

## 84.70

**84.70 - 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 - Electronic calculators capable of operation without an external source of electric power and pocket-size data recording, reproducing and displaying machines with calculating functions

- Other electronic calculating machines :

8470.21 - - Incorporating a printing device

8470.29 - - Other

8470.30 - Other calculating machines

8470.50 - Cash registers

8470.90 - Other

All machines of this heading, **except** for certain cash registers, have one common characteristic in that they include a calculating device enabling them to add together at least two figures each comprising several digits. It should be noted that devices which merely count or add one by one are **not** regarded as calculating devices (e.g., devices incorporated in certain stamp affixing machines, revolution counters, production counters). The machines of this heading may be manually or electrically operated. The calculation operations are performed mechanically or by electro-magnetic, electronic or fluidic devices.

### (A) CALCULATING MACHINES AND POCKET-SIZE DATA RECORDING, REPRODUCING AND DISPLAYING MACHINES WITH CALCULATING FUNCTIONS

This group comprises a wide range of calculating machines varying from the simplest types which can only add and subtract to more complex machines which can perform the four arithmetic operations and several other types of calculations (e.g., extract square roots, raise a number to a given power and carry out trigonometric calculations). It includes, in particular, pocket electronic calculators and office electronic calculators, whether or not programmable. This group also includes pocket-size data recording, reproducing and displaying machines with calculating functions (see Note 8 to this Chapter).

Electronic programmable calculators differ from automatic data processing machines, in particular, by the fact that they cannot execute, without human intervention, a processing program which requires them to modify their execution, by logical decision during the processing run. These calculators incorporate a microprocessor designed to carry out complex mathematical operations.

Calculating machines comprise the following main parts :

- (1) **Manual arrangements for data input** (stops or cursors, keyboard, etc.). However, they may have ancillary facilities for the automatic input of recurrent or preset data (readers for punched cards or tape, magnetic tape, etc.).

- (2) **A calculating device** operated by a series of keys or by a program which may be fixed or may be modified by replacing the programming element or changing the program instructions.
- (3) **An output device** presenting the results in the form of a visual display or a print-out. "Printer" machines incorporate a device for printing the result and sometimes also the preliminary data. However, calculating machines remain classified here whether or not comprising such a device.

Calculating machines with a printing facility use numbers and a limited range of symbols. However, they differ from accounting machines in that they print vertically only, on paper bands or rolls. Some have ancillary facilities for recording the results in code on data media.

Some of the components of these machines (calculating device, ancillary devices, etc.) may be built-in or be separate units connected by electric cable.

### (B) ACCOUNTING MACHINES

These machines are designed to keep accounting books, accounting documents, etc. They combine the function of accounting (i.e., totalling a series of items) with that of printing letters or symbols in addition to figures in order to provide an adequate description of the accounting operation performed.

The structure of accounting machines is appreciably the same as that of calculating machines. In addition to manual input arrangements for variable data (e.g., debit-credit operations), like calculating machines they may be fitted with devices for reading punched cards or tape, magnetic tape or cards, etc., to introduce recurrent data (account No., customer's name and address, etc.) or pre-set data (e.g., balance of account).

Accounting machines have numeric or alpha-numeric printing devices which can print both vertically and horizontally; this is one of the features which distinguishes them from calculating machines.

In most cases, these machines are designed to be used with specially printed forms such as pay slips, invoices, loose-leaf pages of day books, journals, ledgers, etc., or filing cards. Some of them can type simultaneously on two or more forms (e.g., on the invoices and corresponding day book and ledger entries).

They are often equipped with apparatus for transcribing data onto data media in coded form. Some print in clear on a card and simultaneously transcribe the results in code on a magnetic track on the side of the card. These results can then serve as basic data for further processing in the machine.

Like calculating machines, these machines may be in the form of a self-contained unit or consist of separate units to be electrically interconnected.

**(C) CASH REGISTERS**

This group comprises cash registers whether or not incorporating a calculating device.

These machines are used in shops, offices, etc., to provide a record of all transactions (sales, services rendered, etc.) as they occur, of the amounts involved, the total of the amounts recorded and, in some cases, the code number of the article sold, quantity sold, time of transaction, etc.

Data may be introduced either manually by means of a keyboard and a stop, lever or handle, or automatically, e.g., by means of a bar-code reader. Like calculating and accounting machines, some cash registers also have ancillary facilities for the automatic input of recurrent or pre-set data (e.g., card or tape readers).

Usually, the result is visually displayed and printed, at the same time, on a ticket for the customer and on a tallyroll which is periodically removed from the machine for checking purposes.

These machines are often combined with a till or drawer in which the cash is kept.

They may also incorporate or work in conjunction with devices such as multipliers for increasing their calculating capacity, calculators of change due, automatic change dispensers, trading stamp dispensers, credit card readers, check digit verifiers, or appliances for transcribing all or part of the data on transactions onto data media in coded form. If presented separately, these devices are classified in their respective headings.

This heading also covers cash registers working in conjunction, on-line or off-line, with an automatic data processing machine and cash registers which use, for example, the memory and microprocessor of another cash register (to which they are linked by cable) to perform the same functions.

This group also includes terminals for electronic payment by credit or debit card. These terminals use the telephone network to connect to the financial institution for authorisation and completion of the transaction, and to record and issue receipts indicating the amounts debited and credited.

**(D) OTHER MACHINES INCORPORATING A CALCULATING DEVICE**

These include :

- (1) **Postage-franking machines**; these print on the envelope a design in place of the postage stamp. The machine has a non-reversible totalling device which adds up the total value of the postages printed. In addition the machine can often be used for other printing on the envelope (e.g., advertising slogans).
- (2) **Ticket-issuing machines** used to issue tickets (e.g., cinema or railway tickets) at the same time recording and totalling the amounts involved; certain of these also print the ticket.
- (3) **Totalisator machines** for racecourses. These issue the tickets, record and total the amounts staked, and in certain complex machines also calculate the odds.

Machines which only count the tickets, etc., issued, without totalising the amounts, are **excluded** (heading 84.72 or, if coin-operated, heading 84.76).

## PARTS AND ACCESSORIES

Subject to the general provisions regarding the classification of parts (see the General Explanatory Note to Section XVI), parts and accessories of machines of this heading are classified in **heading 84.73**.

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The heading **does not cover** :

- (a) Data processing machines of **heading 84.71**.
- (b) Weighing machines which total the weights (**heading 84.23** or **90.16**).
- (c) Slide rules, disc calculators, cylindrical calculators and other calculating instruments based on the slide rule or other mathematical calculating principle including, for instance, pocket-type adding and subtracting devices operated by the selection of numbers with a stylus according to a given procedure (**heading 90.17**).
- (d) Instruments which count unit by unit, such as revolution counters, production counters, etc., of **heading 90.29**.