Geared Traction Machine - TM Series

Models TM21, TM26, and TM35

Compact size and quiet performance

The TM Series geared traction machine from Motion Control Engineering (MCE) is a compact, easily installed and serviced, superior quality solution for medium speed, high capacity elevators.

The streamlined design of the TM Series allows significant weight reduction without sacrificing durability or frame rigidity. The TM Series slow shaft uses tapered roller bearings that require no periodic grease lubrication, assuring reliable performance over time without the risk of efficiency loss or failure that can occur on other machines when bearing lubrication is overlooked. The TM Series worm shaft, using the recommended geared machine oil, employs a unique design that protects the shaft. The TM Series traction sheave is fitted with shrink-fit sheaves.

The TM Series uses AC VVVF motors from Imperial Electric. Imperial motors use cast iron construction and hot rolled steel shafts, achieving a level of performance and dependability you can trust through long years of service. Imperial motors are renowned for quiet performance and long service life.

Applications
- Modernization or new construction
- Overhead machine room
- 2000 pound (900kg) to 6000 pound (2700kg) capacity at speeds from 100 to 400 feet per minute (0.5 to 2.0 m/s)
- TM35 can handle higher load in some cases, contact our office

Benefits
- Three machine family for optimum match to speed and capacity
- Compact design and reduced weight make handling and installation easier
- Machine sleeve bushings and tapered roller bearings require no periodic lubrication
- Flexible style coupling minimizes vibration and enables fast motor alignment
- Designed for maintainability
- Rope guard included with every machine

Features
- ASME A17.1/CSA-B44, EN81-1
- Oil bath worm gear unit, high strength cast iron case
- Alloy steel worm, case hardened, stress relieved, with anti-wear bronze bushings
- Tough nickel based, bronze worm wheel for extended durability
- Alloy steel worm wheel shaft, case hardened, tempered
- High-strength grade, ductile iron sheave
- Electrically released, independently acting brakes
- Motor is UL and CUS approved
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Geared Traction Machines Performance Comparisons

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<tr>
<th></th>
<th>TM21</th>
<th>TM26</th>
<th>TM35</th>
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<tbody>
<tr>
<td>Capacity (lbs)</td>
<td>2500</td>
<td>4500</td>
<td>6000</td>
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<tr>
<td>Speed (fpm)</td>
<td>400</td>
<td>400</td>
<td>350</td>
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<tr>
<td>Width (in.)</td>
<td>30</td>
<td>31 3/4</td>
<td>36</td>
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<tr>
<td>Weight (lbs) w/o motor</td>
<td>1550</td>
<td>2380</td>
<td>3000</td>
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Standard equipment
- Includes machine, drive sheave, drum brake, isolation pads, motor, flexible style coupling, machine base, blocking beams, and rope guard
- Spring activated, electrically released, DC brake
- 1024 ppr incremental hollowshaft encoder
- Factory installed synthetic lubricant
- Fabricated steel sub base
- 3 lifting lugs provided
- Field replaceable sheave
- Brake release micro switch
- View port and oil level site glass

Options
- Rope brake
- Seismic sheave guard
- Deflector sheave
- Hoist ropes

Technical information
- Worm shaft composition nickel-chromium-molybdenum steel alloy (18NiCrMo4) hardened and ground to 58-61 HRC Rockwell
- High strength anti-friction bronze worm wheel
- Bronze worm wheel is more resistant to stress
- Double-race thrust ball bearing – longer lasting, less noise, and easy to replace
- No backlash adjustment required
- High resistance alloy steel main sheave shaft
- Thrust bearing continuously washed and cooled by machine lubricant
- Synthetic oil only
- Traction sheave is made of ductile iron with minimum sheave hardness of 250 Brinell
- Rope guard provided with each machine