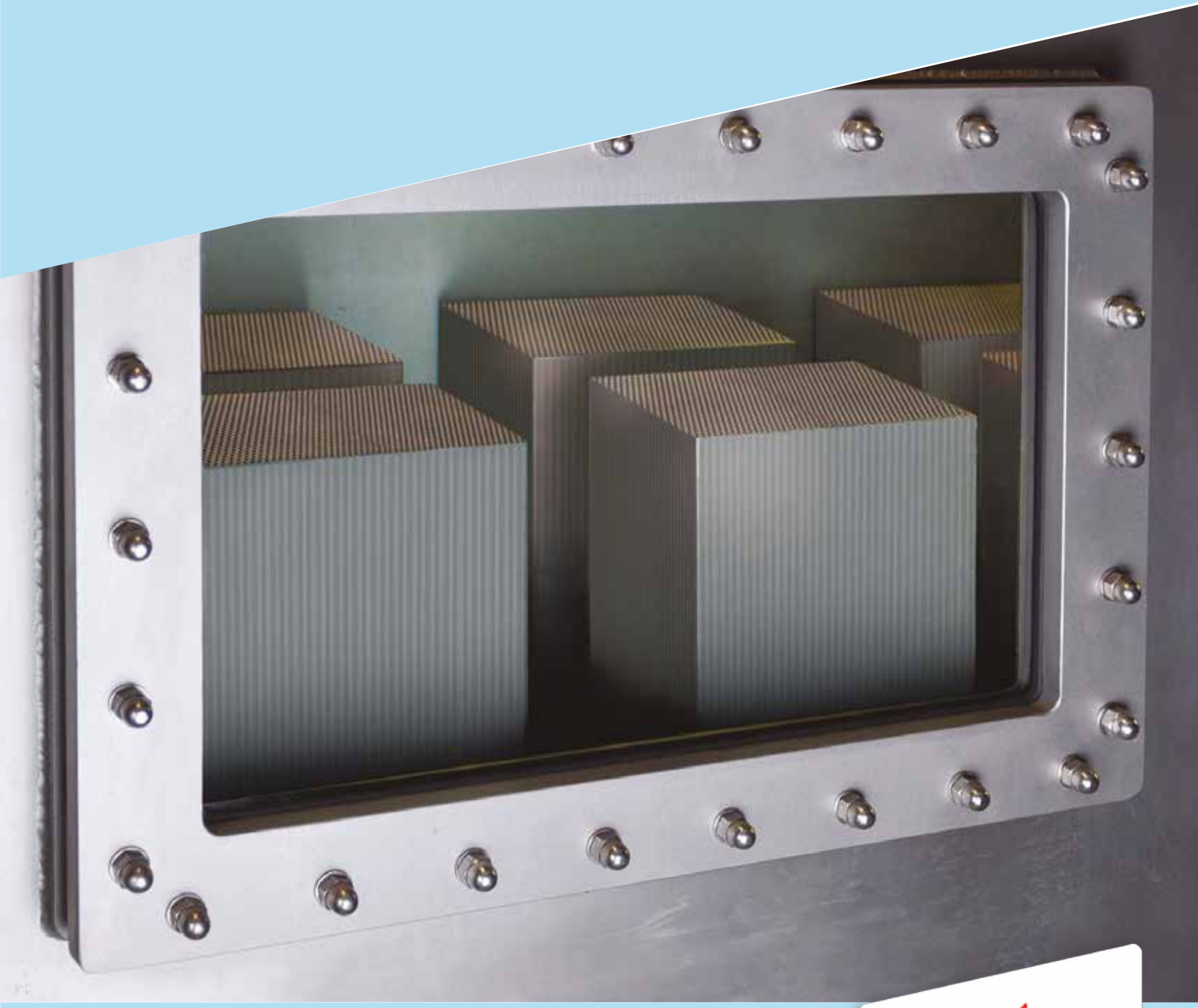
CRYSTAR®

CRYSTAR® FT

Silicon Carbide Ceramic Filters

FOR RECREATIONAL WATER



WHEN THE QUALITY OF WATER MATTERS

SAINT-GOBAIN


SAINT-GOBAIN

Saint-Gobain leads the international recreational water filtration industry with high performance ceramic honeycomb filter technology.

- Multichannel honeycomb for engineered water flow.
- Layered membrane structure improves filtration performance.

UL CERTIFIED
HEALTH EFFECTS US CA
PERFORMANCE US
MH61987

MEMBRANE FILTER

ANSI/NSF 61
WATER TEMP. 23°C

ALSO CERTIFIED TO
ANSI/NSF 50
MATERIAL ONLY

SAINT-GOBAIN

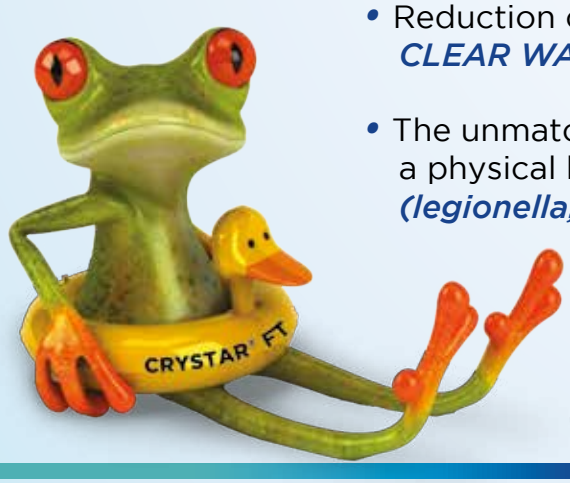
CRYSTAR® FT Silicon Carbide Ceramic Filters

When the quality of water assures *your wellbeing to the fullest*

Swimming pools, splash pads and other aquatic activities can be wonderful leisure experiences for you, your family and friends. During your vacation or in your daily life, the benefits of enjoying recreational water are undeniable.

The use of Crystar® Filtration Technology will ensure you have the best experience in your recreational water activities. Indeed, this revolutionary technology provides healthier and more pleasant water thanks to:

- A reduction of 40% in chloramines (combined chlorine) and 30% trihalomethanes (THM) content, which eliminates the ***chlorine odor and reduces irritation of eyes, skin and lungs.***
- Reduction of at least 40 % in turbidity, resulting in ***CRYSTAL CLEAR WATER!***
- The unmatched efficiency of silicon carbide microfiltration, a physical barrier ***to stop dangerous microorganisms (legionella, cryptosporidium...)*** in their tracks.



When the quality of water is *cost effective*

Major Benefits over Sand Filters

The benefits of Crystar® Filtration Technology for the operation and safety of your swimming pool cannot be overstated:

- ***Up to 40% less*** combined chlorine (chloramines)
- ***Up to 30% less*** THM (trihalomethanes)
- ***Up to 40% less*** residual turbidity
- ***Up to 50% reduction*** in backwash water consumption
- ***Up to 30% reduction*** in chemical usage
- ***Up to 50% reduction*** in power consumption
- ***Up to 30% reduction*** in footprint
- ***A maintenance-free, long life filtration system***
- ***Reduced risk of swimming pool closures***
- ***Able to operate*** automatically

CRYSTAR® FT Silicon Carbide Ceramic Filters

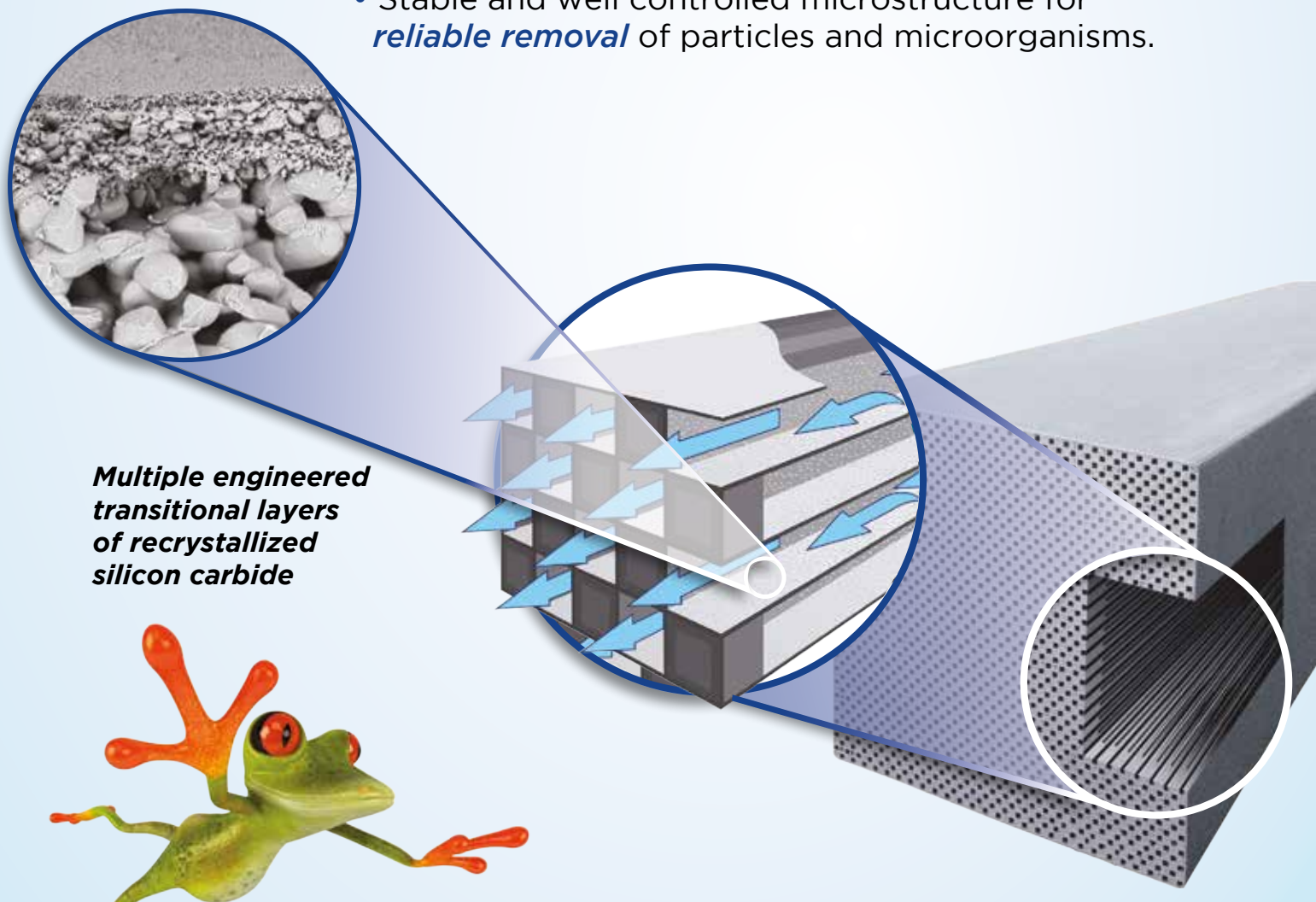
When the quality of water reflects *technology innovation*

An ultra-compact ceramic honeycomb structure with alternatively plugged channels:

- Very high ***filtration area*** – 11 m^2 for a filtration element of 149 x 149 x 1000 mm.
- Well defined and stable path for inlet water flow and filtrate water exit, ensuring ***low operating pressure*** (below 0,5 bar – 7 psi) and ***easy and fast backwash*** (30 – 60 liters/filtration element, 3 seconds).

Crystar® Filtration Technology is a highly engineered product that utilizes the unique properties of recrystallized silicon carbide, a special ceramic characterized by:

- Very high ***chemical stability*** and ***abrasion resistance.***
- Excellent ***permeability*** to water.
- Stable and well controlled microstructure for ***reliable removal*** of particles and microorganisms.



Multiple engineered transitional layers of recrystallized silicon carbide

CRYSTAR® FT Silicon Carbide Ceramic Filters

Choose which Crystar® FT Filters works for you

Crystar® HiPur - The choice for therapy and wellness pools, spas and other challenging pools.

- Highest retention efficiency thanks to the 250 nm membrane
- Lowest chemical consumption

Crystar® HiFlo has the **ideal balance between water quality and low rate capacity**, making it the preferred choice for recreational pools, aquatic parks and splash pads.

Cost effective versus current filtration technologies.

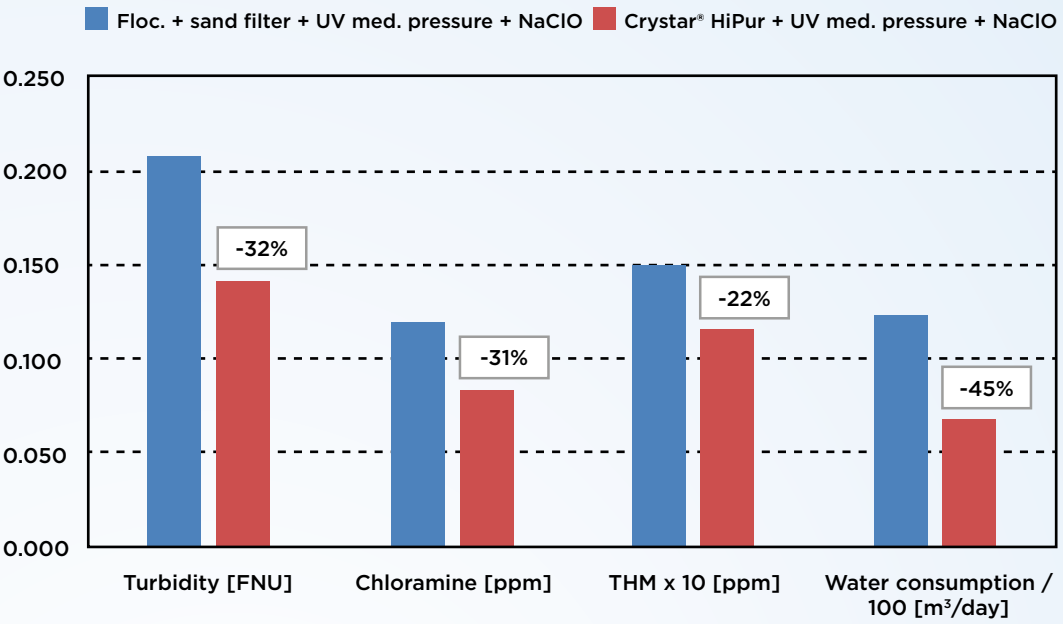
- Less maintenance
- Smaller installation footprint

Compare Crystar® FT Silicon Carbide Ceramic Filters to sand filters

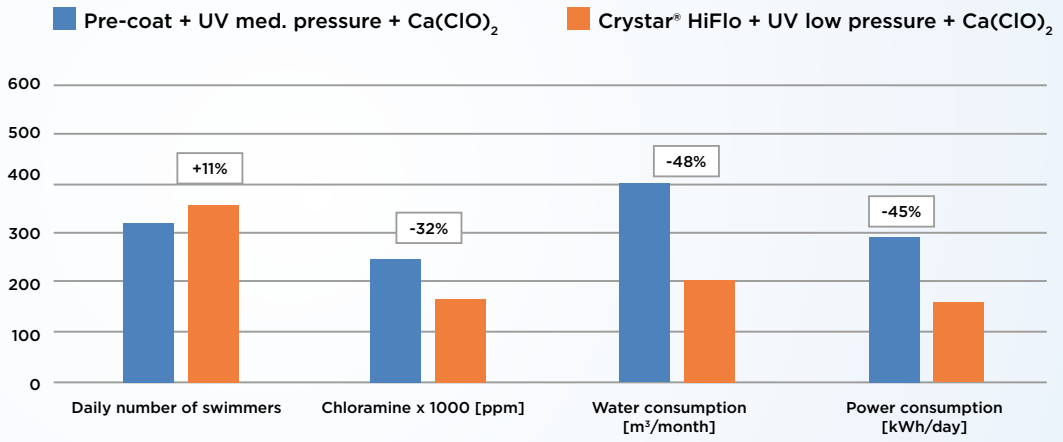
	Crystar® HiPur	Crystar® HiFlo	Sand Filter
Flow rate	6 m^3/h	10 -15 m^3/h	Variable
Operating Pressure	<0.5 bar	<0.5 bar	<1 bar
Water Quality	Excellent	Good	Poor
Water Consumption	Medium	Low	High
Power Consumption	Medium	Low	High
Chemicals Consumption	Low	Medium	High
Footprint	Medium	Low	High

Crystar® Filtration Technology – Available products and comparison to sand filter based on data from field installations.

Benchmark sand filter vs. Crystar® HiPur - Sports pool 140 m³/h



Benchmark Pre-coat vs. Crystar® HiFlo - Leisure pool 120 m³/h



CRYSTAR®

Designing recreational water systems is the core of your business. You believe in the value of water quality. You believe in the strength of technology. Nevertheless, you are having a hard time promoting high quality filtration systems in a market dominated by low cost solutions with poor performance.

The Market Trends Are Shifting

Increasing awareness of recreational water **health issues**

Vacuum mode configuration sports and therapy pools, Norway – 540 m^3/h

The challenge to provide **environmentally-friendly** filtration technologies

Pressure mode configuration wellness pool, Germany – 80 m^3/h

Crystar® Filtration Technology is the response to the urgent need for more efficient and reliable filtration systems for recreational water.

Saint-Gobain IndustrieKeramik Rödental GmbH

Oeslauer Straße 35 · 96472 Rödental
Phone: +49 (0) 9563 724 0
Fax: +49 (0) 9563 724 356
EMail: crystarft@saint-gobain.com

www.crystarfiltration.saint-gobain.com

Saint-Gobain
Is an international business group located in 66 countries. It is one of the 100 largest industrial companies in the world and has a leading position in all its strategic business areas.

SAINT-GOBAIN