

PROCESS TECHNOLOGY



Know-how for your success



Fully automatic microfiltration plant for skimmed milk during functional testing in our workshop Dresden



From raw milk reception to the packaging of your dairy products, we engineer and design tailor-made production and processing lines for your company. To ensure your success we combine proven technologies with the latest scientific developments to guarantee the highest standards of operational and process hygiene. The optimum economy and flexibility of your plant are our highest priority. The customised solution is our strength.

Our product range includes:

- ▶ Raw milk reception systems
- ▶ Pasteurisers and tank storage
- ▶ Processing systems for the production of sweet and cultured milk products
- ▶ Preparation of milk for cheese production and whey processing lines
- ▶ Cleaning-in-place (CIP) systems
- ▶ Design and installation of pipework
- ▶ Preventive maintenance, services and spare parts supply
- ▶ Complete plant installations

Plant for production of particulated whey protein

We guarantee that your project will be carried out efficiently and delivered on schedule. We are always available for our customers.

4-stage fully automatic UF-DF-RO-plant for the food industry

In the food industry as well as the Bio- and Environmental Technology industries efficiency, flexibility, and tailor-made solutions are becoming ever more important. After decades of experience in Membrane filtration we put all our know-how at your disposal.



After thorough discussion, and with your agreement, we develop integrated solutions to fulfil your filtration task:

- ▶ Micro-/ultra-/nano-filtration/reverse osmosis
- ▶ Continuous/batch process
- ▶ Semiautomatic/fully automatic
- ▶ Organic/inorganic membrane systems

We offer approved solutions in the following applications: Food processing technology, e.g.:

- ▶ fractionation of whey
- ▶ standardisation of casein
- ▶ sterilisation of milk and whey
- ▶ production of quark and fresh cheese products
- ▶ blood plasma filtration
- ▶ concentration of egg
- ▶ regeneration of brine

Biotechnology e.g.:

- ▶ separation of biomass after fermentation

Environmental Technology e.g.:

- ▶ regeneration of cleaning solutions in the food processing industry
- ▶ concentration of oily waste water

Various pilot plants are available to our customers for experimental purposes, and also to allow different layouts and optimisation schemes to be tried out. All common membrane modules can be adapted to meet your needs.

Microfiltration-pilot-plant

Utility supply technology



Our experience and competence with utility supply equipment extends to the planning, design and implementation of complete utility supply systems for the food industry companies, for example.

By using cost-saving energy systems we ensure optimal utilisation of your plant.

*Operator platform
for a tank depot*

We undertake supervised installations worldwide with our internationally experienced team of technicians, site managers and locally based partners.

Examples:

- ▶ **Compressed air and sterile air systems**
- ▶ **Steam and condensate systems**
- ▶ **Ice water systems**
- ▶ **„Heat swing“ systems**
- ▶ **CIP plants**
- ▶ **Inspection platforms**
- ▶ **On-site process operation**



NH₃-ice water plant

CIP-plant



Plant manufacturing

Food processing, pharmaceutical and chemical industries demand quality and hygiene, particularly with regards to process technology and pipe-work systems.

We can demonstrate our core strengths with:

- ▶ **Processing plants in the food industry**
- ▶ **Supply technology**
- ▶ **Membrane filtration plants**
- ▶ **Compressed air supply**
- ▶ **Chilling equipment**
- ▶ **Operator platforms**
- ▶ **Stainless steel structures**



Automated, recipe-conducted mixing plant

Naturally we take as much care over the plant technology as we do in providing solutions to problems regarding the control and pipework assembly.

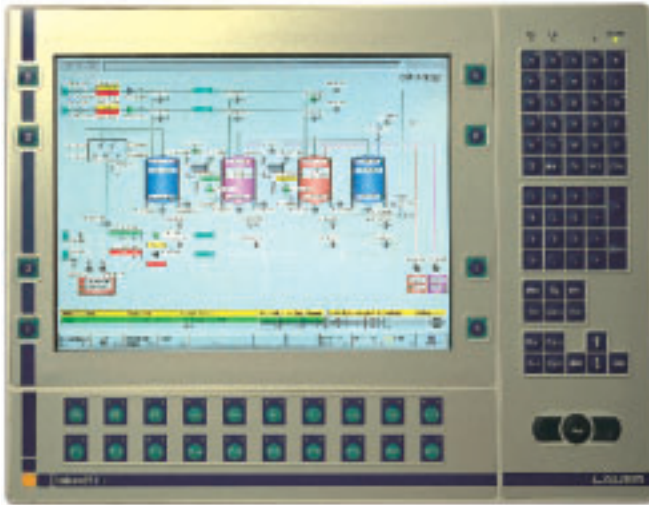
We invest in the future by training our employees and offering them further qualifications. The experience we have built up over decades of working with stainless steel will be used to your advantage in increasing the quality of your plant. Innovative working methods, clear structures and our Quality Assurance System mean for you efficient-cooperation in partnership with our project teams.

Your great advantage is that in our company everything comes from one source – from initial planning through acquisition to construction, installation and commissioning of the complete plant as well as the instruction of the operating staff. This saves



Final assembly of a NF plant in the Technical Workshop Dresden

unnecessary communication and handover channels. Our ready-made, ready-to-go, fitted systems are assembled and tested at our Dresden factory. We remain your partner to assist with the regular maintenance of your installation and our Service department is always at your disposal, this providing a complete solution for your needs.



At-site-operator panel

... comprises the engineer-services listed below, which we carry out in close co-operation with our customers. They include the complete project handling from tender preparation to acceptance, customer service and spare parts recommendations for the plants supplied by us.

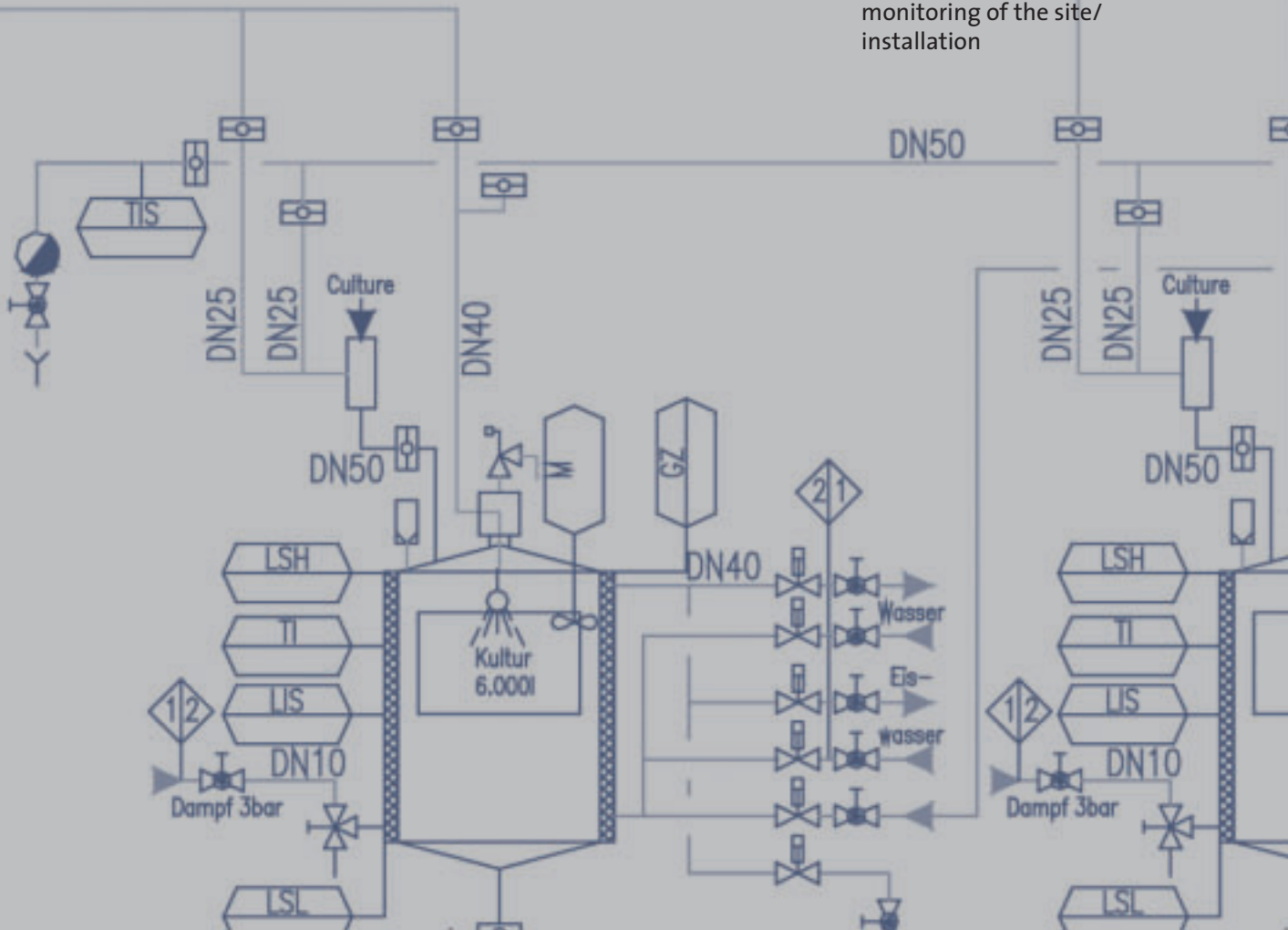
Independence in terms of the choice of components and suppliers enables us to meet your special requirements.

Project design

- ▶ Technological consultation and pre-design of the process and the required equipment
- ▶ Coordination and preparation of flow diagrams and layout drawings
- ▶ Interface coordination with the customer and other companies involved, including schedule
- ▶ Determination of the capital costs in form of an offer

Project handling

- ▶ Calculation and definition of the media and energy consumption figures
- ▶ Function and process description for automation
- ▶ Integration of the machines and the components into the complete plant
- ▶ Coordination, design and specification of the commissioned measuring and control system
- ▶ Design, preparation and monitoring of the site/ installation



Hardware commissioning

- ▶ Checking the installed systems and components
- ▶ Configuration of the flow meters
- ▶ Activating all actuators via the control incl. test of the cable runs and air hose runs

Software commissioning

- ▶ Testing the automatic programs with water
- ▶ Setting and optimising the software controls
- ▶ Commissioning of the CIP-programs
- ▶ Commissioning of the sterilisation programs
- ▶ Commissioning of the production programs

Preparing the documentation

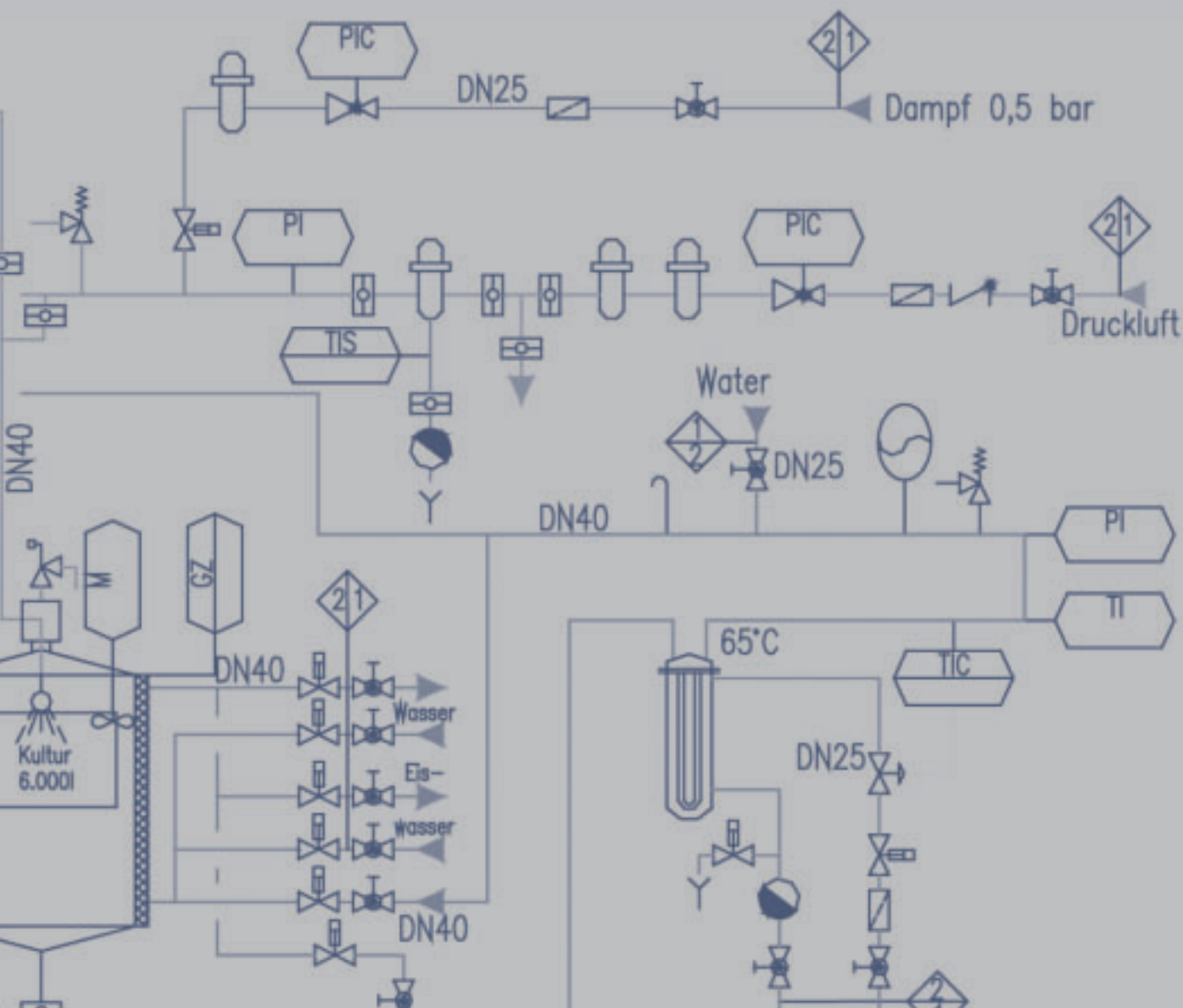
- For the process engineering part this comprises:
- ▶ Detailed flow diagrams
 - ▶ Installation drawings
 - ▶ Motor lists, valve lists, measuring instrument lists, energy and media lists
 - ▶ Process description/operating and maintenance instructions
 - ▶ Recommended spare parts list

Operating staff training

Handover and acceptance of the plant with the client

- ▶ Service and acceptance test with acceptance certificate

Our team of ten project engineers, assistants, 20 technicians and site managers receives constant training and is always at the cutting edge of technology in its area. With this knowledge we are always at your disposal also on site.



Talk to us about your challenges!

Customers who offer references:

J. Bauer KG:

fully automatic ultrafiltration plant for production of whey protein concentrate (WPC) and nanofiltration plant for production of lactose concentrate

Berglandmilch reg.

Gen.m.b.H., Austria:

fully automatic reverse osmosis plant for concentration of sweet whey

Müllermilch/Sachsenmilch AG:

utility supply systems for dairy plants

KRONES AG:

Engineering and installation of pipeworks for worldwide bottling project

Alpenhain Camembert-Werk:

Ice water plant, CIP-plant, mixing plant, tank farm

Werdersche Wein & Früchte:

Processing plant for Ketchup

Philip Morris:

Mixing and Dosing plant

WimmBillDann, Russia:

complete dairy processing plant for milk and whey

Radomsko, Poland:

fully automatic microfiltration plant to reduce germs content of skimmed milk

NÖM AG, Austria:

Aseptic- and Steril process plant

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