



**Thin Film/Plasma | Temperature | Flow | Metrology
Components | Systems | Equipment | Support**



Thin film process power supplies: DC magnetron, RF/AC 40KHz-60MHz with matching networks; 'Sekidenko' non-contact temperature measurement instrumentation; solid state power controllers; repair, upgrade and retrofit service solutions



Vacuum flanges, fittings and accessories; vacuum isolation valves; vacuum chambers and weldments; feedthroughs; exhaust traps and filters



Recirculating chillers up to 14kW standard, larger sizes available upon request



'Dektak' stylus surface profilers; 'Contour' optical surface profilers; Atomic Force Microscopes; Tribology instruments



Kalrez® Perfluoroelastomer o-rings and seals for plasma, wet chemistry and high temperature applications, including bonded doors and custom shapes



DC & RF magnetron sputter sources featuring high target utilization
SpeedFlo™ reactive sputtering process controllers
Linear ion sources for surface conditioning / cleaning



Scientific grade RGAs
Advanced gas and energy analysis systems for applications including Thin Film/Plasma, SIMS & SNMS, Catalysis, Thermal Reactions



High vacuum gate valves



Dry Vacuum Pumps: NeoDry Series up to 100 LPM durable air-cooled pumps with 3+ years maintenance free operation; MU Series medium duty and SD Series harsh duty pumps range from 250 LPM to 150,000 LPM.



Microwave and RF plasma surface treatment and ashing systems
Asyntis wafer thinning/stress relief Systems
Stress, ion implant dose, and surface acoustic wave metrology tools



Thermocouple vacuum gauge tubes, gauges and controllers, linear wide range vacuum gauges, ion gauges; Mass flow meters and controllers



E-Beam sources & power supplies/sweeps; deposition rate controllers; e-beam parts, liners & crystals; SainTech ion beam systems and ion current monitor; TVP water vapor cryotrap; NVision Plasma emission monitors



Temperature control solutions for semiconductor and high vacuum applications, specializing in pumpline and gasline heating; Integrated multi-function controllers and power switching devices; limit controllers; data loggers

IES Technical Sales Solutions by Product Group

VACUUM COMPONENTS AND SERVICES

ANCORP	Vacuum components; vacuum valves; chambers & weldments; traps and filters
DUPONT KALREZ® ELASTOMERS	Perfluoroelastomer o-rings and seals for plasma, wet chemistry and high temperature (to 327C) applications
HVA	High vacuum gate valves
KASHIYAMA, USA	Dry Vacuum Pumps: NeoDry Series up to 100 LPM durable air-cooled pumps with 3+ years maintenance free operation; MU Series medium duty and SD Series harsh duty pumps range from 250 LPM to 150,000 LPM.
TELEDYNE HASTINGS	Thermocouple vacuum gauge tubes, gauges and controllers, linear wide range vacuum gauges; ion gauges
IES PRODUCTS & SERVICES	Field vacuum system maintenance service/consulting, evaporation and sputtering parts and materials; sputtering targets; vacuum and gas handling components including Kobold USA Procurement services: JIT part supply, kitting, creative distribution solutions

THIN FILM/PLASMA PROCESSING AND MEASUREMENT EQUIPMENT

ADVANCED ENERGY	Thin film process power supplies: DC and pulsed DC magnetron, RF 40KHz-60MHz with matching networks; RF measurement instrumentation <i>Litmas</i> remote plasma sources for abatement and ashing
BRUKER NANO METROLOGY	Industry standard 'DEKTAK' surface profilers and 'Contour' optical profilers
GENCOA	DC & RF magnetron sputter sources featuring high target utilization; Speedflo™ Reactive Process Controllers
HIDEN ANALYTICAL	RGAs, plasma and energy analysis instrumentation
TELEMARK	Electron beam guns & power supplies; Ion beam sources & power supplies; optical thickness monitors; deposition rate controllers; PCM Series plasma monitor; APT Inspector in-situ film thickness/reflectivity measurement system;
PVA TEPLA AMERICA	Microwave plasma surface treatment systems; stress measurement, ion implant dose monitoring and structural analysis instruments

TEMPERATURE MEASUREMENT AND CONTROL INSTRUMENTS AND COMPONENTS

ADVANCED ENERGY	<i>Sekidenko</i> : temperature and emissivity measurement instrumentation
APPLIED THERMAL CONTROL	Recirculating chillers for up to 14kW
WATLOW	Solutions for virtually any thermal application, specializing in pipeline and gasline heating

FLUID HANDLING AND MASS FLOW MEASUREMENT AND CONTROL COMPONENTS

IES PRODUCTS	<i>Gentec</i> : industrial, medical, and high/ultra-high purity valves and regulators <i>Kobold</i> : industrial flow, pressure and level instruments <i>Parker/Veriflo</i> : high purity valves and regulators
TELEDYNE HASTINGS	High performance electronic mass flow meters and controllers