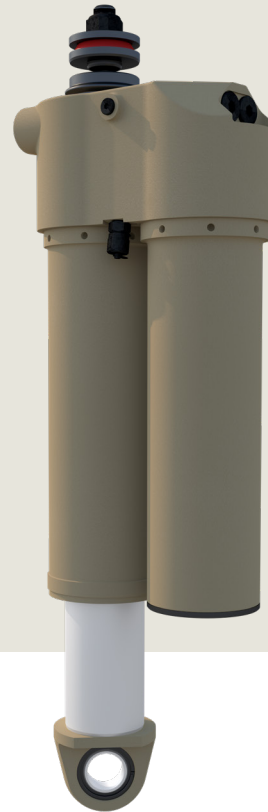


## SUSPENSIONS

# Hydrostrut®

/ Suspension Type

**High Pressure Nitrogen Gas**



Developed by Horstman in the late 1980s for tracked vehicle and wheeled applications, Hydrostrut® was designed from the outset to eliminate the need for a separate spring by combining the gas spring into the damping unit. This allows the vehicle designer to overcome internal packaging constraints in the case of torsion bars or external packaging constraints in the case of coil springs.

The hydro pneumatic suspension uses high-pressure nitrogen gas and an integral oil damper. Robust environmental seals make the Hydrostrut® a sealed module suitable for robust environments. The rising spring rate of compressed gas provides a natural progressive end stop to travel and reduce shock loads into the chassis and crew. Separate bump stops can be eliminated or significantly reduced in size and cost.



### Reference Vehicles

- Spz Puma
- M777 Howitzer
- M1126 Stryker
- PARS
- Terrex

# Hydrostrut®

## Features

- Single unit combines spring and damper
- Supports wheeled or tracked vehicle suspensions
- Independent suspension mounted externally
- Lower vehicle height / survivability
- Integrated system approach with self-contained gas

## Benefits

Low weight and size compared to separate shock+coil or air bag+compressor. The rising spring rate of compressed gas provides a natural progressive end stop to travel and reduce shock loads into the chassis and crew. Separate bump stops can be eliminated or significantly reduced in size and cost

Efficient packaging space of Hydrostrut® allows use with road arms, MacPherson struts or short / long arm suspensions

Simplified installation & repair; damaged units can be replaced more easily than bent or seized torsion bars

Ability to lower the turret basket and reduce the height of the vehicle gives improved survivability (lower silhouette). The saving of the hull side armour is typically 100-500kg (or) ability to increase ground clearance for IED blast reduction or extra floor armour

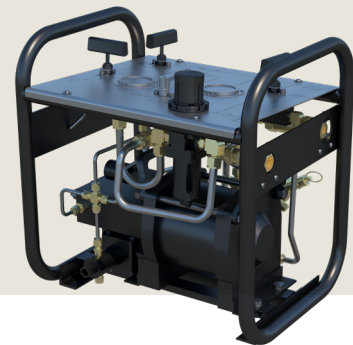
Hydrostrut® allows different spring rates at each wheel station using a single part number allowing different vehicle variants in a fleet to have optimised ride quality. Simpler than a torsion bar system which needs separate road arms, bump stops, dampers, torsion bar attachments and protective tubes. Upgrade path to ride height, lockout and Active Damping

## Options

- Ride height control
- Variable damping, up to full hydraulic lockout
- Dual spring

## Accessories

- Charging kit – Hydrobooster™



## Trusted Partner.

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