

**WASTE-TO-ENERGY**

# **GRATE BARS FOR MOVING GRATES**



Mitsubishi Power is a power solutions brand  
of Mitsubishi Heavy Industries.

**Mitsubishi Power Europe GmbH**

## OUR BAR TECHNOLOGY MAKES THE DIFFERENCE

### ECONOMIC ASPECTS:

- Availability > 8,000 h (operation) / year
- Increased operational reliability
- Inspection intervals extended
- Reduction of ongoing maintenance costs
- Increased service life due to our reversible and wear end grate bar technology
- Reduced spare parts inventory

The selection of the grate lining depends on the specific energy potential of the fuel. As a result, air-cooled grate lining is used for low-calorific waste fuels and water-cooled grate lining is used for higher-calorific fuels, permitting higher thermal loads.

The design of the grate system is constructed in a way that a change between water-cooled and air-cooled grate bars can be made at any time without any design change. In the transition area from low-calorific to higher-calorific waste, it is possible to combine both types of cooling. The grate bars of the high thermal load grate zones are cooled by water, while the grate bars of the burnout zone are cooled by pure air. The surface coating grate, developed by Mitsubishi Power, enables a process-optimized reduction in the primary air ratio, together with a reduction in excess air and therefore also a parameter relating to NOx formation.

### AIR-COOLED CENTER CROSSBAR

for a 2-lane moving grate. Grate track divider in grate bar construction.



Reference: WtE-Plant Spittelau Vienna, Austria

### AIR-COOLED GRATE BARS

Our patented air-cooled grate bars are designed for longer service life. This is achieved by a second wear face, which - protected from temperature-induced corrosion - is concealed behind the head face. In the event of thermal wear of the outer head surface, this ensures the continued function of the grate bar and thus an extension of the overall service life. The grate bar can also be designed as a reversible grate bar for two-sided supports. This further increases the service life.

### WATER-COOLED GRATE BARS

In the cast iron grate bars, the cooling water-ducts are cast in, which ensure the tightness. Their tightness is guaranteed even at higher temperatures. Furthermore, the cast-in steel ducts guarantees a defined flow. This avoids vortex-induced dead spaces of angular ducts, which entail a risk of overheating. At the same time, an optimum cooling effect of the entire grate bar surface is achieved.

### WATER COOLED CENTRAL BAR

for a 2-lane moving grate. Grate track divider in grate bar construction.



Reference: WtE-Plant Bitterfeld, Germany

### AREA OF APPLICATION

Unrestricted usability for medium and low calorific values  $H_u = < 12,000 \text{ kJ / kg}$

Unrestricted usability for high calorific value range from 10,000 to 25,000 kJ/kg and with restrictions even up to 30,000 kJ/kg

