

# BED ASH COOLING IN FBC PLANT VILLE-BERRENRATH



## APPLICATION AND MODE OF OPERATION:

Cooling of bed-ash by hot-ash dosing lock and cooling vibratory feeder describes our new system for cooling of bed-ash. The advantages of the new system are especially the simply and flexible construction as well as the excellent accessibility for inspections. The hot ash dosing lock is connected with the ash discharge pipe, so that the extension of the boiler is compensated. All other components are installed on the floor. The extension takes place between the hot ash dosing lock and the cooling vibratory feeder. The sealing at this place effects by a heat-resistance fabric compensator.

The hot ash is fed to the cooling vibrating conveyor in dosed quantities and passes through a coarse screening section in order to separate particles > 15 mm. Coarse particles are conveyed sideways without cooling. Following coarse screening the ash stream is passed to a cooling element located in the trough of the vibrating conveyor and is cooled here during transport through the conveyor trough. Cooling water flows through the cooling element, the structural shape of which takes into account the high abrasiveness of the ash layer. In particular no built-in components transverse to the direction of transport in the product stream have been used. The high requirements set on service life and quick maintenance and repair times have also been considered by using a modular construction. After easy dismantling of the cover the coarse one-piece screening section and the cooling element can be quickly removed for repair or replacement.

## SPECIFICATIONS:

Product:	Bed Ash from FBC-plants
Feed quantity:	1.250 kg/h
Mesh size:	d50 = 220 µm / max. d = 40 mm
Intake temperature:	850 °C max.
Discharge temp.:	£ 130 °C
Machine type:	FUFK
Length:	4.500 mm
Width:	500 mm
Drives:	2 x JV 156-330 mit je 0.95 kW
Cooling area:	6.48 m <sup>2</sup>
Cooling water flow:	20 t/h (< 25 °C, 4.0 bar)

## YOUR BENEFIT:

- Simple modular construction
- Quick replacement of the cooling element
- Integrated coarse ash sifting
- High cooling performance with low spatial requirements
- Reliable operation even for different ash compositions
- Flexible machine version for varying throughput and cooling capacities, can also be combined with other vibratory machines e.g. water-cooled spiral elevators
- Easy integration into existing plants