

Sentry™ Double Acting Energy Absorber

For light rail and
metro application

Draft 600kN 45mm stroke

Buff 800kN 80mm stroke



Oleo has developed a unique Double Acting energy absorption solution for use in LRV and Metro couplers.

Sentry™ Double Acting device delivers the high energy absorption capacity of Oleo's gas-hydraulic technology in a light weight and small packaging envelope.

The unit is available with clamp to clamp mounting for Metro applications and yoke arrangement for LRV foldable couplers.

Integration of the Sentry Double Acting device into the coupler system removes the need for heavy draft springs and draft housings.

By reducing the variety and complexity, this can allow for lower project costs per train coupling system whilst also offering higher coupling speeds, significant weight savings and reduced life cycle costs.

Product details

- 2-way buff and draft, Gas Hydraulic energy absorption.
- Standardised clamp connections.
- Maximum Force range up to 800KN.
- Protection against draft overload events.
- Fully customisable force/stroke characteristics at no extra cost.
- Integral anti-rotation system.
- All units tested by Oleo with validated mathematical models in accordance with EN15227. Plug in elements available for Radioss and LS-Dyna finite element software.
- 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.

Product advantages

Oleo's Sentry Double Acting Energy Absorption Device enables:

- Buff and Draft functions in 1 compact unit.
- Lower price per Train Set.
- Lower Life Cycle cost.
- Light weight.
- Small space envelope.
- Faster Coupling Speeds.
- Reduced Potential Impact Damage.
- Increased Passenger Protection.

Performance optimisation at no cost with Oleo 1D Rail at no additional cost.

Higher recoverable energy absorption than any alternative solution.

Standardised modular design with clamp connections for ease of service.

Maintenance free between major train overhaul periods.

Fully tested standard unit.

No NRC cost, short lead time.

Applications

Metro



Light Rail



Locomotive & Freight



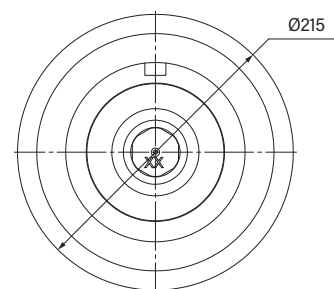
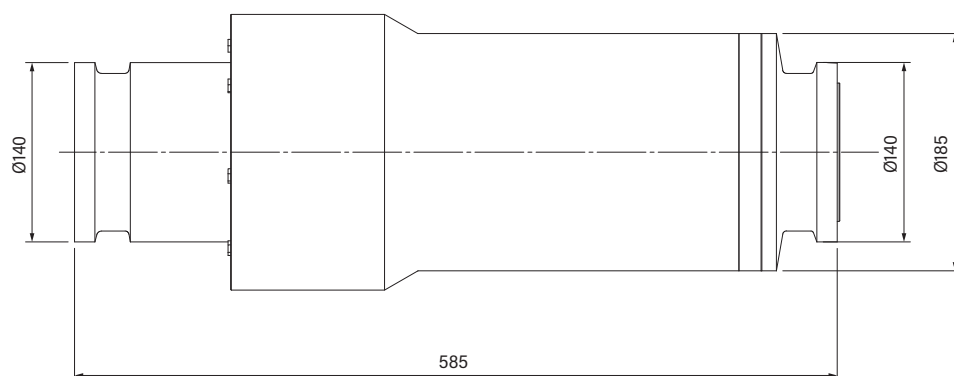
High Speed



Mainline



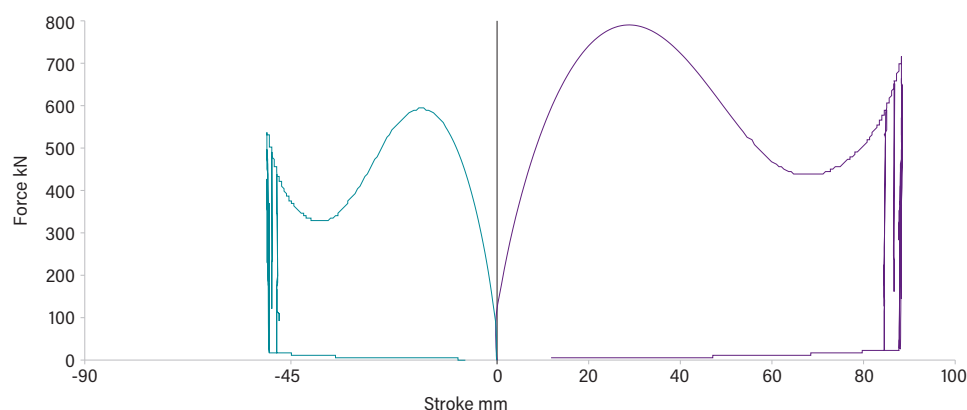
Sentry™ double acting energy absorber specification



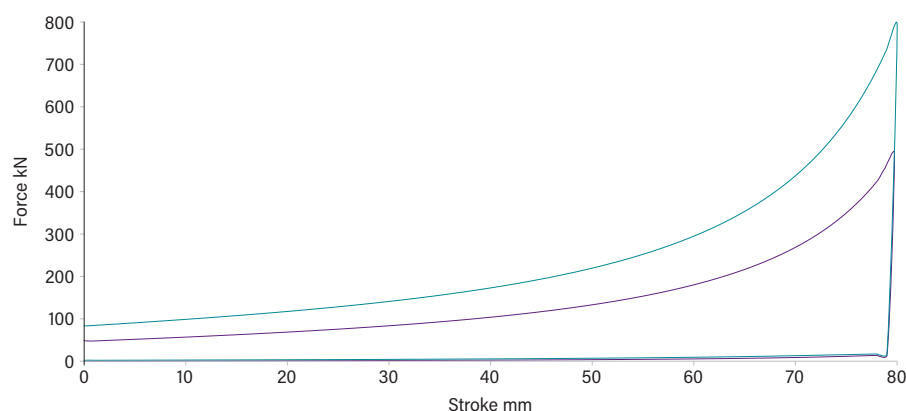
Buff				Draft				Operating Temperature	Clamp Options	
Stroke	Pre Load	Force	Energy Absorption	Stroke	Pre Load	Force	Energy Absorption		Diameter	Profiles
80mm	Up to 85kN	800kN	20kJ	45mm	50kN	600kN	6kJ	+40°C -40°C	Ø140mm Ø155mm Ø170mm	Customer Specific

Classified under UN ADR, IMDG & IATA regulations as : UN 3164 Articles, pressurised, Pneumatic or Hydraulic 2.2.

Idealised Recoverable Dynamic Force v Stroke curve for Sentry Double Acting Device



Range of available quasi-static (pre-load) characteristics



www.oleo.co.uk
www.oleo.cn
www.oleoinc.com