



Screening and Processing



Drying System



Wood Yard



Conveying solutions in the
cement industry



Maintenance and
Service



Waste to Fuel



Waste to Flame



Waste to Electricity



Biomass Fuel Handling



Pneumatic Conveying

INDUSTRIAL PROJECT AND SERVICE

www.ispm-service.com



ISPM-Service is a portuguese company born in 2015 with an environmental and innovative concept, guided by values that encourage sustainable development in an industrialized Era, where the generation of energy from waste is not only a way to ensure the future of the planet, but also a mean to profit. ISPM is a flexible, enthusiastic, socially responsible organization and adaptable to the changes. Our business is characterized mainly for a joint effort with our business partners. Together we design, produce, and assemble equipment and turn-key projects in various areas. Our technical assistants are motivated and highly qualified professionals. Overcoming challenges and searching for the generation and implementation of technological, innovative, and out-of-the-box business solutions, are on our day-to-day basis and part of our longterm vision for **ISPM-Service**. We are a visionary company, we work today for tomorrow as the beginning of the future.

**THE FUTURE'S
SOLUTION
TODAY**

Paulo Teixeira

ISPM has been named Official Reseller Of:

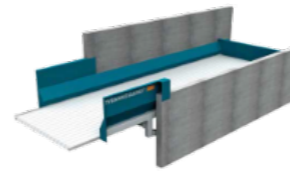
*BMH Technology in Portugal and France;
Jeffrey Rader, Stela and Aumund in Portugal;
Demuth in Portugal, Spain and France.*





Waste to Electricity

Waste to Electricity solution is customized to fit the requirements of Power Plants for production and handling of Solid Recovered Fuel. The solutions includes it all: from receiving the waste until boiler feeding and ash handling. Solid Recovered Fuel produced by TYRANNOSAURUS® Waste to Electricity process has optimum particle size and quality for fluid bed boiler combustion.



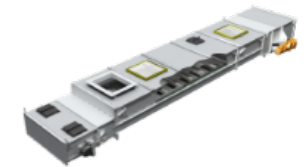
TYRANNOSAURUS® Feeders

TYRANNOSAURUS® Feeders enable optimal feeding to the shredder/crusher ensuring continuous maximum capacity.



TYRANNOSAURUS® 1500 Fines Screens

TYRANNOSAURUS® Fines Screen separates fines, for example, sand, glass, soil from the material.



Drag Chain Conveyors

Drag Chain Conveyors are ideal for safe and reliable transportation of bulky materials in various industrial processes.



Tubular Belt Conveyors

Tubular Belt Conveyors are suitable for conveying material over long distances at high capacities.



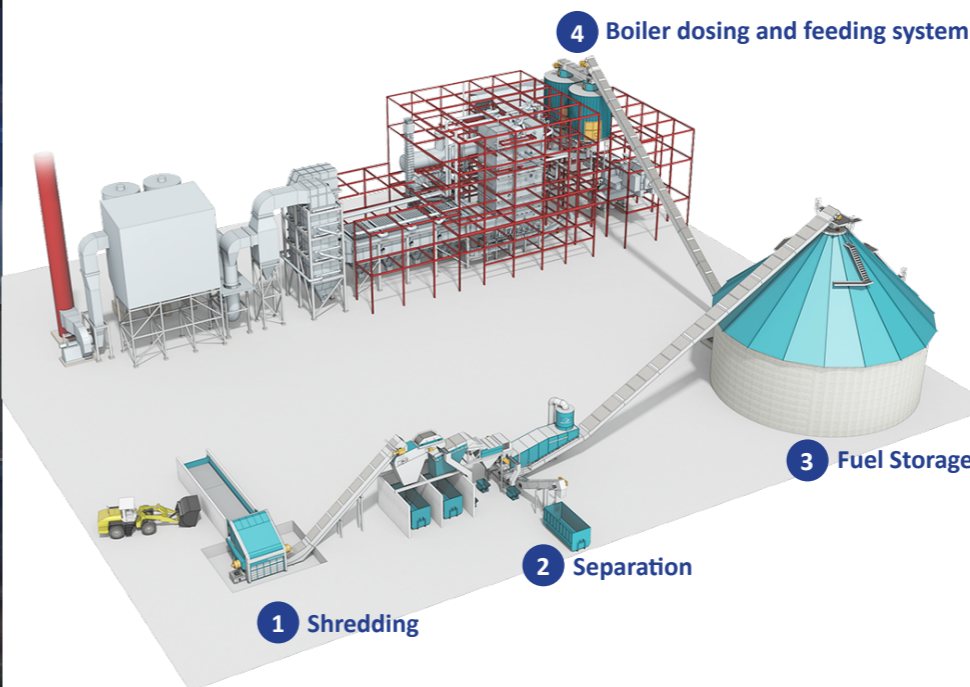
TYRANNOSAURUS® 2500 Air Classifiers

TYRANNOSAURUS® 2500 Air Classifiers produce light and clean fraction to maximize the fuel quality.



TYRANNOSAURUS® Rotating Screw Reclaimers

TYRANNOSAURUS® Rotating Screw Reclaimers are suitable to discharge solid fuels from silos or round open-air storages.



Rotary Valve Feeders

Rotary Valve Feeders are optimal solution for feeding and dosing variety of different fine-grained or dusty materials.

Bucket elevators are an excellent choice particularly in locations where space is limited and material needs to be transferred high on a vertical scale. They are capable of lifting a variety of materials ranging from dry, dusty fluff to heavy materials such as bottom ash.

Bucket elevators are always custom designed to meet your specific requirements and to suit the materials being handled.

Main advantages

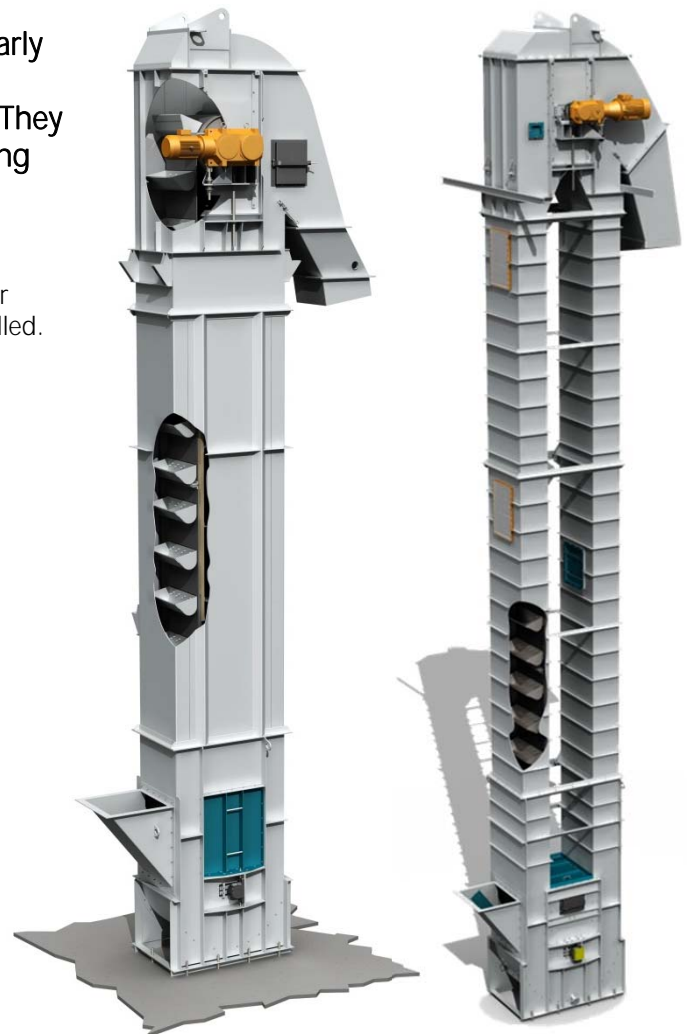
- outstanding lifting capacity to high altitudes in confined spaces
- totally enclosed construction provides dust-tight and spillage-free operation
- specially designed buckets ensure clean and perfect discharge
- customised solutions based on modular engineering for fast and cost-effective installation
- long lifetime

BELT BUCKET ELEVATOR	
Belt width (mm)	Max capacity (m ³ /h)
500	100
650	150
800	250
1000	400
1200	600
1400	900

Please note that the capacity values in this table are only indicative and they have been calculated for handling woodchip or similar materials.

CHAIN BUCKET ELEVATOR	
Casing size (mm)	Max. capacity (m ³ /h)
400 x 1000	40
720 x 1000	80
900 x 1250	120

Please note that the capacity values in this table are only indicative and they have been calculated for handling lime or similar materials.



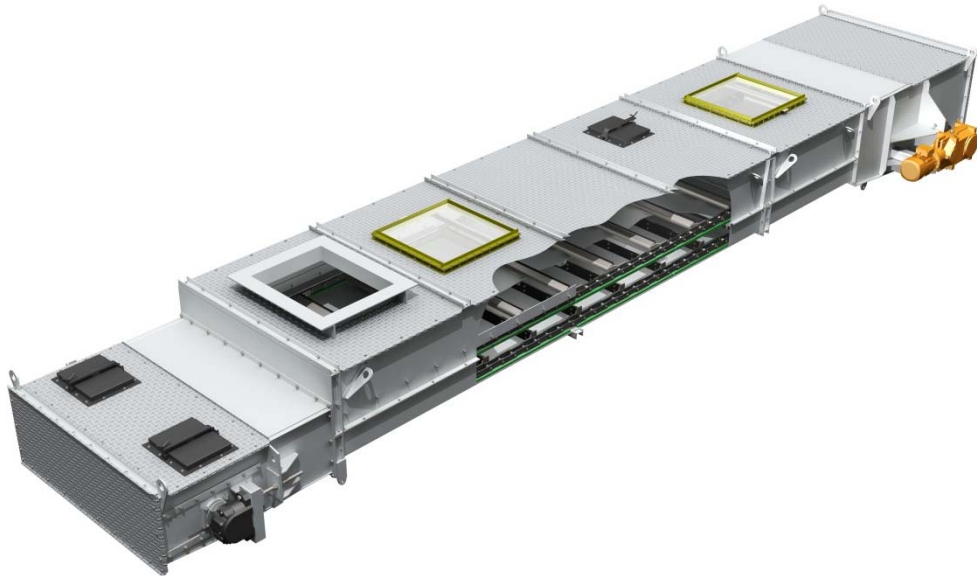
IDEAL FOR HANDLING:

Belt bucket elevators

- biomass fuels (woodchips, bark, peat, agro biomass, pellets)
- solid recovered fuel (SRF)

Chain bucket elevators

- cement
- lime
- ash



Drag chain conveyors provide a safe and reliable solution for handling powdery and dusty bulk materials in various industrial processes that require a continuous and even material flow.

Drag chain conveyors efficiently meet your needs in the following areas:

- receiving of material and transferring to intermediate storage
- filling of storage silos
- discharging from storage silos and further feeding to process equipment
- transferring of end product to storage

Width (mm)	Capacity (m ³ /h)	Recommended max. length (m)
650	150	60
800	200	60
1000	300	60
1200	400	60
1400	500	60
1600	700	60
2000	1000	60

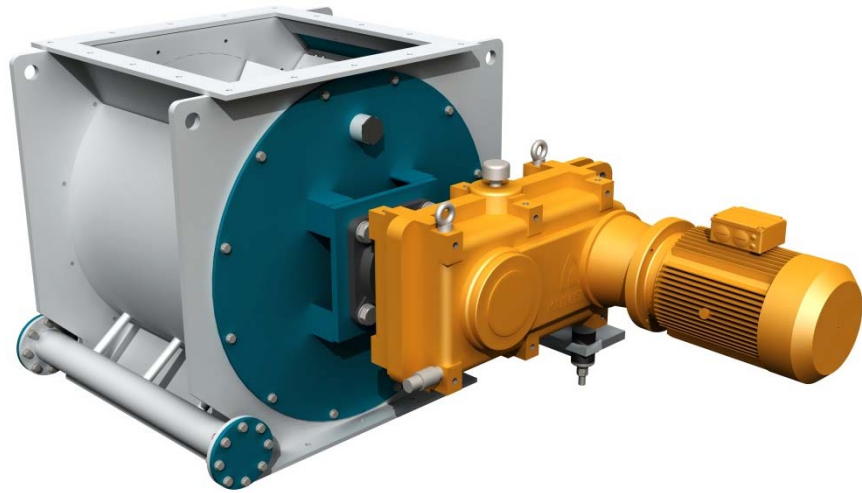
Please note that the values in this table are only indicative. The capacities have been calculated for handling woodchip or similar materials.

IDEAL FOR HANDLING:

- biomass fuels (woodchips, bark, peat, agro biomass, pellets)
- solid recovered fuel (SRF)
- coal
- ash
- cement
- lime and minerals

Main advantages

- customised solutions based on modular engineering for fast and cost-effective installation
- horizontal or inclined installations, or a combination of both
- several inlet and outlet points
- standard components and chain types
- forged chains for heavy-duty applications
- special chains for heavy-duty and demanding conditions (heatproof structures)
- possibility to include water-cooling designs
- simple construction for straightforward maintenance
- dust-tight and spillage-free



Rotary valve feeders are widely used in feeding and dosing fine-grained and dusty materials in various processes. They are always custom designed to meet your specific applications and to suit the materials being handled.

Rotary valve feeders feed e.g. coal, SRF, biomass or fly ash into a power boiler and, at the same time, act partially as a lock to prevent the backflow of gases and flames. They also serve as a dosing feeder at the silo outlet to prevent the uncontrolled discharge of material out of the silo.

Main advantages

- modular robust design with standard components
- reliable operation
- totally enclosed, dust-tight and safe construction
- easy installation
- minor need for maintenance

Special models available for your specific needs:

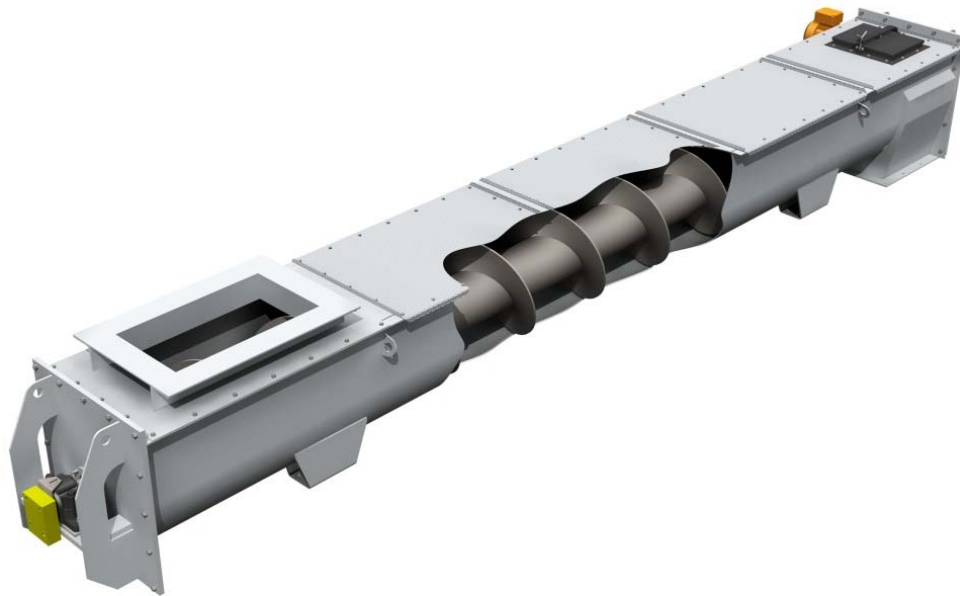
- LSE – Electric precipitator soda ash

TYPE	Size	Capacity (m ³ /h)
LSF Biomass, solid recovered fuel (SRF)	40/60	40
	50/60	60
	50/80	85
	63/50	100
	63/80	140
	80/80	200
	63/120	230
LSC Coal, sludge, sticky materials, (biomass)	80/120	300
	40/40	20
	40/50	30
	40/60	40
	50/60	60
	63/50	60
LSAR Ash, sand	63/80	100
	20/20	5
	30/30	15
	40/40	40
	50/50	80

Please note that the values in this table are only indicative and they have been calculated for a filling degree of 40%.

IDEAL FOR HANDLING:

- biomass fuels (woodchips, bark, peat, agro biomass, pellets)
- solid recovered fuel (SRF)
- coal
- sludge
- sticky materials
- ash
- sand



Screw conveyors are one of the most economical ways to transfer bulk materials over short distances.

Besides transferring materials from one place to another, screw conveyors can be used for:

- feeding, dosing and mixing
- distribution of material flow
- cooling (double-wall special design)
- humidifying (when equipped with internal water nozzles)
- vertical lifting of certain materials

Screw conveyors are designed to meet your specific usage requirements and to suit the materials being handled.

Screw diameter (mm)	Capacity (m ³ /h)	Recommended max. length
250	15	6.5
315	26	7.0
400	55	8.5
500	110	8.6
630	220	10.0
710	300	11.0
800	330	11.0
900	450	11.0
1000	520	12.0
1120	740	12.0
1250	850	12.0
1400	1200	14.0
1600	1400	14.0

Please note that the values in this table are only indicative. The capacities have been calculated for handling woodchip or similar materials at an inclination of 0°.

IDEAL FOR HANDLING:

- biomass fuels (woodchips, bark, peat, agro biomass, pellets)
- solid recovered fuel (SRF)
- coal
- ash
- cement
- lime and minerals

Main advantages

- standard modular design
- horizontal, inclined and vertical designs
- tubular or U-shaped conveyor trough
- special design flights for difficult sticky materials
- screws with wear-resistant facing for demanding conditions
- simple construction means easy maintenance



Tubular belt conveyors are a good choice for conveying various kinds of bulk materials over long distances at high capacities. The material lies unaffected on the conveyor belt throughout its journey between the transfer points.

The flexible design gives more freedom in optimising the location of the main process equipment and buildings at demanding sites.

Horizontal and vertical curves enable reliable and economical design of the conveyor lines even in space-limited environments. This versatility becomes a particularly useful feature when conventional conveying systems are to be replaced in existing installations.

Inner diameter of tube (mm)	Capacity (m ³ /h)
150	100
190	150
235	240
275	320
315	420
370	580
420	750
475	950
530	1200
585	1450

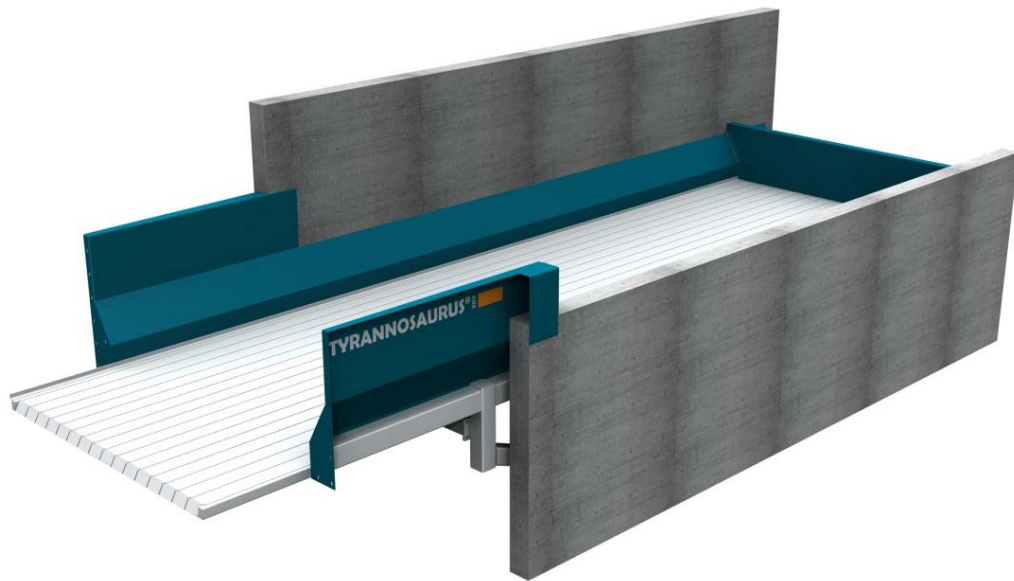
Please note that the values in this table are only indicative. Capacities have been calculated for handling woodchip or similar materials at a belt speed of 2 m/s.

IDEAL FOR HANDLING:

- biomass fuels (woodchips, bark, sludge, pellets)
- solid recovered fuel (SRF)
- coal
- ash
- cement
- lime

Main advantages

- enclosed design prevents spillage and keeps the environment clean and dust-free
- enclosed belt tube keeps the material handled undamaged and free from external impurities
- simple and flexible layout solutions for space-limited sites
- less cross stations and related auxiliary equipment are needed which means higher reliability and lower operating costs
- standard components already proven to work in conventional belt conveyors



TYRANNOSAURUS® Step Feeders are an excellent solution for optimising almost any feeding process where a continuous flow of material is needed. They are typically combined with a TYRANNOSAURUS® Shredder or a TYRANNOSAURUS® Biocrusher. A step feeder serves a buffer and a feeder for the process lengthening the loading intervals and enabling the front loader driver to take on more profitable tasks between loadings.

When attached for example to a shredder, TYRANNOSAURUS® Step Feeders can adjust their feeding capacity according to the level measurements taken in the shredder's feed hopper. This means the production capacity is kept at its maximum level all the time. Step feeders are not only capable of handling large pieces but also carrying a huge volume of material. The fully automatic feeding ensures that the process functions are constantly optimised.

TYPE	Width (mm)	Length (m)	Capacity (m³/h)
2412	2400	12	45
2418	2400	18	65
2424	2400	24	85
3212	3200	12	60
3218	3200	18	85
3224	3200	24	115

Please note that the values in this table are only indicative and they have been calculated for handling MSW. The thickness of the material layer used in the calculation was 1.5 m.

TYRANNOSAURUS® Step Feeders have a long lifetime. The number of wear parts has been minimised resulting in low operation and maintenance costs.

SUITABLE FOR ALMOST ANY SOLID MATERIAL:

- municipal solid waste (MSW)
- industrial waste
- demolition waste wood
- bark
- stumps
- biomass

Main advantages

- high availability and long lifetime
- low investment and operating costs
- low maintenance costs
- high buffer capacity
- loading intervals lengthened
- produces an even material flow to the next process
- designed to prevent material from tangling
- efficient operation
- heavy duty design
- easy to install

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