

**Science of Seed Processing** 



## **SILO with CONVEYOR BOTTOM**

### Saat Technologe Rectangle Silo with Conveyor's Bottom

The Saat Technologe rectangle silo is suitable for the storage of grain, corn, oilseeds, and rape. The silo with a conveyor floor, however, is not suitable for pelleted and floury goods. Optionally, a version for seeds is available.

Saat Technologe rectangle silos can be optimally fitted to each building. The individual cells can be up to 10m long, 4m wide, and up to 10m high. Single existing supports within the building can be integrated into the silos.

In the version with the conveyor or ventilation floor, the silo can be used as a cold air dryer. In the Saat Technologe ventilation silo, grain can be stored with up to 20% moisture content and can be dried by full ventilation combined with "move". The mounted conveyor and ventilation floor can be used for either ventilation or emptying the grain.

# Choose Saat Technologe grain storage, for your precious crop is threatened by the following factors:

- spoilage by molds
- · damage by beetles
- can be eaten by rats and mice
- may be contaminated by cats

# The rectangle silos by Saat Technologe are available in three versions:

- grounded mounting
- · mounted on a hopper (screwed or welded) or
- conveyor floor installation

#### A lot of reasons to argue for conveyor-bottom:

#### Pollution.

The union of ventilation and grain removal saves conveyors above all at several cells.

#### Conveyor's bottom:

The removal by conveyor-bottom is wear-free and handles the grain with care.

#### Plate between bottom and grain:

Through the complete separation of ground and grain, no ground moisture can reach the storage grain.

#### **Excellent ventilation:**

The ventilation is excellent through the big air exit surface. Cooling of the grain through winter ventilation on 10°C is possible and protects from insects.

#### Storage of grain up to 17% humidity:

Because of the good ventilation of the grain, the grain can be stored up to a maximum of 17% humidity. With a ventilation of 50 - 100m³ air capacity / h. /m³ you can conserve the grain and prepare storable.

#### Cold air drying:

With an air performance of the fan from approximately

#### Advantages of Saat Technologe rectangle silos

- the weather risk is reduced because the grain can be stored moist
- large quantities can be taken over and are immediately under control
- the takeover effectiveness of large quantities guarantees also a busy harvester-use
- reduction of worktops thus lower costs
- conservation of the crop for longer periods at low cost and time taken
- high sales proceeds during seasonal fluctuations
- exact design therefore easy and fast assembly
- all elements are galvanized modular system
- favorable "price-benefit ratio".

100-200m³ per hour per m³ grain, cold-air drying is possible up to a maximum of 20% grain humidity. The maximum filling height is 4-5m. You have to attend to work with as low air humidity as possible. With a heater, the air can be heated (max. heating 4°-5°C!). Air heating via a heater reduces the relative air humidity per °C about 5%. For "cold -air-drying" a relative air humidity of approx. 65-70% is enough.

#### Saving space:

Through the rectangular and quadratic silos, you take advantage of your expensive building optimally. Finally, you don't build your hall in round nature.

#### Saving material:

Often you can save a lot of material by a clever installation of silo cells because the first cells build parts of further cells.

You don't waste money because of higher investment costs, but over time it saves a lot of costs for drying and it is very effective against insects and is environment-friendly. Using a conveyor-bottom saves a lot of time by total emptying and is a great assistance

# .Advantages of Saat Technologe conveyor bottom in galvanized design:

- No hopper necessary ventilation and emptying all in one.
- Also suitable for rape
   The height of the ventilation slots on the ventilation sheet metal is approx. 1.2 mm, so also suitable for rape
  - Effective air guide shafts
    The roof turrets are air guide shafts and direct
    the airflow to the nozzle sheet metal galvanized fixed
    to the roof turret.
- Empty easy
   When emptying, the conus ensures a constant grain-inflow to the ventilation sheet metal and prevents the avoiding of grain.
- Easy montage and long life expectancy
  - Simple and secure
    The way system (per flow path 1 air damper)
    guarantees maximum safety and best performance
    at the complete emptying.

### **Specification**

#### **Elements of rectangle silos:**

Consists of trapeze-sheet metal elements, tube legs, and stiffening parts.

#### Possible sheet length:

675 mm, 1000 mm, 1250 mm, 1450 mm, 1500 mm, 1750 mm, 2000 mm, 2225 mm, 2500 mm and 3000 mm.

#### Sheet height:

800 mm or 400 mm.

#### Legs:

1600 mm, 1200 mm, 800 mm and 400 mm.

#### Calculation:

For calculation of the silo-width of the 1st cell, you have to add 2x the leg-width, and for every further cell each 1x leg-width.

The grain-current when emptying: through the opened outflow-slides the larger part of the grain flows out independently. The last rest is delivered completely by the conveying bottom (fan).

The scheme shows that a cell is built. All elements are zinc-coated, without wood parts, and are screwed together. The arrows show the air-current

