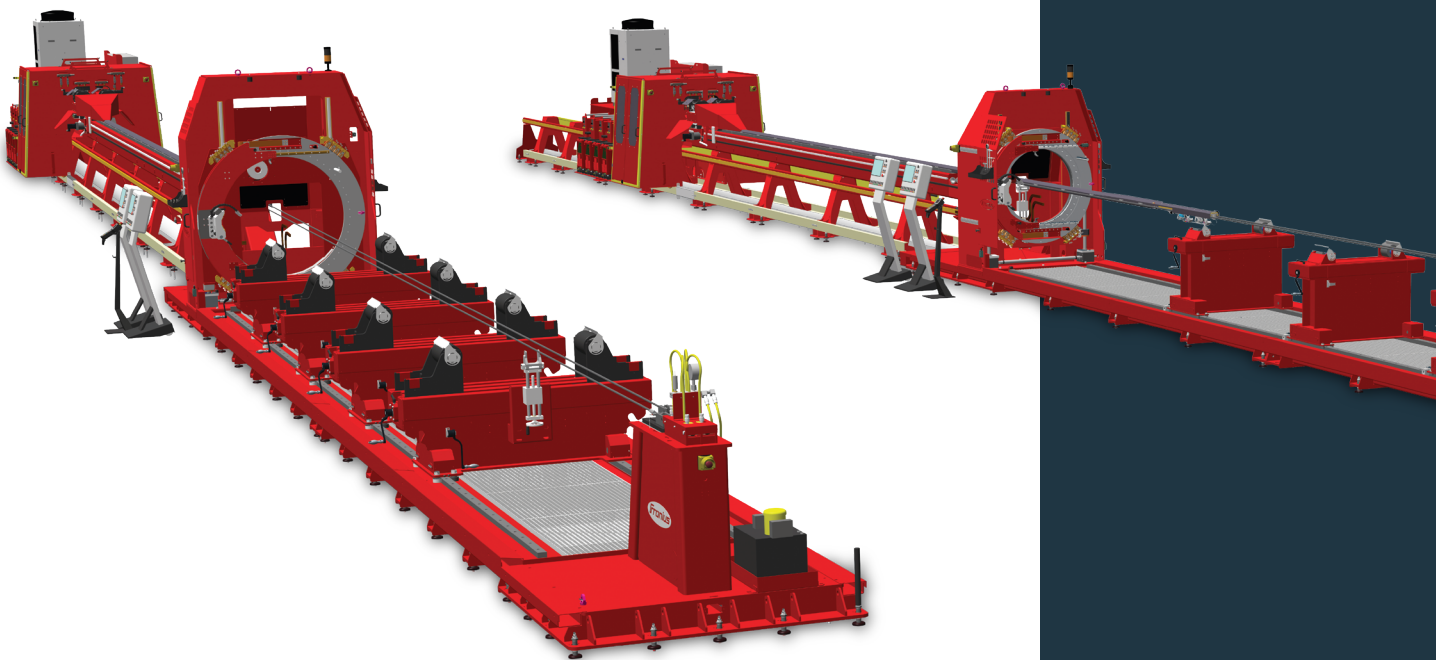
Synchronized movement axes in combination with the endlessly rotating welding torch allow complex component geometries to be welded in a single pass.

The optional use of turntables or positioners further expands the range of possible applications.

Automatic determination of the component position significantly reduces setup times.

Two different vertical axes with travel paths of 3 m and 5 m are available as standard.

The 340° rotatable stand allows for several working positions, e.g., for preheating one component while welding on another.



Flawless welding quality, less distortion, and greater efficiency: ETR-S and ETR-Ultimate are revolutionizing the cladding of components. The even heat distribution means that different materials and geometries are no longer a challenge.

## ETR-Ultimate

**Large working area/multi-station operation:**  
The motorized horizontal and vertical axes in conjunction with track motion mean that it is possible to either weld large components or to switch between two or more stations automatically.

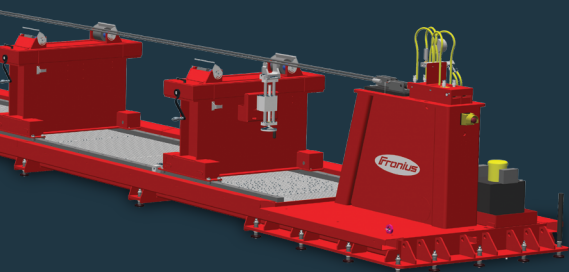
**Complex component geometries:** Thanks to integrated CNC technology, virtually all components can be welded.

In addition to the CAD import function available as standard, G-Code can also be used as a programming language.

The sophisticated mechanism results in a reduced overall height compared to the conventional ETR-S, which allows it to be used in confined spaces while still covering a large working area.



## Inside Pipe Cladding System



Maximum welding speed and a high deposition rate thanks to the use of two welding torches, each with two wires

Maximum efficiency through significantly reduced gas consumption

Minimal wear and tear on torch wear parts

Chain tensioning system on linear slide to compensate for pipe tolerances

Two versions available for pipes up to 36 inches or 50 inches in diameter and up to 12 m in length

Hydraulic cable tensioning system for the torch guidance and roller blocks, which can be individually positioned on rails

Taking cladding to a new level

# SpeedClad 2.0<sup>®</sup>

Significantly less wear and maintenance work: SpeedClad 2.0<sup>®</sup> offers you a completely new dimension when it comes to cladding. Unlike the high-speed SpeedClad Twin process, which welds with two electrodes and two filler wires, the new cladding process requires just one electrode and one filler wire for the same and higher welding speeds. In addition, the much slimmer welding torch allows for even smaller interior diameters to be surfaced.



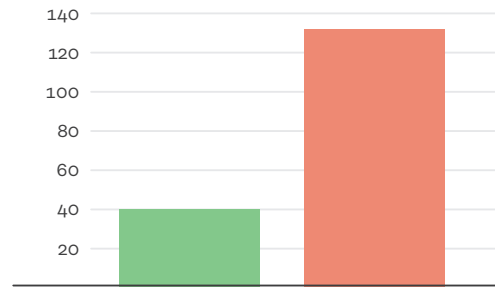
Awarded by the American  
Welding Society



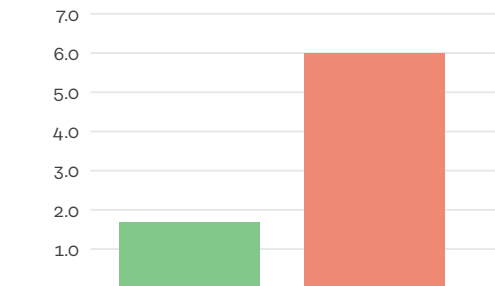
## The advantages for you

- Extremely high welding speeds reduce your production times.
- Reduced consumption of wear parts and shielding gas make your cladding systems more cost effective.
- Less time spent on service and maintenance extends arc time and reduces your costs.
- Pivoting torch head with locking device ensures the optimal electrode angle to the component.
- The wire feeding is quick and easy to calibrate for extra convenience, also saving time.

Higher welding speed\*  
up to 135 cm/min

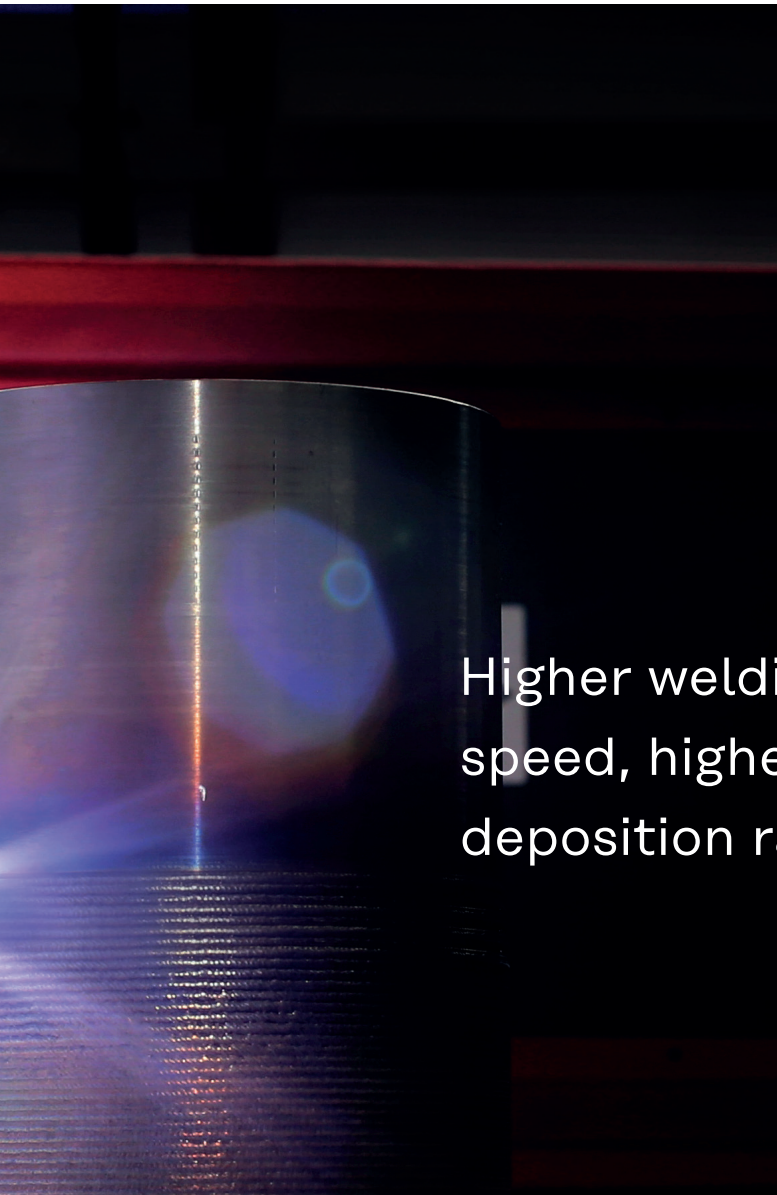


Higher deposition rate\*  
up to 6 kg/h



TIG hot wire (wire = 1 x 1.2 mm)  
SpeedClad 2.0® (wire = 1 x 1.6 mm)

\*Depending on the application



Higher welding  
speed, higher  
deposition rate



## System controls

Precise and efficient control of your processes: The HMI-T21 system controls are setting new standards in the field of cladding systems. One of the many highlights is the state-of-the-art 21-inch touch display with an intuitive user interface for maximum ease of use.

A wide range of intelligent functions also provide the opportunity to further optimize your cladding applications. From the precise setting of welding parameters to monitoring and analyzing process data, this control solution offers a comprehensive package to increase efficiency while ensuring the highest quality standards.



# Functions



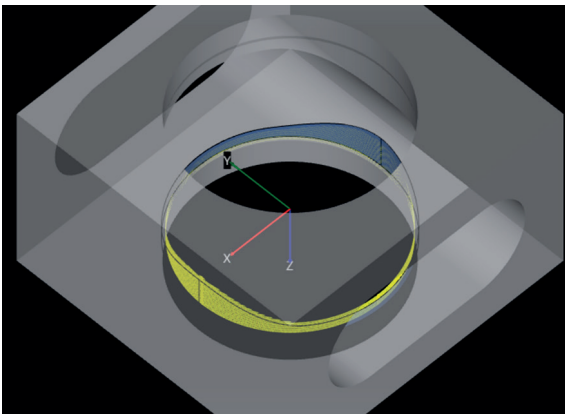
## Multi-user accounts

Creation and management of multiple user profiles with individual permissions



## Real-time actual value monitoring

All relevant welding parameters are displayed clearly and in real time



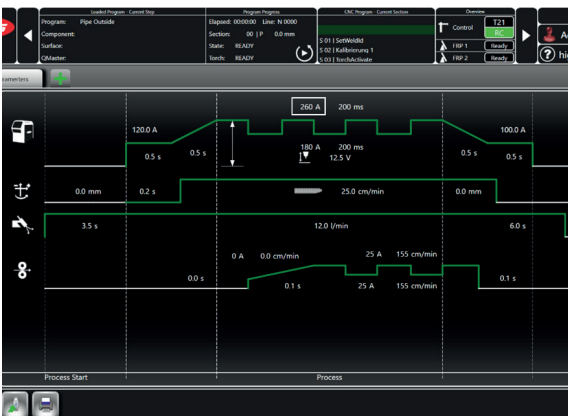
## "X-Ray" view

Transparent representation of the component with an optimal view of the programmed weld



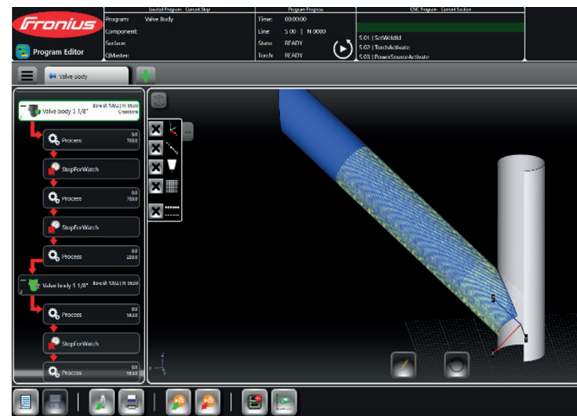
## 3D Component Editor

User-friendly component editor with real-time 3D visualization



## Weld Editor

Graphical representation and programming of welding parameters



## Program Editor

Creation of sequence programs supported by graphics



# ArcView


## Wireless

Wireless camera system for  
real-time monitoring of the welding process

The ArcView Wireless camera system has been designed specifically for use in cladding applications. Wireless video transmission technology makes the system ideal for endlessly rotating welding torch systems such as ETR-S and ETR-Ultimate.

### Highlights

- Extremely compact and robust design
- High-resolution image sensor (1080p)
- WLAN receiver & control for all camera functions and parameters
- HDMI or SDI connection for external display
- Network video streaming
- Monitoring and display of the current camera temperature



Unleash your  
welding potential

To ignite the welding potential of our customers: that is our mission. As the innovation leader for arc welding and global market leader for robot-assisted welding, we create both advanced and profitable welding solutions, which are inspired by our sustainable mindset. We enjoy long-standing relationships with our customers. We understand their challenges and perspectives and maintain a close relationship with them through our regional service teams throughout the world. We listen, understand, and therefore shape the mindset of the welding industry. Our strengths lie in combining our customers' knowledge with our expertise, which allows them to unleash their full welding potential.

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