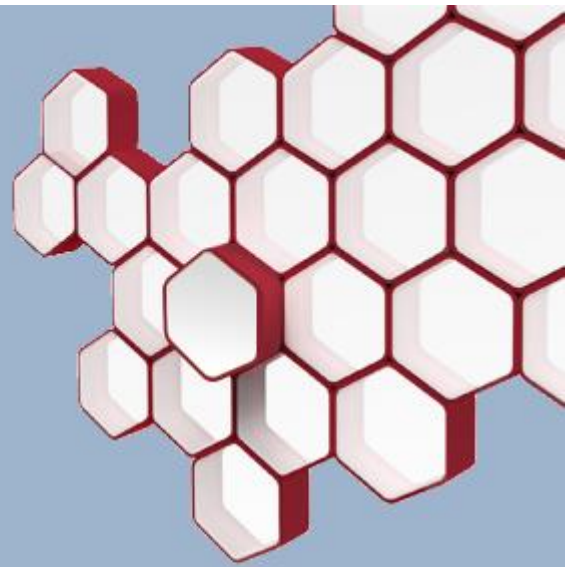


APPLICATION INSTRUCTION



Moog Valve and Pump Configuration Software (MoVaPuCo) B99464-DV0**-A-010

Rev. A, August 2020

Moog Valve and Pump Configuration
Software (MoVaPuCo) using IXXAT
USB-to-CAN adapter via VCI driver

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We reserve the right to make changes to this document at any time and without specified reasons.

Completeness

This document is complete only when used in conjunction with the product-related hardware and software documentation required for the relevant application, as for example operating instructions of the valve and other manuals.

Selection and qualification of personnel

As specified in the product-related hardware and software documentation required for the relevant application, only users properly qualified and authorized for these tasks may work with and on our products.

Note

This document has been prepared with great care in compliance with the relevant regulations, state-of-the-art technology and our many years of knowledge and experience, and the contents have been generated to the best of the authors' knowledge. However, the possibility of error remains and improvements are possible.
 Please feel free to submit any comments about possible errors and incomplete information to us.

Document version

The following table shows possible language versions of this document:

ES	DA	DE	EL	EN	FR	IT	NL	PT	FL	SV	CS	ET	LV	HU	MT	PL	SK	SL	BG	RO	GA
-	-	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Revision record

The following table shows the revision record:

Revision	Description	Prepared	Checked	Approved	Date
A	Initial version	HOS	TYG, SCR		Aug. 2020

Table of Contents

Document version.....	2
Revision record.....	2
1 Overview.....	4
2 Different hardware of the USB-to-CAN adapter	5
2.1 USB-to-CAN compact.....	5
2.2 USB-to-CAN V2 compact	5
3 VCI Driver	6
3.1 VCI 3.5.....	6
3.2 VCI 4.0.....	6
4 Possible problems	7
4.1 Driver is not recognized by MoVaPuCo	7
4.2 Blue Screen with VCI 4.0 driver.....	7
5 Suggested solutions	8
5.1 New installation VCI driver	8
5.1.1 Uninstall VCI driver.....	8
5.1.2 Driver Download	8
5.1.3 Install VCI driver	8
5.2 Connecting the USB-to-CAN adapter to a USB port	9
5.3 Firmware Update USB-to-CAN Adapter.....	9
5.4 New installation MoVaPuCo	9
5.4.1 MoVaPuCo uninstall	9
5.4.2 MoVaPuCo Download	10
5.4.3 Installing MoVaPuCo	10

1 Overview

The Moog Valve and Pump Configuration Software (MoVaPuCo) with the Moog number B99464-DV0**-A-010 is used to configure digitally controlled valves. (** stands for the different version numbers e.g. 3.4 => B99464-DV034-A-010).

In most cases MoVaPuCo uses a USB-to-CAN adapter from IXXAT to connect to the CAN service connector of the valve. MoVaPuCo accesses a VCI driver from IXXAT to communicate with the USB-to-CAN adapter. In the past, problems have occurred in the interaction of MoVaPuCo due to different hardware and firmware versions of the USB-to-CAN adapter or due to different VCI drivers and different Windows versions. In this document, these problems are discussed and solutions are suggested.

USB-to-CAN V2 with MoVaPuCo Version >= 3.4

VCI driver version	Windows 7 / 8.1 / 10
3.5.2.4268	recommended
3.5.4.4543	not working
4.0.793	is working ^{(1) (2)}
4.0.925 new	^{(1) (2) (3)}

⁽¹⁾ USB-to-CAN V2 Firmware must be >= v1.07.00

⁽²⁾ Other Moog tools do not work (PC-Bootloader, MoVaCo)

⁽³⁾ Not yet sufficiently investigated. First tests with Windows 10 showed no errors.

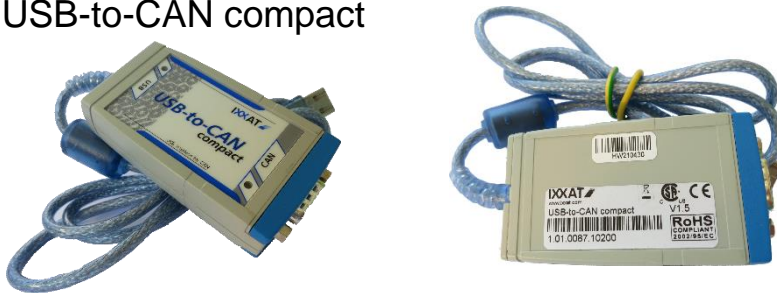
Please check if a newer version of this document is available on our download page.

<https://www.moogsoftwaredownload.com/valves-pumps.html>

2 Different hardware of the USB-to-CAN adapter

At the beginning the USB-to-CAN compact was sold under the Moog part number C43094-001 and later, under the same number, its replacement the USB-to-CAN V2 compact.

2.1 USB-to-CAN compact

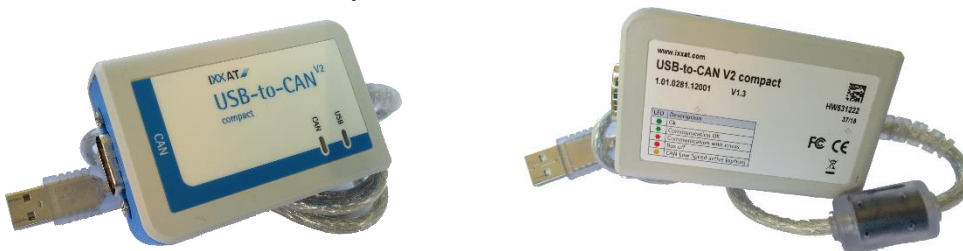


An old USB-to-CAN compact adapter existed that worked with USB 1.1, but it has been discontinued by IXXAT (now HMS) since 2014.

IXXAT and Moog no longer support it.

Depending on the age of its firmware (recommended version: V1.6) it can still work with different versions of VCI drivers and Windows versions. However, we recommend using the current USB-to-CAN V2 adapter.

2.2 USB-to-CAN V2 compact



The USB-to-CAN V2 compact works with USB 2.0 and is therefore significantly faster than its predecessor.

It works well together with different versions of the VCI driver 3.5. Unfortunately, firmware versions of the adapter earlier than 1_07_00 have problems with the VCI 4.0 driver. There are occasional Windows crashes with blue screen. A firmware update with instructions is offered on the manufacturer's website.

We recommend making the firmware update independent of the version of the VCI driver.

See chapter 5.3 Firmware Update USB-to-CAN Adapter

3 VCI Driver

A USB-to-CAN adapter requires the installation of a VCI driver.

Please use only drivers, which are recommended on our homepage.

<https://www.moogsoftwaredownload.com/valves-pumps.html>

3.1 VCI 3.5

The latest driver 3.5, released as 3.5.4.4543, does not work together with MoVaPuCo. Furthermore, it must not be used with Windows 10 with activated Secure Boot.

(Secure Boot is a part of the UEFI specification, which is supposed to guarantee the authenticity or originality of important software parts of the firmware).

We therefore recommend the use of version VCI V3.5.2.4268, which is older, but works with Windows 7 / 8.1 and Windows 10 (independent of Secure Boot).

3.2 VCI 4.0

Only use if version VCI V3.5.2.4268 does not work.

Only use the 4.0 driver version tested by us from our homepage.

<https://www.moogsoftwaredownload.com/valves-pumps.html>

4 Possible problems

4.1 Driver is not recognized by MoVaPuCo

If the VCI driver is not found during starting MoVaPuCo:



This is not a problem if a USB-to-CAN adapter is not in use, e.g. because the connection is established via EtherCAT only.

Possible solutions:

Is the USB-to-CAN connected? The driver is only recognized if an adapter has already been recognized and Windows completes the driver installation.

- Chapter 5.2 Connecting the USB-to-CAN adapter to a USB port

Is the VCI driver installed?

- Chapter 5.1.3 Install VCI driver

The VCI driver may not have been installed correctly and must be removed and reinstalled:

- Chapter 5.1 New installation VCI driver

Problems are possibly caused by damaged / faulty MoVaPuCo installation:

- Chapter 5.4 New installation MoVaPuCo

4.2 Blue Screen with VCI 4.0 driver

Some crashes with blue screen were observed when the USB-to-CAN adapter had a firmware version older than 1_07_00.

Possible solutions:

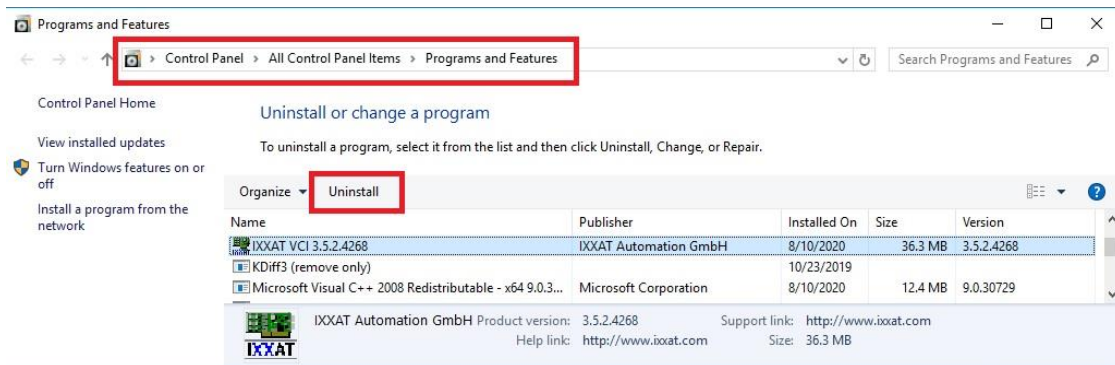
- Chapter 5.3 Firmware Update USB-to-CAN Adapter

5 Suggested solutions

5.1 New installation VCI driver

5.1.1 Uninstall VCI driver

- Close all applications that use the driver.
Example: MoVaPuCo, MiniMon, CAN-Analyzer,
- Disconnect USB-to-CAN adapter from PC USB port.
- At Control Panel\Programs\Programs and Features select the IXXAT driver and press Uninstall.
- Follow the instructions.
- Restart Windows.



5.1.2 Driver Download

The driver recommended by Moog can be downloaded from this page:

<https://www.moogsoftwaredownload.com/valves-pumps.html>

Drivers for BUS Interfaces			
	Description	File Name	Size
Download	VCI driver V3.5.2.4268 is recommended by Moog, because it is very well tested with MoVaPuCo. It must not be installed on computers that use Windows 10 with Secure Boot enabled.	VCI V3.5.2.4268.zip	26.7 MB
Download	VCI driver version 4.0 (Not all old IXXAT hardware/firmware work stable). It must be used on computers that use Windows 10 with Secure Boot enabled.	VCI V4.0.793.zip	60.4 MB

5.1.3 Install VCI driver

Preconditions:

- Uninstalling existing drivers see chapter 5.1.1 Uninstall VCI driver
- Obtain installation software see chapter 5.1.2 Driver Download
- Administrator rights on the PC
- Close all applications that use the driver.
Example: MoVaPuCo, MiniMon, CAN-Analyzer, ...
- Disconnect USB-to-CAN adapter from PC USB port.

Execute installation

Unzip the installation software and place it in a directory that is not called temp, tmp or download or in subdirectories of it since on some systems, the rights of programs started in such folders are restricted.

Call the installation program e.g. vci_3_5_2_4268.exe and follow the instructions.

5.2 Connecting the USB-to-CAN adapter to a USB port

Preconditions:

- Chapter 5.1.3 Install VCI driver







After the installation is completed, connect the USB-to-CAN adapter to the PC via USB. If necessary, wait a moment until Windows has recognized the new device, set up the driver and reports the device ready for use. This may appear differently or not at all with different Windows versions.

Only now, MoVaPuCo is able to recognize and use the installed driver.

5.3 Firmware Update USB-to-CAN Adapter

Download instructions and firmware from the manufacturer and install according to instructions.

<https://www.ixxat.com/technical-support/resources/downloads-and-documentation?ordercode=1.01.0281.12001>

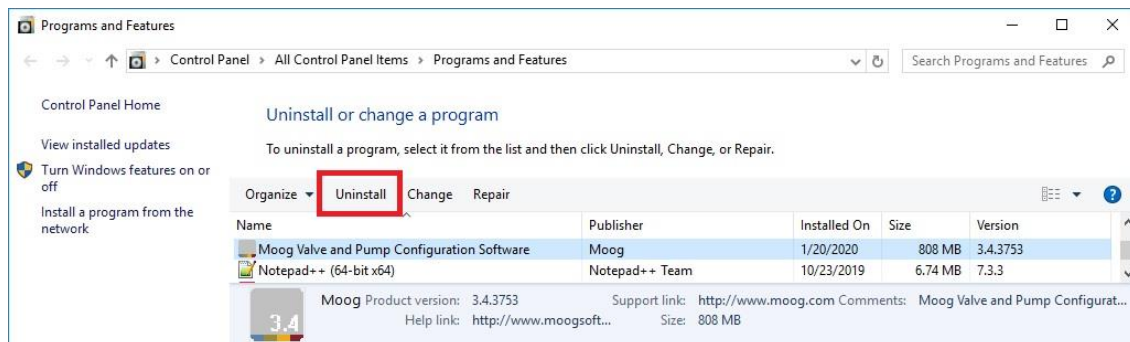
ECI Driver for VxWorks 6.9.3	1.9.2404.0	1,40 MB	 Download
05 - CERTIFICATIONS			
USB-to-CAN V2 CE Declaration of Conformity		50,23 KB	 Download
06 - OTHER FILES			
Firmware Update - How-to		238,62 KB	 Download
Firmware update - Release Notes	1.07.00	763 BYTES	 Download
USB-to-CAN V2 – Firmware update	1.07.00	350,87 KB	 Download
07 - STEP 3D FILES			
Step 3D file for USB-to-CAN V2 embedded		6,12 MB	 Download

The manual only refers to the VCI 4.0 driver, but works in the following way also with the VCI 3.5 driver. Use the C:\Program Files\IXXAT\VCI 3.5\VCI3floadGUI.exe instead of the C:\Program Files\HMS\Ixxat VCI 4.0\VCI4floadGUI.exe application.

5.4 New installation MoVaPuCo

5.4.1 MoVaPuCo uninstall

- Close MoVaPuCo
- At Control Panel\Programs\Programs and Features select the Moog Valve and Pump Configuration Software and press Uninstall.
- Follow the instructions.



5.4.2 MoVaPuCo Download

After the license conditions have been accepted, MoVaPuCo can be loaded in two different versions from this page as a zip file:

<https://www.moogsoftwaredownload.com/valves-pumps.html>

Important! You must agree to the [Moog Software License \(Softwarelizenzvertrag\)](#) before downloading our software packages.

[I have read and agree to the Moog Software License](#)

Configuration Software

	Description	File Name	Size
Download	Latest Moog Valve and Pump Configuration Software (MoVaPuCo) version 3.4. Small installation includes internet links to the Help Videos and a Webinstaller for .net.	MoVaPuCo_3.4_Small.zip	17 MB
Download	Latest Moog Valve and Pump Configuration Software (MoVaPuCo) version 3.4. Complete installation includes Help Videos and .net, for target PCs without internet access.	MoVaPuCo_3.4_Complete.zip	435 MB

The complete standard installation MoVaPuCo_3.4_Complete.zip contains the help videos and an installation package in case the required .net version is not yet installed on your system. It is especially suitable for target PCs without internet access.

The small installation MoVaPuCo_3.4_Smal.zip contains only internet links to the help videos and a web installer, in case the required .net version is not yet installed on your system. It is especially suitable for target PCs with slow internet access or little free disk space

5.4.3 Installing MoVaPuCo

Preconditions:

- Chapter 5.4.2 MoVaPuCo Download
- Administrator rights on the PC

Execute installation

Unzip the installation software and place it in a directory that is not called temp, tmp or download or in subdirectories thereof since on some systems, the rights of programs started in such folders are restricted.

Start the setup.exe and follow the dialogs.

If the required .net runtime version is not yet installed (e.g. with Windows 7), this is detected and the installation is performed first. Afterwards you will be asked to restart Windows. After the restart, please be patient, the setup.exe will start automatically to continue with the installation of MoVaPuCo.

Note:

If MoVaPuCo is to work via a USB-to-CAN adapter, the VCI driver must first be installed. See chapter 5.1.3 Install VCI driver.

If MoVaPuCo is operated exclusively via EtherCAT, the warning about the missing VCI driver can be ignored.

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