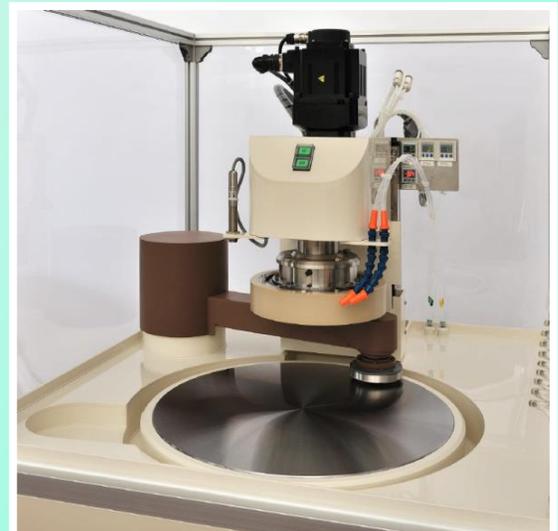




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## RDP-500 Polisher and Tribometer for R&D and Low-Volume Manufacturing



# Specification

<b>Manufacturer:</b>	Fujikoshi Machinery Corporation (Nagano JAPAN). Sold exclusively in North America and the EU by Araca, Inc. (Tucson, AZ USA).
<b>Wafer Size:</b>	Coupons (25, 50, 75-mm) , 200, 150 and 100-mm with interchangeable wafer carriers.
<b>Wafer Carrier:</b>	Pressure range of 0.5 to 10 PSI. Independent pressure control (2 zones for the wafer and 1 zone for the retaining ring). Rotation range of 20 to 200 RPM. Rotation and vertical displacement controlled via servo motors. Head oscillation range of $\pm 40$ mm (can be adjusted).
<b>Platen:</b>	508 mm in diameter stainless steel (SUS410) with integrated heating and cooling capability (chiller and heater to be provided by the customer). Rotation rate of 20 to 200 RPM. Rotation control via inverter motor.
<b>Conditioner:</b>	100 mm in diameter (can accommodate most standard CMP discs) Rotation rate range of 20 to 200 RPM. Sweep velocity range of 0 to 700 mm/sec through 10 independently controlled zones and dwell times. Down force range of 2 to 12 kg-force. In-situ and ex-situ capability.
<b>Chemical Delivery Systems:</b>	Two computer-controlled, 10-liter, chemical-resistant, removable tanks each with an impeller mixer, roller pump and level sensor. Flow rate range of 10 to 300 cc/min.
<b>Pad Rinse:</b>	Dedicated high flow rate (up to 3,000 cc/min) water rinse with an optional bristle brush end effector for through-the-grooves pad cleaning. Attached to the conditioner swing arm.
<b>Force Sensors:</b>	Shear force transducer above the carrier head and normal force transducers below the platen.
<b>Temperature Sensor:</b>	Single-point pad surface IR detector.
<b>Wafer Slip Sensor:</b>	Adjustable single-point slip sensor interlocked with the main operational features of the polisher for safety.
<b>Control &amp; Monitoring:</b>	Intuitive programmable touch-screen controller for complete polisher operation.
<b>Data Capture vs. Time:</b>	Powered by Araca's FSX-500X <sup>®</sup> proprietary force acquisition and data analysis. Data capture frequency up to 2,300 Hz recording the following: Platen and carrier rotational velocities, shear force, normal force, and pad surface temperature.
<b>Data Analysis &amp; Reporting:</b>	FSX-500X <sup>®</sup> off-line data analysis software (with user-friendly GUI) developed by Araca, Inc. Capable of reporting (vs. polish time) shear and normal forces, coefficient of friction and temperature. Advanced features include shear and normal force Fast Fourier Transform (FFT), force cluster plots, Stribeck+ curves and kinetic curves.
<b>W x L x H &amp; Weight:</b>	92 x 92 x 186 cm and 1,082 Kg (for the polisher). 50 x 72 x 81 cm and 35 Kg (for the 2 chemical delivery systems).
<b>Utilities:</b>	200 V – 3 Phase, 60 Hz, 25kVA; minimum CDA pressure of 75 PSI (50 KPa); vacuum 95 PSI (65 KPa).
<b>Enclosure &amp; Exhaust:</b>	Enclosed and sealed polishing chamber with 10 cm diameter standard tool exhaust port.
<b>Warranty:</b>	One year parts and labor warranty included. Optional extended warranties and service contracts available.