Apart from complete extrusion dies and die heads ETA offers additional devices, e.g. colour striping adapters for pipe dies. Special attention is paid to installations to reduce product, material and colour change times.

**Melt Shifter**

The so-called melt-shifter is used for equalising melt temperature and creating more uniform residence time distribution in melt flow channels. Unlike static mixers the melt-shifter has a distinct transport function and improves material and colour change.

**Skimming Module**

The skimming module separates and takes away (contaminated or degraded) skin layers and thus improves optical properties of the extrudate. Material and colour change times (purging) are essentially shortened.

**Quick Die Change Systems**

Quick change systems are used for faster die and dimension change. Sliding dies allow production of several dimensions without exchange of die inserts.
Besides new dies ETA offers repair and modernisation of existing die heads.

**Rheological Optimization**

As an example, the spiral mandrel manifold in a blown film die can be exchanged by a modern design, using the same room. Product quality is considerably improved as a result from the rheological optimization (e. g. increased number of spirals).

![Image of mandrel manifolds](image)

**Change of Technology**

Heart-shaped manifolds in accumulator heads for industrial or packaging blow molding can be replaced by spiral mandrel manifolds using the same periphery. All advantages of melt distribution result in better products.

![Image of manifolds](image)

**Cooling of Dies**

For quicker cooling down of the dies to avoid degradation, the dies can be cooled intensively by means of heater/cooler units with cooling fans instead of normal heaters.

![Image of die cooling](image)