



# BRT HARTNER

Sorting Systems

The realisation that natural resources are finite has pushed people into thinking about their lifestyle. This is why we are now more attuned to the idea of nature being a valuable asset that needs to be safeguarded for future generations. The development of sustainable solutions is the active way to contribute to a future worth living, and is something that our employees engage in on a day-to-day basis.

Karlgünter Eggersmann,  
CEO



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## Ballistic Separator



The machines of the BS-series are the most sold Ballistic Separators for light packaging and household waste. A wide range of machine-types available to fit to all application of the ballistic-separation. The separation process takes place in only one step. Here, the material is broken down into a rolling, flat and sieve fraction, which is highly suitable for further processing. In the separation of single stream, light packaging and comingled waste, BS is the first choice for effective sorting process with low cost and high availability.

- Rugged machine-design for durable application
- Patented eccentric-crankshaft with rugged changeable bearings
- Many types for each purpose
- Sieve area from 6 m<sup>2</sup> to 34 m<sup>2</sup>
- 4 useful width (1.57 / 2.07 / 2.6 / 2.76 m), 6 + 8 + 10 sievepadle at each machine
- 2 sievepadle-widths available (253/338 mm)
- Throughput up to 200 m<sup>3</sup>/h
- Screwable sieve mesh



Waste paper

MSW & industrial waste

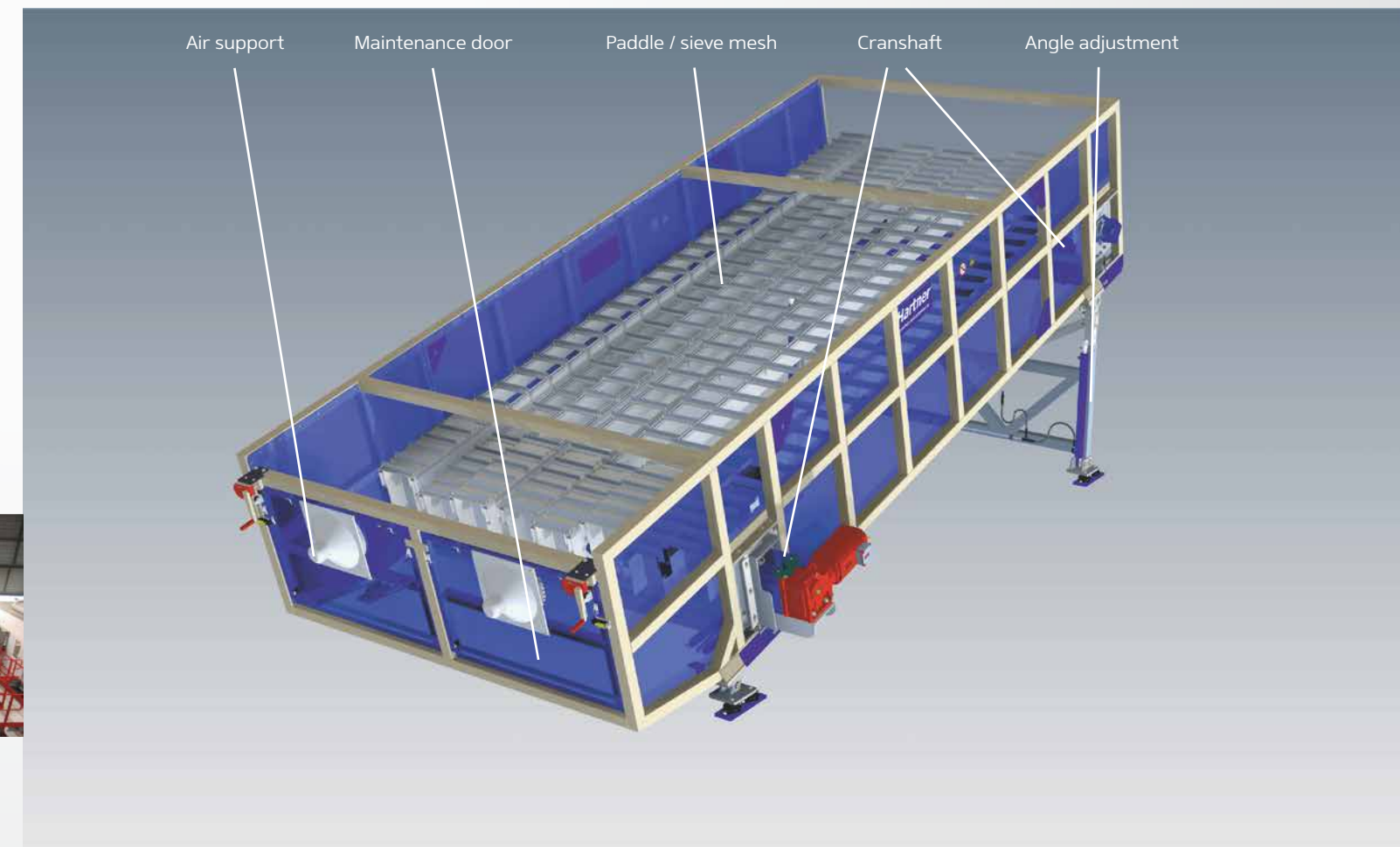
Single stream

PET-separation

## Technical Data

	BS 25	BS 30	BS 45	BS 60	BS 35	BS 40	BS 45	BS 60	BS 90	BS 120
Paddle width A (mm)	253	253	253	253	338	338	338	338	338	338
Useful width B (m)	1.56	1.56	2.08	2.6	2.07	2.07	2.07	2.77	4.14	5.54
Paddle length C (m)	4.08	5.08	6.3	6.3	4.08	5.08	6.3	6.3	6.3	6.3
Drive power E (kW)	11	11	11	11	11	11	11	11	22	22
Throughput F (m <sup>3</sup> /h)*	0-30	30-45	45-60	60-90	0-40	40-45	45-60	60-90	90-120	120-200
Sieve area G (m <sup>2</sup> )	6.3	7.9	13.1	16.3	8.4	10.5	13	17.4	26	34.9
Paddle no.	6	6	8	10	6	6	6	8	12	16
Revolution (1/min)	Serie: 0-200 (frequency controlled)									
Control enclosure / PLC	Option: Siemens PLC									
Fieldbus	Option: Profibus, Modbus, TCP/IP									
Air support	Option: 2 / 4 Fans (frequency controlled)									
Angle adjustment	Serie: Mechanical angle adjustment, Option: Hand- / motor-hydraulic adjustment									
Central greasing	Serie: Manual greasing, Option: Centralised hand greasing, central greasing system									
Sieve mesh	Serie: 60 mm (rectangle), Option: 10-80 mm (rectangle/round), adjustable sieve mesh									
Top cover	Option: PVC-top cover, steel top cover, steel hood									

\* Throughput can vary depending on the material, material properties, moisture and composition. All values are approximate.







### Technical Data

	BSD 70
Paddle width (mm)	338
Useful width (m)	2.0
Paddle length (m)	4.3
Drive power (kW)	15
Troughput (m³/h)*	70 - 100
Sieve area (m²)	17.2
Paddle no.	12
Revolution (1/min)	Serie: 0-200 (frequency controlled)
Control enclosure / PLC	Option: Siemens PLC
Fieldbus	Option: Profibus, Modbus, TCP/IP
Air support	Option: 2 / 4 Fans (frequency controlled)
Angle adjustment	Serie: Mechanical angle adjustment, Option: hand- / motor-hydraulic adjustment
Central greasing	Serie: Manual greasing, option: centralised hand greasing, central greasing system
Sieve mesh	Serie: 60 mm (rectangle), Option: 10-80 mm (rectangle/round), adjustable sieve mesh
Top cover	Option: PVC-Top cover, steel top cover, steel hood

\* Throughput can vary depending on the material, material properties, moisture and composition. All values are approximate.

The BSD is the most sold Ballistic Separator for light packaging and household waste. A wide range of machine-types available to fit to all application on the ballistic-separation. The separation process takes place in only one step. Here, the material is broken down into a rolling, flat and sieve fraction, which is highly suitable for further processing. In the separation of single stream, light packaging and co-mingled waste, BSD is the first choice for effective sorting process with low cost and high availability.

- Rugged machine-design for durable application
- Patented eccentric-crankshaft with rugged changeable bearings
- Up to five fractions in one step
- Angle independent on both decks hydraulically adjustable
- High troughput

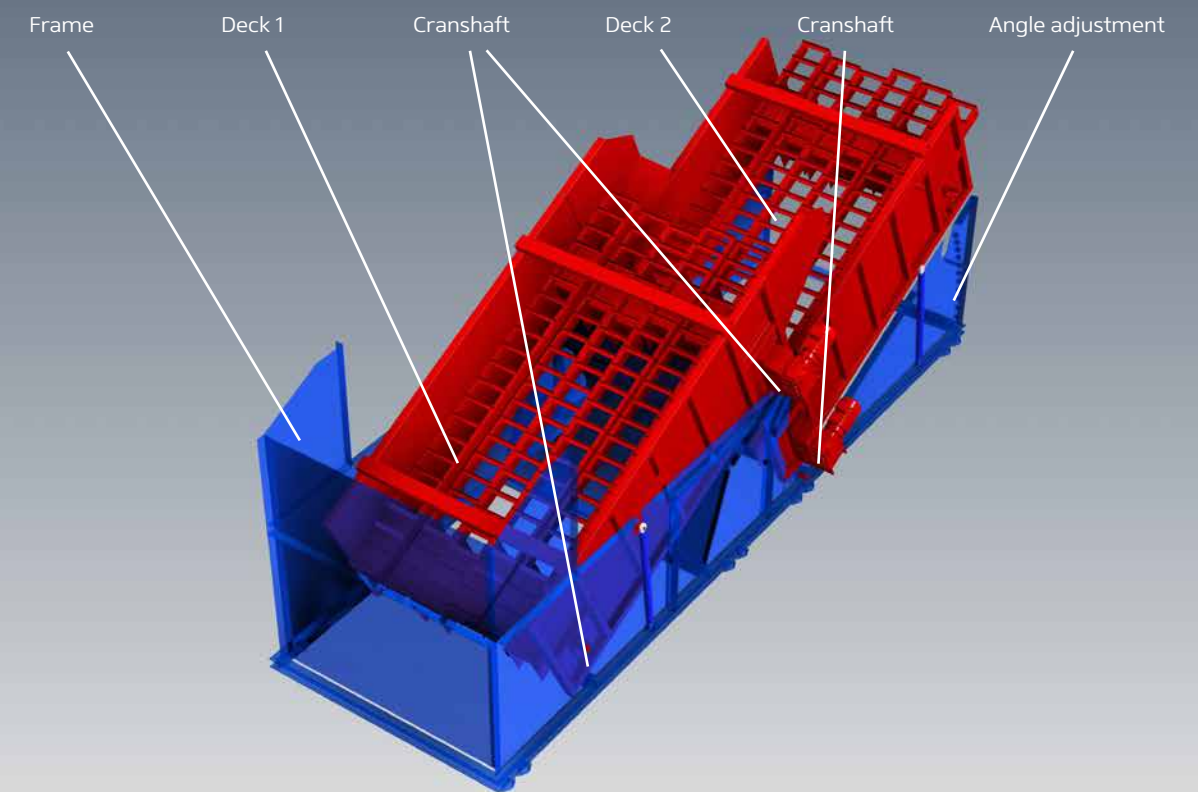


Waste paper

MSW & industrial waste

Single stream

PET-separation







The BPS is suitable within the range of the waste paper assortment both for the separation from paper and cardboard boxes and for the finesorting of the problematic disturbing off portions in the waste paper, here particularly also for the improvement of the de-inking quality.

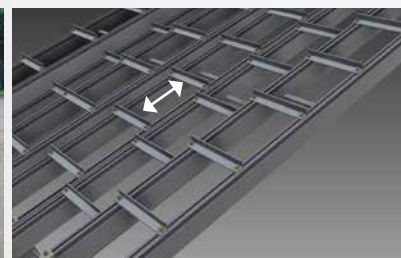
- Rugged Machine-Design for durable application
- Patented Eccentric-Crankshaft
- Rugged changeable bearings
- Patented adjustable Sieve-opening
- Many types for each purpose
- Sieve-area from 6 m<sup>2</sup> to 42 m<sup>2</sup>
- 3 useful width
- 6+8 sievepadle at each machine
- 2 sievepadle-width available
- Troughput from 6 t/h to 45 t/h
- Easy to maintain
- Two housings available
- For fines/trash and cardboard-sorting



Heigh housing



Low housing



Adjustable sieve mMesh

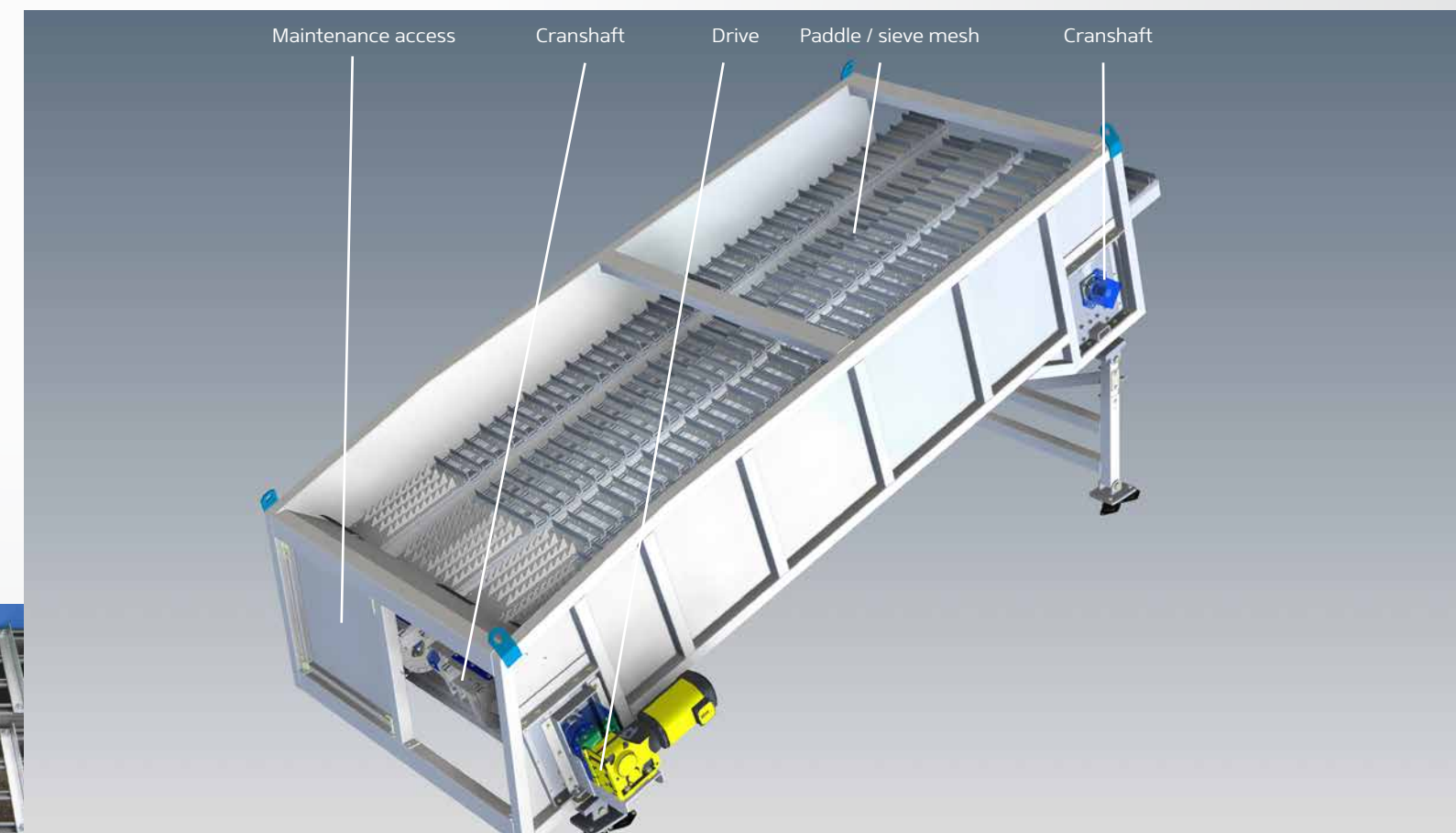


Longitudinal divison

## Technical Data

	BPS 06	BPS 08	BPS 12	BPS 14	BPS 16	BPS 20	BPS 21	BPS 22	BPS 30	BPS 45
Model	1 Deck	1 Deck	1 Deck	1 Deck	1 Deck	2 Deck	2 Deck	2 Deck	2 Deck	3 Deck
Paddle width (mm)	253	253	338	338	338	338	338	338	338	338
Useful width (m)	1.5	1.5	2.1	2.1	2.7	2.1	2.1	2.1	2.7	2.7
Paddle length (m)	4.2	5.2	5.2	6.2	6.2	2x 4.2	5.2 / 4.2	2x 5.2	2x 5.2	3x 5.2
Drive power (kW)	7.5	7.5	7.5	7.5	11	15	15	15	22	33
Troughput (t/h)*	6	8	12	14	16	20	21	22	30	45
Sieve area (m <sup>2</sup> )	6	8	11	12	17	17	19	21	28	42
Paddle no	6	6	6	6	8	12	12	12	16	24
Revolution (1/min)	Serie: 0-200 (frequency controlled)									
Control enclosure / PLC	Option: Siemens PLC									
Fieldbus	Option: Profibus, Modbus, TCP/IP									
Housing	High / low housing									
Angle adjustment	Serie: 15° fixed; Low housing: Option: hand- / motor-hydraulic adjustment									
Central greasing	Serie: Manual greasing; Option: Centralized hand greasing / automatic greasing system									
Sieve mesh	Serie: adjustable Sieve mesh; Option: adjustable + wrap protection / longitudinal division									
Top cover	Low housing: Option: PVC-Cover, steel top cover, steel hood									

\* Throughput can vary depending on the material, material properties, moisture and composition. All values are approximate.







## Screen for fine material

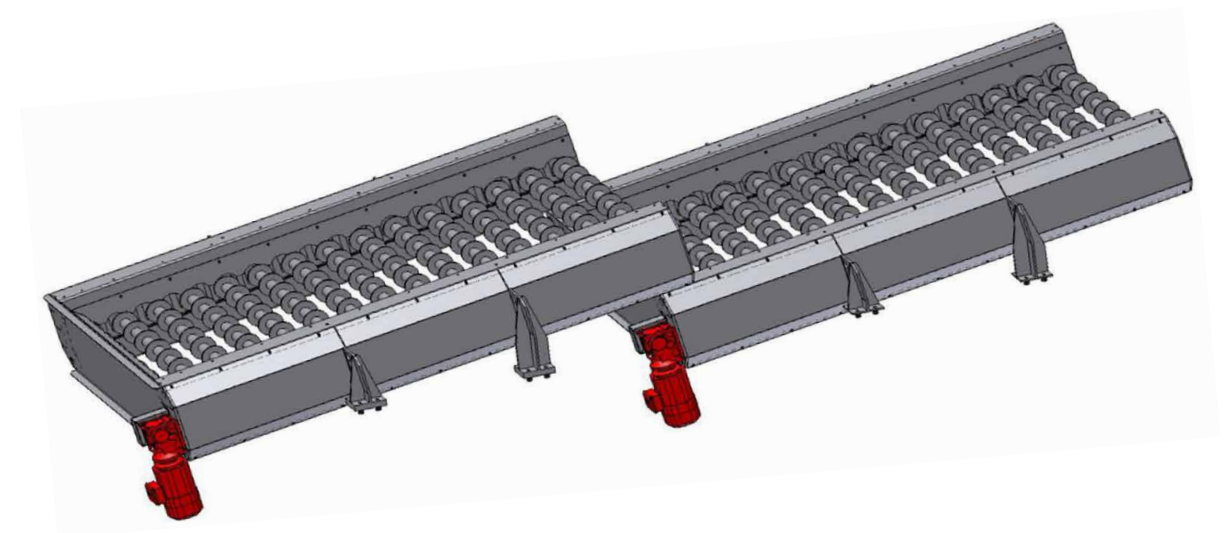


## Technical Data

	SF 40	SF 60	SF 90
Working width	1,700 mm	1,700 mm	1,700 mm
Length	approx. 4,000 mm	approx. 6,000 mm	approx. 9,000 mm
Screen surface	approx. 6.7 m <sup>2</sup>	approx. 9.8 m <sup>2</sup>	approx. 14.7 m <sup>2</sup>
Weight	approx. 2.4 to	approx. 5.0 to	approx. 7.5 to
Mesh size	> 100 mm	> 100 mm	> 100 mm
Cascade	-	500 mm	500 mm
Amount of rotor elements	22	34	51
Amount of discs per element	14	14	14
Power requirement	2.2 kW	4.4 kW	6.6 kW
Throughput waste paper and cardboard	up to 7 t/h	up to 12 t/h	up to 18 t/h

Use the SF Fine Screen for post-treatment of the mixed paper fraction. Producing a loose, even stream, the Fine Screen prepares the material in an optimal way for manual, mechanical or optical sorting. The oversize grain consists mainly of valuable de-inking material.

- Optimal subsequent treatment of mixed paper fraction
- Efficient screening of disruptive materials and small parts
- Reasonable price, long service life
- Additional improvement of performance and quality
- Loosened up and even material feeding to post-sorting
- Easy to clean
- Almost no danger of entangling through long foils or tapes
- Easy integration into existing sorting plants







## Screen for coarse material

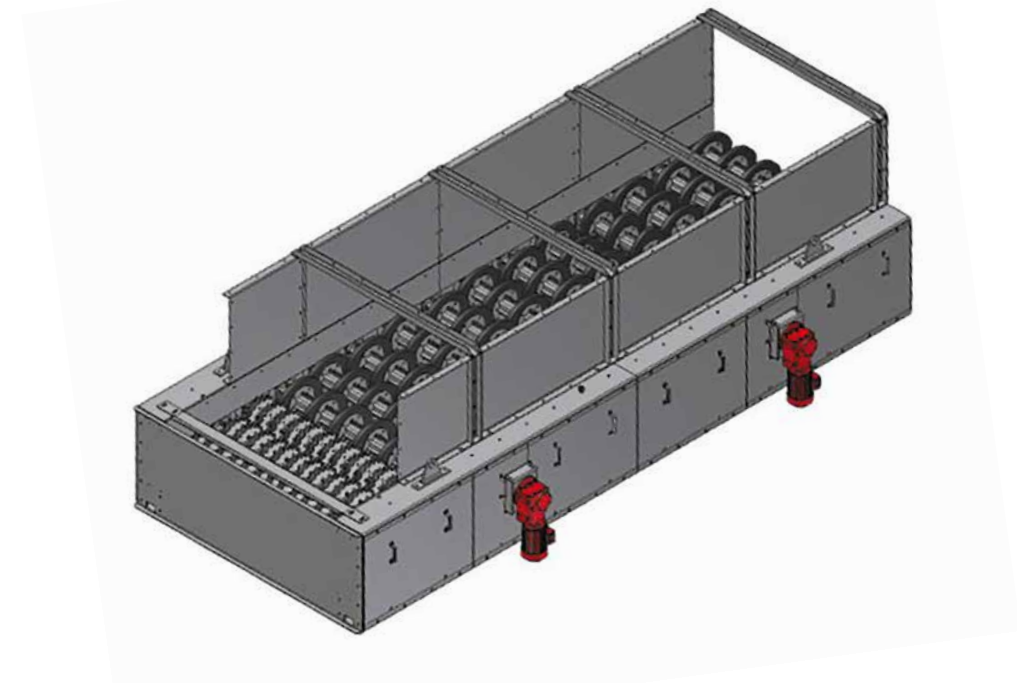


## Technical Data

	SC 40	SC 60	SC 90
Working width	1,700 mm	1,700 mm	1,700 mm
Length	approx. 4,000 mm	approx. 6,000 mm	approx. 9,000 mm
Screen surface	approx. 6.7 m <sup>2</sup>	approx. 9.8 m <sup>2</sup>	approx. 14.7 m <sup>2</sup>
Weight	approx. 2.6 to	approx. 5.2 to	approx. 7.8 to
Mesh size	> A4	> A4	> A4
Amount of rotor elements	10	15	23
Amount of discs per element	8	8	8
Power requirement	3 kW	6 kW	9 kW
Throughput mixed paper	up to 10 t/h	up to 20 t/h	up to 30 t/h

Rotor screens provide a functioning and economic way to perfectly separate a wide range of materials. The screens feature an easy and quick change of the screening criteria according to varying operational requirements. In addition, BRT HARTNER rotor screens are easy to clean, provide a long service life and last but not least, impress with their reasonable price.

- Efficient separation of cardboard and cardboard packagings from newspaper
- Reasonable price, long service life
- Impervious to disruptive material
- Loosened up and even material feeding to post-sorting
- Almost no danger of entangling
- Dynamic adjustment of screen mesh size
- Frequency controlled speed adjustment
- Easy to clean
- Optional: adjustment of screen inclination
- Easy integration into existing sorting plants







## Technical Data

	SMW 30	SMW 60	SMW 90
Working width	1,700 mm	1,700 mm	1,700 mm
Length	approx. 3,000 mm	approx. 6,000 mm	approx. 9,000 mm
Screen surface	approx. 4.9 m <sup>2</sup>	approx. 9.8 m <sup>2</sup>	approx. 14.7 m <sup>2</sup>
Weight	approx. 2.6 to	approx. 5.2 to	approx. 7.8 to
Mesh size	> 100 mm	> 100 mm	> 100 mm
Amount of rotor elements	min. 9	min. 18	min. 27
Amount of discs per element	min. 7	min. 7	min. 7
Power requirement	5,5 kW	11 kW	16,5 kW
Throughput mixed household waste	up to 20 t/h	up to 40 t/h	up to 60 t/h

SMW Waste Screen is a potent, compact screen segment unit for efficient separation of MSW into two fractions.

The rotor elements consist of rugged steel tubes equipped with pentagonal screen discs. SMW Rotor Screens are flexibly adjustable to the individual separating behaviour and transport characteristics of the input material.

The axial distance of the single rotor elements can be adjusted gradually. Same renders possible to choose different axial distances over the whole length of the screen. The proven BRT HARTNER design makes exchange of screen discs easy and fast to accomplish.

The machine can be upgraded with a speed control adjustment for optimal adjustment of the screen to the input material composition. This additional feature enables the machine to operate with changing velocities. As further option, an inclination adjustment device can be used for changing the inclination angle. A prolonged treatment time of the material on the screen results in a higher screening quality.

- Efficient material separation into two fractions
- High material selectivity
- Effective separation of disruptive materials
- Easy to clean
- Budget-priced and long-life
- Insusceptible to difficult material
- Loosened-up and evened out material feeding to post-sorting processes
- Small footprint
- Easy Integration into existing sorting plants
- Easy exchange of single screen discs
- Dynamic change of screen arrangement







### Technical Data

	SD 20	SD 25	SD 30
Drum diameter	2,100 mm	2,450 mm	2,950 mm
Length of sieving surface	6,000 - 8,000 mm	6,000 - 12,000 mm	6,000 - 12000 mm
Total length of drum body	8,000 - 10,000 mm	8,000 - 14,000 mm	8,000 - 14,000 mm
Total sieving area	40 - 53 m <sup>3</sup>	46 - 92 m <sup>3</sup>	65 - 111 m <sup>3</sup>
Thickness of screen plates	10 mm (8, 15)	10 mm (8, 15)	10 mm (8, 15)
Drum inclination	4°	4°	4°
Thickness of rings	35 mm	35 mm	35 mm
Width of rings	150 or 280 mm	280 or 410 mm	280 or 410 mm
Number of radial wheels	4 or 8	8 or 12	8 or 12
Design radial wheels	1-fold/ 2-fold	2-fold/ 3-fold	2-fold/ 3-fold
Drive	"1 x 11 kW or 1 x 15 kW"	"1 x 15 kW or 2 x 15 kW"	"1 x 15 kW or 2 x 15 kW"
Base frame profil height	300 mm	300 or 360 mm	300 or 360 mm
Total weight	14,800 - 16,600 kg	20,800 - 28,000 kg	26,500 - 33,700 kg

Trommel Screens separate the material input in different grain sizes. The specific materials, throughput rates and the screen size of the output fractions are the main criteria for the appropriate size of the screen drum. One to four screen steps are feasible.

The exchangeable screen sheet metals have round or rectangular holes, as well as an additional entangling protection if required for a particular kind of material. Further bag ripping tools, accelerators, mixers or other means can be added for additional improvement of the screening result.

- Suitable for domestic waste, organic material, RDF, compost, industrial waste, building rubble, etc.
- Eminently suitable for separating of flat materials thanks to permanent material turning
- Extremely robust and resistant to wear production of up to four grain sizes
- Different mesh sizes and tools for optimal screening results
- Protects downstream units from blockages high maintainability
- High efficiency and effectiveness, outstanding throughput capacity



Solid race



Protection against wrapping by flat steel



Protection against wrapping by pipe sleeves



Infeed of the drum without holes and labyrinth seal



Trommel Screen, MBA Wrexham (UK)



Key transfer system



Loading





### Technical Data

	BBS 10	BBS 16
Working width	1,000 mm	1,600 mm
Throughput	up to 100 m <sup>3</sup> /h	up to 160 m <sup>3</sup> /h
Length total	9,200 mm	9,200 mm
Width total	1,800 mm	2,400 mm
Height total	4,600 mm	4,600 mm
Installed electrical power		
Air belt	2.2 kW	2.2 kW
Fan for nozzle	15.0 kW	22.0 kW
Fan for underpressure generation	7.5 kW	15.0 kW

#### Principle

The separator classifies the input material in a light weight and a heavy weight fraction. The input material has to be free of fines and oversizes as far as possible. The input material has to be free-flowing and may not agglutinate. For good separation results, the ratio of the smallest to the largest particle should be 1: 4.

#### Functional Description

The input material must be evenly distributed on the acceleration belt. Under the head of the accelerating belt a nozzle is placed. The input material passes this nozzle in free fall. Very light components are blown out of the stream over the air belt directly into the settling chamber. In the transfer area, very heavy parts fall down on a heavy material discharge belt. All other parts reach the air belt. Over the radius of the air belt they are also separated into light and heavy fractions.

In the settling chamber the light fraction is separated from the air stream. Due to calming of the air, the light particles can settle here and are discharged by the light material discharge belt.

#### Air Management / Integrated Filters

The separator operates in recirculation mode. A second fan extracts the dust-laden air through a filter from the settling chamber and transfers the cleaned air to the surroundings. The separated dust is supplied to the light material fraction.

#### Advantages

- High recovery rate of light fraction
- A lot of setting options allow an optimal separation result
- Integrated filter unit
- Trace heating for pressure line to the filter and condensate line







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