

## Motors and Gearboxes for Biomass Heating Systems

Energy efficient  
Durable  
Quiet as a whisper  
Compact



## Reliability in many areas

ABM Greiffenberger develops and manufactures innovative drive unit solutions in highest quality. The individual components of our system solutions like motor and gearbox are from one single source and are exactly attuned to each other already in the development phase. That way customized solutions are developed for well-known manufacturers in the areas of lifting technology, textile machines, pallet trucks, wind power plants or biomass heating systems.

Innovation, sustainability, partnership and high flexibility are the dictums of our actions. That way highly qualified personnel develop and produce more than 300,000 drive units annually. International subsidiaries as well as partners in all important industrial nations assure close contact to our customers world-wide.



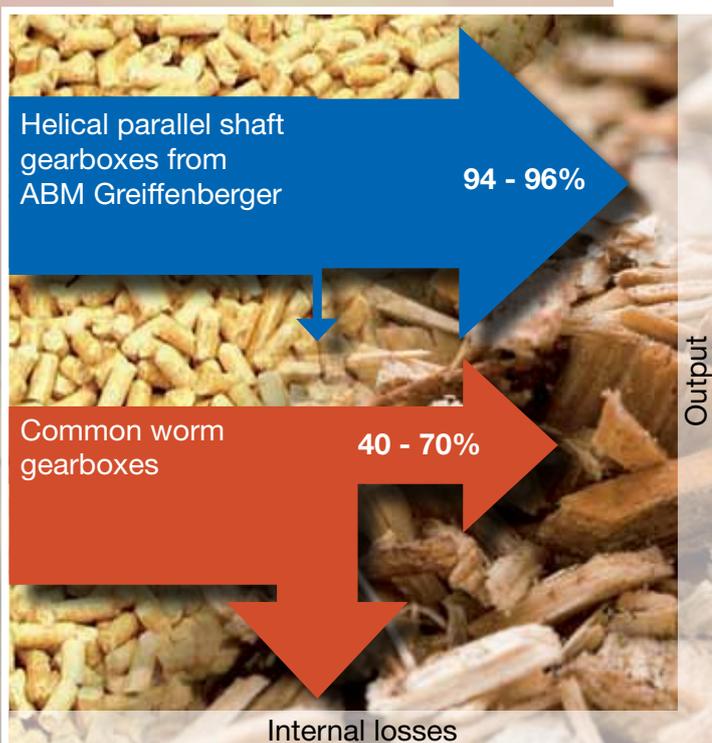
## Biomass Know-how

ABM Greiffenberger accompanies the technological development of the biomass heating technology from the beginning. Our wide variety of highly efficient drive unit technologies for **pellet stoves as well as pellet and woodchip heating systems** is based on our longtime experience with this dynamic technology with future.

## Perfect Efficiency

Using renewable energies is an indicator for high energy awareness. Exactly there ABM Greiffenberger delivers powerful arguments: the extremely high efficiency of our helical and parallel shaft gearboxes for biomass heating systems reduces the energy demand of the equipment. Geared motors from ABM Greiffenberger are genuine energy saver after all additionally reducing operating cost.

## Efficiency





## Helical Geared Motors

2- and 3-stage helical geared motors from ABM Greiffenberger stand for absolute robustness, high quality and longevity. The low dead weight and the high resistance to corrosion originates from the consequent use of aluminum housings from the own aluminum die-cast foundry of ABM Greiffenberger.

Transmission elements like sprockets etc. can be connected easily to the output shaft.



## Parallel Shaft Gearboxes

ABM Greiffenberger parallel shaft geared motors offer a variety of implementation possibilities due to a high center distance and hollow output shaft. That way, e.g. a U-mounting is possible with the motor adapting parallel to the auger.

Our parallel shaft geared motors are available in 2-, 3- or 4-stage versions, gear ratios up to  $i = 2000$  as well as output torques up to 1350 Nm.



## Agitator Gearboxes

ABM Greiffenberger agitator gearboxes have been developed especially for the use in agitators for wood chip conveying.

Usually, designed as worm gearboxes and equipped with a plate at the output shaft for direct mounting of spring arms.

The pedestals are mounted directly to the robust gray-cast iron housing via threaded holes. Therefore, complex sheet-metal fixtures are eliminated.

A patented combination of materials of tooth system and lubricant provide for low wear and more than 10,000 hours of operation.

## High-grade Drive Unit Solutions for Efficient Heating Systems

Well-thought-out solutions for **pellet stoves as well as pellet and woodchip heating systems.**

Biomass heating systems require well-thought-out drive unit technology in many areas. Stored wood chips or pellets in a silo need to be conveyed by a removal system and transported to the boiler by an auger, usually via a rotary feeder to prevent burn-back. Additionally, there is continuous cleaning of heat exchangers and ash removal.

ABM Greiffenberger offers an ideally designed solution for each of these applications.

### Absolute Energy Efficiency

The use of biomass heating technology documents the high resources and energy awareness of the user. Anybody counting on renewable energies also cares for overall efficiency.

That's where ABM Greiffenberger puts down benchmarks. The high overall efficiency of helical and parallel shaft gearboxes reduces the power input and so the energy intake drastically. ABM geared motors are true energy saver.

### Whisper Quiet and Reliable

Today, biomass heating technology is understood as part of a homely environment. Noise emissions would affect the comfort of living and need to be avoided.

At ABM Greiffenberger motor and gearbox are coming from one source. Both components harmonize ideally with each other – without any compromises purchasing parts some-



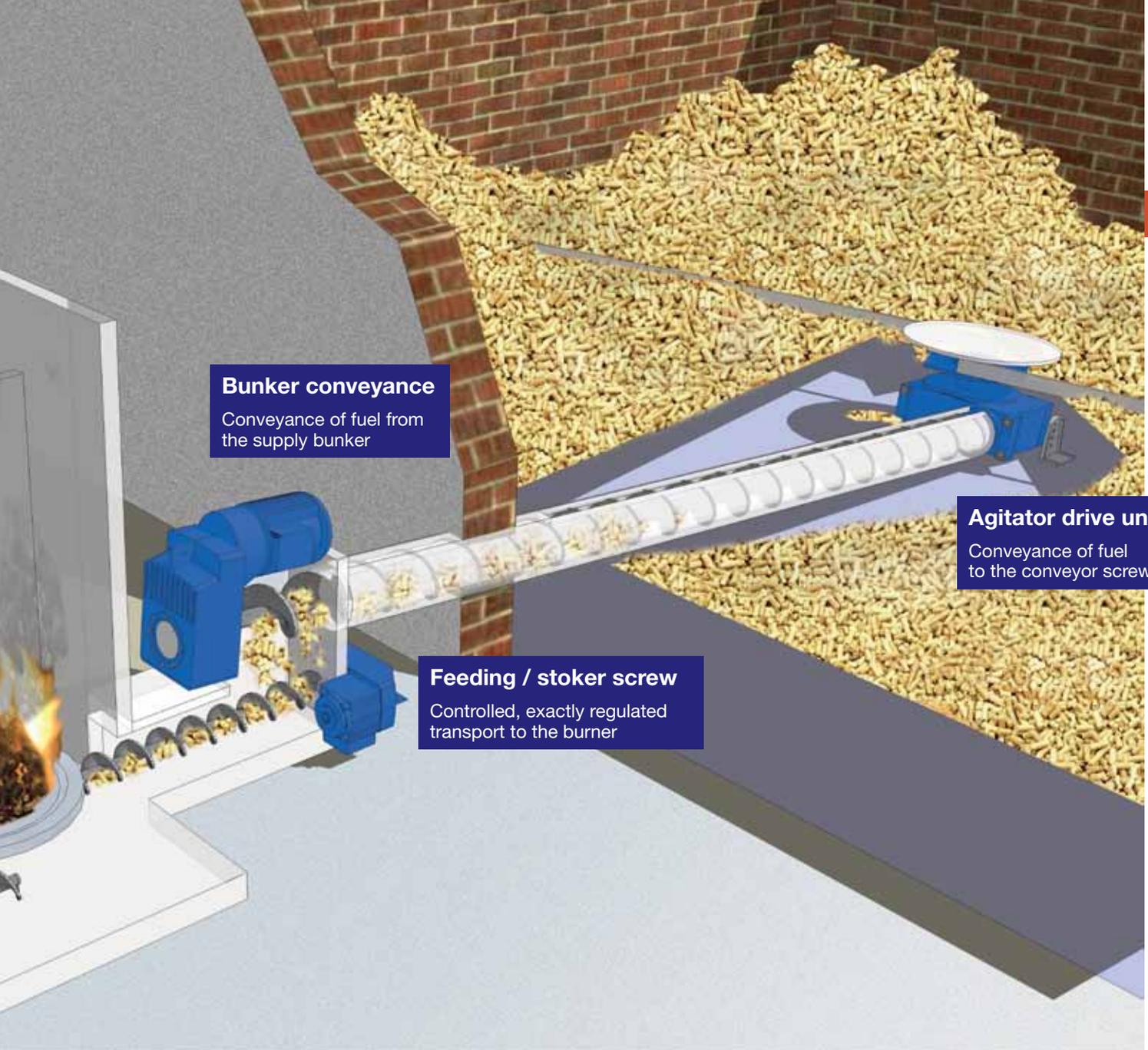
times require.

High quality gearing guarantee quiet operation. For silencing trimmed and precisely machined aluminum die-cast housings additionally reduce noise emissions.

This high quality demand of ABM Greiffenberger warrants also the high reliability and longevity of the products. Because, only quality assures smooth operation of the heating technology avoiding owners to be sitting in the cold.

### Compact Plug-and-Play

Frequently, biomass heating technology needs to be installed in cramped areas requiring a compact drive unit solution. Due to the big center distance of the drive units and the integrated hollow shaft ABM Greiffenberger made a wide spectrum of



**Bunker conveyance**

Conveyance of fuel from the supply bunker

**Agitator drive unit**

Conveyance of fuel to the conveyor screw

**Feeding / stoker screw**

Controlled, exactly regulated transport to the burner

integration possibilities accessible.

Endless layouts are feasible, from integration of the motor into the gearbox housing to a so-called U-mounting of the motor, adapting to the auger.

An especially for the application developed program of components allows an economic and individual configuration. On this basis our customers get true plug-and-play drive unit solutions helping save time and money.

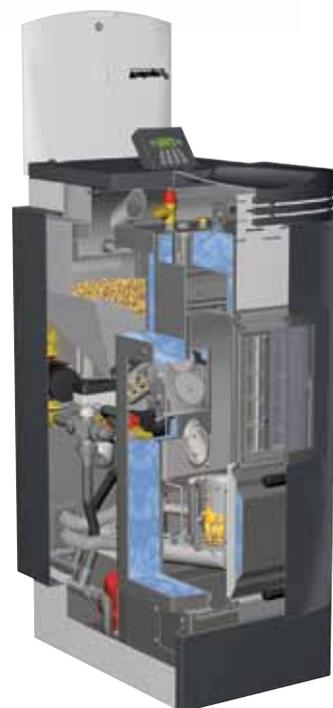
**Developed for the application**

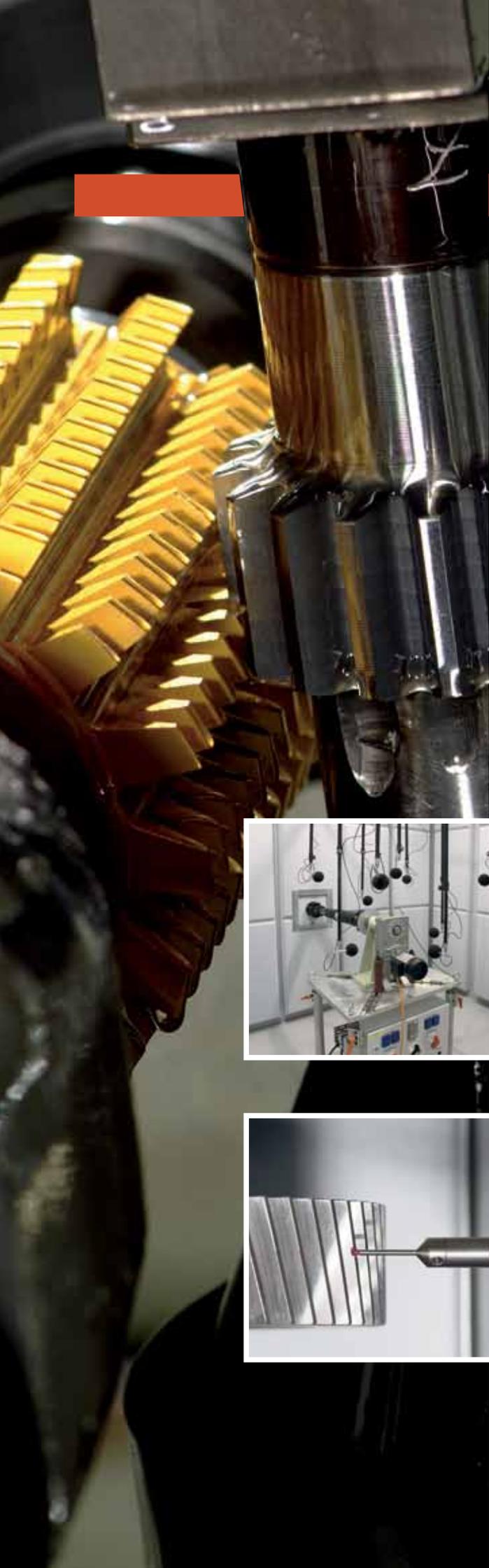
ABM Greiffenberger offers drive units for pellet stoves as well as pellet and woodchip heating systems with an area of application reaching from removal of material from the bunker over rotary feeder, auger and cleaning of heat

exchanger all the way to ash removal.

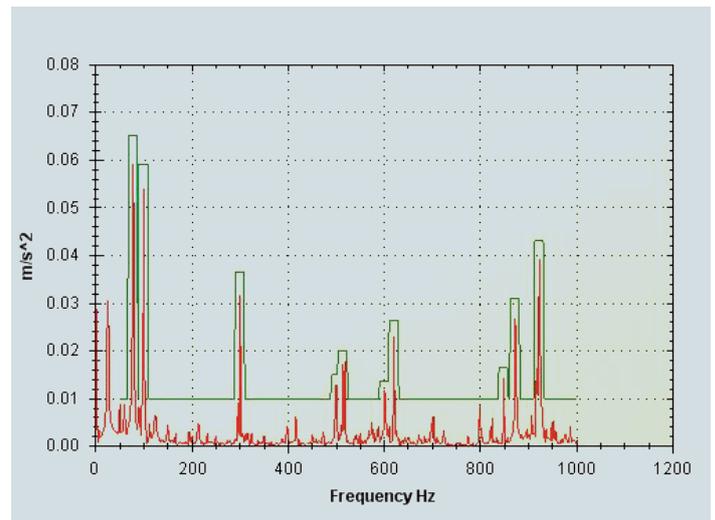
**If flexibility counts**

If you desire more than standard components, you will be at the right address at ABM Greiffenberger. Because, in our collaboration we respect your wishes and targets and create a fitting solution for you. That is how we stay flexible, even if it comes to special demands.





## Measurement of Sounds and Quality and Objective Evaluation

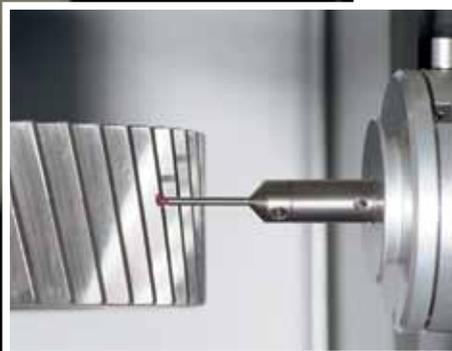


## Quality from the beginning

According to our conviction quality needs to be topmost order from the first planning step on. Fabrication of quality starts at ABM Greiffenberger with the accurate analysis of demands of the target market. It carries forward in detailed farsighted design as well as careful choice of used components and materials.

Our manufacturing processes are naturally flanked by quality checks accordingly. Whether 100% checks, endurance tests or laser supported detailed measurements: a close-meshed netting assures the reliability of our quality declaration.

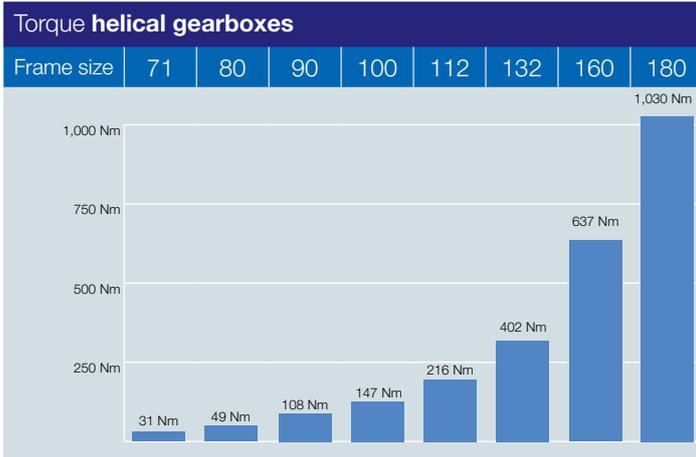
A certification according to DIN ISO 9001:2008 is downright naturally as well as a consequent environmental management system according to DIN ISO 14001:2004 as ABM Greiffenberger is certified since 2007.





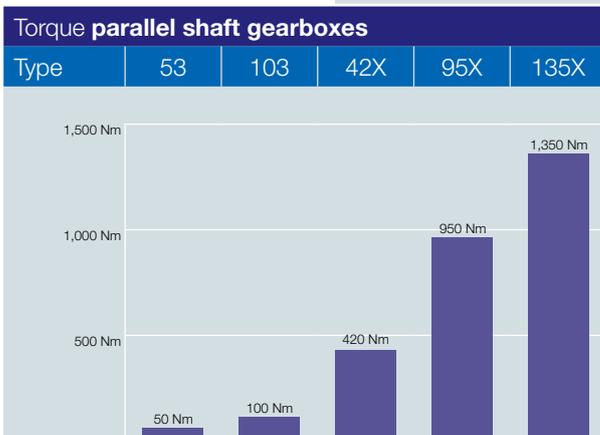
## Helical geared drive unit

Motor type	1- or 3-phase asynchronous motor
Rated output	0.09 kW through 7.5 kW
Output speed [rpm]	2.5 rpm through 550 rpm
Rated voltage	115 V through 575 V
Frequency	50 Hz / 60 Hz
Protection class	IP54, IP55
Cooling	Self- or non-cooled
Connections	Terminal board/bar or cable with connector



## Parallel shaft geared drive unit

Motor type	1- or 3-phase asynchronous motor
Rated output	0.03 kW through 5.5 kW
Output speed [rpm]	2.2 rpm through 250 rpm
Rated voltage	115 V through 575 V
Frequency	50 Hz / 60 Hz
Protection class	IP54, IP55
Cooling	Self- or non-cooled
Connections	Terminal board/bar or cable with connector



## Agitator drive unit

Gear ratios [i]	15,667
Max. Input torque	185 Nm
Output torque	2,000 Nm
Short time peak torque	5,000 Nm
Axial load on plate	10,000 N

# We drive the world

A dense network of international subsidiaries and sales offices in all major industrial countries ensure close contact with our customers around the world – and guarantee an excellent standard of service.

Kindly contact us for further detailed information.

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