Technology Portrait: Doosan Lentjes Grate Ash Extractor

The ash remover is used to quench and remove the mineralised ash that continuously accumulates on the grate after the thermal treatment of the waste, which can be transported for further processing.

The burnt-out, hot ash falls continuously from the last grate zone through an ash chute into the water bath of the respective ash extractor. This is where the complete quenching of the grate ash takes place.

The grate ash extractor has proven itself to be a compact and reliable unit for discharging ash.



The task

The press ash extractor fulfils three important functions:

- Cooling the hot ash
- Airtight sealing between ash discharge and combustion chamber
- Dust and odour-free discharge of the grate ash

Optimised design

The ash extractor consists of a welded and reinforced sheet steel housing and is equipped with replaceable wear and panelling plates as well as wear strips on the discharge piston. Built with high rigidity, the high-quality construction enables low-wear operation with a long service life.

The discharge piston is actuated via a central drive shaft with hydraulic cylinders arranged on both sides, which are driven by the hydraulic unit of the combustion grate.

At its lowest point, the ash extractor has large inspection openings on both sides and generously dimensioned emptying devices.

The amount and width of the ash extractor is determined on a project-specific basis. Depending on the width of the grate track, one or two units are provided. The ash removal unit is designed as an evaporation system and is filled with water up to the front end wall. The level of the water bath is monitored and service water, for example, is fed in accordingly.

The resulting vapours are continuously extracted by a fan and fed to the combustion chamber through a corrosion-resistant plastic duct. By means of the discharge piston, the cooled grate ash is pushed under the end wall in intervals to the ash drop edge and discharge. Due to the long residence time of the ash in the dry section of the ash extractor, a low residual moisture is ensured.

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The advantages of our Doosan Lentjes ash extractor at a glance:

- ► Low water content in the ash
- ► Low susceptibility to heavy or non-combustible components in the ash
- Easy to maintain due to replaceable wear plates

