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DISCO

Fully Automatic Dicing Saw

DFD6760

High end dicing saw for ø300 mm wafers

Fully automatic dual spindle dicing saw with two chuck tables to improve productivity

- The DFD6760 is a high end model which has further enhanced productivity from the DFD6362 fully automatic dicing saw for ø300 mm wafers. It has seen wide industry acceptance since its launch in 2008.
- Since this dicing saw has two chuck tables, it is possible for transfer and alignment to occur on one chuck table, while processing is performed on the other chuck table. This shortens the spindle waiting time for processing considerably and improves productivity.
- Since the DFD6760 has two chuck tables, inspection and measurement operations including workpiece image recording and workpiece thickness measurement using an NSD* can be performed on one chuck table, while processing proceeds on the other chuck table to maintain throughput. of the workpiece after processing can be recorded or workpiece
- Increased X, Y and Z-axis feed speed (same as the DFD6362) also contributes towards reduced processing time.

*Non-contact surface height detector (option)



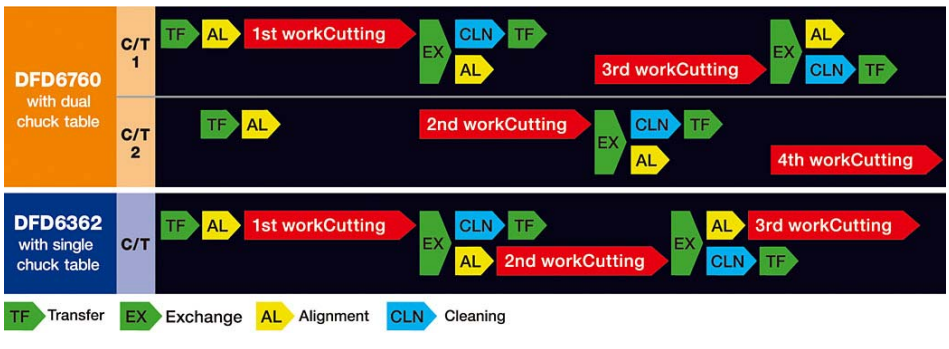
Enhancing the quality of thin wafer processing while maintaining throughput

For thin wafer step cuts, controlling the cut depth from the wafer surface is important. The NSD that is used to control the cut depth makes it possible to measure the wafer upper surface height very accurately. Typically, the NSD requires about 10 seconds to make the measurements, but in the case of the DFD6760, the NSD makes the measurements while processing the wafer on the other chuck table, so the throughput does not deteriorate.

Various measures to prevent particles

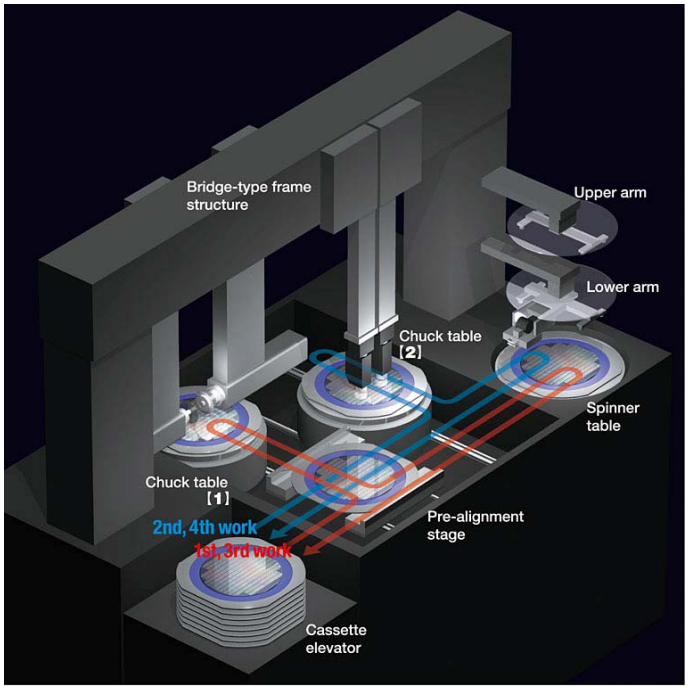
The cut section atomizing nozzle, wheel cover, and chuck table water curtain, which have been well received in the DFD6362, are selectable as optional accessories in accordance with workpiece characteristics.

DFD6760 operation flow
Process flow comparison with existing model



Fully Automatic Dicing Saw

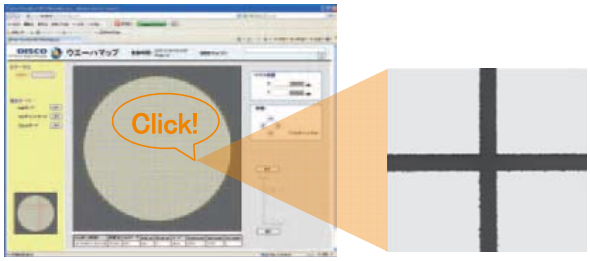
DFD6760



Meeting the need for traceability

Since the DFD6760 is equipped with two chuck tables, while dicing is performed on one chuck table, kerf images of the workpiece after processing can be saved and processing quality can be recorded using the other chuck table. In recent years at production facilities, there has been a demand for traceability. If a defect is found in a device, the DFD6760 can provide the records to check or certify product quality.

Dicer image viewer and software for browsing processing records



Display the kerf image by double-clicking
Resize the image by changing the magnification setting

Easy operation

The GUI (Graphical User Interface) implemented on the DFD6362, which has been recognized for its ease of use, has been included on the DFD6760. This is combined with an LCD touch panel for stress-free operation.

Specifications

Specification		Unit	1.2, 1.8 kW	2.2 kW
Workpiece size		mm	ϕ300	
X-axis	Cutting range	mm	310	
	Cutting speed	mm/sec	0.1 - 1,000	
Y1·Y2 -axis	Cutting range	mm	310	
	Index step	mm	0.0001	
	Index positioning accuracy	mm	0.003/310 (Single error)0.002/5	
MY1· MY2 -axis	Index step	mm	0.0001	
	Index positioning accuracy	mm	0.003/310 (Single error)0.002/5	
Z-axis	Max. stroke	mm	14.7 (For ϕ2″ blade)	14.9 (For ϕ3″ blade)
	Moving resolution	mm	0.00005	
	Repeatability accuracy	mm	0.001	
θ-axis	Max. rotating angle	deg	380	
Spindle	Rated torque	N･m	0.19(1.2 kW/High speed rotation)	0.7
	Revolution speed range	min^{-1}	6,000 - 60,000	3,000 - 30,000
Machine dimensions(W×D×H)		mm	1,200 × 1,900 × 1,800	
Machine weight		kg	Approx.2,800	

Environmental Conditions

- Use clean, oil-free air (dew point between -10 - -20 , residual oil: 0.1 ppm, and filtration rating: 0.01 μm/99.5 % or more).
- Keep room temperature fluctuations within ±1℃ of the set value. (Set value should be between 20 - 25 ℃).
- Keep cutting water and cleaning water 2 ℃ above room temperature (fluctuations within ±1 ℃).
- 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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2014.11