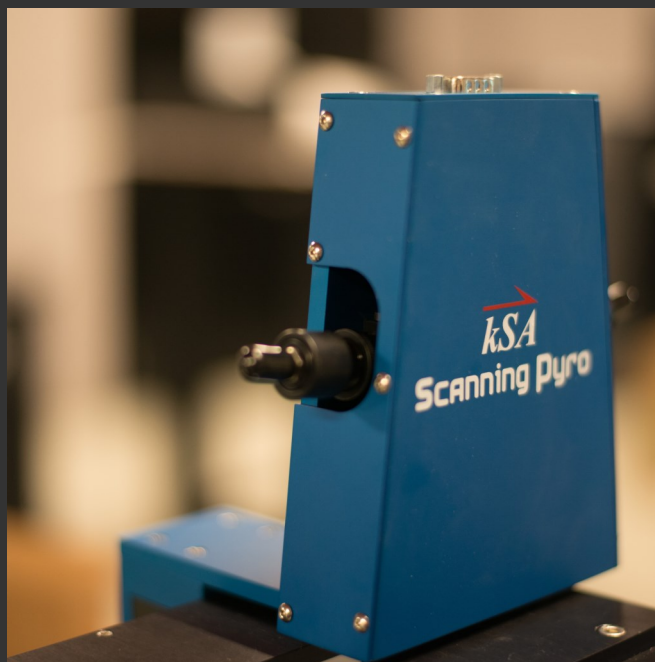




# kSA Scanning Pyro - System Requirements

## kSA ScanningPyro

Full Carrier  
Temperature  
Maps at the  
Click of a Button!



The kSA ScanningPyro is a dual-pyrometer based temperature mapping tool designed for production MOCVD reactors with slit-style viewports. The system requirements described here are specifically for the Veeco K465i MOCVD reactor.

### Controller

The kSA ScanningPyro is supplied with a fully configured, Windows™ 10, multi-core CPU, 4U rack mounted computer controller. User must have space and facilities for a computer controller and supplied 22" LCD monitor, keyboard and mouse within 3m of the front of the reactor.

### Electrical Specifications

System Power: 120VAC with 10A max or 230VAC with 5A max, 50/60Hz compatible.

Power Connections: Requires power connections for 1) computer controller (2m power cable), 2) computer monitor (2m power cable), and 3) Linear Scanning Stage (3m power cable). All power connections configured for China CPCS-CCC (Type I) for shipments to China.

### Control Hardware and Cabling

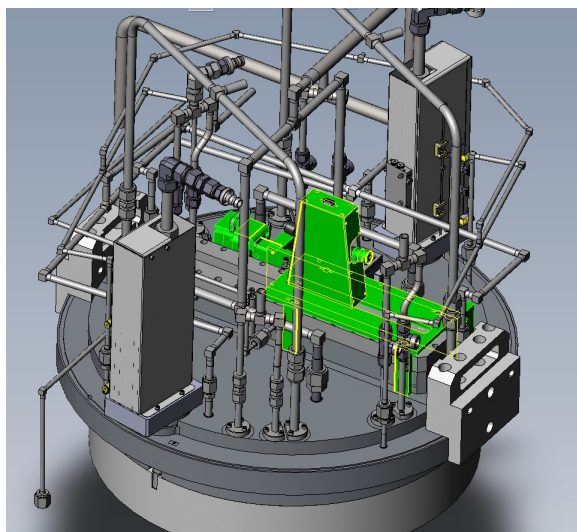
Computer controller is connected to 1) System Power (2m power cable), 2) Optical Head (9-pin D-sub to USB, 3m), 3) Rotational Trigger (hardwired to trigger sensor and pigtail connection to controller with 9-pin D-sub for power and BNC for trigger signal input, 3m), 4) Linear Scanning Stage Motor (ribbon cable to USB, 3m), 5) monitor (2m power cable), 6) mouse, and 7) keyboard. All cables provided.



# kSA Scanning Pyro - System Requirements

## Mechanical Mounting

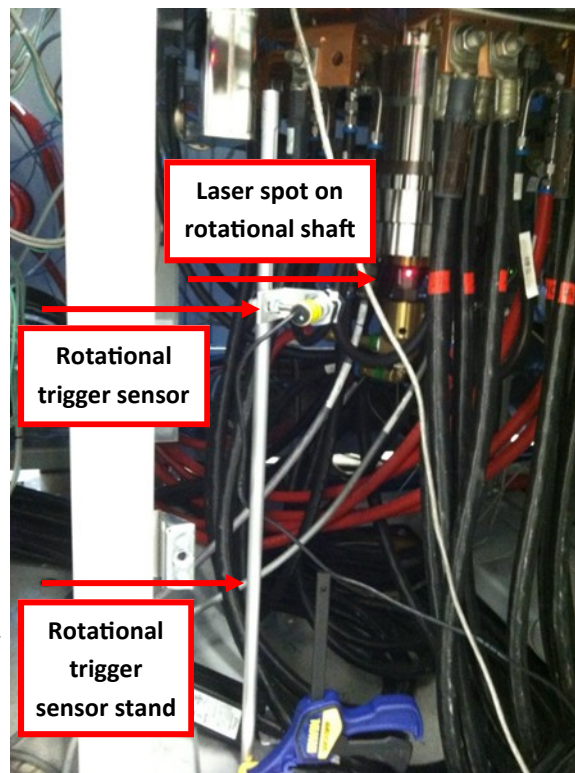
**Optical Head/Linear Scanning Stage Mounting:** When facing the FRONT of the K465i reactor, the right side of the viewport must be clear of any metrology tools, i.e. all RT (Veeco RealTemp) and DRT (Deflectometer and RealTemp) metrology optics must be removed from the right side viewport. The photograph and drawings show the position of the kSA ScanningPyro on the right side viewport of the K465i reactor. The unit is connected to the reactor top via four stand offs; mounting hardware and bolts are provided. The linear scanning stage is controlled by the computer and software via a ribbon/USB cable and has independent



power connection. Attached to the optical head and supported by the mounting hardware, the motor controls the scanning of the optical head across the slit. The optical head has one connection to the control computer.

**Rotational Trigger Mounting:** An optical trigger sensor is placed on the underside of the reactor cart, as shown in the photograph. The kSA ScanningPyro is supplied with a sensor, sensor stand and reflective tape. The sensor is mounted to a rod with platform which stands on the floor. A small piece of reflective tape is placed on the rotation shaft for rotational pulse positioning. The trigger sensor has a pig-tailed cable for two connections to the control computer (cable length 3m).

**Optional Accessories:** A pocketless carrier can be supplied with the system at additional cost. The pocketless carrier is very useful for precise measurement of temperature uniformity of the underlying heater elements.



*Information is to change without notice. While due caution has been exercised in the production of this document, possible errors and omissions may occur.*

December 11, 2020