Morphological composition of solid waste in Russia is full of useful fractions which can be recycled for production of different products.

Today we offer a unique technology - the autonomous waste sorting complex.

Inclusion of special equipment for solid waste recycling which generates electrical and heat energy into waste sorting line allows you to get an autonomous waste sorting plant which doesn’t require any connection to the power grid. This fact makes starting mechanisms of such projects much easier.

For more effective economic and ecological work of waste sorting plant it is necessary to choose not only solid waste fractions which can be sold as recyclable materials but also other energy-valuable unmarked plastics, polymers, mechanical rubber products, textiles etc. In other words all the products which can’t be sold as recyclable materials but can provoke a fire at the landfill and of course poison the environment with combustion products of polymers, mechanical rubber products etc.

If you supplement the waste sorting plant with complex EcoMachine AMR there will be a possibility to supply with electrical and heat energy the whole waste sorting plant. (Generation of electrical energy from 100 kW·h to supply the equipment, lighting etc.)
In addition you get environmentally safe recycling of polymers, products etc. It is also possible to recycle hazardous waste unfitted for burial at the landfill (healthcare waste, oil-slimes, industrial waste etc.).

Taking into account all these facts we get an autonomous waste sorting plant which doesn’t require any connection to the power grid. Unprocessed waste of this plant are food and biodegradable waste.

PROFITABLE BUSINESS WITH GREAT PERSPECTIVES

Taking into account the mixed collection of solid waste in Russia and bullish demand for recyclable materials, you can be sure that such sorting plants for solid waste with extraction of fractions which are good as recyclable materials are a very profitable business with great perspectives.

Today demand for secondary raw materials allows us to sell up to 50% of the materials which are part of industrial solid waste and selected from the total mass of waste sorting line: plastics, polymers, paper, glass, ferrous and nonferrous metals.

ROUGH COMPOSITION OF WASTE SORTING PLANT

Composition of waste sorting plant as well as the mutual order of its elements depends on many factors:

- Volume of sorting waste
- Desirable number of useful fractions
- Required degree of automation of the processes;
- Size of the area.

*Our waste sorting plants are designed according to our customers requirements.*
FEEDING CONVEYOR
It is necessary for feeding of solid waste to the sorting line

Work description: solid wastes are delivered to the concrete ground under the canopy of waste loading station by garbage trucks.

Incoming wastes are loaded on the concrete ground of the waste receiver (solid waste). Large-size items are selected from the whole mass of solid waste then loaded and transported by loader-digger or bulldozer to the sorting ground of large-size waste. After selection of large-size items wastes are moved to the pit of the feeding conveyor.

SORTING PLATFORM

It is an important element of the sorting plant and necessary for more effective selection of useful fractions from MSW. There is a conveyor and places for operators who select useful fractions at the sorting platform.
SORTING CONVEYOR
Necessary to the work of the operators for sorting MSW

According to our customers’ choice we can offer a sorting cabin for more comfortable work of the plant staff.

Work description: sorting belt conveyor is placed at the sorting platform and used for transporation of solid waste and hand sorting.

There are posts for hand sorting of raw materials in the sorting cabin from two sides.

Paper, cardboard, textiles, film, plastic bottles, colored metal and glass are consistently selected from MSW.
Glass and non-ferrous scrap metal is discharged through the gutter an the containers on the floor. Paper, cardboard, textiles, film, foil and plastic bottles are discharged through the gutter in the bunkers and after bunkers filling waste are moved to the chain conveyor in the press.

The operator while selecting of useful fractions throws then down into the bunker. There are posts (places of work) with hatches along sorting conveyor. There are from 3 to 20 posts at the each side of the conveyor (depends on required efficiency of the plant) Part of the selected components (waste paper, PET plastic of high and low pressure, etc.) go through hatches into the storage compartment and then fall into the mobile containers.

REVERSIBLE BELT CONVEYOR
Necessary for MSW supply at the sorting line

Work description: waste left after selection of useful components goes to the reversible conveyor and then goes to the open container-multi lift placed under the conveyor line on the right and left sides of the reversible conveyor. Material is supplied both from right and left sides which gives non-stop plant work.
CONVEYOR SUPPLYING USEFUL FRACTIONS INTO AUTOMATIC PRESS

**Work description:** next the accumulated selected useful fractions of MSW are transported to the conveyor line. After that useful fractions are thrown down onto the conveyor line for further supplying to the press.

AUTOMATIC PRESS

*Necessary to press secondary raw materials*

The automatic press is used for raw materials production which is continuously in small amounts (the accumulation of waste is required to press them into the package). Pressing is necessary for transportation and sale of secondary raw materials. There is a possibility of installation of several vertical presses (on request).

COLLECTION BIN OR PRESS COMPACTOR

*Necessary to press secondary raw materials*

Used for tails collection (mainly food waste) and further waste burial.
QUALITY OUR OUR EQUIPMENT

All units of our equipment are perfected. Waste sorting equipment is constructed with using imported parts. Conveyors belts have high strength properties. Units and components of our equipment have a very high safety factor and are designed for critical external environment in conditions of high dust, dirt, negative temperature, and other negative factors, which ensures reliable operation of systems in case of sudden or transient overload. All conveyors are modular what makes them quick disassembly/assembly in the case of moving equipment to a new location.

INDIVIDUAL SOLUTIONS AND WHOLE COMPLEX OF WORK

Science and production association ECOMASHGROUP performs the whole complex of work related to design, manufacture and assembly of “turnkey” systems for waste sorting of municipal solid waste (MSW) according to customer’s requirements.

The technological process of waste sorting of our equipment is optimized for Russian morphology of solid waste which ensures high reliability of equipment, as well as the best qualitative and quantitative indicators of waste sorting processes to extract secondary raw materials.

We are ready to give you the best solution on the composition of the equipment and its location, according to the size of the building and your financial capabilities.
OPTIONS OF LAYOUT OF PARTS OF WASTE SORTING PLANT

20 000 ton per year

50 000 ton per year
100 000 ton per year

200 000 ton per year
350 000 ton per year

Head office
4th floor, 48 Radischeva blvd,
Tver 170100 Russia.

E-mail
ecomg@ecomg.ru

Tel/fax:
+7 (4822) 777-604