

S1

Offer P012665AN01

Recycling plant for MSW

Client:

Oroszlány
Mr. Károly Takács
Rákóczi F. u. 78
H-2840 Oroszlány

Dear Mr. Herr Károly Takács,
many thanks for your inquiry for a MSW Sorting-Plant. As we do not have exact informations with regard to the waste composition we took the data from similar projects to have basis for planning. Our offer consists of 2 parts. The first part is the main plant and the second includes the sepcific treatment of the fine fraction . Especially the treatment of the fine fraction strongly depends on the input composition and the individual regulations for the final storage. As for both points we don't have the necessary information we made a separate offer for this step of material treatment. In our planning we chose a plant concept where the waste is separated according to the grain spectrum and afterwards treated. The overflow from the drum screen is separated manually. In this area the manual sorting is very effective. In the midsized fraction we planned 2 NIR-Systems (near infrared sorting systems), a magnet and a Ballistic Separator.. With this aggregates the material is treated that way to give the sorters a qualitative to Mit diesen Aggregaten wird das Material so aufbereitet, dass wir den Sortierern ein qualitativ e high-grade pre-product which is easy to treat afterwards. At the paper and film fraction only the quality has to be refined. At plastic hollow bodies a separation into the following fractions is made. HDPE, PP and PET. The working places are designed ergonomically so that the people work in a convenient surrounding. The plant can also be expanded with further NIR-Systems to additionally achieve an automatical sorting of the single polymer.

As you can see besides the best technical solution we also took into consideration the cration of sensible and convenient working places.

We would be very happy if the offer comes up to your expectations and we could start realizing the plant together with you. Naturally we would like to show you STADLER sorting plants in operation. Should you have further questions please do not hesitate to contact us.

Kind Regards
Stadler Anlagenbau GmbH



ppa. Roland Göggel
Headoffice

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Finanzamt Sigmaringen Steuer-Nr. 81060/02371

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General project data

Input:	MSW
Quantity:	15t/H
Number of shifts:	2
Working days	250
Apparent density:	250 kg/m ³

Material data:

Dates for the input are not yet known. Material distribution according to the flow chart.
If the material distribution or apparent weight change, it must be sent off, so that the product quality would not be in danger.

To be provided by the client:

Control room incl. inlet and outlet air, heating and climatisation according to the specifications of the compressor supplier.

Compressor room incl. inlet and outlet air, heating and climatisation according to the specifications of the compressor supplier.

Low voltage main distribution, cable network from the LVMD to the switch cabinets of the machines. Delivery, installation and connection. Provision of a potential earthing point for the earthing of the plant.

All aggregates which possess a connection power of 30 KW and more, as well as aggregates which are expressly named on the data sheet electric and control have to be provided and connected using a direct power supply from the low voltage main distribution.

Illumination of the hall and the machine area.

Necessary fire protection and fireguard during the mounting, as well as the fire protection installation for the operation of such plants

Automatic fire alarm and fire-retarding sealing

Lightning protection (external)

Base earthing

Technical Inspection Agency certification, certifications by public authorities

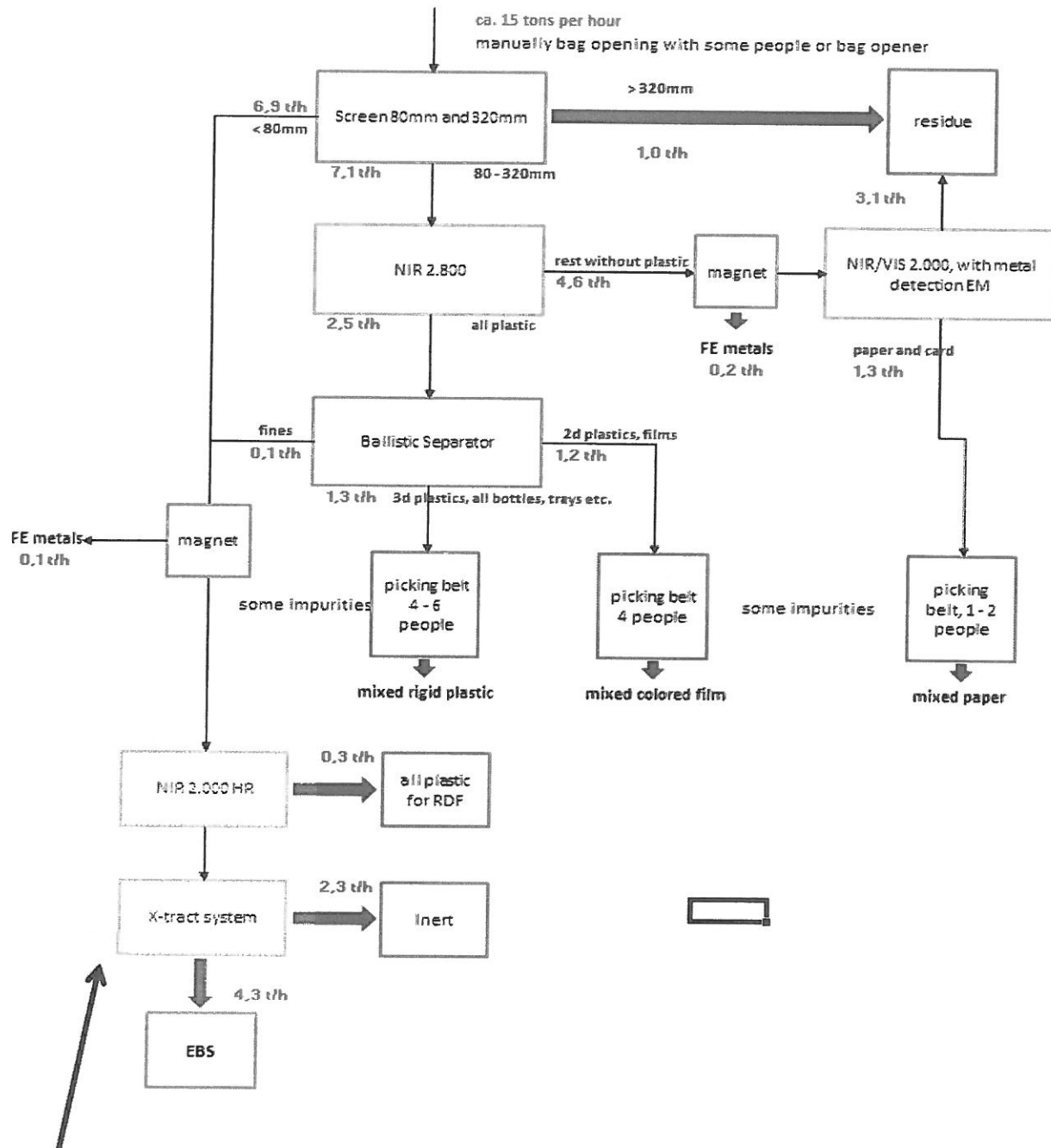
All works at the building, break throughs, bases and pits etc.

All import charges that will be necessary by the import of the plant.

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Flow chart



The dine fraction preparation is a separate offer.

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Gesamtpreis [€]:

Summary

Position	Description	Price
S1		
	De General project data	
	FL Flow chart	
Pos. 0500	Bag opener	
Pos. 1010	Feeding conveyor drum screen	
Pos. 1020	Drum screen	
Pos. 1100	Collecting conveyor fine fraction	
Pos. 1110	Permanent magnet separator	
Pos. 1115	Discharge shaft	
Pos. 1120	Discharge conveyor FE	
Pos. 1200	Collecting conveyor midsized fraction	
Pos. 1210	Collecting conveyor midsized fraction	
Pos. 1220	Intermediate conveyor midsized fraction	
Pos. 1230	Feeding conveyor to acceleration conveyor	
Pos. 1250	Acceleration conveyor optical separator NIR KT	
Pos. 1260	NIR-Separator 2800	
Pos. 1300	Collecting conveyor over flow	
Pos. 1310	Sorting conveyor over flow	
Pos. 2000	Feeding conveyor Magnet	
Pos. 2010	Permanent magnet separator	
Pos. 2015	Discharge shaft FE	
Pos. 2020	Discharge conveyor metal medium fraction	
Pos. 2030	Feeding conveyor to acceleration conveyor	
Pos. 2040	Acceleration conveyor optical separator NIR PPK+PVC	
Pos. 2050	NIR-Separator 2000	
Pos. 2060	Collecting conveyor PPK	
Pos. 2070	Sorting conveyor PPK	
Pos. 3000	Feeding conveyor to ballistic separator	
Pos. 3010	Balistic separator	
Pos. 3100	Collecting conveyor fine fraction	
Pos. 3110	Discharge conveyor fine fraction	
Pos. 3200	Sorting conveyor flat fraction	
Pos. 3210	Splitting conveyor flat fraction	
Pos. 3220	Sorting conveyor flat fraction	
Pos. 3230	Bunker feeding conveyor mixed material soft	
Pos. 3300	Collecting conveyor mixed material hard	
Pos. 3310	Sorting conveyor Plastics hard	
Pos. 5000	Feeding conveyor to press	
Pos. 5010	Feeding conveyor to press	
Pos. 5020		
Pos. 5020 (2)		
Pos. 5500	Sorting cabin	
Pos. 5500(2)	Sorting cabin	
Pos. 5600	Heating and Ventilation	
Pos. 6000	Compressor	
Pos. 9000	Steel structure	
Pos. 9100	EMSR Technique	
Pos. 9100(2)	EMSR Technique	
Pos. 9100 (3)	EMSR Technique	
Pos. 9200	Installation	
Pos. 9300	Transport and lifting devices	

Summary

Position	Description
Pos. 9400	Beschreibung
ZB	Scope of supply and service
Terms and conditions	Terms and conditions
Terms and conditions-1	Terms and conditions 1
Terms and conditions-2	Terms and conditions-2

Price

Total price excl. VAT 3.110.000 €

Pos. 0500

Bag opener

Scope of supply:

1 Hopper, capacity approximately 16 m³ with slide blade conveyor
1 Slitting rotor SR IV 2000 with Hardoxprotection
1 Motor for the rotor 22 KW (or 2 Hydraulic drives with Hydraulicunit 38 kW)
1 Comb Type IV 2000
1 Hydraulic unit for move the comb 1,2 KW
1 Set Safety equipment
1 Complete electric control cabinet with controls
1 Complete electrical installation
1 Motor for the the conveyor 2,2 KW
Fused by 100 A

Electrical connections:

Rotor back-geared engine SEW 15 kW (fuse protection 63 A)
Drive chain conveyor angle gear box engine SEW 1,1 kW
Hydraulics for comb regulation 1,5 kW
The execution of engine occurs after the new EU-engine guideline and is accorded to all secure instructions as UVV etc.

Technical data bag opener:

Hopper capacity: approx. 16 m³
Feed capacity, depending on bulk density: approx. 15 t/h
Bulk density: approx. 200 kg/m³

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Total price [€]:

Pos. 1010

Feeding conveyor drum screen

Dimensioning / Transported material		Specifications	
MSW	0,25	Usable width [mm]:	1550
Tonnage [t/h]:	16,2	Nominal height of sideboard [mm]:	500
Volume flow [m³/h]:	65	Belt velocity [m/s]:	0,8
Distance between centres [m]:	17,0	Dumping height [mm] (theoretical):	15
max. Inclination [degree]:	25 °	Total width [mm] (without motor):	1768
		Total height [mm]:	908
		Weight [kg]:	2519
		Color: 2-comp. single-coat 0,05 mm	50 my
Belt details		Electrical data	
Belt width [mm]:	1600	Power [kW]:	4,0
Belt quality: EP 400/3 2+0		Charging rate [A]:	8,5
Resistance: MOR		Revolution [1/min]:	75
Sealing: Lip seal		Voltage:	400V/50 Hz
Height of carriers [mm]:	40	Cable pull switch [number]:	
Distance of carriers [mm]:	450	Skew control switch [number]:	
Belt connection on site	Yes	Thermal classification F	No
		Brake	Yes
		Separate fan	No
		Frequency inverter	No
		Thermistor motor protection	No
		Overspeed trip	No
		Soft starter	No
Additives			
Supports < 2 m height [number]:	1		
Supports 2 - 4 m height [number]:	2		
Feed hopper [number]:	1		
Discharge chute [number]:	1		
Bend [number]:			
Under pin [m]	17		
Belt covering [m]			
Scraper	No		
Antimagnetic intermediate piece	No		
Antimagnetic head piece	No		
Rollers rubberized	Yes		
Central grease point	No		
Reversible	No		
Impact protection [m]:	1		

The belt movement is sliding on the smooth table area of the conveyor.

The conveyor belt structure is made of a robust profiled sectional steel construction.

The electric drive is effected by a bevel gear drive motor type SEW. Driving and guide drums have a diameter of 220 mm (spherical) with a crowned finish in order to obtain an optimal guiding of the belt.

The dismounting of the driving and guide drums is to be effected in axial direction through the frame of the conveyor. The driving drum is rubberized from a distance between centres of 10 m and more. The bearing is amply dimensioned with branded flange bearings of 60mm. Plug wipers clean the interior belt. On plain belts a wiper is mounted at the end of the dropping side.

The belt sealing towards the sideboard can be engineered on request as a mild grinding lip seal or as a non-touching labyrinth-sealing.

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Total price [€]:

Pos. 1020

Drum screen

General data:

Total length (mm):	14.345
Length screen (mm):	10000
Ø cylinder trommel (mm):	2500
Total width (mm):	3750
Total height (mm):	3663
Inclination (°):	3°
Screen shots	10
Screen plates per shot	6
Thickness screen (mm):	8
Perforation (mm)	
Number screenings.	1
Screen shot 1 - 4:	50 pipe connection
Screen shot 4 - 10:	120-240 pipe connection

Technical data:

Revolutions trommel (U/min):	10
Drive capacity (kW):	15
Power input (V):	220
Tension (HZ):	50

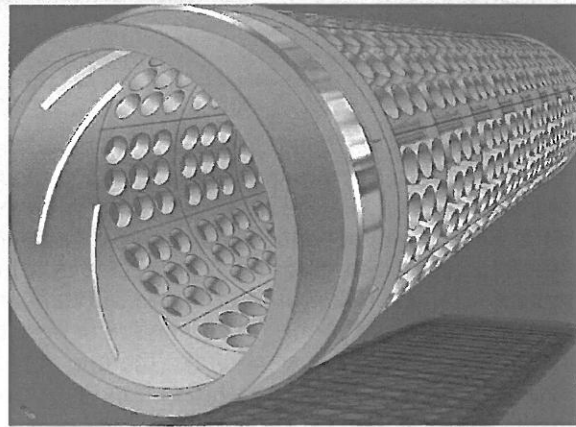
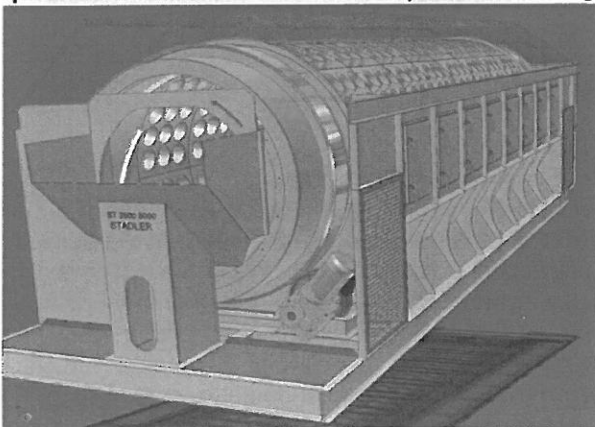
The trommel screen consists of a robust steel frame which takes the drive and thrust bearing. The drive is effected through friction wheels what allows a quiet running. The trommel cylinder is made of sectional steel and steel plates with welded wheel treads and provides exchangeable screening sheets. The diameter of the running wheels is 500mm plated with Vulkolan. 4 wheels are drive wheels and are connected with the motor by a coupling.

Other 4 wheels are running wheels. All wheels possess two bearings. The diameter of the bearings is 100mm. The engine speed of the trommel screen is 10 rpm. With the frequency converter it is possible to activate it within the indicated area. The engine speed has a direct influence on the dwell time and the screening grade. At the dropping side the ball race is fixed through an axial running wheel.

The diameter is 300mm. The wheels are constructed conical to guarantee a complete starting of the ball races.

The casing, feeding and dropping chute are made of a robust, screwed and welded sheet steel construction (3 – 5mm plate thickness)

The casing possesses apertures alongside the whole length. All rotating parts are provided with a protective enclosure. The screen plates are designed to be convertible.



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Total price [€]:

Pos. 1100

Collecting conveyor fine fraction

Dimensioning / Transported material		Specifications	
MSW	0,30	Usable width [mm]:	1350
Tonnage [t/h]:	7,3	Nominal height of sideboard [mm]:	500
Volume flow [m³/h]:	24	Belt velocity [m/s]:	0,8
Distance between centres [m]:	10,0	Dumping height [mm] (theoretical):	6
max.Inclination [degree]:	14 °	Total width [mm] (without motor):	1568
		Total height [mm]:	908
		Weight [kg]:	1570
		Color:2-comp. single-coat 0,05 mm	50 my
Belt details		Electrical data	
Belt width [mm]:	1400	Power [kW]:	3,0
Belt quality: EP 400/3 2+0		Charging rate [A]:	6,6
Resistance: MOR		Revolution [1/min]:	73
Sealing: Lip seal		Voltage:	400V/50 Hz
Height of carriers [mm]:		Cable pull switch [number]:	
Distance of carriers [mm]:		Skew control switch [number]:	
Belt connection on site	No	Thermal classification F	No
		Brake	No
Additives		Separate fan	No
Supports < 2 m height [number]:	2	Frequency inverter	No
Supports 2 - 4 m height [number]:	1	Thermistor motor protection	No
Feed hopper [number]:	1	Overspeed trip	No
Discharge chute [number]:	1		
Bend [number]:			
Under pin [m]	6		
Belt covering [m]			
Scraper	Yes	Soft starter	No
Antimagnetic intermediate piece	No		
Antimagnetic head piece	Yes		
Rollers rubberized	Yes		
Central grease point	No		
Reversible	No		
Impact protection [m]:	2		

The belt movement is sliding on the smooth table area of the conveyor.

The conveyor belt structure is made of a robust profiled sectional steel construction.

The electric drive is effected by a bevel gear drive motor type SEW. Driving and guide drums have a diameter of 220 mm (spherical) with a crowned finish in order to obtain an optimal guiding of the belt.

The dismounting of the driving and guide drums is to be effected in axial direction through the frame of the conveyor. The driving drum is rubberized from a distance between centres of 10 m and more. The bearing is amply dimensioned with branded flange bearings of 60mm. Plug wipers clean the interior belt. On plain belts a wiper is mounted at the end of the dropping side.

The belt sealing towards the sideboard can be engineered on request as a mild grinding lip seal or as a non-touching labyrinth-sealing.

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Total price [€]:

Pos. 1110

Permanent magnet separator

For surrounding temperature max. 45 °C

shielded magnet in permanent design:

Width: 1900 mm, Length: 1500 mm,

Construction height: 250 mm

antimagnetic frame construction

Protection against deposit of iron

Closed open cavities within body of magnet and frame

Motor: SEW

Power: 3,0kW

Supply voltage: 230/400V three-phase 50 Hz, adjusted to 400 V

Dropping conveyor:

Width: 1600 mm

Belt velocity: $v = 1,5$ m/sec.

incl. wiper plate

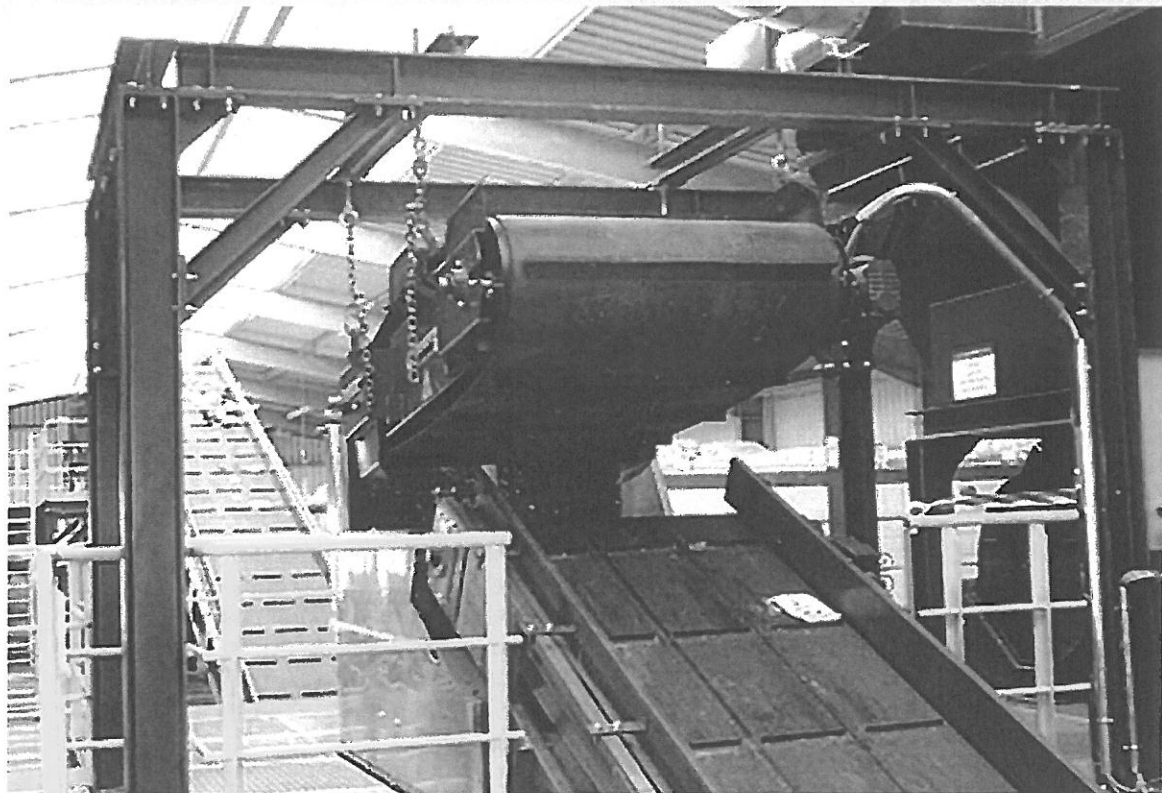
Protection devices according to DIN 15. 220-4.2.2

Painting:

Machine RAL 6018 yellow-green

Motor RAL 6018 yellow green

Protection devices RAL 2000 yellow -orange



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Total price [€]:

Pos. 1115

Discharge shaft

Type

separating drum 220

Main data

Length [mm]:	1000
Width [mm]:	1000
Height [mm]:	1000
Weight [t]:	0,2

The separating drum is made of stainless steel and helps to avoid wrappings at the separating points of the material (e.g. under an overbelt-magnet). The installation permits a horizontal and vertical adjustment. The bevel gear drive motor type SEW renders 0,37KW.

Pos. 1120

Discharge conveyor FE

Dimensioning / Transported material

MSW	0,20
Tonnage [t/h]:	7,5
Volume flow [m³/h]:	38
Distance between centres [m]:	3,0
max.Inclination [degree]:	20 °

Belt details

Belt width [mm]:	1200
Belt quality: EP 400/3 2+0	
Resistance: MOR	
Sealing: Lip seal	
Height of carriers [mm]:	30
Distance of carriers [mm]:	450
Belt connection on site	No

Additives

Supports < 2 m height [number]:	
Supports 2 - 4 m height [number]:	2
Feed hopper [number]:	1
Discharge chute [number]:	1
Bend [number]:	
Under pin [m]	3
Belt covering [m]	
Scraper	Yes
Antimagnetic intermediate piece	No
Antimagnetic head piece	No
Rollers rubberized	No
Central grease point	No
Reversible	No
Impact protection [m]:	

Specifications

Usable width [mm]:	1150
Nominal height of sideboard [mm]:	200
Belt velocity [m/s]:	1,2
Dumping height [mm] (theoretical):	8
Total width [mm] (without motor):	1368
Total height [mm]:	559
Weight [kg]:	761
Color:2-comp. single-coat 0,05 mm 50 my	

Electrical data

Power [kW]:	3,0
Charging rate [A]:	6,6
Revolution [1/min]:	103
Voltage:	400V/50 Hz
Cable pull switch [number]:	
Skew control switch [number]:	
Thermal classification F	No
Brake	Yes
Separate fan	No
Frequency inverter	No
Thermistor motor protection	No
Overspeed trip	No
Soft starter	No

The belt movement is sliding on the smooth table area of the conveyor.

The conveyor belt structure is made of a robust profiled sectional steel construction.

The electric drive is effected by a bevel gear drive motor type SEW. Driving and guide drums have a diameter of 220 mm (spherical) with a crowned finish in order to obtain an optimal guiding of the belt.

The dismounting of the driving and guide drums is to be effected in axial direction through the frame of the conveyor. The driving drum is rubberized from a distance between centres of 10 m and more. The bearing is amply dimensioned with branded flange bearings of 60mm. Plug wipers clean the interior belt. On plain belts a wiper is mounted at the end of the dropping side.

The belt sealing towards the sideboard can be engineered on request as a mild grinding lip seal or as a non-touching labyrinth-sealing.

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Total price [€]:

Pos. 1200

Collecting conveyor midsized fraction

Dimensioning / Transported material		Specifications	
MSW	0,25	Usable width [mm]:	1350
Tonnage [t/h]:	7,3	Nominal height of sideboard [mm]:	500
Volume flow [m³/h]:	32	Belt velocity [m/s]:	0,8
Distance between centres [m]:	3,5	Dumping height [mm] (theoretical):	8
max. Inclination [degree]:	0 °	Total width [mm] (without motor):	1568
		Total height [mm]:	908
		Weight [kg]:	940
		Color: 2-comp. single-coat 0,05 mm	50 my
Belt details		Electrical data	
Belt width [mm]:	1400	Power [kW]:	2,2
Belt quality: EP 400/3 2+0		Charging rate [A]:	5,0
Resistance: MOR		Revolution [1/min]:	72
Sealing: Lip seal		Voltage:	400V/50 Hz
Height of carriers [mm]:		Cable pull switch [number]:	
Distance of carriers [mm]:		Skew control switch [number]:	
Belt connection on site	No	Thermal classification F	No
Additives		Brake	No
Supports < 2 m height [number]:	2	Separate fan	No
Supports 2 - 4 m height [number]:		Frequency inverter	No
Feed hopper [number]:	1	Thermistor motor protection	No
Discharge chute [number]:	1	Overspeed trip	No
Bend [number]:		Soft starter	No
Under pin [m]	3,5		
Belt covering [m]			
Scraper	Yes		
Antimagnetic intermediate piece	No		
Antimagnetic head piece	No		
Rollers rubberized	No		
Central grease point	No		
Reversible	No		
Impact protection [m]:	2		

The belt movement is sliding on the smooth table area of the conveyor.

The conveyor belt structure is made of a robust profiled sectional steel construction.

The electric drive is effected by a bevel gear drive motor type SEW. Driving and guide drums have a diameter of 220 mm (spherical) with a crowned finish in order to obtain an optimal guiding of the belt.

The dismounting of the driving and guide drums is to be effected in axial direction through the frame of the conveyor. The driving drum is rubberized from a distance between centres of 10 m and more. The bearing is amply dimensioned with branded flange bearings of 60mm. Plug wipers clean the interior belt. On plain belts a wiper is mounted at the end of the dropping side.

The belt sealing towards the sideboard can be engineered on request as a mild grinding lip seal or as a non-touching labyrinth-sealing.

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Total price [€]:

Pos. 1210

Collecting conveyor midsize fraction

Dimensioning / Transported material

MSW	0,23
Tonnage [t/h]:	7,3
Volume flow [m³/h]:	32
Distance between centres [m]:	4,5
max. Inclination [degree]:	15 °

Belt details

Belt width [mm]:	1400
Belt quality: EP 400/3 2+0	
Resistance: MOR	
Sealing: Lip seal	
Height of carriers [mm]:	
Distance of carriers [mm]:	
Belt connection on site	No

Additives

Supports < 2 m height [number]:	2
Supports 2 - 4 m height [number]:	
Feed hopper [number]:	1
Discharge chute [number]:	1
Bend [number]:	
Under pin [m]	4
Belt covering [m]	
Scraper	Yes
Antimagnetic intermediate piece	No
Antimagnetic head piece	No
Rollers rubberized	No
Central grease point	No
Reversible	No
Impact protection [m]:	1

Specifications

Usable width [mm]:	1350
Nominal height of sideboard [mm]:	500
Belt velocity [m/s]:	0,8
Dumping height [mm] (theoretical):	8
Total width [mm] (without motor):	1568
Total height [mm]:	908
Weight [kg]:	1037
Color: 2-comp. single-coat 0,05 mm 50 my	

Electrical data

Power [kW]:	2,2
Charging rate [A]:	5,0
Revolution [1/min]:	72
Voltage:	400V/50 Hz
Cable pull switch [number]:	
Skew control switch [number]:	
Thermal classification F	No
Brake	No
Separate fan	No
Frequency inverter	No
Thermistor motor protection	No
Overspeed trip	No
Soft starter	No

The belt movement is sliding on the smooth table area of the conveyor.

The conveyor belt structure is made of a robust profiled sectional steel construction.

The electric drive is effected by a bevel gear drive motor type SEW. Driving and guide drums have a diameter of 220 mm (spherical) with a crowned finish in order to obtain an optimal guiding of the belt.

The dismounting of the driving and guide drums is to be effected in axial direction through the frame of the conveyor. The driving drum is rubberized from a distance between centres of 10 m and more. The bearing is amply dimensioned with branded flange bearings of 60mm. Plug wipers clean the interior belt. On plain belts a wiper is mounted at the end of the dropping side.

The belt sealing towards the sideboard can be engineered on request as a mild grinding lip seal or as a non-touching labyrinth-sealing.

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Total price [€]:

Pos. 1220

Intermediate conveyor midsize fraction

Dimensioning / Transported material		Specifications	
MSW	0,23	Usable width [mm]:	1350
Tonnage [t/h]:	7,3	Nominal height of sideboard [mm]:	500
Volume flow [m³/h]:	32	Belt velocity [m/s]:	0,8
Distance between centres [m]:	18,0	Dumping height [mm] (theoretical):	8
max. Inclination [degree]:	15 °	Total width [mm] (without motor):	1568
		Total height [mm]:	908
		Weight [kg]:	2346
		Color: 2-comp. single-coat 0,05 mm	50 my
Belt details		Electrical data	
Belt width [mm]:	1400	Power [kW]:	4,0
Belt quality: EP 400/3 2+0		Charging rate [A]:	8,5
Resistance: MOR		Revolution [1/min]:	75
Sealing: Lip seal		Voltage:	400V/50 Hz
Height of carriers [mm]:		Cable pull switch [number]:	
Distance of carriers [mm]:		Skew control switch [number]:	
Belt connection on site	Yes	Thermal classification F	No
Additives		Brake	Yes
Supports < 2 m height [number]:	1	Separate fan	No
Supports 2 - 4 m height [number]:	3	Frequency inverter	No
Feed hopper [number]:	1	Thermistor motor protection	No
Discharge chute [number]:	1	Overspeed trip	No
Bend [number]:			
Under pin [m]	4		
Belt covering [m]			
Scraper	Yes	Soft starter	No
Antimagnetic intermediate piece	No		
Antimagnetic head piece	No		
Rollers rubberized	Yes		
Central grease point	No		
Reversible	No		
Impact protection [m]:	1		

The belt movement is sliding on the smooth table area of the conveyor.

The conveyor belt structure is made of a robust profiled sectional steel construction.

The electric drive is effected by a bevel gear drive motor type SEW. Driving and guide drums have a diameter of 220 mm (spherical) with a crowned finish in order to obtain an optimal guiding of the belt.

The dismounting of the driving and guide drums is to be effected in axial direction through the frame of the conveyor. The driving drum is rubberized from a distance between centres of 10 m and more. The bearing is amply dimensioned with branded flange bearings of 60mm. Plug wipers clean the interior belt. On plain belts a wiper is mounted at the end of the dropping side.

The belt sealing towards the sideboard can be engineered on request as a mild grinding lip seal or as a non-touching labyrinth-sealing.

GG

Total price [€]:

Pos. 1230

Feeding conveyor to acceleration conveyor

Dimensioning / Transported material

MSW	0,23
Tonnage [t/h]:	7,3
Volume flow [m³/h]:	32
Distance between centres [m]:	9,0
max.Inclination [degree]:	13 °

Belt details

Belt width [mm]:	2000
Belt quality: EP 400/3 2+0	
Resistance: MOR	
Sealing: Lip seal	
Height of carriers [mm]:	
Distance of carriers [mm]:	
Belt connection on site	No

Additives

Supports < 2 m height [number]:	
Supports 2 - 4 m height [number]:	2
Feed hopper [number]:	1
Discharge chute [number]:	1
Bend [number]:	
Under pin [m]	7
Belt covering [m]	
Scraper	Yes
Antimagnetic intermediate piece	No
Antimagnetic head piece	No
Rollers rubberized	Yes
Central grease point	No
Reversible	No
Impact protection [m]:	1

Specifications

Usable width [mm]:	1950
Nominal height of sideboard [mm]:	500
Belt velocity [m/s]:	0,8
Dumping height [mm] (theoretical):	6
Total width [mm] (without motor):	2168
Total height [mm]:	908
Weight [kg]:	2043
Color:2-comp. single-coat 0,05 mm 50 my	

Electrical data

Power [kW]:	3,0
Charging rate [A]:	6,6
Revolution [1/min]:	73
Voltage:	400V/50 Hz
Cable pull switch [number]:	
Skew control switch [number]:	
Thermal classification F	No
Brake	Yes
Separate fan	No
Frequency inverter	No
Thermistor motor protection	No
Overspeed trip	No
Soft starter	No

The belt movement is sliding on the smooth table area of the conveyor.

The conveyor belt structure is made of a robust profiled sectional steel construction.

The electric drive is effected by a bevel gear drive motor type SEW. Driving and guide drums have a diameter of 220 mm (spherical) with a crowned finish in order to obtain an optimal guiding of the belt.

The dismounting of the driving and guide drums is to be effected in axial direction through the frame of the conveyor. The driving drum is rubberized from a distance between centres of 10 m and more. The bearing is amply dimensioned with branded flange bearings of 60mm. Plug wipers clean the interior belt. On plain belts a wiper is mounted at the end of the dropping side.

The belt sealing towards the sideboard can be engineered on request as a mild grinding lip seal or as a non-touching labyrinth-sealing.

GG

Total price [€]:

Pos. 1250

Acceleration conveyor optical separator NIR KT

Dimensioning / Transported material		Specifications	
MSW	0,23	Usable width [mm]:	2850
Tonnage [t/h]:	7,3	Nominal height of sideboard [mm]:	200
Volume flow [m³/h]:	32	Belt velocity [m/s]:	2,3
Distance between centres [m]:	6,0	Dumping height [mm] (theoretical):	1
max. Inclination [degree]:	0 °	Total width [mm] (without motor):	3068
		Total height [mm]:	559
		Weight [kg]:	2382
		Color: 2-comp. single-coat 0,05 mm	50 my
Belt details		Electrical data	
Belt width [mm]:	2900	Power [kW]:	7,5
Belt quality: EP 400/3 2+0		Charging rate [A]:	15,2
Resistance: MOR		Revolution [1/min]:	200,0
Sealing: lip seal		Voltage:	400V/50 Hz
Belt connection on site	No	Cable pull switch [number]:	
		Skew control switch [number]:	
		Thermal classification F	Yes
Additives		Separate fan	Yes
Supports < 2 m height [number]:		Frequency inverter	Yes
Supports 2 - 4 m height [number]:		Thermistor motor protection	Yes
Feed hopper [number]:	1	Overspeed trip	No
Discharge chute [number]:	2		
Under pin [m]	2		
Belt covering [m]			
Scraper	Yes	Soft starter	
Central grease point	No	Capacity separating drum [kW]:	0,18
		Drawing of current sep. drum [A]:	0,55

Hood

Hood for NIR width 2800

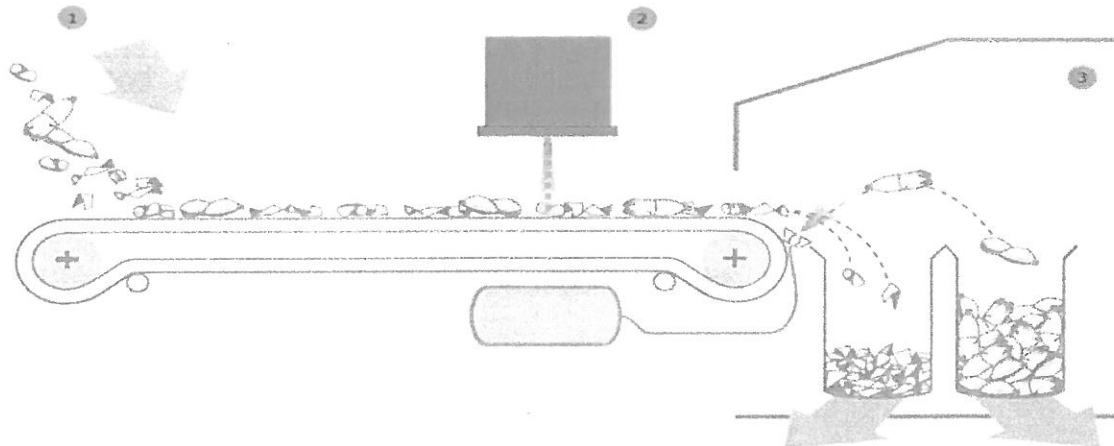
The belt movement is sliding on the smooth table area of the conveyor. The construction of the conveyor is similar to the sliding belt conveyor (GG). The driving-drum is not rubberized to avoid unbalances and therefore oscillations under higher speeds. The electric drive is installed "shovingly" to grant the access to the guide rail of the valves. The belt sealing to the side wall is designed as a grinding lip seal but with smooth sealing lips to allow a higher belt velocity. The discharge hood shows a maintenance door and an adjustable guide plate. Adjustable retainers for the guide rails of the valves and for the separating drum are also installed in the painted hood. The separating drum has a diameter of 135mm (belt 2900mm / 220 mm) and is driven with 12 1/min.

BB

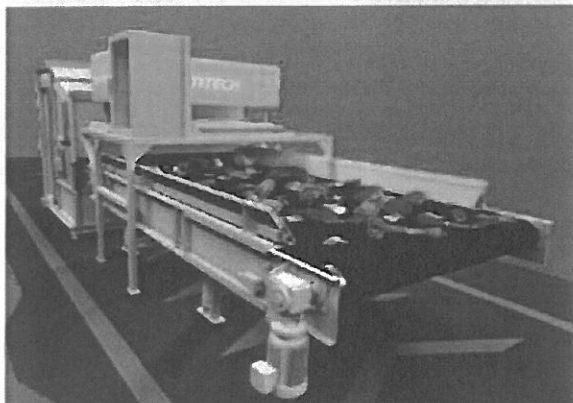
Total price [€]:

Pos. 1260

NIR-Separator 2800



- ① Feeding of unsorted material
- ② Spectrometer scanner
- ③ Separation chamber



The TITECH autosort is a multifunctional sorting system to recover a wide range of valuable material from different waste streams like single stream, packaging, municipal solid waste and other. The new generation with **FLYING BEAM®** technology makes a significant simplification to the system as a whole. This way the TITECH autosort 4 sorts extremely reliable and can be maintained very easy. Sophisticated near infrared (NIR) and visible light (VIS) spectrometer based sensors take in the characteristic spectra with a very high optical resolution. Innovative **FLYING BEAM®** lighting technology focuses only on the area of the conveyor belt that is being scanned. The result: Up to 70% energy savings. The advanced NIR spectrometer based detector recognises materials based on their specific and unique spectral properties of reflected light. There are two detectors available for different spectral ranges. The VIS spectrometer based detector recognises materials based on their specific colour properties. These detectors can be used in combination depending on the application. In addition the TITECH autosort 4 technology covers a broader temperature range. The system can be quickly optimized for the required sorting tasks by the selection of sorting programs.

Blanko

Total price [€]:

Pos. 1300

Collecting conveyor over flow

Dimensioning / Transported material

MSW	0,15
Tonnage [t/h]:	1,6
Volume flow [m³/h]:	11
Distance between centres [m]:	16,0
max.Inclination [degree]:	12 °

Belt details

Belt width [mm]:	1200
Belt quality: EP 400/3 2+0	
Resistance: MOR	
Sealing: Lip seal	
Height of carriers [mm]:	
Distance of carriers [mm]:	
Belt connection on site	Yes

Additives

Supports < 2 m height [number]:	
Supports 2 - 4 m height [number]:	3
Feed hopper [number]:	1
Discharge chute [number]:	1
Bend [number]:	
Under pin [m]	16
Belt covering [m]	
Scraper	Yes
Antimagnetic intermediate piece	No
Antimagnetic head piece	No
Rollers rubberized	Yes
Central grease point	No
Reversible	No
Impact protection [m]:	1,5

Specifications

Usable width [mm]:	1150
Nominal height of sideboard [mm]:	500
Belt velocity [m/s]:	0,8
Dumping height [mm] (theoretical):	3
Total width [mm] (without motor):	1368
Total height [mm]:	908
Weight [kg]:	1892
Color:2-comp. single-coat 0,05 mm 50 my	

Electrical data

Power [kW]:	3,0
Charging rate [A]:	6,6
Revolution [1/min]:	73
Voltage:	400V/50 Hz
Cable pull switch [number]:	
Skew control switch [number]:	
Thermal classification F	No
Brake	No
Separate fan	No
Frequency inverter	No
Thermistor motor protection	No
Overspeed trip	No
Soft starter	No

The belt movement is sliding on the smooth table area of the conveyor.

The conveyor belt structure is made of a robust profiled sectional steel construction.

The electric drive is effected by a bevel gear drive motor type SEW. Driving and guide drums have a diameter of 220 mm (spherical) with a crowned finish in order to obtain an optimal guiding of the belt.

The dismounting of the driving and guide drums is to be effected in axial direction through the frame of the conveyor. The driving drum is rubberized from a distance between centres of 10 m and more. The bearing is amply dimensioned with branded flange bearings of 60mm. Plug wipers clean the interior belt. On plain belts a wiper is mounted at the end of the dropping side.

The belt sealing towards the sideboard can be engineered on request as a mild grinding lip seal or as a non-touching labyrinth-sealing.

GG

Total price [€]:

Pos. 1310

Sorting conveyor over flow

Dimensioning / Transported material

MSW	0,15
Tonnage [t/h]:	1,6
Volume flow [m³/h]:	11
Distance between centres [m]:	16,0
max.Inclination [degree]:	0 °

Belt details

Belt width [mm]:	1200
Belt quality: EP 400/3 2+0	
Resistance: MOR	
Sealing: open	
Height of carriers [mm]:	
Distance of carriers [mm]:	
Belt connection on site	Yes

Additives

Supports < 2 m height [number]:	5
Supports 2 - 4 m height [number]:	
Feed hopper [number]:	8
Discharge chute [number]:	1
Bend [number]:	1
Under pin [m]	3
Belt covering [m]	
Scraper	Yes
Antimagnetic intermediate piece	No
Antimagnetic head piece	No
Rollers rubberized	Yes
Central grease point	No
Reversible	No
Impact protection [m]:	

Specifications

Usable width [mm]:	1200
Nominal height of sideboard [mm]:	0
Belt velocity at 50 Hz [m/s]:	0,7
Dumping height [mm] (theoretical):	4
Total width [mm] (without motor):	1368
Total height [mm]:	908
Weight [kg]:	1892
Color:2-comp. single-coat 0,05 mm 50 my	

Elektrical data

Power [kW]:	3,0
Charging rate [A]:	6,3
Revolution [1/min]:	39
Voltage:	400V/50 Hz
Cable pull switch [number]:	
Screw control switch [number]:	
Thermal classification F	Yes
Brake	No
Separate fan	Yes
Frequency inverter	Yes
Thermistor motor protection	Yes
Overspeed trip	No
Soft starter	No

The belt movement is sliding on the smooth trough shaped table area of the conveyor. The conveyor belt structures are made of a robust profiled sectional steel construction.

The electric drive is effected by a bevel gear drive motor type SEW. Driving- and guide-drums have a diameter of 320 mm (spherical) with a crowned finish in order to obtain an optimal guiding of the belt. The dismounting of the driving- and guide-drums is to be effected in axial direction through the frame of the conveyor. The driving drum is rubberized.

The bearing is amply dimensioned with branded flange bearings of 60mm.

Plug wipers clean the interior belt. On plain belts a wiper is mounted at the end of the dropping side.

SO

Total price [€]:

Pos. 2000

Feeding conveyor Magnet

Dimensioning / Transported material

MSW	0,25
Tonnage [t/h]:	4,7
Volume flow [m³/h]:	19
Distance between centres [m]:	5,5
max.Inclination [degree]:	0 °

Belt details

Belt width [mm]:	1600
Belt quality: EP 400/3 2+0	
Resistance: MOR	
Sealing: Lip seal	
Height of carriers [mm]:	
Distance of carriers [mm]:	
Belt connection on site	No

Additives

Supports < 2 m height [number]:	
Supports 2 - 4 m height [number]:	2
Feed hopper [number]:	1
Discharge chute [number]:	1
Bend [number]:	
Under pin [m]	5
Belt covering [m]	
Scraper	Yes
Antimagnetic intermediate piece	No
Antimagnetic head piece	Yes
Rollers rubberized	No
Central grease point	No
Reversible	No
Impact protection [m]:	1

Specifications

Usable width [mm]:	1550
Nominal height of sideboard [mm]:	500
Belt velocity [m/s]:	1,2
Dumping height [mm] (theoretical):	3
Total width [mm] (without motor):	1768
Total height [mm]:	908
Weight [kg]:	1289
Color:2-comp. single-coat 0,05 mm 50 my	

Electrical data

Power [kW]:	3,0
Charging rate [A]:	6,6
Revolution [1/min]:	103
Voltage:	400V/50 Hz
Cable pull switch [number]:	
Skew control switch [number]:	
Thermal classification F	No
Brake	Yes
Separate fan	No
Frequency inverter	No
Thermistor motor protection	No
Overspeed trip	No
Soft starter	No

The belt movement is sliding on the smooth table area of the conveyor.

The conveyor belt structure is made of a robust profiled sectional steel construction.

The electric drive is effected by a bevel gear drive motor type SEW. Driving and guide drums have a diameter of 220 mm (spherical) with a crowned finish in order to obtain an optimal guiding of the belt.

The dismounting of the driving and guide drums is to be effected in axial direction through the frame of the conveyor. The driving drum is rubberized from a distance between centres of 10 m and more. The bearing is amply dimensioned with branded flange bearings of 60mm. Plug wipers clean the interior belt. On plain belts a wiper is mounted at the end of the dropping side.

The belt sealing towards the sideboard can be engineered on request as a mild grinding lip seal or as a non-touching labyrinth-sealing.

GG

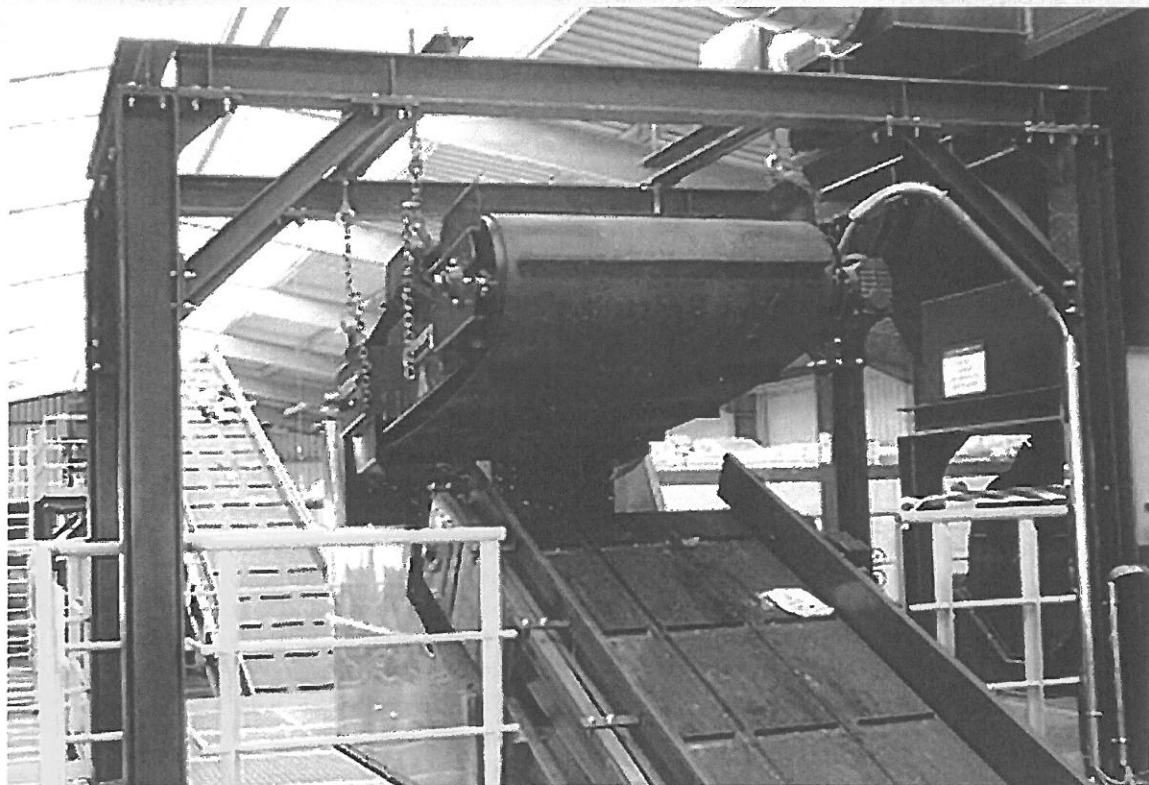
Total price [€]:

Pos. 2010

Permanent magnet separator

For surrounding temperature max. 45 °C
shielded magnet in permanent design:
Width: 1900 mm, Length: 1500 mm ,
Construction height: 250 mm
antimagnetic frame construction
Protection against deposit of iron
Closed open cavities within body of magnet and frame
Motor: SEW
Power: 3,0kW
Supply voltage: 230/400V three-phase 50 Hz, adjusted to 400 V
Dropping conveyor:
Width: 1600 mm
Belt velocity: $v = 1,5$ m/sec.
incl. wiper plate
Protection devices according to DIN 15. 220-4.2.2

Painting:
Machine RAL 6018 yellow-green
Motor RAL 6018 yellow green
Protection devices RAL 2000 yellow -orange



Blanko

Total price [€]:

Pos. 2015

Discharge shaft FE

Type

separating drum 220

Main data

Length [mm]:	1000
Width [mm]:	1600
Height [mm]:	1000
Weight [t]:	0,2

The separating drum is made of stainless steel and helps to avoid wrappings at the separating points of the material (e.g. under an overbelt-magnet). The installation permits a horizontal and vertical adjustment. The bevel gear drive motor type SEW renders 0,37KW.

Pos. 2020 option

Discharge conveyor metal medium fraction

Dimensioning / Transported material

Metal	0,15
Tonnage [t/h]:	0,2
Volume flow [m³/h]:	1
Distance between centres [m]:	9,0
max. Inclination [degree]:	0 °

Belt details

Belt width [mm]:	800
Belt quality: EP 400/3 2+0	
Resistance: MOR	
Sealing: Lip seal	
Height of carriers [mm]:	
Distance of carriers [mm]:	
Belt connection on site	No

Additives

Supports < 2 m height [number]:	
Supports 2 - 4 m height [number]:	2
Feed hopper [number]:	1
Discharge chute [number]:	1
Bend [number]:	
Under pin [m]	
Belt covering [m]	
Scraper	Yes
Antimagnetic intermediate piece	No
Antimagnetic head piece	No
Rollers rubberized	Yes
Central grease point	No
Reversible	No
Impact protection [m]:	1

Specifications

Usable width [mm]:	750
Nominal height of sideboard [mm]:	200
Belt velocity [m/s]:	0,8
Dumping height [mm] (theoretical):	0
Total width [mm] (without motor):	968
Total height [mm]:	559
Weight [kg]:	903
Color: 2-comp. single-coat 0,05 mm 50 my	

Electrical data

Power [kW]:	2,2
Charging rate [A]:	5,0
Revolution [1/min]:	72
Voltage:	400V/50 Hz
Cable pull switch [number]:	
Skew control switch [number]:	
Thermal classification F	No
Brake	No
Separate fan	No
Frequency inverter	No
Thermistor motor protection	No
Overspeed trip	No
Soft starter	No

The belt movement is sliding on the smooth table area of the conveyor.

The conveyor belt structure is made of a robust profiled sectional steel construction.

The electric drive is effected by a bevel gear drive motor type SEW. Driving and guide drums have a diameter of 220 mm (spherical) with a crowned finish in order to obtain an optimal guiding of the belt.

The dismounting of the driving and guide drums is to be effected in axial direction through the frame of the conveyor. The driving drum is rubberized from a distance between centres of 10 m and more. The bearing is amply dimensioned with branded flange bearings of 60mm. Plug wipers clean the interior belt. On plain belts a wiper is mounted at the end of the dropping side.

The belt sealing towards the sideboard can be engineered on request as a mild grinding lip seal or as a non-touching labyrinth-sealing.

GG

Total price [€]:

Pos. 2030

Feeding conveyor to acceleration conveyor

Dimensioning / Transported material

MSW	0,25
Tonnage [t/h]:	4,6
Volume flow [m³/h]:	18
Distance between centres [m]:	19,0
max. Inclination [degree]:	13 °

Belt details

Belt width [mm]:	2000
Belt quality: EP 400/3 2+0	
Resistance: MOR	
Sealing: Lip seal	
Height of carriers [mm]:	
Distance of carriers [mm]:	
Belt connection on site	Yes

Additives

Supports < 2 m height [number]:	1
Supports 2 - 4 m height [number]:	3
Feed hopper [number]:	1
Discharge chute [number]:	1
Bend [number]:	
Under pin [m]	7
Belt covering [m]	
Scraper	Yes
Antimagnetic intermediate piece	No
Antimagnetic head piece	No
Rollers rubberized	Yes
Central grease point	No
Reversible	No
Impact protection [m]:	1

Specifications

Usable width [mm]:	1950
Nominal height of sideboard [mm]:	200
Belt velocity [m/s]:	0,8
Dumping height [mm] (theoretical):	3
Total width [mm] (without motor):	2168
Total height [mm]:	559
Weight [kg]:	3313
Color: 2-comp. single-coat 0,05 mm	50 my

Electrical data

Power [kW]:	4,0
Charging rate [A]:	8,5
Revolution [1/min]:	75
Voltage:	400V/50 Hz
Cable pull switch [number]:	
Skew control switch [number]:	
Thermal classification F	No
Brake	Yes
Separate fan	No
Frequency inverter	No
Thermistor motor protection	No
Overspeed trip	No
Soft starter	No

The belt movement is sliding on the smooth table area of the conveyor.

The conveyor belt structure is made of a robust profiled sectional steel construction.

The electric drive is effected by a bevel gear drive motor type SEW. Driving and guide drums have a diameter of 220 mm (spherical) with a crowned finish in order to obtain an optimal guiding of the belt.

The dismounting of the driving and guide drums is to be effected in axial direction through the frame of the conveyor. The driving drum is rubberized from a distance between centres of 10 m and more. The bearing is amply dimensioned with branded flange bearings of 60mm. Plug wipers clean the interior belt. On plain belts a wiper is mounted at the end of the dropping side.

The belt sealing towards the sideboard can be engineered on request as a mild grinding lip seal or as a non-touching labyrinth-sealing.

GG

Total price [€]:

Pos. 2040

Acceleration conveyor optical separator NIR PPK+PVC

Dimensioning / Transported material

MSW	0,25
Tonnage [t/h]:	4,6
Volume flow [m³/h]:	18
Distance between centres [m]:	6,0
max.Inclination [degree]:	0 °

Belt details

Belt width [mm]:	2100
Belt quality: EP 400/3 2+0	
Resistance: MOR	
Sealing: lip seal	

Belt connection on site

No

Additives

Supports < 2 m height [number]:	
Supports 2 - 4 m height [number]:	
Feed hopper [number]:	1
Discharge chute [number]:	2

Under pin [m]

3

Belt covering [m]

Scraper

Yes

Central grease point

No

Specifications

Usable width [mm]:	2050
Nominal height of sideboard [mm]:	200
Belt velocity [m/s]:	3,2
Dumping height [mm] (theoretical):	1
Total width [mm] (without motor):	2268
Total height [mm]:	559
Weight [kg]:	1742
Color:2-comp. single-coat 0,05 mm	50 my

Electrical data

Power [kW]:	5,5
Charging rate [A]:	11,3
Revolution [1/min]:	278,0
Voltage:	400V/50 Hz
Cable pull switch [number]:	
Skew control switch [number]:	
Thermal classification F	Yes

Separate fan	Yes
Frequency inverter	Yes
Thermistor motor protection	Yes
Overspeed trip	No

Soft starter

Capacity separating drum [kW]:	0,18
Drawing of current sep. drum [A]:	0,55

Hood

Hood for NIR width 2000

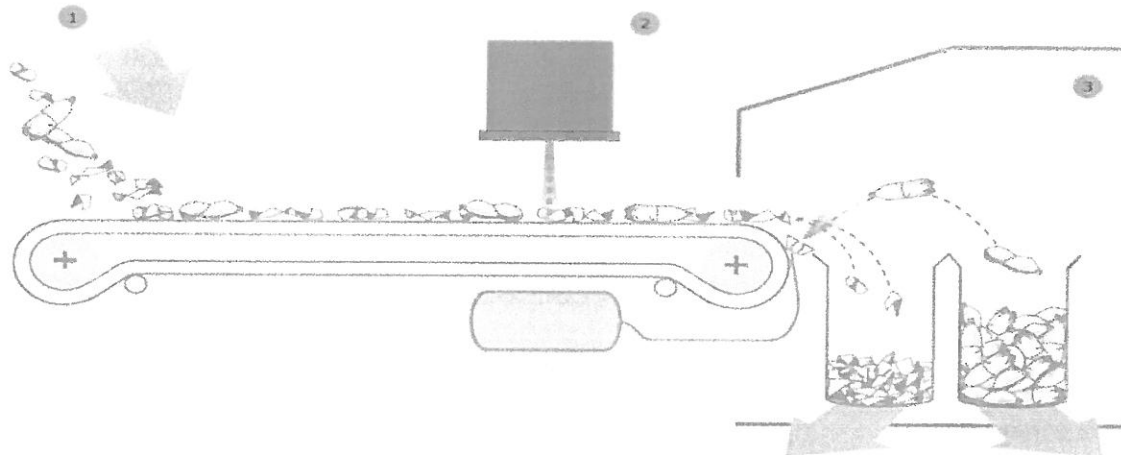
The belt movement is sliding on the smooth table area of the conveyor. The construction of the conveyor is similar to the sliding belt conveyor (GG). The driving-drum is not rubberized to avoid unbalances and therefore oscillations under higher speeds. The electric drive is installed "shovingly" to grant the access to the guide rail of the valves. The belt sealing to the side wall is designed as a grinding lip seal but with smooth sealing lips to allow a higher belt velocity. The discharge hood shows a maintenance door and an adjustable guide plate. Adjustable retainers for the guide rails of the valves and for the separating drum are also installed in the painted hood. The separating drum has a diameter of 135mm (belt 2900mm / 220 mm) and is driven with 12 1/min.

BB

Total price [€]:

Pos. 2050

NIR-Separator 2000



- ① Feeding of unsorted material
- ② Spectrometer scanner
- ③ Separation chamber



The TITECH autosort is a multifunctional sorting system to recover a wide range of valuable material from different waste streams like single stream, packaging, municipal solid waste and other. The new generation with **FLYING BEAM®** technology makes a significant simplification to the system as a whole. This way the TITECH autosort 4 sorts extremely reliable and can be maintained very easy. Sophisticated near infrared (NIR) and visible light (VIS) spectrometer based sensors take in the characteristic spectra with a very high optical resolution. Innovative **FLYING BEAM®** lighting technology focuses only on the area of the conveyor belt that is being scanned. The result: Up to 70% energy savings. The advanced NIR spectrometer based detector recognises materials based on their specific and unique spectral properties of reflected light. There are two detectors available for different spectral ranges. The VIS spectrometer based detector recognises materials based on their specific colour properties. These detectors can be used in combination depending on the application. In addition the TITECH autosort 4 technology covers a broader temperature range. The system can be quickly optimized for the required sorting tasks by the selection of sorting programs.

Blanko

Total price [€]:

Pos. 2060

Collecting conveyor PPK

Dimensioning / Transported material

MSW	0,15
Tonnage [t/h]:	1,5
Volume flow [m³/h]:	10
Distance between centres [m]:	22,0
max.Inclination [degree]:	2 °

Belt details

Belt width [mm]:	1000
Belt quality: EP 400/3 2+0	
Resistance: MOR	
Sealing: Lip seal	
Height of carriers [mm]:	
Distance of carriers [mm]:	
Belt connection on site	Yes

Additives

Supports < 2 m height [number]:	
Supports 2 - 4 m height [number]:	4
Feed hopper [number]:	1
Discharge chute [number]:	1
Bend [number]:	
Under pin [m]	22
Belt covering [m]	
Scraper	Yes
Antimagnetic intermediate piece	No
Antimagnetic head piece	No
Rollers rubberized	Yes
Central grease point	No
Reversible	No
Impact protection [m]:	1

Specifications

Usable width [mm]:	950
Nominal height of sideboard [mm]:	200
Belt velocity [m/s]:	0,8
Dumping height [mm] (theoretical):	4
Total width [mm] (without motor):	1168
Total height [mm]:	559
Weight [kg]:	2094
Color:2-comp. single-coat 0,05 mm 50 my	

Electrical data

Power [kW]:	4,0
Charging rate [A]:	8,5
Revolution [1/min]:	75
Voltage:	400V/50 Hz
Cable pull switch [number]:	
Skew control switch [number]:	
Thermal classification F	No
Brake	Yes
Separate fan	No
Frequency inverter	No
Thermistor motor protection	No
Overspeed trip	No
Soft starter	No

The belt movement is sliding on the smooth table area of the conveyor.

The conveyor belt structure is made of a robust profiled sectional steel construction.

The electric drive is effected by a bevel gear drive motor type SEW. Driving and guide drums have a diameter of 220 mm (spherical) with a crowned finish in order to obtain an optimal guiding of the belt.

The dismounting of the driving and guide drums is to be effected in axial direction through the frame of the conveyor. The driving drum is rubberized from a distance between centres of 10 m and more. The bearing is amply dimensioned with branded flange bearings of 60mm. Plug wipers clean the interior belt. On plain belts a wiper is mounted at the end of the dropping side.

The belt sealing towards the sideboard can be engineered on request as a mild grinding lip seal or as a non-touching labyrinth-sealing.

GG

Total price [€]:

Pos. 2070

Sorting conveyor PPK

Dimensioning / Transported material		Specifications	
MSW	0,15	Usable width [mm]:	800
Tonnage [t/h]:	1,5	Nominal height of sideboard [mm]:	0
Volume flow [m³/h]:	10	Belt velocity at 50 Hz [m/s]:	0,7
Distance between centres [m]:	8,0	Dumping height [mm] (theoretical):	5
max.Inclination [degree]:	0 °	Total width [mm] (without motor):	968
		Total height [mm]:	908
		Weight [kg]:	836
		Color:2-comp. single-coat 0,05 mm	50 my
Belt details		Elektrical data	
Belt width [mm]:	800	Power [kW]:	3,0
Belt quality: EP 400/3 2+0		Charging rate [A]:	6,3
Resistance: MOR		Revolution [1/min]:	39
Sealing: open		Voltage:	400V/50 Hz
Height of carriers [mm]:		Cable pull switch [number]:	
Distance of carriers [mm]:		ScREW control switch [number]:	
Belt connection on site	No	Thermal classification F	Yes
		Brake	No
Additives		Separate fan	Yes
Supports < 2 m height [number]:	3	Frequency inverter	Yes
Supports 2 - 4 m height [number]:	2	Thermistor motor protection	Yes
Feed hopper [number]:	2	Overspeed trip	No
Discharge chute [number]:	1		
Bend [number]:	1	Soft starter	No
Under pin [m]	6		
Belt covering [m]			
Scraper	Yes		
Antimagnetic intermediate piece	No		
Antimagnetic head piece	No		
Rollers rubberized	Yes		
Central grease point	No		
Reversible	No		
Impact protection [m]:			

The belt movement is sliding on the smooth trough shaped table area of the conveyor. The conveyor belt structures are made of a robust profiled sectional steel construction.

The electric drive is effected by a bevel gear drive motor type SEW. Driving- and guide-drums have a diameter of 320 mm (spherical) with a crowned finish in order to obtain an optimal guiding of the belt. The dismounting of the driving- and guide-drums is to be effected in axial direction through the frame of the conveyor. The driving drum is rubberized.

The bearing is amply dimensioned with branded flange bearings of 60mm.

Plug wipers clean the interior belt. On plain belts a wiper is mounted at the end of the dropping side.

SO

Total price [€]:

Pos. 3000

Feeding conveyor to ballistic separator

Dimensioning / Transported material

Plastics	0,05
Tonnage [t/h]:	2,5
Volume flow [m³/h]:	50
Distance between centres [m]:	14,0
max.Inclination [degree]:	16 °

Belt details

Belt width [mm]:	1600
Belt quality: EP 400/3 2+0	
Resistance: MOR	
Sealing: labyrinth-sealing	
Height of carriers [mm]:	
Distance of carriers [mm]:	
Belt connection on site	Yes

Additives

Supports < 2 m height [number]:	1
Supports 2 - 4 m height [number]:	2
Feed hopper [number]:	1
Discharge chute [number]:	1
Bend [number]:	
Under pin [m]	8
Belt covering [m]	
Scraper	Yes
Antimagnetic intermediate piece	No
Antimagnetic head piece	No
Rollers rubberized	Yes
Central grease point	No
Reversible	No
Impact protection [m]:	

Specifications

Usable width [mm]:	1550
Nominal height of sideboard [mm]:	500
Belt velocity [m/s]:	1,2
Dumping height [mm] (theoretical):	7
Total width [mm] (without motor):	1768
Total height [mm]:	908
Weight [kg]:	2198
Color:2-comp. single-coat 0,05 mm 50 my	

Electrical data

Power [kW]:	5,5
Charging rate [A]:	11,3
Revolution [1/min]:	109
Voltage:	400V/50 Hz
Cable pull switch [number]:	
Skew control switch [number]:	
Thermal classification F	No
Brake	No
Separate fan	No
Frequency inverter	No
Thermistor motor protection	No
Overspeed trip	No
Soft starter	No

The belt movement is sliding on the smooth table area of the conveyor.

The conveyor belt structure is made of a robust profiled sectional steel construction.

The electric drive is effected by a bevel gear drive motor type SEW. Driving and guide drums have a diameter of 220 mm (spherical) with a crowned finish in order to obtain an optimal guiding of the belt.

The dismounting of the driving and guide drums is to be effected in axial direction through the frame of the conveyor. The driving drum is rubberized from a distance between centres of 10 m and more. The bearing is amply dimensioned with branded flange bearings of 60mm. Plug wipers clean the interior belt. On plain belts a wiper is mounted at the end of the dropping side.

The belt sealing towards the sideboard can be engineered on request as a mild grinding lip seal or as a non-touching labyrinth-sealing.

GG

Total price [€]:

Pos. 3010

Balistic separator

Type

STT 2000/101

Dimensioning / Transported material

Material	0,05
Graining material [mm]:	
Tonnage [t/h]:	2,5
Volume flow [m³/h]:	50

Principal data

Length [mm]:	5500
Width [mm]:	2410
Height [mm]:	2240
Weight [t]:	6

Paddel

Covering deck 1(above):	45 square
Covering deck 2 :	
Covering deck 3:	

Electrical data each set

Power [kW]:	4
Charging rate [A]:	8
Revolution [1/min]:	216
Voltage: 400 V/50 Hz	
Thermal classification F	
Brake	

Throughput deck (above) [m³/h]:

The throughput ,resp. the density refers to evenly spread material over the width of the separator (max. 200mm height on the infeed conveyor). The throughput is also depending on the grain size distribution in the material (specific for each material) - In case of doubts a trial is recommended. The tonnages refer to relatively dry recycling material.

In order to keep the warranty, the ballistic separator has to be connected to a drive current control. This control unit is part of the separately available switch cabinet.

Additions

Dust hood	Yes	Chute rolling (3mm)	Yes
Adaption outer skin	No	Chute rolling (6mm)	No
Chute flat fraction (3mm)	Yes	Chute fines (lengthwise)	No
Switch cabinet	No	Chute fines with manhole	Yes

Incl. An air nozzle for the support by the separation of flat/scrolled fraction

Please find a detailed description in the attached brochure.

BS

Total price [€]:

Po. 3100 Option

Collecting conveyor fine fraction

Dimensioning / Transported material

Fine Plastics	0,05
Tonnage [t/h]:	0,2
Volume flow [m³/h]:	4
Distance between centres [m]:	2,5
max.Inclination [degree]:	0 °

Belt details

Belt width [mm]:	1600
Belt quality: EP 400/3 2+0	
Resistance: MOR	
Sealing: Lip seal	
Height of carriers [mm]:	
Distance of carriers [mm]:	
Belt connection on site	No

Additives

Supports < 2 m height [number]:	2
Supports 2 - 4 m height [number]:	
Feed hopper [number]:	1
Discharge chute [number]:	1
Bend [number]:	
Under pin [m]	
Belt covering [m]	
Scraper	Yes
Antimagnetic intermediate piece	No
Antimagnetic head piece	No
Rollers rubberized	No
Central grease point	No
Reversible	No
Impact protection [m]:	

Specifications

Usable width [mm]:	1550
Nominal height of sideboard [mm]:	500
Belt velocity [m/s]:	0,8
Dumping height [mm] (theoretical):	1
Total width [mm] (without motor):	1768
Total height [mm]:	908
Weight [kg]:	968
Color:2-comp. single-coat 0,05 mm 50 my	

Electrical data

Power [kW]:	2,2
Charging rate [A]:	5,0
Revolution [1/min]:	72
Voltage:	400V/50 Hz
Cable pull switch [number]:	
Skew control switch [number]:	
Thermal classification F	No
Brake	No
Separate fan	No
Frequency inverter	No
Thermistor motor protection	No
Overspeed trip	No
Soft starter	No

The belt movement is sliding on the smooth table area of the conveyor.

The conveyor belt structure is made of a robust profiled sectional steel construction.

The electric drive is effected by a bevel gear drive motor type SEW. Driving and guide drums have a diameter of 220 mm (spherical) with a crowned finish in order to obtain an optimal guiding of the belt.

The dismounting of the driving and guide drums is to be effected in axial direction through the frame of the conveyor. The driving drum is rubberized from a distance between centres of 10 m and more. The bearing is amply dimensioned with branded flange bearings of 60mm. Plug wipers clean the interior belt. On plain belts a wiper is mounted at the end of the dropping side.

The belt sealing towards the sideboard can be engineered on request as a mild grinding lip seal or as a non-touching labyrinth-sealing.

Pos. 3110 Option

Discharge conveyor fine fraction

Dimensioning / Transported material		Specifications	
Fine Plastics	0,05	Usable width [mm]:	550
Tonnage [t/h]:	0,2	Nominal height of sideboard [mm]:	500
Volume flow [m³/h]:	4	Belt velocity [m/s]:	0,8
Distance between centres [m]:	11,5	Dumping height [mm] (theoretical):	3
max.Inclination [degree]:	0 °	Total width [mm] (without motor):	768
		Total height [mm]:	908
		Weight [kg]:	856
		Color:2-comp. single-coat 0,05 mm 50 my	
Belt details		Electrical data	
Belt width [mm]:	600	Power [kW]:	2,2
Belt quality: EP 400/3 2+0		Charging rate [A]:	5,0
Resistance: MOR		Revolution [1/min]:	72
Sealing: Lip seal		Voltage:	400V/50 Hz
Height of carriers [mm]:		Cable pull switch [number]:	
Distance of carriers [mm]:		Skew control switch [number]:	
Belt connection on site	No	Thermal classification F	No
Additives		Brake	No
Supports < 2 m height [number]:		Separate fan	No
Supports 2 - 4 m height [number]:	3	Frequency inverter	No
Feed hopper [number]:	1	Thermistor motor protection	No
Discharge chute [number]:	1	Overspeed trip	No
Bend [number]:			
Under pin [m]			
Belt covering [m]			
Scraper	Yes	Soft starter	No
Antimagnetic intermediate piece	No		
Antimagnetic head piece	No		
Rollers rubberized	Yes		
Central grease point	No		
Reversible	No		
Impact protection [m]:			

The belt movement is sliding on the smooth table area of the conveyor.

The conveyor belt structure is made of a robust profiled sectional steel construction.

The electric drive is effected by a bevel gear drive motor type SEW. Driving and guide drums have a diameter of 220 mm (spherical) with a crowned finish in order to obtain an optimal guiding of the belt.

The dismounting of the driving and guide drums is to be effected in axial direction through the frame of the conveyor. The driving drum is rubberized from a distance between centres of 10 m and more. The bearing is amply dimensioned with branded flange bearings of 60mm. Plug wipers clean the interior belt. On plain belts a wiper is mounted at the end of the dropping side.

The belt sealing towards the sideboard can be engineered on request as a mild grinding lip seal or as a non-touching labyrinth-sealing.

GG

Total price [€]:

Pos. 3200

Sorting conveyor flat fraction

Dimensioning / Transported material

Flat mixed material	0,03
Tonnage [t/h]:	0,5
Volume flow [m³/h]:	17
Distance between centres [m]:	17,0
max.Inclination [degree]:	0 °

Belt details

Belt width [mm]:	1200
Belt quality: EP 400/3 2+0	
Resistance: MOR	
Sealing: open	
Height of carriers [mm]:	
Distance of carriers [mm]:	
Belt connection on site	Yes

Additives

Supports < 2 m height [number]:	2
Supports 2 - 4 m height [number]:	2
Feed hopper [number]:	6
Discharge chute [number]:	1
Bend [number]:	
Under pin [m]	
Belt covering [m]	
Scraper	Yes
Antimagnetic intermediate piece	No
Antimagnetic head piece	No
Rollers rubberized	Yes
Central grease point	No
Reversible	No
Impact protection [m]:	

Specifications

Usable width [mm]:	1200
Nominal height of sideboard [mm]:	0
Belt velocity at 50 Hz [m/s]:	0,7
Dumping height [mm] (theoretical):	6
Total width [mm] (without motor):	1368
Total height [mm]:	908
Weight [kg]:	1979
Color:2-comp. single-coat 0,05 mm 50 my	

Elektrical data

Power [kW]:	3,0
Charging rate [A]:	6,3
Revolution [1/min]:	39
Voltage:	400V/50 Hz
Cable pull switch [number]:	
ScREW control switch [number]:	
Thermal classification F	Yes
Brake	No
Separate fan	Yes
Frequency inverter	Yes
Thermistor motor protection	Yes
Overspeed trip	No
Soft starter	No

The belt movement is sliding on the smooth trough shaped table area of the conveyor. The conveyor belt structures are made of a robust profiled sectional steel construction.

The electric drive is effected by a bevel gear drive motor type SEW. Driving- and guide-drums have a diameter of 320 mm (spherical) with a crowned finish in order to obtain an optimal guiding of the belt. The dismounting of the driving- and guide-drums is to be effected in axial direction through the frame of the conveyor. The driving drum is rubberized.

The bearing is amply dimensioned with branded flange bearings of 60mm.

Plug wipers clean the interior belt. On plain belts a wiper is mounted at the end of the dropping side.

SO

Total price [€]:

Pos. 3210

Splitting conveyor flat fraction

Dimensioning / Transported material		Specifications	
Plastics	0,03	Usable width [mm]:	1150
Tonnage [t/h]:	0,5	Nominal height of sideboard [mm]:	500
Volume flow [m³/h]:	17	Belt velocity [m/s]:	0,8
Distance between centres [m]:	4,0	Dumping height [mm] (theoretical):	5
max. Inclination [degree]:	15 °	Total width [mm] (without motor):	1368
		Total height [mm]:	908
		Weight [kg]:	848
		Color: 2-comp. single-coat 0,05 mm	50 my
Belt details		Electrical data	
Belt width [mm]:	1200	Power [kW]:	2,2
Belt quality: EP 400/3 2+0		Charging rate [A]:	5,0
Resistance: MOR		Revolution [1/min]:	72
Sealing: labyrinth-sealing		Voltage:	400V/50 Hz
Height of carriers [mm]:		Cable pull switch [number]:	
Distance of carriers [mm]:		Skew control switch [number]:	
Belt connection on site	No	Thermal classification F	No
Additives		Brake	No
Supports < 2 m height [number]:	2	Separate fan	No
Supports 2 - 4 m height [number]:		Frequency inverter	No
Feed hopper [number]:	1	Thermistor motor protection	No
Discharge chute [number]:	1	Overspeed trip	No
Bend [number]:			
Under pin [m]			
Belt covering [m]			
Scraper	Yes	Soft starter	No
Antimagnetic intermediate piece	No		
Antimagnetic head piece	No		
Rollers rubberized	No		
Central grease point	No		
Reversible	No		
Impact protection [m]:			

The belt movement is sliding on the smooth table area of the conveyor.

The conveyor belt structure is made of a robust profiled sectional steel construction.

The electric drive is effected by a bevel gear drive motor type SEW. Driving and guide drums have a diameter of 220 mm (spherical) with a crowned finish in order to obtain an optimal guiding of the belt.

The dismounting of the driving and guide drums is to be effected in axial direction through the frame of the conveyor. The driving drum is rubberized from a distance between centres of 10 m and more. The bearing is amply dimensioned with branded flange bearings of 60mm. Plug wipers clean the interior belt. On plain belts a wiper is mounted at the end of the dropping side.

The belt sealing towards the sideboard can be engineered on request as a mild grinding lip seal or as a non-touching labyrinth-sealing.

GG

Total price [€]:

Pos. 3220

Sorting conveyor flat fraction

Dimensioning / Transported material		Specifications	
Flat mixed material	0,03	Usable width [mm]:	1200
Tonnage [t/h]:	0,5	Nominal height of sideboard [mm]:	0
Volume flow [m³/h]:	17	Belt velocity at 50 Hz [m/s]:	0,7
Distance between centres [m]:	18,5	Dumping height [mm] (theoretical):	6
max.Inclination [degree]:	0 °	Total width [mm] (without motor):	1368
		Total height [mm]:	908
		Weight [kg]:	2110
		Color:2-comp. single-coat 0,05 mm 50 my	
Belt details		Elektrical data	
Belt width [mm]:	1200	Power [kW]:	3,0
Belt quality: EP 400/3 2+0		Charging rate [A]:	6,3
Resistance: MOR		Revolution [1/min]:	39
Sealing: open		Voltage:	400V/50 Hz
Height of carriers [mm]:		Cable pull switch [number]:	
Distance of carriers [mm]:		ScREW control switch [number]:	
Belt connection on site	Yes	Thermal classification F	Yes
		Brake	No
		Separate fan	Yes
		Frequency inverter	Yes
		Thermistor motor protection	Yes
		Overspeed trip	No
		Soft starter	No
Additives			
Supports < 2 m height [number]:	2		
Supports 2 - 4 m height [number]:	2		
Feed hopper [number]:	6		
Discharge chute [number]:	1		
Bend [number]:			
Under pin [m]			
Belt covering [m]			
Scraper	Yes		
Antimagnetic intermediate piece	No		
Antimagnetic head piece	No		
Rollers rubberized	Yes		
Central grease point	No		
Reversible	No		
Impact protection [m]:			

The belt movement is sliding on the smooth trough shaped table area of the conveyor. The conveyor belt structures are made of a robust profiled sectional steel construction.

The electric drive is effected by a bevel gear drive motor type SEW. Driving- and guide-drums have a diameter of 320 mm (spherical) with a crowned finish in order to obtain an optimal guiding of the belt. The dismounting of the driving- and guide-drums is to be effected in axial direction through the frame of the conveyor. The driving drum is rubberized.

The bearing is amply dimensioned with branded flange bearings of 60mm.

Plug wipers clean the interior belt. On plain belts a wiper is mounted at the end of the dropping side.

SO

Total price [€]:

Pos. 3230

Bunker feeding conveyer mixed material soft

Dimensioning / Transported material		Specifications	
Plastics	0,03	Usable width [mm]:	1350
Tonnage [t/h]:	1,0	Nominal height of sideboard [mm]:	500
Volume flow [m³/h]:	33	Belt velocity [m/s]:	0,8
Distance between centres [m]:	13,0	Dumping height [mm] (theoretical):	8
max.Inclination [degree]:	0 °	Total width [mm] (without motor):	1568
		Total height [mm]:	908
		Weight [kg]:	1861
		Color:2-comp. single-coat 0,05 mm	50 my
Belt details		Electrical data	
Belt width [mm]:	1400	Power [kW]:	3,0
Belt quality: EP 400/3 2+0		Charging rate [A]:	6,6
Resistance: MOR		Revolution [1/min]:	73
Sealing: Lip seal		Voltage:	400V/50 Hz
Height of carriers [mm]:		Cable pull switch [number]:	
Distance of carriers [mm]:		Skew control switch [number]:	
Belt connection on site	No	Thermal classification F	No
		Brake	No
Additives		Separate fan	No
Supports < 2 m height [number]:	2	Frequency inverter	No
Supports 2 - 4 m height [number]:		Thermistor motor protection	No
Feed hopper [number]:	1	Overspeed trip	No
Discharge chute [number]:	1		
Bend [number]:		Soft starter	No
Under pin [m]	11		
Belt covering [m]			
Scraper	Yes		
Antimagnetic intermediate piece	No		
Antimagnetic head piece	No		
Rollers rubberized	Yes		
Central grease point	No		
Reversible	No		
Impact protection [m]:			

The belt movement is sliding on the smooth table area of the conveyor.

The conveyor belt structure is made of a robust profiled sectional steel construction.

The electric drive is effected by a bevel gear drive motor type SEW. Driving and guide drums have a diameter of 220 mm (spherical) with a crowned finish in order to obtain an optimal guiding of the belt.

The dismounting of the driving and guide drums is to be effected in axial direction through the frame of the conveyor. The driving drum is rubberized from a distance between centres of 10 m and more. The bearing is amply dimensioned with branded flange bearings of 60mm. Plug wipers clean the interior belt. On plain belts a wiper is mounted at the end of the dropping side.

The belt sealing towards the sideboard can be engineered on request as a mild grinding lip seal or as a non-touching labyrinth-sealing.

GG

Total price [€]:

Pos. 3300

Collecting conveyor mixed material hard

Dimensioning / Transported material

Plastics	0,05
Tonnage [t/h]:	1,4
Volume flow [m³/h]:	28
Distance between centres [m]:	9,5
max.Inclination [degree]:	7 °

Belt details

Belt width [mm]:	1600
Belt quality: EP 400/3 2+0	
Resistance: MOR	
Sealing: Lip seal	
Height of carriers [mm]:	
Distance of carriers [mm]:	
Belt connection on site	No

Additives

Supports < 2 m height [number]:	2
Supports 2 - 4 m height [number]:	
Feed hopper [number]:	1
Discharge chute [number]:	1
Bend [number]:	
Under pin [m]	6
Belt covering [m]	
Scraper	Yes
Antimagnetic intermediate piece	No
Antimagnetic head piece	No
Rollers rubberized	Yes
Central grease point	No
Reversible	No
Impact protection [m]:	

Specifications

Usable width [mm]:	1550
Nominal height of sideboard [mm]:	500
Belt velocity [m/s]:	0,8
Dumping height [mm] (theoretical):	6
Total width [mm] (without motor):	1768
Total height [mm]:	908
Weight [kg]:	1717
Color:2-comp. single-coat 0,05 mm 50 my	

Electrical data

Power [kW]:	3,0
Charging rate [A]:	6,6
Revolution [1/min]:	73
Voltage:	400V/50 Hz
Cable pull switch [number]:	
Skew control switch [number]:	
Thermal classification F	No
Brake	No
Separate fan	No
Frequency inverter	No
Thermistor motor protection	No
Overspeed trip	No
Soft starter	No

The belt movement is sliding on the smooth table area of the conveyor.

The conveyor belt structure is made of a robust profiled sectional steel construction.

The electric drive is effected by a bevel gear drive motor type SEW. Driving and guide drums have a diameter of 220 mm (spherical) with a crowned finish in order to obtain an optimal guiding of the belt.

The dismounting of the driving and guide drums is to be effected in axial direction through the frame of the conveyor. The driving drum is rubberized from a distance between centres of 10 m and more. The bearing is amply dimensioned with branded flange bearings of 60mm. Plug wipers clean the interior belt. On plain belts a wiper is mounted at the end of the dropping side.

The belt sealing towards the sideboard can be engineered on request as a mild grinding lip seal or as a non-touching labyrinth-sealing.

Pos. 3310

Sorting conveyor Plastics hard

Dimensioning / Transported material

Hard mixed material	0,05
Tonnage [t/h]:	1,4
Volume flow [m³/h]:	28
Distance between centres [m]:	19,0
max. Inclination [degree]:	12 °

Belt details

Belt width [mm]:	1200
Belt quality: EP 400/3 2+0	
Resistance: MOR	
Sealing: open	
Height of carriers [mm]:	
Distance of carriers [mm]:	
Belt connection on site	Yes

Additives

Supports < 2 m height [number]:	2
Supports 2 - 4 m height [number]:	2
Feed hopper [number]:	8
Discharge chute [number]:	1
Bend [number]:	1
Under pin [m]	6
Belt covering [m]	
Scraper	Yes
Antimagnetic intermediate piece	No
Antimagnetic head piece	No
Rollers rubberized	Yes
Central grease point	No
Reversible	No
Impact protection [m]:	

Specifications

Usable width [mm]:	1200
Nominal height of sideboard [mm]:	0
Belt velocity at 50 Hz [m/s]:	0,7
Dumping height [mm] (theoretical):	9
Total width [mm] (without motor):	1368
Total height [mm]:	908
Weight [kg]:	2153
Color: 2-comp. single-coat 0,05 mm	50 my

Elektrical data

Power [kW]:	3,0
Charging rate [A]:	6,3
Revolution [1/min]:	39
Voltage:	400V/50 Hz
Cable pull switch [number]:	
ScREW control switch [number]:	
Thermal classification F	Yes
Brake	No
Separate fan	Yes
Frequency inverter	Yes
Thermistor motor protection	Yes
Overspeed trip	No
Soft starter	No

The belt movement is sliding on the smooth trough shaped table area of the conveyor. The conveyor belt structures are made of a robust profiled sectional steel construction.

The electric drive is effected by a bevel gear drive motor type SEW. Driving- and guide-drums have a diameter of 320 mm (spherical) with a crowned finish in order to obtain an optimal guiding of the belt. The dismounting of the driving- and guide-drums is to be effected in axial direction through the frame of the conveyor. The driving drum is rubberized.

The bearing is amply dimensioned with branded flange bearings of 60mm.

Plug wipers clean the interior belt. On plain belts a wiper is mounted at the end of the dropping side.

SO

Total price [€]:

Pos. 5000

Feeding conveyor to press

Dimensioning / Transported material

valuable material	0,10
Tonnage [t/h]:	4,0
Volume flow [m³/h]:	40
Horizontal length [m]:	24,0
Length inclined part [m]:	
Length of gooseneck [m]:	

Belt details

Belt width [mm]:	1500
type: EP 500/4 5+2	
Resistance: MOR	
Sealing: Labyrinth-sealing	

Specifications

Usable width [mm]:	1350
Nominal height of sideboard [mm]:	600 / 900
Belt velocity [m/s]:	0,30
Dumping height [mm] (theoretical):	27
Total width [mm] (without motor):	1742
Total height [mm]:	1120 / 1480
Weight [kg]:	5740
Color: 2-comp. single-coat 50 mm	50 µm

Electrical data

Power [kW]:	7,5
Charging rate [A]:	15,2
Revolution [1/min]:	15,0
Voltage:	400V/50 Hz
Cable pull switch [number]:	

Additives

Supports < 2 m height [number]:	4
Supports 2 - 4 m height [number]:	
Side wall special / top	No
Press hopper:	No
Bend [number]:	
Under pin [m]	
Belt covering [m]	
Pit covering :	Yes
Leack dropping [number]:	1

Thermal classification F	No
Brake	Yes
Separate fan	No
Frequency inverter	No
Thermistor motor protection	No
Overspeed trip	No
Soft starter	Yes

Chain oiler (left and right)	Yes
Central grease point	Yes

The chain belt conveyor is a profiled sectional steel construction in screwed and welded design. As traction mechanism a double-line bush chain with a separation of 125mm and a diameter of the rollers of 63mm is used. The vulcanized rubber belt is screwed on C profiles which are mounted between each second chain-link. For the support the C-profiles move on screwed guiding rails. On the surface of the belt there are carriers made of angular steel with a distance of 1m. All screw fittings are designed with self-locking screw-nuts. The guiding rails are made of St 52 and are also screwed.

KF

Total price [€]:

Pos. 5010

Feeding conveyor to press

Dimensioning / Transported material

Valuable material	0,10
Tonnage [t/h]:	4,0
Volume flow [m³/h]:	40
Distance between centres [m]:	17,0
max.Inclination [degree]:	23 °

Belt details

Belt width [mm]:	1600
Belt quality: EP 400/3 2+0	
Resistance: MOR	
Sealing: labyrinth-sealing	
Height of carriers [mm]:	40
Distance of carriers [mm]:	450
Belt connection on site	Yes

Additives

Supports < 2 m height [number]:	2
Supports 2 - 4 m height [number]:	2
Feed hopper [number]:	1
Discharge chute [number]:	1
Bend [number]:	1
Under pin [m]	16
Belt covering [m]	
Scraper	No
Antimagnetic intermediate piece	No
Antimagnetic head piece	No
Rollers rubberized	Yes
Central grease point	No
Reversible	No
Impact protection [m]:	2

Specifications

Usable width [mm]:	1550
Nominal height of sideboard [mm]:	500
Belt velocity [m/s]:	0,6
Dumping height [mm] (theoretical):	12
Total width [mm] (without motor):	1768
Total height [mm]:	908
Weight [kg]:	2519
Color:2-comp. single-coat 0,05 mm	50 my

Electrical data

Power [kW]:	3,0
Charging rate [A]:	6,6
Revolution [1/min]:	46
Voltage:	400V/50 Hz
Cable pull switch [number]:	
Skew control switch [number]:	
Thermal classification F	Yes
Brake	Yes
Separate fan	Yes
Frequency inverter	Yes
Thermistor motor protection	Yes
Overspeed trip	No
Soft starter	No

The belt movement is sliding on the smooth table area of the conveyor.

The conveyor belt structure is made of a robust profiled sectional steel construction.

The electric drive is effected by a bevel gear drive motor type SEW. Driving and guide drums have a diameter of 220 mm (spherical) with a crowned finish in order to obtain an optimal guiding of the belt.

The dismounting of the driving and guide drums is to be effected in axial direction through the frame of the conveyor. The driving drum is rubberized from a distance between centres of 10 m and more. The bearing is amply dimensioned with branded flange bearings of 60mm. Plug wipers clean the interior belt. On plain belts a wiper is mounted at the end of the dropping side.

The belt sealing towards the sideboard can be engineered on request as a mild grinding lip seal or as a non-touching labyrinth-sealing.

GG

Total price [€]:

Pos. 5020

Outlet situation

Type of material:

PET, HDPE, LDPE, PPK, Mixed Plastics

Size of material:

unknown

Feed arm/feeding :

Conveyors technology from company Stadler. Material cutting point is top edge of fill in shafts.

Loose weight before injecting (kg/m³):

Average cca. 40 kg/m³

Required through put operation (kg/h):

cca. 10 to max. 12 t/h

Technical Data

- Main drive capacity 55 kW
- Total drive capacity: depends on the supplementary equipment
- Tension / frequency: 3 x 400 V / 50 Hz
- Press power: 560 kN
- Specific press power: 68 N/cm²
- Flow rate pump: 348 l/min
- Tank content: 1250 l
- Feed opening: (W x L) 990 x 1250 mm
- Bale / Chanel cross section: (W x L) 1100 x 750 mm
- Bale Length 4-stages adjustable: 600 - 1200 mm
- Bale weight by 1200mm Bale Length: approx. 250-500 kg or bale weight normal (each m³): approx. 250-500 kg (each one depends on the material)
- Pulse Cycle (press hub on empty operation back and forth): approx. 8,70 sec
- Hypothetical volume flow: 425 m³/h
- Hypothetical throughput by an apparent weight of 20 kg/m³ approx. 8,50 t/h 50 kg/m³ approx. 21,25 t/h

Technical description:

- Continuous feeding
- Standard filling hopper, cubic with revision door on the left
- Full automatic pressing
- Full automatic 5-point hopping through patent-coiled wire
- Press-intervall control over light beam
- 3400 mm press canal conic
- Conicity is hydraulic regulated depending on the material
- Filling opening length according to demand is flexible adjustable through integrated displacement transducer
- Operating side and through-position-cylinder in the direction of the press have the option left or right.

Blanko

Total price [€]:

Pos. 5020 (2)

-Highest Operator security through: access-locking through key-change-system on the access area of the press as also no-touch active security switch on the area of access and maintenance of the press.

- Modem-equipment for external data emission
- Bale counter on the text display integrated
- Operating hours counter
- Electro-hydraulic blocking of the press car while the wiring process
- Area of deterioration on the press cabinet of double-walled steel blade (second position exchangeable)
- Painting (standard): press RAL 7038
- Switch cabinet, blade part, hydraulic cylinder and press car: RAL 9002
- Machine base weight without supplementary equipment: approx. 36 - 38 tons
- Including technical documentation, 3-copies, in german/ englisch
- Inclusive GS-symbols (Safety Tested GS) and CE-declaration of conformity

The plant is specially adequate for bigger material amounts until **cca. 50-60 m³/h**. It is accorded to an average flow of **cca. 37.500 PET-bottles (1-Liter) per hour**.

You produce with this plant the volume reduction of 80-90%!

Please, be aware that the plant should operate just in frost-proofed room, that the rest fluidity from PET-bottles cannot be frozen and thereby cannot damage, for insurance generate conveyor.

It is suited especially for the perforation of PET-bottles (from drinks, oil and detergents) until maximal sizes of cca. 2,5 Liters.

Technical description:

- Supply of pre-sorted PET-bottles into a perforator intermediate conveyor
- PET-bottles perforation with and without fastener possible
- Middle amount of partly filled single bottles will be removed and strongly perforated without problems
- Isolated glass bottles will be broken and guided not to damage
- Following delivery of PET-bottles in the HSM baller canal for the fully automated pressing for compact bales.

- Engine power 2x3 kW
- Connection 3x400 V/50 Hz
- Working width cutting unit 600 mm
- Hourly output cca. 37.500 (1l)725.000(1,5l) bottles
- Output cca. 50-60 m³/h
- Size: width 990 x dept 1.200 x height 500 mm
- Weight cca. 670 kg (without peripheral equipment)

Automatic, hydraulic movable shaft-part

By integration of perforators in filling shaft about press-touch-controlling, enable the material pressing operation, by which the perforator is not needed.

Optional price plus valuable added tax:

The price is valid just by the order with the main offer and in the same time delivery with the whole plant.

Blanko

Total price [€]:

Pos. 5500

Sorting cabin

Length: [mm]: 17.000
With: [mm]: 5.200
Height: [mm]: 3.000

Number of doors: 4
Number of windows: 10

Flooring in sorting cabin: will be done of concrete by the contractor. No further surface will be done on this floor. In case that client wishes more insulation or acoustic insulation, it will be extra charged by the contractor. The contractor does not need to provide any achievement.

Supporting frame: steel hollow profile construction, hollow profiles cold finished according to EN 10219, S275JOH
Supports: 180 x 180 x 4 mm, Rafters: 180 x 80 x 4, or if needed 180 x 80 x 8 mm, purlins 80 x 80 x 4 mm respectively by demand 180 x 80 x 8 mm Roof beams 80 x 80 x 4 mm

Walls: Polyurethane sandwich panel, metal panel on both sides galvanized steel sheets 0,8 mm

Windows: plastic-windows, S

Doors: multi-purpose doors MZ 1 875 x 2000 mm

Ceiling: Polyurethane sandwich panel

Advice:

It is advisable that ceiling panels are not accessible.

By this cabin execution of acoustic insulated value and U-values cannot be guaranteed. The contractor would in that circumstances specific indicate that there is no provision for this field. In Hungary should be given for sorting cabin any provision, relating to acoustic emission or heat in the cabin. It could be that this execution for this purpose is not adequate. In that case, the contractor would execute all expansions in one invoice. The agent (client) does not have to guarantee any activity in this case.

Pos. 5500(2)

Sorting cabin

Length: [mm]:	12.000	The measures of the cabin are not correct.
With: [mm]:	10.000	There is an extension in the field.
Height: [mm]:	3.000	There are sorting conveyor foil and PPK.
Number of doors:	4	
Number of windows:	8	

Flooring in sorting cabin: The flooring is not insulated. In case the client would like, it will be extra charged by the contractor.

Supporting frame: steel hollow profile construction, hollow profiles cold finished according to EN 10219, S275JOH

Supports: 180 x 180 x 4 mm, Rafters: 180 x 80 x 4 mm, or if needed 180 x 80 x 8 mm, purlins 80 x 80 x 4 mm respectively by demand 180 x 80 x 8 mm Roof beams 80 x 80 x 4 mm

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Blanko

Total price [€]:

Pos. 5600

Heating and Ventilation

The cabin ventilation is planned as supply air system. It is ensured thure the compressed areation, so that one excess pressure exists in the cabin.

Ventilationrate 10-times

Total ventilation system performance 6.700 m3/h

Heating capacity temperature difference 30 K (-10°C to +20°C)

1 peace of supply air system equipment with E-Register 6570 m3/h

- for interior assembly
- equipment in modules pre-installed

Inlet-canal-pipe

- in galvanized steel structure
- when necessary boots and connecting parts
- mounting material
- mounting possiblitiy on site existing constructing elements provided

Supply air drain piping system

- in galvanized steel structure
- when necessary boots and conneting parts
- insulation flaps
- mounting material
- mounting posibility on site existing constructing elements provided

Blanko

Total price [€]:

Pos. 6000

Compressor

4 x screw compressor with a propulsion of 90kW and a supplying quantity of 14,5 m³/min, at a max. operation pressure of 10 bar

Technical data each compressor:

Reference conditions.

-suction pressure 1 bar

-suction temperature 20°C

Working over pressure

-max. working pressure 10 bar

Performance values

Supplying quantity 8,86 m³/min at 10 bar

Motordata:

Nominal power 55 kW

Protection IP 55, ISOF

Tension 400 V

Frequency 50 Hz

Acoustic level (measured in 1 m distance after PN8 NTC 2.2) 69 dB(A)

Measures:

(L x W x H): 2.248 x 1.080 x 1.005 mm

Weight: 1.329 kg in execution FE

Integral electronics:

Automatic warm restart and remote control integrated.

Floating control contact integrated.

- constant control of tunnel machine for efficient, effective operation.
- alphabetic display, in different languages programmable
- control history with available saved documents
- time controller
- service analysis
- soft programmable

CE air receiver, interior and exterior galvanized, regular execution incl. container mounting.

Technical data:

Reservoir capacity: 2.000 l max. pressure: 11 bar weight: 421 kg dimensions: (W x H) 860 x 2400 mm

Blanko

Total price [€]:

Pos. 9000

Steel structure

Steel structure Trommel drum Pos. 1020, walkways on both sides

Steel structure FE strainer Pos. 1110, no walkways

Steel structure optical identification Pos. 1250, walkways on one side

Steel structure optical identification Pos. 2040, walkways on one side

Steel structure FE strainer Pos. 2010, no walkways

Steel structure ballistic separator STT_2000_101 Pos. 3010, walkways on both sides,
connection way to optical identification and sorting platform

Steel structure sorting platform with wooden box-walls

2 staircases with pedestal

7 box-walls L=13 m, H=4m

Steel structure sorting platform rolling material with wooden box-walls

1 staircase with pedestal

6 box-walls L=6m, H=4m

Blanko

Total price [€]:

Pos. 9100

EMSR Technique

1.0 Switch cabinet

1.1 Scope of delivery

- Switch and control cabinet
- Main switch approx. 630 A
- Quantity of inputs and outputs 190/90
- Single drives to 7,5 kW 19
- Single drives to 30 kW (Soft-Starter) 3
- Drives with frequency converter (to 5,5 kW) 3
- Drives with frequency converter (to 7,5 kW) 9
- Drives with frequency converter (to 30 kW) 1
- Drive to 30 kW (star-delta) 0
- Power supply 3-phase (to 30 kW) 4
- Control connection to external units 6
- Door switch with separate emergency stop 6
- Filling level monitoring analogue ultrasonic 0
- Emergency stop connection possibility with single evaluation 20
- Maintenance switch with feedback 33
- Hardware-running hours counter 1
- Illumination sorting cabin (linear luminaires) 17 (lamps)

1.2 Electrical Data

- Power feed : 400V, 3PH, PEN 50 Hz
- Network: TN-S nest
- Control voltage: 230 V AC/ 24V DC
- Surrounding temperature: 5° - 35° C (dust-free)
- Mounting height: to 1000 m over NN
- Regulations: VDE 0100, VDE 0160, VDE 0104,

Mechanical execution:

- steel structure cabinet 2,5 mm
- Width: 800/1000/1200 mm domain
- Height: 2000 mm + 200 mm cable base
- Dept: 500 mm
- Colour: RAL 7035
- Colour base: RAL 7022
- Galvanized installation plate
- Door 110° opening angle
- Dook lock with double lock

Electrical planning:

- Preparation of E-plans in an CAE-system
- Definition of used material
- Installation plans for switchboard
- Preparation of cable lists
- Preparation of final drawings
- Finished coordinates for delivery of switchboard

Blanko

Gesamtpreis [€]:

Pos. 9100(2)
EMSR Technique

Software preparation and start-up

Preparation of SPS-controlling and visualizing software
Manual and automatic operation
Switching single devices through inserted number (manual)
Plant switch-on through safety pillar, secured run-up pulse (automatic)
Plant switch-off with coasting of definite unit
Preparation of visualization software
Plant diagram
Display of formed drives (green field)
Display of faulty drives (red field) and clear words
Display of error with date and time
Plant start-up (besides, finished plant must be available at least 5 days)

Hardware explanation visualization

Office-PC set up in control room with followed configuration:

- software WinCC complete installed
- Operation system Windows XP Professional
- Coupling to SPS
- Overview screen with cca. 5 followed detail pictures
- Colour display with 19" diagonale
- Keyboard, mouse for PC

Blanko

Gesamtpreis [€]:

Pos. 9100 (3)
EMSR Technique

Activities made by clients:

It is expressly agreed that extra activities will be advised ready-for-use by the client.

Feeders for switch cabinets and to extra made uses will be delivered, installed and connected by the client.

Feeding cabinet conveyor technology	ca. kW
Feeding heating and ventilation	100 kW
Feeding dedusting	200 kW
Compressor	100 kW
Feeding Baler 1	110 kW

Furthermore, the client put a air-conditioned and without dust switch cabinet room.

Pos. 9200

Installation

Installation of the components is within the scope of supply of Stadler. The company Stadler will install these parts professionally. The design is state-of-the-art.

At the beginning of the installation the whole area has to be cleared and cleaned. Inflammable materials have to be removed from this area. During the installation the entire area has to be freely accessible. Clear access must be ensured for the trucks.

Sufficient light must be provided in the installation area so that work can go on during darkness.

The illumination must also be ensured in the material storing area.

The hall has to be equipped with sufficient supply points.

A separate supply point of high-tension current (32 Ampere) is provided by the client.

Cold startup:

The cold startup is effected directly following the installation. In this case the plant is operated without material. All operating conditions are checked.

The cold startup lasts maximum 2 working days.

Warm startup:

The warm startup is executed directly after the cold startup. Here the plant is operated with the agreed material. During the warm start up it is not obligatory to operate the plant with stipulated capacity.

The warm start up takes maximum 2 working days. The personnel are provided by the client.

Test run:

The test run is executed directly after the warm startup. During the test run the plant should be operated with preferably full capacity. The availability of the plant should be between 70 and 80% of the agreed operating time. During the test-run the contractor can carry out remaining changes and optimisations.

If during the test run grave deficiencies appear which are caused by the contractor and which cause a downtime of several days the test-run is extended by this period.

The test-run last maximum 10 working days. The personnel are provided by the client.

Efficiency test:

During the efficiency run the plant is operated with the stipulated input material.

The availability of the plant is at least 85 % of the stipulated working time.

Changing of containers, incorrect operation of the plant by the client or interferences caused by disturbing material which has not been taken out, do not reduce the availability.

For the efficiency test the client has to provide material the same as the plant was designed for.

The client also makes available the necessary personnel.

The efficiency test lasts maximum 2 working days.

Mo

Total price [€]:

Pos. 9300

Transport and lifting devices

The contractor loads the goods which are scope of supply onto adequate vehicles and transports the goods to the mounting place. The contractor provides the lifting devices which are necessary to unload the vehicles on site, for the transport of the good on the site and which

are necessary to mount the goods. The contractor provides accommodation containers, office container for the mounters. The contractors' employees is allowed to use the sanitary facilities of the customer without separate remuneration.

Blanko

Gesamtpreis [€]:

Pos. 9400

Beschreibung

The Stadler company plans the contractors scope of delivery as per the offer in close collaboration and agreement with the client. The client makes available to the contractor all necessary documents of the customer supplied units at the latest one week after placement of order. The plant is designed by the contractor according to the state of the art. The client is responsible for all parts provided and the compliance of the guarantees of the parts provided by the client. The client also takes the complete process liability of the goods. The contractor is not obligated to check provided goods and to eventually express the reserves. All security regulations valid for this type of plant according to German standard are complied with as far as these have been given to the client on placement of order in writing and the client has accepted them. The CE-declaration of conformity for the complete plant is made by the client. To obtain a CE-declaration of conformity the contractor must be given all CE-declarations of manufacturer of the units supplied by the customer and if so of all existing plant parts. For the contractor it is only possible to issue a declaration of conformity after handing over all declarations of manufacturer as mentioned above. Until this moment the contractor can only hand over the declarations of manufacturer of the individual components to the client. The plant can only be run after receipt of the CE-declaration of conformity. If the contractor runs the plant before receipt of this document it is done at his own risk and against the instruction of the contractor. If it is not possible to make a CE-declaration of conformity due to reasons which are the fault of the client, the contractor can not default with the service owed.

Planning documents:

Complete buildup plan, mounting schedule

Dokumentation:

The client receives a documentation in duplicate printed form in a folder and one in electrical version on CD. The documentation is duplicate in English language.

Instruction

After the end of installation the employees chosen by the client are trained in operating the equipment by our project and installation manager. During this training all safety issues are explained and shown to them on site. The maintenance and operating instructions are discussed in detail and are shown on the machines. At specific machines further training is undertaken. With the same employees the training of the control and visualisation is done. The attention is especially turned to the treatment of interferences. After the training all participants have to sign a training report.

Information:

The contractor points out that the material sorted by the client can possibly cause overheating.

Waste often contains material which can cause fire. To avoid a fire the plant has to be continuously supervised and a fire protection system should be installed. Further the plant should be operated dust and dirt free. Especially dirt accumulations also outside the machines have to be cleaned. If compressed air is used to clean the plant please take into consideration that during the cleaning works the plant does not operate.

Error messages of single plants have to be pursued. If not overheating is possible.

Blanko

Gesamtpreis [€]:

Scope of supply and service

The engineering services of complete plants contain the layout plan, the operating instructions in duplicate as well as the CE declaration of conformity.

Not included in the scope of supply and service are:

- _ Masonry and mortising works, earth removals and concrete foundations, fretworks & fretwork closings.
- _ Statical calculations and threat analyses.
- _ Building site lightening, electrical energy, water supply and waste water.
- _ Manufacturing aid, manufacturing material for trials and test run.
- _ Current entry to switch cabinet, hall lighting, lighting of maintenance walkways.

All services not specified are not included in this offer. The client is responsible for fire protection requirements. Fire-watch has to be provided by the customer for the period required. Differences in floor level up to 3 cm, based on the floor space will be graduated by STADLER, additional expenditures caused by bigger discrepancies bears the builder.

Minimum Floor plate requirements underneath machines and conveyors:

Minimum thickness of 25cm concrete of C25/30 quality.

Minimum substitute area load of 20KN/m² with possible single loads of 150KN w/base plates 40x40cm and 3m distance in X and Y direction. Surfaces should be even to within 3cm w/respect to the complete mounting area. Wear resistance corresponds w/concrete exposition class XM1 according to DIN 1045.

Erection and construction clearances have to be provided for at relevant locations. Sanitary facilities and dressing rooms at site are allowed to be used by the mounting personel of STADLER.

Guarantee

The supplier grants a 12 months, or maximum 3.500 h working hours, guarantee on all new plant parts except wear and tear parts, subject to a conventional use in a normal operation. The guarantee commences with the start-up of the plant, however 6 weeks after supply at the latest.

Pricing term

DAP Oroszlany, plus value added tax appropriate Incoterms 2010
Importing fee and costs of custom clearance will be charged from client.

Terms of payment

30% Payment at placement of order

50% when ready for despatch indicated

10% with start-up, however, 3 weeks after delivery at the very latest

10% by reception, against position of restricted citizenship guarantee
provided that the insurability at our credit insurance is guaranteed

Period allowed for payment

14 days net, without any deduction of discounts, without money transfer costs, to one of our bank accounts. Is the payment delayed, the contractor can stop project works. All scheduled tasks will delay minimum for the period of payment delay.

Time of delivery

appr. 5-6 months after clarification of all technical details

The time of delivery is valid after mutual signment of confirmation of order, after final commercial and technical clarification and after receipt of prepayment

Binding period

This offer is valid for 3 months

subject to technical alterations. Our general terms and conditions shall prevail, please refer to www.w-stadler.de. Place of venue is Ravensburg, German law shall prevail.

ZB

Terms and conditions

Terms and conditions

Terms and Conditions of Stadler Anlagenbau GmbH

Preamble:

Our General Terms and Conditions, as amended, apply to all the present and future contractual relationships we enter into with the customer. In other respects, German law including the German technical specifications applies exclusively. European standards govern plant engineering and construction outside the Federal Republic of Germany. Customers' general terms and conditions are valid only if we expressly accept them.

The contract language with our company is German. If texts have to be translated into other languages or from other languages, the customer bears this expense separately.

1. Offer and scope of supply and services

The customer may disclose our offer and accompanying documents to third parties only if we have given our express consent. The same applies to all contract documents we make available to the customer. We retain the right of ownership and copyright to these documents.

We are bound to our offers for 6 weeks maximum from the date of issue. The exact scope of supply and services then follows from the order confirmation. If work not specified in the offer or order confirmation has to be carried out, we have a right toward our customer to separate payment. If we have specified certain manufacturers' units in our offer, we are entitled to use other manufacturers' units when executing the contract, if they are equivalent.

2. Delivery time, default

The agreed delivery time commences only when all the technical details have been resolved and the customer has met all the requirements for performance and assembly. These include that the respective rooms have been prepared for the assembly, all the necessary paperwork including the countersigned order confirmation is at hand, the necessary approvals have been granted, the due payments on account have been made and security, if any, has been furnished.

If delivery periods or a fixed delivery date are agreed, they are prolonged to a reasonable extent if delays are due to labour disputes, force majeure, lacking supplies of material, sickness of personnel, failure to settle an outstanding payment obligation on the customer's part or other circumstances beyond our direct control.

We enter into default if, after expiry of a scheduled delivery date, we have been set a reasonable period of at least 2 weeks and this period has not been used for contractual performance.

If we fall behind schedule because our suppliers fail to deliver on time, we are not liable for this delay.

Terms and conditions-1

Terms and conditions-1

3. Delivery of the system, acceptance

During delivery and assembly, the customer has to provide us with the necessary power at the customer's expense, together with the connections required. We have the right to free-of-charge use of the customer's utilities and equipment (hoists, fork lift trucks, among others). The rooms have to be prepared for the assembly by the customer and at customer's expense, and all sources of danger have to be eliminated. In particular, all combustible materials have to be removed. It is the customer's responsibility to attend to the necessary static conditions and the official approvals. If applicable, the customer has to obtain an approval for work on Sundays, public holidays and at night. The subsurfaces have to be suitably rugged and able to take load commensurate with the system. We must be allowed the possibility to undertake assembly work uninterrupted, including over weekends, on public holidays and at night.

If a contracting partner calls for a formal acceptance, this must take place immediately after completion of the assembly. Acceptance can be withheld only if there are grave defects. If nobody calls for a formal acceptance, the system is deemed to be accepted following 6 days of use, but 12 days after assembly at the latest. If the issue of a CE, A or B declaration forms part of the contract, they will be handed over upon acceptance.

4. Obligation to pay, security, offset, assignment

The customer has to pay the agreed remuneration under the contract for work and services as follows:

30% after conclusion of a contract, 60% after readiness to deliver is reported and 10% after completion and 10% after reception. Our invoices are payable by bank transfer, without deduction and exempt from charges, within 14 days of the invoice date. If insurance cover for our customer cannot be granted by our credit insurer, we are entitled to call for our customer to provide security in the form of a directly enforceable guarantee of a German bank or credit insurance institution. The guarantee sum must correspond to our anticipated claim for remuneration.

Offset with counterclaims by the customer is barred, unless the customer's claims are undisputed or have been recognized by declaratory judgement.

The customer is not permitted to assign its claims against us to third parties.

5. Warranty, Liability

The customer must assert apparent defects in writing with in 14 days from performance and assembly. Later complaints are excluded and cannot be recognized.

We must be notified without delay of any defects of the system. If the customer fails to fulfil its duty to inform and such failure results in further defects or damage, they will not be for our account.

In case of justified complaints, the customer has a right to rectification of defects. If rectification repeatedly fails, is not carried out within a reasonable period or we refuse it, then the customer has a right to a reduction in price or a claim for damages. Rescission of the contract is barred.

We are obliged to carry out necessary rectification work only on working days during normal business hours. For carrying out the rectification work, the customer has to provide us, free of charge, with unhindered access to the system, power and, if appropriate, personnel to explain the defect to us and to assist in the rectification work.

For damage or loss incurred not on the delivery item itself, we are liable – no matter on what grounds – only if we, our legal agents and persons we use to perform our obligations act with

Terms and conditions-2

Terms and conditions-2

The customer is entitled to re-sell the goods subject to retention of title in the course of ordinary business as long as the customer is not in default towards us. The customer hereby assigns to us all claims arising from the resale of the goods subject to retention of title. If the customer re-sells the goods subject to retention of title together with other goods, then he assigns to us the claim from the resale equal to the proportion of the invoice value of the goods subject to retention of title to the invoice value of the other goods. The customer is revocably authorised to collect the claims from the resale. This right lapses should the customer be in default towards us. At our request, the customer is obliged to inform its buyer of the assignment and to give us the information necessary for enforcing the claim.

If the value of the existing security exceeds our claim by more than 20% in all, we are obliged to release securities to that extent, at our option.

As at: 01/2009

S1

Offer P012665AN01 Fine Fraction Line

Sorting plant for MSW

Client: Oroszlány
Mr. Károly Takács
Rákóczi F. u. 78
H-2840 Oroszlány

Dear Mr. Herr Károly Takács,

As it is written in main offer, here you can find separate offer about preparation of fine fraction from Screening drum. In main offer we released fine fraction just from ferromagnetic components and as following we ejected that fine fraction in one bunker. The next preparation is not successful.

With this offer we offer you now also the preparation using IR optical separator and X-ray technique. With those units you can separate also plastics and mineral components. Intensity of use of preparation step must be proved with the help of your input compositions .

For this we must know your exact input analysis and also your allowance for deposit of fine fraction.

In case you have further questions about this offer or main offer, do not hesitate to contact us.

Kind Regards
Stadler Anlagenbau GmbH



ppa. Roland Göggel
Headoffice

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Gesellschaft mit beschränkter Haftung, Sitz Altshausen, Registergericht Ravensburg HRB 1356
Geschäftsführer: Willi Stadler, Dipl. Ing.
UST-ID-NR. DE 811 357 071
Finanzamt Sigmaringen Steuer-Nr. 81060/02371

De

General project data

Input:	MSW
Quantity:	15t/H
Number of shifts:	2
Working days	250
Apparent density:	250 kg/m ³

Material data:

Dates for the input are not yet known. Material distribution according to the flow chart.
If the material distribution or apparent weight change, it must be sent off, so that the product quality would not be in danger.

To be provided by the client:

Control room incl. inlet and outlet air, heating and climatisation according to the specifications of the compressor supplier.

Compressor room incl. inlet and outlet air, heating and climatisation according to the specifications of the compressor supplier.

Low voltage main distribution, cable network from the LVMD to the switch cabinets of the machines. Delivery, installation and connection. Provision of a potential earthing point for the earthing of the plant.

All aggregates which possess a connection power of 30 KW and more, as well as aggregates which are expressly named on the data sheet electric and control have to be provided and connected using a direct power supply from the low voltage main distribution.

Illumination of the hall and the machine area.

Necessary fire protection and fireguard during the mounting, as well as the fire protection installation for the operation of such plants

Automatic fire alarm and fire-retarding sealing

Lightning protection (external)

Base earthing

Technical Inspection Agency certification, certifications by public authorities

All works at the building, break throughs, bases and pits etc.

All import charges that will be necessary by the import of the plant.

De

15.07.2014

Summary

Position	Description	Price
S1		
	De General project data	
Pos. 1130	Intermediate conveyor fine fraction	
Pos. 1140	Intermediate conveyor fine fraction	
Pos. 1150	Acceleration conveyor optical separator NIR EBS	
Pos. 1160	NIR-Separator 2000	
Pos. 1170	Feeding conveyor X-ray Device	
Pos. 1180-1170	X-ray device incl. conveyor, hood and vibration chute	
Pos. 6000	Compressor	
Pos. 9000	Steel structure	
Pos. 9100	EMSR Technique	
Pos. 9200	Installation	
Pos. 9300	Transport and lifting devices	
Pos. 9400	Beschreibung	
	ZB Scope of supply and service	
	Terms and conditions	Terms and conditions
	Terms and conditions-1	Terms and conditions-1
	Terms and conditions-2	Terms and conditions-2
Total price excl. VAT		912.000 €

Pos. 1130

Intermediate conveyor fine fraction

Dimensioning / Transported material

MSW	0,20
Tonnage [t/h]:	7,5
Volume flow [m³/h]:	38
Distance between centres [m]:	9,0
max. Inclination [degree]:	13 °

Belt details

Belt width [mm]:	1200
Belt quality: EP 400/3 2+0	
Resistance: MOR	
Sealing: Lip seal	
Height of carriers [mm]:	
Distance of carriers [mm]:	
Belt connection on site	No

Additives

Supports < 2 m height [number]:	
Supports 2 - 4 m height [number]:	3
Feed hopper [number]:	1
Discharge chute [number]:	1
Bend [number]:	
Under pin [m]	9
Belt covering [m]	
Scraper	Yes
Antimagnetic intermediate piece	No
Antimagnetic head piece	No
Rollers rubberized	Yes
Central grease point	No
Reversible	No
Impact protection [m]:	

Specifications

Usable width [mm]:	1150
Nominal height of sideboard [mm]:	200
Belt velocity [m/s]:	1,2
Dumping height [mm] (theoretical):	8
Total width [mm] (without motor):	1368
Total height [mm]:	559
Weight [kg]:	1283
Color: 2-comp. single-coat 0,05 mm	50 my

Electrical data

Power [kW]:	4,0
Charging rate [A]:	8,5
Revolution [1/min]:	109
Voltage:	400V/50 Hz
Cable pull switch [number]:	
Skew control switch [number]:	
Thermal classification F	No
Brake	Yes
Separate fan	No
Frequency inverter	No
Thermistor motor protection	No
Overspeed trip	No
Soft starter	No

The belt movement is sliding on the smooth table area of the conveyor.

The conveyor belt structure is made of a robust profiled sectional steel construction.

The electric drive is effected by a bevel gear drive motor type SEW. Driving and guide drums have a diameter of 220 mm (spherical) with a crowned finish in order to obtain an optimal guiding of the belt.

The dismounting of the driving and guide drums is to be effected in axial direction through the frame of the conveyor. The driving drum is rubberized from a distance between centres of 10 m and more. The bearing is amply dimensioned with branded flange bearings of 60mm. Plug wipers clean the interior belt. On plain belts a wiper is mounted at the end of the dropping side.

The belt sealing towards the sideboard can be engineered on request as a mild grinding lip seal or as a non-touching labyrinth-sealing.

GG

Total price [€]:

Pos. 1140

Intermediate conveyor fine fraction

Dimensioning / Transported material		Specifications	
MSW	0,20	Usable width [mm]:	1950
Tonnage [t/h]:	7,5	Nominal height of sideboard [mm]:	200
Volume flow [m³/h]:	38	Belt velocity [m/s]:	1,2
Distance between centres [m]:	13,0	Dumping height [mm] (theoretical):	5
max. Inclination [degree]:	19 °	Total width [mm] (without motor):	2168
		Total height [mm]:	559
Belt details		Weight [kg]:	2551
Belt width [mm]:	2000	Color: 2-comp. single-coat 0,05 mm 50 my	
Belt quality: EP 400/3 2+0			
Resistance: MOR		Electrical data	
Sealing: Lip seal		Power [kW]:	5,5
Height of carriers [mm]:	30	Charging rate [A]:	11,3
Distance of carriers [mm]:	450	Revolution [1/min]:	109
Belt connection on site	No	Voltage:	400V/50 Hz
		Cable pull switch [number]:	
Additives		Skew control switch [number]:	
Supports < 2 m height [number]:		Thermal classification F	No
Supports 2 - 4 m height [number]:	3	Brake	Yes
Feed hopper [number]:	1	Separate fan	No
Discharge chute [number]:	1	Frequency inverter	No
Bend [number]:		Thermistor motor protection	No
Under pin [m]	12	Overspeed trip	No
Belt covering [m]			
Scraper	No	Soft starter	Yes
Antimagnetic intermediate piece	No		
Antimagnetic head piece	No		
Rollers rubberized	Yes		
Central grease point	No		
Reversible	No		
Impact protection [m]:			

The belt movement is sliding on the smooth table area of the conveyor.

The conveyor belt structure is made of a robust profiled sectional steel construction.

The electric drive is effected by a bevel gear drive motor type SEW. Driving and guide drums have a diameter of 220 mm (spherical) with a crowned finish in order to obtain an optimal guiding of the belt.

The dismounting of the driving and guide drums is to be effected in axial direction through the frame of the conveyor. The driving drum is rubberized from a distance between centres of 10 m and more. The bearing is amply dimensioned with branded flange bearings of 60mm. Plug wipers clean the interior belt. On plain belts a wiper is mounted at the end of the dropping side.

The belt sealing towards the sideboard can be engineered on request as a mild grinding lip seal or as a non-touching labyrinth-sealing.

Pos. 1140

Acceleration conveyor optical separator NIR EBS

Dimensioning / Transported material		Specifications	
MSW	0,20	Usable width [mm]:	2050
Tonnage [t/h]:	8,0	Nominal height of sideboard [mm]:	200
Volume flow [m³/h]:	40	Belt velocity [m/s]:	3,2
Distance between centres [m]:	6,0	Dumping height [mm] (theoretical):	2
max. Inclination [degree]:	0 °	Total width [mm] (without motor):	2268
		Total height [mm]:	559
Belt details		Weight [kg]:	1742
Belt width [mm]:	2100	Color: 2-comp. single-coat 0,05 mm	50 my
Belt quality: EP 400/3 2+0		Electrical data	
Resistance: MOR		Power [kW]:	5,5
Sealing: lip seal		Charging rate [A]:	11,3
		Revolution [1/min]:	278,0
Belt connection on site	No	Voltage:	400V/50 Hz
Additives		Cable pull switch [number]:	
Supports < 2 m height [number]:		Skew control switch [number]:	
Supports 2 - 4 m height [number]:		Thermal classification F	Yes
Feed hopper [number]:	1	Separate fan	Yes
Discharge chute [number]:	2	Frequency inverter	Yes
		Thermistor motor protection	Yes
Under pin [m]	6	Overspeed trip	No
Belt covering [m]		Soft starter	
Scraper	Yes	Capacity separating drum [kW]:	0,18
Central grease point	No	Drawing of current sep. drum [A]:	0,55

Hood

Hood for NIR width 2000

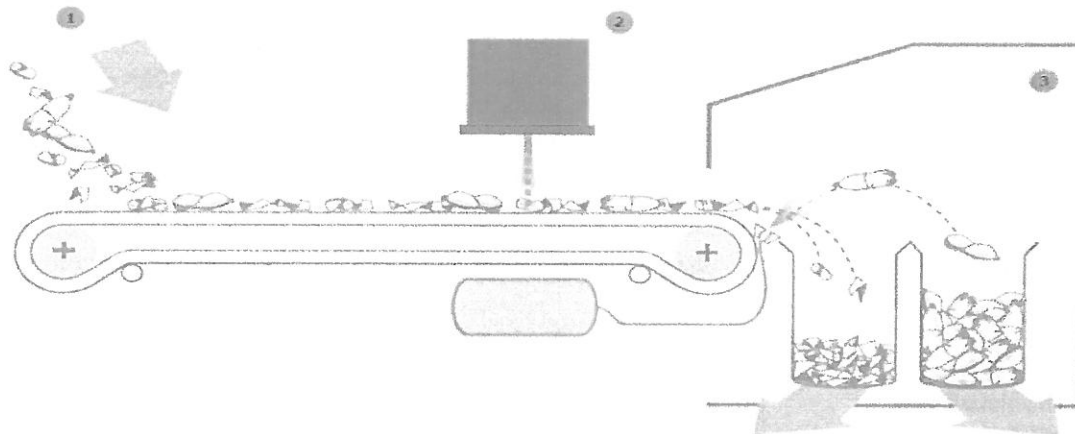
The belt movement is sliding on the smooth table area of the conveyor. The construction of the conveyor is similar to the sliding belt conveyor (GG). The driving-drum is not rubberized to avoid unbalances and therefore oscillations under higher speeds. The electric drive is installed "shovingly" to grant the access to the guide rail of the valves. The belt sealing to the side wall is designed as a grinding lip seal but with smooth sealing lips to allow a higher belt velocity. The discharge hood shows a maintenance door and an adjustable guide plate. Adjustable retainers for the guide rails of the valves and for the separating drum are also installed in the painted hood. The separating drum has a diameter of 135mm (belt 2900mm / 220 mm) and is driven with 12 1/min.

BB

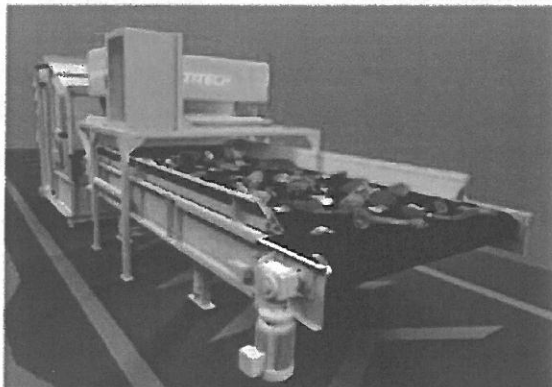
Total price [€]:

Pos. 1150

NIR-Separator 2000



- ① Feeding of unsorted material
- ② Spectrometer scanner
- ③ Separation chamber



The TITECH autosort is a multifunctional sorting system to recover a wide range of valuable material from different waste streams like single stream, packaging, municipal solid waste and other. The new generation with **FLYING BEAM®** technology makes a significant simplification to the system as a whole. This way the TITECH autosort 4 sorts extremely reliable and can be maintained very easy. Sophisticated near infrared (NIR) and visible light (VIS) spectrometer based sensors take in the characteristic spectra with a very high optical resolution. Innovative **FLYING BEAM®** lighting technology focuses only on the area of the conveyor belt that is being scanned. The result: Up to 70% energy savings.

The advanced NIR spectrometer based detector recognises materials based on their specific and unique spectral properties of reflected light. There are two detectors available for different spectral ranges.

The VIS spectrometer based detector recognises materials based on their specific colour properties. These detectors can be used in combination depending on the application.

In addition the TITECH autosort 4 technology covers a broader temperature range.

The system can be quickly optimized for the required sorting tasks by the selection of sorting programs.

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Total price [€]:

Pos. 1170

Feeding conveyor X-ray Device

Dimensioning / Transported material

MSW	0,20
Tonnage [t/h]:	4,0
Volume flow [m³/h]:	20
Distance between centres [m]:	5,0
max. Inclination [degree]:	0 °

Belt details

Belt width [mm]:	1200
Belt quality: EP 400/3 2+0	
Resistance: MOR	
Sealing: Lip seal	
Height of carriers [mm]:	
Distance of carriers [mm]:	
Belt connection on site	No

Additives

Supports < 2 m height [number]:	
Supports 2 - 4 m height [number]:	2
Feed hopper [number]:	1
Discharge chute [number]:	1
Bend [number]:	
Under pin [m]	5
Belt covering [m]	
Scraper	Yes
Antimagnetic intermediate piece	No
Antimagnetic head piece	No
Rollers rubberized	No
Central grease point	No
Reversible	No
Impact protection [m]:	

Specifications

Usable width [mm]:	1150
Nominal height of sideboard [mm]:	200
Belt velocity [m/s]:	1,2
Dumping height [mm] (theoretical):	4
Total width [mm] (without motor):	1368
Total height [mm]:	559
Weight [kg]:	935
Color: 2-comp. single-coat 0,05 mm 50 my	

Electrical data

Power [kW]:	3,0
Charging rate [A]:	6,6
Revolution [1/min]:	103
Voltage:	400V/50 Hz
Cable pull switch [number]:	
Skew control switch [number]:	
Thermal classification F	No
Brake	Yes
Separate fan	No
Frequency inverter	No
Thermistor motor protection	No
Overspeed trip	No
Soft starter	No

The belt movement is sliding on the smooth table area of the conveyor.

The conveyor belt structure is made of a robust profiled sectional steel construction.

The electric drive is effected by a bevel gear drive motor type SEW. Driving and guide drums have a diameter of 220 mm (spherical) with a crowned finish in order to obtain an optimal guiding of the belt.

The dismounting of the driving and guide drums is to be effected in axial direction through the frame of the conveyor. The driving drum is rubberized from a distance between centres of 10 m and more. The bearing is amply dimensioned with branded flange bearings of 60mm. Plug wipers clean the interior belt. On plain belts a wiper is mounted at the end of the dropping side.

The belt sealing towards the sideboard can be engineered on request as a mild grinding lip seal or as a non-touching labyrinth-sealing.

GG

Total price [€]:

Pos. 1160-1170

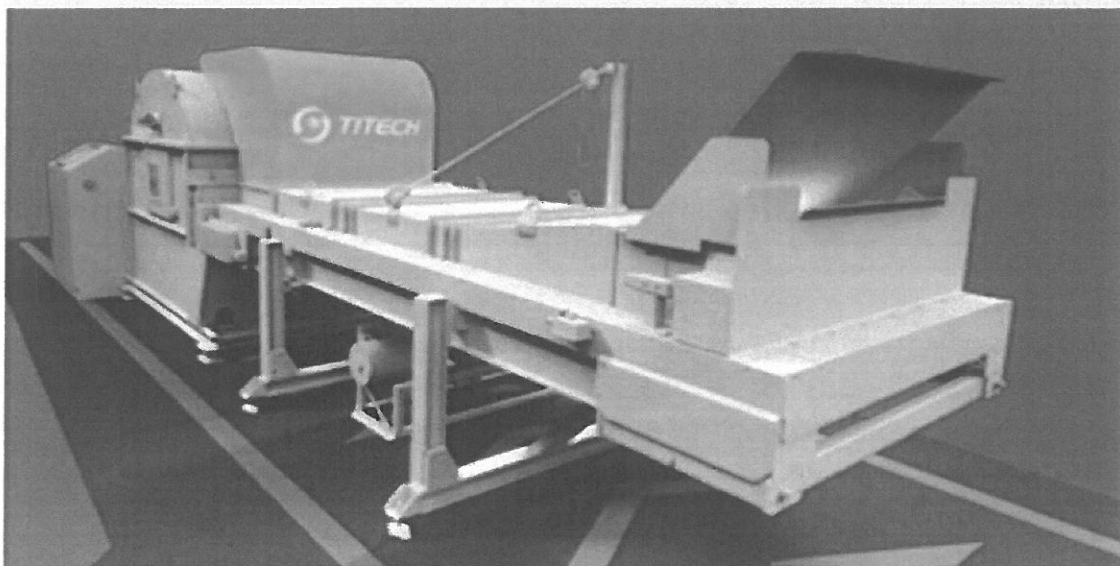
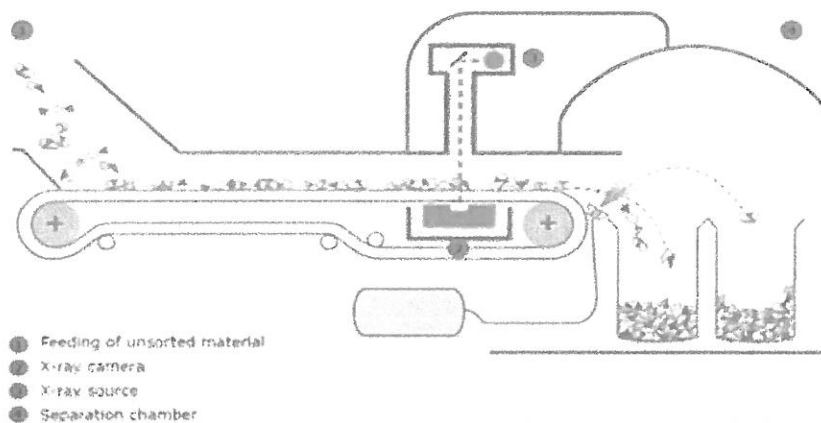
X-ray device incl. conveyor, hood and vibration chute

The product TITECH x-tract contains electric x-ray resource and high sensitive x-ray camera with DUO LINE® Sensor. It uses two independent sensor lines with different spectral reflectance selectivity. With their help the atomic explosion tightness from sorted materials can be covered widely independent of material dept. Moreover, the TITECH x-tract will not be damaged by pollution on upper surface of materials, like colours and dust.

These sensor technique is combined with high.duty coputer systems, sandwitch valve with quite long-lasting and valves with capacity guarantee an optical sotring result.

The system can be fast adapted to desired sorting tasks thrue selection of different sorting programms.

The following drawing shows general principle of TITECH x-tract function:



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Total price [€]:

Pos. 6000
Compressor

Screw compressor
FF, Nominal power 45 kW
Supplying quantity 6,53 m³/min at 10 bar, incl. integrated
Refrigerant type dryer

Incl. installation material and installation.

Blanko

Total price [€]:

Pos. 9000

Steel structure

Steel structure FE strainer Pos. 1110, no walkways
1 magnet hanging

Steel structure X-ray engine Pos. 1180, walkway on one side by switching station

Steel structure optical separator Pos. 1150, walkways on one side
Feed hopper after X-ray engine

Pos. 9100

EMSR Technique

1.0 Switch cabinet

Appropriate preparation to standards from main offer.

1.2 Electrical Data

Power feed :	400V, 3PH, PEN 50 Hz
Network:	TN-S nest
Control voltage:	230 V AC/ 24V DC
Surrounding temperature:	5° - 35° C (dust-free)
Mounting height:	to 1000 m over NN
Regulations:	VDE 0100, VDE 0160, VDE 0104,

1.3 Mechanical execution:

- steel structure cabinet 2,5 mm
- Width: 800/1000/1200 mm domain
- Height: 2000 mm + 200 mm cable base
- Dept: 500 mm
- Colour: RAL 7035
- Colour base: RAL 7022
- Galvanized installation plate
- Door 110° opening angle
- Dook lock with double lock

Electrical planning:

Preparation of E-plans in an CAE-system
 Definition of used material
 Installation plans for switchboard
 Preparation of cable lists
 Preparation of final drawings
 Finished coordinates for delivery of switchboard

Software preparation and start-up

Expansion of existance in Section 1

Hardware description Visualizing

Expansion of existance in Section 1

Activities made by clients:

It is expressly agreed that extra activities will be adviced ready-for-use by the client.

Feeders for switch cabinets adn to extra made uses will be delivered, installed and connected by the client.

Feeding cabinet conveyor technology		ca. kW
Feeding heating and ventilation	100 kW	
Feeding dedusting		200 kW
Compressor		100 kW
Feeding Baler 1	110 kW	

Furthermore, the client put a air-conditioned and without dust switch cabinet room.

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Gesamtpreis [€]:

Pos. 9200

Installation

Installation of the components is within the scope of supply of Stadler. The company Stadler will install these parts professionally. The design is state-of-the-art.

At the beginning of the installation the whole area has to be cleared and cleaned. Inflammable materials have to be removed from this area. During the installation the entire area has to be freely accessible. Clear access must be ensured for the trucks.

Sufficient light must be provided in the installation area so that work can go on during darkness.

The illumination must also be ensured in the material storing area.

The hall has to be equipped with sufficient supply points.

A separate supply point of high-tension current (32 Ampere) is provided by the client.

Cold startup:

The cold startup is effected directly following the installation. In this case the plant is operated without material. All operating conditions are checked.

The cold startup lasts maximum 2 working days.

Warm startup:

The warm startup is executed directly after the cold startup. Here the plant is operated with the agreed material. During the warm start up it is not obligatory to operate the plant with stipulated capacity.

The warm start up takes maximum 2 working days. The personnel are provided by the client.

Test run:

The test run is executed directly after the warm startup. During the test run the plant should be operated with preferably full capacity. The availability of the plant should be between 70 and 80% of the agreed operating time. During the test-run the contractor can carry out remaining changes and optimisations.

If during the test run grave deficiencies appear which are caused by the contractor and which cause a downtime of several days the test-run is extended by this period.

The test-run last maximum 10 working days. The personnel are provided by the client.

Efficiency test:

During the efficiency run the plant is operated with the stipulated input material.

The availability of the plant is at least 85 % of the stipulated working time.

Changing of containers, incorrect operation of the plant by the client or interferences caused by disturbing material which has not been taken out, do not reduce the availability.

For the efficiency test the client has to provide material the same as the plant was designed for.

The client also makes available the necessary personnel.

The efficiency test lasts maximum 2 working days.

Mo

Total price [€]:

Pos. 9300

Transport and lifting devices

The contractor loads the goods which are scope of supply onto adequate vehicles and transports the goods to the mounting place. The contractor provides the lifting devices which are necessary to unload the vehicles on site, for the transport of the good on the site and which are necessary to mount the goods. The contractor provides accommodation containers, office container for the mounters. The contractors' employees is allowed to use the sanitary facilities of the customer without separate remuneration.

Pos. 9400

Beschreibung

The Stadler company plans the contractors scope of delivery as per the offer in close collaboration and agreement with the client. The client makes available to the contractor all necessary documents of the customer supplied units at the latest one week after placement of order. The plant is designed by the contractor according to the state of the art. The client is responsible for all parts provided and the compliance of the guarantees of the parts provided by the client. The client also takes the complete process liability of the goods. The contractor is not obligated to check provided goods and to eventually express the reserves. All security regulations valid for this type of plant according to German standard are complied with as far as these have been given to the client on placement of order in writing and the client has accepted them. The CE-declaration of conformity for the complete plant is made by the client. To obtain a CE-declaration of conformity the contractor must be given all CE-declarations of manufacturer of the units supplied by the customer and if so of all existing plant parts. For the contractor it is only possible to issue a declaration of conformity after handing over all declarations of manufacturer as mentioned above. Until this moment the contractor can only hand over the declarations of manufacturer of the individual components to the client. The plant can only be run after receipt of the CE-declaration of conformity. If the contractor runs the plant before receipt of this document it is done at his own risk and against the instruction of the contractor. If it is not possible to make a CE-declaration of conformity due to reasons which are the fault of the client, the contractor can not default with the service owed.

Planning documents:

Complete buildup plan, mounting schedule

Dokumentation:

The client receives a documentation in duplicate printed form in a folder and one in electrical version on CD. The documentation is duplicate in English language.

Instruction

After the end of installation the employees chosen by the client are trained in operating the equipment by our project and installation manager. During this training all safety issues are explained and shown to them on site. The maintenance and operating instructions are discussed in detail and are shown on the machines. At specific machines further training is undertaken. With the same employees the training of the control and visualisation is done. The attention is especially turned to the treatment of interferences. After the training all participants have to sign a training report.

Information:

The contractor points out that the material sorted by the client can possibly cause overheatings.

Waste often contains material which can cause fire. To avoid a fire the plant has to be continuously supervised and a fire protection system should be installed. Further the plant should be operated dust and dirt free. Especially dirt accumulations also outside the machines have to be cleaned. If compressed air is used to clean the plant please take into consideration that during the cleaning works the plant does not operate.

Error messages of single plants have to be pursued. If not overheatings are possible.

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Gesamtpreis [€]:

Scope of supply and service

The engineering services of complete plants contain the layout plan, the operating instructions in duplicate as well as the CE declaration of conformity.

Not included in the scope of supply and service are:

- _ Masonry and mortising works, earth removals and concrete foundations, fretworks & fretwork closings.
- _ Statical calculations and threat analyses.
- _ Building site lightening, electrical energy, water supply and waste water.
- _ Manufacturing aid, manufacturing material for trials and test run.
- _ Current entry to switch cabinet, hall lighting, lighting of maintenance walkways.

All services not specified are not included in this offer. The client is responsible for fire protection requirements. Fire-watch has to be provided by the customer for the period required. Differences in floor level up to 3 cm, based on the floor space will be graduated by STADLER, additional expenditures caused by bigger discrepancies bears the builder.

Minimum Floor plate requirements underneath machines and conveyors:

Minimum thickness of 25cm concrete of C25/30 quality.

Minimum substitute area load of 20KN/m² with possible single loads of 150KN w/base plates 40x40cm and 3m distance in X and Y direction. Surfaces should be even to within 3cm w/respect to the complete mounting area. Wear resistance corresponds w/concrete exposition class XM1 according to DIN 1045.

Erection and construction clearances have to be provided for at relevant locations. Sanitary facilities and dressing rooms at site are allowed to be used by the mounting personel of STADLER.

Guarantee

The supplier grants a 12 months, or maximum 3.500 h working hours, guarantee on all new plant parts except wear and tear parts, subject to a conventional use in a normal operation. The guarantee commences with the start-up of the plant, however 6 weeks after supply at the latest.

Pricing term

DAP Oroszlany, plus value added tax appropriate Incoterms 2010
Importing fee and costs of custom clearance will be charged from client.

Terms of payment

30% Payment at placement of order

50% when ready for despatch indicated

10% with start-up, however, 3 weeks after delivery at the very latest

10% by reception, against position of restricted citizenship guarantee

provided that the insurability at our credit insurance is guaranteed

Period allowed for payment

14 days net, without any deduction of discounts, without money transfer costs, to one of our bank accounts. Is the payment delayed, the contractor can stop project works. All scheduled tasks will delay minimum for the period of payment delay.

Time of delivery

cca. 20 Weeks after clarification of all technical details

The time of delivery is valid after mutual signment of confirmation of order, after final commercial and technical clarification and after receipt of prepayment

Binding period

This offer is valid for 2 months

subject to technical alterations. Our general terms and conditions shall prevail, please refer to www.w-stadler.de. Place of venue is Ravensburg, German law shall prevail.

ZB

Terms and conditions

Terms and conditions

Terms and Conditions of Stadler Anlagenbau GmbH

Preamble:

Our General Terms and Conditions, as amended, apply to all the present and future contractual relationships we enter into with the customer. In other respects, German law including the German technical specifications applies exclusively. European standards govern plant engineering and construction outside the Federal Republic of Germany. Customers' general terms and conditions are valid only if we expressly accept them.

The contract language with our company is German. If texts have to be translated into other languages or from other languages, the customer bears this expense separately.

1. Offer and scope of supply and services

The customer may disclose our offer and accompanying documents to third parties only if we have given our express consent. The same applies to all contract documents we make available to the customer. We retain the right of ownership and copyright to these documents.

We are bound to our offers for 6 weeks maximum from the date of issue. The exact scope of supply and services then follows from the order confirmation. If work not specified in the offer or order confirmation has to be carried out, we have a right toward our customer to separate payment. If we have specified certain manufacturers' units in our offer, we are entitled to use other manufacturers' units when executing the contract, if they are equivalent.

2. Delivery time, default

The agreed delivery time commences only when all the technical details have been resolved and the customer has met all the requirements for performance and assembly. These include that the respective rooms have been prepared for the assembly, all the necessary paperwork including the countersigned order confirmation is at hand, the necessary approvals have been granted, the due payments on account have been made and security, if any, has been furnished.

If delivery periods or a fixed delivery date are agreed, they are prolonged to a reasonable extent if delays are due to labour disputes, force majeure, lacking supplies of material, sickness of personnel, failure to settle an outstanding payment obligation on the customer's part or other circumstances beyond our direct control.

We enter into default if, after expiry of a scheduled delivery date, we have been set a reasonable period of at least 2 weeks and this period has not been used for contractual performance.

If we fall behind schedule because our suppliers fail to deliver on time, we are not liable for this delay.

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Gesamtpreis [€]:

Terms and conditions-1

Terms and conditions-1

3. Delivery of the system, acceptance

During delivery and assembly, the customer has to provide us with the necessary power at the customer's expense, together with the connections required. We have the right to free-of-charge use of the customer's utilities and equipment (hoists, fork lift trucks, among others). The rooms have to be prepared for the assembly by the customer and at customer's expense, and all sources of danger have to be eliminated. In particular, all combustible materials have to be removed. It is the customer's responsibility to attend to the necessary static conditions and the official approvals. If applicable, the customer has to obtain an approval for work on Sundays, public holidays and at night. The subsurfaces have to be suitably rugged and able to take load commensurate with the system. We must be allowed the possibility to undertake assembly work uninterrupted, including over weekends, on public holidays and at night.

If a contracting partner calls for a formal acceptance, this must take place immediately after completion of the assembly. Acceptance can be withheld only if there are grave defects. If nobody calls for a formal acceptance, the system is deemed to be accepted following 6 days of use, but 12 days after assembly at the latest. If the issue of a CE, A or B declaration forms part of the contract, they will be handed over upon acceptance.

4. Obligation to pay, security, offset, assignment

The customer has to pay the agreed remuneration under the contract for work and services as follows:

30% after conclusion of a contract, 60% after readiness to deliver is reported and 10% after completion and 10% after reception. Our invoices are payable by bank transfer, without deduction and exempt from charges, within 14 days of the invoice date. If insurance cover for our customer cannot be granted by our credit insurer, we are entitled to call for our customer to provide security in the form of a directly enforceable guarantee of a German bank or credit insurance institution. The guarantee sum must correspond to our anticipated claim for remuneration.

Offset with counterclaims by the customer is barred, unless the customer's claims are undisputed or have been recognized by declaratory judgement.

The customer is not permitted to assign its claims against us to third parties.

5. Warranty, Liability

The customer must assert apparent defects in writing with in 14 days from performance and assembly. Later complaints are excluded and cannot be recognized.

We must be notified without delay of any defects of the system. If the customer fails to fulfil its duty to inform and such failure results in further defects or damage, they will not be for our account.

In case of justified complaints, the customer has a right to rectification of defects. If rectification repeatedly fails, is not carried out within a reasonable period or we refuse it, then the customer has a right to a reduction in price or a claim for damages. Rescission of the contract is barred.

We are obliged to carry out necessary rectification work only on working days during normal business hours. For carrying out the rectification work, the customer has to provide us, free of charge, with unhindered access to the system, power and, if appropriate, personnel to explain the defect to us and to assist in the rectification work.

For damage or loss incurred not on the delivery item itself, we are liable – no matter on what grounds – only if we, our legal agents and persons we use to perform our obligations act with

Blanko

Gesamtpreis [€]:

Terms and conditions-2

Terms and conditions-2

The customer is entitled to re-sell the goods subject to retention of title in the course of ordinary business as long as the customer is not in default towards us. The customer hereby assigns to us all claims arising from the resale of the goods subject to retention of title. If the customer re-sells the goods subject to retention of title together with other goods, then he assigns to us the claim from the resale equal to the proportion of the invoice value of the goods subject to retention of title to the invoice value of the other goods. The customer is revocably authorised to collect the claims from the resale. This right lapses should the customer be in default towards us. At our request, the customer is obliged to inform its buyer of the assignment and to give us the information necessary for enforcing the claim.

If the value of the existing security exceeds our claim by more than 20% in all, we are obliged to release securities to that extent, at our option.

As at: 01/2009

Blanko

Gesamtpreis [€]:

