

# AIR PURIFICATION

Catalytic incineration units for coffee roasting



**REICAT**  
Environmental Solutions

ReiCat develops, produces and installs process plants for gas treatment worldwide.

With more than 35 years of experience and over 800 delivered systems and manufacturing "made in Germany" we guarantee highest efficiency and reliability to our customers.

Always delivering efficient and environmental-friendly systems with minimal energy consumption.





## Catalytic incineration

Function

Design

Advantages

Technical data



## Function

During the coffee roasting process, harmful substances arise mainly in the form of hydrocarbons ( $C_xH_y$ ), which are dangerous for health and environment.

Additional fumes and unpleasant odours occur during this process. With the ReiCat catalyst the micro particles, odours, smoke, plumes and hydrocarbons are converted into harmless substances such as water vapour ( $H_2O$ ) and carbon dioxide ( $CO_2$ ) by using a combination of techniques.

## ReiCatino®



Batch range:  
up to 30 kg  
Exhaust air flow:  
up to 450 Nm<sup>3</sup>/h

## ReiCat Gourmet



Batch range:  
30 - 60 kg  
Exhaust air flow:  
450 - 600 Nm<sup>3</sup>/h

## ReiCat Industrial



Batch range:  
60 - 720 kg  
Exhaust air flow:  
600 - 7.500 Nm<sup>3</sup>/h

## Design

All models are equipped with ceramic honeycomb catalysts which are non-flammable and do not influence the roasting process at all.

The unit size depends on the desired result:

- Elimination of smoke and odours
- Elimination of smoke and odours, reduction of VOCs and Formaldehyde according to the technical instructions on air quality control (TA-Luft)
- Elimination of smoke and odours, reduction of VOCs and prevention of NO<sub>x</sub>



## Advantages

- Most effective reduction of odours and contaminations
- Energy-efficient and environmentally-friendly
- Permanent compliance of the legal regulation limits:

VOCs	< 35 mg/Nm <sup>3</sup>	NO <sub>x</sub>	< 350 mg/Nm <sup>3</sup>
Formaldehyde	< 15 mg/Nm <sup>3</sup>	CO	< 100 mg/Nm <sup>3</sup>
- Easy retrofitting at existing roasters
- Low operation and maintenance costs
- Around 50 % reduction of primary energy consumption compared with afterburners
- Long lifetime

# Technical data

**ReiCatino®**



**ReiCat Gourmet**



**ReiCat Industrial**



<b>Working temperature:</b>	200 - 250 °C	250 - 380 °C (max. 600 °C)	250 - 380 °C (max. 600 °C)
<b>Power supply:</b>	Electrical heat blower 230 V / 50 - 60 Hz or 400 V / 50 - 60 Hz	Gas burner 230 V / 50 - 60 Hz	Gas burner 230 V / 50 - 60 Hz
<b>Fuel:</b>	./.	G20 (L.C.V.8.570 kcal/Nm <sup>3</sup> )	G20 (L.C.V.8.570 kcal/Nm <sup>3</sup> )
<b>Output:</b>	approx. 6-11 kW	approx. 26 -130 kW (depending on unit size)	approx. 140 -500 kW (depending on unit size)
<b>Insulation:</b>	approx. 60 mm	approx. 120 mm	approx. 120 mm
<b>Flange inlet:</b>	DIN 24151 (ReiCatino® 100: NW 100) (ReiCatino® 450: NW 150)	DIN 24154 T2 (NW 180)	DIN 24154 T2 (NW 250 - 500)
<b>Flange outlet:</b>	DIN 24151 (ReiCatino® 100: NW 100) (ReiCatino® 450: NW 200)	DIN 24154 T2 (NW 200)	DIN 24154 T2 (NW 355 - 800)

## Scope of Supply

### Components

### Model

Type A: Inlet temperature 150 - 250 °C (= outlet temperature roaster)	ReiCatino®		ReiCat Gourmet	ReiCat Industrial
	100	450		
Catalytic chamber	*	*	*	*
Honeycomb catalysts	*	*	*	*
Burning chamber	*	*	*	*
Electric hot air blower	*	*		
Gas burner			*	*
Differential pressure sensor			*	*
Temperature sensor	*	*	*	*
Prefilter	*	*	*	*
Type B: Inlet temperature 380 - 550 °C (= outlet temperature roaster)			ReiCat Gourmet	ReiCat Industrial
Catalytic chamber			*	*
Honeycomb catalysts			*	*
Differential pressure sensor			*	*
Temperature sensor			*	*

## Packaging

### ReiCatino®

### ReiCat Gourmet

### ReiCat Industrial

#### Type A

<b>Dimensions*</b> (L x W x H mm)	500 x 320 x 790 - 800 x 750 x 1200	1200 x 1000 x 1750 - 1200 x 1000 x 2500	1400 x 1300 x 3200 - 2000 x 1700 x 4500
<b>Gross weight*</b> (kg)	32 - 100	300 - 500	900 - 2000

#### Type B

<b>Dimensions*</b> (L x W x H mm)	1200 x 800 x 1200	1200 x 800 x 2000 - 2000 x 1700 x 2500
<b>Gross weight*</b> (kg)	150	650 - 1500

\*approx. values

