

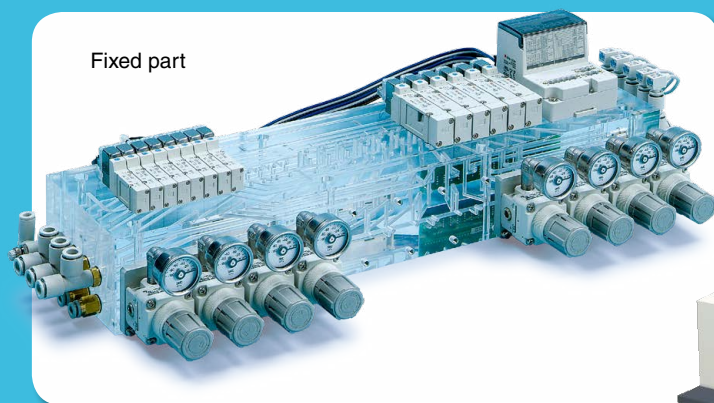
Composite Manifold

The unitization of devices allows for the whole unit to be made more compact. Expansion into a wide range of industries is now possible!

Required space reduced by 50%

Weight reduced by 70%

No piping work required



Fixed part



Moving part

<Image>

Features

• Space saving

Reduction in piping volume, manifold can be designed to suit the space

• Flow passage style with high flexibility

Three-dimensional flow passage that cannot be created by machining or injection molding

• Lightweight

Weight reduced by using resin material

• Reduced piping work

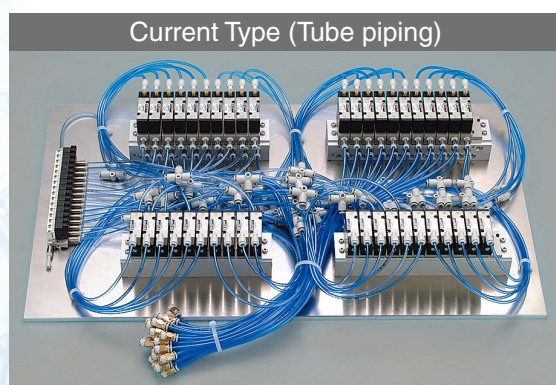
Reduction in piping work and wiring faults
Improved reliability against leakage

• Reduced wiring

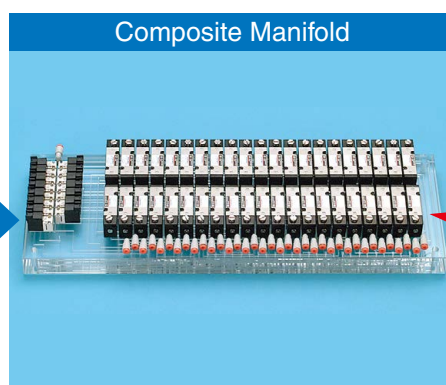
Wiring and wiring time reduced by integrating manifold and PCB

• Transparent flow passage (Acrylic)

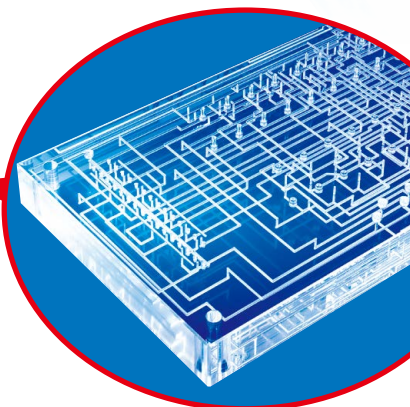
Easy visual detection of fluid



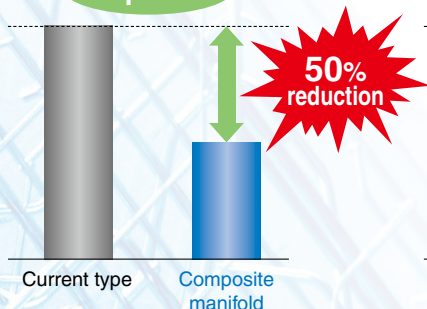
Current Type (Tube piping)



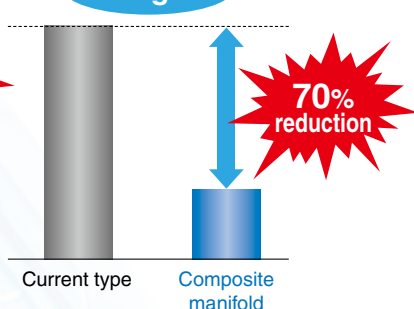
Composite Manifold



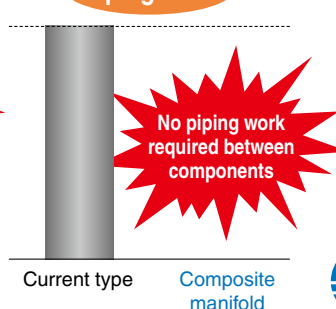
Space



Weight



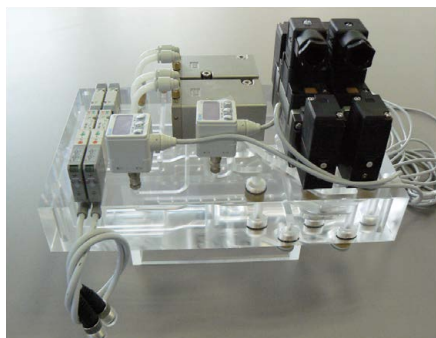
Piping work



Applications

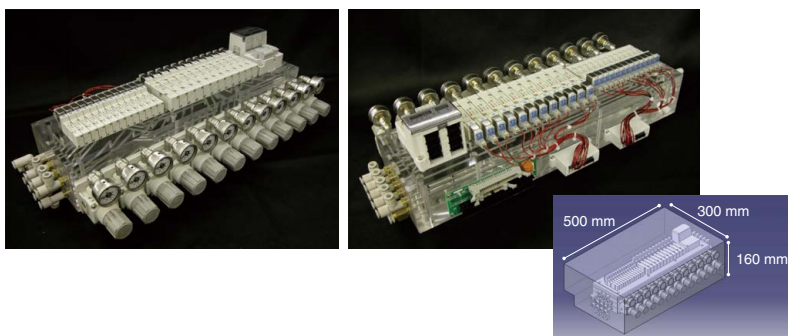
Reducing weight of device to be mounted on the moving part

Lightweight unit mounted on the tip of a robot arm



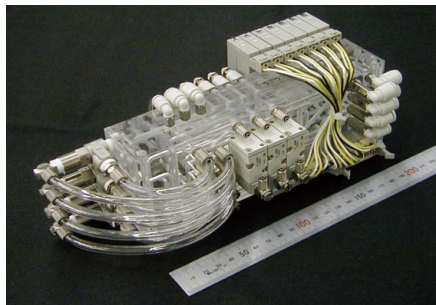
Unitizing valves, regulators, and pressure sensors

Achievement of fabrication within a limited space



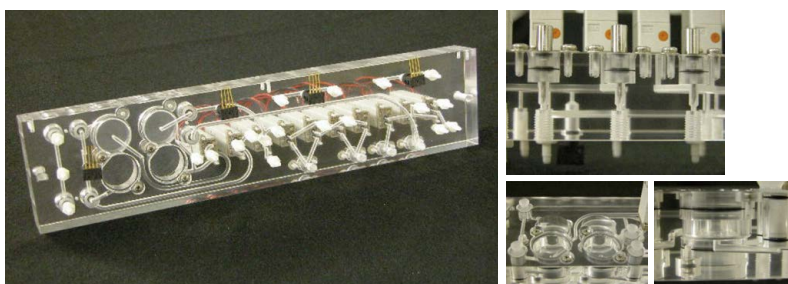
Unitizing different valves and check valves

Achievement of fabrication within a limited space



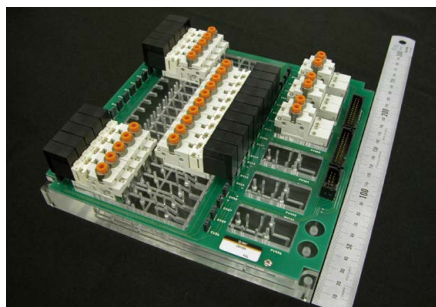
Combining a tank and needle valves

Formation of a tank, valve elements, and a flow passage inside the manifold



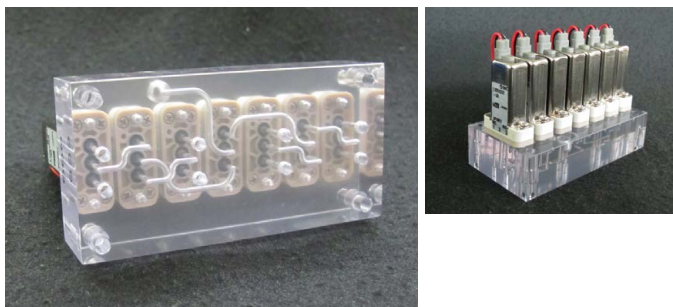
Integrating a PCB and composite manifold

Reduction in required space and time required for air piping and electrical wiring



Multiport compact dispenser

The flow passage is branched inside the manifold, so visual checking of the fluid flow is possible.



Manifold Materials

The manifold material can be selected depending on the environment of use.

<Guide>

Material		Acrylic PMMA	Polycarbonate PC	Vinyl chloride PVC	Polyetherimide (ULTEM*) PEI
Features		Transparency	Impact resistance	Chemical resistance	High temperature property
Continuous operating temperature		60°C	120°C	50°C	170°C
Impact resistance		○	◎	○	○
Chemical resistance	Alcohol	×	○	◎	◎
	Acid	○	×	◎	◎
	Alkali	×	×	◎	◎

◎ ≥ ○ ≥ ×

Very good Very poor

ULTEM* is a trademark of SABIC Innovative Plastics IP B.V.