

- **Bull wheel Puller with integrated reel winder for pulling 1 rope up to a maximum pull force of 9 to**
- **Double bull wheel drive with a bull wheel diameter of 540 mm**
- **Reel winder for loading/unloading reels independently**
- **With automatic and continuously adjustable rope guiding device**
- **Special reel shaft => allows one single operator to change the reels very quickly without tools**
- **Robust machine, constructed for highest reliability of operation, simple operation and minimal maintenance**
- **Operation of the machine via cable remote control (optional also via radio remote control) => good overview, low noise level and a safe position for the operator**



#### Technical data in puller mode:

- Max. pull force: 9.000 daN
- Continuous pull force: 8.000 daN
- Continuously adjustable speed: 0 - 5 km/h (83 m/min)  
at 8.000 daN: max. 2,8 km/h (46 m/min)

#### Control of the machine:

- Cable remote control with 10 m cable (functions: rope in/out, emergency stop); rope can be indefinitely controlled in/out via a joystick
- Emergency operation for controlling the machine by hand
- Control panel with display of the pull force and all instruments to control engine, hydraulic and electrical systems
- Pull force switch-off system (inductive system for highest safety of operation)
- Digital meter counter and digital tachometer
- Preparation for a quick installation of a pull force recorder

#### Cover:

- Lockable cover made of thick-walled aluminium sheet, protects the diesel engine, the hydraulic and the electrical systems => increases the reliability of the machine and is noise reducing

#### Double wheel drive:

- 2 bull wheels with a diameter of 540 mm
- Each with 10 grooves made of hardened steel
- Grooves designed for connectors up to Ø 52 mm
- Automatic rope clamping with integrated grounding device => rope anchoring not necessary during change of reels

#### Hydraulic drive system:

- In both bull wheels a complete driving unit consisting of planetary gear, brake and hydraulic motor is integrated => fully enclosed and therefore requiring minimal maintenance
- 2 emergency multiple-disc brakes, automatically activated
- High quality control technique enables inching even under maximum load
- Highly effective oil cooling system, electrically activated and controlled via thermostat, designed for extreme operating conditions
- Hydraulic hoses and screw connections with a special sealing system for a long service life without leakage
- Hydraulic differential system for the bull wheel drives => low stress for ropes and planetary gears

#### Integrated reel winder:

- Hydraulic drive of the reels and the rope guiding device with gear and hydraulic motor => fully enclosed => requiring minimal maintenance
- With free wheel device and mechanical disc-brake system (optional) for a controlled pull out of the rope
- Reel lifting device for steel reels with Ø 1.100 - 1.400 mm
- Hydraulic lifting and lowering of the reels for loading/unloading
- Automatic rope guiding device; can be continuously adjusted without tools to all rope diameters and different reel widths

#### Engine:

- Water-cooled DEUTZ diesel engine with 100 kW (136 HP) at 2.200 rpm
- Low speed => long life cycle and low noise level
- 12 V system with high capacity battery for a safe start also at cold temperatures

#### Weight, dimension and noise level:

- Weight: approx. 3.500 kg
- Length x width x height: approx. 4.220 x 2.100 x 2.100 mm (dimensions can be reduced for shipment)
- Low noise level: approx. 79 dB (A)

#### Frame and support:

- Stable steel frame with anchoring eyes
- Central lifting ring for easy loading by crane
- Front support via hydraulic backstay for high stability and a fast and easy anchoring; with integrated eyes for anchoring of ropes
- Back support via stable mechanical parking jack

#### Standard chassis:

- 1 axle chassis with rigid axle with parking brake  
Optional: pneumatic brake system, lighting system, mudguards and registration
- Stable towing bar with height-adjustable towing eye with  $\varnothing$  40 mm (optional:  $\varnothing$  of towing eye according to customer requirement)

#### Optional chassis:

- 2 axle chassis with rigid axle and parking brake  
Optional: pneumatic brake system, lighting system, mudguards and registration
- 1 or 2 axle chassis with spring-mounted axle, pneumatic-hydraulic brake system (with integrated brake cylinders), parking brake, lighting system, mudguards. Optional: registration as high-speed trailer (in Germany up to 80 km/h)

#### Optional equipment:

- Special maintenance-free precleaner for the air filter; prevent engine overheating and reduce maintenance work at the diesel engine
- Mechanical disc-brake system for reel winder
- Grounding plate with holding device
- Noise reduction kit for cover
- Biodegradable hydraulic oil
- Crawler chains to reduce the ground pressure (only with 2 axle chassis)
- Electronic pull force recorder to document the pull force
- Radio remote control (additional functions: ignition, engine starting)
- Reels with detachable or non-detachable flange with  $\varnothing$  1.100 or 1.400 mm
- Ropes (steel or synthetic fibre ropes) on request
- Special equipment or special models on request



Modifications and errors excepted. Illustrations show in part optional equipment. Technical data varied according to model. Machine performance is calculated at sea level at 20°C.