PRO-SET® CC800A Series

Programmable Charging Scale

CERTIFIED

Calibrated to standards traceable to the
National Institute of Standard and
Technology (NIST).

CPS® CC800A

SPECIFICATIONS

Working Load Capacity:	0-220lbs (100kg)
Overload Warning At:	220 lbs (100kg)
Operating Temperature:	14°F to 122°F or -10°C to 50°C
Operating and Storage Humidity:	0 to 95% non-condensing
Display Resolution (oz. / gm. Increments):	.25 ounces (10 grams)
Accuracy:	± 0.05% of reading or ± .25 oz. (10 grams) whichever is greater
Operating Power Source:	Two 9V alkaline battery (ANSI 1604AC-IEC 6LR61)
Battery Life:	30 hours of continuous use
Battery Indicator:	Battery symbol with 3 segment Power Level Bar Graph
Maximum Working Pressure:	500 PSIG (34 bar)
Max. Operating Pressure Differential:	485 PSIG
Weight:	8 lbs 8 oz. (3kg 900g)

INTRODUCTION

The CC800A is the state of the art battery operated weighing and charging scale. The CC800A has been designed to be accurate, rugged and reliable over a large weighing span (220 lbs/ 100kg). The CC800A can also charge the high-pressure refrigerant R-410A. The CC800A incorporates a hand held unit with 7 keys and an extra large LCD display for easy viewing. A space saving flex-cord interconnects between the hand held unit and the platform. The platform incorporates a corner adjusted, heavy-duty load cell. The blow molded case houses the 9VDC solenoid valve with 1/4 SAE inlet and outlet ports.

Included with the CC800A: mechanical hook and magnetic pad for the hand held positioning and two 9VDC battery.

KEY FUNCTIONS

• **POWER** - Press once to turn power ON while it is OFF. Press and hold for 1 second to turn power OFF while the unit is ON. This also clears all memory and settings.

• **UNITS** - Press and hold for 1 second to change the current unit (kg to lbs or lbs to kg).
Note: While turning the unit ON, it will display kg or lbs depending on the last display before shutting OFF.

• **TARE** - Press and hold for 1 second to tare while the unit is in the WEIGHING mode. It returns the display to"00.00" in the SETTING mode. The TARE key is not active while the unit is in the HOLD mode. In the SET mode the TARE key will reset the programmed amount to zero.

• **GO/HOLD** - Initiates the CHARGING or RECOVERY modes per the data entered after pushing the SET key. The data entered will determine how long the solenoid valve will remain open. Also while operating in the CHARGE or RECOVERY modes, pressing this key again will put the CC800A in the HOLD mode. Pressing it once again returns to CHARGE or RECOVERY modes.

△ Increase the weight display, one resolution unit (0.25oz or 10g) for every actuation or continuously if held down. A beep sounds when the display reaches its maximum load capacity of 220lbs (100kg).

▽ Decrease the weight display, one resolution unit (0.25oz or 10g) for every actuation or continuously if held down. A beep sounds when the display reaches zero.

• **SET/RESET** - Puts the instrument in the CHARGE or RECOVERY data input mode. Pressing the key again will return the CC800A to the WEIGHING mode. Also pressing this key while in the CHARGE or RECOVERY modes will terminate that mode and put the CC800A back into the WEIGHING mode.

OPERATION

The CC800A can be used for Weighing, Charging and Recovering refrigerants. The following are instructions and information on how to use the CC800A for common refrigeration service functions.

WEIGH MODE

1) Place the Scale on a level, rigid surface.
2) Press POWER key to turn the unit ON, any weight on platform will be set to zero (Tare).
3) Select the desired unit by pressing UNITS key.
4) Place the object that is to be weighed on the platform.
5) Gross weight will display.
6) When weighing has been completed, remove the object, press and hold the POWER key for 1 second to turn the unit OFF.

CHARGE MODE

Figure 1

1) Place the Scale on a level, rigid surface.
2) Press POWER key to turn the unit ON, it zeroes out any weight on platform.
3) Select the desired unit by pressing UNITS key.
4) Place cylinder on scale and connect scale as shown in Figure 1.
5) Open the cylinder liquid valve and all other valves that are in the charging pathway.
6) Press the SET key and the display will show:

   READY   READY
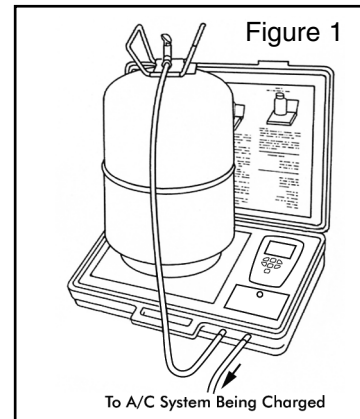   000 lbs   "000 kg
   00.00 oz "   OR   0000 g ".

   Note: READY appears on the top right hand corner of the screen.
   Press and hold down the △ or ▽ keys to program the charge amount.

To A/C System Being Charged

7) Press the GO key to begin the CHARGE. While in CHARGE, pressing the **RESET** key will stop and cancel the CHARGING process and go back to normal mode by displaying the net weight. The **HOLD** key may be depressed at any time during the CHARGE or RECOVERY mode. When this key is depressed, the solenoid valve will close, and display will read the net weight. The amount of refrigerant transferred at the time the **HOLD** key is activated is stored in the memory. While in **HOLD** mode, any adjustments such as replacing a container, or tightening loose connections may be done. When the adjustments are complete, the program may be resumed at the point it was interrupted by depressing the **GO** key; or press **SET** once to adjust the desired weight if the user wants to change the setting and press **GO** again to resume.

8) The refrigerant is now being dispensed by the opening of an electro-mechanical solenoid valve. The unit will now proceed to either item "A" or "B".

A. When the programmed charge amount is reached, the CC800A will sound a continuous beep and the display will show the amount that has been charged ("-" sign on the display). Set up another charging process by pressing **SET/RESET** twice and follow the instruction in STEP 6; note that the previous setting amount will show.

B. If the refrigerant is no longer being dispensed after 3 minutes*, but the programmed charge amount has not been met, the CC800A will sound an intermittent beep. The user will need to push the HOLD key and exchange the empty virgin tank with a full one (or correct flow path restriction). Push the GO key to resume charging.

   Note: Watch Dog timer turn ON right after pressing GO; after 3 minutes without a weight change of 1 oz. (30 grams) the unit begins to beep intermittently, at which point the user may press HOLD to review the problem.

When CHARGE mode has been completed, remove the cylinder from the platform, press and hold the POWER key for 1 second to turn the unit OFF.

RECOVERY

Figure 2

1) Place the Scale on a level, rigid surface.
2) Press POWER key to turn the unit ON,
   it zeroes out any weight on platform.
3) Select the desired unit by pressing UNITS key.
4) Connect scale as shown in Figure 1. Do not place cylinder on platform at this time.
5) Press the SET key and the display will show:

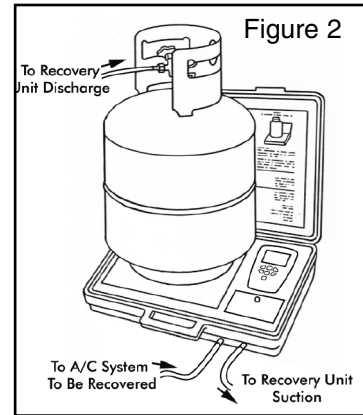 | READY | READY |
   |-------|-------|
   | 000 lbs | 000 kg |
   | 00.00 oz " OR | 0000 g". |

   Note: READY appears on the top right hand corner of the screen.
   Press and hold down the △ or ▽ keys to program
   the cylinders manufacturer,s maximum fill weight plus the empty tank. This can be calculated as follows: 80%WC+TW WC=Water Weight Capacity of Cylinder, TW=Empty tank weight
6) Press the GO key to open the solenoid valve. This allows the flow of refrigerant to a refrigerant recovery unit.
7) Now place the cylinder on the scale platform as shown in Figure 2. **Caution: It is very important not to place the cylinder on the platform before this step. Failure to do so could lead to overfilling a refrigerant cylinder.**
   Danger- the recovery cylinder used contains liquid refrigerant. Overfilling of the recovery tank may cause a violent explosion resulting in severe injury or even death.
8) Turn on the refrigerant recovery unit. Follow the recovery unit,s instructions.
9) If the recovery process finishes before the weight exceeds the programmed maximum tank weight, push the SET key to return to stop the RECOVERY mode and return to the Weighing mode. Reweigh the tank to confirm the total weight of the cylinder does not exceed the maximum allowable amount.
10) If during the recovery process the gross weight exceeds the programmed maximum tank weight, the solenoid valve will close preventing the additional filling of the refrigerant cylinder. Exchange the cylinder with an empty one and proceed back to STEP 4.

When CHARGE mode has been completed, remove the cylinder from the platform, press and hold the POWER key for 1 second to turn the unit OFF.

OTHER FEATURES

Battery Low Indications:
-Scale Electronics Battery
The battery indicator is shown on the LCD as a battery shape with a 3 segment Power Level Bar Graph:

100% (3 segments) of Bar Graph-	Battery at 100% to 80%
67% (2 segments) of Bar Graph-	Battery at 80% to 60%
33% (1 segment) of Bar Graph-	Battery at 60% to 20%
0% (0 segments) of Bar Graph-	Battery at 20% to 5%
LO CELL displayed on LCD-	Battery below 5%, replace

Note: If the unit shuts off on low battery, the unit will revert to Auto Shut Off feature.

-Solenoid Valve Battery
  The CC800A has a separate 9 VDC battery for the solenoid valve. It is located in the lower battery compartment. Please note that the LCD low battery indicator does not detect battery levels for this battery. If the Solenoid Valve battery is low, the CC800A will briefly sound an alarm after pushing the GO key while in the RECOVER or CHARGE mode. Under a low battery condition, the solenoid valve will only operate with up to 350-PSI differential. A fresh valve battery will operate the solenoid valve with up to 485-PSI pressure difference across its ports.

Auto Tare and Overload Indicator feature:
The unit will tare off any weight less than 220lbs (100kg) while powering up. If the weight is more than its capacity, the unit will display "OL" to indicate OVERLOAD. The "OL" will also display when the GROSS weight is more than its capacity.

For example: The unit starts with 200 pounds on its platform-display reads 0; placing 25 pounds makes the unit display OL.

Auto Shut Off and Smart Awake features:

Auto Shut Off - The unit will automatically shut off after 10 minutes if the weight on its platform does not change by more than 1oz (30g) in that period of time.

Note: Auto Shut Off is disabled in the RECOVERY and CHARGE modes.

Smart Awake - When Auto Shut-Off feature is active, the last weight reading is stored in memory. Next time scale is activated, scale will resume operation at same point as when Shut-Off occured.

CPS®

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