

Operating instructions (ENG)

MODELS: 1.007-901.0

DELUXE 1.007-904.0

DRR



Read these instructions before using the machine.

FCC ID: U90-RFET



86339940-C 08/30/11

(Model:	
	Date of Purchase:	
	Serial Number:	
	Dealer:	
	Address:	
	Phone Number:	
	Sales Representative:	

OVERVIEW

The Crew Chief and Dry Check System is an electrically powered monitoring and controlling device for use in disaster recovery environments.

Warranty Registration

Thank you for purchasing a Prochem product. Warranty registration is quick and easy. Your registration will allow us to serve you better over the lifetime of the product.

> To register your product go to: <u>www.prochem.com/WarrantyRegistration.aspx</u> For customer assistance: 1-800-776-2436



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This manual contains the following sections:

- How to Use This Manual
- Safety
- Operations
- Maintenance
- Parts List

The HOW TO USE THIS MANUAL section will tell you how to find important information for ordering correct repair parts.

Parts may be ordered from authorized dealers. When placing an order for parts, the machine model and machine serial number are important. Refer to the MACHINE DATA box which is filled out during the installation of your machine. The MACHINE DATA box is located on the inside of the front cover of this manual.

Model:	
Date of Purchase:	
Serial Number:	
Dealer:	
Address:	
Phone Number:	
Sales Representative:	

The model and serial number of your machine is located on the back panel of the machine.



The SAFETY section contains important information regarding hazardous or unsafe practices of the machine. Levels of hazards are identified that could result in product damage, personal injury, or severe injury resulting in death.

The OPERATIONS section is to familiarize the operator with the operation and function of the machine.

The MAINTENANCE section contains preventive maintenance to keep the machine and its components in good working condition. They are listed in this general order:

- Storage
- Maintenance
- Troubleshooting

The PARTS LIST section contains assembled parts illustrations and corresponding parts list. The parts lists include a number of columns of information:

- **REF** column refers to the reference number on the parts illustration.
- **PART NO.** column lists the part number for the part.
- **PRV NO.** reference number.
- **QTY** column lists the quantity of the part used in that area of the machine.
- **DESCRIPTION** column is a brief description of the part.
- SERIAL NO. FROM If this column has an (*) and a Reference number, see the SERIAL NUMBERS page in the back of your manual. If column has two asterisk (**), call manufacturer for serial number. The serial number indicates the first machine the part number is applicable to. The main illustration shows the most current design of the machine. When a boxed illustration is shown, it displays the older design.
- **NOTES** column for information not noted by the other columns.

NOTE: If a service or option kit is installed on your machine, be sure to keep the KIT INSTRUCTIONS which came with the kit. It contains replacement parts numbers needed for ordering future parts.

The manual part number is located on the lower left corner of the front cover.

IMPORTANT SAFETY INSTRUCTIONS

When using this machine, basic precaution must always be followed, including the following: READ ALL INSTRUCTIONS BEFORE USING THIS MACHINE.

WARNING: To reduce the risk of fire, electric shock, or injury:

Use only indoors. Do not use outdoors or expose to rain or water.

Use only as described in this manual. Use only manufacturer's recommended components and attachments.

Do not operate this machine near flammable fluids, dust or vapors.

For use by qualified personnel only.

The machine shall only be operated by instructed and authorized persons.

Do not handle the plug or machine with wet hands.

Do not unplug machine by pulling on cord. To unplug, grasp the plug, not the cord.

Do not use with damaged cord or plug.

Do not pull or carry by cord, use cord as a handle, run over cord, close a door on cord, or pull cord around sharp edges or corners.

Connect to a properly grounded outlet.

Never service or clean the unit while plugged in.

Do not switch Voltage inputs directly, pause in the OFF position for a few seconds.

Use only in an upright position.

Do not exceed the maximum allowable loads.

Test each GFCI module and/or breaker before use.

Ground fault protection will not guard against shock hazard resulting from:

Physical contact with both circuit conductors.

Any defect in the wiring of the electrical supply to this unit.

The Manual resetting GFCIs (M) require resetting after a power interruption and at power up.

The 50 Amp receptacle is not GFCI protected.

READ AND SAVE THESE INSTRUCTIONS

CONSIGNES IMPORTANTES DE SÉCURITÉ

Lors de l'utilisation d'un appareil électrique, il faut toujours observer des précautions élémentaires,qui comprennent parmi celles-ci :

LISEZ BIEN L'ENSEMBLE DES CONSIGNES AVANT D'UTILISER CET APPAREIL.

AVERTISSIMENT:

Pour réduire les risques d'incendie, d'électrocution ou de blessure :

Utiliser uniquement à l'intérieur. Ne pas utiliser à l'extérieur ni exposer à la pluie ou à l'eau.

Utiliser conformément aux instructions de ce manuel. Utiliser uniquement les composants et les accessoires recommandés par le fabricant.

Ne pas faire fonctionner cette machine en présence de fluides inflammables, de poussière ou de vapeur.

Pour utilisation par du personnel qualifié uniquement.

Cette machine doit être utilisée uniquement par des personnes formées et autorisées.

Ne pas manipuler la fiche ou la machine avec des mains mouillées.

Ne pas débrancher la machine en tirant sur le cordon. Pour débrancher, tenir la fiche et non le cordon.

Ne pas utiliser un cordon ou une fiche endommagé(e).

Ne pas tirer ou porter à l'aide du cordon, utiliser le cordon comme une poignée, rouler sur le cordon, fermer une porte sur le cordon ou tirer le cordon en passant dans des coins pointus ou tranchants.

Brancher à une prise appropriée de mise à la terre.

Ne jamais entretenir ou nettoyer l'unité lorsqu'elle est branchée.

Ne pas commuter directement les entrées de tension, permettre une pause à la position Arrêt (OFF) pendant quelques secondes.

Utiliser uniquement en position verticale.

Ne pas dépasser les charges maximales admissibles.

Tester chaque module GFCI et/ou chaque fusible avant utilisation.

Le dispositif de protection contre les défauts de terre ne protège pas contre le risque d'électrocution dans les cas suivants :

Contact physique avec les deux conducteurs de circuit;

Toute panne dans le câblage de l'alimentation électrique de cette unité.

La réinitialisation manuelle des GFCI (M) nécessite une réinitialisation après une mise hors tension et à la mise sous tension.

Le réceptacle de 50 ampères est dépourvu de protection GFCI.

The following symbols are used throughout this guide as indicated in their descriptions:

HAZARD INTENSITY LEVEL

There are three levels of hazard intensity identified by signal words -**WARNING** and **CAUTION** and **FOR SAFETY**. The level of hazard intensity is determined by the following definitions:

WARNING:

WARNING - Hazards or unsafe practices which COULD result in severe personal injury or death.

ACAUTION:

CAUTION - Hazards or unsafe practices which could result in minor personal injury or product or property damage.

FOR SAFETY: To Identify actions which must be followed for safe operation of equipment.

Report machine damage or faulty operation immediately. Do not use the machine if it is not in proper operating condition. Following is information that signals some potentially dangerous conditions to the operator or the equipment. Read this information carefully. Know when these conditions can exist. Locate all safety devices on the machine. Please take the necessary steps to train the machine operating personnel.

FOR SAFETY:

DO NOT OPERATE MACHINE: Unless Trained and Authorized. Unless Operation Guide is Read and understood. In Flammable or Explosive areas. In areas with possible falling objects. Les symboles ci-dessous sont utilisés à travers ce manuel comme illustré dans leurs descriptions :

DEGRÉS DE RISQUES EN CAS DE DANGER

Il existe trois degrés de risques identifiés par les termes signalétiques -AVERTISSEMENT et ATTENTION et POUR VOTRE SÉCURITÉ. Le degré de risque est défini de la manière suivante :

AVERTISSIMENT:

AVERTISSEMENT - Dangers ou méthodes dangereuses qui POURRAIENT provoquer de graves blessures ou entraîner la mort.

ATTENTION:

ATTENTION - Dangers ou méthodes dangereuses qui pourraient provoquer des blessures légères ou une détérioration du produit ou des biens immobiliers.

POUR VOTRE SÉCURITÉ : ce signe permet d'identifier les mesures de précaution à prendre pour assurer un bon fonctionnement du matériel.

Rendre compte immédiatement d'une défaillance ou d'une détérioration de la machine. Ne pas utiliser la machine si celle-ci ne fonctionne pas correctement. Lire soigneusement les informations ci-dessous signalant certains dangers potentiels pour l'opérateur de la machine. L'opérateur doit être absolument au courant de ces dangers potentiels. Localiser tous les dispositifs de sécurité sur la machine. Il est conseillé de prendre les mesures nécessaires pour former le personnel opérateur.

POUR VOTRE SÉCURITÉ :

NE PAS MANOEUVRER LA MACHINE :

Lorsqu'on n'est pas expérimenté ou qualifié.

Lorsque le guide d'utilisation n'est pas été lu ou compris.

Dans des zones inflammables ou explosives.

Dans des zones où des objets peuvent tomber.

Grounding Instructions

ELECTRICAL:

In the USA this machine utilizes standard 15 amp 120V, 60 hz, A.C. and/or 30 or 50 amp 240V power circuit. The amp, hertz, and voltage requirements are listed on the data label. Using voltages above or below those indicated on the data label will cause serious damage.

EXTENSION CORDS:

When an extension cord is used, use UL certified undamaged power cords appropriate to carry 120V 15 Amps or 240V 50 Amps of continuous power.

GROUNDING INSTRUCTIONS:

This machine must be grounded. If it should malfunction or break down, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. The extension cords approved for use with this machine have an equipment-grounding conductor and grounding plug. The plug must be inserted into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

The nominal 120-volt extension cord has a grounded plug that looks like the plug in *Figure A*. A temporary adaptor that looks like the adaptor in *Figure C* may be used to connect this plug to a 2-pole receptacle as shown in *Figure B*, if a properly grounded outlet is not available. The temporary adaptor should be used only until a properly grounded outlet *Figure A* can be installed by a qualified electrician. The green colored rigid ear, lug, or the like extending from the adaptor must be connected to a permanent ground such as a properly grounded outlet box cover. Whenever the adaptor is used, it must be held in place by a metal screw.

The nominal 240-volt extension cord has a grounded plug that looks like the plug in *Figure D*. If the wall outlet and cord in *Figure E* are used, be sure to plug the attached 120V cord into the 120V grounded outlet, as shown.

15 amp ground fault module test instructions (manual)

Test each GFCI before each use.

- 1. Apply power to Crew Chief's GFCI outlet module.
- 2. Press reset button on each GFCI. Each GFCI trip indicator light should be off.
- 3. Press test button. Each GFCI trip indicator light should turn on.

4. Press reset button again for use.







AWARNING:

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or service person if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with the extension cord - if it will not fit the outlet, have a proper outlet installed by a qualified electrician.

AVERTISSIMENT:

Un branchement inapproprié du conducteur de protection peut entraîner un risque d'électrocution. Vérifier avec un électricien ou un membre qualifié du personnel d'entretien si vous doutez de la mise à la terre de la prise. Ne pas modifier la fiche fournie avec la corde d'extension; si elle ne correspond pas à la prise, faire poser une fiche appropriée par un électricien qualifié.

Safety Label Location

This drawing indicates the safety label location on the machine. If at any time the label becomes illegible, promptly replace it.



Technical Specifications

ITEM	
Height	19.3 in. (490mm)
Width	11.5 in. (293mm)
Length	27.3 in. (694mm)
Weight	31.0 lbs. (14.07kg) / 37.7 lbs (17.12kg) Deluxe
Body Construction	Powder Coated steel and Roto-molded Polyethylene
GFCI Outlet	110 / 120 VAC 60 Hz





Operations

Crew Chief





Components

- 1. Control Panel
- 2. Menu Navigation Buttons
- 3. LCD Display
- 4. Handle
- 5. Indicator Light
- 6. Front Panel
- 7. 3 Controlled 120 Volt GFCI Electrical Outlets
- 8. 120 Volt Input Sockets
- 9. 4 Uncontrolled 120 Volt GFCI Electrical Outlets
- 10. 240 Volt Input Socket
- 11. Voltage Selection Knob
- 12. Circuit Breakers
- 13. USB Port
- 14. Ethernet Port
- 15. Back Panel
- 16. Circuit Breakers



Components

- 1. Control Panel Located at top of Crew Chief next to handle. The display and navigation buttons are on it.
- 2. **Menu Navigation Buttons** Used to navigate through programmed menu, and set time and sensor communication channel used etc.
- 3. **LCD Display** Displays menu and sensor data. The top row of the display provides information like where the operator is in menu structure, or sensor data. The bottom row of the display provides information and navigation and control options.
- 4. Handle Located on top of Crew Chief to easily carry it.
- 5. Indicator Light Illuminates to indicate power available to the paired outlet.
- 6. Front Panel Contains electrical input ports, selector switch, outlets and circuit breakers.
- 7. Controlled 120 Volt GFCI Electrical Outlets 3 Protected outlets on front of machine. Intended to power fans. Programed to automatically interrupt power, when sensors indicate dew point is reached. They can also be manually switched off with the Voltage Selection Knob. GFCI includes test and reset buttons, and a trip indicator light. Test GFCI function individually before use.
- 8. **120 Volt Input Sockets** Supply sockets to power individual Crew Chief electrical outlets. Use UL certified undamaged power cords appropriate to carry 120V 15 Amps of continuous power.
- 9. 1 Uncontrolled 120 Volt GFCI Electrical Outlets These outlets when powered are not automatically interrupted by reaching dew point. The outlet on the front panel can be manually switched off with the Voltage Selection Knob. GFCI includes test and reset buttons, and a trip indicator light. Test GFCI function individually before use.
- 10. **240 Volt Input Socket** Supply socket to power 4 front Crew Chief electrical outlets. Use UL certified undamaged power cord and outlet appropriate to carry 240V 50 Amps of continuous power with proper grounding.
- 11. Voltage Selection Knob 3 option selection knob. Select source power of 120V or 240V or turn the front outlets off. When switching source voltages pause in the off position for a few seconds.
- 12. **Circuit Breakers** The breakers on the front panel are rated at 15 Amps to protect from current over-use. May be manually tripped to turn power on or off individually.
- 13. USB Port Available to save data from Crew Chief to removable flash or thumb drives.
- 14. Ethernet Port Available to connect Crew Chief to broadband router. Used to obtain access to environmental data remotely through the internet.
- 15. **Back Panel** Contains USB and ethernet ports. The Deluxe model also has electrical input ports, outlets, and circuit breakers.
- 16. Circuit Breakers Rated at 12 Amps to protect from current over-use. May be reset when thermally tripped.

Operations

Sensors



Components

- 1. Color Label
- 2. Channel Selection Switch
- 3. ON/OFF Switch
- 4. ID Label
- 5. Battery Door
- 6. Probe Cable Connection Port

Probes



Components

- 1. Sensor Connection Cable
- 2. Stainless Steel Conductive Screws
- 3. Spring Contacts
- 4. Screw Ports

Sensor Components

- 1. **Color Label** Color coordinating with color of GFCI outlets on front panel of Crew Chief. Indicating which fans will be automatically interrupted when dew point in a room is reached.
- 2. **Channel Selection Switch** When more than 1 Crew Chief is used for bigger restoration projects, select a channel A, B or C to avoid cross talk. Use same channel on Crew Chief base.
- 3. ON/OFF Switch ON to operate, OFF to preserve batteries.
- 4. **ID Label** Indicates radio ID for identification by Crew Chief base.
- 5. Battery Door Access to batteries by removing two screws.
- 6. Probe Cable Connection Port Receives the end of the probe's connection cable.

Probe Components

- 1. **Sensor Connection Cable** Plugs into Sensors connection port, to provide power to the probe and to relay data to the Crew Chief.
- 2. **Stainless Steel Conductive Screws** used to fasten probe to wooden members, and to conduct resistance data to probe, telling moisture levels.
- 3. Spring Contacts Insures good conductive contact between probe and screws.
- 4. Screw Ports Screws pass through the probe into wooden members, via these ports.

Equipment Setup

Powering the Crew Chief

- 1. Place the Crew Chief in the center of a building or area to be restored. If an ungrounded 240 V supply is to be used, locate within 10' of the grounded outlet and connect the ground jumper there.
- Connect the Crew Chief to grounded electrical supply source(s). Use UL certified undamaged power cords appropriate to carry 120V 15 Amps or 240V 50 Amps of continuous power. Plug in a single 240V cord and/or multiple 120V cords.

ACAUTION:

Discharge personal static build-up by touching a face screw before touching switches or plugging in electronic cables. Otherwise component damage to switches and PCBs may occur.

ATTENTION:

Libérer l'énergie statique personnelle en touchant une vis faciale avant de toucher les commutateurs ou de brancher les câbles électroniques. Sinon, les composants des commutateurs ou des PCB peuvent s'endommager.

- 3. Select the power input 120V or 240V on the Voltage Selection Knob. All outgoing power is 120V.
- 4. When 240V supply is used then all the front 120V GFCI Electrical outlets are live. When 120V supply cords are used then only the outlet immediately above the input is live.

To access environmental condition data remotely:

- 1. Call PROCHEM customer service @ 1-800-776-6363 to set up your Crew Chief internet account. This only needs to be done once. Then you will have access to *crewchief.prochem.com* website. An account allows uploading, storing and remote access to environmental condition data.
- 2. Connect Crew Chief to internet source via ethernet port on back panel.

Sensors and probes

- 1. Ensure that the sensors have good fully charged batteries. Sort by color and designate a room or zone for each color of sensor.
- 2. Screw probes into building structure that are most suspect of being wet.
- 3. Plug the probes' connection cables into the sensors' cable connection ports. Every probe needs a sensor to power it and relay data to the Crew Chief.
- 4. Use the Quick Start Process, turning on the sensors and setting the broadcasting channels when indicated in the process.

Menu Navigation

The top row of the display provides information like where the operator is in menu structure, or sensor data. The bottom row of the display provides information and navigation and control options. Below the display are three buttons used to navigate through the Crew Chiefs menu structure, corresponding to the bottom row of text. The chevrons on the left and right of the display indicate multiple menu options at that level. Continuing to press either the left or right button will scroll through those options, returning to the original page. Pressing both the left and right buttons will navigate up to the Main Menu Run page.



Crew Chief Setup

- 1. Complete the Quick Start Process.
- 2. The time and date are set in the factory for the US Mountain time zone. If desired, change the Crew Chiefs time and date for your zone. (Refer to the Time Setup Menu)
- 3. Read the Crew Chief's status/sensor readings to verify that all sensors and probes are functioning correctly and to effectively distribute fans, dehumidifiers and other equipment. (Refer to the Sensor Data Menu)

Auxiliary Equipment

1. Place the fans as appropriate in each of the regions or rooms. Plug the fans so that they get their power from the controlled outlets on the Crew Chief.

NOTE: Fans increase air flow past damp areas, causing the air to draw away more moisture. This raises the humidity levels so that dehumidifiers are more effective. Multiple fans can raise the humidity faster than a dehumidifier can remove the water from the air. If the humidity gets too high, water will start to precipitate out, starting on cool surfaces. This can cause secondary damage to a remediation site. To avoid this the Crew Chief has the optional Auto Fan Control. This will turn off the outlets that are controlled by sensors that are reading excessive moisture levels. Plug fans into the Red, Green, or Blue power outlets and place fans and color matching sensors in the same zone of the remediation site.

2. Dehumidifiers and other equipment need to be powered from the live uncontrolled electrical outlets. When the dew point in a room is reached the sensors will indicate it and the Crew Chief will temporarily turn off the controlled outlets until the Dehumidifiers lower the ambient air humidity.

Verify that the Quick Start Process is completed.

- 3. Turn on equipment sequentially checking current amperage readings on the Crew Chief to guarantee safe uninterrupted working levels. (Refer to the Current Status Menu)
- 4. Use good cord management practices to remove tripping hazards.
- 5. Run ducting to/from fans as required.

Quick Start Menu Navigation



Quick Start Process

The initial screen page gives a choice between English and Spanish language interfaces. This page times out after 10 seconds defaulting to an English menu system.

The Crew Chief then checks for available sensor channels, detecting if other Crew Chiefs within range are using the currently selected channel.

If the channel is taken then the menu prompts to change to a different channel.

If the channel is available it goes immediately to the Main Menu Run screen.

1. Select Run to accept defaults and quickly setup and start the Crew Chief recording data.

The Crew Chief then checks for a network connection.

- 2. a. Select **OK** if internet access is unavailable.
 - b. Or connect the modem to the ethernet port and select Retest.

The Crew Chief then checks if there are overloaded circuits.

If there is a overloaded circuit, a Current Warning page prompt pops up.

- 3. Remove excessive load and press Retest.
- 4. Set sensor's broadcasting channels to match Crew Chief and turn sensors on, while they are near the Crew Chief.

The screen page displays the quantity of sensors and dehumidifiers that the Crew Chief is receiving a signal from.

- 5. If all expected sensors and dehumidifiers are signalling and being received, and everything is ready to start, then press **OK**.
- 6. Place all the sensors in the desired locations. Re-verify all expected sensors and dehumidifiers are signaling and signals are being received.

NOTE: For detailed information from the sensors and dehumidifiers, press More. This will navigate to screens explained in the Menu Navigation - Sensors section.

The **Job Not Recording** screen page displays and gives 3 options: **Back** will navigate to the **Sensor** display, **Ctrl** will navigate to Auto Fan Control page, and **Start**. The Auto Fan Control page displays whether the Auto Fan Control is on or off, and gives the option to turn the auto control **On** or **Off**. Any selection will navigate back to **Job Not Recording** page.

ACAUTION:

Starting a Job Recording begins recording new data. Previous jobs have the potential to be overwritten. It is best practice to verify that previous jobs' data are saved to the web site or to an USB data storage device before starting a new job.

ATTENTION:

Le début de l'enregistrement d'un travail déclenche l'enregistrement de nouvelles données. Les travaux précédents peuvent être écrasés. La meilleure méthode consiste à vérifier que les données des travaux précédents soient sauvegardées sur le site Web ou sur un dispositif USB de stockage de données avant de commencer un nouveau travail.

7. Press **Start** to begin recording data from sensors and power drawn. The Crew Chief will automatically send the data along with notifications and alarms to the web site.

The **Job Recording** page displays 3 options: **Back** will navigate to the main menu, **Ctrl** will navigate to Auto Fan Control page and **Stop**.

Stop will navigate to the Stop Recording page with 2 options, No and Yes.

NOTE: Stopping recording does not turn off power to the outlets. They are still hot and typical precautions must be used.

Sensor Data Menu Navigation



To Access the Sensor Data Menu Pages: press the right button from the initial main menu page. This will navigate to the Main Status Menu.

1. Select Status.

2. Select Sensors

This page will indicate the number of Blue, Red, Green and Auxiliary sensors, and Dehumidifiers which the Crew Chief is receiving data from. It also has 2 options. **Back** will navigate to the Status menu.

3. Select **More** to navigate to sensor and dehumidifier data pages.

All of the data pages display the source of the data in the upper left corner, ie Blue1, or Red2.

The top center number is the temperature.

The number to the right is the relative humidity.

The lower left display scrolls between the sensor ID number and the time that the humidity was sampled.

The lower right displays the moisture content read by the probe connected to the sensor.

Selecting the left or right buttons will navigate through the data pages for each of the sensors sending a signal.

Status Menu Navigation



There are 4 sections under the Status Main menu: Sensors (described on a different page), **Current**, **Zones**, and **Alarms**.

Current Menu

Press **Current** to display data of how much power in amps are being drawn from each of the circuits. This is useful to balance electrical load.

Each page displays the Circuit on the top row and how many amps are being drawn on the bottom row.

Cycle through the circuit pages by pressing the right or left buttons.

Zones Menu

Press **Zones** to display the composite atmospheric data by zone.

The top line displays the zone by color.

The bottom line has a scrolling display. It will show: Temperature in degrees Fahrenheit, Relative Humidity, Dew Point in degrees Fahrenheit, and Grains Per Pound of moisture in the air.

Cycle through the Zones pages by pressing the right or left buttons.

Alarms Menu

Press Alarms to view and clear notification events (Alarms).

The first screen displays the number of alarms and gives 3 options.

Clear will delete stored alarms in the Crew Chief after a verification page.

View will display the saved alarms.

Back will navigate to the Alarms Menu page.

Diagnostics / Save Data Menu Navigation



Diagnostics Menu

Press **Diags** to enter the menu that displays internet connection information.

Press Net Test.

The top line of the Ping page displays **Pinging host**.

The bottom left displays the result of the ping test, Fail (NET), Timeout, or OK with response time in milliseconds.

Press **Back** to return to previous page.

Save Data Menu

Press Save Data to copy stored data to a USB data storage device (thumb drive).

The Save Data? page is asking if data is to be copied to a local USB drive.

The **Insert USB** page is waiting for the USB drive to be connected, then press **OK**. If the USB drive is unavailable press **Cancel**.

The **Downloading** splash page indicates progress to completion of copying data, with an option to **Cancel** the process if the machine seems to be stuck, or the process is taking too long. Copying should not take more than 5 minutes.

Data Saved page indicates a successful copy has been placed on USB drive. Press Next to return to Main Menu.

NOTE: Saving data to an USB drive does not remove it from the Crew Chief. The data is only removed when a new job is started. (Refer to Quick Start Menu Navigation)

Updating Firmware Menu Navigation



Updating Firmware

For best functionality of the Crew Chief, it is necessary to keep the firmware current.

Determine if your machine is running the current firmware.

- 1. Go to crewchief.prochem.com to find the current version of firmware available.
- 2. Turn on Crew Chief.
- 3. When the menu display requests English or Spanish press middle button.
- 4. Read firmware version on display.
- 5. If the websites version is not the same as the machine's version, the firmware will need to be updated.

Load firmware on Crew Chief

- 1. Download latest firmware version from crewchief.prochem.com.
- 2. Place firmware file in root directory of a USB drive.
- 3. Turn on Crew Chief. The screen displays a request to select English or Spanish, do not select either.
- 4. Press center button to enter the hidden firmware update submenu. Currently installed firmware version will be displayed.
- Press the middle and right buttons simultaneously. Update FW? (firmware) is displayed, with No and Yes as options. Pressing No will return the display to the top of the menu structure. Press Yes to continue through the process.
- 6. The display instructs to **Insert USB** drive into Crew Chief. Insert the USB drive that has the new firmware installed and press **OK**. If the USB drive with new firmware is unavailable, Press **Cancel** to move back one level in menu.
- 7. The screen displays the New firmware version on the USB drive and the Old version that is currently installed on the Crew Chief. The only option is to press **OK** to continue.
- 8. If the version on the USB drive is not more recent than what is already installed in the Crew Chief then the display prompts **Download OK** and **Cancel**. It is asking if you want to download the USB firmware anyway even though it is not more recent than what is already installed on the machine. Press **OK** to continue the process or **Cancel** to back out.
- 9. If **OK** was pressed in the previous steps then the processor will automatically go through the Verifying, Uploading and Programming processes. The Crew Chief will show the progress on the display unless interrupted with a **CANCEL** option choice. Do not stop the process in any other way.

ACAUTION:

Do not turn off Crew Chief or remove USB drive while programming firmware. Interrupting the programming stage can create an unrecoverable state for the processor.

ATTENTION:

Ne pas éteindre Crew Chief ni enlever la clé USB lors de la programmation du micrologiciel. L'interruption de la phase de programmation peut provoquer un état non récupérable du processeur.

10. When the screen displays Firmware Update Complete, remove USB drive and press **OK** to return to the top menu level.

PARTS



REF	PART NO.	QTY	DESCRIPTION	SERIAL NO. FROM	NOTES
1	86338210	1	SWITCH, SELECTOR, 8-POLE		
2	86345010	4	CIRCUIT BREAKER 15 AMP 120V		
3	86336990	1	INLET, 250VAC, 50A LOCKING		
4	86336880	1	SUB-ASSY, PANEL, FRONT		
5	86329940	4	INLET, FLANGED NEMA 5-15P		
6	86327360	4	GFCI, NEMA 5-15, 15A 125V		
7	86005760	22	NUT, 6-32 HEX W/STAR		
8	86345640	4	LIGHT, INDICATOR, 125-250V		
9	86340330	1	TERMINAL BLOCK, 3-CIR, 50A		
10	86006620	8	SCR, 6-32 X 1/4 PPHMS SS		
11	86010640	5	WASHER, #10 EXT STAR SS		
12	86005700	10	NUT, 10-32 HEX W/STAR		



REF	PART NO.	QTY	DESCRIPTION	SERIAL NO. FROM	NOTES
1	86339350	8	SCREW, SHLDR, #6-32 X .31		
2	86339340	8	DAMPER, SHOCK		
3	86338610	1	CLIP, FLAT CABLE		
4	86338580	1	POWER SUPPLY, 3 OUTPUT		
5	86279330	4	WASHER, #6 INT STAR		
6	86336950	2	ASSY, BRKT, BOX, SHORT		
7	86336940	1	PLATE, PWR SUP MTG		
8	86336930	1	BRKT SUB-ASSY, FRONT PANEL		
9	86336910	1	ENCLOSURE, FRONT		
10	86333310	1	PCBA, FRONT POWER CNTRL		
11	86279300	4	WASHER, #6 LOCK		
12	86274290	4	SCR, 10-32 X 3/8 PPHMS SS		
13	86006950	6	SCR, 10-32 X 1/2 PPHMS BLK		
14	86006620	6	SCR, 6-32 X 1/4 PPHMS SS		
15	86005760	8	NUT, 6-32 HEX W/STAR		
16	86332860	1	HOUSING, TRIM		
17	86010640	11	WASHER #10 LOCK EXT STAR SS		
18	86005700	1	NUT 10-32 W/STAR WASHER PLTD		
19	86355720	9	RIVET, .156 D X .12 GRIP, SS		
20	86336920	1	COVER, SWITCH		
21	86338510	1	ASSY, FRONT PANEL		



REF	PART NO.	QTY	DESCRIPTION	SERIAL NO. FROM	NOTES
1	86339540	1	PCBA, DISPLAY		
2	86339350	4	SCREW, SHLDR, #6-32 X .31		
3	86339340	4	DAMPER, SHOCK		
4	86339300	3	SWITCH ASSY, DISPLAY		
5	86336980	1	PANEL, CONTROL SUB-ASSY		



REF	PART NO.	QTY	DESCRIPTION	SERIAL NO. FROM	NOTES
1	86006950	4	SCR, 10-32 X 1/2 PPHMS BLK		
2	86010640	4	WASHER #10 LOCK EXT STAR SS		



REF	PART NO.	QTY	DESCRIPTION	SERIAL NO. FROM	NOTES
1	86349670	1	PANEL, REAR		
2	86339400	1	RF ENGINE, CPU		
3	86341760	1	FOAM, 6MM X 3 X 25 ADHESIVE		
4	86339350	6	SCREW, SHLDR, #6-32 X .31		
5	86339340	6	DAMPER, SHOCK		
6	86333290	1	PCBA, CPU		
7	86279300	1	WASHER, #6 LOCK		
8	86010640	7	WASHER #10 LOCK EXT STAR SS		
9	86006950	10	SCR, 10-32 X 1/2 PPHMS BLK		
10	86273990	1	SCREW 6-32 X 3/8 PPHMS SS		
11	86005700	1	NUT 10-32 W/STAR WASHER PLTD		
12	86356260	1	PLATE, RF ENGINE		

REF	PART NO.	QTY	DESCRIPTION	SERIAL NO. FROM	NOTES
1	86005700	7	NUT, 10-32 HEX W/STAR		
2	86328180	3	BREAKER, 12A, 250VAC, 32VDC		
3	86336890	1	SUB-ASSY, PANEL, REAR		
4	86329940	3	INLET, FLANGED NEMA 5-15P		
5	86327360	3	GFCI, NEMA 5-15, 15A 125V		
6	86005760	12	NUT, 6-32 HEX W/STAR		
7	86273990	1	SCREW 6-32 X 3/8 PPHMS SS		
8	86279300	1	WASHER, #6 LOCK		
9	86010640	4	WASHER #10 LOCK EXT STAR SS		
10	86340840	3	NUT, 11MM X 1.0 PANEL HEX PLTD		
11	86356260	1	PLATE, RF ENGINE		

REF	PART NO.	QTY	DESCRIPTION	SERIAL NO. FROM	NOTES
1	86344850	1	RF ENGINE, CPU		
2	86339350	6	SCREW, SHLDR, #6-32 X .31		
3	86339340	6	DAMPER, SHOCK		
4	86336890	1	SUB-ASSY, PANEL, REAR		
5	86338610	1	CLIP, FLAT CABLE		
6	86336970	1	BOX, REAR PANEL		
7	86336960	1	ASSY, BRKT, BOX, TALL		
8	86336950	1	ASSY, BRKT, BOX, SHORT		
9	86333320	1	PCBA, REAR PWR CNTRL		
10	86333290	1	PCBA, CPU		
11	86274290	4	SCR, 10-32 X 3/8 PPHMS SS		
12	86006950	6	SCR, 10-32 X 1/2 PPHMS BLK		
13	86006620	6	SCR, 6-32 X 1/4 PPHMS SS		
14	86005760	4	NUT, 6-32 HEX W/STAR		
15	86355720	4	RIVET, .156 D X .12 GRIP, SS		
16	86341760	1	FOAM, 6MM X 3 X 25 ADHESIVE		
17	86010640	6	WASHER #10 LOCK EXT STAR SS		
18	86279300	6	WASHER, #6 LOCK		

REF	PART NO.	QTY	DESCRIPTION	SERIAL NO. FROM	NOTES
1	86339490	1	LABEL, PANEL, FRNT		
2	86338390	1	LABEL, CREW CHIEF		
3	86339520	1	LABEL, MENU		
4A	86339500	1	LABEL, PANEL BACK		DELUXE ONLY
4B	86349780	1	LABEL, REAR PANEL BASIC		

REF	PART NO.	PRV NO.	QTY	DESCRIPTION	SERIAL NO. FROM	NOTES
1	86345670	-	16	SPRING, CONTACT		
2	86339650	-	8	SCR, SHT MTL, #10x3.5 LG		
3	86339640	-	8	SCR, SHT MTL, #10x2.0 LG		
4	86339560	-	4	PROBE ASSY		
5	86339440	-	2	SENSOR ASSY, AUX		
6	86339430	-	2	SENSOR ASSY, GREEN		
7	86339420	-	2	SENSOR ASSY, BLUE		
8	86339410	-	2	SENSOR ASSY, RED		
9	86338430	-	1	LABEL, CARRY CASE		
10	86336570	-	1	CASE, BLOW MOLDED		

REF	PART NO.	QTY	DESCRIPTION	SERIAL NO. FROM	NOTES
1	86339530	2	BATTERY, AA, 1.5V ALKALINE		
2A	86339360	1	RF ENGINE, RED		
2B	86344820	1	RF ENGINE, BLUE		
2C	86344830	1	RF ENGINE, GREEN		
2D	86344840	1	RF ENGINE, AUX		
3A	86338350	1	LABEL, HUMIDITY SENSOR, RED		
3B	86337040	1	LABEL, HUMIDITY SENSOR, BLUE		
3C	86338360	1	LABEL, HUMIDITY SENSOR, GREEN		
3D	86339510	1	LABEL, HUMIDITY SENSOR, AUX		
4	86335320	1	COVER, BATT, SENSOR		
5	86335310	1	COVER, BOTTOM, SENSOR		
6	86335300	1	CASE, SENSOR		
7	86332290	1	PCBA, SENSOR		
8	86273790	4	SCR, 6-32 X 3/4 PPHMS SS		
9	86356800	1	FOAM, ADHESIVE BACKED, .5X1X1		

REF	PART NO.	QTY	DESCRIPTION	SERIAL NO. FROM	NOTES
1	86338420	1	LABEL, MOISTURE PROBE		
2	86336060	1	COVER, PROBE		
3	86336050	1	CASE, PROBE		
4	86332300	1	ASSY, PCB & CABLE		
5	86172940	2	SCR,KA40X10,PT OVAL,WIN1412,PL		

REF	PART NO.	QTY	DESCRIPTION	SERIAL NO. FROM	NOTES
1	86339850	1	HARNESS, MAIN POWER ASSY		
2	86339890	1	HARNESS, PCB POWER ASSY		
3	86339860	2	HARNESS, 20 PIN RIBBON CABLE		
4	86339870	1	HARNESS, 10 PIN RIBBON CABLE		
5	86339830	1	HARNESS BACK PANEL CREW CHIEF		DELUXE ONLY
6	86339840	1	HARNESS FRONT PANEL CREW CHIEF		

BLACK	SW
WHITE	WS
RED	RT
GREEN	GN

PART NO.	PRV NO.	DESCRIPTION	SERIAL NO. FROM	NOTES
86345010		CIRCUIT BREAKER 15 AMP 120V		
86327360		GFCI, NEMA 5-20R, 20A 125V		
86336990		INLET, 250VAC, 50A LOCKING		
86329940		INLET, FLANGED NEMA 5-15P		
86339300		SWITCH ASSY, DISPLAY		
86337410		BREAKER, 12A, THERMAL		
86339650		SCR, #10 X 3.5 PPHSM SS		
86339640		SCR, #10 X 2 PPHSM SS		
86345670		SPRING, CONTACT		

REF. NO.	MODEL: SERIAL #
1	N/A

Limited Warranty

Effective on all products Shipped After February 28, 2011

Warranty on the PROCHEM CREW CHIEF and is provided to the original purchaser only.

PROCHEM warrants new machines against defects in material and workmanship under normal use and service to the original purchaser. Any statutory implied warranties, including any warranty of merchantability or fitness for a particular purpose, are expressly limited to the duration of this written warranty. *PROCHEM* will not be liable for any other damages, including but not limited to indirect or special consequential damages arising out of or in connection with the furnishing, performance, use or inability to use the machine. This remedy shall be the exclusive remedy of the buyer. The warranty period is subject to the conditions stated below.

PROCHEM will not reimburse any local or distant transportation, normal maintenance, or diagnostic calls.

Warranty covers:

Polyethylene Molded Components	5 Years Parts & 1 Year Labor
GFCI, Switches & Breakers	1 Year Parts & 1 Year Labor
Power Inlets/Outlets	1 Year Parts & 1 Year Labor
USB plugs & Ethernet connectors	1 Year Parts & 1 Year Labor
Temperature/Humidity Sensors	1 Year Parts & 1 Year Labor

**Product exceptions and Exclusions: Normal wear items and maintenance items including but not limited to o-rings, seals, and gaskets are covered, parts and labor, for 90 days.

This Warranty Shall Not Apply To:

- 1. Any product that has been subject to abuse, misuse, neglect or unauthorized alteration (including the use of incompatible or corrosive chemicals or overloading of capacity).
- 2. Products that have experienced shipping or freight damage.
- 3. Repairs necessary to correct any failure due to improper pre-delivery service and inspection by the selling dealer.
- 4. Time for cleaning units in preparation for repair.
- 5. Any repairs resulting from poor initial service work or improper diagnosis.
- 6. Any design alterations performed by an organization not authorized or specified by PROCHEM.
- 7. A unit which is improperly repaired.
- 8. Damage due to hard water scaling.
- 9. Damage due to exposure to freezing temperature conditions.
- 10. Damage due to electrical components exposed to moisture.

The warranty commences on the purchase date by the original end user from an authorized *PROCHEM* agent, subject to proof of purchase. **The warranty is non transferable and is intended for the original purchaser only**. The Machine Registration Card must be completed and returned within 10 days of the purchase. If proof of purchase cannot be identified, the warranty start date is 90 days after the date of sale to an authorized *PROCHEM* distributor.

If difficulty develops during the warranty period, contact the authorized *PROCHEM* agent from whom the product was purchased. *PROCHEM* may elect to require the return of components to validate a claim. Any defective part to be returned must be shipped **freight prepaid** to an authorized *PROCHEM* Distributor/Service Center or to the *PROCHEM* factory.