10 things you should know about printing blankets
...man who gets everything right when it comes to printing blankets. As long ago as 1982, my father-in-law Ludwig J. Marchner wrote in the preface to his book „The BIRKAN System“:

„The uncertainty that prevails about the correct use in a press of printing blankets together with the required underpackings regularly leads to unexpected results – frequently accompanied by (...) trouble with the customer and at the very least unnecessarily high wear or consumption of ink, plates, stock, time and blankets.“

This uncertainty has evidently not diminished over the last few – increasingly technology orientated – years and decades. Day after day, customers confront us with questions, concerns and requests. The demand for comprehensive advice remains unbroken despite, or possibly because of, the ever expanding choice of consumables.

Against this background, we have decided to compile a few easy-to-follow tips that will help you select the optimal blanket and use it in the correct way. The modern printing world is so complex that well-founded support is invariably welcome. Although we would have had no trouble in formulating tips on a hundred different topics, we have deliberately restricted ourselves to the „10 things“ we consider most essential. If you’d like to learn more about the other 90, please do not hesitate to contact us in person.

Mathias Klein
Managing Director BIRKAN Drucktuchtechnik GmbH
**Tips for buying blankets**

**1. Stocks**

The majority of quality printing blankets are suitable for a wide variety of paper types and thicknesses. Regardless of this, many of the risks and unknowns associated with certain stocks can be compensated by choosing special blanket characteristics.

If you want to print on thicker paper or carton, for example, you should pay particular attention to its smash resistance and make sure there are no format edges on the blanket.

Uneven substrates, on the other hand, call for a softer blanket or a soft packing.

**2. Ink type**

The importance of the ink type tends to be underestimated. A very broad range of printing blankets are available for conventional inks. However, you should resist the temptation to employ these blankets for UV inks, because they will be useless after only a short time.

A special UV printing blanket is vital for UV inks. Such blankets usually have an EPDM surface that is resistant to swelling and heat.

If your presswork involves frequent changes of ink type, you should select a blanket with a swell-resistant surface compound that is intended for mixed operation.

Incidentally, a similar distinction (suitability for UV or aqueous varnish transfer) is also made with varnishing blankets.
3 Specific requirements

Discuss all specific requirements, such as non-standard job types that are particularly complicated to print, with your supplier. Some blankets are capable of rendering very clean dots and very fine halftones while others are better suited for solid printing.

At higher press speeds, on the other hand, it is important to release the sheet and web as quickly as possible – and once again, special blankets are available.

4 Quality can save you money

Prior to making a purchase, take the time to find out about a printing blanket's special characteristics and whether it conforms to the conditions and constraints applicable at your company.

Don't buy the cheapest blanket, buy the best. A blanket that fails to match your specification adequately will cost considerably more in the long term due to deficiencies in the printing process or the shorter service life, even if the initial investment appears to be smaller.

You can find a simple cost calculator that also takes account of the savings generated by reduced make-ready times at the following address:

www.birkan.de/costcalculator.html
Tips for using blankets

5 Storage

Printing blankets have a very sensitive surface – please protect new blankets against light (especially direct sunlight), excessive heat and physical damage. Be careful not to scratch the surface with the bars when you unpack them.

Ideally, individual blankets should always be stored lying down flat or hanging. Your blankets will normally be shipped to you wrapped on a roll. If you wish, you can also use this original packaging for storage – though only upright and never lying down.

Even if there is no official „use by“ date for rubber blankets, it’s a good idea to start mounting them on the press at the latest after six months in storage if you want to avoid any deterioration in quality. As with any rubber material, the surface characteristics inevitably change after a while.

6 Care

Automatic blanket washers save time and materials. Nevertheless, you should remember to check the condition of your printing blankets regularly. You can’t normally wash a rubber blanket too often, but you can wash it the wrong way – for example, if you use too much wash, the cleaning agent is too aggressive or you damage the surface while wiping it.

Cleaning agents are yet another area where it is important to differentiate between conventional and UV inks. Please also refer to the lists of approved agents published by the press manufacturer or FOGRA.

A wise precaution:

Edge sealing at the sides prevents cleaning agents from entering the fabric.
7 Are you using the right packing?

Too high a pressure between the blanket cylinder and the plate cylinder is a common phenomenon, even among PSO-certified printing companies. For this reason, it is better not to rely on historical measurements and settings when putting the press into operation. Instead, you should check the composition and thickness of your cylinder packings at defined intervals (refer also to p. 8). Not only does this help reduce your plate consumption, it could also improve the quality of your end results.

Don't hesitate to ask your blanket supplier for advice if you're in any doubt about which underpacking sheets and foils to buy; harder or softer underpackings can often be the key to visibly higher quality.

8 Torque

Always use a torque wrench to tension your blankets. The torque is specified by the press manufacturer and should be communicated to all relevant persons. If the tension values are too high or too low, they can have a negative impact on printing quality and blanket durability.

9 Record keeping

Regular records of end results and blanket life can be a valuable source of information. Without them, you have no way to compare if you want to try out an alternative quality.

Of course, this is only true if you always use the same blanket quality on one press.
Your supplier – an invaluable partner

Printing problems are one of the daily challenges in any printer’s life. When you’re searching hard for the cause, you shouldn’t be afraid to consult the companies that supply your consumables. A trusted partner will normally be willing to share its technical expertise with you at no extra cost.

If you do decide to get in touch with your blanket supplier, please be careful to describe the problem as accurately as possible. Keep a sample of the press sheet and the rubber blanket for reference purposes. Check the packings and the pressure if necessary (refer also to tip 7).

Many new problems that occur without warning are attributable to incompatibilities with other consumables such as paper, ink or wash. Tell your blanket supplier if you think this could be the case – swell tests and microscopic examinations may well provide useful clues for getting to grips with the fault. At the very least, the supplier can probably give you tips that will point you in the right direction, even if the trouble has actually nothing to do with the blanket.
Even if you followed the requirement profile exactly when producing your cylinder packings, there's one other thing you should never forget – the tolerances.

No manufacturer of plates, rubber blankets or underpacking foils will ever guarantee the nominal thickness of their products without specifying a thickness tolerance (as defined by the ISO standard). These deviations can occasionally amount to as much as several hundredths of a millimetre. The normal reduction in thickness due to tensioning and sinking must then be added on for rubber blankets. All these tolerances combined can quickly reach a value that exceeds every standard published.

We therefore recommend that you measure your cylinder packings regularly – and why not your stocks as well while you're at it? – and check the thickness and tension values for all printing units. This is certainly an excellent way to avoid problems in the pressroom and extend the life of your material.

**Only essential instruments and accessories**

You can find everything you really need in our catalogue: the analogue, easy-to-use *BIRKAN* thickness gauge, for example, or an electronic packing gauge for on-press measurements in seconds. A torque wrench should also be part of any printer's standard equipment.
Alternative: Leave measuring the packing height to the experts*

If you charge BIRKAN with measuring the packing height, you get:

- Electronic measurement of the plate and cylinder packings in all printing units;
- Pressure check based on the measurement results;
- Advice on how to tension your rubber blankets correctly and measure the packing height regularly.

To arrange a personal appointment, please call +49 / 81 43 / 92 04-0.

* Service only available to BIRKAN customers in Germany, Austria, Switzerland, and the Benelux countries.
Almost a century ago...
... a letterpress printer from Munich set out to revolutionise the world of printing – in 1914, Alois Kandlbinder (cover photo) developed his first rubber blanket with woven mounting straps, registered it as a utility model and sent it off to numerous printers throughout Germany. And because his blanket printed better and lasted longer than anything else available in the market at the time, demand grew so rapidly that in 1924 he decided to set up his own company.

As Germany’s oldest specialist dealer...
... for printing blankets, BIRKAN Drucktuchtechnik can draw on a unique treasure chest of experience; after all, printing blankets are still the business mainstay of Kandlbinder’s heirs to this day. The company building in Eching, nestled on the shores of Lake Ammer in Upper Bavaria, is home to one of Europe’s most modern production facilities.

Top printing quality and blankets made to last...
... are still at the top of any printing company’s list of priorities. These two features are the sum of many different components, on which our blanket engineers will be pleased to advise you free of charge. A clear perspective on all the components involved is an essential precondition for the fulfilment of the third most popular wish – economy.

More than 40 different qualities...
... are available for selecting the optimal printing blanket to meet your individual requirements. We cooperate with several premier manufacturers and are the exclusive distributor for many offset printing blankets. Place your trust in our deep know-how and expert service.
„I haven’t come across such all-round flexibility in a long time! Thank you very much (...)!“ *

This and other, similar praise from customers is something we receive relatively often. As well as being clearly focused on the needs of practice, we’re also good at lateral thinking and frequently come up with a novel product solution while others have simply been marking time.

Thanks to major investments in new equipment and technologies over the last few years, BIRKAN Drucktuchtechnik has now reached an unprecedented level of production speed and efficiency. We manufacture any format ranging from CD size to barred blankets more than two metres wide.

The high quality awareness of our staff and an electronically controlled workflow allow us to realise even the most unusual requests, as confirmed by countless satisfied customers.

The BIRKAN film provides an insight into our blanket conversion services (on www.birkan.de).

* E-mail received from an employee at a press manufacturer.
Blankets made in Bavaria

BIRKAN Drucktuchtechnik GmbH
Painhofener Strasse 11
82279 Eching am Ammersee
Deutschland / Germany
Tel. +49 [0] 81 43 / 92 04-0
Fax +49 [0] 81 43 / 92 04-24
✉ info@birkan.de ● www.birkan.de

© BIRKAN 2011.
Printed with BIRKAN blankets.