Single head capping machine

Instruction
1. Brief

This kind single head capping machine is mainly used for filling line in Pharmacy, food, chemical, pesticide and other industries. Use stainless steel, easy to remove and cleaning meet the GMP requirement.

The interval plate can finish cap placing, capping automatically, no bottle, no capping, wont damage caps. The whole machine is mechanism, electricity, pneumatic integrated, reasonable structure, stable work, easy to maintain, suitable for different bottle material and size.

Power is three phase, 5 wires, 50Hz alternating current, power supply is 380V, 1.5 KW. For the safety of operator, electric case and frame should be ground connection! Follow the manual before using machine so as to know how to operate, adjust, and maintain, operate it correctly.

2. Parameter:

- Model: SD-XG-05
- Factory: IMC
- Power supply: 380V,50HZ,
- Power: 1.2KW
- Dimension: 1000*800*1700
- Weight: 400kg

3. Working principle:

The craft flow: feeding machine automatically → 6 nozzle filling → shake
hopper ordering cap → bottle dividing plate placing cap → capping → bottle discharging. The filling is integrated with mechanism and pneumatic, cap placing and capping is mechanical. All work is controlled by electric.

**Working principle narration:**

1. **Conveyor:**
Conveyor is driven by 0.18KW worm gear speed reducer motor, the speed can be adjusted sleeplessly through speed reducer hand wheel.

2. **Capping part consists of** bottle dividing plate, shake hopper, cap conveyor, cap placing mouth, capping device etc.

   A. **Star wheel:**
   The interval moving is forced by cam slicer, bottles after filling conveyed to the plate by conveyor, then realizing placing cap, capping, then discharge out by conveyor.

   B. **Shake hopper:**
   The principle of shake hopper is through the pulsation electromagnetism drive spring system of alternating electromagnet, forming directional vibration, so as to realize auto range and trend feeding, adopts double-way controllable silicon regulating pressure in electric controlling, to realize stepless speed regulating of shake hopper.

   C. **Screwing capping:**
   It consists of two parts: capping head, and up and down cam etc, self-developed permanent magnet screw caps without touch, won’t
damage caps.

4. Operating and using

A、 Preparation before starting

1、 Power: connect power, rack must be ground connected reliably.

2、 Lubricating: reliable and correct lubricating can prolong largely the working life of the machine. 
(1) Firstly, infuse proper level of 40# motor oil in leader of each drive part.

B: Starting

The operation is easy, connecting power, the power light is on. Firstly, open the knob of shake hopper, adjust the pressure to proper, ensuring caps enter into rail smoothly, when the rail is full with caps, start all, adjust main engine knob, adjust the working frequency of main motor, realizing capacity adjusting( PS: after the frequency is set, not change; if change, may affect the harmony; if need to change, the filling part parameter should adjust too). Round button is total stop button, when there is emergency, press the button, then all operation will stops. To recover work, back-out the round button clockwise, take out all bottles from the conveyor, re-press it to start.

5. Adjusting:

1. Adjusting of screw capping:
   
a. Fall the capping head to the lowest position from bottle,
then further fall 1.5-2.5mm is ok.

2. Adjusting of devising plate
   a. Loosen the screw of the dividing plate, then adjusting the position of the dividing plate with the capping head to see the entrance and out mouth is consistent.

3. Adjusting for the capping head’s tightness
4. Will the spin a covering a hex screws loosen the M6 which beside of the capping head , clockwise turn the adjusting board, the capping force will increase or will loose.

6. Common breakdown and solution

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<tr>
<th>phenomenon</th>
<th>solution</th>
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<td>After shake hopper working for a long time, the speed slow down suddenly or when adjust the highest, there is only vibration, and caps won’t go forward or the noise is too much.</td>
<td>elastic element bolt is loose, resulting in electromagnet attach together, then the tightening bolt of tightening elastic element adjusting the gap of the electromagnet to 0.5-1.0mm</td>
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| 2. After link P the power, the hopper won’t vibrate. | 1. Remove and check whether the electrical box of fuse is fusing, electrical components is loose, the plug in the socket contact undesirable or not.  
  2. Check the coil of electromagnetic is burnt up |
| 3. capping not tight                     | Check the part five for adjusting                                         |
7. Maintain:

The main drive of the machine is mechanical, some drive of chain wheel and bearing should be maintained, keep good lubricating, the worm gear reducer casing should be changed regularly, add oil to ensure the smooth work of the machine.