

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

## SECTION XVI

### MACHINERY AND MECHANICAL APPLIANCES; ELECTRICAL EQUIPMENT; PARTS THEREOF; SOUND RECORDERS AND REPRODUCERS, TELEVISION IMAGE AND SOUND RECORDERS AND REPRODUCERS, AND PARTS AND ACCESSORIES OF SUCH ARTICLES

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#### Notes

1. This section does not cover:
  - (a) Transmission, conveyor or elevator belts or belting, of plastics of chapter 39, or of vulcanized rubber (heading 4010); or other articles of a kind used in machinery or mechanical or electrical appliances or for other technical uses, of vulcanized rubber other than hard rubber (heading 4016);
  - (b) Articles of leather or of composition leather (heading 4204) or of furskin (heading 4303), of a kind used in machinery or mechanical appliances or for other technical uses;
  - (c) Bobbins, spools, cops, cones, cores, reels or similar supports, of any material (for example, chapter 39, 40, 44 or 48 or section XV);
  - (d) Perforated cards for Jacquard or similar machines (for example, chapter 39 or 48 or section XV);
  - (e) Transmission or conveyor belts of textile material (heading 5910) or other articles of textile material for technical uses (heading 5911);
  - (f) Precious or semiprecious stones (natural, synthetic or reconstructed) of headings 7102 to 7104, or articles wholly of such stones of heading 7116, except unmounted worked sapphires and diamonds for styli (heading 8522);
  - (g) Parts of general use, as defined in note 2 to section XV, of base metal (section XV), or similar goods of plastics (chapter 39);
  - (h) Drill pipe (heading 7304);
  - (ij) Endless belts of metal wire or strip (section XV);
  - (k) Articles of chapter 82 or 83;
  - (l) Articles of section XVII;
  - (m) Articles of chapter 90;
  - (n) Clocks, watches or other articles of chapter 91;
  - (o) Interchangeable tools of heading 8207 or brushes of a kind used as parts of machines (heading 9603); similar interchangeable tools are to be classified according to the constituent material of their working part (for example, in chapter 40, 42, 43, 45 or 59 or heading 6804 or 6909); or
  - (p) Articles of chapter 95.
2. Subject to note 1 to this section, note 1 to chapter 84 and to note 1 to chapter 85, parts of machines (not being parts of the articles of heading 8484, 8544, 8545, 8546 or 8547) are to be classified according to the following rules:
  - (a) Parts which are goods included in any of the headings of chapters 84 and 85 (other than headings 8409, 8431, 8448, 8466, 8473, 8485, 8503, 8522, 8529, 8538 and 8548) are in all cases to be classified in their respective headings;
  - (b) Other parts, if suitable for use solely or principally with a particular kind of machine, or with a number of machines of the same heading (including a machine of heading 8479 or 8543) are to be classified with the machines of that kind or in heading 8409, 8431, 8448, 8466, 8473, 8503, 8522, 8529 or 8538 as appropriate. However, parts which are equally suitable for use principally with the goods of headings 8517 and 8525 to 8528 are to be classified in heading 8517;
  - (c) All other parts are to be classified in heading 8409, 8431, 8448, 8466, 8473, 8503, 8522, 8529 or 8538 as appropriate or, failing that, in heading 8485 or 8548.
3. Unless the context otherwise requires, composite machines consisting of two or more machines fitted together to form a whole and other machines adapted for the purpose of performing two or more complementary or alternative functions are to be classified as if consisting only of that component or as being that machine which performs the principal function.

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## Notes (con.)

4. Where a machine (including a combination of machines) consists of individual components (whether separate or interconnected by piping, by transmission devices, by electric cables or by other devices) intended to contribute together to a clearly defined function covered by one of the headings in chapter 84 or chapter 85, then the whole falls to be classified in the heading appropriate to that function.
5. For the purposes of these notes, the expression "machine" means any machine, machinery, plant, equipment, apparatus or appliance cited in the headings of chapter 84 or 85.

## Additional U.S. Note

1. For the purposes of this section, the term "printed circuit assembly" means goods consisting of one or more printed circuits of heading 8534 with one or more active elements assembled thereon, with or without passive elements. For the purposes of this note, "active elements" means diodes, transistors and similar semiconductor devices, whether or not photosensitive, of heading 8541, and integrated circuits and microassemblies of heading 8542.

## Statistical Note

1. Provisions for semiconductor manufacturing and testing machines and apparatus cover products for the growth and processing of semiconductor materials, such as silicon and gallium arsenide, the processing of such materials into semiconductor devices and the testing of such devices (in general the testing equipment, as well as some of the processing equipment, is classified in chapter 90). More specifically the goods include the following:
  - (a) Wafer manufacturing equipment:
    - (i) Crystal growers & pullers. - used to produce extremely pure monocrystalline semiconductor boules from which wafers can be sliced. Most common methods employed in these crystal growers and pullers are the Czochralski and float zone methods.
    - (ii) Wafer preparation equipment:
      - (A) Crystal grinders - used to grind the crystal boule to precise diameter required for wafers and to grind the flats on the boule to indicate the conductivity type and resistivity of the crystal.
      - (B) Wafer slicing saws - used to slice wafers from a boule of monocrystalline semiconductor material.
      - (C) Wafer grinders, lappers and polishers - used to prepare the semiconductor wafer for the fabrication process. This involves bringing the wafer within dimensional tolerances. Especially critical is the flatness of its surface.
  - (b) Mask fabrication and repair equipment -
    - (i) Fabrication equipment - used to transfer design patterns to a mask or reticle, this equipment generally utilizes optical, electron beam or X-rays to write circuit patterns on photoresist coated substrates. After development, these substrates become the mask or reticle for wafer fabrication.
    - (ii) Repair equipment - this equipment generally utilizes focused ion beams or laser beams. They are used directly on the mask or reticle to remove chrome.
  - (c) Wafer fabrication equipment:
    - (i) Film formation equipment - used to apply or produce various films on the surface of the wafer during the fabrication process. These films serve as conductors, insulators and semiconductors on the finished device. They may include oxides and nitrides of the substrate surface, metals, and epitaxial layers. The processes and equipments listed below are not necessarily limited to the generation of a particular type of film.
      - (A) Oxidation furnaces - used to form a "film" of oxide on the wafer. The oxide is formed by the chemical reaction of the top molecular layers of the wafer with the applied oxygen or steam under heat.
      - (B) Chemical Vapor Deposition (CVD) equipment - used to deposit various types of films which are obtained by combining the appropriate gases in a reactant chamber at elevated temperatures. This constitutes a thermochemical vapor-phase reaction. Operations may take place at atmospheric or low pressure (LPCVD) and may use plasma enhancement (PECVD).

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## Statistical Note (con.)

- (C) Physical Vapor Deposition (PVD) equipment - used to deposit various types of films which are obtained by vaporizing a solid.
  - (1) Evaporation equipment - in which the film is generated by heating the source material.
  - (2) Sputtering equipment - in which the film is generated by bombarding the source material (target) with ions.
- (D) Molecular Beam Epitaxy (MBE) equipment - used to grow epitaxial layers on a heated monocrystalline substrate in an ultrahigh vacuum using beams of molecules. The process is similar to PVD.
- (ii) Doping equipment - which is used to introduce dopants into the wafer surface in order to modify the conductivity or other characteristics of a semiconductor layer:
  - (A) Thermal diffusion equipment - in which the dopants introduced into the surface of the wafer by the application of gases under high temperatures.
  - (B) Ion Implantation - in which the dopants are "driven" into the crystal lattice structure of the surface of the wafer in the form a beam of accelerated ions.
  - (C) Annealing furnaces - which are used to repair the crystal lattice structures of the wafer damaged by ion implantation.
- (iii) Etching and stripping equipment - used for etching or cleaning surfaces of the wafers.
  - (A) Wet etching equipment - in which chemical etching materials are applied by spraying or immersion. Spray etchers provide more uniform results than bath etchers, since they perform the operation on one wafer at a time.
  - (B) Dry plasma etching - in which etching materials are presented as gases within a plasma energy field, providing an anisotropic etch profile.
  - (C) Ion beam milling equipment - in which ionized gas atoms are accelerated toward the wafer surface. The impact results in the top layer being physically removed from the surface.
  - (D) Strippers or ashers - using techniques similar to etching this apparatus removes the spent photoresist from the surface of the wafer after it has served its purpose as a "stencil". This equipment is also used for removal of nitrides, oxides, and polysilicon, with an isotropic etch profile.
- (iv) Lithography equipment - used to transfer the circuit designs to the photoresist coated surface of the semiconductor wafer.
  - (A) Equipment for coating wafers with photoresist - these include the photoresist spinners which are used to apply liquid photoresist evenly over the surface of the wafer.
  - (B) Equipment for exposing the photoresist coated wafer with the circuit design (or a part thereof):
    - (1) Using a mask or reticle and exposing the photoresist to light (generally ultraviolet) or, in some instances, X-rays:
      - (a) Contact printers - where the mask or reticle is in contact with the wafer during exposure.
      - (b) Proximity aligners - similar to contact aligners except actual contact doesn't take place between the mask or reticle and the wafer.
      - (c) Scanning aligners - which use projection techniques to expose a continuously moving slit across the mask and wafer.
      - (d) Step and repeat aligners - which use projection techniques to expose the wafer a portion at a time. Exposure can be by reduction from the mask to the wafer or 1:1. Enhancements include the use of an excimer laser.
    - (2) Direct write on wafer equipment - these apparatus operate with no mask or reticle. They use a computer controlled "writing beam" (such as, an electron beam (E-beam), ion beam or laser) to "draw" the circuit design directly on the photoresist coated wafer.
  - (C) Equipment for developing exposed wafers - these include chemical baths similar to those used in photographic laboratory applications

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(d) Assembly equipment

- (i) Dicing equipment - these include sawing machines and scribing machines (including laser scribers) and dicing accessories such as wafer breaking equipment.
- (ii) Die bonding equipment - which installs the die to the package by soldering or gluing
- (iii) Wire bonding equipment - used for attaching thin wires or tapes (usually of gold, aluminum or copper) from the die bonding pads to the corresponding pads on the package.
- (iv) Packaging equipment - which are used to encapsulate or package a semiconductor device. They include sealing furnaces, lid welders, plastic encapsulation presses, lead trim and form equipment, package deflashers, and tin dip and solder plate equipment.

(e) Testing and inspection equipment

- (i) Optical inspection equipment - These include equipment that "examines" portions of the wafer surface and compares them either to a standard pattern or to other portions of the wafer surface.
- (ii) Electrical testing equipment - These include computer controlled systems that test the functions and electrical specifications of semiconductor devices through the application and detection of electrical signals or patterns. Testing is performed on both unencapsulated dice and packaged integrated circuits.

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## CHAPTER 84

### NUCLEAR REACTORS, BOILERS, MACHINERY AND MECHANICAL APPLIANCES; PARTS THEREOF

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#### Notes

1. This chapter does not cover:
  - (a) Millstones, grindstones or other articles of chapter 68;
  - (b) Machinery or appliances (for example, pumps) of ceramic material and ceramic parts of machinery or appliances of any material (chapter 69);
  - (c) Laboratory glassware (heading 7017); machinery, appliances or other articles for technical uses or parts thereof, of glass (heading 7019 or 7020);
  - (d) Articles of heading 7321 or 7322 or similar articles of other base metals (chapters 74 to 76 or 78 to 81);
  - (e) Electromechanical tools for working in the hand, of heading 8508, or electromechanical domestic appliances of heading 8509; or
  - (f) Hand-operated mechanical floor sweepers, not motorized (heading 9603).
2. Subject to the operation of note 3 to section XVI, a machine or appliance which answers to a description in one or more of the headings 8401 to 8424 and at the same time to a description in one or more of the headings 8425 to 8480 is to be classified under the appropriate heading of the former group and not the latter.

Heading 8419 does not, however, cover:

  - (a) Germination plant, incubators or brooders (heading 8436);
  - (b) Grain-dampening machines (heading 8437);
  - (c) Diffusing apparatus for sugar juice extraction (heading 8438);
  - (d) Machinery for the heat treatment of textile yarns, fabrics or made up textile articles (heading 8451); or
  - (e) Machinery or plant, designed for mechanical operation, in which a change of temperature, even if necessary, is subsidiary.

Heading 8422 does not cover:

  - (a) Sewing machines for closing bags or similar containers (heading 8452); or
  - (b) Office machinery of heading 8472.

Heading 8424 does not cover:

Ink-jet printing machines (heading 8443 or 8471).
3. A machine tool for working any material which answers to a description in heading 8456 and at the same time to a description in heading 8457, 8458, 8459, 8460, 8461, 8464 or 8465 is to be classified in heading 8456.
4. Heading 8457 applies only to machine tools for working metal, other than lathes (including turning centers), which can carry out different types of machining operations either:
  - (a) by automatic tool change from a magazine or the like in conformity with a machining program (machining centers),
  - (b) by the automatic use, simultaneously or sequentially, of different unit heads working on a fixed position workpiece (unit construction machines, single station), or
  - (c) by the automatic transfer of the workpiece to different unit heads (multi-station transfer machines).

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## Notes (con.)

5. (A) For purposes of heading 8471, the expression "automatic data processing machines" means:
- (a) Digital machines, capable of (1) storing the processing program or programs and at least the data immediately necessary for execution of the program; (2) being freely programmed in accordance with the requirements of the user; (3) performing arithmetical computations specified by the user; and, (4) executing, without human intervention, a processing program which requires them to modify their execution, by logical decision during the processing run;
  - (b) Analog machines capable of simulating mathematical models and comprising at least: analog elements, control elements and programming elements;
  - (c) Hybrid machines consisting of either a digital machine with analog elements or an analog machine with digital elements.
- (B) Automatic data processing machines may be in the form of systems consisting of a variable number of separate units. Subject to paragraph (E) below, a unit is to be regarded as being a part of a complete system if it meets all the following conditions:
- (a) It is of a kind solely or principally used in an automatic data processing system;
  - (b) It is connectable to the central processing unit either directly or through one or more other units; and
  - (c) It is able to accept or deliver data in a form (codes or signals) which can be used by the system.
- (C) Separately presented units of an automatic data processing machine are to be classified in heading 8471.
- (D) Printers, keyboards, X-Y coordinate input devices and disk storage units which satisfy the conditions of paragraphs (B)(b) and (B)(c) above, are in all cases to be classified as units of heading 8471.
- (E) Machines performing a specific function other than data processing and incorporating or working in conjunction with an automatic data processing machine are to be classified in the headings appropriate to their respective functions or, failing that, in residual headings.
6. Heading 8482 applies, inter alia, to polished steel balls, the maximum and minimum diameters of which do not differ from the nominal diameter by more than 1 percent or by more than 0.05 mm, whichever is less. Other steel balls are to be classified under heading 7326.
7. A machine which is used for more than one purpose is, for the purposes of classification, to be treated as if its principal purpose were its sole purpose.
- Subject to note 2 to this chapter and note 3 to section XVI, a machine the principal purpose of which is not described in any heading or for which no one purpose is the principal purpose is, unless the context otherwise requires, to be classified in heading 8479. Heading 8479 also covers machines for making rope or cable (for example, stranding, twisting or cabling machines) from metal wire, textile yarn or any other material or from a combination of such materials.
8. For the purposes of heading 8470, the term "pocket-size" applies only to machines the dimensions of which do not exceed 170 mm x 100 mm x 45 mm.

## Subheading Notes

1. For the purposes of subheading 8471.49, the term "systems" means automatic data processing machines whose units satisfy the conditions laid down in note 5(B) to chapter 84 and which comprise at least a central processing unit, one input unit (for example, a keyboard or a scanner), and one output unit (for example, a visual display unit or a printer).
2. Subheading 8482.40 applies only to bearings with cylindrical rollers of a uniform diameter not exceeding 5 mm and having a length which is at least three times the diameter. The ends of the rollers may be rounded.

## Additional U.S. Notes

1. For the purposes of subheadings 8479.89.65 and 8479.89.97, the rate of duty "Free (C)" appearing in the column entitled "1-Special" applies only to the following articles: nonelectric starter motors; propeller regulators, nonelectric; servo-mechanisms, nonelectric; windshield wipers, nonelectric; hydropneumatic accumulators; pneumatic starters for turbojets, turbopropellers, or other gas turbines; toilet units specially designed for aircraft; mechanical actuators for thrust reversers.

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## Additional U.S. Notes (con.)

2. Subheadings 8473.30.30 and 8473.30.60 cover the following parts of printers of subheading 8471.60:
  - (a) Control or command assemblies, incorporating more than one of the following: printed circuit assembly, hard or flexible (floppy) disk drive, keyboard, user interface;
  - (b) Light source assemblies, incorporating more than one of the following: light emitting diode assembly, gas laser, mirror polygon assembly, base casting;
  - (c) Laser imaging assemblies, incorporating more than one of the following: photoreceptor belt or cylinder, toner receptacle unit, toner developing unit, charge/discharge units, cleaning unit;
  - (d) Image fixing assemblies, incorporating more than one of the following: fuser, pressure roller, heating element, release oil dispenser, cleaning unit, electrical control;
  - (e) Ink jet marking assemblies, incorporating more than one of the following: thermal print head, ink dispensing unit, nozzle and reservoir unit, ink heater;
  - (f) Maintenance/sealing assemblies, incorporating more than one of the following: vacuum unit, ink jet covering unit, sealing unit, purging unit;
  - (g) Paper handling assemblies, incorporating more than one of the following: paper transport belt, roller, print bar, carriage, gripper roller, paper storage unit, exit tray;
  - (h) Thermal transfer imaging assemblies, incorporating more than one of the following: thermal print head, cleaning unit, supply or take-up roller;
  - (i) Ionographic imaging assemblies, incorporating more than one of the following: ion generation and emitting unit, air assist unit, printed circuit assembly, charge receptor belt or cylinder, toner receptacle unit, toner distribution unit, developer receptacle and distribution unit, developing unit, charge/discharge unit, cleaning unit; or
  - (k) Combinations of the above specified assemblies.
3. For the purposes of subheadings 8466.10.40, 8466.20.40 and 8466.30.45, the expression "machines described in additional U.S. note 3 to chapter 84" means any of the following machines: machines of subheading 8456.10.60; machines of subheading 8456.91; machines of 8456.99.10; machines of subheading 8456.99.70; machines of subheading 8462.21.40 or 8462.29.40; machines of subheading 8464.10 for sawing monocrystal semiconductor boules into slices, or wafers into chips; machines of subheading 8464.20.10; machines of subheading 8464.90.10; machines of subheading 8464.90.60.

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Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8401		Nuclear reactors; fuel elements (cartridges), non-irradiated, for nuclear reactors; machinery and apparatus for isotopic separation; parts thereof:				
8401.10.00	00	Nuclear reactors .....	t .....	3.3%	Free (A,CA,E,IL,J, MX)	45%
8401.20.00	00	Machinery and apparatus for isotopic separation, and parts thereof .....	t .....	2.6%	Free (A,CA,E,IL,J, MX)	35%
8401.30.00	00	Fuel elements (cartridges), non-irradiated, and parts thereof .....	X .....	3.3%	Free (A,CA,E,IL,J, MX)	45%
8401.40.00	00	Parts of nuclear reactors .....	t .....	3.3%	Free (A,CA,E,IL,J, MX)	45%
8402		Steam or other vapor generating boilers (other than central heating hot water boilers capable also of producing low pressure steam); super-heated water boilers; parts thereof:				
8402.11.00	00	Steam or other vapor generating boilers: Watertube boilers with a steam production exceeding 45 t per hour .....	t .....	5.2% <sup>1/</sup>	Free (A,CA,E,IL,J, MX)	45%
8402.12.00	00	Watertube boilers with a steam production not exceeding 45 t per hour .....	t .....	4.3%	Free (A,CA,E,IL,J, MX)	45%
8402.19.00	00	Other vapor generating boilers, including hybrid boilers .....	t .....	5.2%	Free (A,CA,E,IL,J, MX)	45%
8402.20.00	00	Super-heated water boilers .....	t .....	3.3%	Free (A,CA,E,IL,J, MX)	45%
8402.90.00		Parts .....		4.3%	Free (A,CA,E,IL,J, MX)	45%
	10	Heat exchangers .....	t			
	90	Other .....	X			
8403		Central heating boilers (other than those of heading 8402) and parts thereof:				
8403.10.00	00	Boilers .....	No. ....	Free		45%
8403.90.00	00	Parts .....	X .....	Free		45%
8404		Auxiliary plant for use with boilers of heading 8402 or 8403 (for example, economizers, super-heaters, soot removers, gas recoverers); condensers for steam or other vapor power units; parts thereof:				
8404.10.00		Auxiliary plant for use with boilers of heading 8402 or 8403 .....		3.5%	Free (A,CA,E,IL,J, MX)	45%
	10	Economizers .....	t			
	50	Other .....	t			
8404.20.00	00	Condensers for steam or other vapor power units .....	t .....	5.6%	Free (A,CA,E,IL,J, MX)	45%
8404.90.00	00	Parts .....	X .....	3.5%	Free (A,CA,E,IL,J, MX)	45%

<sup>1/</sup> See subheading 9902.84.02.



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Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8405		Producer gas or water gas generators, with or without their purifiers; acetylene gas generators and similar water process gas generators, with or without their purifiers; parts thereof:				
8405.10.00	00	Producer gas or water gas generators, with or without their purifiers; acetylene gas generators and similar water process gas generators, with or without their purifiers	X	Free		45%
8405.90.00	00	Parts	X	Free		45%
8406		Steam turbines and other vapor turbines, and parts thereof:				
8406.10		Turbines for marine propulsion:				
8406.10.10	00	Steam turbines No.	6.7%	Free (A,CA,E,IL	20% J,MX)	
8406.10.90	00	Other	No.	Free		27.5%
8406.81		Other turbines:				
8406.81.10		Of an output exceeding 40 MW:				
8406.81.10		Steam turbines		6.7%	Free (A,CA,E,IL, J,MX)	20%
	20	Stationary steam turbines, condensing type	No.			
	70	Other	No.			
8406.81.90	00	Other	No.	Free		27.5%
8406.82		Of an output not exceeding 40 MW:				
8406.82.10		Steam turbines		6.7%	Free (A,CA,E,IL, J,MX)	20%
	10	Stationary steam turbines, condensing type:				
	20	Not exceeding 7,460 kW	No.			
		Exceeding 7,460 kW	No.			
	50	Other:				
	70	Not exceeding 7,460 kW	No.			
		Exceeding 7,460 kW	No.			
8406.82.90	00	Other	No.	Free		27.5%
8406.90		Parts:				
		Of steam turbines:				
8406.90.20	00	Rotors, finished for final assembly	No.	6.7%	Free (A,CA,E,IL,J, MX)	20%
8406.90.30	00	Rotors, not further advanced than cleaned or machined for removal of fins, gates, sprues, and risers, or to permit location in finishing machinery	No.	6.7%	Free (A,CA,E,IL,J, MX)	20%
8406.90.40	00	Blades, rotating or stationary	No.	6.7%	Free (A,CA,E,IL,J, MX)	20%
8406.90.45		Other		6.7%	Free (A,CA,E,IL,J, MX)	20%
	40	Rotors or spindles and rotor or spindle assemblies	No.			
	80	Other	X			
8406.90.50	00	Other:				
8406.90.50		Rotors, finished for final assembly	No.	Free		27.5%
8406.90.60	00	Rotors, not further advanced than cleaned or machined for removal of fins, gates, sprues, and risers, or to permit location in finishing machinery	No.	Free		27.5%
8406.90.70	00	Blades, rotating or stationary	No.	Free		27.5%
8406.90.75	00	Other	X	Free		27.5%

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Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8407		Spark-ignition reciprocating or rotary internal combustion piston engines:				
8407.10.00		Aircraft engines . . . . .		Free		35%
		For use in civil aircraft <u>1/</u> :				
		New:				
	20	Less than 373 kW . . . . .	No.			
	40	373 kW or over . . . . .	No.			
	60	Used or rebuilt . . . . .	No.			
	90	Other . . . . .	No.			
8407.21.00		Marine propulsion engines:				
		Outboard motors . . . . .		Free		35%
	40	Less than 22.38 kW . . . . .	No.			
	80	Other . . . . .	No.			
8407.29.00		Other . . . . .		Free		35%
	10	Inboard engines with outboard drive . . . . .	No.			
		Inboard engines with inboard drive:				
	20	Less than 746 W . . . . .	No.			
	30	746 W or greater, but not exceeding 18.65 kW . . . . .	No.			
	40	Exceeding 18.65 kW . . . . .	No.			
8407.31.00		Reciprocating piston engines of a kind used for the propulsion of vehicles of chapter 87:				
		Of a cylinder capacity not exceeding 50 cc . . . . .		Free		35%
	40	Less than 746 W . . . . .	No.			
	80	Other . . . . .	No.			
8407.32		Of a cylinder capacity exceeding 50 cc but not exceeding 250 cc:				
8407.32.10	00	To be installed in tractors suitable for agricultural use . . . . .	No.	Free		Free
8407.32.20		To be installed in vehicles of subheading 8701.20, or heading 8702, 8703 or 8704 . . . . .		Free		35%
	40	Used or rebuilt . . . . .	No.			
	80	Other . . . . .	No.			
8407.32.90		Other . . . . .		Free		35%
	40	Not exceeding 18.65 kW . . . . .	No.			
	80	Exceeding 18.65 kW . . . . .	No.			
8407.33		Of a cylinder capacity exceeding 250 cc but not exceeding 1,000 cc:				
8407.33.10		To be installed in tractors suitable for agricultural use . . . . .		Free		Free
	30	Not exceeding 37.3 kW . . . . .	No.			
		Exceeding 37.3 kW:				
	60	Air-cooled . . . . .	No.			
	90	Other . . . . .	No.			
8407.33.30		To be installed in vehicles of subheading 8701.20, or heading 8702, 8703 or 8704:				
		To be installed in vehicles specially designed for traveling on snow, golf carts, non-amphibious all-terrain vehicles and burden carriers . . . . .		Free		35%
	40	Used or rebuilt . . . . .	No.			
	80	Other . . . . .	No.			
8407.33.60		Other . . . . .		2.5%	Free (A,B,CA,E,IL, J,MX)	35%
	40	Used or rebuilt . . . . .	No.			
	80	Other . . . . .	No.			
8407.33.90		Other . . . . .		Free		35%
	40	Not exceeding 18.65 kW . . . . .	No.			
	80	Exceeding 18.65 kW . . . . .	No.			

1/ See General Note 6.

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-7

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8407 (con.)		Spark-ignition reciprocating or rotary internal combustion piston engines (con.):				
		Reciprocating piston engines of a kind used for the propulsion of vehicles of chapter 87 (con.):				
8407.34		Of a cylinder capacity exceeding 1,000 cc:				
8407.34.05		Of a cylinder capacity not exceeding 2,000 cc:				
		To be installed in tractors				
	30	suitable for agricultural use . . . . .	No.	Free		Free
		Not exceeding 37.3 kW . . . . .	No.			
	60	Exceeding 37.3 kW:				
		Air-cooled . . . . .	No.			
	90	Other . . . . .	No.			
		To be installed in vehicles of subheading 8701.20, or heading 8702, 8703 or 8704:				
8407.34.14	00	Used or rebuilt . . . . .	No. . . . .	2.5%	Free (A,B,CA,E,IL, J,MX)	35%
8407.34.18	00	Other . . . . .	No. . . . .	2.5%	Free (A,B,CA,E,IL, J,MX)	35%
8407.34.25	00	Other . . . . .	No. . . . .	Free		35%
8407.34.35		Of a cylinder capacity exceeding 2,000 cc:				
		To be installed in tractors suitable for agricultural use . . . . .		Free		Free
	30	Not exceeding 37.3 kW . . . . .	No.			
	60	Exceeding 37.3 kW:				
		Air-cooled . . . . .	No.			
	90	Other . . . . .	No.			
		To be installed in vehicles of subheading 8701.20, or heading 8702, 8703 or 8704:				
8407.34.44	00	Used or rebuilt . . . . .	No. . . . .	2.5%	Free (A,B,CA,E,IL, J,MX)	35%
8407.34.48	00	Other . . . . .	No. . . . .	2.5%	Free (A,B,CA,E,IL, J,MX)	35%
8407.34.55	00	Other . . . . .	No. . . . .	Free		35%
8407.90		Other engines:				
8407.90.10		To be installed in agricultural or horticultural machinery or equipment . . . . .		Free		Free
		Not exceeding 37.3 kW:				
	10	Less than 4,476 W . . . . .	No.			
	20	Other . . . . .	No.			
		Other:				
	60	Air-cooled . . . . .	No.			
	80	Other . . . . .	No.			
8407.90.90		Other . . . . .		Free		35%
	10	Gas (natural or LP) engines . . . . .	No.			
		Other:				
	20	Less than 746 W . . . . .	No.			
	40	746 W or greater but less than 4,476 W . . . . .	No.			
	60	4,476 W or greater but not exceeding 18.65 kW . . . . .	No.			
	80	Exceeding 18.65 kW . . . . .	No.			

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-8

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8408		Compression-ignition internal combustion piston engines (diesel or semi-diesel engines):				
8408.10.00		Marine propulsion engines . . . . .		2.5%	Free (A,CA,E,IL,J, MX)	35%
	05	Not exceeding 111.9 kW . . . . .	No.			
	15	Exceeding 111.9 kW but not exceeding 149.2 kW . .	No.			
	20	Exceeding 149.2 kW but not exceeding 223.8 kW . .	No.			
	30	Exceeding 223.8 kW but not exceeding 373 kW . . .	No.			
	40	Exceeding 373 kW but not exceeding 746 kW . . . .	No.			
	50	Exceeding 746 kW . . . . .	No.			
8408.20		Engines of a kind used for the propulsion of vehicles of chapter 87:				
8408.20.10		To be installed in tractors suitable for agricultural use . . . . .		Free		Free
	40	Not exceeding 37.3 kW . . . . .	No.			
	80	Exceeding 37.3 kW . . . . .	No.			
8408.20.20	00	To be installed in vehicles of subheading 8701.20, or heading 8702, 8703 or 8704 . . . . .	No. . . . .	2.5%	Free (A*,B,CA,E, IL,J,MX)	35%
8408.20.90	00	Other . . . . .	No. . . . .	2.5%	Free (A*,CA,E,IL, J,MX)	35%
8408.90		Other engines:				
8408.90.10		To be installed in agricultural or horticultural machinery or equipment . . . . .		Free		Free
	40	Not exceeding 37.3 kW . . . . .	No.			
	80	Exceeding 37.3 kW . . . . .	No.			
8408.90.90		Other . . . . .		Free		35%
	10	Not exceeding 149.2 kW . . . . .	No.			
	20	Exceeding 149.2 kW but not exceeding 373 kW . . . . .	No.			
	30	Exceeding 373 kW but not exceeding 746 kW . .	No.			
	40	Exceeding 746 kW but not exceeding 1,119 kW . . . . .	No.			
	50	Exceeding 1,119 kW . . . . .	No.			

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-9

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8409		Parts suitable for use solely or principally with the engines of heading 8407 or 8408:				
8409.10.00		For aircraft engines . . . . .	kg	Free		35%
	40	For use in civil aircraft <sup>1/</sup> . . . . .	kg			
	80	Other . . . . .	kg			
8409.91		Other: Suitable for use solely or principally with spark-ignition internal combustion piston engines (including rotary engines):				
8409.91.10		Cast-iron parts, not advanced beyond cleaning, and machined only for the removal of fins, gates, sprues and risers or to permit location in finishing machinery . . . . .		Free		10%
	40	For vehicles of subheading 8701.20, or heading 8702, 8703 or 8704 . . . . .	kg			
	60	For marine propulsion engines . . . . .	kg			
	80	Other . . . . .	kg			
		Other: For vehicles of subheading 8701.20, or heading 8702, 8703 or 8704:				
8409.91.30	00	Aluminum cylinder heads . . . . .	No. . . . . kg	2.5%	Free (A,B,CA,E,IL, J,MX)	35%
8409.91.50		Other . . . . .		2.5%	Free (A*,B,CA,E, IL,J,MX)	35%
	10	Connecting rods . . . . .	No. kg			
	80	Other . . . . .	kg			
8409.91.92		For marine propulsion engines . . . . .		2.5%	Free (A,CA,E,IL,J, MX)	35%
	10	Connecting rods . . . . .	No. kg			
	90	Other . . . . .	kg			
8409.91.99		Other . . . . .		2.5%	Free (A*,CA,E,IL, J,MX)	35%
	10	Connecting rods . . . . .	No. kg			
	90	Other . . . . .	kg			
8409.99		Other: Cast-iron parts, not advanced beyond cleaning, and machined only for the removal of fins, gates, sprues and risers or to permit location in finishing machinery . . . . .		Free		10%
8409.99.10		For vehicles of subheading 8701.20, or heading 8702, 8703 or 8704 . . . . .	kg			
	40	For marine propulsion engines . . . . .	kg			
	60	Other . . . . .	kg			
	80	Other: For vehicles of subheading 8701.20, or heading 8702, 8703 or 8704 . . . . .		2.5%	Free (A*,B,CA,E, IL,J,MX)	35%
8409.99.91		Connecting rods . . . . .	No. kg			
	10	Other . . . . .	kg			
8409.99.92		For marine propulsion engines . . . . .		2.5%	Free (A,CA,E,IL,J, MX)	35%
	10	Connecting rods . . . . .	No. kg			
	90	Other . . . . .	kg			
8409.99.99		Other . . . . .		Free		35%
	10	Connecting rods . . . . .	No. kg			
	90	Other . . . . .	kg			

<sup>1/</sup> See General Note 6.

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-10

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8410		Hydraulic turbines, water wheels and regulators therefor; parts thereof:				
		Hydraulic turbines and water wheels:				
8410.11.00	00	Of a power not exceeding 1,000 kW . . . . .	No. . . . .	3.8%	Free (A,CA,E,IL,J, MX)	27.5%
8410.12.00	00	Of a power exceeding 1,000 kW but not exceeding 10,000 kW . . . . .	No. . . . .	3.8%	Free (A,CA,E,IL,J, MX)	27.5%
8410.13.00	00	Of a power exceeding 10,000 kW . . . . .	No. . . . .	3.8%	Free (A,CA,E,IL,J, MX)	27.5%
8410.90.00	00	Parts, including regulators . . . . .	X . . . . .	3.8%	Free (A,CA,E,IL,J, MX)	27.5%

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-11

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8411		Turbojets, turbopropellers and other gas turbines, and parts thereof:				
		Turbojets:				
		Of a thrust not exceeding 25 kN:				
8411.11		Aircraft turbines	No.	Free		35%
8411.11.40	00	Other	No.	Free		35%
8411.11.80	00					
8411.12		Of a thrust exceeding 25 kN:				
8411.12.40	00	Aircraft turbines	No.	Free		35%
8411.12.80	00	Other	No.	Free		35%
		Turbopropellers:				
		Of a power not exceeding 1,100 kW:				
8411.21		Aircraft turbines	No.	Free		35%
8411.21.40	00	Other	No.	Free		35%
8411.21.80	00					
8411.22		Of a power exceeding 1,100 kW:				
8411.22.40	00	Aircraft turbines	No.	Free		35%
8411.22.80	00	Other	No.	Free		35%
		Other gas turbines:				
		Of a power not exceeding 5,000 kW:				
8411.81		Aircraft turbines	No.	Free		35%
8411.81.40	00	Other	No.	2.5%	Free (A,CA,E,IL,J, MX)	35%
8411.81.80	00					
		Of a power exceeding 5,000 kW:				
8411.82		Aircraft turbines	No.	Free		35%
8411.82.40	00	Other	No.	2.5%	Free (A,CA,E,IL,J, MX)	35%
8411.82.80	00					
		Parts:				
		Of turbojets or turbopropellers:				
8411.91		Cast-iron parts, not advanced beyond cleaning, and machined only for the removal of fins, gates, sprues and risers or to permit location in finishing machinery		Free		10%
8411.91.10						
	40	Parts of nonaircraft turbines	kg			
		Parts of aircraft turbines:				
	60	For use in civil aircraft <u>1</u> /	kg			
	90	Other	kg			
8411.91.90		Other		Free		35%
	40	Parts of nonaircraft turbines	X			
	80	Parts of aircraft turbines	X			
8411.99		Other:				
8411.99.10		Cast-iron parts, not advanced beyond cleaning, and machined only for the removal of fins, gates, sprues and risers or to permit location in finishing machinery		Free		10%
	10	Parts of nonaircraft gas turbines	X			
		Parts of aircraft gas turbines:				
	40	For use in civil aircraft <u>1</u> /	X			
	80	Other	X			
8411.99.90		Other		2.4%	Free (A,C,CA,E,IL, J,MX)	35%
	30	Parts of nonaircraft gas turbines: Rotors or spindles and rotor or spindle assemblies	No.			
	60	Other	X			
	90	Parts of aircraft gas turbines	X			

1/ See General Note 6.

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-12

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8412		Other engines and motors, and parts thereof:				
8412.10.00		Reaction engines other than turbojets . . . . .		Free		35%
	10	Missile and rocket engines . . . . .	No.			
	90	Other . . . . .	No.			
8412.21.00		Hydraulic power engines and motors:				
		Linear acting (cylinders) . . . . .		Free		27.5%
	15	Tie-rod type . . . . .	No.			
	30	Weld fused type . . . . .	No.			
		Other:				
	45	Telescoping . . . . .	No.			
	60	Rodless . . . . .	No.			
	75	Other . . . . .	No.			
8412.29		Other:				
8412.29.40	00	Hydrojet engines for marine propulsion . . . . .	No. . . . .	Free		30%
8412.29.80		Other . . . . .		Free		27.5%
		Unlimited rotary acting:				
	15	Gear type . . . . .	No.			
	30	Radial piston type . . . . .	No.			
	45	Axial piston type . . . . .	No.			
	60	Other . . . . .	No.			
	75	Other . . . . .	No.			
8412.31.00		Pneumatic power engines and motors:				
		Linear acting (cylinders) . . . . .		Free		27.5%
	40	Tie-rod type . . . . .	No.			
	80	Other . . . . .	No.			
8412.39.00		Other . . . . .		Free		27.5%
	40	Unlimited rotary acting . . . . .	No.			
	80	Other . . . . .	No.			
8412.80		Other engines and motors:				
8412.80.10	00	Spring-operated and weight-operated motors . . . . .	No. . . . .	Free		35%
8412.80.90	00	Other . . . . .	X . . . . .	Free		27.5%
8412.90		Parts:				
8412.90.10	00	Of hydrojet engines for marine propulsion . . . . .	X . . . . .	Free		30%
8412.90.90		Other . . . . .		Free		27.5%
		Of hydraulic power engines and motors:				
	05	Of linear acting engines and motors . . . . .	X			
	15	Other . . . . .	X			
		Of pneumatic power engines and motors:				
	25	Of linear acting engines and motors . . . . .	X			
	35	Other . . . . .	X			
	50	Of reaction engines other than turbojets . . . . .	X			
	80	Other . . . . .	X			



# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-13

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8413		Pumps for liquids, whether or not fitted with a measuring device; liquid elevators; part thereof:				
		Pumps fitted or designed to be fitted with a measuring device:				
8413.11.00	00	Pumps for dispensing fuel or lubricants, of the type used in filling-stations or in garages . . . . .	No. . . . .	Free		35%
8413.19.00	00	Other . . . . .	No. . . . .	Free		35%
8413.20.00	00	Hand pumps, other than those of subheading 8413.11 or 8413.19 . . . . .	No. . . . .	Free	35%	
8413.30		Fuel, lubricating or cooling medium pumps for internal combustion piston engines:				
8413.30.10	00	Fuel-injection pumps for compression-ignition engines . . . . .	No. . . . .	2.5%	Free (A*,B,C,CA, E,IL,J,MX)	35%
8413.30.90		Other . . . . .		2.5%	Free (A,B,C,CA,E, IL,J,MX)	35%
	30	Fuel pumps . . . . .	No.			
	60	Lubricating pumps . . . . .	No.			
	90	Other . . . . .	No.			
8413.40.00	00	Concrete pumps . . . . .	No. . . . .	Free		35%
8413.50.00		Other reciprocating positive displacement pumps . . . . .		Free		35%
	10	Oil well and oil field pumps . . . . .	No.			
	50	Diaphragm pumps . . . . .	No.			
		Other:				
	70	Hydraulic fluid power pumps:				
	80	Radial piston type . . . . .	No.			
	90	Other . . . . .	No.			
8413.60.00		Other rotary positive displacement pumps . . . . .		Free		35%
		Hydraulic fluid power pumps:				
	20	Vane type . . . . .	No.			
	30	Gear type . . . . .	No.			
	40	Other . . . . .	No.			
		Other:				
	50	Oil well and oil field pumps . . . . .	No.			
	70	Roller pumps . . . . .	No.			
	90	Other . . . . .	No.			

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-14

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8413 (con.)		Pumps for liquids, whether or not fitted with a measuring device; liquid elevators; part thereof (con.):				
8413.70		Other centrifugal pumps:				
8413.70.10	00	Stock pumps imported for use with machines for making cellulosic pulp, paper or paperboard . . . . .	No. . . . .	Free		35%
8413.70.20		Other . . . . .		Free		35%
	04	Submersible pumps . . . . .	No.			
		Other:				
	05	Single-stage, single-suction, close-coupled: With discharge outlet under 5.08 cm in diameter . . . . .	No.			
	15	With discharge outlet 5.08 cm or over in diameter . . . . .	No.			
	22	Single-stage, single-suction, frame-mounted: With discharge outlet under 7.6 cm in diameter . . . . .	No.			
	25	With discharge outlet 7.6 cm or over in diameter . . . . .	No.			
	30	Single-stage, double-suction . . . . .	No.			
	40	Multi-stage, single- or double-suction . . . . .	No.			
	90	Other . . . . .	No.			
8413.81.00		Other pumps; liquid elevators:				
	20	Pumps . . . . .	Free		35%	
	30	Turbine pumps . . . . .	No.			
		Household water systems, self-contained; and windmill pumps . . . . .	No.			
	40	Other . . . . .	No.			
8413.82.00	00	Liquid elevators . . . . .	No. . . . .	Free		35%
		Parts:				
		Of pumps:				
8413.91		Of fuel-injection pumps for compression-ignition engines . . . . .	X . . . . .	2.5%	Free (A,B,C,CA,E,IL,J,MX)	35%
8413.91.10	00					
8413.91.20	00	Of stock pumps imported for use with machines for making cellulosic pulp, paper or paperboard . . . . .	X . . . . .	Free		35%
8413.91.90		Other . . . . .		Free		35%
	10	Of subheading 8413.30.90 . . . . .	X			
	50	Of hydraulic fluid power pumps . . . . .	X			
	80	Other . . . . .	X			
8413.92.00	00	Of liquid elevators . . . . .	X . . . . .	Free		35%

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-15

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8414		Air or vacuum pumps, air or other gas compressors and fans; ventilating or recycling hoods incorporating a fan, whether or not fitted with filters; parts thereof:				
8414.10.00	00	Vacuum pumps .....	No. ....	2.5%	Free (A,B,C,CA,E,IL,J,MX)	35%
8414.20.00	00	Hand- or foot-operated air pumps .....	No. ....	3.7%	Free (A,B,C,CA,E,IL,J,MX)	35%
8414.30		Compressors of a kind used in refrigerating equipment (including air conditioning):				
8414.30.40	00	Not exceeding 1/4 horsepower .....	No. ....	Free		35%
8414.30.80		Other .....		Free		35%
		Screw type:				
	10	Not exceeding 200 horsepower .....	No.			
	20	Exceeding 200 horsepower .....	No.			
		Other:				
		For all refrigerants except ammonia:				
	30	For motor vehicles .....	No.			
		Other:				
	50	Exceeding 1/4 horsepower but not exceeding 1 horsepower .....	No.			
	60	Exceeding 1 horsepower but not exceeding 3 horsepower .....	No.			
	70	Exceeding 3 horsepower but not exceeding 10 horsepower .....	No.			
	80	Exceeding 10 horsepower .....	No.			
	90	For ammonia .....	No.			
8414.40.00	00	Air compressors mounted on a wheeled chassis for towing .....	No. ....	2.7%	Free (A,CA,E,IL,J,MX)	35%
8414.51.00		Fans: Table, floor, wall, window, ceiling or roof fans, with a self-contained electric motor of an output not exceeding 125 W .....		4.7%	Free (A,C,CA,E,IL,J,MX)	35%
		For permanent installation:				
	30	Ceiling fans .....	No.			
	60	Other .....	No.			
	90	Other .....	No.			
8414.59		Other:				
8414.59.10	00	Blowers for pipe organs .....	No. ....	Free		35%
8414.59.30	00	Other: Turbochargers and superchargers .....	No. ....	2.3%	Free (A,B,C,CA,E,IL,J,MX)	35%
8414.59.60		Other .....		2.3%	Free (A,B,C,CA,E,IL,J,MX)	35%
	40	Suitable for use with motor vehicles .....	No.			
		Other:				
	60	Centrifugal .....	No.			
	90	Axial .....	No.			
	95	Other .....	No.			
8414.60.00	00	Hoods having a maximum horizontal side not exceeding 120 cm .....	No. ....	Free		35%

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-16

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8414 (con.)		Air or vacuum pumps, air or other gas compressors and; fans ventilating or recycling hoods incorporating a fan, whether or not fitted with filters; parts thereof (con.):				
8414.80		Other, except parts:				
		Air compressors:				
8414.80.05	00	Turbochargers and superchargers . . . . .	No. . . . .	Free		35%
8414.80.15		Other . . . . .		Free		35%
		Stationary:				
		Reciprocating:				
	05	Not exceeding 746 W . . . . .	No.			
	15	Exceeding 746 W but not exceeding 4.48 kW . . . . .	No.			
	25	Exceeding 4.48 kW but not exceeding 8.21 kW . . . . .	No.			
	35	Exceeding 8.21 kW but not exceeding 11.19 kW . . . . .	No.			
	40	Exceeding 11.19 kW but not exceeding 19.4 kW . . . . .	No.			
	45	Exceeding 19.4 kW but not exceeding 74.6 kW . . . . .	No.			
	55	Exceeding 74.6 kW . . . . .	No.			
		Rotary:				
	60	Not exceeding 11.19 kW . . . . .	No.			
	65	Exceeding 11.19 kW but under 22.38 kW . . . . .	No.			
	70	22.38 kW and over but not exceeding 74.6 kW . . . . .	No.			
	75	Exceeding 74.6 kW . . . . .	No.			
	80	Other . . . . .	No.			
		Portable:				
	85	Under 0.57 cubic meters per minute . . .	No.			
	90	Other . . . . .	No.			
8414.80.20		Other compressors . . . . .		Free		35%
	05	Refrigerant recovery units . . . . .	No.			
		Other:				
	15	Centrifugal and axial . . . . .	No.			
		Other, including reciprocating and rotary:				
	55	Not exceeding 186.5 kW . . . . .	No.			
	65	Exceeding 186.5 kW but not exceeding 746 kW . . . . .	No.			
	75	Exceeding 746 kW . . . . .	No.			
8414.80.90	00	Other . . . . .	No. . . . .	3.7%	Free (A,B,C,CA,E, IL,J,MX)	35%

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-17

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8414 (con.)		Air or vacuum pumps, air or other gas compressors and fans; ventilating or recycling hoods incorporating a fan, whether or not fitted with filters; parts thereof (con.):				
8414.90		Parts:				
8414.90.10		Of fans (including blowers) and ventilating or recycling hoods . . . . .		4.7%	Free (A,B,C,CA,E,IL,J,MX)	35%
	40	Of fans of subheading 8414.51.00 . . . . .	X			
	80	Other . . . . .	X			
		Of compressors:				
8414.90.30	00	Stators and rotors of goods of subheading 8414.30 . . . . .	No.	Free		35%
8414.90.40		Other . . . . .		Free		35%
		Of refrigerating and air conditioning compressors:				
	20	Compressor housings . . . . .	No.			
	40	Other . . . . .	X			
		Other:				
		Of compressors of subheading 8414.40:				
	45	Compressor housings . . . . .	No.			
	55	Other . . . . .	X			
		Other:				
	65	Compressor housings . . . . .	No.			
	75	Other . . . . .	X			
8414.90.90		Other . . . . .		Free		35%
	40	Of vacuum pumps . . . . .	X			
	80	Other . . . . .	X			

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-18

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8415		Air conditioning machines, comprising a motor-driven fan and elements for changing the temperature and humidity, including those machines in which the humidity cannot be separately regulated; parts thereof:				
8415.10.00		Window or wall types, self-contained		Free		35%
	40	Less than 2.93 kW per hour	No.			
	60	2.93 kW per hour or greater but less than 4.98 kW per hour	No.			
	80	4.98 kW per hour or greater	No.			
8415.20.00	00	Of a kind used for persons, in motor vehicles	No.	1.4%	Free (A,B,CA,E,IL,J,MX)	35%
8415.81.00		Other, except parts: Incorporating a refrigerating unit and a valve for reversal of the cooling/heat cycle		1%	Free (A,B,C,CA,E,IL,J,MX)	35%
		Self-contained:				
	10	Not exceeding 17.58 kW per hour	No.			
	20	Exceeding 17.58 kW per hour	No.			
	30	Other	No.			
8415.82.00		Other, incorporating a refrigerating unit		2.2%	Free (A,B,C,CA,E,IL,J,MX)	35%
		Self-contained machines and remote condenser type air conditioners other than year-round units:				
	05	Not exceeding 17.58 kW per hour	No.			
	10	Exceeding 17.58 kW per hour	No.			
		Year-round units (heating and cooling):				
	15	Not exceeding 17.58 kW per hour	No.			
	20	Exceeding 17.58 kW per hour	No.			
		Room or central station air conditioning units for use with water chillers:				
	30	Room fan coil units	No.			
	35	Central station air handlers	No.			
	40	Other	No.			
		Dehumidifiers:				
	55	With a rated water removal capacity of less than 35 liters over a 24 hour period	No.			
	60	Other	No.			
	70	Other air conditioning machines incorporating a refrigerating unit	No.			
8415.83.00		Not incorporating a refrigerating unit		1.4%	Free (A,B,C,CA,E,IL,J,MX)	35%
		Heat exchangers including condensing units:				
		Condensing units:				
	50	Not exceeding 17.58 kW per hour	No.			
	60	Exceeding 17.58 kW per hour	No.			
	70	Other	No.			
	90	Other air conditioning machines not incorporating a refrigerating unit	No.			
8415.90		Parts:				
8415.90.40	00	Chassis, chassis bases and outer cabinets	No.	1.4%	Free (A,B,C,CA,E,IL,J,MX)	35%
8415.90.80		Other		1.4%	Free (A,B,C,CA,E,IL,J,MX)	35%
	25	Air conditioning evaporator coils	No.			
		Other:				
	45	Of automotive air conditioners	X			
	65	Of heat pumps	X			
	85	Other	X			

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-19

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8416		Furnace burners for liquid fuel, for pulverized solid fuel or for gas; mechanical stokers, including their mechanical grates, mechanical ash dischargers and similar appliances; parts thereof:				
8416.10.00	00	Furnace burners for liquid fuel .....	No. ....	Free	Free	
	27.5%					
8416.20.00	00	Other furnace burners, including combination burners .....	No. ....	Free		27.5%
	40	Gas burners .....	No. ....			
	80	Other .....	No. ....			
8416.30.00	00	Mechanical stokers, including their mechanical grates, mechanical ash dischargers and similar appliances ...	X .....	Free		27.5%
8416.90.00	00	Parts .....	X .....	Free		27.5%
8417		Industrial or laboratory furnaces and ovens, including incinerators, nonelectric, and parts thereof:				
8417.10.00	00	Furnaces and ovens for the roasting, melting or other heat treatment of ores, pyrites or of metals .....	No. ....	2.9%	Free (A,CA,E,IL,J, MX)	45%
8417.20.00	00	Bakery ovens, including biscuit ovens .....	No. ....	3.5%	Free (A,CA,E,IL,J, MX)	45%
8417.80.00	00	Other, except parts .....	No. ....	3.9%	Free (A,CA,E,IL,J, MX)	45%
8417.90.00	00	Parts .....	X .....	3.9%	Free (A,CA,E,IL,J, MX)	45%

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-20

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8418		Refrigerators, freezers and other refrigerating or freezing equipment, electric or other; heat pumps, other than the air conditioning machines of heading 8415; parts thereof:				
8418.10.00		Combined refrigerator-freezers, fitted with separate external doors . . . . .		Free		35%
	10	Compression type: Having a refrigerated volume of under 184 liters . . . . .	No.			
	20	Having a refrigerated volume of 184 liters and over but under 269 liters . . . . .	No.			
	30	Having a refrigerated volume of 269 liters and over but under 382 liters . . . . .	No.			
	40	Having a refrigerated volume of 382 liters and over . . . . .	No.			
	90	Other . . . . .	No.			
8418.21.00		Refrigerators, household type: Compression type . . . . .		Free		35%
	10	Having a refrigerated volume of under 184 liters . . . . .	No.			
	20	Having a refrigerated volume of 184 liters and over but under 269 liters . . . . .	No.			
	30	Having a refrigerated volume of 269 liters and over but under 382 liters . . . . .	No.			
	90	Having a refrigerated volume of 382 liters and over . . . . .	No.			
8418.22.00	00	Absorption type, electrical . . . . .	No. . . . .	1%	Free (A,CA,E,IL,J, MX)	35%
8418.29.00	00	Other . . . . .	No. . . . .	1.9%	Free (A,CA,E,IL,J, MX)	35%
8418.30.00	00	Freezers of the chest type, not exceeding 800 liters capacity . . . . .	No. . . . .	Free		35%
8418.40.00	00	Freezers of the upright type, not exceeding 900 liters capacity . . . . .	No. . . . .	Free		35%
8418.50.00		Other refrigerating or freezing chests, cabinets, display counters, showcases and similar refrigerating or freezing furniture . . . . .		Free		35%
	40	Freezing . . . . .	No.			
	80	Other . . . . .	No.			



# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-21

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8418 (con.)		Refrigerators, freezers and other refrigerating or freezing equipment, electric or other; heat pumps, other than the air conditioning machines of heading 8415; parts thereof (con.):				
8418.61.00		Other refrigerating or freezing equipment; heat pumps: Compression type units whose condensers are heat exchangers	No.	Free		35%
	40	Finned coil type	No.			
	80	Other	No.			
8418.69.00		Other		Free		35%
	10	Icemaking machines: Self-contained, cube and flake with a capacity not exceeding 227 kg	No.			
	15	Other	No.			
	20	Drinking water coolers, self-contained	No.			
	25	Soda fountain and beer dispensing equipment	No.			
	45	Centrifugal liquid chilling refrigerating units: Open-type	No.			
	50	Hermetic-type	No.			
	55	Absorption liquid chilling units	No.			
	60	Reciprocating liquid chilling refrigerating units	No.			
	90	Other refrigerating or freezing equipment: Household	No.			
	95	Other	No.			
8418.91.00	00	Parts: Furniture designed to receive refrigerating or freezing equipment	X	Free		35%
8418.99		Other:				
8418.99.40	00	Door assemblies incorporating more than one of the following: inner panel; outer panel; insulation; hinges; handles	X	Free		35%
8418.99.80		Other		Free		35%
	05	Refrigeration condensing units: Not exceeding 746 W	No.			
	10	Exceeding 746 W but not exceeding 2.2 kW	No.			
	15	Exceeding 2.2 kW but not exceeding 7.5 kW	No.			
	20	Exceeding 7.5 kW but not exceeding 22.3 kW	No.			
	25	Exceeding 22.3 kW	No.			
	50	Other: Parts of combined refrigerator-freezers fitted with separate external doors and parts of household type refrigerators	X			
	60	Other	X			

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-22

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8419		Machinery, plant or laboratory equipment, whether or not electrically heated, for the treatment of materials by a process involving a change of temperature such as heating, cooking, roasting, distilling, rectifying, sterilizing, pasteurizing, steaming, drying, evaporating, vaporizing, condensing or cooling, other than machinery or plant of a kind used for domestic purposes; instantaneous or storage water heaters, nonelectric; parts thereof:				
		Instantaneous or storage water heaters, nonelectric:				
8419.11.00	00	Instantaneous gas water heaters . . . . .	No. . . . .	Free		45%
8419.19.00		Other . . . . .		Free		45%
	20	Instantaneous water heaters . . . . .	No. . . . .			
	40	Solar water heaters . . . . .	No. . . . .			
	60	Other . . . . .	No. . . . .			
8419.20.00	00	Medical, surgical or laboratory sterilizers . . . . .	No. . . . .	Free		35%
		Dryers:				
8419.31.00	00	For agricultural products . . . . .	No. . . . .	Free		35%
8419.32		For wood, paper pulp, paper or paperboard:				
8419.32.10	00	For wood . . . . .	No. . . . .	Free		35%
8419.32.50	00	Other . . . . .	No. . . . .	Free		35%
8419.39.00		Other . . . . .		Free		35%
	40	For food and beverages . . . . .	No. . . . .			
	80	Other . . . . .	No. . . . .			
8419.40.00		Distilling or rectifying plant . . . . .			Free	
	35%					
	40	For food and beverages . . . . .	No. . . . .			
	80	Other . . . . .	No. . . . .			
8419.50		Heat exchange units:				
8419.50.10	00	Braze aluminum plate-fin heat exchangers . . . . .	No. . . . .	4.2%	Free (A,C,CA,E,IL, J,MX)	35%
8419.50.50	00	Other . . . . .	No. . . . .	Free		35%
8419.60		Machinery for liquefying air or other gases:				
8419.60.10	00	Machinery containing braze aluminum plate-fin heat exchangers . . . . .	No. . . . .	4.2%	Free (A,CA,E,IL, J,MX)	35%
8419.60.50	00	Other . . . . .	No. . . . .	Free		35%
		Other machinery, plant or equipment:				
8419.81		For making hot drinks or for cooking or heating food:				
8419.81.10	00	Microwave ovens . . . . .	No. . . . .	4%	Free (A,C,CA,E,IL, J,MX)	35%
8419.81.50		Other cooking stoves, ranges and ovens . . . . .		Free		35%
	40	For use in civil aircraft <sup>1/</sup> . . . . .	No. . . . .			
	80	Other . . . . .	No. . . . .			
8419.81.90		Other . . . . .		Free		35%
	40	Of a type used in restaurants, hotels or similar locations . . . . .	No. . . . .			
	80	Other . . . . .	No. . . . .			
8419.89		Other:				
8419.89.10	00	For making paper pulp, paper or paperboard . . . . .	No. . . . .	Free		35%
		Other:				
8419.89.60	00	Molten-salt-cooled acrylic acid reactors . . . . .	No. . . . .	Free		35%
8419.89.90		Other . . . . .		4.2%	Free (A,CA,E,IL, J,MX)	35%
		Designed for cooling:				
	20	For food and beverages . . . . .	No. . . . .			
	40	Other . . . . .	No. . . . .			
		Other:				
	60	For food and beverages . . . . .	No. . . . .			
	80	For rubber and plastics . . . . .	No. . . . .			
	85	For other materials . . . . .	No. . . . .			

<sup>1/</sup> See General Note 6.

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-23

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8419 (con.)		Machinery, plant or laboratory equipment, whether or not electrically heated, for the treatment of materials by a process involving a change of temperature such as heating, cooking, roasting, distilling, rectifying, sterilizing, pasteurizing, steaming, drying, evaporating, vaporizing, condensing or cooling, other than machinery or plant of a kind used for domestic purposes; instantaneous or storage water heaters, nonelectric; parts thereof (con.):				
8419.90		Parts:				
8419.90.10	00	Of instantaneous or storage water heaters . . . . .	X . . . . .	Free		45%
8419.90.20	00	Of machinery and plant for making paper pulp, paper or paperboard . . . . .	X . . . . .	Free		35%
8419.90.30	00	Of heat exchange units . . . . .	X . . . . .	Free		35%
8419.90.50		Other:				
		Of molten-salt-cooled acrylic acid reactors; of medical, surgical or laboratory sterilizers . . . . .		Free		35%
	40	Of medical, surgical or laboratory sterilizers . . . . .	X			
	80	Other . . . . .	X			
8419.90.80		Other . . . . .		4%	Free (A,CA,E,IL, J,MX)	35%
	20	Of an apparatus of a type used in restaurants, hotels or similar locations . . . . .	X			
	80	Other . . . . .	X			
8420		Calendering or other rolling machines, other than for metals or glass, and cylinders therefor; parts thereof:				
8420.10		Calendering or other rolling machines:				
8420.10.10	00	Textile calendering or rolling machines . . . . .	No. . . . .	3.5%	Free (A,CA,E,IL,J, MX)	40%
8420.10.20	00	Calendering or similar rolling machines for making paper pulp, paper or paperboard . . . . .	No. . . . .	Free		35%
8420.10.90		Other . . . . .		Free		35%
	40	Calendering or other rolling machines for rubber and plastics . . . . .	No.			
	80	Other . . . . .	No.			
8420.91		Parts:				
8420.91.10	00	Cylinders: For textile calendering or rolling machines . . . . .	No. . . . .	2.6%	Free (A,CA,E,IL,J, MX)	40%
8420.91.20	00	For calendering or other rolling machines for machines for making paper pulp, paper or paperboard . . . . .	No. . . . .	Free		35%
8420.91.90	00	Other . . . . .	No. . . . .	Free		35%
8420.99		Other:				
8420.99.10	00	Of machines for processing textiles . . . . .	X . . . . .	3.5%	Free (A,CA,E,IL,J, MX)	40%
8420.99.20	00	Of machines for making paper pulp, paper or paperboard . . . . .	X . . . . .	Free		35%
8420.99.90	00	Other . . . . .	X . . . . .	Free		35%

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-24

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8421		Centrifuges, including centrifugal dryers; filtering or purifying machinery and apparatus, for liquids or gases; parts thereof:				
		Centrifuges, including centrifugal dryers:				
8421.11.00	00	Cream separators .....	No. ....	Free		25%
8421.12.00	00	Clothes-dryers .....	No. ....	Free		25%
8421.19		Other:				
8421.19.30	00	Spin dryers for semiconductor wafer processing .....	No. ....	Free		25%
8421.19.90	00	Other .....	No. ....	1.3%	Free (A,C,CA,E,IL,J,MX)	25%
		Filtering or purifying machinery and apparatus for liquids:				
8421.21.00	00	For filtering or purifying water .....	No. ....	Free		35%
8421.22.00	00	For filtering or purifying beverages other than water .....	No. ....	Free		35%
8421.23.00	00	Oil or fuel filters for internal combustion engines ..	X .....	2.5%	Free (A,B,C,CA,E,IL,J,MX)	35%
8421.29.00		Other .....		Free		35%
	05	Refrigerant recovery and recycling units .....	No.			
		Other:				
	15	Oil-separation equipment .....	No.			
	40	Other:				
		Hydraulic fluid power filters, rated at 1,000 kPa or greater .....	No.			
	65	Other .....	No.			
		Filtering or purifying machinery and apparatus for gases:				
8421.31.00	00	Intake air filters for internal combustion engines ...	X .....	2.5%	Free (A,B,C,CA,E,IL,J,MX)	35%
8421.39		Other:				
8421.39.40	00	Catalytic converters .....	No. ....	Free		35%
8421.39.80		Other .....		Free		35%
		Dust collection and air purification equipment:				
	05	For machine tools of headings 8456 through 8465, inclusive .....	X			
	15	Other .....	X			
		Other:				
		Industrial gas cleaning equipment:				
	20	Electrostatic precipitators .....	No.			
	30	Other .....	No.			
	40	Gas separation equipment .....	No.			
		Other:				
	60	Pneumatic fluid power filters, rated at 550 kPa or greater .....	No.			
	90	Other .....	X			

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-25

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8421 (con.)		Centrifuges, including centrifugal dryers; filtering or purifying machinery and apparatus, for liquids or gases; parts thereof (con):				
8421.91		Parts:				
		Of centrifuges, including centrifugal dryers:				
8421.91.20	00	Drying chambers for the clothes-dryers of subheading 8421.12 and other parts of clothes-dryers incorporating drying chambers . . . . .	X . . . . .	Free		25%
8421.91.40	00	Furniture designed to receive the clothes-dryers of subheading 8421.12 . . . . .	X . . . . .	Free		25%
8421.91.60	00	Other . . . . .	X . . . . .	Free		25%
8421.99.00		Other . . . . .		Free		35%
	40	Parts of machinery and apparatus for filtering or purifying water . . . . .	X			
	80	Other . . . . .	X			

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Annotated for Statistical Reporting Purposes

XVI  
84-26

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8422		Dishwashing machines; machinery for cleaning or drying bottles or other containers; machinery for filling, closing, sealing or labeling bottles, cans, boxes, bags or other containers; machinery for capsuling bottles, jars, tubes and similar containers; other packing or wrapping machinery (including heat-shrink wrapping machinery); machinery for aerating beverages; parts thereof:				
8422.11.00	00	Dishwashing machines: Of the household type . . . . .	No. . . . .	2.4%	Free (A,CA,E,IL,J, MX)	35%
8422.19.00	00	Other . . . . .	No. . . . .	Free		35%
8422.20.00	00	Machinery for cleaning or drying bottles or other containers . . . . .	No. . . . .	Free		35%
8422.30		Machinery for filling, closing, sealing or labeling bottles, cans, boxes, bags or other containers; machinery for capsuling bottles, jars, tubes and similar containers; machinery for aerating beverages:				
8422.30.10	00	Can-sealing machines . . . . .	No. . . . .	Free		30%
8422.30.90		Other . . . . .		Free		35%
	10	Machines for aerating beverages . . . . .	No.			
	20	Labeling machines . . . . .	No.			
		Other:				
		Machinery for filling, closing, sealing, capsuling or labeling bottles, cans or similar containers:				
		Machines for filling, whether or not capable of performing other operations:				
	30	Vacuum or gas packaging . . . . .	No.			
	40	Other . . . . .	No.			
		Machines which perform only the following operations: capping, lidding, sealing or closing:				
	50	Vacuum or gas packaging . . . . .	No.			
	60	Other . . . . .	No.			
	70	Other . . . . .	No.			
		Machinery for filling, closing, sealing, capsuling or labeling boxes, bags or similar containers:				
	80	Machines for opening, filling and closing bags . . . . .	No.			
	90	Other . . . . .	No.			
8422.40		Other packing or wrapping machinery (including heat-shrink wrapping machinery):				
8422.40.10		Machines for packaging pipe tobacco; machines for wrapping candy; machines for wrapping cigarette packages; and combination candy cutting and wrapping machines . . . . .		Free		35%
	10	Machines for wrapping candy . . . . .	No.			
	90	Other . . . . .	No.			
8422.40.90		Other . . . . .		Free		35%
	40	Strapping machines . . . . .	No.			
	80	Other . . . . .	No.			

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Annotated for Statistical Reporting Purposes

XVI  
84-27

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8422 (con.)		Dishwashing machines; machinery for cleaning or drying bottles or other containers; machinery for filling, closing, sealing or labeling bottles, cans, boxes, bags or other containers; machinery for capsuling bottles, jars, tubes and similar containers; other packing or wrapping machinery (including heat-shrink wrapping machinery); machinery for aerating beverages; parts thereof (con.):				
8422.90		Parts:				
		Of dishwashing machines:				
8422.90.02	00	Water containment chambers for the dishwashing machines of subheading 8422.11 and other parts of dishwashing machines of the household type incorporating water containment chambers . . . . .	X . . . . .	Free		35%
8422.90.04	00	Door assemblies for the dishwashing machines of subheading 8422.11 . . . . .	X . . . . .	Free		35%
8422.90.06		Other . . . . .		Free		35%
	40	Of the household type . . . . .	X			
	80	Other . . . . .	X			
8422.90.10	00	Of can-sealing machines . . . . .	X . . . . .	Free		30%
8422.90.20	00	Of machines for packaging pipe tobacco, wrapping candy or wrapping cigarette packages, and of combination candy cutting and wrapping machines . . . . .	X . . . . .	Free		35%
8422.90.90		Other . . . . .		Free		35%
	20	Of machinery for cleaning or drying bottles or other containers . . . . .	X			
		Other:				
	30	Of strapping machines . . . . .	X			
	60	Of other wrapping and packaging machines . . . . .	X			
	95	Other . . . . .	X			

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-28

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8423		Weighing machinery (excluding balances of a sensitivity of 5 cg or better), including weight-operated counting or checking machines; weighing machine weights of all kinds; parts of weighing machinery:				
8423.10.00		Personal weighing machines, including baby scales; household scales		Free		45%
	10	Digital electronic type	No.			
	30	Other:				
	60	Of a kind suitable for carrying on the person	No.			
		Other	No.			
8423.20.00	00	Scales for continuous weighing of goods on conveyors	No.	2.9%	Free (A,CA,E,IL,J, MX)	45%
8423.30.00	00	Constant-weight scales and scales for discharging a predetermined weight of material into a bag or container, including hopper scales	No.	Free		45%
8423.81.00		Other weighing machinery: Having a maximum weighing capacity not exceeding 30 kg		Free		45%
		Digital electronic type:				
	10	Counting scales	No.			
	20	Retail scales, non-computing	No.			
	30	Retail scales, computing	No.			
	40	Other	No.			
	50	Other	No.			
8423.82.00		Having a maximum weighing capacity exceeding 30 kg but not exceeding 5,000 kg		Free		45%
	10	Digital electronic type	No.			
	50	Other	No.			
8423.89.00		Other		2.9%	Free (A,CA,E,IL,J, MX)	45%
	10	Digital electronic type	No.			
	50	Other	No.			
8423.90.00		Weighing machine weights of all kinds; parts of weighing machinery		2.8%	Free (A,CA,E,IL,J, MX)	45%
	40	Digital weight indicators	No.			
	80	Other	X			



# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-29

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8424		Mechanical appliances (whether or not hand operated) for projecting, dispersing or spraying liquids or powders; fire extinguishers, whether or not charged; spray guns and similar appliances; steam or sand blasting machines and similar jet projecting machines; parts thereof:				
8424.10.00	00	Fire extinguishers, whether or not charged . . . . .	No. . . . .	Free		35%
8424.20		Spray guns and similar appliances:				
8424.20.10	00	Simple piston pump sprays and powder bellows . . X . . . . .	X . . . . .	2.9%	Free (A,B,CA,E,IL, J,MX)	45%
8424.20.90	00	Other . . . . .	X . . . . .	Free		35%
8424.30		Steam or sand blasting machines and similar jet projecting machines:				
8424.30.10	00	Sand blasting machines . . . . .	No. . . . .	Free		Free
8424.30.90	00	Other . . . . .	X . . . . .	Free		35%
8424.81		Other appliances:				
8424.81.10	00	Agricultural or horticultural: Sprayers (except sprayers, self-contained, having a capacity not over 20 liters) . . . . .	X . . . . .	Free		Free
8424.81.90		Other . . . . .		2.4%	Free (A,CA,E,IL,J, MX)	35%
		Irrigation equipment:				
	10	Self-propelled, center pivot . . . . .	No.			
	20	Other . . . . .	No.			
		Other:				
	40	Sprayers, self-contained, having a capacity not over 20 liters . . . . .	No.			
	90	Other . . . . .	No.			
8424.89		Other:				
8424.89.30	00	Spraying appliances for etching, stripping or cleaning semiconductor wafers . . . . .	No. . . . .	Free		35%
8424.89.50	00	Spraying appliances for developing semiconductor wafers; spraying appliances for etching, developing, stripping or cleaning flat panel displays; deflash machines for cleaning and removing contaminants from the metal leads of semiconductor packages prior to the electroplating process (deflash by high pressure spray) . . . . .	No. . . . .	Free		35%
8424.89.70		Other . . . . .		1.8%	Free (A,B,CA,E,IL, J,MX)	35%
	10	Sprinkler systems (fire extinguishing equipment) . . . . .	No.			
	90	Other . . . . .	No.			
8424.90		Parts:				
8424.90.05	00	Of fire extinguishers . . . . .	X . . . . .	Free		35%
8424.90.10	00	Of simple piston pump sprays and powder bellows . . . . .	X . . . . .	2.9%	Free (A,B,CA,E,IL, J,MX)	45%
8424.90.20	00	Of sand blasting machines . . . . .	X . . . . .	Free		Free
8424.90.90		Other . . . . .		Free		35%
	40	Of steam and similar jet projecting machines . . X	X			
	80	Other . . . . .	X			

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-30

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8425		Pulley tackle and hoists other than skip hoists; winches and capstans; jacks:				
		Pulley tackle and hoists other than skip hoists or hoists of a kind used for raising vehicles:				
8425.11.00	00	Powered by electric motor No. ....	Free		35%	
8425.19.00	00	Other .....	No. ....	Free		35%
8425.20.00	00	Pit-head winding gear; winches specially designed for use underground .....	No. ....	Free		35%
		Other winches; capstans:				
8425.31.00	00	Powered by electric motor No. ....	Free		35%	
8425.39.00	00	Other .....	No. ....	Free		35%
		Jacks; hoists of a kind used for raising vehicles:				
8425.41.00	00	Built-in jacking systems of a type used in garages .	No. ....	Free		35%
8425.42.00	00	Other jacks and hoists, hydraulic .....	No. ....	Free		35%
8425.49.00	00	Other .....	No. ....	Free		35%
8426		Ships' derricks; cranes, including cable cranes; mobile lifting frames, straddle carriers and works trucks fitted with a crane:				
		Overhead traveling cranes, transporter cranes, gantry cranes, bridge cranes, mobile lifting frames and straddle carriers:				
8426.11.00	00	Overhead traveling cranes on fixed support .....	No. ....	Free		35%
8426.12.00	00	Mobile lifting frames on tires and straddle carriers .	No. ....	Free		35%
8426.19.00	00	Other .....	No. ....	Free		35%
8426.20.00	00	Tower cranes .....	No. ....	Free		35%
8426.30.00	00	Portal or pedestal jib cranes .....	No. ....	Free		35%
		Other machinery, self-propelled:				
8426.41.00		On tires .....		Free		35%
	05	Works trucks fitted with a crane .....	No.			
		Other:				
	10	Cable operated .....	No.			
	90	Other .....	No.			
8426.49.00		Other .....		Free		35%
	10	Cable operated .....	No.			
	90	Other .....	No.			
		Other machinery:				
8426.91.00	00	Designed for mounting on road vehicles .....	No. ....	Free		35%
8426.99.00	00	Other .....	No. ....	Free		35%
8427		Fork-lift trucks; other works trucks fitted with lifting or handling equipment:				
		Self-propelled trucks powered by an electric motor:				
8427.10		Rider-type, counterbalanced fork-lift trucks .....	No. ....	Free		35%
8427.10.40	00	Other .....		Free		35%
8427.10.80		Operator riding .....	No.			
	60	Automated guided vehicle (AGV) .....	No.			
	90	Other .....	No.			
8427.20		Other self-propelled trucks:				
8427.20.40	00	Rider-type, counterbalanced fork-lift trucks .....	No. ....	Free		35%
8427.20.80	00	Other .....	No. ....	Free		35%
8427.90.00	00	Other trucks .....	No. ....	Free		35%

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-31

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8428		Other lifting, handling, loading or unloading machinery (for example, elevators, escalators, conveyors, teleferics):				
8428.10.00	00	Passenger or freight elevators other than continuous action; skip hoists . . . . .	No. . . . .	Free		35%
8428.20.00		Pneumatic elevators and conveyors . . . . .		Free		35%
	10	Conveyors . . . . .	No.			
	50	Elevators . . . . .	No.			
		Other continuous-action elevators and conveyors, for goods or materials:				
8428.31.00	00	Specially designed for underground use . . . . .	No. . . . .	Free		35%
8428.32.00	00	Other, bucket type . . . . . No. . . . .		Free	35%	
8428.33.00	00	Other, belt type . . . . .	No. . . . .	Free		35%
8428.39.00	00	Other . . . . .	No. . . . .	Free		35%
8428.40.00	00	Escalators and moving walkways . . . . .	No. . . . .	Free		35%
8428.50.00	00	Mine wagon pushers, locomotive or wagon traversers, wagon tippers and similar railway wagon handling equipment . . . . .	No. . . . .	Free		35%
8428.60.00	00	Teleferics, chair lifts, ski draglines; traction mechanisms for funiculars . . . . .	No. . . . .	Free		35%
8428.90.00		Other machinery . . . . .		Free		35%
	02	Of a kind used in charging or discharging furnaces	No.			
	04	Of a kind used for radioactive materials . . . . .	No.			
	06	Woodland log handling equipment (other than skidders) . . . . .	No.			
		Other:				
	10	Industrial robots . . . . .	No.			
	20	Oil and gas field machinery . . . . .	No.			
	30	Sidebooms and pipehandlers . . . . .	No.			
	40	Loaders, underground mine type . . . . .	No.			
	90	Other . . . . .	No.			

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-32

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8429		Self-propelled bulldozers, angledozers, graders, levelers, scrapers, mechanical shovels, excavators, shovel loaders, tamping machines and road rollers:				
8429.11.00		Bulldozers and angledozers:				
		Track laying		Free		35%
	10	New	No.			
	90	Used or rebuilt	No.			
8429.19.00		Other		Free		35%
	10	New	No.			
	90	Used or rebuilt	No.			
8429.20.00	00	Graders and levelers	No.	Free		35%
8429.30.00		Scrapers		Free		35%
		New:				
	20	Not exceeding 13.7 m <sup>3</sup>	No.			
	40	Exceeding 13.7 m <sup>3</sup>	No.			
	60	Used or rebuilt	No.			
8429.40.00		Tamping machines and road rollers		Free		35%
		New:				
	20	Vibratory	No.			
	40	Other	No.			
	60	Used or rebuilt	No.			
8429.51		Mechanical shovels, excavators and shovel loaders:				
8429.51.10		Front-end shovel loaders:				
		Wheel-type		Free		35%
		New:				
		Integral tractor shovel loaders, rear engine mounted:				
	05	2 wheel drive	No.			
	15	4 wheel drive with a bucket capacity of:				
		Under 1.5 m <sup>3</sup>	No.			
	25	At least 1.5 m <sup>3</sup> but under 2.2 m <sup>3</sup>	No.			
	30	At least 2.2 m <sup>3</sup> but under 2.9 m <sup>3</sup>	No.			
	35	At least 2.9 m <sup>3</sup> but under 3.8 m <sup>3</sup>	No.			
	40	At least 3.8 m <sup>3</sup> but under 5.2 m <sup>3</sup>	No.			
	45	At least 5.2 m <sup>3</sup> but under 7.6 m <sup>3</sup>	No.			
	50	At least 7.6 m <sup>3</sup> but under 11.4 m <sup>3</sup>	No.			
	55	11.4 m <sup>3</sup> and over	No.			
	60	Other	No.			
	65	Used or rebuilt	No.			
8429.51.50		Other		Free		35%
		New:				
	10	Less than 44.7 kW	No.			
	20	At least 44.7 kW but under 67.1 kW	No.			
	30	At least 67.1 kW but under 93.2 kW	No.			
	40	At least 93.2 kW but under 119.3 kW	No.			
	50	119.3 kW and over	No.			
	60	Used or rebuilt	No.			

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-33

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8429 (con.)		Self-propelled bulldozers, angledozers, graders, levelers, scrapers, mechanical shovels, excavators, shovel loaders, tamping machines and road rollers (con.):				
8429.52		Mechanical shovels, excavators and shovel loaders (con.):				
8429.52.10		Machinery with a 360° revolving superstructure:				
		Backhoes, shovels, clamshells and draglines . . . . .		Free		35%
		New:				
		Crawler mounted:				
	10	Hydraulic . . . . .	No.			
	20	Other . . . . .	No.			
		Other:				
	30	Hydraulic . . . . .	No.			
	40	Other . . . . .	No.			
	50	Used or rebuilt . . . . .	No.			
8429.52.50		Other . . . . .		Free		35%
	10	New . . . . .	No.			
	90	Used or rebuilt . . . . .	No.			
8429.59		Other:				
8429.59.10		Backhoes, shovels, clamshells and draglines . . . . .		Free		35%
		New:				
	30	Backhoes . . . . .	No.			
	60	Other . . . . .	No.			
	90	Used or rebuilt . . . . .	No.			
8429.59.50		Other . . . . .		Free		35%
		New:				
		Ditchers and trenchers:				
	20	Ladder type . . . . .	No.			
	40	Other . . . . .	No.			
	60	Other . . . . .	No.			
	80	Used or rebuilt . . . . .	No.			

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-34

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8430		Other moving, grading, leveling, scraping, excavating, tamping, compacting, extracting or boring machinery, for earth, minerals or ores; pile-drivers and pile-extractors; snowplows and snowblowers:				
8430.10.00	00	Pile-drivers and pile-extractors . . . . .	No. . . . .	Free		35%
8430.20.00		Snowplows and snowblowers . . . . .		Free		35%
		Snowblowers:				
	30	Attachment type . . . . .	No.			
	60	Other . . . . .	No.			
	90	Other . . . . .	No.			
		Coal or rock cutters and tunneling machinery:				
8430.31.00		Self-propelled . . . . .		Free		35%
	40	Rock breaking machines . . . . .	No.			
	80	Other . . . . .	No.			
8430.39.00		Other . . . . .		Free		35%
	40	Rock breaking machines . . . . .	No.			
	80	Other . . . . .	No.			
		Other boring or sinking machinery:				
8430.41.00	00	Self-propelled . . . . .	No. . . . .	Free		35%
8430.49		Other:				
8430.49.40	00	Offshore oil and natural gas drilling and production platforms . . . . .	kg . . . . .	Free		45%
8430.49.80		Other . . . . .		Free		35%
		For oil well and gas field drilling:				
	10	Rotary . . . . .	No.			
	20	Other . . . . .	No.			
		For water well drilling:				
	30	Rotary . . . . .	No.			
	40	Other . . . . .	No.			
	50	Other . . . . .	No.			
8430.50		Other machinery, self-propelled:				
8430.50.10	00	Peat excavators . . . . .	No. . . . .	Free		35%
8430.50.50	00	Other . . . . .	No. . . . .	Free		35%
		Other machinery, not self-propelled:				
8430.61.00	00	Tamping or compacting machinery . . . . .	No. . . . .	Free		35%
8430.62.00	00	Scrapers . . . . .	No. . . . .	Free		35%
8430.69.00	00	Other . . . . .	No. . . . .	Free		35%

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-35

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8431		Parts suitable for use solely or principally with the machinery of headings 8425 to 8430:				
8431.10.00	10	Of machinery of heading 8425 .....	X	Free		35%
	90	Of machinery of subheading 8425.11 or 8425.19 ..	X			
8431.20.00	00	Other .....	X	Free		35%
8431.31.00		Of machinery of heading 8427 .....	X			
		Of machinery of heading 8428:				
	20	Of passenger or freight elevators other than continuous action, skip hoists or escalators .....	X	Free		35%
	40	Of skip hoists .....	X			
	60	Of escalators .....	X			
8431.39.00	10	Other .....	X	Free		35%
	50	Of elevators and conveyors .....	X			
	70	Other:				
		Of oil and gas field machinery .....	X			
		Of the woodland log handling equipment of statistical reporting number 8428.90.8006 ..	X			
	80	Other .....	X			

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Annotated for Statistical Reporting Purposes

XVI  
84-36

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8431 (con.)		Parts suitable for use solely or principally with the machinery of headings 8425 to 8430 (con.):				
8431.41.00		Of machinery of heading 8426, 8429 or 8430:				
		Buckets, shovels, grabs and grips .....		Free		35%
	20	Shovel attachments .....	No.			
	40	Clamshell (grappler) attachments .....	No.			
	60	Dragline buckets .....	No.			
	80	Other .....	No.			
8431.42.00	00	Bulldozer or angledozer blades .....	No. ....	Free		35%
8431.43		Parts for boring or sinking machinery of subheading 8430.41 or 8430.49:				
8431.43.40	00	Of offshore oil and natural gas drilling and productions platforms .....	X .....	Free		45%
8431.43.80		Other .....		Free		35%
		Of oil and gas field machinery:				
	20	Tool joints, whether or not forged .....	No.			
	40	Drill pipe fitted with tool joints .....	No.			
	60	Other .....	No.			
	90	Of other boring or sinking machinery .....	X			
8431.49		Other:				
8431.49.10		Of machinery of heading 8426 .....		Free		35%
	10	Of machinery of subheadings 8426.11, 8426.19 and 8426.30 .....	X			
	60	Of mobile lifting frames, straddle carriers and works trucks fitted with a crane .....	X			
	90	Other .....	X			
8431.49.90		Other .....		Free		35%
		Attachments for mounting on machinery:				
	05	Backhoe attachments .....	No.			
	10	Front-end loader attachments .....	No.			
	15	Rippers and rooters .....	No.			
	20	Other .....	No.			
		Other:				
		Parts of coal or rock cutters and tunneling machinery:				
	25	Cast axle housings .....	No.			
	30	Other .....	X			
		Parts of backhoes, shovels, clamshells and draglines:				
	35	Cast axle housings .....	No.			
	40	Other .....	X			
		Other:				
	45	Scraper bowls for scrapers of subheadings 8429.30 and 8430.62 .....	No.			
	50	Track links .....	X			
	55	Cast axle housings .....	No.			
	60	Other .....	X			



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Annotated for Statistical Reporting Purposes

XVI  
84-37

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8432		Agricultural, horticultural or forestry machinery for soil preparation or cultivation; lawn or sports ground rollers; parts thereof:				
8432.10.00		Plows		Free		Free
	20	Moldboard plows except listers	No.			
	40	Disc plows	No.			
	60	Other	No.			
8432.21.00	00	Harrows, scarifiers, cultivators, weeders and hoes:				
		Disc harrows	No.	Free		Free
8432.29.00		Other		Free		Free
	40	Cultivators, weeders and hoes:				
		Cultivators, tractor drawn or for tractor mounting	No.			
	60	Walk behind rotary tillers	No.			
	80	Other	No.			
	90	Other	No.			
8432.30.00		Seeders, planters and transplanters		Free		Free
	10	Planters and transplanters	No.			
	90	Seeders	No.			
8432.40.00	00	Manure spreaders and fertilizer distributors	No.	Free		Free
8432.80.00	00	Other machinery	No.	Free		Free
8432.90.00		Parts		Free		Free
	05	Of plows	X			
	15	Of harrows, scarifiers, cultivators, weeders and hoes	X			
	30	Of seeders, planters, transplanters, manure spreaders and fertilizer distributors	X			
	80	Of other machinery	X			

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-38

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8433		Harvesting or threshing machinery, including straw or fodder balers; grass or hay mowers; machines for cleaning, sorting or grading eggs, fruit or other agricultural produce, other than machinery of heading 8437; parts thereof:				
8433.11.00		Mowers for lawns, parks or sports grounds:				
	10	Powered, with the cutting device rotating in a horizontal plane		Free		30%
		Electric mowers, including battery operated	No.			
	20	Riding mowers, other than electric:				
	30	Under 5.2 kW	No.			
	40	5.2 kW and over but under 7.46 kW	No.			
		7.46 kW and over	No.			
		Other:				
	50	Under 3.7 kW	No.			
	60	3.7 kW and over	No.			
8433.19.00		Other		Free		30%
	10	Greens mowers	No.			
	20	Gang cutting units	No.			
	30	Other riding mowers	No.			
		Other:				
	40	Gasoline powered	No.			
	50	Other	No.			
8433.20.00		Other mowers, including cutter bars for tractor mounting		Free		Free
		Tractor drawn or for tractor mounting:				
	20	Rotary cutter type	No.			
	40	Other	No.			
	60	Other	No.			
8433.30.00	00	Other haymaking machinery	No.	Free		Free
8433.40.00	00	Straw or fodder balers, including pick-up balers	No.	Free		Free
8433.51.00		Other harvesting machinery; threshing machinery:				
		Combine harvester-threshers		Free		Free
	10	Self-propelled	No.			
	90	Other	No.			
8433.52.00	00	Other threshing machinery	No.	Free		Free
8433.53.00	00	Root or tuber harvesting machines	No.	Free		Free
8433.59.00		Other		Free		Free
	10	Field forage harvesters	No.			
	90	Other	No.			
8433.60.00		Machines for cleaning, sorting or grading eggs, fruit or other agricultural produce		Free		Free
	10	Machines for cleaning, sorting or grading eggs	No.			
	90	Other	No.			
8433.90		Parts:				
8433.90.10	00	Of mowers for lawns, parks or sports grounds	X	Free		30%
8433.90.50		Other		Free		Free
		Of other mowers, harvesting machines and threshing machines:				
	20	Of haying machines and balers	X			
	40	Other	X			
	60	Of machines for cleaning, sorting or grading eggs	X			
	80	Of machines for cleaning, sorting or grading fruit or other agricultural produce	X			

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Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8434		Milking machines and dairy machinery, and parts thereof:				
8434.10.00	00	Milking machines .....	No. ....	Free		Free
8434.20.00	00	Dairy machinery .....	No. ....	Free		Free
8434.90.00	00	Parts .....	X .....	Free		Free
8435		Presses, crushers and similar machinery, used in the manufacture of wine, cider, fruit juices or similar beverages; parts thereof:				
8435.10.00	00	Machinery .....	No. ....	Free		40%
8435.90.00	00	Parts .....	X .....	Free		40%
8436		Other agricultural, horticultural, forestry, poultry-keeping or bee-keeping machinery, including germination plant fitted with mechanical or thermal equipment; poultry incubators and brooders; parts thereof:				
8436.10.00	00	Machinery for preparing animal feeds .....	No. ....	Free		Free
		Poultry-keeping machinery; poultry incubators and brooders:				
8436.21.00	00	Poultry incubators and brooders .....	No. ....	Free		Free
8436.29.00	00	Other .....	No. ....	Free		Free
8436.80.00		Other machinery .....		Free		Free
	20	Forestry machinery .....	No.			
		Other:				
	40	Barn and barnyard machines .....	No.			
	60	Machines for preparing crops for market or for use .....	No.			
		Other:				
	70	Bee-keeping machinery .....	No.			
	90	Other .....	No.			
8436.91.00		Parts:				
		Of poultry-keeping machinery or poultry incubators and brooders .....		Free		Free
	40	Of poultry incubators and brooders .....	X			
	80	Other .....	X			
8436.99.00		Other .....		Free		Free
	20	Of forestry machinery .....	X			
	30	Of bee-keeping machinery .....	X			
	35	Of machinery for preparing animal feeds .....	X			
		Other:				
	40	Of barn or barnyard machines .....	X			
	70	Of machines for preparing crops for market or for use .....	X			
	90	Other .....	X			
8437		Machines for cleaning, sorting or grading seed, grain or dried leguminous vegetables, and parts thereof; machinery used in the milling industry or for the working of cereals or dried leguminous vegetables, other than farm type machinery; parts thereof:				
8437.10.00	00	Machines for cleaning, sorting or grading seed, grain or dried leguminous vegetables .....	No. ....	Free		35%
8437.80.00		Other machinery .....		Free		35%
	10	Flour mill and grain mill machines .....	No.			
	90	Other .....	No.			
8437.90.00		Parts .....		Free		35%
	10	Of flour mill or grain mill machines .....	X			
	90	Other .....	X			

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Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8438		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; parts thereof:				
8438.10.00		Bakery machinery and machinery for the manufacture of macaroni, spaghetti or similar products	No.	Free		35%
	10	Bakery machinery	No.			
	90	Other	No.			
8438.20.00	00	Machinery for the manufacture of confectionery, cocoa or chocolate	No.	Free	35%	
8438.30.00	00	Machinery for sugar manufacture	No.	Free		Free
8438.40.00	00	Brewery machinery	No.	2.3%	Free (A,CA,E,IL,J, MX)	35%
8438.50.00		Machinery for the preparation of meat or poultry		2.8%	Free (A,CA,E,IL,J, MX)	35%
	10	Meat- and poultry-packing plant machinery	No.			
	90	Other	No.			
8438.60.00	00	Machinery for the preparation of fruits, nuts or vegetables	No.	Free		35%
8438.80.00	00	Other machinery	No.	Free		40%
8438.90		Parts:				
8438.90.10	00	Of machinery for sugar manufacture	X	Free		Free
8438.90.90		Other		2.8%	Free (A,CA,E,IL,J, MX)	35%
	15	Of bakery machinery and machinery for the manufacture of macaroni, spaghetti or similar products	X			
	30	Of machinery for the manufacture of confectionery, cocoa or chocolate	X			
	60	Of machinery for the preparation of meat or poultry	X			
	90	Other	X			
8439		Machinery for making pulp of fibrous cellulosic material or for making or finishing paper or paperboard (other than the machinery of heading 8419); parts thereof:				
8439.10.00		Machinery for making pulp of fibrous cellulosic material		Free		35%
	10	New	No.			
	90	Used or rebuilt	No.			
8439.20.00		Machinery for making paper or paperboard		Free		35%
	10	New	No.			
	90	Used or rebuilt	No.			
8439.30.00	00	Machinery for finishing paper or paperboard	No.	Free		35%
8439.91		Parts:				
8439.91.10	00	Of machinery for making pulp of fibrous cellulosic materials: Bed plates, roll bars and other stock-treating parts	X	Free		20%
8439.91.90	00	Other	X	Free		35%
8439.99		Other:				
8439.99.10	00	Of machinery for making paper or paperboard	X	Free		35%
8439.99.50	00	Of machinery for finishing paper or paperboard	X	Free		35%

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Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8440		Bookbinding machinery, including book-sewing machines, and parts thereof:				
8440.10.00	00	Machinery . . . . .	No. . . . .	Free		25%
8440.90.00	00	Parts . . . . .	X . . . . .	Free		25%
8441		Other machinery for making up paper pulp, paper or paperboard, including cutting machines of all kinds, and parts thereof:				
8441.10.00	00	Cutting machines . . . . .	No. . . . .	Free		35%
8441.20.00	00	Machines for making bags, sacks or envelopes . . . . .	No. . . . .	Free		35%
8441.30.00	00	Machines for making cartons, boxes, cases, tubes, drums or similar containers, other than by molding . . . . .	No. . . . .	Free		35%
8441.40.00	00	Machines for molding articles in paper pulp, paper or paperboard . . . . .	No. . . . .	Free		35%
8441.80.00	00	Other machinery . . . . .	No. . . . .	Free		35%
8441.90.00	00	Parts . . . . .	X . . . . .	Free		35%
8442		Machinery, apparatus and equipment (other than the machine tools of headings 8456 to 8465), for type-founding or typesetting, for preparing or making printing blocks, plates, cylinders or other printing components; printing type, blocks, plates, cylinders and other printing components; blocks, plates, cylinders and lithographic stones, prepared for printing purposes (for example, planed, grained or polished); parts thereof:				
8442.10.00	00	Phototypesetting and composing machines . . . . .	No. . . . .	Free		Free
8442.20.00	00	Machinery, apparatus and equipment for typesetting or composing by other processes, with or without founding device . . . . .	No. . . . .	Free		Free
8442.30.00	00	Other machinery, apparatus and equipment . . . . .	No. . . . .	Free		Free
8442.40.00	00	Parts of the foregoing machinery, apparatus or equipment . . . . .	X . . . . .	Free		Free
8442.50		Printing type, blocks, plates, cylinders and other printing components; blocks, plates, cylinders and lithographic stones, prepared for printing purposes (for example, planed, grained or polished):				
8442.50.10	10	Plates . . . . .		Free		25%
	10	Planed, grained, polished or otherwise prepared for engraving or impressing . . . . .	No.			
8442.50.90	90	Other . . . . .	No.			
	90	Other . . . . .		4%	Free (A,CA,E,IL,J, MX)	60%
	10	Planed, grained, polished or otherwise prepared for engraving or impressing . . . . .	No.			
	90	Other . . . . .	No.			

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Annotated for Statistical Reporting Purposes

XVI  
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Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8443		Printing machinery, including ink-jet printing machines, other than those of heading 8471; machines for uses ancillary to printing; parts thereof:				
8443.11		Offset printing machinery:				
8443.11.10	00	Reel-fed:				
		Double-width newspaper printing presses . . . .	No. . . . .	3.3%	Free (A,CA,E,IL, J,MX)	25%
8443.11.50	00	Other . . . . .	No. . . . .	Free		25%
8443.12.00	00	Sheet-fed, office type (sheet size not exceeding 22 x 36 cm) . . . . .	No. . . . .	Free		25%
8443.19		Other:				
8443.19.10	00	Weighing 900 kg or less . . . . .	No. . . . .	Free		25%
8443.19.50	00	Weighing more than 900 kg but less than 1,600 kg . . . . .	No. . . . .	Free		25%
8443.19.90	00	Weighing 1,600 kg or more . . . . .	No. . . . .	Free		25%
		Letterpress printing machinery, excluding flexographic printing:				
8443.21.00	00	Reel-fed . . . . .	No. . . . .	2.2%	Free (A,CA,E,IL,J, MX)	25%
8443.29.00	00	Other . . . . .	No. . . . .	Free		25%
8443.30.00	00	Flexographic printing machinery . . . . .	No. . . . .	2.2%	Free (A,CA,E,IL,J, MX)	25%
8443.40.00	00	Gravure printing machinery . . . . .	No. . . . .	2.2%	Free (A,CA,E,IL,J, MX)	25%
		Other printing machinery:				
8443.51		Ink-jet printing machinery:				
8443.51.10	00	Textile printing machinery . . . . .	X . . . . .	2.6% <u>1/</u>	Free (A,CA,E,IL, J,MX)	40%
8443.51.50	00	Other . . . . .	X . . . . .	Free		25%
8443.59		Other:				
8443.59.10	00	Textile printing machinery . . . . .	X . . . . .	2.6% <u>2/</u>	Free (A,CA,E,IL, J,MX)	40%
8443.59.50	00	Other . . . . .	X . . . . .	Free		25%
8443.60.00	00	Machines for uses ancillary to printing . . . . .	X . . . . .	Free		25%
8443.90		Parts:				
8443.90.10	00	Of textile printing machinery . . . . .	X . . . . .	2.6%	Free (A,CA,E,IL,J, MX)	40%
8443.90.50	00	Other . . . . .	X . . . . .	Free		25%

1/ See subheading 9902.84.43.

2/ See subheading 9902.84.20.

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Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8444.00.00		Machines for extruding, drawing, texturing or cutting man-made textile materials . . . . .		Free		40%
	10	Texturing machines . . . . .	No.			
	90	Other . . . . .	No.			
8445		Machines for preparing textile fibers; spinning, doubling or twisting machines and other machinery for producing textile yarns; textile reeling or winding (including weft winding) machines and machines for preparing textile yarns for use on the machines of heading 8446 or 8447:				
		Machines for preparing textile fibers:				
8445.11.00	00	Carding machines . . . . .	No. . . . .	Free		40%
8445.12.00	00	Combing machines . . . . .	No. . . . .	Free		40%
8445.13.00	00	Drawing or roving machines . . . . .	No. . . . .	Free		40%
8445.19.00		Other . . . . .		3.3%	Free (A,CA,E,IL,J, MX)	40%
	40	Cotton gins . . . . .	No.			
	80	Other . . . . .	No.			
8445.20.00	00	Textile spinning machines . . . . .	No. . . . .	Free		40%
8445.30.00		Textile doubling or twisting machines . . . . .		Free		40%
	10	Textile twisting machines . . . . .	No.			
	90	Other . . . . .	No.			
8445.40.00	00	Textile winding (including weft winding) or reeling machines . . . . .	No. . . . .	3.7%	Free (A,CA,E,IL,J, MX)	40%
8445.90.00	00	Other . . . . .	No. . . . .	3.7%	Free (A,CA,E,IL,J, MX)	40%
8446		Weaving machines (looms):				
8446.10.00		For weaving fabrics of a width not exceeding 30 cm . . . . .		Free		40%
	10	Power looms . . . . .	No.			
	90	Other . . . . .	No.			
		For weaving fabrics of a width exceeding 30 cm, shuttle type:				
8446.21		Power looms:				
8446.21.10	00	For weaving fabrics of a width exceeding 4.9 m . . . . .	No. . . . .	Free		40%
8446.21.50	00	Other . . . . .	No. . . . .	3.7% <sup>1/</sup>	Free (A,CA,E,IL, J, MX)	40%
8446.29.00	00	Other . . . . .	No. . . . .	Free		40%
8446.30		For weaving fabrics of a width exceeding 30 cm, shuttleless type:				
8446.30.10		Power looms for weaving fabrics of a width exceeding 4.9 m . . . . .		Free		40%
	10	Rapier type . . . . .	No.			
	20	Jet type . . . . .	No.			
	30	Other . . . . .	No.			
8446.30.50		Other . . . . .		3.7% <sup>2/</sup>	Free (A,CA,E,IL, J, MX)	40%
	10	Rapier type . . . . .	No.			
	20	Jet type . . . . .	No.			
	30	Other . . . . .	No.			

<sup>1/</sup> See subheading 9902.84.10.

<sup>2/</sup> See subheading 9902.84.46.

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XVI  
84-44

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8447		Knitting machines, stitch-bonding machines and machines for making gimped yarn, tulle, lace, embroidery, trimmings, braid or net and machines for tufting:				
8447.11		Circular knitting machines:				
		With cylinder diameter not exceeding 165 mm:				
8447.11.10	00	For knitting hosiery . . . . .	No. . . . .	Free		40%
8447.11.90		Other . . . . .		Free		40%
	10	Open-top cylinder machines . . . . .	No.			
	20	Cylinder and dial machines . . . . .	No.			
	90	Other . . . . .	No.			
8447.12		With cylinder diameter exceeding 165 mm:				
8447.12.10	00	For knitting hosiery . . . . .	No. . . . .	Free		40%
8447.12.90		Other . . . . .		Free		40%
	10	Open-top cylinder machines . . . . .	No.			
	20	Cylinder and dial machines . . . . .	No.			
	90	Other . . . . .	No.			
8447.20		Flat knitting machines; stitch-bonding machines:				
		V-bed flat knitting machines:				
8447.20.20	00	Power driven flat knitting machines over 50.8 cm in width . . . . .	No. . . . .	Free		40%
8447.20.30	00	Other . . . . .	No. . . . .	2.6%	Free (A,CA,E,IL, J,MX)	40%
8447.20.40	00	Warp knitting machines . . . . .	No. . . . .	Free		40%
8447.20.60	00	Other . . . . .	No. . . . .	Free		40%
8447.90		Other:				
8447.90.10	00	Braiding and lace-braiding machines . . . . .	No. . . . .	Free		40%
8447.90.50	00	Embroidery machines . . . . .	No. . . . .	Free		30%
8447.90.90	00	Other . . . . .	No. . . . .	Free		40%



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Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8448		Auxiliary machinery for use with machines of heading 8444, 8445, 8446 or 8447 (for example, dobbies, Jacquards, automatic stop motions and shuttle changing mechanisms); parts and accessories suitable for use solely or principally with the machines of this heading or of heading 8444, 8445, 8446 or 8447 (for example, spindles and spindle flyers, card clothing, combs, extruding nipples, shuttles, healds and heald-frames, hosiery needles):				
		Auxiliary machinery for machines of heading 8444, 8445, 8446 or 8447:				
8448.11.00	00	Dobbies and Jacquards; card reducing, copying, punching or assembling machines for use therewith . . . . .	X . . . . .	Free		40%
8448.19.00	00	Other . . . . .	X . . . . .	Free		40%
8448.20		Parts and accessories of machines of heading 8444 or of their auxiliary machinery:				
8448.20.10	00	Of machines for extruding or drawing man-made textile filaments . . . . .	X . . . . .	3.7%	Free (A,CA,E,IL,J, MX)	40%
8448.20.50		Other . . . . .		3.3%	Free (A,CA,E,IL,J, MX)	40%
	10	Of texturing machines . . . . .	X			
	90	Other . . . . .	X			
8448.31.00	00	Parts and accessories of machines of heading 8445 or of their auxiliary machinery:				
		Card clothing . . . . .	m <sup>2</sup> . . . . .	3.3%	Free (A,CA,E,IL,J, MX)	45%
8448.32.00		Of machines for preparing textile fibers, other than card clothing . . . . .		Free		40%
	10	Of cotton gins . . . . .	X			
	90	Other . . . . .	X			
8448.33.00	00	Spindles, spindle flyers, spinning rings and ring travellers . . . . .	X . . . . .	3.3%	Free (A,CA,E,IL,J, MX)	40%
8448.39		Other:				
8448.39.10	00	Parts of spinning, doubling or twisting machines . . . . .	X . . . . .	Free		40%
8448.39.50	00	Parts of winding or reeling machines . . . . .	X . . . . .	3.7%	Free (A,CA,E,IL,J, MX)	40%
8448.39.90	00	Other . . . . .	X . . . . .	Free		40%
8448.41.00	00	Parts and accessories of weaving machines (looms) or of their auxiliary machinery:				
		Shuttles . . . . .	X . . . . .	3.7%	Free (A,CA,E,IL,J, MX)	40%
8448.42.00	00	Reeds for looms, healds and heald-frames . . . . .	X . . . . .	3.7%	Free (A,CA,E,IL,J, MX)	40%
8448.49.00	00	Other . . . . .	X . . . . .	Free		40%
8448.51		Parts and accessories of machines of heading 8447 or of their auxiliary machinery:				
		Sinkers, needles and other articles used in forming stitches:				
		Needles for knitting machines:				
8448.51.10	00	Latch needles . . . . .	thousand	Free		\$2/1,000 + 60%
8448.51.20	00	Spring-beard needles . . . . .	thousand	Free		\$1.50/1,000 + 50%
8448.51.30	00	Other . . . . .	thousand	Free		\$1.15/1,000 + 40%
8448.51.50	00	Other . . . . .	X . . . . .	Free		40%
8448.59		Other:				
8448.59.10	00	Parts of knitting machines . . . . .	X . . . . .	Free		40%
8448.59.50	00	Other . . . . .	X . . . . .	Free		40%

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Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8449.00		Machinery for the manufacture or finishing of felt or nonwovens in the piece or in shapes, including machinery for making felt hats; blocks for making hats; parts thereof:				
8449.00.10	00	Finishing machinery and parts thereof	X	2.6%	Free (A,CA,E,IL,J, MX)	40%
8449.00.50	00	Other	X	Free		40%
8450		Household- or laundry-type washing machines, including machines which both wash and dry; parts thereof:				
		Machines, each of a dry linen capacity not exceeding 10 kg:				
8450.11.00		Fully automatic machines		1.4%	Free (A,CA,E,IL,J, MX)	35%
	10	Coin operated	No.			
		Other:				
	40	Top Loading	No.			
	80	Other	No.			
8450.12.00	00	Other machines with built-in centrifugal dryer	No.	2.6%	Free (A,CA,E,IL,J, MX)	40%
8450.19.00	00	Other	No.	1.8%	Free (A,CA,E,IL,J, MX)	35%
8450.20.00		Machines, each of a dry linen capacity exceeding 10 kg:				
				1%	Free (A,CA,E,IL,J, MX)	35%
	10	Coin operated	No.			
	90	Other	No.			
8450.90		Parts:				
8450.90.20	00	Tubs and tub assemblies	X	2.6%	Free (A*,CA,E,IL, J, MX)	40%
8450.90.40	00	Furniture designed to receive the machines of subheadings 8450.11 through 8450.20, inclusive	X	2.6%	Free (A,CA,E,IL,J, MX)	40%
8450.90.60	00	Other	X	2.6%	Free (A,CA,E,IL,J, MX)	40%

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Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8451		Machinery (other than machines of heading 8450) 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; parts thereof:				
8451.10.00	00	Dry-cleaning machines . . . . .	No. . . . .	Free		35%
8451.21.00		Drying machines: Each of a dry linen capacity not exceeding 10 kg . . . . .		3.4%	Free (A,CA,E,IL,J, MX)	40%
8451.29.00	10 90	Coin operated . . . . . Other . . . . .	No. No.		Free (A,CA,E,IL,J, MX)	40%
8451.30.00	10 90	For drying made up articles . . . . . Other . . . . .	No. No.			
8451.40.00	00	Ironing machines and presses (including fusing presses) . . . . .	No. . . . .	Free		35%
8451.50.00	00	Washing, bleaching or dyeing machines . . . . .	No. . . . .	3.5%	Free (A,CA,E,IL,J, MX)	40%
8451.80.00	00	Machines for reeling, unreeling, folding, cutting or pinking textile fabrics . . . . .	No. . . . .	Free		40%
8451.90.30	00	Other machinery . . . . .	No. . . . .	3.5%	Free (A,CA,E,IL,J, MX)	40%
8451.90.60	00	Parts: Drying chambers for the drying machines of subheading 8451.21 or 8451.29, and other parts of drying machines incorporating drying chambers . . . . .	X . . . . .	3.5%	Free (A,CA,E,IL,J, MX)	40%
8451.90.90	00	Furniture designed to receive the drying machines of subheading 8451.21 or 8451.29 . . . . .	X . . . . .	3.5%	Free (A,CA,E,IL,J, MX)	40%
	10	Other . . . . .		3.5%	Free (A,CA,E,IL,J, MX)	40%
	20	Of machines for washing, dry-cleaning, ironing, pressing or drying made up textile articles or of other household or laundry type machines . . . . .	X			
	90	Other: Of machines for bleaching, dyeing, washing or cleaning . . . . .	X			
	90	Other . . . . .	X			

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Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8452		Sewing machines, other than book-sewing machines of heading 8440; furniture, bases and covers specially designed for sewing machines; sewing machine needles; parts thereof:				
8452.10.00		Sewing machines of the household type . . . . .		Free		30%
	10	Valued not over \$20 each . . . . .	No.			
	90	Other . . . . .	No.			
		Other sewing machines:				
		Automatic units:				
8452.21		Specially designed to join footwear soles to uppers . . . . .	No. . . . .	Free		Free
8452.21.10	00					
8452.21.90	00	Other . . . . .	No. . . . .	Free		30%
8452.29		Other:				
8452.29.10	00	Specially designed to join footwear soles to uppers . . . . .	No. . . . .	Free		Free
8452.29.90	00	Other . . . . .	No. . . . .	Free		30%
8452.30.00	00	Sewing machine needles . . . . .	thousand	Free		42%
8452.40.00	00	Furniture, bases and covers for sewing machines, and parts thereof . . . . .	X . . . . .	2.5%	Free (A,CA,E,IL,J, MX)	20%
8452.90.00		Other parts of sewing machines . . . . .		Free		30%
	10	Of household machines . . . . .	X			
	90	Other . . . . .	X			
8453		Machinery for preparing, tanning or working hides, skins or leather or for making or repairing footwear or other articles of hides, skins or leather, other than sewing machines; parts thereof:				
8453.10.00	00	Machinery for preparing, tanning or working hides, skins or leather . . . . .	No. . . . .	Free		35%
8453.20.00	00	Machinery for making or repairing footwear . . . . .	No. . . . .	Free		Free
8453.80.00	00	Other machinery . . . . .	No. . . . .	Free		35%
8453.90		Parts:				
8453.90.10	00	Of machinery for making or repairing footwear . . . . .	X . . . . .	Free		Free
8453.90.50	00	Other . . . . .	X . . . . .	Free		35%

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-49

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8454		Converters, ladles, ingot molds and casting machines, of a kind used in metallurgy or in metal foundries, and parts thereof:				
8454.10.00	00	Converters .....	No. ....	Free		35%
8454.20.00		Ingot molds and ladles .....		Free		35%
	10	Ingot molds: For steel ingots .....	No. kg			
	60	Other .....	No. kg			
	80	Ladles .....	kg			
8454.30.00		Casting machines .....		Free		35%
	10	Die casting machines .....	No.			
	90	Other .....	No.			
8454.90.00		Parts .....		Free		35%
	30	Of casting machines: Of die casting machines .....	X			
	60	Other .....	X			
	70	Of ingot molds .....	X			
	80	Other .....	X			
8455		Metal-rolling mills and rolls therefor; parts thereof:				
8455.10.00	00	Tube mills .....	No. ....	Free		30%
		Other rolling mills:				
8455.21.00	00	Hot or combination hot and cold .....	No. ....	Free		30%
8455.22.00	00	Cold .....	No. ....	Free		30%
8455.30.00		Rolls for rolling mills .....		Free		30%
		Gray iron:				
	05	Not exceeding 2,268 kg .....	No. kg			
	15	Exceeding 2,268 kg but not exceeding 6,803.9 kg .....	No. kg			
	25	Exceeding 6,803.9 kg .....	No. kg			
		Cast steel:				
	35	Not exceeding 2,268 kg .....	No. kg			
	45	Exceeding 2,268 kg but not exceeding 6,803.9 kg .....	No. kg			
	55	Exceeding 6,803.9 kg .....	No. kg			
		Other:				
	65	Not exceeding 2,268 kg .....	No. kg			
	75	Exceeding 2,268 kg but not exceeding 6,803.9 kg .....	No. kg			
	85	Exceeding 6,803.9 kg .....	No. kg			
8455.90		Other parts:				
8455.90.40	00	Castings or weldments, individually weighing less than 90 tons, for the machines of heading 8455 .....	kg .....	Free		30%
8455.90.80	00	Other .....	kg .....	Free		30%

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-50

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8456		Machine tools for working any material by removal of material, by laser or other light or photon beam, ultrasonic, electro-discharge, electro-chemical, electron-beam, ionic-beam or plasma arc processes:				
8456.10		Operated by laser or other light or photon beam processes:				
8456.10.10		For working metal . . . . .	3.5%	Free (A,CA,E,IL,J, MX)	30%	
	10	Numerically controlled . . . . .	No.			
	20	Other . . . . .	No.			
8456.10.60	00	Other: For use in the production of semiconductor wafers; lasercutters for cutting contacting tracks in semiconductor production . . . . .	No. . . . .	Free	35%	
8456.10.80	00	Other . . . . .	No. . . . .	2.4%	Free (A,CA,E,IL,J, MX) 35%	
8456.20		Operated by ultrasonic processes:				
8456.20.10		For working metal . . . . .	3.5%	Free (A,CA,E,IL,J, MX)	30%	
	10	Numerically controlled . . . . .	No.			
	50	Other . . . . .	No.			
8456.20.50	00	Other . . . . .	No. . . . .	2.4%	Free (A,CA,E,IL,J, MX) 35%	
8456.30		Operated by electro-discharge processes:				
8456.30.10		For working metal . . . . .	3.5%	Free (A,CA,E,IL,J, MX)	30%	
	20	Traveling wire (wire-cut) type . . . . .	No.			
	50	Other: Numerically controlled . . . . .	No.			
	70	Other . . . . .	No.			
8456.30.50	00	Other . . . . .	No. . . . .	2.4%	Free (A,CA,E,IL,J, MX) 35%	
8456.91.00	00	Other: For dry etching patterns on semiconductor materials . . . . .	No. . . . .	Free	35%	
8456.99		Other:				
8456.99.10	00	For working metal: Focused ion beam milling machines to produce or repair masks and reticles for patterns on semiconductor devices . . . . .	No. . . . .	Free	30%	
8456.99.30		Other . . . . .	3.5%	Free (A,CA,E,IL,J, MX)	30%	
	05	Numerically controlled: Of a kind used for cutting metal by electro-chemical process . . . . .	No.			
	40	Other . . . . .	No.			
	60	Other: Of a kind used for cutting metal by electro-chemical process . . . . .	No.			
	80	Other . . . . .	No.			
8456.99.70	00	Other: For stripping and cleaning semiconductor wafers . . . . .	No. . . . .	Free	35%	
8456.99.90	00	Other . . . . .	No. . . . .	2.2%	Free (A,CA,E,IL,J, MX) 35%	

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-51

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8457		Machining centers, unit construction machines (single station) and multistation transfer machines, for working metal:				
8457.10.00		Machining centers .....		4.2%	Free (A,CA,E,IL,J, MX)	30%
	05	Used or rebuilt .....	No.			
		Other:				
		With automatic tool changers:				
		Vertical-spindle machines with a Y-axis travel of--				
	15	Not over 660 mm .....	No.			
	25	Over 660 mm .....	No.			
		Horizontal-spindle machines with a Y-axis travel of--				
	55	Not over 685 mm .....	No.			
	60	Over 685 mm but not over 1,016 mm ..	No.			
	65	Over 1,016 mm .....	No.			
	70	Other .....	No.			
	75	Other .....	No.			
8457.20.00		Unit construction machines (single station) .....		3.3%	Free (A,CA,E,IL,J, MX)	30%
	10	Numerically controlled .....	No.			
	90	Other .....	No.			
8457.30.00		Multistation transfer machines .....			3.3%	Free
(A,CA,E,IL,J,	30%				MX)	
	10	Numerically controlled .....	No.			
	90	Other .....	No.			

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-52

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8458		Lathes (including turning centers) for removing metal:				
8458.11.00		Horizontal lathes:				
		Numerically controlled .....		4.4%	Free (A,CA,E,IL,J, MX)	30%
	05	Used or rebuilt .....	No.			
		Other:				
	10	Multiple spindle .....	No.			
		Other:				
	30	With a power rating of less than 18.65 kW .....	No.			
		Other:				
	50	With a power rating of 18.65 kW or greater but not exceeding 37.3 kW .....	No.			
		Other:				
	90	With a power rating exceeding 37.3 kW .....	No.			
8458.19.00		Other .....		4.4%	Free (A,CA,E,IL,J, MX)	30%
	10	Used or rebuilt .....	No.			
	20	Other, valued under \$3,025 each .....	No.			
		Other:				
	30	Engine or toolroom lathes .....	No.			
		Automatic bar and/or chucking machines:				
	50	Single spindle .....	No.			
	70	Multiple spindle .....	No.			
	90	Other .....	No.			
8458.91		Other lathes:				
8458.91.10		Numerically controlled:				
		Vertical turret lathes .....		4.2%	Free (A,CA,E,IL,J, MX)	30%
	40	Used or rebuilt .....	No.			
		Other:				
	60	Multiple spindle .....	No.			
	80	Other .....	No.			
8458.91.50		Other .....		4.4%	Free (A,CA,E,IL,J, MX)	30%
	40	Used or rebuilt .....	No.			
		Other:				
	50	Multiple spindle .....	No.			
	70	Other .....	No.			
8458.99		Other:				
8458.99.10		Vertical turret lathes .....		4.2%	Free (A,CA,E,IL,J, MX)	30%
	10	Used or rebuilt .....	No.			
	50	Other .....	No.			
8458.99.50		Other .....		4.4%	Free (A,CA,E,IL,J, MX)	30%
	30	Used or rebuilt .....	No.			
	60	Other, valued under \$3,025 each .....	No.			
	90	Other .....	No.			



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Annotated for Statistical Reporting Purposes

XVI  
84-53

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8459		Machine tools (including way-type unit head machines) for drilling, boring, milling, threading or tapping by removing metal, other than lathes (including turning centers) of heading 8458:				
8459.10.00	00	Way-type unit head machines .....	No. ....	3.3%	Free (A,CA,E,IL,J, MX)	30%
8459.21.00	00	Other drilling machines: Numerically controlled .....	No. ....	4.2%	Free (A,CA,E,IL,J, MX)	30%
8459.29.00	40 80	Used or rebuilt .....	No. ....			
	80	Other .....	No. ....	4.2%	Free (A,CA,E,IL,J, MX)	30%
	10 20	Used or rebuilt .....	No. ....			
	20	Other, valued under \$3,025 each .....	No. ....			
	40	Other: Multiple spindle .....	No. ....			
	50 70	Other: Radial .....	No. ....			
	70	Upright, excluding sensitive (hand-directed), turret and deep-hole machines .....	No. ....			
	90	Other .....	No. ....			
8459.31.00	00	Other boring-milling machines: Numerically controlled .....	No. ....	4.2%	Free (A,CA,E,IL,J, MX)	30%
	05	Used or rebuilt .....	No. ....			
	10 40	Other: Horizontal spindle: Table type, excluding planer type .....	No. ....			
	40	Other .....	No. ....			
8459.39.00	70	Other .....	No. ....	4.2%	Free (A,CA,E,IL,J, MX)	30%
	10 20	Used or rebuilt .....	No. ....			
	20	Other, valued under \$3,025 each .....	No. ....			
	40 50	Other: Horizontal spindle .....	No. ....			
8459.40.00	50	Other .....	No. ....	4.2%	Free (A,CA,E,IL,J, MX)	30%
	10 20	Used or rebuilt .....	No. ....			
	20	Other, valued under \$3,025 each .....	No. ....			
	40 50	Other: Vertical: Numerically controlled .....	No. ....			
	50	Other .....	No. ....			
	70 80	Other: Numerically controlled .....	No. ....			
	80	Other .....	No. ....			

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-54

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8459 (con.)		Machine tools (including way-type unit head machines) for drilling, boring, milling, threading or tapping by removing metal, other than lathes (including turning centers) of heading 8458 (con.):				
8459.51.00		Milling machines, knee type: Numerically controlled .....		4.2%	Free (A,CA,E,IL,J, MX)	30%
	40	Used or rebuilt .....	No.			
	80	Other .....	No.			
8459.59.00		Other .....		4.2%	Free (A,CA,E,IL,J, MX)	30%
	10	Used or rebuilt .....	No.			
	20	Other, valued under \$3,025 each .....	No.			
	30	Other .....	No.			
8459.61.00		Other milling machines: Numerically controlled .....		4.2%	Free (A,CA,E,IL,J, MX)	30%
	40	Used or rebuilt .....	No.			
	80	Other .....	No.			
8459.69.00		Other .....		4.2%	Free (A,CA,E,IL,J, MX)	30%
	10	Used or rebuilt .....	No.			
	20	Other, valued under \$3,025 each .....	No.			
		Other:				
	50	Profile, duplicating or die sinking .....	No.			
	70	Bed type .....	No.			
	90	Other .....	No.			
8459.70		Other threading or tapping machines:				
8459.70.40	00	Numerically controlled .....	No. ....	4.2%	Free (A,CA,E,IL,J, MX)	30%
8459.70.80		Other .....		4.2%	Free (A,CA,E,IL,J, MX)	30%
	40	Used or rebuilt .....	No.			
	60	Other, valued under \$3,025 each .....	No.			
	80	Other .....	No.			

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Annotated for Statistical Reporting Purposes

XVI  
84-55

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8460		Machine tools for deburring, sharpening, grinding, honing, lapping, polishing or otherwise finishing metal or cermets by means of grinding stones, abrasives or polishing products, other than gear cutting, gear grinding or gear finishing machines of heading 8461: Flat-surface grinding machines, in which the positioning in any one axis can be set up to an accuracy of at least 0.01 mm:				
8460.11.00		Numerically controlled .....		4.4%	Free (A,CA,E,IL,J, MX)	30%
	40	Used or rebuilt .....	No.			
	80	Other .....	No.			
8460.19.00		Other .....		4.4%	Free (A,CA,E,IL,J, MX)	30%
	05	Used or rebuilt .....	No.			
	10	Other:				
	50	Reciprocating-table type .....	No.			
		Other .....	No.			
		Other grinding machines, in which the positioning in any one axis can be set up to an accuracy of at least 0.01 mm:				
8460.21.00		Numerically controlled .....		4.4%	Free (A,CA,E,IL,J, MX)	30%
	40	Used or rebuilt .....	No.			
	80	Other .....	No.			
8460.29.00		Other .....		4.4%	Free (A,CA,E,IL,J, MX)	30%
	05	Used or rebuilt .....	No.			
	10	Other:				
	30	External cylindrical, including universal .....	No.			
	50	Internal cylindrical .....	No.			
		Other .....	No.			
		Sharpening (tool or cutter grinding) machines:				
8460.31.00		Numerically controlled .....		4.4%	Free (A,CA,E,IL,J, MX)	30%
	40	Used or rebuilt .....	No.			
	80	Other .....	No.			
8460.39.00		Other .....		4.4%	Free (A,CA,E,IL,J, MX)	30%
	10	Used or rebuilt .....	No.			
	20	Other, valued under \$3,025 each .....	No.			
	50	Other .....	No.			
8460.40		Honing or lapping machines:				
8460.40.40		Numerically controlled .....		4.4%	Free (A,CA,E,IL,J, MX)	30%
	10	Used or rebuilt .....	No.			
	60	Other .....	No.			
8460.40.80		Other .....		4.4%	Free (A,CA,E,IL,J, MX)	30%
	10	Used or rebuilt .....	No.			
	20	Other, valued under \$3,025 each .....	No.			
	80	Other .....	No.			
8460.90		Other:				
8460.90.40		Numerically controlled .....		4.4%	Free (A,CA,E,IL,J, MX)	30%
	10	Used or rebuilt .....	No.			
	60	Other .....	No.			
8460.90.80		Other .....		4.4%	Free (A,CA,E,IL,J, MX)	30%
	10	Used or rebuilt .....	No.			
	20	Other, valued under \$3,025 each .....	No.			
	80	Other .....	No.			

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-56

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8461		Machine tools for planing, shaping, slotting, broaching, gear cutting, gear grinding or gear finishing, sawing, cutting-off and other machine tools working by removing metal or cermets, not elsewhere specified or included:				
8461.10		Planing machines:				
8461.10.40		Numerically controlled .....	4.4%	Free (A,CA,E,IL,J, MX)	30%	
	20	Used or rebuilt .....	No.			
	60	Other .....	No.			
8461.10.80		Other .....	4.4%	Free (A,CA,E,IL,J, MX)	30%	
	20	Used or rebuilt .....	No.			
	40	Other, valued under \$3,025 each .....	No.			
	80	Other .....	No.			
8461.20		Shaping or slotting machines:				
8461.20.40	00	Numerically controlled .....	No. .... 4.4%	Free (A,CA,E,IL,J, MX)	30%	
8461.20.80		Other .....	4.4%	Free (A,CA,E,IL,J, MX)	30%	
	30	Used or rebuilt .....	No.			
	70	Other, valued under \$3,025 each .....	No.			
	90	Other .....	No.			
8461.30		Broaching machines:				
8461.30.40		Numerically controlled .....	4.4%	Free (A,CA,E,IL,J, MX)	30%	
	20	Used or rebuilt .....	No.			
	60	Other .....	No.			
8461.30.80		Other .....	4.4%	Free (A,CA,E,IL,J, MX)	30%	
	20	Used or rebuilt .....	No.			
	40	Other, valued under \$3,025 each .....	No.			
	80	Other .....	No.			
8461.40		Gear cutting, gear grinding or gear finishing machines:				
8461.40.10		Gear cutting machines .....	5.8%	Free (A,CA,E,IL,J, MX)	40%	
	10	Used or rebuilt .....	No.			
	20	Other:				
		For bevel gears .....	No.			
		Other:				
	30	Gear hobbars .....	No.			
	40	Gear shapers .....	No.			
	60	Other .....	No.			
8461.40.50		Gear grinding or finishing machines .....	4.4%	Free (A,CA,E,IL,J, MX)	30%	
	20	Used or rebuilt .....	No.			
	40	Other, valued under \$3,025 each .....	No.			
		Other:				
	50	For bevel gears .....	No.			
	70	Other .....	No.			
8461.50		Sawing or cutting-off machines:				
8461.50.40		Numerically controlled .....	4.4%	Free (A,CA,E,IL,J, MX)	30%	
	10	Used or rebuilt .....	No.			
	50	Other .....	No.			
8461.50.80		Other .....	4.4%	Free (A,CA,E,IL,J, MX)	30%	
	10	Used or rebuilt .....	No.			
	20	Other, valued under \$3,025 each .....	No.			
	90	Other .....	No.			

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Annotated for Statistical Reporting Purposes

XVI  
84-57

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8461 (con.)		Machine tools for planing, shaping, slotting, broaching, gear cutting, gear grinding or gear finishing, sawing, cutting-off and other machine tools working by removing metal or cermets, not elsewhere specified or included (con.):				
8461.90		Other:				
8461.90.40		Numerically controlled .....	4.4%	Free (A,CA,E,IL,J, MX)	30%	
	10	Used or rebuilt .....	No.			
	40	Other .....	No.			
8461.90.80		Other .....	4.4%	Free (A,CA,E,IL,J, MX)	30%	
	10	Used or rebuilt .....	No.			
	20	Other, valued under \$3,025 each .....	No.			
	80	Other .....	No.			
8462		Machine tools (including presses) for working metal by forging, hammering or die-stamping; machine tools (including presses) for working metal by bending, folding, straightening, flattening, shearing, punching or notching; presses for working metal or metal carbides, not specified above:				
8462.10.00		Forging or die-stamping machines (including presses) and hammers .....	4.4%	Free (A,CA,E,IL,J, MX)	30%	
	10	Used or rebuilt .....	No.			
		Other:				
	30	Headers and upsetters, including cold headers	No.			
	50	Other .....	No.			
		Bending, folding, straightening or flattening machines (including presses):				
8462.21		Numerically controlled:				
8462.21.40		For bending, folding and straightening semiconductor leads .....	Free		30%	
	45	Used or rebuilt .....	No.			
	85	Other .....	No.			
8462.21.80		Other .....	4.4% <sup>1/</sup>	Free (A,CA,E,IL,J, MX)	30%	
	45	Used or rebuilt .....	No.			
	85	Other .....	No.			
8462.29		Other:				
8462.29.40		For bending, folding and straightening semiconductor leads .....	Free		30%	
	45	Used or rebuilt .....	No.			
	85	Other .....	No.			
8462.29.80		Other .....	4.4% <sup>1/</sup>	Free (A,CA,E,IL,J, MX)	30%	
	15	Used or rebuilt .....	No.			
	25	Other, valued under \$3,025 each .....	No.			
		Other:				
	35	Press brakes .....	No.			
	45	Bending rolls .....	No.			
	55	Other .....	No.			
		Shearing machines (including presses), other than combined punching and shearing machines:				
8462.31.00		Numerically controlled .....	4.4% <sup>2/</sup>	Free (A,CA,E,IL,J, MX)	30%	
	40	Used or rebuilt .....	No.			
	80	Other .....	No.			
8462.39.00		Other .....	4.4%	Free (A,CA,E,IL,J, MX)	30%	
	10	Used or rebuilt .....	No.			
	20	Other, valued under \$3,025 each .....	No.			
	50	Other .....	No.			

<sup>1/</sup> See subheadings 9817.84.01 and 9902.84.40.

<sup>2/</sup> See subheading 9902.84.81.

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-58

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8462 (con.)		Machine tools (including presses) for working metal by forging, hammering or die-stamping; machine tools (including presses) for working metal by bending, folding, straightening, flattening, shearing, punching or notching; presses for working metal or metal carbides, not specified above (con.):				
8462.41.00		Punching or notching machines (including presses), including combined punching and shearing machines: Numerically controlled .....		4.4% <u>1/</u>	Free (A,CA,E,IL,J, MX)	30%
	40	Used or rebuilt .....	No.			
	80	Other .....	No.			
8462.49.00		Other .....		4.4% <u>1/</u>	Free (A,CA,E,IL,J, MX)	30%
	10	Used or rebuilt .....	No.			
	20	Other, valued under \$3,025 each .....	No.			
	50	Other .....	No.			
8462.91		Other:				
		Hydraulic presses:				
8462.91.40		Numerically controlled .....		4.4%	Free (A,CA,E,IL,J, MX)	30%
	30	Used or rebuilt .....	No.			
	60	Other .....	No.			
8462.91.80		Other .....		4.4%	Free (A,CA,E,IL,J, MX)	30%
	30	Used or rebuilt .....	No.			
	90	Other .....	No.			
8462.99		Other:				
8462.99.40		Numerically controlled .....		4.4%	Free (A,CA,E,IL,J, MX)	30%
	10	Used or rebuilt .....	No.			
	30	Other .....	No.			
8462.99.80		Other .....		4.4% <u>2/</u>	Free (A,CA,E,IL,J, MX)	30%
	10	Used or rebuilt .....	No.			
	20	Other, valued under \$3,025 each .....	No.			
		Other:				
	35	Mechanical transfer presses .....	No.			
	45	Other mechanical presses .....	No.			
	60	Other .....	No.			

1/ See subheading 9817.84.01.

2/ See subheading 9902.84.40.

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-59

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8463		Other machine tools for working metal or cermets, without removing material:				
8463.10.00		Draw-benches for bars, tubes, profiles, wire or the like	4.4%	Free (A,CA,E,IL,J, MX)	30%	
	40	Used or rebuilt	No.			
	60	Other, valued under \$3,025 each	No.			
	80	Other	No.			
8463.20.00		Thread rolling machines	4.4%	Free (A,CA,E,IL,J, MX)	30%	
	40	Used or rebuilt	No.			
	60	Other, valued under \$3,025 each	No.			
	80	Other	No.			
8463.30.00		Machines for working wire	4.4% <sup>1/</sup>	Free (A,CA,E,IL,J, MX)	30%	
	40	Used or rebuilt	No.			
	60	Other, valued under \$3,025 each	No.			
	80	Other	No.			
8463.90.00		Other	4.4%	Free (A,CA,E,IL,J, MX)	30%	
	40	Used or rebuilt	No.			
	60	Other, valued under \$3,025 each	No.			
	80	Other	No.			
8464		Machine tools for working stone, ceramics, concrete, asbestos-cement or like mineral materials or for cold working glass:				
8464.10.00		Sawing machines	Free		35%	
	40	Machines designed to saw (slice) blank semiconductor wafers from crystal boules of semiconductor grade materials	No.			
	80	Other	No.			
8464.20		Grinding or polishing machines:				
8464.20.10	00	For processing of semiconductor wafers	Free		35%	
8464.20.50		Other	2%	Free (A,CA,E,IL, J, MX)	35%	
	10	Glass-working machines	No.			
	90	Other	No.			
8464.90		Other:				
8464.90.10		For scribing or scoring semiconductor wafers; for wet-etching semiconductor wafers	Free		35%	
	40	For scribing or scoring semiconductor wafers	No.			
	60	Other	No.			
8464.90.60	00	For wet-developing or -stripping semiconductor wafers; for wet-etching, -developing, or -stripping flat panel displays	Free		35%	
8464.90.90		Other	2%	Free (A,CA,E,IL,J, MX)	35%	
	10	Glass-working machines	No.			
	90	Other	No.			

<sup>1/</sup> See subheadings 9902.84.40 and 9902.84.83.

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-60

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8465		Machine tools (including machines for nailing, stapling, glueing or otherwise assembling) for working wood, cork, bone, hard rubber, hard plastics or similar hard materials:				
8465.10.00		Machines which can carry out different types of machining operations without tool change between such operations .....		2.4%	Free (A,CA,E,IL,J, MX)	35%
		Woodworking machines:				
		Used or rebuilt:				
	05	Tenoners .....	No.			
	15	Other .....	No.			
		Other:				
		Tenoners:				
	25	Numerically controlled .....	No.			
	35	Other .....	No.			
	45	Other .....	No.			
	50	Other .....	No.			
		Other:				
8465.91.00		Sawing machines .....		3% <sup>1/</sup>	Free (A,CA,E,IL,J, MX)	35%
		Woodworking machines:				
		Used or rebuilt:				
	02	Rip saws .....	No.			
	06	Panel saws .....	No.			
	12	Band saws .....	No.			
	16	Cross-cut and optimizing saws .....	No.			
	22	Other .....	No.			
		Other:				
	27	Sawmill machines .....	No.			
		Other:				
	32	Radial arm saws .....	No.			
	36	Tilting arbor table saws .....	No.			
	41	Rip saws .....	No.			
	47	Miter saws .....	No.			
	49	Scroll saws .....	No.			
		Panel saws:				
	53	Valued under \$3,000 each .....	No.			
	58	Other .....	No.			
		Band saws:				
	64	Valued under \$1,000 each .....	No.			
	68	Other .....	No.			
	74	Cross-cut and optimizing saws .....	No.			
	78	Other .....	No.			
	90	Other .....	No.			

<sup>1/</sup> See subheading 9902.84.91.



# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-61

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8465 (con.)		Machine tools (including machines for nailing, stapling, glueing or otherwise assembling) for working wood, cork, bone, hard rubber, hard plastics or similar hard materials (con.):				
8465.92.00		Other (con.) Planing, milling or molding (by cutting) machines . . . . .		3%	Free (A,CA,E,IL,J, MX)	35%
		For woodworking: Used or rebuilt:				
	03	Moulders . . . . .	No.			
	06	Routers . . . . .	No.			
	16	Other . . . . .	No.			
		Other:				
		Dovetailing machines:				
	26	Valued under \$3,000 each . . . . .	No.			
	29	Other . . . . .	No.			
	31	Moulders . . . . .	No.			
		Planers:				
	34	Valued under \$1,000 each . . . . .	No.			
	37	Other . . . . .	No.			
		Jointers:				
	42	Valued under \$1,000 each . . . . .	No.			
	46	Other . . . . .	No.			
		Routers:				
	51	Valued under \$3,000 each . . . . .	No.			
		Other:				
	55	Numerically controlled . . . . .	No.			
	58	Other . . . . .	No.			
		Shapers and profilers:				
	62	Valued under \$1,000 each . . . . .	No.			
	66	Other . . . . .	No.			
	72	Other . . . . .	No.			
	90	Other . . . . .	No.			
8465.93.00		Grinding, sanding or polishing machines . . . . .		3%	Free (A,CA,E,IL,J, MX)	35%
		For woodworking: Used or rebuilt:				
	04	Belt sanders, for a belt width 60 cm or wider . . . . .	No.			
	12	Other . . . . .	No.			
		Other:				
		Edge belt sanders:				
	30	Valued under \$1,000 each . . . . .	No.			
	45	Valued \$1,000 or over but under \$3,000 each . . . . .	No.			
	55	Other . . . . .	No.			
	65	Belt sanders, for a belt width 60 cm or wider . . . . .	No.			
	75	Other . . . . .	No.			
	90	Other . . . . .	No.			
8465.94.00		Bending or assembling machines . . . . .		2.9%	Free (A,CA,E,IL,J, MX)	35%
		For woodworking: Used or rebuilt				
	05	Other:	No.			
	15	Doweling machines . . . . .	No.			
	25	Edgebanding machines . . . . .	No.			
	35	Laminating machines . . . . .	No.			
		Presses:				
	45	Cold . . . . .	No.			
	55	Other . . . . .	No.			
	65	Other . . . . .	No.			
	90	Other . . . . .	No.			

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-62

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8465 (con.)		Machine tools (including machines for nailing, stapling, glueing or otherwise assembling) for working wood, cork, bone, hard rubber, hard plastics or similar hard materials (con.):				
8465.95.00		Other (con.) Drilling or mortising machines . . . . .		3%	Free (A,CA,E,IL,J, MX)	35%
	05	For woodworking: Used or rebuilt: Numerically controlled boring machines . . . . .	No.			
	10	Other . . . . .	No.			
		Other: Boring machines:				
	20	Numerically controlled . . . . .	No.			
		Other:				
	35	Valued under \$3,000 each . . . . .	No.			
	45	Other . . . . .	No.			
		Other drilling machines:				
	55	Valued under \$1,000 each . . . . .	No.			
	60	Other . . . . .	No.			
	65	Other . . . . .	No.			
	90	Other . . . . .	No.			
8465.96.00		Splitting, slicing or paring machines . . . . .		2.4%	Free (A,CA,E,IL,J, MX)	35%
		For woodworking:				
	15	Log splitters . . . . .	No.			
	25	Chippers . . . . .	No.			
	30	Hogs . . . . .	No.			
	40	Other . . . . .	No.			
	50	Other . . . . .	No.			
8465.99 8465.99.40	00	Other: Deflash machines for cleaning and removing contaminants from the metal leads of semiconductor packages prior to the electroplating process (deflash by chemical bath) . . . . .	No. . . . .	Free		35%
8465.99.80		Other . . . . .		2.4%	Free (A,CA,E,IL,J, MX)	35%
		Woodworking machines:				
	05	Debarkers . . . . .	No.			
		Lathes:				
	10	Veneer lathes . . . . .	No.			
		Other:				
	20	Valued under \$1,000 each . . . . .	No.			
	40	Valued \$1,000 or over but under \$3,000 each . . . . .	No.			
		Other:				
	60	Other . . . . .	No.			
	70	Other . . . . .	No.			
	95	Other . . . . .	No.			

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-63

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8466		Parts and accessories suitable for use solely or principally with the machines of headings 8456 to 8465, including work or tool holders, self-opening dieheads, dividing heads and other special attachments for machine tools; tool holders for any type of tool for working in the hand:				
8466.10		Tool holders and self-opening dieheads:				
8466.10.40	00	Tool holders for the machines described in additional U.S. note 3 to chapter 84	No. ....	Free		45%
8466.10.80		Other		3.9%	Free (A,CA,E,IL,J, MX)	45%
	10	Tool holders for forming-type or cutting-type dies	X			
	30	Holders for replaceable cutting or drill inserts	X			
	75	Other	X			
8466.20		Work holders:				
8466.20.10		For machine tools used in cutting gears		4.6%	Free (A,CA,E,IL,J, MX)	45%
	10	Jigs and fixtures	X			
	90	Other	X			
8466.20.40	00	For the machines described in additional U.S. note 3 to chapter 84	No. ....	Free		35%
8466.20.80		Other		3.7%	Free (A,CA,E,IL,J, MX)	35%
	20	For metalworking machine tools:				
	35	Jigs and fixtures	X			
		Other	X			
	40	Other work holders:				
	65	Jigs and fixtures	X			
		Other	X			
8466.30		Dividing heads and other special attachments for machine tools:				
8466.30.10	00	Dividing heads	X	3.7%	Free (A,CA,E,IL,J, MX)	35%
8466.30.45	00	Other special attachments: For the machines described in additional U.S. note 3 to chapter 84	X	Free		45%
8466.30.60		Other: Machines		2.9%	Free (A,CA,E,IL,J, MX)	35%
	40	For woodworking machines	X			
	85	Other	X			
8466.30.80	00	Other	X	8%	Free (A,CA,E,IL,J, MX)	45%

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-64

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8466 (con.)		Parts and accessories suitable for use solely or principally with the machines of headings 8456 to 8465, including work or tool holders, self-opening dieheads, dividing heads and other special attachments for machine tools; tool holders for any type of tool for working in the hand (con.): Other:				
8466.91 8466.91.10	00	For machines of heading 8464: Cast-iron parts not advanced beyond cleaning, and machined only for the removal of fins, gates, sprues and risers or to permit location in finishing machinery . . . . .	kg . . . . .	Free		10%
8466.91.50	00	Other . . . . .	X . . . . .	Free		35%
8466.92 8466.92.10	00	For machines of heading 8465: Cast-iron parts not advanced beyond cleaning, and machined only for the removal of fins, gates, sprues and risers or to permit location in finishing machinery . . . . .	kg . . . . .	Free		10%
8466.92.50		Other . . . . .		4.7% <sup>1/</sup>	Free (A,CA,E,IL,J, MX)	35%
	10	Of woodworking machines . . . . .	X			
	90	Other . . . . .	X			
8466.93		For machines of headings 8456 to 8461: Bed, base, table, head, tail, saddle, cradle, cross slide, column, arm, saw arm, wheelhead, tailstock, headstock, ram, frame, work-arbor support, and C-frame castings, weldments or fabrications:				
8466.93.15		Cast-iron parts not advanced beyond cleaning, and machined only for the removal of fins, gates, sprues and risers or to permit location in finishing machinery . . . . .		Free		10%
	30	For metalworking machine tools for cutting, grinding or finishing gears . . . . .	kg			
	60	Other . . . . .	kg			
8466.93.30	00	Other: Of metalworking machine tools for cutting gears . . . . .	X . . . . .	5.8%	Free (A,CA,E,IL,J, MX)	45%
8466.93.47	00	Of machines of subheading 8456.10.60; of machines of subheading 8456.91; of machines of 8456.99.10; of machines of subheading 8456.99.70 . . . . .	No. . . . .	Free		35%
8466.93.53		Other . . . . .		4.7%	Free (A,CA,E,IL,J, MX)	35%
	40	Of metalworking machine tools for grinding or finishing gears . . . . .	X			
	85	Other . . . . .	X			

<sup>1/</sup> See subheading 9902.84.91.

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Annotated for Statistical Reporting Purposes

XVI  
84-65

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8466 (con.)		Parts and accessories suitable for use solely or principally with the machines of headings 8456 to 8465, including work or tool holders, self-opening dieheads, dividing heads and other special attachments for machine tools; tool holders for any type of tool for working in the hand (con.):				
8466.93 (con.)		Other (con.):				
		For machines of headings 8456 to 8461 (con.):				
		Other:				
8466.93.60		Cast-iron parts not advanced beyond cleaning, and machined only for the removal of fins, gates, sprues and risers or to permit location in finishing machinery . . . . .		Free		10%
	30	For metalworking machine tools for cutting, grinding or finishing gears . . . . .	kg			
	60	Other . . . . .	kg			
8466.93.75	00	Other:				
		Of metalworking machine tools for cutting gears . . . . .	X	5.8%	Free (A,CA,E,IL,J, MX)	45%
8466.93.85	00	Of machines of subheading 8456.10.60; of machines of subheading 8456.91; of machines of 8456.99.10; of machines of subheading 8456.99.70 . . . . .	No.	Free		35%
8466.93.95		Other . . . . .		4.7%	Free (A,CA,E,IL,J, MX)	35%
	40	Of metalworking machine tools for grinding or finishing gears . . . . .	X			
	85	Other . . . . .	X			

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Annotated for Statistical Reporting Purposes

XVI  
84-66

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8466 (con.)		Parts and accessories suitable for use solely or principally with the machines of headings 8456 to 8465, including work or tool holders, self-opening dieheads, dividing heads and other special attachments for machine tools; tool holders for any type of tool for working in the hand (con.):				
8466.94		Other (con.): For machines of heading 8462 or 8463: Cast-iron parts not advanced beyond cleaning, and machined only for the removal of fins, gates, sprues and risers or to permit location in finishing machinery:				
8466.94.20	00	Bed, base, table, column, cradle, frame, bolster, crown, slide, rod, tailstock and headstock castings, weldments or fabrications . . . . .	kg . . . . .	Free		10%
8466.94.40	00	Other . . . . .	kg . . . . .	Free		10%
		Other:				
		Bed, base, table, column, cradle, frame, bolster, crown, slide, rod, tailstock and headstock castings, weldments or fabrications:				
8466.94.55	00	Of machines of subheading 8462.21.40 or 8462.29.40 . . . . .	No. . . . .	Free		35%
8466.94.65		Other . . . . .		4.7%	Free (A,CA,E,IL,J, MX)	35%
	40	Parts of mechanical transfer presses . . . . .	X			
	85	Other . . . . .	X			
8466.94.75	00	Other: Of machines of subheading 8462.21.40 or 8462.29.40 . . . . .	No. . . . .	Free		35%
8466.94.85		Other . . . . .		4.7% <u>1/</u>	Free (A,CA,E,IL,J, MX)	35%
	40	Parts of mechanical transfer presses . . . . .	X			
	85	Other . . . . .	X			

1/ See subheadings 9902.84.81 and 9902.84.83.

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-67

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8467		Tools for working in the hand, pneumatic, hydraulic or with self-contained nonelectric motor, and parts thereof:				
8467.11		Pneumatic:				
		Rotary type (including combined rotary-percussion):				
8467.11.10		Suitable for metal working .....		4.5%	Free (A,CA,E,IL,J, MX)	30%
	40	Grinders, polishers and sanders .....	No.			
	80	Other .....	No.			
8467.11.50		Other .....		Free		27.5%
	10	Rock drills .....	No.			
	20	Other drills, screwdrivers and nut runners ..	No.			
	40	Other wrenches .....	No.			
	90	Other .....	No.			
8467.19		Other:				
8467.19.10	00	Suitable for metal working .....	No. ....	4.5%	Free (A,CA,E,IL,J, MX)	30%
8467.19.50		Other .....		Free		27.5%
	30	Pneumatic, hand-held force feed lubricating equipment .....	No.			
	60	Designed for use in construction or mining ..	No.			
	90	Other .....	No.			
8467.81.00	00	Other tools:				
		Chain saws .....	No. ....	Free		27.5%
8467.89		Other:				
8467.89.10	00	Suitable for metal working .....	No. ....	Free		30%
8467.89.50		Other .....		Free		27.5%
	30	Gasoline powered grass and weed trimmers and brushcutters .....	No.			
	60	Other, designed for use in agriculture or horticulture .....	No.			
	90	Other .....	No.			
8467.91.00	00	Parts:				
		Of chain saws .....	X .....	Free		27.5%
8467.92.00		Of pneumatic tools .....		Free		27.5%
	50	Of pneumatic, hand-held force feed lubricating equipment .....	X			
	90	Other .....	X			
8467.99.00		Other .....		Free		27.5%
	30	Of gasoline powered grass and weed trimmers and brushcutters .....	X			
	90	Other .....	X			

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-68

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8468		Machinery and apparatus for soldering, brazing or welding, whether or not capable of cutting, other than those of heading 8515; gas-operated surface tempering machines and appliances; parts thereof:				
8468.10.00	00	Hand-held blow torches . . . . .	No. . . . .	2.9%	Free (A,CA,E,IL,J, MX)	45%
8468.20		Other gas-operated machinery and apparatus:				
8468.20.10	00	Hand-directed or -controlled . . . . .	No. . . . .	3.9%	Free (A,CA,E,IL,J, MX)	45%
8468.20.50	00	Other . . . . .	No. . . . .	Free		27.5%
8468.80		Other machinery and apparatus:				
8468.80.10	00	Hand-directed or -controlled . . . . .	No. . . . .	2.9%	Free (A,CA,E,IL,J, MX)	45%
8468.80.50	00	Other . . . . .	No. . . . .	Free		27.5%
8468.90		Parts:				
8468.90.10	00	Of hand-directed or -controlled machinery and apparatus . . . . .	X . . . . .	2.9%	Free (A,CA,E,IL,J, MX)	45%
8468.90.50	00	Other . . . . .	X . . . . .	Free		27.5%
8469		Typewriters other than printers of heading 8471; word processing machines:				
		Automatic typewriters and word processing machines:				
8469.11.00	00	Word processing machines . . . . .	No. . . . .	Free		35%
8469.12.00	00	Automatic typewriters . . . . .	No. . . . .	Free		35%
8469.20.00		Other typewriters, electric . . . . .		Free		Free
	20	Weighing not more than 12 kg, excluding case . . . . .	No.			
	40	Other . . . . .	No.			
8469.30.00		Other typewriters, nonelectric . . . . .		Free		Free
	20	Weighing not more than 12 kg, excluding case . . . . .	No.			
	40	Other . . . . .	No.			
8470		Calculating machines and pocket-size data recording, reproducing and displaying machines with calculating functions; accounting machines, postage-franking machines, ticket-issuing machines and similar machines, incorporating a calculating device; cash registers:				
8470.10.00		Electronic calculators capable of operation without an external source of electric power and pocket-size data recording, reproducing and displaying machines with calculating functions . . . . .		Free		35%
	40	Display only . . . . .	No.			
	60	Other . . . . .	No.			
		Other electronic calculating machines:				
8470.21.00	00	Incorporating a printing device . . . . .	No. . . . .	Free		35%
8470.29.00	00	Other . . . . .	No. . . . .	Free		35%
8470.30.00	00	Other calculating machines . . . . .	No. . . . .	Free		35%
8470.40.00	00	Accounting machines . . . . .	No. . . . .	Free		35%
8470.50.00		Cash registers . . . . .		Free		35%
	20	Point-of-sale terminals . . . . .	No.			
	60	Other . . . . .	No.			
8470.90.00		Other . . . . .		Free		35%
	10	Postage-franking machines . . . . .	No.			
	90	Other . . . . .	No.			



# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-69

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8471		Automatic data processing machines and units thereof; magnetic or optical readers, machines for transcribing data onto data media in coded form and machines for processing such data, not elsewhere specified or included:				
8471.10.00	00	Analog or hybrid automatic data processing machines . . . . .	No. . . . .	Free		40%
8471.30.00	00	Portable digital automatic data processing machines, weighing not more than 10 kg, consisting of at least a central processing unit, a keyboard and a display . . . . .	No. . . . .	Free		35%
8471.41.00		Other digital automatic data processing machines: Comprising in the same housing at least a central processing unit and an input and output unit, whether or not combined . . . . .		Free		35%
	35	With cathode-ray tube (CRT):				
	65	Color . . . . .	No.			
	95	Other . . . . .	No.			
8471.49		Other, entered in the form of systems:				
8471.49.10		Digital processing units entered with the rest of a system, whether or not containing in the same housing one or two of the following types of unit: storage units, input units, output units . . . . .		Free		35%
	35	With cathode-ray tube (CRT):				
	65	Color . . . . .	No.			
	95	Other . . . . .	No.			
		Other . . . . .	No.			

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-70

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8471 (con.)		Automatic data processing machines and units thereof; magnetic or optical readers, machines for transcribing data onto data media in coded form and machines for processing such data, not elsewhere specified or included (con.):				
8471.49 (con.)		Other digital automatic data processing machines (con.):				
		Other, entered in the form of systems (con.):				
		Input or output units, entered with the rest of a system, whether or not containing storage units in the same housing:				
8471.49.15	00	Combined input/output units . . . . .	No. . . . .	Free		35%
		Other:				
8471.49.21	00	Keyboards . . . . .	No. . . . .	Free	35%	
		Display units:				
8471.49.24	00	Without cathode-ray tube (CRT), having a visual display diagonal not exceeding 30.5 cm . . . . .	No. . . . .	Free		35%
		Other:				
8471.49.26	00	With color cathode-ray tube (CRT) . . . . .	No. . . . .	Free		35%
8471.49.29	00	Other . . . . .	No. . . . .	Free		35%
		Printer units:				
		Laser:				
8471.49.31	00	Capable of producing more than 20 pages per minute . . . . .	No. . . . .	Free		35%
8471.49.32	00	Other . . . . .	No. . . . .	Free		35%
8471.49.33	00	Light bar electronic type . . . . .	No. . . . .	Free		35%
8471.49.34	00	Ink jet . . . . .	No. . . . .	Free		35%
8471.49.35	00	Thermal transfer . . . . .	No. . . . .	Free		35%
8471.49.36	00	Ionographic . . . . .	No. . . . .	Free		35%
8471.49.37	00	Other . . . . .	No. . . . .	Free		35%
	30	Daisy wheel . . . . .	No.			
	60	Dot matrix . . . . .	No.			
	90	Other . . . . .	No.			
		Other:				
8471.49.42	00	Optical scanners and magnetic ink recognition devices . . . . .	No. . . . .	Free		35%
8471.49.48	50	Other . . . . .	No.	Free		35%
		Card key and magnetic media entry devices . . . . .	No.			
		Other:				
	75	Output devices . . . . .	No.			
	95	Other . . . . .	No.			

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-71

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8471 (con.)		Automatic data processing machines and units thereof; magnetic or optical readers, machines for transcribing data onto data media in coded form and machines for processing such data, not elsewhere specified or included (con.):				
		Other digital automatic data processing machines (con.):				
8471.49 (con.)		Other, entered in the form of systems (con.):				
8471.49.50		Storage units, entered with the rest of a system .....		Free		35%
	10	Magnetic disk drive units:				
		For a disk of a diameter exceeding 21 cm .....	No.			
	20	Other:				
		Flexible (floppy) magnetic disk drive units .....		No.		
	40	Hard magnetic disk drive units . . . .	No.			
	60	Other .....	No.			
	80	Other .....	No.			
		Other:				
8471.49.60	00	Control or adapter units .....	No. ....	Free		35%
8471.49.70	00	Power supplies .....	No. ....	Free		35%
		Other:				
8471.49.85	00	Units suitable for physical incorporation into automatic data processing machines or units thereof .....	No. ....	Free		35%
		Other .....	No. ....	Free		35%
8471.49.95	00	Other .....	No. ....	Free		35%
8471.50.00		Digital processing units other than those of subheading 8471.41 and 8471.49, whether or not containing in the same housing one or two of the following types of unit: storage units, input units, output units .....		Free		35%
		With cathode-ray tube (CRT):				
	35	Color .....	No.			
	65	Other .....	No.			
	85	Other .....	No.			
8471.60		Input or output units, whether or not containing storage units in the same housing:				
8471.60.10		Combined input/output units .....		Free		35%
		With cathode-ray tube (CRT):				
	35	Color .....	No.			
	65	Other .....	No.			
	95	Other .....	No.			

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-72

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8471 (con.)		Automatic data processing machines and units thereof; magnetic or optical readers, machines for transcribing data onto data media in coded form and machines for processing such data, not elsewhere specified or included (con.):				
8471.60 (con.)		Input or output units, whether or not containing storage units in the same housing (con.):				
		Other:				
8471.60.20	00	Keyboards .....	No. ....	Free		35%
		Display units:				
8471.60.30	00	Without cathode-ray tube (CRT), having a visual display diagonal not exceeding 30.5 cm .....	No. ....	Free		35%
		Other:				
8471.60.35	00	With color cathode-ray tube (CRT) ....	No. ....	Free		35%
8471.60.45		Other .....		Free		35%
	40	With cathode-ray tube (CRT) ....	No.			
	80	Other .....	No.			
		Printer units:				
		Assembled units incorporating at least the media transport, control and print mechanisms:				
		Laser:				
8471.60.51	00	Capable of producing more than 20 pages per minute .....	No. ....	Free		35%
8471.60.52	00	Other .....	No. ....	Free		35%
8471.60.53	00	Light bar electronic type .....	No. ....	Free		35%
8471.60.54	00	Ink jet .....	No. ....	Free		35%
8471.60.55	00	Thermal transfer .....	No. ....	Free		35%
8471.60.56	00	Ionographic .....	No. ....	Free		35%
8471.60.57		Other .....		Free		35%
	30	Daisy wheel .....	No.			
	60	Dot matrix No.				
	90	Other .....	No.			
		Other:				
		Laser:				
8471.60.61	00	Capable of producing more than 20 pages per minute .....	No. ....	Free		35%
8471.60.62	00	Other .....	No. ....	Free		35%
8471.60.63	00	Light bar electronic type .....	No. ....	Free		35%
8471.60.64	00	Ink jet .....	No. ....	Free		35%
8471.60.65	00	Thermal transfer .....	No. ....	Free		35%
8471.60.66	00	Ionographic .....	No. ....	Free		35%
8471.60.67		Other .....		Free		35%
	30	Daisy wheel .....	No.			
	60	Dot matrix No.				
	90	Other .....	No.			
		Other:				
8471.60.70		Units suitable for physical incorporation into automatic data processing machines or units thereof .....		Free		35%
	40	Output devices .....	No.			
	80	Other .....	No.			
		Other:				
8471.60.80	00	Optical scanners and magnetic ink recognition devices .....	No. ....	Free		35%
8471.60.90		Other .....		Free		35%
	30	Card key and magnetic media entry devices .....	No.			
		Other:				
	70	Output devices .....	No.			
	90	Other .....	No.			

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-73

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8471 (con.)		Automatic data processing machines and units thereof; magnetic or optical readers, machines for transcribing data onto data media in coded form and machines for processing such data, not elsewhere specified or included (con.):				
8471.70		Storage units:				
		Magnetic disk drive units:				
		For a disk of a diameter exceeding 21 cm:				
8471.70.10	00	Without read-write unit assembled therein; read-write units entered separately . . . . .	No. . . . .	Free		35%
8471.70.20	00	Units for physical incorporation into automatic data processing machines or units thereof . . . . .	No. . . . .	Free		35%
8471.70.30	00	Other . . . . .	No. . . . .	Free		35%
8471.70.40		Other:				
		Not assembled in cabinets, and without attached external power supply . . . . .		Free		35%
	35	Flexible (floppy) magnetic disk drive units . . . . .	No.			
	65	Hard magnetic disk drive units . . . . .	No.			
	95	Other . . . . .	No.			
8471.70.50		Other . . . . .		Free		35%
	35	Flexible (floppy) magnetic disk drive units . . . . .	No.			
	65	Hard magnetic disk drive units . . . . .	No.			
	95	Other . . . . .	No.			
8471.70.60	00	Other storage units: Not assembled in cabinets for placing on a table, desk, wall, floor or similar place . . . . .	No. . . . .	Free		35%
8471.70.90	00	Other . . . . .	No. . . . .	Free		35%
8471.80		Other units of automatic data processing machines:				
8471.80.10	00	Control or adapter units . . . . .	No. . . . .	Free		35%
		Other:				
8471.80.40	00	Units suitable for physical incorporation into automatic data processing machines . . . . .	No. . . . .	Free		35%
8471.80.90	00	Other . . . . .	No. . . . .	Free		35%
8471.90.00	00	Other . . . . .	No. . . . .	Free		35%

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-74

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8472		Other office machines (for example, hectograph or stencil duplicating machines, addressing machines, automatic banknote dispensers, coin-sorting machines, coin-counting or wrapping machines, pencil-sharpening machines, perforating or stapling machines):				
8472.10.00	00	Duplicating machines . . . . .	No. . . . .	1.6%	Free (A,CA,E,IL,J, MX)	25%
8472.20.00	00	Addressing machines and address plate embossing machines . . . . .	No. . . . .	2.1%	Free (A,CA,E,IL,J, MX)	25%
8472.30.00	00	Machines for sorting or folding mail or for inserting mail in envelopes or bands, machines for opening, closing or sealing mail and machines for affixing or canceling postage stamps . . No. . . . .	1.8%	Free (A,CA,E,IL,J,	MX)	35%
8472.90		Other:				
8472.90.10	00	Automatic teller machines . . . . .	No. . . . .	Free		35%
8472.90.40	00	Pencil sharpeners . . . . .	No. . . . .	2.6%	Free (A,CA,E,IL,J, MX)	40%
8472.90.60	00	Numbering, dating and check-writing machines . . .	No. . . . .	Free		25%
8472.90.70	00	Accessory and auxiliary machines which are intended for attachment to an electrostatic photocopier and which do not operate independently of such photocopier . . . . .	No. . . . .	Free		35%
8472.90.95		Other . . . . .		1.8%	Free (A,CA,E,IL,J, MX)	35%
	20	Coin and currency handling machines . . . . .	No.			
	50	Other . . . . .	No.			

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-75

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8473		Parts and accessories (other than covers, carrying cases and the like) suitable for use solely or principally with machines of headings 8469 to 8472:				
8473.10		Parts and accessories of the machines of heading 8469:				
		Parts:				
		Of word processing machines:				
8473.10.20	00	Printed circuit assemblies . . . . .	X . . . . .	Free		45%
8473.10.40	00	Other . . . . .	X . . . . .	2%	Free (A,CA,E,IL,J, MX)	45%
8473.10.60	00	Other . . . . .	X . . . . .	2%	Free (A,CA,E,IL,J, MX)	45%
8473.10.90	00	Other . . . . .	X . . . . .	2%	Free (A,CA,E,IL,J, MX)	45%
		Parts and accessories of the machines of heading 8470:				
8473.21.00	00	Of the electronic calculating machines of subheading 8470.10, 8470.21 or 8470.29 . . . . .	X . . . . .	Free		35%
8473.29.00	00	Other . . . . .	X . . . . .	Free		35%
8473.30		Parts and accessories of the machines of heading 8471:				
		Not incorporating a cathode ray tube:				
8473.30.10	40	Printed circuit assemblies . . . . .		Free		35%
		Memory modules suitable for use solely or principally with machines of heading 8471 . . . . .	No.			
		Other . . . . .	X			
8473.30.20	80	Parts and accessories, including face plates and lock latches, of printed circuit assemblies . . . . .	X . . . . .	Free		35%
8473.30.30	00	Other parts for printers, specified in additional U.S. note 2 to this chapter . . . . .	X . . . . .	Free		35%
8473.30.50	00	Other . . . . .	X . . . . .	Free		35%
8473.30.60	00	Other: Other parts for printers, specified in additional U.S. note 2 to this chapter . . . . .	X . . . . .	Free		35%
8473.30.90	00	Other . . . . .	X . . . . .	Free		35%
8473.40		Parts and accessories of the machines of heading 8472:				
8473.40.10	00	Printed circuit assemblies for automatic teller machines of subheading 8472.90.10 . . . . .	X . . . . .	Free		35%
8473.40.60	00	Parts and accessories of the goods of subheading 8472.90.70 . . . . .	X . . . . .	Free		35%
8473.40.95	00	Other . . . . .	X . . . . .	1.9%	Free (A,CA,E,IL,J, MX)	35%
8473.50		Parts and accessories equally suitable for use with machines of two or more of the headings 8469 to 8472:				
8473.50.30	00	Printed circuit assemblies . . . . .	X . . . . .	Free		35%
8473.50.60	00	Parts and accessories, including face plates and lock latches, of printed circuit assemblies . . . . .	X . . . . .	Free		35%
8473.50.90	00	Other . . . . .	X . . . . .	Free		35%

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-76

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8474		Machinery for sorting, screening, separating, washing, crushing, grinding, mixing or kneading earth, stone, ores or other mineral substances, in solid (including powder or paste) form; machinery for agglomerating, shaping or molding solid mineral fuels, ceramic paste, unhardened cements, plastering materials or other mineral products in powder or paste form; machines for forming foundry molds of sand; parts thereof:				
8474.10.00	10	Sorting, screening, separating or washing machines . . . . .		Free		35%
	90	Portable . . . . .	No.			
		Stationary . . . . .	No.			
8474.20.00	10	Crushing or grinding machines . . . . .		Free		35%
	10	Portable . . . . .	No.			
		Stationary:				
	50	Crushing . . . . .	No.			
	70	Other . . . . .	No.			
		Mixing or kneading machines:				
8474.31.00	00	Concrete or mortar mixers . . . . .	No.	Free		35%
8474.32.00	00	Machines for mixing mineral substances with bitumen . . . . .	No.	Free		35%
8474.39.00	00	Other . . . . .	No.	Free		35%
8474.80.00		Other machinery . . . . .		Free		35%
		For agglomerating, shaping or molding solid mineral fuels, ceramic paste, unhardened cements, plastering materials or other mineral products in powder or paste form:				
	10	Designed for use with ceramic paste, unhardened cements and plastering materials . . . . .	No.			
	15	Other . . . . .	No.			
	20	Machines for forming foundry molds of sand . . . . .	No.			
	80	Other . . . . .	No.			
8474.90.00		Parts . . . . .		Free		35%
	10	Of sorting, screening, separating or washing machines . . . . .	X			
	20	Of crushing or grinding machines . . . . .	X			
	50	Of mixing or kneading machines . . . . .	X			
	90	Other . . . . .	X			



# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-77

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8475		Machines for assembling electric or electronic lamps, tubes or flashbulbs, in glass envelopes; machines for manufacturing or hot working glass or glassware; parts thereof:				
8475.10.00	00	Machines for assembling electric or electronic lamps, tubes or flashbulbs, in glass envelopes . . . . .	No. . . . .	Free		35%
8475.21.00	00	Machines for manufacturing or hot working glass or glassware: Machines for making optical fibers and preforms thereof . . . . .	No. . . . .	Free	35%	
8475.29.00	00	Other . . . . .	No. . . . .	Free		35%
8475.90		Parts:				
8475.90.10	00	Of machines for assembling electric or electronic lamps, tubes or flashbulbs, in glass envelopes . . . . .	X . . . . .	Free		35%
8475.90.90	00	Other . . . . .	X . . . . .	Free		35%
8476		Automatic goods-vending machines (for example, postage stamp, cigarette, food or beverage machines), including money-changing machines; parts thereof:				
8476.21.00	00	Automatic beverage-vending machines: Incorporating heating or refrigerating devices . . . . .	No. . . . .	Free		35%
8476.29.00	00	Other . . . . .	No. . . . .	Free		35%
8476.81.00	00	Other machines: Incorporating heating or refrigerating devices . . . . .	No. . . . .	Free		35%
8476.89.00	00	Other . . . . .	No. . . . .	Free		35%
8476.90.00	00	Parts . . . . .	X . . . . .	Free		35%

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-78

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8477		Machinery for working rubber or plastics or for the manufacture of products from these materials, not specified or included elsewhere in this chapter; parts thereof:				
8477.10		Injection-molding machines:				
8477.10.30	00	For manufacturing shoes . . . . .	No. . . . .	Free		Free
8477.10.40	00	For use in the manufacture of video laser discs . . .	No. . . . .	Free		35%
8477.10.70	00	For encapsulation in the assembly of semiconductors . . . . .	No. . . . .	Free		35%
8477.10.90		Other . . . . .		3.1%	Free (A,CA,E,IL,J, MX)	35%
	15	Of a type used for processing rubber or other thermosetting materials . . . . .	No.			
	30	Of a type used for processing thermoplastics: With a clamp force less than 50 tons . . . . .	No.			
	40	With a clamp force equal to or greater than 50 tons and less than 300 tons . . . . .	No.			
	50	With a clamp force equal to or greater than 300 tons and less than 750 tons . . . . .	No.			
	60	With a clamp force equal to or greater than 750 tons . . . . .	No.			
8477.20.00		Extruders . . . . .		3.1% <sup>1/</sup>	Free (A,CA,E,IL,J, MX)	35%
		Of a type used for processing rubber or other thermosetting materials:				
	05	Single screw . . . . .	No.			
	15	Other, including multiple screw . . . . .	No.			
		Of a type used for processing thermoplastics:				
		Single screw, with a screw size:				
	35	Less than 6.4 cm . . . . .	No.			
	45	6.4 cm or greater . . . . .	No.			
		Other, including multiple screw:				
	55	With a screw size less than 6.4 cm . . . . .	No.			
	65	With a screw size 6.4 cm or greater . . . . .	No.			
8477.30.00	00	Blow-molding machines . . . . .	No. . . . .	3.1%	Free (A,CA,E,IL,J, MX)	35%
8477.40		Vacuum-molding machines and other thermoforming machines:				
8477.40.40	00	Transfer molding and compression molding machines for encapsulation in the assembly of semiconductors . . . . .	No. . . . .	Free		35%
8477.40.80	00	Other . . . . .	No. . . . .	3.1%	Free (A,CA,E,IL,J, MX)	35%
8477.51.00		Other machinery for molding or otherwise forming: For molding or retreading pneumatic tires or for molding or otherwise forming inner tubes . . . . .		3.1% <sup>2/</sup>	Free (A*,CA,E,IL, J,MX)	35%
	10	For molding or retreading pneumatic tires . . . . .	No.			
	90	Other . . . . .	No.			
8477.59		Other:				
8477.59.40	00	Liquid encapsulate molding machines for encapsulation in the assembly of semiconductors . . . . .	No. . . . .	Free		35%
8477.59.80	00	Other . . . . .	No. . . . .	3.1%	Free (A,CA,E,IL,J, MX)	35%
8477.80.00	00	Other machinery . . . . .	No. . . . .	3.1%	Free (A,CA,E,IL,J, MX)	35%

<sup>1/</sup> See subheading 9902.84.85.

<sup>2/</sup> See subheadings 9902.84.87 and 9902.84.89.

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-79

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8477 (con.)		Machinery for working rubber or plastics or for the manufacture of products from these materials, not specified or included elsewhere in this chapter; parts thereof (con.):				
8477.90		Parts:				
		Base, bed, platen, clamp cylinder, ram, and injection castings, weldments and fabrications:				
8477.90.15	00	Of machines of subheading 8477.10.70, 8477.40.40 or 8477.59.40 . . . . .	X	Free		35%
8477.90.25		Other . . . . .		3.1%	Free (A,CA,E,IL,J, MX)	35%
	40	Of machines of subheading 8477.10.30, 8477.10.40 or 8477.10.90 . . . . .	X			
	80	Other . . . . .	X			
		Barrel screws:				
8477.90.35	00	Of machines of subheading 8477.10.70, 8477.40.40 or 8477.59.40 . . . . .	X	Free		35%
8477.90.45		Other . . . . .		3.1%	Free (A,CA,E,IL,J, MX)	35%
	40	Of machines of subheading 8477.10.30, 8477.10.40 or 8477.10.90 . . . . .	X			
	80	Other . . . . .	X			
		Hydraulic assemblies incorporating more than one of the following: manifold; valves; pump; oil cooler:				
8477.90.55	00	Of machines of subheading 8477.10.70, 8477.40.40 or 8477.59.40 . . . . .	X	Free		35%
8477.90.65	00	Other . . . . .	X	3.1%	Free (A,CA,E,IL,J, MX)	35%
		Other:				
8477.90.75	00	Of machines of subheading 8477.10.70, 8477.40.40 or 8477.59.40 . . . . .	X	Free		35%
8477.90.85		Other . . . . .		3.1% <sup>1/</sup>	Free (A,CA,E,IL,J, MX)	35%
	05	Of injection-molding machines:				
		For manufacturing shoes . . . . .	X			
	10	Other . . . . .	X			
	20	Of extruders . . . . .	X			
	30	Of blow-molding machines . . . . .	X			
	40	Of machines for forming pneumatic tires . . . . .	X			
	95	Other parts . . . . .	X			
8478		Machinery for preparing or making up tobacco, not specified or included elsewhere in this chapter; parts thereof:				
8478.10.00		Machinery . . . . .		Free		35%
	10	Industrial cigarette-making machines . . . . .	No.			
	90	Other . . . . .	No.			
8478.90.00		Parts . . . . .		Free		35%
	10	Parts of industrial cigarette-making machines . . . . .	X			
	90	Other . . . . .	X			

<sup>1/</sup> See subheadings 9902.84.85, 9902.84.87 and 9902.84.89.

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-80

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8479		Machines and mechanical appliances having individual functions, not specified or included elsewhere in this chapter; parts thereof:				
8479.10.00		Machinery for public works, building or the like . . . . .		Free		35%
		Concrete and bituminous pavers, finishers and spreaders:				
	40	For concrete . . . . .	No.			
	60	For bituminous material . . . . .	No.			
	80	Other . . . . .	No.			
8479.20.00	00	Machinery for the extraction or preparation of animal or fixed vegetable fats or oils . . . . .	No. . . . .	Free		35%
8479.30.00	00	Presses for the manufacture of particle board or fiber building board of wood or other ligneous materials and other machinery for treating wood or cork . . . . .	No. . . . .	Free		35%
8479.40.00	00	Rope or cable-making machines . . . . .	No. . . . .	Free		35%
8479.50.00	00	Industrial robots, not elsewhere specified or included . . . . .	No. . . . .	2.5%	Free (A,CA,E,IL,J, MX)	35%
8479.60.00	00	Evaporative air coolers . . . . .	No. . . . .	2.8%	Free (A,CA,E,IL,J, MX)	40%
8479.81.00	00	Other machines and mechanical appliances: For treating metal, including electric wire coil-winders . . . . .	No. . . . .	Free		35%
8479.82.00		Mixing, kneading, crushing, grinding, screening, sifting, homogenizing, emulsifying or stirring machines . . . . .		Free		35%
	40	Mixing, kneading or stirring machines . . . . .	No.			
	80	Other . . . . .	No.			
8479.89		Other:				
		Electromechanical appliances with self-contained electric motor:				
8479.89.10	00	Air humidifiers or dehumidifiers . . . . .	No. . . . .	Free		40%
8479.89.20	00	Floor polishers . . . . .	No. . . . .	Free		35%
8479.89.30		Vacuum cleaners . . . . .		Free		35%
	40	Industrial vacuum cleaners . . . . .	No.			
	80	Other . . . . .	No.			
8479.89.55	00	Trash compactors . . . . .	No. . . . .	2.8%	Free (A,CA,E,IL,J, MX)	40%
8479.89.65	00	Other . . . . .	X . . . . .	2.8%	Free (A,C 1/,CA,E, IL,J,MX)	40%
8479.89.70	00	Carpet sweepers . . . . .	No. . . . .	Free		35%

<sup>1/</sup> See additional U.S. note 1 to this chapter.

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-81

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8479 (con.)		Machines and mechanical appliances having individual functions, not specified or included elsewhere in this chapter; parts thereof (con.):				
8479.89 (con.)		Other machines and mechanical appliances (con.):				
8479.89.85		Other:				
		Machines for processing of semiconductor materials; machines for production and assembly of diodes, transistors and similar semiconductor devices and electronic integrated circuits; machines for the manufacturing of video laser discs . . . . .		Free		35%
	72	Apparatus designed to grow monocrystal semiconductor boules (crystal growers and pullers) . . . . .	No.			
	74	Machines (spinners) designed to coat photographic emulsions on semiconductor wafers . . . . .	No.			
	76	Chemical vapor deposition (CVD) apparatus including low pressure and plasma enhanced systems . . . . .	No.			
	78	Physical deposition apparatus including sputtering and E-beam apparatus . . . . .	No.			
	90	Other . . . . .	No.			
8479.89.87	00	Machines for wet-cleaning flat panel displays . . . . .	No. . . . .	Free		35%
8479.89.97		Other . . . . .		2.5% <u>1/</u>	Free (A,B,C <u>2/</u> ,CA, E,IL,J,MX)	35%
	50	Oil and gas field wireline and downhole equipment . . . . .	No.			
	60	Automotive maintenance machines . . . . .	No.			
	65	Hydraulic accumulators . . . . .	No.			
	85	Ultrasonic cleaning devices . . . . .	No.			
	95	Industrial vibrators . . . . .	No.			
	97	Other . . . . .	No.			

1/ See subheadings 9817.84.01, 9902.84.00, 9902.84.16 and 9902.84.30.

2/ See additional U.S. note 1 to this chapter.

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-82

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8479 (con.)		Machines and mechanical appliances having individual functions, not specified or included elsewhere in this chapter; parts thereof (con.):				
8479.90		Parts:				
8479.90.40	00	Of articles of subheading 8479.89.10, 8479.89.30 or 8479.89.70 . . . . .	X . . . . .	Free		35%
8479.90.45	00	Of trash compactors: Frame assemblies incorporating more than one of the following: baseplate; side frames; power screws; front plates . . . . .	X . . . . .	Free		35%
8479.90.55	00	Ram assemblies incorporating a ram wrapper and/or ram cover . . . . .	X . . . . .	Free		35%
8479.90.65	00	Container assemblies incorporating more than one of the following: container bottom; container wrapper; slide track; container front . . . . .	X . . . . .	Free		35%
8479.90.75	00	Cabinets or cases . . . . .	X . . . . .	Free		35%
8479.90.85	00	Other . . . . .	X . . . . .	Free		35%
8479.90.95		Other . . . . .		Free		35%
	40	Of industrial robots . . . . .	X			
		Other:				
	50	Of machinery for public works, building or the like . . . . .	X			
	60	Of presses for the manufacture of particle board or fiber building board of wood or other ligneous materials and other machinery for treating wood or cork . . . . .	X			
	65	Of machines or mechanical appliances for treating metal . . . . .	X			
	95	Other . . . . .	X			

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-83

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8480		Molding boxes for metal foundry; mold bases; molding patterns; molds for metal (other than ingot molds), metal carbides, glass, mineral materials, rubber or plastics:				
8480.10.00	00	Molding boxes for metal foundry . . . . .	No. . . . .	3.8%	Free (A,CA,E,IL,J, MX)	45%
8480.20.00	00	Mold bases . . . . .	No. . . . .	3.4%	Free (A,CA,E,IL,J, MX)	50%
8480.30.00	00	Molding patterns . . . . .	No. . . . .	2.8%	Free (A*,CA,E,IL, J, MX)	50%
8480.41.00	00	Molds for metal or metal carbides: Injection or compression types . . . . .	No. . . . .	3.1%	Free (A,CA,E,IL,J, MX)	35%
8480.49.00	00	Other types . . . . .	No. . . . .	3.1%	Free (A,CA,E,IL,J, MX)	35%
8480.50.00		Molds for glass . . . . .		Free		35%
	10	Injection or compression types . . . . .	No.			
	90	Other types . . . . .	No.			
8480.60.00		Molds for mineral materials . . . . .		Free		35%
	10	Injection or compression types . . . . .	No.			
	90	Other types . . . . .	No.			
8480.71		Molds for rubber or plastics: Injection or compression types:				
8480.71.10	00	For shoe machinery . . . . .	No. . . . .	Free		Free
8480.71.40	00	For the manufacture of semiconductor devices . . . . .	No. . . . .	Free		35%
8480.71.80		Other . . . . .		3.1% <sup>1/</sup>	Free (A,CA,E,IL,J, MX)	35%
	20	Temporarily imported for testing, calibration, examination, repair or alteration; returned after being exported for testing, calibration, examination, repair or alteration . . . . .	No.			
	45	Other: Injection type . . . . .	No.			
	60	Compression type . . . . .	No.			
8480.79		Other types:				
8480.79.10	00	Molds for shoe machinery . . . . .	No. . . . .	Free	Free (A,CA,E,IL,J, MX)	Free
8480.79.90		Other . . . . .		3.1%		35%
	10	Blow molds . . . . .	No.			
	20	Bladder operated molds . . . . .	No.			
	90	Other molds . . . . .	No.			

<sup>1/</sup> See subheading 9902.84.19.

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-84

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8481		Taps, cocks, valves and similar appliances, for pipes, boiler shells, tanks, vats or the like, including pressure-reducing valves and thermostatically controlled valves; parts thereof:				
8481.10.00		Pressure-reducing valves . . . . .		2%	Free (A,B,CA,E,IL, J,MX)	35%
	20	Hydraulic fluid power type . . . . .	No. kg			
	40	Pneumatic fluid power type: Filter-regulators and filter-regulator-lubricators . . . . .	No. kg			
	60	Other . . . . .	No. kg			
	90	Other . . . . .	No. kg			
8481.20.00		Valves for oleohydraulic or pneumatic transmissions . . . . .		2%	Free (A,B,CA,E,IL, J,MX)	35%
		Hydraulic valves:				
	10	Directional control: Manual type . . . . .	No. kg			
	20	Solenoid type . . . . .	No. kg			
	30	Other . . . . .	No. kg			
	40	Flow control type . . . . .	No. kg			
	50	Other . . . . .	No. kg			
		Other:				
	60	Directional control: Solenoid type . . . . .	No. kg			
	70	Other . . . . .	No. kg			
	80	Other . . . . .	No. kg			
8481.30		Check valves:				
8481.30.10		Of copper . . . . .		3%	Free (A,B,CA,E,IL, J,MX)	45%
	10	Having a pressure rating under 850 kPa . . . . .	No. kg			
	90	Having a pressure rating of 850 kPa or over . . . . .	No. kg			
8481.30.20		Of iron or steel . . . . .		5%	Free (A*,B,CA,E, IL,J,MX)	45%
	10	Of iron . . . . .	No. kg			
	90	Of steel . . . . .	No. kg			
8481.30.90	00	Other . . . . .	No. . . . .	3%	Free (A,B,CA,E,IL, J,MX)	45%
8481.40.00	00	Safety or relief valves . . . . .	No. . . . .	2%	Free (A,B,CA,E,IL, J,MX)	35%



# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-85

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8481 (con.)		Taps, cocks, valves and similar appliances, for pipes, boiler shells, tanks, vats or the like, including pressure-reducing valves and thermostatically controlled valves; parts thereof (con.):				
8481.80		Other appliances:				
8481.80.10		Hand operated:				
		Of copper .....		4%	Free (A,B,CA,E,IL, J,MX)	47%
	20	Having a pressure rating under 850 kPa:				
		Bath and shower faucets .....	No. kg			
	30	Sink and lavatory faucets .....	No. kg			
	40	Supply stops .....	No. kg			
	50	Other .....	No. kg			
		Having a pressure rating of 850 kPa or over:				
	60	Gate type .....	No. kg			
	70	Globe type .....	No. kg			
	75	Plug type .....	No. kg			
	85	Ball type .....	No. kg			
	90	Butterfly type .....	No. kg			
	95	Other .....	No. kg			
8481.80.30		Of iron or steel .....		5.6%	Free (A*,B,CA,E, IL,J,MX)	45%
		Of iron:				
	10	Gate type .....	No. kg			
	15	Globe type .....	No. kg			
	20	Plug type .....	No. kg			
	25	Ball type .....	No. kg			
	30	Butterfly type .....	No. kg			
	40	Other .....	No. kg			
		Of steel:				
	55	Gate type .....	No. kg			
	60	Globe type .....	No. kg			
	65	Plug type .....	No. kg			
	70	Ball type .....	No. kg			
	75	Butterfly type .....	No. kg			
	90	Other .....	No. kg			
8481.80.50		Of other materials .....		3%	Free (A,B,CA,E,IL, J,MX)	45%
	40	Pressure spray can valves .....	No. kg			
	60	Bath, shower, sink and lavatory faucets ..	No. kg			
	90	Other .....	No. kg			

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-86

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8481 (con.)		Taps, cocks, valves and similar appliances, for pipes, boiler shells, tanks, vats or the like, including pressure-reducing valves and thermostatically controlled valves; parts thereof (con.):				
8481.80 (con.)		Other appliances (con.):				
8481.80.90		Other .....		2%	Free (A*,B,CA,E,IL,J,MX)	35%
	05	Solenoid valves .....	No.			
	10	Ballcock mechanisms .....	No.			
	15	Regulator valves, self-operating, for controlling variables such as temperature, pressure, flow and liquid level .....	No.			
		Other:				
		With electrical or electro-hydraulic actuators:				
	20	Control valves designed for proportional operation by a signal from a control device .....	No.			
	25	Other .....	No.			
	30	With hydraulic actuators .....	No.			
		With pneumatic actuators:				
	35	Control valves designed for proportional operation by a signal from a control device .....	No.			
	40	Other .....	No.			
	45	With thermostatic actuators .....	No.			
	50	Other .....	No.			
8481.90		Parts:				
		Of hand operated and check appliances:				
8481.90.10	00	Of copper .....	kg .....	3%	Free (A,B,CA,E,IL,J,MX)	47%
8481.90.30	00	Of iron or steel .....	kg .....	5%	Free (A*,B,CA,E,IL,J,MX)	45%
8481.90.50	00	Of other materials .....	kg .....	3%	Free (A,B,CA,E,IL,J,MX)	45%
8481.90.90		Other .....		Free		35%
		Of valves of subheading 8481.20:				
	20	Valve bodies .....	kg			
	40	Other .....	kg			
		Other:				
	60	Valve bodies .....	kg			
	80	Other .....	kg			

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-87

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8482		Ball or roller bearings, and parts thereof:				
8482.10		Ball bearings:				
8482.10.10		Ball bearings with integral shafts .....		2.4%	Free (A+,B,CA,D, E,IL,J) 0.8% (MX)	35%
	40	Bearings having an outside diameter not over 30 mm .....	No. kg			
	80	Other .....	No. kg			
8482.10.50		Other .....		9%	Free (A+,B,CA,D, E,IL,J) 2.2% (MX)	67%
	04	Unground bearings .....	No.			
	08	Other:				
		Thrust bearings .....	No. kg			
	12	Linear bearings .....	No. kg			
		Angular contact bearings:				
		Wheel hub bearings units:				
	16	Flanged .....	No. kg			
	24	Other .....	No. kg			
	28	Other .....	No. kg			
		Radial bearings:				
		Single row bearings:				
	32	Maximum or full capacity type . . . .	No. kg			
		Other bearings, having an outside diameter of:				
	36	Under 9 mm .....	No. kg			
	44	9 mm and over but not over 30 mm No.	kg			
	48	Over 30 mm but not over 52 mm No.	kg			
	52	Over 52 mm but not over 100 mm. ....	No. kg			
	56	Over 100 mm .....	No. kg			
	60	Double row ball bearings .....	No. kg			
	64	Other .....	No. kg			
	68	Other .....	No. kg			

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Annotated for Statistical Reporting Purposes

XVI  
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Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8482 (con.) 8482.20.00		Ball or roller bearings, and parts thereof (con.):				
		Tapered roller bearings, including cone and tapered roller assemblies .....		5.8%	Free (A+,B,CA,D, E,IL,J) 1.3% (MX)	67%
		Cup and cone assemblies entered as a set:				
		Wheel hub units:				
	20	Flanged .....	No. kg			
	30	Other .....	No. kg			
		Other:				
	40	With cups having an outside diameter not exceeding 102 mm .....	No. kg			
	60	Other .....	No. kg			
		Cone assemblies entered separately:				
	70	For cups having an outside diameter not exceeding 102 mm .....	No. kg			
	80	Other .....	No. kg			
8482.30.00		Spherical roller bearings .....		5.8%	Free (A,B,CA,E, IL,J) 1.3% (MX)	67%
	40	Single row .....	No. kg			
	80	Other .....	No. kg			
8482.40.00	00	Needle roller bearings .....	No. kg	5.8%	Free (A,B,CA,E, IL,J) 1.3% (MX)	67%
8482.50.00	00	Other cylindrical roller bearings .....	No. kg	5.8%	Free (A,B,CA,E, IL,J) 1.3% (MX)	67%
8482.80.00		Other, including combined ball/roller bearings .....		5.8%	Free (A,B,CA,E, IL,J) 1.3% (MX)	67%
	20	Combined ball and spherical roller bearings .....	No. kg			
	40	Combined ball and needle roller bearings .....	No. kg			
	60	Combined ball and other cylindrical roller bearings .....	No. kg			
	80	Other .....	No. kg			

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Annotated for Statistical Reporting Purposes

XVI  
84-89

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8482 (con.)		Ball or roller bearings, and parts thereof (con.):				
8482.91.00		Parts: Balls, needles and rollers .....		4.4%	Free (A+,B,CA,D, E,IL,J) 0.9% (MX)	45%
	10	Balls: Of alloy steel .....	kg			
	20	Other .....	kg			
	40	Needles .....	kg			
	50	Tapered rollers .....	kg			
	70	Spherical rollers .....	kg			
	80	Other cylindrical rollers .....	kg			
	90	Other .....	kg			
8482.99		Other:				
8482.99.05	00	Inner or outer rings or races: For ball bearings .....	No. .... kg	9.9%	Free (A+,B,CA,D, E,IL,J) 2.2% (MX)	67%
8482.99.15		For tapered roller bearings .....		5.8%	Free (A+,B,CA,D, E,IL,J) 1.3% (MX)	67%
	40	Cups .....	No. kg			
	80	Other .....	No. kg			
8482.99.25		Other .....		5.8%	Free (A+,B,CA,D, E,IL,J) 1.3% (MX)	67%
	20	For spherical roller bearings .....	No. kg			
	40	For needle bearings .....	No. kg			
	60	For other cylindrical roller bearings .....	No. kg			
	80	Other .....	No. kg			
8482.99.35	00	Other: Parts of ball bearings (including parts of ball bearings with integral shafts) .....	kg .....	9.9%	Free (A+,B,CA,D, E,IL,J) 2.2% (MX)	67%
8482.99.45	00	Parts of tapered roller bearings .....	kg .....	5.8%	Free (A+,B,CA,D, E,IL,J) 1.3% (MX)	67%
8482.99.65		Other .....		5.8%	Free (A+,B,CA,D, E,IL,J) 1.3% (MX)	67%
	10	For spherical roller bearings .....	kg			
	30	For needle bearings .....	kg			
	60	For other cylindrical roller bearings .....	kg			
	95	Other .....	kg			

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Annotated for Statistical Reporting Purposes

XVI  
84-90

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8483		Transmission shafts (including camshafts and crankshafts) and cranks; bearing housings, housed bearings and plain shaft bearings; gears and gearing; ball or roller screws; gear boxes and other speed changers, including torque converters; flywheels and pulleys, including pulley blocks; clutches and shaft couplings (including universal joints); parts thereof:				
8483.10		Transmission shafts (including camshafts and crankshafts) and cranks:				
		Camshafts and crankshafts:				
8483.10.10		Designed for use solely or principally with spark-ignition internal combustion piston engines or rotary engines		2.5%	Free (A,B,C,CA,E,IL,J,MX)	35%
	10	For vehicles of chapter 87:				
		For motorcycles	No.			
	30	Other	kg			
	50	Other	No.			
			kg			
8483.10.30		Other		2.5%	Free (A,B,C,CA,E,IL,J,MX)	35%
	10	For vehicles of chapter 87	No.			
			kg			
	50	Other	No.			
			kg			
8483.10.50	00	Other transmission shafts and cranks	kg	Free		30%
8483.20		Housed bearings, incorporating ball or roller bearings:				
8483.20.40		Flange, take-up, cartridge and hanger units		4.5%	Free (A,CA,E,IL,J,MX)	45%
	40	Incorporating ball bearings	No.			
	80	Incorporating roller bearings	No.			
8483.20.80		Other		4.5%	Free (A+,CA,D,E,IL,J) 1.1% (MX)	45%
	40	Incorporating ball bearings	No.			
	80	Incorporating roller bearings	No.			
8483.30		Bearing housings; plain shaft bearings:				
8483.30.40		Flange, take-up, cartridge and hanger units		4.5%	Free (A,C,CA,E,IL,J,MX)	45%
	40	Ball or roller bearing type	kg			
	80	Other	kg			
8483.30.80		Other		4.5%	Free (A+,C,CA,D,E,IL,J,MX)	45%
	20	Bearing housings:				
		Ball or roller bearing type	kg			
	40	Other	kg			
		Plain shaft bearings:				
		With housing:				
	55	Rod end bearings	No.			
			kg			
	65	Other	No.			
			kg			
		Without housing:				
	70	Spherical	No.			
			kg			
	90	Other	No.			
			kg			

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-91

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8483 (con.)		Transmission shafts (including camshafts and crankshafts) and cranks; bearing housings, housed bearings and plain shaft bearings; gears and gearing; ball or roller screws; gear boxes and other speed changers, including torque converters; flywheels and pulleys, including pulley blocks; clutches and shaft couplings (including universal joints); parts thereof (con.):				
8483.40		Gears and gearing, other than toothed wheels, chain sprockets and other transmission elements entered separately; ball or roller screws; gear boxes and other speed changers, including torque converters:				
8483.40.10	00	Torque converters .....	No. ....	Free		27.5%
		Gear boxes and other speed changers:				
		Fixed ratio speed changers, multiple and variable ratio speed changers each ratio of which is selected by manual manipulation:				
8483.40.30		Imported for use with machines for making cellulosic pulp, paper or paperboard .....		Free		27.5%
	40	Fixed ratio speed changers .....	No.			
	80	Other .....	No.			
8483.40.50		Other .....		2.5%	Free (A,C,CA,E,IL, J,MX)	27.5%
	10	Fixed ratio speed changers .....	No.			
	50	Other .....	No.			
8483.40.70	00	Other speed changers No. ....	25¢ each +	3.9%	Free (A,C,CA,E,IL, J,MX)	\$4.50 each + 65%
8483.40.80	00	Ball or roller screws .....	X .....	3.8%	Free (A,B,C,CA,E, IL,J,MX)	45%
8483.40.90	00	Gears and gearing, other than toothed wheels, chain sprockets and other transmission elements entered separately .....	X .....	2.5%	Free (A,B,C,CA,E, IL,J,MX)	27.5%
8483.50		Flywheels and pulleys, including pulley blocks:				
8483.50.40	00	Gray-iron awning or tackle pulleys, not over 6.4 cm in wheel diameter .....	X .....	5.7%	Free (A,C,CA,E,IL, J,MX)	45%
		Other:				
8483.50.60	00	Flywheels .....	X .....	2.8%	Free (A,B,C,CA,E, IL,J,MX)	45%
8483.50.90		Other .....		2.8%	Free (A,B,C,CA,E, IL,J,MX)	45%
	40	Grooved pulleys .....	X			
	80	Other .....	X			
8483.60		Clutches and shaft couplings (including universal joints):				
8483.60.40		Clutches and universal joints .....		2.8%	Free (A,B,C,CA,E, IL,J,MX)	45%
	40	Clutches .....	No.			
	80	Universal joints .....	No.			
8483.60.80	00	Other .....	X .....	2.8%	Free (A+,B,C,CA, D,E,IL,J,MX)	45%

# Harmonized Tariff Schedule of the United States (2001)

Annotated for Statistical Reporting Purposes

XVI  
84-92

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
8483 (con.)		Transmission shafts (including camshafts and crankshafts) and cranks; bearing housings, housed bearings and plain shaft bearings; gears and gearing; ball or roller screws; gear boxes and other speed changers, including torque converters; flywheels and pulleys, including pulley blocks; clutches and shaft couplings (including universal joints); parts thereof (con.):				
8483.90		Parts:				
8483.90.10		Chain sprockets and parts thereof . . . . .		2.8%	Free (A,B,C,CA,E,IL,J,MX)	45%
	10	Forged . . . . .	kg			
	50	Other . . . . .	kg			
8483.90.20	00	Parts of bearing housings and plain shaft bearings: Parts of flange, take-up, cartridge and hanger units . . . . .	X	4.5%	Free (A,C,CA,E,IL,J,MX)	45%
8483.90.30	00	Other . . . . .	X	4.5%	Free (A+,C,CA,D,E,IL,J,MX)	45%
8483.90.50	00	Parts of gearing, gear boxes and other speed changers . . . . .	X	2.5%	Free (A,B,C,CA,E,IL,J,MX)	27.5%
		Other:				
8483.90.70	00	Parts of articles of subheading 8483.20 . . . . .	X	5.5%	Free (A+,CA,D,E,IL,J,MX)	45%
8483.90.80		Other . . . . .		2.8%	Free (A+,B,C,CA,D,E,IL,J,MX)	45%
	10	Parts of articles of subheading 8483.60.80 . . . . .	X			
	40	Parts of universal joints . . . . .	X			
	80	Other . . . . .	X			
8484		Gaskets and similar joints of metal sheeting combined with other material or of two or more layers of metal; sets or assortments of gaskets and similar joints, dissimilar in composition, put up in pouches, envelopes or similar packings; mechanical seals:				
8484.10.00	00	Gaskets and similar joints of metal sheeting combined with other material or of two or more layers of metal . . . . .	X	2.5%	Free (A,B,C,CA,E,IL,J,MX)	35%
8484.20.00	00	Mechanical seals . . . . .	No.	3.9%	Free (A,B,CA,E,IL,J,MX)	45%
8484.90.00	00	Other . . . . .	No.	2.5%	Free (A,B,C,CA,E,IL,J,MX)	35%
8485		Machinery parts, not containing electrical connectors, insulators, coils, contacts or other electrical features, and not specified or included elsewhere in this chapter:				
8485.10.00		Ships' or boats' propellers and blades therefor . . . . .		Free		30%
	40	Of copper . . . . .	No.			
	80	Other . . . . .	X			
8485.90.00		Other . . . . .		3.9%	Free (A,B,CA,E,IL,J,MX)	45%
	40	Oil seals, other than those of chapter 40 . . . . .	kg			
	80	Other . . . . .	kg			