

# PACO

## WORLD



Our International  
Wire&Mesh Magazine  
for Existing and  
Prospective Customers

No. 3 01/2002

## Only the Best Get Through!

Dear Reader!

2001 was a year in which Germany saw the largest number of company insolvencies in history. A sad record that many experts fear will be surpassed during the coming year. Against this background it is reassuring to hear of companies that have had their best year ever and have every reason for believing that 2002 will be even better. Such widely opposed differences in fortune prove that the process of selection which sorts the successful from the less successful is becoming increasingly severe. As someone with a long experience in separating, we know what we are talking about. Today, companies that are successfully producing precision meshes out of metal wire can more or less be counted on the fingers of one hand. And it is no coincidence that PACO has assumed a prominent position within this group. We have been systematically "sifting" ourselves so that our customers consistently get more quality, precision, reliability and value-for-money than they have ever got before. By swapping notes with our customers and users, we can constructively draw on their experience as well as getting to know and satisfy their needs and expectations. Then, one thing is sure: the process of screening for better and better solutions has not stopped. That is why we are doing everything we can to prepare our customers for the selection process within their individual markets. It is only when they keep their position among the best that we can be sure of getting through. For this reason, we would like to thank all of our partners around the world for a fruitful 2001 and are now looking forward to a mutually successful 2002!

Best regards  
Peter Ruppel  
Managing Director



## At the Heart of Screening:

# The Power of Screening is PACO



There are very few elementary technologies that have played a part in human development right from the very start – one of them is screening. Incidentally, another is weaving, the basis for screening. From the simple starting exercise of "separating the wheat from the chaff", screening has become a highly complex technology in which precision down to a thousandth of a millimeter is of extreme importance.

**It all comes down to the screen**  
As screening is a mechanical processing operation in which a collection of particles are separated according to their particle size, the screen is of fundamental importance. The structure and registration of the screen determine just how precise the selection process as a whole will be. It doesn't matter how the screen is moved, the precision of the screen cloth is the deciding factor for the success of the separating process. That is why PACO woven wire cloths are the material of choice of screening machine manufacturers around the world for the original equipment of their screens.

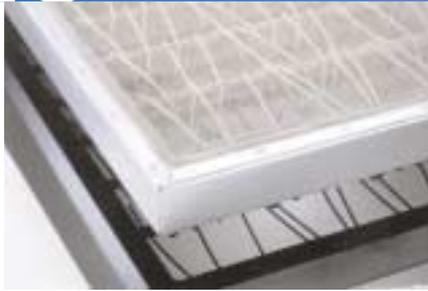
**The finest screening cloths**  
PACO's experience in metal wire weaving has led to the development of screening media that fulfills the highest expectations. Regardless of whether an increase in resolution or performance is required, critical density powders are to be successfully screened, lodging in the mesh is to be prevented or lifetimes are to be increased – PACO precision wire cloth for screening enables tailor-made solutions for a wide variety of situations.

**Compatibility for a limitless range of applications**  
PACO precision metal cloths can be exactly tailored to the individual requirements of various screening particles, procedures and processes. They have been successfully used in demanding industries and applications such as pharmaceuticals, chemicals, biotechnology, food processing, cosmetics, pigments/dyes, metal powders, fibres and plastics as well as for recycling and environmental protection. Further to this, they have proved their compatibility with a wide range of traditional and innovative technical processes – from vibratory and tumble screening machines through hydraulic processes to magnetic or ultrasonic separation.

**What's good for screen printing is good for screening**  
The product obtained through competence in screening becomes even more powerful when it is multiplied by the know-how gained in related fields. PACO is also a leading manufacturer of metal screen-printing meshes. The advantages in precision and lifetime when compared to synthetic meshes are well-known. Applications such as the printing of circuit boards and chips set high standards that can be achieved through the extremely high precision of PACO meshes. The comprehensive knowledge gained in this field is also of benefit to screening and vice-versa. When it comes to precision and keeping things absolutely fine, PACO is always a valuable partner.

**Screening precision and performance are decisive factors when choosing the best screening cloth for paint pigment production.**





The online anti-clogging PACO DSS frame is particularly suitable for fine and superfine screening.

## PACO DSS-Frame: Very Exciting!



View of Stretching Department

Screening is a traditional mechanical process that can trace its roots back to ancient times. It has proved to be indispensable right down to this day and can be considerably optimized through the intelligent use of modern technology. An example of this is the use of fine mesh PACO screens in combination with the online anti-clogging PACO DSS frame.

### Should it come to a tailback on the screen

When looking at the effectiveness of a screening process, hydroscopic, fibrous and very disperse products present a particular challenge, as they can very easily clog the screen. An obvious solution would be the use of a larger mesh cloth, but this would not bring the desired screening fineness and quality. We have here a problem on our screens that cannot be solved by conventional cleaning methods – regardless of whether we choose percussion cleaning, brush cleaning, air jet cleaning or a combination thereof. It seems that we are forced to choose between lower quality or lower productivity.

### Between screening and filtering: PACO makes the transition

PACO produces stainless steel screen cloths with a mesh size as small as 25 µm and, for laboratory use, meshes as fine as 15 µm. This means that the fineness and precision of PACO weaving has practically removed the dividing line between screening and filtering.

Within this critical area, however, the sieve meshes can very quickly clog, to the extent that the screening machine can go down – wet screening processes proving to be particularly vulnerable.

### PACO DSS – screening with the utmost precision

By making use of a "directional oscillator", PACO has provided a solution for increasing the performance of conventional screening machines: the springs located below the screen provide an intensive, consistent excitation of the screen cloth. The PACO DSS Vibration Frame System has been successfully used for a number of years, particularly for critical screening operations. Its advantages: high specific screening efficiency, fast acceleration of the

material being screened, optimum operational performance and, finally, clog-free screening.

### The strength is in the weave

The screen cloths for PACO DSS Vibration Frames have a uniform weave in all directions. This type of cloth can only be produced when the physical characteristics of the weave in both the weft and warp directions are almost identical. The result is a screen cloth that has particularly high rigidity and can optimally convey vibrations.

Added to this is the fact that the high tension of the weave in both directions allows thinner wire diameters to be used. Consequently, for the mesh size, a large open screening area can be created. At the same time, there are no gaps at the crimping points, so that material cannot collect there. All of this considerably increases the lifetime of the cloth.

### Productivity wherever you look

The PACO DSS Frame System with excitation springs is particularly suitable for fine and superfine screening. The advantages of the system include high particle separation efficiency, prevention of clogging and blinding and increased screening performance. Further to

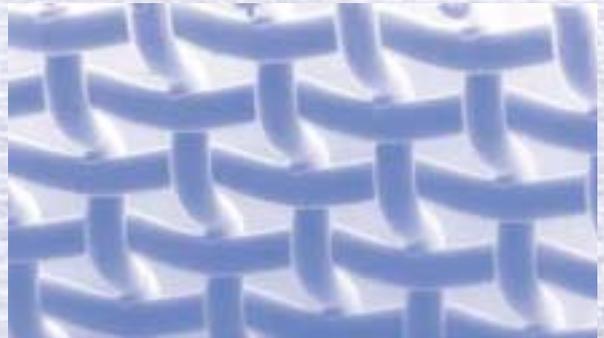
this, the partially guided movement of the PACO DSS Frame's excitation springs provide milder and more efficient cleaning of the screen. The PACO DSS Frame System has already proved itself in a wide range of fields: chemicals, pharmaceuticals, plastics, metal powders, animal feed, stone and earth, food processing, spices, sugar, salt, fertilizers, recycling, wood and chipboard, rubber, paint pigmentation, soot etc..

### Covering everything –

**PACO engineers play their part**

In addition to DSS Systems, PACO also supplies and covers a wide variety of frames for most of the popular screening systems. The basis of this universal approach is the purpose-developed high performance cloth PACO S-AM.

Regardless of the intended application, PACO engineers work closely together with the screening machine manufacturers' Research and Development teams – from as early on as possible. Samples of various materials and metal meshes are made available for laboratory testing to determine the most suitable configuration. And when the chosen development is put into production, PACO is there to ensure consistently high cloth quality and precision.



The high uniformity of weave in warp and weft direction is the basis of the optimum screening characteristics of the PACO DSS frame.

Further information  
[www.Paco-online.com](http://www.Paco-online.com)

# Our "World Selection" Plays an Important Role!



PACO draws its team from a variety of cultures, welded together by tolerance.

Although Germany currently has an unemployment figure of approximately four million – PACO has found it to be impossible to find sufficient qualified specialists on the home employment market. This has been true of engineers as well as "craft" apprentices. Without our foreign workers, it would be impossible for PACO to continue as a successful global player.

#### A strong quarter

The amount of staff at PACO with a foreign passport is currently 24 % of the workforce. Within a company that exports 80 % of its production, this is somehow to be expected. More importantly, however, is the fact that a professional working approach knows no national borders: the correct qualifications, willingness to succeed and a customer-oriented approach are of prime importance in a global marketplace. One of the most important fundamental principles of the German constitution also holds true for the "common world economy": everyone that wants to participate is equal – regardless of social status, sex, skin colour or religion. When it comes to our overall performance, we take the same attitude as the leading soccer teams: if you want to play among world-class teams, only the best are good enough.

#### Work – supply without demand?

One of the essential features of PACO's identity right from the start has been its regional loyalty. After all, the region around Steinau an der Straße can be considered as the home of metal cloth production. And the people from in and around Steinau can view metal processing as their traditional home craft and means of economic security. It is, therefore,

obvious that PACO endeavours to fulfill its responsibility towards the region and its people by supporting the regional *Arbeitsamt* (employment office) in their effort to provide employment to persons that are currently listed as being without work. Our experience has, however, shown that a number of the persons placed by the regional *Arbeitsamt* have as yet to appreciate the strategic importance of a professional working relationship. What appears to be a sad reflection on the working morale of the local workforce may in fact be a side effect of our affluent welfare state.

#### The "World Team" as a "Global Player"

The PACO workforce is made up out of people from various cultural backgrounds. In alphabetical order: Eritreans, Germans, Hungarian, Lebanese, Pakistanis, Poles, Russians of German extraction, Spaniards, Turks and Vietnamese. One thing that everybody has in common is that they earn good money for good work. The way that they spend their earnings is obviously determined by their culture. A fact demonstrated by the multicultural spread that can be seen during the breakfast break: sausage-meat sandwiches, rice, pita bread or chickpeas: good food is a matter of taste! The facts are, however, clear: PACO could no longer play the role that it has achieved in the global market if it was not for its foreign workers. Also, expansion through the recruitment of additional qualified personnel is far more difficult than expansion through the construction of additional production facilities. We are, therefore, pleased to be supported by an international team of 359 workers that can genuinely be referred to as a Global Player.

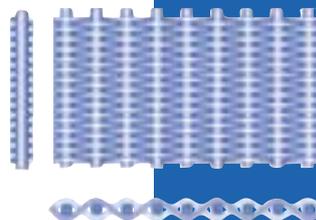
## PACO's Short Guide to Weaving

### 3. Dutch Weaves

In the previous two parts of PACO's Short Guide to Weaving we looked at two of the three basic kinds of metal cloth weave – the plain and the twill weave. This time, it's the turn of the third type – the dutch weave.

The metal cloth weavers say that the term "Dutch" refers to the use of a heavier or thicker diameter warp in conjunction with a finer fill. This creates a compact, firm wire cloth of great strength with very fine openings. In fact, no opening is apparent when the cloth is viewed from above. However, as with the twill that we looked at last time, things are not quite that simple. A flexible approach to the way that the threads can cross provides a variety of cloths that differ in appearance and structure. This variety is reflected in the range of dutch weaves that PACO offers: plain dutch weave, plain dutch weave (Duplex), twilled dutch weave, twilled dutch weave (Duplex and Triplex), reverse plain dutch weave, reverse twilled dutch weave and broad mesh twilled weave. The plain dutch weave HF, which PACO was heavily responsible for bringing onto the market, is a good example of how user-specific requirements can be translated into a profitable customer solution.

The "dutch weave" can assume many different forms. PACO is sure to master the version that you need.





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# PACOMosaic

The squaring of the filtration circle: PACO Highflow gives increased filter performance from the same filtering surface.

nozzles or when filtering low viscosity media. Compared to conventional dutch weaves, the design of PACO Highflow has significant advantages: the filter performance can be considerably increased without increasing the filtering surface. A larger mesh count and the specific geometry of the



## Highflow

Flow rate and contaminant tolerance are extremely important factors when choosing suitable filters for oil and fuel systems. This is also true when protecting control or injection

openings provide a higher contamination absorption capacity together with an increased flow rate. In addition, the cloth is inherently easier to clean.



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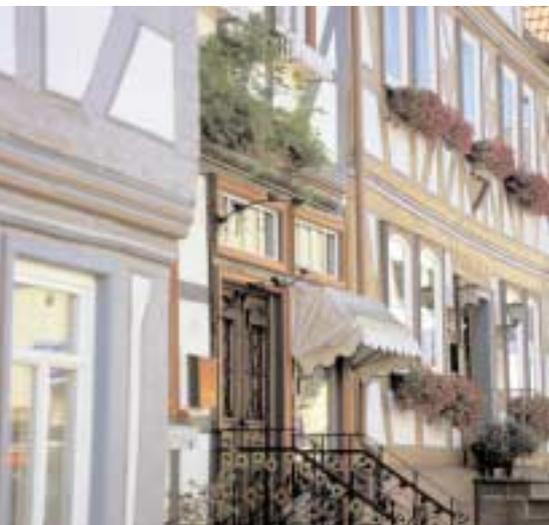
## Bits and Pieces

### 2002 and the Future: A Matter of Seconds

"Human consciousness experiences the present for a period of between two and twelve seconds. Following this, everything that we had at this moment gently slips into our memory or into oblivion: the past. Parallel to this, there is the time that we expect. That's the way that psychologists define the future: as expected time. Expectations can of course be very different: full of hope or full of concern, cheerful or gloomy, sure or uncertain. Each expected moment of time flows, completely new, piece for piece into our consciousness: That is how the future becomes the past. Everyone that is aware of this knows their exact responsibility for the future. With each duty that we don't try to get out of, with each decision that we don't put off – despite our fears or indolence, with each conflict that we resolve instead of avoiding, we do ourselves as well as those with whom we live, work and choose to spend our time a big favour. We may not be able to plan our future, but we can free ourselves for it, by solving our problems in the present. And as we have already said, that is short enough: it is a matter of seconds. The future does not begin by heralding in a new year. It begins with each new moment – in other words, right now!"

We wish all our current and future business associates, partners and staff a healthy, successful and forward-looking new year, 2002!

Peter Ruppel  
Wilhelm Ruppel



### Steinau a.d. Straße: The Half-Timbered "Living Room"

The fact that our customers like to keep visiting us is in part due to the specific charm of our hometown Steinau a.d. Straße. One thing that particularly meets with the visitors' approval is the attractive half-timbered architecture.

The art of producing a living monument that can last for centuries out of a frame of wood filled with wattle and daub can be clearly demonstrated in the old centre of Steinau. It is not without reason that the more than 1300 year old town is on the official German Fairy Tale and Half-Timbered Route. Lined up like beads on a necklace are the half-timbered houses in the Brüder-Grimm-Straße – one finer than the other. Idyllic: to see them and take in their unique atmosphere will make your visit well worthwhile.



#### Imprint

**Published by**  
PACO PAUL GmbH & CO.  
Metallgewebe und Filterfabrik  
Industriegebiet West  
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**Printed by:** Brönners Druckerei,  
Frankfurt am Main

Photos:  
City of Steinau  
PACO GmbH