



**GRAVITY SEPARATOR**

# GRAVITY SEPARATOR GS 010 SERIES

Saat Technologie is more than the equipment we produce. We are professionals who thrive on building creative solutions to bring your vision to life. We've been doing it since 2008. We combine the right technology with the right team to bring it all together. Our purpose is your success. You can feel confident because you have an expert at your side helping you grow into the future.

**Saat Technologie** GS 010 Series Gravity Separator machines for the perfect separation of products with a different density of product with very slight difference in size and/or weight, which cannot be separated by screening (width) or by indented cylinders (length)

## APPLICATION AREAS

Gravity separators can be used for multiple purposes. For seed cleaning, to remove damaged products, shells and immature or low germinations, and for commercial cleaning, to improve the quality of wheat, rye and barley and many other products. They find applications in the industrial sector too. Some applications are listed here below.

- grown-out, damaged cereals, wild oat, weed, small kernels, etc.
- barley and wheat if the size is the same
- plastic granulates
- soft and hard bones for gelatine production
- copper and insulation of cut wire
- broken cocoa beans from cocoa germs
- cocoa from shells
- apricot pips from shell parts
- herbs from sticks, earth and other impurities
- spices from sticks, shells and other impurities
- green coffee beans from unshelled beans (cherries), splits and ears
- tea into different qualities
- ergot from rye
- nuts (hazel nuts, peanuts, almonds etc.) from shells, sticks and other impurities

## WORK PRINCIPLE

The separator works on a fluidised bed principle; air is forced through the deck causing the light fraction to float above the heavy fraction. The deck is reciprocated causing the heavy fraction to move uphill, while the light fraction floats downhill. Variations in deck speed, air volume, deck material, deck angle (lengthwise and sidewise), and take-off points allow effective separation to be achieved on almost any dry product. The re-sort conveyor belt which is located below the Gravity Separator's Platform conveys the middling seeds to the elevator so the seeds that are not certain of their quality are re-sorted thus allows the operator to control the output quality in finer results.

# ASSEMBLY VARIATIONS

- ① Elevator
- ② Intake pre-storage hopper
- ③ Linear Feeder
- ④ Cascade
- ⑤ Gravity Separator
- ⑥ Platform
- ⑦ Re-sort Conveyor Belt
- ⑧ Partial Dust Hood
- ⑧a Full Dust Hood
- ⑨ Centrifugal Aspirator
- ⑩ Cyclone



| MODELS                      | Technical data                             |   |  |  |  |
|-----------------------------|--|---|--|--|--|
|                             | GS 011                                     | GS 012                                      | GS 013                                       | GS 014                                       | GS 015                                       |
| Capacity                    |  |   |  |  |  |
| Corn, wheat soybeans        | 1 t/h                                      | 2 - 4 t/h                                   | 4 - 6 t/h                                    | 6 - 8 t/h                                    | 8 - 12.5 t/h                                 |
| Beans                       | 750 kg/h                                   | 1.5- 2 t/h                                  | 3.5-5 t/h                                    | 5-7.5 t/h                                    | 7.5-10 t/h                                   |
| Clover                      | 350 kg/h                                   | 0.8 to 1.25 t/h                             | 1.5-2.5 t/h                                  | 2.5-3 t/h                                    | 3.5-4.5 t/h                                  |
| Coffee (green)              | 1.3 t/h                                    | 3 t/h                                       | 6.5 t/h                                      | 10 t/h                                       | 15 t/h                                       |
| Screen area                 | 0.9 m <sup>2</sup>                         | 1.9 m <sup>2</sup>                          | 3.6 m <sup>2</sup>                           | 4.6 m <sup>2</sup>                           | 7.2 m <sup>2</sup>                           |
| Motors: (standard)          |  |   |  |  |  |
| Fan drive                   | 4 kW                                       | 3 x 4 kW                                    | 3 x 5.5 kW                                   | 4 x 5.5 kW                                   | 4 x 7.5 kW                                   |
| Reciprocating drive         | 1.1 kW                                     | 1.5 kW                                      | 1.5 kW                                       | 2.2 kW                                       | 2.2 kW                                       |
| Air volume:                 |  |   |  |  |  |
| Air requirements            | 150 m <sup>3</sup> /min.                   | 250 m <sup>3</sup> /min.                    | 300 m <sup>3</sup> /min.                     | 470 m <sup>3</sup> /min.                     | 550 m <sup>3</sup> /min.                     |
| Dimensions                  |  |   |  |  |  |
| Length                      | 1740mm                                     | 2520mm                                      | 3300mm                                       | 4250mm                                       | 4650mm                                       |
| Width                       | 1620mm                                     | 1725mm                                      | 2150mm                                       | 2150mm                                       | 2385mm                                       |
| Height                      | 1150mm                                     | 1200mm                                      | 1500mm                                       | 1750mm                                       | 1950mm                                       |
| Total weight of separator   |  |   |  |  |  |
| Net                         | 550kg                                      | 760kg                                       | 1650kg                                       | 2450kg                                       | 3250kg                                       |
| Dynamic loading at 7–12 Hz: |  |   |  |  |  |
|                             | PH=+/- 100 N<br>PV=+/- 50 N<br>10N = 1 kg) | PH=+/- 200 N<br>PV=+/- 95 N<br>(10N = 1 kg) | PH=+/- 270 N<br>PV=+/- 120 N<br>(10N = 1 kg) | PH=+/- 750 N<br>PV=+/- 420 N<br>(10N = 1 kg) | PH=+/- 850 N<br>PV=+/- 520 N<br>(10N = 1 kg) |

Technical data can vary for certain of the above due to continued development or a different machine composition