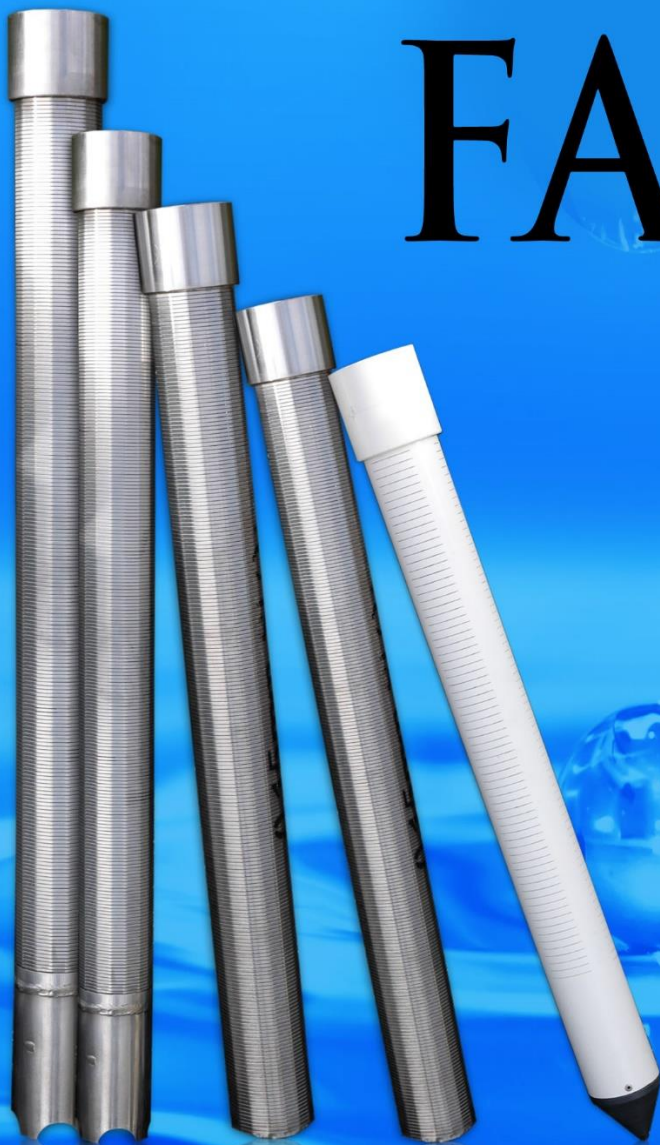
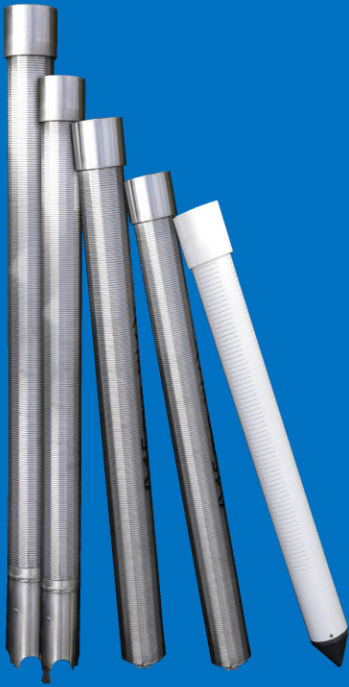


# SAND SPEARS

## FAQ





**For All Your  
Questions and  
Answers, regarding  
Sand Spears  
Sand Spear  
Installation  
Pumping  
Developing**

# Questions

Q1- What is a Sand spear point bore?

Q2- How does a Sandspears work?

Q3- Can I install this myself?

Q4- What other names is a Sandspear called?

Q5- What sizes do they come in?

Q6- What materials are they made from?

Q7- Do I need a License to install my sand spear?

Q8- What size sand spears are available?

Q9- What Installations methods are there?

Q10- What's the best Sandspear?

Q11- Will they remove salt?

Q12- How do I install my Sand spear?

Q13- Difference between PVC Sandspear and the Stainless sand spear?

Q14- Do I need a license to drill a Sandspear?

Q15- How much water can I pump from a sand spear?

Q16- How much do they cost?

Q17- Do my Sandspears come with a guarantee?

Q18- How to I get the water out of the screen?

Q19- Can I drink the water?

Q20- Where do I connect my pump to my Sandspear?

Q21- How deep do I set my sand spear?

Q22- Why do I need to develop a bore?

Q23- How do I develop my bore?

Q24- Have you sold many Sandspears?

Q25- What materials are Sandspears made from?

Q26- What accessories do you sell?

Q27- What accessories do I need for my Sandspear installation?

Q28- Can I buy my Sandspear online?

Q29- Do Sandspears and installation tools come in a kit

Q30- Do you deliver and where?

Q31- Where do I get help on my Sandspear issues?

Q32- Can I access water from a beach?

Q33- Is there a situation where a Sandspear cannot be installed?

Q34- Is there any other costs with having a sand spear bore?

Q35- What are the benefits of having a Sand spear installation?

Q36- Do I have to pay for the water I use from my Sand spear bore?

Q37- What else can I use this water for?

Q38- Is there anything that will need replacing?

Q39- How long do they last in the ground?

Q39- What locations are best suited for a Sandspear installation?

Q40- What types of Sandspears are there?

Q41- What open aperture width of my screen do I need?

Q42- What is the best pump to use in my Sandspear Installation?

Q43- How can I tell where the top of my water table is?

Q44- What type of pump do I use for my sand spear bore?

Q45- Can I make a sand-spear myself?

Q46- Does my Sandspear need maintenance or an inspection?

Q47- What are the best drilling methods for Sand?

Q48 – How deep do I have to go to find water?

Q49- What is the best Sandspear?

Q50- Is there anything else I should Know before I start my sand spear installation?

Q51- What is the easiest installation methods of my sand spear?

Q52- Can I auger through the sand to reach my depth needed?

Q53- What would it cost if I got a professional in to drill or install my sand-spear?

Q54- My Pump will not keep primed?

Q55- Can I make my own Bailer for my Sandspear bore?

Q56- Where have you sold sand spears to?

Q57 – Do you sell Accessories for my sand spear Installation?

Q58- How much water can I expect from a Sandspear installation?

Q59- I don't have electricity available, how can I get water out from my Sandspear Installation?

Q60-- Can I get any help if I have any problems?

# Answers & Questions

## Q1- What is a Sand spear point bore?

Answer- It is a device that is sunk into a sand aquifer below the water table, allowing water to be extracted and pumped to the surface. Installation is usually shallow, and the water is typically of low volume, not for irrigation, mainly used for watering gardens in a house block.

## Q2- How does a Sandspear work?

Answer – The spear point has slots or an open aperture of approximately 0.25mm wide this is to stop any sand from coming into the spear or screen and allow clean water to enter the inside diameter, clean water can then be pumped up to where you need it.

## Q3- Can I install this myself?

Answer- Yes over the last 10 years we have had a large number of people who have purchased a Sandspear from us and installed us themselves. The majority of sales have been private purchases not by professional drillers and installers.

Check the rules, in most situations you can only drill to 3m or you then have to get a license and a licensed driller or Installer

## Q4- What other names is a Sandspear called?

Answer- Sand screens, spear points, piezometers, water spear, drive point, water screen, drive points, well screens, spear, sand blocker screens, and wash down screen

### **Q5- What sizes do they come in?**

Answer- Sand spears come in sizes from 25mm 1" to 200mm diameter, and lengths from 300mm to 3000mm. The most common size is 50mm diameter by 600mm long with an open width of 0.25mm to let the water in.

### **Q6- What materials are they made from?**

Answer- The ultimate sand screen is made from stainless wedge wire; the next level down is made from a PVC wedge wire screen extruded and the budget is made from UPVC pipe with fine slots cut into it. Other materials used are steel pipe and stainless mesh are used in the manufacturing of sand spears.

### **Q7- Do I need a License to Install my sand spear?**

Answer- Every state has their own rules and regulations, even some parts in a state will have their own regional rules, places such as Fraser Island in Australia. Many states allow you to install a bore to a maximum of 3m before a bore license is needed and to be drilled by a licensed driller. So, before you start check your local water authority that control ground water licenses.

### **Q8- What sizes Sandspears are available?**

Answer- The standard size Sandspear is 50nb this is has a diameter of 60mm

They do come in sizes from 25mm to 100mm NB dia.

Note: The maximum dia. Of a stock and bore water bore is 125nb upvc pipe (140mm)

### **Q9- What Installations methods are there?**

Answer- There are three main types

- 1- Bail
- 2- Drive
- 3- Wash In

### **Q10- What's the best Sandspear?**

Answer- The stainless-steel wedge wire screen is the definitely one of the best, due to its construction method and using stainless, it is much stronger than PVC and will take more impact. Specially if you are using the drive-in method of installation, it also has a finer aperture, keeping more sand out of the bore and not getting through into your pump and piping systems.

### **Q11- Will they remove salt?**

Answer- No. You will need a desalination unit for this.

### **Q12- How do I install my Sand spear?**

Answer- There are three methods for installing sand spears Jetting, Bailing and Driving for more information on these methods see [www.sandspears.com](http://www.sandspears.com)

### **Q13- Difference between PVC Sandspear and the Stainless sand spear?**

Answer- The strength and impact force are much greater with the stainless sand spear, it also has a finer aperture to ensure the smaller particles of sand do not enter the screen, they cost more money than the Pvc. The advantage of the Pvc sand spear is the price and as it has a slightly larger aperture of 0.25mm, were the stainless has 0.15mm, more water can pass through the screen.

### **Q14- Do I need a license to drill a Sandspear?**

Answer- No

You should check what the rules are in your state with your water board or whichever looks after the groundwater, the standard is as long as you don't go over 3m

Victoria DELPW.vic.gov.au



### **Q15 – How much water can I pump from a sand spear?**

Answer- A standard system can give you a minimum of 6 L/M

Depending on the size of the bore

E.g. The maximum dia. Of a stock and bore water bore is 125nb Pvc pipe (140mm)

It also depends on the ground conditions where your sand spear is installed, On a beach such as Fraser island you could extract as much as 44 Litre per hr. In some installation 88 liters or 1200 gph have been achieved.

### **Q16- How much do they cost?**

Answer- They range from \$75 to approx. \$500 each, plus GST and delivery, if you buy the complete kit and pump then this will be a lot more expensive.

### **Q17- Do my Sandspears come with a guarantee?**

Answer- Yes

If you are not 100% happy with our product send it back and we will refund your money and pay for the freight. I have never had one return in over 10 years.

### **Q18- How to I get the water out of the screen?**

Answer - To remove water from the screen there can be a few different methods some of these are the following.

- 1: Use a small bailer.
- 2: use a hand pump.
- 3: Connect a Std. small House hold pump..
- 4: A 12 volt submersible pump that fits inside the spear
- 5: Use a Vortex Pump

### **Q19- Can I drink the water?**

Answer- Before drinking you should have the water checked by a qualified tester, but if a distance away from this, then use a small taste test and smell test. Check to make sure there is no septic or toilet systems close by that could contaminant the water, look around in the close proximity and see if there are any unusual effects on the habitat around.

As sand is a perfect natural filter for water and sea water, there is only a small possibility that it is unfit for human usage.

Please have it tested for your family and yourself safety.

### **Q20- Where do I connect my pump to my Sandspear?**

Answer- there are a number of methods, my best choice is not to connect your pump to the Sandspear, it is better to have a riser pipe to the surface which connects to the sand spear and then place a suction line down inside the riser with a non-return valve on the bottom, to keep pump primed.

### **Q21- How deep do I set my sand spear?**

Answer- This depends on what depth the water table is but usually the idea is to set the bottom of the spear to 2-3M from the surface, ensuring the top of the screen is covered by a minimum of 600mm to 800mm of water above it. This will stop the vortex action of the water coming into the spear and allowing air to enter. If enter is allowed to enter the pump will stop producing water immediately

Take into consideration of water table variations caused by tides, drought conditions or water table draw down

### **Q22- Why do I need to develop my bore?**

Answer- You don't have to, the reason is that when a sand bore is drilled or a sand spear is installed, the sand aquifer has many size particles of sand, these go from very fine to larger, the screen is designed to go into a certain size of sand, and keep this out from entering inside the screen, often there is fine particles of sand between the larger ones this can enter the screen and sometimes block the flow of water entering the screen, by developing this at the very start all the fines are removed and the bore or installation can be pumped at its maximum efficiency.

### **Q23- How do I develop a bore?**

Answer- There are a number of ways, one is to use an airline and high volumes of air to blow the sand to the top and this will clean out the fines.

As this needs a lot of mechanical equipment, the manual way is to use a plunger valve block and manually lift the plunger up and down sucking in the fine sands and pumping it to the surface. This leaves the water now coming in free from fine sands.

### **Q24- Have you sold many Sandspears?**

Answer- I have been selling these for well over 10 years, in that time we have sold hundreds of sand spears, for home use and professional drillers. In that time, we have not had a failure, only the wrong installation method has caused an issue.

### **Q25- What materials are Sandspears made from?**

Answer- the 3 main groups are as follows

- 1- Upvc 50mm cl18 pipe
- 2- Upvc Wedge wire
- 3- Stainless Steel wedge wire
- 4- PVC and stainless wire wrapped

### **Q26- What accessories do you sell?**

Answer- if you go to our buy online at this link you will see all the accessories we sell, like Pvc Fittings, bore casing, caps, etc. -

<http://sandspears.com.au/product-category/accessories-for-sandspears/>

### **Q27- What accessories do I need for my Sandspear installation?**

Answer- The main items you need are

- 1- Sandspear (to suit installation method)
- 2- Riser, connection to the surface
- 3- Pvc pipe, short piece to case dirt away.
- 4- Pump
- 5- Suction hose with non-return valve

### **Q28- Can I buy my Sandspear online?**

Answer- Yes go to this link below or click on the buy online button on our page

<http://order-online.sandspears.com.au/>

### **Q29- Do Sandspears and installation tools come in a kit?**

Answer- Yes

We sell a Kit that comes with, casing and the spear, with pump if needed, this also comes with a bottom internal cap and venturi jet to install casing.

### **Q30- Do you deliver and where?**

Answer- Anywhere in Australia and Overseas

### **Q31- Where do I get help on my Sandspear issues?**

Answer- You can go to our web page here <http://sandspears.com.au/learn-about-sandspears/>

Or feel free to contact us on [info@sandspears.com](mailto:info@sandspears.com) and ask any question that will help you.

### **Q32- Can I access water from a beach?**

Answer- Yes you can, first you must check that it is legal and within the law to do so, as it is banned in some areas.

### **Q33- Is there a situation where a Sandspear cannot be installed?**

Answer- Sandspears are used in sand (unconfirmed aquifer), if you have Dirt, Shale, Rocky, Sandy Loom or Clay, these will not work.

### **Q34- Is there any other costs with having a sand spear bore?**

Answer- There are no fees, the water you extract is free, no permits or licenses required.

### **Q35- What are the benefits of having a Sand spear installation?**

Answer- There are no fees, permits or licenses required.

Free water

No more fines for watering your gardens during restrictions in drought times.

Keep your garden alive after doing all the hard work to making it look beautiful.

No water bills

**Q36- Do I have to pay for the water I use from my Sand spear bore?**

Answer- No, at this point in time the water authorities are not subjecting water extraction from a sand spear with any costs. All water is free!

**Q37- What else can I use the water for?**

Answer- drinking if clean and safe

Watering the garden and lawns

Topping up and filling your swimming pools

Water for all your animals (horses as we know they drink a lot)

Filling up your water tank

Washing cars, trucks, boats, and equipment.

**Q38- Is there anything that will need replacing?**

Answer- Due to some small particles of sand passing through the sand spear, this may wear the seat of the non-return valve,

And cause this to leak. It could be fixed simply by cleaning the seat or replacing the valve.

I have never heard of or experienced a screen being worn out by sand passing through it.

### **Q39- How long do they last in the ground?**

Answer- This will depend on ground conditions, Some have been in the ground for over 20 years, with ground condition and the stray electric currents in the ground

This may have an effect on your Sandspears life.

Stainless will be more effected by stray electricity and salts

PVC will be more effected by state of ground conditions, such as acidity.

Being in sand it's unlikely to have an effect.

### **Q39- What locations are best suited for a Sandspear installation?**

Answer- The main requirement is a location on sand, near a beach. Clay, shale, sandy loam and other ground matter are not able to facilitate use of sand spear. If a neighbour uses a sand spear less than 6 metres, it is likely that you, too, will be able to use a sand spear, although sand spears can vary in depth, quality, and quantity between nearby sites.

### **Q40- What types of Sandspears are there?**

Answer- PVC slotted pipe, PVC Wedge Wire, Stainless wedge wire, Mesh wrapped

### **Q41- What open width do I need?**

Answer- This depends on the sand particle size.

Some sands are much finer than other areas.

PVC slotted Casing is 0.4mm slots

PVC Wedge-wire is 0.25mm slots or open width

Stainless Wedge wire is 0.15mm width

#### **Q42- What is the best pump to use in my Sandspear Installation?**

Answer- For the majority of installations a DAB EUROINOX 30/50 standard multistage pump will be fine, this is a 240-volt pump, If you needed automated off on pressure switch then a Control-D will be needed.

#### **Q43- How can I tell where the top of my water table is?**

Answer- when installing, if it is shallow, then shine a torch down the rising main pipe and see if you can see water, another test is if you cannot see it, put down a piece of wood, even if its on a rope, lower it and bring back up, taking note of depth and where the water mark is on the wood.

Lower a float until the string goes loose and measure. Or there is a toll called a fox whistle, this is lowered into the hole by string, when it goes inside water it will whistle, you can then measure the string depth.

#### **Q44- What type of pump do I use for my sand spear bore?**

Answer- Std Centrifugal such as from DAB pumps

Vortex pump if you have 100mm dia. Casing

If you are deep enough, have a large water supply and big enough casing diameter a submersible pump could be used, in most cases this cannot be used due to size restrictions.

#### **Q45- Can I make a sand-spear myself?**

Answer- yes, you can, people have made the mesh wire wrap themselves and this has been successful, you will not be able to make the wedge wire screen, and to slot pipe finely, you need a special machine and buy expensive cutting blades. To get the best results you will need a wedge wire type screen, its non-clogging and will last for ever



#### **Q46- Does my Sandspear need maintenance or an inspection?**

Answer- In the majority of cases, you will know if there is a problem as there will be no water coming out of the pump. The cases I have heard of is in the mesh wrapped screens a green mold type substance grows on the mesh and blocks it.

Some of the older spears made from steel corroded away and stopped working.

In normal circumstances, some Sandspears never need maintenance.

#### **Q47- What are the best drilling methods for Sand?**

Answer- Cable tool drilling – good

Auger – Fair

Rotary Air Unsuitable

Rotary mud – Suitable

High air pressure and down hole hammer- Unsuitable

#### **Q48 – How deep do I have to go to find water**

Answerer- For most people looking down at the ground is like looking into a crystal ball, you have no idea what is inside. Professional drillers often put in a small test bore first. The if they find water they will drill the large hole.

You will not know exactly until you dig or install your spear

#### **Q49- What is the best Sandspear?**

Answer- By far the best valve is the PVC wedge wire, at a great price, first all standard Pvc fittings.

The Best Sandspear is unfortunately the most expensive is the stainless steel wedge wire Sandspear, as it can be installed by all methods, and its strength is superior to all other types and as it has the finest opening it keeps more sand away from your pump and valves.

#### **Q50- Is there anything else I should Know before I start my sand spear installation?**

Answer- For everything you need to know there are information products on our website, read, watch, and listen to these before you start, to ensure that you chose the right methods and products. If after this you still have any doubts, issues, or questions, we are here to help you, but please read this information first as we to are busy like yourself.

#### **Q51- What is the easiest installation method?**

Answer- The easiest installation method is the wash in or jetting method, the spear is pushed into the ground by little force as the water pressure moves the sand away.

#### **Q52- Can I auger through the sand to reach my depth needed?**

Answer- No, as sand has no stickiness to it, as you extract the auger all the sand will fall off the auger and back to into the hole you just drilled, or the sand already there will just keep caving in, exactly as what happened when you dug into the sand at the beach.

**Q53- What would it cost if I got a professional in to drill or install my sand-spear?**

Answer- this will vary considerable, My guess is that there will be very little change from \$2000, if there are any issues , (one day to install it 8rs at \$200 per hr.) like depth, aquifer, access to the hole spot, then this could put the cost up to \$4k.

Get a professional quote before you decide.

**Q54- My Pump will not keep primed?**

Answer- thee should be a check valve or a one way valve near or at the bottom of your suction hose, more than likely the seat is not seating properly and allowing the head of water above it to slowly leak, or the seat is damaged, remove this valve, check for leakage and repair or replace if needed.

The other area to look is, is there any leaks or holes in the suction line, it may be where there is a join, again check, if it is a joiner then reseal with new tape or jointing paste.

**Q55- Can I make my own Bailer for my Sandspear bore?**

Answer- yes, if you have a workshop, tools and the skill to form metal and weld, then you could make one, to see what they look like see this -

[http://sandspears.com.au/tech/bailing\\_method.pdf](http://sandspears.com.au/tech/bailing_method.pdf)

**Q56- Where have you sold sand spears to?**

Answer- Fingal, Venus bay, Harvey bay, Brisbane, Gold Coast, Sunshine Coast, Frankston

### **Q57 – Do you sell Accessories for my sand spear Installation?**

Answer- Yes we sell many components, spares and tools that will make your installation easier and ensure you have a fully operational Sandspear bore. See below

### **Q58- How much water can I expect from a Sandspear installation?**

Answer- You cannot ever really know until you do a pump test, “see below” every ground condition can be different, I have seen bores that work great and another bore 1m away is producing nothing.

To get an idea talk to your neighbors if you know they have put one down and it's working.

### **Q59- How do I do a pump test for my Sandspear installation?**

Answer- After you have fully installed your system, you can check the amount of flow available by installing a pump with an adjustable tap on it, usually one that has a larger capacity than you need, if you have room you can measure the height of the water table before you start the pump test, and then measure it after you have started and see the draw down level. Start the pump test with the tap partially closed, if the water coming out is constant, keep opening the valve until you can see that the flow is slowing down, stopped or air is coming out as well. Then turn the tap in the off position until the flow goes back to normal. Measure this by using a bucket and stopwatch, this will then give you your maximum amount of flow from your sand spear installation,.

**Q60- I don't have electricity available, how can I get water out from my Sandspear Installation?**

Answer- by using a hand pump, see YouTube video - <https://youtu.be/kQ9L5hStvck>

You can also buy a 12volt dc small submersible pump that will fit down 50mm Pvc pipe, this will connect to your standard battery and cigarette plug.

**Q61- Where do I go to get help on my Sandspear installation?**

Answer- Go here and ask your question, we will be happy to help you

Email – [info@sandspears.com.au](mailto:info@sandspears.com.au)

Or call on 0438 746 894

Ps. Always happy to help you.

**BUT  
REMEMBER...**



## When purchasing or Install your Sand Spear...



- ✓ Suit to purpose
- ✓ Decide on drilling method
- ✓ Screen to match Gravel
- ✓ Check on Council regulations
- ✓ Choice the best position
- ✓ Do your homework first

## And try to avoid...

- ✗ Mud
- ✗ Soil
- ✗ Driving of PVC Screens
- ✗ Deeper than 3M
- ✗ Air leaks
- ✗ Screen above the Aquifer





# Thank You

Thank you for taking the time to look at the information we have created for you.

We hope this will be of assistance and a benefit to you with the installation of your sand spear system

If you have any more questions  
Please feel free to contact us



# **We**

## **Deliver Sand Spear Solutions**

**“At Your Service”**

**Visit our website at [sandspears.com.au](http://sandspears.com.au)**

**or call us at 0438 746 894**

**[Info@sandspears.com.au](mailto:Info@sandspears.com.au)**



# Components and Accessories



Installation

Kits

Screwed

Casing

Sand Ventures

Non return  
valves

Surface casing

Rising main

PVC Fittings

Poly Fittings

Hand Pumps

Caps

Casing

Wash Down Valves

Spear Points

Pumps

Wedge Wire

PVC Pipe

Wire Mesh Screens

Bore Developing

Tools



# Sand Spears

**Solving your Sandspear, Installation and  
Pumping Challenges  
with Trust and Integrity**

