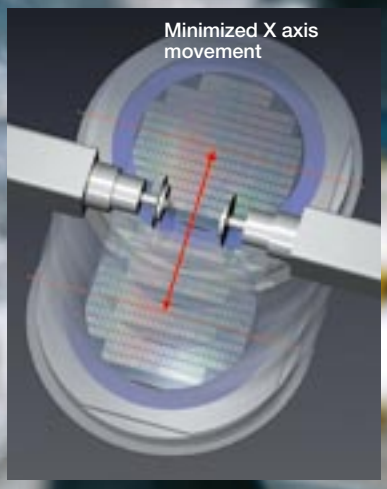
DISCO
Kiru·Kezuru·Migaku Technologies

Kiru Kezuru Migaku

Fully Automatic Dicing Saw
DFD6361

Advanced performance for 300 mm dicing

Facing dual-spindle



Enhanced Dicing Throughput

DFD6361 enhances throughput in two distinct ways. A reduction in distance between the blades and DISCO's facing dual design help manage total cut time, while high-magnification microscopes (standard) and non-contact setup sensors (option) for both Z1 and Z2 reduce the time required for non-dicing sequences such as kerf check and blade setup.

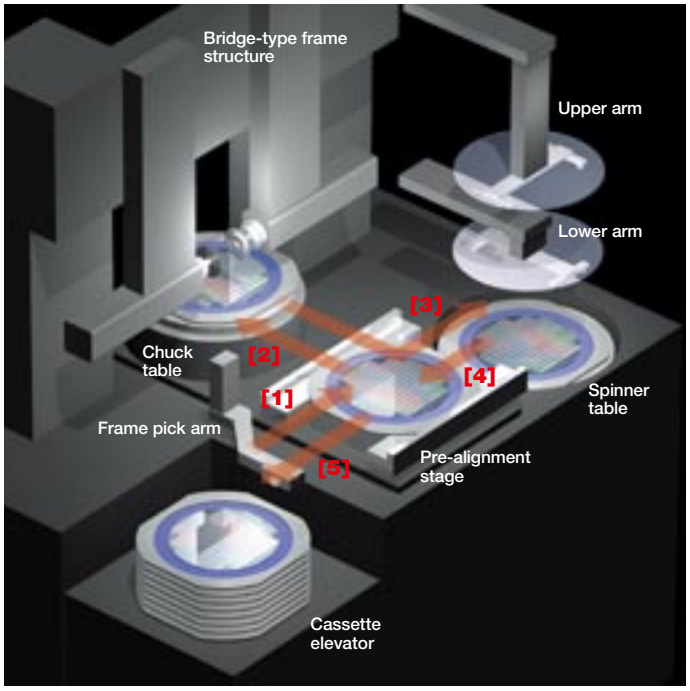
Consistent Cut Quality

DFD6361 offers highly consistent and dependable cut quality through the new Synchro Spindle™ featuring superior radial rigidity. An atomizing nozzle cleaning mechanism can also be installed in the spinner unit as an option to effectively clean wafers after dicing (patented, patent no. 3410385).

CE

Fully Automatic Dicing Saw

DFD6361



DFD6361 Work flow

[1] Frame pick arm moves workpiece from cassette to pre-alignment stage →

[2] After centering at pre-alignment stage, lower arm moves workpiece to chuck table → **cutting** →

[3] Upper arm moves workpiece to spinner table → **cleaning and drying** →

[4] Lower arm moves workpiece to pre-alignment stage →

[5] Frame pick arm returns workpiece to cassette

Improved Usability

- Spindle shaft-lock feature and auto-open/close wheel cover make blade changes easy and quick.
- Condition monitor function relays processing status and key machine information in real time.
- The cutting water flow rate controller, programmable via the touch-panel display, sets the flow rate for each process recipe.
- Adjustable touch-panel display supports an easy-to-use graphical user interface.

Adjustable LCD

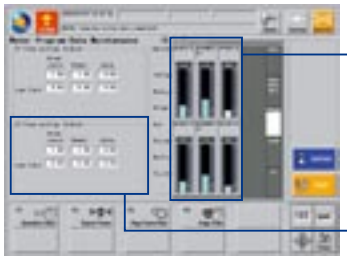
Small Footprint

The bridge-type structure frame and improved wafer handling system contribute to the compact size and small footprint of DFD6361.

Spindle Lineup

- 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.

Condition monitor screen



LCD touch screen

Control screen

DFD6361 Specifications

Workpiece size		mm	Max. ø300
X-axis	Cutting range	mm	310
	Cut speed	mm/s	0.1 ~ 600
Y1-axis and Y2-axis	Cutting range	mm	310
	Index step	mm	0.0001
	Index positioning accuracy	mm	0.003/310 (Single error) 0.002 or less/5
	Scale resolution	mm/s	0.0001
Z1-axis and Z2-axis	Max. stroke	mm	14.7 (for 2" blade)
	Moving resolution	mm	0.00005
	Repeating accuracy	mm	0.001
	Max. blade size	mm	ø58
θ-axis	Max. rotating angle	deg.	380
Spindle	Output	kW	1.2 at 60,000 min^{-1}
	Rated Torque	N·m	0.19
	Revolution speed range	min^{-1}	6,000 ~ 60,000
Applicable tape frame			2-12
Utilities	Power supply		200 ~ 240 V AC±10 %, 3-phase(50/60 Hz) For other than the above voltages, a transformer is necessary.
	Power consumption		
	When processing	kW	2.2 (for reference)
	During warm-up	kW	1.8 (for reference)
	Air pressure	MPa	0.5 ~ 0.8
	Average air consumption during operation	L/min (ANR)	189.0 (for reference)
	Clean air pressure	MPa	0.5 ~ 0.8
	Average clean air consumption during operation	L/min (ANR)	65.0 (for reference)
	Cutting water, water curtain and other		
	Water pressure	MPa	0.2 ~ 0.4
	Max. consumption flow rate	L/min	Cutting water,: 12 Water curtain: 1 Other: 1
	Cooling water		
	Water pressure	MPa	0.2 ~ 0.4
	Consumption flow rate	L/min	3.0 at 0.3 MPa
	Exhaust duct capacity	m^3/min	5.0
	Machine size (W x D x H)	mm	1,200 x 1,550 x 1,800
	Machine weight	kg	Approx. 2,050 (without transformer for overseas use) Approx. 2,150 (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 1 Wt/Wt. 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 (20 - 25 °C, fluctuations within ±1 °C).
- The machine should be used in an environment free from external vibrations. Do not install machine near a ventilation opening, heat-generating equipment, or oil mist-generating equipment.
- 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.**

DISCO

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