

Actuators

2 Troubleshooting

The following describes the general contents of the troubleshooting.

[Cylinder]

Trouble (Symptom)	Cause	Corrective action
The operation is not smooth. The output drops. The cylinder does not operate.	The grease of the sliding part runs out.	Apply the grease. The following may be the cause of the trouble. <ul style="list-style-type: none"> • As water content, such as drain enters, the grease flows out. • The lubrication is stopped halfway. • The cylinder is operated in an environment where the fluid splashes.
	The center between the workpiece and cylinder shaft or the center between the workpiece guide shaft and cylinder shaft deviates.	Align the center. Check that the cylinder operates smoothly with the air not supplied to the cylinder. Additionally, examine the use of the floating joint.
	The piston rod deforms.	Replace the cylinder. The following may be the cause of the trouble. <ul style="list-style-type: none"> • The center between the cylinder and load deviates. • A lateral load exceeding an allowable level is applied. • The kinetic energy exceeds an allowable level. • An excessive force is applied when mounting a load.
	The air leaks (seal is worn-out).	Replace the seal. The following may be the cause of the trouble. <ul style="list-style-type: none"> • The center between the cylinder and load deviates. • A lateral load exceeding an allowable level is applied. • The operating temperature exceeds its range. • The grease runs out. • A foreign object enters.
	The air pressure is insufficient.	Supply an appropriate pressure. The following may be the cause of the trouble. <ul style="list-style-type: none"> • The supply pressure decreases. • The pressure regulator setting deviates. • The piping is clogged.
	The cylinder operates at low speed.	Operate the cylinder within the specification range.
	The cylinder output is insufficient.	Increase the operating pressure or use an appropriate cylinder with a large bore size. Since there are cylinder and mechanical resistances, it is necessary to consider the load factor.
	The system configuration is not appropriate.	Use piping tube, fitting, directional control valve, and speed controller with proper sizes.
	Equipment other than the cylinder malfunctions or is faulty.	Investigate the target system step-by-step. The following may be the cause of the trouble. <ul style="list-style-type: none"> • The directional control valve malfunctions. • The speed controller is not adjusted properly. • The speed controller malfunctions. • The piping is clogged. • The filter is clogged, etc.
The cylinder part is damaged.	The cylinder operates at high speed.	Adjust the speed with the speed controller to operate the cylinder within the specification range.
	Overload	Operate the cylinder within its allowable kinetic energy range.
	Lateral load	Operate the cylinder within its lateral load range.
	Unusual external force is applied.	If any mechanical interference, eccentric load, or overload occurs, this may cause the cylinder to deform or break. Remove such adverse factors.