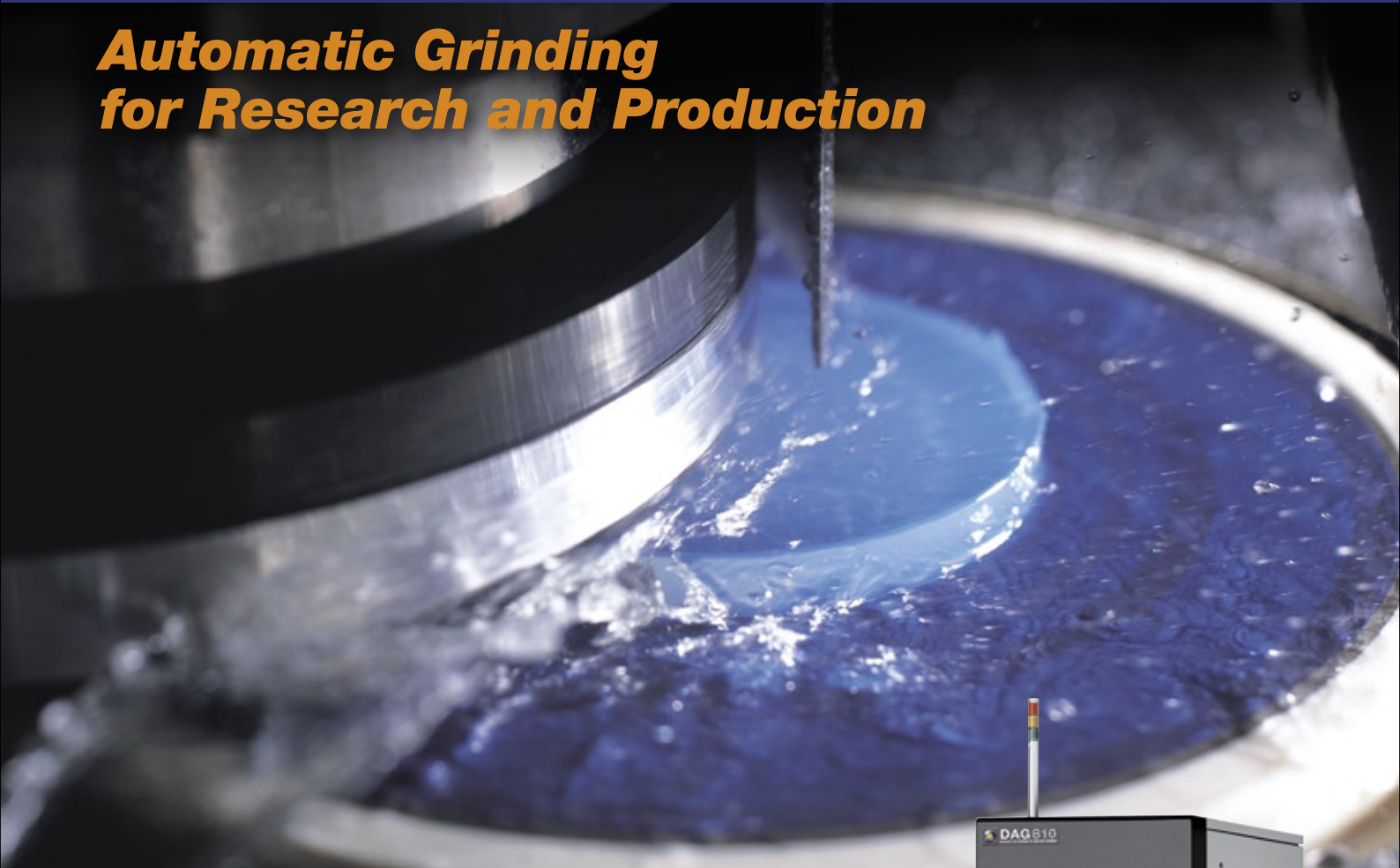


## Automatic Surface Grinder **DAG810**

### *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 m<sup>2</sup>**

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.

#### **Unlimited Materials**

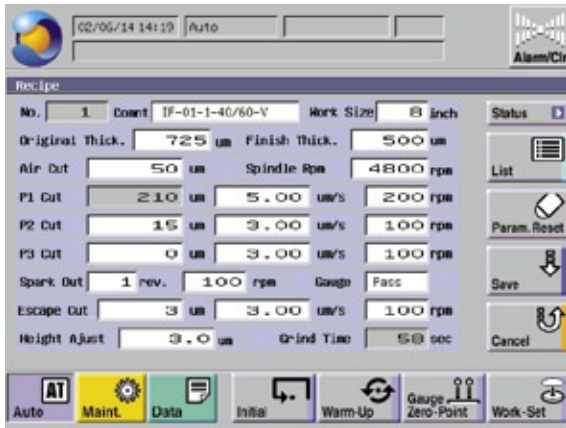
Process hard or brittle substrates of various diameters with ease. The DAG810 is also the choice for processing a wide variety of electronic components.

#### **Easy Operation**

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



## DAG810



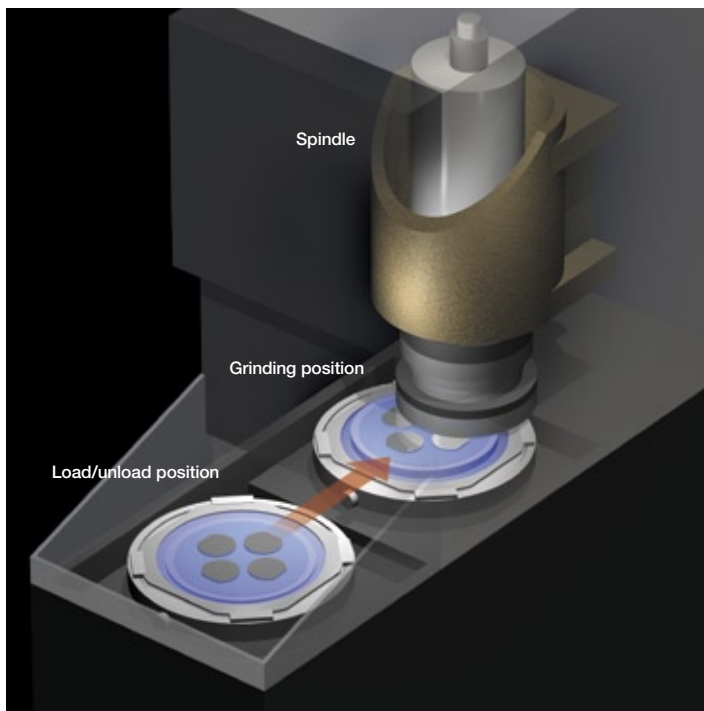
LCD touch screen

## 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
- Grind green ceramics



\*A special jig is required for ring frame grinding

## DAG810 Specifications

<b>Workpiece Size</b>	-	Max. $\phi 8"$ ( $\phi 4"$ to $\phi 8"$ when the universal chuck table is used)
<b>Grinding Method</b>	-	Anomalous In-feed grinding with water rotation
<b>Spindle</b>	Type	- Air bearing with high frequency motor
	Number of axes	1
	Output	kW 4.2
	Revolution speed	min <sup>-1</sup> 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	$\mu$ m 0.1
	Min. Z-axis vertical movement resolution	$\mu$ m 0.1
<b>Chuck Table</b>	Chuck table type	- Porous chuck table
	Chuck method	- Vacuum
	Number of revolutions	min <sup>-1</sup> 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
<b>Grinding Wheel</b>	Diamond wheel	mm $\phi 200(\phi 8")$
<b>Grinding Accuracy</b>	Thickness variation within one wafer	$\mu$ m Less than 1.5 (when the dedicated chuck table is used)
	Finish surface roughness	$\mu$ m Ry 0.13(with #2000 finish) Ry 0.15(with #1400 finish)
<b>Utilities</b>	Power supply	- 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 <sup>3</sup> /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  $-15^{\circ}\text{C}$  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  $20\text{--}25^{\circ}\text{C}$ .)
- Keep grinding water  $2^{\circ}\text{C}$  above room temperature (fluctuations within  $1^{\circ}\text{C}$  over one hour).
- Keep spindle cooling water temperature between  $20\text{--}25^{\circ}\text{C}$  (fluctuations within  $2^{\circ}\text{C}$  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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