



PLUG & RECYCLE



THE FIRST INTEGRATED PLANT FOR MIXED LAMP AND FLAT SCREEN RECYCLING

THE BLUBOX

The vision to develop a BLUBOX which recycles hazardous waste was born several years ago. Because of the growing volume of flat panel displays (FPDs) and lamps containing mercury on the market, a solution was called for to enable their safe recycling without endangering human health or contaminating the environment. In cooperation with MTB Recycling, our engineering team accomplished this goal and developed the first fully automatic recycling machine on the market.

The BLUBOX technology revolutionizes the recycling of the growing volumes of e-waste and lamps. It is an all-in-one solution integrated in a 40ft HC container that meets the highest safety standards. A dry treatment process consisting of mechanical crushing systems and multiple-step separation works with great efficiency inside the BLUBOX. In order to protect the environment, the built-in aspiration system absorbs the mercury, treats the exhaust air, and turns the contaminated waste into high-value outputs.

Over the past few years the BLUBOX has been refined to excellence. Innovation and technology enable it to simultaneously recycle several kinds of mercurial wastes and all kinds of e-waste, such as computers, notebooks, tablets, mobile phones, etc.

CAPACITY

The capacity depends on the material to be processed and the skills of the operating personnel. In general the following capacity can easily be obtained during an 8 hour working day:

$$\begin{array}{r} \mathbf{1000\ kg} \\ \mathbf{FPDs} \\ \mathbf{per\ hour} \end{array} + \begin{array}{r} \mathbf{500\ kg} \\ \mathbf{lamp\ waste} \\ \mathbf{per\ hour} \end{array} = \begin{array}{r} \mathbf{3000\ t} \\ \mathbf{lamps\ and\ FPDs} \\ \mathbf{per\ year} \end{array} \begin{array}{l} \mathbf{based\ on\ 8\ hours} \\ \mathbf{working\ day} \end{array}$$

Operating personnel required: 1 operator for logistics and control
2 operators processing lamps
1 operator processing FPDs

FACTS

- Simultaneously recycles lamps and flat panel displays
- Fully automatic recycling process
- Latest technology to ensure the safe recycling of lamps and e-waste
- High capacity: 1000 kg/h flat panel displays and 500 kg/h lamps
- No need to manually disassemble FPDs
- Secure data destruction
- Converts hazardous waste into valuable raw materials
- Highest safety standard – the whole system works constantly under negative pressure
- Easy transportation – the entire BLUBOX technology is built into a 40ft HC container
- Fast and reasonable commissioning (ready within 3 days of installation)
- Low maintenance costs – proven heavy-duty parts

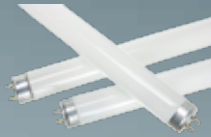
INPUT – OUTPUT

INPUT DISPLAYS AND LAMPS

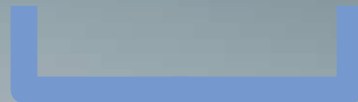
Flat Panel Displays



Fluorescent Tubes



Compact Fluorescent Lamps



OUTPUT DISPLAYS

Non Magnetic



Magnetic



OUTPUT PRODUCTS LAMPS

End Caps



Glass



Fluorescent Powder



**AUTOMATED
SORTING**



OUTPUT PRODUCTS DISPLAYS

PCBs



Aluminium



Liquid Crystals



PMMA



Mixed Plastics



OPERATION AND PLANT SAFETY

The BLUBOX is permanently under negative pressure, even in standby mode, in order to ensure a totally clean environment and protect the operating staff.

Sophisticated air treatment systems capture the mercury within the BLUBOX. An integrated mercury monitor notifies the crew, should ambient air contaminants exceed health regulations.

Even if there is an emergency shutdown via one of the several easily accessible emergency stop buttons the ventilation system will continue to operate.

ADVANTAGES

The BLUBOX is ...

... safe:

- Hazardous wastes are recovered within the BLUBOX
- No emissions
- Secure data destruction

... simple:

- Plug in and recycle
- Low handling and maintenance costs
- Easy to operate

... valuable:

- Recovers rare earths and precious metals
- Metals and plastics are 100% recycled
- All products have a positive value

SAFE FOR YOU, YOUR EMPLOYEES AND THE ENVIRONMENT



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