



ECOSTARTM

VIS



TRADITIONAL SCREENING TECHNOLOGIES



DYNAMIC DISC SCREENING
PATENTED TECHNOLOGY

DYNAMIC DISC SCREENING ^{P.3}

VS VIBRATING ^{P.4}

VS STARS ^{P.5}

VS TROMMEL ^{P.6}

ECOSTAR DYNAMIC

DISC SCREENING

ADVANTAGES

DDS

THE TECHNOLOGY



Dynamic Discs. The drive shaft is coated with free manifolds made of highly resistant material (Hardox).

DYNAMIC DISC SCREENING USES A SERIES OF HEXAGONAL OR OCTAGONAL DISC SHAFTS WITH A FLAT PROFILE.

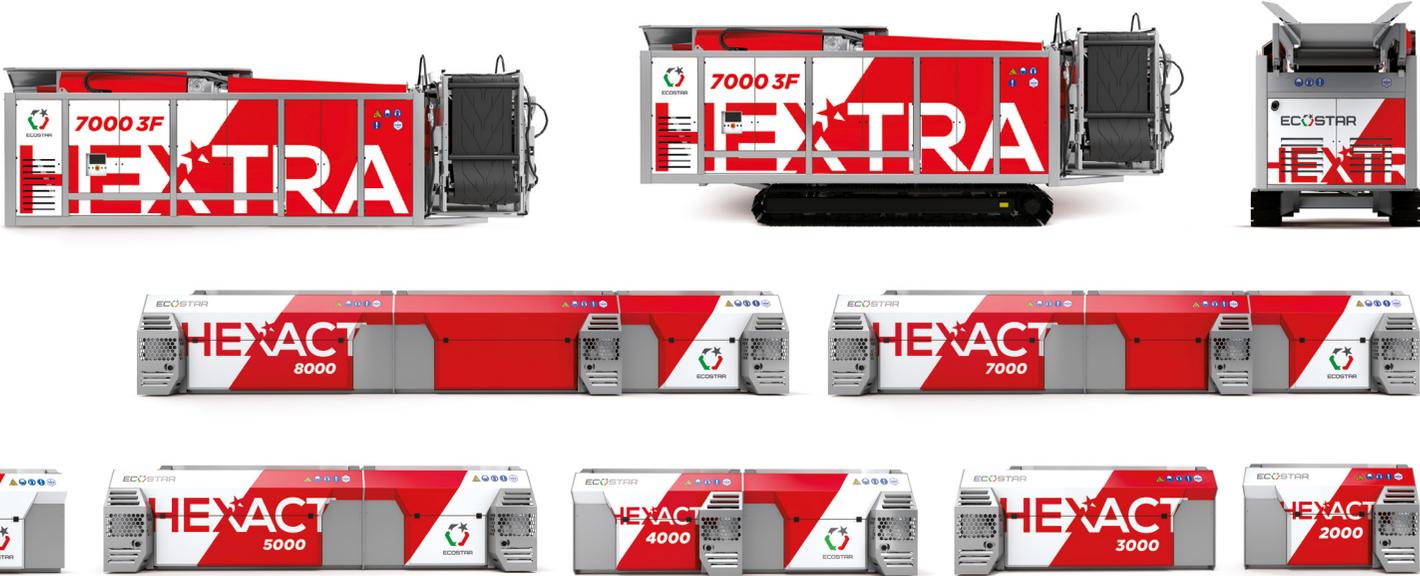
Thanks to this particular shape, the material slides on the screen discs and is subject to an up and down motion that separates the waste. The screened material falls under the screening surface, passing through the spaces between the discs, while the material remaining on the screen advances to the end of the screening surface.

THE RESULT IS A SEPARATE AND CLEAN PORTION, READY FOR SUBSEQUENT RECYCLING RECOVERY.

MACHINES RANGE



Our R&D department developed **Hextra** and **Hexact**, two ultra-efficient machines based on the Dynamic Disc Screening Technology that increases their efficiency and extend their lifetime in comparison with the other solutions on the market.



DDS MAIN ADVANTAGES

anti
WRAPPING
flexible
SCREENING

consumption
-70%
max screening
200 T/H

ANTI WRAPPING AND ANTI CLOGGING SYSTEM

The drive shaft is coated with free manifolds made of highly resistant material (specially designed for each application) which **are independent of the rotation of the shaft itself**. This system does not allow the long and fibrous parts of the material being screened to twist around the shafts or to clog among them, thus **facilitating its easy separation and considerably reducing downtime**.

FLEXIBLE SCREENING SIZE

Dynamic Disc Screening allows real time changes to the predetermined screening size ($\pm 30\%$), which can be made by varying the speed of the shafts with the aid of the inverter. **The available screening sizes range from 10 to 350 mm.**

HIGHER PRODUCTIVITY IN LESS SPACE

Dynamic Disc Screening allows to screen materials faster than traditional screening technologies (1 m/sec), using less space and achieving productivity of up to 200 t/h. These features bring a considerable increase in revenues from the sale of recycled materials, while the use of higher quality components compared to market standards **guarantees maximum reliability and reduces maintenance costs**.

HIGH PERFORMANCE, LOW CONSUMPTION

The efficiency of the Dynamic Disc Screening technology permits the use of 7.5 kW electric motors. This makes this **technology very cost-effective in terms of power consumption**, saving up to 70% when compared to traditional screening systems.

DDS VS VIBRATING

double
PRODUCTION
volumes

costs
-300%
for structures

costs
-30%
for conveyors

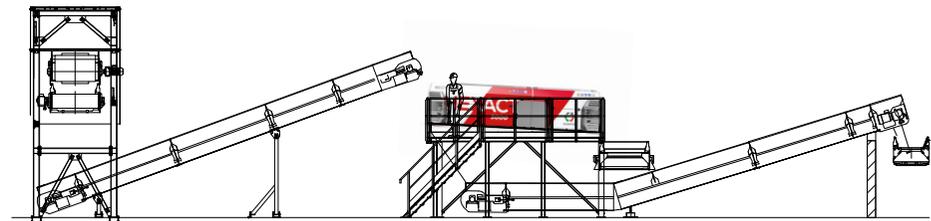
DOUBLE PRODUCTION

A vibrating screen is able to separate up to 190 cubic meters/h of material. With wood alone, Ecostar's dynamic disc screening reaches 400 cubic meters/h with the same screening surface and installed power.

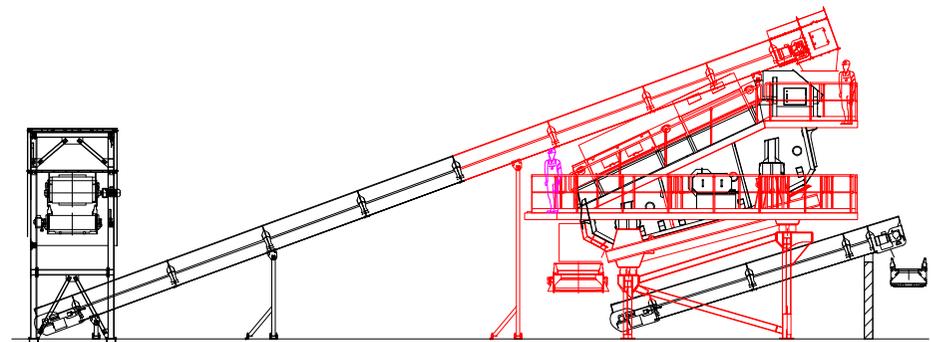
INVESTMENT COSTS

The total investment costs for vibrating screens are very high because they need sturdy reinforced concrete foundations to withstand the strong vibrations. In contrast the Hexact dynamic disc screen simply "rests" on the ground on its legs.

With the same screen length, the size of a typical vibrating screen is much larger than that of an Ecostar screen. Hexact reduced footprint results in the reduction in investment costs related to structures: up to 800% less for accessory structures, up to 30% less for conveyor belts.



System constructed with a Hexact screen.



Vibrating screens require more significant support and operational structures.

DDS VS VIBRATING



Vibrating screens require more significant support and operational structures.

QUALITY OF THE SCREENED PRODUCT

Vibrating screens use a “passive” screening system: they work by lowering the material by gravity. In the Ecostar Dynamic Screens, thanks to the patented design of the discs, the material flows over the discs, optimizing the separation of the two fractions, which results in high screening quality.

MAINTENANCE

Vibrating screens require daily maintenance to eliminate the material that gets caught in the mesh, with consequent machine stops, while Ecostar has an antiwrapping and anticlogging system.



Vibrating screens require concrete foundations.

DDS VS STARS

reduced
MAINTENANCE
costs

anti
WRAPPING
system

higher
PRODUCTION
volumes

APPLICATIONS

Star screens can only work with compost and wood (no waste). Ecostar Dynamic screen is designed to separate every kind of material MSW, RDF, C&D, ASH, wood, compost, etc.

DURATION

Rubber stars are weak and do not have a reliable section over time, therefore the screening section precision is reduced in the long run. Ecostar Dynamic discs are in Hardox.

PRODUCTIVITY

Stars screens have lower capacity because the screening surface is narrower (1.2 mt. instead of 1.6 mt.).

EFFICIENCY

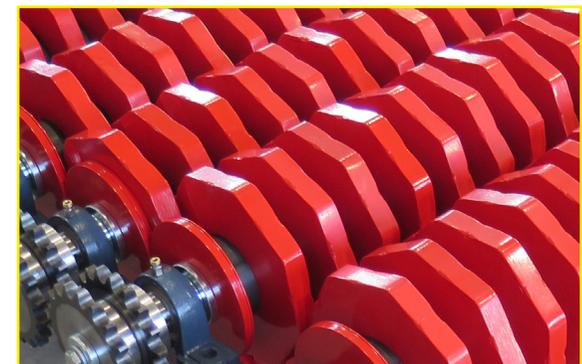
In star screens, the star screening deck needs to be inclined upwards in order to operate efficiently. The Ecostar Dynamic Disc Screen works in flat or downhill position thanks to the Hexagonal discs that shake the material very well. Furthermore, in order to obtain a high-quality separated fraction, the stars screens must move upwards, which affects the production volume.

MAINTENANCE COSTS

In star screens the whole set of stars must be changed 1 or 2 times every year, due to the fragility of the rubber stars. Since Ecostar discs are made of Hardox, which is an extremely resistant material, it is sufficient to replace the first 4-6 shafts once a year.



Star discs



Ecostar dynamic discs

DDS VS TROMMEL

SAME
productivity

HALF
volume



PRODUCTIVITY

Every year we replace big trommel screens with Ecostar dynamic disc screens, guaranteeing the same production volume while halving footprint and power consumption.

SCREEN QUALITY

In the Ecostar Dynamic Disc Screens, thanks to the patented design of the discs, the material floats over the screen surface, optimizing the separation of the fractions, giving a high screen quality.



Two trommels dismissed/dismantled (tot. length 25 meters); installation of one dynamic Ecostar screen (total length 9 mt.) guaranteeing the same production volume with better efficiency, less power consumption and less maintenance.

DDS VS TROMMEL

variable
SPEED
screening

anti
CLOGGING
system

FLEXIBILITY

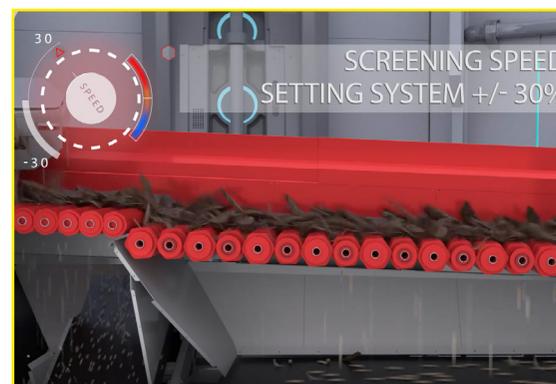
The Ecostar Dynamic Screens, thanks to the adjustable speed of the axles, permit to fine tune ($\pm 30\%$) the screening size chosen. The customer can modify the setting according to the quality of the waste and the season.

CLOGGING

Drums, after a few hours of operation, become dirty and stuck, decreasing the screening performance and results. The Ecostar technology does not allow the material to twist around the shafts or to clog among them, thus facilitating its easy separation and considerably reducing downtime.



Trommel drums after a few hours of operation.



Ecostar screening setting technology.



Ecostar self cleaning technology.

DDS VS TROMMEL

very **FAST** to clean
consumption **-70%** saving
less **INVESTMENT** costs

MAINTENANCE COSTS

The Ecostar Dynamic Screens are open at the top and very fast and easy to clean. In most cases, the Ecostar screens can be cleaned by simply reversing the rotation of the axes.

SPACE COSTS

The compact size of the Ecostar Dynamic Screens, compared to that of huge traditional trommels, guarantees room saving. This means less investment costs (space, conveyors and steel structures).

HIGH PERFORMANCE, LOW CONSUMPTION

The efficiency of the Dynamic Disc Screening technology permits the use of 7,5 kW electric motors up to 20 T/H. This makes this technology very cost-effective in terms of power consumption, saving up to 70% when compared to traditional screening systems.



Drum size compared to an extremely compact and efficient Ecostar plant.

EC**STAR**

The next recycling technologies™