

SERVICE MANUAL

DOMESTIC HOUSEHOLD ComfortLift

DISHWASHERS



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1. Purpose of this manual

The purpose of this Service Manual is to provide Service Engineers with technical information regarding the new range of “Dorotea” dishwashers and to give a description of the service functionality.

This Manual describes:

- General characteristics
- Technical characteristics
- Guide to diagnostics

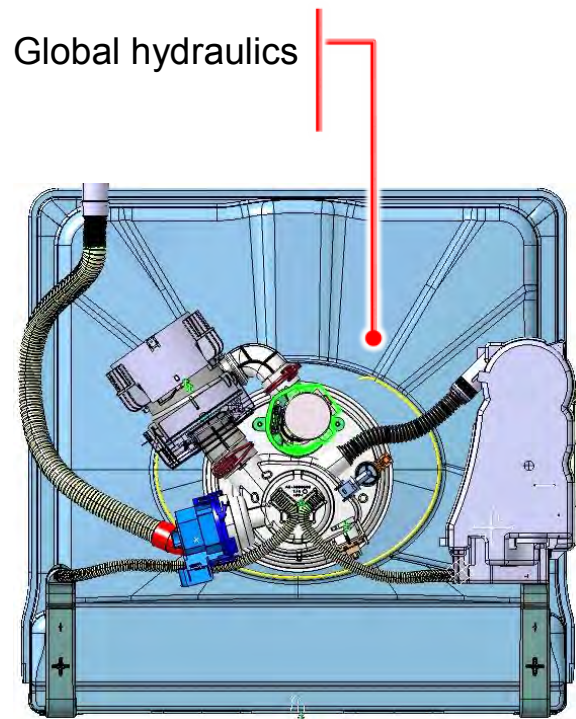
2. Precautions



- **Electrical appliances must be serviced only by qualified Service Engineers.**
- **Always remove the plug from the power socket before touching internal components.**

3. Technical details

3.1. Product overview



Sidekick connection possible also from the front of the appliance

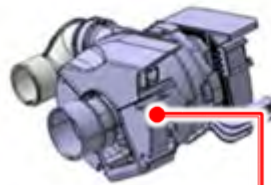


Thin inner door with Global dispenser

Global door lock with auto door opening integrated

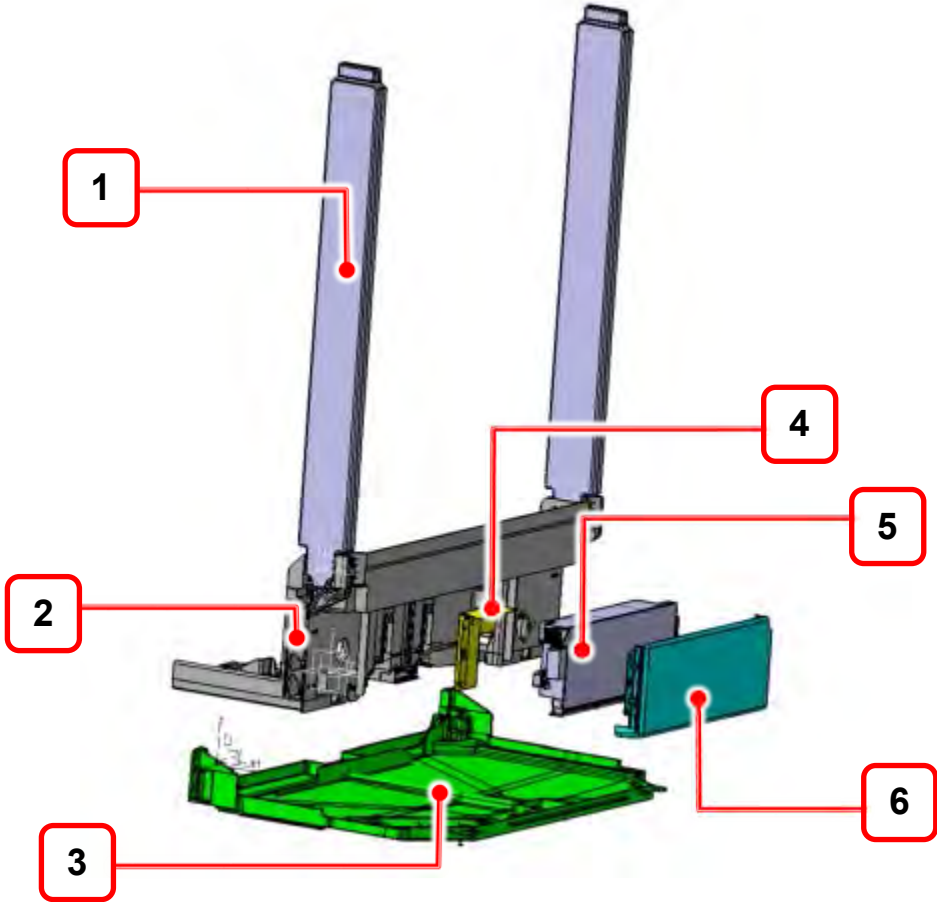


PB100 / PB200 Main board

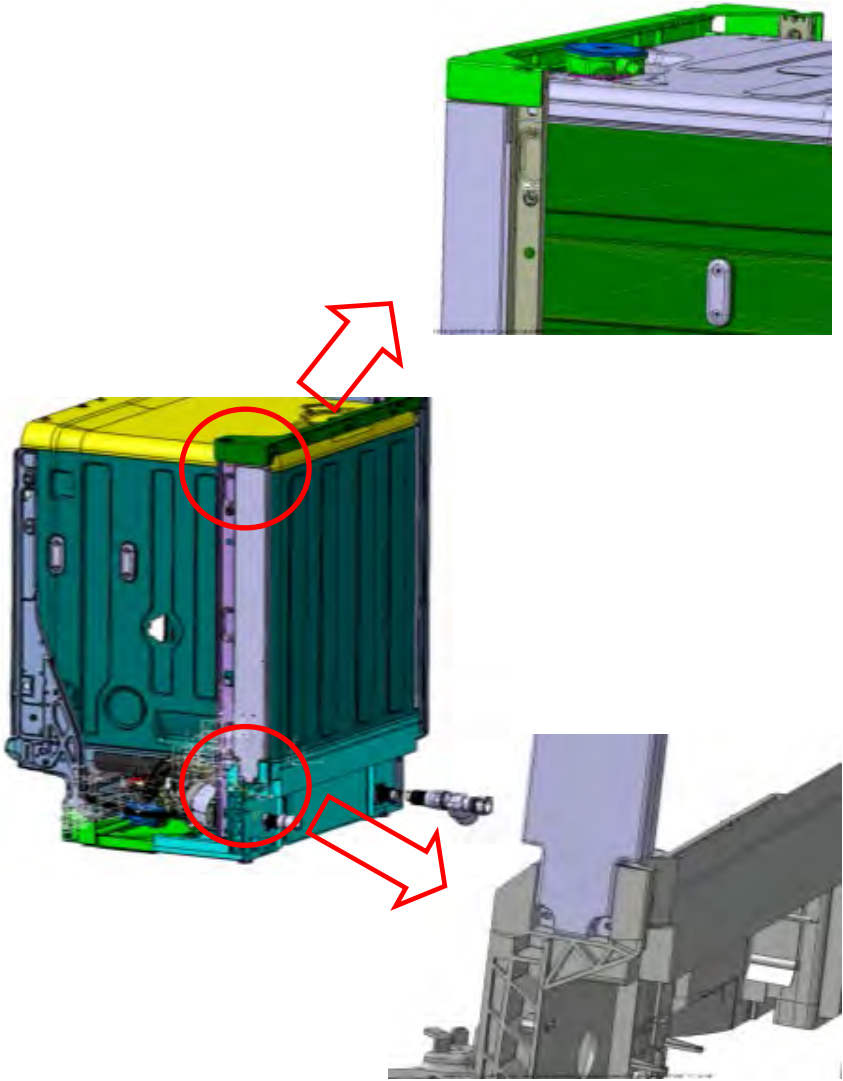


Wash pump with integrated heater

3.2. Structural Parts



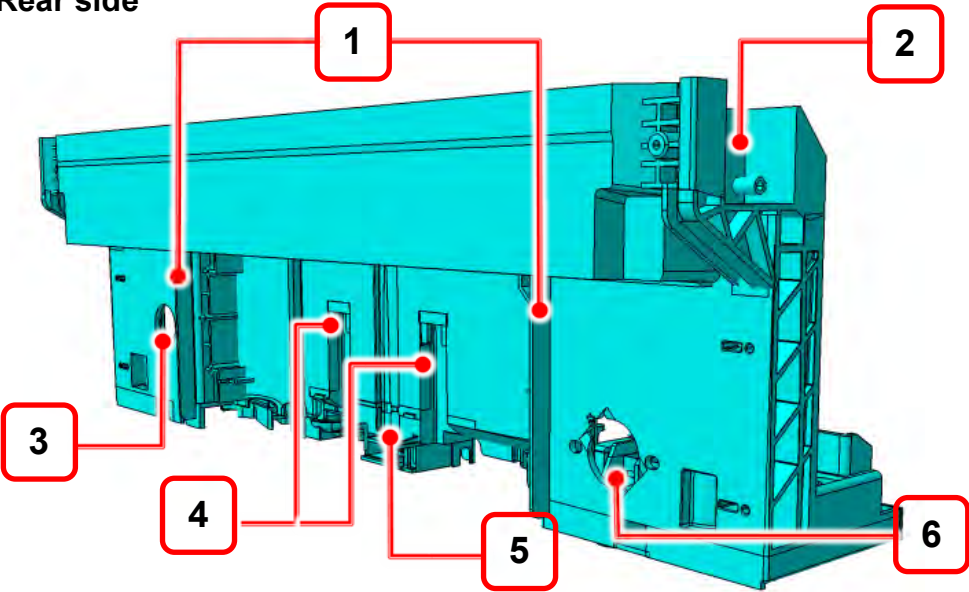
The counterweight slides under the rear bar and is attached with 2 screws in the base.



| | |
|---|----------------------|
| 1- Counterweights | 2- Base |
| 3- Bottom tray | 4- Inner fire shield |
| 5- GMB Box (Covered in Electronic System) | 6- Metal cover |

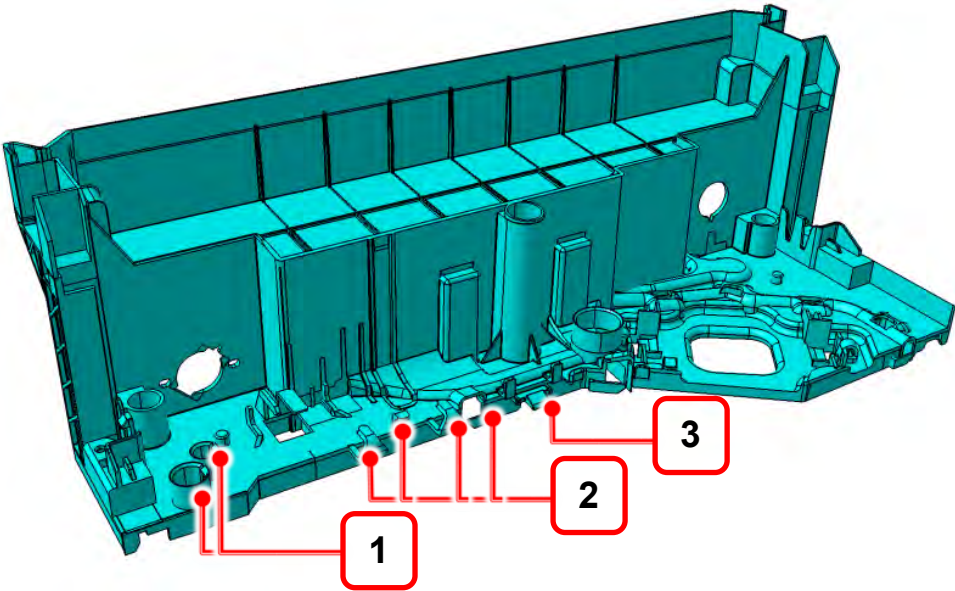
3.3. Base

Rear side



| | |
|--|--|
| 1- Ribs to prevent that water sprays in to the circuit board if the hose is damaged on the outside just after coming out from dishwasher | 2- Area for swing in and attach the counter weights with screws |
| 3- Water outlet | 4- Channels for inserting the hooks from the mainboard box when assembling |
| 5- Ribs to prevent cables from mainboard to fall down | 6- Water inlet |

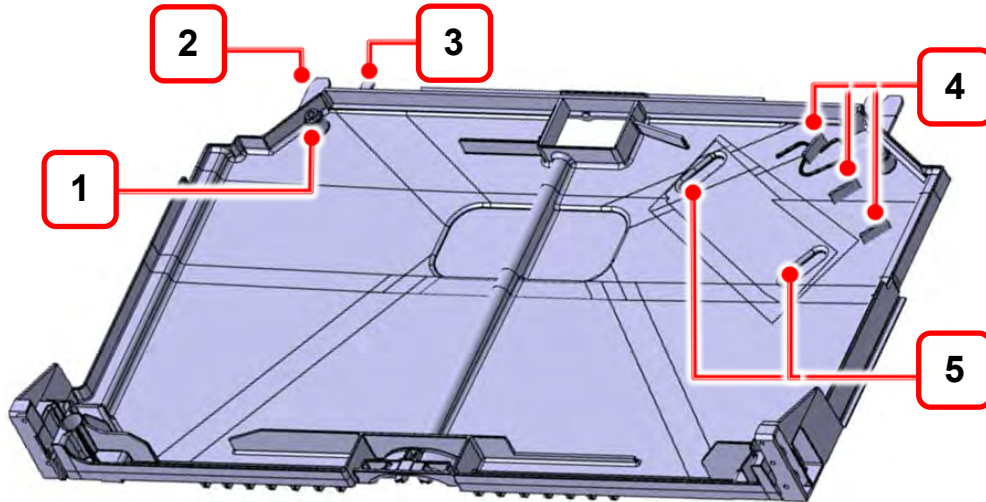
Inner side



| | |
|----------------------------------|--------------------------------------|
| 1- Holder for active drying hose | 2- Cable exit and holders for cables |
| 3- Holder for float switch | |

3.4. Bottom tray

Details



1- Screw bosses that is only planned to be backup if the snaps fails

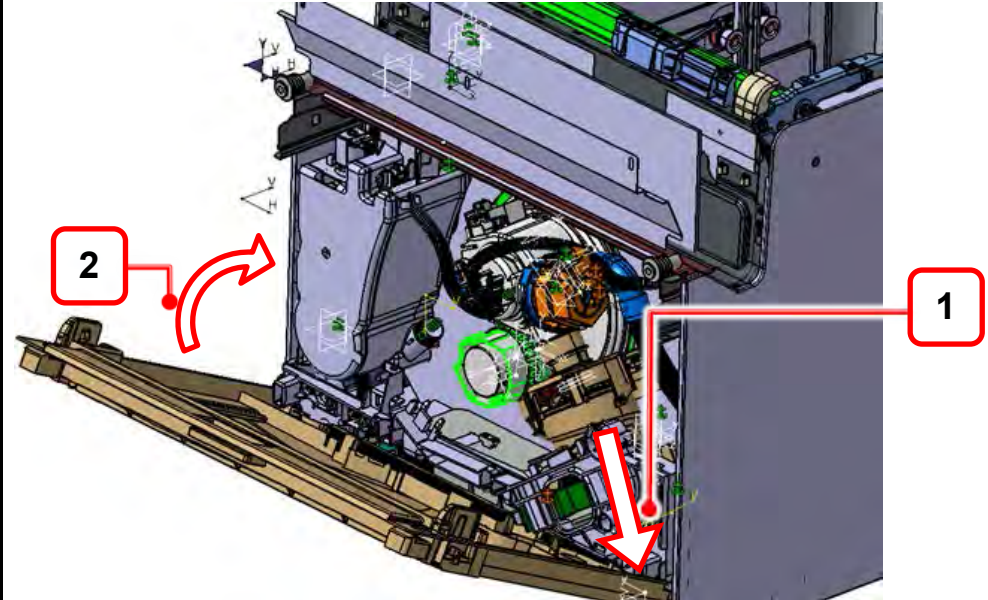
2- Snaps for assembling tray to base

3- Ribs to help controlling the movement when assembling the tray

4- Ribs to lift cable to prevent them from reaching the water

5- Dents for rubber fixation of motor

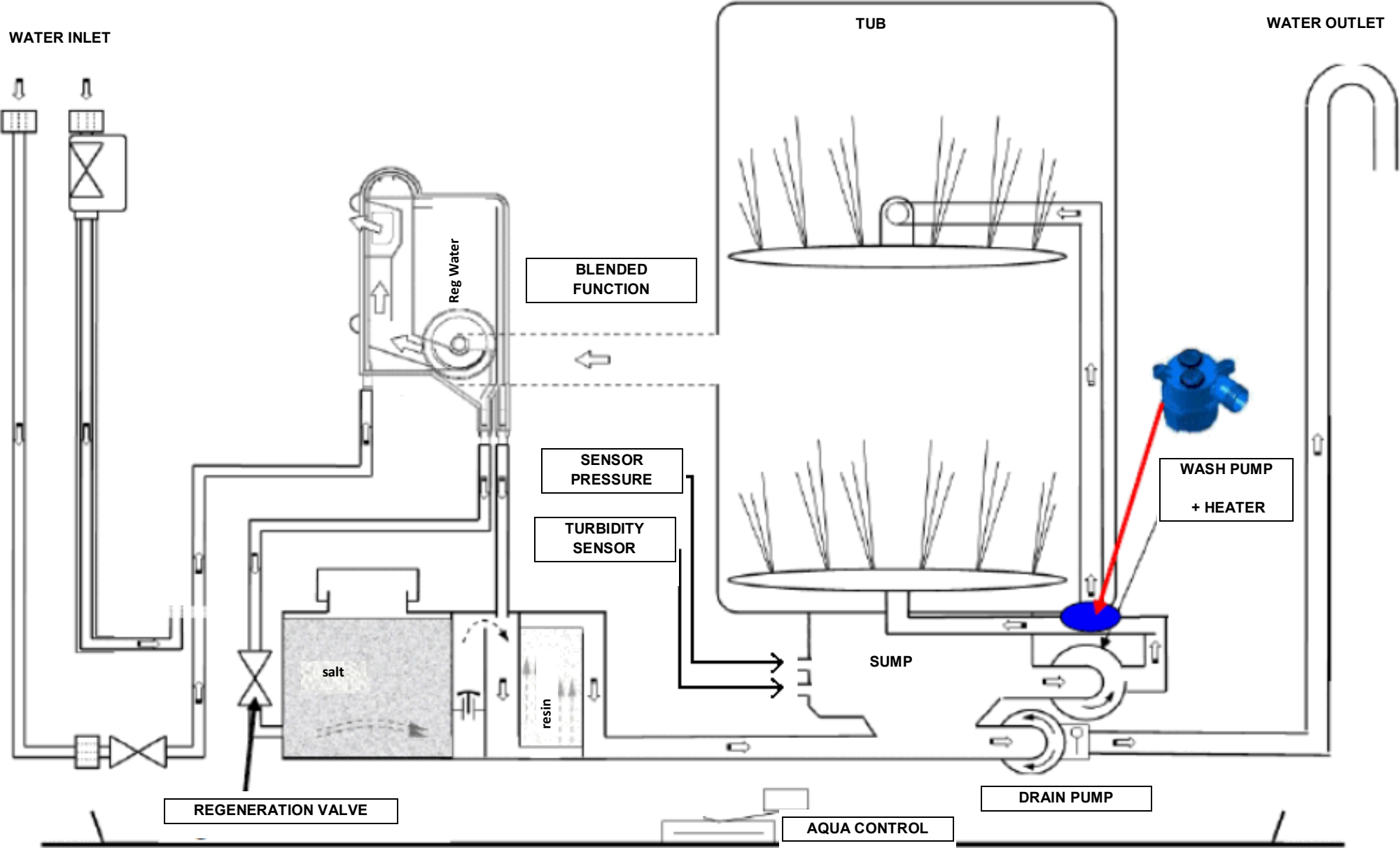
Assembly instructions



1- Insert bottom tray (without metal feet), the tabs on the tray must match the slots in the base.
The tray should be horizontal if the machine lays on its back

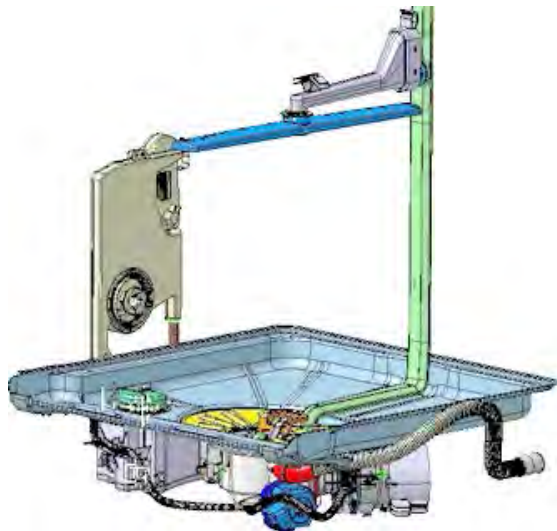
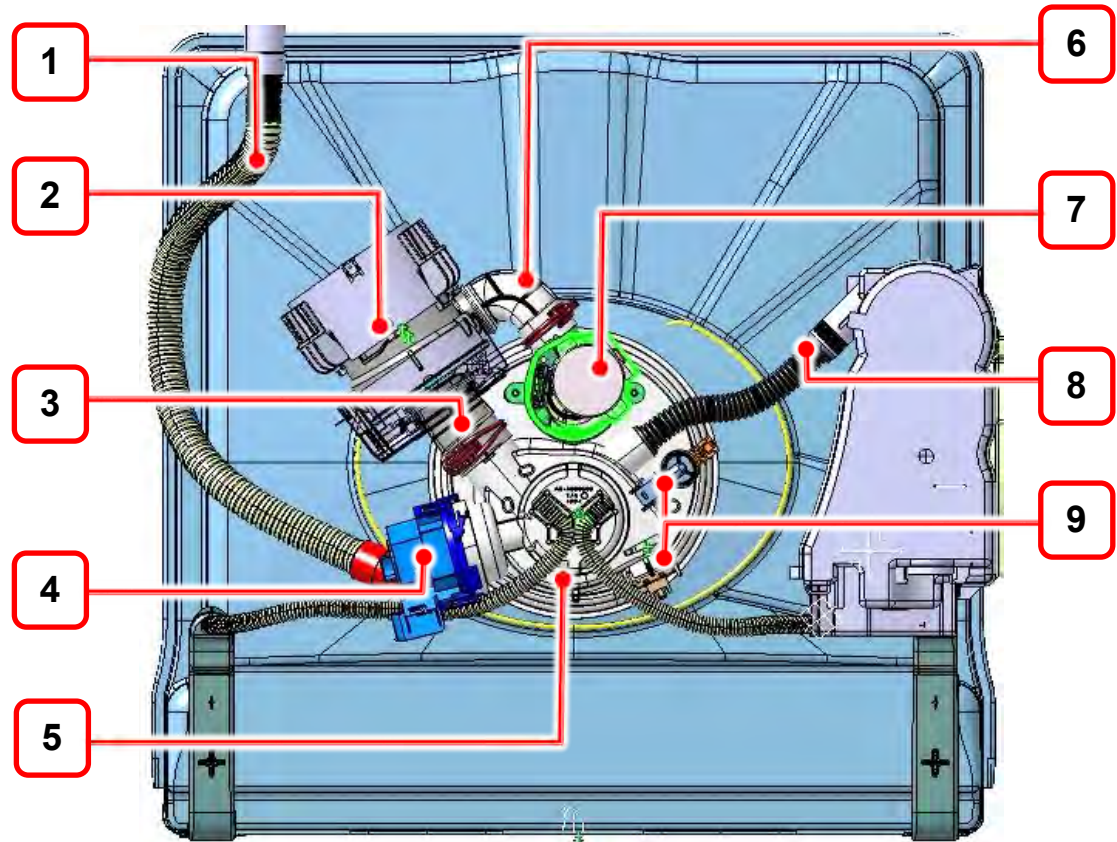
2- Keeping bottom tray pushed inwards, rotate it into place

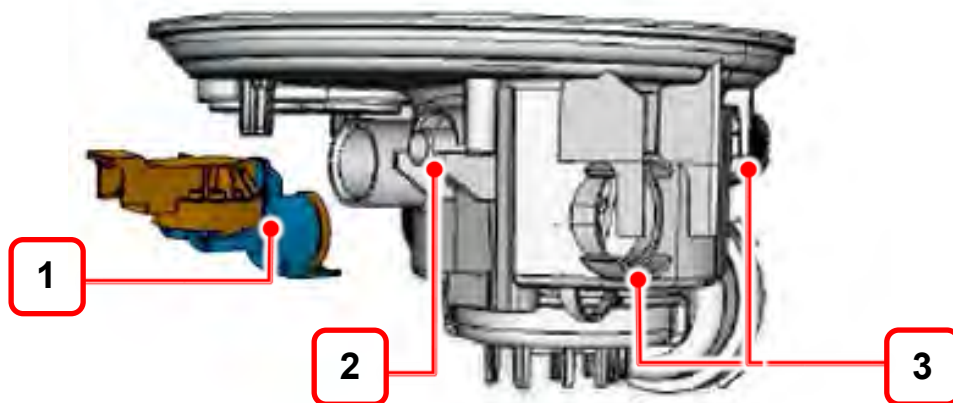
3.5. Water circuit



3.6. Hydraulic circuit

| | |
|--|---|
| 1- Drain hose. | 2- Wash pump with integrated heater |
| 3- Hose pump-sump (included with sump) | 4- Drain pump |
| 5- Sump | 6- Hose pump-FC/FD (included with pump) |
| 7- Flow controller (FC) or Flow distributor (FD) | 8- Hose softener-sump |
| 9- Sensors | |



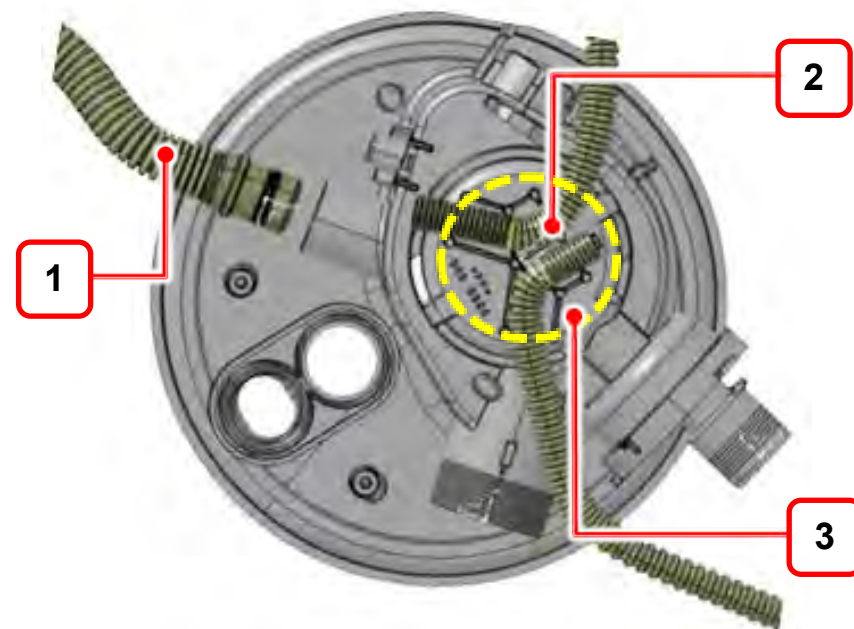


1- Pressure sensor with radial sealing

2- Pressure sensor snap:

- robust snap from bottom
- ribs in sump to limit rotation
- half round rib to limit move upward

3- Harness snaps



1- Softener-ump hose:
Corrugated pressed and sealed using o-ring compression. Symmetrical connectors from sump and softener side.

Proper assembly: must put hose to the sump and than to the softener.

2- Overflow hoses:
The same parts for both sides. Position provided by friction with sump ribs. Ribs are indicating correct assembly position

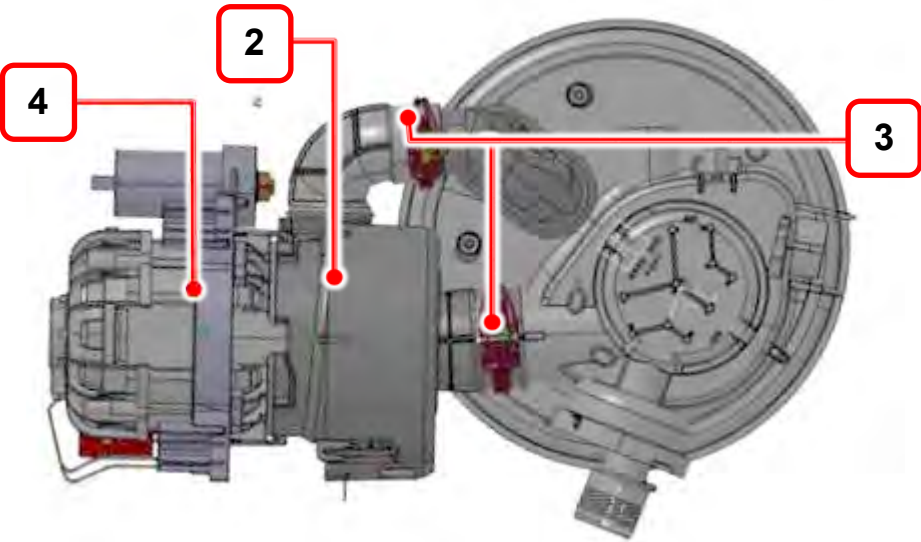
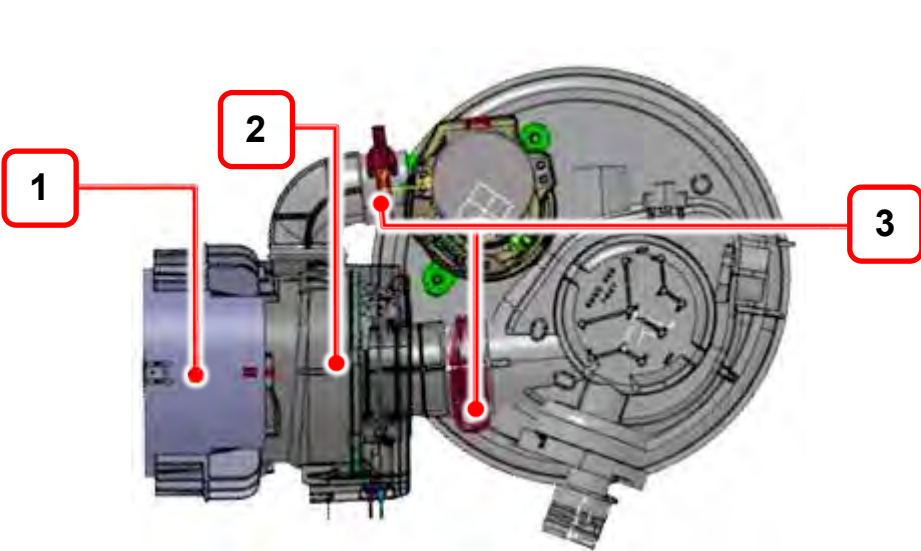
3- Secure that the hose pointing towards the front of the DW is not routed outside indicated yellow circle.

3.7. Sump Circ Motor and Heater

Main Pump assembly:

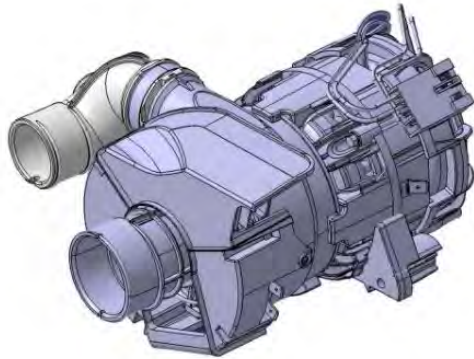
- Common interface with new volute
- Basement fixation is same
- Includes hose to flow controller
- Includes pump-sump hose
- Includes Omega heater
- Includes steel shield around

For both motors the heater is available as separate spare part

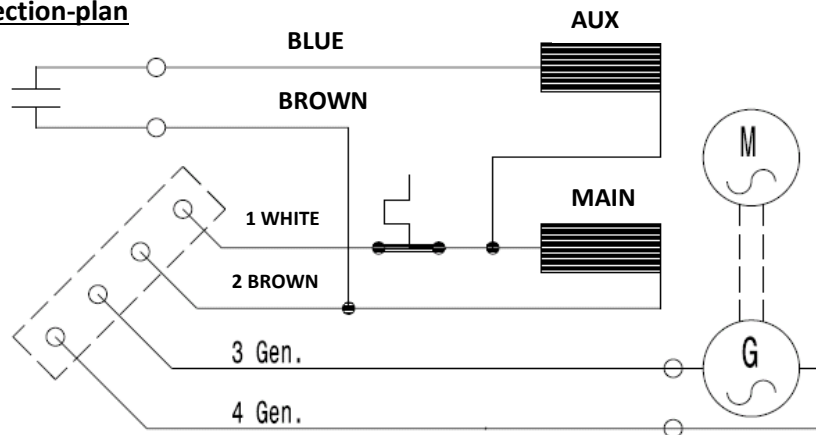


| | |
|---------------------------------|-------------------------------|
| 1- BLDC motor with Flow Control | 2- Omega heater |
| 3- Clamps | 4- Asynchronous motor with FD |

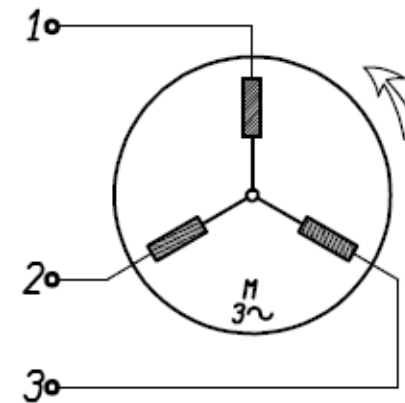
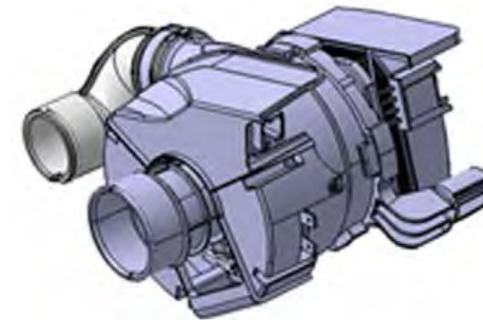
Single phase asynchronous washing pump motor with FD



Connection-plan

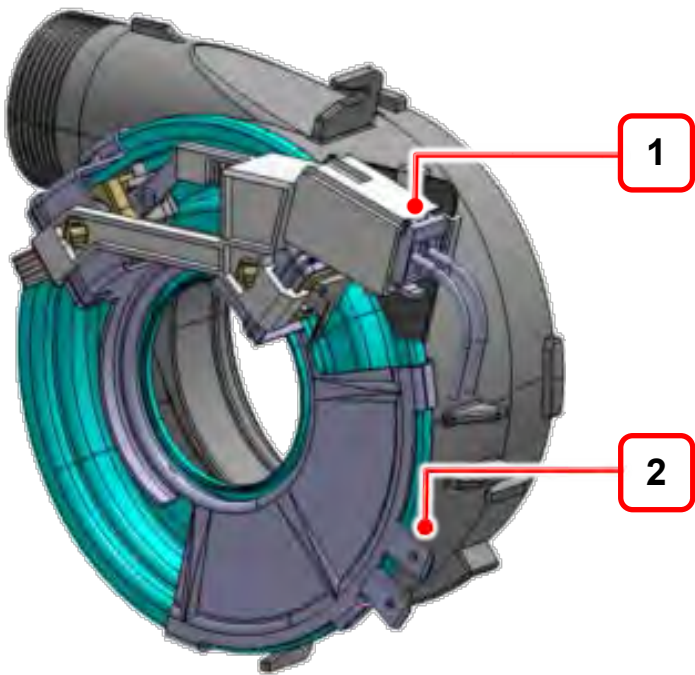


Three phase washing pump BLDC motor with FC



230/240 V 50/60 Hz Class F
Resistance: 1-2: 56 ohms/2-3: 56 ohms/3-1: 56 ohms

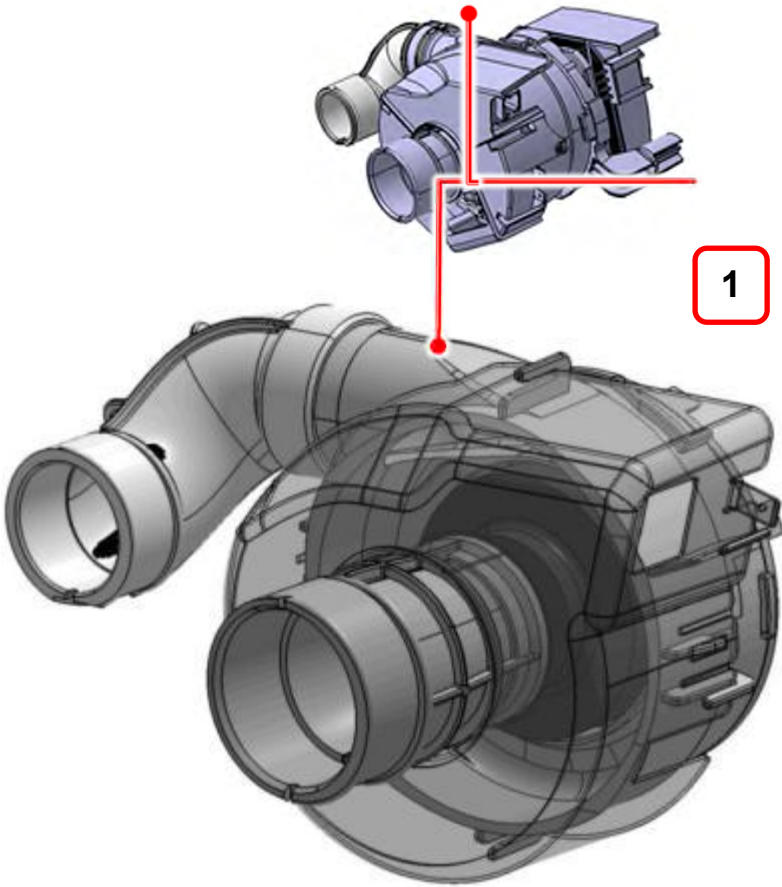
Omega heater:



1- Electric connection of the heater

2- Ground connection

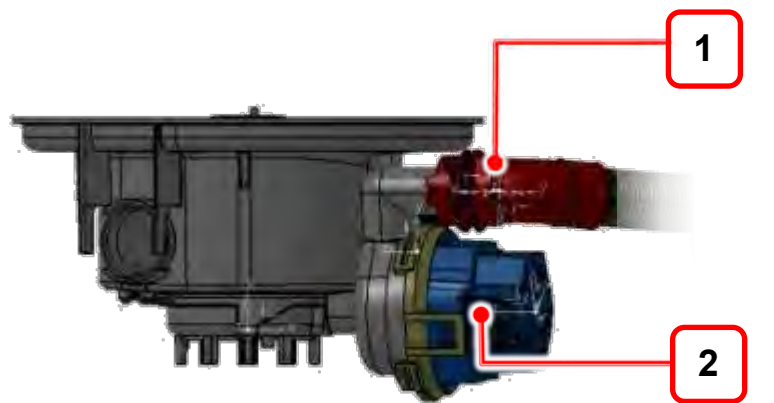
Voltage EU 220-240 V, Power: 1800 W
Voltage EU 220-240 V, Power: 2040 W



1- Heater Cover

3.8. Sump and drain system

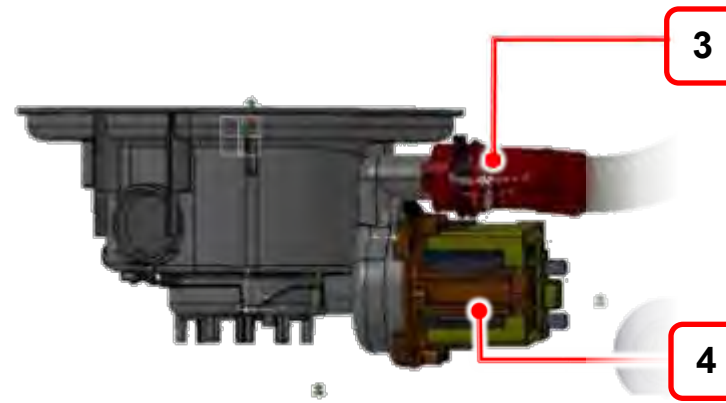
Three-phase Synchronous BLDC motor



- 1- Cuff on drain hose:
- Clamped to drain outlet.
 - Positioned by rib in sump and ribs in cuff.

- 2- Drain pump (Three-phase Synchronous BLDC motor):
- Fixed directly in sump built-in volute using Bayonete system
 - Back of protection hook provided for motor

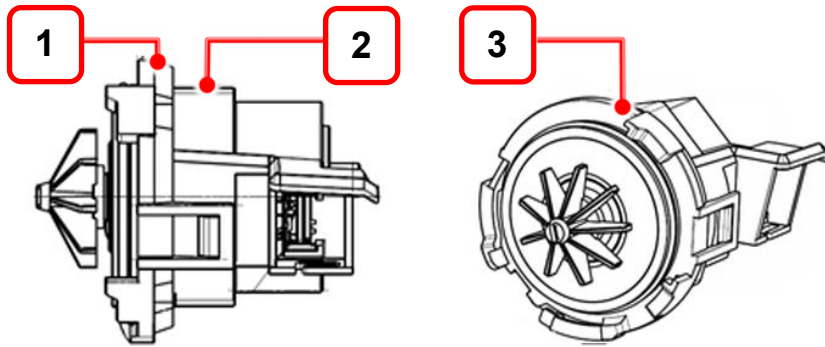
Single-phase Synchronous motor



- 3- Cuff on drain hose:
- Clamped to drain outlet.
 - Positioned by rib in sump and ribs in cuff.

- 4- Drain pump (Single-phase Synchronous motor):
- Fixed directly in sump built-in volute using Bayonete system
 - Back of protection hook provided for motor

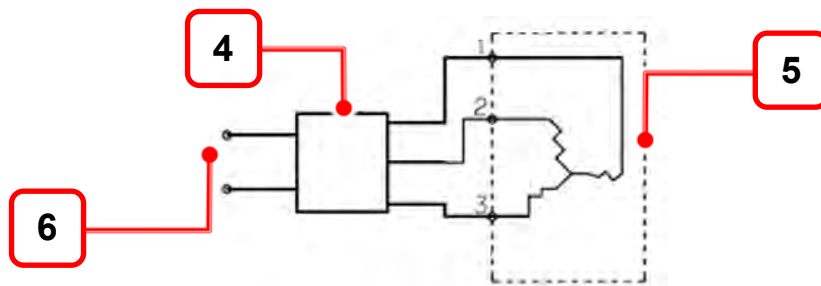
Drain pump - Three-phase Synchronous BLDC motor



Voltage 230 V 50 Hz

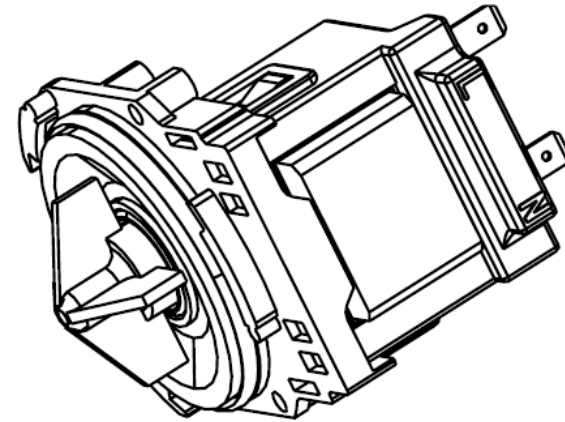
Power: 21 W → resistance 93 ohms +/- 10%

Max flow rate: 15 litre/min



| | |
|--|---|
| 1- Cover | 2- Housing |
| 3- Triple bayonet fixation aligned into sump connector | 4- Motor driver (not incl. in assembly) |
| 5- Motor | 6- Power supply |

Drain pump - Single-phase Synchronous motor



Voltage 230 V 50 Hz

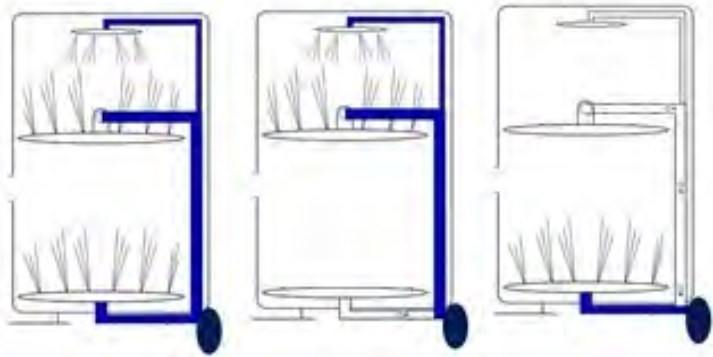
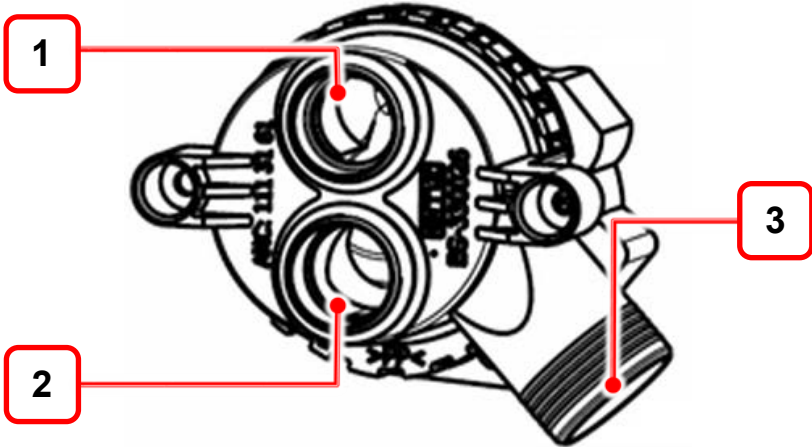
Power: 30 W → resistance aprox 225 ohms

Max flow rate: 15 litre/min

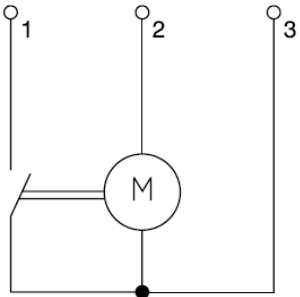
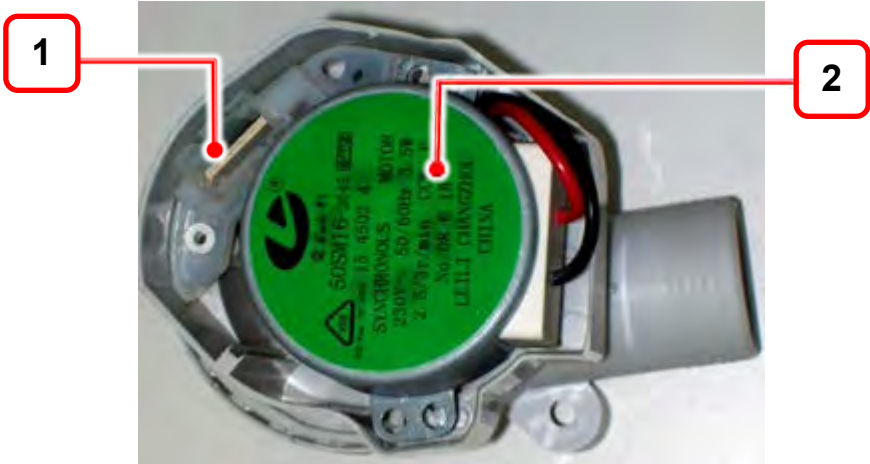
3.9. Flow controller

Details

The flow controller is designed to control the water flow towards the top spray arm only, bottom spray arm only or towards both spray arms.



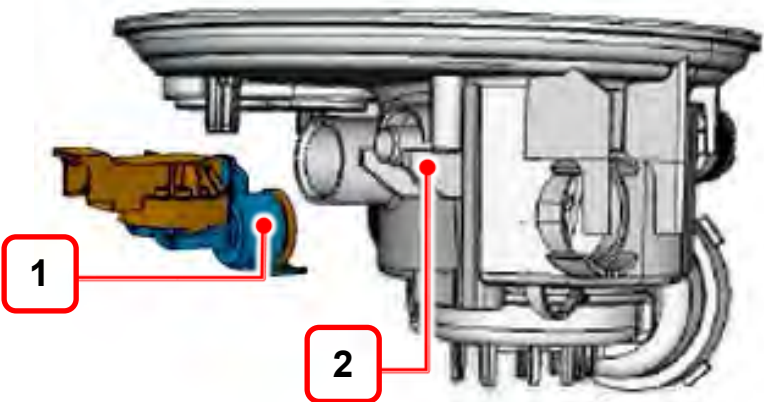
| | |
|-------------------------------------|-------------------------------------|
| 1- Water outlet to lower spray arms | 2- Water outlet to upper spray arms |
| 3- Water inlet from wash pump | |



| | |
|-----------------|---|
| 1- Micro switch | 2- Synchronous motor 230V AC, 50/60Hz 2.5/3 rounds/minute Counterclockwise direction |
|-----------------|---|

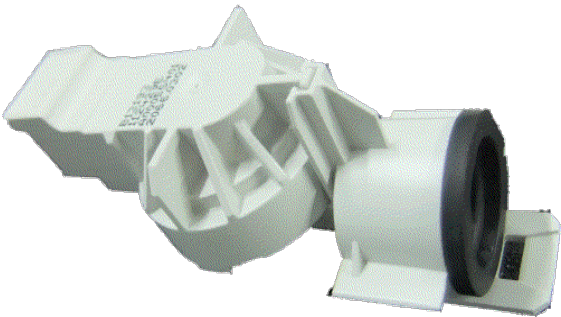
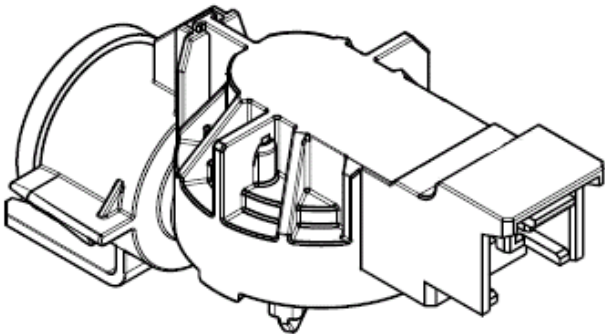
3.10. Pressure sensor

Details



1- Pressure sensor with radial sealing

2- Pressure sensor snap: robust snap from bottom ribs in sump to limit rotation half round rib to limit move upward



Frequency output (0-5V Signal),
Range: 0-300mm
Connection: 3 connectors RAST 2.5mm

| Pressure mmWc/PA | Frequency | Tolerance 20°C | Tolerance 70°C |
|---------------------|-----------|------------------|---------------------|
| - | 44.3 | + / - 3mmWC / 1% | + / - 5mmWC / 1.7% |
| 75 | 42.16 | + / - 3mmWC / 1% | + / - 5mmWC / 1.7% |
| 150 | 40.0 | + / - 6mmWC / 2% | + / - 8mmWC / 2.7% |
| 225 | 37.77 | + / - 9mmWC / 3% | + / - 11mmWC / 3.7% |

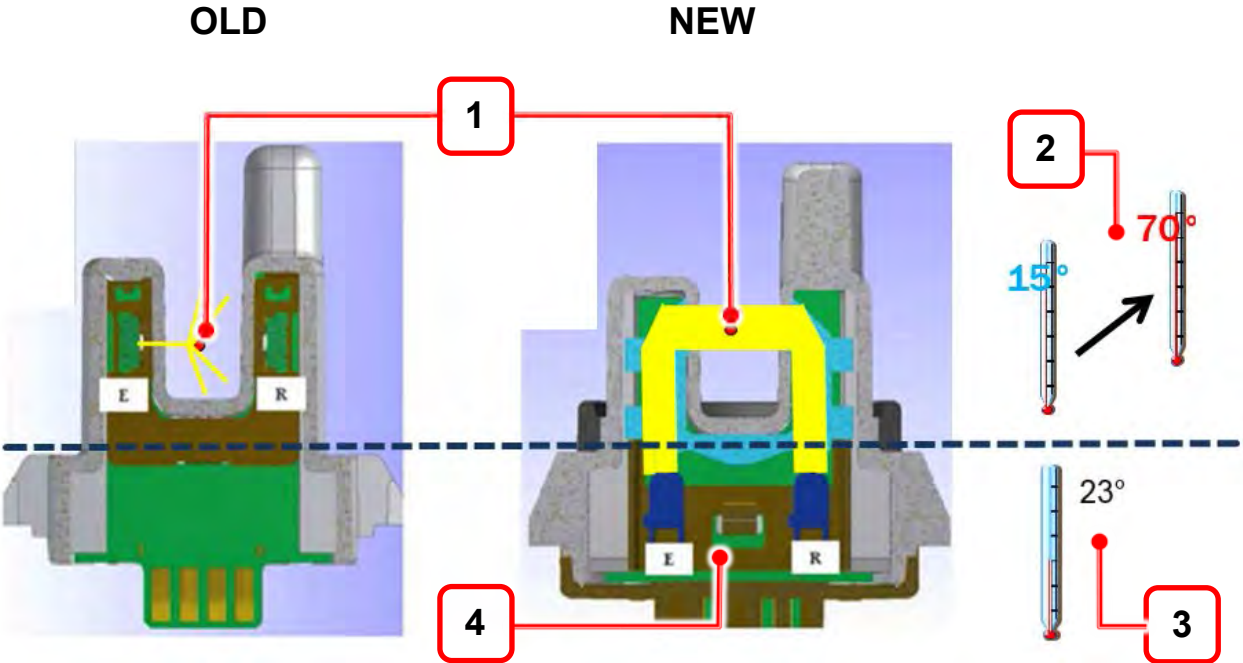
3.11. Turbidity sensor (High power sensor)

Control both the temperature and the turbidity of the washing water.
Positioned externally on the sump in direct contact with the water.
Fitted with an NTC sensor for control of the temperature.
Fitted with an infra-red system for control of the turbidity of the water (i.e. the quantity of dirt in the water).
Constantly transmits the two signals to the electronic control system for processing.

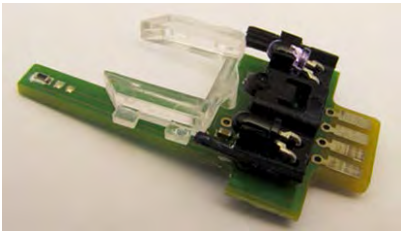
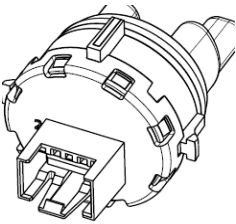
By correctly combining the signals received from the two sensors (NTC and turbidity), enables the appliance to perform "automatic" washing cycles which automatically optimize the washing cycle according to the type of load, the quantity of the load and the degree of soiling.

The light is collected by a new technology and guides the light into the measurement zone.

- Use of larger LEDs
 - the light area increases from 3 to 20sqmm
 - small dirt pieces cannot block the light beam anymore
- LEDs are located in a colder area
- less temperature fluctuations around the LED's
- higher precision during measurement
- improved signal stability
- measurement during higher pump speed is possible.

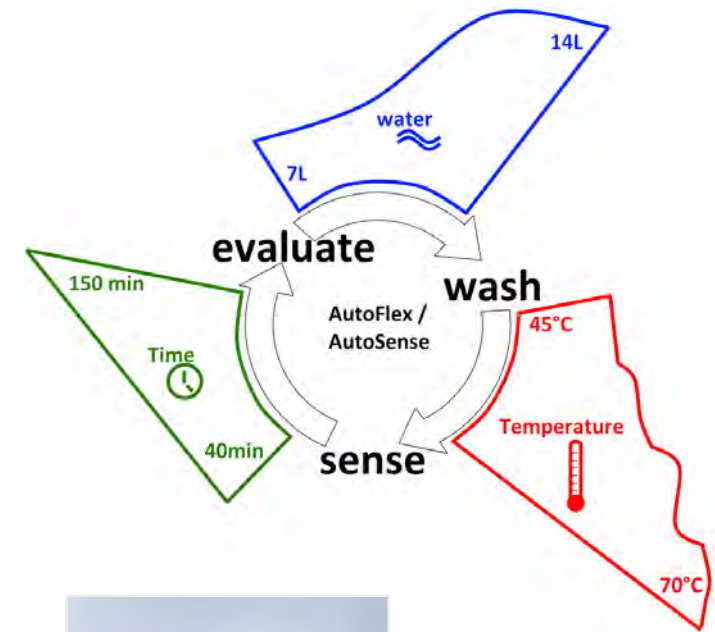


| | |
|--|---|
| 1- Dirt pieces | 2- Temperature between 15-70°C in water |
| 3- Constant 23°C measured, because LEDs are outside the hot water area | 4- The temperature sensitive electrical components are out of the water zone, where the temperature is colder and more constant |



3.12. Automatic Cycle: AutoSense

- The AutoSense software
 - Washes the dishes and detaches the dirt continuously
 - In this way the turbidity sensor can detect the degree of dirtiness
 - And will define, if additional rinses are necessary.
 - The measurements will be done continuously during the cycle.
- Temperature, water consumption and duration is adjusted to the degree of dirtiness.



Comparison Auto 45-70 vs AutoSense 45-70

**AUTO
SENSE
45°-70°**



0.6 ... 1.4kWh



7 ... 14 l



40 ... 150min

**AUTO
45°-70°**



0.9 ... 1.6kWh



8 ... 15 l



90 ... 160min

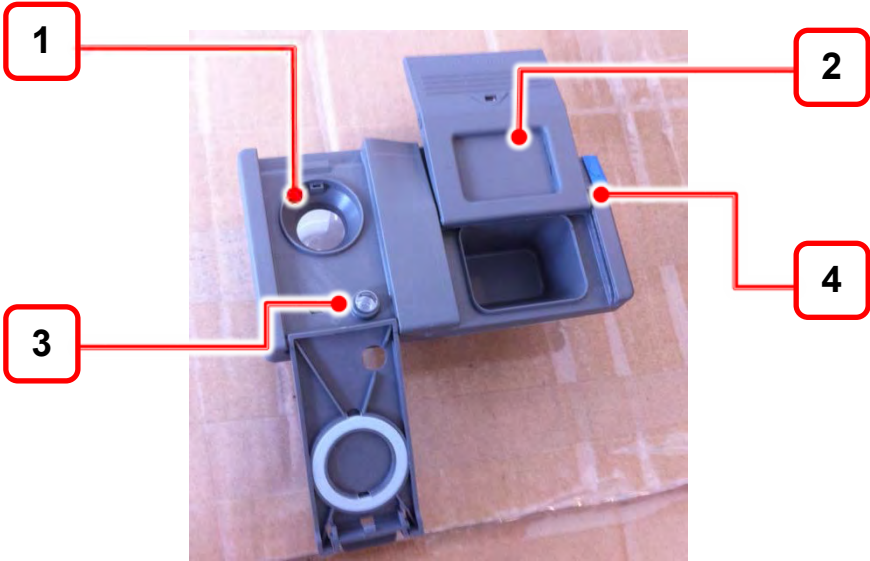
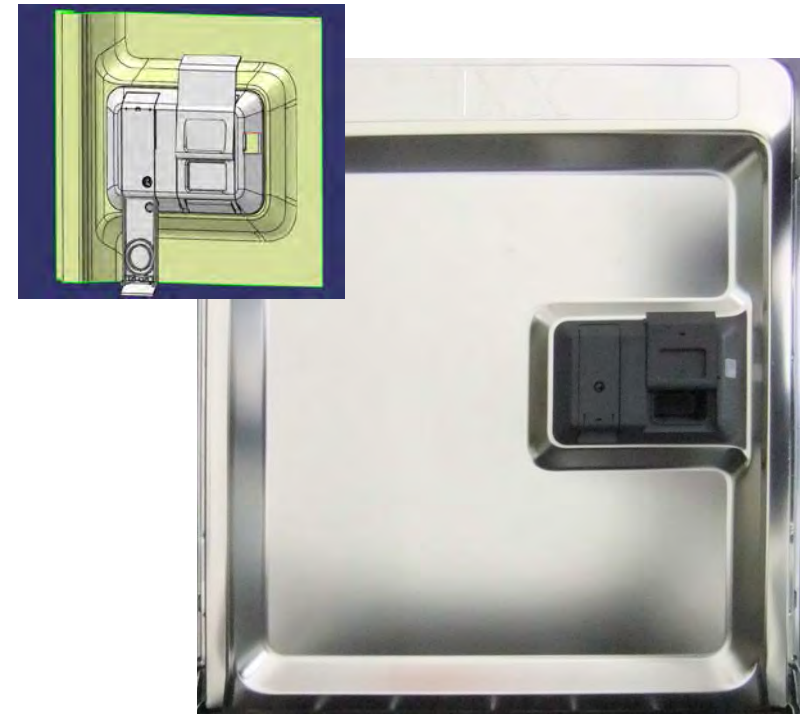
3.13. Global Dispenser

Details

The dispenser have the following main features:

- Low voltage driving - 5VDC => Safety improvement
- Multiple dosage => Performance/Quality improvement
- Sliding lid => Performance/Quality improvement

It's present on dishwashers with "Thin inner door".
Assembly process as today. It is screwed in to door cut out in an automated line.



| | |
|--|--|
| 1- Multi dosage -> No knob | 2- Sliding door. Improved access to wash compartment and no interaction with basket. |
| 3- Rinse aid level detection variants <ul style="list-style-type: none">- Optical (Shown on picture)- Electrical (For signal to MB) | 4- Activation button on side |

3.14. Multi Dosage – Specification

▪ PERFORMANCE

The dosage of the rinse-aid has to be independent of the filling status of the container, as long as the refill indication isn't reached. After indicating the refill minimum for another 2 dosage cycles the nominal volume has to be guaranteed.

▪ Dosage procedure – Multiple dosage

The first activation impulse opens the detergent lid, no rinse aid should be dosed into the tub.

With each further activation impulse a dosage volume of 1,5 ml has to be dosed into the tub.

The allowed dosage time for 4 dosage cycles is max. 7 minutes.

The nominal dosage volume with 4 dosage cycles is 6 ml.

The maximum number of dosage cycles is 6.

The maximum dosage volume with 6 dosage cycles is 9 ml.

▪ Rinse aid volume

The rinse aid container must have an available volume of 120 ml \pm 3%. All dead volumes in the container have to be minimized. The design has to avoid air chambers in the container, which might influence the available volume or the exactness of the dosage.

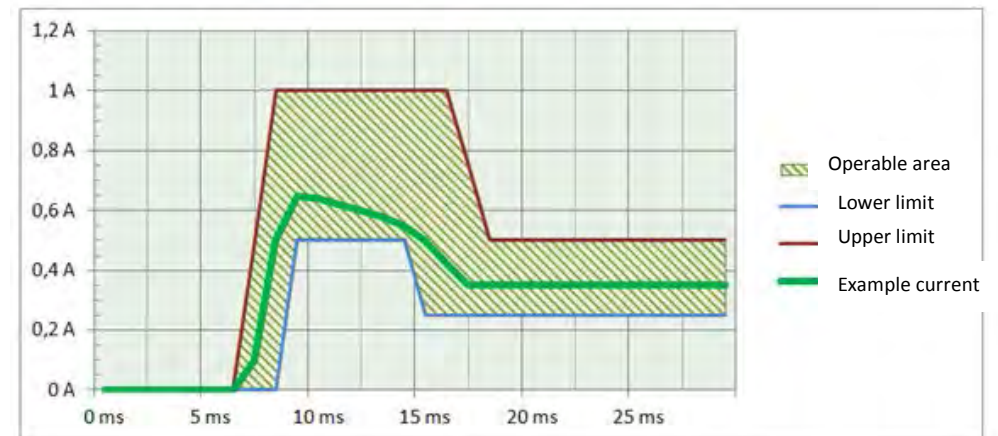
During main wash phase – Detergent lid opening:

| Step | Action | Time | Purpose |
|------|--------------------|-------|--|
| 1 | Activation of coil | 0.3 s | Opening the detergent lid to release detergent |

During hot rinse phase – Rinse aid delivery:

| Step | Action | Time | Purpose |
|------|--------------------|------|--|
| 1 | Dosage check - | | Check if rinse aid should be delivered If 0 → no delivery the rinse aid delivery process should be stopped. |
| 2 | Activation of coil | 5 s | Delivery of dose of rinse aid – 1,5ml nominal |
| 3 | Pause | 10 s | Refill of dosage chamber |
| 4 | Repeat from step 2 | - | Number of dosages according to set level. |

| | | |
|------------------------|--------------------------|----|
| Rise time | $0.5 \leq T_r \leq 4$ | ms |
| Pulse amplitude | $0.5 \leq P_A \leq 1.0$ | A |
| Pulse width | $5 \leq P_w \leq 15$ | ms |
| Holding current | $0.25 \leq I_h \leq 0.5$ | A |



Visualization of current pulse specification

3.15. XtraDry option

The XtraDry option increases drying performance and impact the following:

- Extension of the drying phase
- Higher temperature in the rinse cycle
- Increase adding of rinse aid

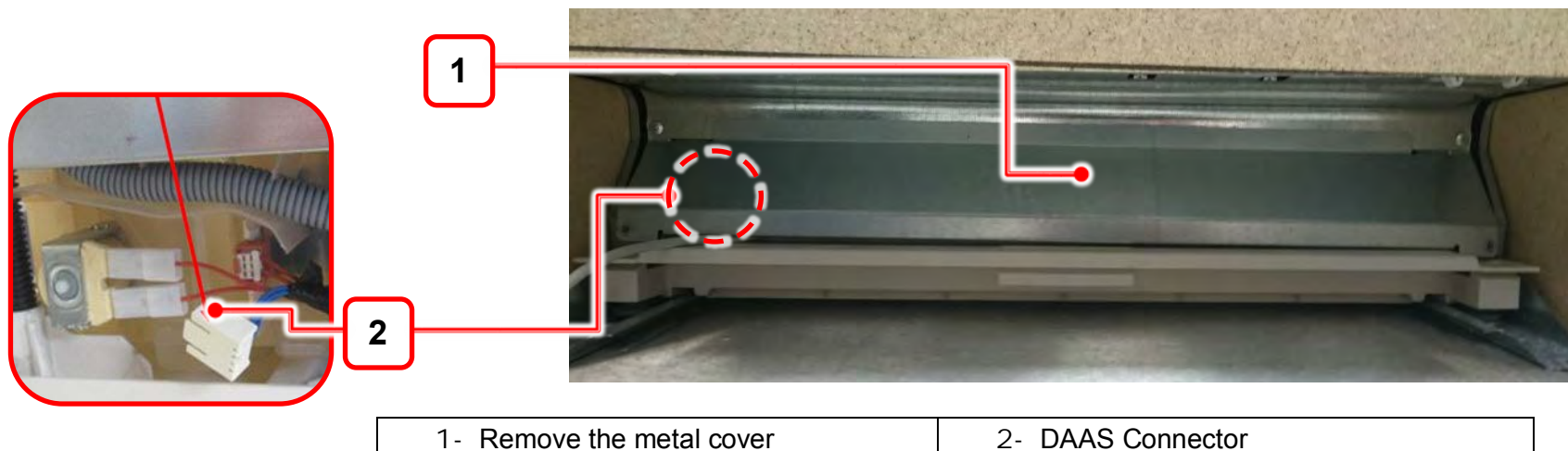
| PROGRAM | DRYING PHASE | TEMPERATURE HOT RINSE | RINSE AID |
|------------------|--------------|-----------------------|-----------|
| Intensive 70°C | +30min | +1°C (70°C) | +3 ml |
| Auto 45°C - 70°C | +30min | +1°C (70°C) | +3 ml |
| Eco 50°C | +0min | +15°C (70°C) | +1,5 ml |
| Glass 45°C | +30min | +5°C (60°C) | +3 ml |
| 30 Min. 60°C | +30min | +10°C (70°C) | +3 ml |

The XtraDry option (extending time for better drying) and Time Saver option (reducing time) are not compatible.

3.16. DAAS / Sidekick connector

Details

The Sidekick can connect from the front of the appliance. The DAAS connector is available behind the lower front cover on the dishwasher. By removing the metal cover the DAAS connector is reached.



3.17. Door Lock with Auto Door Opening – 2nd generation

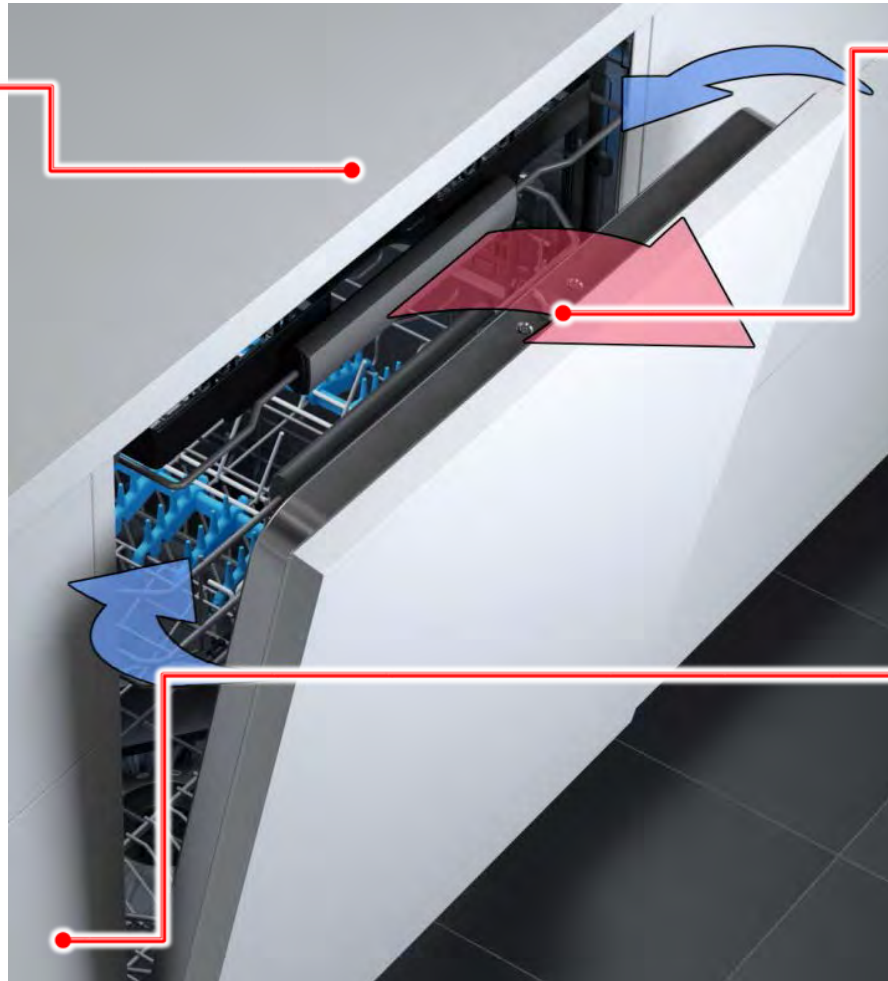
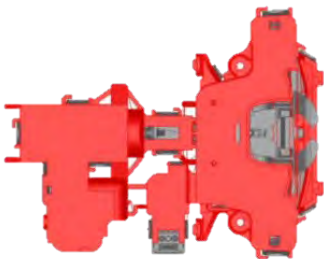
Doorlock

The door lock is fixed on the upper front cross bar, springs are adjusted to 50/60N.



Doorlock with Auto Door Opening

The mechanism to open the door is integrated in the locking device to guarantee process control



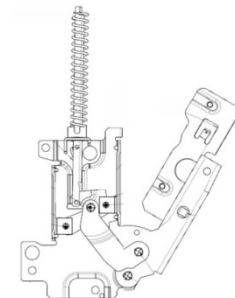
Diamond Latch

Opening and Closing feeling are defined by the shape of the Diamond Latch sitting in the door



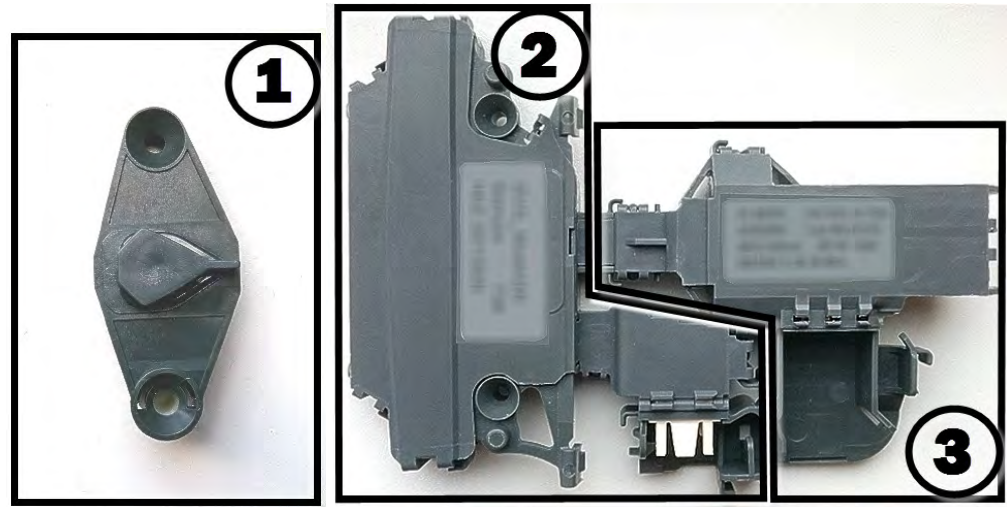
Hinges

After the locking is disengaged the hinges balance the door at 10cm opening, to guarantee air flow for drying efficiency and bench top protection.

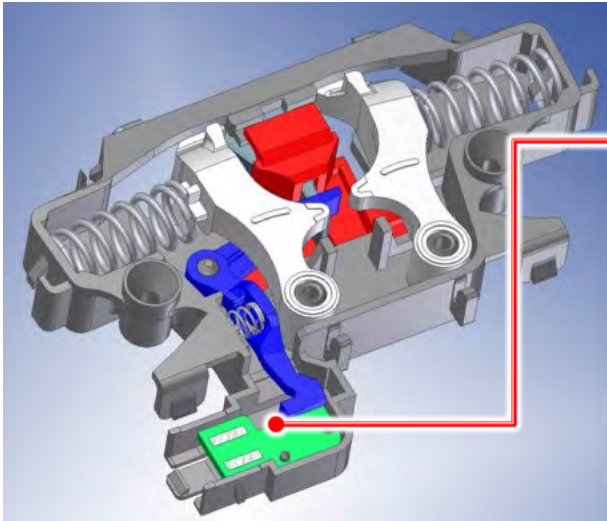


The door lock will have in the same part as the auto door opening. The door will open because of the new door hinges. The door lock, auto door opening and door hinges allow this new integrated system for better drying performance.

- 1 – Diamond Latch
- 2 – Door Lock
- 3 – Auto Door Opening



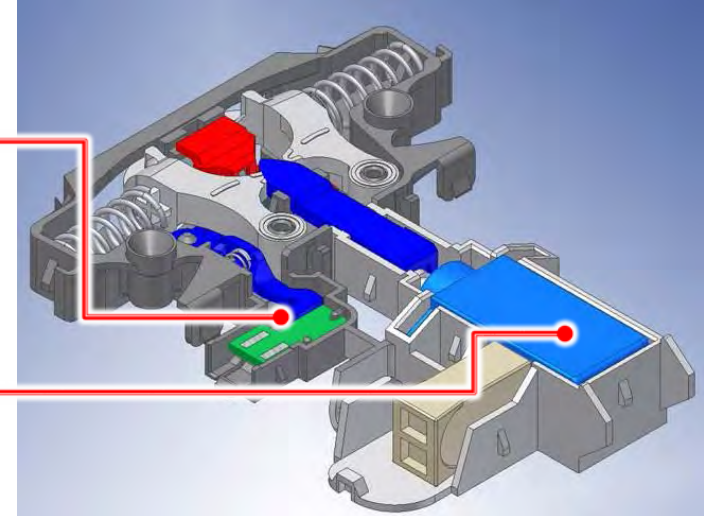
Door Lock



28V DC micro switch

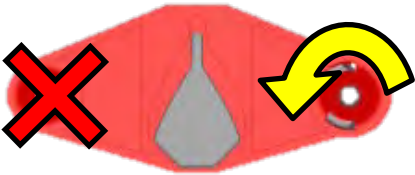
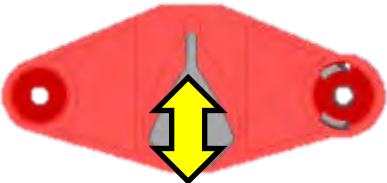




220/240V AC Wax actuator

Door Lock with Auto Door Opening



The Diamond Latch is fixed on the door, and it's possible to adjust the Diamond Latch's position.

How to adjust the Diamond Latch position

| | | |
|---|---|--|
| <ul style="list-style-type: none">- Loosen the right screw of the Diamond Latch until it spins.- Do not loosen the left screw at the same time.- Push downwards with the screwdriver on the screw to loosen the clamping lever. | <ul style="list-style-type: none">- Lift up the Diamond Latch between 2 fingers.- Push forward or backward (according to needed adjustment).- Push down until locked in position. | <ul style="list-style-type: none">- Fix the right screw again to lock the Diamond Latch. |
|  |  |  |
|  |  |  |

Detail of the lever on the Diamond Latch.

If door is hard to keep closed: adjust Diamond Latch forward into the dishwasher. If door is hard to close, adjust outwards of the dishwasher.

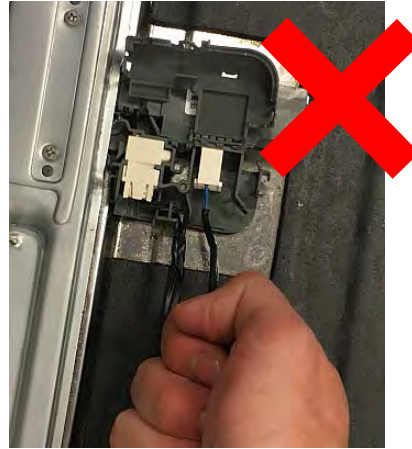


Disassembly:

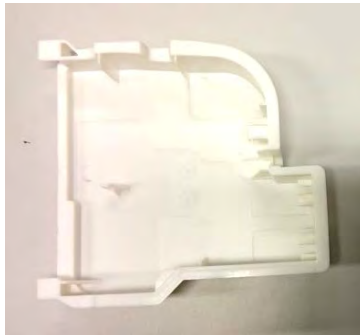
The door lock is snapped and fixed with 2 screws on the upper front cross bar, to exchange it, the crossbar has to be taken.



Door lock with Auto door opening assembly



When replacing the Door lock or Door lock with Auto door opening do not Pull on the wire's – use plyers to pull off connector.



Cover of Door lock with Auto door opening

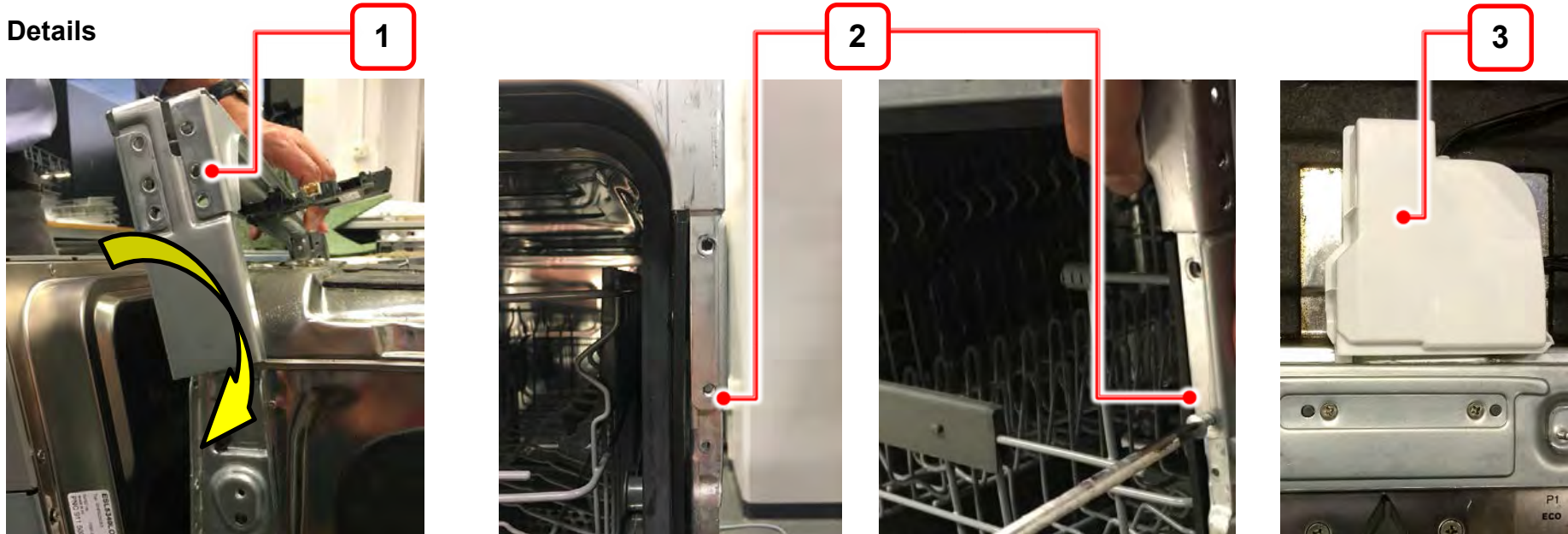


Detail of the snapped fixation with 2 screws on the upper front cross bar

Assembly:

- Use manual screw driver to avoid overturning and damaging the screws
- Make sure wires are not twisted or damaged
- Regarding the Wax motor – polarization does not matter
- Put the wires in the cable channel
- Put the new cover of the door lock
- Functional test with Service menu after assembly

Details



1- When assembling the crossbar needs to be rotated from the hingebar / tub

2- When assembling the crossbar, start with the front, lower screws for positioning

3- **Always assemble a new cover of the door lock.**

When disassembling the ADO Cover there is a risk of breaking the fixation snaps, or at least bending them, and thereby reducing the fixation force of this safety relevant component. Therefore, it is mandatory to replace the ADO Cover, once it has been disassembled, with a new part.

Careful assembly is necessary to ensure the safety function of this protective cover and be aware that the snaps in the rear do not break. **Covers with broken snaps may not be assembled.**

Auto door opening (ADO) – working description

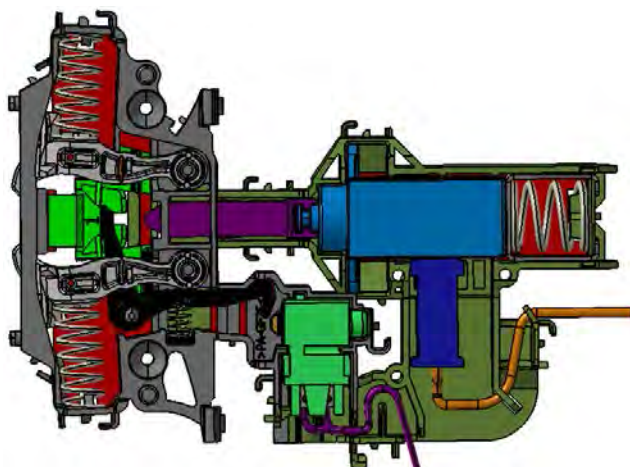
When the machine is done with the washing cycle, the door will open:

- The Wax motor in the auto door opening (ADO) is activated
- Latest 2min later the door lock release the door.
- The door falls through the weight of the door itself to 10cm opening, because the hinges are balanced for 10cm opening.
- The 10 cm opening allows for faster exchange of moist and dry air.
- When the drying is done, the machine beeps. The door remains open even after the cycle is finished.

The Auto door opening (ADO) is default on with option AirDry enabled.

The consumer may deactivate AirDry option on user mode for:

- Child safety feature
- Protection of the kitchen furniture, if customer is unsure.



ADO 1st Generation
(previous)



ADO 2nd Generation
(current)



Increased opening allows for faster exchange of moist and dry air

- Increased drying speed
- Decreased risk for condensation

How to check the Auto door opening (ADO)

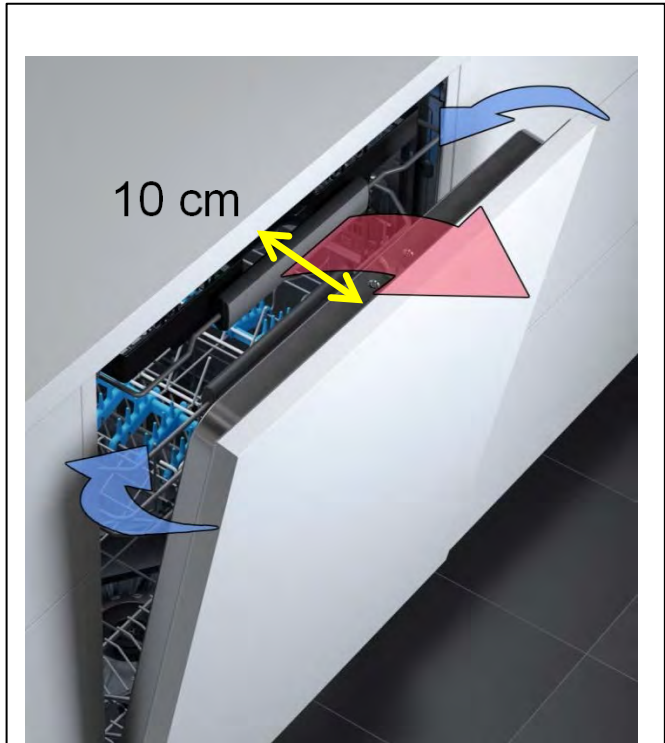
- Open the door
- Activate service mode
- Go to actuator position 10
- Close door
- Wait 2 minutes for the door to open
- Check if the door opens 10cm between the upper front cross bar and inner door

Door not closing

Probably the Auto door opener is still active.

The Wax motor is still warm, because it take about 3 min for cooling and allow the door to close.

On fully integrated models there is a “pusher” (strut) located on the hinge to assure that the door goes open.



Door opens:

5 to 10cm - Drying results are as expected.

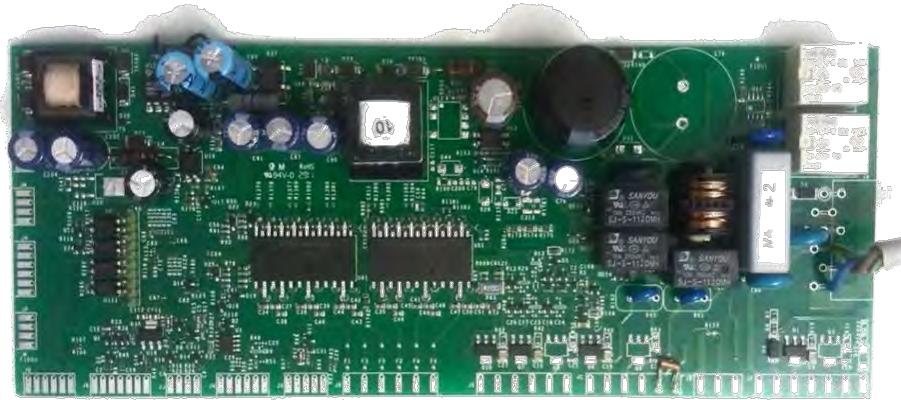
10 to 20cm – According to specification

More than 20 cm – The door might fall all the way open and this could mean that panel might be too heavy.

3.18. Electronic Main Boards

- The main board is placed on the rear side of the appliance in the basement area.
- The electronic board is assembled in a fire protected area.
- The metal cover works as fire protection and avoids mechanical damages on the main board.

PB 100



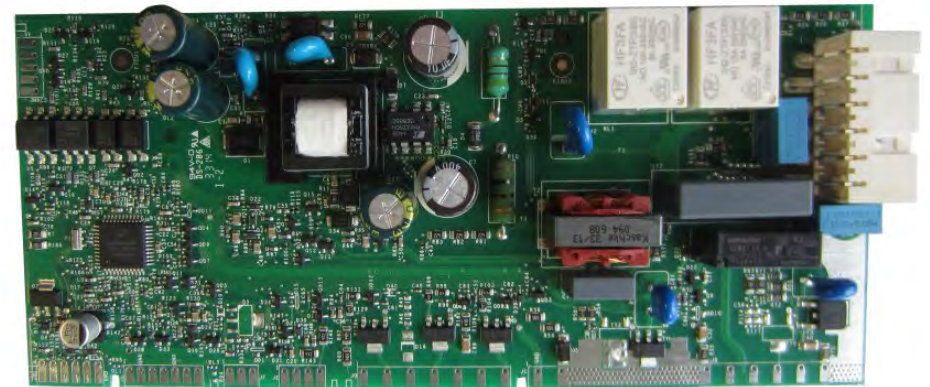
PB 200



PB 150



PB 300



| Features possible to support (Depending on mounting option) | PB100 | PB150 | PB200 | PB300 |
|--|-------|-------|-------|-------|
| Existing HV main switch | Y | N | Y | N |
| Existing LV main switch | Y | Y | Y | N |
| Auto-off functionality | Y | Y | Y | Y |
| Future logic main switch | Y | Y | Y | Y |
| BLDC Wash pump | Y | Y | N | N |
| BLDC Drain pump | Y | N | N | N |
| Async Wash pump | N | N | Y | Y |
| Sync Drain pump | N | Y | Y | Y |
| Wash pump Taco input | N | N | Y | Y |
| Safety isolated low voltage UI interface | Y | Y | Y | Y |
| Auto Door Opener (ADO) | Y | Y | N | Y* |
| Integrated main filter | N | Y | Y | Y |
| Integrated LV tub lights driver | Y*** | Y*** | N | N |
| Leakage Switch | Y | Y | Y | Y |
| Flow control | Y | Y | Y | N |
| Existing HV dispenser | Y | Y | Y | Y |
| Low voltage dispenser | Y | Y | Y | Y |
| Inlet valve | Y | Y | Y | Y |
| Regeneration valve | Y | Y | Y | Y |
| Pressure sensor | Y | Y | Y | Y |
| Salt sense | Y | Y | Y | Y |
| Rinse sense | Y | N | Y | N |
| Display on Floor (DOF) | Y | Y | Y | N |
| Beam on Floor (BOF) 2-colour | Y | Y | Y | N |
| DAAS | Y | Y | Y | Y |
| Extra MACS connector for future modules | Y | Y** | Y ** | N |
| JTAG IF to microcontroller for development | Y | Y | Y | Y |
| | | | | |
| *= PB300 updated with ADO support Q4 2016 | | | | |
| ** = Can not be combined with DOF | | | | |
| ***= Only in North American variant | | | | |
| | | | | |

PB100

- High and Mid range covering all platforms. Supports both EU and NA via population options.
- BLDC wash and drain motors.

PB150

- Mid and Low range. Supports EU and NA.
- BLDC wash and SINC drain motors.

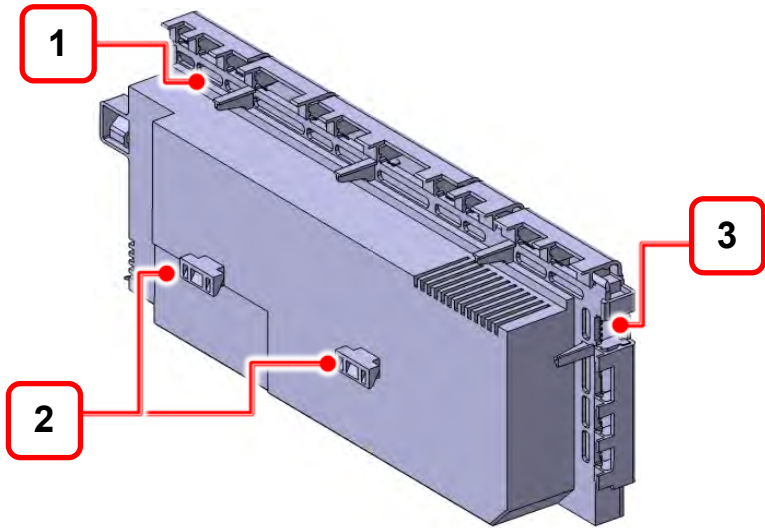
PB200

- Mid and Low range. Supports EU.
- ASYNC wash and SINC drain motors.

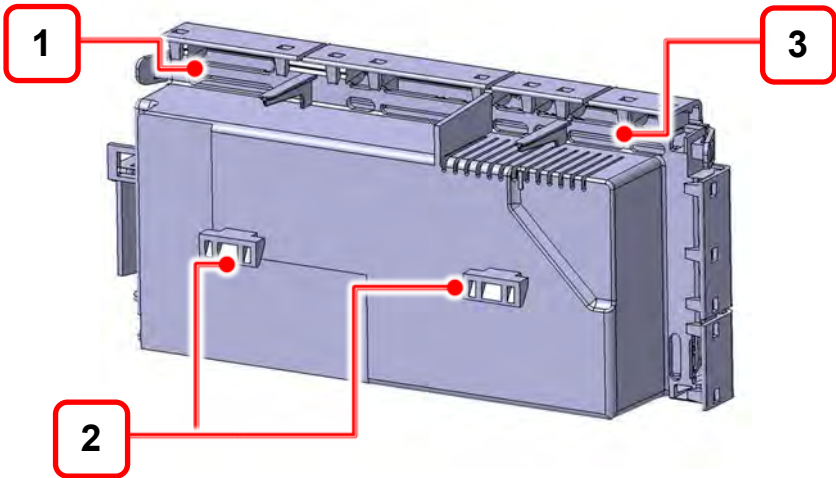
EDW-PB300

- Low range. Supports EU.
- ASYNC wash and SINC drain motors.

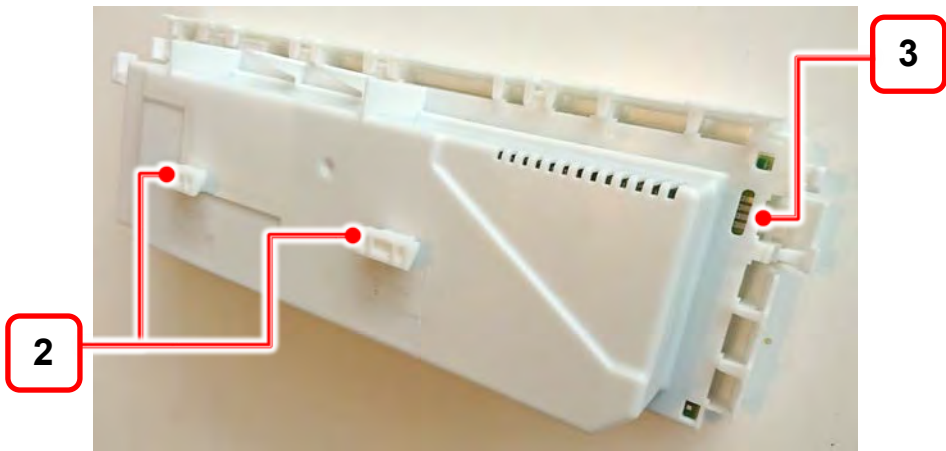
Electronic Box for Main Board PB100 / PB200



Electronic Box for Main Board PB300



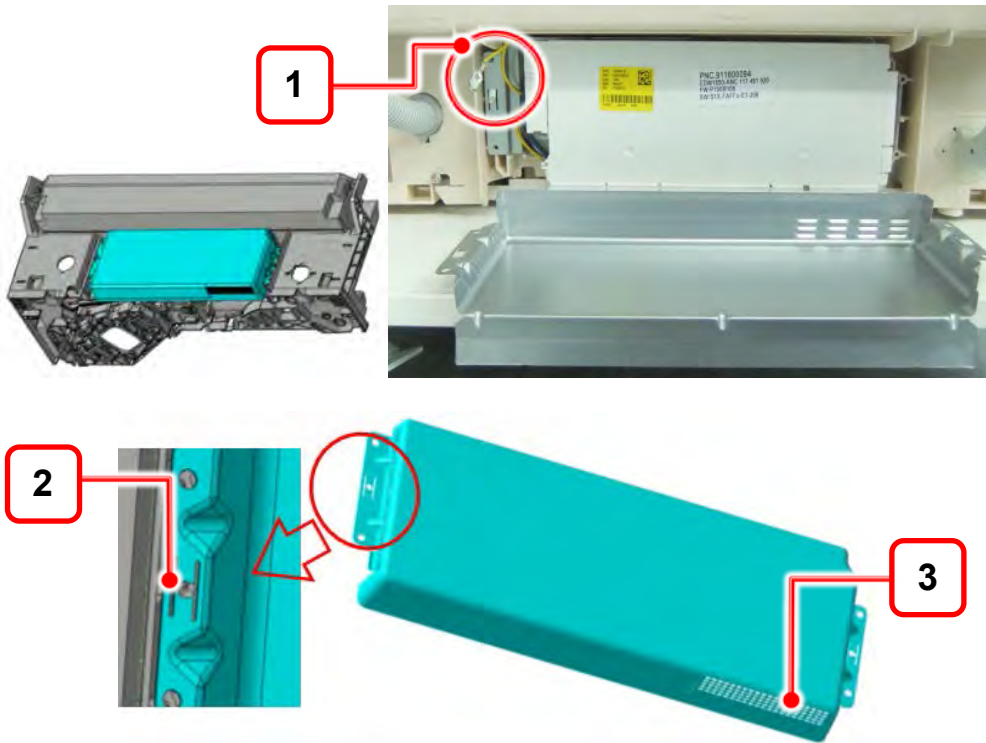
Electronic Box for Main Board PB150



| | |
|---|--|
| 1- Probe-slots for testing PCB One for each connector | 2- Fastening hooks goes into the base and locked by ribs in lower edge of the base |
| 3- DAAS-connector position Open interface due to easy access for service and programming | |

Metal cover for Main Board

The metal cover is a fire shield and protects the electronics from mechanical stress.

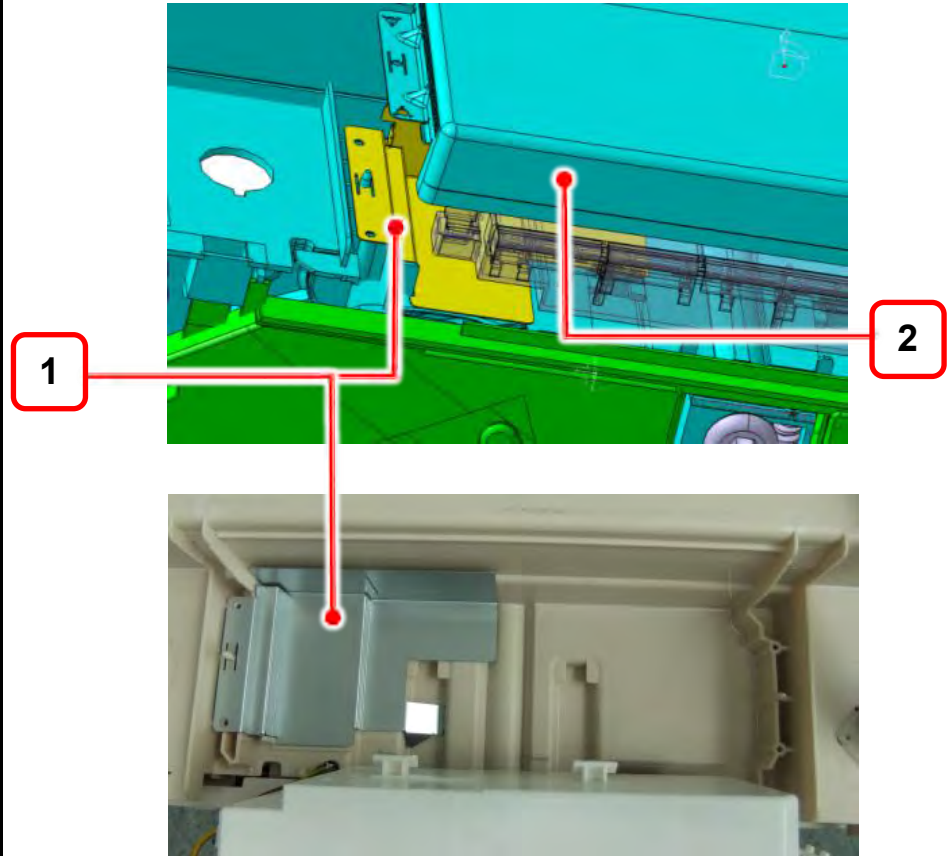


1- The yellow/green wire must be connected to the metal cover when the part is put back in position

2- Hole for pin, holding cover in place before screwing it to the base

3- Holes for ventilation

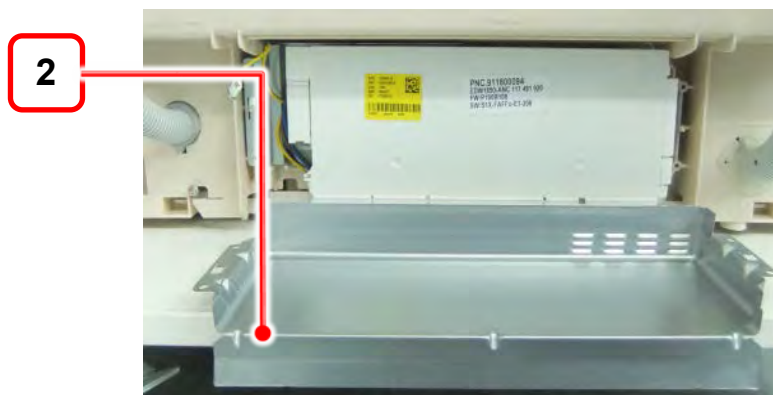
Inner fire shield



1- Inner fire shield

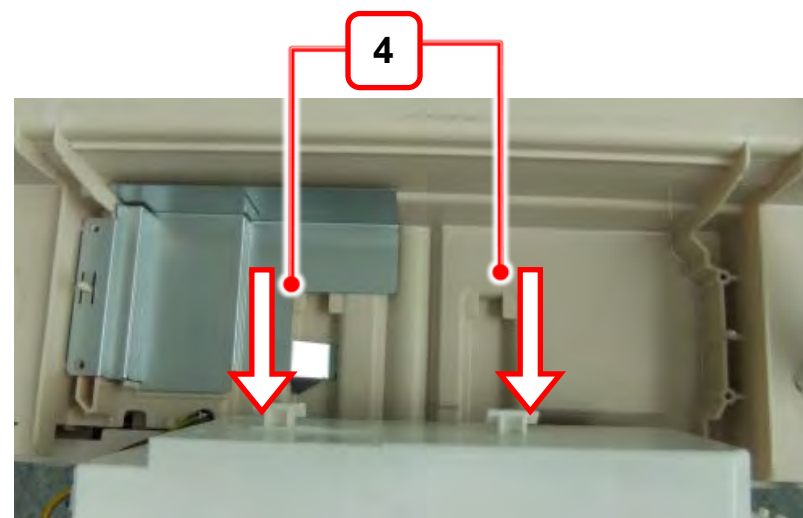
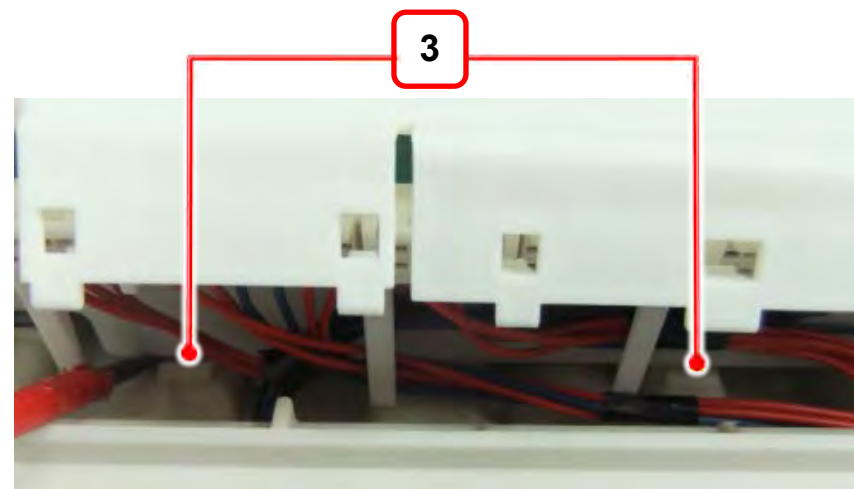
2- Metal cover to be assembled on top of electronic box

Main board disassembly



1- Remove 4 screws from the cover

2- Remove the metal cover



3- Unlock the 2 hooks

4- Pull the main board box downwards

3.19. Components check

| PARTS | PB100 BLDC LEAD CONNECTIONS | PB150 BLDC LEAD CONNECTIONS | PB200 ASY LEAD CONNECTIONS | PB300 ASY LEAD CONNECTIONS | CORRECT VALUE | REMARKS |
|--|-----------------------------------|-----------------------------------|----------------------------------|----------------------------------|-----------------------|--------------------------------|
| POWER CABLE | A5 ↔ L | A5 ↔ L | A5 ↔ L | A5 ↔ L | 0 Ω | |
| | A6 ↔ N | A6 ↔ N | A6 ↔ N | A6 ↔ N | 0 Ω | |
| ON/OFF SWITCH | E5 ↔ E6 | ↔ | D5 ↔ D6 | ↔ | 0 Ω | |
| AUTO OFF COMMAND | E3 ↔ E4 | ↔ | D3 ↔ D4 | ↔ | | |
| | | | | | 130 Ω ± 8% | DW off |
| Heating ELEMENT 2040W + Safety THERMOSTAT | A2 ↔ A1 | A2 ↔ A1 | A2 ↔ A1 | A2 ↔ A1 | 25.9 Ω + 11.1% - 4.7% | Serial connection 2040W |
| Heating ELEMENT 1800W + Safety THERMOSTAT | A2 ↔ A1 | A2 ↔ A1 | A2 ↔ A1 | A2 ↔ A1 | 28,7 Ω +/- 5% | Serial connection 1800W |
| DOOR SWITCH | N5 ↔ N6 | ↔ | M5 ↔ M6 | ↔ | 0 Ω | Door closed |
| DISPENSER | E1 ↔ E2 | (F1 ↔ F2) | D1 ↔ D2 | D1 ↔ D2 | 3900 8% | PB150 -> AC dispenser |
| RINSE AID SENSOR | J1 ↔ J2 | ↔ | J1 ↔ J2 | ↔ | 0 Ω | Without Rinse Aid |
| | | | | | INFINITE | With Rinse Aid |
| SALT SENSOR | J4 ↔ J3 | H8 ↔ H7 | J4 ↔ J3 | E1 ↔ E2 | 0 Ω | Without Salt |
| | | | | | INFINITE | With Salt |
| TEMPERATURE SENSOR | L4 ↔ L5 | H1 ↔ H2 | K4 ↔ K5 | G4 ↔ G5 | 4836 Ω ± 2.5% | At 25 °C |
| | | | | | 915 Ω ± 4% | At 70 °C |
| TACHO SENSOR | | | G3 ↔ G1 | E4 ↔ E3 | 223 Ω ± 5% | The motor has stopped |
| REGENERATION solenoid valve | G4 ↔ G3 | E4 ↔ E3 | F4 ↔ F3 | D7 ↔ D6 | 3800 Ω ± 8% | |
| FILL solenoid valve | G1 ↔ G2 | E5 ↔ E6 | F1 ↔ F2 | D4 ↔ D5 | 4100 Ω ± 10% | solenoid valve in fill pipe |
| | | | | | 3750 Ω ± 10% | solenoid valve in base |
| ASY WASHING MOTOR | | | B4 ↔ B3 | B6 ↔ B5 | 95 Ω ± 7% | ASY Motor |
| BLDC WASHING MOTOR | H4↔H5↔H6 | C1↔C2↔C3 | | | 56 Ω +5/-10% | BLDC Motor (phase-to-phase) |
| ASY DRAIN MOTOR + Anti-flooding | | E7 ↔ E8 | B1 ↔ B2 | B1 ↔ B2 | 230 Ω ± 8% | Serial connection |
| BLDC DRAIN MOTOR | H1↔H2↔H3 | | | | 93 Ω ± 10% | BLDC Motor (phase-to-phase) |
| FLOW CONTROLLER | F1 ↔ F2 | G1 ↔ G2 | E1 ↔ E2 | ↔ | 10400 Ω ± 8% | Motor |
| | F1 ↔ F3 | G1 ↔ G3 | E1 ↔ E3 | ↔ | 0 / INFINITE | Micro-switch |

3.20. Water Reuse N/A

A water Reuse tank is placed on the right side of the dishwasher.

The tank purpose is to save 3.5 lt of water from the cold and hot rinse in Energy Label & Intensive programs and use them in the Pre wash of next cycle.

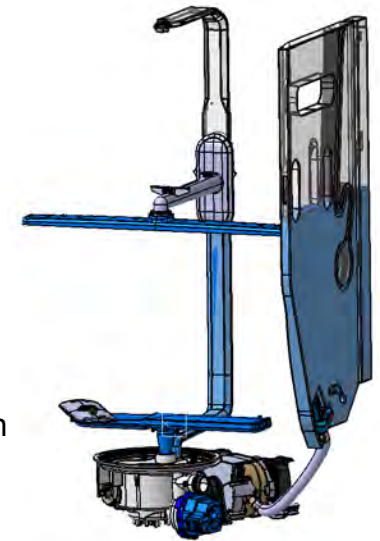
This allows reducing the water consumption.

The tank is conditioned after every 6 cycles.

5-6 lt of hot water are used to clean the tank, water contained in the tank is pumped out and replaced by fresh water.

The 'Sanitize' or 'Extra Hygiene' option.

Can be run to also clean the tank and the dishwasher not only the load.



Water raises during the last rinses →



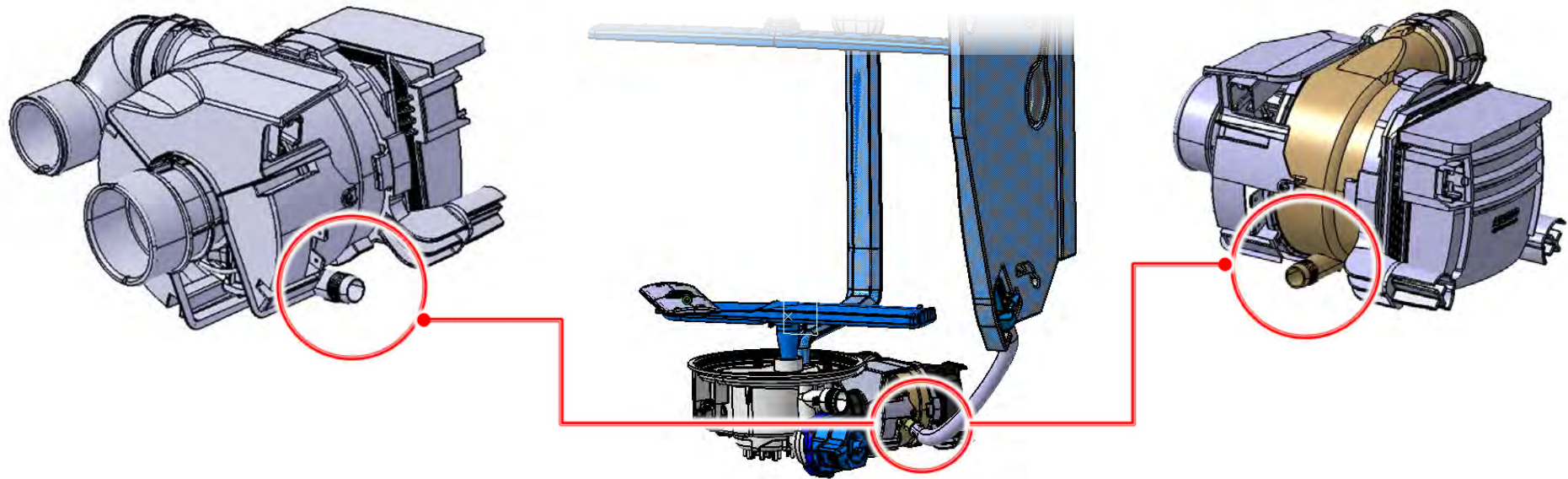
Water reuse valve



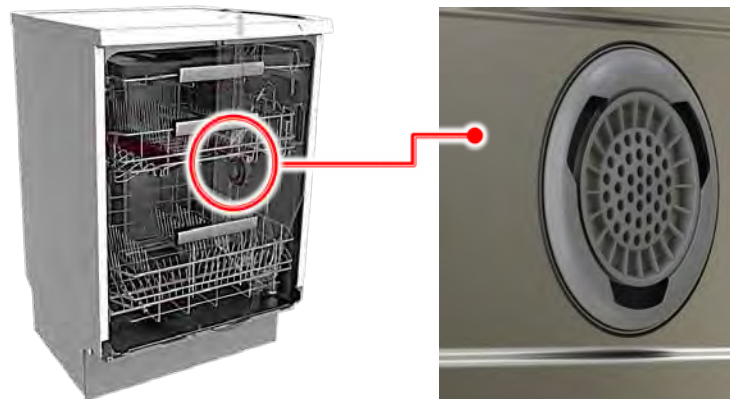
Tank is not visible inside, and is located on the right side.

Plastic nut with grid

Three phase washing pump BLDC for water reuse N/A



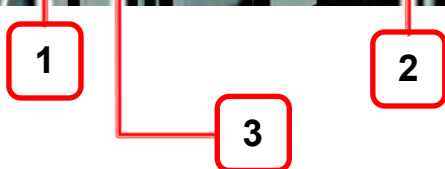
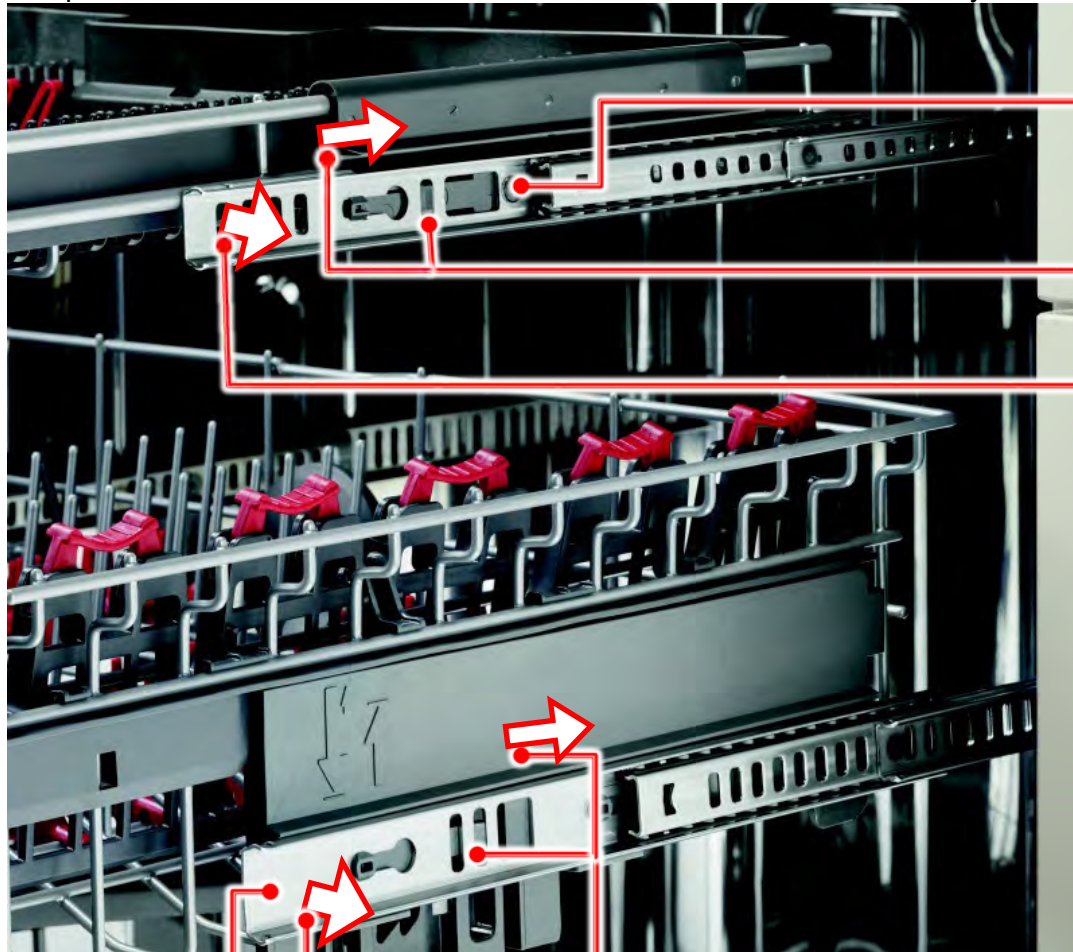
The only part that is visible is the nut inside the tub in the location of the internal light on the right side.



3.21. Comfort rails

Basket disassembly

The procedure is similar for both baskets, and is done with the baskets fully out.



Detail of the snap to press and movement on step 2

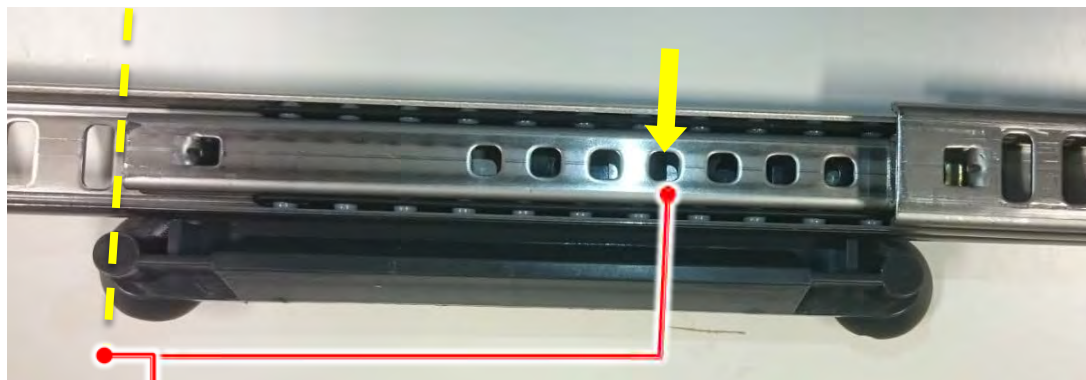


1- Remove the screws fixing the basket to the rails

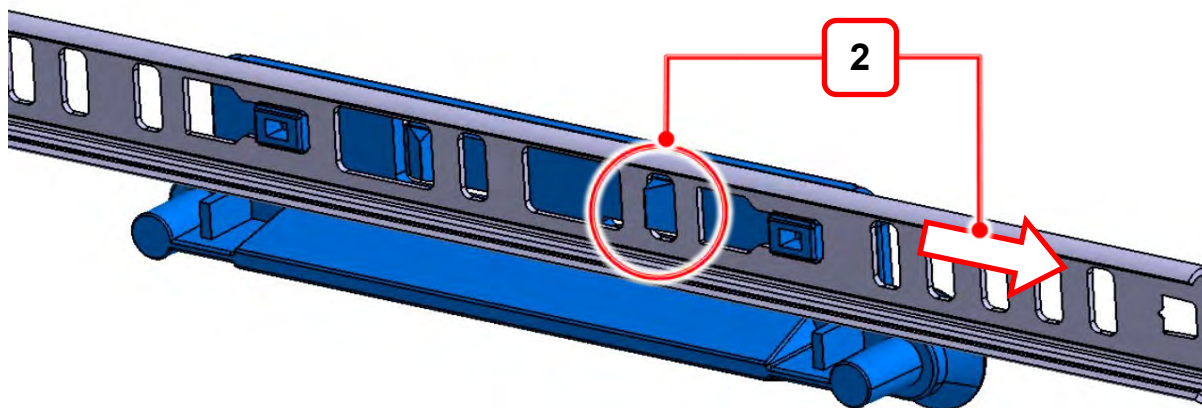
2- Press the snap and slide the basket while holding the rail.

3- While holding the basket move one rail at a time apart from the basket
This movement should be small enough just to release the basket from the rails

Top rails disassembly



1



Pictures representing the right side rails

1- When rail is aligned as shown on the picture, the snap to press is located in hole marked on the picture.

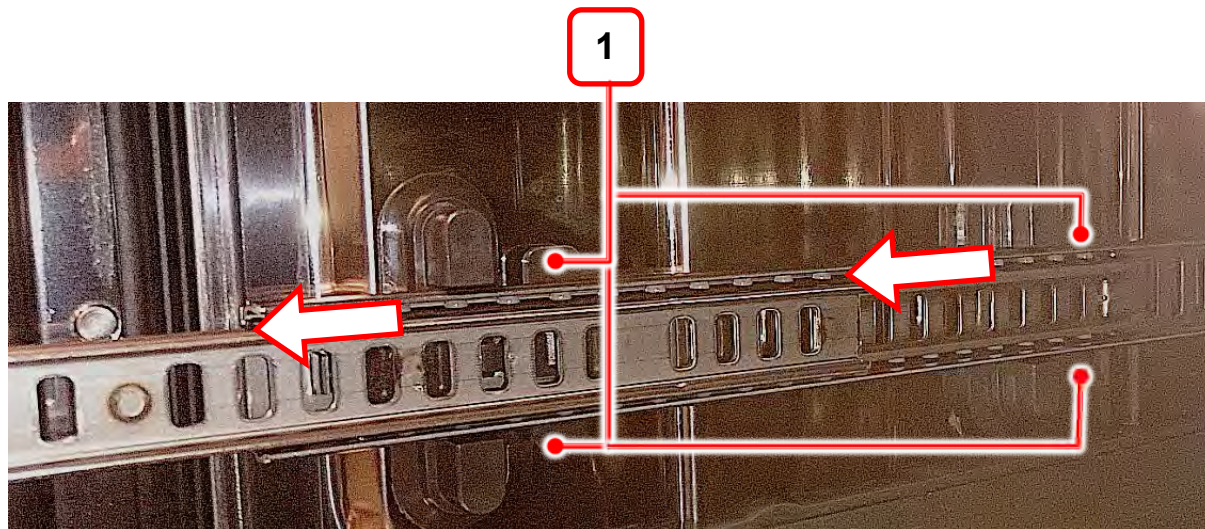
2- Press the snap and slide the rail in direction to the front of the dishwasher. This movement should be small enough just to release the rails from the tub

Detail of components



It's also possible to disassemble the rails by removing the side panels, and removing the plastic part fixed to the tub.

Intermediate rails disassembly



1- Press the four snaps and slide the rail in direction to the front of the dishwasher. This movement should be small enough just to release the rails from the tub

It's also possible to disassemble the rails by removing the side panels, and removing the plastic part fixed to the tub.



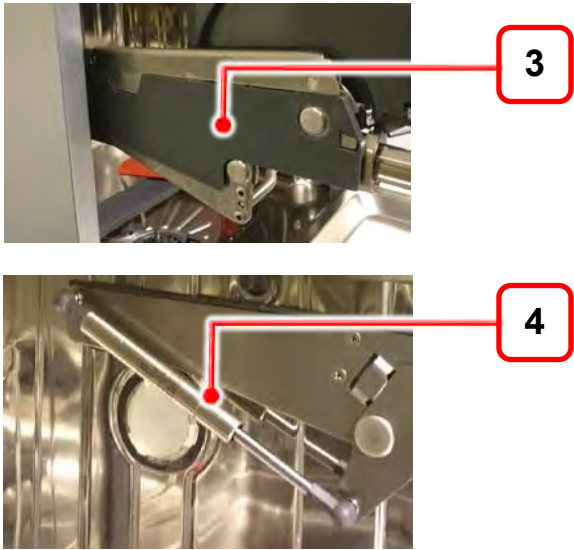
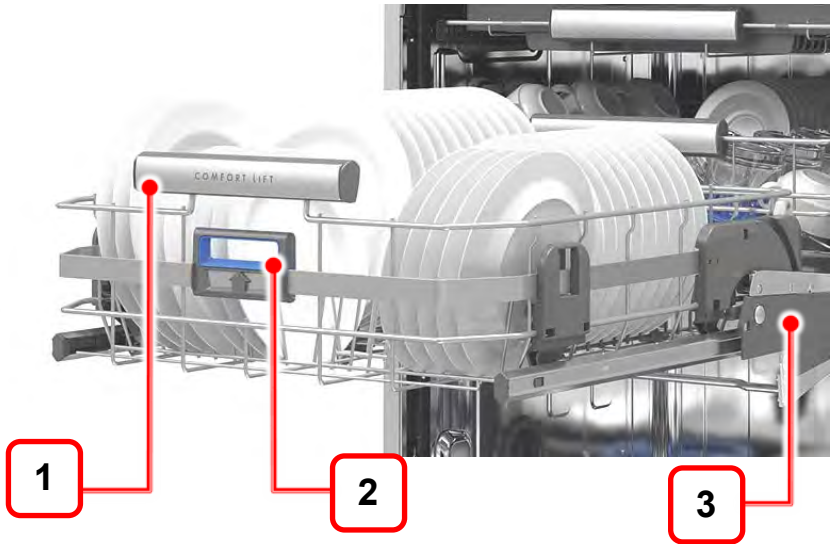
Pictures representing the left side rails

Cutlery Basket comes out

When the dishwasher is not level and there is inclination to the front, the cutlery basket may come out by itself since this one do not have a retaining system. To properly level the dishwasher use the feet regulation.

3.22. Comfort lift

A mechanical system that lifts the bottom basket. When lifted the basket will remain on that position by action of a locking device.



| | | | |
|----------------|---------------------|-----------------|----------|
| 1- Main handle | 2- Unlocking handle | 3- Safety cover | 4- Strut |
|----------------|---------------------|-----------------|----------|

Lift the basket

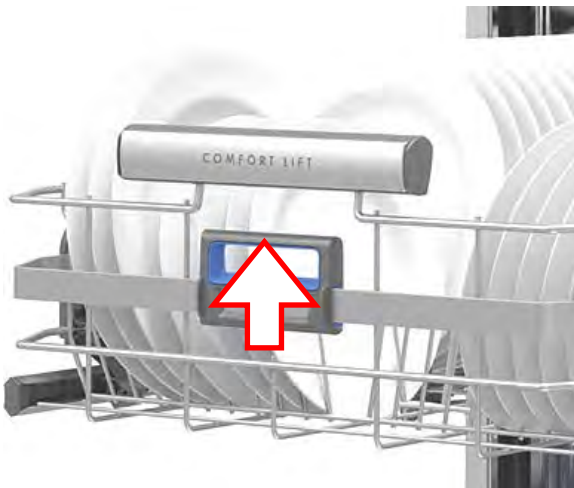


Pull the handle off the basket.



Don't pull the unlocking handle

Lower the basket




Pull up the unlocking handle to lower the basket.



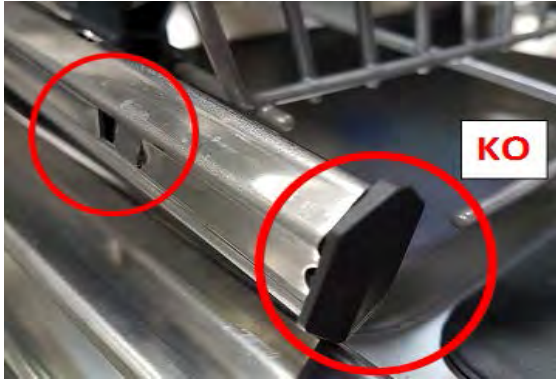


Failure situations and actions to perform:

(*) Information on how to do the component repair / replacement indicated on the action to perform is available after this failure situations table.

| Failure description | Possible causes | Action to perform |
|---|---|---|
| Basket swings down too fast | Dishwasher is not levelled and is leaning backwards. | Level the dishwasher. It is very important that the product is levelled in the installation. |
| | The gas strut is faulty. | Replace the gas strut. (*) |
| Basket swings down but stops before the end position | This is normal if the basket is empty or with few load. When fully loaded this happens if the dishwasher is not levelled and is leaning forwards. | Level the dishwasher. It is very important that the product is levelled in the installation. |
| | Self closing unit not working properly. | Replace Self closing unit. (*) |
| Roller cages coming out from basket guide  | Parts not planar | Replace the roller cages. (*) |
| Basket stuck on lower position. Not possible to raise the basket | System rotation occurs before locking arm opening | 1 - Push Comfort lift system again inside the tub and pull it out afterwards 2 - Check if the front stoppers are on correct position (see "Basket stuck or difficult to move" on this table) 3 - If fault still there, replace the comfort lift system. (*) |

Failure situations and actions to perform (cont.):

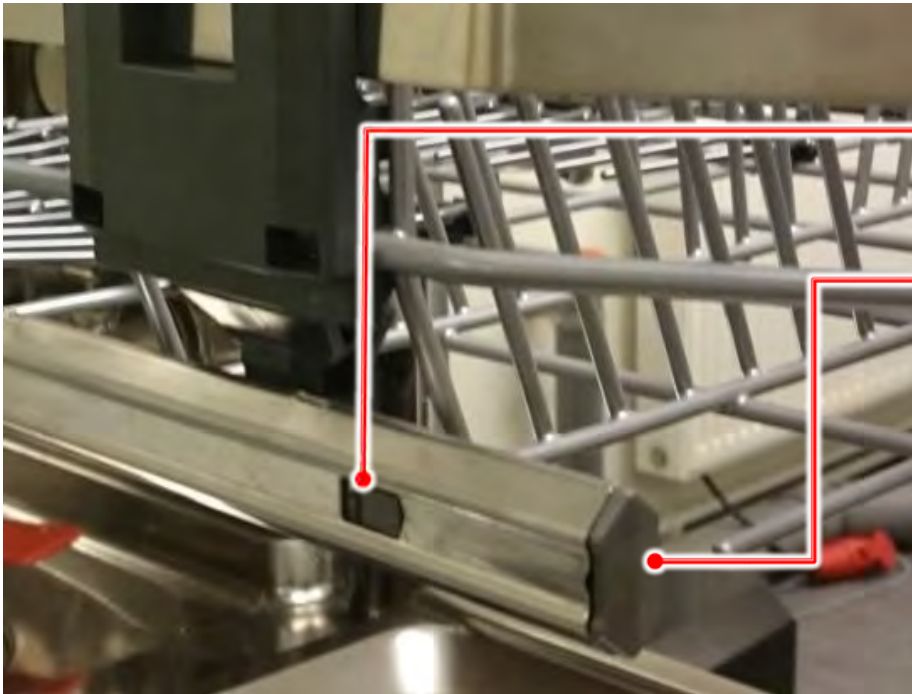
(*) Information on how to do the component repair / replacement indicated on the action to perform is available after this failure situations table.

| Failure description | Cause | Action to perform |
|--|--|--|
| Basket stuck or difficult to move. | Basket front stoppers bad positioned | Put front stoppers on the correct position. After fully inserting the stopper completely, rotate it towards the outside of the guide to create the correct interference with the fixing hole on the guide itself. |
| Basket coming out from basket rails. |  |  |
| Basket stuck in upper position. Not possible to lower the basket | Trigger belt not triggering the locking pin on left side | 1 – Check if the front stoppers are on correct position (see “Basket stuck or difficult to move” on this table) 2 - Replace the basket assembly. (*) |
| The basket self-unlocks from top position  | Uncorrect locking pin contact point with upper chasm. | Replace left or right hinge of the Comfort lift System, depending on fault side. (*) |

Basket disassembly

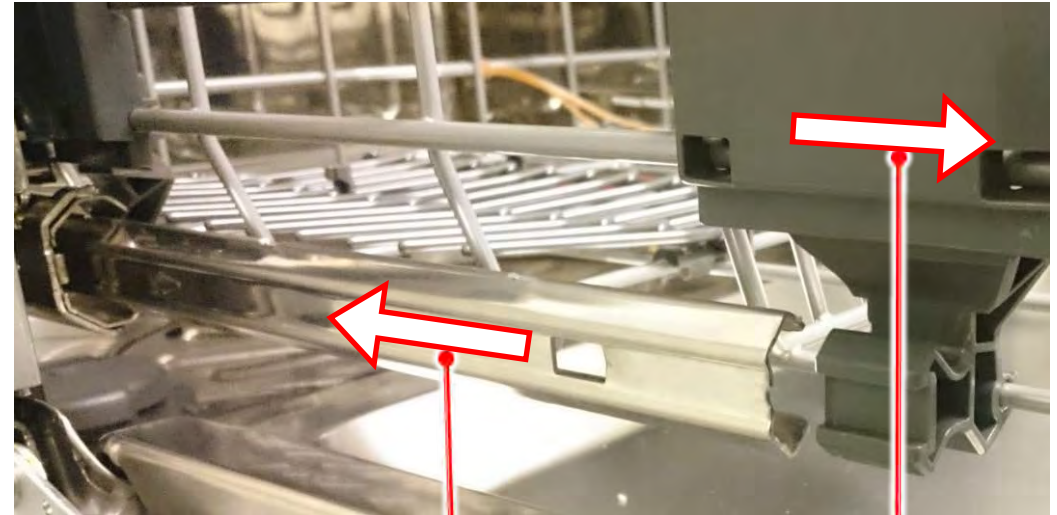
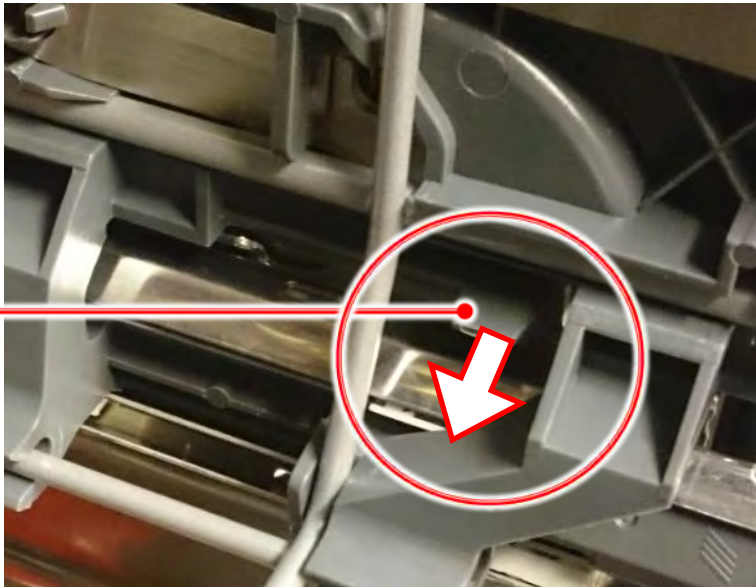
With the basket on lower position

To disassemble the basket, **it is necessary to have it on the lower position**, otherwise the lifting mechanism locks the basket and it is not possible to disassemble it.



| | |
|---|--|
| 1- Press the snap to remove the plastic locking part (front stopper) | 2- With the snap pressed, pull the plastic lock. |
| 3- Do this operation on left and right side rails | |

4



5

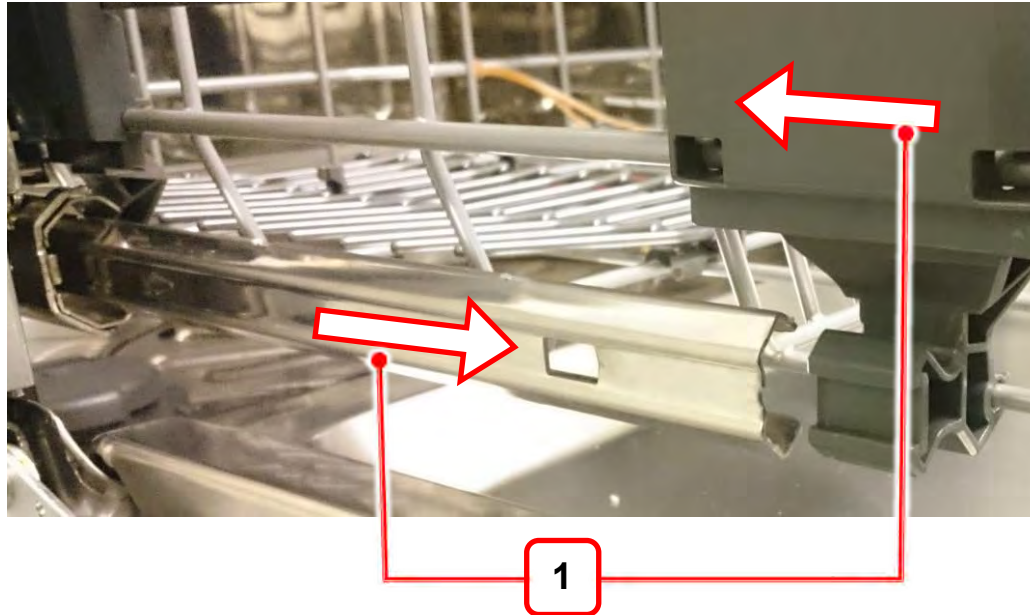
4- Pull the basket as far out as possible without engaging the rotational lifting movement. Then on each side pull the snap 1 cm against middle of dishwasher and in the same time pull the basket out minimum 1 cm.

5- Slide the rails on both sides to the interior of the dishwasher while holding the basket

Basket assembly

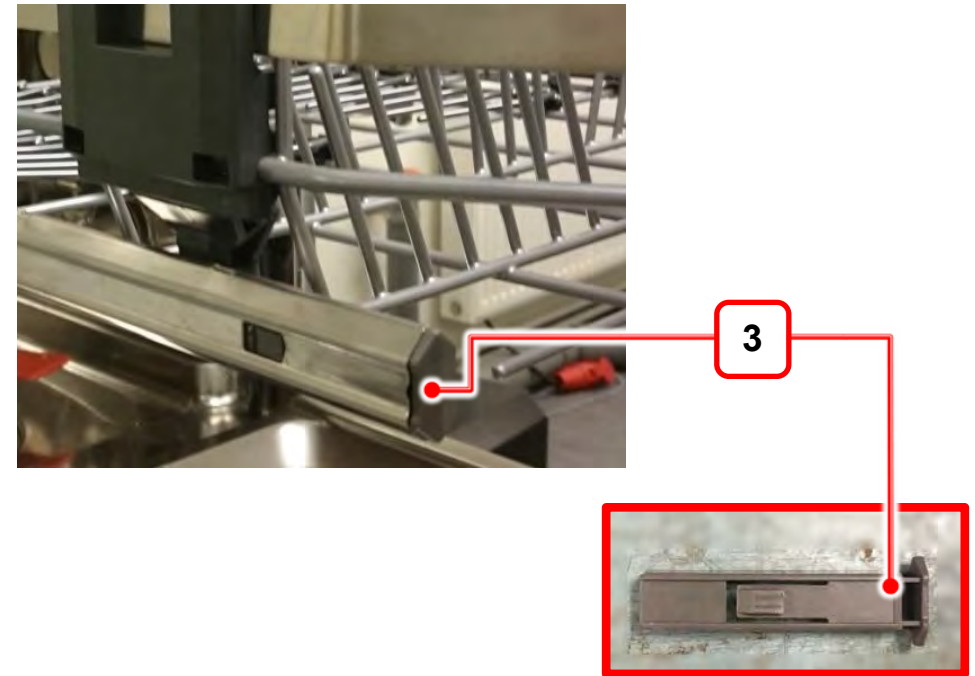
With the lift mechanism on lower position

To assemble the basket, **it is necessary to it have on the lower position**, otherwise the lifting mechanism collides with the basket and it is not possible to assemble it.



1- Insert the basket on the rails by sliding the rails out and slide the basket in

2- Make sure the basket is fixed on the lifting mechanism

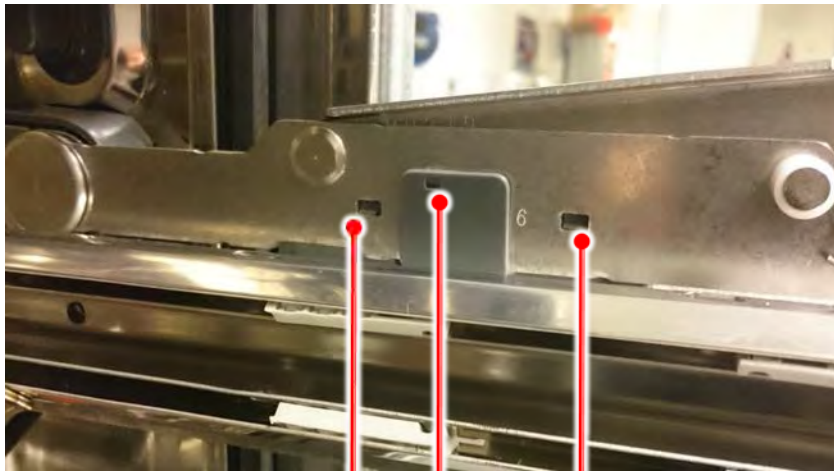


3- Assemble the plastic locking part

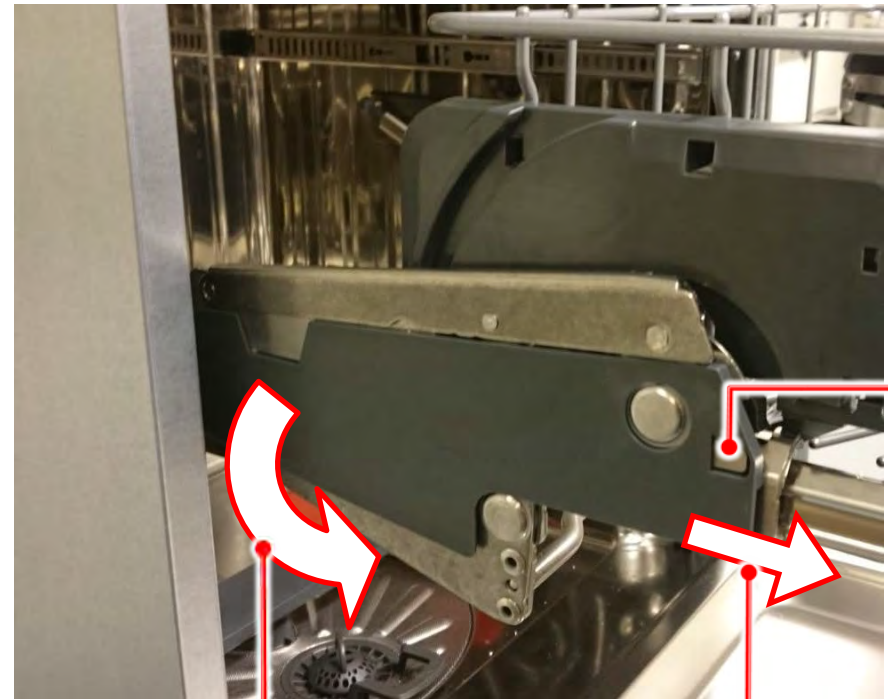
4- Do this operation on left and right side rails

Safety cover

| | |
|----------------------------|--------------|
| 1- The safety cover snaps | 2- Fix point |
| 3- Movement to disassemble | |



1



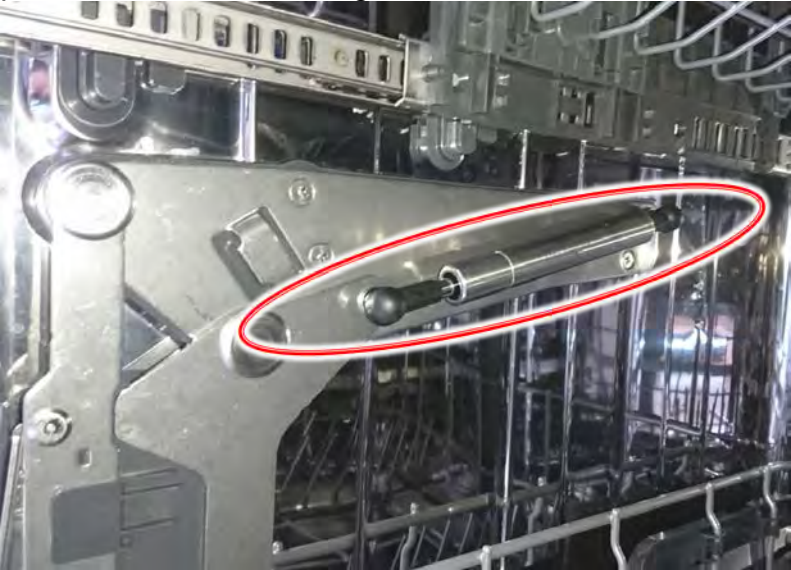
2

3

When assembling align the cover on the fix point and rotate the other side up to snap it (inverse movement from disassemble).
On assembly and disassembly procedure, lower the lifting mechanism at least 5 cm.

Gas Strut replacement N/A.

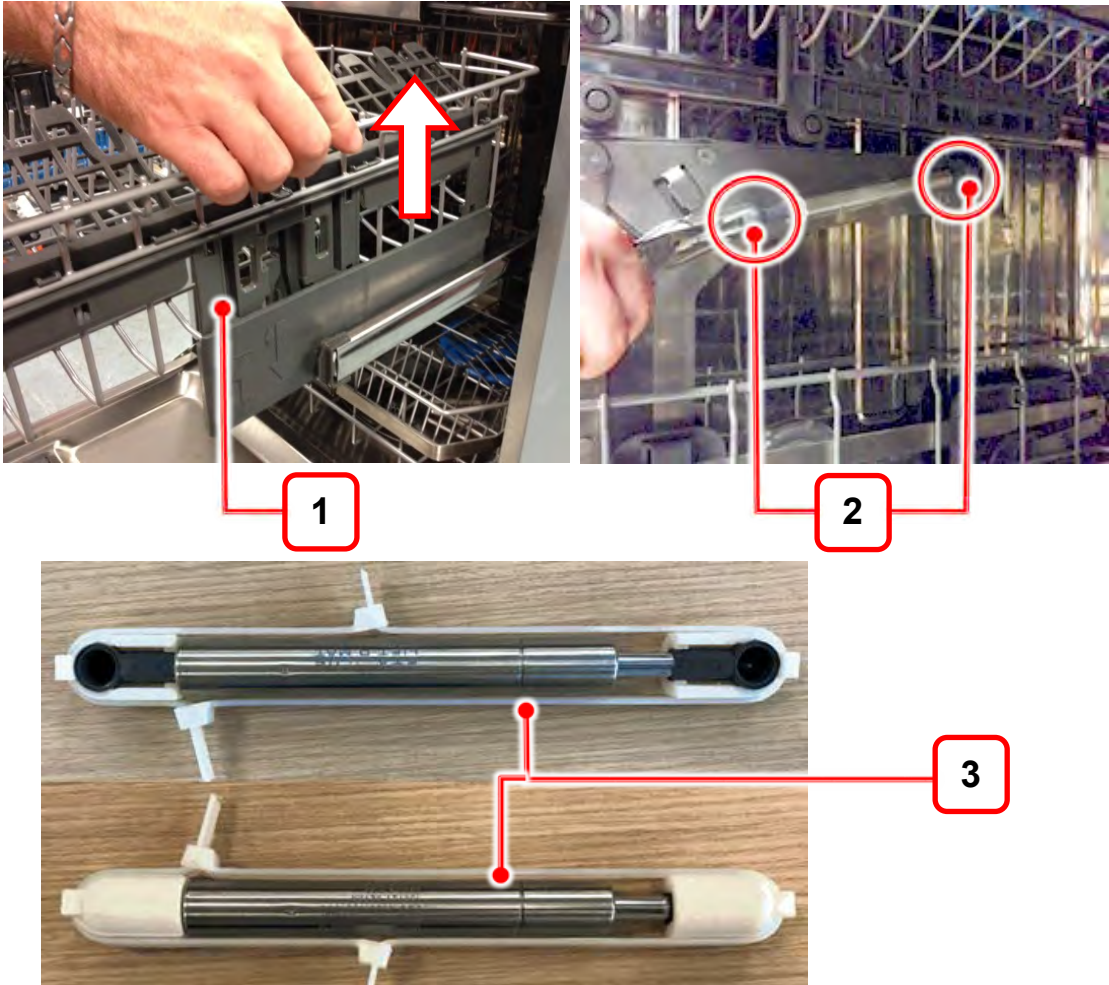
The easy movement of the ComfortLift mechanism is possible because of this gas strut.



Any operation of disassembly or assembly of the gas strut must be done with the ComfortLift mechanism on lower position; the gas strut must be on the position shown on the picture above.



Do not remove the gas strut unless it's necessary to replace it.

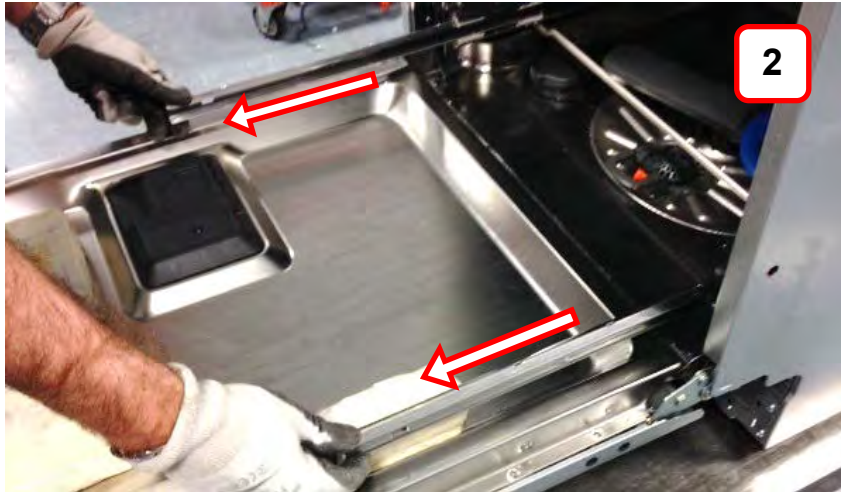


| | | |
|--|---|--|
| 1- Move middle rack on upper position. | 2- Unsnap the 2 gas strut connections with appropriate tool | 3- Replace gas strut using the packaging shell to keep it in position. |
|--|---|--|

Lift mechanism replacement N/A

1- Remove the basket (Refer to "Basket disassembly")

2- Slide out the two guides



Keeping the syncro bar firm with one hand, unlock the right side pin.

3- Keep the syncro bar firm with one hand.

3.1 - Unlock the right side pin.

3.2 - Unlock the left side pin.

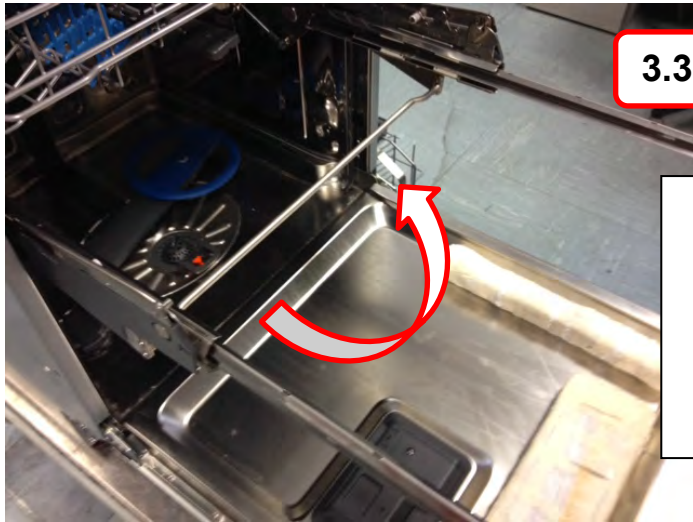
3.3 - Lift the system up.



3.2

Keeping the syncro bar firm with one hand, unlock the left side pin.





3.3

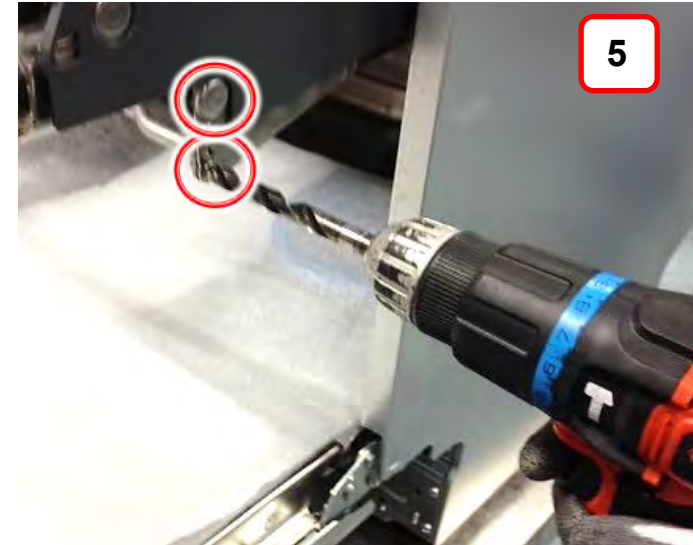
Keeping the syncro bar firm with one hand, lift the system up.

4- Place protective foil onto inner door and tub to protect them from scratching or denting.



4

5- Drill both rivets from both side (4 rivets) with Ø10mm drill bit.

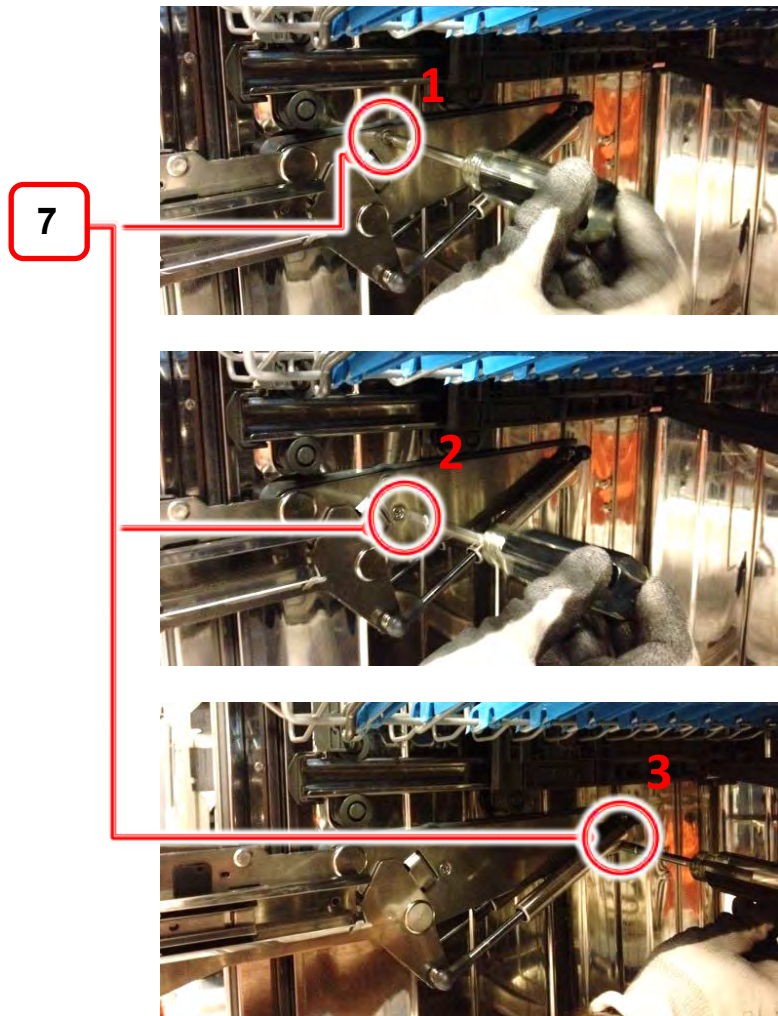


5

6- Remove the syncro bar



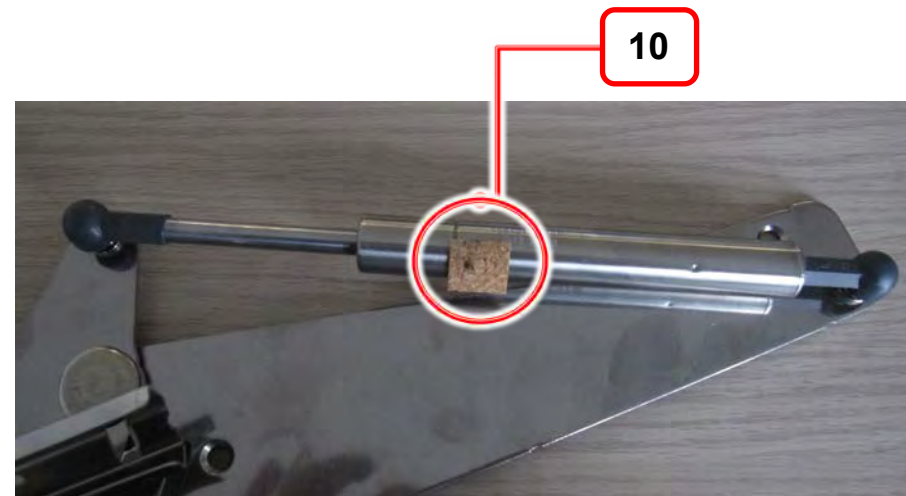
7- Unscrew the 3 fixation screws from the faulty hinge module (left or right or both)



8- Remove the faulty hinge module (left or right or both)

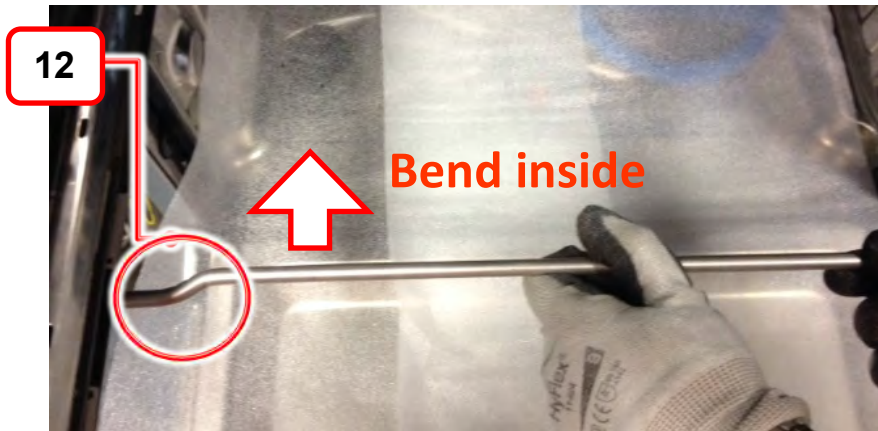
9- Assemble the safety cover on the new hinge module to avoid finger trapping during operation (refer to specific section "Safety cover")

10- Remove cork from the strut to avoid any risk to have it in the sump.



11- Place and screw the new hinge module with manual screwdriver, not automatic one (max force torque **3,8Nm**).

12- Position the new syncro bar like the picture (bending inside)



13- Fix the syncro bar with 4 rivets (2 per side) with manual rivet machine (spec.: able to fix 5mm iron rivets)



14- Move the system in lower position (inside tub), and keeping the syncro bar firm with one hand

14.1 - Unlock the left side pin.

14.2 - Unlock the right side pin.

14.3 - Push the syncrobar into the tub



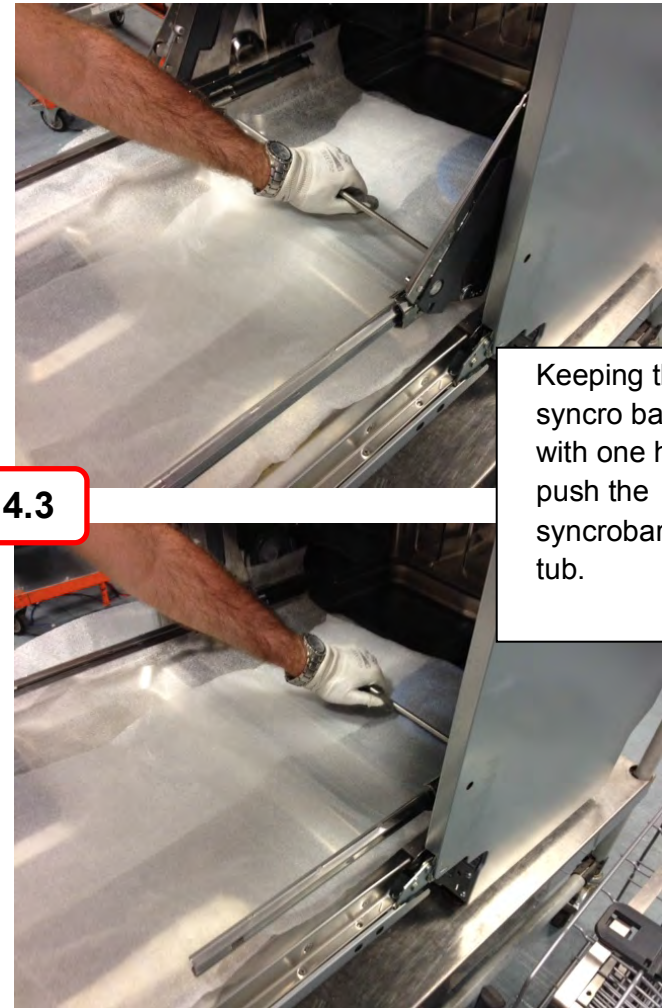
Keeping the syncro bar firm with one hand, unlock the left side pin.

14.2



Keeping the syncro bar firm with one hand, unlock the right side pin.

14.3



Keeping the syncro bar firm with one hand, push the syncrobar into the tub.

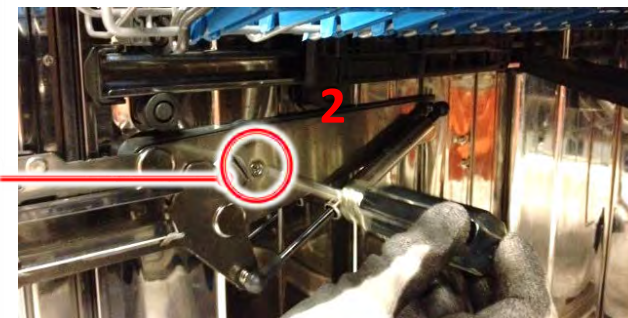
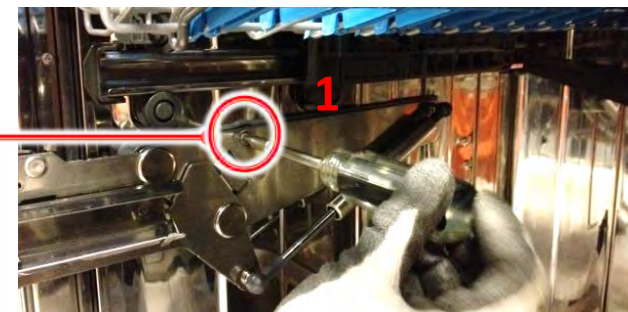
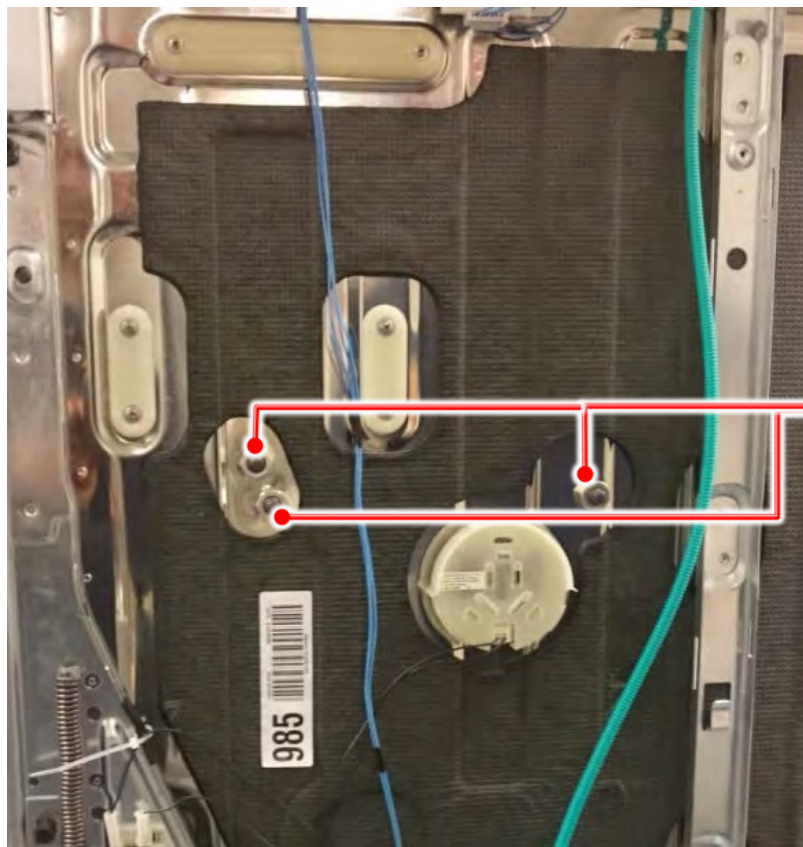
15- Reassemble the basket, (refer to specific section "Basket assembly")

Tub bracket replacement N/A

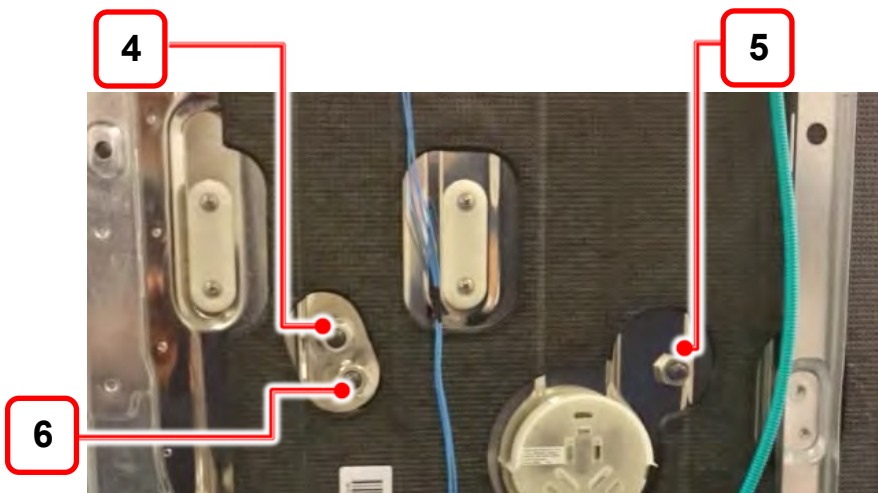
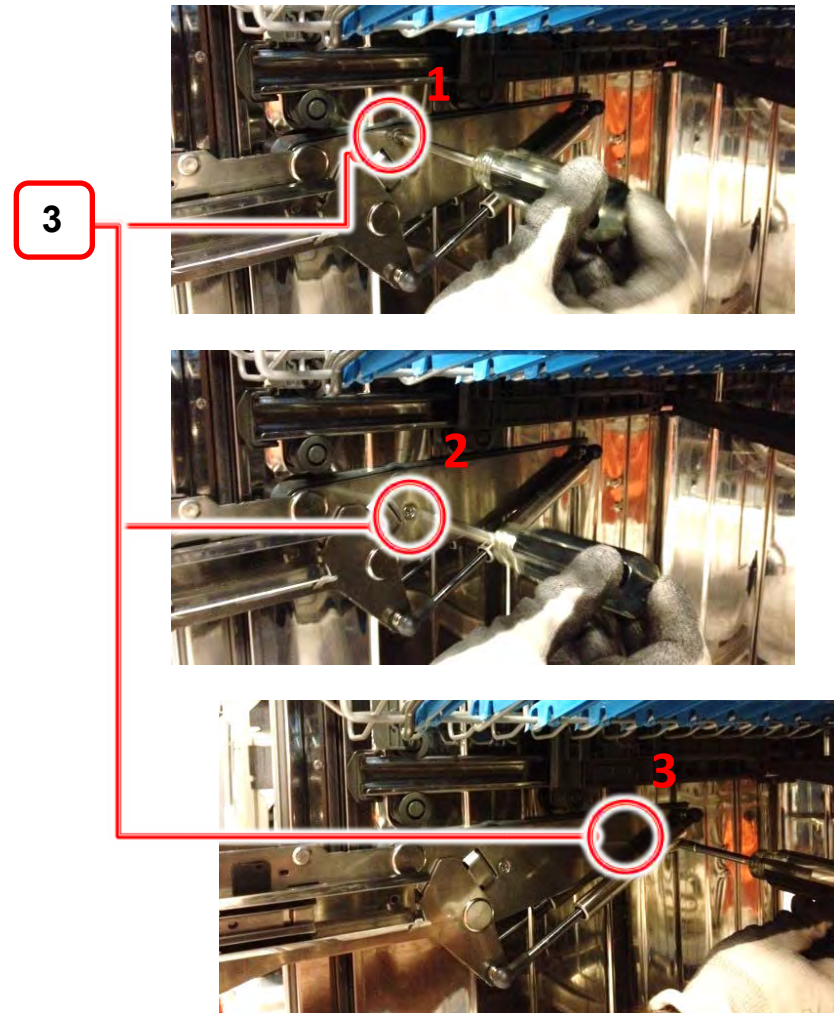
(tub bracket - plastic part connecting the lift mechanism to the tub)

1- With the lift mechanism on the lower position, it is necessary to remove the dishwasher from the niche and/or remove the side panels to have access to the 3 metallic nuts that fix it to the tub on each side. Remove the 3 nuts.

2- Unscrew the 3 interior fixation screws



| | |
|---|--|
| 3- Place the new tub bracket and screw the 3 interior screws with manual screwdriver, not automatic one (max force torque 3,8Nm). | 4- To fix from the exterior of the tub start with the upper front nut. Use a manual tool not a automatic one (max force torque 4,5Nm). |
| 5- Then the rear nut. Use a manual tool not a automatic one (max force torque 4,5Nm). | 6- And the last is the the lower front nut. Use a manual tool not a automatic one (max force torque 4,5Nm). |

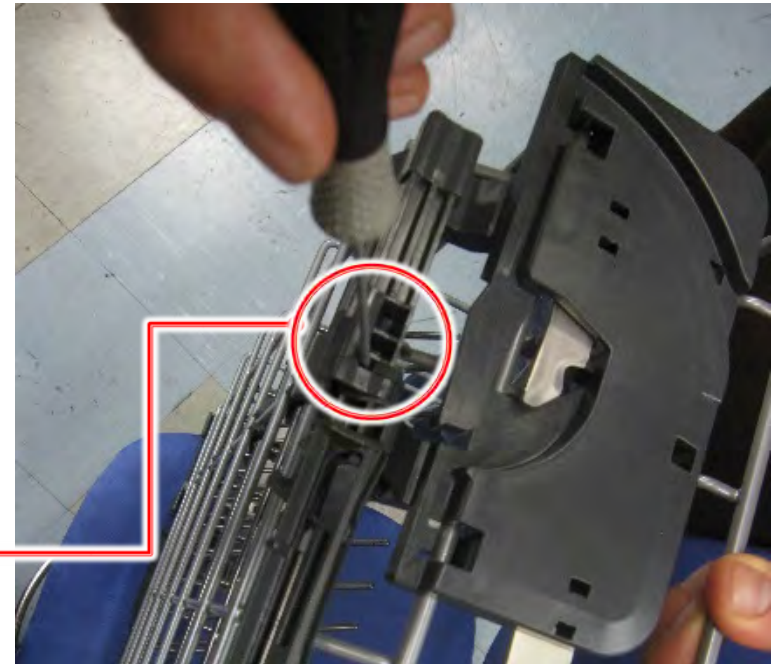
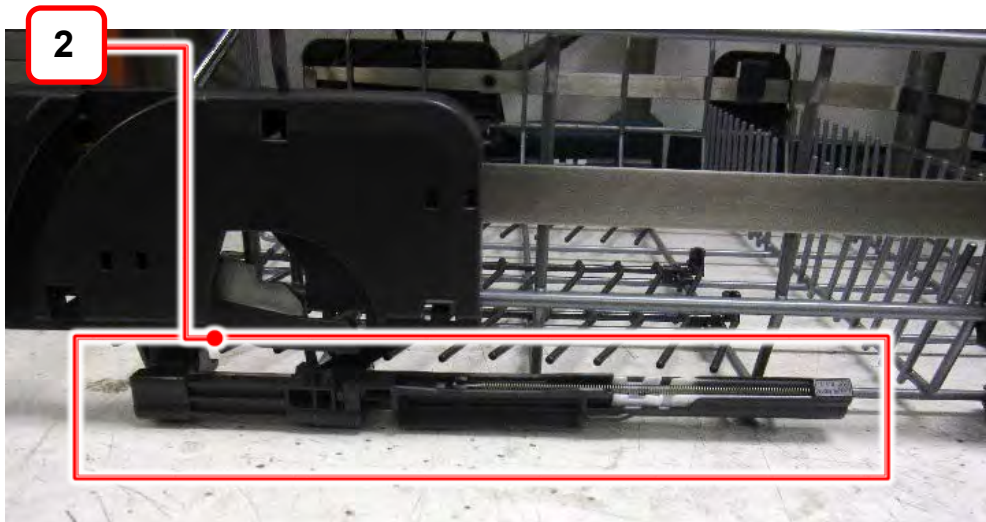


Since the exterior nuts are metallic and fixed on a plastic part the thread of the plastic part may be damaged in case too much force is used when fixing the nuts.

Self closing unit replacement

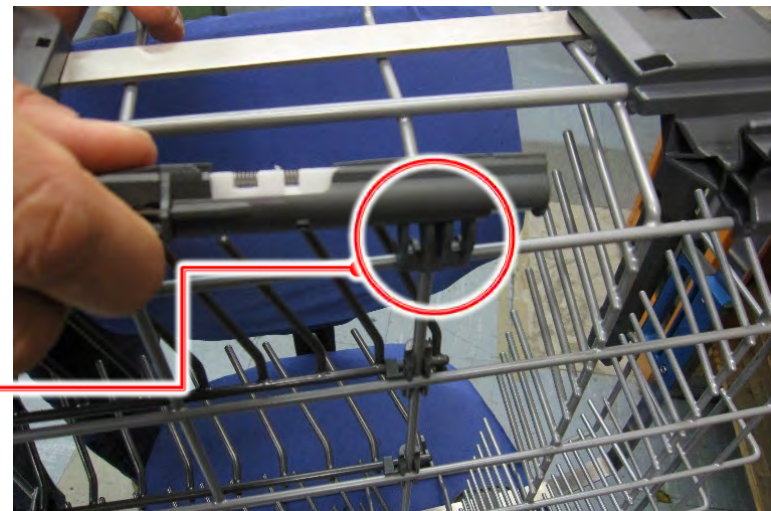
1- Remove the basket (Refer to "Basket disassembly")

2- Identify Self closing unit in red rectangle



3- Use screw driver to unlock Self closing unit .

4- Unsnap the Self closing unit from basket.



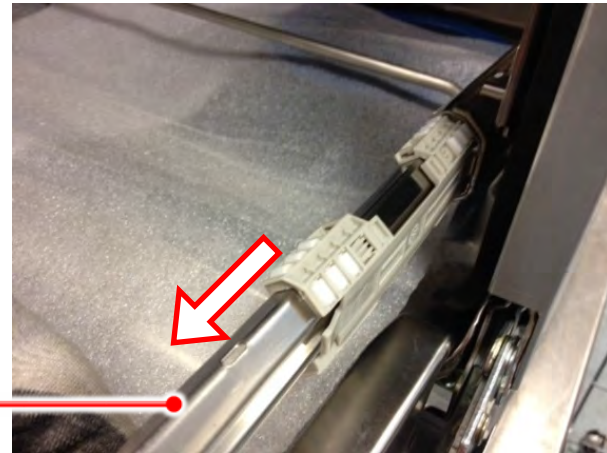
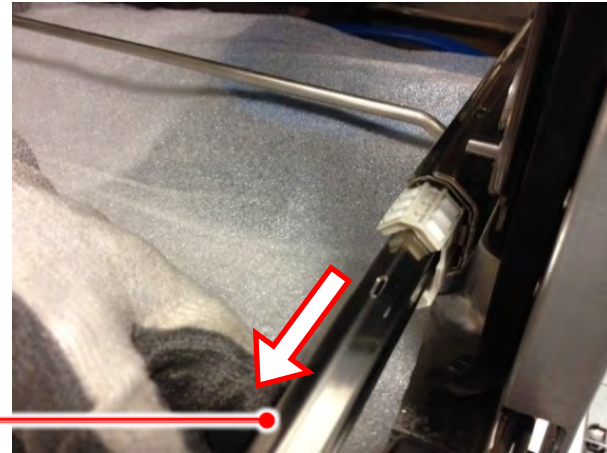
5- Place the new one with reverse procedure.

Roller cage replacement

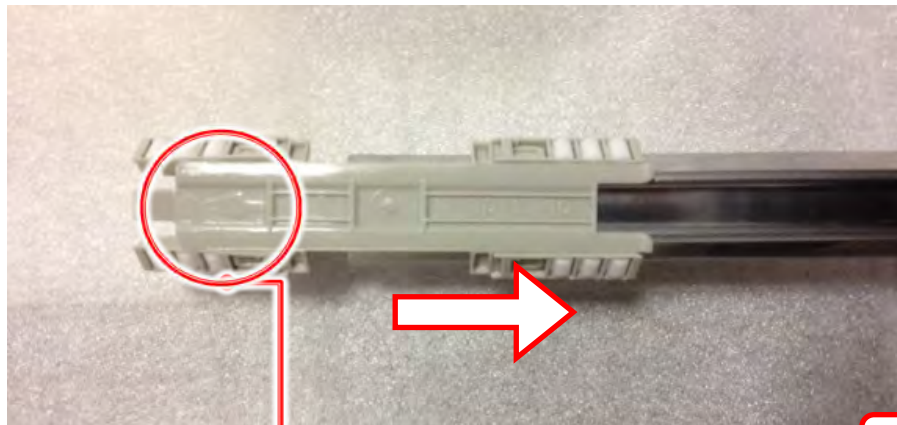
1- Put the screwdriver inside the guide to push the plastic tooth to unlock it.



2- Move the rail out to slide out the roller cage.



3- Assemble the new Roller cage sliding on the guide till the end of the guide (spec. The **arrow** on roller cage must be directed pointing outside the dishwasher)



1



4- Insert the rail inside the guide till the end.



2

5- Reassemble the rack.