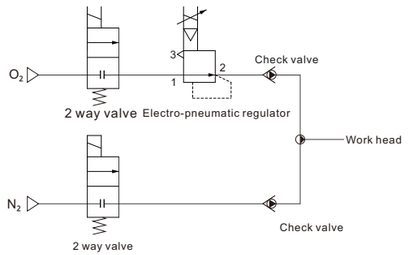
ITV-JG Laser Cutting Integrated Module





Ordering Code

ITV-JG Laser Cutting Integrated Module

ITV-JG 1000 - 05 05 G - 3

- ITV-JG: Type code — ITV-JG: Laser Cutting Integrated Module
- 1000: Electro-pneumatic regulator — 1000: ITV1000 type; 2000: ITV2000 type
- 05: O_2 line port size — 5: Φ5
- 05: O_2 line port size — 5: Φ5
- G: Thread type

Nil	PT
G	G
N	NPT

- 3: Port size — 3: 3/8

Note: For detailed selection methods of the Electro-Pneumatic Regulator, please refer to the ITV Electro-Pneumatic Regulator catalog.

Specifications

Integrated Module

Model	Specifications
Port size	Inlet/Outlet: 3/8 Exhaust port: 1/4
Working medium	N_2, O_2
Working pressure	N_2 Line: 0 to 3MPa O_2 Line: 0.005 to 0.9MPa
Working temperature	0 to 50℃ (No freezing)
Piping diameter	Φ5mm
Enclosure	IP65

ISO9001 CE

ITV-JG Laser Cutting Integrated Module

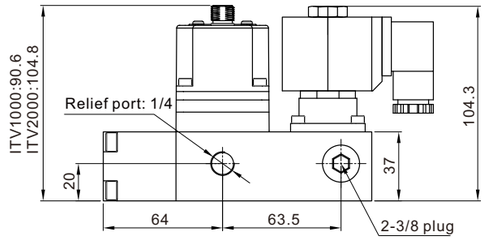
Two-way valve

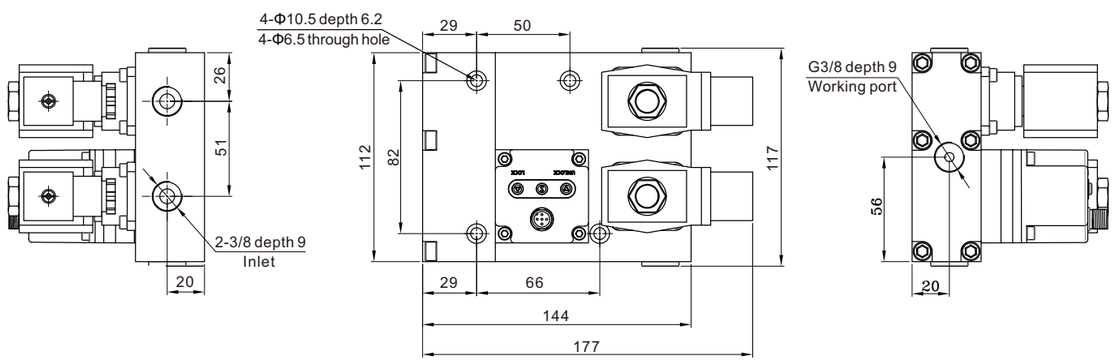
Model	Specifications
Power supply voltage	DC24V±10%
Power	18W
Electrical entry	Terminal type
Valve type	2 Position 2 Port, Normally Closed

Check valve

Model	Specifications
Body material	Brass
Cracking pressure	<0.01MPa

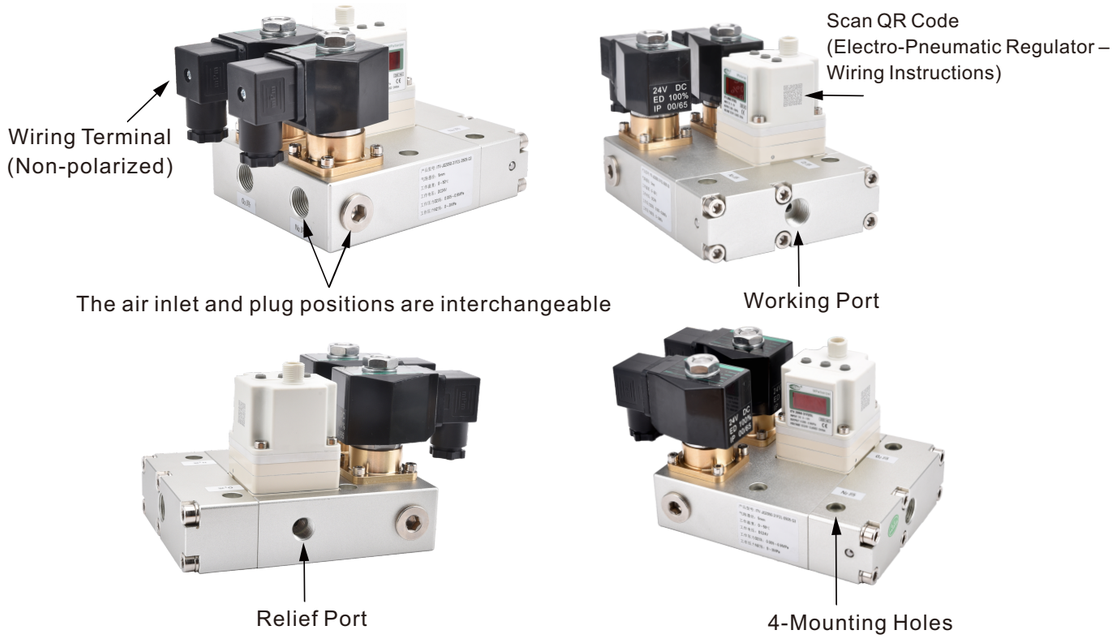
Main Dimensions





ITV-JG Laser Cutting Integrated Module

Installation Diagram



Troubleshooting Guide

ITV Electro-Pneumatic Regulator

No.	Common troubleshooting items	Possible cause		Remedy
1	Regulator outlet leakage	Improper operation	Input signal wire (white) not connected; Internal circuit interference causing leakage.	Check wiring, re-wire.
		Product malfunction	High-frequency valve or main valve stuck.	Return for factory repair, or clean impurities and check air source to prevent re-clogging.
2	Regulator no display when powered on	Improper operation	Wiring not according to requirements.	Check wiring, re-wire.
		Product malfunction	Regulator PCB board damaged or power pins damaged.	Return for factory repair, and check wiring toavoid burning out the regulator again.
3	Regulator output pressure fluctuation	Improper operation	Unstable control signal	Check wiring, re-wire.
		Product malfunction	High-frequency valve failure or regulator aging leading to reduced accuracy and sensitivity.	Return for factory repair.
4	Regulator abnormal noise	Improper operation	Set output pressure is greater than input pressure.	Re-set input or output pressure.
		Product malfunction	High-frequency valve or PCB board malfunction	Return for factory repair.
5	Regulator error	Improper operation	Power supply voltage or input signal exceeds rated range, incorrect input signal	Ensure power supply voltage and input signal are within the rated range and input correct signal.
		Product malfunction	High-frequency valve or PCB board malfunction.	Return for factory repair.

Note: For details on other faults and troubleshooting methods of the electro-pneumatic regulator, please refer to the ITV Electro-Pneumatic Regulator catalog.

ISO9001 CE

ITV-JG Laser Cutting Integrated Module

Troubleshooting Guide - 2-Way Valve

No.	Common troubleshooting items	Possible cause		Remedy
1	2-way valve no action when powered on	Improper operation	Power supply voltage exceeds rated range, poor wiring or loose wire.	Ensure power supply voltage is within rated range, open terminal box, re-wire.
		Product malfunction	Coil damaged.	Replace coil.
2	2-way valve leakage	Product malfunction	Foreign object stuck, seals aged or damaged.	Replace seals or clean impurities, check air source to prevent re-clogging.
3	2-way valve coil overheating	Improper operation	Long-term operation, circuit malfunction.	Check wiring, re-wire.
		Product malfunction	Coil damaged.	Replace coil.

Troubleshooting Guide - Check Valve

No.	Common troubleshooting items	Possible cause		Remedy
1	Check valve cannot close	Product malfunction	Foreign object stuck, spring failure, seals aged or damaged.	Replace seals or clean impurities, check air source to prevent re-clogging.
2	Check valve cannot open	Product malfunction	Foreign object stuck, spring failure, seals aged or damaged.	Replace seals or clean impurities, check air source to prevent re-clogging.
3	Check valve leakage	Product malfunction	Seals aged or damaged.	Replace seals.
4	Check valve medium backflow	Product malfunction	Foreign object stuck, seals aged or damaged.	Replace seals or clean impurities, check air source to prevent re-clogging.

Complete Unit Packing List

1. Proportional valve cable: 1 PC
2. Proportional valve manual: 1 PC
3. Complete assembly: 1 Set (includes integrated module / Two-Way Valve / Check Valve / Electro-Pneumatic Regulator)

⚠ Important Safety and Operation Precautions

1. Supply pressure must pass through an air filter with a filtration accuracy of 5μm or less.
2. When installing pipe fittings, prevent thread debris and sealing materials from entering the pipeline, which could block the inlet of the 2-way valve.
3. Compressed air with condensed water entering the product may cause malfunction; please perform corresponding air path drying.
4. If power is suddenly cut during the product's pressurization phase, the "OUT" output of the electro-pneumatic regulator will be in a power-off protection state, maintaining pressure briefly.
5. This product has undergone various index tests before leaving the factory. Unauthorized disassembly is strictly prohibited, as it may lead to product instability.
6. The 4-core cable for the electro-pneumatic regulator can only be assembled in one direction. Rotation is strictly prohibited after assembly, otherwise, the connector joint may be damaged.
7. Product air supply and power supply sequence: Power On → Air Supply → Air Shut-off → Power Off.
8. When using this product in strong electric field environments, wiring should be kept as far away as possible to avoid external interference affecting product operation.
9. The product may produce the sound of a solenoid valve operating during use, but it does not affect parameter settings or product usage.
10. When the 4-core cable of the electro-pneumatic regulator is not used for monitoring output, it should be kept away from other cables to avoid malfunction.