



DRYING



CONVEYING



DE-DUSTING

Overall view of the turntable: accumulator, loading system and the control room



Plants and components for the production of heavy special cables

Münstermann designs, develops and produces turnkey solutions for the production of heavy special cables like sea cables, which are needed for offshore wind farms. A typical use for the plants is the transfer of the cable from the stranding machine to the turntable and the intermediate storage of the cable on the turntable (buffer storage). The units and components can be offered along with the accompanying automation systems and safety engineering.

Offered components

- Turntables in the most varying dimensions and different weights (e.g. diameter up to 35 metres and a load capacity of up to 4,000 tonnes)
- Transportation and handling systems, for instance, from the stranding machine to the turntable
 - Cable pull systems (tensioners) for an efficient and safe transportation of the cable produced
 - Safety measures during a break in the production process using a so-called accumulator
 - A loading arm for the transfer of the cable to the turntable
- Complete control systems of the plants
 - complex solutions for cable production
 - basic solutions for cable storage
- Mobile and stand-alone tensioners

Advantages of the solutions developed

- Tensioners are designed for cables up to approximately 300 millimetres in diameter and for a reeling speed of up to 20 metres per minute.
- Turntable drive is reversible.
- The unit operates very quietly when using a wheel block compensator.
- Tolerances in height are compensated for by a wheel block compensator.
- Assembly both outdoors and indoors is possible.

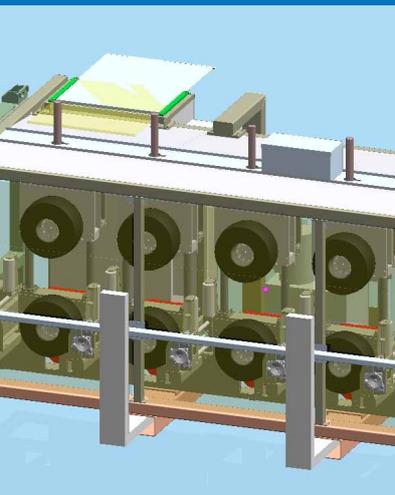


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INNOVATIVE PLANT ENGINEERING FROM GERMANY

3D-illustration of the cable pull system (tensioner) for cable transportation



Buffer store during production of the cable (accumulator)



View into a control room with panel and joysticks for the control of the turntable



Wheel-blocks for the turntables in the Münstermann production



Münstermann offers plants and components for the production of special cables as for example those needed for offshore wind farms. A typical application is the transfer of the cable from the stranding machine to the turntable, which acts as a buffer store for the cable. Münstermann can also supply transport systems, which unload the cable from the storage turntables and lay it onto an appropriate turntable on the cable-laying ship. The assembly of this unit is both possible outdoors and indoors as well as near the sea.

Turntables

Münstermann can supply turntables with a diameter of up to 35 metres and with a load carrying capacity of up to 4,000 tonnes. Further typical dimensions and carrying loads are for example:

- Diameter 10 metres, load carrying capacity 150 tonnes
- Diameter 50 metres, load carrying capacity 2,500 tonnes

The rotary speed of the turntable varies according to the position of the cable on the turntable. The drive is reversible which means that the rotary direction can be reversed. Special wheel block compensators ensure quiet operation of the unit and compensate for high tolerances.

Transportation and cable pull systems

The transportation of the cable is effected by tensioners. Cables with a diameter of up to 300 millimetres and at a speed of up to 20 metres a minute are transported. The roller path consists of heavy duty rollers and has as an example a bending radius of up to 3 metres. Along with the actual transport systems Münstermann can offer turnkey solutions including the static calculations, the design, development and the production of the constructional steelwork for the roller path. The loading arm for the transfer of the cable to the turntable can, depending on the requirement, be pivoted both horizontally or vertically either electrically or hydraulically.

As a safety measure on a sudden interruption of the production process so-called accumulators (hold down force up to 6 tonnes) are responsible for storing the cable in loops when different speeds of the transport system and the turntable occur.

Automation and control of the unit

The transportation, turntable and the additional components are controlled fully automatically by operational control elements (joysticks and the control panel). The unit itself is safeguarded by sensors and an emergency stop system. ■

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