

G45

PROBAT



# THE MACHINE FOR SPECIALISTS

The G45 drum roaster holds a special place within the PROBAT shop roaster portfolio. Manufactured in the classic retro design of the UG series roasters and equipped with the key technical features of the G series roasters, the G45 combines an elegant design with enhanced functionality even in its standard version. Furthermore, additional options such as pneumatic operated opening flaps on the bean container, roasting drum and cooling sieve outlet, ensure that green and roasted coffee are processed reliably. These functions are controlled by either simply pressing a button on the control panel or fully automatic.

If you are reaching the capacity limits with your UG roaster but still want to process smaller batches, the G45 – with its flexible drum volume between 20 and 55 kg – is the ideal choice.

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## BENEFITS FOR YOUR COFFEE








Special shovel blades inside the roasting drum that were particularly developed for the G45 roaster ensure that the coffee beans are mixed evenly during the roasting process, producing a homogeneous final product. In addition, the G45 offers the following benefits:

- Frequency converter to adjust roasting air volume
- Precise airflow thanks to the traditional “flavor wheel”
- Intensive cooling
- Powerful fans
- Reproducible product quality
- Independent drives for the drum, mixer, and roasting and cooling fans
- Additional separate cooling sieve outlet
- Easy to clean thanks to large maintenance openings
- Reduced dust emissions thanks to additional cooling exhaust air cyclone
- Frequency converter to adjust drum rotation speed (optional)



# VERSIONS

The G45 roasters are equipped with state-of-the-art drive, burner and control technology, as well as a cyclone. The following model is available:

	 Roasting Time (min)	 Roasting Capacity (kg/h)	 Batch Size (kg)	 Heating	 Space requirement min. – max. (m <sup>2</sup> )	 Recommended room height (m)	 Dimensions (L x W x H) (mm)
G45	10–20	100–150	20–55	propane, natural gas	20–26	3,5	6000 x 4400 x 3000



## CONTROL

All G45 roasters are equipped with thermocouples as standard to document the supply air, product, and exhaust air temperatures. The basic version is controlled manually. Alternatively, the G45 roasters can be equipped with semi- or fully automatic controls via a touch panel.

- Recipe management with up to 40 user-definable recipes. Saved settings can be reproduced safely and automatically (semi- and fully automatic control solution)
- twelve temperature levels can be predefined (semi- and fully automatic control solution)
- Visualization of the roasting curve on the touch screen (semi- and fully automatic control solution)
- Burner output can be selected manually or automatically from a recipe (semi- and fully automatic control solution)
- Two additional potentiometers allow for a mechanical regulation of the air volume and burner capacity in steps of 1% (semi-automatic control solution)
- Interfaces for external software systems from Artisan and Cropster (semi- and fully automatic control solution)
- Process safety thanks to pneumatic operated opening flaps on the bean container, roasting drum and cooling sieve outlet (semi- and fully automatic control solution)
- automatic heat switch-off when the desired final temperature is reached
- automatic safety shutdown of the burner when the temperature limit is reached
- Router for remote maintenance and diagnosis as well as software updates



# FEATURES



## BURNER

The burner used in the G45 roasters can be configured for use with natural gas or propane, depending on the specific requirements. In addition, it stands out due to the following features:

- Higher capacity
- Continuously adjustable for a more flexible roasting process
- State-of-the-art safety technology, including gas and flame monitoring



## ROASTING EXHAUST AIR CYCLONE

The G45 roaster's roasting cyclone is equipped with a wheeled chaff collection container and made of aluminum, making it light and easy to empty. In addition, the roasting cyclone stands out due to the following features and benefits:

- Individually adjustable
- Roasting fan above the cyclone enables particularly high separation efficiency
- Collection container with additional water emergency quenching (optional)



## COOLING EXHAUST AIR CYCLONE

All G45 roasters come as standard with an additional cyclone for the cooling exhaust air. This additional exhaust air treatment keeps the amount of dust particles that enter the environment to a minimum.



## ROASTING FAN

Even in the basic version, the G45 roaster's roasting fan is equipped with a frequency converter. Furthermore the roasting fan stands out due to its particularly high performance and can be connected to an exhaust air treatment system.

# ACCESSORIES



## GREEN COFFEE CONVEYOR

PROBAT green coffee conveyors make it extremely easy to feed green coffee into the feed hoppers of the G45 roasters.



## AFTERBURNER

To further treat the visible exhaust gases released during roasting, the G45 roaster can be equipped with an afterburner specially designed for this process.



## DESTONER

PROBAT destoners reliably remove foreign objects with a predetermined higher weight than roasted coffee.

# TECHNICAL DATA

G45

Machine Performance*	Batch	(kg)	20–55
	Roasting Time	(min)	10–20
	Capacity	(kg/h)	100–150
Power Supply (Three-Phase Current)	Voltage	(V)	230/400
	Frequency	(Hz)	50
	Power	(kW)	10.0
Burner Output	Natural Gas/Propane	(kW)	145
		(kcal/h)	110,000
		(MJ/h)	450
Gas Consumption – Natural Gas*	Calorific Value	(MJ/mn <sup>3</sup> )	37
	Flow Pressure	(mbar)	20
	Full Load	(mn <sup>3</sup> /h)	14.5
	Roasting Operation	(mn <sup>3</sup> /h)	8.0
Gas Consumption – Propane*	Calorific Value	(MJ/mn <sup>3</sup> )	100
	Flow Pressure	(mbar)	50
	Full Load	(mn <sup>3</sup> /h)	4.7
	Roasting Operation	(mn <sup>3</sup> /h)	2.6
Roasting Exhaust Air (Without Afterburner)	Flow Rate	(mn <sup>3</sup> /h)	900
	Temperature	(°C)	150–250
Roasting Exhaust Air (With Afterburner)**	Flow Rate	(mn <sup>3</sup> /h)	900
	Temperature	(°C)	400–500
Cooling Exhaust Air	Flow Rate	(mn <sup>3</sup> /h)	2900
	Temperature	(°C)	30–70

\* Depending on desired color intensity, residual moisture, roasting time, negative pressure, roasting supply air temperature, green coffee moisture and type, etc.

\*\* A catalyzer solution is optionally available.

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