

**84.44 - Machines for extruding, drawing, texturing or cutting man-made textile materials.**

This heading covers machines for the manufacture of man-made textile fibres, including machines for cutting the fibres.

These include :

- (1) **Machines for extruding man-made textiles** in the form of monofilaments or of several filaments. These machines are, in practice, made up of a long series of separate identical spinning units placed side by side. Each unit consists essentially of a metering pump and a filter which feed the spinnerets or spinning nozzles. Depending on the process employed, the one or more filaments leaving the nozzles pass either through a bath containing a chemical coagulating agent (e.g., viscose process), or through an airtight chamber fitted with a water spray (e.g., cuprammonium process) or a hot air current (e.g., cellulose acetate process), or through a cooling chamber. The nozzles may be single or contain a great number of holes (sometimes many thousands) according to whether it is desired to obtain a monofil, or a multi-filament yarn, or tow for cutting into staple fibre. In some machines the fibres emerging from the nozzle are brought together and assembled by a slight twist given by a special device, thus forming a yarn. In others, the fibres leaving the various spinning units are combined in a thick rope (tow), sometimes of many hundreds of thousands of fibres, for subsequent cutting into staple fibre.
- (2) **Drawing machines** which stretch the filaments to three or four times their original length, a process which orientates the molecules in the direction of the filaments thus considerably increasing its strength.
- (3) **Machines for texturing synthetic textile yarn.** Most texturing processes (traditional discontinuous method, false-twisting, edge crimping, gear-crimping, hot air or steam jets, knit-deknit) modify the physical properties of the yarn to produce crimped yarn, elastic "foam" yarn, etc.
- (4) **Staple fibre cutters** for cutting tow into short lengths.
- (5) **"Tow-to-top" machines.** These also cut the tow into staple fibre lengths, but they do not disturb the parallel arrangements of the fibres in the tow. These machines therefore produce tops which are ready for spinning (requiring neither carding nor combing), and not a loose mass of staple fibres like the cutters of paragraph (4). They sometimes incorporate a spinning machine and are then called "tow-to-yarn" machines (see Explanatory Note to heading 84.45).
- (6) **Rupturing machines** for producing ruptured filament tow. The greater part (but not all) of the filaments are broken at intervals so that, although some filaments remain continuous, the yarn obtained from the tow has the characteristics of a staple fibre yarn.

**PARTS AND ACCESSORIES**

**Subject** to the general provisions regarding the classification of parts (see the General Explanatory Note to Section XVI), parts and accessories of the machines of this heading are classified in **heading 84.48**.

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## 84.44

The heading **excludes** :

- (a) Machines for preparing the raw materials intended for later extrusion into man-made textile fibres (generally heading 84.19 or 84.77).
- (b) Draw boxes and gill boxes of heading 84.45.
- (c) Machines for spinning continuous or discontinuous glass fibres or yarns (heading 84.75).