

## Vertical Shock Absorber

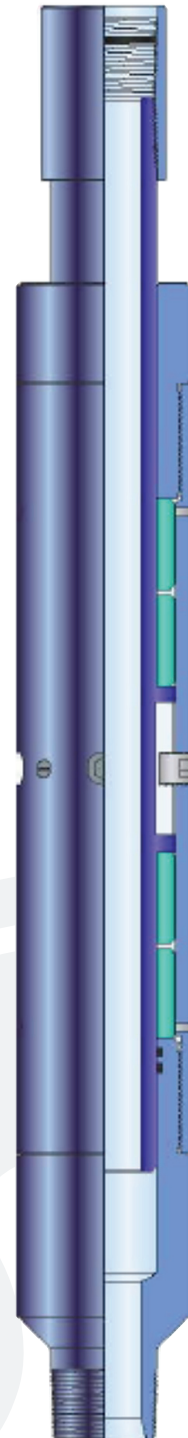
The 5" Vertical Shock Absorber (VSA) is designed to run between the Packer and TCP string. Its purpose is to absorb vertical shock loading associated with the detonation of TCP guns.

### Features and benefits

- Protects packer from direct shock
- Protects pressure and temperature gauges
- Tool is rigid until guns fire
- Anti-rotational feature designed in

### Specifications:

OD	5"	127 mm
ID	2.25"	57.15 mm
Length	50.25"	1276 mm
Max Hydrostatic	20,000 psi	137.9 MPa
Max Differential	15,000 psi	103.4 MPa
Tensile rating	250,000 lbf	111 205 daN



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