



Ecological treatment for water management

✓ *Ecological* ✓ *Natural* ✓ *Economical*



***Pollutants?
Rust?
Limescale?***

It is an ecological alternative to the traditional salt-based water softener, and more, for your well-being and health: a unique system!

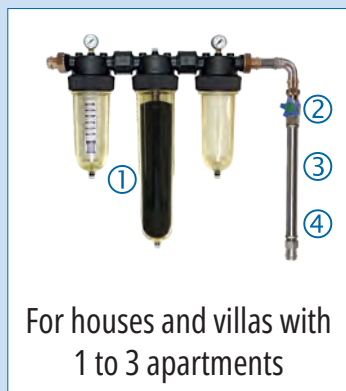


www.sonatec.ch



Ecological treatment for water management

Process: ① Filtration ② Adjustment ③ Limescale and Rust ④ Vortex



For houses and villas with
1 to 3 apartments



For houses and buildings with
3 to 9 apartments



For buildings with
10 or more apartments

The **sonatec plus** system is patented and was developed at EPFL*
*École Polytechnique Fédérale de Lausanne

It applies to:

- Single-family homes
- Rental buildings
- Public buildings
- Businesses
- Industries
- Agricultural and livestock farms
- Wineries
- and all water-using activities

With the **sonatec plus** system
WE ARE COMMITTED TO ECOLOGY AND SUSTAINABLE DEVELOPMENT

- No salt, no chemicals, no electricity, no sodium in the water
- No water waste like a traditional softener
(You save 15,000 liters of water per year that a softener would use to clean its resins)
- Minimal maintenance (filter and adjustment) and a yearly system renewal

Effects and Well-being:

- 80% **less** limescale **deposits**
- 98% effective **anti-rust** action
- All the minerals in the water remain, which is **beneficial**
- **The water does not contains** traces of **chlorine** and other sediments like iron, plastic particles, etc.
- With the **Sonatec Plus System**, itching and redness on the body are eliminated
- **The water** becomes soft and pleasant to drink
- Additionally, it is **energized** 3.5 to 5 times more (geobiological measurements)



Legal Requirements:

We fully comply with WHO* standards for drinking water

*WHO: World Health Organization

Your contact:



SONATEC - Avenue de la Gare 1 - CP 192 - 1522 LUCENS - Switzerland
Tél +41 (0)21 906 63 55 - www.sonatec.ch - info@sonatec.ch

cintropur
WATERFILTRATION & TREATMENT



Industrial fluid filters
with centrifugal prefiltration

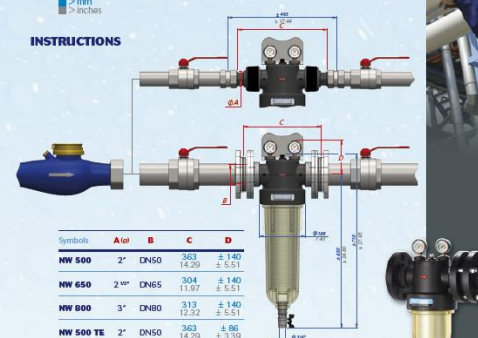
www.cintropur.com

TECHNICAL DATA

Filter type	NW 500	NW 650	NW 800	NW 500 TE
Diameter of pipe :	2"	2 1/2"	3"	2"
Average flow rate : ΔP = 0.2 bar / 2.8 psi	m³/h 79	25 110	32 141	2" 9"
Working pressure :	bar 10	10 145	10 145	10 145
Max. operating pressure :	bar 16	16 232	16 232	16 232
Max. operating t° :	50° C 122° F	50° C 122° F	50° C 122° F	50° C 122° F
Weight :	kg 14.11	7 15.43	7.4 16.31	5.6 12.35
Standard filter sleeve :	25 μ	25 μ	25 μ	—
Available volume :	l —	—	—	4.85 1.28
Filtration surface :	cm² 199.64	1288 199.64	1288 199.64	—

* Max with selected carbon CDR1000-SCN
* > mm
* > inches

INSTRUCTIONS



Symbol	A	B	C	D
NW 500	2"	DN50	363 14.29	± 1.40 ± 5.51
NW 650	2 1/2"	DN65	304 11.97	± 1.40 ± 5.51
NW 800	3"	DN80	313 12.32	± 1.40 ± 5.51
NW 500 TE	2"	DN50	363 14.29	± 1.40 ± 5.51

Your supplier

airwatec
Cintropur® is a product of the Amesco® company
Info@cintropur.com — www.cintropur.com

cintropur
WATERFILTRATION & TREATMENT

TECHNICAL DATA

Filter type	NW 18	NW 25	NW 32	TIO	NW 25 DUO-CTN	NW 25 TE-CTN	NW 32 TE
Diameter of pipe :	3/4"	3/4" or 1"	1 1/4"	1"	3/4" + 1"	1"	1 1/4"
Average flow rate : ΔP = 0.2 bar / 2.8 psi	m³/h 3.5	5.5	6.5	0.5*	0.5*	0.5*	0.5*
Working pressure :	bar 10	10	10	10	10	10	10
Max. operating pressure :	bar 16	16	16	16	16	16	16
Max. operating t° :	50° C 122° F	50° C 122° F	50° C 122° F	50° C 122° F	50° C 122° F	50° C 122° F	50° C 122° F
Weight :	kg 0.9	1.2	1.7	1.8	2.4	1.3	1.6
Standard filter sleeve :	25 μ	25 μ	25 μ	25 μ	25 μ	—	—
Available volume :	l —	—	—	0.57 l	0.57 l	0.57 l	1.70 l
Filtration surface :	cm² 29.45	450	840	335	1 x 450	—	—
	Sq. inches	69.75	130.20	51.92	1 x 69.75	—	—

* Value with selected carbon CDR1000-SCN

INSTRUCTIONS



Symbol A

NW 18 3/4"

NW 25 1"

NW 32 1 1/4"

TIO 1"

NW 25 DUO-CTN 3/4" + 1"

NW 25 TE-CTN 1"

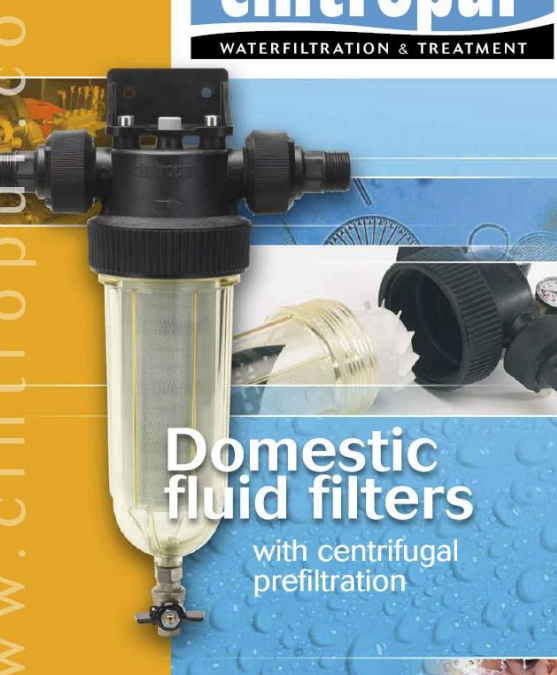
NW 32 TE 1 1/4"

Your supplier :

airwatec
Cintropur® is a product of the Amesco® company
Info@cintropur.com — www.cintropur.com

cintropur
WATERFILTRATION & TREATMENT

cintropur
WATERFILTRATION & TREATMENT



Domestic fluid filters
with centrifugal prefiltration

www.cintropur.com

GENERAL DESCRIPTION

Made entirely from top quality synthetic material, CINTROPUR filters are ideal for use with food products and drinking water.

The CINTROPUR vane changes the liquid flow using centrifugal motion, forcing the larger particles down into the lower bowl, depending on the chosen filter sleeve micron-size.

Basic principle

The protection of sanitary domestic, collective and agricultural water supplies by filtering out the solid particles (earth, sand, rust, etc.) suspended in the water. The protection filter will be ideally placed at the entrance of the installation in order to protect all the devices connected below.

APPLICATIONS

- Residential:** Protection of sanitary networks supplied with domestic water, rainwater or well water.
Filtration of water before softener, reverse osmosis or treatment by ultraviolet.
- Industrial:** Protection of sanitary networks, machine tools and all industrial machinery for water treatment.
Filtration of water before high pressure cleaning machines (100 to 200 bar / 1500 to 3000 psi) and very high pressure cleaning machines (1500 to 2500 bar / 21000 to 35000 psi).
- Agricultural:** Filtration of watering (spraying) installations;
Filtration of water for animals;
Filtration of rainwater and well water.

Advantages

- high and constant flow rate
- low pressure drop
- centrifugal prefiltration with a cyclonal effect
- robustness and reliability
- fast and easy flushing out
- permanent visual control of the filter sleeve (transparent bowl)
- exclusive system, ecological and not expensive (filter sleeve).

Water treatment

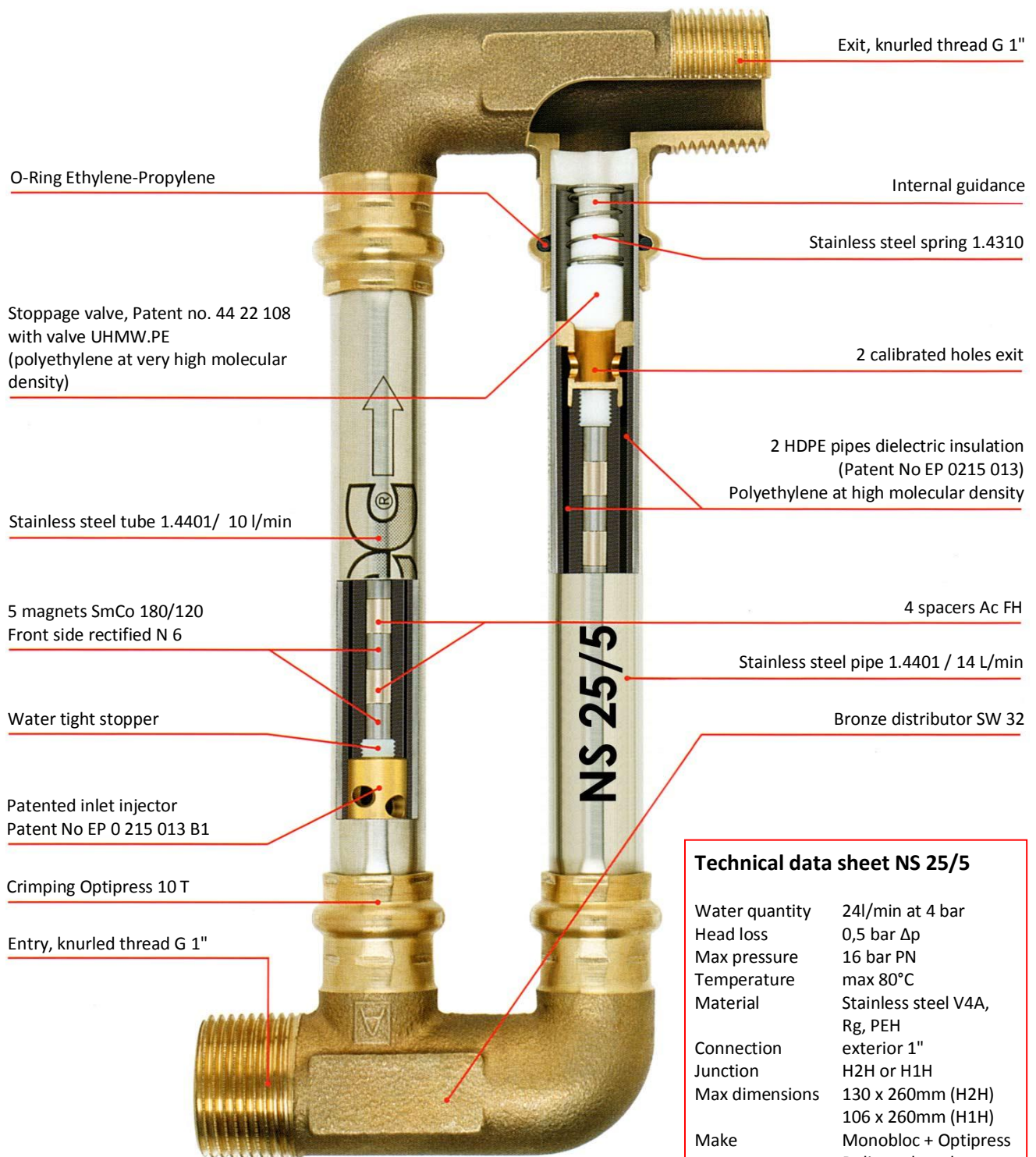
The CINTROPUR water treatment is designed with a stainer tube, so different products can be used with this system.

*- Poly-phosphates, silicates, silico-phosphates
(we do not use it, as it's a health hazard)*

Efficient up to 60°C / 140° F, these products are used to reduce the harmful and scaling effects of the water hardness. The protection of new installations against rust is also a well known application.

- Activated carbon CINTROPUR SCIN

Its large pore volume and pore size distribution makes it highly suitable for the improvement of taste and the removal of odour, chlorine, ozone, micro-pollutants such as pesticides and other dissolved organic substances.



Technical data sheet NS 25/5

Water quantity	24l/min at 4 bar
Head loss	0,5 bar Δp
Max pressure	16 bar PN
Temperature	max 80°C
Material	Stainless steel V4A, Rg, PEH
Connection	exterior 1"
Junction	H2H or H1H
Max dimensions	130 x 260mm (H2H) 106 x 260mm (H1H)
Make	Monobloc + Optipress Delivered ready to be connected

NS 25/5

DETAIL OF MANUFACTURE

Difference between the **sonatec^{plus}** ecological system, a water softener and a monotube treatment without filter

	Water softener, Water refiner	 1 2 3	Monotube treatment without filter
BUILDINGS	Protects all building against lime scale (CaCo3)	Protects all buildings against lime scale and rust	Protects all buildings only against limescale
	Needs a lot of space, impossible in an apartment, should be connected to a drain. Storage space for salt required.	Fits into a small space, can be installed in an apartment, under a sink, in a cupboard	Fits into a small space, can be installed in an apartment, under a sink, in a cupboard
	The local water company stipulates to tenants, that the water supply to the sink is untreated by a water softener, to avoid drinking sodium or to regulate the level of water softener 15Fr purchase price of water bottle	The water is pleasant to drink and provides good skin care, it supplies mineral salts and is energized by + 30%	The water is not softened, only at high flow rates > 1,5m/s (3 water taps at the same time)
HEALTH	Eliminates Calcium and Magnesium (precious mineral salts) according to WHO, and substitutes them with Sodium, for every replaced calcium molecule, 2 Sodium (salt) molecules are injected	Changes Calcite into Aragonit + and avoids its deposits by 80% at all outflows	Changes calcite into aragonite on the condition that there is more the 0,8 m/s in the apparatus
	It is not advisable to drink water that has been excessively softened because it contains too much Sodium (salt = cause of hypertension) and also not recommended for pregnant women and children.	Water has a rich mineral content, calcium and magnesium exist in the form of aragonit. A balanced intake helps a better absorption of nutriments.	Under the condition that calcite is really changed into aragonit, the treated water helps a better absorption of nutriments.
	Chlorine, heavy metals, and pesticides remain present in the water.	The Chlorine evaporates, the water is odorless and pleasant to drink. Showering does not have an aggressive impact on your hair and skin. The pesticides and heavy metals are blocked with an active carbon filter and used for food preparation.	Chlorine remains in the water as well as heavy metals and pesticides
ECOLOGY	Sodium is toxic for plants, humans beings and animals, it acidifies the ground, (the first weed killer used was salt)	Quality of water beneficial for watering the plants, maintains the level PH in the ground, encourages absorption by capillarity	Quality of water beneficial for watering the plants, maintains the level PH in the ground, encourages absorption by capillarity
	Detrimental for soft water aquariums, also for aquatiques plants, because of the presence of sodium and Chlorine	Neutral effect for aquariums, it is beneficial for aquatic life, because the Chlorine is blocked	Neutral for aquariums depending on the water flow
	Softened water has an aggressive effect on joints and water pipes, it dissolves the metal contained in drinking water, and weakens the organism	A non-aggressive quality of water, dissolves tartar in your pipes and respects + increases the lifespan of your water pipeline/ installations + protects against tartar and rust	Water moderately aggressive, does not protect against rust
MAINTENANCE	Often needs to be connected to an electrical system. Electricity is an expensive form of energy, with an ecological impact.	Electricity is not required	Sometimes electricity is required mainly for electronic systems.
	The water softener rejects the brine, as a result your water consumption increases by 10 to 15% (rinses and flushes the system) against environmental directives (You need to save potable water!)	No reject, minimum maintenance, once a year for the filter	No maintenance, as there is no filter
	in case of absence, you need to carry out a regeneration with a waste of 300 l. of water and 120g. of salt	No stagnant water in contact with the air (ex. bottles), water is energized at more than 30%	Water is treated uniquely to protect the installations

Balance Adjustment *natecplus*: NS – MB

As you are aware, water is an extremely difficult liquid to stabilize and balance. The fact that it is an element which creates tartar and corrodes, it can cause damages in the different installations that it comes in contact with.

Several solutions which are physical, chemical and physicochemical are proposed by different companies. With our experience in this domain, we can offer you a simple solution; **now directly adjustable** and free of chemicals.

The results:

The different tests carried out in France, Belgium, Switzerland at the EPFL for NATEC and the undersigned, have shown that the treated water was judiciously processed with a *natecplus*, which provides a well balanced result, with three times less precipitations, and no incrustation.

This balanced water does not cause tartar build up and is non corrosive (patent and guaranteed by 98% with proven evidence). See www.sonatec.ch.

After this treatment, the water softens up the hard matter in the installations, with a judicious purge, allows a correct water flow to the point of extraction, equipment, pumps, etc...

We carry out this adjustment for the client during the installation, with a gustative and a physiological test (*which consists of testing if the water has a silk effect on the skin*), and finally the reduction of deposits in a sauce pan.

We proceed, using valves of a ¼ turn placed before the NATEC, adjusted to reinforce the balance of calco-carbon by a better homogenized hydration of the ions CaCO_3 .

Once this adjustment has been carried out, we eliminate the bad taste of the water due to the chlorine, and other elements which causes a bitter taste, and improves its texture. It is by this method that you will notice the difference.

SONATEC (SUISSE).CH Sàrl – LABO DES EPINOUX, Technical Service, G. SONNAY. *

* Reactualized 1998, 2002, 2006, 2008, 2010, 2012.

The MHD Technology

Magnetic and electro-magnetic method

Appliances using the effect of magnets or electro-magnets produce in the water that flows through them, phenomena that will be described further on, but their general aim is to prevent the calcium carbonate of natural water from depositing itself on the inside faces of pipelines, and thus fill these with fur.

These appliances act indirectly upon the colloids of CaCO_3 by causing a rapid germination-crystallization procedure, within the flow of water.

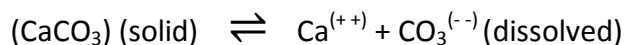
FUNCTIONING OF THE MAGNETIC WATER CONDITIONER

In natural water we find, apart from certain dissolved ions and gases, and according to each case, a fairly large amount of colloids (or micelles), that are charged electrically and of large size compared to water molecules.

The colloids of CaCO_3 repel themselves mutually as they are charged positively (COULOMB forces) and thus they have no chance of building up crystallization germs.

If these colloids are introduced into a large concentration of ions, these will attract ions of the opposite sign around them. Now, if the latter are numerous enough, the electro-magnetic field of the colloids will be reduced, thanks to a screening effect and will then decrease in an exponential way with distance. At the same time these colloids will be able to agglomerate and build crystallization germs inside the liquid.

The flux of water will drag with it the growing micro-crystals and incrustation of calcium carbonate upon the metallic walls of pipes will not take place. On the other hand, in pipes already filled with fur, the adsorption of ions on the colloids will shift the reaction of equilibrium to the right:



thus progressively dissolving the calcium carbonate (physical-chemical defurring).

In the NATEC conditioner, the magnetic fields are produced by a particular series of magnets placed so that the radial fields, thanks to precise fitting of the magnets in inverted polarity, influence the ions contained in the water several times at their passage.

Furthermore, the flow of water must show a speed component at the same time at a right angle to the axis of the apparatus and to the magnetic field, so that LORENTZ forces may alternately concentrate cations and anions, according to the position with regard to the magnets.

These local concentrations of ions thus enable the colloids to agglomerate themselves and build up crystallization-germs.

Therefore, in the presence of a n_0 concentration of ions and at a T temperature, the colloids are going to be surrounded by ions of the opposite sign; the layer of ions thus built up reduces the electro-static field around the colloid, thanks to the screening effect.

This field decreases rapidly in an exponential manner: $\overline{|\mathbf{E}|} = E_0 \cdot \exp. (- r / D)$

D the constant of decrease, is given by: $D = \sqrt{\frac{\epsilon k T}{2 n_0 q^2}}$

where ϵ is the permittivity of the liquid

k the BOLTZMANN constant

and q the charge of ions

The field decreases by a factor of $1 / e = 1 / 2,71828$ at a distance of D .

This distance, also called "Debye length" measures the thickness of the ion-layer whose sign is opposite to that of the colloid.

We note that:

the Debye length to the square is **inversely proportional to the n_0 concentration of ions** and proportional to the T temperature.

We have seen that the colloids repel themselves owing to their charge of same sign. Now, if the film of ions sufficiently reduces the electro-static field of the colloids, the latter could then enter into contact and agglomerate themselves, thus building up crystallization germs inside the liquid. This agglomeration is encouraged by a decrease in the Debye length, i.e. by :

- a decrease of the temperature
- an increase of the concentration of ions.

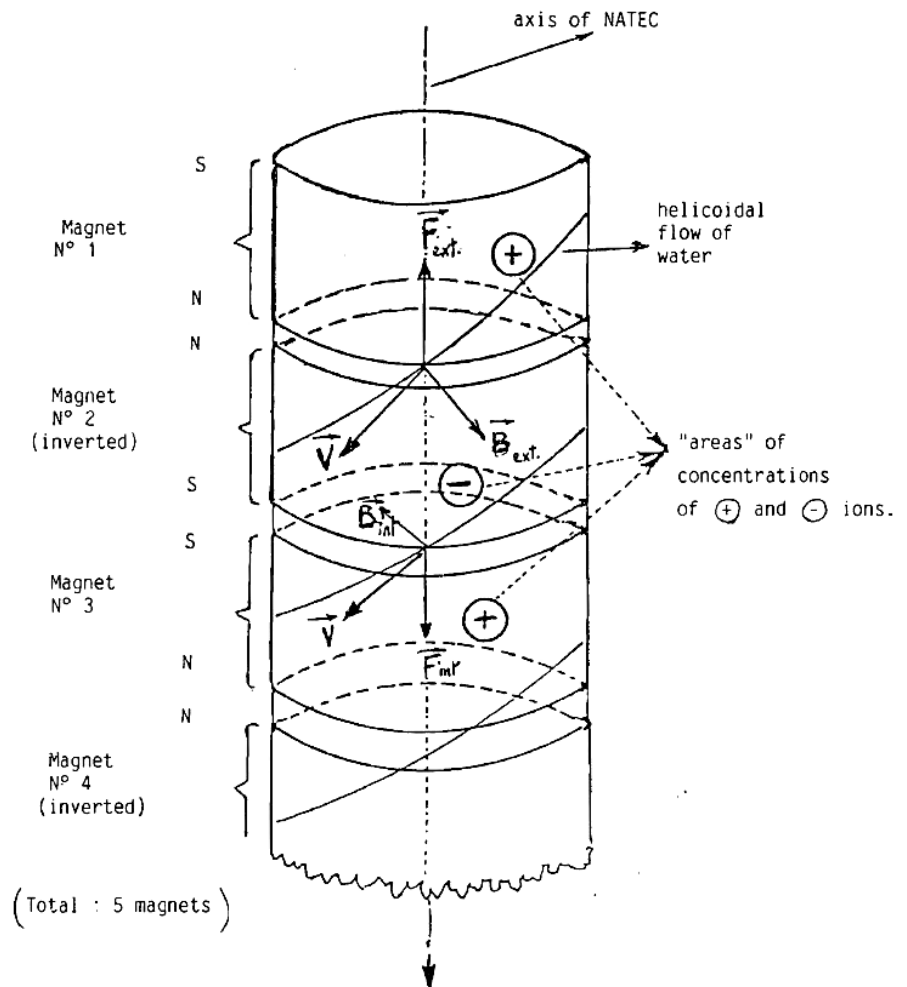
The agglomeration of the colloids builds up CaCO_3 crystallization germs, inside the liquid, and thus makes incrustation much less probable. If the colloids adhered to the pipe walls, the resulting crystals would then be bigger, thus less incrusting. The agglomeration of the colloids and the germination in the liquid go hand in hand with the increase of the turpitude of the water; however, this increase would only be small. We have seen that the colloids of CaCO_3 were charged positively, thus the film of ions around them will be of negative sign. The $\text{CO}_3^{(-)}$ and $\text{OH}^{(-)}$ ions will take part in the formation of this film.

This attraction of $\text{CO}_3^{(-)}$ and $\text{OH}^{(-)}$ ions will break the calco-carbonic equilibrium.

Specifically the reaction $(\text{CaCO}_3) \rightleftharpoons \text{Ca}^{++} + \text{CO}_3^{--}$ is going to be shifted to the right, i.e. the fur will be dissolved.

Two conditions are necessary to make our apparatus work:

- We must make sure that the magnetic field B turns several times in a radial manner during the passage of the liquid: for this reason the magnets are mounted in opposite polarity.
- The flow of water must, furthermore, show a speed component which, at the same time must be at a right angle to the axis of the apparatus and the magnetic field.



Under these conditions, field \vec{B} acts on the ions that are in motion through LORENZ forces and the ions pass through in a helicoidal flow at a velocity of \vec{V} :

$$\vec{F} = q \vec{V} \wedge \vec{B}$$

where q is the ionic charge and \wedge is the vector product and produces alternating concentration zones composed of cations and anions. The cations are repelled **upwards** when \vec{B} is oriented **externally**, and the anions are repelled downwards when \vec{B} is oriented **internally**.

Effects of these concentration zones

The water transports these positively charged colloids during its helicoidal flow through these zones, that exhibit particularly high concentrations of $\text{CO}_3^{(-)}$ and $\text{OH}^{(-)}$. The colloids **adsorb** these anions, **agglomerate** and produce **crystallization germs**, which destroys the calco-carbonic equilibrium:

No fur will be deposited in a **new** pipe and any **fur that has already been deposited** in a pipe will gradually dissolve.

THE TECHNICAL ADVANTAGES OF NATEC

1. The apparatus is shielded against external factors (motors, etc.) by magnetic protection.
2. The mounted magnets are separated from each other by a spacer and are fitted into fully electrically insulated cladding. In contrast to other water conditioners, NATEC is therefore resistant to electrical discharge (earth conductors).
3. The inflow and outflow connectors have been manufactured to ensure a helicoidal flow of water, independent of the quantity of outflow, with a precise gradient that corresponds to the optimum angle between vector \vec{V} of the water and the ions, and vector \vec{B} , such that the resultant \vec{F} is also optimal.
4. The selection of the materials, in particular the magnets, the insulating cladding, and the antimagnetic protection, was instrumental to NATEC's success and flawless function. The sleek, expert workmanship of the apparatus as a whole has made it nearly indestructible.
5. The internal surface of the external pipe in NATEC is insulated with dielectric material, which allows the particularly spectacular effect of "passivation" to be achieved (see above).

Our Research with The E.P.F.L.*

*Ecole Polytechnique Fédérale de Lausanne

10 YEARS CHRONOLOGY

- 1982 :** Research on the equation for a smooth function.
It was developed by Pr. Tam Ming Tran based on technical information from Pr. Marc de Smet.
For more information: [www.sonatec.ch/fonctionnement/2 réacteur MHD](http://www.sonatec.ch/fonctionnement/2_réacteur_MHD)
- 1987 :** Study and simulation of a water conditioner by Olivier JORDAN from the department of Physics-EPFL 4th year, published in 1988.
This study takes into consideration the findings Pr. Tam Ming Tran and Pr. Marc de Smet in order to understand the influence of a fluid with an electrical – or magnetic energy on salt dissolved in ionic solution.
- 1988 :** The comparative study by Ramiro CONDÉ of the department of physics : The explanation of the effects of a magnetic field on drinking water, supervised by Pr. Marc de Smet.
This helped improve the condition for the water flow in the water conditioner by using energy from magnetic fields.
- 1989 :** Bibliographical study on the influence of a magnetic treatment of water on passive metal by Nicolas SAGNA of the dept. of physics, supervised by Pr. Marc de Smet.
This study confirmed that it was possible to passivate hydroxide under certain conditions, confirmed by M. Broussoux, engineer specialized in cathodique protection.
- 1989 / 1990 :** Experimental study of the water conditioner Natec by Nicolas SAGNA, supervised by Pr. Marc de Smet.
This study helped improve the flow of water at variable speed.
- 1990 :** Bibliographical study based on the influential elements of corrosion inertia within the scope of MHD by Pierre-Hervé GIAUQUE of the dept. of Physics, supervised by Pr. Marc de Smet.
This study permitted us to understand which method should be used in order to find a solution to passivate electropositive or electronegative metal.
- 1992 :** SONATEC research : To develop the best parameter, to prevent at a variable flow a build up of limescale incrustation by precipitation, the disintegration of limescale deposits, and the corrosion inertia in a water environment, by M. le Dr. C. HERARD du Laboratoire des Technologies des poudres MX-D, with the assistance of two students.
- 1993 - today :** Based on these ten years of research and these scientific bases, SONATEC has continued to improve the practical application, creating various models from experience of use for thirty years in the field.

GUARANTEE



1. GUARANTEE

- ARTICLES 1.1 TO 1.9 AVAILABLE ONLY IN SWITZERLAND
- 1.1 The regular guarantee is on a basis of ten years (10) from the date of installation or delivery.
- 1.2 The guarantee is in two parts :
- a) The first two years with a reimbursement of the apparatus (without installation and maintenance) guaranteed by an insurance (civil liability for a company).
It serves :
- To repair a deficient apparatus
 - To replace the water conditioner(s) if needed
 - The refund of the **sonatec plus** equipment will come into effect, when for a good reason, both precedent points are not feasible.
- The buyer will receive a certificate from SONATEC.
- The refund intervenes in the case where the **sonatec plus** system cannot assume the results by taking into account the technical requirements signed by the customer.
- b) for a period of eight (8) additional years, to replace the faulty parts, or an abnormal loss of power from the magnets, with digressive value in proportion to the years of service.
- 1.3 Eventual defects in the course of normal use, noticed during the guaranteed period, must be put in writing within one week and addressed to SONATEC.
- 1.4 The benefit of the guarantee will only be granted on presentation of this certificate with the paragraph « Technical requirements » (see the reverse side) signed by the buyer.
- 1.5 The guarantee is delivered only after the fulfilment of the purchase obligations to SONATEC or the designated sales representative SONATEC.
- 1.6 Unless otherwise specified by the buyer, the guarantee is automatically cancelled on the expiry date.
- 1.7 The supplier is free from all obligations of the guarantee, if the buyer does not respect the technical requirements and maintenance of installation.
- 1.8 The water conditioner cannot be opened in any circumstances, except by a person duly appointed by our technical services from the Labo des Epinoux.
- 1.9 No compensation will be granted for loss of use.

2. TECHNICAL REQUIREMENTS:

Reminders:

The warranty will be valid only in case of technical problems, provoked by a malfunction of the **sonatec^{plus}** system, the buyer must present this document completed and signed.

The system **sonatec^{plus}** is not a water softener therefore, it does not remove the calcium salts from the water, but prevents calcification and corrosion in the installation. Do not expect the degree of water hardness to decrease in the drinking water, as it's not the desired effect.

- 2.1 For cooking, use cold water. The containers should be wiped after use, to avoid deposits.
- 2.2 If the conditioned water becomes cloudy during the normal flow, it is advisable to remove the end of the faucet, in order to purge the pipe, and then allow a certain time for the sediments of limescale to be evacuated.
- 2.3 The possible traces of limescale on the chrome fixture can be removed with a dry cloth or wet cloth and soft soap.
- 2.4 If the water is very hard, it is advisable to brush the showerheads and the end of the taps once a week.
- 2.5 After 12 months of use, it is essential to purge the pipes and clean the boiler, in order to eliminate any sediments and sludge that may cause problems, even though they are not attached to the interior surface of the pipes. The aim :
 - For a new system, is to eliminate the oxide, the iron waste, limescale and various impurities.
 - For an old system, is to eliminate the limescale residue, les oxide, and various impurities.
 - This work, which can be completed quickly, must be carried out by our maintenance department or by a qualified and authorized person.
 - The buyer will receive a maintenance report of the installation.

MAINTENANCE SET PRICE FOR 2013 + V.A.T. M-O + REPLACEMENT PARTS.+ TRAVEL

Read and agreed by purchaser:			
Name	:	
Address	:	
Town	:	
Appliance	:	Type :.....	NATEC : Guarantee 10 YEAR
	:	NO :.....	FILTRATION : 1 YEAR
Date	:	Signature	:.....

Maintenance service:

Enterprise:

SOLD BY :



FILTER



REACTOR



ADJUSTMENT

GENERAL INFORMATION CONCERNING OUR ECOLOGICAL WATER REQUIREMENTS AND REGULATIONS RELATED TO SOFTENED WATER

CONCEPT EFFECT

- 80% less lime scale
- 98% anti-rust
- Softened water

ECOLOGY

- No salt and chemical products
- No injection of products
- Excellent quality of purified water, no need to purchase bottled water (info: one and a half litres of crude oil is needed to manufacture one water bottle)

WELL-BEING

- Mineral content of the water is not altered, this is beneficial for your health
- No traces of chlorine and other sediments such as: iron, cast iron, etc...have been found
- Skin irritations and rashes caused by allergies to lime scale are eliminated.
- Water is softened and pleasant
- Water is energized + 30% minimum

STATUTS (requirements and regulations)

According to (SSIGE) Swiss Society for Gas and Water industry, to soften water is not advisable for hard water at a lower level than 30°f. If a water is installed in a drinking water system the level of hard water, should be between 12 et 15° f, www.svgw.ch.



Installation for a building of 35 housing

DOMAINS OF APPLICATION

HABITATIONS

- Apartments
- Houses
- Buildings
- Hotels
- Laboratories
- Hairdressing salons

HEATING SYSTEMS

- Plate or tubular heat exchanger
- Coils
- Water heating pumps
- Accumulation tanks
- Solar heaters

COLLECTIVE CATERING

- Coffee machines
- Vending machines
- Ice machines
- Steam oven
- Sterilizers
- Washing machines
- Dishwashers
- Showers and sanitary facilities

INDUSTRIAL SYSTEM

- Injection moulding press
- Thermoforming press
- Extruders
- Lathe machine
- Liquid ring pump
- Tubular exchangers
- Plate heat exchangers
- Baking ovens


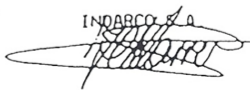
COOLING SYSTEMS

- Coolers, air conditioners
- Condensers
- Evaporators
- Cooling towers
- Humidifiers
- Compressors

AGRICULTURAL SYSTEMS

- Irrigation by spraying
- Drip irrigation
- Nebulisation

ANTI RUST ATTESTATION

			S. A.
		Rue du Simplon 32 B-C Case postale 230 1020 RENENS 1 Tél. (021) 34 35 38 - Téléc 25593 inda ch	
Protection cathodique Etudes, projets, contrôles Accessoires de tuyauterie Clapet thermique «PROTEUS»	SONATEC Ch. des Epinoux 6 1052 LE MONT-SUR-LAUSANNE		
V. réf.	N. réf. JMB/JCK	Renens, le 5 décembre 1985	
Concerne : <u>Conditionneur Natec</u>			
Messieurs,			
<p>Vous nous avez confié un mandat d'étude expérimentale du comportement de votre appareil au plan de la lutte contre la corrosion intérieure des tubes. Ces mesures ont été conduites sur un banc d'essai aménagé dans nos locaux à la Route de Cojonex 6 à Lausanne et sur des installations chez divers clients de Sonatec. Les résultats et conclusions sont contenus dans le rapport technique et nous restons à votre disposition pour tout renseignement complémentaire. Les différentes constructions testées ont montré une évolution favorable de la passivation avec les apports technologiques nouveaux brevetés par votre société.</p> <p>Nous vous prions d'agréer, Messieurs, nos salutations distinguées.</p>			
			

Reference: Natec Conditioner

We were asked to do an experimental study on the capacity of the apparatus to resist and fight against interior corrosion of the tubes.

These measures were carried out in our workshop and on our SONATEC customers' installations.

The different installations that were tested showed an improved passivation due to your company's newly patented technologies.

BACTERIOLOGIC ATTESTATION

CANTON DE VAUD
Les Croisettes
1056 EPALANSES
Téléphone (021) 33 31 51
Téléfax (021) 33 31 02
CCP 10-6952-6

Département de l'intérieur et de la santé publique
LABORATOIRE CANTONAL
CONTRÔLE DES DENRÉES ALIMENTAIRES

Epalinges, le 30 mai 1989
rms

ANALYSES BACTÉRIOLOGIQUES D'EAUX

Monsieur
Gilbert Sonnaty
Direction Sonatec - Inter S.A.
Chemin Epinaux 21
1052 Le Mont-sur-Lausanne

Prélèvement du: S.5.89
Par: M. B. Favez, inspecteur cantonal adjoint
Concerne: Analyses demandées par la maison Sonatec - Inter S.A.

N° de l'analyse	Désignation des échantillons	Germes aérobies par ml	Exarches coli par 100 ml	Entérocoques par 100 ml
484	1/ Villa Gilbert Sonnaty-Fasel - Garage - Robinet de service : eau froide avant conditionnement	196	0	0
485	2/ Villa Gilbert Sonnaty-Fasel - Garage - Robinet de service : eau froide après conditionnement	17	0	0

Frais d'analyse: Fr. 158.--
Frais de prélèvement: Fr. ---

Le Chimiste cantonal

Analyst carried out by the Laboratory of the Public Health Department, Vaud, Switzerland.

1/Villa Gilbert Sonnaty-Fasel-Garage-
Service faucet: cold water before conditioning
amount of aerobic germs by ml 196

2/Villa Gilbert Sonnaty-Fasel-Garage-
Service faucet: cold water after conditioning
amount of aerobic germs by ml 17

TARTAR AND RUST ATTESTATION

VILLE DE LAUSANNE
DIRECTION DES SERVICES INDUSTRIELS
SERVICE DE L'ÉNERGIE
Tél. 021/43 81 11

Rue de Genève 52
Case postale 312
1000 Lausanne 9

SONATEC
Monsieur G. SONNATY
Rte de Penau 66
1052 LE MONT/LAUSANNE

N/céf. P. Favre/mb
43 38 53

Lausanne, le 9 novembre 1990

Aux personnes concernées,

Le Service de l'énergie de la commune de Lausanne a profité de la transformation de la chaufferie d'un de ses bâtiments pour faire poser un conditionneur d'eau NATEC en octobre 1986.

Une année après, soit en octobre 1987, lors d'une visite de contrôle, la vidange du boiler a permis de constater de visu que les promesses de la maison SONATEC s'étaient effectivement concrétisées: l'intérieur du chauffe-eau était "comme neuf" et dépourvu de toute incrustation (saleté, calcaire ou autre).

Parallèlement, les analyses d'échantillons d'eau effectuées par le chimiste de la STEP de Lausanne indiquent que la qualité de l'eau est restée égale à elle-même.

De plus, une visite de contrôle en octobre 1988, en présence également du Service des gérances de la commune de Lausanne n'a montré aucune modification par rapport à l'état initial.

SERVICE DE L'ÉNERGIE
L'ingénieur adjoint
F. FAVRE

The department of energy of Lausanne local council undertook the occasion during the transformation of a heating installation in one of its building, to install a NATEC water conditioner.

The following year, in October 1987, during maintenance inspection the boiler was emptied, and the promises from the company SONATEC were visually proved to be correct. The interior of the water heater was "like new" and no evidence of any incrustation (dirt, limescale, etc.)

At the same time, the water samples analyzed by the chemist from the STEP (sewerage treatment plant) in Lausanne indicated that the water quality was stable.

In addition to this, during maintenance inspection carried out by the facility management department from the Lausanne local council, did not find any changes in the initial state of the water heater.