

About S&F GmbH

The family-owned company established in 1990 supplies screening machines and conveying systems around the world to meet the specific requirements of different industries and customers. The company takes pride in its excellent, personal service and in the expertise of its employees. All machines are extensively tested and optimised at S&F for the various tasks.

The result: *bespoke, long-lasting and service-friendly solutions.*

- Screening machines and systems
- Separating and screening plants
- Dosing and conveying plants
- Project planning
- Assembly and spare part service

www.sfb-welfenburg.de



S&F GmbH
Siebmaschinen und Fördertechnik
Gewerbestraße 11
88287 Grünkraut-Gullen
Germany

Telephone: +49 751 7692436-0
Fax: +49 751 7692436-1
E-mail: info@sf-gmbh.de
Internet: www.sf-gmbh.de/en



Star screens

AST Series

Star screens AST Series

AST model S&F star screen is suitable for screening moist and difficult-to-screen materials and for sifting out over-length materials. The high throughput in minimal space and the robust design ensure vibration-free running and a long, low-maintenance running time. The AST series of screening machines is available in various widths and lengths and enables material-dependent screening capacities of up to 250 m³/h.

Function description:

The S&F star screen consists of a large number of shafts arranged parallel to one another and at equal distances. These screen shafts are fitted with star-shaped plastic discs that rotate next to one another.

The screen stars are arranged so that quadratic or rectangular openings are formed. The shaft gaps and the dimensions and the shape of the stars determine the size of the respective openings.

Size and shape of the screen stars, star gaps and screen deck speed determine the screening result

The unsorted, crushed material mixture reaches the horizontal or slightly inclined screening machine by means of a conveying system or some other feeding equipment. The screen stars arranged on the shafts rotate in the same direction. The small fractions fall downwards through the openings between the stars. The coarse fraction moves on to the screen level by means of the rotary movement of the shafts. There is a type of tossing effect, as the material is constantly in motion. The coarse fraction is transported onto the screen level by the rotary movement of the rotating shafts and is ejected at the end of the screen.

Screening machine for moist input material and difficult-to-screen raw materials and substances

Due to their low tendency for blockages, these screening machines are suited to the separation of moist and difficult-to-screen bulk materials, as well as the sifting out of over-length materials.

A design as a disc screen with round or polygonal steel screens is possible. Disc screens are predominantly used for pre-sizing and preparing hot combustion residues, such as ash.

Application areas:

Star screens are used in the wood industry (sawmills, wood waste firing plants, power plants, manufacturers of wood-based fuels) and in the recycling industry (waste wood processing plants, waste wood operations facilities, recycling plants, alternative fuel plants and compost heaps).

Materials to be screened:

S&F star screens screen moist and difficult-to-screen material such as crushed waste wood, wood chips, biomass, bark, bark mulch, sawmill waste, burl wood, alternative fuels, compost, green waste, topsoil and much more.

Advantages of S&F star screens:

- **High screening capacity in minimal space** due to compact design and rotating screen shafts. The rotary movement of the stars ensures a tossing effect and dynamically knocks fine, sticky parts downwards.
- **High separation precision with moist input material** due to defined screen parameters and screen stars made of plastic which have a low tendency towards blockages.
- **Minimum noise and low maintenance** thanks to the low number of wear parts and the use of high-quality components.
- **Easy to maintain and repair** thanks to ease of access to bearing points and the low proportion of wear parts.
- **Highly reliable** due to generously dimensioned drives, roller bearings and roller chains. Screen stars made from abrasion-resistant plastic of high strength ensure long machine service life.
- **High degree of flexibility in changing conditions.** Due to the changing of the screen deck speed, the separation result can be adjusted to various material properties.
- **Material inlet and outlet positions freely configurable** simplifying the planning of the overall system.
- **Can be integrated in existing plant systems** thanks to its compact design and custom configuration options.

Accessories and options:

- Sub-structure
- Design as a disc screen with polygonal or disc-shaped steel discs
- Cover hood (star screen in sealed, dust-tight design)
- Dedusting nozzles
- Ejection hood
- Frequency converter for controlling the screening result
- Special materials
- Special paint
- Inspection and safety equipment
 - Speed control

Star screen AST Series

A

Exceptionally powerful.
Thanks to the compact and robust design, up to 250 m³/h can be processed in minimal space, depending on the product.

B

High-quality screening stars made from high-strength plastics.
High-quality screening stars made from plastic with a high level of abrasion resistance ensure for long running times and the best separation results.

C

Best screening results with moist input material.
Due to its low tendency to blockages, star screens are especially suited for the screening of difficult-to-screen materials.

D

Low-maintenance and reliable.
The ease of access to bearing points and the low proportion of wear parts ensure for the low-maintenance operation of the machine.

Technical Data:

| Machine model | AST-600/3 | AST-800/4 | AST-1000/4 | AST-1200/5 | AST-1500/6 |
|---|--|-----------|------------|------------|------------|
| Screen surface width [mm] | 600 | 800 | 1,000 | 1,200 | 1,500 |
| Screen surface length [mm] | 3,000 | 4,000 | 4,000 | 5,000 | 5,000 |
| Total length [mm] | 3,250 | 4,250 | 4,250 | 5,250 | 6,250 |
| Total width [mm] | 1,350 | 1,600 | 1,800 | 2,100 | 2,500 |
| Total height [mm] | 1,050 | 1,150 | 1,150 | 1,150 | 1,250 |
| Screen surface [m ²] | 1.8 | 3.2 | 4.0 | 6.0 | 9.0 |
| Screening capacity (material-dependent) [m ³ /h] * | 10 – 40 | 30 – 80 | 70 – 130 | 120 – 180 | 160 – 250 |
| Star diameter [mm] / finger [n] | 325/12 | 325/12 | 325/12 | 325/12 | 325/12 |
| Standard separation cut [mm] | 0/30 – 50 | 0/30 – 50 | 0/30 – 50 | 0/30 – 50 | 0/30 – 50 |
| Drive output [kW] | 2 x 3.0 | 3 x 3.0 | 3 x 3.0 | 4 x 4.0 | 4 x 5.5 |
| Total weight [kg] | ~ 2,300 | ~ 3,100 | ~ 4,000 | ~ 5,700 | ~ 8,500 |
| Available lengths [mm] | 3,000 / 4,000 / 5,000 / 6,000 / 7,000 | | | | |
| Additional separation cuts | 0/10 – 25 mm 0/60 – 80 mm 0/80 – 150 mm (depending on star diameter) | | | | |

* Output specifications are dependent on the material properties of the screenings (bulk weight, grain size, material moisture content), screen usage, separation cut, screen deck speed, machine incline, separation precision, etc.

Subject to technical amendments. | All approximate specifications. | Excerpt from our model list. Additional models upon request. | Version: 06/2018

