



FAMA BUYER'S GUIDE

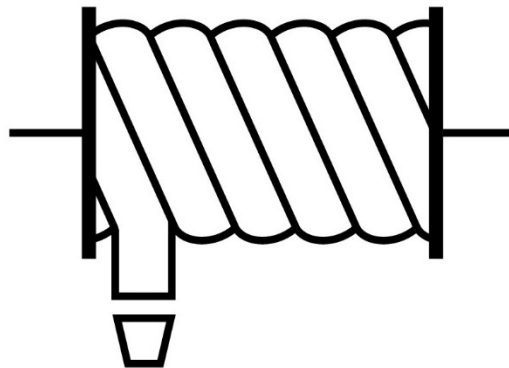
TC055

Reels

Cord Reels, Hydraulic Reels, Hose Reels

Prepared by the FAMA Body Subcommittee

This guide does not endorse any manufacturer or product





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INTRODUCTION

Reels on fire and rescue apparatus allow convenient storage, and quick payout and retrieval of electrical cords, air, water, and hydraulic hoses. Some of the key considerations when choosing a fire truck hose reel are contained here. Most reels used on fire apparatus have an electrical motor to assist in retrieval of the cord or hose, operated by a push button. Other rewind methods are available. Reel manufacturers and apparatus builders are good resources when specifying reels for a new apparatus. A listing of manufactures can be found using the Manufacturers Guide on www.fama.org.

MAJOR COMPONENTS

Frame- mounting structure that supports the spool assembly along with the hose or cable.

Drum- roll formed center core around which the hose or cable is wound.

Hub- center axle of spool assembly. Can be a fluid hub for hose or provide wiring access to slip ring assembly on cable reels.

DISCS- side plates to form spool assembly with drum. Discs have rolled edges to prevent hose or cable damage and add rigidity.

Outlet riser- attachment point in spool assembly for hose. Contoured to match curve of drum so hose will wrap smoothly.

Swivel joint and seals- permits reel to rotate freely while connected to the fluid source with appropriate seals for fluid being used.

Collector ring- provides electrical continuity through reel as cable is payed out or retrieved.

Brake/rewind assembly- provides manual rewind backup and adjustable tension brake.

Motor- provides power to rewind hose or cable through chain and sprocket drive.

Bearings- supports weight and provides smooth rotation of spool.

Hose and cable stops- used with 4-way roller assemblies to prevent hose ends from being rewound too far onto spool of reel.



CORD REELS

When specifying cord reels, it is necessary to know the amperage draw and voltage required for your application. Once known, refer to NFPA 1901 table A22.12.5 to choose the correct cord size and length for your reel. You will also need to know where the reel will be mounted (bottom or floor, shelf, back wall or roof of compartment) and note any space restrictions. With this information, refer to the reel manufacturer's catalog or website to choose a reel to fit your specifications.



AIR REELS

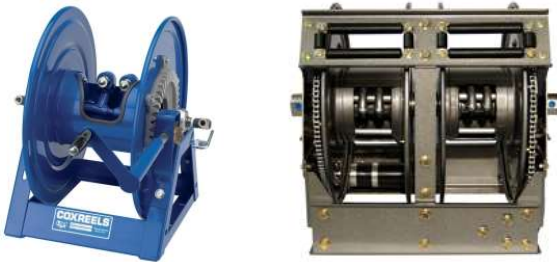
For air reels, determine whether it is for utility air or breathing air and again determine hose size and length. For breathing air applications, stainless steel and/or plated piping within the reel is required. With cabinet dimensions and hose information in hand, refer to the reel manufacturer's catalog or website to choose a reel to fit your specifications.





RESCUE TOOL REELS

For rescue tool reels, it is necessary to know the manufacturer of the hydraulic tool you plan on using as this determines the hose thread style and also the seals required for compatibility with the hydraulic fluid used. With cabinet dimensions and tool manufacturer information in hand, refer to the reel manufacturer's catalog or website to choose a reel to fit your specifications



HOSE REELS

When specifying a fire truck hose reel, often referred to as booster hose reel, the hose type (rubber or lightweight polyester), hose ID, and length are all required. Keep in mind that some lightweight polyester hoses have a large bend radius and require a larger drum than standard including a special outlet riser angle for hose attachment. Cabinet dimensions are required to choose the correct configuration of reel to fit your needs. Many booster reels are available in aluminum construction for weight reduction.



GENERAL INFORMATION

For all reel installations, it is important to know that there are many reel configurations available for a given cord or hose length to fit compartmental restrictions. If cabinet height is tight, a "low profile" reel can be specified where the motor is mounted either in the rear or on the side of the frame. If depth or width needs to be minimized, a "high profile" reel with motor tucked under the spool is a good choice. Even with standard profile reel models, the motor can be mounted on either side of the reel.



Buyer's Guide Reels

Payout of hose and cable is most commonly specified to come off the top of the reel spool, but bottom wind payout can easily be specified. Roller assemblies are an important option to consider as they help guide the cable or hose on the reel and help prevent it from jumping over the disc edge. Rollers can be mounted on the reels or supplied as separate items and mounted in the cabinet, by the body builder, to protect the cable or hose from rubbing on cabinet edges.



It is important to remember that if you do not immediately find the reel configuration best suited for your needs, please contact your reel supplier for assistance.