



TRADITION WITH FUTURE

Modern Industrial & Engineering Services from Development to Maintenance



MODERN INDUSTRIAL & ENGINEERING ACHIEVEMENTS

A COMPANY WITH TRADITION AND FUTURE

MainTech Systems is your partner. Our comprehensive know-how comes from our 90-year history as an engineering, service and manufacturing unit of well-known industrial companies. These include the Glanzstoffwerke Obernburg, Enka, Akzo Nobel and Acordis.

We provide comprehensive service along the whole life cycle of machines and facilities. With about 200 engineers, technicians, masters, qualified technical specialists as well as 12,000 m² of production space, we unite efficient know-how and productivity.

MainTech Systems is a mid-size company, founded in 1924, in a tradition-steeped location in the heart of Europe. The "Industry Centre Obernburg am Main" is located in the Bavarian part of the international economic area Rhein-Main.

WORLDWIDE AT YOUR SERVICE

With our activities at international level, MainTech Systems is a future-oriented and reliable partner in global plant construction. We implement projects in:

- Europe (Germany, Austria, Switzerland, Spain, France, Poland)
- USA
- Russia
- India
- China
- Australia



“MainTech Systems is your competent partner for the complete special plant engineering and construction as well as for maintenance and service of your industrial plant.

We take profit of our profound experience in industrial plant construction and we combine our resources from Design, Build, Install and Maintain for design, construction, erection and service of your projects and systems in steel work, piping, E and I&C technologies.”

WE PLAN, MANUFACTURE, INSTALL AND MAINTAIN FOR YOU ...

- Fiber spinning plants
- Water treatment plants
- Energy devices such as power-to-heat systems
- General process-technical systems such as solvent recovery plants etc.

... BY USING OUR KNOW-HOW AND EXPERIENCE FROM OVER 90 YEARS OF SITE RESPONSIBILITY.

FULL SERVICE FROM A TO Z

An investment in industrial machines and equipment is associated with high expectations as well as complex processes. So much the better if you can bundle planning, construction, commissioning and maintenance with one single partner.

	 DESIGN	 BUILD	 INSTALL	 MAINTAIN
PRODUCTS & SERVICES	FIBERS & MEMBRANES			
	INDUSTRY			
	SOLVENT RECOVERY			
	ENERGY			
	WATER			

THE MAINTECH SYSTEMS COMPETENCE MATRIX

Whether construction or manufacturing, assembly or maintenance – MainTech Systems provides everything from one source. With our expertise in Design (Development Services), Build (Plant Construction), Install (Assembly) and Maintain (Service & Maintenance), we professionally stand with you in the fields of water, energy, fibers and industry.

OUR COMPETENCES OVERVIEW



DESIGN

DEVELOPMENT &
CONCEPTION



BUILD

PRODUCTION &
MANUFACTURING

SOLUTION-ORIENTED ENGINEERING

MainTech Systems has an own experienced engineering team in conception, development and construction of process plants and special machines.

Our engineering services are:

- Concept development
- Process engineering & process design
- Dimensioning of apparatus and machines, technical specifications
- Monitoring and implementation of pilot plants
- Process optimization
- Layout, design and detailing of plants, machines and apparatus, piping
- Risk analysis
- Installation sequencing
- Documentation, manufacturer declaration and CE certificate

QUALITATIVE MANUFACTURING

We build systems from a single source for the process industry according to the requirements and specifications of our customers.

Our specialist divisions are:

- Cutting & chipping
- Pipe construction/fitter's shop/ steel construction/welding
- Sheet metal forming/non-metal working
- Control cabinet construction
- Electric instrumentation & control technology
- Automation technology
- Drive an materials handling
- Paint shop/corrosion protection
- Pickling/sandblasting



INSTALL

ASSEMBLY &
COMMISSIONING

COMPETENT MOUNTING & ERECTION

Our trained staff completes systems and components in our workshops as well as on your construction sites and puts them into operation.

Our assembly competences are:

- New plants and machines
- Piping systems
- Electrical engineering
- Components of measurement and control technology
- Safety technology
- Relocation of complete production facilities



MAINTAIN

MAINTENANCE &
TECHNICAL SERVICE

PROFESSIONAL MAINTENANCE

Above all, our expertise, flexibility and reliability concerning plants in full continuous operation are very much appreciated by our customers from the most different industrial branches.

We offer:

- Repair
- Maintenance (preventive)
- Refurbishment
- Check of plants & revisions
- Repair of key components
- Retrofit on site



Fibers & Membranes

ALL FIBERS IN ONE HAND

Market-ready fiber spinning systems usually undergo a development process from lab through pilot up to the production plant. It pays off to trust a partner who holds all threads in hand. For over 90 years, we have been active in the field of fiber technologies, of research, engineering, manufacturing/assembly and maintenance.

THE RIGHT SOLUTION FOR EVERY THREAD

The product portfolio of our spinning lines includes the most different spinning processes from melt spinning to wet spinning. Whether conventional or innovative, textile or technical fibers, whether synthetic or cellulose membrane fibers – all threads run together in MainTech Systems!

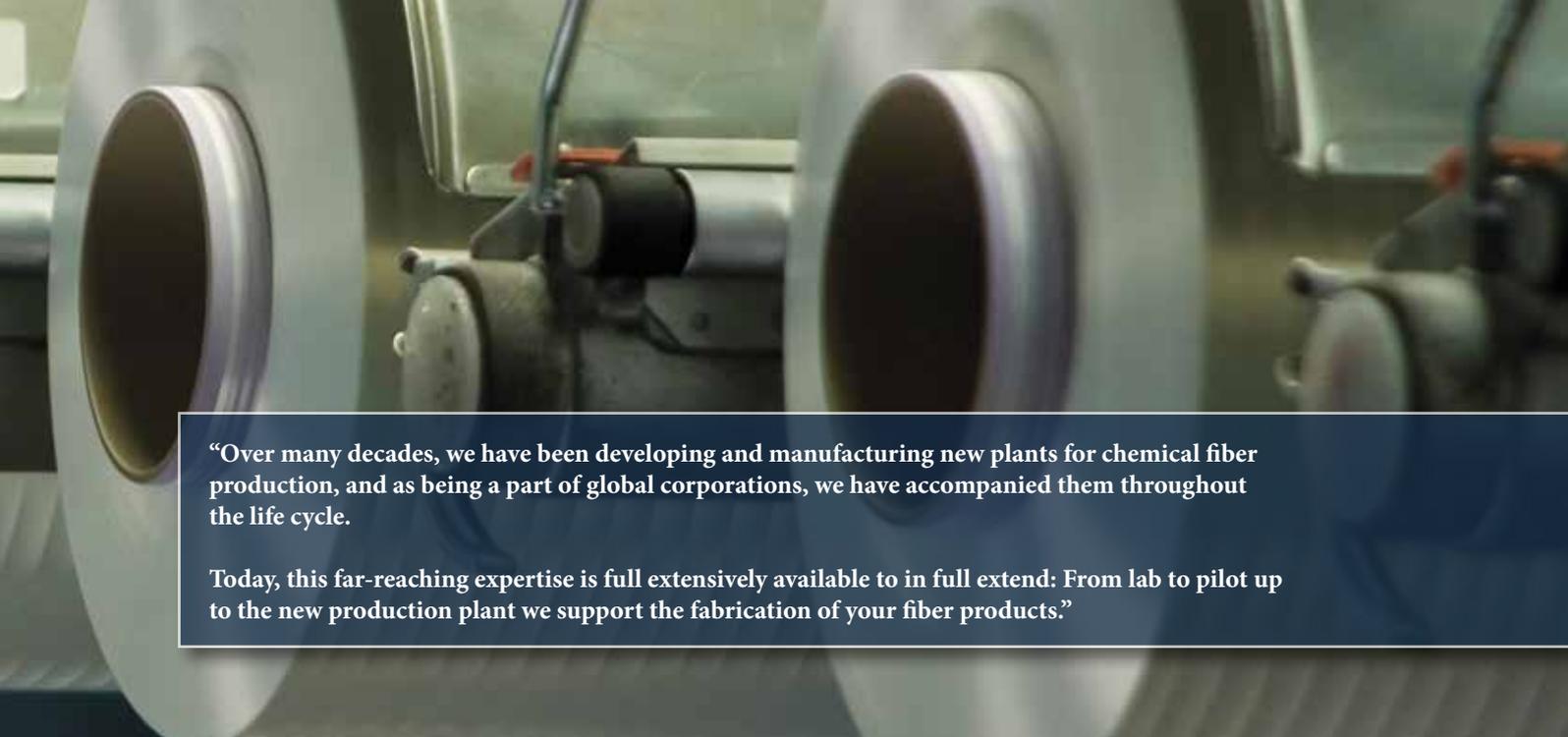
We offer the complete systems including control and automation with different throughput capacities for the most different applications.



Draw panel retrofil spinning line



Washing system of spinning line



“Over many decades, we have been developing and manufacturing new plants for chemical fiber production, and as being a part of global corporations, we have accompanied them throughout the life cycle.

Today, this far-reaching expertise is full extensively available to in full extend: From lab to pilot up to the new production plant we support the fabrication of your fiber products.”

INTERDISCIPLINARY KNOW-HOW FOR MODERN FIBERS AND MEMBRANES

Spinning plants – whether pilot plants or production units – for production of new or modified fibers: Here you are with the specialist.

For special high-capacity fibers, such as carbon fibers, we can rely on a wide spectrum of knowledge in design and manufacturing of production plants. This also includes plants to the production of the preliminary stage, the so-called precursor of polyacrylonitrile.

For bicomponent fibers, microfine fibers and fibers from renewable raw materials we develop plant concepts together with our customers adapted to capacity, process and other requirements for various prepolymers.

High-strength LOY, POY, FOY filaments from PET, PA6, PA66, PP and cellulose producing, stretching and wrapping are our core competences. We are decisively involved in several developments of successful production procedures for light and heavy titers, as well as the matching components.

SOME APPLICATIONS

- Spinning Lines for production of most different membrane types
- Melt spinning systems for technical applications
- Melt spinning pilot plants Mainsite Vario Spinning Line®
- Melt spinning units for geotextiles
- Variable R & D spinning systems
- Wet spinning pilot plants
- Provision of infrastructure
- Design of spinning parts and plant components



Industry

HEAD AND HAND FOR THE PLANT

Plant construction is our element! In process and environmental technology, in chemical and process engineering, in vessel and apparatus construction, in linked industrial technology ... this is where we feel comfortable! We contribute decades of experiences and competence from a central chemical and industrial location, in planning, construction and service of your projects!

ENGINEERING

Our engineers and technicians support you to design your systems and components. Basic and detail engineering, process engineering calculations (also with CHEMCAD), the creation of flow charts and material flow balances and the dimensioning of apparatus as well as creating layouts and drawings, constructing and detailing of plants, machines and devices, drawing pipelines, taking into account the steel construction including statics. We provide the necessary production drawings and tune the details with you and, if necessary, with the approval authorities/notified bodies.



Flue gas treatment plant



Modular DeNox Plant



“MainTech Systems is the right partner for plant construction: design and development, production and assembly of plant components, assemblies of chemical and process technology, provision of steel work, vessels and piping, E/I&C technology as well as control cabinet construction. At MainTech Systems all disciplines are bundled under one single roof; our experienced staff supplies finishing and insulation, assembly and commissioning. The subsequent maintenance services complete the allround-carefree-package of your plants and projects.”

PRODUCTION

We provide complete system modules and components from steel construction with apparatus, containers, pumps, etc. via the complete piping including shut-off valves and control elements up to cabling and the appropriate control cabinet.

OUR MANUFACTURING CAPACITIES CONSIST OF

- Steel construction
- Container and apparatus construction
- Pipeline construction in C steel and stainless steel
- Pipeline construction in plastics
- Sand and bead blasting
- Pickling
- Paint
- Isolating
- E/I&C technology
- Control cabinet construction and cabling

INSTALLATION AND COMMISSIONING

As far as possible, we mount and prepare your machines, components and systems already in our workshop. Afterwards, we ship the equipment together with our tool and construction containers to your construction site.

With our well-trained staff, we assemble the systems (parts) on site ready for the official take over. Together with you we carry out commissioning and test run. During operation, we stand with you for all areas of service including spare parts procurement.

We are located extremely traffic-favourably in the Rhein-Main area which enables us to transport our products and systems to you in all possible ways:

- Over the well-developed road network
- Via our railway connection in the factory
- Via our water-connection in shipping on the Main river



Solvent Recovery – Exhaust air treatment **ECOLOGICAL & ECONOMICAL – SOLVENTS SEPARATION AND REUSE**

In the entire field of solvent processing industry MainTech Systems develops, designs and builds plants for exhaust air purification and solvent recovery. We have integrated the technology of Roses GmbH and we provide entire activated-carbon systems according to the fixed-bed adsorption process with steam regeneration. Whether the production process operates with one single or several organic solvents: we distil and separate them in a rectification process where necessary in order to reclaim them with high purities for further production.

SERVICE FROM A TO Z

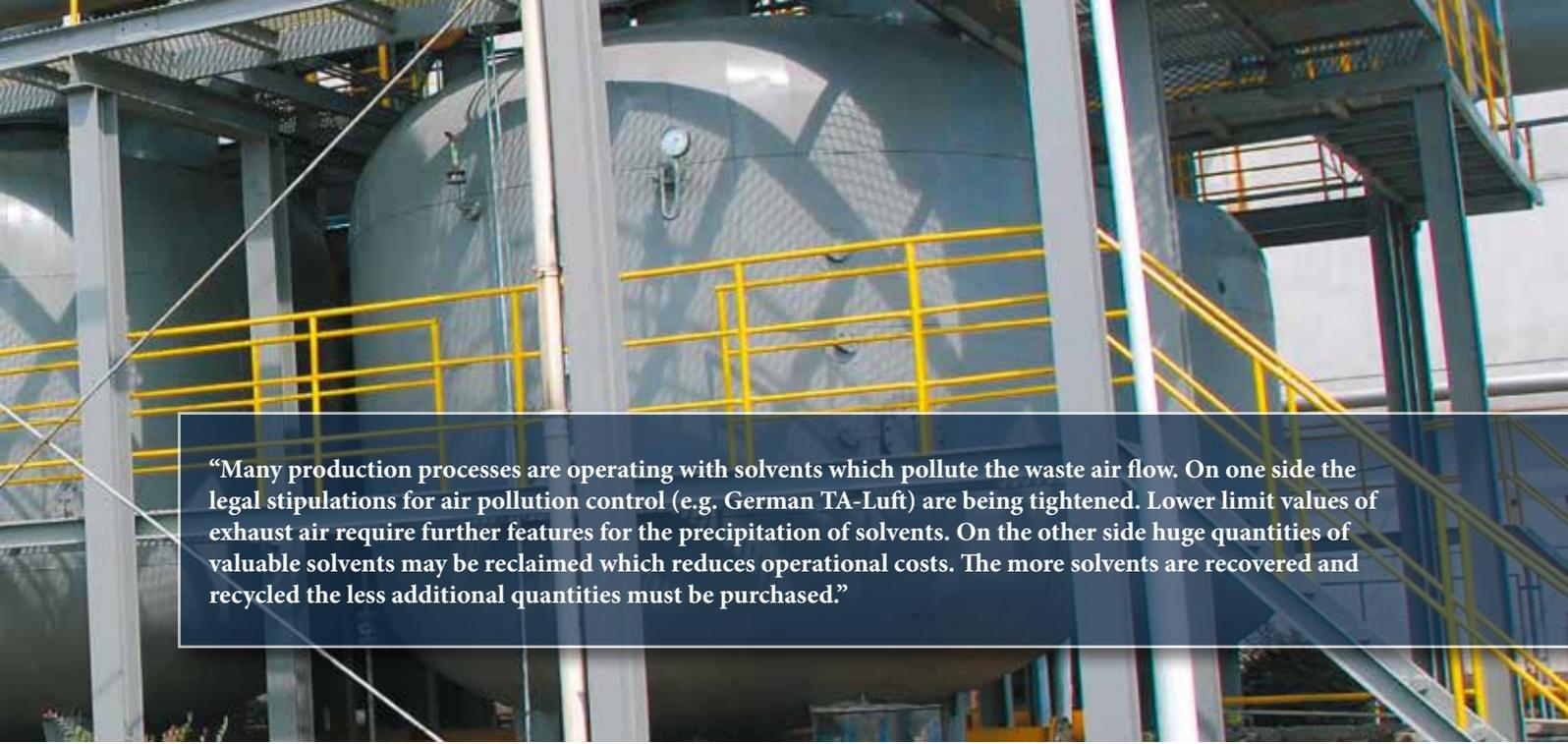
We also supply components and subsystems for upgrading or expansion as well as retrofitting of existing plants. Finally we care about economic aspects of operation such as optimisation of the applied energies and utilities or about security concepts.



Horizontal adsorbers



Adsorption plant with rectification column



“Many production processes are operating with solvents which pollute the waste air flow. On one side the legal stipulations for air pollution control (e.g. German TA-Luft) are being tightened. Lower limit values of exhaust air require further features for the precipitation of solvents. On the other side huge quantities of valuable solvents may be reclaimed which reduces operational costs. The more solvents are recovered and recycled the less additional quantities must be purchased.”

PARTIAL AND ADDITIONAL INSTALLATIONS – AS WELL AS FOR RETROFITTING EXISTING PLANTS:

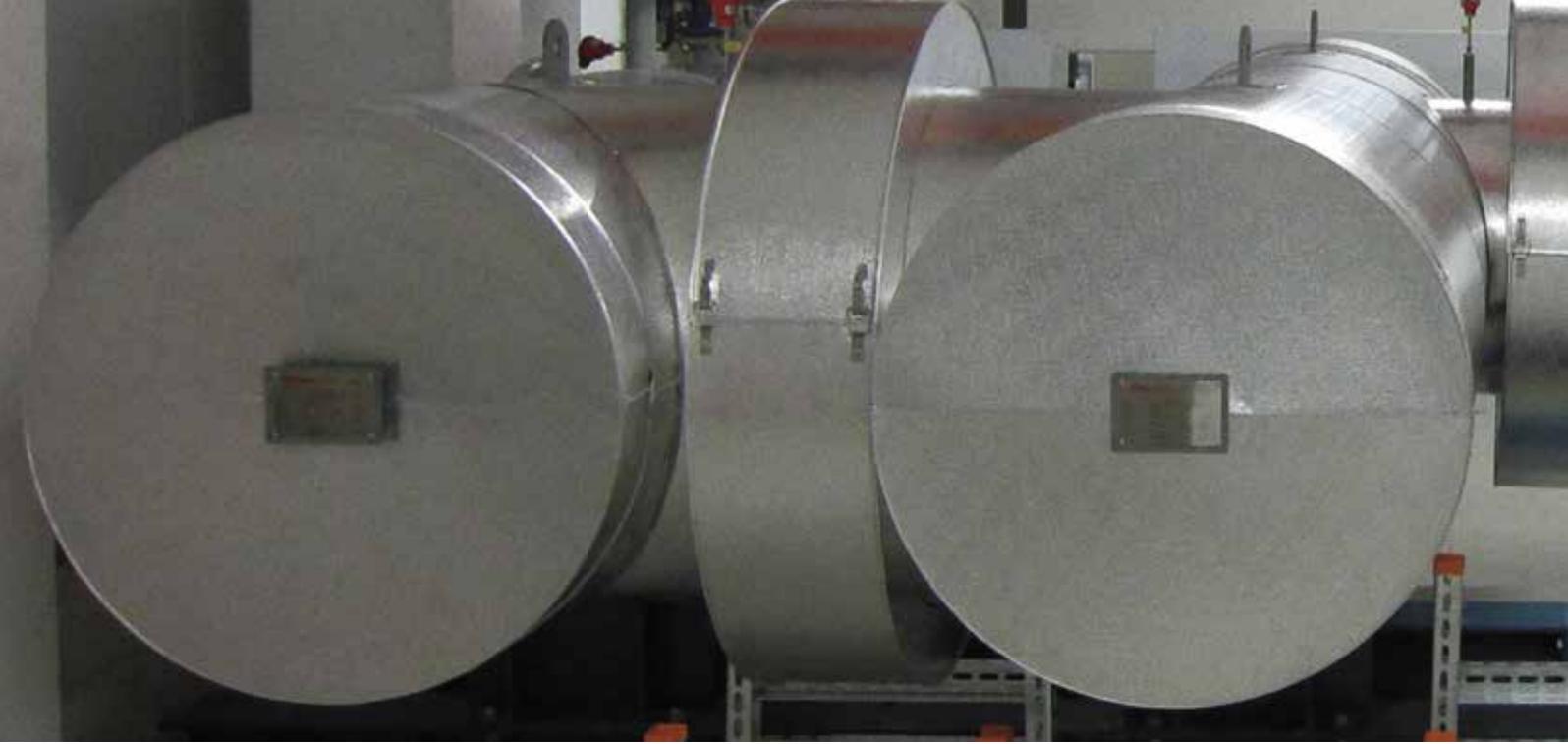
- Concentration control for dryer exhaust air systems
- Activated-carbon adsorbers for exhaust air purification and solvent recovery
- Condensation (air-/water cooled)
- Steam saving system
- Waste-water stripper
- Neutralisation
- Heat recovery for heating systems
- Cooling
- Energy optimisation
- Conditioning of compositions (mechanical, rectification)
- Steam-condensate recovery
- Signal processing (instrumentation and control technology)
- Speed-controlled fans
- Equipment for emission measurement
- Automation
- Noise reduction

SOLVENTS TO BE SEPARATED RESPECTIVELY RECOVERED ARE AMONG OTHERS AS FOLLOWS:

- Benzene/toluene/xylene
- Paraffin hydrocarbons
- Chlorinated hydrocarbons
- Alcohols
- Esters
- Ketones

FIELDS OF APPLICATION:

- Roto gravure-printing
- Packaging materials
- Sealing materials
- Brake linings/clutch discs
- Drive/V-belts
- Coating materials
- Carrier materials for films
- Tobacco foils
- Chemical industry and Pharmaceutical industry



Energy

EFFICIENT SUPPLY AND USE

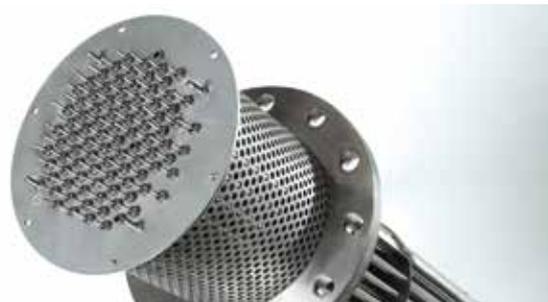
Aside from the traditional supply of electricity, the MainTech Systems Energy branch includes nearly every energy-containing medium. Regardless of whether you need a single switch cabinet or complex systems for supplying gaseous media such as compressed air, welding gases or hot steam: we are the right partner for you.

Thanks to nearly 90 years of experience in the construction of plants for the chemical industry, we have designed and installed a wide range of different media pipelines and matching systems in any nominal diameter. As a part of our everyday business we work according to the pressure equipment guidelines. No matter whether steel or plastic, our experienced pipe fitters always take the right curve.

In addition, energy conversion and energy storage systems are among our offers. Particularly in the field of energy efficiency, we are strongly represented by our wide portfolio of heat exchangers, process heaters and power-to-heat products for the supply of controlled energy. By cooperation with different institutes and universities, we make sure that our customers always receive state-of-the-art products and solutions.



Power-to-heat plant e.g. for public utility companies



Stainless steel heat exchanger



“The energy department of MainTech Systems gets on as a partner for customers with settings of tasks in the field of energy supply and energy conversion.

Due to the extensive technical and potential possibilities of MainTech Systems, our customer is always able to individually combine his system requirements or service wishes.”

ECONOMICAL ENERGY BALANCE AND MODERN USE

In times of rising energy costs, our focus is on optimizing the energy balance of our customers.

Starting with simple electrical process heaters with some kW power up to plants with more than 20MW of installed power, we can realize nearly every setting of tasks with our experience and our know-how in a customer-specific manner.

You determine, according to your needs, how much support you would like to receive from us. From classical engineering with layout & design of systems up to plant construction, erection, operating installations and services you can choose freely from our portfolio.

So you make sure you only pay the services you really need.

SOME APPLICATIONS

- Control cabinet construction
- Tube bundle heat exchangers
- District heating/local heating
- Steam generator
- Power-to-heat
- Control energy/surplus electricity
- Flange heat exchanger
- Pipe work construction
- Process heaters for fluids
- Air heat exchangers



Water

WE LIVE THE FASCINATION FOR WATER

Water is the element of life! The MainTech Systems team is a partner for many companies who deal with water in its purest form.

Our experienced employees understand the process of water treatment for every use and are able to define the necessary components. As we know the needs of the most different procedures, we can offer to our customers and partners optimal results for water qualities for people, technology and the environment.

TECHNOLOGY WITH PROPER PERFORMANCE

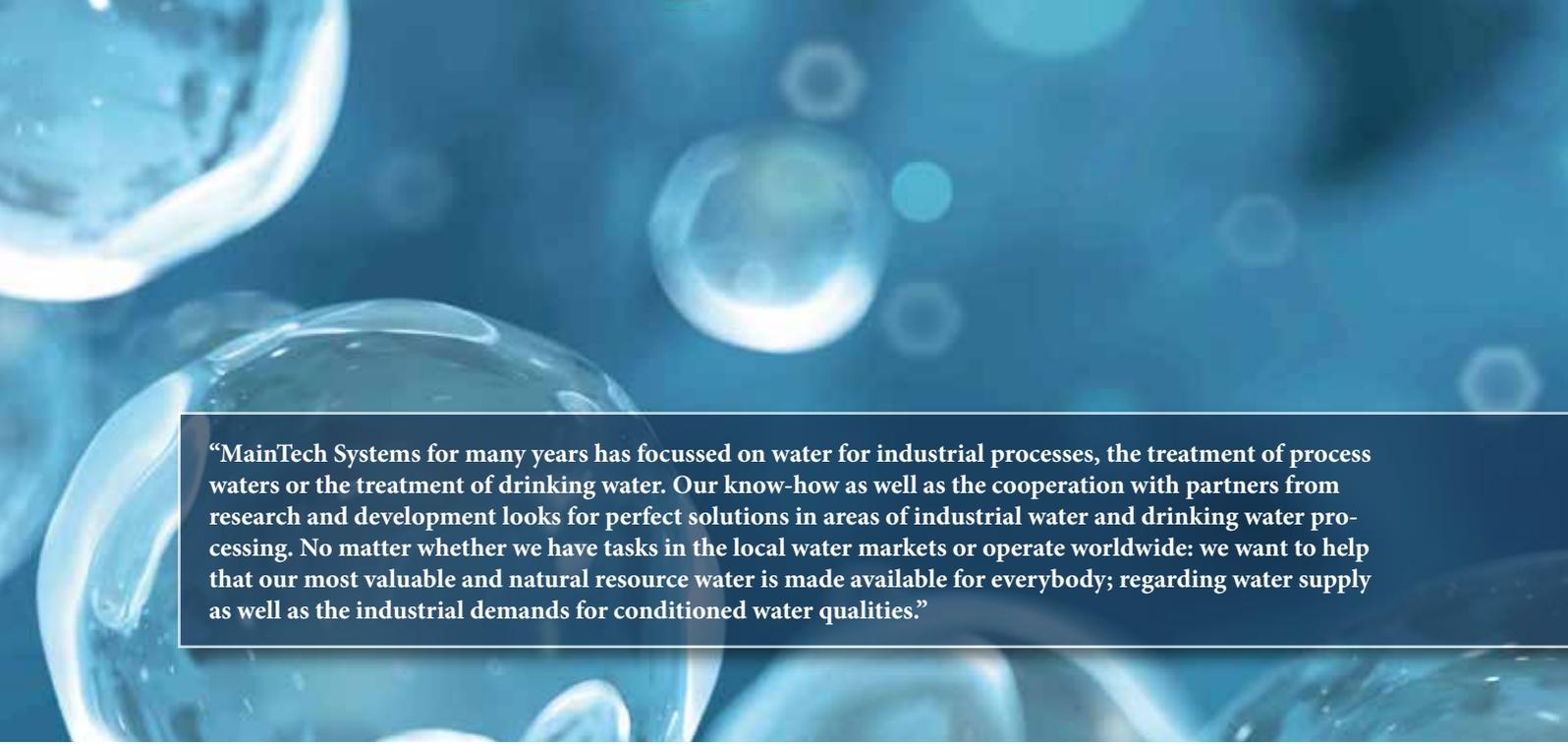
We offer you proven and up-to-date water treatment technologies with a well-coordinated process technology under ecological and economical aspects in the industrial environment or in municipal water technology. We are your partner if it is about water in its purest form.



Surface water treatment



Ultrafiltration



“MainTech Systems for many years has focussed on water for industrial processes, the treatment of process waters or the treatment of drinking water. Our know-how as well as the cooperation with partners from research and development looks for perfect solutions in areas of industrial water and drinking water processing. No matter whether we have tasks in the local water markets or operate worldwide: we want to help that our most valuable and natural resource water is made available for everybody; regarding water supply as well as the industrial demands for conditioned water qualities.”

EFFECTIVE WATER TREATMENT SYSTEMS WITH MODERN MEMBRANE TECHNOLOGIES

YOUR USES

- (Municipal) drinking water treatment
- Demineralisation systems
- Industrial process water treatment
- Treatment plants for surface water, well water, etc.
- Waterworks

OUR SOLUTIONS

- Pre-treatment
- Dosing systems
- Ultrafiltration
- Reverse osmosis
- Membrane degassing
- Ion exchange
- Electrochemical deionization

YOUR ADVANTAGES

- Economical water treatment by extensive improvements in membrane technology – optimum cost-benefit ratio
- Mostly smaller floor space in comparison to traditional technologies of water treatment
- Bundling your maintenance and technical operation with one single partner
- Manufacturing, installation and commissioning of already planned water treatment plants

MainTech Systems GmbH
Industrie Center Obernburg | 63784 Obernburg | Germany
+49 (0) 60 22 81 3366 | kontakt@maintech.pro
www.maintech.pro

