



## OPERATING MANUAL

### Sample PRO 100 Series

#### Gas Heating



Applies to Versions:

SPG1, **SPG2\***, SPG4, SPG6

**NOTE:** All roasters heated by gas in the 'Sample PRO 100 Series' are modular and this manual applies to the entire series. **Please also refer to the 'Technical Manual' supplied with each specific model.**

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*\*Illustration in this manual: SPG2 model*

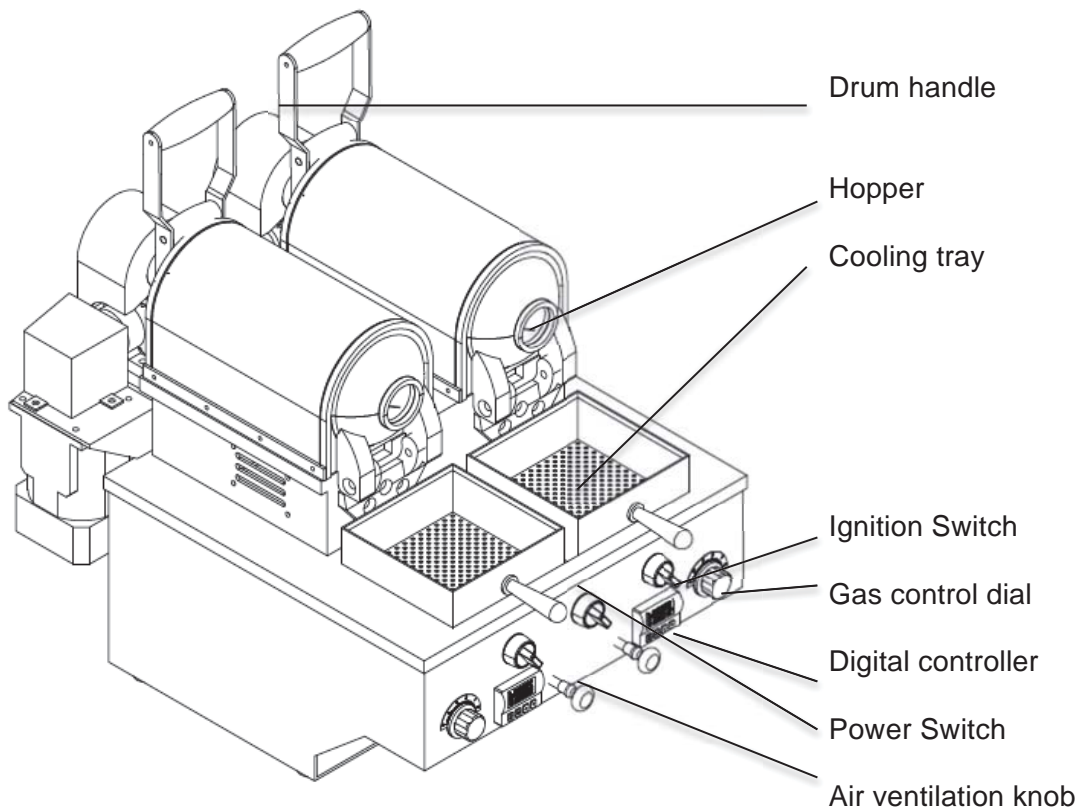
## WARNINGS

1. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
2. Children should be supervised to ensure that they do not play with the appliance.
1. Care is needed when handling during maintenance.
2. If the supply cord is damaged it must be replaced by a qualified person in order to avoid a hazard.

## 1. Introduction SPG2

The Sample PRO 100 G2 is a coffee roaster used for roasting small batches of coffee and consists of 02 roasting drums with a capacity of up to 100g/ batch (green beans). This roaster is heated by gas and is fitted with a cooling sieve.

## CONTROL ELEMENTS



## **2. Operation Principle**

Coffee beans are fed into the front hopper of the roasting drum. Coffee beans are rotated and mixed continuously in the drum and roasted evenly. Below the roasting drum lays the gas burner. 8 nozzles per drum supply heat.

Air ventilation sucks out the hot air and chaff during the roasting process.

Roasted coffee is finally discharged into the cooling sieve.

## **3. Preparations**

- Unpack the product carefully and place on a stable flat counter in a dry area away from water or water splashes. Remove all plastic wrap from the product and ensure the drum is entirely clean and empty of packaging residue.

**NOTE:** For SPG1 models, remove the carry-lid of the machine by unscrewing the knobs on each side of the machine. Slide the lid forward and gently remove from the machine.

-Connect the main plug of the machine with a 220-240V and 50Hz power source. Make sure the wall socket is fitted with an efficient ground contact.

**DO NOT** plug the appliance into the supply mains if a ground system is not available in mains socket and was not positively checked to be in compliance with national/ local electrical models.

**IT IS COMPULSARY TO GROUND THE APPLIANCE.** Do not use extension cables, plug adapters for multiple sockets, or makeshift connections.

The amount of Hz supplied to the machine determines the speed of the drum and all machines come with a standard cogwheel sized to achieve 60RPM.

**NOTE:** Running the machine in a 60Hz environment means the drum speed is 20% faster. In this case please contact the vendor for supply of a larger cogwheel.

- Switch on the machine using the main power switch (red color) and check if the machine is rotating.

**NOTE:** For SPG1 models, verify that the cooling fan at the exhaust in the back of the machine is working.

**DO NOT FILL ANY COFFEE BEANS INTO THE ROASTER YET.** Switch off the power again.

### 3.1. Preparations gas connection

- Connect the gas supply pipe with the roaster connection situated at the back of the machine.
- The roasters default setting is for propane gas and the pressure before burner should be 30-50mbar.

**NOTE:** Only authorized gas fitters may fit and vent the gas pipe prior to initial ignition of the burner. There are 8 burners with with injector and safety pilot. The burner is suitable for several types of gas, as far as the special nozzles are incorporated and a specialist adjusts the corresponding gas pressure.

#### **WARNING AND SAFETY**

Unburned escaping propane gas cannot be noticed by smell. Propane gas is heavier than air and can form explosive mixtures on the ground. Place the liquid gas cylinders as specified in the safety instructions of the gas supplier. Keep away from direct sunlight. A shut off valve on the gas supply pipe must be easily accessible at all time. Improper gas connections can cause serious accidents through fires and explosions. Only allow authorized, qualified gas fitters to connect the gas pipe. Prior to initial commissioning of the roaster, the gas installation must be tested for leaks. The pipe must be vented in a safe manner.

- After successful connection of the gas supply, switch on the power and verify that the digital controller is functioning and set to the desired temperature. The smaller temperature indication in green color is the set temperature. Actual temperature is indicated in red and is displayed larger. Once the set peak temperature is reached, the gas supply will automatically shut down by activating a solenoid valve.

**NOTE:** the reading is bean/ air temperature measured inside the back of the drum. Set the desired temperature by pushing the appropriate button on the far left side of the controls. Be careful not to enter a different program by pushing the wrong buttons. (For more information and problem solving please visit the 3<sup>rd</sup> party suppliers website and download the appropriate user manual).

**NOTE:** For SPG1 models connect the flexible exhaust pipe to the machine if required and point into desired direction. For all SPG2, SPG4 and SPG6 models connect the flexible exhaust pipe to the top of the supplied cyclone input. Then, carefully screw the supplied motor onto the top rim of the cyclone with the supplied tools. Install the second exhaust pipe to the output of the cyclone, and point into the desired direction. Plug the cyclone into power and verify that it is fully functional.

- Make sure the bean filler is ready (to fill the beans into the roaster) and cooling tray is in place.
- Unpack the timer and spoon from the maintenance kit.
- In the event that your machine is supplied with an additional thermocouple, connect the output wire to a data bridge and data logging software of your choice.
- You are now ready to perform your first sample roast!

**NOTE:** We highly recommend you season the drum by initially roasting a batch of coffee dark in order to clean the drum thoroughly and add oils to its surface.

#### 4. Operating Instructions

**NOTE:** For all SPG2, SPG4 and SPG6 drum models switch on the cyclone before igniting the gas. Always make sure that the cyclone is switched on prior to roasting.

- Switch on the ignition of the desired drum(s) and open the gas supply via the gas control dial. Re-confirm that the air ventilation knob is pulled out to enable air suction through the drum. Recommended setting: initially half open, then fully open after “yellow stage” or “1<sup>st</sup> cracking” of beans.
- Wait until the roaster reaches the desired roasting temperature.  
Default setting: 220C.
- Fill exactly 100g of beans into the hopper with the bean filler. Set the gas control dial to achieve a roasting time between 8-12 minutes.
- During the roasting process, from time to time use a spoon to sample and monitor the degree of roasting from the hopper.
- After obtaining the desired result, turn the gas control dial clockwise to shut down the gas supply. Push in the airflow knob to enable air underneath the cooling trays. To discharge the batch, lift the drum handle of the appropriate roasting drum up and pull forward. After emptying the roasting drum, move the drum handle back gently. In the event that more coffee is being roasted, bring the heat control dial back to the desired setting and ignite as necessary.
- Make sure all beans are emptied and repeat the roasting operation as desired.
- Continuously spread the roasted beans evenly by using the supplied spoon. Ensure proper cooling within 3 minutes. Pour the roasted beans into a coffee tray.
- Prepare for grinding and cup testing or storage as required...

**Note:** Remember to turn off the gas supply to the machine after roasting!

## 5. Maintenance

- The Sample PRO 100 is specifically designed for minimal maintenance.

**WARNING:** Before carrying out any such maintenance work, allow the roaster to cool down by starting the suction fan, then unplug the main electrical power supply

- Clean the gas burners with a flat brush and vacuum cleaner as required
- Tighten the bolts of the front drum hinges from time to time and as required
- After 6 months of frequent use open the machine from underneath the control panel and vacuum clean chaff residues out of the machine as necessary
- Lubricate the cogwheels with plenty of grease when they appear to be dry or noisy

## 6. Safety Instructions

- Roasted coffee that is not cooled in time will catch fire resulting in accidents.
- Unauthorized changes to the roaster are not permitted for safety reasons.
- Do not use the appliance bare foot or if your hands or feet are damp
- Always keep the appliance dry
- Do not roast anything else but green coffee
- Do not roast unattended
- Do not touch the drum surface while operation as can get EXTREMELY HOT

### IN CASE OF EMERGENCY:

- Fire in the roasting drum: Leave roasted coffee in the roasting drum; do not empty! Wait until the roaster has cooled down.
- Fire in the cooling sieve: Switch off the main switch (power). Extinguish roasted coffee with water.

## 7. Tool kit/ Accessories

1. Filler
2. Spoon to sample coffee
3. Screw driver
4. Keys
5. Halogen lights (not supplied with gas heating version)
6. Flexible pipe
7. Plug adapter
8. Timer (not on photo)



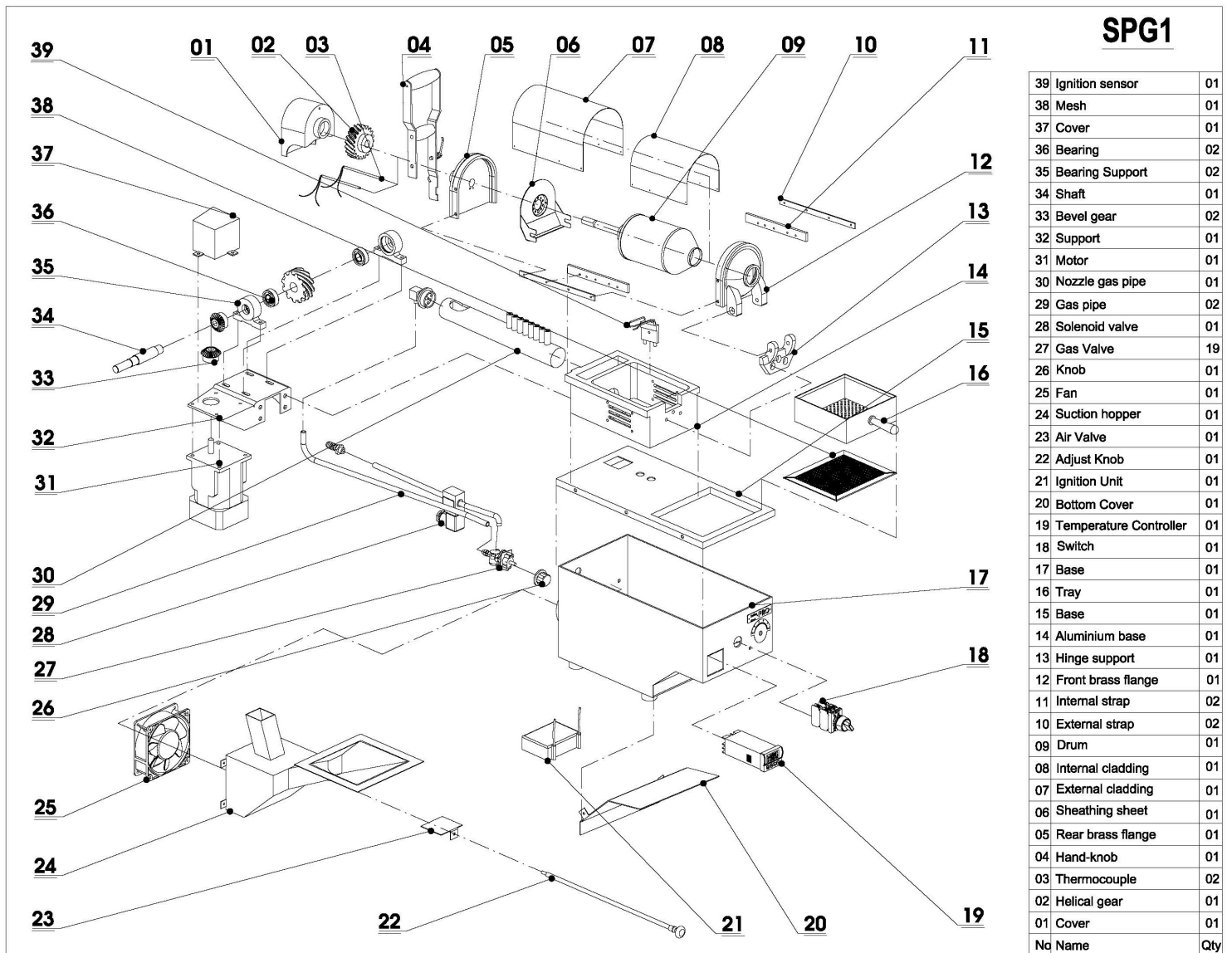




## Technical Manual

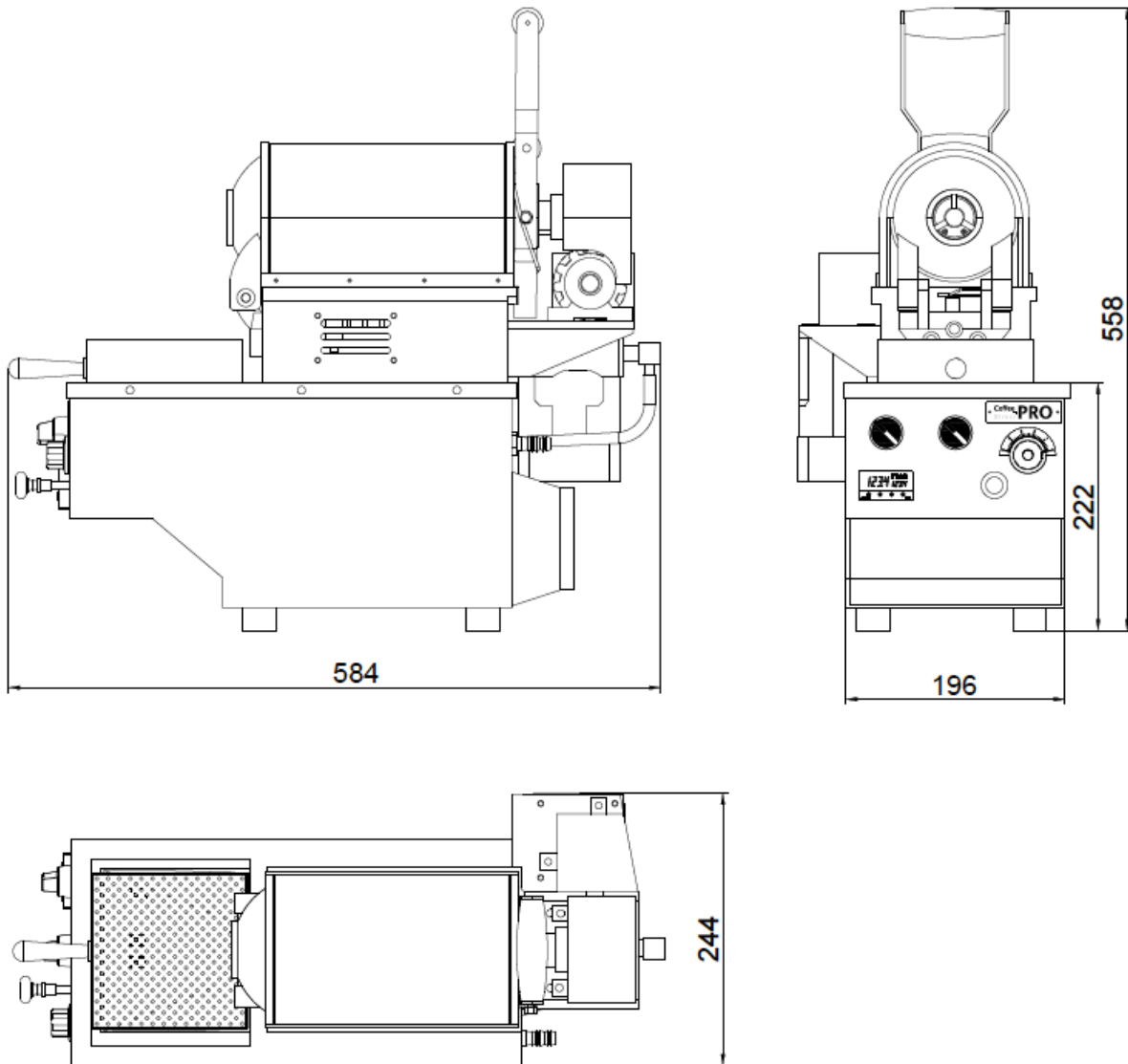
### SPG1

#### 1. Components



## **2. Technical Specifications**

- Capacity 100g/ batch /drum
- Roasting time 05 –15 minutes per batch
- Velocity of roasting drum 60 RPM
- Power installed Power source 50-60Hz/220-240V  
Single phase
  - + Motor: 25 W
  - + Suction fan: 10 W
- Dimensions (mm) L x W x H: 560 x 250 x 560
- Net Weight 32 kg



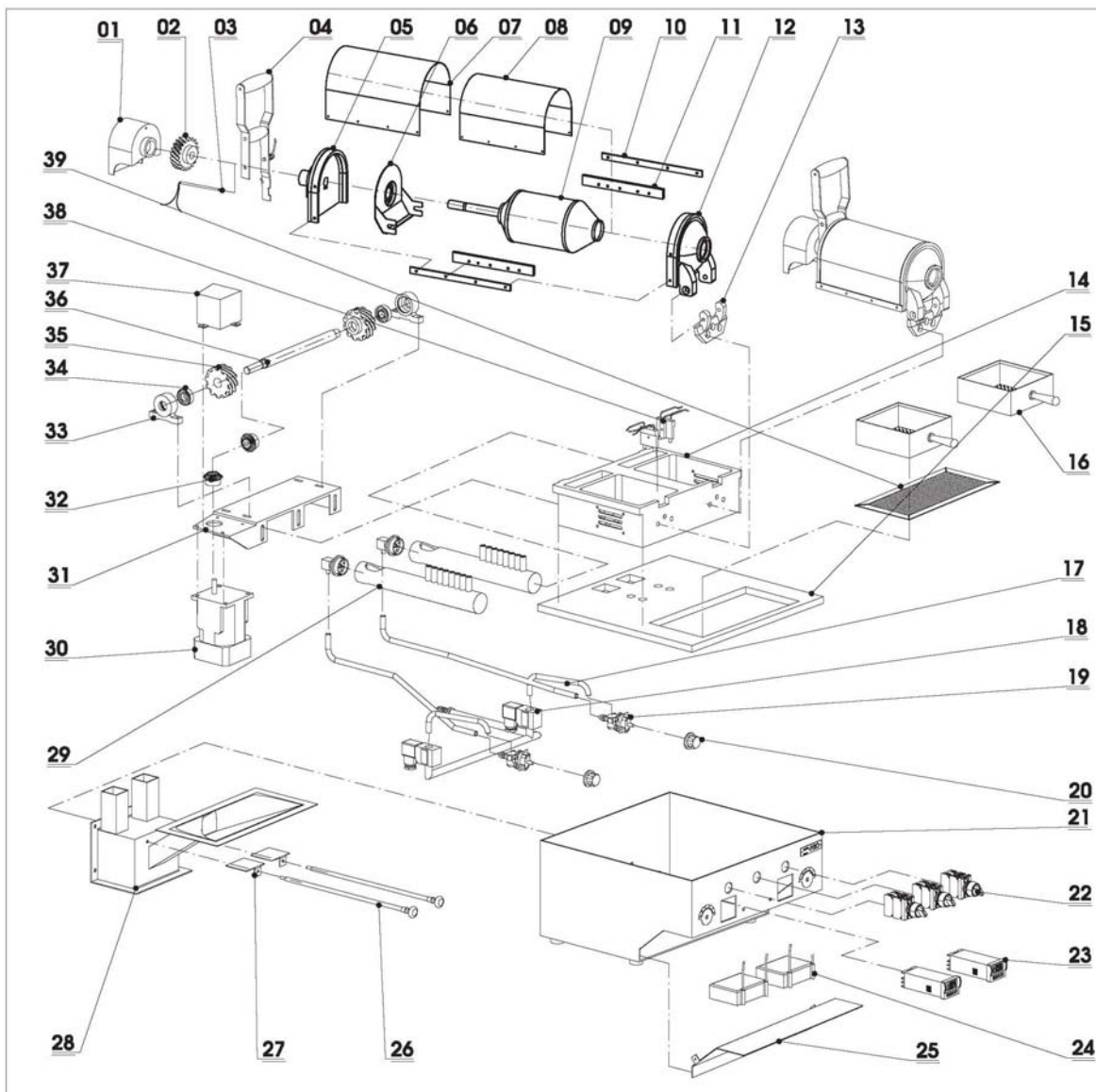




## Technical Manual

### SPG2

#### 1. Components



#### SPG2

39	Mesh	01
38	Ignition sensor	02
37	Shaft	01
36	Cover	02
35	Helical gear	02
34	Bearing	02
33	Bearing Support	02
32	Bevel gear	02
31	Support	01
30	Motor	01
29	Nozzle gas pipe	02
28	Suction hopper	01
27	Air Valve	02
26	Adjust Knob	02
25	Bottom Cover	01
24	Ignition Unit	02
23	Temperature Controller	02
22	Switch	03
21	Base	01
20	Knob	02
19	Gas valve	02
18	Solenoid valve	02
17	Gas pipe	02
16	Tray	02
15	Base	01
14	Aluminium base	01
13	Hinge support	02
12	Front brass flange	02
11	Internal strap	04
10	External strap	04
09	Drum	02
08	Internal cladding	02
07	External cladding	02
06	Sheathing sheet	02
05	Rear brass flange	02
04	Hand-knob	02
03	Thermocouple	04
02	Helical gear	02
01	Cover	02
No	Name	Qty

## 2. Technical Specifications

- Capacity 100g/ batch /drum
- Roasting time 05 –15 minutes per batch
- Velocity of roasting drum 60 RPM
- Power installed Power source 50-60Hz/220-240V  
Single phase
- + Motor: 25 W
- + Suction fan: 370 W
- Dimensions (mm) L x W x H: 560 x 430 x 560
- Net Weight 44 kg

