



HEIDENHAIN



Product Information

HR 550 FS

Electronic Handwheel
with Wireless
Transmission

User-friendly setup with HEIDENHAIN handwheels

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 550FS 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 550FS 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 550FS 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 550FS can be connected to the following controls:

	As of NC software
• TNC 640	34059x02
• TNC 620	81760x01
• TNC 320	771851-01
• TNC 128	771841-05
• iTNC 530	60642x01
• CNC PILOT 640	68894x05
• MANUALplus 620	548431-05

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

The radio operating conditions of the Technical Manual for your control apply during operation of the HR 550FS/HRA 551 FS in the appropriate locations.

The HR 550FS 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 550FS handwheel also features the usual **safety buttons**: an emergency stop button and two permissive buttons. The safety functions of the HR 550FS fulfill the requirements of performance level d, category 3, according to EN ISO 13849-1. In addition, HR 550FS fulfills the requirements of EN 60950.





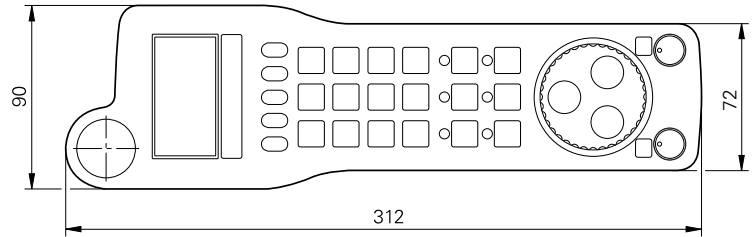
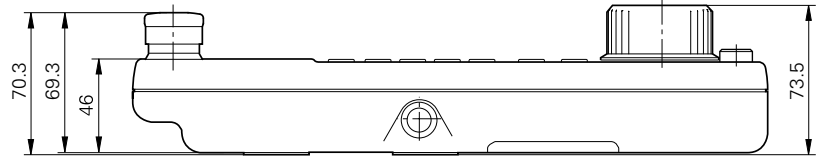
	HR 550 FS
Design	Handwheel with wireless transmission
Functional safety	For applications up to category 3, PL d according to EN ISO 13849-1: 2015
Display	Monochrome 6-line display (128 x 64 pixels)
Handwheel*	HR 550FS without mechanical detent: ID 1200495-xx HR 550FS with mechanical detent: ID 1183021-xx
Operating elements	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Emergency stop button (dual-channel) • 2 permissive buttons (dual-channel)
Handwheel holder	HRA 551 FS: ID 1119052-xx <ul style="list-style-type: none"> • For docking the HR 550 FS on the machine • Integrated battery charger for HR 550 FS • 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	<ul style="list-style-type: none"> • 16 channels (ISM; 2.4 GHz) • Transmission range up to 20 m (depending on environment) • Radio power of 11 dBm (EIRP)
Functions	<ul style="list-style-type: none"> • Display of field strength • Vibrating alarm upon leaving the transmission area • Battery warning/battery charge indicator
Voltage supply	<i>HR 550FS</i> : via battery pack (included in delivery; replacement ID 623166-xx) <i>HRA 551 FS</i> : 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	<i>HR 550FS</i> : approx. 1 kg <i>HRA 551 FS</i> : approx. 1 kg

* Please select when ordering

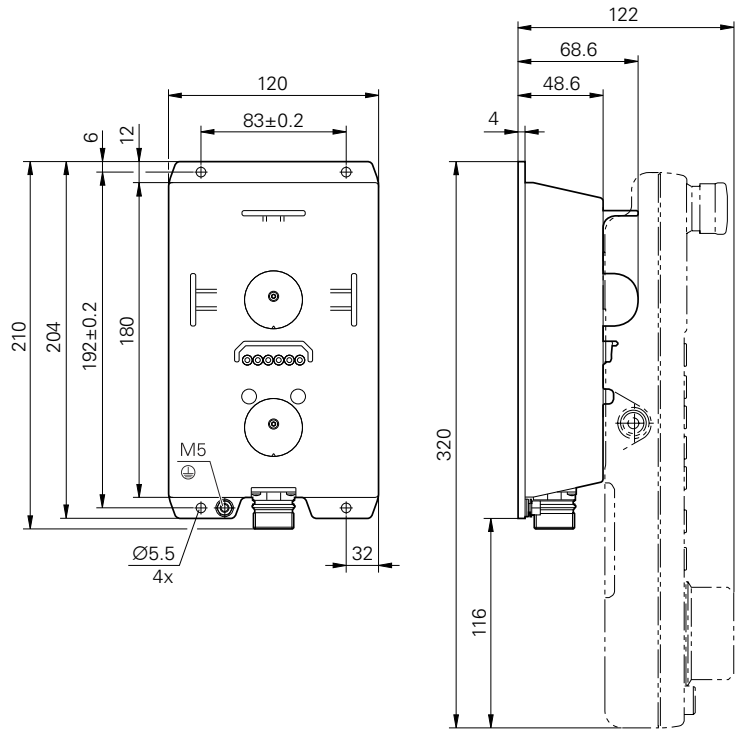
Dimensions



HR 550 FS



HRA 551 FS



mm



Tolerancing ISO 8015
ISO 2768 - m H
≤ 6 mm: ±0.2 mm

HEIDENHAIN

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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