## Dry Lignite Combustion Systems

**Application**

**Coal Fired Power Plants and Industrial Boilers**
- Pollution reduction, extension of fuel range, efficiency increase
- Ignition burner and auxiliary burner for medium and peak loads

**Benefits**
- High flexibility, availability and efficiency
- For reliable use in co-firing systems for base loads optimized engineering based on simulation calculations without extensive trials
- Reliable solution based on decades of experience
- Savings on expensive start up fuel

**Technical Data**

- **Burner type:** Integrated Vortex Burner
- **Burner Capacity:** 10 – 100 MW
- **Emissions:**
  - CO < 100 mg/m³ (STP)
  - NOₓ < 190 mg/m³ (STP)

**Fuel Type**

- Pulverized Dried Lignite
  - Water: 10-20 % ar
  - Ash: 4-16 % ar
  - VM daf: 30-70 %
  - LCV: 18-22 MJ/kg

**Scope of Supply**

- Consultancy
- Basic engineering
- Design of burners
- Design of furnace
- Process engineering
- CFD-Simulations of boiler furnace and combustion system
- Supply and installation of burners including all related components
- Commissioning

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**Dry Lignite Vortex Burner**

High Flexibility, Availability and Efficiency
Reliable Use in Co-firing
## Dry Lignite Combustion Systems

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<td>Concept design study for optimization of firing system considering dry lignite burners, 2x550 MWel, Lignite, Niederaußem PS Unit K, Germany</td>
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<td>Concept study for a 1100 MWel dry lignite-fired steam generator, Japan</td>
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<td>Design study for a super critical steam generator fired with Pre-Dried Lignite without flue gas circulation, Germany</td>
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<td>Feasibility study for the implementation of dry lignite burners including test phase, Germany</td>
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**Legend:**
- **PS** – Power Station
- **PF** – Pulverized Fuel
- **CHP** – Heat and power plant
- **SCR** – Selective Catalytic Reduction
- **STP** – Standard Temperature and Pressure
- **HRSG** – Heat Recovery Steam Generator
- **FGD** – Flue Gas Desulphurization
- **CFB** – Circulating Fluidized Bed
- **ESP** – Electrostatic Precipitator