

Claims

1. Grinding and extraction apparatus for roasted coffee beans comprising a grinding device (60) and an associated extraction device (70);
 - 5 the grinding device (60) comprising one or more housings for receiving one or more beans containers (10, 20) with roasted coffee beans of the same or different types; 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 unit configured to adapt the
10 grinding size and the quantity of roasted coffee beans for obtaining a certain coffee blend from each beans container to be grinded according to these product parameters and/or according to a recipes database (64) comprising the beverage information associated to the beverage to be prepared;
 - 15 the grinding device (60) further comprising an encoder (62) to encode the beverage information on programmable identification means (65) on a product holder (61) in the grinding device (60), to where the grinded coffee is sent;
20 the extraction device (70) being configured for receiving the product holder (61) and comprising reading means (72) to identify the beverage information in the said product holder identification means (65), the extraction device (70) further comprising a control unit to extract the beverage according to the beverage information retrieved and/or from the beverage information retrieved from a beverage database in this control unit.
- 25 2. Grinding and extraction apparatus for roasted coffee beans according to claim 1 wherein the beverage information comprises one or a plurality of the following data: beverage type, beverage volume, brewing temperature and/or brewing pump profile, brewing profile according to time.
- 30 3. Grinding and extraction apparatus for roasted coffee beans according to any of the previous claims 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 and or marketing info.
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4. Grinding and extraction apparatus for roasted coffee beans according to any of the previous claims wherein the product holder (61) comprises plugging means to be

quickly plugged and/or unplugged onto the grinding device (60) and onto the extraction device (70) so it is freely exchangeable (plug & play).

- 5 5. Grinding and extraction apparatus for roasted coffee beans according to any of the previous claims wherein the product holder (61) is locked on the grinding device (60) and on the extraction device (70) to allow firm fix of it during the grinding and the extraction operations, respectively.
- 10 6. Grinding and extraction apparatus for roasted coffee beans according to any of the previous claims wherein the coffee beans received by the grinding device (60) comprise identification means (21) with the characteristics of these roasted coffee beans, to be read by the reading means (62) in the grinding device, these identification means being optical, such as a barcode, OID and/or a QR code, and/or electromagnetically read identification means such as a RFID tag.
- 15 7. Grinding and extraction apparatus for roasted coffee beans according to any of the previous claims wherein the quantity of coffee to be grinded, the grinding size and the blend in the grinding device (60) 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).
- 20 8. Grinding and extraction apparatus for roasted coffee beans according to any of the previous claims wherein the one or plurality of coffee beans containers (10, 20) have an embedded dosing device to dose only the needed quantity of roasted coffee beans in the grinding device (60).
- 25 9. Grinding and extraction apparatus for roasted coffee beans according to claim 7 wherein the grinding device (60) comprises a motor and a drive to control the embedded dosing device 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).
- 30 10. Grinding and extraction apparatus for roasted coffee beans according to claim 7 wherein the grinding device (60) comprises a RFID tag reader (62) 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.
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11. Method for grinding roasted coffee beans and preparing a beverage from them using a grinding and extraction apparatus according to any of claims 1-10, comprising the following steps:
- reading the product parameters in the coffee beans container (10, 20);
 - 5 - adapting the grinding size according to the product parameters read and/or according to a recipes database;
 - dispensing a certain quantity of roasted coffee beans from a beans container (10, 20) in the grinding device (60);
 - 10 - carrying out the grinding as to grinding size and quantity according to the product parameters read and/or according to a recipes database;
 - encoding the beverage information on the product holder (61) in the grinding device (60);
 - transferring the product holder (61) to the extraction device (70) manually or automatically;
 - 15 - reading the beverage information from the product holder (61) by the extraction device (70) and extracting the beverage according to the beverage information retrieved and/or from the beverage information retrieved from a beverage database.
12. Method for grinding roasted coffee beans and preparing a beverage from them according to claim 11 where a certain coffee blend is produced in the grinding device (60) and put in the product holder (61), the method comprising the following further steps:
- attaching a plurality of coffee beans containers (10, 20) into the grinding device (60);
 - 20 - 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 from the roasted and
 - 30 grinded coffee beans.
13. Use of a grinding and extraction apparatus according to any of claims 1-10 for delivering a certain beverage from roasted coffee beans.