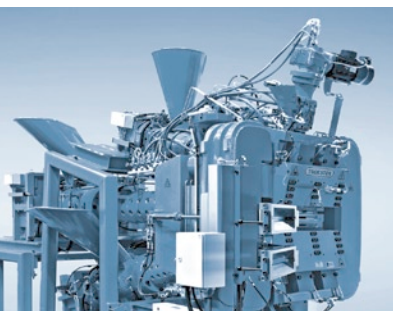
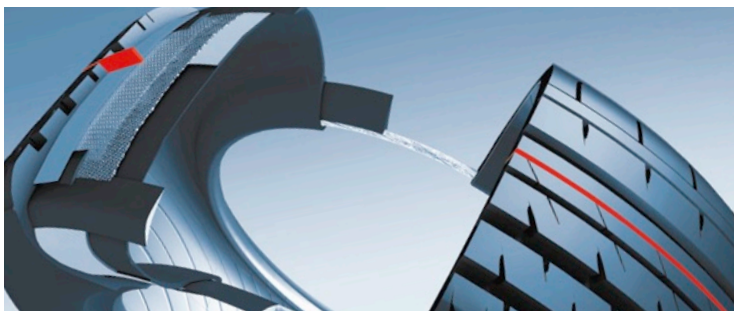
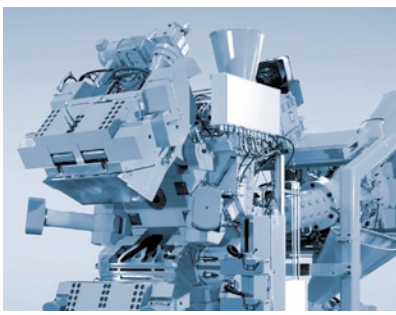
»Xplus1«-Technology for the Flexibility in Tire Design



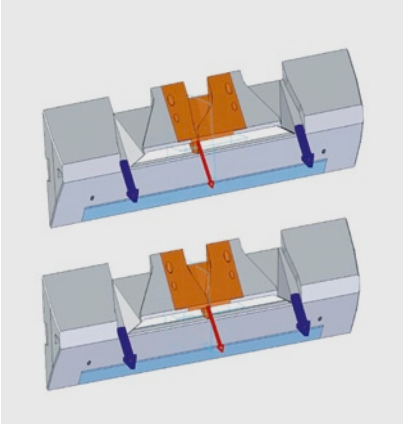




TROESTER

EXCELLENCE IN EXTRUSION.

Multiple Extrusion Aggregates TROESTER CoEx 5plus1



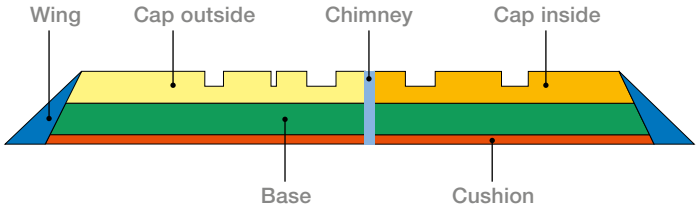
Chimney positioning examples

The current highlight in a new series of developments of multiple extrusion aggregates is the TROESTER CoEx 5plus1, which can process six (6) tire components in one operation. The basis for this is provided by the »Xplus1«-technology, a newly-designed upper part of a piggy-back head with an additional extruder – therefore »plus« – which e.g. when used with silica-compounds, adds a carbon black compound into the tread to ensure the discharge of static energy from the tire. The »Xplus1«-technology is a flexible and economical solution for multiple extrusion in the manufacture of Ultra-high Performance (UHP) – or Maximum Performance tires. This is also the optimal addition for the new generation of multiple extrusion aggregates for up to 6 different compounds.

The proper extruder solution for every task

The introduction of tire labeling and the relevant necessary tire features required new rubber compounds in manufacturing. Their low electrical conductivity required alternatives in order to discharge static energy to the road.

Flexibility in tire design with 6 compounds



TROESTER has analyzed these present and many future requirements in tire manufacturing and has found a technical engineering answer which supports the manufacturing of Ultra-high Performance (UHP) or Maximum Performance tires in a flexible and economical way. The present highlight in this series of developments is the multiple extrusion aggregate TROESTER CoEx 5plus1, which is able to economically process up to six different components in only one step.

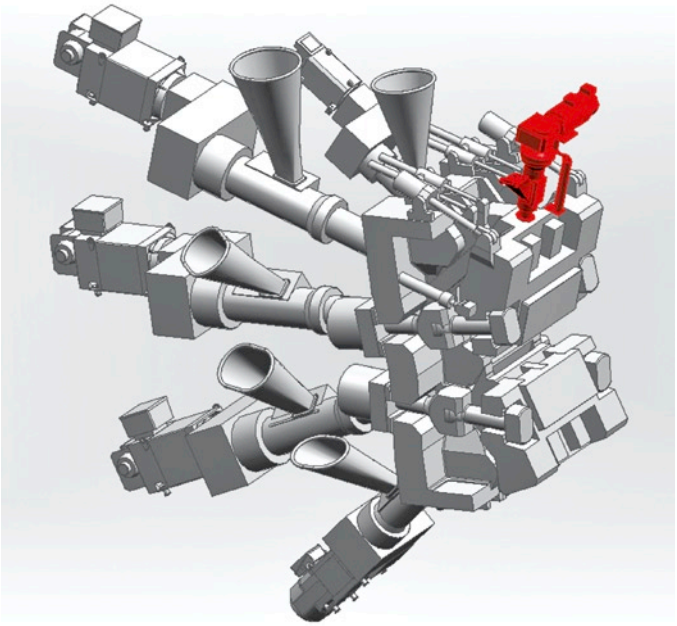
Master challenges with innovations

With the use of silica compounds, the problem of reduced conductivity is solved by an extruder that is directly placed onto a movable upper part. The additional extruder adds a narrow component with a good conductive carbon black compound to the tread. This so called ”chimney“ reaches from the upside of the tread to the bottom side and reliably discharges static energy from the tire.

In the development of the new heads, TROESTER engineers focused on the continued use of existing tooling without the need to adapt them, or to change their design. In order for manufacturers of high quality tires to use the »Xplus1«-technology, as far as tooling is concerned, only adaptation of overlapping pieces is necessary. Besides, »Xplus1« provides for a simple positioning of the chimney.

TROESTER CoEx Xplus1 in practical use

In practical experience with the »Xplus1«-technology TROESTER received good grades for the distribution of the additional compound in the tread and the handling of the tooling during their daily use in production. With its »Xplus1« technology, TROESTER offers the manufacturers of Ultra-high Performance (UHP) or Maximum Performance tires an ideal solution for an efficient multiple extrusion for tire components.



Concept study TROESTER CoEx 5plus1

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