

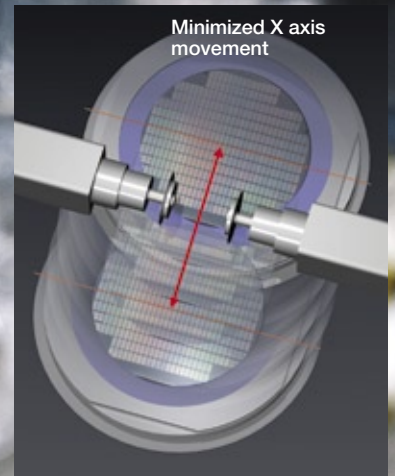
Fully Automatic Dicing Saw

# DFD6361

**Advanced performance  
for 300 mm dicing**

**Facing dual-spindle**

Minimized X axis  
movement



**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. The coolant water flow rate controller, programmable via the touch-panel display, sets the flow rate for each process recipe. The spinner cleaning unit, where it yields exceptionally clean wafers after dicing (option, patented in USA, Japan and other countries).



ISO 9001  
JQA-0954

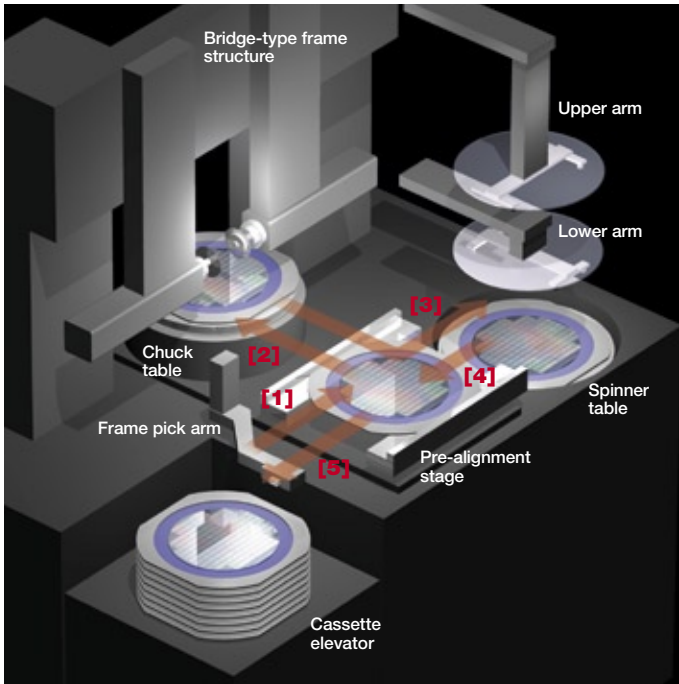


REGISTERED ORGANIZATION  
No. E892-ISO 14001



# Fully Automatic Dicing Saw

# DFD6361



## Workpiece Flow System

- [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.
- Adjustable touch-panel display supports an easy-to-use graphical user interface.



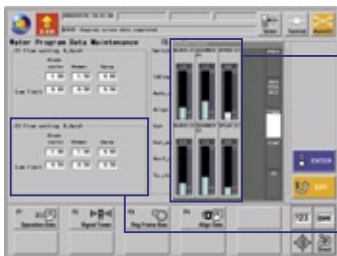
Adjustable LCD

## Small Footprint

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

## Spindle Lineup

- 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.



LCD touch screen



Condition monitor screen



Control screen

## DFD6361 Specifications

Workpiece size		mm	Max. $\phi$ 300
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
Z1-axis and Z2-axis	Index positioning accuracy	mm	0.003/310 (Single error) 0.002 or less/5
	Scale resolution	mm/s	0.0001
	Max. stroke	mm	14.7 (for 2" blade)
Moving resolution	Moving resolution	mm	0.00005
	Repeating accuracy	mm	0.001
	Max. blade size	mm	$\phi$ 58
$\theta$ -axis	Max. rotating angle	deg.	380
	Output	kW	1.2 at 60,000min <sup>-1</sup>
Spindle	Rated Torque	N·m	0.19
	Revolution speed range	min <sup>-1</sup>	6,000 ~ 60,000
Applicable tape frame		2-12	
Utilities	Power supply	200 ~ 240 V AC $\pm$ 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)
Max. power		kVA	6.9
Air pressure		MPa	0.5 ~ 0.8
Air max. consumption		L/min (ANR)	378.0
Clean air pressure		MPa	0.5 ~ 0.8
Clean air max. consumption		L/min (ANR)	265.0
Cutting water, water curtain and other			
Pressure		MPa	0.2 ~ 0.4
Consumption flow rate		L/min	Wheel coolant: 12 Water curtain: 1 Other: 1
Cooling water			
Pressure		MPa	0.2 ~ 0.4
Consumption flow rate		L/min	3.0 at 0.3 MPa
Exhaust duct capacity		m <sup>3</sup> /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  $\mu$ m/99.5% or more.
- Keep room temperature fluctuations within  $\pm$  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  $\pm$  1 °C).
- Keep spindle cooling water the same as room temperature (20 - 25 °C, fluctuations within  $\pm$  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



ASIA :  
**DISCO HI-TEC (SINGAPORE) PTE. LTD.**  
 Blk 2 Kaki Bukit Ave. 1 #03-06/08 Kaki Bukit Industrial Estate Singapore 417938  
 Phone: 65-6747-3737 Fax: 65-6745-0266  
**DISCO HI-TEC (MALAYSIA) SDN. BHD.**  
 Penang Regional Office  
 Phone: 60-4-844-5302 Fax: 60-4-645-2285  
**DISCO HI-TEC (THAILAND) CO., LTD.**  
 Phone: 66-2-618-8441 Fax: 66-2-618-8440  
**DISCO TECHNOLOGY (SHANGHAI) CO., LTD.**  
 Area E, 3rd Floor, Building A1 No.381 FuTeXiYi Road, WaiGaoQiao Free Trade Zone, Shanghai 200131 P.R. CHINA  
 Phone: 86-21-58662516 Fax: 86-21-58662517  
 Tianjin Service & Technical Support Center  
 Phone: 86-022-24381973 Fax: 86-022-24381637  
 Dongguan Service & Technical Support Center  
 Phone: 86-769-86334981 Fax: 86-769-86334559  
 Suzhou Office  
 Phone: 86-512-67629081 Fax: 86-512-67629082

Chengdu Office  
 Phone: 86-28-86528592 Fax: 86-28-86528591  
**ASIA AGENT :**  
**New Tronics Co., Ltd.**  
 Flat F, 11th Floor, Valiant Ind. Bldg. 2-12 Au Pui Wan Street, Fofan Shantin, N.T. HONG KONG  
 Phone: 852-26871431 Fax: 852-26874283  
**Happy Pole, Ltd.**  
 8F-1, No.41 Section 2, Roosevelt Road Taipei, Taiwan R.O.C.  
 Phone: 886-2-23980651 Fax: 886-2-23943943  
**Aurotech Corporation**  
 2021 Buencamino Street Alabang, Muntinglupa PHILIPPINES  
 Phone: 63-2-809-0155 Fax: 63-2-807-7419  
**DHK Solution Corporation**  
 13F, Sankak Jasdang Building, 1337-31, Seocho-dong, Seocho-gu, Seoul, Korea  
 Phone: 82-2-3415-1122 Fax: 82-2-3415-1441  
**U.S.A. :**  
**DISCO HI-TEC AMERICA, INC.**  
 3270 Scott Blvd. Santa Clara, CA 95054-3011 U.S.A.  
 Phone: 1-408-987-3776 Fax: 1-408-987-3785

Eastern Regional Sales & Service Office  
 Phone: 1-603-656-9019 Fax: 1-603-656-9018  
 Southeastern Regional Sales & Service Office  
 Phone: 1-919-468-6003 Fax: 1-919-468-6004  
 Central Regional Sales & Service Office  
 Phone: 1-972-267-9500 Fax: 1-972-267-5612  
 Southwestern Regional Sales & Service Office  
 Phone: 1-602-431-1412 Fax: 1-602-431-1437  
 Northwest Regional Sales & Service Office  
 Phone: 1-503-644-0323 Fax: 1-503-643-8108  
**EUROPE :**  
**DISCO HI-TEC EUROPE GmbH**  
 Liebigstrasse 8 D-85551 Kirchheim b. Muenchen Germany  
 Phone: 49-89-909030-0 Fax: 49-89-90903-199  
**DISCO HI-TEC FRANCE SARL Provence Head Office**  
 Phone: 33-4-42-91-00-20 Fax: 33-4-42-91-00-29  
**DISCO HI-TEC U.K. LTD.**  
 Phone: 44-1342-313165 Fax: 44-1342-313177  
**DISCO HI-TEC MOROCCO SARL**  
 Phone: 212-6-136-94-04 Fax: 212-22-97-38-88

**DISCO CORPORATION**  
 13-11 Omori-Kita 2-chome, Ota-ku, Tokyo 143-8580, Japan  
 Tel: 03-4590-1100 Fax: 03-4590-1075 • www.disco.co.jp