NISSHIN ENGINEERING

Eddy Classifier

AIR CLASSIFIER

Eddy Classifier is a compact air classifier that has been developed for the purpose of classifying relatively coarse particles such as plastics, foods, metals and ceramics. Compared with the forced vortex type air classifier, because of no moving parts, this type of semi-free vortex style air classifier has achieved better performance in the range of coarse classification, such as 30 to 300 microns cut point.

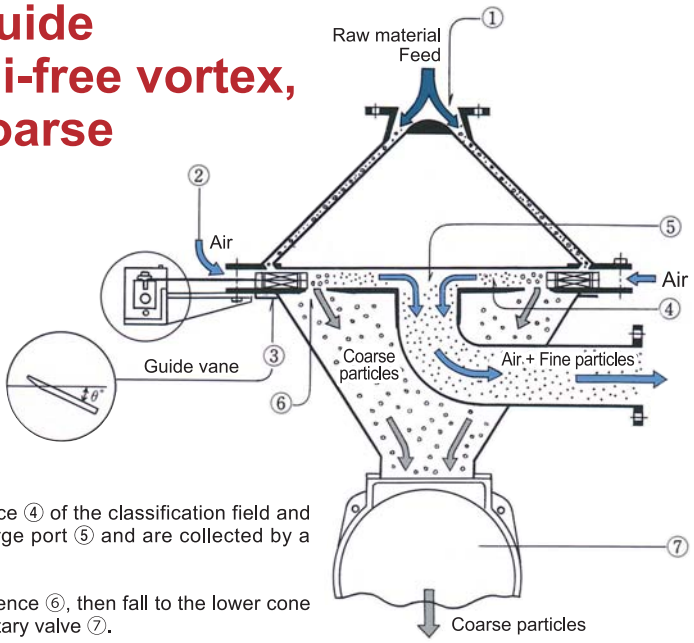
High classification performance between 30 to 300 microns cut point ranges. Perfect fitting to various industrial material classification especially for coarse powder field.

- Compact design. Less floor space is required.
- No moving parts. The mechanism is simple.
- Cut point can be easily adjusted by rotating the small steering wheel handle. This handle determines the angle of the vanes, and once the optimum angle is found, it is easily repeated using the same setting of the handle.
- High reproducibility is possible by the detail reading of the vane angle inscribed on the handle unit.
- Specially designed for coarse classification ranges.
- Stable processing is available due to small shift rate of cut point compared to the shift rate of air flow.
- The Eddy Classifier can effectively classify adhesive particles. On the other hand, vibration or ultrasonic sieve is hard to classify such materials.
- The anti-abrasion specifications are available (optional) for particles with high worn down characteristics.

Eddy Classifier

Air classifier

θ degree inclined Guide vanes form the semi-free vortex, which best fit the coarse classification.

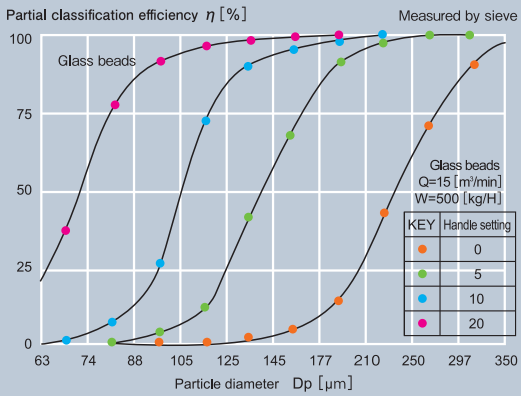


1 Uniformly fed material enters at the top center of the machine ① by gravity. Suction, applied on the fine particle discharge port ⑤, causes air to enter the perimeter of the machine ② passing through the adjustable Guide vanes ③. As air is sucked into the machine, eddies are formed creating a classification field ④. The in-rush of air through the Guide vanes accelerates the particles so that they are shot into the classification field along the spiraling eddy currents. The particle paths vary depending on the particle diameters.

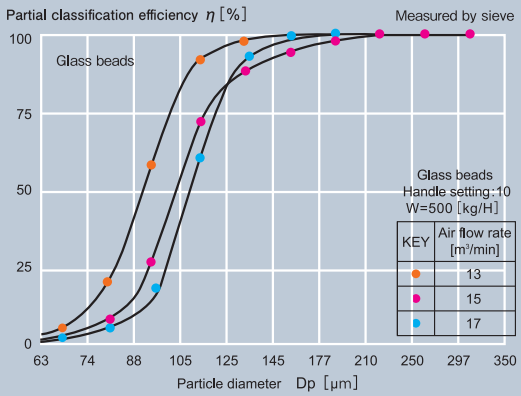
2 Fine particles move to the inner circumference ④ of the classification field and are sucked out from a fine particles discharge port ⑤ and are collected by a cyclone separator or a bag filter.

3 Coarse particles move to the outer circumference ⑥, then fall to the lower cone and discharged from the classifier through Rotary valve ⑦.

The relationship between Vane angles and Partial classification efficiency



The relationship between Air flow rate and Partial classification efficiency



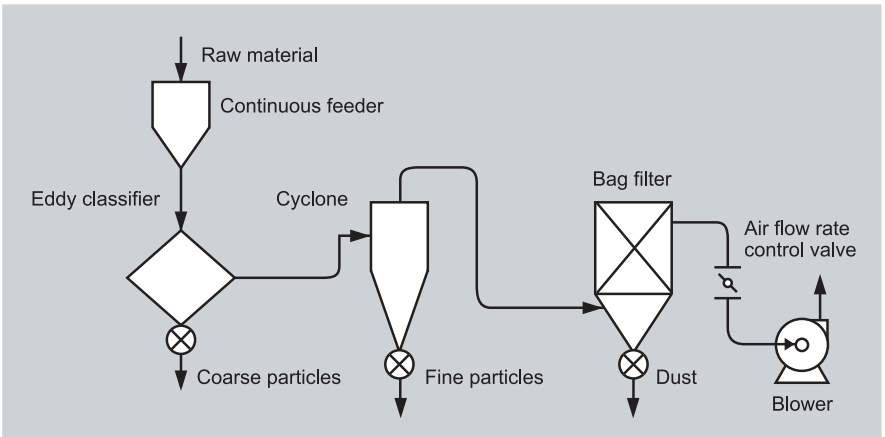
Outline of the equipment

MODEL \ PARTICULAR	Cut point Dp[μm]	Feed rate W[kg/H]	Air flow rate Q[m³/min]	Pressure drop P[kPa]	External dimensions W×D×H[mm]※
EC-32	60～300	300～1,000	～30	～15	800×800×2000
EC-20	30～150	50～300	～15	～25	700×700×1500

Note:Feature and specification may change for modification without notice. ※Rotary valve not included.

Type EC-32

Typical flow sheet



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