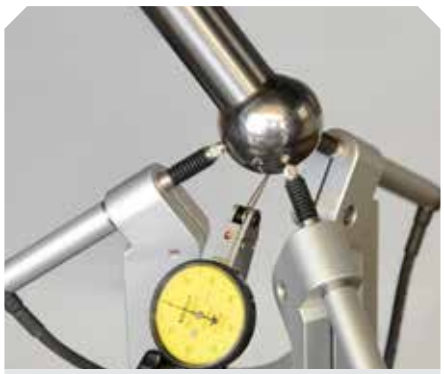
HMS™

Head Measuring System

European patent
No. 1549459

FIDIA
Giving shape to design

HMS™ (Head Measuring System)



RTCP and HMS™

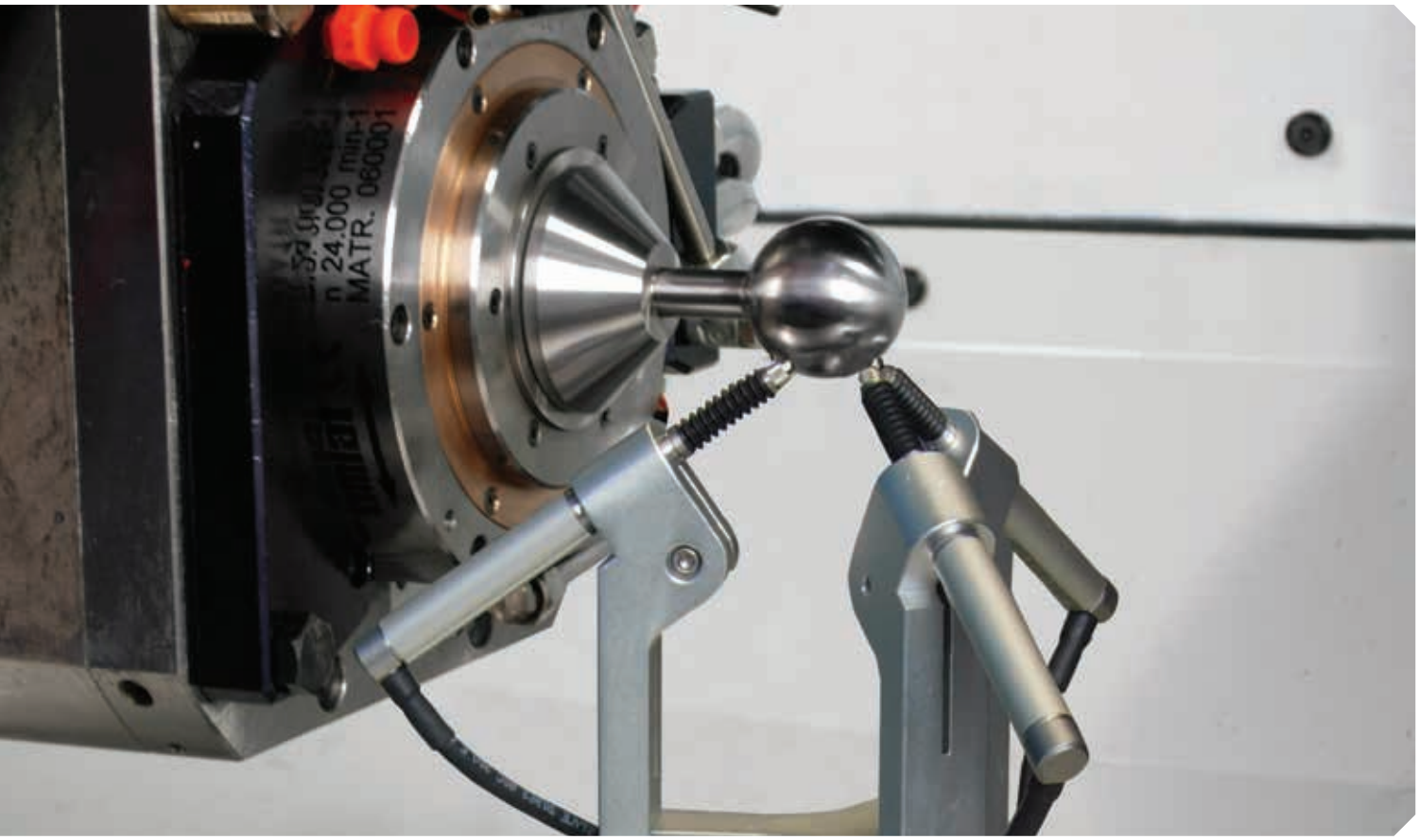
Combining the RTCP function with the HMS™ head calibration system is a winning and unique formula in 5-axis milling technology. This function has clear benefits for accuracy of movement at the tool tip and surprising milling results.

The HMS system is a device designed for measuring and checking continuous and indexed bi-rotary heads and roto-tilting tables. Equipped with 3 sensors connected to the CNC, the HMS system is managed by a specific measurement software. By processing incoming data in real time, the software is able to check and correct geometric error, positioning accuracy and the RTCP parameters for the heads and tables.

HMS is a high-precision instrument and provides an alternative to the traditional checking method using dial gauges. It has many advantages:

- a drastic reduction in checking time (half an hour rather than an entire day)
- measurement of all head and/or table positions (not just orthogonal positions)
- measurement of RTCP parameters
- automatic insertion of correction values in the CNC.

Easy to install and use, HMS can also be used by operators with no particular expertise. This means head geometry checks can be performed whenever necessary, avoiding lengthy and costly service interventions and reducing machine tool downtime.



The HMS device is available in two different versions, standard and compact, to adapt to machine tool axis working travel for executing the cycles.

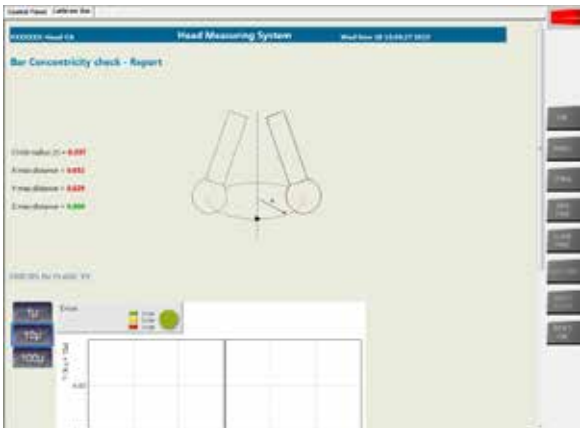
The simple and intuitive user interface guides the operator through the execution of the measurement cycles and makes HMS extremely easy to use.
No specific knowledge is required and the cycles can be executed directly by the machine tool operator.

The HMS device is easily fitted onto the machine tool using its magnetic base and no alignment is required.
The instrument is supplied with a set of two high-precision reference bars to be used for the measurement cycles.

The equipment and the application have been granted a European patent No. 1549459.

Roto-tilting tables: small size HMS

Head and roto-tilting table: actual check with HMS™



Monitoring: HMS calibration cycle

Continuous bi-rotary heads with orthogonal axes
- measurement and compensation of rotary axis positioning
- measurement and compensation of rotary axis zero preset
- measurement and correction of RTCP parameters

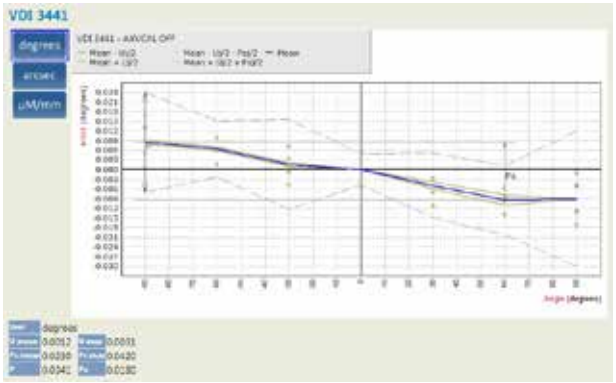
Indexed bi-rotary heads with orthogonal axes
- measurement and compensation of head positions
- measurement of rotary axis zero preset
- measurement and correction of RTCP parameters

Indexed bi-rotary heads with inclined axes
- measurement of head positions
- compensation of head positioning errors

Roto-tilting tables
- measurement and compensation of rotary axis positioning
- measurement and compensation of the centre table position

Graphic Reporting

A full report is available at the end of the calibration cycle detailing the measurements made and the compensation values inserted. The reports can be kept in the form of files and are a useful record for maintenance purposes.
Errors are also represented graphically for the best interpretation of head conditions and to assess the suitability of scheduling a service intervention for the mechanical parts. Axes errors compensation cycles have been improved with graphs of different units (degrees, arcsecs, µ/mm).
A new axis measurement cycle, compliant to VDI 3441 and ISO 230-2 standards, has been added.



VDI 3441 report

ISO 230-2 report

FIDIA
www.fidia.com

FIDIA S.p.A.
Corso Lombardia, 11
10099 San Mauro Torinese - TO - ITALY
TEL. +39-011-2227111
FAX +39-011-2238202
info@fidia.it

FIDIA GmbH
Robert-Bosch-Strasse 18
63303 Dreieich-Sprendlingen - GERMANY
Tel. +49 6103 4858700
Fax +49 6103 4858777
info@fidia.de

FIDIA Co.
3098 Research Drive
Rochester Hills MI 48309 - USA
Tel. +1 248 6800700
Fax +1 248 6800135
info@fidia.com

FIDIA Sarl
47 bis, Avenue de l'Europe
B.P. 3 - Emerainville
77313 Marne La Vallee Cedex 2 - FRANCE
Tel. +33 1 64616824
Fax +33 1 64616794
info@fidia.fr

FIDIA Iberica S.A.
Parque Tecnológico
Laida Bidea, Edificio 208
48170 Zamudio - Bizkaia - SPAIN
Tel. +34 94 4209820
Fax +34 94 4209825
info@fidia.es

FIDIA DO BRASIL LTDA
Av. Padre Anchieta, 161 – Jordanopolis
São Bernardo do Campo
09891-420 – SP – BRASIL
Tel. +55 11 29657600
Fax +55 11 20212718
info@fidia.com.br

OOO FIDIA
c/o Promvost
Sushovskiy Val, Dom 5, Str. 2, Office 411
127018 Moscow - RUSSIA
Tel.: +7 499 9730461
Mobile: +7 9035242669
sales.ru@fidia.it
service.ru@fidia.it

FIDIA JVE
Beijing Fidia Machinery & Electronics Co., Ltd
Room 1509, 15/F Tower A. TYG Center Mansion
C2 North Road East Third Ring Road, Chaoyang District
100027 BEIJING - P.R. CHINA
Tel. +86 10 64605813/4/5
Fax +86 10 64605812
info@fidia.com.cn

FIDIA SHANGHAI OFFICE
Shanghai Office
28/D, No.1076, Jiangning Road
Putuo District
Shanghai 200060 - CHINA
Tel. +86 21 52521635
Fax +86 21 62760873
shanghai@fidia.com.cn