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84.51 - Machinery (other than machines of heading 84.50) for washing, cleaning, wringing, drying, ironing, pressing (including fusing presses), bleaching, dyeing, dressing, finishing, coating or impregnating textile yarns, fabrics or made up textile articles and machines for applying the paste to the base fabric or other support used in the manufacture of floor coverings such as linoleum; machines for reeling, unreeling, folding, cutting or pinking textile fabrics.

8451.10 - Dry cleaning machines

- Drying machines :

8451.21 -- Each of a dry linen capacity not exceeding 10 kg

8451.29 -- Other

8451.30 - Ironing machines and presses (including fusing presses)

8451.40 - Washing, bleaching or dyeing machines

8451.50 - Machines for reeling, unreeling, folding, cutting or pinking textile fabrics

8451.80 - Other machinery

8451.90 - Parts

This heading covers a wide variety of machines which are used :

- (I) For the washing, bleaching, wringing, cleaning, ironing, dyeing, drying or the like of textile yarns, fabrics or made up textile articles, but **excluding** household or laundry-type washing machines (**heading 84.50**).
- (II) For the dressing or finishing of yarns or fabrics, after spinning or weaving respectively, to bring out certain qualities or improve their appearance (e.g., shearing, fulling, lustring), or to give them special new qualities (e.g., by impregnating or coating), but **excluding** machines for the finishing of felt (**heading 84.49**).
- (III) For the reeling, unreeling, folding, cutting or pinking of textile fabrics.

Many of the machines of this heading are nothing more than vats, tanks, troughs or other containers, fitted with simple mechanical features such as rollers for leading in the yarn or fabric or for squeezing out excess liquid, stirring paddles, etc. Such machines are used for a variety of washing, bleaching, dyeing, cleaning, etc., operations, or for finishing operations involving coating or impregnating (e.g., with size or with waterproofing, crease-resisting, fireproofing, moth-proofing, rot-proofing, etc., compounds). To fall in the heading, the apparatus **must have such mechanical features and must be clearly intended for treating textiles.**

**(A) MACHINERY FOR WASHING, WRINGING, IRONING OR PRESSING
WHETHER OR NOT FITTED WITH HEATING DEVICES**

This group includes :

- (1) **Industrial washing machines, excluding** washing machines of heading 84.50, for yarns or woven fabrics or textile articles. This heading includes, for example, tunnel washers through which hanks of yarn are drawn, successively sprayed to wash them and dried, as well as festoon loop washers for piece goods.

This heading covers industrial washing machines used during the manufacturing process of fabrics and textiles, in which the equipment is used in finishing or to remove sizing from the manufactured goods.

- (2) **Wringers and mangles.**
- (3) **Shaker-tumblers** used in laundries to untangle the damp pieces and open them out ready for ironing.
- (4) **Ironing machines and steam presses** for pressing garments (including fusing presses) but **excluding** smoothing or ironing machines of the calender type, whether or not for domestic use, of heading 84.20.

(B) BLEACHING OR DYEING MACHINERY

These include **J-boxes** used in bleaching or other wet finishing operations; they consist essentially of a vertical two-armed container, shaped like a letter J, fitted with internal steam jets and with rollers to guide the cloth. The fabric, previously impregnated by passing through a bath of bleaching liquor, enters the longer arm where it remains for the time required for the bleaching to take effect, and in due course emerges from the smaller arm.

Other machines of this group are mainly vat-type machines already referred to, adapted for dealing with particular types of textile goods (e.g., yarns in hanks or skeins or in balls, on bobbins, etc., piece goods or made up articles). The group also includes machines for dyeing or dressing textile piece goods in open width; the essential feature of these machines is that they incorporate a set of rollers for squeezing out excess liquid.

(C) DRY CLEANING MACHINERY

These clean with liquids such as petrol, carbon tetrachloride, etc., instead of water. They are usually complex machines incorporating, for example, washers for circulating the liquid through the goods being cleaned, centrifugal extractors, filters, clarifiers and storage tanks. In view of the inflammable nature of many of the liquids used, they usually have an explosion-proof motor drive for the washer and circulating pump.

(D) DRYING MACHINES

These machines are classified here **only** if they are clearly designed and specialised for the drying of textile yarns, fabrics or made up articles. They are of two main types : those consisting essentially of a closed chamber in which the goods to be dried are subjected to the action of hot air, and those in which fabrics are passed over heated rollers.

The heading **excludes** dryers not specialised for the treatment of textile goods (**heading 84.19**), and centrifugal dryers (**heading 84.21**).

(E) DRESSING OR FINISHING MACHINES

This group includes :

- (1) **Mercerising machines** in which yarns or fabric are treated with caustic soda.
- (2) **Beetling machines** in which rows of wooden headed or cast-steel hammers, mounted spirally on a roller, consolidate the cloth by beating; they close up the interstices of the weave and improve the lustre of the fabric.
- (3) **Rotary milling machines**. These machines close up the warp and weft threads and effect a partial felting on the surface.
Stock or hammer mills, mainly used in the manufacture of felt, are **excluded** (**heading 84.49**).
- (4) **Picking or burling machines**, used in the removal of imperfections or pieces of burr still remaining in the fabrics.
- (5) **Raising machines**, used to raise the surface fibres of a cloth. They consist essentially of a large cylinder, mounted either with slats or frames into which teasels can be set, or with smaller cylinders fitted with fine wire points.
- (6) **Machines for beating the backs of fabrics** to make the surface hairs stand up.
- (7) **Cropping machines** to shear the surface of the fabric level after teasing; similar machines are used in the finishing of velvets. By using indented bed-plates or rollers, patterned effects can be obtained.
- (8) **Ratine or rippling machines** used to form wave or bead effects on raised fabrics, by rolling and curling together bunches of fibres. They consist of a plush covered table over which another table (covered with rubber, felt or emery) swings with a short oscillating and circular motion.
- (9) **Brushing machines**; these comprise revolving cylindrical brushes for brushing the fabric after raising or cropping.
- (10) **Singeing machines** for removing the hairiness of yarn or cloth. These work by rapidly passing the cloth over heated cylinders or curved plates, or over gas flames.
- (11) **Machines for polishing or glazing string, for polishing silk yarn in hanks, or for polishing silk fabrics.**

- (12) **Emery machines** for producing a smooth, even surface on fabrics.
- (13) **Cylindrical presses** operating on a flat or semi-circular bed-plate to produce a surface lustre. Calendering machines (**heading 84.20**) and general purpose hydraulic presses (**heading 84.79**) are also used for this purpose.
- (14) **Decatising machines** in which the fabric is steam-treated to fix the final finish and set of the cloth; also similar machines for conditioning yarns or fabrics by steam-treatment.
- (15) **Stentering (tentering) machines** for restoring the fabric to its proper width.
- (16) **Shrinking machines**, which close up the weft threads to produce a close fabric less likely to shrink subsequently.
- (17) **Coating or impregnating machines** for applying special surface coatings to yarns or fabrics, or for impregnating them with special preparations (e.g., gum, starch, size, wax, plastics, rubber or water-proofing compounds). The heading includes machines for coating fabric, paperboard, etc., in the manufacture of floor coverings such as linoleum, and also the dressing machines described in the last sentence of Part (B) above.
- (18) **Fancy yarn manufacturing machines** in which the special effect is produced after the spinning and doubling of the yarn (e.g., machines for ornamenting yarn with small drops of gelatin or wax).

**(F) MACHINES FOR REELING, UNREELING, FOLDING,
CUTTING OR PINKING TEXTILE FABRICS**

This group includes :

- (1) **Cloth folding or reeling machines**, which fold the cloth lengthwise or across the width, or roll it on to a support; also **inspection machines incorporating folding or reeling devices**, for inspecting fabrics for defects. Any of these machines may be combined with measuring apparatus.
- (2) **Cloth cutting or pinking machines**, including machines for cutting out patterns or parts of garments, etc.

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The following are also classified here :

- (1) **Steaming apparatus** (steam dummies, busts for steam ironing) **for outer garments**.
- (2) **Machinery and apparatus (tables, etc.) for folding linen already ironed** (for example, handkerchiefs, sheets, tablecloths).
- (3) **Machinery and apparatus for boiling and washing wool fabric** in order to scour it before bleaching or dyeing.
- (4) **Machines for removing gum from fabrics** before bleaching or dyeing.

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- (5) **Machines for treating fabrics** with a lye of soda or potassium before bleaching or dyeing.
- (6) **Steam machines for humidifying** yarns, fabrics and other textile products.
- (7) **Form setting and fixing machines** (thermosetting), including **machines for preforming or forming stockings or socks**.
- (8) **Machines for the impregnation and drawing of fabrics for pneumatic tyres**.
- (9) **Machines for inking textile ribbons for typewriters and the like**.
- (10) **Machines for breaking up the finish of fabrics**.
- (11) **Machines for flocking fabrics**, for example, electrostatic flocking machines.
- (12) **Fabric-pleating machines**.
- (13) **Appliances for cleaning carpets in situ** by injecting a liquid cleaning solution into the carpet, the solution then being extracted by suction, designed for use in establishments (other than domestic premises) such as hotels, motels, hospitals, offices, restaurants and schools.

PARTS

Subject to the general provisions regarding the classification of parts (see the General Explanatory Note to Section XVI), the heading also covers parts of the machines of this heading.

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The heading also **excludes** :

- (a) Autoclaves, steam-jacketed vats and other heating apparatus not identifiable as being for the heat-treatment of textiles (**heading 84.19**).
- (b) Calendering machines (for glossing, glazing, smoothing, embossing, moireing, etc.) and their cylinders (**heading 84.20**).
- (c) Centrifugal dryers and other centrifuges of **heading 84.21**.