



Power degreasing. Top surface energy.

Our PCE system is ideally suited for stamping, turning, polishing or grinding parts heavily wetted with oil or grease. Several cleaning circuits and a powerful vapour degreasing ensure the best surface energy.

Batch size

- Schäfer 1 basket: 630 x 480 x 300 mm
- Schäfer 2 basket: 430 x 300 x 200 mm
- Wire-mesh cleaning crate: 1200 x 800 x 800 mm
- Long parts: up to max. 2600 mm

Process description

- Clean with / without ultrasound from tank 1
- Fine cleaning from tank 2
- Vapor degreasing
- Conservation from tank 3 (optional)
- Vacuum drying
- Chamber rinsing with clean air



PLANT EQUIPMENT Aqueous systems

Superfine cleaning. Process reliability. Part by part.

The aqueous continuous spray cleaning system guarantees reliable precision cleaning at a high throughput.

Its innovative parts movement ensures parts with difficult geometry become perfectly clean. The parts are packed in the clean room immediately connected to the system.

Batch size

Cleaning basket: 530 x 320 x 200 mm

Process description

- 2x alkaline cleaning
- 2x alkaline rinsing
- 2x acidic cleaning
- 2x acidic rinsing
- Deionized water rinsing
- Hot air drying
- Packaging in clean room



Ultrasonic cleaning. Spotless parts.

Emulsion-coated parts, such as aluminium die-casting after machining or hydroformed parts, are washed in an ultrasonic chamber process with water-based cleaners.

Batch size

Cleaning basket: 630 x 480 x 300 mm

Process description

- Clean with / without ultrasound from tank 1
- Rinsing with / without ultrasound from tank 2
- Rinsing from tank 3
- Deionized water rinsing from tank 4
- Hot air drying
- Vacuum drying





CLEANLINESS ANALYSIS LABORATORY

Testing for technical cleanliness

Today, cleanliness tests for the assessment of the technical cleanliness are indispensable because of initial sampling and evaluation, output and input control, quality control, and process monitoring. The vaptic cleanliness analysis laboratory analyses for you according to ISO 16232 / VDA 19 and various customer standards to the highest quality standards.

- Services:**
- Gravimetric analysis
 - Particle size distribution from 5 μm by using a Leica DM 4000 M material microscope
 - Decay curve measurements

Clean room class 5

Excellent blank values are a requirement for meaningful analyses. However, conventional spray booths do not achieve this. This is why the vaptic cleanliness analysis laboratory was equipped with a custom-made spray tank and the laboratory was designed as a class 5 clean room.

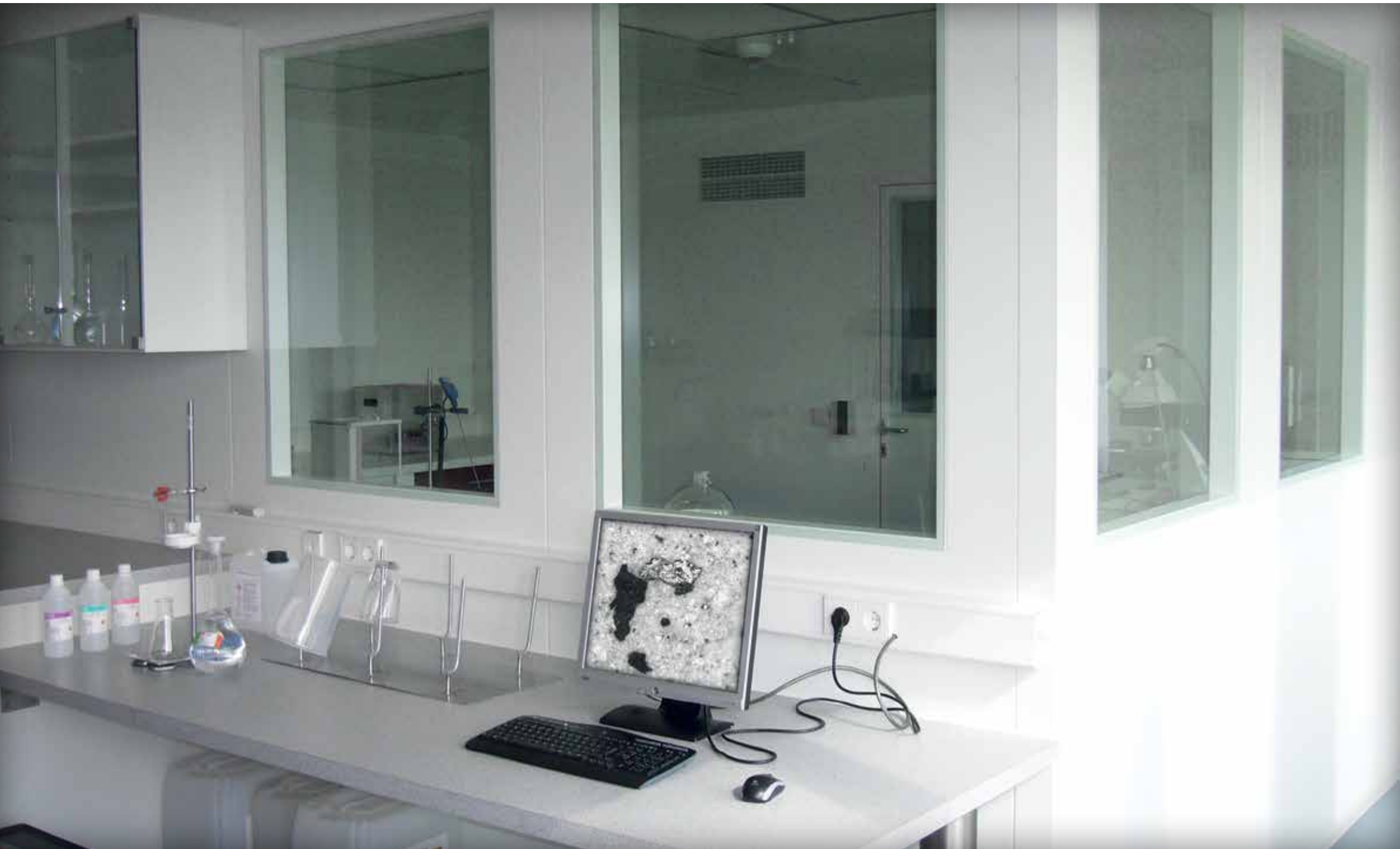


Extraction

We have a wide variety of extraction methods available to guide the particles onto analysis filter:

- Rinsing
- Splashing
- Shaking
- Ultrasound





Particle size distribution

A fully automated Leica DM 4000 material microscope automatically measures and counts particles from 5 µm. A distinction is made between reflective (metal) and non-reflective (non-metallic) particles and fibres. After a thorough manual examination, these are clearly displayed in written and pictorial form according to the following categories: all particles, reflective particles, non-reflecting particles, reflective fibres, non-reflective fibres. We also perform particle height measurements if required. The data will then be provided to the customer as a test report. We will provide general assistance concerning the testing of technical cleanliness, the evaluation of your analysis results or questions on the process chain in addition to delivering a meaningful analysis within the shortest possible time.

Decay characteristics

The extraction method is specified by us in close coordination with the customer, unless already predetermined. The decay characteristics must be examined to qualify this method. For this purpose, six consecutive analyses establish whether the remaining amount of particles is below 10 percent of the total amount of particles.

Gravimetric analysis

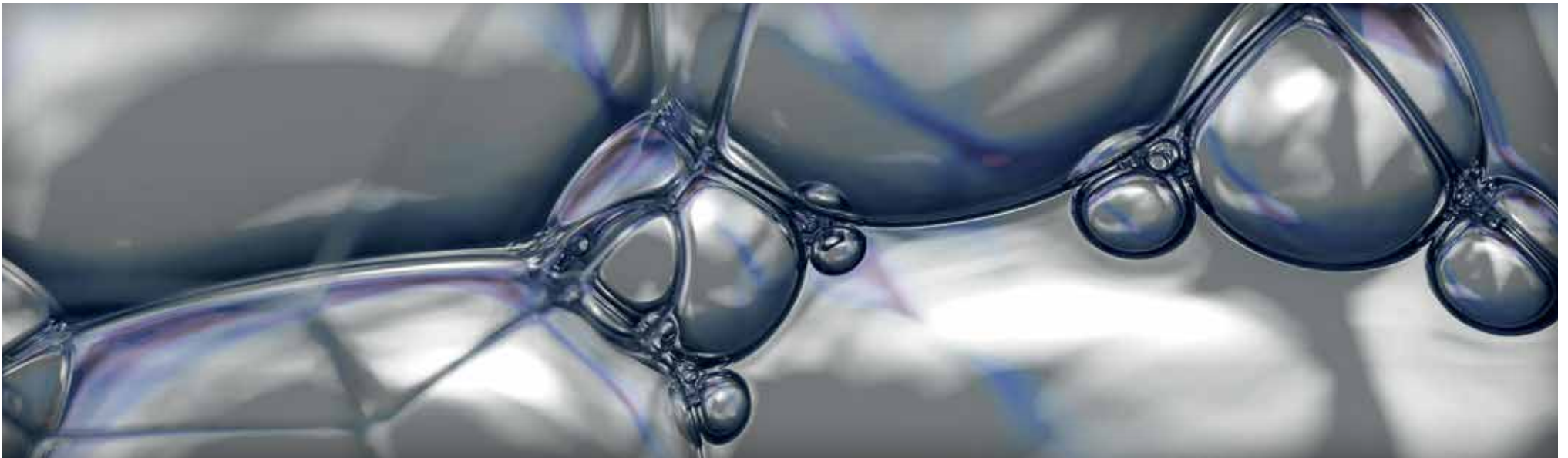
The analysis liquid is passed over a filter after the particle extraction. The total amount of dirt cleaned off is determined by micro scales (resolution 0.1 mg) after drying the filter.





CLEANING CHEMICALS

Contamination cleanly removed



vapic systems and cleaning agents are a well-practised team. Long bath life, low solvent consumption, no unknown factors in the cleaning process - a perfect result, that's what you can expect from our chemicals.

- Solvent-based cleaning agents
- Aqueous cleaning agents
 - Additives



We will support you with detailed advice, preliminary cleaning at our technical center and laboratory services when selecting the perfect product for your cleaning task and the associated systems engineering.

We take product responsibility seriously. Already when we conceive our products, we assess possible basic materials as critical for any environmental impact and occupational safety as we assess them for their effectiveness and material compatibility. A long service life and recyclability are other important criteria for our product development. Waste-water free and waste-free production as well as the collection of used media is a natural part of it.

Product safety requires consistent quality control. Careful laboratory tests accompany each production step and ensure continuous process monitoring.

Naturally, we will remain your contact after the installation of our systems too. Qualified sample investigations are just an example of our service.

Cleani



Our products offer innovative solutions for all areas where quality and safety are important. We deliver the desired container size fast and competitively priced:



vapic FL, solvent-based cleaning agent:

A variety of formulations made of modified hydrocarbons and alcohols.

Example: vapic FL 820 modified hydrocarbon, flame resistant.

vapic FW, aqueous cleaning agent:

Neutral, alkaline and acidic cleaning concentrates for water-based parts cleaning.

Example: vapic FW 0709NS is a re-sharpening solution adapted to the contamination for an aqueous large-scale plant "without bath change".

vapic FO, oils:

We have the proper oils for our plant technology.

Example: vapic FO 444 is our fully synthetic oil for an optimum service life of your screw vacuum pumps.

What our customers say:

Tony Wang
Project Engineer CEF

Hirschvogel Umformtechnik GmbH

"Our forming processes require a lot of strength and lubrication. The dirt must come off and even more importantly, it must be removed from the cleaning system. We have purchased two vaptic special systems for our plants in Denklingen and China. We had the opportunity to add our internal requirements and experiences during project implementation. The results speak for themselves - our specialized departments are very happy".



Senior Staff

Boysen GmbH & Co. KG

"The emission control technology of Boysen is in demand worldwide. In only two years we have built seven new production facilities on four continents. Our experience with vaptic XXL systems was very positive. Today, nine machines are used at Boysen locations in Germany, China and the United States. Plant engineering and chemistry have been perfectly adapted to our cleanliness requirements. For years we operate our systems in shifts without a bath change."

Gerhard Saur
Production Manager
Engineering

WEBER-HYDRAULIK GMBH

"The cleanliness requirements for our hydraulic cylinders constantly increase. As a supplier for utility vehicles we face tough competition. Within a short period, vaptic has produced three customized aqueous special systems for us. There is always a start-up phase with special equipment. The "teething problems" have been eliminated constructively, quickly and accommodatingly. The value for money is very reasonable - vaptic is flexible and innovative."



Andrea Krause

Witzenmann GmbH

"I work at Witzmann - market leader for flexible metallic elements - and responsible for the cleanliness of technical components: Complex geometries, extremely ladling components, cost pressure, increasing cleanliness requirements - that's our daily challenge. In 2004, we have put the first vaptic system with the patented process in operation. Further machines have been ordered and vaptic also services the systems from other manufacturers at our factory. For several years we on and off have used the services of the vaptic Parts Cleaning Center for components with high cleanliness requirements. vaptic is competent, innovative, honest and reliable."

WITZENMANN
managing flexibility

Helmut Mühlberger

Rosenberger Hochfrequenztechnik GmbH & Co. KG

"Rosenberger produces highly complex parts made of brass. Our cleaning machines must be able to cope with an enormous entry of oil and chips and continuously deliver very clean components. Our two vaptic systems can do just that! We need additional cleaning capacity because of our rapid growth - it will be provided by vaptic, of course."



Rosenberger

Achim Mayenberger Managing Director

Mayenberger GmbH

"We seriously considered our decision for a new cleaning system. Detailed specifications had to be met. In the end, our choice was clearly in favour of vaptic. Cleanliness and efficient energy cost savings were definitely better than offered by competitors. That's what we had to achieve. And vaptic helped us get there."



REFERENCES

Unity - despite all diversity

Our customers operate in a variety of industries. Their requirements are as individual as diverse.

But one thing unites our customers: They are happy to work with vapic. Because of the excellent energy balance of our process.

Because of the competent service. Because we deliver on time...

The following is an excerpt from our reference list:

Turned and milled parts

Dietrich GmbH
Endress+Hauser
Kuhnke
Mann + Hummel
Mayenberger
OBE-Werk
Rosenberger
Wilhelm Drexelius GmbH & Co. KG
WST Präzisionstechnik

Fine blanking

Feinstanz CH

Extruded parts

Neumann Aluminium

Electroplating

Biacchessi

Hydraulic parts

Weber Hydraulik

Expansion joints

Boa
Witzenmann

Ball bearings

CW Bearing
GRW - Gebr. Reinfurt

Laser parts / Superfine cleaning

ROFIN-BAASEL Lasertech

Razor blades

Feintchnik

Pipes

König Metall
Vadeb-Witzenmann B

Other

Continental
Daimler AG
DT Swiss CH
Hörisch Präzision

Die-cut parts

Kaufmann
Prym Fashion

Deep-drawn parts

Stüken, Hubert

Mould parts

Friedrich Boysen
Hirschvogel

Zinc pressure casting

Rahrbach

Imprint

vapic GmbH
vacuum and pressure industrial cleaner
Harry à Wengen Straße 6
D-75387 Neubulach-Oberhaugstett

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Full Service Interactive Agency, Altensteig
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Printed on recycled paper
www.druckhaus-goetz.de



Das Zeichen für
verantwortungsvolle
Waldwirtschaft



BLUE SPHERES. CLEANED BY VAPIC.