



RHINO REEL™ by Conductix-Wampfler

Mill Duty Spring-Driven Cable Reel

 **CONDUCTIX**
wampfler
© DELACHAUX GROUP



Linear Spring Motor Cable Reel for Mill Duty Applications



24 MONTH LIMITED WARRANTY (see page 22)



Patent # 8,888,033 B2

Some of the hardest working machines in your operation are the spring driven cable reels that supply power/control to your magnets, grabs, or transfer cars. These mission-critical reels must operate on-demand or you risk downtime and lost productivity.

Revolutionary New Long-Life Spring Reel - Safe and Easy to Maintain

- **Three Times More Spring Life**

Guaranteed to 100,000 cycles; longest life in the industry. Much longer than traditional "power spring" reels.

- **67% Fewer Spring Replacements - Less Maintenance**

Lower total cost of ownership; less downtime due to spring replacement. Life time lubricated ball screw and chain/sprocket drive system require no routine maintenance

- **Reduced strain on the cable**

The linear torque curve creates the smoothest operating reel on the market; no erratic motion

- **Handles the most demanding applications**

Extra heavy duty construction; field-proven in mills, foundries, & bulk handling

- **Safer alternative to traditional power springs**

The Linear Spring Motor is safety-sealed. If it ever needs replacement, it is safe to handle. The tension is completely removed. A power spring out of its canister/safety band will uncoil violently; more chance of injury.

- **Quick and Easy Spring Replacement, if ever needed**

If a spring needs to be changed, it can be done without removing the reel and in less than 15 minutes.

How rugged is the Linear Spring Motor?

Major shock absorber makers estimate that an average car spring flexes between 1500-2000 cycles *per mile*, which is 150 million cycles in 100,000 miles. Suspension springs usually last the life of the vehicle.



Rugged From Top to Bottom - RHINO REEL Can Handle It

- **Water and dust tight** Built to NEMA 4 standards; suitable for indoor and outdoor use.
- **Rugged Finish** Steel surfaces are primed and finished with AUE 360 high solids polyurethane, commonly used for construction equipment.
- **Flexible Cable Handling** Can be configured to accommodate cables from 2 to 36 conductors. Standard SOOW, Type W, Type G-GC, and premium cables are available.
- **Many Useful Options** Cable Guides, Pivot Base, Cable Grips, and Cable Protection Devices.
- **Power and Signal Handling Capability** 35 to 400 amps at 600 volts maximum. Combination power and signal slip rings are available. Silver plated rings and silver graphite brushes for signal use can be provided by request.
- **Maximum Retraction Speed** Up to 150 ft per min. For higher speeds, contact the factory.

Traditional Power Springs

Also called "clock springs" are used in most spring reels. However, they have a very limited life span.

For high duty cycle equipment, power springs must be replaced often, which is costly, time consuming, and dangerous. Power springs are constantly under tension.



Typical Power Spring



A Revolutionary *New* Concept

Patented Linear Coil Spring Motor

Rugged Frame

- 1/2" thick hot rolled steel; sized to protect spool flanges.
- Integrated lifting eyes to hoist the reel into place.

Durable Spool

- 1/4" steel spool flanges.
- 6105-T5 aluminum alloy drum spacers.

Spring Tension Indicator

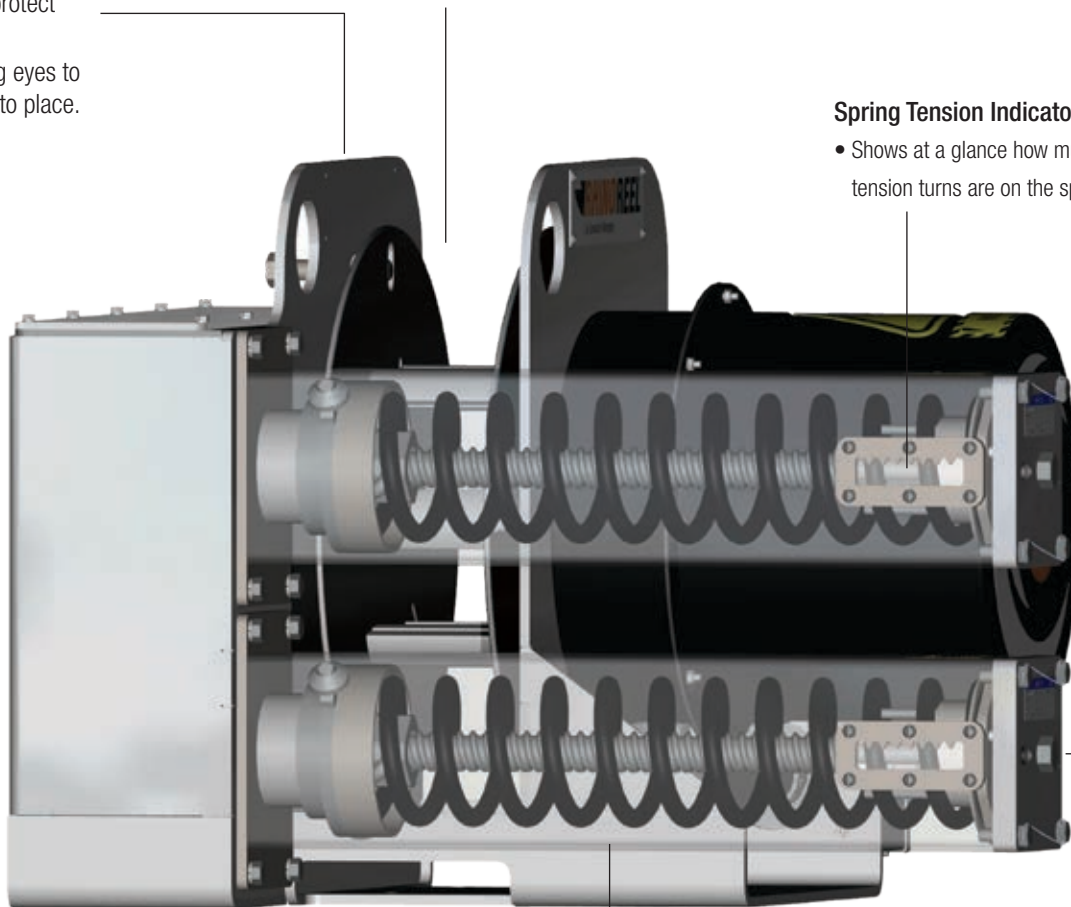
- Shows at a glance how much pre-tension turns are on the spring

Broken Spring Indicator

- In the unlikely event that a spring breaks, an LED light will come on to indicate which motor needs attention

Durable Drive Housing

- 1/4" hot rolled steel.
- Fully sealed.



Long-Life Linear Spring Motors

- From one to four motors, each individually sealed in a steel housing.
- Springs are automotive-grade, high tensile chrome silicon alloy steel.
- Lifetime lubricated, hardened ball screws convert spring compression into rotational energy.

Spring Torque Adjustment

- Easily adjusted with a standard 1 1/8" hex socket or wrench.

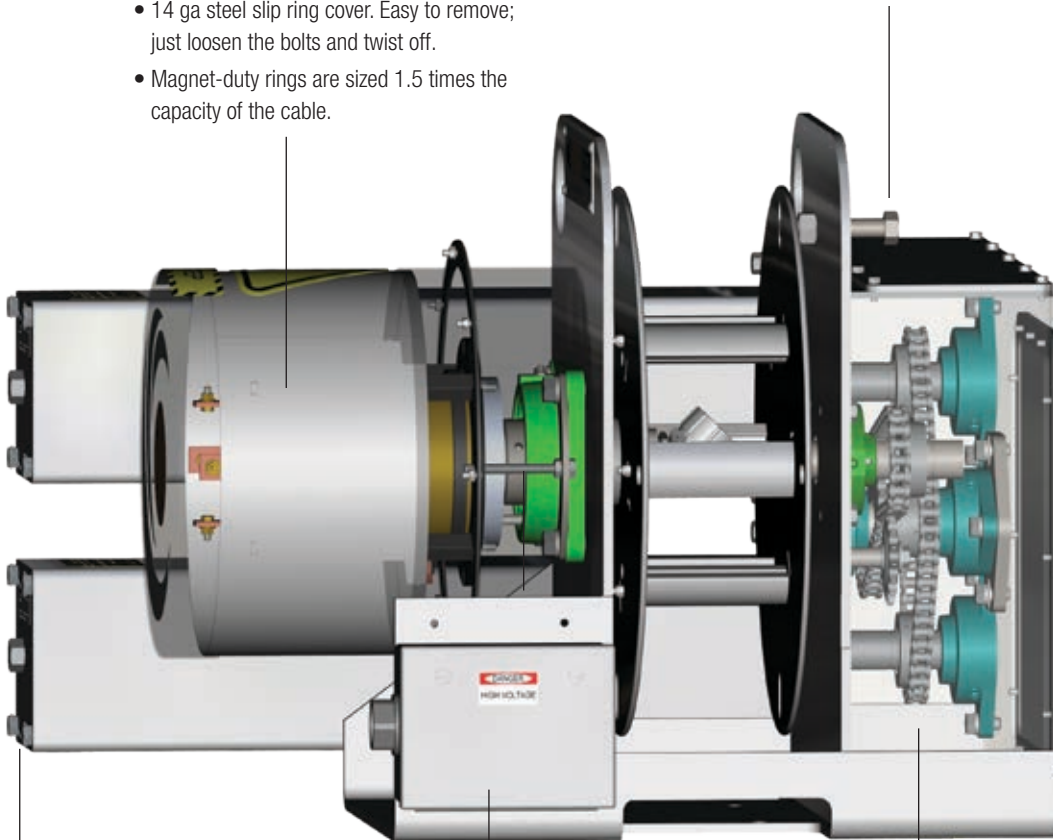
Provides Three Times the Life of Other Spring Reels

Slip Ring Assembly

- 35 amps up to 400 amps at 600 volts.
- Durable, industrial-grade.
- 14 ga steel slip ring cover. Easy to remove; just loosen the bolts and twist off.
- Magnet-duty rings are sized 1.5 times the capacity of the cable.

Spool Lock

- Prevents the spool from rotating during installation or maintenance.



Safety Wire

- Prevents unauthorized removal of spring housing cover.

Junction Box

- NEMA 4 rated; generously sized to make wiring easy.

Long Lasting Chain and Sprocket Drive

- ANSI # 50 roller chain; over 6,000 lb tensile strength. Commonly used on a variety of heavy industrial equipment, conveyors, agricultural machinery, and motorcycles.
- Sprocket ratios are chosen based on the application, the cable used, and the number of spring motors.

RhinoReel Standard Sizes and Options

RhinoReels are constructed with a modular design that offers a number of options to handle all of your mill cable management needs. See pages 20 and 21 for a data sheet to gather your application information.

Contact our sales office for a quotation . . . we will be happy to work out all the specification details.

CHARACTERISTIC	BASIC CHOICES
Spool Frame Sizes (inches)	21, 24, or 28
Drum Widths (inches)	4, 5, 6, 7, or 8
Drum Diameters (inches)	12, 13, 14, 15, or 16
Number of Spring Motors	1, 2, 3, or 4
Sprocket Ratios	1.00:1.00, 1.25:1.00, 1.50:1.00, 1.75:1.00, 2.00:1.00, 2.25:1.00, 2.50:1.00, 2.75:1.00, 3.00:1.00
Applications (see page 20)	Lift, Stretch, and Retrieve
Rotation (as viewed from slip ring side)	Right Hand (clockwise) or Left Hand (counter clockwise)
Shaft OD (slip ring bore)	1.5" or 2.5"
Cable Types	Standard SOOW-A or Type W (8 AWG and over)
	Standard G-GC
	TPC Super Trex ¹ (Premium Cable)
	Prysmian Cordaflex SM ¹ (Premium Cable)
	Radix SKS Soaking Pit Cable ¹
	Others - Contact the Factory
Cable Conductor Size (AWG) ²	16 14 12 10 08 06 04 02 01 1/0 2/0
# of Conductors	2 through 36
Active Travel (feet)	30 thru approximately 100 (max. varies by cable type)
Slip Ring Capacity (max Amps)	35, 75, 110, 150, 200, 400
Inactive Length (feet)	"none" thru approximately 100 (max. varies by cable type)
Finishes	Standard: Gray and Black (Other colors by request)

¹ Brands listed are trademarks of their respective companies.

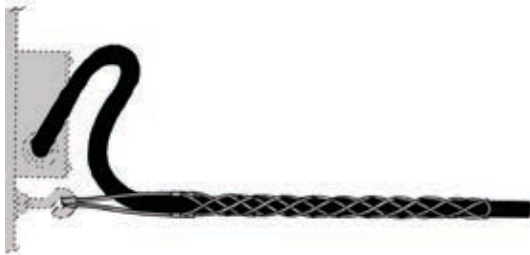
² Metric cable is available by request - contact the Factory

Lead time, availability, and minimum order quantities are subject to the manufacturers of these cables and their distributors.

Cable Grips and Pivot Base

Cable Grips

Also referred to as “Kellems” grips, these devices are recommended to maximize cable life. They relieve the concentrated strain on individual conductors at the cable termination point. In most installations, the eye of the cable grip is connected to an eye bolt or U-bolt. This allows free movement between the cable and the grip. Include a generous cable loop to minimize the strain on the cable. Recommended for lift and stretch applications - see page 20.



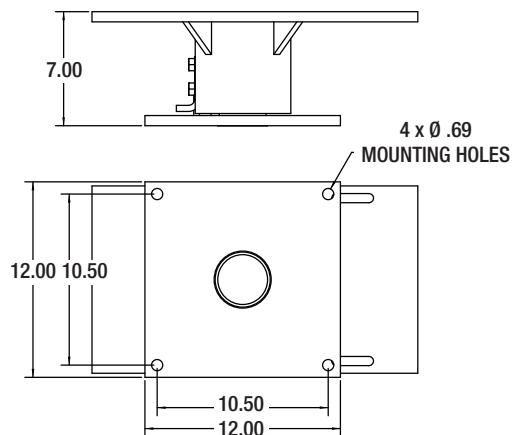
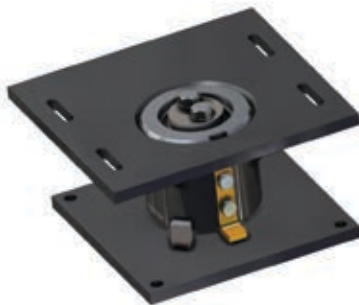
Cable OD Range in. (mm)	Part No.
0.43 to 0.61 (10.9 to 15.5)	XA-03622
0.61 to 0.74 (15.5 to 18.8)	XA-03623
0.74 to 0.99 (18.8 to 25.1)	XA-03624
0.99 to 1.24 (25.1 to 31.5)	XA-03625
1.25 to 1.49 (31.8 to 37.8)	XA-03626

Pivot Base

If the cable is to be extended at more than 15 degrees away from parallel with the spool flanges, a pivot base should be used. Pivot Bases allow the cable reel to pivot back and forth for alternating directions of cable payout. The "RR" RhinoReel version has a maximum rotation of 330 degrees.

Swivel Bases that include slip rings are available for applications that require a full 360 degree rotation - contact the factory.

Reel Series	Maximum Rotation (Degrees)	Part No.	Wt lb (kg)
RhinoReel	330	P3-RR	103.0 (46.72)



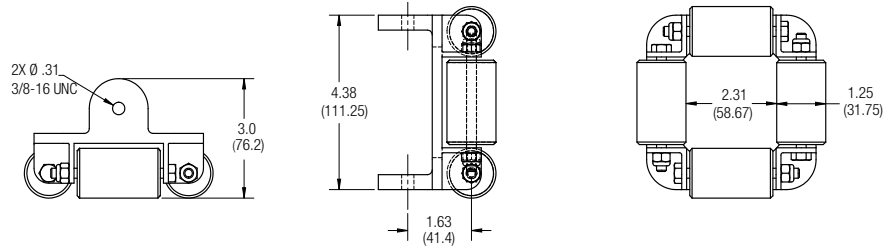
Cable Guides

Medium Duty 4-Roller Cable Guide



The A3A 4-Roller Cable Guide shown at the left is a cost effective guide. It can be remotely mounted. Contact us to discuss your cable guide requirements and application.

Opening size in. (mm)	Part No.	Wt lb (kg)
2.31 (58.7)	A3A	20 (9.1)

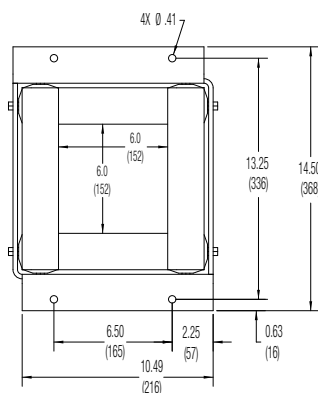
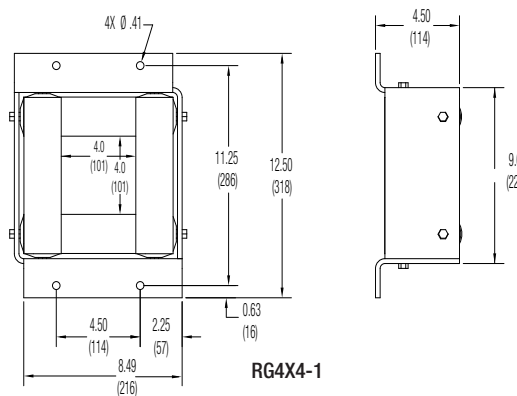


Heavy Duty 4-Roller Cable Guide

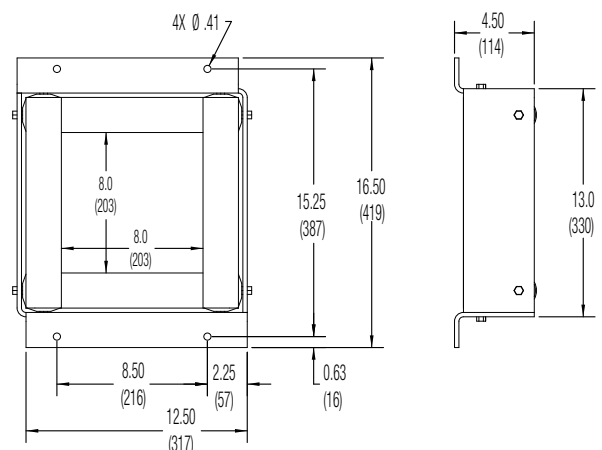


This 4-Roller Cable Guide is designed to guide cables through the deck of a crane or similar machine, or through the floor, or around obstacles. This is just one example of many styles of robust, custom cable guide built by Conductix-Wampfler. Contact us to discuss your cable guide requirements and application.

Opening size in. (mm)	Part No.	Wt lb (kg)
4.0 (101)	RG4X4	19 (8.6)
6.0 (152)	RG6X6	24 (11.9)
8.0 (203)	RG8X8	28 (12.7)



RG6X6-1



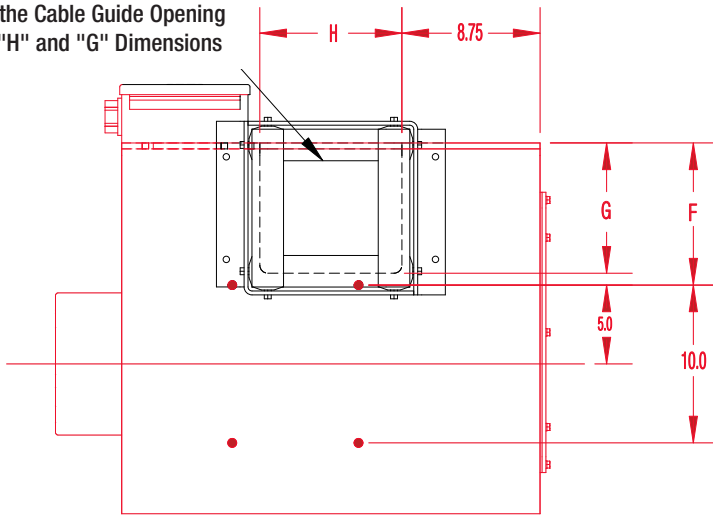
RG8X8-1

Cable Guide Mounting Locations and Cable Protection

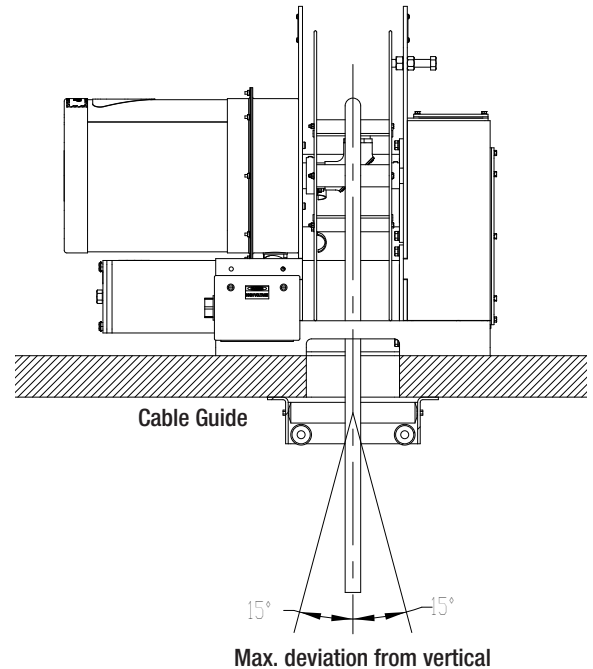
For reel applications that pay the cable in a vertical-down orientation, Cable Guides are generally be mounted on the underside of the steel deck or other flooring. This prevents the cable from scraping against the metal edges of the deck.

For "F", "H", and "G" dimensions, see pages 18 and 19.

Center the Cable Guide Opening on the "H" and "G" Dimensions



Red lines show the bottom of the reel above the deck



Cable Protection Options



A fire sleeve or high temperature jacket that can be installed over the cable to resist heat, flame, and deflect molten metal splash. Even when degraded, these continue to offer substantial protection.

For reels, only the end of the cable that is connected to the powered device will have the protective sleeve or jacket.

Fire Sleeve

- Heavy-duty silicone coated, braided fiberglass sleeve
- Continuous protection to 500°F (260°C)

High Temperature Jacket

- Different constructions available for many applications
- For reels, jacket designed to fit over the free end of the cable near the powered device
- Material combinations - Woven silica, aluminized Kevlar® and silicone coated fiberglass
- Jackets equipped with quarter turn fasteners
- High temperature dust flap enclosure
- Continuous Protection to 500°F (260°C)
- Short term protection to 2200°F (1204°C)

There are a number of other cable protection devices on the market.
Contact Conductix-Wampfler for details.

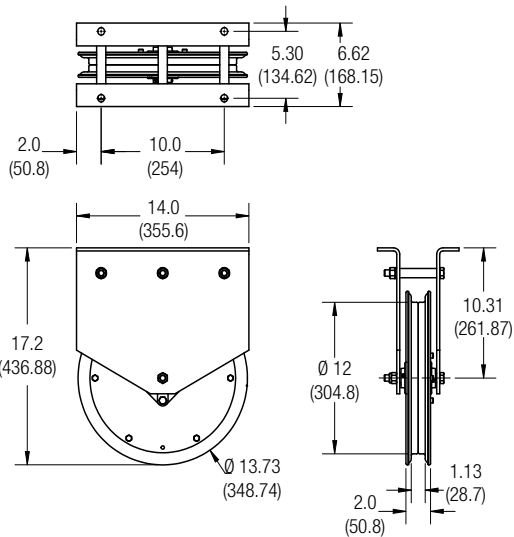
Single Roller Cable Sheave

The rugged **Single Roller Cable Sheave** mounts separately from the reels and guides cable in one direction. It is used when a structural member or obstruction would interfere with the normal payout and retraction of the cable. The guide runs on long lasting ball bearings. Comes in matte black finish. The use of sheave(s) must be noted when specifying the reel as they affect the amount of torque the reel springs need to rewind the cable.

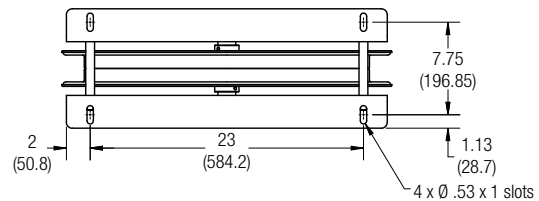


Bend Dia in.(mm)	Max Cable OD in. (mm)	Part No.	Wt lb (kg)
12 (305)	1.0 (25.4)	CA11397	37 (16.8)
18 (457)	1.5 (38.1)	CA11518	62 (28.1)
24 (610)	2.0 (50.8)	CA11199	114 (51.7)

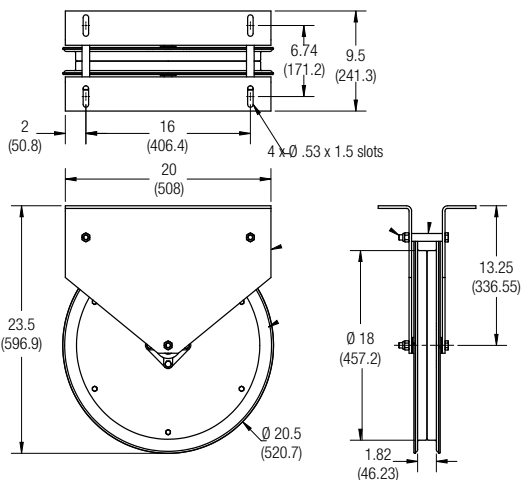
IMPORTANT: When using cable sheaves or guides, **premium cable** will be required. See pages 15-17 - contact the factory for details. Care should be taken to use a cable guide no smaller in diameter than the recommended bend radius of the cable.



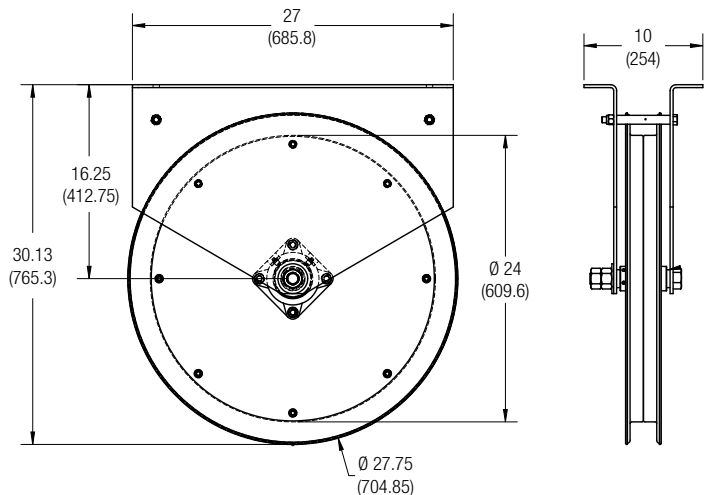
CA11397 - 12" Sheave



CA11199 24" Sheave



CA11518 18" Sheave



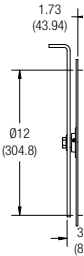
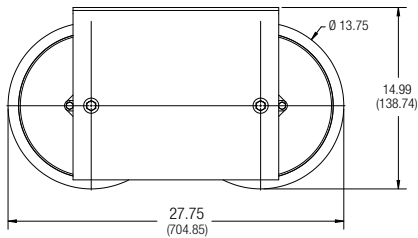
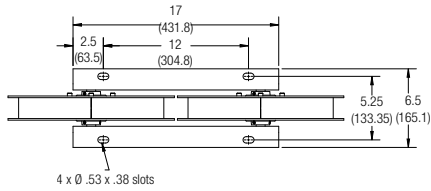
Two-Roller Cable Sheave

The rugged **Two-Way Cable Guide** mounts separately from the reel, pays out cable in two directions, and is terminated at the center of travel. Guides run on long lasting ball bearings. Comes in matte black finish. The use of sheave(s) must be noted when specifying the reel as they affect the amount of torque the reel springs need to rewind the cable.

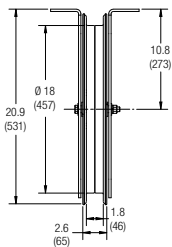
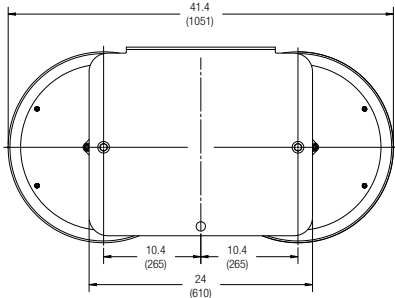
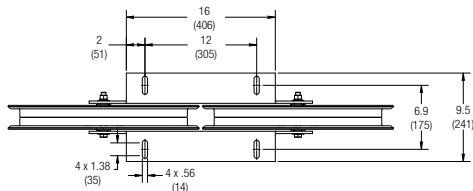


Bend Dia in.(mm)	Max Cable OD in. (mm)	Part No.	Wgt lb (kg)
12 (305)	1.0 (25.4)	C12S	60 (27.2)
18 (457)	1.5 (38.1)	C18S	105 (47.6)
24 (610)	2.0 (50.8)	C24S	200 (90.7)

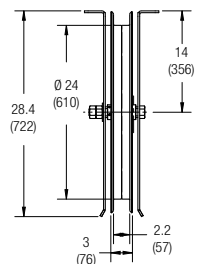
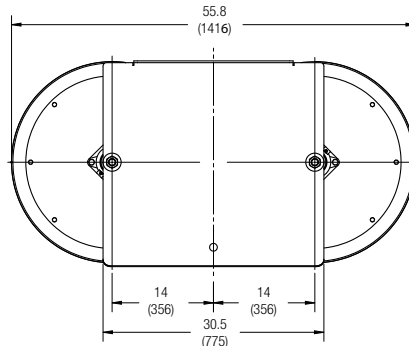
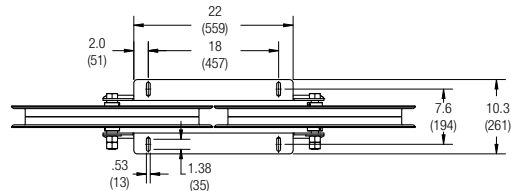
IMPORTANT: When using cable sheaves or guides, **premium cable** will be required. See pages 15-17 - contact the factory for details. Care should be taken to use a cable guide no smaller in diameter than the recommended bend radius of the cable.



C12S - 12" Cable Sheave



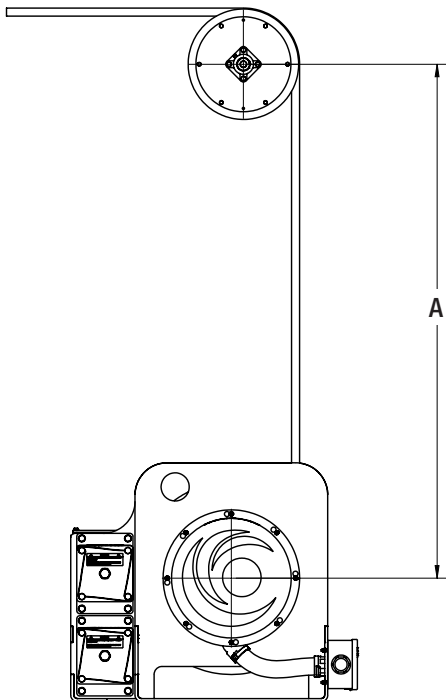
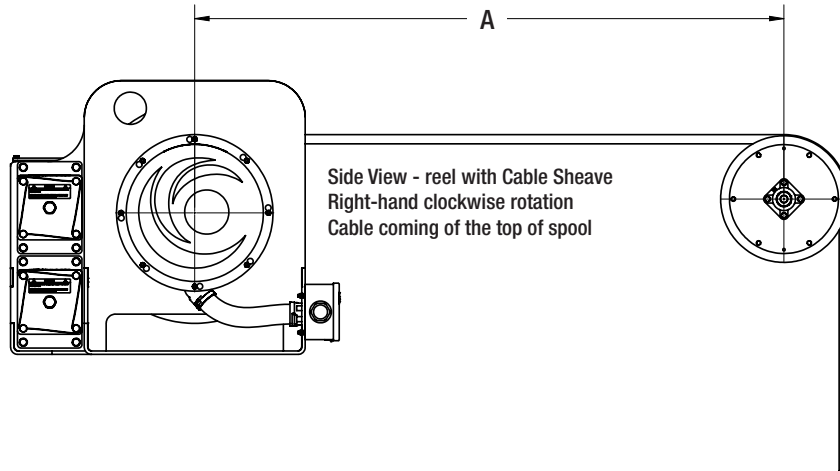
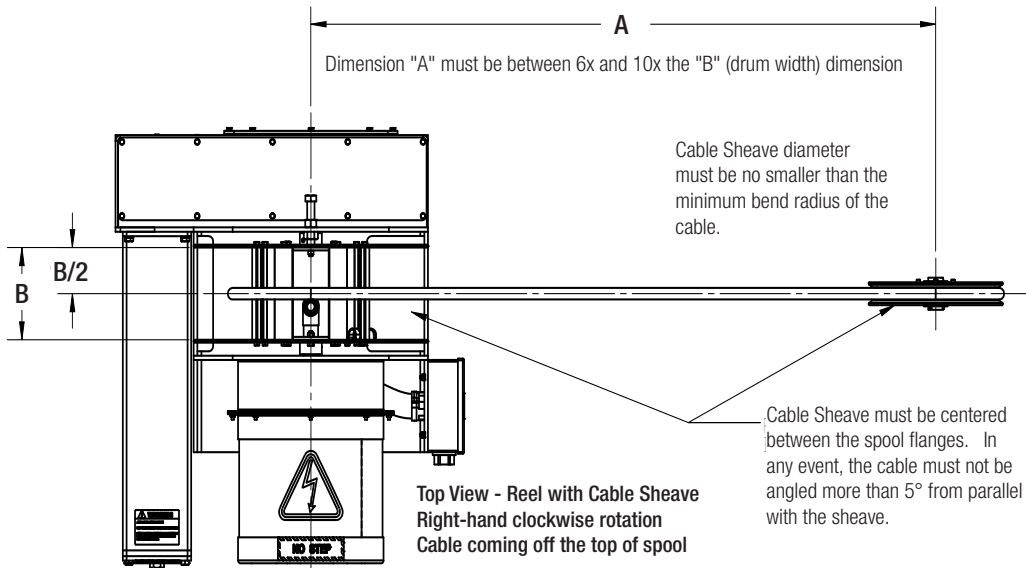
C18S - 18" Cable Sheave



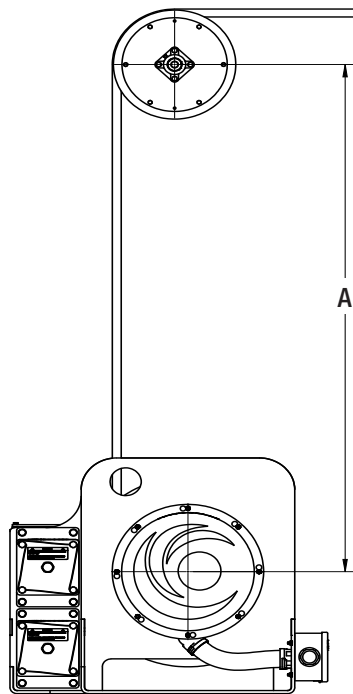
C24S - 24" Cable Sheave

RhinoReel - Mounting Configurations with Cable Sheave

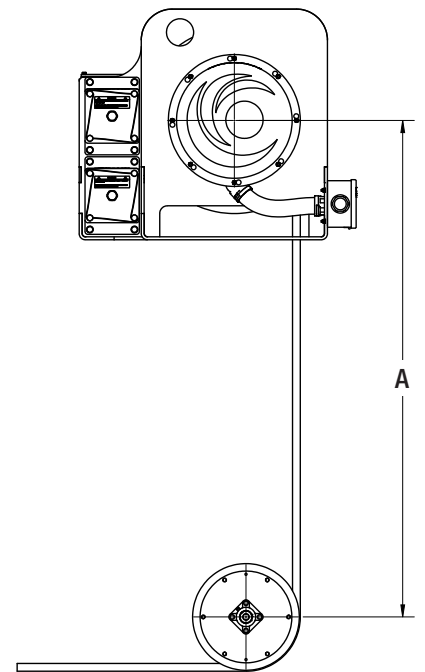
Drum Width (B) in.
4
5
6
7
8



Slip ring side view
 Reel with Cable Sheave
 Left-hand counter-clockwise rotation
 Cable coming off the right side of spool



Slip Ring side view
 Reel with Cable Sheave
 Right-hand clockwise rotation
 Cable coming off the left side of spool



Slip ring side view
 Reel with Cable Sheave
 Right-hand clockwise rotation
 Cable coming off the right side of spool

Standard Cable Data - AWG

Conductix-Wampfler **RHINOREELS** can be set up to handle several types of cable, as noted on page 8 and throughout this catalog:

- Type **SOOW-A**
- Type **W** or **G-GC** (for 8 AWG and larger)
- Or several types of premium cables, such as TPC Super-Trex, Prysmian Cordaflex SM, or Radix SKS Soaking Pit Cables (pages 15-17),

Detailed cable information for standard SOOW-A, Type W, and Type G-GC appear below and on page 14. All cable data presented in this catalog is for general information only. Specifications vary between manufacturers. Conductix-Wampfler reels can be used with other types of cable not fully detailed in this catalog, such as Radix Soaking Pit Cable. Cable diameter and weight are critical to proper reel selection and operation. Please contact Conductix-Wampfler to discuss your requirements.

GENERAL CABLE CHARACTERISTICS

SOOW-A

- General purpose, CPE jacketed, with fine stranding for flexibility
- Jacket O.D. is larger than same size SJOOW-A cables
- Resistant to oil, water, and weather
- Suitable for outdoor use
- 600 Volts

Type W

- General purpose, neoprene jacket cable with fine stranding for flexibility. 8 AWG and larger
- Resistant to oil and water
- Suitable for outdoor use
- 600 Volts

Type G-GC

- Similar to Type W, but the G-GC ground conductor is divided into three smaller wires rather than one large wire. G-GC has a smaller O..D. than a same-size Type W; symmetrical construction
- Resistant to oil, acids, alkalis, heat, water, most chemicals
- Suitable for outdoor use
- 600 Volts

CPE = Chlorinated Polyethylene

Type	Conductor Temperature	Max. Voltage Rating	Conductor Insulation	Jacket	No. of Conductors	Ground Conductors
SOOW-A	90°C	600	EPDM	CPE (or equal)	2-36	N/A
SO	90°C	600	Rubber or EPR	Neoprene (or equal)	2-36	N/A
W	90°C	600	Rubber or EPR	Neoprene (or equal)	2-4	N/A
G-GC	90°C	600	Rubber or EPR	Neoprene (or equal)	3	Yes
"Premium"	SO/W based cable, but specifically designed for harsh and/or heavy-duty applications. Availability & specifications vary.					

General Cable Conductor Colors

Cond. No.	Base Color	Tracer Color
1	Green	----
2	Black	----
3	White	----
4	Red	----
5	Orange	----
6	Blue	----
7	White	Black
8	Red	Black
9	Green	Black
10	Orange	Black

Cond. No.	Base Color	Tracer Color
11	Blue	Black
12	Black	White
13	Red	White
14	Green	White
15	Blue	White
16	Black	Red
17	White	Red
18	Orange	Red
19	Blue	Red
20	Red	Green

Cond. No.	Base Color	Tracer Color
21	Orange	Green
22	Black	----
23	White	----
24	Red	----
25	Green	----
26	Orange	----
27	Blue	----
28	White	Black
29	Red	Black
30	Green	Black

Standard Cable Data - AWG

Reels with 16 AWG - SOOW-A Cable			
No. Cond.	Amps	Dia. in. (mm)	Wt lb/ft (kg/m)
2	10	0.405 (10.24)	0.083 (0.1235)
3	10	0.430 (10.92)	0.102 (0.1518)
4	8	0.485 (12.32)	0.135 (0.2009)
5	8	0.525 (13.34)	0.153 (0.2277)
6	8	0.565 (14.35)	0.177 (0.2634)
7	7	0.605 (15.37)	0.202 (0.3006)
8	7	0.645 (16.38)	0.221 (0.3289)
10	5	0.720 (18.29)	0.278 (0.4137)
12	5	0.740 (18.80)	0.305 (0.4539)
14	5	0.775 (19.69)	0.348 (0.5179)
16	5	0.825 (20.96)	0.386 (0.5744)
20	5	0.900 (22.86)	0.466 (0.6935)
24	5	1.015 (25.78)	0.573 (0.8527)

Reels with 12 AWG - SOOW-A Cable			
No. Cond.	Amps	Dia. in. (mm)	Wt lb/ft (kg/m)
2	20	0.605 (15.34)	0.169 (0.2515)
3	20	0.640 (16.26)	0.230 (0.3423)
4	16	0.670 (17.02)	0.270 (0.4018)
5	16	0.730 (18.54)	0.319 (0.4747)
6	16	0.800 (20.32)	0.372 (0.5536)
7	14	0.860 (21.84)	0.429 (0.6384)
8	14	0.915 (23.24)	0.472 (0.7024)
10	10	1.015 (25.78)	0.577 (0.8587)
12	10	1.045 (26.54)	0.642 (0.9554)
14	10	1.100 (27.94)	0.740 (1.1013)
16	10	1.155 (29.34)	0.837 (1.2456)
20	10	1.285 (32.64)	1.002 (1.4912)
24	10	1.445 (36.70)	1.230 (1.8305)

Reels with Type "W" Cable - 600 Volts

AWG	No. Cond.	Amps	Dia in. (mm)	Wt lb/ft (kg/m)
8	2	50	0.81 (20.57)	0.420 (0.6250)
8	3	50	0.91 (23.11)	0.585 (0.8706)
8	4	45	0.99 (25.15)	0.675 (1.0045)
6	2	65	0.93 (23.62)	0.570 (0.8483)
6	3	65	1.01 (25.65)	0.754 (1.1221)
6	4	55	1.10 (27.94)	0.880 (1.3096)
4	2	75	1.08 (27.43)	0.785 (1.1682)
4	3	75	1.17 (29.72)	0.980 (1.4584)
4	4	65	1.27 (32.26)	1.220 (1.8156)
2	2	110	1.27 (32.26)	1.135 (1.6891)
2	3	110	1.34 (34.04)	1.410 (2.0984)
2	4	100	1.48 (37.59)	1.625 (2.4183)
1	2	140	1.44 (36.58)	1.445 (2.1504)
1	3	130	1.51 (38.35)	1.865 (2.7755)
1	4	110	1.68 (42.67)	2.230 (3.3187)
1/0	2	150	1.52 (38.61)	1.685 (2.5076)
1/0	3	145	1.65 (41.91)	2.180 (3.2443)
1/0	4	130	1.79 (45.47)	2.700 (4.0181)
2/0	2	195	1.65 (41.91)	2.040 (3.0359)
2/0	3	170	1.75 (44.45)	2.510 (3.7354)
2/0	4	150	1.93 (49.02)	3.240 (4.8218)
3/0	2	225	1.71 (43.43)	2.420 (3.6014)
3/0	3	195	1.89 (48.01)	3.085 (4.5911)
3/0	4	170	2.07 (52.58)	3.885 (5.7817)
4/0	2	260	1.92 (48.77)	2.950 (4.3902)
4/0	3	220	2.04 (51.82)	3.770 (5.6105)
4/0	4	190	2.26 (57.04)	4.805 (7.1508)

Reels with 14 AWG - SOOW-A Cable			
No. Cond.	Amps	Dia. in. (mm)	Wt lb/ft (kg/m)
2	15	0.530 (13.46)	0.137 (0.2039)
3	15	0.560 (14.22)	0.169 (0.2515)
4	12	0.605 (15.37)	0.209 (0.3110)
5	12	0.685 (17.40)	0.262 (0.3899)
6	12	0.740 (18.80)	0.302 (0.4494)
7	10.5	0.720 (18.29)	0.329 (0.4896)
8	10.5	0.845 (21.46)	0.373 (0.5551)
10	7.5	0.905 (22.99)	0.434 (0.6459)
12	7.5	0.930 (23.62)	0.481 (0.7158)
14	7.5	0.980 (24.89)	0.556 (0.8274)
16	7.5	1.075 (27.31)	0.657 (0.9777)
20	7.5	1.180 (29.97)	0.786 (1.1697)
24	7.5	1.290 (32.77)	0.920 (1.3691)

Reels with 10 AWG - SOOW-A Cable			
No. Cond.	Amps	Dia. in. (mm)	Wt lb/ft (kg/m)
2	25	0.640 (16.26)	0.221 (0.3289)
3	25	0.690 (17.53)	0.283 (0.4212)
4	20	0.750 (19.05)	0.350 (0.5209)
5	20	0.815 (20.70)	0.419 (0.6236)
6	20	0.880 (22.35)	0.484 (0.7203)
7	17.5	0.860 (21.84)	0.590 (0.8780)
8	17.5	1.050 (26.67)	0.652 (0.9703)
10	12.5	1.125 (28.58)	0.762 (1.1340)
12	12.5	1.155 (29.34)	0.853 (1.2694)
14	12.5	1.225 (31.12)	0.987 (1.4689)
16	12.5	1.290 (32.77)	1.121 (1.6683)
20	12.5	1.460 (37.08)	1.410 (2.0984)
24	12.5	1.600 (40.64)	1.645 (2.4481)

Reels with Type "G-GC" Cable - 600 Volts Three Conductors + Ground

AWG	Amps	Dia. in. (mm)	Wt lb/ft (kg/m)
8	50	0.97 (24.64)	0.597 (0.8885)
6	65	1.05 (26.67)	0.764 (1.1370)
4	85	1.19 (30.23)	1.070 (1.5924)
2	115	1.34 (34.04)	1.533 (2.2814)
1	130	1.51 (38.35)	1.965 (2.9243)
1/0	145	1.65 (41.91)	2.315 (3.4452)
2/0	170	1.75 (44.45)	2.750 (4.0926)
3/0	195	1.89 (48.01)	3.330 (4.9557)
4/0	220	2.04 (51.82)	4.195 (6.2430)

* The data on this page is for **general information only**. It is applicable to cable sold by Conductix-Wampfler on our "reels with cable", based on 90°C insulation temperature ratings. Amp ratings are based on an ambient temperature of 30°C, de-rated for cables with more than 3 current carrying conductors per NEC. Ampacity requirements are solely dependant on applicable local codes, Conductix-Wampfler cannot specifically recommend required ampacity. Nominal diameters and weights shown will vary with different manufacturers.

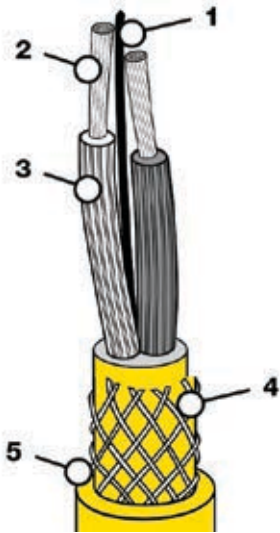
If you don't see the cable types and sizes you need, contact Conductix-Wampfler.

TPC Super-Trex® *

Type W/Type TC-ER Portable Power & Automation Cable

Super-Trex® Type W/Type TC-ER Portable Power and Automation Cable is rated for Extra Hard Usage. This portable power cable has excellent resistance to abrasion, impact, tearing, and most industrial chemicals. Features an integral fill, dual layered fiber reinforced jacket and Live-Flex™ ribbed insulation for added strength. Security yellow TSE jacket allows for extreme all weather flexibility.

- UL Listed • MSHA Approved • Type W – 2,000 V • Suitable for Class 1, 2, 3, Division 1 & 2¹ • UV Resistant • cUL Listed (3-6 conductors only) • ICEA S-75-381 • Type TC-ER – 2,000 V • Maximum Conductor Temperature: 90°C • Extra Hard Usage



Features & Benefits

1. NO-WICK™ REINFORCED SYNTHETIC FILLERS — Adds tensile strength. Improves flexibility. Won't wick up liquids. Acts like a shock absorber to reduce damage from impact. (2 conductor only.)

2. FLEXIBLE CONCENTRIC ROPE LAY BUNCH STRANDED COPPER — Provides longer life in reeling, flexing, and twisting applications.

3. LIVE-FLEX™ RIBBED EPR RATED 90°C — Ribbed to prevent kinking and breakage due to twisting and flexing. Resists dry rot. High dielectric, tensile and mechanical properties.

4. POLYESTER TIRE CORD REINFORCING BRAID EMBEDDED IN JACKET — Provides added strength. Improves cable resistance to impact, abrasion, twisting and pulling.

5. HEAVY-DUTY SECURITY YELLOW SUPER-TREX® TSE DOUBLE PASS JACKET — Provides superior first-line defense against industrial and environmental abuse. Resists tearing, abrasion, oil, impact, ozone and most chemicals. Flame and heat resistant. Extreme all-weather flexibility.

For more information on this cable, please go to www.tpcwire.com.

Conductor Color Code	
#	Base Color
2	Black, White
3	Black, Red, Green
4	Black, White, Red, Green
5	Black, White, Red, Green, Orange
6	Black, White, Red, Green, Orange, Blue

The data herein is approximate and subject to normal manufacturing tolerances. These specifications are subject to change without notice.

* Brands listed are trademarks of their respective companies. **Lead time, availability, and minimum order quantities are subject to the manufacturer of these cables and their distributors.**

Prysmian CORDAFLEX® (SM) Portable Reeling Cable

EP Insulation, Dual Neoprene Jacket with Braid Reinforcement 90°C, 600 V



NSHTOUE J/-O; UL File E 113313; DIN VDE 0250 part 814; MSHA P-189-1. Flexible power and control cable for use on reels and drum systems for connecting movable parts of machine tools, material handling equipment, etc., associated with high mechanical stresses. RS version for use in vertical reeling application. e.g.: Timber crane grapple reels, all tenders on plow feeders, container cranes, steel mill cranes, ship loaders and unloaders, Magnet cranes, Container crane spreader reels. Rated volts: 600V. Max AC volts: 1200V, Max DC volts: 1800V. AC test voltage: 2.5KV, 5 min. For details on this cable, please go to www.anixter.com and search for Cordaflex SM to access the specification sheet.

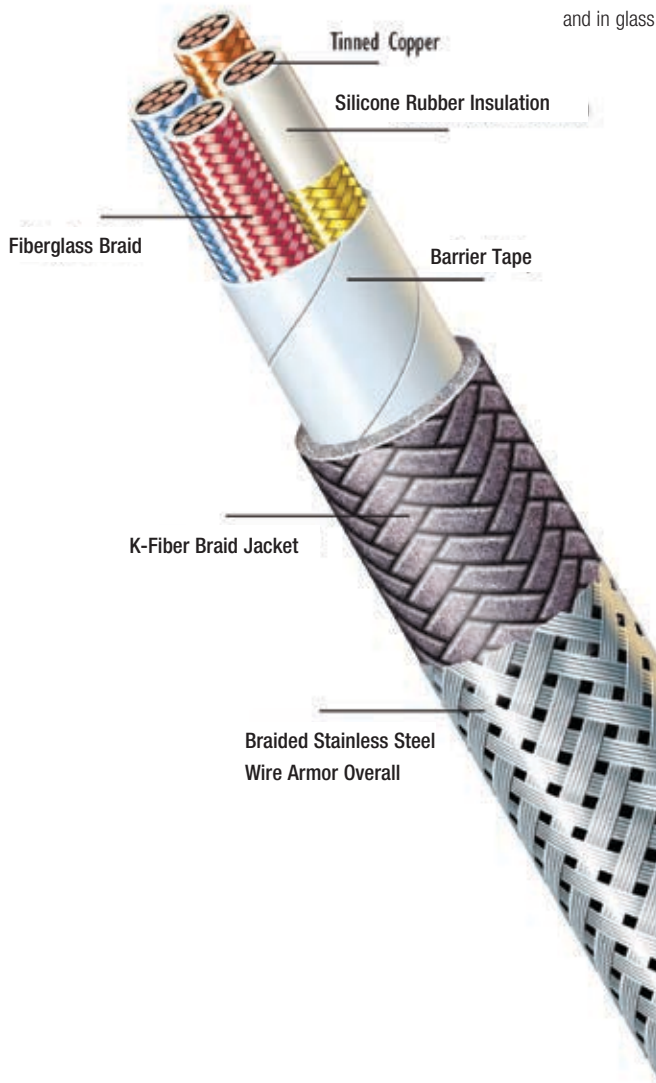
Technical Data		
Type	CORDAFLEX (SM)	
Type designation	NSHTOUE -J/-O	
Approvals	UL File E 113313; DIN VDE 0250 part 814; MSHA P-189-1	
Application	Flexible power and control cable for use on reels and drum systems for connecting movable parts of machine tools, material handling equipment, etc., associated with high mechanical stresses. RS-version for use in vertical reeling application. e.g.: - Timber crane grapple reels - all tenders on plow feeders, container cranes, steel mill cranes, shiploaders and unloaders - Magnet cranes - Container crane spreader reels	
Electrical parameters	Rated voltage	600 V
	Maximum permissible operating voltage in AC systems	1200 V
	Maximum operating voltage in DC systems	1800 V
	AC test voltage	2.5 kV, 5 min.
	Current-carrying capacity	According to DIN VDE 0298, Part4
Thermal parameters	Ambient temperature	
	- Fully flexible operation	- 35 °C to + 80 °C
	- Fixed installation	- 50 °C to + 80 °C
	Maximum permissible operating temperature of the conductor	90 °C
	Short-circuit temperature of the conductor	250 °C
Mechanical parameters	Tensile load	Up to 30 N/mm ²
	Torsional stresses	+/- 25 °/m
	Minimum bending radii	According to DIN VDE 0298, Part 3
	Minimum distance with S-type directional changes	20 x D
	Travel speed	
	- Gantry (reeling operation)	No restriction. It is recommended to consult the manufacturer for speeds beyond 240m/min
	- Trolley (festoon operation)	Up to 240 m/min
Additional tests	Reserved bending test, roller bending test	
Chemical parameters	Resistance to oil	DIN VDE 0473; Part 811-2-1; Para 10
	Weather resistance	Unrestricted use outdoors and indoors, resistant to ozone, UV and moisture

The data herein is approximate and subject to normal manufacturing tolerances. These specifications are subject to change without notice.

* Brands listed are trademarks of their respective companies. Lead time, availability, and minimum order quantities are subject to the manufacturer of these cables and their distributors.

Radix SKS Soaking Pit High Temperature Cable *

SKS is a multiple conductor power and control cable constructed for high temperature applications where the cable needs to resist abrasion, moisture, hot material spills and mechanical abuse. This cable is widely used in steel plants as soaking pit cable, slag and teeming ladle car cable, overhead crane cable and in glass plants.



CHARACTERISTICS

- Silicone formulations suitable for UV, ozone, moisture exposure.
- Cable utilizes Radix "Torque Free" design. This eliminates memory found in traditional right-hand or left-hand twisted cables.
- Suitable for applications to -60°C.
- Binder tape provides moisture resistance.
- Aramid K-fiber braid and stainless steel jacket provide maximum ruggedness.
- Not recommended for outdoor use.

RATINGS / APPROVALS

- 200°C – 600 Volts
- Passes NEMA WC 3 Flame Propagation Test
- Passes IEEE-383 Vertical Cable Tray Flame Test
- RoHS Compliant

For more information on this cable, please go to:

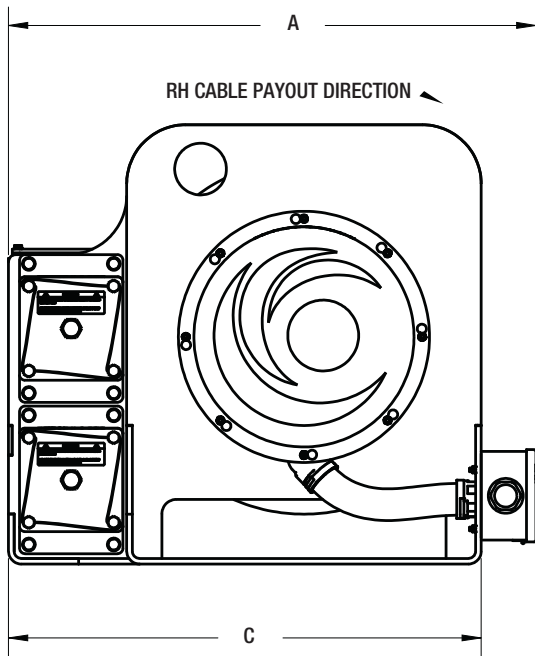
www.radix-wire.com

The data herein is approximate and subject to normal manufacturing tolerances. These specifications are subject to change without notice.

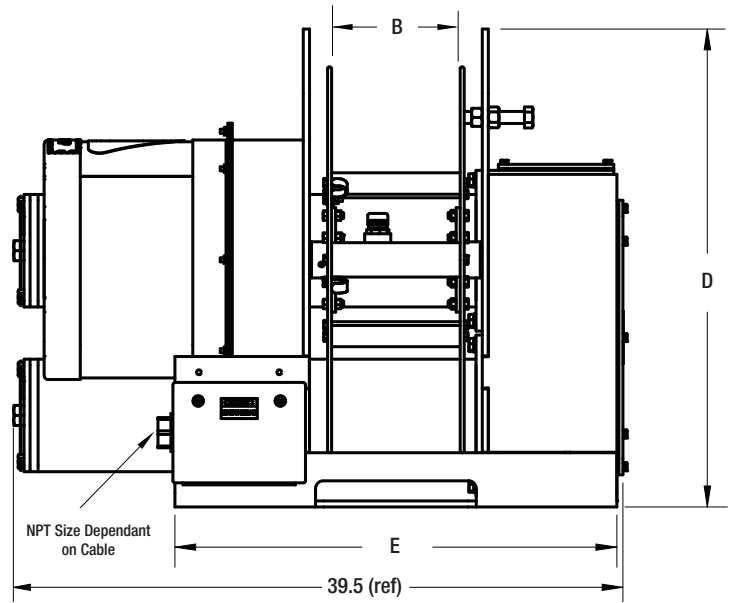
* Brands listed are trademarks of their respective companies.

Lead time, availability, and minimum order quantities are subject to the manufacturer of these cables and their distributors.

Reel Dimensions - 1 and 2 Spring Motor Reels



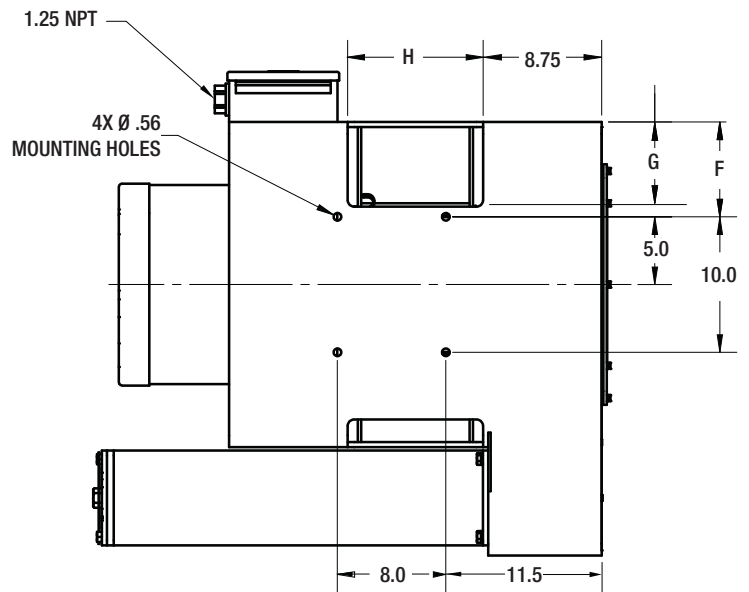
Viewed from the Slip Ring Side.
Right Hand (Clockwise) Rotation.
A single spring motor reel would just have the lower one.



Junction Box Side

Ref. Dimensions (in)	Spool Size		
	21	24	28
A	33.00	36.00	40.00
C	29.00	32.00	36.00
D	26.75	29.75	33.75
F	5.50	7.00	9.00
G	4.75	6.25	8.25

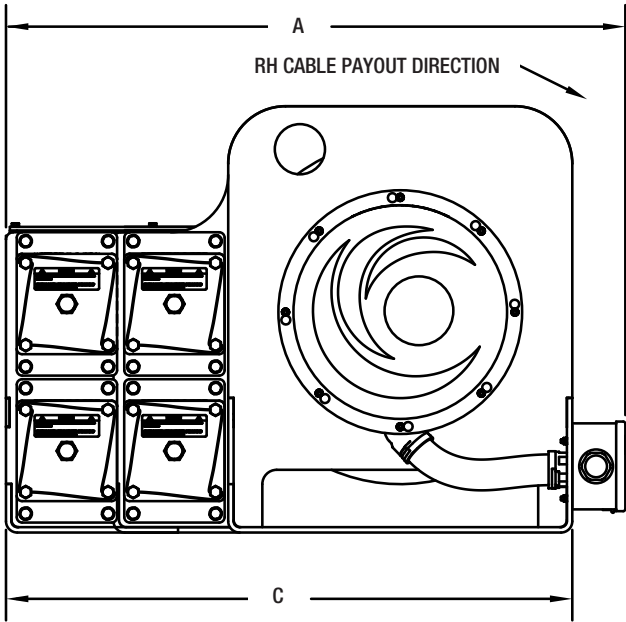
Ref. Dimensions (in)	Drum Width				
	4	5	6	7	8
B	4.00	5.00	6.00	7.00	8.00
E	23.50	24.50	25.50	26.50	27.50
H	6.00	7.00	8.00	9.00	10.00



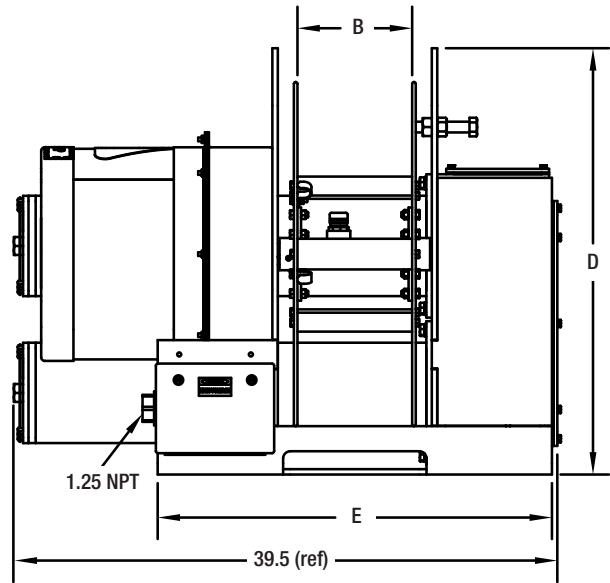
Bottom View
Standard Base Bolt Pattern

RHINOREEL™ Mill Duty Reels are intended for commercial/industrial use and are provided with a permanent mounting base.

Reel Dimensions - 3 and 4 Spring Motor Reels



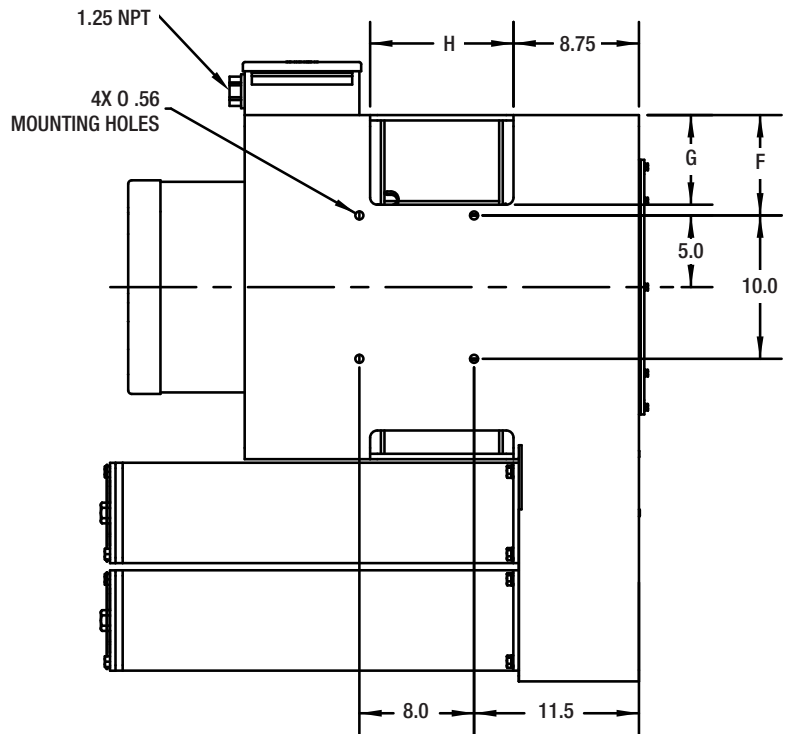
Viewed from the Slip Ring Side.
Right Hand (Clockwise) Rotation.
A 3-spring motor reel would just have the upper right hand motor and the bottom two.



Junction Box Side

Ref. Dimensions (in)	Spool Size		
	21	24	28
A	40.50	43.50	47.50
C	36.50	39.50	43.50
D	26.75	29.75	33.75
F	5.50	7.00	9.00
G	4.75	6.25	8.25

Ref. Dimensions (in)	Drum Width				
	4	5	6	7	8
B	4.00	5.00	6.00	7.00	8.00
E	23.50	24.50	25.50	26.50	27.50
H	6.00	7.00	8.00	9.00	10.00



Bottom View
Standard Base Bolt Pattern

RHINOREEL™ Mill Duty Reels are intended for commercial/industrial use and are provided with a permanent mounting base.

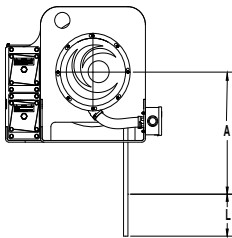
RhinoReel™ Specification Data Sheet - 1 of 2

To we quote the right reel for your application, please record your requirements using the data sheets below and on the next page. All page references refer to this catalog (CAT1014). If you need help, contact us at (+1) 800-521-4888 or (+1) 402-339-9300. Fax the completed sheets to (+1) 800-780-8329 or (+1) 402-339-9627, or scan/e-mail them to sales.us@conductix.com to obtain a quotation. See back cover of this catalog for contact information in Canada, Mexico, Brazil, and the rest of Latin America.

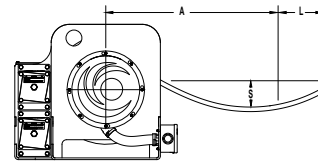
Request Date	_____	Sales Person	_____
Company	_____	Name	_____
	_____	Title	_____
	_____	Phone	_____
	_____	Fax	_____
Company Type	_____	E-mail	_____

BASIC APPLICATION A = Active Length L = Inactive length (always outside spool) S = Cable sag C = Cable Guide Distance H = Lift Height

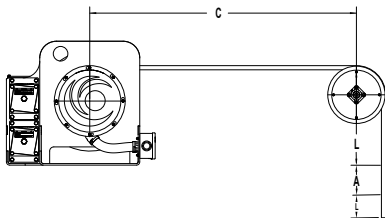
Lift



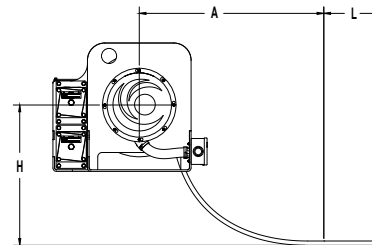
Stretch



Lift with Cable Sheave (pages 10-12)



Retrieve



Other application information: Sketch and describe application. Will the cable run through cable guides, rollers, or diverter devices? Will the cable run at an angle with the spool? (Attach description and sketch.)

CABLE LENGTH NEEDED Sum the cable length you need using the table below. See applications above.

	Lift ↓	Stretch ↓	Retrieve ↓	
Active travel (A)	_____	_____	_____	The difference between minimum and maximum cable payout.
Inactive length (L+C)	_____	_____	_____	The cable that stays <u>outside</u> the reel at minimum cable payout (not including hook-up length). Include extra cable for "C" (Cable Guide Distance) if applicable.
Sag allowance (S)		_____		Add 10% to the active + inactive length to accommodate cable sag.
Lift height (H)			_____	The distance from the cable lay up to the center line of the reel (retrieve).
Hook-up length (L)	_____	_____	_____	The length needed to make connections at the "free end" of the cable.
TOTAL	_____	_____	_____	Sum of all lengths listed above.

RhinoReel™ Specification Data Sheet - 2 of 2

ELECTRICAL DATA

1. AMPACITY REQUIRED _____ The amount of amperage the reel/cable needs to handle per conductor.
 - To power up an **electromagnet**, contact the factory for recommendations.
2. NUMBER OF CONDUCTORS REQUIRED (with ground) _____ Note: Single phase needs 3 conductors; three-phase needs 4.
3. WIRE GAUGE/SIZE REQUIRED _____ AWG Metric To handle the required amperage per conductor.
 - To help determine required wire gauge, refer to NEC or other applicable local codes.
4. CABLE TYPE NEEDED _____
 - For further information on standard and premium cable types, see pages 15-17.
5. OPERATING VOLTAGE _____ (volts) AC DC
6. OPERATING FREQUENCY _____ Hz (Note: USA is 60 Hz)

MECHANICAL DATA

1. DUTY CYCLE _____ cycles per _____ [How often will the reel payout and retract?]
Note: For very high cycle rates, harsh environments, and/or cables that routed through external cable guides, premium cable may be required - see pages 14-17 or consult Conductix-Wampfler.
 2. SPEED What is the speed of the equipment? _____ ft/min m/min
 3. PAYOUT ANGLE How will the cable be paid out? Parallel with spool At an angle from the spool
 - If the cable payout is more than 15 degrees from parallel with center line of the spool, a pivot base might be required (page 7) or the cable may need to be rerouted. Contact Conductix-Wampfler for recommendations.
 4. Available space for the reel (W x D x H): _____
-

ENVIRONMENTAL DATA

Describe the environment in which the cable reel will be installed and used.

1. Indoors Outdoors Dust Snow Ice
Electrical enclosure sealing required (if known) NEMA _____ or IP _____
2. Ambient temperature Min _____ Max _____ °F °C
3. Will there be corrosive materials present? Yes No [salt, chlorine, steam, acids, etc.]
If yes, describe the type of corrosive _____
4. Is this a hazardous location? Yes No If yes, state required NEC Class _____ Division _____ Group _____
5. Other considerations (vibration, shock loads, etc): _____

RHINOREEL™ - Terms, Conditions, and Warranty

The technical data and images which appear in RHINOREEL™ Catalog CAT1014 are for informational purposes only. NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE CREATED BY THE DESCRIPTIONS AND DEPICTIONS OF THE PRODUCTS SHOWN IN THIS CATALOG. Conductix-Wampfler ("seller") makes no warranty and assumes no liability as to the function of equipment or the operation of systems built according to customer design or of the ability of any of its products to interface, operate or function with any portions of customer systems not provided by Conductix-Wampfler.

Seller agrees to repair or exchange the goods sold hereunder necessitated by reason of defective workmanship, and material discovered and reported to Seller within **two years** after shipment of such goods to Buyer. Except where the nature of the defect is such that it is appropriate in Seller's judgment to affect repairs on site, the seller's obligation hereunder to remedy defects shall be limited to repairing or replacing (at Seller's option), FOB point of original shipment by Seller, any part returned to Seller at the risk and cost of Buyer. Defective parts replaced by Seller shall become the property of Seller.

Seller shall only be obligated to make such repair or replacement of the goods which have been used by Buyer in service recommended by Seller and altered only as authorized by Seller. Seller is not responsible for defects which arise from improper installation, neglect, or improper use or from normal wear and tear.

Additionally, Seller's obligation shall be limited by the manufacturer's warranty (and shall not be further warranted by Seller) for all parts procured from others according to published data, specifications, or performance information not designed by or for Seller.

Seller further agrees to replace, or at Seller's option to provide a refund of the sales price of any goods that did not conform to applicable specifications or which differ from that agreed to be supplied which non-conformity is discovered and forthwith reported to Seller within thirty (30) days after shipment to Buyer. Seller's obligation to replace or refund the purchase price for non-conforming goods shall arise once Buyer returns such good FOB point of original shipment by Seller at the risk and cost of Buyer. Goods replaced by Seller shall become property of Seller.

There is no guarantee or warranty as to anything made or sold by Seller, or any service performed, except as to title and freedom from encumbrances, and except as herein expressly stated and particularly without limiting the foregoing. There is no guarantee or warranty, express or implied, of merchantability or of fitness for any particular purpose or against claim of infringement or the like.

Seller makes no warranty (and assumes no liability) as to function of equipment or operation of systems built to Buyer's design or of the ability of any goods to interface, operate or function with any portions of Buyer's system not provided by Seller.

Seller's liability on any claim; whether in contract (including negligence) or otherwise, for any loss or damage arising out of, connected with, or resulting from the manufacture, sale, delivery, resale, repair, replacement or use of any products or, services shall in no case exceed the price paid for the product or services or any part thereof which give rise to the claim. In no event shall Seller be liable for consequential, special, incidental or other damages, nor shall Seller be liable in respect to personal injury or damage to property on the subject matter hereof unless attributable to gross misconduct of Seller, which shall mean an act of omission by Seller demonstrating reckless disregard of the foreseeable consequences thereof.

Seller is not responsible for incorrect choice of models or where products are used in excess of their rated and recommended capacities and design functions or under abnormal conditions. Seller assumes no liability for loss of time, damage or injuries to property or persons resulting from the use of Seller's products. Buyer shall hold Seller harmless from all liability, claims, suits and expenses in connection with loss or damage resulting from operation of products or utilization of services, respectively, of Seller and shall defend any suit or action which might arise there from Buyer's name, provided that Seller shall have the right to elect to defend any such suit or action for the account of Buyer. The foregoing shall be the exclusive remedies of the buyer and all persons and entities claiming through the Buyer.

Other Products from Conductix-Wampfler

The products described in 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 / Conductor Rail

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



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.

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