



# Mill Duty Electrification Systems

**CONDUCTIX**  
wampfler  
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Mission-critical mill equipment must not go down . . . . .

Electrification Solutions from Conductix-Wampfler can help!

# Introduction

## Mill Duty Electrification

In modern iron and steel processing facilities, mission-critical equipment must keep running or you incur unacceptable costs and down time. Electrification systems for mill duty equipment are subjected to challenging duty cycles, day in, day out. Yet you demand maximum availability and reliability from your equipment.

You should be able to install your electrification system once, then forget about it!

Our wide range of mobile electrification systems can adapt to your unique requirements. Reliable systems, optimum efficiency, an experienced, committed partner; these are good reasons to choose a mill electrification system from Conductix-Wampfler.

Conductix-Wampfler's core competence is in the development, production, consulting, and installation of tailor made, engineered solutions that provide energy for our customers' moving machinery.

If you seek a complete and reliable solution for mill duty equipment electrification, look no further than Conductix-Wampfler!

### Conductix-Wampfler:

- A local company with a global reach; part of the well-respected Delachaux Group of companies.
- Serves the Americas from plants in Omaha, NE and Harlan, IA and warehouses in Florence, KY, Ontario, CA, Mexico, Canada, and Brazil
- Provides sales and service from 17 offices located across the USA, plus Canada, Mexico, Brazil, and beyond.
- Custom-engineers systems to meet our customers' requirements, with extensive experience in the demanding iron/steel mill environment

- We offer the full range of power delivery systems for moving machinery.
- Products include cable festoon systems, conductor bar, cable reeling equipment, cable chain systems, and both wired and wireless push-button controls.
- We offer on-site installation assistance and installation supervision by request
- If your critical systems absolutely must be keep running, choose Conductix-Wampfler - we keep your vital business moving!

# Motor Driven Reels

Conductix-Wampfler's Motor Driven Reels are built for continuous operation in the harsh environments that are found within the mill environment. The "Mag Coupler" motor/coupler combination, pioneered by Conductix-Wampfler in 1974, maintains constant tension, while allowing the reel to pay out and retract cable. This design causes no wear on the magnets operating inside the coupler and last for years without any degradation.

Even the most robust spring-driven cable reel is limited by the life of its springs. Mill Duty applications required routine spring replacement and if these springs fail the cable tension and cable integrity will be compromised.



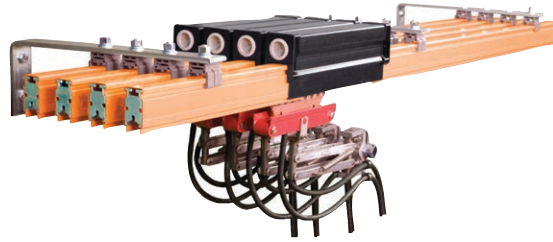
## Benefits of Mag Coupler Motor Driven Reels

- Long lasting drive train; no springs to replace
- Less down time for maintenance; components are easily accessible
- Increased cable life; reel drive train exerts constant cable tension
- Constant cable tension even if power is interrupted
- Ability to handle all mill cable/hoses; torque is adjustable to match the application
- Easy servicing, since the major components are modular.



# Hevi-Bar II

## Conductor Bar



The rugged Hevi-Bar II Conductor bar system delivers reliable, high-capacity electrical performance. It is ideal for tough environments and demanding, heavy-use applications up to and including Class F cranes.

**Hevi-Bar II** is an aluminum bar profile with a stainless steel V-contact running surface, rated from 500 to 1500 amperes. In addition to **Hevi-Bar II** standard orange insulating covers, you may specify green ground covers, black UV-resistant outdoor covers, high-heat covers for temperatures up to 400° F ambient, or as bare bar for temperatures up to 750° F.

### Benefits of Hevi-Bar II

- 100% reliable collector shoe tracking, provided by the "V"-contact bar
- Long-wearing stainless steel surface; 10 times the life of steel bar!
- Ease of retrofit; **Hevi-Bar II** can be easily installed in place of your old conductor bar system
- Available in AC or DC applications
- Mounting options of horizontal or vertical plane
- Ease of install; fewer joints due to 30' bar length

### Dura-Coat Hevi-Bar II For Corrosive Environments

Conductix-Wampfler's optional **Dura-Coat** finish for **Hevi-Bar II** is a ceramic compound in an epoxy binder. It provides superior corrosion resistance and exceptional adhesion. **Dura-Coat** is rated for ambient temperatures up to 350° F.

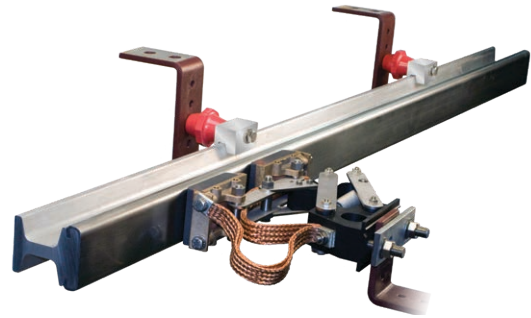
**Dura-Coat** is applied to all metal surfaces except the stainless steel shoe running surface. The insulating cover slides over the coating.

**Dura-Coat** is ideal for:

- Smelters
- Foundries
- Cast Houses
- Coke and ore handling cranes
- Oxidizing and electro-winning facilities



## Hevi-Bar MD



Whether you are electrifying hot metal or charging cranes, billet cranes, coil handling equipment, or scrap handling systems, the 4000 amp or 6000 amp Hevi-Bar MD Conductor Rail is a great choice for your high current, high demand, AC or DC mill requirements.

The rail integrates the hardness and corrosion resistance of a stainless steel running surface with an aluminum body for maximum current carrying capacity and is capable of ambient temperatures up to 500° F. The rail carries US Patent No. 6,983,834 B1.

### Benefits of Hevi-Bar MD

- Running surface is virtually wear-free; wears better than aluminum, copper, or steel surfaces. Cap welds are on the rail sides to reduce resistance and improve shoe life.
- Replacing a “soft” rail, like copper or steel requires grinding to match the new rail to the old. With the Hevi-Bar MD this is unnecessary.
- Running surface is corrosion resistant to enhance conductivity.
- Locking stainless steel hardware is used throughout the system.
- Rail body is high-strength, corrosion-resistant aluminum alloy to maximize current carrying capacity; eliminates the need for copper “auxiliary wiring”.

### Pantograph Collector

- Linkage articulates vertically within a 5.9” (150 mm) range. Horizontally rigid to accurately track the rail.
- Arms rotate on patented “fluid blocks”; sealed for life. Eliminates electrical pitting and joint wear. A reliable bolted clamp system holds the shoe in the holder; easy to replace.
- Rated for 600 amps.



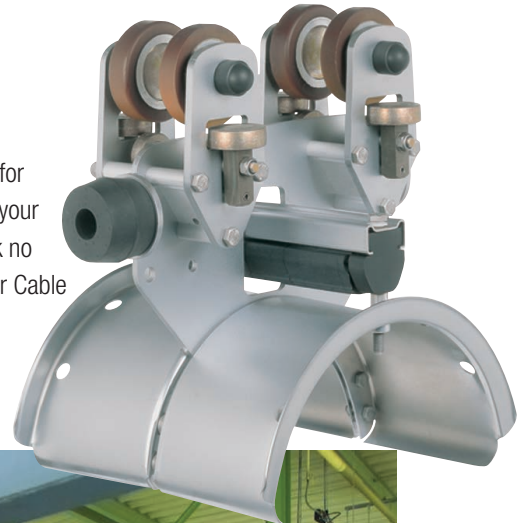
# Cable Festoon Systems

Conductix-Wampfler's vast experience in festoon solutions for severe mill duty applications will ensure that you receive a reliable low maintenance system. From our single cable to multi-tier solutions a system can be uniquely created to suit your mill duty needs. We have provided solutions from high duty coil handling

cranes to high temperature charging cranes. If you are looking for a reliable, long life time solution for your crane electrification needs then look no further than the Conductix-Wampfler Cable Festoon Systems.

## Mill Duty Festoon Systems provide:

- Corrosion resistance; hot-dipped galvanized; stainless steel hardware
- Low Maintenance; side shield independently removable allowing for easy roller replacement
- Modular design; allows for customized solutions
- Long Life-time of operation; double sealed precision SKF bearings
- Easy installation due to pre-assembly and pre-wiring options!
- High temperature cable protection is available



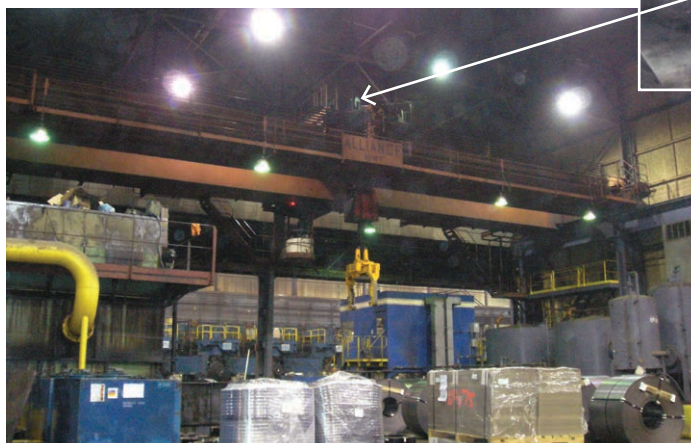
## Spring Driven Reels

If you are faced with size constraints or lack of available power, then a low profile, robust spring-driven cable reel is the solution you are looking for.

Conductix-Wampfler's "6100 Series" is a time tested, proven mill duty spring reel that will allow for 50,000 cycles of operation. The hot dipped galvanized finish will not chip and is therefore resistant to the harsh environment that exists within the mills. The load bearing spool contains two high-grade double sealed ball bearings that are lifetime lubricated. The 6100 features a wide range of models that provide 2 to 36 conductors, and 30' to 200' of cable depending on the application requirements. From transfer cars to magnet cranes Conductix-Wampfler has the spring reel solution that you are looking for.

### Benefits of Series 6100 Spring Driven Reels

- Ease of installation; flange-mounted with quick disconnect options when requested
- Optimal corrosion resistance; hot dipped galvanized flanges / powder coated drum body
- Exceptionally high spring life; springs constructed of high quality spring steel, tested to 50,000 cycles
- Ease of maintenance; springs are encapsulated into a safety canister for quick and safe replacement
- Slip rings are rated at 100% duty cycle and provide for easy conductor connection and simple brush replacement

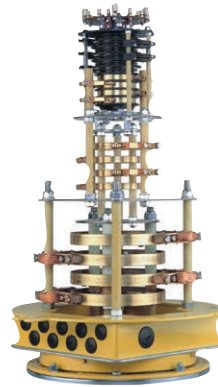




# Slip Rings

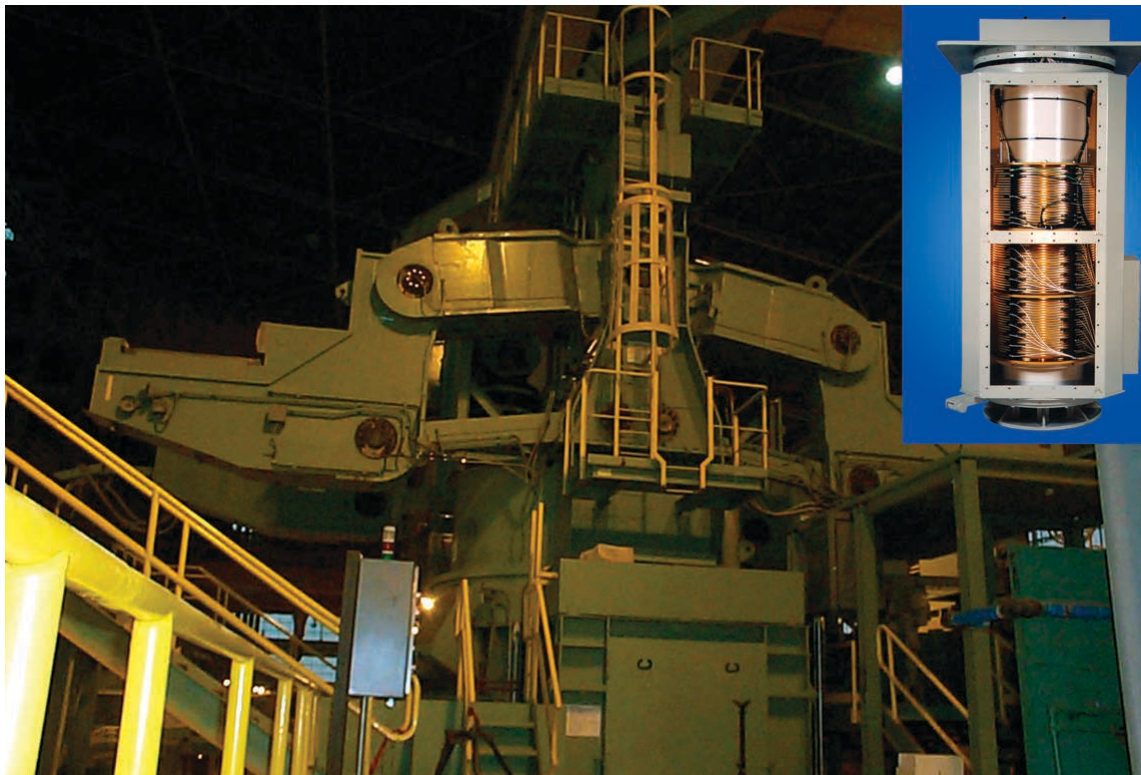
In the past 60 years, Conductix-Wampfler has designed and built thousands of standard and custom slip ring assemblies for every application imaginable. With our engineering experience and know-how we can design and build a rugged slip ring assembly for the demanding requirements in the steel industry. Due to our vast solutions in many industries we have a capability of building slip rings that are capable of signal, control and power with voltages up to 25kV and amperages up to 3000+ amps.

If the application requires a special housing we have our own manufacturing facility and the ability to supply different types of enclosures to meet many different types of the application and environmental requirements including explosion proof assemblies. Designs available to include features such as fiber optics, encoders, through-bores for hydraulic hosing, and hydraulic swivels. For large diameter applications we utilize our wide range of conductor bar products.



## Benefits of Slip Rings:

- Rated for 100% duty cycle
- Easy Service; due to modular design
- Double brush circuits offer redundancy
- Brush contact maintained by individual spring
- Easy replacement of brush holders and brushes; No dis-assembly of brush carriage required
- Ease of installation; self contained complete unit





# Summary

## Worldwide partnership

### Industry-specific experience and expertise

We speak our customers language. Our specialists consult with customers locally to develop custom configured solutions.

Our leading edge innovations enable us to help our customers increase productivity and optimize production.

### A single source supplier

Conductix-Wampfler designs, develops and produces a complete range of products to supply non stationary consumers with power and digital data. As a result, our customers receive product-neutral consulting and can count on us for the optimum solution for any industrial application. Conductix-Wampfler offers not only products but also total custom solutions:

- Product-neutral consulting
- Engineering
- Customer specific solutions
- Pre-assembled systems
- Quality controls according to customer standards
- On site installation
- Maintenance and service



### Global presence

Like our customers and the projects we handle, we are present worldwide. With production locations in Europe, North America, and Asia. Conductix-Wampfler can guarantee available capacity and fast delivery worldwide.

### Perfect coordination

Network thinking and action are just as important to Conductix-Wampfler as relationships with our customers. After all, that provides the basis for the future and lets us forge ahead together by providing solutions for your critical applications.



# Other Products from Conductix-Wampfler

The products described in the this catalog represent a few of the products from the broad spectrum of Conductix-Wampfler components and systems for the transfer of energy, data, gases, and fluids. The solutions we deliver for your applications are based on your specific requirements. In many cases, a combination of several different Conductix-Wampfler products are needed to fill the application. You can count on all of Conductix-Wampfler's business units for hands-on engineering support - coupled with the perfect solution to meet your energy management and control needs.



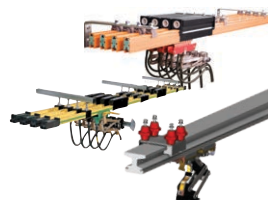
### Motor driven cable reels

Motor driven reels by Conductix-Wampfler are the perfect solution for managing long lengths of heavy cable and hoses in very demanding industrial applications. Monospiral, level wind, and random wind spools.



### Slip ring assemblies

Whenever powered machinery needs to rotate 360°, field proven slip ring assemblies by Conductix-Wampfler can flawlessly transfer energy and data. Here, everything revolves around flexibility and reliability.



### Conductor bar

Whether they are enclosed conductor rails, expandable single-pole bar systems, or high amperage bar for demanding steel mill use up to 6000 amps. Conductix-Wampfler's conductor bar is the proven solution to reliably move people and material.



### Spring driven cable reels

We have 60 years experience and trusted brands such as Insul-8, Wampfler, and IER. We offer small cord reels all the way to large multi-motor units, a wide range of accessories, and hazardous location reels.



### Cable Festoon systems

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



### Push Button Pendants

Our ergonomic pendants are ideally suited for industrial control applications. They are available in a wide range of configurations for overhead cranes and other machinery.



### Radio remote controls

Safe, secure, and reliable radios use the latest in microprocessor technology. Available in several models for overhead crane control and other types of machinery.



### Inductive Power Transfer IPT®

The contact-less system for transferring energy and data. For all tasks that depend on high speeds and absolute resistance to wear.



### Energy guiding chains

The "Jack of all Trades" when it comes to managing energy and data cables and air and fluid hoses. A wide range of energy guiding chains are available for many industrial applications.



### Air hoists and balancers

ENDO Air hoists accurately place delicate loads and continuously vary the speed for precise positioning. They run cool in continuous operations.



### Bumpers

Conductix-Wampfler offers a complete range of bumpers for the auto industry, cranes, and heavy machinery. These include rubber, rubber/metal, and cellular types.



### Spring balancers and retractors

ENDO spring balancers by Conductix-Wampfler are rugged, reliable high-precision positioning devices that reduce operator fatigue and assist with accurate tool placement.

# www.conductix.us

## USA / LATIN AMERICA

10102 F Street  
Omaha, NE 68127

Customer Support  
Phone +1-800-521-4888

Phone +1-402-339-9300  
Fax +1-402-339-9627

info.us@conductix.com  
latinamerica@conductix.com

## CANADA

1435 Norjohn Court  
Unit 5  
Burlington, ON L7L 0E6

Customer Support  
Phone +1-800-667-2487

Phone +1-450-565-9900  
Fax +1-450-951-8591

info.ca@conductix.com

## MÉXICO

Calle Treviño 983-C  
Zona Centro  
Apodaca, NL México 66600

Customer Support  
Phone (+52 81) 1090 9519  
(+52 81) 1090 9025  
(+52 81) 1090 9013

Fax (+52 81) 1090 9014

info.mx@conductix.com

## BRAZIL

Rua Luiz Pionti, 110  
Vila Progresso  
Itu, São Paulo, Brasil  
CEP: 13313-534

Customer Support  
Phone (+55 11) 4813 7330

Fax (+55 11) 4813 7357

info.br@conductix.com

Contact us for our Global Sales Offices

