

Eltronic

WIND SOLUTIONS

EQUIPMENT
RENTAL



Semi- automatic sander for blades

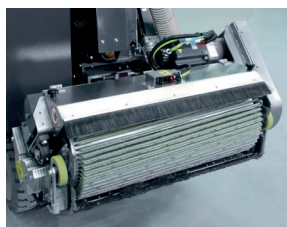
– faster, more efficient and with a
much more consistent finish!

Flexible, fast and safe sanding of any type of wind turbine component

A semi-automated sanding unit from Eltronic is an advanced robotic solution which performs sanding treatment of all types and sizes of wind turbine blades and other main components. The actual sanding process is fully automatic. The unit is able to detect the shape of the blade without pre-programming, and it is controlled by one operator only.

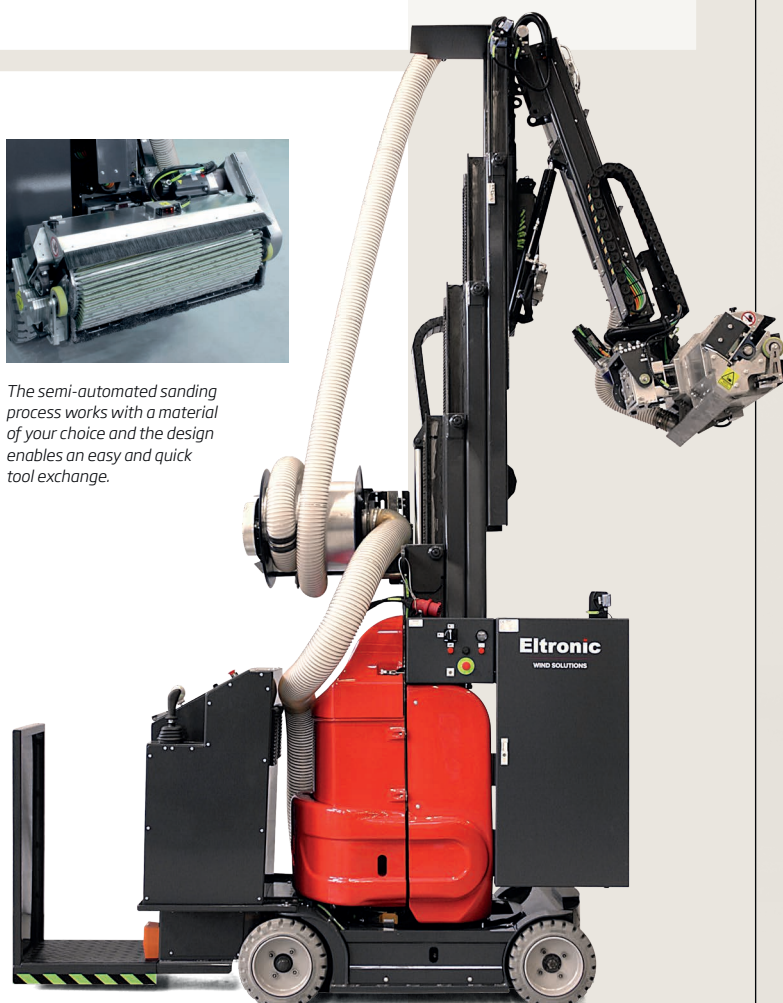
Due to an integrated dust suction system, well-known issues with dust in the production facility are reduced to a minimum, and as a result the working environment is significantly improved. The unit is able to operate with all types of sanding materials.

Compared to manual sanding, a semi-automated sanding unit will perform the sanding process faster, more efficient, economical and with a much more consistent finish.



The semi-automated sanding process works with a material of your choice and the design enables an easy and quick tool exchange.

The semi-automated sander from Eltronic has a high reach up to 7.5 meters.



The Semi-automated sander can operate with only 2.2 m between the blades.

How it works

THE SEMI-AUTOMATIC SANDER CONSISTS OF THE FOLLOWING PARTS:

Mover

A strong and rigid standard unit which is moved to the next position by the operator.

Sanding manipulator

A standard telescopic system which is able to detect and follow the shape of the blade.

Sanding tool

The sanding drum can be equipped with sanding strips, which are easily replaceable.

Safety system

The unit is equipped with an integrated safety system ensuring absolute safety in all aspects.

PLC control system and operator interface

Control system and user-friendly operator panel ensuring complete control of the sanding treatment.

Your direct advantages

Cost-effective

Semi-automated sanding treatment is a very cost-efficient solution. Operational costs are low, and the number of man-hours compared to manual sanding is heavily reduced.

Flexible

Due to a large working range and height, the semi-automatic sander can be used for all blade types and sizes. Furthermore, the unit is able to operate with all types of sanding material.

Working range in height, up to

7.5 m

Now even faster sanding process, up to

200 m²/h

Mobile extraction unit for improved working environment

The mobile extraction unit is an additional feature. Using the mobile extraction unit together with the sanding unit, allows for a complete removal of dust particles from the air. The extraction unit can easily be connected to the semi-automatic sander making it a complete and compact solution. With the convenient dust disposal a safe work environment is guaranteed.



Agile

The semi-automatic sander is a compact unit easy to maneuver and which can be used on any level surface.

Extremely fast

Our unit is able to sand both in the downward as well as in the upward motion. This up & down feature ensures a very fast sanding process.

EHS - Environment, Health and Safety

The semi-automatic sander improves all aspects of the working environment and guarantees a safer workplace without white fingers, static electricity etc. The improved and automatic work procedure eliminates the repetitive work characterizing manual sanding. In addition, up to as much as 98% of all dust particles will be retained by the dust suction system. Compared to manual sanding, the unit operates at a low sound level, and the energy consumption can be reduced significantly.

The semi-automatic sander with the mobile extraction unit - a convenient dust disposal for improved safety and work environment.



1. Laser sensors on the sanding head detect the top of the blade and start sanding in a downward motion.



2. The sanding process is stopped when the bottom of the blade is detected.



3. After a finished track, the unit can be easily moved to the next section of the blade.



4. The next track can be sanded with an upward motion from the the leading edge to the trailing edge.

About Eltronic Wind Solutions

Wind Solutions offers innovative equipment supporting the entire life cycle of wind turbines - from concept design, production and transport to installation, service and decommissioning.

Wind Solutions is a part of Eltronic A/S - an engineering company focused on increasing the productivity, flexibility and efficiency of its customer's business.

Eltronic employs more than 300 highly professional engineers and technicians covering competencies within a wide range of disciplines.

Core competencies of Eltronic Wind Solutions:

- + Process
- + Optimization
- + Production & transport equipment
- + Lifting equipment
- + Sea fastening
- + Service & installation tools

Eltronic A/S

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Technical specifications

General

| | |
|--|------------------------------|
| Total weight | 3950 kg |
| Max. ground bearing pressure | 12.6 kg/cm ² |
| Dimensions (in driving position) (LxWxH) | 3380x1120x2160 mm |
| Maximum height reach | 7.5 m |
| Control system | Siemens Fail Safe safety PLC |
| User interface | Siemens touch panel |
| Power supply | 3x400VAC+N+PE, 32A* |
| Blade types | All types |

Sanding drum**

| | |
|-----------------------------|------------------------------------|
| Width | 800 mm |
| Diameter incl. strips (max) | 400 mm |
| Rotation speed | 50-250 rpm (up to 500 rpm) |
| Sanding materials | Strips, 55 pcs, 797x45 mm |
| Grid type/size | Any grid type/size from any vendor |

Mover

| | |
|------------------------|---------------------|
| Driving speed (Stowed) | 4.8 km/h (1.33 m/s) |
| Wheelbase | 1.2 m |
| Floor requirements | Max 2° slope |
| Turntable rotation | Left and right 110° |

Productivity

| | |
|------------------------|------------|
| Surface speed | 1-10 m/min |
| Amount of blade sanded | +95% |

Extraction system

| | |
|----------------------|-----------|
| Removal of particles | Up to 98% |
|----------------------|-----------|

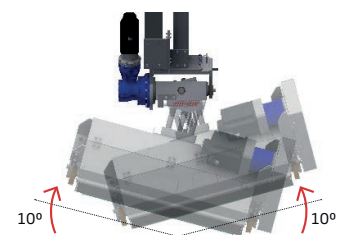
* RCCB protection in supply usually not suitable due to servomotor amplifiers.

** Customized sanding drums can be developed on request.

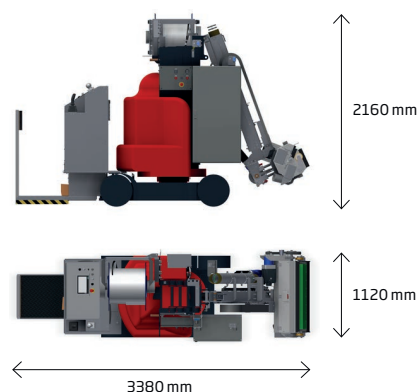
Optional equipment

- + Trailer with mobile extraction unit including self cleaning filter system
- + Supply cable reel
- + Automatic extraction valve
- + Performance monitor (OEE)
- + QA reports
- + Camera with a monitor
- + Vacuuming head

Sideways adaption 10° to each side



Dimensions (driving position)



Working envelope

