

**G SERIES**

**PROBAT**





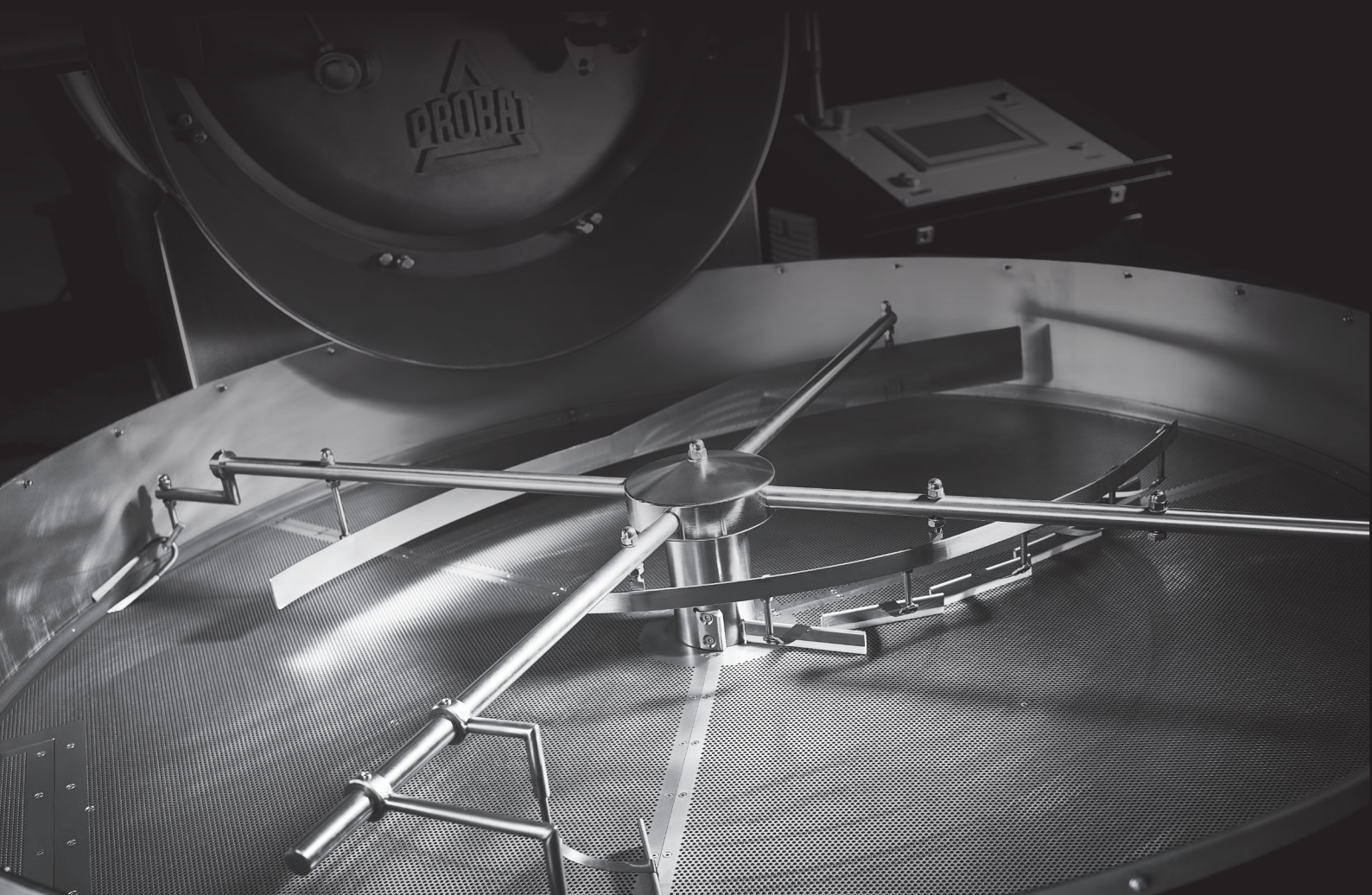
# THE MACHINE FOR CONNOISSEURS

The roasters of the G series are based on the drum roasting method: special shovel blades inside a horizontally lying, rotating roasting drum ensure even mixing of the beans during the roasting process and a homogeneous product. The G roasters, with batch capacities ranging between 60 and 150 kg, are equipped with pneumatic-operated opening flaps on the bean container, roasting drum, and cooling sieve outlet as a standard. These functions allow for reliable processing of green and roasted coffee and are controlled either fully automatically or simply by pressing a button on the control panel.

## BENEFITS FOR YOUR COFFEE








The ideal diameter-length ratio of the roasting drum of the G roasters guarantees a homogeneous heat transfer onto the beans during the roasting process. In addition, the G roasters offer the following benefits:

- Even mixing of the coffee beans inside the roasting drum
- Frequency converter on the roasting fan to regulate the roasting air volume
- Targeted air flow through automatic adjustment of the flavour flap
- Intensive cooling
- Powerful fans
- Reproducible product quality
- Independent drives for the drum and mixer, as well as for the roasting and cooling fan, which can be optionally equipped with frequency converters
- Additional separate cooling sieve outlet
- Easy to clean thanks to large maintenance openings
- Reduced emissions thanks to additional cooling exhaust air cyclone



# VERSIONS

The roasters of the G series are equipped with state-of-the-art drive, burner, and control technology, as well as a cyclone both for the roasting and cooling exhaust air. The following models are available:

|      |  Roasting Time<br>(min) |  Roasting Capacity<br>(kg/h) |  Batch Size<br>(kg) |  Heating |  Space requirement<br>min. - max. (m <sup>2</sup> ) |  Recommended room height<br>(m) |  Dimensions<br>(L x W x H)<br>(mm) |
|------|--|---|--|---|---|--|---|
| G60  | 10-20  | 100-195   | 20-65  | propane,<br>natural gas   | 21-30   | 4,5  | 6500 x 4800 x<br>3500   |
| G75  | 10-20  | 125-240   | 25-80  | propane,<br>natural gas   | 22-31   | 4,5  | 6800 x 4800 x<br>3500   |
| G90  | 10-20  | 150-285   | 30-95  | propane,<br>natural gas   | 30-38   | 4,5  | 7500 x 5100 x<br>3640   |
| G120 | 10-20  | 240-360   | 60-120   | propane,<br>natural gas   | 32-40   | 4,5  | 7850 x 5100 x<br>3640   |
| G150 | 10-20  | 240-450   | 60-150   | propane,<br>natural gas   | 35-44   | 4,5  | 8000 x 5500 x<br>3640   |



## CONTROL

The G roasters are equipped with thermocouples as standard to document the supply-air, product, and exhaust-air temperature. The basic version also includes a semi-automatic control unit with touch panel. As an option, the G roasting machines can be equipped with a fully automatic control system.

- Recipe management with up to 40 user-definable recipes; saved settings can be reproduced safely and automatically
- Visualization of the roasting curve on the touch screen
- Burner can be adjusted manually or automatically from a recipe
- Interface for external software systems from Artisan and Cropster
- Process safety through pneumatic opening flaps on the bean container, roasting drum, and cooling sieve outlet
- Additional protective cover on the cooling sieve
- Emergency water quenching for the roasting drum manually or integrated into the control system
- Additional water quenching for the chaff collection container of the roasting cyclone
- Heating stops automatically when 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
- Optional equipment with manual control



# FEATURES



## BURNER

The burner used in the G roasters can be configured for use with natural gas or propane, depending on customer requirements, and stands out due to the following features:

- High 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 warm air is pre-cleaned of dust and coffee chaff in the roasting cyclone. The G roasting exhaust-air cyclone features a large, wheeled chaff collection container, making it particularly light. This enables the container to be emptied easily and regularly. A second container can be supplied on request to ensure the process flow.



## COOLING EXHAUST AIR CYCLONE

The G roasters come standard with an additional cyclone for the cooling exhaust air. This extra exhaust-air treatment keeps the amount of dust particles that enter the environment to a minimum.



## ROASTING FAN

Even in the basic version, the roasting fan of the G roasters 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 roasters of the G series. These can be fitted with optional scales.



## AFTERBURNER

To further treat the exhaust gases released during roasting, the roasters of the G series can be equipped with an afterburner and catalyzer specially designed for this process.



## DESTONER

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



# TECHNICAL DATA

|   |                     |                       | G60     | G75     | G90     | G120    | G150    |
|---|---------------------|-----------------------|---------|---------|---------|---------|---------|
| Machine Performance*                          | Batch               | (kg)                  | 20–65   | 25–80   | 30–95   | 60–120  | 60–150  |
|   | Roasting Time       | (min)                 | 10–20   | 10–20   | 10–20   | 10–20   | 10–20   |
|   | Capacity            | (kg/h)                | 100–195 | 125–240 | 150–285 | 240–360 | 240–450 |
| Power Supply<br>(Three-Phase Current)         | Voltage             | (V)                   | 230/400 | 230/400 | 230/400 | 230/400 | 230/400 |
|   | Frequency           | (Hz)                  | 50      | 50      | 50      | 50      | 50      |
|   | Power               | (kW)                  | 13      | 13      | 15      | 15      | 15      |
| Burner Output                                 | Natural Gas/Propane | (kW)                  | 160     | 200     | 230     | 280     | 280     |
|   |                     | (kcal/h)              | 121,000 | 152,000 | 174,000 | 212,000 | 212,000 |
|   |                     | (MJ/h)                | 496     | 620     | 714     | 870     | 870     |
| Gas Consumption –<br>Natural Gas*             | Calorific Value     | (MJ/mn <sup>3</sup> ) | 37      | 37      | 37      | 37      | 37      |
|   | Flow Pressure       | (mbar)                | 20      | 20      | 20      | 20      | 20      |
|   | Full Load           | (mn <sup>3</sup> /h)  | 16      | 20      | 23      | 28      | 35      |
|   | Roasting Operation  | (mn <sup>3</sup> /h)  | 8.8     | 11      | 12.6    | 15      | 19      |
| Gas Consumption –<br>Propane*                 | Calorific Value     | (MJ/mn <sup>3</sup> ) | 100     | 100     | 100     | 100     | 100     |
|   | Flow Pressure       | (mbar)                | 50      | 50      | 50      | 50      | 50      |
|   | Full Load           | (mn <sup>3</sup> /h)  | 5.2     | 6.5     | 7.4     | 9       | 11.2    |
|   | Roasting Operation  | (mn <sup>3</sup> /h)  | 2.9     | 3.6     | 4       | 4.9     | 6.1     |
| Roasting Exhaust Air<br>(Without Afterburner) | Flow Rate           | (mn <sup>3</sup> /h)  | 1,100   | 1,400   | 1,800   | 2,200   | 2,750   |
|   | Temperature         | (°C)                  | 150–250 | 150–250 | 150–250 | 150–250 | 150–250 |
| Roasting Exhaust Air<br>(With Afterburner)**  | Flow Rate           | (mn <sup>3</sup> /h)  | 1,100   | 1,400   | 1,800   | 2,200   | 2,750   |
|   | Temperature         | (°C)                  | 400–500 | 400–500 | 400–500 | 400–500 | 400–500 |
| Cooling Exhaust Air                           | Flow Rate           | (mn <sup>3</sup> /h)  | 3,200   | 3,600   | 3,800   | 4,100   | 5,100   |
|   | Temperature         | (°C)                  | 30–70   | 30–70   | 30–70   | 30–70   | 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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