

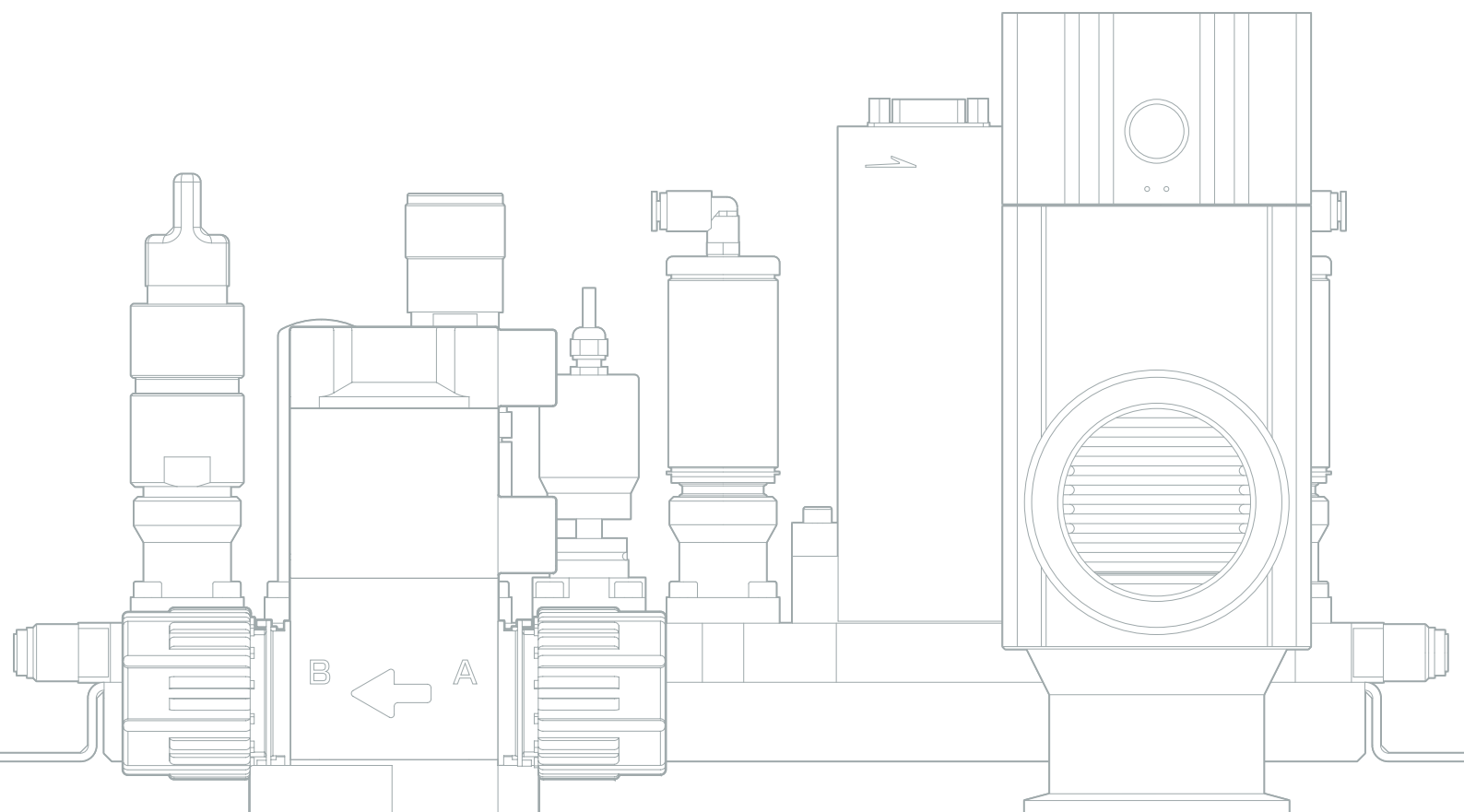
Fine System Components

For Semiconductor, LED, FPD
Manufacturing Processes

Ultra High Purity

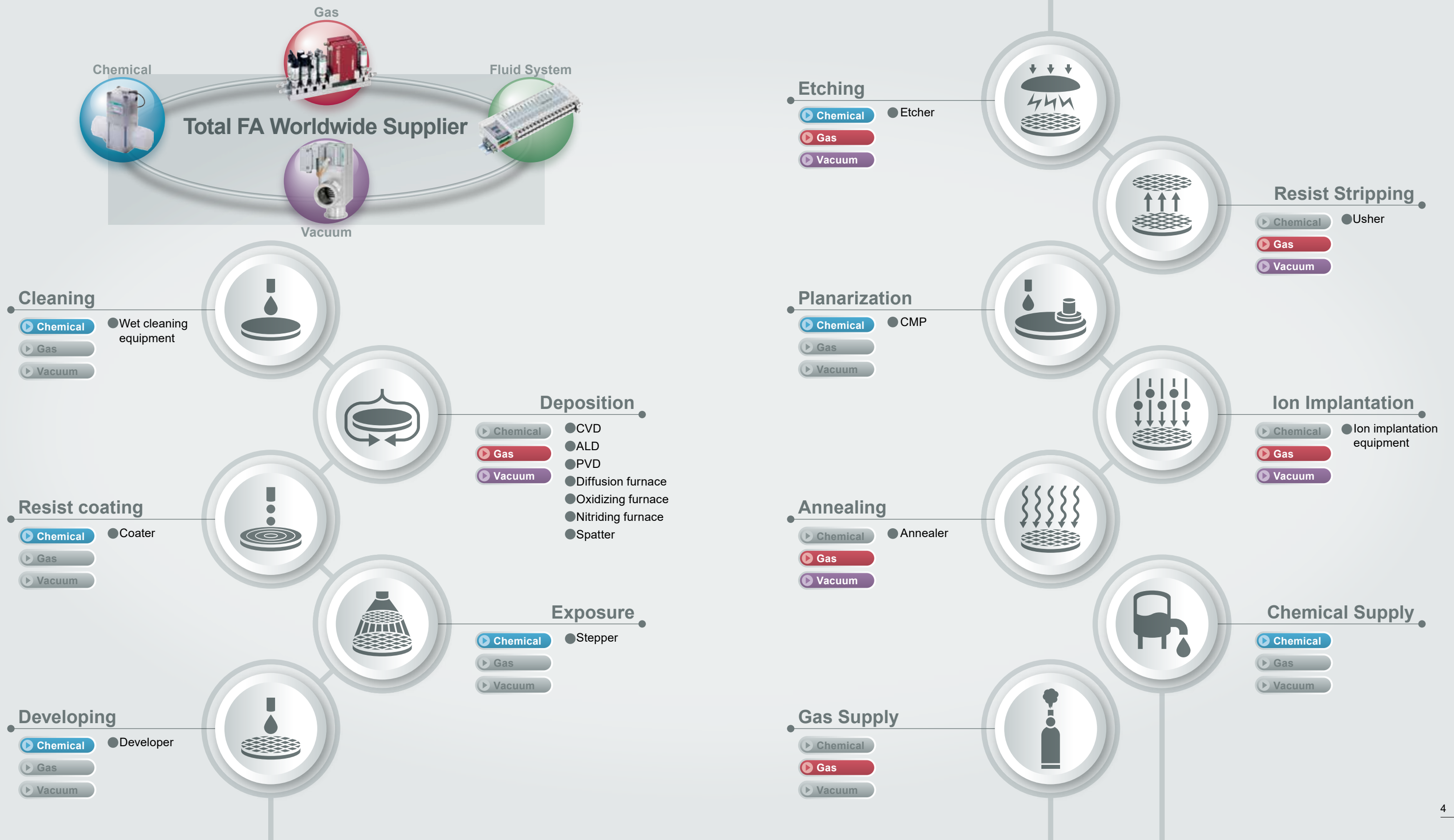


For Manufacturing Improvements



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 liquids, pure water, and slurries.

Valve

Air operated valve

AMD**3R

- 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.



Air operated valve (manifold)

GAMD**3R

- 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.



Manual valve (for high pressure)

MMD*0H

- 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.



Air operated valve (metal-free)

AMD*1M

- 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.



Manual valve for chemical liquids

MMD*03RN

- Standard manual valve for chemical liquids.
- High pressure / high temperature support enables process sophistication.
- Prevents malfunctions and misoperation, reducing leakage risk.



Manual valve for chemical liquids (manifold)

GMMD**3RN

- 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.



Air operated valve (for high pressure)

AMD*1H

- 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.



Manual valve (metal-free)

MMD*0M

- 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.



Regulator

Pilot operated regulator

PMP

- Space saving type PMP002 Series added.
- Remote control is also possible by combining with an electro pneumatic regulator.



Manually operated regulator

PYM / PMM

- A manually operated regulator for pressure control of pure water, etc.



Flow rate adjusting valve

Manual flow rate adjusting valve

FMD

- 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.



Electric flow rate adjusting valve

MNV

- Motorized flow rate adjusting valve (needle valve).
- The set flow rate can be changed by remote operation.



Manual fine flow rate adjusting valve

LYX

- Manual flow rate adjusting valve (needle valve) capable of adjusting ultra-low flow rates.



Other

Drip prevention valve

AMS

- Uniform resist coating is realized by suppressing disturbances or dripping of chemical liquid discharge.
- Compatible with optimized custom-made designs for fluid viscosity.



Integrated air operated valve/suck valve

AMDS

- 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.



Fine level switch

KML

- 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.



Gas Gas Process

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

Valve

Air operated valve

AGD

(High temperature / High durability)

- 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.



Air operated valve/manual valve

LGD

- A new variation of valve for process gases.



Air operated valve

AGD

- A mainstay valve for process gases.
- Compatible with many variations, including discrete unit, integrated, 3-way valve, double 3-way valve, etc.



Manual valve

OGD

- A 90° rotation snap action manual valve.



Manual valve

MGD

- Manually operated valve.
- 270° rotation handle opening and closing type.



System

Integrated gas supply system

IAGD

- 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.



Clean panel

FICS

- CKD guarantees that this unit is designed, manufactured, and inspected to be suited for the customer's requirements and flow.



System function products

Flow rate diagnostic unit

TPB

- 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.



Vacuum generator

VG

- An energy saving vacuum exhaust device. A vacuum generator for exhaust of process gases.
- Nozzle diameter: ø0.5.



Vacuum Vacuum Process

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

Valve

Air operated valve

AVB

- 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.



Manual valve

MVB

- A manual valve for handle rotary high vacuum.
- Aluminum body, stainless steel body.



System components

Pressure control system

IABV

- Has pressure control that enables a variety of processes with the same reliability as conventional high vacuum valves.



Proportional control system

VEC-R

- APC system for high precision high vacuum proportional control.
- More compact and lightweight.



Fluid System Auxiliary Components

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

Flow rate sensor

Flow rate sensor for liquid

WFK2

- Received the 2018 Good Design Award.
- Kalman vortex flow sensor covering 0.4 to 250 L/min.
- Active in cooling water flow and temperature control.



Integrated unit for water control

WXU

- Integrated flow sensor and valve in cooling water circulation circuit.
- Space saving with significant reduction in piping work-hours and 80% reduced footprint.



Flow rate sensor for gas RAPIFLOW®

FSM3

- 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.



Valve

Pilot operated 3, 4-port solenoid valve

MN3E/MN4E

- 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.



Direct acting 3-port solenoid valve

3QRA/B

- 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.



Regulator

Electro-pneumatic regulator

EVS2

- Electro-pneumatic regulator with 30mm width, compact, light weight, and high performance.
- Pilot regulator for chemical liquids (PMP Series) can be remotely controlled.



Production & Technology Network

For Fine System Components



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