Product Information

HR 550 FS
Electronic Handwheel with Wireless Transmission
Delicate manual traverse
For setup, you can use the axis-direction keys of the machine operating panel to move the machine axes manually or in incremental jog. A simpler and more reliable way, however, is to use the electronic handwheels from HEIDENHAIN. With the portable handwheels you are always close to the action, enjoy a close-up view of the setup process, and can control the infeed responsively and precisely.

The HR 550 FS with wireless transmission is exceedingly simple to use: since it communicates with the handwheel holder via radio transmission, your movements are not restricted in any manner, and you can fully concentrate on the action in the machine’s working space. The practical HRA 551 FS handwheel holder is not just a docking station for the handwheel: it also features an integrated charger for the handwheel’s battery, so that your HR 550 FS is always ready for the next job.

The transmission range is amply dimensioned. If you should nevertheless happen to come near the edge of the transmission area, which is possible with very large machines, the HR 550 FS warns you in time with a plainly noticeable vibration alarm.

When the handwheel is in the docking station, contacts on its back ensure uninterrupted operation in the event of unexpected disturbances in the radio field.

System requirements
The HR 550 FS can be connected to the following controls:

- As of NC software
  - TNC 640 34059x-02
  - TNC 620 81760x-01
  - TNC 320 771851-01
  - TNC 128 771841-05
  - iTNC 530 60642x-01
  - CNC PILOT 640 68894x-05
  - MANUALplus 620 548431-05

The connecting and adapter cables are identical with those of the HR 420 and HR 520.

The HR 550 FS electronic handwheels from HEIDENHAIN are available with and without mechanical detent, with 100 stops per revolution. The traverse path per step can be set via parameters. It also features numerous valuable additional functions:

- The handwheel display consists of a header and six status lines. It displays important machine conditions and information (e.g. position of the selected axis, spindle speed, feed rate, error messages, active basic rotation and tilted working plane) as well as the functions of the five soft keys, which the machine manufacturer can assign as desired. The header provides information on the active radio operation, field strength and the battery’s state of charge.

- The colored and raised axis keys permit traverse of up to six NC axes. In addition, the machine manufacturer can configure an axis key for selection of the so-called “virtual tool axis.”

In addition to the soft keys, the machine manufacturer can assign special functions to six function keys. They can be illuminated by LEDs. The symbols for the axis designations and the function keys can be exchanged.

- The axis feed rate, which is activated when the arrow key is pressed, and the spindle speed can each be set with an override potentiometer.

The HR 550 FS handwheel also features the usual safety buttons: an emergency stop button and two permissive buttons. The safety functions of the HR 550 FS fulfill the requirements of performance level d, category 3, according to EN ISO 13849-1. In addition, HR 550 FS fulfills the requirements of EN 60950.
<table>
<thead>
<tr>
<th><strong>HR 550 FS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Design</strong></td>
</tr>
<tr>
<td><strong>Functional safety</strong></td>
</tr>
<tr>
<td><strong>Display</strong></td>
</tr>
</tbody>
</table>
| **Handwheel**<sup>*</sup> | HR 550FS without mechanical detent: ID 1200495-xx  
HR 550FS with mechanical detent: ID 1183021-xx |
| **Operating elements** |  6 keys for axis selection (symbols can be exchanged)  
6 keys with permanent NC functions  
6 keys with LEDs for free assignment via the PLC (symbols can be exchanged)  
2 override potentiometers for feed rate and spindle speed  
5 soft keys for menu-guided operation |
| **Safety buttons** | Emergency stop button (dual-channel)  
2 permissive buttons (dual-channel) |
| **Handwheel holder** | HRA 551 FS: ID 1119052-xx  
For docking the HR 550FS on the machine  
Integrated battery charger for HR 550FS  
Connections to the control and the machine  
Integrated transmitter/receiver unit |
| **Radio transmission** | According to EN 300328 V2.1.1; EN 301489-1; EN 301489-17;  
FCC ID HR 550FS: YJKHR0GACZ4; FCC ID HRA 551 FS: YJKHRAGACZ4 |
| **Radio link** | 16 channels (ISM; 2.4 GHz)  
Transmission range up to 20 m (depending on environment)  
Radio power of 11 dBm (EIRP) |
| **Functions** | Display of field strength  
Vibrating alarm upon leaving the transmission area  
Battery warning/battery charge indicator |
| **Voltage supply** | HR 550FS: via battery pack (included in delivery; replacement ID 623166-xx)  
HRA 551 FS: by standard connection from the control |
| **Operating time** | Continuous duty typically 6 h |
| **Charging process** | Automatic when handwheel is in the HRA docking station, duration approx. 200 min |
| **Mass** | HR 550FS: approx. 1 kg  
HRA 551 FS: approx. 1 kg |

*Please select when ordering*
Dimensions

For more information:

To ensure the correct operation of the handwheel, comply with the requirements described in the Technical Manual and User’s Manual of the respective control.

For brochures and product information sheets, visit us on the Internet at www.heidenhain.de ➤ Documentation

HEIDENHAIN

DR. JOHANNES HEIDENHAIN GmbH
Dr.-Johannes-Heidenhain-Straße 5
83301 Traunreut, Germany
☎ +49 8669 31-0
✉ info@heidenhain.de
www.heidenhain.de