



Automatic Grate Firing type LCS-R



Boiler capacity:
from 70 up to 1,300 kW



Compact, powerful and environment-friendly

The investment in a biomass-firing system is particularly worthwhile for the wood processing and wood working companies. The fuel must not be disposed expensive or purchased in addition. It is residual material from the production. Consequently, the factory, residential house and, if necessary, neighboring buildings can be heated at low cost. The biomass-firing systems are amortized within a few years. In addition the generated heat can be used for the drying of timber, gluing and pasting of wood, for chemical curing and conditioning of surface coatings etc. You are independent of the fossil fuels and by the way: you protect the environment and act in the sense of future generations.



Moving Grate Firing System type LCS-RV 650/785

Our standards

- ✓ boiler
- ✓ stoker screw
- ✓ cellular wheel sluice
- ✓ cleaning heat exchanger
- ✓ safety heat exchanger
- ✓ residual oxygen-dependent combustion regulation
- ✓ combustion chamber temperature regulation
- ✓ multi-level burn back safety
- ✓ electric control with 7" touch panel incl.
 - time control
 - service interval display
 - data base for fuels
 - full network compatibility
 - graphical display

The following options are possible:

- + automatic capacity regulation (30–100%)
- + automatic ignition
- + automatic ash removal of combustion chamber/heat exchanger/undergrate or fine dust filter
- + double cyclone dust separator
- + flue gas recirculation
- + return temperature increase
- + buffer storage management
- + cascade control
- + boiler circulation pump control
- + remote control
- + fine dust filter

Comfortable, efficient and low-maintenance

The new LCS-R convinces from the point of view of combustion technology. This firing installation is a compact tubular boiler which offers the possibility to build in an underfeed or a moving grate firing. In that way, we succeeded in presenting a boiler in just one series covering a particularly wide scope of combustible, achieving high efficiency degrees and offering an efficient de-ashing system.

Underfeed Firing type LCS-RU

This kind of firing is a sophisticated and robust system. Based upon the innovative solutions, the underfeed firing has continuously been developed. Among others, the geometry of the underfeed body is optimally adapted to the combustion conditions.

The combustible is pushed into the ceramic firing chamber which is lined with ceramic shaped bricks by means of a de-ashing screw and is burnt there; the ash is conveyed into an ash box by means of a de-ashing screw.

The underfeed firing is particularly appropriate to combustibles which have homogeneous consistency and produce few ash as, for example, residues of untreated wood (chips from wood processing).

Moving Grate Firing type LCS-RV

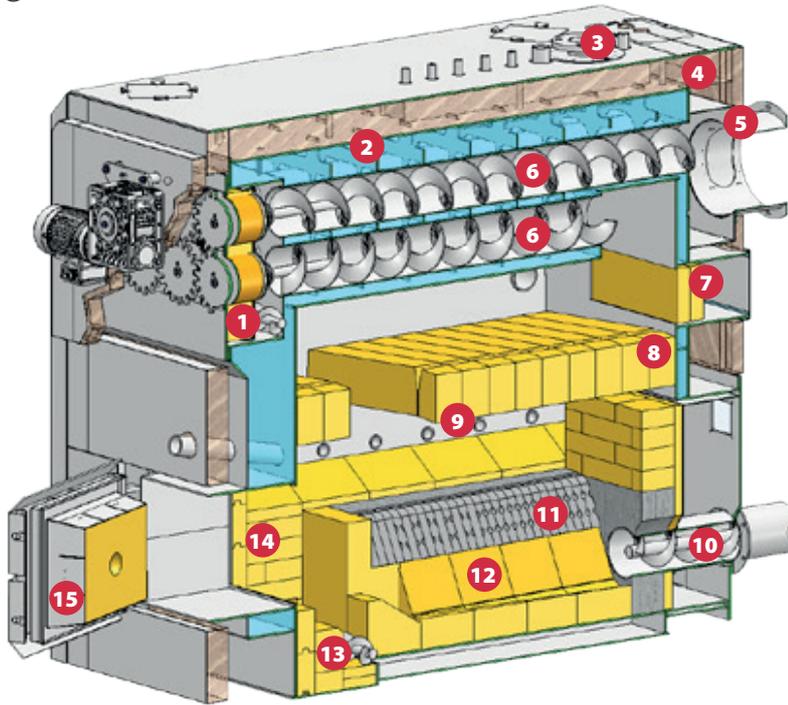
In a moving grate firing type LCS-RV the combustible is conveyed onto the moving grate by means of an insertion screw. The combustible is pushed through the firing by a movement of the lines of firing bars of the moving grate, of which the control is de-pending on time and output. The moving grate is divided into different zones, which allows both a stepped supply of combustion air (also recirculation) and stepped combustion. After that, the combustible is de-gassed and burned out on the grate. The ash is automatically conveyed into an ash collecting box by means of an ash removal screw. An undergrate ash removal is recommended (optional).

The moving grate firing is appropriate to fuels with higher ash amount as well as to wet combustible, especially well for production residues from wood working and processing, as well as fuels with increased slagging.

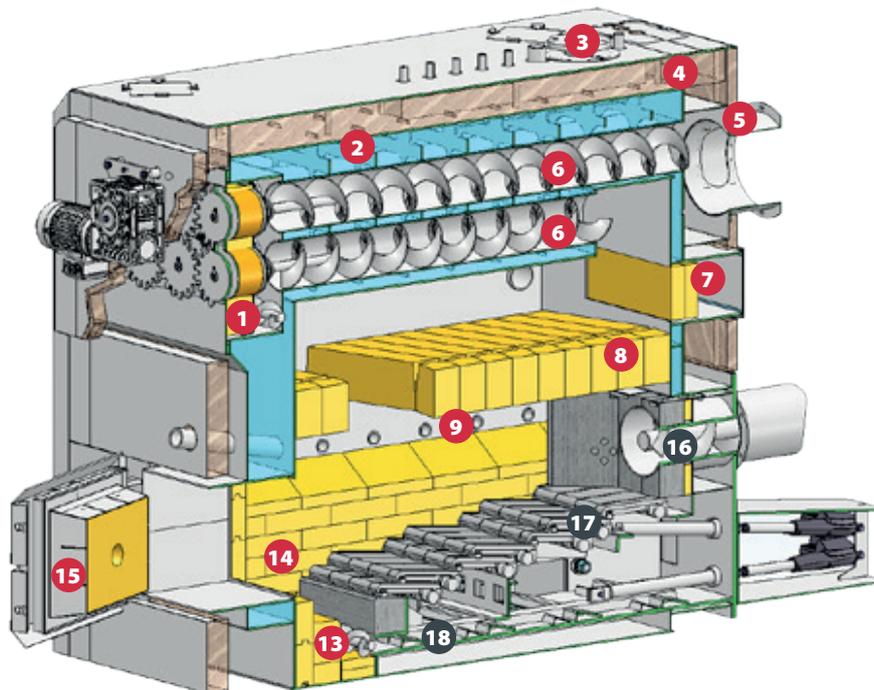
Seven advantages that convince

- ✓ wide range of fuel by the use of a moving grate
- ✓ guarantees of emissions acc. 1. BImSchV or 4. BImSchV
- ✓ high efficiency: over 90%
- ✓ very easy to maintain by large inspection openings, comfortable by automatic ash removal
- ✓ for more than 75 years of experience in combustion technology
- ✓ furnaces manufactured in Germany
- ✓ customer service from a single source, directly from the manufacturer

Underfeed Firing System type LCS-RU



Moving Grate Firing System type LCS-RV



- | | | | |
|------------------------------------|-----------------------------------|---|----------------------------|
| 1 ash removal screw heat exchanger | 6 heat exchanger with turbulators | 11 primary air injectors | 15 combustion chamber door |
| 2 water jacket | 7 cleaning opening | 12 underfeed pit | 16 insertion screw |
| 3 outlet | 8 reflection arch | 13 ash removal screw combustion chamber | 17 moving grate |
| 4 insulation | 9 secondary air injectors | 14 refractory | 18 de-ashing |
| 5 flue gas flange | 10 stoker screw | | |

Individual, customized and optimized

The performance of a firing system is considerably influenced by the quality of the supplementary components. Our experienced staff support you in the planning in order to provide you a suitable solution for the best possible general concept.

We have the right filter solution for you!

To keep emissions as low as possible, Nolting offers various types of fine dust filters. For existing systems, these fine dust filters can be retrofitted.

High performance cyclone/filter combination HZF



Advantages

- ✓ space-saving filter solution by combining cyclone with a fine dust filter in one device
- ✓ integrated bypass for flue gas
- ✓ low wear and low maintenance
- ✓ very service-friendly through several cleaning and inspection openings
- ✓ control and regulation unit with display

Fine dust filter NGF



Advantages

- ✓ residual dust content < 3mg/Nm³, typically < 1mg/Nm³
- ✓ no cyclone pre-separator necessary
- ✓ compact, modular design
- ✓ meets the requirements of all current programs
- ✓ also for wood materials of fuel groups 6 and 7 (after 1st BImSchV)
- ✓ remote maintenance optional

Comfortable and easy operation of the control system!

The electric control system in industrial quality located in a stable, dust-proof enclosure and contains all elements for the automatic operation of the plant. The execution of control complies with the directives of the VDE.



Advantages

- ✓ industry standard, no "home" version
- ✓ stable steel plate switch cabinet in IP X4
- ✓ made by Nolting by proper switch cabinet construction
- ✓ control TÜV approved and certified
- ✓ well-known components (Siemens, Mitsubishi)
- ✓ upgrade reserves
- ✓ active ventilation with filter
- ✓ comfortable and intuitive manipulation by 7" touch panel

Nolting biomass-firing technology

The highest quality in biomass-firing technology since 75 years

From the analysis of the fuel, economy calculation to the inspection and maintenance, Nolting supports you with expertise, decades of experience and our own factory customer service. Our service team responds to your individual concerns.



Check-out our webpage with our international partners or contact us directly by e-mail: export@nolting-online.de

innovative. flexible. reliable.