

84.16 - Furnace burners for liquid fuel, for pulverised solid fuel or for gas; mechanical stokers, including their mechanical grates, mechanical ash dischargers and similar appliances.

8416.10 - Furnace burners for liquid fuel

8416.20 - Other furnace burners, including combination burners

8416.30 - Mechanical stokers, including their mechanical grates, mechanical ash dischargers and similar appliances

8416.90 - Parts

This heading covers a range of apparatus for the mechanical or automatic firing and stoking of furnaces of all kinds, and for evacuating the ash and cinders.

(A) FURNACE BURNERS

These project a flame directly into the furnace, and dispense with the need for a grate and for ash removal. They include the following types :

(1) Heavy oil burners (atomisers).

In these the heavy fuel is atomised in the air stream, in some cases by compressed air and in others by high pressure steam or mechanically (the latter types of apparatus usually incorporate a motor, a pump and an air blower).

(2) Pulverised coal burners.

These are often of large size. A jet of pulverised coal is forced into the furnace by means of an air blast which also provides the primary air supply. The burners may sometimes incorporate a coal conveyor and a grinding mill. In another type, soft coal is pulverised and injected intermittently by the alternate action of high or low pressure steam.

(3) Gas burners.

These include both high pressure types for use with forced draught, and low pressure types for use with atmospheric air. The air and gas is in either case fed through concentric or converging tubes.

(4) Combination burners.

These provide for the simultaneous combustion of oil, gas and powdered coal, or any two of them.

**(B) MECHANICAL STOKERS, MECHANICAL GRATES,
MECHANICAL ASH DISCHARGERS
AND SIMILAR APPLIANCES**

These are various mechanical appliances for feeding solid fuels to furnaces, or for forming the fire bed. Mechanical stokers and mechanical grates are frequently combined and also equipped with devices for the automatic removal of the slag and ash after combustion, thus forming a fully automatic installation. In other cases a mechanical or automatic element may be combined with a non-mechanical element.

(1) Mechanical stokers.

These are of widely differing types. They usually comprise a coal hopper together with various devices such as Archimedean screws, mechanical shovels, sliding trays, propelling pistons, operated by hand or by power, for regulating the supply of coal and conveying it to the furnace bed. These appliances are often fitted with breakers for reducing the coal supply to uniform size. The heading covers mechanical stokers for central heating (including domestic) boilers.

(2) Mechanical grates.

These are appliances of varying design by which the coal is distributed over the fire-bed and moved forward through the furnace to secure even combustion. The most common systems are based on the principle of the caterpillar band, or take the form of oscillating inclined steps. These grates often terminate with appliances for removing the slag and ash. In other systems the slag and ash removal is effected by separate mechanical units; these are also classified in this heading.

PARTS

Subject to the general provisions regarding the classification of parts (see the General Explanatory Note to Section XVI), parts of the goods of this heading are also classified here (e.g., burner nozzles, thrust pistons and trays for mechanical stokers; chassis for mechanical grates, link sections and links, guides and rolls for mechanical grates).

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The heading **does not cover** non-mechanical fire-bars or grates, industrial or other. Fire-boxes consisting of fixed grates in a metal body designed to be fitted as an integral part into certain types of boilers are **excluded** and are regarded as parts of boilers and fall in **heading 84.02**. Similarly, certain other types of non-mechanical grates which are identifiable as specialised for particular machines or appliances are classified as parts for such machines and appliances (e.g., for gas generators - **heading 84.05**). On the other hand, iron fire-bars and grates of general use, for fitting into brickwork, are classified in **heading 73.21, 73.22 or 73.26** according to type.