

## <Basic Specifications>

### Object Color of Cullet

**1. Object Color of Cullet** Flint (Transparent), Amber (Brown), other colored cullet and opaque particle (details to be discussed)

**2. Detectable Size of Cullet** 6mm or larger – 30mm or shorter (less than 6mm cullet is not subjected)

### Mechanical Specifications

**1. Processing Capacity** max.10ton/h, regular use. 8ton/h (maker recommended capacity)

※Subject to change depending on conditions of cullet

**2. Way of Transfer** Vibrating Feeder (Variable Speed) Width: 1100mm

**3. Rejection System** Pinpoint Air by 80 solenoid valves

**4. Deliver to next process** Freely falling from duct

※Facilities after ducts are not included (Prepared by User)

**5. Air Specifications** Not less than 0.6MPa Compressed Air (Prepared by User)

**6. Air Supply Unit** 40μm (Included)

**7. Air Transfer Specifications** SPG25A (Internal Piping and Tubing are included)

**8. Vibration Proof measure** Spring Vibration Isolator (Included)

### Electrical Specifications

**1. Detecting System** Color Sorting by transmissive color Camera and Metal Detection

**2. Control Unit** Target Cullet Color Sorting simply by pressing button

**3. Main Alarm** Air Failure (less than 0.4MPa) / Internal Alarm can be set by Control Panel.

**4. Secondary Electric Wiring Work** Dedicated cables are included, which connect Control Unit with such a main unit as Light Source, Color Sensor Camera and Solenoid Valve.

### Others

**1. Electrical wiring** Grounding work to be conducted by user

**2. Painting Color** Machine body: Standard color (orange) or any color designated by user  
Control unit: Control unit maker's standard color



### Remark

Less than 6mm cullet and foreign particles of powder or granulation shall not input.  
Foreign particles such as metal, cap and paper shall be rejected prior to cullet input into CELVSS to ensure the best sorting performance of CELVSS.  
Sorting accuracy of CELVSS is highly influenced by quality of cullet charged into CELVSS.



### Maintenance

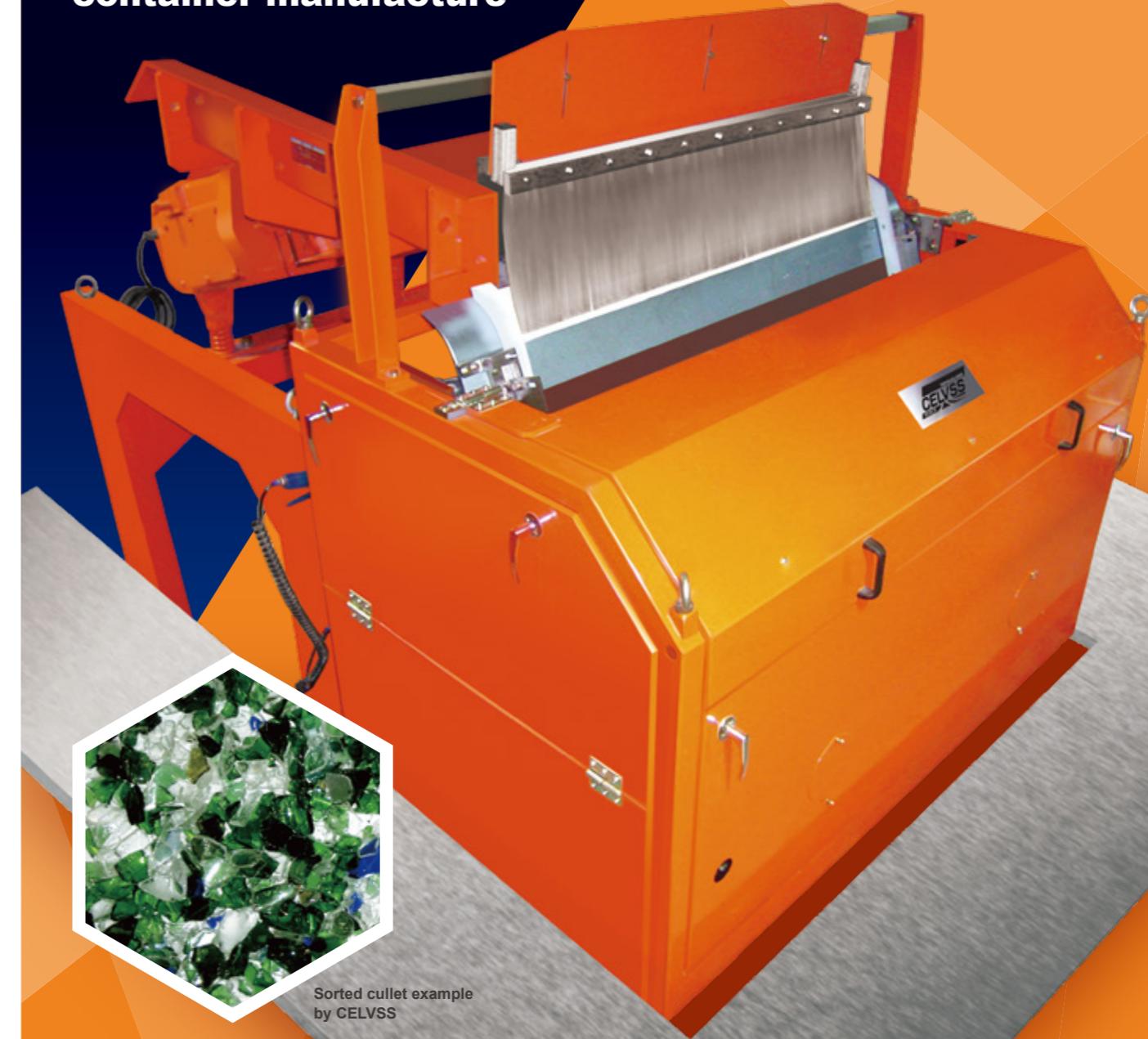
A yearly periodical maintenance recommends to maintain machine performance.  
CELVSS shall be done an appropriate parameter adjustment to adjust a change of source cullet, cullet quality requirement, degradation of light source and change of an ambient environment. Shall be done



### Introduction schedule

Production will be started after a specification meeting with customers, quotation submission and conclusion of a contract.  
Production period: Approximately four months  
A test run of before and after delivery, operator education and so on: Approximately one month

**“Sophisticated Sorting Eyes”  
Cullet Separation System,  
CELVSS,  
developed by a glass container manufacture**



# CELVSS

Ceramic Lead Vision Separation System

**TOYO GLASS MACHINERY CO., LTD.**

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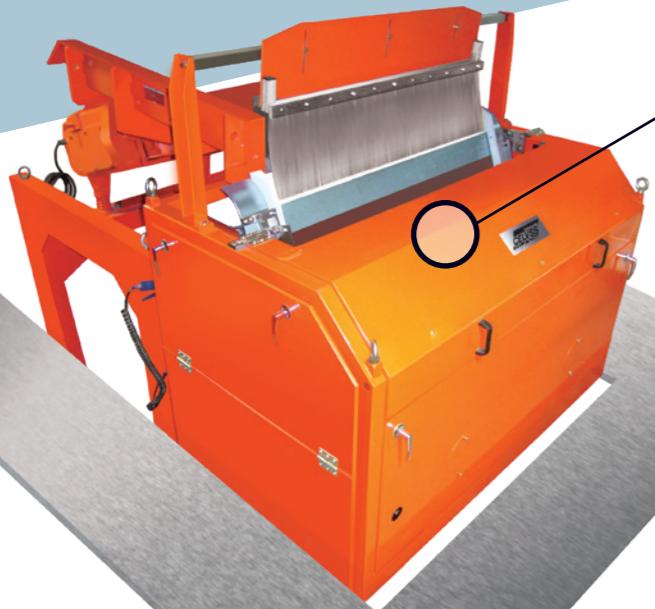
**TOYO GLASS MACHINERY CO., LTD.**



# / Product features /

## 1. Design based on unique algorithm

The algorithm has come from the combination of the technology accumulated for the development of bottle inspection machines and devices, and our knowledge about glass compositions and properties.



## 2. Sophisticated metal detector

It uses sophisticated metal detector solely developed by Toyo Glass. (patented)

## 3. LED light source

It uses a white LED emitter which is more reliable and has a longer life than a fluorescent lamp.



## 4. User-friendly control unit

It can designate a target cullet color simply by pressing a select button on the control unit.

## 5. Simple and tough structure

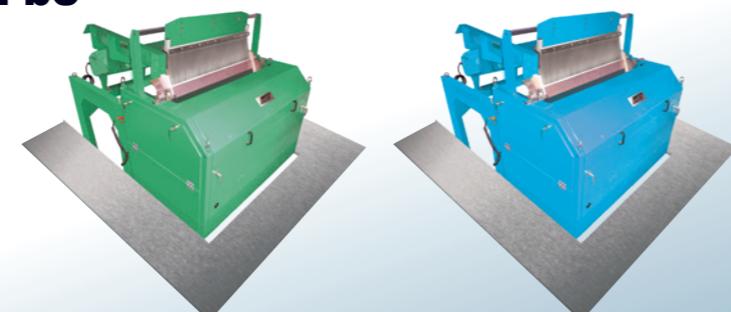
An easy-to-use and reliable feeder is used. Its structure is so simple that undesired cullet or particle is detected and rejected as collected cullet freely falls inside the machine. It can assure to prevent a trouble.



## 6. Solenoid valve analyzer

It uses solenoid valves which is possible to manufacture a sophisticated "CELVESS" and do maintenance easily.

## 7. Machine body color can be changed according to customer's request.



# / Color sorting mechanism /

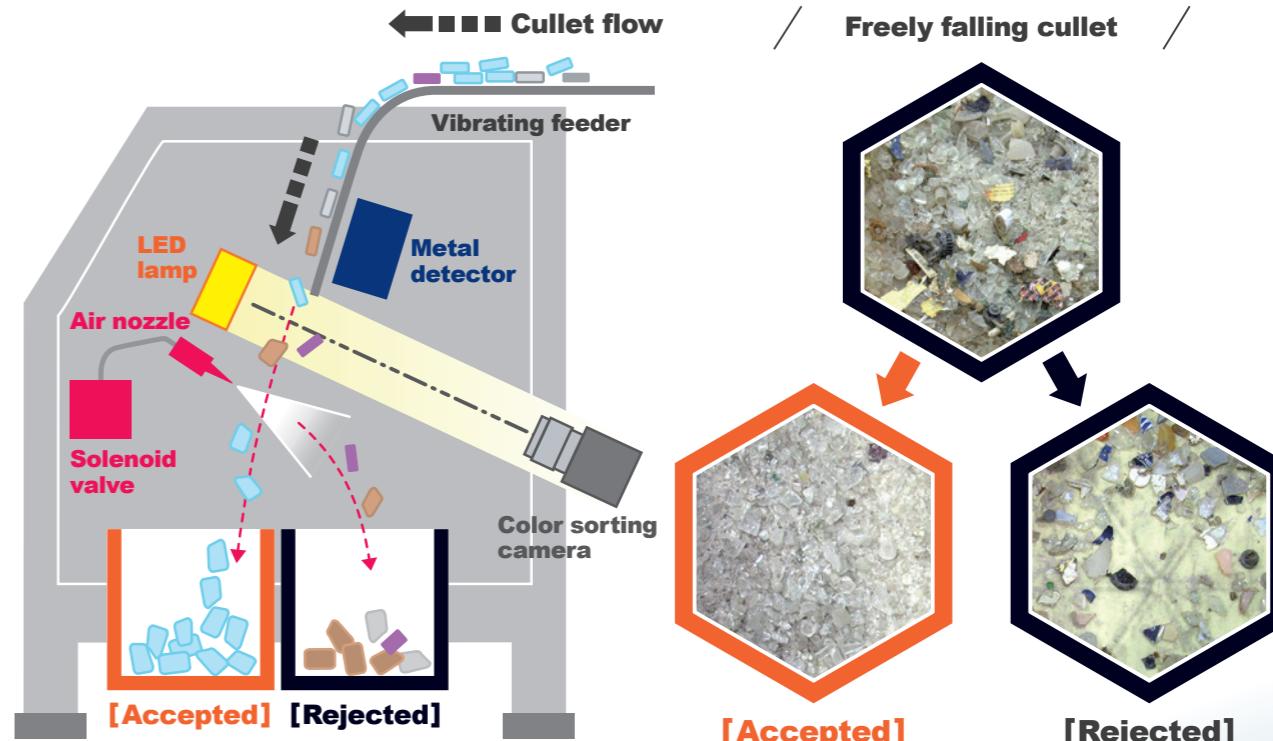
"CELVSS" is a cullet foreign particle rejecter solely developed by Toyo Glass. It consists of 2 functions, metal detection by a metal detector and color sorting by a color sorting camera.

Cullet charged into CELVSS from a vibrating feeder passes through the metal detector and then the color sorting camera. Detected foreign particles are rejected by blow-off air.

### CELVSS standard type

#### Foreign particle removal from single-color cullet

Undesired colored glass and foreign particles (metals and ceramics) are rejected from single color cullet.



# / Equipment configuration / (unit:mm)

