UPMACH

Automatic Capsule Visual Inspection Machine UP-360

Automatic Capsule Visual Inspection Machine adopts an advanced high-definition visual system with AI (Artificial Intelligence) algorithm and high-speed image processing technology, combined with a stable mechanical structure and reliable control system, which can detect various defects such capsule damage, black spot, stain, abnormal shape, split, top concave and other imperfections. The equipment also includes several advanced in-house developed technologies, including a mechanical structure, electronic cam, high-speed graphics acquisition system and AI (Artificial Intelligence) defect recognition algorithm, which can accurately detect the appearance of the capsule at a high speed of 360 degrees, with a speed of 2 times per second. Moreover, the defective capsules can be automatically rejected, which solves the problems of subjective emotion, fatigue factor, accuracy, and speed of manual detection, thus greatly reducing the production costs of pharmaceutical enterprises.

Features:

- Capsules can be automatically lifted and fed by means of compressed air.

- This machine can be connected to the automatic capsule filling machine or liquid capsule filling sealing machine to form one production line according to the different number of channels or can be used as one single machine.
- Automatic detection and elimination of defective capsules by means of the visual inspection principle and high-speed image processing technology.
- The detection information is based on templates and can be deployed repeatedly; the core testing software is customized, which can be designed dynamically according to the characteristics of customers' products.
- Some defects can be classified and identified by deep AI (Artificial Intelligence)
- Real time storage of test data, dynamic display of test results, real-time images and running status.
- The software adopts a modular design, which is easy to upgrade, improve and maintain.
- No capsule is stored in the channels and feeding hopper after each batch.
- After capsules are rectified, capsules can be detected one by one, with a speed that can reach 2 capsules per second.
- Wide range application to hard capsules: #000, #00EL, #00, #0EL, #0, #1, #2, #3, #4 and #5 by changing the tooling.
- HMI has different operation authorities.
- Simple structure, easy to operate, maintain and clean.
- No contact is made to the capsule during the whole process, which reduces the human risk and contamination.

Technical Parameters:

Model	UP-360
Machine Name	Automatic Capsule Visual Inspection Machine
Max. inspection speed	216,000 capsules/h
Inspection range	Outer appearance in all directions
Inspection accuracy	Fatal defect: 100% Serious defect: ≥95% Minor defects: ignored
Inspection method	Multi-channels single capsule inspection
Applicable capsules	All hard capsule sizes
Power supply	380V / 50HZ/ 3-phase
Power	3KW
Air consumption	15L/min
Working condition	Temperature: 0-40℃ Relative humidity: 40%-60%
Dimensions	1100*930*1620mm
Weight	Approx. 550Kg