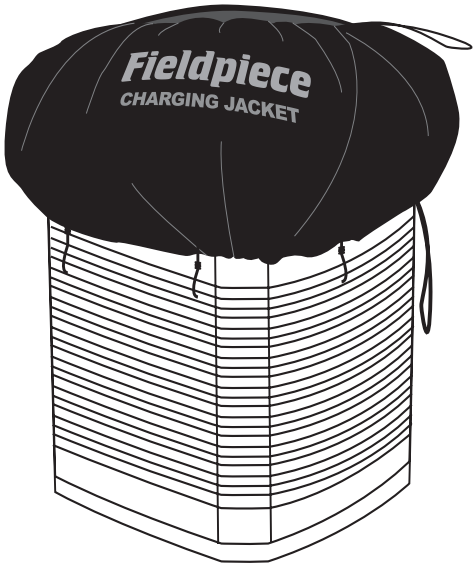
Fieldpiece

Charging Jacket

OPERATOR'S MANUAL

Model S365



⚠ WARNINGS ⚠

- ⚠ Only use on TXV systems using either R410A or R22.
- ⚠ Ensure the system is powered OFF before installing the Charging Jacket.
- ⚠ Severe injury can occur if the fan turns ON before hooks are securely fastened towards the top of the condenser.
- ⚠ Wear eye protection.
- ⚠ Only use when the ambient dry bulb temperature is between 37°F and 70°F (3°C to 21°C.)
- ⚠ Using outside of this range can damage the air conditioner/heat pump.
- ⚠ Head pressure of the system needs to remain within the following safe ranges to avoid damage to the compressor or other equipment:

  R22: 55psig to 300psig

  R410A: 97psig to 500psig

  Stop the system if the head pressure approaches these limits.

Description

HVACR technicians typically cannot charge a cooling system in cold weather. The cold temperature removes too much heat from the condenser coils.

The Charging Jacket from Fieldpiece Instruments allow you to charge a TXV system when ambient temperatures are between 70°F and 37°F.

It works by restricting the fan outlet of the condenser, in effect raising the temperature within the condsenser. This is a more effective method than blocking the incoming air to the condenser coil .

Look professional and increase your amount of possible jobs. No more trash bags or cardboard! Do it the right way.

Maintenance

Hand wash with cold water and mild detergent if needed and let air dry. Do not machine wash or dry.

How to Use

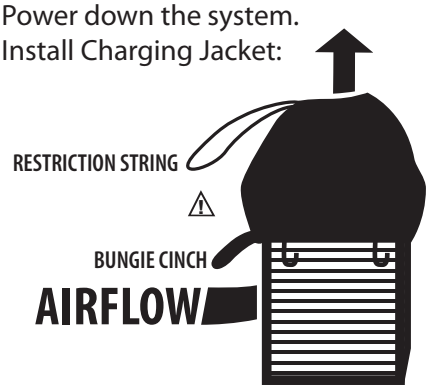
⚠ The Winter Charge Setup may only be used for equipment for which the air conditioning manufacturers approve the use of the Winter Charge Setup. Refer to (California's) Energy Commissions website for the list of split system air condition units approved by the manufacturers to use the Winter Charge Setup. In addition to the requirements of this document, manufacturers may issue additional instructions/clarification for the equipment and procedures to be used to conduct the Winter Charge Setup. These additional instruction/clarifications are also available on the (California) Energy Commission website.

-- California Title 24 2013 Edition

Setup

1 Power down the system.

2 Install Charging Jacket:



A. Tighten Bungie Cinch around top of condenser fan cage making sure not to block the airflow inlet (sides.)

B. Fasten hooks securely so that the the fan does not eject the Charging Jacket when the system starts.

C. Always start with the top open, then tighten the restriction string to restrict airflow as needed.

3 Make sure people and animals are clear of the condenser, then start the system. *If using on a heat pump, set it to cooling mode.*

4 Carefully adjust the restriction of the Charging Jacket until the ***difference*** between the high side and the low side pressures is between 160psi and 220psi (R410A) or 100psi and 145psi (R22).

Restricting airflow increases the pressure difference.

Check Refrigerant Charge

5 Once the system is within the pressure difference range, allow the system to stabilize for 15 minutes.

6 Calculate Actual Subcooling. ($T_{condenser,\ saturation} - T_{liquid\ line}$)

If your subcooling is more than three degrees less than the target subcooling, then you are undercharged. (continued)

If your subcooling is more than one degree over the target subcooling, you are overcharged.

EXAMPLES

Target subcooling = 12°F and your measured subcooling is 10°F. You are OK.

Target subcooling = 12°F and your measured subcooling is 14°F. You are overcharged.

Target subcooling = 12°F and your measured subcooling is 7°F. You are undercharged.

Please use manufacturer's target subcooling for comparison.

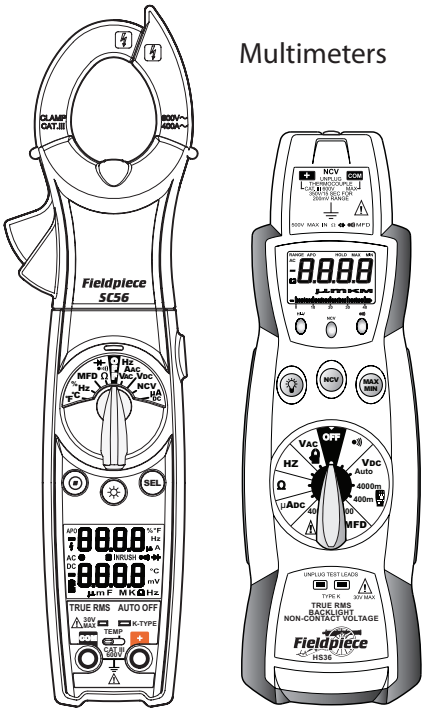
Check TXV Device

7 Calculate Actual Superheat ($T_{suction} - T_{evaporator,saturation}$)

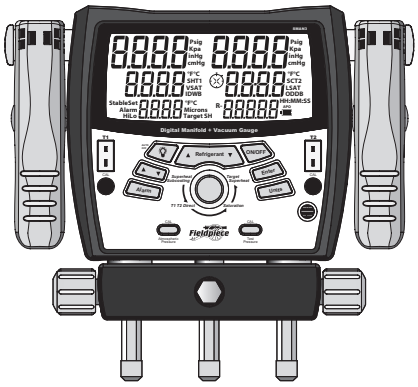
8 If TXV manufacturer's data is available, determine the superheat range recommended by the manufacturer. (continued)

9 If there is no manufacturer's data available then a superheat between 4° and 25°F is acceptable for a TXV. If the superheat is outside this range, and the charge is correctly adjusted by the subcooling method, there may be a problem with the TXV.

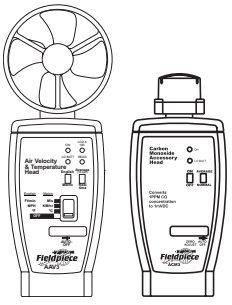
More Products from Fieldpiece



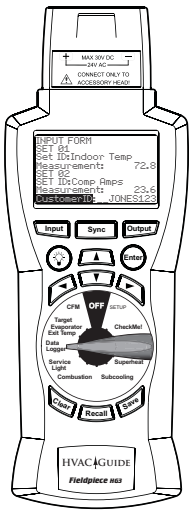
Multimeters



Digital Refrigerant Manifolds



Accessory Heads



System Analyzer

Limited Warranty

In the USA, this product is warranted against defects in material or workmanship for one year from date of purchase. Fieldpiece will replace or repair the defective unit, at its option, subject to verification of the defect.

This warranty does not apply to defects resulting from abuse, neglect, accident, unauthorized repair, alteration, or unreasonable use of the instrument.

Any implied warranties arising from the sale of a Fieldpiece product, including but not limited to implied warranties of merchantability and fitness for a particular purpose, are limited to the above. Fieldpiece shall not be liable for loss of use of the instrument or other incidental or consequential damages, expenses, or economic loss, or for any claim of such damage, expenses, or economic loss.

State laws vary. The above limitations or exclusions may not apply to you.

For Service

In the USA, call Fieldpiece Instruments for one-price-fix-all out of warranty service pricing. Send check or money order for the amount quoted. Send the product freight prepaid to Fieldpiece Instruments. Send proof of date and location of purchase for in-warranty service. The product will be repaired or replaced, at the option of Fieldpiece, and returned via least cost transportation.

Fieldpiece
Designed in USA
MADE IN TAIWAN