

Components & Parts

Experience matters

1991 Founded as RETEK Goslar Recycling GmbH as spin-off from German ore mining company **PREUSSAG** AG – Germany, first solutions for recycling of WEEE development of delamination systems for compound materials to recover and separate metals

2007 Take over by E-Waste Solutions Inc. Canada, driven by Alfred Hambsch former owner and president of **GEEP** – Canada (Global Electric and Electronic Processing Inc., Barrie, Ontario, Canada)

2008 Renaming to RETEK Engineering GmbH, adaptation of technology to compound materials like e.g. mixed metal scrap.

2013 Renaming to UMS – Urban Mining Solutions GmbH

2014 Founding of Mesatex as production center on loan basis and as UMS development and testing center



Since machines were not available on the market or did not meet the requirements, UMS developed and continues to develop its own components and solutions to increase the efficiency of material processing and separation.

UMS extended this even to operational parts based on its own processing and operational know-how experienced during running Mesatex production center.

Air Jig (ARJ)



Air Jig (ARJ)

The air jig is an universal and highly flexible machine to separate materials of different density and/or particle shape.

The material to be separated is fed onto an inclined screen that is vibrating in an eccentric manner resulting in a movement upwards. In parallel, a ventilator directs an air stream from the bottom through the material forcing a movement downwards.

To separate “heavy” from “light” materials the ratio between the eccentric vibration and the speed of the ventilator is essential. Setting the ratio correctly, “heavy” pieces are separated very sharp from “light” ones. This principle enables a successful separation and concentration of mixed ARJ fractions leading to high added value.



The separation works highly effective applied to:

- Metal and plastic mixtures
e.g. aluminum and plastic
- Aluminum and copper fractions

Successful density separation depends on the material being dry and completely delaminated (no material composites). In addition it depends also very much on the quality of the screen cut.

Due to its own processing and operational know-how UMS possesses numerous proven pre-sets to be used in new installations enabling a quick adaptation and steep learning curve.

The air jig can be used to separate particle sizes from approx. 500 microns to 50 mm. The screening inserts to adapt the ARJ to the different particle sizes are easily exchangeable. The set points of the eccentric vibration and the speed of the ventilator are continuously adjustable via frequency converters and the control system.

Technical data

Model	Working width (mm)	Working length (mm)	Power of eccentric drive (kW) at 400 V	Power of ventilator drive (kW) at 400 V	Exhaust air (m³/h)
ARJ 600/1000	575	1,000	0.37	5,5	5,000
ARJ 1200/1200	1,150	1,200	0.75	11	10,000

We offer the ARJ as single machine without or with the necessary control system and / or feeding system. Extension of or integration into your operating system is also possible.

How to Proceed

If you request an offer or want to purchase an Air Jig (ARJ) directly, please contact our department for component and parts as follows

phone: +49 (0) 21 91 / 422 22 64

email: parts@urbamine.de