Anti Climbers

Oleo has developed new standard ranges of anti-climbing devices. Providing more cost effective solutions with shorter lead-times, to meet customer project requirements.

Oleo 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 over ride 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 working in conjunction with British Rail Research 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 over-riding and crash energy management.

Applications

- Metro
- Light Rail
- Locomotive & Freight
- High Speed
- Mainline

Product details

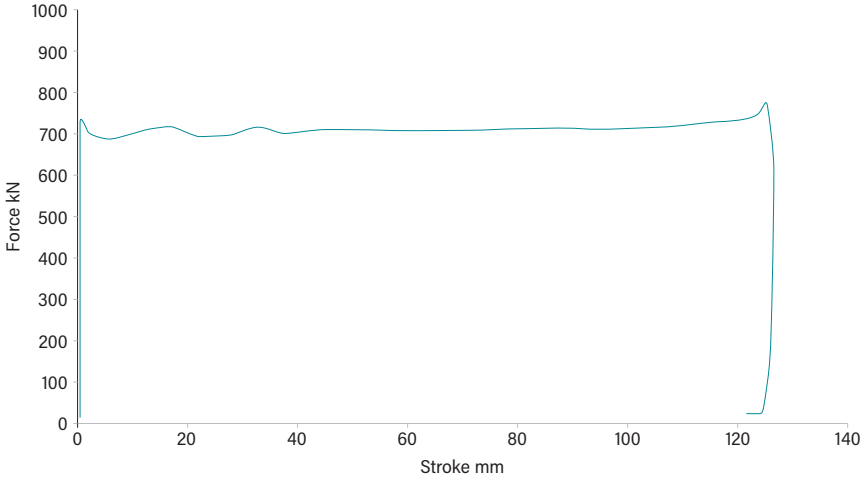
New standard range of Oleo Anti Climbing Devices:

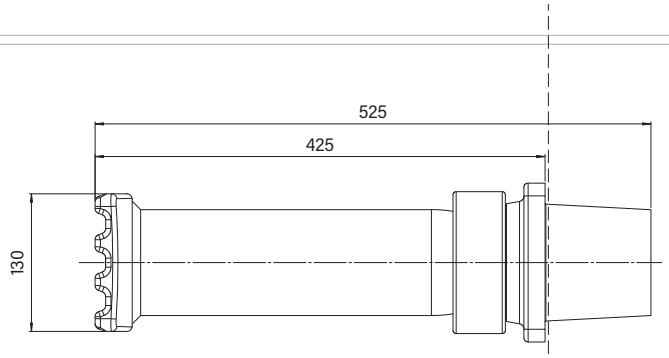
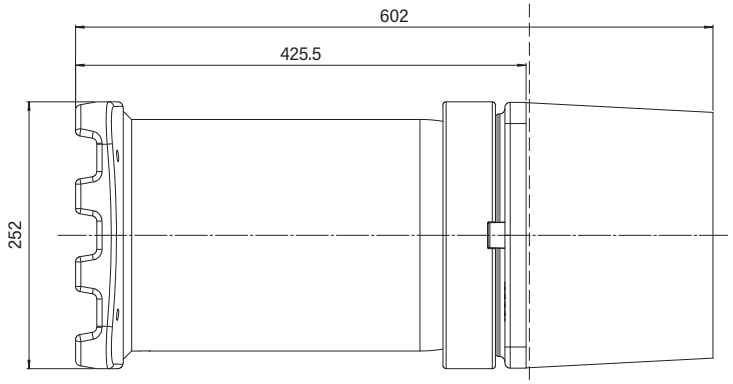
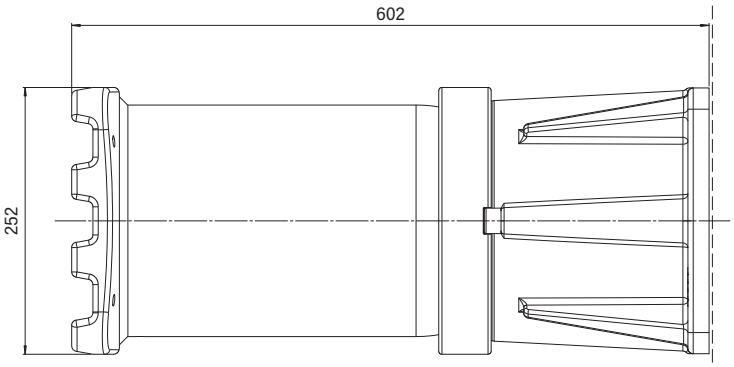
- Low Force; up to 500kN.
- High Force; up to 1,000kN.
- Fully customisable force characteristics at no extra cost.
- Standard fixed length and design per stroke.
- Extensive range of available strokes.
- All units are tested by Oleo with validated mathematical models in accordance with EN15227. Available 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 Rail at no additional cost.
- Controllable 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 (±40mm from axis).

Dynamic impact test data for Oleo Deforming Anti Climber



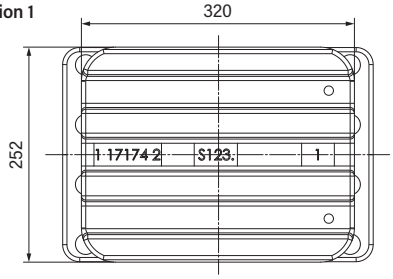
Deforming stroke (mm)	Deforming force (kN) Min	Deforming force (kN) Max	Anti Climber overall length and forward projection (based on 300mm stroke)	Unit Code
100	200	400		AFxx-10
150				AFxx-15
200				AFxx-20
250				AFxx-25
300				AFxx-30
350				AFxx-35
400				AFxx-40
100	400	750		AFxx-10
150				AFxx-15
200				AFxx-20
250				AFxx-25
300				AFxx-30
350				AFxx-35
400				AFxx-40
450				AFxx-45
500				AFxx-50
100	400	700		AFxx-10
200				AFxx-15
300				AFxx-20
400				AFxx-25
500				AFxx-30
600				AFxx-35
700				AFxx-40
800				AFxx-45
900				AFxx-50

Notes

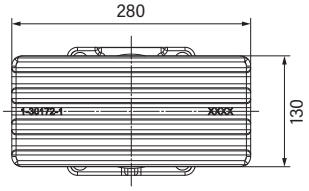
1. xx digits in unit code refer to Deforming Force (i.e. 250kN deforming force would equal '25', 400kN would equal '40' etc).
2. Illustrations of Anti-climbers shown above are all 300mm stroke units (for AL, AF and AB range).

Additional Options – Head Size

Option 1



Option 2



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