

Product information

DuraScan G5 semi automatic hardness testing machine 0.25 gf – 62.5 kgf
DuraScan 10 G5, 20 G5



Fields of application

Suitable for all optical hardness testing methods in the low force range (0.00025-62.5 kgf) for single, series and multiple hardness according to the following standards:

- Vickers according to DIN EN ISO 6507, ASTM E384, ASTM E92
- Knoop according to DIN EN ISO 4545, ASTM E384, ASTM E92
- Brinell according to DIN EN ISO 6506, ASTM E10

The DuraScan G5 series hardness testing machine covers the (steel producers, steel suppliers, hardening shops), automotive, aerospace and automotive, aerospace, universities and medical authorities and medical technology (ceramics and dental materials) and is mostly used in testing laboratories.

Advantages/Characteristics

- The groundbreaking standard load range from 10 gf to 62.5 kgf extends the application range of the hardness tester and is applied by means of a closed control loop. This can be optionally extended to 0.25 gf to 62.5 kgf.
- The hardness tester is developed as a „TopLoader“,

so that the testing unit is automatically lowered to the specimen.

- The 12 Mpix camera offers high image quality.
- The 4x zoom allows a wide range of applications with a small number of objectives.
- The automatic 6-position turret (optional) of the DuraScan G5 series allows fast and convenient change of different indenters and objectives (DuraScan 10 G5/20 G5 are equipped with a manual 3-position turret as standard, the automatic 6-position turret is available as an option).
- The ecos Workflow software controls the hardness tester and evaluates the measurement data. The test report with the test parameters and the test results is generated automatically.

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ecos Workflow Touch - intuitiv operating software with calibration assistant

Workflow-based measurement in 5 steps (sample, method, position, result, history).

Simple operation

Simple operation and guided measurement process up to data backup. Intuitive user interface shortens training time and reduces operating errors.

Calibration assistant

Integrated calibration assistant CIS (Calibration Information System) monitors all calibrated methods and simplifies the normatively required testing. CIS indicates when periodic and indirect tests are due, guides through the test procedure and assists with standard-compliant documentation.

Optional modules

The software can be customized to the customer's needs with optional modules.

Useful features

- Rights and role management for easy administration of user rights
- QR code function for efficient control - easy creation and reading of relevant data
- Reduction of operator effort and possible operating errors through grouped measurement data management and use of the template function

Data output

- Extensive range of options for data output and data backup through integrated export editor: backup of test results directly at the hardness tester, output and storage in .pdf, .csv, .xls or .xml format (easy connection to Q-DAS systems)
- ecos Workflow xChange: xml-based interface for connecting the hardness tester to databases and data input devices
- Standard-form-generator to create individualized test reports

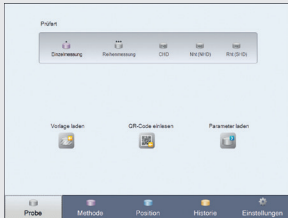


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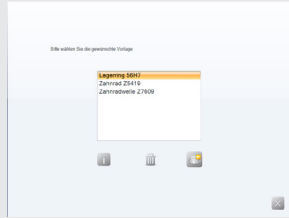
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Step 1: Specimen

Select the required test type from a choice of single measurement, serial measurement, CHD, SHD and NHD progression, load a template or scan a QR code.



Selection of the test type



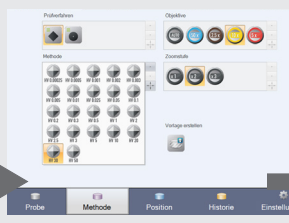
Time-saving template mode

Step 2: Method

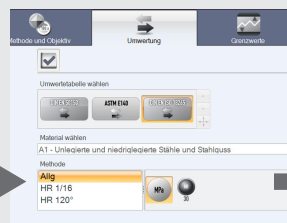
Select a measurement type, lens, test method, zoom level and, if applicable, conversion, hardness limits and geometric correction according to standard as well.



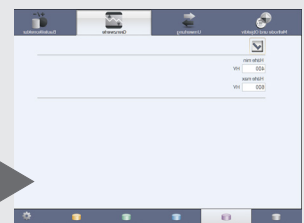
Information on method & objective, conversion, limits and component correction



The test procedure is selected with the choice of the indenter.



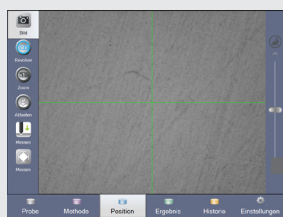
Selection of the desired conversion



Setting the desired limits

Step 3: Position

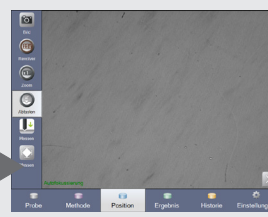
Position your test point on the workpiece. Then simply start the test.



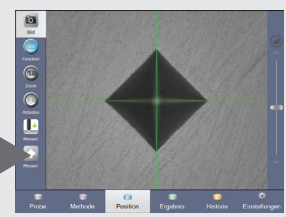
Position your test point on the workpiece in the Workflow step "Position".



The turret shows the currently swiveled-in objective or indenter



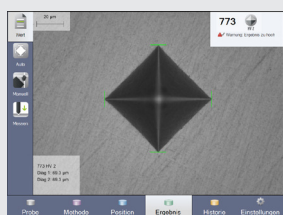
Automatic scanning to detect the sample surface



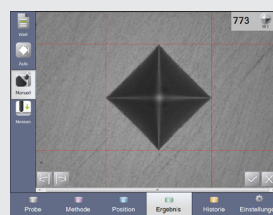
Measurement is performed

Step 4: Result

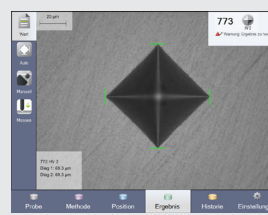
The result is shown clearly and is available for further use. The measurement can also be repeated automatically or manually if required.



The value from the test is displayed clearly together with the indent image.



If necessary, the indent can be remeasured



Further measurements with the same parameters can be performed

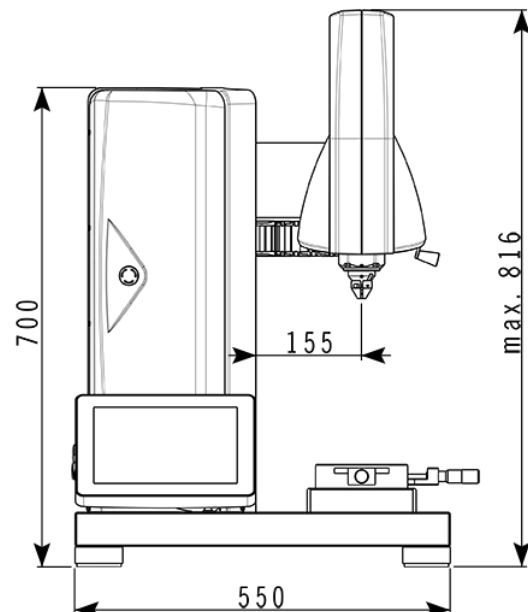
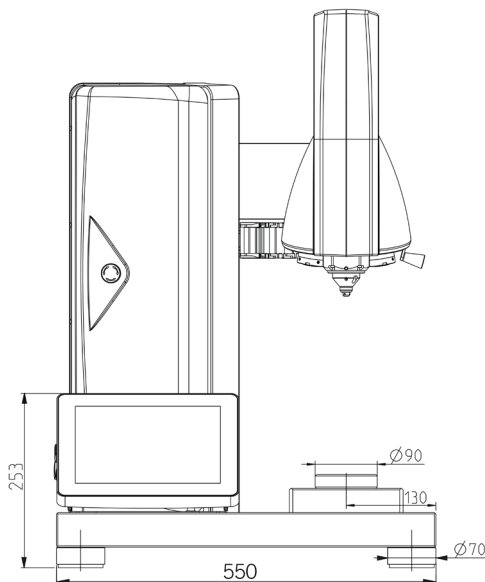
EMCO-TEST		Messbericht	
PROBENNAME:	TOXTECHNOL	SAMPLE:	HOW 10/3000
UNWERTUNG:	USERFELD1	USERFELD1:	USERFELD1
MESSSTUM:	USERFELD1	USERFELD1:	USERFELD1
ANZAHL:	54	SPANNUNGS:	246.0
ANZAHL OIL:	24	WERTUNG:	223.0
ANZAHL LUFT:	0	STANDABWEICHUNG:	51.7
REIBKOEFF:	0.0	CP:	0.0
REIBNUMM:	370.0	CPK:	0.9
	120.0		
Datum:	Unterschrift:		

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DuraScan 10 G5/20 G5

Typ	DuraScan 10 G5	DuraScan 20 G5
Load range	0,098–612,9 N (0,01–62,5 kgf)	0,098–612,9 N (0,01–62,5 kgf)
Optional Load range	0,002452–612,9 N (0,00025–62,5 kgf)	0,002452–612,9 N (0,00025–62,5 kgf)
Max. speed on Z-axis	1,2 mm/sec to 20 mm/sec	1,2 mm/sec to 20 mm/sec
Positioning accuracy with manual spindles	-	0,01 mm
Dimensions (W x H x D)	550 x 700 x 450 (mm)	550 x 700 x 450 (mm)
Weight	85 kg	85 kg
Max. test height	260 mm	235 mm
Voltage supply	110 ... 230 V (PH,N,PE)	110 ... 230 V (PH,N,PE)
Frequency	50/60 Hz	50/60 Hz
Power consumption	120 W	120 W
Test anvil (W x D)	Ø 90 mm	135 mm x 135 mm
Resolution evaluation camera	12 Mpix mit CMOS Sensor	12 Mpix mit CMOS Sensor
Room temperature (to ISO/ASTM)	23 (± 5)°C	23 (± 5)°C
Humidity	max. 70% (non-condensing)	max. 70% (non-condensing)
Operating system	Windows 10/64 bit	Windows 10/64 bit
Max. workpiece weight	50 kg	50 kg
Protection class to EN 60529	IP20	IP20



Accessories

Description

Handheld scanner for scanning QR-codes

Test anvils

Lenses