

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

# IntegraTec



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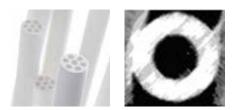
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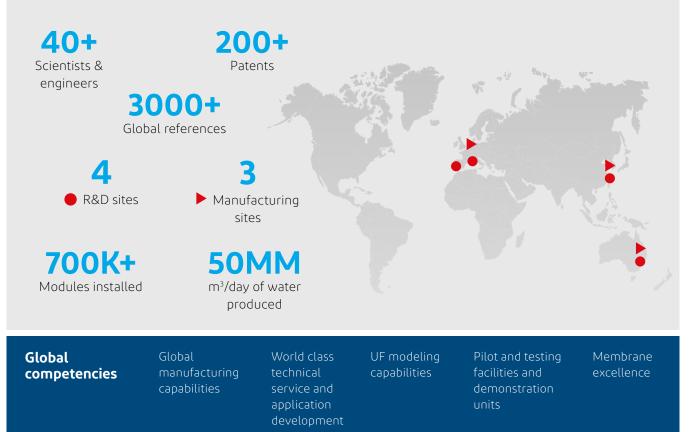
## DuPont<sup>™</sup> IntegraTec<sup>™</sup> Ultrafiltration Capabilities

## IntegraTec<sup>™</sup> 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



## DuPont has created a UF portfolio that combines 3 industry leading brands and portfolios to deliver 35 years of experience and knowledge to the industry



## The most versatile portfolio delivers ideal solutions

## Why choose DuPont<sup>™</sup> IntegraTec<sup>™</sup> 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

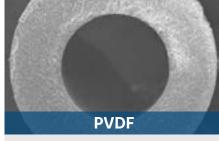
#### Expertise beyond the product Customer tailored solutions

- 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

#### Huzhou, China



- 22+ years
- PVDF/Out-In technology
- Pressurized & Integrated UF

## Windsor, Australia



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

# Greifenberg, Germany

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

## Expertise beyond the product



## WAVE projection software

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



## Water Academy

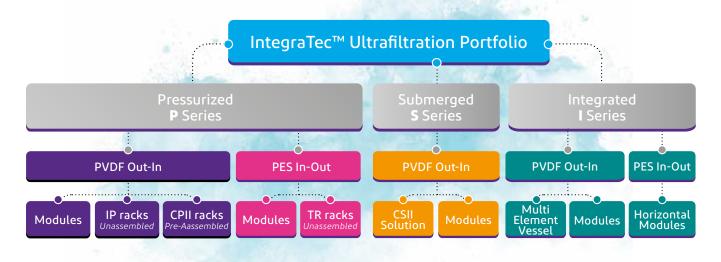
- Water education resource
- Application, technology and design best practices
- 30+ Webinars available online



#### Extensive experience with advanced expertise in application innovation

- 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<sup>™</sup> IntegraTec<sup>™</sup> P Series

## PVDF open platform modules offering



## PVDF Scalable DuPont<sup>™</sup> IntegraPac<sup>™</sup> IP Racks

#### **IP Rack**

## Components

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

### 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



## **IP UF Modules**

## XP 77 IP

- 77 m² filtration area
- 8" (D) x 80" (H) size
- 0.03  $\mu m$  pore size fiber
- Suitable for medium to large size plants

## XP 51 IP

- 51 m² filtration area
- 8" (D) x 60" (H) size
- 0.03  $\mu m$  Pore size fiber
- Suitable for containerized
- or height restricted sites

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

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

#### Components

#### N 67 Modules

- 67 m² 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<sup>™</sup> (TR) offering

## **TR Skid**

## Components

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

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



**MB 80 TR** 

– 80 m² filtration area

- 10" (D) x 80" (H) size

– Suitable for medium

to large size plants

– 0.02 µm Multibore™ fiber



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## **TR Modules**

## **MB PRO 95 TR**

- 95 m² filtration area
- 10" (D) x 80" (H) size
- 0.02 µm innovative Multibore™ PRO fiber
- Suitable for large desal & drinking water 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 40 TR MB 60 TR** - 60 m² filtration area

- 10" (D) x 60" (H) size
- 0.02 µm Multibore™ fiber
- Suitable for containerized or height restricted sites
- 40 m² filtration area
- 10" (D) x 60" (H) size
- 0.02 µm Multibore™ fiber
- Suitable for high TSS water filtration in containerized installations



## DuPont<sup>™</sup> IntegraTec<sup>™</sup> P Series PES In-Out

## **PES Open Platform modules offering**

MB 80

**MB 25** 

### Standard

## MB PRO 95

- 95 m² filtration area
- 10" (D) x 80" (H) size
- 0.02 μm innovativ Multibore™ PRO fiber

– 40 m<sup>2</sup> filtration area

– 10" (D) x 60" (H) size

water filtration

- 0.02 µm Multibore™ fiber
- Suitable for High TSS

- Suitable for large desal & drinking water plants
- 10″ (D) x 80″ (H) size – 0.02 µm Multibore™ fiber – Suitable for medium

- 80 m<sup>2</sup> filtration area

to large size plants

– 25 m<sup>2</sup> filtration area

- 10" (D) x 40" (H) size
- 0.02 µm Multibore<sup>™</sup> fiber

- Suitable for small plant size

## MB 60

- 60 m² filtration area
- 10" (D) x 60" (H) size
- 0.02 µm Multibore™ fiber
- Suitable for containerized or height restricted sites



## Special

**MB 40** 

### **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 m² filtration area
- 4.7" (D) x 70" (H) size
- 0.04 µm Innovative N fiber
- Suitable for CSII Racks

#### S10N Modules

- 28 m² 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 m² filtration area
- 6" (D) x 80" (H) size
- 0.03 µm proven XP fiber

#### **GRP Vessels**:

- Various sizes & Pressure ratings
- Various base configuration

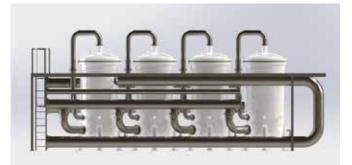
Integrated Self Cleaning Filter





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

## PES In-Out

## PES Horizontal Modules Suitable for retrofits and upgrades

#### MB PRO 64 H

- 64 m² filtration area
- 8.7" (D) x 60" (L) size
- 0.02 µm innovative Multibore™ PRO fiber

### MB 55 H

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

## MB 40 H

- 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

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