

Standard range of light weight anti climbing devices.

Providing more cost effective solutions with shorter lead times, to meet customer project requirements.



Up to 600kN deforming force

Light Weight Anti Climbers

Oleo's Light Weight Anti Climbers have benefited from extensive dynamic testing. Static compression tests alone do not realistically reflect the performance characteristics during a collision.

Without anti climbers one vehicle would override another in a serious accident. Anti climbers contribute to the crash worthiness of rail vehicles by absorbing impact energy as collision forces rise following coupler overload, in line with International Standards such as EN 15227.

Oleo's anti climber ranges have been specifically designed to limit vertical movement even in offset impacts, and promote a controlled longitudinal stroke.

Anti climber contact faces lock together prior to any vehicle structural deformation and minimise the tendency of vehicles to climb or override.

Oleo was involved in the development of the first anti climbers in the 1990's. End on collisions present the greatest hazard to passengers and most fatalities happen at speeds of less than 60km/h. Oleo anti climbers are successful in the prevention of overriding and crash energy management.

Product Details

New standard range of Oleo Anti Climbing Devices:

- Low Force; from 200kN.
- High Force; up to 600kN.
- Fully customisable force characteristics at no extra cost.
- Standard fixed length and design per stroke.
- Extensive range of available strokes.
- All units are tested by Oleo with validated mathematical models in accordance with EN15227. Available with Radioss and LS-Dyna finite element models.
- The system used by Oleo for the mathematical modelling of crash scenarios is approved by a European Rail Authority as being accurate, appropriate and properly controlled.
- Reduced manufacturing lead time.
- Standard Anti Climber head profile and Mounting Plate design.

Product Advantages

- Performance can be fully optimised with Oleo 1D Train™ at no additional cost.
- Consistent and predictable deforming forces across the complete stroke.
- Controlled energy absorption throughout the total stroke.
- Near 100% energy absorption efficiency.
- Standard mounting options for ease of customer selection.
- Designed to withstand vertical offsets ($\pm 40\text{mm}$ from axis).

Applications



Metro



Light Rail



Locomotive & Freight



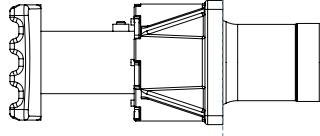
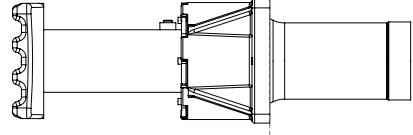
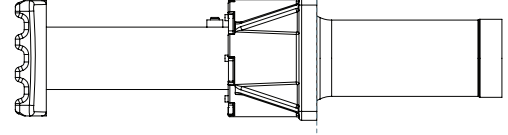
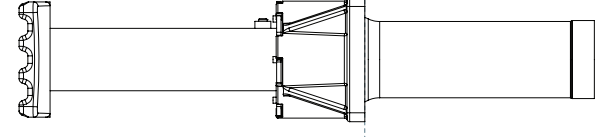
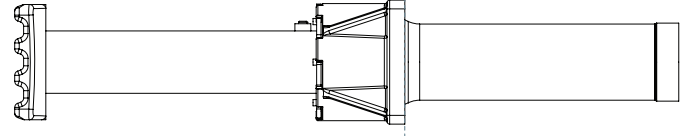
High Speed



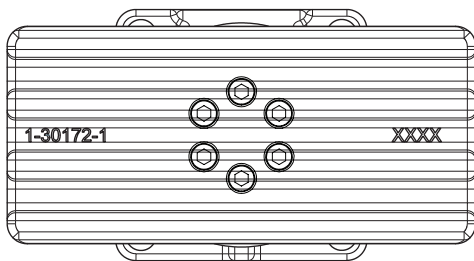
Mainline



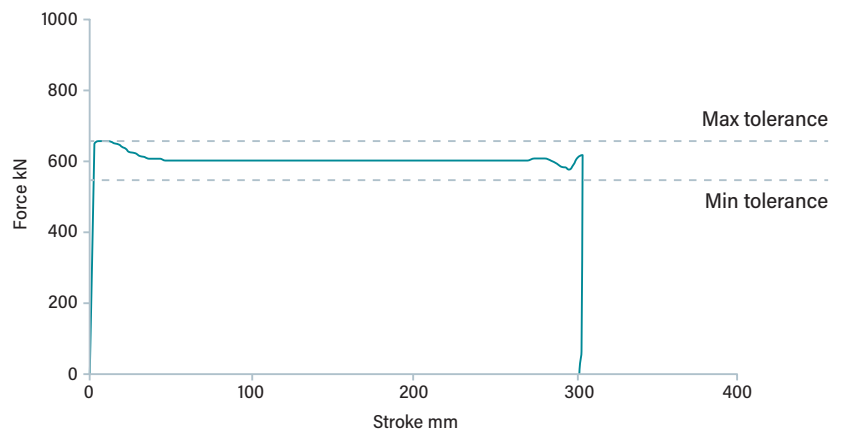
Light Weight Anti Climbers Data

| Deforming Stroke (mm) | Deforming Force (kN) | | Max Bending Force (kN) | Energy Absorption (kJ) | Light Weight Anti Climber Range | Unit Code |
|-----------------------|----------------------|-----|------------------------|------------------------|--|-----------|
| | Min | Max | | | | |
| 100 | | | | 63 |  | AL10 |
| 150 | | | | 93 |  | AL15 |
| 200 | 200 | 600 | 50 | 123 |  | AL20 |
| 250 | | | | 153 |  | AL25 |
| 300 | | | | 183 |  | AL30 |

Light Weight Anti Climber Head



Dynamic impact for Oleo Deforming Light Weight Anti Climber



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