

KraussMaffei
Berstorff

Linde

PLASTINUM[®] Foam E.

Innovative gas solutions for Schaumex[®]/
Schaumtandex foam extrusion lines.





Up and running with KraussMaffei Berstorff and Linde. Win-win combination.

You may be considering investing in a state-of-the-art foam extrusion line from KraussMaffei Berstorff? As a leading global player in the foam extrusion market, KraussMaffei Berstorff is renowned worldwide for the quality, reliability and performance of its machines and systems, and for its end-to-end, customised service offering. The company is dedicated to holistic solutions that extend along the full extrusion value chain. This entails optimising every single step in the upstream and downstream process flow as that is the most effective way to maximise the flexibility, productivity and quality gains promised by the latest in foam extrusion technology.

Blowing agent as key success factor

The blowing agent, for instance, is a key link in this process flow. The challenge lies in selecting the right blowing agent and the supply system best suited to that agent. You have probably selected carbon dioxide (CO₂). This is an excellent choice as industrial gases are both cost efficient and readily available in consistently high quality levels. In addition, industrial gases such as CO₂ or nitrogen (N₂) can help you meet your corporate sustainability goals as they have zero ozone depletion potential and lower global warming potential than conventional blowing agents.

To reap these benefits, however, it is essential that your gas supply scheme is tailored to your specific extrusion line. At Linde, we develop and fine-tune gas supply solutions based on CO₂, N₂ or any other industrial gas to deliver optimum extrusion results.

Proven partnership

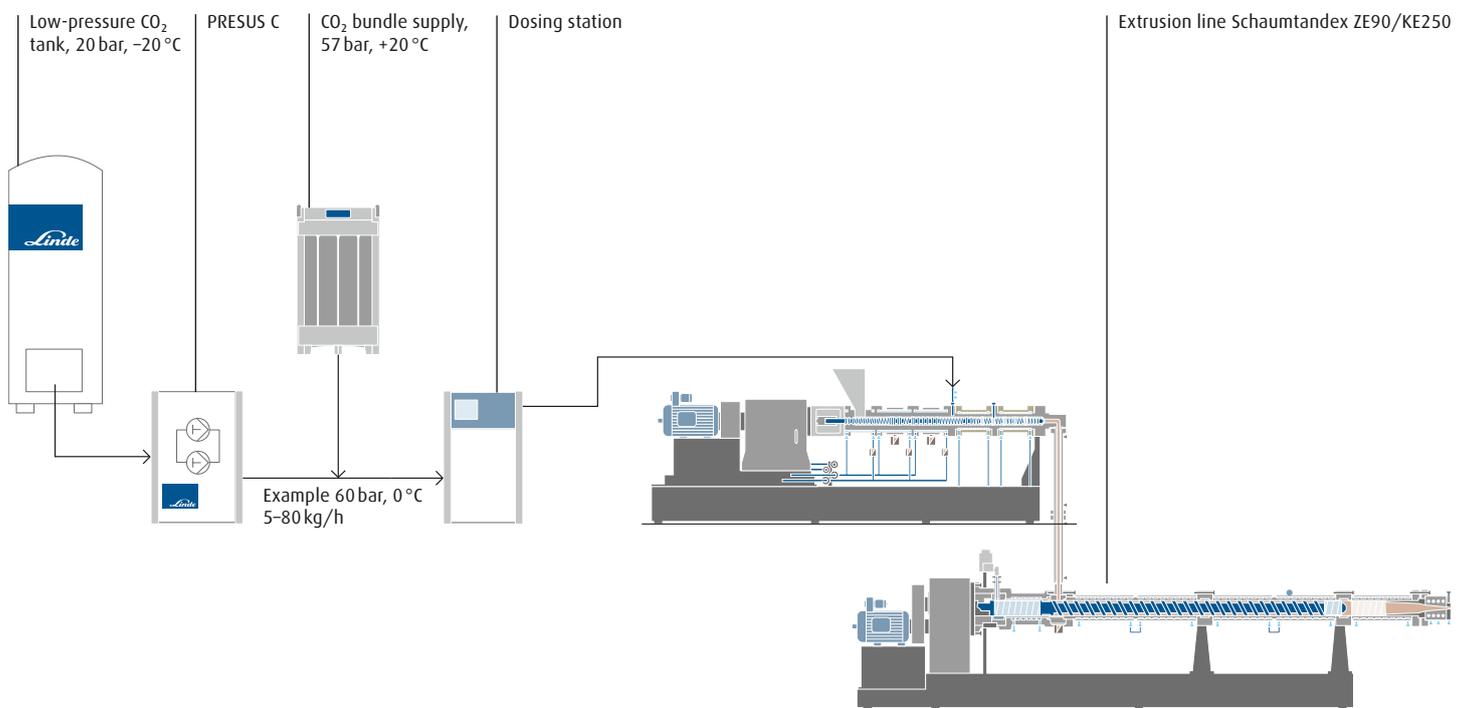
More specifically, we partner with leading extrusion experts such as KraussMaffei Berstorff to optimise the interplay between gas supply and extrusion results. Over the past twenty years, numerous successful joint customer collaborations and trials around the world confirm the benefits of this close alliance.

“For many years now, we have been working closely with Linde to the benefit of our joint customers. The proven quality, reliability and innovative strength of PLASTINUM® Foam gas supply solutions make Linde a preferred partner for KraussMaffei Berstorff, giving our customers the reassurance of an all-in-one, ready-to-run extrusion setup that is fine-tuned to their needs,” says Joachim Meyke, Manager Foam Extrusion Lines, at KraussMaffei Berstorff.

Introducing PLASTINUM[®] Foam E.

For maximum productivity in extrusion foaming.

Overview of one-stop CO₂ plastics foaming solution

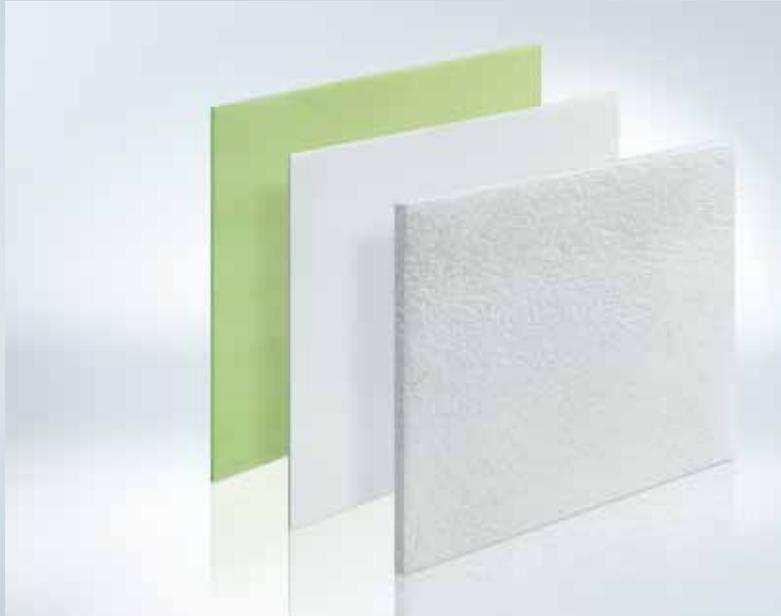
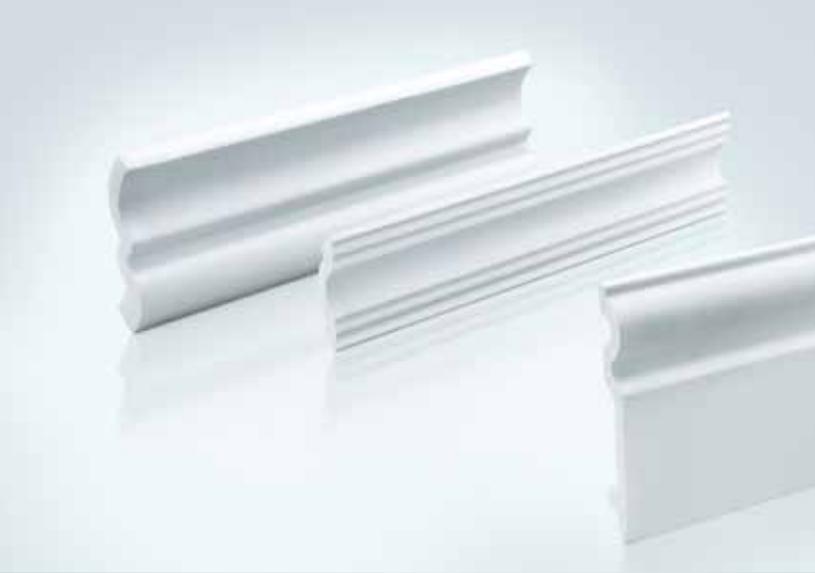


As a world-leading gas solutions provider to the plastics industry, we have developed a portfolio of technologies and solutions specifically to improve the efficiency, reliability and quality of extrusion lines. Our PLASTINUM Foam E portfolio was engineered to provide the best CO₂ supply solution for extrusion foaming systems that rely on high-pressure metering pumps – such as the Schaumex[®] and Schaumtandex lines delivered by KraussMaffei Berstorff.

The challenge with these pumps lies in supplying pure liquid carbon dioxide (LIC) without any gas bubbles at a much higher pressure than that provided by standard CO₂ bulk tanks. If the pumps are not supplied with LIC at the right pressure and temperature, strong fluctuations in mass flow can occur, resulting in machine downtime and high scrap rates.

PLASTINUM Foam E ensures reliable and precise metering performance at low installation and operating costs. It comprises a customised LIC storage solution and our extremely reliable PRESUS[®] C pressure boosting pump, which we closely align with your metering system. PLASTINUM Foam E is also future-proof as it scales to support several high-pressure metering pumps and extrusion lines.

In addition, you can rely on our extrusion-trained supply engineers – backed by a strong global team of plastics application experts – for professional consulting and complementary services such as startup assistance and safety training. They can also advise you on gas management services that leave you free to focus on your extrusion business.



Getting you kick-started.

To accelerate your time-to-solution, we deliver PLASTINUM Foam E as a ready-to-run package in combination with KraussMaffei Berstorff extrusion lines. In other words, you can rely on us to look after all your CO₂ storage and supply needs – from the very get-go.

Highlights of our ready-to-run package:

- Process consulting to ensure the best fit for your needs
- Selection of the most suitable supply mode to match your consumption pattern and required inlet pressure (CO₂ cylinders, bundles or bulk tank)
- Engineering of CO₂ pipeline, including insulation, venting valves and safety valves, to suit local conditions
- CO₂ cooler (if required)
- Risk analysis
- PRESUS C CO₂ pressure boosting pump (bulk supply)
- Installation of CO₂ bulk tank, PRESUS C and pipeline to high-pressure metering devices
- Metering devices through our DSD family (if a suitable CO₂ metering device is not already installed)
- Gas detection devices
- Commissioning
- Safety training, aftersales service, maintenance and troubleshooting
- Automated gas supply solutions such as SECCURA® (on request)

PRESUS C – The heart of our CO₂ supply solution:

- Fast commissioning due to automatic adjustment to high-pressure metering pumps
- Easy installation as recirculation and second tank are not required
- Highest supply reliability due to redundant design (two boosters with automatic switchover)
- Optimal foaming quality with bubble-free liquid CO₂

For more information on our PLASTINUM range of solutions for the plastics industry, visit linde-gas.com/plastinum or contact plastics.rubber.team@linde.com.

Getting ahead through innovation.

With its innovative concepts, Linde is playing a pioneering role in the global market. As a technology leader, it is our task to constantly raise the bar. Traditionally driven by entrepreneurship, we are working steadily on new high-quality products and innovative processes.

Linde offers more. We create added value, clearly discernible competitive advantages, and greater profitability. Each concept is tailored specifically to meet our customers' requirements – offering standardised as well as customised solutions. This applies to all industries and all companies regardless of their size.

If you want to keep pace with tomorrow's competition, you need a partner by your side for whom top quality, process optimisation, and enhanced productivity are part of daily business. However, we define partnership not merely as being there for you but being with you. After all, joint activities form the core of commercial success.

Linde – ideas become solutions.

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