



HEIDENHAIN



Programming Station for TNC Controls

Programming and Training
on a PC

HEIDENHAIN programming stations

Programming, archiving, and training

Your workstation

What's the purpose of a programming station?

As easy as it is to write a part program on a TNC at the machine while a different part is being machined, short reloading times or high machine utilization may hinder attentive programming work on the shop floor. With a HEIDENHAIN programming station you have the capability to program just as you do at the machine, but away from the noise and distractions of the shop floor.

Creating programs

Programming, testing and optimizing HEIDENHAIN Klartext or G-code programs with a programming station substantially reduces machine idle times. You need not adjust your way of thinking—every keystroke fits. On the programming station you program on the same keyboard unit as at the machine.

Testing programs created offline

Naturally, you can also test programs that were written on a CAD/CAM system. The high-resolution program verification graphics help you to easily spot contour damage and hidden details even in complex 3-D programs.

Training with the programming station

Since the programming stations are based on the same software as the controls, they are ideally suited for apprentice and advanced training. Programming and Test Run modes work exactly as they would on the machine. This gives the trainee the confidence needed to operate a real machine.

And because the HEIDENHAIN controls can be programmed in Klartext and with G codes, the programming stations can also be used in schools for TNC programming training.

What can the programming station do?

The programming modes offer you the same features as the TNC on the machine. You create programs:

- In HEIDENHAIN Klartext format or with G codes
- With graphic support for program input and test run
- With innovative TNC functions, such as contour drawing
- By direct data transfer from standardized CAD formats (DXF, STEP, IGES)

With the programming station, you are working with the original control software. This ensures compatibility. Part programs created with the programming station run on any machine tool equipped with the appropriate control. A requirement for this to work is that the programming station software must have been adapted to the machine.

One special benefit: nearly all **software options** and—on the iTNC 530—**FCL functions** available for the control are fully enabled on the TNC programming station at no extra charge. This enables users of the licensed versions and the free demo version to simply test all functions and then decide whether an upgrade on the machine is worthwhile.

What does the programming station look like?

The programming station is an application for PCs with Windows operating systems. The software offers you the same TNC user interface and graphic support as the control of your machine. Depending on the version of the programming station, there are several types of possibilities for using it.

Demo version of the programming station

A demo version of the programming station is available for testing (for free download from www.heidenhain.com). It contains all functions of the TNC, and permits short programs to be saved. The demo version is programmed with the virtual keyboard or PC keyboard. The legend for the control keys is included.

Programming station with TNC operating panel

A separate TNC machine operating panel is connected to the PC via the USB port. You then create your programs as always, on the same keyboard as on the machine. The keyboard also includes the soft keys, which are otherwise integrated in the display unit. It has a PC keyboard for convenient and efficient entry of file names and

comments. Overlays for better soft-key association and self-adhesive strain relief for the USB cable are included in delivery.

Programming station with virtual keyboard

You can also work without the TNC operating panel: this programming station is operated with a virtual keyboard instead. It is displayed together with the TNC control panel on the PC screen, and features the most important dialog initiation keys of the TNC. A dongle for the software is included.

The programming station with virtual keyboard is available in the following versions:

- **Single station license**
- **Network license** for 1, 14 or 20 stations. The stations must be interconnected with each other, because the software dongle is connected to only one PC. The network license is therefore especially useful for training rooms.

TNC7 programming station keyboard

The programming station keyboard is based on the TNC7 control panel and, owing to its compact design, is excellently suited for use at the office workstation or for training purposes. With the keyboard,

you can operate the programming station very ergonomically and, thanks to the long-travel key mechanism, particularly comfortably.

The TNC7 programming station keyboard:

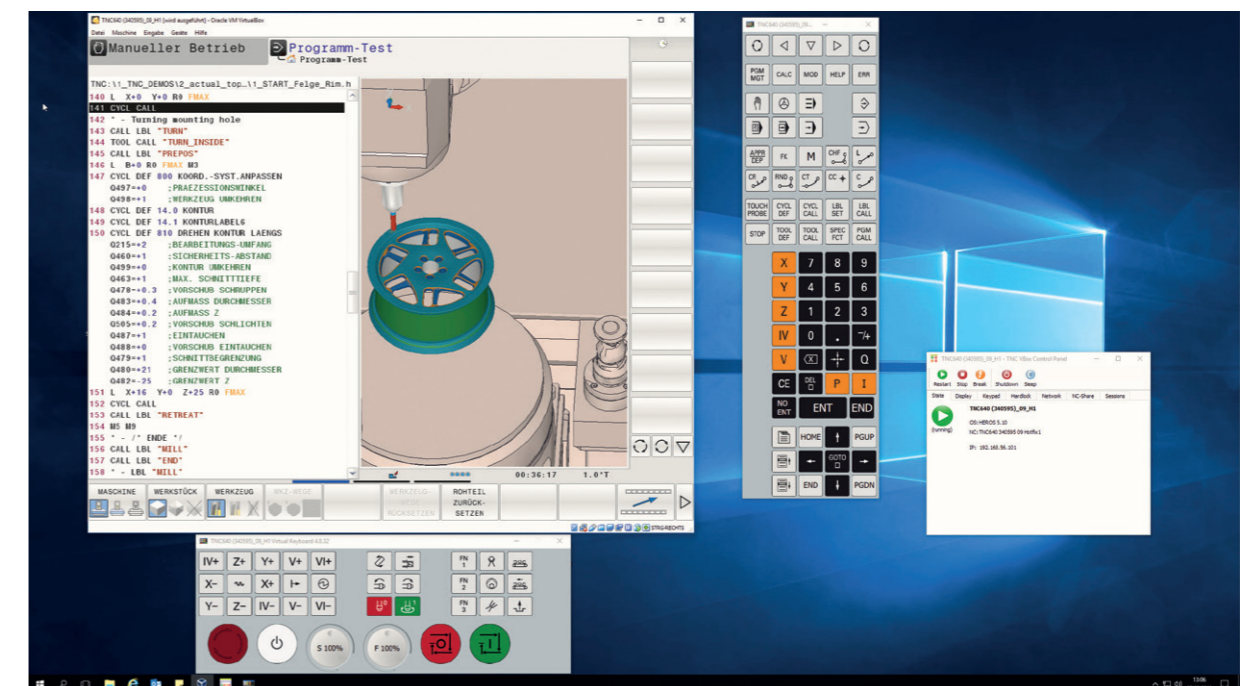
- Hardware in the modern TNC7 design
- Compact design for use at the office workstation
- Installation slot for USB dongle on the bottom
- Strain relief for USB cable integrated in the housing
- Newly designed keyboard with an improved feel
- Dirt-repelling, anodized surface of the keyboard

The TNC7 programming station keyboard can be combined as desired with the different programming station variants (dongle versions). Your USB dongle is safely protected in the installation slot in the bottom of the housing.

The operating design of the TNC7 is fully touch-optimized. Just like the TNC7 itself, the new programming station keyboard has no separate soft keys. You select the soft keys either with the mouse or directly by touching the screen.



TNC7 programming station keyboard



Programming station with virtual keyboard

Versions and system requirements

Which programming stations are available?

Programming stations are available for all current TNC controls. The programming station contains:

- Programming station software
- VirtualBox (VBox) virtualization software from ORACLE
- VBox expansion: TNC VB Base Software and data for the installation and operation of all programming stations (Control Center and virtual keyboard)

Prerequisites for the PC

Operating system: Windows 10/11 (64-bit)

- Processor with virtualization support (VT-x or AMD-V)
- RAM: ≥ 8 GB, ≥ 16 GB (TNC7)
- Dedicated graphics board for graphics-intensive applications
- Hard disk: ≥ 10 GB per programming station
- Resolution: $\geq 1024 \times 768$, $\geq 1280 \times 1024$ (TNC 640), $\geq 1920 \times 1080$ (TNC7)
- Interfaces: USB, LAN

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TNC 640, TNC 620/TNC 320, iTNC 530 programming stations

With TNC programming station keyboard	ID 1113967-03
With virtual keyboard	
Single station license	ID 1113924-04
Network license, 1 station	ID 1125955-04
Network license, 14 stations	ID 1113926-04
Network license, 20 stations	ID 1113928-04

Programming station keyboard

Operating panel without dongle	ID 1113967-52
TNC7 programming station keyboard	ID 1380256-01

Conversational languages

You can install the TNC programming station with several languages and switch among them during operation. All dialogs and soft keys are then displayed in the respective national language. The following languages are available:

- Chinese (simplified and traditional)
- Czech
- Danish
- Dutch
- English
- Finnish
- French
- German
- Hungarian
- Italian
- Korean
- Norwegian
- Polish
- Portuguese
- Romanian
- Russian (Cyrillic)
- Slovak
- Slovenian
- Spanish
- Swedish
- Turkish

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Further information:

- Brochure: TNC7
- Brochure: TNC 640
- Brochure: TNC 620
- Brochure: TNC 320