

# ctrlX WORKS

Basic System

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DOK-XWORKS-\*\*\*\*\*-AP03-EN-P

DC-IA/EPI5 (MiSc/PiaSt)

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# 1 About this documentation

The PC-based engineering tool ctrlX WORKS allows to centrally access the automation environment of ctrlX AUTOMATION.

- The purpose of this document is to get familiar with the PC-based engineering tool ctrlX WORKS
- The content is intended for users projecting, commissioning and operating functionally secure products

## Editions of this documentation

Edition	Release date	Notes
01	2020-06	First edition ctrlX WORKS version WRK-V-0102
02	2020-09	Revision ctrlX WORKS version WRK-V-0104
03	2021-01	Revision ctrlX WORKS Version WRK-V-0106

## 2 Important directions on use

### 2.1 Intended use

#### 2.1.1 Introduction

Rexroth products are developed and manufactured to the state-of-the-art. The products are tested prior to delivery to ensure operational safety and reliability.

#### **▲ WARNING**

**Personal injury and damage to property due to incorrect use of products!**

The products may only be used as intended.

Failure to use the products as intended may cause situations resulting in property damage and personal injury.

#### **NOTICE**

**Damages resulting from unintended use**

Rexroth As the manufacturer does not assume any warranty, liability or compensatory claims for damages resulting from unintended use of the products. The user alone shall bear the risks of an unintended use of the products.

Before using Rexroth products, make sure that all the prerequisites for an intended use of the products are met:

- Personnel that in any way, shape or form uses Rexroth products must first read and understand the relevant safety instructions and be familiar with their intended use
- Leave hardware products in their original state, i.e., do not make any structural modifications. It is not permitted to decompile software products or alter source codes
- Do not install damaged or defective products or commission them
- It has to be ensured that the products have been installed as described in the relevant documentation

#### 2.1.2 Areas of use and application

Products of the ctrlX series are suitable for Motion/Logic applications.

#### **NOTICE**

**Products of the ctrlX series may only be used with the accessories, mounting parts, and other components specified in this documentation. Components that are not expressly mentioned must neither be attached nor connected. The same applies to cables and lines.**

**Only to be operated with the hardware component configurations and combinations expressly specified and with the software and firmware specified in the corresponding documentations and functional descriptions.**

Products of the ctrlX series are suitable for single-axis as well as for multi-axis drive and control tasks. Device types with different equipment and interfaces are available for using the system in specific applications.

Typical areas of application:

- Building automation
- IoT and Security Gateway or Device
- Handling & Robotic

Controls of the ctrlX CORE series may only be operated under the mounting and installation conditions, in the position of normal use and under the ambient conditions (temperature, degree of protection, humidity, EMC, etc.) specified in the related documentations.

## 2.2 Unintended use

"Unintended use" refers to using the ctrlX products outside of the above-mentioned areas of application or under operating conditions and technical data other than described and specified in the documentation.

ctrlX products must not be used if they are exposed to following conditions:

- Operating conditions that do not meet the specified ambient conditions. Operation under water, under extreme temperature fluctuations or under extreme maximum temperatures is prohibited
- Applications that have not been expressly authorized by Rexroth

## 3 Safety instructions

The Safety instructions contained in the available application documentation feature specific signal words (DANGER, WARNING, CAUTION or NOTICE) and, where required, a safety alert symbol (in accordance with ANSI Z535.6-2006).

The signal word is meant to draw the reader's attention to the safety instruction and identifies the hazard severity.

The safety alert symbol (a triangle with an exclamation point), which precedes the signal words DANGER, WARNING and CAUTION, is used to alert the reader to personal injury hazards.

The Safety instructions in this documentation are designed as follows:

<b>▲ DANGER</b>	In case of non-compliance with this safety instruction, death or serious injury will occur.
<b>▲ WARNING</b>	In case of non-compliance with this safety instruction, death or serious injury could occur.
<b>▲ CAUTION</b>	In case of non-compliance with this safety instruction, minor or moderate injury could occur.
<b>NOTICE</b>	In case of non-compliance with this safety instruction, property damage could occur.





## 4 Introduction and overview

### 4.1 ctrlX WORKS

#### 4.1.1 ctrlX WORKS - Basics

The PC-based engineering tool ctrlX WORKS allows to centrally access the automation environment of ctrlX AUTOMATION.

##### Functional scope:

- **Device overview**

Managing ctrlX CORE and ctrlX CORE Virtual controls

→ Pin your ctrlX CORE to the device table. A control is provided in the overview even if it cannot be reached at the moment, as it is disabled for example

→ Add a new ctrlX CORE Virtual control

- **ctrlX PLC Engineering**

Tool to create the PLC application

- **ctrlX I/O Engineering**

Tool to configure a field bus connection and I/O components

- **ctrlX DRIVE Engineering**

Tool to parameterize the ctrlX DRIVE drive

After the installation, double-click on the icon in the WinStudio screen to open the ctrlX WORKS start page. Already projected ctrlX CORE Virtual controls and ctrlX CORE controls reachable in the network are shown, refer to ↗ Chapter 5.1.1 “Devices” on page 13. The ctrlX CORE and the ctrlX CORE Virtual control are configured in the browser.

To open the ctrlX WORKS help, select “Go to documentation”.

##### Further information

- ↗ Chapter 5.1.1 “Devices” on page 13
- ↗ Chapter 4.2.1 “ctrlX WORKS – Installation ” on page 9
- ↗ Chapter 4.3.1 “ctrlX WORKS – Licenses” on page 10
- ↗ Chapter 5.1.2 “ctrlX CORE Virtual ” on page 13
- ↗ Chapter 5.1.3 “ctrlX CORE ” on page 14
- ↗ Chapter 6.2.1 “Window – “Devices”” on page 17
- ↗ Chapter 6.2.3 “Window – “Settings”” on page 19
- ↗ Chapter 6.2.4 “Window – “About”” on page 19

### 4.2 Installation

#### 4.2.1 ctrlX WORKS – Installation

##### General notes on the software installation

Installing the software ctrlX WORKS and the respective software options requires knowledge of PCs, the operating system and admin rights on the respective PC.

A Windows 10 64 bit operating system is required to operate ctrlX WORKS.





An internet access is required for the installation using the file “ctrlx-works-xxxx.exe”. Software packages from the Rexroth provision platform can only be downloaded online. Alternatively, the respective setup files can be downloaded first and then installed via a local network.

Multiple ctrlX WORKS installations can be operated parallelly on one computer.



Before each installation, it is checked whether a ctrlX WORKS installation is already available on the PC. In this case, a query is displayed, asking whether the existing installation should be changed or if a parallel installation should be executed.

### ctrlX WORKS initial installation

Proceed as follows when installing the ctrlX WORKS software for the first time:

1.  To start the installation, execute the ctrlX WORKS setup file “ ctrlx-works-xxxx.exe” (admin rights required).
  - ➔ The terms of use of the Bosch Rexroth AG are shown.
2.  Please check the terms of use before continuing the installation with “Accept”.
  - ➔ The dialog to select the installation directory is shown.
3.  Enter the directory for the ctrlX WORKS installation and confirm the dialog with “Next”.
  - ➔ The dialog to select the installation options is shown.
4.  Select the software packages to be installed on the PC with ctrlX WORKS from the list.

For more information about the software packages, refer to →  
➔ Chapter 4.2.2 “ctrlX WORKS – Installation options” on page 10.

Confirm your selection with “Next”.
  - ➔ The selected software options are used to determine and to show a list of the required software packages.
5.  Start the installation with “Install”.
  - ➔ The installation can take some minutes and is shown visually.  
The installation result is shown at the end.
6.  To close the installation, select “Finish”.

#### Further information

- ➔ Chapter 4.1.1 “ctrlX WORKS - Basics” on page 9

## 4.2.2 ctrlX WORKS – Installation options

### Customized installation

In the ctrlX WORKS installation setup, determine the functions and tools to be installed. Functions can be added to the installation at a later point.



The installation options available in the setup can be added or removed to/from the existing installation at a later point.

#### Further information

- ➔ Chapter 4.2.1 “ctrlX WORKS – Installation ” on page 9
- ➔ Chapter 4.3.1 “ctrlX WORKS – Licenses” on page 10

## 4.3 Licenses

### 4.3.1 ctrlX WORKS – Licenses

Currently, no special licenses are required.

#### Further information

- ➔ Chapter 4.1.1 “ctrlX WORKS - Basics” on page 9

## 4.3.2 ctrlX WORKS – Licensing notes

### Open source components

This product includes software developed by Jon Skeet and Marc Gravell (Contact [skeet@pobox.com](mailto:skeet@pobox.com), or see <http://www.pobox.com/~skeet/>).

For an overview on further open source components, go to Window – “About”

### Further information

- ➔ Chapter 6.2.4 “Window – “About”” on page 19
- ➔ Chapter 4.1.1 “ctrlX WORKS - Basics” on page 9



## 5 Working with ctrIX WORKS

### 5.1 Device overview

#### 5.1.1 Devices

The table Devices lists all ctrIX CORE and projected ctrIX CORE Virtual controls that are available and pinned in the network.

The automatic device detection in the network detects devices from the same subnet. This includes an automatic configuration of the network interface of the device. Common standards such as DHCP, UPNP or mDNS allow the device detection in the network without a required user configuration.

Status, device type, IP address and the available actions are shown for each listed device. To open the start page of the control, click on the name of the device or its IP address.

To change the status of the ctrIX CORE Virtual controls (online/offline) or to delete the control if it is in online state, go to the action panel. Select the stylus button to open the configuration window of the ctrIX CORE Virtual control.

The ctrIX CORE controls can be pinned using the needle. They remain visible also when they are switched off.

#### Further information

- ➔ Chapter 6.2.1 “Window – “Devices”” on page 17
- ➔ Chapter 6.4.1 “Sidebar – “Devices <Control name>” ” on page 22
- ➔ Chapter 4.1.1 “ctrIX WORKS - Basics” on page 9

#### 5.1.2 ctrIX CORE Virtual

Provision of virtual controls on the desktop PC as option for the ctrIX WORKS installation of the offline project planning.

#### General information

To test functions and configurations without control hardware on a PC, ctrIX WORKS provides the ctrIX CORE Virtual. It emulates the ctrIX CORE control in a Linux environment on a Windows PC.

Note the following when using the ctrIX CORE Virtual:

- System requirements:
  - Windows 10 64 Bit
  - 8 GB RAM
  - Processor: Intel with support of the visualization technology (Intel VT)
- Up to 5 ctrIX CORE Virtual can be managed
- No field bus connection available
- If a ctrIX CORE Virtual is started, the configuration and operation are analog to the configuration and operation of a ctrIX CORE



The ctrIX CORE Virtual is operated in a visualization environment. When installing ctrIX WORKS on a virtual machine (e.g. Oracle VM VirtualBox) and when executing ctrIX CORE Virtual, considerable performance restrictions can occur. Check the settings regarding the supported of nested visualization for the virtual machine.

### Prerequisites

The ctrlX WORKS installation always includes a current base image for the ctrlX CORE Virtual. To create a ctrlX CORE Virtual on the engineering PC, install ctrlX WORKS with the respective installation option “Virtual Controls”, see ↗ Chapter 4.2.1 “ctrlX WORKS – Installation ” on page 9.

### Description

Virtual controls can be created and managed in the ctrlX WORKS engineering interface. The control is also started and stopped in the engineering interface and the ctrlX CORE web browser is accessed to further project, configure and program.

For the ctrlX CORE Virtual control, the complete Linux operating system is emulated on the engineering PC. Thus, starting the ctrlX CORE Virtual takes a bit longer. The “Booting” display in the status field shows the start.

The “Online” status shows a successful ctrlX CORE Virtual startup. To access the control via the web browser, enter the name or IP addresses. To open the website of the control in the default browser, click on the respective link.

In “Online” state, a ctrlX CORE Virtual control is also shown as device in the Windows network environment if this service is active in Windows.



Note that the active ctrlX CORE Virtual controls continue running when ending ctrlX WORKS. To shut down a ctrlX CORE Virtual, select the  in the device overview of ctrlX WORKS.

### Settings

To specify whether the window of the emulation process is to be displayed, go to the ctrlX WORKS settings. This setting is only evaluated when starting a control.

### Further information

- ↗ Chapter 5.1.1 “Devices” on page 13
- ↗ Chapter 5.1.3 “ctrlX CORE ” on page 14
- ↗ Chapter 6.2.1 “Window – “Devices”” on page 17
- ↗ Chapter 6.2.3 “Window – “Settings”” on page 19
- ↗ Chapter 6.4.1 “Sidebar – “Devices <Control name>” ” on page 22

## 5.1.3 ctrlX CORE

Project planning of the ctrlX CORE via ctrlX WORKS.

### Prerequisites

ctrlX WORKS installation available on the engineering PC, see ↗ Chapter 4.2.1 “ctrlX WORKS – Installation ” on page 9.

### Description

A ctrlX CORE is shown in the Table Devices after is was identified in the connected network using the integrated search mechanism.

If the connection to the control is disconnected, the control is removed from the overview. The list entry remains in the overview even when the control is offline using the “Pinning”.



If a ctrlX CORE is not displayed automatically from the network due to firewall and router settings, insert a link to this control via the button .

**Further information**

- ↪ Chapter 5.1.1 “Devices” on page 13
- ↪ Chapter 5.1.2 “ctrlX CORE Virtual ” on page 13
- ↪ Chapter 6.2.1 “Window – “Devices”” on page 17
- ↪ Chapter 6.2.3 “Window – “Settings”” on page 19
- ↪ Chapter 6.4.1 “Sidebar – “Devices <Control name>” ” on page 22

## 5.2 Diagnostics

### 5.2.1 Creating the system report in ctrlX WORKS

**Call:**

ctrlX WORKS side navigation “About → Generate report”

**Function:**

Creating a system report to supplement an error description.

If an error occurs in ctrlX WORKS or a software package such as ctrlX PLC or ctrlX IO Engineering, staff of the service and development department requires the version of the individual software packages to debug the error. The ctrlX WORKS user can easily obtain and download the information as system report (zip file).

**How to create a system report in the ctrlX WORKS:**

- Click on the "Generate report" button
- Downloading .zip file

**Content of a system report in the ctrlX WORKS:**

The system report (i.e. the zip file) contains the following control information:

- Product name and version
- List of all installed software packages including their versions
- Installed software packages and their version
- Log files of the %LOCALAPPDATA%\Rexroth\ctrlX WORKS\<ID> directory
- If available, more entries of installed software packages

This information is contained in the archive, in file "VersionInfo.json" as well as in the subdirectory "Logs".

**Further information**

- ↪ Chapter 6.2.4 “Window – “About”” on page 19







## 6 ctrlX UI – Elements

### 6.1 Navigation

#### 6.1.1 Side navigation – Overview

**Function:**

For the available functions, go to Side navigation. Select  in the right upper corner of the Side navigation to minimize it and select  to maximize it.

**Further information**

- ➔ Chapter 4.1.1 “ctrlX WORKS - Basics” on page 9

### 6.2 Windows

#### 6.2.1 Window – “Devices”




**Call:**






ctrlX WORKS side navigation “Devices”

**Function:**

The Window Devices is the ctrlX WORKS start page. The upper screen half shows the product banner “ctrlX WORKS essentials”. It references to the basic information on the ctrlX WORKS. Below the product banners in the table, the ctrlX CORE Virtual controls are provided as option of the ctrlX WORKS installation for the offline project planning and the ctrlX CORE controls.

**Elements of the “Devices” window**

GUI element	Description
Product banner “ctrlX WORKS essentials”	The Tile “ctrlX WORKS essentials” provides an overview on the ctrlX WORKS concept and a start into further detailed product documentations. Select Icon Tile to show and hide the 
Command bar “Devices”	“[x] items”: Number of listed ctrlX CORE and ctrlX CORE Virtual controls
	 Adding a ctrlX CORE Virtual or a link to the existing ctrlX CORE control in the Table of the available ctrlX CORE devices. The dialog “Add a ctrlX CORE” opens, see ➔ Chapter 6.3.1 “Dialog – “Add a ctrlX CORE”” on page 21
	 Refresh current site
Table “Devices”	“Name”: Control name
	“State” Operating state of the control.

GUI element	Description
	<p>A ctrlX CORE Virtual can assume four operating states:</p> <ul style="list-style-type: none"> <li>• “Offline”: The control is not running</li> <li>• “Booting”: The control was started and the control web server does not yet respond</li> <li>• “Online”: The control was started successfully and the control web server responds</li> <li>• “Shutdown”: The control was stopped and the system shuts down</li> </ul>
	<p>“Type” Control type (ctrlX CORE or ctrlX CORE Virtual)</p>
	<p>“IP addresses” IP address of the control. In the operating state “Online”, the name and the IP addresses become hyperlinks. Click on the links to open the website of the control in the standard browser</p>
	<p>“Actions” Includes buttons to edit or delete a control (only in stopped state)</p> <p> or </p> <p>Starting or ending the ctrlX CORE Virtual on the device</p> <p></p> <p>Editing a ctrlX CORE Virtual. This is only possible in the stopped state, refer to ↗ Chapter 6.4.1 “Sidebar – “Devices &lt;Control name&gt;” ” on page 22</p> <p></p> <p>Deleting a ctrlX CORE Virtual</p> <p></p> <p>Pin the table entry of the ctrlX CORE. It also remains when the control is “Offline”</p>

**Further information**

- ↗ Chapter 5.1.1 “Devices” on page 13
- ↗ Chapter 6.4.1 “Sidebar – “Devices <Control name>” ” on page 22
- ↗ Chapter 4.1.1 “ctrlX WORKS - Basics” on page 9

**6.2.2 Window – Engineering Tools**

**Call:**

ctrlX WORKS side navigation “*Engineering Tools*”

**Function**

The WindowEngineering Tools provides an overview of all stand-alone Windows applications in the ctrlX AUTOMATION environment. The tool is managed via the ctrlX WORKS installation. A Windows applications is represented by a tile. This tile contains information about the function of the respective application as well as a link to install the installation at a later point or to start the application.

**Further information**

- ↪ Chapter 4.1.1 “ctrlX WORKS - Basics” on page 9

**6.2.3 Window – “Settings”****Call:**

ctrlX WORKS side navigation “*Settings*”

**Function:**

For the setting on ctrlX WORKS, go to the window Settings.

**Start page****Tile Start page**

Via the “Start page”, it is specified which page is displayed upon the start of ctrlX WORKS. Initialization value is Devices

**Setup****Tile “Installed version:”**

The currently installed ctrlX WORKS version is shown.


Click on the button “Add or remove features” to select the functions and tools to be installed in the opening ctrlX WORKS window “Custom Setup”, see ↪ Chapter 4.2.2 “ctrlX WORKS – Installation options” on page 10.

**Tile “Available update(s):”**

The available ctrlX WORKS updates are shown here.

Click on the button of the new version to update in the opening ctrlX WORKS window “Custom Setup”, see ↪ Chapter 4.2.2 “ctrlX WORKS – Installation options” on page 10.

**Help****Tile “Help settings:”**

To change the jump target to the Content Delivery Portal, go to the address field “Help url \*”. Select the help to be opened using the button .

**ctrlX CORE Virtual****Tile “Virtual control emulation:”**

Select whether to show the window of the emulation process for a running ctrlX CORE Virtual instance via a switch.

**Further information**

- ↪ Chapter 4.1.1 “ctrlX WORKS - Basics” on page 9
- ↪ Chapter 4.2.2 “ctrlX WORKS – Installation options” on page 10

**6.2.4 Window – “About”****Call:**

ctrlX WORKS side navigation “*About*”

**Function:**

The Window “About” provides product information on the present ctrlX WORKS software instance:

- Software and version
- Software publisher (copyright)

- Open source components
- General conditions of use
- System report

**Further information**

- ➔ Chapter 4.1.1 “ctrlX WORKS - Basics” on page 9
- ➔ Chapter 6.2.3 “Window – “Settings”” on page 19

### 6.2.5 Window – “Open Source Components”

**Call:**

ctrlX WORKS side navigation “About → Open Source Components”

**Function:**

The Window “Open Source Components” provides information on open source components implemented into the ctrlX WORKS software instance. The components are shown in a table.

After the table, the “Written Offer for Source Code” is shown, see ➔ Chapter 6.2.6 “Written Offer for Source Code” on page 20

**Elements of the “Open Source Components” window**

GUI element	Description
Table	“Name” Name of the open source component
	“Version” Version of the open source component
	“License(s)” License type
“Written Offer for Source Code”	Information on the reference of the implemented source code

**Further information**

- ➔ Chapter 4.1.1 “ctrlX WORKS - Basics” on page 9
- ➔ Chapter 6.2.3 “Window – “Settings”” on page 19

### 6.2.6 Written Offer for Source Code

**Call:**

ctrlX WORKS side navigation “About → Open Source Components → Written Offer for Source Code”

**Written Offer for Source Code**

This product contains software components that are licensed by the holder of the rights under GNU General Public License (GPL), GNU Lesser General Public License (LGPL) or any other Open Source Software license, which requires that source code be made available.

The source code of these software components is not already delivered together with this product. You can obtain the source code for these software components on a physical medium (CD or DVD) by submitting a written request

to our open source office address listed below or by sending an email to “open.source@boschrexroth.de”. When sending such a request, please name the relevant product and the date of purchase of the same.

**Bosch Rexroth AG**  
**Open Source Office**  
**Zum Eisengießer 1**  
**97816 Lohr am Main**  
**Deutschland**

We may charge you a fee (up to max. 20,- €) to cover the cost of physical media and processing. You may send your request (i) within three (3) years from the date you received the product that included the binary that is the subject of your request or (ii) in the case of code licensed under the GPL v3 for as long as Bosch Rexroth offers spare parts or customer support for that product.

#### Further information

- ↪ Chapter 4.1.1 “ctrIX WORKS - Basics” on page 9
- ↪ Chapter 6.2.3 “Window – “Settings”” on page 19

## 6.3 Dialogs

### 6.3.1 Dialog – “Add a ctrIX CORE”

#### Call:

ctrIX WORKS side navigation “*Devices*” button 

#### Function:

Use the dialog “Add a ctrIX CORE” to add a ctrIX CORE Virtual or a link to an existing ctrIX CORE control in the Table of the available ctrIX CORE.

#### Dialog elements

	Function
“Create a new ctrIX CORE Virtual instance”	Creating a new ctrIX CORE Virtual. The default name of a new ctrIX CORE is <b>VirtualControl-x</b> and can be changed in the input field “Name”
“Add a link to an existing ctrIX CORE”	Adding a link to an existing ctrIX CORE. An existing ctrIX CORE is created by entering an IP address into the input field “IP_Address”. If a ctrIX CORE is detected below the IP address, the control name is shown
“OK”	Command to confirm the dialog and to create the ctrIX CORE Virtual or ctrIX CORE
“Cancel”	Command to cancel the dialog


#### Further information

- ↪ Chapter 6.2.1 “Window – “Devices”” on page 17
- ↪ Chapter 5.1.1 “Devices” on page 13

## 6.4 Sidebars

### 6.4.1 Sidebar – “Devices <Control name>”

#### Editing a ctrlX CORE Virtual

The ctrlX CORE Virtual control properties can be edited via the  interface in the window “Devices” in stopped state. If the control is running, the control properties are opened as read-only.

#### Elements of the Sidebar “Devices <Control name>”

GUI element	Description
Tab bar “Devices <Control name>”	<p>“Basic”: Changing the control name</p> <hr/> <p>“Advanced”: The following is shown in this tab:</p> <ul style="list-style-type: none"> <li>● “Network Mode”                             <ul style="list-style-type: none"> <li>- “Network Adapter” The selection allows to access the control using a TAP Windows network adapter. The control can be reached via the respectively configured IP addresses. The IP addresses are set analogously to the ctrlX CORE using the settings of the control</li> <li>- “Port Forwarding” If a port forwarding is required (e.g. in a VPN environment), some communication ports of the ctrlX CORE Virtual control (e.g.: SSH 22, HTTPS 443, PLC 11740, OPC UA 4840) have to be redirected. To make these settings, go to the field “Port Forwarding”. The numerical placeholders to be entered for the respective ports can be freely selected (www:22,xxx:443,yyy:11740,zzz:4840). Open the control website via https://localhost:xxxx. The PLC communication can be set up in the ctrlX PLC Engineering via the address 127.0.0.1:yyyy. The address localhost:www is used for an SFTP access to the control</li> </ul> </li> <li>● “External access” This option is available if the “Port Forwarding” option is active. By selecting a network adapter, it is specified which network interface is used to publish the virtual control. The ports defined in “Port Forwarding” are forwarded via the host IP. External devices can establish a connection to the control via the following address: <b>https://&lt;Host-IP&gt;:&lt;Port&gt;</b>.</li> </ul> <p><b>Note:</b> To allow external access, a rule has to be created for the affected ports in the firewall of the PC</p> <ul style="list-style-type: none"> <li>● “Base Image Version”</li> </ul>

GUI element	Description
	<p>Version displaz of the current base image (cannot be edited)</p> <ul style="list-style-type: none"><li>• “User Image” File name of the user image file used (cannot be edited).</li></ul> <p>All changes in the file system of the ctrlX CORE Virtual control are saved in the respective user image file. A user image file can only be used with its respective base image file</p>

To save the change, select . Select  to return to the window “Devices”.

#### Further information

- ↪ Chapter 5.1.1 “Devices” on page 13
- ↪ Chapter 6.2.1 “Window – “Devices”” on page 17





## 7 Related documentation

### 7.1 Overview

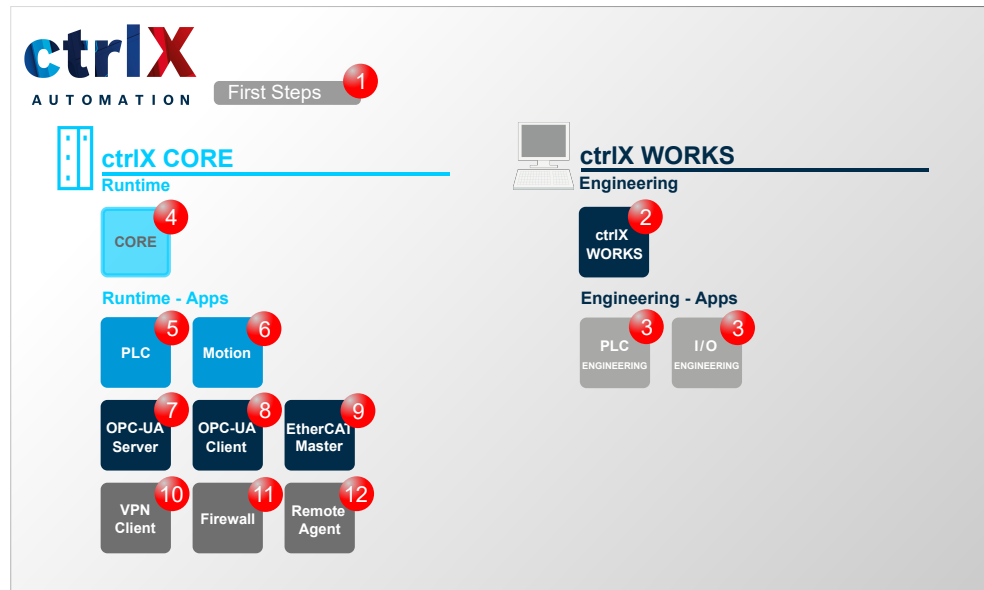


Fig. 1: Overview on further documentations

### 7.2 ctrlX AUTOMATION

No.	Documentation
1	<p><b>ctrlX WORKS First Steps</b> Quick Start Guide → Web documentation link Ordering information:</p> <ul style="list-style-type: none"> <li>• DOK-XWORKS-F*STEP*****-QURS-EN-P</li> <li>• R911403760</li> </ul>

### 7.3 ctrlX WORKS

No.	Documentation
2	<b>ctrlX WORKS Basic System</b> Application Manual ↪ Web documentation link Ordering information: <ul style="list-style-type: none"> <li>• DOK-XWORKS-*****-APRS-EN-P</li> <li>• R911403761</li> </ul>
3	<b>ctrlX PLC Engineering - PLC Programming System</b> Application Manual ↪ Web documentation link Ordering information: <ul style="list-style-type: none"> <li>• DOK-XPLC**-ENGINEERING-APRS-EN-P</li> <li>• R911403764</li> </ul>
3	<b>ctrlX PLC Engineering - PLC Libraries</b> Reference ↪ Web documentation link Ordering information: <ul style="list-style-type: none"> <li>• DOK-XPLC**-LIBRARY****-RERS-EN-P</li> <li>• R911403766</li> </ul>

## 7.4 ctrlX CORE

No.	Documentation
4	<b>ctrlX CORE - Runtime</b> Application Manual ↪ Web documentation link Ordering information: <ul style="list-style-type: none"> <li>• DOK-XCORE*-BASE*****-APRS-EN-P</li> <li>• R911403768</li> </ul>
	<b>ctrlX CORE - Diagnostics</b> Reference ↪ Web documentation link Ordering information: <ul style="list-style-type: none"> <li>• DOK-XCORE*-DIAG*****-RERS-EN-P</li> <li>• R911403770</li> </ul>

## 7.5 ctrlX CORE Apps

No.	Documentation
5	<b>PLC App - PLC Runtime Environment for ctrlX CORE</b> Application Manual ↪ Web documentation link

No.	Documentation
	Ordering information: <ul style="list-style-type: none"> <li>● DOK-XCORE*-PLC*****-APRS-EN-P</li> <li>● R911403787</li> </ul>
6	<b>Motion App - Motion Runtime Environment for ctrlX CORE</b> Application Manual ➔ Web documentation link Ordering information: <ul style="list-style-type: none"> <li>● DOK-XCORE*-MOTION*****-APRS-EN-P</li> <li>● R911403791</li> </ul>
7	<b>OPC UA Server App - OPC UA Server for ctrlX CORE</b> Application Manual ➔ Web documentation link Ordering information: <ul style="list-style-type: none"> <li>● DOK-XCORE*-OPCUA*SERV*-APRS-EN-P</li> <li>● R911403778</li> </ul>
8	<b>OPC UA Client App - OPC UA Client for ctrlX CORE</b> Application Manual ➔ Web documentation link Ordering information: <ul style="list-style-type: none"> <li>● DOK-XCORE*-OPCUA*CLIEN-APRS-EN-P</li> <li>● R911403781</li> </ul>
9	<b>EtherCAT Master App - EtherCAT master for ctrlX CORE</b> Application Manual ➔ Web documentation link Ordering information: <ul style="list-style-type: none"> <li>● DOK-XCORE*-ETHERCAT***-APRS-EN-P</li> <li>● R911403773</li> </ul>
10	<b>VPN Client App - Remote Support Software for ctrlX CORE</b> Application Manual ➔ Web documentation link Ordering information: <ul style="list-style-type: none"> <li>● DOK-XCORE*-VPN*****-APRS-EN-P</li> <li>● R911403775</li> </ul>
11	<b>Firewall App - Security Functions for ctrlX CORE</b> Application Manual ➔ Web documentation link Ordering information: <ul style="list-style-type: none"> <li>● DOK-XCORE*-FIREWALL***-APRS-EN-P</li> <li>● R911403783</li> </ul>
12	<b>Remote Agent App - Device Portal Connection for ctrlX Devices</b> Application Manual ➔ Web documentation link

No.	Documentation
	Ordering information: <ul style="list-style-type: none"><li data-bbox="496 297 1043 327">• DOK-XCORE*-REMOTE*AG**-APRS-EN-P</li><li data-bbox="496 331 695 360">• R911403785</li></ul>

## 8 Service and support

Our worldwide service network provides an optimized and efficient support. Our experts offer you advice and assistance should you have any queries. You can contact us **24/7**.

### Service Germany

Our technology-oriented Competence Center in Lohr, Germany, is responsible for all your service-related queries for electric drive and controls.

Contact the **Service Hotline** and **Service Helpdesk** under:

Phone: **+49 9352 40 5060**

Fax: **+49 9352 18 4941**

E-mail: **↗ service.svc@boschrexroth.de**

Internet: **↗ <http://www.boschrexroth.com>**

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Outside Germany, please contact your local service office first. For hotline numbers, refer to the sales office addresses on the internet.

### Preparing information

To be able to help you more quickly and efficiently, please have the following information ready:

- Detailed description of malfunction and circumstances
- Type plate specifications of the affected products, in particular type codes and serial numbers
- Your contact data (phone and fax number as well as your e-mail address)



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