

RSA-G2 Solids Analyzer



Site Preparation Guide

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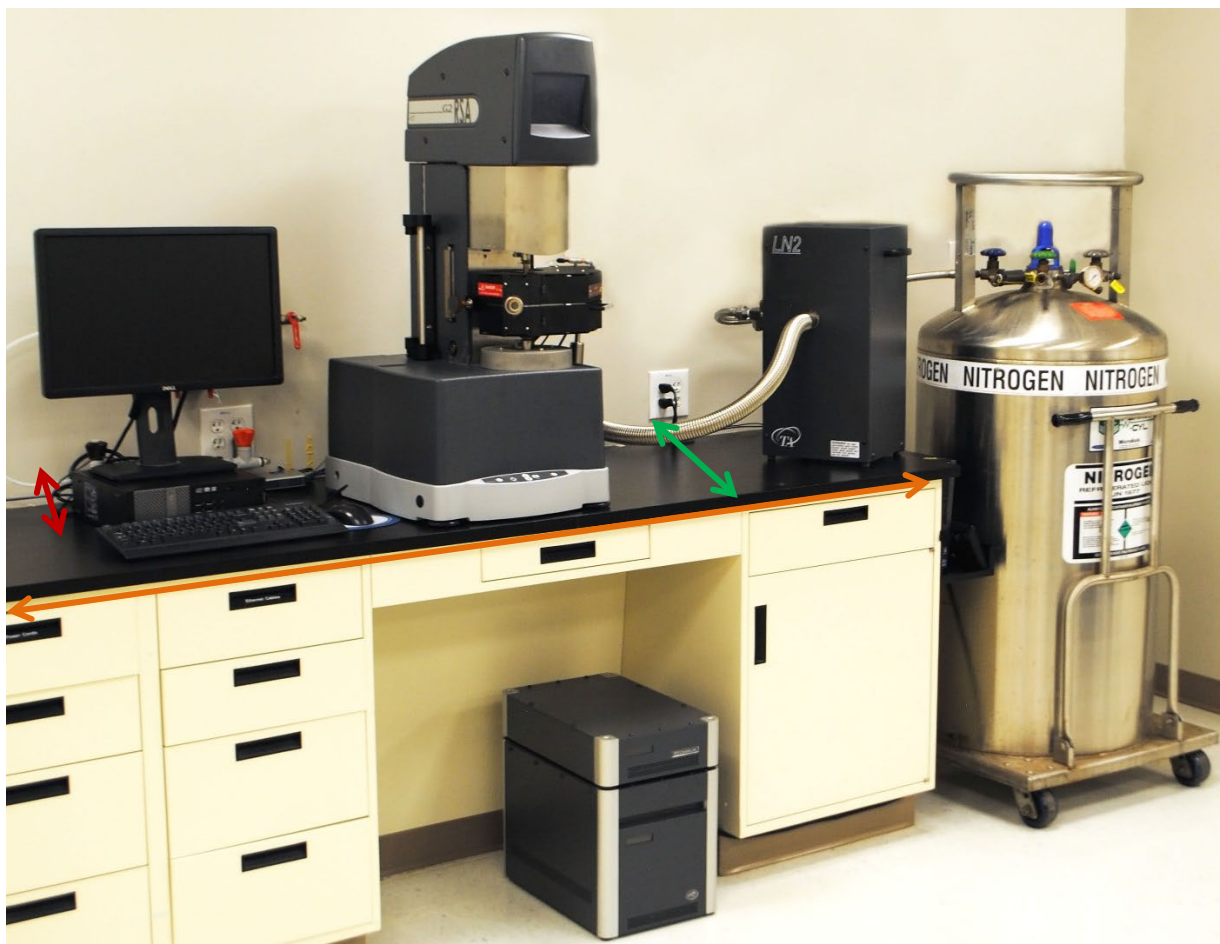
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Ideal Setup



IDEAL PLACEMENT AND BENCH MEASUREMENTS

Select a location with adequate floor space and a rigid laboratory bench that is level and is in a vibration-free environment. For optimal performance it is recommended that the instrument be placed by itself on a separate marble table.



Bench width: 2.1 m (7 ft)

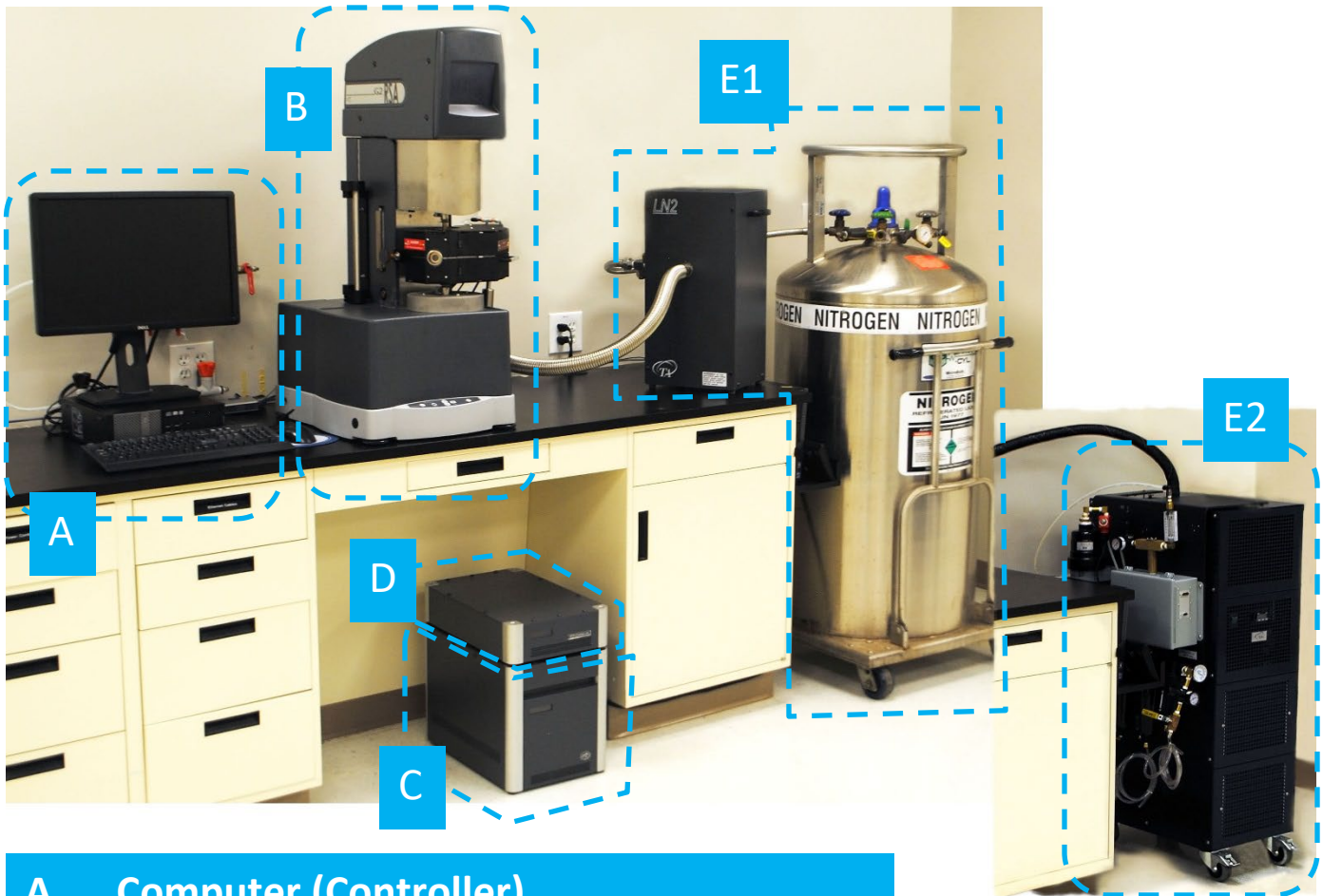
Bench depth: 76 cm (30 in) min.

Distance from the wall: 20 cm (8 in) min.

System Components



MAIN SYSTEM COMPONENTS



- A. Computer (Controller)
- B. Instrument
- C. Power Supply Enclosure
- D. Forced Convection Oven Enclosure
- E1. Liquid Nitrogen Controller & LN₂ Tank
- OR
- E2. Air Cooling System

Instrument Measurements



MAIN INSTRUMENT



Height: 104 cm (39.37 in)

Width: 46 cm (18 in)

Depth: 56 cm (22 in)

Weight: 87.5 kg (193 lbs)



POWER SUPPLY ENCLOSURE

Height: 34 cm (13.5 in)

Width: 32 cm (12.5 in)

Depth: 48 cm (19 in)



FORCED CONVECTION OVEN ENCLOSURE

Height: 11 cm (4.5 in)

Width: 32 cm (12.5 in)

Depth: 48 cm (19 in)

Utility Requirements



POWER

- 180–264 VAC, 47–63 Hz, and single phase
- Dedicated 20 A outlet. US sites require an L6-20 outlet.



NEMA L6-20 plug



GAS

Air Supply:	
Conditions	• Must be dry • Must be free from oil (0.01 mg/m³) and dirt (5 µm)
Dew Point*	-10°C or better
Pressure	100 psig (0.7 MPa)
Flow Rate	9.5 scfm (270 L/min)  If using N ₂ gas as FCO heater source, air flow rate is 6 scfm (170 L/min). Separate N ₂ gas source must be 70–125 psig and able to sustain a flow rate of 3.5 scfm (100 L/min)

*TA Instruments recommends purchasing the air dryer to account for the necessary dew point and air quality.

Computer Requirements



HARDWARE REQUIREMENTS

Description	Requirement
Processor	• Intel® Core™ i5 8400 or better • 2.8 GHz with 9 MB L2 cache
Memory	≥ 16 GB RAM DDR4 2666 SDRAM
Hard drive	≥ 80 GB free space • 1.5 GB required for Full version of TRIOS • 675 MB required for Lite version of TRIOS (without Online help)
DVD (optional)	≥ 48x CD-ROM or DVD (optional for installing TRIOS)
Screen resolution	Required: 1280 x 1024 with 24-bit colors Recommended: 1920 x 1080 with 24-bit colors
Graphic memory	128 MB
Screen (LCD) size	Required: 19" or greater Recommended: 24" wide screen
USB II port	Required with FCO Camera option.
Network card	Ethernet 10Base T/100 Base TX
Additional Ethernet card(s)	Necessary if connecting the instrument directly and access is needed to the Corporate LAN.
Ethernet Cabling	10/100BaseTX Ethernet hub/switch. Must be EIA-568B Category 5+ UTP
Client-Server Protocol	DHCP
Image Capture (Camera Option)	DirectX 9.0 or higher
TCP/IP ports used	• TCP: 20010, 20011 • UDP: 5050, 5056

Computer Requirements



SOFTWARE REQUIREMENTS

Item	TRIOS
Operating System	• Windows 10 or 11 Enterprise, Ultimate, & Professional • Home version not supported • ≥ 64-bit version
Internet	Internet connection is strongly recommended for ongoing support after installation
Service Pack	Microsoft Operating System Service Pack
Updates	Windows Operating System and associated Microsoft updates must be up to date. Windows 10 must be 1709 or later.
Network	<i>A second network card for corporate connection is recommended.</i> <i>TA Instruments is not responsible for resolving issues associated with connections to your corporate network.</i>
Conflicts	<i>TA Instruments is not responsible for resolving hardware/software conflicts created by the addition of third-party hardware or software to the computer.</i>

Accessories



ACS-2 MEASUREMENTS



Height: 88.5 cm (35 in)

Width: 67 cm (26.5 in)

Depth: 56 cm (22 in)

Weight: 96 kg (211 lbs) WITHOUT Chiller Panel

Weight: 112 kg (247 lbs) WITH Chiller Panel



ACS-3 MEASUREMENTS

Height: 112 cm (44 in)

Width: 67 cm (26.5 in)

Depth: 56 cm (22 in)

Weight: 121 kg (267 lbs) WITHOUT Chiller Panel

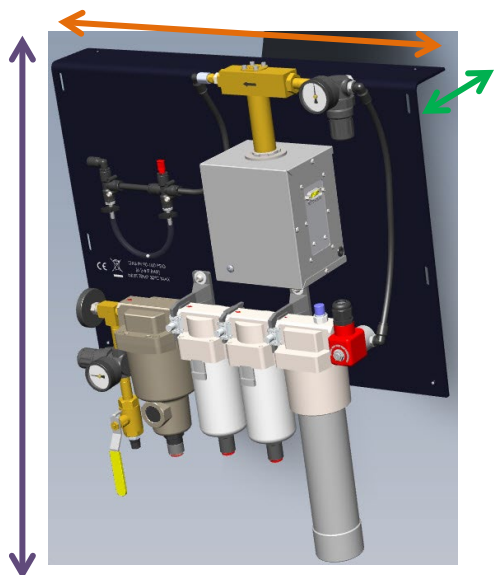
Weight: 137 kg (302 lbs) WITH Chiller Panel



Accessories



FCO CHILLER PANEL MEASUREMENTS – SMC MODEL



Height: 68.6 cm (27 in)

Width: 54.6 cm (21.5 in)

Depth: 20.3 cm (8 in)

Weight: 8.2 kg (18 lbs)



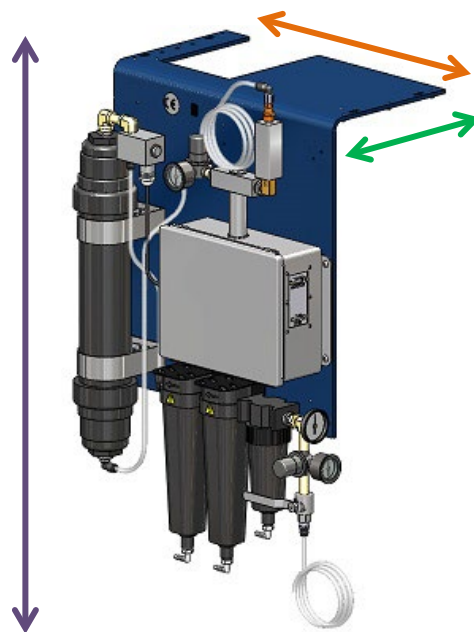
FCO CHILLER PANEL MEASUREMENTS – PARKER MODEL (DISCONTINUED)

Height: 86.4 cm (34 in)

Width: 48.3 cm (19 in)

Depth: 38.1 cm (15 in)

Weight: 15.8 kg (35 lbs)



Accessories



AIR COOLING SYSTEM REQUIREMENTS

Requirements



- 50 Hz: 207–252 VAC (refer to the serial number plate on the rear of the unit. The ACS is line frequency specific.)
- 60 Hz: 216–252 VAC (refer to the serial number plate on the rear of the unit. The ACS is line frequency specific.)
- 8A, 9A, 9.1A, or 11A (refer to the serial number plate on the rear of the unit)
- US sites require an L6-20 single-phase outlet



NEMA L6-20 plug



- Gas:
 - Air or nitrogen
 - Pressure: 6.9 bar (100 psig)
 - Flow rate: 200 L/min
 - Temperature: 20–30°C
 - Dew point: Must not exceed the ambient air temperature by more than 5°C. Specified at operating pressure.



- Lab Environment: (must be below 25°C):
 - 12°C–21°C = Acceptable
 - 21°C–24°C = Ideal
- Leave 20 cm (8 in) of space in the front and back of the ACS for ventilation.
- 4 ft² required floor space for the ACS.



Circulator



Power



Cooling



Gas



LN₂



Fluid



Light



Hardware



Software



Temp



Lab



Customer

Accessories



AIR DRYER REQUIREMENTS

Requirements



- Inlet air: 100–130 psig (0.7–0.9 MPa); air temperature $\sim 20^{\circ}\text{C}$; Relative Humidity of 70% or less at RT with particle size of 5 microns (0.0002 in) or less
- Air source into dryer should be oil-less compressed air



- The dryer weighs 3.2 kg (7 lbs).
- It has two mounting holes 22.3 cm (8.8 in) apart
- Must be mounted upright to the wall within 183–244 cm (6–8 ft) of the air source



Customer must provide:

- Means to connect to a 3/8" NPT male connector on the inlet hose (provided by TA Instruments) of the air dryer
- Gauge to monitor the air into the air dryer
- Water trap if there is excessive moisture levels that result in immediate condensation into water (installed by Customer's maintenance personnel)



Circulator



Power



Cooling



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Customer

Accessories



LIQUID NITROGEN CONTROLLER MEASUREMENTS



Height: 58 cm (23 in)

Width: 28 cm (11 in)

Depth: 36 cm (14 in)

Weight when EMPTY: 14 kg (30 lbs)

Weight when FULL: 15 kg (33.5 lbs)



LIQUID NITROGEN CONTROLLER REQUIREMENTS

Requirements



Should be placed on the same side as the FCO



Customer must provide: 160 L (or larger) Liquid Nitrogen tank with a pressure of 14–22 psig (95–150 kPa gauge)



LN₂ pressure above 30 psig (207 kPa gauge) may cause damage to the Liquid Nitrogen Controller.



Keep the supply line short and provide adequate insulation to minimize gaseous nitrogen build-up in the supply line. Failure to do so may cause the Liquid Nitrogen Controller to malfunction frequently. Use the 3 ft. hose provided by TA Instruments for this reason.



Circulator



Power



Cooling



Gas



LN₂



Fluid



Light



Hardware



Software



Temp



Lab



Customer

Site Preparation Checklist



RSA-G2 Solids Analyzer

	Sufficient bench space for instrument, computer, Power Supply Enclosure, and FCO Enclosure: ☐ Length: 2.1 m (7 ft) ☐ Depth: 76 cm (30 in) ☐ Distance from the wall: 20 cm (8 in)
	Instrument power: ☐ 180–264 VAC, 47–63 Hz. In the US, an L6-20 outlet is required. ACS power: ☐ 207–252 50 Hz ☐ 216–252 60 Hz
	☐ Computer meets all hardware requirements ☐ I have two network cards installed on the computer to be able to connect to both the corporate LAN and the instrument. ☐ Computer meets all software requirements ☐ Customer's IT personnel has provided Administrative privileges on the controller computer ☐ The Customer's IT personnel will be on site the day of installation
	Air Supply: ☐ Pressure is 100 psig (0.7 MPa) ☐ Available flow rate is 9.5 scfm (270 L/min) ☐ Dew point is -10°C or better
	Liquid Nitrogen Controller: ☐ Customer must provide 160 L (or larger) Liquid Nitrogen tank with a pressure of 14–22 psig (95–150 kPa gauge)
	☐ The Customer assumes responsibility for any damage that occurs when the instrument is moved by someone other than a trained TA Instruments Service Representative.

I hereby acknowledge that all utility requirements have been met per the checklist above and that they will be ready at the agreed time of installation.

If all utility requirements are not met at the agreed time of installation, additional charges may be incurred for a return Service trip.

<i>Company</i>	<i>City</i>	<i>State</i>	<i>Country</i>
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Please send a signed copy of the completed checklist to your local Service representative.

TA Instruments Offices

For information on our latest products, contact information, and more, see our website at:
<http://www.tainstruments.com>.

To find your local TA Instruments office and contact information, visit
<http://www.tainstruments.com/contact/ta-directory/>

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