## **Back inserted Gage Unit**

# ZHF Series USER MANUAL

## **Prologue**

ZHF series back inserted gage unit is a series of active measuring device produced by our company, which is specially manufactured for grinding internal hole grinders with very small aperture. It is developed with the essence of the company's technical strength, with imported high-precision production equipment, carefully produced by skilled technical workers. After rigorous various tests, qualified products with superior performance. So you can use it with confidence.

In order to make this high-precision measuring device often in good condition and give full play to its functions, it must be properly used and managed. Therefore, before using the device, we must be familiar with and understand the operating instructions, so that we can master the correct method of use, and the necessary inspection and maintenance, and skillfully and flexibly use the measuring device.

#### Note:

1. The device can be used in combination with various controllers according to the purpose of use.

When the series of instructions are attached, it is hoped that the combination can be used correctly based on the content of the components of the product. But the simple combination series, omitting the series instruction manual.

- 2. Accidental fall or excessive impact of the measuring device is the main cause of failure. Please pay full attention to it.
- 3. The cable from the measuring device should be careful to prevent damage and damage by other moving objects when wiring.

In addition, when the measuring device is moving, please fix the cable so that it is not subject to tension and friction.

- 4. The cable from the measuring device should be more than 200mm away from the other power cables and routed through the dedicated wiring pipe.
- 5. Except for professional maintenance personnel, please never open the end cover of the measuring device. In addition, do not loosen or adjust the fastening screws, adjusting screws and other fixing screws on the measuring device.
- 6. When repairing or replacing the fuse on the controller, please cut off the power supply first.
- 7. When installing or working, please confirm that the machine has no abnormal action before operating, otherwise the personnel may be injured.
  - 8. Do not load heavy objects on the controller.

9. The ground wire of the control instrument power source must be grounded,						
otherwise it may cause misoperation of the machine tool and cause injury.						

### 一. Summary

The rear-insert active measuring device is the ideal measuring device for the inner hole grinding of small parts such as micro bearings, OA machines and AV machines. It is installed in the main shaft hole, and opposite the grinding wheel, so when the measuring subspace is small, or when the grinding hole is very small, the grinding wheel whose diameter is close to the processing aperture can be used to improve the processing efficiency.

#### 二. Features

#### 1. Spindle through type

The back inserted gage unit is installed in the main shaft hole, does not occupy the external space, so that the grinding wheel, the grinding wheel correction device and the automatic feeding device can be freely arranged, and when grinding the very small aperture, the grinding wheel whose diameter is close to the processing aperture can be used, without frequent replacement of the grinding wheel, and improve the processing efficiency.

## 2. Fixed and swinging dual use when working

In grinding, whether it is the fixed way of staying in the machining hole, or the swinging way of advancing and advancing at the same time with the grinding wheel, it can be used.

### 3. Large size ZHF-04A\ZHF-32

ZHF-04A\ZHF-32 type active measuring device with an outer diameter of 32 mm is made of elastic elements made of alloy materials, which makes the product

have excellent collision resistance.

#### 4. Small size ZHF-25

The ZHF-25 active measuring device with an outer diameter of 24.8 mm is very convenient to use.

#### 5. Pen type ZHF-06A

Contrary to previous understanding, the ZHF-06A type active measuring device with an outer diameter of 15.9 mm is suitable for small machine tools.

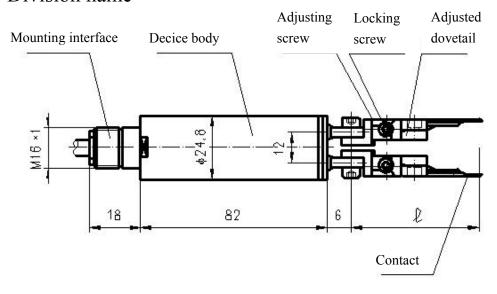
#### 6. Excellent sensitivity

When installed in swing mode, there must be sensitivity corresponding to high-speed swing, with a maximum of 800cpm.

## $\Xi$ . The name of each part of the gage unit

#### ZHF series

#### Division name



## 四. Zero setting

At the time of zero setting, measure the value of the calibration gauge, exceed the limit value of the automatic zero, and the automatic calibration limit value, when the zero cannot be set, or even if the zero adjustment knob is rotated, it cannot be corrected, please perform the following operations (however, due to the dust around the gauge and on the calibration gauge, the adhesion of chips, the wear of the calibration gauge, etc., will also produce the same phenomenon, Please find out the cause, confirm that it is not the above reason, then proceed to the following operations).

In addition, if the reason is because of the wear of the proofreader, please replace the new proofreader.

- (1) Prepare the zero calibration gauge and install it on the machine tool.
- (2) Open the controller and display the measured value set by the zero position of the measuring device (if the controller has the measurement data attribute on the display value, please switch to display the original data).
- (3) Make the measuring device advance and enter the measuring state (the measuring device with the retracting function please remove the retracting claw).
- (4) Adjust the gauge on the side of the measuring device to display the measurement value, so that its display value is zero, and lock (if the adjustment is carried out on the dovetail gauge, the adjustment screw is returned a little after locking to eliminate axial thrust).
- (5) The offset after locking should be adjusted within  $\pm 10 \,\mu$  m. If the offset is large due to locking, adjust the locking screw in the semi-locking state to reduce the locking error.
  - (6) The gauge on the other side is set to zero in the same way.

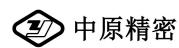
- (7) Small offset after locking, please use the controller operation to correct.

  Use the memory function on the controller when the measuring device swings.
  - (8) For the above items (1)  $\sim$  (7), please use zero proofreading gage.
- (9) Rotate (move) the zero calibrator so that it is consistent with the state when measuring the actual workpiece.
- (10) When the display value does not match the nominal value of the zero calibrator, read and record the value.
- (11) When the measuring device is used in processing, the error of reading the previous item is corrected by direct supplementary adjustment; When used after processing, use the function of adjustment setting to correct the error of reading the previous item.

## 五. Warranty description

- 1. This product warranty service is only valid under normal use.
- 2. Failure caused by non-product quality problems and abnormal use will not be guaranteed. For example: including but not limited to the following circumstances caused by the failure, no warranty:
- (1) The device is affected by external forces resulting in deformation, bending, etc., which cannot be measured;
- (2) The user disassembles the device without authorization, resulting in loose parts, oil leakage, liquid intake, etc.;
- (3) failure to use as required, and failure caused by the device working beyond its normal scope of application.

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