



PDW

Process duty open winch
for loads from 6.300 to 70.000 kg

 **VERLINDE**
LIFTING EQUIPMENT



PDW

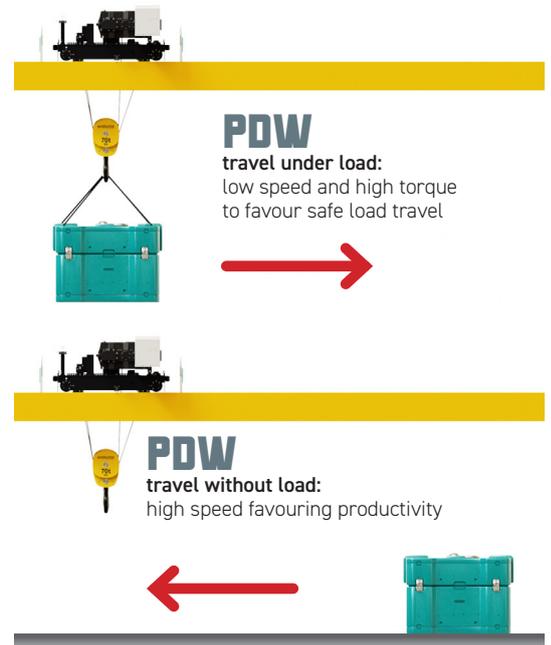
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VERLINDE open winch family is now extended in term of duty group with the PDW. This range of open winches makes it possible to provide technical responses to your search of lifting unit with duty group from M6.

Standard technical characteristics

- > Large spectrum of lifting capacity (from 6,3 to 70 tonnes).
- > Hoisting speeds 10 m/min and 20 m/min (ESR speed for hoisting.)
- > True vertical lift, double girder trolley or fixed version or machinery only.
- > Trolley speed control (inverter for variable speed drive) from 20 m/min to 61 m/min.
- > Technical optimization of component design following modular design concept.
- > PDW is designed according to EN standards (rope safety factor is always 5) and target for heavy duty class when product is requested according to FEM standard, lifting capacity is de-rated to comply higher rope safety factor.
- > Reeving: 2 x 2 and 2 x 4 reeving's available.
- > Built in standard features to enhance the safety:
 - Hoist condition monitoring device.
 - Upper and lower, slow down and stop limits for hoist with weighted ultimate upper switch.
 - Trolley and bridge travel slow down & stop limits.
 - Safety features: over speed and overload protection.

> PDW is equipped with ESR as standard.



> Optional features

Mechanics

- > Anti-condensation package, motors standby heating, electrics standby heating.
- > Second brake: Ready assembly surface for enclosed disc brake on the gear primary shaft.
- > Second brake: thruster operated disc brake.
- > Rope drum with deep groove.
- > Hardened rope drums.
- > Hardened rope sheaves.
- > Rope overwrap indication bar.
- > Rain covers.
- > Oil drip pans.
- > Rail brush assembly.
- > Storm lock device.
- > Anti-jump catches against earthquake, etc.
- > Buffer extensions.
- > Grease nipples to group.
- > Hydraulic buffers.
- > Hook block with Ramshorn forging .
- > Rotation lock of hook forging (4 x 90°).

- > Motorized hook.
- > Cable reel for lifting device.
- > Special painting for trolley and components.

Electrics

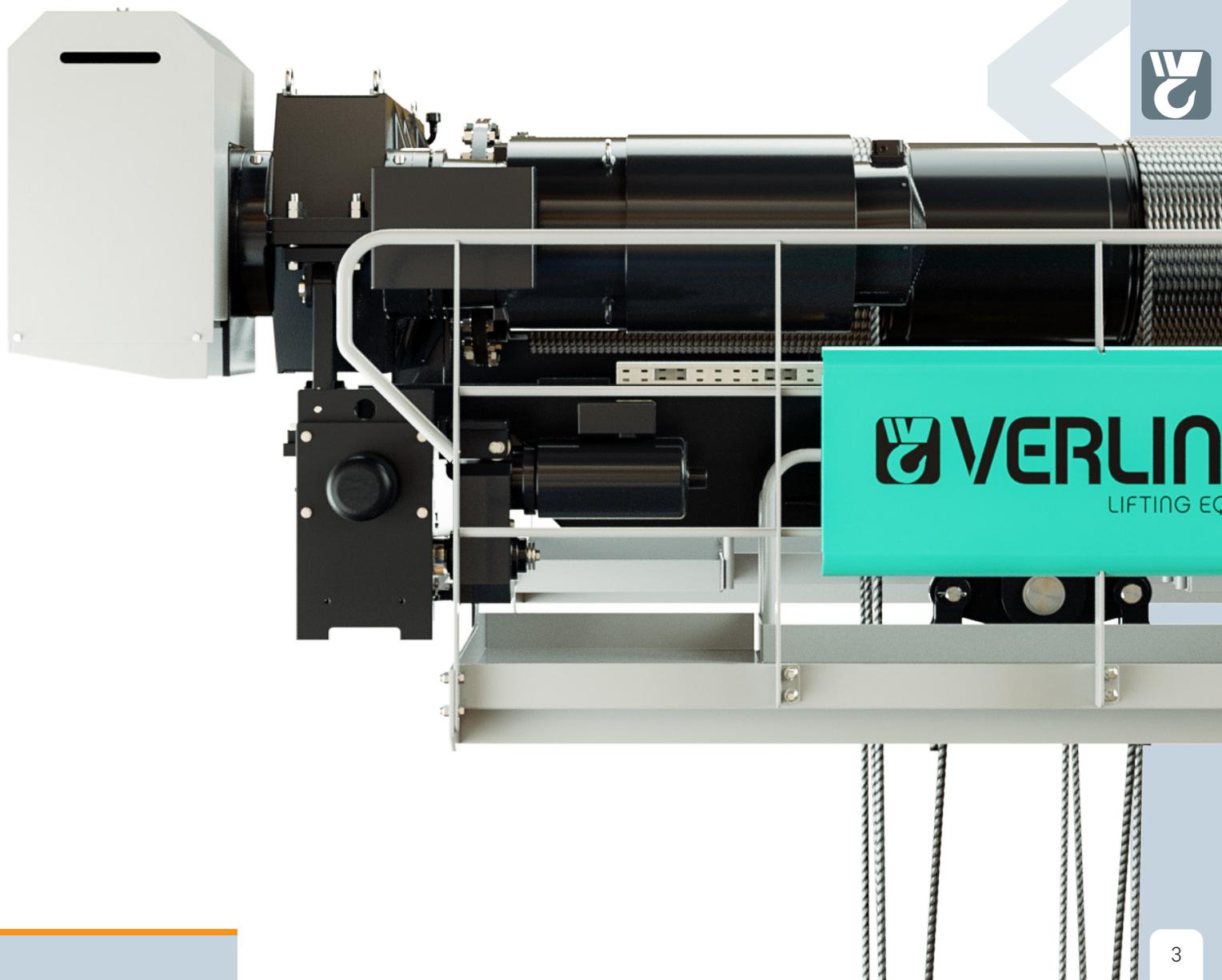
- > Sway control (incl. encoder in the slow speed shaft of hoist gear).
- > Inching.
- > Micro speed.
- > Slack rope supervision (with loading device).
- > Hoisting synchronization (two or more main hoists).
- > Trolley anti-collision device between two trolleys.

Maintenance

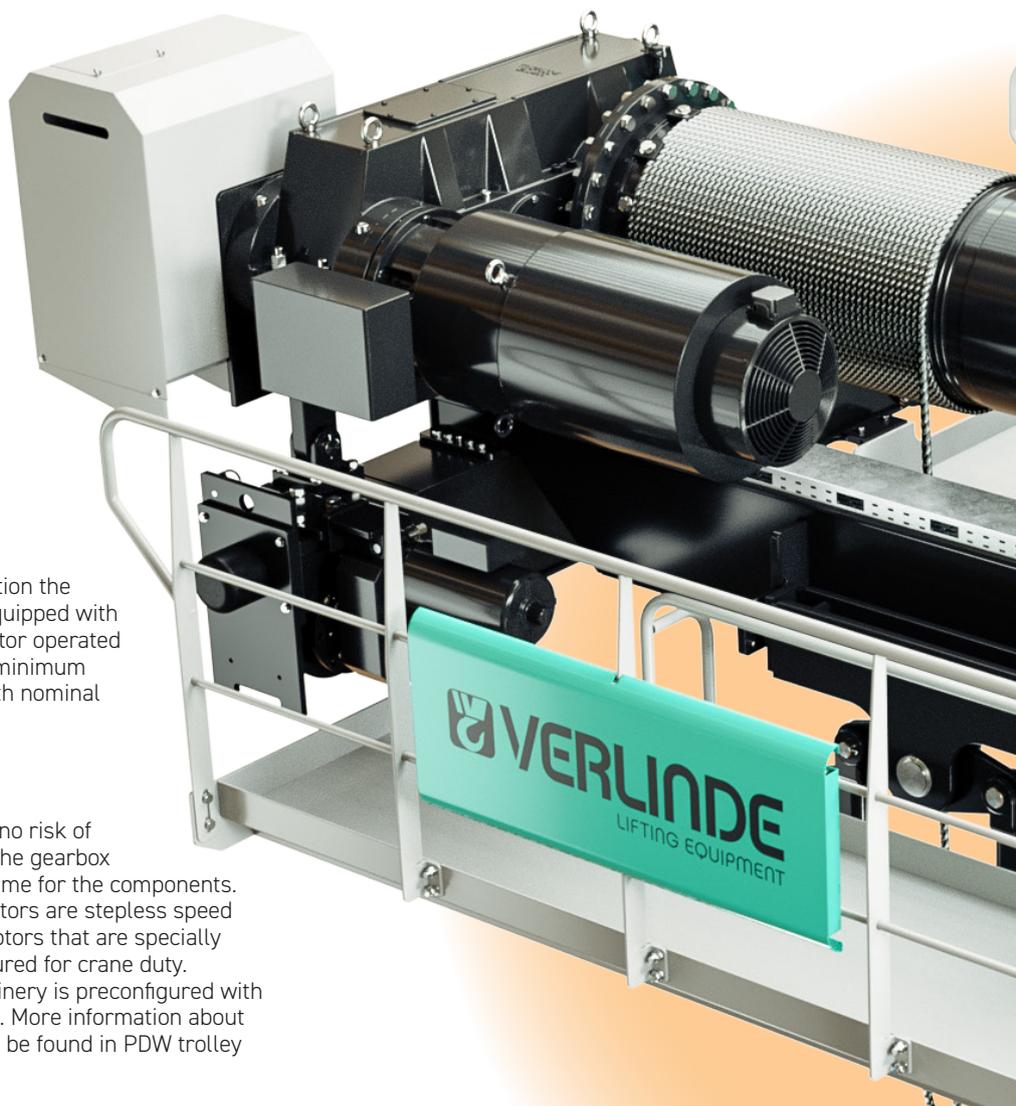
- > Fixed service platform, one or two sides.

Environment

- > -20 °C to +55 °C temperature possible.
- > IP66 possible for humid or dusty environment.



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Hoisting brakes

As a standard configuration the hoisting machinery is equipped with a electrohydraulic thruster operated disc brake which has a minimum 200% braking torque with nominal load.

Hoisting motors

Flange mounted motor, no risk of misalignment between the gearbox and motors. Higher lifetime for the components. Hoist and traversing motors are stepless speed control squirrel cage motors that are specially designed and manufactured for crane duty. The PDW hoisting machinery is preconfigured with four basic motor frames. More information about motor specifications can be found in PDW trolley technical guide.

Hoisting machinery

Modular design concept provides compact design, rail gauge is optimized based on customer desired height of lift. Hoist machinery is supported with a unique floating suspension which eliminates the bending forces due to load weight. Fatigue analysis of the structure has led to a unique design of the machinery support arrangement that eliminates internal stresses. Extended speed range (ESR) for hoisting speed available for free, lifting speed is double with empty hook.

Hoisting gears

Unique design of gear box and hoist drum construction, structural deflections of the rope drum and the trolley do not cause misalignment in the connection between the drum end and gearbox; reduce fatigue failure.

Customer benefits: highest lifetime of the components. Sealed gearbox housings are made of spheroidal cast iron or are welded constructions.

Traversing motors

Traversing motors are stepless speed control squirrel cage motors.

Traversing gears

The trolley is equipped with two pieces of traversing machineries. Traversing gears types are QM6 and QM7.

Hook blocks

Compact hook block that allows some side pull in trolley traversing direction (robust). Easy to handle hook blocks are structurally closed and rotate freely 360 degrees.

Rope drum

Rope drum is machined from high quality steel and has precision machined grooves for rope. Rope overwrap protection bar is available as an option for all rope falls configurations.

Pulleys

Smaller rope reeving, lesser rope bends during each cycle, improved the life of the rope, less spare costs. Ropes are manufactured from high tensile steel as standard. The rope pulleys are made from spheroidal cast iron and the construction of large diameter pulleys ensures that the rope is retained in the pulley.



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Trolley end carriage and wheels

Optimized rail gauge = optimized amount of rope & optimized dimensions. Trolley end carriage is made from welded box, not tube, to ensure robust design.

Trolley service platform

The trolley platform offers easy access to the service points for inspection trolley platform is used as an installation place e.g. for loading device power supply cable reels.

Limit switch functions

Adjustable, self-re-setting hoist and lower limit switch functions are provided as standard to prevent over travel of hook. Trolley traversing motions are equipped with slow-down and or stop limit switch functions. The hoisting motion is also equipped with an ultimate safety limit switch, which ensures the operation of standard mechanical upper limit switch.

Buffers

Energy-absorbing buffers are provided with Trolley end carriage.

Overload protection

Each winch is equipped with overload protector, which will prevent the lifting of loads beyond the nominal load of each winch on the crane.

Safe Working Period monitoring

Condition monitoring unit monitors regularly the "Safe Working Period" (SWP). SWP refers to the actual working life of a hoist since installation.

Electrics

The trolley main controls are located on the bridge electrical panels. Trolley connection box is located on the trolley. Connection box normally contains only terminals and overload sensor's amplifier. Proven technology: same bridge panel and electric components that actual range.

Maintenance friendly

Easy access to inspection points (e.g. to rope fixings, hoisting motor, trolley motor easily accessible form trolley platform).



VERLINDE is:

- > The leading French distributor and exporter of lifting and handling equipment.
- > A comprehensive range of 30 groups of lifting equipment from 60 to 250,000 kg.
- > ISO 9001 Quality control certified and ISO 14001 Environmental Management Systems.

In France:

A sales network and after sales service points, EUROPONT travelling crane construction plants and a distributor network.

Abroad:

A customer service in more than 92 countries.

References

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Arcelor Mittal, Unimetal, Stein, NFM, Framatome, Alstom

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Sanofi Aventis, Total, Du Pont De Nemours

Aeronautical industry

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