

TE82988 Global Test System Site Preparation Guide

Site Planning

Site planning is critical to facilitate installation as well as proper operation. Important considerations include: size, weight, environment, vacuum, network and power requirements. For site planning or setup assistance, contact Waters Test Engineering.



Figure 1 - Waters Global Test System

Considerations

Size

Provide adequate space for placement and service of the system. Consider space required for operating personnel, tables, chairs and storage (test fixtures, paper, etc.), as well as sufficient space for ventilation.

Weight

Consider the weight of the system and other items (including personnel) at the installation site; the floor must have sufficient load capacity.

Environment

The Heating/Ventilation/Air Conditioning (HVAC) system should provide filtered air within the temperature and humidity ranges for the system. Air pressure within the room should ideally be maintained at a higher level than adjacent areas to prevent dust infiltration. While the system does not require a clean room environment, cleanliness and climate control should be prime considerations.

Vacuum

Sufficient vacuum is required to mate the unit-under-test (UUT) to the fixture and fixture probes. Included vacuum hose measures: 1- $\frac{1}{4}$ " ID x 10' (3.2 cm ID x 3 m) and vacuum port is located at the lower rear of system.

Network

A network connection will be required for remote diagnostic control, including test code revisions.

Power

Sufficient AC power with proper grounding is required prior to system installation. Power cord extends roughly 13' (4 m) from lower rear of system.

Delivery

Prior to delivery, determine the route that the system will travel from receiving to the installation site. Develop a plan to avoid hallway obstructions, elevator size/weight limitations etc. Planning to eliminate obstacles along the route will save installation time.

Size and Weight

Size (Width x Depth x Height): 24" x 48" x 60" (61 x 122 x 152 cm) *

Weight: 660 lb (300 kg mass)

*Monitor arm extends and articulates in an arc, up to 42" (107 cm) from front right corner.

For space planning:

- Allow sufficient room around the system for access by operation and service personnel. Three feet (1 m) is typically sufficient for service access. The system is mobile, and can be moved, if necessary for service.
- Do not block air vents (intake at lower front or exhaust at upper rear panel). Nothing should be located within 12" (30 cm) of these vents.

Environment

These operating and storage environmental limits apply to the entire system including individual equipment operating as part of the system. Manufacturers of individual, included equipment may list operational temperature and humidity ranges that exceed the system limits shown below:

Relative Humidity:	20%-80%, Non-Condensing
Max Humidity Gradient:	10% per Hour
Ambient Temperature:	59-86° F (15-30° C)
Max Temp. Gradient:	18° F per Hour (7.7° C per Hour)
Altitude:	≤ 10,000 Feet (≤ 3,048 m)

The on-site HVAC system must compensate for heat produced when the Global Test System operates. The heat produced will vary, based on the power consumed and dissipated. In all cases, the site's temperature must remain within the specified range.

Vacuum

Vacuum is used to make mechanical and electrical connections between the UUT and fixture/fixture probes. The vacuum required depends on the physical properties of the UUT (size, the number of components, holes, etc.). The system requires 40 cfm (1.13 m³/min) minimum vacuum flow and a minimum vacuum pressure of 23 inches Hg (78 kPa).

Note: 1-1/4" (3.2 cm) ID hose extends roughly 10' (3 m) from lower rear of system.

Network

The Global Test System requires a VPN connection for: data reporting, remote diagnostic and test code control. This connection must be available at all times.

Power

Install the system in accordance with all applicable codes for the installation location. Make certain that the receptacle which accepts the system's plug meets the voltage and current requirements.

The primary AC power source for the system must be a clean line. There should be no abnormal disturbances such as transient spikes, dropped cycles, large voltage or frequency fluctuations, current surges; or voltage, phase angle, or interphase voltage imbalances.

WARNING: To avoid shock hazard, the system must be operated with an adequate earth ground and wiring must conform to local electrical codes.

To enable remote control, the AC power connection must be available at all times.

Note: Cord extends roughly 13' (4 m) from lower rear of system.

SYSTEM POWER DETAILS

Input

Max kVA:	8.64	(Mid-Range Power)
Plug:	L21-30P	 (3-Phase Locking 120/208VAC 30A Plug)
Cable Length:	15'	
Voltage:	3-Phase 120/208 (WYE)	(3-Phase WYE North American)
Current:	24A	
Phase:	Three Phase WYE	(X, Y, Z, N, G)
Cable Gauge:	10/5	(10 Gauge, 5 Wires)
Cable Jacket:	SOOW	
Frequency:	50-60 HZ	