

# BOGIE MEN

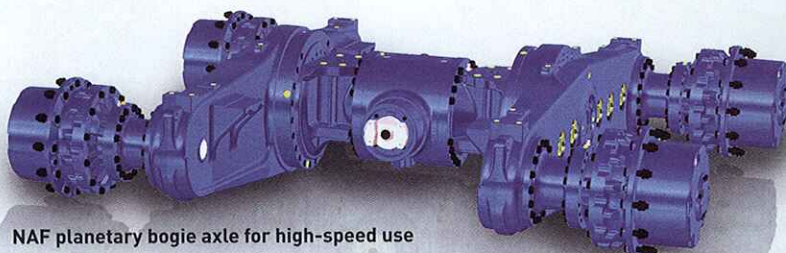
FOLLOWING ITS YEARS OF EXPERIENCE IN PRODUCING RIGID AND STEERING AXLES, ONE COMPANY'S VENTURE INTO MODELS FOR ADTs AND MOTOR GRADERS IS NOW THE STUFF OF LEGEND. GIVE IT A TRY – THERE'S NOTHING TO BE AFRAID OF...

▷ For about 50 years, Neunkirchener Achsenfabrik (NAF) has been a specialist in high-performance drivelines for construction, forestry and agricultural vehicles that deal with the toughest terrain, environmental and climate conditions all over the world.

Competence, technical know-how and continuous improvements have made the company a world market leader in bogie axles for nearly 30 years. But within the last few years in particular, NAF bogie axles have begun making a name for themselves among manufacturers of construction machinery. Their perfected technology has proved its worth in articulated dump trucks and motor graders of distinguished manufacturers all over the world, such as Moxy in Norway, Hydrema in Denmark, Dormash and Brjansk Arsenal in Russia and Mista in Poland.

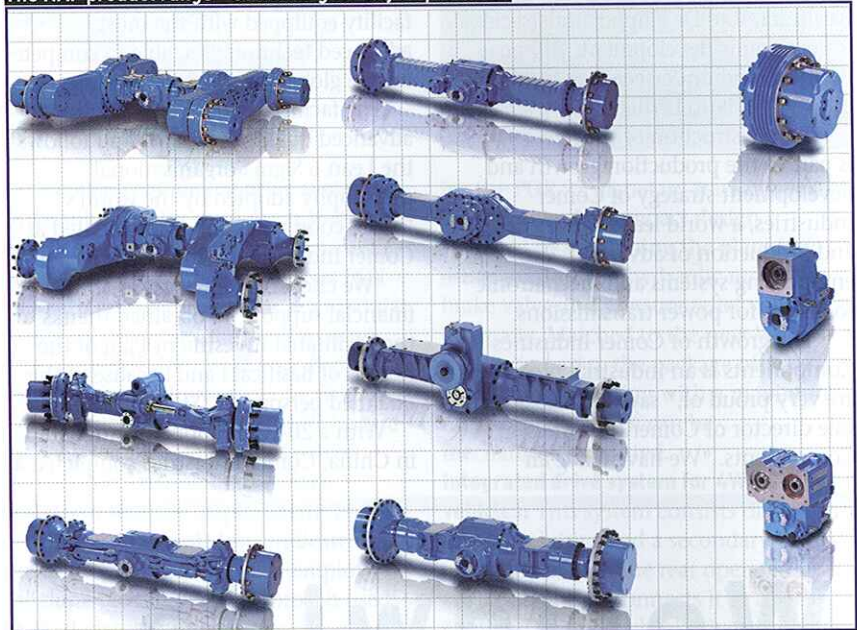
One other NAF product with an enormous rate of growth in the construction machinery sector is the planetary rigid axle. Equipped with oil-immersed disk brakes in the wheel ends, they are applied in articulated dumper trucks such as those from Terex and JCB.

The partnership between Terex Equipment Ltd in Motherwell, Scotland, and NAF has become a real success story. NAF had been supplying the German Atlas Terex company with rigid and steering axles, equipped with oil-immersed brakes, for excavators for decades. So when Terex Scotland was searching for a reliable and innovative manufacturer of axles for its articulated dumper trucks, it approached NAF too.



NAF planetary bogie axle for high-speed use

The NAF product range – something for any requirement



With its patented self-cooling brake system in the wheel ends, NAF was able to offer a solution with a focus on maximum capacity.

This technical feature, combined with the fact that the company had proved its competence in the construction sector for so many years, convinced Terex to set up business with NAF in April 2006. Terex is the third-largest manufacturer of construction equipment worldwide, and this new partnership is very promising.

The dump trucks – type TA25, TA27 and TA30 – have a load capacity of 25, 27 and 30 tons respectively. For the front axle of the TA30, the Irish company Timoney Technology and

NAF have developed a special suspension, which is particularly beneficial when working in gravel pits and off-road applications.

## A range of possibilities

NAF offers a wide range of bogie axles for cut-to-length forest machines with high ground clearance, such as from eight tons up to 30 tons payload. These axles have an offset up to 200mm and are equipped for travel speeds up to 30km/h. They can be equipped with oil-immersed disk brakes, with differential lock or shiftable multidisk differential lock as an option.

NAF also offers a complete range of bogie axles for high speeds. These are specially developed for articulated dump trucks up to 30 tons payload and motor graders with an operating weight of 30 tons, and are equipped for speeds up to 65km/h. The axles can be equipped with oil-immersed disk brakes in the wheel ends, and with optional differential lock, multidisk differential lock or no-spin system.



One further option is the NAF-patented balance bogie system. This system offers the opportunity to reduce the lifting effect at the front wheels of the bogie. Driven bogie axles experience a lifting torque at the oscillating point due to a force acting towards the drive direction. Depending on the bogie dimensions and the bogie ratio, the lifting torque causes an uneven wheel load between the front and rear wheels of the bogie. When the ratio in the bogie is higher to produce more torque, the NAF Balance Bogie System is installed to reduce or eliminate the lifting effect. A balanced bogie harmonises the wheel loads of front and rear wheels and thereby reduces the ground pressure. A further advantage is that torque-transmitting components are more evenly loaded, which leads to a longer lifetime. Furthermore, the balancing effect is also achieved during braking.

One of the latest developments of the company is its patented self-cooling oil-immersed multiple disk brake. Turbine blades cast into the wheel hub guarantee stable lubrication as well as the required self cooling, so no external cooling system is required. This system



#### Driven by innovation

is, in fact, maintenance free. Further advantages are the increased performance and vehicle stability that result from the brake acting directly on the wheels, thereby minimising the backlash within the intermediate components. The main advantage for the customer is the longer lifetime and reduced maintenance work on the brake because of the completely closed system.

Due to NAF's modular system, the components and individual parts are variably combined to create an

individual drive solution. The cost advantages of this production concept make a considerable difference.

As a supplier of complete driveline solutions, NAF offers a wide product range for each application. Ralf Sauer, CEO of NAF AG, explains what motivates and drives him and his 500 employees: "Our idea of co-operation is to make an important contribution towards your success. We regard our customers as partners. We consider ourselves to be thinkers, and with our commitment we do our best to achieve optimum technical and cost-effective solutions. This leads to the creation of high-tech products, which have to produce maximum performance under the toughest conditions."

The head office of the company is located in southern Germany, but customers can also get in contact with its subsidiaries in Edmonton, Canada or Ekaterinburg, Russia, or with one of the dealers worldwide. **ivT**

*Dörthe Dreher has been responsible for sales and marketing at NAF for more than 10 years*



#### CONTACT

[www.nafaxles.com](http://www.nafaxles.com)  
[doerthe.dreher@nafaxles.com](mailto:doerthe.dreher@nafaxles.com)

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