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Puerstinger High Purity Systems GmbH

Gewerbepark Lindbach B3-B4
D-84489 Burghausen, Germany

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Phone: +49 8677 / 9878 - 0

E-Mail: info@puerstinger.de

Web: www.puerstinger.de

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SOLU TIONS IN QUALITY



Alfred Pürstinger
C.O. of PUE-Group
Managing Director PUE-A



Peter Berger
Managing Director PUE-G



Fabian Kreuzeder
Technical Manager,
General manager

About Us

The Puerstinger group company combines years of experience and competence in the areas of pipelines, distribution and waste technology, distribution systems, as well as processing facilities associated with chemistry. Through the synergy of this range of services, we are capable of offering an unique, complete service to our customers from a single source. We advise you from the beginning of the project planning phase and guide you through engineering to the planning production until the completion of the project. With our four locations in Europe and Asia, we are one of the leading companies in the sector of high purity applications.

Quality is our Commitment

Our customers place high demands on our services and place great trust in the quality of our equipment. We are aware of our high responsibility and implement only the latest technology for the products of our customers to materialize the required objectives. Our first priority is the satisfaction of our customers and constantly aiming for improvements is an inherent part of our daily work. Functional, economical and value analytic optimisation combined with innovation through continuous investment in research and development distinguish Puerstinger and make us an important and reliable partner for numerous industries.

Employees are our intellectual capital

Our 125 employees are our primary line of success. They identify themselves 100 percent with the company and have completely internalised the required quality. We maintain an equal relationship with our employees, as well as with our customers, which is mutually beneficial. Our employees are the guarantor for our extraordinary achievement potential. They represent the company to the outside world and characterize our reputation. We secure our market position through constant training and an extensive advanced training portfolio because a forward-looking personnel policy is the basis for our outstanding pioneer work.

This, for example, was honoured by Siltronic AG with the award for „Best Development Partner 2010“.



Our company visions and values

Quality has highest priority

To achieve our customer's satisfaction, the quality of our products is first priority. Puerstinger has set the point in high quality products for the market since starting it's business.

Customer is in the center of our thinking and acting

Customer's expectations are growing continuously. Using latest technology is our guarantee, that our customers will receive zero-defect and professional products.

Continuous ambition for improvement is part of our daily life

It is a major target of Puerstinger to develop the quality of our products in functionality, economical and profitable way. We attach high importance for innovation and we invest in research & development.

Defect prevention instead of defect correction

Our quality policy is concentrated in defect prevention. Our quality management is certificated according ISO 9001:2008 since 2003.

Staff members are our mental capital

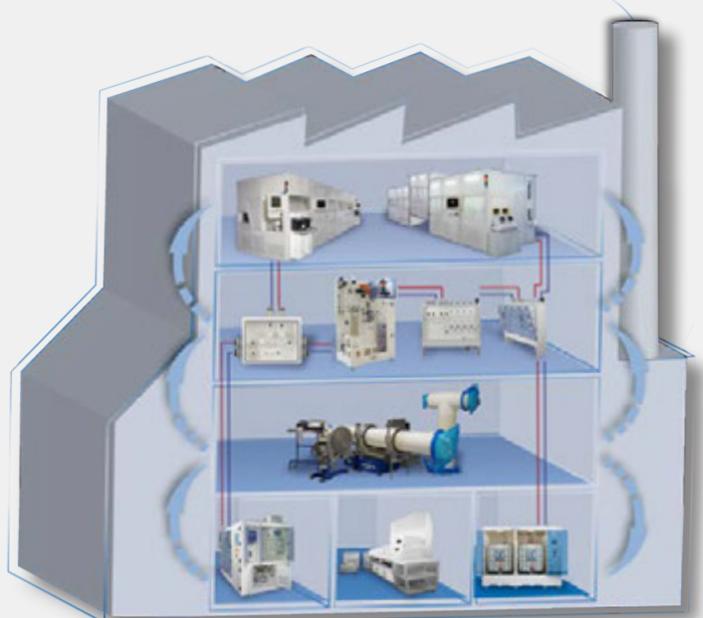
Our employees are our power. They give distinction of our prestige and effectiveness. We see a reasonable human resource development as an important share to ensure the companies success.

Safety, Healthy and Environment

Environmentally and safe working is our responsibility for our colleagues and partners. During design and development of our products the prevention of any personal or material damage has first priority. The protection of our environment, effective usage of material and waste separation for further recycling is also part of our policy.

Customers and Suppliers are our Partners

We practice business relationship with our customers, suppliers and partners to ensure a mutual benefit. We take care especially in loyalty.





QUALITY
makes the
Difference

Wafer

Basic

The basis of a microchip and/or solar cell consists of a crystalline substrate. Silicon material is generally accepted for both industries.

The purity requirements for the production of such substrates (wafer) are constantly rising and are a crucial factor for the success of the entire process chain.

Supply and Install

Puerstinger High Purity Systems supplies and installs chemical systems starting from the crystal growing process up to the finished wafer.

Product range

Our product range for this sector covers from engineering, over the piping construction, chemical distribution and waste disposal, also polishing systems and fully automatic wet processing units.

Chemical Distribution
and Waste disposal

Polishing
systems

Wet processing
units



Wafer



As holistic partner for the wafer industrie
we offer a wide spectrum of products.

Wafer production

Engineering

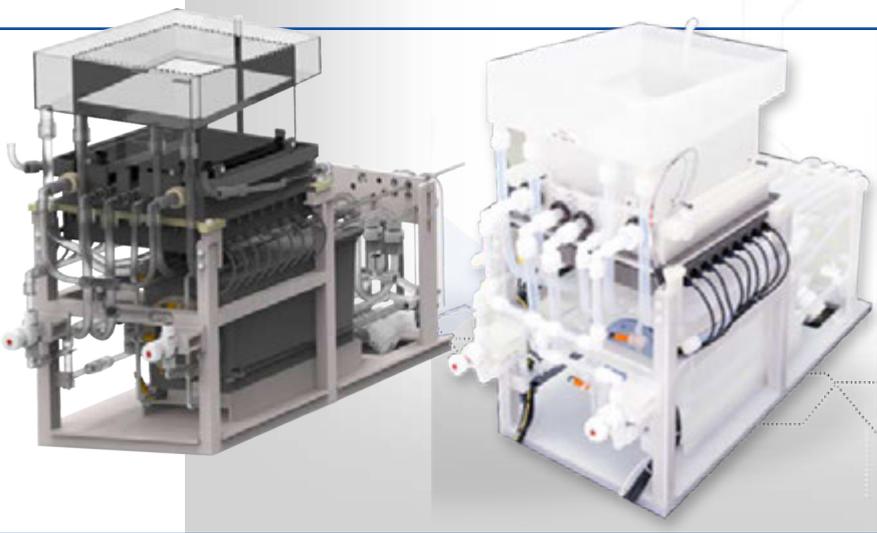
We are a specialist company for chemical handling and we like to advise and support you in the workout of dimensioning and finding the right concept for your project. Whether you require chemical equipment, DI-water, gases or complex process tools we can provide a solution.

As a professional establishment the health and safety of your company employees have great importance to us by the implementation of your concept. We plan and realise modifications, extensions and improvements for your existing systems.

Chemical distribution and waste disposal

Filling stations for lorries and tanks, mixing and dilution systems, filter systems, as well as chemical supply systems, polishing agents and solvents all belong to our business activities. Furthermore we supply technical solutions for waste and recycling of your chemicals. These includes collection and lifting stations, neutralising and recycling systems.

We can offer you complete chemical solutions ranging from delivery, mixing to your process and waste.



Wafer

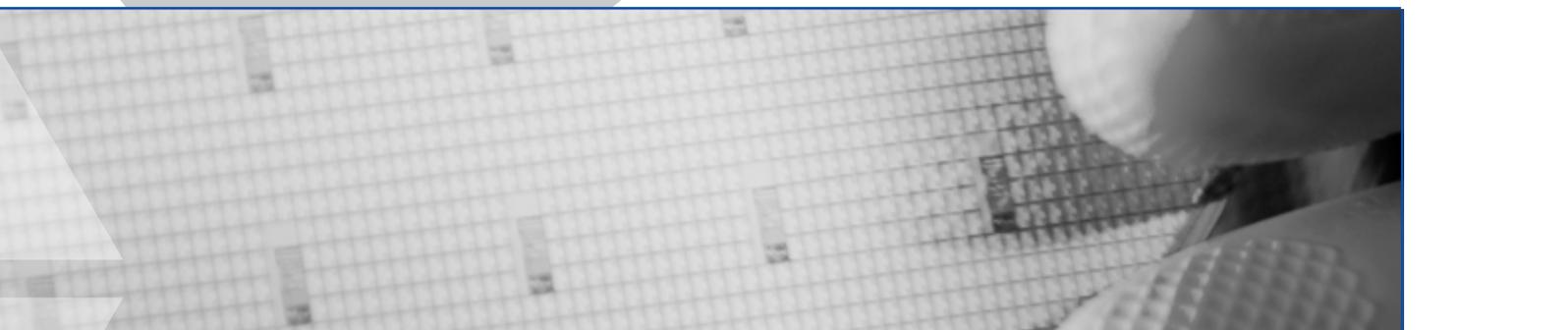
Slurry Recycling Station

With the compact Slurry Recycling System, which can be easily integrated into the polishing process, the used polishing slurry from the polishing tool can be collected and filtered. The PH- control determines whether the recycled slurry can be reused for a given time. Otherwise, the slurry is

recycled by chemical „Spiking“, mixed with fresh slurry and honed for a new polishing process. The dosage occurs automatically. Thanks to efficient slurry reclamation with low energy consumption, the valuable recycled substance can be economically reused. This not only reduces production costs, but also contributes significantly to reducing the impact on environmental pollution.



Highest precision



Wafer production

Chemical Supply System Tote

The chemical supply system tote from Puerstinger is your best option for high safety transport and storage by volumetric flow. Two separated compartments include IBC containers with a capacity of 1.000 liters each.

Based on the compartments, highest safety can be guaranteed for the operator as there is no danger from leakage of pressurized tubes.

The redundant design of the most important component basis provides fail-safe-stability. Two pumps guarantee the loop- or single-line supply without interruption. A day tank is not necessary.

Thanks to its cubic design the capacity can be used optimally - that is the IBC tank's advantage over a cylindrical 1.000 liter barrel.

This kind of solution is not only clean but user-friendly. You only need one operating step for emp-



tying 1.000 liters. That way you save time and costs.

You can clean the IBC containers and use them multiple times. They're stackable and being moved by a forklift or a low lift platform truck. Asset and maintenance costs are low.

The housing of the cabinettes is made of plastic PP-white with transparent PVC doors. It is customizable though.

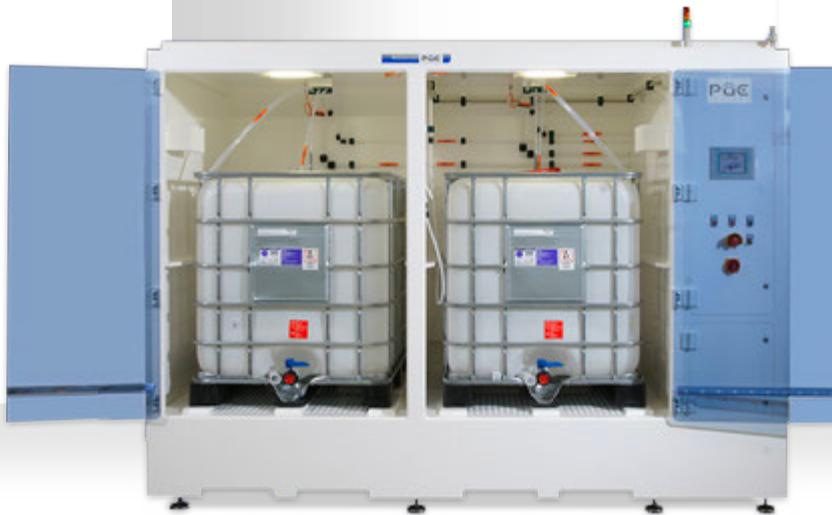
Highest purity of the chemicals at the point of use is guaranteed by the usage of quality materials (PFA, PTFE, PVDF, PE-HD).

The capacity of the collection tank makes 110 % of the biggest container. Electronics and pneumatic are stored in a separate cabin.

System dimensions

(Example):

3050 x 1600 x 2200 mm (L x W x H)



Wafer

Chemical distribution system for drums

Compact chemical distribution system for 2x55gal drums

Our compact designed 2x55gal distribution systems are our standard for the supply of ultra high purity chemicals in the fab. Every system is implemented redundant, to ensure continuous supply. Each drum has a dedicated pump and filter and can be switched over, in case of a failure. The use of high grade material for tubing and valves (PFA, PTFE, PVDF, PE-HD), our system guarantees high purity of chemicals at POU (point of use).

The distribution system offers a lot of special features:

- Supply of high purity chemicals
- 99,9% uptime
- Automatic drum switch
- Easy control via touchpanel
- Compact design
- Low foot print
- Particle and metal counts better than SEMI
- Drum change via roller floor
- Redundant pumps and filters
- Integrated sample port
- Max. flow up to 40 lpm
- Max. pressure up to 50 PSI



Compact chemical distribution system

Semiconductor

Production

The production of integrated semiconductor circuits became very complex due to the rapidly rising innovation in this sector. Several hundred process steps are necessary in order to manufacture a microchip. „High purity“ is a basic condition for manufacturing.

PUE as reliable Partner

For our customers in the semiconductor industry we offer a very broad spectrum of products. Our division „piping construction“ has been working in co-operation with well known semiconductor producers since 1992.

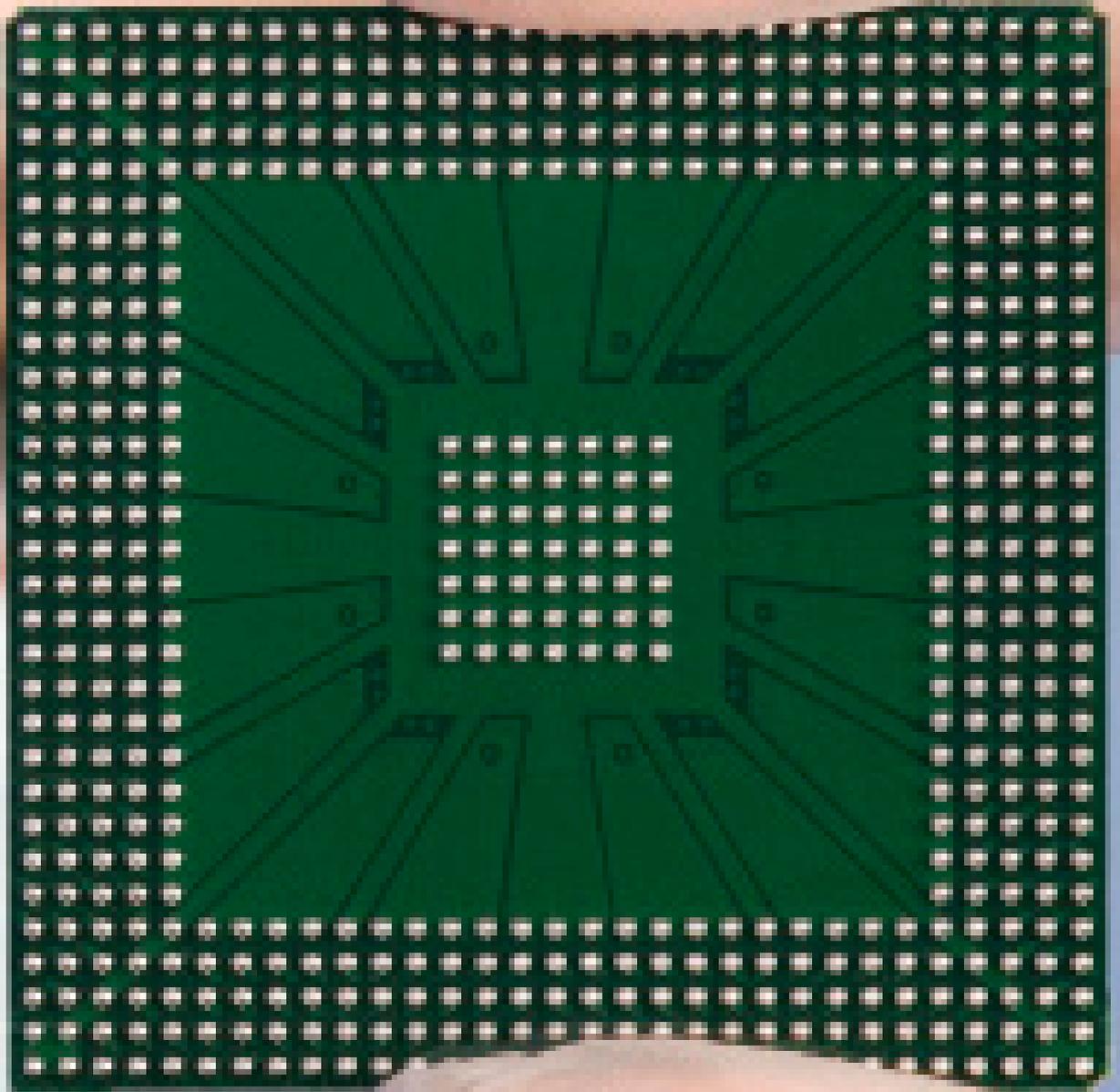
We have established a complete range of high purity chemical handling systems. We offer distribution and waste disposal systems for high purity chemicals and gases. We are your reliable partner for your research and development division by offering laboratory equipment like wet benches and chemical work stations. For your production we produce fully automatic cleaning and etching systems.

distribution and waste disposal systems

Cleaning and etching systems

Laboratory equipment

Sem



iconductor

Semiconductor

Laboratory Equipment

The area of laboratory furnishing is multifaceted and includes various applications.

For example we furnish laboratories for schools, institutes, universities and colleges. Whether it be a simple wash basin, fume hood or a manual wet bench, we will integrate into the process the exact components which you require (e.g. Ultrasonic Bath, Spin Coater, Process/ Cleaning Tanks and Measuring Instrumentation). We will dimension

the the equipment parts according to the space available to you.

We can design, tailor make and install experimental one-off constructions of any type according to your innovative research projects. We construct your laboratory furnishing according to your requirements and the latest safety standards.



Latest safety standard

Semiconductor

Wet Benches

The integrable Manual Wet Bench is suitable for development of new processes and lab applications as well as for flat wall integration into clean-room walls.



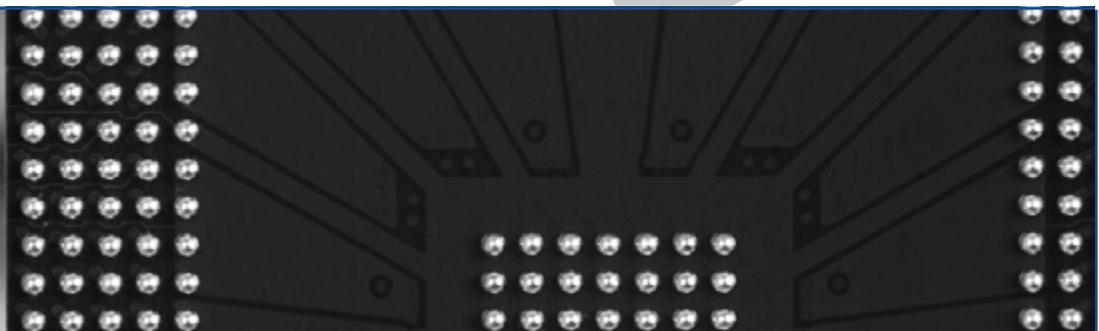
The Manual Laboratory Wet Bench is made for development of new processes but also for production, where manually operated wet benches are needed. The shown wet bench is suitable for connection to the existing clean room ceiling.



The Manual Wet Bench made from stainless steel is integrable and suitable for development of new processes and lab applications, also suitable for flat wall integration into cleanroom walls.



The Manual Wet Bench is equipped with electrical relay and perforated plate, rinsing tank, hot plates, ultrasonic bath, spincoater, as well as DI Water and N2 spray guns, eye washer and storage compartment.



Pipe work construction

Pipe work construction

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Pipe work construction

Since the foundation of the Austrian „Puerstinger High Purity Systems GmbH“ in 1992, pipe work construction is one of our major businesses.

Pipe work construction



Plastic and stainless steel

We install pipe work and pipe work components made of plastic or stainless steel for:

- Acids and bases
- Surfactants
- Polishing, lapping and grinding
- DI-water
- Waste water
- Solvents

- Gases
- Vacuum
- Process air

Above you see an installation example of a typical chemical pipe work. PFA tubing is pulled through a protective PVC glass pipe for safety reasons.



Pipe work construct

Choice of material

As a well-versed supplier in this field, we also assume the choice of material upon request, conforming to the chemical stability and the necessary degree of purity, as well as the applicable safety regulations and plan the alignment. For example, depending on the requirement profile, we utilise inserted PFA tubing and a T-box for double containment chemical piping based on synthetic materials. For high-purity water processing and distribution systems on the other hand, depending on the quality of the water, we em-

ploy PVDF-HP materials and/or PP materials for the implementation of pipes.

For the use of stainless steel piping, for example, 6" electropolished stainless steel pipes for high-purity IPA are used, which are manufactured through orbital welding. The selection of our materials is always suited to the individual demands of our customers and the applicable legal regulations. Sustainable cost management is part of our customer service.



Details of a different kind of DI Water systems installed by Puers-tinger.



Photovoltaics

Counseling from A to Z

We already provide our counseling service during your project consultation. We guarantee that our state-of-the-art technologies will help you from your economic manufacture to your successful finish. With the resulting, high quality of our efficient installations we won the deep trust of our content customers.

Renewable Energy

The technique of renewable energies is one of the key innovations of the 21st century. It is our understanding to be a co designer in this process. We are already an established partner in providing high quality chemical and gas supply systems for the manufacturing of solar cells. Solar producers are using our automatic wet benches in their cell production. We offer innovative solutions for the cell production industry.

Pipe Work Construction
distribution systems

Chemical distribution
and waste disposal

project consultation

procedural installations

Photo- voltaics

Photovoltaics

Distribution systems

In order to operate the pipe work system individually as well, the system requires a sophisticated distribution system. These distribution boxes, also called VMB (valve manifold boxes), serve as a shut-off for individual areas.

We manufacture distribution boxes with ventilation connections, catch basins and leakage detection, which are intended for the installation in a ring or stub line. These distribution boxes are prepared as hook-up connectors via PFA tubing



and PVC transparent protective tubes. We also produce these boxes for the use of flammable liquids, furthermore, form stainless steel with safety glass and electro polished valves, fittings and VCR-connectors.

Processing facilities

Our latest addition is the construction of fully automated wet processing systems for wafer production, the semi-conductor industry and the photo-voltaic branch.

We deliver a system to our customers, which is tailor-made to their cleaning-, textural-, wet etch- or combination-processes.



Photovoltaics

Etching system

One chamber etcher made of stainless steel with etching parts up to 900 mm diameter and a weight of 500 kg.

High-grade stainless steel version outside dimensions:

L x W x H = approx 2700 x 1700 x 2900 mm

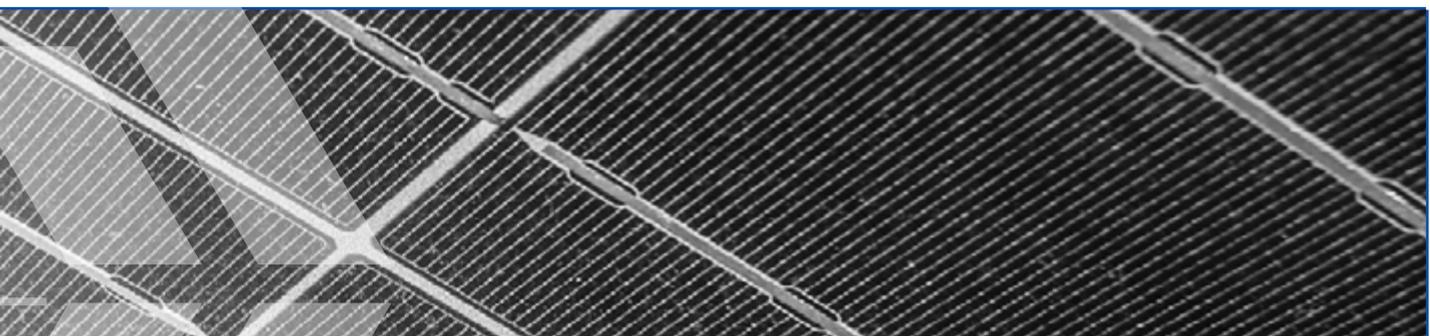
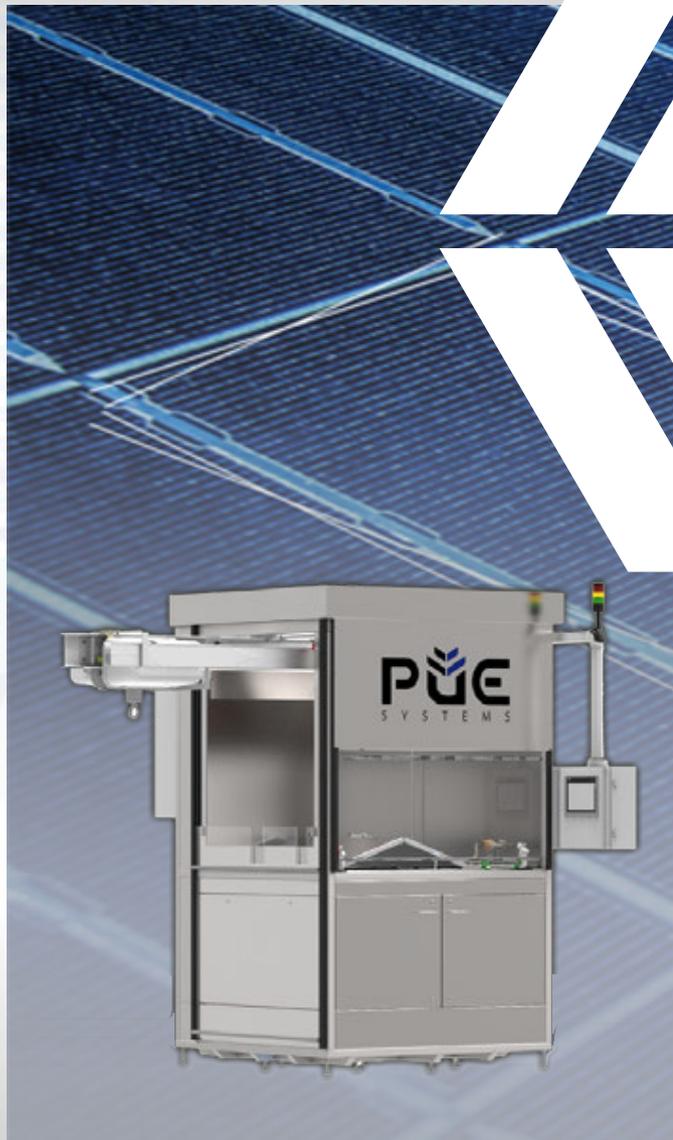
Process tank size:

L x W x H = approx 1000 x 660 x 1100 mm

Easy loading of up to 500 kg heavy components up to 900 mm diameter loadable from clean room crane rail.

More details:

- automatic loading door
- Semi control automatic front door
- etching with at closed tank cover and nitrogen blanketing
- integrated hand basin with Di water and compressed air gun
- mixing of used etching chemicals to arbitrary recipes in the system
- monitoring of the media feed times
- 10 freely programmable cleaning programs
- automatic safety temperature and time monitoring
- monitoring of air, the temperature
- fire monitoring and extinguishing concept



Research & Development

Systematic Research and consequent Development

Research and development are very important key processes for technical innovation. We co-operate since many years with universities, companies and institutes in supplying our distribution systems, laboratory equipment and wet benches.

We offer flexible solutions and special equipments to satisfy our customers requirements.



Research & development



Special equipment

The area in building special equipment is multifaceted and includes various possible applications.

Our customer's demand combined with our "Solutions in quality" – with this credo PUE Systems has been successful on the market for years. We build customized systems according to your special process demands. Starting from P&ID, almost every solution can be offered. Starting from chemicals distribution systems to complex tools – we assist you with turnkey solutions.



Research & development

Piranha solution

The piranha solution is made from $H_2O + H_2O_2 + H_2SO_4$.

Since years Puerstinger deliver Mix- and Dilution system for aggressive acids and other media. In this compact Mix system for Caro's acid are following media according on an exact recipe mixed, Di-water, Hydrogen Peroxide and Sulphuric Acid. Regarding the exothermic reaction the bath temperature increases and will be cooled down automatically to the specified set point (Degree Celsius exactly). After the desired temperature of the Dilution has been reached the set point, the Dilution will be transferred to the

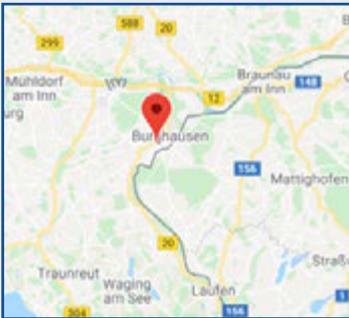
Buffer tank. The supply from the Buffer tank to the tool is done via a with a pneumatic operated diaphragm pump.



Questions or Concerns? Please contact us!



PUE-Germany



Puerstinger High Purity Systems GmbH (PUE-G)
Gewerbepark Lindach B3-B4
D-84489 Burghausen, Deutschland

Phone: +49.8677.9878.0

Telefax: +49.8677.9878.13

E-Mail: info@puerstinger.de

PUE-Austria



Puerstinger High Purity Systems GmbH (PUE-A)
Pyhrnstraße 16
A-4553 Schlierbach, Austria

Phone: +43.7582.6080.0

E-Mail: puerstinger.austria@puerstinger.de

Establishment Dresden



Puerstinger High Purity Systems GmbH (PUE-A)
Torfmoor 1b
D-01109 Dresden, Deutschland

Phone: +49.351.8966.780

Telefax: +49.351.8966.781.0

E-Mail: info-dresden@puerstinger.de

