



KOMPTECH
TECHNOLOGY FOR A BETTER ENVIRONMENT

STATIONARY MACHINES

SHREDDING | SCREENING | SEPARATION





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TECHNOLOGY FOR A BETTER ENVIRONMENT

Komptech is a leading international technology supplier of machinery and systems for the mechanical and mechanical-biological treatment of solid waste and for the treatment of biomass as a renewable energy source.

The product range includes over 30 different types of machines, that cover all key process steps in modern waste handling - shredding, separation, and biological treatment. By combining the right products from our own portfolio with proven components, we can deliver solutions to address complex challenges.

The focus is always on innovative technology and solutions that ensure the maximum customer benefit.

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SEPARATION - BALLISTOR



TECHNOLOGY



- » **Mechanical pre- and post-treatment for**
Composting plants
Mechanical-biological treatment plants (MBT)
Refuse derived fuel production
Wet and dry fermentation
- » **Preparation technology for**
Residual/Household waste
Commercial waste,
Waste wood,
Biomass
Tar paper etc.
- » **Technology for Splitting and Recycling in general**

EFFICIENT SOLUTIONS

FOR COMPLEX TASKS

Electrically powered machines are ideal for large plants, stationary facilities and wherever mobility is not required. Komptech offers an extensive range of stationary electric-powered shredding, screening and separating machines. Designed for continuous operation and precisely adapted to their task and site, these machines are often the key components in recycling systems

and perform a wide range of functions. With the right combination of our own products and market-proven components from established manufacturers where needed, we provide efficient all-in solutions that can accomplish complex tasks, such as prepping material for anaerobic fermentation or refuse-derived fuel production.



THE COMPLETE PERFORMANCE CHAIN

Turnkey waste processing technology requires solid expertise and resources along the entire performance chain. Our capabilities extend from the initial idea to professional handling including installation to user training.

We are your expert contact for all areas of stationary systems, and everything from individual machines to entire processing lines.

SERVICES



- » Initial ideas
- » Flowcharts incl. material stream representation
- » Assistance with permitting
- » Engineering
- » Definition of interfaces between all process steps
- » In-house fabrication of key components
- » Project leader as contact for the customer
- » Complete installation with own construction supervision
- » Commissioning
- » Training of operating personnel



APPLICATION



- » Municipal solid waste
Residual waste
Mixed waste
- » Waste wood
Bulky waste
- » Commercial waste
Production waste
- » Special batches:
Tires
Tar paper etc.

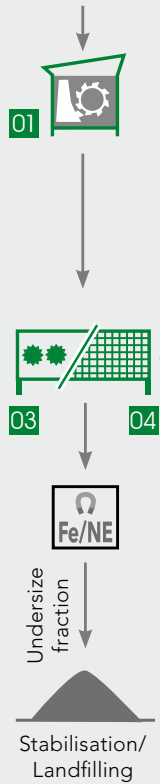
WASTE SPLITTING

MECHANICAL TREATMENT AS THE FOUNDATION FOR RECYCLING

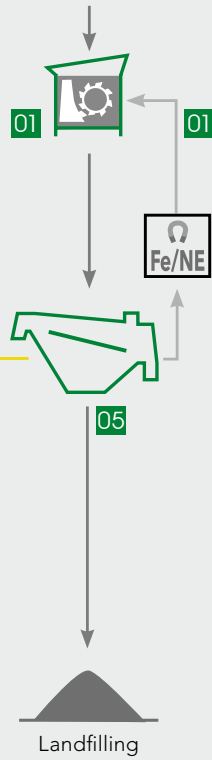
The reuse of materials and energy from waste is central to modern waste management. The foundation for it is laid by mechanical preparation in the form of waste splitting. In it, recyclables are recovered from the waste stream and high-yield combustibles are separated out for further processing as refuse-derived fuels (RDF). The remaining residue fraction can be stabilized and then landfilled. The process technology developed by Komptech revolves around shredding, screening and separating. Low-speed shredders with adjustable degree of shredding generate

a homogeneous material stream at the desired particle size. The machines can be driven by hydraulics or high-efficiency mechanical systems. Following shredding a range of technologies can be deployed, depending on the specific material and conditions. These include all-purpose drum screens, ballistic separators with rotating screen elements to separate flat from three-dimensional fractions, or disc screens that work efficiently even with material that tends to wrap and tangle.

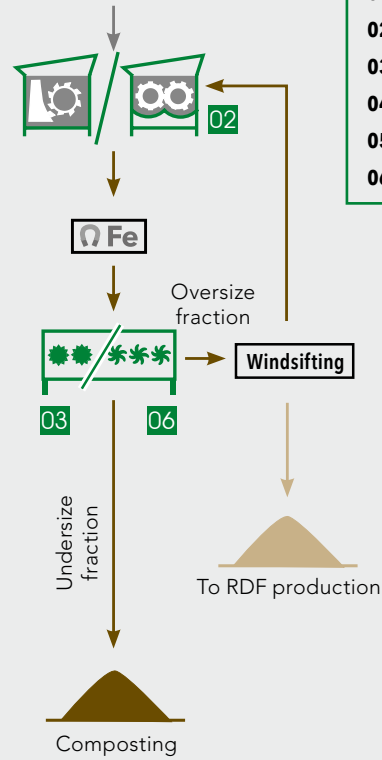
Municipal solid waste
Residual waste



Bulky waste
Commercial waste
Production waste



Bio waste



- 01 Single-shaft shredder Terminator
- 02 Dual-shaft shredder Crambo
- 03 Disc screen Flowerdisc
- 04 Drum screen
- 05 Ballistic separator Ballistor
- 06 Star screen Multistar



SHREDDING:

Shredding generates a defined grain for downstream separating steps. The Terminator is known for its wide range of uses and high resistance to contraries while the Crambo has two shredding drums for aggressive intake of bulky material.



SCREENING:

Robust, reliable drum screens separate the shred into over- and undersize fractions. Thanks to Komptech's wide range of screens, there is a model for virtually any application. Star screens are used to clear contraries from organic waste.



SEPARATING:

The Ballistor has proven its ability to separate out light, mostly high-calorific materials as well as heavy contraries. The Hurrifex combines a stone separator and windsifter in a single machine. Compost and biomass fractions are cleaned from stones and light materials in one pass.



APPLICATION



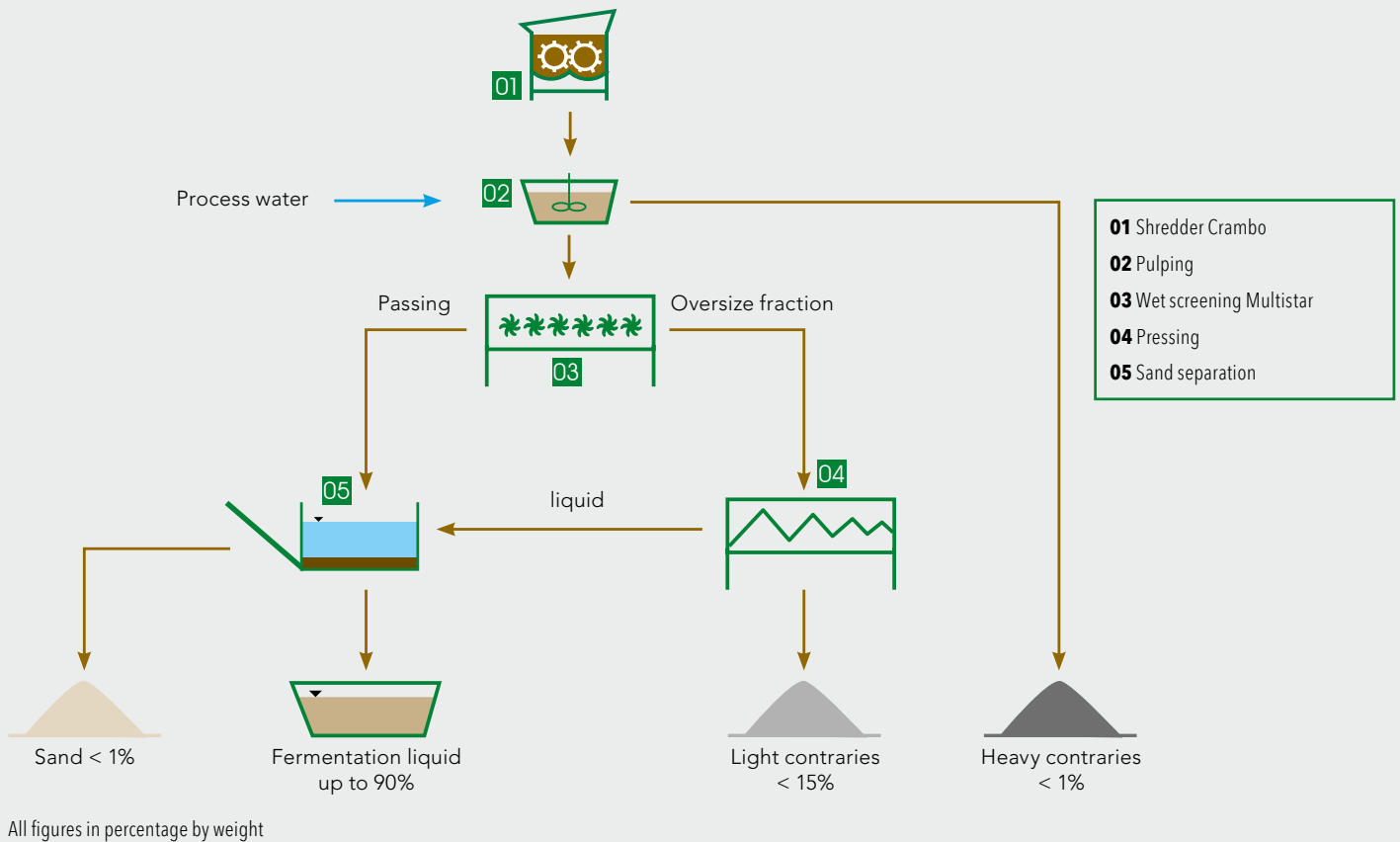
- » Separately collected biodegradable household waste
- » Restaurant leftovers
- » Expired food from supermarkets and market waste
- » Food industry waste

FERMENTATION

PULPING GIVES THE MAXIMUM YIELD FOR FERMENTATION

For some types of organic waste, fermentation is the most suitable treatment method from an economical and ecological standpoint. The organics break down to give clean energy sources while the fermentation sludge is useful as compost and liquid fertilizer. But packaging, contraries and inert materials get in the way, so organic waste require special processing before it can be fermented. With the proper machinery, organics, leftovers, severely contaminated market waste and expired foodstuffs in various degrees of packaging can be prepared for problem-free fermentation.

The substrate that results after the packaging and contraries are removed goes to wet fermentation in sealed reactors, where it is used to make biogas. This can be used in various ways depending on the site, from fuel for cogeneration plants to scrubbing and subsequent feed into natural gas grids.



SHREDDING:

Shredding with Crambo eliminates oversizes and makes sure that packages are opened up. Organic materials are thus exposed and ready for the next step, pulping.



PULPING:

The waste is homogenised with process water and further reduced in a pulper in batch operation. The high flow speed empties and cleans out packages. Heavy matter is separated out through a sluice.



SCREENING / SEPARATING:

A downstream Multistar star screen dependably removes large contraries from the fermentation substrate. The substrate is then pumped through a grit separator into a storage tank for the fermenters, while the oversize fraction goes to a press.



HIGHLIGHTS



- » Shredding of the most difficult materials
- » Rugged design as pre-shredder provides high degree of shredding
- » Variable particle size by adjusting cutting gap
- » Direct-drive with 2-speed transmission (Terminator direct) or hydraulic drive with constant power control



TERMINATOR

SINGLE-SHAFT SHREDDER FOR PRE-SHREDDING

The Terminator is a slow speed, high torque single-shaft shredder for hard-to-shred waste. C&D, railroad ties, carpet, MSW and tires are no problem for the rugged teeth mounted on the shredding drum and opposing counter comb. The stepless cutting gap allows adjustment of the size of the output material.

Power is delivered by an electric motor with minimal maintenance and transferred to the shredding drum either by a mechanical drive with optimum efficiency or by a hydraulic drive with constant power control. For the hydraulic system the separation of the drive unit from the shredding unit is provided as an option.



**green
efficiency**



01
Extremely large feed area
(3000 x 2000 mm)

02
Shredding drum
with replaceable teeth

03
2-speed-transmission with
overload protection (direct)

04
Hydraulically adjustable
counter comb

05
Drum drive on both sides
(S-types)

Terminator direct	1700	2200	3400	3400 S	5000 S	6000 S
Drive						
Power (kW):	1 x 75	1 x 132	1 x 160	2 x 75	2 x 110	2 x 160
Shredding unit						
Drum length (mm):	3000					
Drum diameter (mm):	1050					
Drum rpm:	14/10	17/13	19/14	14/10	20/14	28/20
Weight (t)						
	~ 13,6	~ 13,6	~ 14,0	~ 15,0	~ 15,3	~ 15,8
Throughput (dependent on material)						
Throughput performance (t/h):	up to 15	up to 20	up to 30	up to 35	up to 55	up to 75

Terminator	2200	3400	3400 S	5000	5000 S	6000 S
Drive						
Power (kW):	1 x 132	1 x 160	1 x 160	1 x 200	1 x 200	2 x 160
Shredding unit						
Drum length (mm):	3000					
Drum diameter (mm):	1050					
Drum rpm:	max. 29	max. 29	max. 27	max. 29	max. 29	max. 38
Weight (t)						
Assembled unit	~ 15,1	~ 15,5	~ 16,5	~ 15,8	~ 16,8	~ 17,1
Throughput (dependent on material)						
Throughput performance (t/h):	up to 30	up to 45	up to 50	up to 60	up to 80	up to 100



HIGHLIGHTS



- » High throughputs with general-purpose use
- » Aggressive feed with 2820 mm long, counter-rotating shredding drums
- » Quick-change system for screen basket and tools – change particle size in minutes
- » Direct drive with automatic 2-speed transmission (Crambo direct) or hydraulic drive with constant power control



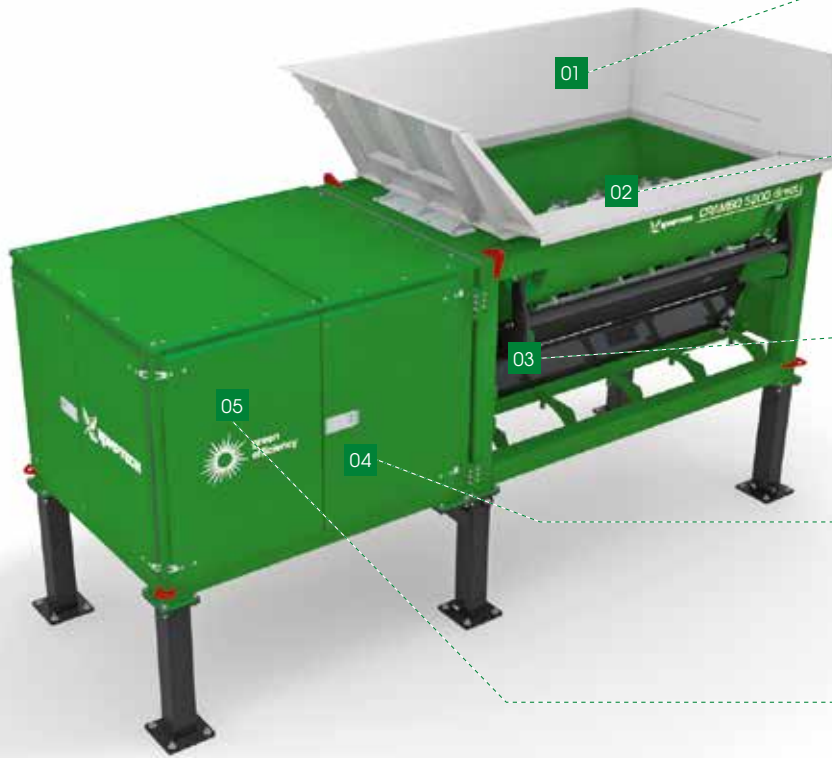
CRAMBO

DUAL-SHAFT SHREDDER FOR WOOD AND GREEN WASTE

The stationary Crambo shreds all types of wood and green waste to a set particle size. Slow-running screws with shredding tools minimize fine particle and noise/dust emissions, and build up resistance to contamination. The particle size is adjustable by simply exchanging screen baskets.

The drum drive offers a choice between highly efficient mechanical drum drive with automatic transmission (Crambo direct) or the familiar hydraulic drive with load-dependent speed regulation. For the hydraulic system the separation of the drive unit from the shredding unit is provided as an option.





01
Extremely large feed area
(3000 x 2000 mm)

02
Shredding drums with
aggressive cutting tools

03
Swivellable
screen basket cartridge

04
Drive container
with service doors

05
Intelligent automatic transmission
with 2 speeds (direct)

	3400	5000	6000	4200 direct	5200 direct	6200 direct
Drive						
Power (kW):	1 x 160	1 x 200	2 x 160	1 x 160	1 x 200	1 x 280
Shredding unit						
Number of screws:	2	2	2	2	2	2
Drum rpm:	max. 32	max. 32	max. 40	18 / 28	23 / 34	29 / 44
Drum length (mm):	2820	2820	2820	2820	2820	2820
Drum diameter (mm):	610	610	610	610	610	610
Cutting elements:	134	134	134	134	134	134
Weight (t)						
Assembled unit	~ 16,0	~ 16,8	~ 17,1	~ 17,7	~ 18,0	~ 18,2
Throughput (dependent on material)						
Throughput performance (t/h):	up to 45	up to 60	up to 100	up to 55	up to 80	up to 120





HIGHLIGHTS



- » Designed for continuous use, trouble-free drum operation and reliable cleaning
- » Variable configuration for perfect adaptation to application and site
- » Options:
Screen segment drum for changing segments without removing the drum

Special drum with anti-dirt strips for screening residual waste

Three-fraction screening by using different screen drum hole sizes

Special carrier drum with interchangeable screen segments

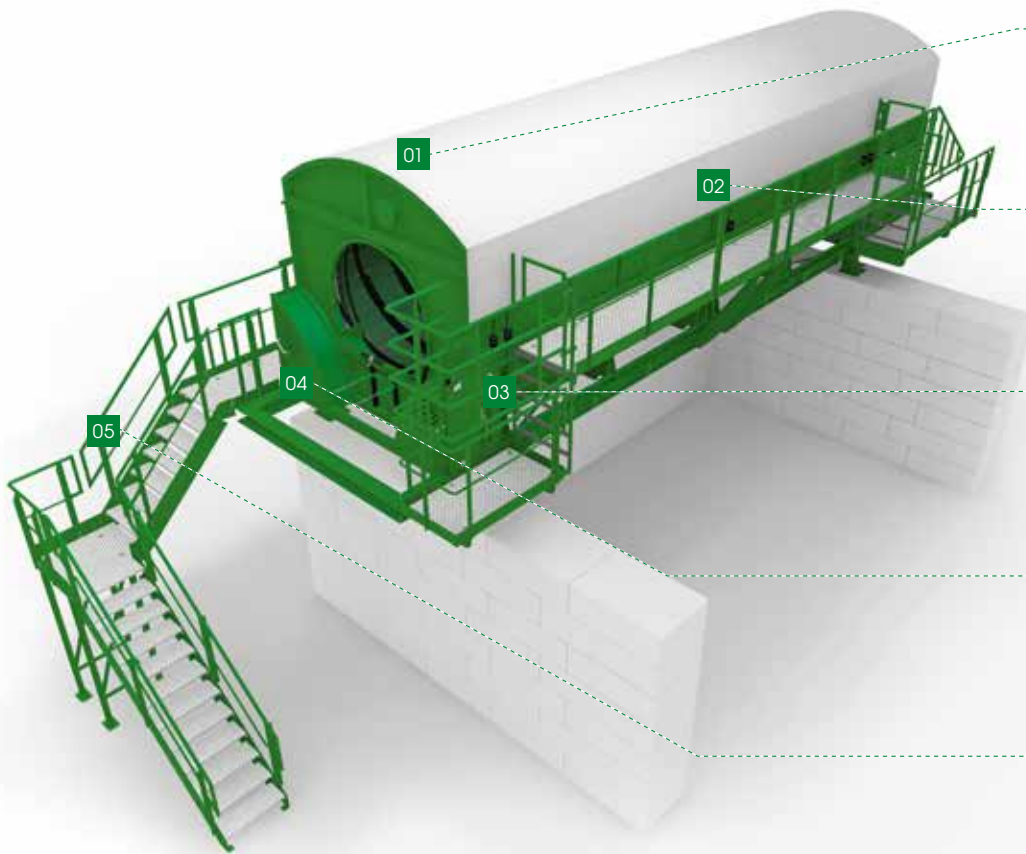


DRUM SCREENS

TYPES: 1845, 2055, 2255, 2278, 2290, 2590, 25120

With stationary drum screens, a corresponding screening machine is available for every system size. Directly driven heavy-duty supporting wheels (1845/2055: DRUMGRIP-drive) provide quiet drum operation and top efficiency with reduced energy consumption and noise emissions.

A high throughput performance is guaranteed by feed screws welded on the inner side of the drum. Variable configuration of sub-structure, servicing accessibility, enclosure and drive simplify adaptation to on-site conditions.



01
Robust tarpaulin cover
for easy cleaning access

02
Reliable drum cleaning
with brush or scraper

03
Maintenance free supporting
wheels and drive in one unit

04
Electric direct drive
for highest efficiency

05
Variable design of fundament
and service platforms

	1845	2055	2255	2278	2290	2590	25120
Drive							
Power (kW):	2 x 5,5	4 x 4,0	2 x 9,2	2 x 11	2 x 11	4 x 7,5	4 x 9,2
System:	electrically via direct drive						
Screening drum							
Diameter (mm):	1800	2000	2200	2200	2200	2500	2500
Length (mm):	4500	5500	5500	7800	9000	9000	12000
Effective screening area (m ²):	22,5	30	32	48	56,5	62,5	86
Drum shell area (m ²):	25,5	35	38	54	62	71	94
Dimensions (without walkways)							
Length (mm):	6250	7650	7500	9800	11100	11100	14100
Width (mm):	2280	2480	3100	3100	3100	3400	3400
Height (mm):	2980	2980	3600	3600	3600	4000	4000
Throughput (dependent on material)							
Throughput performance (m ³ /h):	up to 120	up to 160	up to 190	up to 250	up to 250	up to 275	up to 300





HIGHLIGHTS



- » Separation into two, three or four fractions, wind sifting, magnet-separation in one compact machine
- » Patented Cleanstar-cleaning system for high throughput and precise selectivity – even with moist materials
- » Simple speed control at the screen deck to change particle size in seconds
- » Flexibly tailored solutions for specialist customer applications



MULTISTAR

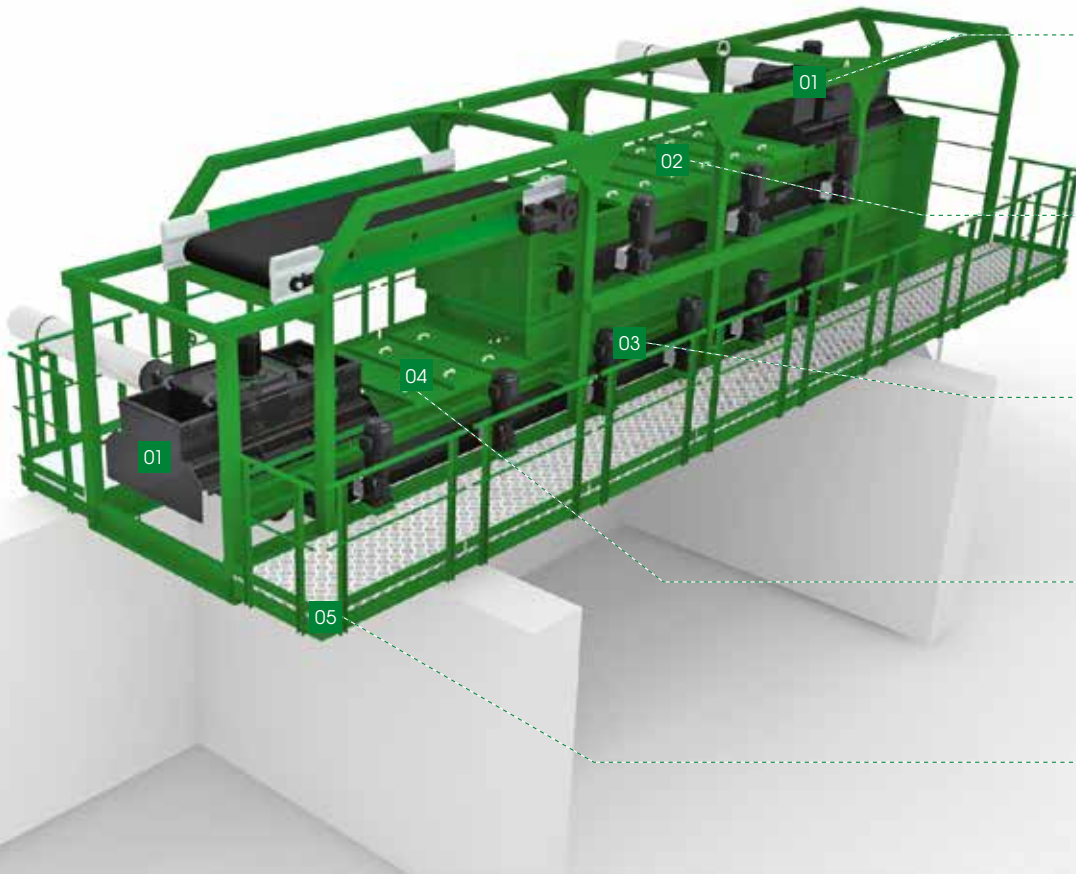
STAR SCREEN

Multistar star screens are not only among the most powerful screening machines, they are also unparalleled in operating efficiency. Compost, bark and biomass are separated extremely reliably and quietly. The core of the star screens consists of one or more screen decks, depending on the model.

The electrical drive of the star shafts with electric motors and frequency converters gives efficient and economical operation. With its modular design, screen decks, feed metering container, wind sifter and stone/magnet separation are tailored perfectly to the job at hand, generating up to 4 fractions in one operation.



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01
Windsifters for medium and coarse fraction (option)

02
Coarse screen deck with robust rubber stars

03
Screen deck-drive via electric motors with frequency converter

04
Fine screen deck with elastic stars and cleaning elements

05
Variable design of fundament and service platforms

MULTISTAR 2-SE

MULTISTAR 3-SE

Drive	MULTISTAR 2-SE	MULTISTAR 3-SE
Power (kW):	22 (Fine screen) or 12 (Coarse screen)	40
Screen unit		
Length x width (mm) / area (m ²):	5985 x 1200 / 7,2 (Fine screen) or 5863 x 1200 / 7,0 (Coarse screen)	5863 x 1200 / 7,0 (Fine screen) and 3998 x 1200 / 4,8 (Coarse screen)
Feed hopper		
Hopper volume (m ³):	-	20
Screen sections		
Fine (mm):	8 20 10 25	8 20 Standard: 10 25
Coarse (mm):	30 60 60 90 90 120 120 150	30 60 Standard: 60 90 90 120 120 150
Throughput (dependent on material)		
Throughput performance (m ³ /h):	up to 180	up to 250



01

Screen drive via electric motors with frequency converter

02

Screen deck with steel disc and movable jacketed pipes

03

Service covers for access to the screen deck

04

Variable design of substructure



HIGHLIGHTS



- » Designed for separation of oversized particles from commercial waste, bulky waste, household waste and fresh bio-waste
- » High throughput, low energy expenditure
- » Sturdy design allows smooth, low-wear operation
- » Modular design for flexible configuration in stationary systems



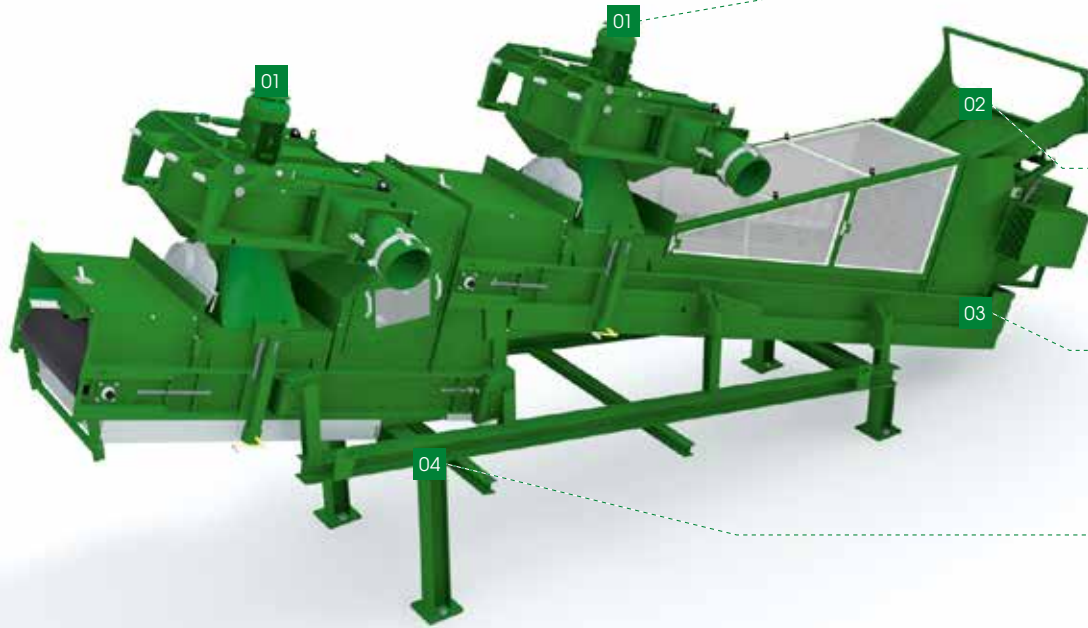
FLOWERDISC

DISC SCREEN

The Flowerdisc represents a further technology for the screening of pre-shredded commercial, bulky and biowaste, a technology which combines high throughput, selectivity and resistance to contamination.

Material is transported by shafts with rugged steel discs working on the disc screen principle. Movable jacketed pipes positioned between the discs prevent seizures and blockages by contraries.

Drive (standard design)	FLOWERDISC
Power (kW):	11
Screen unit	
Length x width (mm):	4560 or 6080 x 1200
Screen sections	
FD 80 (mm):	80 ... 100
Throughput (dependent on material)	
Throughput performance (m³/h):	up to 100



01
Suction fan
(S-version: two fans)

02
Vibrating feeder

03
Pressure fan

04
All components electrically powered



HIGHLIGHTS



- » Up to more than 90 percent selectivity by precise adjustment of settings to material properties
- » Powerful S-version with enlarged suction section (2 suction fans)
- » Outstanding windsifting performance using pressure-suction in conjunction with vibration
- » Simple integration into new or existing systems

HURRIKAN

WINDSIFTER

The stationary Hurrikan windsifter-system allows effective cleaning of over-sized screened particles. The unit is extremely compact for a windsifter and can be integrated easily into a system chain.

The patented „pressure-suction“ principle is used to separate plastic with a high degree of selectivity.

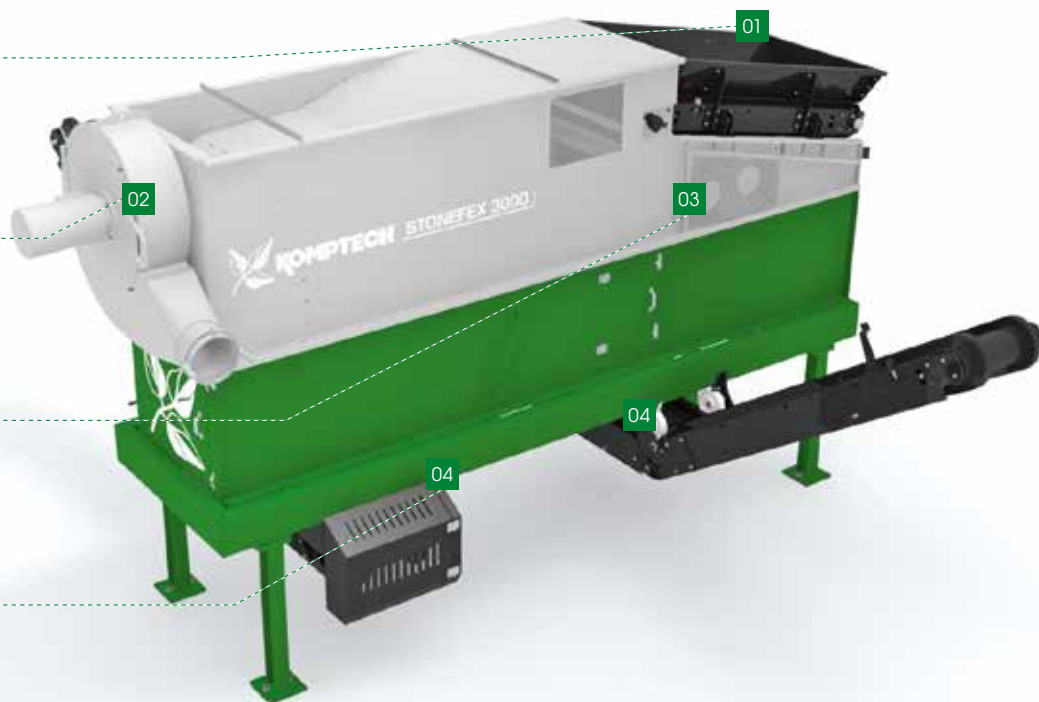
Drive	HURRIKAN	HURRIKAN S
Power (kW):	26	44
Feed		
Filling width (mm):	1600	1600
Width feed conveyor (mm):	up to 1200	up to 1200
Dimensions		
L x W x H (mm):	7300 x 2000 x 4200	9800 x 2460 x 4000
Weight (t):	~ 4	~ 6,0
Throughput (Throughput)		
Throughput performance (m ³ /h):	up to 40	up to 60

01
Intake conveyor
with adjustable speed

02
Suction fan,
hinged for maintenance

03
Pressure fan, adjustable by
frequency converter

04
One-piece corrugated belt
conveyors for discharge



HIGHLIGHTS

- » Dependable removal of up to more than 90 percent of stones and inert items from the input material (dependent on material)
- » Throughput up to 100 m³/h designed for a input particle size of 10...20–150 mm
- » Wide range of application with simple adaption of separation criteria
- » Low energy costs due to electrical drive of all components



STONEFEX

STONE SEPARATOR

The stone separator Stonefex removes reliably and very effectively stones and inert items from biomass fuels. A patented system of pressure and suction blowers generates exactly the right air flow in the expansion chamber to remove stones and heavy objects from wood.

The outcome is a fuel nearly free of stones which can be sold at a higher price. Furthermore fractions that were previously unusable due to their high amount of stones can now be processed into fuel.

Drive	STONEFEX
Power (kW):	26
Material feeding - Feed conveyor	
Filling width (mm):	1200
Discharge - Stone and wood fraction	
Design:	One -piece corrugated belt conveyor
Discharge height (mm):	2500 (Option 3700)
Dimensions (Working position)	
L x W x H (mm):	6850 x 7500 x 3800
Weight (t):	6,2
Throughput (dependent on material)	
Throughput performance (m ³ /h):	up to 100



01
Intake conveyor
with adjustable speed

02
Powerful suction fans,
hinged for maintenance

03
Separation chamber with
pressure and suction fan

04
Stones discharge by one-piece
corrugated belt conveyor



HIGHLIGHTS 

- » Combined unit with savings in space, materials and transportation effort compared to two separate machines
- » Wide range of uses with simple operation and high availability
- » Separation efficiency up to more than 90 percent at throughputs of 60 m³/h
- » Low energy costs due to electrical drive of all components

HURRIFEX

STONE AND LIGHT MATERIAL SEPARATOR

The Hurrifex combines a stone separator and wind sifter in a single machine. This makes it possible to clean compost and biomass fractions of stones and light materials - primarily plastic film - in one pass.

Easily adjustable separation parameters give the Hurrifex a wide range of applications, and a separation efficiency of more than 90 percent.

Drive	HURRIFEX
Power (kW):	48
Material feed	
Filling width (mm):	1200
Dimensions	
L x W x H (mm):	12400 x 4900 x 4100
Weight (t):	~ 11,5
Throughput (dependent on material)	
Throughput performance (m ³ /h):	up to 60





HIGHLIGHTS



- » Wide range of applications – from municipal waste (household waste, commercial waste) to potential recyclables and building material waste
- » High degree of selectivity with setting of separation limit
- » Efficient drive design with low power requirement
- » Rugged design with long service life and low operating costs

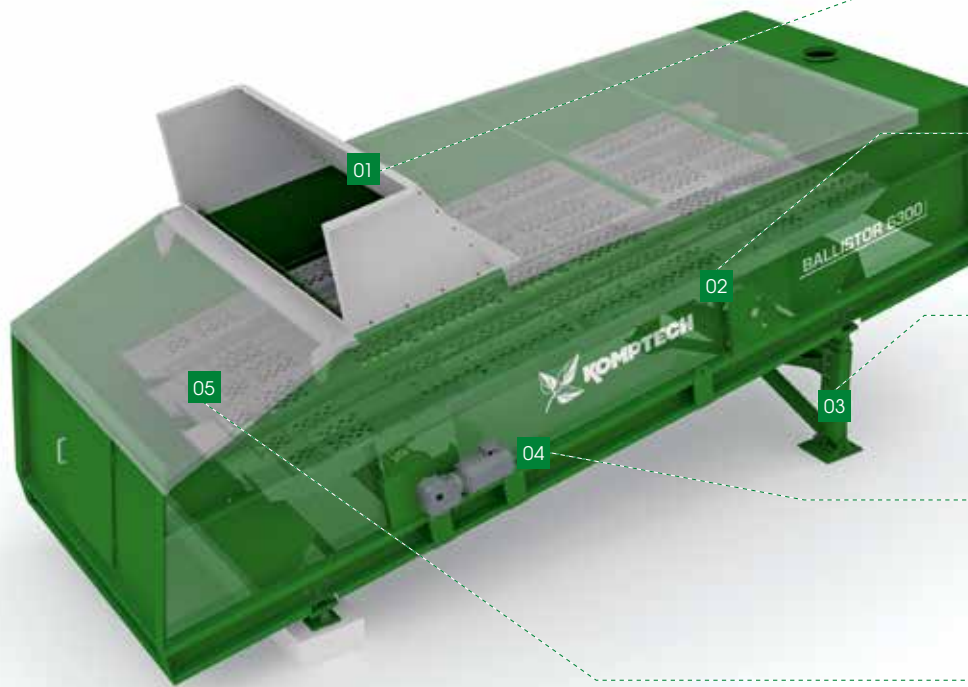


BALLISTOR

BALLISTIC SEPARATOR

The Ballistor is used to separate out usable fractions from waste and potential recyclables. By combining ballistic separation with screening, separation is performed in one operation in accordance with the criteria 3/2-dimensional, rolling-cubic-rigid/flat-soft-narrow, or undersized/oversized particles. A drive system using an electric motor, crankshaft, and elastic connecting link provides long service life.

Automatic lubrication options combined with electronic monitoring make the machine dependable even under heavy-duty operation. With a choice of separation into three or four fractions, five sizes and many options, the Ballistor separator can be configured to suit the application.



01
In-feed hood (option) and adjustable in-feed flap

02
Elastic connecting link for crankshaft-screen element

03
Mechanical inclination adjustment

04
Crankshaft motor

05
Screen elements (different types, hole sizes and materials)

	4300	4400	6300	6400	8300	8400	10300	10400	12300	12400
Drive										
Power (kW):	5,5	5,5	5,5	5,5	11,0	11,0	11,0	11,0	11,0	11,0
Screening elements										
Number of fractions:	3	4	3	4	3	4	3	4	3	4
Number of screening elements:	4	4	6	6	8	8	10	10	12	12
Length screening elements (mm):	5600	6800	5600	6800	5600	6800	5600	6800	5600	6800
Screening area (m ²):	9,6	11,6	14,4	17,4	19,2	23,3	23,9	29,1	28,7	34,9
Dimensions (mm)										
Length:	7475	8675	7475	8675	7475	8675	7475	8675	7475	8675
Width:	2400	2400	3250	3250	4100	4100	4960	4960	5810	5810
Height without inlet cap (mm):	1930	1930	1930	1930	1930	1930	1930	1930	1930	1930
Transport width (mm): (pre-assembled unit)	2150	2150	3000	3000	3940	3940	4800	4800	5650	5650
Weight (t):	5,75	6,5	7,0	7,75	8,5	9,25	9,75	10,5	11,0	11,75
Throughput (dependent on material)										
Throughput performance (m ³ /h):	up to 60	up to 80*	up to 100	up to 120*	up to 130	up to 150*	up to 160	up to 180*	up to 200	up to 220*



* using a 4-fraction machine for separating into 3 fractions data of the 3-fraction machine have to be applied

TECHNOLOGY FOR A BETTER **ENVIRONMENT**



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