Service
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Philips Consumer Lifestyle

Service Manual

PRODUCT INFORMATION

- This product meets the requirements regarding interference suppression on radio and TV.
- After the product has been repaired, it should function properly and has to meet the safety requirements as officially laid down at this moment.

TECHNICAL INFORMATION

- Voltage : 220 - 240 V
- Frequency : 50 Hz
- Power consumption : 1400 W
- Stand-by power consumption : <0,5 W
- Color setting : Monza Red
- Contents of water container : 0,7 L / 5 cups
- Dimensions
  - Appliance : 225 x 105 x 350 mm
  - F-Box : 290 x 165 x 390 mm
- Spout height : 150 mm
- Cord length : 80 cm
- Weight
  - Appliance : 2,05 kg
  - Incl. F-Box : 2,17 kg

- Materials
  - Housing, Driptray, Back plate : PP
  - Water container & Lid : Tritan
  - Collector : POM
  - Brewchamber bottom : PA
  - Lid cover, Baseplate, Driptray cover : ABS
  - Buttons : TPE
  - Lever : PC

- Consumer Replaceable Parts
  - CP9044/01 Podholder 1
  - CP9045/01 Podholder 2
  - CP9046/01 Collector assy Black
  - CP9048/01 Drip tray cover Deep black
  - CP9053/01 Drip tray Monza red
  - CP9056/01 Water container lid
  - CP9057/01 Water container assy

OPTIONAL (accessories)

- No specific issues

PHILIPS

HD7880/80 / HD7880/81

General coffee specifications:

In-cup volume (mL)	Regular coffee	Strong coffee
General WEU version	125	60
France specific version	100	60

Temperature indication (°C)	Regular coffee	Strong coffee
General WEU version	>74	>72
France specific version		

Measurement specification

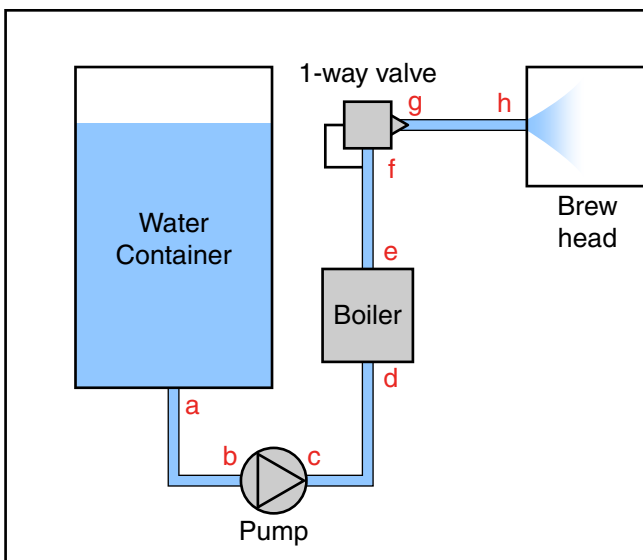| Water spec (without pod, in mL)	Regular coffee
1-cup (with 1-cup pod holder)	133 ± 10

Electical diagram
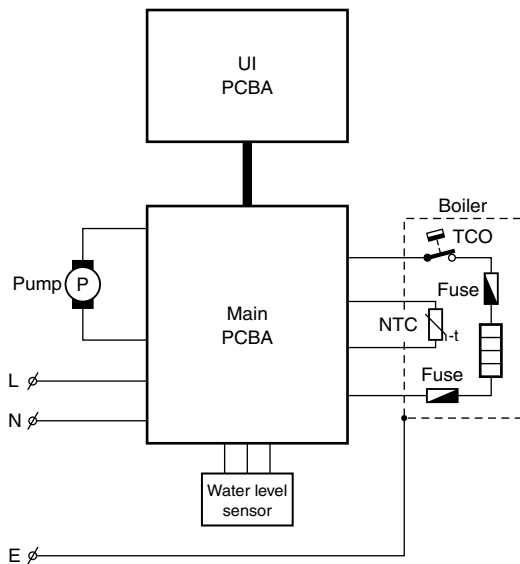
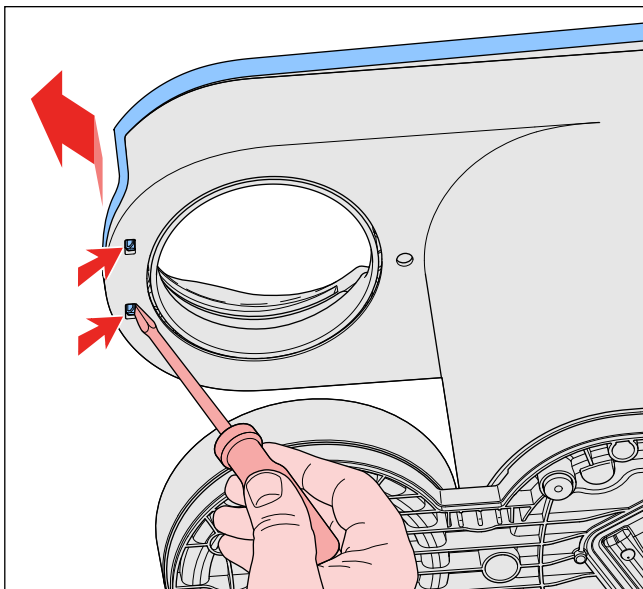## User interface layout
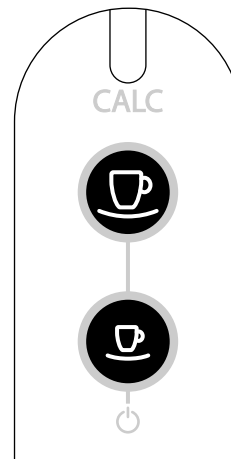
Functional diagram

Make sure the appliances cordset is disconnected from the mains!

To open the appliance, removal all detachable parts: Water container, driptray and cover, pod holder and collector.

1. To reach the brew chamber.
   1.1. Open the top cover.
   To open to the top cover the brew chamber needs to be unlocked. Start at the back side of the top cover, using a plastic tool, and trace along the parting line of the top cover, undoing all the snaps. There are two small snaps on the front lower side of the brew chamber, undo them with a small flathead screwdriver (No. 0)

The top cover needs to be tilted forward to be removed. The flat cable **W** from the main PCBA to the UI PCBA is still attached to the User Interface panel, and can easily be unplugged.

The brew chamber can now be removed by unscrewing the two screws (**B**,T15), and undoing the hose connection (**g**) from the one way valve.

To continue, first remove the two screws (**A**,T15) from the bottom side of the appliance.

2. To reach internal components like Boiler or Pump.
   2.1. Remove the back plate and undo the hose connection (**g**) from the one way valve (if not done so already).
   To remove the back plate, use a plastic tool and trace the parting line of the back plate, undoing all the snaps.
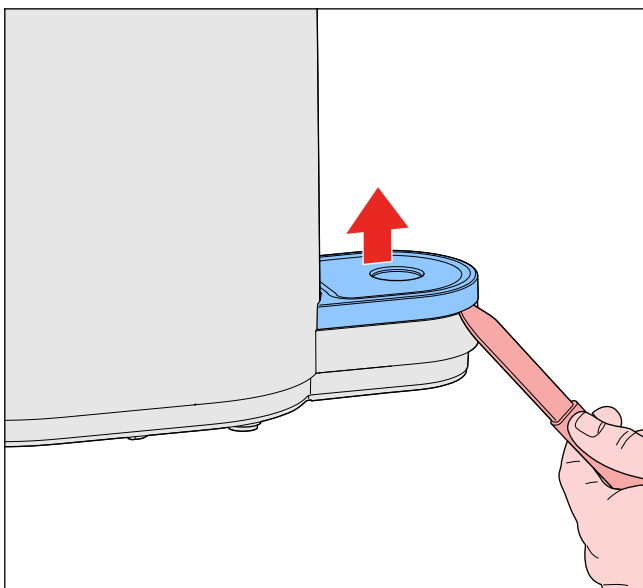
The corrugated tube is still connected to the water container socket, and can easily be pulled off.

2.2. Remove the housing.
To remove the housing, start at the back side and undo the clicks on either side of the back plate, next continue on either the left of right side and undo the click on the long lower side of the housing, next undo the snap on the front round edge of the housing. Make sure that none of the snaps snap back. Repeat this procedure on the other side of the appliance, working from back to front. Tip: leave a screwdrive or plastic tool in the area where the first front click was released, to prevent it snapping back.
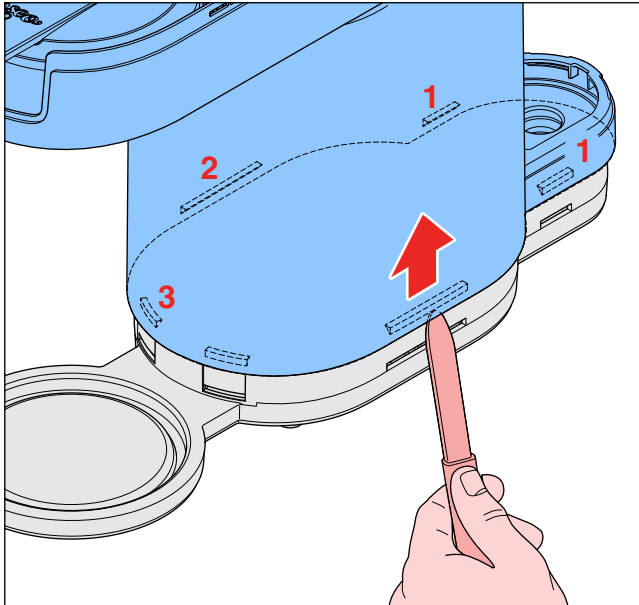
Remove the housing upwards from the rest of the appliance, but mind flat cable running through the guide on the inside of the housing and the water level sensor still connected to the inside of the housing.

You can now access the Boiler and Pump, to remove them, undo the electrical connections and hoses, and reinstall in the reverse order. Any Ty-wrap that has been removed needs to be replaced by a new one, and tightened with the specified forces.

3. To replace the PCBA.
3.1. Unscrew the inner frame.
Unscrew the two screws (**C**, T15) holding the inner frame in place, take special care to note the proper wire routing, and make sure reinstalling the PCBA will be done in an identical way.

Descaling

Scale builds up inside the machine during use. It is essential to descale the SENSEO® coffee machine when the CALC Light goes on. If the descaling procedure is not performed correctly, scale residue remains behind in the machine. This causes scale to build up more quickly and may cause permanent and irreparable damage to the machine.

Use the correct descaling agent (HD7011, HD7012 only). It has been developed to ensure better machine performance and operation. Never use a descaling agent based on mineral acids such as Sulphuric acid, Acetic acid (vinegar) or Hydrochloric acid. These descaling agents may damage your SENSEO® coffee machine.

For detailed instructions please refer to the Directions For Use, chapter CALC.

User Programmable Volumes (HD7884 only)

For any Senseo Up appliance in the HD7884 range the cup volume can be programmed by the consumer self to suit his personal coffee preference. This can be done by pressing the button corresponding to the recipe to be programmed until the LED starts flashing quickly. Once the appliance is heated up, it starts making the coffee, press the button again once the desired volume is reached. The LED will blink rapidly as confirmation the volume has been stored.

To reset the user programmable volumes to default (60 mL Strong coffee, 125 mL Regular coffee), keep both buttons pressed, until the LED starts to flash.

Volume adjustment

Note: Volume adjustment may only be carried out in case the repair technician is sure there is no underlying cause (e.g. User programmable volume, leakage, incorrect voltage setting, etc.) for the deviation in volume from the factory default.

For the correct procedure on Volume measurement, please refer to the Senseo Repair process.

How to adjust the volume output:

1. Make sure the boiler is filled properly, otherwise perform the Flush before first use procedure, according to the instructions in the DFU.
2. Reset the User Programmable Volumes by pressing both buttons, until the LED starts to flash.
3. Make sure the collector and a pod holder, **without** a coffee pod is installed in the appliance. Calibrate the scale you are going to use for the measurement, by placing the empty cup and switching it on.
4. Press the Regular coffee button to start a regular coffee brewing process. When finished also pour the leftover water in the pod holder into the cup.
5. Measure the output and compare to the specifications on P.X
6. Determine the deviation from the specification, the deviation van be adjusted in steps of 3,5 mL. The calculated deviation divided by 3,5 will tell you how many steps you need to in-, or decrease.
7. Follow the steps as mentioned under Service modes - Manual pump calibration to recalibrate the pump.
8. Measure the newly calibrated volume, and repeat steps 5-7 if necessary.

Manual pump calibration

1. Keep the regular- and strong cup button pressed while connecting the mains voltage to the appliance.
2. The buttons can be released when the regular- and strong cup LEDs are switched on.
   a. Press and release the strong cup button to decrease the calibration value. The strong and regular cup LEDs blink for 0,5 second.
   b. Press and release the regular cup button to increase the calibration value. The strong and regular cup LEDs blink for 0,5 second.
   c. Press and release the strong and regular cup buttons to store the calibration value. The strong and regular cup LEDs blink for 1 second.

*) Service step 2a and 2b can repeatedly be used to adjust the calibration value. Use service step 2c to store the new calibration value.

Mid-end / High-end selection

This steps follows automatically after step 2c, storing the newly calibrated value. To skip the calibration, simply press the regular and stong button again after you connected the mains.

3. If the strong cup LED is on, the appliance is a ME version. If the regular cup LED is on, the appliance is a HE version.
   a. Press and release the strong cup LED to make the appliance a ME version.
   b. Press and release the regular cup LED to make the appliance a HE version.
   c. Press and release the strong and regular cup buttons to store the HE/ME selection value. The strong and regular cup LEDs blink for 1 second.
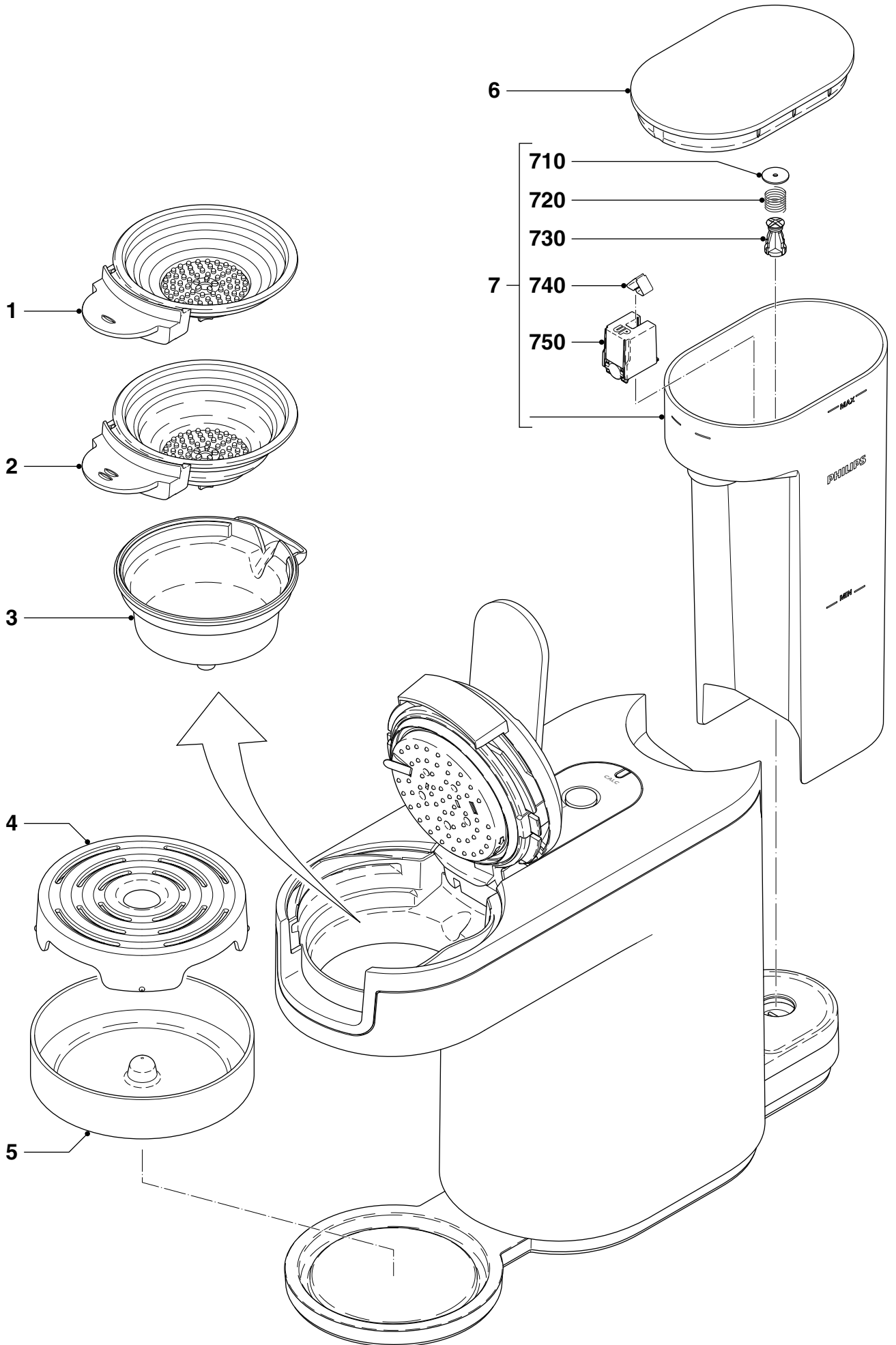
Boiler reset

1. Keep the strong cup button pressed while connecting the mains voltage to the PCBA.
2. Button can be released when the strong cup LED or regular cup LED blinks rapidly. The strong cup LED will burst in case of a ME version. The regular cup LED will burst in case of a HE version.
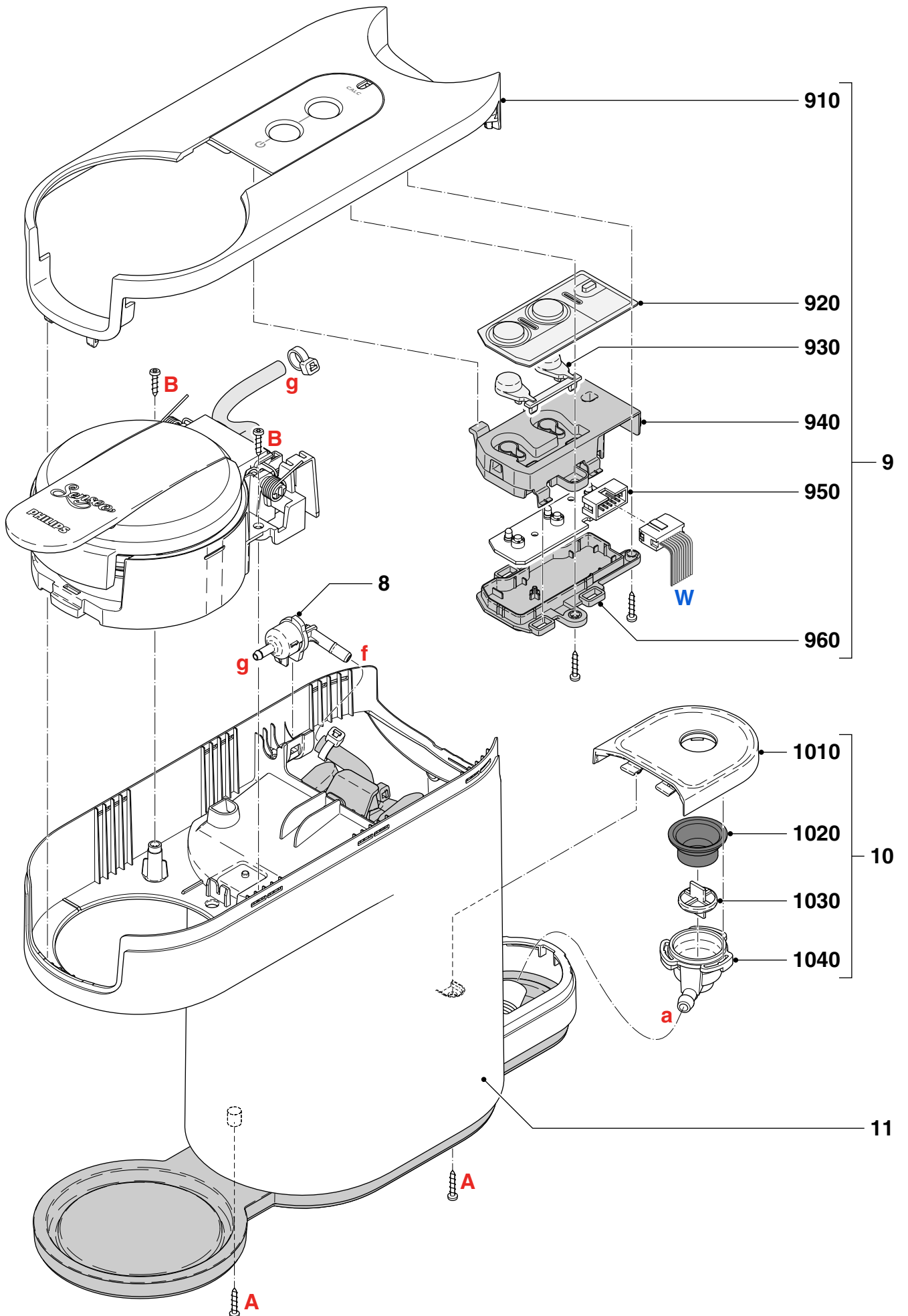
HD7880/80 / HD7880/81

Pos	Service code	Description	Remark
1	4222 259 60221	Padholder 1	Black
2	4222 259 60231	Padholder 2	Black
3	4222 259 60061	Collector assy	Black
4	4222 247 72811	Driptray cover	Deep black
5	4222 247 72801	Driptray	Monza red
6	4222 247 72772	Water container lid	Transparent
7	4222 259 60081	Water container assy	Transparent
710		Valve seal	
720		Valve spring	
730		Valve rod	
740		Float spring	
750		Float assy	
8	**4222 259 60072**	One-way valve	
9		Top cover assy	Deep black
910	4222 247 72752	Top cover	Deep black
920	4222 259 60262	Buttons rubber	
930	4222 247 72731	Buttons plastic	
940	4222 247 72721	UI house top	
950	4222 259 58081	UI PCBA	
960	4222 247 72711	UI house bottom	
10	4222 259 60021	Back cover assy	Monza red
1010		Back cover	Monza red
1020		WC seal	
1030		WC filter	
1040		WC socket	
11	4222 247 72581	Housing	Monza red
12	4222 247 72691	Brewchamber cover	Deep black
13	4222 259 60051	Brewchamber assy	Deep black
1310		Lid hinge cover	
1320		Lid spring	
1330		Hose	
1340		Lever	
1350		Lever frame	
1360		Rod	
1370		Slider left	
1380		Slider right	
1390		Slider spring	
13100		Lid frame	
13110	4222 240 05991	Ejector pin	
13120	4222 247 08121	BC seal	
13130	4222 247 72611	Distribution disk	
13140		Brewchamber bottom	Black

■ = changed

HD7880/80 / HD7880/81

Pos	Service code	Description	Remark
14	4222 247 72573	Inner frame	
15	4222 247 59473	Housing, water level sensor	
16	4222 259 58064	PCBA HV	
17	4222 247 08101	L-bend	
18	4222 240 01471	Hose clamp	
19	4222 259 61291	Tube (P - B) incl. restrictor	
20		Base plate	
21	4222 247 69442	Suspension bracket	
22	4222 244 50692	Tie-wrap B	
23	4222 259 37244	Pump	230 V / 50 Hz
24	4222 247 43690	Boiler pin cover	
25		Tube (B - V)	
26	4222 247 69552	TCO cover	
27		Boiler assy	Metal - 230 V
2710	4222 259 53272	Boiler	Metal - 230 V
2720	4222 247 05134	O-ring (NTC)	
2730	4222 240 00892	Bracket	
2740	4222 259 60501	NTC	
2750	4222 248 56582	Screw	
2760	4222 248 56001	TCO	
28	4222 247 05001	Currugated tube	
29		Cordset	
30	4213 247 05256	Foot	
31	4222 247 06301	Pump damper	
100	4222 244 50680	Tie-wrap	

HD7880/80 / HD7880/8I

6

710

720

730

7 740

750

1

2

3

4

5

HD7880/80 / HD7880/81

910

920

930

940

9

950

W

960

8

g

f

B

B

g

1010

1020

10

1030

1040

a

11

A

A

HD7880/80 / HD7880/81

12

1310

1320

1330

1340

1350

1360
2x

1370

1380

1390

13

13100

13110

13120

13130

13140

g

h

24
2x

f

25

e

26

21

14

22

2710

15

W

V

C

V

d

27

2720

16

C

2730

2740

U

U

2750

X Y

Z

23

2760

b

a

17

c

28

18

19

29

Z

Y

X

30
4x

20

31
2x