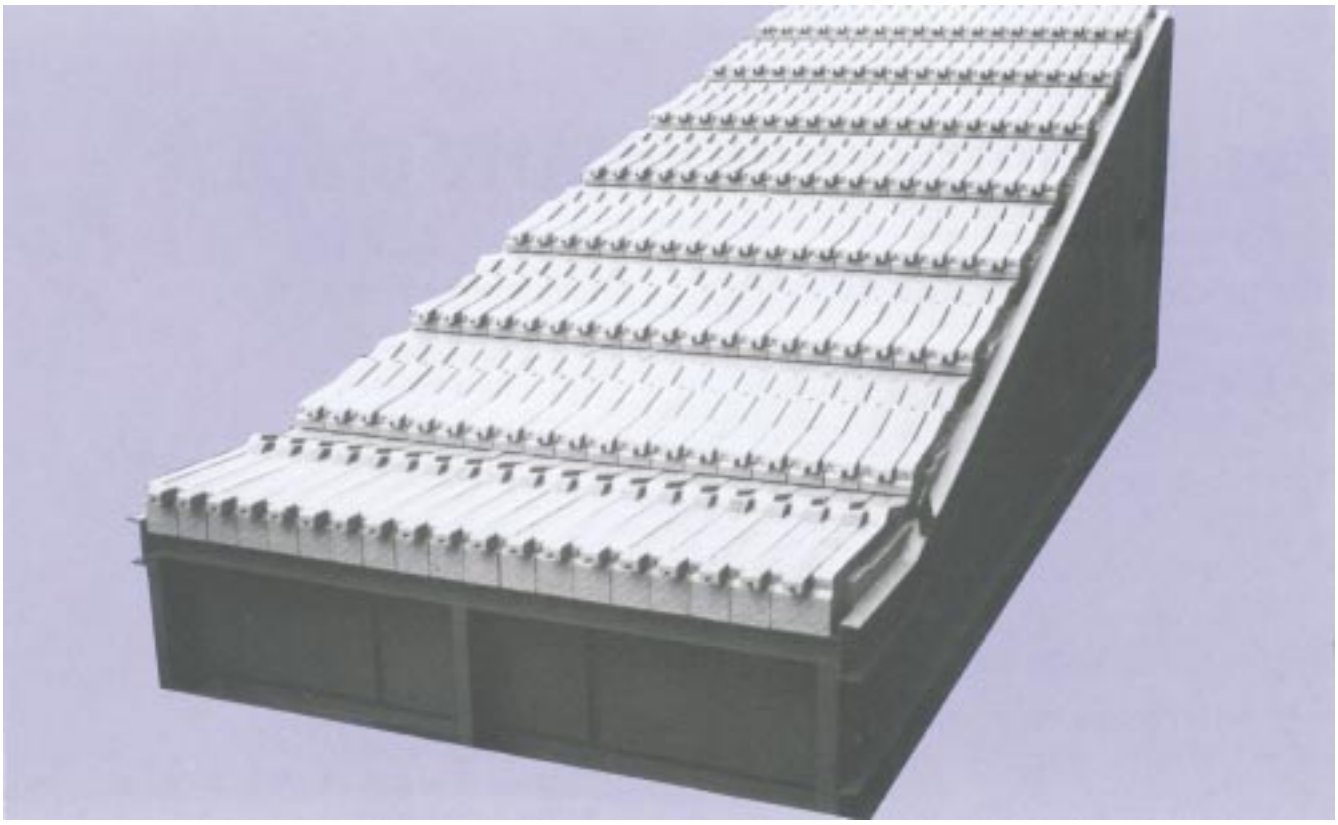
KABLITZ
FOUNDED 1901

Energy production from low grade fuels and combustible waste – our specialised field for 100 years



KABLITZ RANGE OF GRATES

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KABLITZ Overthrust and Reciprocating Grates with Variable Section Drive

KABLITZ Grates are special reciprocating grates with a particularly good and versatile stoking action.
This is achieved by the step-like sectional arrangement and movement of the grate bars. Special grate models ensure that. Both the shape of the grate bars and the movement of the individual grate sections are matched to the properties of the fuel in question.
A special feature of all KABLITZ Grates is their variable and versatile conveying action, which can be adjusted both individual sections and for the grate as a whole. This makes it possible to empty the grate rapidly when required. KABLITZ Overthrust and Reciprocating Grates make it possible to burn all low grade combustible waste and fuels. Instead of landing on the rubbish tip, these combustible materials are put to good use in the production of energy.

Their special design using the overthrust principle and the sectional control of the burning process guarentees complete combustion even of the most difficult materials.

Environmentally harmful materials are rendered sterile as the slag is burned out.

The Advantages of KABLITZ Grates

- Wide range of applications
- Unaffected by fuel and load fluctuations
- Variable conveying speed of individual grate sections
- Effective layering of the fuel as it is conveyed
- Undergrate draught control in individual areas
- Permitted undergrate draught up to 250 °C
- Rapid combustion throughout the fuel layer
- Optimum versatility through optimum stoking action
- Simple control
- High efficiency
- Maximum combustion
- High operating reliability
- Low maintenance requirements
- Long maintenance intervals
- Low wear, long life
- Low power requirement
- Robust construction
- Simple and clear design
- Jointless arrangement of several adjacent grate lines without partitions
- Simple and rapid installation
- Chromium alloy grate bars

The KABLITZ Range of Overthrust Grates:

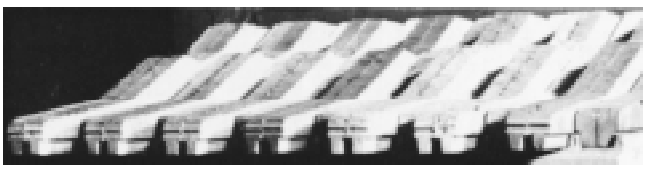
The constructlon of the standard grate the basis of all the models

The Overthrust Grate is built as a sectional, stepped construction at a inclination of 16 degrees. It consists basically of the following elements:
A stable welded frame structure carries the supporting beams for the grate bed and for the ducting supplying variable amounts of combustion air to the different parts of the grate.

The cast-iron cross beams which support the grate are supplied with cooling water from the inside. This both protects the ends of the grate bars which rest on them, and keeps them from burning.

Each parallel set of grate bars forms a grate sections about 1 m long. Each section is adjacent pairs of grate bars, one bar being fixed and the other having free hori- zontal movement.
The grate bars are made of chrome alloy cast iron.
The moving horizontal grate bars are driven by hydraulic cylinders fitted to the front of the grate via a driven frame System mounted on rollers. The first sections have a separate drive from the other sections (as illustrated for example on page 5).
Grate movement is individually variable by means of stroke length, stroke speed and stroke rate. This makes it possible to match the movement of the fire-bed and the thick-ness of the fuel layer over the whole length of the grate to the particular fuel being used and its combustion characteristics.

Operation:
As it is conveyed through the grate, the fuel material passes over a drying area, a combu-stion area and a burning out area.



The periodic stoking action of the profiled grate bar bed turns over the layers of fuel in such a way that the movement of the bottom layer is checked, so that it moves forward made up of more slowly than the layer which is forced over the top of it. When the grate bars return to their starting position after completing their thrust, part of the bottom layer of fuel is car-ried back with them. Those parts of the fuel which remain longer at the bottom of the layer form burning or glowing centres which ignite the fuel above them or ensure that it is com-pletely burnt out.
This process is repeated (according to the fuel involved) on each section until it is finally burnt out completely by the time it reaches the last section.

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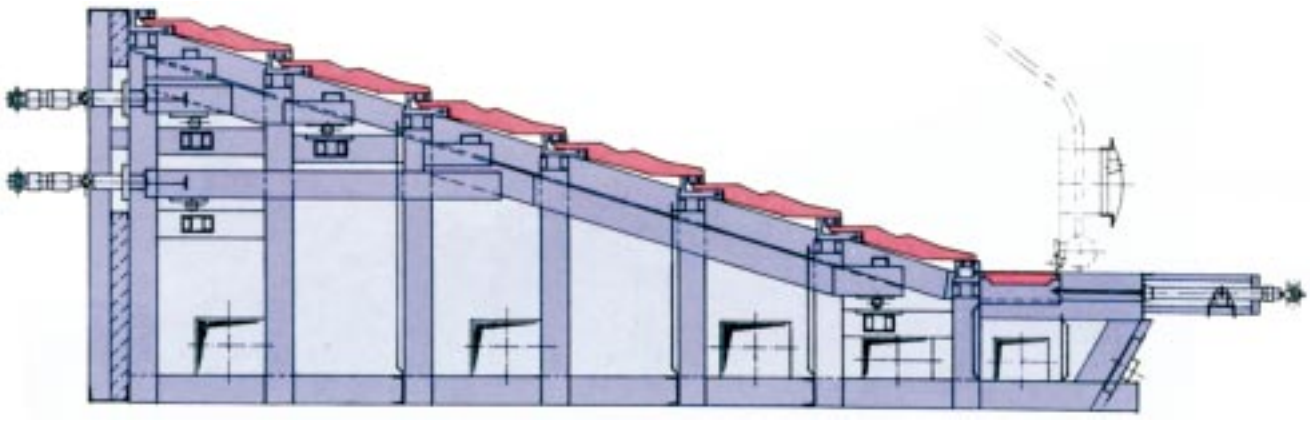
116 SW - The Standard Grate

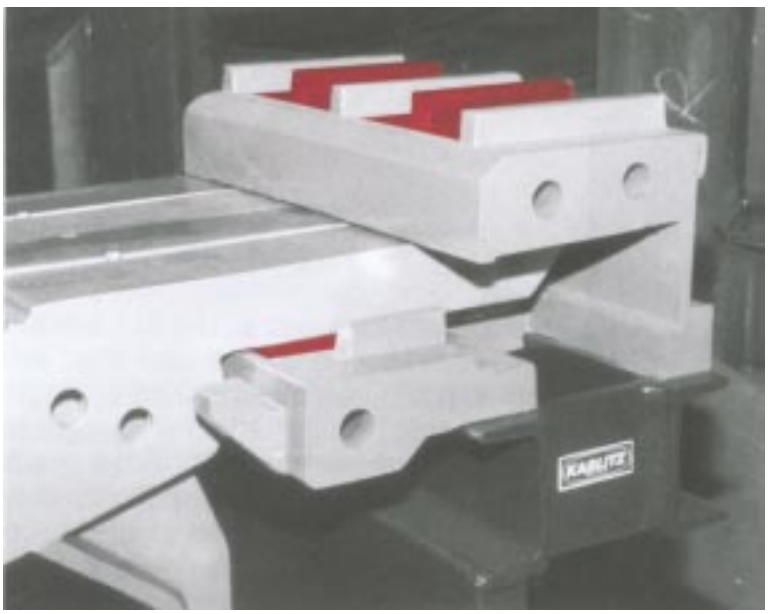
Water-cooled grate inclined at 16 degrees with or without an extendable slag grate (type 200).

For burning:

- **Bark**
- **Wood, waste wood**
- **Peat**
- **Brown coal**
- **Oil shale**
- **Sugar cane waste**
- **Biological waste**



The illustration shows a water-cooled grate type 116 SW-200, consisting of the 116 SW grate model with 6 grate sections, 2 separate drives and hydraulically extendable slag grate type 200.



The illustration shows a cast-iron, water-cooled grate beam with teeth on which the grate bars rest and slide. The inserted replaceable sliding plates of non-wearing material for the moving grate bars protect the grate beams from wear caused by abrasive fuels.

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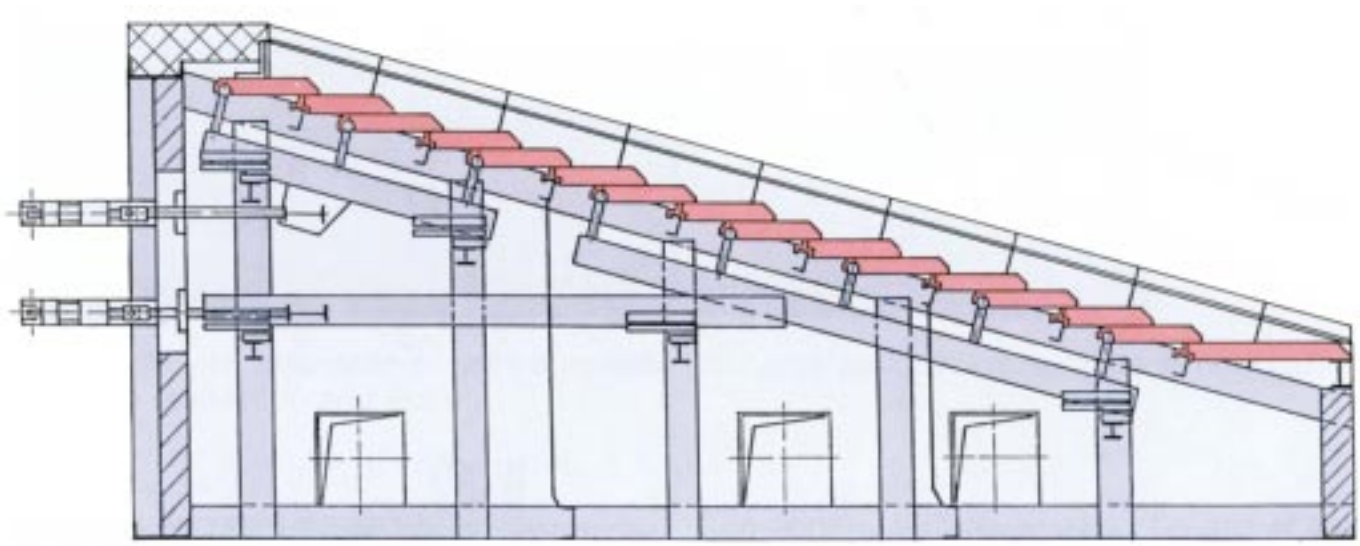
415 - Inclined Grate with Air Cooling

Air-cooled grate inclined at 15 degrees with or without extendable slag grate type 200 or 290.

For burning:

- Refuse
- Lignite
- Brown coal
- Bark
- Cut peat
- Biological waste



The reciprocating grate model 415 is a stepped grate consisting of stationary and moving rows of grate bars.
Unlike overthrust grates, every second row of grate bars on this type is moved in cycles to convey the fuel forward.
All grate bars are close together and have air slots. Inserted wearing ledges prevent off-center run at the sides and protect the grate bars against wear through the stroke action.
The drive of the moving rows of grate bars is effected hydraulically by our proven system, whereby the cycle time and stroke length can be varied for each drive.