

SE-9090 Express Specifications

Grinding System	Patternless Double Spindle System
Grinding Mode	Auto Grinding : Computer Beveling Guided Grinding Flat Edging Safety Beveling (Chamfering) Polishing (Type PLB only. Type PLA polishes safety-beveled edges.)
Grinding Lens Material	Plastic (CR-39 etc.), Polycarbonate, Acrylic Resin, TRX (Type PLA or Type PLB), Glass (Type GLS)
Minimum Grinding Size With chamfering	When Flat Edging : 33 (Horizontal Width) x 26 (Vertical Width) mm When Beveling : 35 (Horizontal Width) x 27 (Vertical Width) mm
Without Chamfering	When Flat Edging : 33 (Horizontal Width) x 20 (Vertical Width) mm When Beveling : 34 (Horizontal Width) x 21 (Vertical Width) mm
Grinding Pressure	Variable: 7 Levels (Automatic Control by Program)
Display	10.4 - inch SVGA Color Display (Touch Panel)
Lens Chucking	
Chucking Method	Electric
Chucking Pressure	Variable: 7 Levels (Parameter Setting)
Water Supply System	Pump Circulation or Direct Connection to Tap Water
Power Supply	
Power Source	AC200 - 240 V, 50/60 Hz (Single Phase)
Power Consumption	2.5k VA
Dimensions/Weight	600 (W)x510(D)x611(H) mm/120 kg 23.6(W)x 20 (D)x 24 (H) "/265 lbs.
Standard Accessories	Lens Cup (x10), Lens Cup for Half-eye Lenses (x10), Double-coated Adhesive Tape (x1 box), Lens Adapter/Lens Clamp for Half-eye Lenses (x1 set), Cup Remover (x2), Coupler (x2), Hose Band (x2), Duct (x2), Duct Adapter (x2), Power Cable, Monkey Wrench, Hex. Wrenches (2, 5, 6 mm), Dressing Stick for Roughing Wheel :WA80 K (Type GLS only), Dressing Stick for Finishing Wheel :WA320, Dressing Stick for Polishing Wheel :WA4000 (Except for Type GLS)

AHM-1000 Specifications

Drilling	
Hole dia.	Dia. 0.8 - 3.0 mm (in increments of 0.1 mm)
Hole depth	6.0 mm or less
Drilling range	Dia. 33 - 70 mm around lens axis
Drilling direction	Normal to lens surface (max. 30°)
Grooving	
Width	0.6 - 1.2 mm continuously variable (in increments of 0.1 mm)
Depth	0.0 - 0.8 mm continuously variable (in increments of 0.1 mm)
Grooving mode	Automatic Guided
Display	10.4 - inch SVGA color LCD (Touch Panel)
Power Supply	
Power Source	AC200 - 240V, 50/60 Hz
Power Consumption	300 VA
Dimensions/Weight	400(W)x 515 (D)x611(H) mm/50 kg 16 (W)x20.6(D)x24.4(H) "/110 lbs.
Standard Accessories	End mill (x10), Grooving cutter (x1), Lens Adapter/Lens Clamp for Half-eye Lenses (x1 set), Standard Pattern, Grooving Calibration Jig, Drill Calibration Jig, Coupler, Hose Band, Duct (1M), Duct Adapter, Power Cable, Monkey Wrench (8 - 9 mm), Hex' Wrenches (2, 5, 6 mm), Fuse (x4), Interface Cable

RHU-1000 / 1500 Specifications

Conveyable Lens	
Outer dia. (Before Grinding)	80 mm dia. or Less
Outer dia. (After Grinding)	20 mm dia. or More
Maximum Thickness	17 mm (Edge of Concave Lens) 10 mm (Center of Concave Lens) 14 mm (Total of Convex Lens)
Power Supply	
Power Source	AC 200/230 V, 50/60 Hz (Single Phase)
Power Consumption	600 VA
Positive Pressure	
Used Fluid	Dry Air
Pressure Supply	0.45 - 0.8 MPa
Flow	70 L /min or More
Connection Method	10 mm dia. One-Touch Joint
Dimensions/Weight	
RHU-1000	800 (W)x 875 (D)x1472(H) mm/140 kg 31.5(W)x 34.4 (D)x 58 (H) "/309 lbs.
RHU-1000S	800 (W)x1185(D)x1472(H) mm/220 kg 31.5(W)x 44.3(D)x 58 (H) "/486 lbs.
RHU-1000CB	1207(W)x1128(D)x1472(H) mm/185 kg 47.5 (W)x 44.4 (D)x 58 (H) "/ 408 lbs.
RHU-1500	1300(W)x1185(D)x1472(H) mm/230 kg 51.2 (W)x 46.7 (D)x 58 (H) "/ 507 lbs.
Standard Accessories	RS-232C Cable, Drain Hose

*Specifications and design are subject to change without notice for improvement.

VISIONARY PERFORMANCE



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Lab Edging Systems



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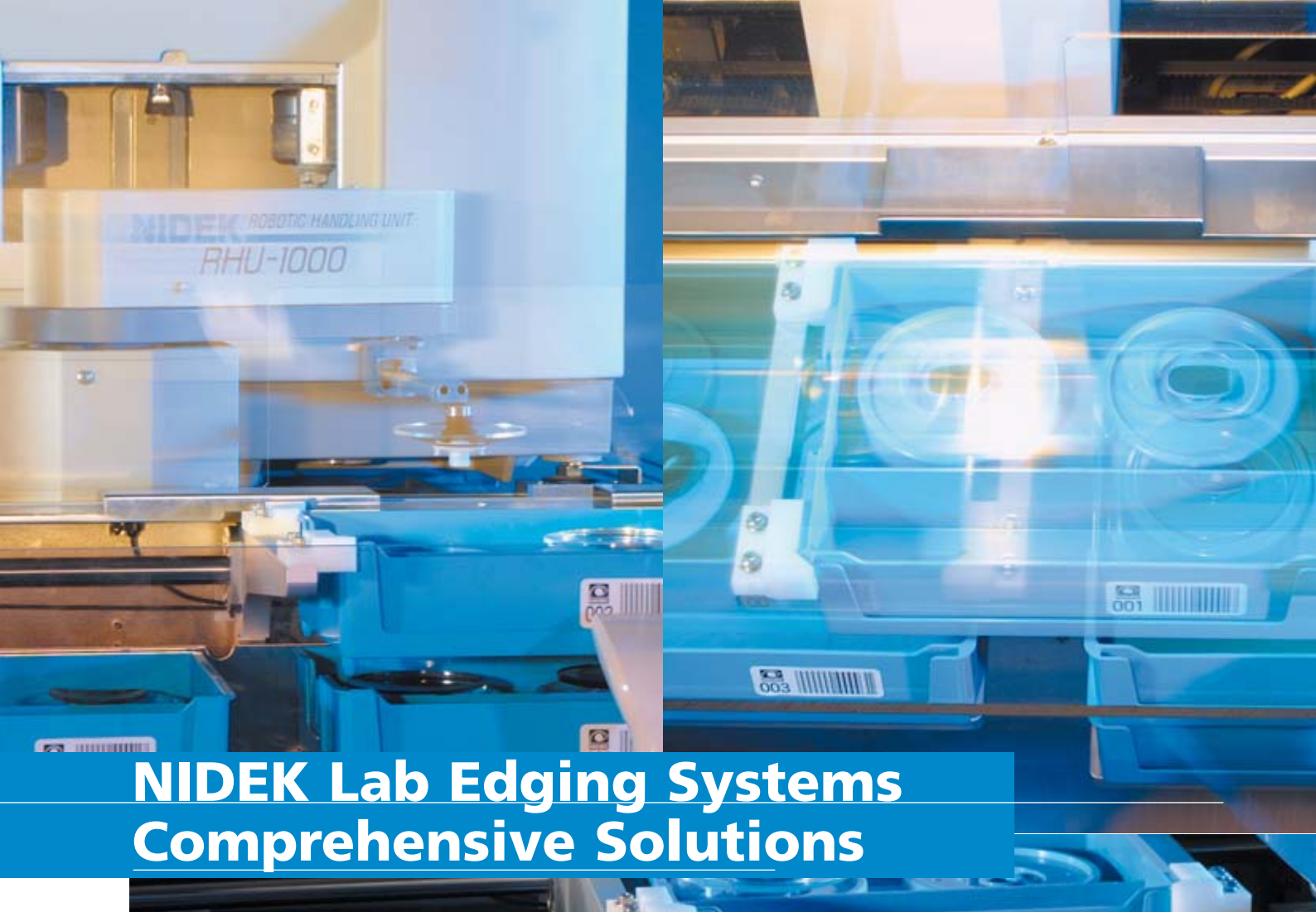
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NIDEK Lab Edging Systems Comprehensive Solutions

Automation

Complete Automation & Lens Processing

Various configurations are made possible with NIDEK's Lab Equipment --- SE-9090 Express, AHM-1000 and RHU-1000/1500.

From a small optical lab to a large scale outfit, NIDEK delivers and provides efficient and comprehensive solutions to meet and satisfy your lab business needs.

System Edger SE-9090 Express

Provides High-Speed Automatic Edging & Polish Chamfering with High Precision and Accuracy

Auto Drilling Unit AHM-1000

Offers Automatic 3-D Drilling & Grooving for Various Lens Designs and Styles

Robotic Handling Unit RHU-1000/1500

Provides Robotic Handling for Automatic Lens Production



High Efficiency & Versatility

In a small footprint, NIDEK lab equipment offers highly efficient lens production --- A variety of lab configurations best suited for each customer's needs.

Compact & Complete Systems of the SE-9090 Express & RHU-1000S



AES-1500

(SE-9090 Express & AHM-1000 & RHU-1500)
includes Automatic Drilling & Grooving

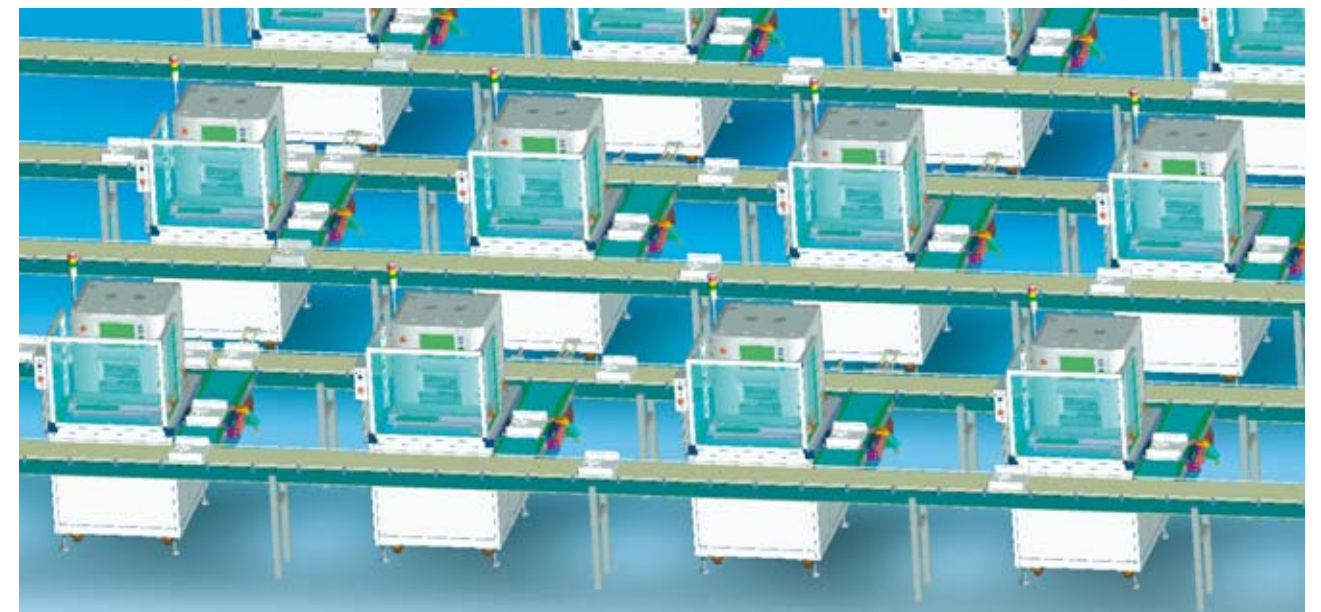
VCA Protocol

Lab networks using VCA protocol.

Enhanced Flexibility

Various configurations of the SE-9090 Express and RHU-1000CB can provide highly productive and efficient workflow of automated and continuous lens processing.

The systems are highly flexible for expansion, to fit in various floor layouts and production areas. Efficiency of output can be achieved without increasing manpower, offering high quality finished lenses with greater profitability.





System Edger SE-9090 Express Accurate & Durable

High Quality Automatic Crystal Cut™ Chamfering

The NIDEK System Edger SE-9090 Express offers automatic standard chamfering and polish chamfering; paying greater attention to the creation of more beautiful lenses with less effort than ever before.



Normal Chamfering Special Chamfering

Faster Grinding with the Double Spindle System

The Double Spindle System incorporates a program to automatically control the grinding pressure of 7 different levels. As the grinding pressure is variable, time can be saved by processing at the best pressure and optimum speed.

Simultaneous Double-Sided Shape Measurement

The SE-9090 Express simultaneously measures both front and rear sides of the lens for faster operation. The system measures a lens in approximately 5 seconds, providing accurate and fast processing.

Improved Durability & Accuracy

The robust SE-9090 Express platform supports powerful, industrial-strength servo drive motors linked to an advanced RISC CPU microprocessor. These drive the world's first patented dual-spindle edger, accurate to 0.15 mm in lens circumference. The powerful servo drive motors offer continuous operation capabilities, less down time and higher productivity.

High Quality Polishing

The SE-9090 Express incorporates low-vibration motors for spindles, and 20,000 grinding control points for obtaining a high quality polished finish.

User Friendly Touch Panel

The large 10.4-inch SVGA color LCD touch panel provides all the information needed for total processing. Bevel simulation can be observed, assuring a satisfying result.



10.4-inch SVGA color LCD (Touch Panel)

Advanced Networking Capability

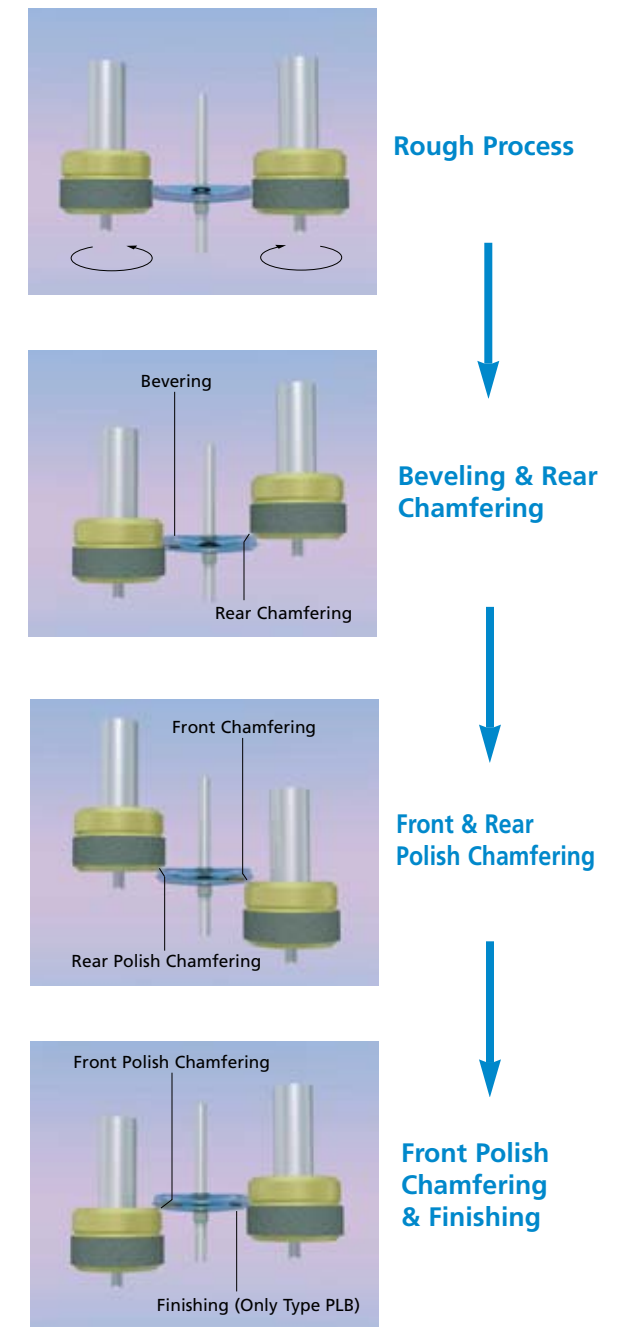
The SE-9090 Express is compatible with various communication protocols - VCA, RS-232C, LAN, etc., offering advanced networking capabilities.

Data Transmission

Data transmission with the barcode scanner (optional) can simplify troublesome procedures. This feature also saves processing time and reduces errors, to assure fast and high productivity.



Barcode Scanner (Optional)



Grinding Wheels

TYPE PLB	Lens material					Grinding					
	Plastic	High index plastic	Polycarbonate	Acrylic resin	Glass	Bevel edging	Flat (rimless) edging	Safety beveling	Bevel polishing	Flat (rimless) polishing	Safety bevel polishing
	○	○	○	○	×	○	○	○	○	○	○
TYPE PLA	Lens material					Grinding					
	Plastic	High index plastic	Polycarbonate	Acrylic resin	Glass	Bevel edging	Flat (rimless) edging	Safety beveling	Bevel polishing	Flat (rimless) polishing	Safety bevel polishing
	○	○	○	○	×	○	○	○	×	×	○
TYPE GLS	Lens material					Grinding					
	Plastic	High index plastic	Polycarbonate	Acrylic resin	Glass	Bevel edging	Flat (rimless) edging	Safety beveling	Bevel polishing	Flat (rimless) polishing	Safety bevel polishing
	×	×	×	×	○	○	○	○	×	×	×



AHM-1000

AHM-1000 Automatic Drilling and Grooving for Industrial Labs

The NIDEK Auto Drilling Unit AHM-1000 provides automatic hole drilling and grooving for various frame styles.

Combined with the RHU series, the AHM-1000 offers automatic and continuous lens processing for labs.



Twin Holes & Peripheral Design Cut

Hole & Notch

Grooving

RHU-1000/1500 Enhanced Functionality with the SE-9090 Express

The NIDEK Robotic Handling Unit (RHU) Series offer automatic lens conveyance to assist automation of the SE-9090 Express' lens processing in industrial labs.



Key Features

- Small Foot Print
- High-Speed Conveyance 25 sec. / job (RHU-1000)
- Great Adaptability for any Style Edging Laboratory
- Easy Operation and Maintenance

Auto Drilling Unit AHM-1000 Versatility

Key Features

- Automatic 3-D Hole Drilling according to the Spherical Surface Curve of Lenses.
- Progressive Grooving with Tilting Function for Rimless Frame Lenses
- 10.4-inch LCD Touch Panel for Easy Operation



3-D Drilling



Grooving with Tilting Function

Robotic Handling Unit RHU-1000/1500 Automation

The RHU-1000S (with stacker), RHU-1000CB (with conveyer belt) and RHU-1500 can provide continuous automatic processing to achieve high productivity and profits for large production labs. The RHU-1000 (without stacker/conveyer belt) is also an available option.



SE-9090 Express & RHU-1000S
(NIDEK Tray Type Stacker)*

*LOH tray type stacker is also available.



SE-9090 Express & RHU-1000CB
(with Conveyer Belt)



AES-1500* (RHU-1500)

*AES-1500 is the combined system of the SE-9090 Express + AHM-1000 + RHU-1500.