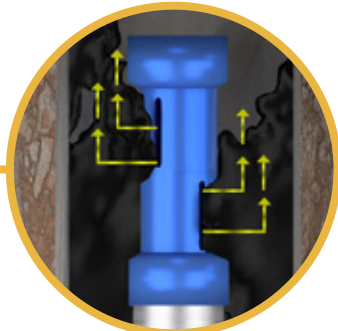
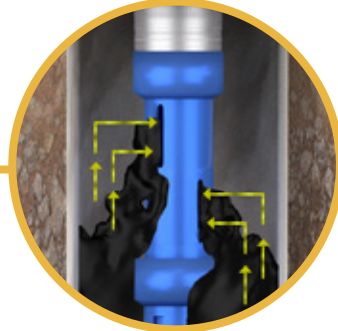


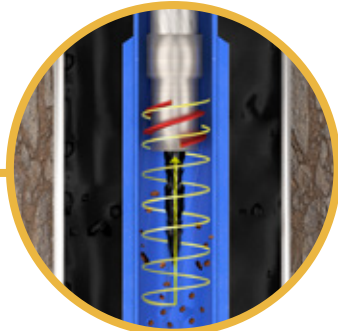
# ESP VORTEX DESANDER™ With Capillar String



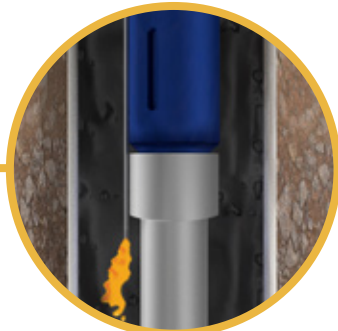
(3) Fluid out



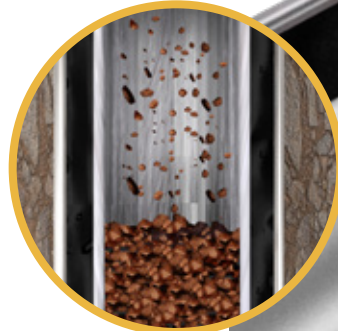
(1) Fluid in



(2) Vortex separator



Chemical and crude mixture



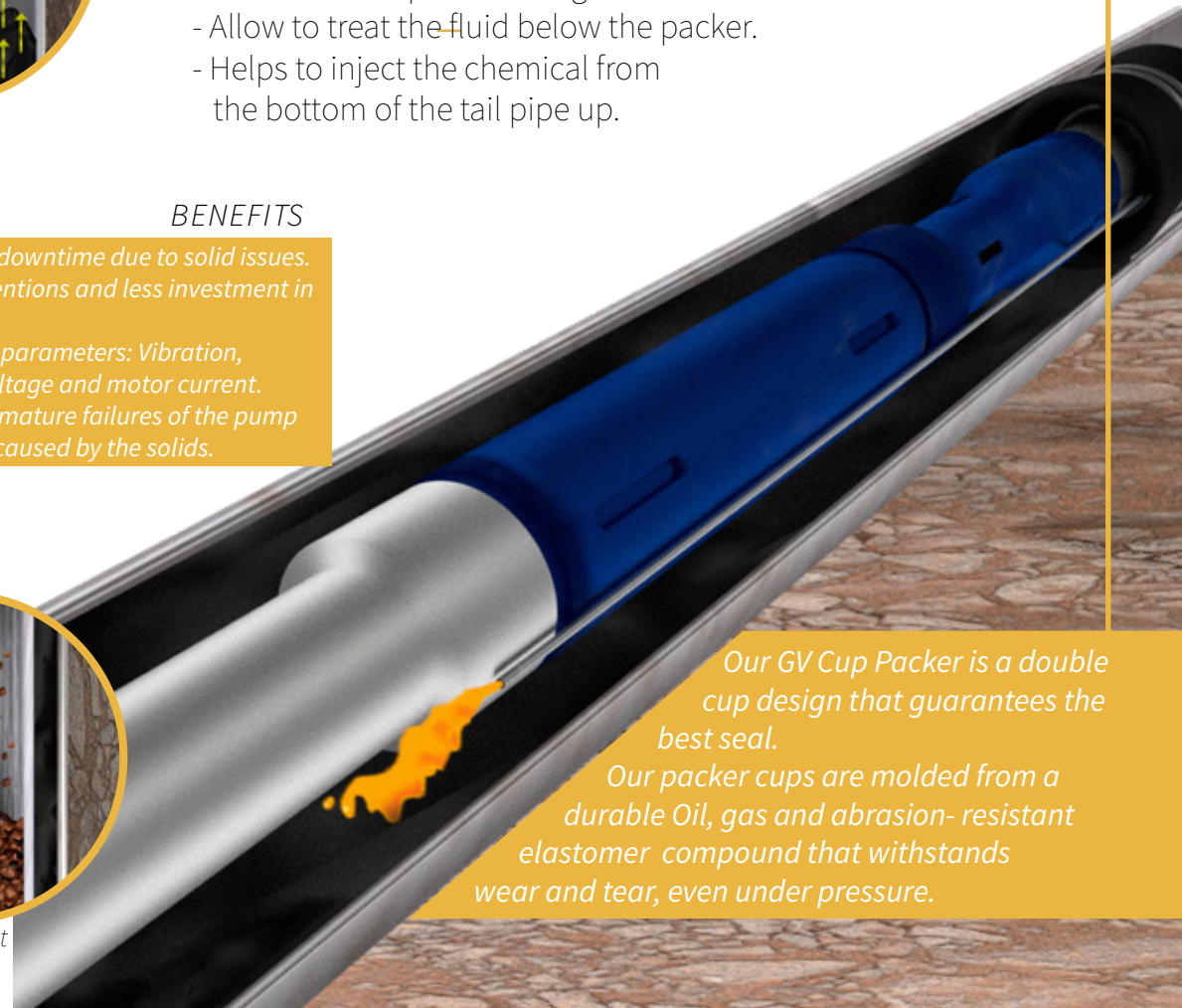
Mud joint

## Features

- Separate the solid particles before reaches the ESP system.
- New Vortex Deparator design.
- Allow to treat the fluid below the packer.
- Helps to inject the chemical from the bottom of the tail pipe up.

## BENEFITS

- Reduced the downtime due to solid issues.
- Fewer interventions and less investment in CAPEX.
- Stable pump parameters: Vibration, frequency, voltage and motor current.
- Avoid the premature failures of the pump components caused by the solids.



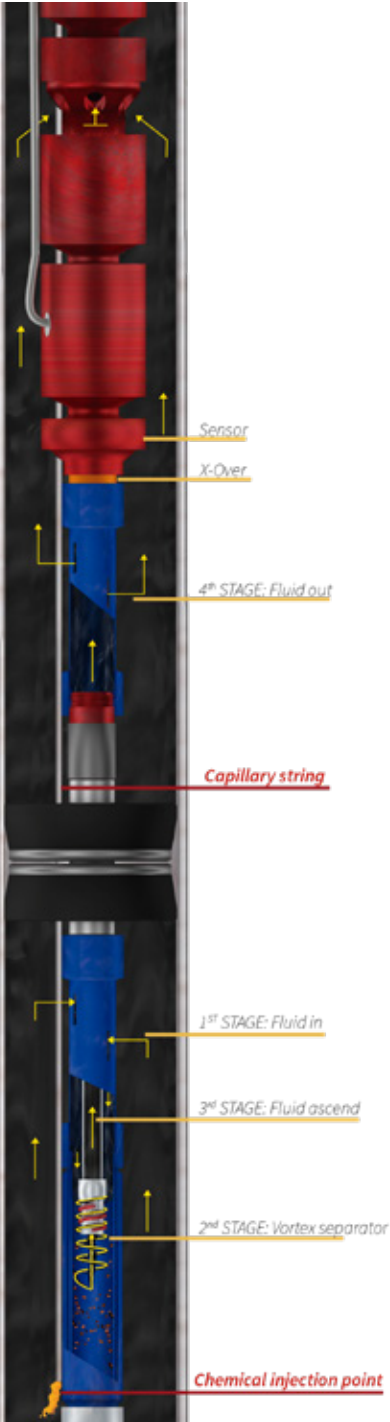
*Our GV Cup Packer is a double cup design that guarantees the best seal.*

*Our packer cups are molded from a durable Oil, gas and abrasion-resistant elastomer compound that withstands wear and tear, even under pressure.*

# VORTEX FLOW CHART

FLOW CHART		HELIX SIZES		
ESP		EUE TUBING SIZE		
MIN	MAX	2-3/8"	2-7/8"	3-1/2"
96	192	HE1.1	HE2.1	HE3.1
132	252	HE1.2	HE2.2	HE3.2
216	440	HE1.3	HE2.3	HE3.3
330	610	HE1.4	HE2.4	HE3.4
410	850	HE1.5	HE2.5	HE3.5
780	1480	HE1.6	HE2.6	HE3.6
1150	1910	HE1.7	HE2.7	HE3.7
1480	2800	HE1.8	HE2.8	HE3.8
2100	3900	HE1.9	HE2.9	HE3.9

Available  
 -2-3/8"  
 -2-7/8"  
 -3-1/2"



## GV CUP PACKER RUBBER MATERIAL

RUBBER TYPE	TEMPERATURE RANGE
NITRILE	70° - 300° F
HSN (HNBR)	70° - 325° F
VITON	100° - 350° F

## PRINCIPLE OF OPERATION

The ESP Slotted Vortex consists of an intake and an embodied helix (vortex creator).

**The intake** consist of a specifically engineered slotted design. These slots are cut using a plasma cutter which creates smoother cut surfaces than other cutting methods. Smooth surfaces are less likely to be affected by corrosion.

**The helix** creates the vortex through the use of centrifugal force, which separates the smaller solids and deposits them into the tail pipe[s] (mud joint[s]) enclosed with a bull plug.

**Outlet Section** is located above the ESP packer and delivers the clean and solid free fluid to the annular section. It consists of a specifically engineered slotted design like the intake.