



**WESTERN  
OILFIELD  
SPECIALTIES CORP**

# ***Fluid Conditioning Systems***

*Maximizing production performance with integrated artificial lift solutions.*

**ESP PREMIUM PACKAGES**

**SUCKER ROD PUMP**

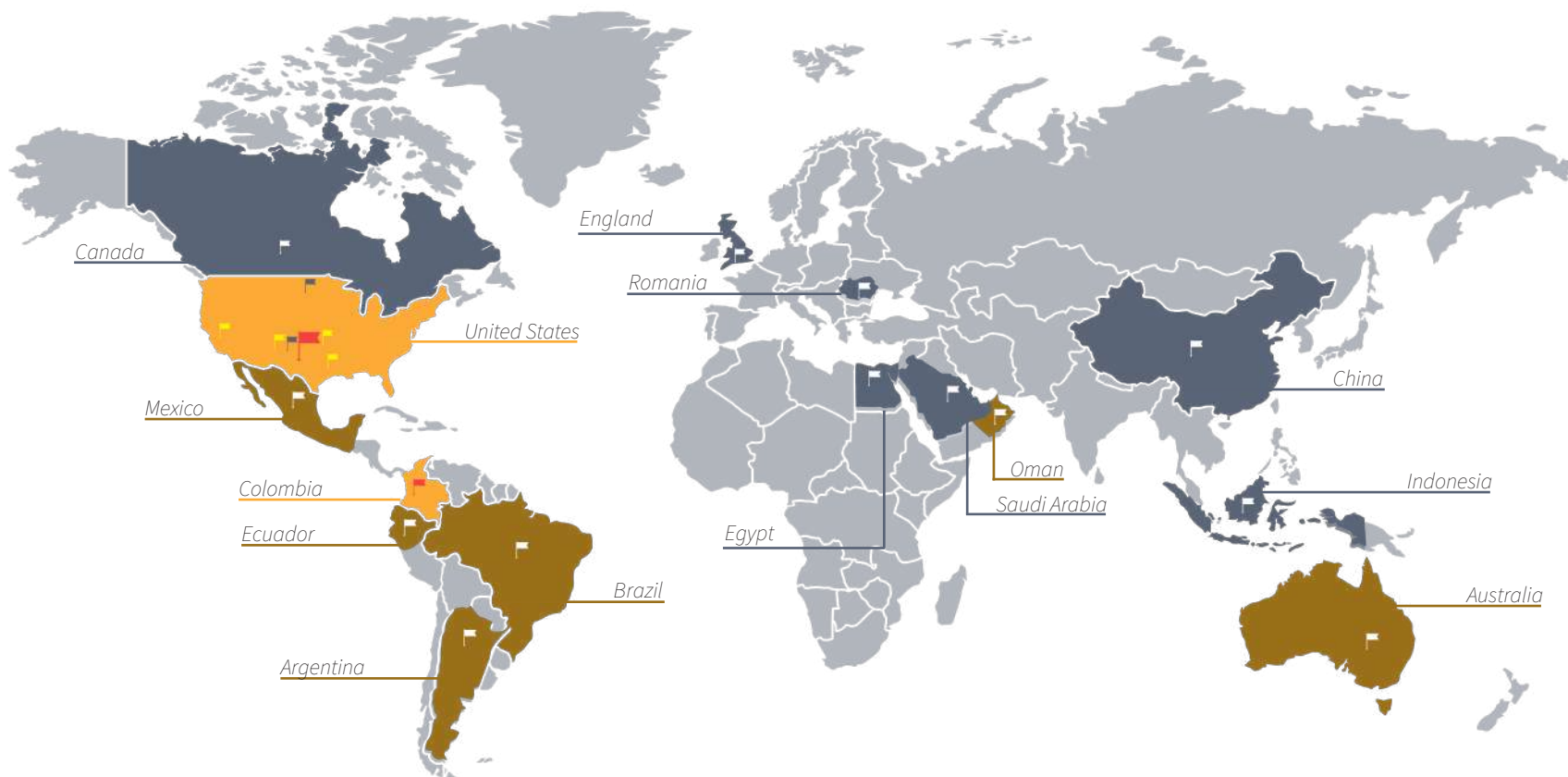
**GAS LIFT & PLUNGER LIFT**

**PCP**



# Odessa Separator Inc. is a world leader in downhole fluid conditioning systems

## Our Domestic & International Offices



### USA Office

- 🚩 Odessa (Principal Office)
- 🚩 Hobbs
- 🚩 North Dakota

### Inter. Office

- 🚩 Colombia

### Dom. Sales

- 🚩 California
- 🚩 New Mexico
- 🚩 Oklahoma
- 🚩 Louisiana

### Inter. Rep

- 🚩 Ecuador
- 🚩 Brazil
- 🚩 Argentina
- 🚩 Australia
- 🚩 Mexico
- 🚩 Oman

### Inter. Sales

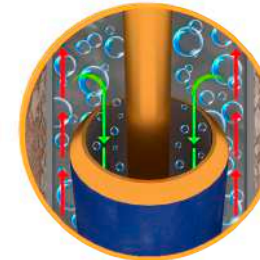
- 🚩 Canada
- 🚩 Indonesia
- 🚩 Egypt
- 🚩 England
- 🚩 Saudi Arabia
- 🚩 Romania
- 🚩 China



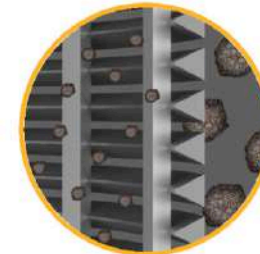
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**GAS SEPARATION**



**SAND CONTROL**



**CHEMICAL TREATMENT**

**#OSISolutions**





# OSI Products

## Filtration / Sand Control



ESP Sand Lift



Tubing Screen



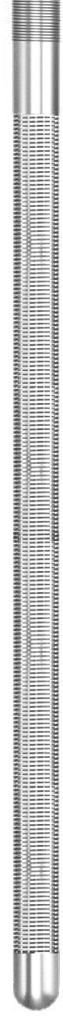
OSI UltraMesh



Top Bypass Valve



Super Perf



Pump Guard Screen



Vortex Sand Shield

## Gas Separation



G-Force Packerless



Gas Separator



Slotted Gas Shield



Gas Release System - GRS

# Chemical Tools



Top



Center



Bottom



Slow Release

Chem Screen



Quick Release



Retrievable Chem Tool - SRP / Gas Lift

# Components



Seating Nipple



No Flow Collar



Collar



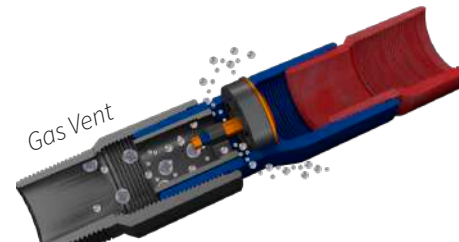
Bull Plug



Tubing Connection



Flow Nipple

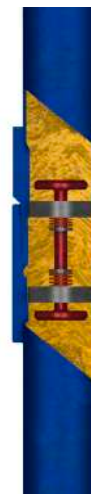


Gas Vent



Triple Seal Cup Packer

Shut Off Valve



Chemical flow downward - Open Valve



No spillage - Closed Valve

# Oilfield Challenges SAND

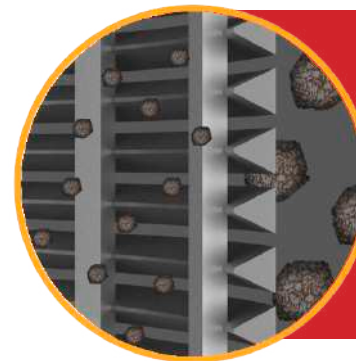


*Sand in a well is very costly, causing damage to downhole equipment and reducing pumping system efficiency.*

## SOURCES OF SAND

- **Formation sand** – relatively smaller, and irregular size grains.
- **Frac Sand** – larger and very uniform in size also, more abrasive.

Slot	Size (Microns)	US. Mesh Sieves	Retained Weight (gr)	Retained Weight (%)	Cumulative %
50	1,410	14	0.2	0.2	0.2
30	841	20	0.4	0.4	0.6
20	595	30	2	2	2.61
15	400	40	53.3	53.41	56.01
12	297	50	21.6	21.64	77.66
10	250	60	12.8	12.83	90.48
8	210	70	6.4	6.41	96.89
7	177	80	2.4	2.4	99.3
Pan	Pan	Pan	0.7	0.7	100
Total Weight =			99.8	100	100



**Slot size is the area of opening between the V-wires.**

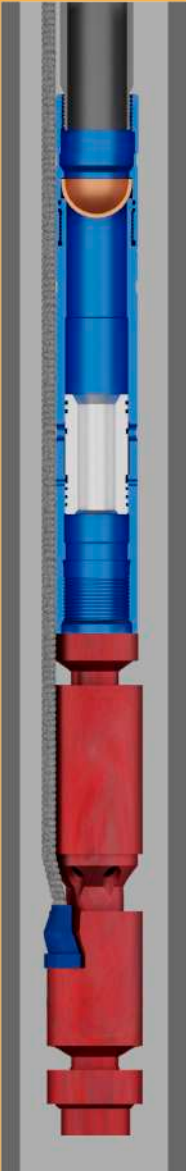
**Slot size dictates the size and type of filtration for a screen.**

**OSI laboratories perform solid and sieve analysis on produced fluid samples to ensure that slot size, tool length and filtration stages will mitigate screen plugging and maximize run times.**

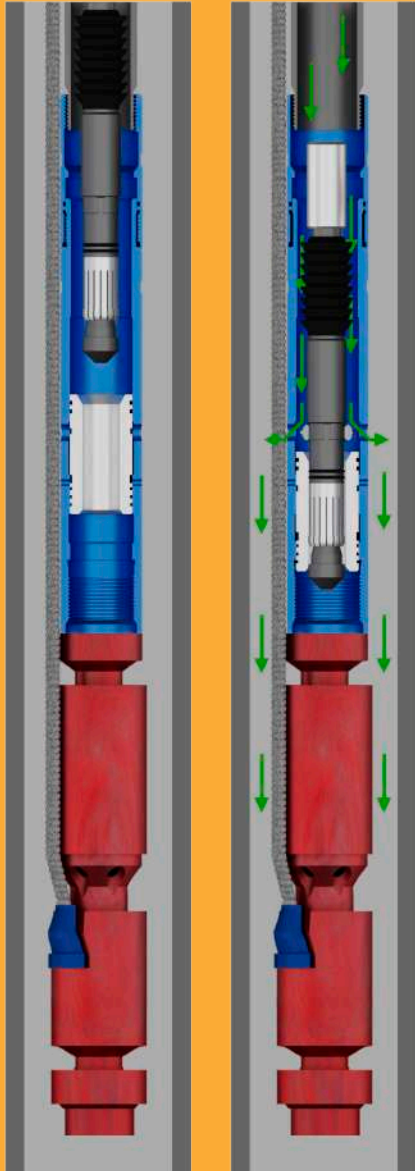
# ESP PMM GUARDIAN

*Patent pending*

**RUNNING DOWNHOLE**



**PULLING DOWNHOLE**



*The ESP PMM Guardian is an exceptional solution that completely transforms safety and operational efficiency during the installation or pulling of the Electrical Submersible Pump (ESP). Its robust protective barriers eliminate the need for installing blanking plugs while running the Permanent Magnet Motor (PMM), resulting in substantial reductions in rig time and significant improvements in Return on Investment (ROI).*

*Not to mention, it significantly reduces the risk of field operations, prioritizing the safety of personnel in the field.*

*In addition, the reduction of certain operations contributes to a considerable decrease in both Capital Expenditure (Capex) and Operational Expenditure (Opex), making it an unbeatable, cost-effective, and time-saving tool for ESP installations.*

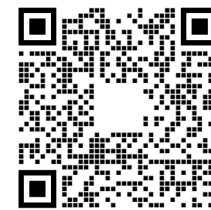
SIZE in	OD in	ID in	DISC RATING ABOVE psi	DISC RATING BELOW psi	TEMPERATURE RATING °F
2.875	3.460	2.441	1,000	10,000	302

## SAFETY INSTALL & PULLING

Use your device by scanning the QR code



VIDEO



AUGMENTED REALITY



# ESP SAND LIFT

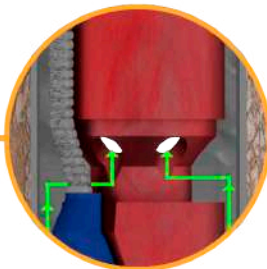
Patent No.: US 9,441,435 10,132,151 10,132,152 10,584,571

Odessa Separator's ESP SAND LIFT provides extended ESP run times through improved downhole sand management.

It is installed above the ESP discharge, where, upon start-up, the unique OSI dart, sand-breaker uses differential pressure to push fluid and entrained solids through tubular ports in one flow path, to the surface



Internal View



Intake ESP

**Provides significantly longer ESP run times**

## BENEFITS

- Prevent workovers due to sand failures.
- Extends run times by regulating the rate of falling sand.
- Backflush operations are carried out easily.
- Housing is highly sand-resistant.

Use your device by scanning the QR code



VIDEO

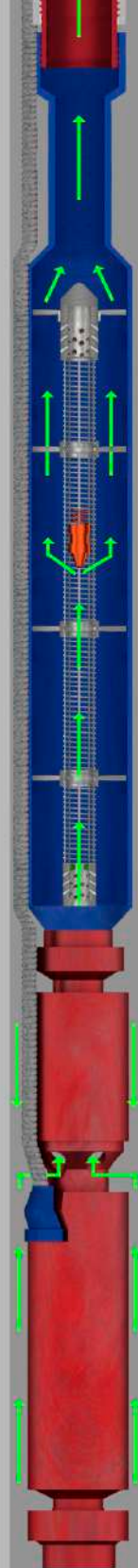


AUGMENTED REALITY

Description	Lifting Neck OD (in)	Body OD (in)	Connection Top	Connection Bottom	Capacity of the Cavity (in <sup>3</sup> )	Total Open Area (in <sup>2</sup> )
Series 350	2-7/8	3.5	2-7/8" EUE Box	2-7/8" EUE Pin	1453.6	293.6
Series 400	2-7/8	4	2-7/8" EUE Box	2-7/8" EUE Pin	2060.5	293.6
Series 450	2-7/8	4.5	2-7/8" EUE Box	2-7/8" EUE Pin	2773.1	293.6
Series 550	3-1/2	5.5	3-1/2" EUE Box	3-1/2" EUE Pin	4454.4	368.8

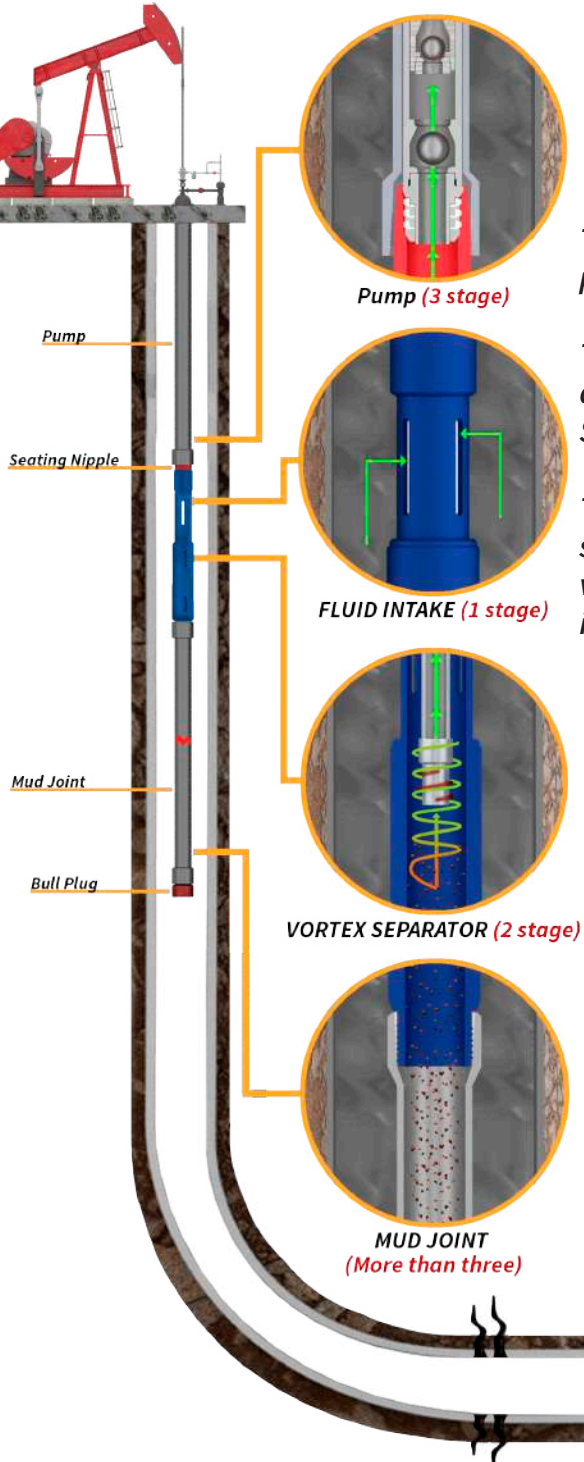
HOW IT WORKS

FLUID





# VORTEX DESANDER



Pump (3 stage)

The Vortex Desander is a high efficiency desander designed to separate sand particles prior to entering the pump.

FLUID INTAKE (1 stage)

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.

VORTEX SEPARATOR (2 stage)

The helix creates the vortex effect 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 sand in the tool and prevent the failure of the solids separation system.

MUD JOINT (More than three)

## BENEFITS

- Reduces the downtime due to solids issues.
- Fewer interventions and less investment in CAPEX.
- Avoid the premature failures of the pump components caused by the solids.
- Avoid problems such as sand cutting.

Use your device by scanning the QR code

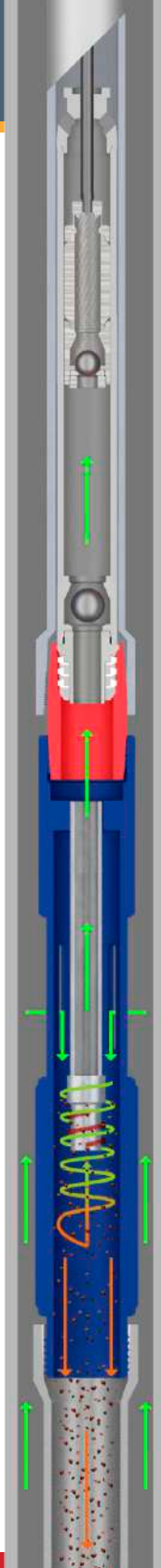


VIDEO



AUGMENTED REALITY

HOW IT WORKS



# ESP VORTEX DESANDER

The ESP Vortex Desander is designed specifically for wells where high lifting costs are a result of sand problems. The intake slots are cut with a plasma cutter making them smoother and much more corrosion-resistant.

The OSI Vortex Desander technology, employs centrifugal force, created by a helix to achieve maximum separation efficiency. This centrifugal force separates the smaller solids and deposits them in the tail pipe made up of multiple mud joints.

The ESP Vortex Desander was engineered to withstand the high speed of the particles avoiding sand "cutting" and system failures.

## BENEFITS

- Lower lifting costs, reduces downtime, and greater operating efficiency.
- Reduces pump failures resulting from sand damage.
- Plasma cut intake slots resist corrosion.
- Centrifugal force greatly increases sand separation efficiency.

Use your device by scanning the QR code

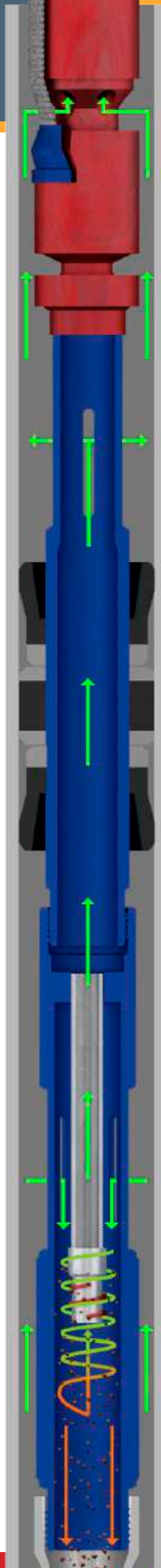
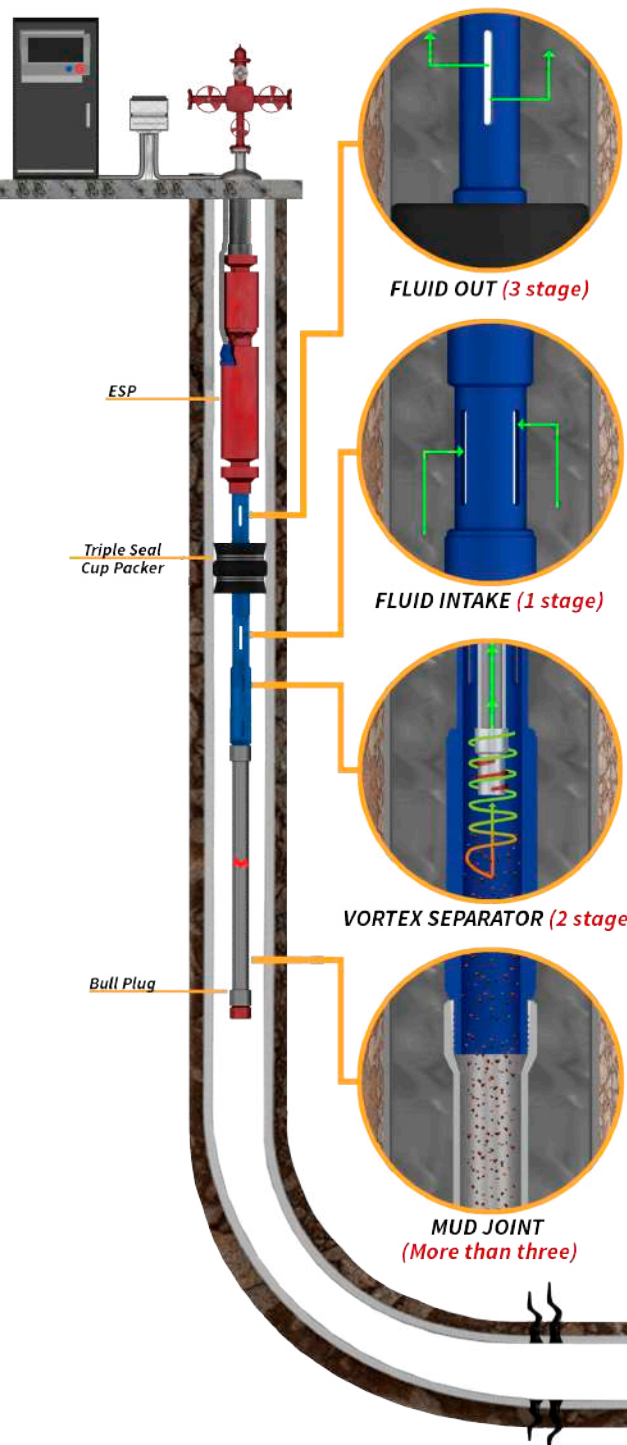


VIDEO



AUGMENTED REALITY

HOW IT WORKS



# ESP VORTEX DESANDER (HIGH RESISTANCE)

The OSI ESP Vortex Desander (High Resistance) was engineered for conditions involving high rates of abrasive or corrosive flow.

A Boronized hardened, wear resistant body provides substantially more resistance to excessive erosion in the Vortex body.

The improved sleeve is available in two lengths: 6 ft. and 15 ft.

### BENEFITS

- Reduces sand cutting problems.
- Reduces the frequency of workovers and the lost production associated with them.
- Boronizing provides a greater surface density which is resistant to excessive corrosion from H<sub>2</sub>S and CO<sub>2</sub>.
- Boronization is not a coating so there is no reduction of the i.d.

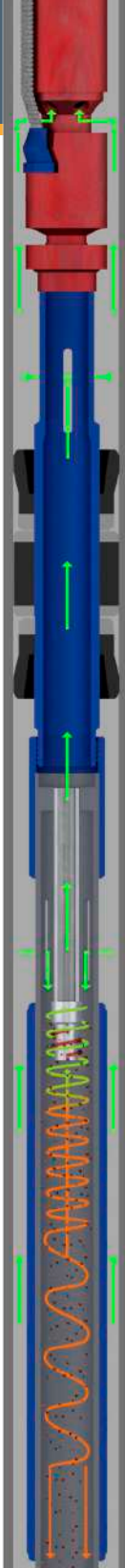
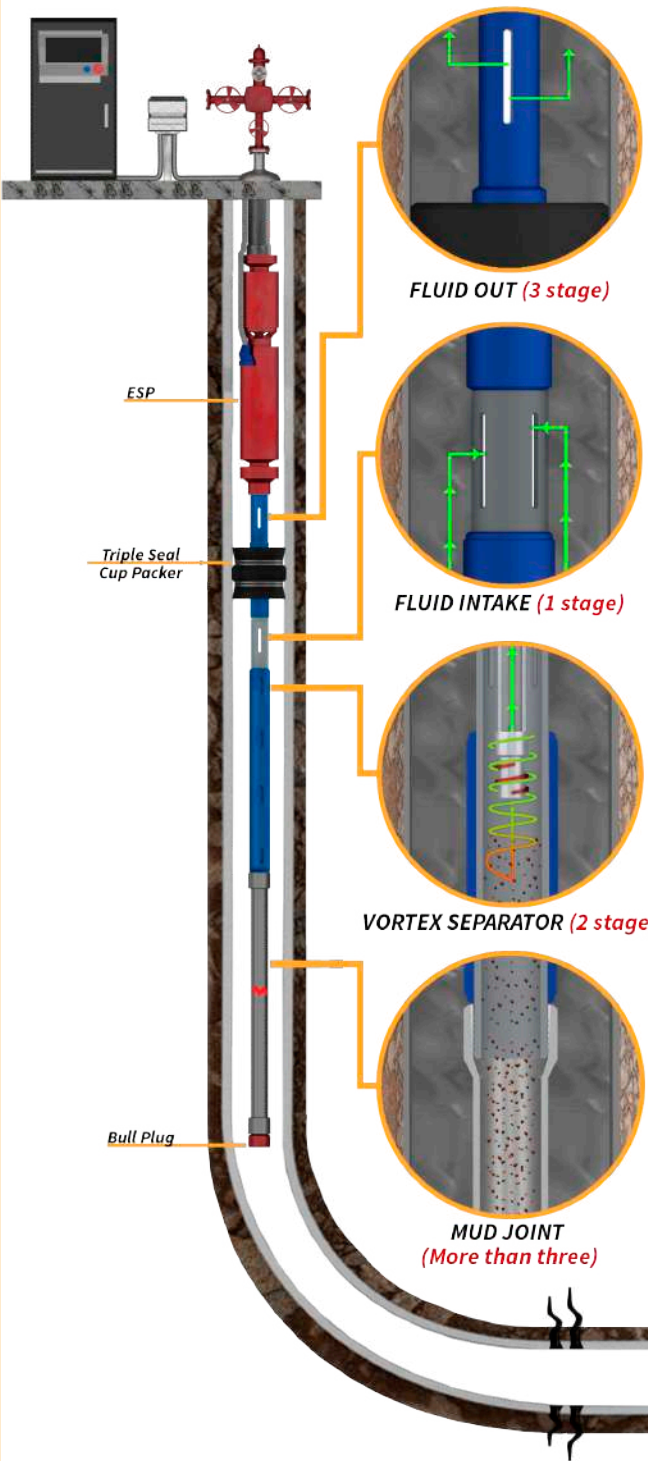
Longer sleeve provide a most effective protection by keeping the centrifugal wave inside the double-wall high resistance sleeve

Use your device by scanning the QR code



AUGMENTED REALITY

HOW IT WORKS





# SCREEN VORTEX DESANDER

The Screen Vortex Desander is designed specifically for wells where high lifting costs are a result of sand problems.

The OSI Vortex Sand Shield technology, which employs centrifugal force to achieve maximum separation efficiency, can be combined with the OSI Tubing Screen or the OSI Super Perf to achieve two-stage sand separation. This system has been successfully proven in multiple installations worldwide.

The Screen Vortex Desander is a versatile system that can be combined with other OSI tools solids control and gas separation to greatly improve the performance of artificial lift systems.

## BENEFITS

- Lower lifting costs, reduces downtime and greater operating efficiency.
- Reduced pump failures resulting from sand damage.
- Two-stage sand separation.
- Centrifugal force greatly increases sand separation efficiency.

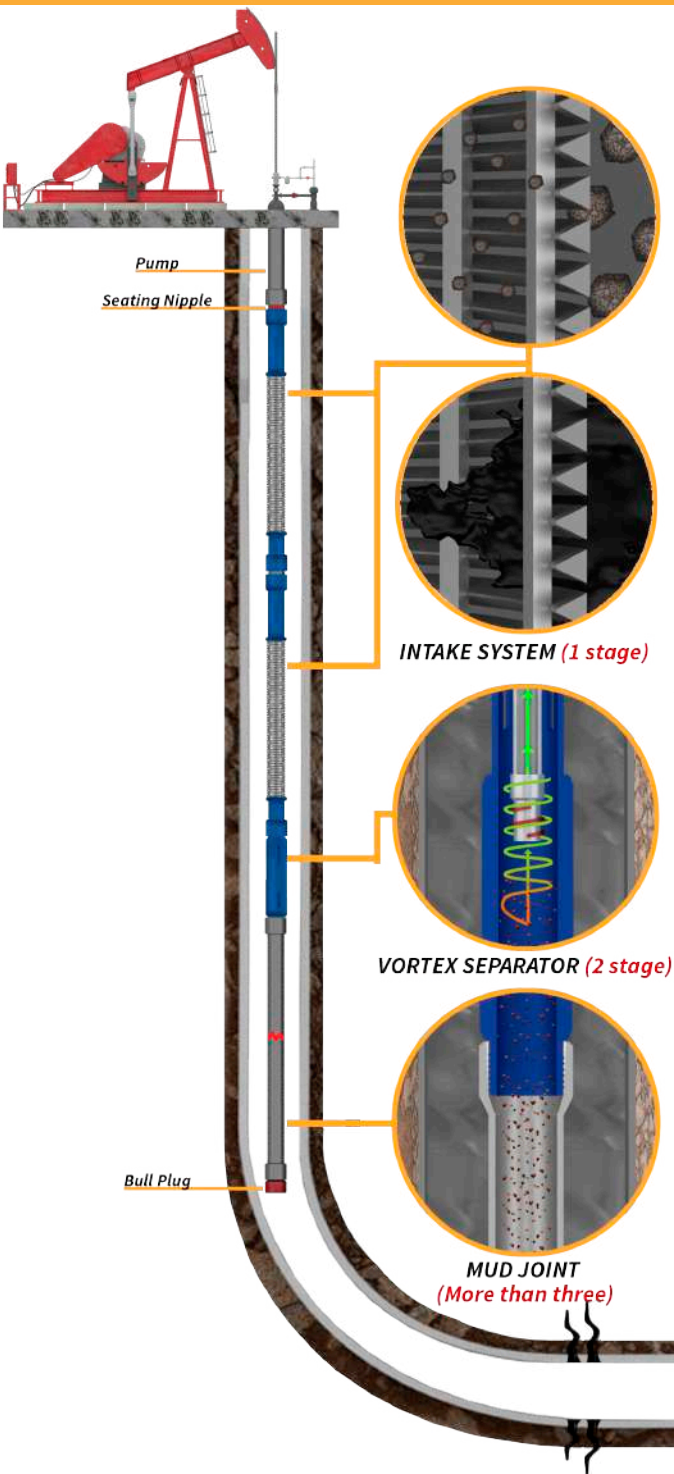
Use your device by scanning the QR code



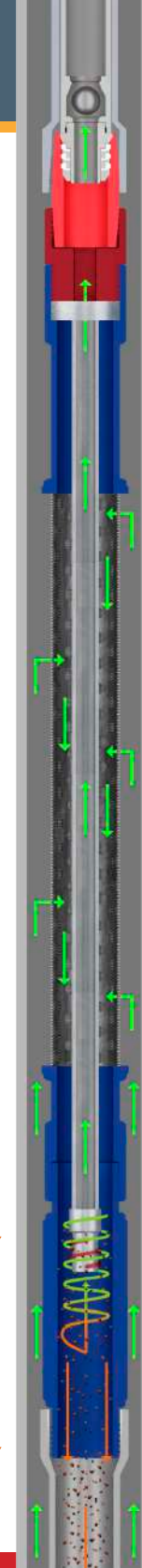
VIDEO



AUGMENTED REALITY



## HOW IT WORKS



# ESP SCREEN VORTEX DESANDER

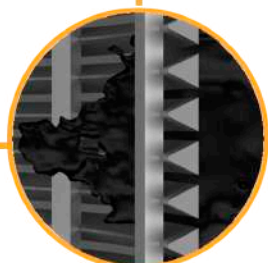
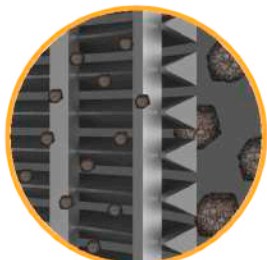
The ESP Screen Vortex Desander is the most effective tool in the market to control sand problems in ESP wells. This technology combines the capacity of the Tubing Screen to separate coarse to medium particles with the Vortex able to separate fine particles using centrifugal force. The new design provides a longer run time when is combined with the Top Bypass Valve.

The ESP Screen Vortex Desander is installed below the ESP sensor, mechanical packer, or a shroud without any loss of separation efficiency

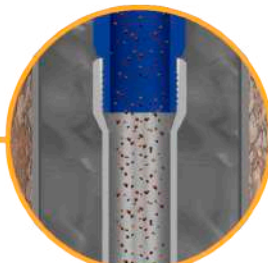
## BENEFITS

- Lower lifting costs, reduced downtime and greater operating efficiency.
- Reduced pump failures resulting from sand damage.
- Two-stage sand separation.
- Centrifugal force greatly increases sand separation efficiency.

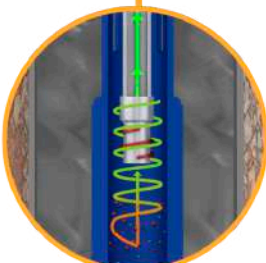
FLUID OUT (3 stage)



INTAKE SYSTEM (1 stage)



MUD JOINT (More than three)



VORTEX SEPARATOR (2 stage)

Use your device by scanning the QR code



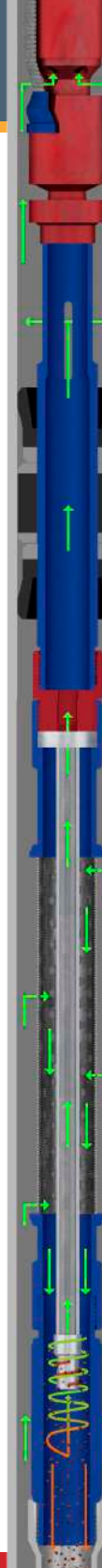
VIDEO



AUGMENTED REALITY

HOW IT WORKS

FLUID ↑  
SAND PARTICLES ↓

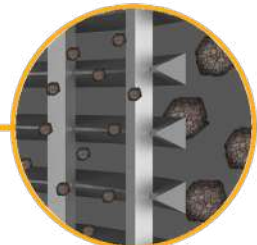




TOP VALVE  
(Open Valve)



(Close Valve)



INTAKE SYSTEM / 75 Slot  
(1 stage)



# TOP BYPASS VALVE

Odessa Separator's TOP BYPASS VALVE provides extended pump run times by ensuring fluid flow, to the pump, when the pump intakes plug off due to sand, scale, or paraffin.

Installed above the sand separation tools, the TOP BYPASS VALVE opens at a pressure differential of greater than 33 psi.

The open valve allows continued fluid flow, bypassing the plugged screens. The Top Bypass Valve can be combined with any OSI bottom hole assembly.

## BENEFITS

- Prevent workovers due to solids failures increasing productive time.
- Extends run times by allowing continued fluid flow.
- Provides large particle filtration.

Use your device by scanning the QR code

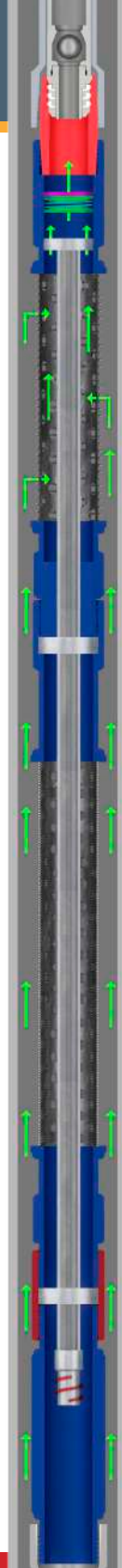


VIDEO



AUGMENTED REALITY

HOW IT WORKS





# SUPER PERF

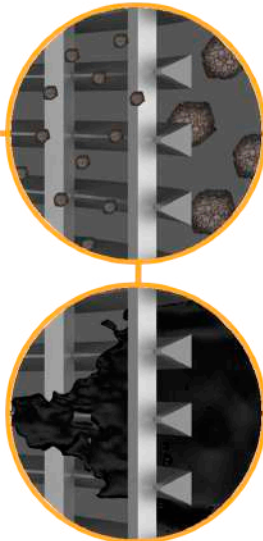
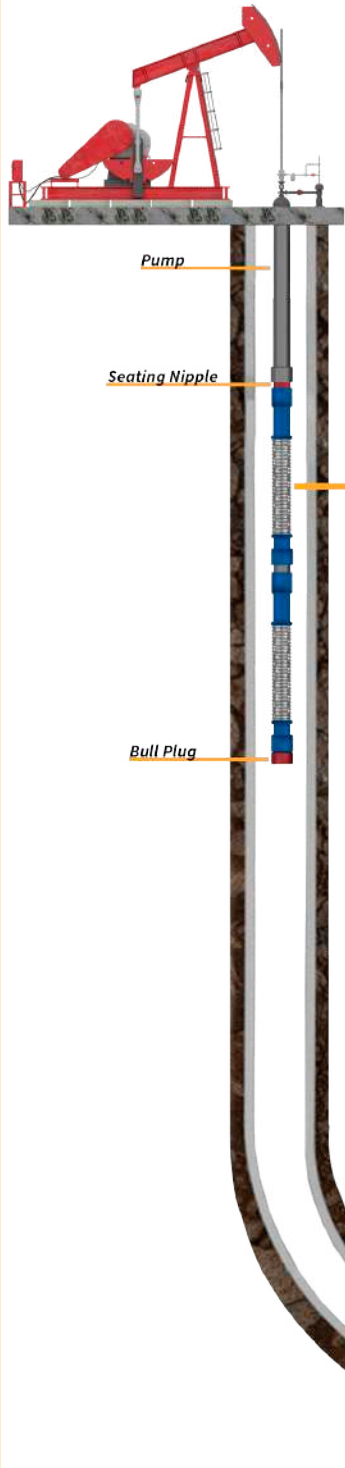
OSI's SUPER PERF is a considerable improvement from conventional perforated subs. The Super Perf breaks up and blends sand slugs from the formation allowing improved sand management downhole.

The large opening mesh screen provides 27 times the open area of a traditional perforated sub preventing intake restrictions.

The Super Perf is applicable to any artificial lift system and can be combined with other OSI fluid conditioning tools.

## BENEFITS

- Greatly reduces downhole equipment failures.
- Greater pumping system efficiency and increased production.
- Corrosion resistant.



INTAKE SYSTEM

OSI's SUPER PERF is a high efficiency filtration system that homogenizes sand slugs from the formation. The sand screen is corrosion resistant while reducing flow restrictions.

Use your device by scanning the QR code



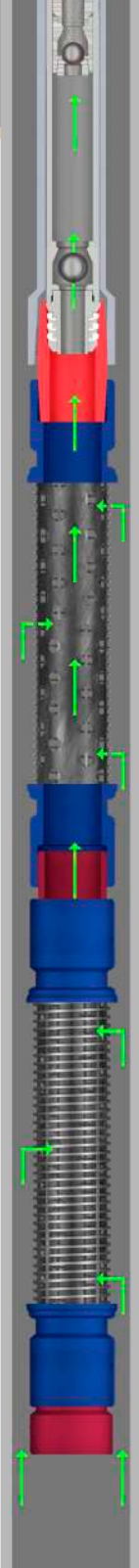
VIDEO



AUGMENTED REALITY

HOW IT WORKS

FLUID ↑



# OSI ULTRAMESH

Introducing the latest technology from Odessa Separator, OSI UltraMesh, is designed specifically for wells with severe sand related failures.

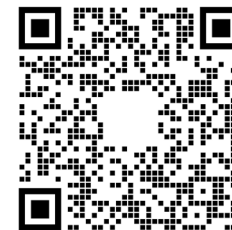
The OSI UltraMesh is constructed using a base pipe, filter media and protective shroud forming the Multi-Layer Mesh that breaks sand slugs and retains abrasive coarser and finer sand sizes, whilst maintaining high permeability.

The OSI UltraMesh has a bypass valve that is incorporated on top, that ensures clean fluid in the pump especially in challenging wells. In addition, OSI's Dual Flow technology allows The OSI UltraMesh to be combined with a Desander if the operator wants.

## BENEFITS

- Breaks Sand Slugs and retains coarser and finer sand sizes.
- Maintains high open area and permeability.
- Extends ESP and Rod Pump run times by reducing sand related equipment failures.
- Rugged construction to resist corrosion and abrasion.

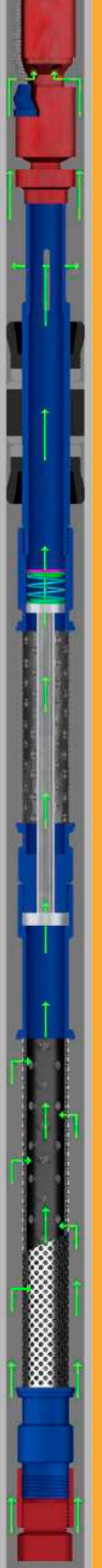
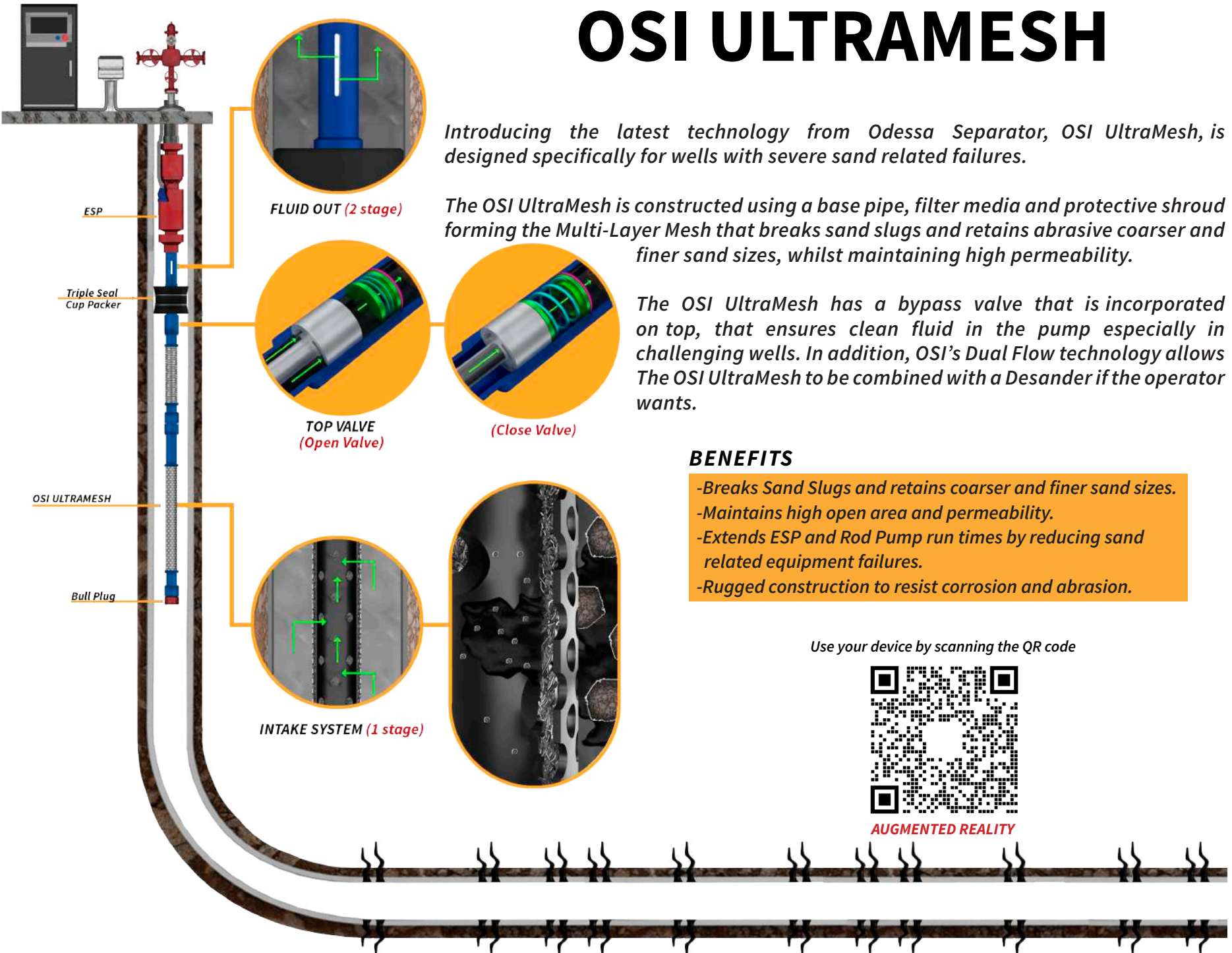
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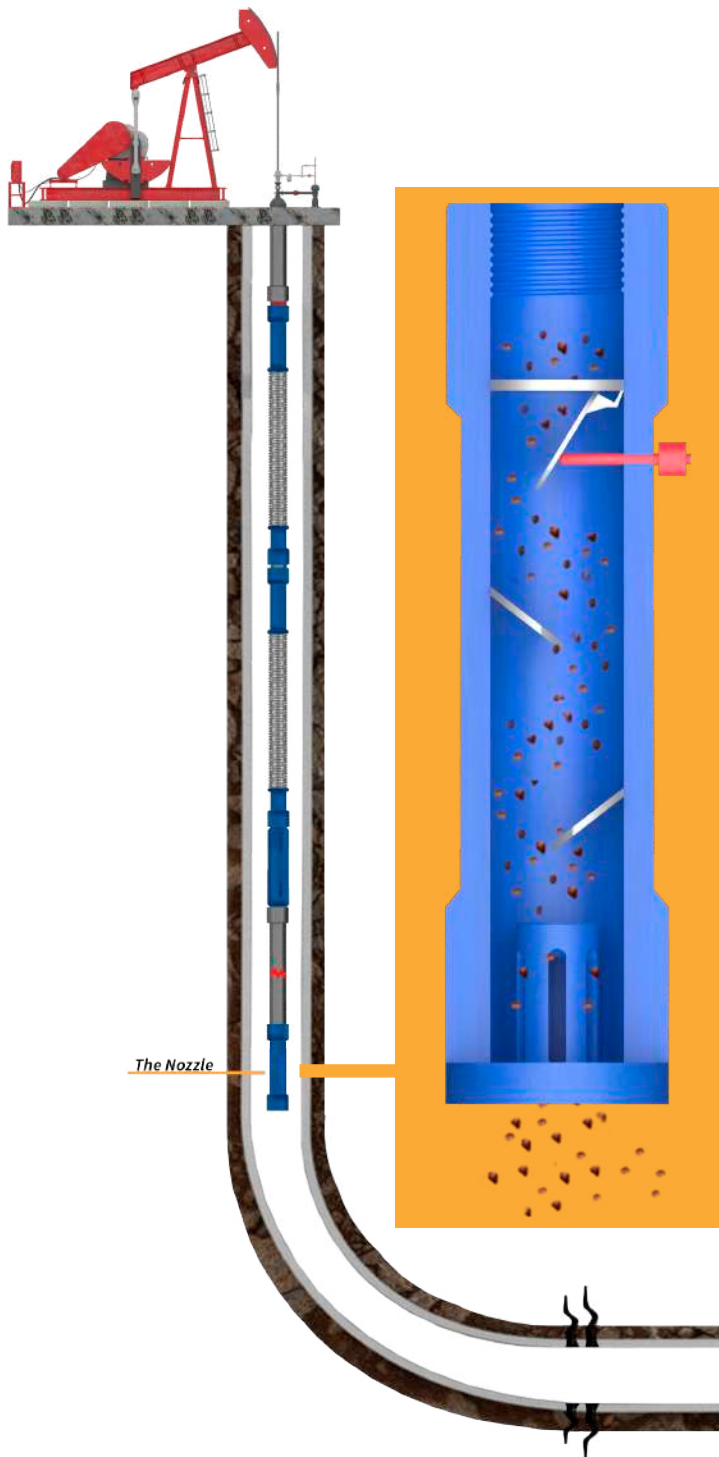
AUGMENTED REALITY

HOW IT WORKS

FLUID



# THE NOZZLE



*Introducing The Nozzle– a cutting-edge purging device strategically positioned at the termination of the tailpipe assembly beneath the Vortex Desander.*

*This innovative system incorporates an internal design featuring multiple upward obstacles, inducing a significant pressure drop that mitigates the impact of bottom hole pressure in the upper chamber of the valve.*

*Conversely, the sand present in the tail joints undergoes precipitation and is efficiently expelled beyond the valve into the wellbore. This expulsion is facilitated by the combined forces of gravity and hydrostatic pressure within the tail joints.*

*These fundamental principles actively operate within the tool, effectively preventing the bypassing of the Vortex Desander.*

*The result is an assurance of optimal sand separation, ensuring a clean pump intake and enhancing overall system performance.*

## **BENEFITS**

***Pump Efficiency:** The Nozzle ensures optimal pump performance by preventing sand accumulation, maintaining a consistent and unobstructed flow.*

***Extended Equipment Life:** Minimizes abrasive wear on pump components, leading to a longer lifespan for the ESPs and associated equipment.*

***Reduced Downtime:** Proactive sand removal minimizes pump shutdowns for cleanouts, reducing downtime and improving overall operational efficiency.*

***Cost Savings:** Lower maintenance requirements, extended equipment life, and improved production contribute to significant cost savings over the ESP system’s operational lifespan.*





*Sand problems in your wells? No big deal, Odessa Separator Inc can advise on the tools you need to extend your pump's run life.*

# Oilfield Challenges

# GAS



**Gas interference is a major problem for operators.**

Gas interference that is not effectively dealt with can lead to fluid pounding, gas locking, and corrosion that will ultimately result in pumping system failures.

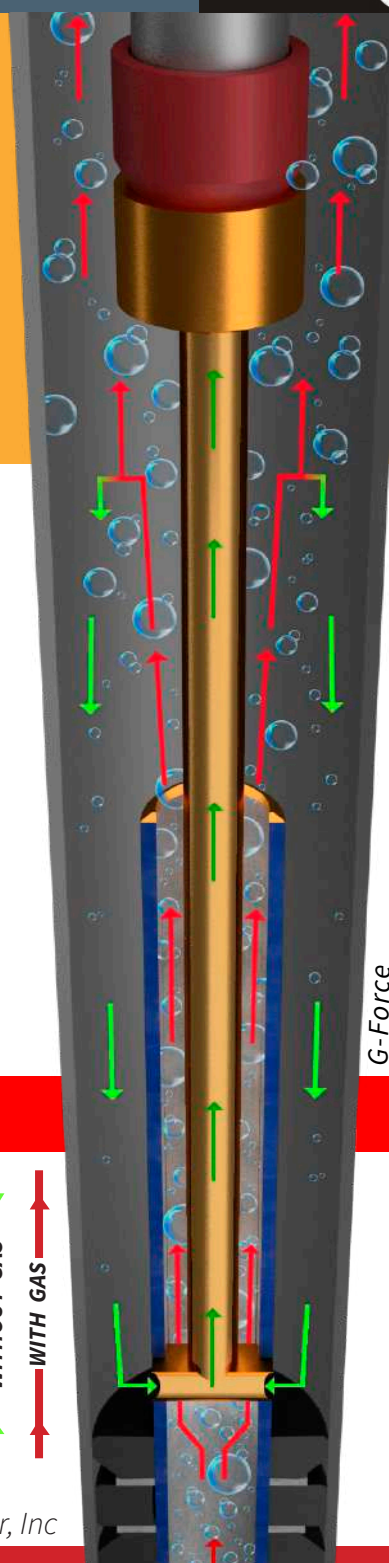
## OSI TOOLS PROTECT

- Rods
- Downhole Pumps
- PCP Rotors
- Tubing
- ESP Motors
- PCP Stators

## THE OSI SOLUTION

Highly trained and experienced OSI personnel will work closely with operators to design effective fluid conditioning systems.

OSI's extensive and unique line of gas separation tools can provide solutions for the most difficult downhole conditions.



G-Force



# ESP VORTEX REGULATOR

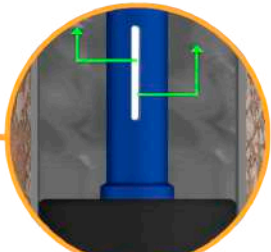
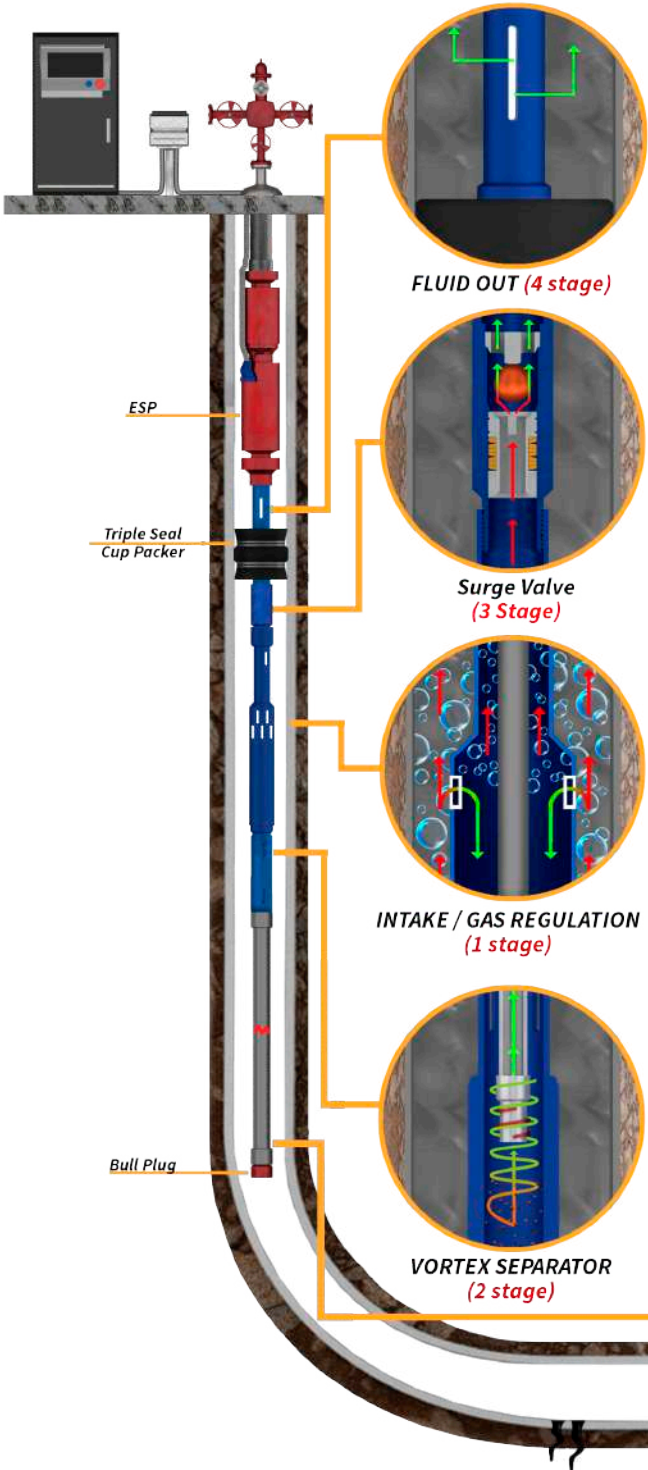
Odessa Separator's ESP VORTEX REGULATOR is a new technology engineered to separate sand while regulating gas slugs. The ESP Vortex Regulator delivers clean, gas free fluid to the ESP, eliminating mechanical damage to the pump and downtime due to overheating and gas lock.

The ESP Vortex Regulator installs easily and has a broad range of applications.

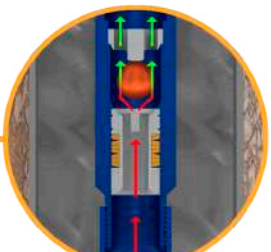
The Surge Valve allows a fluid surge to flow one way through the valve then holds the surge above the valve, decreasing formation back pressure and increasing production.

### BENEFITS

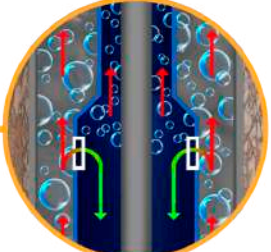
- Reduces or eliminates gas interference.
- Provides effective sand separation.
- Stabilizes pump operating parameters: vibration, frequency, voltage and motor current.
- Increases pumping system efficiency.
- Reduces operating expenses.



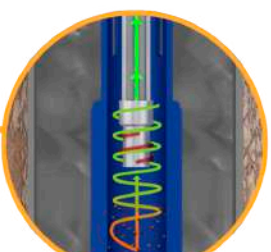
FLUID OUT (4 stage)



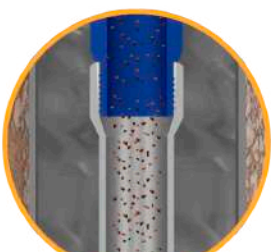
Surge Valve (3 Stage)



INTAKE / GAS REGULATION (1 stage)



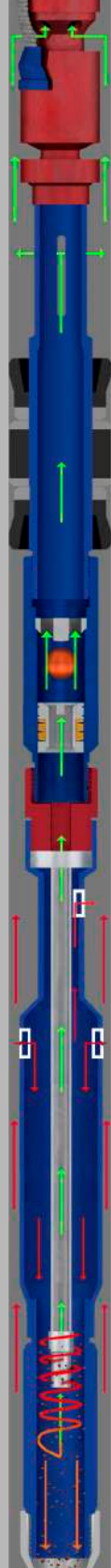
VORTEX SEPARATOR (2 stage)



MUD JOINT (More than three)



HOW IT WORKS

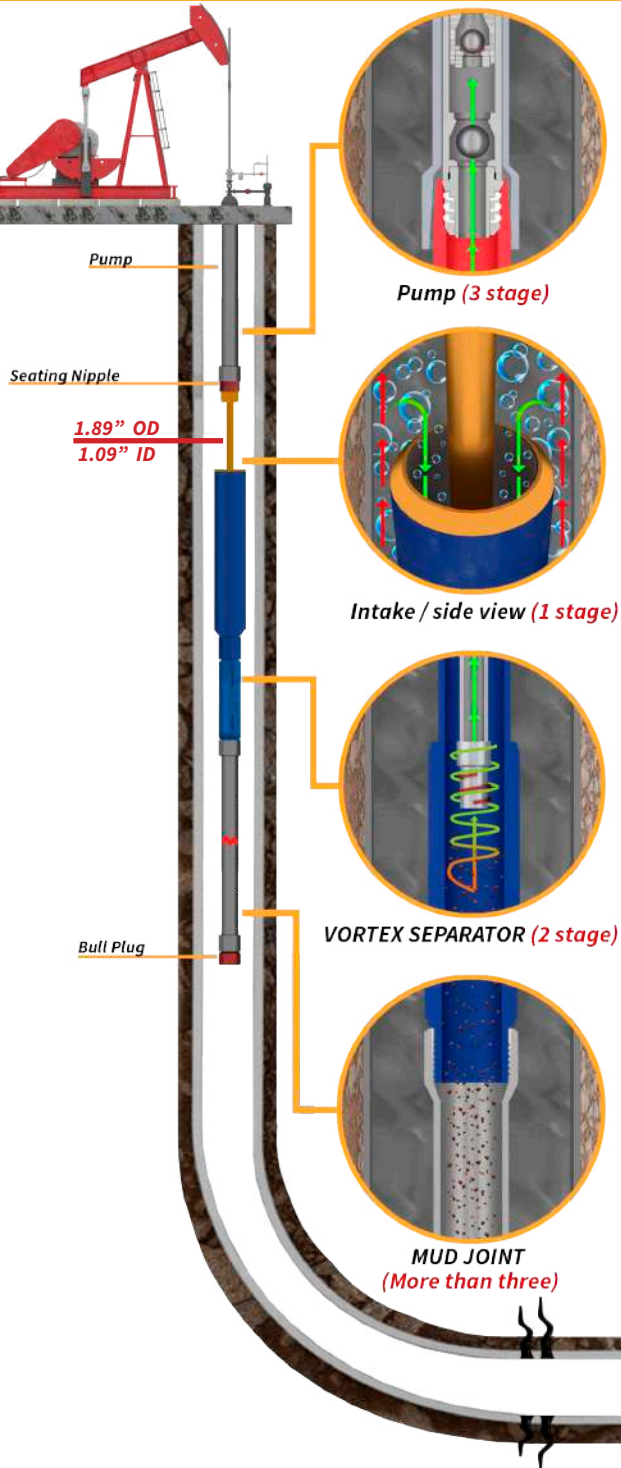




# G-FORCE PACKERLESS

The G-Force Packerless Gas Separator is the only gas separator in the market which maximizes phase separation area where it matters. The change in the flow direction is the key to separate the free gas from the liquid. The innovative intake and the great casing annular area will guarantee an effective gas separation before enter the chamber.

The simplistic and effective design is installed easily below the seating nipple and it can be combined with the Vortex Sand Shield to separate gas and solids



## BENEFITS

- Mitigates the gas slugs.
- Reduces or Eliminates the Gas locking.
- Multiple stages of gas separation.

## BENEFITS

- Highly efficient Gas Separator design.
- Separate the free gas to the backside.
- Yield strength of 72,210 lb
- In combined system, The Dual Flow system is used to improve the installation time and functionality of the tool
- Allows sand & gas separation when is combined with the Vortex Sand Shield.



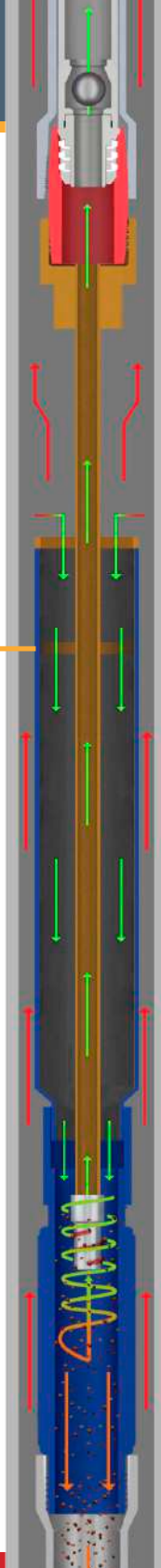
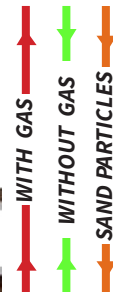
Top View (internal)

Use your device by scanning the QR code



AUGMENTED REALITY

HOW IT WORKS



# ESP G-FORCE PACKER TYPE GAS SEPARATOR

The solution to gas problems in ESP wells is OSI's G-FORCE, a revolutionary, new, packer-type gas separator design that is the ultimate in gas separation technology.

The G-Force exit slots are oriented upward so that the exiting gas avoids the circuitous pathway found in other gas separators allowing gas to rise unrestricted, in a more uniform, linear movement.

The upper neck of the G-Force is a reduced diameter compared to typical gas separator body designs. This increases the available volume within the annulus between the casing and the neck of the G-Force promoting greater flow dynamics.

## BENEFITS

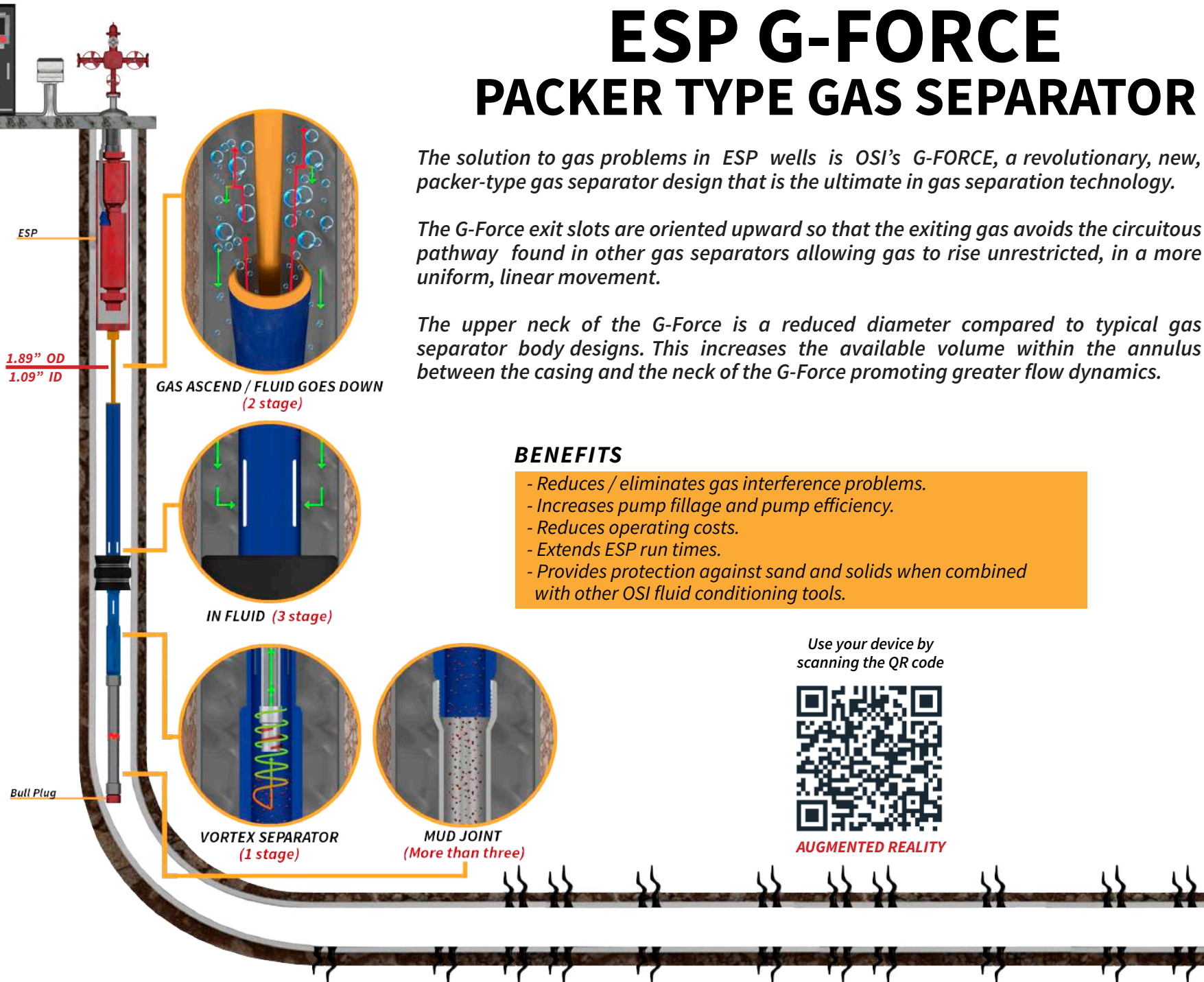
- Reduces / eliminates gas interference problems.
- Increases pump fillage and pump efficiency.
- Reduces operating costs.
- Extends ESP run times.
- Provides protection against sand and solids when combined with other OSI fluid conditioning tools.

Use your device by scanning the QR code

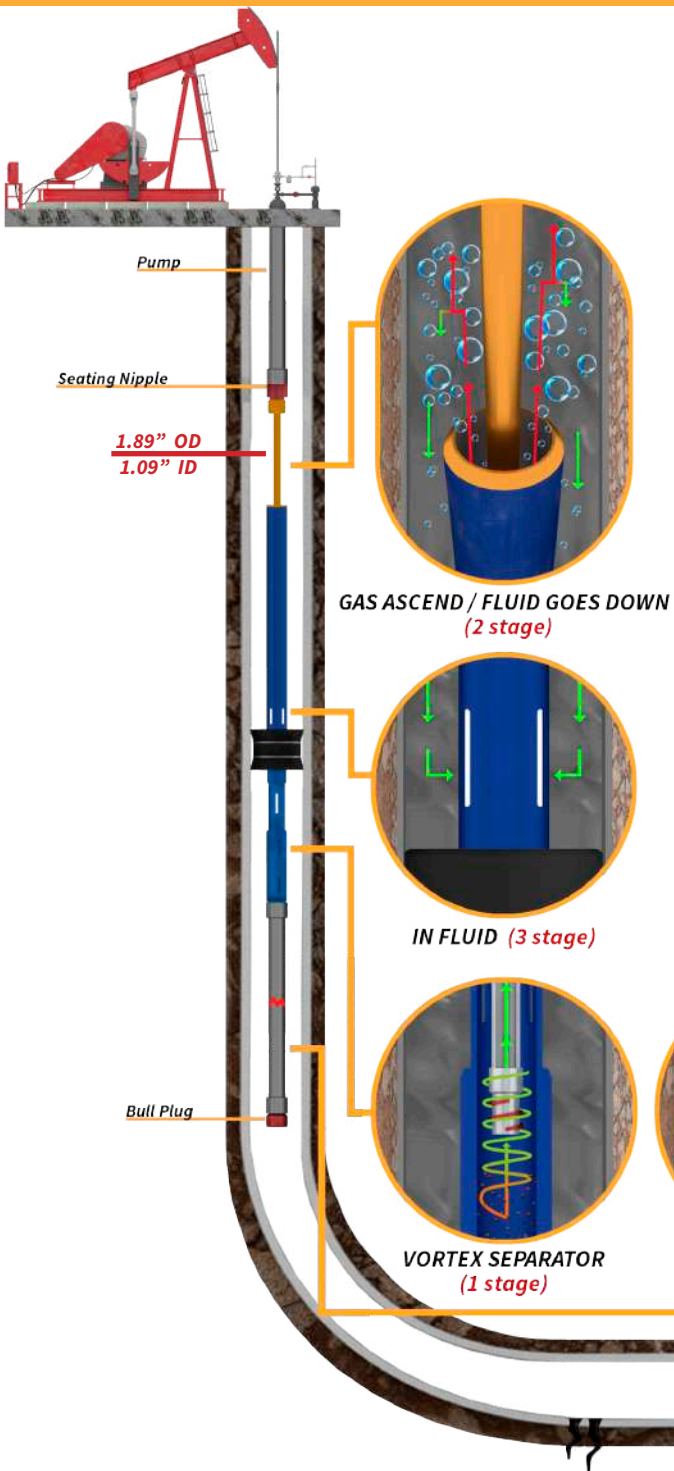


AUGMENTED REALITY

HOW IT WORKS



# G-FORCE PACKER TYPE GAS SEPARATOR



The G-FORCE is a revolution in Gas Separation design!

The 1.89 in. I.D. at the outlet section provides a greater volumetric area and a straight path for gas to escape the separator.

The packer forces production fluid into the G-Force separator section where phase separation is maximized, and minimum flow resistance is encountered.

### BENEFITS

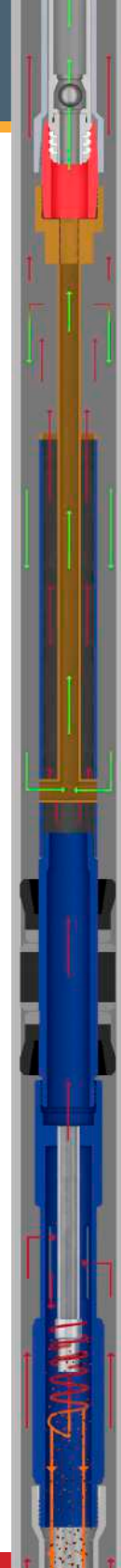
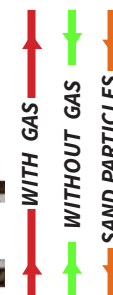
- Reduces or eliminates gas interference.
- Provides multiple stages of gas separation.
- Increases pumping system efficiency.
- Reduces operating expenses.
- Can be combined with other OSI tools for sand separation and chemical treatment.

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AUGMENTED REALITY

HOW IT WORKS





# GAS RELEASE SYSTEM

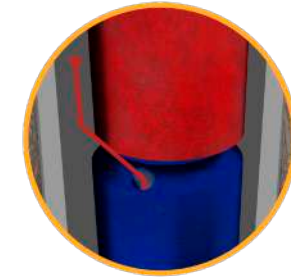
The fluid rises internally from the gas separation system below (red flow path), and enters through the dip tube with a 45-degree cut and holes at the top.

This is a point of access to the Gas Release System (GRS) where the separation of free gas and liquid occurs. The gas will be directed upwards finding an exit port to the casing, releasing the gas (green flow path).

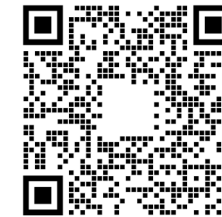
On the other hand, the gas-free liquid descends to the bottom of the GRS entering the dip tube with a 45-degree cut allowing the flow towards the pump (yellow flow path).

## BENEFITS

- Improvement of Gas Separation Efficiency for High Fluid and High GLR Horizontal Wells.
- Earlier conversion from ESP to rod pump.
- Innovative design that enhances production rates by efficiently separating gas.
- Proven performance in gassy conditions.
- Achieve the maximum potential of your reservoir by efficiently drawing down your wells.
- Deal with free and solution gas.



Use your device by scanning the QR code



AUGMENTED REALITY



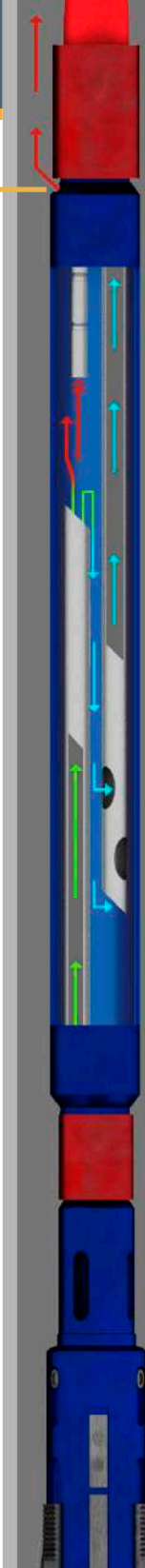
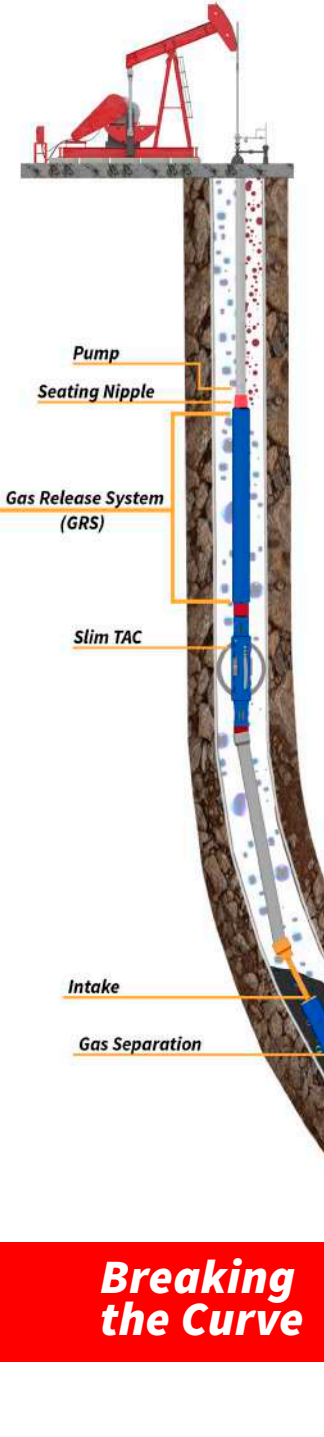
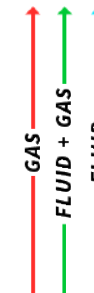
Free Gas



Production Fluid



Denotes gas that enters the separator downhole in the curve of the well that is then vented out in the casing by the Gas Release System under the Seating Nipple.



**Breaking the Curve**

# COMBINATION TOOL

The OSI COMBINATION TOOL is designed and engineered to maximize artificial lift system efficiency. Using OSI's patented "DUAL FLOW" connections, the COMBINATION TOOL is a versatile and effective means of fluid conditioning by controlling sand, gas, and solids.

### THE COMBINATION TOOL CONSISTS OF:

**THE TUBING SCREEN** is the intake while filtering out sand particles and assisting with gas separation. Tubing screens come in 2-3/8", 2-7/8", and 3-1/2" diameters with different options of slot sizes for the screens.

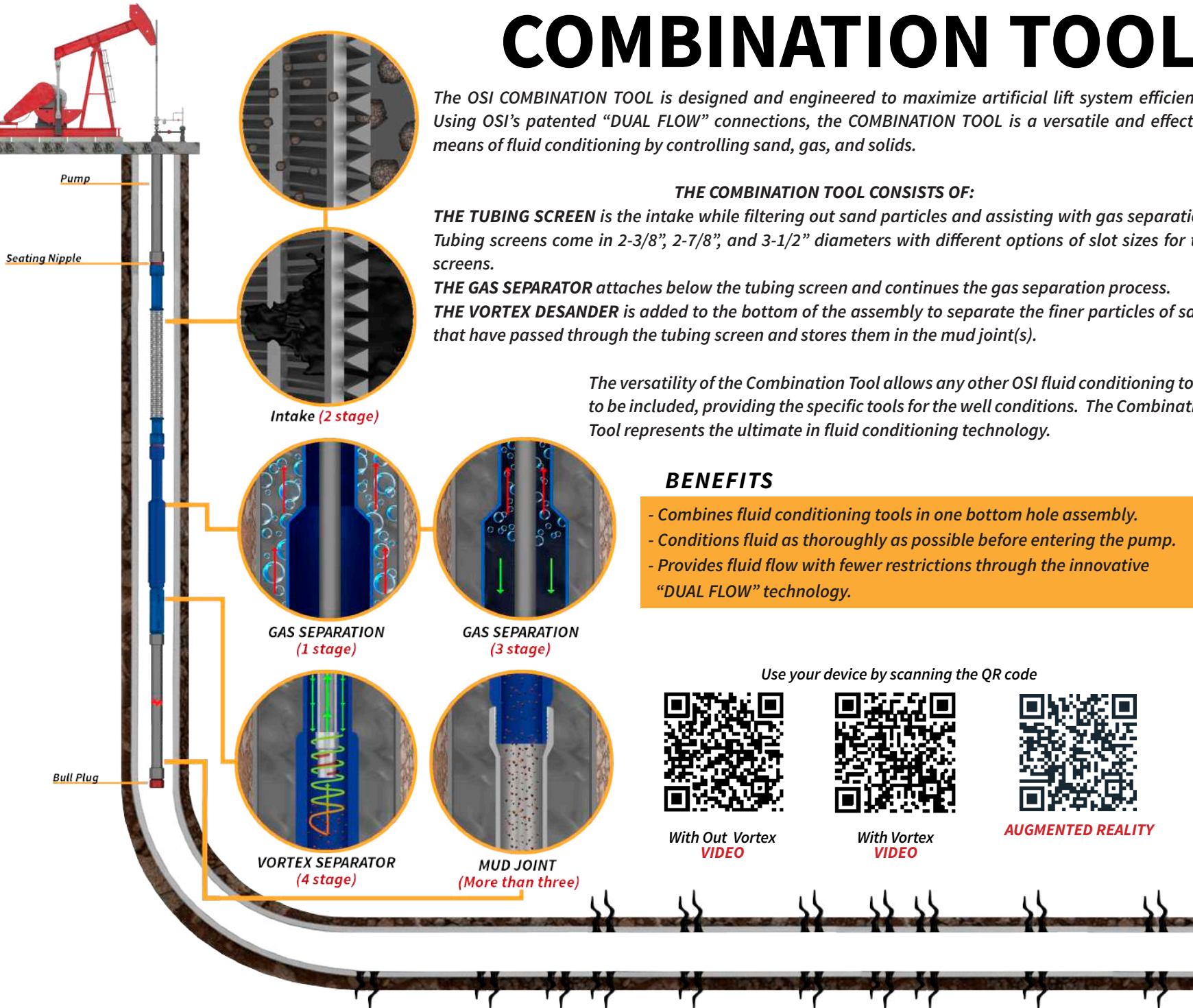
**THE GAS SEPARATOR** attaches below the tubing screen and continues the gas separation process.

**THE VORTEX DESANDER** is added to the bottom of the assembly to separate the finer particles of sand that have passed through the tubing screen and stores them in the mud joint(s).

The versatility of the Combination Tool allows any other OSI fluid conditioning tools to be included, providing the specific tools for the well conditions. The Combination Tool represents the ultimate in fluid conditioning technology.

### BENEFITS

- Combines fluid conditioning tools in one bottom hole assembly.
- Conditions fluid as thoroughly as possible before entering the pump.
- Provides fluid flow with fewer restrictions through the innovative "DUAL FLOW" technology.



Use your device by scanning the QR code



With Out Vortex VIDEO

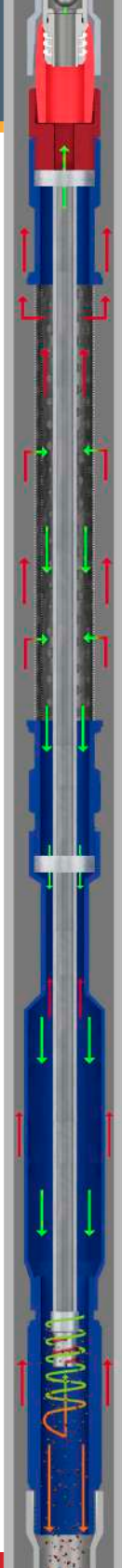


With Vortex VIDEO



AUGMENTED REALITY

## HOW IT WORKS

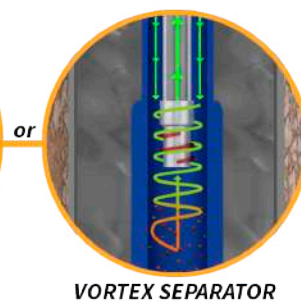
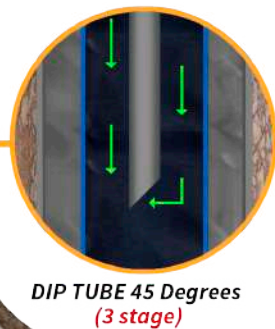
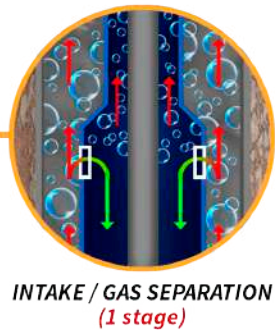
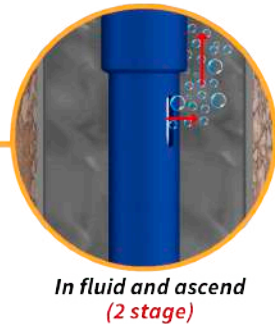
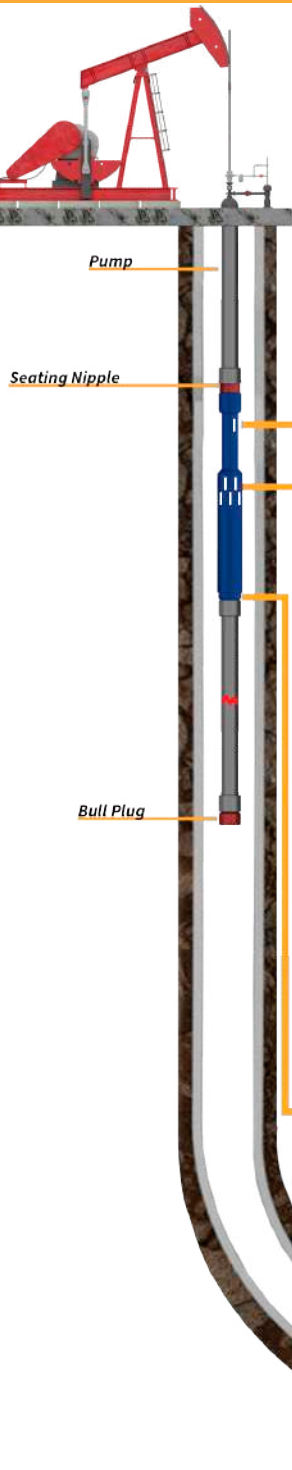




# SLOTTED GAS SHIELD

The Odessa Separator Slotted Gas Shield is designed specifically for wells with high lifting costs associated with gas failures. The Slotted Gas Shield is made up of diffused intake ports which minimize gas entering the separator and a large body annulus, which reduces the fluid velocity allowing for gravity driven gas separation.

The fluid enters through the slotted intake, where the first stage of separation of free gas occurs in the annular gap "by mechanical action wherein the coalescence of gas particles occurs colliding directly with the slot," then the fluid travels down inside the housing of Slotted Gas Shield.



## BENEFITS

- Mitigates the gas slugs.
- Reduces or Eliminates the Gas locking.
- Multiple stages of gas separation.
- Allows sand & gas separation when is combined with the Vortex Sand Shield.

Use your device by scanning the QR code



With Out Vortex  
VIDEO

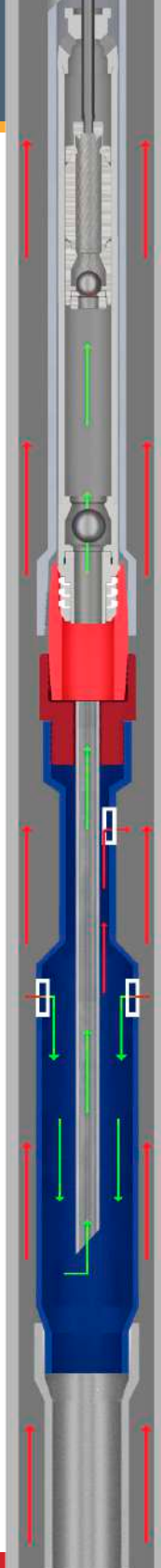


With Vortex  
VIDEO



AUGMENTED REALITY

HOW IT WORKS





# ESP GUARDIAN SHIELD

The ESP Guardian Shield significantly improves the performance of ESP's in high GOR/GLR horizontal wells.

With OSI's DUAL-FLOW Completion System technology, the inadequacies of traditional "dip tube" type assemblies are eliminated while optimizing operational effectiveness. The Guardian Shield includes an encapsulating shroud around the ESP motor that prevents overheating due to gas interference.

Guardian Shield provides multi-stage separation of gas and solids while ensuring uncompromised flow area versus standard dip tube tools.

## BENEFITS

- Mitigates gas slugs.
- Reduces or eliminates gas locking.
- Lowers ESP motor operating temperature.
- Prevents random shutdowns.

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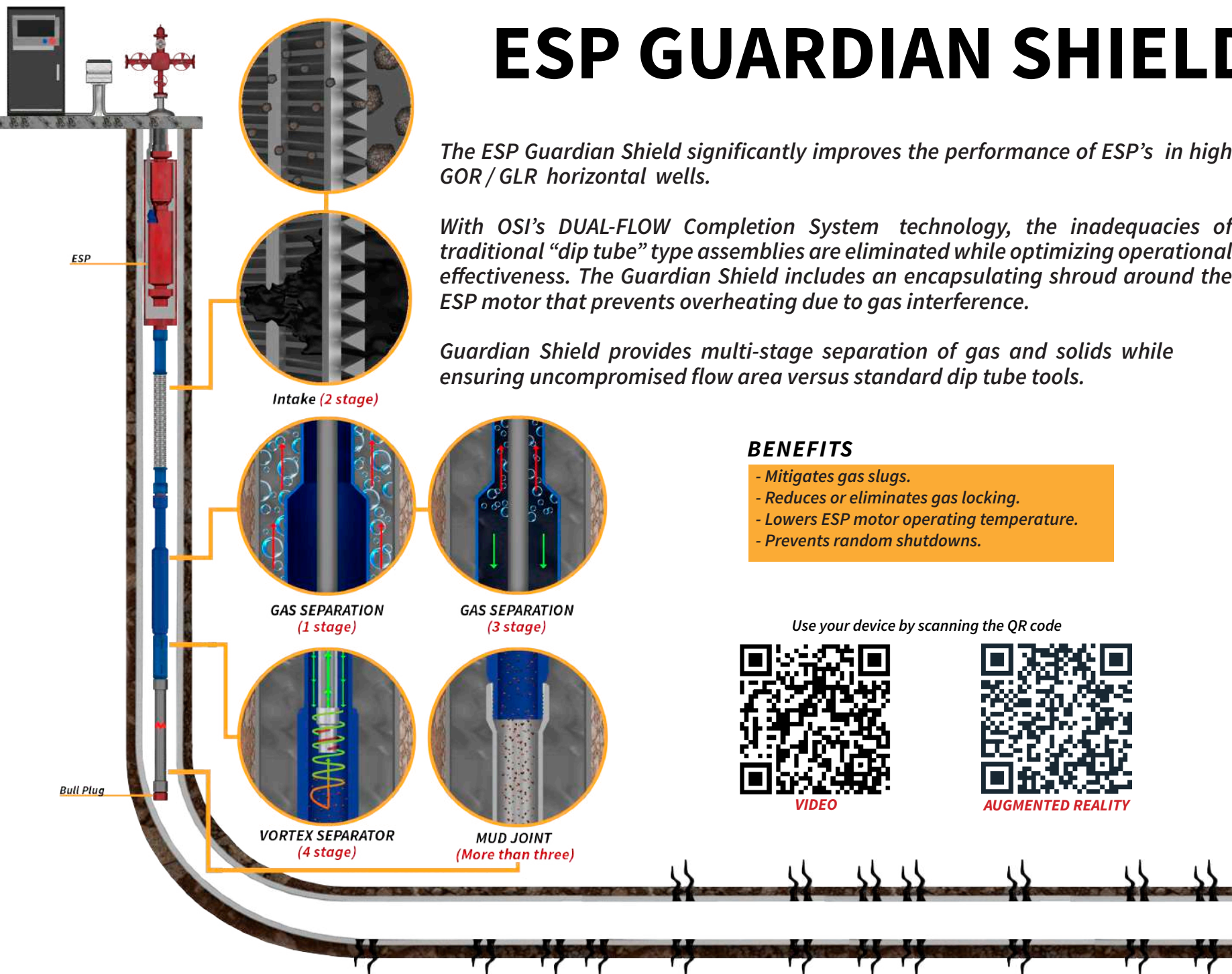
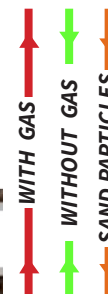


VIDEO



AUGMENTED REALITY

HOW IT WORKS







*OSI gas separators are a guarantee of improving performance and reducing operating costs.*



# Oilfield Challenges **CHEMICAL**



The PhD Chemists at Odessa Separator, Inc. are continually researching and applying the latest chemical technology to ensure operators have the most effective chemical treatment programs possible.

OSI's extensive and unique line of chemical treating tools combined with the latest laboratory testing capabilities provide cost effective solutions for the most difficult producing conditions.

OSI personnel conduct ongoing, residual testing using procedures based on A.T.S.M., N.A.C.E. and A.W.W.A. test methods.



Scale



Paraffin



Corrosion



## OSI's Inhibitors

- Scale
- THPS / THPC
- Scavenger
- Corrosion
- Paraffin
- Acid Surfactant
- Asphaltene
- Resins
- Defoamer
- Wax
- Super Lube



# CHEM SCREEN WITH SHUT OFF VALVE

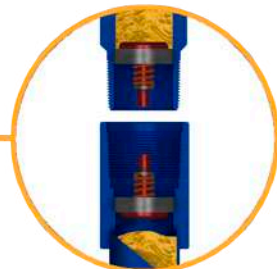
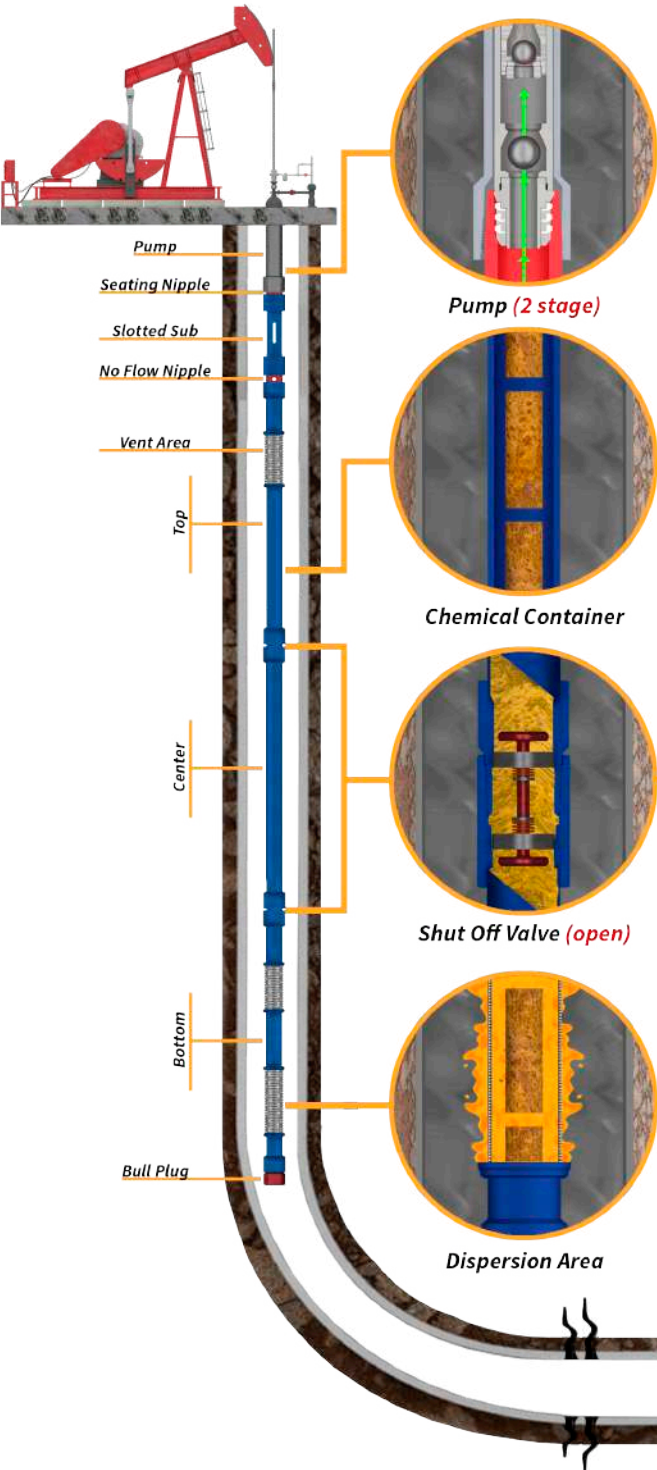
The OSI Chem Screen is a significant improvement over traditional chemical treating methods. OSI's proprietary, micro-encapsulation technology allows the most effective oilfield treatment chemistry to be put into solid stick form, placed into specifically engineered tools and installed below the pump intake. With the treating chemicals placed downhole, the activation and dispersal of the chemicals occur much faster and more efficiently. Where multiple screens are used, a SHUT OFF VALVE between each section prevents premature dispersal. The treatment process is continual, over a longer period ensuring a more cost-effective treatment program.

The Chem Screen is engineered for durability so that, in most cases, it can be refilled when needed.

The Quick Release is another solution, perfectly compatible with the Chem Screen, offering a slow release dispersion to provide a strong initial treatment.

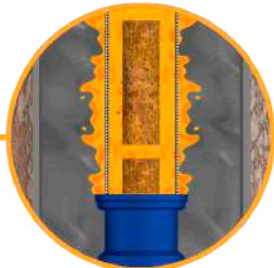
## BENEFITS

- Provides chemical treatment below a packer.
- Treatment from downhole up.
- Slow, continual dispersal.
- Serviceable rugged construction.



Shut Off Valve (open)

Shut Off Valve (close)  
No Spillage



Dispersion Area

Use your device by scanning the QR code



With out Shut Off Valve  
VIDEO



With Shut Off Valve  
VIDEO

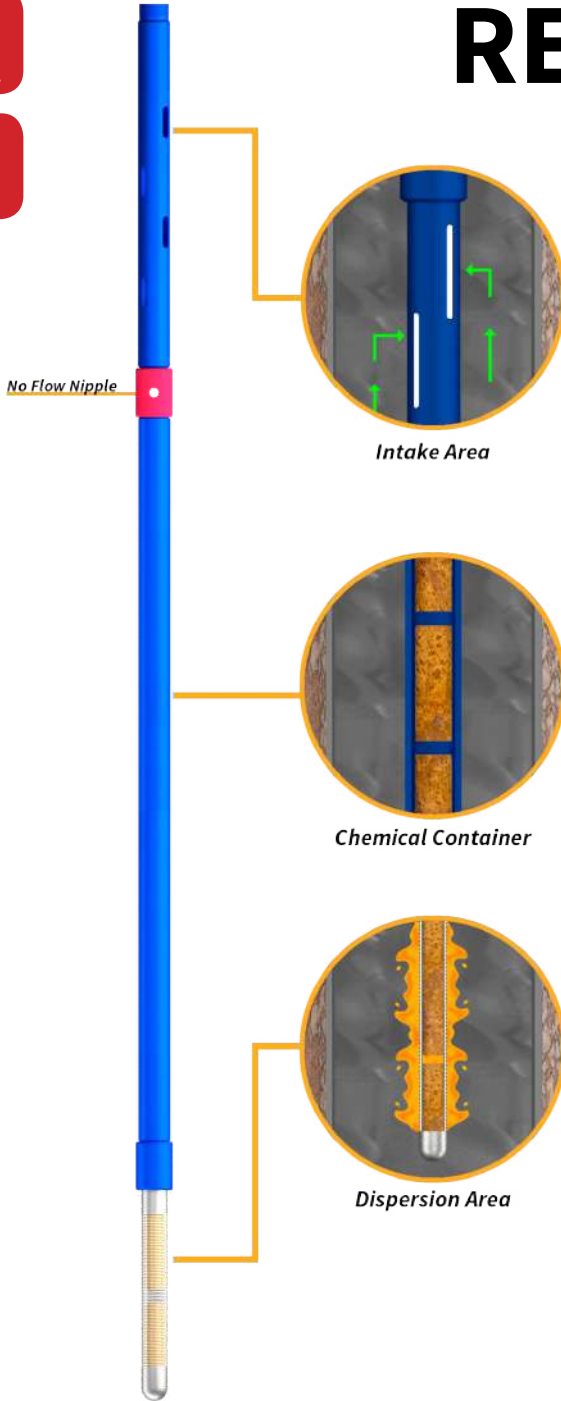


AUGMENTED REALITY

HOW IT WORKS



# RETRIEVABLE CHEM TOOL



The Retrievable Chem Tool is designed specifically for wells with high lifting costs that have chemical issues downhole, such as corrosion, scale, paraffin, asphaltenes, etc. The tool provides an even distribution of well-specific chemicals while offering an easy installation.

In Gas Lift or Plunger Lift applications, the tool is installed via slickline, sitting inside the X or XN Nipple, and is held in place with a standard lock mandrel.

In SRP is easily installed below the coupling of the insert rod pump, which translates into lower operating costs since it is not necessary to pull out the production tubing. This feature makes it the best alternative to condition the fluid from the bottom of the well, improving the life of the sucker rod pumps and well production.

After installation, the tool comes in contact with wellbore fluid, releasing the chemical product through the screen at the bottom of the well. It offers a controlled dispersion, from the bottom up, which protects the artificial lift system.

## BENEFITS

- Slow, self release of chemical(s).
- Up to 6 months of chemical treatment.
- Reduces paraffin, scale, and corrosion failures.
- Variety of well specific recipes (paraffin, asphaltenes, corrosion, scale).
- Can be easily installed, set, & retrieved with wireline or slickline.
- Low installation costs.

Use your device by scanning the QR code

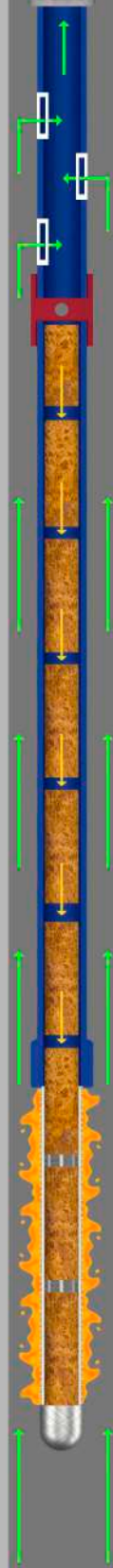


VIDEO



AUGMENTED REALITY

HOW IT WORKS







*It is time to innovate; treat the well from bottom-up and have the chemical where you need it. "Close to the Pump".*



## ESP NO-GO CATCHER

The ESP No-Go Catcher is designed for wells completed with liners and whose End of String will land inside the liner.

This tool is installed under the pump in the production casing section above the liner and will prevent the assembly from falling into the liner in the event of a component rupture. This system will facilitate fishing operations while allowing communication between the casing and the liner thanks to its flow channels.

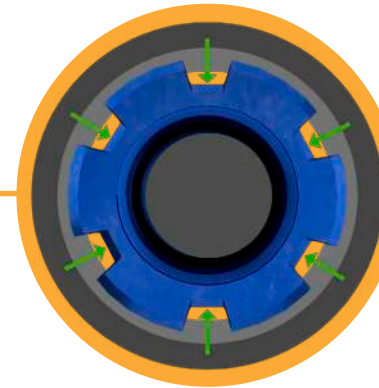
INSTALLATION

ESP No-Go Catcher

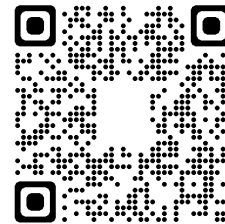


In the well

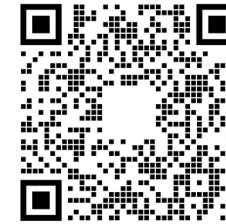
Flow view



Use your device by scanning the QR code



VIDEO



AUGMENTED REALITY

OPERATION MECHANISM

ESP No-Go Catcher

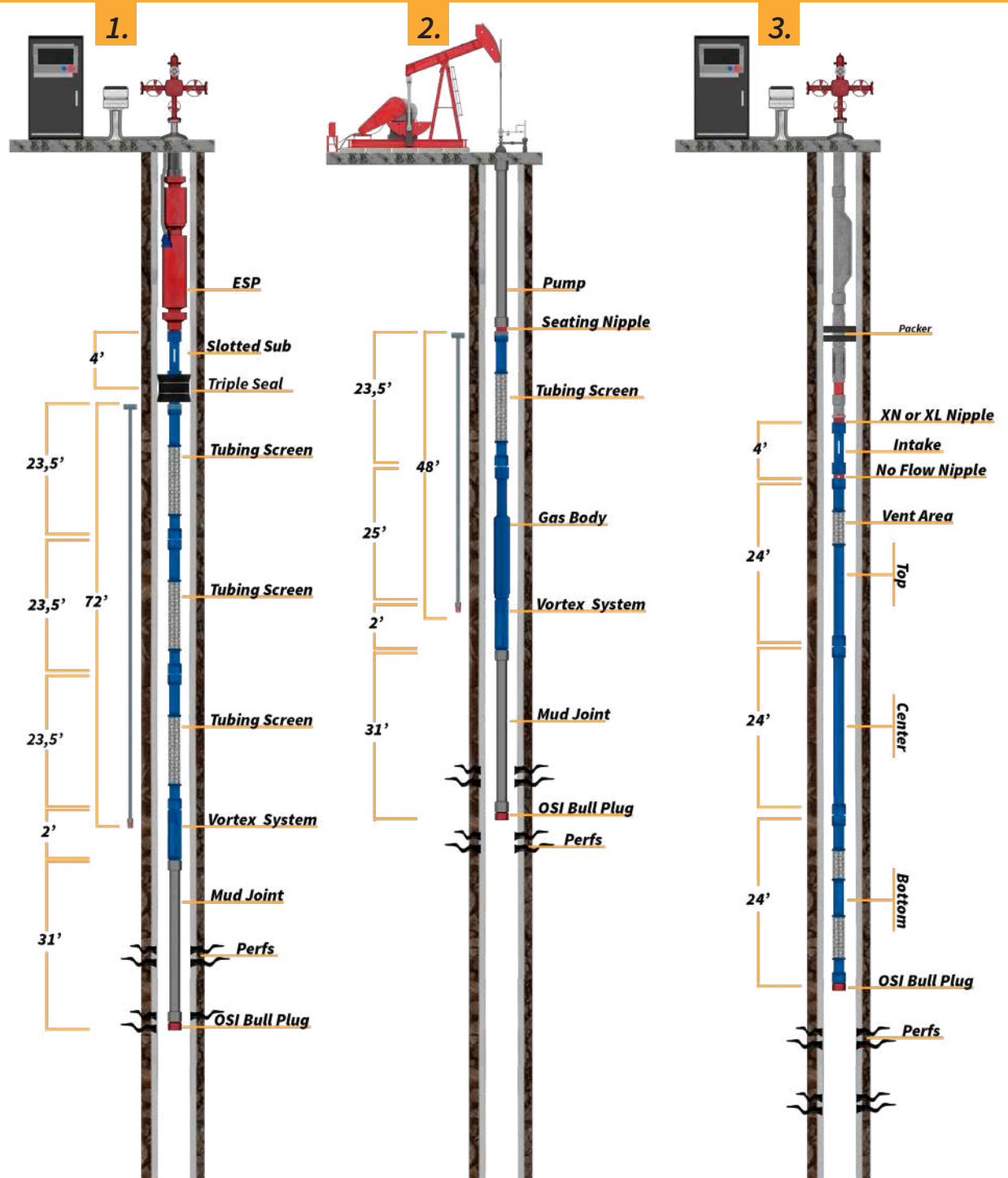
Works as a bull plug if is necessary

# WELLBORE APPLICATIONS

1. ESP configuration, using Slotted Sub, Packer - Tubing Screen with 72' Dip Tube, Vortex Sand Shield and Mud joint.

2. Beam pump configuration, Combination Tool with 48' Dip Tube (Sand and Gas Separator).

3. Gas Lift Configuration, Tubing Mandrel, Packer, XN or XL Nipple, Intake 4' (slotted sub), Chem Screen 72'.



# TECHNICAL SPECIFICATION

## Filtration / Sand Control

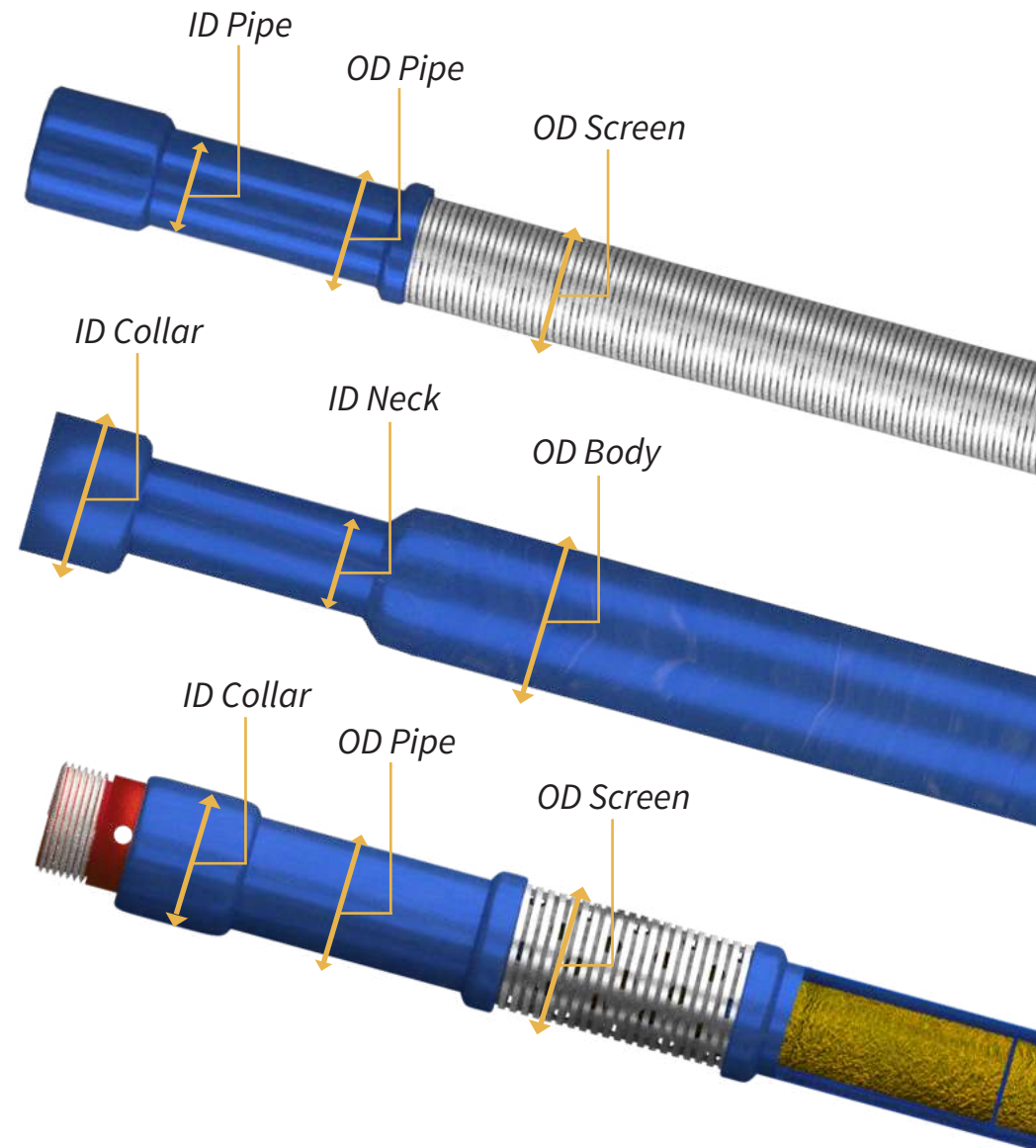
Sizes	Pipe (in)		Screen (in)	Collar (in)	
	OD	ID	OD	OD	ID
2-3/8"	2.375	1.941	2.870	3.063	2.375
2-7/8"	2.875	2.441	3.370	3.668	2.875
3-1/2"	3.500	3.066	3.940	4.500	3.500

## Gas separation

Sizes	Neck (in)		Body (in)		Collar (in)	
	OD	ID	OD	ID	OD	ID
2-3/8" x 3"	2.375	1.941	3.000	2.500	3.063	2.375
2-7/8" x 3-1/2"	2.875	2.441	3.500	3.000	3.668	2.875
2-7/8" x 4"	2.875	2.441	4.000	3.500	3.668	2.875
2-7/8" x 4-1/2"	2.875	2.441	4.500	4.000	3.668	2.875
3-1/2" x 4-1/2"	3.500	3.066	4.500	4.000	4.500	3.500
3-1/2" x 5-1/2"	3.500	3.066	5.500	5.000	4.500	3.500

## Chemical Treatment

Sizes	Pipe (in)		Screen (in)	Collar (in)	
	OD	ID	OD	OD	ID
2-3/8"	2.375	1.941	2.870	3.063	2.375
2-7/8"	2.875	2.441	3.370	3.668	2.875
3-1/2"	3.500	3.066	3.940	4.500	3.500







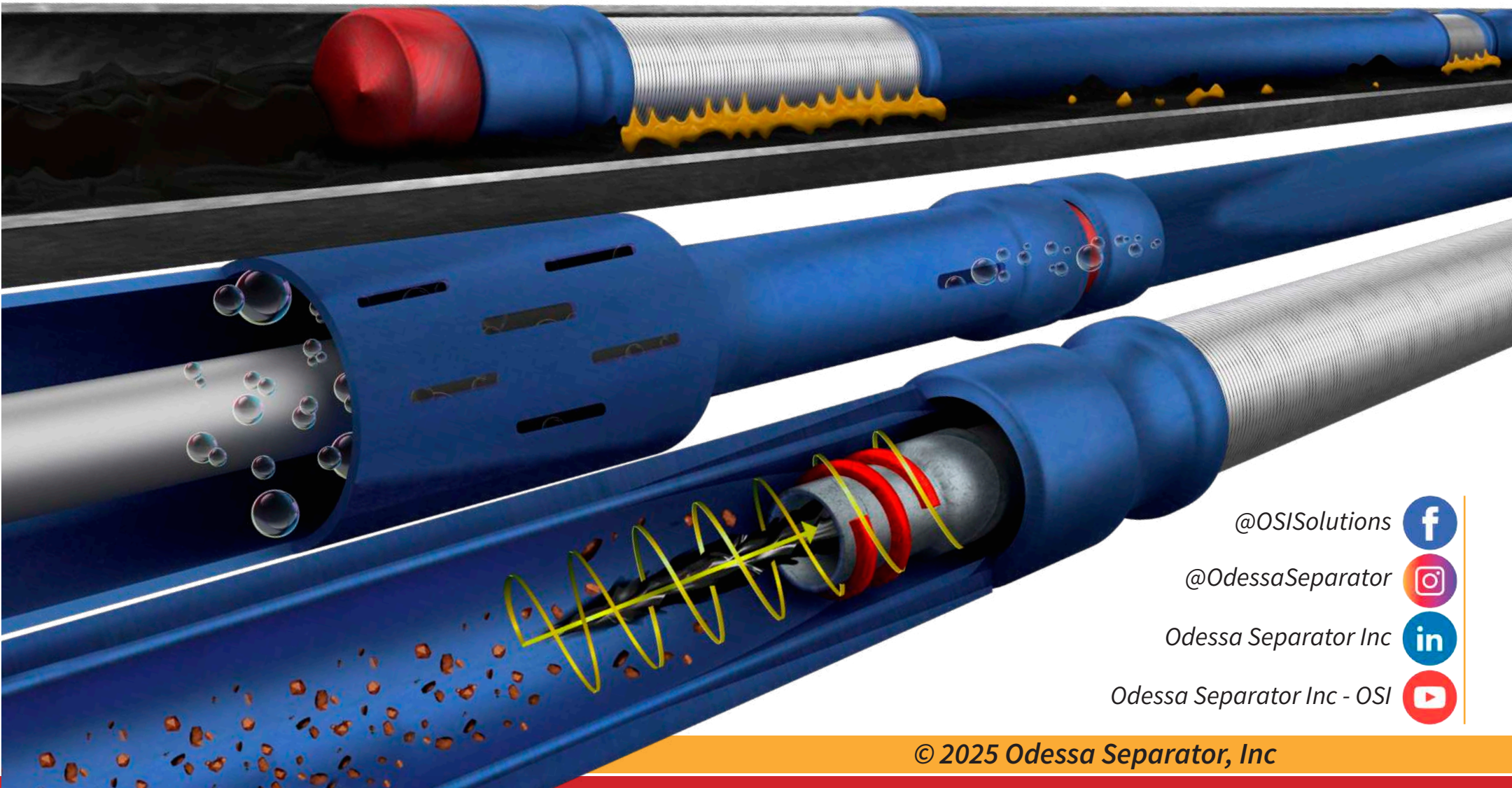
"Your source for fluid conditioning systems"



**WESTERN  
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SPECIALTIES CORP**

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