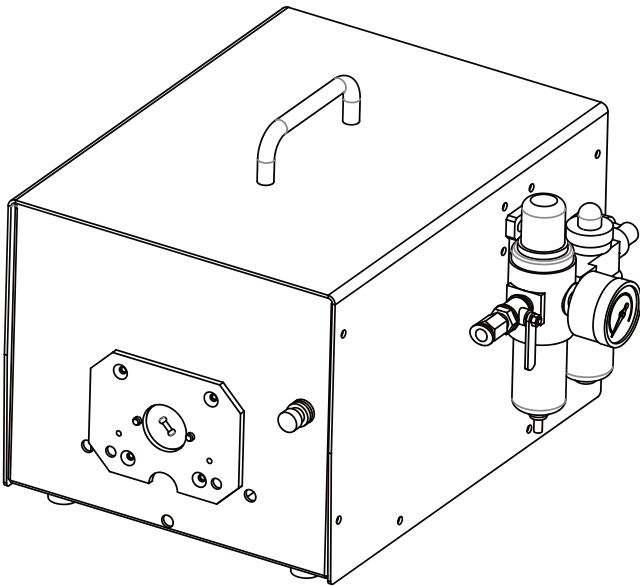




# **GOLANDER PUMP**

## **FG600S/601S-Q Pneumatic Motor Peristaltic Pump Operation Manual**



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# 1 Safety Cautions

Please read this manual carefully before using the product. It may cause injury if you do not follow the manual. The air source must be compressed dry gas, and the maximum pressure should not exceed 90Psig (6.2bar/620KPa). The risk of high pressure may include over speed, burst, abnormal output torque (driving force) and so on. Ensure that the gas transmission tube is installed with an obstacle free emergency shutoff valve, and its position is clearly reported. Do not use any damaged or worn air hoses and accessories. Please cut off the gas supply and discharge the air hose before installing, moving or doing maintenance.

Do not use the inflammable (or volatile) substance such as kerosene, diesel and fuel as lubricants. Please use the recommended lubricating oil recommended in this manual.

Do not tear any labels off. Please change the damaged label in time.

The drive is not insulated to prevent electric shock, do not place it in a leakage electric field.



**Warning:** Tubing breakage may result in fluid being sprayed from pump. Use appropriate measures to protect operator and equipment.

Please use the special lubricating oil lubrication pneumatic motor of gas transmission line. The recommended lubricating oil: NO. C28241-800 air filter, pressure regulator device special lubricants. Pneumatic tools for oil (viscosity 30 or so); CASROL QWS, SHELL TELIUS 32, MOBIL OIL DTE 24, BP ENERGOL HLP 32.

Warning: It will shorten the life of pneumatic motor without adequate supply of lubricating oil.

## 2 Introduction

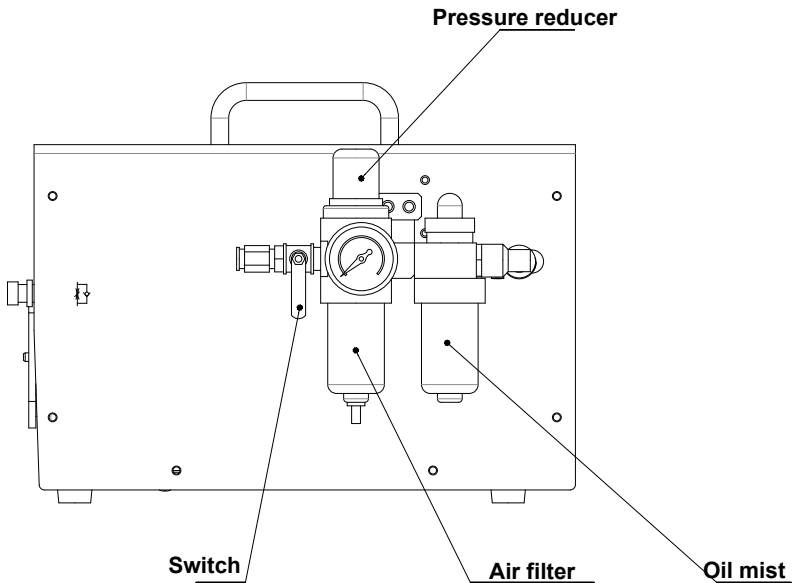
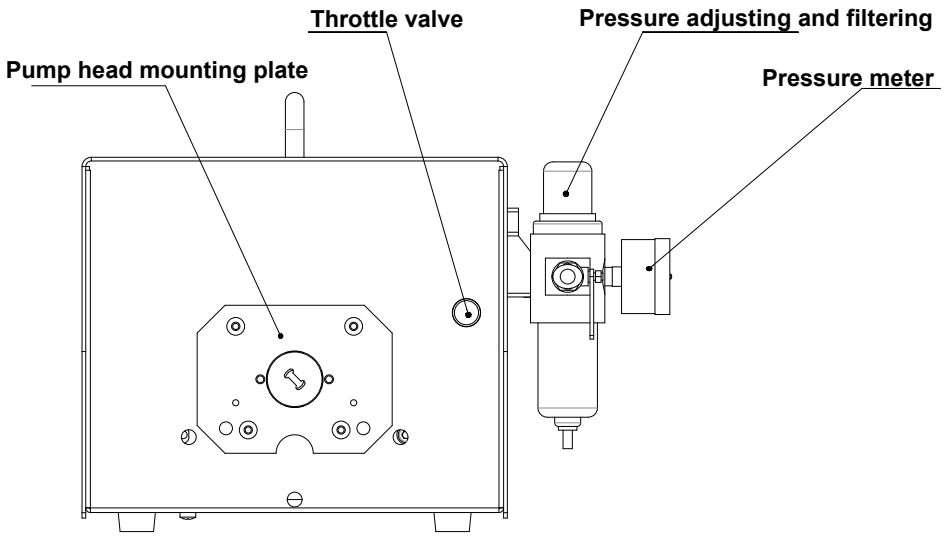
The peristaltic pump is driven by pneumatic motor, and the operation is simple. The products are mainly applicable to the workplaces with explosion-proof requirements or without power supply. The flow can be adjusted by the pressure regulator or the interception valve.

Drive Type	Speed	Pump head	Tubing	Flow rate per channel (ml/min)
FG600S-Q	150-600rpm	YZ15, 2xYZ15	13#, 14#, 16#, 19#, 25#, 17#	9-1700
		YT15, 2xYT15	13#, 14#, 16#, 19#, 25#, 17#, 18#	9-2300
		YZ25, 2xYZ25	15#, 24#	250-1700
		YT25, 2xYT25	15#, 24#, 35#, 36#	250-2900
		KZ25	15#, 24#, 35#, 36#	370-6000
FG601S-Q	150-580rpm	YZ35	73#, 82#	2000-11000

### 3 Functions and Features

- Pneumatic motor for explosion protection environment
- Speed adjustable via pressure or throttle valve
- For workplace with explosion-proof requirement or no power supply
- For abrasive liquid transfer
- No valve obstruction
- Only hose touches liquid
- Suction lift and priming can be up to 8m water column at sea level.
- Low shear force, which can be used to transfer emulsion or foam liquid
- For liquid containing a large amount of air
- For viscous liquid
- Can be used in food and medical treatment

## 4 Components and Connectors



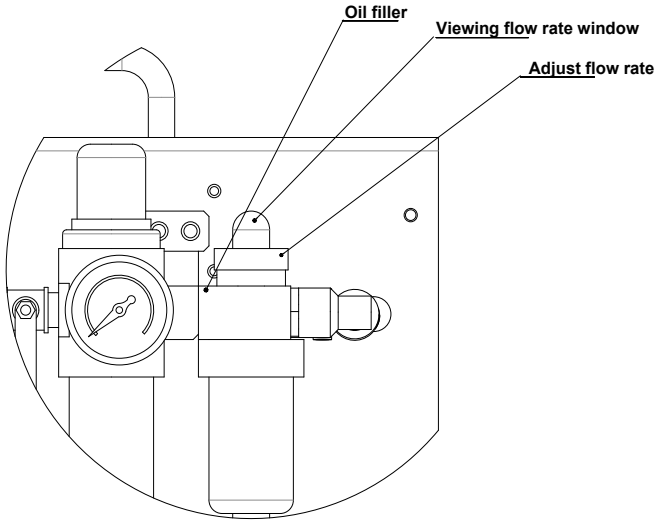


Figure 1. Components and connectors

**Pump head mounting plate:** The pump head mounting plate is different according to different pump head.

**Throttle valve:** To adjust the airflow and change the speed. Rotate clockwise to lower the speed; rotate counter clockwise to increase the speed.

**Pressure adjusting and filtering:** To adjust pressure. Show the current pressure and filter the air.

**Oil mist:** Used for adding lubricating oil to the pneumatic motor.

## 5 Operation Instructions

### 5.1 Before Operating

- 1) Please check the packing slip to make sure nothing is wrong or damaged in the package. If there is problem, please contact the manufacturer or distributor.
- 2) Read through the instruction.
- 3) There should be more than 200 mm space for the back of the pump when it is running.

## 5.2 Installation

Air source requirement

- Standard air pressure: 0.63Mpa
- Airflow > 300L/min
- Air hose: Exclusive air hose  $\Phi$ 10mm

Please ensure the input pressure and flow of the pneumatic motor (air motor consumption), otherwise the drive will not work properly.

## 5.3 Attentions for air hose

Please clean the tubing via compressed air before using. Make sure there is no dust or iron pin in the hose.

It is not allowed to change the diameter of the air pipe, and the intake pipe must be larger than 3/8 inch or 10mm. Check whether there's air leakage and or loose connection with the air hose and joint to prevent the compressed air leaking to the pneumatic tool.

Fill lubricating oil: Remove the screw on the top of oil mist, fill the required lubricating oil and tighten the screw.

**Note:** The standard working pressure is 0.63Mpa, higher pressure may cause damage or accident to the gas motor. Lower pressure will not meet the designed requirements, and the will not be able to reach the maximum speed, the gas motor will not work normally.

Be sure to fill lubricating oil before operating the peristaltic.

## 5.4 Operation

- Inserting the trachea into the drive to adjust the inlet of the filter component
- The throttle valve of the panel is rotated clockwise to close.
- Adjust the oil adjustment knob to zero
- Install hose
- Switch on the air source switch, adjust the drive pressure knob to make the pressure up to the specified value:

0.4Mpa for YZ15/YZ25

0.6Mpa for FG601S-Q with YZ35.

- Rotate the throttle clockwise to run the pump. Adjust the speed according to required flow.

The top speed of this drive is 600 rpm.

To adjust oil drop speed

Rotate the oil knob clockwise to reduce the oil drop speed. Rotate oil knob counterclockwise to increase the oil drop speed.

Observe the oil droplet in the oil mist observation window and keep it 1 or 2 drops per minute. The drop oil speed will increase/decrease according to air flow speed.

## 6 Maintenance and Service

The product comes with one-year labor and parts warranty. The limited warranty does not cover any damage that is caused by improper usage and handling.

### 6.1 Regular Maintenance

- The inlet pressure on the peristaltic pump is generally 0.5-0.6Mpa. Higher or lower pressure will shorten the lifetime of the product.
- The working pressure should be around 0.6Mpa. The input air must contain enough lubricating oil so that the pneumatic motor will be lubricated. Please use the special lubricating oil of the gas transmission line to lubricate the pneumatic motor. It is recommended to use special oil for pneumatic tools (about 30 viscosity): CASROL QWS, SHELL TELIUS 32, MOBIL OIL DTE 24, BP ENERGOL HLP 32.
- The inlet air must not contain water, it is not appropriate if the air was not dried.
- Ambient temperature: -10°C-60°C (only be used in a non-frozen state).
- Lubricating oil: check oil every day for oil level, oil quality and drop speed. Air filter should be regularly checked, oil level can not exceed 80% of the oil cup.
- It is not allowed to make peristaltic pump continuously running or



without load. Otherwise, the lifetime of pneumatic motor will be shortened, or damage will occur.

- There is no need for special maintenance for the peristaltic pump head. Attention should be paid to the wear of hose in the pump head when used. To move the hose position in the pump head often helps prolong the service life of the tubing.

## 7 Dimensions (mm)

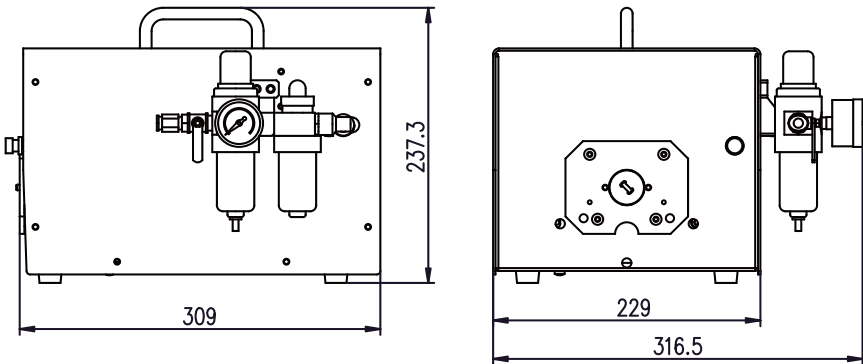


Figure 2. Components and connectors

## 8 Specifications

FG600S/601S-Q Flow Range	YZ15: 9-2300 ml/min YT15: 9-2300 ml/min KZ25: 370-6000ml/min	YZ15: 250-1700 ml/min YT25: 250-2900 ml/min YZ35: 2000-11000ml/min
Speed	150-600 rpm	
Adjustment	Manual	
Working environment	Environment temperature-10-60°C Relative humidity<80%	
Dimensions	309*316*237mm	
Drive weight	11kg	
IP grade	IP31	

FG601S-Q Flow range	YZ35: 2000-11000 ml/min
Speed	150-600 rpm
Adjustment	Manual
Working environment	Environment temperature-10-60°C Relative humidity<80%
Dimensions	309*316*237mm
Drive weight	11kg
IP grade	IP31

## 9 Suitable Pump Heads and Tubing

Liquid: water

Condition: Standard atmosphere temperature and pressure, length of input or output is 1 meter. Pump and liquid on the same level. Data is only for reference.

### 9.1 FG600S-Q

YZ15, 3 rollers (ml/min)

Speed (rpm)	Tubing					
	13#	14#	19#	16#	25#	17#
150	9	33	73	120	250	425
350	21	76	181	280	583	992
600	36	130	286	480	1000	1700

YZ25, 3 rollers (ml/min)

Speed (rpm)	Tubing	
	15#	24#
150	250	425
350	583	992
600	1000	1700

YT15, 4 rollers (ml/min)

Speed (rpm)	Tubing						
	13#	14#	19#	16#	25#	17#	18#
150	9.0	33	73	120	250	425	575
350	21	76	181	280	583	992	1342
600	36	130	286	480	1000	1700	2300

YT25, 4 rollers (ml/min)

Speed (rpm)	Tubing			
	15#	24#	35#	36#
150	250	425	575	725
350	583	992	1342	1692
600	1000	1700	2300	2900

## 9.2 FG601S-Q

KZ25/KZ25-L, 3 rollers (ml/min)

Speed (rpm)	Tubing			
	15#	24#	35#	36#
150	370	650	1225	1500
350	863	1517	2858	3500
600	1480	2600	4900	6000

Note: KZ25 is for silicone tubing only. KZ25-L will work with the all material tubing

YZ35, 3 rollers (ml/min)

Speed (rpm)	Tubing Size	
	73#	82#
150	2000	3250
350	4667	7583
600	8000	13000