The scoring device on your folding machine will never stop your work from cracking, here are four reasons why

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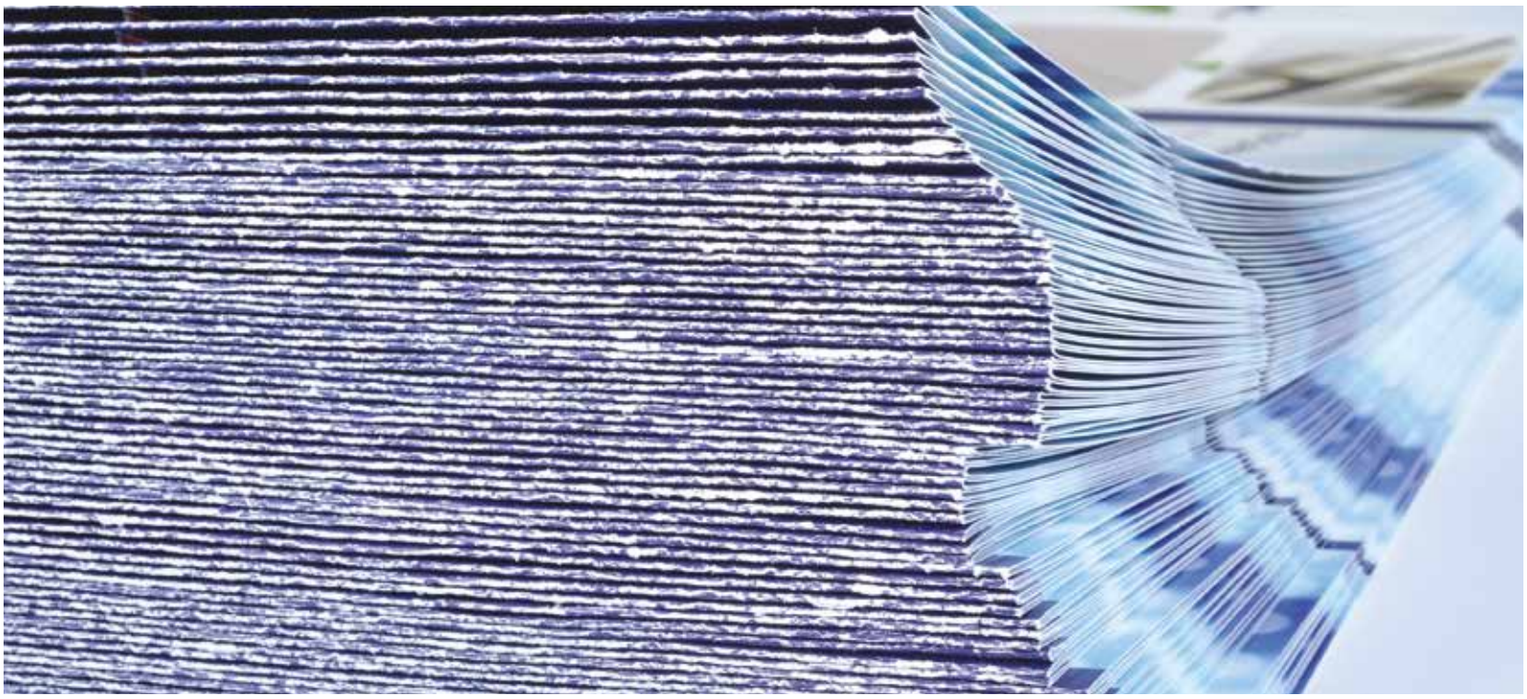
Discover the four key reasons why your folding machine's scoring device is failing to eliminate fibre cracking...

.....and how we overcame the problem to offer you a proven solution.



A typical steel scoring device supplied with all common types of folding machine

Have you experienced the same kind of problems?

It's late on Friday afternoon and the Bindery manager is beginning to panic as his top folding machine operator fails to get a decent score on a four page brochure after more than two hours of trying. Why hadn't anyone mentioned to him that the brochure was printed with a solid black ink and that the grain was running against the fold? All he's getting is cracking, no matter how hard he tries to stop it.

The account manager should have allowed for the brochure to be pre-creased using an offline letterpress cylinder, but time was against him and he took a risk of trying to get away with it and lost, he picks up his phone to ask if his client will accept the cracking.

The type of damage a typical steel scoring device can do to the spines of cover stock material

Are you fed up with the same old scoring devices and techniques that constantly fail you time and time again?

Outsourcing your creasing may not always be an option and sometimes the work that is not quoted to be pre-creased cracks anyway, this is just the way it happens as your scoring device just isn't designed to stop it.

Through our quest in coming up with the perfect creasing solution for folding machines we researched and found out why all methods of scoring simply do not work.

Here are the **four key reasons** why the scoring device supplied with your folding machine fails to eliminate fibre cracking.

And how we got around the problem to bring you the solution.

1 It is made using a steel scoring blade and is too destructive when used for creasing single sheets

The steel score used in the devices you may be familiar with were only designed to apply a slight indentation in pre-folded sheets so that right angle folds can be made more accurately, but that hasn't stopped literally thousands of folding machine operators from trying to also use it to stop single sheets from cracking. Unfortunately, no matter how much time operators spend trying to create a deep enough crease to aid the perfect fold it usually ends up with either the substrate fibres being crushed, split or damaged. The truth of the matter is that UV varnish or gloss finished materials are extremely prone to these issues and dry and brittle toner based digital stocks stand no chance and are often cut in half by such harsh metallic applications.

Creasing is up to three times deeper

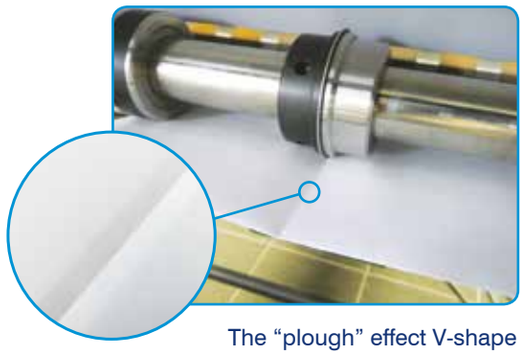
The Tech-ni-Fold Solution

Our creasing device was developed to replace destructive scoring blades with a softer patented creasing solution, made in circular moulds, that once fitted into the male locking collar penetrates the material up to three times deeper, without splitting or damaging the stock. The forgiving and gentle application manipulates and stretches even the most difficult print and stock combinations known to us, including oven baked web offset, UV coated and toner based digital applications. Our "rubber technology" gets to work directly on top of the area that is prone to cracking.

2 It produces a V-shaped impression

Quite simply, typical all-steel scoring devices apply completely the wrong shape to suit the type of substrates that are prone to cracking.

The V-shape created by such configurations is obviously ideal for preparing text weight substrates for cross folding, because the score impression is sharp and concise. However, you will see how the V-shape exposes critical flaws on cover stock materials. If you were to look into a magnifying glass at the score, just after it was applied, you would already see fibres breaking away along a thin line in the centre of the impression. This is often referred to as a "ploughing motion," in other words the blade is creating a sharp ridge, damaging everything in its path, and effecting the quality of the substrate either side.



The "plough" effect V-shape score created by steel scoring devices

The Tech-ni-Fold Solution

We developed our creasing device to apply a U-shape to spread the pressure of the crease evenly along the whole area that is to be folded. The heavier or thicker the stock being creased, the wider and deeper the crease needs to be, it's as simple as that. A V-shape impression doesn't spread the crease evenly; it exerts stress into the centre, significantly increasing the risk of cracking. The much greater depth of crease we apply using our special rubber, as opposed to steel, simply forces the material to form the U-shape of the set female channel opposite.

Our creasing solution creates the perfect U-shape

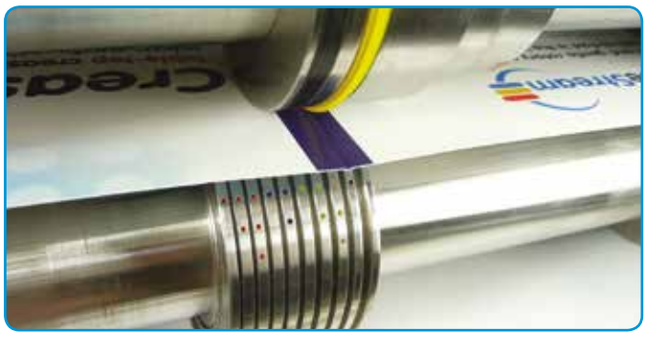
The results from the reverse, showing a perfectly formed bead

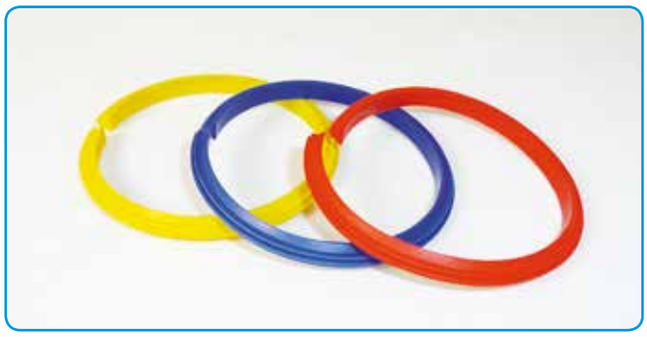
3 It produces only one score setting

If you think about it, successful creasing relies on a combination of various crease width and depth settings to accommodate a multitude of stock ranges. For example, a narrow crease option used for creasing and folding paper will fall a long way short when applied to 350gsm cover stock, so why do we expect a single scoring device to cope with everything? Scoring devices rely on the skill of the operator to create an acceptable score width by opening up or closing two collars directly underneath the blade. It's more like a balancing act to achieve a reasonable width and depth of score without cutting the sheet in half or creating such a weak and ineffective impression.

The Tech-ni-Fold Solution

We developed up to 8 pre-set crease options that easily help stop the cracking on the full range of materials that run through your folding machine, from 85-350gsm. Our method works regardless of grain direction, solid ink coverage or whether the substrate has been UV varnished or laminated. Our system has all the crease width settings machined into the female component so the user doesn't have to spend endless hours experimenting; all the thinking has been done so that the guess work is eliminated. The operator only has to apply the relevant colour creasing rib into the male collar and run it into the matching dot-coded channel below. The image below demonstrates how a 350gsm stock can be creased using our yellow (heavy) creasing rib as it runs into one of the widest channels below – this automatically creates exactly the right crease width and depth to guarantee that the product won't crack once it is folded.





Changing from one crease setting to another takes only seconds to carry out

4 It applies the score to the inside of the subsequent fold

All scoring devices were designed to apply the score to the inside of the product that is to be folded, and this is ideal for the job it was intended carry out. However, when this method is used when processing single sheet cover stock, the depth and shape of the score isn't sufficient enough to prevent the fibres on the outside of the fold from bursting open as the pressure of the metal forces an adverse reaction.

The Tech-ni-Fold Solution

We replaced the method of scoring on the inside of the product by adopting the effective reverse crease application used by letterpress machines. Letterpress or flatbed creasing works by applying the crease directly on top of the area that is prone to cracking (the outside). This means that we could apply our rubber application to the area that makes up the spine of the fold to gently push the fibres back inside the product. We know that cracking to the outside is eliminated this way but also see that a perfect bead has formed on the inside and is highlighted once the folded product is re-opened. This demonstrates the depth of crease penetration from the outside through to the inside of the product and conclusively proves that the perfect letterpress method can be replicated on a folding machine.

The pressure of steel causes damage to the outside of the fold

The reverse crease method gets to work on the outside of the fold, pushing the fibres inward

So why hasn't anyone come up with a suitable scoring device that stops cracking?

Opportunists and machine manufacturers alike have all come up with some strange solutions in a bid to improve scoring on a folding machine but none have succeeded in eliminating the problem of cracking. They all fail to realise any of the four key reasons (listed above). Some have tried scoring into rubber in order to cushion the harsh steel blade and reduce stress to the material but this only gives minimal improvement to paper stock and nothing more.

At best there are those talented and skilled technicians that produce a stop gap method that gets them out of a mess sometimes, but is this good enough? Are you prepared to take the gamble?

The simple fact is that they have all got it wrong; a scoring device will never completely eradicate the problem of fibre cracking on a folding machine.

Imagine how much time and money you would save with a perfect creasing device – as well as the added bonus of keeping control of your own work

Imagine being able to confidently crease and fold book covers, greetings cards, mailers or any leaflet, even if its printed in dark blue or black, regardless of grain direction. What if the device required no effort to set and that even your least experienced operator could use it?

Ease of use and flexibility are great but what about the other benefits your company will gain such as saving on transport costs, saving on expensive Cylinder time and saving on downtime in production. We all know it can sometimes be stressful handing over your valuable print to another operation and then worrying if it will come back creased the right way and exactly in the right place. What price would you put on avoiding all these unnecessary hassles and be able to keep control of your own work?

The Solution: A simple and very effective device that conclusively dismisses the scoring theory

After researching why existing methods of scoring fail we studied the mechanics of the tried and tested flatbed Cylinder crease. We noticed a remarkable distinction between common scoring as opposed to conventional creasing. And with this in mind we set to work on producing a simple device that would produce an array of quality Cylinder style creases as opposed to linear scoring. In fact the only similarity we wanted to inherit from a common scoring device was that our solution would also fit onto the shafts of a folding machine.

The device had to be much easier to use than the drawn out process adopted in letterpress creasing where the operator sticks matrix strips to a drum. We wanted to incorporate all the settings in one device so that instant results were achievable without the users having to make any kind of fine adjustments themselves.

In January 1999 we succeeded in meeting our requirements and produced the world's first and only rotary creasing solution that totally eliminates fibre cracking. We named it the **Tri-Creaser**.

The **Tri-Creaser** range of products guarantees all of the following:

- Completely eliminates fibre cracking 100% on stock ranges 100-350gsm
- Produces a crease that is as good or better than a flatbed Cylinder impression
- Produces any one of a choice of multiple crease settings for any imaginable print/stock combination, and works like magic on difficult toner based digital output
- Works just as well when it creases and folds against the grain
- Works as fast as your folding machine can run with no limitations on speed
- Takes only minutes to set up and seconds to change from one crease setting to another
- Pays for itself within 1-3 job runs
- Saves expensive outsourcing cost
- Saves hours and hours of time
- Gets the work to your customer faster

Already over 60,000 users are benefiting from using the **Tri-Creaser** all over the world. Here's what a few of them have said:

> Tech-ni-Fold undertook to solve one of the most troublesome problems within the finishing area of print and came up with the answer. Their **Tri-Creaser** family for the folding machines have revolutionised the final appearance of our products. Our devices have paid for themselves many times over as the operators know they need not waste time asking if the cracking along the spine will be acceptable – there is no cracking! Ron Watson, Broglia Press Ltd, Poole

> Best invention I've come across over the last decade saved me a lot of time and money. Now I do not dread covers coming in, laminated or not. P Thredfall, E Fish & Co, Liverpool

> We are finding a major benefit is the ability to avoid cracking on centre spreads with the wrong grain direction. By eliminating the entire process of letterpress creasing our turnaround times are considerably faster, increasing our competitive edge. Hank Roelink, Wyatt & Wilson, New Zealand

The image to the left represents the results our 60,000 customers are used to getting, many of them decided to buy our **Tri-Creaser** because we offered them an amazing three month money back guarantee if they were not satisfied with the results.

If you would like to receive our latest brochure together with a special introductory discount, and covered by our amazing guarantee please click below:

Yes, please send me the **Tri-Creaser Fast Fit** information pack

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