



ONE FUTURE

ONE RECYCLING SOLUTION

PRODUCT & APPLICATION CATALOGUE

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TRUSTED TECHNOLOGY AND PARTNERSHIP FOR BETTER BUSINESS AND ENVIRONMENT

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TOMRA VALUES



INNOVATION



PASSION



RESPONSIBILITY

EDITORIAL

Everything is input to everything else.*

As one of the first descriptions of the Circular Economy, the quote above still rings true today. The Circular Economy is in more focus than ever before – regions around the world are heightening sustainability targets and driving impactful recycling standards. Together with TOMRA, they build a brighter future for generations to come.

Alarming amounts of plastics in our oceans and other environmental concerns significantly heightened consumer awareness and propelled a global shift to make the most of resources. The numerous benefits of tighter regulations, such as National Sword and European Union initiatives, have set a worldwide trend to preserve valuable secondary resources. As opposed to DOWNcycling, the Circular Economy requires REcycling of every material in our waste streams.

With over 20 years of supplying industry-benchmarking sensor-based sorting technology, and process knowledge we are located worldwide, sorting a multitude of waste streams including packaging, MSW, E-waste, compost, and post-shredder, to name a few. As part of the TOMRA Group, our customers benefit from an expansive range of sensors enabling success far beyond regulatory standards as well as application expansion opportunities.

Rest assured: it's not only about the technology. As a pioneer in the industry, we recognize our responsibility to educate, influence and shape the market. By working with an all-encompassing group of stakeholders, we aim to optimize the entire value chain of resources. At TOMRA, we always aim for sustainable progress.

Join us in Leading the Resource Revolution.
Welcome to Planet TOMRA.



*Tom Eng, Senior VP
Head of TOMRA Sorting Solutions Recycling*

THE TOMRA ORGANIZATION



3.950 employees



Member of UN Global – Compact since 2009, focused on implementing ethical policies worldwide



over 115 years combined technology

PIONEER IN SENSOR-BASED SORTING



Partnership with leading R&D institutions (SINTEF, CTR, Fraunhofer ILT, Universities like RWTH and Brussels)



13.800 units installed worldwide



8% of revenue reinvested in R&D



The use of sensor-based sorting technology was new to us. It gives additional benefits when compared to conventional sorting methods, and the installation of these devices has allowed the purchasing and processing of a higher amount of a specific grade of scrap. We're delighted with the results achieved to date at our nowa sól plant.

*Andrzej Slupski
Alumetal's Business Development Manager*

WHY SENSOR-BASED SORTING?



INCREASE REVENUES

- High purity
- Optimal recovery rate
- Consistent quality of output streams
- New and innovative business fields



REDUCE COSTS

- Greatly reduced labor requirements
- Low operational and service costs
- Low space requirement
- Easily adaptable



IMPROVE ENVIRONMENT

- Much fewer landfills
- More efficient use of primary resources
- Less pollution

GLOBAL SALES PRESENCE

An extensive direct sales network supplemented with agents and distributors worldwide.



WORLDWIDE TEST CENTERS



Germany



China



South Korea

TOMRA TEST CENTERS: CUSTOMIZED ANALYSIS

Recycling Test and Demonstration Centers



Personalized support through experienced application engineers



610 Tests with waste and metal focus



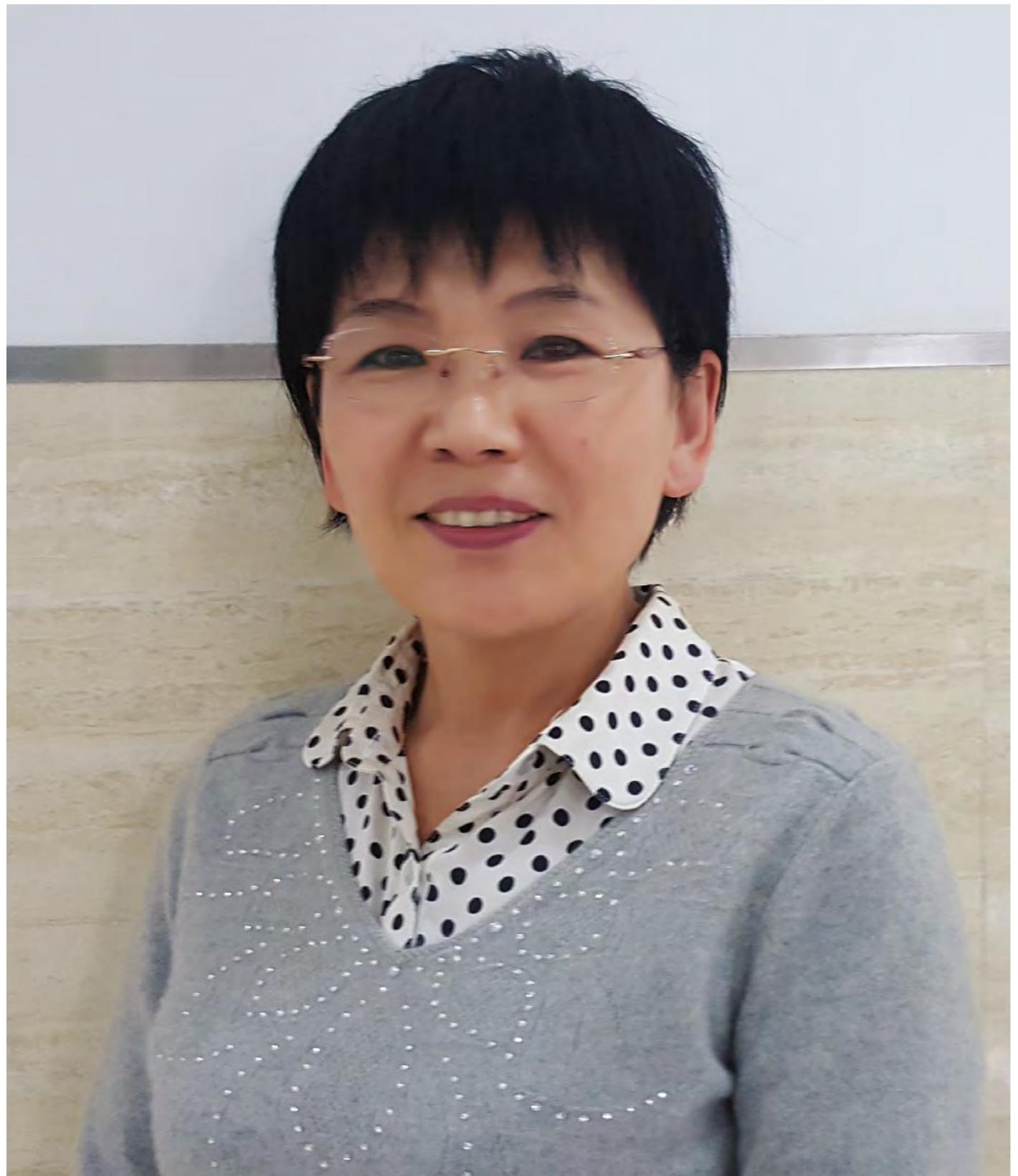
Testing of customers' own material



Customized Test Report



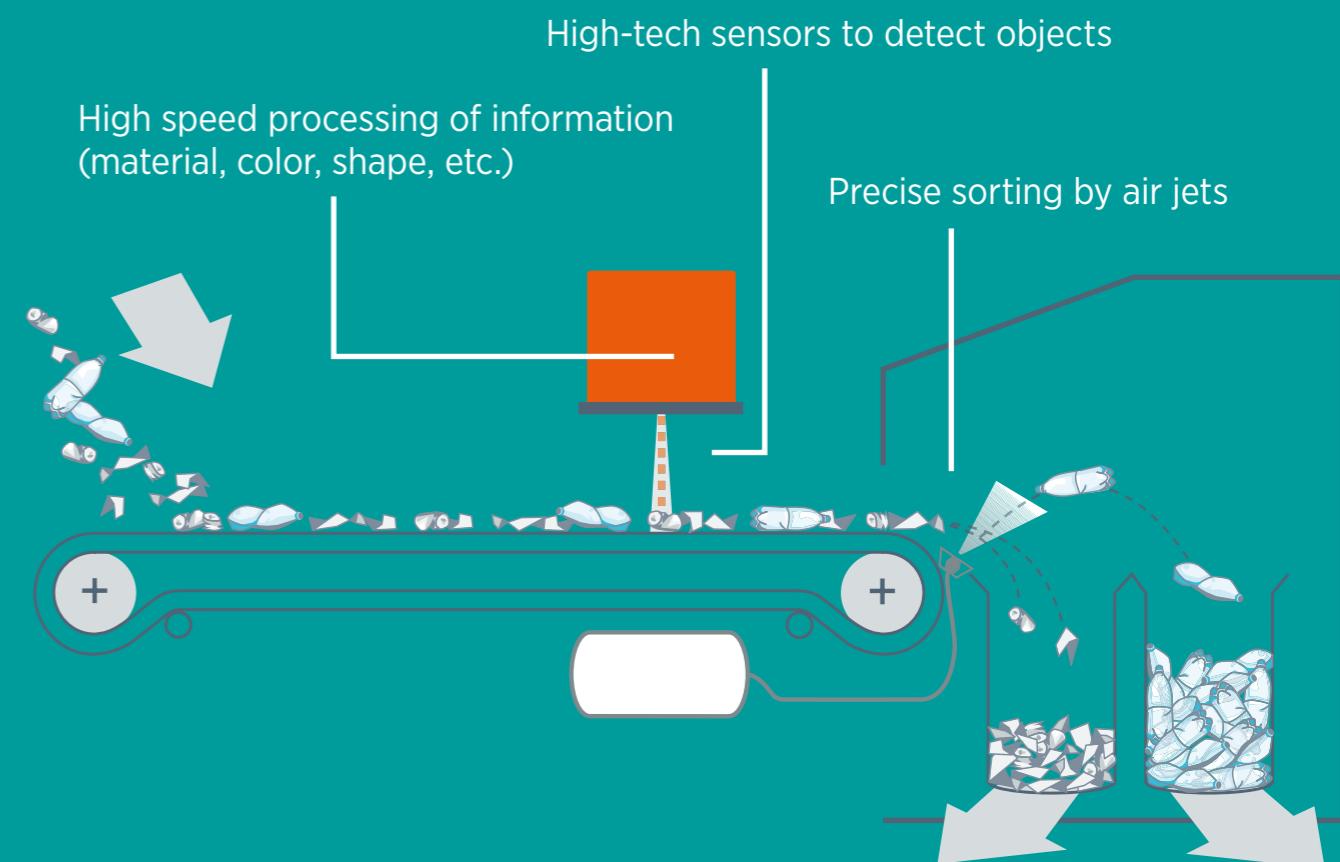
Individualized process design



Both myself and my colleagues here at Xiamen Alee are immensely pleased and proud to have this opportunity of playing a central role in an operation that will have immense environmental benefits and directly support China's drive for sustainable development. TOMRA's automated sorting equipment is among the most advanced of its kind in the world and we are absolutely committed to working with both TOMRA and our Xiamen customers to make waste sorting and recycling work in Xiamen. In the process, our goal is to recover valuable material resources, add value, promote sustainability and protect Xiamen's famous natural environment. We are confident that the Xiamen plant is an example from which other cities in China can learn.

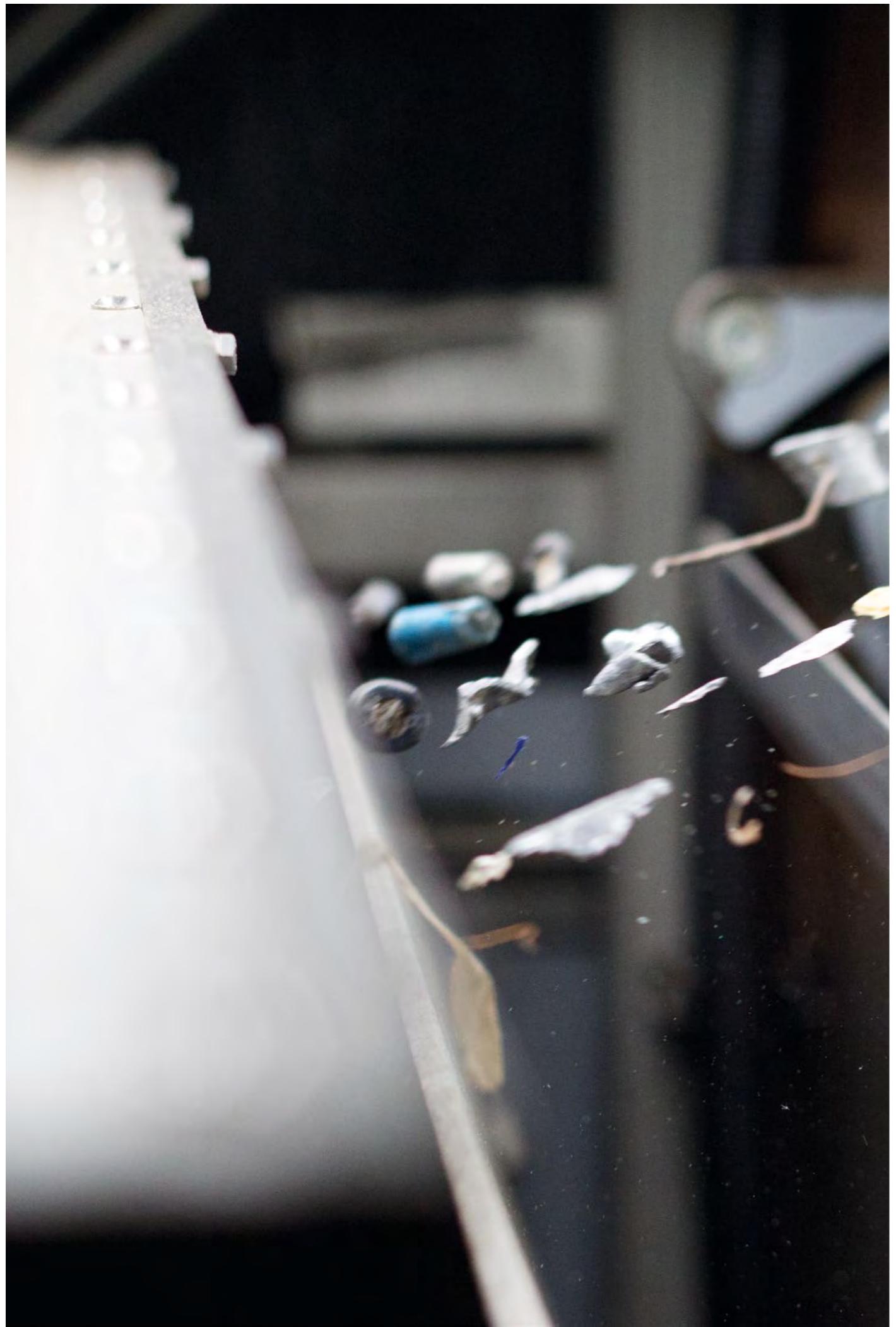
Xiu Fang Guo
Technical Manager, Xiamen Alee MSW Plant

CORE TECHNOLOGY



To see a machine in action
<https://tomra.23video.com/>





PRODUCT & APPLICATION PORTFOLIO

AUTOSORT

FLYING BEAM®: CONTINUOUS SIGNAL CORRECTION,
INTEGRATED LIGHT SOURCE, ENHANCED LIGHT DISTRIBUTION
FLEXIBLE SENSOR CONFIGURATION (NIR/VIS/EM)
OPTIMIZED SENSOR SYSTEM



TOMRA Sorting's multifunctional AUTOSORT continues to set the industry standard since its introduction in **1996**. With a foundation based on NIR technology, the recent upgrade of the **user-friendly touchscreen** (ACT), means that customers can easily select various sorting programs to suit their individual needs. Coupled with **self-diagnostic features**, state-of-the-art technology enables material to be **separately filtered by various parameters**, ensuring effective sorting and maximal yield – over an exceptionally broad range of applications.

	1000	1400	2000	2800
TOTAL WIDTH	1,800 mm	2,200 mm	2,800 mm	3,600 mm
LENGTH BELT	5,000 mm	5,000 mm	5,000 mm	5,000 mm
LENGTH	7,400 mm	7,400 mm	7,400 mm	7,400 mm
WEIGHT*	190 kg	215 kg	270 kg	300 kg
POWER CONSUMPTION**	1.5 kW	1.6 kW	1.7 kW	1.9 kW

Valves	Nozzle Pitches		
TS200	37.5 mm	25 mm	12.5 mm
TS400	37.5 mm	25 mm	12.5 mm

* The data is indicative and application-dependent. Exact data upon request.
** only AUTOSORT components



MAIN APPLICATIONS

Packaging

thermoplastics, beverage cartons, paper, board, glass

Municipal Solid Waste

thermoplastics, mixed paper, cardboard, metals

Thermoplastics

PET, PP, PVC, PS, LDPE, LLDPE, HDPE, trays, bottles, homo vs. co-polymer, injection or blow molding qualities

Paper

cardboard, deinking, mixed paper

Commercial & Industrial Waste

thermoplastics, paper, cardboard

Bulky Waste

wood, paper, board, thermoplastics

Wood

wood, wood chips, wood from ASR

Electronic Scrap - WEEE

PCB, wire, WEEE thermoplastics

AUTOSORT FLAKE

SIMULTANEOUS MATERIAL, METAL AND COLOR DETECTION
FLYING BEAM®: CONTINUOUS SIGNAL CORRECTION,
INTEGRATED LIGHT SOURCE, ENHANCED LIGHT DISTRIBUTION
HIGHEST AVAILABLE SENSOR RESOLUTION
OPTIMIZED SENSOR SYSTEM



Continuing its pioneering tradition, TOMRA Sorting's AUTOSORT FLAKE is the first to successfully **combine detection of color, enhanced material information and metal objects – simultaneously**. The result is remarkably high purity and high yield with only **one machine**. This exceptionally effective system optimizes flake sorting applications – **regardless of grain size and minimal downtime**.

	1200
WIDTH	1,900 mm
HEIGHT	2,000 mm
LENGTH	2,300 mm
WEIGHT*	1,850 kg
POWER CONSUMPTION*	10 kW

Valves	Nozzle Pitches
TS100B	4 mm

* The data is indicative and application-dependent.
Exact data upon request.



MAIN APPLICATIONS

PET Flakes
purifying PET flakes

PO Flakes
purifying PE/PP flakes

PVC Window Frames
purifying PVC

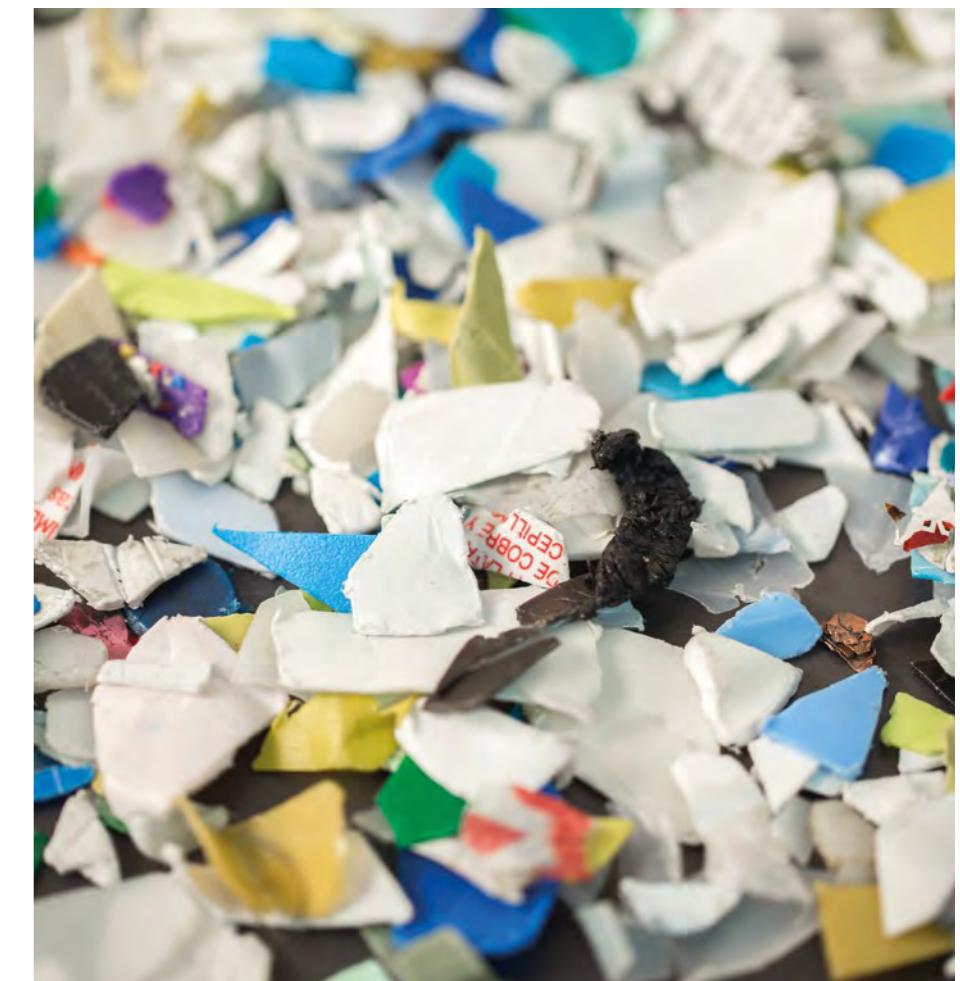
AUTOSORT FINES

HIGH-SPEED VALVES

WIDER MECHANICAL SETUP

FLYING BEAM®: CONTINUOUS SIGNAL CORRECTION,
INTEGRATED LIGHT SOURCE, ENHANCED LIGHT DISTRIBUTION

OPTIMIZED SENSOR SYSTEM



Building on the proven tradition of the AUTOSORT, the AUTOSORT FINES is built to sort **small fractions across multiple applications**. A wider mechanical setup allows for **high throughput with one machine** – thus a low initial investment. Coupled with TOMRA's patented **FLYING BEAM® technology**, high speed valves strongly enhances purity levels with stable and optimized sorting performance, while benefitting from low downtimes. **All of this means greater saleable yield – and a quick ROI.**

	1200	1800	2400
TOTAL WIDTH	2,000 mm	2,600 mm	3,200 mm
LENGTH BELT	4,000 mm	4,000 mm	4,000 mm
LENGTH	6,420 mm	6,420 mm	6,420 mm
WEIGHT*	3,990 kg	4,815 kg	6,370 kg
POWER CONSUMPTION*	4.3 kW	6.1 kW	7.5 kW

Valves	Nozzle Pitches
TS200	6.25 mm
TS400	6.25 mm

* The data is indicative and application-dependent.
Exact data upon request.

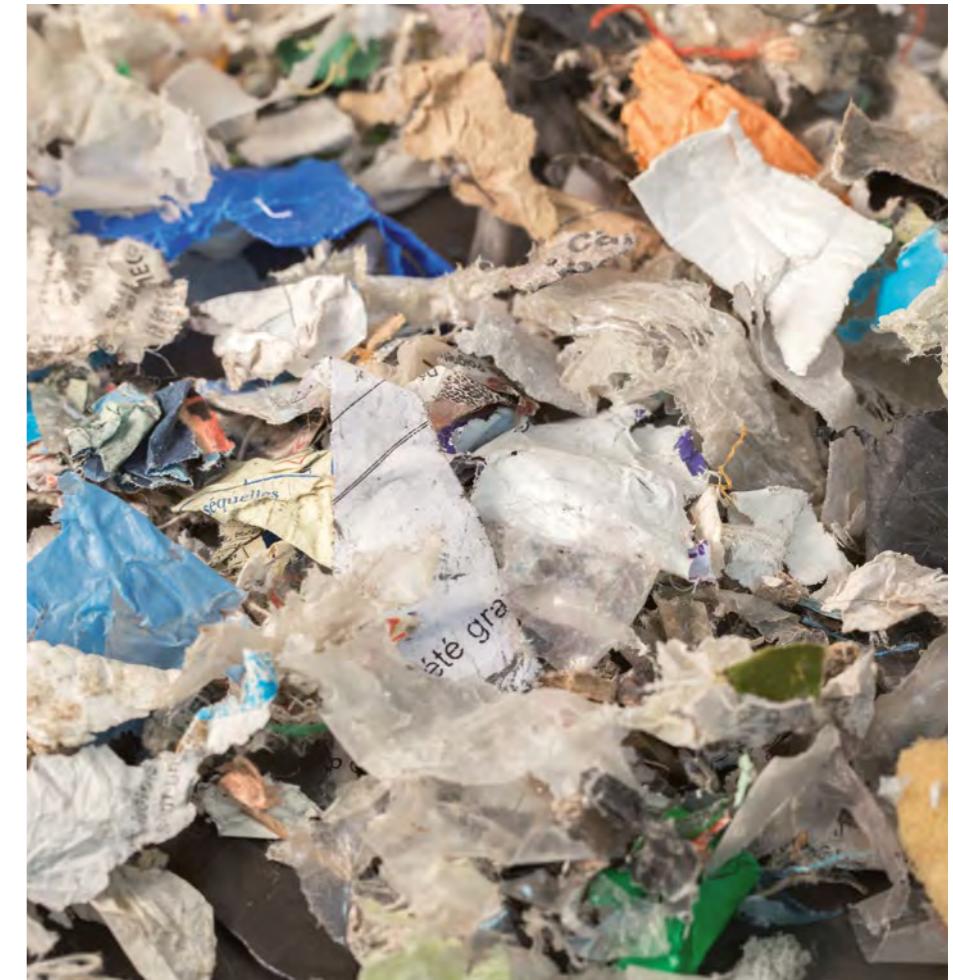
MAIN APPLICATIONS

Electronic Scrap - WEEE

PS, ABS, PC ABS, PPO, PPE, PC, PBT, PMMA, PP, PE

AUTOSORT RDF

FLYING BEAM®: CONTINUOUS SIGNAL CORRECTION, INTEGRATED LIGHT SOURCE
LARGEST INSTALLED BASE IN RECYCLING



TOMRA Sorting technology has long been utilized in many plants across Europe to produce a refused derived fuel material from different waste streams according to the specific needs of the end users. Quality assurance of refused derived fuel (RDF) by random sample analysis is challenging, due to small sample sizes and differing laboratory results. **Online analysis**, coupled with TOMRA's AUTOSORT, results in **accurate and timely measurements** of critical value (calorific value, chlorine, water content) during operational uptime. Permanent monitoring in real time can be easily integrated into existing processes and allows for optimum process control and ensures **uniform quality**.

	600	1000	1400
WIDTH	1,400 mm	1,800 mm	2,200 mm
LENGTH BELT	5,000 mm	5,000 mm	5,000 mm
WEIGHT*	135 kg	170 kg	200 kg
POWER CONSUMPTION**	1.3 kW	1.5 kW	1.6 kW

* The data is indicative and application-dependent. Exact data upon request.
** only AUTOSORT components

MAIN APPLICATIONS

Online Analysis

RDF (analyzing calorific value, chlorine and water content)

AUTOSORT LASER

INDEPENDENT BACKGROUND SYSTEM

SIMULTANEOUS SINGLE-POINT DETECTION

GLASS VS. TRANSPARENT POLYMER RECOGNITION

FULLY FLEXIBLE SENSOR CONFIGURATION

UNIQUE MECHANICAL DESIGN BUILT FOR HIGHEST SAFETY STANDARDS



As a sensor-based sorting machine based on laser, electromagnetic and near-infrared technology, the pioneering AUTOSORT LASER allows the separation of glass, ceramics, stones, porcelain (CSP) metals and plastics from household- and commercial waste as well as residual material from cullet glass sorting plants. Coupled with an **independent background system**,

simultaneous single-point detection results in exceptional and consistent sorting results with greatly reduced downtime. Even thick and opaque glass can easily be identified and sorted with TOMRA's AUTOSORT LASER technology. Selection of varied sorting programs can be done through TOMRA's user-friendly touchscreen (ACT). This means the customer benefits from reliable and stable results across a range of applications.

	1200	1800
WIDTH	2,400 mm	3,200 mm
LENGTH	2,300 mm	2,300 mm
HEIGHT	2,145 mm	2,145 mm
WEIGHT*	2,810 kg	3,272 kg

Valves	Nozzle Pitches
TS400	6.25 mm

* The data is indicative and application-dependent.
Exact data upon request.

MAIN APPLICATIONS

Glass from Municipal Solid Waste

mixed glass

AUTOSORT BLACK

LARGE BLACK OBJECT SORTING
NO SENSOR MAINTENANCE
INDEPENDENT BACKGROUND SYSTEM
OPTIMIZED SENSOR SYSTEM
HIGH PERFORMANCE DETECTION

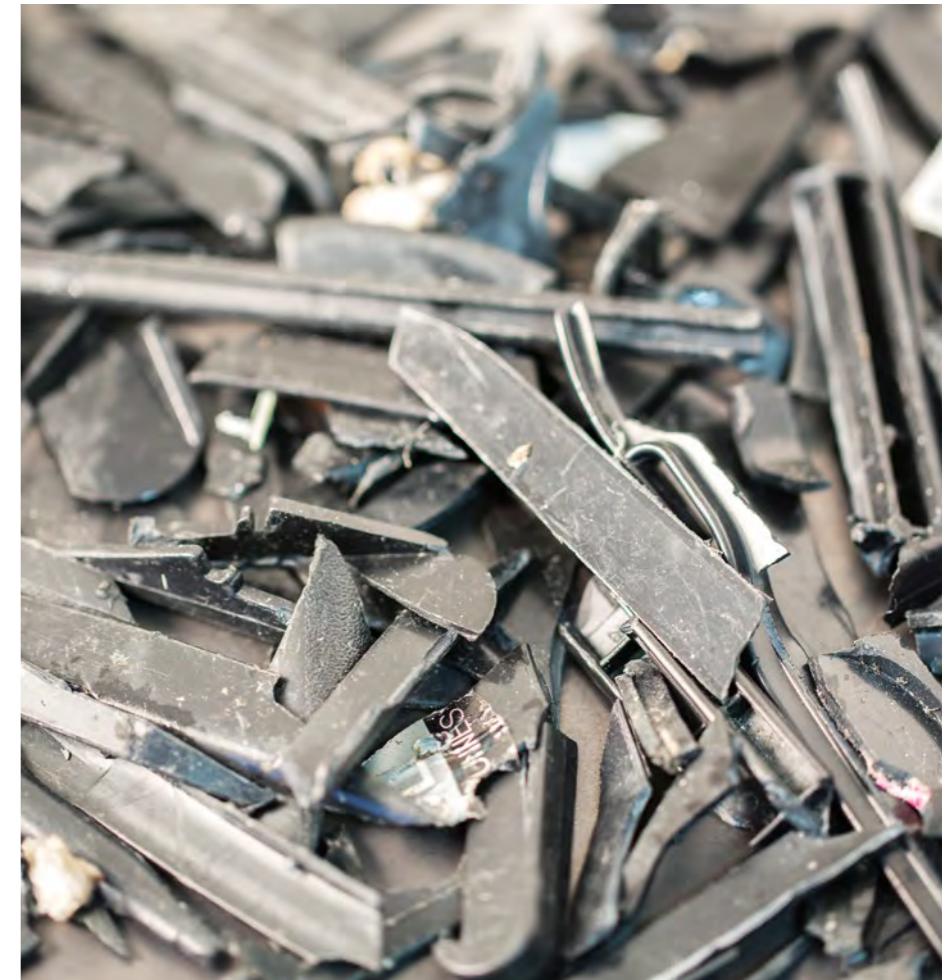


The newest addition to TOMRA's field-proven AUTOSORT family, the AUTOSORT *BLACK* is the first machine of its kind to allow the **sorting of large plastic objects without pre-shredding** of the material thanks to its mechanical construction. As with all TOMRA Recycling equipment, this machine also benefits from in-house sensor development allowing customers **application specific flexibility**, low operational costs and **no sensor maintenance**. An independent background system means that maintenance required through dirt and grime is non-existent and **downtimes are minimized**. Customers can count on AUTOSORT *BLACK*'s high throughput and high resolution to deliver a **quick ROI** for their sorting needs.

	1200	1800
WIDTH	2,400 mm	3,200 mm
LENGTH	2,300 mm	2,300 mm
HEIGHT	2,145 mm	2,145 mm
WEIGHT*	2,810 kg	3,272 kg

Valves	Nozzle Pitches
TS400	6.25 mm

* The data is indicative and application-dependent.
Exact data upon request.



MAIN APPLICATIONS

Electronic Scrap - WEEE
PS, ABS, PC ABS, PPO, PPE, PC,
PBT, PMMA, PP, PE

FINDER

SUPPIXX® TECHNOLOGY
Z-TECT TECHNOLOGY
IOR TECHNOLOGY

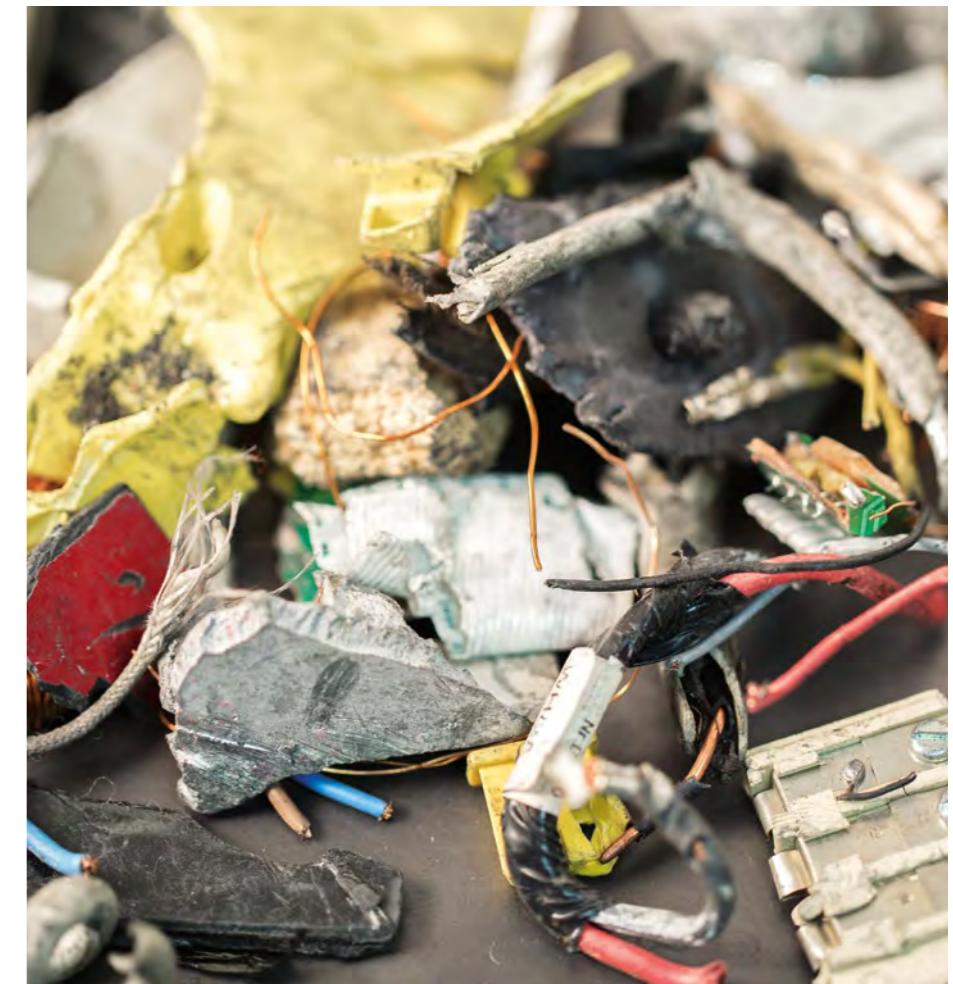
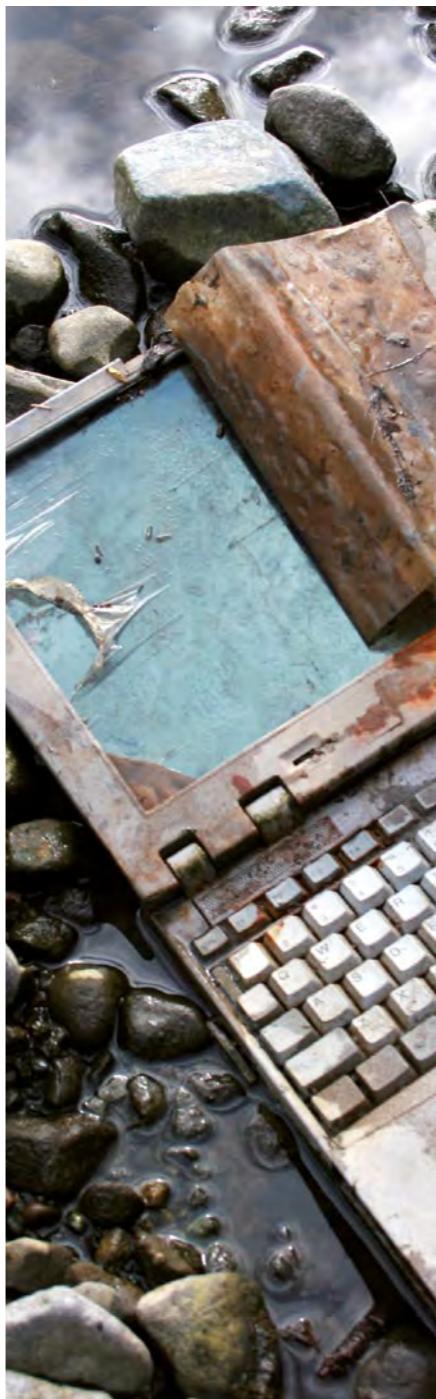


With over 600 installations worldwide, TOMRA Sorting's FINDER dominates the metals market when it comes to effectively separating high purity metal fractions. Through its SUPPIXX® technology, the FINDER is best able to target metal objects, leading to **exceptionally high yield and purity** of metal material. Patented Z-TECT technology uses **artificial intelligence** to detect and ignore disturbing noise, resulting in stable purity and yield. **Modular flexibility** and **Intelligent Object Recognition** (IOR) means that the FINDER is adaptable across multiple mixed waste and metal applications and results in maximum metal recovery – regardless of the complexity of the fraction.

	1200	1800	2400	3000
WIDTH	2,000 mm	2,600 mm	3,200 mm	3,800 mm
WIDTH BELT	1,200 mm	1,800 mm	2,400 mm	3,000 mm
LENGTH BELT	4,000 mm	4,000 mm	4,000 mm	4,000 mm
LENGTH	6,420 mm	6,420 mm	6,420 mm	6,420 mm
HEIGHT	2,120 mm	2,120 mm	2,120 mm	2,120 mm
WEIGHT*	3,800 kg	4,600 kg	6,100 kg	6,900 kg
POWER CONSUMPTION*	5 kW	5.5 kW	7.5 kW	10 kW

Valves	Nozzle Pitches
TS200	6.25 (1:1)
TS400	6.25 (1:1)
TS1500	6.25 (1:2)

* The data is indicative and application-dependent. Exact data upon request.



MAIN APPLICATIONS

ASR

metal recovery

Electronic Scrap - WEEE

PCB, wire, aluminum

Wire Recovery

cable & wire material

Wood

wood chips

Ash Recycling

recovery of ferrous- & non-ferrous metals

COMBISENSE

FLUID COOL®
DUAL PROCESSING TECHNOLOGY
AUTO-ADJUSTABLE EJECTION MODULE

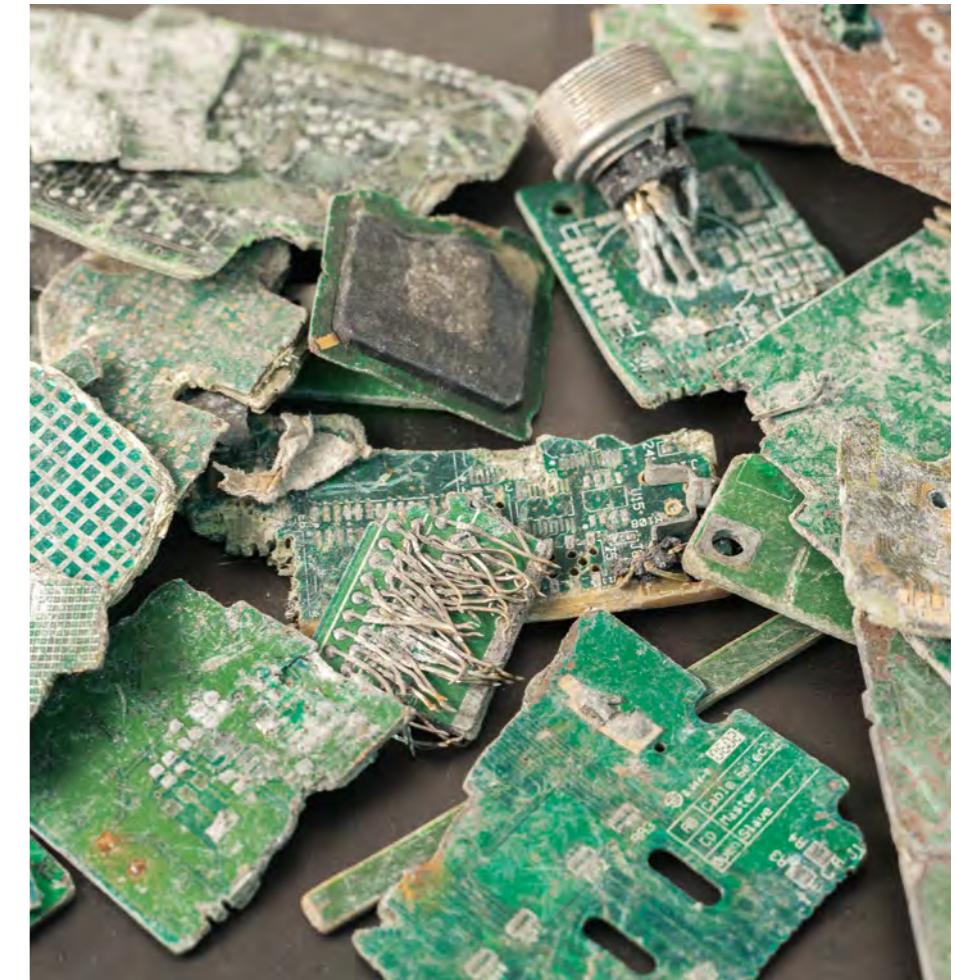


Leading the market once again, TOMRA Sorting's highly flexible COMBISENSE specializes in effectively separating high purity metal fractions in a multi-parameter material mix. By offering the most sorting programs in the market, combined with TOMRA's patented and proven technology, customers benefit from **unsurpassed level of variability**. This makes the COMBISENSE the most adaptable across multiple metal applications and results in **maximum metal recovery** - regardless of the combination and complexity of the fraction.

	1200
WIDTH	2,480 mm
WIDTH BELT	1,200 mm
LENGTH BELT	3,960 mm
LENGTH	5,650 mm
HEIGHT	1,830 mm
WEIGHT*	190 kg
POWER CONSUMPTION*	10 kW

Valves	Nozzle Pitches
TSI500	8 mm

* The data is indicative and application-dependent.
Exact data upon request.



MAIN APPLICATIONS

End-of-life Vehicle Scrap

unalloyed steel, plastics, glass, compound materials

Electronic Scrap - WEEE

PCB, wire, grey metals, copper, brass

Non-ferrous Metals

grey metals, copper, brass

Zorba

grey metals, copper, brass

COMBISENSE CHUTE

FLUID COOL®
DUAL PROCESSING TECHNOLOGY
SIMULTANEOUS SINGLE-POINT DETECTION
DOUBLE-SIDED DETECTION

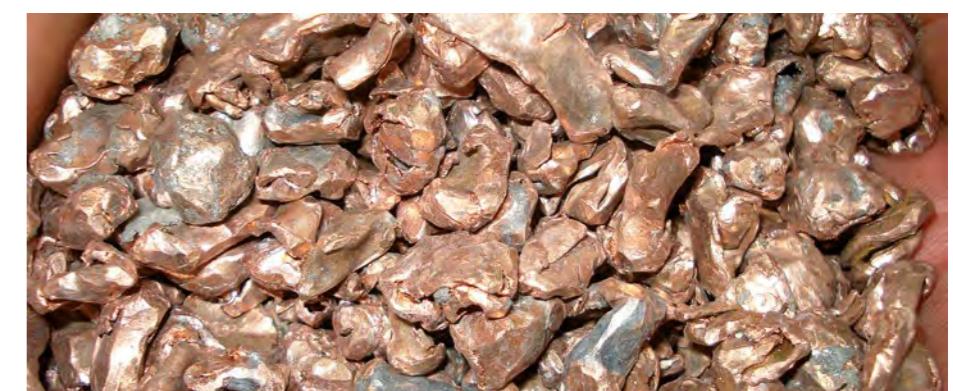


TOMRA Sorting's highly flexible COMBISENSE CHUTE specializes in effectively separating high purity metal fractions in a multi-parameter material mix. By offering the most sorting programs in the market, combined with TOMRA's patented and proven technology, customers benefit from **unparalleled level of variability**. This makes the COMBISENSE CHUTE the most adaptable across multiple metal applications and results in **maximum metal recovery** - regardless of the combination and complexity of the fraction.

	1200
WIDTH INFEED	1,200 mm
WIDTH	2,150 mm
LENGTH	2,770 mm
HEIGHT	1,990 mm
WEIGHT*	2,990 kg
POWER CONSUMPTION*	5.7 kW

Valves	Nozzle Pitches
TS100	4 mm

* The data is indicative and application-dependent.
Exact data upon request.



MAIN APPLICATIONS

Granulated Copper Material
fines metal fractions

Mixed Metal Sorting
copper, brass, grey metals

Red Metal Sorting
copper, brass

X-TRACT

MULTI-DENSITY-CHANNELS FOR GREATER PRECISION

ACT USER INTERFACE FOR MORE CONTROL

DUAL PROCESSING TECHNOLOGY FOR CONSTANT OUTPUT QUALITY

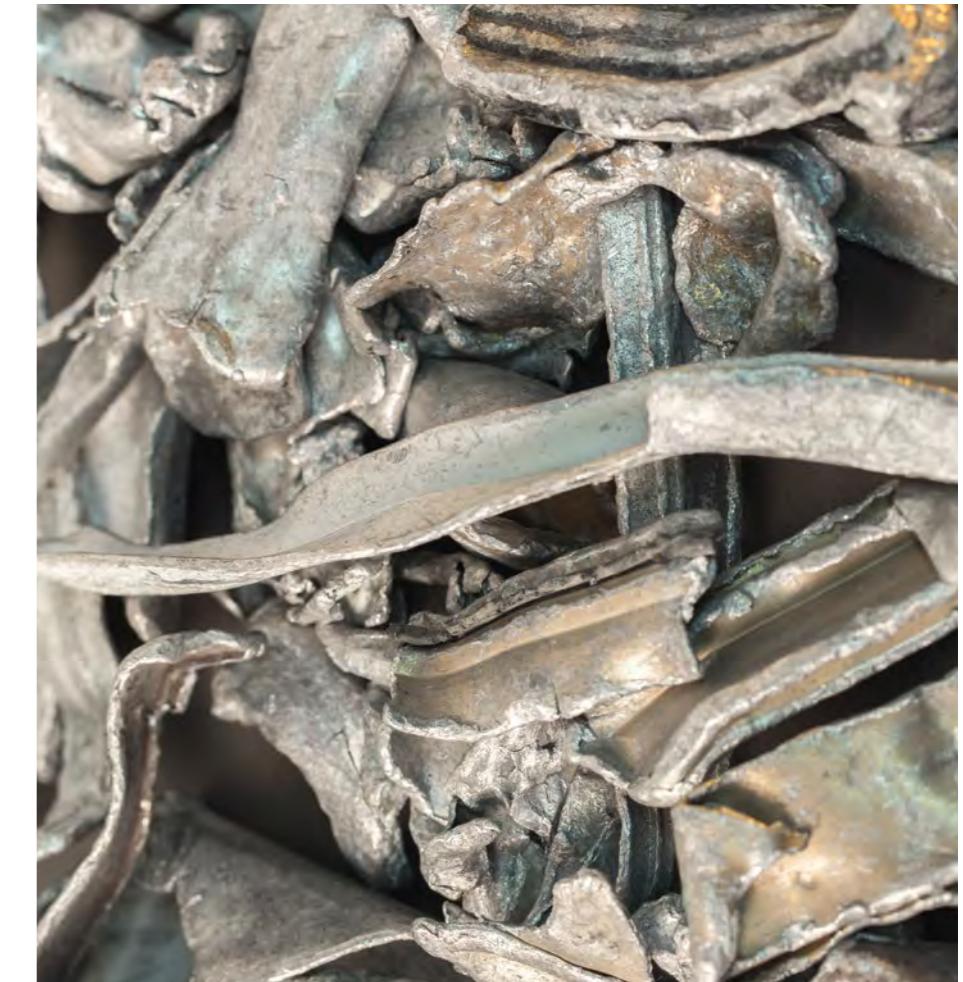
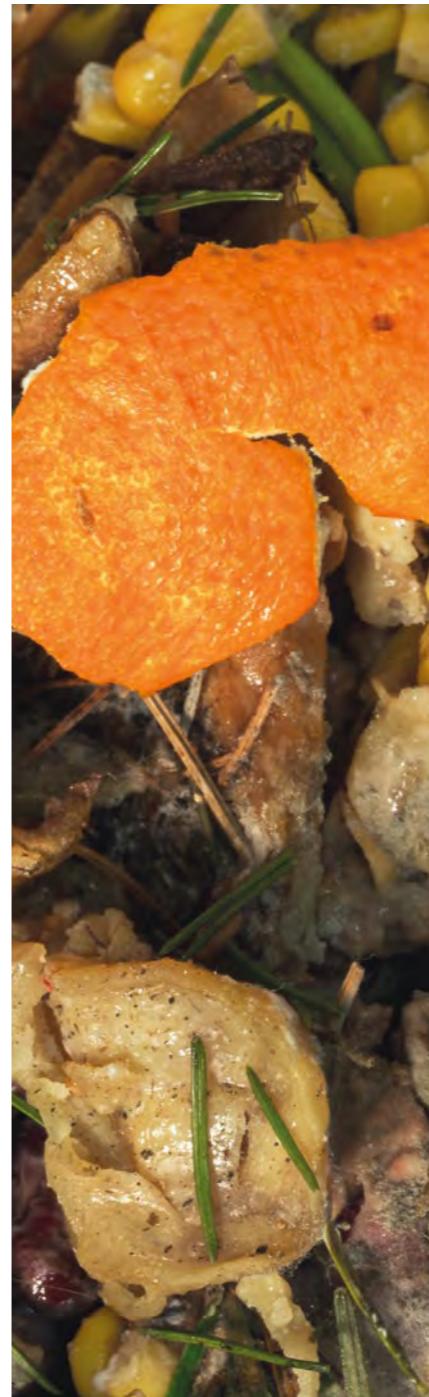
APPLICATION PACKAGES FOR CUSTOMIZED MECHANICAL DESIGN



TOMRA continues to lead the market with pioneering technology: multi-density-channel capabilities **enhance the precision** of sorting even the most complicated material mixes across a wide variety of metal applications. Our field-proven Dual Processing Technology, coupled with TOMRA's exclusive software development, means that the X-TRACT enables effective sorting of the **highest throughput** with **reliable top-quality yield**. Now equipped with the new award-winning and intuitive ACT user interface, X-TRACT operators can easily see critical sorting information and **real-time process data at a glance**. Clear information enables improved monitoring and fast adjustments, so the operator is **always in control**. New application packages ensure that customers benefit from a **tailored mechanical design** to meet their specific needs. With the largest worldwide installation base in the market, TOMRA's X-TRACT customers continue to profit from a robust machine and **optimal performance**.

	1200	2400	Valves	Nozzle Pitches
WIDTH BELT	1,200 mm	2,400 mm	TS200	6.25 (1:1)
WIDTH	1,900 mm	3,560 mm	TS400	6.25 (1:1)
LENGTH BELT	4,160 mm	5,170 mm	TS1500	6.25 (1:2)
LENGTH	6,535 mm	7,770 mm		
HEIGHT	2,265 mm	2,580 mm		
WEIGHT*	7,000 kg	16,000 kg		
POWER CONSUMPTION*	9 kW	17.5 kW		

* The data is indicative and application-dependent. Exact data upon request.



APPLICATION PACKAGES

E-SCRAP PACK

flame retardants

ORGANIC PACK

inert material, organic material

WOOD PACK

cleaning of wood chips

ALUMINUM PACK

aluminum alloys,
aluminum vs heavy metals,
recovery of ferrous & non-ferrous metals,
PCB, wire, aluminum,
aluminum alloys vs heavy metals

HIGH POWER PACK

aluminum alloys,
aluminum vs heavy metals,
recovery of ferrous & non-ferrous metals,
PCB, wire, aluminum,
aluminum alloys vs heavy metals

AUTOSORT COLOR

PRECISE FREE-FALL DETECTION REGARDLESS OF MATERIAL TYPE

EASY MAINTENANCE

SELF-CLEANING FUNCTION

FLUID COOL® TECHNOLOGY



Once again, TOMRA sets industry standards for recovering glass from MSW, with at least **95% purity rates**. Combined with the field-proven AUTOSORT LASER, the new AUTOSORT COLOR achieves unprecedented effectiveness at high throughput levels, even when input materials are **wet, dusty or dirty**.

TOMRA's very own FLUID COOL® LED technology delivers a constant light source and quality resulting in **maximum yield stability**, and its easy maintenance and self-cleaning function also helps sorting facilities **minimize the risks** of disruption, downtime and repair costs arising from damage to components in sorting machines not intended for glass. Now equipped with the new award-winning and intuitive TOMRA ACT user interface, AUTOSORT COLOR operators can easily see critical sorting information and **real-time process data** at a glance. Clear information and **robust machinery** enables improved monitoring and fast adjustments, so the operator is always in control.

	1200
WIDTH	2,450 mm
LENGTH	3,500 mm
HEIGHT	2,402 mm
WEIGHT*	4,990 kg

Valves	Nozzle Pitches
TS400	6.25 mm

* The data is indicative and application-dependent.
Exact data upon request.



MAIN APPLICATIONS

Glass from Municipal Solid Waste

mixed glass

INNOSORT FLAKE

MATERIALLY DIFFERENT



Alutrade Ltd has been using TOMRA's sensor-based sorting technology since 2013. We find it gives additional benefits when compared to conventional sorting methods, and the installation of TOMRA machines allowed the purchasing and processing of a higher amount of a specific grade of scrap. We're delighted with the results achieved at our plant, this has led to further investment in TOMRA technologies and the option to send our own material to the Test Center in Germany is fantastic. This gives us the chance to test the machines and to work out a sorting process together with TOMRA. As they are not only selling machines but are also offering a full service process we are more than happy to work with them as a real partner.

Andrew Powell
Director - Alutrade Limited

TECHNOLOGIES

FLYING BEAM®

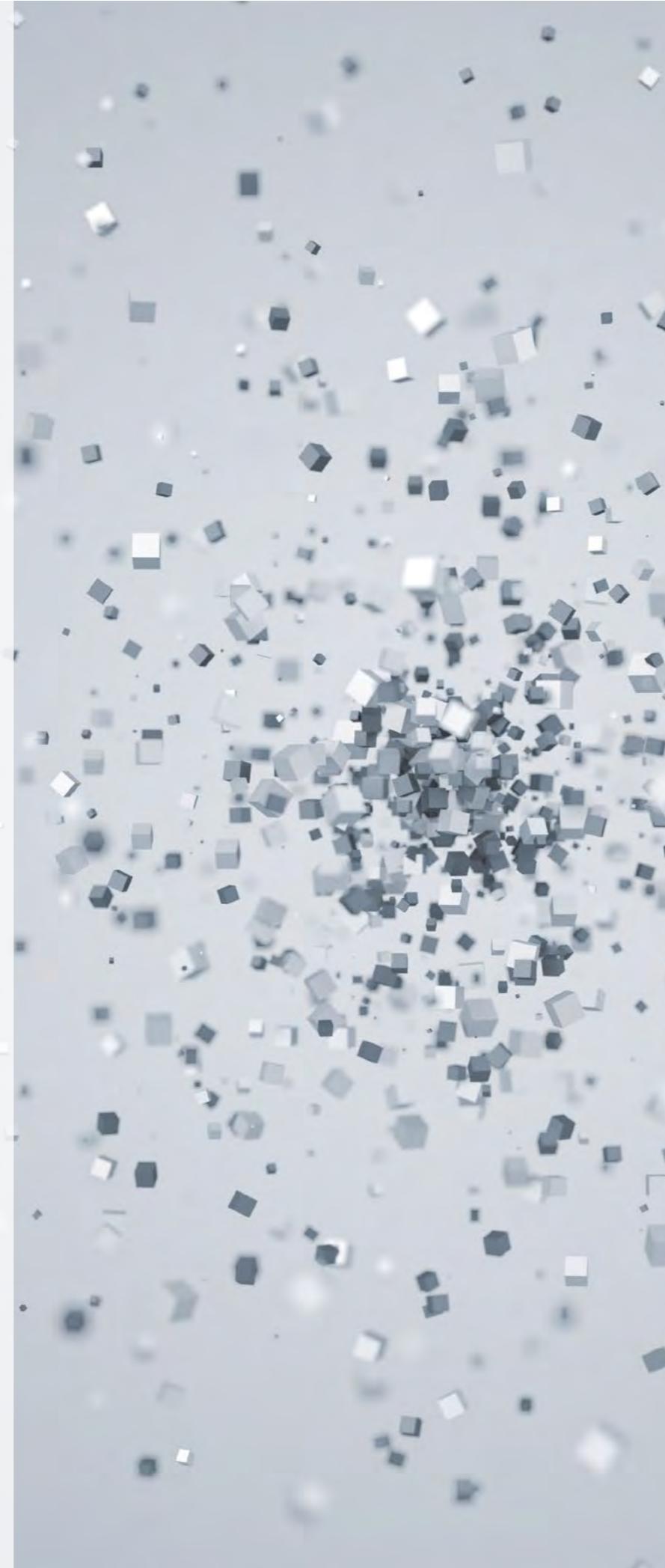
Renown worldwide for its energy efficiency and maintenance-friendly design, TOMRA's FLYING BEAM® technology has revolutionized scanning systems by not requiring external light sources. The sophisticated, integrated light source positioned inside the scanner protects against contamination, lowers maintenance levels and reduces power consumption up to 70%.

Thanks to its continuous signal correction and homogeneous light distribution, FLYING BEAM® technology offers an extended temperature range and enhanced stability of sorting performance. Its innovative point scanning principle simultaneously detects materials across the entire belt feed as it passes through the scanner. TOMRA's highly-specialized algorithms enable a wide range of flexible calibration possibilities for various applications as well as increased stability over time.

SUPPIXX® AND DEEP DATA

With up to 8x enhanced resolution levels, TOMRA's revolutionary SUPPIXX® image processing technology eliminates "noise" caused by mechanical and electrical influences. Its accuracy results in the reduction of lost product yield. In applications where throughput and material density are a factor, the precision of SUPPIXX® significantly reduces lost product yield.

The cutting-edge DEEP DATA technology for Intelligent Object Recognition generates even more valuable information for a variety of applications. Digital sensor signals enable the identification by shape, size and signal intensity of materials with pinpoint accuracy for a higher degree of purity and increased product yield. The combination of SUPPIXX® and DEEP DATA technologies enhances precision and provides continuous monitoring of the entire conveyor belt through Z-TECT technology, while the intelligent software ensures maximum recovery and stability long term.



LOD

Featuring laser technology that sorts based on the feed material's spectral and spatial characteristics, LOD efficiently detects black-colored plastic, glass, rubber and waste that goes unidentified by NIR technology. As opposed to other methods demanding a high energy draw, TOMRA's LOD system offers a cost-effective and low energy solution to boost product quality significantly and has been fitted to for a variety of applications and easy installation. This mechanically-mounted unit fits any belt feeder and makes the ideal add-on for AUTOSORT and FINDER units. With this breakthrough design, it's easy to upgrade existing machinery for an expanded application portfolio and increased purity levels with very little initial investment.

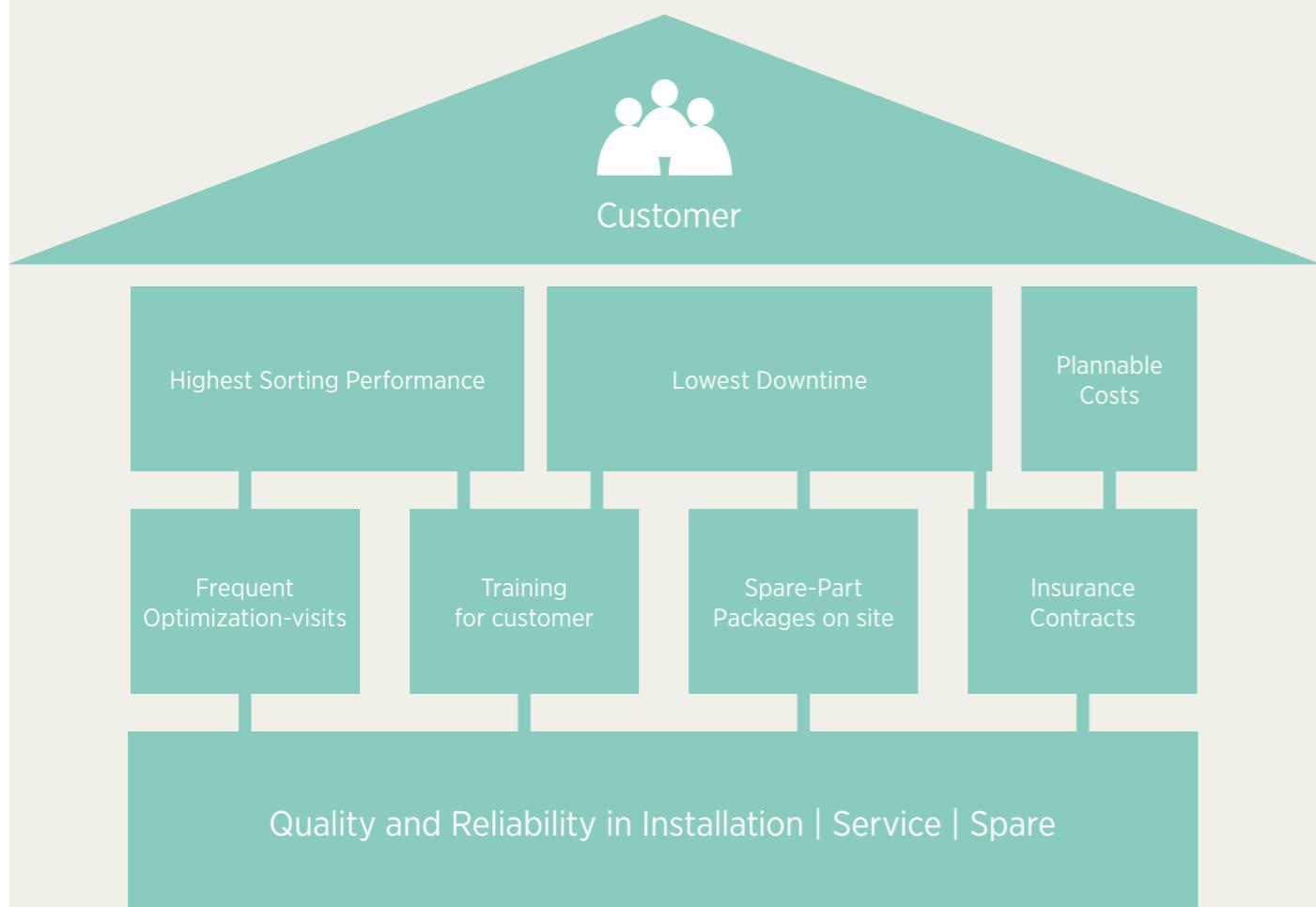
SHARP EYE

This commercially significant discovery identifies critical chemical property differences required for equivalent-product recycling: new SHARP EYE technology identifies and effectively sorts even the most challenging applications. By distinguishing the finest molecular characteristics in materials combined with artificial intelligence embedded in TOMRA systems, our solutions seamlessly analyze sort products, continually improving processes and make future plants even smarter. Thanks to its enlarged lens, TOMRA SHARP EYE offers higher light intensity making it possible to detect complex properties, such as sorting single-layer PET trays from bottles as well as deinking. In combination with TOMRA's AUTOSORT featuring FLYING BEAM® technology, it's possible to sort mixed PET into different polymers by detecting materials, as well as colors in combination with grain size. Even with a very mixed material input, this process achieves an impressive sorting efficiency of 95% or greater.

TOMRA CARE



It takes more than a machine to make an operation perform at its best. That's why we continuously improve and expand our worldwide TOMRA Sorting sales and support network, enabling us to offer you first-class assistance during every stage of your decision-making process. With TOMRA Care, our established industry and application expertise, whether in the pre-sales, @sales or post-sales phase, our established industry and application expertise ensures maximum productivity of your operation.



WORLDWIDE SERVICE HUBS

Over 150 service engineers globally





92%

of the participants
extremely/very likely
to attend a TOMRA LEADS
event in the future



94%

of the participants rated
the overall event as
excellent/very good



96%

of the participants rated
the TEST CENTER as
excellent/very good



96%

of the participants rated
staff support during the
event as excellent/
very good

TOMRA LEADS JOIN US

NETWORKING SESSIONS

LIVE DEMONSTRATIONS

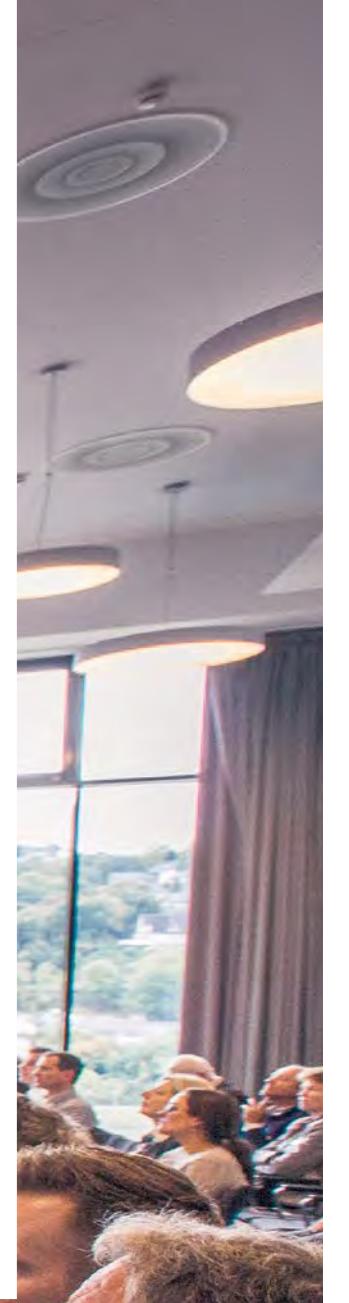
EXCLUSIVE PRESENTATIONS

As the world population grows, so does the amount of waste. Society, business and the recycling industry are faced with the challenges associated with these increases, and being equipped for the future is mandatory. For everyone.

As the global pioneer in sensor-based sorting in recycling, TOMRA Recycling also leads the sector with technology and industry knowledge. Our TOMRA Leads Conferences bring influential and experienced industry experts together to discuss and consider solutions, putting stakeholders in a position to thrive. Whether challenging new EU regulations, new ground-breaking technology, or simply the opportunity to meet and learn from others in the industry, participants leave the conferences with valuable knowledge and new contacts that strongly benefit their business.

Together, we can make a difference. TOMRA Leads Conferences support delegates in doing just that.

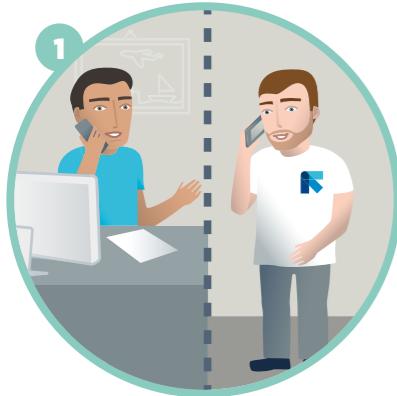
"The event was really an exciting networking opportunity and a knowledge upgrade platform!"



Please check out our
event video on
<https://tomra.23video.com>



OUR SALES PROCESS: A STRONG PARTNERSHIP



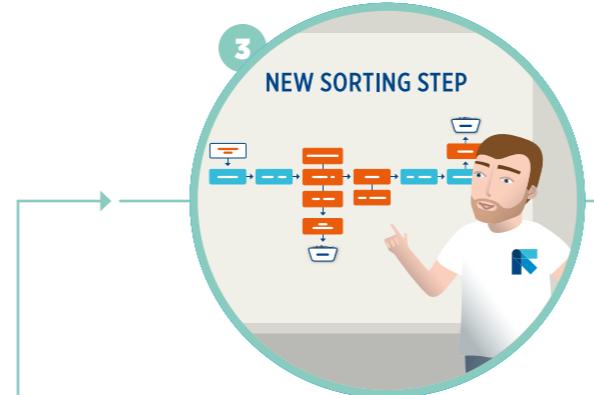
PROCESS CONSULTANCY

At the beginning of the process, our experienced recycling experts work with you to identify key facts and figures to clarify your needs.



MATERIAL TESTING

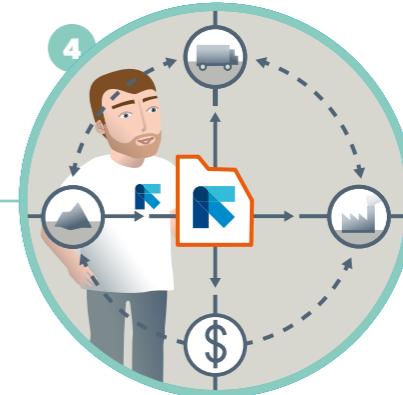
By using our broad portfolio of advanced recognition technology available in TOMRA's Test Centers, we support you in selecting the optimal solution for your sorting task.



NEW SORTING STEP

SENSOR-BASED SORTING/ FLOWCHART DESIGN

Based on your objectives, we design the optimal sorting process for your project, integrating one or more machines.



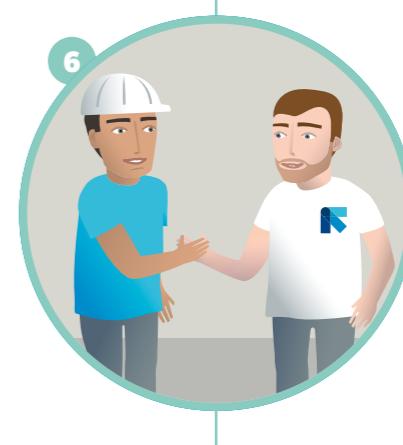
PROJECT EVALUATION

Based on the test results, we analyze how integrating a sensor-based sorting step affects your entire process.



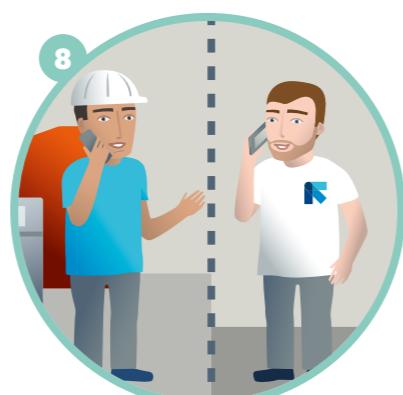
TAILORED PACKAGES

We provide you with a tailored package, including machinery, delivery, spare parts, on-site training and first-class after-sales service. You also can take advantage of different service contracts that provide dependability for your system.



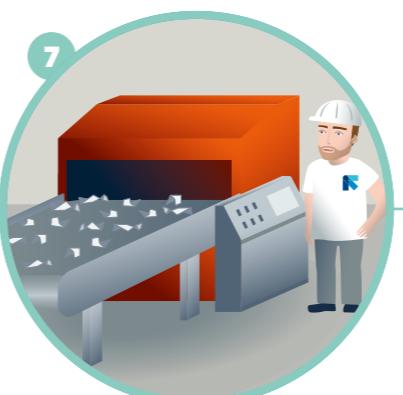
CONCLUSION OF CONTRACT

Based on your requirements, the test results and the flowchart, we create an offer, tailored to your unique needs. We guarantee that the test results will also be achieved on-site..



AFTER SALES SUPPORT

We have established an international service network, with multiple locations, around the world and can assist you remotely or on-site in minimal time.



COMMISSIONING AND OPERATOR TRAINING

Our service engineers commission the sorting equipment and carry out functional testing. Sorting performance is optimized once the plant is set up. Our experts will train your staff in basic maintenance and proper operating procedures, to ensure that your system runs at the highest performance level at all times.

TOMRA INSIGHT

FACT-BASED DECISION MAKING. OPERATIONAL EXCELLENCE.

At TOMRA, we are committed to revolutionizing the resource industry. The Internet of Things and Big Data play a key role that leads to higher productivity and yield in the future. Our answer to these developments: TOMRA Insight.

The process to separate a mixed material stream into valuable resources requires optimization of various elements across the system. TOMRA Insight combines multiple data sources and sorters into one data stream, allowing the optimization of overall yield. This transparency of information, coupled with Big Data analytics and our experience in artificial intelligence, is the basis for a

successful transformation to a circular economy addressing today's resource needs. A safe and secure connection of TOMRA sorters, ensuring full privacy around customer data and enabling fast and efficient access to equipment, is the backbone of TOMRA Insight. Our user-friendly customer portal combines real-time data directly from the machine with non-real-time information, such as service activities and spare parts. The result: customers can keep an eye on productivity from anywhere. In the future, this will enable the industry to act and take informed decisions before things happen.

Your expertise and ours – connected.

TOMRA Insight is not only a remote access or predictive maintenance tool.

It is all of the above and much more. (Felix Flemming, VP Head of Digital, TOMRA Sorting)

ARTIFICIAL INTELLIGENCE

distinguish different objects or materials by providing a large amount of sensor data. The achieved accuracies are close or, in some cases, even superior to the human performance.

TOMRA Sorting, has successfully been applying AI technologies to more and more demanding sorting applications for well over 20 years. As a pioneer in technology, it is clear that the path has not stopped there. Whether examining pre-processing, object detection, classification or self-diagnosis, artificial intelligence continuously plays a significant role in development of TOMRA equipment. In fact, it might be fair to say that TOMRA's machines have more artificial intelligence integrated in its systems than any other product on the market!

TOMRA Artificial Intelligence – it's in our genes.

Deep learning will stretch the limits of sensor-based sorting.

(Daniel Bender Team Leader, Deep Learning)





Input waste material changes through the different seasons depending on the type of tourism that comes to Mallorca. Both packaging material and technology have changed a lot since we relied on MONOSORT and POLYSORT units back in 2002. The new machines are much more versatile than the old MONOSORT, which could only classify a single type of predefined factory material. Now we are able to easily change the machine configuration, depending on the needs of the moment and the materials entering the plant. With these modifications we have clearly gained in efficiency and now expect annual capacity to rise to 20,600 tons per year. Without a doubt, the flexibility of TOMRA Sorting technology is an important added value. We are very pleased with the results.

Simón Gili
Project Manager at TIRME

DID YOU KNOW? TOMRA HAS...



>60% market share



>5,500 units installed worldwide



machines installed in over 80 countries



>96% customer satisfaction with TOMRA CARE



Adopting circular-economy principles could not only benefit Europe environmentally and socially but could also generate a net economic benefit of €1.8 trillion by 2030.

(from Europe's Circular Economy, McKinsey & Company, Q3 Report 2015)

CIRCULAR ECONOMY





We are very satisfied with the professional collaboration with TOMRA Sorting in many respects. The experienced TOMRA team persevere with their tasks and challenges, ensuring their work is always completed. As a result of this working ethic we now have a very effective plant, well supported by TOMRA's sorting technology. The equipment itself is user-friendly, with the reprogramming of the PET fraction being just one example - now, we only have to press a few keys and we receive a different quality.

Tom Roger Fossum

Director - Sorting Plant, RoAF, Norway

WASTE & METALS FACTS & FIGURES



Recycled paper produces 73% less air pollution than if it was made from raw materials.



Plastic bags and other plastic garbage thrown into the ocean kill as many as 1,000,000 sea creatures every year!



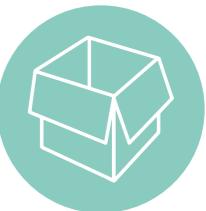
Every month, we throw out enough glass bottles and jars to fill up a giant skyscraper. All of these jars are recyclable!



Five plastic bottles (PET) recycled provides enough fiber to create one square feet of carpet or enough fiber fill to fill one ski jacket.



It requires 95% less energy and water to recycle a can than it does to create a can from virgin materials.



Recycling 1 ton of cardboard saves 46 gallons of oil.



Recycling one tonne of steel saves 1,100 kilogrammes of iron ore, 630 kilogrammes of coal, and 55 kilogrammes of limestone.



715,000 tons of metal is recovered every year by our metal recycling machines. That's over 4,000 Boeing 747's!



Each year, worldwide Auto Recycling Industry recycles more than 25 million tons of waste materials which are collected from out of order cars.

ROOM FOR NOTES

ROOM FOR NOTES

**DO YOU HAVE
AN IDEA?**

Please contact us for your
innovative idea!

inpuls@tomra.com

As a technology leader, TOMRA Sorting Recycling continues to be pioneer in sensor-based sorting in the waste and metal recycling industries. With over 5.500 units installed in more than 80 countries, our expertise and superior service allow us to deliver high-performance sorting and analytical solutions to our customers in a broad range of applications.

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Official Distributor/Partner



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



*)

ISO 9001 certified