



2024-2025 PRODUCT CATALOG

METALLOGRAPHIC EQUIPMENT AND CONSUMABLES

ABRASIVE & PRECISION CUTTING
COMPRESSION & CASTABLE MOUNTING
GRINDING & POLISHING
MICROSCOPY & ANALYSIS
HARDNESS TESTING
LAB FURNITURE

HARDNESS TESTING

ALPHA-MHT-1000Z MICROHARDNESS TESTER



ALPHA-MHT-1000Z

- Vickers or Knoop
- Auto-turret
- Built-in printer
- Load range 10-1000 grams
- Scales (HV, HK)
- LED display
- User friendly
- Robust and durable design



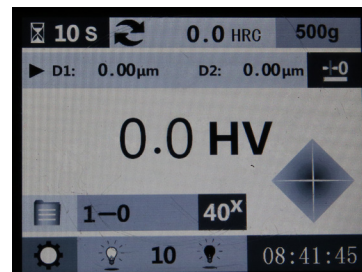
ALPHA-MHT-1000Z Control Panel

ALPHA-MHT-2000Z2 MICROHARDNESS TESTER



ALPHA-MHT-2000Z2

- Vickers or Knoop
- Auto-turret
- Built-in printer
- Load range 10-2000 grams
- Scales (HV, HK)
- Auto hardness conversion to other scales (HRA, HRB, HRC, HV, HK, HBW, etc)
- Long lasting Halogen lamp
- Touch screen display
- Robust and durable design



ALPHA-MHT-2000Z2 Touch Screen



EN 61000-6-1:2007, EN 61000-6-3:2007+A1:2011+AC:2012, EN 61000-3-2:2014, EN 61000-3-3:2013
Electromagnetic Compatibility directive 2014/30/EU

MICROHARDNESS TESTERS

Microhardness Testers

2 year warranty
Limited Warranty

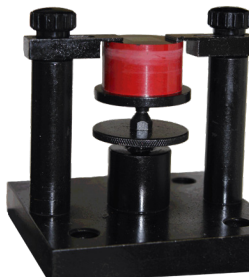
FEATURE	ALPHA-MHT-1000Z	ALPHA-MHT-2000Z2
Indenter types	Vickers or Knoop	Vickers or Knoop
Objective Magnification	10X (observation) & 40X (measurement)	10X (observation) & 40X (measurement)
Indenter Positioning	Auto turret	Auto turret
Testing force (gf)	10, 25, 50, 100, 200, 300, 400, 500, 1000	10, 25, 50, 100, 200, 300, 400, 500, 1000, 2000
Auto Hardness Conversion	HK, HRA, HRBW, HRC, HRD, HRGW, HRKW, HR15N, HR30N, HR45N, HR15TW, HR30TW, HR45TW, HBW	HK, HRA, HRBW, HRC, HRD, HRFW, HRGW, HRKW, HR15N, HR30N, HR45N, HR15TW, HR30TW, HR45TW, HS, HBW
Testing Range	1 HV ~ 3000 HV	1 HV ~ 3000 HV
X-Y Anvil Size	4 x 4-inch (100 x 100 mm)	4 x 4-inch (100 x 100 mm)
X-Y Anvil Travel	1 x 1-inch (25 x 25 mm)	1 x 1-inch (25 x 25 mm) ¹
Dwell Time	5-60 seconds	5-60 seconds
Maximum Sample Height	3.5-inches (90 mm)	3.5-inches (90 mm)
Throat Depth	4-inches (100 mm)	4-inches (100 mm)
Illumination	Halogen	Halogen
Dimensions (W x D x H)	12.8 x 19 x 21.5-inch (325 x 480 x 545 mm)	12.8 x 19 x 21.5-inch (325 x 480 x 545 mm)
Electrical Specifications	110V / 220V 50/60 Hz	110V / 220V 50/60 Hz
Weight	68 lbs (31 kg)	70 lbs (32 kg)
Microhardness indentation measurement software (optional)	HARDNESS PRO	HARDNESS PRO
C-Mount camera attachment (optional)	823-361	823-361
Sample leveler (optional)	823-741	823-741
Direct Certification (optional)	3rd Party	3rd Party
Catalog Number	ALPHA-MHT-1000Z	ALPHA-MHT-2000Z2

Benefits:

- ◆ Auto Turret to avoid indenter damage
- ◆ User friendly
- ◆ Built-in digital micrometer
- ◆ Counter balanced loading
- ◆ Economical
- ◆ 3rd party Direct Certification (optional)

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Sample Leveler (part no. 823-741)



HARDNESS PRO Measurement Software



C-Mount camera adapter (part no. 823-361)

MICROHARDNESS TESTERS

ALPHA-MHT-1000VK DUAL MICROHARDNESS TESTER



ALPHA-MHT-1000VK

NEW

ALPHA-MHT-1000VK

- Dual Vickers AND Knoop
- Auto-turret
- Load range 10-1000 grams
- Scales (HV and HK)
- Dwell time 0-95 seconds
- Auto hardness conversion to other scales (HRA, HRB, HRC, HV, HK, HBW, etc)
- Robust and durable design



Dual Vickers and Knoop Indenters with individual 40X (2) objectives

ALPHA-MHT-AUTO MICROHARDNESS TESTER



ALPHA-MHT-AUTO

ALPHA-MHT-AUTO

- Automated Microhardness Testing
- Vickers or Knoop
- Auto-turret
- Load range 10-1000 grams
- Scales (HV, HK)
- Dwell time 0-60 seconds
- Maximum sample height 6.7-inches (170 mm)
- X-Y Anvil travel range 4.3 x 4.3-inches (110 x 110 mm)
- Auto hardness conversion to other scales (HV, HK, HRA, HRBW, HRC, HRD, HREW, HRFW, HRGW, HRKW, HR15N, HR30N, HR45N, HR15TW, HR30TW, HR45TW, HS, HBW)
- Robust and durable design

Microhardness Testers

2 year warranty
Limited Warranty

FEATURE	ALPHA-MHT-1000VK	ALPHA-MHT-AUTO
Indenter types	Dual Vickers and Knoop	Vickers or Knoop
Objective Magnification	10X (observation) and 20X & 40X (2)(measurement)	10X and 40X
Indenter Positioning	Auto turret	Automatic (Loading/Dwell/Unloading)
Testing force (gf)	10, 25, 50, 100, 200, 300, 400, 500, 1000	10, 25, 50, 100, 200, 300, 400, 500, 1000
Auto Hardness Conversion	HV, HK, HRA, HRBW, HRC, HRD, HREW, HRFW, HRGW, HRKW, HR15N, HR30N, HR45N, HR15TW, HR30TW, HR45TW, HS, HBW	HV, HK, HRA, HRBW, HRC, HRD, HREW, HRFW, HRGW, HRKW, HR15N, HR30N, HR45N, HR15TW, HR30TW, HR45TW, HS, HBW
Testing Range	1 HV ~ 3000 HV	1 HV ~ 3000 HV
X-Y Anvil Size	4 x 4-inch (100 x 100 mm)	4.3 x 4.3-inch (110 x 110 mm)
X-Y Anvil Travel	1 x 1-inch (25 x 25 mm)	2 x 1-inch (50 x 50 mm)
Dwell Time	0-95 seconds	0-60 seconds
Maximum Sample Height	3.5-inches (90 mm)	6.7-inches (170 mm)
Throat Depth	4-inches (100 mm)	5.1-inches (130 mm)
Illumination	Halogen	Halogen
Dimensions (W x D x H)	17 x 19 x 17-inch (425 x 490 x 425mm)	13.2 x 22 x 26.6-inch (335 x 560 x 675 mm)
Electrical Specifications	110V / 220V 50/60 Hz	110V / 220V 50/60 Hz
Weight	77 lbs (35 kg)	115 lbs (52 kg)
Microhardness indentation measurement software (optional)	HARDNESS PRO	Built-in
C-Mount camera attachment (optional)	823-361	Built-in
Sample leveler (optional)	823-741	823-741
Direct Certification (optional)	3rd Party	3rd Party
Catalog Number	ALPHA-MHT-1000VK	ALPHA-MHT-AUTO

Benefits:

- ◆ Fully automated ALPHA-MHT-AUTO
- ◆ Dual Vickers AND Knoop indenters ALPHA-MHT-1000VK
- ◆ Auto Turret to avoid indenter damage
- ◆ User friendly
- ◆ Built-in digital micrometer
- ◆ Counter balanced loading
- ◆ Economical
- ◆ 3rd party Direct Certification (optional)

REQUEST A QUOTE

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EN 61000-1:2010, EN 61000-3-3:2013
2014/35/ EU Low Voltage Directive
2014/30/EU Electromagnetic Compatibility Directive

HARDNESS TESTING CONSUMABLES

Microhardness Test Blocks and Accessories

PACE Product Name	Catalog Number	Qty	Price (\$)
Vickers (1 gram to 1000 grams) for all microhardness hardness ranges	MV010	each	675.00
Knoop (1 gram to 1000 grams) for all microhardness hardness ranges	MK010	each	675.00
Vickers microhardness Diamond Penetrator -certified	P1110	each	1400.00
Knoop microhardness Diamond Penetrator - certified	P1120	each	1400.00

Rockwell Hardness Test Blocks

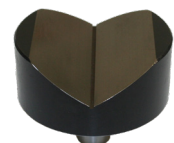
PACE Product Name	Catalog Number	Qty	Price (\$)
A-Scale, C diamond, 60 kg, A60-A84, Steel Rockwell hardness test block	RA10	each	115.00
A-Scale, C diamond, 60 kg, A20-A59, Brass Rockwell hardness test block	RA20	each	115.00
A-Scale, A diamond (carbide), 60 kg, A88 & up, Carbide Rockwell hardness test block	RA30	each	460.00
B-Scale, 1/16-inch ball, 100 kg, B10-B92, Steel Rockwell hardness test block	RB10	each	115.00
B-Scale, 1/16-inch ball, 100 kg, B90-B130, Steel Rockwell hardness test block	RB20	each	115.00
C-Scale, C Diamond, 150 kg, All, Steel Rockwell hardness test block	RC10	each	115.00
D-Scale, C Diamond, 100 kg, All, Steel Rockwell hardness test block	RD10	each	115.00
E-Scale, 1/8-inch ball, 100 kg, All, Brass Rockwell hardness test block	RE10	each	115.00
F-Scale, 1/16-inch ball, 60 kg, All, Brass Rockwell hardness test block	RF10	each	115.00
G-Scale, 1/16-inch ball, 150 kg, G82-91, Brass Rockwell hardness test block	RG10	each	115.00
H-Scale, 1/8-inch ball, 60 kg, All, Brass Rockwell hardness test block	RH10	each	115.00
K-Scale, 1/8-inch ball, 150 kg, All, Brass Rockwell hardness test block	RK10	each	115.00
L-Scale, 1/4-inch ball, 60 kg, All, Brass Rockwell hardness test block	RL10	each	115.00
M-Scale, 1/4-inch ball, 100 kg, All, Brass Rockwell hardness test block	RM10	each	115.00
P-Scale, 1/4-inch ball, 150 kg, All, Brass Rockwell hardness test block	RP10	each	115.00
R-Scale, 1/2-inch ball, 60 kg, All, Brass Rockwell hardness test block	RR10	each	115.00
S-Scale, 1/2-inch ball, 100 kg, All, Brass Rockwell hardness test block	RS10	each	115.00
V-Scale, 1/2-inch ball, 150 kg, All, Brass Rockwell hardness test block	RV10	each	115.00

Rockwell Anvils

PACE Product Name	Catalog Number	Qty	Price (\$)
Pedestal Spot (1/4-inch) Rockwell Anvil	A1010	each	265.00
1-1/2-inch Flat Rockwell Anvil	A1020	each	265.00
2-1/2-inch Flat Rockwell Anvil	A1030	each	305.00
Shallow V Rockwell Anvil	A1040	each	305.00
Standard V Rockwell Anvil	A1050	each	305.00



Rockwell Flat Anvil



Rockwell V-Anvil

Rockwell Ball Penetrators

PACE Product Name	Catalog Number	Qty	Price (\$)
1/16-inch Carbide Ball Penetrator Indentron Certified	P20101	each	390.00
1/16-inch Carbide Ball, Certified	P20150	each	24.00
1/8-inch Carbide Ball Penetrator Indentron Certified	P20201	each	328.00
1/8-inch Carbide Ball, Certified	P20250	each	55.00
1/4-inch Carbide Ball Penetrator Indentron Certified	P20301	each	395.00
1/4-inch Carbide Ball, Certified	P20350	each	55.00
1/2-inch Carbide Ball Penetrator Indentron Certified	P20401	each	440.00
1/2-inch Carbide Ball, Certified	P20450	each	78.00

Superficial Rockwell Hardness Test Blocks

PACE Product Name	Catalog Number	Qty	Price (\$)
15 N Scale, N Diamond, 15 kg, All, Steel, Superficial hardness test blocks	S15N10	each	115.00
30 N Scale, N Diamond, 30 kg, All, Steel, Superficial hardness test blocks	S30N10	each	115.00
45 N Scale, N Diamond, 45 kg, All, Steel, Superficial hardness test blocks	S45N10	each	115.00
15 T Scale, 1/16-inch Ball, 15 kg, All, Brass, Superficial hardness test blocks	S15T10	each	115.00
30 T Scale, 1/16-inch Ball, 30 kg, All, Brass, Superficial hardness test blocks	S30T10	each	115.00
45 T Scale, 1/16-inch Ball, 45 kg, All, Brass, Superficial hardness test blocks	S45T10	each	115.00
15 W Scale, 1/8-inch Ball, 15 kg, All, Brass, Superficial hardness test blocks	S15W10	each	115.00
30 W Scale, 1/8-inch Ball, 30 kg, All, Brass, Superficial hardness test blocks	S30W10	each	115.00
45 W Scale, 1/8-inch Ball, 45 kg, All, Brass, Superficial hardness test blocks	S45W10	each	115.00
15 X Scale, 1/4-inch Ball, 15 kg, All, Brass, Superficial hardness test blocks	S15X10	each	115.00
30 X Scale, 1/4-inch Ball, 30 kg, All, Brass, Superficial hardness test blocks	S30X10	each	115.00
45 X Scale, 1/4-inch Ball, 45 kg, All, Brass, Superficial hardness test blocks	S45X10	each	115.00
15 Y Scale, 1/2-inch Ball, 15 kg, All, Brass, Superficial hardness test blocks	S15Y10	each	115.00
30 Y Scale, 1/2-inch Ball, 30 kg, All, Brass, Superficial hardness test blocks	S30Y10	each	115.00
45 Y Scale, 1/2-inch Ball, 45 kg, All, Brass, Superficial hardness test blocks	S45Y10	each	115.00

ROCKWELL HARDNESS TESTERS

OMEGA-RT2 MANUAL ROCKWELL TESTER



OMEGA-RT2

OMEGA-RT2

- Manual Rockwell Tester
- 60 Kgf, 100 Kgf and 150 Kgf loading
- Analog display
- Robust and durable design
- Manual loading control
- User friendly
- Economical

OMEGA-RT-60/150 ROCKWELL TESTER



OMEGA-RT-60/150

OMEGA-RT-60/150

- Semi-Automated Rockwell Tester
- Initial test force 10 Kgf loading
- Total test force 60, 100 and 150 Kgf loading
- Automatic conversion to 18 different hardness scales
- LCD displays hardness
- Robust and durable design
- Loading time and dwell time (1-60 seconds)
- Auto hardness conversion
- User friendly
- Economical

OMEGA-RST-15/150 SUPERFICIAL ROCKWELL TESTER



OMEGA-RST-15/150

OMEGA-RST-15/150

- Semi-Automated Dual Rockwell / Superficial Tester
- Total test force 15, 30, 45, 60, 100 and 150 Kgf loading
- Automatic conversion to 18 different hardness scales
- LCD displays hardness
- Robust and durable design
- Loading time and dwell time (1-60 seconds)
- Auto hardness conversion
- User friendly
- Economical

Manual Rockwell Hardness Tester

FEATURE	OMEGA-RT2
Rockwell Scales	HRA, HRB, HRC
Preliminary test force	10 Kgf (98.07N)
Full test force	60 Kgf, 100 Kgf, 150 Kgf
Loading control	Manual
Instrument Throat Height	6.5-inch (165 mm)
Maximum Sample Height	7.3-inch (185 mm)
Hardness Resolution	0.5 HR
Dimensions (W x D x H)	9.6 x 20.5 x 27.6-inch (245 x 520 x 700mm)
Weight	172 lbs (78 kg)

2 year warranty
Limited Warranty

Benefits:

- ◆ Basic Rockwell Tester
- ◆ Economical
- ◆ Easy to Use

REQUEST A QUOTE
www.metallographic.com

Semi-Automated Rockwell Hardness Testers

FEATURE	OMEGA-RT-60/150	OMEGA-RST-15/150
Rockwell Tester	Standard Rockwell Tester	Dual Rockwell / Superficial Rockwell Tester
Automation	Semi-Automated	Semi-Automated
Rockwell Scales	HRA, HRD, HRC, HRFW, HRBW, HRGW, HRHW, HREW, HRKW, HRL, HRM, HRR, HRP, HRS, HRV	HRA, HRD, HRC, HRFW, HRBW, HRBW, HRGW, HREW, HRKW, HRM, HRP, HRR, HRS, HRV, HR15N, HR30N, HR45N, HR15TW, HR30TW, HR45TW, HR15W, HR30W, HR45W, HR15X, HR30X, HR45X, HR15T, HR30Y, HR45Y
Preliminary test force	10 Kgr (98.07N)	3 Kgr (Superficial) 10 Kgr (Rockwell)
Full test force	60 Kgf, 100 Kgf, 150 Kgf	15, 30, 45, 60, 100, and 150 Kgf
Hardness resolution	0.1 HR	0.1 HR
Dwell time	Adjustable 0-60 seconds	Adjustable 0-60 seconds
Auto Hardness conversion	HV, HK, HRA, HRBW, HRC, HRD, HREW, HRFW, HRGW, HRKW, HR15N, HR30N, HR45N, HR15TW, HR30TW, HR45TW, HS, HBW	HV, HK, HRA, HRBW, HRC, HRD, HREW, HRFW, HRGW, HRKW, HR15N, HR30N, HR45N, HR15TW, HR30TW, HR45TW, HS, HBW
Instrument Throat Height	6.5-inch (165 mm)	6.3-inch (165 mm)
Power	110 or 220V	110 or 220V
Dimensions (W x D x H)	8.5 x 20 x 28 inch (215 x 520 x 700mm)	8.5 x 20 x 28 inch (215 x 520 x 700mm)
Weight	172 lbs (78 kg)	175 lbs (80 kg)
Direct Certification (optional)	3rd Party	3rd Party

2 year warranty
Limited Warranty

CE EN 61000-1:2010, EN 61000-3-3:2013
2014/35/ EU Low Voltage Directive
2014/30/EU Electromagnetic Compatibility Directive

ROCKWELL HARDNESS TESTERS

OMEGA-RT MANUAL ROCKWELL TESTER



OMEGA-RT

OMEGA-RT

- Manual Rockwell Tester
- Initial test force 10 Kgf loading
- Total test force 60, 100 and 150 Kgf loading
- Analog display
- Robust and durable design
- Manual loading control
- Easy to use
- Economical

OMEGA-DIGI-RT ROCKWELL TESTER



OMEGA-DIGI-RT

OMEGA-DIGI-RT

- Digital Semi-Automated Rockwell Tester
- Initial test force 10 Kgf loading
- Total test force 60, 100 and 150 Kgf loading
- Automatic conversion to 16 different hardness scales
- Touch screen display
- Robust and durable design
- Loading time and dwell time (1-60 seconds)
- Auto hardness conversion
- User friendly
- Economical

OMEGA-DIGI-RST SUPERFICIAL ROCKWELL TESTER



OMEGA-DIGI-RST

OMEGA-DIGI-RST

- Digital Semi-Automated Dual Rockwell / Superficial Tester
- Total test force 15, 30, 45, 60, 100 and 150 Kgf loading
- Automatic conversion to 16 different hardness scales
- Touch screen display
- Robust and durable design
- Loading time and dwell time (1-60 seconds)
- Auto hardness conversion
- User friendly
- Economical

Manual Rockwell Hardness Tester

FEATURE	OMEGA-RT (Rockwell)	OMEGA-ST (Superficial Rockwell)
Rockwell Scales	HRA, HRB, HRC	HR15N, HR30N, HR45N, HR15T, HR30T, HR45T
Preliminary test force	10 Kgf (98.07N)	3 Kgf (29.4N)
Full test force	60 Kgf, 100 Kgf, 150 Kgf	15 Kgf, 30 Kgf, 45 Kgf
Loading control	Manual	Manual
Instrument Throat Height	6.5-inch (165 mm)	6.5-inch (165 mm)
Dimensions (W x D x H)	7.2 x 21.5 x 29.7 inch (182 x 546 x 755 mm)	7.2 x 21.5 x 29.7 inch (182 x 546 x 755 mm)
Weight	200 lbs (90 kg)	200 lbs (90 kg)

2 year warranty
Limited Warranty

Benefits:

- ◆ Basic Rockwell Tester
- ◆ Economical
- ◆ Easy to Use

REQUEST A QUOTE
www.metallographic.com

Semi-Automated Rockwell Hardness Testers

FEATURE	OMEGA-DIGI-RT	OMEGA-DIGI-RST
Rockwell Tester	Standard Rockwell Tester	Dual Rockwell / Superficial Rockwell Tester
Automation	Semi-Automated	Semi-Automated
Hardness Scales	Rockwell: HRA, HRB, HRC, HRD, HRE, HRF, HRG, HRH, HRK, HRL, HRM, HRR, HRP, HRS, HRV	Rockwell: HRA, HRB, HRC, HRD, HRE, HRF, HRG, HRH, HRK, HRL, HRM, HRR, HRP, HRS, HRV Superficial Rockwell: HR15N, HR30N, HR45N, HR15T, HR30T, HR45T
Preliminary test force	10 Kgr (98.07N)	3 Kgr (Superficial) 10 Kgr (Rockwell)
Full test force	60 Kgf, 100 Kgf, 150 Kgf	15, 30, 45, 60, 100, and 150 Kgf
Hardness resolution	0.1 HR	0.1 HR
Dwell time	Adjustable 1-60 seconds	Adjustable 1-60 seconds
Auto Hardness conversion	HRC, HV, HBS, HBW, HK, HRA, HRD, HR15N, HR30N, HR45N, HS, HRF, HR15T, HR30T, HR45T, HR15Y, HRB	HRC, HV, HBS, HBW, HK, HRA, HRD, HR15N, HR30N, HR45N, HS, HRF, HR15T, HR30T, HR45T, HR15Y, HRB
Maximum Height of Specimen	6.9-inch (175 mm)	11.0-inch (280 mm)
Power	110 or 220V	110 or 220V
Dimensions (W x D x H)	7 x 21.5 x 30 inches 182 x 546 x 755 mm	8.8 x 24 x 35 inches 225 x 615 x 885 mm
Weight	198 lbs (90 Kg)	265 lbs (120 Kg)
Direct Certification (optional)	3rd Party	3rd Party

2 year warranty
Limited Warranty



EN 61000-1:2010, EN 61000-3-3:2013
2014/35/ EU Low Voltage Directive
2014/30/EU Electromagnetic Compatibility Directive

AUTOMATED ROCKWELL TESTERS

OMEGA-AUTO-RT HARDNESS TESTER



OMEGA-AUTO-RT

- Fully-automated Rockwell Tester
- Initial test force 10 Kgf loading
- Total test force 60, 100 and 150 Kgf loading
- One touch operation
- Auto load change
- Auto lifting
- Auto loading
- Auto measuring
- Auto conversion
- Ability to set upper and lower limits
- Robust and durable design

OMEGA-AUTO-ST HARDNESS TESTER



OMEGA-AUTO-ST

- Fully-automated Superficial Rockwell Tester
- Total test force 15 Kgf, 30 Kgf and 45 Kgf loading (Superficial)
- One touch operation
- Auto load change
- Auto lifting
- Auto loading
- Auto measuring
- Auto conversion
- Color touch screen
- Ability to set upper and lower limits
- Robust and durable design

OMEGA-AUTO-RST HARDNESS TESTER



OMEGA-AUTO-RST

- Fully-automated Dual Rockwell / Superficial Rockwell Tester
- 15 Kgf, 30 Kgf and 45 Kgf loading (Superficial)
60 Kgf, 100 Kgf and 150 Kgf loading (Rockwell)
- One touch operation
- Auto load change
- Auto lifting
- Auto loading
- Auto measuring
- Auto conversion
- Color touch screen
- Ability to set upper and lower limits
- Robust and durable design

Automated Rockwell Hardness Testers

2 year warranty
Limited Warranty

FEATURE	OMEGA-AUTO-RT	OMEGA-AUTO-ST	OMEGA-AUTO-RST
Rockwell Type	Rockwell	Superficial Rockwell	Dual Rockwell / Superficial Rockwell
Rockwell Scales	HRA, HRB,HRC,HRD,HRE, HRF, HRG,HRH,HRK,HRL, HRM, HRR, HRP, HRS,HRV	HRA, HRB,HRC,HRD,HRE, HRF, HRG,HRH,HRK,HRL, HRM, HRR, HRP, HRS,HRV	HRA, HRB,HRC,HRD,HRE, HRF, HRG,HRH,HRK,HRL, HRM, HRR, HRP, HRS,HRV
Preliminary Test Force	10 Kgr (Rockwell)	3 Kgr (Superficial)	3 Kgr (Superficial) 10 Kgr (Rockwell)
Full Test Force	60 Kgf, 100 Kgf, 150 Kgf (Rockwell)	15 Kgf, 30 Kgf, 45 Kgf (Superficial)	15 Kgf, 30 Kgf 45 Kgf (Superficial) 60 Kgf, 100 Kgf, 150 Kgf (Rockwell)
Hardness resolution	0.1 HR	0.1 HR	0.1 HR
Dwell Time	Adjustable 1-60 seconds	Adjustable 1-60 seconds	Adjustable 1-60 seconds
Auto Hardness conversion	HRC, HV, HBS, HBW, HK, HRA, HRD, HR15N, HR30N, HR45N, HS, HRF, HR15T, HR30T, HR45T, HRB	HRC, HV, HBS, HBW, HK, HRA, HRD, HR15N, HR30N, HR45N, HS, HRF, HR15T, HR30T, HR45T, HRB	HRC, HV, HBS, HBW, HK, HRA, HRD, HR15N, HR30N, HR45N, HS, HRF, HR15T, HR30T, HR45T, HRB
Max Height of Specimen	11 inches (280 mm)	11 inches (280 mm)	11 inches (280 mm)
Power	110 or 220V	110 or 220V	110 or 220V
Dimensions (W x D x H)	9 x 24 x 34.8 inches (225 x 615 x 885 mm)	9 x 24 x 34.8 inches (225 x 615 x 885 mm)	9 x 24 x 34.8 inches (225 x 615 x 885 mm)
Weight	275.6 lbs (125 Kg)	275.6 lbs (125 Kg)	275.6 lbs (125 Kg)
Direct Certification (optional)	3rd Party	3rd Party	3rd Party
Catalog Number	OMEGA-AUTO-RT	OMEGA-AUTO-ST	OMEGA-AUTO-RST

Benefits:

- ◆ Automated Testers
- ◆ One touch operation
- ◆ Stores up to 2000 single test measurements
- ◆ Stores 1000 groups of test results
- ◆ Eliminates user error for more reproduceable results

REQUEST A QUOTE

www.metallographic.com



EN 61000-1:2010, EN 61000-3-3:2013
2014/35/ EU Low Voltage Directive
2014/30/EU Electromagnetic Compatibility Directive

BRINELL TESTERS

OMEGA-HB BRINELL HARDNESS TESTER



OMEGA-HB

OMEGA-HB

- Manual Brinell Tester
- Test Forces 62.5, 100, 125, 187.5, 250, 500, 750, 1000, 1500 and 3000 Kgf
- Test range (~3.2 to 650 HBW)
- User friendly
- Robust and durable design

REQUEST A QUOTE
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OMEGA-HB-3000 BRINELL HARDNESS TESTER



OMEGA-HB-3000

OMEGA-HB-3000

- Digital Brinell Tester with Built-In Optics
- Semi-automated
- Built-in eyepiece filar
- Test Forces 62.5, 100, 125, 187.5, 250, 500, 750, 1000, 1500 and 3000 Kgf
- Test range (~3.2 to 650 HBW)
- LCD display
- User friendly
- Robust and durable design

OMEGA-AUTO-HB BRINELL HARDNESS TESTER



OMEGA-AUTO-HB

OMEGA-AUTO-HB

- Fully-automated BRINELL Tester
- Testing range of ~3.2 to 650 HBW
- One key operation
- Displays data statistics, hardness conversion, and limitation setting
- Loading by high accuracy force sensor
- Compensation of force loss during loading with micro central processing unit
- Test forces 62.5, 100, 125, 187.5, 250, 500, 750, 1000, 500, 3000 Kgf
- Robust and durable design

Brinell Hardness Testers

2 year warranty
Limited Warranty

FEATURE	OMEGA-HB	OMEGA-HB-3000	OMEGA-AUTO-HB
Brinell Tester	Manual	Semi-Automated	Automated
Optical Measurement	Manual 20X Optical Scope	Built-in 20X eyepiece filar	Built-in 20X eyepiece filar
Test forces (Kgf)	62.5, 100, 125, 187.5, 250, 500, 750, 1000, 1500, 3000	62.5, 100, 125, 187.5, 250, 500, 750, 1000, 1500, 3000	62.5, 100, 125, 187.5, 250, 500, 750, 1000, 1500, 3000
Testing range	~3.2 to 650 HBW	~3.2 to 650 HBW	~3.2 to 650 HBW
Max. height of specimen	8.1-inch (205 mm)	8.8-inch (225 mm)	10 inches (260 mm)
Max. throat depth	5.3-inch (135 mm)	5.3-inch (135 mm)	6 inches (150 mm)
Power	110 or 220V	110 or 220V	110 or 220V
Dimensions (W x H x D)	9.3 x 21.5 x 29.7-inch (235 x 545 x 755 mm)	9.3 x 21.5 x 31.1-inch (235 x 545 x 790 mm)	12 x 24.5 x 39-inch (313 x 622 x 992 mm)
Weight	290 lbs (130 kg)	290 lbs (130 kg)	375 lbs (170 kg)
Catalog Number	OMEGA-HB	OMEGA-HB-3000	OMEGA-AUTO-HB

Brinell Consumable Test Blocks

PACE Product Name	Catalog Number	Qty	Price (\$)
3000 kg load, 10 mm ball Brinell test block for all hardness ranges	B3000	each	210.00
2000 kg load, 10 mm ball Brinell test block for all hardness ranges	B2000	each	210.00
1500 kg load, 10 mm ball Brinell test block for all hardness ranges	B1500	each	210.00
1000 kg load, 10 mm ball Brinell test block for all hardness ranges	B1000	each	210.00
500 kg load, 10 mm ball Brinell test block for all hardness ranges	B0500	each	210.00
250 kg load, 10 mm ball Brinell test block for all hardness ranges	B0250	each	210.00
187.5 kg load, 10 mm ball Brinell test block for all hardness ranges	B0187	each	210.00

Brinell Indenters / Carbide Balls

PACE Product Name	Catalog Number	Qty	Price (\$)
2.5 mm Brinell carbide balls (each) - certified	P3032	each	38.00
5 mm Brinell carbide balls (each) - certified	P3031	each	65.00
10 mm Brinell carbide balls (each) - certified	P3020	each	80.00
2.5 mm Brinell Indenter with carbide ball - certified	P3132	each	480.00
5 mm Brinell Indenter with carbide ball - certified	P3131	each	565.00
10 mm Brinell Indenter with carbide ball - certified	P3134	each	675.00



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MACRO VICKERS TESTERS

OMEGA Macro Vickers Hardness Testers

2 year warranty
Limited Warranty



OMEGA-5000-HV

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OMEGA-5000-HV

- Semi-automated Macro Vickers Tester
- 1, 2, 2.5, 3, 5, 10, 20, 30 and 50 Kgf loading
- 10X and 20X objectives
- Touch screen control
- Auto turret
- Auto focusing
- Auto measurement
- Robust and durable design

FEATURE	OMEGA-5000-VZ
Test forces	1kgf, 2kgf, 2.5kgf, 3kgf, 5kgf, 10kgf, 20kgf, 30kgf, 50kgf
Eyepieces	10X
Objectives	10X, 20X
Total Magnification	100X, 200X
Loading Method	Automatic (Loading/Dwell/Unloading)
Dwell time	Adjustable 5-60 seconds
Shifting between Objective and Indenter	Automatic Shifting
Resolution	0.25μm / 0.125μm
Illumination	Halogen
Maximum Sample Height	6.7-inch (170 mm)
Power	110 or 220V
Dimensions (W x H x D)	11 x 21 x 25 inch (280 x 530 x 630mm)
Weight	77 lbs (35 kg)
Part No.	OMEGA-5000-HV

Macro Vickers Test Blocks

PACE Product Name	Catalog Number	Qty	Price (\$)
Heavy Load Vickers (1 kg to 50 kg)	MV020	each	675.00

Steel Hardness Conversion Table:

This table compares the relative tensile strength to the approximate hardness of steel for the Brinell, Rockwell B, Rockwell C and Vickers scales.

Brinell Hardness (HB)	Rockwell (HRC)	Rockwell (HRB)	Vickers (HV)	Tensile Strength (N/mm ²)
3000 kg 10 mm Ball	150 kg Diamond	100 kg 1/16-inch Ball	Diamond 120 kg	Approx.
800	72			
745	68			
695	64			
641	61			
592	57		727	
552	55		649	
504	52	118	549	
456	48	116	490	1569
402	43	114	424	1390
348	38	110	361	1187
300	32	107	303	1020
255	26	102	258	870
203	16	94	201	680
154	1	82	152	515
105		62	112	378



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METALLOGRAPHIC MICROSCOPY

IM-3000B INVERTED METALLURGICAL MICROSCOPE



IM-3000B Microscope

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IM-3000B Microscope

- Basic Metallographic Microscope
 - Brightfield Illumination
 - Polarized Light Illumination
- 5 position turret for 4.5X, 10X, 20X, 50X and 100X Infinite Plan Achromatic Objectives
- Dual widefield eyepieces
- Mechanical X-Y stage control
- Bright Halogen Light Source
- Multiple camera ports
- Robust and durable design
- Economical Basic Metallurgical Microscope

IM-5000 INVERTED METALLURGICAL MICROSCOPE



IM-5000 Microscope

REQUEST A QUOTE

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IM-5000 Microscope

- Powerful Metallographic Microscope
 - Brightfield Illumination
 - Darkfield Illumination
 - Polarized Light
 - Differential Interference Contrast (DIC) Illumination
- 5 position turret for 5X, 10X, 20X, 50X and 100X DIC Objectives
- Dual widefield eyepieces
- Mechanical X-Y stage control
- Bright Halogen Light Source
- Multiple camera ports
- Robust and durable design
- Economical High Performance Metallurgical Microscope

METALLOGRAPHIC MICROSCOPES

IM-3000B Brightfield Metallographic Microscope

FEATURE	IM-3000B DESCRIPTION
Illumination Techniques	Brightfield and Polarized Light
Objectives:	Infinite Plan Achromatic 4.5X/0.1 Infinite Plan Achromatic 10X/0.25 Infinite Plan Achromatic 20X/0.4 Infinite Plan Achromatic 50X/0.75 Infinite Plan Achromatic 100X/0.90
Eyepiece:	Wide field WF 10X (field no. 22 mm)
Trinocular Head:	Trinocular, 45 degree inclination ratio Observation: 80%, photo 20%
Focusing System:	Coaxial coarse/fine focus (2 micron) ravel (stage to focal plane) up 1 mm, down 7 mm
Nosepiece:	Quintuple
Mechanical Stage:	X-Y stage Travel range: 1.6 x 1.6-inches (40 x 40 mm) Size: 8.9 x 7-inch (226 x 178 mm)
Illumination:	12V/50W Halogen Lamp
Color Filters:	Grey, Blue, Green color filters & ground glass
Electrical Specification	110V/220V (50/60 Hz) (single phase)

2 year warranty
Limited Warranty

Benefits:

- ◆ Brightfield illumination
- ◆ Polarized light illumination
- ◆ X-Y Stage control
- ◆ Multiple camera ports

REQUEST A QUOTE
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IM-3000B Infinite Plan Achromatic Objectives

IM-5000 Brightfield, Darkfield & DIC Microscope

FEATURE	IM-5000 DESCRIPTION
Illumination Techniques	Brightfield, Darkfield, Polarized Light & Differential Interference contrast (DIC)
Objectives:	PL L5X/0.12 BD (working distance 10 mm) PL L10X/0.25 BD (working distance 10 mm) PL L20/0.40 BD (working distance 5 mm) PL L50X/0.70 BD (working distance 1.3 mm) PL L100X/0.90 BD (working distance 0.7 mm)
Eyepiece:	Wide field WF 10X (field no. 22 mm)
Trinocular Head:	Trinocular, 45 degree inclination ratio Observation: 80%, photo 20%
Focusing System:	Coaxial coarse/fine focus (2 micron) Travel (stage to focal plane) up 1 mm, down 7 mm
Nosepiece:	Quintuple
Mechanical Stage:	X-Y stage Travel range: 1.6 x 1.6-inches (40 x 40 mm) Size: 8.9 x 7-inch (226 x 178 mm)
Illumination:	12V/50W Halogen Lamp
Color Filters:	Grey, Blue, Green color filters & ground glass
Electrical Specification	110V/220V (50/60 Hz) (single phase)

2 year warranty
Limited Warranty

Benefits:

- ◆ Brightfield illumination
- ◆ Darkfield illumination
- ◆ Polarized light illumination
- ◆ Differential interference contrast
- ◆ X-Y Stage control
- ◆ Multiple camera ports



IM-5000 Objectives



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STEREO MICROSCOPES

ZMS0745T STEREO METALLURGICAL MICROSCOPE



ZMS0745T Microscope

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ZMS0745T Stereo Microscope

- Stereo imaging for better 3-dimensional viewing (excellent for weld analysis)
- Dual eyepieces
- 10X zoom
- High depth of focus
- X-Y stage (optional)
- Trinocular head for camera attachment
- Robust and durable design
- Economical Stereographic Metallurgical Microscope

VM-100 DIGITAL STEREO MICROSCOPE



VM-100 Microscope

VM-100 Digital Stereo Microscope

- Digital High Resolution Stereo Microscope
- Photo and video recording capability
- Built-in zoom
- Unit includes monitor
- Adjustable bottom and top LED illumination
- Robust and durable design

VM-500-PLUS DIGITAL STEREO MICROSCOPE



VM-500-PLUS Microscope

NEW

VM-500-PLUS Digital Stereo Microscope

- Digital High Resolution Stereo Microscope
- Auto Focus
- Photo and video recording capability
- Built-in zoom
- Unit includes monitor
- Adjustable bottom and top LED illumination
- Includes built-in measuring software
- Robust and durable design

ZMSO7475T Stereo Metallographic Microscope

2 year warranty
Limited Warranty

FEATURE	ZMSO745T DESCRIPTION
Illumination Techniques	Oblique Illumination
Total Magnification	7-45X (with 10X eyepieces)
Eyepiece Options	10X (standard), 15X and/or 20X (optional)
Trinocular Head	Inclined 45 degrees from main body (360 degree rotation)
Diopter Adjustment	+/- 6 degrees
Interpupillary Adjustment	2 ~ 3-inch (52 ~ 76 mm)
Focus Range	3-inch (76 mm)
Stage Size	5-inch (125 mm)
Color Filters:	Grey, Blue, Green color filters & ground glass
Catalog Number	ZMSO745T

ACCESSORIES	CATALOG NUMBER
Eyepieces: SWH10X/23mm SWH15X/17mm SWH20X/14mm	416-101 416-151 416-201
Magnifiers: 0.37X magnifying objective 0.5X magnifying objective 0.7X magnifying objective 1.5X magnifying objective 2X magnifying objective	416-311 416-321 416-331 416-341 416-351
Digital camera	CAM-31 or CAM-91
1X CCD adapter	417-101
4-Division LED Lightsouce (ML-144D)	413-136
Fiber optic light source (150 W)	413-227
Mechanical stage with X-Y micrometers	419-162

VM Digital Stereo Metallographic Microscope

2 year warranty
Limited Warranty

FEATURE	VM-100 DESCRIPTION	VM-500-PLUS DESCRIPTION
Illumination Techniques	Oblique Illumination	Oblique Illumination with Auto Focus
Optical Objective	0.7 X ~ 4.5X Horizontal zoom lens (Zoom ratio: 6.5:1)	0.7 X ~ 4.5X Horizontal zoom lens (Zoom ratio: 6.5:1)
Camera Parameter	2 million pixel (1920 x 1080) Image size: 1/2.86-inch Frames per second: 30 fps	2 million pixel (1920 x 1080) Image size: 1/2.86-inch Frames per second: 1080P@60 fps
Measuring Function	- White balance, brightness control, digital noise reduction - Photograph and video recording - VGA/USB Out put, SD card storage - Cross hairline, Picture frozen, 10 X digital magnification	- White balance, brightness control, digital noise reduction - Photograph and video recording - VGA/USB Out put, - Cross hairline, Picture frozen, 10 X digital magnification
Measuring Function	Optional PC System and measuring software can measure image in field of view	Linear dimensions such as distance, perimeter, area, angle, radian, width, height, and radius elements are measured
Interpupillary Adjustment	2 ~ 3-inch (52 ~ 76 mm)	
Microscope Stand	Z-axis Travel: 6-inch (150 mm), Coarse/fine lifting system	Z-axis Travel: 4-inch (100 mm), Coarse/fine lifting system
Electrical Parameters	90~240 V; 50~60 Hz	90~240 V; 50~60 Hz
Dimensions (W x D x H)	11.4 x 11 x 15.7 inches (290 x 280 x 400 mm)	14.8 x 11.2 x 19.7 inches (375 x 285 x 500 mm)
Weight	10 lbs (4.7 kg)	14 lbs (6.5 kg)
Catalog Number	VM-100	VM-500-PLUS



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