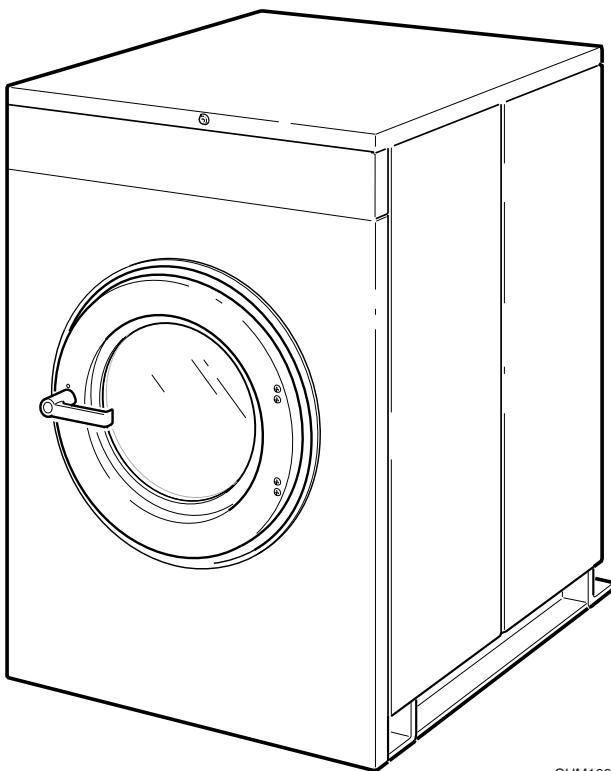


# Washer-Extractors

Cabinet Hardmount – OPL

V-Series Microcomputer  
2 Speed and Variable-Speed  
Refer to Page 3 for Model Identification



CHM166C

## Keep These Instructions for Future Reference.

(If this machine changes ownership, this manual must accompany machine.)



[www.comlaundry.com](http://www.comlaundry.com)

Part No. F232141R3  
December 2008



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# Introduction

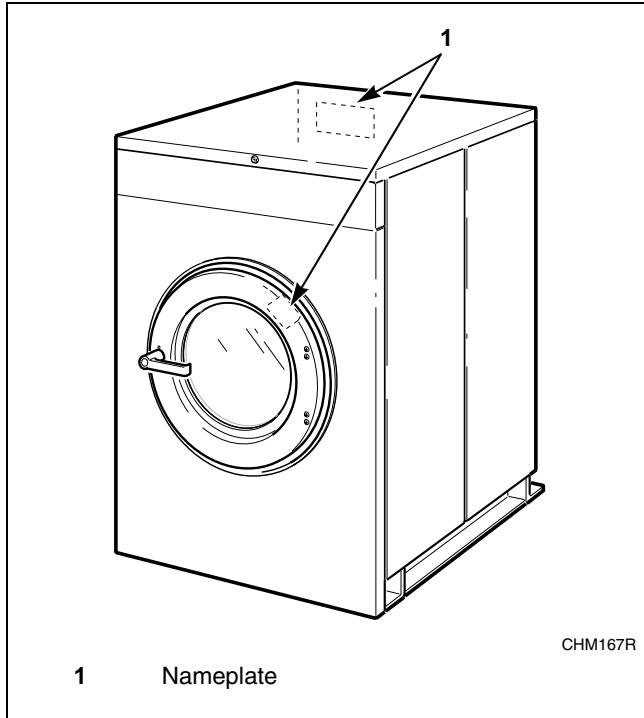
## Model Identification

Information in this manual is applicable to these models:

HC80VN2	SC40VN2	UC125VN2	UC40VN2
SC125VN2	SC40VN2	UC18VN2	UC50VN2
SC18VN2	SC50VN2	UC20VN2	UC50VN2
SC20VN2	SC50VN2	UC27VN2	UC60VN2
SC27VN2	SC60VN2	UC30VN2	UC60VNF
SC30VN2	SC60VNF	UC35VN2	UC60VN2
SC35VN2	SC60VN2	UC35VN2	UC80VN2
SC35VN2	SC80VN2	UC40VN2	

## Nameplate Location

The nameplate is located at the rear of the machine and inside door. Always provide the machine's serial number and model number when ordering parts or when seeking technical assistance.



## Replacement Parts

If literature or replacement parts are required, contact the source from which the machine was purchased or contact Alliance Laundry Systems LLC at (920) 748-3950 for the name and address of the nearest authorized parts distributor.

## Customer Service

For technical assistance, call the following number:

(920) 748-3121  
Ripon, Wisconsin  
[www.comlaundry.com](http://www.comlaundry.com)

# Safety Information

Precautionary statements (“DANGER,” “WARNING” and “CAUTION”), followed by specific instructions, are found in this manual and on machine decals. These precautions are intended for the personal safety of the operator, user, servicer and those maintaining the machine.

	<b>DANGER</b>
	<b>DANGER indicates the presence of a hazard that will cause severe personal injury, death, or substantial property damage if the danger is ignored.</b>

	<b>WARNING</b>
	<b>WARNING indicates the presence of a hazard that can cause severe personal injury, death, or substantial property damage if the warning is ignored.</b>

	<b>CAUTION</b>
	<b>CAUTION indicates the presence of a hazard that will or can cause minor personal injury or property damage if the caution is ignored.</b>

Additional precautionary statements (“IMPORTANT” and “NOTE”) are followed by specific instructions.

**IMPORTANT:** The word “IMPORTANT” is used to inform the reader of specific procedures where minor machine damage will occur if the procedure is not followed.

**NOTE:** The word “NOTE” is used to communicate installation, operation, maintenance or servicing information that is important but not hazard related.

## Important Safety Instructions

	<b>WARNING</b>
	<b>To reduce the risk of fire, electric shock, serious injury or death to persons when using your washer, follow these basic precautions:</b>

W023

1. Read all instructions before using the washer.
2. Refer to the GROUNDING INSTRUCTIONS in the INSTALLATION MANUAL for the proper grounding of the washer.
3. Do not wash textiles that have been previously cleaned in, washed in, soaked in, or spotted with gasoline, dry-cleaning solvents, or other flammable or explosive substances as they give off vapors that could ignite or explode.
4. Do not add gasoline, dry-cleaning solvents, or other flammable or explosive substances to the wash water. These substances give off vapors that could ignite or explode.
5. Under certain conditions, hydrogen gas may be produced in a hot water system that has not been used for two weeks or more. HYDROGEN GAS IS EXPLOSIVE. If the hot water system has not been used for such a period, before using a washing machine or combination washer-dryer, turn on all hot water faucets and let the water flow from each for several minutes. This will release any accumulated hydrogen gas. The gas is flammable; do not smoke or use an open flame during this time.
6. Do not allow children to play on or in the washer. Close supervision of children is necessary when the washer is used near children. This is a safety rule for all appliances.
7. Before the washer is removed from service or discarded, remove the door to the washing compartment.
8. Do not reach into the washer if the wash drum is moving.

9. Do not install or store the washer where it will be exposed to water and/or weather.
10. Do not tamper with the controls.
11. Do not repair or replace any part of the washer, or attempt any servicing unless specifically recommended in the user-maintenance instructions or in published user-repair instructions that the user understands and has the skills to carry out.
12. To reduce the risk of an electric shock or fire, DO NOT use an extension cord or an adapter to connect the washer to the electrical power source.
13. Use washer only for its intended purpose, washing textiles.
14. Never wash machine parts or automotive parts in the machine. This could result in serious damage to the basket.
15. ALWAYS disconnect the washer from electrical supply before attempting any service. Disconnect the power cord by grasping the plug, not the cord.
16. Install the washer according to the **INSTALLATION INSTRUCTIONS**. All connections for water, drain, electrical power and grounding must comply with local codes and be made by licensed personnel when required.
17. To reduce the risk of fire, textiles which have traces of any flammable substances such as vegetable oil, cooking oil, machine oil, flammable chemicals, thinner, etc. or anything containing wax or chemicals such as in mops and cleaning cloths, must not be put into the washer. These flammable substances may cause the fabric to catch on fire by itself.
18. Do not use fabric softeners or products to eliminate static unless recommended by the manufacturer of the fabric softener or product.
19. Keep washer in good condition. Bumping or dropping the washer can damage safety features. If this occurs, have washer checked by a qualified service person.
20. If the supply cord is damaged, it must be replaced by a special cord or assembly available from the manufacturer or its service agent.
21. Be sure water connections have a shut-off valve and that fill hose connections are tight. CLOSE the shut-off valves at the end of each wash day.
22. Loading door MUST BE CLOSED any time the washer is to fill, tumble or spin. DO NOT bypass the loading door switch by permitting the washer to operate with the loading door open.
23. Always read and follow manufacturer's instructions on packages of laundry and cleaning aids. Heed all warnings or precautions. To reduce the risk of poisoning or chemical burns, keep them out of the reach of children at all times (preferably in a locked cabinet).
24. Always follow the fabric care instructions supplied by the textile manufacturer.
25. Never operate the washer with any guards and/or panels removed.
26. DO NOT operate the washer with missing or broken parts.
27. DO NOT bypass any safety devices.
28. Failure to install, maintain and/or operate this washer according to the manufacturer's instructions may result in conditions which can produce bodily injury and/or property damage.

**NOTE: The WARNINGS and IMPORTANT SAFETY INSTRUCTIONS appearing in this manual are not meant to cover all possible conditions and situations that may occur. Common sense, caution and care must be exercised when installing, maintaining or operating the washer.**

Any problems or conditions not understood should be reported to the dealer, distributor, service agent or the manufacturer.

## Safety Information

	<h3>WARNING</h3> <p>This machine must be installed, adjusted, and serviced by qualified electrical maintenance personnel familiar with the construction and operation of this type of machinery. They must also be familiar with the potential hazards involved. Failure to observe this warning may result in personal injury and/or equipment damage, and may void the warranty.</p> <p>SW004</p>		<h3>CAUTION</h3> <p>Be careful around the open door, particularly when loading from a level below the door. Impact with door edges can cause personal injury.</p> <p>SW025</p>
<p><b>IMPORTANT:</b> Ensure that the recommended clearances for inspection and maintenance are provided. Never allow the inspection and maintenance space to be blocked.</p>			
	<h3>WARNING</h3> <p>Install the machine on a level floor of sufficient strength. Failure to do so may result in conditions which can produce serious injury, death and/or property damage.</p> <p>W703</p>		<h3>WARNING</h3> <p>Never touch internal or external steam pipes, connections, or components. These surfaces can be extremely hot and will cause severe burns. The steam must be turned off and the pipe, connections, and components allowed to cool before the pipe can be touched.</p> <p>SW014</p>

## Safety Decals

Safety decals appear at crucial locations on the machine. Failure to maintain legible safety decals could result in injury to the operator or service technician.

To provide personal safety and keep the machine in proper working order, follow all maintenance and safety procedures presented in this manual. If questions regarding safety arise, contact the manufacturer immediately.

Use manufacturer-authorized spare parts to avoid safety hazards.

## Operator Safety

	<b>WARNING</b>
<b>NEVER insert hands or objects into basket until it has completely stopped. Doing so could result in serious injury.</b>	

SW012

To ensure the safety of machine operators, the following maintenance checks must be performed daily:

1. Prior to operating the machine, verify that all warning signs are present and legible. Missing or illegible signs must be replaced immediately. Make certain that spares are available.
2. Check door interlock before starting operation of the machine:
  - a. Attempt to start the machine with the door open. The machine should not start with the door open.
  - b. Close the door without locking it and attempt to start the machine. The machine should not start with the door unlocked.
  - c. Close and lock the door and start a cycle. Attempt to open the door while the cycle is in progress. The door should not open.
 If the door lock and interlock are not functioning properly, call a service technician.
3. Do not attempt to operate the machine if any of the following conditions are present:
  - a. The door does not remain securely locked during the entire cycle.
  - b. Excessively high water level is evident.
  - c. Machine is not connected to a properly grounded circuit.

Do not bypass any safety devices in the machine.

	<b>WARNING</b>
<b>Never operate the machine with a bypassed or disconnected balance system. Operating the machine with severe out-of-balance loads could result in personal injury and serious equipment damage.</b>	

SW039

# Programming

## Entering Program Mode

1. Unlock and raise top cover.
2. Remove control module cover.
3. Locate the Run/Program Mode switch near center of computer board inside control module. Refer to *Figure 1*.

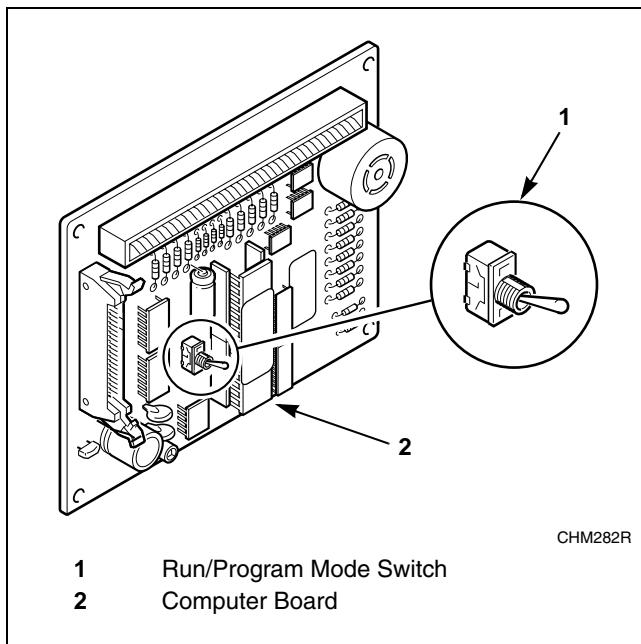


Figure 1

4. Flip switch to down position to enter PROGRAM Mode. Display will show temperature of sump.

## Procedures for Calibration of Temperature Probe for V-Computer Controlled Machines

1. Disconnect power to the machine. Ensure that the V-Computer has no input power applied.
2. Mount an accurate temperature sensor probe (part of temperature calibration equipment) in the bottom of the machine basket. Make sure the wires for the probe exit the top of the door to ensure that the door gasket does not leak.
3. Close door and ensure that the door is locked.
4. Open machine top cover and remove control component cover(s), if necessary, to gain access to the V-Computer and output control board.

	<h3>WARNING</h3>
<p>Dangerous voltages are present in the electrical control box(es) and at the motor terminals. Only qualified personnel familiar with electrical test procedures, test equipment, and safety precautions should attempt adjustments and troubleshooting. Disconnect power from the machine before removing the control box cover, and before attempting any service procedures.</p>	

SW005

- On **Variable**-Speed machines, note wire connections on the output control board for the AC Drive control. Some machines will have six wires connected to "STF," "STR," "RH," "RM," "RL" and "COM" individually or a single connector labeled "J11-1." Remove these wires or connector to ensure the basket will not rotate. Also remove the input power to the drive.

**NOTE: If this step is not followed, damage can occur to the calibration temperature probe.**

- On **Fixed**-speed machines, remove fuses from the "FWD," "REV" and "SPIN" outputs to ensure the basket will not rotate.

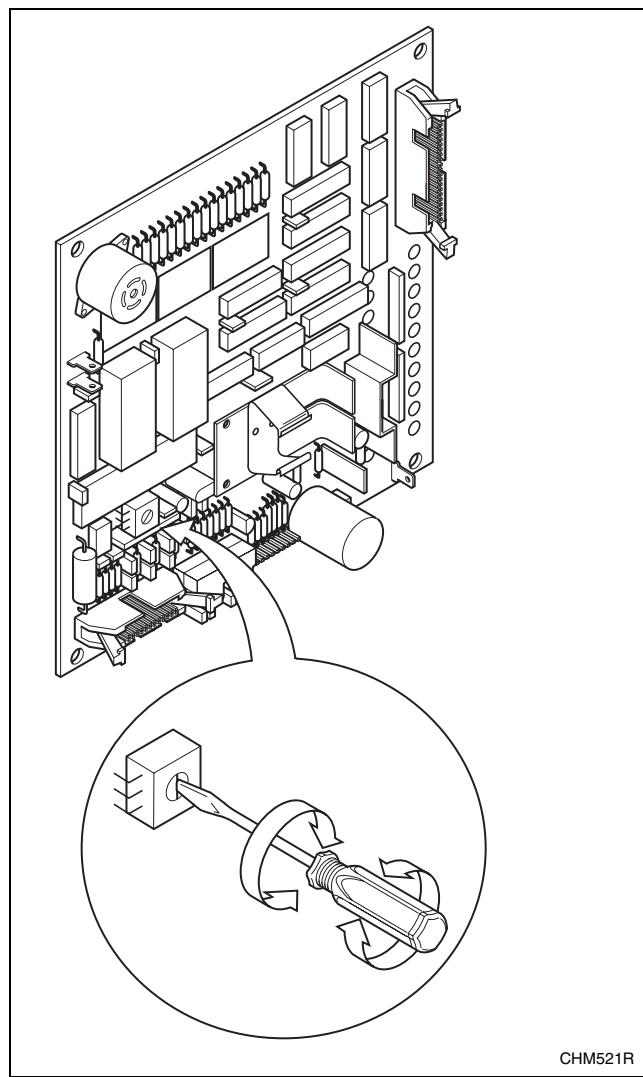


## WARNING

**NEVER insert hands or objects into basket until it has completely stopped. Doing so could result in serious injury.**

SW012

- Restore input power to the machine.
- Wait until machine message displays "CY" followed by a two-digit cycle number (01 – 30).
- Program one of the unused cycles to Fill to High Level using both of the water inlet valves. Select a time limit for the step that would be sufficient to complete the calibration procedure.
- When machine has completed the Fill to High Level, press and hold the Up (arrow) key on the keypad to display the machine temperature. Make sure that the V-Computer is in the correct temperature unit (deg F or C). Refer to **Programming Setup Options** section of manual to change.
- Using a flat-bladed screwdriver, turn the machine temperature calibration screw until the displayed temperature of the machine and the temperature of the temperature calibration equipment are accurate to the nearest degree (refer to *Figure 2*).



CHM521R

Figure 2

- When the temperatures match, calibration is completed.
- Remove power from the machine input.
- Reconnect any wires/connectors/fuses that were removed, making sure they are installed exactly as they were removed.
- Reinstall all machine protective covers.
- Remove the temperature calibration probe from the bottom of the machine basket.
- Restore input power to machine.
- Machine is now ready for use.

## Programming

### Programming Setup Options

- With display showing sump temperature, press Stop (\*) key to enter SETUP Mode.
- Use Up or Down (arrow) key to scroll through setup options. Refer to *Table 1* for possible setup options and description.

Setup Options	Description
“FAr”/“CEL”	Select “FAr”: degrees are displayed in Fahrenheit. Select “CEL”: degrees are displayed in Celsius.
“noHt”/“HEAT”	Select “noHt”: no heat is available during a cycle regardless of programmed temperature setting. Select “HEAT”: heat is available as long as a temperature is programmed.
“SUP5”/“AFIL”	Select “SUP5”: a fifth or sixth supply can be programmed in a cycle step. Select “AFIL”: auxiliary fills can be programmed to low, medium or high water level in a cycle step.
“tFIL”/“ntFL”	Select “tFIL”: a temperature-controlled fill can be programmed for any segment. Select “ntFL”: feature is disabled.
“COOL”/“noCL”	Select “COOL”: automatic cool-down feature is enabled allowing cold water to flush into wash before a drain if temperature is 140°F or above. Select “noCL”: feature is disabled.

Table 1

	<b>WARNING</b>
<b>To prevent personal injury, avoid contact with inlet water temperatures higher than 125° Fahrenheit (51° Celsius) and hot surfaces.</b>	

W748

- Press the Start (#) key to accept the option and to then scroll forward to the next setup option.
- Press the Stop (\*) key anytime to exit SETUP Mode. The display will show sump temperature.

### Programming a Cycle

- With the display showing sump temperature, press the Up (arrow) key to edit a cycle. The display will show “CY01”.

**NOTE: On VNV and VN2 models, 26 of the 30 cycles available are pre-programmed.**

- Press Up or Down (arrow) key until cycle to be edited is displayed. The display will show “CY01”. Press Start (#) key to begin editing selected cycle.
- Use Up or Down (arrow) key to select agitation action. Refer to *Table 2* for agitation action options. Press Start (#) key.

**NOTE: This action applies to entire cycle.**

Agitation Action Options		
Display	Description	Percentage
AG 1	27 seconds forward, 3 seconds pause, 27 seconds reverse, 3 seconds pause	90%
AG 2	10 seconds forward, 20 seconds pause, 10 seconds reverse, 20 seconds pause	33%
AG 3	3 seconds forward, 27 seconds pause, 3 seconds reverse, 27 seconds pause	10%
AG 4	4 seconds forward, 56 seconds pause, 4 seconds reverse, 56 seconds pause	6.7%

Table 2

- On VNV models only**, use Up or Down (arrow) key to select agitation speed: normal (“AGSn”) or gentle (“AGSL”). Press Start (#) key.
- Use Up or Down (arrow) key to select next option: “PUnP” or “nPnP”. This is for a future recirculation feature. It has no effect on wash cycle. Select “nPnP” and press Start (#) key.

## Programming Cycle Segments

**NOTE:** Each cycle program can be customized within the 11 program segments contained in a cycle. A time must be entered for each segment. To skip a segment or spin, set the time to “00” and press Start (#) key. Refer to *Table 3* for time parameters.

Time Parameters		
Segment	Minimum	Maximum
PreWash “PrE”	2 minutes	30 minutes
Wash “UASH”	2 minutes	20 minutes
Fill 1 – Fill 9 “FIL1”... “FIL9”	2 minutes	15 minutes
Intermediate Spin	30 seconds	240 seconds
Final Spin	1 minute	10 minutes

Table 3

**NOTE:** Spin times in cycle segments 1 – 10 are entered in seconds (30 to 240), and time for final spin in segment 11 is entered in minutes (1 to 10).

6. Press Up (arrow) key until display shows segment to be edited. Press Start (#) key.
7. Use Up or Down (arrow) key to select Segment Time. Set this value to “00” to skip segment. Press Start (#) key.
8. If Temperature-Controlled Fill Setup Option is enabled, display will show “tFIL”. Press Start (#) key.
9. Use Up or Down (arrow) key to select Fill Temperature: Cold (“CFIL”), Hot (“HFIL”), Warm (“bFIL”) or Auxiliary (“AFIL”). Press Start (#) key.

**NOTE:** An auxiliary fill is available only if “SUP5”/“AFIL” setup option is set to “AFIL”.

10. Use Up or Down (arrow) key to select Fill Level: Low (“Lo”), Medium (“nEd”) or High (“Hi”). Press Start (#) key.

11. Use Up or Down (arrow) key to select Supply Option. Refer to *Table 4*.

Supply Options	
Display	Supply
SUP0	No Supply
SUP1	Supply 1
SUP2	Supply 2
SUP3	Supply 3
SUP4	Supply 4
SUP5	Supply 5*
SUP6	Supply 1 and 5*
SUP7	Supply 3 and 4

\*This is available only if the “SUP5”/“AFIL” setup option is set to “SUP5”.

Table 4

12. Press Start (#) key.
13. Use Up or Down (arrow) key to select Segment Temperature: 75° to 200°F or 25° to 93°C. Set this value to zero to disable auxiliary heat and temperature-controlled fill. Press Start (#) key.

**NOTE:** Only available if Temperature-Controlled Fill or Auxiliary Heat Setup Option is enabled.

	<b>WARNING</b>
To prevent personal injury, avoid contact with inlet water temperatures higher than 125° Fahrenheit (51° Celsius) and hot surfaces.	

W748

## Programming

14. Use Up or Down (arrow) key to select Drain Option: “drAl” (drain) or “nodr” (no drain).
- NOTE: The drain step in the final segment cannot be skipped.**
15. **For VNV models only**, select spin speed for Fill 9: “SPn1” (Low), “SPn2” (Medium), or “SPn3” (High).
16. Display will flash “SPIn” and “tInE”. Use Up or Down (arrow) key to select spin time: 1 to 10 minutes (00 for no spin). Press Start (#) key. The display will show the identifier for the next program segment.
17. Press the Stop (\*) key to complete the cycle programming procedure.

## Test Cycle

To select test cycle:

1. Flip program switch to up position (RUN Mode).
2. Press Down (arrow) key. Display will show “tEST” and “CYC”.
3. Press Start (#) key to begin.

The ability to advance to the next cycle step is possible by pressing the Start (#) key.

Refer to the following **Cycle Charts** section for detailed description of cycles.

## Cycle Charts

V-Computer Standard OPL Cycles								
Cycle Program	1 Permanent Press Light Soil	2 Cotton Terrycloth Light Soil	3 Permanent Press Medium Soil	4 Cotton Terrycloth Medium Soil	5 Permanent Press Heavy Soil	6 Cotton Terrycloth Heavy Soil	7 Table Napery Blends Colors	8 Table Napery Blends Whites
Agitation	AG 1	AG 1	AG 1	AG 1	AG 1	AG 1	AG 1	AG 1
Wash Speed	AGSn	AGSn	AGSn	AGSn	AGSn	AGSn	AGSn	AGSn
Pump	nPnP	nPnP	nPnP	nPnP	nPnP	nPnP	nPnP	nPnP
<b>PreWash</b>								
Time (Min.)	0	0	2	2	2	2	2	2
Water			Both (warm)	Both (warm)	Both (warm)	Both (warm)	Both (warm)	Both (warm)
Level			High	High	High	Low	High	High
Supply			0	0	0	0	0	0
Temp (F)			0	0	0	0	0	0
Drain			DrAl	DrAl	DrAl	DrAl	DrAl	DrAl
Spin (Sec.)			0	0	0	0	0	0
<b>Wash</b>								
Time (Min.)	7	7	7	7	6	6	9	9
Water	Hot	Hot	Hot	Hot	Hot	Hot	Hot	Hot
Level	Low	Low	Low	Low	Low	Low	Low	Low
Supply	1	1	1	1	1	1	1	1
Temp (F)	0	0	0	0	0	0	0	0
Drain	DrAl	DrAl	DrAl	DrAl	DrAl	DrAl	DrAl	DrAl
Spin (Sec.)	0	0	0	0	0	0	0	0
<b>Fill 1</b>								
Time (Min.)	4	4	7	7	7	7	4	7
Water	Hot	Hot	Hot	Hot	Hot	Hot	Hot	Hot
Level	High	High	Low	Low	Low	Low	High	High
Supply	0	0	2	2	1	1	0	2
Temp (F)	0	0	0	0	0	0	0	0
Drain	DrAl	DrAl	DrAl	DrAl	DrAl	DrAl	DrAl	DrAl
Spin (Sec.)	0	0	0	0	0	0	0	0
<b>Fill 2</b>								
Time (Min.)	2	2	4	4	7	7	2	4
Water	Both (warm)	Both (warm)	Hot	Hot	Hot	Hot	Both (warm)	Hot
Level	High	High	High	High	Low	Low	High	High
Supply	0	0	0	0	2	2	0	0
Temp (F)	0	0	0	0	0	0	0	0
Drain	DrAl	DrAl	DrAl	DrAl	DrAl	DrAl	DrAl	DrAl
Spin (Sec.)	30	60	0	0	0	0	30	0
<b>Fill 3</b>								
Time (Min.)	4	0	2	2	4	4	4	2
Water	Both (warm)		Both (warm)	Both (warm)	Hot	Hot	Both (warm)	Both (warm)
Level	Low		High	High	High	High	Low	Low
Supply	3		0	0	0	0	3	0
Temp (F)	0		0	0	0	0	0	0
Drain	DrAl		DrAl	DrAl	DrAl	DrAl	DrAl	DrAl
Spin (Sec.)	240		30	0	60	0	240	30

## Programming

V-Computer Standard OPL Cycles (Continued)								
Cycle Program	1 Permanent Press Light Soil	2 Cotton Terrycloth Light Soil	3 Permanent Press Medium Soil	4 Cotton Terrycloth Medium Soil	5 Permanent Press Heavy Soil	6 Cotton Terrycloth Heavy Soil	7 Table Napery Blends Colors	8 Table Napery Blends Whites
<b>Fill 4</b>								
Time (Min.)	0	0	4	0	2	2	0	4
Water			Both (warm)		Both (warm)	Both (warm)		Both (warm)
Level			Low		High	High		Low
Supply			3		0	0		3
Temp (F)			0		0	0		0
Drain			DrAl		DrAl	DrAl		DrAl
Spin (Sec.)			240		30	30		240
<b>Fill 5</b>								
Time (Min.)	0	0	0	0	4	0	0	0
Water					Both (warm)			
Level					Low			
Supply					3			
Temp (F)					0			
Drain					DrAl			
Spin (Sec.)					240			
<b>Fill 6</b>								
Time (Min.)	0	0	0	0	0	0	0	0
Water								
Level								
Supply								
Temp (F)								
Drain								
Spin (Sec.)								
<b>Fill 7</b>								
Time (Min.)	0	0	0	0	0	0	0	0
Water								
Level								
Supply								
Temp (F)								
Drain								
Spin (Sec.)								
<b>Fill 8</b>								
Time (Min.)	0	0	0	0	0	0	0	0
Water								
Level								
Supply								
Temp (F)								
Drain								
Spin (Sec.)								
<b>Fill 9</b>								
Time (Min.)	0	4	0	4	0	4	0	0
Water		Both (warm)		Both (warm)		Both (warm)		
Level		Low		Low		Low		
Supply		3		3		3		
Temp (F)		0		0		0		
Drain		DrAl		DrAl		DrAl		
Spin		SPn3		SPn3		SPn3		
Spin (Min.)		5						

<b>V-Computer Standard OPL Cycles (Continued)</b>								
Cycle Program	9 VISA Table Napery Colors	10 VISA Table Napery Whites	11 Rags Heavy Soil	12 Reclaim	13 Personals with Bleach	14 Personals no Bleach	15 Delicate Spreads Cold Water	16 Delicate Spreads Warm Water
Agitation	AG 1	AG 1	AG 1	AG 1	AG 1	AG 1	AG 1	AG 1
Wash Speed	AGSn	AGSn	AGSn	AGSn	AGSn	AGSn	AGSn	AGSn
Pump	nPnP	nPnP	nPnP	nPnP	nPnP	nPnP	nPnP	nPnP
<b>PreWash</b>								
Time (Min.)	2	2	2	2	2	2	0	0
Water	Both (warm)	Both (warm)	Both (warm)	Hot	Both (warm)	Both (warm)		
Level	High	High	High	High	High	High		
Supply	0	0	1	1	1	0		
Temp (F)	0	0	0	0	0	0		
Drain	DrAI	DrAI	DrAI	DrAI	DrAI	DrAI		
Spin (Sec.)	0	0	0	0	0	0		
<b>Wash</b>								
Time (Min.)	10	10	10	6	7	7	5	7
Water	Hot	Hot	Hot	Hot	Hot	Hot	Cold	Both (warm)
Level	Low	Low	Low	Low	Low	Low	High	High
Supply	1	1	1	1	2	1	1	1
Temp (F)	0	0	0	0	0	0	0	0
Drain	DrAI	DrAI	DrAI	DrAI	DrAI	DrAI	DrAI	DrAI
Spin (Sec.)	0	0	0	0	0	0	0	0
<b>Fill 1</b>								
Time (Min.)	6	6	6	12	2	2	4	4
Water	Hot	Hot	Hot	Hot	Both (warm)	Both (warm)	Cold	Both (warm)
Level	Low	Low	Low	Low	High	High	High	High
Supply	1	2	2	2	0	0	0	0
Temp (F)	0	0	0	0	0	0	0	0
Drain	DrAI	DrAI	DrAI	DrAI	DrAI	DrAI	DrAI	DrAI
Spin (Sec.)	0	0	0	0	0	0	0	0
<b>Fill 2</b>								
Time (Min.)	4	4	4	4	2	2	2	2
Water	Hot	Hot	Hot	Hot	Both (warm)	Both (warm)	Cold	Hot
Level	High	High	High	High	High	High	High	High
Supply	0	0	2	0	0	0	0	0
Temp (F)	0	0	0	0	0	0	0	0
Drain	DrAI	DrAI	DrAI	DrAI	DrAI	DrAI	DrAI	DrAI
Spin (Sec.)	0	0	0	0	30	30	30	30
<b>Fill 3</b>								
Time (Min.)	2	2	2	2	4	4	4	2
Water	Both (warm)	Both (warm)	Both (warm)	Both (warm)	Both (warm)	Both (warm)	Cold	Both (warm)
Level	High	High	High	High	Low	Low	High	High
Supply	0	0	0	0	3	3	3	0
Temp (F)	0	0	0	0	0	0	0	0
Drain	DrAI	DrAI	DrAI	DrAI	DrAI	DrAI	DrAI	DrAI
Spin (Sec.)	0	0	0	0	240	240	240	240

## Programming

V-Computer Standard OPL Cycles (Continued)								
Cycle Program	9 VISA Table Napery Colors	10 VISA Table Napery Whites	11 Rags Heavy Soil	12 Reclaim	13 Personals with Bleach	14 Personals no Bleach	15 Delicate Spreads Cold Water	16 Delicate Spreads Warm Water
<b>Fill 4</b>								
Time (Min.)	2	2	2	2	0	0	0	0
Water	Cold	Cold	Both (warm)	Both (warm)				
Level	High	High	High	High				
Supply	0	0	0	0				
Temp (F)	0	0	0	0				
Drain	DrAl	DrAl	DrAl	DrAl				
Spin (Sec.)	30	30	60	30				
<b>Fill 5</b>								
Time (Min.)	4	4	4	4	0	0	0	0
Water	Cold	Cold	Both (warm)	Both (warm)				
Level	Low	Low	High	Low				
Supply	3	3	0	3				
Temp (F)	0	0	0	0				
Drain	DrAl	DrAl	DrAl	DrAl				
Spin (Sec.)	240	240	60	240				
<b>Fill 6</b>								
Time (Min.)	0	0	0	0	0	0	0	0
Water								
Level								
Supply								
Temp (F)								
Drain								
Spin (Sec.)								
<b>Fill 7</b>								
Time (Min.)	0	0	0	0	0	0	0	0
Water								
Level								
Supply								
Temp (F)								
Drain								
Spin (Sec.)								
<b>Fill 8</b>								
Time (Min.)	0	0	0	0	0	0	0	0
Water								
Level								
Supply								
Temp (F)								
Drain								
Spin (Sec.)								
<b>Fill 9</b>								
Time (Min.)	0	0	4	0	0	0	0	0
Water			Both (warm)					
Level			Low					
Supply			3					
Temp (F)			0					
Drain			DrAl					
Spin			SPn3					
Spin (Min.)			6					

V-Computer Standard OPL Cycles (Continued)										
Cycle Program	21 Normal 90°C (PreWash)	22 Normal 90°C	23 Normal 60°C (PreWash)	24 Normal 60°C	25 Normal 40°C (PreWash)	26 Permanent Press 90°C (PreWash)	27 Permanent Press 90°C	28 Permanent Press 60°C (PreWash)	29 Permanent Press 60°C	30 Fine 40°C
Agitation	AG 1	AG 1	AG 1	AG 1	AG 1	AG 1	AG 1	AG 1	AG 1	AG 2
Wash Speed	AGSn	AGSn	AGSn	AGSn	AGSn	AGSn	AGSn	AGSn	AGSn	AGSn
Pump	nPnP	nPnP	nPnP	nPnP	nPnP	nPnP	nPnP	nPnP	nPnP	nPnP
<b>PreWash</b>										
Time (Min.)	8	0	8	0	6	8	0	8	0	6
Water	Cold		Cold		Cold	Cold		Cold		Cold
Level	High		High		High	High		High		High
Supply	1		1		1	1		1		1
Temp (C)	40°		40°		40°	40°		40°		40°
Drain	DrAI		DrAI		DrAI	DrAI		DrAI		DrAI
Spin (Sec.)	0		0		0	0		0		0
<b>Wash</b>										
Time (Min.)	10	10	10	10	8	10	10	10	10	8
Water	Hot	Hot	Hot	Hot	Both (warm)	Hot	Hot	Hot	Hot	Both (warm)
Level	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Supply	2	2	2	2	2	2	2	2	2	2
Temp (C)	90°	90°	60°	60°	40°	90°	90°	60°	60°	40°
Drain	DrAI	DrAI	DrAI	DrAI	DrAI	DrAI	DrAI	DrAI	DrAI	DrAI
Spin (Sec.)	0	0	0	0	0	0	0	0	0	0
<b>Fill 1</b>										
Time (Min.)	0	0	0	0	0	0	0	0	0	0
Water										
Level										
Supply										
Temp (C)										
Drain										
Spin (Sec.)										
<b>Fill 2</b>										
Time (Min.)	0	0	0	0	0	0	0	0	0	0
Water										
Level										
Supply										
Temp (C)										
Drain										
Spin (Sec.)										
<b>Fill 3</b>										
Time (Min.)	2	2	2	2	2	2	2	2	2	2
Water	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold
Level	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Supply	0	0	0	0	0	0	0	0	0	0
Temp (C)	0	0	0	0	0	0	0	0	0	0
Drain	DrAI	DrAI	DrAI	DrAI	DrAI	DrAI	DrAI	DrAI	DrAI	DrAI
Spin (Sec.)	30	30	30	30	30	30	30	30	30	30

## Programming

V-Computer Standard OPL Cycles (Continued)										
Cycle Program	21 Normal 90°C (PreWash)	22 Normal 90°C	23 Normal 60°C (PreWash)	24 Normal 60°C	25 Normal 40°C (PreWash)	26 Permanent Press 90°C (PreWash)	27 Permanent Press 90°C	28 Permanent Press 60°C (PreWash)	29 Permanent Press 60°C	30 Fine 40°C
<b>Fill 4</b>										
Time (Min.)	2	2	2	2	2	2	2	2	2	2
Water	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold
Level	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Supply	0	0	0	0	0	0	0	0	0	0
Temp (C)	0	0	0	0	0	0	0	0	0	0
Drain	DrAl	DrAl	DrAl	DrAl	DrAl	DrAl	DrAl	DrAl	DrAl	DrAl
Spin (Sec.)	30	30	30	30	30	30	30	30	30	30
<b>Fill 5</b>										
Time (Min.)	2	2	2	2	2	2	2	2	2	2
Water	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold
Level	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Supply	0	0	0	0	0	0	0	0	0	0
Temp (C)	0	0	0	0	0	0	0	0	0	0
Drain	DrAl	DrAl	DrAl	DrAl	DrAl	DrAl	DrAl	DrAl	DrAl	DrAl
Spin (Sec.)	30	30	30	30	30	30	30	30	30	30
<b>Fill 6</b>										
Time (Min.)	0	0	0	0	0	0	0	0	0	0
Water										
Level										
Supply										
Temp (C)										
Drain										
Spin (Sec.)										
<b>Fill 7</b>										
Time (Min.)	0	0	0	0	0	0	0	0	0	0
Water										
Level										
Supply										
Temp (C)										
Drain										
Spin (Sec.)										
<b>Fill 8</b>										
Time (Min.)	0	0	0	0	0	0	0	0	0	0
Water										
Level										
Supply										
Temp (C)										
Drain										
Spin (Sec.)										
<b>Fill 9</b>										
Time (Min.)	2	2	2	2	2	2	2	2	2	2
Water	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold
Level	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Supply	3	3	3	3	3	3	3	3	3	3
Temp (C)	0	0	0	0	0	0	0	0	0	0
Spin	SPn3	SPn3	SPn3	SPn3	SPn3	SPn3	SPn3	SPn3	SPn3	SPn3
Spin (Min.)	6	6	6	6	6	2	2	2	2	2