

SAND SPEARS

How to install a Pump into a Sand Spear



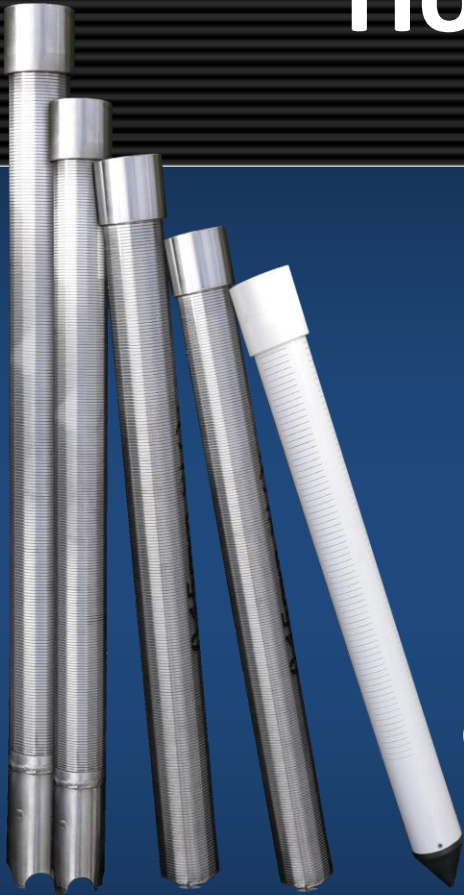
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How To



Fit a Pump in a Sand Spear Installation

Our Method makes it easier to Install and Remove Your Pump

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The Issues Are?

1: What is the best method of Installation

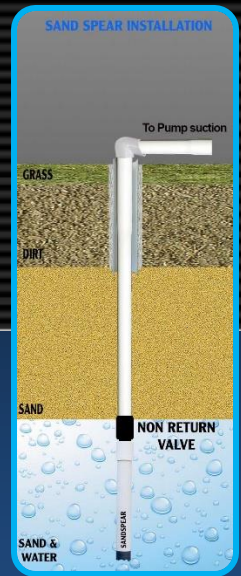
2: Most Sandspears bores are 50mm Id

3: You cannot fit a submersible pump

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Two Methods to use



1: Connect the top of the casing directly to the suction inlet of the pump

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Method 2

Highly Recommended

The top of the casing is open
The suction line from the pump is separate and fits inside the rising main with non-return at the bottom



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Third method

If no power is available, you can use
a hand pump or a 12 volt Submersible pump

See more below



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Look at Method 1 -

Pump Suction is connected to rising main.

Rising main or casing is connected to the screen,



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Solution 1

Non return
Valve is
connected to
top of screen

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Method 1 – Must Insure

1- All joints must be airtight.
To ensure this glue each joint



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Method 1 – Must Insure

2- Any small air leaks will not allow the pump to keep prime, and will stop pumping

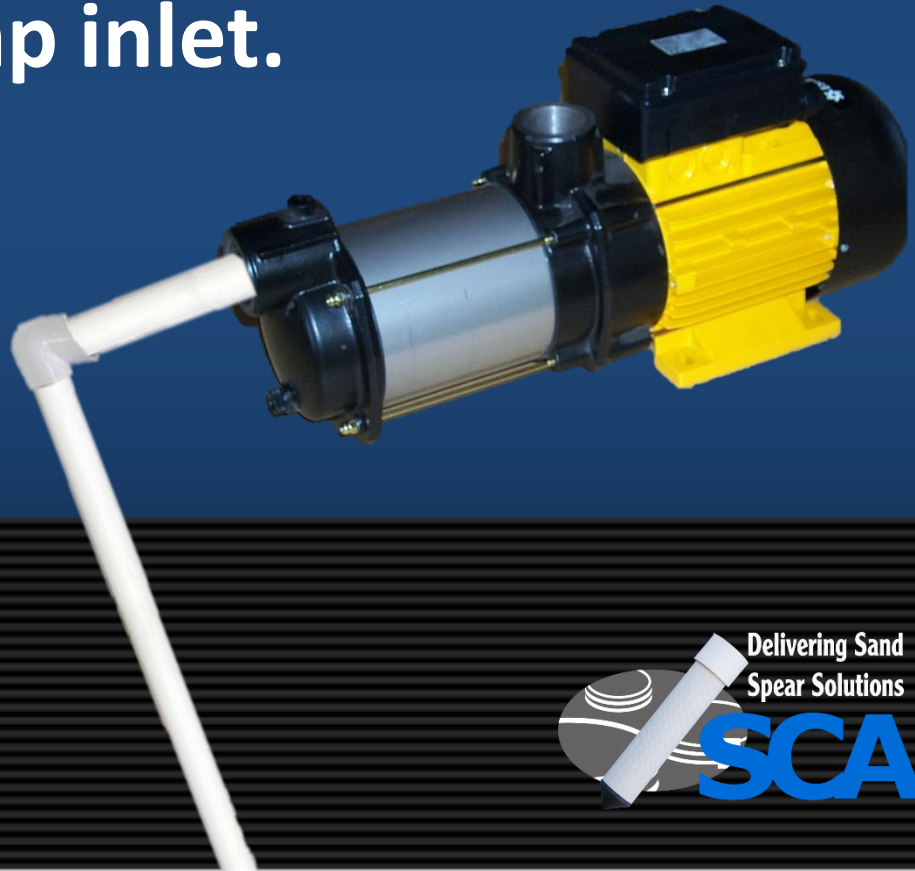


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Method 1 – Must Insure

3- Rising main or casing should be of similar size as pump inlet.



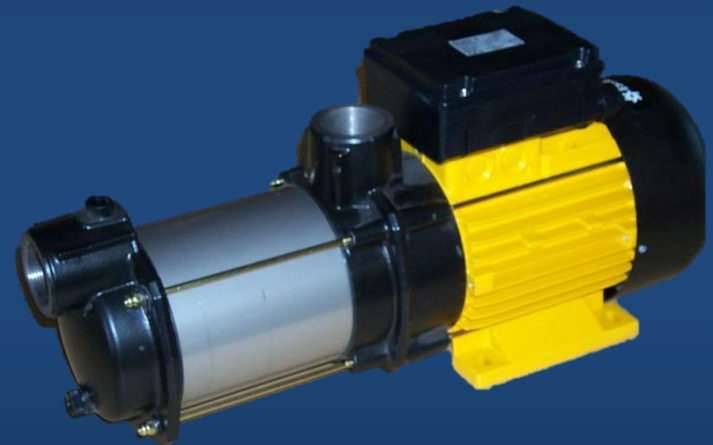
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Method 1 – Negative Aspects

1- The pump must prime itself every time, not reliable.

Unless a non return
Valve is fitted onto screen
Or casing

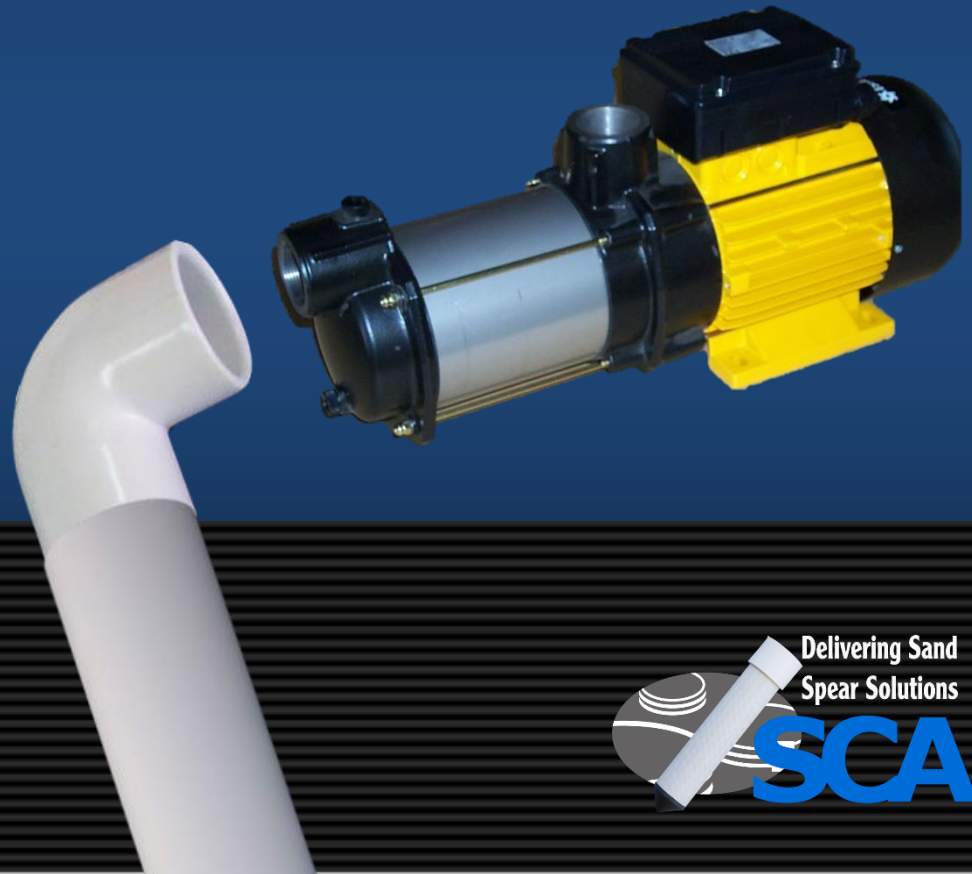


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Method 1 – Negative Aspects

2- The rising main is a lot larger than the pump inlet



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Method 1 – Negative Aspects

3- If a foot valve is fitted, how can you clean it, if it leaks?

This will cause the pump
Not to be primed.



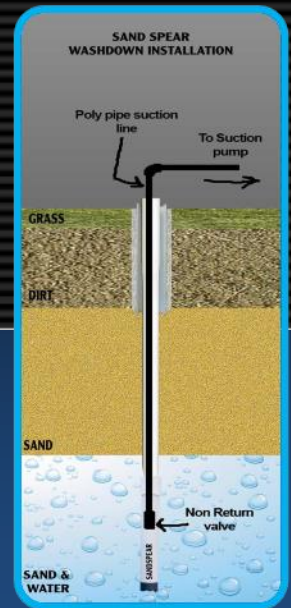
Method 1 – Negative Aspects

When sand builds up in the foot valve or non return valve seat and is leaking, it is difficult to fix, as you have to pull out the Sandspear system, fix and reinstall, a very long process.

Solution 2

Highly Recommended

1: The top of the casing is open
The suction line from the pump is separate and fits inside the rising main with non-return at the bottom



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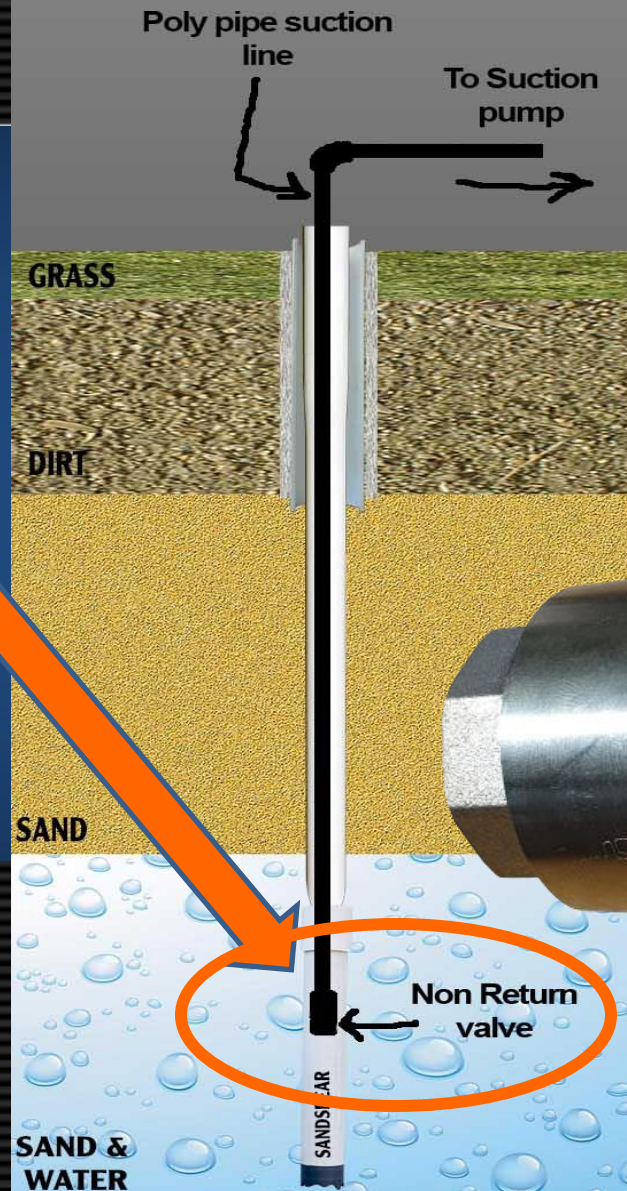
Solution 2

The Foot valve being under the water table, always allows the pump to be primed

This means, when you turn on the pump, water is available to use immediately

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SAND SPEAR WASHDOWN INSTALLATION



Solution 2

Positive Aspects

**1: Installation time is much quicker
And the system is more efficient in
pumping**

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Solution 2

Positive Aspects

2: As there are less joints , the possibility of having a bad joint or air leak is minimized.

Solution 2

Positive Aspects

1: If sand builds up in the foot valve or non return valve seat and is leaking, it is easy to fix by pulling up the suction line, cleaned, tested and reinstalled in no time at all.

Components Needed

Suction Pump –

Std. Household Pump 240V
(with or without pressure switch)

$\frac{3}{4}$ " to $1\frac{1}{4}$ " suction inlet



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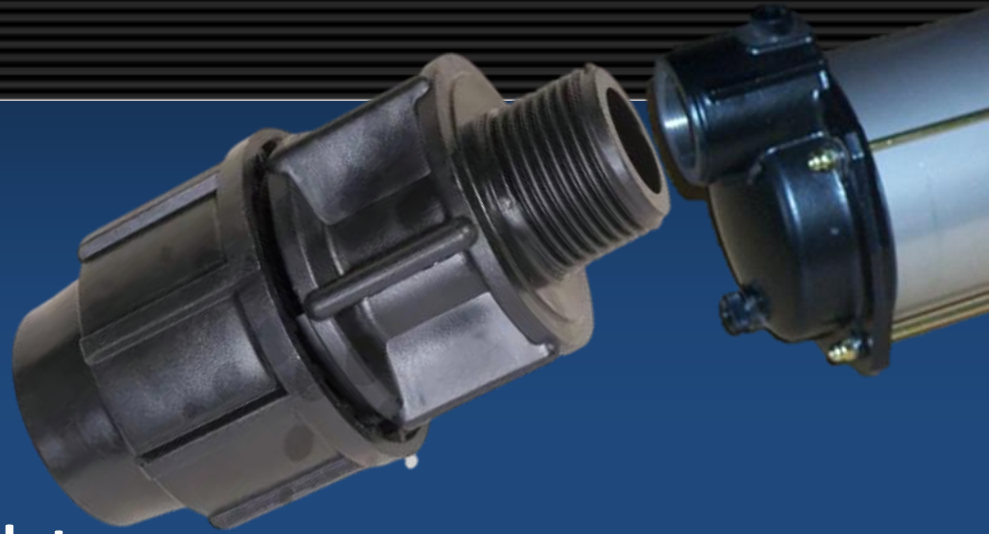


Components Needed

Poly Male End Connector –

Bsp male thread to fit pump outlet

Female end to fit poly pipe being used



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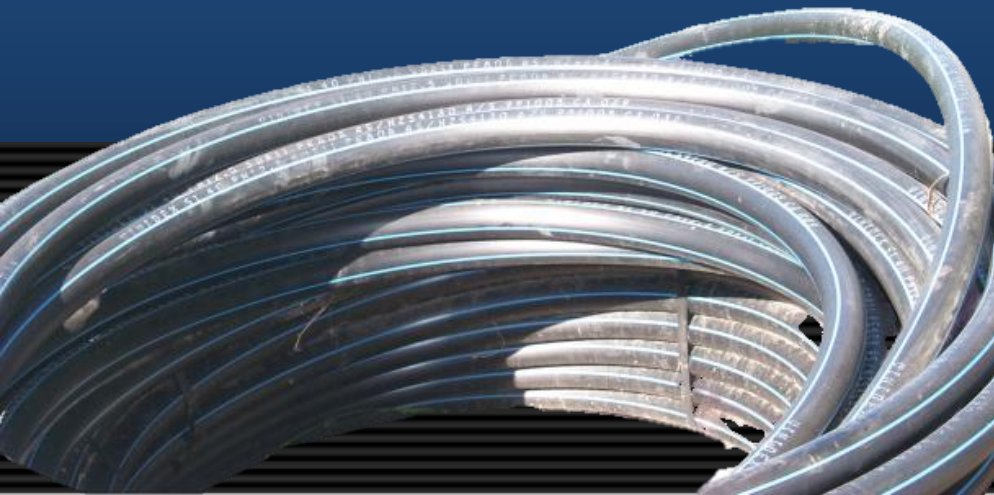
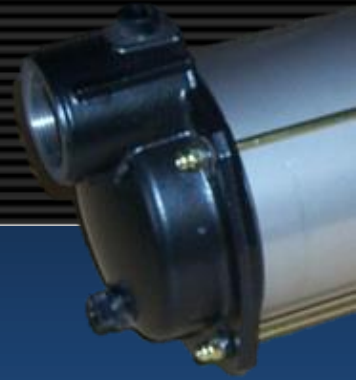


Components Needed

Suction line –

Standard poly line pipe

20 -32mm dia. Is used, size depends on pump suction size



Components Needed

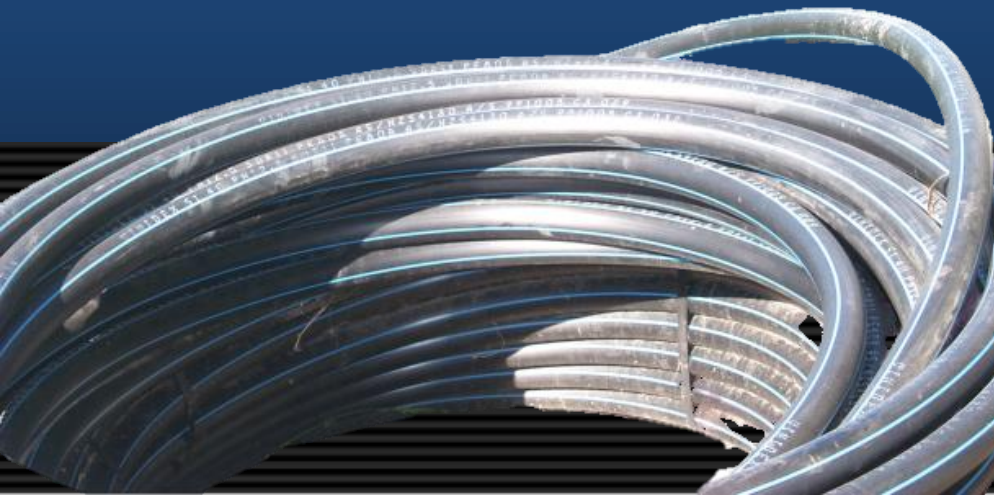
Non return valve or foot valve –

$\frac{3}{4}$ " or 1" Brass Non return valve

Ensure poly fitting fits inside of casing
and thread is the same size as each other



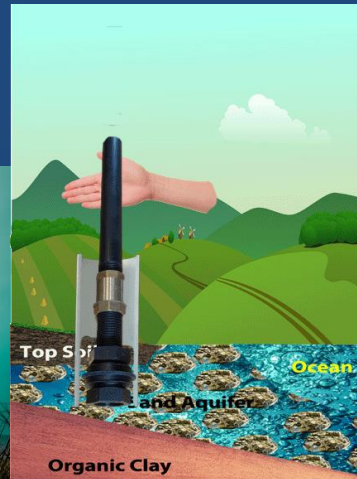
Make sure valve is facing in
the correct direction



Other Pumping Methods

If no pump is available, you can use
a hand pump

E.g. On the beach camping



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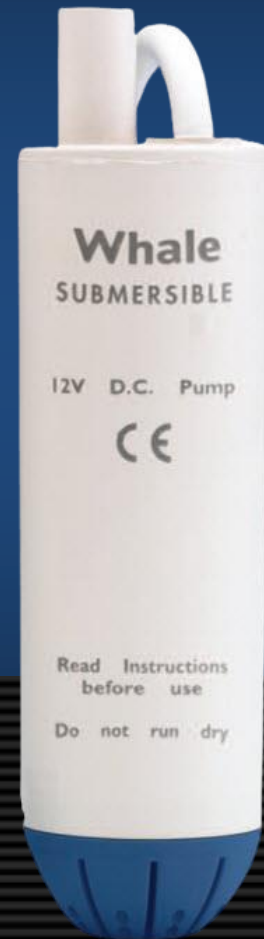
Other Pumping Methods

If 240 volt is not available, you can use a 12 volt submersible pump

E.g. On the beach camping



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Solution 2 - Ensure

1: The pump is always primed

**2: There are no leaks or holes in the suction line
Pumping system**

**3: Use thread tape or sealer on all threaded joints
to ensure all Joints are airtight**

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Solution 2 - Advantages

- 1: The pump is always primed
- 2: Easy Installation and removal
- 3: Non return valve easily removed and cleaned

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Solution 2 - Advantages

4: The suction line pipe diameter is more aligned with the pump suction inlet size, making it more efficient.

5: Easy access to the screen if it needs cleaning, developing or removal.

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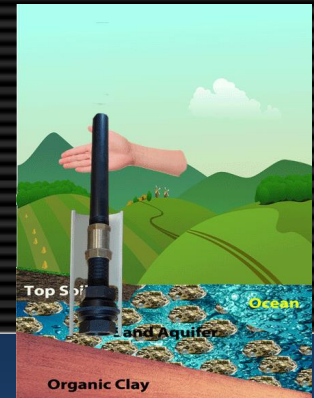
Conclusion

There are always more than one solution, Solution 2 here has been proved by my clients to be the most successful and easier to install

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Conclusion



Any standard household pump can be used.
A hand pump can be used.

For the size of the pump or quantity of water needed, a pump test may be needed.

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With Thanks

I hope this has been valuable and useful in helping you set up your sand spear system

If you have any more questions or need any more information, please go to our website

Sandspears.com.au



We are here to help

Or email-

info@sandspears.com.au

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