

Vanquish UHPLC Pre-installation Checklist

Use this checklist in conjunction with the Pre-Installation Requirements Guide for the Thermo Scientific™ Vanquish™ UHPLC system, to ensure adequate preparation prior to the start of an installation. Complete the checklist and return to your installation contact/coordinator when ready to schedule your installation.

No.	Item	Check To Acknowledge
1	All laboratory remodeling/building has been completed.	<input type="checkbox"/>
2	Principal operator will be available during the installation / certification period.	<input type="checkbox"/>
3	Available floor area is sufficient and flooring will support the load.	<input type="checkbox"/>
4	Sufficient bench space is available for all of the equipment. List the following:	<input type="checkbox"/>
	Width:	
	Depth:	
	Height:	
5	Workbench can support the load of the LC system [up to 100kg (190 lbs), (System with 1 column compartment, without Charger)] and is free from vibration. (System with Charger, add 35kg, each additional Column Compartment add 15kg)	<input type="checkbox"/>
6	Lighting is adequate.	<input type="checkbox"/>
7	Main power is installed and is in compliance with local electrical safety laws.	<input type="checkbox"/>
8	Power is free from fluctuations due to slow changes in the average voltage or changes due to surges, sags, or transients.	<input type="checkbox"/>
9	Air conditioning is adequate for temperature, humidity, and particulate matter control. The laboratory can be maintained at a constant temperature, between 10 and 30 °C (50 and 86 °F).	<input type="checkbox"/>
10	Relative humidity is between 20% and 80% with no condensation.	<input type="checkbox"/>
11	The laboratory has adequate ventilation.	<input type="checkbox"/>
12	System work area is free from magnetic disruption and electrostatic discharge.	<input type="checkbox"/>
13	<ul style="list-style-type: none"> The following HPLC grade chemicals must be available: Water (Fisher Scientific Catalog No. W5-1, or equivalent) Methanol (Fisher Scientific Catalog No. A452-1, or equivalent) Isopropanol (Fisher Scientific Catalog No. A416-1, or equivalent) Formic Acid (for rear seal wash) <p>Note – LC/MS Grade chemicals are also acceptable, e.g. Fisher Optima.</p> <p>The installation of a Vanquish Neo System requires the following solvents:</p> <ul style="list-style-type: none"> Water, Optima™ LC–MS grade (Fisher Scientific Catalog No. W6-212 or equivalent) Acetonitrile, Optima™ LC–MS (Fisher Scientific Catalog No. A955-212) 	<input type="checkbox"/>

No.	Item	Check To Acknowledge
	<p>grade or equivalent)</p> <ul style="list-style-type: none"> • Isopropanol, Optima™ LC–MS grade (Fisher Scientific Catalog No. A461–212 grade or equivalent) • Water with 0.1% Formic Acid, Optima™ LC–MS grade (Fisher Scientific Catalog No. LS118–500 grade or equivalent) • 80% Acetonitrile with 0.1% Formic Acid, Optima™ LC–MS grade (Fisher Scientific Catalog No. LS122-500 grade or equivalent) • Formic Acid (FA), Optima™ LC–MS grade (Fisher Scientific Catalog No. A117-10X1AMP grade or equivalent) <p>Fishersci: 800-766-7000 or www.fishersci.com</p>	
14	All relevant safety regulations are complied with.	<input type="checkbox"/>
15	Your laboratory has a waste disposal system for solvents and located below bench level. Waste reservoir, minimum 2 L.	<input type="checkbox"/>
16	For systems with a Vanquish Charged Aerosol Detector - A source of dry nitrogen gas (or compressed air if nitrogen generator purchased) is available in the laboratory. Must meet requirements outlined in Section 9.1 of the CAD operators manual (70-80psi).	<input type="checkbox"/>
	Note the distance between installation location and gas source:	
17	Computer system purchased with the instrument:	Yes <input type="checkbox"/> No <input type="checkbox"/>
18	Computers supplied by the customer must meet minimum specifications for operating the Chromeleon version being used with the Vanquish system. (see attached requirements) <i>Note: When running the Vanquish system in combination with a mass spectrometer, the computer controlling the mass spectrometer can be used for running the Vanquish system as well.</i>	<input type="checkbox"/>
19	For Customer supplied computers, the service engineer will need to have administrative privileges on the computer during the installation . Alternatively, a customer representative with these privileges must be present during installation. <i>Delays to installation due to lack of IT support may result in a billable charge.</i>	<input type="checkbox"/>

1. Provide requested additional information:

Are there any local characteristics that could influence the installation? If YES , please attach details of characteristics.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Have any special acceptance specifications been agreed to as a term of sale? If YES , please attach full details of specifications.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is there any additional equipment that needs to be interfaced to the system? If YES , please attach full details of additional equipment.	Yes	No

2. Confirm space/weight suitability:

Most Vanquish modules are stackable – the column compartment(s) are situated to the side of the stack. Please calculate the total required bench space from the dimensions listed below. These dimensions include the required venting space surrounding the instruments. Please note the total weight, especially if the system will be installed on a lab cart.

WARNING—Risk of tilting system stack A one-stack configuration may exceed the maximum allowed height. If the system configuration is higher, the system stack poses a tilting risk which can entail personal injury. If your configuration is higher, you need to stabilize the stack with one of the following safety measures:

- Use a stack stabilization kit (see table below).
- Build up the system in two separate stacks

The following table shows which stack stabilization kit you need for which stack height. The heights are measured from the table surface to the solvent rack railing. Due to production and installation tolerances, the actual stack height can be up to 2 cm higher than the limit. This tolerance is acceptable.

Stack height	Stabilization required
Up to 100 cm	None <i>Example: Configuration with pump, autosampler, diode array detector and charged aerosol detector</i>
Up to 123 cm	One of the following kits: <ul style="list-style-type: none"> • Bench clamp kit • Stack stabilizer kit • IonBench with stack mounting kit
Up to 139 cm	Bench clamp kit
139 cm and higher	Build up the system in two separate stacks

Component	Height		Width		Depth		Weight	
	cm	in	cm	in	cm	in	kg	lbs
Solvent Rack Vanquish (without bottles)	12.1	4.0	42	16.6	59.6	20.1	4	8.8
System Base	6	2.3	42	16.6	42	16.6	5	11.0
Binary Pump H	19.2	7.6	42	16.6	62	24.4	32	70.5
Quaternary Pump F/C/CN	19.2	7.6	42	16.5	62	24.4	17	37.5
Binary Pump F/C	19.2	7.6	42	16.5	62	24.4	20	44.1
Dual Pump F/C/CN	19.2	7.6	42	16.6	62	24.4	20	44.1
Isocratic Pump C	19.2	7.6	42	16.6	62	24.4	17	37.5
Binary Pump N	19.2	7.6	42	16.6	62	24.4	26	57.3
Split Sampler HT/FT	29	11.4	42	16.6	62	24.4	25	55.1
Split Sampler CT	29	11.4	42	16.6	62	24.4	24	52.9
Split Sampler C	29	11.4	42	16.6	62	24.4	22	48.5
Dual Split Sampler HT/FT	29	11.4	42	16.6	62	24.4	29	63.9
Split Sampler NT	29	11.4	42	16.6	62	24.4	26	57.3
Charger Module	75	29.5	33.9	13.4	62	24.2	35	77.2
Column Compartment H/C	70	27.6	11.1	4.4	42.2	16.6	14	30.9

Column Compartment N	15.9	6.3	42	16.6	62	24.4	10.7	23.6
Variable Wavelength Detector F/C	16	6.3	42	16.6	51	20.1	16	35
Diode Array Detector HL	16	6.3	42	16.6	51	20.1	17.0	37.5
Diode Array Detector FG/CG	15.9	6.3	42	16.6	62	24.4	17.0	37.5
Multi-Wavelength Detector CG	15.9	6.3	42	16.6	62	24.4	17.0	37.5
Fluorescence Detector F/C	15.9	6.3	42	16.6	51	20.1	21	46.3
Charged Aerosol Detector F/H	19.2	7.6	42	16.6	62	24.4	17.5	38.6
Integral Fraction Collector FT	23	9.1	42	16.5	62	24.4	23	53.7
Refractive Index Detector C	16	6.3	42	16.6	62	24.4	17	36.4
Vanquish Neo System	82	32.2	45	17.7	65	25.6	66	145.5

Minimum bench-top space requirements for the installation of a Vanquish UHPLC system with different numbers of VTCCs (Vanquish Column Compartment H) excluding data system and printer):

LC System	Width		Depth	
	cm	inch	cm	inch
Vanquish UHPLC system with 1 VTCC	64	25.2	62	24.4
Vanquish UHPLC system with 1 VTCC and Charger	108	42.5	62	24.4
Vanquish UHPLC system with 2 VTCCs	86	33.9	62	24.4

LC System	Width		Depth	
Vanquish UHPLC system with 3 VTCCs	108	42.5	62	24.4
Vanquish UHPLC system with 3 VTCCs and Charger	152	59.8	62	24.4
Vanquish Neo system with 1 VNTCC	45	17.7	65	25.6

3. Pre-installation system familiarization information:

Please use the following QR code or URL to access Vanquish and UltiMate system familiarization information. This information will provide all necessary familiarization points for new users and should be reviewed prior to your installation. At the time of installation, your service engineer will review this information in-person and can answer any questions you may have.



www.thermofisher.com/myLC

4. Provide any additional notes or comments for installation:

5. Sign/Date for confirm readiness for installation:

Customer: _____ Date: _____

Addendum – PC Requirements

PC Hardware Requirements

The table below shows the minimum and the recommended PC configuration for a **stand-alone** installation of Chromeleon 7.2. PCs meeting **minimum** requirements may be sufficient for some low-demand applications, but will not provide satisfactory performance in many applications. PCs meeting **recommended** requirements should be suitable for general applications.

The following information is valid for Chromeleon 7.2.6.

Type		Specification
Processor		
	Minimum	3 GHz Intel™ Core™ 2 Duo
	With 1 DAD-3000RS	3 GHz Intel Core 2 Duo
	With 2 DAD-3000RS	3 GHz Intel Core i7*
	With MS	2.4 GHz Dual Core Processor
	With Agilent ICF / Waters ICS	3 GHz Intel Core 2 Duo
	With GC-MS	2.4 GHz
	Recommended	3.0 GHz Intel Dual Core i7* or better
Recommended with Agilent ICF / Waters ICS (running one or two drivers)	3.0 GHz Intel Quad Core i7* or better	
RAM		
	Minimum	3 GB
	With 1 DAD-3000RS	3 GB8
	With 2 DAD-3000RS	4 GB*
	With MS	16 GB*
	With Agilent ICF/ Waters ICS:	4 GB*
	Recommended	8 GB* or greater
Hard Disk		
	Minimum	60 GB**
	With 3D detectors	120 GB**
	DAD with max (200 Hz) rate:	15MB/min
	With GC-MS	250 GB
	With LC-MS	500 GB
Optical Drive		DVD

Type	Specification
Display	
Minimum	1024x768 resolution, 32-bit color
Recommended	1280x1024, 1440 x 900 or more
USB Ports	
license device:	1 port
Thermo Scientific modules:	1 or more additional port(s)
Refer to the <i>Chromeleon 7 Online Help</i> for further information with regard to specific modules.	

* For taking full advantage of this hardware, a 64-bit Windows version is required.

** These hard disk requirements are set to enable storage of a substantial amount of data. The software itself requires approximately 4 GB disk space on the C drive (twice as much during an update). In addition, a few GB disk space must always be available on the C drive for cached sequences.

PC Operating System Requirements

Chromeleon 7.2.6 has been validated for stand-alone use on Microsoft Windows 10 Enterprise (64-bit edition), Microsoft Windows 8.1 Pro (64-bit edition), Microsoft Windows 7 SP1 (64-bit edition). Windows 7 SP1 32-bit edition is also validated, but use is strongly discouraged.