# Product Overview Festoon-Systems | I-Beams









Count on it!

On the go! Cable trolley system **program 0350** on a steel mill overhead bridge crane

Solutions for a moving world: Wherever you see objects and people in movement, you will find tailor-made Conductix-Wampfler solutions for the flexible transfer of energy, data and media.

What makes Conductix-Wampfler truly remarkable are its years of experience and comprehensive know-how in the development and production of festoon systems. These systems carry flat and round cables for the transfer of electrical energy and data. Hoses are also carried for the directing of fluids, air or gases.

Conductix-Wampfler festoon systems are employed worldwide in steel mills, ports, zinc coating shops and compost preparation facilities, to name a few applications. Perfected technology and standardization in modular design ensure an above-average operational life of the systems, even in the roughest of environments. Assemblies are easily done on site and within the shortest amount of time; service and maintenance are quick and easy. Conductix-Wampfler festoon systems save time and minimize costs - throughout their operational life.

As a system supplier, Conductix-Wampfler offers its customers comprehensive all around service. This includes the delivery of the components, such as the cable trolley, towing trolley and end clamp. Along with competent consulting, the planning of the overall system, the selection and acquisition of the optimal cables and equipment, the right logistical concept and on-site commissioning. Consequently important data and required energy arrive safely, reliably and permanently wherever they're needed.

All over the world! Count on it!

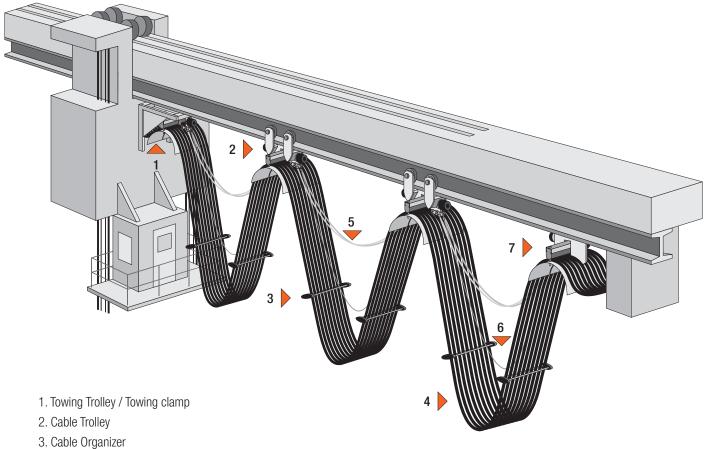


Open the gates! Cable trolley system program 0330 on a lock



Carrying a heavy load! Motorized cable trolley system program 0380 in combination with program 0375 on a STS-container crane. Everything from one source: The right cables are always a given at Conductix-Wampfler!

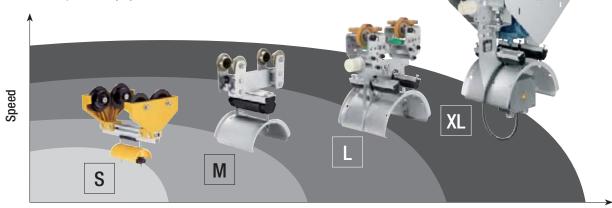
## System Layout



- 4. Cables
- 5. Elastic Damping Devices
- 6. Tow Rope Assembly
- 7. End Clamp

## **Complete overview of cable trolleys** S-Line to XL-Line for I-Beams

The Conductix-Wampfler product range covers cost-efficient cable trolleys made of plastic for the most basic applications all the way up to motorized cable trolleys with frequency converter control and patented drive concept for heavy dynamic loads.



#### Load capacity

Design	For low mechanical and dynamic loads	For medium mechanical and dynamic loads	For high mechanical and dynamic loads	For maximum mechanical and dynamic loads
	Monorail hoists and overhead bridge cranes	Standard and special overhead bridge cranes as well as conveyor systems	Ladle cranes, grab cranes, container cranes as well as high-speed conveyor systems	Ladle cranes, grab cranes, container cranes as well as high-speed conveyor systems

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Festoon- System	0314	0320	0325	0330	0350	0360	0365	0370	0375	0380 0385
Cable weight per cable trolley max. (kg)*	20	80	125	200	350	500	350	350	800	800
Speed max. (m/min)	50	100	120	150	160	160	300**	210	300**	300
Suitable cable type	Flat / Round	Flat Round	Flat Round	Flat Round	Flat	Round	Round	Flat	Round	Round
Multiple saddle		0	0	0	0	0		•	•	•
Motorized										•
	Page 6	Page 8	Page 9	Page 11	Page 12	Page 13	Page 15	Page 16	Page 17	Page 18

\*depending on roller size/roller material | \*\*in combination with motorized trolleys

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Center-loading **flat** or **round cable trolleys** made of plastic for lighter cable selections. Flanged guided plastic rollers for simple I-beam applications. Two, three and four rollers.

These cable trolleys generally run on the same I-beam as the electricitypowered consumer.



Smooth and wear-resistant operation through plastic rollers, with friction bearings and stainless axle

Quick and easy setting to different beam widths through adjustable side shields

Simple and quick assembly through patented plastic split nuts

#### Main applications:

- Electric chain hoists, e.g., on swiveling cranes
- Travelling hoists
- Standard cranes
- Transport systems
- Electricity and air supply for machinery



#### Standard application data

otanidara applioation data	
Max. travel speed	50 m/min
Max. load capacity	20 kg*
Main rollers	diameter: 40 mm   design: flanged rollers   material: polyamide
Ambient temperature	-20°C +60°C
Applications	indoor / outdoor
Acid-proof design	possible
Resistance to chemicals	special designs on request
Curved	optional
I-beam	parallel flange / tapered flange

\*depending on roller arrangement





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Compact **round** or **flat cable trolleys**, center-loading, made of galvanized steel for medium speeds and cable weights.

#### Main applications:

- Standard bridge cranes
- Conveyor systems
- Electric hoist units
- Transport systems



Maintenance-free with antifriction bearing rollers and permanent lubrication

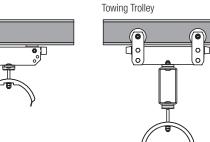
Minimized shock load with rubber buffers

Maximum protection against corrosion with hot dipped galvanized steel parts

Maximum bending strength at low weight with one-piece rollformed trolley saddle in different widths and radii

End Clamp

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#### Standard application data

Max. travel speed	100 m/min*
Max. load capacity	80 kg*
Main rollers	diameter: 40 mm   design: flanged / non flanged
	material: steel / Vulkollan, others on request
Ambient temperature	-30°C +80°C
Applications	indoor / outdoor
Design	hot dipped galvanized steel   stainless steel   powder-coated   painted
Resistance to chemicals	special designs on request
Curved	optional
I-beam	parallel flange / tapered flange





Compact round or flat cable

**trolleys**, center-loading, made of hot dipped galvanized steel for medium mechanical and dynamic loads.



Maintenance-free with antifriction bearing rollers with permanent lubrication for higher loading capacities and speeds S

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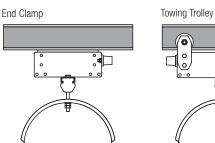
XL

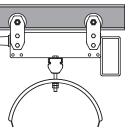
High protection against corrosion with hot dipped galvanized steel parts

Maximum bending strength at low weight with one-piece rollformed trolley saddle in different widths and radii

#### Main applications:

- Bridge cranesConveyor applications
- Electric hoists
- Transport systems





#### Standard application data

Standard application data	
Max. travel speed	120 m/min*
Max. load capacity	125 kg*
Main rollers	diameter: 50 mm   design: flanged / non flanged
	material: steel / Vulkollan, others on request
Ambient temperature	-30°C +80°C
Applications	indoor / outdoor
Design	hot dipped galvanized steel   stainless steel   powder-coated   painted
Resistance to chemicals	special designs on request
Curved	optional
I-beam	parallel flange / tapered flange







The fastest and strongest **round** or **flat cable trolleys** of the M-Line. Made of hot dipped galvanized steel for average speeds and higher loads with four-point suspension.

#### Main applications:

- Bridge cranes
- Conveyor systems
- Electric hoists
- Transport systems



High load capacity with extra large ball bearing diameters

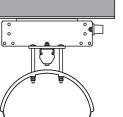
Maintenance-free with anti-friction bearing rollers with permanent lubrication for higher loading capacities and speeds

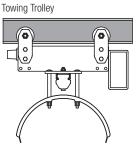
Minimized shock load with robust rectangle rubber buffers

High protection against corrosion with hot dipped galvanized steel parts

Maximum bending strength at low weight with one-piece rollformed trolley saddle in different widths and radii

### End Clamp





#### Standard application data

Standard application data		
Max. travel speed	150 m/min*	
Max. load capacity	200 kg*	
Main rollers	diameter: 63 mm   design: flanged / non flanged	
	material: steel / Vulkollan, others on request	
Ambient temperature	-30°C +80°C	
Applications	indoor / outdoor	
Design	hot dipped galvanized steel   stainless steel   powder-coated   painted	
Resistance to chemicals	special designs on request	
Curved	optional	
I-beam	parallel flange / tapered flange	











Cable trolley with single or multi layer side-loading cable supports for **flat cables**.

Suitable for medium mechanical and dynamic loads including traversing operation with lateral forces. Also suitable for short work cycles and high speeds.

#### Main applications:

- Bridge cranes
- Gantry cranes
- Stacker cranes (RMG's,RTG's)
- Ladle cranes
- Stacker and reclaimers
- Conveyor systems
- Transport systems

#### Standard application data

Max. travel speed	160 m/min*
Max. load capacity	350 kg*
Main rollers	diameter: 50/63/80/100 mm   design: flanged / non flanged
	material: steel / Vulkollan, others on request
Ambient temperature	-30°C +80°C
Applications	indoor / outdoor   sea climate
Design	hot dipped galvanized steel   stainless steel   powder-coated   painted
Resistance to chemicals	special designs on request
Curved	optional
I-beam	parallel flange / tapered flange

\*depending on roller size/roller material











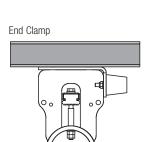
High load capacity with extra large ball bearings with special seals for the toughest environmental conditions - maintenancefree with permanent lubrication

Precise tracking performance controlled by optimized running gear

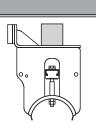
Safe cable support even with large cable packages via a stable rubber clamp profile

Permanent protection against corrosion through stainless steel hardware

**One-piece cable saddle** welded to the center plate for high loads



Towing Clamp



Cable trolley with single or multi layer side-loading cable supports for **round cables**.

Suitable for high mechanical and dynamic loads including traversing operation with lateral forces. Also suitable for short work cycles and high speeds.

#### Main applications:

- Scrap and ladle cranes in steel mills
- STS-container cranes
- Heavy-duty scrap cranes in steel mills
- High-speed conveyor systems



High load capacity with extra large ball bearings with special seals for the toughest environmental conditions - maintenancefree with permanent lubrication

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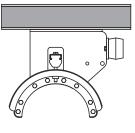
Permanent protection against corrosion through stainless steel hardware

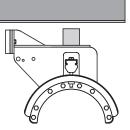
**Optimal cable support** even with large cable packages via a stable rubber clamp profile

Maximum energy absorption of high mechanical and dynamic shock loads with robust hollow rubber buffers - one-or doublesided

Maximum bending resistance at low weight through rollformed cable saddles with maximum bending strength

End Clamp





Towing Clamp

#### Standard application data

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Max. travel speed	160 m/min*
Max. load capacity	500 kg*
Main rollers	diameter: 50/63/80/100/112/125 mm   design: flanged / non flanged
	material: steel / Vulkollan, others on request
Ambient temperature	-30°C +80°C
Applications	indoor / outdoor   sea climate
Design	hot dipped galvanized steel   stainless steel   powder-coated   painted
Resistance to chemicals	special designs on request
Curved	optional
I-beam	parallel flange / tapered flange



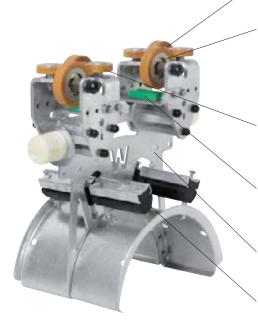




High-speed cable trolley with single layer side-loading cable supports for **round cables**.

Suitable for maximum mechanical and dynamic loads including traversing operation with strong lateral forces. Also suitable for short work cycles and high work speeds.

For high speeds, in combination with a motorized cable trolley.



- Smooth operation due to patented roller arrangement
- Maximum load capacity with extra large ball bearings with special seals for the toughest environmental conditions maintenance-free with permanent lubrication

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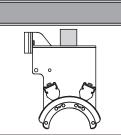
- Low wear and low noise emission even at high speeds with web-guided side guide rollers
- Optimal guidance under maximum mechanical loads with a special polymer glide plate
- Maximum stability with a one-piece, continuous center plate up to the saddle
- **Optimal cable support** with a double V-lined cable clamp

#### Main applications:

- STS-container cranes
- Ladle cranes
- Heavy-duty grab cranes
- High-speed conveyor systems

# End Clamp

Towing Clamp



Standard	application	data

The second	
Max. travel speed	300 m/min* (in combination with motorized trolleys)
Max. load capacity	350 kg*
Main rollers	diameter: 112/125 mm   design:non flanged
	material: steel / Vulkollan, others on request
Ambient temperature	-30°C +50°C
Applications	indoor / outdoor   sea climate
Design	hot dipped galvanized steel   stainless steel   powder-coated   painted
Resistance to chemicals	special designs on request
Curved	optional
I-beam	parallel flange / tapered flange









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Rugged cable trolley with multiple layer side-loading cable saddles for **flat cables**.

Suitable for maximum mechanical and dynamic loads including traversing operation with lateral forces. Also suitable for short work cycles and high speeds.



High load capacity with extra large ball bearings with special seals for the toughest environmental conditions - maintenance-free with permanent lubrication

Low wear and low noise emission even at high speeds with web-guided side guide rollers

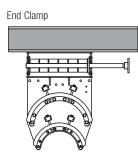
Maximum energy absorption of high mechanical and dynamic shock loads with robust rubber or cellular buffers

Optimal cable support with a double V-lined cable clamp

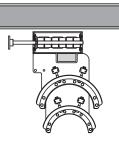
**Compact design** - saddle diameters synchronized with the optimized minimum bending radii of the flat cable packages

#### Main applications:

- Casting cranes
- Scrap cranes
- Ladle cranes
- High-speed conveyor systems
- Transport systems



Towing Clamp



#### Standard application data

Max. travel speed	210 m/min*	
Max. load capacity	350 kg*	
Main rollers	diameter: 125/160 mm   design: non flanged	
	material: steel / Vulkollan, others on request	
Ambient temperature	-30°C +50°C	
Applications	indoor / outdoor   sea climate	
Design	hot dipped galvanized steel   stainless steel   powder-coated   painted	
Resistance to chemicals	special designs on request	
Curved	optional	
I-beam	parallel flange / tapered flange	





Cable trolley with multi layer side-loading cable saddles for **round cables**. Suitable for maximum mechanical and dynamic loads including traversing operation and strong lateral forces. Suitable for short work cycles and high speeds - combinable with powered cable trolleys.



End Clamp

High load capacity with extra large ball bearings with special seals for the toughest environmental conditions - maintenancefree with permanent lubrication

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Low wear and low noise emission even at high speeds with web-guided side guide rollers

Easy replacement of the rollers with individually removable side shields

Maximum stability with a onepiece, continuous center plate to the bottom saddle

Optimal cable support of the round cables with a double V-lined cable clamp

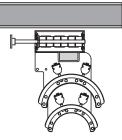
#### Main applications:

- STS-container cranes
- Scrap and ladle cranes in steel mills
- High-speed conveyor systems

Standard application data

- Transport systems

Towing Clamp



Max. travel speed	300 m/min* (in combination with motorized trolleys)
Max. load capacity	800 kg*
Main rollers	diameter: 125/160 mm I design: non flanged
	material: steel / Vulkollan, others on request
Ambient temperature	-30°C +50°C
Applications	indoor / outdoor I sea climate
Design	hot dipped galvanized steel   stainless steel   powder-coated   painted
Resistance to chemicals	special designs on request
Curved	optional
l-beam	parallel flange / tapered flange



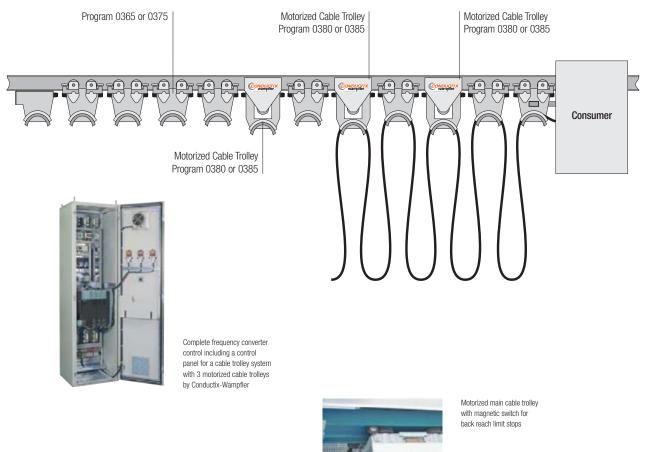


## **Motorized Festoon-Systems**

The requirements of today's systems, especially in container handling, often exceed the physical limitations of conventional systems when it comes to speed, acceleration and cable package weight. The application of motorized cable trolleys in combination with nonmotorized cable trolleys allows for controlled acceleration and deceleration. This synchronization with the consumer makes it possible to increase the travel speeds of the entire system enormously. In addition, wear and maintenance work are reduced considerably, increasing the availability of the complete facility and minimizing the overall costs.



#### System sketch



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## Program 0380 | 0385

Motorized cable trolley for **round cables** with a patented compact drive (Progr. 0380) or with a gear motor (Progr. 0385).

The entire system consists of motorized cable trolleys, a frequency converter control for optimizing movement and cable trolleys from programs 0365 and 0375.

#### Main applications:

- High-speed STS-container cranes of all Panamax classes
- Special overhead bridge cranes
- Scrap and ladle cranes in steel mills
- High-speed conveyor systems
- Transport systems

Increased capacity range with double gear motor drive

**Optimal cable support** with a double V-lined trolley clamp

#### Standard application data

otalidara application data	
Max. travel speed	300 m/min*
Max. load capacity	800 kg*
Main rollers	diameter: 125/160 mm   design: non flanged
	material: steel / Vulkollan, others on request
Ambient temperature	-30°C +50°C
Applications	indoor / outdoor   sea climate
Design	hot dipped galvanized steel   stainless steel   powder-coated   painted
Resistance to chemicals	special designs on request
I-beam	parallel flange











Compact designed power unit with standard motor, heating element and thermal overload protection

Minimization of the most severe mechanical and dynamic shock loads with heavy duty rubber or cellular buffers

\*depending on roller size/roller material

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## **Perfect Interaction**

The right equipment is just as important as the right tires on your car.

The perfect coordination of the equipment with the cable trolleys allows for the counterbalancing of unfavorable operating conditions. Conductix-Wampfler Accessories are optimally coordinated with the appropriate cable trolley line.

Conductix-Wampfler Accessories increase the safety, the availability and the operational life of the entire festoon system. Conductix-Wampfler offers the suitable equipment for every application - longlasting and with the high quality you've come to expect!



#### Cable clamps

A controlled cable line in the loop prevents cables from twisting or overlapping. Cable clamps for flat

and round cables considerably increase the operational life of the cables as well as the functional safety of the system.



**Tension relief ropes** protect the cables from excessive tension. Suitable for every application with their various materials and designs.



The optimal roller for each application is a given at Conductix-Wampfler. Accordingly the available range of rollers is large and flexible.

**Elastic damping devices** optimize the movement of the system at high speeds and protect the cables.





Whether it's hot dipped galvanized or stainless steel, powder-coated or painted - Conductix-Wampfler always offers the right **surface**.

## Service - tailor-made

#### Branch-specific competence

The scope and depth of the Conductix-Wampfler range of services is based on the requests and requirements of the customers. 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 utilize our competent service team. Ask for us!

#### Planning

- Capture of the application parameters
- Selection of the optimal cable trolley technology and suitable cables optimized to customer requirements, application parameters and environmental factors

#### Pre-assembly

- Mounting the cable trolleys on the transport beam
- Laying out and aligning the cables
- Installing the equipment
- Loading and transporting the festoon system to its work location



#### Final assembly & inspection

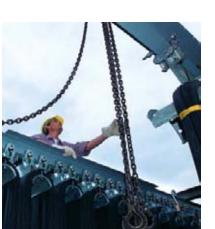
- Ascertaining the correct assembly on site
- Complete installation and commissioning by trained and experienced personnel up to inspection

#### Maintenance & service

- Regular maintenance and inspections increase the operational life of the facility, ensuring its long-term availability
- Conductix-Wampfler service agreements: the "complete worry-free package"



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



## Your Applications – our Solutions

Festoon systems from Conductix-Wampfler represent only one of the many solutions made possible by the broad spectrum of Conductix-Wampfler components for the transport of energy, data and media supply systems. The solutions we deliver for your applications are of course based on your specific requirements. In many cases, a combination of several different Conductix-Wampfler systems can prove advantageous. 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.



#### Cable 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.



#### 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.



#### 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.

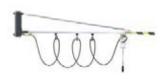


#### Non-insulated conductor rails Extremely robust, non-insulated conductor rails with copper heads or stainless steel surfaces provide the ideal basis for rough applications, for example in steel mills or shipyards.



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.



#### Jib boom

Complete with tool transporters, reels, or an entire media supply system here, safety and flexibility are key to the completion of difficult tasks.



#### 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!



Inductive Power Transfer IPT<sup>®</sup> The no-contact system for transferring energy and data. For all tasks that depend on high speeds and absolute resistance to wear.



Reels, retractors and balancers Whether for hoses or cables, as classical reels or high-precision positioning aids for tools, our range of reels and spring balancers take the load off your shoulders.



#### Conveyor systems Whether manual, semiautomatic or with Power & Free – flexibility is applicated with full automizatio

or with Power & Free – flexibility is achieved with full customization concerning layout and location.

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