

Home

Continuous-flow
Reverse Osmosis system
for home application

Aqua
PUR



AquaPUR
Slim ED



AquaPUR Slim
with simple commands and water
production from 70 to 90 litres/hour
is the compact version:
33 x 43 x 23 cm only!

AquaPUR is a continuous-flow reverse osmosis system able to deliver 70-110 lt/h of pure water.

It comes with autocontrol *-ED series-* or manual control *-Slim or Standard version-*. It is equipped with a sediment and a granular activated carbon prefilters that eliminate suspended particles such as rust, sand, sediments and remove chlorine that may damage the R.O. membrane module.

AQUAPUR SELECTIVELY REJECTS THE CONCENTRATED SALT SOLIDS AND ELIMINATES NITRATES, BACTERIA, VIRUSES, CHLORINE AND OTHER CONTAMINANTS DISSOLVED IN THE DRINKING WATER.

Standard Features

- Stainless steel frame
- Inlet solenoid valve
- Automatic switch off for low or high pressure
- Pressure gauge
- TFC high flow membrane
- Automatic start and stop switch from the faucet
- Automatic membrane flushing*
- TDS reading on product water*
- Failures warning for high/low pressure*
- Manual membrane flushing
- Installation kit

* Standard features for AquaPUR Slim ED and AquaPUR ED only



AquaPUR is equipped with a flushing system for the membrane and a by-pass valve to adjust the hardness of the treated water.

Small size and easy to install, practical, safe and reliable, AquaPUR can solve the bothering problem of purchasing mineral water.



PERTECO

ENVIRONMENTAL TECHNOLOGIES

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AquaPUR



What is Reverse Osmosis?

Osmosis is a natural process, known for over 200 years, which reverse osmosis systems are based on. The wall of living cells are natural semipermeable membranes. This means that the membrane is selective, some materials can pass through it, others cannot. The semipermeable nature of the membrane allows the water to pass much more readily than the dissolved minerals. If two solutions with different salts concentration are separated by a semipermeable membrane, the water in the less concentrated solution tries to dilute the more concentrated solution: this is the natural osmosis phenomenon. When a pressure is applied to the concentrated solution, the flow of water through the membrane is reversed and the process of reverse osmosis is established. The membrane's ability to selectively pass water is unchanged, only the direction of water flow is changed.

With the same features of quality and safety, AquaPUR is available in two versions: AquaPUR ED -with automatic controls- and AquaPUR -simple commands-.

Small size and easy to install, the series AquaPUR has a 50-110 L/h continuous-flow.

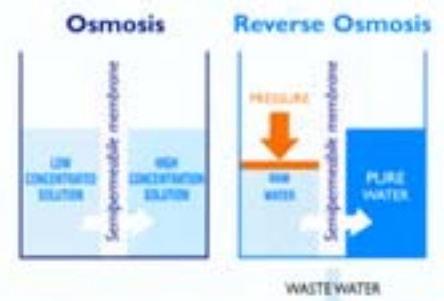


AquaPUR ED

AquaPUR is practical, reliable and cost saving, ideal for bar, restaurants and small Communities.



AquaPUR



Raw water characteristics

Temperature (°C)	min. 5 - max. 30
TDS max. (mg/l)	2.000
pH	min. 3 - max. 11
Free Chlorine max.	0,1 ppm
Water hardness max.	45° F

AquaPUR TECHNICAL SPECIFICATIONS

Model	AquaPUR Slim			AquaPUR		
	NF	TW	NF 70	TW	HR	
Water production*	liters/hour	90	70	110	90	50
	gallons/hour	23	18	28	23	13
Membrane type	TFC					
Sediment prefilter	5 micron					
Granular activated carbon prefilter	25 micron					
Power supply	230 Volt - 50 Hz					
Electric consumption	300 Watt	300 Watt	550 Watt	550 Watt	550 Watt	
Dimensions (a-b-c) mm	322-425-226	322-425-226	325-485-320	325-485-320	325-485-320	

* With raw water at 25°C of temperature and 800 mg/l of TDS (Total Dissolved Solids). The quantity of produced water depends on feed water temperature and TDS.



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Sterilizzatori UV / UV Sterilizers

PERTECO UV sterilizers can eliminate bacteria and viruses from the water for domestic, commercial, industrial application and anywhere a pure, free bacteria and free chlorine water is requested.

They are a valid alternative to using chemicals that, besides altering the water taste, can be noxious to environment. They are equipped with activated carbon cartridge to eliminate bad taste and odour from water.

A 5 micron pre-filtration can be provided for sediments into the water to get UV rays be more effective and carbon filter have longer life.

The high intensity of the UV rays can kill microbes up to 99.9% and disarm their reproducing capacity.

The average life of a lamp is 9000 hrs.

Model	Lt./min	Lt./hour	Cartridge type	Absorption	In-out	Dimensions (cm)
UV SERIES -Max pressure: 4 Bar-						
UV1-CBC	4	240	activated carbon 0.5 µ	10 Watt	½"	12 x 12 x 39
UV2-SD/CBC	4	240	polypropilene 5 µ and activated carbon 0.5 µ	10 Watt	½"	24 x 12 x 39

Power supply: 230 Volt. a.c. - 50 Hz, trasformed to 12 Volt d.c.
Max. pressure: 4 Bar

UV2-SD/CBC



UV1-CBC

Model	Lt./min	Lt./hour	Cartridge type	Absorption	In-out	Dimensions (cm)
UVB SERIES						
UVB1-CBC	8	480	activated carbon 0.5 µ	10 Watt	½"	13 x 14 x 40
UVB2-SD/CBC	8	480	polypropilene 5 µ and activated carbon 0.5 µ	10 Watt	½"	27 x 14 x 40

Power supply: 230 Volt. a.c. - 50 Hz, trasformed to 12 Volt d.c.
Max. pressure: 4 Bar

UV1-CBC



UV2-SD/CBC

Model	Lt./min	Lt./hour	Cartridge type	Absorption	In-out	Dimensions (cm)
20 SERIES						
UV20-1 (only UV)	38	2280	-	18 Watt	½"	13 x 16 x 63
UV20-2/SD	38	2280	5 µ	18 Watt	½"	27 x 16 x 63
UV20-2/EPM	38	2280	activated carbon	18 Watt	½"	27 x 16 x 63
UV20-3/SD/EPM	38	2280	polypropilene 5 µ and activated carbon	18 Watt	½"	42 x 16 x 63

Power supply: 230 Volt. a.c. - 50 Hz
Max. pressure: 4 Bar

UV20-3/SD/EPM



UV20-2/SD

UV20-1



UVBB-1

Model	Lt./min	Lt./hour	Cartridge type	Absorption	In-out	Dimensions (cm)
BIG BLUE SERIES						
UVBB-1 (only UV)	57	3420	-	18 Watt	1" ½	19 x 22 x 74
UVBB-2/SD - UVBB-2/EPM	57	3420	50/5 µ ^{**} or activated carbon	18 Watt	1" ½	40 x 22 x 74 ^{**}
UVBB-3/SD/EPM	57	3420	50/5 µ ^{**} and activated carbon	18 Watt	1" ½	60 x 22 x 74 ^{**}
UVBB-2/SD DOUBLE	57+57	6840	50/5 µ	18 Watt	1" ½	74 x 48 x 75

*: double filtration in polypropilene
**: also available with stainless steel frame
Max pressure: 6 Bar

Power supply: 230 Volt. a.c. - 50 Hz

UVBB-2/SD
DOUBLE



UVBB-2/SD



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Sterilizzatori UV / UV Sterilizers

Stainless Steel U.V. Sterilizers

The vertical frame UV sterilizers of serie TC are suitable to disinfect the water from bacteria, viruses and other polluting microbes.

These UV systems are modular and in AISI 304 stainless steel (AISI 316 if requested) with low pressure mercury vapours germicidal lamp.



TC-9000



TC-2500

TC-5000

TC-8000

The electrical control panel complies with EC directives and is equipped with ballast to extend the average life of the lamps.

The maximum pressure is 8 Bar and the average lamp life is 9000 hrs. It is advisable to provide upstream a sediment prefiltration for a better effectiveness of the sterilizing process and an activated carbon filter to eliminate bad odour and taste from water.

Model	Lt./min	Lt./hour	Absorption (Watt)	Power supply	In-out	Dimensions (cm)	Weight (Kg)
TC SERIES							<i>lung. x larg. x h</i>
TC 2500	42	2500	90	230 V a.c.-50 Hz*	1"	13 x 16 x 95	9
TC 5000	84	5000	200	230 V a.c.-50 Hz*	1"	24 x 19 x 95	16
TC 8000	134	8000	200	230 V a.c.-50 Hz	1" 1/2	38 x 16 107	17
TC 9000	150	9000	250	230 V a.c.-50 Hz	DN 40	UV:(Ø x h) 22x110 frame: 40x22x60	50
TC 13000	217	13000	500	230 V a.c.-50 Hz	DN 50	UV:(Ø x h) 22x110 frame: 40x22x60	50
TC 18000	300	18000	500	230 V c.a.-50 Hz	DN 50	UV:(Ø x h) 22x110 frame: 40x22x60	50
TC 26000	434	26000	750	230 V c.a.-50 Hz	DN 65	UV:(Ø x h) 22x110 frame: 40x22x60	50

Supplied with standard removable joints for cleaning; special connections made under request

*: trasformed to 24 Volt d.c.

Max. pressure: 8 Bar

PERTECO UV sterilizers have a minimum dosage of Ultraviolet energy of 30.000 $\mu\text{Wsec}^2/\text{cm}^2$.

The following list indicates the most common bacteria and viruses and the UV energy necessary to destroy them.

It is recommended not to exceed the flow rate indicated for each model.

INTENSITY OF UV ENERGY REQUIRED FOR 99.9% DESTRUCTION OF VARIOUS MICRO-ORGANISMS:

$\mu\text{Wsec}/\text{cm}^2$

BACTERIA

Agrobacterium tumefaciens	8500
Rhodospirillum rubrum	6200
Bacillus anthracis	8700
Salmonella enteridis	7600
Bacillus megaterium	2500
Salmonella paratyphi	6100
Bacillus subtilis	11000
Salmonella typhimurium	15200
Clostridium tetani	22000
Salmonella typhosa	6000
Corynebacterium diptheriae	6500
Shigella dysenteriae	4200
Escherichia coli	7000
Shigella flexneri	3400
Legionella bozemanii	3500
Staphylococcus epidermidis	5800
Legionella dumoffii	5500
Staphylococcus aureus	7000
Legionella gormanii	4900
Streptococcus faecalis	10000
Legionella micdadei	3100
Legionella pneumophila	3800

VIRUS

Bacteriophage	6600
Leptospira interrogans	6000
Hepatitis virus	8000
Mycobacterium tuberculosis	10000
Influenza virus	6600
Proteus vulgaris	6600
Poliovirus	21000
Pseudomonas aeruginosa	10500
Rotavirus	24000



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OsmoFRESH 100

REVERSE OSMOSIS & WATER COOLER

Instant Cool and Pure water with Osmofresh!

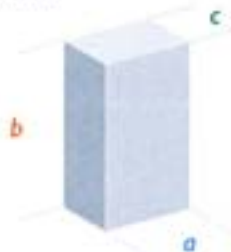
OsmoFRESH 100 is a water cooler station with a built-in Reverse Osmosis water purification unit that produces up to 35 liters per hour of pure and cold water.

There is no storage tank... the water produced by the Reverse Osmosis unit is instantly cooled as it passes through an exclusive refrigeration system.

The refrigeration gas is HFC 134a type with zero ODP (Ozone Depletion Potential).

OsmoFRESH 100 is ideal for schools and offices and wherever pure and cold water is required.

A second faucet can be added to deliver pure water at ambient temperature.



TECHNICAL FEATURES

OsmoFRESH 100	
Water production* liters (gallons)	35 liters (7.7 gallons)/hour
Produced water temperature	10° C (50° F)
Power supply	230 Volt - 50 Hz (other voltages available)
Power consumption	300 Watt
Dimensions (cm)	a: 34 - b: 105 - c: 34

*with ambient temperature at 27° C (80° F) and feed water TDS at 1000 ppm

Specifications subject to changes without notice.



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Bar & Restaurant

AquaMIX

COOLING & CARBONATION SYSTEM

**Instant Cool,
Sparkling or Natural
water with
AquaMIX!**

AquaMIX is a water cooler and carbonation system that delivers cool, sparkling or natural water on demand.

It is maintenance-free since it does not have any internal storage tank... the water is refrigerated as it passes through an exclusive refrigeration system. It is an heavy duty machine able to deliver up to 37 liters per hour of cool and carbonated water. Ideal for bars and restaurants where sparkling and cold water is required.

The refrigerating gas is HFC 134a type with zero Ozone Depletion Potential.

A smart electronic thermostat allows to regulate the desired temperature and the instant production of cool carbonated water.

A third faucet can be installed to deliver water at ambient temperature.



ACCESSORIES:

- Third faucet for ambient temperature water
- Reverse Osmosis purification system
- Ultraviolet sterilization system with sediment and carbon prefilters

REFRIGERATION CAPACITY

Ambient Temperature °C (°F)	22 (71.6)	27 (80.6)	32 (89.6)
Cold water at 10° C (122° F)	liters: 37	27	20
delivered per hour	gallons: 10	7	5

Technical features	AquaMIX
Power consumption	370 Watt/hour
Power supply	230 Volt - 50 Hz (other voltages available)
Refrigerating gas	HFC 134a
Dimensions (cm)	width: 34 - height: 46 - length: 35

Specifications subject to changes without notice.

STANDARD FEATURES

- Stainless steel frame
- Quick connection fittings for water supply and CO₂
- Two chromed brass faucets
- Digital thermostat with temperature display
- Carbonation chamber in stainless steel with safety valve
- Refrigeration system with gasproof compressor protected by an overload cutout
- Refrigerating gas HFC 134a type with zero ODP (Ozone Potential Depletion)
- Pressure reducing valve with two gauges (CO₂ tank level and carbonation pressure) with safety valve



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TC Series

REVERSE OSMOSIS WATERMAKERS

TC-Lab-56

Technical Features

TC series (for well water - 2,000/6,000 ppm)

Model	Lt/hour	Lt/day	Consumption	Electrical Supply	Dimens. (l x w x h) cm
TC 6	80	1,920	0.75 KW	230V c.a. / 50 Hz.	48 x 40 x 130
TC 12	160	3,840	0.75 KW	230V c.a. / 50 Hz.	48 x 40 x 130
TC 18	240	5,760	0.75 KW	230V c.a. / 50 Hz.	48 x 40 x 130
TC 24	310	7,440	0.75 KW	230V c.a. / 50 Hz.	48 x 40 x 130
TC 56	500	12,000	4 KW	400V c.a. / 50 Hz.	52 x 56 x 140
TC 84	750	18,000	4 KW	400V c.a. / 50 Hz.	52 x 56 x 140
TC 112	1,000	24,000	4 KW	400V c.a. / 50 Hz.	240 x 65 x 110
TC 168	1,500	36,000	4 KW	400V c.a. / 50 Hz.	340 x 72 x 115
TC 252	2,200	52,800	4 KW	400V c.a. / 50 Hz.	340 x 72 x 115
TC 448	4,000	96,000	5.5 KW	400V c.a. / 50 Hz.	340 x 72 x 115

TC/S series (for brackish water over 6,000 ppm)

Model	Lt/hour	Lt/day	Consumption	Electrical Supply	Dimens. (l x w x h) cm
TC 6/S	80	1,920	0.75 KW	230V c.a. / 50 Hz.	48 x 40 x 130
TC 12/S	160	3,840	0.75 KW	230V c.a. / 50 Hz.	48 x 40 x 130
TC 18/S	240	5,760	0.75 KW	230V c.a. / 50 Hz.	48 x 40 x 130
TC 24/S	310	7,440	0.75 KW	230V c.a. / 50 Hz.	48 x 40 x 130
TC 56/S	500	12,000	4 KW	400V c.a. / 50 Hz.	52 x 56 x 140
TC 84/S	750	18,000	4 KW	400V c.a. / 50 Hz.	52 x 56 x 140
TC 112/S	1,000	24,000	4 KW	400V c.a. / 50 Hz.	240 x 65 x 110
TC 168/S	1,500	36,000	4 KW	400V c.a. / 50 Hz.	340 x 72 x 115
TC 252/S	2,200	52,800	4 KW	400V c.a. / 50 Hz.	340 x 72 x 115
TC 448/S	4,000	96,000	5.5 KW	400V c.a. / 50 Hz.	340 x 72 x 115

All the Reverse Osmosis units TC series can be customized for specific civil, industrial and chemical needs. Bigger units can be designed upon request.

Technical Department of PERTECO is available for any problem about water treatment.



TC 252



TC Lab®
ULTRAPURE WATER

TC-Lab SERIES
FOR PRODUCTION
OF ULTRAPURE
WATER

TC-Lab is a version specifically engineered for the production of ultrapure water and is indicated for chemical industry, pharmaceutical and medical facilities, electronical laboratories, dialysis centers and everywhere demineralized water is required.

The water is first processed with specific Reverse Osmosis membranes and then it is filtrated through a cationic and anionic resins bed where it is completely demineralized.

The control panel is equipped with electronic microprocessor MICROMAR 2 with liquid crystal display to read salinity of produced water, pressure (both high and low by transducers), produced water flow rate, electrical consumption in Ampère, water temperature, operated hours-meter, starting-meter and failures occurred. It is also supplied with sound and visual alarm for oil change with automatic shut-down for high and low pressure and high electrical consumption.

A led fitted on the resins tank shows when resins must be regenerated.



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Home & Industry

TC Series

REVERSE OSMOSIS WATERMAKERS

Well and brackish water Reverse Osmosis systems

TC is a series of Reverse Osmosis units for civil, commercial, industrial and chemical water treatment with flow rate from 80 to 5,000 liters/hour.

Units with bigger flow rate (TCB series) up to 1,000 m³/day are designed and manufactured on request. Based on the Reverse Osmosis process the units of TC series eliminate nitrates, virus, bacterium, chlorine, radioactive elements, hydrocarbons and all pollutant materials into the water.

They are available both for well water (TC series with TDS from 2,000 till 6,000 ppm) and for brackish water (TC/S series with TDS over 6,000 ppm). For specific applications, such as chemical and pharmaceutical industries or dialysis centers, and every time it is necessary to have demineralized water, TC-Lab units are the ideal solution.

STANDARD EQUIPMENTS

- Frame in stainless steel AISI 316
- Prefiltering system with high flow cartridges
- Motor/pump set*
- Filmtec Reverse Osmosis membranes in TFC
- Safety pressure switches for low and high pressure
- Low and high pressure gauges with glycerine
- Produced water flow meter
- Control panel**
- Pressure regulator valve
- Inlet solenoid valve to avoid water leakage when the unit is not running
- By-pass for raw water mixing
- High pressure fittings in stainless steel AISI 316

All the TC units can be customized according to raw water quality and working conditions.

TC 84



TCB 690-S

* rotary motor/pump set for models up to TC 24
multistage centrifugal motor/pump set for models from TC 56
high pressure volumetric CAT pump for brackish water

** electro-mechanical type for models up to TC 24
with microprocessor and liquid crystal display for models from TC 56



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Home

Teti

REVERSE OSMOSIS PURIFICATION SYSTEM



Pure and crystalline water from a never ending spring!



WHAT IS REVERSE OSMOSIS?

Osmosis is a natural process, known for over 200 years, on which reverse osmosis systems are based.

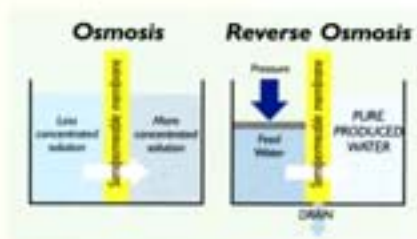
The wall of living cells are natural semipermeable membranes. This means that the membrane is selective, some materials can pass through it, others cannot.

The figure illustrates osmosis and the selectivity of the membrane. The semipermeable nature of the membrane allows the water to pass much more readily than the dissolved minerals.

If two solutions with different salts concentration are separated by a semipermeable membrane, the water in the less concentrated solution seeks to dilute the more concentrated solution: this is the osmosis phenomenon.

When a pressure is applied to the concentrated solution, the direction of water passage through the membrane is reversed and the process of reverse osmosis is established.

The membrane's ability to selectively pass water is unchanged, only the direction of water flow is changed.



TETI is a reverse osmosis water purification system for home application that purifies the water coming from the water supply. It operates with the principle of reverse osmosis which retains impurities that may be found in the drinking water supply.

If you don't rely on the water which comes out from your tap, now you can use pure, crystalline, fresh and healthful water for drinking and cooking.

TETI removes nitrates, bacteria, viruses, chlorine, pesticides and all contaminants dissolved in the drinking water.

TETI is also equipped with an efficient ultraviolet sterilization system which assures complete and continuous disinfection of the produced water.



Teti

RAW WATER CHARACTERISTICS

Pressure (Bar)	min. 2 - max. 8
Temperature (°C)	min. 5 - max. 30
TDS max. (mg/l)	2.000
pH	min. 3 - max. 11
Free Chloride max.	0,2 ppm
Water hardness max.	45° F

TETI TECHNICAL SPECIFICATIONS

TETI

Water production -liters/day- [*] (gallons)	380 (100)
Membrane type	TFC 100 GPD
Sediment prefilter	5 micron
Activated carbon prefilter	25 micron
Activated carbon post-filter	0.5 micron
Power supply	230 Volt - 50 Hz
Electric consumption (U.V. lamp)	10 Watt
Storage tank capacity (liters)	min. 5-max. 13 [*]

^{*}with raw water at 4 bar/60 PSI, 25° C of temperature and 800 mg/l of TDS (Total Dissolved Solids).

^{*}storage tank capacity depends on the water supply pressure.



Original AMETEK spare parts

Drinking water contaminants and their control with TETI!

Inorganic contaminants:

Sodium	90-95 %	Chromium	93-98 %
Calcium	93-98 %	Lead	93-98 %
Magnesium	93-98 %	Chloride	90-95 %
Potassium	90-95 %	Bicarbonate	90-95 %
Aluminum	93-98 %	Nitrate ¹	85-90 %
Copper	93-98 %	Fluoride	90-95 %
Nickel	93-98 %	Phosphate	93-98 %
Zinc	93-98 %	Sulfate	93-98 %
Strontium	93-98 %	Boron	55-60 %
Cadmium	93-98 %	Arsenic ¹	70-80 %
Silver	93-98 %	Arsenic ¹	93-98 %
Mercury	93-98 %	Selenium	93-98 %
Barium	93-98 %	Radioactivity	93-98 %

Biological and particulate contaminants:

Bacteria	>99 %	Asbestos	>99 %
Protozoa	>99 %	Sediment	>99 %
Giardia	>99 %	Turbidity	>99 %

Organic contaminants:

Organics molecules with a molecular weight <300	>99 %
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FROM WATER TREATMENT FUNDAMENTALS - Water Quality Association (CCLAL) (PBI)

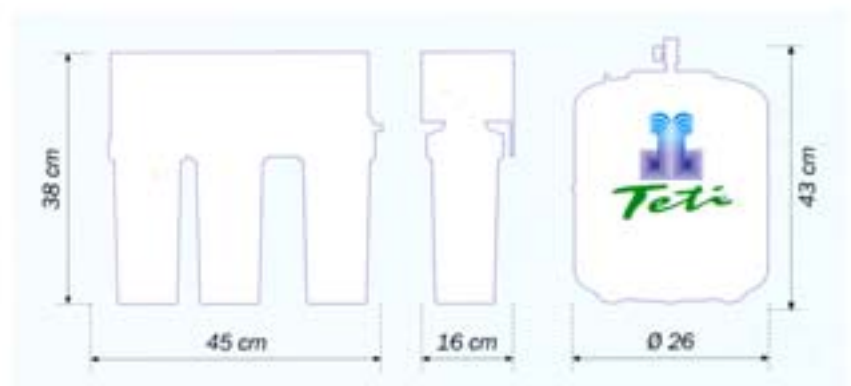
TETI purification system consists of 5 stages:

- 1- Sediments filtration:** filtrate particles up to 5 micron.
- 2- Carbon filtration:** absorbs chlorine and other contaminants.
- 3- TFC membrane permeator:** only pure water is allowed to pass through. The highly concentrated salts solids and all contaminants are rejected to drain.
- 4- Carbon post-filtration:** absorbs bad taste and odors that may be in the water.

- 5- Ultraviolet sterilization:** assures that all bacteria and viruses are destroyed.



Pure and crystalline water from a never ending spring... with TETI!



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