

## 14. FAULTS

### 14.1 UNCRITICAL FAULTS

Fill, wash and drain program can be started.

During the fill program, uncritical faults are only indicated by the indicator lights and error codes (none green/red flashing ON/OFF button).






INDICATOR			THE ON/OFF BUTTON IS FLASHING GREEN/RED ALTERNATELY.		
Rinse	Wash	Lamp	FAULT		PARAM.
<b>AL</b>			<b>Drain fault</b>	Level switch value [F11] still exceeded at the end of the drain cycle. To reset, repeat drain program until value is below [F11].	F11
			<b>Possible cause</b> <ol style="list-style-type: none"> <li>1. Kinked drain hose.</li> <li>2. Drain pump does not run (jammed or defective).</li> <li>3. Pressure transmitter <b>B4</b> defective (wiring, PCB).</li> <li>4. Trap possibly clogged.</li> </ol>	<b>Remedy</b> <ol style="list-style-type: none"> <li>1. Place drain hose correctly.</li> <li>2. Check drain pump, dismantle if necessary.</li> <li>3. Check voltage level (service menu).</li> <li>4. Check trap.</li> </ol>	
<b>HEI</b>			<b>Thermostop</b>	The thermostop time [C25] is exceeded (max. heating period for wash and fill cycle). Reset via machine "OFF-ON".	C25 S02 S58
			<b>Possible cause</b> <ol style="list-style-type: none"> <li>1. Booster heating defective.</li> <li>2. Missing phases.</li> <li>3. Machine single-phase connected (230 V).</li> <li>4. Tank heating defective (with thermostop tank) parameter S58.</li> </ol>	<b>Remedy</b> <ol style="list-style-type: none"> <li>1. Replace booster heating.</li> <li>2. Check phases (also at site).</li> <li>3. Connect to three-phase current if possible.</li> <li>4. Replace tank heating.</li> </ol>	
<b>CH1 CH2</b>		<b>DOS</b>	<b>Chemical deficiency</b>	Detergent deficiency <b>X12.3</b> "on" / rinse aid deficiency <b>X12.4</b> "on". If both containers are empty, CH1/CH2 is displayed alternately. CH1 Detergent / CH2 Rinseaid	
			<b>Possible cause</b> <ol style="list-style-type: none"> <li>1. Chemical container empty / suction hoses not filled.</li> <li>2. Adjustment of chemical deficiency sensors not correct.</li> <li>3. Missing electrical supply (X12.1/2).</li> </ol>	<b>Remedy</b> <ol style="list-style-type: none"> <li>1. Refill container / carry out hose priming.</li> <li>2. Check settings (see chap. 7.3.2, page 19).</li> <li>3. Check voltage (X12.1 +5V, X12.2 0V) / check crimp connection.</li> </ol>	
<b>SAL</b>			<b>Salt deficiency</b>	Softener salt deficiency indication – <b>X13.5</b> "on" (only if softener [S05] = "1").	S05
			<b>Possible cause</b> <ol style="list-style-type: none"> <li>1. Salt container empty.</li> <li>2. Float switch inside salt container jammed [S3].</li> <li>3. Loose contact on PCB (X13.5/6).</li> </ol>	<b>Remedy</b> <ol style="list-style-type: none"> <li>1. Refill container with regeneration salt.</li> <li>2. Loose the container a little and shake slightly.</li> <li>3. Check crimp connection and contacts.</li> </ol>	
<b>d 0</b>			<b>External water treatment (option)</b>	Only if activated in service mode [S18]. The preset water quantity [C79] + [C80] is reached (down-counter). For reset see customer menu.	C79 C80 S18
			<b>Possible cause</b> <ol style="list-style-type: none"> <li>1. Counter reading of preset water quantity (liter) is "0".</li> <li>2. Switching function [S18] is set to "1" without specified water quantity.</li> </ol>	<b>Remedy</b> <ol style="list-style-type: none"> <li>1. Reset counter (see customer menu).</li> <li>2. Enter the desired water quantity (liter).</li> </ol>	
			<b>ON/OFF BUTTON: RUNNING INDICATION</b>		
	<b>CLOSE Hood</b>		<b>Cause</b> Fill cycle interrupted as hood is open.	<b>Remedy</b> Close hood, filling will continue.	

\* Intermediate draining is also monitored by the parameter C38, i.e. if the parameter is exceeded, **AL** fault appears.

.. Point run light to left to right Display Regeneration also takes place during the filling operation

**14.2 CRITICAL FAULTS**

Only the drain program can be started. Fill program and all wash programs are locked.

INDICATOR			THE ON/OFF BUTTON ILLUMINATES RED.			
Rinse	Wash	Lamp	FAULT		PARAM.	
<b>F01</b>	-- 1 -- 2		Temperature probe <b>BOOSTER B1</b>	Booster heating <b>RL10</b> will be switched off immediately. Fill and wash programs are locked, drain program can be started.		
			<b>Possible cause</b> 1. -- 1 = short circuit (temperature probe or wires to probe). 2. -- 2 = open circuit. 3. Inlet temperature to low.			<b>Remedy</b> 1. Check wires, replace temperature probe. 2. Replace wiring, replace temperature probe if necessary. 3. Check inlet temperature.
<b>F02</b>	-- 1 -- 2		Temperature probe <b>TANK B2</b>	Tank heating <b>RL2</b> will be switched off immediately. Fill and wash programs are locked, drain program can be started.		
			<b>Possible cause</b> 1. -- 1 = short circuit (temperature probe or wires to probe). 2. -- 2 = open circuit			<b>Remedy</b> 1. Check wires, replace temperature probe. 2. Replace wiring, replace temperature probe if necessary.
<b>F03</b>	-- 1 -- 2		Pressure transmitter <b>BOOSTER B3</b>	Control of input voltage <b>X14.7</b> – min. 0.3V up to max. 4.0V. If the input voltage is out of range, the running program will be stopped. Fill and wash programs are locked, drain program can be started.		
			<b>Possible cause</b> 1. -- 1 = short circuit (transmitter or wires to transmitter) / > 4.0V. 2. -- 2 = open circuit / < 0.3V.			<b>Remedy</b> 1. Check wires, replace transmitter B3. 2. Replace wiring, replace B3 if necessary.
<b>F04</b>	-- 1 -- 2		Pressure transmitter <b>TANK B4</b>	Control of input voltage <b>X14.10</b> – min. 0.3V up to max. 4.0V. If the input voltage is out of range, the running program will be stopped. Fill and wash programs are locked, drain program can be started.		
			<b>Possible cause</b> 1. -- 1 = short circuit (transmitter or wires to transmitter) / > 4.0V. 2. -- 2 = open circuit / < 0.3V.			<b>Remedy</b> 1. Check wires, replace transmitter B4. 2. Replace wiring, replace B4 if necessary.
	-- 3		Pressure transmitter <b>TANK B4 / SOFTENER</b>	The max. water quantity [ <b>C82</b> ] is exceeded and value [ <b>F16</b> ] is not reached. Only "draining" possible.	C82 F16	
			<b>Possible cause</b> 1. Air trap blocked or leaky. 2. Hose to pressure transmitter leaky. 3. Valve Y4.2 locked (drain direction) or coil defective. 4. Extension board not correctly plugged to Main PCB.		<b>Remedy</b> 1. Check air trap, clean or replace if necessary. 2. Replace hose. 3. Run Softener Test. Replace switching valve if necessary. 4. Plug in correctly.	
<b>To quit the fault:</b> start drain program or reload machine program no. ( <b>U01</b> see page 23).						
<b>SIE</b>			STRAINER CONTROL	Reed-switch [ <b>S4</b> ] (X13.7) more than 5 seconds "off". Start of fill and wash programs is locked automatically.	S38	
			<b>Possible cause</b> 1. Tank strainer is missing or not correctly positioned. 2. Magnet at the strainer is missing. 3. Reed switch in wrong position. 4. Cable break.			<b>Remedy</b> 1. Put strainer correctly in place. 2. Fit magnet. 3. Put reed switch in correct position. 4. Replace reed switch and cable.

INDICATOR			THE ON/OFF BUTTON ILLUMINATES RED.		
Rinse	Wash	Lamp	FAULT		PARAM.
FIL			<b>FILL 1</b>	The fill valve <b>Y1 (RL7)</b> is triggered and the impeller switch <b>S2</b> does not count (no impulses on <b>X14.3</b> -machine with impulse counter). Reset via input pulses on <b>X14.3</b> or machine "OFF". S52 = 1. If S52 is "0" (machines without impeller counter) the level in the booster has to be increased 0,1V in the time C90	
			<p><b>Possible cause with incoming water</b></p> <ol style="list-style-type: none"> <li>Bad contact at impeller switch plug (airgap) or PCB.</li> <li>Impeller switch PCB not correctly locked.</li> <li>Reed switch in wrong position.</li> </ol> <p><b>Possible cause without incoming water</b></p> <ol style="list-style-type: none"> <li>Shut-off valve is closed.</li> <li>Fill valve Y1 defective (wiring and pin).</li> <li>No output signal from PCB A1 (X7.1/3).</li> </ol>	<p><b>Remedy</b></p> <ol style="list-style-type: none"> <li>Check contacts, solder plug (airgap) if necessary.</li> <li>Check PCB and lock in place.</li> <li>Put reed switch in correct position.</li> </ol> <p><b>Remedy</b></p> <ol style="list-style-type: none"> <li>Open shut-off valve at site.</li> <li>Check fill valve via service mode and replace if necessary.</li> <li>Replace PCB.</li> </ol>	
FIL			<b>FILL 2</b>	Exceeded fill time [C43]. The fill valve <b>Y1 (RL7)</b> and all other outputs will be switched off immediately. Reset via machine "OFF".	C43
			<p><b>Possible cause</b></p> <ol style="list-style-type: none"> <li>See above.</li> <li>Line flow pressure very low.</li> <li>Line strainer clogged.</li> </ol>	<p><b>Remedy</b></p> <ol style="list-style-type: none"> <li>See above.</li> <li>Check line flow pressure.</li> <li>Clean line strainer.</li> </ol>	
FIL			<b>FILL 3</b>	External fill valve is triggered, tank level does not rise.	C34 F27 S37
			<p><b>Possible cause</b></p> <ol style="list-style-type: none"> <li>Shut-off valve is closed.</li> <li>Fill valve Y1 defective (wiring and pin).</li> <li>Line strainer clogged.</li> </ol>	<p><b>Remedy</b></p> <ol style="list-style-type: none"> <li>Open shut-off valve at site.</li> <li>Check fill valve via service mode and replace if necessary.</li> <li>Clean line strainer.</li> </ol>	
UL			<b>OVERFLOW PROTECTION</b>	When [F18] is exceeded, a running program will be stopped: - after 5 seconds [S37] = "1" - immediately [S37] = "0".  The drain pump <b>RL8</b> will be switched on until [F17] is below preset value.	F17 F18 S37
			<p><b>Possible cause</b></p> <ol style="list-style-type: none"> <li>Fill valve is jammed and water is running permanently.</li> <li>Hose from air trap to pressure transmitter tank (B4) is leaky.</li> <li>Not enough water is pumped out.                             <ul style="list-style-type: none"> <li>Drain pump clogged.</li> <li>Kinked drain hose.</li> </ul> </li> </ol>	<p><b>Remedy</b></p> <ol style="list-style-type: none"> <li>Replace fill valve Y1</li> <li>Drain tank manually and replace hose.</li> <li>Drain tank manually.                             <ul style="list-style-type: none"> <li>Dismantle and clean drain pump or replace if necessary.</li> <li>Place drain hose correctly.</li> </ul> </li> </ol>	
ERR			<b>INTERFACE</b>	Communication problem.	
			<p><b>Possible cause</b></p> <ol style="list-style-type: none"> <li>Broken connection: Display / Main PCB</li> <li>Defective Circuit Board.</li> </ol>	<p><b>Remedy</b></p> <ol style="list-style-type: none"> <li>Check plugs/cable and connect correctly.</li> <li>Replace PCB.</li> </ol>	

### 14.3 OTHER INDICATIONS

INDICATOR			THE ON/OFF BUTTON IS FLASHING BLUE/RED ALTERNATELY.		
Rinse	Wash	Lamp	FAULT		PARAM.
			<b>Low level tank</b>		
			<p><b>Possible cause</b></p> <ol style="list-style-type: none"> <li>Wash tank filters blocked.</li> <li>Ware wash loaded with the opening on top</li> </ol>	<p><b>Remedy</b></p> <ol style="list-style-type: none"> <li>Remove and flush strainers.</li> <li>Correct loading of the wash ware</li> </ol>	