

# DuPont<sup>™</sup> IntegraTec<sup>™</sup> Ultrafiltration Capabilities



# Content

DuPont™ IntegraTec™ capabilities	3
The most versatile portfolio	4
Solving various challenges with membrane excellence	4
Reliable & durable range of modules & racks configurations	5
World class UF manufacturing & quality	5
Expertise beyond the product	5
DuPont™ IntegraTec™ Ultrafiltration	6
Portfolio overview	6
Pressurized vs. submerged, PVDF vs. PES: which should I choose	6
Pressurized UF "P Series"	
PVDF UF Out-In	7
PES In-Out	9
Submerged UF "S Series"	10
Integrated UF "I Series"	11

# DuPont<sup>™</sup> IntegraTec<sup>™</sup> Ultrafiltration Capabilities

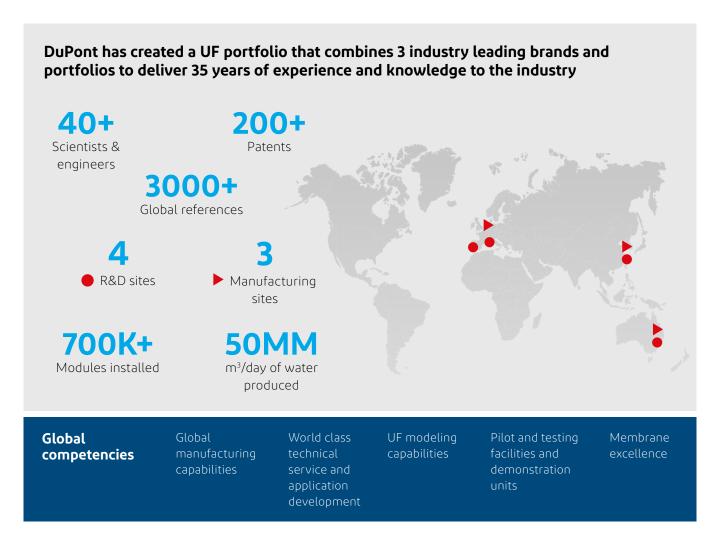
# IntegraTec™ Ultrafiltration

# a new global leader in Ultrafiltration (UF) Technology

- Broadest application cases for leverage total>3,000 Installations
- ▶ One-stop consultation for Multi-tech solutions







## The most versatile portfolio delivers ideal solutions

## Why choose DuPont™ IntegraTec™ Ultrafiltration Solutions?

#### Membrane excellence

#### Suited to solve all challenges

- PVDF, PES and PP Chemistry
- Industrial, municipal and commercial applications
- Membrane prototyping and chemistry formulation

#### Manufacturing excellence Trusted quality with world class production

- 3 manufacturing facilities
- Highest quality standards
- More than 35 years of experience
- 40+ drinking water regulatory certifications



## Range of UF configurations

## Durable, reliable & best fit solution

- Pressurized, submerged & integrated UF solutions
- Flexible commercial offering: components, racks and system level solutions
- Engineering & system design services

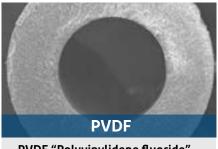
#### Expertise beyond the product **Customer tailored solutions**

- 40 pilots globally located
- 75+ technical support professionals
- 40+ R&D specialists
- 5 regional labs
- Interactive tools (water academy, WAVE, iSD, Memsize)

# Solving various challenges with membrane excellence

## Decades of UF experience

- Industry leading portfolio
- Diverse membrane chemistries
- Solves various filtration challenges
- Proven results and large installed reference base
- Proven solids and pathogen rejection



#### PVDF "Polyvinylidene fluoride"

- High fouling resistance
- High oxidation resistance
- High Recovery



#### PES: Polyethersulfone

- Low energy
- Highest mechanical strength
- High virus rejection

# Reliable & durable range of modules & racks configurations

## Module & Potting

- Highest quality standards
- Optimal filtration performance
- Robustness, integrity & stability
- Effectively backwash and cleaning
- Differentiation to fit customer requirements
- Proven experience



#### **Racks & Skids**

- Durability & suitability
- Simplify installation
- Maximize productivity
- Scalable and economic
- Suit all geographies



# World class UF manufacturing & quality

# Manufacturing excellence in 3 production plants





- 35+ years of UF manufacturing
- PVDF/Out-In technology
- Pressurized and Submerged UF



- 20+ years of UF manufacturing
- PES/In-Out technology
- Pressurized & Integrated UF

## **Expertise beyond the product**



"Great presentation! Very good information even after 10 years in the industry I learned a lot."

"Excellent presention.
I'm looking forward to the next
sessions, thank you for the
top-notch Leadership in Water."

## WAVE projection software

- 75+ TS&D personnel globally
- Engineering support
- Drawings, layouts, designs, projections, P&ID
- Projection software: RO, UF & IER

#### **Water Academy**

- Water education resource
- Application, technology and design best practices
- 30+ Webinars available online



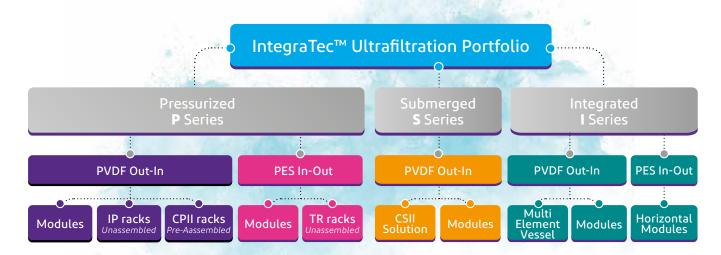
Greiffenberg, Germany Tarragona, Spain Huzhou, China Windsor, Australia

### **Extensive experience**

with advanced expertise in application innovat

- 4 world class centers
- Real world testing conditions
- Industrial scale assets
- Best in class analytical lab
- System Optimization Services (SOS)
- Product & application experts

## Portfolio overview



# DuPont™ IntegraTec™ P Series

# PVDF UF Out-In

## PVDF open platform modules offering

#### Standard

#### **XP 77**

- 77 m² filtration area
- -8" (D) x 80" (H) size
- 0.03 µm pore size fiber
- Suitable for racks built by customers for medium to large size plants



## **Adaptive**

#### N 67 AM

- 67 m<sup>2</sup> filtration area
- 7" (D) x 70" (H) size
- 4 adaptive end-caps
- Suitable for new systems, containerized systems, or retrofit existing racks with PVDF

#### **XP 51**

- 51 m² filtration area
- -8" (D) x 60" (H) size
- 0.03 µm pore size fiber
- Suitable for racks built by customers for containerized or height restricted sites



#### XP 55 UXA

- 55 m² filtration area
- 6" (D) x 80" (H) size
- 3 adaptive end-caps
- Suitable for compact racks built by customers or replace other PVDF modules

# PVDF Scalable DuPont™ IntegraPac™ IP Racks

### **IP Rack**

#### **Components**

- PVC filtrate and air scour pipes
- Air scour tubing and DN connectors
- Connecting flanges
- Frames with fastening nuts & bolts

## **IP UF Modules**

### **XP 77 IP**

- 77 m<sup>2</sup> filtration area
- 8" (D) x 80" (H) size
- 0.03 µm pore size fiber
- Suitable for medium to large size plants

#### **Features**

- Scalable to fit 6 22 modules
- Easily accessible
- Clear filtrate pipes
- Ships unassembled
- High pressure rating
- Corrosion resistant materials
- Modular for ease of integration



## **XP 51 IP**

- 51 m<sup>2</sup> filtration area
- 8" (D) x 60" (H) size
- 0.03 µm Pore size fiber
- Suitable for containerized or height restricted sites

# DuPont™ IntegraTec™ P Series

## PVDF UF Out-In

# **PVDF pre-assembled compact CPII Racks**

## **Components**

#### N 67 Modules

- 67 m<sup>2</sup> filtration area
- 7" (D) x 70" (H) size
- 0.03 µm Proven N Fiber

#### Fully assembled racks with

- Molded nylon rack headers
- ABS module housing center tube
- Mechanical fittings & accessories
- Painted, mild steel support skids



#### **Features**

- Up to 36 L40N modules per rack
- Self-supporting, self-manifolded for rapid installation
- Multiple configurations to fit a specific site
- Top and side module access point for ease of maintenance
- Standard seismic design
- Up to 5.0 bar operational pressure
- Most compact design for large scale projects



# DuPont<sup>™</sup> IntegraTec<sup>™</sup> P Series

PES In-Out

# PES Streamlined T-Rack™ (TR) offering

#### **TR Skid**

### **Components**

- Bottom frame & connecting brace
- Top cross brace
- Feed & drain integrated end caps
- Module connecting parts
- Filtrate header

#### **Features**

- Long and Short versions
- Safe, reliable & easy to assemble
- Lightweight
- Reduced shipping costs and assembly time
- High pressure rating
- Highest corrosion resistance class (C5)





#### TR Modules

### MB PRO 95 TR

- 95 m<sup>2</sup> filtration area
- 10" (D) x 80" (H) size
- 0.02 µm innovative Multibore™ PRO fiber
- Suitable for large desal & drinking water plants

### **MB 80 TR**

- 80 m² filtration area
- 10" (D) x 80" (H) size
- 0.02 µm Multibore™ fiber
- Suitable for medium to large size plants

### **MB 50 TR**

- 50 m² filtration area
- 10" (D) x 80" (H) size
- 0.02 µm Multibore™ fiber
- Suitable for containerized or height restricted sites

#### TR Module containerized solutions

## MB PRO 82 TR S

- 82 m<sup>2</sup> filtration area
- 10" (D) x 60" (H) size
- 0.02 µm innovative Multibore™ PRO fiber
- Suitable for containerized or height restricted sites

## **MB 60 TR S**

- 60 m<sup>2</sup> filtration area
- 10" (D) x 60" (H) size
- 0.02 µm Multibore™ fiber
- Suitable for containerized or height restricted sites

#### **MB 40 TR S**

- 40 m<sup>2</sup> filtration area
- 10" (D) x 60" (H) size
- 0.02 μm Multibore™ fiber
- Suitable for high TSS water filtration in containerized installations



# DuPont™ IntegraTec™ P Series

PES In-Out

# PES Open Platform modules offering

## Standard

MB PRO 95	MB PRO 82	MB 80	MB 60
<ul> <li>95 m² filtration area</li> <li>10" (D) x 80" (H) size</li> <li>0.02 μm innovativ</li> <li>Multibore™ PRO fiber</li> <li>Suitable for large desal &amp; drinking water plants</li> </ul>	<ul> <li>82 m² filtration area</li> <li>10" (D) x 80" (H) size</li> <li>0.02 µm innovativ</li> <li>Multibore™ PRO fiber</li> <li>Suitable for containerized or height restricted sites</li> </ul>	<ul> <li>- 80 m² filtration area</li> <li>- 10" (D) x 80" (H) size</li> <li>- 0.02 μm Multibore™ fiber</li> <li>- Suitable for medium to large size plants</li> </ul>	<ul> <li>- 60 m² filtration area</li> <li>- 10" (D) x 60" (H) size</li> <li>- 0.02 μm Multibore™ fiber</li> <li>- Suitable for containerized or height restricted sites</li> </ul>

## **MB 40**

- 40 m<sup>2</sup> filtration area
- 10" (D) x 60" (H) size
- 0.02 μm Multibore™ fiber
- Suitable for High TSS water filtration

### MB 25

- 25 m² filtration area
- 10" (D) x 40" (H) size
- 0.02 μm Multibore™ fiber
- Suitable for small plant size



## **Special**

#### **MB 55**

- 55 m² filtration area
- 8" (D) x 60" (H) size
- 0.02 µm Multibore™ fiber
- Suitable for medium to large size plants



# DuPont<sup>™</sup> IntegraTec<sup>™</sup> S Series

PVDF Out-In

# PVDF compact submerged (CS & CSII) offering

## Components

#### N 42 Modules

- 42 m<sup>2</sup> filtration area
- 4.7" (D) x 70" (H) size
- 0.04 µm Innovative N fiber
- Suitable for CSII Racks

#### S10N Modules

- 28 m<sup>2</sup> filtration area
- 5" (D) x 47" (H) size
- 0.04 µm Innovative N fiber
- Suitable for CS Racks

#### Pre-engineered nylon racks

#### In-tank rack support hardware

## **Features**

- Up to 44 modules per rack
- Scalable building blocks
- High solids handling capacity
- Single step direct coupling to RO
- Low total cost of ownership
- Low energy consumption
- Most compact footprint





# DuPont<sup>™</sup> IntegraTec<sup>™</sup> I Series

PVDF Out-In

# PVDF multi-tech filter offering

#### **Components**

#### XP 52 Modules

- 52 m<sup>2</sup> filtration area
- 6" (D) x 80" (H) size
- 0.03 µm proven XP fiber

#### **GRP Vessels:**

- Various sizes & Pressure ratings
- Various base configuration

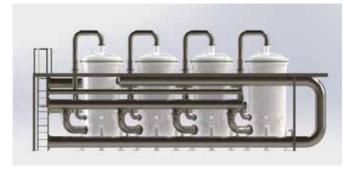
#### **Integrated Self Cleaning Filter**





#### **Features**

- Outdoor installation with limited civil investment
- Extended engineering & service packages
- High water recovery
- Low energy consumption
- Scalable & easy to assemble
- Flexible designs to suit various layouts
- Quick & simple to maintain
- Compact footprint





# DuPont™ IntegraTec™ I Series

PES In-Out

# PES Horizontal Modules Suitable for retrofits and upgrades

#### MB PRO 64 H

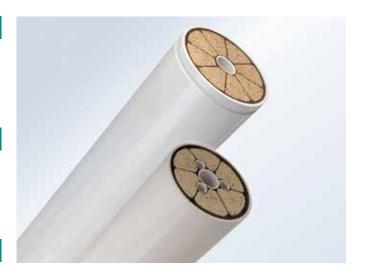
- 64 m<sup>2</sup> filtration area
- 8.7" (D) x 60" (L) size
- 0.02 μm innovative Multibore™ PRO fiber

#### **MB 55 H**

- 55 m<sup>2</sup> filtration area
- 8.7" (D) x 60" (L) size
- 0.02 μm Multibore™ fiber

#### **MB 40 HB**

- 40 m² filtration area
- 7.9" (D) x 60" (L) size
- 0.02 μm Multibore™ fiber



Picture credits: iStock, DuPont Water Solutions



## **Water Solutions** www.dupontwatersolutions.com

DuPont™, the DuPont Oval Logo, and all trademarks and service marks denoted with ™, 5M or ® are owned by affiliates of DuPont de Nemours, Inc. unless otherwise noted. © 2023 DuPont. All right reserved.

All information set forth herein is for informational purposes only. This information is general information and may differ from that based on actual conditions. Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other government enactments. The product shown in this literature may not be available for sale and/or available in all geographies where DuPont is represented. The claims made may not have been approved for use in all countries. Please note that physical properties may vary depending on certain conditions and while operation conditions stated in this document are intended to lengthen product lifespan and/or improve product performance, it will ultimately depend on actual circumstances and is in no event a guarantee of achieving any specific results. DuPont assumes no obligation or liability for the information in this document. References to "DuPont" or the "Company" mean the DuPont legal entity selling the products to Customer unless otherwise expressly noted. NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED. No freedom from infringement of any patent or trademark owned by DuPont or others is to be inferred.