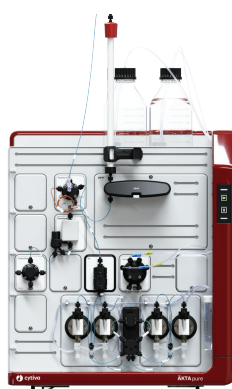


# ÄKTA avant™, ÄKTA go™, ÄKTA pcc™ and ÄKTA pure™ Site Preparation Guide



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# 1 Introduction

## Purpose of this document

The Site Preparation Guide provides information needed to prepare the customer site for installation of the product.

A site preparation checklist is included in this document.

**Note:** *Make sure the ÄKTA™ instrument is unpacked and placed at intended location before the arrival of the Cytiva service engineer. Failure to do so may result in delay or rescheduling of the installation. If necessary, contact the Cytiva service personnel to clarify any questions before the installation is scheduled.*

## Scope of this document

This site preparation guide covers the ÄKTA avant™, ÄKTA go™, ÄKTA pcc™ and ÄKTA pure™ systems. The conditions given in this document apply to all systems, unless otherwise specified.

## System definition

In this document, ÄKTA avant, ÄKTA go, ÄKTA pcc, or ÄKTA pure instrument in combination with UNICORN™ software is referred to as the system.

ÄKTA avant, ÄKTA go, ÄKTA pcc, or ÄKTA pure instruments without the software is referred to as the ÄKTA instruments.

## Installation by Cytiva

Read the entire Site Preparation Guide and complete the site preparation checklist in Chapter 3 before the product installation, to make sure that the site and personnel meet the installation requirements.

It is mandatory to return the completed checklist to Cytiva when booking an installation appointment.

## Contact Cytiva

To get information about returning the checklist, contact your Cytiva representative or follow the steps below to contact Cytiva.

Step	Action
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1	Go to <a href="https://www.cytiva.com/contact">cytiva.com/contact</a> .
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Step	Action
2	Select the applicable country from the <b>Change country</b> drop-down list.  <b>Note:</b> <i>If the applicable country is not listed, select the nearest region.</i>
3	In <b>Step 1</b> , select <b>I need help with an existing order</b> and click <b>Next</b> .
4	In <b>Step 2</b> , select <b>Order Issue &amp; Order Support</b> and click <b>Next</b> .
5	In <b>Step 3</b> , click <b>Message here</b> .  <b>Result:</b> The window with the contact form opens.
6	Fill in the required fields and click <b>Send</b> .  <b>Result:</b> Your inquiry is sent to the Customer service team.

## Assign personnel for site preparation tasks

The site preparation and installation tasks are typically split up between different persons and can take several weeks to prepare, depending on your organization and IT structure. It is up to the site preparation/installation coordinator to:

- Assign personnel and make sure that they are provided with sufficient information to complete the tasks, see table below.
- It is recommended that the same people assist the Cytiva service engineer during the subsequent installation process.
- Gather information about the completed tasks and fill in the site preparation checklist, see [Checklist, on page 13](#).
- Return the completed checklist to Cytiva before installation, if applicable.

The instrument must be placed at the intended location before the installation. See [Dimensions and weight, on page 9](#) for more information.

Personnel	Site preparation tasks
Site preparation/ installation coordinator	<ul style="list-style-type: none"> <li>• Review the site preparation guide for safety information and system requirements.</li> <li>• Choose the site.</li> <li>• Coordinate personnel and tasks.</li> <li>• Coordinate the installation timing of the system with any domestic safety procedures and testings.</li> <li>• Order the required materials.</li> <li>• Make sure that the instrument is placed at the intended location before installation.</li> <li>• Confirm the installation schedule with Cytiva and inform relevant personnel.</li> </ul>
Laboratory personnel/ Primary users	<ul style="list-style-type: none"> <li>• Review all relevant safety information.</li> <li>• Make sure that all customer-provided materials for the installation are present at the site.</li> </ul>
Facilities personnel	<ul style="list-style-type: none"> <li>• Make sure that the installation requirements are met for: <ul style="list-style-type: none"> <li>- Space at the installation site</li> <li>- Environmental conditions</li> <li>- Biosafety</li> <li>- Ventilation and waste collection</li> <li>- Electrical supply</li> <li>- Safety and installation materials</li> <li>- Lifting and moving equipment, if applicable</li> </ul> </li> </ul>
Electrical engineer	<ul style="list-style-type: none"> <li>• Confirm that the electrical supply at the site meets the required electrical specifications.</li> <li>• Confirm that the electrical plugs intended for use with the equipment are available and meet the required electrical specifications.</li> <li>• Establish plan to check that the mains power plug is installed correctly.</li> </ul>
Database administrator	<ul style="list-style-type: none"> <li>• Install the UNICORN database on a network connected Microsoft SQL Server.</li> <li>• Set up a user account in the database for service/vendor access.</li> <li>• Make sure that the network database is accessible through a wired network connection from the site where the system will be installed.</li> </ul> <p><b>Note:</b>  <i>If a network database is not available when the service engineer installs the system, a local database will be used. A local database has limited storage, is not backed up, and is not accessible from another computer.</i></p>

Personnel	Site preparation tasks
IT support	<ul style="list-style-type: none"><li>• If the system computer is not from Cytiva: Make sure that the computer requirements are fulfilled, see <a href="#">Computer requirements and specifications, on page 10</a>, and provide local admin rights for the service engineer to install software.</li><li>• Make sure that a network connection is available from the system location.</li><li>• Assist in connecting the computer to the network, the network database and the license server at the time of the system installation.</li></ul>
eLicense setup responsible	<ul style="list-style-type: none"><li>• Set up a license server.</li><li>• Activate and download the eLicense for your system.</li></ul>

## 2 Site preparation overview

### Introduction

Before the product is delivered, the site must be prepared according to the instructions in this chapter.

### Select the site

Select a site that fulfills the requirements described in this chapter.

**Note:** *If the intended location of the ÄKTA instrument is a cold cabinet, place the unpacked instrument on a nearby laboratory bench. When the Cytiva service engineer arrives, have the facilities personnel ready to place the instrument in the cold cabinet and turn on the power.*

**Note:** *Do not place the ÄKTA instrument in the cold cabinet without turning on the power. This can result in condensation on the electrical components.*

### Environmental conditions

The following general requirements must be fulfilled where the ÄKTA instruments will be installed:

- The room must have exhaust ventilation.
- The instrument must not be placed close to a radiator or exposed to direct sunlight.
- Dust in the atmosphere must be kept to a minimum.

### Environmental requirements

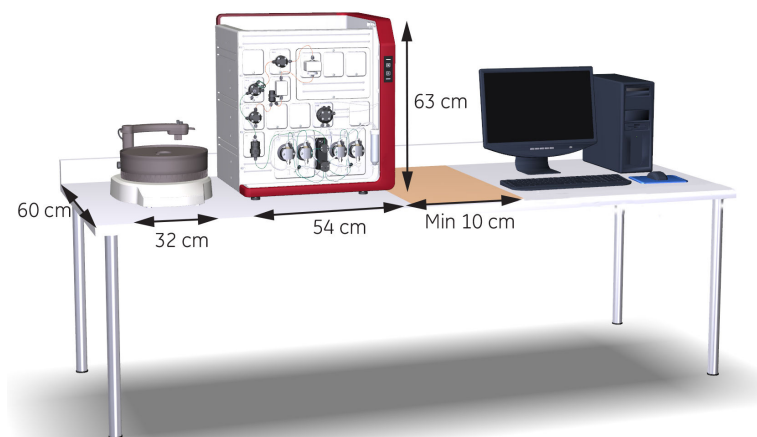
The installation site must comply with the following environmental requirements.

Parameter	Requirement
Allowed location	Indoor use only
Ambient temperature, operation	4°C to 35°C
Relative humidity	20% to 95% RH, noncondensing
Altitude, operation	Up to 2000 m

## Space requirements

Prepare a clean working area on a laboratory bench that is flat, stable, of sufficient size, and able to support the weight of the ÄKTA systems with accessories. The illustration below shows an example of the space recommendation for a laboratory bench.

ÄKTA pure and a desktop computer is used in this example. A laptop can also be used instead of a desktop computer.



The working area must comply with the specifications in the table below.

Parameters	ÄKTA avant	ÄKTA go	ÄKTA pcc	ÄKTA pure
Min. length of the laboratory bench (with one fraction collector, without the computer)	146 cm	76 cm	230 cm	104 cm
Min. depth of the laboratory bench	80 cm	60 cm	80 cm	60 cm
Min. height above the laboratory bench	66 cm	48 cm	66 cm	63 cm
Space for handling of buffers and samples	2 × 30 cm	10 cm	2 × 30 cm	10 cm
Free space around the instrument to allow for adequate ventilation	10 cm	10 cm	20 cm	10 cm
Location of the computer with respect to instrument	Left	Right	Left	Right



## Dimensions and weight

The ÄKTA instruments with accessories are shipped in a delivery box. The dimensions and weight of the box and number of personnel required for lifting the instrument are shown in table below.

Parameters	ÄKTA avant	ÄKTA go	ÄKTA pcc	ÄKTA pure
Dimensions (mm) (W × H × D)	1000 × 900 × 800	509 × 566 × 774	1000 × 900 × 800	660 × 850 × 600
Weight	155 kg	39 kg	155 kg	Up to 64 kg
Number of people required for lifting	4	2	4	4

The outer dimensions of the instruments are shown in the table below.

Dimension	ÄKTA avant (mm)	ÄKTA go (mm)	ÄKTA pcc (mm)	ÄKTA pure (mm)
Width	860	335	860	535
Height	660	482	660	630
Depth	710	464	710	470

The weight of the instruments are shown in the table below.

Parameters	ÄKTA avant	ÄKTA go	ÄKTA pcc	ÄKTA pure
Instrument weight	116 kg	27 kg	119 kg	Up to 53 kg
Max. weight in buffer tray	40 kg	10 kg	40 kg	20 kg

**Note:** Extra weight for the computer must be taken into consideration for the total weight of the system.

## Grounding and protective earth

- The protective earth wire must be connected to system ground.
- Ground impedance must conform to the requirements of national and local industrial safety regulations and/or electrical codes.
- The integrity of all ground connections must be periodically checked.

## Electrical power requirements

The following table specifies the power requirements.

Parameter	Requirement
Supply voltage	100 to 240 V AC $\pm$ 10%
Frequency	50/60 Hz
Transient overvoltages	Overvoltage category II
Max. power consumption	800 VA (ÄKTA avant) 300 VA (ÄKTA go) 800 VA (ÄKTA pcc) 1 100 VA (ÄKTA pure)
Number of sockets	1 socket per instrument, up to 3 sockets for computer equipment.
Type of sockets	EU or US plugs. Grounded mains sockets, fused or protected by equivalent circuit breaker.
Location of sockets	Maximum 2 m from the instrument (due to length of mains cable). Extension cables can be used if required.

## Computer requirements and specifications

The ÄKTA instruments are controlled by UNICORN software running on a PC.

The computer can either be purchased from Cytiva or obtained locally. For more information on computer specifications see [cytiva.com/UNICORNPCspecifications](https://www.cytiva.com/UNICORNPCspecifications).

**Note:** *If the computer is not purchased from Cytiva, make sure that the computer is delivered and available at the installation date of the ÄKTA instrument.*

For information about compatibility between UNICORN versions, the supported operating systems, database versions, and instrument configuration, see the UNICORN compatibility matrix at [cytiva.com/UNICORNcompatibility](https://www.cytiva.com/UNICORNcompatibility).

Specifically for ÄKTA pcc operation, Cytiva recommends two PCs (one client and one server) or one PC (client) and one Real-Time Unit (server).

**Note:** *UNICORN is not installed by default when the computer is purchased from Cytiva. UNICORN is installed at the time of installation of the ÄKTA instruments at the customer site.*

Additional software, i.e. antivirus or a firewall, should be installed before UNICORN installation.

An Ethernet network connection exists between the instrument and the local area network.

**Note:** *If the computer name must be changed, do so before installing UNICORN or provide the computer name to the Cytiva service engineer. UNICORN will stop working if the computer name is changed after installation.*

## Customer supplied consumables and equipment

The solutions and equipment listed in the tables below are required during the installation procedure. These must be supplied by the customer at installation site.

Solutions	Required volume (mL)			
	ÄKTA avant	ÄKTA go	ÄKTA pcc	ÄKTA pure
Distilled water	1000	1000	1000	1000
1.0% acetone in distilled water	1000	–	1000	–
1.0% acetone in 1.0 M NaCl	1000	1000	1000	1000
20% ethanol	1000	1000	1000	1000

**Note:** *The solutions must be freshly prepared, in order for the installation procedure to be successful. Delivery and installation might not take place at same time.*

**Note:** *Make sure that the solutions are at the same temperature as the intended location of the ÄKTA instrument.*

Equipment	Specification
Flasks, liquid containers	For solutions and waste
Gloves	For protection
Protective glasses	For protection

## Preparation of solutions

### 1.0% Acetone solution

Acetone	10 mL
Distilled H <sub>2</sub> O	990 mL

### 1.0% Acetone in 1.0 M NaCl solution

Acetone	10 mL
NaCl	58.44 g
Distilled H <sub>2</sub> O	990 mL

Dissolve 58.44 g of NaCl into 900 mL of distilled water. Add 10 mL of acetone to the NaCl solution and add distilled water up to 1000 mL.

### 20% Ethanol solution

Ethanol	200 mL
Distilled H <sub>2</sub> O	800 mL

# 3 Site preparation checklist

## Introduction

Read the previous chapters in this site preparation guide before completing the checklist.

Complete the checklist in this chapter to make sure that all necessary preparations have been made for the installation of the product.

Send the completed checklist to a Cytiva office **before** Cytiva service engineer can install the ÄKTA systems. See details in [Chapter 1 Introduction, on page 3](#).

## Checklist

Requirement	YES	NO	N/A	Comment/specify
<b>General</b>				
Has the product been delivered? If yes, specify when the product was received (month/year)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Has the instrument been unpacked and placed on the intended laboratory bench before installation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the instrument intended to be placed in a cold cabinet, cold room or clean room? If yes, write in the comment field what the intended location of the instrument is: cold cabinet, cold room or clean room?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If yes, is the instrument placed on a nearby laboratory bench ?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are personnel available to lift the instrument into the cold cabinet after the Cytiva service engineer has prepared the instrument?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Will the Cytiva service engineer be required to take site EHS (Environment, Health and Safety) or security training before doing the installation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Will the Cytiva service engineer be required to have any specific training certificates? If yes, specify which certificate is required.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Requirement	YES	NO	N/A	Comment/specify
Will the Cytiva service engineer be required to have any specific vaccinations? If yes, specify which vaccination is required.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Assigned personnel</b>				
Have personnel been assigned for site preparation tasks? See <a href="#">Assign personnel for site preparation tasks, on page 4</a> .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Site selection</b>				
Are the general site requirements fulfilled?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the site ready for installation? If not, by which date will the site be ready for installation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Environmental requirements</b>				
Are the proper environmental conditions fulfilled as specified? See <a href="#">Environmental conditions, on page 7</a> .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ambient temperature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Relative humidity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Altitude	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the specified space available? See <a href="#">Space requirements, on page 8</a>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Electrical requirements</b>				
Are the electrical requirements fulfilled as specified? See <a href="#">Electrical power requirements, on page 10</a> .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are there 3 mains electrical outlets for PC and 1 additional per instrument unit present?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are the sockets located within 2 m range from the system?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Computer requirements</b>				
Are the computer requirements below fulfilled? See <a href="#">Computer requirements and specifications, on page 10</a> . Note the special PC requirements for ÄKTA pcc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Requirement	YES	NO	N/A	Comment/specify
Was the computer purchased from Cytiva? If not, make sure the computer meets the specified requirements.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If the computer was not purchased from Cytiva, has the computer been delivered and is it available for installation? If not, write in the comment field after which date the computer will be available.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Can a Cytiva engineer log in as an administrator?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is UNICORN installed on the computer? If yes, specify which version.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there on-site IT support available, if needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Will the computer be connected to the local network?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Database location</b>				
Are the database requirements below fulfilled? See <a href="#">Computer requirements and specifications, on page 10</a> .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Will the computer contain a local UNICORN database?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If not, is there an existing central UNICORN database installed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If not, will a new central UNICORN database be set up as part of this installation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Customer supplied equipment</b>				
Is Personal Protective Equipment (PPE) provided as required, (e.g., gloves, lab coats, etc.)? See <a href="#">Customer supplied consumables and equipment, on page 11</a> .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the following laboratory equipment provided:				
Waste flask (1000 mL)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5 reagent bottles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional glassware depending on system configuration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Requirement	YES	NO	N/A	Comment/specify
<b>Customer supplied consumables</b>				
Are required solutions provided at the time of installation? See <a href="#">Customer supplied consumables and equipment, on page 11</a> .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**Additional information**

**Customer contact information**

<b>Date</b> (dd-mmm-yyyy)			
<b>Company/Customer name</b>			
Name			
Address			
Email			
Phone number			
<b>Customer experience level</b>	Beginner <input type="checkbox"/>	Intermediate <input type="checkbox"/>	Advanced <input type="checkbox"/>



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