Line Shaft Drive Systems for Powered and Mechanical Assist Carriages

Spacesaver’s patent pending Line Shaft (LS) Drive System provides a state-of-the-art wheel assembly which incorporates a highly-engineered ductile iron wheel and custom load distributing bearing assembly designed specifically for high-density mobile carriages to deliver smooth, easy carriage movement and long system life.

FEATURES AND BENEFITS
1. The recessed, curvilinear operator gives the contemporary appearance of just the two knobs rotating on the face panel.
2. Adjustable chain tensioner allows easy roller chain adjustment without face panel removal.
3. The knobs installed depth of just 2 7/8” (73mm) maximizes the usable space adjacent to the system.
4. Mechanical assist control operation allows for easy future upgrade to powered control operation.
5. Curvilinear operator features permanently lubricated ball bearing assemblies for easy, maintenance-free system operation.

DESIGN AND CAPABILITIES
LS Drive System's patented wheel assembly incorporates a highly engineered ductile iron wheel and custom load distributing bearing assembly. It also features a new drive shaft coupler that speeds installation. Dependence on critical wheel section forming is reduced ensuring improved alignment of carriage wheels. The new custom load distributing bearing assembly offers higher performance than traditional bearing mount designs. Ductile iron wheels offer a unique combination of high strength, wear resistance, fatigue resistance, toughness and ductility. The ductile iron wheel is precision machined and has the very same yield strength as a steel wheel, but its ductility (less brittle) is an ideal match for our rails. Accelerated life cycle testing in Spacesaver’s lab, which was reviewed by an independent third party engineering firm confirms this.
DESIGN AND CAPABILITIES - CONTINUED
LS Drive Systems are available on powered and mechanical assist carriages up to 45 (13.7 m) feet long. Regardless of carriage length, all tracks are driven, and all wheels on one side of the carriage are driven. Precise carriage tracking and performance (lower rolling resistance), quiet movement, and extended carriage service life are further achieved by the pre-assembled wheel assembly which allows tighter wheel-axle fit tolerance and bolted clamp-type tube connections to reduce field installation time while providing high performance.

APPLICATIoN
Spacesaver's LS Line Shaft System is available on powered and mechanical assist systems with carriages 18" (456 mm) wide or wider. Consult factory for narrower carriage widths. Roller Bearing, Center Flange, or Dual Flange guidance systems may be used with appropriate standard or structural low profile rails.

TECHNICAL SPECIFICATIONS

LS SYSTEM:
Line shaft drive shall consist of a wheel section positioned at each rail location. Wheel section shall consist of a load wheel and a drive wheel. Each wheel shall be provided with two permanently shielded bearing assemblies. Wheels shall be ASTM A 536 specification 65/45/12 machined ductile iron. All wheels shall be 5" (127 mm) diameter. All wheels on one side of the carriage shall be driven by a continuous steel drive shaft 1-5/16" (33 mm) O.D. x 1" (25 mm) I.D. connected to the 1" (25 mm) diameter wheel drive axles with bolted clamp connections.

* Specifications subject to change.