



The future starts here.

**Innovative technology that advances your design.**

# Next-gen technology will be *smaller, lighter, faster.*



How do you differentiate your product in a crowded OEM market? The machinery of the future will be more compact and portable, fitting more easily into people's lives. It will do more using less power, delivering precision performance in factories and in the field.

Reducing component size is critical to bringing this increased functionality into tighter spaces and more easily transportable equipment. However, miniaturization can present serious challenges to traditional manufacturing automation, material handling, and packaging systems.

**No one understands miniaturization better than KOGANEI.** For more than 85 years, we have helped our customers design and build game-changing equipment with miniature components. Let us put our innovation and expertise to work for you!

## Accelerate your development process.

With years of experience, our application engineers have created solutions for most design challenges. Our proven process optimizes your design for usability and manufacturability from day one.

### Step 1: Understand & Define Your Application

We work closely with you to understand every aspect of your application up front.

### Step 2: Test & Evaluate Possible Solutions

We develop your prototype and work with you to test thoroughly, making adjustments if needed for functionality, volume, schedule, or budget.

### Step 3: Pre-production Order

We confirm every last detail before scheduled production and shipments begin.

**We listen, collaborate, and deliver the best result.**



## KOGANEI Global Presence

Founded in Japan in 1934, KOGANEI has been providing precision automation components and custom solutions globally to the semiconductor, electronics and medical industries for more than 85 years. Our state-of-the-art manufacturing processes and equipment ensure quality and consistency. With machinery being shipped around the world, it is important to partner with a company with global presence. With KOGANEI entities in 7 countries and a sales and logistics network in over 30 countries worldwide, KOGANEI has true global reach.

KOGANEI International America Inc., headquartered in Fremont, California, provides application and product support and is the logistics and stocking center for our customers in the Americas.

## The capacity and flexibility to deliver.

To further accelerate the development process, our engineering team in Japan can work while the US is asleep to provide answers the following day. Our expansive manufacturing capabilities allow us to make your components quickly once designs are finalized. We will even stock your final product for you and carry custom assemblies as a single part number.

## Tap into our global supply chain.

Looking for help to reduce your manufacturing time? A reliable supplier? Look no further. Over decades, we've established a network of quality sources, specialty manufacturers, and assembly options, so you will always enjoy the lowest costs and fastest delivery.

## Unexpected orders? No problem.

We can carry dedicated safety stock so you can accommodate your customers' changing requests without holding extra inventory. Our U.S. Logistics Network will ensure you have the product you need when you need it.



**Expedited delivery from our U.S. Logistics Network.**

Unique technology that enhances your product.



Optimized designs with a variety of sizes and styles to fit almost any application.

### Standard Products

When designing a next generation machine, you need to have options. With more than 512,000 standard products we provide just that. Our engineering team can assist you in specifying the component that best fits your needs. With the variety of technologies we offer, along with our engineering expertise, we often combine products into custom sub-assemblies, so you always get the best possible solution. Your assembly will have one-part number from a single source, minimizing the number of vendors and potential delays.
























### Engineered Specials

With many applications, there are times when you need something special. In those cases, our engineering staff will work with you to design and develop a custom solution to optimize your machine's functionality and performance. From design to delivery, we are with you every step of the way. A custom product with unique part number is also a great way for OEMs to secure their MRO business while providing value add.

### Unrivaled Quality

The cost of failure on a new product is higher than ever. That's why we 100% test every single component before shipping, preventing expensive changes or rework. Our facilities are ISO 9001 and ISO 14001 certified, and in RoHS compliance.

## The Advantages of KOGANEI Technology

	Miniaturization		Accuracy and Repeatability		Unique Performance		Longer Life		
V A L V E S	<b>005 Series</b> Micro Valves   <b>5.9 mm Width</b>	<b>F-AVPN070</b> Fluoropolymer Valves   <b>High Flow in Small Envelope</b>	<b>PVR Series</b> Media Isolation Valves   <b>Low 35µl Dead Volume</b>	<b>KFPV Series</b> Proportional Flow Valves   <b>Repeatable to ±2% F.S.</b>	<b>iB-Zero Series</b> Valve Manifolds   <b>Fast, Simple Assembly</b>	<b>iB-Flow Series</b> Digital Flow Controls   <b>Stepper Driven Needle Valve</b>	<b>F Series</b> Valves and Manifolds   <b>100+ Million Cycles</b>	<b>K Series</b> High Speed Valves   <b>Up to 1 Billion Cycles</b>	
	A C T U A T O R S	<b>PBDA Series</b> Pen Cylinders   <b>from 2.5 mm Bore</b>	<b>MBDA Series</b> Mini Bit Cylinders   <b>from 4.5 mm Bore</b>	<b>MGA Series</b> Mini Guide Sliders   <b>±0.0002" Running Parallelism</b>	<b>AFDPG Series</b> Flat Grippers with Guides   <b>Minimal Finger Backlash</b>	<b>MRV Series</b> Rodless Cylinders   <b>Low Speed to 8 mm/s</b>	<b>NHL Series</b> L-Hand Grippers with Guides   <b>Superior External Gripping Force</b>	<b>BC Series</b> Compact Cylinders   <b>15 Million Cycles</b>	<b>BCG Series</b> Guided Actuators   <b>10 Million Cycles</b>
		O T H E R S	<b>RN100 Series</b> Pressure Regulators   <b>23 mm Square Body</b>	<b>Air Picker</b> Rubber Hand Grippers   <b>from 8 mm Diameter</b>	<b>PRS100 Series</b> Precision Regulators   <b>±0.15 psi Sensitivity</b>	<b>EW2H Series</b> Electric Grippers   <b>Positioning Accuracy ±0.05 mm</b>	<b>iB-Cyclone</b> Air Line Water Separators   <b>No Filter Element To Replace</b>	<b>PAU</b> Air Conservation Pulse Units   <b>Reduces Air Use by up to 50%</b>	<b>DTY-ELF14</b> Fan Type Ionizers   <b>No Routine Needle Maintenance</b>

We make great designs even better.

We 100% test EVERY product before it ships.

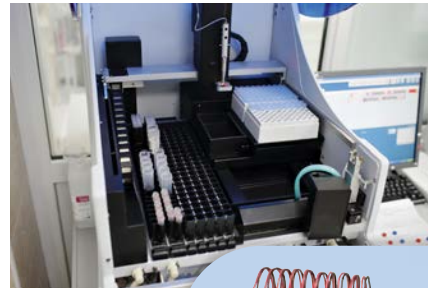
# Advanced applications powered by KOGANEI.

## Life Science Applications

- Automated Liquid Handling
- Automated Sample Preparation
- Flow Cytometry
- Gas & Liquid Chromatography
- Molecular Diagnostics
- Immunoassays Analyzers
- Clinical Chemistry Analyzers
- Microbiology Analyzers
- Air/Water Quality Analysis

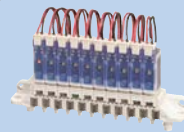
## Medical Applications

- Oxygen Concentrators
- Negative Wound Therapy
- Endoscopy Equipment
- Ventilators
- Ocular Surgical Equipment
- Microdermabrasion
- Dialysis Machine
- Chrysotherapy
- Alternating Pressure Mattresses



### Cell Secretion Analyzer

**Challenge:** Controlling up to 150+ flow paths while maintaining the smallest footprint possible and reducing the potential for leaks and assembly errors.



**Solution:** Our **005 Series** micro solenoid valve met performance and envelope requirements. Providing the complete sub-assembly ensured accurate and fast installation.

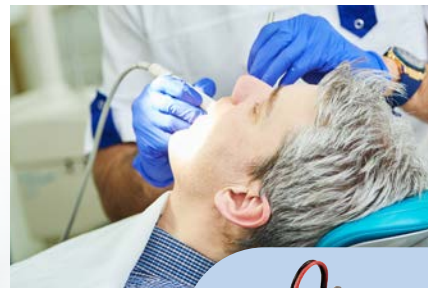


### Clinical Sterilization Equipment

**Challenge:** Maintaining a precise level of clean, dry compressed air in a small, efficient assembly while sourcing parts from multiple suppliers.



**Solution:** Utilizing the breadth of our product line and compact compressed air treatment components, including our **FDH Series** membrane dryer, we provided a complete assembly that met the required filtration and dew point levels.



### Endodontic Device

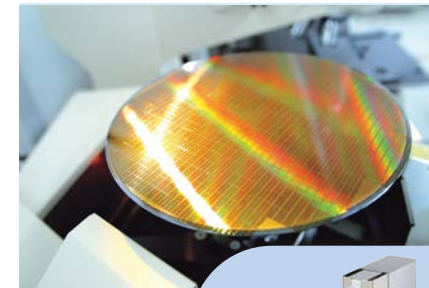
**Challenge:** Finding compact, high-flow, and quiet operating fluid control valves for mixing and dispensing of the proprietary fluid.



**Solution:** Through a modification to the solenoid on our **PVR Series** media isolation valve, we provided a custom assembly that met the OEM's application requirements while sufficiently reducing operating noise.

> Please click on the applications above to go to our website for more information.

Portability and performance for patients and physicians.

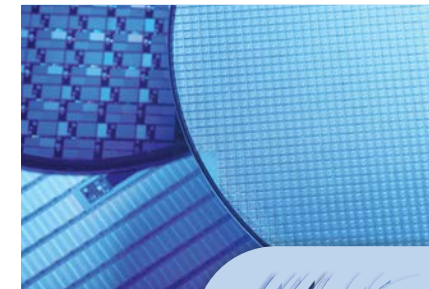


### Photoresist Coating Equipment

**Challenge:** Reducing the waste of expensive photoresist materials while maintaining high speed throughput. At the same time generating the lowest amount of contamination and requiring the least maintenance.



**Solution:** Our patented **F-EPT Series** Tube pump and **F-AVPN070** Fluoropolymer valves provided excellent photoresist dispensing repeatability, low contaminate generation, and the least required maintenance, all while maximizing our customer's profitability.



### Wafer Cleaning Equipment

**Challenge:** Reducing the risk of fire caused by an Electrostatic Discharge (ESD) event due to transporting Ultrapure Water (UPW) through insulative Fluoropolymer (PFA) tubing.



**Solution:** Our Anti-Static **PFA Series** tubing has a conductive material on the surface that provided a ground connection point and eliminated the possibility of an ESD event.



### Back Grinding Equipment

**Challenge:** Reducing quality issues caused by unstable water flow at the cleaning nozzle during the wafer rinse process.



**Solution:** Our **KFPV Series** low hysteresis proportional control valve enabled tighter control of the water pressure to the cleaning nozzle, providing the customer with the stability needed to resolve their quality issues.

> Please click on the applications above to go to our website for more information.

High purity and reliability for equipment and processes.

## Semiconductor Front End

- Silicon Substrate Processing
- Oxidation & Nitride Film Deposition
- Photoresist Coating
- Etching
- Ashing / Cleaning
- Dielectric Film Formation
- Planarization
- Ion Implantation / Annealing
- Contact & Interconnect Formation
- Probe Testing

## Semiconductor Back End

- Dicing
- Back Grinding Tape Laminating
- Back Grinding
- Die Bonding
- Wire Bonding
- Molding
- Trimming / Forming
- IC Testing
- Marking

# Advanced applications powered by KOGANEI.

## Electronics Manufacturing

- Surface Mount Technology (SMT)
- Reflow
- Screw Tightening
- Soldering
- PCB Cutting
- Mechanical Testing
- Electrical Testing
- Packaging
- Ink-Jet Coating (Flat Panel Display)
- Cleaning
- Shock Absorbing
- Pick & Place
- Conveying
- Inserting
- Lifting
- Pushing
- Clamping
- Film Peeling / Laminating (Flat Panel Display)
- Painting
- Assembling
- Part Feeding
- Part Sorting



### Video Game Test Equipment

**Challenge:** Developing the compact, long-life pneumatic equipment necessary to test the durability and endurance of video game controllers.



**Solution:** Our miniature, high-performance *PBDA Series* pen cylinders exceeded the customer's critical life cycle requirement, out-lasting similar components from other manufacturers.



### Solar Cell Pick & Place Equipment

**Challenge:** Reducing inaccuracies during cell handling caused by undesirable shifting and flexing normally associated with small pneumatic actuators.



**Solution:** Our *BCG Series* precision guided cylinders provided the customer with the load capability and rigidity comparable to larger bore cylinders but within the envelope of their existing component, allowing them to improve performance without increasing footprint.



### Car Audio System Assembly Equipment

**Challenge:** Maintaining the various ionizers required to prevent particle accumulation and Electro-Static Discharge (ESD) events, despite having limited in-house expertise and inadequate service support.



**Solution:** We conducted an ESD audit to evaluate the customer's *DTY-ELF Series* ionizer implementation and provided field training and technical support to improve their maintenance process, enabling them to save time and related costs.

> Please click on the applications above to go to our website for more information.

Accuracy and speed for precision assembly operations.



### Pallet Stop Assemblies

**Challenge:** Prolonging the life of stopping mechanisms designed to handle the high loads and cycle counts associated with pallet conveyors.



**Solution:** We analyzed the customer's failed shock absorbers and developed a drop-in replacement using our *KSHJ Series* with linear orifice design, extending the life of their equipment and reducing warranty claims.



### Drop Bin Slide Gates

**Challenge:** Designing an compact, long-stroke drive assembly capable of the high forces required to quickly open and close the slide gates at the bottom of package sortation drop bins.



**Solution:** The oval piston of our *ORV Series* rodless cylinders generated the necessary actuation force in a low profile package, enabling the customer to easily mount the system within their space constraints.



### Sliding Shoe Sorters

**Challenge:** Developing an actuation system for sliding shoe sorter diverters that is fast, highly repeatable and has a long life expectancy.



**Solution:** Our *KDV Series* high-speed actuator package provided the ideal combination of a robust, low-friction, compact cylinder with an integrated, direct acting poppet valve, yielding up to 30 million cycles.

> Please click on the applications above to go to our website for more information.

Durability and long-life through advanced engineering and design.

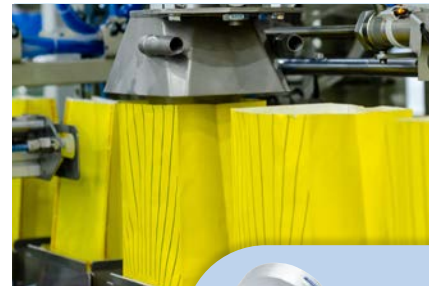
## Material Handling and Warehouse Automation

- Conveying
- Linear Tilt Tray Sorters
- Sliding Shoe Sorters
- Pop-Up Sorters
- Linear Arm Sorters
- Pusher Sorters
- Kicker Cylinders
- Pallet Stops
- End of Arm Tooling (EOAT)
- Storage and Retrieval
- Stacking
- Machine Loading
- Part Transferring
- Bulk Material Handling
- Paddle Sorters
- Gravimetric Feeders
- Garment On Hanger Sortation Systems
- Gravimetric Blenders

# Advanced applications powered by KOGANEI.

## Food, Beverage and Packaging

- Bottle Forming
- Bottle Filling
- Food Cutting
- Picking and Placing
- Packaging
- Conveying
- Ingredients Analysis
- Case Erectors
- Palletizing
- Case Packers
- In-line Pouch Sealers
- Vertical Form Fill Sealers
- Labeling
- Case Sealers
- Automatic Filling
- PET Bottle Blowing
- Capping
- Volumetric Filling
- Depalletizing
- High Speed Picking
- Stretch Wrapping
- Vacuum Sealing



### Automated Bag Filling Equipment

**Challenge:** Increasing throughput on an automated bag filling line without completely restructuring the process or redesigning machinery.

**Solution:** The customer was using vacuum cups to open the bags, requiring the line to stop for each fill. By replacing these with our **NCT Series** Bernoulli grippers, we were able to open and fill the bags while they were still in motion, eliminating wasted cycle time.



### Bottle Handling Equipment

**Challenge:** Delicately handling bottles of various sizes and shapes without requiring complex fixtures or time consuming end effector changes.

**Solution:** Our **Air Gripper Series** with inflatable rubber bladder allowed our customer to gently grip and transport bottles having different neck diameters using a single device.



### Plastic Cap Transport Equipment

**Challenge:** Simplifying the transport of plastic bottle caps that push one another out of their storage bins due to the repulsive electrostatic force they develop during the process.

**Solution:** We reviewed the customer's transfer line and installed our **DTY-BA11** bar type ionizers to neutralize the electro-static charge on the caps before they entered the storage bins.



> Please click on the applications above to go to our website for more information.

Unique components for exceptional applications.



### Rice Sorter

**Challenge:** Finding pneumatic valves with fast switching times that are highly repeatable and can provide sufficient air flow to eject the defective product, yet small enough to fit multiple units into a single machine.

**Solution:** Our **K2 Series** high-speed valve achieved a flow rate of 0.11 Cv with response times of 0.5 ms ON and 1.0 ms OFF, all within a compact 10 mm wide body, allowing us to mount 50 valves onto a custom manifold assembly.



### Dairy Equipment

**Challenge:** Ensuring that the control components used in process equipment are capable of withstanding the harsh environments and cleaning agents.

**Solution:** Our **TAC Series** of manual and mechanical pneumatic valves and accessories are nickel plated for high corrosion resistance and provided basic pneumatic logic and control functions across multiple applications.



### Produce Tumble Washing Equipment

**Challenge:** Redesigning a control cabinet to reduce overall size without sacrificing custom valve manifold functionality or the ability to easily assemble and perform maintenance.

**Solution:** Our versatile **F Series** valve manifolds could be configured to provide the customer's required functionality using standard components and were easily installed and plumbed in a smaller envelope than their predecessors.



> Please click on the applications above to go to our website for more information.

Versatility and performance from the field to distribution.

KOGANEI is committed to your success from concept, to initial design, to final delivery and beyond.



\* Headquarters

Focused on providing industry leading pneumatic, fluid handling, and electrical automation components and assemblies for the OEM market

*Think KOGANEI*

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