

EAGLE'S SANDMASTER SERIES **CYCLONE VALVE ROD GUIDE**

SandCheck

Eagle's Sandmaster Cyclone Valve Rod Guide-SandCheck has been designed to help

the operator increase run time as it eliminates cut out valve guides and rod cut tubing. The Sandmaster addresses key problems related to valve rod loading in high concentrations of frac sands or in high solids fluid. The Eagle Sandmaster Series Cyclone Valve Rod Guide-SandCheck is designed to wipe away excess solids from the valve rod/hvr by not allowing them to move in between the rod and the guide. This is accomplished by three internal 360° radial spiral grooves that wipe the rod clean of solids with the up stroke. If smaller particles do pass into the guide area, they are quickly wiped free from the rod and forced in the radial groove channels. That action routes the solids out the exit passage at the top of guide neck. In an extreme high solids environment, the operator may opt to order the Sandmaster with a carbide sleeve in the top portion of the guide neck. This would provide additional strength and protection in that area exposed to the worst wear. The new **patented Cyclone Floating Sleeve** feature reduces wear and eliminates the possibility of bridging solids between the guide and the rod. It reduces rod loading caused by solids interfering and it will cut down on rod cut tubing. The radial flutes allow the fluid to pass thru the guide with an energy induced cyclone, effectively keeping intrained solids in an orbital state. The cyclone radial spin forces solids higher up in the tubing and prevents them from falling back and collecting on the top of the pump near the guide. This cyclonic motion also prevents the solids from being pulled back into the barrel. When the well is shut down, the Sandmaster Guide is designed with an off-set at the top of the radial flute and a **Cyclone Radial Floating Sleeve** which will prevent solids from flowing back into the pump barrel. The off-set directs the solids away from the flute, and with it's outward taper design drives the solids further away from inlet.

Tubing

Valve Rod / Hollow Valve Rod

Sandmaster Cyclone SandCheck
Valve Rod Guide / **(Required)**

Pump Barrel

Cyclone Top Adapter

Radial Ported Vanes

Cyclone Ported Adapter

Axial Evacuation Ports

Acceleration Chamber

API Pump Plunger

**High Flow Cyclone
Travelling Valve****Cyclone Seat Plug**

Evacuation Accumulator

**High Flow Cyclone
Standing Valve**

Seating Nipple

Cyclone Nipple (Strainer/ Gas Anchor)

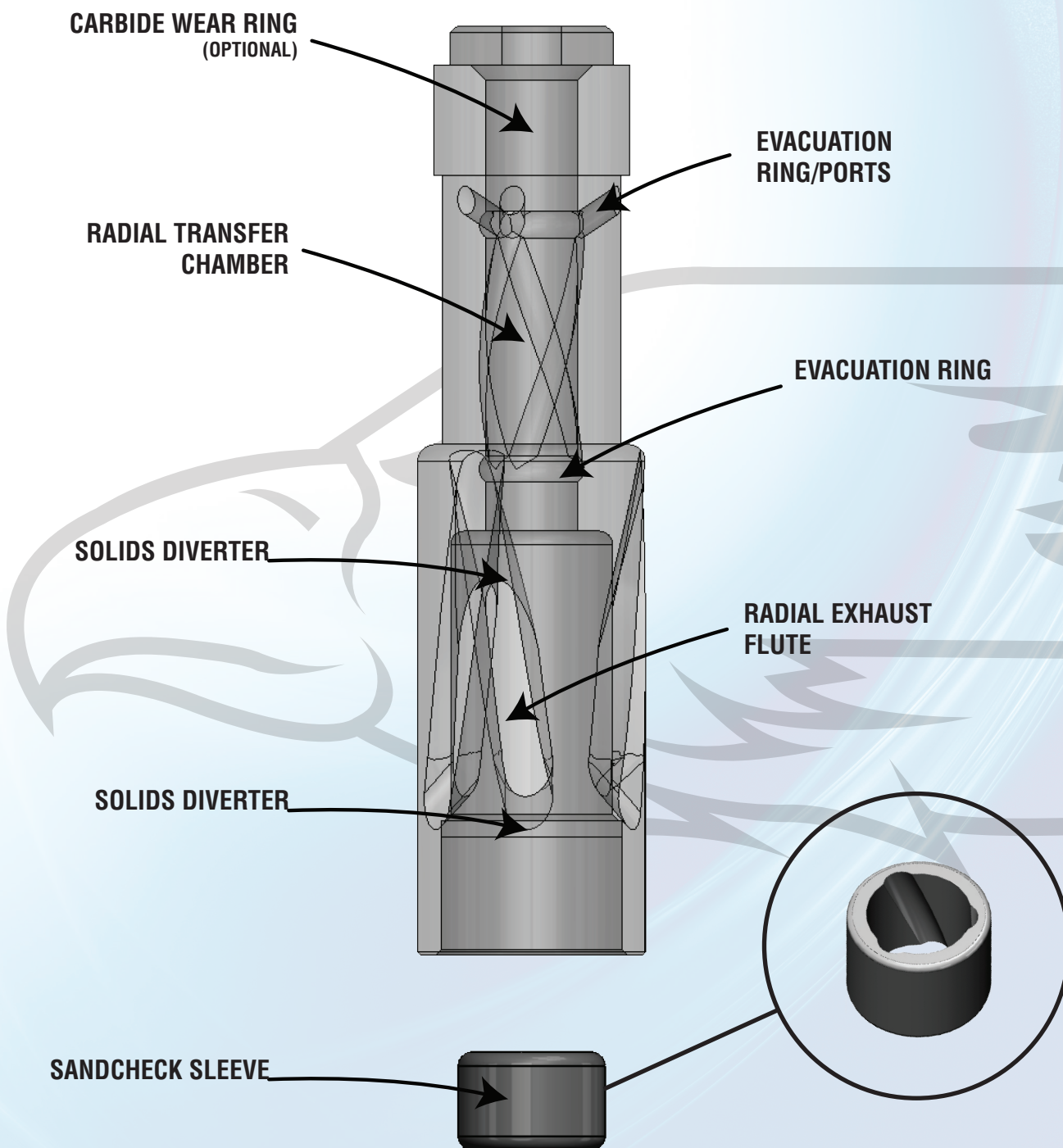
BENEFITS INCLUDE:

- REDUCES VALVE ROD FAILURE
- REDUCES VALVE ROD LOADING
- REDUCES ROD CUT TUBING
- REDUCES GUIDE FAILURE
- REDUCES PUMP FAILURE

**Eagle Innovations Incorporated**

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Material Construction:
316 Stainless Steel
Nickel Carbide

US and Canada Patents
World Wide Patents Pending



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