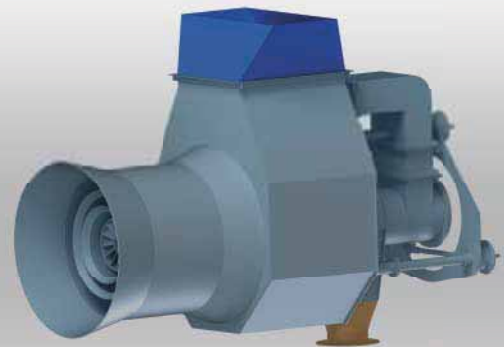


## Dry Lignite Vortex Burner



High Flexibility, Availability and Efficiency  
Reliable Use in Co-firing

Application	Technical Data	Scope of Supply
<p><b>Coal Fired Power Plants and Industrial Boilers</b></p> <p>Pollution reduction, extension of fuel range, efficiency increase</p> <p>ignition burner and auxiliary burner for medium and peak loads</p> <p><b>Benefits</b></p> <ul style="list-style-type: none"> <li>• High flexibility, availability and efficiency</li> <li>• For reliable use in co-firing systems for base loads optimized engineering based on simulation calculations without extensive trials</li> <li>• Reliable solution based on decades of experience</li> <li>• Savings on expensive start up fuel</li> </ul>	<p><b>Burner type:</b> Integrated Vortex Burner</p> <p><b>Burner Capacity:</b> 10 – 100 MW</p> <p><b>Emissions:</b> CO &lt; 100 mg/m<sup>3</sup> (STP) NO<sub>x</sub> &lt; 190 mg/m<sup>3</sup> (STP)</p>	<ul style="list-style-type: none"> <li>• Consultancy</li> <li>• Basic engineering</li> <li>• Design of burners</li> <li>• Design of furnace</li> <li>• Process engineering</li> <li>• CFD-Simulations of boiler furnace and combustion system</li> <li>• Supply and installation of burners including all related components</li> <li>• Commissioning</li> </ul>
	<p><b>Fuel Type</b></p> <p>Pulverized Dried Lignite</p> <p>Water: 10-20 % ar Ash: 4-16 % ar VM daf: 30-70 % LCV: 18-22 MJ/kg</p>	

## Dry Lignite Combustion Systems

Scope	Client
Engineering for C&I implementation for dry lignite test burner, 20 MWth, Lignite, RWE Ibbenbüren PS, Germany	RWE, Essen, Germany
Study for integration of TBK (pre-dried Lignite) burner in anthracite slag-tap firing system, 848 MWel, Bituminous Coal, Ibbenbüren PS, Germany	RWE Service GmbH, Nordhorn, Germany
Engineering service for support during bidding phase for design of boilers including a co-firing concept, 2x550 MWel, Pre-Dried Lignite, Niederaußem PS Unit K, Germany	Ishikawajima-Harima Heavy Industries Co., Ltd, Tokyo, Japan
Concept design study for optimization of firing system considering dry lignite burners, 2x550 MWel, Lignite, Niederaußem PS Unit K, Germany	RWE Power AG, Essen, Germany
Concept study for a 1100 MWel dry lignite-fired steam generator, Japan	Ishikawajima-Harima Heavy Industries Co., Ltd, Tokyo, Japan
Design study for a super critical steam generator fired with Pre-Dried Lignite without flue gas circulation, Germany	RWE Power AG, Essen, Germany
Feasibility study for the implementation of dry lignite burners including test phase, Germany	RWE Power AG, Essen, Germany

**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

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