

84.60

84.60 - 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 84.61 (+).

- Flat-surface grinding machines :

8460.12 -- Numerically controlled

8460.19 -- Other

- Other grinding machines :

8460.22 -- Centreless grinding machines, numerically controlled

8460.23 -- Other cylindrical grinding machines, numerically controlled

8460.24 -- Other, numerically controlled

8460.29 -- Other

- Sharpening (tool or cutter grinding) machines :

8460.31 -- Numerically controlled

8460.39 -- Other

8460.40 - Honing or lapping machines

8460.90 - Other

This heading covers certain surface-finishing machines for metal or cermets, but **excludes** gear cutting, gear grinding or gear finishing machines (**heading 84.61**). These machines work by removing material by means of grinding stones, abrasives or polishing products. For the purposes of this heading the expression "polishing products" means the following :

- (1) polishing discs made from metal carbides, steel, soft metal, wood, felt, textile material or leather;
- (2) wire brushes;
- (3) polishing pads.

In general machine-tools are power-driven but similar machines, worked by hand or pedal, are also covered by this heading. These latter types can be distinguished from the hand tools of **heading 82.05** and from the tools for working in the hand of **heading 84.67**, by the fact that they are usually designed to be mounted on the floor, on a bench, on a wall or on another machine, and are thus usually provided with a base plate, mounting frame, stand, etc.

The heading includes :

- (1) **Deburring machines with metal brushes or abrasives**, for trimming rough castings or the rough edges of cut metal.
- (2) **Sharpening machines** (tool and cutter grinding machines) including machines for grinding cermets or hard metal tool tips as well as card sharpening machines.

- (3) **Grinding machines**, of different types (e.g., internal surface grinders, centreless surface grinders, surface grinding machines, thread grinding machines, machines for grinding valves and valve seats) whose function is to perfect, to the desired degree of precision, the work of other machines.

This group includes, for example :

- (i) **Centreless grinding machines**. These machines are characterised by the absence of a spindle and the presence of two grinding wheels (an abrasive wheel and a regulating wheel) and of a support blade holding the workpiece.
 - (ii) **Cylindrical grinding machines**. These machines are characterised by the presence of a spindle and a support, that holds and moves the workpiece, and one or more abrasive wheels. They can work the external surface of the workpiece, the internal surface or both (universal cylindrical grinding machines).
- (4) **Honing and lapping machines** for producing a precision-fit surface.
 - (5) **Polishing machines** for finishing the surface of the workpiece.
 - (6) **Engraving machines** excluding those of heading 84.59 or 84.61.

PARTS AND ACCESSORIES

Subject to the general provisions regarding the classification of parts (see the general Explanatory Note to Section XVI), parts and accessories (**other than** the tools of **Chapter 82**) of the machine-tools of this heading are classified in **heading 84.66**.

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The heading also **excludes** :

- (a) Hand tools or hand or pedal operated grinding wheels (**heading 82.05**).
- (b) Sand blasting machines (**heading 84.24**).
- (c) 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; water-jet cutting machines (**heading 84.56**).
- (d) Machining centres, unit construction machines (single station) and multi-station transfer machines, for working metal (**heading 84.57**).
- (e) Tools for working in the hand, pneumatic, hydraulic or with self-contained electric or non-electric motor (**heading 84.67**).
- (f) Rotating drums for de-sanding, de-scaling or polishing metal goods (**heading 84.79**).
- (g) Testing machines and apparatus (**heading 90.24**).

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Subheading Explanatory Note.

Subheadings 8460.12, 8460.22, 8460.23, 8460.24 and 8460.31

See the Explanatory Note to subheadings 8458.11 and 8458.91 regarding the term "numerically controlled".