

SPARE TIRE HOISTS



PERFORMANCE

Gear Design

- Revised/improved to improve strength
- Provide faster winding in both directions

Clutch Design

- Utilizes 90 degree activation

Patented Integral "Downstop"

- Indicates all cable "payed out"
- 1-way up and down operation

Durability

- Robust design
- Improved mounting stability
- Improved mounting strength
- Tested to 100 or 200 cycles per customer spec.
 - No degradation in performance
 - 1 unit per shift
 - Typically 3-6 times more stringent than "jack" requirement

Shock Protection / Tire Pressure Loss

- Polyurethane busing / cable protector at lift plate or use of spring at lift plate

Unit Testing

- 100% unit testing prior to packing
- Computerized machining controlled

Lift Plate Design

- Customer program specific
- Design accommodates from 2.25 in. to 5.500 in. pilot hole in wheel
- Self centering design - no adjustments required
- User friendly
- Improved strength

DESIGN FEATURES

Input Forces (Maximum Clutch Design)

- 40 mm (17 - 29 ft-lb.)

Cable Holding Forces (Minimum)

- 1779 N (400 lb.) for tire/wheels weighing < 31.25 kg. (70 lb.)
- 2447 N (550 lb.) for tire/wheels weighing > 31.25 kg. (70 lb.)

Size / Compactness

- Environment Related
- Available Area Under Vehicle

Families: Customer Specific

- 5/32 in. cable (7 x 19 Construction)
- Breaking Strength
 - Galvanized 2800 lb. (1270 kg.)
 - Stainless Steel 2400 lb. (1088 kg.)
- 3/16 in. cable (7 x 19 Construction)
- Breaking Strength
 - Galvanized 4200 lb. (1905 kg.)
 - Stainless Steel 3700 lb. (1680 kg.)

ENVIRONMENTAL

Corrosion Resistance

- E-Coat All Exterior Components (Lead Free) to meet customer requirements
- Hex free plating of other metal components
- Meets substance of concern requirements

QUALITY

Reliability Testing / Validation Capabilities

- Operational characteristics
 - Input Torque
 - Cable Holding Force
 - Winding Effort
- Dimensional compliance
- Life-cycle testing
- Unit tensile strength test
- Lifting plate assembly tension testing
- Unit salt spray testing (outsourced)
- Hot and cold box testing (outsourced)

CONSIDERATIONS

Electric Hoist

- Under development
- "Hi-End" Vehicles
- "Blue Tooth" Technology
- "Smart Switch"