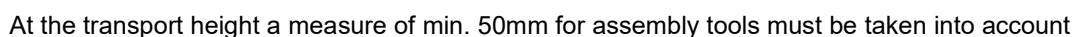
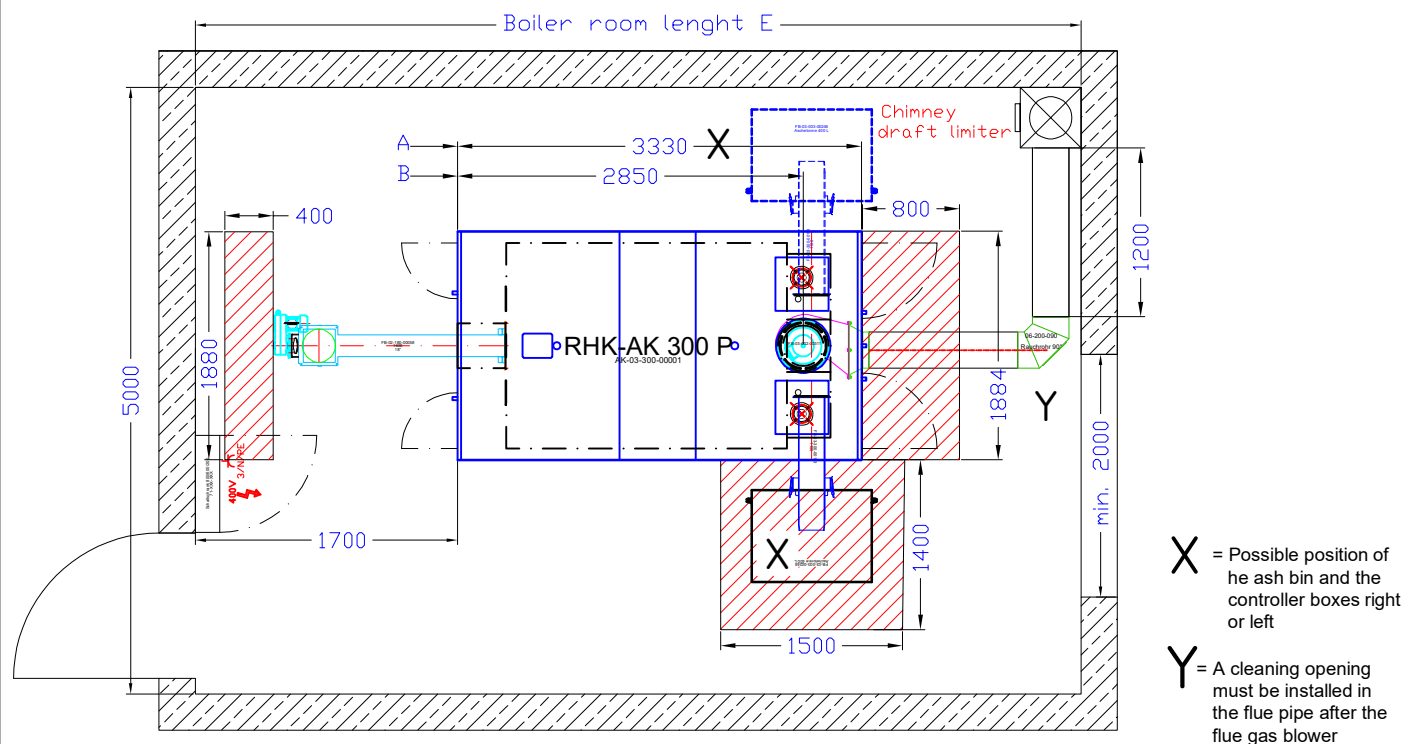


1.1 Space requirements and boiler dimensions



The required straight measuring section is 1000mm up to 75 kW and from 100 kW 4x Flue pipe-Ø but min. 1000mm. The required connections on the flue pipe side must be carried out on site.



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The logo for Heizomat, featuring a stylized orange and green flame icon above the word "Heizomat" in a green, cursive-style font.



1.2 Technical Data

RHK-AK 250-300 P/PZ			
Designation	Unit	RHK-AK 250 (P+PZ)	RHK-AK 300(P+PZ)
Transport width	mm	1700	1700
Transport length	mm	3030	3030
Transport height	mm	1990	1990
Water content	Liter	1258	1258
Weight	kg	5400	5400
Heat exchanger surface	m ²	29,70	29,70
Heat output range	kW	75-250	75-300
Nominal heat output	kW	250	300
Efficiency with wood chips FL/PL	%	94,5/94,3 / 92,8/91,1	94,4/94,3 / 93,2/92,2
Flue draft requirements chimney	Pa	5	
Flue draft mass flow FL / PL	g/s	231 / 83	252 / 83
Flue gas temperature FL/PL	°C	101/69 / 93/80	103/69 / 97/77
Necessary feed pressure FL / PL	Pa	19/16 / 28/30	22/21 / 29/29
Water pressure drop at 10K	mbar	107,55	126,90
Water pressure drop at 20K	mbar	27,89	32,86
max. operating pressure	bar	3 respectively 5**	
Heat flow	mm	DN80	
Heat return	mm	DN80	
Reserve flow	Inch	1 1/2	
Reserve return	Inch	1 1/2	
Filling/Emptying	Inch	2	
Thermowell	Inch	1/2	
Flue pipe diameter	mm	300	300
min. supply/exhaust air	cm ²	550	650
Flow rate at 15K	m ³ /h	14,33	17,20
Boiler doors		2	
Boiler class		5	
Seasonal space heating energy efficiency	%	81 / 77	82 / 81
max. Flow temperature without SWT****	°C	85	
max. Flow temperature with SWT****	°C	95*****	
min. Return temperature	°C	55	
Fuel type		A1 / P16S - P31S / M30 acc. to DIN EN ISO 17225-4	
Recommended buffer volume	Liter	20 / kW Nominal heat output***	
Electrical power consumption P _N / P _{min} (P)	kW	0,577 / 0,209	0,795/0,283
Electrical power consumption P _N / P _{min} (PZ)	kW	0,710 / 0,500	0,884/0,477
Standby power consumption	kW	0,012	
Cold water temperature SWT****	°C	10	
max. operating pressure SWT****	bar	3	
Mode of operation		non-condensing	
Airborne noise emission L _{WA}	dBA	64*	
Reduction measures airborne noise		Flue gas silencer**	
Electrostatic particle separator (P)		7x Heizoclean EF185 in FG-collector**	
Electrostatic particle separator (PZ)		7 Heizoclean EF185 in collector +3 in mounting piece of cyclon**	
Electrical connection		400V / 3N PE - CEE plug 32A	
Electrical protection		C 32A	
FI-circuit breaker		Typ A IΔN 30mA	

* Airborne noise emissions of the wood chip boiler system in the boiler room; no informative value for noise emissions at the chimney end or its surrounding areas ** Depending on equipment *** Deviating in case of funding **** Safety heat exchanger

***** Tolerances of the safety thermostat must be observed

The system shall only be operated under negative pressure!

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1.2 Technical Data



RHK-AK 400-500 P/PZ

Designation	Unit	RHK-AK400 (P+PZ)	RHK-AK450 (P+PZ)	RHK-AK500 (P+PZ)
Transport width	mm	1700	1700	1700
Transport length	mm	3530	3830	3830
Transport height	mm	1990	1990	1990
Water content	Liter	1580	1805	1805
Weight	kg	6200	6800	6800
Heat exchanger surface	m ²	33,75	37,10	37,10
Heat output range	kW	105-400	105-455	150-500
Nominal heat output	kW	400	455	500
Efficiency with wood chips FL/PL	%	94,1/94,4	93,8/94,4	93,7 / 94,3
Flue draft requirements chimney	Pa	5		
Flue draft mass flow FL / PL	g/s	294 / 83	327 / 83	359 / 83
Flue gas temperature FL/PL	°C	105/70	109/70	111 / 72
Necessary feed pressure FL / PL	Pa	30/27	30 / 27	27 / 25
Water pressure drop at 10K	mbar	162,30	182,35	202,40
Water pressure drop at 20K	mbar	42,16	47,37	52,57
max. operating pressure	bar	3 respectively 5**		
Heat flow	mm		DN80	
Heat return	mm		DN80	
Reserve flow	Inch		1 1/2	
Reserve return	Inch		1 1/2	
Filling/Emptying	Inch		2	
Thermowell	Inch		1/2	
Flue pipe diameter	mm	350	350	350
min. supply/exhaust air	cm ²	850	950	1050
Flow rate at 15K	m ³ /h	22,90	25,80	28,70
Boiler doors		2		
Boiler class		5		
Seasonal space heating energy efficiency	%	81	81	81
max. Flow temperature without SWT****	°C	85		
max. Flow temperature with SWT****	°C	95*****		
min. Return temperature	°C	55		
Fuel type		A1 / P16S - P31S / M30 acc. to DIN EN ISO 17225-4		
Recommended buffer volume	Liter	20 / kW Nominal heat output***		
Electrical power consumption P _N / P _{min} (P)	kW	1,232 / 0,430	1,563 / 0,430	1,787 / 0,469
Electrical power consumption P _N / P _{min} (PZ)	kW	1,232 / 0,430	1,563 / 0,430	1,802 / 0,469
Standby power consumption	kW	0,012		
Cold water temperature SWT****	°C	10		
max. operating pressure SWT****	bar	3		
Mode of operation		non-condensing		
Airborne noise emission L _{WA}	dBA	64*		
Reduction measures airborne noise		Flue gas silencer**		
Electrostatic particle separator (P)		7x Heizoclean EF185 in FG-collector**		
Electrostatic particle separator (PZ)		7 Heizoclean EF185 in collector +3 in mounting piece of cyclon**		
Electrical connection		400V / 3N PE - CEE plug 32A		
Electrical protection		C 32A		
FI-circuit breaker		Typ A IΔN 30mA		

* Airborne noise emissions of the wood chip boiler system in the boiler room; no informative value for noise emissions at the chimney end or its surrounding areas ** Depending on equipment *** Deviating in case of funding **** Safety heat exchanger

***** Tolerances of the safety thermostate must be observed

The system shall only be operated under negative pressure!

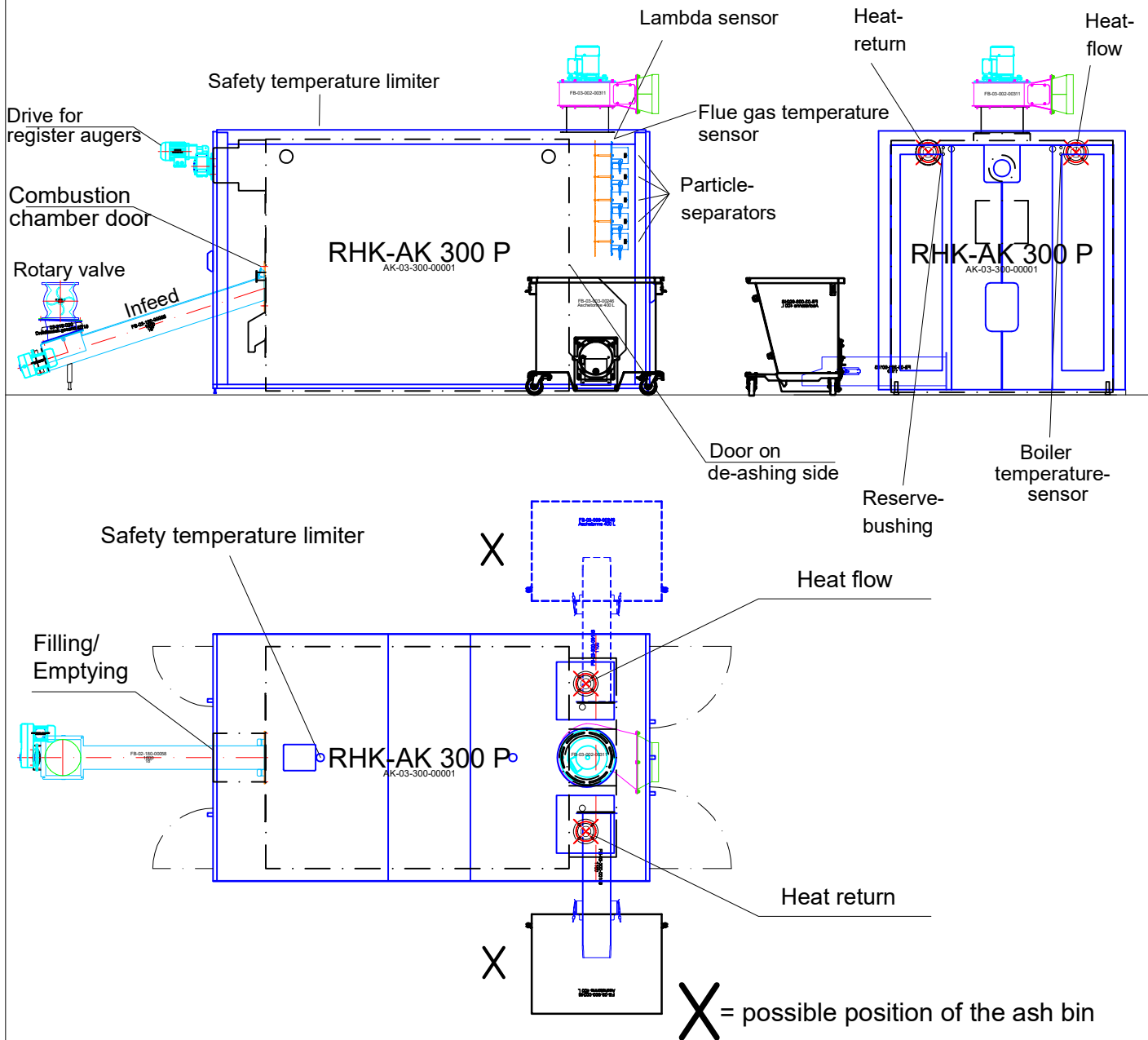
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1.3 Connections - Attachments



The flue gas system must be resistant to condensation and may be operated in damp/wet mode. The boiler should be accessible from three sides.

Room height and position of the multicyclone/particle separators after consultation with the Heizomat specialist advisor.

For connection points for the necessary potential equalization on the boiler, see the supplementary sheets for installing potential equalization and installing the particle separators.

We recommend a buffer storage volume of 20 L/kW of nominal heat output or the specifications of the respective country.

We reserve the right to make technical changes that serve the purpose of ongoing development.

The equipment of the system can vary depending on the legal requirements of the destination country.

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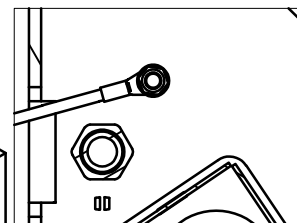
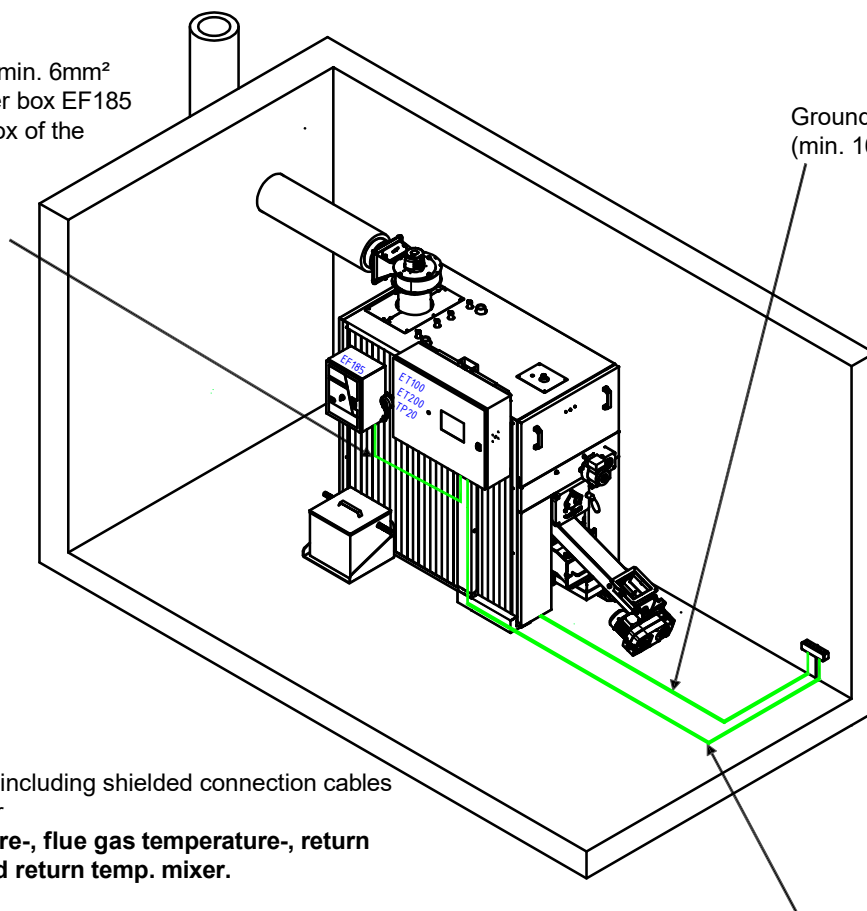


1.4 Equipotential bonding and Shielding of the sensor lines



Grounding cable (min. 6mm² CU) from controller box EF185 to the controller box of the boiler.

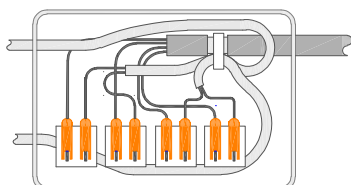
Grounding cable boiler (min. 16mm² CU)



Shielded sensors including shielded connection cables are to be used for **boiler temperature-, flue gas temperature-, return temperature- and return temp. mixer.**

If the cables need to be extended, the shields in the clamping socket must be connected to each other electrically conductive.

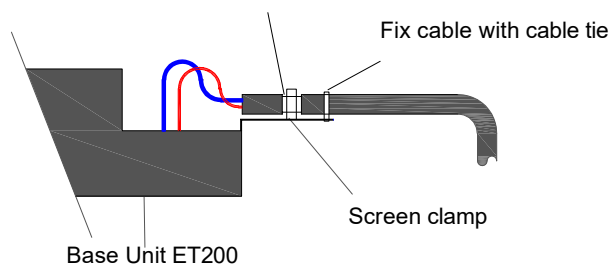
Grounding cable (up to 100 kW min. 6mm², above 100 kW 10mm²) from the boiler controller box to the equipotential bonding bar



Grounding of the sensor cables in the control box:

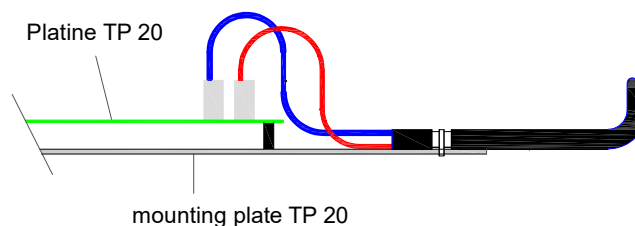
HeizoControl ET100/ET200:

Uncover cable shielding in the area of screen clamp and fix it with cable ties.

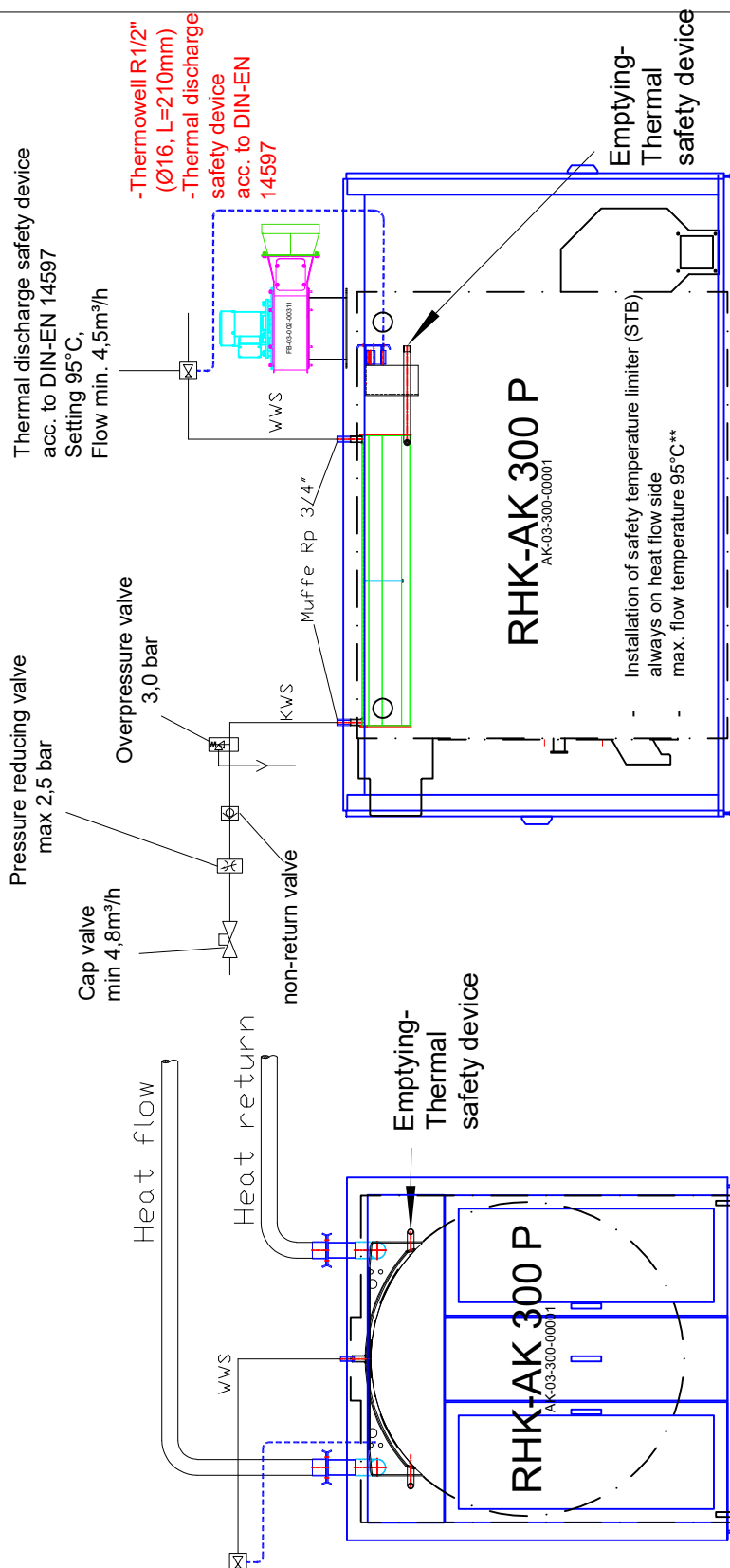


HeizoControl TP 20:

Uncover cable shielding in the area of screen clamp. Fix the cable with cable ties ensure the connections between the contacts.



1.5 Safety heat exchanger with thermal discharge safety device*



Important note:

In this sheet shut off devices, ventilation systems and safety valves are not marked. For dimensioning of the different valves and devices the relevant heating engineer is responsible. These have to be built in system- dependend due to standards and regulations.

Attention!
When installing SWT pay attention to transport height

Thermowell for thermal safety discharge:

R₂^{1"}, D=16mm, L=210mm
Type 3065, DIN TH79703

WWS -Hot water outlet for thermal
safety discharge
mount valve on outlet

KWS -Cold water inlet for thermal
safety discharge

* Special equipment

** Tolerances of the safety thermostate must be observed

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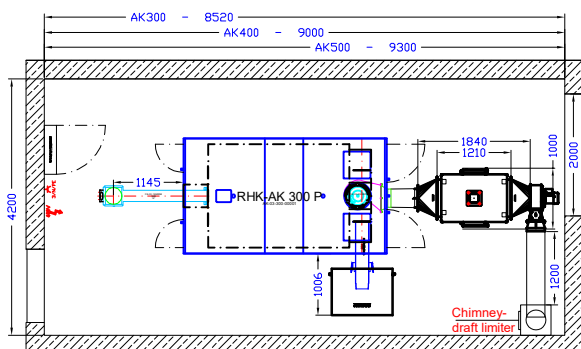
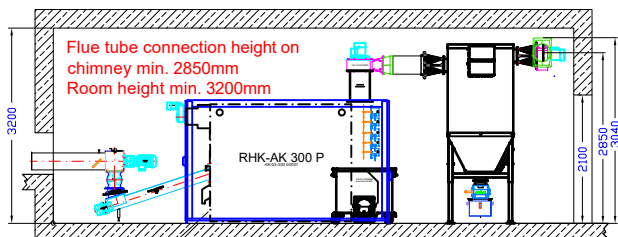
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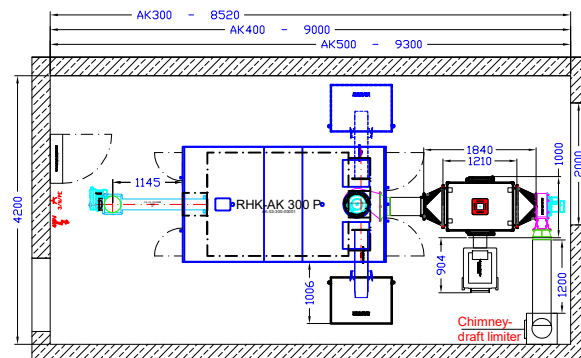
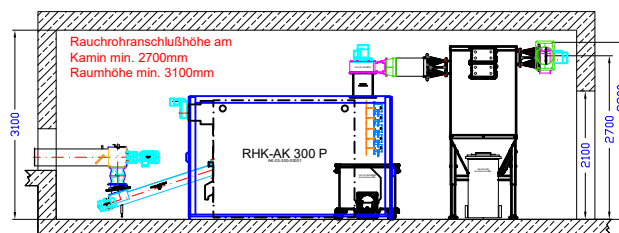
1.6 Space requirements with multicyclone RHK AK 250-500 P/PZ



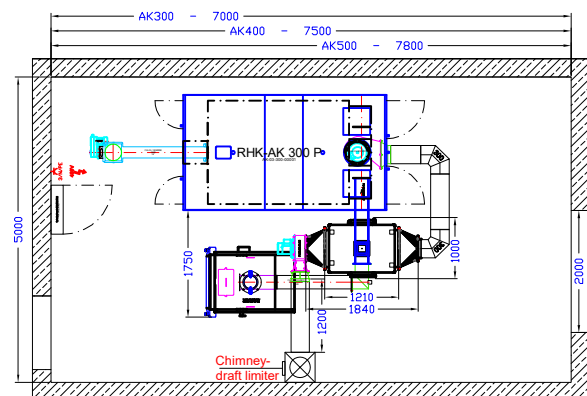
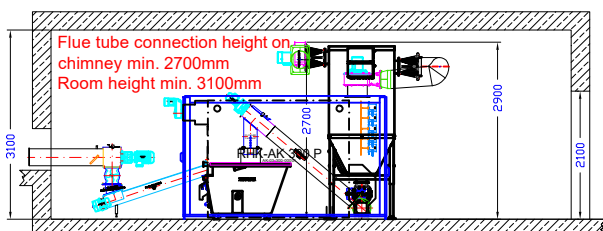
Multicyclone with ash bin 40 Liter
Ash bin 400 Liter direct



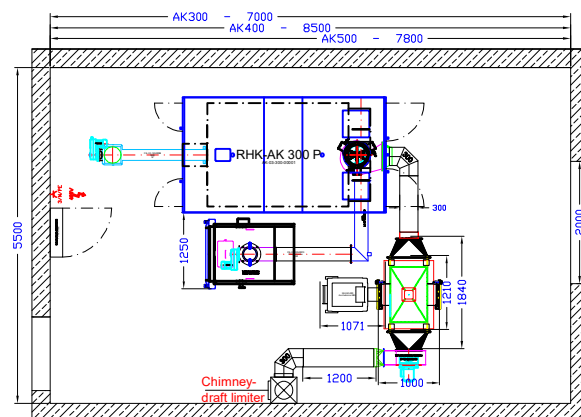
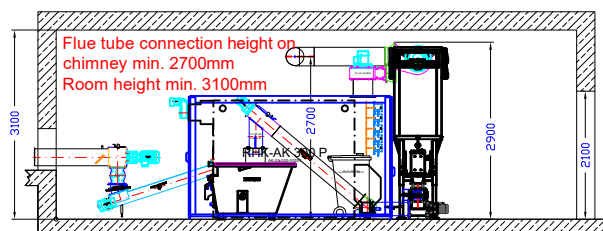
Multicyclone with ash bin 240 Liter
Ash bin 400 Liter direct



Multicyclone with de-ashing 900 Liter



Multicyclone with separate de-ashing 240 Liter
Boiler ash bin 900 Liter



De-ashing also mirrored possible

The required straight measuring section is 1000mm up to 75Kw and from 1000KW 4x Flue pipe diameter but min. 1000mm.

The required flue pipe-side connections must be carried out on site

Technical Data Multicyclone MC 203

Transport width (mm)	1025
Transport length (mm)	1212
Transport height (mm)	2580
weight (kg)	700

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