

PRODUCT DATA SHEET

PROBATONE 60 SA / PROBATONE 60 PRE



Type of system:	Drum roaster
Batch size:	60 kg
Hourly capacity:	max. 215 kg



PROBATONE 60 PRE

THE ESSENTIAL ADVANTAGES OF THE PROBATONE 60 AT A GLANCE:

- Many components made of high-grade cast iron
- Non-perforated, double-wall roasting drum with special shovel mechanism for a homogenous mixture of the product
- PROBAT-specific product/air ratio for particularly homogeneous roasting
- Roasting can be controlled reliably by sight glass, sampler and thermo-couples
- Cooler with large, easily accessible and removable cooling sieve for effective and gentle cooling of the roasted coffee
- Reduced cycle times by simultaneous roasting and cooling with separate suction for cooling and roasting exhaust air
- Efficient drive concept by separate motors for drum drive, cooling sieve stirring arm as well as roasting and cooling fan
- Safe heating by proven modulating burner with regulation of supply air temperature
- Effective chaff separation by separate, free-standing roasting cyclone
- Semi-automatic roaster control system PILOT Roaster Basic with touch panel, recipe management for 99 recipes and 8 recipe stages (version P60 SA)
- Optionally available as fully-automatic version with roaster control system PILOT Roaster Excellence (version P60 PRE), recipe management for 999 recipes

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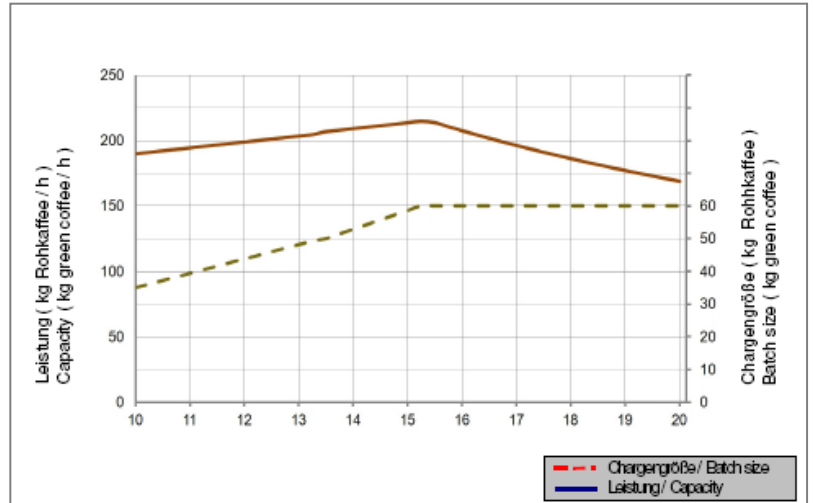
PROBATONE 60 SA / PROBATONE 60 PRE



DESCRIPTION:

The drum roaster PROBATONE 60 was particularly developed for the gentle long-term roasting of high-quality gourmet/specialty coffees and espresso. Its proven construction guarantees an excellent roasting product, a homogenous roasting and highest aroma development.

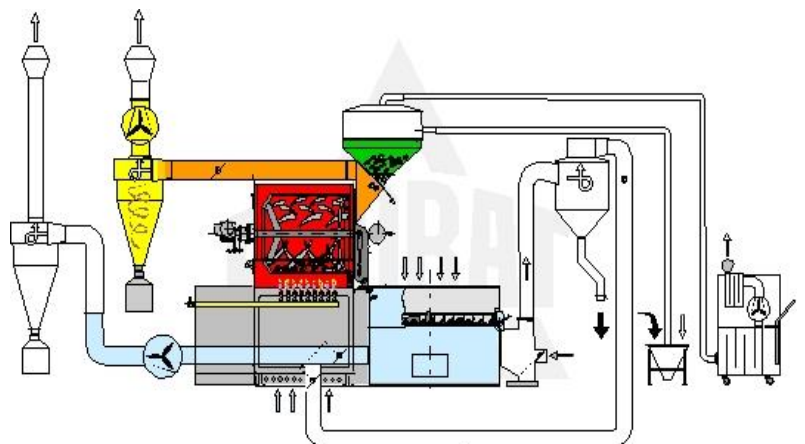
With roasting performances ranging from 190 to 200 (max. 215 kg/h, depending on the green bean quality like provenience, blend, bean size, impurities, etc.) the PROBATONE 60 is particularly appropriate for larger shop and small industrial roasting facilities with a large variety of products and high quality standards concerning their end product.



FUNCTIONING:

The roasting air is heated in the combustion chamber by means of a surface burner. Before it is sucked through the roasting drum, it surrounds the drum so that there is apart from the mainly convective one also a conductive heat transfer to the bean.

The green coffee is filled into the roasting drum when achieving a defined temperature. By means of the shovels therein a product flow opposite to the roasting air is generated. The roasting process starts immediately after the filling. It ends either automatically at a product end temperature which was stored in the recipe or manually after having checked the product by means of the sampler.



The roasting air flow is generated by a central exhaust air fan which is arranged behind the roasting cyclone. The suction capacity can be adjusted by a flap. After having left the roasting drum, the roasting exhaust air is in a cyclone mechanically cleaned from the chaff occurred which is collected in a bin under the cyclone.

After the emptying into the cooler, the fresh roasted coffee is cooled by the surrounding air. Thereby the stirring mechanism provides for a homogenous distribution of the coffee over the complete sieve bottom in order to achieve an optimal cooling. In a high-suction destoner the coffee can afterwards be cleaned from heavy foreign particles like e.g. stones. Cooling and destoner air can be led via a common optional cyclone in which chaff and suspended solids are separated.

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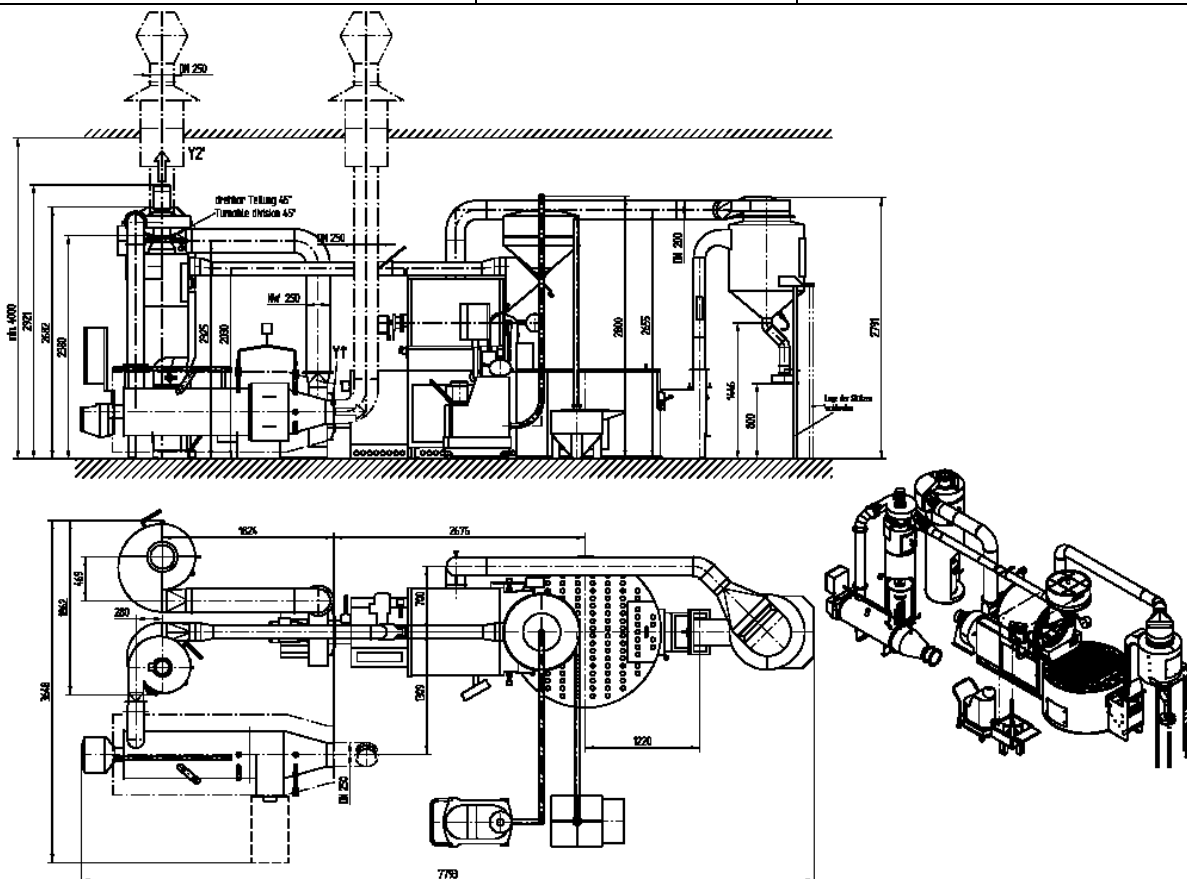
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DIMENSIONS

Drum roaster PROBATONE 60 (main components)	Dimensions [mm]			Weight [kg]
	Length	Width	Height	
Roaster without machine hopper	2,250	1,300	2,200	850
Ambient air cooler	1,835	1,615	1,230	350
Cooling cyclone – Ambient air cooler (optional)	800	1,100	2,682	150
Roasting cyclone	800	1,100	2,921	150
Destoner boot (optional)	520	500	950	150
Destoner receiving bin (optional)	1,320	1,000	1,850	150
TVR/NVK (optional)	3,160	800	1,400	400

WEIGHTS

Operating weights [kg]		
	Roaster	900
	Normal cooler	350
	Cooling cyclone	150
	Roasting cyclone	150
	Destoner	300
	Green coffee conveyor	200
	TVR/NVK	400



Layout sketch as per C17.33/02012-000-0 // Subject to modifications

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CONNECTING AND CONSUMPTION DATA

Connecting data	Electrical nominal load with ambient air cooler [kVA]	
PROBATONE 60 (without options)	8	
Consumption data	Energy consumption ¹ [MJ/100 kg]	Current consumption [kWh/100kg]
PROBATONE 60	160	< 0.5
	Water ² [l/h]	Compressed air ³ (only PRE version) (m ³ /h)
	24	0.3

¹ referring to green coffee, depending on sort, roasting time, residual moisture and shrinkage // 1 MJ = 239 kcal

² for p= 4 - 6 bar (for water buffer unit 3 - 6 bar)

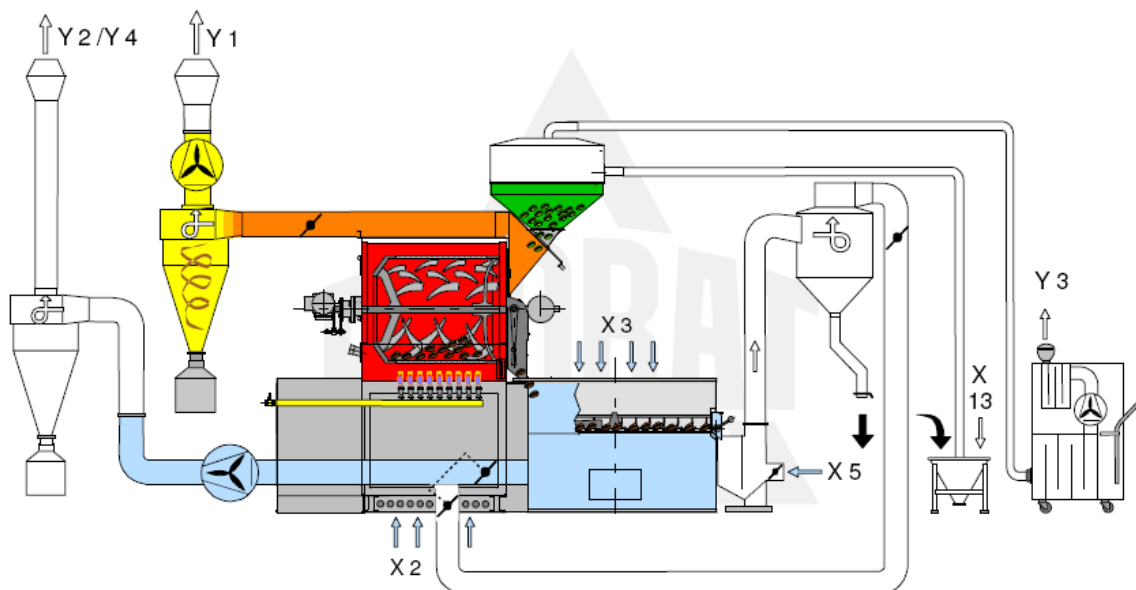
Drinking water; max. hardness range II (max. 2.5 mmol/kg), when the water is harder, we recommend using a water softener unit, pH value > 7.4

³ General workshop quality (4.4.2 according to ISO 8573-1 quality classes for compressed air)

Burner data	Nominal capacity [kW]	Flow pressure min. [mbar]	Supply pressure max. [mbar]	Cross section for connection
Natural gas, calorific value (Hu) 37 MJ/m³ (i. N.)				
or liquid gas (propane), calorific value (Hu) 100 MJ/M³ (i. N.)				
PROBATONE 60	max. 100	20	300	1"

Voltage supply	
Supply voltage (three-phase current)	400 V, 50 Hz
	230 V, 60 Hz

AMBIENT AIR BALANCE



Scheme as per C33.05/00024-000-1 // Subject to modifications

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PROBATONE 60		[m³/h] (standard condition)
Ambient air requirement	Item	
Combustion air quantity	X 2	600
Room cooling air quantity	X 3	3,000
Destoner air quantity	X 5	2,200
Green coffee conveying air quantity	X 13	270

EXHAUST AIR QUANTITIES

Drum roaster PROBATONE 60				
	Roasting exhaust air without exhaust air cleaning	Roasting exhaust air with exhaust air cleaning	Cooling/ Destoner exhaust air	Filling bin
	Y1	Y1	Y2/Y4	Y3
Exhaust air quantities in m³/h for standard condition, moist (average value)				
PROBATONE 60	600	700	3,000 / 2,200	50*
Exhaust air temperature in °C				
PROBATONE 60	160 – 240	450 - 630	35 - 140	30 - 50

* Volume flow when conveying approx. 270 m³/h

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