

# AVANTI CLIMB ASSISTANCE - A SAFE INVESTMENT



Avanti Climb Assistance is a safe and profitable investment both in turbines of average height as well as in older turbines without lift systems. Older turbines must be serviced more often - and this requires a lot of hard climbs on the ladder.

Avanti Climb Assistance relieves the service technician during ascent on the vertical ladder thereby, wearing down of the body's moving parts is avoided. The Climb Assistance especially relieves wearing injuries on knees, arms and feet. The user will be relieved of the chosen number of kilos, that the climb assistance pulls (35 to 45 kg). Thereby the own weight of the user will be reduced to a minimum. The Climb Assistance can also be used when descending.

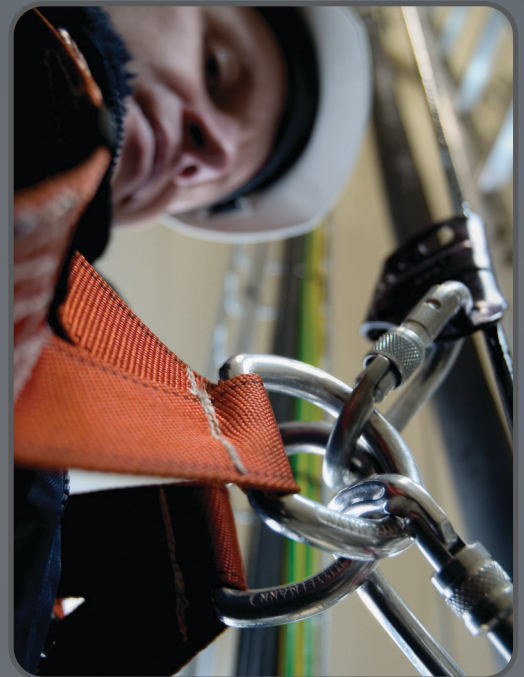
The Climb Assistance can be used in all wind turbines and can be installed any time - also in existing wind turbines.

Even in smaller wind turbines a simple installation like the Climb Assistance gives great safety and human advantages.

Fall from the ladder is a big risk in service work in wind turbines. Therefore, the Climb Assistance must be used together with the fall protection.

Technically, the Climb Assistance works by an endless rope leading the user both up and down the ladder of the turbine. The pulling rope runs on a block in the top and a pulling unit at the bottom of the wind turbine ensuring a constant pull of either 35 to 45 kg determined by the service technician.

The pulling rope has been safely fastened to the belt of the technician with a clamp of the same type as used at mountain climbing.



The Climb Assistance can be installed in all types of wind turbines - including older, existing turbines. The ascent on the ladder is easy and safe with Avanti Climb Assistance.

If the user weight is 100kg and chooses a pull of 40 kg, he only has to lift 60 kg of his own body weight. Thereby, especially injuries on knees, arms and feet are avoided.

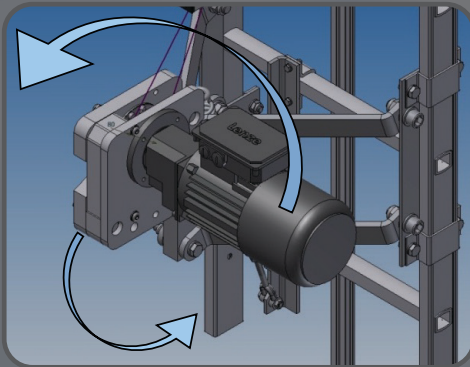
## CLIMB ASSISTANCE VII – NEW MODEL

This new model has new features and benefits for the user and a faster more flexible installation. Both the motor and the control box can be attached to the ladder. The installation is independent of the design and material of the bottom platform making it easier to make regulation for the tensioning of the rope.

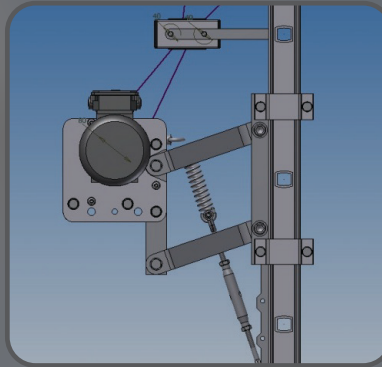
The engine for the application has been optimized with a better performance as a result.

The installation is highly flexible and easily adaptable to most WTG designs.

Benefits for the user are a higher safety when using the Climb Assistance because he can stay attached to the rope and the fall protection system and still be able to access the control box.



4 different assembly configuration with the same standard parts



More regulation for tensioning the rope.



### ADVANTAGES FOR THE USER:

The service technician's own weight will be relieved of the chosen number of kilos (35 to 45 kg).

If the user weight is 100kg and chooses a pull of 40 kg, he only has to lift 60 kg of his own body weight.

The user decides whether he wants to climb slowly or quickly.

The automatic pull is constant no matter how fast the user is climbing avoiding sudden movements.

Pull and speed work independent of each other.

The automatics can be disconnected or connected anywhere and at any time.

### SPECIFICATIONS:

Motion detection system for start/stop (patented system)

Adjustable pulling force 35/45 kg

CE/UL Marked

Machines parts developed according to the Machinery Directive 2006/42/EC

Power supply: -Standard: 230 V 50-60 Hz -Option: 110 V 60 Hz  $\pm$  10%

Maximum current: 4 A  $\pm$  10%

Rated current consumption: 2.4 A  $\pm$  10 10%

Working temperature: -Standard -10°C/+55 °C -Option: -25 °C/+55 °C

Protection rating: -Motor IP55 -Control box IP66

Hauling rope  $\varnothing$ 12 mm breaking load: 2700 daN

Max.Noise level: <70 dB