



## Wire and Cable Packaging, Handling, and Storage

A cable reel is a round, drum-shaped object used to carry various types of electrical wires. Cable drums and reels have been used for many years to transport electric cables and wire products. Cable reels usually come in three different types: wood, plywood, and plastic.

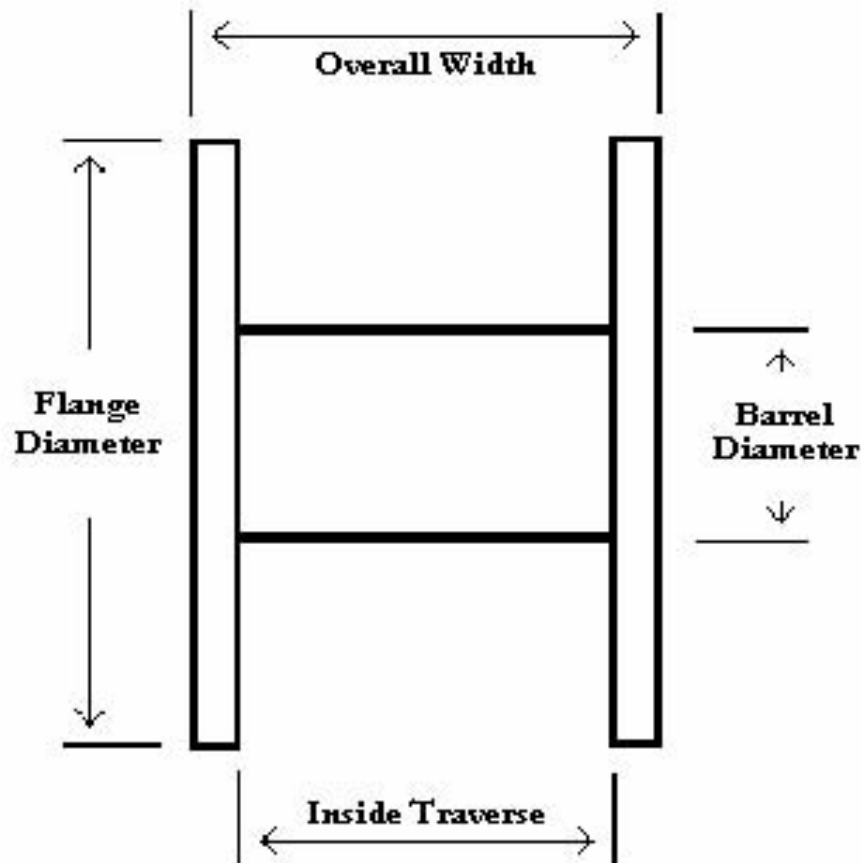
Wooden reels can carry heavy loads and are constructed of resinous wood.

Plywood reels are used for lighter loads and are both strong and light-weight.

Plastic reels are often manufactured from recycled plastic and are used for light-weight cables.

### Reel Size

Selection of proper reel (spool) size depends on the length and overall diameter (OD) of the cable or wire to be rewound. A reel not matched to the weight of the cable wound on it may be damaged during shipment. All wire and cable has a minimum safe bending radius. If cable is subjected to bends sharper than the minimum radius, damage to the material is likely to occur.





<b>Minimum Drum Diameters for Packaging Cables</b>	
<b>Type of Cable</b>	<b>Minimum Drum Diameter as a Multiple of Outside Diameter of Cable</b>
Single and multi conductor cable - unshielded 0-2000V	10
Single and multi conductor cable - unshielded 2400V	12
Single and multi conductor cable wire shield (UniShield®) 5-35kV	12
Single and multi conductor cable helically applied tape shield (Uniblend®) 5-35kV	14
Single and multi conductor cable - longitudinally applied flat tape shield (Type TC)	20
Single and multi conductor cable - Interlocked Armor (Duralox®) 600V35kV	14
Triplexed single conductors cabled together. The circumscribing overall diameter* shall be multiplied by the factor in 1-6 and then by the reduction factor	.75

\*Single conductor times 2.155 times  
 NEMA WC26 EEMAC201-2007 Binational Wire and Cable Packaging Standard



## **Unloading and Moving Reels**

Cable reels are never shipped upended (flat side down). Cable reels that arrive in this manner should be rejected or received only after a thorough inspection for damage.

Upon receipt, a cable's protective covering (and/or lagging) should be inspected for evidence of damage during shipment. If evidence of damage is found, a report should be immediately filed with the carrier.

Under no circumstances should reels be dropped from the delivering vehicle to the ground.

Unloading and reel handling should be accomplished so that the equipment used does not contact the cable surface or applicable protective wrap.

If unloading and reel handling via crane, either a cradle supporting the reel flanges or a shaft through the arbor hold should be used. If using a fork lift, the forks must lift the reel at 90° to the flanges and the forks must be long enough to make complete lifting contact with both flanges. Under no circumstances should the forks come into contact with the cable surface or the protective wraps.

When a reel of cable must be rolled, always roll the drum in the direction of arrow to prevent the cable from unwinding or loosening. Make sure rolling surfaces are firm and free of debris which could contact or damage the cable surface. Once the reel is in position, remember to use proper stoppers to prevent the reel from rolling.

## **Cable Storage**

Finished cables have no established shelf life. However, cables will degrade (oxidize / discolor) when exposed to moisture, sunlight, and atmospheric conditions/elements. Cables should be stored in sheltered areas and covered to prevent exposure. When reels are exposed to weather, inspections should be performed to guard against deterioration.

Generally speaking, cables for indoor use should be stored indoors and cables for outdoor use can be stored outdoors. However, if a cable does not have a cold temperature marking, it must be stored indoors.

Cable reels must not be stored upended (on the flat). Stacking should be avoided. Leave sufficient space between reels for air circulation.

Reels should be stored with the protective covering (or lagging) in place. If cable has been cut from the reel, the cable end should be resealed to prevent moisture damage.

Wooden reels should be stored off the ground to prevent rotting. Store reels on a dry, firm surface to avoid settling. At all times, the weight of the reel and cable must be carried by the reel flanges.

Cable reels should not be stored in areas with direct contact with water/dampness or where chemicals or petroleum products could be spilled or sprayed on the cable.

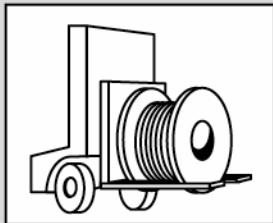
Storage should be in an area where construction equipment, falling or flying objects, or other construction debris cannot come in contact with the cable.

Cables should be stored away from open fires or other sources of high heat.

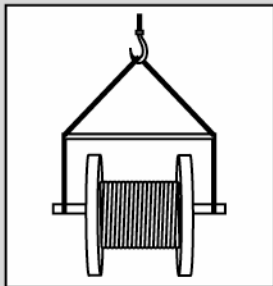


## How to Handle Cable Reels

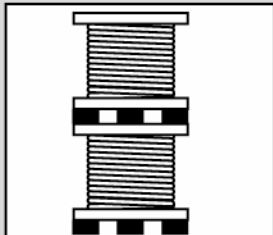
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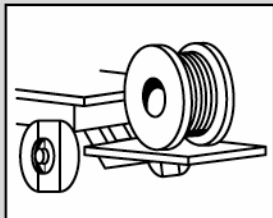
Cradle both reel flanges between forks.



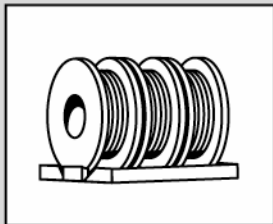
Reels can be hoisted with a shaft extended through both flanges.



Place spacers under the bottom flange and between reels to create a space to insert the forks.

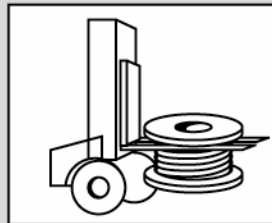


Lower reels from truck using hydraulic gate, hoist or fork lift. **LOWER CAREFULLY.**

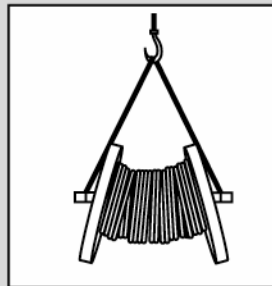


Always load with flanges on edge and chock and block securely.

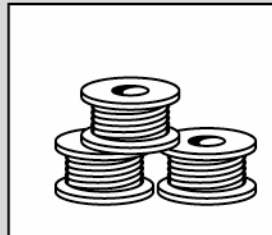
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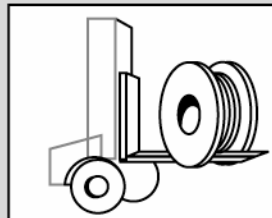
Do not lift by top flange. Cable or reel will be damaged.



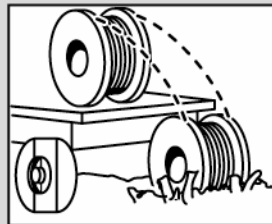
Use a spreader bar to prevent bending the reel flanges and mashing the cable.



Upended heavy reels will often arrive damaged. Refuse or receive subject to inspection for hidden damage.



Never allow forks to touch cable surface or reel wrap.



Never drop reels.