



ATNA
Industrial
Solutions
GmbH

High-performance presses for the industrial briquetting of waste materials



Bundesministerium
für Wirtschaft
und Technologie



Challenges

Dust



Wood



Metal Curls



Sewage Sludge



Fuel

Transportation

Volume Reduction

Emissions

Storing

Melting

Residues

Coking

Circular Economy

Safety

Gasification



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Fields of Application





Two Stage Press Process



Initial Pressing

- Low-pressure pressing to generate a stable pre-agglomerate
- Depending on density the initial pressing can be done in two steps

Final Pressing

- High-pressure pressing to generate a high-quality briquette
- Pressure up to 5000 bar can be achieved

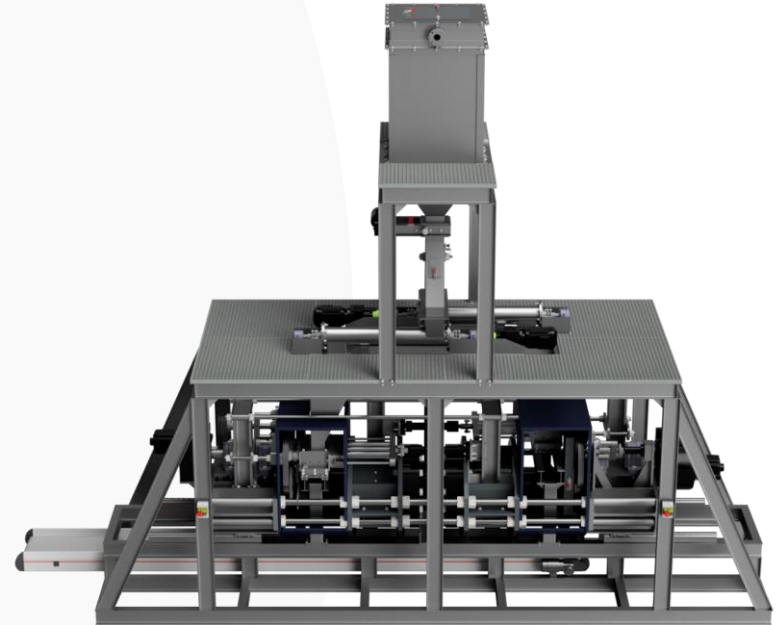




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Pilot Plant

- Prototype: single „industrial core“ with a throughput of 3.2 t/h
- Completion in October 2019
- Industry test: 3 months operation from November 2019 at RWE
- Power consumption < 20 kWh/t
- Dimensions
 - length: 6.0 m
 - width: 2.0 m
 - height: 5.0 m
 - weight: 10 t





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Pilot Plant Test with RWE in Cologne





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Machine Sizes

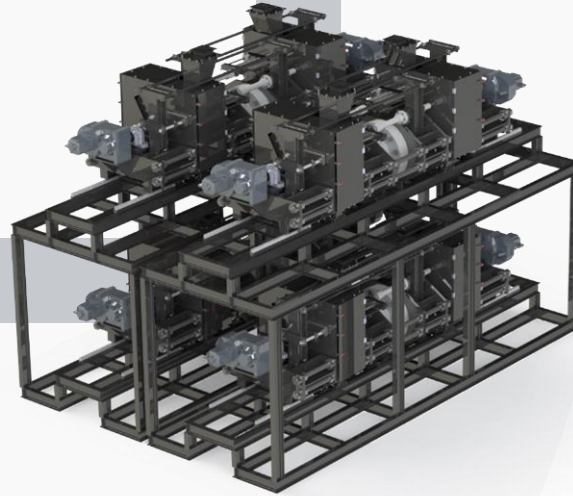
Small scale for the processing of:

- Renewables
- Metal Curls
- Sewage Sludge



50 kg/h

50 t/h



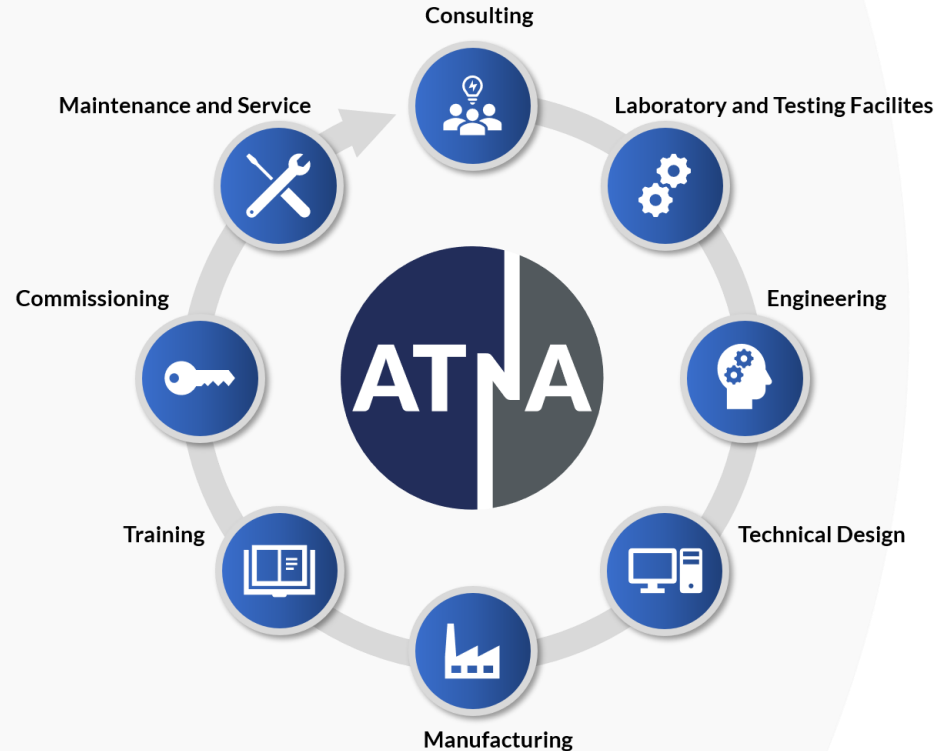
Large scale for the processing of:

- Coal
- Minerals



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Project Support by ATNA Industrial Solutions





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Aluminum / Metal Chips and Curls

- Volume reduction of the voluminous chips and curls
- Reduction in storage and transportation costs
- Increase in the melting yield



Biomass, Sewage Sludge, Agricultural Waste

- Thermal utilization of sewage sludge, fermentation residues and wood chips
- Approach to phosphorus recovery



Plastic Waste

- Thermal utilization of plastic waste or gasification
- Reduction in storage and transportation costs





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