

QUALITY IS OUR ELEMENT

PROCESS SOLUTIONS FROM GLASS



YOUR PARTNER WITH SUBSTANCE

**The aims of our company are clear – as clear as glass:
We want to find the most effective application for your plant,
and optimize your procedures and processes. The quality
and safety of the products for this purpose form the sub-
stance of De Dietrich Process Systems.**

Whenever process engineering solutions are concerned, De Dietrich Process Systems are totally in our element. We are the leading provider worldwide of corrosion resistant plants for the pharmaceutical as well as the fine chemical industry and are held in high regard by very demanding users. Why? Because we are able to build on a proud 325 years of experience, on three and a quarter centuries of intensive contact and exchange with our customers – this forms the most important basis for our technical competence today, tomorrow and the day after tomorrow. Into the future you can also rely on De Dietrich Process Systems as your strong partner in the development and manufacture of QVF® components and plants made in Germany. We know that only know-how combined with service can produce a successful mixture – a mixture, that makes QVF® products market leaders in their field. That is why we can offer you the same excellent service in 15 branches worldwide.

QVF® CORE COMPETENCIES

- > Corrosion resistant materials
- > Thermal process engineering
- > Heat exchangers
- > Mixing and reaction engineering
- > Filtration and drying



SAFELY IN THE LEAD

Since the year 2000 De Dietrich Process Systems and QVF® products have formed an inseparable bond. This bond is as resistant as the company's borosilicate glass 3.3 and as unique as its combination of glass with competence in process engineering.

OK, we don't ordinarily manufacture aquariums, but we are the largest international supplier of high quality equipment, plants and components made of borosilicate glass 3.3. Fish could certainly live safely in them: The DIN/ISO standardized material has a wide range of chemical resistance properties. Additional safety is provided by the "Sectrans" electrically conductive coating available on the components. A patented process is used to protect the surface from external damage, for example scratches or impact. To ensure reliable operation, all components carry a CE label allowing the simple exchange of replacement parts in CE compliant plants, without sacrificing compliance. Last but not least, our customers can rely on our engineering competence in the design and manufacture of key components in the construction of corrosion resistant plant. We are the sole manufacturer of components with a nominal size of DN15 up to DN1000 with a KF system or flat and safety flange.



QVF® BOROSILICATE GLASS 3.3

- > Outstanding corrosion resistance
- > Smooth, non-porous surface
- > Transparent
- > Catalytically inert
- > Non-flammable
- > Ecologically harmless
- > Completely vacuum tight



PURE STRENGTH

- > BOROSILICATE GLASS IS CORROSION RESISTANT AND CATALYTICALLY INERT

VERY WARMLY RECEIVED

Many companies have given a very warm reception to the corrosion resistant QVF® reactors and plants from De Dietrich Process Systems. The chemical and pharmaceutical industries are particularly impressed by the cGMP compliant design and ease of cleaning.

In principle the manufacture of corrosion resistant plants is quite simple – it just has to follow the principle of precision, quality and safety. QVF® equipment from De Dietrich Process Systems, which is used in the chemical and pharmaceutical sectors, is therefore designed according to current Good Manufacturing Practice (cGMP) guidelines. Our customers all over the world use the standardized equipment, which we have developed on the basis of our well-established engineering competence: This means they benefit, for example, from a cost-effective skid design or fast delivery of replacement parts. Their modular construction as well as the CE labelling of all glass components allows our plants to be extended and converted at any time and therefore universally applicable. Anyone with specific requirements receives a bespoke solution by De Dietrich Process Systems. Safety and customer satisfaction remain our overriding objective for individual plant construction.



QVF® PLANTS

- > Stirred reactors
- > Heat exchangers (high pressure design up to 10 bar)
- > Extraction plants
- > Absorption plants
- > Plants for thermal separation e. g. distillation, rectification, evaporators
- > Teaching equipment

VISIBLE ENERGY

- > BOROSILICATE GLASS IS TEMPERATURE RESISTANT AND NON-FLAMMABLE



HIGH-FLYERS IN ENGINEERING

Striving for the best solution gives De Dietrich Process Systems wings. Our Engineered Systems offer you the ideal solution in the development of our own processes and optimization of customer-specific tasks.

Performance is not a question of size, but of engineering. And that is what lies behind all QVF® plants from De Dietrich Process Systems, starting with the smallest reaction unit for research up to large production plant. Our long experience with corrosion resistant materials and our knowledge about the special requirements of the chemical, pharmaceutical or related industries help us to put projects of all sizes into practice: Miniplants for research or training have the attribute for scale-up and are designed in accordance with the laws of engineering. The compact Kilolabs are available in skid design making them extremely user friendly; their design safety and certification conform to production plants up to several thousand litres. Whether small or large, we will take you from the planning stage through engineering design up to the start-up of your stirred reactors or your process engineered plant, which is tailor-made in construction and design to suit your individual requirements.



QVF® SERVICES

- > Units and reactors from -90°C to 250°C
- > Use of corrosion resistant materials including glass, glass-lined, SIC, Hastelloy, Tantal, PTFE
- > CE labelling
- > ATEX certification
- > cGMP compliant plant-construction employing unique GMP seals (in accordance with TA-Luft German Technical Instructions on Air Quality Control)
- > FDA compliance
- > Support of your qualification (DQ/IQ/OQ)

SECURE FLOW

- > BOROSILICATE GLASS IS TRANSPARENT AND IMPERMEABLE



ESTABLISHED COMPETENCE

First class customer service is deeply rooted in the company: De Dietrich Process Systems supports your projects with engineering services for all phases from planning through to start-up.

Our specialised engineers keep both feet firmly on the base of the facts or better: of the corrosion resistant plant construction. Experts from different fields of expertise develop customer-specific plant designs together. In the team they bring together their QVF® competence that has grown over a long period of time to provide a successful and accurate process solution. For example, for cleaning material flows, which have to be treated from an ecological aspect, or in the process for recovering valuable substances without damaging the environment. Their selective separation increasingly represents a worthwhile alternative, which also has a lasting economic influence on the operation of a plant. If such processes include the treatment of aggressive media, this puts extremely high demands on the materials employed: Equipment and pipework made of the almost universally corrosion resistant QVF® borosilicate glass 3.3 as well as De Dietrich® glass-lined steel are best suited to this type of application.

QVF® SERVICE CATALOGUE

- > Feasibility studies
- > Laboratory and test facility trials
- > Basic engineering
- > Detail engineering
- > Manufacture
- > Purchasing
- > Assembly
- > Start-up
- > After-sales service



CLEAN PERFORMANCE

- > BOROSILICATE IS ECOLOGICALLY HARMLESS AND SUSTAINABLE



IMPULSE FOR INNOVATION

QVF® equipment and plants from De Dietrich Process Systems can be found in all parts of the world. Just like the processes and patents we have developed. Just ask us for solutions for your processes too.

Do you have completely new requirements for future products or processes? We will undertake the development and design of innovative solutions, e.g. in our test facility. To put your specific requirements into practice as well as undertake all your project activities, you can call on dedicated De Dietrich Process Systems project managers to help you. Our engineers and designers make sure that the right materials are available to make the idea of a process and plant become a reality. Our fitters and start-up personnel get the plant ready for use right inside your company. The know-how of our experts brings important benefits: Your plant features a high level of safety as well as low maintenance costs; energy efficiency is optimized – your operating costs are reduced. With De Dietrich Process Systems you benefit from a high degree of plant engineering competence coupled with specific know-how about the materials employed.



QVF® PRODUCT RANGE

- > Recovery, cleaning and concentration of mineral acids (H_2SO_4 , HNO_3 , HCl , CH_3COOH)
- > Halogen reactions
- > Waste water treatment
- > Product recovery and cleaning of solvents, organic and inorganic components
- > Exhaust air cleaning



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The international business group De Dietrich Process Systems is the leading provider of system solutions and reactors for corrosive applications as well as plants for mechanical solid/liquid separation and drying. The system solutions from De Dietrich Process Systems are used in the industrial areas of pharmaceuticals, chemicals and allied industries.

www.dedietrich.com

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