



# 250 MRS

Rockwell, Superficial Rockwell, Brinell,  
Vickers, Knoop, Shore

# 250 MRS

## ONE BUTTON MEASUREMENT

All operation are managed by a single drive including automatic contact with the test piece:

1. Push the start button
2. The head moves down to make contact with the test surface and automatically starts the test cycle in automatic succession without breaching a phase.
3. The entire test cycle is complete, results and statistics appear on the display.

250 MRS AFFRI® System Hardness Tester achieves the highest level of depth accuracy and measurement resolution available for Rockwell test. Thanks to the AFFRI® System, the real indentation measurement is guaranteed without any external interference in any condition.





## THE FIRST TEST RESULT IS CORRECT AND ABSOLUTE

The constant clamping surface assures the right measurement with no need to repeat the test. Accuracy is assured even in the case of structural deflection. When testing unstable samples or deflective parts, the AFFRI System will follow the sample and not lose contact with its 2" stroke.

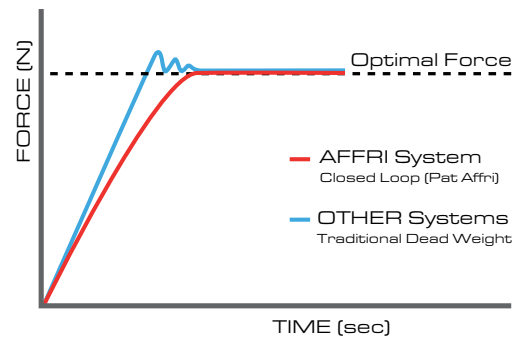
Accurate measurements, even on the first test, eliminate the need for multiple repeated hardness tests.

The R & R. data is at the top of its class and not surpassed by any other competitor under the same test conditions.

# 250 MRS

## CLOSED LOOP AND LOAD CELL TECHNOLOGY

Each load force is automatically programmed and controlled assuring perfect linearity in every range eliminating the problems associated with traditional dead weight system testers. The test is not affected by any external sources of deflection, misalignment or vibration. The AFFRI system can also operate in an inclined position.





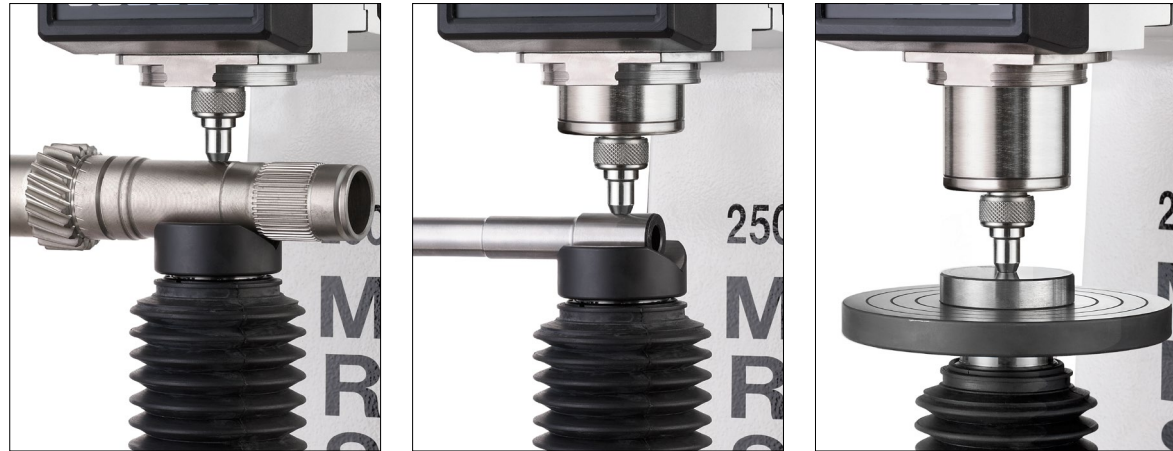
## CLAMPING SYSTEM

Secure contact with the specimen is always maintained, even in the unlikely event of any specimen movement during the operation cycle. The clamping system assures perfect stability of any test piece throughout the test cycle. No additional accessories are required, as per old traditional hardness testers. The top surface referencing design minimizes errors caused by problems associated with dirt or scale. This reduces sample preparation time and increase both accuracy and speed.

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## HEAD STROKE 50 mm (2")

The long head stroke permits easy tests on different height test's samples without change every time the elevating screw position. The motorized head automatically goes downwards to contact, clamp the specimen and perform the indentation.





## ACCESSORIES

Large variety of indenters for each hardness scale.  
A series of different anvils is available to test every size of test piece.  
Consult our web database for more information. Customized solution based on your needs can be made for perfect tests on rough pieces.



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**Made by:**  
**OMAG di AFFRI D. S.r.l.**

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250 MRS	
Action	Just press one button and the Affri® system cycle starts: <ul style="list-style-type: none"> <li>• The Indentation head approaches to the sample</li> <li>• System auto-clamps the sample</li> <li>• Establishes a surface reference point</li> <li>• Performs the analysis</li> <li>• Releases the sample</li> </ul> This cycle is fully automatic. It avoids any risk of human errors and improves accuracy
Accuracy	Better than 0.5 %
Temperature Range	From 10 °C to 35 °C
Data Output	RS 232 C (USB as option)
Power Supply	110 or 220 V / 50÷60 Hz
Software	Affri - OMAG
Principle of Operation	Load Cell and Closed Loop
Preload	29.4 - 98.1 <b>N</b> (3 - 10 <b>kgf</b> )
Force Range	Rockwell 588.4 - 980.7 - 1471 <b>N</b> (60 - 100 - 150 <b>kgf</b> ) Superficial Rockwell 29.42 - 147.1 - 294.2 - 441.3 <b>N</b> (3 - 15 - 30 - 45 <b>kgf</b> ) Brinell 49.03 - 61.29 - 98.07 - 153.2 - 245.2 - 294.2 - 306.5 - 612.9 - 1226 - 1839 <b>N</b> (on request 2452 <b>N</b> ) (5 - 6.25 - 10 - 15.6 - 25 - 30 - 31.2 - 62.5 - 125 - 187.5 <b>kgf</b> - on request 250 <b>kgf</b> ) Vickers - Knoop 9.807 - 29.42 - 49.03 - 98.07 - 147.1 - 196 - 294.2 - 490.35 - 980.7 <b>N</b> (1 - 3 - 5 - 10 - 15 - 20 - 30 - 50 - 100 <b>kgf</b> ) Optional test 49 - 132 - 358 - 961 <b>N</b> (for plastic, rubber as per EN-ISO 2039-1)
Feasible Tests	Rockwell HRC A - D - B - F - G - L - M - R Superficial Rockwell HRN + HRT Brinell HB 30 - HB 10 - HB 5 - HB 2.5 - Break N/mm <sup>2</sup> Vickers - Knoop (only indentation) Shore A-D
Standards	EN-ISO 6506-2 / EN-ISO 6507-2 / EN-ISO 6508-2 / EN-ISO 2039 / ISO 868 / ASTM-E18 / ASTM E-10 / ASTM 2240 / ASTM E 103 / JIS
Screw Stroke	215 mm
Indenter Stroke	50 mm
Depth Capacity	190 mm
Tolerable Weight	2000 kg
Fields Of Use	For all metals: iron, steel, tempered steel, brass, aluminum and nitriding, cementation, hard facing, plastics
Packing Weight	85 kg
Packaging Measurements	34 x 54 x 99 cm