

PRESS RELEASE

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MAS at K 2016:

Meet the New Generation of Extrusion and Melt Filtration Technology from MAS at K 2016

Austrian extrusion machinery manufacturer MAS Maschinen- und Anlagenbau Schulz GmbH MAS has established itself as a supplier of unconventional but proven technologies that save space and energy, and allow its customers to now do things that were previously not possible.

To mark its 10th anniversary, MAS will introduce an entirely new corporate identity in combination with a new machine design for its extruder and melt filter series at K 2016.

The conical, co-rotating, twin-screw Extruder is the bread and butter of the MAS organization. Its large feed opening and gentle plasticization process make it perfect for all extrusion applications that require a high degree of thermal and mechanical polymer protection. This is especially the case for recycling and compounding applications, as well as for film extrusion. The 110 units delivered over the last ten years show this young company's strength in innovation and sets a clear path for the future.

The waterless DRD (Double-Rotor-Disc) cleaning and drying system for shredded film or fibers and regrind material, introduced in 2006, is as innovative as it is new. More than 50 of these machines have gone into operation around the world.

The third pillar of MAS technology, the CDF continuous melt filter, was introduced in 2011. Its revolutionary design allows customers to effectively process highly contaminated materials and help increase extruder capacity.

MAS will present three machines at K 2016, Hall 9 / Stand D 42, representing its latest product developments.

Exhibit 1: MAS 24: conical, co-rotating, twin-screw lab extruder

The MAS 24 Lab Extruder has been developed specifically for plastics manufacturers and compounders to develop formulas in a scientifically oriented manner and produce them in very small volumes (Fig. 1). The highly compact build, with a screw length of just 400 mm and a diameter of 48 mm, narrowing down to 24 mm, is equipped with interchangeable mixing elements. The very large feed opening makes it possible to process regrind material, flaky material, and fine ground film or fibers. Another benefit of the MAS system is that it allows full control over shear strength, and thus the melt temperature of the material, by varying the screw speed (adjustable from 0 to 300 rpm). The maximum output of this lab machine is in the range of 10 to 35 kg/h. ***The MAS 24 Lab Extruder will be presented in operation at K 2016 in combination with an underwater pelletizing unit.***

Exhibit 2: MAS 75 – the new MAS Extruder generation

The third generation of the conical, co-rotating, twin-screw extruder is available in six different sizes with output ranges from 10 kg/h to over 2,000 kg/h. The characterizing feature of MAS' new extruder generation is its optimized machine design. The most exciting technological development is the segmented barrel construction. It permits the exchange of individual barrel sections instead of having to replace the entire cylinder, or selective application of individual cylinder sections with special wear protection. The new series is exemplified by the MAS 75, which is suitable for an output of up to 1,100 kg/h (Fig. 2).

It should be noted that MAS has held the FDA "No Objection Letter" for food grade recycling of PET since mid-2015 and meets all EFSA criteria.

Exhibit 3: CDF – continuous melt filter – the latest generation

The CDF (Continuous Disc Filter) melt filter series by MAS is one of the leading continuous filter systems for recycling applications available. The CDF system has reached its current status thanks to a design that permits previously unattainable filtration surfaces. The

smallest size CDF 300 uses a 300 mm disc with a 792 cm² filter surface area and is suitable for a melt throughput of 300 to 700 kg/h. All other sizes use a 510 mm filter disc. The CDF 500, with one disc, offers a filtration area of 1,640 cm² (700 to 1,600 kg/h). The next step up, the CDF-500-D (two parallel discs), offers twice the filter surface area at 3,280 cm² and allows a throughput of 1,300 to 2,000 kg/h. The largest filter unit, with the designation CDF-500-D-P, consists of two parallel CDF-500-D units with a total of 4 filter discs and a filter surface area of 6,560 cm². ***At a possible melt throughput of up to 4,000 kg per hour, it is currently one of the highest-performing units of its size on the market.***

The basic concept of the filter is a rotating screen combined with a continuous scraper system, which lifts the contamination from the screen surface and discharges it through an auger. The reusable filtration disc is made of surface-hardened steel and is available in filtration sizes ranging from 90 to 750 µm.

In the latest innovation stage, the filter system is now equipped with a new pneumatic scraper. This feature allows a higher degree of adjustability for the stable performance of the system.

Further features of the latest filter generation include optimized melt channels as well as changes to the heating system to heating plates and bands, improving the heating coefficient. (Fig. 2).



MAS at K 2016: Hall 9 / Stand D 42

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About MAS Maschinen- und Anlagenbau Schulz GmbH



MAS was founded in 2006 by Ing. Helmuth Schulz, who has more than 40 years of experience in the building of machines for the plastics industry and owns numerous patents in this field.

Core differences that set MAS apart:

- > Producer of the only conical, co-rotating, twin screw extruder in the world.
- > Systems for dry treatment of waste plastics using the DRD system (Double Rotor Disc).
- > CDF (Continuous Disc Filter) systems for continuous melt filtration.

20 patents show the innovation capacity of the company, which achieves a turnover of about 14 million EUR (2014/15) with about 40 employees.

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Figures:



Photo: MAS-Maschinen-und Anlagenbau Schulz GmbH

Fig. 1: The lab version of the conical, co-rotating, twin-screw extruder type MAS 24 is characterized by a plasticizing unit that is just 400 mm long.



Figure: MAS - Maschinen- und Anlagenbau Schulz GmbH

Fig. 2: At its 10th anniversary, MAS presents itself with a new corporate identity and a new machine design for the extruder and melt filter series.