

COMPONENTS

Mechanical Parts (Dynamic System):

The tub is made of special plastic material that has high strength, is able to decrease noise level and no corrosion problem. The tub cover is also made of plastic used in YOÇ and is attached to the tub with special fixing clamps. Truva tub is made of 2 tubs connected each other by PT screw. The main motor is attached to the tub with two rubber grommets and a bolt in YOÇ series. On the other hand, motors are connected by 4 arms. Positioned behind the tub, on the right, left and top, are transport security bolt connection slots. There are also two concrete counterbalance weights one on top of, and one underneath the tub. The tub group is hooked onto the cabinet at each side by two springs. There are two horizontal shock absorbers at the bottom, the functions of the springs and the shock absorbers is to dampen the vibrations caused by tub movement and to reduce motion and noise. The drum is made of stainless steel.

Shock Absorber System:

Tub group is hooked onto the cabinet at each side by two springs. Furthermore, it is fixed to the cabinet by two shock absorbers. Springs and shock absorbers defeat high noise level and the movement of the machine transmitting vibration to the cabinet. Shock absorbers are connected to chassis and tub with plastic pins instead of nuts.

Electronic Control and Display Card:

Wash programs, wash and spin motor profiles, protection algorithms and components (motor, heater, pump, valves, door lock, NTC, pressure sensor, rotary switch, spin/temperature potentiometer) are controlled by double-phase design control and display card produced by INVENSYS.

There are connection terminals of smps, motor and other component control circuits- triacs and relays- on the front face of the card. On the other face there are, microchip, auxillary function and time delay button and led, as well as program follower.

Wash operation is started due to the signals from the auxillary function, time delay, assembly rotary switch, spin /temperature potentiometer.

Auxillary function, spin/temperature and time delay options can be selected from electronic card.

Door lock:

A PTC door-lock is used. When the door is closed, the PTC disk is heated up and locks the door. After the program is terminated, the PTC is cooled down and after max. 120 seconds the door is unlocked. Thus the door is prevented from opening during operation. If there is a fault with the door lock, then washing machine will not operate.

Nominal Voltage: 250V 50-60Hz

Current: 10-50mA

PTC Resistance: Min. $\geq 50\Omega$

Lock time: $\leq 8\text{sn}$

Unlock time: 35...70sn

Main motor:

The main motor is a universal series motor. It is controlled by a card. The motor spin is adjusted as the triggering angle is altered by the triac on the electronic card module depending on the tachometer. Universal motor is composed of stator and rotor. Stator and rotor are in series connection by collector and brush. Cycle of the motor is controlled by electronic card. Motor triac on card adjusts the motor/drum cycle by changing the triac alert angle according to signals from taco. There is a fuse that prevents extreme heating of bandage on motor.

Nominal Voltage: 220-240V 50-60Hz

Current: 6A max (wash)/ 3A (spin)

Start Power: 300/450W

Start current: 5...8A(wash)/10A max (spin)

Taco generator technical data:

Number of Double Pole: 8

Taco Voltage at 300rpm: $>0,9\text{V}$

Taco Voltage at 1650rpm: $<45\text{V}$

Heater:

A 1900-watt heater is used. There are two thermofuses on the heater. If the heater runs without enough water, one of the thermofuse goes off, and thus this heater cannot be used again. The heater is energized only when there is enough water inside the washing machine. When the desired temperature is reached, electronic control card reads the resistance of NTC and if the prescribed resistance (and hence temperature) is reached, the heater is switched off. In order to prevent the heater operating without water, "heater safety level" is introduced to microchip. Heater is out of operation when water level is under the heater level.

Nominal Voltage: 230V 50-60Hz

Nominal Power: 1900W ($\pm 5\%$)

Valves:

There are double water inlet valves at single water inlet models and double and additional single valves at hot water inlet models. Valves are operated by triac.

Nominal Voltage 220-240V 50-60Hz
Nominal Power 5-8W
Coil Resistance 3400-4500 Ohm
Flow Rate 10lt/min

Drain Pump:

It is a synchronize motor that has single phased, double pole and magnetic rotor. Triac runs during drain step. Impedance is protected against the rotor blockage and continuous operation.

Nominal Voltage 220-240V 50Hz
Resistance 145 Ohm
Current <02A
Flow Rate >14lt/min
Starting Performance $\leq 4\text{sn}(160\text{V})$

NTC:

As the temperature of the surrounding of NTC increases, its resistance decreases. At fixed temperature, NTC will always have a specified resistance within the tolerances. With the aid of this principle it becomes possible to have an operation without using a mechanical thermo-stop. The heater operates until the desired temperature is reached. In this way, the selected program completes properly each time in accordance with the program set and auxiliary functions selection and is not influenced by water temperature etc. Thus a considerable time can be saved at low temperature washes.

No mechanical thermostat or timer is used on these washing machines and the heater is completely driven by the relay.

Pressure Sensor:

An analog pressure sensor (5V) that gives frequency output is used. At each water level, the pressure sensor gives a specified frequency output within the tolerances. With this property of the pressure sensor, it is possible to check and control the water level precisely. It is driven by micro.

DISASSEMBLY

1- Top plate:

- Remove two screws that attach the top lid to the body.
- Top plate is pulled back and then upwards and taken off.

2- Back cover:

- Remove five screws that attach the back cover to the body.
- The cover is laid 90° to the body and lifted up and out of its retaining slot.

3-Kickplate:

The plastic screws that attach the kick plate to the body are turned 90° counter-clockwise and the kick plate unclipped

4-Front panel:

- Door is opened by pulling the handle towards yourself.
- The door hood clamp that fixes the door hood to the front panel is removed by using the special pliers (shown below) or a suitable alternative.
- The door hood is released from the front panel



- Remove two screws that attach the safety lock to the front panel.
- Kick plate is disassembled.
- Remove the screws that attach the front panel to the body.



5-) Front Door (Single Axis):

- Open the front door
- Hinge holder screws, the connection between hinge and front door, are unscrewed and front door is separated from hinge.

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External Front Door:



-Screws that connect internal front door to external front door are unscrewed
-External front door is pulled from internal door.

Inner Front Door:

-Disassemble the front door group. Disassemble the subassemblies.

-Collect with the new internal door

External Front Door Glass:

- Disassemble the front door group
- Disassemble the front door
- Separate outer front door glass from the ratchets of internal door
- Assemble new glass (Be careful not to break the ratchets during assembly of the glass)

Hook:

- Disassemble external front door
- Unscrew 2 screws that hold hook on the internal door

Door Push and Door Push Spring:

- Disassemble the external door.
- Remove the ratchets of door push

Hinge:

- Disassemble the front door.
- Unscrew the 4 screws that connect hinge to the internal door and then remove the hinge
- Assemble the 4 plastic hinge sleeve, taken from the old hinge, to the new hinge. New hinge is assembly to the internal door.
- Screw the hinge holder to the hinge, screw external door to the internal door.
- Screw front door group to the front panel.

6-) Rotary Switch:

-Push the ratchets of button from the inner face panel and then remove the button.



7-) Drawer panel:

-Drawer is pulled back from the detergent box.

-The piece INDICATED by the arrow is pressed and the drawer is pulled back

-Drawer is turned upside down in order to release the drawer front cover panel



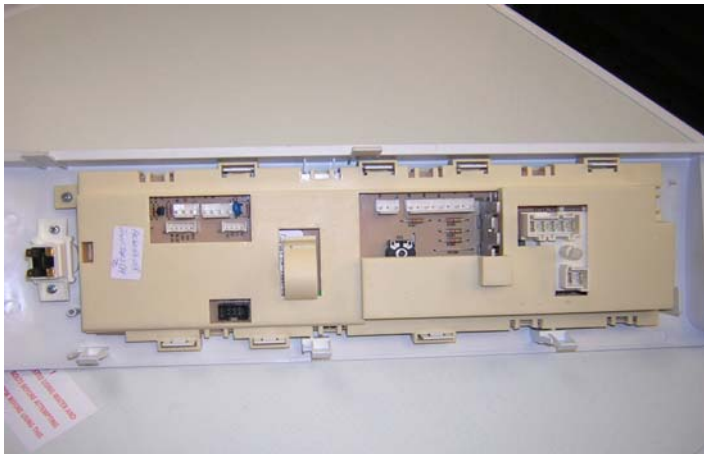
8-) Panel

- Drawer is removed from the detergent box
- Remove the screw that attaches the panel to the panel holder
- Remove 2 screws that attach the panel to the panel holder
- Panel is released from the snaps on the panel holder



9-) Program Card:

- Remove the sockets of program control card
- Unscrew the 2 screws of on the display holder
- Separate display holder from ratchets





-Unscrew 2 screws and remove on-off switch. Separate the on-off switch from panel by pushing from lamp holder ratchets.

10-) Program Control Card:

-Remove the card from card holder



11-Pressure Sensor:

- Remove 2 screws that attach the pressure switch



12- On-off Switch (Not Illuminated):

- Disassemble on-off switch cables
- Disassemble 2 PT screws from the switch holder

13-Interference Suppressor:

- Disassembled top plate
- Disconnect interference suppressor cables
- Remove two screws that are in the terminal box behind the body that fixes the interference suppressor to the terminal group.
- Hold the interference suppressor with one hand and the M8 nut is unscrewed with an appropriate spanner or socket.

14-Water Inlet Valve

- Disassemble top plate
- Disconnect single valve cables
- Release single valve hose clamp and move up the hose.
- Remove hose from the end of the valve
- Turn the valve counter-clockwise

15-Double Valve:

- Disassemble top plate
- Disconnect double valve cables
- Release single valve hose clamp
- Remove the hose
- Unscrew the 2 screws that connect valve to the cabinet



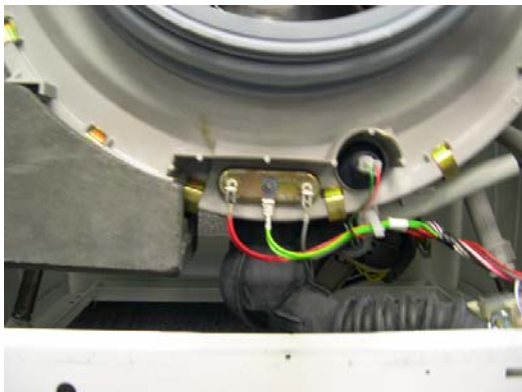
16-Door Safety lock:

- Hold the front door handle and pull the door towards yourself.
- Remove the clamp that fixes the door hood to the front panel
- Disassemble door hood from the front panel
- Remove two screws that attach the safety lock to the body
- Remove front panel
- Disconnect cables



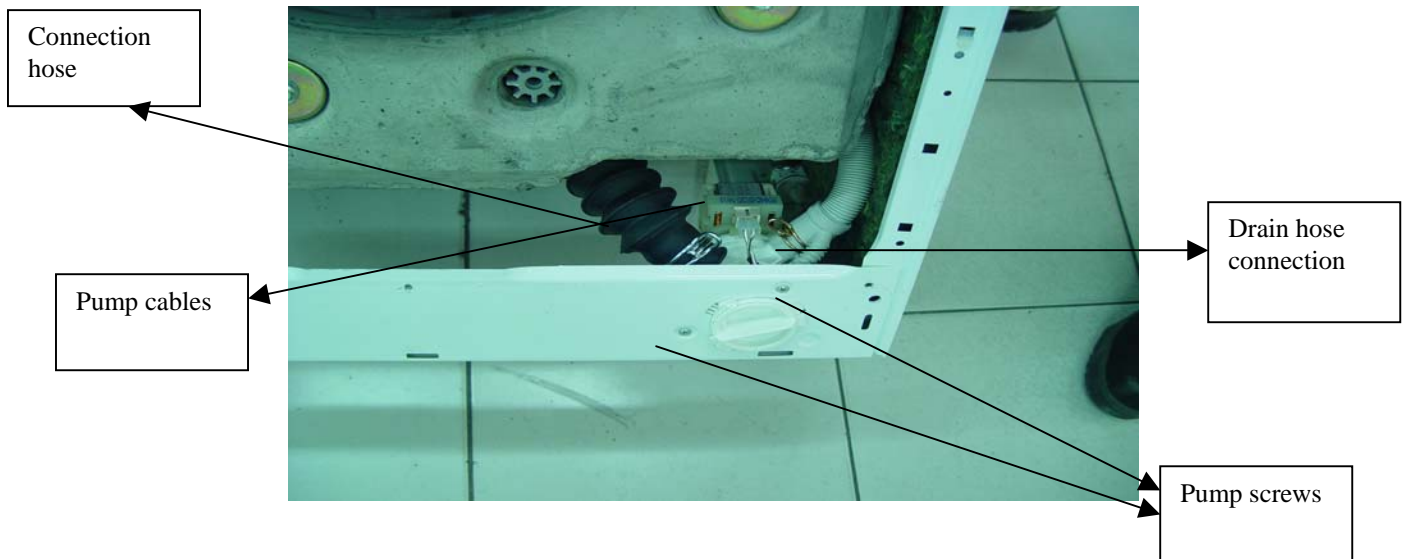
17-Heater:

- Disassemble front panel
- Disconnect heater cables
- Loosen heater M6 bolt and release heater through the tub cover
(When re-fitting the heater ensure element engages correctly in the heater holder clip which is fixed to the tub)



18-Pump:

- Disassemble front panel
- Disconnect pump cables
- Release tub filter hose from the pump
- Release outlet hose
- Remove the screw that attaches the pump to the body
- Separate pump from the body



19-Tub Gasket:

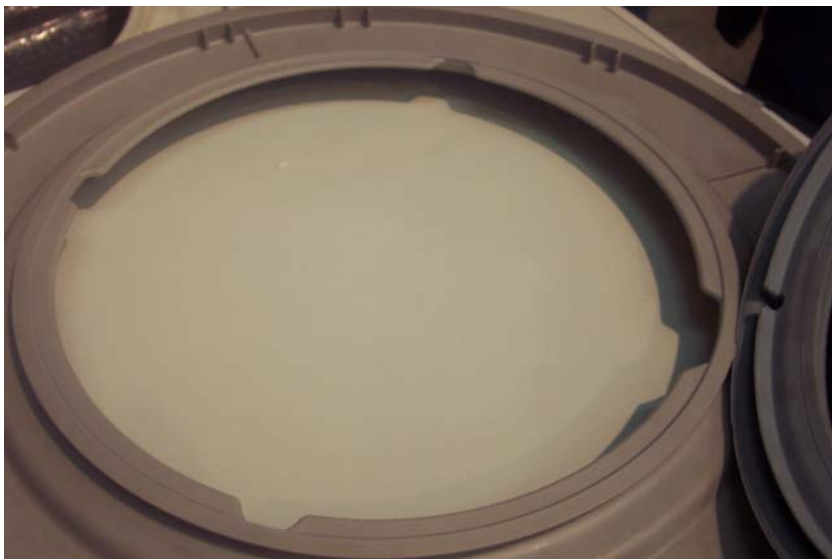
Disassembling:

- Disassemble front panel
- Grab the door hood and pull with force. The hood and the spring clamp will release from the tub.



Assembling

- Assembly should be done on the freestanding tub cover. For that reason disassemble the tub cover by taking out the clips one by one.
- Then find the water drainage hole on the tub gasket. It should be placed at 6 o'clock position of the tub front cover. Begin from 6 o'clock position and remount the door hood on the peripheral of the tub opening. Rear tongue should be placed in the tub side and the front tongue should be placed in the front canal at the same time.
- After positioning the tub gasket, fix it with the spring clamp.



20-Water inlet hose:

- Remove front panel
- Loosen the wire clamp on the detergent box connection and release the water inlet hose
- Pull off the other end of the water inlet hose and release the tub cover by hand.

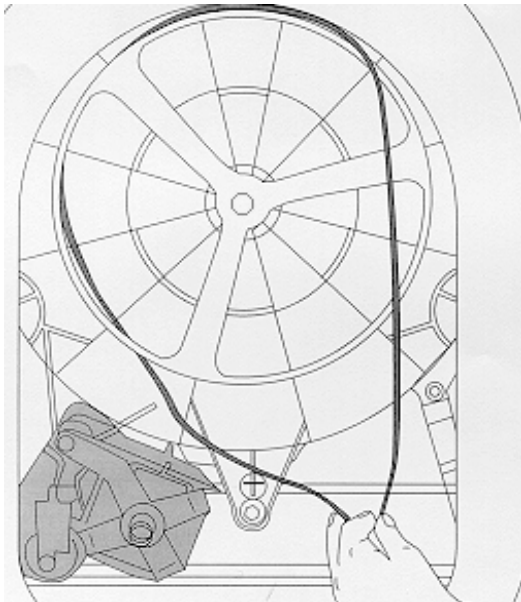
21- Poly-V Belt:

- Remove back cover
- Pull off Poly-V belt while turning over the pulley



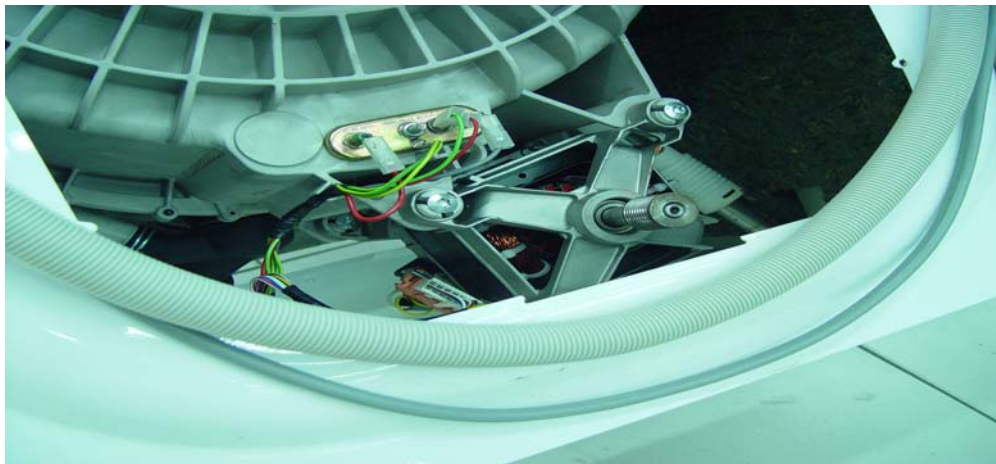
22- Pulley:

- Remove back cover
- Remove poly-V belt
- Unscrew the bat connects the pulley to the drum shaft
- Pull off pulley from the drum shaft.



23-Motor:

- Remove back cover
- Plug out motor socket
- Remove poly-V belt
- Unscrew the bolt that attach the motor to the tub (there are 4bolts, in order to unscrew the bolts use end 40)
- Release motor from the grommet.



24-Power supply cord:

- Release terminal group cover from the snaps at both sides
- Loosen cable holder screw
- Remove power supply cord terminal from the interference suppressor



25- Upper counterweight:

- Remove top plate
- Unscrew upper counterweight fixture screws and pull off counterweight

26-Lower Counterweight:

- Disassemble front panel
- Lower counterweight fixture screws are unscrewed and counterweight pulled off.
(Torque value during assembly of lower and upper counterweight should be 2100Ncm)

IMPORTANT:

Transportation bolts should be used in the case of laying the machine to the front part. Whenever laying of the machine is not required, lower counterweight bolts should not be screwed.

A 25 Torqs end is required in order to separate tub connections.

27-Tub seal:

- Disassemble the front panel
- Loosen the lower counterweight to improve access to tub clips.
- Screw that connects pressure sensor pipe to the tub is unscrewed, so that unscrewing process becomes easy.
- Remove heater
- Remove NTC
- Release tub cover clips
- Pull off tub cover and turn upside down
- Removed tub seal.

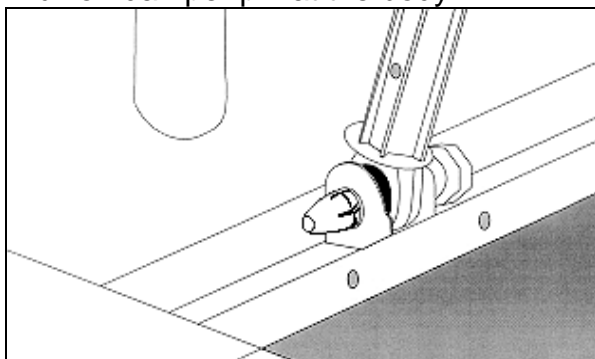
(When re-fitting, ensure that the seal and cover fit into the tub securely. Assembly of the tub group requires 450Ncm torque with –50Ncm tolerances)

28-Drum group:

- Disassemble front panel
- Remove tub cover
- Disassemble back cover
- Disassemble pulley
- Pull off drum from the tub

29-Shock absorber:

- Disassemble back cover
- Pull off damper pin at the tub pressing on the snaps at the sharp end
- Pull off damper pin at the body



30- Outlet hose:

- Remove front panel
- Loosen the clamp at the pump entry of the outlet hose and slid back.
- Pull off outlet hose from the pump
- Release the hose from the snaps at the back of the body
- Release hose from the front of the machine.