84.79 - Machines and mechanical appliances having individual functions, not specified or included elsewhere in this Chapter.

8479.10 - Machinery for public works, building or the like

8479.20 - Machinery for the extraction or preparation of animal or fixed vegetable fats or oils

8479.30 - Presses for the manufacture of particle board or fibre building board of wood or other ligneous materials and other machinery for treating wood or cork

8479.40 - Rope or cable-making machines

8479.50 - Industrial robots, not elsewhere specified or included

8479.60 - Evaporative air coolers

- Passenger boarding bridges :

8479.71 - - Of a kind used in airports

8479.79 - - Other

- Other machines and mechanical appliances :

8479.81 - - For treating metal, including electric wire coil-winders

8479.82 - - Mixing, kneading, crushing, grinding, screening, sifting, homogenising, emulsifying or stirring machines

8479.89 - - Other

8479.90 - Parts

This heading is **restricted to** machinery having individual functions, which :

(a) Is not excluded from this Chapter by the operation of any Section or Chapter Note.

and (b) Is not covered more specifically by a heading in any other Chapter of the Nomenclature.

and (c) Cannot be classified in any other particular heading of this Chapter since :

(i) No other heading covers it by reference to its method of functioning, description or type.

and (ii) No other heading covers it by reference to its use or to the industry in which it is employed.

or (iii) It could fall equally well into two (or more) other such headings (general purpose machines).

The machinery of this heading is distinguished from the parts of machinery, etc., that fall to be classified in accordance with the general provisions concerning parts, by the fact that it has individual functions.

For this purpose the following are to be regarded as having " individual functions " :

(A) Mechanical devices, with or without motors or other driving force, whose function can be performed distinctly from and independently of any other machine or appliance.

Example : Air humidification and dehumidification are individual functions because they can be performed by appliances operating independently of any other machine or appliance.

A separately presented air dehumidifier, even if designed to be mounted on an ozone generator falls, therefore, to be classified in this heading as having an individual function.

(B) Mechanical devices which cannot perform their function unless they are mounted on another machine or appliance, or are incorporated in a more complex entity, **provided** that this function :

(i) is distinct from that which is performed by the machine or appliance whereon they are to be mounted, or by the entity wherein they are to be incorporated, and

(ii) does not play an integral and inseparable part in the operation of such machine, appliance or entity.

Example : A chain cutter is a device which is mounted on an industrial sewing machine and which automatically cuts the thread so that the machine can run without interruption. This device performs an individual function because it plays no part in the " sewing " function of the machine; as there is no other more specific heading, the chain cutter falls to be classified here.

On the other hand, the function of a carburettor for an internal combustion engine is distinct from that of the engine but it is not an " individual function " as defined above because the operation of the carburettor is inseparable from that of the engine. Separately presented carburettors are therefore to be classified as parts of engines in **heading 84.09**.

Similarly, mechanical or hydraulic shock absorbers form an integral part of the machine or appliance in which they are to be incorporated. Separately presented shock absorbers therefore fall to be classified as parts of the machines or appliances on which they are to be mounted. (Shock absorbers for vehicles or aircraft fall in **Section XVII**).

The many and varied machines covered by this heading include *inter alia* :

(I) MACHINERY OF GENERAL USE

This group includes, for example :

(1) Vats or other receptacles (e.g., vats or tanks for electrolysis), fitted with mechanical devices (agitators, etc.), and which are not identifiable as being for any particular industry and are not heating, cooking, etc., apparatus of **heading 84.19**. Vats or other receptacles simply fitted with taps, level or pressure gauges or the like are classified according to their constituent material.

(2) Presses, crushers, grinders, mixers, etc., not designed for particular goods or industries.

(3) Volumetric distributing apparatus (e.g., mechanical hopper feeds) and mechanical distributors for continuous presentation of work pieces in the same alignment ready for the working operation, not specialised for any particular industry.

(4) Eyeletting or tubular riveting machines equally suitable for applying the eyelets or rivets to any material such as textiles, paperboard, plastics or leather; and machines equally suitable for joining by stapling the ends of machinery belting of textiles, rubber or other materials.

(5) Vibrator motor consisting of an electric motor with eccentric discs fitted to the protruding ends of the shaft, generating radial vibrations which are transmitted to the apparatus or appliance (chutes, bins, hoppers, conveyors, compacting appliance, etc.) to which the vibrator motor is fixed.

(6) Electro-magnetic vibrator, for attachment to conveying, screening, compacting, etc., appliances, consisting of a base plate carrying an electro-magnet and two metal rods supporting a mass held in position by two sets of springs at a suitable distance from the electro-magnet; the mass is alternatively attracted by the magnet and pulled back by the springs.

(7) Industrial robots for multiple uses. Industrial robots are automatic machines which can be programmed to carry out repeatedly a cycle of movements. By the use of sensors, industrial robots are able to acquire information about the field in which they operate and to analyse the information thus obtained to be able to adapt their pattern of activity to variations in their field of operation.

Industrial robots may consist of an articulated structure comparable to that of the human arm, mounted on a base in a horizontal or vertical position, and having at its extremity a mobile holder for the toolholder (so-called vertical robots). They may also consist of a rectilinear structure often moving on a vertical axis of which the holder forms the terminal part of the operating mechanism often moving on a horizontal axis (horizontal robots). These robots could equally be placed on a beam (beam robots).

The different parts of the structure are activated by electric motors or by means of a hydraulic or pneumatic system.

Industrial robots have many uses; welding, painting, handling, loading and unloading, cutting, assembling, metal trimming, etc. They are replacing humans in tasks performed in a hostile environment (with toxic products, dust, etc.) or with laborious tasks (moving of heavy loads, repetitive tasks of a boring nature). For these varied applications, robots are equipped with a tool holder and tools specifically designed for the accomplishment of the task (pincers, grippers, welding heads, for example).

The heading covers only industrial robots capable of performing a variety of functions simply by using different tools. However, the heading **excludes** those industrial robots **specifically designed** to perform a specific function; these industrial robots are classified in the heading covering their function (e.g., **heading 84.24, 84.28, 84.86** or **85.15**).

(II) MACHINERY FOR CERTAIN INDUSTRIES

This group includes :

(A) **Machinery for public works, building or the like**, e.g. :

(1) Machines for spreading mortar or concrete (**excluding** mixers for preparing concrete or mortar - **heading 84.74** or **87.05**).

(2) Road making machines which vibrate the concrete to consolidate it and to camber the surface, sometimes also spreading the concrete.

However this heading **does not include** levellers of **heading 84.29**.

(3) Machines, whether or not self-propelled, for spraying gravel on road or similar surfaces and self-propelled machines for spreading and tamping bituminous road-surfacing materials. Gravel sprayers mounted on a motor vehicle chassis are **excluded** (**heading 87.05**).

(4) Machinery and mechanical appliances for smoothing, grooving, checkering, etc., fresh concrete, bitumen or other similar soft surfaces.

Heating apparatus for bitumen, etc., are **excluded** (**heading 84.19**).

(5) Small pedestrian directed motorised apparatus for the maintenance of roads (e.g., sweepers and white line painters).

Mechanical rotating brooms, which may be mounted with a dirt hopper and a sprinkler system on a wheeled chassis powered by a tractor of **heading 87.01**, are also classified in this heading as interchangeable equipment, even if they are presented with the tractor.

(6) Salt and sand spreaders for clearing snow, designed to be mounted on a lorry, consisting of a tank for storing sand and salt, equipped with a lump-breaking agitator, a system for crushing/grinding the lumps of salt, and a hydraulic projection system with spreading disk. The machines' various functions are operated from the cab of the lorry, by remote control.

(B) **Machinery for the oil, soap or edible fat industries**, e.g. :

(1) Special grinders, crushers, mills or presses for oilseeds or oleaginous fruit.

(2) Tanks fitted with mechanical agitators, specially designed for purifying oils.

(3) Tallow-washing equipment.

(4) Equipment for rolling raw tallow in order to crush the cells before melting down.

(5) Churns and mixers for mixing together the component parts of margarine.

(6) Soap cutting or moulding machines.

(C) **Machinery for treating wood or similar materials**, e.g. :

(1) Barking drums in which logs are stripped of their bark by scraping against each other.

(2) Special presses for agglomerating wood fibre, wood chips, sawdust or cork dust.

(3) Wood hardening presses.

(4) Machines for impregnating wood under pressure.

(D) **Rope or cable-making machines** (stranding, twisting or cabling, etc., machines) working with either textile yarn or metal wire or both, including machinery for twisting flexible electrical conductors, **other than** twisting-frames of a type used in spinning textiles (**heading 84.45**).

The heading **does not cover** :

(a) Machines for reeling textile yarn, string, etc., into balls (**heading 84.45**).

(b) Machines for finishing (glazing, polishing) textile yarn, string, etc. (**heading 84.51**).

(E) **Machinery for treating metals, including electric wire coil-winders**, e.g. :

(1) Crucible vice-presses for alumino-thermic welding of rails, machine parts, etc.

(2) Machinery for scouring or pickling metals (by acid, trichloroethylene, etc.) including pickling units for sheet-rolling mills, but **excluding** steam or sand blasting appliances of **heading 84.24**.

(3) Rotating drums for de-sanding, de-scaling or polishing metal goods (e.g., nuts, bolts or ball bearings).

(4) Machines for tin-plating by dipping.

(5) Pig iron breakers and special stamping mills for breaking up cast iron scrap.

(6) Special machines for winding or covering electric cables with layers of textile yarn, impregnated paper strips, asbestos tapes or other insulating or protective material; but **excluding** gimping machines of the kind falling in **heading 84.47**.

(7) Electric wire coil-winders (e.g., for motors, transformers or inductors).

(F) **Basket-making, wickerwork-making and other machinery for plaiting or interlacing osier, canes, rattans, straw, wood strips, plastics, etc.** e.g. :

(1) Machines for making baskets, hampers or similar articles.

(2) Machines for forming wickerwork covers on carboys, bottles, etc.

(3) Machines for making protective straw envelopes for bottles.

(4) Machines for plaiting hats or braids and bands for hat-making.

The heading **does not include** machines for splitting wood, peeling osier, rounding rattans, etc. (**heading 84.65**).

(G) **Machinery for making paint brushes or other brushes**, e.g. :

(1) Machines for preparing (including trimming or shaping) hair, bristles, fibres, etc., for brushes.

(2) Machines for inserting the hairs, bristles, fibres, etc., into sockets, mounts or handles.

The heading **does not cover** :

(a) Machines for sterilising bristles or fibres (**heading 84.19**).

(b) Machines for working brush mounts or brush handles in wood, cork, bone, hard rubber or similar hard materials (**heading 84.65**).

(III) MISCELLANEOUS MACHINERY

This group includes :

(1) Air humidifiers or dehumidifiers, **other than** the appliances of **heading 84.15**, **84.24** or **85.09**.

(2) Engine starters (mechanical, hydraulic, compressed air, etc.) **but not** electrical equipment of **heading 85.11**.

(3) Hydraulic accumulators, for keeping in reserve an amount of liquid under pressure in order to give an even rate of flow or feed pressure to hydraulic machinery. Normally, these accumulators consist of a vertical pump-fed cylinder enclosing a weighted piston which is adjusted to a certain pressure.

(4) Pump-type automatic machine greasers.

(5) Match-dipping machines.

(6) Machinery for cask tarring or coating **other than** spraying appliances of **heading 84.24**.

(7) Machines for coating welding electrodes.

(8) Machines for cleaning off or re-covering gelatin inking rollers.

(9) Machines for coating photosensitive emulsions on to a backing **other than** those machines of **heading 84.86**.

(10) Machines for frosting glass by the acid process.

(11) Bolting or unbolting machines and metal core extractors, **other than** hand tools of **Chapter 82** and small tools for working in the hand, pneumatic, hydraulic or with self-contained electric or non-electric motor (**heading 84.67**).

(12) Machines for the maintenance of pipelines or other non-flexible pipes (e.g., small self-propelled machines used on oil pipelines to clean the pipe, coat it with asphalt or other protective covering; machines, carried through the pipes by the flow of the fluid itself, used for cleaning the inside of pipelines).

(13) Machines for mounting card clothing on carding cylinders.

(14) Machines for making rope soles for footwear.

(15) Machines for washing, scouring or removing dust from bed feathers.

(16) Machines for filling eiderdowns or stuffing mattresses.

(17) Machines for applying abrasives to any backing (fabrics, paper, etc.).

(18) Coiling machines for flexible cables or tubes (e.g., for textile or metal cables or ropes, electric cables, lead pipes).

(19) Mechanical appliances for cutting water-weeds. These consist of a horizontal scythe, below water-level, rotating on a vertical axis which is supported by a frame for fitting to a boat. They may be hand or power-driven.

(20) Diving bells or metal diving suits, etc., mechanically equipped.

(21) Gyroscopic stabilisers for ships or for similar uses; but **excluding** the gyroscopic devices for instruments of **Chapter 90** (gyro-compasses, etc.) and torpedoes (**heading 93.06**).

(22) Steering and rudder equipment for ships, **other than** the rudders themselves (usually **heading 73.25** or **73.26**), and automatic pilots (Gyro pilots) of **heading 90.14**.

(23) Electrical, hydraulic, pneumatic, etc., windscreen wiping mechanisms for aircraft, ships and all vehicles **except** those for cycles or motor vehicles (**heading 85.12**). The heading also includes wiper-blade mountings and mounted wiper-blades, **provided** they are identifiable as for the wiping mechanisms described above; those for use with motor vehicle windscreen wiping mechanisms are **excluded** (**heading 85.12**).

(24) Ultrasonic apparatus for cleaning metal parts and miscellaneous other articles; consisting when complete (whether mounted in a common housing or as separate units) of a high frequency generator, one or several transducers and a tank for the articles to be cleaned, presented either complete or without the tank. The heading also covers ultrasonic transducers for such apparatus. Ultrasonic apparatus and transducers of a kind used solely or principally for cleaning semiconductor wafers or flat panel displays are **excluded** (**heading 84.86**).

(25) Underwater blowpipes, usually fitted with a special ignition device, and with provision for bringing an additional supply of compressed air or oxygen through a ring-shaped outlet round the nozzle, in order to create a cavity in the water so that the flame can burn.

(26) Apparatus for cutting or piercing rock or concrete, using the high temperature produced by burning iron or steel in a jet of oxygen. The apparatus used is usually quite simple, consisting of a heat-resisting handle or grip which incorporates a valve and has provision for connecting both to a source of oxygen and to a length of iron or steel tubing. In operation, the oxygen passes through the iron or steel tubing, the end of which, previously brought to red heat, is thus burned away producing a very high temperature sufficient to melt the rock or concrete.

(27) Automatic shoe brushing machines.

(28) Machines for waxing paper cups and containers, etc., by immersion.

(29) Industrial floor polishers.

(30) Evaporative air coolers.

(31) Passenger boarding bridges. These bridges permit passengers and personnel to walk between a terminal building and a parked aircraft, a cruise ship or ferry-boat, without having to go outside. The bridges generally consist of a rotunda assembly, two or more rectangular telescopic tunnels, vertical lift columns with wheel bogies, and a cabin located in the front part of the bridges. They include electromechanical or hydraulic devices that are designed for moving the bridges horizontally, vertically and radially (i.e., their telescopic sections, cabin, vertical lift columns, etc.), in order to adjust the bridges to the appropriate position to the particular aircraft's door, or to the port (entrance) of the cruise ship or ferry-boat. The passenger boarding bridges of the type used at seaports can be, furthermore, equipped with a transitional device installed on their foreside which can be extended into the port (entrance) of the cruise ship or ferry-boat. These bridges themselves do not lift, handle, load or unload anything.

Appliances for cleaning carpets in situ by injecting a liquid cleaning solution into the carpet, the solution then being extracted by suction, and designed for use in establishments (other than domestic premises) such as hotels, motels, hospitals, offices, restaurants and schools are classified in **heading 84.51**.

The heading also **excludes** machinery for encapsulation in the assembly of semiconductors (**heading 84.86**).

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 machinery of this heading, including moulds **other than** those covered elsewhere (in particular, **heading 84.80**).