Cassette Gas Filling Machine

I. Purpose and features

This machine is dedicated to various kinds of cassette can, refrigerant can and altitude gas can. It can be used for catering, hotel and outdoor travel, etc. This machine applies to 1-inch aerosol valve and cassette gas thread valve. Closing and aeration may be finished separately or jointly. A double aeration system is optional to improve efficiency. And a water-bath leak detector is optional to ensure safety. For CJXH-1600A, there is no liquid filling device in this equipment. It can close and aerate cassette gas valve.

II. Composition and parameters

1. Composition:

This equipment consists of closing machine, aerating machine, gas metering cylinder, feeding booster pump, work benches, racks and pneumatic components.

2. Parameters

Outline of host (L*W*H) (mm)	970*510*1500
Height of aerosol can (mm)	120~320
Diameter of aerosol can (mm)	Customizable depending on aerosol cans of different size
Closing diameter (mm)	27.5
Closing contact height (mm)	4.7

Capacity (cans/hr)	500-1000
Max. gas consumption (L/min)	1000

III. Basic structure and working principle

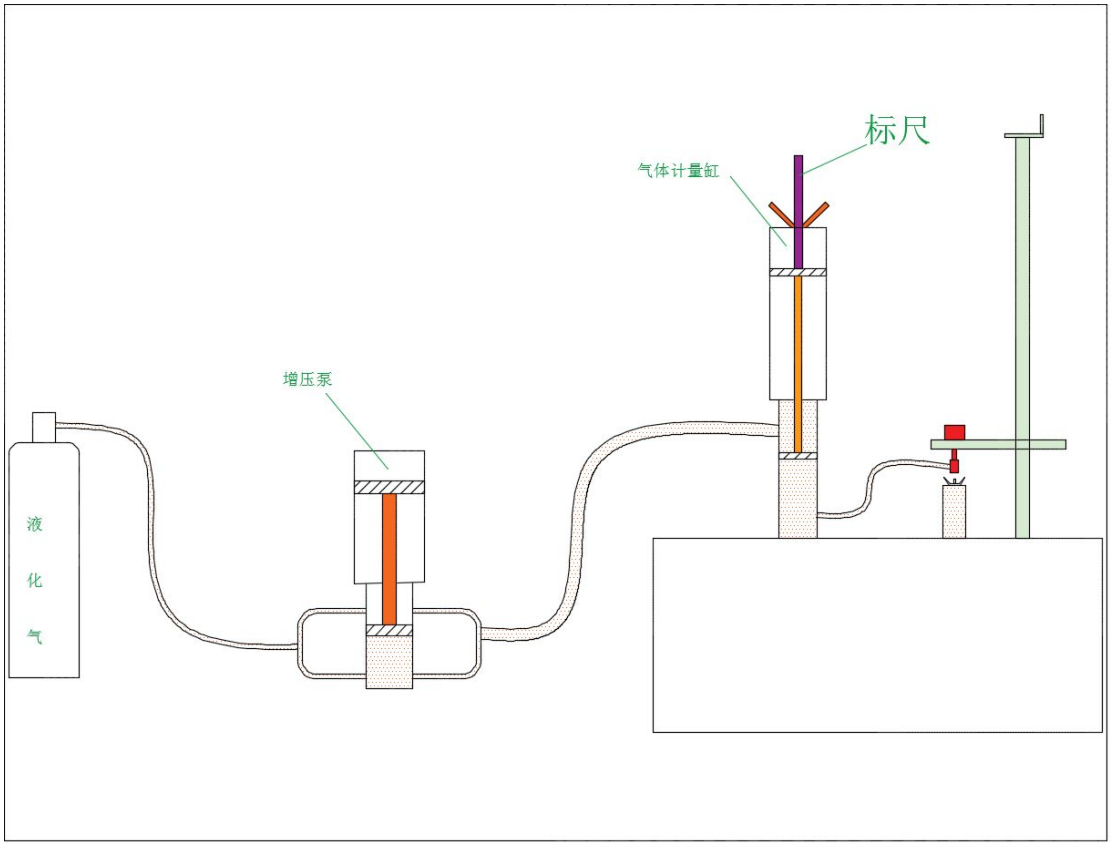
Many kinds of aerosol are inflammable or explosive when filling containers with them. Therefore, this unit employs a mechanical structure under full gas-pressure transmission, which can avoid electric spark caused when using electricity.

This unit consists of closing machine, aerating machine, booster pump, work benches, racks and pneumatic components. And the aerating machine consists of gas metering cylinder and gas filler. The gas metering cylinder is fixed onto the bench, slightly in the back. The closing machine and gas filler are mounted to the bed-plate of the lifting column. They are vertically adjustable depending on the height of the can. The booster pump works on a double-in double-out basis and the diameter of the inlet and outlet tubes has been increased.

Closing: Switch on the closing knob, press the foot valve slightly, the double pneumatic operated directional valve of the closing machine changes direction, the upper chamber in the lifting cylinder of the closing machine takes gas in and the lower chamber exhausts, so that the piston in the lifting cylinder is made to move downwards. The can valve is compressed by the closing end. Meanwhile, the closing signal valve is triggered by the bottom of the closing cylinder that has moved downwards, the gas pressure output from the signal valve acts on the single pneumatic operated directional valve to make the upper chamber in the closing cylinder take gas in and the lower chamber exhaust. The piston moves downwards so that the closing claw is released to close the cylinder mouth. Meanwhile, the stopper on the top of the closing machine triggers the reset signal valve to output gas pressure, which acts on the double pneumatic operated directional valve to make it change direction. The piston of the lifting cylinder ascends home. Meanwhile, the single pneumatic operated directional valve changes direction to move the piston of the closing cylinder upwards and the closing claw retreats home.

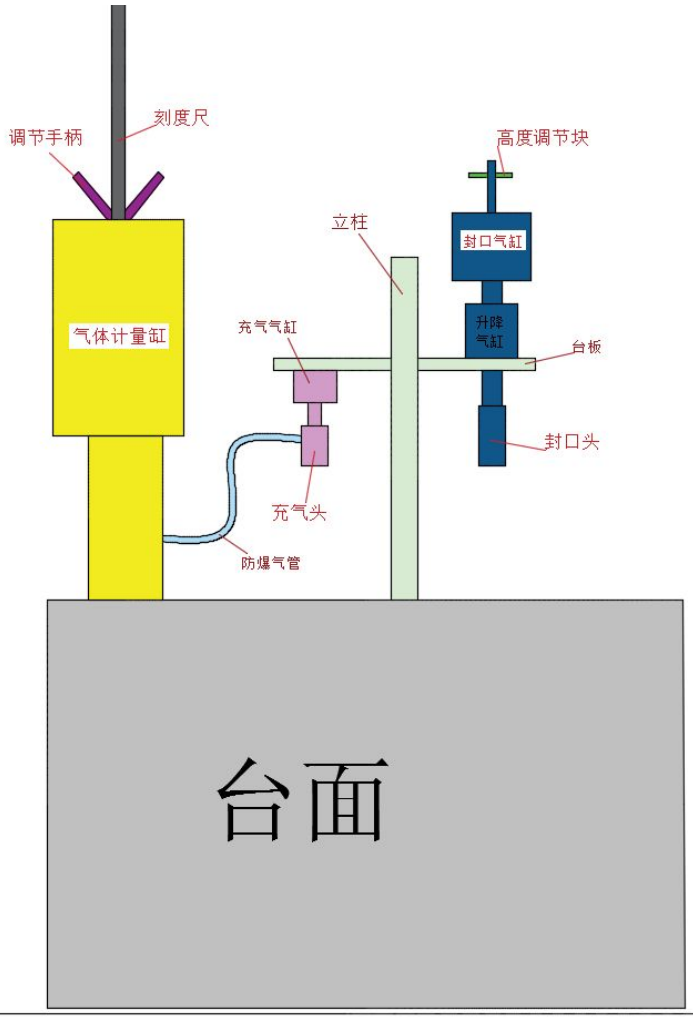
Aeration: Controlled by the compressed air and pneumatic element, the booster pump inhales liquefied gas automatically from the steel cylinder or gas container, raises pressure to make it become liquid, and sends it to the gas metering cylinder for filling. The pressure of liquefied gas may be controlled by adjusting the pressure of gas supply to the booster pump. Turn on the aeration knob, press the foot valve slightly, the double pneumatic operated directional valve of the gas metering cylinder changes direction, the gas filler pushes down the aerosol can with the help of the micro cylinder and the nozzle opens automatically. Meanwhile, the upper chamber in the power cylinder of the gas metering cylinder takes gas in, the lower chamber exhausts, and the piston in the power cylinder moves the liquefied gas piston downwards, so that the liquefied gas in the metering cylinder is injected via the gas filler into the closed aerosol can. At this moment, the piston of the power cylinder is pushed down to trigger the signal valve, the gas pressure output from it acts on the

double pneumatic operated directional valve of the gas metering cylinder to make it change direction, so that the micro cylinder of the gas filler moves opposite to the direction of incoming and outgoing gas of the power cylinder, so that the gas filler and metering cylinder return home, takes in gas of the same amount from the cylinder and waits for the next filling. The height of the locating piston of the metering cylinder can be adjusted by rotating the knob on the top of the metering cylinder in order to change the size of fill by changing the travel of the metering cylinder piston.



液化气：Liquefied gas
增压泵：Booster pump
气体计量缸：Gas metering pump
标尺：Scale

V. Structure diagram



调节手柄：Adjusting handle
刻度尺：Scale
气体计量缸：Gas metering cylinder
充气气缸：Aerating cylinder
充气头：Aerating end
防爆气管：Explosion-proof tube
立柱：Column
高度调节块：Height adjustor
封口气缸：Closing cylinder
台板：Bed-plate
封口头：Closing end
台面：Work bench

VI. List of accessories

Name	Size	Q'ty
Flat ring	125*110*5.6	2
Flat ring	100*85*6	2
Skeleton ring	16*20.5*3.6	1
Skeleton ring	50*40.6*7.1	1
Y-ring	16*24*5	4
Y-ring	40*50*6	1
O-ring	10*1.9	3
O-ring	9*1.9	2
O-ring	12*1.9	2
O-ring	14*1.9	2
O-ring	16*2.4	2
O-ring	16*1.9	1
O-ring	18*2.4	2
O-ring	20*2.4	2
O-ring	30*3.1	1
O-ring	32*2.4	2
O-ring	41*1.8	1
O-ring	45*3.1	2
O-ring	50*3.1	2
O-ring	80*2.4	2
O-ring	90*3.1	2
O-ring	125*3.1	2
Pressure-proof gas pipe		2
Gas ball valve		1
Anchor bolt		4
Allen wrench		1
Silencer	2"	2
Piston slice of booster pump		2
Piston slice of gas metering cylinder		1
PTFE gasket of gas filler		2
PTFE stopper of liquid filler		1
Quick-connect elbow	G1/4φ10	2
Quick-connect elbow	G1/8φ6	1
Quick connector	G3/8φ10	1
Quick-connect	G3/8φ10	1

elbow		
Quick-connect tee	ф10	1
Quick-connect tee	Φ6	1