

# Pulltarps Steel Protector Support Tarping System

10/20/04

OPERATING DESIGN: Tarpaulin shall deploy manually from a roller spool, without using any pivots or arms attached to the side of the dump body, or fitted with the 113-22xxManual Pullarm System. Complete tarping function to be performed from ground level. Tarp system must be fully assembled and ready to install. Tarp system shall come with all required hinge ramp gussets, pull rod centering hooks, rope hooks, and tarp return ramps. Nuts, bolts, brackets, hardware, shaft and roller shall be zinc plated to prevent rust.

A. TARPAULIN ROLLER SPOOL: Tarp spool shall consist of the following:

A.1 Shall be spring-loaded and self-retracting.

A.1.1 Tarpaulin roller spool spring shall be enclosed in a one piece, three inch diameter galvanized steel tube and shall be sealed from weather.

A.1.1.2 Galvanized steel tube shall have a groove for full width insertion and retention of the tarpaulin, by means of a nylon hem tube.

A.1.2 Tarpaulin roller spool shall be under minimum tension when tarp retracted.

A.2 Tarpaulin roller spool shall pivot on sealed nylon bushings.

A.2.1 Bushings shall pivot on a minimum 1/2 inch diameter, zinc plated steel roller shaft.

A.3 Tarpaulin roller spool shall be designed so that the tarp shall roll off the top or bottom of the spool by positioning the spool in one of two horizontal positions. Positioning is accomplished by the location of the bolt on stub shaft and bolt on self-tightening threaded boss. Unless otherwise specified in the invitation for bids, tarp systems shall be assembled, at the factory, to roll off the bottom of the spool.

A.4 The back and top of the roller spool shall be protected by a **ridged single piece galvanized Steel Protector** housing made of a minimum 12 gauge steel enclosure which shall have minimum 10 gauge steel end plates.

A.4.1 Steel Protector housing enclosure shall be supplied with steel or aluminum weld on mounting brackets; which bolt to housing of sufficient strength to safely secure the enclosure to the vehicle bed.

A.4.2 Steel housing enclosure shall be designed so that air is deflected over the deployed tarpaulin, and falling debris is deflected over the retracted tarpaulin.

A.5 Roller spool shall be secured inside housing by means of a self-tightening, threaded boss.

B. Tarpaulin Fabric: Tarpaulin fabric shall consist of one of the following:

B.1 Asphalt tarpaulin fabric shall be a minimum 14 ounce nylon vinyl fabric. The fabric shall be coated on both sides (A-2) with urethane. Tarpaulin fabric shall be impermeable to water or moisture, and shall be resistant to mildew and ultra violet light. Tarpaulin fabric shall withstand normal handling and placement at temperatures from -35 degrees Fahrenheit to 400 degrees Fahrenheit without endangering the structural integrity and serviceability of the fabric.

B.2. 14-ounce vinyl coated nylon fabric. Tarpaulin fabric shall be impermeable to water or moisture, and shall be resistant to mildew and ultra violet light. Tarpaulin fabric shall withstand normal handling and placement at temperatures from -35 degrees Fahrenheit to 375 degrees Fahrenheit without endangering the structural integrity and serviceability of the fabric.

B.3. Open weave red or black PVC coated nylon mesh fabric.

B.4. 18 ounce vinyl coated nylon fabric. Tarpaulin fabric shall be impermeable to water or moisture, and shall be resistant to mildew and ultra violet light. Tarpaulin fabric shall withstand normal handling and placement at temperatures from -35 degrees Fahrenheit to 375 degrees Fahrenheit without endangering the structural integrity and serviceability of the fabric.

C. Pull Rod: System supplied with a pull rod which shall be a minimum one and one quarter inch (1.25") in diameter and shall be constructed of a minimum 6063 aluminum extrusion. Pull rod shall function in its intended application without bending.

C.1 Each pull rod end shall be equipped with a PVC roller bushing, bordered by two minimum 3.5 inch long steel pullrod guides with outside washers.

- C.2 Pull rod shall be supplied with an attached rope with bungee (for easy securing) of sufficient strength and length to deploy the tarpaulin from the back of the vehicle bed to the front.
- C.3 Pullrod shall be a one piece aluminum extrusion with integrated hem tube groove to support the full tarp width.
  
- D. PAINTING: The tarpaulin housing enclosure shall be painted with a manufacture's standard lead-free baked on polyester powder coating black color.
  
- E. TARPAULIN CONSTRUCTION: Double-lock stitching.
  
- F. OPTIONAL SIDE FLAPS & TIE DOWNS:
  - F.1 Side flaps to be integral part of tarp and retract fully into the housing enclosure. Side flaps to be secured by flap rope passing through large #4 brass grommets attached to the edge of the flap. Side flaps to extend a minimum of 17" from edge of tarp.
  - F.2 Tie down system to be integral part of tarp and retract fully into the housing enclosure. Tie downs to be secured by tie down rope passing through large #4 brass grommets attached to the ends of the tie downs. Tie downs to extend a minimum of 6" from edge of tarp.
  
- G. OPTIONAL LOAD CLIMBER: Pull rod fitted with two 4.5 inch diameter ABS rollers allowing pull rod to negotiate material loads exceeding the vehicle side board height.
  
- H. WARRANTY:
  - H.1 All moving parts, shaft, spring and torque block shall have a no cost replacement warranty for as long as the system is in use.
  - H.2 Tarpaulin shall be warranted against defects in material and workmanship for a period of not less than six months.