
Fronius
Prototyping
& Manufacturing
Center

360° service

From the feasibility study to series production

Our experts support you from the initial consultation through to the development and production of your component.

Complete solution from a single source— our comprehensive service package offers solutions tailored to your individual requirements. We support you with the entire process from start to finish.

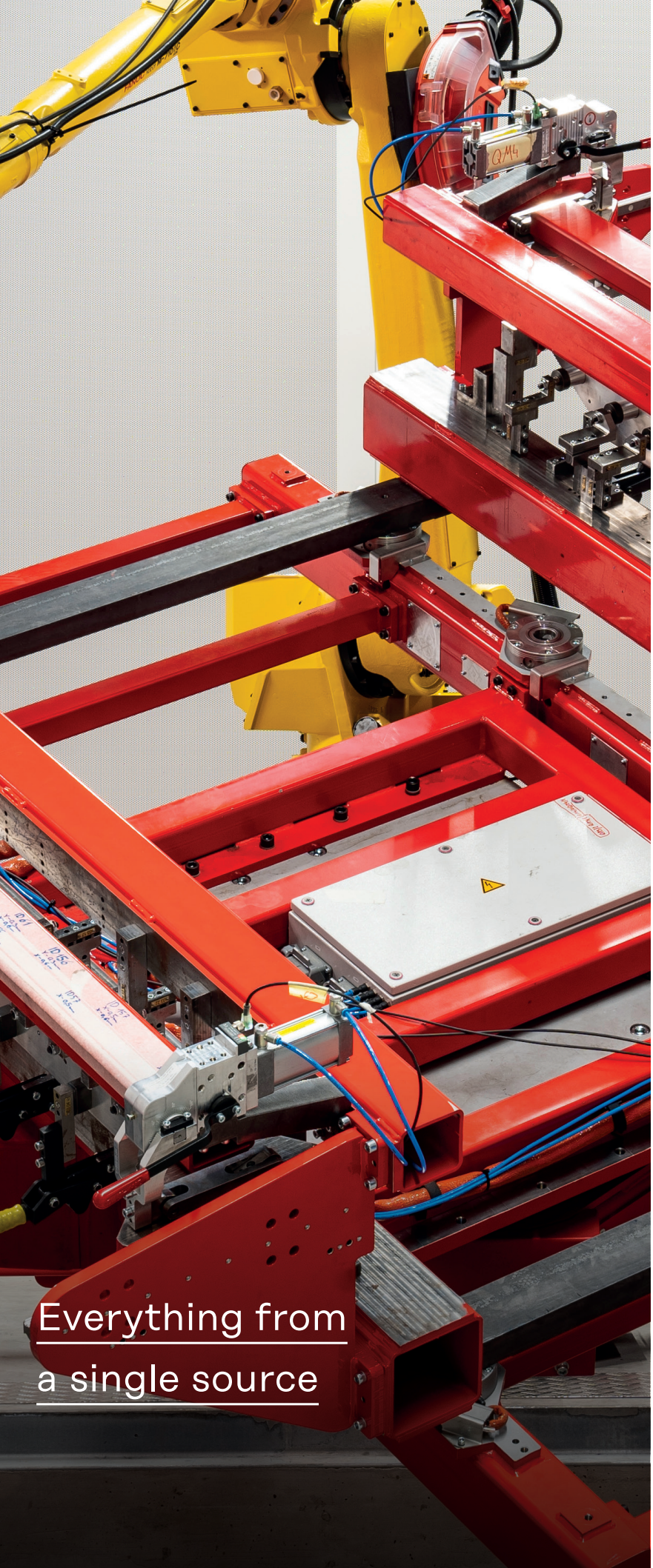
Production at your company—based on our wealth of knowledge and experience, we support you with preparation, turnkey system production, and implementation. And our service package always includes on-site consulting to ensure the manufacturing process runs smoothly at your company.

Your idea. Our way. Your success.
Our aim is to unleash the full potential of your projects—with unbeatable quality and maximum efficiency in production.
We're with you on the road to success and help you to

- Minimize risks
- Shorten time to market
- Discover opportunities
- Calculate investment costs (CAPEX)
- Boost your operating profit (OPEX)



Proto-typing & contract manufacturing



Prototyping & Manufacturing Center

Space for innovation and technology

Our Prototyping & Manufacturing Center is the place where state-of-the-art technology meets in-depth specialist knowledge and a wealth of expertise—to bring your projects to life.

Your orders are in safe hands with us—only certified and qualified personnel have access to this completely sealed-off production area, so we can guarantee the highest degree of discretion.

Highly sophisticated simulation, welding, and measuring technologies enable the manufacturing of components measuring up to 11 ft. and weighing as much as 2.5 tons.

Our solutions are used across all industries:

- Construction and agricultural machinery (yellow goods)
- Automobile industry
- Machine and plant construction
- Commercial and special-purpose vehicles
- Aerospace industry

We process a full range of materials—from thin-walled to solid structures, regardless of shape and dimensions.

Certified quality

**Tried and tested—
the highest standards
for your components**

Working in compliance with all relevant standards and certifications, our range of services covers all process stages—from initial concept testing, material procurement, and prototyping through to series production.

STEELCERT. EN 15085-2 CL 1 ZERTIFIZIERT

STEELCERT. EN ISO 3834 Teil 2 ZERTIFIZIERT

Together we are shaping the world of tomorrow.
Our Prototyping and Manufacturing Center is a hub of creativity, technology, and passion—a place where courage and innovation open up new possibilities.



Custom service package

We offer you end-to-end services to bring your projects to fruition, with a custom solution for every requirement.

Evaluation
We check the concept and design for feasibility, cost effectiveness, and efficiency

Material procurement and preparation
Procurement of premium-grade materials including finishing

Virtual simulation
Accessibility, feasibility, and cycle times are tested using digital twins—virtual replicas of actual components that allow for precise simulations and optimizations

Virtual and physical feasibility study and warpage simulation
Analyses and distortion simulations, plus practical testing with real components

Metallography
We measure material properties using state-of-the-art testing methods such as macrosections and microsections, hardness tests, and computer tomography

3D measurement and warpage calculation
Analysis of tolerances, accuracy, and welding distortion

Fixture construction
Precision-fit clamping concepts and tailor-made fixtures are developed for ultimate precision and stability

Prototyping
Manufacture of initial samples to validate design and functionality

3D measurement prototyping
We analyze component accuracy, deviations, and distortion after the manufacturing stage

Mechanical processing
Precision milling, turning, and drilling of components of any size and shape

Production—pre-series
Manufacture of small and pilot series for validation and optimization prior to series production

Rework
Grinding, polishing, deburring, cleaning, and preserving steps ensure a flawless component finish

Testing & evaluation
Testing and validation according to relevant standards and quality levels

Quality assurance
Documentation, traceability, and marking for maximum transparency

Packaging & logistics
Perfectly matched packaging solutions guarantee the best possible protection during transport by truck, plane, or ship

Reporting
Detailed documentation of processes, results, and parameters, all compiled in a final report

On-site consulting
We ensure production gets off to a smooth start by optimizing your production line on-site

Contract manufacturing
Efficient, precise series production of different batch sizes

Pathfinder—virtual simulation

Welding process optimization based on:

- Digital twins for precise planning
- Simulation of cycle times and process flows
- Error prevention before the actual welding process

Sensor technology—precision weld tracking

Assistance systems help to improve welding quality, reduce programming work, and shorten production times.

Inspection of welds

We ensure flawless components by:

- Testing to pinpoint errors
- Taking rapid, cost-effective action to correct errors

Measuring cell—3D robot measuring system

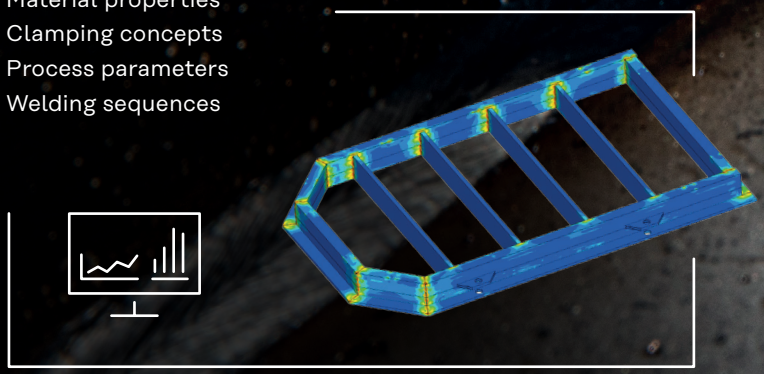
Ensures the quality and dimensional accuracy of components:

- Incoming inspection of individual components through to the entire assembly to check tolerances and dimensional accuracy
- Evaluation of welding sequences, process parameters, and clamping concepts for subassemblies and complete assemblies

Virtual warpage simulation

Analysis of warpage behavior with different welding strategies:

- Material properties
- Clamping concepts
- Process parameters
- Welding sequences



WeldCube—documentation software

Monitors and records relevant welding data for:

- Seamless tracking of every weld
- Perfect reproducibility of all welds

ArcView—camera system for real-time monitoring

Live view of the weld ensures:

- Early detection of potential errors
- Enhanced efficiency in the welding process

Quality assurance—metallurgy

We carry out quality control for welds and components in our in-house metallurgy laboratory—as per individual customer requirements:

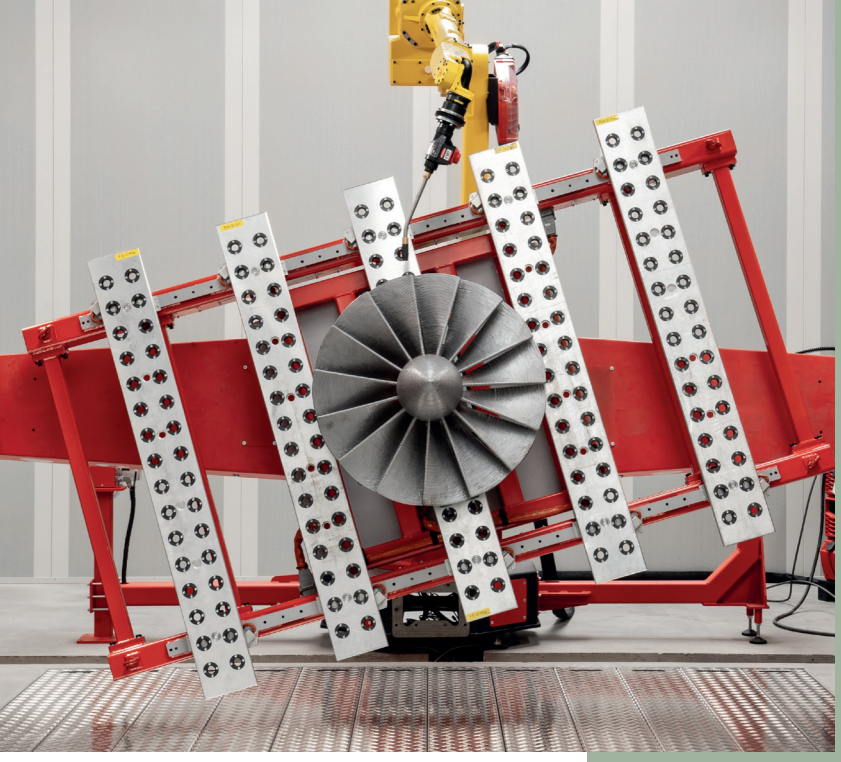
- Macrosections and microsections
- Tensile tests
- Hardness testing
- Computer tomography
- ...and much more



Welding without compromise

for every weld and every material

Certified for contract manufacturing, we draw on the latest welding technologies and ensure the success of your projects by combining the advantages they have to offer.



From the initial idea to series production—

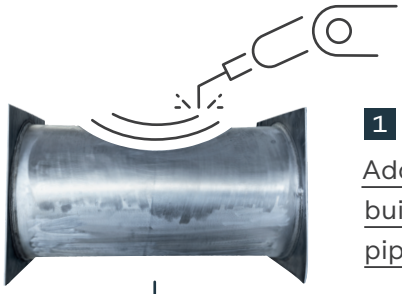
we support you with our technical, business, and digital know-how.

We make the transformation process a smooth one for our customers and put the right measures in place for efficient, future-proof production.

Model qualification of additively manufactured components

We're equipped for all customer and welding requirements and always find the right solution. And this component is a perfect example of this. We looked at the entire process chain, from the design through to the CE label.

The draft European standard prEN 13445-14 was used as the basis for the model qualification. The report provides an up-close insight into the entire process and illustrates the potential offered by metal-based additive manufacturing via arcs—and the performance it delivers.



1 Additive build-up on pipe section



2 Finished component

For further information visit www.fronius.com

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Fronius Canada Ltd.
2875 Argentia Road, Units 3, 4, 5 & 6
Mississauga, ON L5N 8G6
Canada
T +1 905 288-21 00
F +1 905 288-21 01
sales.canada@fronius.com
www.fronius.ca

Fronius USA LLC
6797 Fronius Drive
Portage, IN 46368
USA
T +1 877 FRONIUS
sales.usa@fronius.com
www.fronius-usa.com

Fronius UK Limited
Maidstone Road, Kingston
Milton Keynes, MK10 0BD
United Kingdom
T +44 1908 512 300
F +44 1908 512 329
info-uk@fronius.com
www.fronius.co.uk

Fronius International GmbH
Froniusplatz 1
4600 Wels
Austria
T +43 7242 241-0
F +43 7242 241-95 39 40
sales@fronius.com
www.fronius.com

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