



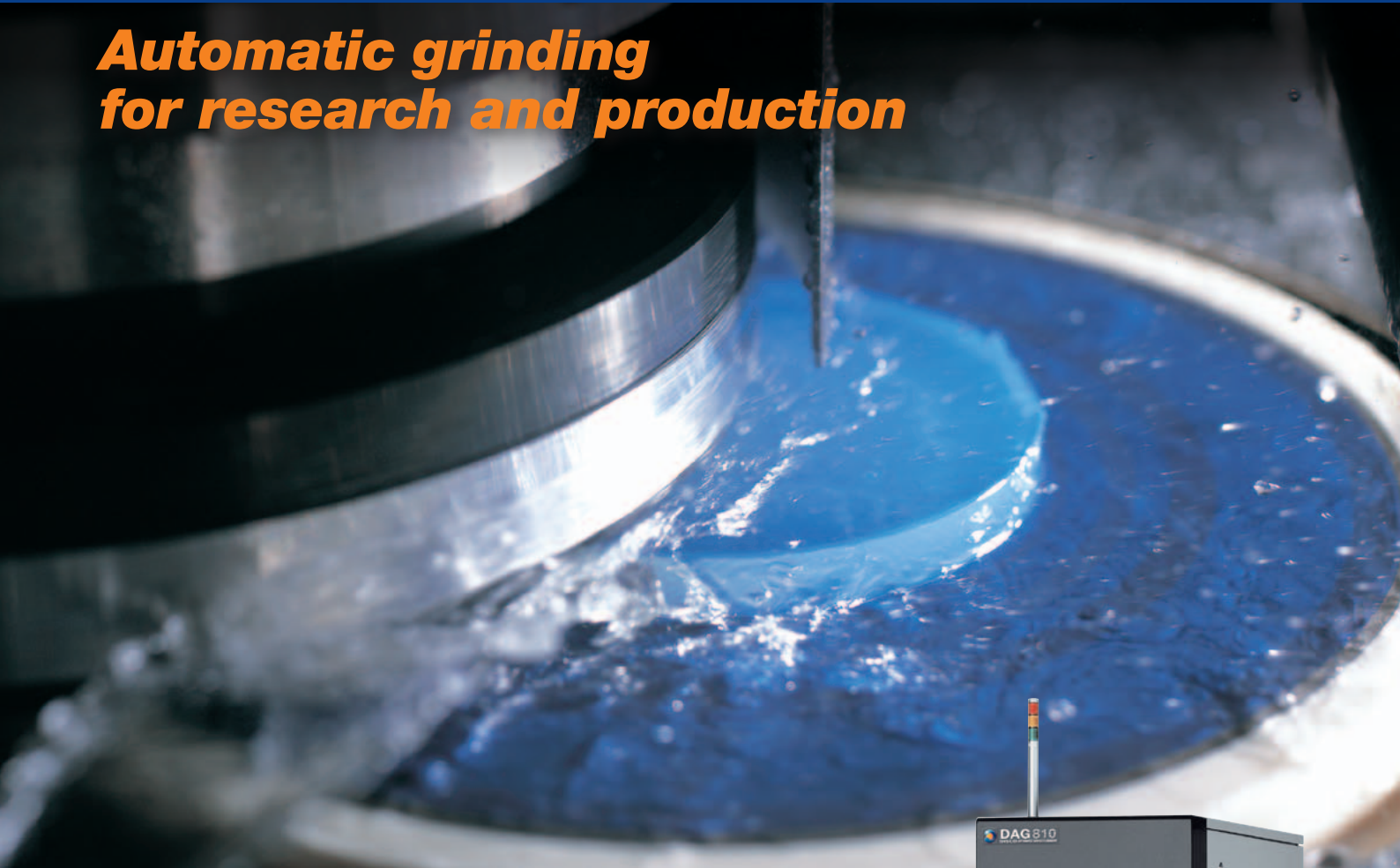
DISCO

Kiru · Kezuru · Migaku Technologies



Automatic Surface Grinder **DAG810**

**Automatic grinding
for research and production**



Single-axis automatic grinder

The DAG810 is a compact, automatic grinder for workpieces up to 8" in diameter. It has one spindle and one chuck table and is designed to process a variety of materials.

Small footprint – 1.02 m²

Machine dimensions: 600 (W)x1,700 (D)x1,780 (H) mm

Precision grinding

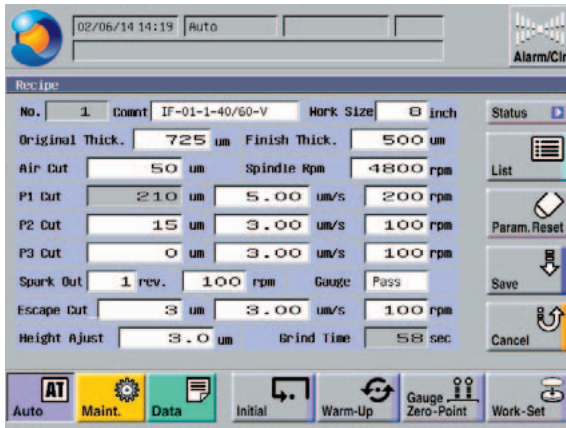
The newly developed high-rigidity, low-vibration spindle achieves superior grinding results and is capable of in-feed grinding and creep feed grinding (option).

Unlimited materials

Process hard or brittle substrates of various diameters with ease. The DAG810 is also the choice for processing a wide variety of electronic components.



Automatic Surface Grinder DAG810



LCD touch screen

Easy operation

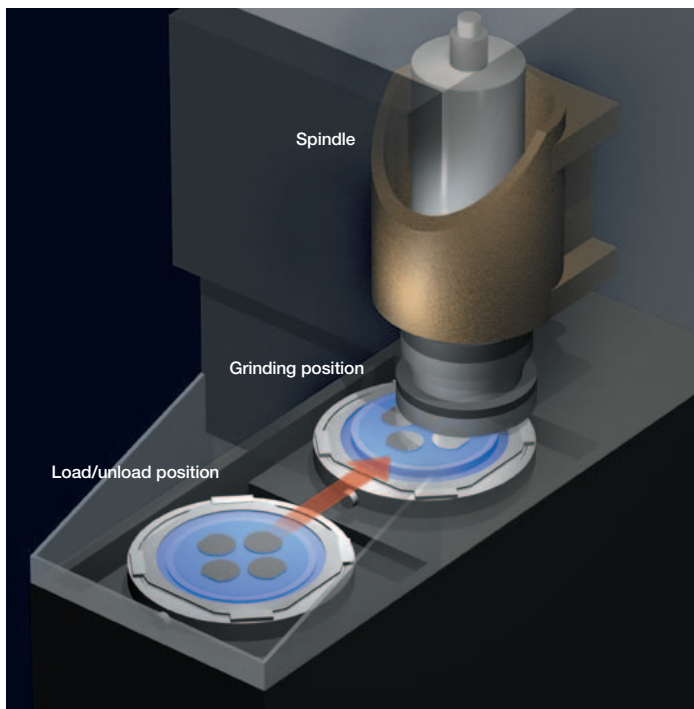
The LCD touch screen graphical user interface makes operation both intuitive and easy.

Special options for a variety of needs

- Either one or two probe-height gauges are available
- In-feed grinding for workpieces up to $\phi 300$ mm
- Creep-feed grinding for workpieces up to $\phi 200$ mm
- 8" ring frame grinding

High-precision applications

- Processes silicon and compound semiconductors for analysis.
- Grinds resin for CSP and WL-CSP
- Performs copper-post exposure and other metal applications
- Improve the planarity of lithium tantalate and lithium niobate
- Able to process green ceramics and sapphire (small diameter)



*A special jig is required for ring frame grinding



DAG810 Specifications

Workpiece size	-	Max. $\phi 8"$ ($\phi 4"$ to $\phi 8"$ when the universal chuck table is used)
Grinding method	-	Anomalous In-feed grinding with wafer rotation
Spindle	Type	Air bearing with high frequency motor
	Number of axes	1
	Output	kW 4.2
	Revolution speed	min ⁻¹ 1,000 - 7,000
	Z-axis vertical stroke	mm 120
	Z-axis vertical grinding feed speed	mm/s 0.0001 - 0.05
	Z-axis vertical fast feed speed	mm/s 50
	Min. Z-axis vertical movement	μ m 0.1
	Min. Z-axis vertical movement resolution	μ m 0.1
Chuck table	Chuck table type	Porous chuck table
	Chuck method	Vacuum
	Number of revolutions	min ⁻¹ 0 - 300
	Number of chuck tables	1
	Spark Out (chuck table revolutions setting)	0 - 999
	Y-axis back and forth movement stroke	mm 430
	Y-axis back and forth grinding feed speed	mm/s 0.01 - 50
	Y-axis back and forth rapid feed speed	mm/s 200
	Y-axis back and forth movement min. command unit	mm 0.001
	Y-axis back and forth movement min. resolution	mm 0.001
Grinding wheel	Diamond wheel	mm $\phi 200$ ($\phi 8"$)
Grinding accuracy	Thickness variation within one wafer	μ m Less than 1.5 (when the dedicated chuck table is used)
	Finish surface roughness	μ m Ry 0.13 (with #2000 finish) Ry 0.15 (with #1400 finish)
Utilities	Power supply	v 200V AC $\pm 10\%$, 3-phase (50/60 Hz)
	Power consumption	
	When processing	kW 2.4 (for reference)
	During warm-up	kW 0.65 (for reference)
	Max. power	kVA 12
	Air pressure	MPa 0.5 - 0.8
	Air flow rate	L/min(ANR) 150 or higher
	Water pressure	
	Grinding and cleaning	MPa 0.2 - 0.3
	Cooling	MPa 0.2 - 0.3
	Water flow rate	
	Grinding and cleaning	L/min Max. 5
	External nozzle	L/min Max. 5
	Chuck table blow	L/min Max. 5
	Height gauge coolant water (optional accessory)	L/min Max. 5
	Cooling	L/min 2
	Exhaust duct capacity	m ³ /min 4
	Machine dimensions (W x D x H)	mm 600 x 1,700 x 1,780
	Machine weight	kg Approx. 1,300

Environmental conditions

- Use clean, oil-free air at a dew point of -15°C or less. (Use a residual oil: 0.1 ppm. Filtration rating: 0.01 $\mu\text{m}/99.5\%$ or more).
- Keep room temperature fluctuations within $\pm 1^{\circ}\text{C}$ of the set value. (Set value should be between $20 - 25^{\circ}\text{C}$).
- Keep grinding water 2°C above room temperature (fluctuations within 1°C over one hour).
- Keep spindle cooling water temperature between $20 - 25^{\circ}\text{C}$ (fluctuations within 2°C over an hour).
- The machines should be used in an environment, free from external vibration. Do not install machine near a ventilation opening, heat generation equipment or oil mist generating parts.
- This machine uses water.
In case of water leakage, please install the machine on the floor with sufficient waterproofing and drainage treatments.
- * All the pressures are described using a gauge pressure.
- * The above specifications may change due to technical modifications. Please confirm when placing your order.
- * For further information please contact your local sales representatives.
- * When you use it anything other than the deionized water, please contact your local representatives.



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