Combination of Extruder and Gear Pump
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The gear pump has been used in rubber processing for over 100 years. TROESTER has further developed the extruder-gear pump combination and is offering it for new application areas. It has been a part of our rubber processing product line since the early 1990’s. The TROESTER extruder-gear pump combination offers important advantages over the single-screw extruder. In combination with a normal (GS), pin (GSM) or vacuum extruder, the gear pump enhances the TROESTER extruder and allows it to work at the highest levels of accuracy and quality.

Its processing advantages stem from the way the extruder-gear pump combination works. The compound is plastified in the extruder and fed into the gear pump under low intake pressure. The gear pump’s intake pressure regulates the speed of the extruder so that the gear pump is always completely filled. The gear pump builds up the compound pressure in order to overcome the resistance from the die. A screen can be located in front of the gear pump if needed to filter out foreign objects (contaminants) and can thus replace any strainer needed in production before the extruder head.

The combination of extruder and gear pump is thus advantageous in the case of particularly difficult process requirements. These can include maintaining the lowest output variations and product dimension tolerances, and avoiding flooding the vacuum zone as well as avoiding poor output-temperature relationships at high die pressures (see diagram). In such cases it is advisable to combine the extruder with a gear pump working at stable pressures. The investment costs for the pump may be partially offset as the extruder required in this combination may be of smaller size. Another application advantage is the speed-proportional feeding characteristic curve.
Compact Extruder-Gear Pump Unit
Type GSC Vak 90 with ZP 75/50

Advantages of the Extruder-Gear Pump Combination at a glance

- ideal, speed-proportional characteristic curve
- produces extrusion within specified tolerances fastest
- highest dimensional accuracy of the product
- energy savings at high die pressures
- avoids excessively high compound temperatures
- considerable output increases at high pressures
- avoids vacuum extruder flooding
- universal use in all extruder lines
- fast amortization due to low peripheral machine costs and material savings
Innovations for the Rubber Industry

Machines and complete lines built by TROESTER are known all over the world and are synonymous with technological advancement, quality and outstanding performance in the fields of rubber and cable processing.