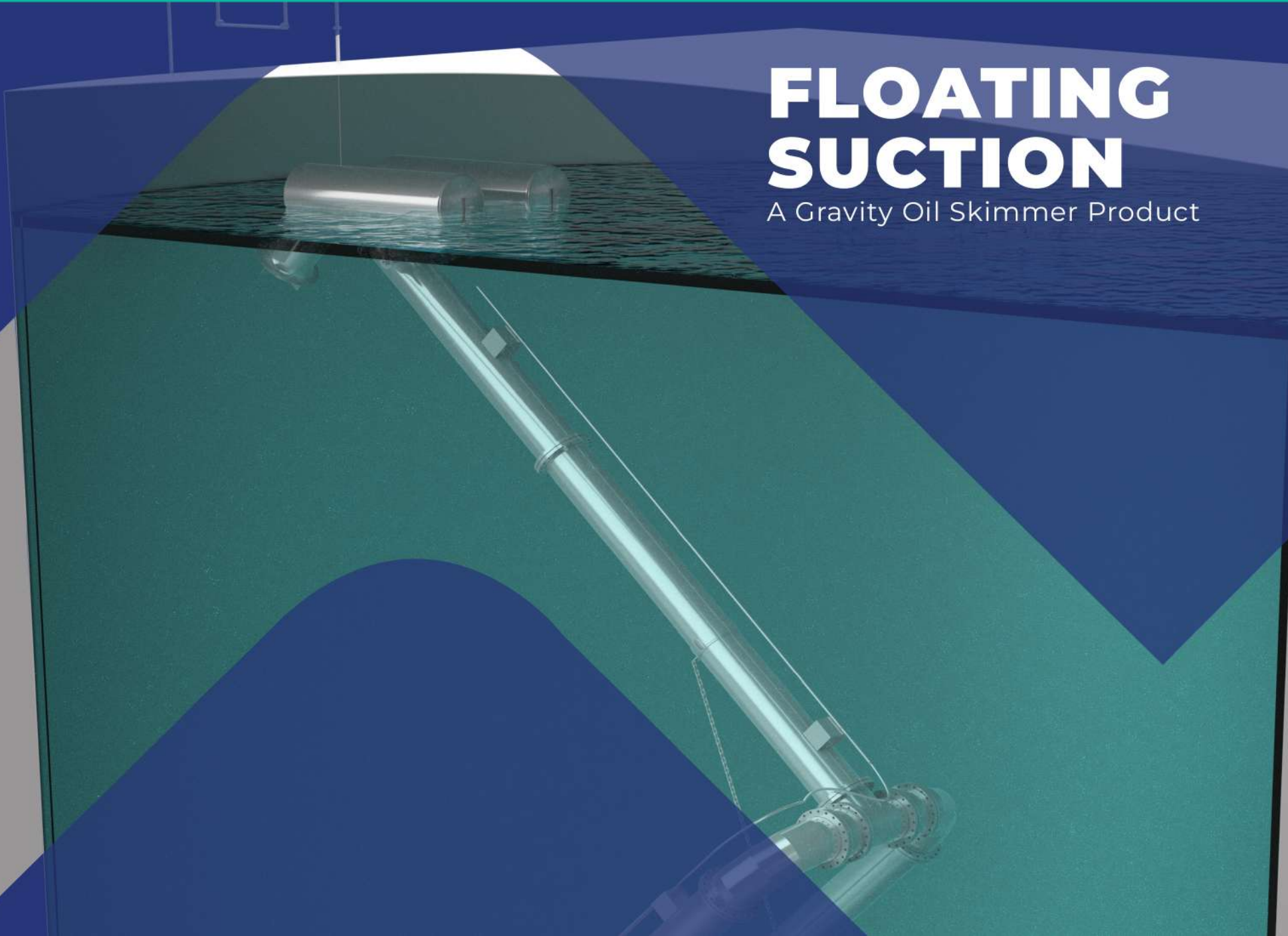


# FLOATING SUCTION

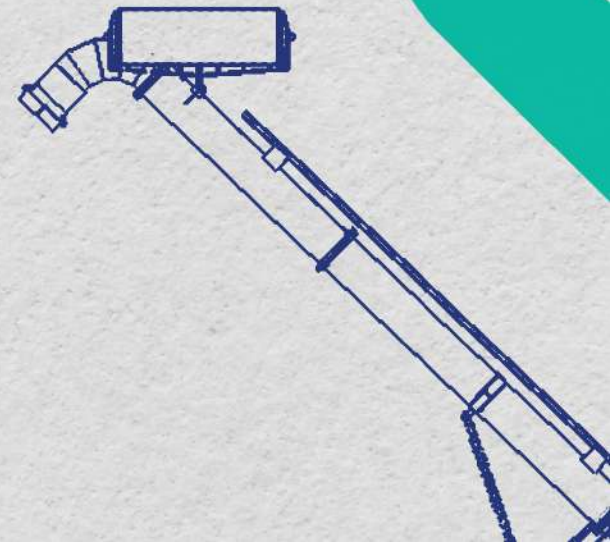
A Gravity Oil Skimmer Product

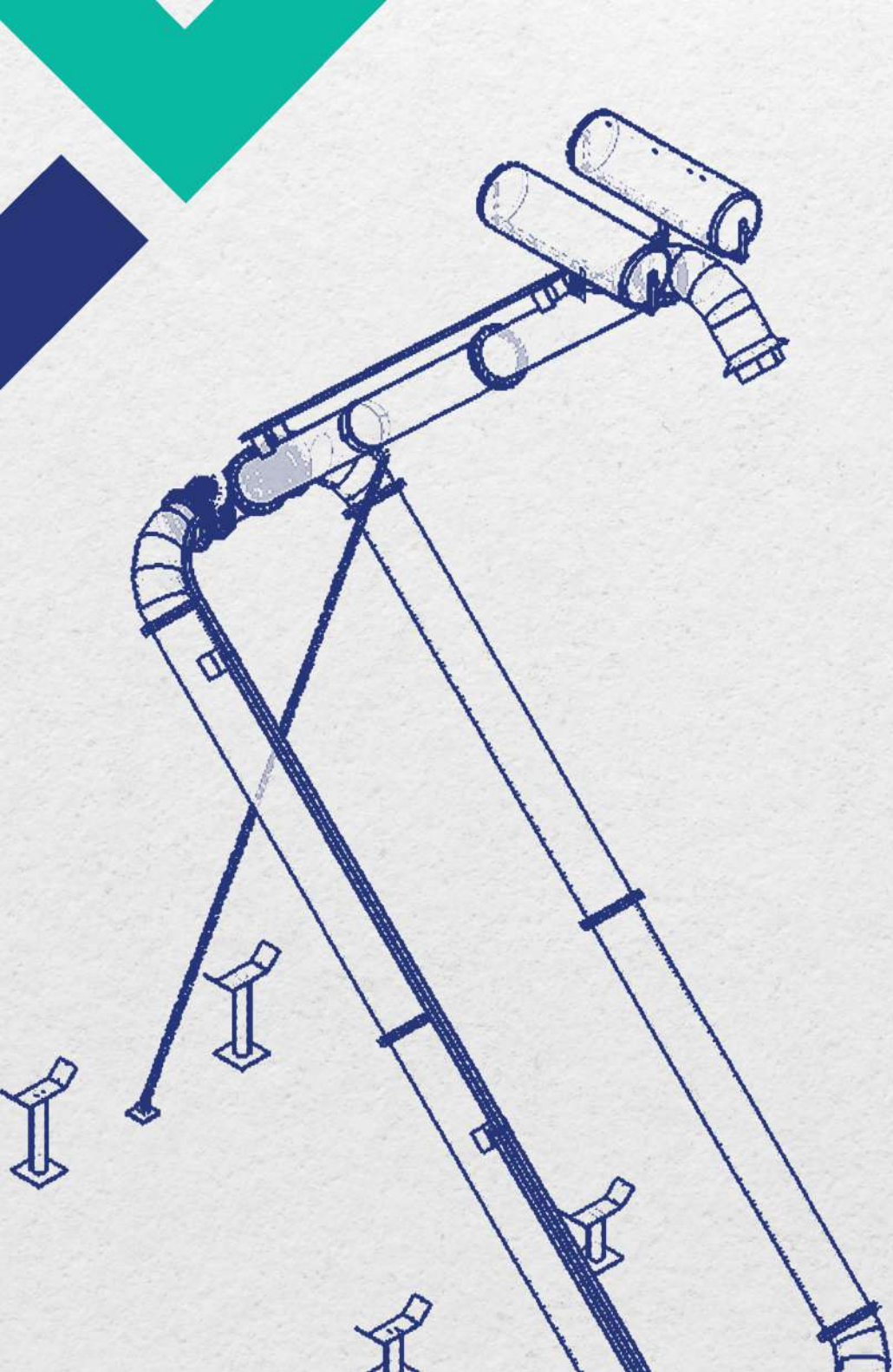




## FLOATING SUCTION

Floating Suction is installed in vertical or horizontal above/underground storage tanks. Floating Suction Unit withdraws clear liquid just below the top surface of the liquid. As the bottom section of the storage tank is contaminated from sludge or rainwater, it is necessary that when withdrawing a product from storage tanks the quality of the product is maintained. Its suction mouth is always below the top of liquid level thus eliminating the chances of entry of heavier particle &/ or floating debris. This application is highly used in air craft industries, motor fuelling, heating oils and petrochemicals. Floating suction assembly is installed in tanks storing product whose clear top layer is to be withdrawn, like ATF and most hydrocarbon tanks.





# ABOUT PROBLEM



## Float puncture

Puncture of the float may take place inside the tank which can lead to potential operational problems.



## Locating skimmer position

the skimmer position inside a tank can be challenging, especially if it's not immediately visible or if there are complexities in the tank's design.



## Skimmer requires constant manual adjustments

When a skimmer requires constant manual adjustments, it can be a significant operational issue.



## High Cost

The high cost associated with additional electrical or moving parts in a floating skimmer can present several significant challenges.

# OUR SOLUTION

## Float

Submerged two floats are used in our system. The floats are hinged with the pipe to keep the floats in horizontal position irrespective of the change in angle of articulated pipe. The floats are pneumatically tested at 0.5 psi for any leakage and then foam filled to avoid temperature change effects.

## Vortex Breaker

To avoid vortex creation a vortex breaker is provided at the inlet of the floating suction mouth.

## Level Indicator

Level Indicator used in our system is of Float and Board Type. Level Indicator shows the relative position of suction mouth. The scale is painted with white epoxy paint and the numbers are bolted with the scale. The pointer and the floating suction mouth is connected with a wire rope. The wire rope external surface is covered with Teflon sleeve to avoid sparking.

## Limiting Chain

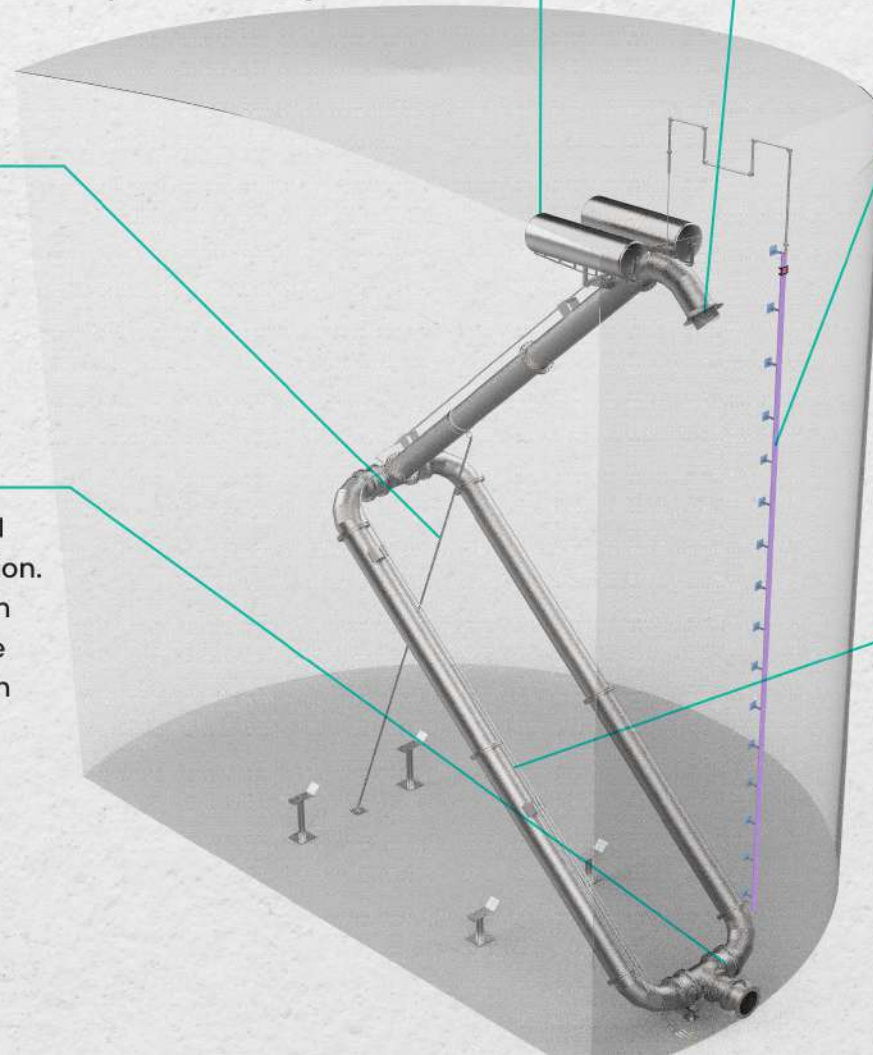
Limiting chain of suitable size is used to limit the opening of articulated arm to specific angle, maximum opening of arm is 60 with the horizontal.

## Swivel Joint

All swivel joints are of step design with 4 seal arrangement for immersed service application. The swivel joint is of balanced type. The main advantage of this swivel joint is, it arrests the axial movement of the articulated arm which is of long length, thus reduces the risk of unwanted load on the system. It avoids off centre movement of floating suction arm.

## Articulated Pipe

Our system consists of one or two articulated arms. A vent hole is provided at the top end of the pipe to avoid air lock in the system.



# SALIENT FEATURE

- ❖ Fixed-position Floating Suction unit prevents air trapping. Includes air release hole at highest point for efficient tank filling.
- ❖ Long life and trouble-free operation are achieved due to the use of swivel joints specifically designed for submerged service.
- ❖ At low level, the Floating Suction unit is rested on supports - this avoids the pipe work resting on any sediment at the bottom of the tank.
- ❖ Easily handle different viscosity oils.
- ❖ Easy installation and Low maintains.
- ❖ It can be designed as single-arm or double-arm according to the diameter and liquid operation height of the tank.
- ❖ Vortex Breaker device is available.
- ❖ Connection flanges are carried out in accordance with all standard flanges according to customer specifications.

## Swivel Joints

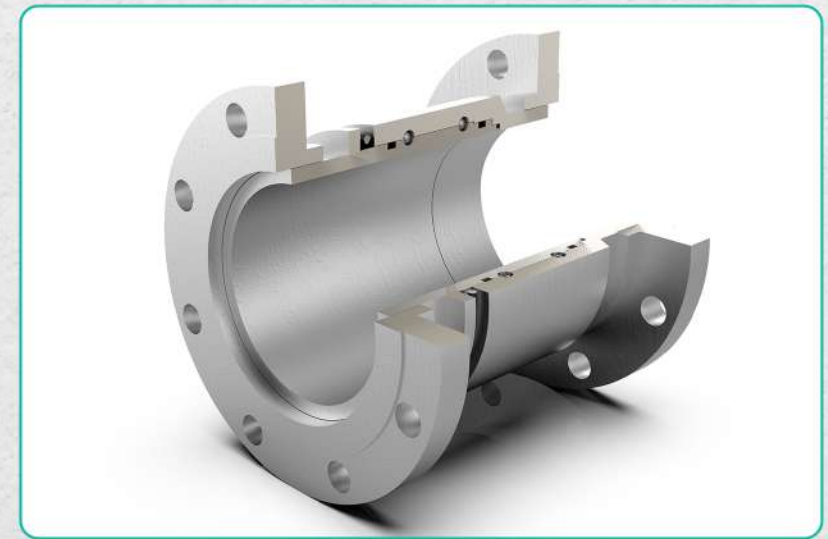
### 4 Side Sealing Swivel Joint

A swivel joint with a step design and a 4-seal arrangement is engineered specifically for immersed service applications. The step design refers to the construction of the swivel joint where it has distinct sections or steps that facilitate smooth movement and sealing. The four-seal arrangement ensures a secure and reliable seal, which is crucial for applications where the joint is immersed in a liquid or fluid.

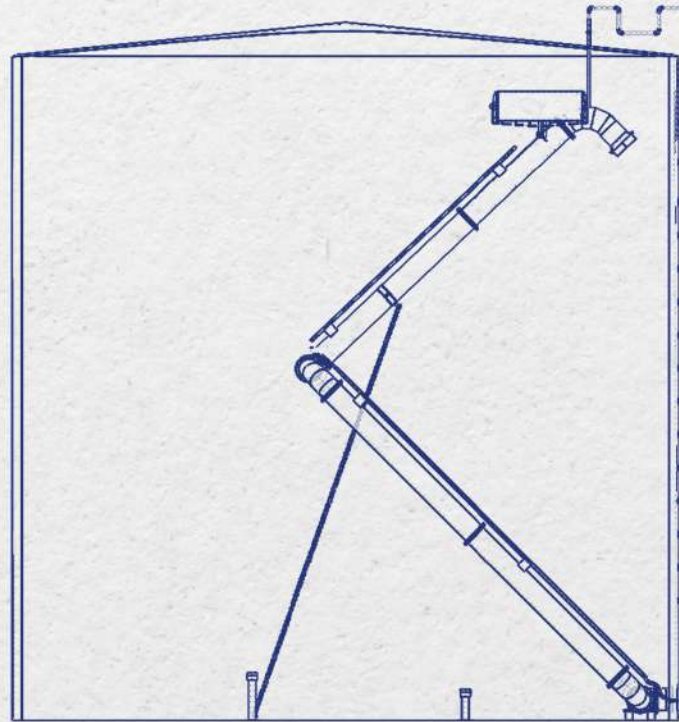
This particular swivel joint is of the balanced type, which means it's designed to evenly distribute pressure and forces within the joint. This balance is achieved through careful engineering of internal components, ensuring that the joint operates smoothly and efficiently even under varying pressure conditions.

One of the key advantages of this swivel joint is its ability to arrest axial movement. This is particularly important when dealing with long articulated arms. By preventing unwanted axial movement, the swivel joint reduces the risk of placing excessive loads on the system. This can be critical for maintaining the structural integrity and safety of the equipment.

Additionally, this swivel joint design helps to avoid off-center movement of a floating suction arm. In applications where precise positioning is crucial, preventing off-center movement ensures that the suction arm remains in the intended position, optimizing its performance.



# MODEL SELECTION MATRIX



TYPE OF TANK	TYPE OF FLOATING SUCTION	MOC	SIZE OF PIPE	NO OF ARM	ACCESSORIES
1) Cone/Dome roof tank	1) Half submerged floats.	MS	3",	Single arm	Limiting Chain
2) Cone/Dome roof with internal floating roof	2) Full Submerged float & guide wheel	SS304,	4",	Double arm	Level Indicator
3) Floating roof	3) Full Submerged float & guide wheel Floating Suction With trolley without floats.	SS304L	6",		Pipe Support
4) CRWS	4) Positive displacement pump.	SS316,	8",		
		SS316L	10",		
		ALUMINIUM	12",		
		INCONEL	14",		
		DUPLEX STEEL	16",		
		SUPER DUPLEX™	18",		
			20",		
			22",		
			24",		
			26"		

For custom sizes, please contact our sales team, [sales@potential.net.in](mailto:sales@potential.net.in)



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