



**HEIDENHAIN**

# **SERVICE NEWS**

**The HEIDENHAIN Service keeps you informed!**

**Edition 11 / 2013**

**The HEIDENHAIN Service –  
You may count on us!**

- + The HEIDENHAIN Service Exchange**
- + Testing equipment for  
HEIDENHAIN encoders**
- + Calibration of your  
testing equipment**
- + Your contact to the Service**



**[service@heidenhain.de](mailto:service@heidenhain.de)**

**Link to the HEIDENHAIN Service**

# The HEIDENHAIN Service Exchange

## Is machine down time blocking your production?

Quick intervention at fair prices is what counts now!

In the event of a machine standstill, the HEIDENHAIN Service Exchange offers a quick and uncomplicated solution to get your production going again.

You receive a replacement from the HEIDENHAIN Exchange stock immediately and free of charge. More than 5,0000 different products are available for you. Apart from current components, original spare parts are at your disposal for machines that may be up to 20 years old.

After return and repair of your defective unit, you will only be charged the actual repair costs.

For the exchange unit, we grant a one-year guarantee of function.



### Overview of your benefits:

- + Short down times
- + Immediate delivery of a replacement
- + High degree of availability of service units in the Exchange stock
- + Uncomplicated handling
- + Fair prices
- + One-year guarantee of function for the Exchange unit

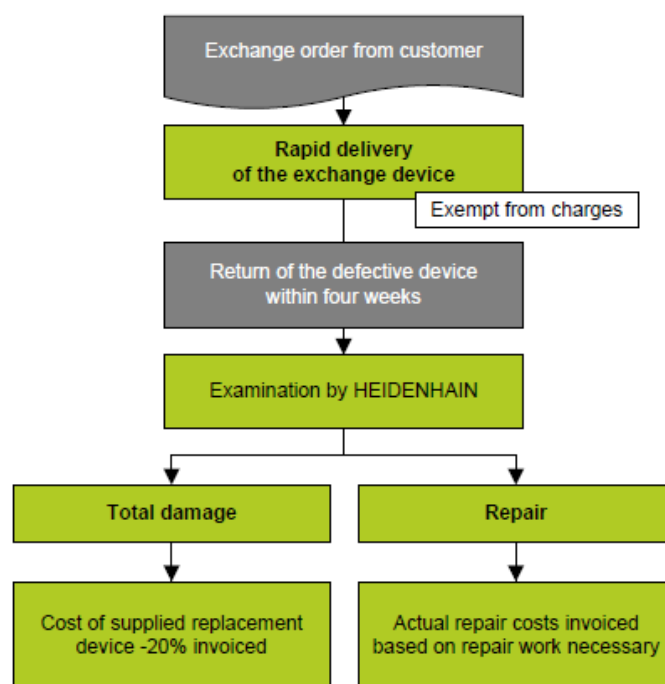
# The HEIDENHAIN Service Exchange

## The Service Exchange procedure

- + You receive a replacement from the HEIDENHAIN Exchange stock immediately and free of charge.
- + Please return your defective device to us within four weeks.
- + We will repair your defective device and store it in the HEIDENHAIN Exchange stock.
- + You receive an invoice for the actual repair costs.
- + In the following cases, we will charge you 80 % of the price of a new unit for the replacement unit:
  - The returned device is totally damaged.
  - You do not return the defective unit within four weeks.
  - The returned device is not the same as the Exchange unit we provided (different ID).
  - Exchange of motors
- + The returned unit becomes our property. The replacement unit remains at your location and becomes your property after the repair invoice has been paid.



## Fast - Easy - Reliable



**Do you want to learn more about the HEIDENHAIN Service Exchange?**

Please contact the free HEIDENHAIN helpline:

+49 8669 31 3121  
[service.order@heidenhain.de](mailto:service.order@heidenhain.de)

# Testing equipment for HEIDENHAIN encoders

## Ensure consistent quality of your products!

We offer a variety of testing equipment for inspection and adjustment for your HEIDENHAIN encoders.

### PWT 10 / PWT 17 / PWT 18

The PWT is a mounting aid for initial commissioning of your encoders. For diagnosis and error localization, we recommend PWM 9 or PWM 20.



### Do you still possess a PWM 8?

We will be pleased to update your PWM 8 to its fully compatible successor PWM 9.

The following measures are performed for this purpose:

- + Upgrade of PWM 8 to PWM 9
- + Update of the hardware and/or software
- + Functional test
- + Inspection of all interface boards
- + Creation of a Calibration Certificate according to DIN 55 350, 18/4.2.1



### PWM 9

PWM 9 is a universal measuring device for inspecting and adjusting incremental linear and angle encoders. For better diagnosis on a machine, the PWM 9 can display the encoder signals in feed-through mode.

For adjusting for the various encoder signals, HEIDENHAIN offers a variety of expansion modules (interface boards) that are easily and quickly exchanged from outside the housing.

### Functions and benefits:

- + Connection to an oscilloscope via BNC connectors
- + Measures signal amplitudes, current consumption, operating voltage and scanning frequency
- + Graphically displays incremental signals (amplitudes, phase angle and on-off ratio) and the reference-mark signal (width and position)
- + Display of symbols for the reference mark, fault-detection signal and counting direction
- + Universal counter; interpolation selectable (1-fold to 1024-fold)
- + Adjustment aid (PWT mode) for exposed linear encoders
- + Convenient operation via soft keys and display on LCD monitor
- + Measurements can be conducted during running operation.

# Testing equipment for HEIDENHAIN encoders

## PWM 20

The PWM 20 phase-angle measuring unit serves to check and adjust encoders with absolute and incremental interfaces.



PWM 20 encoder diagnostic kit

It consists of the following components:

- PWM 20: Phase angle measuring unit for connection to a PC through the USB interface (incl. cable accessories)
- ATS: Adjusting and Testing Software with integrated local encoder database for automatic encoder identification

The functions supported by the ATS software vary depending on the encoder and the encoder interface. The EnDat interface makes it possible not only to display the position value, but also to read out the online diagnostics, to read or write parameters and shift datums.



**Working with our testing equipment saves you time and money!**

### Functions and benefits:

- + Diagnostics and adjustment of HEIDENHAIN encoders with absolute and incremental interfaces
- + Operation of a variety of interfaces
  - EnDat 2.1 or EnDat 2.2 (absolute value with/without incremental signals)
  - DRIVE-CLiQ<sup>1</sup>
  - Fanuc serial interface
  - Mitsubishi high speed interface
  - Yaskawa
  - SSI
  - 1 Vpp (3 Vpp only for service purposes)
  - 11  $\mu$ App (25  $\mu$ App only for service purposes)
  - TTL
- + Mounting wizard for ExI, LIP 200 and LIC 4000
- + Connection to the PC or notebook via USB 2.0 (high speed)
- + Suitability as inspection and testing equipment is ensured by the HEIDENHAIN calibration service.
- + Independent examination of your devices possible at your site
- + Free software updates available on the HEIDENHAIN website

<sup>1</sup> Only encoders from HEIDENHAIN can be tested. Please note that encoders and components from other manufacturers cannot be connected.

# Functions of PWM 20 and ATS

PWM 20 and ATS V2.8 – available functions	EnDat	Fanuc	Mitsu- bishi	SSI	DRIVE- CLiQ	Yaska- wa	1 V <sub>pp</sub> 11 μA <sub>pp</sub>	TTL
<b>Position display</b>								
Display of the absolute position	✓	✓	✓	✓	✓	✓	-	-
Display of the incremental position (if available)	✓	-	-	✓	-	-	✓	✓
Display and resetting of error messages	✓	✓	✓	-	✓	✓	-	-
Display and resetting of warnings	✓	-	-	✓	✓	-	-	-
Display of transmission status	✓	✓	✓	✓	✓	✓	-	-
PWT display of incremental signals	-	-	-	-	-	-	✓	✓
<b>Connection dialog</b>								
Automatic connection using ID number	✓	✓	✓	✓	✓	✓	✓	✓
Connection by indicating the supply voltage and interface	✓	✓	✓	✓	✓	✓	✓	✓
<b>Diagnostics</b>								
Display of online diagnostics (open loop)	✓	✓	✓	-	✓	-	-	-
Display of online diagnostics (closed loop) <sup>1)</sup>	✓	✓	✓	-	-	-	-	-
Feed-through mode permitted with PWM 20	✓	✓	✓	-	-	-	✓	✓
Circular diagram of incremental signals (if available)	✓	-	-	✓	-	-	✓	✓
Evaluation of reference signal	-	-	-	-	-	-	✓	✓
Incremental counter	-	-	-	-	-	-	✓	✓
Display of supply voltage and supply current	✓	✓	✓	✓	✓	✓	✓	✓
<b>Mounting wizards/testing wizards</b>								
For ECI/EQI	✓	-	-	-	-	-	-	-
For LIP 200 (others in preparation)	-	-	-	-	-	-	✓	-
For LIP 4000 (others in preparation)	✓	-	-	-	-	-	-	-
Testing assistant for encoders with functional safety	✓	-	-	-	✓	-	-	-
<b>Additional functions (if supported by the encoder)</b>								
Comparison of absolute position with incremental position	✓	-	-	✓	-	-	-	-
Datum shift ("electrical zeroing of position")	✓	-	-	-	-	-	-	-
Display of additional information: Temperature	✓	-	-	-	✓	-	-	-
Display of additional information: Position value 2	✓	-	-	-	✓	-	-	-
Display of additional information: Additional sensors	✓	-	-	-	-	-	-	-
Display of additional information: Limit position signals	✓	-	-	-	-	-	-	-
Display of additional information: Operating status error sources	✓	-	-	-	-	-	-	-
<b>Memory contents</b>								
Display of memory contents	✓	-	-	-	✓	-	-	-
Modification to memory contents	✓	-	-	-	-	-	-	-
Saving the memory allocation	✓	-	-	-	✓	-	-	-
Comparison of current memory contents with saved memory contents	✓	-	-	-	-	-	-	-

<sup>1)</sup> In Feed-through mode; preferred in connection with a signal adapter, e.g. SA 100 or SA 110

DRIVE-CLiQ is a registered trademark of the Siemens Aktiengesellschaft

(✓) See ATS Software Operating Instructions

# Calibration of your testing equipment

According to **DIN EN ISO 9001**, inspection, measuring and testing equipment must be traced to national standards at regular intervals

We recommend regular calibration of your equipment every two years, as only precisely working units provide high-quality results.



**"Inspection and calibration ensure quality and reliability of your testing equipment."**

## What are the benefits of calibration?

- + Long-term assurance of high product quality
- + Performance of functional test
- + Update of the hardware and/or software
- + Calibration certificate according to DIN 55 350, 18/4.2.1. by the manufacturer

## Your contact to the HEIDENHAIN service

Free of charge for our customers!

Contact our commercial and technical specialists:

### HEIDENHAIN commercial helpline:

**Repairs, spare parts,  
exchange units and complaints**

Domestic Team  
+49 (8669) 31-3123

Foreign team  
+49 (8669) 31-3123

Complaint management  
+49 (8669) 31-3135

[service.order@heidenhain.de](mailto:service.order@heidenhain.de)

### HEIDENHAIN technical helpline:

NC support  
+49 (8669) 31-3101  
[service.nc-support@heidenhain.de](mailto:service.nc-support@heidenhain.de)

PLC programming for TNC  
+49 (8669) 31-3102  
[service.plc@heidenhain.de](mailto:service.plc@heidenhain.de)

NC programming  
+49 (8669) 31-3103  
[service.nc-pgm@heidenhain.de](mailto:service.nc-pgm@heidenhain.de)

Encoders / machine calibration  
+49 (8669) 31-3104  
[service.ms-support@heidenhain.de](mailto:service.ms-support@heidenhain.de)

Lathe controls  
+49 (8669) 31-3105  
[service.lathe-support@heidenhain.de](mailto:service.lathe-support@heidenhain.de)

For further information refer to  
our website:  
[service.heidenhain.de](http://service.heidenhain.de)

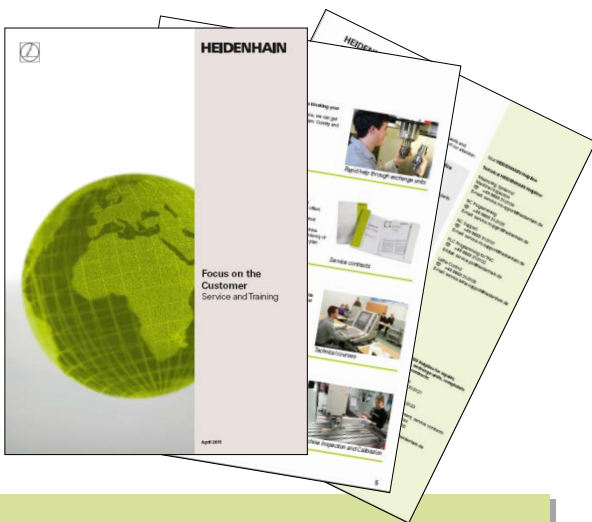
When calling us, please have the device model and HEIDENHAIN ID number at hand.



# Focus on the Customer

**You want to learn more about the HEIDENHAIN Service?**

## HEIDENHAIN Service Brochure “Focus on the Customer”



## “HEIDENHAIN Service News” Semi-Annual Newsletter



**Topics:**

- Our Services
- Your Contact to the HEIDENHAIN Service
- Service Contracts
- Warranty Extensions
- Machine Calibration
- Training Courses

**Topics:**

- News
- Service Successors
- Service Strategies
- Inspection Equipment
- Service Procedures at HEIDENHAIN
- Your Contact to the HEIDENHAIN Service

→ Fill in and return by fax to: +49 (0) 8669 32 9899

- Service Brochure by mail
- Service News semi-annually by e-mail

Your customer no. \_\_\_\_\_

Name: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

E-mail address: \_\_\_\_\_

This data will only be used for the internal purpose of mailing the semi-annual Service Information and will not be made available to any third party.

Please find our previous issues in the internet on [www.heidenhain.de](http://www.heidenhain.de).