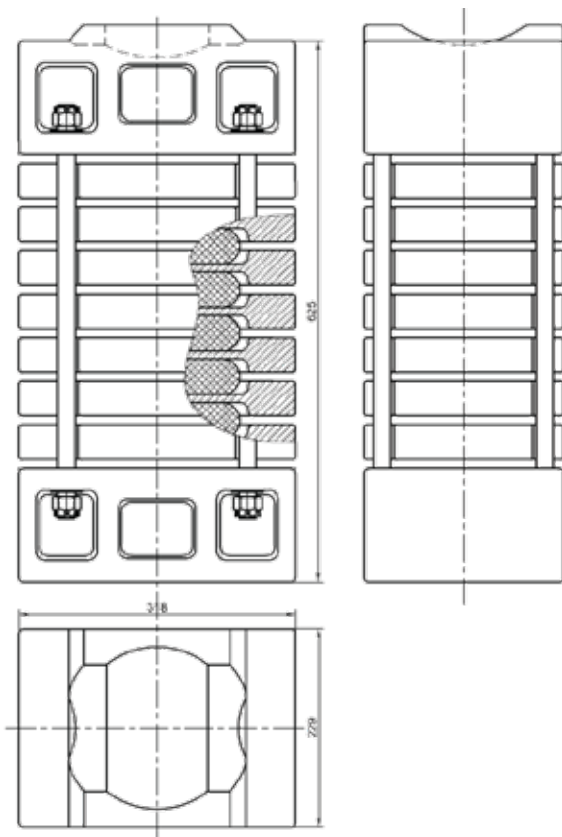


Heavy Duty Draft Gear Systems: Impact Absorption for Rail Applications

Sequoia's Heavy Duty Draft Gear (HDDG) system is designed to deliver superior impact absorption and durability in modern rail operations. Combining a robust housing with a frictionless elastomer spring design, it offers high energy absorption, reduced component wear, and extended service life. Engineered for compatibility with AAR-standard pockets, HDDG ensures smooth performance during both coupling and in-motion stress events making it ideal for high-load freight and passenger applications.

PATENTED HOUSING DESIGN

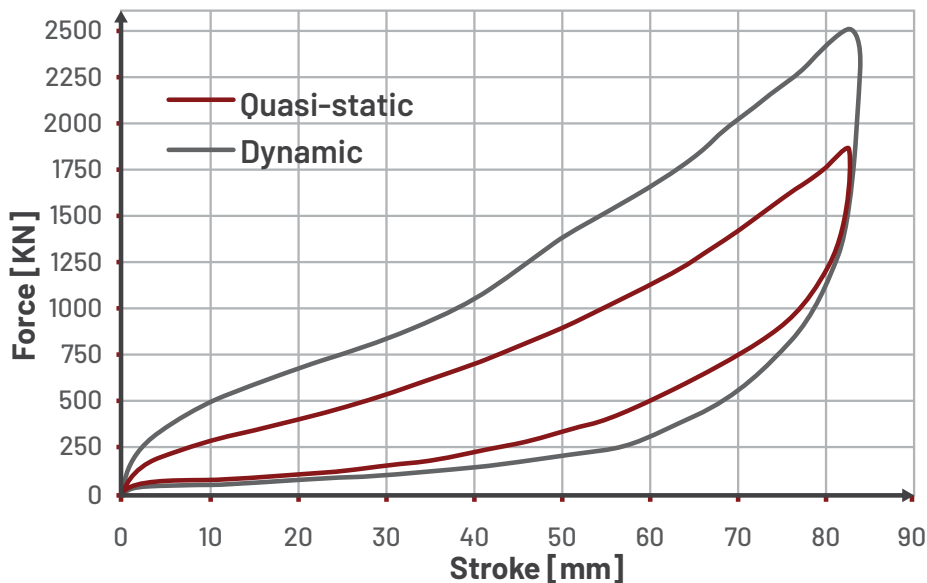
- High robustness of cast steel components
- Follower plate fully integrated, better guiding in the AAR Pocket
- Reduced wear of frame pocket and yoke
- Full protection of individual elastomer pad
(stroke limited by intermediate plate design)
- Improved heat dissipation (radiator shape + open design)



ELASTOMER SPRING DESIGN

- No friction parts - no stick-slip behavior
 - no wear parts – no friction wedges
- Fully smooth quasi-static travel during normal drive, less shocks and wear on railcar components
- Higher energy absorption during impacts (stiffer springs), improved protection of railcars
- Maintenance free
- Long lifetime, no aging of elastomer

HDDG Technical Data: Performance Metrics & Design Specification



This curve shows the HDDG's force response under quasistatic & dynamic conditions. The increasing force with stroke highlights its ability to absorb and dissipate energy effectively, with dynamic end force reaching up to 2500 kN. This helps ensure robust protection during highimpact events like coupling and shunting.



- Fitting AAR M-201 standard pocket: 625x320x229 mm
- Preload > 50 kN
- Stroke: 83 mm
- Maximum dynamic endforce: 2500 kN
- Dynamic energy absorption > 90 kJ
- Front end may be adapted to other coupler tail
- Damping $\geq$ 75%
- Weight : 160 kg

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