

NEWS RELEASE

Hitachi High-Tech

HITACHI

Hitachi High-Technologies Corporation

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HitachiHigh-TechLaunchesNewIM4000IonMillingSystem

A2-in-1hybridionmillingsystemcapableofboth cross-sectionandflatmilling

HitachiHigh-TechnologiesCorporation(TOKYO:8036, HitachiHigh-Tech)todayannouncedtherleaseofthehybridIM4000IonMillingSystemfromDecember1.Thesystemisusedtoprepare specimensforSEMimagingandanlaysissuchasEDX andEBSP,andscapableofboth cross-sectionandflatmilling.

TheionmillingsystemusesawideArgonionbeamteffect*topolishthesurfacewithoutstressingit, andapplicationssuchassemiconductors,materials, oirradiatespecimensandusesthesputtering makingitusefulinamultitudeoffield research, andqualitycontrol.

Thenewly-developedIM4000featuresareremovablespes cross-sectionmilling,wheretheionbeamirradiate crosssectionthroughthespecimenalongtheedgegun, andflatmilling,whereawideandsmoothsurf achievedbyshiftingtheionbeamaxisandspecimen fromananglebetween30–80°. cimenholderthatallowsforboth thespecimenfromaboveandcutsaplanar famasklocatedbetweenthespecimenandion aceofapproximately5mmindiameteris rotationalaxis, andirradiatingthespecimen

TheIM4000alsofeaturesahighmillingrateiongu fasterthanpreviousmodels**)thatdramaticallyre cross-sectionmilling.

HitachiHigh-Techwillhaveademonstrationssystem MakuhariMessefromDecember1.Deliveriesaresche High-Techexpectssalesof150systemsfortheyear *Theeffectofmoleculesandatomsbeingexpelledf acceleratedions.

**ComparedtotheE-3500(2005)onasiliconspecim

nwithaprocessingspeedof300μm/hr(3times ducesthetimerequiredfortime-consuming

ondisplayatSEMICONJapan2010at duledtobeginfromMarch2011andHitachi . romthesurfaceofaspecimenwhenstruckby en.

■ Specifications

Item	Description	
	Cross-sectionmillingholder	Flatmillingholder
Gas	Argongas	
Acceleratingvoltage	0–6kV	
Maximummillingrate (Si)	Approx.300μm/hr	Approx.2μm/hr
Maximumspecimen size	20W×12D×7Hmm	ø50×25Hmm
Gasflowratecontrol system	Massflowcontroller	
Evacuationsystem	Turbomolecularpump(33L/s)+Rotarypump(135L/minat50Hz, 162L/minat60Hz)	
Size	616W×705D×312Hmm	
Weight	Mainunit48kg+Rotarypump28kg	

■ Keyfeatures

Hybridsystemcapableofbothcross-sectionandflatmilling

Crosssectionmilling:Theionbeamirradiatesthe sectionthroughthespecimenalongtheedgeofamasklocatedbetweenthespecimenandiongun. Flatmilling:Awideandsmoothsurfaceofapproximateionbeamaxisandspecimenrotationalaxis,andalmost30–80°.

Highththroughputcrosssectionmilling

Ahighmillingrateiongunwithaspeedof300μm/h (comparedtotheE-3500,releasedin2005).

Removablestageunit

Thespecimenstageunitisdesignedtoberemovable adjustmentofthemillingpositionandspecimen.

tionmilling

specimenfromaboveandcutsaplanarcross sklocatedbetweenthespecimenandiongun. ately5mmindiameterisachievedbyshifting irradiatingthespecimenfromananglebetween

reducestheprocessingtimeby66%

toenabletheaccurateandconvenient



IM4000IonMillingSystem

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