JAVAC PCS-2 and
PCS-2A(Automotive)
(110/240V/60/50Hz)
Operating Instructions

* READ THIS MANUAL BEFORE OPERATING THE MACHINE *

PORTABLE CHARGE STATION
Thank you for purchasing a JAVAC PCS-2 Portable Charging Station!

The PCS-2 combines the benefits of a 2 stage vacuum pump, multi gas refrigerant manifold set and an 80kg refrigeration electronic scale in a lightweight, durable case.

Safety First!

⚠️ When found on the machine, this international symbol is intended to alert the user to the presence of important operating, safety and maintenance (servicing) instructions in this Manual. As used in the Manual, it is intended to draw your attention to critical items.

It is important to read this entire Manual and be familiar with its contents before using the machine!

Responsibility:

Only a Qualified Technician who has been properly trained and certified in the care and use of such equipment should operate the PSC-2 and PSC-2A. Use of this equipment by unqualified personnel is potentially dangerous and illegal.
## JAVAC PCS-2 and PCS-2A (Automotive)

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Service Return .............................................. Refer to Back Cover
1.0 SAFETY PRECAUTIONS:

⚠️ Only a Qualified Technician who has been properly trained and certified in the care and use of such equipment should operate the PSC-2 and PSC-2A. Use of this equipment by unqualified personnel is potentially dangerous and illegal.

⚠️ READ THIS MANUAL and become familiar with the specifications and operation of this machine prior to use.

⚠️ WEAR APPROPRIATE SAFETY PROTECTION APPAREL such as gloves, eye protection and foot protection when working on refrigeration systems.

⚠️ REFRIGERANT VAPOUR CAN BE HAZARDOUS AND IT’S BY PRODUCTS CAN BE LETHAL — work only in well ventilated areas. When working indoors, ensure there is adequate airflow in the workspace and install a separate circulation fan if necessary. DO NOT WORK IN AN ENCLOSED AREA without special safety equipment as appropriate for the conditions.

KNOW THE PROPER SAFETY AND HANDLING REQUIREMENTS for the Refrigerant being charged by reviewing the Material Safety Data Sheets (MSDS) and the Temperature - Vapour Pressure information.

PERFORM LEAK DETECTION in accordance with recommended practice only. For best results use only a refrigerant detector such as the JAVAC D-TEK or TEK-Mate. NEVER USE OXYGEN for this process as it can become an explosive mixture in the presence of oil and pressure.

⚠️ THE PCS-2 UNITS HAVE BEEN DESIGNED TO WORK WITH CFC, HFC AND HCFC REFRIGERANTS ONLY. Use of hydrocarbon and ammonia refrigerants will void warranty and may cause harm or death.

⚠️ FLAMMABLE ENVIRONMENTS ARE DANGEROUS
Do not use this equipment in the vicinity of spilled or open containers of petrol or any other flammable liquid.
Do not use this equipment in an explosive classified zone.

⚠️ USE CAUTION WHEN OPERATING OUTDOORS. Be certain that the power cord and the placement of the machine is in a safe, clean and dry location.

⚠️ CAUTION - EXERCISE CARE WHEN MOVING the equipment to prevent the risk of injury.
2.0 SPECIFICATIONS, FEATURES AND WARRANTY

JAVAC PCS-2 and PCS-2A (Automotive)

- Size (with handle): W300mm x H430mm x D260mm
- Weight: 13kg
- Scale capacity: 80kg
- Scale resolution: 10gm
- Scale power: 9V DC battery
- Vacuum pump power: 240VAC
- Vacuum pump oil: Mineral oil Javac part no. VC2063
- Protection: IP 20
- R410a adapters (PCS-2 model only)*
- Automotive R134a couplers (PCS-2A model only)

* R410a Adaptors are only to be used on PCS-2, not on any other manifold or hose fitting

FEATURES:

- Handle with locking mechanism for safe and easy transport
- Fan cooled vacuum pump for greater reliability
- Removable scale platform for use with larger diameter bottles
- Removable scale head, lead and platform for independent use
- Integrated fuse and thermal protection in vacuum pump
- Integrated hose carrier
- Easy access to oil box on vacuum pump for speedy oil changes
- Battery operated scale set. Unit does not require mains power if charging is to be the only operation
WARRANTY:

JAVAC warrants your PCS-2 to be free from defects of materials or workmanship for one year from the date of purchase. JAVAC does not warrant any machine that has been subject to misuse, negligence, or accident, or has been repaired or altered by anyone other than JAVAC. The PCS-2 is designed and manufactured for intermittent operation. Use of the vacuum pump for longer than 2 hours at any time may void warranty.

The manufacturer warrants the PCS-2 for a period of one year. To keep this WARRANTY in force it is required that the unit is used with compatible refrigerants and the vacuum pump oil be changed regularly with the correct type and grade. Operating the unit outside its design parameters will void warranty.

JAVAC’s liability is limited to machines returned to JAVAC, return transportation prepaid, not later than thirty (30) days after the warranty period expires, and which JAVAC judges to have malfunctioned because of defective materials or workmanship. JAVAC’s liability is limited to, at its option, repairing or replacing the defective machine or part.

This WARRANTY is in lieu of all other warranties, express or implied, whether of MERCHANTABILITY or of FITNESS FOR A PARTICULAR PURPOSE or otherwise. All such other warranties are expressly disclaimed. JAVAC practices continuous product research and improvement. We reserve the right to change specifications and product design without notice. Such revisions do not entitle the buyer to corresponding changes, improvements, additions or replacements for previously purchased equipment.

JAVAC shall have no liability in excess of the price paid to JAVAC for the machine plus return transportation charges prepaid. JAVAC shall have no liability for any incidental or consequential damages. All such liabilities are EXCLUDED.
3.0 SETUP AND OPERATION

Evacuation:

- Close all valves on PCS-2 manifold assembly.
- Connect suction and discharge hose (if discharge connection exists) to the refrigeration system.
- Ensure fittings are firm and that there is no pressure in the system.
- Connect PCS-2 to mains power.
- Check oil level of vacuum pump. Fill if necessary.
- Switch on vacuum pump and let sit for a minimum of 3 minutes.
- Open desired valves so as to open vacuum circuit to system.
- Once desired vacuum has been obtained close off desired valves and check refrigeration system for vacuum stability.
- Turn off vacuum pump.

⚠️ Never switch off the vacuum pump before closing the vacuum valve on manifold first. Doing so will result in vacuum pump oil being syphoned back into refrigeration system. In the event of power failure or overload condition check vacuum pump for adequate oil quantity. Fill if necessary. Carefully monitor follow-up evacuation as some oil may return to vacuum pump. Use a ‘catch pot’ if possible to catch excess oil.

Note: Vacuum pump may produce oil mist vapour while it is pumping down a system. This misting is normal and should reduce once deeper vacuum is obtained. Do not inhale oil vapour.
CHARGING:

- Lower the scale platform by depressing the locking button located near the pivot point of the handle, right side of unit. Pull handle forward while holding the scale platform. Lower platform by hand so it sits horizontal. See pictures below.
CHARGING (cont)

- If using a large bottle the scale platform can be removed for convenience. First lower the scale platform to the horizontal position, pull the scale platform away from the unit, now raise the platform to the vertical position and pull away from the unit. Picture below shows platform removed from unit.

- Switch scale on. Wait for it to initialise then press ‘zero’
- Place gas bottle on platform and wait a minute until it has settled. Press ‘Tare’. The scale is now ready for charging.
- Connect the charge hose (yellow) to the bottle. Ensure all connections are tight and valves are closed.
- Evacuate air from lines using the vacuum pump.
- Close vacuum valve and open bottle tap.
- Open manifold charge valve(s) as desired to obtain correct charge amount.

Note: As the scale is powered by a 9V battery located in the back of the controller, mains power is not required for charging. If power is not available for charging purposes the lines may be purged of air with refrigerant. Where possible evacuate line so as to limit refrigerant loss to atmosphere.

Note: the scale unit has an auto shut down timer built in. The scale will automatically switch off 15 minutes after it has been turned on.

⚠️ Do not leave refrigerant in manifold or lines once charging is complete. Care should be taken so as to prevent any refrigerant entering the vacuum pump.
4.0 STORAGE:

- When the process has been completed, carefully coil the power cord and refrigerant hoses ensuring that no dirt or foreign material is left in the ends or on the connectors.

- Place the PCS-2 in the service vehicle in its upright position. Provide reasonable care to place the unit where it will not be subjected to accidental damage due to shifting items during transit.

- The unit can be stored safely in temperatures of 0\(^\circ\)C - 50\(^\circ\)C and humidity levels up to 95% RH. When stored in conditions that are severe, the unit may need to stabilize in the range 10\(^\circ\)C - 40\(^\circ\)C before it will offer optimum operating performance. For best results, store the unit in an environmentally controlled area when not in use.

- Always relieve any pressure in the hoses/manifold before storage. Do not place hoses/manifold under vacuum for storage. Doing so will result in the vacuum pump oil being syphoned from the pump!

MAINTENANCE

- Your PCS-2 will provide many years of reliable service if it is properly maintained. The actual maintenance requirements are minimal but important.

- Keep the unit clean by wiping it down with a damp cloth to remove dirt, oils, etc. prior to storage for the day. Standard household detergent or isopropyl alcohol may be used if the unit is particularly dirty; in all cases, exercise care to prevent liquids from entering the unit. Petrol and other solvents are to be avoided as they can damage the plastic enclosure and are hazardous.
5.0 TROUBLESHOOTING

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<tr>
<th>PROBLEM</th>
<th>CAUSE</th>
<th>ACTION</th>
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<tr>
<td>Scale will not operate</td>
<td>• Flat battery</td>
<td>• Replace battery</td>
</tr>
<tr>
<td></td>
<td>• Faulty scale</td>
<td>• Return to JAVAC for repair or replacement</td>
</tr>
<tr>
<td>Vacuum pump will not start or has stopped</td>
<td>• Pump has seized</td>
<td>• Return to JAVAC for repair or replacement</td>
</tr>
<tr>
<td></td>
<td>• Pump has overheated</td>
<td>• Let pump cool down until thermal overload resets. Ensure adequate airflow around unit.</td>
</tr>
<tr>
<td></td>
<td>• Internal fuse in pump has blown</td>
<td>• Return to JAVAC for repair</td>
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6.0 SERVICE

⚠️ DO NOT CHANGE any of these components as the safety of the machine could be compromised. All service work must be performed at a JAVAC approved facility in order to maintain the safety rating and the Warranty (if applicable).

Technical assistance and service information can be obtained by contacting:

JAVAC UK +44 (0) 1642 232 880
Or the Organisation where you purchased your PCS-2

The vacuum pump oil used for the PCS-2 is specific and has been certified as safe and reliable to use. Do not use generic vacuum pump oil as its viscosity index is too high. Replace with Javac Shark/Minivac oil part no. VC2063

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