



VIGRA Marketing & Services SRL

Nr RC: J40/0000749/2003

Cod fiscal: R15143726

Bucuresti, sector 1, Str. Stefan Negulescu nr. 34, etaj 3

Email: office@vigra.ro

Banca "Transilvania Suc. Militari Bucuresti"

Tel:(+40-21) 233.33.34; 233.33.35, 233.33.36

Fax:(+40-21) 233.33.37,

CP 011654

Web: www.vigra.ro

IBAN: RO24BTRL04601202G41519XX

OFERTA SPECIALA MASINA CMM Mitutoyo Crysta Plus M443

Nr.	Descriere	COD	Pret in € fara TVA
1	<p>Crysta Plus M 443 Masina de masurat manuala in coordonate, constructie compacta, economica si de mare acuratete tip "bridge", cu suspensie tip "air-bearing" pentru operatii usoare si delicate. Principale avantaje:</p> <ul style="list-style-type: none">• Actionarea aerului printr-o singura atingere inclusiv ajustare fina pe toate axele si in toata gama de masurare.• Versatil pentru conectare cu puternicul software MCOSMOS sau cu calculatorul simplu tip QM-Data 300D.• Scala de sticla de mare rezolutie 0,5 µm.• Masa de lucru din granit cu gauri filetate M8. <p>Date principale:</p> <ul style="list-style-type: none">• <i>Gama de masura</i><ul style="list-style-type: none">○ X = 400 mm○ Y = 400 mm○ Z = 300 mm• <i>Acuratete (20°C)</i><ul style="list-style-type: none">○ Volumetric E = $(3.0 + 4L/1000)$ µm, L=lungimea de masurare in mm.○ Probing error R = 4.0 µm.• <i>Echipamentul cu stand, dimensiuni si greutate.</i><ul style="list-style-type: none">○ Latime = 981 mm○ Adancime = 1087 mm○ Inaltime= 1967 mm○ Greutate = 410 kg• <i>Aer comprimat</i><ul style="list-style-type: none">○ Presiune = 0.35 MPa (Sursa = 0.5 -0.9 MPa)○ Consum = 50L/min (Sursa = 100 L/min)	196-683	
2	UPI-PCI interfata	06AAU829	
3	Masterball ceramic	06ABM944D	





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Capul de masurare MH20i



Contact measuring head, manual turn/swivel

This contact measuring head has a very small outer diameter of just 13.2 mm, enabling it to efficiently measure complex work pieces or to reach parts of work pieces in confined spaces. Further probe modules with optional 50 mm or 70 mm extension are also available.

168 repeatable measuring head positions

The measuring head on the MH20i can be both manually positioned (probe alignment) or turned and/or swiveled into 168 different repeatable positions. Storing the requisite positions before commencing the measurement of complex 3-D shapes requiring repeated changes in probe direction can eliminate the need to recalibrate following each change of position and thus significantly improve overall measuring performance.



Technical specifications MH20i

Direction of measurement	$\pm X, \pm Y, \pm Z$
Change of position	Manually, on the A axis (vertical): 0-90° (in 15° increments), and the B axis (horizontal): $\pm 180^\circ$ (in 15° increments)
Repeatable positioning accuracy	$\pm 0.5 \mu\text{m}$ (L=10 mm, SF module)
Repeat accuracy (2x)	min. 0.35 μm
3-D accuracy	max. 1 μm (at L=10 mm, SF module) max. 4 μm (at L=50 mm, SF module)
Measuring force	XY 0.08 N with 10 mm probe SF module, 0.1 N with 25 mm probe MF module, 0.1 N with 50 mm probe EF module
	Z 0.75 N SF module, 1.9 N MF module, 3.2 N EF module
Overrun	XY $\pm 14^\circ$
	Z + 4.0 mm SF module, + 3.7 mm MF module, + 2.4 mm EF module
Required force needed to trigger an overrun signal	XY 0.2 – 0.3 N SF module, 0.2 – 0.4 N MF module, 0.2 – 0.5 N EF module
	Z 3.5 N SF module, 7 N MF module, 10 N EF module
Length of probe system	50 mm SF module, 60 mm MF module, 60 mm EF module
Probe system mounting	M2
Weight	250 g
Service life	> 1,000,000 contact probes
Mount	M8 connecting thread
Compatible models	Manual/CNC, coordinate measuring machines
Probe changing system (optional)	MCR20; storage of up to 6 probe modules
Repeat accuracy of the probe module	Repeatable positioning accuracy: max. 1.0 μm (with automatic module change) when using the 10 mm probe, *max. 2.0 μm with manual module change when using the 10 mm probe

L = Length of probe system

4

A-4099-0109

Setul starter de palpatori M2



6

K651376

7	Palpator tip stea 5D – L=30mm	K651054	
8	Celsius W520 XeonE3 1230 cu windows 7 garantie 3 ani	S26361-W520EU -	
9	Local Keyboard	K341-L165EU	
10	Adapter DVI/VGA	F2391-L1 EU	
11	NVIDIA Quadro K2000 2GB	F2222-L200EU	
12	NEC EA224WMEU –Monitor LCD	NEC EA224WMEU	



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13	HP Deskjet 6230 E printer include cablul 01140 USB de 3 m	E3E03A	
14	M-Cosmos 1 Manual- Pachetul software pentru MCOSMOS manual include urmatoarele module: <ul style="list-style-type: none">• PartManager: centrul comenzilor include Protocol Designer, ProbeBuilder, DialogDesigner, Gestionarea Utilizatorilor.• GEOPAK: masurari geometrice pentru generarea programelor de piesa, incluzand dialoguri definite de utilizator pentru usoara executare a programelor de piesa, functie de raport flexibil	63TAA096	
15	Instalare, punere in functiune si calibrare cu certificate Mitutoyo	DL90612	
16	Scolarizare MCosmos Manual – 2 zile	DL90910	

Oferta speciala: 22.200 Euro fara TVA

Pret de lista : 27.000 Euro fara TVA