Typical I-Beam Festoon System

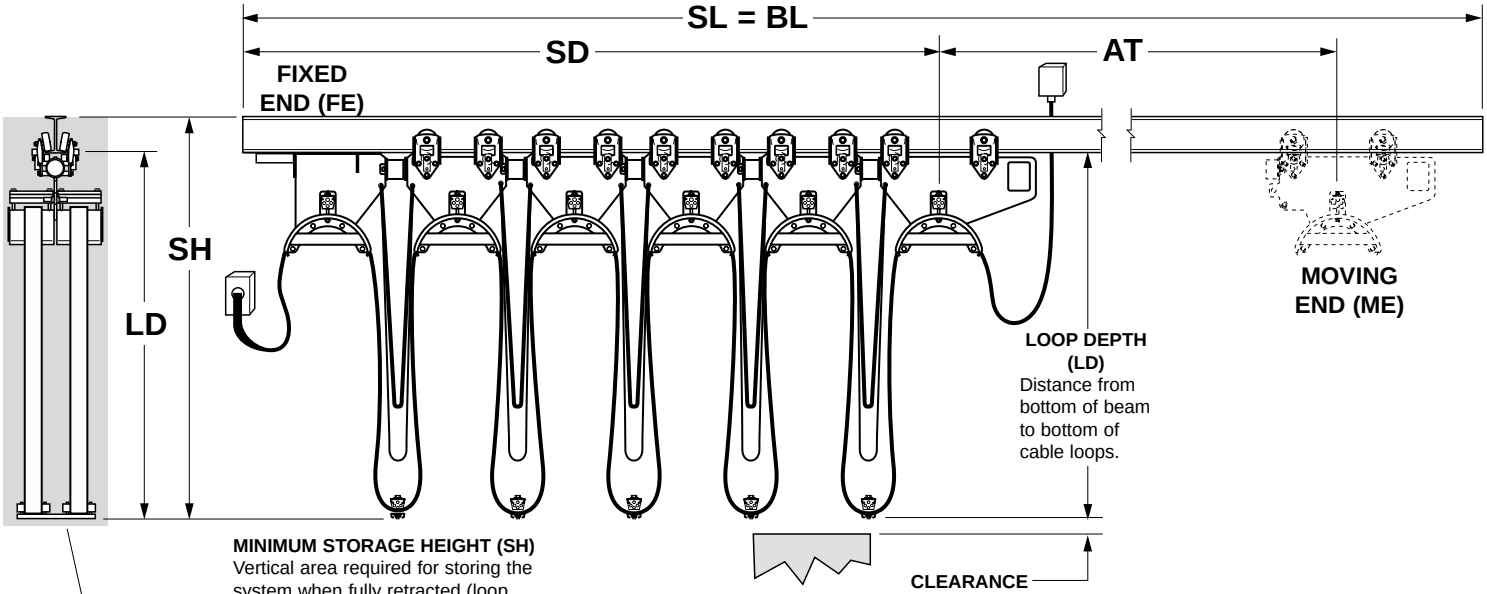
GENERAL LAYOUT • DEFINITIONS • DESCRIPTIONS • TERMS • SYMBOLS

SYSTEM IN STORED POSITION Flat cable shown. Round cable/hose similar.

MINIMUM STORAGE DISTANCE (SD)
Horizontal area required for storing system when fully retracted (loop depth is at maximum).

TOTAL SYSTEM LENGTH (SL)
Equal to total BEAM LENGTH (BL).

ACTIVE TRAVEL DISTANCE (AT)
Maximum distance first moving carrier (Tow Trolley) moves from fully stored position to fully extended. Usable length of system.



LOOP DEPTH (LD)
Distance from bottom of beam to bottom of cable loops.

MINIMUM STORAGE HEIGHT (SH)
Vertical area required for storing the system when fully retracted (loop depth at maximum).

CLEARANCE
Minimum 5" clearance should be maintained between bottom of loops and any fixed obstructions in total system length.

SYSTEM WINDOW (SW)
Total unobstructed area in which system is hung and travels. This must include adequate area for "cable side sway".

SYSTEM IN EXTENDED POSITION Flat cable shown. Round cable/hose similar.

INTERMEDIATE TROLLEY
Traveling assembly to which the saddle is attached. Sized according to your input. Computer figures number required.

RUNNING GEAR
Wheels carrying trolleys. Selection based upon *your* input–weight carried, speed and acceleration of system and special environmental or other wear considerations.

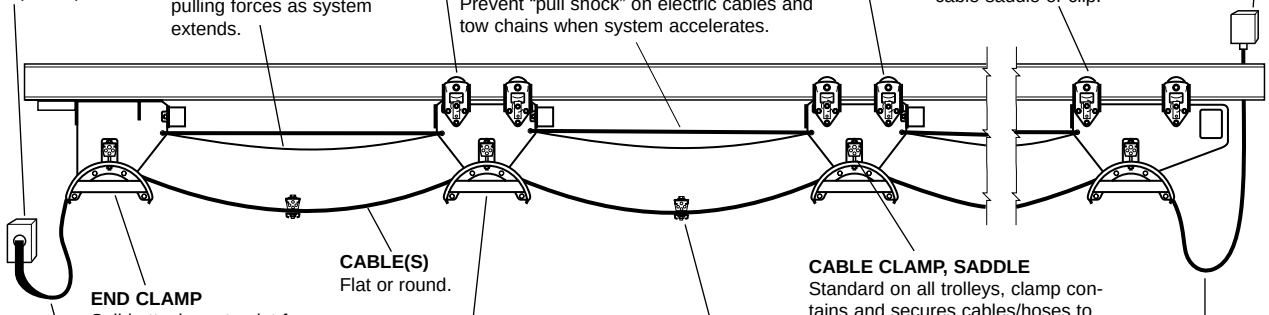
MOVING CABLE TERMINATION (MB)
OPTIONAL – See "fixed termination", left.

FIXED CABLE TERMINATION (FB)
Junction box (terminal strips optional).

TOW CHAINS
Steel chain towing connection between trolleys which transmit pulling forces as system extends.

SHOCK CORDS
Made of elastomeric material, most often used on very high speed or heavily loaded systems. Prevent "pull shock" on electric cables and tow chains when system accelerates.

TOW TROLLEY
Traveling trolley linked with moving machine. Includes cable saddle or clip.



CABLE(S)
Flat or round.

END CLAMP
Solid attachment point for cable at fixed end of system. One per system.

CABLE CLAMP, SADDLE
Standard on all trolleys, clamp contains and secures cables/hoses to cable saddle.

CABLE SADDLE
Standard for all trolleys, this surface determines radius for cable. Saddle radius must match or exceed cable's minimum bend radius

CABLE CLAMP, LOOP
Clamp used at bottom of loop. Organizes cables and prevents cable "thrashing" when cable package consists of more than one cable.

EXTRA CABLE-MOVING END (MC)
Cable required to reach from tow trolley to junction box (MB).

EXTRA CABLE-FIXED END (FC)
Cable required to reach from end clamp to junction box (FB).

Beam•Master™…Extra Durable

Heavy duty components and high quality finishes make Gleason Beam•Master Festoon Systems rugged, smooth running and long lasting.

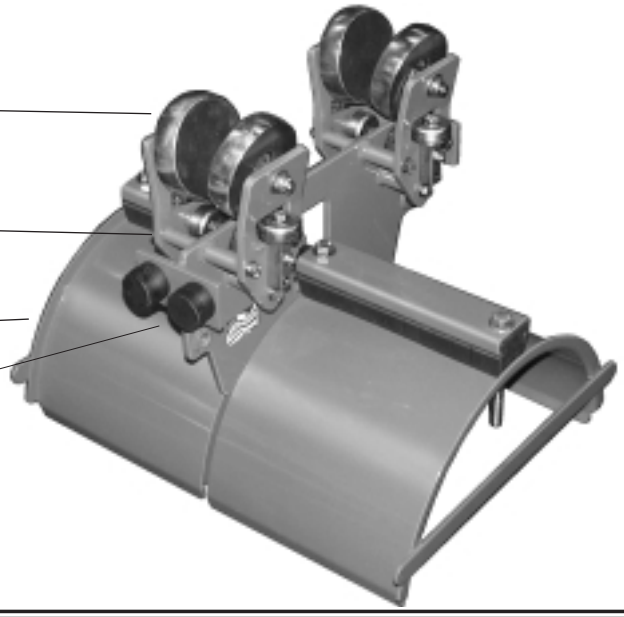
TYPICAL BEAM•MASTER TROLLEY (I-130 shown)

Running Gear
Either crowned (shown) or flanged.
Steel standard. Nylon available.

Trolley Body
Standard finish is baked on orange polyester powder coating.

Saddle
For flat cable or mixed bundle. Standard finish is baked on orange polyester powder coating.

HEAVY DUTY BUMPERS
Absorb impacts caused by trolleys "packing together" on stored end of system.



Cable & Saddle Guidelines

1. Bending Cable *(All saddles and clips)*
For good service and long life, it is best to follow the rule: "BIG BENDS ARE BEST". Cable producers vary in applying a multiplier. Gleason uses the chart below.

CABLE O.D..	MIN. RADIUS	MIN. SADDLE DIA.
Under 0.3 in.	3 x O.D	6 x O.D.
Under 0.5 in.	4 x O.D	8 x O.D.
Above 0.5 in.	5 x O.D	10 x O.D.

2. Cable O.D. Variations *(Type M saddles)*
Variations in cable size (O.D.) should be kept to a minimum. Clamping is most effective when all cables/hoses are the same O.D. or close as in figure 1. This ensures secure clamping. Wide variation in O.D. (Fig. 2) makes clamping difficult and cable/hose may not remain secure on the saddle.

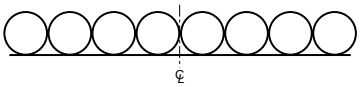


FIG. 1 *BEST!*

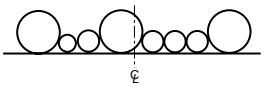


FIG. 2 *poor!*

3. Balance in Loading Cable *(Type M saddles)*
This is important for smooth running, long bearing life and component alignment. Distribute the load evenly, with the heaviest cables nearest the centerline.

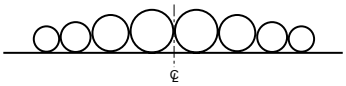


FIG. 3 *BEST!*

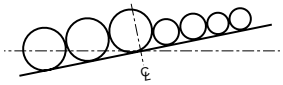


FIG. 4 *poor!*

4. Flat Cable Stacking *(Type F saddles)*

a) Secure Clamping
EXTREMELY IMPORTANT: At least 50% of the cable surface must be under clamp pressure.

b) Height Consideration
Flat cable stacking is best when width is 3 or 4 times height (Fig. 5 & 6, above). High stacking can work as long as equal pressure is applied to all cables (Fig. 8).

c) Configuration
BIG CABLE ON TOP (Fig. 9) provides maximum bending radius for largest cables, improves heat dissipation for power cables and transfers pulling force to largest cables when tow chains are not used.

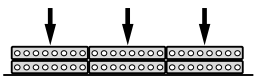


FIG. 5 *BEST!*
100% Clamping

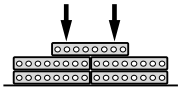


FIG. 6 *good!*
50% Clamping

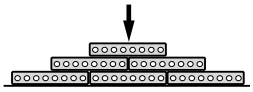


FIG. 7 *poor!*

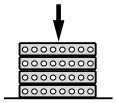


FIG. 8
Unstable, but OK.

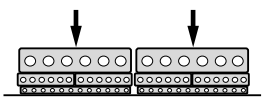


FIG. 9