



Sydney 905 Water Filters - Effective, Portable and Sustainable

Information Summary - Product Deck

Introduction:

Imagine a world where everyone has access to clean water - where mothers can provide safe water to their families – where sickness doesn't rob the children of their education through absenteeism. Imagine a world where money doesn't have to be spent on buying medication for preventable waterborne diseases but is spent feeding hungry people. Imagine a world where parents can feel healthy enough to work and earn a living so they can help change their world for the better.

The health and welfare of people, especially that of vulnerable groups such as children, the elderly and the poor, as well as the immuno-compromised, are closely connected to the availability of adequate, safe and affordable water supplies.

Fresh water, in sufficient quantity and quality, is essential for all aspects of life and sustainable development. It is a very good catalytic issue to facilitate the self empowerment processes. Water that is fit for human consumption must be clean and safe. It must be water that does not have offensive odour or colour, making it undesirable and unpalatable, and deterring people from drinking it. It must be desirable to drink it and people must have confidence that they can give it to their family with certainty that they are giving them water that is fresh, clean, clear, healthy and safe.

Globally, access to safe drinking-water still remains a problem and the reality is that a very high percentage of disease that burden society can be attributed to impure water. There are still billions of people that lack safe water, sanitation and handwashing facilities: 844 million people lack basic water services, 2.2 billion lack safely managed drinking water, 4.5 billion people lack access to safely managed sanitation and 892 million people still practice open defecation which contributes to the prevalence of waterborne diseases.

The United Nations General Assembly, in its resolution 71/222, proclaimed the period from 22 March 2018 to 22 March 2028 the International Decade for Action, “Water for Sustainable Development” (i.e. the “Decade”).

There are various policies and programmes that have been put into place, globally, for the eradication of poverty and thus a reduction of vulnerability within communities. One overarching agenda is the United Nations', "2030 Agenda for Sustainable Development" (i.e. "The 2030 Agenda"). It is a plan of action for people, the planet and prosperity. Member States resolved to “end poverty in all its forms”, to take bold and transformative steps to shift the world on to a sustainable and resilient path and to ensure that “no one will be left behind” and central to this vision is clean and safe water.

The 2030 Agenda established 17 Sustainable Development Goals and 169 global targets relating to development outcomes and means of implementation for the period 2015–2030. These were designed to be integrated and indivisible and to balance the social, economic and environmental dimensions of sustainable development.

The Company:

Being an ex Professional Land Surveyor, Justin Sadler who is the owner and managing director of Sydney 905 Filters, whilst out on surveys in both rural and urban settings, has seen and experienced the water woes effecting a majority of communities in South Africa and Africa at large.

This motivated his passion to be of service to all and to provide an effective and fully sustainable solution in the provision of clean and safe water to all whilst advocating and supporting good environmental stewardship. This coupled with the tragic loss of their daughter Sydney, who passed away on the 9/05/09, underpinned the establishment of the company, Sydney 905 Filters (Pty) Ltd, named in loving memory of her.

Sydney 905 Filters (Pty) Ltd is based on the South Coast of KwaZulu-Natal, South Africa and operates under a unique humanitarian entrepreneurship, "profit-for-purpose" business model. This approach aligns human and environmental betterment initiatives with its core business of creating and distributing life saving products which are primarily for the developing world. We are acutely aware that our products are vital to underpinning these human and environmental betterment initiatives and thus make every endeavor to align our core capabilities to support these initiatives, both locally and internationally.

Strong support of the United Nations' Sustainable Development Goals (SDGs) is a defining characteristic of the company.

The company logo symbolises the human and environment’s complementary, interconnected and interdependent relationship. This is personified in the Yin and Ying shape of the water droplet and leaf within the logo and with the all encompassing nurturing human arm and hand.

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Yin and Yang is a concept of dualism in ancient Chinese philosophy, describing how seemingly opposite or contrary forces may actually be complementary, interconnected, and interdependent in the natural world, and how they may give rise to each other as they interrelate to one another. ^(Wikipedia)

Yin and Yang shows balance where a portion of the opposite element is seen in each section of the symbol and one has no meaning without the other. The two halves that together complete the equilibrium of the wholeness.

The Product:

Sydney 905 Filters has designed, developed and supplies two filters, namely, "The Sydney 905 Filter" which is a 0.1 micron hollow fibre membrane Point-of-Use (POU) microfiltration water filter and the "The Sydney 905 Purifier" which is as a 0.01 micron hollow fibre membrane POU ultrafiltration water filter/purifier. Both filters are highly effective, portable, fully sustainable (i.e. no need to replace any filter cartridges), small, lightweight and durable. There are no chemicals used in the filter and the filtered water will still contain the naturally occurring safe and healthy minerals. They will augment or replace any existing water supply systems, whether improved or unimproved, urban or rural.

The Sydney 905 Filters[®] are also the most versatile filters in the global market thus allowing numerous setup configurations as can be seen in the photos below. They prove to be one of the most cost efficient ways to get safe water regardless of water source. They also make ideal water filters for emergency rapid responses such as in areas impacted by natural disasters as well as manmade disasters such as areas under conflict.



These water filters are:

- **Extremely effective** - Extremely small micron ratings. Two variants in pore sizes, the 0.1 micron (absolute) pore size filter and the 0.01 micron (absolute) pore size purifier. These filters also remove turbidity and odour from the water.
- **Portable** - Whether urban or rural and indoors or outdoors, use it around the home/property or take it with you camping or other holidays, i.e. a perfect "travel mate", just in case you are concerned about the integrity of your destination's water.
- **Fully sustainable** - Will last many years. The lifespan depends on the proper care of the filter/purifier and the turbidity of raw water. Only the occasional basic backwashing required, with the supplied syringe.

©

- **Versatile** - Allowing numerous setup configurations (as seen above but not limited to).
- **Cost efficient** - Low cost of the filter/purifier, saving the household/beneficiary money by not having to buy fuels for boiling water for purification, medical bills etc.
- **Small, lightweight and durable** - there are no moving parts and thus not prone to breakages.
- **Fast flow rates** - There is a high flow rate of the filter and this flow rate is determined by a combination of:
 - Head pressure (The distance from the top of the water to the filter).
 - Pump used.
 - Altitude (The higher the altitude, the slower the flow rate).
 - How clean the filter is.
 - Turbidity of the water.
 - The filter/purifier itself (there are big variations between the filter and the purifier).

The 0.1 micron filter and the 0.01 micron purifier can be gravity fed or can handle a pressurised feed. Both product membranes have a tolerance up to just over 4 bars of pressure which will give about 80 litres per minute for the filter and about 10 litres per minute for the purifier. However, due to the microscopic size filtration pores of the membranes and the expansion properties under high pressure of the polypropylene filter and purifier casings, it is recommended to only use the filters and purifiers under gravity feed.

A safe and realistic flow for the completed encased filter is around 5 litres per minute and around 1 litres per minute for the purifier.

No chemicals are used and the filtered/purified water will still contain the naturally occurring safe and healthy minerals. They can handle from a gravity feed to a pressurised supply of water.

They can be used on a universally common 3/4" threaded tap connection or a non-threaded tap connection via the supplied universal tap adapter, in rural or urban areas, indoors or outdoors, where the source of water can be a risk to one's health. Any household, property or area that has a water flow or vessel with or where a threaded or non-threaded connection can be attached, should have one of these filters so as remove any doubt with the health integrity of the water.

The Rural kit includes: Filter, plastic tap, backwashing syringe and universal adapter.



The Urban Kit includes: Filter, backwashing syringe, universal adapter and 1/2" to 3/4" adapter.



The Technology:

The Sydney 905 filters prove to be one of the fastest, easiest, highly effective and most cost efficient ways to get safe water regardless of water source.

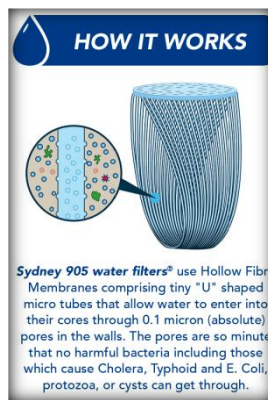
These water filters use hollow fibre (Polysulfone) membranes.

Both the filter and the purifier (i.e. collectively referred to as filters) have microscopic pores blocking any particles bigger than their respective micron ratings and they have "ion-exchange" capabilities. This means that the filters also have what we call an "ion-exchange" impact on the ions of various elements in water such as chlorine, sulphides etc. This impact is brought about by the natural electric or static charge that is created between the polyolefin/polysulfone fibres of the membrane inside the filters. This ion-exchange will positively reduce chlorine and even some metals and chemicals in the water by altering their respective ions thus further improving on the quality of the water.

There are two types of filters available for sale/distribution:

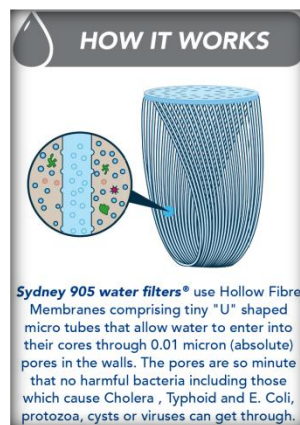
- With the 0.1 micron absolute pore size filter, it is impossible for any bacteria, protozoa or cysts to pass through this microfiltration filter. This is the company's standard filter. It has been tested by WHO (Testing Reference: 24/1/2020-R3-17). Membrane area is 0.5m² (nominal value).

As the pores of the membranes within the Sydney 905 Filter are 0.1 microns in size, this means 700 pores can fit, side by side, in a width of a single human hair or approximately 10 000 will fit into a millimeter.



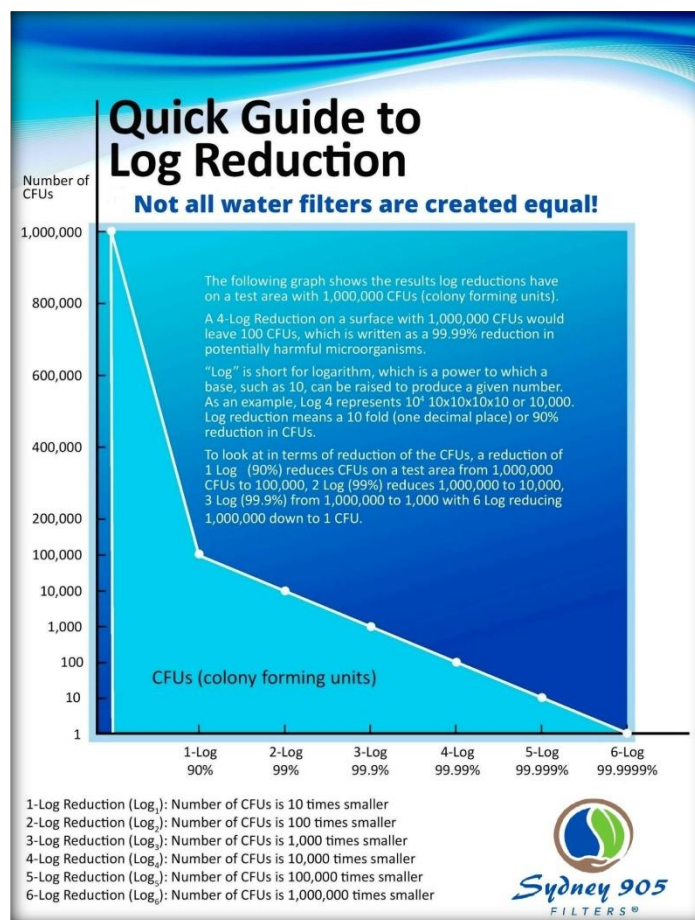
- If viruses are an issue, then with the 0.01 micron absolute pore size purifier, it is impossible for viruses in addition to bacteria, protozoa and cysts to pass through this ultrafiltration purifier. This purifier is known to block even the smallest known virus to man which is the MS2 virus. It has been tested by WHO (Testing Reference: 24/1/2020-R3-18). Membrane area is 0.61m² (nominal value).

As the pores of the membranes within the Sydney 905 Purifier are 0.01 microns in size, this means 7000 pores can fit, side by side, in a width of a single human hair or approximately 100 000 will fit into a millimeter.



- **Microbiological Contamination Removal Rates**

		Waterborne Diseases	WHO, NSF/ANSI P231 & US EPA EPA Removal Rate Requirement	Filter Removal Rate	WHO, NSF/ANSI P231 & US EPA Far Exceeds Standards
0,01 Micron Ultrafiltration Purifier	0,1 Micron Microfiltration Filter	Bacteria which cause: Cholera, Botulism(Clostridium botulinum), Typhoid (Salmonella typhi), Amoebic Dysentery, E.coli, Coliform Bacteria, Streptococcus, Salmonella	99,0% 2 log	99,99999% 7,2 log	Yes
		Protozoan (Cyst): Giardia, Cryptosporidium, Cyclospora	99,0% 2 log	99,99999% 7,2 log	Yes
		Viruses: Hepatitis A (HAV), Hepatitis E (HEV), Poliovirus, Norwalk, Rotavirus, Reovirus, Adenovirus, Coxsackievirus, Echovirus, Astrovirus, Corona Virus (SARS), MS2, phIX-174	99,90% 3 log	99,999% 5,3 log	Yes



Both the 0.1 micron **Sydney 905 Filters** (WHO testing reference 24/1/2020-R3-17) and the 0.01 micron **Sydney 905 Purifiers** (WHO testing reference 24/1/2020-R3-18) have been stringently tested and evaluated (T&E) under "Round III of the World Health Organization (WHO) International Scheme to Evaluate Household Water Treatment Technologies".

The testing followed the requirements of the WHO protocol for filtration technologies and the evaluation is based on performance criteria set out in "Evaluating Household Water Treatment Options: Health-based targets and microbiological performance specifications" (WHO, 2011).

WHO allowable reduction target for "Targetted Protection" against bacteria and other protozoa is a reduction of $\geq 2 \log_{10}$. This equates to a 99.0 % reduction rate of bacteria and other protozoa. 2 log reduction means that the number of potentially harmful microbiological "Colony Forming Units"(CFUs) is **100 times smaller** in a particular test area.

The 0.1 micron **Sydney 905 Filters** obtained and an incredible average $\geq 7.1 \log_{10}$ reduction in bacteria and other protozoa. This equates to more than a 99.99999 % reduction rate of bacteria and other protozoa. 7 log reduction means that the number of potentially harmful microbiological "Colony Forming Units"(CFUs) is **10 000 000 times smaller** in a particular test area.

The 0.1 micron Sydney 905 Filters far exceeded WHO's allowable reduction performance targets for targetted bacteria and other protozoa.

The testing of the 0.01 micron **Sydney 905 Purifier** followed the requirements of the WHO protocol for filtration technologies and investigated the purifiers abilities to reduce bacteria (*Escherichia coli* - *E. coli*), protozoa and viruses (coliphages MS-2 and phiX-174) in microbiological challenge water. The overall challenge water was made up of "General Test Water" (GTW) which simulates high quality ground water and "Challenge Test Water" (CTW) which simulates surface water.

The WHO allowable reduction target for "Comprehensive Protection" against bacteria and other protozoa is a reduction of $\geq 2 \log_{10}$ (See above mention of 99.0 % CFU reduction within a test area).

The 0.01 micron **Sydney 905 Purifiers** obtained and an incredible average $\geq 7.3 \log_{10}$ reduction in bacteria and other protozoa. This equates to more than a 99.99999 % reduction rate of bacteria and other protozoa. 7 log reduction means that the number of potentially harmful microbiological "Colony Forming Units"(CFUs) is **10 000 000 times smaller** in a particular test area.

The WHO allowable reduction target for "Comprehensive Protection" against viruses is a reduction of $\geq 3 \log_{10}$. This equates to a 99.9 % reduction rate of viruses. 3 log reduction means that the number of potentially harmful microbiological "Colony Forming Units"(CFUs) is **1000 times smaller** in a particular test area.

The 0.01 micron Sydney 905 Purifiers obtained and an overall average $\geq 5.3 \log_{10}$ reduction in viruses (i.e. average $\geq 5.5 \log_{10}$ for MS-2 and an average $\geq 5.1 \log_{10}$ for phiX-174). This equates to more than a 99.999 % reduction rate of viruses. 5 log reduction means that the number of potentially harmful microbiological "Colony Forming Units"(CFUs) is **100 000 times smaller** in a particular test area.

This far exceeded WHO's allowable reduction performance targets for bacteria, protozoa and viruses in order to provide "Comprehensive Protection".

Technical:

Filtering effectiveness: It's all about microns!

The micrometer or **micron (μm)** is unit of length equalling 1×10^{-6} metre, which is **one millionth** of a meter or **one thousandth** of a millimeter. Here are examples of some micron sizes:

- A red blood cell is typically 8 μm .
- A width of a strand of spider web silk is typically 3 - 8 μm .
- A white blood cell is typically 25 μm .
- A human hair is on average 70 μm .
- A grain of table salt is approximately 100 μm .

A micron rating for a water filter indicates the ability of the filter to remove contaminants by the size of the contaminant's particles. The higher the micron number the larger the filtration pores.

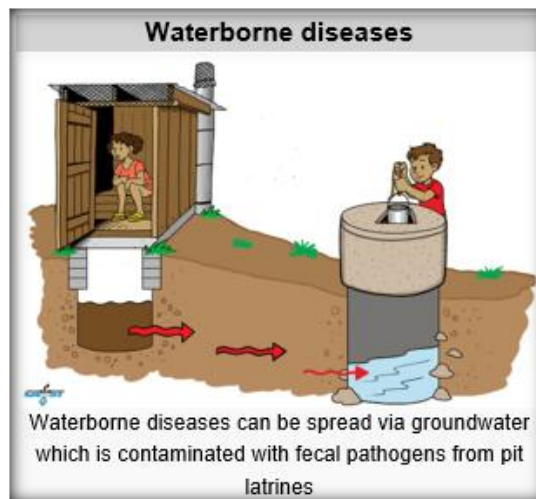
Bacteria range in size from 0.2 to 2 microns in width or diameter and from 1 to 10 microns in length for the non-spherical specie. The common *Escherichia coli* (**E. coli**) is a rod-shaped bacterium where each bacterium measures approximately 0.5 µm in width by 2 µm in length. *Vibrio cholerae* (**Cholera**) is also a rod-shaped bacterium, measuring 0.3 µm in width and 1.3 µm in length. Viruses are typically 0.004 to 0.1 microns in size, which makes them about 100 times smaller than bacteria.

Bearing this in mind, one should seek a filter with a smaller micron number for better filtering capability; the larger the micron number, the less effective the filter in removing health threatening contaminants.

The Benefits:

Safe drinking water, adequate sanitation and hygiene and a healthy environment are fundamental to protecting health and directly contribute to achieving good health and wellbeing. Waterborne diseases are closely linked to poverty and disproportionately affect vulnerable communities that do not have access even to basic safe drinking water, adequate sanitation and hygiene (i.e. WaSH) services. Universal access to WaSH is essential for ending preventable deaths and in particular cholera, diarrhoea and other waterborne diseases and for improving nutrition, health service delivery, social wellbeing and economic productivity. Estimates suggest that every US\$1 invested in WaSH yields a US\$5 return, considering all social and economic benefits.

Let's face the reality, there is a significant lack of quality water infrastructure, globally, to meet the growing demand on water and what is around is often broken thus forcing many to seek water from their nearest raw water source, such as rivers, dams, boreholes etc. The unfortunate part of this is that most of these water sources are contaminated making them unsafe for consumption/use. They are contaminated because the no/poor level of sanitation in these areas as well. Most of the contaminants from this no/poor sanitation leaches into the water sources and finds its way into households, making the kids and the rest of the household sick (See below picture). It is know that even "protected" boreholes are also prone to contamination that is even if the pump is working in the first place! There is also a known fact that there is a high possibility of recontamination along the journey from the borehole to the household.



By distributing these filters to both rural and urban households, in particular, areas of high sanitation issues (i.e. high priority areas) and where a high percentage of the household's main source of water is from unprotected ground and surface water supplies, will empower the households to maintain the integrity of their own water consumption, i.e. becoming "self-providers", and thus have a "decentralising effect" on the supply of clean and safe water by government, local authorities and any other support entities. This also allows them to be proactive rather than reactive to disease incidence mitigation.

The funding and distribution of these filters will also support any action-orientated corporate or other social responsibility programmes aimed at ensuring the sustainability of the environment and communities. This will improve the entity's water and environmental stewardship as the provision of these water filters for the cleaning of impure water will directly impact on at least 11 of the 17 Sustainable Development Goals (SDGs), namely:

- Goal 1 – No Poverty
- Goal 3 – Good Health and Wellbeing
- Goal 5 – Gender Equality
- Goal 6 – Clean Water and Sanitation
- Goal 8 – Decent Work and Economic Growth
- Goal 10 – Reduced Inequality
- Goal 11 – Sustainable Cities and Communities
- Goal 12 – Responsible Consumption and Production
- Goal 13 – Climate Action
- Goal 15 – Life on Land
- Goal 17 – Partnerships to achieve the Goal

However, due to the interlinkage between all the SDG's, the filters can be said to have a positive impact on all SDGs.

The distribution of these filters will also underpin carbon offset initiatives. It must also be noted that one filter can provide benefit to at least 5 people which seems to be the average household size. If there are a cluster of a few families living in close proximity together, then a filter can be shared between them. The average family of five who cleans their water ©

by boiling burns the equivalent of 13 to 50 trees, 290 litres of oil or 120 kilograms of natural gas. The average rural family emits approximately 2.5 tons of carbon emissions per annum. The only energy source required by the filters is gravity.

The distribution of these filters will also underpin the issuance of Water Betterment Certificates whereby entities use the Water Benefit Standard to make the most of their investments in water management and stewardship. They can either certify their own best-practice water management efforts (e.g. in their supply and value chains) or invest in certified project water benefits elsewhere that are generated through the annual project verification process of Water Benefit projects.

They make ideal water filters for, *inter alia*, rapid response **emergency relief**.

By distributing these filters to households, in particular areas of poor sanitation and no or limited access to clean and safe water, they will, *inter alia*:

- Empower households to maintain the integrity of their own water consumption, i.e. becoming "self-providers", and have a "decentralising effect" on the supply of potable water by government, local authorities and any other support entities.
- Provide beneficiaries with their own contingency plan in the provision of potable water.
- Provide access to potable water regardless of available raw water source.
- Free up time, especially for woman and children who are the main water fetchers, to focus more on their own development as it, *inter alia*, alleviates the burden for them, in the time queuing and fetching clean water. Also minimising woman and children's exposure to sexual attack whilst traversing the long distances to fetch water from boreholes etc. This is empowering woman and children.
- Provide the ability to create lasting improved health, good hygiene practices and thus sustained human growth and development and overall improved wellbeing.
- Decrease morbidity and mortality especially amongst children.
- Allow hand and food washing from any source of raw water put through the filter as the water will be clean and safe to use post filtration.
- Lower the incidences of disease especially preventable waterborne disease.
- Support the treatment of HIV and other dreaded diseases.
- Increase water consumption.
- Improve behaviour and school performance in children.
- Improve physical and cognitive development in children.
- Elevate energy levels through added hydration. Children that drink more water will have more energy to play and study. Adults have greater energy to work.
- Help in the eradication of poverty.
- Filters can be used as part of a "Safe Water Enterprise" setup to generate an income for a household.
- Allow less money to be spent on buying fuels to burn so as to boil water for purification.

- Allow less money to be spent on medication and doctor/clinic visits...cost saving for individual, family and government/support entity.
- Create less absenteeism from school and work. Sickness doesn't rob children of an education and the ability of parents to work. Greater economic benefit for the region
- Create less deforestation and thus CO₂ and other noxious gas emissions. The average family of five who cleans their water by boiling burns the equivalent of 13 to 50 trees, 290 litres of oil or 120 kilograms of natural gas. The average rural family emits approximately 2.5 tons of carbon emissions per annum. The only energy source required by the filters is gravity.
- Improve safety in the household as there is no need to burn fuels causing the inhalation of noxious gases or run the risks of causing a devastating fire.
- No more intake of noxious gases that are released when various fuels are used to heat the raw water so as to provide some form of purification. This intake is known to cause respiratory related illness. Not only is carbon dioxide a huge problem but other noxious gases such as nitrogen dioxide (NO₂) which is 300 times more potent as a greenhouse gas than carbon dioxide and lasts 120 years or methane (CH₄) which is 21 times more potent than carbon dioxide and let's not forget particulates.
- Improve water stewardship.
- Allow for the ability to irrigate crops with potable water.
- Provide sustainable living/livelihoods
- Generate greater productivity on small scale farms as less time taken out by mother to attend to sick children.
- Prevent microbiological contamination of fresh produce during planting, growing, harvesting, storing and possible market sales.
- Provide rapid response emergency relief.
- Instantaneously provide clean and safe water on demand.
- Can be used in areas of conflict where people are displaced and on the rapid move. Ideal for "on-the-go" situations!

Currently, there is a massive global campaign on good hygiene practices in the path of Covid. We need to take water filtration to the household level to be effective in, not only, stopping waterborne disease infection but also help stem the spread of Covid and other diseases. Household's are able to practice good hygiene practices all of which is underpinned by access to clean and safe water.

A question to the many "influencers" out there is, how are the millions that don't have access to clean and safe water (i.e. they rely on untreated ground and surface water supplies) meant to practice good hygiene? Are they to be forgotten about, left behind? No!

We need to take water filtration the household level to be effective in stopping waterborne disease infection and help stem the spread of Covid by allowing the household to practice good hygiene practices.

We can use Sydney 905 filters in helping, *inter alia*, curb the spread of Covid. Our filters can be attached to a supplied bucket and tap in what we call a "Rural Household Water Treatment System/Hand Washing Station" which is an effective hand washing station with a difference!



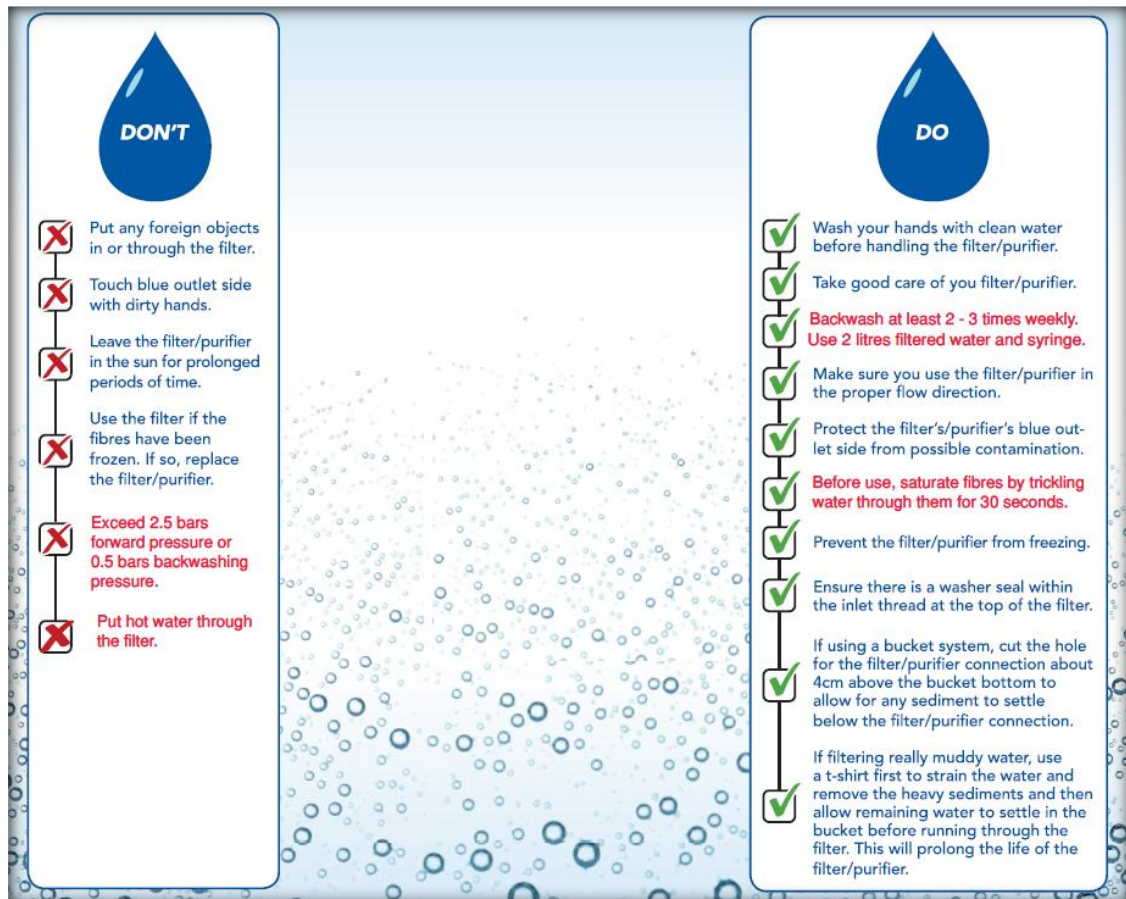
Hand washing stations and other water harvesting/storage tanks that are being promoted around the globe have one critically restricting/limiting factor and that is they all rely on a supply/input of clean and safe water in order to function properly. How often would a house receive a "top up" of clean water? More than likely never! Our filters allow for the fact that this is more often than not possible, so our setup allows for any (contaminated) input source of raw water to be used in the storage vessel and then to pass through the filter resulting in clean and safe water as an output. Now the household can use this filtered water to, *inter alia*, drink, bath, wash hands, wash clothes, irrigation and the washing of farmed produce and other food all of which supports good hygiene practices!

INSTALLATION/CLEANING INSTRUCTIONS & DO's and DONT's (Primarily Urban Setup)

The 0.1 micron Microfiltration Filter:

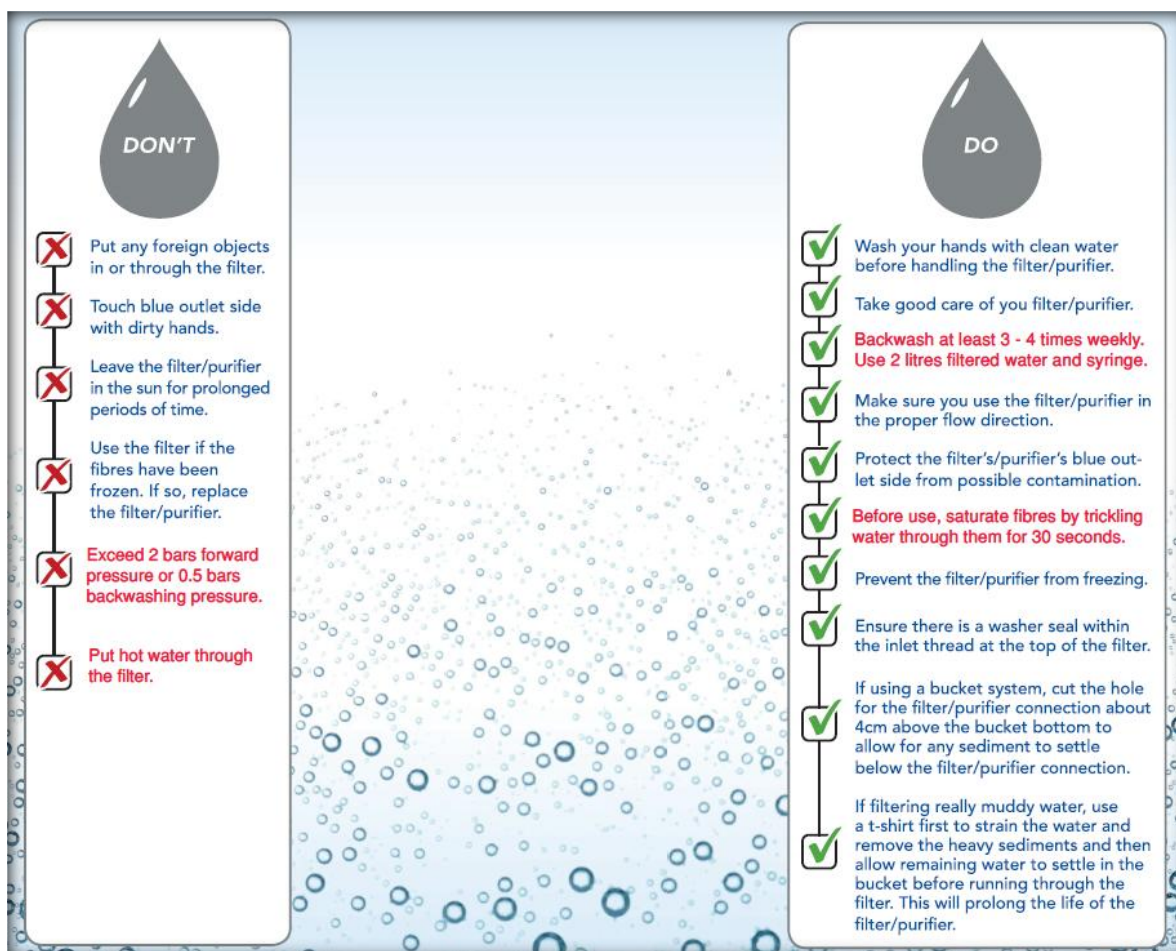
HOW TO INSTALL YOUR NEW WATER FILTER	HOW TO CLEAN YOUR FILTER
<ul style="list-style-type: none"> Make sure your hands are clean. Remove the filter from packaging and ensure the washer seal is still in place at the top of the inflow (white) side. If you have a threaded connection then screw the filter directly onto this connection but do not screw too tight. If you need to use the universal adapter then tightly attach the adapter to the tap, once secured then attach the filter to this adapter. The white side is the raw water inlet side and the blue side is the filtered water outlet side. Gently turn the water flow on and allow the filters to saturate for about 30 seconds. Do not exceed 2.5 bars of pressure thereafter. Turn off the raw water supply once you have the required amount of filtered water. It is best to disconnect the filter after use and store it in a clean environment. Keep the blue outlet side away from possible contamination. If you are concerned the blue side might be at risk of contamination then run a litre of water through the filter which will remove any contaminants from the blue outlet side nozzle before consuming your next lot of filtered water. 	<ul style="list-style-type: none"> Make sure your hands are clean. Keep a separate beaker of filtered water for backwashing. Do not EVER use unfiltered water to backwash. Unscrew the filter from the raw water connection or adapter. Use the supplied plunger/syringe to suck up some filtered water from the beaker. Insert the plunger/syringe nozzle into the nozzle of the filter on the blue side. Depress the plunger/syringe forcing the water in the opposite flow direction which will purge all the sediments and dirt from the fibres and out the white inflow side nozzle. Do not exceed 0.5 bar backwashing pressure. Repeat this process until you see the purged water is as clear as the filtered water being used to backwash. Use approximately 1 - 2 litres filtered water for backwashing. Reattach the filter for reuse. Clean the filter 2 - 3 times per week. The more turbid the water, the more frequent you need to backwash.

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The 0.01 micron Ultrafiltration Purifier:

HOW TO INSTALL YOUR NEW WATER FILTER	HOW TO CLEAN YOUR FILTER
<ul style="list-style-type: none"> Make sure your hands are clean. 	<ul style="list-style-type: none"> Make sure your hands are clean.
<ul style="list-style-type: none"> Remove the filter from packaging and ensure the washer seal is still in place at the top of the inflow (white) side. 	<ul style="list-style-type: none"> Keep a separate beaker of filtered water for backwashing. Do not EVER use unfiltered water to backwash.
<ul style="list-style-type: none"> If you have a threaded connection then screw the filter directly onto this connection but do not screw too tight. If you need to use the universal adapter then tightly attach the adapter to the tap, once secured then attach the filter to this adapter. The white side is the raw water inlet side and the blue side is the filtered water outlet side. 	<ul style="list-style-type: none"> Unscrew the filter from the raw water connection or adapter.
<ul style="list-style-type: none"> Gently turn the water flow on and allow the fibres to saturate for about 30 seconds. Do not exceed 2 bars of pressure thereafter. 	<ul style="list-style-type: none"> Use the supplied plunger/syringe to suck up some filtered water from the beaker.
<ul style="list-style-type: none"> Turn off the raw water supply once you have the required amount of filtered water. 	<ul style="list-style-type: none"> Insert the plunger/syringe nozzle into the nozzle of the filter on the blue side.
<ul style="list-style-type: none"> It is best to disconnect the filter after use and store it in a clean environment. Keep the blue outlet side away from possible contamination. 	<ul style="list-style-type: none"> Depress the plunger/syringe forcing the water in the opposite flow direction which will purge all the sediments and dirt from the fibres and out the white inflow side nozzle. Do not exceed 0.5 bar backwashing pressure.
<ul style="list-style-type: none"> If you are concerned the blue side might be at risk of contamination then run a litre of water through the filter which will remove any contaminants from the blue outlet side nozzle before consuming your next lot of filtered water. 	<ul style="list-style-type: none"> Repeat the process until the purged water is as clear as the filtered water being used to backwash. Use approximately 1 - 2 litres of filtered water for backwashing.
	<ul style="list-style-type: none"> Reattach the filter for reuse.
	<ul style="list-style-type: none"> Clean the filter 3 - 4 times per week. The more turbid the water, the more frequent you need to backwash...



INSTALLATION/CLEANING INSTRUCTIONS & DO's and DONT's (Primarily Rural Households)

(See next page)

Step 1 - Verify Contents



- 1) Sydney 905 Filter/Purifier
- 2) Plastic tap
- 3) Two rubber tap washers
- 4) One plastic tap backing nut
- 5) Backwashing syringe

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Step 2 - Find a bucket or other water storage vessel



Do not use a bucket/water storage vessel that has previously stored chemicals.

©

Translation:

Translation:

Step 3 - Make a hole in the bucket/water storage vessel



This can be done by hand with a sharp tool or knife. Make a hole just big enough to tightly fit the back of the tap, which is approximately 12,5cm in width, into it. Make the hole about 4cm above the bottom of the bucket/water storage vessel. This height will prevent settled sediment from entering the filter/purifier.

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Step 4 - Attach the plastic tap with washers and backing nut onto the bucket/water storage vessel



Make sure one washer is on the outside of the bucket/water storage vessel and the other is on the inside of the bucket/water storage vessel along with the backing nut screwing it firmly onto the plastic tap and against this inside washer.

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Translation:

Translation:

Step 5 - Attach the filter/purifier to the plastic tap



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Step 6 - Add the raw water supply to the bucket/water storage vessel



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Translation:

Translation:

Step 7 - Turn on the plastic tap



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Step 8 - Collect the required amount of filtered/purified water and then turn off the plastic tap



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Translation:

Translation:

The greater the distance between the filter/purifier and the top of the water line in the bucket/water storage vessel, the faster the water will flow through the filter/purifier. ALWAYS filter water into a CLEAN vessel.

Backwashing Instructions for the Sydney 905 Filter and the Sydney 905 Purifier

Step 1 - Reserve some filtered/purified water



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Step 2 - Determine if the filter/purifier needs backwashing

When the water flow through the filter/purifier stops or slows down, then the filter/purifier needs to be backwashed.

The more turbid ("dirty") the water, the greater the frequency required to backwash the filter/purifier.

It is recommended to backwash the filter ever second day after use and the purifier ever day after use.

Look after your filter/ purifier and it will look after you!

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Translation:

Translation:

Step 3 - Fill the syringe with some filtered/purified water that was collected in "Step 1"



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Step 4 - Unscrew the filter/purifier from the plastic tap



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Translation:

Translation:

Step 5 - Backwash with the syringe



With the filtered/purified water from the syringe, inside the filter/purifier, it is possible to block both ends of the filter/purifier with your fingers and shake the filter/purifier so that any stubborn dirt gets dislodged. This is not a necessary step but it can be done. Be careful when doing this.

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Reverse flow - Do this using about 1 - 2 liters of the reserved filtered/purified water in "Step 1"

Step 6 - Reconnect the filter/purifier and you good to go again!



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Translation:

Translation:

Backwashing with contaminated water



CAUTION: Do not backwash with contaminated water. If you have no option but to use contaminated water then run about 2 liters of filtered/purified water through the filter/purifier before drinking from the filter/purifier again. Do not drink this water. This is necessary to flush the filter/purifier.

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