

IVP Firmware Update Tool and Patch Notes

USER MANUAL



BEFORE YOU BEGIN - IMPORTANT INFORMATION

The Ideal Vacuum (IVP) Firmware Update Tool is used to upgrade the onboard software (firmware) of any IVP device which uses firmware by a download through its USB connection.

The Firmware Update tool is a 64 bit Windows 10 and newer application that installs AVRdude and Microchip Technology, Inc. drivers and software when the Update Tool is installed. We provide no guarantee of any kind with these third party drivers.

This document tells you what updates there may be available for your device, without having to download and run the Firmware Update Tool software.



Read this document in its entirety before downloading or using the IVP Firmware Update Tool.

A link to the Update Tool is provided at the end of this document.

Use terminal software (or DirectVAC II software for CommandValves) to determine the current firmware on your device. Use the **version** command. Then, read the firmware patch notes (next page) to determine if your device has an update available.

It is not required or necessary to update the firmware unless you:

- Want to take advantage of the improved functionality or performance that the update offers.
- Are experiencing an issue that is corrected by the new firmware.
- Are instructed to update the firmware by an Ideal Vacuum representative.



If the device is disconnected or power is interrupted during the firmware update, the onboard software will become corrupted, the device will cease to function, and it will have to be returned to Ideal Vacuum for repair.

- Internet access is required to perform any firmware update.
- Connect one device to update at a time.
- The USB cable must be connected and the device must be powered on.

CUSTOMER SERVICE AND SUPPORT

If you have any questions about the installation or use of this software, please contact us. Customer Service and Technical Support is available weekdays, from 8am-5pm, Mountain Time.

Phone: (505) 872-0037

Email: techsupport@idealcvac.com

DOWNLOADING AND INSTALLATION

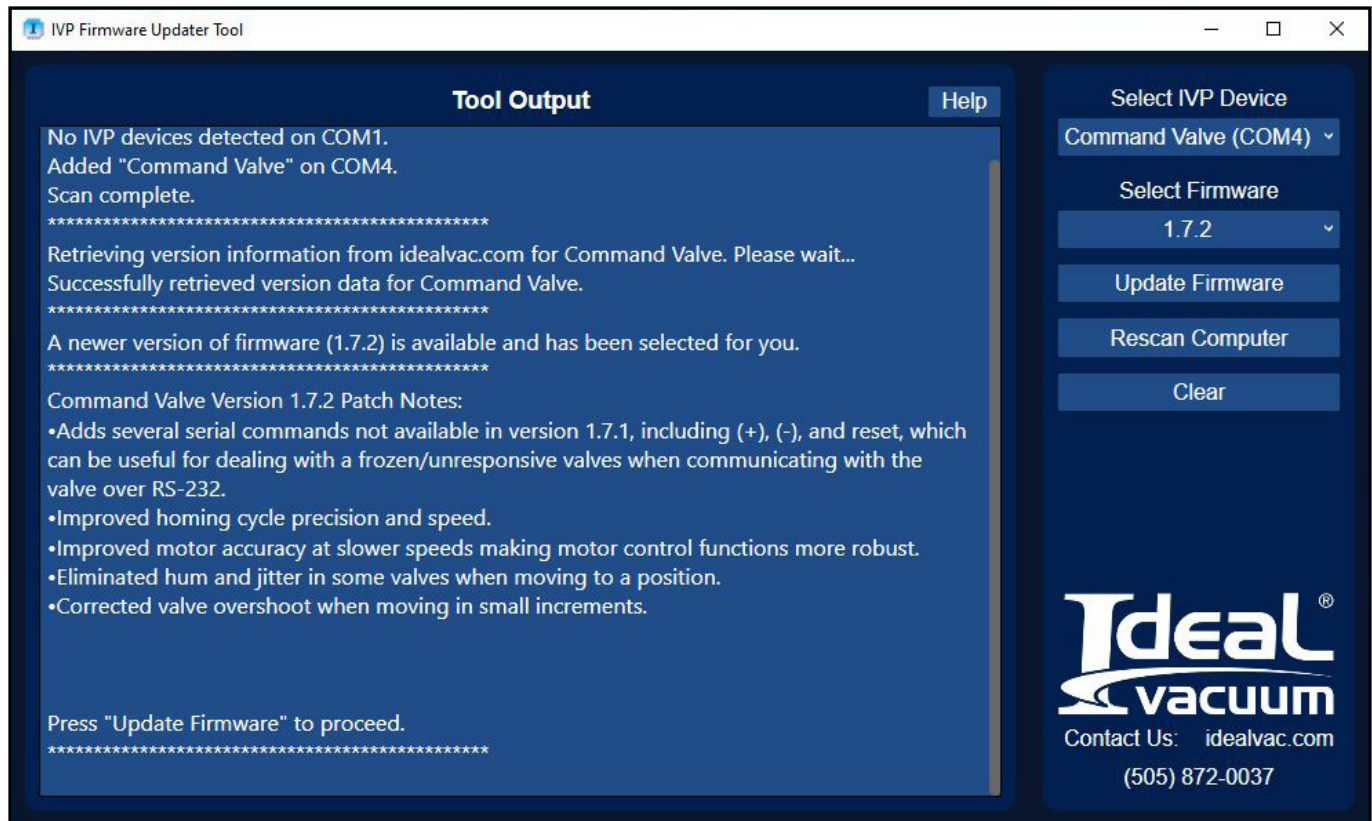
1. Read this entire document.
2. Click the link on the last page of this document to download the Firmware Update Tool Setup.exe file.
3. Double-click the file and follow the on-screen prompts to install the software.
During installation you can choose to add a shortcut to the Desktop.

RUN THE UPDATE TOOL

After the installation is finished, connect the device to the computer with the supplied USB cable and connect power.

If you selected to have a shortcut placed on the desktop during installation, double-click it. Or, go to the Windows Start Menu. Select the IVP Firmware Update Tool from the IdealVac folder.

This screen appears:



The Update Tool will automatically find the device and auto-enter its COM port. It will also determine the currently installed firmware version and determine if there is an upgrade available.

Press the Update Firmware button to write the new firmware onto the device.

The Firmware Update Tool is backward compatible. It can be used to load older versions of the firmware.

FIRMWARE PATCH NOTES

CommandValve:

CommandValve firmware updates can be downloaded and installed through the USB port **ONLY IF THE COMMANDVALVE HAS VERSION 1.7.1 FIRMWARE OR NEWER.**

Version 1.8.2

- Fixed a rare thermal and current overload condition that could cause a control board failure.
- Added an LED Blink function if the valve experiences an error state.
- Added new serial commands (**temp**, **current**, **maxcurrent**, and **circurrent**) for improved valve diagnosis.

Version 1.8.0

- Fixed a failure that allowed the butterfly to spin fully.

Version 1.7.5

- Fixed a homing issue which resulted in the valve throwing the Error 6 code.

Version 1.7.4

- Enhanced motor speed ramping to decrease peaks in current draw. Fixes power issue with Signal Converter adapter (P1012593).

Version 1.7.3

- Enhanced home cycle. Homing is more robust and fails less on mechanically tight valves.
- More home cycle failure recovery features added so valves stay responsive over serial after a failed home cycle.
- Valve warnings and errors are now recorded and can be queried via serial.
- Fixed bug where +/- commands could cause unexpected behavior immediately after a homing cycle.
- Added serial commands "error", "warning", "defaults".

Version 1.7.2

- Adds several serial commands not available in version 1.7.1, including (+), (-), and reset, which can be useful for dealing with a frozen/unresponsive valve when communicating with the valve over RS-232.
- Improved homing cycle precision and speed.
- Improved motor accuracy at slower speeds making motor control functions more robust.
- Eliminated hum and jitter in some valves when moving to a position.
- Corrected valve overshoot when moving in small increments

Version 1.7.1

- Added ability to update firmware over USB by download.
- Fixed minor bugs

Version 1.6x

- Firmware not upgradeable via download. Contact Ideal Vacuum for support options.

Dual Capacitance Manometer Gauge Controller (P1010127):

Version 1.3.0

- Updated C library
- Added support for model P chipset configurations

Version 1.2.0

- Added ability to update firmware over USB by download.

