

FURNACES
BOILERS

PLANT TYPES

UNIT SIZES

KOHLBACH

KOHLBACH Group

PRODUCT PORTFOLIO



KOHLBACH

www.onekohlbach.com

FUEL TYPE



Waste from landscape
maintenance and wood residues



Wood waste from sawmills and wood processors(bark, wood chips, admixture of sawdust or grinding dust)



Wood chips

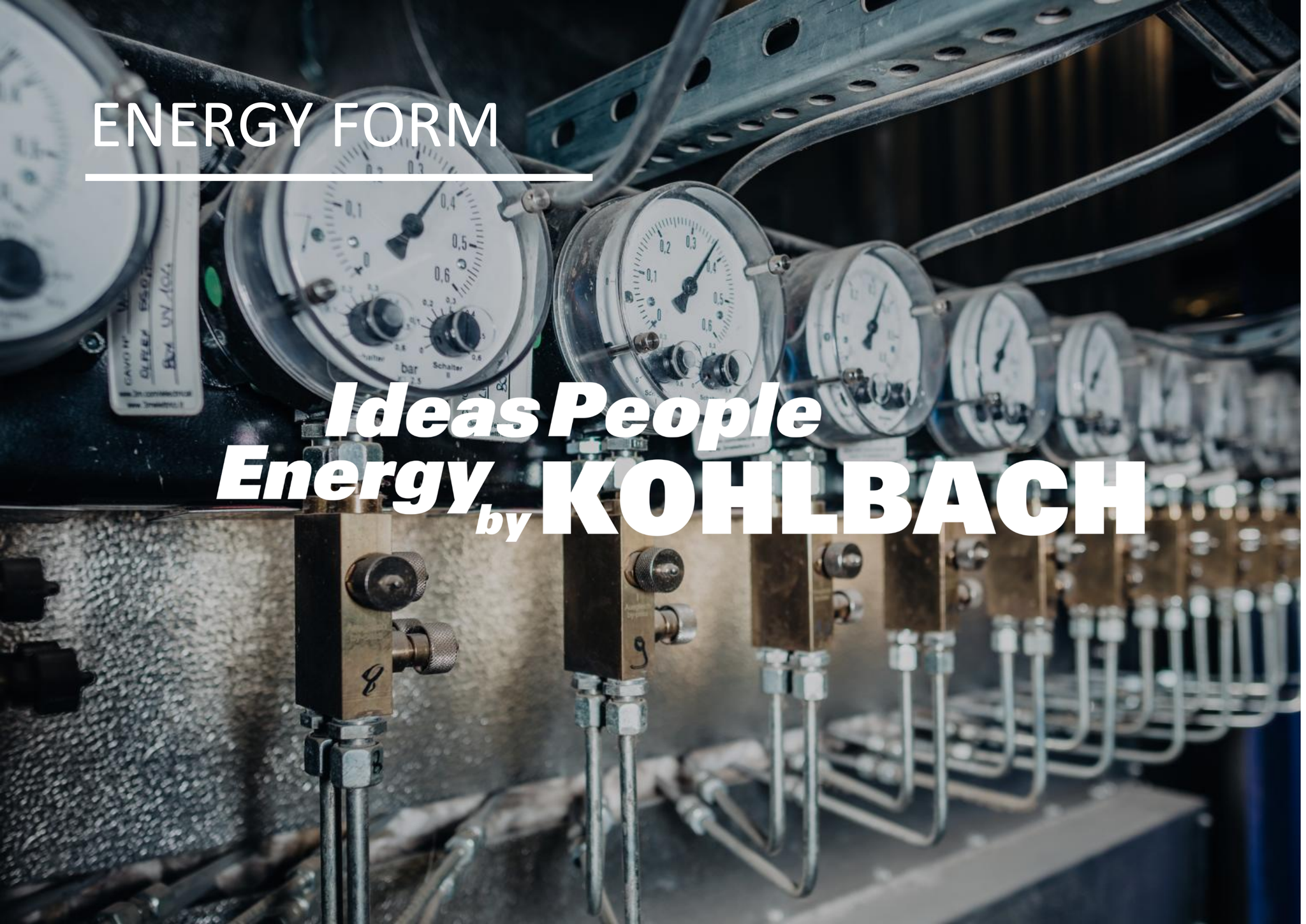
PELLETS



USED WOOD



ENERGY FORM



KOHLBACH

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ENERGY FORM

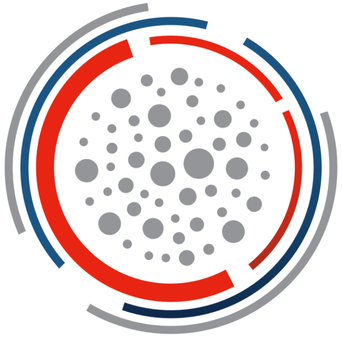
WARM WATER Ts=110°C
(Operation T1=100°C/T2=80°C)



HOT WATER Ts=160°C
(Operation T1=130°C/T2=100°C)



SATURATED STEAM UP TO PS=30 BARG
(Operation P=25 barg)



THERMAL OIL UP TO 315 °C
(at 10 bar)

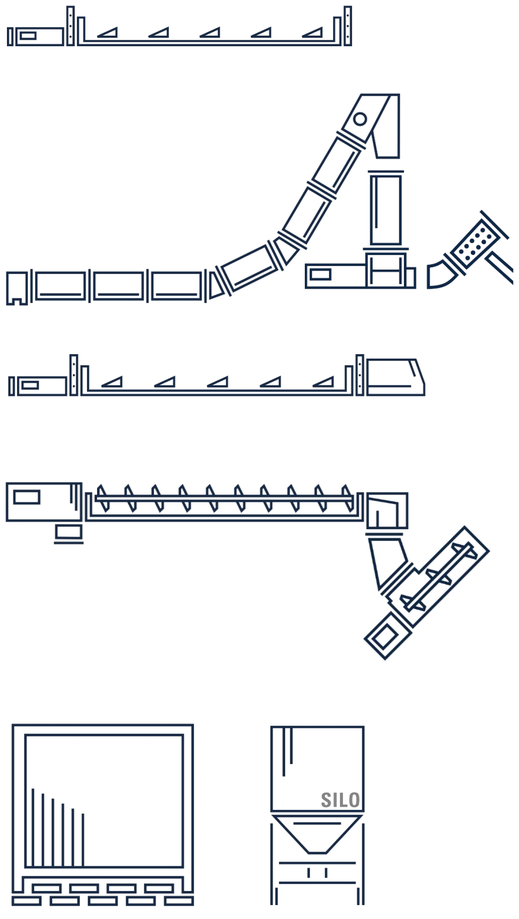


ELECTRICITY

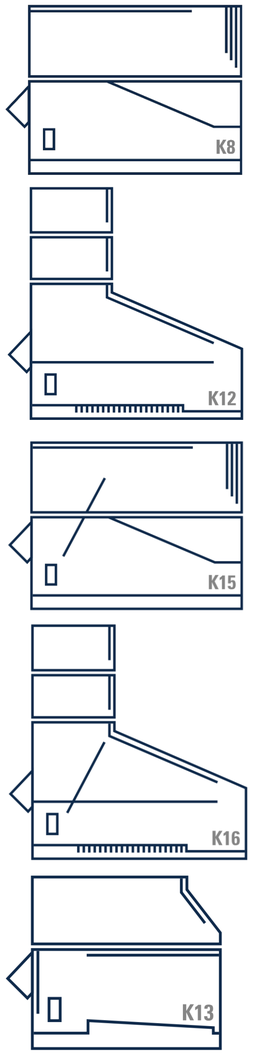


COMPONENTS

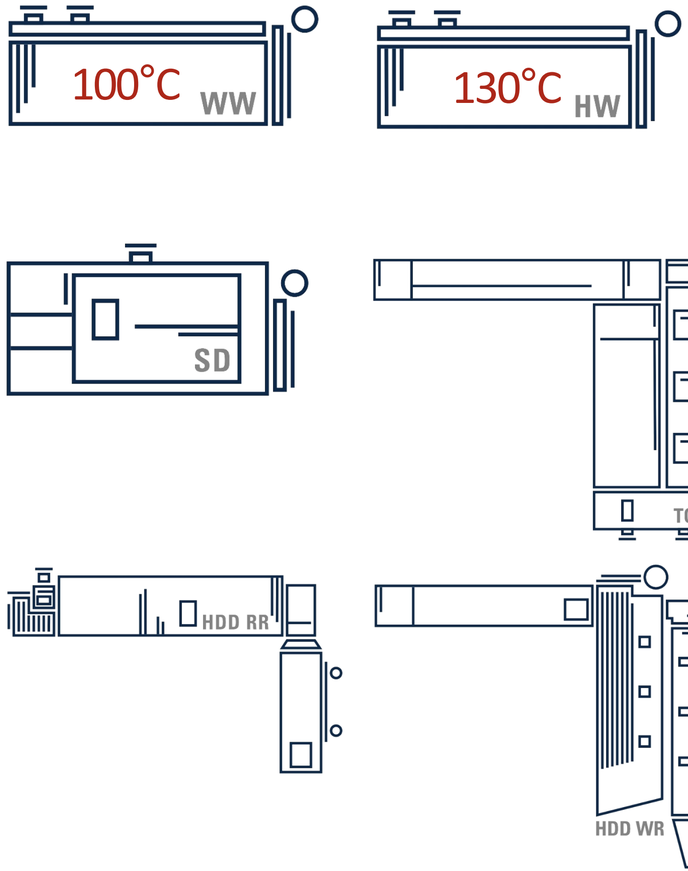
FEED SYSTEM



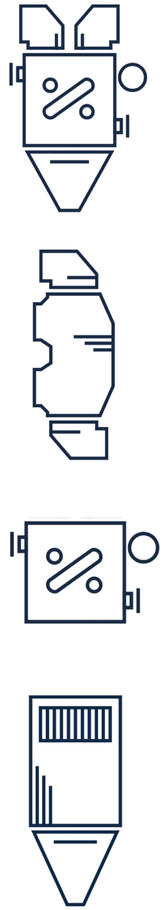
FURNACES



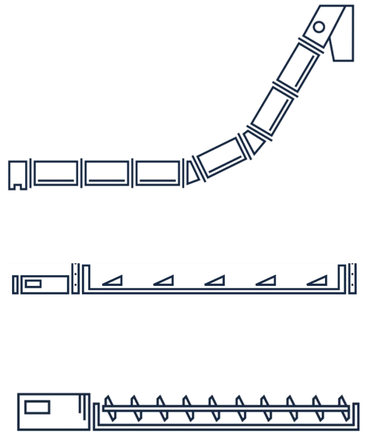
BOILERS



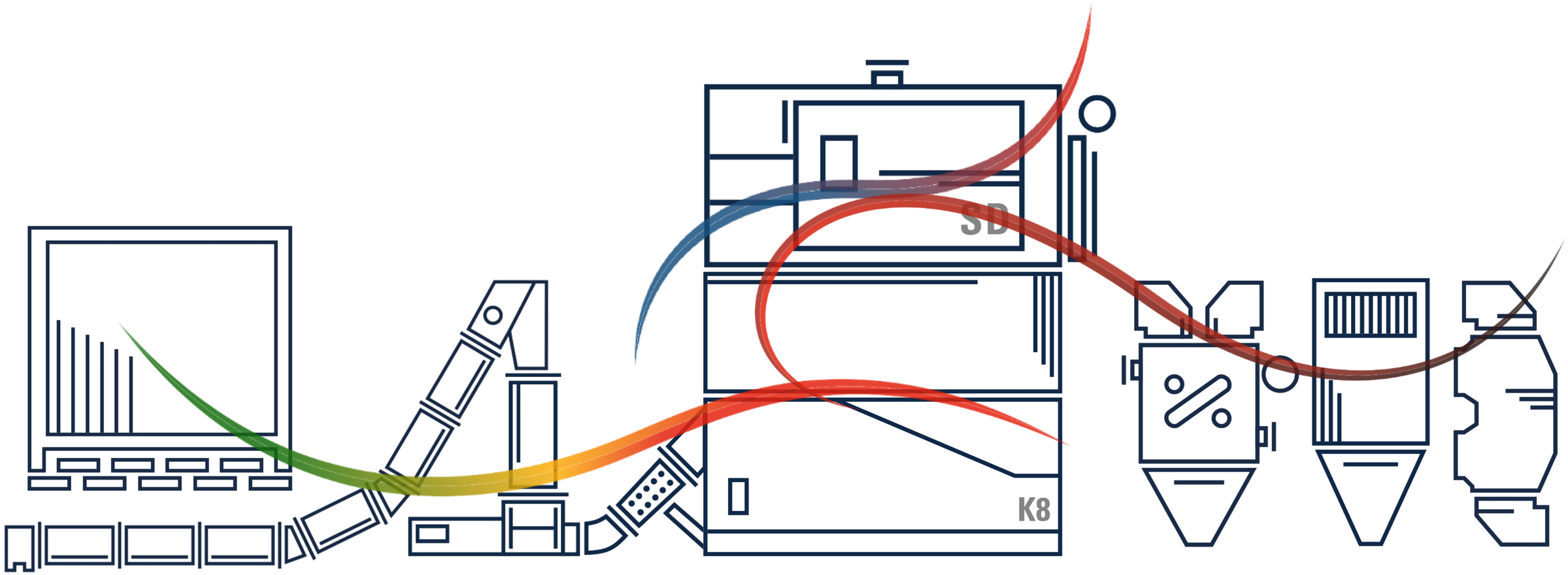
HR / CLEANING



DEASHING



SYSTEM CONCEPT



FURNACE SYSTEM



KOHLBACH

www.onekohlbach.com

K8 system

Combustion technology:
Counter flow furnace with moving grate and water cooled compression zone

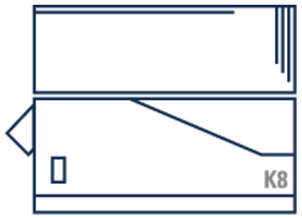
Nominal thermal output: 400 to 8000 kW

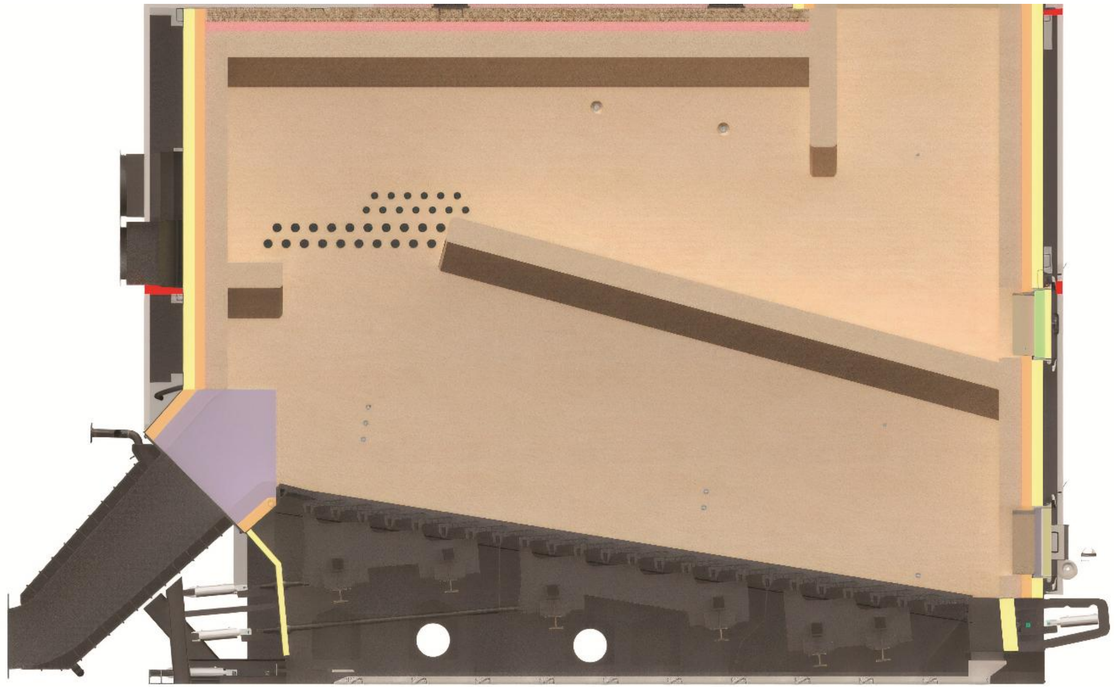
Fuel

Bark, wood chips, sawdust, plywood scraps

Water content (% weight): 20 to 60 depending on configuration

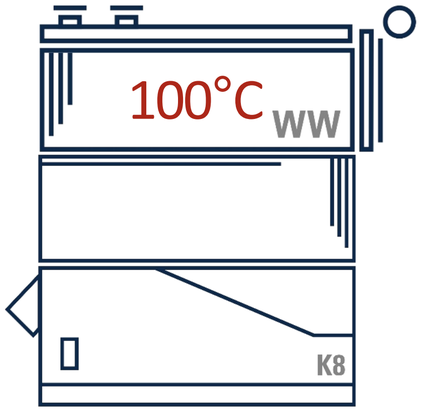
Maximum ash content (% weight): 10



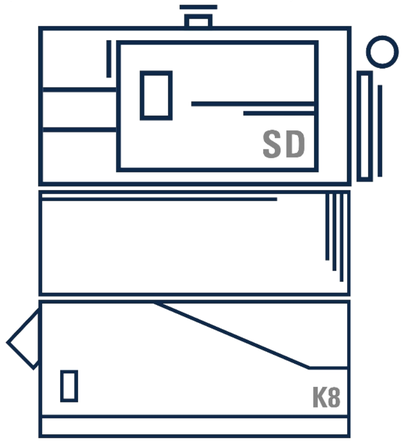


FURNACE K8 – BOILER TYPES

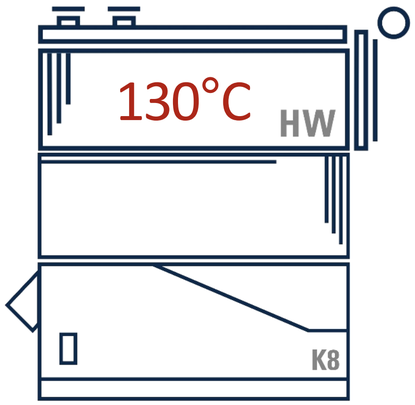
WARM WATER
(SMOKE TUBE BOILER) HW RR



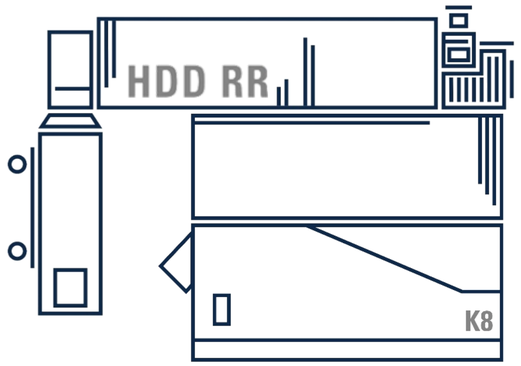
SATURATED STEAM
(SMOKE TUBE BOILER) SD RR



HOT WATER
(SMOKE TUBE BOILER) HW RR



SUPER HEATED STEAM
(SMOKE TUBE BOILER) ÜHD RR



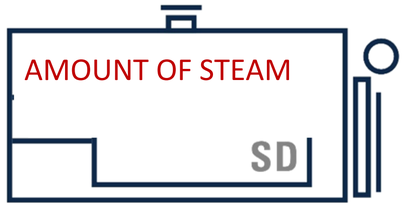
SYSTEM PERFORMANCE – K8



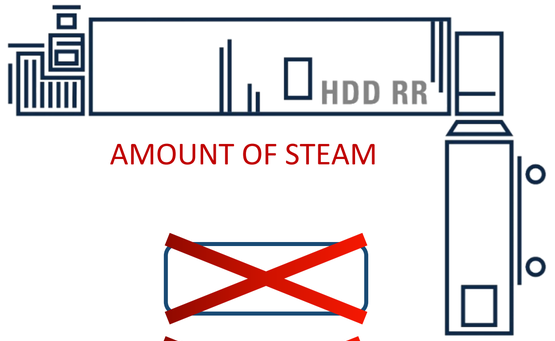
100°C NHP WW
400 kW
600 kW
800 kW
1000 kW
1200 kW
1500 kW
2000 kW
2500 kW



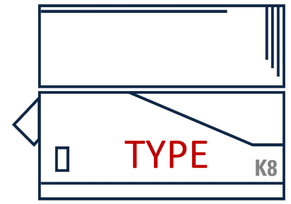
130°C NHP HW
400 kW
600 kW
800 kW
1000 kW
1200 kW
1500 kW
2000 kW
2500 kW



AMOUNT OF STEAM SD
~~X~~
~~X~~
1,20 t/h
1,50 t/h
1,80 t/h
2,25 t/h
3,00 t/h
3,75 t/h



AMOUNT OF STEAM HDD RR
~~X~~
~~X~~
~~1,20 t/h~~
~~1,50 t/h~~
~~1,80 t/h~~
~~2,25 t/h~~
2,80 t/h
3,50 t/h

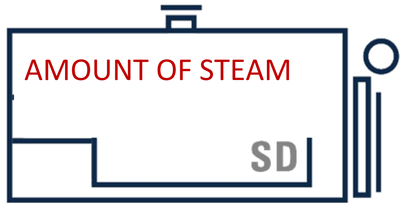


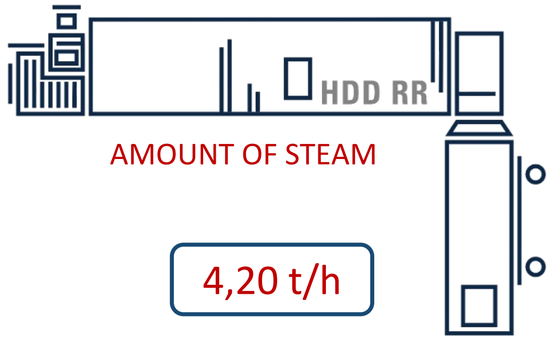
TYPE K8
550
800
1070
1320
1600
1990
2630
3260

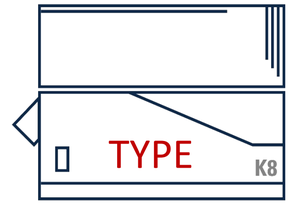
SYSTEM PERFORMANCE – K8



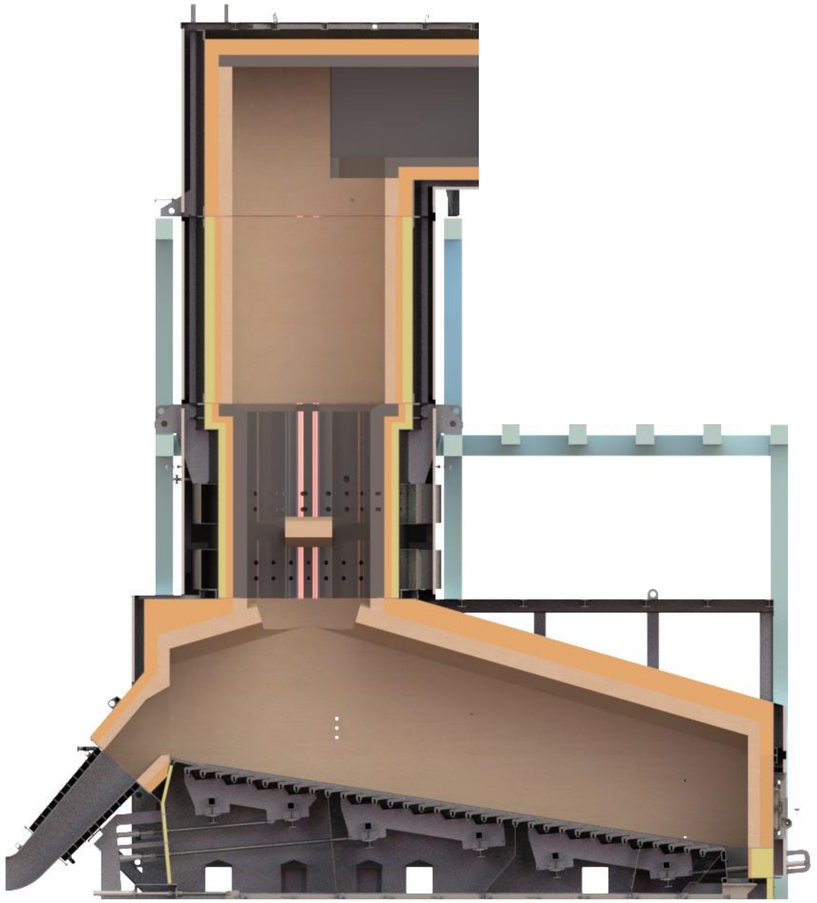








3000 kW	3000 kW	4,50 t/h	4,20 t/h	3900
4000 kW	4000 kW	6,00 t/h	5,60 t/h	5180
5000 kW	5000 kW	7,50 t/h	7,00 t/h	6470
6000 kW	6000 kW	9,00 t/h	~~9 t/h~~	7730
7000 kW	7000 kW	10,50 t/h	~~10 t/h~~	9000
8000 kW	8000 kW	12,00 t/h	~~12 t/h~~	10260



K12 system

Combustion technology:
Central flow furnace with water-cooled moving grate and compression zone

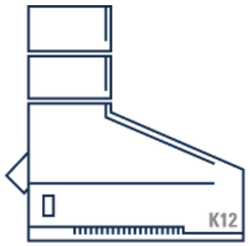
Nominal thermal output: 5000 to 17000 kW

Fuel

Bark, wood chips, sawdust, plywood scraps

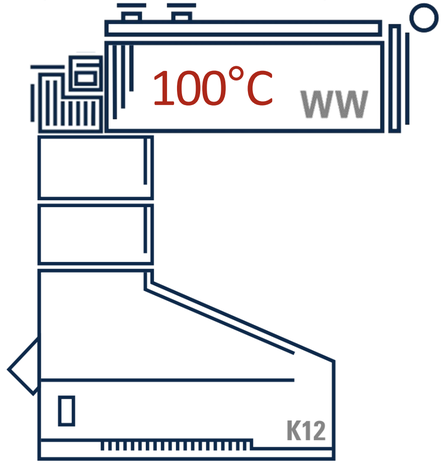
Water content (% weight): 20 to 60 depending on configuration

Maximum ash content (% weight): 15

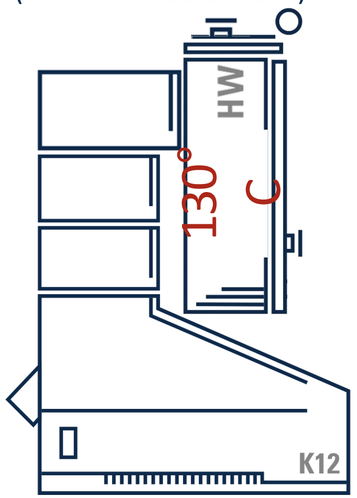


FURNACE K12 – BOILER TYPES

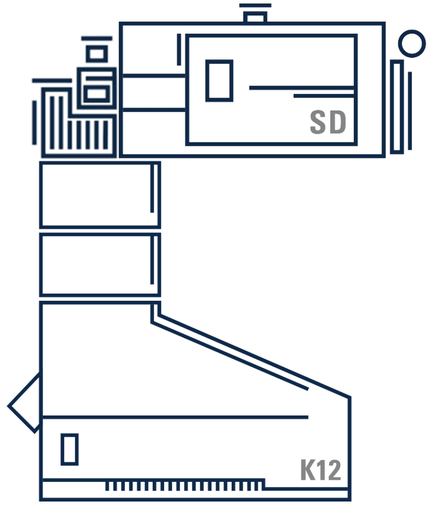
WARM WATER
(SMOKE TUBE BOILER) HW RR



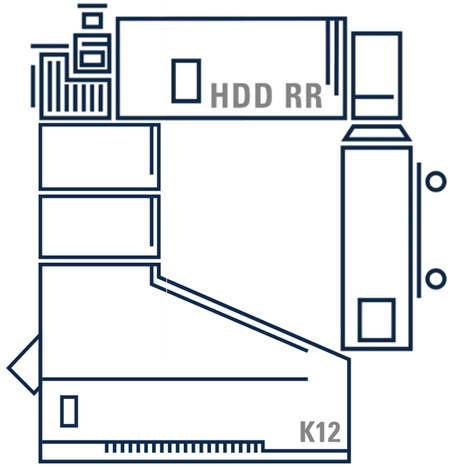
HOT WATER
(SMOKE TUBE BOILER) HW RR



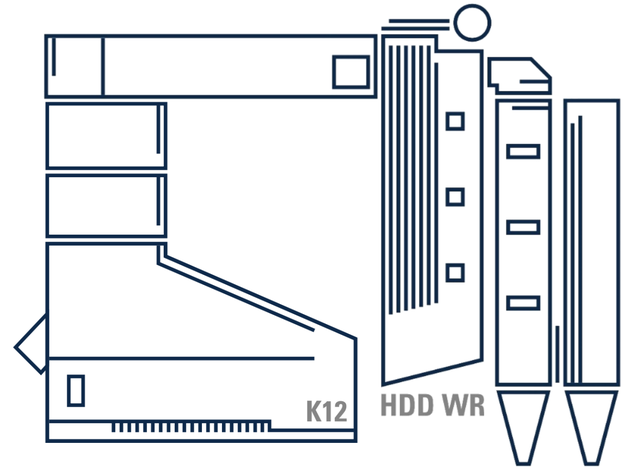
SATURATED STEAM
(SMOKE TUBE BOILER) SD RR



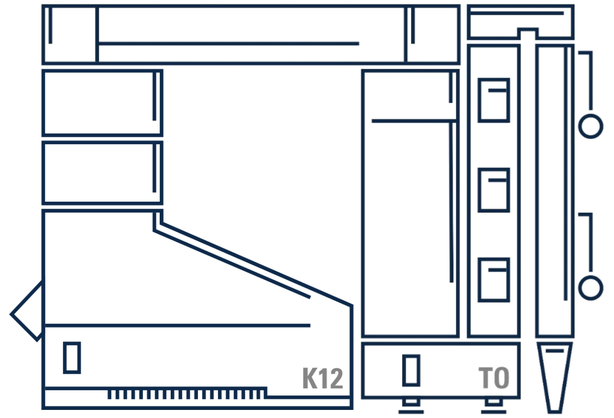
SUPER HEATED STEAM
(SMOKE TUBE BOILER) ÜHD RR



HIGH PRESSURE STEAM (WATER TUBE
BOILER) HDD WR



THERMAL OIL BOILER
TÖ



SYSTEM PERFORMANCE – K12



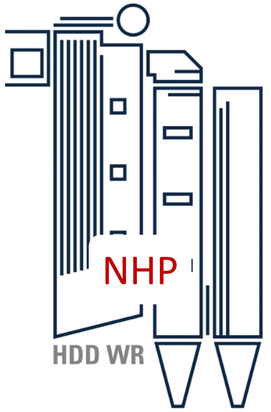
5000 kW
7500 kW
10000 kW
12000 kW
13500 kW
17000 kW



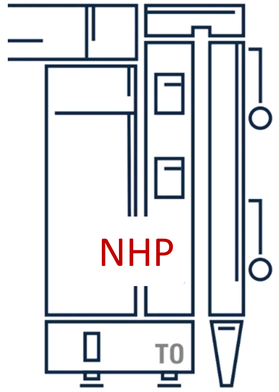
5000 kW
7500 kW
10000 kW
12000 kW
13500 kW
17000 kW



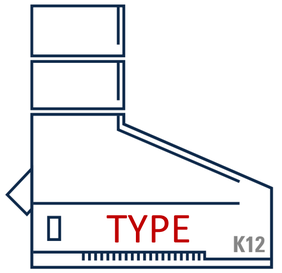
7,50 t/h
11,25 t/h
15,00 t/h
~~
~~
~~



5000 kW
7500 kW
10000 kW
12000 kW
13500 kW
17000 kW



5140 kW
6715 kW
9790 kW
12020 kW
~~
~~



5850
8750
11650
13950
15700
19800

K15 system

Combustion technology:
Counterflow firing with primary combustion chamber cooling, horizontal secondary afterburning and water-cooled moving grate and compression zone

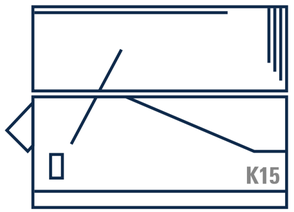
Nominal thermal output: 1000 to 5000 kW

Fuel

Chemically untreated and chemically treated industrial waste and used wood (A1/A2 according to DE Altholz-VO)

Water content (% weight): 5 to 30

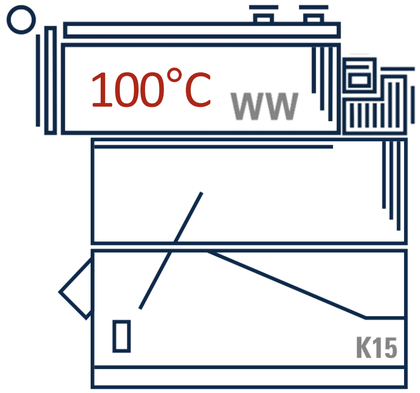
Maximum ash content (% weight): 10



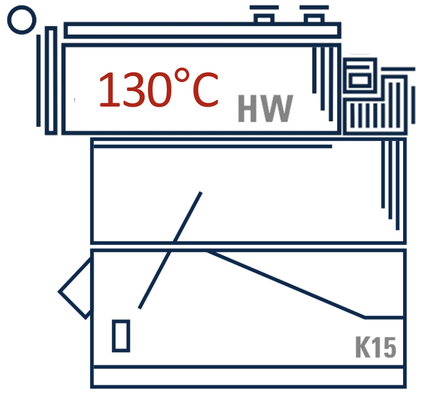


FURNACE K15 – BOILER TYPES

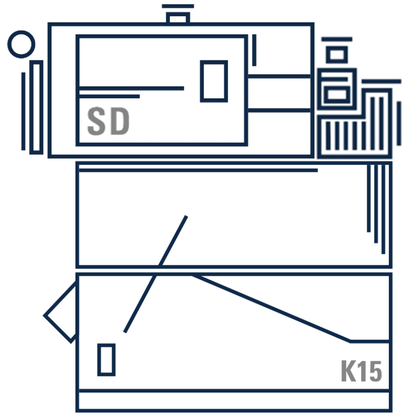
WARM WATER
(SMOKE TUBE BOILER WITH MEMBRANE WALL INSERT) HW RR



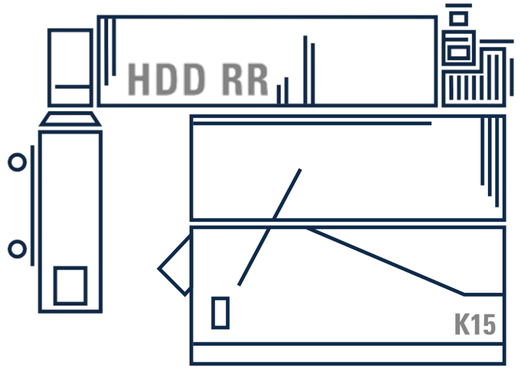
HOT WATER
(SMOKE TUBE BOILER WITH MEMBRANE WALL INSERT) HW RR



SATURATED STEAM
(SMOKE TUBE BOILER WITH MEMBRANE WALL INSERT) SD RR



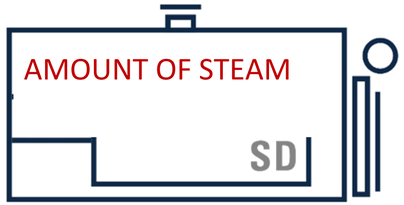
SUPER HEATED STEAM
(SMOKE TUBE BOILER WITH MEMBRANE WALL INSERT) ÜHD RR



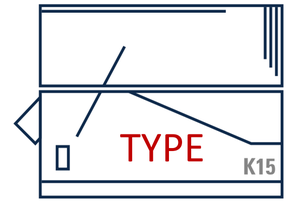
SYSTEM PERFORMANCE – K15





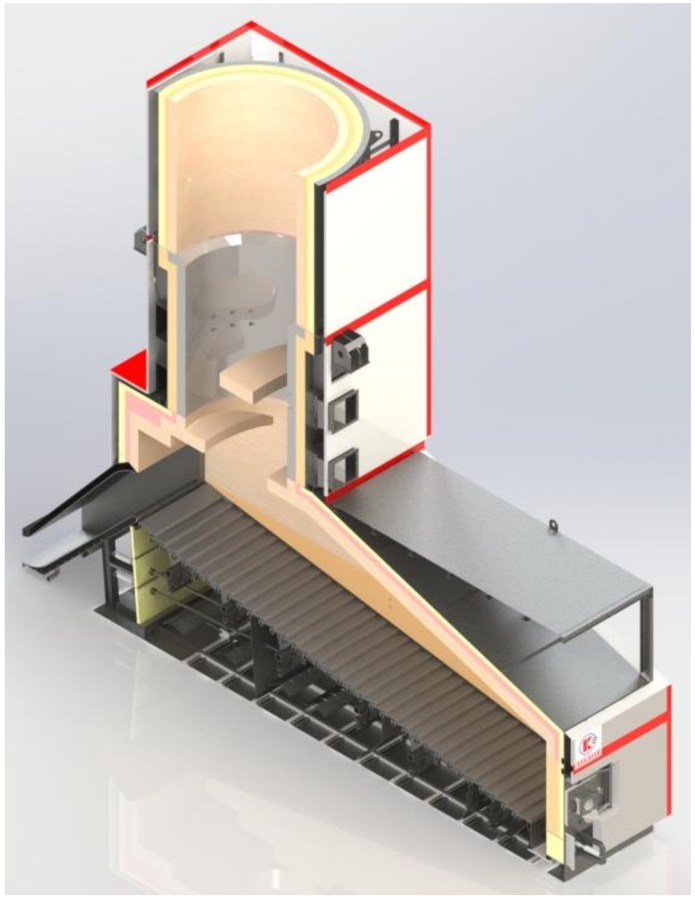






1000 kW	1000 kW	1,50 t/h	~~[illegible]~~	1250
1500 kW	1500 kW	2,25 t/h	~~[illegible]~~	1990
2000 kW	2000 kW	3,00 t/h	2,80 t/h	2410
3000 kW	3000 kW	4,50 t/h	4,20 t/h	3570
4000 kW	4000 kW	6,00 t/h	5,60 t/h	4770
5000 kW	5000 kW	7,5 t/h	7,00 t/h	5800

FURNACE SYSTEM



K16 system

Combustion technology :

Central flow furnace with with primary furnace cooling, water-cooled moving grate and compression zone

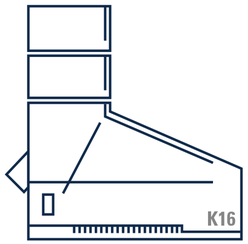
Nominal thermal output: 5000 to 17000 kW

Fuel

Chemically untreated and chemically treated industrial waste and used wood (A1/A2 according to DE Altholz-VO)

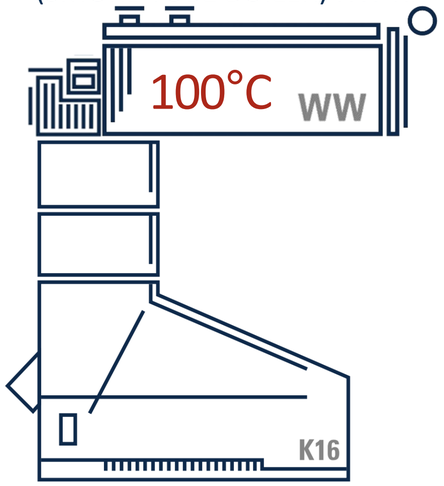
Water content (% weight): 5 bis 30

Maximum ash content (% weight): 15

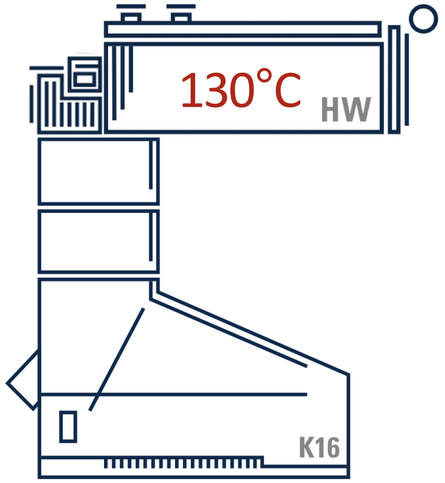


FURNACE K16 – BOILER TYPES

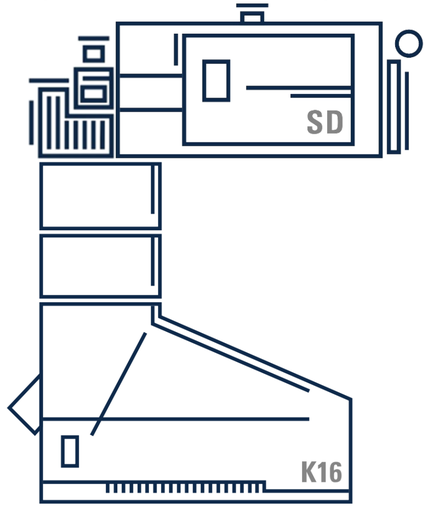
WARM WATER
(SMOKE TUBE BOILER) HW RR



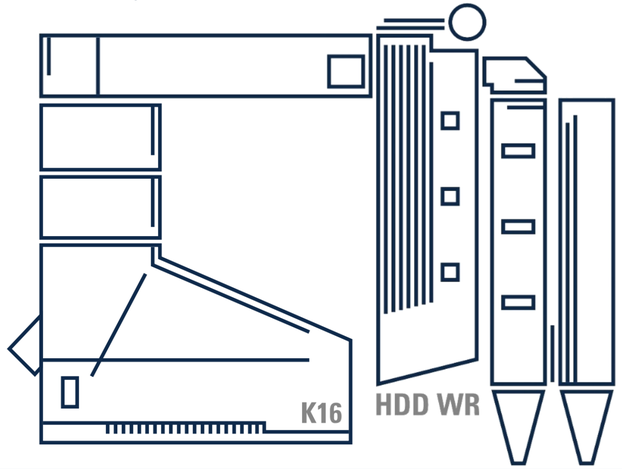
HOT WATER
(SMOKE TUBE BOILER) HW RR



SATURATED STEAM
(SMOKE TUBE BOILER) SD RR



HIGH PRESSURE STEAM (WATER TUBE
BOILER) HDD WR



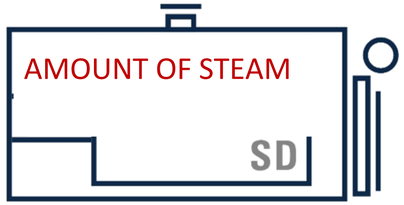
SYSTEM PERFORMANCE – K16



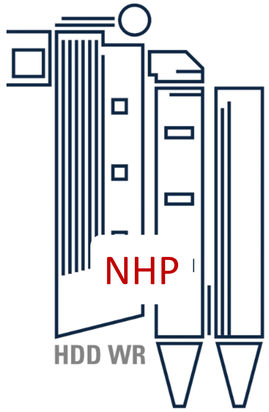
5000 kW
7500 kW
10000 kW
12000 kW
13500 kW
17000 kW



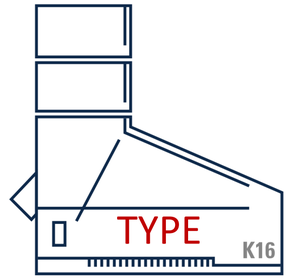
5000 kW
7500 kW
10000 kW
12000 kW
13500 kW
17000 kW



7,50 t/h
11,25 t/h
15,00 t/h
~~
~~
~~



5000 kW
7500 kW
10000 kW
12000 kW
13500 kW
17000 kW



5850
8750
11650
13950
15700
19800

K13 system

Combustion technology :

Direct current firing with primary and secondary furnace cooling, water-cooled grate

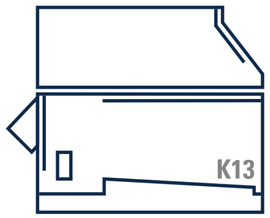
Nominal thermal output: 1000 to 6000 kW

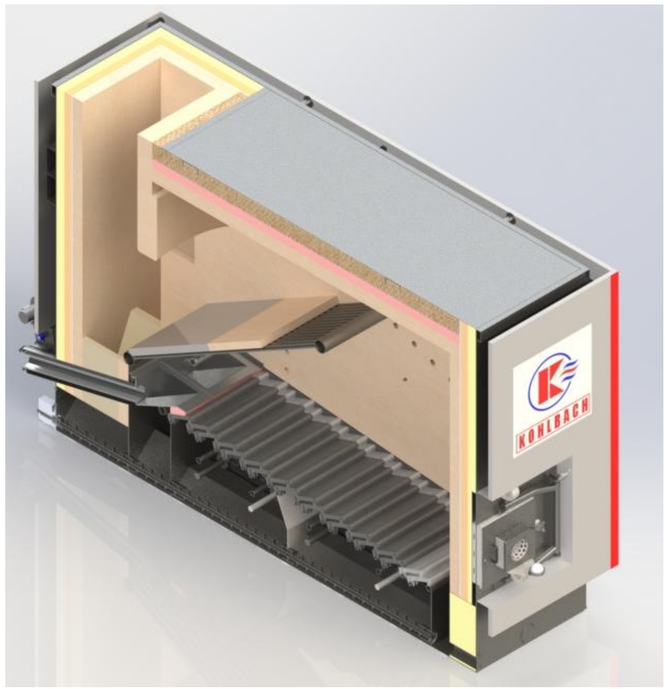
Fuel

Pellets A1, A2, industrial pellets B and wood chips

Water content (% weight): 5 to 30

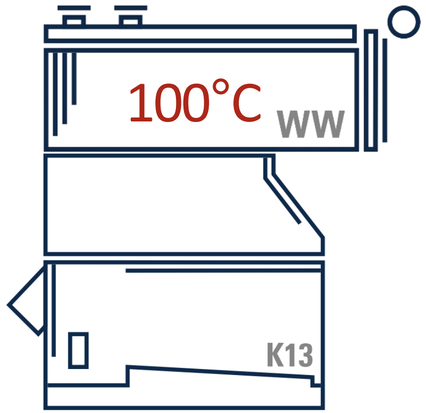
Maximum ash content (% weight): 5



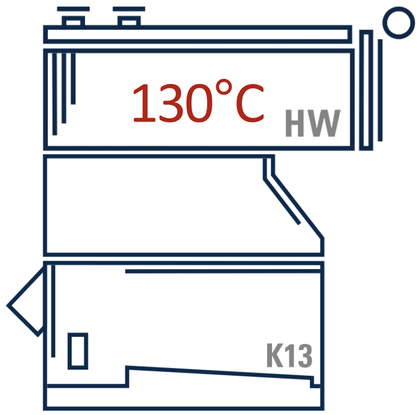


FURNACE K13 – BOILER TYPES

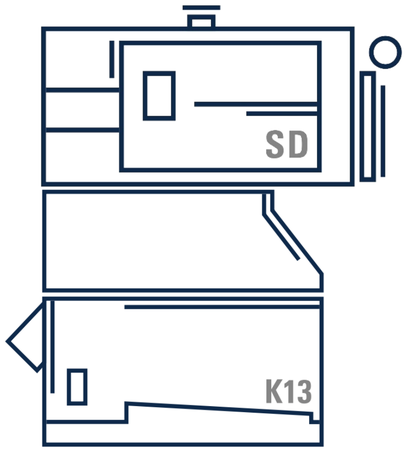
WARM WATER
(SMOKE TUBE BOILER) HW RR



HOT WATER
(SMOKE TUBE BOILER) HW RR



SATURATED STEAM
(SMOKE TUBE BOILER) SD RR



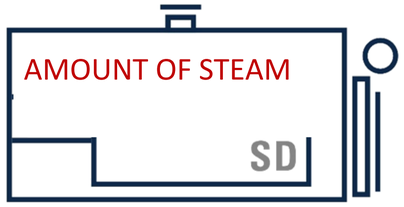
SYSTEM PERFORMANCE – K13



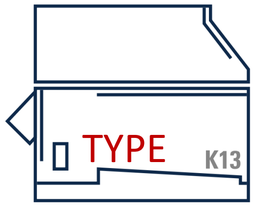
1000 kW
1500 kW
3000 kW
4500 kW
6000 kW



1000 kW
1500 kW
3000 kW
4500 kW
6000 kW

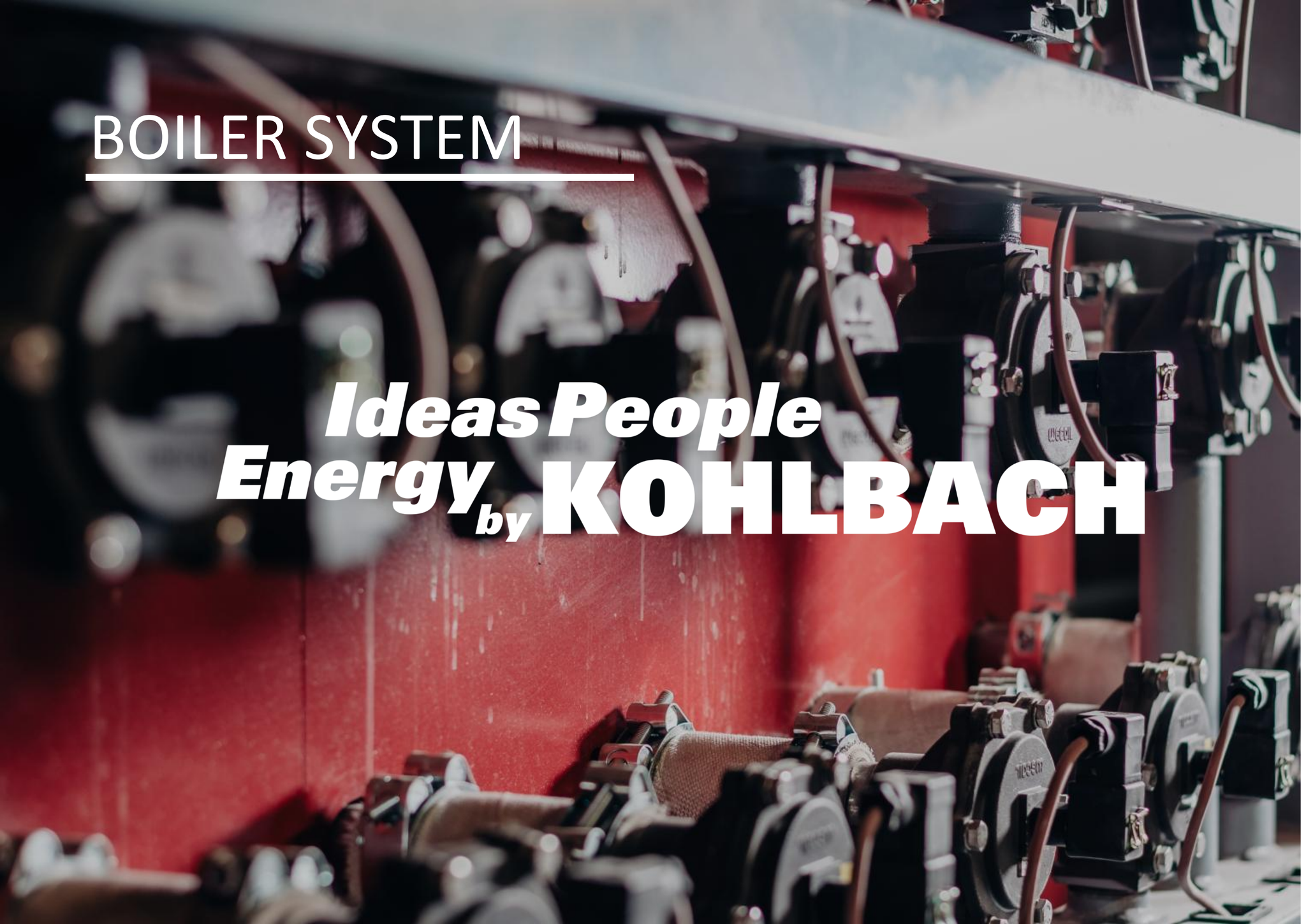


1,50 t/h
2,25 t/h
4,50 t/h
6,75 t/h
9,00 t/h



1150
1700
3450
5150
6800

BOILER SYSTEM

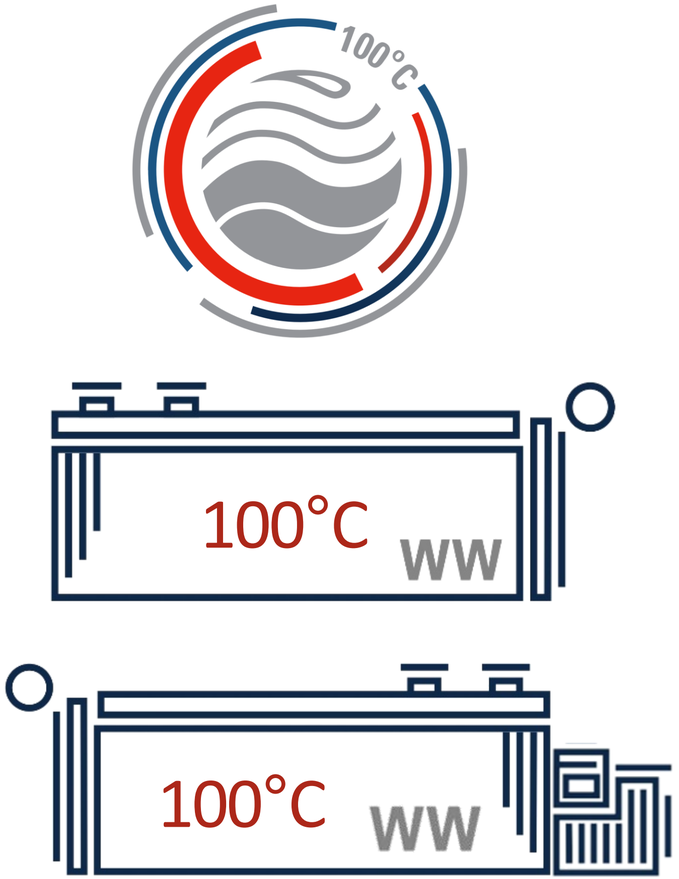


KOHLBACH

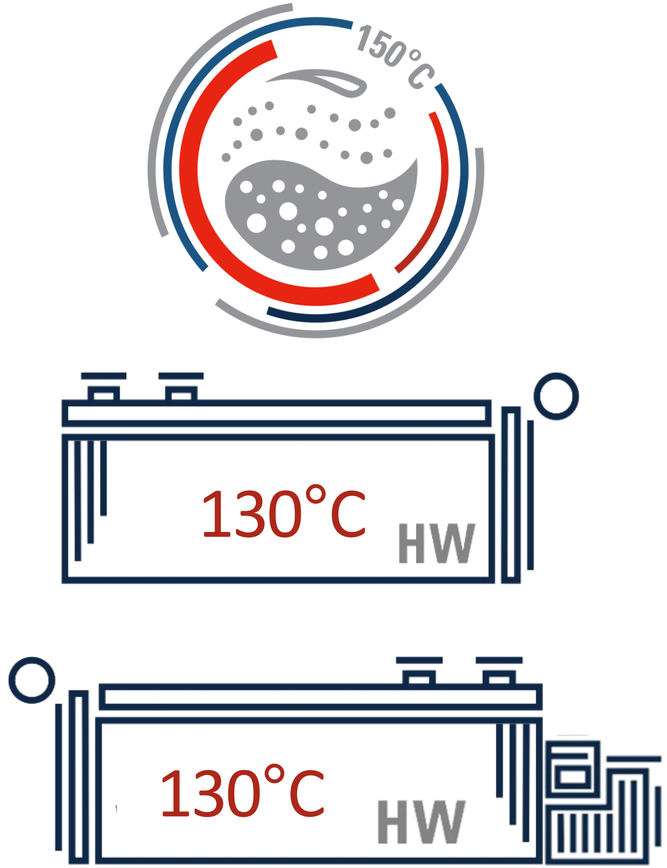
www.onekohlbach.com

BOILER TYPES

WARM WATER BOILER Ts=110°C
(Operation T1=100°C/T2=80°C) 2-Pass and 3-Pass

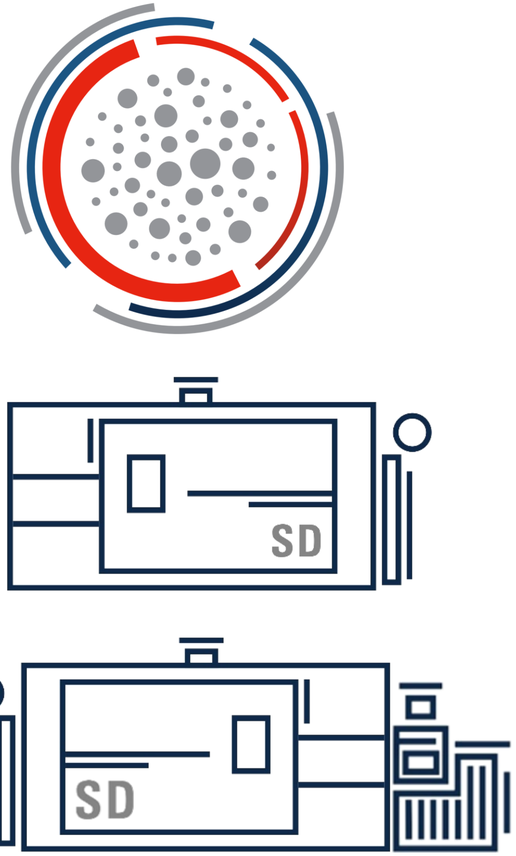


HOT WATER BOILER Ts=160°C
(Operation T1=130°C/T2=100°C) 2-Pass

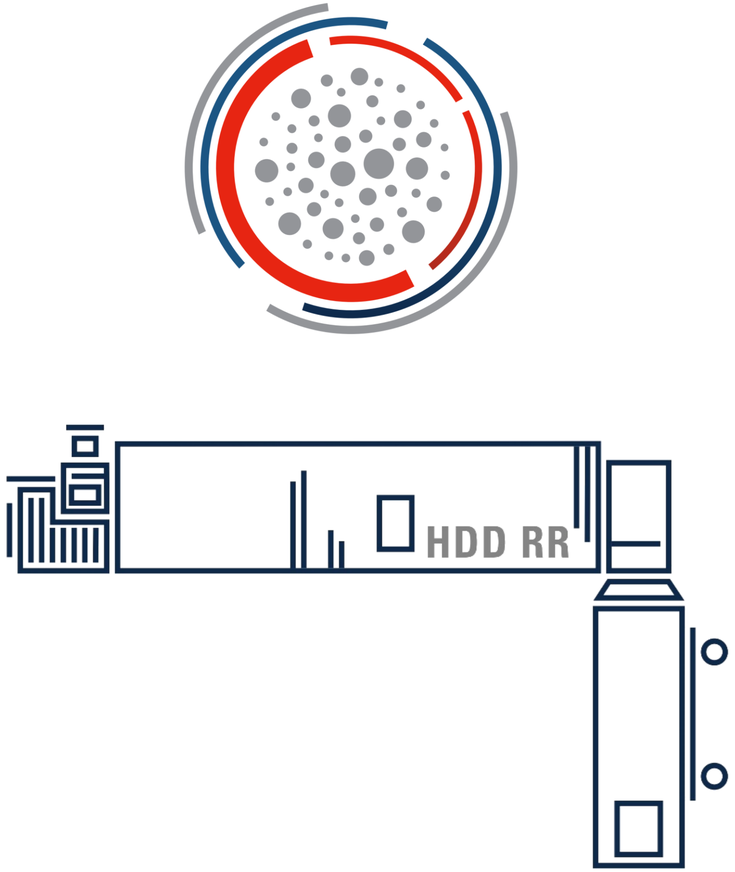


BOILER TYPES

SATURATED STEAM BOILER
up to Ps=30 barg
(Operation P=25 barg / SWT=103°C) 2-Pass

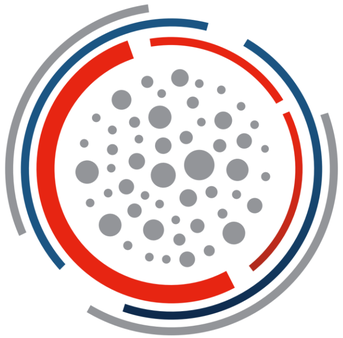


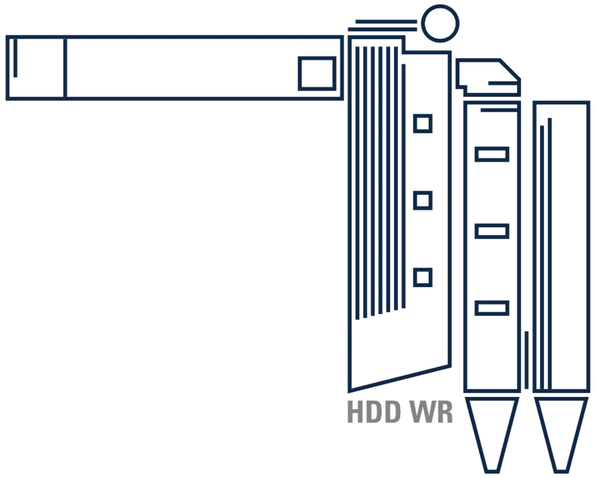
SUPER HEATED STEAM
SMOKE TUBE BOILER
up to Ps=24,5 barg, Ts=350°C
(Operation P=21,5 barg T=300°C / SWT=103°C)



BOILER TYPES

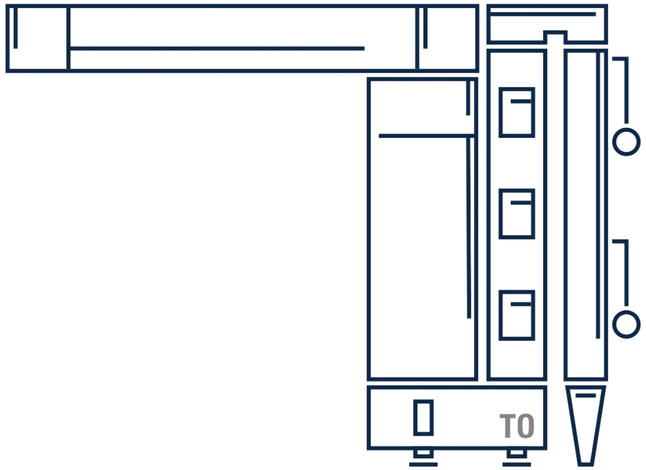
SUPER HEATED STEAM
WATER TUBE BOILER
up to (P= 49 barg T=445°C / SWT=103°C)





THERMAL OIL BOILER
up to 315 °C (at 10 barg)





REFERENCES



KOHLBACH

www.onekohlbach.com

Some of our success stories

Finkbeiner KG, Germany

K12-6715 kW Thermal oil boiler for ORC-CHP

Fuel: Long-fibrous bark, wood chips

Industry: Sawmill

Construction year: 2014



HOLZ HEIZ WERK Balzers, Liechtenstein

K8-4000 kW Saturated steam boiler for district heating and laundry

Fuel: Wood chips

Industry: District heating

Construction year : 2014



We are an Austrian company that manufactures biomass energy systems for the international market

With our work we bear an economic, environmental and social responsibility for present and future generations.

The company was founded in

1946
year

Established an industry standard by building over

3000
systems

Kohlbach group employee figures

180
employees

Structure

Kohlbach Energieanlagen GmbH

Sales, Design, Engineering, Manufacturing
Austria

KBT Bioenergie Technologie GmbH

Sales, Design, Engineering, After-Sales
Germany

KBF Bioenergie France S.A.S.

Sales, Design, Engineering, After-Sales
France

KBR OOO Kohlbach Bioenergetika

Sales, Design, Engineering, After-Sales
Russia

Kohlbach Holding GmbH

Administration & Accounting, PR & Marketing

Kohlbach Services GmbH

Customer Hotline, After Sales International
Austria

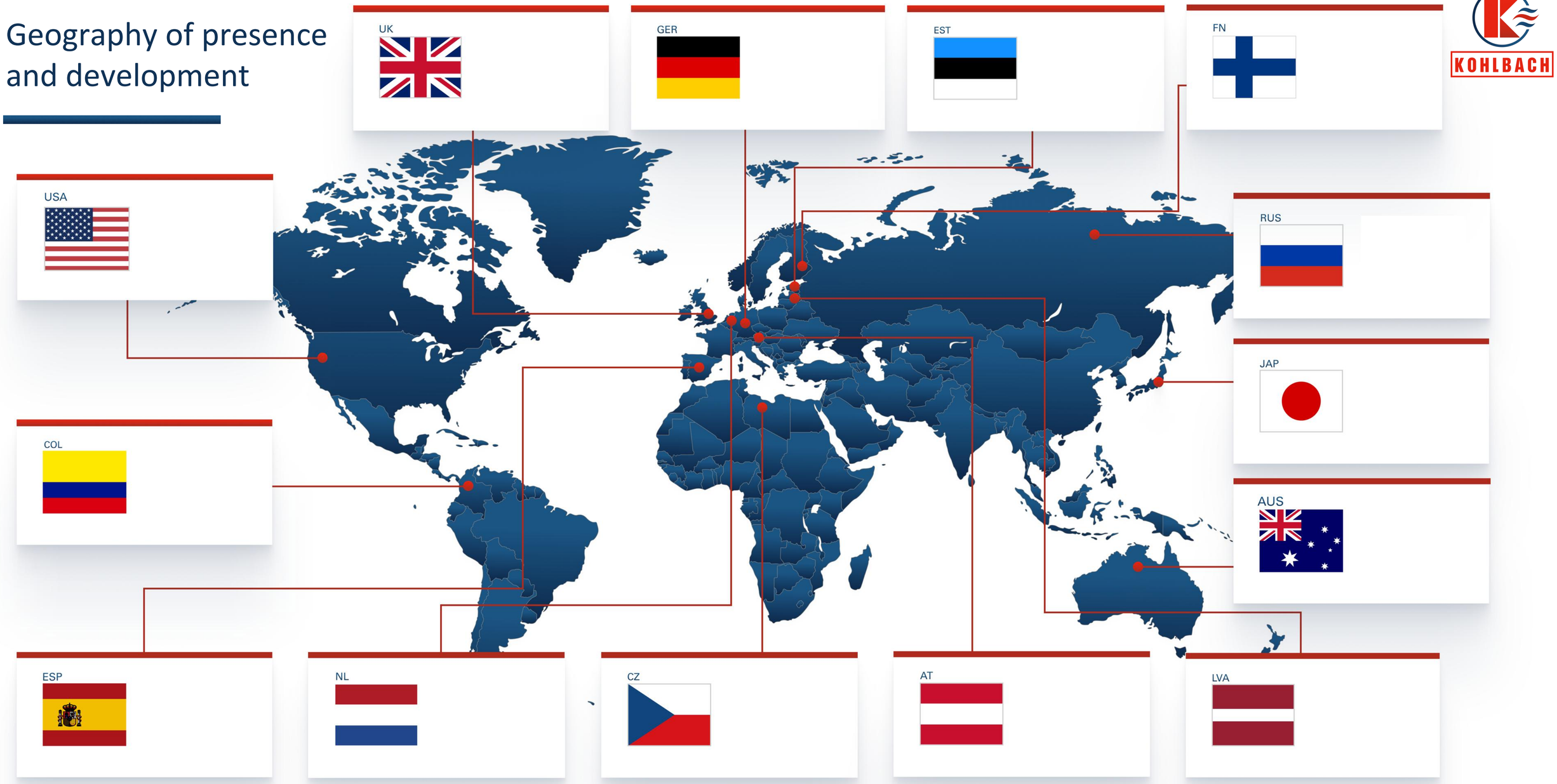
KBE Bioenergie D.O.O.

Sales, Design, Engineering, After-Sales
South-East Europe

KBE Bioenergie Swiss AG

Sales, Customer Hotline, After-Sales
Switzerland

Geography of presence and development



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