



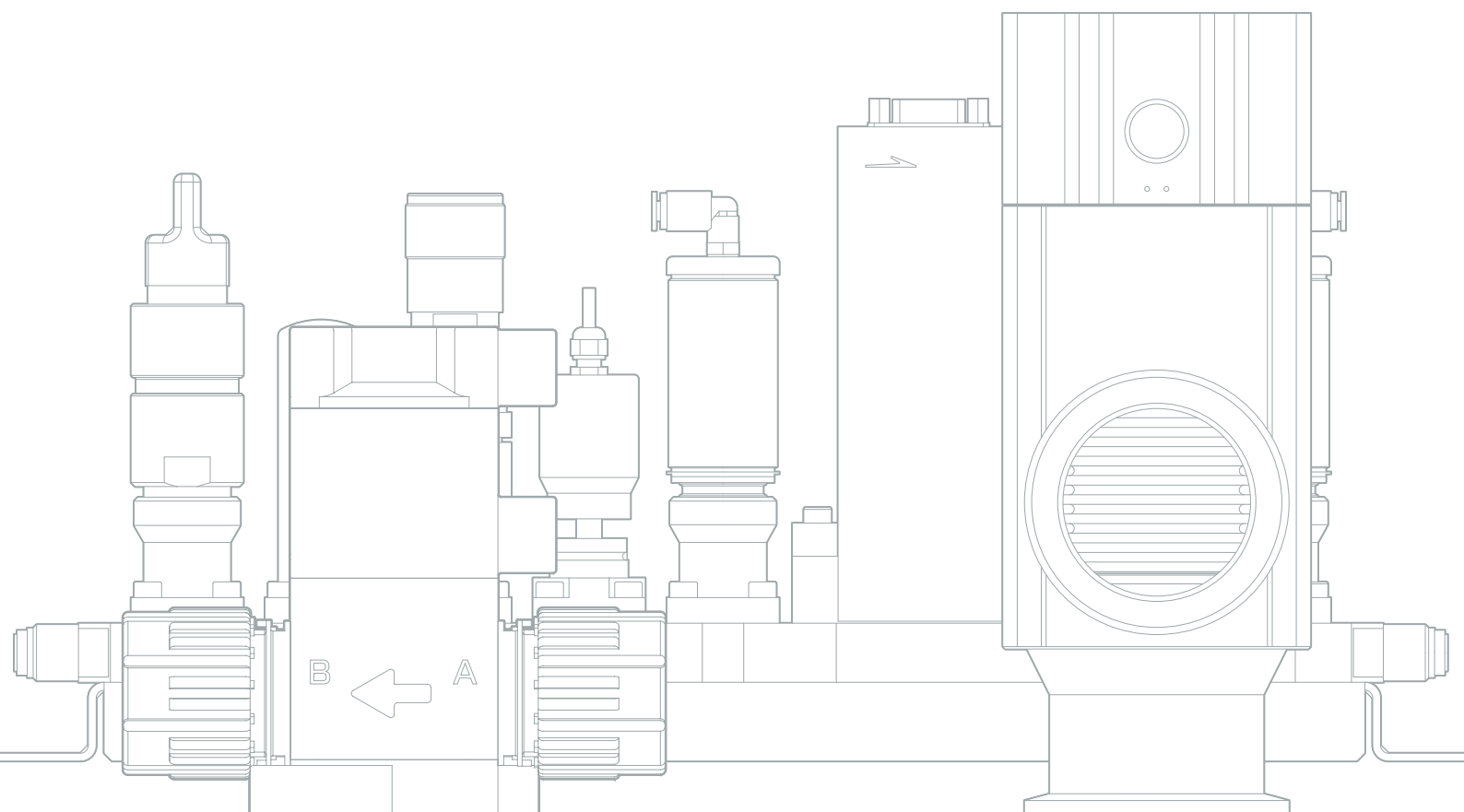
Fine System Components

For Semiconductor, LED, FPD
Manufacturing Processes

Ultra High Purity



For Manufacturing Improvements

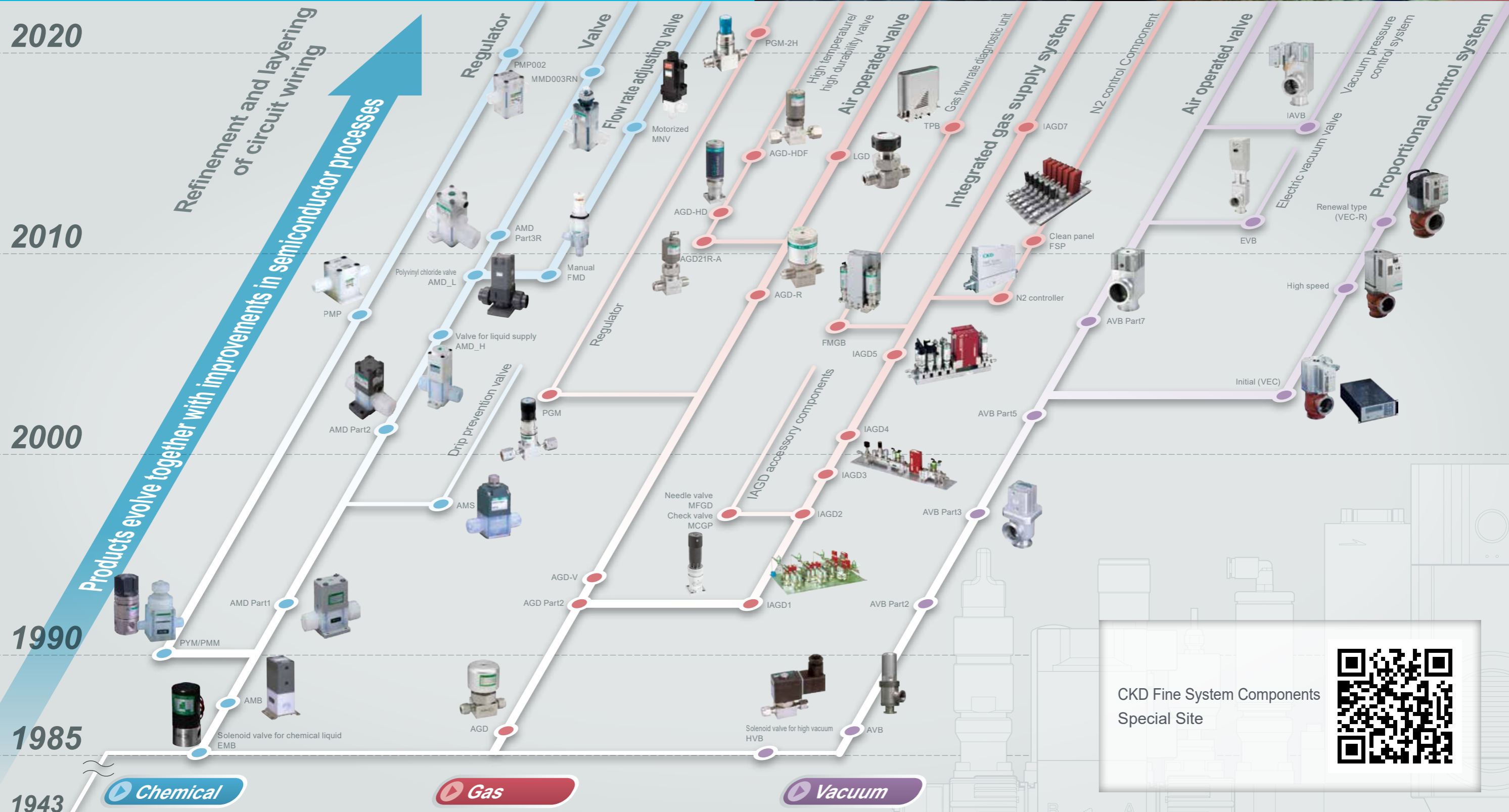
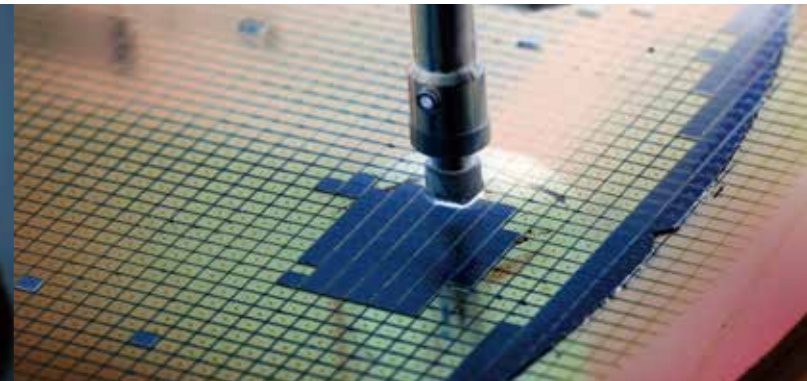


CKD Corporation

CC-1394A **1**

Evolution of Fine System components

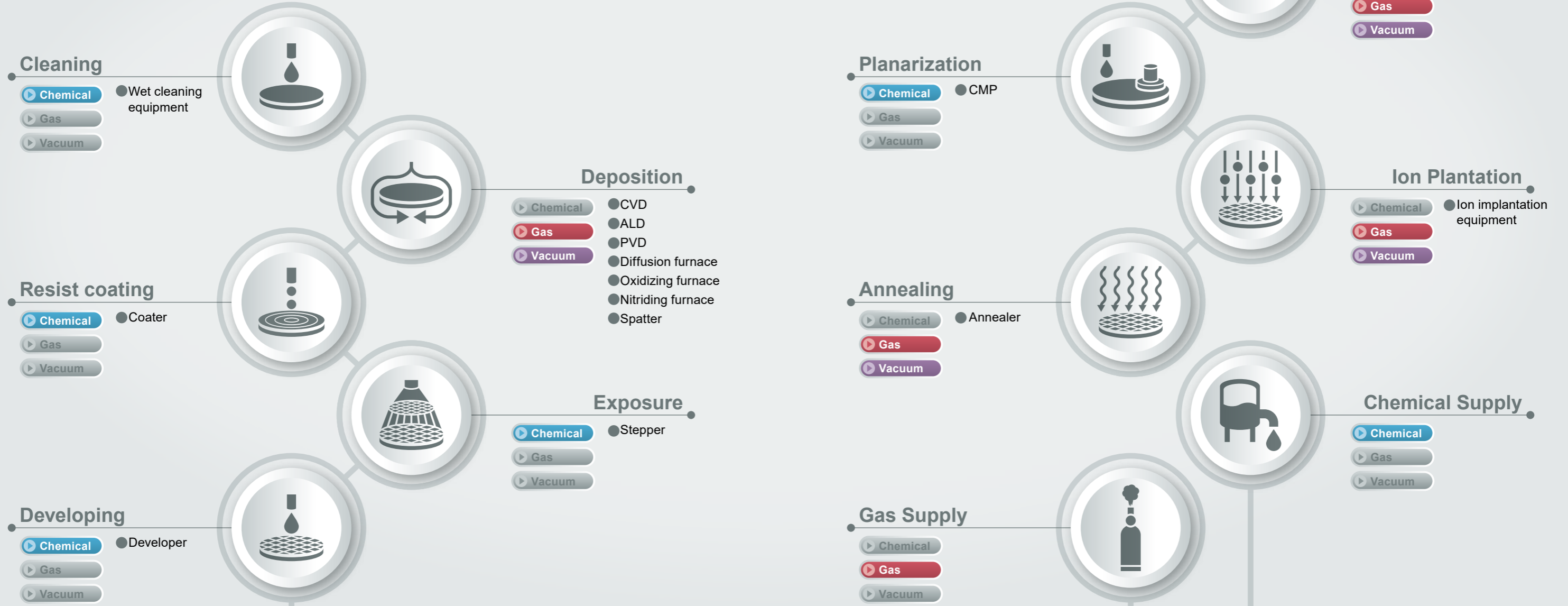
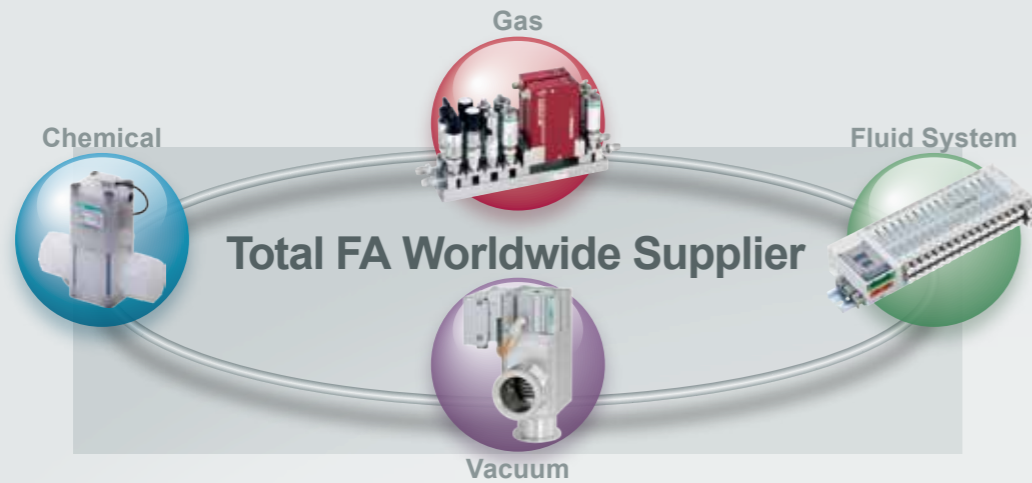
CKD has long worked to achieve high precision, quality stability, and high purity of semiconductor manufacturing processes through "technology that has accumulated since the 1980s", "a preference toward integrated production of core parts", and "thoroughly managed manufacturing processes". For the future, we intend to continue providing customers with "ease of use" functionality.



CKD Fine System Components
Special Site

As a total supplier of the semiconductor manufacturing process

We provide total solutions for chemical liquid, gas, vacuum and air pressure controls, from the semiconductor device production facility to the production process. We provide our customers with "ease of selection".



Fine System component products

Chemical Chemical Process

A wet fine system that offers super clean control for chemical liquid, pure water, and slurries.

Valve

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| <p>Air operated valve</p> <p>AMD**3R</p> <ul style="list-style-type: none"> Standard type of air-operated valves for chemical solutions. High grade model for a wide range of pressure, temperature, and fluid conditions. It is possible to unify all the models that have been subdivided in usage. | <p>Air operated valve (metal-free)</p> <p>AMD*1M</p> <ul style="list-style-type: none"> Thoroughly eliminates metal parts and supports highly corrosive and permeable strong acid (hydrochloric and hydrofluoric acid) lines. Plant sub fab facilities provide safe chemical liquid supply. | <p>Air operated valve (for high pressure)</p> <p>AMD*1H</p> <ul style="list-style-type: none"> A valve that supports high pressure, high back pressure and / for passing large flow rate chemical liquids. Achieves safe chemical liquid supply from the plant sub fab facility. |
| <p>Air operated valve (manifold)</p> <p>GAMD**3R</p> <ul style="list-style-type: none"> Space saving with AMD**3R manifold with reduced piping components. It can be used for branching and mixing of chemical liquids by customizing the shape and access. | <p>Manual valve for chemical liquids</p> <p>MMD*03RN</p> <ul style="list-style-type: none"> Standard manual valve for chemical liquids. High pressure / high temperature support enables process sophistication. Prevents malfunctions and misoperation, reducing leakage risk. | <p>Manual valve (metal-free)</p> <p>MMD*0M</p> <ul style="list-style-type: none"> Thoroughly eliminates metal parts and supports highly corrosive and permeable strong acid (hydrochloric and hydrofluoric acid) lines. Achieves safe chemical liquid supply from the plant downstairs facility. Prevents malfunctions and misoperation, thereby reducing risk. |
| <p>Manual valve (for high pressure)</p> <p>MMD*0H</p> <ul style="list-style-type: none"> A valve that supports high pressure and high back pressure for chemical liquids with large flow rates. Achieves safe chemical liquid supply from the plant downstairs facility. Prevents malfunctions and misoperation, thereby reducing risk. | <p>Manual valve for chemical liquids (manifold)</p> <p>GMMD**3RN</p> <ul style="list-style-type: none"> Space saving with MMD**3RN manifold and reduced piping components. Reliable operation is possible while ensuring safety, such as in a sampling line for chemical liquids. | |

Regulator

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| <p>Pilot operated regulator</p> <p>PMP</p> <ul style="list-style-type: none"> Space saving type PMP002 Series added. Remote control is also possible by combining with an electro pneumatic regulator. | <p>Manually operated regulator</p> <p>PYM/PMM</p> <ul style="list-style-type: none"> A manually operated regulator for pressure control of pure water, etc. |
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Flow rate adjusting valve

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| <p>Manual flow rate adjusting valve</p> <p>FMD</p> <ul style="list-style-type: none"> Manual flow rate adjusting valve (needle valve). The wetted parts use fluoro resin to enable use even with highly corrosive fluids (hydrochloric acid, / hydrofluoric acid). Enables precise flow rate adjustment. | <p>Electric flow rate adjusting valve</p> <p>MNV</p> <ul style="list-style-type: none"> Motorized flow rate adjusting valve (needle valve). The set flow rate can be changed by remote operation. Downsizing and more compact. | <p>Manual fine flow rate adjusting valve</p> <p>LYX</p> <ul style="list-style-type: none"> Manual flow rate adjusting valve (needle valve) capable of adjusting ultra-low flow rates. |
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Other

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| <p>Drip prevention valve</p> <p>AMS</p> <ul style="list-style-type: none"> Uniform resist coating is realized by suppressing disturbances or dripping of chemical liquid discharge. Compatible with optimized custom-made designs for fluid viscosity. | <p>Integrated air operated valve/suck valve</p> <p>AMDS</p> <ul style="list-style-type: none"> Uniform resist coating is realized by suppressing disturbances or dripping of chemical liquid discharge. Compatible with optimized custom-made designs for fluid viscosity. An integrated air operated valve that's been downsized and reduces steps in piping. | <p>Fine level switch</p> <p>KML</p> <ul style="list-style-type: none"> Detects the surface level of various fluids such as pure water, acids, alkalines, and solvents with high accuracy and outputs it as an electrical signal. The pneumatic system is resistant to chemical liquid atmospheres and environments containing foreign matter. |
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Gas Gas Process

A Dry Fine system that contributes to ultra precise control of gases including inert gases.

Valve

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| <p>Air operated valve</p> <p>AGD (high temperature/high durability)</p> <ul style="list-style-type: none"> A valve for process gases compatible with high durability required for improving refinement. A line up with 3 types, suited to the customer's various needs. | <p>Air operated valve/manual valve</p> <p>LGD</p> <ul style="list-style-type: none"> A new variation of valve for process gases. | <p>Regulator</p> <p>PGM</p> <ul style="list-style-type: none"> A regulator for process gases with a metal diaphragm. Contributes to the stabilization of gas pressures and flow rates. |
| <p>Air operated valve</p> <p>AGD</p> <ul style="list-style-type: none"> A mainstay valve for process gases. Compatible with many variations, including discrete unit, integrated, 3-way valve, double 3-way valve, etc. | <p>Manual valve</p> <p>OGD</p> <ul style="list-style-type: none"> A 90° rotation snap action manual valve. | <p>Manual valve</p> <p>MGD</p> <ul style="list-style-type: none"> Manually operated valve. 270° rotation handle opening and closing type. |

System

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| <p>Integrated gas supply system</p> <p>IAGD5</p> <ul style="list-style-type: none"> A pressure gas supply system that saves space and has improved maintainability. Compatible with everything from design to manufacturing to suit the customer's required flow. 1.125", double seal supported. | <p>Clean panel</p> <p>FICS</p> <ul style="list-style-type: none"> CKD guarantees that this unit is designed, manufactured, and inspected to be suited for the customer's requirements and flow. | <p>Flow rate diagnostic unit</p> <p>TPB</p> <ul style="list-style-type: none"> High precision gas flow rate / Quick monitoring. Quick measurement of 2 to 60 secs/line enables early detection of abnormalities. Contributes to stabilization of the equipment operating process. | <p>Vacuum generator</p> <p>VG</p> <ul style="list-style-type: none"> An energy saving vacuum exhaust device. A vacuum generator for exhaust of process gases. Nozzle diameter: ø0.5. |
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Vacuum Vacuum Process

A high vacuum control component that enables high precision exhaust and pressure control for chambers, etc.

Valve

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| <p>Air operated valve</p> <p>AVB</p> <ul style="list-style-type: none"> Achieves long service life and high durability with a special structure that employs CKD's proprietary molded bellows. A high vacuum valve that is highly reliable and easy to use. | <p>Manual valve</p> <p>MVB</p> <ul style="list-style-type: none"> A manual valve for handle rotary high vacuum. Aluminum body, stainless steel body. | <p>Pressure control system</p> <p>IABV</p> <ul style="list-style-type: none"> Has pressure control that enables a variety of processes with the same reliability as conventional high vacuum valves. | <p>Proportional control system</p> <p>VEC-R</p> <ul style="list-style-type: none"> APC system for high precision high vacuum proportional control. More compact and lightweight. |
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Fluid System Auxiliary Components

Contributes to semiconductor manufacturing with high-precision control systems for supply air and cooling water.

Flow rate sensor

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| <p>Flow rate sensor for water</p> <p>WFK2</p> <ul style="list-style-type: none"> Received the 2018 Good Design Award. 0.4 to 250 L/min covered Karman Vortex Flow Sensor. Used for flow rate and temperature management of cooling water. | <p>Integrated unit for water control</p> <p>WXU</p> <ul style="list-style-type: none"> Integrated flow sensor and valve in cooling water circulation circuit. Space saving with significant reduction in piping work-hours and 80% reduced footprint. | <p>Flow rate sensor for gas RAPIFLOW®</p> <p>FSM3</p> <ul style="list-style-type: none"> A flow rate sensor that supports five types of gases with one unit, including air, nitrogen, argon, carbon dioxide, and mixed gas. Lineup includes clean specification, stainless steel body specification, and specification with flow rate adjustment for semiconductor related purging applications. |
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Valve

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| <p>Pilot operated 3, 4-port solenoid valve</p> <p>MN3E/MN4E</p> <ul style="list-style-type: none"> Realizes the industry's smallest valve block width (7 mm), and a compact height (39.5 mm). High performance 3, 4-port block manifold. For driving air operated valves. | <p>Direct acting 3-port solenoid valve</p> <p>3QRA/B</p> <ul style="list-style-type: none"> Achieves high-speed switching for large flow rate, contributing to increased equipment speeds and optimization. Industry top-class durability (100 million cycles) and lightweight (19 g). Ideal for high-speed drive of high-temperature, high-durability gas valves. | <p>Electro-pneumatic regulator</p> <p>EVS2</p> <ul style="list-style-type: none"> Electro-pneumatic regulator with 30mm width, compact, light weight, and high performance. Pilot regulator for chemical liquids (PMP Series) can be remotely controlled. |
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Production & Technology Network

For Fine System Components



If the goods and/or their replicas, the technology and/or software found in this catalog are to be exported from Japan, Japanese laws require the exporter makes sure that they will never be used for the development and/or manufacture of weapons for mass destruction.

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