IonPolarization System

Información Técnica IPS KalyxX

Formación de Sarro

El sarro es la cristalización del Carbonato de Calcio ($CaCO_3$) y el Carbonato de Magnesio ($MgCo_3$) en las tuberías y accesorios:

- Boiler
- Regadera
- Grifería
- Lavadora de ropa…

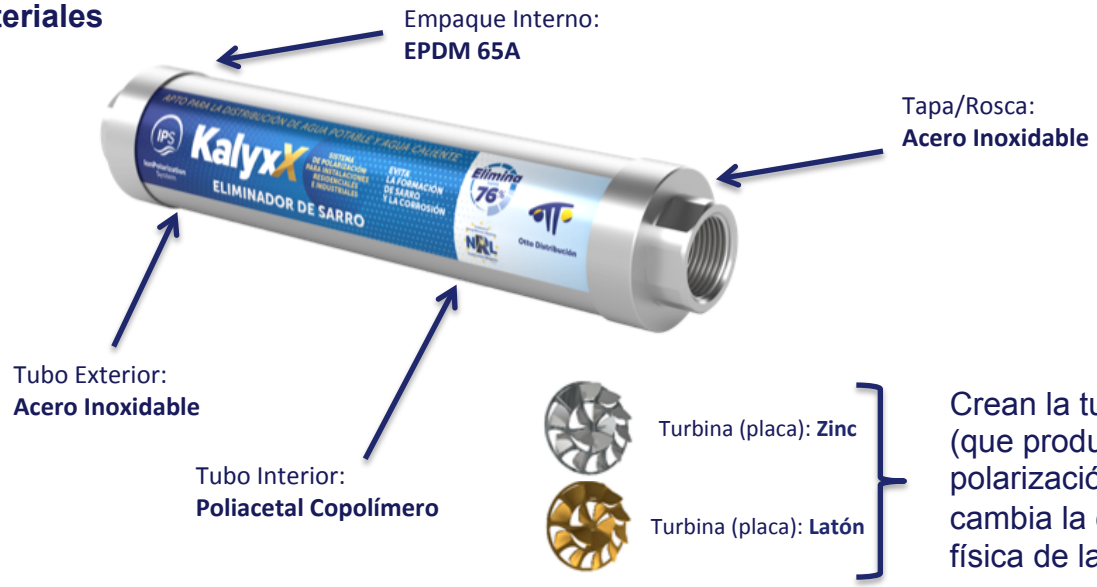
La formación de sarro…

- Genera problemas de operación, costos de operación y mantenimiento de las tuberías y accesorio por donde se transporta el agua.
- Reduce el tiempo de vida de la griferías, regaderas, calentadores de agua, herrajes para W.C., lavadoras de ropa, lavavajillas…
- Es mayor en conductos de agua caliente.
- Incrementa el costo para calentar el agua (gas o electricidad).
- Incrementa el consumo de los jabones y detergentes.

IPS KalyxX

- El dispositivo IPS **cambia la estructura física** de las moléculas del Carbonato de Calcio y Carbonato de Magnesio para que fluyan con el agua y NO se cristalicen como sarro en las tuberías y accesorios (no hay cambio en la composición química de las moléculas).
- El IPS **no es un filtro**, no necesita ningún mantenimiento.

Materiales



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Ejemplos:

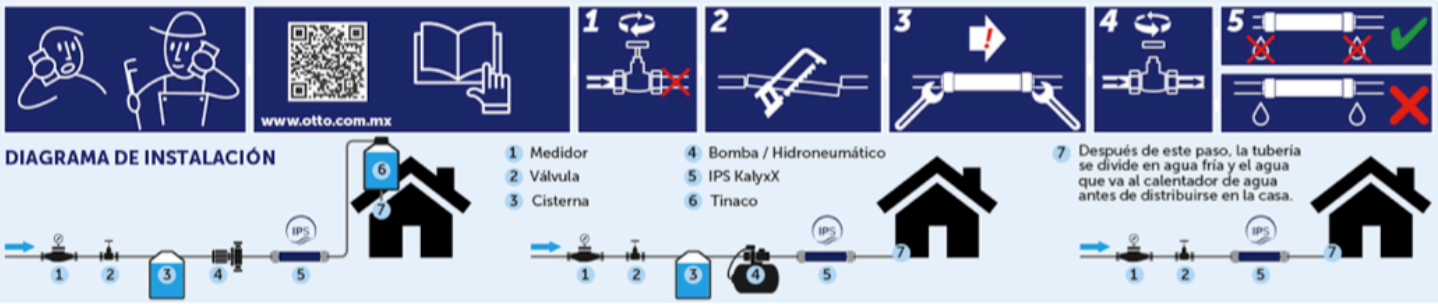
Calentador de Agua

Grifería

Regadera

Tubería

Instalación:



IMPORTANTE: Tiene que haber una distancia mín. de 1m entre la bomba/hidroneumático y el IPS KalyxX.

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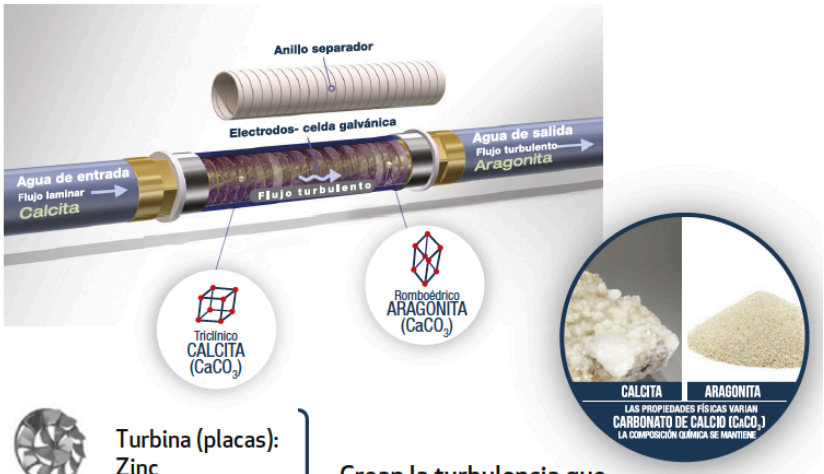
Funcionamiento:

El dispositivo IPS provoca turbulencia en el flujo de agua, lo que genera una corriente galvánica que altera la manera en la que el Carbonato de Calcio (sarro) se cristaliza.




Turbina (placas): Zinc


Turbina (placas): Latón

Crean la turbulencia que genera la corriente galvánica.

Garantía:

-El dispositivo IPS KalyxX cuenta con 10 años de garantía contra defectos de fabricación.
-Vida útil mínima: 10 años.

Datos técnicos:

MODELO	MEDIDA	PIEZAS / CAJAS	CONEXIÓN	ANCHO (MM)	LONGITUD (MM)	PESO (KG)	FLUJO MÁX. (M3/HORA)
IPSKXMA - 1/2	1/2"	1 pieza	Rosca: Hembra Hembra	50	245	0.8	1
IPSKXMA - 3/4	3/4"	1 pieza	Rosca: Hembra Hembra	50	245	0.8	3.2
IPSKXMA - 1	1"	1 pieza	Rosca: Hembra Hembra	50	251	0.9	4

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IAPMO R&T LAB

TEST REPORT

5001 East Philadelphia Street
Ontario, California – USA 91761-2816
Ph: 909.472.4100 | Fax: 909.472.4243
http://www.iapmortl.org

Certificado IAPMO

IAPMO es reconocida como la empresa certificadora de plomería más importante en Estados Unidos.

Report Number: 2475-17001

Report Issued: September 29, 2017 **Project No.:** 28587

Client: Swiss Aqua Technologies SK s.r.o.,
Obereggerstrasse 50,
Berneck, Switzerland, CH-9442 Contact: František Pancurák

Source of Samples: The sample was supplied by the manufacturer, and the testing was witnessed by and IAPMO lab personnel, Robert Schut, at the manufacturer's laboratory.

Date of Testing: August 29, 2017 to September 14, 2017.

Test location: Šebastovska 2, 080 06 Prešov, Slovakia.

Sample Description: IPS Sirius water softener.

Model No.: IPS Kalyxx.

Scope of Testing: The purpose of the testing is to determine if the tested sample of the water softener, IPS Kalyxx, reduces the limescale deposit on the surfaces of heating elements of water heaters per Test Protocol by Swiss Aqua Technologies SK s r.o.

Conclusion: **See results**

Tested by, Reviewed by,

Sample description: The tested IPS Kalyxx device (Sirius) is made from a PEX-Al-PEX multilayer pipe with 12 electrodes of plated silver and 11 electrodes of Ti/Zn inside. The plates are shaped for obtaining a double turbulence in the water to improve the effect of the ionization.

Test procedure (see Test Protocol from Swiss Aqua Tech, attached at the bottom of the report).

Each tank of 50 liters capacity, filled with 45 liters of water, as follows:

- Line 1) Stainless steel heating element, without water softener (untreated)
- Line 2) Stainless steel heating element, with IPS Kalyxx device.
- Line 3) Copper heating element, without water softener (untreated).
- Line 4) Copper heating element, with IPS Kalyxx device.

Note: Lines 2 & 4 were connected to the same IPS Kalyxx device (by a Tee).

During a period of 11 days, 4 times per day (at 8 AM, 11 AM, 1 PM and 4 PM), a 30 liters of water each time was drained and refilled simultaneously. Except the 2 weekend days, only 3 water exchanges were done (at 8AM, 12PM and 4PM).

Before each water draw, the hot water temperature was measured and registered, average of 65.2°C (min: 65.0°C / max: 65.5°C). During each water refill, the cold water temperature was measured and registered, average of 17.2°C (min: 16.9°C / max: 17.7°C). On daily basis, the water hardness was verified and registered, average of 17.9° dH (min: 17.51° dH / max: 18.06° dH).

At the end of the 11-day test, the heating elements were left drying and then taken out from the tanks. The lime scale, which was attached to the heating elements, were mechanically scraped off and weighed.

Finding:

Line number	1	2	3	4
Weight of deposited limescale (g)	0.7133	0.1759	4.7843	1.1336

From these results, it's concluded that the IPS Kalyxx reduced 75.3% limescale deposit on stainless steel heating element, and 76.3% limescale deposit on copper heating element.

"En base a estos resultados, se concluye que el **IPS KalyxX reduce hasta el 75.3% la formación de sarro en las resistencias de acero inoxidable y 76.3% en las resistencias de cobre."**

*Pruebas hechas por IAPMO en aguas con una dureza de 318 ppm y una presión de 3 kg/cm^2.

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Comprobación de resultados:

Resistencia de Acero Inoxidable

Resistencia de Cobre

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SIN IPS KalyxX

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Condiciones Óptimas para el Funcionamiento

Rangos de dureza del Agua en México:
(Concentración de $CaCO_3$)

Nivel de Dureza	Concentración de $CaCO_3$
Suave	0 - 50 ppm
Media	50 - 150 ppm
Dura	150 - 300 ppm
Muy Dura	300 ppm o mayor

Funcionamiento óptimo del IPS KalyxX

Presión de agua recomendada para la instalación:

Porcentaje de Eliminación de Sarro	Presión del agua
50% de eliminación	0.3 kg/cm^2
76% de eliminación	**2 kg/cm^2 o mayor**
Presión Máxima de Operación: 10 kg/cm^2	

Funcionamiento óptimo 2kg/cm^2 del IPS

Información del fabricante:

Swiss Aqua Technologies

Fabricado por:
Swiss Aqua Technologies CZ s.r.o
Skorkovská 1310, Kyje, 198 00 Praha 9, Czech Republic
www.swatech.ch

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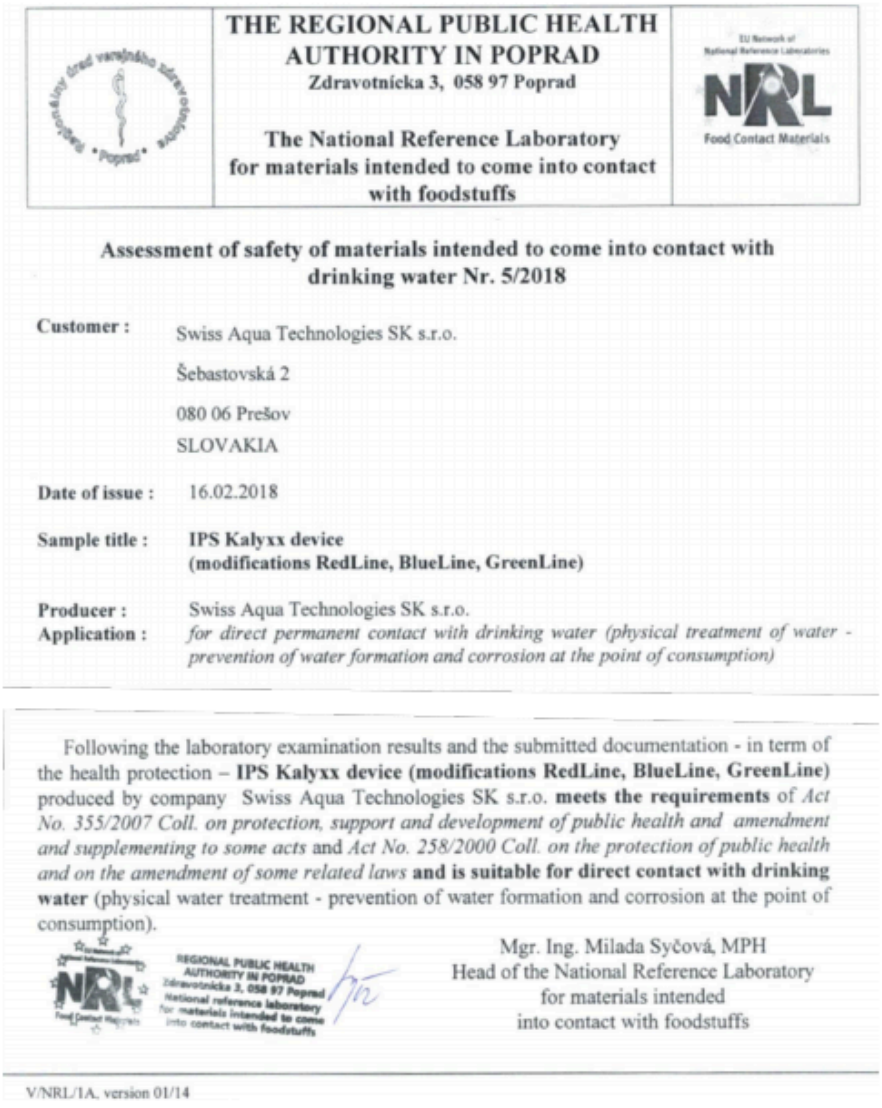
Condiciones Óptimas para el Funcionamiento

Duración del tratamiento en el agua:

-El tratamiento de polarización iónica permanece en el agua tratada por un lapso de 72 horas después de pasar por el dispositivo IPS KalyxX.

Certificación NRL: Contacto directo con agua potable y alimentos:



THE REGIONAL PUBLIC HEALTH AUTHORITY IN POPRAD
Zdravotnícka 3, 058 97 Poprad

The National Reference Laboratory for materials intended to come into contact with foodstuffs

EU Network of National Reference Laboratories
NRL Food Contact Materials

Assessment of safety of materials intended to come into contact with drinking water Nr. 5/2018

Customer : Swiss Aqua Technologies SK s.r.o.
Šebastovská 2
080 06 Prešov
SLOVAKIA

Date of issue : 16.02.2018

Sample title : **IPS Kalyxx device (modifications RedLine, BlueLine, GreenLine)**

Producer : Swiss Aqua Technologies SK s.r.o.
Application : *for direct permanent contact with drinking water (physical treatment of water - prevention of water formation and corrosion at the point of consumption)*

Following the laboratory examination results and the submitted documentation - in term of the health protection – **IPS Kalyxx device (modifications RedLine, BlueLine, GreenLine)** produced by company Swiss Aqua Technologies SK s.r.o. **meets the requirements** of *Act No. 355/2007 Coll. on protection, support and development of public health and amendment and supplementing to some acts* and *Act No. 258/2000 Coll. on the protection of public health and on the amendment of some related laws* **and is suitable for direct contact with drinking water** (physical water treatment - prevention of water formation and corrosion at the point of consumption).

REGIONAL PUBLIC HEALTH AUTHORITY IN POPRAD
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National reference laboratory for materials intended to come into contact with foodstuffs

Mgr. Ing. Milada Syčová, MPH
Head of the National Reference Laboratory
for materials intended
into contact with foodstuffs

V/NRL/1A, version 01/14

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