Plastic pellet screening system – PLATON series

PLATON contribute to product quality improvement by automation of screening process against foreign particle and contamination in plastic pellet.

Sample of materials and contaminants which can be handled by SuperPLATONⅡ

Benefits

		Before	After
1	Reduce the workload of operators	● It takes a lot of time for manual laber inspection. ● Physical load like eye strain is large by long and fine manual work.	● Screening in short time. (Maximum 1000 kg per hour capacity) ● Automation screening.
2	Quality improvement	● Human eye screening causes screening occur. ● Different screening standard by each inspection operator. ● Defective products are released to the market.	● Screening criteria becomes clear and stable. ● Release of defectives can be prevented by screening before shipment. ● Quality problem can be found at the real time basis in the production process.
3	Cost reduction	● Manual inspection to all products (or sampled) is costly.	● Reduce the labor cost of inspection.

Materials and contaminants which can be detected

Material color	White color - Translucent		Transparent		Black color		Colored
							
Contaminants	Discolored (Dark contaminant)*1	Micro black spot (under0.1 mm)	Discolored (Dark contaminant)*1	Micro black spot (under 0.1 mm)	Discolored (Bright contaminant)*2	Micro contaminants	Discolored (more than one color of contamination)
							 
Super PLATONⅡ	+++	+++	++	+++	+++	++	++ (Color filter can be used.)*3
PLATONⅡ	+++	+	–	–	+++	+	+++ (Color of fluorescent light can be changed.)*3

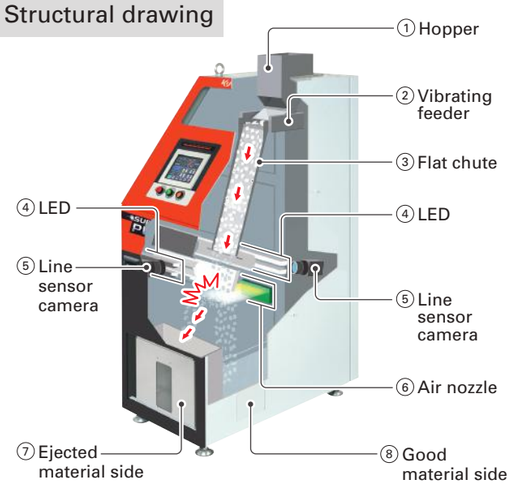
*1 Contaminant which is darker than good material *2 Contaminant which is brighter than good material
*3 Screening accuracy will improve with these options, depends on the contrast of color between good material and contaminant.

Screening procedure

Flow	① Put material into a hopper. ② Vibration feeder feeds material. ③ Material falls through a chute.
Detect	④ Material is lit up by LED. ⑤ Two cameras inspect material from front and rear.
Discharge	⑥ Eject material which is detected as contaminations by air. ⑦ Collect ejected material. ⑧ Good materials flows down to good material side.

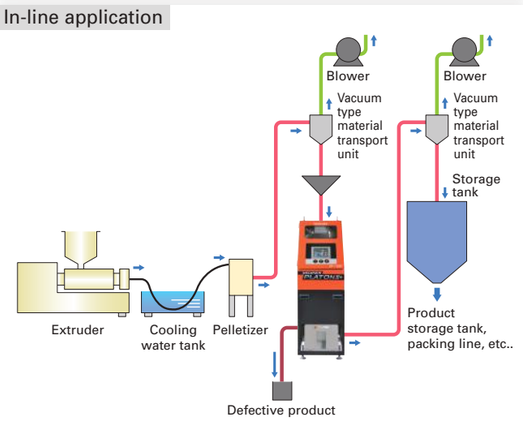
How to eject contaminants

Structural drawing

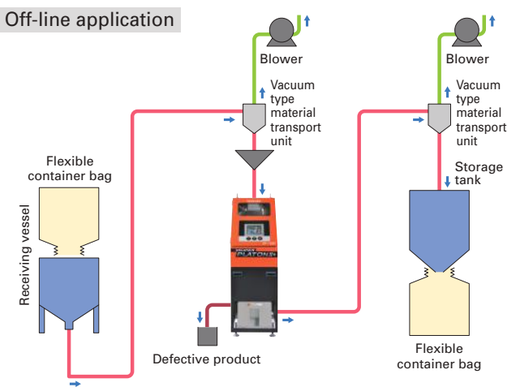


Sample application

In-line application



Off-line application



*Process capacity: 400 – 1,000kg/h