

## CRT SCREEN DISASSEMBLING LINE

The machine separates television screens and PC monitors into the screen and cone parts using a dry cutting method with a diamond-tipped blade. The technology can obtain in particular iron and copper products, screen (Ba-Sr) and cone glass (Pb after cleaning), and luminophore.



|   | <u>RO - 21 M</u>   |
|---|--|
| <b>Diagonal size of screen</b>  | 14" – 32"  |
| <b>Capacity –<br/>number of screens<br/>processed<br/>(all process)</b> | <p style="text-align: center;"><b><u>with digester:</u></b></p> <p>25 pc·h<sup>-1</sup> (200 pc/shift)</p> <p style="text-align: center;"><b><u>without digester:</u></b></p> <p>15 pc·h<sup>-1</sup> (120 pc/shift)</p> |
| <b>Screen cutting time</b>  | 100 s  |
| <b>Screen attachment</b>  | vacuum system -<br>suction Ø 200 mm  |
| <b>Compressed air – for the<br/>screen attachment vacuum<br/>system</b> | 0,6 MPa, dry, oil-free,<br>filtered  |
| <b>Cutting tool</b>   | diamond, Ø 230 mm,<br>6 800 min <sup>-1</sup>  |
| <b>Supply voltage</b>   | 3x400/230V,N+PE,<br>50 Hz/TN-S   |
| <b>Electricity input</b>  | 9 kVA  |
| <b>Dimensions [mm]</b>  | 2100x1470x2300   |
| <b>Weight [kg]</b>  | 800  |
| <b>Worker's noise exposure<br/>(8-hour shift)</b>                       | 78,6 dB(A)   |
| <b>Working environment</b>  | internal, normal, dusty  |

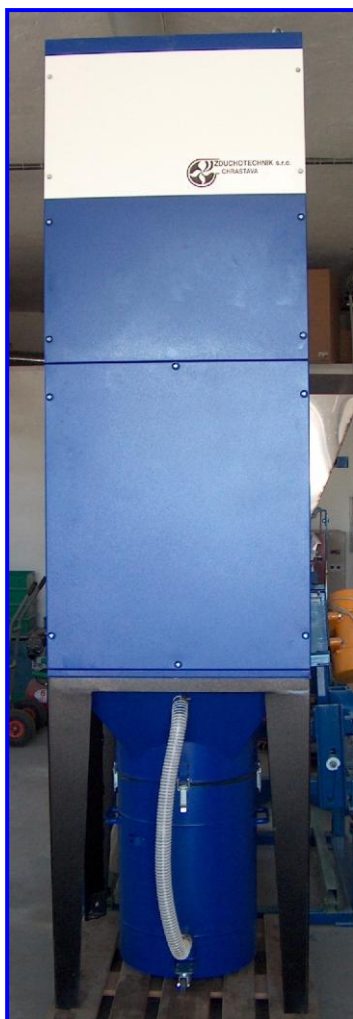
### Brief overview of screen cutting method

Brief overview of screen cutting method the screen is placed on its front side onto the vacuum bed and fastened with an adjustable casing, the vacuum is then activated. The anti-implosive metal frame is removed with an angle grinding machine. The required cutting plane is extended by a swing mechanism. The screen is split (screen and conus part) using a diamond cutting disc placed on the swiveling arm. The casing is released and conus part is removed and placed in a designated container. The metal mask from the screen is removed (only for colored screens). The luminophore from the screen is simply removed using a special vacuum exhauster – **advantage of dry cutting method.** The scalded Al frame is removed by a grinding machine with a special brush. The metal fixtures are removed (only for colored screens). The screen is placed in a designated container.

AQUATEST a.s. can further treat the exhausted luminophore, which is regarded as hazardous waste.

The screen part of the TV or monitor is one of the outputs of the screen disassembling line and is a full-value product, which can be directly used in glassworks without the need of further processing.

It is necessary to remove the active layers from the glass of the cones prior to recycling in the glassworks. AQUATEST a.s has developed a mechanical dry rasping technology for cleaning the glass of cones. By using this technology it is possible to remove the active (graphite and ferro-oxide-graphite) layers from the glass and obtain a full-value product that can be further used in glassworks.



The working area of the machine is equipped with dual-layered sound insulation (inner and outer).

The screen disassembly machine is certificated by the Brno Institute for Mechanical Testing.

Part of the line is an industrial exhauster for exhausting of the working space. Filtration chamber is equipped by two patron filters. Emission air from the exhauster can be released back into the working environment

By the using of a separate exhaust digester is the capacity of the machine increased about 60 %. Preparation and finishing operations can be performed in the digester (removal of anti-implosive frame, mask, luminophore, Al micro-layer, other residual material). Only the cutting process is performed within the disassembling machine.

**The equipment is patented.**

## CERTIFICATE

**screen disassembly machine**

pursuant to Directive 98/37/ES

Issued by the Brno Institute for  
Mechanical Testing



### **AQUATESTa.s.**

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