

PROGRESSIVE CAVITY PUMP CLEANSWEEP

The **Progressive Cavity Pump CleanSweep** is the solution for high solids in downhole oil well progressive cavity pumps. Solids buildup can prevent the pump from starting and cause wear, over-torqueing and well shutdowns. When the **PCP CleanSweep** is installed on the drive rod string above the progressive cavity pump, these problems are avoided.

Solids buildup that occurs when the pump shuts down is one of the biggest problems facing high solids wells. This is a common problem that can be caused by pump off control, rod failure or electrical issues. Without the rod rotation, the fluid no longer moves upward, which causes solids to fall back into the pump. The bristles on the **PCP CleanSweep** catch the solids and prevent them from building up in the pump. The helical design of the brush allows unrestricted fluid flow to travel up during pumping but prevents solids from settling in the event of pump shutdown.

The **PCP CleanSweep's** floating brush is independent of the inner rod which allows the rods to rotate. When the PCP shuts down, solids begin to settle upon the brush section. The brush section is stationary due to the solids filling the upper section. Upon startup of the pump, the drive rods can freely rotate while the brush is stationary until the pump flow forces the solids away from the brush. Then the brush will synchronize with the rotation of the rods due to the proprietary assembly of the **PCP CleanSweep** brush. The upper and lower guide assemblies also float freely from the rod preventing over-torque from occurring.

The application of the **PCP CleanSweep** increases operator revenue by reducing solids buildup, pump failure, over-torque shutdown, and increasing pump run cycle.

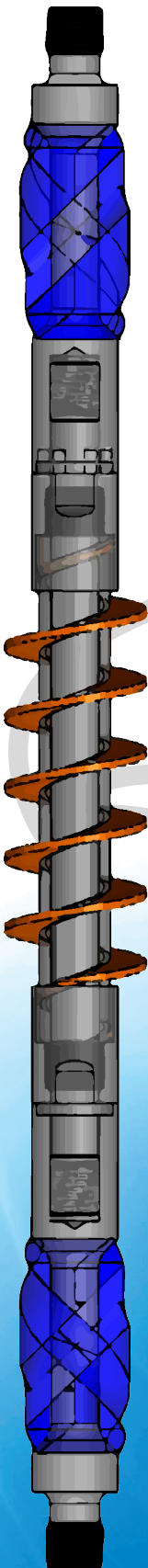
Material construction

Brush: High temp nylon, 356° F max
Body: 4330 alloy steel, 168 ksi
Rod: 4330 alloy steel, 1,296 ft lb min
Brush mandrel: 316 stainless steel
Guides: Cobalt high temp urathane, 290° F max

US and Canada patents
World wide patents pending

BENEFITS INCLUDE:

- SOLIDS REMEDIATION
- REDUCES PUMP FAILURE
- REDUCES VALVE ROD FAILURE
- REDUCES OVER-TORQUE SHUTDOWN
- REDUCES SOLIDS BUILDUP IN TUBING
- INCREASES PUMP RUN CYCLE



PROGRESSIVE CAVITY PUMP CLEANSWEEP INSTALLATION INSTRUCTIONS

Installation of the Progressive Cavity Pump CleanSweep is safe and simple for conventional PCP well designs. The PCP CleanSweep has been engineered for seamless integration at the wellsite into the drive rod string.

Use care when storing and handling. The PCP CleanSweep has been designed to withstand the tubing environment, but can be damaged by impact from heavy tools or other objects. Care should be taken not to damage the brush section.

PCP CleanSweep Installation

1. Remove thread protection from the pin ends and ensure both threads are clear of debris, damage and corrosion. If there is damage or corrosion on the threads, repair and clean before use.
2. Apply an appropriate and approved sucker rod thread lubricant to the pin threads, taking care to degrease the immediate area outside the connection.
3. Identify the orientation engraving on the CleanSweep and install accordingly. Performance will be effected if not orientated correctly.
4. Carefully place the CleanSweep bottom pin on the box coupling thread area and start the first thread by hand.
5. Hand tighten box coupling onto CleanSweep top pin until the shoulder touches the coupling box face.
6. Use the sucker rod manufacturer's power tong make up procedure for final tightening or manually tighten. Do not exceed the published maximum torque rating of the sucker rod pin-coupling connection based on the size and grade of steel and thread type.

The PCP CleanSweep should be installed no closer than four sucker rod length above the PCP. The CleanSweep should be centralized and not be installed in the oscilation area of the drive rods.

