

## Fixed End Stop with Concrete Base Foundation



**Long length gas-hydraulic buffers can be used to offer a fixed, fully recoverable installation and maximum protection to passengers with reduced deceleration rates.**

Oleo hydraulic energy absorption systems are used to dissipate the impacting energy supported on a concrete base foundation.

### Product details

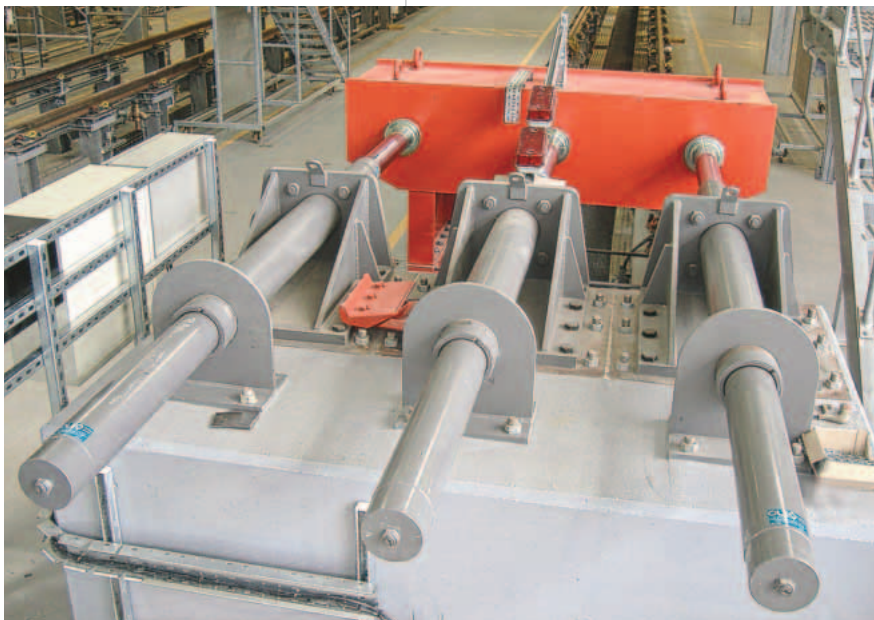
- Appropriate for mainline, depot and test track applications
- Used in conjunction with a buffering beam or buffering trolley designed to interface correctly with the rolling stock
- Design variances for both centre coupling impacts and side buffering impacts
- Gas-hydraulic buffers installed in embedded steel mounts and set in a reinforced concrete base foundation

### Product advantages

Oleo gas-hydraulic buffers are optimised specifically for each application, offering maximum efficiency to minimise installation distances. The long stroke buffers offer reduced and controlled deceleration rates and all projects are accompanied by validated simulation graphs to give detailed analysis of the buffer and train performance upon impact.

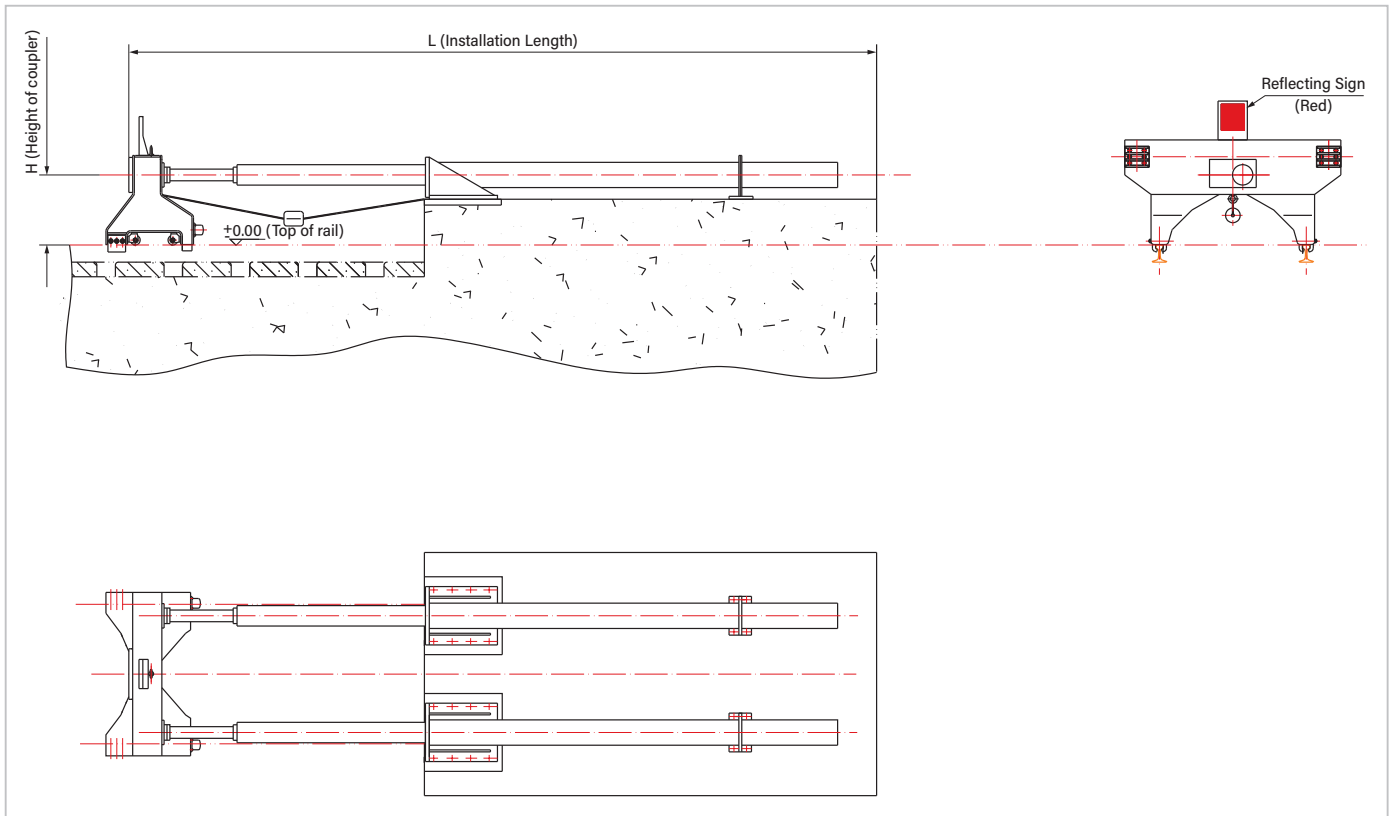
Additional advantages include:

- Ability to self reset after impact, reducing overall lifetime costs compared to sliding devices
- Concrete base foundation allows the customer to customise the design suitable for their requirements and can reduce the overall cost compared to a full steel structure
- Purely mechanical device – no power or manual control required
- Minimal maintenance required
- Long service life
- Additional configuration options available including electrical insulation, painting and galvanisation



*Site supervision and training provided by Oleo professional engineers for the installation of end stops*

# Fixed End Stop with Concrete Base Foundation Design Example Application



- Contains 1 off 'buffing trolley', two long stroke hydraulic buffers and one set of steel embedded part.
- Reinforced concrete base for steel embedded part.
- Impacting point from top of rail (coupler height) mm (720 – 660 – 824)

Examples for conditions and installation length:

(1) 8 Cars

- Type Oleo 730 Maximum energy absorbed 3360kJ, Train mass: 510t, Impacting speed 12km/h, Installation length: 9.5m, Recoverable stroke 3000mm.
- Type Oleo 724 Maximum energy absorbed 2688kJ, Train mass: 300t, Impacting speed 14km/h, Installation length: 8m, Recoverable stroke: 2400mm.

(3) 6 Cars

- Type Oleo 724 Maximum energy absorbed 2688kJ, Train mass: 380t, Speed 13km/h, Installation length 8m, Stroke 2400mm or Train mass 220t, Speed 16km/h, Installation length 8m, Stroke 2400mm.



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