

TECHNIQUE

FRONT LOADING DISHWASHER

INO 45

OPERATING INSTRUCTIONS

• MANUFACTURER'S SPECIFICATION

. Operation Maintenance

GUARANTEE

To ensure the guarantee on this equipment we recommend that you follow the MANUFACTUER'S SPECIFICATION for use, routine and regular maintenance as outlined in these instructions.

Consumables and parts subject to wear are not covered by the warranty.

If you can not undertake the required maintenance operations our installation and service network is available to provide you with a personalised maintenance contract.

WARNING

The product delivered to you complies with current applicable standards. If any modifications are made the manufacturer can accept no responsibility whatsoever, nor can the manufacturer be held responsible in the event of incorrect use of the appliance

This machine is designed for professional use and should only be used qualified personnel.

Read this document carefully before using the machine. Keep it for future reference.

OPERATING INSTRUCTIONS

INO 45 DISHWASHER

CONTENTS

- 1. Technical characteristics
- 2. Installation
- 3. Operation
- 4. Practical advice for use
- 5. Maintenance
- 6. Electrical drawings
- 7. Hydraulic circuits
- 8. Spare parts
- 9. Emergency spare parts

TECHNICAL CHARACTERISTICS - TECHNICAL CHARACTERISTICS

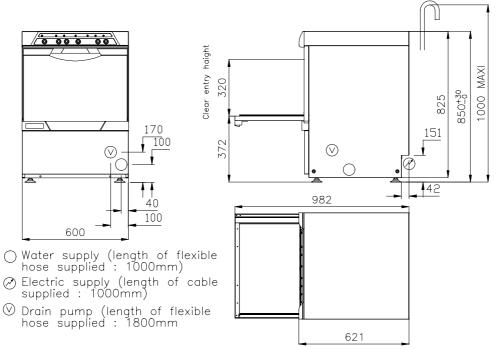


BONNET GRANDE CUISINE

Siège social:

Rue des Frères Lumière - ZI Mitry Compans 77292 MITRY MORY Cedex

A 021 H 10 - A 041 H 10



DIMENSIONS

Width (mm): 600 - Depth (mm): 621 - Height (mm): 850

PACKING

Length (mm): 1000 - Width (mm): 616 - Height (mm): 705

	INO 45					
Codes	A 021 H 10	A 041 H 10				
Net weight (kg)	64	79				
Gross weight (kg)	68	83				

TOTAL POWER INSTALLED (KW)

INO 45 cold or hot from 4 kw to 10 kw.

Wash pump = 0.75 kw Rinse pump = 0.11 kw Drain pump = 0.09 kw Wash tank heater = 1.5 kw

Voltage (50 Hz) : $3 \sim 400 \text{ V} + \text{N} + \text{E}$ Can be wired $3 \sim 230 \text{ V} + \text{E}$ or single phase 230 V + Earth

WATER CONNECTION

- Min. pressure : without softener 2 bar, with softener 3,5 bar. Max pressure : 4 bar
- Supply 20 x 27mm water not exceeding 70ppm at a temperature of up to 65°C 1000mm of hose supplied
- 40mm ø drain standpipe 1800mm of drain hise supplied

ELECTRICAL CONNECTION

- Electrical inlet at 200mm above flloor level (avec 1000mm of cable supplied)
- Provide suitably rated local isolation compling with NFC 15100.

Non contratual document C271701-02/00

INSTALLATION – INSTALLATION – INSTALLATION

For the nature and position of connections, refer to "Technical characteristics" at the beginning of these instructions.

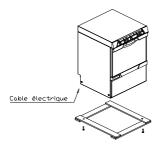
* GENERAL REQUIREMENTS

The installation, modification or repair of this dishwasher should be undertaken by an approved specialist to current standards.

* HANDLING

Handling should be undertaken using a suitable lifting device, such as a pump truck. If the dishwasher has to be moved, it should be left on its original pallet and it should not be stacked. If the machine must be moved especially in the absence of its original pallet, it must be carried and not dragged.

* UNPACKING



* Dishwasher without raising element



* Dishwasher with raising element



- Remove the pallet by unscrewing the two 10mm \varnothing bolts.
- Release the cable and hoses from the rear of the machine.
- Fit the 4 adjustable feet (they are in a bag inside the dishwasher).
- Fit the adjustable feet to the stand legs.
- Fit the machine onto stand and secure it with the 4 bolts supplied.

NOTE: Level the machine using the adjustable feet.

INSTALLATION – INSTALLATION – INSTALLATION – INSTALLATION

* CONNECTIONS

* Electrical connection

Make sure that both the mains voltage and frequency on site corresponds to those indicated on the manufacturer's rating plate on the machine.

Before connecting to mains, make sure supply is isolated. Ensure that the carthing is adequate to provide the required level of safety for the operator and the machine and conforms to current regulations.

It is important to undertake these checks beforehand. If in doubt, have the equipment and installation carefully checked by a qualified electrician.

In addition, the machine must be earth bonded by means of the screws indicated by the symbol \downarrow . The equipotential conductor should have a section of 10 mm².

The earth bonding terminal is located behind the machine on the right at low level..

The supply cable should only be replaced by a cable with the same section and type (H07 RN-F).

The dishwasher is delivered with a 1 m long supply cable; the machine can be connected as indicated below:

- 400 V 3N 50 Hz
- 230 V1 50 Hz
- 230 V3 50 Hz

Refer to the electrical diagram (Section 6) for wiring modifications.

Ensure that there is a suitably rated local isolator (with a distance of at least 3mm between contacts).



THE INSTALLATION MUST COMPLY WITH CURRENT STANDARD.

* Hydraulic connection

Before connecting the machine to the water supply, ensure that a stop cock is fitted so that the supply can be turned off if necessary, or in case of repair.

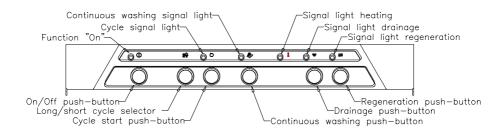
The minimum water pressure, measured at the machine when rinsing (dynamic pressure), especially when there are other valves open on the same line, must comply with the technical characteristics

* Drain connection

Make sure that the drain connection is not above 1 m from the floor.

NOTE: Refer to the technical characteristics.

PUTTING IN SERVICE - PUTTING IN SERVICE - PUTTING IN SERVICE

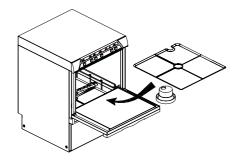


* DETAILS OF THE CONTROL PANEL

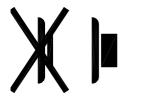
* BEFORE USE

Carry out these operations BEFORE washing the first rack:

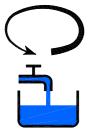
- 15 minutes before (if your machine is connected to hot water)
- 1 hour before (if your machine is connected to cold water).
- * 1 Check the correct position of the filters



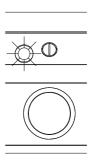
* 2 Check that the drain button is out



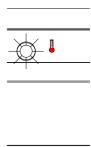
3 Open the water supply



- * 4 Close the door
- * 5 Push the On/Off button in. The amber light comes on

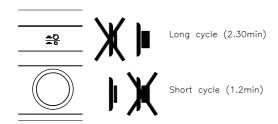


* 6 The machine fills with water, then heating starts. The indicator goes out when the temperature is reached, the machine is then ready to operate.

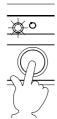


INO 45 DISHWASH	IER Code NU27170	1-03/00	
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- If your machine is not fitted with a detergent dosing system, introduce the amount detergent recommended by the manufacturer (Tank capacity = 24 litres).
- Load a rack of dirty dishes
- Set the cycle selector to the washing time.



- Close the door
- Press the button to start the cycle. The cycle starts. The programme light comes on.



At the end of the cycle, open the door.

- Remove the rack of clean dishes
- Put a further rack of dishes in.
- Close the door and start a new cycle by pressing the start button.



- If your machine is not fitted with an external detergent dosing system, add a dose of detergent corresponding to 14 litres water every 4 racks.
- Selection continuous washing.

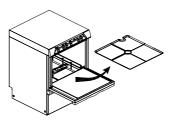
Press the continuous wash button, then press the cycle start button.

To stop continuous wash, press the continuous wash button again and wait until the rinse cycle has finished.

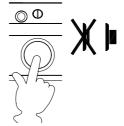
<u>NOTE</u>: If there is a prolonged period between racks, the door should be closed to conserve heat and reduce electrical consumption.

After service

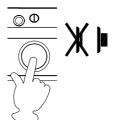
- Open the door
- Remove the filter trays; take care not to drop waste into the tank.



- Remove and clean the filter.
- Press the drain button.



- When the tank is empty, press the drain button again.
- Remove any waste remaining in the tank.
- Close the door. The machine fills up.
- When full, start a short cycle by pressing the cycle start button. In the meantime, wash and brush the filter trays and basket.
- At the end of the cycle, open the door drain the tank.
- Check that the wash arms rotate freely. If a nozzle is blocked, see the section on "Dismantling of wash arms".
- Refit the filter trays and baskets.
- Switch the On/Off button to "Off".



• Carefully wipe the tank with a sponge.

PRACTICAL ADVISE FOR USE - PRACTICAL ADVISE FOR USE -

LOADING DISHES (CROCKERY)

Remove all remains of food or other waste from the plates .

And empty any containers. Items with dried on food should be soaked prior to washing to lift the food.

Put dirty dishes in the racks. To obtain the best results, you should:

- ⇒ Put each item into a suitable rack
- ⇒ Avoid overloading the racks;
- ⇒ Place hollow objects upside down in the rack and never place them on top of one another.



Use compartmented racks for washing glasses in an inclined position.

Preferably place cutlery in holders (handles down)

POSSIBLE PROBLEMS

The dishes are still dirty after washing.

- There is food residue on dishes.
 - Insufficient pre-soaking
 - Washing time too short
 - Insufficient concentration of detergent
 - Wash or rinse nozzles blocked.
- ♦ White marks on glasses
 - Hard water; have a water softener installed or carry out a regenerating operation.
- ♦ Cloudy glasses after several washes
 - Heavily mineralised water; use a descaling agent
- ♦ Drying time too long
 - Check for rinse aid and the amount used.
- Detergent marks on dishes
 - Too much detergent
 - Insufficient rinsing (rinse nozzles blocked).
- Spotting on cutlery (Caused by the acids in various food).
 - Regularly carry out renovation using an adequate product)

Marks caused by the sharp edge of knives on certain type of crockery, and food particles penetrating scratches and staining crockery.

Regularly renovate using an adequate product.

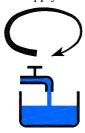
- ♦ Too much foam.
 - Wash temperature below 50 °C
 - Dosing of rinse aid too high
 - Clogged filter.
 - High concentration of milk products in the wash water.

MAINTENANCE - MAINTENANCE - MAINTENANCE - MAINTENANCE -

To ensure your warranty, carry out the following maintenance operations:

* After service

- Switch off the electric supply
- Turn off the water supply at the stop cock



• Check the levels of:

- rinse aid
- detergent
- regenerating salt (softener option)

Top up if necessary.

Leave the door open to aid drying of the dishwater.

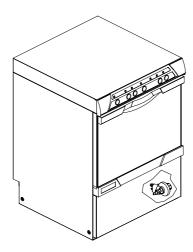
* Access to the rinse aid dispenser, and to the salt tank (softener option)

- Rinse aid dispenser: located behind the lower front panel.
- Salt container (inside the wash tank)

* Adjusting the **rinse aid** dispenser:

The rate of output of the dispenser is adjusted via a screw accessible though the front panel.

Correct, if necessary, depending on the results obtained when washing the dishes.



The rinse aid dispenser is factory-adjusted. It is possible to modify this adjustment by removing the lower front plate.

- Turn clockwise to reduce the quantity injected
- Anti clockwise to increase the quantity WARNING. Never screw or unscrew to the maximum.

NOTE: To prime the dispenser rapidly, pump in and out on the adjusting screw (Avoid unpriming the dispenser by keeping the rinse aid topped up).

MAINTENANCE - MAINTENANCE - MAINTENANCE - MAINTENANCE -

To ensure your guarantee, carry out following maintenance:

At the end of the week, in addition to daily operations

- Brush and wash the interior of the machine to remove any greasy film that may adhere to the machine walls.
- Special descaling products may be applied as per the manufacturer's recommendations. Ensure adequat dilution and you must rinse the machine several times in order to eliminate all traces of product.
- Clean the exterior of the machine with a suitable stainless steel cleaner.

Once a month

- Run the machine for 5 to 10 minutes with a special descaling and disinfecting product for dishwashers. Empty the tank and rinse thoroughly.
- Check general cleanliness and if necessary clean the interior of the machine and the door baffle.

Once a year

- A full service check by an approved engineer to change, if necessary, worn parts:
 - * Wash arm hub and bearings;
 - * Product dispenser pipes.

Important recommendations

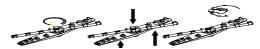
- This machine is exclusively reserved for washing dishes. Do not use it for any other purposes.
- It complies with current safety requirements.
 Repairs should be carried out by an approved agent.
 Incorrect repairs may seriously endanger the user.
- In the event of modifications to the machine, the manufacturer accepts no responsibility.

- This machine must be connected to an isolator combined with suitably rated fuses. Switch off the supply to the machine before any intervention.
- * Make sure that your dishes are dishwasher proof.
- * Use only detergents suitable for commercial dishwashers.
- * Never use solvents for cleaning, nor abrasive pads that might scratch stainless steel and graphics.
- * Do not wait until the rinse aid runs out before refilling, otherwise it will be necessary to re-prime the dispenser.
- * Never hose down the dishwasher.
- * Never touch the heating element after having emptied the tank, you may burn your hands.
- Detergent products are heavily corrosive, always follow the manufacturer's recommendations. Take care when handling them. To avoid stains forming do not leave them in contact with stainless steel for prolonged periods. Switch the machine on immediately after having introduced detergent.
- * The water from the dishwasher is not drinkable!
- * Never lean on the opened door, the machine may tip over and be damaged.
- * Do not allow unqualified personnel to use the machine.
- * There is an air vent behind the dishwasher, allow for **sufficient air flow for built-in units**.
- * For proper operation of the machine, **the dynamic** water pressure, must be less than 4 bars. Refer to Section 1 1.
- Model without water softener: the maximum hardness of water must not exceed 70ppm. Greater hardness will result result in poor wash results, , accelerated scaling of the machine and may damage the heating elements.

To enable us to guarantee this equipment, you have to carry out the following maintenance operations:

* DISMANTLING THE WASH ARMS to free a blocked nozzle

- Slacken the retaining nut
- Free the wash arm by lifting whilst pressing down on the nut
- Unscrew the nut completely and remove the wash arm.
- Unblock the nozzle in question and clean the wash arm.
- Push the wash arm down on its conical pivot



MAINTENANCE - MAINTENANCE - MAINTENANCE -

* REGENERATION

- Check the level of regenerating salts in the holder
- The periodicity depends on the hardness of the water supplied by your public network and the quantity of racks of dirty dishes treated every day.

Degre Th	10	15	20	25	30	35	40
Nber.racks/h							
5	9 days	6 days	5 days	4 days	3 days	3 days	
8	8 days	5 days	4 days	3 days	3 days		
10	7 days	5 days	4 days	3 days		very 2 da	ve.
13	6 days	4 days	3 days		Every 2 days		iyo
15	4 days	3 days					/////
18	4 days				IIII	11111	/////
20	4 days	Every	2 days	IIII	IIII	IIIII	/////
25	3 days						
30	3 days		IIII			/////	IIII
35	3 days		IIIII		IIII	IIIII	/////
40			11111	IIIII			
45					After	avery se	rvice
50		IIII	11111	IIII			

The table indicates the suggested frequency, any signs of limescale confirms that regeneration is overdue

- Open the door
- Press the drain control button.
- When the tank is empty, press again the drain button again.
- Close the door
- Press the regeneration button for 2 to 3 seconds

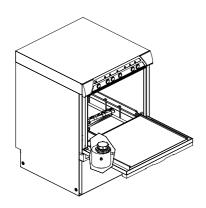
The regeneration indicator light comes on for the entire duration of the cycle (approx. 20 min.) When the light goes off, regeneration is over.

• Drain the tank again and switch off the machine

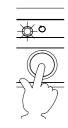
<u>Note</u>: A regeneration cycle should be started when the wash tank is empty. Starting a regeneration cycle prevents the operation of the machine until it is completed.

• FILLING THE SALT CONTAINER

• Refill using proprietary salt granules or tablets.







WARRANTY

WARNING! NO WARRANTY IS UNCONDITIONAL

Our warranty only applies to normal usage, i.e. in strict compliance with the recommendations indicated in our service and maintenance notices.

It is also only valid if our technicians carry out the regular recommended service and/or inspection visits.

Subject to the above reservations, our appliances are normally guaranteed for a period of one year, running from their date of manufacture. In the event of breakdowns due to defects or to constructional errors either apparent or hidden, throughout the period of warranty our appliances are repaired at our cost, parts and labour included.

For the warranty to be effective, our appliances should not have been modified nor repairs carried out with parts which are not original or approved by us, or by non-qualified personnel or those who have not been trained by us.

In the event of a breakdown or failure, the purchaser should inform us in writing as soon as possible of any defect attributed to our appliances. No attempt, should be made to remedy the defect directly or via a third party

Regular service inspections and maintenance by our engineers are an essential condition for correct and reliable operation of our equipment. Such service and maintenance operations can and must only be carried out by our technicians, who are not only fully qualified but also trained to do so. They have the right tooling, original spare parts and are given regular training updates on the appliances. Periodic servicing is essential, it is carried out at a cost but guarantees reliable operation of our appliances.

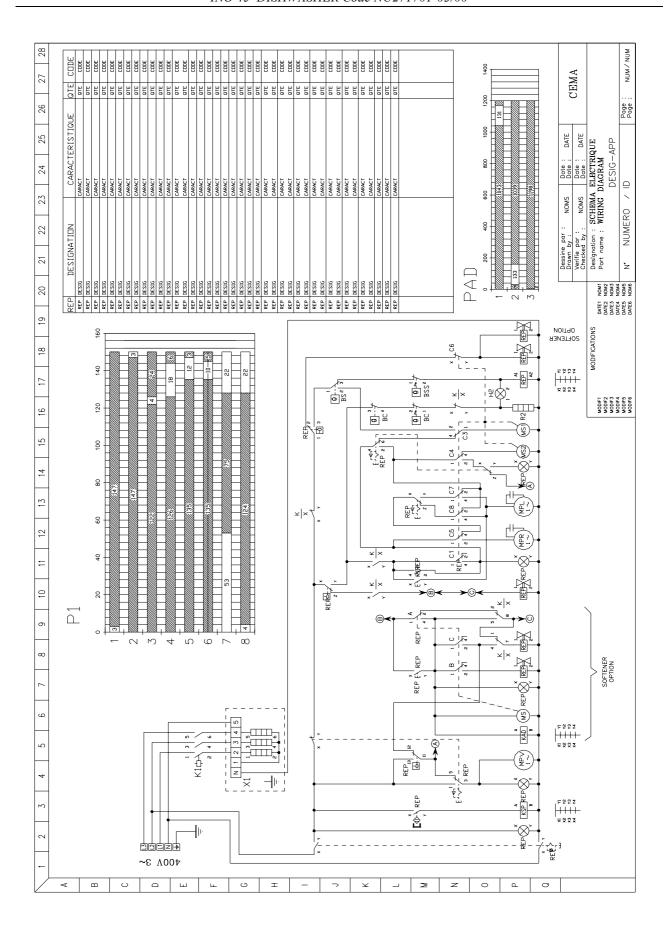
The timing of service and maintenance is relative to the conditions of use. In the event of heavier conditions, it will be necessary to carry out certain operations more frequently.

WARNING: Damage caused by the connection of our appliances to a power supply which does not comply with the instruction plate (voltage, phase/neutral cycles...) or with the phase order (particularly) important for three-phase motors, direction of ventilation, jacks...) shall in no case covered by our warranty.

For this reason we advise that final connections only take place when such things can be checked thoroughly

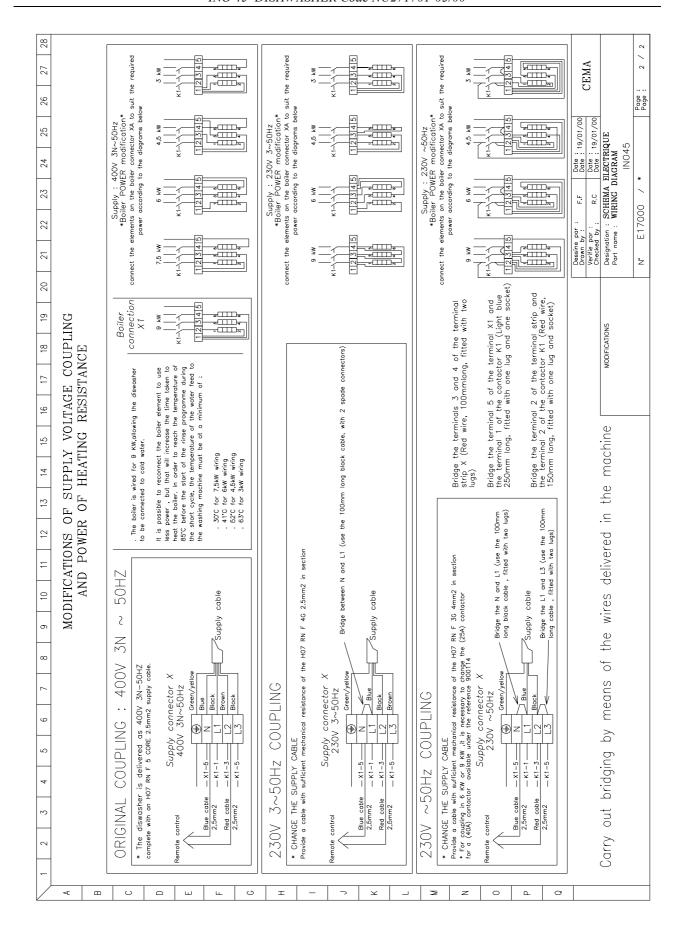


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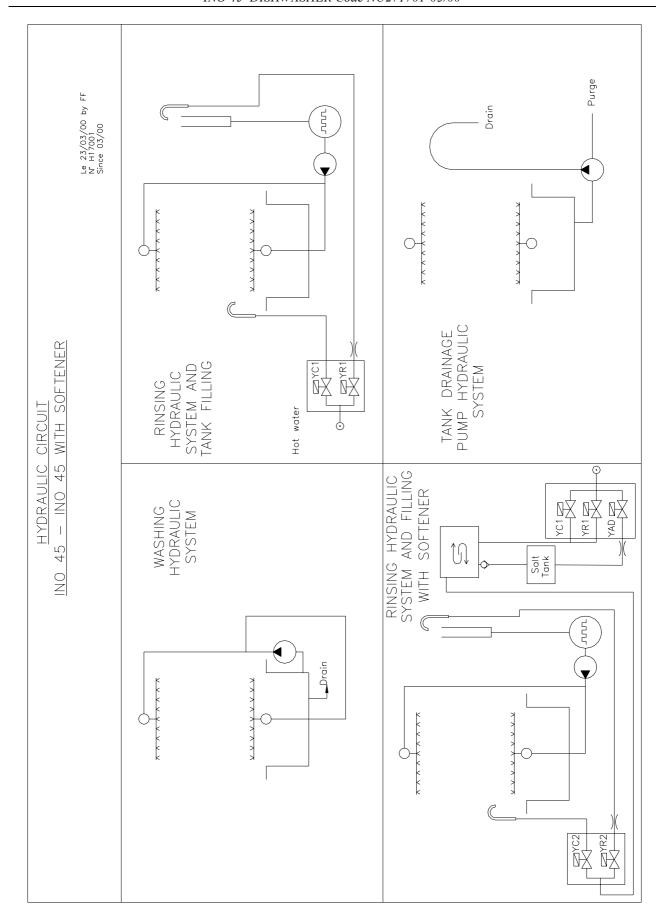


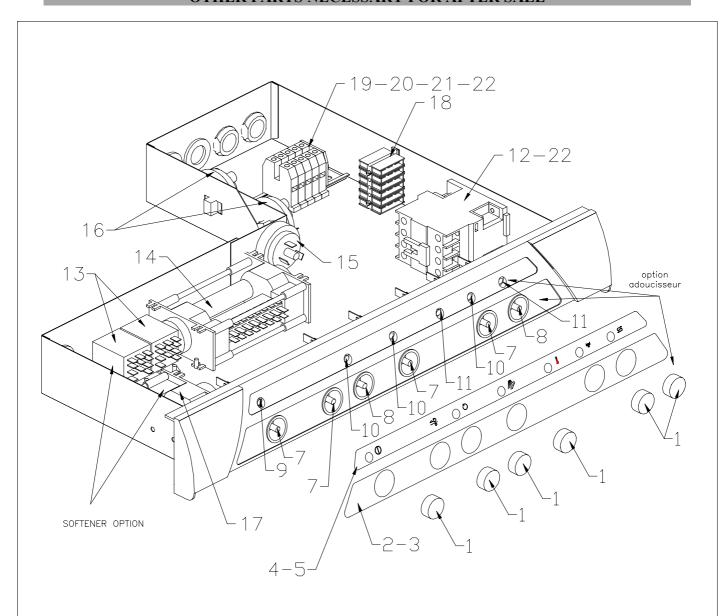
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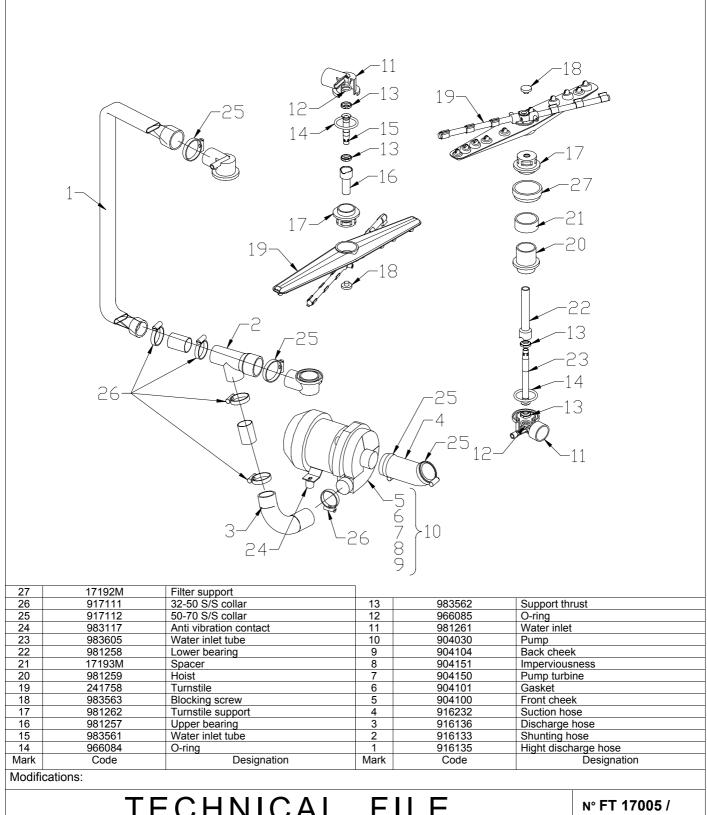




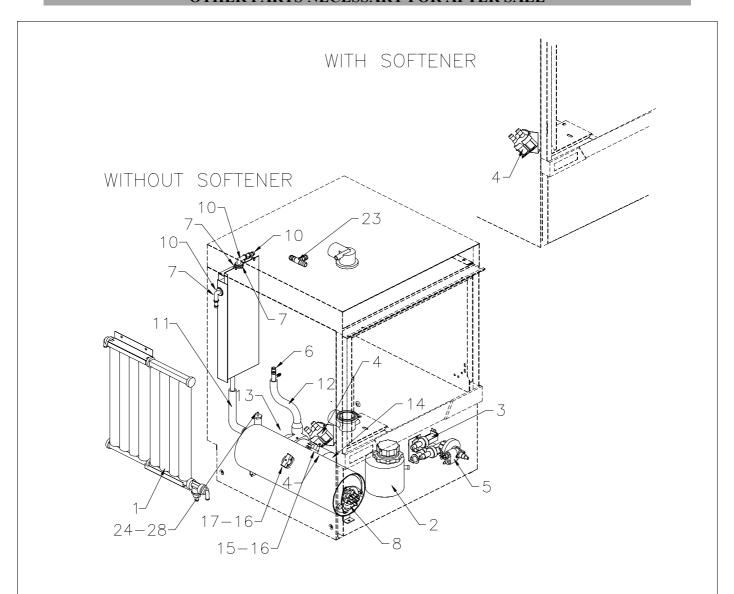
22	900114	Contacor 230V 1 PH			
21	906100	Grey terminal			
20	906101	Blue terminal	10	907533	Green light
19	906152	Yellow / green terminal	9	907535	White light
18	906174	Boiler connector	8	900054	Unmaintained switch
17	905032	Softener programmer	7	900053	Maintained switch
16	901300	Pressure switch	6	981150	Front
15	901026	Drain pressure switch	5	908119	Self adhesive softener front
14	905033	Programmer	4	908118	Standard self adhesive front
13	900073	Relay	3	908121	Self adhesive softener front
12	900130	Contactor 230/400V 3 PH	2	908120	Standard self adhesive front
11	907534	Orange light	1	900085	Key
Mark	Code	Designation	Mark	Code	Designation

Modifications:

FIC	N° FT 17004 /		
FAMILY: DISHWASHER	TYPE :	INO 45	Date : 27/03/00
BONNET S/E: ELECTRIC BOX		Drawn by : FF Checked by : RC	
This drawing is our property, all reproduction rights are reserved. Non contractual document			



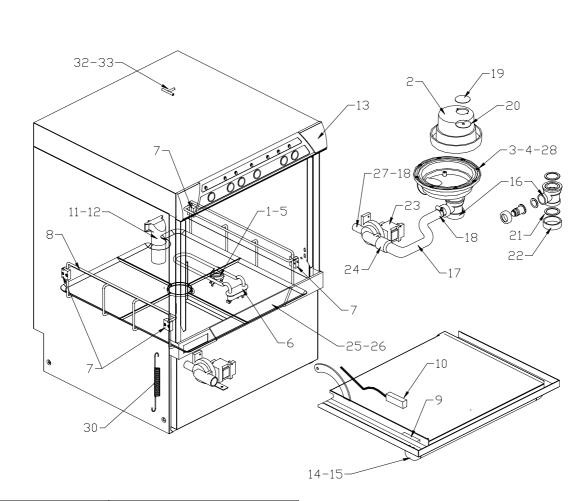
TE	CHNIC	CAL	FILE		N° FT 17005 /
FAMILY: DISHWASHER		TYPE :	INO 45		Date : 26/09/00
BONNET					Drawn by : FF Checked by : RC
	This drawing is our property, all reproduction rights are reserved. No contractual document.				



28	916217	4-7 hose			
27	916207	Suction hose product meter			
26	916235	Discharge hose product meter	13	916129	Suction hose
25	916206	Hose dia.12	12	916137	Discharge hose
24	917114	Collar (pressure switch)	11	916130	Hose
23	917035	Tee	10	917136	Gasket
22	916009	Power hose	9		
21	917111	32-50 collar	8	903113	Immersion heater with O-ring
20	917110	20-32 collar	7	917135	Bended grooved sleeve
19	917109	12-22 collar	6	917001	Tee
18	917108	8-16 collar	5	914207	Product meter
17	901033	Sofety thermostat	4	241701	Double equipped solenoid valve
16	966086	Thermostat gasket	3	241702	Triple equipped solenoid valve
15	901032	Regulation thermostat	2	915405	Salt vat
14	904135	Rinse pump	1	915404	Water softener
Mark	Code	Designation	Mark	Code	Designation

Modifications:

TE	CHNICAL	FILE	№ FT 17006 /	
FAMILY: DISHWASHER	TYPE :	INO 45	Date : 04/10/00	
BBONNET	Drawn by : FF Checked by : RC			
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33	917115	Clamp Collar			
32	917128	T-bracket (pressure switch)			
31					
30	985015	Door spring			
29	966704	O-ring seal			
28	966032	O-ring seal			
27	919024	Drain pipe			
26	981155	Tank front (piece 2)	13	981150	Electric front
25	981153	Tank front (piece 1)	12	966011	O-ring seal
24	917111	32-50 clamp collar	11	981204	Air trap
23	904031	Drain pump	10	900083	Magnet detector
22	919026	Blind nut	9	900084	Magnet
21	919027	Rubber flat seal	8	986139	Rack support
20	17533M	Lower washer	7	981154	Support
19	241757	Upper washer	6	903121	Heater
18	917109	12-22 clamp collar	5	966086	Thermostat gasket
17	916144	Suction hose	4	981243	Suction grid
16	919025	Appliance plug	3	981244	Scraps collector
15	981156	Handle (piece 2)	2	981246	Filter container
14	981152	Handle (piece 1)	1	901031	Thermostat
Mark	Code	Designation	Mark	Code	Designation

Modifications: Drain pump code / door cable removal 03/01 F.F.

SPEC	IFICATION	SHEET	№ FT 17007 / B
FAMILY: DISHWASHER	TYPE :	INO 45	Date : 06/10/00
BBONNET	S/E: TANK EQUIPMENT This drawing is our property, all reproduction rights are reserved. No contract		Drawn by : FF Checked by : RC

EMERGENCY SPARE PART - EMERGENCY SPARE PART -

DESIGNATION	CODE	QTY
Thrust washer	983562	4
Lower spindle bearing	981263	1
Upper spindle bearing	981257	1
Retaining nut	983563	2
Rinse aid dispenser	914207	1
Wash tank immersion heater	903121	1
Boiler immersion heater	903113	1
Fill solenoid (double)	241701	1
Softener solenoid (triple)	241702	1
Wash pump	904030	1
Rinse pump	904135	1
Wash tank drain pump	904031	1
Wash tank pressure switch	901300	1
Boiler pressure switch	901310	1
Wash tank drain pressure switch	901026	1
Button head	900085	2
Push button for softener or cycle start	900054	1
Switch	900053	1
Programmer	905033	1
Optional softener programmer	905032	1
White indicator light	907535	1
Green indicator light	907533	2
Orange indicator light	907534	2
Wash tank thermostat	901031	1
Boiler thermostat	901032	1
Boiler safety thermostat	901033	1