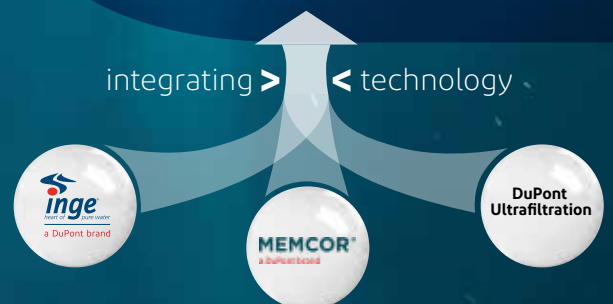


# DuPont™ IntegraTec™ Ultrafiltration Capabilities

# IntegraTec™



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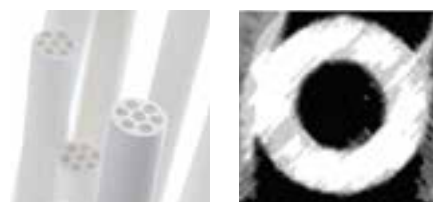


# DuPont™ IntegraTec™ Ultrafiltration Capabilities

## 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



**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**

**40+**

Scientists & engineers

**200+**

Patents

**3000+**

Global references

**4**

● R&D sites

**3**

▶ Manufacturing sites

**700K+**

Modules installed

**50MM**

m<sup>3</sup>/day of water produced



#### Global competencies

Global manufacturing capabilities

World class technical service and application development

UF modeling capabilities

Pilot and testing facilities and demonstration units

Membrane excellence

# 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

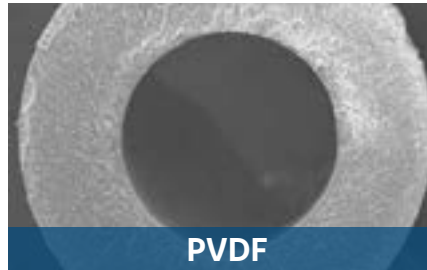
#### Customer tailored solutions

- 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**

#### PVDF "Polyvinylidene fluoride"

- High fouling resistance
- High oxidation resistance
- High Recovery



**PES**

#### 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



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

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

### Water Academy

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



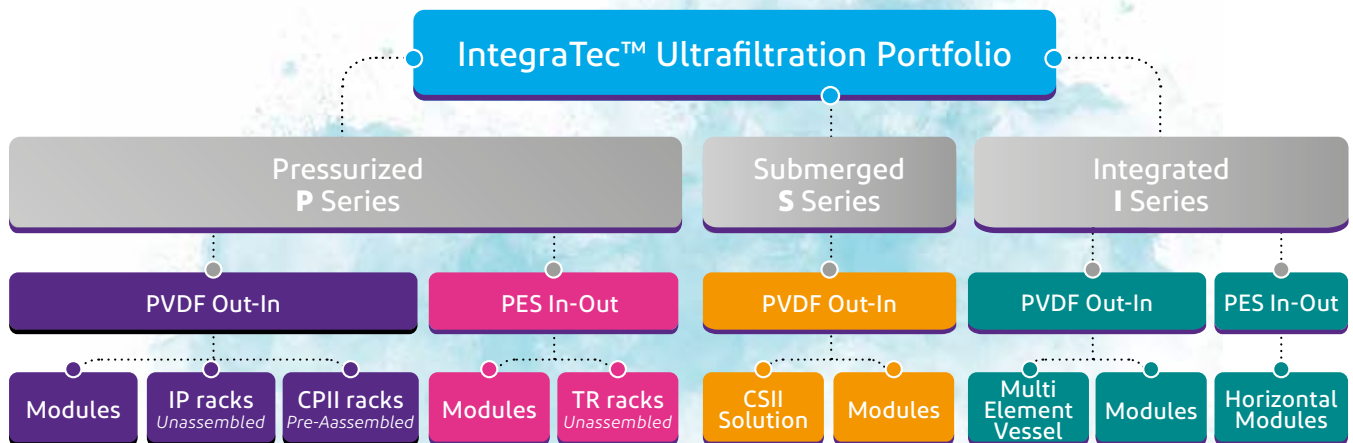
Greifenberg, Germany  
Tarragona, Spain  
Huzhou, China  
Windsor, Australia

### 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™ IntegraTec™ P Series

PVDF UF Out-In

## PVDF open platform modules offering

### Standard

#### XP 77

- 77 m<sup>2</sup> 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

#### XP 51

- 51 m<sup>2</sup> 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



### 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 55 UXA

- 55 m<sup>2</sup> 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

#### 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 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

#### 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 CPlI 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 skirts



### 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™ IntegraTec™ 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 m<sup>2</sup> filtration area
- 10" (D) x 80" (H) size
- 0.02 µm Multibore™ fiber
- Suitable for medium to large size plants

#### MB 50 TR

- 50 m<sup>2</sup> 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 60 TR

- 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

- 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

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

#### MB 80

- 80 m<sup>2</sup> filtration area
- 10" (D) x 80" (H) size
- 0.02 µm Multibore™ fiber
- Suitable for medium to large size plants

#### MB 60

- 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

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



### Special

#### MB 55

- 55 m<sup>2</sup> filtration area
- 8" (D) x 60" (H) size
- 0.02 µm Multibore™ fiber
- Suitable for medium to large size plants



# DuPont™ IntegraTec™ 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 Racksfor

#### 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™ IntegraTec™ 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:

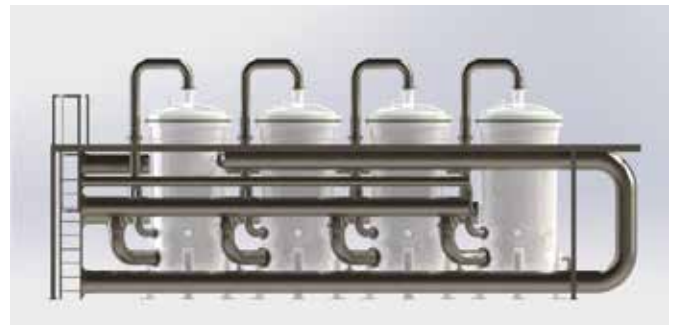
- Various sizes & Pressure ratings
- Various base configuration

#### 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 H

- 40 m<sup>2</sup> 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](http://www.dupontwatersolutions.com)**

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