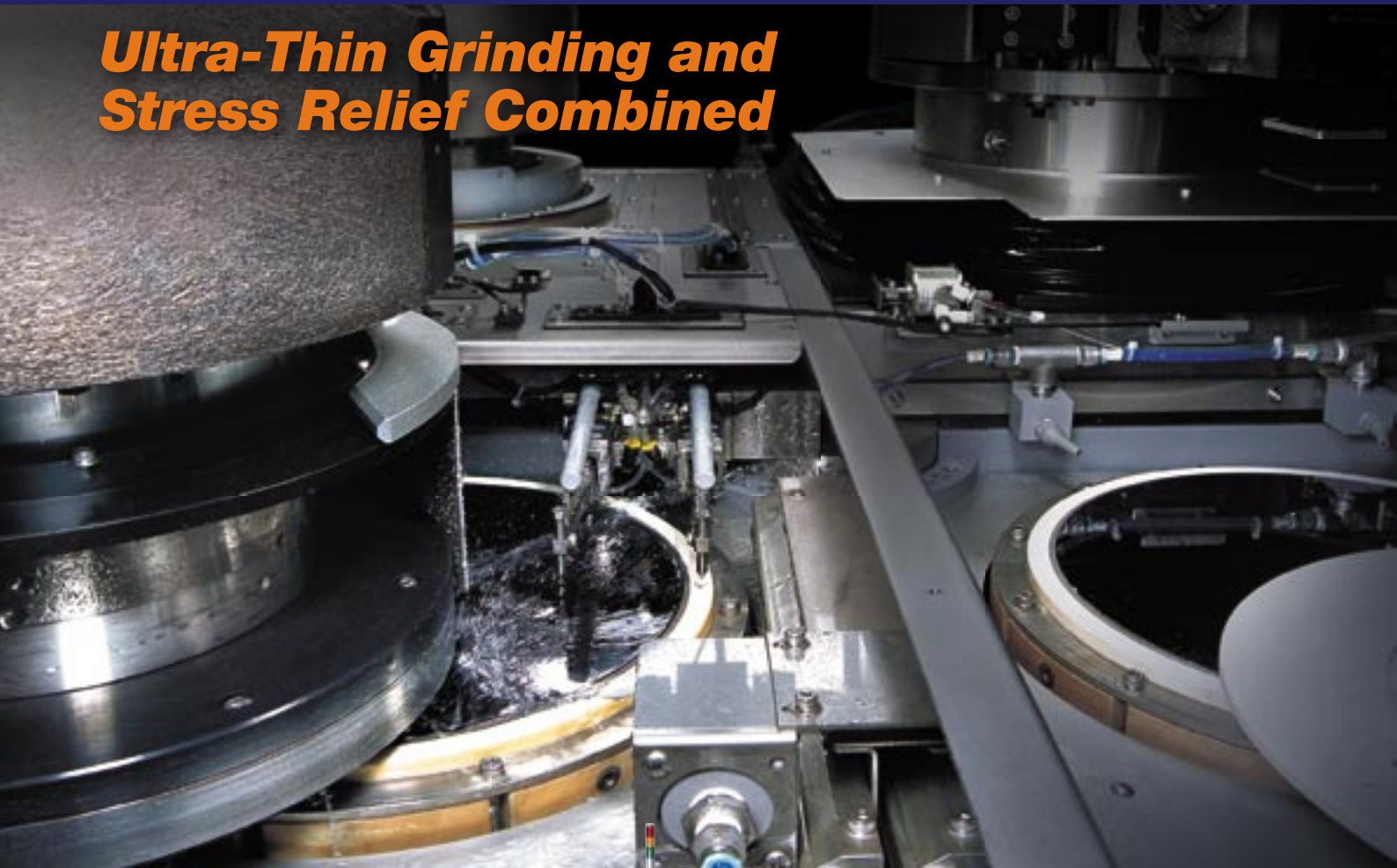


Fully Automatic Grinder/Polisher

DGP8760

Ultra-Thin Grinding and Stress Relief Combined



Grinding and Stress Relief Unified

DGP8760 unifies 300 mm wafer grinding and advanced stress relief options in one low-footprint system.

Advanced 3-Spindle 4-Chuck Design

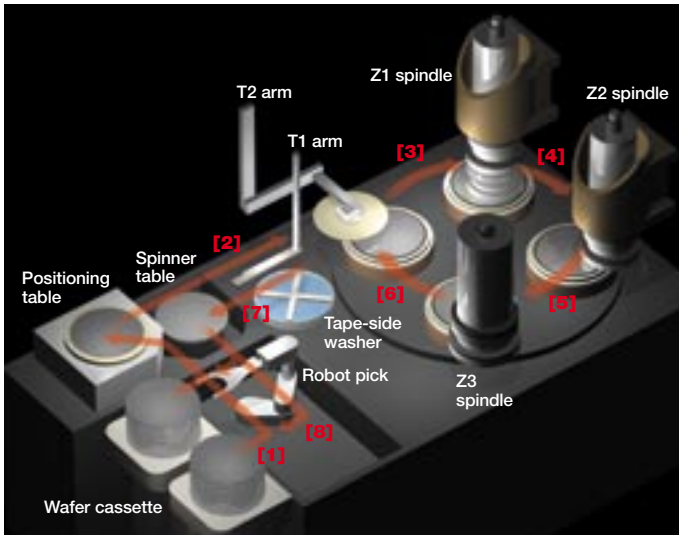
Featuring 3 spindles, DGP8760 combines ultra-thin grinding and stress relief into one complete and uninterrupted process. By keeping each wafer on the same chuck table from start to finish, the efficient turntable-based design minimizes wafer handling and increases process stability for 50 µm finishing and other vanguard applications.

Reduced Footprint

Owing to its 3-spindle 4-chuck design and compact wafer transfer system, DGP8760's footprint is more than 36% smaller than that of DFG8560 and DFP8160 combined. Additionally, the vacuum unit is completely contained within the machine case for extra compactness.



Fully Automatic Grinder/Polisher DGP8760



DGP8760 Workpiece Flow System

- [1] The robot pick removes the wafer from the cassette and places on the positioning table, where centering takes place.
- [2] The T1 arm places the wafer on the chuck table.
- [3] The wafer proceeds to Z1 for rough grinding.
- [4] The wafer proceeds to Z2 for fine grinding.
- [5] The wafer proceeds to Z3 for dry polishing (or ultra-high-mesh wheel grinding).
- [6] The T2 arm removes the wafer from the chuck table and places it on the spinner table, where washing and drying take place.
- [8] Finally, the robot pick removes the wafer from the spinner table and places it in the cassette.

Robust Applications Support

Rough grinding, fine grinding, and stress relief-because it supports all three functions, DGP8760's portfolio of applications is large and robust. Stress relief options include dry polishing and high-mesh grinding by Poligrind.

In-line Expandability

DGP8760 can be configured in-line with DFM2700 for DAF lamination and other tape functions. It is also configurable with Disco's DBG (Dicing Before Grinding) system and with a wide variety of other machines: tape mounter, tape remover, etc.

Disco 8000 Series Compatibility

DGP8760's grinding wheels, polishing wheels, dresser boards, spindles, and chuck tables are all compatible with Disco 8000 Series machines. In addition, operation method and GUI (Graphical User Interface) are based on proven 8000 Series technology.



LCD touch screen

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 grinding water and cleaning water 2 °C above room temperature (fluctuations within 1 °C over one hour).
- Keep spindle cooling water temperature between 20 - 25 °C (fluctuations within 2 °C over an hour).
- 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.

DGP8760 Specifications		
Wafer Diameter	mm	Max. ø300 (ø8" - ø12")
Grinding Method	Z1 and Z2 axis	In-feed grinding with wafer rotation
Z3 axis	-	Anomalous in-feed polishing with wafer rotation
Spindle Type	-	Air bearing with high frequency motor
Number of axes	-	3
Output	Z1 and Z2 axes	kW 4.8
Z3 axis	kW	7.5
Revolution speed	Z1 and Z2 axes	min ⁻¹ 1,000 - 4,000
Z3 axis	min ⁻¹	1,000 - 3,000
Z-axis vertical Z1 and Z2 axes	mm	120 (with zero point)
stroke	Z3 axis	mm 65
Z-axis vertical grinding feed speed	mm/s	0.0001-0.08
Z-axis vertical fast feed speed	mm/s	50
Min. Z-axis vertical movement	µm	0.1
Min. Z-axis vertical movement resolution	µm	0.1
Wafer Chuck Table	Chuck table type	- Porous chuck table
Holding method	-	Vacuum
Number of revolutions	min ⁻¹	0 - 300
Number of chuck tables	-	4
Chuck table cleaning	-	Backflushing of water and compressed air is combined with oilstone cleaning and brush cleaning
Wafer cleaning	-	Water washing by atomizing nozzle
Spark out (chuck table revolutions setting)	-	0 - 999
Grinding Wheels	Diamond wheel Z1 and Z2 axes	mm ø300
Dry polishing wheel	Z3 axis	mm ø450
Wafer Handling Section/Wafer Cleaning Section	Cassette storage quantity	- 2
Cassette flow	-	Same flow and open flow
Spinner unit	-	Water washing by atomizing nozzle and drying
Vacuum	Discharge Pump	- 26/34 m ³ /h, 50/60 Hz
speed	Vacuum Unit	- 20/28 m ³ /h, 50/60 Hz (at -70 kPa)
Achievable pressure	kPa	-90 (at water supply temperature 15 °C and flow rate 1 L/min)
Electric motor	kW	1.5
Water flow rate	L/min	2.0 (when water supply temperature is less than 30 °C) 1.5 (when water supply temperature is less than 25 °C) 1.0 (when water supply temperature is less than 20 °C)
Grinding Accuracy (when grinding ø300 mm wafers with included chuck tables)	Thickness variation within one wafer	µm less than 3.0 (less than 3.0 when using only Z1 and Z2)
Thickness variation between wafers	µm	±3.0 (±3.0 when using only Z1 and Z2)
Finish surface roughness	µm	Ra less than 0.005 (when using only Z1 and Z2 Ry approx 0.13 (#2000 fine grinding) Ry approx 0.15 (#1400 fine grinding))
Utilities	Power supply	- 3-phase AC 200 V ±10 %, 50/60 Hz
Power consumption	During processing	kW 8.4 (for reference)
During warm-up	kW	2.8 (for reference)
Max. power	kVA	26
Air pressure	Main body	MPa 0.6 - 0.8
Dust collector	MPa	0.3 - 0.5
Air flow rate	Main body	L/min (ANR) During max. flow: 1300 or less Average during processing: 700 or less During warming up: 450 or less
Dust collector	L/min (ANR)	50
Water pressure	Grinding and cleaning	MPa 0.3 - 0.4
Cooling water and vacuum pump	MPa	0.2 - 0.3
Vacuum pump	MPa	0.05 - 0.45
Dust collector	MPa	0.2 - 0.3
Water flow	Grinding and cleaning	L/min 25 or higher
Cooling water	L/min	9.5 or higher
Vacuum pump	L/min	2.0 (when water supply temperature is less than 30 °C) 1.5 (when water supply temperature is less than 25 °C) 1.0 (when water supply temperature is less than 20 °C)
Dust collector	L/min	4
Exhaust duct capacity	m ³ /min	4
Machine dimensions (W x D x H)	mm	1,690 x 3,450 x 1,800
Machine weight	kg	5,700

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.
Phone:60-3-8024-6588 Fax:60-3-8024-1311
Penang Regional Office
Phone:60-4-644-5502 Fax:60-4-645-2285

DISCO HI-TEC (THAILAND) CO., LTD.
Phone:66-2-6188441 Fax:66-2-6188440

DISCO TECHNOLOGY (SHANGHAI) CO., LTD.
Area E, 3rd Floor, Building A1 No.381 FuTeXiYi Road,
WaiGaoQiao Free Trade Zone Shanghai, P. R. China 200131
Phone:86-21-5866-2516 Fax: 86-21-5866-2517

ASIA AGENT :
New Tronics Co., Ltd.
Flat F, 11/F, Valiant Ind. Bldg. 2-12 Au Pui Wan Street,
Fotan Shantin, N.T. HONG KONG
Phone:852-26871431 Fax: 852-26874283

Happy Pole, Ltd.
8th floor, 9-1, No.41 Section 2, Roosevelt Road Taipei,
Taiwan R.O.C.
Phone:886-22-3960651 Fax: 886-22-3943943

Aurotech Systems(Phil's), Inc.
121 Buencamino Street Alabang, Muntinlupa PHILIPPINES
Phone:63-2-809-0155 Fax: 63-2-807-7419

D.I. Corporation
D.I. Building 58-6 Nonhyun-Dong Kangnam-ku, Seoul KOREA
Phone:82-2-546-5501 Fax:82-2-3446-8087

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:49-89-90903-0 Fax:49-89-90903-199

DISCO HI-TEC FRANCE SARL. Provence Head Office
Phone:33-442-910020 Fax:33-442-910029

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