

Spring Driven Cable Reels

PowerReel® Series



CONDUCTIX
wampfler

Contents

Spring Driven Cable Reels Series Overview	5
Cable Reel Specification Data Sheet	6-7
VersaReel Commercial Duty Cable Reel	8-10
Ideal For	8
Standard Features	8
Each VersaReel Includes	8
Seperate Mounting Base Plate	8
Mobile End Accessories	9
Dimensions	9
Part Number Listings	10
Seperate Mounting Base	10
1200 Series PowerReel	11-15
Ideal For	11
Standard Features	11
Each 1200 Reel Includes	11
Choosing a 1200 Series Reel	11
Feature Details	12
Exploded View	12
Dimensions	12
Ball Stop Only Standard Part Numbers	13
Quad Box Receptable Standard Part Numbers	14
Incandescent Hand Lamp Standard Part Numbers	14
Fluorescent Hand Lamp Standard Part Numbers	15
Table A - Cable Types Used on 1200 Series Reels	15
1400 Series PowerReel	16-18
Ideal For	16
Standard Feataures	16
Each 1400 PowerReel Includes	16
Choosing a 1400 Series PowerReel	16
1400 Series PowerReels Features	17
Exploded View	17
Dimensions	17
Selection Chart	18
1900 & 2400 Series PowerReel	19-20
Ideal For	19
Standard Feataures	19
Choosing a 1400 Series PowerReel	19
Suggested Reels Options	19
NEMA 4 Junction Boxes	20
1900 Series Dimensions	20
2400 Series Dimensions	20

Contents

3200 & 3600 Series PowerReel	21-22
Ideal For	21
Standard Feataures	21
Reel Options	21
Choosing a 3200-3600 Series Cable Reel	21
3200 Series Dimensions, Single Motor	21
3200 Series Dimensions, Dual Motor	22
3600 Series Dimensions, Single Motor	22
3600 Series Dimensions, Dual Motor	22
1500 Series Hazardous Location PowerReel	23
Ideal For	23
Standard Feataures	23
UL Hazardous Location Listings	23
Choosing a 1500 Series PowerReel	23
1500 Series Options	23
1500 Series Dimensions	23
2500 & 3500 Series Hazardous Location PowerReel	24
2500 Series PowerReel	24
3500 Series PowerReel	24
Options and Accessories Reference Chart	25
Ball Stops and Cable Grips	26
Ball Stops	26
Cable Grips	26
Hand Lamps & Receptacle Boxes	27-28
Handlamps Ideal For	27
Incandescent Hand Lamp	27
Fluorescent Hand Lamp	27
Hazardous Duty Incandescent Hand Lamp	27
Hazardous Duty Fluorescent Hand Lamp	28
Receptacle Boxes	28
Ground Fault Circuit Interrupter (GFCI)	28
Flop-Over Guide Cap	29
345° Pivot Base	30-31
PVB Dimensions	30
XPVB Dimensions	30
40274 & 40724X Dimensions	31
P3-3200 Dimensions	31
360° Swivel Base	32-33
1200/1400 Swivel Base	32
1900/2400 Swivel Base	33
1500 Swivel Base	33

Contents

Optional Spool Locks, Ratchets, and Brake	34
Spool Locks.....	34
Ratchets.....	34
ReelSafe Brake.....	34
Other Options	35
Limit Switches.....	35
Marine Duty Options.....	35
Push Button Pendants.....	35
Roller Guides, Type “A”	36
Roller Guides, Type “C”	37
Roller Guide Installation	38
Configuration A.....	38
Configuration B.....	38
Selection of Roller for Configuration B.....	38
Mounting for Configuration B.....	38
Torque Reels	39
1200 Series.....	39
1400 Series.....	39
Welding Reels	40-41
Welding Reels.....	40
Ideal For.....	40
Features.....	40
Choosing a Welding Cable Reel.....	40
Welding Reels Selection Chart.....	41
Welding Reels Dimensions.....	41
SDR Series Grounding (Static Discharge) Reels	42-43
Ideal For.....	42
Features.....	42
SDR 25 Dimensional.....	43
SDR 50 Dimensional.....	43
1400 Series Grounding (Static Discharge) Reels	44
1400 Series Grounding Reel.....	44
Appendix I - Basic Cable Reel Components & Terms	45
Appendix II - Motor Amperage & Electrical Formulas	46
Appendix III - Cable Types	47
Appendix IV - Cable Data - American Wire Gauge	48
Appendix IV - Cable Data - Type “W” & Type “G-GC”	49
Appendix V - PowerReel Catalog Numbering Systems	50
Appendix VI - Standard vs. Premium Reeling Cables	51
Customer Services you can count on	52
51 Other Products from Conductix-Wampfler	53
Notes	54-55

Spring Driven Cable Reels

Conductix-Wampfler builds high quality spring driven cable reels in the USA and have since 1946. We manufacture dozens of standard designs in hundreds of configurations. These modular reels are competitively priced and assembled from stocked components for quick delivery.

The engineers and sales consultants at Conductix-Wampfler are experts at applying custom-engineered cable reels to industrial needs. While other reel manufacturers have reduced their custom engineering capabilities, we continue to meet the unique and demanding challenges of industrial users.

Conductix-Wampfler in the USA, headquartered in Omaha, NE, began making reels as Industrial Electric Reels "IER", and later merged with "Insul-8 Corporation". Beginning in 1996, some reel models began to be manufactured at our plant in Harlan, Iowa.

In 2006 Insul-8 was renamed "Conductix/Insul-8". Following the merger with Wampfler in 2007, Conductix-Wampfler is now the world leader in the design and manufacture of high-performance cable management systems.

All Conductix-Wampfler plants are ISO14001:2015 certified. Our stringent quality systems ensure that you will get the right product every time.



VersaReel

Economical, reliable, and versatile cable reel to provide remote power for many commercial applications; such as warehouses, maintenance shops, and other similar locations.



1200 Series

The best-built small cord reel on the market. When a "throw-away" reel won't do, try the 1200! 12" diameter spool; available with receptacles and drop lights.



1400 Series

Larger than the 1200 Series and even more robust, covering the mid-range of our line. A great value with features you will not find on other reels. Also available for welding cable.



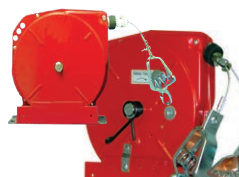
1500 to 3500 Series Hazardous Location

These are equipped with a special slip ring housing for use in hazardous locations.



1900 to 3600 Series

The 19", 24", 32", and 36" diameter PowerReels® handle larger and longer cables. The 3200 and 3600 has many useful features, such as external spring adjustment and quick-change spring motors.



Grounding Reels

Reels for static discharge in locations such as refueling stations for trucks or aircraft.

Cable Reel Specification Data Sheet - Page 1 of 2

To make sure you get the right reel, please collect your requirements using the data sheet below and on the next page. All page references refer to this catalog (Spring Driven Cable Reels CAT1000). If you need help, contact us at 800-521-4888 (or 402-339-9300). Fax the completed sheets to 800-780-8329 (402-339-9627) or e-mail them to sales.us@conductix.com to obtain a quotation.

See back cover of this catalog for other sales offices.

For definition of terms, see "Cable Reel Components", Appendix I, Page 43

Request Date _____

Sales Person _____

Company _____

Name _____

Title _____

Phone _____

Fax _____

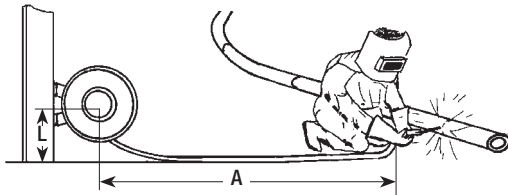
Company Type _____

E-mail _____

Application

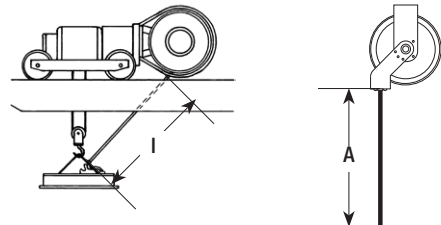
1. How will the reel(s) be used? (Check One)

Drag



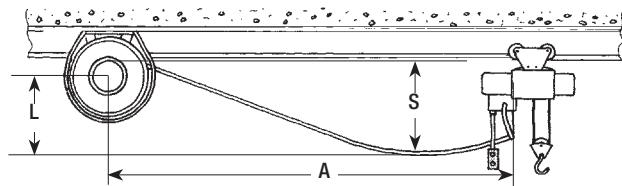
The reel needs to "drag" the cable through supports or along the ground horizontally. The reel is usually stationary. Cable can be pulled out by hand or by machine. **Note: This application is the hardest on cable life.**

Lift



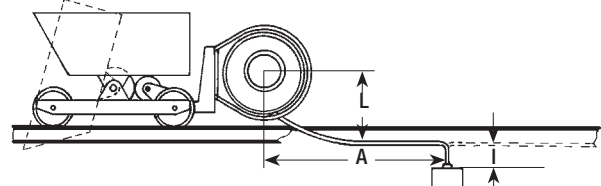
The reel needs to "lift" the cable vertically. The reel is usually stationary. Cable is pulled out of the reel by machine or by hand (as with an overhead light source or a pendant station.)

Stretch



The cable is "stretched" horizontally and is unsupported. The reel may be stationary mounted or mounted onto moving equipment. Cable is pulled out by machine. An extra 6% - 10% of cable beyond active travel required for cable sag.

Retrieve



The reel needs to pickup ("retrieve") the cable. The reel is mounted on moving equipment. Cable is pulled out by machine.

2. Other application information: Describe the application or attach a sketch. For example, will the reel need to lift a cable-end accessory? Will the cable be run through rollers or sheaves? Will the cable pay out at an angle?

Environmental Data

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

1. Indoors Outdoors Dusty Snow Ice

Electrical enclosure sealing required (if known) NEMA _____ or IP _____

2. Ambient temperature Min _____ Max _____ °F °C [To convert Centigrade to Fahrenheit, refer to Appendix V, page 41]

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) : _____

Cable Reel Specification Data Sheet - Page 2 of 2

Mechanical Data

- DUTY CYCLE** _____ cycles per _____ [How often will the reel payout and retract?]
Note: For very high cycle rates, and/or harsh environments, and/or cables that must be routed through sheaves or rollers, premium cable may be required. Please refer to Appendix VII, page 43 and consult Conductix-Wampfler.
 - SPEED** If reel will power moving equipment, what is the speed of the equipment? _____ ft/min m/min
 - PAYOUT ANGLE** How will the cable be paid out? Parallel with spool At an angle from the spool
Note: If the cable payout is more than 15 degrees from parallel with the spool, a swivel base or swing-mount will be required. Refer to pages 13, 24, and 25 or contact Conductix-Wampfler for recommendations.
 - OTHER MECHANICAL NOTES** Will cable pass through/along devices such as rollers or sheaves that might affect cable retraction?

-

Electrical Data

- AMPACITY REQUIRED** _____ [The amount of amperage the reel/cable needs to handle per conductor.]
 • To convert motor horsepower-to-amperage - see Appendix II, page 44
 • To power an **electromagnet**, please consult Conductix-Wampfler
- NUMBER OF CONDUCTORS REQUIRED** (with ground) _____ [Note: Single phase needs three conductors; three-phase needs four.]
- WIRE GAUGE/SIZE REQUIRED** _____ AWG Metric [To handle the required amperage per conductor.]
 To help determine required wire gauge, See Appendix IV, page 46-47. For metric conversion, see Appendix IV, page 47.
- CABLE TYPE NEEDED** _____ For further information, see Cable Types - Appendix III, page 45
- OPERATING VOLTAGE** _____ (volts) AC DC
- OPERATING FREQUENCY** _____ Hz (Note: USA is 60 Hz)

Cable Length Needed

Sum the cable length you need using the table below. See applications, page 4

	Lift ↓	Drag ↓	Stretch ↓	Retrieve ↓	
Active Length	_____	_____	_____	_____	The difference between minimum and maximum operating payout.
Inactive Length	_____	_____	_____	_____	The cable that will stay <u>outside</u> the reel, even at minimum payout.
Sag Allowance	_____	_____	_____	_____	Add 10% to the active + inactive length to accommodate cable sag.
Lift Height	_____	_____	_____	_____	The distance from the cable lay up to the reel location.
Hook-up Length	_____	_____	_____	_____	The amount needed to make connections at the "free end" of the cable.
TOTAL	_____	_____	_____	_____	Sum of all lengths listed above.

Feeder Cable Length (if needed) _____ This cable "feeds" the non-rotating part of the reel. A feeder cable is standard on some reels, as noted in the catalog; customer-supplied for other reels (usually the larger models).

VersaReel Commercial Duty Cable Reel

VersaReels are ideal for:

- Retail Stores
- Maintenance Shops
- Warehouses
- Recreation Centers
- Schools
- Other mobile power applications

The VersaReel, is an economical, reliable, and versatile cable reel that can provide remote power for many commercial applications. Available with up to 50' of cable and many end accessory options make VersaReel ideal for many applications.



Standard Features

- Heavy-Duty spring motor capable of retracting cables up to 50 feet vertically, even with any mobile accessory attached!
- Robust Four-Roller Cable Guide, allows smooth cable payout and minimizes cable stress.
- Handles a number of mobile end accessories, with or without GFCI.
- Blends in with white ceilings and walls.

Each VersaReel Includes

- **Cable:** Supplied with 25, 35 or 50 ft or 12/3 or 16/3 cable.
- **Adjustable cable guide arm:** VersaReel's Quick-Change Cable Guide directs the cable where you need it with the easy-to-reposition cable guide.
- **Ratchet:** Locks the spool to keep cable at the desired extension. Can be disengaged with a pull on the cable.
- **Adjustable ball stop:** Limits cable retraction and prevents damage to cord end accessories.
- **Precision slip ring assembly:** Provides flawless contact and long life.
- **6 foot feeder cord:** Transfers incoming power to the reel. Feeder cords have a three-prong molded plug.

Separate mounting base plate

VersaReel has the easiest installation in the market. Mount the base to either wall or ceiling, slide VersaReel into the mounting base and lock in with the provided screws, it's that easy! Multiple mounting bases can be used for one reel making moving VersaReel quick and efficient.



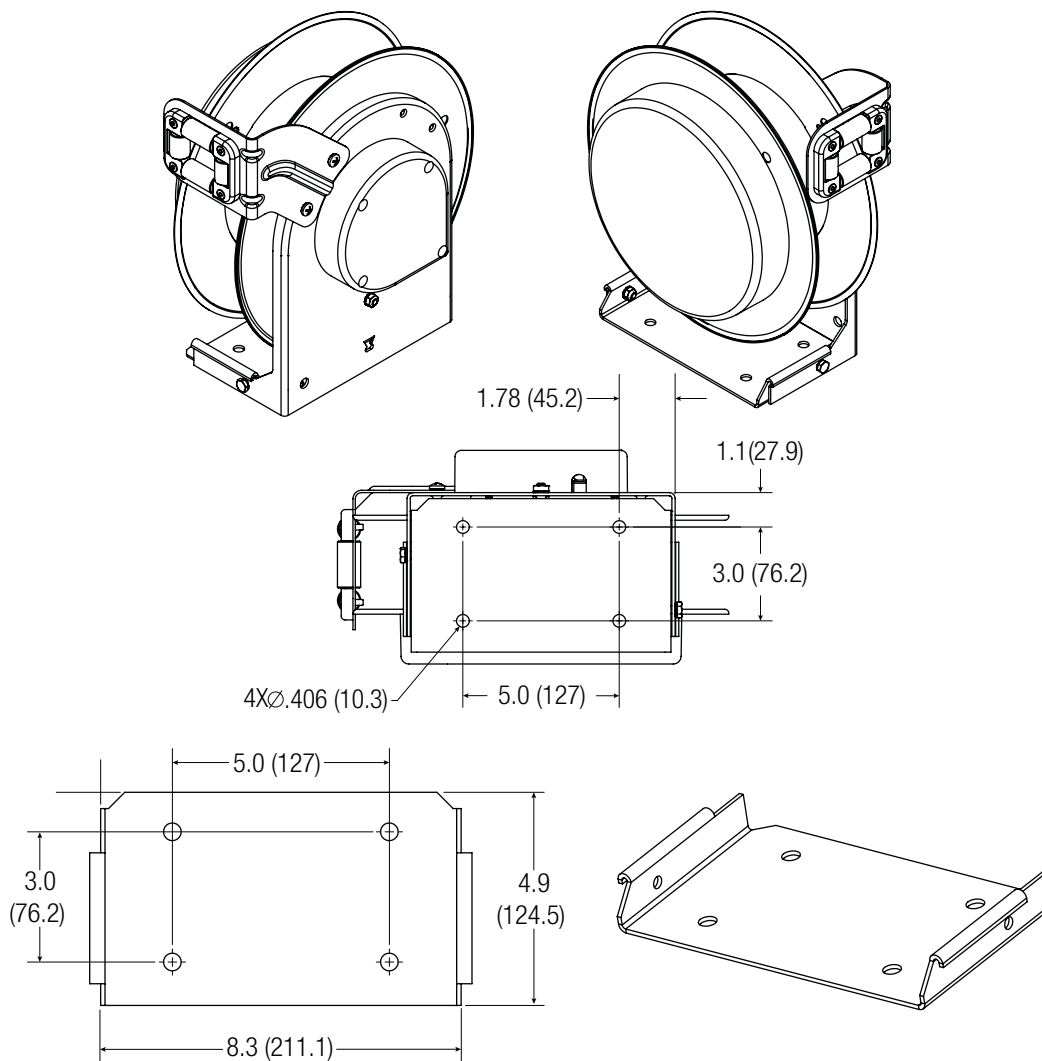
VersaReel Commercial Duty Cable Reel

Mobile End Accessories

VersaReel offers a wide line of Mobile End Accessories and can be ordered pre-installed. (All accessories can be used with or without in-line GFCI).

Flying Lead	in-line GFCI	15 amp Single Outlet	20 amp Single Outlet	15 amp Locking Outlet	20 amp Locking Outlet	Quad Receptacle Box	Triple Tap
							

Dimensions



VersaReel Commercial Duty Cable Reel

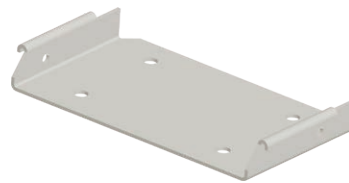
Cable Length	Cable Gauge (AWG)	GFCI	Mobile End Accessory	Capacity (amps)	Part No.	Cable Length	Cable Gauge (AWG)	GFCI	Mobile End Accessory	Capacity (amps)	Part No.
25	12	Y	Quad Receptacle Box	15	VR25-123G-R15	35	12	N	Quad Receptacle Box	20	VR35-123N-R20
25	12	Y	Quad Receptacle Box	20	VR25-123G-R20	35	12	N	Single Outlet	15	VR35-123N-S15
25	12	Y	Single Outlet	15	VR25-123G-S15	35	12	N	Single Outlet	20	VR35-123N-S20
25	12	Y	Single Outlet	20	VR25-123G-S20	35	12	N	Triple Tap	15	VR35-123N-T15
25	12	Y	Triple Tap	15	VR25-123G-T15	35	16	N	Flying Lead	10	VR35-163N-F10
25	12	N	Flying Lead	15	VR25-123N-F15	35	16	N	Quad Receptacle Box	10	VR35-163N-R10
25	12	N	Flying Lead	20	VR25-123N-F20	35	16	N	Single Outlet	10	VR35-163N-S10
25	12	N	Quad Receptacle Box	15	VR25-123N-R15	50	12	Y	Quad Receptacle Box	15	VR50-123G-R15
25	12	N	Quad Receptacle Box	20	VR25-123N-R20	50	12	Y	Quad Receptacle Box	20	VR50-123G-R20
25	12	N	Single Outlet	15	VR25-123N-S15	50	12	Y	Single Outlet	15	VR50-123G-S15
25	12	N	Single Outlet	20	VR25-123N-S20	50	12	Y	Single Outlet	20	VR50-123G-S20
25	12	N	Triple Tap	15	VR25-123N-T15	50	12	Y	Triple Tap	15	VR50-123G-T15
25	16	N	Flying Lead	10	VR25-163N-F10	50	12	N	Flying Lead	15	VR50-123N-F15
25	16	N	Quad Receptacle Box	10	VR25-163N-R10	50	12	N	Flying Lead	20	VR50-123N-F20
25	16	N	Single Outlet	10	VR25-163N-S10	50	12	N	Quad Receptacle Box	15	VR50-123N-R15
35	12	Y	Quad Receptacle Box	15	VR35-123G-R15	50	12	N	Quad Receptacle Box	20	VR50-123N-R20
35	12	Y	Quad Receptacle Box	20	VR35-123G-R20	50	12	N	Single Outlet	15	VR50-123N-S15
35	12	Y	Single Outlet	15	VR35-123G-S15	50	12	N	Single Outlet	20	VR50-123N-S20
35	12	Y	Single Outlet	20	VR35-123G-S20	50	12	N	Triple Tap	15	VR50-123N-T15
35	12	Y	Triple Tap	15	VR35-123G-T15	50	16	N	Flying Lead	10	VR50-163N-F10
35	12	N	Flying Lead	15	VR35-123N-F15	50	16	N	Quad Receptacle Box	10	VR50-163N-R10
35	12	N	Flying Lead	20	VR35-123N-F20	50	16	N	Single Outlet	10	VR50-163N-S10
35	12	N	Quad Receptacle Box	15	VR35-123N-R15						

Separate mounting base plate

One quick install/quick change mounting base plate is included with each reel.

Additional base plates are sold separately and can be mounted in multiple locations to allow users to easily relocate the reel if desired.

Part No. 573508



1200 Series PowerReel®

1200 Series Reels are ideal for:

- Assembly and fabrication work areas
- Truck crane control cables
- Automotive and truck work bays
- Schools, theaters, and recreation centers
- Conveyors and utility trucks
- Other mobile power applications

The **1200 Series PowerReel®** is the best-built small spring driven cord reel on the market today. These are industrial grade, precision machines that will provide years of service with little or no maintenance.



Standard Features

- All-steel construction with fiberglass/nylon drum
- Durable yellow powder coated finish
- Standard versions: Ball stop only, receptacle box, incandescent hand lamp, or fluorescent hand lamp
- Operating Temperature Range: -22°F to 194°F (-30°C to 90°C)

Each 1200 Reel includes:

- **Cable:** Refer to Table A page 13 for the types of cable supplied.
- **Adjustable cable guide arm:** Can be placed at 12 possible positions to direct the cable where you need it. Includes smooth-running 4 roller guide for minimum cable stress.
- **Ratchet:** Locks the spool to keep cable at the desired extension. Can be disengaged with a pull on the cable or completely locked out for “constant tension” (stretch) applications - see page 10.
- **Adjustable ball stop:** Limits cable retraction and prevents damage to cord end accessories.
- **Precision slip ring assembly:** Provides flawless contact and long life.
- **6 foot feeder cord:** Transfers incoming power to the reel. Three conductor reel feeder cords have a three-prong molded plug.
- **Safety chain hole:** Attachment point for a safety chain when the reels are mounted overhead.
- **UL and CSA Listed:** See pages 11-13 for details.

Choosing a 1200 Series Reel

- The reels in the charts on pages 11-13 are sized for Lift/Drag applications, see page 4 for application descriptions.
- This reel can be used for other applications - see Specification Data Sheet on page 4-5.
- Cable length listed is actual length. Be sure to order enough cable. For recommendations, see “Cable Length Needed” page 5.
- Note that slip ring #1 is permanently grounded to the reel and is used for the green ground cable conductor only.
- If the cable needs to payout at an angle, order a Swing-Mount Bracket separately.
- If the reel base needs to rotate, order a Pivot Base, see pages ?? and ??.

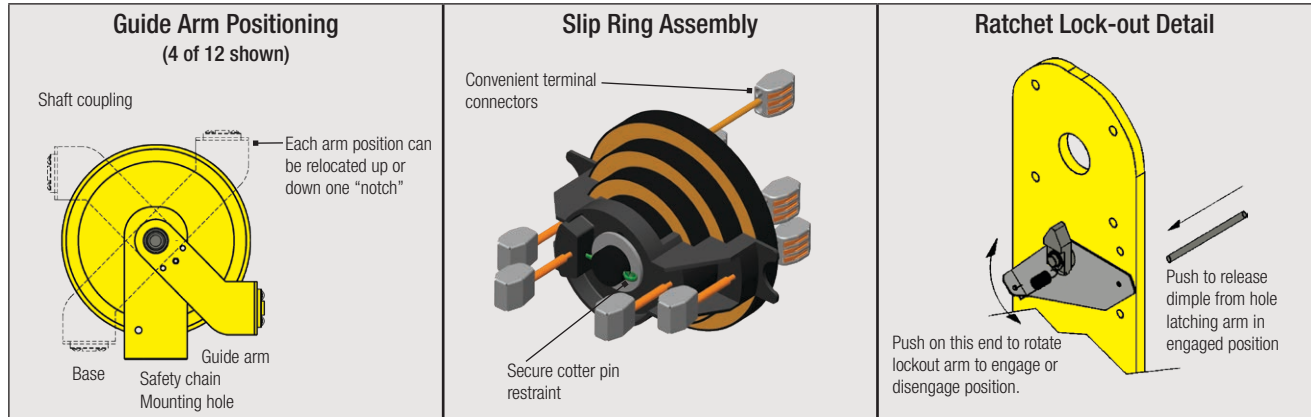
Part No. 573508



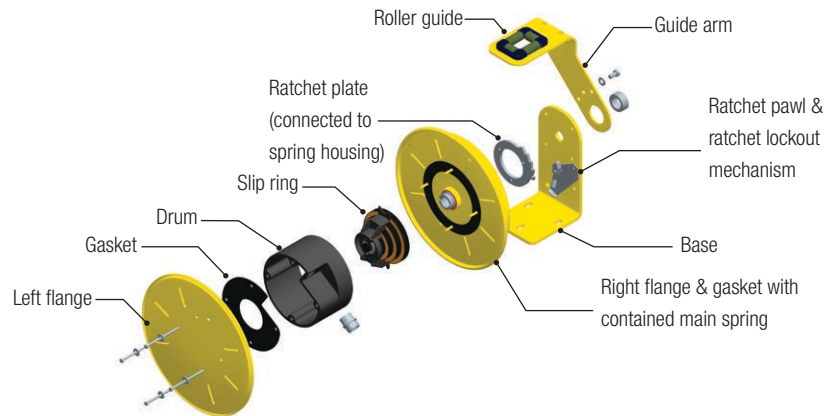
1200 Series PowerReel® Features

The 1200 Series PowerReel® is built with a minimum of components for maximum reliability. Unlike “consumer-grade” cord reels, this reel has all the features you require for tough industrial applications. For more information, refer to the 1200 Series PowerReel Manual on www.conductix.us.

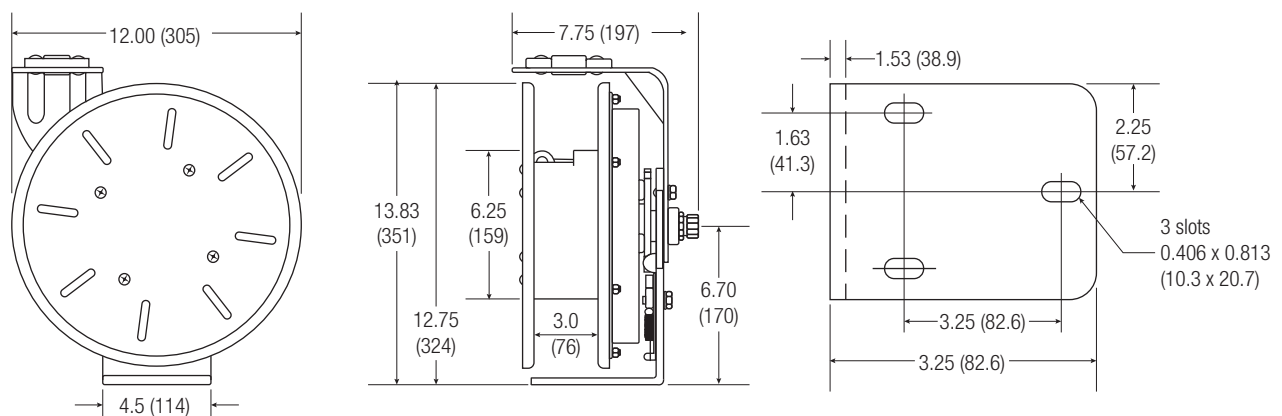
Feature Details



Exploded View



Dimensions - Inches (mm)



1200 Series PowerReel®

With Ball Stop Only

This reel can be used to power moving machinery or be used by hand with a customer-installed cable-end accessory. If the accessory weighs over two pounds (0.9 kg), please contact the factory. Reels come with ball stop and various cable types; see Table A on page 13. Three-conductor 125 volt reels come with six foot feeder cord and NEMA 2 molded plug. Four conductor reels are rated NEMA 4 (IP56) for indoor or outdoor use. UL and CSA Listed (Reels with customer installed components are NOT listed.)



Cable Gauge (AWG)	Number of Conductors ¹	Maximum Capacity Amps	Cable Length ft (m)	Part No. (125 or 300 Volt Reels)	Maximum Voltage ²	Part No. (600 Volt Reels)	Weight - lb (kg)
16	3	10	25 (7.62)	121160302511	125	122160302511	20 (9.07)
16	3	10	35 (10.67)	121160303511	125	122160303511	21 (9.53)
16	3	10	50 (15.24)	121160305011	125	122160305011	23 (10.43)
14	3	15	30 (9.14)	121140303011	125	122140303011	24 (10.89)
14	3	15	40 (12.19)	121140304011	125	122140304011	27 (12.25)
14	3	15	50 (15.24)	121140305011	125	n/a	29 (13.16)
12	3	20	25 (7.62)	121120302511	125	122120303011	24 (10.89)
12	3	20	50 (15.24)	121120305011	125	n/a	28 (12.70)
16	4	8	35 (10.67)	121160403511	300	122160403511	22 (10.00)
16	4	8	50 (15.24)	121160405011	300	122160405011	27 (12.25)
14	4	12	35 (10.67)	121140403511	300	n/a	25 (11.34)
12	4	16	25 (7.62)	121120402511	300	122120402511	24 (10.89)
12	4	16	35 (10.67)	121120403511	300	n/a	26 (11.79)

¹ Slip ring #1 is permanently grounded to the reel and is to be used for the green ground cable conductor only (e.g. 4 conductor cable = green, black, white, red)

² On 125 V reels, the maximum voltage is restricted by the molded plug on the feeder cord.

1200 Series PowerReel®

With Receptacle Box

This version of the 1200 Series PowerReel comes with a factory installed receptacle box as noted below. Boxes are yellow, heavy-duty molded TPE (thermoplastic elastomer) - oil resistant and impervious to most chemicals. Includes internal cord grip. Reels include six-foot feeder cable with molded plug - rated NEMA 2 for indoor use.

GFCI (Ground Fault Circuit Interrupter) models include the GFCI as part of the plug on the feeder cord.

UL and CSA Listed



RB: Dual 15 amp, 125 volt duplex (four outlets total) - used on 16/3 and 14/3 cables

RB-5-20R: Dual 20 amp, 125 volt duplex (four outlets total) - used on 12/3 cable



GFCI Option: The GFCI is part of the plug on the end of the feeder cord. These reels have part numbers ending in "17".

Cable Gauge (AWG)	Number of Conductors	Maximum Capacity Amps	Cable Length ft (m)	Part No. (W/ Std. Feeder Cable)	Part No. (W/ GFCI on Feeder Cable)	Weight - lb (kg)
16	3	10	25 (7.62)	121160302512	n/a	22 (10.0)
16	3	10	35 (10.67)	121160303512	n/a	23 (10.4)
16	3	10	50 (15.24)	121160305012	n/a	24 (10.9)
14	3	15	30 (9.14)	121140303012	121140303017	25 (11.3)
14	3	15	40 (12.19)	121140304012	121140304017	29 (13.2)
14	3	15	50 (15.24)	121140305012	121140305017	30 (13.6)
12	3	20	25 (7.62)	121120302516	121120302517	26 (11.8)
12	3	20	50 (15.24)	121120305016	121120305017	29 (13.2)

With Incandescent Hand Lamp

This 1200 Series PowerReel comes with # HSR factory-installed incandescent hand lamp when extra lighting is required for safety and convenience. The lamp has; high-impact yellow handle, recessed on/off switch, 15 amp / 125 volt auxiliary outlet on the side, all-steel, grounded reflector cage and swivel hook. The lamp requires a 100 watt rough-service bulb - bulb not included.



Cable Gauge (AWG)	Number of Conductors	Cable Length ft (m)	Part No.	Maximum Capacity Amps	Weight lb (kg)
16	3	25 (7.62)	121160302513	10	24 (10.89)
16	3	35 (10.67)	121160303513	10	25 (11.34)
16	3	50 (15.24)	121160305013	10	26 (11.79)
14	3	30 (9.14)	121140303013	15	25 (11.34)
14	3	40 (12.19)	121140304013	15	29 (13.16)
14	3	50 (15.24)	121140305013	15	30 (13.61)

1200 Series PowerReel®

With Fluorescent Hand Lamp

This 1200 Series PowerReel comes with # FHL factory-installed fluorescent hand lamp when extra lighting is required for safety or convenience. The lamp has:

- Yellow rubber handle
- Recessed on/off “bump switch” on the end
- Feeder cord mounted ballast
- Plastic non-glare shield with cool operating 13 watt bulb included
- Double hanging hook

UL Listed, for indoor use



Cable Gauge AWG	Number of Conductors	Cable Length ft (m)	Part No.	Maximum Capacity Amps	Weight lb (kg)
16	3	25 (7.62)	121160302514	10	24 (10.89)
16	3	35 (10.67)	121160303514	10	25 (11.34)
16	3	50 (15.24)	121160305014	10	26 (11.79)
14	3	30 (9.14)	121140303014	15	25 (11.34)
14	3	40 (12.19)	121140304014	15	28 (12.70)
14	3	50 (15.24)	121140305014	15	30 (13.61)

Table A - Cable Types Used on 1200 Series Reels

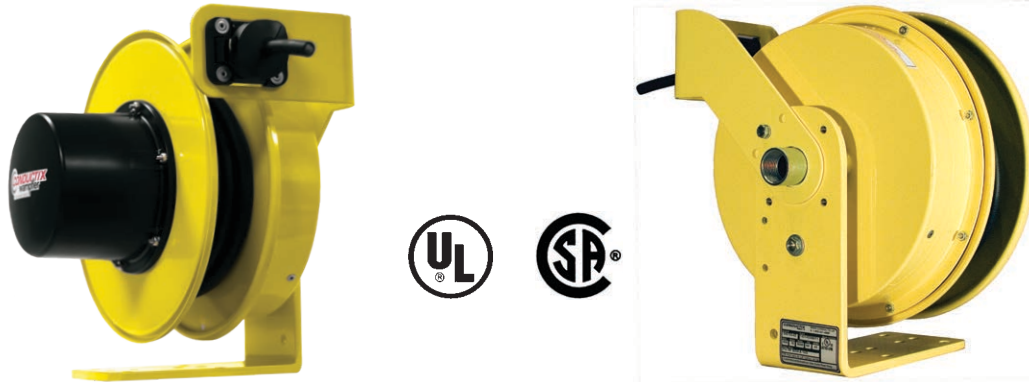
AWG / # of Conductors	110 or 300 Volt reels		600 Volt Reels
	Cable on Spool	Feeder Cable	Cable on Spool
16/3 Cables	SOOW-A	SJTOOW-A, SJ00W or SJE00W	SOOW-A
16/4 Cables	SOOW-A	SOOW-A	SOOW-A
14/3 Cables	SJE00W-A	SJTOOW-A, SJ00W or SJE00W	SOOW-A
14/4 Cables	SJE00W-A	SJE00W-A	SOOW-A
12/3 Cables	SJ00W-A	SJTOOW-A	SOOW-A
12/4 Cables	SJ00W-A	SJ00W-A	SOOW-A

1400 Series PowerReel®

1400 Series PowerReels are ideal for:

- Assembly and fabrication work areas
- Extendable conveyors
- Extendable conveyors
- Class A-C overhead cranes / hoists
- Schools and theaters
- Truck cranes, utility, and ladder trucks

The **1400 Series PowerReel®** is the leading industrial grade cable reel in its class. These reels are the “professionals’ choice”. The reel is modular and built with a minimum of components for maximum reliability. This reel will give you years of service with little or no maintenance. It has all the features you need for demanding industrial applications.



Standard Features

- Rugged, steel frame construction with safety chain hole for overhead-mounted reels
- Precision-built main spring housed in a safety-sealed canister
- Durable yellow powder coated finish, with black thermoplastic slip ring cover
- Available with cable in common sizes - see page 16
- **Operating Temperature Range:** -22°F to 194°F (-30°C to 90°C)

Each 1400 PowerReel includes

- **Adjustable Guide Arm:** Directs the cable to where you need it. Guide has 12 possible positions. Includes smooth-running 4 roller guide for minimum cable stress.
- **Ratchet:** Locks the spool to maintain the desired cable extension, until the user releases it with a pull on the cable. The ratchet can be disabled for constant tension (“stretch”) applications - see page 4 for definition.
- **Adjustable Ball Stop:** Limits cable retraction and prevents damage to cord-end accessories. Included only with “Lift/Drag” reels listed on page 16. Available as an option for other reels - see page 24.
- **Precision Slip Ring Assembly:** Provides flawless contact and long operational life. Enclosed in NEMA 4 weather-proof, gasketed enclosure. Ring #1 is grounded to the enclosure for safety.

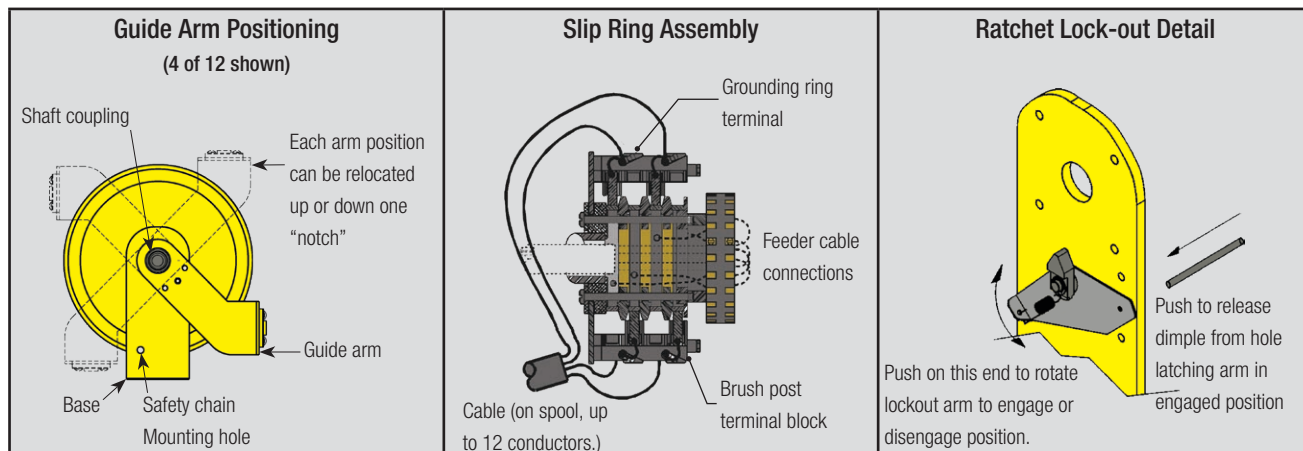
UL and CSA Listed For indoor and outdoor use - **if we supply the cable**

Choosing a 1400 Series PowerReel

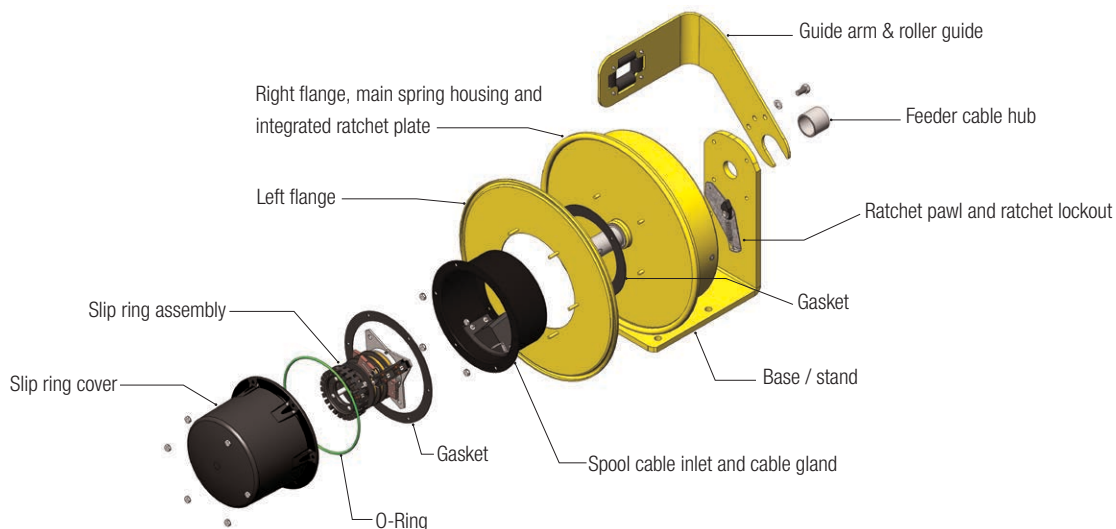
- The reels on page 12 are sized for Lift/Drag applications, such as ceiling or wall/bench mounting - See page 4 for definitions.
- This reel can accommodate other applications - see Specification Data Sheets on page 4-5.
- Cable length is actual length. Be sure to order enough cable - see “Cable Length Needed” on page 5.



1400 Series PowerReel® Features

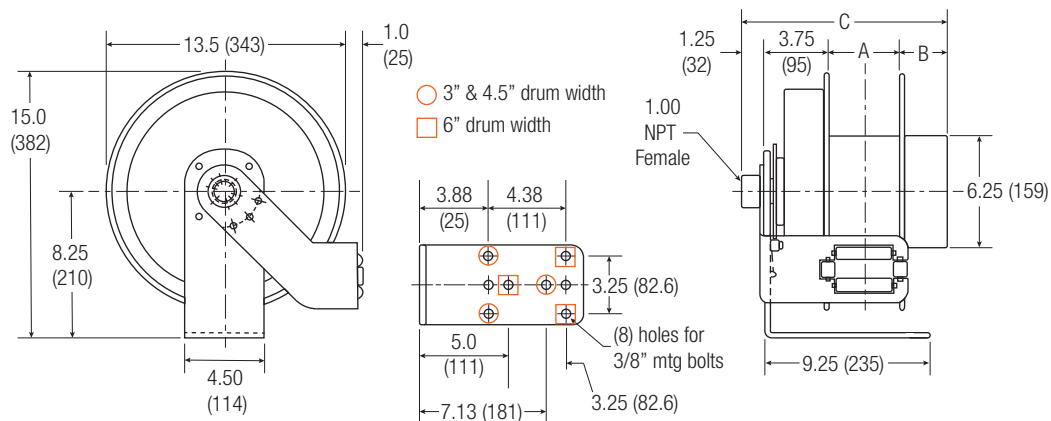


Exploded View



Dimensions - Inches (mm)

Note: Mounting pattern for use with pivot base - see page 24.



A = 3.0 to 6.0 (76-152)
 B = 3.5 to 8.5 (89-216)
 C = 13.0 to 18.0 (330-457)

A, B, and C dimensions depend on the exact reel configuration - Contact Factory

1400 Series PowerReel® Selection Chart

The most common 1400 Series configurations are listed below. Cable lengths listed are the total length of cable on the spool, plus some allowance for safety wraps and connections internal to the reel.

Reels operate best when the cable is payed out parallel with the guide and retracted the same way. If necessary, the payout angle can be a maximum of 15° from parallel. For greater payout angles, we recommend adding a pivot base (pages 13 or 24) or swivel base (page 25).

The reels below:

- Are UL and CSA listed to NEMA 4
 - Come with Type SOOW-A cable pre-installed
 - Come with ball stop (3 or 4 conductors only)
 - Come with one conductor grounded to the reel.
- e.g: 3 conductors (single-phase) = 2 live conductors + 1 ground

Cable AWG / # of Conductors	Available Cable Length in Feet (Meters)						
	20 (6.10)	30 (9.14)	40 (12.9)	50 (15.24)	60 (18.29)	70 (21.33)	80 (24.38)
16/3	1421603020**	1421603030**	1421603040**	1421603050**	1421603060**	1421603070**	1421603080**
16/4	1421604020**	1421604030**	1421604040**	1421604050**	1421604060**	1421604070XX	1421604080XX
16/6	1421606020**	1421606030**	1421606040**	1421606050**	+	+	+
16/8	1421608020**	1421608030**	1421608040**	1421608050**	+	+	+
16/10	1421610020**	1421610030**	1421610040**	+	+	+	+
16/12	1421612020**	1421612030**	1421612040XX	+	+	+	+
14/3	1421403020**	1421403030**	1421403040**	1421403050**	1421403060XX	1421403070XX	+
14/4	1421404020**	1421404030**	1421404040**	1421404050**	1421404060XX	142140407031	+
14/6	1421406020**	1421406030**	1421406040**	1421406050XX	+	+	+
14/8	1421408020**	1421408030**	+	+	+	+	+
14/10	1421410020**	+	+	+	+	+	+
14/12	+	+	+	+	+	+	+
12/3	1421203020**	1421203030**	1421203040**	1421203050**	1421203060XX	+	+
12/4	1421204020**	1421204030**	1421204040**	1421204050**	142120406031	+	+
12/6	1421206020**	1421206030**	+	+	+	+	+
12/8	1421208020**	+	+	+	+	+	+
10/3	1421003020**	1421003030**	1421003040**	142100305031	142100306031	+	+
10/4	1421004020**	1421004030**	1421004040XX	142100405031	+	+	+
10/6	1421006020**	1421006030**	+	+	+	+	+

** Add the two-digit code from the list below to the above part numbers to ensure that the reel is properly set up for the desired application. Refer to page 4 for application details.

11 = Lift or Drag Application

21 = Stretch Application

31 = Retrieve Application

XX = Reels can be used in Lift/Drag (11) or Retrieve (31) applications only.

31 = Reels can be used in a "Retrieve" application only.

IMPORTANT

If the reel will be:

- Paying out and retracting at a very high cycle rate

- Operating in an exceptionally harsh environment you may need Premium Cable - see Appendix VII, page 49, and contact Conductix-Wampfler for details.

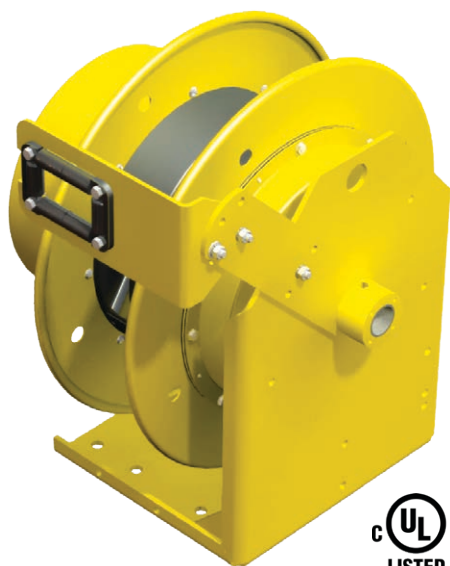
* For a complete listing of available accessories please see pages

1900 & 2400 Series PowerReel®

1900 and 2400 Series Reels are ideal for:

- Utility trucks
- Large cable-end accessories
- Aviation hangars
- Overhead hoists and cranes (Class A-C)
- Automated material handling
- Truck cranes and ladder trucks

Our 1900 Series and 2400 Series PowerReels® handle larger and longer cables and are top-quality, low-cost alternatives to other high-capacity spring reels. These reels offer heavy-duty performance at competitive prices.



Standard Features

- Excellent performance for industrial indoor and outdoor applications. Built to NEMA 4 standards for wet or dry environments
- Heavy-duty, all-steel construction
- Two-piece roller guide can be repositioned to four different locations
- Ball stop and ratchet assembly come standard with all "Lift/Drag" models
- Sealed, lifetime lubricated spring motor canister for easy and safe spring replacement
- A variety of ring amp ratings from 35-150 amps
- 600 volt rating (1-4 conductors). 250 volts (5 or more conductors) per UL requirements. Operating range: -22 F. to 194 F.
- cULus listed

Choosing a 1900-2400 Series Cable Reel

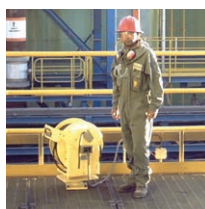
- Use the Specification Data Sheets on pages 4-5 to determine your needs. Contact the factory for quotations.
- Be sure to specify enough cable - see "Cable Length Needed" on page 5.
- Reels are sized to handle Type SOOW-A, Type W, or Type G-GC cable.

IMPORTANT

If the reel will be paying out and retracting at a very high cycle rate and/or operating in an exceptionally harsh environment you may need Premium Cable - see Appendix VII, page 49 - contact Conductix-Wampfler for details.

Suggested Reel Options (For other Options, see pages 23-32)

Option	Purpose	Details on Page:	Spool Size In. (mm)	Part No.
Guide Rail Set	To Protect Spool Flanges	n/a	19 x 5 (483 x 127)	40212A
Guide Rail Set	To Protect Spool Flanges	n/a	24 x 5 (610 x 127)	40212B
Guide Rail Set	To Protect Spool Flanges	n/a	19 x 8 (483 x 203)	40212AA
Guide Rail Set	To Protect Spool Flanges	n/a	24 x 8 (483 x 203)	40212BB
Spool Lock	To Keep the Spool From Rotating	26	n/a	40260A or 40260B
Pivot Base	Allows reel to pivot <360°	24	n/a	40274
Swivel Base	Allows reel to swivel 360°	25	n/a	

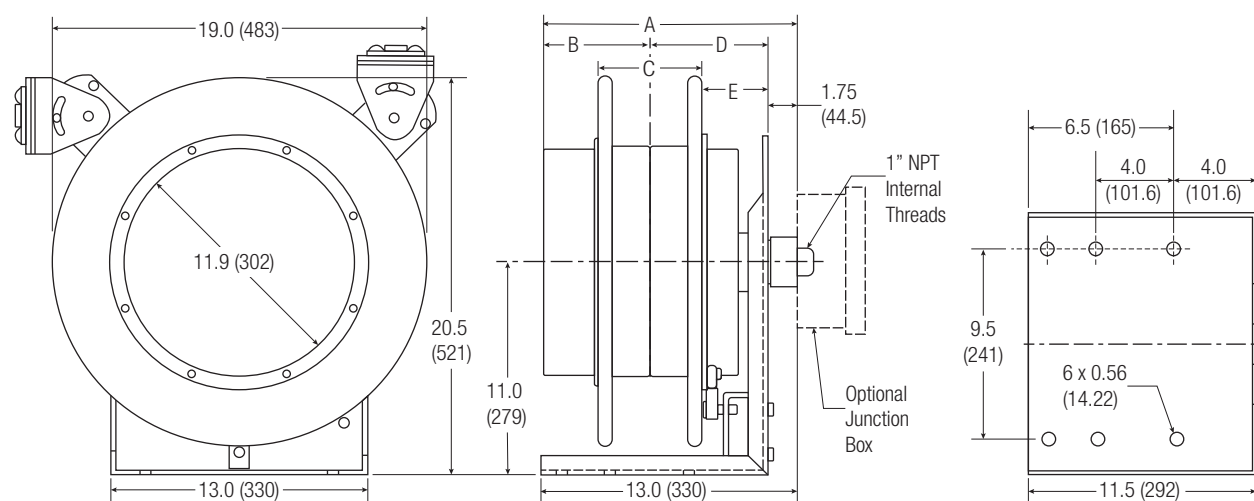


1900 & 2400 Series PowerReel®

NEMA 4 Junction Boxes

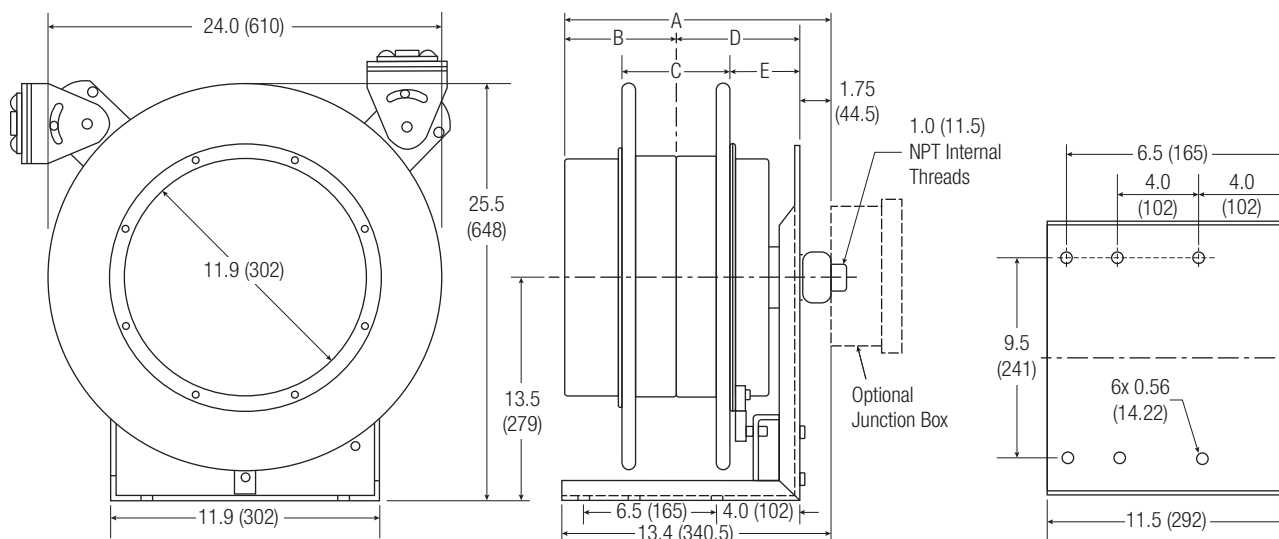
Cable Size	Cable O.D. Inches		Cable O.D. Inches		Cable O.D. Inches	
	w/ 1" NPT	Part No.	w/ 1.25" NPT	Part No.	w/ 1.50" NPT	Part No.
4 Conductor, 16-8 AWG	0.31 - 0.95	40923	n/a	n/a	n/a	n/a
4 Conductor, 6-2 AWG	n/a	n/a	0.875 - 1.245	40924	n/a	n/a
12 Conductor	0.31 - 0.95	40925A	0.875 - 1.245	40925B	n/a	n/a
24 Conductor	0.31 - 0.95	40926A	0.875 - 1.245	40926B	1.156 - 1.495	40926C
30 Conductor	n/a	n/a	0.875 - 1.245	40927B	1.156 - 1.495	40927C

1900 Series Dimensions - Inches (mm)



Dimensions A through D will vary depending on the model and can be provided with quote.

2400 Series Dimensions



Dimensions A through D will vary depending on the model and can be provided with quote.

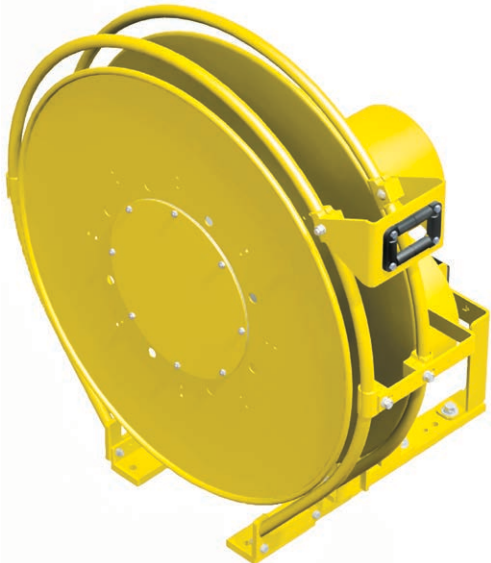
3200 & 3600 Series PowerReel®

3200 and 3600 Series Reels are ideal for:

- Overhead cranes & hoists
- Theater lighting cables
- Conveyors & trippers
- Any very demanding application

Our Heavy-Duty 3200 and 3600 Series Cable Reels are designed for larger, more robust applications. These reels will handle cables ranging from 16 AWG to 1 AWG cables, having up to 36 conductors, and in lengths up to 200 feet (60 m).

Reels are generally sized for type S00W-A, Type W or Type G-GC cable-3.



1900 Series Reel Shown



Standard Features

- All-steel modular construction with yellow powder coated finish
- Roller-guide able to be mounted anywhere along a 345° arc
- Safety-sealed, lifetime lubricated spring motor canisters with Quick-Change feature
- External spring torque adjustment
- Reel lifting eyes
- Integrated junction box and spool guard rails
- Sealed slip ring housing (NEMA 4)

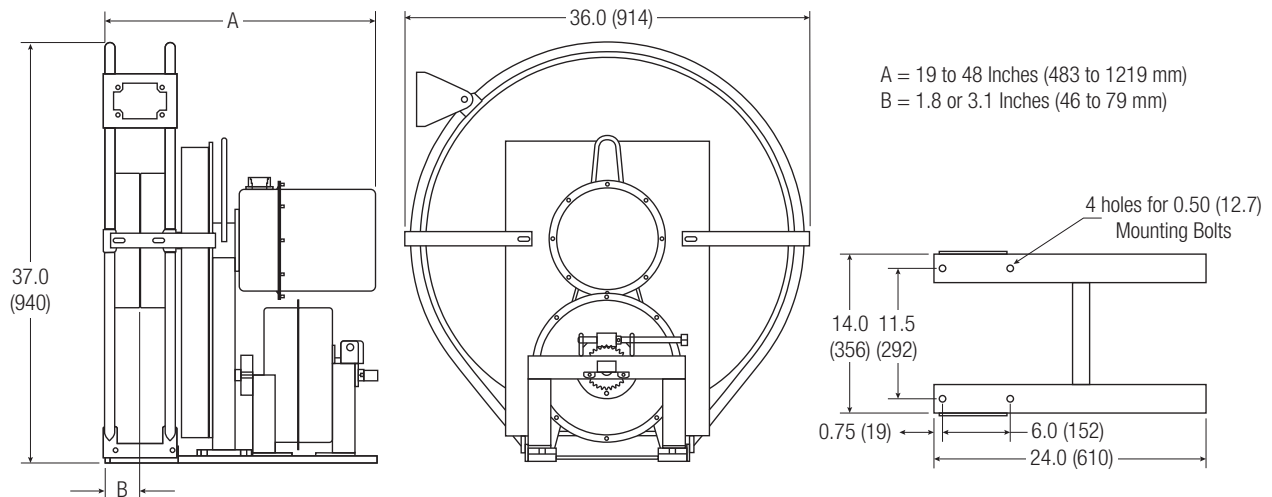
Reel Options

- Left Hand Rotation - contact factory
- Spool Lock (page 31)
- Limit Switch (page 32)
- Marine Duty (page 32)
- Pivot Base (page 29)
- Ratchet (page 31)
- ReelSafe Brake (Retraction Governor, page 31)

Choosing a 3200-3600 Series Cable Reel

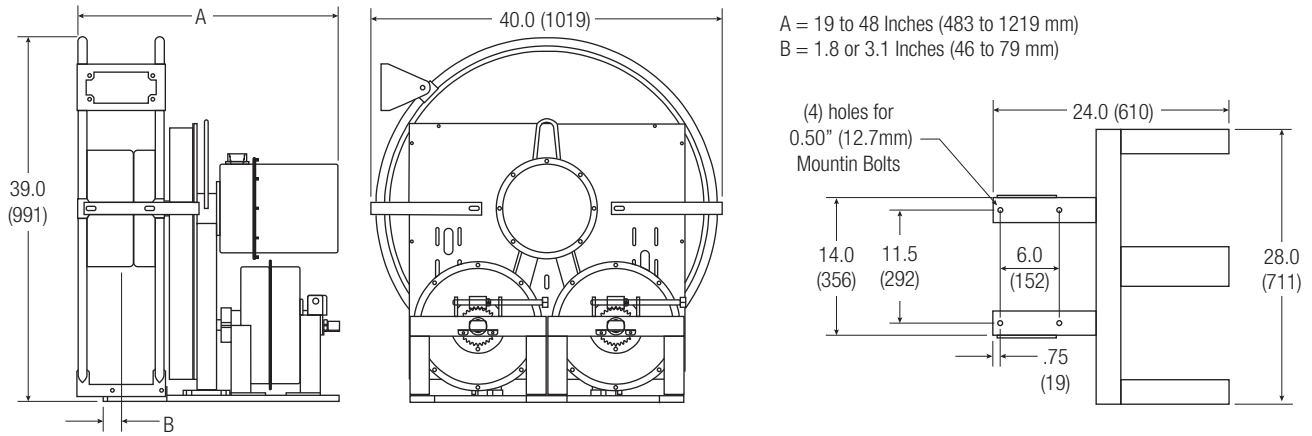
- Use the Specification Data Sheets on pages 4-5 to determine your needs. Contact the factory for quotations.
- Be sure to specify enough cable - see "Cable Length Needed" on page 5.

3200 Series Dimensions, Single Motor

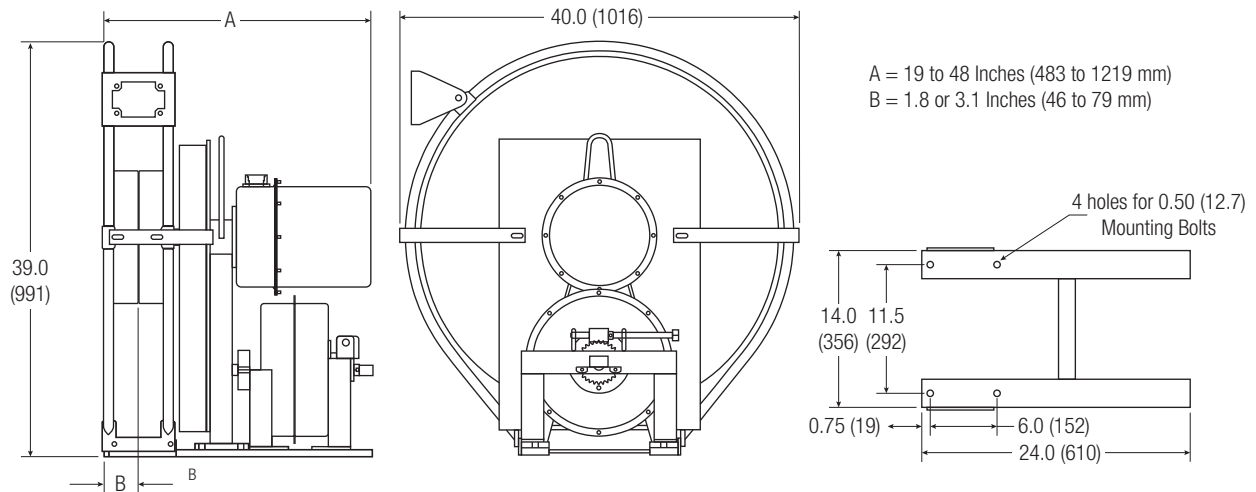


3200 & 3600 Series PowerReel® Dimensions

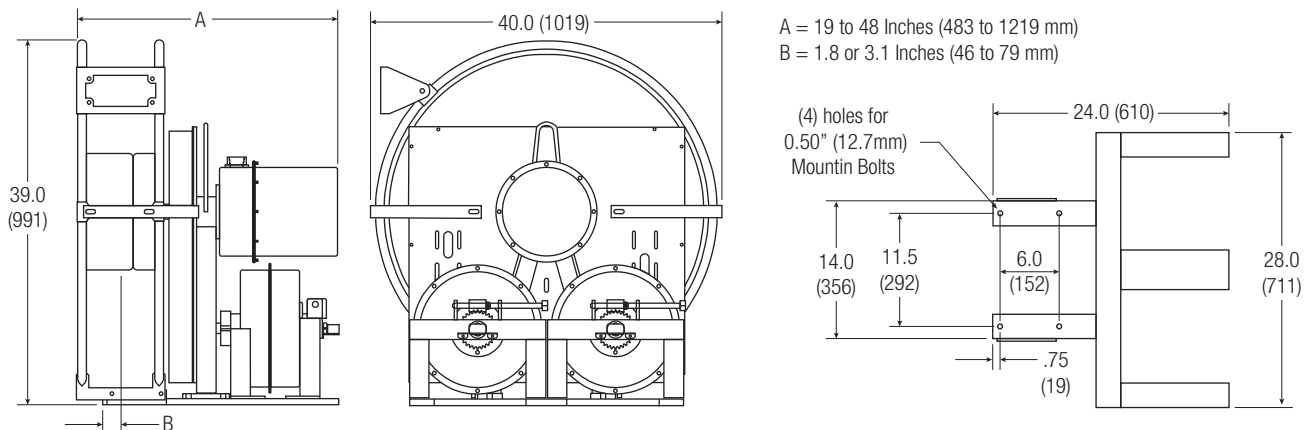
3200 Series Dimensions, Dual Motor



3600 Series Dimensions, Single Motor



3600 Series Dimensions, Dual Motor



1500 Series Hazardous Location PowerReel®

Hazardous Location PowerReels are ideal for:

- Petroleum facilities
- Waste water treatment plants
- Grain storage and handling silos
- Paint booths
- Underground mines
- Chemical plants

These reels are also commonly referred to as “explosion-proof” or “hazardous duty” reels. They are built with modular “1400 Series” components, coupled with a spark-proof ratchet and hazardous location slip ring housing.



Standard Features

- SOW-A cable, on all reels
- Spring activated ratchet
- 4 roller adjustable cable guide and ball stop
- Built to UL 508C table 36.1 / NEC Standards
- 6' feeder cord on fixed end
- Indoor or outdoor use
- 35 amp, 1-4 conductors 600 Volt, 5-12 conductors 250 Volt
- Rugged fabricated steel and cast aluminum construction
- Threaded cast aluminum slip ring enclosure
- Gray epoxy finish on steel parts

UL Hazardous Location Listings

3 and 4 conductor models with cable installed only

- Class I Division 1, Groups C & D (flammable gases or vapors)
- Class II Division 1, Groups E, F, & G (combustible dusts)
- Class III Division 1 (easily-ignitable fibers or flyings)
- Class I Zone 1: AEx d IIB, EX d IIB
- Conforms to NEMA 9 and NEMA 4 (IP56) standards



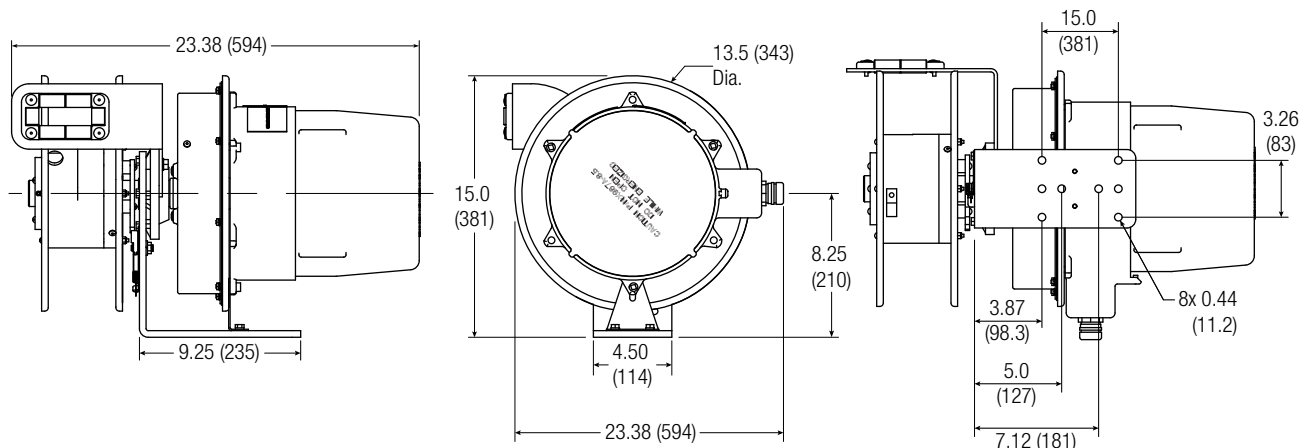
Choosing a 1500 Series PowerReel:

- Use the 1400 Series “Lift/Drag” chart on page 16 to select your 3 or 4 conductor 1500 Series reel. Use the same part number as the equivalent 1400 Series, but replace prefix “14” with “15”. For example: 152160305011 - rather than 142160305011
- Cable length is actual length. Be sure to order enough cable - see “Cable Length Needed” on page 5.
- This reel can accommodate other applications - see Specification Data Sheets pages 4-5.

1500 Series Options

- Hazardous location swivel bases - page 30
- Hazardous location hand lamps - pages 25 & 26
- 345 pivot base for 1500 Series reels - page 28

1500 Series Dimensions



2500 & 3500 Series Hazardous Location PowerReel®

Conductix-Wampfler 2500 & 3500 Series Hazardous Location Reels are built on the same platform as the 2400 and 3200/3600 Series reels, except they have been specially equipped to meet hazardous duty (explosion proof) requirements. The 2500/3500 Series reels will meet application requirements beyond the 1500 Series (namely longer travel distances and larger cables).

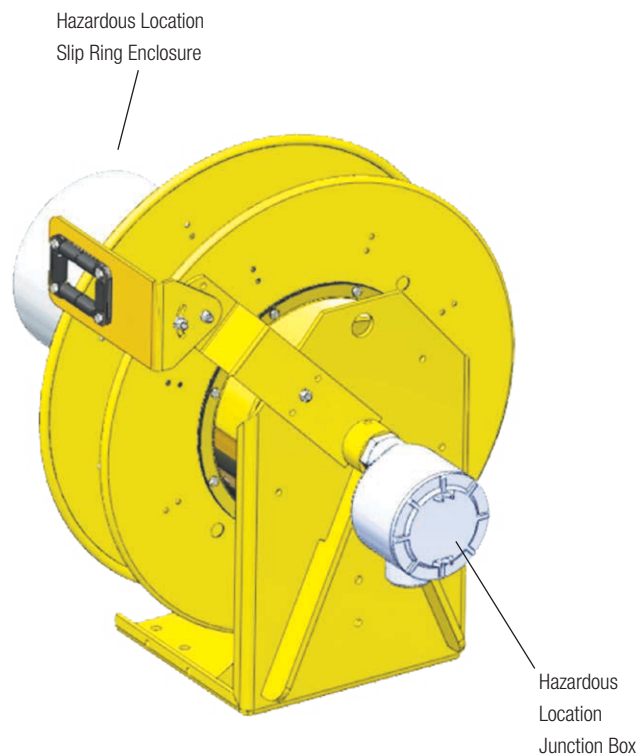
Contact Conductix-Wampfler for assistance with choosing the 2500 or 3500 Series reel to ensure a correct fit with your application.

Complies with NEC requirements. Not third party listed or certified by any regulatory body:

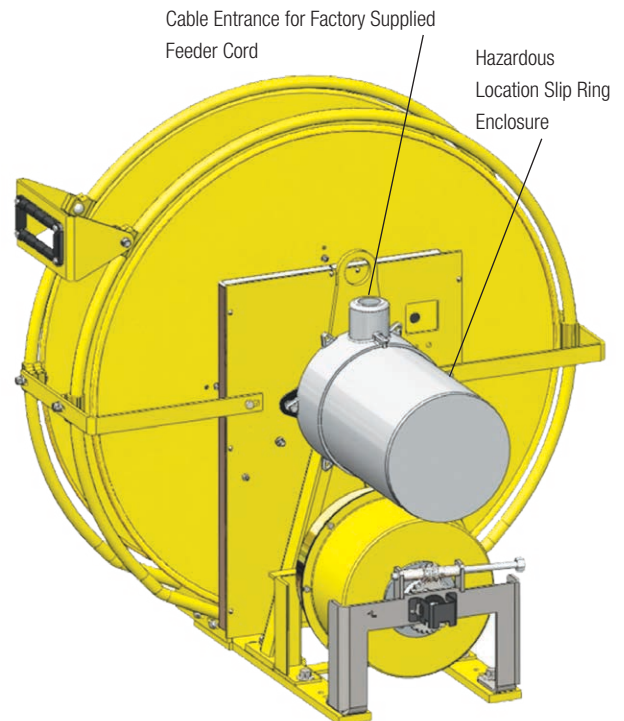
- Class I Division I, Groups C & D (flammable gases or vapors)
- Class II Division I, Groups E, F, & G (combustible dusts)
- Class III Division I (easily ignitable fibers or flyings)

Conforms to NEMA 9 and NEMA 4 (IP56) standards for applications in wet and dry locations.

2500 Series PowerReel



3500 Series PowerReel



Dimensional information will vary with specifications. Contact Conductix-Wampfler with your requirements.

Options and Accessories Reference Chart

For your convenience, the chart below lists each series of reel, the option, and whether that option is available for that reel series. Options and accessories are described on the pages listed in the second column. Some reel models include common add-on options as standard features of the basic reel.

		Reel Series				
		1200	1400	1500	1900 2400 2500	3200 3600 3500
		Reel Series Page Number				
Accessory	Accessory Page Number	6-9	10-13	18	14-15, 19	16-17, 19
Ball Stops	24	Std	Std *	Std	Std *	Add-on
Cable Grip	24	Add-on	Add-on	Add-on	Add-on	Add-on
External Spring Tensioning Device	19	-	-	-	-	Std
Flop-Over Guide Kit	27	-	Add-on	-	-	-
Guide Rail Set	17	-	-	-	Add-on	Std
Hand Lamps	12-13,25-26	Std*	Add-on	Add-on	Add-on	Add-on
Junction Box	18	-	-	-	Add-on	Std
Limit Switch	32	Call	Call	Call	Add-on	Add-on
Marine Duty	32	-	-	-	Call	Call
Pivot Base (345°)	28-29	Add-on	Add-on	Add-on	Add-on	Add-on
Push-Button Pendants	32	Add-on	Add-on	Add-on	Add-on	Add-on
Quick-Change Spring Motor	19	-	-	-	-	Std
Ratchet	31	Std	Std	Std	Std *	Add-on
Receptacle Boxes	26	Std *	Add-on	-	Add-on	Add-on
ReelSafe Brake	31	-	Add-on	Call	Add-on	Add-on
Roller Guides	33-36	Std	Std	Std	Std	Std
Slip Ring Assemblies (Special)	36	-	Call	Call	Call	Call
Spool Lock	31	-	-	-	Add-on	Add-on
Swing Mount	9	Add-on	Add-on	-	-	-
Swivel Base	30	Add-on	Add-on	Add-on	Add-on	Add-on
Hazardous Location Swivel Base	30	-	-	Add on	Add-on 2500 only	Add-on 3500 only

* Selected models ONLY

Need assistance with choosing accessories? Contact Conductix-Wampfler at 1-800-521-4888

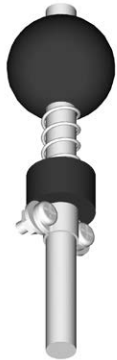
Ball Stops and Cable Grips

Ball Stops

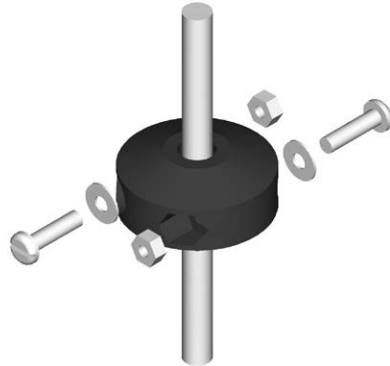
Ball Stops, also referred to as “Cable Stops” or “Bumper Stops” are:

- **Generally used for** manually operated “Lift/Drag” applications govern retraction length. Stops are required when cable-end accessories such as hand lamps and receptacle boxes are installed on the reels.
- Ball stops are included with all 1200 Series reels.
- Ball stops are included on 1400, 1500, 1900, 2400 and 2500 Series reels “Lift/ Drag” application only.

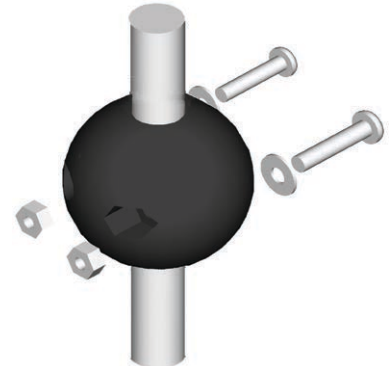
Type	For Outside Cable Dia of: inches (mm)	For Reel Series:	Part No.
A	0.19 to 0.44 (4.8 to 11.2)	1200 or 1400 only Not for 1500	34885
B	0.44 to 0.62 (11.2 to 15.7)	Any	34474
B	0.63 to 0.75 (16.0 to 19.1)	Any	34475
B	0.75 to 1.05 (19.1 to 26.7)	Any	34476
C	0.25 to 1.38 (6.35 to 15.7)	Any	533328-K



Type A - Round with spring



Type B - Split Donut

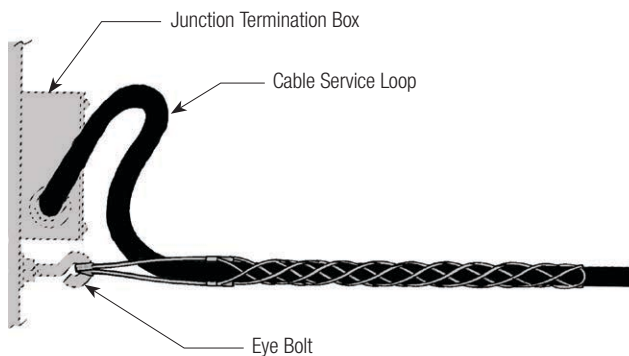


Type C - Split Round

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.

Strongly Recommended for “stretch” applications - see page 4.



For Outside Cable Dia of: inches (mm)	Part No.
0.43 to 0.61 (10.9 to 15.5)	03622
0.61 to 0.74 (15.5 to 18.8)	03623
0.74 to 0.99 (18.8 to 25.1)	03624
0.99 to 1.24 (25.1 to 31.5)	03625
1.25 to 1.49 (31.8 to 37.8)	03626

Hand Lamps

Hand Lamps are ideal for:

- Manufacturing work cells
- Automotive work bays
- School shop areas
- Recreation centers
- Maintenance shops
- Maintenance trucks & trailers

Hand Lamps provide extra lighting in applications where proper lighting is required for safety or convenience. Suitable for indoor use on all 3 conductor 16 AWG & 14 AWG cable reels. Standard on selected 1200 Series PowerReels - see page 12 & 13. Available in incandescent or fluorescent type in standard and hazardous duty models.

Ratchet (page 31) and ball stop (page 24) are required and may need to be ordered separately if they are not standard on the host reel. Please refer to chart on page 23.

Incandescent Hand Lamp

The HSR has a high impact yellow handle with recessed on/off switch and 15 amp, 125 volt outlet on the side. Features a grounded steel reflector cage with swivel hanger. Accepts up to 14/3 SJOOW-A cable. 100-watt rough service bulb not included.

UL listed for indoor use.

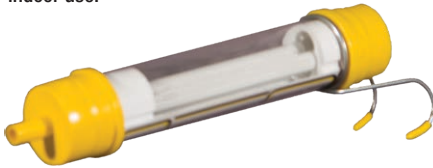


Part No.	Wt lb (kg)
HSR	1.3 (.59)

Fluorescent Hand Lamp

The HSR has a high impact yellow handle with recessed on/off switch and 15 amp, 125 volt outlet on the side. Features a grounded steel reflector cage with swivel hanger. Accepts up to 14/3 SJOOW-A cable. 100-watt rough service bulb not included.

UL listed for indoor use.



Part No.	Wt lb (kg)
FHL	1.2 (.55)

Hazardous Duty Incandescent Hand Lamp

Ideal when a hand lamp needs to be used in a hazardous location. Light-weight construction. Features non-sparking aluminum guard with full swivel hook and high impact glass reinforced phenolic handle. Resists heat up to 300° F. Accepts up to 14/3 SOOW-A cable. 100 Watt, 120 Volt.

UL listed



Part No.	Wt lb (kg)
XHL	4.9 (2.22)

Hand Lamps and Receptacle Boxes

Hazardous Duty Fluorescent Hand Lamp

Ideal when a hand lamp needs to be used in a hazardous location. Light-weight construction. Features non-sparking plastic guard with full swivel hook and high impact glass reinforced phenolic handle. Resists heat up to 300 degrees F. Accepts 16/3 SOOW-A cable. 13 Watt, 120 Volt

UL listed



Part No.	Wt lb (kg)
100211-PL	4.9 (2.22)

Receptacle Boxes

ideal for: • Factory work cells • Automotive work bays • School shop areas • Recreation centers • Maintenance shops • Maintenance trucks & trailers

Receptacle boxes mounted to the reel cable supply mobile power where it is needed. They are standard on some models of 1200 Series reels - see page 8. They can also be wired to other PowerReels and can accommodate up to 12/3 SOOW-A cable.

Made from a heavy duty, molded yellow thermoplastic elastomer (TPE), these boxes have an internal cord grip and are oil resistant and impervious to most chemicals.

Ratchet (page 31) and Ball Stop (page 24) are required and are standard on the reels that most commonly use a receptacle box - see page 23.

UL Listed and CSA approved.



Description	Part No.
Dual 15 amp 125 volt duplex (4 outlets total)	RB
Dual 20 amp 125 volt duplex (4 outlets total)	RB-5-20R

Ground Fault Circuit Interrupter (GFCI)

A Ground Fault Circuit Interrupter (GFCI) and plug assembly can be mounted onto the feeder cord of some reels.

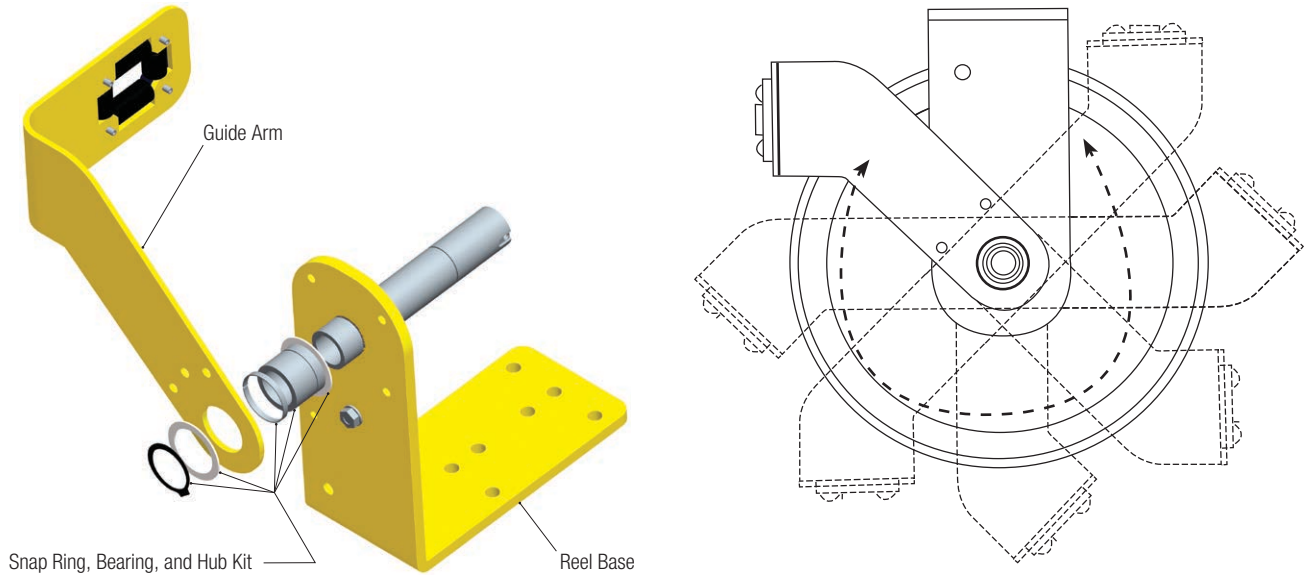
It comes standard on 1200 reels with part numbers ending in "17" - see page 12.



Flop-Over Guide

Flop-Over Guide Kit

The Flop-Over Guide Kit consisting of a new guide arm assembly, special hub, snap ring, and bearings. The kit modifies the standard stationary guide arm to let it freely pivot around the shaft hub. Ideal for overhead reels that require a back and forth payout. **For 1200 and 1400 Series only.**



Part No.	Reel	Color	Part No.	Reel	Color
XA-41012FGK	1200	Yellow	XA-PR87-4FGK	1400 B Width	Yellow
XA-41012FGKBLK	1200	Black	XA-PR87-4FGKBLK	1400 B Width	Black
XA-41012FGKTBW	1200	White	XA-PR87-4TBW	1400 B Width	White
XA-PR87-3FGK	1400 A Width	Yellow	XA-PR87-6FGK	1400 C Width	Yellow
XA-PR87-3FGKBLK	1400 A Width	Black	XA-PR87-6FGKBLK	1400 C Width	Black
XA-PR87-3FGKTBW	1400 A Width	White	XA-PR87-6FGKTBW	1400 C Width	White

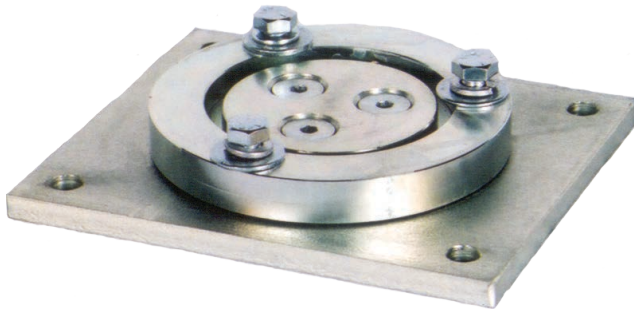
345° Pivot Bases

345° Pivot Base

Pivot Bases allow the cable reel to pivot back and forth for alternating directions of cable payout. See part number chart below for maximum rotation.

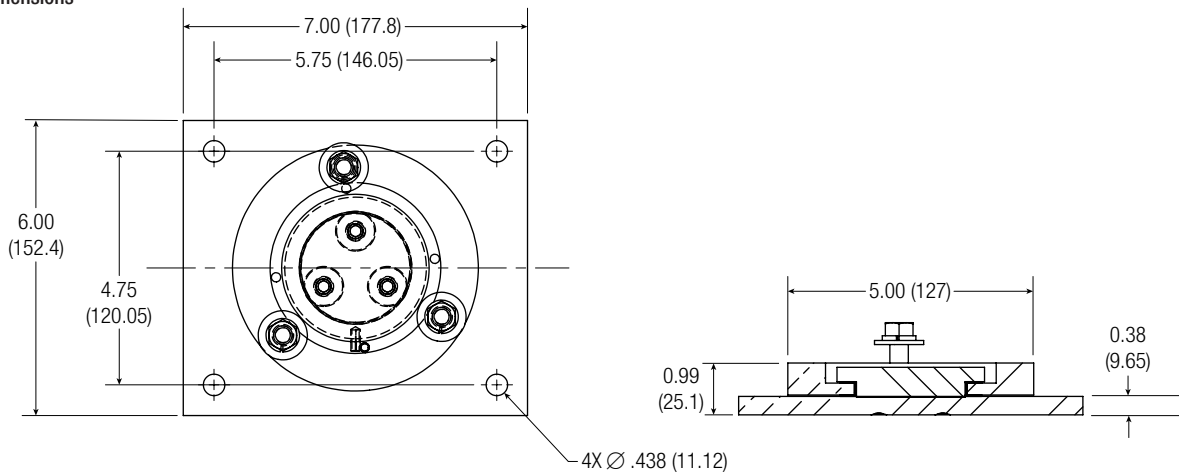
If the cable is to be paid out at more than 15 degrees away from parallel with the spool flanges, a pivot base should be used.

Note that Swivel Bases are available for applications that require a full 360 degree rotation - see page 29. Pivot Bases are ordered based on the specific series of reel used - see chart below.

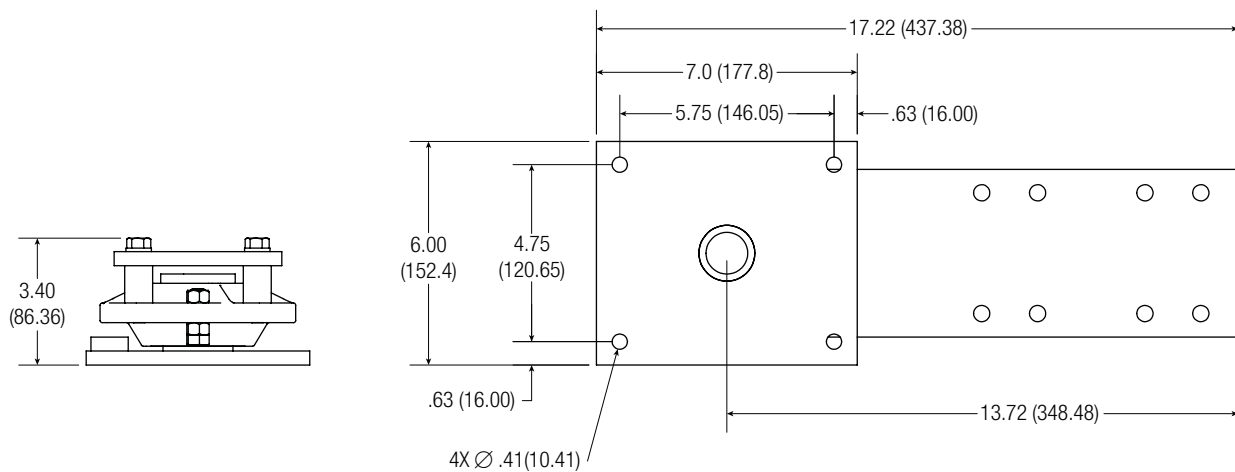


Reel Series	Maximum Rotation (Degrees)	Part No.	Wt lb (kg)
1200 and 1400	345	PVB	7.5 (3.40)
1500	345	XPVB	20.0 (9.07)
1900 & 2400	330	40274	43.0 (19.51)
2500	330	40274X	43.0 (19.51)
3200 & 3600	330	P3-3200	103.0 (46.72)

PVB Dimensions

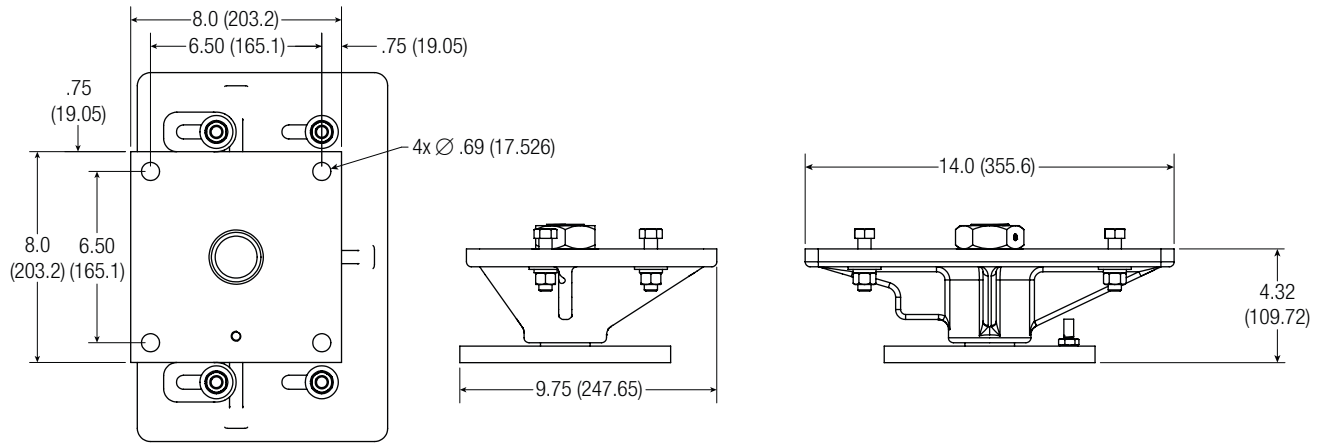


XPVB Dimensions

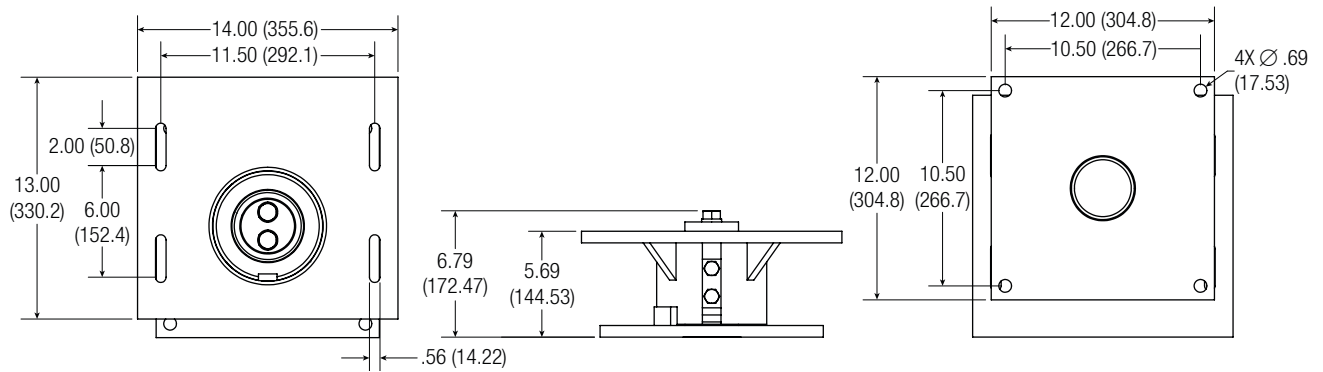


345° Pivot Bases

40274 and 40724X Dimensions



P3-3200 Dimensions



360 Degree Swivel Bases

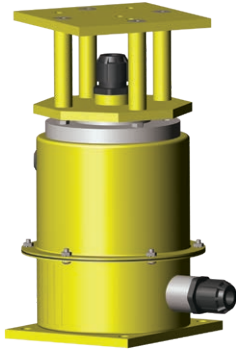


Swivel Bases allow reels to rotate 360 degrees in applications where continuous electrical rotation is required. They feature completely free running ball bearings in a water-tight and dust-tight enclosure. Access holes are provided for simple slip ring inspection. Hazardous duty version is available for 1500 Series Reels (see below).

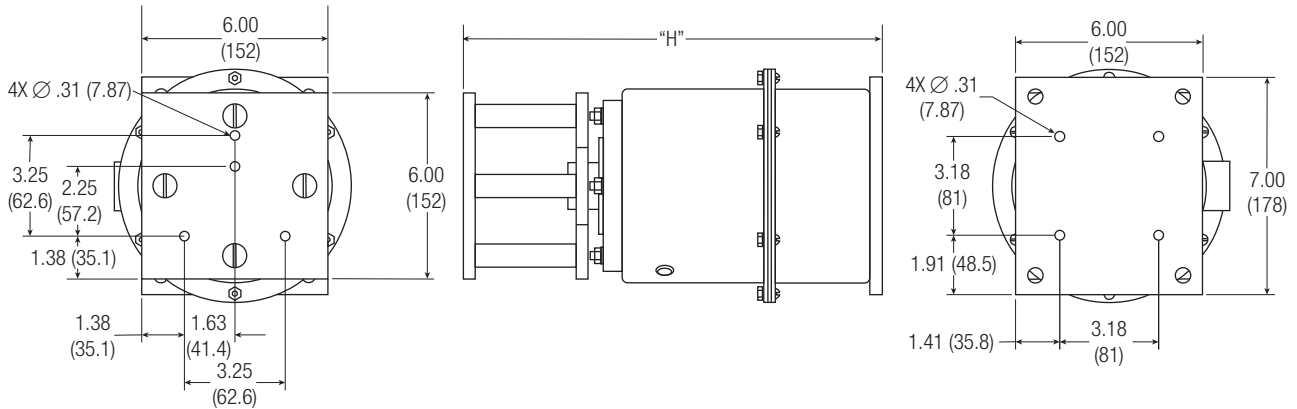
Standard top and side fittings: 1.0 inch NPT for cable diameters ranging from 0.50 to 0.75 inches.

Contact factory regarding fittings for larger size cable.

1200 / 1400 Swivel Base



1200 and 1400 Swivel Bases				
# Cond	Amps	Volts	dim "H"	Part No.
3	35	600	13.5 (343)	38036
4	35	600	13.5 (343)	38036B
5	35	250	15.0 (381)	38036C
6	35	250	15.0 (381)	38036D
8	35	250	16.5 (419)	38036E
10	35	250	16.5 (419)	38036F
12	35	250	18.5 (471)	38036G

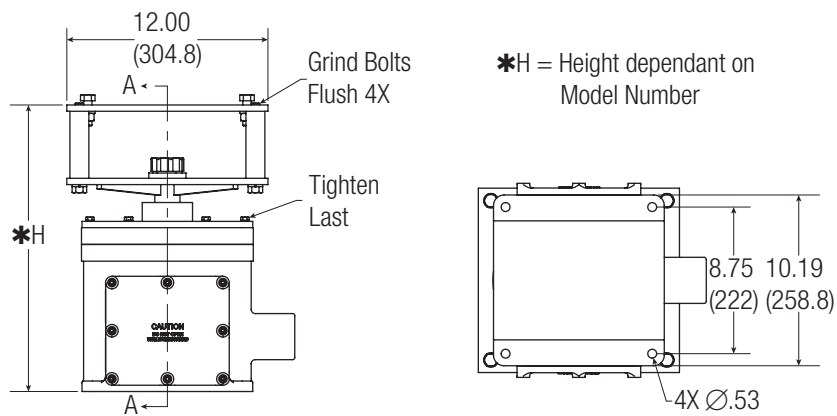


360 Degree Swivel Bases

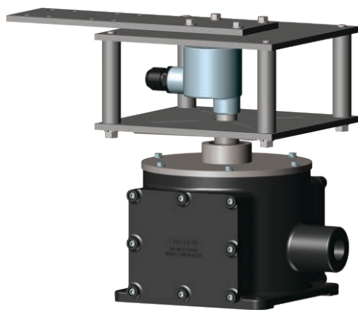
1900 / 2400 Swivel Base



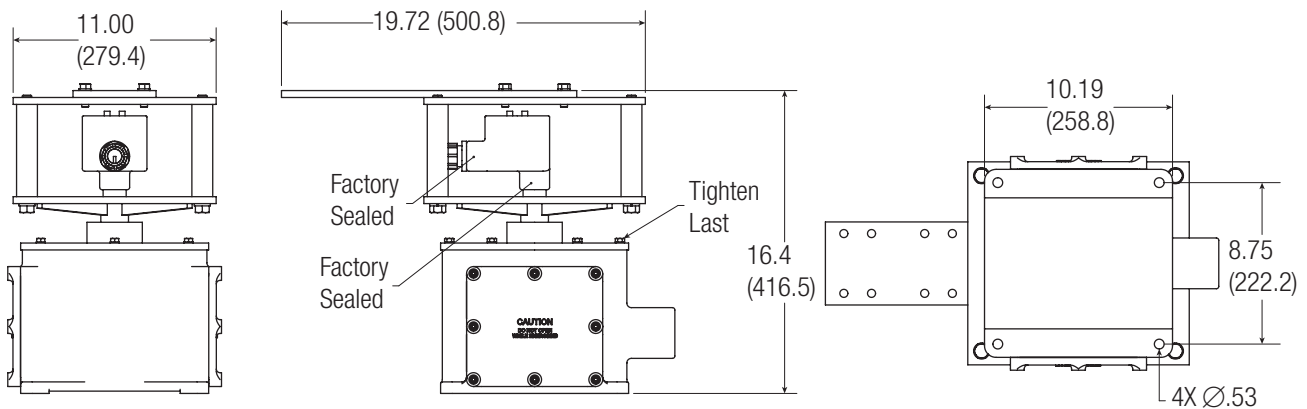
1900 and 2400 Series Swivel Bases			
No. of Conductors	Amps	Volts	Part Number
3	35	600	SM-33-P***
4	35	600	SM-34-P***
5	35	250	SM-35-P***
6	35	250	SM-36-P***
8	35	250	SM-38-P***
10	35	250	SM-310-P***
12	35	250	SM-312-P***



1500 Swivel Base



1500 Series Swivel Bases			
No. of Conductors	Amps	Volts	Part Number
3	35	600	XSM-33-XPVB
4	35	600	XSM-34-XPVB
5	35	250	XSM-35-XPVB
6	35	250	XSM-36-XPVB
8	35	250	XSM-38-XPVB
10	35	250	XSM-310-XPVB
12	35	250	XSM-312-XPVB



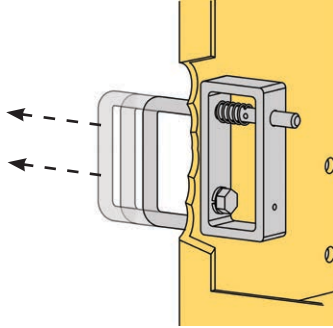
Optional Spool Locks, Ratchets, and Brake

Spool Locks

Spool locks hold the spool in place to prevent rotation of the reel in adverse conditions or during routine maintenance.

Spool Locks are used for:

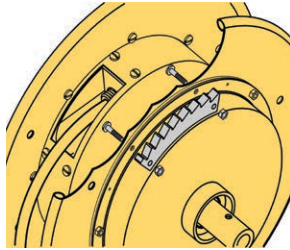
- Overhead cranes
- Railcars
- Reel maintenance situations



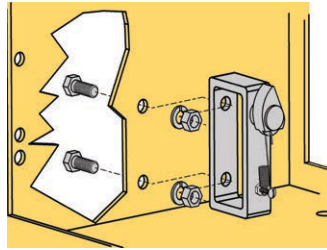
For Reel Series	Part Number:
1900-2400	40260A or 40260B (depending on reel - consult factory)
3200-3600	44333

Ratchets

Ratchets are spring activated mechanisms that temporarily lock the spool in place at selected points in the cable payout. The ratchet can then be released by pulling the cable out slightly. Ratchets are standard on 1900, 2400 and 2500 Series "Lift/Drag" Application Reels (see Page 4 under Applications). For 3200 through 3600 Series, they need to be specified during the quote/order process.



Ratchet on Spool



Ratchet Pawl on Base

Ratchets are used for:

- Manually operated reels
- Lift/Drag applications (see Page 4)
- Reels with hand lamps, receptacle boxes, or pendants installed

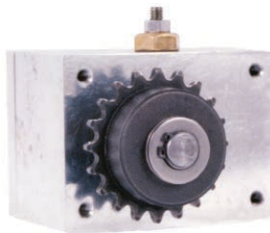
For Reel Series	Part Number
1900-2400	40251A-K or 40251B-K *
3200-3600	43418

* This part number is for replacement as 1900, 2400 and 2500 Series Lift/Drag reels now have ratchets included as standard.

ReelSafe Brake

The ReelSafe Brake (U.S. Patent # 6488224) limits the retraction speed of a spring-powered reel. The device greatly reduces the chance that an accidental uncontrolled cable retraction will occur, thereby reducing the risk of personal injury or property damage.

The ReelSafe is preset at the factory to a safe speed, but it can be adjusted to the users preference after reel installation. Some variation in retraction rate will be noticeable during large temperature variations such as seasonal temperature change, and minor adjustments may be necessary.



For Reel Series	Part Number. (ReelSafe Brake Unit Only *)
1400	42900
1900-2400	42900
3200-3600	42900

* Final part number character determined upon order entry based on reel style.

Other Options

Limit Switches

Rotary cam-type limit switches are used when an electrical interlock between cable payout length and other electrical equipment is required. These are adjustable for accurate location of the tripping mechanism. A variety of internal gear ratios are available so that the selection of the proper ratio will give maximum rotation of the actuator. The standard limit switch consists of a 2-element switch to provide 2 NO (normally open) and 2 NC (normally closed) sets of contacts in a NEMA 4 enclosure.

Limit Switches are used for:

- 1900 through 3600 Series Reels
- Pendant Switches
- Overrun Control

Limit Switches	Part Number
Contact Factory for Consultation	To be determined

Marine Duty Option

Marine Duty option is available for 1900 through 3600 Series PowerReels® used in applications around bodies of water and other moist environments as defined by marine specifications IEEE-45 and U.S. Coast Guard specification ABS. Hardware is stainless steel, reel shaft is zinc plated, and the slip ring leads are fully sealed at both ends of the shaft.

Marine Duty Reels are ideal for:

- Ports and Terminals
- Water Treatment Plants
- Other Extremely Moist Areas

Marine Duty Options	Part Number
Contact Factory for Consultation	To be determined

Push Button Pendants

Cable reels can be used to manage pendant cables and the push button pendant on the cable end. Conductix-Wampfler offers a complete line of ergonomically designed push button pendants - from 2 to 24 buttons.

Contact Conductix-Wampfler Sales and ask for the Pendant Catalog (Cat 1001) or download it from www.conductix.us



Roller Guides, Type “A”

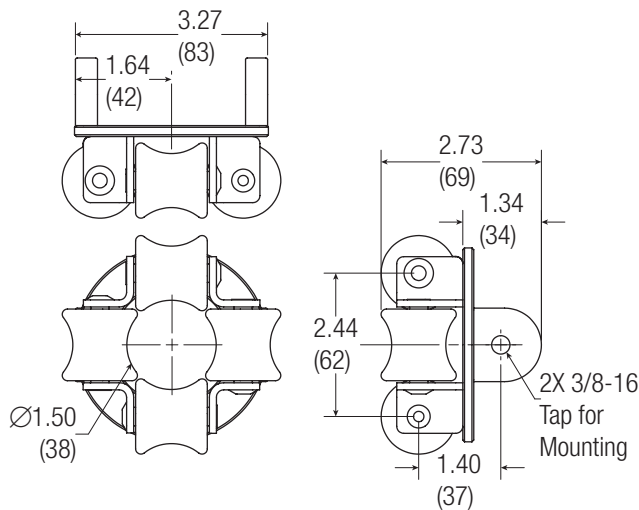
Conductix-Wampfler includes a 4 roller guide as a standard item on each spring driven cable reel. For special cable payout applications, we recommend our Type C.

Type “A” Roller Guides are used to:

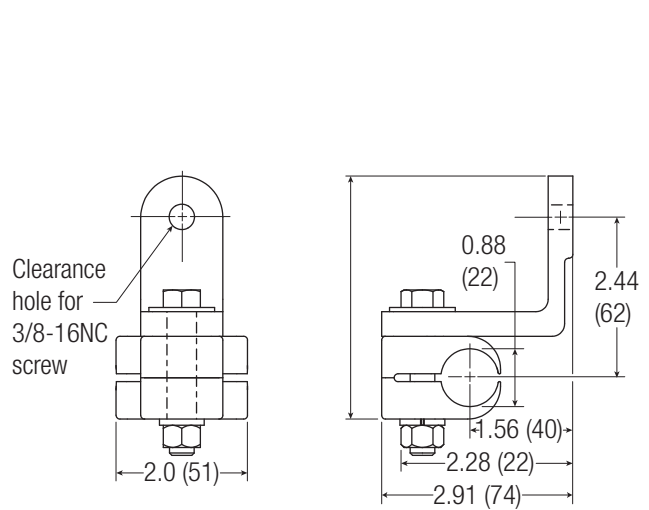
- Centering the cable on the spool
- Lift Applications
- Payouts not more than 15 degrees from tangent to the drum
- Single direction stretch applications
- Providing a “seat” for a Ball Stop

Maximum Cable O.D. inches (mm)	Roller Guide Part Number	Roller Guide Mounting Set Part Number (for old E, F, H and M style reels)
1.25 (32)	A2	AA
2.00 (51)	A3A	08397Z

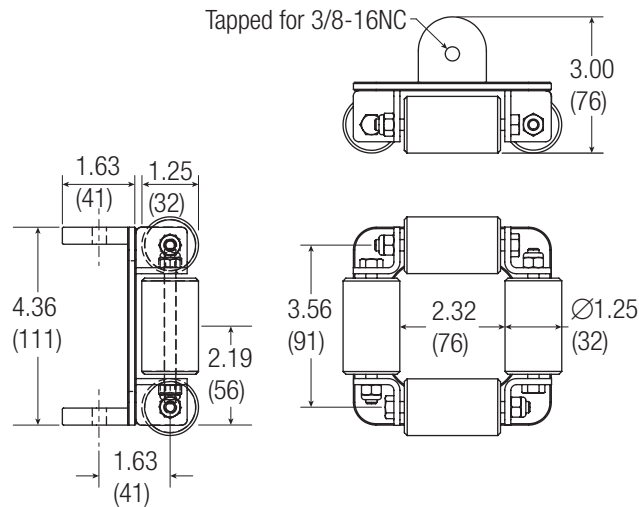
Important Note: Do not use standard rigid mount roller guide supplied with reel in a two-way payout application. Refer to pages 34-35 for appropriate options.



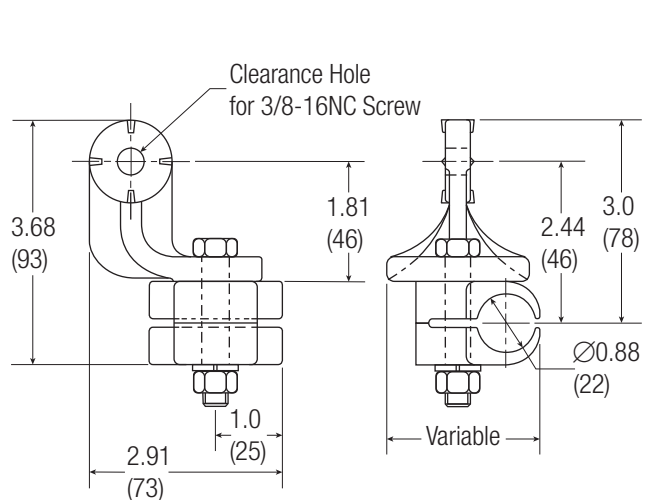
A2 - Four Roller Guide



AA - Guide Mount Set (used on 3” or greater drum widths.



A3A - Four Roller Guide



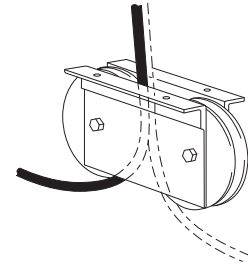
08397Z - Cable Guide Support (used on 2.5” or less drum widths

Roller Guides, Type “C”

The rugged “Type C” guide mount separate from the reel. Suitable for all PowerReel® cable reels, features sealed bearings, and comes in standard matte black finish.

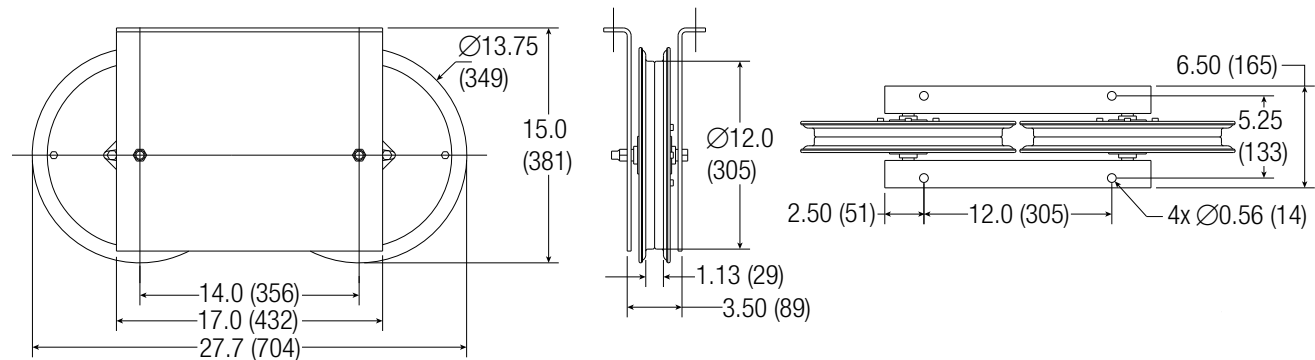
Type “C” Roller Guide (Two Way Version) is ideal for:

- Cable that pays out in two directions and is terminated at the center of travel
- When a structural member of obstruction would interfere with the normal payout and retraction of the cable.

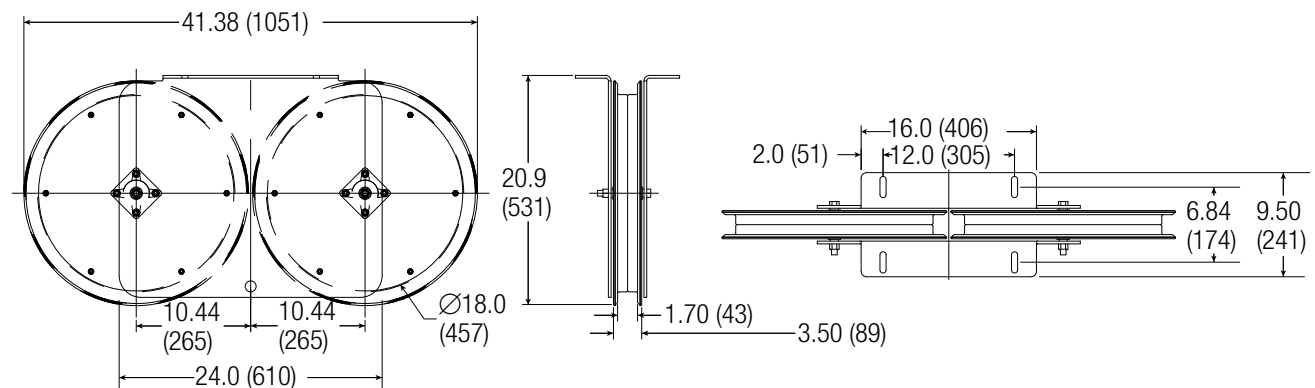


Type	Bend Diameter	Maximum Cable O.D.		Part Number
		Inches (mm)		
Two-way Payout	12 (305)	1.0 (25)		C12S
Two-way Payout	18 (457)	1.5 (38)		C18S
Two-way Payout	24 (610)	2.0 (51)		C24S
Single Sheave	12 (305)	1.0 (25)		CA11397
Single Sheave	18 (457)	1.5 (38)		CA11518
Single Sheave	24 (610)	2.0 (51)		CA11199

Important NOTE: When using roller guides, premium cable is required. See Appendix VII, or contact factory for details.



C12S Roller Guide, Dual Sheave (CA11397 is the single 12” sheave model)

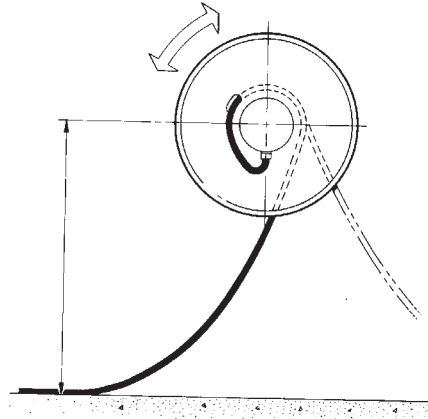


C18S Roller Guide, Dual Sheave (CA11518 is the single 18” sheave model)

Roller Guide Installation

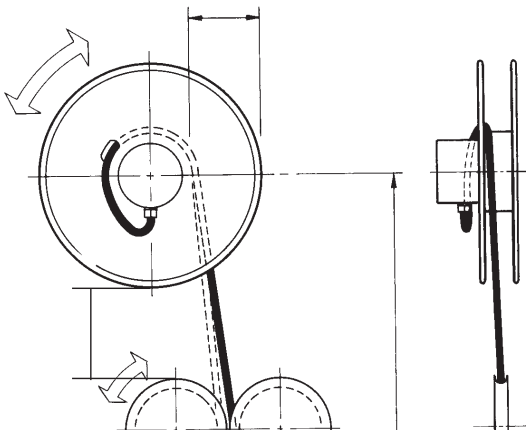
Configuration A

Low lift height to the center line of reel. No obstructions to nominal catenary of cable. **Secondary roller guide is not needed.**



Configuration B

There is an obstruction to the normal catenary of the cable between the lift height center line and the lay of the cable. There is also adequate space between reel flange and cable lay for two-way payout roller guide (Part No. C12S, C18S or C24S - page 35)



Selection of Roller for Configuration B

1. Determine the bend diameter required. The bend diameter (sheave diameter) should be no less than 10 times the cable diameter to maximize cable life.
2. Select roller guide with required bend diameter (from Page: 35). Lay out cable reel and roller guide to assure that there is not interference. When in doubt as to which configuration applies, lay out the application using Configuration B.
3. Specify catalog number of roller guide and note on the order, "For separate mounting with cable reel part number..." If the cable reel is not on the same order, refer to the cable reel order or specify the cable that will run on the roller guide.

Mounting for Configuration B

Front View (A): Locate center line of the roller guide on the mean center line of the spool flange to obtain a vertical line payout of cable from the spool to the roller guide when the spool is one half full.

Front View (B): Align the roller guide center line with spool center line.

Note: Allow a maximum of 4 feet from spool horizontal center line to the surface supporting the cable.

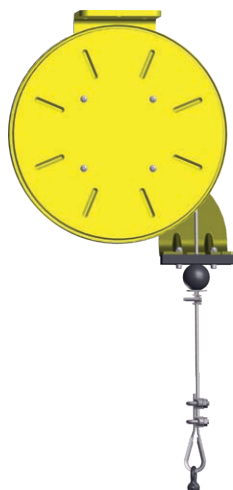
Torque Reels

The rugged, industrial-designed torque reels are spring operated without electrical connections. The 3/16" galvanized steel aircraft cable with protective nylon jacket comes with the reel. See selection charts below of weights and lifting range.

Features

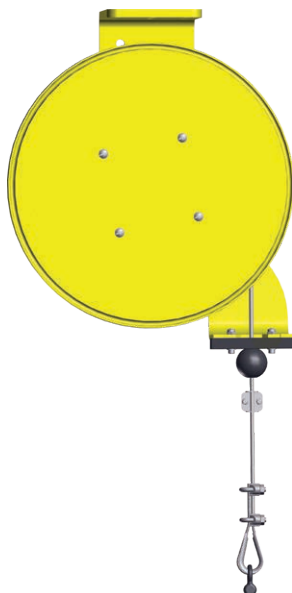
- Indoor/Outdoor use - wet or dry
- Ratchet - with lockout feature for constant tension
- Formed Steel Strand with Multiple Mounting Holes and Strain Relief/Saddle Clamp
- Rubber ball stop and clevis hook included
- Safety yellow powder-coated finish
- Optional 360-degree Pivot Base #TRPVB for 1400 Series

1200 Series



Description	Part Number	Weight: lb. (kg)
Reel for 30' of 1/8" O.D. coated wire rope, working range: 5-23 lb. (2.26-10.43 kg.) line pull, with wire rope.	126920103021	32 (14.52)

1400 Series



Lift Weight: lb. (kg)	Lift Range: ft. (m)	Part Number	Unit Weight: lb. (kg)
5 (2.2)	47 (14.3)	146920105011	62.4 (23.3)
5 (2.2)	100 (30.5)	146920112011	88.4 (33.0)
10 (4.5)	30 (9.1)	146920105011	62.4 (23.3)
10 (4.5)	54 (16.3)	146920112011	88.4 (33.0)
10 (4.5)	67 (20.4)	146920109011	81.7 (30.5)
15 (8.8)	12 (3.7)	146920105011	62.4 (23.3)
15 (8.8)	20 (6.1)	146920104011	59.6 (22.2)
15 (8.8)	37 (11.3)	146920109011	81.7 (30.5)
20 (9.0)	9 (2.7)	146920104011	59.6 (22.2)
20 (9.0)	29 (8.8)	146920105021	76.6 (28.6)
25 (11.3)	20 (6.1)	146920105021	76.6 (28.6)
30 (13.6)	12 (3.7)	146920105021	76.6 (28.6)
30 (13.6)	20 (6.1)	146920104021	71.7 (26.8)
35 (15.8)	14 (4.3)	146920104021	71.7 (26.8)

Welding Reels

Welding Reels

Conductix-Wampfler welding reels are specially designed for electric welding and grounding use. These reels are ideal for keeping excess cable stored and accessible in a neat, safe and efficient manner.

Welding Reels are for Lift/Drag Applications ONLY!

Welding reels have positive locking ratchets and are suitable for both indoor and outdoor applications. We offer two welding reel models.

1400 Series - See Page 14-15 for overview and size specifications.

1900 Series - See Page 17-18 for overview and size specifications.



Welding Reels are ideal for:

- Fabrication work areas
- Repair shops
- Automotive and truck work bays
- Mobile utility vehicles
- School shop areas
- Maintenance shops

Features:

- Both 1400 and 1900 Series are built to NEMA 4 standards, indoor & outdoor use
- Rugged all-steel construction
- Positive Ratchet, including a ratchet lock-out feature for constant-tension applications
- Standard four roller guide included
- 6' (1.82 m) Feeder cord and ball stop included on reels with cable
- Special 450 amp "knuckle style" slip ring assembly for superior current carrying ability and reliability
- Reel will handle from 6 AWG to 2/0 AWG welding cable in lengths up to 75 feet (1400 Series) or 100 feet (1900 Series)

Need to payout cable at an angle? See Pivot Bases on Page 28-29

Choosing a Welding Cable Reel

- The reels in the chart on the following page are sized for Lift/Drag applications, such as ceiling or wall/bench mounting - see page 4 for application definitions
- Make sure to consider the environment in which the reel will operate - see pages 4-5 Cable Reel Specification Data Sheet
- Reels can be supplied with or without cable
- Cable length is **actual length**. Be sure to order enough cable, see Cable Length Needed on page 5. For the welding reel, make sure to add 5 ft. of cable to accommodate safety wraps and hook-ups

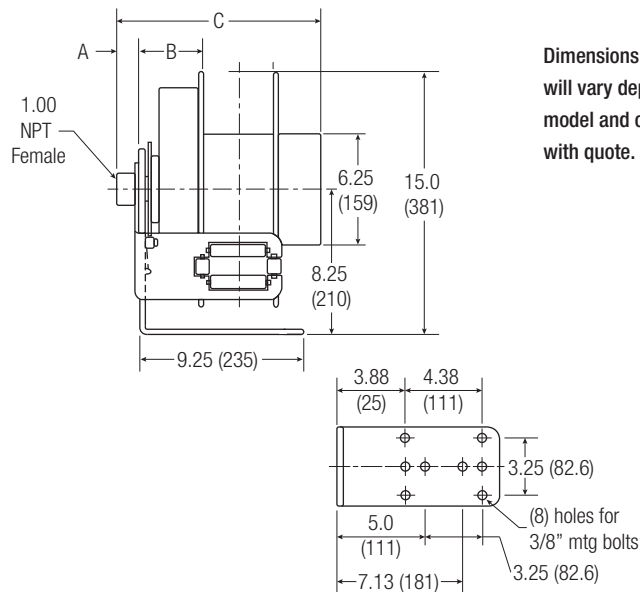
Welding Cable Data			
Wire Size AWG	Amps	Approximate Diameter Inches	Approximate Wt. lb/ft
6	95	0.370	0.125
4	150	0.420	0.200
2	200	0.490	0.275
1	250	0.530	0.365
1/0	350	0.610	0.435
2/0	450	0.635	0.550

Welding Reels Selection Chart

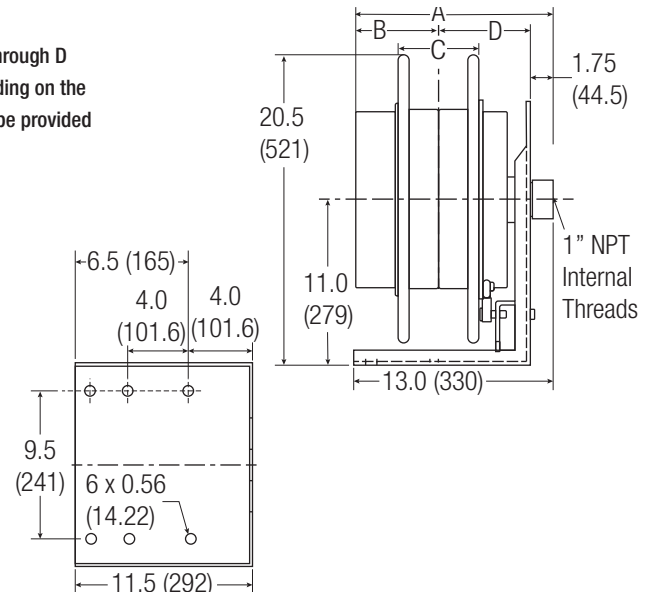
Welding Reels Selection Chart (Lift/Drag Application Only - See Page 4)

Wiring Cable AWG	Cable Capacity - ft.(m)	Voltage Max. Amperage	Rated Duty Cycle	Max. Continuous Amperage (100% Duty Cycle)	Part Number: (WITH CABLE)
6	25 (7.62)	600 Volts / 95 amps	100%	95 amps	145060102511
6	50 (15.24)	600 Volts / 95 amps	100%	95 amps	145060105011
6	75 (22.86)	600 Volts / 95 amps	100%	95 amps	145060107511
6	100 (30.48)	600 Volts / 95 amps	100%	95 amps	195060110011
4	25 (7.62)	600 Volts / 150 amps	60%	140 amps	145040102511
4	50 (15.24)	600 Volts / 150 amps	60%	140 amps	145040105011
4	75 (22.86)	600 Volts / 150 amps	60%	140 amps	145040107511
4	100 (30.48)	600 Volts / 150 amps	60%	140 amps	195040110011
2	25 (7.62)	600 Volts / 200 amps	60%	190 amps	145020102511
2	50 (15.24)	600 Volts / 200 amps	60%	190 amps	145020105011
2	75 (22.86)	600 Volts / 200 amps	60%	190 amps	195020107511
2	100 (30.48)	600 Volts / 200 amps	60%	190 amps	195020110011
1	25 (7.62)	600 Volts / 250 amps	60%	220 amps	145010102511
1	50 (15.24)	600 Volts / 250 amps	60%	220 amps	145010105011
1	75 (22.86)	600 Volts / 250 amps	60%	220 amps	195010107511
1	100 (30.48)	600 Volts / 250 amps	60%	220 amps	195010110011
1/0	25 (7.632)	600 Volts / 350 amps	60%	260 amps	145100102511
1/0	50 (15.24)	600 Volts / 350 amps	60%	260 amps	145100105011
1/0	75 (22.86)	600 Volts / 350 amps	60%	260 amps	195100107511
1/0	100 (30.48)	600 Volts / 350 amps	60%	260 amps	195100110011
2/0	50 (15.24)	600 Volts / 450 amps	40%	285 amps	145200105011
2/0	100 (30.48)	600 Volts / 450 amps	40%	285 amps	195200110011

Maximum dimensions shown. For actual dimensional information on a specific reel, contact Conductix-Wampfler Sales, 1 800 521 4888.



Dimensions A through D will vary depending on the model and can be provided with quote.



1400 Series

1900 Series

SDR Series Grounding (Static Discharge) Reels

SDR Series Grounding Reel

Grounding (Static Discharge) Reels are ideal for:

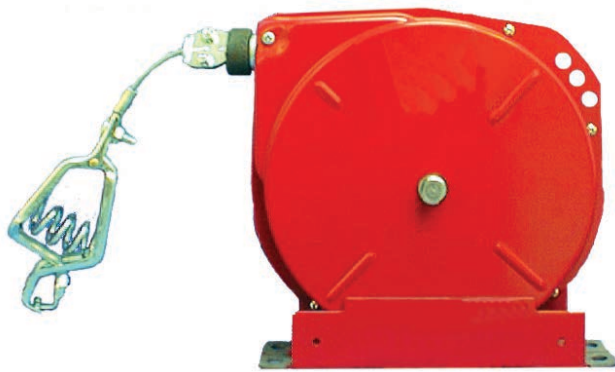
- Fuel tank static grounding
- Airplane static grounding
- Utility vehicle static grounding
- Maintenance shops
- Any place where static might build up and cause safety problems

Features

- Rugged all-steel construction
- Compact design
- Mounts in any position with spool perpendicular
- Ratchet and ball stop; ratchet can be locked out for “stretch” applications
- Available in a double-cable “Y” design to ground two places at once

Cable Length: ft. (m)	Resistance (ohms)	Description	Part Number	Weight: lb. (kg)
25 (7.62)	1.4	Single Cable	SDR25-0	8.0 (3.63)
50 (15.2)	2.8	Single Cable	SDR50-0	12.0 (5.44)
50 (15.2)*	2.8	“Y” Cable	SDR50Y-0	12.0 (5.44)

* 30 feet (9.14 m) travel, plus 20 feet (6.10 m) each branch



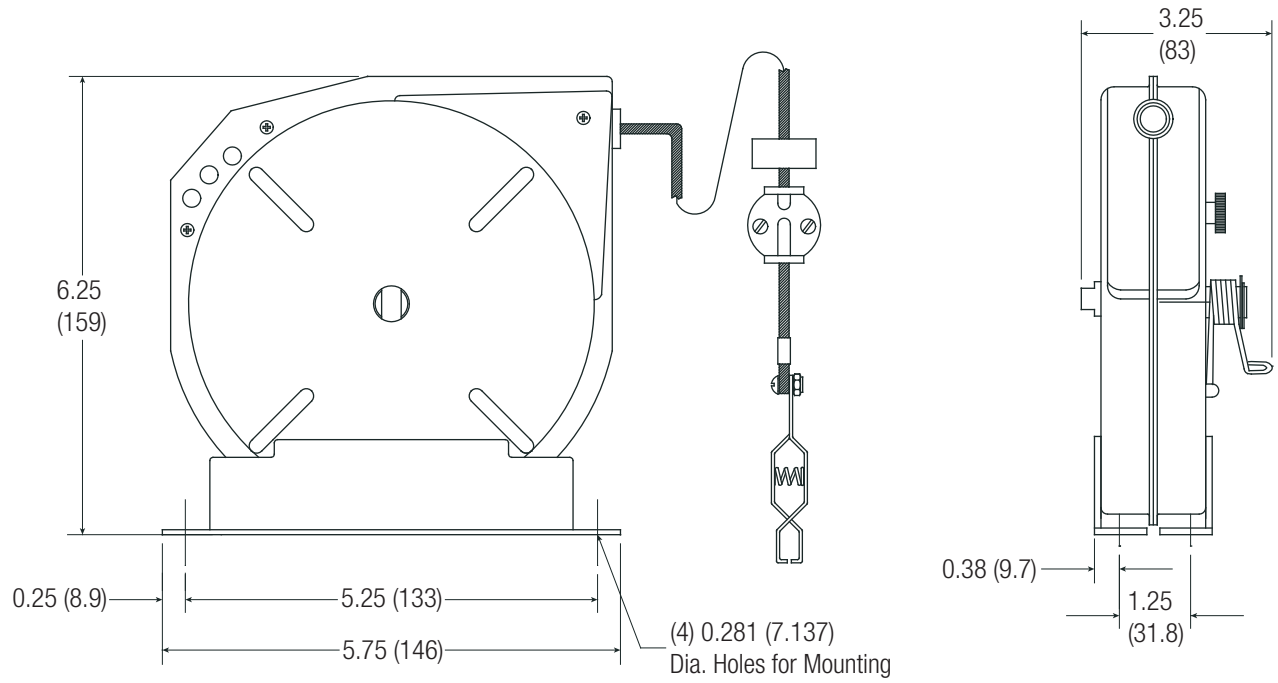
SDR25-0



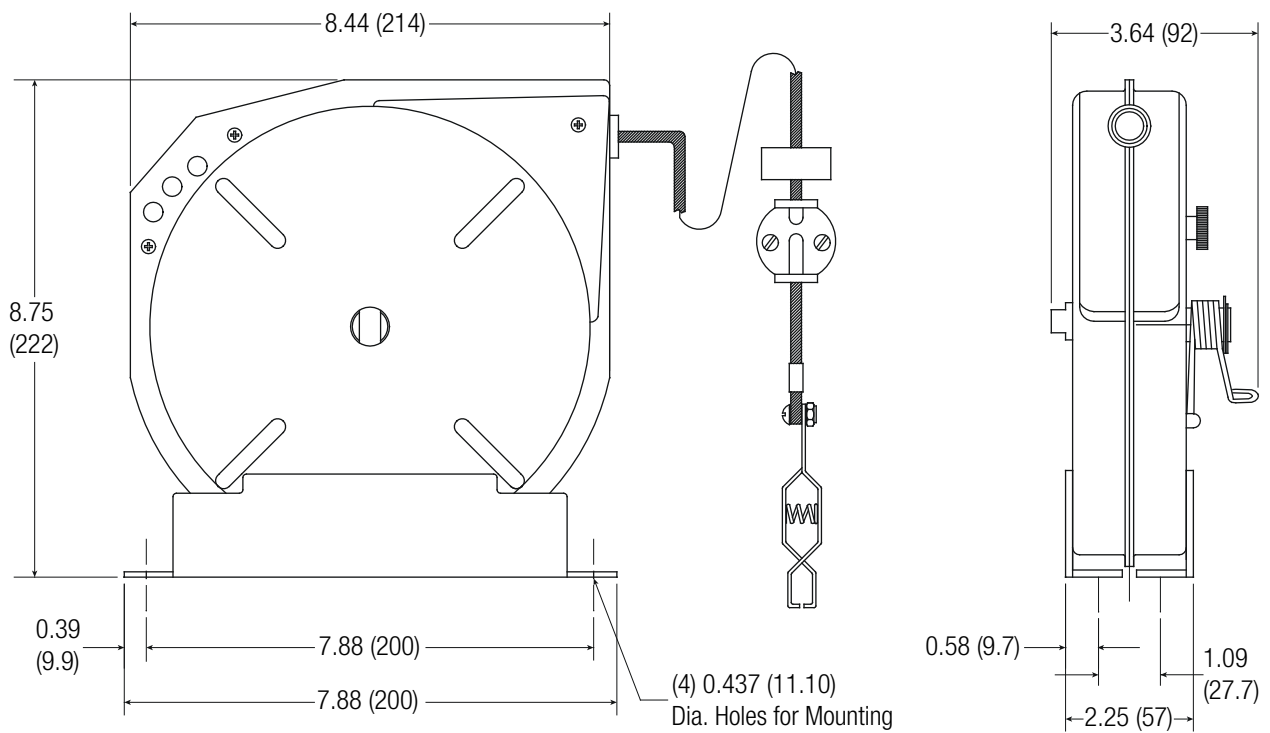
SDR50Y-0

SDR Series Grounding (Static Discharge) Reels

SDR 25 Dimensional



SDR 50 Dimensional



1400 Series Grounding (Static Discharge) Reels

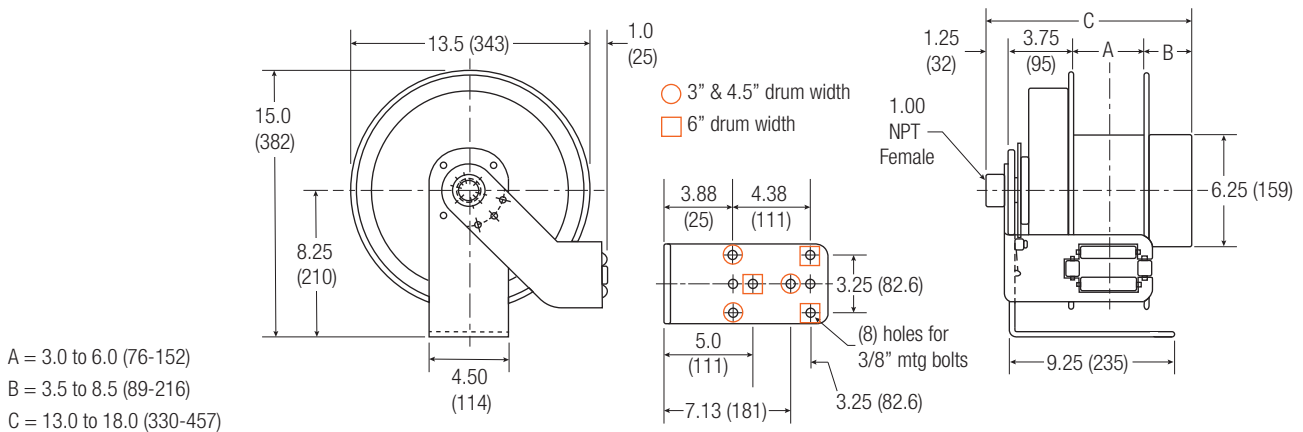
1400 Series Grounding Reel

There are 1400 Series PowerReels configured for static discharge applications. They are equipped with cables listed in the table below.

- Ball stop included
- 4 roller adjustable cable guide
- Auto locking ratchet for constant tension
- 100 amp grounding clamp included
- Resistance not exceeding 2 Ohms

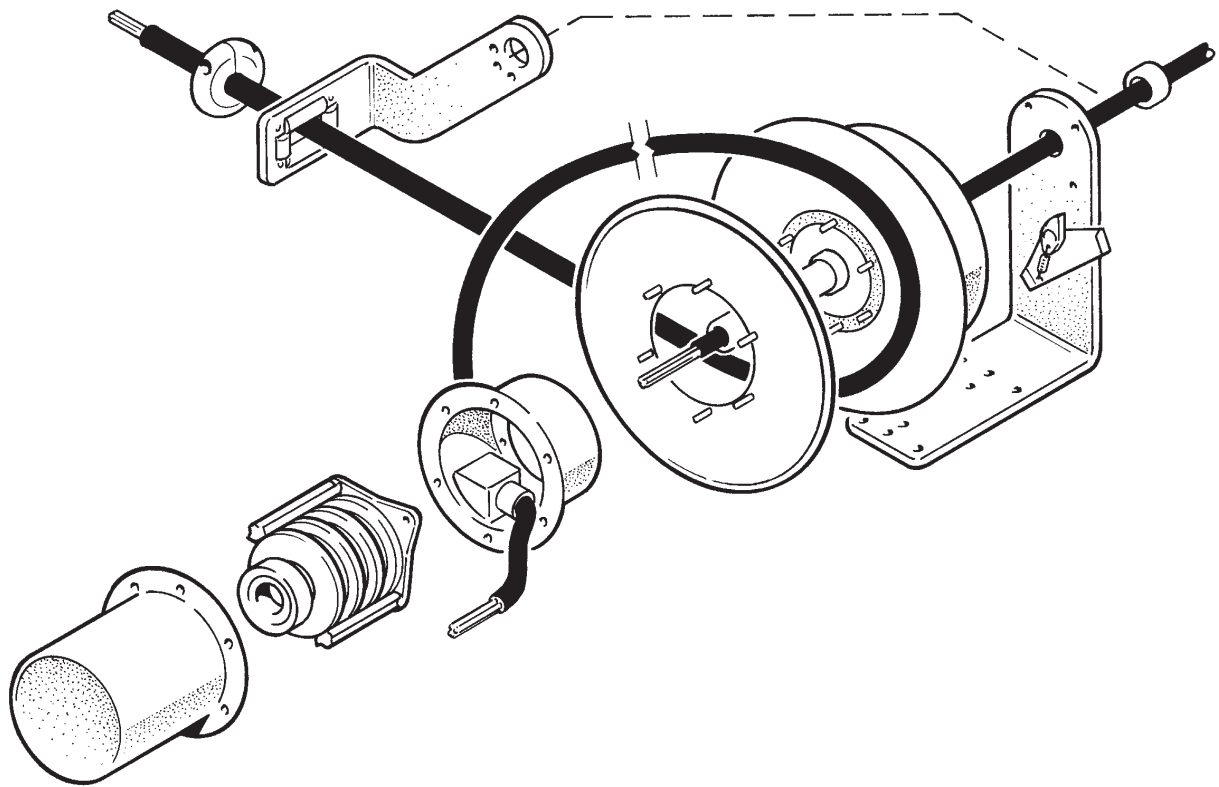


Cable Length: ft. (m)	Description	Part Number	Weight: lb (kg)
75 (22.87)	12 AWG/1 Conductor SOW-A	142120107511	52 (23.6)
100 (30.49)	12 AWG/1 Conductor SOW-A	142120110011	65 (29.5)
75 (22.87)	Orange Nylon Jacket	146910107511	52 (23.6)
100 (30.49)	Orange Nylon Jacket	146910110011	65 (29.5)



A, B, and C dimensions depend on the exact reel configuration - Contact Factory

Appendix I - Basic Cable Reel Components & Terms



Term	Definition
Payout	Pulling cable out of the reel (off the spool).
Retract or Rewind	Rewinding the cable back into the reel.
Base	Supports and mounts the reel. Might also be called a "frame" or "stand".
Spring Motor	A single spring or several springs working together that store energy as a cable is pulled out to provide power to retract/rewind the cable back onto the spool.
Spool	Composed of a drum and two flanges.
Slip Ring	Electromechanical device consisting of an energized ring and a sliding brush that transfers power from the stationary feeder cable to the cable that is wound on the rotating spool.
Roller Guide	Guides the cable during payout and rewind. Can be mounted on the reel or separate from the reel.
Active Length	The difference between the minimum payout and maximum payout of cable.
Safety Wrap	Cable that stays on the reel at maximum payout of cable - usually two complete wraps on the drum.
Sag Factor	The effect of gravity an actual travel length during stretch applications (10%).
Lift Height	The distance between where the cable lays to the center line of spool.

Term	Definition
Lift	The reel is mounted stationary and the cable is pulled out of the reel by machine or by hand (as with an overhead light source or a pendant station). To retract the cable, the reel needs to "lift" the cable vertically.
Drage	The reel is usually stationary. Cable can be pulled out by hand or by machine. To retract the cable, the reel must "drag" the cable through supports or along the ground horizontally. This application is the hardest on cable life.
Stretch	The reel may be stationary mounted or mounted onto moving equipment. Cable is pulled out by machine. The cable is "stretched" horizontally and is mostly unsupported. An extra 10% in cable beyond active travel is required to account for cable sag.
Retrieve	The reel needs to pickup "retrieve" the cable. The reel is mounted on moving equipment. Cable is pulled out by machine.
Vertical Retrieve	Looks like a "lift" application, except that the cable reel is mounted on the machine member that is moving up and down. The power source is at the end of the cable above the spool. The reel needs only to "retrieve" the cable back into the spool as the reel moves up with the machine.

Appendix II - Motor Amperage & Electrical Formulas

The chart below lists the most common combinations of motor HP (horsepower) in relation to voltage used and the resulting amperage draw. To the chart, determine amperage draw based on horsepower and voltage. Then use the Cable Data Chart in Appendix IV to determine cable gauge and number of conductors required for your application. Direct Current requires 2 conductors. Single phase requires 3 conductors. Three phase requires 4 conductors.

NOTE: For DC magnets, the Slip Ring must be sized to twice the magnets cold amp rating. The cable amp rating does not need to be doubled.

Motor Amperage Draw (At Full Load of 60 Hz)															
3 Phase AC Induction Type - Squirrel Cage & Wound Rotor								Single Phase			Direct Current				
HP	115V	200V	230V	460V	575V	2300V	4160V	HP	115V	230V	HP	120V	240V	HP	240V
1/2	4.0	2.3	2.0	1.0	.8	n/a	n/a	1/6	4.4	2.2	n/a	n/a	n/a	n/a	n/a
3/4	5.6	3.2	2.8	1.4	1.1	n/a	n/a	1/4	5.8	2.9	1/4	2.9	1.5	15	55
1	7.2	4.15	3.6	1.8	1.4	n/a	n/a	1/3	7.2	3.6	1/3	3.6	1.8	20	72
1.5	10.4	6.0	5.2	2.6	2.1	n/a	n/a	1/2	9.8	4.9	1/2	5.2	2.6	25	89
2	13.6	7.8	6.8	3.4	2.7	n/a	n/a	3/4	13.8	6.9	3/4	7.4	3.7	30	106
3	n/a	11.0	9.6	4.8	3.9	n/a	n/a	1	16.0	8.0	1	9.4	4.7	40	140
5	n/a	17.5	15.2	7.6	6.1	n/a	n/a	1.5	20.0	10.0	1.5	13.2	6.6	50	173
7.5	25.0	22.0	11.0	9.0	n/a	n/a	n/a	2	24.0	12.0	2	17.0	8.5	60	206
10	n/a	32.0	28.0	14.0	11.0	n/a	n/a	3	34.0	17.0	3	25.0	12.5	75	225
15	n/a	48.0	42.0	21.0	17.0	n/a	n/a	5	56.0	28.0	5	40.0	20.0	100	341
20	n/a	62.0	54.0	27.0	22.0	n/a	n/a	7.5	80.0	40.0	7.5	58.0	29.0	125	425
25	n/a	78.0	68.0	34.0	27.0	n/a	n/a	10	100.0	50.0	10	76.0	38.0	150	506
30	n/a	92.0	80.0	40.0	32.0	n/a	n/a								
40	n/a	120.0	104.0	52.0	41.0	n/a	n/a								
50	n/a	150.0	130.0	65.0	52.0	n/a	n/a								
60	n/a	177.0	154.0	77.0	62.0	16.0	8.9								
75	n/a	221.0	192.0	96.0	77.0	20.0	11.0								
100	n/a	285.0	248.0	124.0	99.0	26.0	14.4								
125	n/a	358.0	312.0	156.0	125.0	31.0	17.0								
150	n/a	415.0	360.0	180.0	144.0	37.0	20.5								
200	n/a	550.0	480.0	240.0	192.0	49.0	27.0								

Ohms Law

$$\text{Ohms} = \frac{\text{Volts}}{\text{Amperes}} \quad \text{Amperes} = \frac{\text{Volts}}{\text{Ohms}}$$

$$\text{Volts} = \text{Amperes} \times \text{Ohms}$$

Speed Formulas

$$\text{Synchronous RPM} = \text{Hertz} \times 120 \text{ Poles}$$

$$\text{Percent Slip} = \frac{\text{Synchronous RPM} - \text{Full Load RPM}}{\text{Synchronous RPM}}$$

Power Formulas

$$\text{Watts} = \text{Amperes} \times \text{Volts}$$

$$\text{Amperes (not 3-Phase)} = \frac{\text{Watts}}{\text{Volts}}$$

$$\text{HP} = \frac{\text{Volts} \times \text{Amps} \times \text{Efficiency}}{746}$$

$$\text{Power Factor} = \frac{\text{Watts}}{\text{Amperes} \times \text{Volts}}$$

$$\text{Single Phase Kilowatts} = \frac{\text{Volts} \times \text{Amperes} \times \text{Power Factor}}{1000}$$

$$\text{Single Phase Amperes} = \frac{746 \times \text{HP (Horsepower)}}{\text{Volts} \times \text{Efficiency} \times \text{Power Factor}}$$

$$\text{Kilowatts} = \frac{\text{Volts} \times \text{Amperes} \times \text{Power Factor} \times 1.732}{1000}$$

$$\text{Amperes} = \frac{746 \times \text{HP (Horsepower)}}{1.732 \times \text{Volts} \times \text{Efficiency} \times \text{Power Factor}}$$

$$\text{Volt-Amperes} = \text{Volts} \times \text{Amperes} \times 1.732$$

Appendix III Cable Types

Conductix-Wampfler cable reels are designed to handle specific types of cable, as noted throughout this catalog:

- **1200 Series PowerReels** - Cable types are listed on page 9
- **1400 Series and Larger** - (16 through 10 guage cable) - cable type is **S00W-A**
- **1900 Series and Larger** - (8 through 4/0 guage cable) - cable type is **W** or **G-GC**

Detailed cable information appears on page 40. 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 specified in this catalog. Cable diameter and weight are critical to proper reel selection and operation.

Please contact Conductix-Wampfler to discuss your requirements.

General Cable Characteristics

SJ00W-A

- General purpose, CPE jacketed with fine stranding for flexibility
- Resistant to oil, water, and weather
- Suitable for outdoor use
- 300 Volts

S00W-A

- General purpose, CPE jacketed, with fine stranding for flexibility
- Jacket O.D. is larger than same size SJ00W-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

CPE = Chlorinated Polyethylene

Type	Conductor Temperature	Max. Voltage Rating	Conductor Insulation	Jacket	No. of Conductors	Ground Conductors
SJ00W-A	194 °F (90 °C)	300	CPE	CPE (or equal)	1-4	N/A
S00W-A	194 °F (90 °C)	600	EPDM	CPE (or equal)	2-36	N/A
SO	194 °F (90 °C)	600	Rubber or EPR	Neoprene (or equal)	2-36	N/A
W	194 °F (90 °C)	600	Rubber or EPR	Neoprene (or equal)	2-4	N/A
G-GC	194 °F (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

Conductor No.	Base Color	Tracer Color	Conductor No.	Base Color	Tracer Color	Conductor No.	Base Color	Tracer Color
1	Green	----	11	Blue	Black	21	Orange	Green
2	Black	----	12	Black	White	22	Black	----
3	White	----	13	Red	White	23	White	----
4	Red	----	14	Green	White	24	Red	----
5	Orange	----	15	Blue	White	25	Green	----
6	Blue	----	16	Black	Red	26	Orange	----
7	White	Black	17	White	Red	27	Blue	----
8	Red	Black	18	Orange	Red	28	White	Black
9	Green	Black	19	Blue	Red	29	Red	Black
10	Orange	Black	20	Red	Green	30	Green	Black

Appendix IV - Cable Data - American Wire Gauge

Reels with 16 AWG - SOOW 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 14 AWG - SOOW 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 12 AWG - SOOW 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 10 AWG - SOOW 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 (26.27)	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)

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 a 190 °F (90 °C) insulation temperature ratings. Amp ratings are based on an ambient temperature of 86 °F (30 °C), de-rating for cables with more than 3 current carrying conductors per NEC. Ampacity requirements are solely dependent 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.

Appendix IV - Cable Data - Type "W" & Type "G-GC"

Reels with Type "W" Cable - 600 Volts

AWG	# of 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 Type "G-GC" Cable - 600 Volts
Three Conductors + Ground**

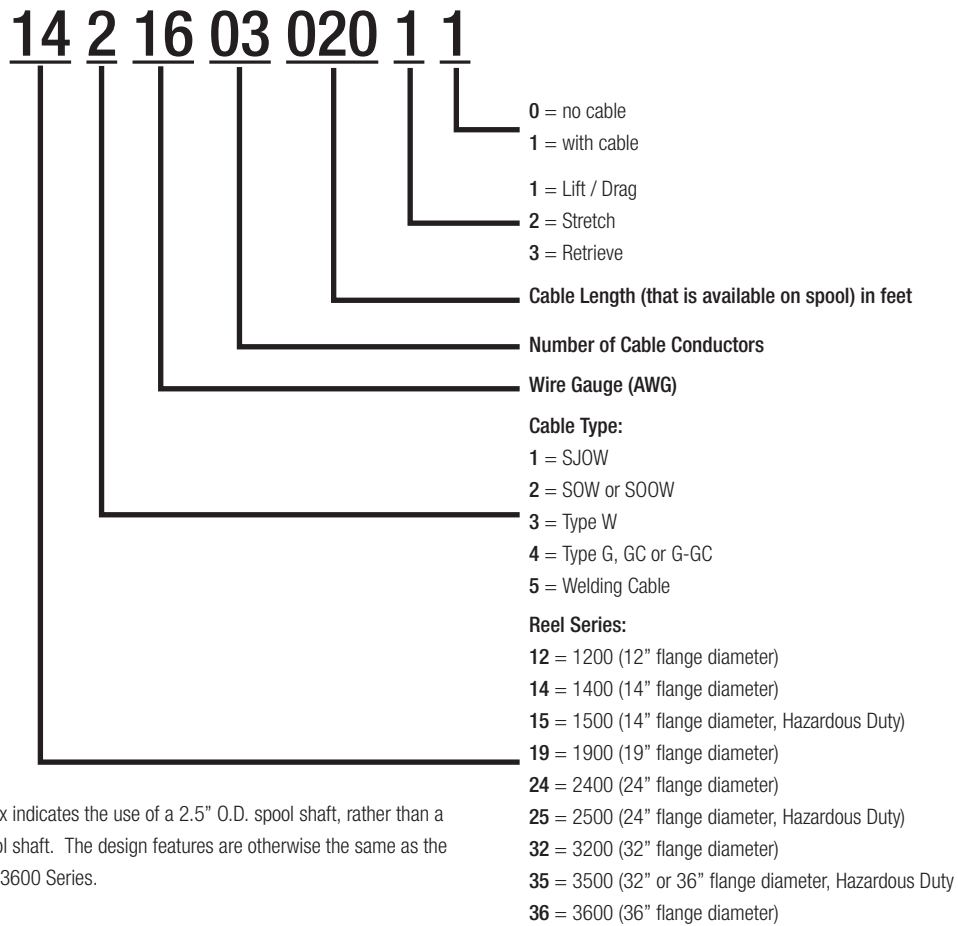
AWG	Amps	Dia. in. (mm)	Wt. lb/ft (kg/m)
8	50	0.97 (24.64)	0.597 (0.8885)
6	65	1.05 (26.67)	0.764 (1.1370)
4	85	1.19 (30.23)	1.070 (1.5924)
2	115	1.34 (34.04)	1.533 (2.2814)
1	130	1.51 (38.35)	1.965 (2.9243)
1/0	145	1.65 (41.91)	2.315 (3.4452)
2/0	170	1.75 (44.45)	2.750 (4.0926)
3/0	195	1.89 (48.01)	3.330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

AWG / Metric Conductor Size Conversion

AWG or MCM	Circular Mils	Cross-Sectional Area (mm ²)	Metric Conductor Size
	987	0.50	.50
20 AWG	1020	0.52	
	1480	0.75	.75
18 AWG	1620	0.82	
	1970	1.0	1.0
16 AWG	2580	1.31	
	2960	1.50	1.5
14 AWG	4110	2.08	
	4930	2.50	2.5
12 AWG	6530	3.31	
	7890	4.00	4.0
10 AWG	10380	5.26	
	11800	6.00	6.0
8 AWG	16510	8.37	
	19700	10.00	10.0
6 AWG	26240	13.30	
	31600	16.00	16.0
4 AWG	41740	21.15	
	49300	25.00	25.0
2 AWG	66360	33.63	
	69100	35.00	35.0
1 AWG	83690	42.41	
	98700	50.00	50.0
1/0 AWG	105600	53.48	
2/0 AWG	133100	67.43	
	138000	70.00	70.0
3/0 AWG	167800	85.03	
	187000	95.00	95.0
4/0 AWG	211600	107.20	
	237000	120.00	120.0
250 MCM	250000	126.64	
	296000	150.00	150.0
300 MCM	300000	152.00	
350 MCM	350000	177.35	
	365000	185.00	185.0
400 MCM	400000	202.71	
	474000	240.00	240.0
500 MCM	500000	253.35	
	592000	300.0	300.0
600 MCM	600000	303.96	
750 MCM	750000	379.95	
	789000	400.00	400.0
	987000	500.00	500.0
1000 MCM	1000000	506.60	

Appendix VI - PowerReel® Catalog Numbering Systems

All standard Conductix-Wampfler PowerReels® employ the “smart number” system described below:



An “M” suffix indicates the use of a 2.5” O.D. spool shaft, rather than a 1” O.D. spool shaft. The design features are otherwise the same as the basic 3200-3600 Series.

The sample reel above is a 1400 Series (14” flange) with SOW cable, 16 AWG, 3 conductors, with 20 feet of cable on the spool, and designed for a lift/drag application.

If you have any problems or questions, feel free to call Conductix-Wampfler Sales. Contact information is on the back cover of this catalog.



Appendix VII - Standard vs. Premium Reeling Cables

Cable reel manufacturers, including Conductix-Wampfler, offer generic cable types such as SOW-A, SOOW-A, and Type W as their standard reeling cables. These types are adequate for most non-rigorous reeling applications, such as three or four conductor portable power cables. The cable reel marketplace and third party certification agencies such as UL, NEC, and CSA recognize these types as acceptable reeling cables. However, generic cables may not survive very long in difficult reeling applications.

The “Corkscrew” Effect

In very demanding cable applications and with certain types of cable configurations, generic cables can become stretched, twisted, and deformed. This phenomenon is commonly called “corkscrewing”. When cables start to corkscrew and if left unchecked, the conductors inside the cable can fray or break. This can even result in bare conductors being exposed through the outer jacket of the cable. The end result could be broken conductors, short-circuits, failed systems, and potential safety hazards.

Should Premium Cable be Considered?

Premium cable should be considered if one or more of these conditions exist:

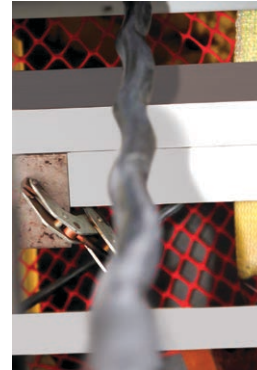
- The required cable has a large number of conductors of a small wire gauge, such as 16 AWG or smaller with 5 or more conductors.
- The cable will be under very high line-pull, such as a long “stretch” application - see page 4.
- The reeling cable will experience very high cycle rates, such as more than 10,000 cycles a year.
- Cables that pass through or over sheaves, external rollers, or other guiding devices.
- The cable will be subjected to tight bend radii, constant changes in bend direction, tight cable lay, and multiple bend cycles.
- The cable will be exposed to extreme climates or environments.

Typical Premium Cables

Here are a few of the heavy-duty premium reeling cables available¹

- Siemens Cordaflex (SM) or (K)
- Draka/BIW All-Temp Industrite (Prysmian Group)
- TPC Super-Trex

These premium cables are costly; anywhere from three to eight times the cost of generic cable. However, in tough, critical applications, they represent the best overall value and will help prevent premature system failures.



Failing cable due to the “corkscrew” effect



Effect of a sheave on standard cable

Call the cable reel experts at Conductix-Wampfler to discuss your application. We will help you analyze your situation and can recommend and supply suitable premium cables if needed. 1 800 521 4888 “Press 2” for Inside Sales.

¹All cable brands lists are held by their respective trademark holders.

Customer Services you can count on...

You can count on us to meet your specific service needs and requirements. With Conductix-Wampfler everything is possible, from initial design and development to long term service contracts.

The more complex your system is, the greater your expectations are in terms of service life and operational reliability, and the more sense it makes to take advantage of our after-sales service.

When it comes to service, you can count on Conductix-Wampfler to perform!



The Turnkey Solution

As a system supplier, Conductix-Wampfler offers you a complete turnkey solution. This includes the delivery of all necessary parts to complete your project.

We consider qualified consulting, project engineering of the complete system, the choice and selection of the right components, optimizing the accessories, the adequate logistic concept and the commissioning on site to be important elements of Conductix-Wampfler's business activities.

Planning and Development

- Definition of the application parameters.
- Selection of the proper components for the required system - optimized to your requirements, application parameters, and environmental factors.
- Selection of the optimum energy supply solution in cooperation with you, our customer, as a function of all considerations including cost, service life, operating parameters, installation, and site requirements.

Final Assembly

- Supervision of construction, assembly and mounting on site.
- Or, complete installation by our trained specialists.

Service Agreement

- Regular maintenance and inspections to increase the operational life of your facility, ensuring long-term performance and availability.
- All services required on site in the event of an incident, including spare parts and replacement materials.
- Conductix-Wampfler service agreements: The "Worry-Free Package"



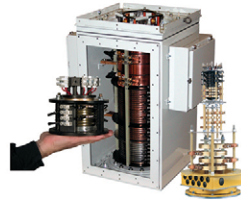
Other Products from Conductix-Wampfler

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

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.



Data Transfer: ProfiDAT® | Nexus

Safe & reliable wireless communication using slotted waveguide technology that's PROFSafe compatible.

Nexus NB for narrow band signal transfer over power conductors



LJU Automation EMS Controller

Specialized controllers Programmable by parameters, Ideal for Electrified Monorails at automotive plants, with over 1500 in service worldwide. Adaptable for other applications



BridgeGuard™

Prevents crane to crane and crane to end collisions. IP69K rated for indoor and outdoor use, with a 3 ft to 150 ft range. Compliant with IEC 60068-2-6:2007



Air & Spring balancers | Air hoists

Conductix-Wampfler offers the full line of ENDO positioning devices. Rugged, reliable steel construction increasing safety and decreasing fatigue and body stress.

Notes

Notes

www.conductix.us

Conductix-Wampfler

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

To contact your nearest
sales office, please refer to:

www.conductix.contact

