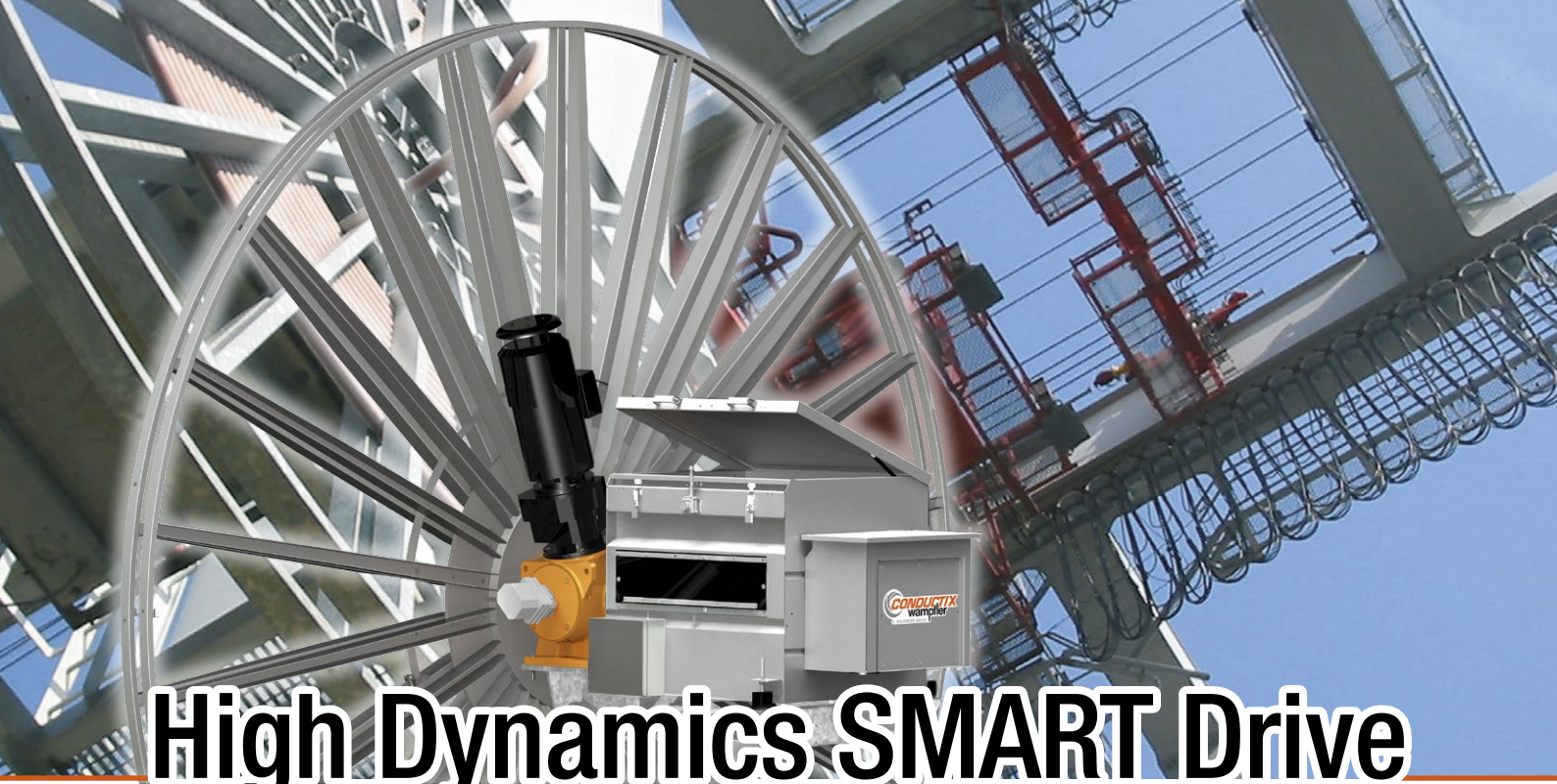


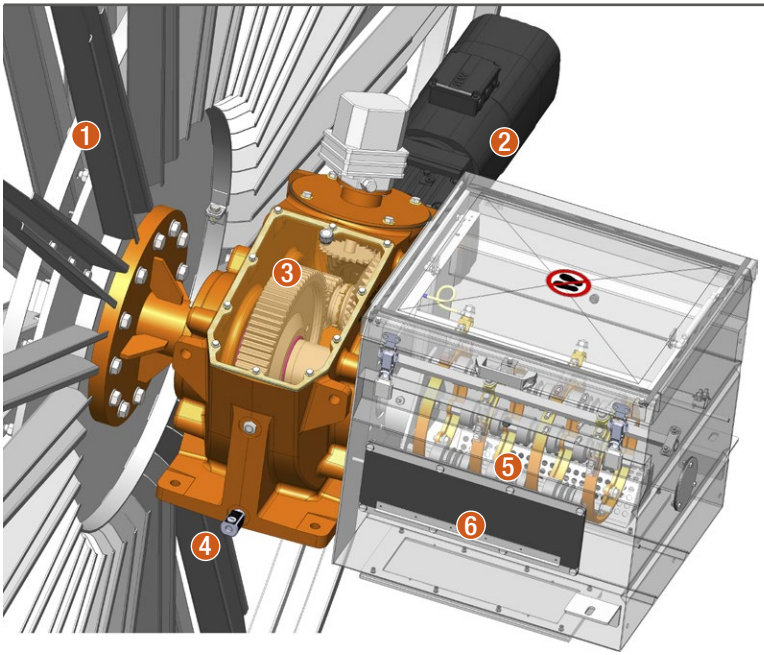
High Dynamics SMART Drive

VFD Motor Driven Cable Reels

CONDUCTIX wampfler

DELACHAUX GROUP

Components



1. Low inertia spool
2. Heavy-duty gear motor
3. High Dynamics gearbox
4. Oil lubrication
5. High-voltage slip ring
6. Inspection window

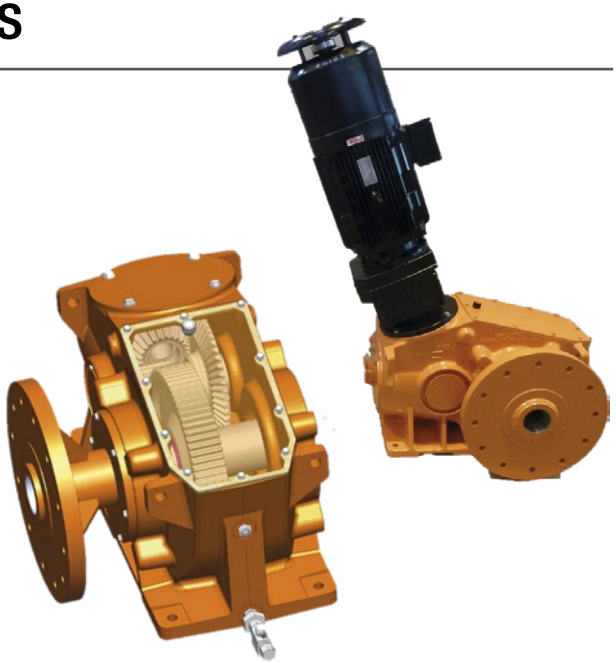
Gearboxes and Gear Motors

The **main gearbox** is available in three sizes:

- HD10 | 3.500 Nm
- HD20 | 4.000 Nm
- HD30 | 8.000 Nm

It is powered by a **gear motor** of configurable power and gear ratio, predefined according to installation parameters.

We offer a very large range of **20 gear ratios from 1:26 to 1:295** and 10 motor sizes from 3 kW to 30 kW for precise adjustment of power and torque to the application.



Variable Frequency Drive

SMART Drive Variable frequency drive for motor driven cable reels

The VFD drives the electric motor by varying the frequency and current supplied to the electric motor. It provides performance, responsiveness and flexibility.

Electronic control units
The control unit is the brain of a VFD cable reel. It combines the frequency converter (hardware) and control laws (software) to control the electric motor during all phases of the reel operation.

To address widely different customer requirements and applications, we offer a broad choice of control units with the High Dynamics SMART Drive range.

Choice of frequency converter brand:
- Siemens
- ABB
- TMEIC

Choice of physical implementation:
- enclosure in main E-room
- panel plate
- outdoor cabinet
- software only

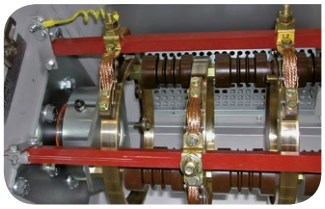
Choice of three different performance levels:
- Basic – suitable for travel speeds up to 100 m/min (with end feed) or 50 m/min (center feed)
- Advanced – suitable for travel speeds up to 300 m/min and acceleration up to 1 m/s² , includes active tension control at center feed

Slip Ring Assemblies

High Dynamics SMART Drive reels are available with a complete range of slip rings to suit all types of electric needs

Low voltage power slip rings
- from 25 to 1250 A, up to 12 rings
- for cables with cross section up to 300 mm².

Control and data slip rings
Up to 72 control rings. Multi-layer, silver or gold plated rings are available for signal transmission.



High voltage power slip rings
- from 7.2 to 24 kV
- up to 500 A.
- 3 or 4 rings + PE.

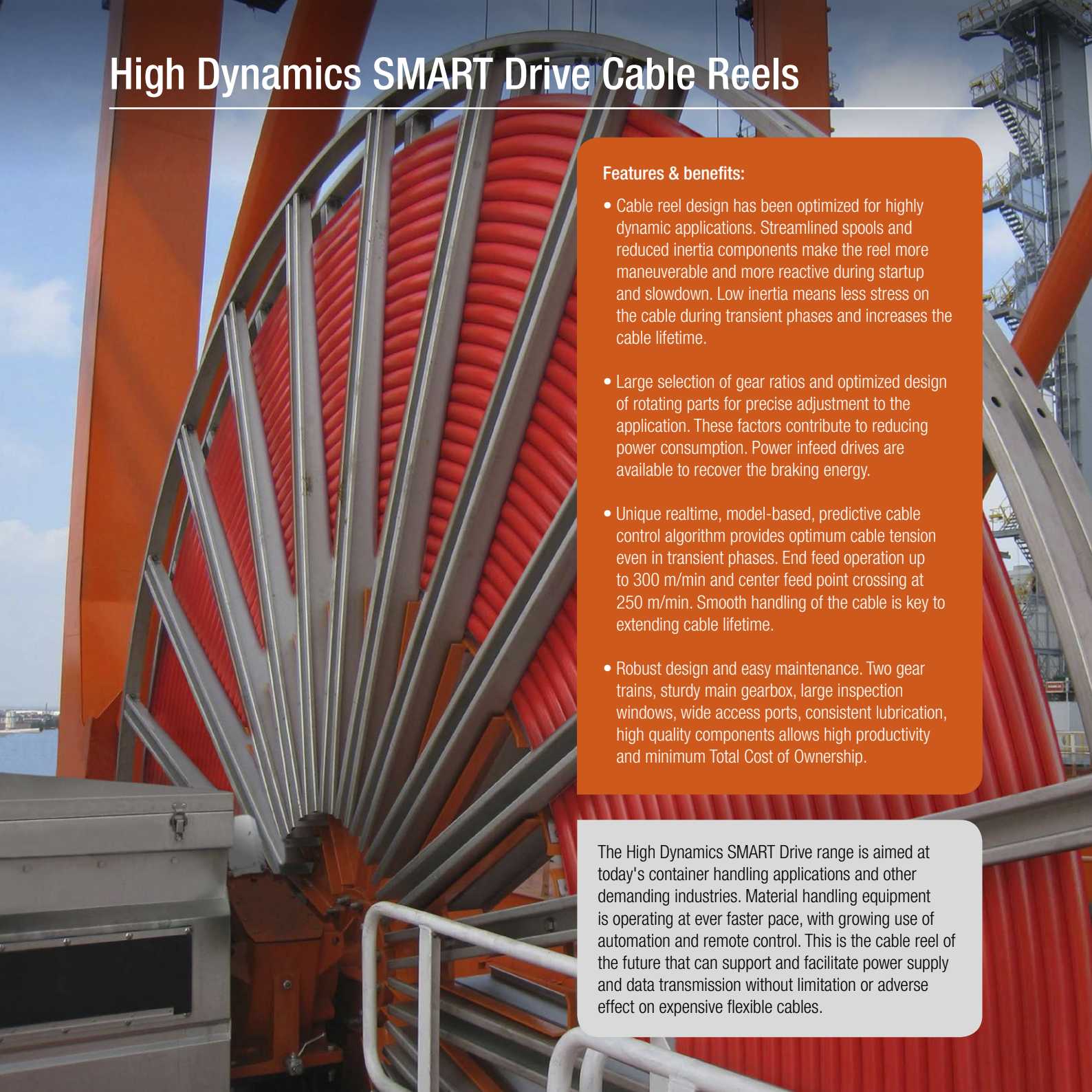
Fiber Optic
- Single mode 9/125 or multi-mode 50/125 & 62.5/125
- 40 up to 120 turns
- 6, 12, 18 and 24 fibers

Technical Data

Technical Specifications

Cable types:	• Power cables (Low Voltage or High Voltage) • Combined power and data cable (fiber optic or copper cores)
Cable voltage and cross-section:	• Low voltage: 690 Va - up to 3 x 300 mm² • High voltage:24.000 V - up to 3 x 185 mm²
Spool type:	• Monospiral or single layer drum • Monospiral outer diameter: from 2.2 m to 8.0 m
Ambient temperature:	-40 °C / +50 °C
Motor power:	Up to 30 kW
Motor features:	IE2, over-temperature sensor, heating resistance, IP55, canopy
Motor position:	Horizontal and/or vertical (72°)
Main gearbox:	• Two gear trains • Conical bevel entry gear + spur gear • Cast iron housing
Total gear ratio:	Main + secondary gearboxes I 1:26 to 1:295
Lubrication (Oil):	Type Mobil SHC 630 for gear motor and main gearboxes
Slip ring type:	• High Voltage: 7.2 to 24 kV, 3 or 4 phases up to 500 A • Low Voltage: 690 V (power), up to 1.250 A • Control and data: up to 72 rings; silver, gold or multilayer rings • Fiber Optic: up to 24 channels, multimode or single mode
Control unit implementation:	• Complete control unit in separate enclosure (indoor or outdoor) • Panel for standard E-Room installation • Software only
Frequency converter:	• Siemens Sinamics • ABB ACS • TMEIC

High Dynamics SMART Drive Cable Reels



Features & benefits:

- Cable reel design has been optimized for highly dynamic applications. Streamlined spools and reduced inertia components make the reel more maneuverable and more reactive during startup and slowdown. Low inertia means less stress on the cable during transient phases and increases the cable lifetime.

- Large selection of gear ratios and optimized design of rotating parts for precise adjustment to the application. These factors contribute to reducing power consumption. Power infeed drives are available to recover the braking energy.

- Unique realtime, model-based, predictive cable control algorithm provides optimum cable tension even in transient phases. End feed operation up to 300 m/min and center feed point crossing at 250 m/min. Smooth handling of the cable is key to extending cable lifetime.

- Robust design and easy maintenance. Two gear trains, sturdy main gearbox, large inspection windows, wide access ports, consistent lubrication, high quality components allows high productivity and minimum Total Cost of Ownership.

The High Dynamics SMART Drive range is aimed at today's container handling applications and other demanding industries. Material handling equipment is operating at ever faster pace, with growing use of automation and remote control. This is the cable reel of the future that can support and facilitate power supply and data transmission without limitation or adverse effect on expensive flexible cables.

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has just one critical mission:
To provide you with energy and data transmission systems that will keep your operations up and running 24/7/365.

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