

AGRO DRYING



INDUSTRIAL DRYING



OBJECT HEATING

# HOT AIR GENERATION FOR AGRO AND INDUSTRY



# HOT AIR GENERATION FROM BIOMASS

## THE ICS HotAir TECHNOLOGY

The ICS HotAir technology was developed by us for the drying industry and enables the generation of hot air for a wide range of applications based on renewable energy sources and residual products from agriculture and forestry. The use of regionally available biomass instead of fossil fuels such as oil or gas reduces drying costs many times over.

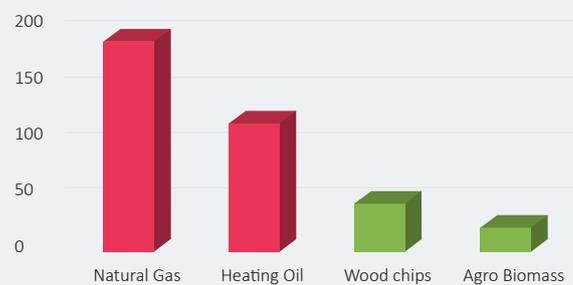
Thanks to the flexible system technology, almost all dryer models available on the market can be equipped with ICS HotAir technology.



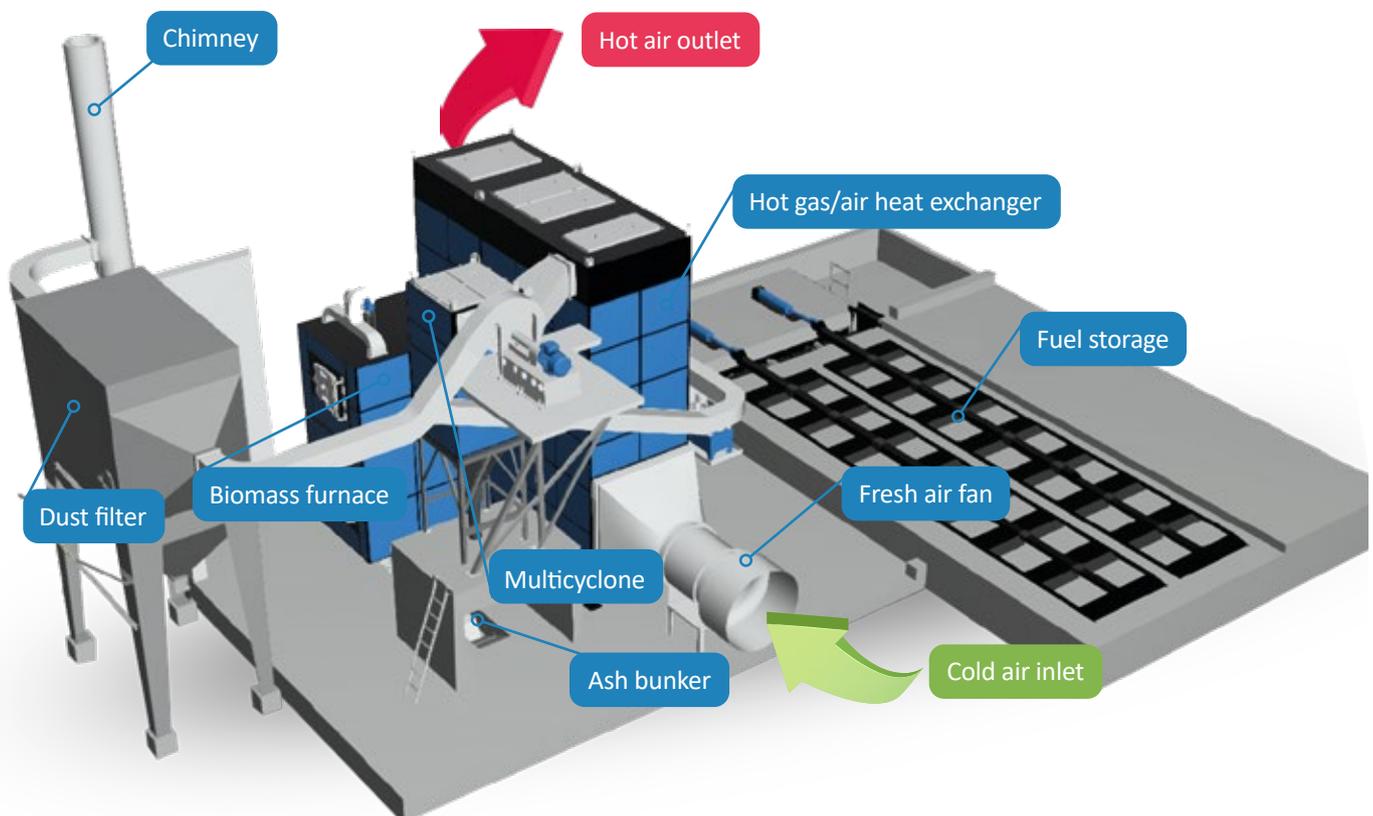
Corn drying plant in Spain

- ✓ Reduction of drying costs
- ✓ Regional added value
- ✓ Lower CO<sub>2</sub>-emissions
- ✓ Crisis-proof energy supply
- ✓ Robust plant technology

### Comparison of energy sources €/MWh



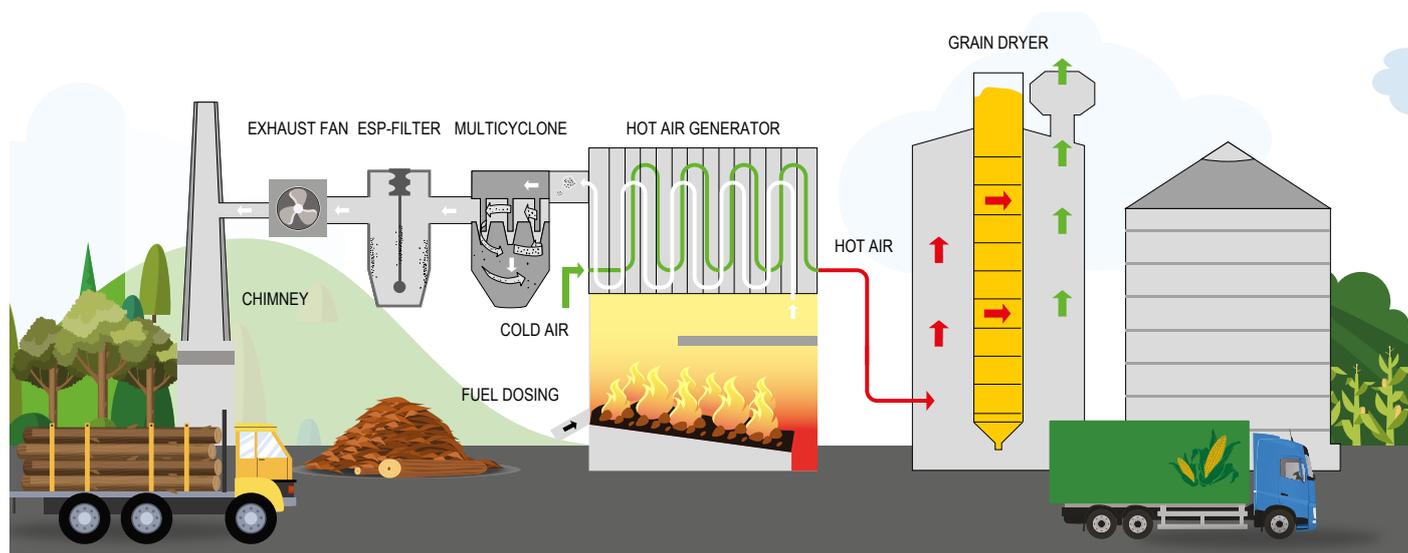
Source: Austrian Biomass Association, state 12/2023





## PROVEN PLANT TECHNOLOGY

The hot air generators and energy supply systems we have built have been successfully supplying energy for over 30 years and confirm the quality of our services. The ICS HotAir process combines proven combustion systems with modern and sophisticated hot air technology to guarantee our customers the best possible flexibility and operational reliability.



The fuels are fed into a highly efficient and very flexible grate firing system via robust discharge systems. The hot gases produced during the combustion process are channelled in a controlled manner into a hot air heat exchanger, where the energy is transferred to the fresh air. Due to the spatial separation of the flue gases and the fresh air, indirect air heating is achieved and thus pollutant-free hot air is generated.

## ICS HotAir TECHNICAL DATA

BIOMASS HOT AIR GENERATORS							
ICS HotAir							
Type	HLE 1000	HLE 1500	HLE 2000	HLE 3000	HLE 4000	HLE 5000	HLE 6000
Nominal power [kW]	750-1000	1250-1500	1500-2000	2500-3000	3500-4000	4500-5000	5500-6000
Fuels	wood chips / bark / pellets / wood residues / recycling wood / corn cobs / agricultural by-products						
Heat medium	Fresh air						
Hot air temperature [°C]	200 °C (higher temperatures on request)						
Hot air volume at 150°C [m³/h]	30 000	45 000	60 000	90 000	120 000	150 000	180 000
Fuel consumption wood chips W35% [to/h]	0,54	0,72	0,91	1,09	1,27	1,44	1,70
Exhaust gas cleaning	multicyclone, dust filters optionally						

Hot air supply for drying systems								
Type		HLE 1000	HLE 1500	HLE 2000	HLE 3000	HLE 4000	HLE 5000	HLE 6000
Drying product	Drying grade water (W)	Drying power approximation (dry output product) [to/h] *						
Maize	28 % to 14 %	5,4	8,1	10,8	16,2	21,6	27,0	32,3
Grain, wheat, seed	20 % to 14 %	15,6	23,4	31,2	46,7	62,3	77,9	93,5
Sawdust	55 % to 10 %	0,9	1,3	1,8	2,6	3,5	4,4	5,3
Sewage sludge	75 % to 15 %	0,2	0,3	0,4	0,6	0,8	1,0	1,2
RDF / SSW / waste	35 % to 10 %	3,8	5,7	7,6	11,4	15,2	19,0	22,8
Water evaporation appr. [to/h] *		0,8	1,2	1,6	2,4	3,2	4,0	4,8

\* The values given are guide values and depend on the drying technology used, outside temperature and other influencing factors, all information without guarantee.



# OUR REFERENCES



## Sieder KG, Austria

Plant type: HLE 4000.130  
Power output: 4.000 kW  
Fuel: Wood chips  
Drying output: 20,0 t/h  
Drying product: Corn, luzerne  
Dryer producer: Alvan Blanch



## Quality Corn, Spain

Plant type: HLE 14500.90  
Power output: 14.500 kW  
Fuel: Wood chips, recycling wood  
Drying output: 10 + 10 + 30 t/h  
Drying product: Corn  
Dryer producer: Bühler AG



## Tamme Kuivatid, Estonia

Plant type: HLE 3000.110  
Power output: 3.000 kW  
Fuel: Wood chips  
Drying output: 10 + 10 t/h  
Drying product: Grain, corn  
Dryer producer: Stela



## Agrarservice Grafenegg, Austria

Plant type: HLE 4000.150  
Power output: 4.000 kW  
Fuel: Wood chips  
Drying output: 20 t/h  
Drying product: Corn  
Dryer producer: Alvan Blanch



## Tschiggerl Agrar, Austria

Plant type: HWK 3000.150  
Power output: 3.000 kW  
Fuel: Corn cobs, straw  
Drying output: 16 + 2 + 1 t/h  
Drying product: Corn, pumpkin seeds, beans  
Dryer producer: Strahl, KWA



## ZIPO d.o.o., Slovenia

Plant type: HWK 3000.150  
Power output: 3.000 kW  
Fuel: Corn cobs, wood chips  
Drying output: 16 + 5 t/h  
Drying product: Corn, soy, luzerne  
Dryer producer: Zanin, Alvan Blanch