

7250A GC QTOF GC/MS Hardware and Software Installation Checklist

Thank you for purchasing an Agilent GC/MS system solution. This checklist is used by the installing engineer to ensure that the instrument and associated systems are correctly installed, upgraded and functioning as designed in your facility. This checklist will be completed at the end of the service and provided to you as a record of the installation.

Customer Information

- Customers should provide all necessary operating supplies upon request of the engineer.

Service Engineer's Responsibilities

- Print out all pages of the document and complete sections that relate to the system being installed.
- Complete empty fields with the relevant information.
- Complete the relevant checkboxes in the checklist using **X** or tick mark **✓** in the checkbox.
- Check the **Not Applicable** check boxes or specify **N/A** (where appropriate) to indicate optional services not delivered.
- Complete the **Service Review** and **Service Completion** sections together with the customer.

Additional Instruction Notes

- Retain shipping containers and material until installation is complete and system performance is verified.
- This checklist covers the following models:

Description	Bundle	Tracking
7250 GC/MS-High Resolution QTOF Bundle	G7250AA	G7250A

System Information

System Name and ID	System Site and Location

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System Components

Check this box if an instrument configuration report is attached instead of completing the table.

List system component product numbers	List the serial numbers of each component
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.
7.	7.
8.	8.
9.	9.
10.	10.

General Preparation

- Discuss any specific questions, issues, and configuration options with the customer prior to starting.
- Arrange with the customer to have assistance lifting the GC and QTOF (mainframe and flight tube) onto the bench.
- Unpack/Verify the condition and completeness of shipment. For discrepancies, use the table below.

Product or part description	Observation	Action

- If the PC is customer-supplied, check that the hardware meets minimum requirements.
NOTE: Additional time and labor may be required for non-Agilent provided PCs
- Create an administrator account on the PC for future use. Without this, it would be impossible to update and edit GC/MS configuration files.
- Check for required service note applicability and firmware updates if connecting to instruments.
- Locate appropriate "Software Authorization Code and Registration Packet" and verify against sales order.
- Upgrades only – Ensure with customer that instrument control settings, data, methods, etc. have been properly saved or archived prior to starting any installation procedures.

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GC Installation and Preparation

- Check if a GC is not ordered and QTOF will be added to an existing GC installation** (skip to QTOF Installation and Preparation).
- Unpack and place the GC on the bench.
- Verify line voltage (Dedicated Circuit), GC voltage settings, and power cord match.
- See GC installation checklist for non-MS related plumbing and cabling.
- Prepare the GC for QTOF transferline.
 - Remove left side panel of GC.
 - Make necessary panel modifications.
 - Reinstall GC left side panel, routing GC/MSD interface cable.
- Connect the carrier gas to the supplied trap and GC.
 - Verify gas purity requirement.
 - Leak - check the gas delivery system.
 - Purge gas lines with carrier gas at 5 - 8 psi (35 - 55 KPa).
- Connect the cables to the back of the GC.
 - Connect the signal output and/or remote cables (if applicable).
 - Connect the LAN cable from the GC to the Switch.
 - Plug in GC power cable and power on the GC.
- Verify the GC passes self-test.
- Enter GC LAN configuration in the GC front panel.
 - Enter the IP address, Subnet, and Gateway address for the GC.
 - Save the inputs and validate after reboot the correct IP addresses.
- Install optional devices; if applicable.
 - Autosampler installation - per the specific autosampler installation checklist.
 - Install GC portion of any Capillary Flow Technology (CFT) option.
- Installation and Configuration of GC Column.
 - 7890B Gas Chromatographs**
 - Install GC column to inlet (if applicable).
 - Remove septum plugging the outlet end of column and cut end of column.
 - Verify installed height in injection port is correct for the installed port.
 - Configure the GC column.
 - Set carrier gas flow rate to 2 ml per minute (constant flow mode).
 - Set carrier gas line pressure to approximately 65 psi (448 KPa).
 - Verify carrier gas flow through column.
- Configure all inlets and detectors.
 - Set injection port temperature to 120°C.
 - Set the septum purge to 3 ml/min.
 - Set the inlet to Split mode (Split/Splitless or MMI) and set the split ratio to 400:1.
- Set oven temperature to 120°C and hold for 30 minutes.
- Prepare the GC to be turned off.
 - Set GC temperature to 40°C after temperature cycle complete.
 - Cool down the heated zones.
- Connect the exhaust duct for the GC (if applicable); GC exhaust duct is in the QTOF Shipping Kit.

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QTOF Installation and Preparation

- Unpack and place the QTOF on the bench.
 - Flight tube and mainframe are shipped separately.
 - Covers must be removed from the QTOF to remove from pallet.
 - QTOF requires 3- to 4-people to lift onto table.
 - Flight tube required 2-people to lift and position onto mainframe.
- Prepare QTOF calibrants (if applicable).
 - Fill the PFTBA calibrant vial (if applicable).
- Foreline Pump

Wet Pump Installation

- Unpack Foreline Pump
- Verify the correct AC power for Foreline pump.
- Add oil to pump.
- Place oil drip pan under the Foreline pump.
- Install Foreline pump Quiet Cover (if ordered).
- Install exhaust hose line/filter and connections.
- Connect pump to Foreline hose connection.
- Connect Foreline pump AC supply power cord to the MS.

Dry Pump Installation

- Unpack Foreline Pump
- Verify the correct line voltage has been selected (230V) on the Foreline pump if not autodetect.
- Undo the shipping locks on the foreline pump.
- Install exhaust hose line/filter and connections.
- Connect pump to Foreline hose connection.
- Connect Foreline pump AC supply power cord to the MS.

GC and QTOF System Installation

- Turn off the GC.
- Connect cable to the QTOF.
 - Connect GC/MS interface heater cable to GC.
 - Carefully position the MS close to the GC.
 - Connect the remote/start stop cables.
 - Micro Ion Gauge.
 - Connect MSD power cord to the appropriate AC outlet.
 - Connect LAN cable from MSD to Switch.
- MSD Column installation
 - Open the Analyzer door MS cover.
 - Loosen front and rear sideplate thumbscrews completely
 - Open analyzer door.
 - Install column in the GC/MS interface – use view port to install column.

Note: Inform the user about the various column lengths pass the end of the guide tube.
- Turn on GC.
- Update GC configuration to include MS, 7890B models only (if applicable)
 - Configure the Aux Heater from GC front panel.
 - Configure the Aux Heater 2 to Auxiliary Type: MS.
 - Set Aux Heater 2 to 120°C (MS Transferline) on the GC.

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- Close side plate and turn power on to MS.
- Verify foreline pump and the front fan operation.
- Verify high vacuum pump operation.
 - Verify the turbo pumps gets to 100% speed within 15 minutes.

Data System Installation

- Install PC with three (3) Network ports.
 - House is on the Main Board will be labeled as House.
 - GC and accessories will be labeled as GC.
 - QTOF will be a 10GByte LAN card will be labeled as MS.
- Switch Configuration
 - Unpack LAN switch and position on bench and connect the power line to the switch.
 - Connect/verify LAN cable from the GC to LAN switch Port #1.
 - Connect/verify LAN cable from PC to LAN switch Port #3.
 - Connect/verify LAN cable from Accessories (HeadSpace, CTC PAL, etc) to LAN switch Port #4.
- QTOF LAN Configuration
 - Use special LAN cable (CAT6A) to connect QTOF to MS Port on back of PC.
- Install printer and connect printer cable. System support is based on a dedicated printer not on the network.
- Turn on LAN switch, printer, monitor, and PC (in this order).
- Configure PC network for TCP/IP, IP address and Subnet mask, as specified in the MassHunter Software Installation Manual.
- Verify configuration of the TCP/IP network protocol on the PC.
- Reboot the PC.

Software and Manuals/Tools Installation

- Install **MassHunter GC/MS Acquisition Software** (if applicable). Bundled PCs will have this software preloaded.
- Install **MassHunter GC/MS Acquisition Software Service Pack** or point patches (if applicable).
- Install the **Installation Checkout Software** per the Installation Checkout Guide on **Agilent Technologies GC/MS Start-up** media.
- Install relevant hardware manuals/tools from **Agilent GC and GC/MS User Manuals and Tools** media.
- Install relevant software manuals from **Agilent GC/MS Software Information and Manuals** media.

Software Registration

- Register software license on Agilent SubscribeNet (<https://agilent.subscribenet.com>). Refer to "Software Authorization Code and Registration Packet" for detailed instructions.

GC/MS Configuration and Firmware Update

- 7250A and 7890B GC systems
 - Configure GC/MSD instrument using Agilent GC/MS Configuration icon.
 - Update MSD firmware (if applicable) using **Help > Check Networking and Update MS Firmware** from Agilent GC/MS Instrument Configuration window.
 - Update GC firmware (if applicable) using the GC Firmware Update Tool.
 - Update ALS firmware (if applicable) using the GC Firmware Update Tool.
 - Update MSD firmware (if applicable) using **Help > Check Networking and Update MS Firmware** from Agilent GC/MS Instrument Configuration window.

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QTOF Vacuum and Conditioning

- Launch 'Agilent QTOF Conditioning' desktop icon program.
- Monitor system pump down and check for leaks.
- Set conditioning time to 13 hours.
 - Typical pump down time will take 2- to 3-days to reach 2×10^{-6} .
 - Then conditioning time will begin.
 - Do not proceed to the next step until QTOF Vacuum and Conditioning has been completed.

Method Resolution and MS Tuning

- Start MassHunter GC/MS Acquisition Software.
- Load DEFAULT and verify method resolution, and save changes.
- Copy the factory tune file results to the tune file and save changes.
- Do a system check for validation and perform an autotune, approximately 1.5 hours.
 - **NOTE: This is a check to see if the system is functional.**

System Verification using Installation Checkout Software

- Section NOT applicable. Instrument configuration does not meet the requirements to use Installation Checkout Software.**
- Verify the column and collision cell gas flow rates produces a high vacuum gauge reading in the range of 2 to 6 10^{-7} Torr.
- Load and resolve the appropriate methods located in directory ...\`1\methods\Checkout\checkout.7250A.ei.M`, where 1 is the instrument number.
- Run the checkout method via the sequence.
- Verify the system performance via IDL (or S/N if ALS is not present).

QTOF Exchanging Ion Source

- Show customer the process of how to vent/pump down the QTOF.
- Show customer the process of how to removed remove the ion source.
- Show customer the videos on how to disassemble and reassemble the ion source.

Not Included at Installation

- Training on LAN.
- Connecting the instrument up to the customer's network (available upon time/material).
- PC/Software backup recovery (unless it has been purchased or available upon time/material).

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Important Customer Web Links

For additional information about our solutions, please visit our web site <http://www.chem.agilent.com/en-US/Pages/HomePage.aspx>

Need to get information on your product? Literature Library -

<http://www.agilent.com/chem/library>

Need to know more? Customer Education –

<http://www.agilent.com/chem/education>

Need technical support, FAQs? –

<http://www.agilent.com/chem/techsupp>

Need supplies? –

<http://www.agilent.com/chem/supplies>

Service Review

- Attach available reports/printouts to this documentation.
- Record the time/date of installation or upgrade completion in the customer's records/logbook.
- Complete the Service Engineer Comments section below if there are additional comments.
- Review the installation/upgrade with the customer.
- Explain Agilent warranty for instruments.
- Explain how to use manuals, guides, and online help.
- Explain how to get self-help, FAQs from the web.
- Explain how to log an instrument service call, support services available.
- Advise customer of additional instrument training options.
- Microsoft updates, review the options listed below.
 - If computer is not connected to the world-wide web (WWW), inform the customer that it is their responsibility to keep system up to date with the MS updates.
 - If computer is connected to world-wide web (WWW), ask if their IT has a policy that they will implement, inform the customer that Microsoft updates becomes their responsibility.
 - If computer is connected to world-wide web (WWW) and there is no IT or general implementation from the customer then install all critical and security updates and change computer setting to "download updates but ask me before installing them."
 - Inform the customer that it is their responsibility to keep the system up to date with Microsoft Updates.
- If the Instrument firmware was updated, record the details of the change in the Service Engineer's Comments box below or if necessary, in the customer's IQ records.



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Service Engineer Comments (optional)

If there are specific points you wish to note as part of the installation or items of interest for the customer, please write in this box.

[Empty box for Service Engineer Comments]

Service Completion

Service request number _____ Date service completed _____

Agilent signature _____ Customer signature _____

Number of pages _____