

Tube Filler and Sealer

First,Outline

SA Packaging Machinery is a South Africa-based trading company focusing on the supply of premium packaging machinery across global industries. Backed by a professional technical team and profound industry expertise, we provide one-stop packaging machinery sourcing, technical consultation and after-sales technical support services for worldwide clients.

Our supplied tube filling and closing machine is developed with introduced global advanced technology, optimized and upgraded in strict accordance with GMP industry standards. Featuring reasonable structural design, complete functional configuration, simple operation, precise dosing, stable operation and low running noise, this automated machine adopts PLC programmable control system to realize full-process automatic operation. It supports filling materials ranging from liquid to high-viscosity paste, and completes integrated procedures including tube filling, tail sealing, batch number and production date coding automatically.

Ideal for processing aluminum tubes, plastic tubes and composite tubes, this equipment is widely applicable for cosmetics, pharmaceutical, food and adhesive industries. All supplied machinery fully complies with official GMP compliance standards, which is the preferred packaging solution for tubular product filling and tail sealing enterprises.

Second, machine principle of work

GF-400L (F) tube filling and closing machine is automatically for profession in cosmetics, drugs manufacture, food, bond aluminum tubes, the plastic tube, the multiple-unit tube fills seals gathers designs the manufacture, its main principle of work is in the loading hopper barrel of pipe enters the one by one the first location to fill vertical the pattern making, then revolves together along with the rotating disc, when revolves to the second location, to the barrel of pipe carries on the examination to the sign, enters the nitrogen sufficiently in the third location toward the barrel of pipe in, when fourth location, fills to the barrel of pipe in wants to install the thing, afterwards enters to heats up, the knee bend, contracts, the printing serial number, cooling, the cutting edge and so on a series of locations Carries on seals gathers, revolves to last the namely 12th location when the end product derives. Each barrel of pipe all must pass through such a series of processes, finally feeds seals gathers finished.

The machine main structure by the master drive organization, the feed mechanism, the rotation organization, seals the tail organization, fills in adds the organization, the electric appliance control system is composed.

Third, machine performance characteristic

- a) a high grade night of crystal demonstrated the programming controller and the button unify the operation regards the screen, comprehensive assurance movement conditions and so on

equipment stepless speed regulation, parameter establishment, output register statistics, barometric pressure instruction, breakdown demonstration, cause operation simple

b) the completely automatic completes the human for the tube, to the sign, the sufficient inert gas (may elect), to fill installs, seals the tail, hits the code, the end product derives the entire process.

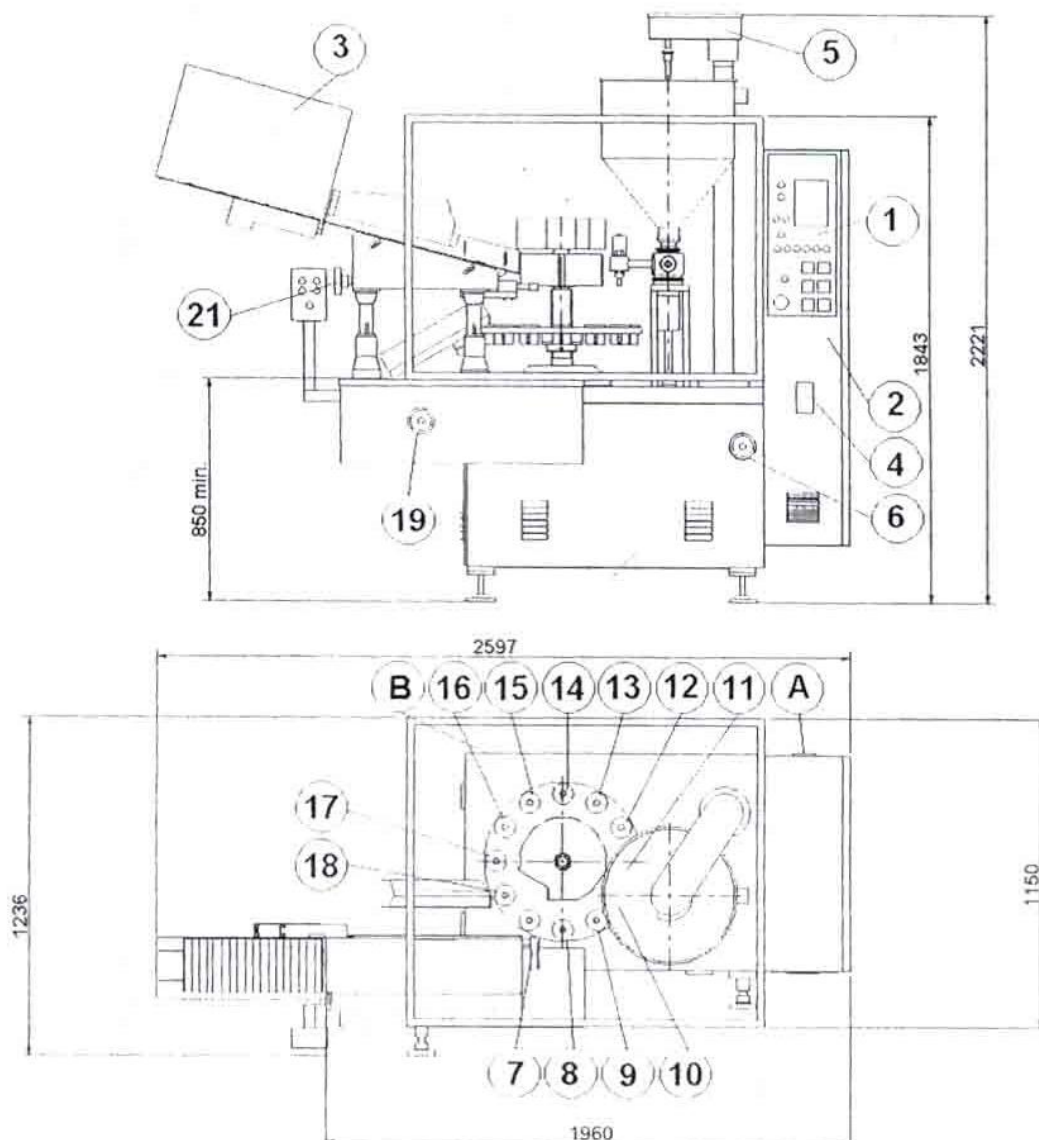
c) the high accuracy to the sign system, reduced the tube body and the color code chromatic aberration scope.

d) adjusts outside the spot to set at, the position numeral demonstrated that, the adjustment fast, accurate (use in multi- specifications, multi- varieties produces).

e) machine, the light, the electricity, the gas integration, the realization do not have the tube not to fill the attire, does not arrive for the tube, the barometric pressure lowly, the automatic demonstration (reports to the police);Opens when the protection gate can completely automatic functions and so on auto-stop.

Fourth, machine outline

The machine uses the stainless steel manufacture completely, becomes by many locations combination. (Sees the entire machine outline drawing)



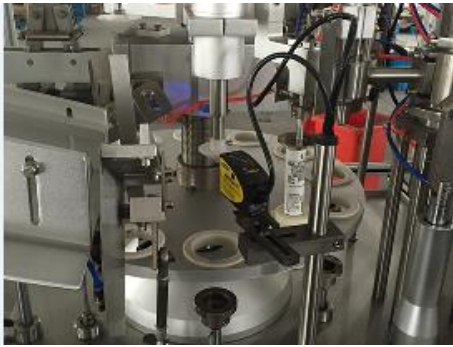
1.	Control panel
2.	Electrical kneading board
3.	Loading hopper
4.	Controls remotely the plug
5.	The mixer (prepares elects)
6.	Measurement regulating wheel
7.	The barrel of pipe inserts the location
8.	The barrel of pipe direction detection examines the location
9.	The barrel of pipe arrives examines the location, the barrel of pipe inverts, the nitrogen turns on
10.	The barrel of pipe fills the location, the barrel of pipe puts in completely fills in the pattern making
11.	The nitrogen turns on, metal: Operates the pliers to clamp; Polyethylene: May use
12.	Metal: Operates the pliers to clamp; Polyethylene: The hot pliers clamp
13.	Metal: Operates the pliers to clamp; Polyethylene: The hot pliers clamp
14.	Metal: Operates the pliers to clamp; Polyethylene: The hot pliers clamp
15.	Metal: Operates the pliers to clamp; Polyethylene: Prints the pliers to clamp
16.	Metal: May use; Polyethylene: Cools the location
17.	Metal: Prints the pliers to clamp; Polyethylene: Cutting edge location
18.	The barrel of pipe springs the location
19.	Loader height control handwheel
20.	Skewed slot regulating hand wheel
A	Compressed air connection, supplies connection
B	Water supply connection

Barometric pressure	0.6-0.7 MPa
Air flow	150L/min
Power source/power	1.2 kw 380V 50HZ 3F+N+PE

Attention: The nitrogen pressure should not be lower than 0.15 MPa to avoid the machine engine off

1st	Barrel of pipe feeding by charging device, regulation and so on skewed slot
2nd	The barrel of pipe enters the machine turntable to fill in the pattern making
3rd	The barrel of pipe uses the sensor and the turning gear to the sign
4th	Examines the location and the nitrogen turns on uses the sensor and the mechanism
5th	The barrel of pipe fills by the control valve automatic control systems control
6th	The barrel of pipe seals gathers uses heats up the mouth or the bend installment seals gathers
7th	May print the batch number, information and so on date
8th	End operation for barrel of pipe ex-denning

1st		The barrel of pipe feeds the location Skewed slot: The barrel of pipe installs by the operator on the skewed slot The loader (prepares elects): The barrel of pipe a box loads automatically by the box in The suitable adjustment rotating disc controls the barrel of pipe the current capacity
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		Fills the location An installment (inclines installment) to move on the loader the barrel of pipe to fill the pattern making place.
2nd		The barrel of pipe fills the pattern making Altogether has 12 to fill the pattern making to put in on the turntable
3rd		Barrel of pipe direction detection location The barrel of pipe accurate direction detection controled by steping motor, the photoelectricity reading on the barrel of pipe the reference point
4th		Examines the location and the nitrogen turns on (prepares elects) The control device examination barrel of pipe arrives causes the quota to have an effect to the material Another control device (belt approaches pole) to examine the barrel of pipe position whether inverts, if inverts, machine engine off.

5th		The barrel of pipe fills the location: The barrel of pipe fills only under the premise which completes in the preceding location to carry on
		The barrel of pipe puts in completely fills in the pattern making detector to examine
6th		The nitrogen turns on the location After this location is fills the nitrogen to turn on
7th		Ex-denning location

Safety device:

The air feed water supply uses controls the part. When the value excessively is low, these control parts cause the machine to stop revolving.

The machine crown has a warning signal light. When the machine has the breakdown, the red candle glitters immediately.

Each time warning indication on control panel

If the machine appears the breakdown to be blocked, the clockwise rotation turntable causes its function to avoid in the protection key having no intention to put through the power source.

The barrel of pipe fills must the heat-seal, the corresponding location should be thermostable.

Attention: Because the afterheat very was still high, after the engine off 10 minutes only then might touch the heating tongs at least to clamp

Dangerous temperature: 200°C

When uses the harmful goods should examine its security standard

Compressed air supplies line

The air operated supplies has an effect through machine left side of pressure regulator. The compressed air must be far away the condensate.

Note: pressure must calibrate to 0.4-0.6 MPa between.(Dials and revolves pressure regulator handwheel)

Compressed air supplies chart



Power supply

The machine delivers goods when had is connected including the above the terminal the electric wire, therefore only must install a suitable plug then.

If the electric wire must have to replace should pay attention to the wiring to have to open the main switch wiring in the electric wire box internal breaks, must concentrate the same place all electric wires to the cutout box.

The related wiring diagram detailed information attaches in the handbook.

Note:

Guarantees operates when the electrical system switches off the power source

Guarantees the voltage with product label in consistency

Earthing

The metal structure earth must guarantee the electric wire and the electric wire box meets the grounding column to connect,

The user earth system must conform to the GB/T5226.1-96 standard,

All parts or the equipment must through the alone earth system earth,

All parts earth system must receive fully protects,

The earth must be as far as possible short, on the conductor should not have the pressure either put in the danger or the corrosion.

The installment company receives a telegram the gas tank

These equipments should or have the qualifications personnel maintenance by the expert,

The machine is loaded with the protective equipment or the safety mask,

Works when the electrical system should the dump,

Even if switches off the power source, in electricity gas tank still live, in order to the complete power failure, separates the main power source,

The electrical power distribution system must have the protective device, the automatic circuit breaker, the earth protection automatic circuit breaker (for example has need),

If the water quality is hard, suggested installs the water filter to prevent the boiler scale.

Security microswitch

Inspection adjustment stored air pressure approximately 0.6 MPa,

Inspects various electrical machinery to change, if has the electrical machinery to change the mistake, changes in the electricity gas tank by electrical engineer the two phase diagram,

When machine circular telegram must replace the PLC battery.

Fifth, machine installment

1. mixing installments

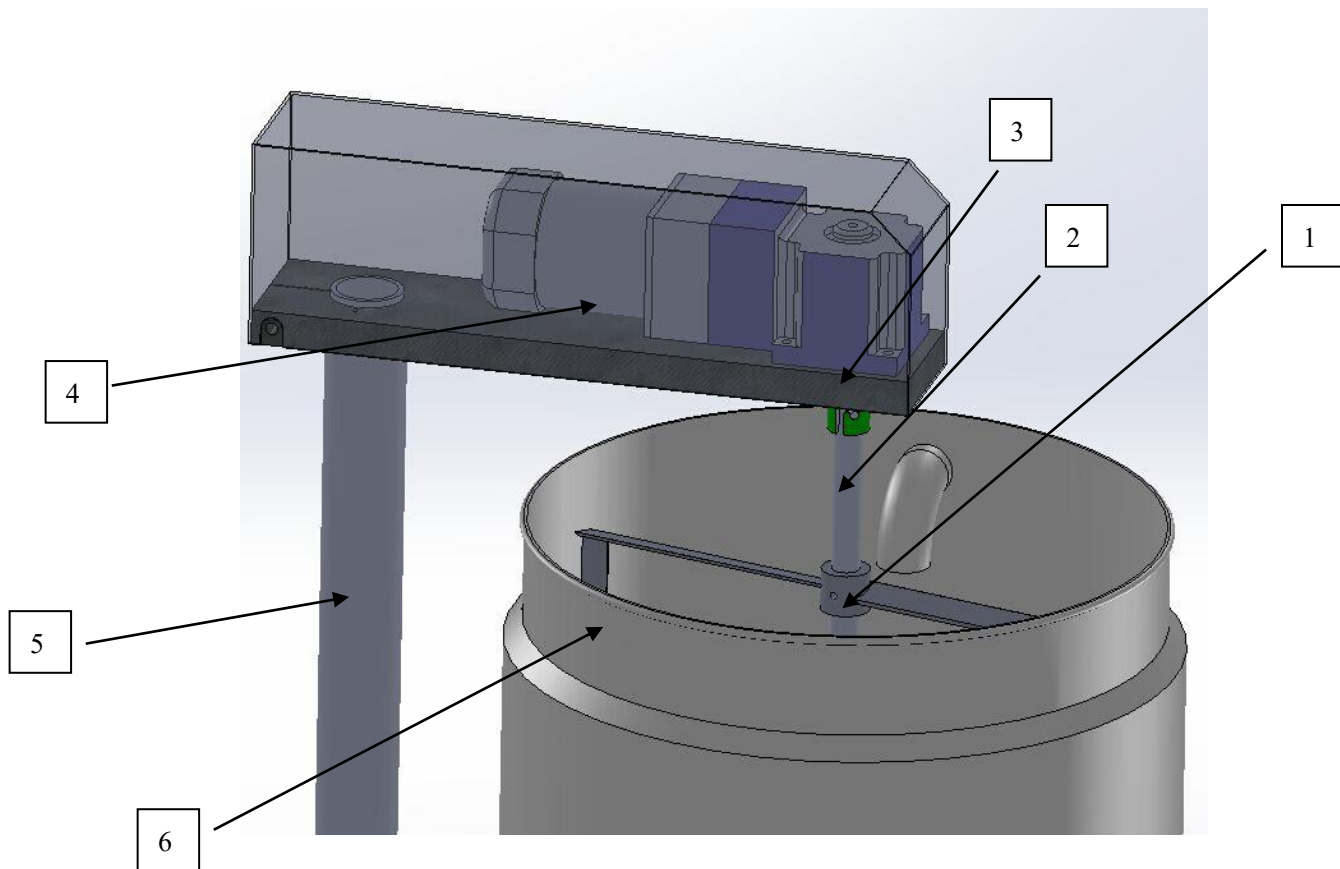
a. separation power source,

b. opens the barrel of pipe loader and the electricity gas tank,

c. takes the guard shield,

- d. lives fixedly with the flange plate decelerates the electrical machinery,
- e. inspects the flange plate the drill bit with to stir the pole the drill bit to match,
- f. on fixed flange plate M8 bolt,
- g. will stir the pole to connect decelerates inside the electrical machinery, the inspection guide rod position with decelerates the electrical machinery the Taiwan pad to coincide,
- Will stir to aim at the loading hopper.
- h. the fixed tight M10 bolt causes to stir the pole to live fixedly,
- i. with clamp installment fixed worm type.

Mixer installation diagram



(1)Mixing head; (2)Mixing pole (3)Connector (4)Motor (5)Prop
(6)Feeder (7)Facing bar

Attention:

Guarantees in the rotation process the mixer not to bump into the feeder wall

Turns in the main engine kneading board the switch, the inspection stirs changes clockwise for

2. Loading hopper installment

- ☐ guarantees the O circle in to pump in the place also does not move (1)
- ☐ will feed in raw material with the central aligner partly aims at Yu Fati (2)
- ☐ closes the jig (3)



Compressed air adjustment: Inspection compressed air value to 0.6 MPa about,

The loading hopper fills: Opening machine front should make the essential loading hopper to fill, opens the active security guard shield to cause its function in the loading hopper upper half position.

3. Metal getting involved in machine operation

- ☐ opens the air feed
- ☐ turns on the power source
- ☐ presses down the green movement button to start the machine

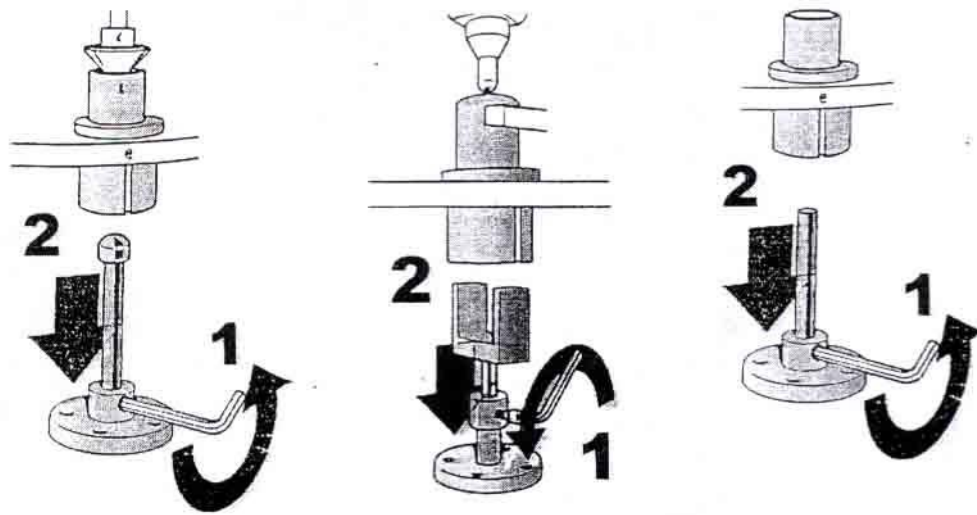
4. Notice before change barrel of pipe size:

- ☐ insertion key closure safety device

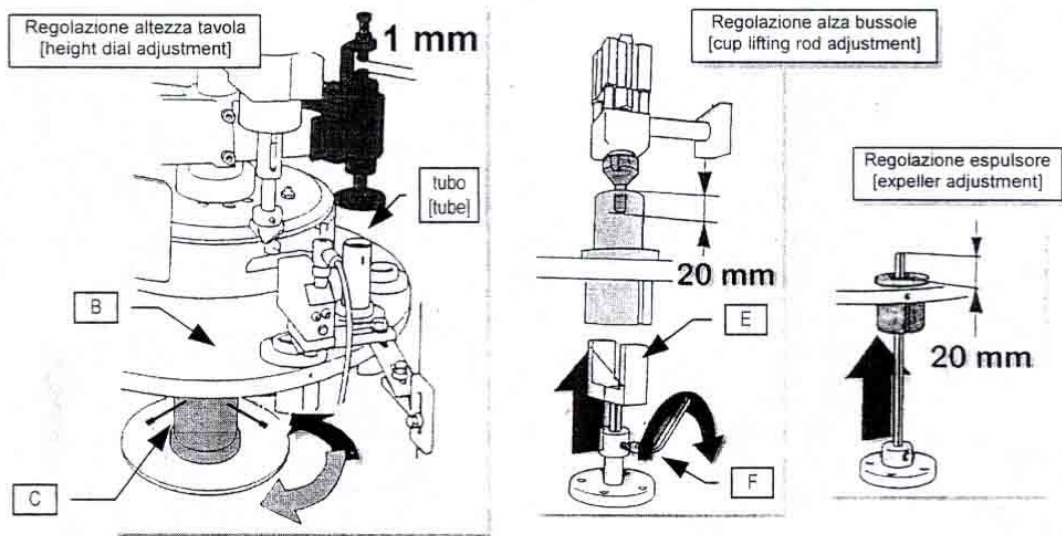
Attention:

Must only be able to operate the machine by an operator

- ☐ turns on the emergency exit, changes into the barrel of pipe jig must the size
- ☐ loosens the screws (for example step 1 and 2) dismounts under the barrel of pipe direction detection installment the pole
- ☐ picks off the barrel of pipe discharge chute
- ☐ turns on lathe the loose plate hub (B) the under bolt (A) half circle



- □ with controls remotely the button to dismount on the top completely
- □ inserts a barrel of pipe to fills in the pattern making
- Until (C) adjusts through the adjusting screw fills the pattern making highly 360mm
- with a barrel of pipe test machine movement, examined possibly appears hemstitching
- tightens the plate hub bolt (A)

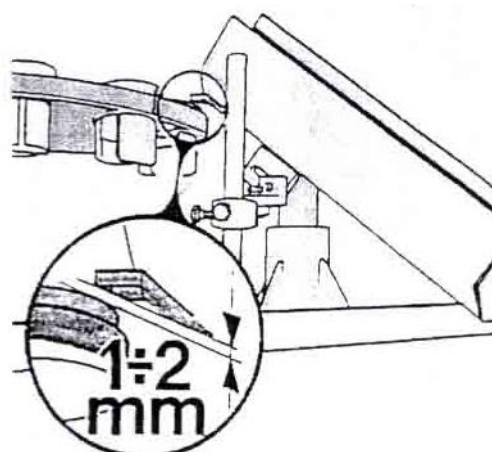


5. Regulation tube cup roof bar (as on chart)

- with controls remotely the button to dismount on the top completely
- Until the promotion fills the pattern making roof bar (E) the barrel of pipe crown to enter measurement 20mm, again screw (F)
- interrupted movement machine, examined the pole with fills between the pattern making not to have disturbs

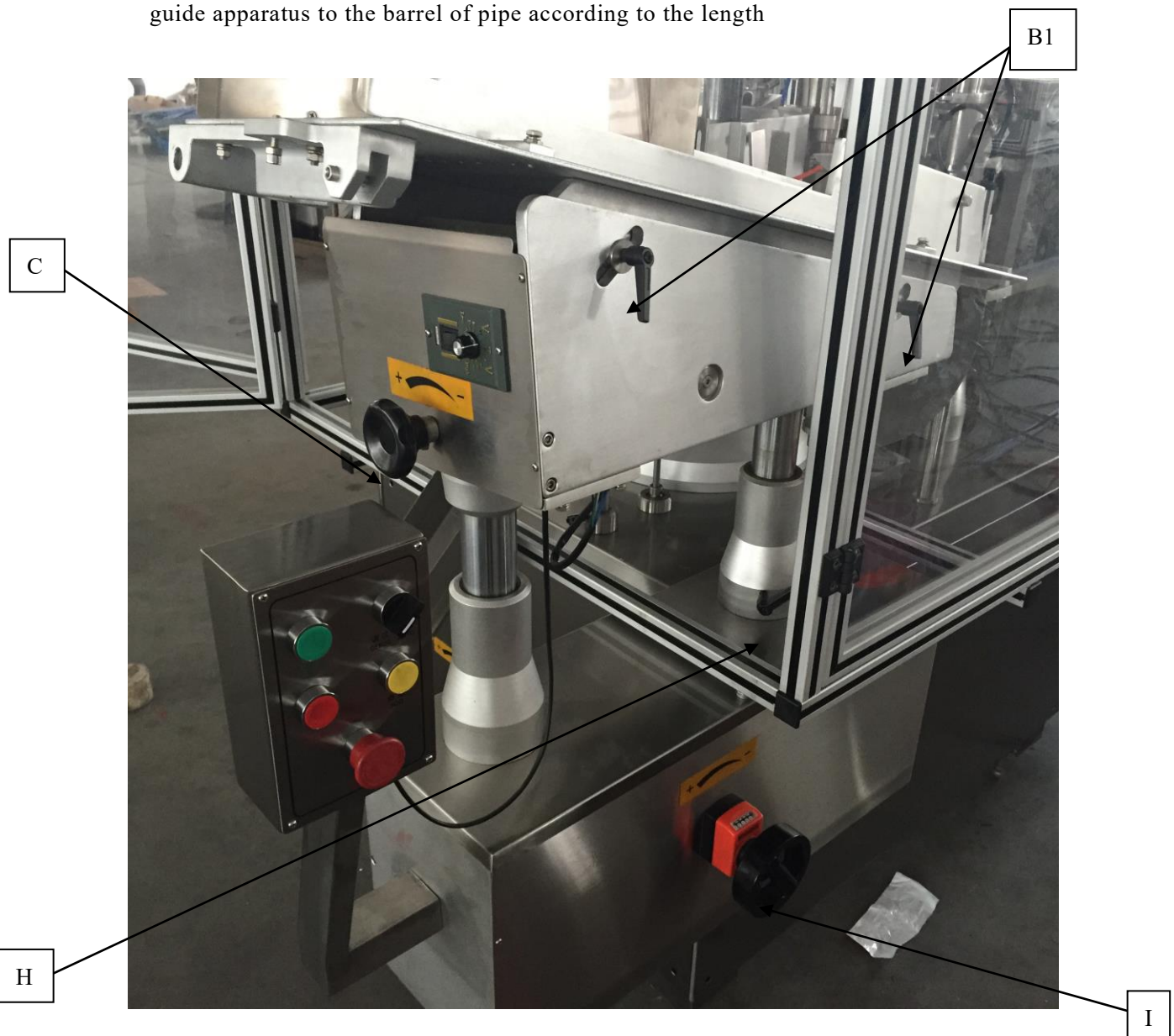
6. Adjusts the roof bar

- ☐ with controls remotely the button to dismount on the top completely
- ☐ adjustment roof bar causes the prominent spot distance to fill pattern making 20mm highly
- ☐ test and the examination pole with fill the pattern making or the barrel of pipe do not have the disturbance, also the barrel of pipe goes against truly
- ☐ promotion discharge chute Gao Guoguan the pattern making 1—2mm causes the cup pause
- ☐ test movement discharge chute with fills the pattern making or the hemstitching pliers clamps without the disturbance

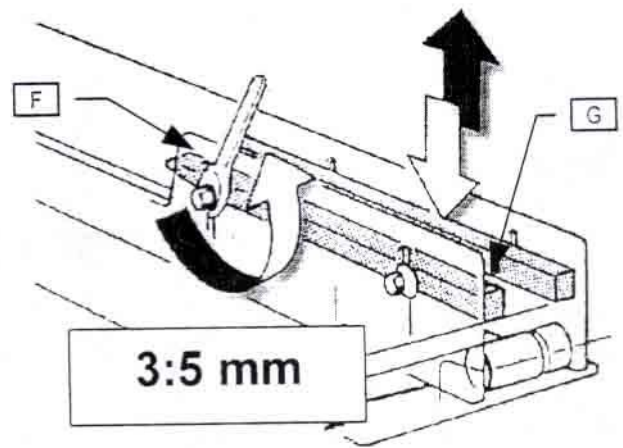
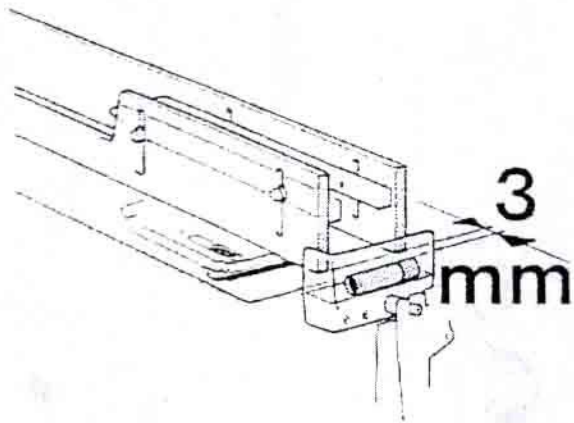


7. adjustments barrels of pipe loader

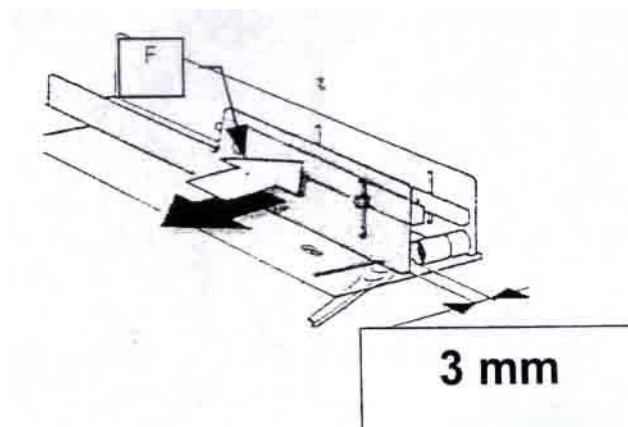
- Loosen the screw (A), replace the tilted device according to the new tube (B)
- Adjust and keep the inclined surface and turning surface on the identical axis. Loosen the screw (B) and rotates the small handwheel (C) to keep 3mm distance from the barrel of pipe to the loader surface.
- Loosen the screw (D) on the guide apparatus (D) and adjust contrast apparatus distance(G) to be 3-5mm
- Loosen the screw (E) on the guide apparatus (F) and adjust the distance to be 3—5mm from guide apparatus to the barrel of pipe according to the length





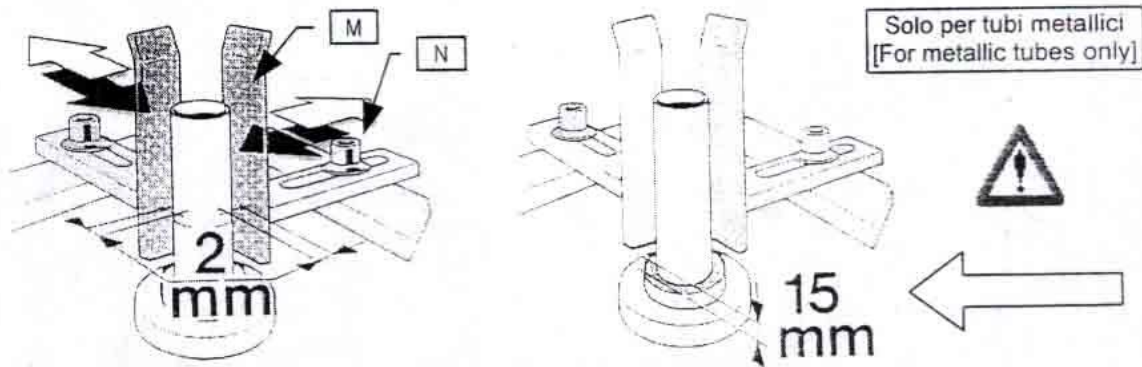


- basis revolves the floor and the barrel of pipe loosens the screws (H) highly and the handwheel (I) adjusts the loader altitude



Attention: When the inspection the barrel of pipe drops from the skewed slot does not bump into the turn over bottom end

Revolves the bolt (N) to adjust the vertical guide rod (M) and maintains the 2mm distance with the barrel of pipe



8. feeds in raw material takes over control the replacement

Fills the spot the terminating unit to be composed by inner and outside of the components, must carries on the suitable replacement according to the barrel of pipe size and the type. Feeds in raw material takes over control the type by the barrel of pipe diameter, the machine speed, decisions and so on product characteristic

Fills and the air feed connection maintains feeds in raw material takes over control cleanly

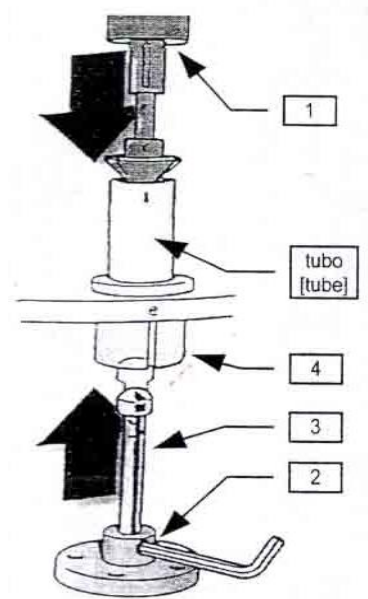
9. Dosage adjustment

Dosage adjustment by machine in front of (A) the dosage handwheel carries on the establishment



10. Barrel of pipe direction finder adjustment

In order to adjust the direction finder, in fills the attire to trace head with on (1) installs one to measure the test tube. Loosen 2 bolts (2) on the axis (3) and rise 5-10mm to push the barrel of pipe out of the filling mould, fasten the screw.



11. Barrel of pipe direction detection cursor adjustment

Turns on lathe on the loose cursor the bolt in order to the cursor may as far as possible clear according to arrive on the barrel of pipe

The cursor group of lines should maintain the certain angle to be vertical avoids reflecting the effect Cursor may reading under the black background the bright cursor, also may reading under the luminous background the black cursor

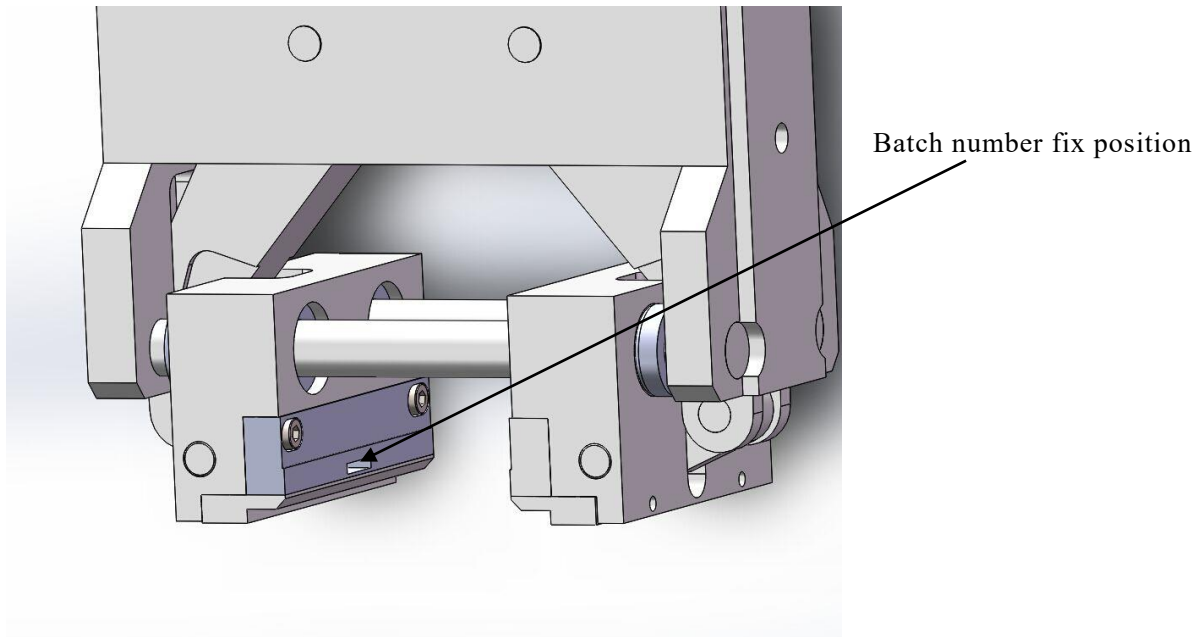
- cursor symbolized puts in under the luminescent spot, presses down the TEACH key
- puts in the background under the luminescent spot, presses down the TEACH key

Until do not move the background to maintain several seconds the cursor launch to be stable

12. Change batch number

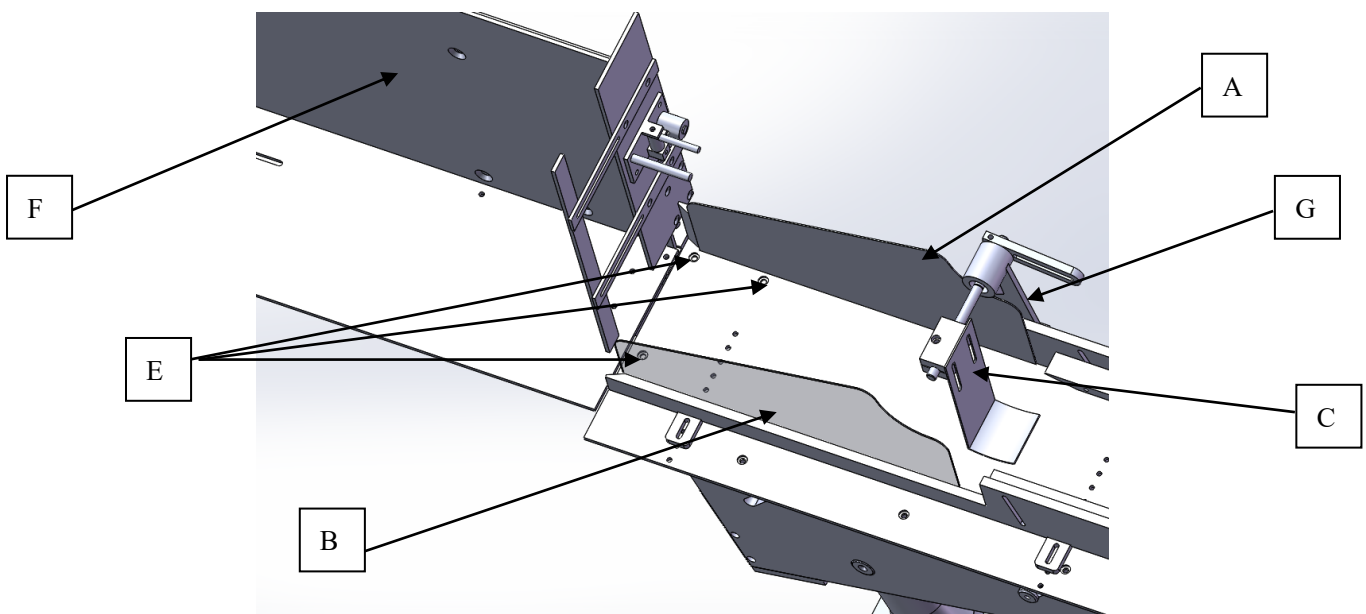
Metal tube: loosen 2 screws. Takes code to contract the place. The replacement code rewiring contracts the place, the tighten the screws.

Attention: Do not touch swing arm, insert the barrel of pipe when test the machine



13. The barrel of pipe feeds the storehouse installment

- ☐ (E) installs the fixed attire materials storehouse with 3 screws, guarantees its nearby two (F) with to feed the rotor to maintain consistently.
- ☐ basis barrel of pipe size installs the barrel of pipe on its support to enter for the knife.
- ☐ closes the power source to examine for the knife works whether normally.



14. Movement:

- ☐ first in advance saving (1) place laying aside barrel of pipe in order to lets the tube cup shift to the wall wall (2) place.

- lags behind 2 side the release lever (4), reduces the damper plate (3), then is loaded with the barrel of pipe the box to put to the filling type card box (5), place and the attention fills the attire to trace is located the wall wall (2) place.
- then inclines upwardly the card box, this time has 2 kind of possibilities the situations:

Under

a) in this time box the barrel of pipe faces, in this kind of situation took takes the paper carton, the barrel of pipe still keeps in the card box, afterwards put out the barrel of pipe flushing again.

One side

b) the box has may open, puts out the barrel of pipe and arranges the position not good barrel of pipe.

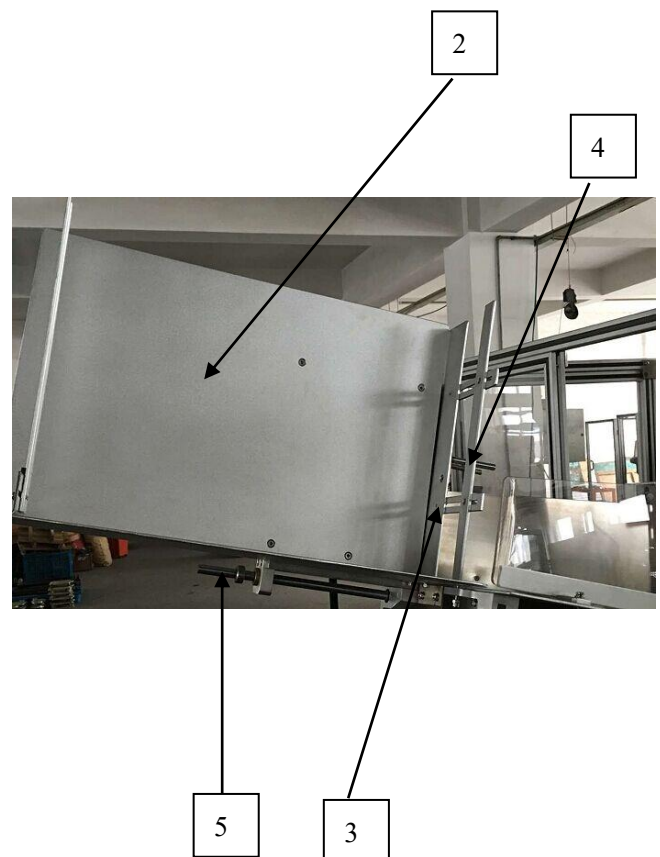
Pulls up nearby the damper plate on 2 release levers (4) by then to mention the damper plate (3), inspects the barrel of pipe whether arranges good,

When the card box falls spatially above duplicates the step.

Attention:

On the skewed slot saving must maintain in advance has the material condition, like this maintains feeds the operation not to need the engine off.

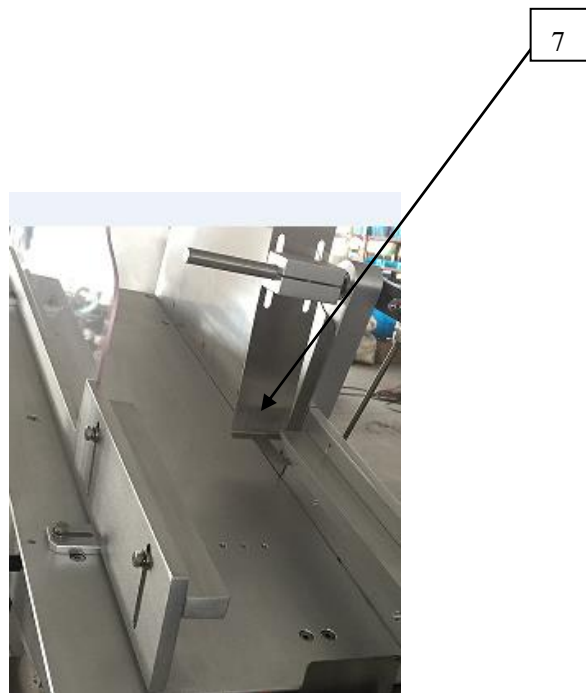
15. The card type enters for the system



16. Change barrel of pipe size:

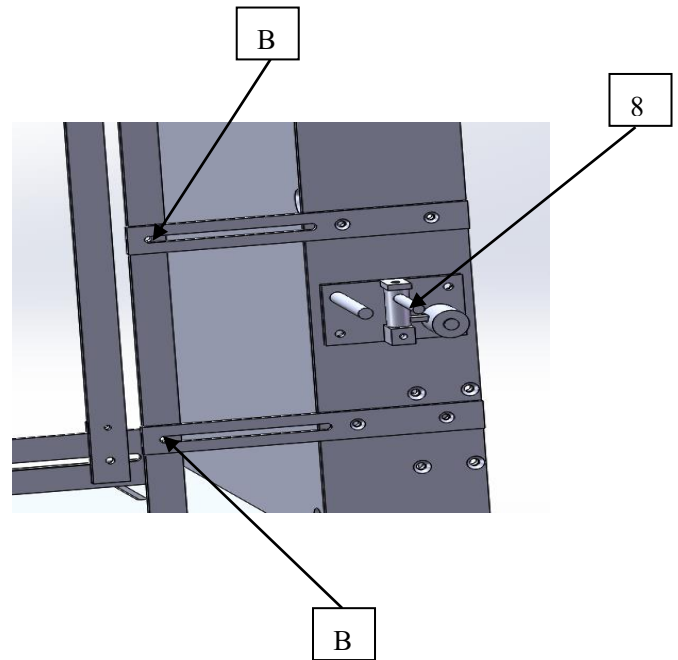
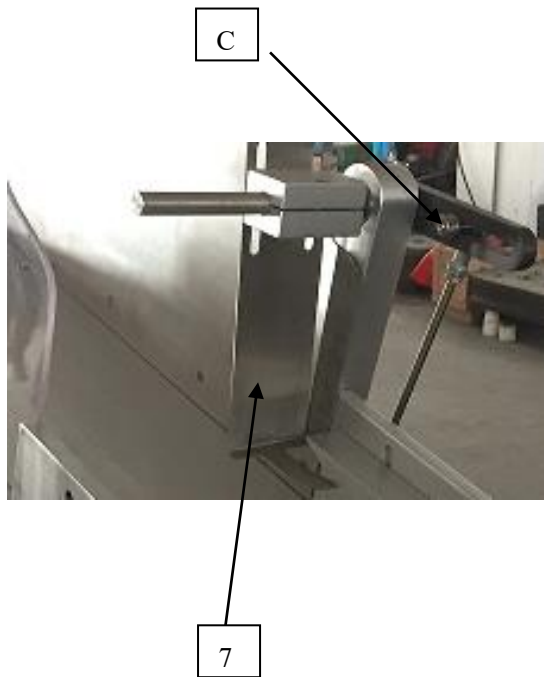
- ☐ adjustment or the replacement does not suit the new barrel of pipe size to dial the yard lumber (7)
- enters to the barrel of pipe replacement, turns on lathe the pine seal screw (A), takes originally dials the yard lumber, exchanges dials the yard lumber newly, tightens seals the screw
- enters to the barrel of pipe adjustment, turns on lathe the pine seal screw, adjusts the barrel of pipe to cause the barrel of pipe with to dial the yard lumber has 3—4mm the space highly, tightens seals the screw (A)

Attention: Dials when the yard lumber work must affect in the barrel of pipe hard one side



Adjusts the barrel of pipe to enter for the vibration (7): Turns on lathe the loose screw (C), adjusts the connecting rod position to the rotor among;

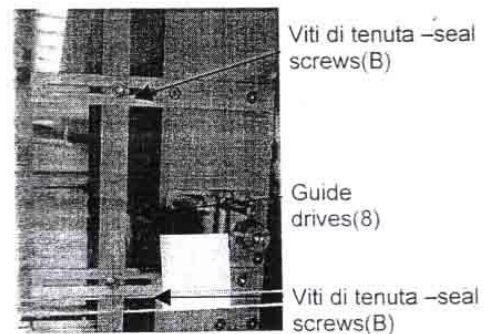
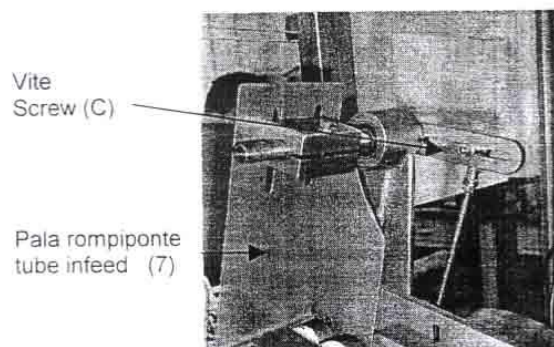
Turns on lathe the loose screw (B) and adjusts the damper plate according to the barrel of pipe size positioning the guide apparatus (8), finally tighten the screws.



Sixth, machine routine maintenance and maintenance

1. Clean doser

- □ pine opens on the loading hopper the freedom to clamp (1)
- puts out the loading hopper
- thorough clean loading hopper
- separation dosage (2) on trachea



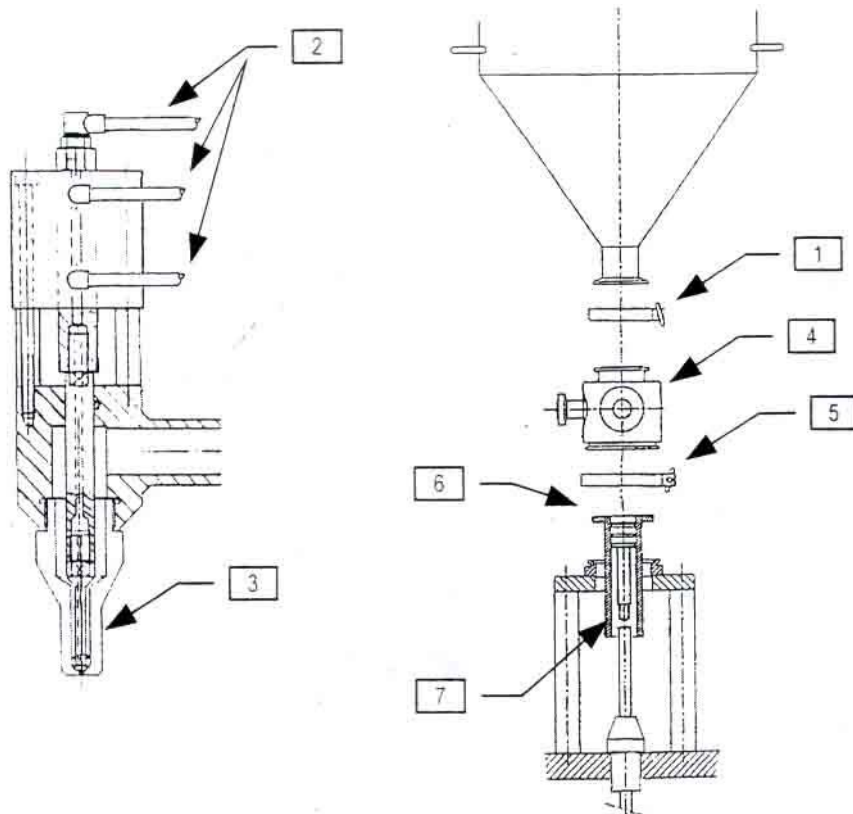
- turns on lathe the pine exterior components (3) to dismount feeds in raw material takes over control, and puts out a dosage interior the components.

Attention:

Water used or when cleaning liquid dosage do not have to get wet the air operated actuation piston

- □ relaxes on the main valve the control stick and promotes the control stick other aspect artificially the valve (4)
- turns on lathe the pine to take clamps (5) freely and puts out pumps the module
- promotes the piston sleeve upwardly

- puts out the seal packing collar and thorough clean
- assembles, when rewiring piston and doser, lubricates all seals.



2. Clean machine surface:

Use water or cleaning solution to clean machine surface or other parts

3. Routine maintenance

Under each month of machine board covers the inspection actuation to rise the tight chain link

In order to increase the tensity, adjusts on the electrical machinery support and the chain adjuster specially makes the screw

The PLC battery replacement, suggested every year replaces time. In order to does not delete the machine function, when machine circular telegram must replace the PLC battery.

Seventh, machine breakdown and diagnosis

Breakdown	Possible reason	Solution
The man-machine contact surface does not have the demonstration	1. does not have the power source 2. circuit breakers not on electricity 3. PLC does not have the power source 4. PLC damage 5. men-machine contact surfaces damage	1. inspects power source 2. gets the circuit breaker 3. inspections controls transformer does have the input output voltage 4. exchanges PLC 5. exchanges the man-machine contact surface
The main engine does not revolve	1. breakdowns report to the police 2. electrical machinery or the frequency changer do not have the power source 3. frequency changers frequencies are 0HZ 4. electrical machinery or frequency changer damages 5. frequency changers class	1. found the breakdown, eliminates abreast in row 2. inspects the circuit breaker whether electrifies, frequency changer whether there is output voltage 3. reestablishes a time of main engine speed, inspects PLC to pass the fuse with frequency changer RS485 4. exchanges the electrical machinery or the frequency changer - Whether there is 5. inspections loads and does the electrical machinery reduction gear catch
The encoder condition does not have the demonstration	1. encoders do not have the power source 2. encoders damages	1. inspections switching power supply 2. exchanges the encoder
PLC does not have the work	1. does not have the power source 2. PLC does not have the movement 3. PLC damage	1. inspections controls transformer does have the input output voltage 2. puts in the PLC on movement switch the ON position 3. exchanges PLC
Does not have the work to the sign electrical machinery	1. does not have the power source 2. overloads 3. pair of signs electrical machinery angle has not established	1. inspects the transformer and the bridge type rectifier 2. inspects the electrical machinery whether catches 3. reestablishes the good angle
To the sign electrical machinery, the spring collet, to the sign, blow the material, feed in raw material the switch, feed in raw material working positions and so on valve, sufficient nitrogen, fixed-point engine off ahead of time, the lag or	1. zero disalignment 2. encoders do not have the work 3. solenoid valves do damage 4. pair of signs electrical machinery damage	1. reestablishes the zero position 2. inspects the encoder 3. exchanges the solenoid valve 4. exchanges the solenoid valve

do not work		
The spatial pot is not correct to the sign	1. pair of signs angles have not established 2. color codes photoelectricities have not established 3. color codes photoelectricities are apart from with the spatial pot not rightly	1. reestablishes to the sign angle 2. rereading the color code color data 3. adjusts the good color code photoelectricity with the spatial pot distance

Eighth, safe guard measure

Keep work place in order
Working environment requirements: ● do not have to lay aside the machine in the rain water place ● do not have in the moist place use machine ● machine must put in the illumination good place ● maintains the ground to be smooth, dry, and avoid oil pollution
Wear suitable clothes: On the sleeve must have the oak rubber or plastic rings, does not put on has the scallop clothes, does not wear the earring necklace, must put on guards against the work accident the shoe; Is higher than 85 decibels places in the sound to have to wear the anti- noise hard helmet
Keep body balance when operates the machine
Boot key only given to licensed person
Opening machine front should pick off the spare part which on the machine services uses
Only can by the personnel who passes through the permission carry on services the machine
When inspection electricity part, separates the power source
Do not do the power line it to use in addition, also cannot allocate the plug from the plug, the power line must be far away the high temperature, the greasy dirt, and sharp.
Cannot put in the foreign matter the electrical system

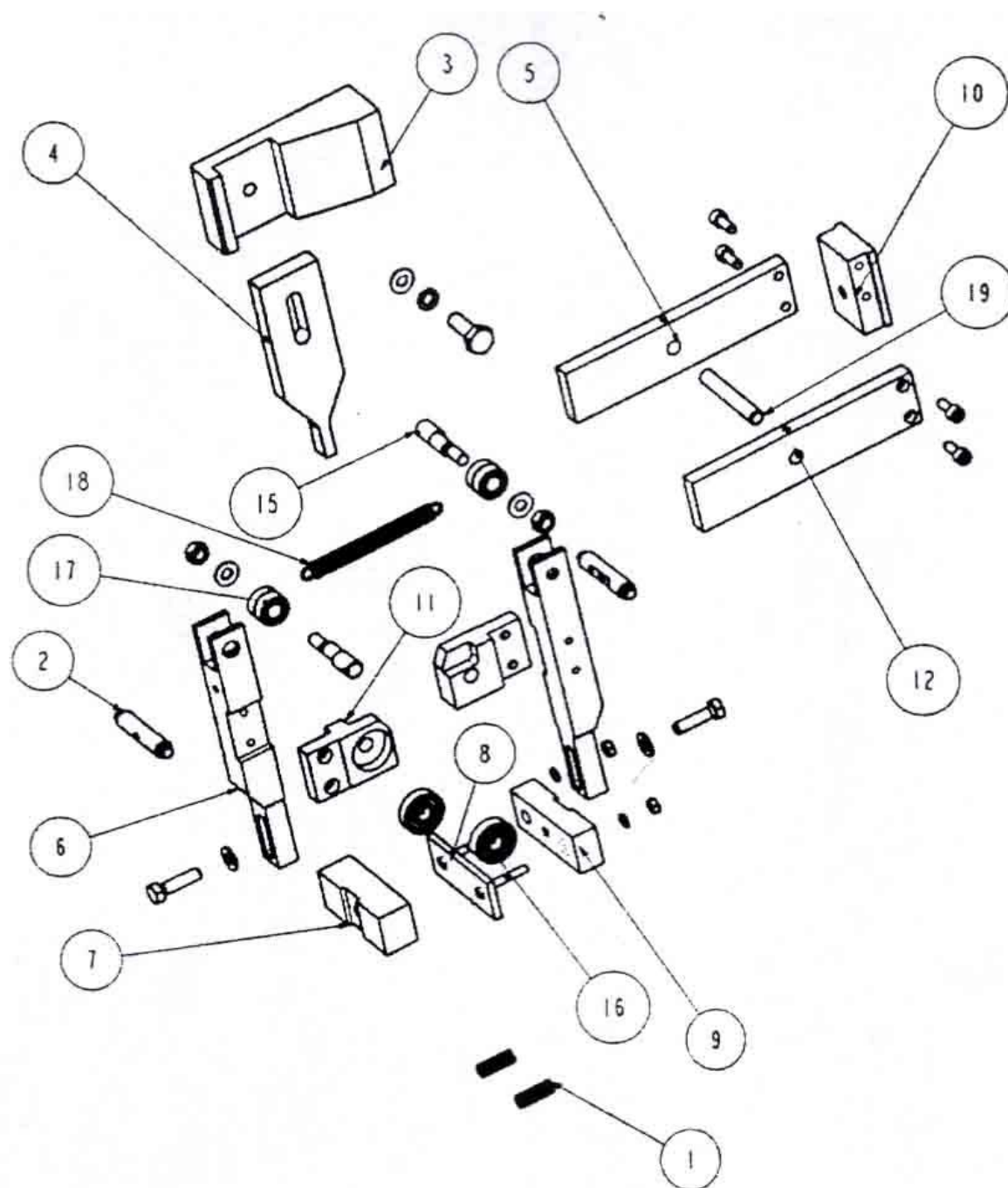
Must use to unfold qualified meets the electric wire
The prohibition water used sprays or uses solvent clean machines and so on compressed air and naphtha
Takes care of the m

Ninth, vulnerable outfit detailed list

1.	Clamps 1 device	GF-400-3-4	
2.	Clamps 2 device	GF-400-3-5	
3.	Clamps 3 device	GF-400-3-6	
4.	Clamps 4 device	GF-400-3-5	
5.	Clamps 5 device	GF-400-3-6	
6.	Batch number device	GF-400-3-28	
B-9A			
	Code	Name	Quantity
2.	GF-400-3-4-8	Extension spring support	4
3.	GF-400-3-4-6	Clamps 1 support	1
4.	GF-400-3-4-5	Clamps 1 guide rail	1
5.	GF-400-3-4-10	Clamps 1 base plate	2
6.	GF-400-3-4-1	Clamps 1 rocking shaft	2
7.	GF-400-3-4-12	Clamps 1 briquetting 2	1
8.	GF-400-3-4-13	Clamps 1 briquetting 3	1
9.	GF-400-3-4-2	Clamps 1 briquetting 1	1
10.	GF-400-3-4-9	Clamps 1 supporting shoe	1
11.	GF-400-3-4-4	Clamps 1 rocking shaft fixed block	2
15	GF-400-3-4-7	Eccentric shaft	2

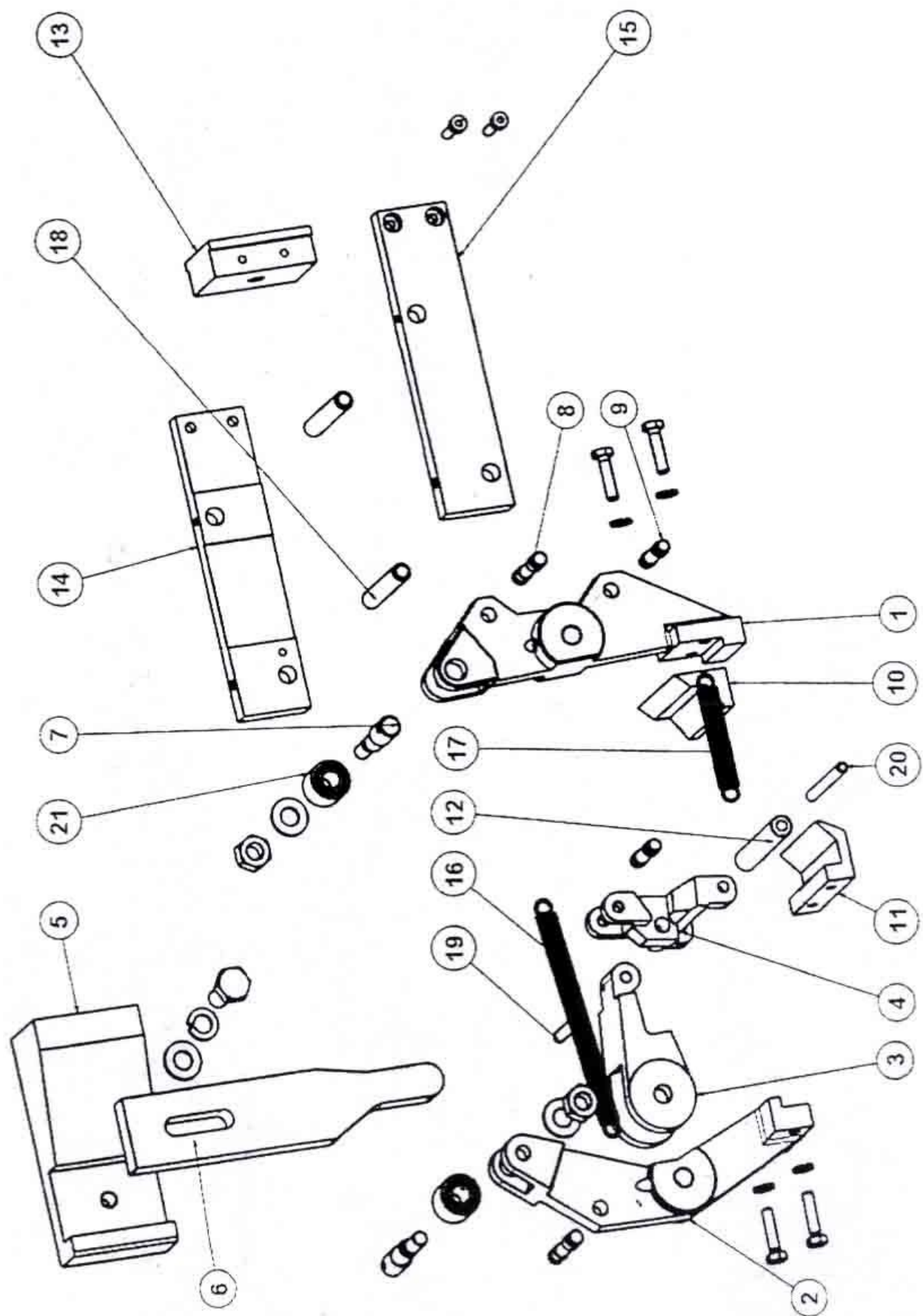
16	GF-400-3-4-3	Transfers the wrap	4
17	NKI110/16	Needle bearing	2
18	GF-400-3-4-11	Clamps 1 extension spring	2
19		Cylindrical pin $\phi 10 \times 70$	2

B-9A chart



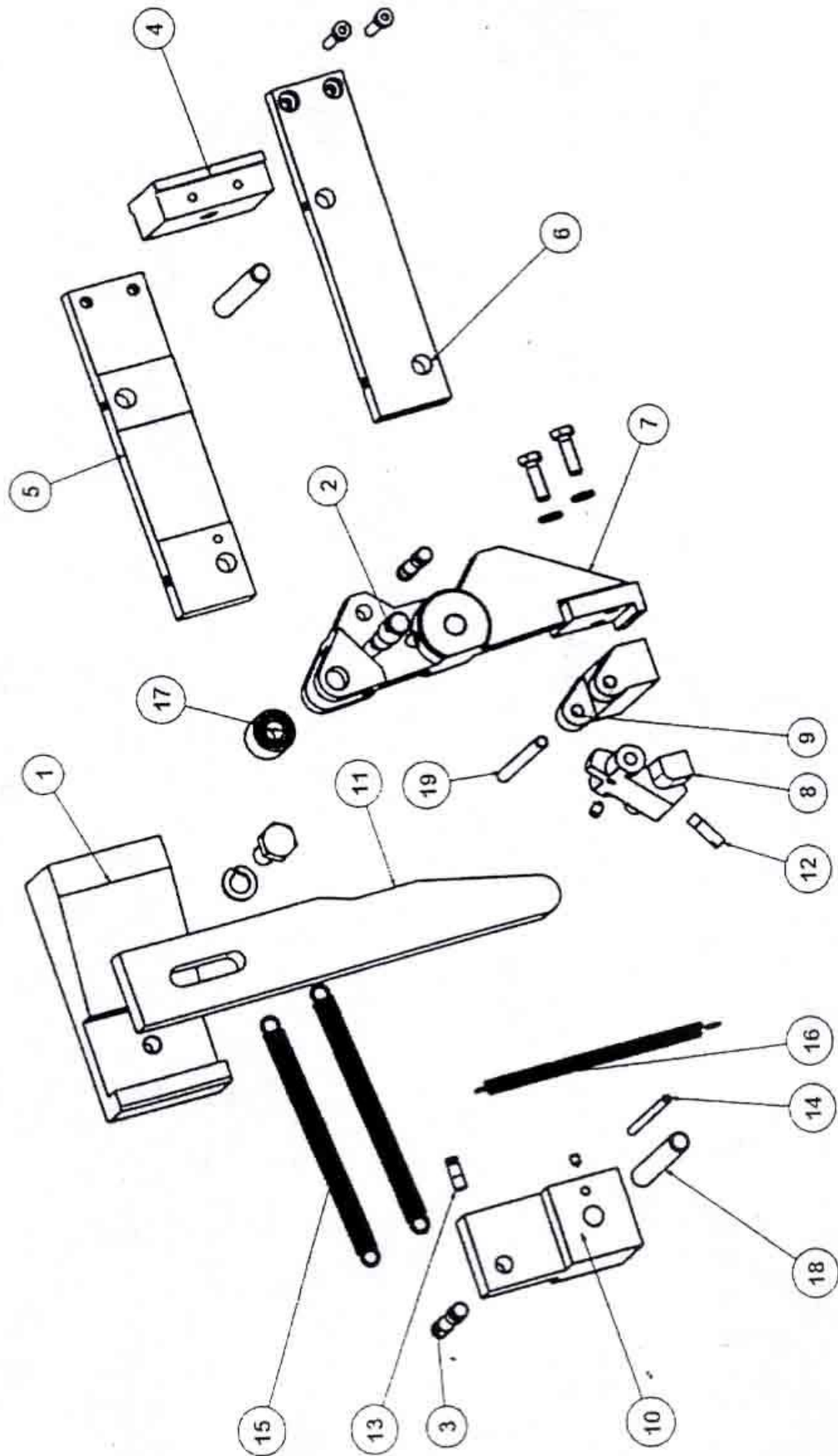
B-9B			
1.	GF-400-3-5-11	Clamps 2 to suspend in the arm 3	1
2.	GF-400-3-5-8	Clamps 2 to suspend outside the arm	1
3.	GF-400-3-5-6	Clamps 2 to suspend in the arm 2	1
4.	GF-400-3-5-3	Clamps 2 to suspend in the arm 1	1
5.	GF-400-3-5-9	Clamps 2 supports	1
6.	GF-400-3-5-10	Clamps 2 guide rails	1
7.	GF-400-3-4-7	Eccentric shaft	2
8.	GF-400-3-5-4	Extension spring support 2	4
10	GF-400-3-5-13	Clamps in 2 briquetting	1
11	GF-400-3-5-12	Clamps outside 2 briquetting	1
12	GF-400-3-5-1	Clamps 2 rollers	1
13	GF-400-3-5-15	Clamps 2 supporting shoes	1
14	GF-400-3-5-14	Clamps 2 base plates	2
16	GF-400-3-5-7	Clamps 2 extension springs 2	2
17	GF-400-3-5-5	Clamps 2 extension springs 1	2
18		Cylindrical pin $\phi 10 \times 70$	1
19		Cylindrical pin $\phi 6 \times 35$	2
20		Cylindrical pin $\phi 60 \times 90$	1
21	NKI 10/16	Round needle bearing	2

B-9B Chart



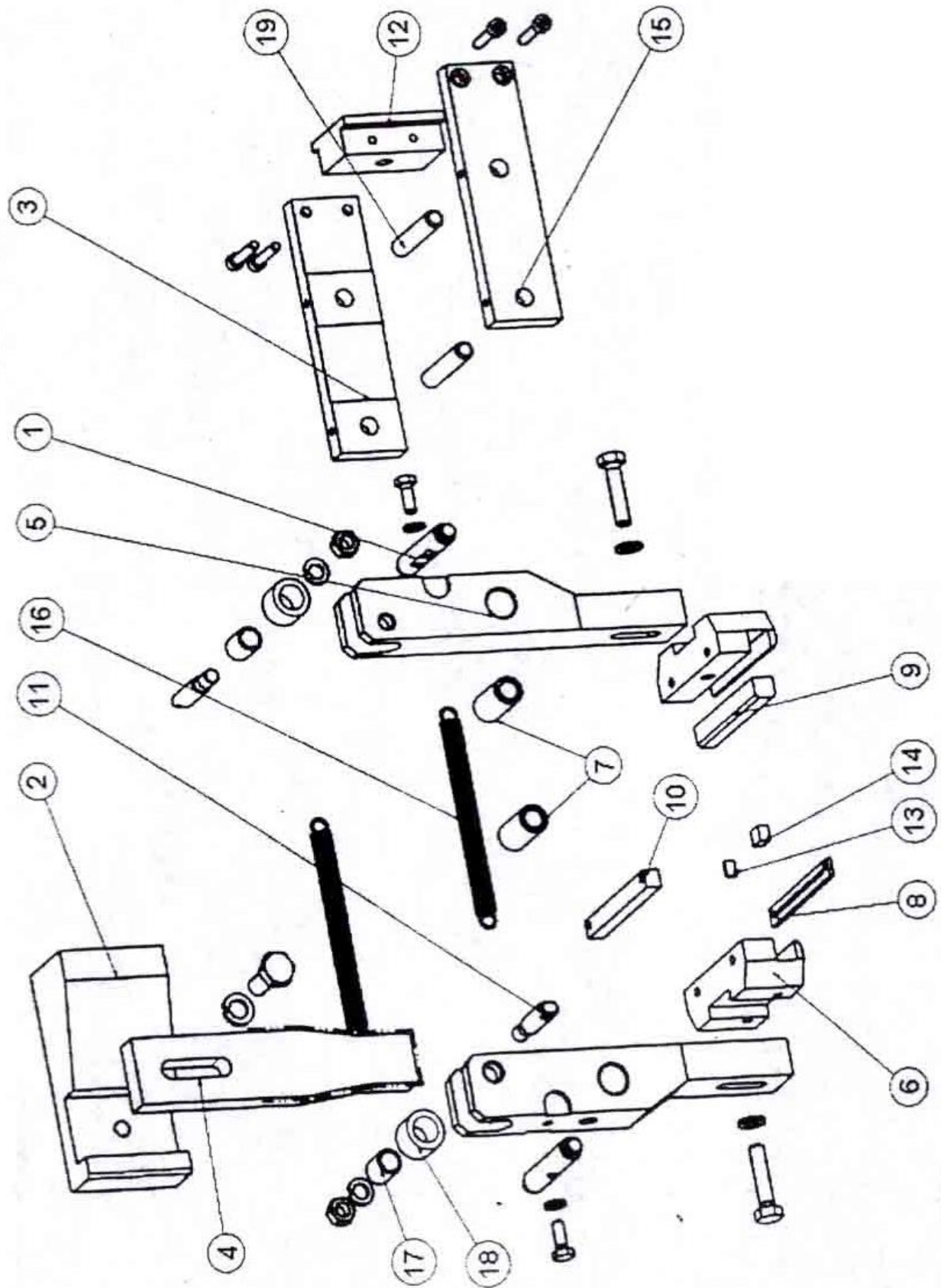
B-9C			
1.	GF-400-3-5-9	Clamps 2 supports	1
2.	GF-400-3-4-7	Eccentric shaft	1
3.	GF-400-3-5-4	Extension spring support 2	2
4.	GF-400-3-5-15	Clamps 2 supporting shoes	1
5.	GF-400-3-6-3	base plates	2
6	GF-400-3-5-11	Clamps 2 to suspend in the arm 3	1
7	GF-400-3-6-6	Clamps 3 briquetting 2	1
8	GF-400-3-6-5	Clamps 3 briquetting 1	1
9	GF-400-3-6-3	Clamps 3 localizations blocks	1
10	GF-400-3-6-1	Clamps 3 guide rails	1
12		Pin with hole $\phi 6 \times 15$	2
14		Cylindrical pin $\phi 4 \times 70$	1
15	GF-400-3-5-7	Clamps 2 extension springs 2	2
16	GF-400-3-6-2	Clamps 3 extension springs	1
17	NKI 10/16	Needle bearing	1
18		Cylindrical pin $\phi 10 * 64$	2
19		Cylindrical pin $\phi 6 * 70$	1

B-9C chart:



B-9F			
1.	GF-400-3-4-8	Extension spring support	2
2.	GF-400-3-28-01	Clamps 6 supports	1
3.	GF-400-3-28-05	Clamps 6 base plates	2
4.	GF-400-3-28-02	Clamps 6 guide rails	1
5.	GF-400-3-28-03	Clamps 6 to suspend the arm	2
6.	GF-400-3-28-06	code place	2
7.	GF-400-3-4-3	Transfers the wrap	4
8.	GF-400-3-28-09	code contracts the block	
9.	GF-400-3-28-07	Hits the code block	1
10.	GF-400-3-28-10	code contracts the <u>place</u>	1
11.	GF-400-3-4-7	Eccentric shaft	2
12.	GF-400-3-28-08	Clamps 6 supporting shoes	1
13.	GF-400-3-28-04	code	
14	GF-400-3-28-04	Clamps 6 extension springs	2
15	NKI10/16	Needle bearing	2
16		Cylindrical pin $\phi 10 * 64$	2

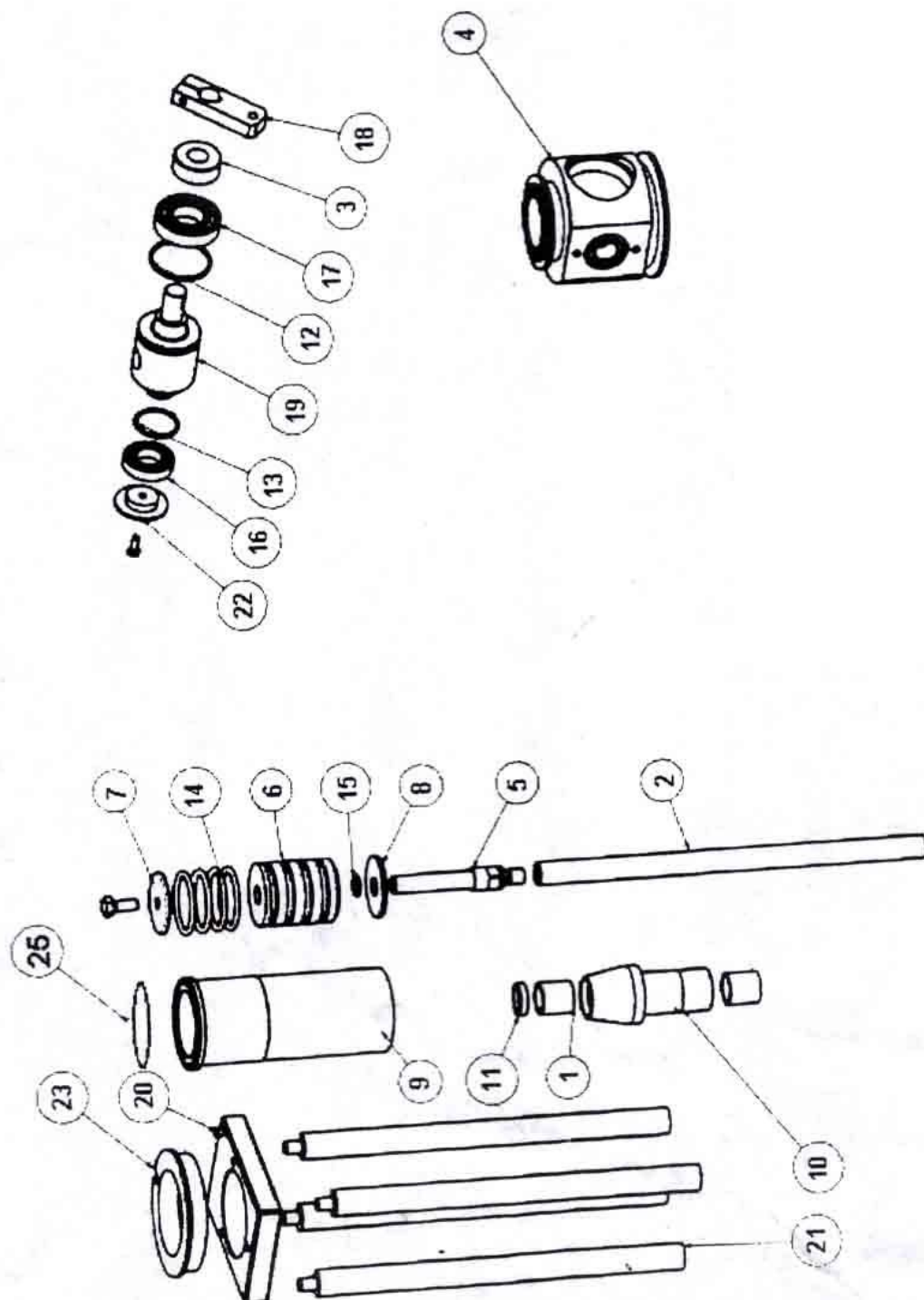
B-9F chart:



S-04Φ60 standard			
1	JBB-22×32×30	Axle bushing	2
2	GF400-02-04-17	Connecting rod	1
3.	GF400-03-03a-12	First filling piece	1
4.	GF400-03-03a-1	Valve body	1
5.	GF400-03-03a-13	Connecting rod	1
6.	GF400-03-03a-14	Piston	1
7.	GF400-03-03a-15	Gasket	2
9	GF400-03-03a-4	Cylinder	1
10	GF400-03-03b-7	Spindle seat	1
11	GB/T10708.3 B22×32×20	Dust ring	1
12	φ60×4	O circle	1
13	φ44×4	O circle	1
14	φ60×4	O circle	4
15	φ18×2	O circle	1
16	GB/T 126 6005 2RS	Bearing	1
17	GB/T 276 6206 2R	Bearing	1
18	GF400-03-03a-9	Tension bar	1
19	GF400-03-03a-8	Turns on lathe the valve	1
20	GF400-03-03a-5	Cylinder base plate	1
21	GF400-03-03a-6	Column	
22	GF400-03-03a-7	Latter fronts	1
23	GF400-03-03a-3	Wrap	1
25	φ80×4	O circle	1

φ60 chart:

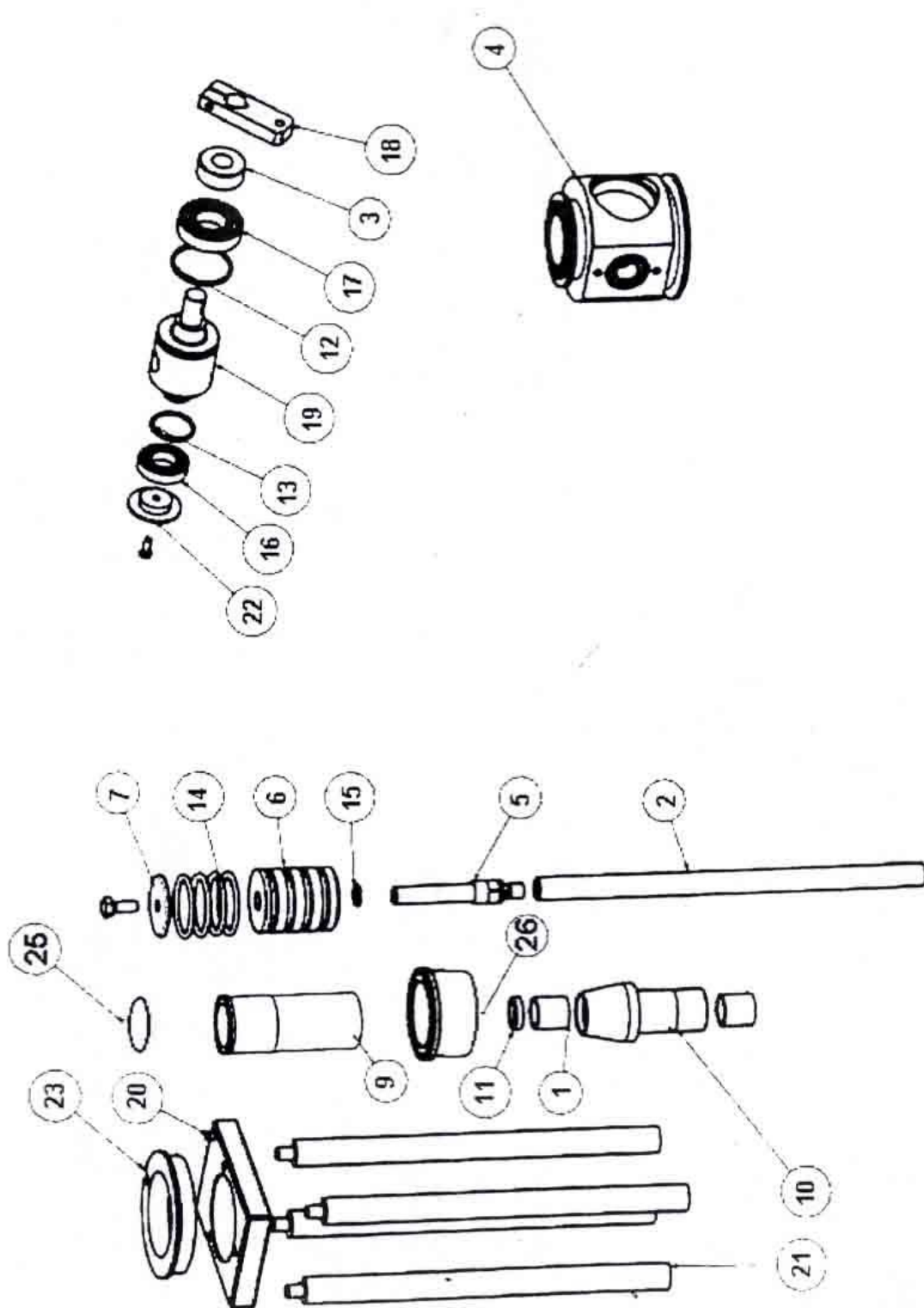
Ø 61



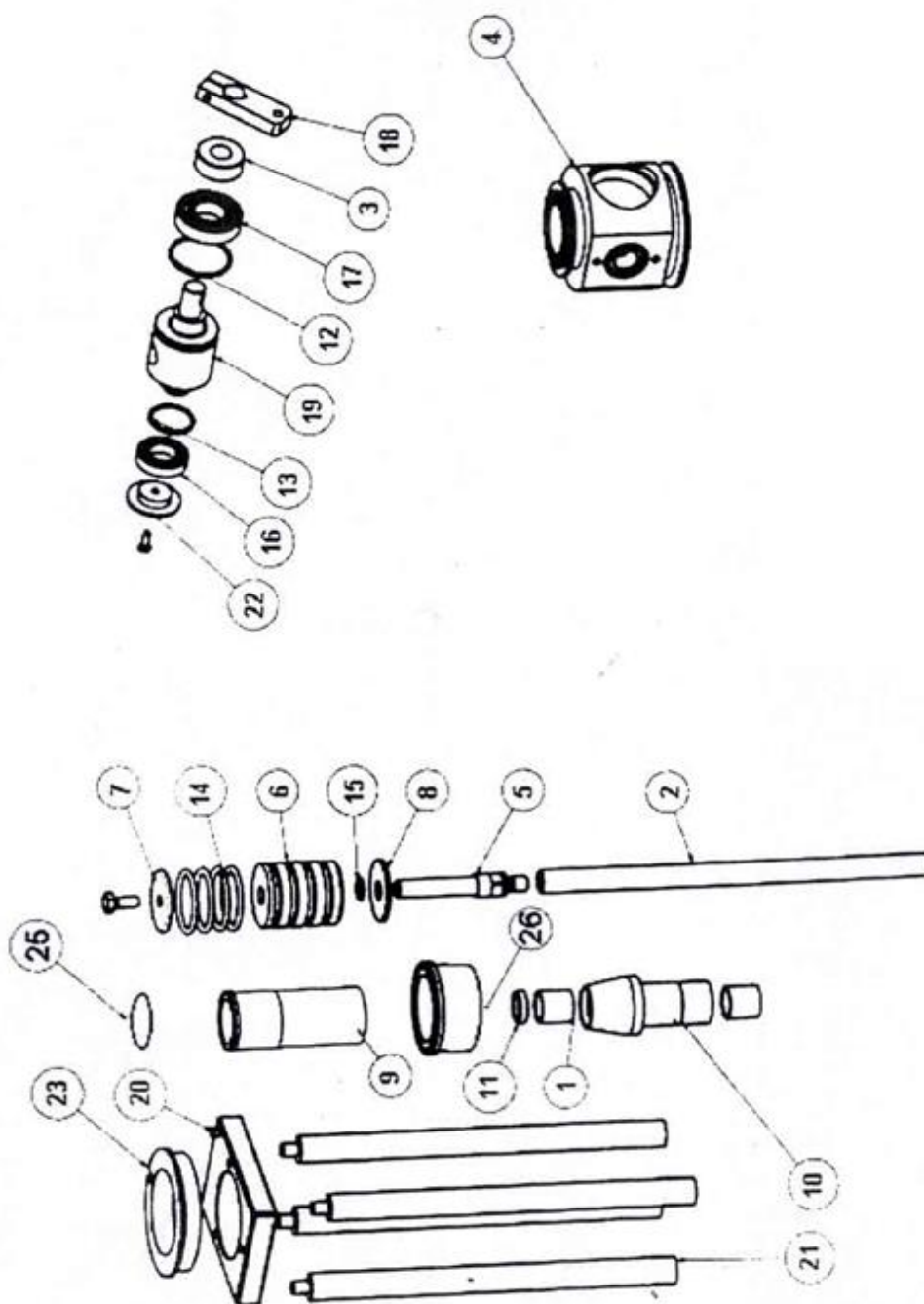
S-04Φ22 standard			
1	JBB-22×32×30	Axle bushing	2
2	GF400-02-04-17	Connecting rod	1
3	GF400-03-03a-12	First filling piece	1
4	GF400-03-03a-1	Valve body	1
5	GF400-03-03a-13	Connecting rod	1
6	GF400-03-03a-14	Piston	1
7	GF400-03-03a-15	Gasket	2
9	GF400-03-03a-4	Cylinder	1
10	GF400-03-03b-7	Spindle seat	1
11	GB/T10708.3 B22×32×20	Dust ring	1
12	φ22×4	O circle	1
13	φ44×4	O circle	1
14	φ60×4	O circle	4
15	φ12×1.9	O circle	1
16	GB/T 126 60052RS	Bearing	1
17	GB/T 276 6206 2R	Bearing	1
18	GF400-03-03a-9	Tension bar	1
19	GF400-03-03a-8	Turns on lathe the valve	1
20	GF400-03-03a-5	Cylinder base plate	1
21	GF400-03-03a-6	Column	4
22	GF400-03-03a-7	Latter fronts	1
23	GF400-03-03a-3	Wrap	1
25	φ80×4	O circle	1

φ22 chart:

Ø 24



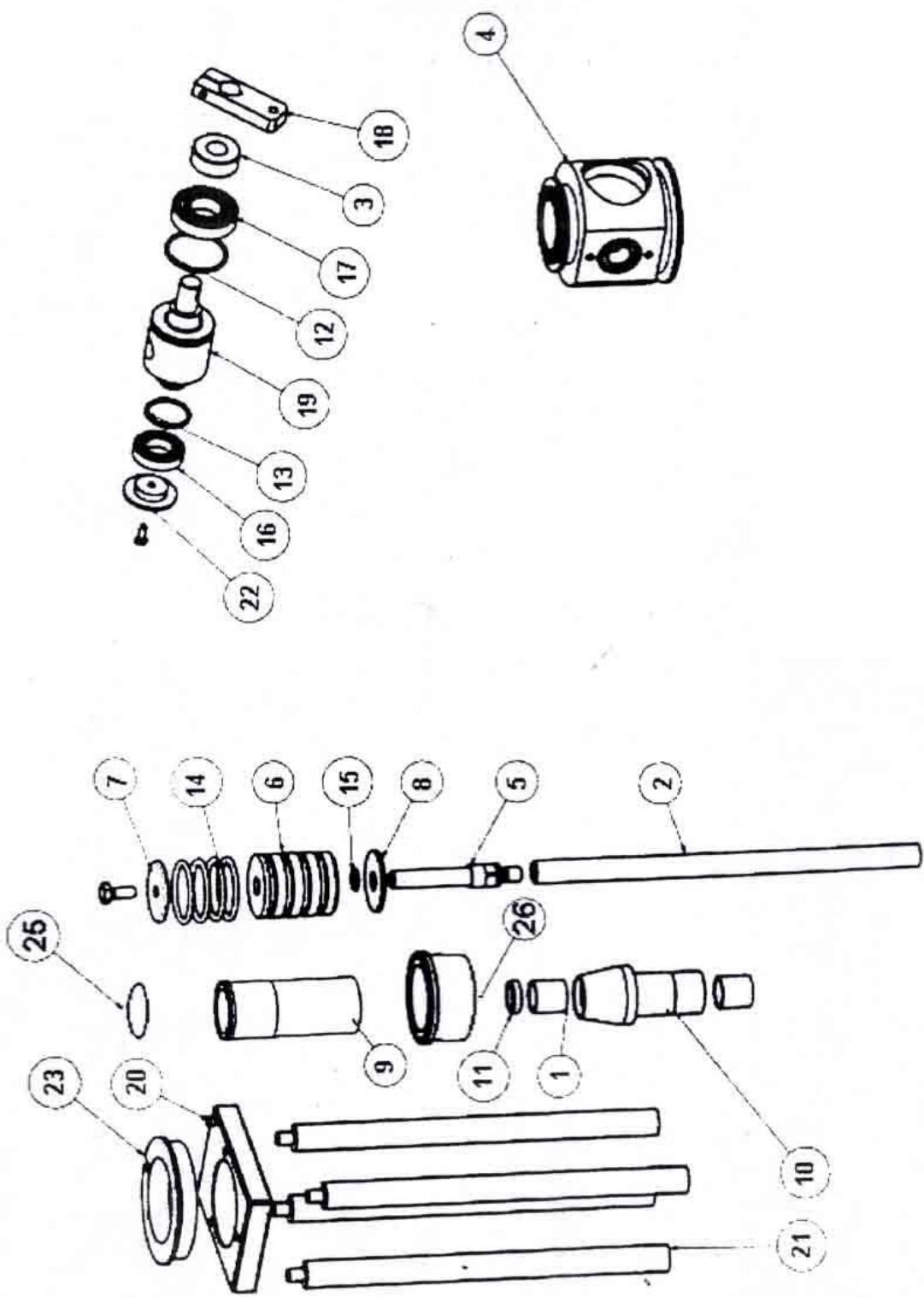
S-04Φ40 standard			
1	JBB-22×32×30	Axle bushing	2
2	GF400-02-04-17	Connecting rod	1
3	GF400-03-03a-12	First filling piece	1
4	GF400-03-03a-1	Valve body	1
5	GF400-03-03a-13	Connecting rod	1
6	GF400-03-03a-14	Piston	1
7	GF400-03-03a-15	Gasket	2
9	GF400-03-03a-4	Cylinder	1
10	GF400-03-03b-7	Spindle seat	1
11	GB/T10708.3 B22×32×20	Dust ring	1
12	GB/T7757.2 57.2×3.55	O circle	1
13	GB/T7757.2 34.5×3.55	O circle	1
14	GB/T7757.2 54.4×3.55	O circle	4
15	GB/T7757.2 14.2×2.65	O circle	1
16	GB/T 12,660,052 RS	Bearing	1
17	GB/T 27,662,062 R	Bearing	1
18	GF400-03-03a-9	Tension bar	1
19	GF400-03-03a-8	Turns on lathe the valve	1
20	GF400-03-03a-5	Cylinder base plate	1
21	GF400-03-03a-6	Column	4
22	GF400-03-03a-7	Latter fronts	1
23	GF400-03-03a-3	Wrap	1
25	φ80×4	O circle	1



S-04Φ70 standard			
1	JBB-22×32×30	Axle bushing	2
2	GF400-02-04-17	Connecting rod	1
3	GF400-03-03a-12	First filling piece	1
4	GF400-03-03a-1	Valve body	1
5	GF400-03-03a-13	Connecting rod	1
6	GF400-03-03a-14	Piston	1
7	GF400-03-03a-15	Gasket	2
9	GF400-03-03a-4	Cylinder	1
10	GF400-03-03b-7	Spindle seat	1
11	GB/T10708.3 B22×32×20	Dust ring	1
12	φ70×4	O circle	1
13	φ44×4	O circle	1
14	φ60×4	O circle	4
15	φ18×2	O circle	1
16	GB/T 126 60052RS	Bearing	1
17	GB/T 276 6206 2R	Bearing	1
18	GF400-03-03a-9	Tension bar	1
19	GF400-03-03a-8	Turns on lathe the valve	1
20	GF400-03-03a-5	Cylinder base plate	1
21	GF400-03-03a-6	Column	4
22	GF400-03-03a-7	Latter fronts	1
23	GF400-03-03a-3	Wrap	1
25	φ80×4	O circle	1

Φ70 chart:

Ø 42
Ø 48



Tenth, electrical operation instructions

The entire machine control system selects Japan Mitsubishi Corporation the man-machine contact surface, the programmable controller, the Japanese deuterostopy, Taiwan Taiwan reaches the frequency changer. Entire machine may defer to the procedure in the work which establishes in advance reliably to move safely. Has the breakdown to demonstrate and to report to the police, the movement prompt, various parts operating time hypothesis conveniently, the daily work load automatic recording and so on.

(1) control principle

When the main engine moves, drives the encoder to revolve, the encoder revolves 360, is the canned cycle happen to. The sufficient nitrogen, to the sign electrical machinery, blows the material, feeds in raw material the switch, feeds in raw material the valve, to the sign, the spring collet and so on is counts according to the encoder pulse transforms the angle, the realization reports to the police, the movement starts, requests and so on movement conclusion, completes the pot, to the sign, the sufficient nitrogen, blows the material, seals the tail, the forming, the end product.

The system center control uses Japan Mitsubishi Corporation the programmable controller, the man-machine contact surface. The main engine transmission uses the Taiwan Taiwan to reach the frequency changer to drive the three-phase asynchronous machine to make the entire opportunity biography, may realize modulates velocity limitless satisfies the work the demand. Uses the encoder in the localization aspect to complete, has the pointing accuracy to be high, the recombination man-machine contact surface causes various parts movement the angle hypothesis ease of operation. Uses the Japanese deuterostopy color code detector to complete the color code the examination, the ease of operation may transform the value to the color code, responds directly. The man-machine contact surface is the operator with the machine communication contact surface, the operator may establish the entire machine movement according to the product.

(2) man-machine interface operation

Passes the power source, the man-machine contact surface can appear the first picture (chart 1-1), the picture demonstrated this company attempts the sign, the corporate name and this machine model. According to “>>>” the button, enters the second picture (chart 1-2). The picture demonstrated the date, the time and automatic, manual, the hypothesis, the statistics, the company introduce and so on five cuts pictures to use the button.

A: Automatic picture (chart 1-3)

The automatic picture is composed separately by following several parts: 1. starts, the engine off, the spot move, the thrust pipe, return to and so on the buttons; 2. counts demonstrated and counts the clear zero button; 3. sufficient nitrogen, blow the material, feed in raw material the switch, feed in raw material condition indicating lamp demonstrations and so on valve, to sign electrical machinery; 4. main engines speeds hypothesis; 5. encoders positions condition demonstration; 6. have not closed, the pot position not to, breakdown demonstrations and so on barometric pressure insufficiency, spring collet.

1. starts, the engine off, the spot move, the thrust pipe, return to and so on the buttons

Start: Causes the main engine continuous working, leads various parts work, uses in the regular production. The button demonstrates “in the movement” according to “the start”, main engine revolution.

Engine off: Causes the main engine to stop down in the working condition, moreover it has the

fixed-point position engine off function. According to “the engine off” the button demonstration white, the hand pine opens the replacement, the main engine revolves to the fixed-point position under the engine off.

The spot moves: Causes the main engine spot to move the revolution, uses in regulating the position, fixes the breakdown to use. Holds down “the spot to move” the button demonstration white, the main engine revolution, the pine opens “the spot to move” the button, the button repositions, the main engine can stop in any position revolving.

Thrust pipe: Blocks the spatial pot, when with will empty the pot to put down. According to “the thrust pipe” the button demonstration white, the back plate drops, under the spatial pot enters in the machine. Again presses “the thrust pipe” the button to reposition, on the back plate goes against, blocks under the spatial pot to enter in the machine.

Returning to: Cuts the second picture the automatic picture.

2. counts demonstrated and counts the clear zero

Counts demonstrated that, Demonstrates the canned quantity. When the regular production, the spatial pot carries on the sufficient nitrogen every time, counts time.

Counts the clear zero: Clear place counts the demonstration quantity, anew starts to count.

3. Sufficient nitrogen, blow the material, feed in raw material the switch, feed in raw material indicating lamps and so on valve, to sign electrical machinery, uses in the picture place above demonstrating corresponds solenoid valve and electrical machinery whether has the circular telegram active status. Their active status all is controls with the angle

Sufficient nitrogen indicating lamp: When sufficient nitrogen solenoid valve circular telegram, the indicating lamp demonstration white, enters the nitrogen sufficiently to the spatial pot in.

Blows the material indicating lamp: When blows the material solenoid valve circular telegram, the indicating lamp demonstration white, injects the material to the spatial pot in.

Feeds in raw material the switch indicating lamp: When feeds in raw material the switch solenoid valve circular telegram, the indicating lamp demonstration white, turns on the channel to blow the material to use.

Feeds in raw material the valve indicating lamp: When feeds in raw material the valve solenoid valve circular telegram, the indicating lamp demonstration white, turns on the channel to blow the material to use.

To sign electrical machinery indicating lamp: When the main engine arrives the certain angle, to the sign electrical machinery work, the indicating lamp demonstration white, regulates the spatial pot to the position which prearranges.

4. Main engines speed setting

Main engine speed: setting main engine operating speed, touch the number, key in the main engine operating speed, PLC can change frequency of frequency converter, thus change the speed of main engine, highest setting speed is 80 pcs per minute.

5. Encoders positions condition demonstration

Encoder position: The machine works for a cycle is happen to the encoder revolves 360, may observe the machine transportation with it the position.

6. The door is not closed, the wrong pot position, breakdown demonstrations and so on barometric pressure insufficiency, spring collet.

The door is not closed: When the door opened, the main engine will stop working because of the breakdown, be able to appear the buzzing to report to the police “has not closed the inscription with the gate”. Only then removes the breakdown after engine to be able to start, but the spot moves may act.

The pot position is not right: When enters the sufficient nitrogen link, should empty the pot position not to be right, but the main engine meeting should the breakdown the engine off, appear the buzzing to report to the police “is not right with the pot position” the inscription. Only then removes the breakdown after engine to be able to start, but the spot moves may act.

Barometric pressure insufficiency: When is made the pressure drop to the certainty, but the main engine meeting should the breakdown the engine off, appear the buzzing to report to the police “is insufficient the inscription with the barometric pressure”. Only then removes the breakdown after engine to be able to start, but the spot moves may act.

Spring collet: When under the pot enters in the sky to the machine in, when appears does not arrive, but the main engine meeting should the breakdown the engine off, appear the buzzing to report to the police with “the spring collet” the inscription. Only then removes the breakdown after engine to be able to start, but the spot moves may act.

B: Manual picture (chart 1-4)

The manual picture is composed separately by following several parts: 1. starts, the engine off, the spot move, the sufficient nitrogen, blow the material, the thrust pipe, to the sign electrical machinery, feed in raw material, return to and so on the buttons; 2. sufficient nitrogen, blow the material, feed in raw material the switch, feed in raw material condition indicating lamp demonstrations and so on valve, to sign electrical machinery; 3. main engines speeds hypothesis; 4. encoders positions condition demonstration; 5. have not closed, the pot position not to, breakdown demonstrations and so on barometric pressure insufficiency, spring collet.

1. Button

Start: Causes the main engine continuous working, drives various parts, uses in the continuous working. According to “start” button demonstration white, main engine transportation.

Engine off: Causes the main engine to stop down in the working condition, moreover it has the fixed-point position engine off function. According to “the engine off” the button demonstration white, the hand pine opens the replacement, the main engine revolves to the fixed-point position under the engine off.

The spot moves: Causes the main engine continuous working, uses in regulating the position, fixes the breakdown to use. Holds down “the spot to move” the button demonstration white, the main engine revolution, the pine opens “the spot to move” the button, the button repositions, the main engine can stop in any position revolving.

Thrust pipe: Blocks the spatial pot, with when will empty the pot to put down. According to “the thrust pipe” the button demonstration white, the back plate drops, under the spatial pot enters in the machine. Again presses “the thrust pipe” the button to reposition, on the back plate goes against, blocks the spatial pot to enter in the machine.

To sign electrical machinery: Uses for to regulate to each spatial pot position to a hypothesis position condition. According to “to sign electrical machinery” button demonstration white, when the main engine revolves to the angle which establishes to the sign electrical machinery, starts to the sign electrical machinery to work. Until the cursor detector, examines the color code, the electrical machinery stops. According to the button repositions “to the sign electrical machinery”.

Sufficient nitrogen: Will regulate the position the spatial pot, will carry on sufficient nitrogen processing. According to “sufficient nitrogen” button demonstration white, when the main engine revolves the angle which establishes to the sufficient nitrogen, the sufficient nitrogen solenoid valve circular telegram work, carries on ground-to-air pot sufficient nitrogen processing. The button repositions according to “the sufficient nitrogen”.

Blows the material: Will imitate the nitrogen the spatial pot, will inject the material. According to “blows the material” the button demonstration white, when the main engine revolves to blows the angle which the material establishes, blows the material solenoid valve circular telegram work, carries on the ground-to-air pot to inject the material. According to “blows the material” the button to reposition.

Feeding in raw material: Feeds in raw material the switch and feeds in raw material the valve to open, for blows the material movement to prepare for. According to “feeds in raw material” the button demonstration white, when the main engine revolves to feeds in raw material the switch and feeds in raw material the angle which the valve establishes, feeds in raw material the switch and feeds in raw material the valve solenoid valve circular telegram work, for blows the material movement to prepare for. According to “feeds in raw material” the button to reposition.

Returning to: Cuts the second picture the manual picture.

2. sufficient nitrogen, blow the material, feed in raw material the switch, feed in raw material indicating lamps and so on valve, to sign electrical machinery, uses in the picture place above demonstrating corresponds solenoid valve and electrical machinery whether has the circular telegram active status. Their active status all is controls with the angle

The sufficient nitrogen, blows the material, feeds in raw material the switch, feeds in raw material indicating lamp the and so on valve, to sign electrical machinery principles of work, with is same from the animation.

3. Machine speed hypothesis

Main engine speed: The hypothesis main engine operating speed, touches the numeral, enters the main engine operating speed which needs, PLC can to the frequency changer carry on the revision frequency, thus realization revision main engine speed goal, highest hypothesis for each minute 80.

1. 1. yards positions conditions demonstration

Encoder position: The machine works for a cycle is happen to the encoder revolves 360, may observe the machine transportation with it the position.

5. have not closed, the pot position not to, breakdown demonstrations and so on barometric pressure insufficiency, spring collet.

The gate has not closed, the pot position not to, breakdown demonstration principles and so on barometric pressure insufficiency, spring collet, is same with the automatic picture. But the gate has not closed insufficient with the barometric pressure only makes visual display alarm, does not make the buzzing warning to be

different with the automatic picture.

C:Hypothesis picture

Is entering the hypothesis picture (chart 1-5), must input the debugging password (initial password is 9088).Touches the numeral, the input password, again presses the determination, enters the hypothesis picture.If the password input mistake, after the picture can leave (chart 1-6) to prompt “the input password wrongly please to confirm” and so on 3 seconds the picture can return to the input password picture.In the hypothesis picture demonstrated a form (chart 1-7), is composed by following several parts:1. pair of signs electrical machinery, the spring collet, to the sign, blow the material, feed in raw material the switch, feed in raw material the valve, the sufficient nitrogen, the zero degree and the fixed-point engine off hypothesis, the hypothesis angle demonstration and so on.

To sign electrical machinery:According to enters “to the sign electrical machinery” to the sign electrical machinery angle hypothesis picture (chart 1-8).So-called is refers to the sign electrical machinery angle:Starts the movement which position to the sign electrical machinery in an action cycle from to which position closing performance.Hypothesis request:The angle drops which generally to the sign electrical machinery to leaves when spatial pot 5mm establishes, when rises to the sign electrical machinery establishes for the angle which closes.

To the sign electrical machinery angle hypothesis picture demonstrated the date, the time, the encoder position condition, the spot move the button, open the determination, the pass determination, the current switch angle.Again uses the spot to move the push-button control main engine, when is and so on the host opportunity to the certain position, lets loose the spot to move the button, according to “the pass determined” has established to the sign electrical machinery closing performance angle.Established the angle could demonstrate in the hypothesis picture.(Established good number of degree, started movement angle not to be able to be bigger than closing performance number of degree, here had to pay attention, otherwise had may not work to sign electrical machinery, other angle hypotheses also had to pay attention to this point.)!Regarding decelerates the time hypothesis to the sign electrical machinery frequency hypothesis and to sign electrical machinery Canada, only then in “zero degree and fixed-point engine off” in hypothesis picture (chart 1-15).To the sign electrical machinery frequency is the electrical machinery rotational speed, it is step-by-steps the electrical machinery therefore decelerates the time with the frequency and Canada to control the electrical machinery the speed.Touches numeral which the digital input needs, may complete to decelerates the time hypothesis to the sign electrical machinery frequency hypothesis or Canada.

The spring collet, to the sign, blows the material, feeds in raw material the switch, feeds in raw material angles and so on valve, sufficient nitrogen with is same to the sign electrical machinery angle hypothesis operation.

The spring collet angle hypothesis (chart 1-9) requests:Turntable to under work position migration when establishes for the angle which opens, moves to the work to front supposes for the angle which closes.

(Chart 1-10) requests to the sign angle hypothesis:Contacts the spatial pot to the sign electrical machinery, the color code photoelectricity light eye happen to when the spatial pot mark horizontal position establishes for the angle which opens, may suppose to the sign electrical machinery rise process

in for the angle which closes.

Blows the material angle hypothesis (chart 1-11) to request: The spatial pot promotes upwardly to the highest order when supposes for the angle which opens before, the spatial pot drops supposes for the angle which closes.

Feeds in raw material the switch angle hypothesis (chart 1-12) to request: The turntable just moved to the new work position when established for the angle which opened, moved in the turntable to in the next work position process establishes for the angle which closed.

Feeds in raw material the valve angle hypothesis (chart 1-13) to request: The spatial pot promotes upwardly to the highest order when supposes for the angle which opens around, the spatial pot drops supposes for the angle which closes, must act according to the filling angle which the material how many hypotheses close.

The sufficient nitrogen angle hypothesis (chart 1-14) requests: To the sign under work position, contacts when the spatial pot supposes for the angle which opens, leaves when the spatial pot supposes for the angle which closes.

Zero and fixed-point engine off hypothesis (chart 1-15): This picture with above differing from, the zero hypothesis is refers the encoder lives the new nulling operation to use, regulates the encoder beginning position. After the zero position change, other hypotheses angles all must simultaneously change the certain angle, therefore in hypothesis zero position time must pay attention! The fixed-point engine off refers to each time the main engine continuous working, when needs the engine off, the main engine can revolve to this position engine off. Zero position hypothesis and fixed-point engine off hypothesis, also all is the initial point moves the button to adjust the good main engine position, again presses “the zero hypothesis” or “the fixed-point engine off” the button completes the hypothesis.

D: Statistical picture (chart 1-16. charts 1-17)

The statistical picture demonstrates a day-long production output, it by 31 working days may the record, and it can delete the old record automatically, increases automatically newly, is advantageous for examines looked recently produced the situation.

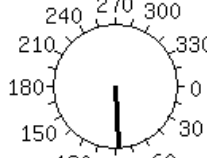
E: The company introduces (chart 1-18. charts 1-19. charts 1-20)

The company introduced in the picture the simple introduction this company's situation and the contact method, was advantageous for the customer communication.

(3) operation kneading board button

Operates on the kneading board to have the power source key, to stop the switch anxiously, reports to the police calls the bee, the debugging/automatic change-over, the start button, the engine off button, the spot moves the button.

(4) Human-Machine Interface:

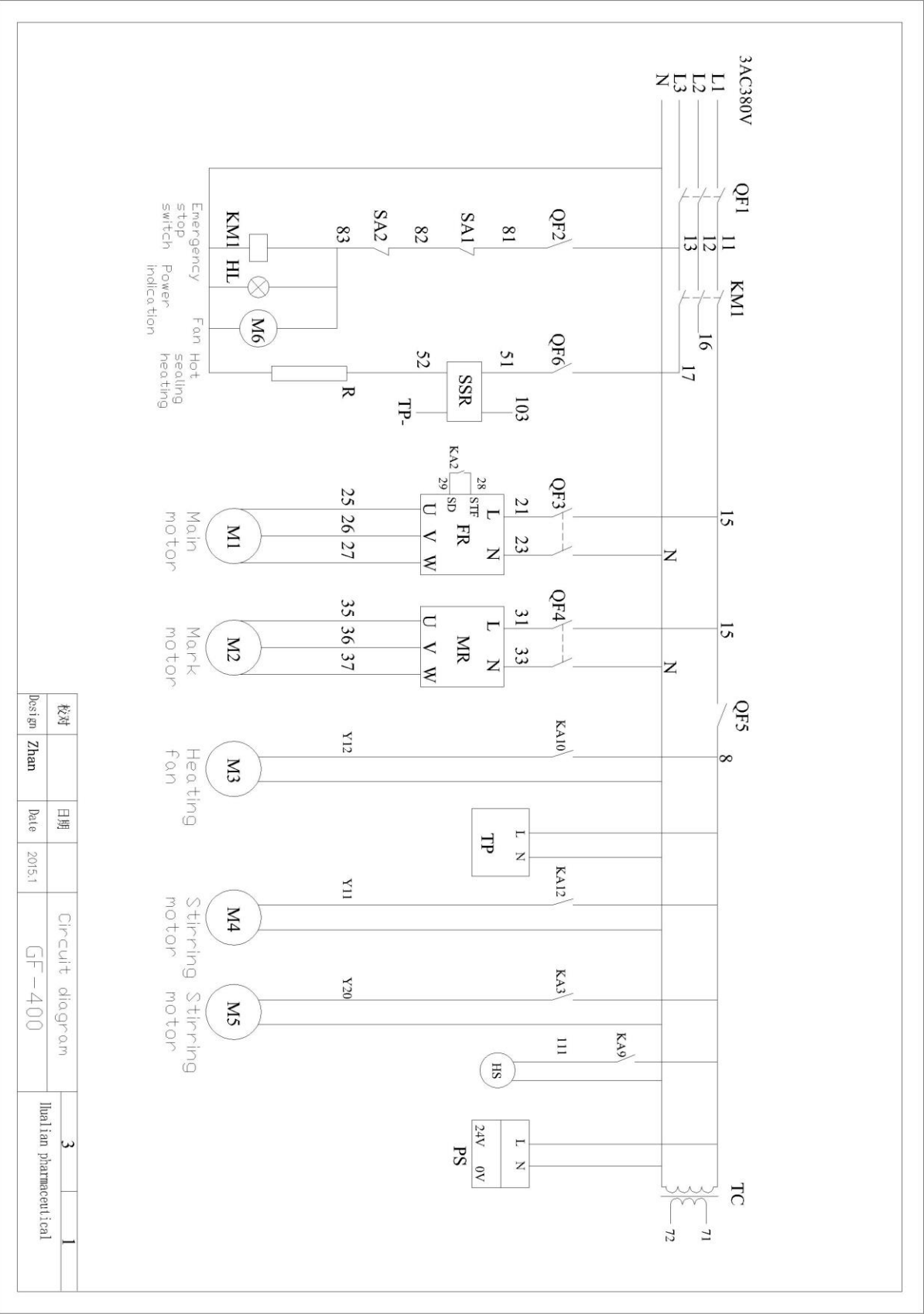
	INPUT PASSWORD: 01234 ENTER BACK																																													
PASSWORD ERROR PLEASE CHECK	<table border="1" style="width: 100%; border-collapse: collapse; font-size: 10px;"> <tr> <td style="padding: 2px;">FILL NITROGEN</td> <td style="padding: 2px;">BLOW MATERIAL</td> <td style="padding: 2px;">FEED SWITCH</td> <td style="padding: 2px;">FEED VALVE</td> <td style="padding: 2px;">PHOTOCELL MOTOR</td> </tr> <tr> <td colspan="2">MOTOR SPEED 01 TIMES/MIN</td> <td colspan="3">COUNT CLR 01234</td> </tr> </table> TEMPERATURE DISPLAY 012.4°C SET 012.4°C  HEAT STOP TUBE JOG STOP BACK START	FILL NITROGEN	BLOW MATERIAL	FEED SWITCH	FEED VALVE	PHOTOCELL MOTOR	MOTOR SPEED 01 TIMES/MIN		COUNT CLR 01234																																					
FILL NITROGEN	BLOW MATERIAL	FEED SWITCH	FEED VALVE	PHOTOCELL MOTOR																																										
MOTOR SPEED 01 TIMES/MIN		COUNT CLR 01234																																												
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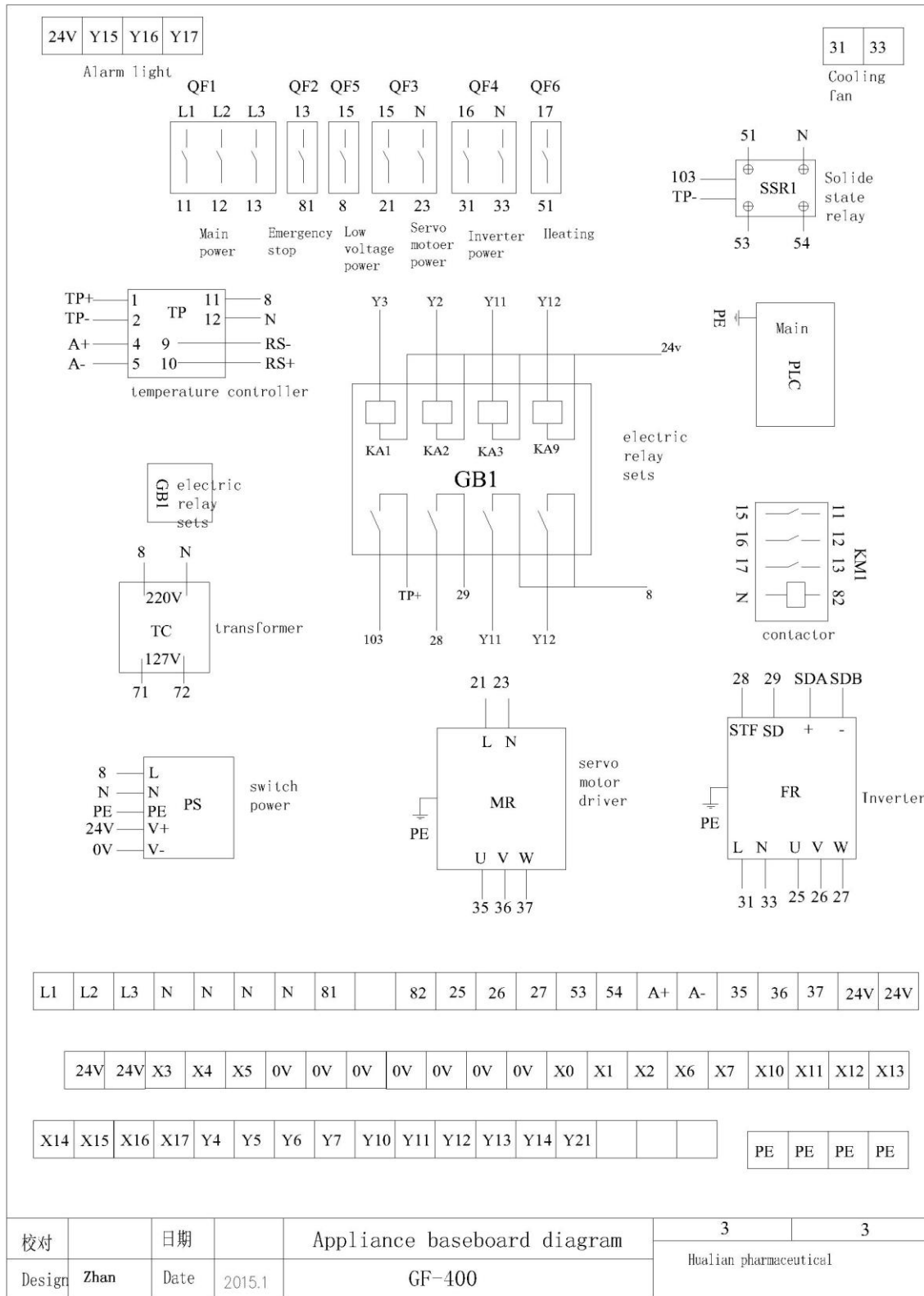
ANGLE SET 06/ 1/19 15:14:22 012° ON ENTER 012° OFF ENTER JOG BACK	PHOTOCELL MOTOR ANGLE SET 06/ 1/19 15:11:04 012° ON ENTER 012° OFF ENTER JOG BACK PHOTOCELL MOTOR SPEED 01234 HZ																																																																								
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(5) frequency converter parameter

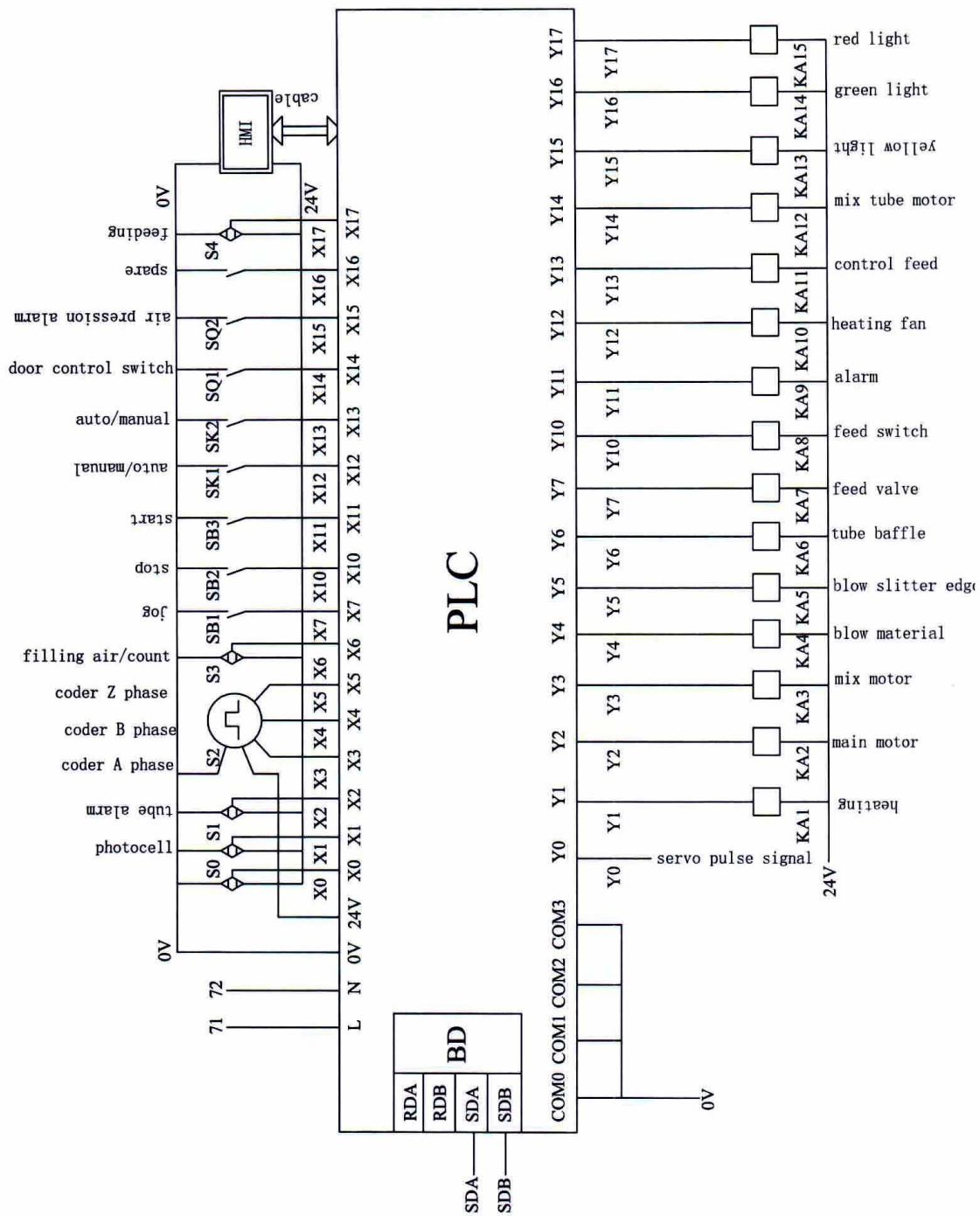
Function name	Function demonstration	Parameter Setting	Note
Basic frequency input hypothesis	Pr-00	d-02	
Revolution signal origin hypothesis	Pr-01	d-01	
Highest operating frequency hypothesis	Pr-03	d-60	
Greatest voltage frequency hypothesis	Pr-04	d-60	
Middle frequency hypothesis	Pr-06	d-13	
Middle voltage hypothesis	Pr-07	d-12	
Lowest output frequency hypothesis	Pr-08	d-1.3	
Lowest output voltage hypothesis	Pr-09	d-12	
First rise time hypothesis	Pr-10	d-0.5	
First decelerates the time hypothesis	Pr-11	d-0.2	
The torque compensates the hypothesis	Pr-54	d-6	
Slips compensates the hypothesis	Pr-55	d-5	
Bao leads the hypothesis	Pr-77	d-2	
Mailing address hypothesis	Pr-78	d-1	
Parameter locking/reset hypothesis	Pr-76	d-01	d-00 may read, may write d-01 read-only, cannot write d-10 restores leaves the plant the establishment
Note:Other function establishments decides in addition according to the working condition			

11th, electric appliance schematic diagram





Electric principle drawing of GF-400 automatic tube filling and closing machine

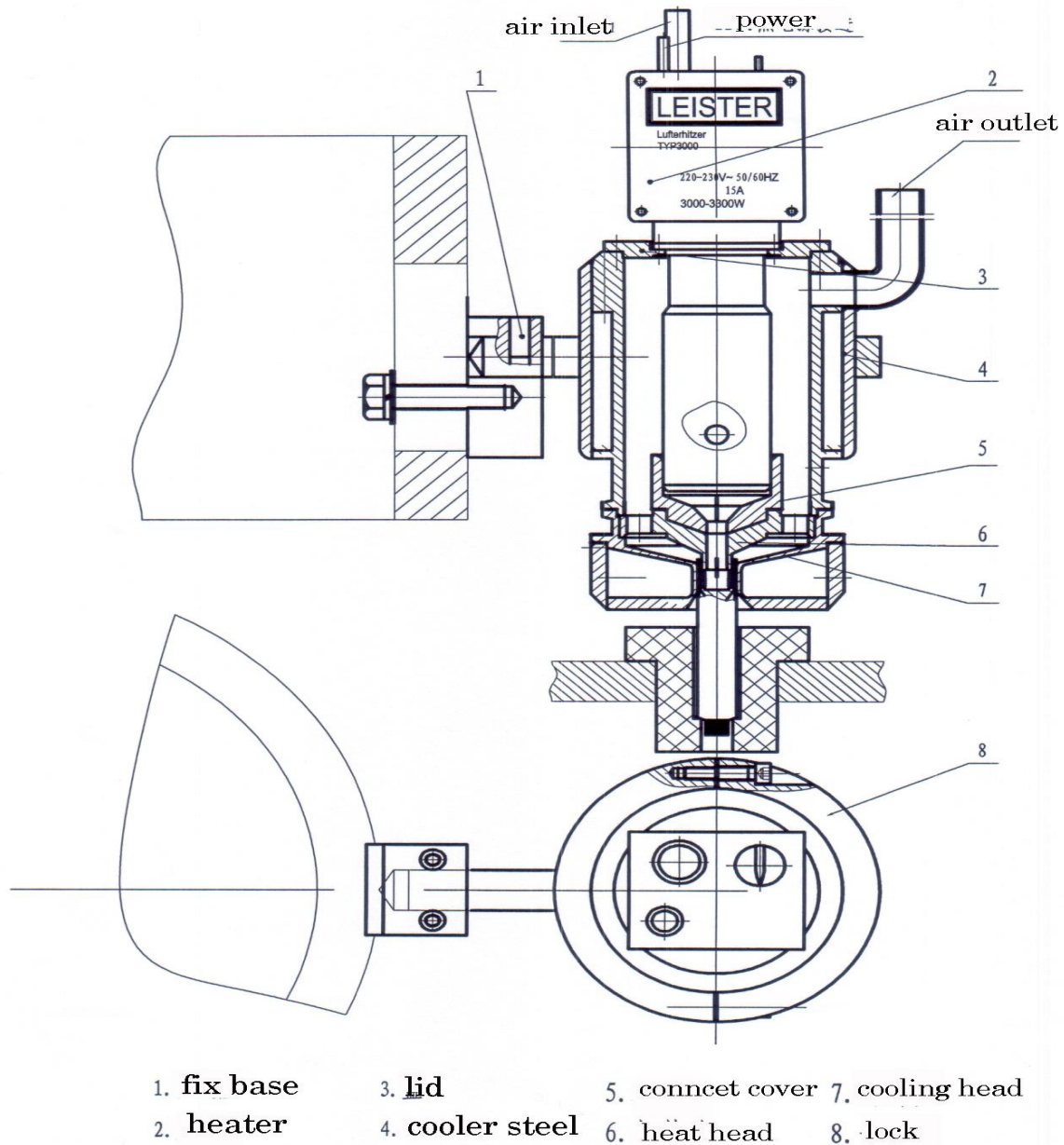


Packing list

No.	Name/Spec.	QTY	Remark
1.	GF-400 Automatic Tube Filling and Sealing Machine	1	
2.	Extra alu tube mould	3	
3.	Extra cool jacket	2	
4.	Water heater and water pump	1	
5.	Water chiller	1	
6.	High pressure butter oil gun	1	
7.	Pressure oil gun	1	
8.	Hang operating crank	1	
9.	17inch wrench	1	
10.	8-17 inch wrench	1	
11.	Allen wrench	1	
12.	38-42 inch wrench	1	
13.	6inch +, - type screwdriver	1 each	
14.	8inch monkey wrench	1	
15.	shield ring clamp for bearing	1	
16.	shield ring clamp for hole	1	
17.	Tension spring	6	
18.	Draw spring	12	
19.	Steel letters	10each	0-9
20.	O ring	3sets	
21.	bearing CF10	2	
22.	Synchronous belt	1	For plastic tubes
23.	Cylinder SDA20*10	1	
24.	Cylinder SDA40*15	1	
25.	Thermocouple	1	
26.	Eccentric gear	1	
Documents			
1	Operation Manual	1 copy	
2	Certification	1 copy	
3	CD	1 each	Company CD, operation CD, CD for transducer etc.

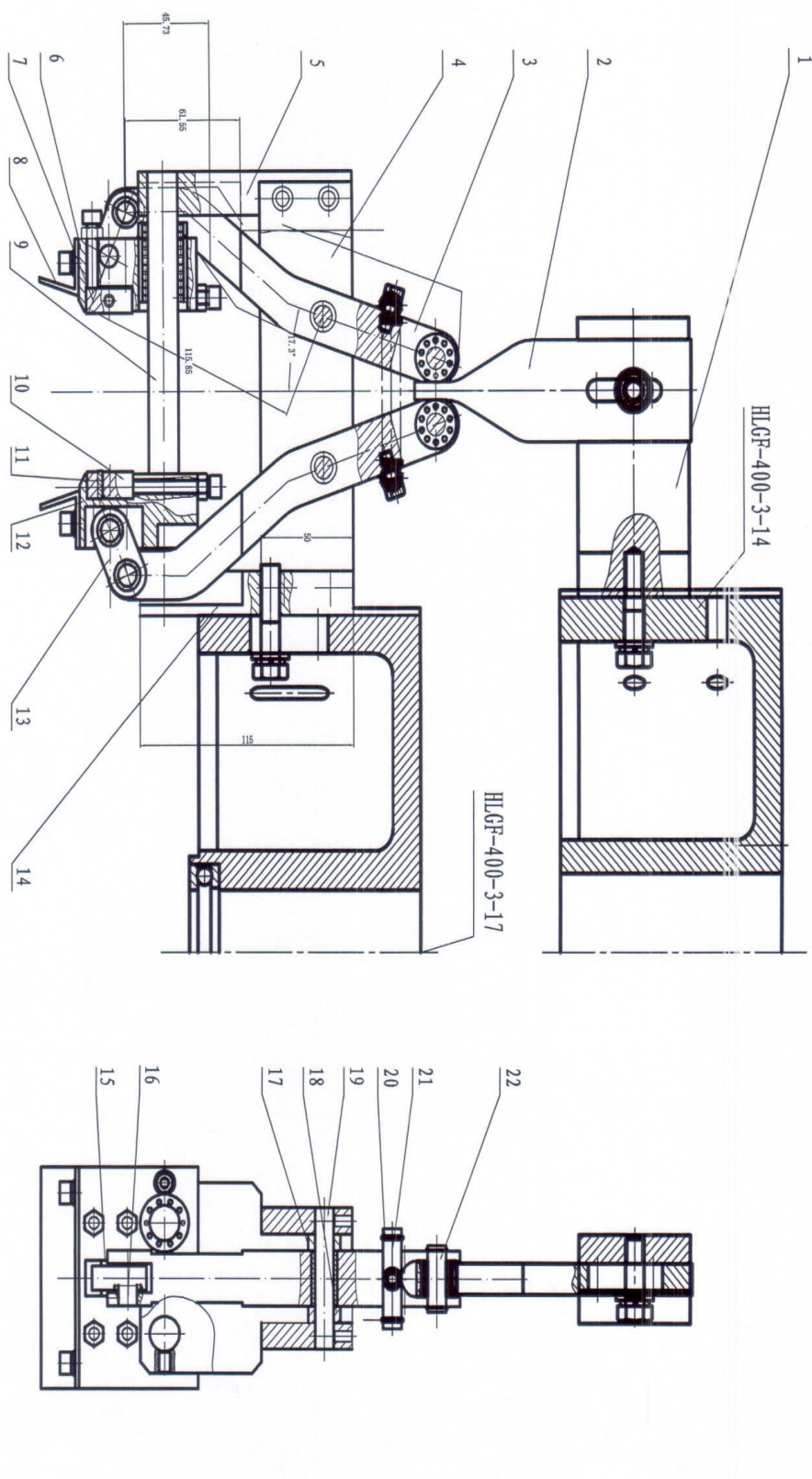
Attachment (only for plastic tube)

chart 1: inner heating device



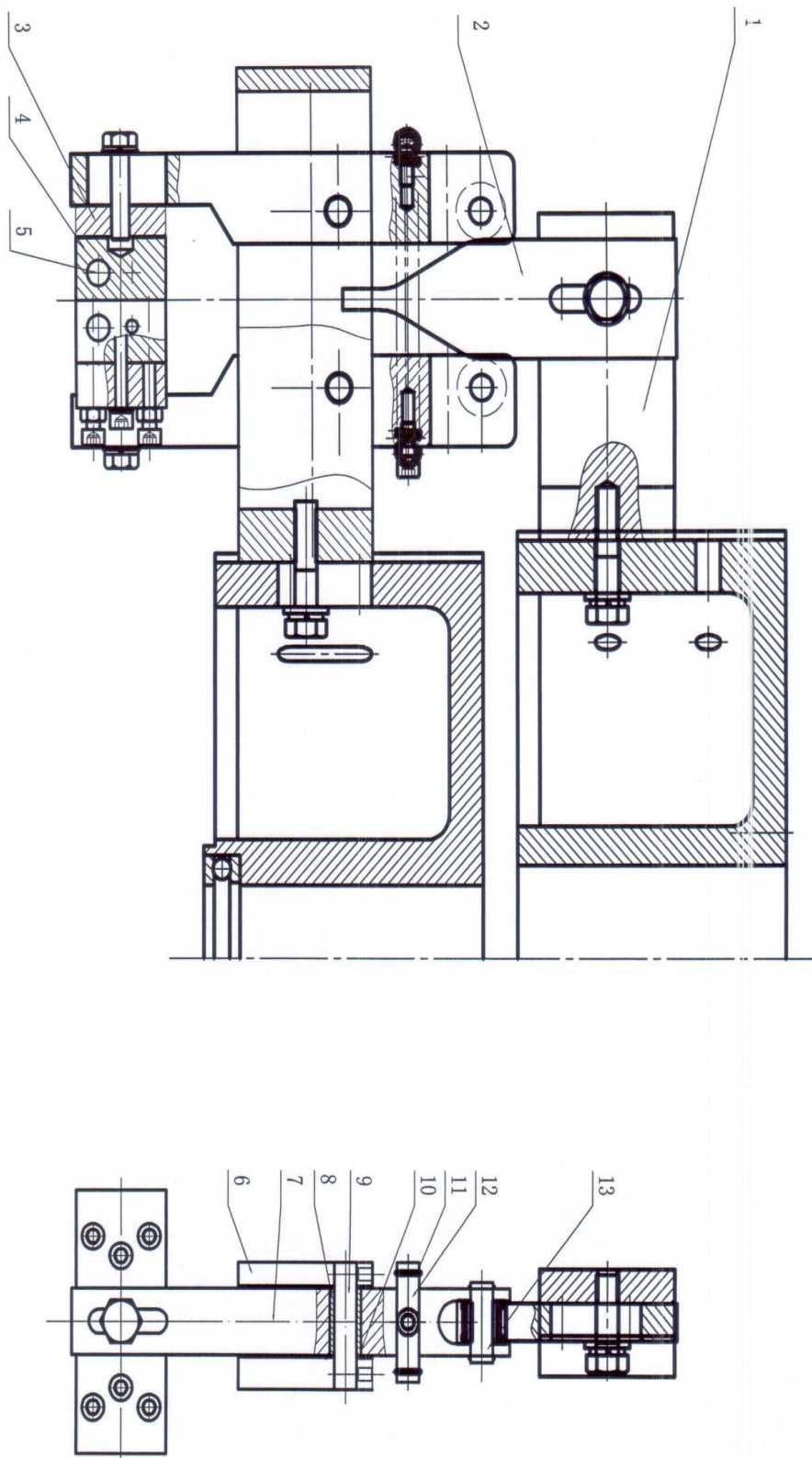
Work Theory: the whole heating device is fixed on the fixed plate, the wind will come in from the air inlet and be heated by heater while the temperature will be around 200°C (the temperature will be controlled by temperature controller and air sending quantity). It will go through the wind path after being heated, transferred the thermal to tubes in the heat head to heat the tubes. At the same time, the outer arm of tubes will be cooled by circle cooling water (note: you should open the circle cooling water first, and then open the heater.), and the hot air will go out from air outlet. After that, the tubes will go to next work.

chart 2: hot sealing device



1. nip I basis 2. nip I guide rail 3. swing arm 4. shoe plate 5. external fixed board 6. guide clamping basisA 7. hot sealing clamping plate A 8. baffle plate 9. leading axle 10. hot sealing clampingB 11. steel letter 12. guide clamping basisB 13. flap 14. internal fixed board 15. wrist A 16. wrist B 17. axle sleeve 18. distance sleeve 19. wrist B 20. nip I tension spring 21. tension spring holder 22. weist C

chart 3: external heating and sealing device



- | | | | | | | |
|---------------------|------------------------------|-----------------|----------------|---------------|---------------------------|-----------|
| 1. nip 1 basis | 3. sealing adjustment board | 5. heating pipe | 7. swing arm | 9. wrist | 11. nip 1 tension spring | 13. wrist |
| 2. nip 1 guide rail | 4. heating and seating board | 6. fixed basis | 8. axle sleeve | 10. cage ring | 12. tension speing holder | |

chart 4: punching device

