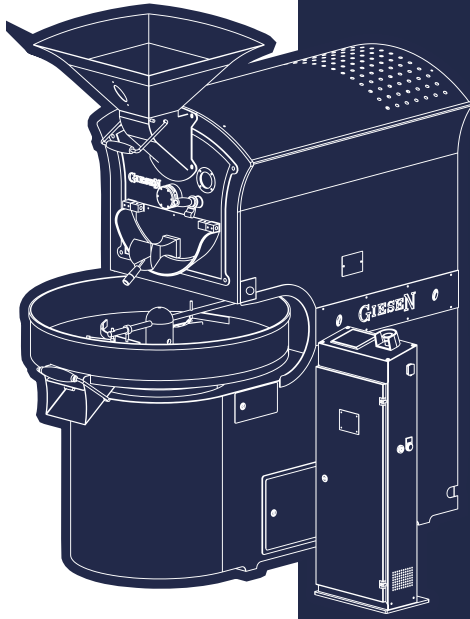


EMISSION DATASHEET

W15A WITH INTERNAL CYCLONE



EMISSIONS		AVERAGE	MAX VALUE
	ROAST DURATION (MIN)	18	-
	GAS TEMPERATURE (°C)	44.5	< 100
	O ₂ (%)	20.6	-
	CO (MG/M ³)	7.2	< 30
	NO (MG/M ³)	3.3	< 5
	NO ₂ (MG/M ³)	0.0	-
	NO _x (MG/M ³)	3.3	< 5
	CO ₂ (%)	0.6	-
	AIR PRESSURE (HPA)	1025.0	-
	FORMALDEHYDE (MG/M ³)	6.0	-

Depending on the roasting method, coffee type and other circumstances, different values may occur.

Since an internal cyclone mixes more cooling air from outside with the air coming from the roasting drum, the measurement results are lower than when using an external cyclone.

The graphs on the right show the current data based on the time course of coffee roasting. This makes it easy to see which types of emissions increase and decrease over the course of the coffee roasting process.

MG / M³ DATA

The first graph shows how the various values develop during coffee roasting. The substances nitrogen dioxide, nitrogen monoxide, nitrogen dioxides (collective term), oxygen and carbon monoxide. The legend shows which color corresponds to which substance.

Depending on the roasting process, coffee type and other circumstances, different values may occur.

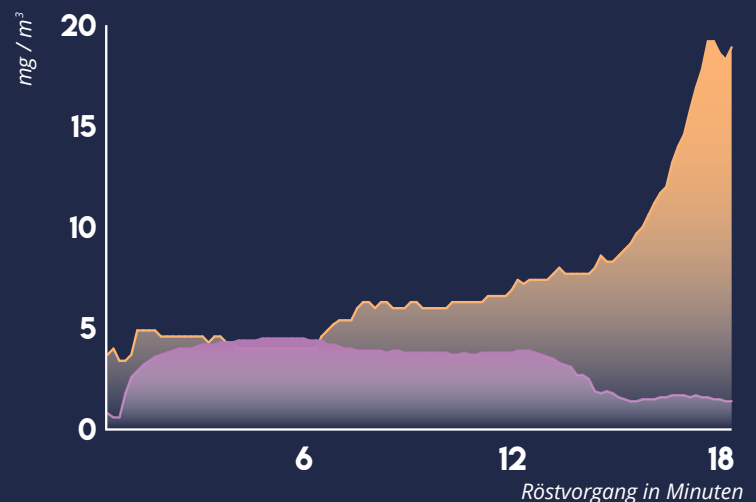
In accordance with the Federal Immission Control Act and the Technical Instructions on Air Quality Control (TA-Luft), no permit is required for this plant (less than 250 kg processing capacity).

The values of the exhaust gas flows and the mass concentration refer to the standard condition.

The indicated emission values refer to a certain green coffee composition, certain roasting degree and residual moisture.

EMISSION DATASHEET

W15A WITH INTERNAL CYCLONE



● CO

● NO_x

The values in the graph above are the average values based on four different roasts performed in succession.

The above data were measured with calibrated measuring equipment from Giesen Coffee Roasters. No rights can be derived from this data. This data was measured at the Giesen Coffee Roasters site and may differ at other sites.