MEPNN Supplier Scouting Opportunity Synopsis

Section 1: General Information

Scouting Number	2025-359
Item to be Scouted	Cross Section Polisher
Days to be scouted	30
Response Due By	12/19/2025
Description	The Agency needs to purchase a cross section polisher as a commercial off the shelf item. This instrument supports sample preparation of field pipes for analysis using the Scanning Electron Microscope (SEM). The cross section

Section 2: Technical Information

Type of supplier being sought	Manufacturer
Reason	BABA
Describe the manufacturing processes (elaborate to provide as much detail as possible)	Metal, plastic, and electronic components assembled into a precision instrument, see attached product description.
Provide dimensions / size / tolerances / performance specifications for the item	See attached product description, p. 4.
List required materials needed to make the product, including materials of product components	Product is a precision scientific instrument consisting of multiple components, please see attached product description.
Are there applicable certification requirements?	No
Are there applicable regulations?	No
Are there any other stndards, requirements, etc.?	No
Additional Technical Comments	N/A

These cross-sectioned pipe samples are analyzed using the SEM to characterize the scales. This instrument is necessary for this kind of analysis.

The Agency research staff expect an instrument that shall meet or exceed what the current instrument can accomplish. Training shall be included at installation for the research staff. The instrument purchase shall include a minimum of 1 year warrantee which covers all travel, parts and labor if service is required.

The minimum specifications are as follows:

• Instrument shall include a programable user interface to customize milling runs

• Intermittent and fine milling options are preferred for protection and fine surfacing of samples

• Options shall include variable voltages and milling speeds at acceleration voltages up to 10kV

• The ion milled area should be a minimum of 8mm

• Any optional accessories needed for mounting and shielding of samples shall be listed as available options

Ohio

Section 4: Business Information

Estimated potential business volume	According to USASpending between 2020 and 2024 the total federal dollars obligated to ion mill type instruments was $1.2 million (8 units). Other purchasers/users of the item would include universities and other research entities.
Estimated target price / unit cost information (if unavailable explain)	$77,000 see attached product quote from JEOL.
When is it needed by?	Immediate
Describe packaging requirements	Individually wrapped on pallet.
Where will this item be shipped?	Cincinnati, OH

Additional Comments

Is there other information you would like to include?	Attached quote (SQC016134_1) and product description from JEOL (JEOL Ion Mill Brochure)

Scientific / Metrology Instruments
CROSS SECTION POLISHER™

Solutions for Innovation

CROSS SECTION POLISHER™

IB-19540CP

COOLING CROSS SECTION POLISHER™

IB-19550CCP

JEOL Ltd.

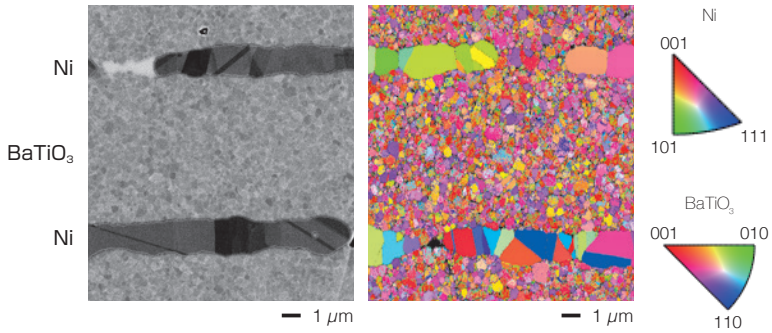
CROSS SECTION POLISHER™ ～ user-frien

Easy setup by following the flowchart on the control panel. Preset function for saving and recalling process conditions tailored to specific applications or specimen types.

Electronic component

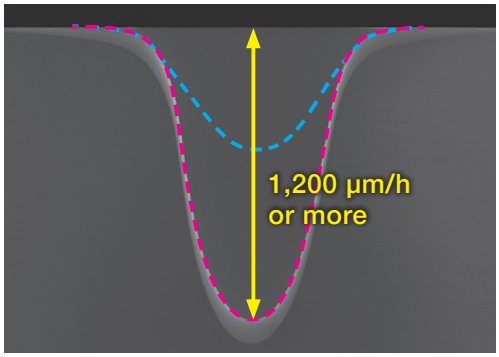
Cross section

A high-quality cross section of a ceramic capacitor can be rapidly prepared. The crystal grains of Ni and $BaTiO_3$ are clearly visible in the cross section. Furthermore, the crystal orientation of both Ni and $BaTiO_3$ can be confirmed using EBSD (Electron Backscatter Diffraction).



High throughput ion source ～ standard milling rate 1,200 μm/h ～

High throughput ion source is equipped as standard. The ion current density has been improved by optimizing the ion-source electrode and increasing the accelerating voltage.



Specimen: Silicon wafer
Ion energy: 10 keV, Milling time: 1 hour

dly and remote control enabled ～

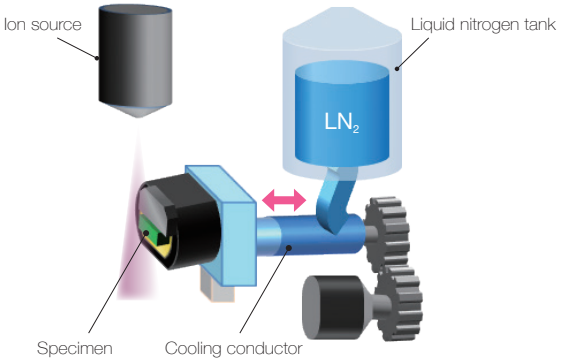
Connect to LAN for remote access and control through a web browser.
Monitor and adjust the milling process over multiple CPs.

Life science

Cross section

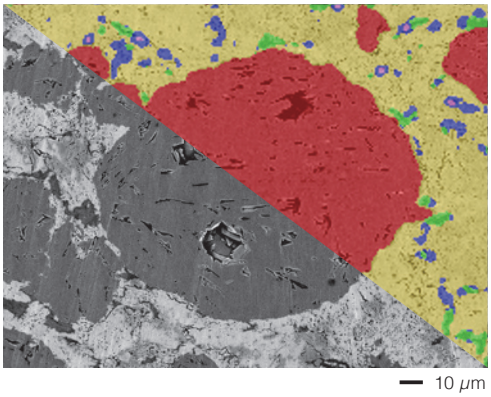
Cooling

High throughput cooling system ～ auto cooling and auto return to room temperature ～



- ✓ It is possible to continuously mill for 8 hours at -120 °C.
- ✓ Cooling temperature is controlled, and consumption of liquid nitrogen is reduced by repeated connection/retraction of the cooling conductor.
- ✓ Specimen exchange can be performed even when the liquid nitrogen is present.

The cooling system enables cross section milling of a heat-sensitive zinc supplement. Through EDS phase analysis, it can be confirmed that there are three phases containing Zn.



10 μm

Main elements of each phase*

- C, O
- C, O, Zn
- C, O, Zn, Si
- C, O, Zn, Ca
- O, C, Si

*Elements are listed according to their quantitative values

preset 2

4.0 keV — Stage Swing Standard — 07 : 00 + cooling -120 °C

Specification	Standard model IB-19540CP	Cooling model IB-19550CCP
Ion energy	2 to 10 keV	
Milling speed	1,200 µm/h or more*1	
Specimen swing function	Auto specimen swing by ±30°, Angle setting swing	
Auto milling start mode	○	○
Auto cooling start mode / Auto return to room temperature mode	—	○
Specimen stage ultimate cooling temperature	—	-120 °C or less
Cooling temperature range	—	-120 to 0 °C
Specimen cooling time to reach -100 °C	—	Within 75 min
Specimen cooling retention time	—	8 h or more
Pre-cooling function	—	○
Intermittent milling mode	Can set Ion beam irradiation cycle time (ON: 1 to 999 sec, OFF: 1 to 999 sec)	
Fine milling mode	Milling conditions automatically switched	
Large-area cross section milling mode	Maximum milling width: 8 mm (with optional Large Area Milling Holder)	
Large-area planar surface milling mode	○ (with optional Large Specimen Rotation Holder IB-11550LSRH)	
Maximum specimen size (cross section milling)	11 mm (W) × 8 mm (L) × 3 mm (T) (with standard holder) 25 mm (W) × 15 mm (L) × 10 mm (T) (with optional Large Area Milling Holder IB-11730LMH)	
Maximum specimen size (planar surface milling)	40 mm (Dia.) × 15 mm (T) (with optional Large Specimen Rotation Holder IB-11550LSRH)	
Specimen movements	X-axis: ±6 mm, Y-axis: ±2.5 mm	
Operation	Touch panel, 8.4 inch display	
Positioning for milling	Milling position is adjustable with a camera or optical microscope	
Positioning camera (magnification)	Approx. ×70 (on 8.4 inch display)	
Monitoring camera (magnification)	Approx. ×20 to ×100 (on 8.4 inch display) (option: IB-14530MCAM)	
Preset function	○	
Remote control function	○	
Dimension and weight (Basic unit)	587.2 mm (W) × 802.5 mm (D) × 429.3 mm (H) Approx. 69 kg	692 mm (W) × 802.5 mm (D) × 527.5 mm (H) Approx. 74 kg
Dimension and weight (diaphragm pump)	140 mm (W) × 264 mm (D) × 141 mm (H) Approx. 4.4 kg	

Installation Requirements	
Power supply	Single phase AC100 to 240 V, 50/60 Hz, Allowable input voltage fluctuation: ±10 V, Rating: 15 A or more
Maximum power consumption	650 VA
Grounding terminal	100Ω or less, One
Argon gas	Purity: 99.9999% or more (recommendation) Pressure: 0.1 to 0.2 MPa (1.0 to 2.0 kgf/cm^2)
Room temperature	15 to 25 °C
Room humidity	30 to 60% (no condensation)*2

*1 Milling of 1 h, Si equivalent, Edge distance: 100 µm

*2 If you want to install the instrument in an environment that does not satisfy the installation requirements, contact your JEOL sales representative.

* Specifications subject to change without notice.

JEOL Ltd.
3-1-2 Musashino Akishima Tokyo 196-8558 Japan Sales Division Tel. 81-3-6262-3561 Fax. 81-3-6262-3577
www.jeol.com ISO 9001 • ISO 14001 Certified

▼ Local office

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• SWEDEN • SINGAPORE • TAIWAN • THAILAND • THE NETHERLANDS • UNITED ARAB EMIRATES (UAE) • UNITED STATES OF AMERICA (USA)

Quotation No. SQC016134_1

Date: 11/19/2024

Quotation is valid for 30 days

Cross Section Polisher

IB-19530CP

Instrument:

IB-19530CP

Cross Section Polisher

Prepared for:

Christina Bennett-Stamper

U.S. Environmental Protection Agency, (Cincinnati,

26 Martin Luther King Drive West

Cincinnati, OH 45220

Bid No.: ***IB-19530CP (without trade-in)***

JEOL Contact:

Bill Powell

Senior Sales Manager

wpowell@jeol.com

978-764-2397

Sales Administration Support:

SalesAdmin@jeol.com

978-535-5900

JEOL
Solutions for Innovation

JEOL USA, Inc.

11 Dearborn Rd, Peabody, MA 01960

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IB-19530CP

Quotation

11 Dearborn Rd Peabody, MA 01960 Phone: 978-535-5900 Fax: 978-536-2221

Christina Bennett-Stamper
bennett-stamper.christina@epamail.epa.gov
U.S. Environmental Protection Agency, (Cincinnati,
26 Martin Luther King Drive West

Cincinnati, OH 45220

Quotation No.: SQC016134_1

Quotation Date: 11/19/2024

Quoted Price Valid for 30 Days

Line	Qty	Description	Ext. Price
1	1	IB-19530CP: Cross Section Polisher	$82,800.00
2	1	JU2006558: SAMPLE BLOCK HOLDER - SET OF 5	$760.00
3	1	JU2012801: 20 x 12 x 4 T BRASS SAMPLE BLOCK - SET OF 5	$115.00
4	3	804437742: Shield Plate, Mask, Magnetic	$483.00
5	3	804448248: Shield Plate, Mask, Non-Magnetic	$678.00

Sub Total Amount: **$84,836.00**

Discount:	**($8,836.00)**
Freight:	**$1,000.00**
Total Amount:	**$77,000.00**

All Prices are in US Dollars.

Please send your Purchase Order to salesadmin@jeol.com

Freight Terms:	FCA: DESTINATION, LOAD DOCK
Estimated Delivery:	Estimate Delivery TBD
Payment Terms:	90% Net 30 days after Delivery
	10% Net 30 days after Acceptance
Acceptable forms of Payment:	Check, Wire or ACH

Basic Terms & Conditions:
Prices quoted do not include any applicable sales and/or use taxes.

JEOL manufactured equipment is guaranteed against defects in workmanship and component failure for a period of one year from the date of customer's first use of the instrument. In the event that installation and/or acceptance is delayed by the Customer but not by JEOL, the warranty period will begin 60 days after the agreed upon delivery date. Under this warranty policy the labor necessary to repair the instrument and all parts (except consumables) are provided by JEOL at no cost to the Customer. JEOL reserves the right to repair or replace components at their sole discretion. The warranty does not cover components which have been damaged through misuse or accident on the part of the buyer nor does it include components which have been modified by the customer.

Third Party electrical/safety inspection, if required, would add to the promised delivery schedule, and the cost of inspections and any required physical modifications to the instrument would be borne by the buyer.

JEOL USA will hold the instrument for up to 30 days past the agreed delivery date. In the event that the customer's intended room is not ready, JEOL will deliver the instrument to an appropriate storage or temporary facility provided by the customer.

JEOL USA, Inc. Budgetary Quotation

JEOL USA, Inc.
salesadmin@jeol.com

Line	Qty	Detailed Description	Ext. Price
1	1	**IB-19530CP: Cross Section Polisher** CROSS-SECTION POLISHER A specimen preparation device for SEM utilizing a broad Ar ion beam. The instrument consists of a chamber evacuated by a TMP, ion gun, masking plate, and specimen stage that supports X-Y movement and angle control. The ion source has a variable voltage up to 8kV, as well as intermittent milling function for preparation of beam sensitive samples. The instrument features touch panel controls for ion beam operational setup and stage control, as well as a CCD camera for sample positioning and alignment. The Ar gas flow and ion beam current are regulated via a mass-flow controller. Instrument can be optionally configured with a CCD camera for direct specimen observation during the milling process using an LCD touch panel. Milling speed: 500 µm/h (8 kV, 100 µm from edge) Includes direct drive rotary pump.	**$82,800.00**
2	1	**JU2006558: SAMPLE BLOCK HOLDER - SET OF 5**	**$760.00**
3	1	**JU2012801: 20 x 12 x 4 T BRASS SAMPLE BLOCK - SET OF 5**	**$115.00**
4	3	**804437742: Shield Plate, Mask, Magnetic**	**$483.00**
5	3	**804448248: Shield Plate, Mask, Non-Magnetic**	**$678.00**