

# inge GmbH Company Presentation

# inge GmbH: Competence in water



- We develop, produce and sell leading-edge ultrafiltration membranes and subsystems which are based on our own, patented technology
- Our products “Made in Germany” are the key components for more than 500 large water treatment plants around the world
- Strong existing relationships with blue chip customers (e.g. Siemens, GE, Veolia, LG, ...)
- 90 employees (as of Oct. 2012)
- In August 2011, inge became part of BASF, the world’s leading chemical company

# BASF – The Chemical Company

- BASF is the world's leading chemical company
- Sales 2011: EUR 73.5 billion
- Employees (December 31, 2011): 111,141
- 6 Verbund sites and about 370 production sites
- With the acquisition of Ciba in 2009, BASF has become a leading supplier of water treatment chemicals
- Since 2012 BASF is bundling all its products for the water industry in the „Water Solutions“ business unit.



# BASF's strong expertise in offering chemistry enhanced process solutions

## Solid Liquid Separation



- **Coagulants and flocculants** for water and waste water treatment
- **Polymer design expertise** (molecular weight, charge, architecture, product form)
- **Application expertise** in water, waste water and sludge treatment processes

## Corrosion Inhibition



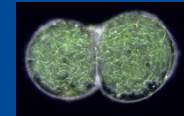
- **Advanced corrosion inhibitors and formulations** to protect cooling, boiler and process water circuits
- Alternatives to metal salts
- **Analytical capabilities** to predict and analyse corrosion phenomena

## Scaling Inhibition



- **Antiscalants, dispersants and chelating agents** with superior performance
- **Cleaning formulations** and procedures
- **Analytical expertise**, predictive tools, pilot facilities
- **Application know-how** in boiler, cooling and membrane applications

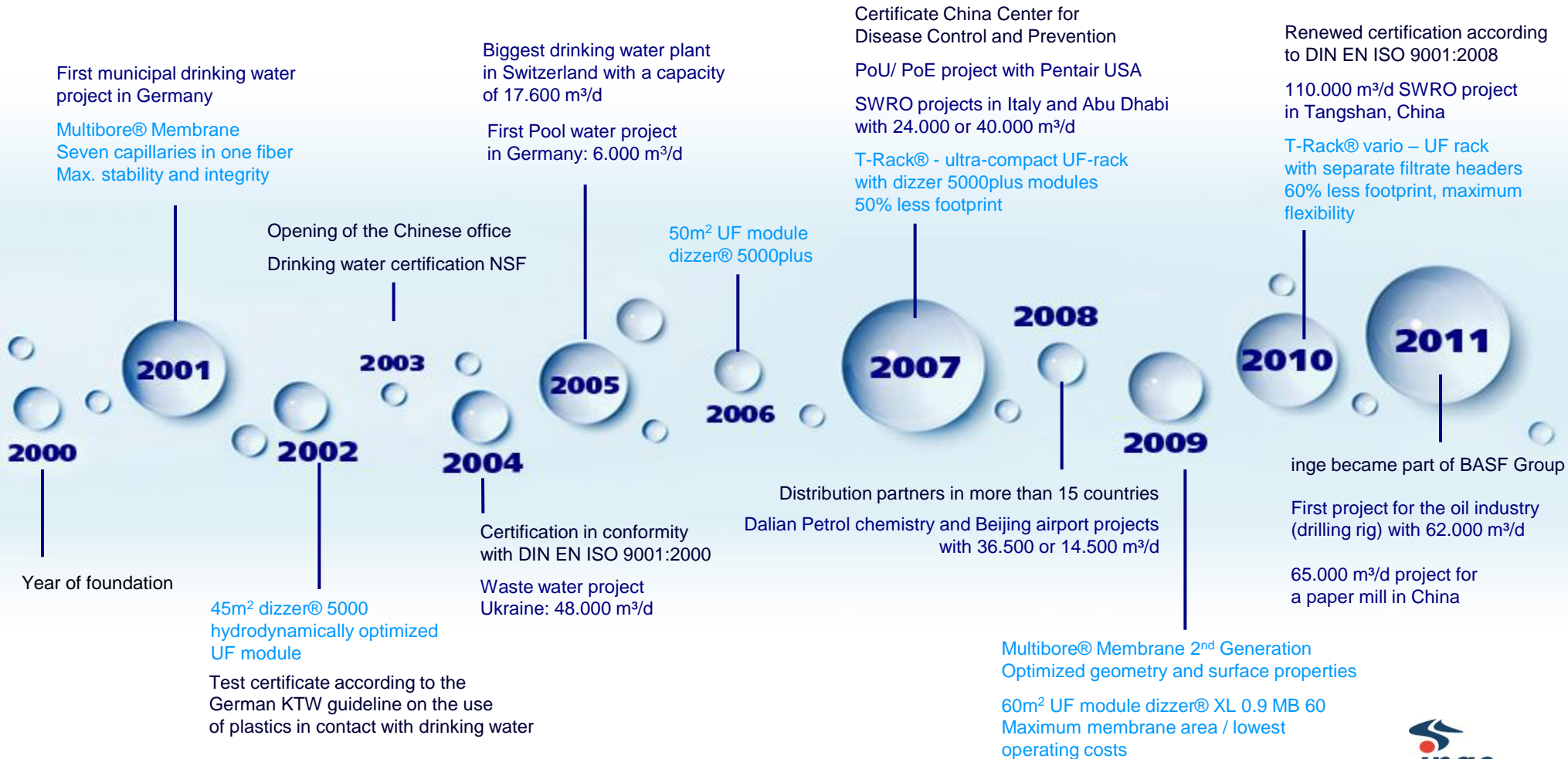
## Biofouling Control



- **Chemicals** to control slime, bacteria, fungi and algae growth
- BASF's **biocide technical and regulatory team** supports customers
- **Solutions to save energy and protect health**



# inge Milestones



# Ultrafiltration is the most versatile solution

## Water Sources



Ground, Lake and Surface Water



Sea Water



Waste Water

## Applications



Municipal  
Treatment



Industrial  
Treatment

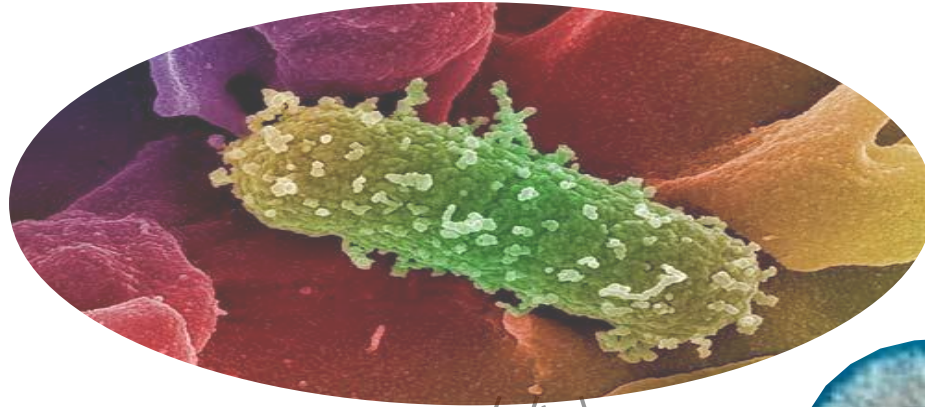


Domestic  
PoU / PoE

# How it works - Pore size and efficiency

Giardia approx. 8 – 15  $\mu\text{m}$

Cryptosporidium approx. 4 – 6  $\mu\text{m}$

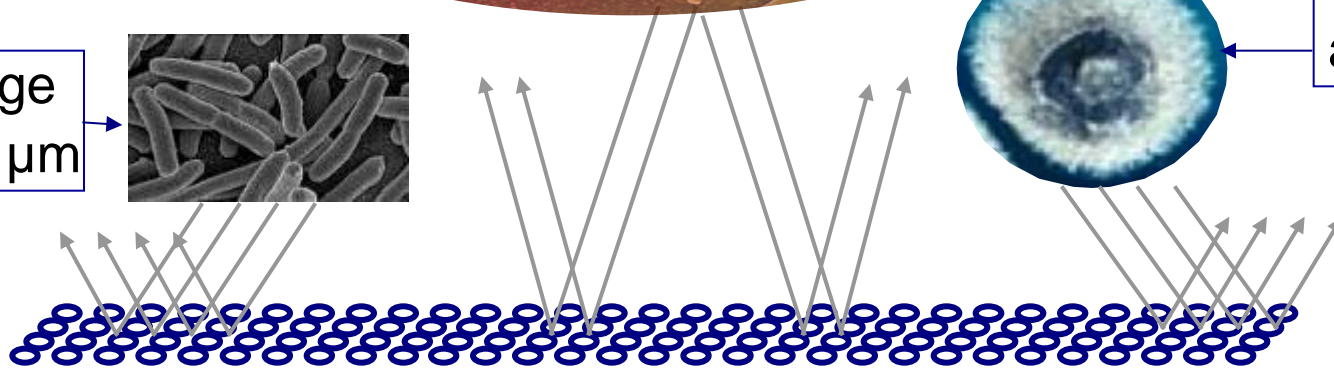


Escherichia Coli  
0.5 – 1.5  $\mu\text{m}$

B. Subtilis  
approx. 0.3  $\mu\text{m}$



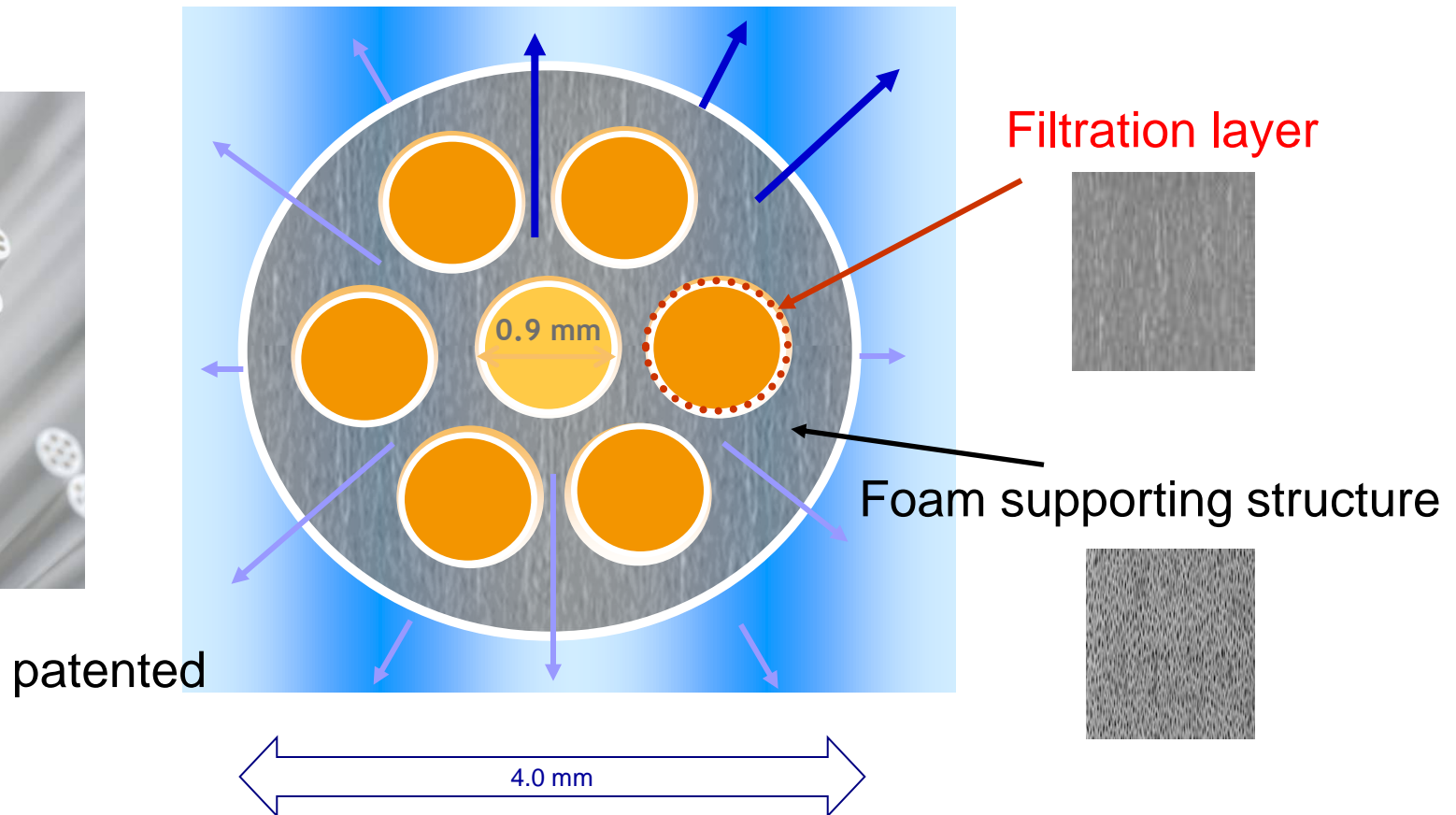
MS2 Coliphage  
approx. 0.025  $\mu\text{m}$



Pore Size UF approx. 0.02  $\mu\text{m}$

# The core technology – inge's Multibore® Membrane

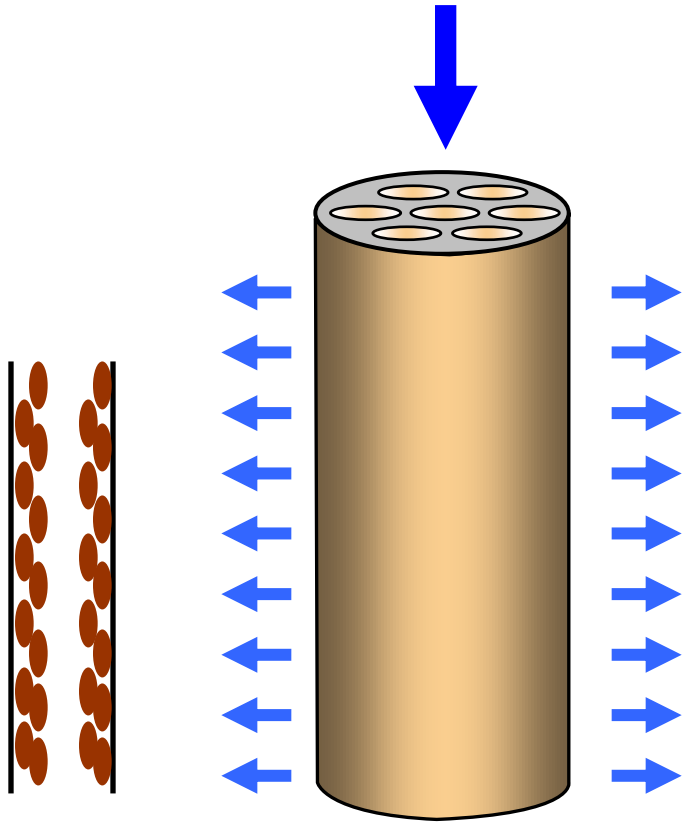
Flow of water during filtration



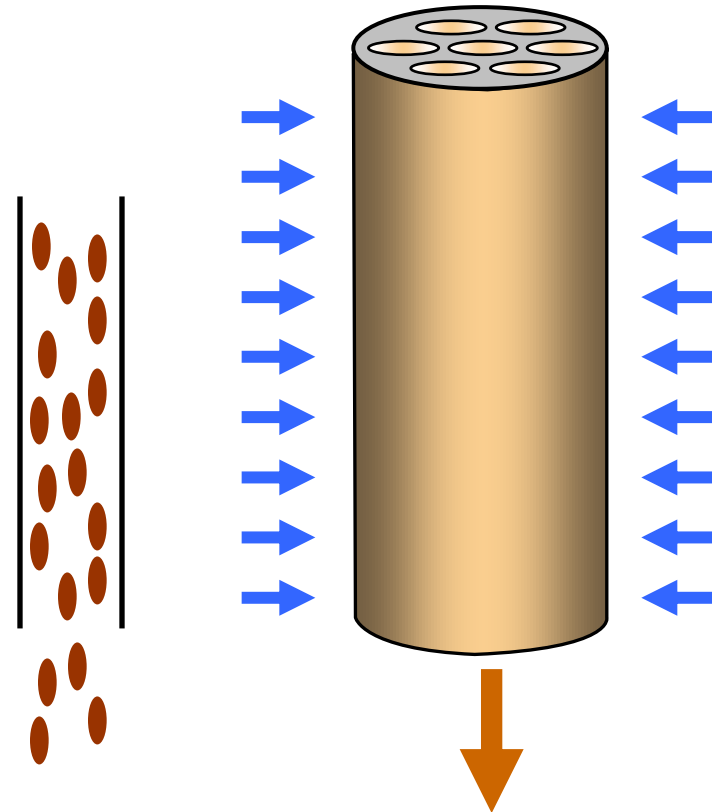


# Working principle In-Out filtration

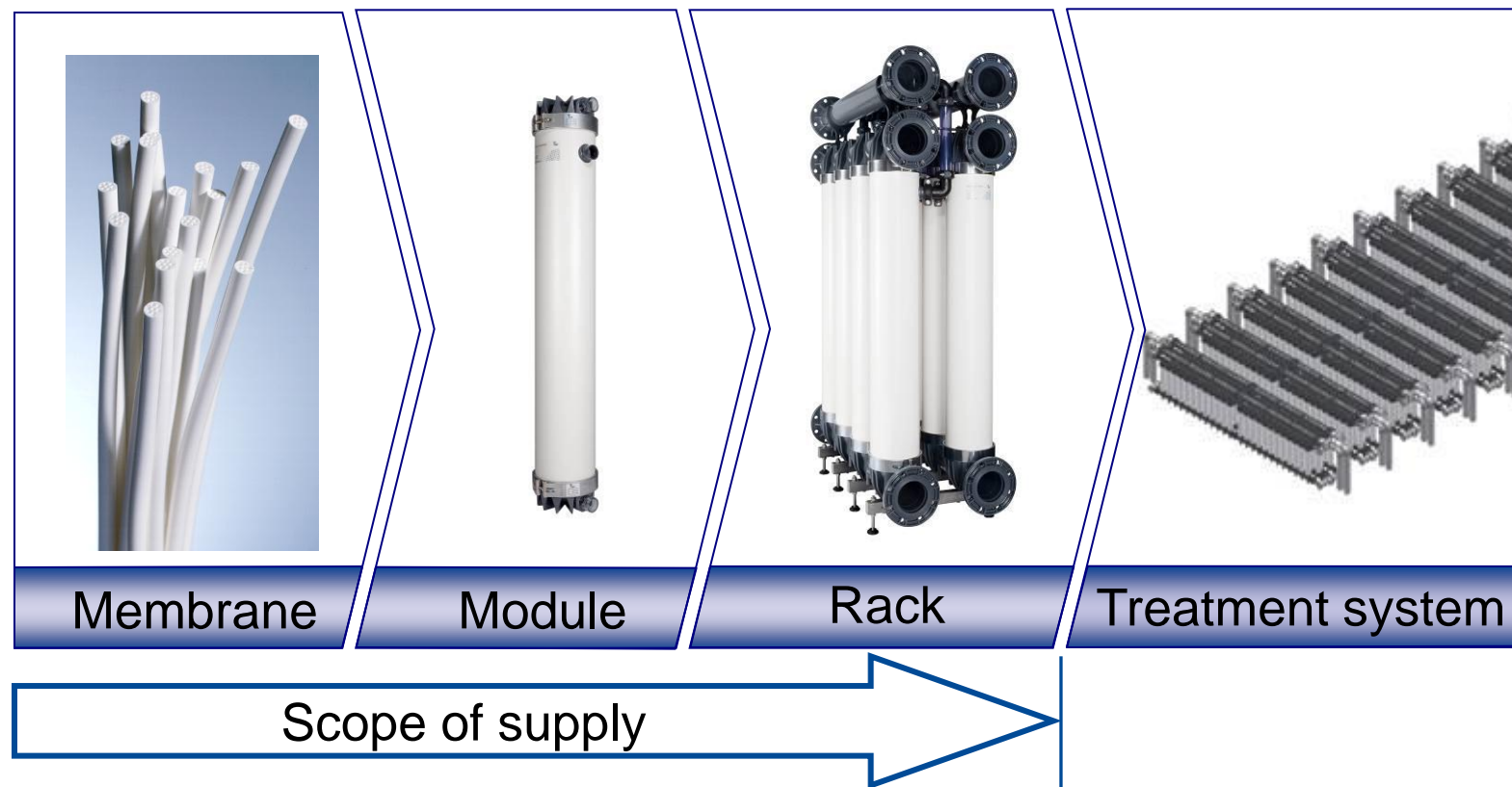
## Filtration



## Backwash



# A highly scalable solution



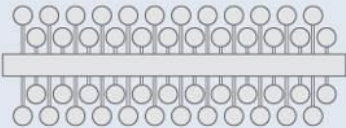



# Innovative Rack concepts – the inge T-Rack®

- Integrated module & rack design
- Extremely compact
- Modular, highly scalable
- One stop solution
- Plug'n play assembly at site
- Operation of each row as separate filtration line possible



# Product innovation: T-Rack® vario

T-Rack® vario	Conventional rack
1.4 m width	1.9 m width
4.1 m length	5.5 m length
2.4 m height	2.5 m height
5.9 m <sup>2</sup> footprint	10.6 m <sup>2</sup> footprint
 Reduced footprint  More compact solution	 

- footprint savings of up to 60%
- cost savings in civil works
- cost savings in piping



# inge's solution: superior technology offering significant cost benefits

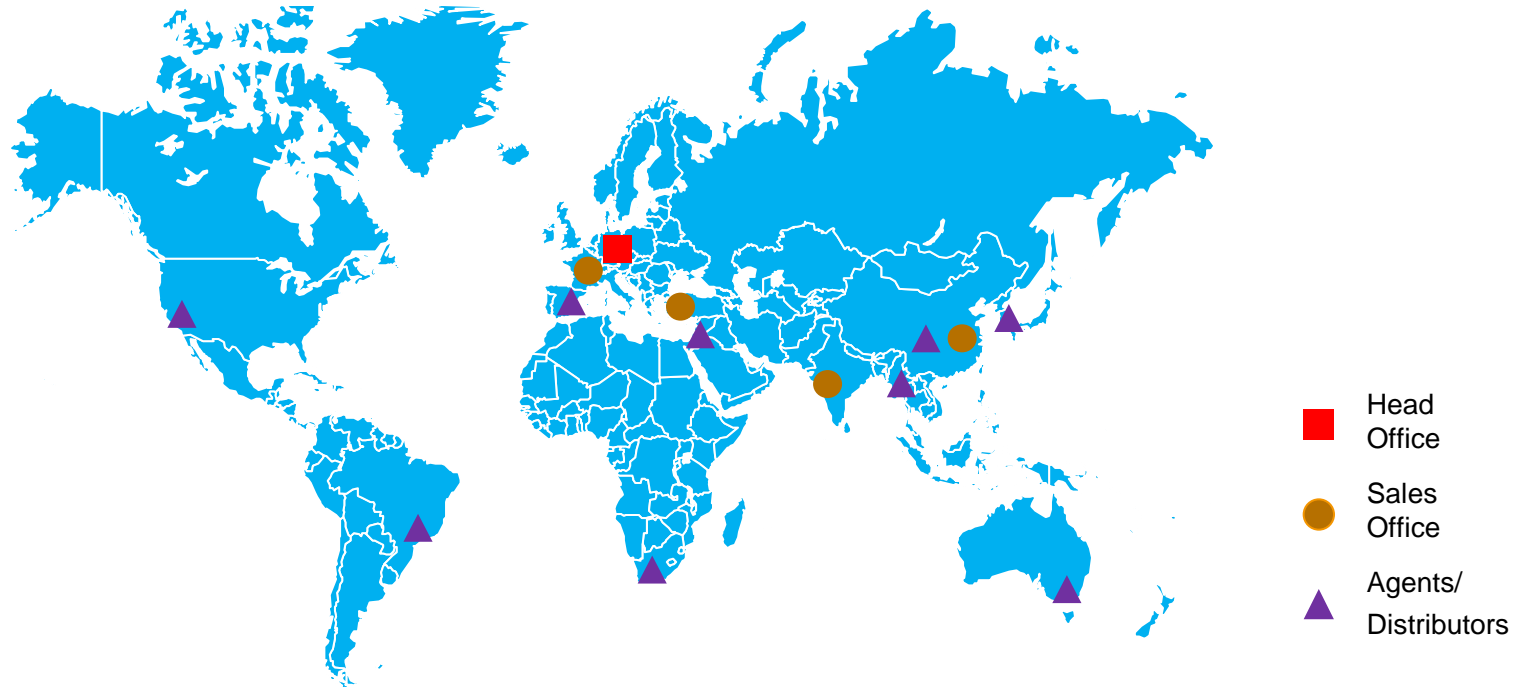


- Superior mechanical and chemical strength of membranes
- High system reliability and safe operation
- Hydro-dynamically optimized modules guarantee highest performance
- Compact rack-design enables cost-effective, integrated solution and reduces required floor space



Substantial savings in CAPEX & OPEX

# Global presence



Head Office	inge sales offices	Agents & distributors
<ul style="list-style-type: none"> <li>• Greifenberg, Germany</li> </ul>	<ul style="list-style-type: none"> <li>• Beijing, China</li> <li>• Paris, France</li> <li>• Mumbai, India</li> <li>• Istanbul, Turkey</li> <li>• Dubai, UAE</li> </ul>	<ul style="list-style-type: none"> <li>• Australia</li> <li>• Brazil</li> <li>• China</li> <li>• Israel</li> <li>• Korea</li> <li>• South Africa</li> <li>• Spain</li> <li>• Thailand / SEA</li> <li>• USA</li> </ul>

Global reach through own sales representatives and an international network of agents and distributors

# Selected references

Country	Capacity [m <sup>3</sup> /d]	Type of water	Market
China	110.000	Sea water	Industry
Abu Dhabi	84.000	Sea Water	Steel
China	65.000	River Water	Paper
Angola	62.000	Sea water	Oil & Gas
Turkmenistan	58.000	Sea Water	Municipal
Turkey	57.000	Sea Water	Steel
Ukraine	48.000	Waste Water / Industry	Recycling
Germany	38.400	Well Water	Municipal
China	36.300	Waste Water / Municipal	Petrochemical
Germany	30.000	Pool Water	Pool

# Management board



## **Bruno Steis, Chief Executive Officer**

Joined the company in 2008 from Siemens Venture Capital, where he was a Senior Investment Partner for almost a decade specializing on environmental technologies. Prior Bruno Steis held a number of management positions with an international focus in the fields of sales, marketing and business development for over 15 years.



## **Dr. Peter Berg, Chief Technical Officer**

is co-founder of inge and Chief Technical Officer of the company. He obtained his doctorate in Mechanical Engineering from Gerhard-Mercator University in Duisburg and is a specialist in water technologies. In addition to his university activities, Dr. Berg also spent five years working with the Insitute of Water Chemistry and Water Technology (IWW GmbH).



## **Dr. Tilo Habicher, Managing Director Finance & Strategy**

Tilo Habicher has been a member of the inge GmbH Executive Board since January 2012. He is in charge of finance and strategy and is responsible for the company's links to BASF's Water Solutions business. Before joining inge GmbH, he was the director of health and environment at BASF Future Business GmbH. Habicher obtained his doctorate in chemistry from the Swiss Federal Institute of Technology Zurich (ETH Zurich) and began working for BASF in Ludwigshafen in 2000.



# Thank you for your attention!

inge GmbH  
Flurstrasse 27  
86926 Greifenberg  
Germany

Phone +49 8192 997-700  
Fax +49 8192 997-999

info@inge.ag  
www.inge.ag

