

## F23K

### FEEDING FUEL TO COMBUSTION APPARATUS (fuel feeders specially adapted for fluidised-bed combustion apparatus F23C10/22 ; regulating or controlling combustion F23N)

#### Definition statement

*This subclass/group covers:*

General arrangements for preparing and supplying fuel to a combustion apparatus, including accessories and peripheral devices such as for example pumps, pulverisers, pre-heaters or vaporisers, arrangements for adding chemicals to fuels, subdivided according to the type of the fuel which is burned.

Details of devices specially adapted to feed or prepare fuels.

#### References relevant to classification in this subclass

*This subclass/group does not cover:*

Fuel feeders specially adapted for fluidised bed combustion apparatus	<a href="#">F23C 10/22</a>
Regulating or controlling combustion	<a href="#">F23N</a>

Examples of places where the subject matter of this class is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Fuel feeders specially adapted for feeding waste to incinerating apparatus	<a href="#">F23G 5/44</a>
Fuel feeders incorporated into combustion apparatus for burning solid fuel	<a href="#">F23B 40/00</a>

#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Filtration in general	<a href="#">B01D</a>
Mixing in general	<a href="#">B01F</a>

Pulverizing in general	<a href="#">B02C</a>
Drying	<a href="#">F26B</a>
Conveying in general	<a href="#">B65G</a>
Pumps in general	F04

### Special rules of classification within this subclass

In this subclass, the first place priority rule is applied, i.e. at each hierarchical level, classification is made in the first appropriate place.

When classifying in this subclass, add codes [F23K 2200/00-F23K 2401/201](#);  
[F23K 2900/00001-F23K 2900/05142](#).

### Glossary of terms

*In this subclass/group, the following terms (or expressions) are used with the meaning indicated:*

Air	a mixture of gases containing free oxygen and able to promote or support combustion
Primary air	air supplied to the burning fuel in order to liberate combustible gases
Secondary air	air supplied to the combustible gases liberated by the primary air in order to complete their combustion. The term "secondary air" covers "tertiary air" etc.
Ash	means any solid combustion residues, for example remaining in the fuel bed or suspended in the flue gases
Burner	a device by which fluid fuel or solid fuel suspended in air is passed to a combustion space where it burns to produce a self-supporting flame
Combustion	means the direct combination of

	oxygen gas, e.g. in air, and a burnable substance
Combustion chamber	a chamber in which fuel is burned to establish a self-supporting fire or flame and which surrounds that fire or flame
Combustion zone	the part of the apparatus where the reaction takes place between air and fuel
Flue gases	any gaseous products of combustion
Grate	a perforated surface, e.g. a grid, which supports or delimits a bed of burning fuel and serves to supply primary air

### Synonyms and Keywords

In patent documents the expression/word "boiler" is often used with the meaning "combustion apparatus".

In patent documents the expression/word "burner" is often used with the meaning "combustion apparatus".

### F23K 1/00

**Preparation of lump or pulverulent fuel in readiness for delivery to combustion apparatus (filtration B01D; mixing B01F; pulverising B02C; drying F26B)**

### F23K 3/00

**Feeding or distributing of lump or pulverulent fuel to combustion apparatus (conveying in general B65G)**

### F23K 3/18

**Spreader stokers**

### Definition statement

*This subclass/group covers:*

Feeding devices wherein the fuel is fed by scattering it over the

fuel-supporting surface.

## **F23K 5/00**

### **Feeding or distributing other fuel to combustion apparatus**

#### **References relevant to classification in this group**

*This subclass/group does not cover:*

Preheating devices in burners using a direct spraying action of liquid droplets or vaporised liquid into the combustion space	<a href="#">F23D 11/44</a>
Vaporizing devices in burners using a direct spraying action of liquid droplets or vaporised liquid into the combustion space	<a href="#">F23D 11/44</a>

#### **Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Pumps in General	F04
Safety arrangements for combustion chambers	<a href="#">F23M 11/00</a>

## **F23K 5/04**

### **Feeding or distributing systems using pumps (F23K5/06 takes precedence)**

#### **References relevant to classification in this group**

*This subclass/group does not cover:*

Feeding or distributing systems using pumps from a central source to a plurality of burners	<a href="#">F23K 5/06</a>
---	---------------------------

## **F23K 5/16**

**Safety devices (F23K5/18 takes precedence; safety arrangements for combustion chambers F23M11/00)**

**References relevant to classification in this group**

*This subclass/group does not cover:*

Cleaning or purging devices, e.g. filters	<a href="#">F23K 5/18</a>
---	---------------------------