Zwick / Roell

Zwick
Materials Testing

Product Information

Zwick 3130...7 Electronic hardness testers to Shore

Range of application

The electronic hardness testers (Shore A, D, B, C, D0, 0, 00, 000) are used to determine the hardness of plastics and rubber according to the test standards DIN 53505, ASTM D 2240, ISO 868, NFT 51109 and BS 903, part A26.

Prerequisite for tests to test standard are specimen with plane parallel contact areas of at least 35 mm dia. and a minimum thickness of 6 mm.

Advantages of the products

- Hardness tests can be carried out in horizontal and vertical positions on site and stationary. Test data determination after different durations (DIN, ISO requirements) can be determined and entered with digital hardness testers.
- The electronic hardness tester consists of a handy, cylindrically shaped measurement head with integrated digital electronics.
- The low weight, the handy dimensions and the accumulator operation enable mobile use as well as laboratory operation (test stand as an option).
- The pressure spring is integrated in the measurement head so that the contact ring enables the hardness tester to be applied exactly parallel to the specimen, this excludes measurement error.
- An optical and an acoustic signal are generated after the measurement time has expired and the test data is automatically shown on the display.
  The test data can be transmitted to a PC for further processing and archiving via an RS232 interface when using the test software *testXpert*® (069020.0X.X0).
- The tester always shows the current test data, the previous data is overwritten. The tester is switched to the stand-by mode if testing has not been carried out for a long time.
- The digital electronics integrated in the measurement head has a 1-line display and 2 function buttons. The function buttons enable the tester to be switched on/off and zeroed, they also enable input of the measurement duration after which the hardness is determined.
- The test stand with loading weight (option) is suitable for electronic Shore hardness testers (Zwick 3130/1). It guarantees exact, right-angled positioning of the hardness tester with respect to the specimen surface and thus results in a considerably lower scatter of test data for the hardness tests. Test stands are recommended for use in laboratories as the repeatability of the test method is considerably increased by elimination of operator influence.
- The Zwick 7507 (option) control device serves to monitor the spring characteristics of hardness testers to Shore A and D (Zwick 3130/1).

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Zwick 3130...7 Electronic hardness testers to Shore

	Value	Units
Scale value	1	Shore hardness unit
Display	1-Line	
Display accuracy	± 0.5	Shore hardness unit
Measurement duration	0 ... 99	s
Battery with minimum operating duration	2000	h
Data output	V 24 RS232 C/600 ... 9600 Baud	
Contact area, dia.	18	mm
Dimensions	135 x 65 x 40	mm
Weight	350	g

Display of the individual test devices

Device	Indentor	Contact force	Spring force	Range of application	Order no.
Zwick 3130 (Shore A)	Truncated cone Opening angle 35°	12.5 N	8.065 N	Soft rubber, elastomers, Natural rubber, PVC soft	**H04.3130.000**
Zwick 3131 (Shore D)	Cone Opening angle 30°	50 N	44.5 N	Hard rubber, acrylic glass, polystyrene, rigid thermo-plasts	**H04.3131.000**
Zwick 3132 (Shore B)	Cone Opening angle 30°	1 kg	8.065 N	Elastomers harder than Shore A	**H04.3132.000**
Zwick 3133 (Shore C)	Truncated cone Opening angle 35°	5 kg	44.5 N	Middle hard elastomers and rubber materials	**H04.3133.000**
Zwick 3134 (Shore D0)	Ball dia. 3/32 inch	5 kg	44.5 N	High strength textile fabrics	**H04.3134.000**
Zwick 3135 (Shore 0)	Ball dia. 3/32 inch	1 kg	8.065 N	Soft elastomers and textile fabrics	**H04.3135.000**
Zwick 3136 (Shore 00)	Ball dia. 3/32 inch	0.4 kg	1.10853 N	Foam, sponge and cellular rubber	**H04.3136.000**
Zwick 3137 (Shore 000)	Ball, dia. 1/2 inch		1.10853 N	Sponge/cellular rubber and gel	**H04.3137.000**

Accessories

Description	Order no.
Zwick 7206 test stand with loading weight for Shore A; test table dia. 90 mm, projection 70 mm, specimen thickness max. 120 mm, contact force 10 N/12.5 N, dimensions (H x W x D) 410 x 190 x 200 mm, weight nett approx. 5.2 kg, gross approx. 7.9 kg	**7206.200**
Supplementary weight (37.5 N) for Shore D; applied load 50 N in total	**7206.110**
Control device Zwick 7507 with slide weights for Shore A, dimensions (H x W x D) 265 x 360 x 200 mm, weight net approx. 3.2 kg, gross approx. 5.5 kg	**H04.7507.002**
Supplementary weight for Shore D, net weight approx. 2.2 kg	**H04.7507.010**
Control ring for Shore hardness testers (indentor travel at 40 Shore)	**H04.7507.081**

Software *testXpert*®

Description		Order no.
Master test program for accepting test data from different devices via an RS232 C interface	German	**069020.00.00**
	English	**069020.00.10**
Standard test program for accepting test data from different devices via an RS232 C interface	German	**069020.01.00**
	English	**069020.01.10**

All data at ambient temperature.