



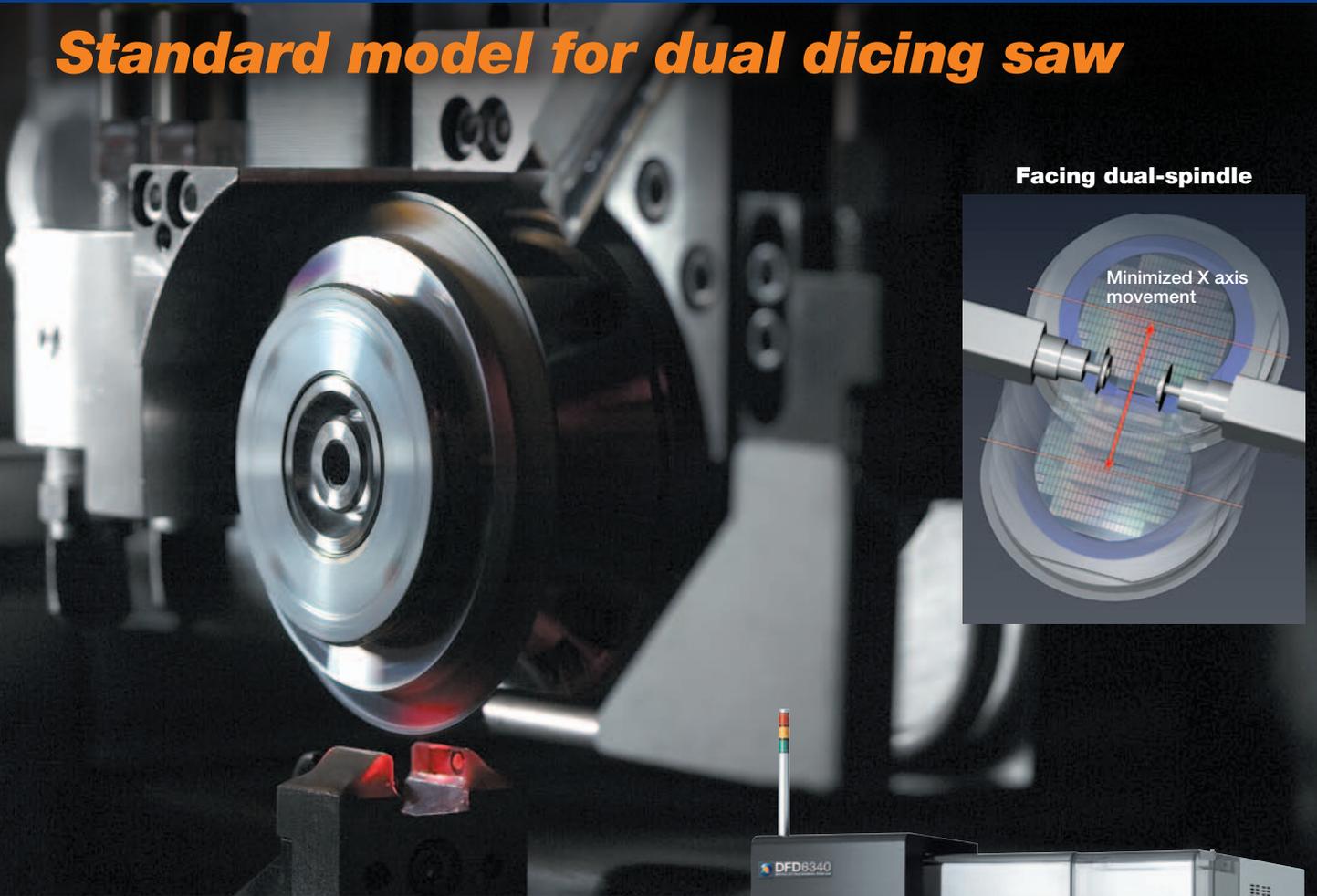
DISCO

Kiru · Kezuru · Migaku Technologies



Fully Automatic Dicing Saw DFD6340

Standard model for dual dicing saw



Maximized throughput

A facing dual-spindle configuration with a shorter distance between blades improves throughput by up to 30 % for step/bevel cut and 40 % for dual cut when compared to parallel dual-spindle saws.

Small footprint

By employing a new high-rigidity, bridge-type frame structure, the DFD6340 has the smallest footprint of any 8" saw in its class.

Lower air and energy consumption

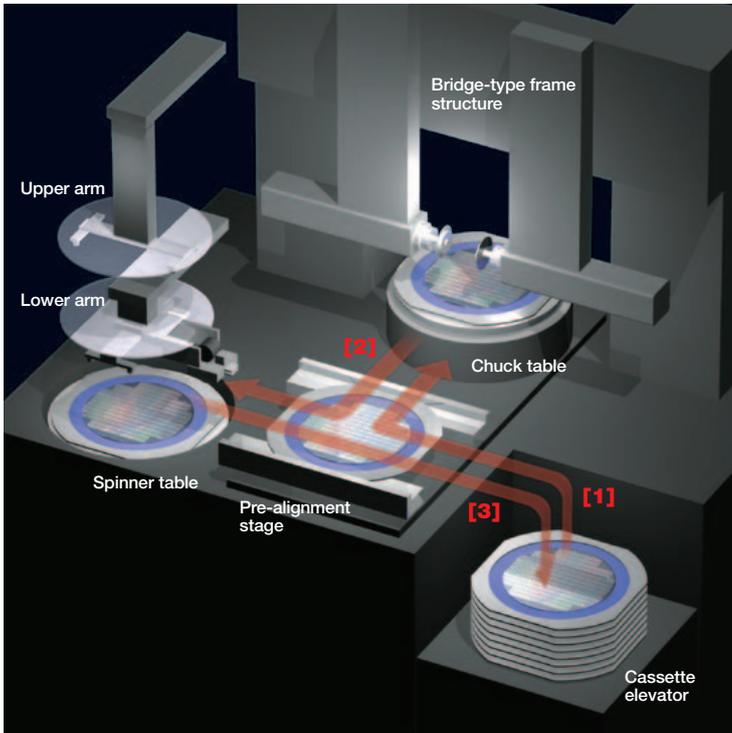
Utilizing the latest in conservation technology, the energy and air consumption of the DFD6340 has been reduced by 33 % and 24 % respectively when compared to the previous generation of saws.

Consistent cut quality

The DFD6340 offers consistent cut quality with the adoption of a SynchroSpindle™ featuring superior radial rigidity. An atomizing nozzle cleaning mechanism can also be included in the spinner unit as an option to effectively clean wafers after dicing (patent no. 3410385).



Fully Automatic Dicing Saw DFD6340



DFD6340 Operation flow

- [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 & drying** →
- [3] Lower arm returns workpiece to cassette

Cost of ownership improvements

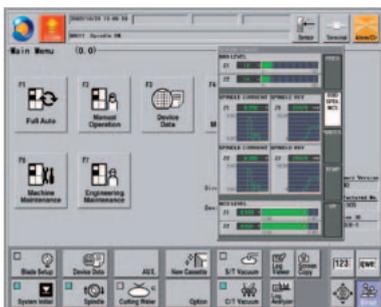
- **Shorter set up time - two NCS sensors**
Two Non-Contact Setup sensors, one each for Z1 & Z2, enable increasing throughput.
- **Shorter kerf check time - two microscopes**
A dedicated high-magnification microscope for each spindle allows for simultaneous kerf check, which increases throughput.

Process stability - cutting water flow control

- **Cutting water flow is controlled by the recipe.**
- **Water flow is consistently maintained, aiding process stability.**

Easy operation

The DFD6340 utilizes an adjustable LCD touch screen graphical user interface making operation and maintenance intuitive and easy. Also, an inspection stage allows for a wafer to be removed during saw operation. By including a checking stage, it is possible to remove or check a wafer after dicing during full automatic operation.



LCD touch screen



Adjustable LCD

17 % smaller footprint

DFD651 (1.58 m²)

DFD6340 (1.31 m²)

DFD6340 Specifications

Workpiece size	-	Max. ø8"
X-axis	Cutting range	mm 210
	Max. cutting speed	mm/s 0.1 - 600
Y1-axis and Y2-axis	Cutting range	mm 210
	Index step	mm 0.0001
Y1-axis and Y2-axis	Index positioning accuracy	mm 0.002/210
		(Single error) 0.002 or less/5
Z1-axis and Z2-axis	Max. stroke	mm 19.22 (For ø2" blade)
Z1-axis and Z2-axis	Moving resolution	mm 0.00005
	Repeatability accuracy	mm 0.001
Z1-axis and Z2-axis	Max. blade size	mm ø58 (For ø2" blade)
θ-axis	Max. rotating angle	deg. 380
Spindle	Output	kW 1.2 kW at 60,000 min ⁻¹
	Rated torque	N·m 0.19
	Revolution speed range	min ⁻¹ 6,000 - 60,000
Applicable tape frame	-	2-8-1
Utilities	Power supply	v 200 - 240 V AC ± 10 %, 3-phase (50/60 Hz)
		For other than the above voltage, a transformer is necessary.
Power consumption	-	-
	When processing	kW 2.1 (for reference)
Air pressure	-	-
	During warm-up	kW 1.8 (for reference)
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
Exhaust duct capacity	-	-
	L/min	3.0 at 0.3 MPa
Machine dimensions (W x D x H)	-	-
	mm	1,180 x 1,110 x 1,850
Machine weight	-	-
	kg	Approx. 1,600 (without transformer for overseas use) Approx. 1,670 (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 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.



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