THE TP56 -
A CUSTOMIZED SOLUTION
FOR YOUR SWITCHING NEEDS

TractivePower Corporation was founded by Frank Donnelly in 2010 to provide innovative and practical solutions to the rail industry. Frank is a well known innovator in the rail industry with over 30 patents in his name. His achievements include re-powering a large part of BC Rail’s mainline fleet and founding RailPower Technologies Corp. where he designed and built the industry’s first hybrid locomotive. At TractivePower, he has assembled a talented and committed team with significant industry expertise at both its manufacturing plant in Squamish BC, and its Head Office in North Vancouver BC.

TractivePower’s initial product, the “TP56”, is designed to meet the switching needs of the industrial user. The TP56 offers:

- Better, more robust performance than Railcar movers,
- Lower maintenance costs and shorter waiting times for replacement parts,
- More tractive effort with less horsepower,
- Better fuel efficiency and lower emissions than competing products.

TractivePower will work with you during the design and build phases of your TP56 to offer a bespoke solution for your switching needs.

With a price point starting at $575,000 (depending on configuration), the TP56 is very competitively priced. TractivePower is also pleased to offer a long term leasing and service plan to customers located in the Lower Mainland.
## THE TP56 - PRODUCT SPECIFICATIONS

**WEIGHT**
Nominal .................. 160,000 lb ( 80 tons )

**DIMENSIONS**
Length ( between pulling faces ) .......... 32' - 0" ( 384" )
Length ........................................... 27" - 10" ( 334" )
Width ............................................ 10" - 3" ( 123" )
Height ............................................ 14" - 2-3/4" ( 170.8" )

**WHEEL BASE**
Wheel Base .................. 8" - 9 - 1/2" ( 105.5" )
Wheel Diameter ......................... 40"

**tractive effort**
Starting (35% adhesion) ........ 56,000 lb

**SPEED**
Maximum ..................... 25 mph ( 40 km/hr )

**MAXIMUM CURVE**
175-foot radius

**ENGINES**
One 300 - 800 hp diesel electric engine*

**GENERATORS**
Brushless alternator

**traction motors**
D-77 ( 3 units )

**FUEL CAPACITY**
up to 300 gallons

**CONTROL**
AAR Standard

**AIR BRAKES**
Type 26

**AIR COMPRESSOR**
Rotary Screw Type - 140 CFM

* More Tractive Effort with Less Horsepower
THE TP56 - PRODUCT DESCRIPTION

- Three axles, and the use of “Steel on Steel”, means that the TP56 has greater adhesion than Railcar Movers. The TP56 therefore produces 56,000 lbs. of Tractive Effort with lower horsepower. With customization, this can be increased to 70,000 lbs.

- The TP56 uses existing and proven technologies so that it is serviceable by any skilled person possessing basic mechanical knowledge.

- The TP56 is “jackable” so it can be serviced in the yard as well as the shop.

- The TP56 uses readily available parts that do not have a long lead time for ordering as is the case for Railcar Movers.

- The TP56 is transportable by truck and has the potential to minimize certification requirements.

- The TP56 meets Tier 3 Industrial Standards (Tier 4 available), and its fuel requirements when idling, at 0.5 gal/hr, are minimal when compared to 2 - 4 gal/hr for switcher locomotives.

- The TP56 has an electric (as opposed to mechanical) power train thereby minimizing shuttering.

- The TP56 has a full sized cab that can be customized according to your preferences. It also has several choices of controls, all of which are designed to simplify operation.
Sources: Manufacturers’ website and printed material. Chart shows current models offered by the various manufacturers.

Note: For comparison purposes, the above pulling capacities are measured under ideal conditions on straight and level track. Variables such as weather, rail and track condition will affect pulling capacity. Grade and track curvature will affect rolling resistance of attached railcars. To accurately assess the pulling capacity for a particular vehicle or application, request a written track survey from the manufacturer.

Shuttlewagon uses standard AAR, direct, non-weight transfer couplers. Tractive effort in this system is unchanged with respect to loaded or empty railcar coupling. Trackmobile and Rail King use weight transfer couplers. When coupled to empty railcars, tractive effort is reduced up to 50%.

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## FUEL CONSUMPTION

Many locomotives used in switching have a lengthy start-up process, meaning that they are often left to idle for lengthy periods of time. This wastes fuel, increases noise and engine wear, and increases emissions of HC, CO\textsubscript{2}, NO\textsubscript{x}, and PM. The TP56 by contrast, is simple to start and can be shut down when not in use. The following table compares fuel usage for selected locomotives with the TP56\textsuperscript{1}.

<table>
<thead>
<tr>
<th>Locomotive &amp; Engine Size</th>
<th>Tractive Effort \textsuperscript{3} (lbs)</th>
<th>Locomotive Fuel Use in Gallons per Hour \textsuperscript{2} Notch</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Idle</td>
<td>1</td>
</tr>
<tr>
<td>TP56 \textsuperscript{1} 375 hp (447 kW)</td>
<td>56,000 \textsuperscript{4}</td>
<td>0.5</td>
</tr>
<tr>
<td>EMD SW1000/01 1,000 hp (745 kW)</td>
<td>42,310</td>
<td>3</td>
</tr>
<tr>
<td>EMD GP15-1 1,500 hp (1,118 kW)</td>
<td>47,000</td>
<td>3.8</td>
</tr>
<tr>
<td>EMD GP9 1,750 hp (1,304 kW)</td>
<td>64,750</td>
<td>3.5</td>
</tr>
<tr>
<td>EMD GP30 2,250 hp (1,680 kW)</td>
<td>63,375</td>
<td>3.5</td>
</tr>
<tr>
<td>EMD SD70M 4,000 hp (2,982 kW)</td>
<td>109,000</td>
<td>3</td>
</tr>
</tbody>
</table>

\textsuperscript{1} Assumes a Cat C9 ACERT Engine that meets EPA Tier 3 standards
\textsuperscript{2} GATX Locomotive Group Author Sam Bucholtz [http://www.gatx.com/wps/wcm/connect/58111180461da43d984af913d02d902a/Fuel_Consumption_Chart.pdf?MOD=AJPERES]
\textsuperscript{3} GATX Locomotive Group, [http://www.gatx.com/wps/wcm/connect/a5915100461da27a9841f913d02d902a/Locomotive_Specifications.pdf?MOD=AJPERES]
\textsuperscript{4} TP56: anticipated tractive effort is 56,000 lbs
THE TP56 - A BETTER SOLUTION

- TractivePower is pleased to introduce the TP56, a state of the art switcher designed with your needs in mind.

- The TP56 offers greater tractive effort (up to 70,000 lbs) that is produced with less horsepower than Railcar movers or diesel locomotives currently used for switching.

- Our goal is to make the TP56 “Hassle Free” for maintenance purposes by using standardized parts that are readily available so that it can be maintained by any person with basic mechanical knowledge.
  - The TP56 is jackable so it can be maintained in the yard or in the shop.
  - The TP56 is transportable by truck, so the expensive service regimen needed for a Blue Card can be avoided.
  - TractivePower has partnered with Southern Railway of British Columbia to offer a long dated service plan to customers in the Lower Mainland.

- The TP56 meets Tier 3 Industrial Standards and can be easily modified to meet Tier 4 Standards.

- Please call us today to discuss your needs, or visit us at www.tractivepowercorp.com
THE TRACTIVEPOWER TEAM

North Vancouver Office

Address:  
340 Harbour Avenue  
North Vancouver, BC  
Canada V7J 2E9  
Tel: 604 904 0085  
Fax: 604 980 5400

Frank Donnelly, Founder & President  
E: fwdonnelly@tractivepowercorp.com  
M: 604 816 8553

Edgard Rivera, Sales & Marketing  
E: erivera@tractivepowercorp.com  
M: 604 312 2581

Simon Clarke, Business / Corporate Development  
E: sclarke@tractivepowercorp.com  
M: 604 551 9665

Tim Sanderson, Chief Operations Officer  
E: tsanderson@tractivepowercorp.com  
M: 604 992 8844

Marty Popoff, Finance Opportunities  
E: mpopoff@tractivepowercorp.com  
M: 778 838 3221

Squamish Facilities

Address:  
39645 Government Road  
Squamish, BC  
Canada V8B 0G3  
Tel: 604 898 9336

Al Broadfoot, Senior Mechanical Consultant

Yurek Duszynsk, Senior Engineer

Andy Faris, Associate
Our prototype unit as of August, 2013.

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