

Claims

1. Roasting and grinding apparatus for coffee beans comprising a roasting device (50) and an associated grinding device (60);
 - 5 the roasting device (50) being configured for receiving coffee beans of a certain type that will be roasted, the roasting device (50) comprising reading means (53) to identify the characteristics of the coffee beans dispensed to it, the roasting device (50) further comprising a control unit configuring the roasting profile of the beans according to the characteristics retrieved from the reading means (53) and/or from the characteristics of
10 the beans in a database (51) in this control unit and/or according to the user's input; the roasted coffee beans being dispensed into a beans container (10, 20), the beans container (10, 20) comprising programmable identification means where product parameters of the roasted coffee beans of a certain type are encoded on it by an encoder (52) in the roasting device;
 - 15 the grinding device (60) comprising one or more housings for receiving one or more beans containers (10, 20); the grinding device (60) comprising a reader (62) to obtain the information of the product parameters of the roasted coffee beans of the one or more beans containers (10, 20); the grinding device (60) further comprising a control
20 unit configured to adapt the grinding size and the quantity of roasted coffee beans to be delivered from the coffee beans containers (10, 20) for obtaining a certain coffee quantity and/or a certain coffee blend quantity from each beans container to be grinded according to these product parameters and/or according to a recipes database (64), and/or according to the user's input.
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2. Roasting and grinding apparatus for coffee beans according to claim 1 wherein the characteristics of the coffee beans are one or a plurality of the following: coffee beans type, coffee beans origin, batch volume, recommended roasting level or levels, date of harvest, date of production, production data, farmer data, date of expiration, company
30 and or marketing info.
3. Roasting and grinding apparatus for coffee beans according to any of the previous claims wherein the coffee beans are green and/or partially roasted coffee beans.
- 35 4. Roasting and grinding apparatus for coffee beans according to any of the previous claims wherein the coffee beans received by the roasting device (50) comprise identification means (41) with the characteristics of these coffee beans, to be read by

the reading means (53) in the roasting device, these identification means (41) being optical identification means, such as a barcode, OID and/or a QR code, and/or electromagnetic identification means such as a RFID tag.

- 5 5. Roasting and grinding apparatus for coffee beans according to any of the previous claims wherein the encoder (52) in the roasting device (50) writes on the programmable identification means of a certain container (10, 20) the product parameters of the roasted coffee beans of a certain type, these product parameters comprising the characteristics of the coffee beans and one or a plurality of the following: roasting level,
10 roasting profile, CTN, aroma profile chart, adequate beverage recommendation, roasting date, best limit consumption date.
- 15 6. Roasting and grinding apparatus for coffee beans according to any of the previous claims wherein the programmable identification means in the one or plurality of beans containers (10, 20) comprise a RFID tag.
- 20 7. Roasting and grinding apparatus for coffee beans according to any of the previous claims, wherein the quantity of the roasted coffee beans to be grinded, the grinding size and the blend in the grinding device are adapted as a function of the type of beverage to be prepared from the roasted and grinded coffee beans in combination of the product parameters of the roasted coffee beans of the one or plurality of beans containers (10, 20) connected to the grinding device (60).
- 25 8. Roasting and grinding apparatus for coffee beans according to any of the previous claims wherein the one or plurality of coffee beans containers (10, 20) have an embedded dosing means to dose only the needed quantity of roasted coffee beans in the grinding device (60).
- 30 9. Roasting and grinding apparatus for coffee beans according to claim 8 wherein the grinding device (60) comprises a motor and a drive to control the embedded dosing means of the one or plurality of coffee beans containers (10, 20) to dose only the needed dose of roasted coffee beans to the grinding device (60).
- 35 10. Roasting and grinding apparatus for coffee beans according to any of the previous claims wherein the one or plurality of coffee beans containers (10, 20) comprise plugging means to be quickly plugged onto the grinding device (60) so they are freely exchangeable (plug & play).

11. Roasting and grinding apparatus for coffee beans according to any of the previous claims wherein the one or plurality of coffee beans containers (10, 20) are locked on top of the grinding device (60) to allow firm fix of the one or plurality of containers (10, 20) during the grinding operation.
12. Roasting and grinding apparatus for coffee beans according to claim 10 wherein the plugging means comprise one or a plurality of: bayonet connection, magnetical connection, electromagnetical connection, clutch system, or the like.
13. Roasting and grinding apparatus for coffee beans according to any of the previous claims wherein the roasting device (50) comprises a RFID tag encoder to encode the product parameters of the roasted coffee beans of a certain type in the one or plurality of beans containers (10, 20).
14. Roasting and grinding apparatus for coffee beans according to any of the previous claims wherein the grinding device (60) comprises a RFID tag reader to obtain the information of the product parameters of the roasted coffee beans of the one or more beans containers (10, 20) connected to it.
15. Method for roasting and grinding coffee beans using a roasting and grinding apparatus according to any of claims 1-14, comprising the following steps:
- dispensing a certain quantity of coffee beans in the roasting device (50);
 - reading the characteristics of the coffee beans dispensed;
 - carrying out a roasting process according to the characteristics read and/or a database information (51) and/or a user's choice or selection;
 - delivering the roasted coffee beans into a beans container (10);
 - encoding the product parameters into the coffee beans container (10);
 - attaching a coffee beans container (10) into the grinding device (60);
 - reading the product parameters in the coffee beans container (10);
 - carrying out the grinding as to grinding size and quantity according to the product parameters read.
16. Method for roasting and grinding coffee beans according to claim 14 and producing a certain coffee blend, the method comprising the following further steps:
- attaching a plurality of coffee beans containers (10, 20) into the grinding device (60);
 - reading the product parameters in each of the plurality of the coffee beans containers (10, 20);

- carrying out the grinding as to grinding size and quantity of each of the coffee beans containers (10, 20) according to the product parameters read for each and to the type of beverage to be prepared from the recipes database (51) from the roasted and grinded coffee beans.

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17. Use of a roasting and grinding apparatus according to any of claims 1-14 for delivering a blend of roasted and grinded coffee beans in a certain quantity.