84.75 - Machines for assembling electric or electronic lamps, tubes or valves or flash-bulbs, in glass envelopes; machines for manufacturing or hot working glass or glassware.

8475.10 - Machines for assembling electric or electronic lamps, tubes or valves or flash-bulbs, in glass envelopes

- Machines for manufacturing or hot working glass or glassware :

8475.21 - - Machines for making optical fibres and preforms thereof

8475.29 - - Other

8475.90 - Parts

The heading covers machines for assembling electric or electronic lamps, tubes or valves or flash-bulbs, in glass envelopes. It also includes machines for manufacturing or hot working glass or glassware (**other than** furnaces of **heading 84.17** or **85.14**).

(I) MACHINES FOR ASSEMBLING ELECTRIC OR ELECTRONIC LAMPS, TUBES OR VALVES OR FLASH-BULBS, IN GLASS ENVELOPES

This group includes :

(A) **Machines for the vacuum-sealing of lamp bulbs.**

(B) **Rotary machines for the automatic assembly of incandescent lamps or wireless valves.**

These machines usually include equipment for the heat-treatment of glass (e.g., blowpipes or pressing and closing devices for closing the glass envelope), but remain here even if not including such glass-working devices.

The heading also includes machinery for assembling electric filament lamps of which the component parts are interconnected by conveyors, and which include equipment for the heat-treatment of glass, pumps and lamp-testing units (see Note 4 to Section XVI).

The heading **does not**, however, **include** machines used solely for making metal parts of components of lamps or valves (e.g., machines for cutting out or deep drawing screens, anodes or supports (**heading 84.62**), machines for spiralling fine metal wire in the manufacture of electric lamp filaments (**heading 84.63**), and machines for welding screens or electrodes (**heading 84.68** or **85.15**)).

(II) MACHINES FOR THE MANUFACTURE OR HOT WORKING OF GLASS OR GLASSWARE

The glass-working machines of this heading are those which work glass (including fused quartz and other fused silica) which has been heated until it becomes soft or liquid. These machines operate mainly by casting, drawing, rolling, spinning, blowing, modelling, moulding, etc. Machines for working glass in the hard state (even if slightly heated to facilitate the operation) are **excluded** (**heading 84.64**).

(A) MACHINES FOR THE MANUFACTURE OF FLAT GLASS SHEETS

This group includes :

(1) **Machines for making sheet glass by drawing out flat strips**. A roughly formed sheet of glass is picked up by a special device; it is then gripped by rollers and drawn out vertically or horizontally as it passes through an annealing oven. The continuous band thus obtained is cut into sheets (mechanically or by an electrically heated wire).

(2) **Machines for the manufacture of floatglass**. In the float process, the glass is floating horizontally on a molten media, to manufacture an endless glass ribbon, which later in the process is cut into pieces.

(B) OTHER MACHINES FOR HOT WORKING GLASS

This group includes :

(1) **Bottle-making machines, etc**. These range from simple mechanical appliances for gathering and blowing (operated by suction or compressed air and using separate moulds), to automatic continuous feeder machines (with two revolving plates, one with rough-casting moulds, the other with finishing moulds).

(2) **Special machines and presses for moulding** various glass articles (e.g., paving blocks, tiles, insulators, optical glass blanks and hollow glassware), but **excluding** presses of general use (**heading 84.79**).

(3) **Machines for drawing, shaping or blowing glass pipes or tubes, and special machinery for drawing fused silica tubes**.

(4) **Machines for making glass beads**, in particular, machines in which cut pieces of tubing are rounded by being rolled in rotating heated drums.

(5) **Machines for making glass fibre or filaments**. These fall into three main categories :

(i) **Machines for making continuous glass yarn for weaving**. These consist of a small electric furnace which is charged with glass balls. The bottom of the furnace consists of a draw-plate with a hundred or so very fine holes; the filaments are lubricated as they emerge from these holes, and are joined together by a special device to form a single strand. This is wound on a rotating drum which ensures that the filaments are continuously drawn forward.

(ii) **Machines for making short fibres**. These machines are equipped with an electric furnace and a draw-plate like that mentioned above, but there are also sets of converging compressed air jets on either side. These jets fulfil the dual purpose of drawing out and breaking the filaments. The fibres fall through an oil-spray on to a rotating perforated drum; a suction device inside the drum draws the fibres together to form a roving which is wound on to a spool bobbin.

(iii) **Special machines for making glass wadding**. The molten glass is poured on to a heated rotating disc; it adheres to the corrugations of the disc and is drawn into fibres by centrifugal action.

(6) **Machines for bulb-blowing or for making other glass parts of electric light bulbs or tubes, or of electronic valves or tubes, etc.** (e.g., base blocks, filament supports, stems).

(7) **Machines for making optical fibres and preforms thereof**.

PARTS

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

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The heading also **excludes** :

(a) Hand type glass blowers (**heading 82.05**).

(b) Certain machines for the manufacture of toughened glass, in which ordinary glass sheets are placed between heated plates and then suddenly cooled (**heading 84.19**).

(c) Moulds for manual or mechanical glass-making (**heading 84.80**).