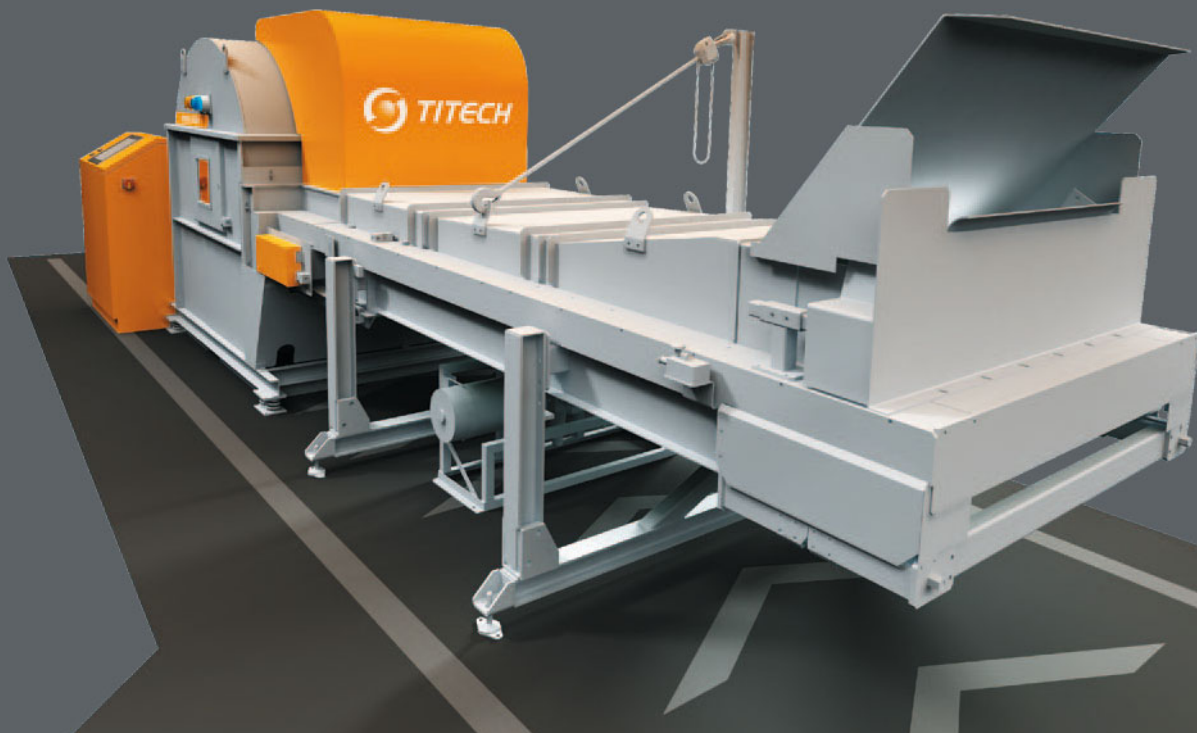


NEW XRF
TECHNOLOGY

TITECH x-tract

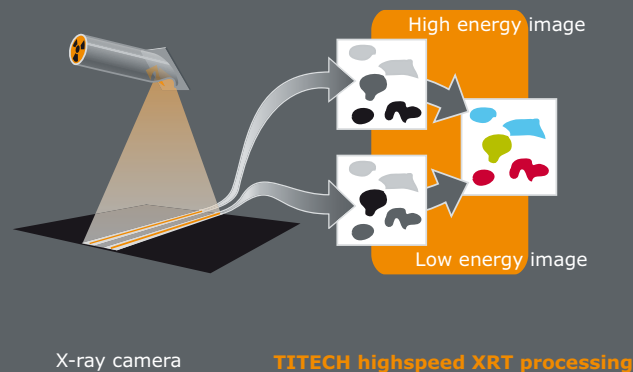
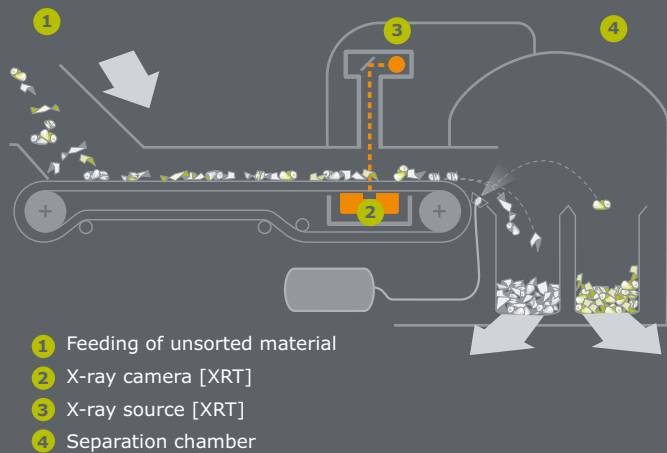
WITH **DUOLINE**[®] AND **SUPPIXX**[®] TECHNOLOGY



PRODUCT DETAILS

english

A global leader in sensor-based sorting



TITECH x-tract

Cutting-edge X-ray sensors empower the TITECH x-tract for special sorting tasks. [XRT]: Measures the atomic density irrespective of surfaces, e.g. in mixed municipal solid waste sorting. [XRF]: Analyzes the elemental composition of metals, e.g. in copper sorting from ferrous line.

TECHNOLOGY XRT

TITECH x-tract uses an electric X-ray source which creates a broad-band radiation. This radiation penetrates the segregation material and hits an X-ray camera with DUOLINE® sensor using two independent sensor lines with different spectral sensitivity. The data supplied by this camera is classified using TITECH high speed X-ray processing. So the atomic density of the materials can be identified – regardless of the material thickness.

TECHNOLOGY XRF

X-ray fluorescence allows for the first time the detection of existing elements in particles. The material will be excited by low-energy X-ray radiation and element specific fluorescence will be released. With an energy dispersive X-ray sensor this fluorescence can be measured. The data will be processed and information about presence of elements and their concentration are the result. These informations combined with additional data from an EM sensor using SUPPIX® identify the position and size of the object – and a set of valves eject it precisely.

BENEFITS

- Extremely fast payoff
- Highest selectivity
- Identification irrespective of the surface*
- Very robust and proven design
- Highest safety standard
- Good adaptability to customer requirements
- Emergency service hotline

*just relevant for [XRT]

EXAMPLE // MEATBALL SORTING FROM FERROUS LINE

About 40% of the steel production worldwide is made from recycled ferrous scrap. But only steel scrap that meets the required specifications (e.g. type E40 with less than 0.20% copper content) may enter the steel production process as secondary resource. Used cars are for example full of free copper contents such as copper coils or electro motors, so-called meatballs or anchors. TITECH's x-tract system [XRF] uses an X-ray fluorescence sensors to detect copper and other impurities by their atomic characteristics and ejects them from ferrous metals. This secures a high purity in connection with minimal material loss. In addition the expensive and risky manual sorting can be reduced to a minimum.



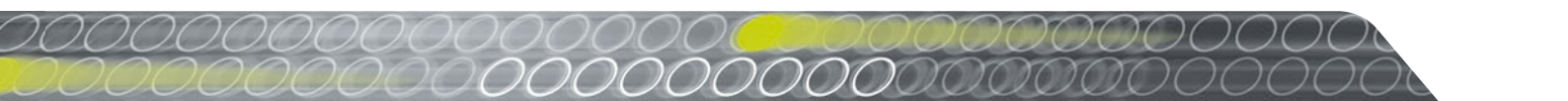
TITECH offers a variety of configurations for different sorting tasks and conditions. You are welcome to check your individual material in our test facility. E-mail: info@titech.com

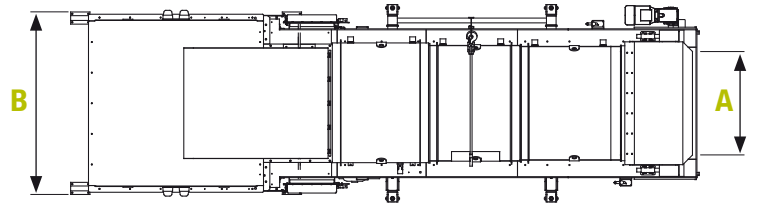
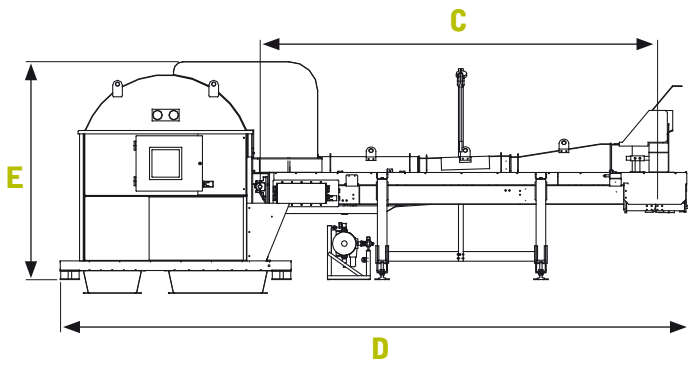
SENSOR CONFIGURATIONS

- A** // Economy model for separation of materials of lower thickness and lower atomic density, 90 KeV X-ray energy – **XRT basic**
- B** // Flexible and high efficiency model for separation of materials of greater thickness and higher atomic density, 160 KeV X-ray energy and 500 W power – **XRT standard**
- C** // More powerful X-ray source for highest penetration of materials. This improves the range of thickness and the separation quality for special applications. 160 KeV X-ray energy and 1000 W power – **XRT extended**
- D** // Energy dispersive X-ray sensor combined with an EM sensor using SUPPIX® to separate material by their elemental composition – **XRF**

MODELS

STANDARD APPLICATION PACKAGES		A	B	C	D
ALUMINIUM cleaning	Producing a more valuable clean aluminium fraction by sorting out heavy metals like copper, brass, zinc, lead, ...		●	●	
CRT sorting	Producing clean mono fractions of panel glass (lead free) and funnel glass (high lead content)		●	●	
RDF production	Producing refused derived fuel by sorting out PVC, glass, stones, metals	●	●	●	
ORGANIC sorting	Producing a clean organic fraction and a clean non-organic fraction for landfill	●	●	●	
PVC removal	Removing flame retardants like chlorine and bromine out of a mixed plastic stream	●	●	●	
MEATBALL SORTING FROM FERROUS LINE	Copper recovery from ferrous metals – Producing a clean steel fraction				●
METAL	Additional removal or suppress of metals	Option: electromagnetic (EM) sensor			
SPECIAL APPLICATION	On request	●	●	●	●





Installation example of TITECH x-tract standard or extended [XRT]

	XRT 600	XRT 1200	XRF 1200	XRF 1800	XRF 2400
A //	600 mm	1,200 mm	1,080 mm	1,680 mm	2,280 mm
B //	1,300 mm	1,900 mm	2,060 mm	2,660 mm	3,260 mm
C //	4,162 mm	4,162 mm	4,000 mm	4,000 mm	4,000 mm
D //	6,535 mm	6,535 mm	6,560 mm	6,560 mm	6,560 mm
E //	2,264 mm	2,264 mm	2,100 mm	2,100 mm	2,100 mm

exact dimensions on request

TITECH x-tract

Valve block model, nozzle distance	XRT x-tract* 600	XRT x-tract 1200	XRF x-tract 1200	XRF x-tract 1800	XRF x-tract 2400
Economic, 12.5 mm Power, 6.25 mm Speed, 6.25 mm	24 valves 48 valves 96 valves	48 valves 96 valves 192 valves	– 192 valves –	– 288 valves –	– 384 valves –
Weight Power Consumption	4800 kg 9.1 kW	5800 kg 9.1 kW	4700 kg 17 kW	7000 kg 17 kW	9200 kg 17 kW

OPTIONS

EM sensor

Uses conductivity information for metal recognition (for [XRF] already included)

Wear and tear package

Heavy duty version for higher robustness and a longer life

Remote Access

Safe network connection for easy and fast service reaction

PRODUCT RANGE

TITECH autosort
Mixed packaging waste, RDF, Sorting paper, PET/PE recycling

TITECH finder
Metal recovery and metal contaminant removal

TITECH combisense
E-scrap recycling, nonferrous metal processing, cable recycling

TITECH x-tract
Automobile recycling, CRT glass, industrial/domestic waste, RDF production, meatball sorting

*not available in configuration A // XRT basic

Innovation in Global Recycling

WWW.TITECH.COM

ISO 9001 certified.

We print on 100% recycled paper. TITECH's innovations are helping to produce it.

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