

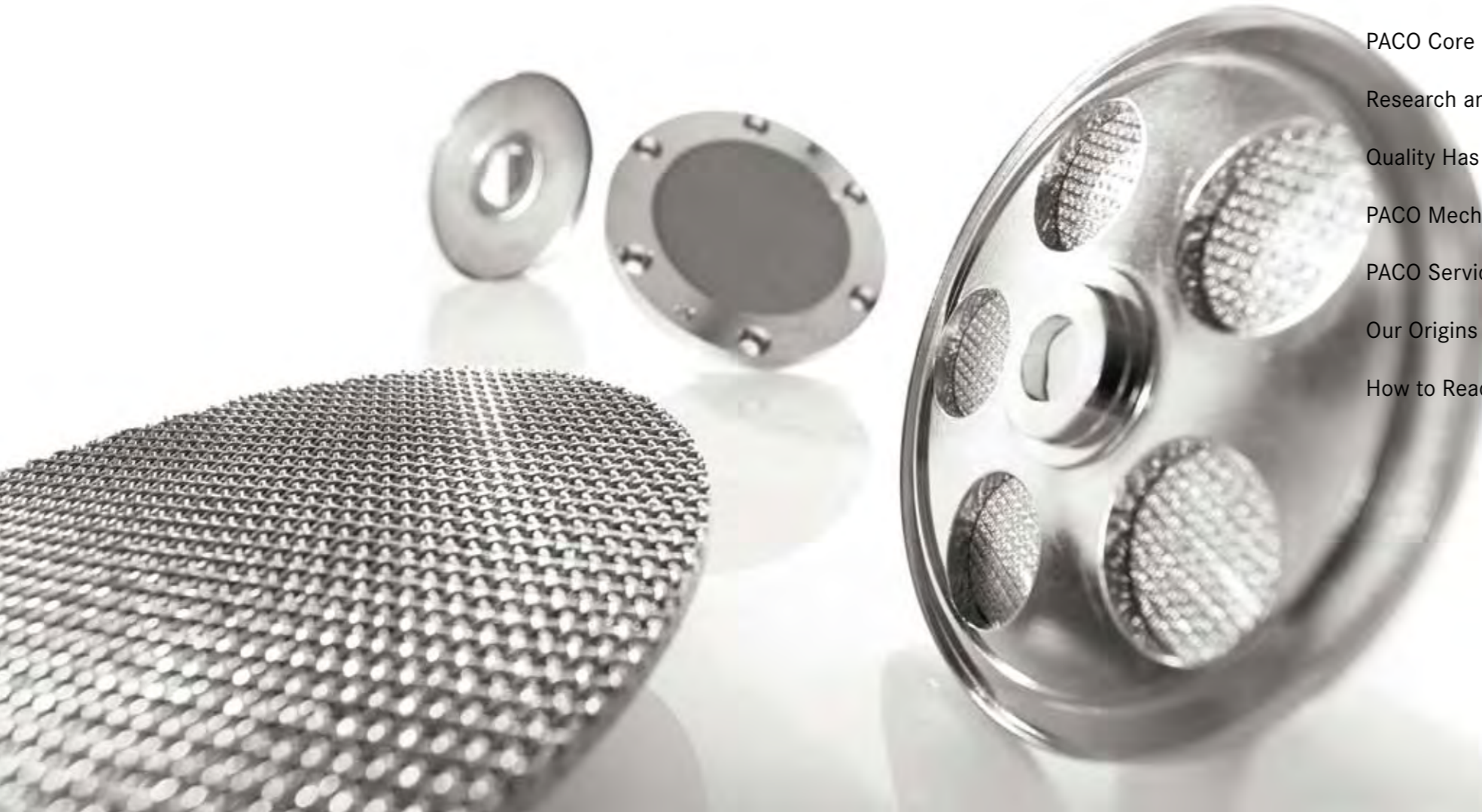


The World Needs Solutions

Mesholutions created by PACO



Welcome to the PACO Family



Mesholutions – Invitation to Advancement	4
Concentrating on Core Expertise – with Vision	6
PACO Core Expertise Filtration	8
PACO Core Expertise Screening	12
PACO Core Expertise Screen Printing	14
Research and Development – Practical Use is What Matters	16
Quality Has to be Wanted – Again and Again Every Day	17
PACO Mechanical Engineering: We Do Ourselves, What We Can Do Best	18
PACO Service – Globalizing Close Customer Contact	19
Our Origins are Our Future – and Vice-Versa	20
How to Reach Us – Any Time and Anywhere	22

Mesholutions – Invitation to Advancement



The weaving shops – the pulsating heart of PACO production – in their infancy (left) comparatively simple, today extremely modern.

Origins

Paul GmbH & Co. – in short: PACO – is a company family and family company at the same time. Its origins lie in the expertise of making high quality metal cloth from fine metal wire. What began with a few looms has developed into multiple weaving shops with hundreds of automated weaving machines.

Self-conception

Having a realistic company philosophy which can pragmatically be put into practice is part of our self-conception as a family company. We would never hit upon the idea of trying to buy out Volkswagen. Similarly, we have got absolutely no intention of being taken over ourselves. We just want to stay as we are: solid, showing solidarity and thriving as part of a social market economy. Our objective is to do what we do as well as we possibly can – ideally, better than everybody else. For the utmost benefit of our customers and their projects.

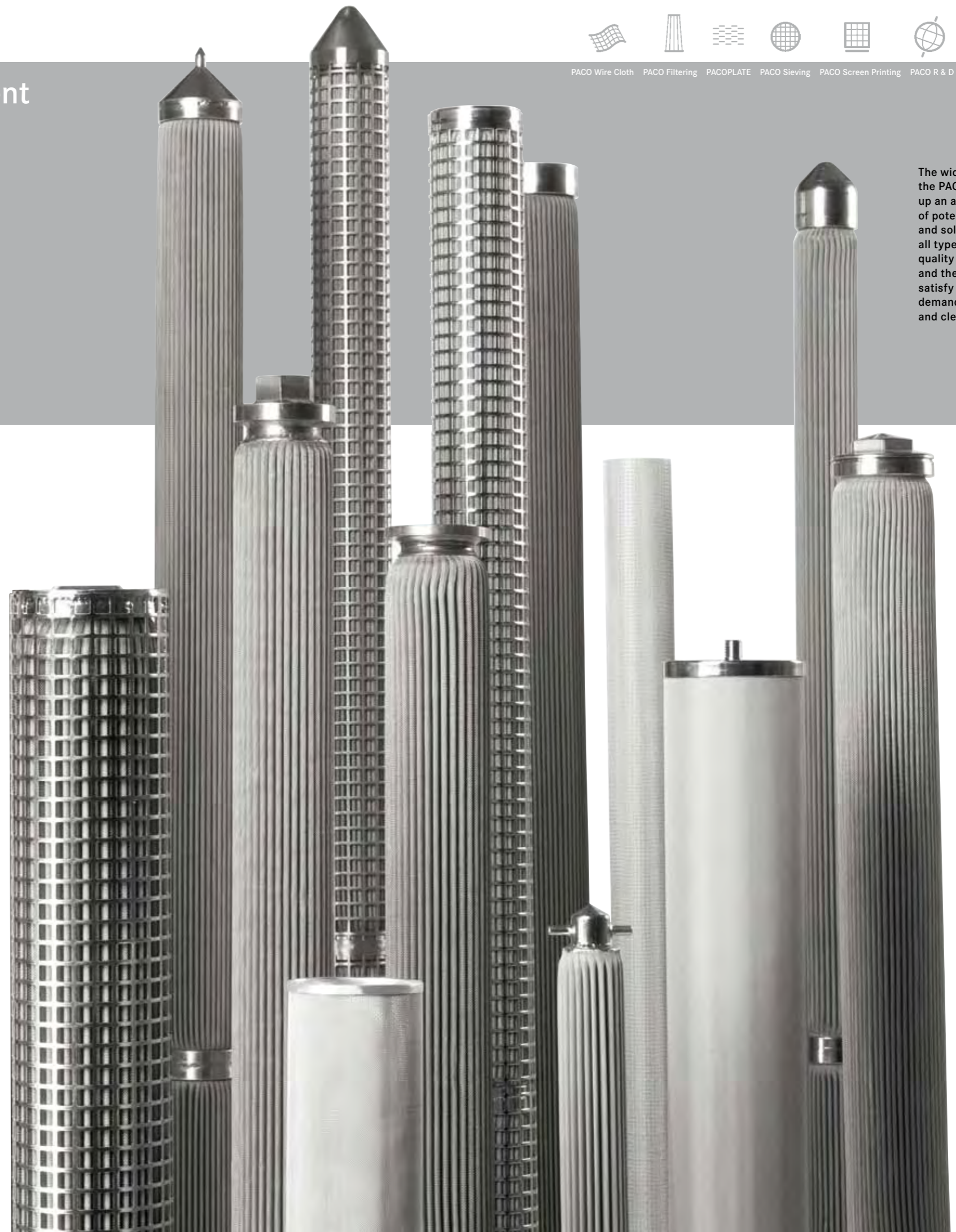
Mesholutions

Our “Wire & Mesh“ solutions – Mesholutions – are not just products made of mesh woven from metal wire. Our Mesholutions provide complete solutions. The cloth, the filter or the screen is not an end in itself, but a means of providing our customers the benefits that really matter to them: efficiency, safety, success.

The world needs solutions

We are convinced that problems are there to be solved. Behind this conviction is the experience that we have gained from working closely together with our customers. After all, the search for better and better solutions is a fundamental motivation for everyone. For every company as well – for itself and for its customers. Something that at the end of the day will make the world a little bit better too.

Our concept of working for our customers means finding a convincing solution for every case, need and wish. Our company objective is to advance.



The wide variety within the PACO filter family opens up an almost limitless range of potential applications and solutions. Common to all types of filter is the high quality of materials used and their workmanship. They satisfy the highest possible demands respecting lifetime and cleaning cycles.

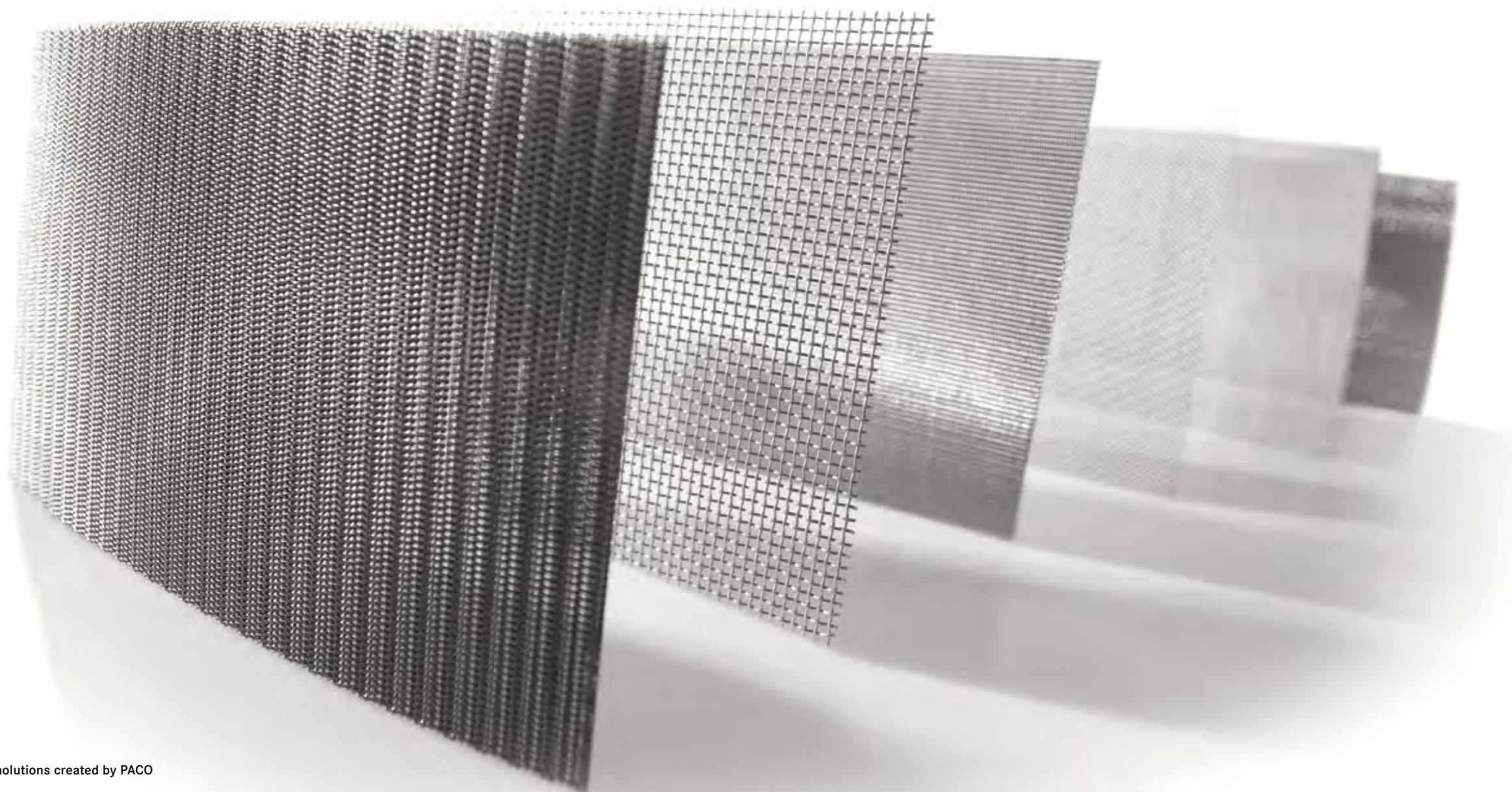
Concentrating on Core Expertise – with Vision

For a company to concentrate on its core areas of expertise is a proven recipe for success. Nevertheless, such expertise needs to be continuously strengthened and further developed. In addition, vision and innovation are absolutely essential. From the outset, PACO has used its expertise to continually add new skills. As a result, the core expertise of producing metal wire cloth that provided the basis for the company has been steadily expanded upon to include other areas of expertise and activities.

Cloths
 Filters
 Laminates
 Sieves
 Screen Printing



From the incoming inspection of the metal wires to be used through to the final acceptance of the finished cloths, each stage of production is checked to ensure total PACO quality.



PACO Area of Activity

Cloths

PACO metal wire weaving mills produce a wide range of different cloths. The differences lie in the dimension of thread, mesh size, type of weave, materials as well as final treatment, finish and assembly.

Hundreds of different qualities are permanently in stock. And when a special cloth is needed, flexible processing techniques ensure short lead times. All PACO cloths are available in a large variety of delivery formats: rolls, pieces, strips, stamped to round blanks or in any other shape that might be required.

The wide diversity of customer needs is reflected in the extensive range of PACO wire cloths.

PACO Core Expertise Filtration

Cloths
Filters
Laminates
Sieves
Screen Printing

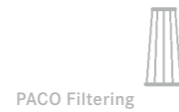


Further information about PACO areas of activity, product details and application examples can be found online under www.paco-online.com

PACO Area of Activity

Filter Media and Filters

The reliable filtering of fluid media is one of the most important of all processing steps – in all industries. This includes environmental protection, gastronomy and even the fuel tanks of the Ariane 5. PACO not only provides suitable metal wire cloths for filtering but also develops comprehensive customer-specific filtering solutions – starting from filter elements for demanding applications with a joint-free (!) length of up to 1400 mm through diesel particle filters to large-format filter baskets. In all cases, high filtering accuracy, absolute reliability, long lifetimes and uncompromising cost-effectiveness – for example, through optimum cleaning characteristics and re-usability – are very high on the list of priorities.



PACO star filters with pleated metal wire cloths increase the filtering surface for applications such as drying processes. The PACO star filter family is comprised of a wide range of designs and sizes.

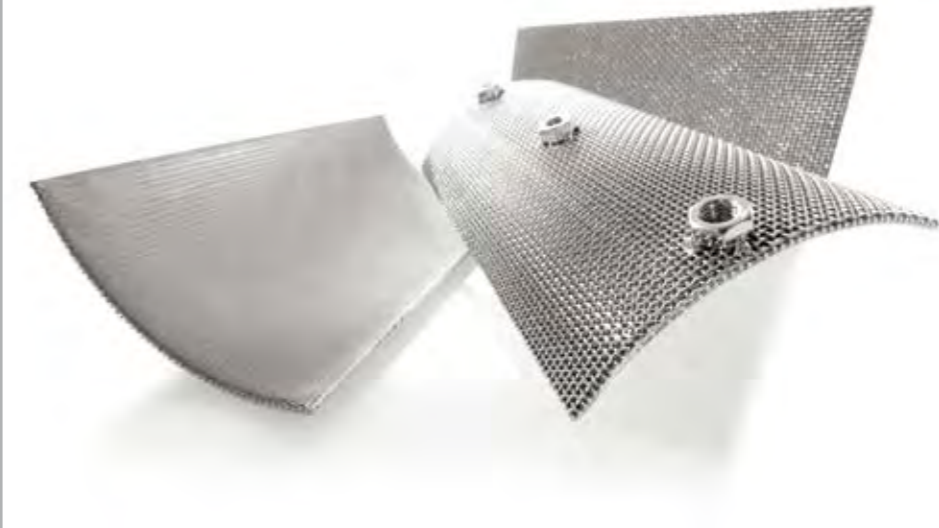
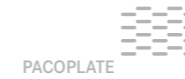


PACO Core Expertise Filtration (II)



Precise metrology plays an essential part in assuring PACO quality from the cloth through to the finished product.

- Cloths
- Filters
- Laminates**
- Sieves
- Screen Printing



PACO Area of Activity

Laminates and Fleeces

Specialised filtration applications demand a diversity of filter media. Depending on the required process, surface or deep-bed filters are used. The latter are so-called “non-wovens”. In this specialist area too, PACO is among of the best in the world.



PACO metal fleeces are subject to the same high standards regarding quality, functionality and performance as metal wire cloths.

PACO metal fleeces for finest filtration are particularly in demand when precise separating capabilities and a high contaminant retaining capacity are required.

PACOPLATE describes a large filter media family. Each filter is made up of between two and a number of hundred layers or steel mesh cloths that are

heated and pressed together to produce a laminate. The composition is chosen so that performance parameters such as durability, filtering fineness, flow rate and regeneration capability are optimized for each individual filtering application. This enables a filtering accuracy as fine as 1µ to be obtained.

PACO filter inserts on the basis of PACOPLATE cloth laminates for high pressure applications such as film or foil production.



PACO Core Expertise Screening



The re-screening of used sieves at PACO is cost-effective and conserves resources.

- Cloths
- Filters
- Laminates
- Sieves**
- Screen Printing



PACO Area of Activity

Screen Cloths and Sieves

The multitude of different screening machines and plants as well as the even larger variety of products to be screened places extreme demands on the sieve manufacturer. PACO fulfils these demands with the high quality of its sieve cloths, considerable expertise in screening technology and high-grade sieve production. Particularly important for us is a close working relationship with the world's screening machine manufacturers. For them it is important to get a sieve base that is optimally suited to their machine. On top of this they are looking for performance characteristics such as minimum screening strain, resistance against clogging and long lifetimes. That is why PACO sieves have become the sieve of choice for screening machine manufacturers around the world.



PACO is capable of screening sieve frame diameters up to 3,000 mm. Not many companies in the world can offer this to their customers.



PACO Core Expertise Screen Printing

Cloths
Filters
Laminates
Sieves
Screen Printing



Regardless of whether it is for decorative screen printing with precious metals or the production of electronic components – the high precision of PACO SD cloths is always exactly the right choice.



PACO Screen Printing



PACO SD AM cloths are the world's material of choice to produce precision printing screens for the metallization of the front and rear contacts of solar cells using emulsion and thin film technology.

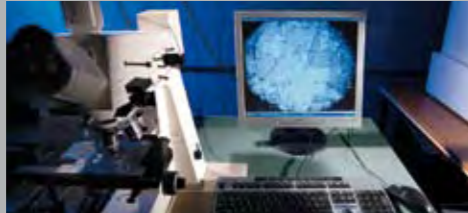


PACO Area of Activity

Screen Printing Cloths

The number of screen printing applications has dynamically grown over the past few years. What began with classic uses such as the printing of glass or ceramics has now become essential to electronics, leading-edge technology and alternative energy production. These ongoing advances are enabled by PACO through innovative and extremely precise metal cloths that are specially developed for state-of-the-art screen printing. PACO cloths have made the printing of extremely fine lines such as PCB conductor paths or the thin film doping of solar cells not only reliably reproducible but also economically possible. It is, therefore, no surprise that PACO is the world market leader in these fields.

Research and Development – Practical Use is What Matters

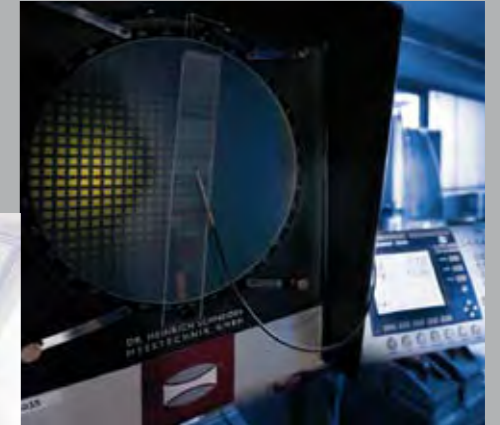


The abbreviation RFID (Radio Frequency Identification Application) stands for an innovative technology that allows products to be identified by radio waves. Instead of optical bar codes, minute chips are used. PACO R & D has been continually developing PACO screen cloths to increase the minimization of RFID chips.

Quality Has to be Wanted – Every Day



Certified quality management is a permanent process. The quality certificate needs to be renewed on a regular basis.



Intensive Research

Over time, it is solutions that have established themselves as being the real PACO product.

These solutions are not only the result of metal wire cloths, sieves or filters, but also expertise, extensive experience and thorough understanding of customers' exact needs.

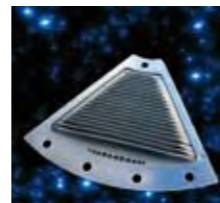
The basis for PACO "Mesholutions" is intensive research and development – often in close co-operation with our customer's specialists. In most cases, PACO's team of experts, working with state-of-art tools and measuring equipment in the company's own technical centre, can quickly find the needed solution. And if the situation demands, PACO will work together with universities and research institutes to reach the required goal.

High Quality Implementation

Whatever is needed, PACO R & D is never an end in itself, but always pragmatically oriented towards practice with the objective of providing an economic solution in the shortest possible time.

Before a PACO Mesholution is put into production, it has to undergo an extensive series of tests in our own technical centre as well as on site. When the specified functionality and values have been obtained, PACO's production technicians ensure a fast and high quality implementation.

Incidentally: the close and efficient co-operation between PACO R & D and customer works on a global scale. This is confirmed by our customers and local representatives around the world time and time again.



PACO Research and Development provides innovative solutions specifically oriented to customer requirements.



Quality

It is not presumptuousness when PACO claims to be the world-wide market leader in quality in its sector. This is because an integral part of the company strategy is to place extremely high demands on its own work, efficiency and responsibility.

As complex as the subject of quality may be, the principle is easy: in the end an excellent product is needed.

This assumes that everything is as it should be at the outset. Incoming goods inspection makes sure that only the best wires reach the production shop. After this, the production equipment and processes themselves have to be of the highest possible quality – from the loom through to the metalworking machines, from welding through to finishing operations. Throughout this you need to be able to rely on well qualified personnel that are all highly motivated.

Quality Management

Essential to the complete quality process is PACO's total quality management system that is accordingly certified in itself. The basis for this is certification to EN ISO 9001:2008. Additionally, as a supplier for the Ariane 5, PACO is also certified according to the Assessment Standard EN 9100 for the aerospace industry.

Every quality management audit means significant additional work and responsibility for everyone in the company that is involved with it. Extensive and detailed preparations are needed as the certification institute takes a close look at everything. They need to be sure that quality is something that is not only there on the day of the audit but is a permanent condition. That is why we have programs at PACO to pro-actively check quality throughout the company every day.

PACO Mechanical Engineering: We Do Ourselves, What We Do Best



As PACO's mechanical engineering is primarily aimed at fulfilling the company's own needs, only solutions that are fully suited to practical everyday operation are put into series. Shown here is an automated loom (below) and a tumbler screening machine (right).

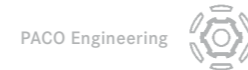
PACO's in-house mechanical engineering team – shown here is an innovative welding robot – makes a fundamental contribution to putting PACO's total quality policy into practice.



PACO Globalizes Close Customer Contact – Starting from Home



PACO storage, production and logistics capacities are being continuously expanded to provide a reliable supply and service infrastructure that ensures close customer contact in all PACO markets.



Own Strengths

The weaving of metal wire at PACO is an extremely specialist field that has very little in common with production operations for the mass market. Consequently, PACO has to place very high demands on the builders of machines such as automated looms. In particular, precision and flexibility are absolutely essential for PACO to produce a range of such high grade products with such diversity.

Against this background, PACO set up its own mechanical engineering team that initially concentrated on producing dedicated looms. Over 300 of these have already been commissioned, with technical advances incorporated in each new generation. It can, therefore, safely be said that our own mechanical engineering sets the pace for the consistently optimized quality of PACO cloths.

In a 2nd phase, equipment such as automated welding cells, cutting machines and handling systems have been developed by the PACO mechanical engineering team for specific company requirements.

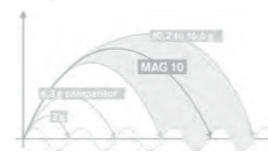
MAG 10 Screening Machine

On the basis of its own experience with screening technology and the requirements indicated by users, PACO mechanical engineering decided to develop its own particularly high power screening machine – the MAG 10. Behind this decision was the fact that PACO had begun to offer screening cloths with hitherto unknown performance capabilities and that there was simply no machine on the market that could fully exploit their potential.

Central to the development was the acceleration of the screen. The patented design enables values exceeding 14 g: world record! This provides a gravitational acceleration that can separate products that were previously almost inseparable – even substances containing heavy oils. The MAG 10 went into production in mid 2009 and is already a large success.

The high performance of PACO screening cloths provides the basis for the conception of the world's most powerful screening machine – the MAG 10.

Superior screening performance through extremely high acceleration and very high throwing amplitude.



PACO World

PACO's hometown is Steinau an der Straße, a town in central Germany with a long industrial tradition, just a few kilometres away from the Frankfurt/Rhine-Main metropolitan area. Located in Steinau is not only the headquarters of the PACO Group, but also its three German production plants. Other factories are situated in France and in Belgium.

These production centres are interlinked with a world-wide team of more than 80 distribution partners. This means that PACO is represented on all continents, not just in the industrialised world, but also in countries with, for instance, oil and other natural resources.

Common to all distributors is the fact that the quality and competitive pricing of PACO products and services means that they are very successful in their respective markets.

Commitment to Service

PACO sees its service as being much more than just an absolute necessity. It is a sign of commitment to the customer and proof that PACO support is never far away. That is why PACO service starts at the very top: the upper company management tirelessly travels around Germany, Europe and the rest of the world to keep close contact with existing and potential customers. Their example is followed by the company's own sales force as well as the distributors in the PACO export markets.

Together, this adds up to an extremely high level of service and individual customer support – particularly "after sales". Maintaining close proximity to customers ensures a successful long-term relationship and continuing success: for PACO, the distributor and particularly for the customer.

Our Pedigree is Our Future – and Vice-Versa

1953

Paul GmbH & Co – in short PACO – is founded by three partners: by Hans Paul (who had gained experience in metal wire weaving through his previous experience at Ratazzi & May) as well as the silent partners Werner Seyfert and Hans Arnold. Production was started in a garage with a second-hand loom.

1956

Production is relocated to premises in the newly built industrial estate at Steinau an der Straße. Initial contacts are made in foreign markets – particularly in the USA.

1958

The cofounder Hans Paul withdraws for health reasons. With Wilhelm Ruppel, a man that was onboard from the outset takes over the management of the company as managing partner.

1963

The company is booming and dynamically expanding. PACO takes over the machines and production resources from a competitor in Karlsruhe.

1964

A second production plant commences operations at the village of Herolz near Schlüchtern in Central Germany. This plant concentrates on the production of medium and coarse cloths. The USA is now an important export market.

1965

PACO takes over all of the machines from a company in Ireland that they had developed a close working relationship with.

1973

The first foreign subsidiary, PAUL WIRE CLOTH CO. in Middlewich (UK) is set up.

1974

The first shuttleless loom built by PACO themselves is put into service at the plant in Steinau.

1975

The main factory at Steinau commences filter manufacturing, which due to huge demand is very quickly expanded. The first products are filter discs and sieves for synthetic fibre extrusion.

1979

The silent partner Hans Arnold sells his share of the company to the Ruppel and Seyfert families.

1981

PACO takes over the fine weaving activities of a further competitor. Shortly after that they acquire the production resources of Ratazzi & May, the

former market leader in metal wire weaving, where the company founders Paul and Ruppel originally learnt their trade.

1988

The 50th PACO HML lightweight loom is commissioned.

1989

Peter Ruppel is appointed as sole executive director of the PACO group of companies.

1990

The French subsidiary TSE is set up by PACO at Longjumeau near to Paris. Business activities are centred on the supply and service of the screen printing industry. The range of activities is systematically increased – from sieve production through to the printing of small batches for the regional market.

1992

Foundation of the Belgian subsidiary CANAL – together with the partners André Brassine and the company Dillinger Fabrik gel. Bleche.

1993

A new factory is set up in the “Im Poppen” industrial estate in Steinau. This initially concentrates on the production of airbag components.

1994

The first automated welding plant developed by PACO for the production of screening cylinders produces the millionth part.

1995

Airbag production reaches its peak with nearly 300,000 units per month.

1996

Successful certification of the PACO quality assurance system according to EN ISO 9001. The 175th loom produced by PACO is commissioned at the factory in Herolz.

1999

The 2nd factory “Im Poppen” is expanded. The production area is extended and a new storage area is provided.

2000

The new millennium begins with the completion of extensive expansion measures. The three factories at Steinau and Herolz provide PACO with a floor area of over 27,000 m², of which approx. 20,000 m² is production space for weaving and filter manufacturing and 1000 m² is for

storage. The workforce now numbers 330 and turnover now exceeds 35,000,000 Euro with exports to more than 100 countries around the world. PACO’s mechanical engineering team puts the 250th automated loom for fine wires into production. A supercalendar to reduce the thickness of ultra fine wires is commissioned. The investment for the project amounted to 1.3 million DM – the largest single invest-

ment to date made by PACO for manufacturing equipment.

2001

The Herolz factory’s 100th loom is commissioned. The 2nd factory “Im Poppen” receives an additional 500 m² store.

2002

The fourth phase of the PACO weaving mill at the Herolz plant is completed. This new production facility employs the latest concepts in manufacturing logistics. Enhanced certification of the PACO quality assurance system according to EN ISO 9001:2000.

2003

PACO – Paul GmbH & Co. – celebrates its 50th anniversary. It puts on a big celebration for its staff, customers and business partners as well as the dignitaries of the town of Steinau. Senior manager Wilhelm Ruppel holds a moving speech that finishes with an appeal to the younger generation to embrace their future and the future of PACO with ambition and joyful expectation.

2004

PACO steps up its presence at trade fairs and, for the first time, exhibits at fairs in India and Indonesia. In each case, a lot of interest is shown in its screening and filtering technology.

As supplier for the Ariane 5, PACO undergoes a strenuous quality management assessment and receives certification according to EN 9100 (E) ff / AS 9100 ff for the aerospace industry.

2006

A new production line for pleated filters is commissioned. An innovative pleating machine enables especially long filter elements with a length of up to 1400 mm to be produced in one piece. A capability that is unique on the world market.

2007

A further phase of the extension of the Herolz site is completed. A new office building and an increase in storage capacity to 1600 m² provides space for further expansion. Eight further high performance looms are commissioned. After a number of years of planning and development, PACO’s own mechanical engineering team

ships the first of its MAG 10 screening machines. This introduces a complete new level of performance to the world of screening. The graduate engineer Garvin Ruppel takes on an assistant managerial role to mark the entry of the 3rd generation into the company.

2008

The founder and senior manager Wilhelm Ruppel dies at the age of 81.

2009

As of 1st January 2009 Klaus Ruppel is appointed as an additional executive director of Paul & Co. GmbH. The expansion and modernisation of the PACO company headquarters in Steinau is completed. Over 900 m² of office area are now available. Also included are an attractive and welcoming façade and reception area as well as conference rooms and staff rooms. At the same time, addi-

tional space was allocated to the factory at Steinau plant II which concentrates on sieve production. The sieve screening shop alone has been increased by an area of 500 m². This is complemented by a new sand blasting chamber and high pressure cleaning system for sieve frames.

2010

With effect from 1st January 2010 PACO takes over HETA Verfahrenstechnik GmbH, Lich.

How to Reach Us – Any Time and Anywhere

The fastest and easiest way of reaching us is to contact your nearest PACO representative.

A complete list of sales and service partners can be found on the PACO home page under

www.paco-online.com,
menu item “Distributors“

Additionally you can also directly contact the PACO headquarters:

E-Mail: info@paco-online.com

Internet: www.paco-online.com

Telephone: +49 (0) 66 63 – 97 8 – 0

Telefax: +49 (0) 66 63 – 91 91 16

Post:

PACO

Paul GmbH & Co.

Metallgewebe- und Filterfabriken

Postfach 12 20

36393 Steinau an der Straße

Deutschland

Mesholutions created by PACO

