# Product Overview Motorized Reels









We grow your business!

A **Walker** motorized reel on an outside irrigation system.

### An all-round solution!

### Solutions for a moving world:

Everywhere goods and people are in motion you will find custom-engineered motorized reels designed and built by Conductix-Wampfler for flexible energy, data, air and fluid supply.

Our many years of experience in developing and manufacturing motorized reeling systems has resulted in a sophisticated and highly engineered product line.

Cleaning up! The **Sprinter** motorized cable reel provides energy and data for a waste water treatment bridge.



Low voltage and high voltage cable as well as hoses - Conductix-Wampfler motorized reels cater to all kinds of applications.

In ports, steel mills, theaters, waste water treatment plants and mines - Conductix-Wampfler motor reels reliably handle demanding requirements, even under harsh environmental conditions.

Installation on site can be completed quickly and periodic maintenance is fast and easy to handle. During their lifetime Conductix-Wampfler motorized reels will minimize your total cost of ownership.

As system supplier Conductix-Wampfler offers a complete all-round service to all customers. In addition to the delivery of the motorized reel we offer qualified consulting, project engineering of the complete system, selection of the right cable, and the optimal accessories. The right logistic concept and on-site commissioning are important parts of Conductix-Wampfler's business activities.

Thus energy and data signals reach the consumer safely and reliable wherever they are required.

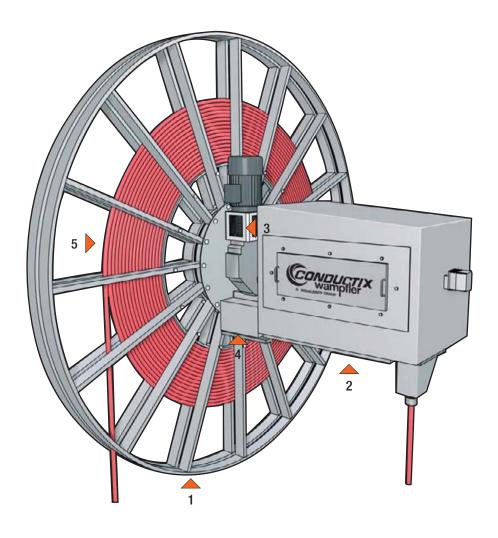
Worldwide!



On the track! The **Walker** motorized cable reel provides main power supply for a railway transfer car.



# **System Structure**



- 1. Spool
- 2. Slip Ring Housing
- 3. Drive Unit
- 4. Gearbox
- 5. Cable and/or hose











Travel

Travel

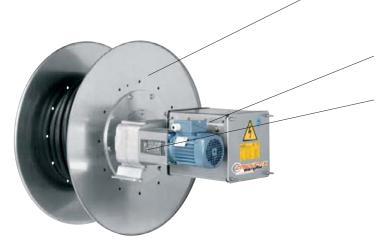
# Product Overview What's your move?

The product range of Conductix-Wampfler motorized reels varies from simple cable or hose reels to variable frequency controlled systems to handle the highest dynamic and mechanical demands.

		distance max.	speed max.
Walker	Bulk wrapped spool for small to medium travel distances with low to medium travel speed	150 m	100 m/min
Cruiser	3-2-3 spool for medium to large travel distances with low to medium travel speed	500 m	60 m/min
Sprinter	Monospiral spool for medium to large travel distances with low to high travel speed	1000 m	300 m/min
Runner	Levelwind spool for medium to very long travel distances with low to high travel speed	1500 m	60 m/min
Climber	One layer spool for vertical application (such as a container crane spreader) with high hoisting speed	100 m	240 m/min



# Walker



### Optimal corrosion protection

even under aggressive conditions

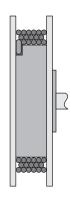
- flanges and reel drum are manufactured from hot dip galvanized steel

**Reliable operation** with standardized slip ring assembly

Highly durable, maintenancefree and contact-less torque transmission - standard motor with magnetic clutch

### Typical applications:

- Waste water treatment plant bridges
- Transfer cars
- Hoists
- Greenhouses
- Theater stages
- Main power supply on cranes



### **Specifications**

Оросписатопо			
Travel speed	Standard motor with magnetic clutch	up to 100 m/min	
	Torque motor	up to 60 m/min	
Winding length	Max. 150 m		
OD of reel body	400 mm - 2100 mm		
Gearbox	Type W 100 Nm - 800 Nm		
	Type K 1000 Nm - 5400 Nm		
Slip ring assembly	0 kV - 1 kV l mA - 630 A		
Temperature range	-20 °C - +60 °C, for higher temperatures, please contact us.		

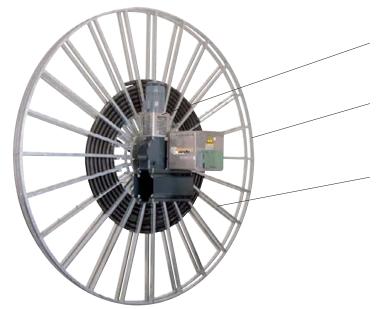








# Cruiser



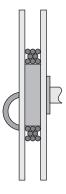
**Undisturbed operation at high duty** due to robust gearboxes with adjusted drive unit

Reeling characteristics are sympathetic to cable due to optimised distances between spokes

**Dimensionally stable spool** due to usage of rectangular spoke tubes

### Typical applications:

- Stacker / reclaimers
- Ship unloaders



### **Specifications**

Travel speed	Standard motor with magnetic clutch		
	Torque motor max. 60 m/min		
	Variable frequency controlled		
Winding length	max. 500 m		
OD of reel body	1000 mm - 6500 mm		
Gearbox	Type W 100 Nm - 800 Nm		
	Type K 1000 Nm - 14000 Nm		
Slip ring assembly	0 kV - 20 kV   mA - 630 A		
Temperature range -20 °C - +60 °C, for higher temperatures, please contact us.			

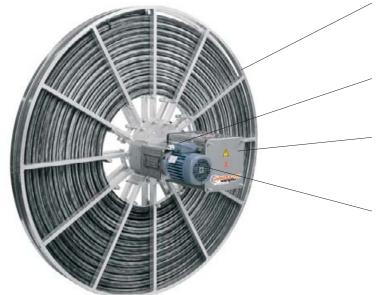








# **Sprinter**



### Dimensionally stable spool

prevents the spool from splitting apart even at high speed and large travel distances

### Optimal adjustment of torque

according to actual requirements due to finely graded gear units

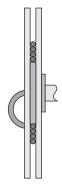
### High reliability - even at 100%

**ED-** due to slip ring assemblies with abrasion resistant rings and low abrasion brushes

**High durability and uninterrupted operation** due to optimal adjusted drive units

### Typical applications:

- Container cranes (STS, RMG, RTG)
- Waste water treatment plant bridges
- Ship unloaders
- Stacker / reclaimers
- Transfer cars



### **Specifications**

Travel speed	Standard motor with magnetic clutch	up to 100 m/min	
	Torque motor	up to 60 m/min	
	Variable frequency controlled	up to 300 m/min	
Winding length	max. 1000 m		
OD of reel body	1000 mm - 7500 mm		
Gearbox	Type W 100 Nm - 800 Nm		
	Type K 1000 Nm - 14000 Nm		
Slip ring assembly	0 kV - 20 kV l mA - 630 A		
Temperature range	-20 °C - +60 °C, for higher temperatures, please contact us.		













**Huge travel distances** with compact cylindrical reel body in different sizes

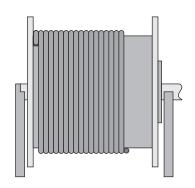
**Optimal load distribution** due to suspension on both sides of the reel body

Easy access to fibre optic rotary joint separated from high voltage in its own compartment made of stainless steel

Long durability of cable due to well defined and smooth guidance with cable spooling device

### Typical applications:

- Stacker / reclaimers
- Ship unloaders



### **Specifications**

оробіновного		
Travel speed	Standard motor with magnetic clutch up to 60 m/min	
	Variable frequency controlled up to 60 m/min	
Winding length	max. 1500 m	
OD of reel body	Available sizes on demand	
Gearbox	Type K 1000 Nm - 14000 Nm	
Slip ring assembly	0 kV - 20 kV   mA - 630 A	
Temperature range	-20 °C - +60 °C, for higher temperatures, please contact us.	

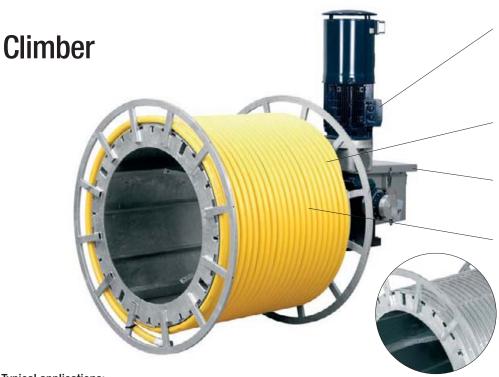












Optimal corrosion protection even under aggressive conditions - welded design manufactured from hot dip galvanized steel or stainless steel

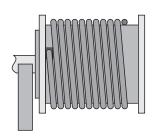
**Optimized spool design** based on the parameters of each unique application

**Reliable operation** with standardized spool in welded housing

Reduced wear on the cable due to well defined and smooth guidance proved by the round spiral-welded reel drum

### Typical applications:

- Spreader on container cranes (Vertical application)



### **Specifications**

-	
Travel speed	Variable frequency controlled up to 240 m/min
Lifting height	max. 100 m
Dimensions of reel body	ID: 1000 mm   0D: 1400 mm
Width: 750 / 850 / 1050 mm / for other sizes, please contact us.	
Gearbox	Type K 1000 Nm - 14000 Nm
Slip ring assembly	0 kV - 1 kV   mA - 630 A
Temperature range	-20 °C - +60 °C, for higher temperatures, please contact us.









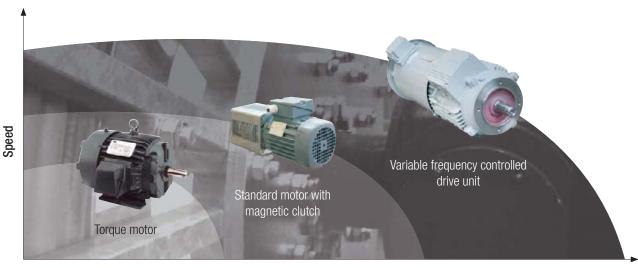
## **Drive Units**



Torque motor mounted on a **Sprinter** in a tough environment

The drive unit is the primary component of a motorized reeling system. Motor and coupling must meet the special requirements of different applications.

Conductix-Wampfler has the expertise to provide the optimal drive unit for each system.



Torque

### For the harshest applications

Torque motor, robust drive unit with high durability - even under the toughest environmental conditions, such as in steel mills or in mining areas.

### For standard applications

Standard motor with magnetic clutch, contact-less, maintenance free and reliable.

# For high-speed applications with long travel distances

Variable frequency controlled drive units, ideally adjusted to the dynamic requirements.

Maintenance-free and reliable!
Magnetic Clutch



# **Gear Units**

The gearbox is the supporting component of the complete motorized reel system.

The gearbox unit supports all reel components and adjusts the rotational speed and torque to meet the needs of the application.



Conductix-Wampfler bevel gear with frequency controlled drive unit for medium to high torque

### Conductix-Wampfler spur gear unit

This compact gear unit is easy to install and can handle low to medium torque requirements, available in four different sizes.



Torque from 100 Nm up to 800 Nm in corrosion resistant aluminium housing. Drive unit and slip ring assembly are parallel to hollow shaft, allowing compact dimensions.

### Conductix-Wampfler bevel gear unit

Powerful, robust design for medium to high torque, available in five different sizes.



Torque from 1000 Nm up to 14000 Nm. High dimensional stability of the steel cast iron housing provides long operational life even when subjected to high mechanical and dynamic stress.



Conductix-Wampfler spur gear with standard motor and magnetic clutch for low to medium torque



Slip ring assembly

Type 323 for main

power supply on

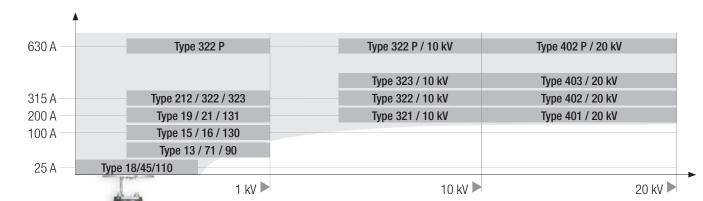
container cranes

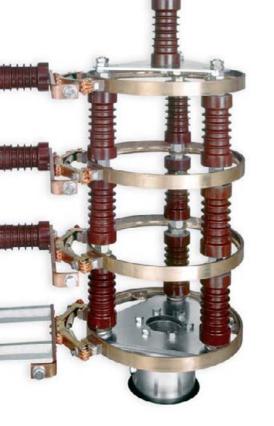
# **Rotary Joints**

Conductix-Wampfler offers a complete range of different rotary joints for electric power, data, air and fluids. Slip ring assemblies up to 20 kV and 630 A are available for energy transmission.

For the transmission of data signals, special multi-layer rings are used to ensure a high transfer rate.

Fiber optic rotary joints and single or multi-channel swivels for air, hydraulic fluid and water complete the product range.







### Fiber optic rotary joints

provide a failure-free transmission of a high volume of data. The optic rotary joint can be provided with up to 18 cores FO 9/125  $\mu$ , 50/125  $\mu$  or 62,5/125  $\mu$  as well as combinations of above mentioned cores.

The attenuation values are below 1 dB due to the non-interrupted transfer.



# Single channel / multi-channel swivel

for air up to 16 bar, water up to 30 bar and hydraulic oil up to 250 bar (other media on request).

Slip ring assembly type 18 for the use on Climber



# Control system for variable frequency controlled drives

Variable frequency controlled drives for motorized reels are applied wherever an energy supply system is required for horizontal or vertical movements of high speed systems.

- where reels are installed at a considerable height above the cable lay.
- where the cable tension on long winding lengths must be reduced.

The advantage of a frequency controlled drive is that it provides continuous torque and rotation speed regulation for speeds up to 300m/min<sup>1)</sup> and accelerations up to 0.6m/s<sup>2</sup> <sup>1)</sup>. They enable a reel to pass over a center feed at a speed of up to 150m/min<sup>1)</sup> without any problems. During the braking phase frequency controlled drive systems even allow power recovery, depending on the model of control system used.

The high functionality of variable frequency controlled drives is determined by the correct combination of motor and drive unit, but mainly by the control system. Conductix-Wampfler provides the best solution for each application. We deliver the hardware components or software packages for the integration into the crane main control up to the complete switching cabinet, including parametrized converters and

appropriate control software as well as complete commissioning on site. Hardware and software will be adjusted to the brands and types used for the main drives.

Control systems of Conductix-Wampfler communicate via the established BUS-systems or in case of simple applications by relay contacts.

Depending on the equipment and configuration of the complete systems



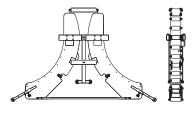


Tension relief with damping device on spreader

### **Accessories**

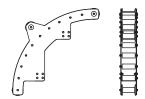
### Cable Guide

Safe and smooth guidance of the cable for end and center feed, optional with slack and over-tension sensors. Corrosion protection due to use of hot dip galvanized steel. Optional with TrenchGuard® cable protection belt lifting device.



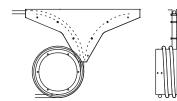
### **Roller Guide**

Positive guidance of the cable from spool to feed point. Available with 60° and 90° deflection, made of hot dip galvanized steel.



### **Cable Feed Point**

Ideal cable guidance at feeding point for center feed applications. Can be supplied with optional tension relief drum.



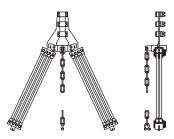
### **Closed Roller Guide Assembly**

Ideal solution for well defined guidance of cable, such as when feeding the cable through a progressive curve or vertical cable guidance at tall mounting heights.



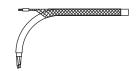
### **Damping Device**

For tension relief at the fixed connection point with high mechanical and dynamic stress in vertical applications, such as a container crane spreader.



### Cable Mesh Grip

Ideal tension relief for cable at feeding point - safe and simple to spread the forces over a wide surface area to prevent cable damage.



Cable guide on RMG Yard Crane



# **Cable Expertise**

The adequate cable completes the cable reel solution!

The choice of the most suitable cable is an important factor with high influence on performance and therefore the reliability of the complete system.

Conductix-Wampfler offers the most suited cable to each application, speed and environmental situation.

We offer a complete range of cables from the low up to highest mechanical and dynamic demand.

Whether you need shielded or unshielded energy and control cables, data and bus cables, or fiber optic cables, which are specially designed for use on motor cable reels, Conductix-Wampfler has them!



### Summary of our cable product range

Conductix-Wampfler	Cable type	Rated voltage		Strain of system		
description	Cable type	nateu voitage	Ambient temperature	low	Strain of system  medium	high
RP-7	PUR-cable		-20°C up to +70°C	•	•	-
RXP-8	PUR-cable		-40°C up to +80°C	•	•	•
RG-8	NSHTOEU-J rubber cable	0.6 / 1 KV	-40°C up to +80°C	•	•	-
RXG-8	(N)SHTOEU-J rubber cable	0.671KV	-35°C up to +80°C	•	•	•
DF-13	Fiber optic cable		-35°C up to +80°C	-	•	•
DX-14	Cable for data transmission (BUS, DMX)		-25°C up to +80°C		•	•
WG-9	Reeling cable with/without fiber optic	3 - 24 KV	-25°C up to +80°C	•	•	-
WP-9	PUR-reeling cable with/without fiber optic	3 - 24 KV	-25°C up to +80°C	•	•	-
WX-10	Reeling cable with/without cable	3 - 24 KV	-35°C up to +80°C	•	•	•
WF-11	Flat reeling cable with/without cable	3 - 15 KV	-35°C up to +80°C	•	•	•
SX-12	Combined cable with/without fiber optic	1 - 24 KV	-35°C up to +80°C	•	•	•

The cable product range of Conductix-Wampfler is the result of a long-term partnership with all of the leading cable producers. Conductix-Wampfler offers the best possible cable solutions for cable reels.

- main application, most suitable
- suitable
- conditional \*2

<sup>\*2</sup> Please get in touch with our sales representative. We will advise you based on your application.



### **Tailor Made Service**

### Branch-specific competence

The scope and depth of the Conductix-Wampfler range of service is based on the requests and requirements of the customer.

From planning to long-term agreements, anything is possible - it is entirely up to you. Plus, the more complex the system layout and the expectations of operational life and operational safety, the more sense it makes to use our competent service team.

### **Planning**

- Definition of the application parameters
- Selection of the optimal motorized reel system and suitable cable or hose
- optimized to customer requirements, application parameters and environmental factors

### Pre-assembly

- Assembly of the reel system
- Installation of cable and connection to the slip ring assembly
- Pre-adjustment of parameters for variable frequency controlled drive units

### Maintenance and service

- Regular maintenance and inspections increase the operational life of the installation, ensuring long-term performance and availability
- Conductix-Wampfler service agreements: the "Worry Free Package"



The experts of Conductix-Wampfler accompany their customers from planning through pre-assembly right up to the on site installation - anywhere in the world

### Final assembly and inspection

- Complete installation and commissioning by trained and experienced personnel up to inspection
- Training and briefing on site
- Determination of the correct assembly on site



# **Your Applications - Our Solutions**

Motorized Reels by Conductix-Wampfler are only one part of the wide range of the Conductix-Wampfler energy, data and air/fluid supply systems. The right solution for your application is always dependant on the specific situation.

Many times, it is the precise combination of several Conductix-Wampfler systems that will yield the best results. You will find consulting and engineering competence in our companies and subsidiaries worldwide - a perfect complement to our wide array of products and systems.













### Festoon systems

It's hard to imagine Conductix-Wampfler cable trolleys not being used in virtually every industrial application. They're reliable and robust and available in an enormous variety of dimensions and designs.

#### Reels

Motorized reels and spring reels by Conductix-Wampfler hold their own wherever energy, data and media have to cover the most diverse distances within a short amount of time - in all directions, fast and safe.

### Slip ring assemblies

Whenever things are really moving "in circles", the proven slip ring assemblies by Conductix-Wampfler ensure the flawless transfer of energy and data. Here, everything revolves around flexibility and reliability!

### Conductor rails

Whether they're enclosed conductor rails or expandable single-pole systems, the proven conductor rails by Conductix-Wampfler reliably move people and material.

### **Energy guiding chains**

The "Jack of all trades" when it comes to transferring energy, data, air and fluid hoses. With their wide range, these energy guiding chains are the ideal solution for many industrial applications.

#### Inductive Power Transfer IPT®

The no-contact system for transferring energy and data. For all tasks that depend on high speeds and absolute resistance to wear.

# Conductix-Wampfler AG | 2009 | subject to technical modifications without prior notice

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