# THE RIGHT SOLUTION FOR MODERN RAIL LOGISTIC







#### WE KNOW THE WAY TO MAKE IT POSSIBLE

**EXPERTISE** Over 45 years of experience in the market

**VERSATILITY** Custom made solutions for the special needs applications

**RELIABILITY** Built to last with longlife design

**INNOVATION** The latest technology available on board

**SAFETY** Conforms with the highest safety regulations

**WIDE RANGE** 40 models offered **OF PRODUCTS** 

#### **APPLICATION AREAS**













#### Design

Since 1969, Zephir has designed and manufacture bi-modal vehicles "railcar shunting locomotives" to efficiently, economically, and safely move our rail cars in a wide range applications areas.

#### **Bimodal operation**

The locotractor can be moved on or off track in most areas and in one quick and easy operation. It can cross paved tracks to move across rail yards quickly and efficiently.

#### **Rubber tire drive**

- The rubber tire drive provides a uniform 100% tractive force with a single coupling in forward and reverse direction.
- The rubber tire drive system does not require extra weight to be added in order to provide enough traction.
- Traction tires don't wear the railways like metal wheels. Our equipment is lighter, so there is no added stress on the rail due to the weight, and the rubber last longer.
- The equipment is designed to not transfer extra force to the railcars or locomotives.



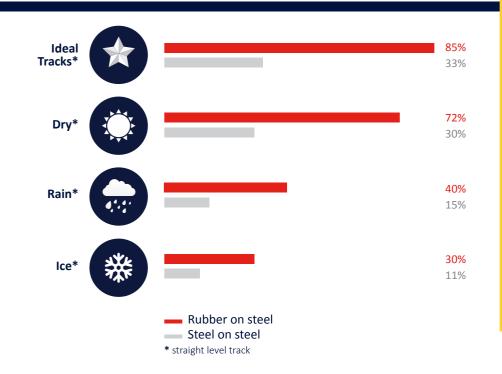


#### Concept

The Locotractor traction system utilizes Rubber on Steel which produces twice the coefficient of traction compared to conventional Steel on Steel, independent from the rail condition.



#### Coefficient of friction (Rubber Vs. Steel)



## Easy to mantain and to operate

- Our machines are designed to be easily maintained with no special skills or tools needed.
- Anyone capable of operating basic equipment can drive the locotractor.
- Decrease labor costs and increase productivity because just one operator is needed to drive the locotractor.
- With compact dimensions, the locotractor is easy to transport and relocate.
- No need for special infrastructure or tools for service and maintenance Environmentally friendly.

## **ELECTRIC RANGE APPLICATIONS**



















## S SPECIAL AND CUSTOM MACHINES

**KUBO** with snowplow



**KUBO** with diesel engine



**KUBO** with cabin





\* dry straight level track | \*\* starting peak performance

| Line <b>CRAB</b>     | Model    | Draw Bar Pull *           | Max Towing<br>Capacity ** | Weight | Dimensions<br>LxWxH           | Rail road                               |
|----------------------|----------|---------------------------|---------------------------|--------|-------------------------------|---|
| white adversariation | 1500 E   | ●>< 15 kN > <b>&lt;</b>   | 300 t                     | 4 t    | 2180 mm<br>1830 mm<br>1550 mm |   |
|                      | 1800 E   | ●>< 20 kN > <b>○●</b>     | 400 t                     | 4 t    | 2180 mm<br>1830 mm<br>1550 mm | *************************************** |
|                      | 2100 E   | ●>< 26 kN > <b>○</b> ■    | 520 t                     | 5,2 t  | 2880 mm<br>2050 mm<br>2435 mm | *************************************** |
|                      | 3100 E   | ●>< 36 kN ><              | 730 t                     | 6,6 t  | 3100 mm<br>2450 mm<br>2435 mm |   |
|                      | 5000 E   | ●>< 50 kN > <b>○</b> ■    | 1000 t                    | 9 t    | 3850 mm<br>2200 mm<br>2650 mm |   |
| Line <b>CRAB EVO</b> | Model    | Draw Bar Pull *           | Max Towing Capacity **    | Weight | Dimensions<br>LxWxH           | Rail road                               |
|                      | 3200 EVO | ■>< 36 kN >               | 730 t                     | 6,6 t  | 2504 mm<br>2200 mm<br>2500 mm |   |
|                      | 4200 EVO | ■>< 36 kN >               | 730 t                     | 7,5 t  | 2504 mm<br>2200 mm<br>2500 mm |   |
| Line <b>LOK E</b>    | Model    | Draw Bar Pull *           | Max Towing<br>Capacity ** | Weight | Dimensions<br>LxWxH           | Rail road                               |
|                      | 7.90 E   | ●>< 70 kN > <b>✓</b> ■    | 1400 t                    | 16 t   | 4800 mm<br>2500 mm<br>3400 mm |   |
|                      | 10.90 E  | ■>< 100 kN > <b>✓</b> ■   | 2000 t                    | 20 t   | 4800 mm<br>2500 mm<br>3400 mm |   |
|                      | 13.90 E  | ■>< 130 kN >              | 2600 t                    | 24 t   | 4800 mm<br>2500 mm<br>3400 mm |   |
|                      | MPV E    | ●>< 30 kN >               | 600 t                     | 14 t   | 4800 mm<br>2500 mm<br>3375 mm |   |
| Line <b>KUBO</b>     | Model    | Draw Bar Pull *           | Max Towing Capacity **    | Weight | Dimensions<br>LxWxH           | Rail only                               |
|                      | 1.200 E  | ■>< 18 kN > <b>&lt;</b> ■ | 360 t                     | 5t     | 2600 mm<br>2200 mm<br>1300 mm |   |
|                      | 2.500 E  | ●>< 25 kN > <b>●●</b>     | 500 t                     | 5 t    | 2600 mm<br>2200 mm<br>1500 mm |   |
|                      | 3.500 E  | ●>< 35 kN > <b>○</b> ■    | 700 t                     | 6 t    | 2600 mm<br>2200 mm<br>1500 mm |   |
|                      | 5.500 E  | ●>< 55 kN > <b>●●</b>     | 1100 t                    | 11 t   | 3500 mm<br>2200 mm<br>1500 mm |   |
|                      | 10.000 E | ■>< 100 kN >              | 2000 t                    | 20 t   | 4200 mm<br>2200 mm<br>2200 mm |   |



\* dry straight level track | \*\* starting peak performance

|                                | * dry straight level track   ** starting peak performanc |                         |                           |                      |                               |             |  |
|--------------------------------|--|-------------------------|---------------------------|----------------------|-------------------------------|-------------|--|
| Line <b>LOK</b>                | Model  | Draw Bar Pull *         | Max Towing<br>Capacity ** | Weight               | Dimensions<br>LxWxH           | Rail road   |  |
|                                | 2.60   | ●>< 30 kN ><            | 600 t                     | 10 t                 | 4800 mm<br>2500 mm<br>3400 mm |             |  |
|                                | 4.90   | ●>< 50 kN > <b>&lt;</b> | 1000 t                    | 14 t                 | 4800 mm<br>2500 mm<br>3400 mm |             |  |
|                                | 6.110  | >< 70 kN >              | 1400 t                    | 16 t                 | 4800 mm<br>2500 mm<br>3400 mm |             |  |
|                                | 8.130  | <b>80 kN</b> >          | 1600 t                    | 18 t                 | 4800 mm<br>2500 mm<br>3400 mm |             |  |
|                                | 10.170   | >< 100 kN >             | 2000 t                    | <b>2</b> 0 t         | 4800 mm<br>2500 mm<br>3400 mm |             |  |
|                                | 13.220   | ■>< 130 kN > <b>○</b> ■ | 2600 t                    | <b>24</b> t          | 4800 mm<br>2500 mm<br>3400 mm |             |  |
|                                | 16.300   | >< 160 kN >             | 3200 t                    | <b>2</b> 9 t         | 6500 mm<br>2500 mm<br>3410 mm |             |  |
|                                | 20.300   | >< 200 kN >             | 4000 t                    | 35 t                 | 7000 mm<br>2500 mm<br>3630 mm |             |  |
|                                | 20.450   | >< 200 kN >             | 4000 t                    | 35 t                 | 7000 mm<br>2500 mm<br>3630 mm |             |  |
|                                | 22.520   | >< 230 kN >             | 4600 t                    | 40 t                 | 7000 mm<br>2500 mm<br>3630 mm |             |  |
|                                | 30.520   | >< 280 kN >             | 5600 t                    | 48 t                 | 7360 mm<br>2500 mm<br>3660 mm |             |  |
| Line <b>LOKOM</b>              | Model  | Draw Bar Pull *         | Max Towing<br>Capacity ** | Weight               | Dimensions<br>LxWxH           | Rail only   |  |
|                                | LOKOM  | From 70 t<br>to 120 t   | From 1400 t<br>to 2400 t  | From 18 t<br>to 44 t | upon request                  |             |  |
| Line <b>INDUSTRIAL TRACTOR</b> | Model  | Draw Bar Pull *         | Max Towing<br>Capacity ** | Weight               | Dimensions<br>LxWxH           | Road        |  |
|                                | 650 NC   | ●>< 45 kN >             | 129t                      | 6,7 t                | 3500 mm<br>1900 mm<br>2190 mm |             |  |
|                                | 650 NC 4x4   | ●>< 64 kN >             | 183 t                     | 8 t                  | 3500 mm<br>1900 mm<br>2280 mm | <u>\$</u> ) |  |
|                                | 800 NC   | >>< 70 kN >             | 200 t                     | 11 t                 | 3950 mm<br>2200 mm<br>2500 mm | <u> </u>    |  |
|                                | 800 NC 4x4   | ●>< 90 kN >             | 257 t                     | 11,5 t               | 3950 mm<br>2200 mm<br>2750 mm | <b>(1)</b>  |  |

## DIESEL RANGE APPLICATIONS



















## S SPECIAL AND CUSTOM MACHINES

LOK 1400 - 2000 - 2500



**Military Applications** 



4 Wheel Steering System



