

84.38 - Machinery, not specified or included elsewhere in this Chapter, for the industrial preparation or manufacture of food or drink, other than machinery for the extraction or preparation of animal or fixed vegetable fats or oils.

- 8438.10 - Bakery machinery and machinery for the manufacture of macaroni, spaghetti or similar products
- 8438.20 - Machinery for the manufacture of confectionery, cocoa or chocolate
- 8438.30 - Machinery for sugar manufacture
- 8438.40 - Brewery machinery
- 8438.50 - Machinery for the preparation of meat or poultry
- 8438.60 - Machinery for the preparation of fruits, nuts or vegetables
- 8438.80 - Other machinery
- 8438.90 - Parts

This heading covers machinery, not specified or included elsewhere in this Chapter, for the industrial preparation or manufacture of food or drink (whether for immediate consumption or preserving, and whether for human or animal consumption), but **not including** machinery for the extraction or preparation of animal or fixed vegetable fats or oils (**heading 84.79**). This heading also includes machines for industrial or commercial use, of a type used in restaurants or similar establishments.

It should, however, be noted that in practice the heading **excludes** many machines used for these purposes, e.g., :

- (a) Domestic appliances (e.g., meat mincing machines and bread cutting machines) falling in **heading 82.10** or **85.09**.
- (b) Industrial or laboratory ovens (**heading 84.17** or **85.14**).
- (c) Cooking, roasting, steaming, etc., machinery and plant (**heading 84.19**).
- (d) Centrifuges and filters (**heading 84.21**).
- (e) Bottling, canning, packing, etc., machinery (**heading 84.22**).
- (f) Machinery for the milling industry (**heading 84.37**).

(I) BAKERY MACHINERY

Such machinery is used for the manufacture of bread, biscuits, pastries, cakes, etc. It includes :

- (1) **Dough or pastry mixers.** These consist essentially of rotating or stationary receptacles equipped with fixed or moving arms or blades for kneading the dough. Certain high speed mixers are often fitted with water-cooled jackets.
- (2) **Dough-dividing machines** consist of receptacles in which the dough, delivered through a hopper, is divided mechanically into portions of equal size. These machines sometimes incorporate devices for weighing or rolling the dough.
- (3) **Moulding machines** for forming the portions of divided dough to the required shapes ready for baking.
- (4) **Slicing machines** for bread, cake, etc.
- (5) **Machines designed for "crumbing" dry bread.**
- (6) **Cutting, shaping, sawing or filling machines** for biscuits, cakes, etc.
- (7) **Cake depositing machines** designed to deliver given quantities of cake batter into cake shapes.

The heading **excludes** :

- (a) Bakery ovens (**heading 84.17 or 85.14**).
- (b) Pastry rolling machines of **heading 84.20**.

(II) MACHINERY FOR THE MANUFACTURE OF MACARONI, SPAGHETTI, OR SIMILAR PRODUCTS

This group includes :

- (1) **Mixing machines** for preparing macaroni paste.
- (2) **Machines for cutting or stamping out** special shapes from the rolled pastry in sheet form. These machines often incorporate devices for rolling the pastry.
- (3) **Continuous extruding presses** for macaroni, spaghetti, etc. Letters, figures and other special shapes can be produced with extruding machines equipped with suitably shaped dies; the dough is then cut off to the desired thickness by a revolving knife fitted on the outside of the dieplate.
- (4) **Machines for filling ravioli, etc.**
- (5) **Machines for twisting** macaroni, vermicelli, etc., in hanks, etc.

The heading **excludes** :

- (a) Macaroni pre-drying or drying machines (**heading 84.19**).
- (b) Machines for rolling macaroni dough, pastry, etc., into sheet form (**heading 84.20**).

(III) MACHINERY FOR THE MANUFACTURE OF CONFECTIONERY

This group includes :

- (1) **Grinding or crushing machines** for the preparation of icing sugar.
- (2) **Confectionery mixing machines.** These usually consist essentially of receptacles fitted with mechanical stirrers or grinders, and are often fitted with heating or cooling coils or jackets.
- (3) **"Pulling" machines** used for kneading plastic sugar mixtures by means of crank-shaped revolving arms.
- (4) **Dragee pans.** These consist of hemispherical pans, usually of copper or glass, which rotate on an inclined axis and thus coat hard centres (e.g., almonds) with sugar, chocolate, etc. The heading covers such dragee pans whether they are heated from an external source (hot air blast, independent gas burner, etc.), or whether the pans themselves incorporate heating elements.
- (5) **Machines designed for moulding, cutting or shaping confectionery.**

This heading **does not include** sugar boilers or other heating plant (heading 84.19) or cooling plant (heading 84.18 or 84.19).

(IV) MACHINERY FOR THE MANUFACTURE OF COCOA OR CHOCOLATE

This group includes :

- (1) **Machines for husking, for removing the germ, or for crushing the roasted beans into "nibs".**
- (2) **Machines for mixing, kneading or grinding** the crushed beans and resultant paste to give the "cocoa mass".
- (3) **Presses for extracting cocoa butter** from the "cocoa mass". These machines always incorporate provision for heating the paste to facilitate the butter extraction.
- (4) **Machines for preparing cocoa powder** by grinding the cakes left after cocoa butter extraction. Normally these machines also sieve and grade the powder, and sometimes mix it with other products to improve the aroma or solubility.
- (5) **Machines for mixing** cocoa butter, cocoa powder, sugar, etc. These machines often incorporate apparatus for measuring the quantities to be mixed.
- (6) **Machines for rolling and refining** the mixture.
- (7) **Conches.** These consist essentially of containers fitted with heating equipment and power driven rollers, grinders, etc., so that the constituents of the mixture are thoroughly intermingled and heat-treated.

- (8) **Machines which, prior to moulding, homogenise the chocolate** and deliver it in regular portions by pressure and extrusion.
- (9) **Tabletting and moulding machines**, usually incorporating vibrator devices. These machines also often contain heating elements in the pouring section, and provision for cooling the moulds.
- (10) **Enrobing machines** consist essentially of a conveyor belt on which biscuits, sweets or other centres are coated by passing them through sprays or molten baths of chocolate or confectionery. These machines always incorporate heating elements.

(V) MACHINERY FOR SUGAR MANUFACTURE

The type of machinery used for extracting the sugar juices depends on whether sugar cane or sugar beet is employed. The machines used for extracting the sugar from the juice are, however, much the same in each case.

(A) Machines for extracting the juice from sugar cane, e.g. :

- (1) **Cutters or defibrators**, consisting of a series of double-edged knives which revolve at high speed and thus reduce the cane to long fibres.
- (2) **Shredders** in which the cane is passed between toothed rollers revolving at different speeds and is thereby torn to shreds.
- (3) **Crushers**, which consist essentially of adjustable, corrugated metal rollers. Some machines combine the operations of shredding and crushing.
- (4) **Roller mills**, which usually consist of trains of grooved rollers for extracting the juice from the crushed cane. They normally incorporate feeding and conveyor mechanisms, equipment for spraying water on to the cane during rolling, and maceration baths.

(B) Machines for extracting the juice from sugar beet, e.g. :

- (1) **Washing machines** consisting of agitators or similar mechanisms operating in large channels, tanks, etc.
- (2) **Slicing machines**. These may be large cylindrical vessels whose bases consist of rotating discs fitted with cutting blades, or of rotating drums whose inner surfaces are fitted with knives against which the beet is projected, by specially designed guide plates or by centrifugal force.

(3) **Diffusing apparatus** for extracting the juice from the sliced beet by osmosis. Each diffuser consists of a "calorisator" in which the water is heated by a steam coil, and a large diffuser vessel in which the sugar is extracted from the beet chips by the hot water. The heading also covers the diffuser vessel presented separately. The "calorisator" presented separately is, however, **excluded (heading 84.19)**.

(4) **Pulp presses.**

(C) **Machines for extracting the sugar from the juice, or for refining the sugar, e.g. :**

(1) **Sulphiting vessels, provided** they incorporate mechanical agitators, but **not including** those with thermal equipment (**heading 84.19**)

(2) **Crystallising apparatus** fitted with slow stirring devices. The syrupy mass ("masse cuite") from the concentration plant is here cooled by the surrounding air, and the crystallisation begun in that plant is completed.

(3) **Machines for sawing or breaking sugar** into lumps, etc.

The heading **excludes** :

(a) Defecation vessels, juice concentration plant, vacuum boiling or crystallising pans and other plant of **heading 84.19**.

(b) Centrifugal separators and filter presses (**heading 84.21**).

(VI) **BREWERY MACHINERY**

This group includes :

(1) **Sprouting or germination machines** fitted with slow stirring devices, rotating drums or similar mechanical features.

(2) **Rotating cylinders** for removing the shoots from the malt after kilning and **screening machines.**

(3) **Malt crushing machines.**

(4) **Mashing vats provided** they contain mechanical agitators, etc., and no heating equipment. In these the crushed malt is mashed with water so that the starch content is converted into sugar (saccharification).

(5) **Straining vats**, large containers fitted with stirrers or agitators, and with a perforated double bottom to separate the brewers' grains from the wort.

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The heading also includes, as functional units within the meaning of Note 4 to Section XVI, brewhouse machinery, comprising, *inter alia*, sprouting or germination machines, malt crushing machines, mashing vats, straining vats. Auxiliary appliances (e.g., bottling machines, label-printing machines) are, however, **not included** and should be classified in their own appropriate heading (see the General Explanatory Note to Section XVI).

The heading **excludes** :

- (a) Fermenting vats without mechanical or cooling equipment; these are classified according to the constituent materials.
- (b) Malt drying plant; macerating vessels and mashing vats with heating equipment; vessels for the decoction of the hops, or for boiling the hop decoction with the wort (**heading 84.19**); fermenting vats with cooling coils and beer coolers (**heading 84.18 or 84.19**).
- (c) Filter presses (**heading 84.21**).

(VII) MACHINERY FOR THE PREPARATION OF MEAT OR POULTRY

This group includes :

- (1) **Machinery for the slaughter and subsequent treatment of animals.**
- (2) **Hog de-hairing machines.** These consist of a revolving cradle which holds the carcass, and of a number of belt scrapers turning in the opposite direction to the cradle.
- (3) **Meat cutting or chopping machines** for cutting up carcasses, etc., by the action of circular saws, rotating knives, etc.
- (4) **Machines for sawing or chopping bones.**
- (5) **Meat beating machines** to make the flesh more tender by the action of pointed or bladed combs which sever the nerve fibres.
- (6) **Meat mincing or dicing machines.**
- (7) **Gut cleaning machines.**
- (8) **Sausage stuffing machines.** These consist essentially of a cylindrical container from which the meat is forced by a piston into the sausage casing.
- (9) **Meat or bacon slicing machines.**
- (10) **Meat or fat moulding presses.**

- (11) **Machines and appliances for killing, plucking or drawing poultry** (electric stunning and bleeding knife, high-output poultry pluckers, eviscerating apparatus, gizzard strippers and lung extractors).
- (12) **Meat pickling machinery** comprising hand-operated brine injection guns connected to a pump, or a fully automatic conveyor device which feeds the meat to a grid consisting of brine injection needles.

The heading **excludes** boilers, autoclaves, heating cupboards and similar plant or machinery of heading 84.19.

(VIII) MACHINERY FOR THE PREPARATION OF FRUITS, NUTS OR VEGETABLES

This group includes :

- (A) **Peeling machines**, e.g. :
 - (1) **Abrasive peelers** (e.g. for potatoes), consisting of a rotating container with abrasive inner walls.
 - (2) **Peelers** (e.g., for apples and pears) in which adjustable knives remove the peel in spirals. These machines often also incorporate devices for coring, removing pips, etc.
 - (3) **Peelers for citrus fruit**. These usually remove the peel in quarters or scoop the fruit from the peel of fruit previously cut into halves.
 - (4) **Chemical peelers**. These usually consist of a conveyor band or rotating drum on which the fruit or vegetables are passed through sprays or baths of hot water, lye, etc. The fruit or vegetables are then vigorously tumbled in a washer vessel to remove the skins. These peelers are classified in this heading whether or not they incorporate provision for heating the water or lye.
- (B) **Machines for shelling peas or similar vegetables**. These usually consist of a revolving perforated drum fitted with beaters.
- (C) **Machines for cutting off the ends of green beans**.
- (D) **Machines for removing the stalks, etc.**, from currants, gooseberries, cherries, grapes, etc.
- (E) **Machines for removing the stones, pips, etc.**, from fruit.
- (F) **Machines for shelling nuts, etc.**
- (G) **Machines for grating or cutting fresh or dried fruit, vegetables, manioc, etc.**
- (H) **Machines for cutting or salting cabbage for sauerkraut**.
- (IJ) **Machines for pulping fruit or vegetables** for the preparation of jams, sauces, tomato purée, etc., but **not including** presses for fruit juices (e.g., peaches, grapefruit and tomatoes) (heading 84.35).

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The heading **excludes** :

- (a) Flame or radiant heat peelers (**heading 84.17**).
- (b) Fruit blanching plant, heating plant for the preparation of potato flakes and other plant of **heading 84.19**.
- (c) Fruit or vegetable grading machines (**heading 84.33**).

(IX) MACHINES FOR PREPARING FISH, SHELL FISH, ETC.

This group includes :

- (1) **Machines for scaling, skinning, gutting or for removing heads, tails, bones, etc.**
- (2) **Machines for opening the fish, slicing or cutting it into fillets, etc.**
- (3) **Machines for shelling or cutting up shell fish.**
- (4) **Grinding machines** for preparing fish flour from dried fish.

The heading **does not cover** frying, smoking or curing plant, or other machinery or plant of **heading 84.19**.

(X) OTHER MACHINERY FOR THE INDUSTRIAL PREPARATION OR MANUFACTURE OF FOOD OR DRINK

This group includes :

- (1) **Mechanical appliances for acetification** (used in vinegar-making).
- (2) **Coffee bean husking or hulling machines** (cylinder, disc or blade types).
- (3) **Extracting machines**, of the spiked roller type, for extracting the essential oil from oranges.
- (4) **Tea-leaf cutting or rolling machines**.

PARTS

Subject to the general provisions regarding the classification of parts (see the General Explanatory Note to Section XVI), the parts of the machinery of this heading are also classified here (for example, moulds (pans) used in continuous process bread-making, moulds for confectionery moulding machines, moulds for chocolate moulding machines and extrusion dies, of bronze or brass, for use in extruding presses for the manufacture of macaroni, spaghetti, or similar products).