



# Charge Free Dampener™

## 10,000 PSI DRILLING PULSATION DAMPENER



## WE WILL OUTPERFORM YOUR EXPECTATIONS

### Why choose the CFD?

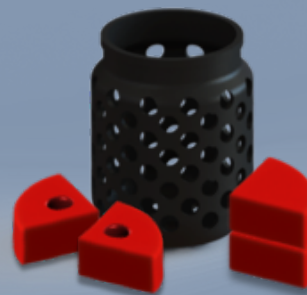
- ❖ **HIGHEST PRESSURE RATING**  
Surpasses all other drilling dampeners with 10,000 psig maximum operational pressure.
- ❖ **SMALLEST & LIGHTEST**  
Most compact design with a minimum footprint and the most lightweight dampener. *36" height, 25" OD, and less than 3000 lbs.*
- ❖ **HIDDEN BOLTING**  
Fasteners are recessed into the dampener and unexposed to potential impact damage.
- ❖ **100% CORROSION RESISTANT**  
All surfaces are treated for corrosion resistance both inside and out.
- ❖ **NO NITROGEN REQUIRED**  
Only dampener designed to utilize the superior performance of Sigma's CFC Kit.

### TECHNICAL DETAILS

- ✓ 10000 psig maximum operational pressure
- ✓ Made in America
- ✓ Standard 4-1/16" API type RTJ replaceable bottom plate
- ✓ No gauges, charge valves, or charging expendables
- ✓ Designed to ASME U-1A code

### What's in the CFD?

Sigma's Charge Free Dampener™ comes with an installed Charge Free Conversion Kit® (CFC Kit).



The CFC Kit does not use a bladder or gases; rather, it utilizes a molded basket that contains a layered system of compression discs.



**FASTENERS**

Fully recessed, black oxide, corrosion resistant, single piece fasteners. No more dealing with multiple components, sizes or exposed fasteners.

**COVER PLATE**

Dual seal constructed cover plate designed for fully recessed fasteners. Corrosion resistant coating applied both inside and out.

**CFC KIT WEDGES**

Compression-tuned, layered discs comprised of four wedges each. Wedges have a proprietary Sigma-Shield™, and are designed to compress across all operational pressure bands.

**CFC KIT SUSPENSION BAG**

Non-pressure retaining suspension bag designed to create and assist kinetic exchange between pumped media and Sigma's Charge Free Kit.

**CFD BODY**

Charge free, weld-free forged drilling dampener designed to ASME div I code. Constructed to be capable of operation pressure up to 10,000 psi. Corrosion resistant coating applied both inside and out.

**BOTTOM PLATE**

Standard 4 1/16 API 10K connection. Designed for fully recessed fasteners. Corrosion resistant coating applied both inside and out.

**Charge Free Dampener™**  
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