WINDCUBE v2 RP-20 Fuel Cell Kit Assembly

The following set of instructions describes how to assemble the RP-20 Fuel Cell stand and wiring for remote powering a V2 WINDCUBE®_v2. This kit includes the RP-20 500W solid oxide fuel cell system manufactured by Acumentrics, a field stand, quick-connect propane fittings for up to 6 propane tanks and wiring to connect to a V2 WINDCUBE.

WARNING: The RP-20 Fuel Cell uses propane to generate electricity. Read the RP-20 manual completely before attempting to power up and install this system.

Included components:

- RP-20 Solid Oxide Fuel Cell Generator
- Fuel cell bundle
- 6-tank propane manifold
- System stand
- Jack handle for leveling legs
- Wiring harness for WINDCUBE®_v2
- 4 Spikes

Equipment Required:

1) Two 12V Deep Cycle Batteries
2) #2 Philips screwdriver
3) 1” Pliers
4) Adjustable wrench
5) Hammer
6) *Additional tools required for fuel cell initialization:* || **See RP-20 Manual**

Procedure:

Part 1: Pre-installation site considerations

- The RP-20 Fuel Cell weighs approximately 350 lbs (160 kg). When choosing a site be sure it allows for the access of a vehicle suitable to carry in the RP-20 as you most likely will be unable to hand-carry the system.

- The RP-20's stand is equipped with four adjustable legs that can be adjusted to accommodate up to 6" of variability in its footprint

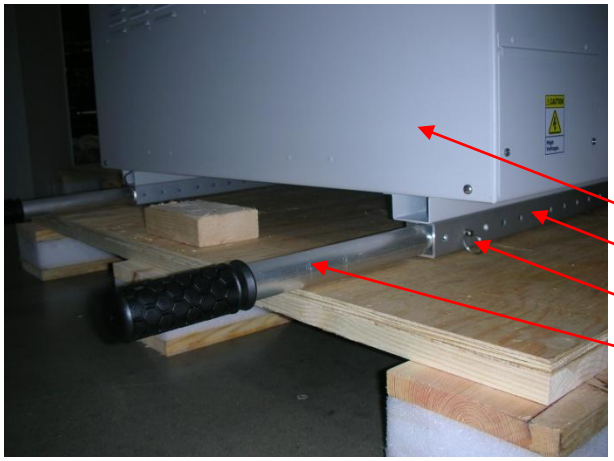
- Check soil conditions for stability. Consider how terrain may be affected by things like rain events and ground thaw. If necessary, use boards or a pallet to stabilize stand.

Part 2: Unpacking Stand and Fuel Cell

1. Stand: cut banding and remove four screws attaching feet to pallet with Philips screw driver.
2. RP-20: cut banding and remove shrink wrap.
3. **NOTE: Be sure to save the RP-20's pallet – which is fitted with shock absorbing foam – for future transport**.

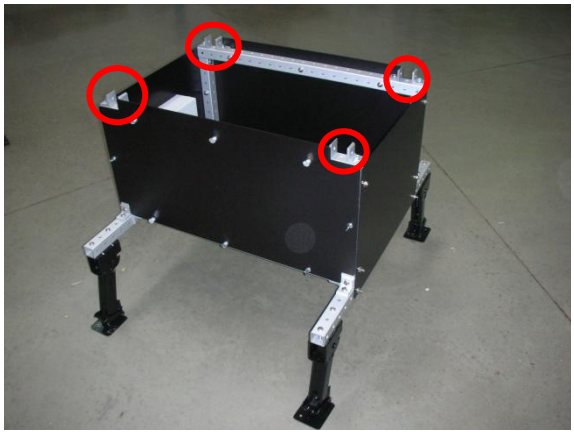
Part 3: Mount RP-20

1. Position stand so that all four legs are touching the ground and stable. If necessary, adjust the leg heights to level and balance the stand with the included Jack handle.
2. Once stand is level, use a hammer to drive 4 included spikes through holes in stand feet and into the ground.
3. Attach handles to RP-20
    a. Slide handles into square rails in bottom of RP-20
    b. Secure handle using quick release pin in **second pin-hole in rail**; this is important because the first hole must be clear to secure RP-20 to stand



- RP-20
- RP-20 Rail
- Quick Release Pin
- Lifting Handle

4. Lift RP-20 onto stand
    a. **CAUTION**: RP-20 is heavy; lift carefully. While two adults may be able to lift the RP-20 onto the stand it is safer to perform this step with four adults or a forklift with an experienced operator
    b. RP-20 rails drop into four mounts on top of stand (red circles)

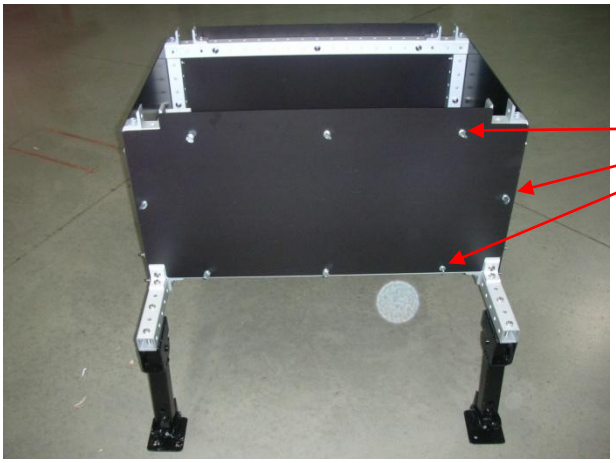


    c. Remove the quick release pins and handles and reinstall the pins in the four mounts so the RP-20 is locked to the stand.
    d. Check that stand is still level; adjust if necessary

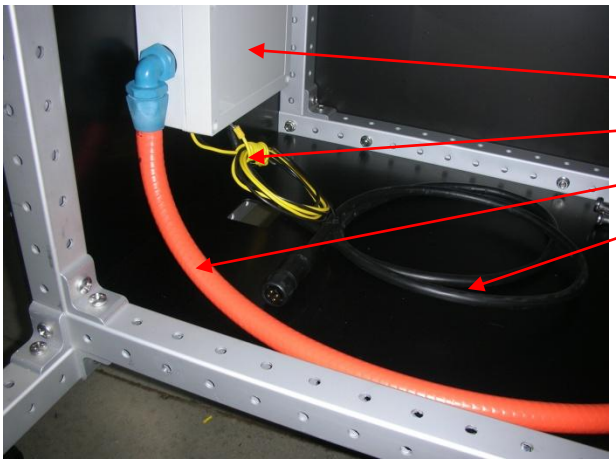
Part 4: Install batteries and wiring harness

1.

a. Unscrew 8 thumb screws from side of fuel cell stand so the sheet metal door can be removed.



b. Place batteries inside fuel cell stand enclosure.

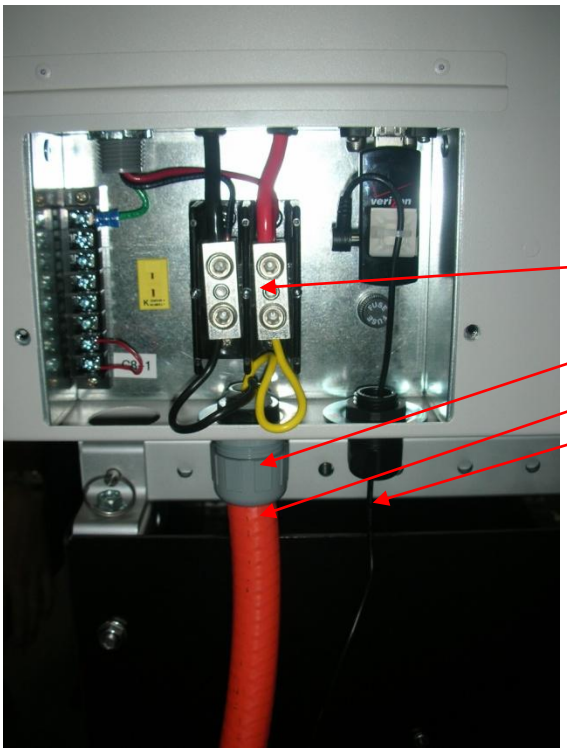


c. Run conduit and WINDCUBE®_v2 power cable through square hole in the sheet metal floor of the fuel cell stand.

d. Attach conduit to conduit connector on fuel cell and attach wire leads to the power output terminals on the fuel cell (yellow to positive and black to negative).

e. Attach the provided jumper wire to one of the positive and negative terminals of each battery (the jumper wire is yellow and about 1.5 feet long)

f. Attach battery leads to batteries (black to negative and yellow to positive)



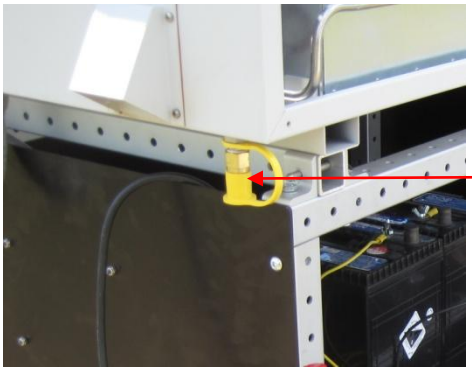
- Power Output Terminals
- Conduit Connector
- Conduit
- Antenna Cable

Propane Manifold Assembly

1. Attach the six 100 gallon propane tanks to manifold using adjustable wrench. Apply bubble mix to all six connections and watch for bubbles. Bubbles indicate a leak; if they are present tighten the connection using the adjustable wrench till no more bubbles are being formed.

- Apply bubble mix here

2. Attach the quick connect fitting on the manifold to the connector on the fuel cell.



- Quick Connect Propane Fitting on Fuel Cell

Fuel Cell Startup

1. Refer to fuel cell manual for startup instructions.

System Notes

1. Never drag stand; always lift to move.
2. Avoid making large height adjustments to the feet of the stand while the R-P20 is mounted on the stand. If large adjustments are necessary to level the unit, remove the fuel cell, adjust the legs as needed and place the fuel fell back on the stand.