

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 2	Converters.....	No.....	Free		35%
8454.20.00		Ingot molds and ladles.....		Free		35%
		Ingot molds:				
	10 8	For steel ingots.....	No. v			
			kg			
	60 7	Other.....	No. v			
			kg			
	80 3	Ladles.....	kg			
8454.30.00		Casting machines.....		Free		35%
	10 6	Die casting machines.....	No.			
	90 9	Other.....	No.			
8454.90.00		Parts.....		Free		35%
		Of casting machines:				
	30 9	Of die casting machines.....	X			
	60 2	Other.....	X			
	70 0	Of ingot molds.....	X			
	80 8	Other.....	X			
8455		Metal-rolling mills and rolls therefor; parts thereof:				
8455.10.00	00 1	Tube mills.....	No.....	4.9%	Free (A,E,IL,J) 0.9% (CA)	30%
		Other rolling mills:				
8455.21.00	00 8	Hot or combination hot and cold.....	No.....	4.9%	Free (A,E,IL,J) 0.9% (CA)	30%
8455.22.00	00 7	Cold.....	No.....	4.9%	Free (A,E,IL,J) 0.9% (CA)	30%
8455.30.00		Rolls for rolling mills.....		4.9%	Free (A,E,IL,J) 0.9% (CA)	30%
		Gray iron:				
	05 2	Not exceeding 2,268 kg.....	kg			
	15 0	Exceeding 2,268 kg but not exceeding 6,803.9 kg.....	kg			
	25 8	Exceeding 6,803.9 kg.....	kg			
		Cast steel:				
	35 6	Not exceeding 2,268 kg.....	kg			
	45 4	Exceeding 2,268 kg but not exceeding 6,803.9 kg.....	kg			
	55 1	Exceeding 6,803.9 kg.....	kg			
		Other:				
	65 9	Not exceeding 2,268 kg.....	kg			
	75 7	Exceeding 2,268 kg but not exceeding 6,803.9 kg.....	kg			
	85 5	Exceeding 6,803.9 kg.....	kg			
8455.90.00	00 4	Other parts.....	kg.....	4.9%	Free (A,E,IL,J) 0.9% (CA)	30%

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.....	4.4%	Free	(A,E,IL,J)	30%
	10 6	Numerically controlled.....	No.	0.8%	(CA)	
	20 4	Other.....	No.			
8456.10.50	00 9	Other.....	No.....	3%	Free (A,E,IL,J)	35%
					0.6%	(CA)
8456.20		Operated by ultrasonic processes:				
8456.20.10		For working metal.....	4.4%	Free	(A,E,IL,J)	30%
	10 4	Numerically controlled.....	No.	0.8%	(CA)	
	50 5	Other.....	No.			
8456.20.50	00 7	Other.....	No.....	3%	Free (A,E,IL,J)	35%
					0.6%	(CA)
8456.30		Operated by electro-discharge processes:				
8456.30.10		For working metal.....	4.4%	Free	(A,E,IL,J)	30%
	20 0	Traveling wire (wire-cut) type.....	No.	0.8%	(CA)	
		Other:				
	50 3	Numerically controlled.....	No.			
	70 9	Other.....	No.			
8456.30.50	00 5	Other.....	No.....	3%	Free (A,E,IL,J)	35%
					0.6%	(CA)
8456.90		Other:				
8456.90.10		For working metal.....	4.4%	Free	(A,E,IL,J)	30%
					0.8%	(CA)
		Numerically controlled:				
	05 6	Of a kind used for cutting metal by electro-chemical process.....	No.			
		Other:				
	20 7	Focused ion beam milling machines designed to produce or repair masks and reticles of semiconductor device designs..	No.			
	40 3	Other.....	No.			
		Other:				
	60 8	Of a kind used for cutting metal by electro-chemical process.....	No.			
	80 4	Other.....	No.			
8456.90.50		Other.....	No.....	3%	Free (A,E,IL,J)	35%
					0.6%	(CA)
	40 4	Dry etching (including plasma) machines designed to process semiconductor wafers.....	No.			
	80 5	Other.....	No.			

8457		Machining centers, unit construction machines (single station) and multistation transfer machines, for working metal:			
8457.10.00		Machining centers.....	4.2%	Free (A,E,IL,J) 0.8% (CA)	30%
	05 4	Used or rebuilt.....	No.		
		Other:			
		With automatic tool changers:			
		Vertical-spindle machines			
		with a Y-axis travel of--			
	15 2	Not over 660 mm.....	No.		
	25 0	Over 660 mm.....	No.		
	35 8	Other.....	No.		
	45 6	Other.....	No.		
8457.20.00		Unit construction machines (single station)...	4.2%	Free (A,E,IL,J) 0.8% (CA)	30%
	10 5	Numerically controlled.....	No.		
	90 8	Other.....	No.		
8457.30.00		Multistation transfer machines.....	4.2%	Free (A,E,IL,J) 0.8% (CA)	30%
	10 3	Numerically controlled.....	No.		
	90 6	Other.....	No.		

8458	Lathes for removing metal:				
	Horizontal lathes:				
8458.11.00	Numerically controlled.....	4.4%	Free (A,E,IL,J)	30%	
	05 2	Used or rebuilt.....	No.	0.8% (CA)	
		Other:			
	10 5	Multiple spindle.....	No.		
		Other:			
	30 1	With a power rating of less than 18.65 kW.....	No.		
	50 6	With a power rating of 18.65 kW or greater but not exceeding 37.3 kW.....	No.		
	90 8	With a power rating exceeding 37.3 kW.....	No.		
8458.19.00	Other.....	4.4%	Free (A,E,IL,J)	30%	
	10 7	Used or rebuilt.....	No.	0.8% (CA)	
	20 5	Other, valued under \$3,025 each.....	No.		
		Other:			
	30 3	Engine or toolroom lathes.....	No.		
		Automatic bar and/or chucking machines:			
	50 8	Single spindle.....	No.		
	70 4	Multiple spindle.....	No.		
	90 0	Other.....	No.		
8458.91	Other lathes:				
8458.91.10	Numerically controlled: Vertical turret lathes.....	4.2%	Free (A,E,IL,J)	30%	
	40 0	Used or rebuilt.....	No.	0.8% (CA)	
		Other:			
	60 5	Multiple spindle.....	No.		
	80 1	Other.....	No.		
8458.91.50	Other.....	4.4%	Free (A,E,IL,J)	30%	
	40 1	Used or rebuilt.....	No.	0.8% (CA)	
		Other:			
	50 8	Multiple spindle.....	No.		
	70 4	Other.....	No.		
8458.99	Other:				
8458.99.10	Vertical turret lathes.....	4.2%	Free (A,CA,E,IL,J)	30%	
	10 8	Used or rebuilt.....	No.		
	50 9	Other.....	No.		
8458.99.50	Other.....	4.4%	Free (A,E,IL,J)	30%	
	30 5	Used or rebuilt.....	No.	0.8% (CA)	
	60 8	Other, valued under \$3,025 each.....	No.		
	90 2	Other.....	No.		

8459		Machine tools (including way-type unit head machines) for drilling, boring, milling, threading or tapping by removing metal, other than lathes of heading 8458:					
8459.10.00	00 7	Way-type unit head machines.....	No.....	4.2%	Free (A,E,IL,J) 0.8% (CA)	30%	
8459.21.00		Other drilling machines:					
		Numerically controlled.....		4.2%	Free (A,E,IL,J) 0.8% (CA)	30%	
	40 6	Used or rebuilt.....	No.				
	80 7	Other.....	No.				
8459.29.00		Other.....		4.2%	Free (A,E,IL,J) 0.8% (CA)	30%	
	10 4	Used or rebuilt.....	No.				
	20 2	Other, valued under \$3,025 each.....	No.				
		Other:					
	40 8	Multiple spindle.....	No.				
		Other:					
	50 5	Radial.....	No.				
	70 1	Upright, excluding sensitive (hand-directed), turret and deep-hole machines.....	No.				
	90 7	Other.....	No.				
8459.31.00		Other boring-milling machines:					
		Numerically controlled.....		4.2%	Free (A,E,IL,J) 0.8% (CA)	30%	
	05 7	Used or rebuilt.....	No.				
		Other:					
		Horizontal spindle:					
	10 0	Table type, excluding planer type.....	No.				
	40 4	Other.....	No.				
	70 7	Other.....	No.				
8459.39.00		Other.....		4.2%	Free (A,E,IL,J) 0.8% (CA)	30%	
	10 2	Used or rebuilt.....	No.				
	20 0	Other, valued under \$3,025 each.....	No.				
		Other:					
	40 6	Horizontal spindle.....	No.				
	50 3	Other.....	No.				
8459.40.00		Other boring machines.....		4.2%	Free (A,E,IL,J) 0.8% (CA)	30%	
	10 9	Used or rebuilt.....	No.				
	20 7	Other, valued under \$3,025 each.....	No.				
		Other:					
		Vertical:					
	40 3	Numerically controlled.....	No.				
	50 0	Other.....	No.				
		Other:					
	70 6	Numerically controlled.....	No.				
	80 4	Other.....	No.				
8459.51.00		Milling machines, knee type:					
		Numerically controlled.....		4.2%	Free (A,E,IL,J) 0.8% (CA)	30%	
	40 9	Used or rebuilt.....	No.				
	80 0	Other.....	No.				
8459.59.00		Other.....		4.2%	Free (A,E,IL,J) 0.8% (CA)	30%	
	10 7	Used or rebuilt.....	No.				
	20 5	Other, valued under \$3,025 each.....	No.				
	30 3	Other.....	No.				

8459 (con.)	Machine tools (including way-type unit head machines) for drilling, boring, milling, threading or tapping by removing metal, other than lathes of heading 8458 (con.):			
	Other milling machines:			
8459.61.00	Numerically controlled.....	4.2%	Free (A,E,IL,J) 0.8% (CA)	30%
40 7	Used or rebuilt.....	No.		
80 8	Other.....	No.		
8459.69.00	Other.....	4.2%	Free (A,E,IL,J) 0.8% (CA)	30%
10 5	Used or rebuilt.....	No.		
20 3	Other, valued under \$3,025 each.....	No.		
	Other:			
50 6	Profile, duplicating or die sinking.....	No.		
70 2	Bed type.....	No.		
90 8	Other.....	No.		
8459.70.00	Other threading or tapping machines.....	4.4%	Free (A,E,IL,J) 0.8% (CA)	30%
20 0	Numerically controlled.....	No.		
	Other:			
40 6	Used or rebuilt.....	No.		
60 1	Other, valued under \$3,025 each.....	No.		
80 7	Other.....	No.		

8460		Machine tools for deburring, sharpening, grinding, honing, lapping, polishing or otherwise finishing metal, sintered metal carbides 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,E,IL,J) 0.8% (CA)	30%
	40 5	Used or rebuilt.....	No.		
	80 6	Other.....	No.		
8460.19.00		Other.....	4.4%	Free (A,E,IL,J) 0.8% (CA)	30%
	05 0	Used or rebuilt.....	No.		
		Other:			
	10 3	Reciprocating-table type.....	No.		
	50 4	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,E,IL,J) 0.8% (CA)	30%
	40 3	Used or rebuilt.....	No.		
	80 4	Other.....	No.		
8460.29.00		Other.....	4.4%	Free (A,E,IL,J) 0.8% (CA)	30%
	05 8	Used or rebuilt.....	No.		
		Other:			
	10 1	External cylindrical, including universal.....	No.		
	30 7	Internal cylindrical.....	No.		
	50 2	Other.....	No.		
		Sharpening (tool or cutter grinding) machines:			
8460.31.00		Numerically controlled.....	4.4%	Free (A,E,IL,J) 0.8% (CA)	30%
	40 1	Used or rebuilt.....	No.		
	80 2	Other.....	No.		
8460.39.00		Other.....	4.4%	Free (A,E,IL,J) 0.8% (CA)	30%
	10 9	Used or rebuilt.....	No.		
	20 7	Other, valued under \$3,025 each.....	No.		
	50 0	Other.....	No.		
8460.40.00		Honing or lapping machines.....	4.4%	Free (A,CA,E,IL,J)	30%
	10 6	Used or rebuilt.....	No.		
	20 4	Other, valued under \$3,025 each.....	No.		
		Other:			
	60 5	Numerically controlled.....	No.		
	80 1	Other.....	No.		
8460.90.00		Other.....	4.4%	Free (A,E,IL,J) 0.8% (CA) <u>1</u> /	30%
	10 5	Used or rebuilt.....	No.		
	20 3	Other, valued under \$3,025 each.....	No.		
		Other:			
	60 4	Numerically controlled.....	No.		
	80 0	Other.....	No.		

1/ Duty suspended on certain articles originating in the territory of Canada. See subheading 9905.84.30.

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, sintered metal carbides or cermet, not elsewhere specified or included:			
8461.10.00		Planing machines.....	4.4%	Free (A,E,IL,J) 0.8% (CA)	30%
	20 9	Used or rebuilt.....	No.		
	40 5	Other, valued under \$3,025 each.....	No.		
		Other:			
	60 0	Numerically controlled.....	No.		
	80 6	Other.....	No.		
8461.20.00		Shaping or slotting machines.....	4.4%	Free (A,E,IL,J) 0.8% (CA)	30%
	10 9	Numerically controlled.....	No.		
		Other:			
	30 5	Used or rebuilt.....	No.		
	70 6	Other, valued under \$3,025 each.....	No.		
	90 2	Other.....	No.		
8461.30.00		Broaching machines.....	4.4%	Free (A,E,IL,J) 0.8% (CA)	30%
	20 5	Used or rebuilt.....	No.		
	40 1	Other, valued under \$3,025 each.....	No.		
		Other:			
	60 6	Numerically controlled.....	No.		
	80 2	Other.....	No.		
8461.40		Gear cutting, gear grinding or gear finishing machines:			
8461.40.10		Gear cutting machines.....	5.8%	Free (A,E,IL,J) 1.1% (CA)	40%
	10 3	Used or rebuilt.....	No.		
		Other:			
	20 1	For bevel gears.....	No.		
		Other:			
	30 9	Gear hobbors.....	No.		
	40 7	Gear shapers.....	No.		
	60 2	Other.....	No.		
8461.40.50		Gear grinding or finishing machines.....	4.4%	Free (A,E,IL,J) 0.8% (CA)	30%
	20 2	Used or rebuilt.....	No.		
	40 8	Other, valued under \$3,025 each.....	No.		
		Other:			
	50 5	For bevel gears.....	No.		
	70 7	Other.....	No.		
8461.50.00		Sawing or cutting-off machines.....	4.4%	Free (A,E,IL,J) 0.8% (CA)	30%
	10 2	Used or rebuilt.....	No.		
	20 0	Other, valued under \$3,025 each.....	No.		
		Other:			
	50 3	Numerically controlled.....	No.		
	90 5	Other.....	No.		
8461.90.00		Other.....	4.4%	Free (A,E,IL,J) 0.8% (CA)	30%
	10 4	Used or rebuilt.....	No.		
	20 2	Other, valued under \$3,025 each.....	No.		
		Other:			
	40 8	Numerically controlled.....	No.		
	80 9	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,E,IL,J) 0.8% (CA)	30%	
10 0	Used or rebuilt.....	No.			
30 6	Other: Headers and upsetters, including cold headers.....	No.			
50 1	Other.....	No.			
8462.21.00	Bending, folding, straightening or flattening machines (including presses): Numerically controlled.....	4.4%	Free (A,E,IL,J) 0.8% (CA)	30%	
40 1	Used or rebuilt.....	No.			
80 2	Other.....	No.			
8462.29.00	Other.....	4.4%	Free (A,E,IL,J) 0.8% (CA) <u>1/</u>	30%	
10 9	Used or rebuilt.....	No.			
20 7	Other, valued under \$3,025 each.....	No.			
30 5	Other: Press brakes.....	No.			
40 3	Bending rolls.....	No.			
50 0	Other.....	No.			
8462.31.00	Shearing machines (including presses), other than combined punching and shearing machines: Numerically controlled.....	4.4%	Free (A,E,IL,J) 0.8% (CA)	30%	
40 9	Used or rebuilt.....	No.			
80 0	Other.....	No.			
8462.39.00	Other.....	4.4%	Free (A,E,IL,J) 0.8% (CA)	30%	
10 7	Used or rebuilt.....	No.			
20 5	Other, valued under \$3,025 each.....	No.			
50 8	Other.....	No.			
8462.41.00	Punching or notching machines (including presses), including combined punching and shearing machines: Numerically controlled.....	4.4%	Free (A,E,IL,J) 0.8% (CA)	30%	
40 7	Used or rebuilt.....	No.			
80 8	Other.....	No.			
8462.49.00	Other.....	4.4%	Free (A,E,IL,J) 0.8% (CA)	30%	
10 5	Used or rebuilt.....	No.			
20 3	Other, valued under \$3,025 each.....	No.			
50 6	Other.....	No.			
8462.91.00	Other: Hydraulic presses.....	4.4%	Free (A,E,IL,J) 0.8% (CA)	30%	
30 8	Used or rebuilt.....	No.			
60 1	Other, numerically controlled.....	No.			
90 5	Other.....	No.			
8462.99.00	Other.....	4.4%	Free (A,E,IL,J) 0.8% (CA)	30%	
10 4	Used or rebuilt.....	No.			
20 2	Other, valued under \$3,025 each.....	No.			
30 0	Other: Numerically controlled.....	No.			
35 5	Other: Mechanical transfer presses.....	No.			
45 3	Other mechanical presses..	No.			
60 3	Other.....	No.			

1/ Duty suspended on certain articles originating in the territory of Canada. See subheading 9905.84.40.

8463	Other machine tools for working metal, sintered metal carbides or cermets, without removing material:				
8463.10.00	Draw-benches for bars, tubes, profiles, wire or the like.....	4.4%	Free (A,E,IL,J) 0.8% (CA)	30%	
40 3	Used or rebuilt.....	No.			
60 8	Other, valued under \$3,025 each.....	No.			
80 4	Other.....	No.			
8463.20.00	Thread rolling machines.....	4.4%	Free (A,E,IL,J) 0.8% (CA)	30%	
40 1	Used or rebuilt.....	No.			
60 6	Other, valued under \$3,025 each.....	No.			
80 2	Other.....	No.			
8463.30.00	Machines for working wire.....	4.4%	Free (A,E,IL,J) 0.8% (CA)	30%	
40 9	Used or rebuilt.....	No.			
60 4	Other, valued under \$3,025 each.....	No.			
80 0	Other.....	No.			
8463.90.00	Other.....	4.4%	Free (A,E,IL,J) 0.8% (CA)	30%	
40 6	Used or rebuilt.....	No.			
60 1	Other, valued under \$3,025 each.....	No.			
80 7	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.....	3%	Free (A,E,IL,J) 0.6% (CA)	35%	
40 2	Machines designed to saw (slice) blank semiconductor wafers from crystal boules of semiconductor grade materials..	No.			
80 3	Other.....	No.			
8464.20.00	Grinding or polishing machines.....	3%	Free (A,E,IL,J) 0.6% (CA)	35%	
10 6	Glass-working machines.....	No.			
50 7	Other.....	No.			
8464.90.00	Other.....	3%	Free (A,E,IL,J) 0.6% (CA)	35%	
10 1	Glass-working machines.....	No.			
40 5	Machines designed to scribe or score semiconductor wafers into finished chips or die.....	No.			
60 0	Wet chemical etching machines designed to process semiconductor wafers.....	No.			
80 6	Other.....	No.			

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.....	3%	Free (A, E, IL, J) 0.6% (CA)	35%
		Woodworking machines:			
	20 5	Valued under \$3,025 each.....	No.		
	40 1	Other.....	No.		
	50 8	Other.....	No.		
		Other:			
8465.91.00		Sawing machines.....	3%	Free (A, E, IL, J) 0.6% (CA)	35%
		Woodworking machines:			
	10 9	Sawmill machines.....	No.		
		Other, valued under \$3,025 each:			
	15 4	Radial arm saws.....	No.		
	25 2	Table saws.....	No.		
	35 0	Other.....	No.		
	45 8	Other.....	No.		
	50 0	Other.....	No.		
8465.92.00		Planing, milling or molding (by cutting) machines.....	3%	Free (A, E, IL, J) 0.6% (CA)	35%
		For woodworking:			
	15 3	Valued under \$3,025 each.....	No.		
		Other:			
	30 4	Routing machines.....	No.		
	40 2	Other.....	No.		
	50 9	Other.....	No.		
8465.93.00		Grinding, sanding or polishing machines..	3%	Free (A, CA, E, IL, J)	35%
		For woodworking:			
	15 2	Valued under \$3,025 each.....	No.		
		Other:			
	30 3	Sanding machines.....	No.		
	40 1	Other.....	No.		
	50 8	Other.....	No.		
8465.94.00		Bending or assembling machines.....	3.7%	Free (A, E, IL, J) 0.7% (CA)	35%
		For woodworking.....	No.		
	10 6	Other.....	No.		
8465.95.00		Drilling or mortising machines.....	3%	Free (A, E, IL, J) 0.6% (CA)	35%
		For woodworking:			
	15 0	Valued under \$3,025 each.....	No.		
	25 8	Other.....	No.		
	50 6	Other.....	No.		
8465.96.00		Splitting, slicing or paring machines....	3%	Free (A, E, IL, J) 0.6% (CA)	35%
		For woodworking.....	No.		
	10 4	Other.....	No.		
8465.99.00		Other.....	3%	Free (A, E, IL, J) 0.6% (CA)	35%
		Woodworking machines:			
	15 6	Lathes, valued under \$3,025 each.....	No.		
		Other, valued under \$3,025 each.....	No.		
	25 4	Other.....	No.		
	35 2	Other.....	No.		
	50 2	Other.....	No.		

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:				
8466.10.00		Tool holders and self-opening dieheads.....	4.9%	Free	(A,E,IL,J)	45%
	10 6	Tool holders for forming-type or cutting-type dies.....		0.9%	(CA)	
	30 2	Holdings for replaceable cutting or drill inserts.....				
	70 3	Other.....				
8466.20		Work holders:				
8466.20.10		For machine tools used in cutting gears..	5.8%	Free	(A,E,IL,J)	45%
	10 2	Jigs and fixtures.....		1.1%	(CA)	
	90 5	Other.....				
8466.20.90		Other.....	4.7%	Free	(A,E,IL,J)	35%
		For metalworking machine tools:				
	20 3	Jigs and fixtures.....				
	30 1	Other.....				
		Other work holders:				
	40 9	Jigs and fixtures.....				
	60 4	Other.....				
8466.30		Dividing heads and other special attachments for machine tools:				
8466.30.10	00 2	Dividing heads.....	4.7%	Free	(A,E,IL,J)	35%
		Other special attachments:				
8466.30.30	00 8	Machines.....	3.7%	Free	(A,E,IL,J)	35%
8466.30.50	00 3	Other.....	9.5%	Free	(A,E,IL,J)	45%
		Other:				
8466.91		For machines of heading 8464:				
8466.91.10	00 8	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 9	Other.....	4.7%	Free	(A,E,IL,J)	35%
				0.9%	(CA)	

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 (con.):			
8466.92		For machines of heading 8465:			
8466.92.10	00 7	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%	Free (A,E,IL,J) 0.9% (CA)
	10 6	Of woodworking machines.....	X		
	90 9	Other.....	X		
8466.93		For machines of headings 8456 to 8461:			
8466.93.10		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%
	30 0	For metalworking machine tools for cutting, grinding or finishing gears.....	kg		
	60 3	Other.....	kg		
8466.93.50	00 7	Other: Of metalworking machine tools for cutting gears.....	X.....	5.8%	Free (A,E,IL,J) 1.1% (CA)
8466.93.70		Other.....		4.7%	Free (A,E,IL,J) 0.9% (CA) <u>1/</u>
	40 5	Of metalworking machine tools for grinding or finishing gears.....	X		
	80 6	Other.....	X		
8466.94		For machines of heading 8462 or 8463:			
8466.94.10	00 5	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%
8466.94.50		Other.....		4.7%	Free (A,E,IL,J) 0.9% (CA)
	40 8	Parts of mechanical transfer presses.....	X		
	80 9	Other.....	X		

1/ Duty suspended on certain articles originating in the territory of Canada. See subheading 9905.84.35.

8467	Tools for working in the hand, pneumatic or with self-contained nonelectric motor, and parts thereof:				
	Pneumatic:				
8467.11	Rotary type (including combined rotary-percussion):				
8467.11.10	Suitable for metal working.....	4.5%	Free 0.9%	(A, E, IL, J) (CA)	30%
40 6	Grinders, polishers and sanders.....	No.			
80 7	Other.....	No.			
8467.11.50	Other.....	2.5%	Free 0.5%	(A, E, IL, J) (CA)	27.5%
10 3	Rock drills.....	No.			
20 1	Other drills, screwdrivers and nut runners.....	No.			
40 7	Other wrenches.....	No.			
90 6	Other.....	No.			
8467.19	Other:				
8467.19.10	Suitable for metal working.....	No..... 4.5%	Free 0.9%	(A, E, IL, J) (CA)	30%
8467.19.50	Other.....	2.5%	Free 0.5%	(A, E, IL, J) (CA)	27.5%
30 1	Pneumatic, hand-held force feed lubricating equipment.....	No.			
60 4	Designed for use in construction or mining.....	No.			
90 8	Other.....	No.			
8467.81.00	Other tools:				
00 1	Chain saws.....	No..... 2.5%	Free 0.5%	(A, E, IL, J) (CA)	27.5%
8467.89	Other:				
8467.89.10	Suitable for metal working.....	No..... 4.5%	Free 0.9%	(A, E, IL, J) (CA)	30%
8467.89.50	Other.....	2.5%	Free 0.5%	(A, E, IL, J) (CA)	27.5%
30 6	Gasoline powered grass and weed trimmers and brushcutters.....	No.			
60 9	Other, designed for use in agriculture or horticulture....	No.			
90 3	Other.....	No.			
8467.91.00	Parts:				
00 9	Of chain saws.....	X..... 2.5%	Free 0.5%	(A, E, IL, J) (CA)	27.5%
8467.92.00	Of pneumatic tools.....	2.5%	Free 0.5%	(A, E, IL, J) (CA)	27.5%
50 7	Of pneumatic, hand-held force feed lubricating equipment.....	X			
90 9	Other.....	X			
8467.99.00	Other.....	2.5%	Free 0.5%	(A, E, IL, J) (CA)	27.5%
30 5	Of gasoline powered grass and weed trimmers and brushcutters.....	X			
90 2	Other.....	X			

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 6	Hand-held blow torches.....	No.....	5.7%	Free	(A, CA, E, IL, J)	45%
8468.20		Other gas-operated machinery and apparatus:					
8468.20.10	00 2	Hand-directed or -controlled.....	No.....	5.7%	Free	(A, E, IL, J)	45%
					1.1%	(CA)	
8468.20.50	00 3	Other.....	No.....	Free			27.5%
8468.80		Other machinery and apparatus:					
8468.80.10	00 9	Hand-directed or -controlled.....	No.....	5.7%	Free	(A, E, IL, J)	45%
					1.1%	(CA)	
8468.80.50	00 0	Other.....	No.....	Free			27.5%
8468.90		Parts:					
8468.90.10	00 7	Of hand-directed or -controlled machinery and apparatus.....	X.....	5.7%	Free	(A, E, IL, J)	45%
					1.1%	(CA) <u>1/</u>	
8468.90.50	00 8	Other.....	X.....	Free			27.5%
8469		Typewriters and word processing machines:					
8469.10.00	00 5	Automatic typewriters and word processing machines.....	No.....	2.2%	Free	(A, CA, E, IL, J)	35%
8469.21.00	00 2	Other typewriters, electric: Weighing not more than 12 kg, excluding case.....	No.....	Free			Free
8469.29.00	00 4	Other.....	No.....	Free			Free
8469.31.00	00 0	Other typewriters, nonelectric: Weighing not more than 12 kg, excluding case.....	No.....	Free			Free
8469.39.00	00 2	Other.....	No.....	Free			Free
8470		Calculating machines; accounting machines, cash registers, postage-franking machines, ticket-issuing machines and similar machines, incorporating a calculating device:					
8470.10.00		Electronic calculators capable of operation without an external source of power.....		3.7%	Free	(A, CA, E, IL, J)	35%
	40 4	Display only.....	No.				
	60 9	Other.....	No.				
		Other electronic calculating machines:					
8470.21.00	00 9	Incorporating a printing device.....	No.....	3.7%	Free	(A, CA, E, IL, J)	35%
8470.29.00	00 1	Other.....	No.....	3.7%	Free	(A, CA, E, IL, J)	35%
8470.30.00	00 8	Other calculating machines.....	No.....	3.7%	Free	(A, CA, E, IL, J)	35%
8470.40.00	00 6	Accounting machines.....	No.....	3.9%	Free	(A, CA, E, IL, J)	35%
8470.50.00		Cash registers.....		Free			35%
	20 9	Point-of-sale terminals.....	No.				
	60 0	Other.....	No.				
8470.90.00		Other.....		3.9%	Free	(A, E, IL, J)	35%
					0.7%	(CA)	
	10 3	Postage-franking machines.....	No.				
	90 6	Other.....	No.				

1/ Duty suspended on certain articles originating in the territory of Canada. See subheading 9905.84.42.

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 1	Analog or hybrid automatic data processing machines.....	No.....	4.9%	Free (A, C, CA, E, IL, 40% J)
8471.20.00		Digital automatic data processing machines, containing in the same housing at least a central processing unit and an input and output unit, whether or not combined.....		3.9%	Free (A, C, CA, E, IL, 35% J)
		With cathode-ray tube (CRT):			
	30 3	Color.....	No.		
	60 6	Other.....	No.		
	90 0	Other.....	No.		
8471.91.00		Other: Digital processing units, whether or not entered with the rest of a system, which may contain in the same housing one or two of the following types of units: storage units, input units, output units.....		3.9%	Free (A, C, CA, E, IL, 35% J)
		With cathode-ray tube (CRT):			
	30 7	Color.....	No.		
	60 0	Other.....	No.		
	90 4	Other.....	No.		
8471.92		Input or output units, whether or not entered with the rest of a system and whether or not containing storage units in the same housing:			
8471.92.10		Combined input/output units.....		3.7%	Free (A, C, CA, E, IL, 35% J)
		With cathode-ray tube (CRT):			
	30 4	Color.....	No.		
	60 7	Other.....	No.		
	90 1	Other.....	No.		
8471.92.20	00 8	Other: Keyboards.....	No.....	Free	35%
8471.92.30	00 6	Display units: Without cathode-ray tube (CRT), having a visual display diagonal not exceeding 30.5 cm.....	No.....	Free	35%
8471.92.40		Other.....		3.7%	Free (A, C, CA, E, IL, 35% J)
		With cathode-ray tube (CRT):			
	25 5	Color.....	No.		
	75 4	Other.....	No.		
	85 2	Other.....	No.		
8471.92.65		Printer units: Assembled units incorporating at least the media transport, control and print mechanisms.....		3.7%	Free (A, C, CA, E, IL, 35% <u>1</u> / J)
		Daisy wheel.....	No.		
	20 0	Dot matrix.....	No.		
	40 6	Laser.....	No.		
	60 1	Other.....	No.		
8471.92.70	00 7	Other.....	No.....	Free	35%

1/ Duty on certain line printers temporarily reduced. See heading 9902.84.65.



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 (con.):			
8471.92 (con.)	Input or output units, whether or not entered with the rest of a system and whether or not containing storage units in the same housing (con.):			
	Other (con.):			
	Other:			
8471.92.80	Units suitable for physical incorporation into automatic data processing machines or units thereof.....	Free		35%
65 7	Output devices.....	No.		
85 3	Other.....	No.		
8471.92.90	Other.....	3.7%	Free (A, C, CA, E, IL, 35% J)	
20 9	Card key and magnetic media entry devices.....	No.		
40 5	Optical scanners and magnetic ink recognition devices..	No.		
	Other:			
60 0	Output devices..	No.		
80 6	Other.....	No.		
8471.93	Storage units, whether or not entered with the rest of a system:			
	Magnetic disk drive units:			
	For a disk of a diameter exceeding 21 cm:			
8471.93.10 00 9	Without read-write unit assembled therein; read-write units separately entered.....	No.....	Free	35%
8471.93.15 00 4	Units for physical incorporation into automatic data processing machines or units thereof.....	No.....	Free	35%
8471.93.20 00 7	Other.....	No.....	3.7%	Free (A, C, CA, E, IL, 35% J)
8471.93.30	Other:			
	Not assembled in cabinets, and without attached external power supply.....	Free		35%
20 1	Flexible (floppy) magnetic disk drive units.....	No.		
40 7	Hard magnetic disk drive units.....	No.		
60 2	Other.....	No.		
8471.93.40	Other.....	3.7%	Free (A, C, CA, E, IL, 35% J)	
30 7	Flexible (floppy) magnetic disk drive units.....	No.		
50 2	Hard magnetic disk drive units.....	No.		
90 4	Other.....	No.		

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 (con.):				
8471.93 (con.)	Storage units, whether or not entered with the rest of a system (con.):				
	Other storage units:				
8471.93.50 00 0	Not assembled in cabinets for placing on a table, desk, wall, floor or similar place...	No.....	Free		35%
8471.93.60 00 8	Other.....	No.....	3.7%	Free (A, C, CA, E, IL, J)	35%
8471.99	Other:				
8471.99.15 00 8	Control or adapter units.....	No.....	Free		35%
	Power supplies:				
8471.99.32 00 7	Units suitable for physical incorporation into automatic data processing machines or units thereof.....	No.....	Free		35%
8471.99.34 00 5	Other.....	No.....	3%	Free (A*, CA, E, IL, J)	35%
	Other:				
8471.99.60 00 2	Units suitable for physical incorporation into automatic data processing machines or units thereof.....	No.....	Free		35%
8471.99.90 00 6	Other.....	No.....	3.7%	Free (A, CA, E, IL, J)	35%

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 0	Duplicating machines.....	No.....	3.3%	Free (A, CA, E, IL, J)	25%
8472.20.00	00 8	Addressing machines and address plate embossing machines.....	No.....	4.2%	Free (A, E, IL, J) 0.8% (CA)	25%
8472.30.00	00 6	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.....	3.7%	Free (A, E, IL, J) 0.7% (CA)	35%
8472.90		Other:				
8472.90.20		Automatic banknote dispensers and other coin or currency handling machines.....		3.7%	Free (A, CA, E, IL, J)	35%
	10 7	Automatic banknote dispensers.....	No.			
		Other:				
	20 5	Coin and currency handling machines.....	No.			
		Other.....	No.			
8472.90.40	00 5	Pencil sharpeners.....	No.....	5.3%	Free (A, CA, E, IL, J)	40%
8472.90.60	00 0	Numbering, dating and check-writing machines.....	No.....	Free		25%
8472.90.80	00 6	Other.....	No.....	3.7% <u>1/</u>	Free (A, CA, E, IL, J)	35%
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:				
8473.10.00		Parts and accessories of the machines of heading 8469.....		4%	Free (A, CA, E, IL, J)	45%
	10 7	Of automatic typewriters and word processing machines.....	X			
		Other.....	X			
	90 0	Parts and accessories of the machines of heading 8470:				
8473.21.00	00 6	Of the electronic calculating machines of subheading 8470.10, 8470.21 or 8470.29.....	X.....	3.9%	Free (A, CA, E, IL, J)	35%
8473.29.00	00 8	Other.....	X.....	3.9%	Free (A, CA, E, IL, J)	35%
8473.30		Parts and accessories of the machines of heading 8471:				
		Not incorporating a cathode ray tube.....	X.....	Free		35%
8473.30.80	00 8	Other.....	X.....	3.9%	Free (A, CA, E, IL, J)	35%
8473.40		Parts and accessories of the machines of heading 8472:				
8473.40.20	00 9	Of automatic banknote dispensers and other coin or currency handling machines of subheading 8472.90.20.....	X.....	3.9%	Free (A, CA, E, IL, J)	35%
8473.40.40	00 5	Other.....	X.....	3.9%	Free (A, E, IL, J) 0.7% (CA) <u>2/</u>	35%

1/ Duty on certain accessory and auxiliary machines intended for attachment to electrostatic copiers temporarily suspended. See heading 9902.90.90.

2/ Duty suspended on certain articles originating in the territory of Canada. See subheading 9905.84.45.

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		Sorting, screening, separating or washing machines.....	2.9%	Free (A, E, IL, J) 0.5% (CA)	35%
	10 6	Portable.....	No.		
	90 9	Stationary.....	No.		
8474.20.00		Crushing or grinding machines.....	2.9%	Free (A, E, IL, J) 0.5% (CA)	35%
	10 4	Portable.....	No.		
	50 5	Stationary:			
	70 1	Crushing.....	No.		
		Other.....	No.		
8474.31.00	00 3	Mixing or kneading machines:			
		Concrete or mortar mixers.....	No..... 2.9%	Free (A, E, IL, J) 0.5% (CA)	35%
8474.32.00	00 2	Machines for mixing mineral substances with bitumen.....	No..... 2.9%	Free (A, E, IL, J) 0.5% (CA)	35%
8474.39.00	00 5	Other.....	No..... 2.9%	Free (A, E, IL, J) 0.5% (CA)	35%
8474.80.00		Other machinery.....	2.9%	Free (A, E, IL, J) 0.5% (CA)	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 1	Designed for use with ceramic paste, unhardened cements and plastering materials.....	No.		
	15 6	Other.....	No.		
	20 9	Machines for forming foundry molds of sand.....	No.		
8474.90.00	80 6	Other.....	No.		
		Parts.....	2.9%	Free (A, E, IL, J) 0.5% (CA)	35%
	10 9	Of sorting, screening, separating or washing machines.....	X		
	20 7	Of crushing or grinding machines.....	X		
	50 0	Of mixing or kneading machines.....	X		
	90 2	Other.....	X		

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 7	Machines for assembling electric or electronic lamps, tubes or flashbulbs, in glass envelopes.....	No.....	3.7%	Free (A,E,IL,J) 0.7% (CA)	35%
8475.20.00	00 5	Machines for manufacturing or hot working glass or glassware.....	No.....	3.9%	Free (A,E,IL,J) 0.7% (CA)	35%
8475.90		Parts:				
8475.90.10	00 8	Of machines for assembling electric or electronic lamps, tubes or flashbulbs, in glass envelopes.....	X.....	3.7%	Free (A,E,IL,J) 0.7% (CA)	35%
8475.90.90	00 1	Other.....	X.....	3.9%	Free (A,E,IL,J) 0.7% (CA)	35%
8476		Automatic goods-vending machines (for example, postage stamp, cigarette, food or beverage machines), including money-changing machines; parts thereof:				
		Machines:				
8476.11.00	00 5	Incorporating heating or refrigerating devices.....	No.....	3.9%	Free (A,CA,E,IL,J)	35%
8476.19.00	00 7	Other.....	No.....	3.9%	Free (A,CA,E,IL,J)	35%
8476.90.00	00 9	Parts.....	X.....	3.9%	Free (A,CA,E,IL,J)	35%

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	9	For manufacturing shoes.....	No.....	Free			Free
8477.10.60			Other.....		3.9%	Free	(A, CA, E, IL, J)	35%
	10	0	Of a type used for processing rubber or other thermosetting materials.....	No.				
			Of a type used for processing thermoplastics.....	No.				
8477.20.00			Extruders.....		3.9%	Free	(A, E, IL, J)	35%
			Of a type used for processing rubber or other thermosetting materials:			0.7%	(CA)	
	05	8	Single screw.....	No.				
	15	6	Other, including multiple screw.....	No.				
			Of a type used for processing thermoplastics:					
	35	2	Single screw, with a screw size:					
	45	0	Less than 6.4 cm.....	No.				
			6.4 cm or greater.....	No.				
	55	7	Other, including multiple screw:					
			With a screw size less than 6.4 cm.....	No.				
	65	5	With a screw size 6.4 cm or greater.....	No.				
8477.30.00	00	1	Blow-molding machines.....	No.....	3.9%	Free	(A, CA, E, IL, J)	35%
8477.40.00	00	9	Vacuum-molding machines and other thermoforming machines.....	No.....	3.9%	Free	(A, E, IL, J)	35%
			Other machinery for molding or otherwise forming:			0.7%	(CA)	
8477.51.00			For molding or retreading pneumatic tires or for molding or otherwise forming inner tubes.....		3.9%	Free	(A, E, IL, J)	35%
	10	3	For molding or retreading pneumatic tires.....	No.		0.7%	(CA)	
			Other.....	No.				
8477.59.00	00	7	Other.....	No.....	3.9%	Free	(A, E, IL, J)	35%
						0.7%	(CA)	
8477.80.00	00	0	Other machinery.....	No.....	3.9%	Free	(A, E, IL, J)	35%
						0.7%	(CA)	
8477.90.00			Parts.....		3.9%	Free	(A, E, IL, J)	35%
	10	6	Of injection-molding machines.....	X		0.7%	(CA)	<u>2/</u>
	20	4	Of extruders.....	X				
	30	2	Of blow-molding machines.....	X				
	40	0	Of machines for forming pneumatic tires..	X				
	90	9	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.....		4.2%	Free	(A, E, IL, J)	35%
	10	2	Industrial cigarette-making machines.....	No.		0.8%	(CA)	
	90	5	Other.....	No.				
8478.90.00			Parts.....		4.2%	Free	(A, E, IL, J)	35%
	10	5	Parts of industrial cigarette-making machines.....	X		0.8%	(CA)	
	90	8	Other.....	X				

1/ Duty suspended on certain articles originating in the territory of Canada. See subheading 9905.84.50.  
2/ Duty suspended on certain articles originating in the territory of Canada. See subheading 9905.84.55.

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.....	3.7%		Free (A,E,IL,J) 0.7% (CA)	35%
		Concrete and bituminous pavers, finishers and spreaders:				
	40 5	For concrete.....	No.			
	60 0	For bituminous material.....	No.			
	80 6	Other.....	No.			
8479.20.00	00 1	Machinery for the extraction or preparation of animal or fixed vegetable fats or oils.....	No.....	3.5%	Free (A,E,IL,J) 0.7% (CA)	35%
8479.30.00	00 9	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.....	3.7%	Free (A,E,IL,J) 0.7% (CA)	35%
8479.40.00	00 7	Rope or cable-making machines.....	No.....	4.2%	Free (A,E,IL,J) 0.8% (CA)	35%
		Other machines and mechanical appliances:				
8479.81.00	00 7	For treating metal, including electric wire coil-winders.....	No.....	3.7%	Free (A,E,IL,J) 0.7% (CA) <u>1/</u>	35%
8479.82.00		Mixing, kneading, crushing, grinding, screening, sifting, homogenizing, emulsifying or stirring machines.....		3.7%	Free (A,E,IL,J) 0.7% (CA)	35%
	40 8	Mixing, kneading or stirring machines.....	No.			
	80 9	Other.....	No.			
8479.89		Other:				
		Electromechanical appliances with self-contained electric motor:				
8479.89.10	00 7	Air humidifiers or dehumidifiers.....	No.....	4.2%	Free (A,C <u>2/</u> ,E,IL, 40% J) 2.5% (CA)	
8479.89.20	00 5	Floor polishers.....	No.....	3.4%	Free (A,E,IL,J) 0.6% (CA)	35%
8479.89.30		Vacuum cleaners.....		3.4%	Free (A,E,IL,J) 2% (CA)	35%
	40 5	Industrial vacuum cleaners.....	No.			
	80 6	Other.....	No.			
8479.89.60	00 6	Other.....	X.....	4.2%	Free (A,C <u>2/</u> ,E,IL, 40% J) 0.8% (CA)	
8479.89.70	00 4	Carpet sweepers.....	No.....	3.7%	Free (A,E,IL,J) 2.2% (CA)	35%

1/ Duty suspended on certain articles originating in the territory of Canada. See subheading 9905.84.56.

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

8479 (con.)	Machines and mechanical appliances having individual functions, not specified or included elsewhere in this chapter; parts thereof (con.):			
	Other machines and mechanical appliances (con.):			
8479.89 (con.)	Other (con.):			
8479.89.90	Other.....	.....	3.7% <u>1/</u>	Free (A,B,C <u>2/</u> , E,IL,J) 0.7% (CA) <u>3/</u> 35%
40 2	Industrial robots.....	No.		
	Other:			
50 9	Oil and gas field wire line and downhole equipment.....	No.		
60 7	Automotive maintenance machines.....	No.		
65 2	Hydraulic accumulators....	No.		
	Machines for processing of semiconductor materials; machines for production and assembly of diodes, transistors and similar semiconductor devices and electronic integrated circuits:			
72 3	Apparatus designed to grow monocrystal semiconductor boules (crystal growers and pullers).....	No.		
74 1	Machines (spinners) designed to coat photographic emulsions on semiconductor wafers.....	No.		
76 9	Chemical vapor deposition (CVD) apparatus including low pressure and plasma enhanced systems.....	No.		
78 7	Physical deposition apparatus including sputtering and E-beam apparatus.....	No.		
80 3	Other.....	No.		
85 8	Ultrasonic cleaning devices.....	No.		
95 6	Industrial vibrators.....	No.		
99 2	Other.....	No.		

1/ Duty on certain machines suitable for the manufacture of wheels for bicycles temporarily suspended. See heading 9902.84.79.  
2/ See additional U.S. note 1 to this chapter.  
3/ Duty suspended on certain articles originating in the territory of Canada. See subheading 9905.84.57.



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 8	Of articles of subheading 8479.89.10, 8479.89.30 or 8479.89.70.....	X.....	3.7%	Free (A,C <u>1</u> /,E, IL,J) 2.2% (CA)	35%
8479.90.80	Other.....		3.7%	Free (A,B,C <u>1</u> /, E,IL,J) 0.7% (CA) <u>2</u> /	35%
40 1	Of industrial robots.....	X			
50 8	Other: Of machinery for public works, building or the like.....	X			
60 6	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 1	Of machines or mechanical appliances for treating metal..	X			
70 4	Of machines for production and assembly of diodes, transistors and similar semiconductor devices and electronic integrated circuits.....	X			
90 0	Other.....	X			
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 0	Molding boxes for metal foundry.....	No.....	5.7%	Free (A,E,IL,J) 1.1% (CA)	45%
8480.20.00 00 8	Mold bases.....	No.....	4.2%	Free (A,E,IL,J) 0.8% (CA)	50%
8480.30.00 00 6	Molding patterns.....	No.....	4.2%	Free (A,E,IL,J) 0.8% (CA)	50%
8480.41.00 00 3	Molds for metal or metal carbides: Injection or compression types.....	No.....	3.9%	Free (A,E,IL,J) 0.7% (CA)	35%
8480.49.00 00 5	Other types.....	No.....	3.9%	Free (A,E,IL,J) 0.7% (CA)	35%
8480.50.00	Molds for glass.....		3.9%	Free (A,E,IL,J) 0.7% (CA)	35%
10 9	Injection or compression types.....	No.			
90 2	Other types.....	No.			
8480.60.00	Molds for mineral materials.....		3.9%	Free (A,E,IL,J) 0.7% (CA)	35%
10 7	Injection or compression types.....	No.			
90 0	Other types.....	No.			
8480.71	Molds for rubber or plastics: Injection or compression types:				
8480.71.10 00 4	For shoe machinery.....	No.....	Free		Free
8480.71.90	Other.....		3.9%	Free (A,CA,E,IL,J)	35%
10 5	Injection type.....	No.			
90 8	Compression type.....	No.			
8480.79	Other types:				
8480.79.10 00 6	Molds for shoe machinery.....	No.....	Free		Free
8480.79.90	Other.....		3.9%	Free (A,E,IL,J) 0.7% (CA)	35%
10 7	Blow molds.....	No.			
20 5	Bladder operated molds.....	No.			
90 0	Other molds.....	No.			

1/ See additional U.S. note 1.

2/ Duty suspended on certain articles originating in the territory of Canada. See subheading 9905.84.58.

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.....	3.7%	Free	(A,B,CA,E,IL, 35% J)	
20 5	Hydraulic fluid power type.....	No. v kg			
	Pneumatic fluid power type:				
40 1	Filter-regulators and filter- regulator-lubricators.....	No. v kg			
60 6	Other.....	No. v kg			
90 0	Other.....	No. v kg			
8481.20.00	Valves for oleohydraulic or pneumatic transmissions.....	3.7%	Free	(A,B,E,IL,J) 35% 0.7% (CA)	
	Hydraulic valves:				
	Directional control:				
10 5	Manual type.....	No. v kg			
20 3	Solenoid type.....	No. v kg			
30 1	Other.....	No. v kg			
40 9	Flow control type.....	No. v kg			
50 6	Other.....	No. v kg			
	Other:				
	Directional control:				
60 4	Solenoid type.....	No. v kg			
70 2	Other.....	No. v kg			
80 0	Other.....	No. v kg			
8481.30	Check valves:				
8481.30.10	Of copper.....	5.6%	Free	(A,B,E,IL,J) 45% 1.1% (CA)	
10 1	Having a pressure rating under 850 kPa.....	No. v kg			
90 4	Having a pressure rating of 850 kPa or over.....	No. v kg			
8481.30.20	Of iron or steel.....	8%	Free	(A,B,E,IL,J) 45% 1.6% (CA)	
10 9	Of iron.....	No. v kg			
90 2	Of steel.....	No. v kg			
8481.30.90	Other.....	No. v kg	4.4%	Free (A,B,E,IL,J) 45% 0.8% (CA)	
8481.40.00	Safety or relief valves.....	No. v kg	3.7%	Free (A,B,E,IL,J) 35% 0.7% (CA)	

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:					
	Hand operated:					
8481.80.10	Of copper.....				5.6%	Free (A,B,E,IL,J) 47% 1.1% (CA) <u>1/</u>
	Having a pressure rating under 850 kPa:					
20 8	Bath and shower faucets...	No.	v			
		kg				
30 6	Sink and lavatory faucets.....	No.	v			
		kg				
40 4	Supply stops.....	No.	v			
		kg				
50 1	Other.....	No.	v			
		kg				
	Having a pressure rating of 850 kPa or over:					
60 9	Gate type.....	No.	v			
		kg				
70 7	Globe type.....	No.	v			
		kg				
75 2	Plug type.....	No.	v			
		kg				
85 0	Ball type.....	No.	v			
		kg				
90 3	Butterfly type.....	No.	v			
		kg				
95 8	Other.....	No.	v			
		kg				
8481.80.30	Of iron or steel.....				8%	Free (A,B,E,IL,J) 45% 1.6% (CA) <u>1/</u>
	Of iron:					
10 6	Gate type.....	No.	v			
		kg				
15 1	Globe type.....	No.	v			
		kg				
20 4	Plug type.....	No.	v			
		kg				
25 9	Ball type.....	No.	v			
		kg				
30 2	Butterfly type.....	No.	v			
		kg				
40 0	Other.....	No.	v			
		kg				
	Of steel:					
55 2	Gate type.....	No.	v			
		kg				
60 5	Globe type.....	No.	v			
		kg				
65 0	Plug type.....	No.	v			
		kg				
70 3	Ball type.....	No.	v			
		kg				
75 8	Butterfly type.....	No.	v			
		kg				
90 9	Other.....	No.	v			
		kg				

1/ Duty suspended on certain articles originating in the territory of Canada. See subheading 9905.84.60.

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.):				
8481.80.50	Hand operated (con.):				
	Of other materials.....		4.4%	Free (A,B,E,IL,J)	45%
40 5	Pressure spray can valves.....	No. v		0.8%	(CA) <u>1/</u>
60 0	Bath, shower, sink and lavatory faucets .....	kg			
90 4	Other.....	No. v			
		kg			
8481.80.90	Other.....		3.7%	Free (A,B,CA,E,IL, 35%	J)
05 0	Solenoid valves.....	No.			
10 3	Ballcock mechanisms.....	No.			
15 8	Regulator valves, self-operating, for controlling variables such as temperature, pressure, flow and liquid level.....	No.			
	Other:				
	With electrical or electro-hydraulic actuators:				
20 1	Control valves designed for proportional operation by a signal from a control device.....	No.			
25 6	Other.....	No.			
30 9	With hydraulic actuators.....			No.	
	With pneumatic actuators:				
35 4	Control valves designed for proportional operation by a signal from a control device.....	No.			
40 7	Other.....	No.			
45 2	With thermostatic actuators....			No.	
50 4	Other.....			No.	
8481.90	Parts:				
	Of hand operated and check appliances:				
8481.90.10	Of copper.....	kg.....	5.6%	Free (A,B,E,IL,J)	47%
				1.1%	(CA) <u>2/</u>
8481.90.30	Of iron or steel.....	kg.....	8%	Free (A,B,E,IL,J)	45%
				1.6%	(CA) <u>2/</u>
8481.90.50	Of other materials.....	kg.....	4.4%	Free (A,B,E,IL,J)	45%
				0.8%	(CA) <u>2/</u>
8481.90.90	Other.....		3.7%	Free (A,B,E,IL,J)	35%
				0.7%	(CA) <u>2/</u>
	Of valves of subheading 8481.20:				
20 9	Valve bodies.....	kg			
40 5	Other.....	kg			
	Other:				
60 0	Valve bodies.....	kg			
80 6	Other.....	kg			

1/ Duty suspended on certain articles originating in the territory of Canada. See subheading 9905.84.60.  
2/ Duty suspended on certain articles originating in the territory of Canada. See subheading 9905.84.65.

8482	Ball or roller bearings, and parts thereof:				
8482.10	Ball bearings:				
8482.10.10	Ball bearings with integral shafts.....	4.2%		Free (B,E,IL,J)	35%
				2.5% (CA) <u>1/</u>	
40 8	Bearings having an outside diameter not over 30 mm.....	No.	v		
		kg			
80 9	Other.....	No.	v		
		kg			
8482.10.50	Other.....	11%		Free (B,E,J)	67%
				1.1% (IL)	
				6.6% (CA) <u>1/</u>	
04 3	Unground bearings.....	No.			
	Other:				
08 9	Thrust bearings.....	No.	v		
		kg			
12 3	Linear bearings.....	No.	v		
		kg			
	Angular contact bearings:				
	Wheel hub bearings units:				
16 9	Flanged.....	No.	v		
		kg			
24 9	Other.....	No.	v		
		kg			
28 5	Other.....	No.	v		
		kg			
	Radial bearings:				
	Single row bearings:				
32 9	Maximum or full capacity type.....	No.	v		
		kg			
	Other bearings, having an outside diameter of:				
36 5	Under 9 mm.....	No.	v		
		kg			
44 5	9 mm and over but not over 30 mm.....	No.	v		
		kg			
48 1	Over 30 mm but not over 52 mm..	No.	v		
		kg			
52 4	Over 52 mm but not over 100 mm.	No.	v		
		kg			
56 0	Over 100 mm.....	No.	v		
		kg			
60 4	Double row ball bearings..	No.	v		
		kg			
64 0	Other.....	No.	v		
		kg			
68 6	Other.....	No.	v		
		kg			

1/ Equipment, originating in the territory of Canada, intended for use in the repair or maintenance of certain motor vehicles subject to accelerated staged rate reductions. See subheading 9905.00.00.

8482		Ball or roller bearings, and parts thereof (con.):			
(con.)					
8482.20.00	Tapered roller bearings, including cone and tapered roller assemblies.....	kg	v	6.5%	Free (B,CA,E,IL,J) 67%
	Cup and cone assemblies entered as a set:				
	Wheel hub units:				
20 2	Flanged.....	No. kg	v		
30 0	Other.....	No. kg	v		
	Other:				
40 8	With cups having an outside diameter not exceeding 102 mm..	No. kg	v		
60 3	Other.....	No. kg	v		
	Cone assemblies entered separately:				
70 1	For cups having an outside diameter not exceeding 102 mm.....	No. kg	v		
80 9	Other.....	No. kg	v		
8482.30.00	Spherical roller bearings.....	kg	v	6.5%	Free (A,B,E,IL,J) 67% 3.9% (CA)
40 6	Single row.....	No. kg	v		
80 7	Other.....	No. kg	v		
8482.40.00 00 2	Needle roller bearings.....	No. kg	v	6.5%	Free (A,B,E,IL,J) 67% 3.9% (CA)
8482.50.00 00 9	Other cylindrical roller bearings.....	No. kg	v	6.5%	Free (A,B,E,IL,J) 67% 3.9% (CA)
8482.80.00	Other, including combined ball/roller bearings.....	kg	v	6.5%	Free (A,B,E,IL,J) 67% 3.9% (CA)
20 9	Combined ball and spherical roller bearings.....	No. kg	v		
40 5	Combined ball and needle roller bearings.....	No. kg	v		
60 0	Combined ball and other cylindrical roller bearings.....	No. kg	v		
80 6	Other.....	No. kg	v		

8482 (con.)	Ball or roller bearings, and parts thereof (con.):			
	Parts:			
8482.91.00	Balls, needles and rollers.....	4.9%	Free (B,E,IL,J) 2.9% (CA) <u>1/</u>	45%
	Balls:			
10 8	Of alloy steel.....	kg		
20 6	Other.....	kg		
40 2	Needles.....	kg		
50 0	Tapered rollers.....	kg		
70 6	Spherical rollers.....	kg		
80 3	Other cylindrical rollers.....	kg		
90 2	Other.....	kg		
8482.99	Other:			
8482.99.10	Parts of ball bearings (including parts of ball bearings with integral shafts).....	11%	Free (B,E,J) 1.1% (IL) 6.6% (CA)	67%
10 8	Inner and outer races.....	No.		
50 9	Other.....	kg		
8482.99.30	Parts of tapered roller bearings....	6.5%	Free (B,CA,E,IL,J)	67%
10 4	Cups entered separately.....	No.		
50 5	Other.....	kg		
8482.99.50	00 1 Parts of spherical roller bearings..	kg..... 6.5%	Free (B,E,IL,J) 3.9% (CA)	67%
8482.99.70	Parts of other roller bearings or combined ball/roller bearings....	6.5%	Free (B,E,IL,J) 3.9% (CA)	67%
30 1	For needle bearings.....	kg		
60 4	For other cylindrical roller bearings.....	kg		
90 8	Other.....	kg		

1/ Duty suspended on certain articles originating in the territory of Canada. See subheading 9905.84.66.

8483		Transmission shafts (including camshafts and crankshafts) and cranks; bearing housings, housed bearings and plain shaft bearings; gears and gearing; ball 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....	3.1%		Free (A,B,C,E,IL, J)	35%
					0.6% (CA)	
		For vehicles of chapter 87:				
	10 3	For motorcycles.....	No.	v		
			kg			
	30 9	Other.....	No.	v		
			kg			
	50 4	Other.....	No.	v		
			kg			
8483.10.30		Other.....	3.7%		Free (A,B,C,CA,E, IL,J)	35%
	10 9	For vehicles of chapter 87.....	No.	v		
			kg			
	50 0	Other.....	No.	v		
			kg			
8483.10.50	00 6	Other transmission shafts and cranks....	kg.....	4%	Free (A,C,CA,E, IL,J) <u>1/</u>	30%
8483.20		Housed bearings, incorporating ball or roller bearings:				
8483.20.40		Flange, take-up, cartridge and hanger units.....	5.7%		Free (A,E,IL,J) <u>1/</u>	45%
					1.1% (CA)	
	40 9	Incorporating ball bearings.....	No.			
	80 0	Incorporating roller bearings.....	No.			
8483.20.80		Other.....	5.7%		Free (E,IL,J) <u>1/</u>	45%
					1.1% (CA)	
	40 0	Incorporating ball bearings.....	No.			
	80 1	Incorporating roller bearings.....	No.			
8483.30		Bearing housings; plain shaft bearings:				
8483.30.40		Flange, take-up, cartridge and hanger units.....	5.7%		Free (A,C,CA,E, IL,J) <u>1/</u>	45%
	40 7	Ball or roller bearing type.....	kg			
	80 8	Other.....	kg			
8483.30.80		Other.....	5.7%		Free (C,CA,E, IL,J) <u>1/</u>	45%
		Bearing housings:				
	20 2	Ball or roller bearing type....	kg			
	40 8	Other.....	kg			
		Plain shaft bearings:				
	60 3	With housing.....	No.	v		
			kg			
		Without housing:				
	70 1	Spherical.....	No.	v		
			kg			
	90 7	Other.....	No.	v		
			kg			

1/ Duty free treatment under the Automotive Products Trade Act (Free (B)) temporarily provided for motor vehicle parts. See heading 9902.84.83.



8483 (con.)	Transmission shafts (including camshafts and crankshafts) and cranks; bearing housings, housed bearings and plain shaft bearings; gears and gearing; ball 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 screws; gear boxes and other speed changers, including torque converters:					
8483.40.10	00 9	Torque converters.....	No.....	3.4%	Free (A,C,E, IL,J) <u>1</u> / 0.6% (CA)	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 7	Fixed ratio speed changers.....	No.			
	80 8	Other.....	No.			
8483.40.50		Other.....		2.5%	Free (A,C,E, IL,J) <u>1</u> / 0.5% (CA)	27.5%
	10 8	Fixed ratio speed changers.....	No.			
	50 9	Other.....	No.			
8483.40.70	00 6	Other speed changers.....	No.	50¢ each + 7.7%	Free (A,C,E, IL,J) <u>1</u> / 10¢ each + 1.5% (CA)	\$4.50 each + 65%
8483.40.80	00 4	Ball screws.....	X.....	5.7%	Free (A,B,C,E,IL, J) 1.1% (CA)	45%
8483.40.90	00 2	Gears and gearing, other than toothed wheels, chain sprockets and other transmission elements entered separately.....	X.....	2.5%	Free (A,B,C,E,IL, J) 0.5% (CA) <u>2</u> / 1.1% (CA)	27.5%
8483.50		Flywheels and pulleys, including pulley blocks:				
8483.50.40	00 0	Gray-iron awning or tackle pulleys, not over 6.4 cm in wheel diameter.....	X.....	5.7%	Free (A,C,E,IL, J) <u>1</u> / 1.1% (CA)	45%
8483.50.80		Other.....		5.7%	Free (A,B,C,E,IL, J) 1.1% (CA)	45%
	40 3	Grooved pulleys.....	X			
	80 4	Other.....	X			
8483.60		Clutches and shaft couplings (including universal joints):				
8483.60.40	00 8	Clutches and universal joints.....	X.....	5.7%	Free (A,C,E,IL, J) <u>1</u> / 1.1% (CA) <u>2</u> / 1.1% (CA)	45%
8483.60.80	00 9	Other.....	X.....	5.7%	Free (C,CA,E, IL,J) <u>1</u> / 1.1% (CA)	45%

1/ Duty free treatment under the Automotive Products Trade Act (Free (B)) temporarily provided for motor vehicle parts. See heading 9902.84.83.

2/ Duty suspended on certain articles originating in the territory of Canada. See subheadings 9905.84.67 and 9905.84.70.

8483 (con.)	Transmission shafts (including camshafts and crankshafts) and cranks; bearing housings, housed bearings and plain shaft bearings; gears and gearing; ball 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.....	5.7%		Free (A,B,C,E,IL, J) 45%	
				1.1% (CA)	
10 6	Forged.....	kg			
50 7	Other.....	kg			
	Parts of bearing housings and plain shaft bearings:				
8483.90.20 00 6	Parts of flange, take-up, cartridge and hanger units.....	X..... 5.7%		Free (A,C,CA,E,IL,J) <u>1/</u> 45%	
8483.90.30 00 4	Other.....	X..... 5.7%		Free (C,CA,E,IL,J) <u>1/</u> 45%	
8483.90.50 00 9	Parts of gearing, gear boxes and other speed changers.....	X..... 2.5%		Free (A,C,E,IL, J) <u>1/</u> 27.5%	
				0.5% (CA) <u>2/</u>	
	Other:				
8483.90.70 00 5	Parts of articles of subheading 8483.20.....	X..... 5.7%		Free (E,IL,J) <u>1/</u> 45%	
				1.1% (CA)	
8483.90.80	Other.....	5.7%		Free (B,C,E,IL,J) 45%	
				1.1% (CA) <u>2/</u>	
10 1	Parts of articles of subheading 8483.60.80.....	X			
90 4	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:				
8484.10.00 00 6	Gaskets and similar joints of metal sheeting combined with other material or of two or more layers of metal.....	X..... 3.7%		Free (A,B,C,E,IL, J) 35%	
				0.7% (CA)	
8484.90.00 00 9	Other.....	No..... 3.7%		Free (A,B,C,E,IL, J) 35%	
				0.7% (CA)	
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.....	4.2%		Free (A,E,IL,J) 30%	
				0.8% (CA)	
40 7	Of copper.....	No.			
80 8	Other.....	X			
8485.90.00 00 8	Other.....	X..... 5.7%		Free (A,B,E,IL,J) 45%	
				1.1% (CA)	

1/ Duty free treatment under the Automotive Products Trade Act (Free (B)) temporarily provided for motor vehicle parts. See heading 9902.84.83.

2/ Duty suspended on certain articles originating in the territory of Canada. See subheadings 9905.84.71 and 9905.84.75.