

Customer: Wasteserve
EkoCentre,
Latmija Road,
Marsaskala
MSK 4613

Offer n°: Q309 - Wasteserv

TEMPORARY SORTING LINE

Prepared By : Stefan Borg

Dear Sirs,

We have the pleasure to submit for your consideration our offer for the temporary sorting line. The offer includes all the necessary machinery as requested and as illustrated in drawing OFF.12-2018.

Unec ltd. Has a vast experience in simalar projects with a team of qualified technical people and a 24hr assistance facility.

We trust our offer is in line with your requirements and look forward to receive your further instructions.

Kind regards,

The Director



Composition of the plant

POS.	NAME	QUANTITY
01	Bag Opener	1
02	Sliding belt conveyor	1
03	Sorting belt conveyor	1
04	Sorting platform	1
05	Electric control board	1

BAG OPENER BO1300

Pos.01

FUNCTION BAG OPENER

DESCRIPTION The bag breaking unit is made up by a central body of steel profile closed on three sides in which the cogged roll is positioned..

The machine is featured by an accumulation buffer. The material gets pushed towards the bag opener roll thanks to the action of the rubber conveyor. The walls are made of robust beams, which guarantee the containment of the material without risk of deformation.

The cogged roll is powered by a hydraulic motor.

The machine is designed to avoid shredding the waste by keeping the content intact, in order to facilitate subsequent selection phases. It is also possible, due to the unique way the machine was designed, to steadily ration the material.

The bags are opened thanks to the movement of the teeth of the roll and fixed teeth.

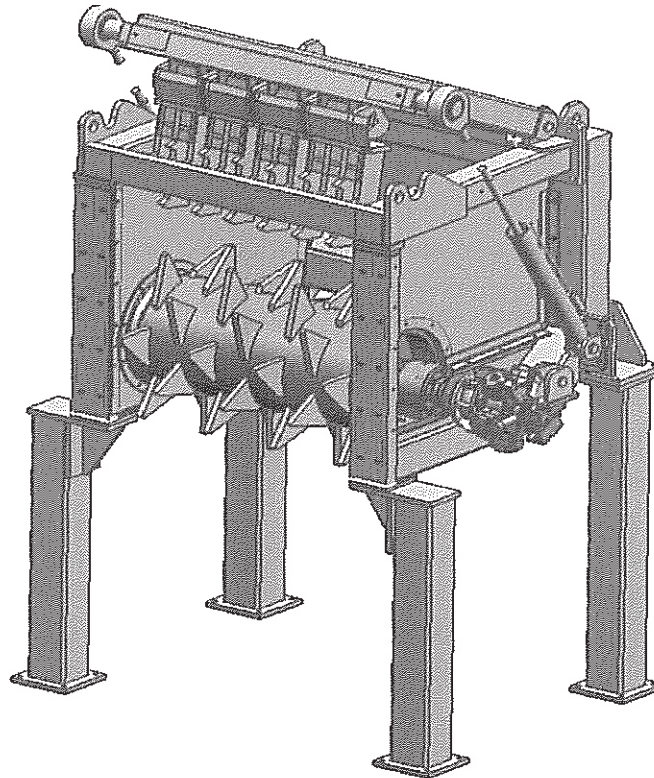
There is an hydraulic anti-clogging system made up by a lifting system that automatically activates in case of tough material that could get stuck in the bag opening system.

The hydraulic control unit is managed by the PLC touch screen.

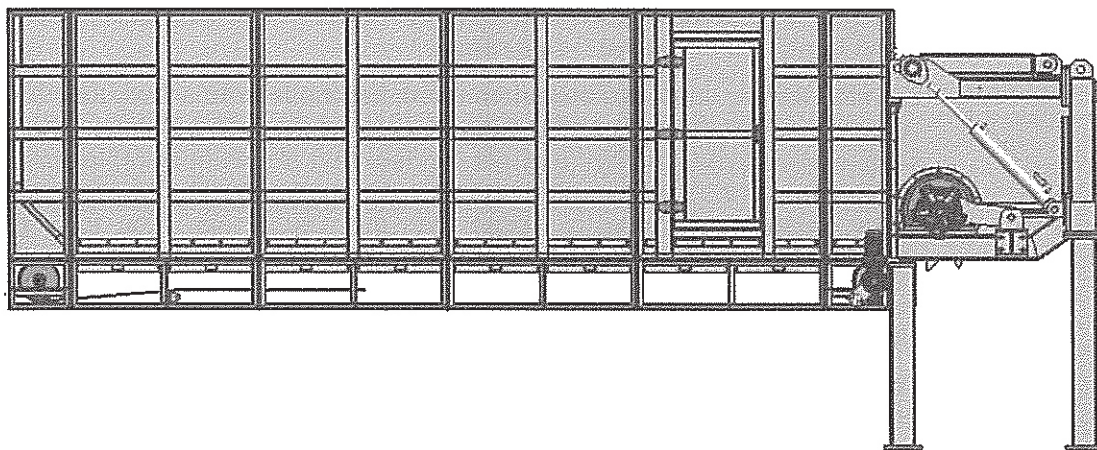
CHARACTERISTICS:

Unit provided	n°	1
Max width	mm	2.500 approx
length	mm	9.000 approx
Height	mm	2.500 approx
Number of rolls	n°	1
Net width of conveyor	mm	1.300
Length of conveyor	mm	8000
Storage volume	m ³	27,0 approx
Diameter of roll	mm	600
Rotation speed	rpm	30
Transmission		Hydraulic
Electric panel and hydraulic control unit	Yes	
Surface treatment		Sandblasting SA 2 ½ Oven-hardened zinc primer 2 passes of epoxy paint
Emergency systems	Yes	emergency button + microswitches
Approximate weight	kg	7.000

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Construction detail of the rotor (with emphasis on the hydraulic drive) and comb opening system that operates in the event of clogging or maintenance intervention



You can see the robust structure of the sides and the access door inside the body for any maintenance or cleaning operations.

BELT CONVEYOR BC-01

Pos.02

FUNCTION

SLIDING BELT CONVEYOR

DESCRIPTION

The frame and side rails are made of carbon steel. The frame has a bent sheet metal structure, which gives it considerable strength.

The modular type structure offers great advantages in terms of flexibility, in the sense that any variations in length (positive or negative) that should take over for new needs, are easily implemented.

Also this type of structure allows to mount indifferently the engine or on the right side or on the left side, and, for particular applications, also on the load side.

All the necessary protections are provided in order to avoid accidental contact with moving parts.

The sliding plane of the carpet is made up from terns of rollers rotating on sealed bearings. In the loading area the above-mentioned triples will be thicker, in order to better mitigate the impact caused by the fall of the material.

The belt is made of PVC and is resistant to abrasion, oil and grease substances with a high thickness, 3 canvases in tergal nylon, 4 + 2 mm coating, tensile strength 315 N / mm.

At the engine roller, an external scraper is mounted, with the function of keeping the surface of the belt clean. The external scraper can only be fitted in the case of a smooth mat (not herringbone or slatted).

The internal scraper is of the plowing type, connected to the frame by two clamps. It is applied on the internal non-bearing side of the belt, adjacent to the return drum and facing the opposite direction to the travel direction of the belt.

The centering of the carpet is ensured by "donkey back" processing of the rollers in the head and by side anti-skid rollers.

Both the towing head and the return head, are made from a thick tube turned and complete with a through shaft, supported by frame with bearings. The through-shaft is in a keyed solution (and not welded) that allows easy replacement of the shaft only and not of the entire shaft / head assembly. The keyed solution also offers greater resistance to fatigue than the welded one. The towing head is completely covered in rubber to ensure proper traction.

In correspondence of both heads, a tensioning system is mounted in order to always guarantee the correct tension of the belt and its centering.

The motorization is carried out on the head roller, with geared motor directly keyed to the drum axis with fixing arm connected to the belt frame..

CHARACTERISTICS

N° of units	n°	1
Lenght	mm	10.000
Working width	mm	1.400
Total width	mm	1.900
Inclination	°	Max 17
Thick rubber mat	mm	9
Sides height	mm	300
Sheet metal thickness	mm	2

Head roller diameter	mm	344 rubberized
Idler roller diameter	mm	324
carrying roller diameter	mm	89
carrying roller pitch	mm	1.500
Lower roller diameter	mm	104
Lower roller pitch	mm	3.000
Installed power	kW	3
Belt cleaning system	Yes	
Sheet metal closing lower	Yes	
Surface finishing		Sandblast, one anti-rust layer + two epoxy paint layers. RAL to be defined
Support frame	Yes	

SORTING CONVEYOR SC-01

Pos.03

FUNCTION MANUAL SELECTION OF THE MATERIAL

DESCRIPTION The frame consists of profiles and folded sheets of adequate thickness (3 mm). The sides of the belt are made of sheet metal, thus hiding the entire carpet ring. The entire frame and side rails are made of carbon steel.

The sliding surface of the belt is made up of inverted C-profiles, alternating with steel stress rollers that rotate on ball-bearings with a dust and water seal. In the lower part the belt is supported by flat rollers rotating on sealed bearings.

The belt is made of PVC and is resistant to abrasion, oil and grease substances with a high thickness, 3 canvases in tergal nylon, 4 + 2 mm coating, tensile strength 315 N / mm.

The towing head is made from a thick tube turned and covered in rubber complete with a through shaft supported by supports with sealed bearings. The referral head was taken from a thick tube turned with the characteristics such as towing and provides the tension of the carpet from a threaded register with locknut. The through-shaft is in a keyed solution (and not welded) that allows easy replacement only of the shaft and not of the entire shaft / head assembly. The keyed solution also offers greater resistance to fatigue than the welded one.

The motorization is carried out on the head roller, with geared motor directly keyed to the drum axis with fixing arm connected to the belt frame.

If there is a magnetic separator mounted straddling the sorting belt, the section of the latter underneath the magnet will be made of stainless steel in order to avoid damaging magnetization of the tape.

CHARACTERISTICS

N° of units	n°	1
Lenght	mm	22.000
Working width	mm	1.200
Total width	mm	1.350
Inclination	°	0
Sides height	mm	56
Sheet metal thickness	mm	3
Head roller diameter	mm	344 rubberized
Idler roller diameter	mm	324
carrying roller diameter	mm	60
carrying roller pitch	mm	2.300
Lower roller diameter	mm	60
Lower roller pitch	mm	2.300
Installed power	Kw	3,0
Emergency system	Yes	
Start / stop buttons	Yes	For each sorting station



Surface finishing

Sandblast, one anti-rust layer +
two epoxy paint layers. RAL to be
defined

Support frame

Yes

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PLATFORM OF SELECTION PS-01

Pos.04

FUNCTION AUTOMATIC/MANUAL PLATFORM

DESCRIPTION Made entirely of HEA main beams and secondary IPE beams, coupled together with bolts to form a platform resting on appropriately sized beams.

The structure is completed by access stairs in anti-slip galvanized grating; the flooring is made of panels in metal grating or another type of non-slip surface.

All the characteristics described give great resistance and perfect stability.

The sizing of the impalcate derives from calculations made according to the current metal construction standards.

CHARACTERISTIC:

Unit	n°	1
Lenght	mm	26.000
Widht	mm	5.000
Floating floor height	mm	2.000
N. of floor	n°	1
Access stairs	n°	2
Total area	m ²	130,0
Surface treatment		Sandblasting SA 2 ½ Oven-hardened zinc primer

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ELECTRICAL CONTROL SYSTEM EL-01

Pos.05

FUNCTION

POWER SUPPLY / COMANDO E CONTROLLO

DESCRIPTION

The selection plant is equipped with an electrical panel with contactors, inverters, protections and anything else necessary.

Emergencies and control pushbuttons for manual movements are located along the entire line; flashing lights indicating system in operation and alarms for anomalies.

The protection doors for the rotating parts of the various machines (where present) are connected to safety switches that provide for putting the system in an emergency.