

84.37 - Machines for cleaning, sorting or grading seed, grain or dried leguminous vegetables; machinery used in the milling industry or for the working of cereals or dried leguminous vegetables, other than farm-type machinery.

8437.10 - Machines for cleaning, sorting or grading seed, grain or dried leguminous vegetables

8437.80 - Other machinery

8437.90 - Parts

(I) MACHINES FOR CLEANING, SORTING OR GRADING SEED, GRAIN OR DRIED LEGUMINOUS VEGETABLES

This heading covers machines, whether of horticultural, agricultural or industrial types, of a kind used for cleaning, sorting or grading cereal grains, dried leguminous vegetables, seeds, etc., by winnowing, blowing, sieving, etc. Such machines include :

- (1) **Fanning mills** consisting of a feeding hopper, a blower and sieves (usually vibrating).
- (2) **Grading winnowers, rotating winnowers and seed or grain selectors**, more complex machines which clean by means of air currents, and grade the seed or grain according to weight, size or shape. Some seed selectors, etc., incorporate auxiliary devices for coating the seeds with insecticide powders, etc.
- (3) **Sieving belts**, often used for cleaning beet seed. They consist of a series of rolls operating an endless inclined belt running under a feeding hopper. The seeds roll freely to the bottom of the belt but the light vegetable waste adheres to the plushy surface of the belt fabric.
- (4) **Special machines for selecting and grading seed for planting.**

This heading also covers machinery used in the milling industry for cleaning, sorting or grading grain prior to milling. Some of these machines are based on the same principles as the winnowing, screening and grading machines described above, but are designed for larger output and are specialised for the milling industry, e.g. :

- (1) **Cyclone separators** for cleaning the grain.
- (2) **Machines for cleaning and grading** by the action of revolving pocketed or perforated drums.
- (3) **Aspirator separators** with oscillating sieves.

- (4) **Separators and graders** of the magnetic or electro-magnetic types.
- (5) **Washing, stone-removing and "whizzing" machines**, with or without subsidiary drying columns.
- (6) **Grain brushing machines**.
- (7) **Grain dampening machines**, whether or not incorporating heating or weighing apparatus.

The heading also includes combined machines which clean, sort and grade simultaneously, including machines incorporating devices for electro-magnetic separation.

(II) MACHINERY USED IN THE MILLING INDUSTRY

In addition to machinery for cleaning, sorting or grading grain prior to milling (see Part (I) above), the following are included as machinery used in the milling industry :

(A) Certain machines for mixing or preparing grain prior to milling, e.g. :

- (1) **Machines for mixing grain** in pre-determined quantities.
- (2) **Grain scouring machines** consisting of spiked drums turning against rubber cylinders and thus eliminating the softer grains.

However, the heading **does not cover** :

- (a) Plant operating by temperature change (**heading 84.19**). For example, **heading 84.19** covers such drying or cooling columns, but grain dampening machines with thermal equipment remain in this heading.
- (b) Centrifugal dryers (**heading 84.21**).
- (c) Conveyors and elevators (e.g., of the bucket, belt or pneumatic suction types) (**heading 84.28**).

(B) Grinding or crushing machinery, e.g. :

- (1) **Grinding mills**.
- (2) **"Breaking" rolls or mills** composed of several sets of grooved rollers, sometimes internally cooled, which crush the grain into middlings, semolina and flour.
- (3) **Reduction rolls or mills** with smoother rollers, specially designed to convert middlings, semolina, etc., into flour.
- (4) **Disintegrators or impact grinders** used to grind down into flour, the meal, etc., which adheres to the mill or converter rollers in the preceding processes.
- (5) **Feeders**, machines designed to ensure a regular and even flow of grain to the crushing rollers.

The heading **does not include** small farm type grinding mills (**heading 84.36**).

(C) **Machinery for the sorting or separation of flour from sharps or middlings.**

This group includes machines for separating the flour, meal, middlings, sharps, etc., produced by milling.

This separation is effected by a series of operations carried out on the following types of machines which are often used in series :

- (1) **Sifting machines ("bolters")** for separating flour from groats and meal. **Centrifugal sifters (or "reels")** consist of drums fitted internally with beater bars and covered externally with gauze of various mesh sizes. **Oscillating sifters or plansifters** consist of nests of free-swinging superimposed sieves and collecting trays.
- (2) **Sieving machines or "purifiers"**. These grade the middlings, etc., and also blow off the bran by means of vibrating sieves through which a current of air is drawn.
- (3) **Bran cleaners.**
- (4) **Blending machines** for flour, bran, etc.; also **machines for adding vitamins to flour.**

However, the heading **does not cover** :

- (a) Flour-drying machines (**heading 84.19**).
- (b) Air filters and "cyclones" used to extract the dust from the exhaust air issuing from sorting or bolting machines (**heading 84.21**).
- (c) "Extraction recorders" for recording the flour extraction rate, and other flour testing apparatus of **Chapter 90**.

(III) **MACHINERY USED FOR THE WORKING OF CEREALS OR DRIED LEGUMINOUS VEGETABLES**

The working referred to is generally preceded by preliminary cleaning, sorting or grading (see Part (I) above).

This group includes :

- (1) **Machines for husking cereals or dried leguminous vegetables.**
- (2) **Rice hulling or polishing machines.**
- (3) **Machines for splitting dried peas, lentils or beans.**
- (4) **Machines for preparing rolled or flaked oats, etc.,** whether or not incorporating auxiliary heating devices.
- (5) **Special milling and grinding machines for milling cereals (other than bread grains, see Part (I) (B) above) or dried leguminous vegetables into flour.**
- (6) **"Bearding" machines and "clipping" machines** designed to remove the "beards" or "points" from barley or oat grains.

84.37

This part of the heading **does not cover** :

- (a) Machinery or plant operating by heat exchange (e.g., steamers, drying apparatus or roasting plant for the manufacture of puffed or toasted grain; plant for malting barley, for roasting flour, etc.) (**heading 84.19**).
- (b) Machines for processes beyond the flour-making stage (e.g., bakery, preserving or macaroni-making) (**heading 84.38**).

PARTS

Subject to the general provisions regarding the classification of parts (see the General Explanatory Note to Section XVI), parts of the goods of this heading are also classified here, e.g., :

Sieves and sieve frames for the bread grain milling industry (**other than** bolting cloth, whether or not made up — **heading 59.11**); mixing or separating cylinders, rollers for bread grain mills, or converters, etc.

Millstones are, however, **excluded** (**heading 68.04**).