

ESP VORTEX DESANDER™ BYPASS VALVE

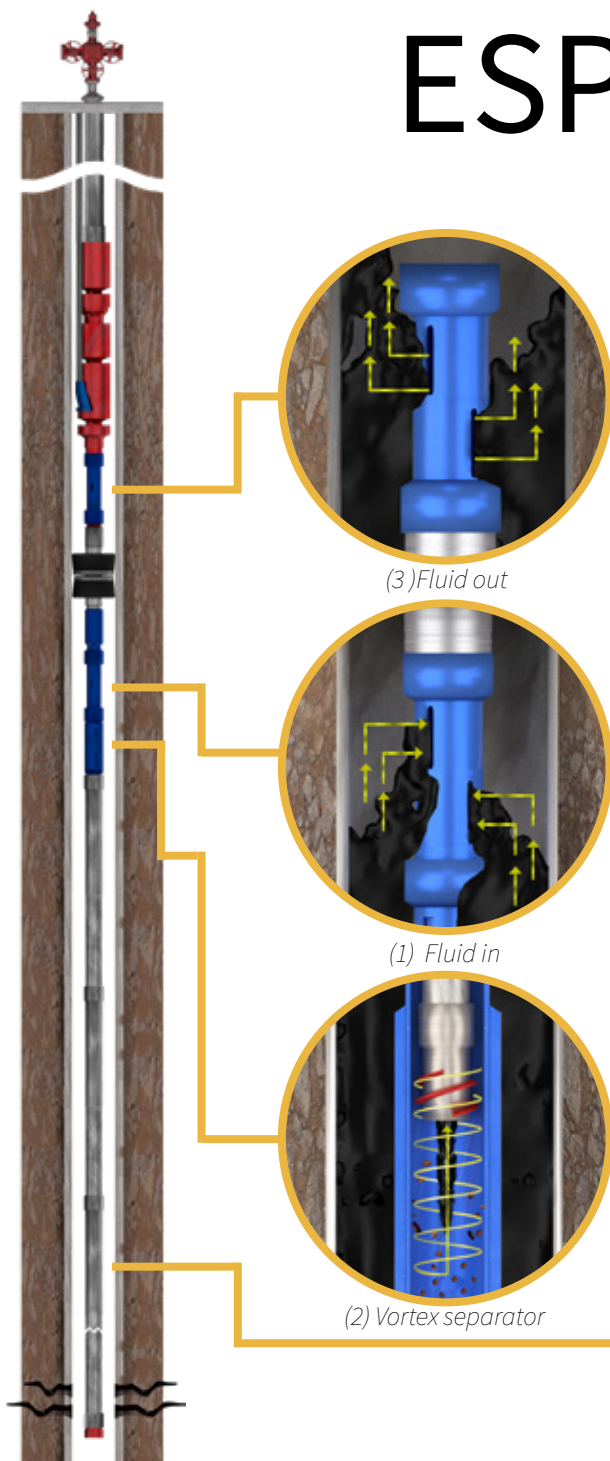
The intake consists of a specifically engineered slotted design. These slots are cut using a plasma cutter which creates smoother cut surfaces than other cutting methods. Smooth surfaces are less likely to be affected by corrosion.

The helix creates the vortex using centrifugal force, which separates the smaller solids and deposits them into the tail pipe[s] (mud joint[s]).

This improved version of the vortex sand shield was designed to withstand the high speed of the particles and avoid cuts in the tool and the failure of the solid separation system.

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.
- Avoid problems such as sand cutting.



Mud joint

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.

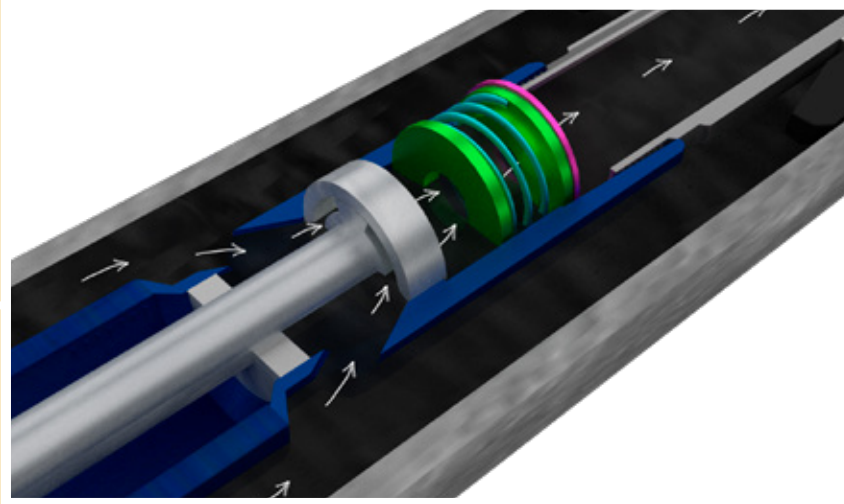
Outlet Section is located above the ESP packer and delivers the clean and solid free fluid to the annular section. It consists of a specifically engineered slotted design like the intake.



How it work?

Bypass Valve

2nd Step



Fluid flowing thru the top bypass valve, Spring displaced by the fluid due to the differential pressure.

Bypass Valve is the most recent solution created by OSI to guarantee the flow to the pump increasing the runtime. The main advantage is that the Bypass Valve is ensuring the optimum opening when the pressure difference in the system is greater than 33 psi.

Frequently, the pump intake is plugged by sand, scale or paraffin (or several problems simultaneously), with the installation of the Bypass Valve at the top of the assembly, the plugging issues wouldn't affect the runtime. Bypass Valve can be used in combination with any OSI system and its application has been tested around the world.

BENEFITS

- Minimizes effects of plugging issues.
- Reduces the risk of production loss.
- Extend equipment run life.
- Large particle filtration.
- Valve is replaceable.

1st Step

Intake plugged

