

# Ultramarine™ Smartrack™

PRETREATMENT OF SEAWATER  
WITH PRESSURIZED OUT/IN  
ULTRAFILTRATION MODULES



DESALINATION

INCREASE DESALINATION  
SCALABILITY WITH INTERCHANGEABLE  
ULTRAFILTRATION MODULES

**+** **FLEXIBLE INTEGRATION**  
A standardized, industrialized  
system for easier installation

**+** **SAVINGS**  
The high performance of  
ultrafiltration at controlled costs



# INNOVATION

## THE ONLY UNIVERSAL RACK WITH INTERCHANGEABLE ULTRAFILTRATION MODULES.

### KEY FIGURE:

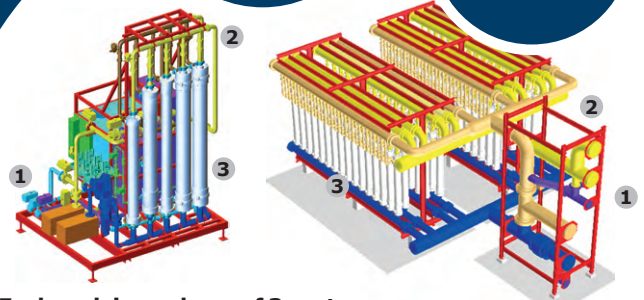
SDI (Silt Density Index)

<3

100% of the time.

Ultramarine™  
Smartrack™

DESALINATION



#### Each rack is made up of 3 parts :

- 1 The facade (called the "Valve Rack") where the valves, instrumentation and electrical connections are located.
- 2 "Inter-piping" or the 3 networks that connect to the rack
- 3 The "Module Rack" where the ultrafiltration modules are attached

### Ultramarine™ Smartrack™ TECHNOLOGY...

Ultrablue™ Smartrack™ is a rack, or metallic chassis capable of accommodating ultrafiltration membrane modules of different brands, presenting varied dimensions as well as different connections.

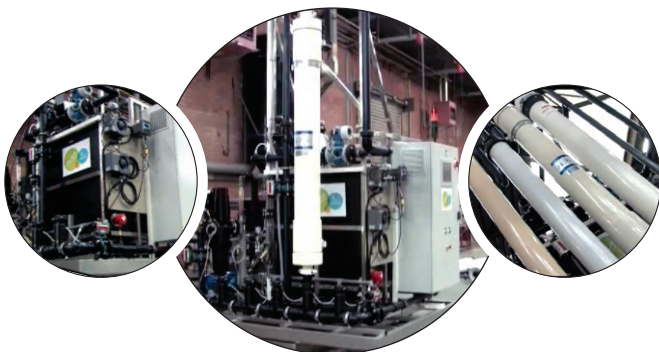
The rack can accommodate the 4 principal module supplier brands found on the market: ASAHI, DOW, GE, TORAY and inter-piping to allow switching the filtrate/retentate exits.

Ultrablue™ Smartrack™, is conceived for the extension or renovation of existing plants, adapting to any size installation and able to handle a capacity of 200 to 22,000 m<sup>3</sup>/day per rack,

The Ultrablue™ Smartrack™ system functions on an Out/In principal (filtration from the exterior towards the interior of the membrane) especially in order to treat peaks in turbidity.

### ...WHAT IT CAN DO FOR YOU

- + **STRATEGIC AND ECONOMIC INTEREST:**
  - Freedom to choose suppliers and membranes
  - Control ultrafiltration renewal costs
  - Return on investment: the addition of new membranes requires no modifications to the installation.
- + **FLEXIBLE INTEGRATION:**
  - Pre-assembled, rack elements are easy to transport
  - Standardized, industrialized system that reduces delivery and start-up time
- + **EASE OF OPERATION:**
  - Easy maintenance: disposition of modules in staggered rows to simplify accessibility
  - All equipment (valves, pumps and electrical connections) are on the front.
  - Can be taken apart without special tools
  - Standard cleaning equipment (forklift, hoist, crane)
- + **HEALTH AND SAFETY:**
  - Ultrafiltration constitutes an excellent bacteriological barrier.
- + **SUSTAINABLE DEVELOPMENT:**
  - The ultrafiltration of seawater reduces discharge of iron salts into the natural marine environment.



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