

## Machines for the wire processing industry



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## Innovation for Tradition

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The company Aachener Maschinenbau was founded in 1908 as a sort of workshop to arrange repairs for the regional industry. Only a few years later the company started designing machine parts and developing products of their own. This pioneering spirit of the founding family persisted for three generations. In combination with the respective know-how and professionally trained employees it made the machines from Aachen famous for their quality and reliability.

After the management buy-in at the beginning of 2005 we made it our business to further develop these strong points of the company and together with our employees to safely and long-term position it in a worldwide niche-market: Innovation for Tradition.





## BoltMaker

Our BoltMaker combines two-step heading, reducing, pointing and thread-rolling as completely automatic high-speed applications in one machine, independent of the length of the products, without any additional handling – a major advantage against any combination of separate units. The most significant advantage of our BoltMaker however is it's modular concept. This way each machine can be exactly focussed on our customers' needs and specially designed to user specifications. Any completion or upgrading which might become necessary at a later stage may already be considered during design and construction of the machine and will so allow for an immediate reaction to changing markets and conditions.

- infinitely variable drive
- full power also at low speed
- all movements mechanically combined
- programmable logic control
- central lubrication system
- centralized supply of cooling lubricants

Wire feeding is operated by servo-engine and reaches a maximum length tolerance of  $\pm 0.05$  mm ( $\pm .002$ ") without additional trim cut. The compact machine only requires little space and may be installed without foundation or baseplate.

As a matter of course we are also prepared to supply straighteners, decoilers and further peripheral equipment adjusted to the machine capacity.



### Components in Detail



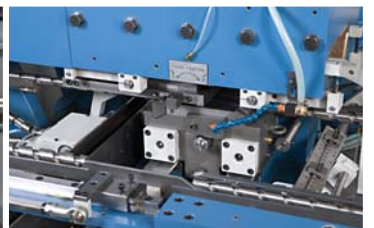
Heading



Turn-Around



Pointing



Thread-Rolling

### Machine-Types

	BM 6	BM 8	BM 10	BM 12	BM 14
Diameter of Thread	6 mm (1/4")	8 mm (5/16")	10 mm (3/8")	12 mm (7/16")	14 mm (9/16")
Max. Diameter of Head	15 mm (0.60")	20 mm (0.80")	25 mm (1.00")	30 mm (1.20")	35 mm (1.40")
Max. Length	600 mm (24")	800 mm (32")	1000 mm (40")	1500 mm (60")	1500 mm (60")
Threading Width	100 mm (4")	125 mm (5")	125 mm (5")	125 mm (5")	125 mm (5")
Threading Tool Size	TR 4 (WF 20)	TR 5 (WF 30)	TR 6 (WF 40)	TR 6 (WF 40)	TR 7 (WF 50)
Drive Capacity	15 kW	22 kW	30 kW	37 kW	45 kW
Production Capacity	up to 230 ppm	up to 170 ppm	up to 120 ppm	up to 110 ppm	up to 90 ppm



## Rod Header

For heading or ulterior cold-forming of wires with up to 20 mm (3/4") in diameter we design and manufacture mechanical and hydraulic rod headers with a production capacity of 5 to 50 ppm (hydraulic) and up to 230 ppm (mechanical).

Depending on their range of application the machines are equipped with either one or two heading units. Each unit can take up to two heading tools. If requested the rod header can also be designed for simultaneous heading of both ends of a blank.

Feeding of the blanks can be either manual or automatic. The blanks can be fed pre-cut and straightened from a magazine or directly from a coil via our decoiler WFS and our cutting system.

Adjusting the wire diameter as well as the length of the product can be provided variable to a large extend. The heading stroke may be up to 400 mm (16").

### Examples for the use of our Rod-Header

Stud-bolt blanks, muffle-hangers, mandrels, building bars



Hydraulic Rod Header HRH 12

BoltMaker BM8





## Flat-Die Thread-Roller

Partly due to EU regulations - the demand of fully threaded screws for wood construction has continuously increased on the European market. Following this demand we developed a Flat-Die Thread-Roller for the production of fully threaded screws in 2005. The prototype had been designed and manufactured for a maximum thread length of 600 mm (24").

The main difference and also the main advantage against other systems is the horizontal feeding of the blanks, similar to our BoltMaker. The successful operation of the prototype has led to the manufacturing of further machines designed for a maximum thread length of 800 mm (32").

- powered by frequency controlled three phase AC motor
- full power also at low speed
- all movements mechanically combined
- programmable logic control
- central lubrication system
- centralized supply of cooling lubricants

As a further option the machine may also be equipped with a pointing unit or the Thread-Roller and our BoltMaker may be interlinked. Other applications for the machine concept are currently under investigation. Also a combination with a hydraulic drive might make sense in order to offer a wider range of applications.

## Straightening Machines

Machines for the straightening of long bolts and screws after heat treatment have been part of our production programme for many years. These machines are designed to straighten the screws and bolts in the thread-free shank area only. In the past this was completely sufficient.

For the new fully-threaded screws, however, these machines cannot be used, because the thread would be damaged by the straightening rolls.

Therefore we developed a new generation of straightening machines specially designed for fully-threaded screws up to 800 mm (24") in length, using profiled straightening rolls that fit the respective threads. Feeding the parts into the machine is effected by our approved spindle system, machine capacity approx. 30 parts per minute.

### Machine Types

	<b>BBW 10 - 600</b>	<b>BBW 12 - 600</b>	<b>BBW 12 - 800</b>
Diameter of Thread	max. 10 mm (7/16")	max. 12 mm (9/16")	max. 12 mm (9/16")
Threading Width	max. 600 mm (24")	max. 600 mm (24")	max. 800 mm (32")
Threading Length	max. 490 mm (20")	max. 600 mm (24")	max. 600 mm (24")
Tool Size	TR 5, TR 6 (WF 30, WF 40)	TR 5, TR 6, TR 7 (WF 30, WF 40, WF 50)	TR 5, TR 6, TR 7 (WF 30, WF 40, WF 50)
Drive capacity	30 kW	45 kW	55 kW
Production Capacity	up to 40 ppm	up to 35 ppm	up to 30 ppm



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## Service

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All the machines of our comprehensive range are continuously enhanced and adapted to changing conditions of particular markets and to the specific needs and requirements of each single customer. As a matter of course we offer – as far as possible – a similar type of service for those machines already supplied to our customers and take over repairs, adaptations and maintenance either on customers' site or at our works always depending on the requirements.

Above this we deal with mechanical engineering in general day by day:

- We manufacture machine parts and complete machines per customers' drawings or design and manufacture such parts according to our customers' specification or advice.
- We process parts supplied by our customers.
- We also arrange repairs and maintenance for machines which were not manufactured and supplied by us.
- We lathe, bevel, drill, cut and plane as commission processing.

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