

Contact us Ina Hoch
Phone +49 69 66 03-1844
E-mail Ina.hoch@vdma.org
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Way2K 2025

"Operator support is becoming increasingly important"

Interview on the road to K 2025 with Dr. Henning Stieglitz, CEO and CTO at BC Extrusion Holding GmbH

Dr. Stieglitz, where can efficiencies still be improved in plastics extrusion?

There are four key factors for us: the use of materials, the line speed, the use of energy and the use of recyclates. The biggest driver is the use of materials. This is also the focus of our research. The aim is to keep the tolerances as low as possible so that the customer can go to the lowest limit, and at the same time achieve the highest savings in terms of materials. The ideal scenario would be to get 100 kg of pipe or window profile from 100 kg of material. As a rule, you always have to use a little more, either because the changeover time requires the use of material, the material properties do not allow it, or you reach the limits of the tools. The use of recyclate is a comparatively recent topic and depends heavily on the type of application. Large quantities have been used in the window profile sector for a long time. It is slowly gaining momentum in the pipe sector, and the use of recyclate has also been increasing in the packaging sector for years.

Is it difficult to minimise the use of materials and at the same time use recycled materials?

Yes, because the properties of recycled materials are generally not as consistent as those of virgin material. This is an issue we have been increasingly addressing in recent years: how customers can manufacture the best possible product from post-consumer material – using as little material as possible and, of course, with as little energy as possible. This is a challenge that has become increasingly important everywhere over the past few years, and one that we are increasingly focusing on in our machine concepts.

Are you already using artificial intelligence?

Battenfeld-cincinnati would like to use AI in particular to support operators and make their daily operations easier. We have realised that the qualification requirements have increased over the years, and we can specifically support the operators in their daily operations: for instance, an AI that tells the operator when an error occurs, what the cause is, and how it can be rectified – or that shows that the operational energy consumption is not optimal, and makes suggestions on how to improve it. To do this, you have to record certain error types, and store corrective measures that can then be retrieved from the system. This operator support is becoming increasingly important. We are endeavouring to provide systems that are very easy to use and very supportive. To do this, we will need to utilise AI.

Is this a step towards the "unmanned machine"?

Absolutely. Our Fast Dimension Change (FDC) system, for example, makes it possible to adjust the dimension of a pipe during operation with the help of the control unit and its built-in components. In principle, there are memorised recipes: you press a button, and the system changes the wall thickness and pipe diameter. This works without anyone having to intervene manually. Only one person is needed to make the change on the control unit. The machine does the rest. There is something similar for simple tasks in production. I can't say whether there will ever be a fully automated line. There will certainly always have to be a supervisor, but many other tasks will be automated.

Has the circular economy taken a back seat in the face of economic problems?

When the circular economy was on everyone's lips a few years ago, people would have preferred everything to be made from 100 percent recycled materials. Back then, too little consideration was often given to the cost aspect. Things are different today. It is still the case that using post-consumer materials generally costs more than using new materials. You have to ask yourself who is going to pay the additional costs in the end. There are already very good solutions for recycling. For PET bottles, the cycle in Germany is almost closed. I would like to see a similarly solid system established for two or three other mass plastics. In some respects, however, we have overshot the mark. It is important to come to a reasonable understanding: What really makes sense, and in which instances does recycling not make sense? Coated paper has recently been heavily promoted as a packaging material in some areas. The paper used here is extremely highly processed, and the composite is almost impossible to recycle.

Could the circular economy become an export hit?

Well, it won't be everywhere, it's simply a matter of cost. If it is already difficult to pass on the higher costs of recycling to the products here, then how would that be possible in developing countries? The priorities there are different. The aim in those countries is to ensure that all people have access to food, and that food does not go to waste during transportation. For this reason, there will probably not be a complete cycle for post-consumer plastics there in the foreseeable future. However, it will be possible to tackle individual aspects of the circular economy, such as collection systems for example. Even the controlled combustion of the waste, including energy generation, would then be a

comparatively smaller burden, and at least would not be contributing towards increasing the waste problem in the oceans.

What do you expect from the upcoming K?

I am sure that K will be very well attended. Our industry has had some difficult years recently, but we must not forget that 2021 and 2022 were very good. I expect more clarity on the future tariff agreements with the US by October. After all, uncertainty about what will happen next is worse than tariffs; it slows down investment. I think that once the uncertainty has subsided, visitors will want to see new things again, innovations that people will want to invest in. In addition to digitalisation in general, I expect topics such as operator support via the control system to be a focus, plus of course the efficient use of resources.

Video statement by Dr. Henning Stieglitz:

<https://www.youtube.com/watch?v=a31GbXnEgiw&list=PLN1k-IPccLmHTYB1hQyiJIldtUDF5JrxA&index=1>

Contact for the press

VDMA | Ina Hoch | +49 69 6603 1844 | ina.hoch@vdma.org

Industry interviews on the way to the K:

It is impossible to imagine a world without plastic. And plastics are indispensable for mastering our future challenges. The plastics industry develops solutions so that a growing world population can live safely and prosperously. This important role as an enabler is expressed in the motto of K 2025: The Power of Plastics! Green - Smart - Responsible. Green, because plastics help to combat climate change and conserve resources. Smart, because digitalisation helps to increase efficiency. Responsible, because the focus is on people. To get in the mood for the industry meeting in October 2025, the VDMA is giving representatives of the plastics machinery industry and of all other stakeholders in the sector a chance to have their say in a series of interviews.

VDMA Plastics and Rubber Machinery

More than 200 companies are members of the trade association, covering over 90 per cent of industry's production in Germany. Ten per cent of our member companies come from Austria, Switzerland and France. The German member companies account for a turnover of 7 billion euros in core machine construction and 10 billion euros including peripheral technology. In terms of value, one in four plastics machines manufactured worldwide comes from Germany; the export rate is 70 per cent. Chairman of the trade association is Ulrich Reifenhäuser, Managing Partner of Reifenhäuser GmbH & Co KG.