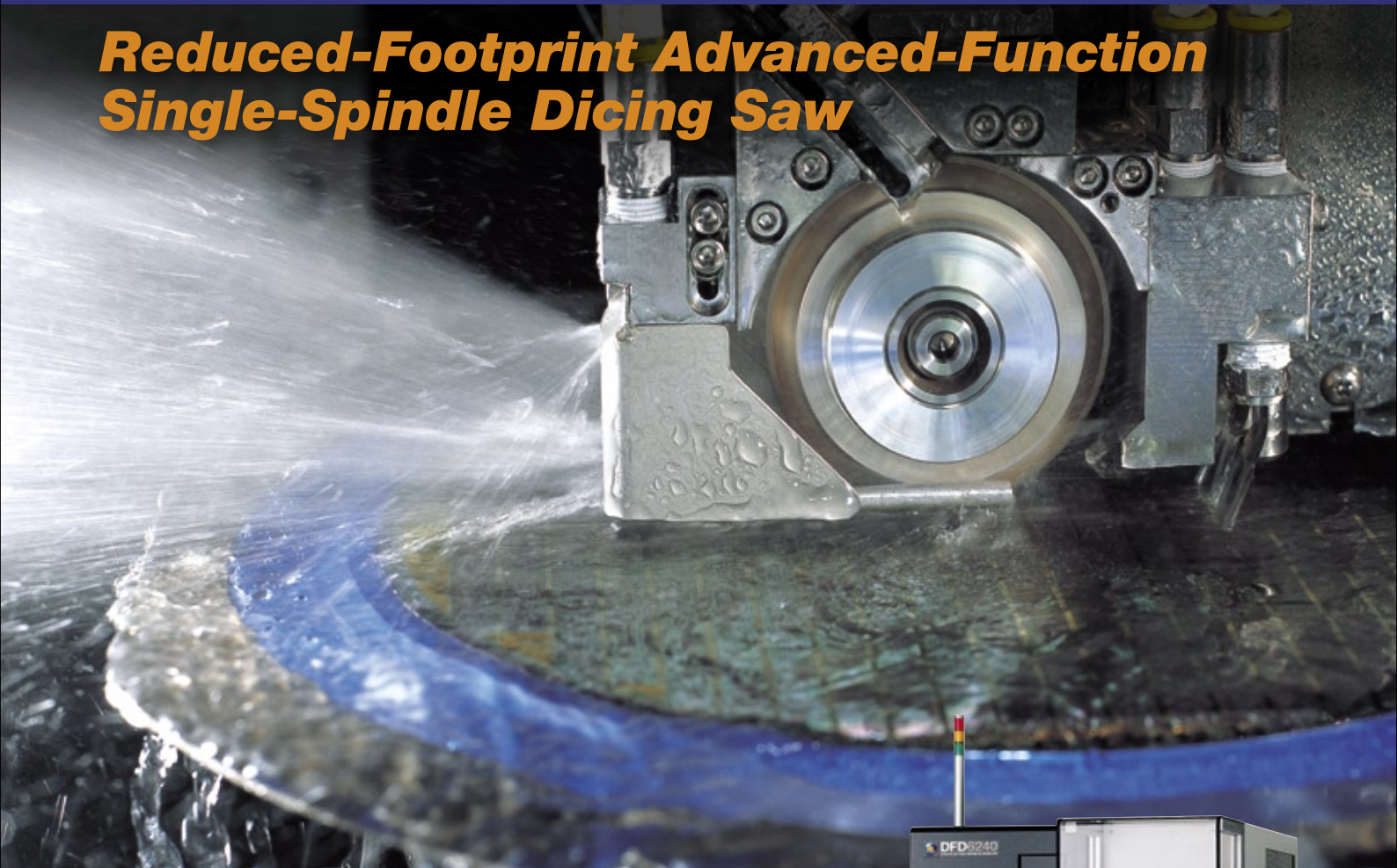


Fully Automatic Dicing Saw

# DFD6240

## Reduced-Footprint Advanced-Function Single-Spindle Dicing Saw



### Disco 6000 Series Features and Performance

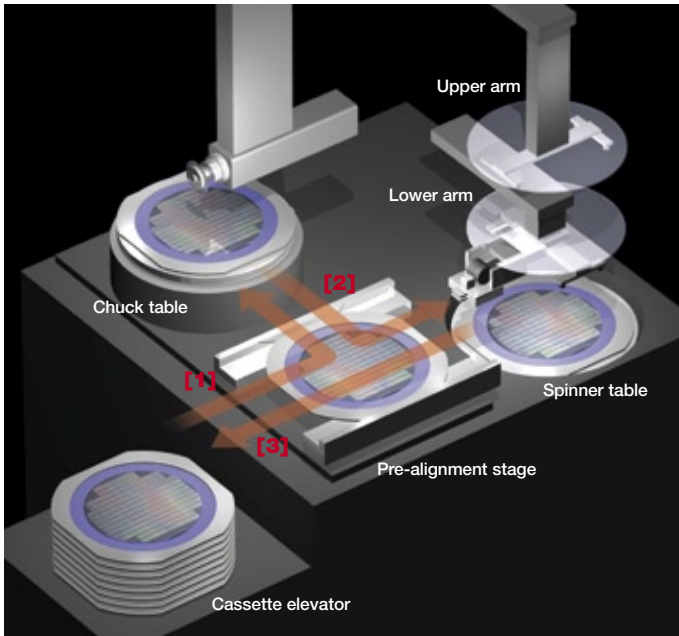
DFD6240 features the advanced functions and spindle lineup of the Disco 6000 series-technology proven at installations around the globe. This 200 mm single-spindle dicing saw is an excellent choice for dicing silicon and compound semiconductors, as well as for cutting and grooving ceramics, glasses, and other electronic and optical materials.

### Factory-Friendly Design

- DFD6240's rigid, compact frame and improved wafer handling system contribute to its extremely small footprint of (20 % less than DFD641).
- Reduced energy and air consumption contribute to lower running cost and environmental impact.
- Condition monitor relays processing status and key machine information in real time for use in machine inspections and process management.



# Fully Automatic Dicing Saw DFD6240



## DFD6240 Workpiece Flow System

- [1] Lower arm moves workpiece from cassette to pre-alignment stage. Lower arm moves workpiece to chuck table → **cutting** →
- [2] Upper arm moves workpiece to spinner table → **cleaning and drying** →
- [3] Lower arm returns workpiece to cassette

## Improved Usability

- Spindle shaft-lock feature and auto-open/close wheel cover (accessible from machine front) make blade changes easy and quick.
- Touch-panel display supports an easy-to-use graphical user interface.

## Higher Throughput

Increased speed ranges and return speeds for machine axes contribute to improved dicing throughput.

## Improved Cut Quality

DFD6240 offers highly consistent and dependable cut quality through the new Synchro Spindle™ featuring superior radial rigidity. The coolant water flow rate controller, programmable via the touch-panel display, sets the flow rate for each process recipe. Atomizing nozzle technology (option, patented in USA, Japan, and other countries) is available for the wheel cover, where it effectively reduces particle adhesion, as well as for the spinner cleaning unit, where it yields exceptionally clean wafers after dicing.

## Spindle Lineup

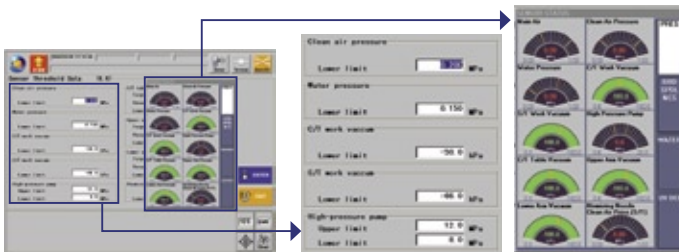
- Newly developed 1.2 kW spindle (standard) features superior rigidity.
- Center thrust design gives 1.8 kW spindle (option, uses 2" blades) and 2.2 kW spindle (option, uses 3" blades) extra rigidity for processing glasses, ceramics, and other high-load materials.

## DFD6240 Specifications

<b>Workpiece Size</b>	-	ø8"
<b>X-axis</b>	Cutting range	mm 210
	Max. cutting speed	mm/s 0.1 - 600
<b>Y-axis</b>	Cutting range	mm 210
	Index step	mm 0.0001
	Index positioning accuracy	mm 0.003/210 (Single error) 0.002 or less/5
	Scale resolution	mm 0.0001
<b>Z-axis</b>	Max. stroke	mm 19.22 (for ø2" blade)
	Moving resolution	mm 0.00005
	Repeatability accuracy	mm 0.001
	Max. blade size	mm ø58
<b>θ-axis</b>	Max. rotating angle	deg 380
<b>Spindle</b>	Output	kW 1.2 at 60,000 min <sup>-1</sup>
	Rated torque	N·m 0.19
	Revolution speed range	min <sup>-1</sup> 6,000 - 60,000
<b>Applicable Tape Frame</b>	-	2-8-1
<b>Utilities</b>	Power supply	- 200 ~ 240 V AC±10 %, 3-phase (50/60 Hz) <small>For other than the above voltages, a transformer is necessary.</small>
<b>Power consumption</b>		
	When processing	kW 1.5 (for reference)
	During warm-up	kW 1.0 (for reference)
<b>Max. power</b>	kVA	4.9
<b>Air pressure</b>	MPa	0.5 - 0.8
<b>Air max. consumption</b>	L/min(ANR)	250
<b>Clean air pressure</b>	MPa	0.5 - 0.8
<b>Clean air max. consumption</b>	L/min(ANR)	243
<b>Cutting water, spinner cleaning water, water curtain</b>		
	Water pressure	MPa 0.2 - 0.4
	Water flow rate	L/min Wheel coolant: 6 Water curtain: 1 Other: 1
<b>Cooling water</b>		
	Water pressure	MPa 0.2 - 0.4
	Water flow rate	L/min 1.5 at 0.3 MPa
<b>Exhaust duct capacity</b>	m <sup>3</sup> /min	5.0
<b>Machine dimensions (W x D x H)</b>	mm	900 x 1,190 x 1,800
<b>Machine weight</b>	kg	Approx. 1,200 (without transformer for overseas use) Approx. 1,280 (with transformer for overseas use)

## 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 μm/99.5 % or more).
- Keep room temperature fluctuations within ±1 °C of the set value. (Set value should be between 20 - 25 °C).
- Keep cutting water and cleaning water 2 °C above room temperature (fluctuations within ±1 °C).
- Keep spindle cooling water the same as room temperature between 20 - 25 °C (fluctuations within ±1 °C).
- 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 pressures specified above are gauge pressures.
- As the above specification may change due to technical modifications. Please confirm when placing your order.
- For further information, please contact your local sales representative.



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