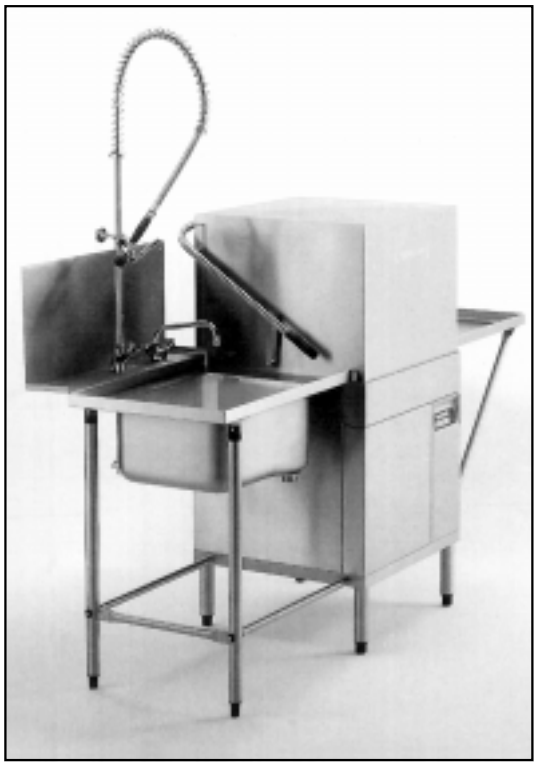
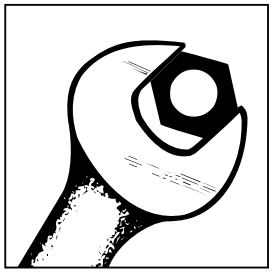
HOBART



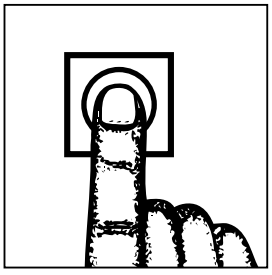
HX-30/40 and HX-30/40 S

Glass and Dishwashers

INSTALLATION



OPERATION



VERSION 18/01/00

Installation and Operation Instructions for Model HX-30/40 and HX-30/40 S (with built-in softener)

Content **Page**

Machine noise level is ≤ 70 dB (A)

Important Notes

● Use in Accordance with Regulations

This machine is exclusively to be used to wash ware such as plates, cups, glasses, cutlery, trays etc.
Do not use for electrically heated cooking and heat conservation appliances.

● Safety

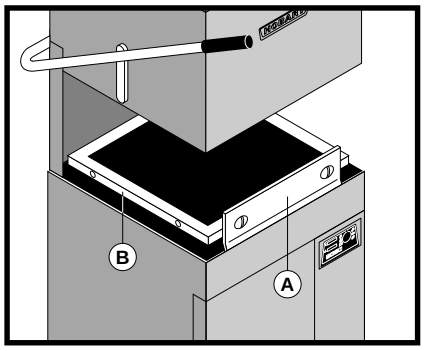
Never hose down the machine.

The **"Attention"** symbol is shown beside instructions that are essential for the **safe operation** of the machine. **Please read** these passages **very thoroughly**.

● Liability

Installations and repairs which are not carried out by **authorized technicians** or the use of other than original spare parts, and any **technical alterations** to the machine, **may affect the warranty set out in the standard conditions of sale**.

1 Installation



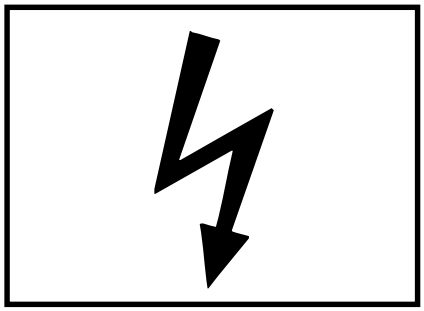
1.1 Location

- Wall clearance of 100 mm is required.
- Level machine by turning the feet.
- Distribute machine weight equally onto all feet.

1.2 Converting to corner version

- Open the hood, unscrew guide rail A and fix it to position B.
- To set the tables see installation plan.

2 Connections

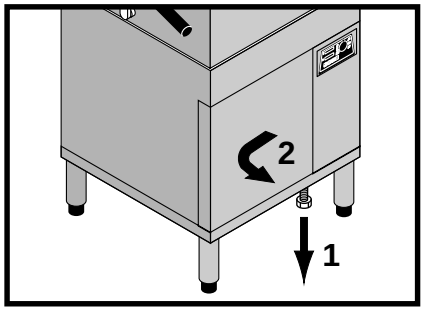


2.1 Electrical connection

must be carried out by an authorized technician according to the local and national codes.

- **Set main circuit breaker.**
- Check machine specifications to make sure they correspond to those of the site supply and to wiring diagram.
- Check site fuse rating.

According to EN 60 335 the appliance must be connected to a equipotential conductor. The connecting screw is located beside the cable inlet.

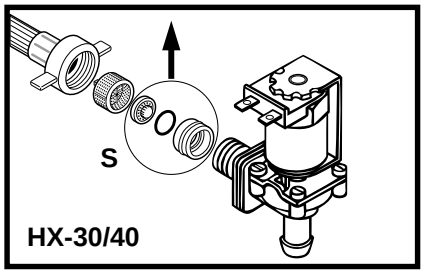


2.2 Water connection (HX-30/40)

- If possible to soft and warm water (4° Clark, max. 60°C).
- Line flow pressure 0.6 – 6 bar.

If line flow pressure is less than 0.7 bar:
(must be carried out by an authorized technician)

- Switch **Off** machine.
- Remove front panel.
- Unscrew panel with electrical parts.



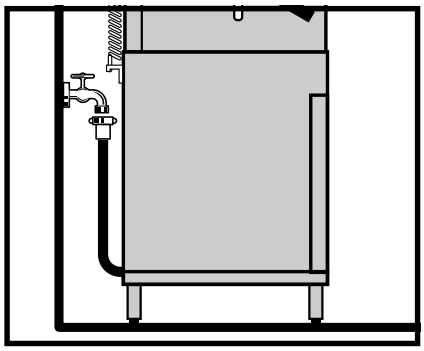
- Disconnect the water supply hose from water inlet valve.
- Take away the sieve (S) and remove the diaphragm (see drawing).
- Replace the sieve and reconnect supply hose.
- **If line flow pressure is above 6 bar provide pressure reducer.**
- Connect flexible supply hose with union nut $^3/_4$" to site connection.
- **Fit shut-off valve.**

All machines must be operated with water of drinking quality. For water with an extremely high mineral content, water treatment is recommended.

Water connection (HX-30/40 S)

For U.K. see following page.

- If possible to warm water (**max. 60°C**).
- Machine is provided for flow pressure 1.4 – 6 bar as standard.
- If flow pressure is below 1.4 bar, please contact the HOBART service.
- **If flow pressure exceeds 6 bar, pressure reducer is required.**
- Connect flexible supply hose with union nut $^3/_4$" to site connection.
- **Fit shut-off valve.**



Water connection (HX-30/40 S) only for U.K.

All United Kingdom installations must be supplied from storage not mains.
Direct connections to the mains supply contravenes Water Authority Regulations.

– Connect if possible to warm water.
  The supply water temperature should not exceed 60°C into the machine.
  For temperatures in excess of 60°C, a thermostatic mixing valve should be fitted at installation. This valve is available from HOBART Service Centres.

– **Fit shut-off valve.**

LOW PRESSURE SITUATIONS

Below 0.4 bar (6 psi) flow pressure there are two solutions.

a) Provide a suitable water storage tank at a height which will create a pressure in excess of 0.4 bar or,
b) fit a water pump to increase the pressure.
  A suitable pump can be supplied by HOBART at extra cost.

MEDIUM PRESSURE SITUATIONS

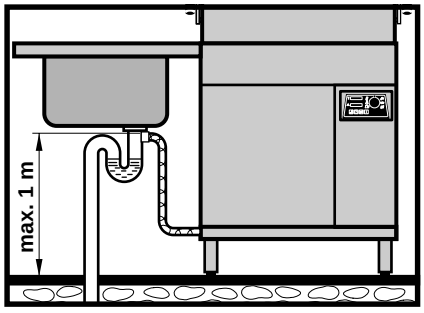
0.4 – 0.7 bar (6-10 psi) flow pressure.

– Most installations will fall into this category and the machine will arrive fitted with a solenoid valve designed for this pressure range.

HIGH PRESSURE SITUATIONS

Above 0.7 bar flow pressure.

a) Fit a water storage tank at a suitable height.
b) Fit a pressure reducing valve during installation.



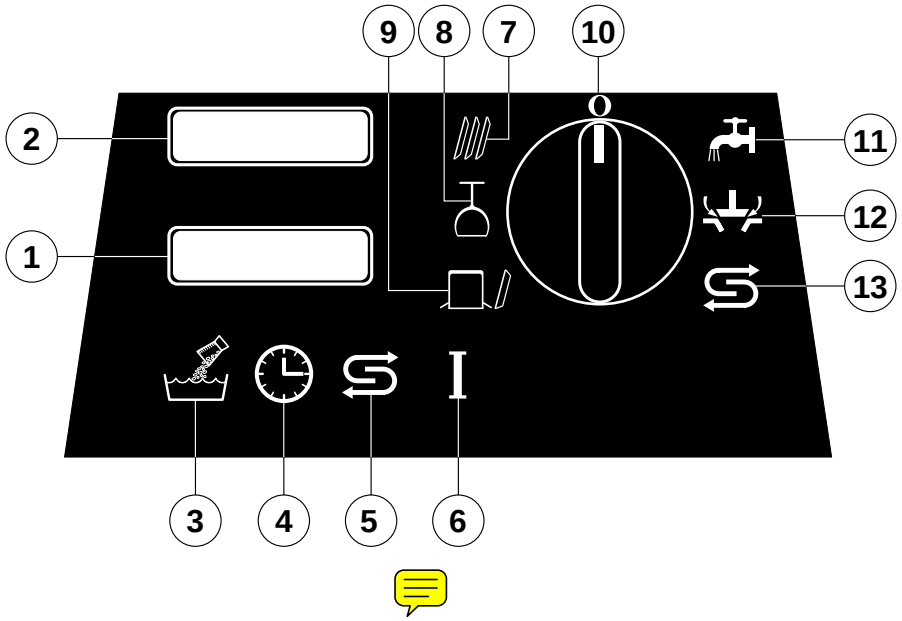
2.3 Drain Connection

– Connect to trapped drain line.

– Connection between machine and site drain may not exceed max. height of drain pump lift of 1 m.

– Do not kink drain hose.

3 Controls



1. Thermometer **Wash** (50-60°C)
2. Thermometer **Rinse** (70-80°C)
3. **Detergent dispenser** pilot light (if installed)
4. **Programme** pilot light
5. Pilot light **Regeneration** (HX-30/40 S only)
6. Pilot light Machine **ON**

SELECTOR SWITCH:

		HX-30 / HX-30 S	HX-40 / HX-40 S	
7.		180 sec.	180 sec.	normal programme
8.		120 sec.	90 sec.	light duty programme
9.		240 sec.	240 sec.	heavy duty programme

10. Machine **OFF**

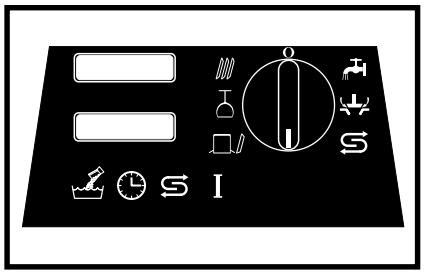
11. **Filling**

12. **Tank drain**

13. **Regeneration** (HX-30/40 S only)

To reach hygienic rinse temperatures even with cold water connection or reduced heating power, the actual cycle times extend accordingly.

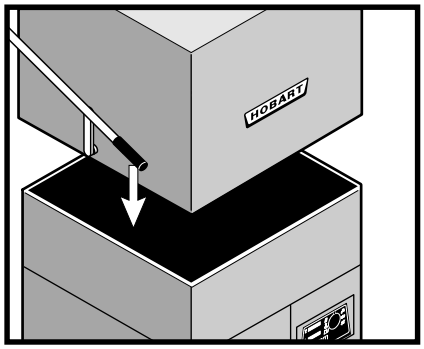
4 First Run



4.1 Fill rinse booster heater

– Set programme switch to lower position (opposite to "**0**").
– **Open shut-off valve.**

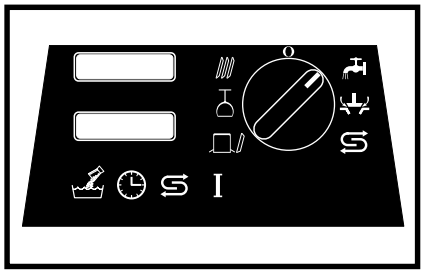
– **Switch on main circuit breaker.**
– Pilot light machine **ON** illuminates.



– Close the hood.
– **Programme** pilot light illuminates.
– Filling starts.

– After approx. 2 minutes the rinse booster heater is filled.

– **Set programme switch to "0".**



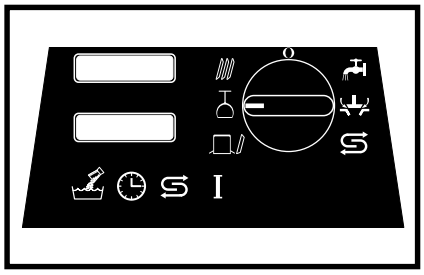
4.2 Tank fill

– Open the hood.

– Set selector switch to **fill** position.

– Close the hood.
The **programme** pilot light illuminates and fill starts.

– When pilot light goes off, tank fill is completed.

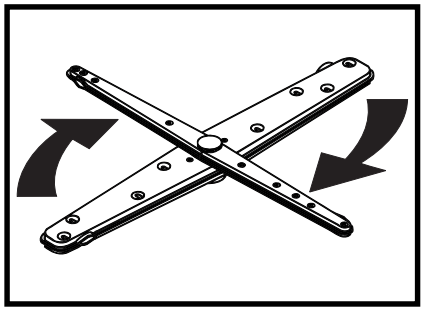


4.3 Test cycle

– Open the hood.

– Set programme switch to light duty position.

– Close the hood.
The **programme** pilot light illuminates, cycle starts.



Check:

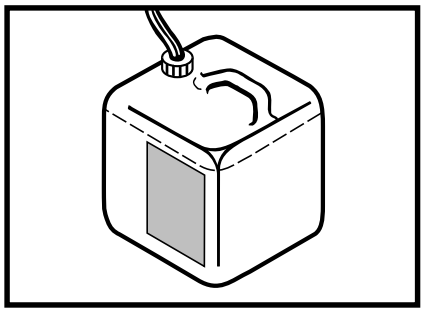
– Open hood and check if upper and lower wash and rinse arms rotate smoothly.

– Check and eliminate any leakages of supply and drain pipework.

ATTENTION

For machines manufactured prior March 2000 the **adjustment of detergent, rinse agent** and **softener** is to be done according to the instructions on page 10 and 11.

5 Dispensers (March 2000 onwards)



5.1 Filling the containers

Rinse agent:

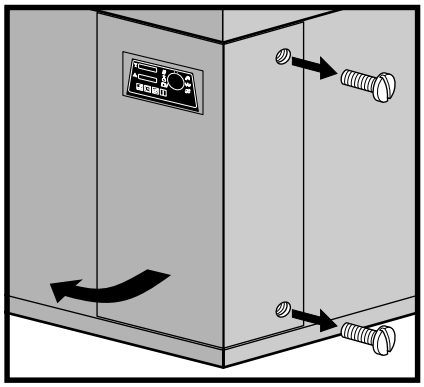
– Put suction hose (**blue**) into rinse agent container.

Detergent:

Important !
Do not use any acidic detergent products with the built-in detergent pump.

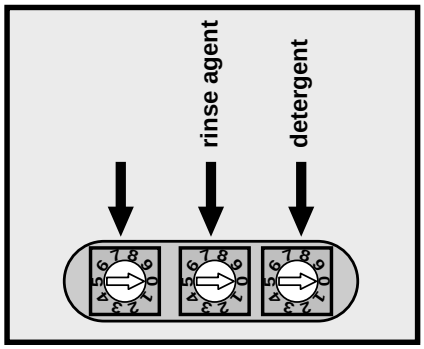
– Put suction hose (**white**) into detergent container.
NOTE: Run machine 3 to 4 cycles until suction hose is filled.

Use only commercial detergent and rinse agent. Please pay attention to the manufacturers safety rules and instructions.



5.2 Adjustment

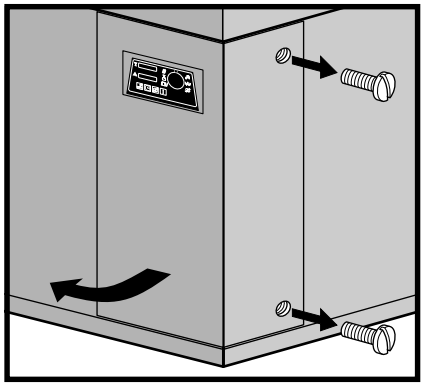
– Switch off the machine.
– **Switch off main circuit breaker.**
– Remove front panel and open the switch box cover.
– Adjust the rinse agent and detergent concentration by turning the rotary switches on electronic board (behind the cover).



– Turn the rotary switches clockwise to increase the dosage and counterclockwise to decrease.
(Only position 0 to 7 are used. Position 8 and 9 are not utilized.)

Each time the dosage is changed, switch off the machine (set the selector switch to **"0"**) in order to activate the new dosage time.

– **The dispensers are factory set to medium position.**
Ask your rinse agent and detergent supplier concerning an optimum adjustment for quantity.

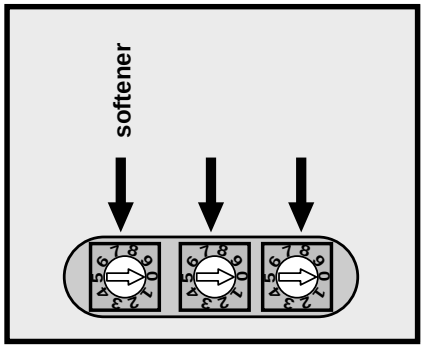


6 Softener (HX-30/40 S only) (March 2000 onwards)

6.1 Adjustment of water hardness

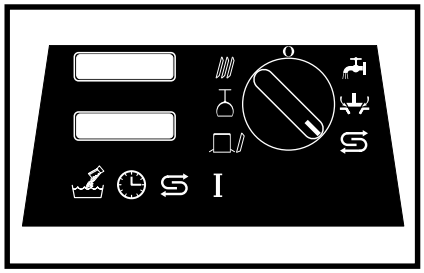
– Switch off the machine.
– **Switch off main circuit breaker.**
– Remove front panel and open the switch box cover.

Adjust the softener according to schedule by turning the rotary switch on electronic board (behind the cover).
(Only position 0 to 2 are used. Position 3 to 9 are not utilized.)



Position	Water hardness	Water quantity until next regeneration	Rack quantity until next regeneration
0	**7-12° clark**	**1300 Ltr.**	**approx. 370 racks**
1	**13-24° clark**	**650 Ltr.**	**approx. 185 racks**
2	**25-36° clark**	**430 Ltr.**	**approx. 122 racks**

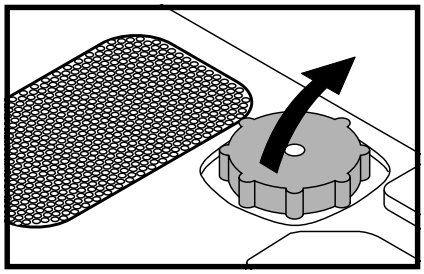
– To ascertain water hardness level, ask local water authority.
– The softener is factory set to position 2.



6.2 Regeneration

(When the machine is delivered, the softener is already regenerated.)

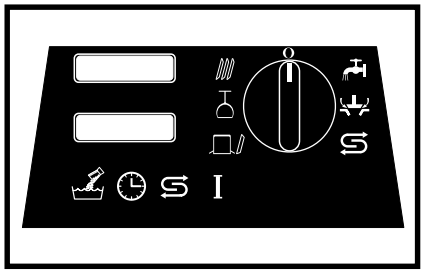
– When the **regeneration** pilot light blinks (with hood closed) indicating that salt is required, open the hood and set programme switch to **regeneration** position.
– Close the hood. The regeneration pilot light illuminates permanently and the tank will be drained.
– As soon as the pilot light starts blinking again, open the hood.



– Unscrew the softener lid.
– Fill dispenser with 1 kg powdered salt (salt tablets are not recommended). **Clean seal and rim of softener lid and border carefully before closing the lid.**
– Close lid and tighten.

IMPORTANT: Only fill with salt just before starting the regeneration programme.

– Close the hood.
– Regeneration pilot light illuminates permanently and also the programme pilot light.
– The regeneration cycle starts (duration approx. 45 minutes). **Do not open the hood during cycle is running.**



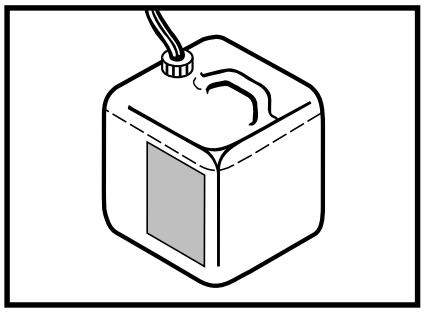
– When the programme pilot light goes off, the regeneration is finished.
– **Set programme switch to "0".**

NOTE:
The regeneration can even be done, when pilot lamp does not blink (e.g. at the end of the day before leaving).

ATTENTION

For machines manufactured March 2000 onwards the **adjustment of detergent, rinse agent** and **softener** is to be done according to the instructions on page 8 and 9.

5a Dispensers (prior March 2000)



5.1a Filling the containers

Rinse agent:

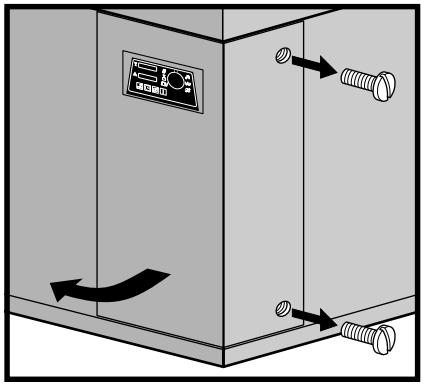
– Put suction hose (**blue**) into rinse agent container.

Detergent:

Important !
Do not use any acidic detergent products with the built-in detergent pump.

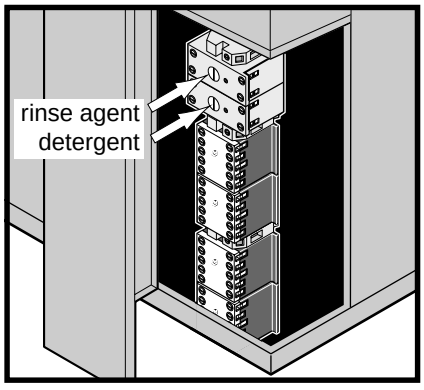
– Put suction hose (**white**) into detergent container.
NOTE: Run machine 3 to 4 cycles until suction hose is filled.

Use only commercial detergent and rinse agent. Please pay attention to the manufacturers safety rules and instructions.



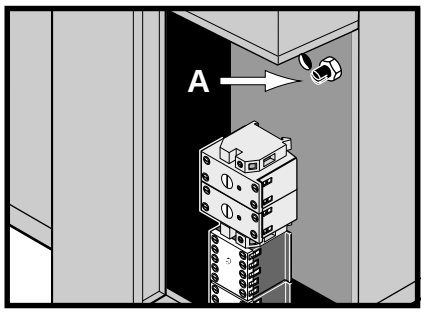
5.2a Adjustment

– Set selector switch to **OFF** position.
– **Switch off main circuit breaker.**
– Open the switch box cover.



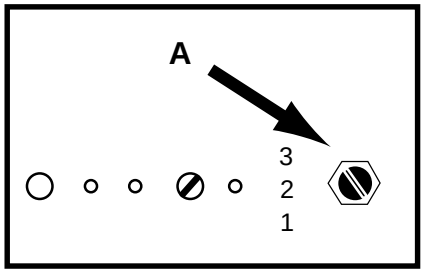
– Adjustment of rinse agent quantity at the top potentiometer, adjustment of detergent quantity at the bottom potentiometer behind the cover.
– Turn to right: increase dosage.
– Turn to left: decrease dosage.
– The dispensers are factory set to medium position.
Ask your rinse agent and detergent supplier concerning an optimum adjustment of the quantity.
– Close panel after adjustment.

6a Softener (HX-30/40 S only) (prior March 2000)



6.1a Adjustment of water hardness

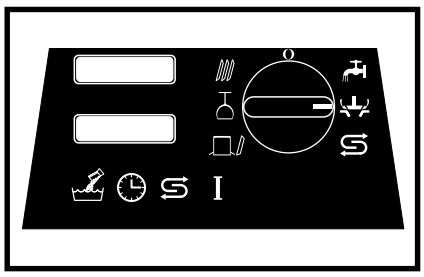
– Switch **OFF** machine.
– Remove front panel.



Adjustment of softener by screw **A** behind the front panel according to schedule.

Position	Water hardness	Water quantity until next regeneration	Rack quantity until next regeneration
1	**7-12° clark**	**1300 Ltr.**	**approx. 370 racks**
2	**13-24° clark**	**650 Ltr.**	**approx. 185 racks**
3	**25-36° clark**	**430 Ltr.**	**approx. 122 racks**

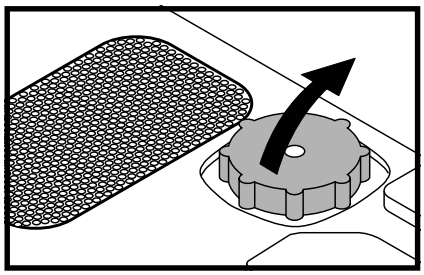
– To ascertain water hardness level, ask local water authority.
– The softener is factory set to position 3.



6.2a Regeneration

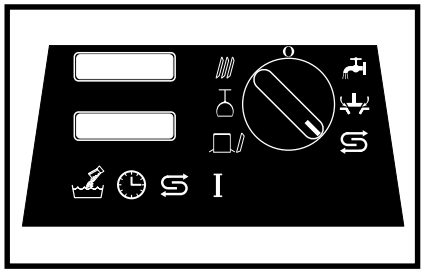
(When the machine is delivered, the softener is already regenerated.)

– When **regeneration** pilot light blinks (indicating that salt is required), set programme switch to **drain** position.
– When the tank is drained, open the hood.



– Unscrew the softener lid.
– Fill dispenser with 1 kg powdered salt (salt tablets are not recommended). **Clean seal and rim of softener lid and border carefully before closing the lid.**
– Close lid and tighten.

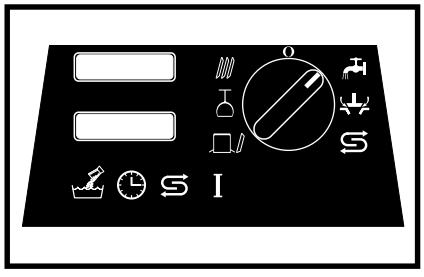
IMPORTANT: Only fill with salt just before starting the regeneration programme.



– Set programme switch to **regeneration** position and close hood. The regeneration pilot light illuminates permanently, cycle is running.

ATTENTION:
Do not open the hood during regeneration.

– After approx. 45 minutes the regeneration pilot light goes off, the regeneration is finished.

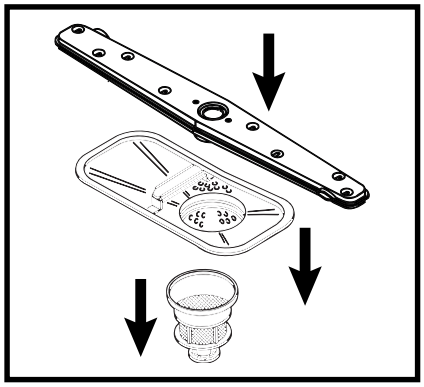


– Open the hood and set programme switch to **fill** position.
– Close the hood.
– **After filling, the machine is ready for operation.**
Select a washing programme.

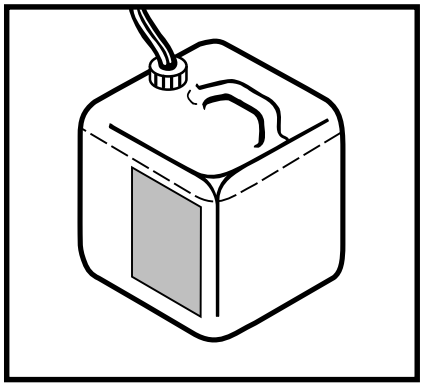
NOTE:
The regeneration can even be done, when pilot lamp does not blink (for instance at the end of the day before leaving).

7 Operation

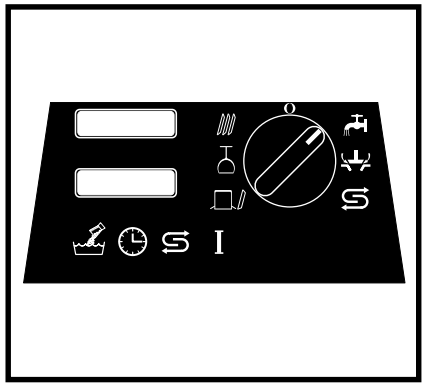
7.1 Preparation



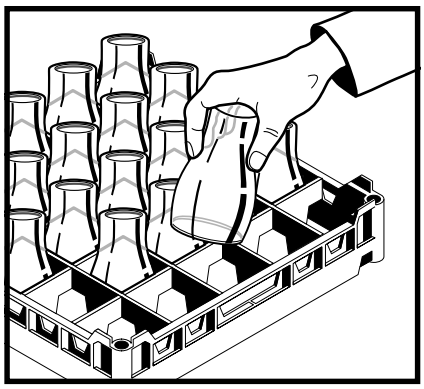
Check correct position of wash and rinse arms and strainer.
Open shut-off valve and switch on main circuit breaker.



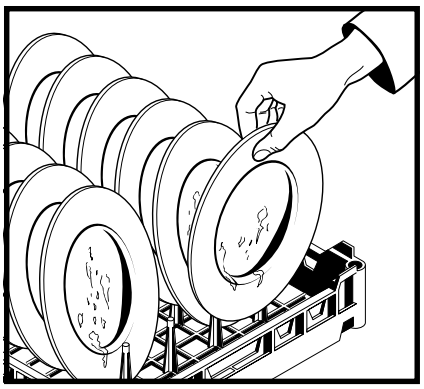
Check fill level of detergent and rinse agent containers.
Do not run the dosing pumps for long periods without a liquid in the containers.



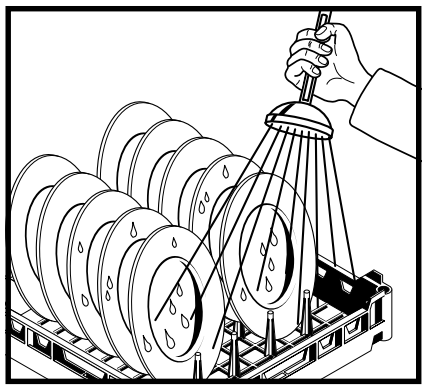
Close the hood, set programme switch to **fill** position.



Place glasses and cups with the opening facing downwards into racks.

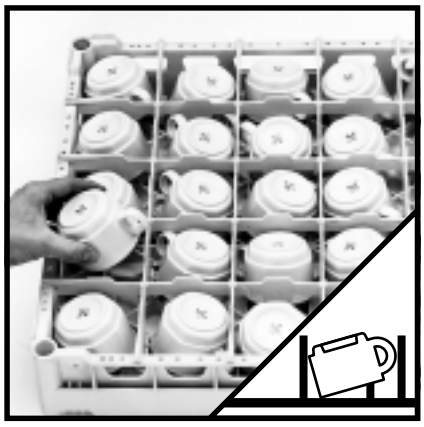


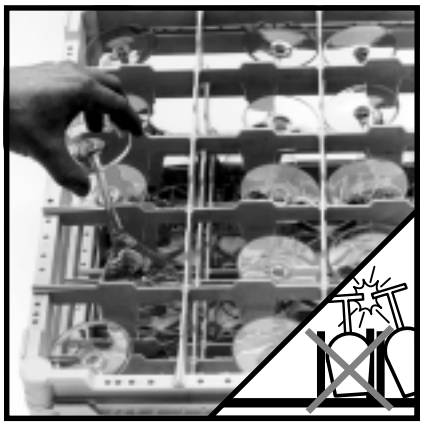
Remove coarse food soil before loading plates into rack.

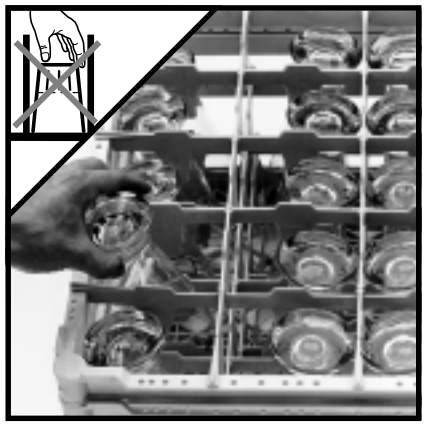


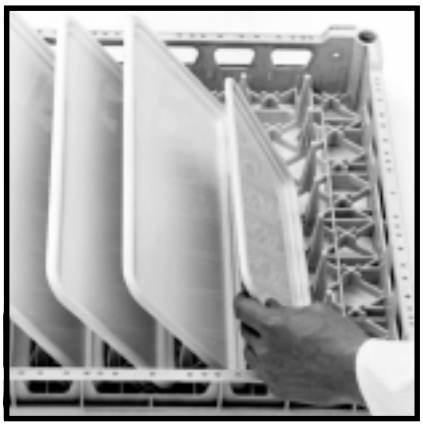
Spray off greasy food soil.

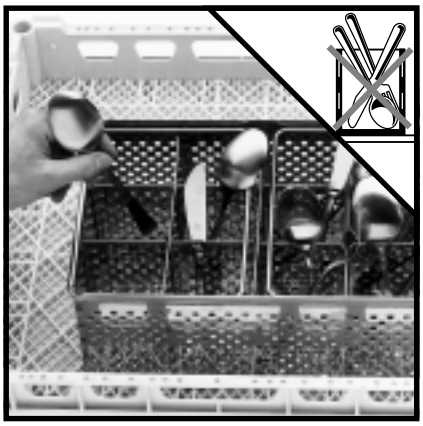
7.2 Racking



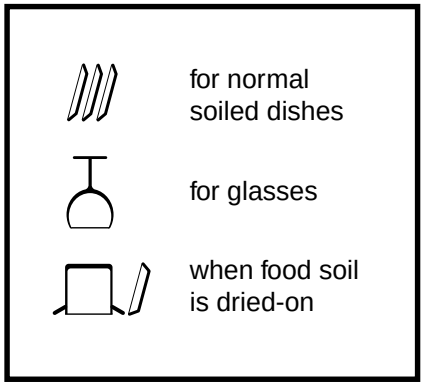




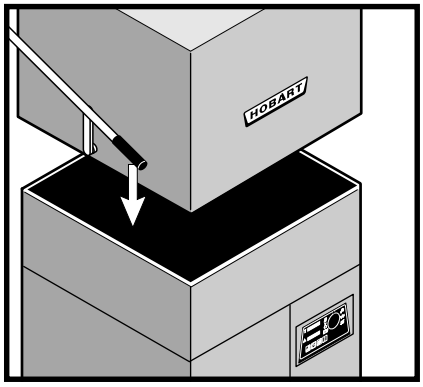




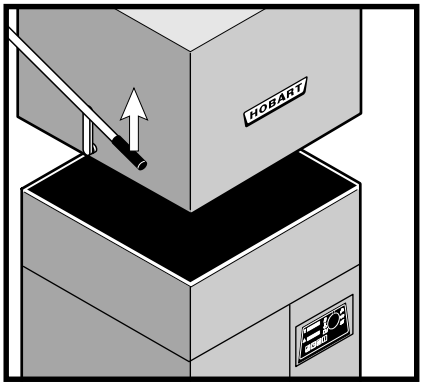
7.3 Washing



Select programme.

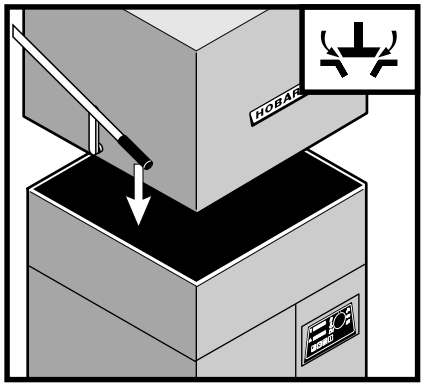


Put rack into the machine and close the hood.
Cycle is running, **programme** pilot light illuminates.



When **programme** pilot light goes off, open hood and take out rack.
Allow dishes to dry for 1 min. approx.

8 Cleaning the machine (daily)



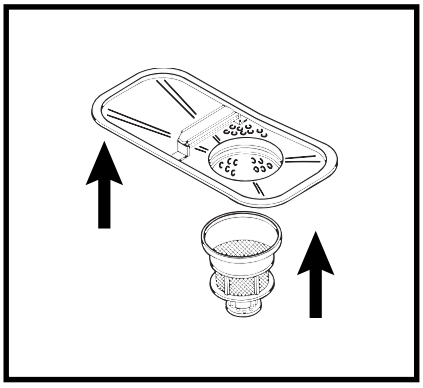
Set programme switch to **drain** position and close the hood.
Programme pilot light illuminates, drain cycle is running.

NOTE:

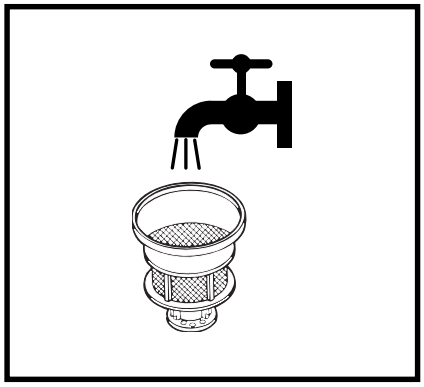
During the drain cycle, the interior of the machine is cleaned automatically.

A final inspection is recommended.

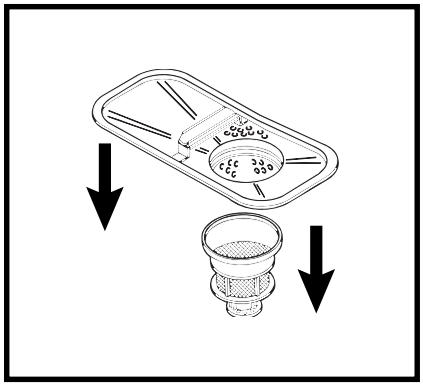
When **programme** pilot light goes off, switch **OFF** machine.
Switch off main circuit breaker and close shut-off valve.



Open the hood, take out and clean strainers.

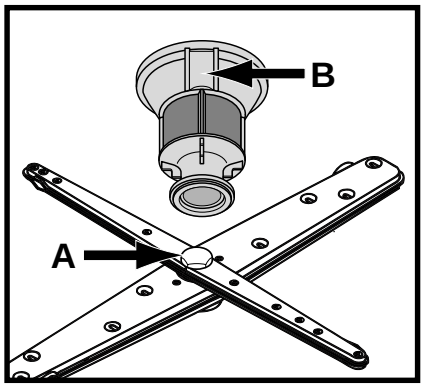


Flush fine strainer.

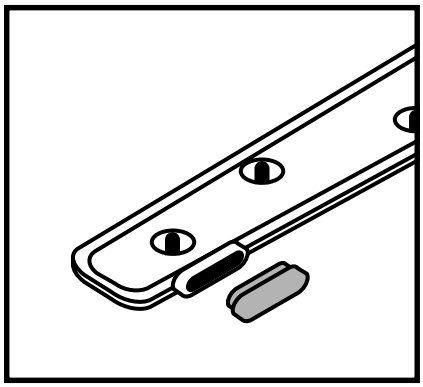


Put strainers back into place.
Leave the hood open for ventilation.

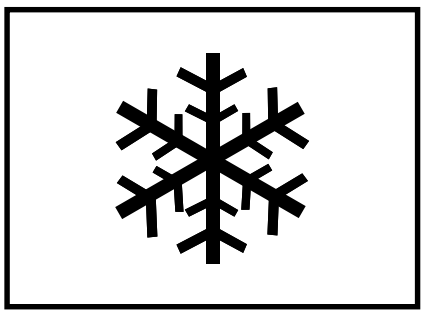
If required:



Take out wash and rinse arms.
Use the side of the fine strainer (B) as a spanner to loosen the hexagon screw (A) by turning it counter-clockwise.



Open plugs of wash and rinse arms and flush.



9 Frost prevention

In case of frost or longer operation pauses (e.g. for seasonal operations) the machine must be completely drained.

This should be carried out by HOBART after sales service. Please contact your local HOBART Office.

Reset for operation according to chapter 4.

10 Maintenance

For trouble free operation we recommend you enter into a service contract with your local HOBART Service Office.

11 Trouble shooting guide

TYPE OF FAILURE	POSSIBLE CAUSE	REMEDY
Poor wash result		
Dishes are not clean.	Wash arms stiff (you should be able to turn them easily by hand).	Take out wash arms and clean them thoroughly. Check water outlet from machine to wash arms is clear.
	Wash arm nozzles are clogged (visual check).	Take out wash arm, remove cleaning cap and rinse wash arm thoroughly until soil is removed. Replace correctly.
	Rinse arm nozzles are clogged (generally through lime deposit).	Remove rinse arms and decalcify them in separate container.
	Detergent concentration is too low or too high.	Check setting of detergent concentration (usually on 4). See also operating instructions point 5.
	Coarse strainer soiled.	Take out strainer, empty and clean it.
	Fine strainer soiled or obstructed through lime.	Take out fine strainer. If heavily soiled soak in a vinegar solution. Then clean it thoroughly until the pores are free. Cleaning is to be done daily (see operating instructions).
	Wrong programme selected for heavily soiled dishes.	Select programme with longer wash cycle.
Dishes or glasses do not dry properly.	Rinse aid concentration too low.	Increase concentration (see operating instructions).
	Fat poorly dissolved.	1. Detergent concentration too low: increase. (see instructions). 2. Check if detergent is appropriate, if not choose a stronger one. 3. Drain soiled water and refill machine. Check pre-scrapping procedure.
	Rack is not suitable for type of dishes (sloping).	Use appropriate racks to create a sloping position which allows water to drain away from cavities.
	Dishes stay too long in the machine at the end of programme.	Take out dishes as soon as cycle is completed to enable them to dry.
Stripes and stains on dishes or glasses.	Rinse aid concentration too high.	Reduce quantity (see instructions).
	Hard water or high mineral content.	Check water quality. Obtain details from local water authority. Recommended values: Ideal degree of hardness is 4° Clark. Ideal conductivity value for glasses is max. 150 µS/cm and for dishes max. 400 µS/cm.
	Rack is not suitable for type of dishes (sloping).	Use appropriate racks to create a sloping position which allows water to drain away from cavities.
	Insufficient rinse aid concentration causes stains.	Increase quantity (see instructions).
	Machine with softener: use of wrong type of salt (too coarse).	Use only fine salt.
	Machine with softener: salt container is full although softening does not take place.	Only fill with salt just before regeneration programme will be activated.

TYPE OF FAILURE	POSSIBLE CAUSE	REMEDY
Softener malfunctions (only applicable to machine with softener)		
Lime deposit in the machine.	Regeneration call was "ignored" i.e. the machine went on washing when regeneration was needed.	Run regeneration programme 2–3 times (refill salt container every time). If required: decalcify the machine.
	Strainer in water supply pipe clogged (in site tap).	Clean it. If necessary replace with heavy duty filter (available as accessory).
Salt container not tight.	During filling, salt was split onto the edge and not removed.	Open softener lid, remove salt with a cloth and close lid tightly.
Other malfunctions		
Glasses are totally or partially cloudy.	Surface of glasses is rough and porous, this is called glass corrosion.	This is not caused by a malfunction on the machine. Replace with new glasses.
	Glasses are coated with a mineral deposit.	Consult your detergent supplier.
Glass breakages.	Use of inappropriate dish or glass racks.	Use appropriate racks.
Machine suddenly stops during wash programme.	Machine is connected to a "maximum power supply unit" which cuts out the energy consumer at a given point, or machine is interlocked with another energy consumer unit.	Connect machine separately (call electrician).
	Blown site fuse.	Check site fuses.

HOBART

Sales, 07002 101 101
Service, 07002 202 202
Spares, 07002 303 303

As continued product improvement is a policy of HOBART, specification are subject to change without notice

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