

PTZ Weidner Separation technology

“The new world of ring separation technology”



**With resource efficiency
secure competitive advantages**

PTZ Weidner

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Rings from PTZ Weidner in use worldwide



...immer einen Schnitt präziser.

Presentation of PTZ Weidner

PTZ Weidner cuts rings and tubes with a cutting machine developed in-house.

The constant further development of this cutting technology enables a wider range of ring dimensions and materials for our customers.

We have over 35 years of experience in the cutting technology of copper, steel, stainless steel, titanium or nickel-based materials.

Seamless rolled, forged or centrifugally cast rings are machined by us.

Application area for the rings

These rings are used in almost every conceivable branch of industry:

- Mechanical engineering
- Mining
- Armaments
- Aerospace
- Wind energy plant construction
- Chemical and plant engineering
- Offshore technology
- Commercial vehicle construction
- Shipbuilding
- Electric motor construction
- Medical technology
- Hydrogen plants



Intended use for the rings

These rings are installed in different sizes as:

- Flanges
- Pressure rings
- Cellrings
- Sealing rings
- Turbine rings
- Adjusting rings
- Bearing rings
- Slewing rings
- Short-circuit rings
- Gear wheels



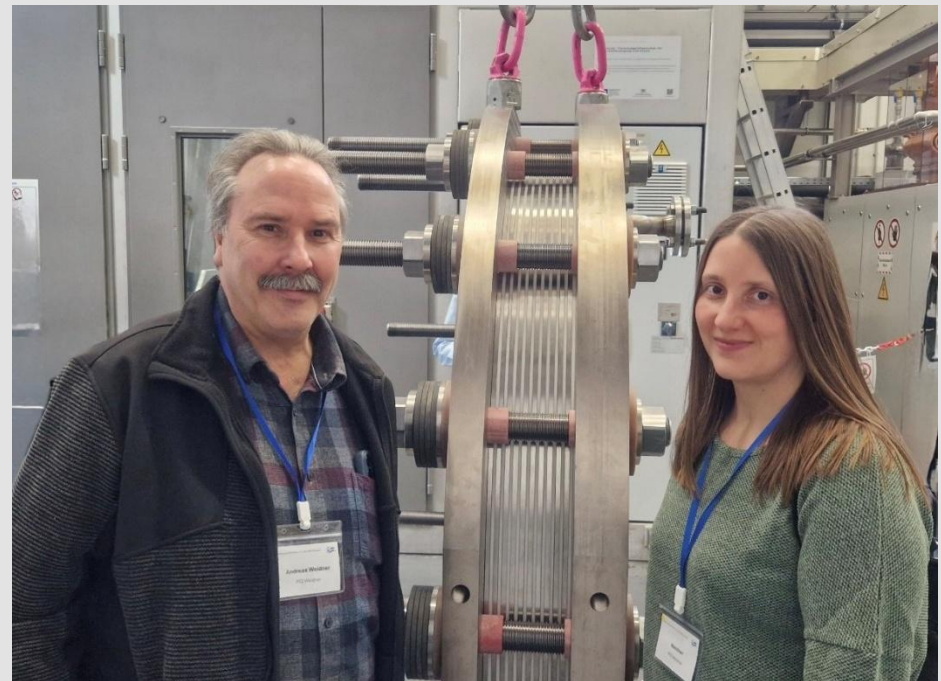
PTZ Weidner Presentation – Hydrogen

**With our innovative ring separation technology,
we help produce green hydrogen more cost-effectively.**



PTZ Weidner Presentation – Hydrogen

With our innovative ring separation technology, we support the cost-effective production of green hydrogen. Project: Mega Stack



Future Technology: Green Hydrogen Energy

Rings from PTZ Weidner for the newly developed electrolysis systems from the ZSW research institute



Zentrum für Sonnenenergie- u...

2.128 Follower:innen

1 Monat • 9

Mit einem grünen Knopf hat Wirtschaftsministerin Dr. Nicole Hoffmeister-Kraut gestern unsere [#Elektrolyse](#)-Anlage eingeschaltet. Nach zw ... mehr



Grünes Licht für die Elektrolyse: Ministerin Dr. Nicole Hoffmeister-Kraut weht Elektrolyseu...

Future technology green energy hydrogen

Precisely separated steel rings for electrolyzers for the production of hydrogen. Material and finishing included on request.



Future technology green energy hydrogen

Precisely separated steel rings for electrolyzers



Future technology green energy hydrogen

Precisely separated steel rings for electrolyzers



Thanks to our cold, deformation-free and precise cutting process, we achieve high savings in terms of material and processing costs, even with very large ring diameters.

Future technology green energy hydrogen

In accordance with the pressure vessel construction guidelines we use multiple seamless rolled steel rings as the material for the precise separated rings.

Thanks to our re-stamping authorization, our customer and we are always able to find the position of each individual ring in the bushing at any time.

The marking of these rings is applied continuously across the bushing, the separated ring through to the finished ring. An acceptance certificate for the material is included in accordance with TÜV and customer specifications.



Separate rings for electrolysis systems



**An electrolyzer for producing hydrogen
consists of individual steel or stainless
steel rings**

Minister of Economic Affairs Dr. Hoffmeister-Kraut



Example of separating a large steel ring



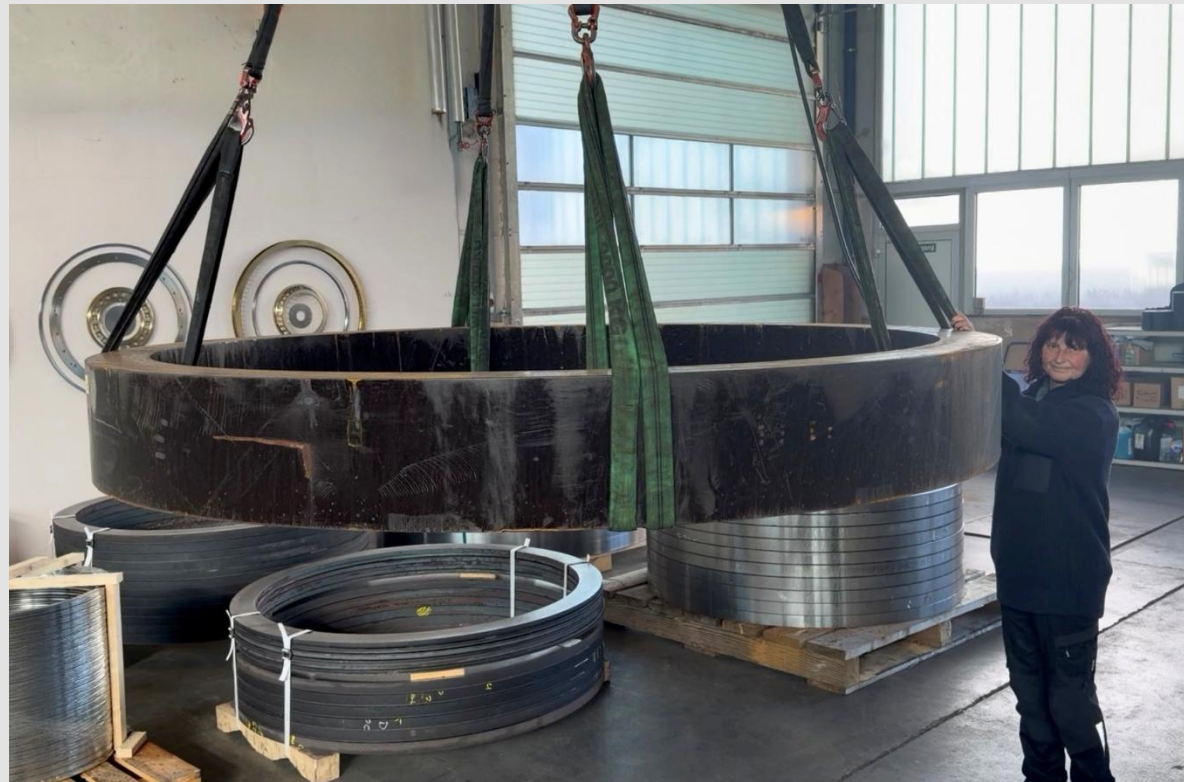
Example of cutting large steel rings



Handling of a large steel ring



Handling of large steel rings



Examples of non-ferrous metal rings



Examples of separating stainless steel and nickel-based rings



Example of separating material 1.4404

**Ring dimensions: Outer diameter 1230 mm,
inner diameter 1090 mm with 70 mm wall thickness, 4 mm high, flatness 0.1 mm**

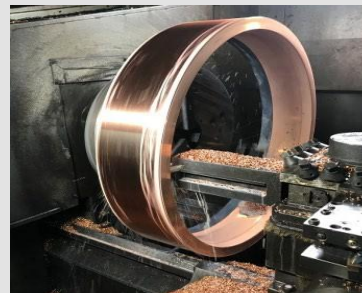


Austenitic stainless steel X2CrNiMo17-12-2



Surface quality 1.293 Ra

Mechanical processing



Mechanical processing



Mechanical processing of various materials



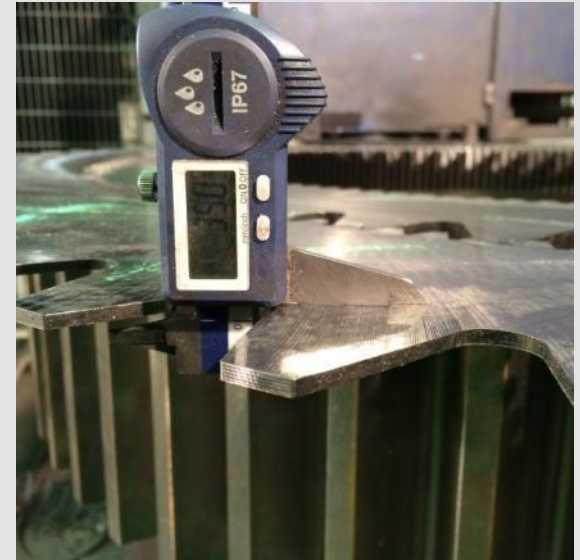
Special solutions



Eine Stahlbüchse präzise in zwei
Halbschalen getrennt.



Separation example gear wheel



Material 42CrMo4

Hardened and tempered to 1200N/mm²

Outer diameter 1440 mm, 160 mm wall thickness

Temperature during cutting approx. 25 C°

Separated gear height 3.50 mm



From the raw part to the end product



Highly rolled material efficiency Precisely separated rings Ready-to-install machined rings

Material X5CrNi18-10 (1.4301)

Stainless austenitic chromium nickel steel

Outer diameter 970 mm, inner diameter 800 mm, height 27 mm

After cutting, the rings were machined ready for installation.

Material grades

There is nothing that we do not separate:

- **Structural steels** e.g.: 1.0116, 1.0570, 1.0044
- **Unalloyed, alloyed heat-treatable steels** e.g.: 1.0503, 1.6582, 1.7225
- **Heat-resistant steels** e.g.: 1.0426, 1.5415, 1.6368, 1.4922
- **Fine-grained structural steel** e.g.: 1.0487, 1.8932, 1.8933
- **Stainless steels** e.g.: 1.4301, 1.4404, 1.4541, 1.4571
- **Duplex** e.g.: 1.4462, 1.4410, 1.4501
- **Nickel-based** e.g.: 2.4602, 2.4665, 2.4819, 2.4602
- **Titanium** e.g.: 3.7025, 3.7165
- **Aluminium** e.g.: 3.3547, 3.3211
- **Non-ferrous metals** e.g.: 2.1293, 2.0070, 2.0966, 2.0971

Advantages for our customers

The focus is on the enormous savings:

- **Less input material**
- **Faster production times**
- **Less energy required**
- **Less tool costs**
- **Lower machining costs**
- **Lower set-up costs**
- **High flatness and surface quality**
- **Deformation-free rings**

Advantages for our customers

PTZ Weidner can take over for you:

- **Material procurement**
(with works certificate and also with TÜV approval)
- **Optimization of your components**
- **Cutting of individual rings**
- **Pre- and finish-machining of rings according to drawings**
- **Heat treatment of rings**
- **Finishing of the rings**
- **Organization of transports**

Convince yourself of our significant cost and quality benefits for your company.



INNOVATION BW
2015
Innovationspreis Baden-Württemberg
Dr.-Rudolf-Eberle-Preis
Preisträger 2015

PTZWEIDNER®
Präzisions- Trenn- & Zerspanungstechnik

Company philosophy

“The new world of PTZ separation technology”

Highest material efficiency

Lowest energy consumption

Very environmentally friendly

Stabilization of your competitive advantages

...with us...

always one **cut** ahead



CYBER ONE
DER HIGHTECH AWARD BADEN-WÜRTTEMBERG



INNOVATION BW
2015
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...immer einen Schnitt präziser.