

# RETURN

SUMMER 2007

RECYCLING NEWS FROM TOMRA



## ***T-63 HCp***

Tomra North America releases new solution for stores with medium return volumes

TOMRA HOLOCHIP  
wins innovation award

BREAKING NEW GROUND  
New market segment developing for UNO

MODEL WEEE RECYCLING  
with TiTech & CommoDaS

# Contents



- 4:** **TOMRA ARC**  
Now showing in Norway
- 5:** **DEPOSIT REFUND DONATION**  
Turning small change into big change
- 6:** **BREAKING NEW GROUND**  
New market segment developing for UNO
- 8:** **NEW PRODUCT RELEASE IN THE US**  
130% greater storage capacity for PET
- 12:** **MODEL WEEE RECYCLING IN THE NETHERLANDS**  
Joint installation by TiTech & CommoDaS



TOMRA's vision, "A leading global provider of advanced solutions enabling recovery and recycling of materials," is a demanding one. First of all, because most of these solutions consist of advanced technology. This applies to all business areas. As a market leader our target will always be to lead the way in delivering the very highest standards in functionality, quality and service. We are determined not just to meet our customers' expectations, but to exceed them.

The macro trends are growing in our favor, and hence the opportunities are growing. We like to say that we have the experience, the knowledge, the technology, and the products—and thereby the solutions. We know from all the feedback we have received that most of our customers are satisfied with the product quality and service TOMRA provides. But I also know that some of our deliveries of technology from our production facilities to our subsidiaries, and from the subsidiaries to our end customers, have not been up to the standards we all want. At the same time I am sure that we reactively have done our best to handle this in the best way possible to solve the challenge for our customers.

With the large volume of deliveries we had in 2006, the potential we see within all our business areas, and the growth ambitions we have going forward it is increasingly important for us to focus on continuous improvement. We must be even better on internal measurement systems and quality systems. We must focus our internal culture and approach even more to understand customer requirements, and to deliver according to customer and market expectations. We must be more structured and disciplined internally, but at the same time be flexible toward our customers. We have potential for improvement, let's use it!

We are also looking forward to building on the positive momentum achieved in many areas across our business during the first half of the year. Our company is experiencing an exciting period of development, with new and growing business areas and opportunities where we can apply our technology and know-how. The organizational structure and alliances we have executed during the past two years are really beginning to show their strength, and I am confident we are on track to meeting our growth expectations for this year and the years ahead.

Best wishes to all for a great summer!

■ Amund Skarholt, President & CEO

## RETURN | SUMMER 2007

RETURN is published twice a year, June and December, and is distributed to TOMRA's employees, customers and other interested parties worldwide. An electronic version is also available on TOMRA's website: [www.tomra.com](http://www.tomra.com)



Printed on Profi Silk

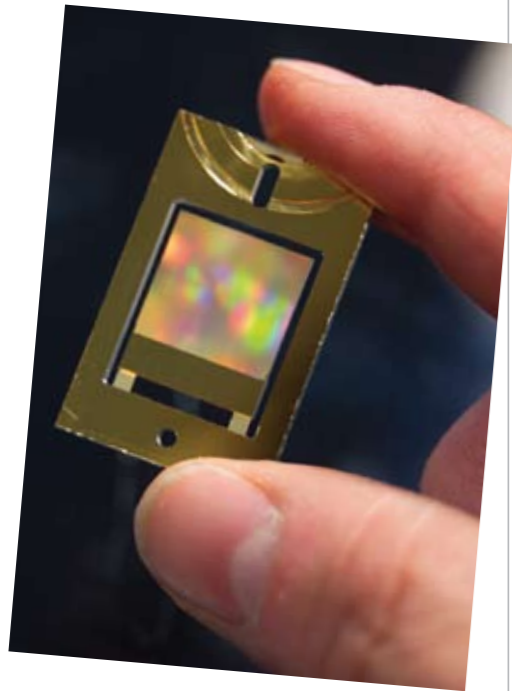
**PUBLISHER:**  
Tomra Systems ASA, Asker, Norway  
**EDITOR:** Andrew Young  
**LAYOUT:** Helene Solheim  
**PRINTED BY:** RK Grafisk  
**PRINTED COPIES:** 4,000  
**COVER PHOTO:**  
Jarle Nyttngnes

**QUESTIONS ABOUT RETURN?**  
Contact: Andrew Young  
Tomra Systems ASA,  
Drengsrudhagen 2  
P.O. Box 278, 1372 Asker, Norway  
Telephone: +47 66 79 92 04  
E-mail: [andrew.young@tomra.no](mailto:andrew.young@tomra.no)

**TOMRA Headquarters:**  
Telephone: +47 66 79 91 00

|| As a market leader our target will always be to lead the way in delivering the very highest standards in functionality, quality and service. ||

## TOMRA HoloChip wins international innovation award



On 22 May 2007, the Germany-based AMA Association for Sensor Technology presented TOMRA and co-developers SINTEF and OptoSense the SENSOR Innovation Award 2007 for the development of the HoloChip. The HoloChip technology was one of just two innovations to receive the award out of approximately 46 submissions.

TOMRA is using the HoloChip as the key component of the recognition system used for plastics in TOMRA's new outdoor automated recycling centers currently being installed at Tesco supermarkets in the UK.



## Now showing in Norway: A whole new approach to recycling

A complete working replica of the TOMRA Automated Recycling Center (ARC) model now being installed at Tesco Supermarkets in the UK is now available for viewing at the TOMRA headquarters in Asker, Norway.

The ARC platform is TOMRA's range of new automated outdoor solutions for collecting and handling a wide variety of rigid containers made of plastic, glass and metal. Collection of paper and plastic bags can also be included. While the ARC is available in different sizes and configurations, the demo model now showing at TOMRA headquarters is the same version ordered by Tesco, a center with two user stations and nine material collection bins.

For those interested in seeing the Automated Recycling Center first hand, we invite you to visit us here in Norway. Please contact Lennart Flem, TOMRA Vice President Business Development, at +47 66 79 92 71 for more information.

# Deposit Refund Donation: Turning small change into big change

Currently about 1,500 supermarkets in Sweden, Norway and Holland are providing their customers the opportunity to donate their deposit refunds to good causes. And while each donation may be relatively small, together they are making a big impact—bringing in approximately a million euros last year for charitable organizations.

The ICA supermarket chain in Sweden has the longest running donation program in operation, beginning their collaboration with the Swedish Red Cross in 1999. Since that time TOMRA's deposit refund donation program has spread to other supermarkets and countries, particularly in the Nordic region.

Says Håkan Erngren, Vice President Tomra Nordic, "based on the increasing interest we're getting from supermarkets about this program, I feel confident that over the next two years the number of TOMRA machines having the donation capability in the Nordic region will be double what it is today. This is quite simply because everyone wins: it provides a very cost-effective and non-intrusive way for charities to raise funds, and for the supermarkets involved it provides another way to increase customer satisfaction while helping to support good social causes."



The COOP supermarket chain in Norway earlier this spring implemented TOMRA's donation program at 15 of its stores in the Greater Oslo area, in collaboration with the Norwegian Cancer Society. Pictured here are Information Director Vidar Ullénrød of COOP and General Secretary Anne Lise Ryel of the Norwegian Cancer Society.

# Breaking new ground with UNO

UNO, TOMRA's groundbreaking reverse vending machine designed for smaller stores, is being taken to heart by a new customer segment: gas stations.



This spring TOMRA signed letters of intent to provide the UNO as a standard element at two regional gas station chains, Q8 in Denmark and Westfalen AG in Germany.

According to Geir Sæther, TOMRA VP Small Store Segment, "we know from a number of consumer research studies that consumers in deposit countries would appreciate the opportunity to return their deposit containers at gas stations if they were offered a convenient, automated solution for doing so. This is why TOMRA three years ago set out to develop a totally new solution specifically for small stores—a highly economical, compact, stand-alone reverse vending machine that accepts both refillable and non-refillable containers. And this is in a nutshell the TOMRA UNO."

Since its release in 2005, TOMRA has sold approximately 1,700 units of UNO. The majority to date have been installed at small grocery stores, but also at many gas stations as well. But with the two agreements signed this spring, this is the first time that an entire gas station chain has decided to implement the UNO as a standard element in its store concept nationwide.

"The feedback we're getting is very positive," continues Sæther. "Besides saving time for the store personnel and making the whole return process more convenient and hygienic compared to accepting containers manually over the counter, we're seeing that the return volume increases considerably after installing UNO—and consequently customer traffic as well."

**New source for ad income?** TOMRA can also provide special front decals for UNO that can support a store branding profile or earn product advertising income.

"We have wanted to move the return of deposit containers away from the counter area and have been looking around for good solutions. We were impressed with the fact that UNO doesn't have the large space-consuming storage equipment that is associated with models designed for supermarkets, and has a good deal of flexibility for handling different types of containers. Depending on the size of containers returned, it can sort and store up to about 450 containers before it needs to be emptied. And this is sufficient for daily use even for our highest volume stores. Besides the fact that it functions well and ensures that our customers receive the correct refunds for their containers, TOMRA has provided us with good service. We have therefore recommended UNO as a standard component at all our stores."

*Jan Bendix, Detail Manager, Q8 service stations*



# Goodbye T-X2, Hello T-63 HCp!

A new generation is set to replace the T-X2, TOMRA's long-standing mid-volume model first launched in the US in 1992. Please welcome the T-63 HCp—delivering new standards in storage capacity, speed and reliability.

“The T-63 HCp has been developed to replace the position that the T-X2 previously held in our reverse vending machine portfolio—namely, for retailers that have a return volume of 500,000

containers or less per year. But that's about where the similarity between the T-63 HCp and the T-X2 ends,” says Debbie Hall, Senior Vice President of Sales at Tomra North America.

“Compared to the T-X2 and other similar models, the T-63 HCp features major technology and design improvements that will immediately begin reducing operating expenses for retailers.

(cont. page 10)



## T-X2

The T-X2 series was designed for the return of non-refillable containers, with the model numbers T-22, T-32, T-42 and T-62 referring respectively to the models for plastic, glass, cans, and the combi-machine for plastic and cans. Last year the T-X2 was phased out of the portfolio after 14 years of production—the longest running RVM model in TOMRA's history. Almost 19,000 units were produced during this time, delivered primarily to the US, Canada and Sweden.

The T-X2 was dimensioned primarily toward handling aluminum cans, which at the time of the model's development was the clear leader in regard to the container types used by beverage producers. Since that time however plastic bottles have taken over considerable market share, going from about 17 percent in the US in 1996 to 33 percent in 2005.\* The T-X2's successor, T-63 HCp, has therefore been designed with this in mind, being able to hold up to 130 percent more compacted PET bottles than the T-X2.

\*Source: Beverage Packaging in the United States, Beverage Marketing Corporation (2002 & 2006).



(cont. from page 8)

In addition, by providing a more reliable and user-friendly return solution, the T-63 HCp will help drive sales by encouraging greater traffic and customer loyalty. We are very excited to begin providing our customers with the significant benefits this machine can provide," continues Hall.

**TOMRA Sure Return™ Technology**

The introduction of the T-63 HCp addresses concerns that the market has had about the ability of the T-X2 to fully protect against "professional" fraud attempts. The T-63 HCp features TOMRA's patented Sure Return™ technology, which utilizes a unique real-time video surveillance and recognition system inside the machine to provide the best protection on the market against deposit refund fraud.



TOMRA has developed a new compactor for the T-63 HCp, preventing memory spring back of plastic bottles. This technique delivers up to 20 percent greater reduction in container volume than the compactor used with the T-X2.

**T-63 HCp**

bin height

T-63 HCp

T-X2

**20%**  
cubic inch increase  
in storage area

bin depth

T-63 HCp

T-X2

Equipped with  
TOMRA Sure Return™ Technology

CORRECT REFUND

FASTEST CONSUMER INTERFACE

BEST FRAUD PROTECTION

- Lower and faster container infeed (ADA compliant)
- Non-acceptable containers returned immediately to consumer from infeed opening

- Larger, easy to read graphic display

- Supports options such as couponing, loyalty cards, fundraising and lotteries

- Quick view of maintenance procedures on inside of machine

- Possibility for single or multi-bin configuration



**Upgrade to the T-63 HCp and start adding up the savings\*:**

Labor savings	\$ 1,161
Energy savings	\$ 591
Cleaning savings	\$ 1,620
<b>TOTAL ANNUAL SAVINGS, T-63 HCp v. T-X2</b>	<b>\$ 3,372</b>

\*Based on a return volume of 500,000 containers.



# TiTech/CommoDaS alliance in full swing



The new Sims Recycling Solutions facility in Eindhoven is one of the most modern, high-tech recycling plants in the world, with the capacity to process approximately 40,000 metric tons of WEEE per year.

Within nine months after TOMRA companies TiTech and CommoDaS integrated their operations, the alliance can already point to a growing list of joint projects in Europe and the US. The first of these is a new model facility for recycling waste electrical and electronic equipment (WEEE) in The Netherlands operated by Sims Recycling Solutions.

Sims Recycling Solutions is a division of the Sims Group, the world's leading metal recycler with 120 sites across four continents and more than €2.5 billion in annual revenues. The Sims Group is responsible for recycling approximately 10 million metric tons of material a year, an increasing amount of which comes from discarded electrical and electronic products and residues. This is particularly so in Europe, where the EU WEEE Directive now requires its member states to ensure that they have systems in place to reach aggressive targets for collecting and recycling or reusing WEEE.

#### A model WEEE recycling facility

When Sims Recycling Solutions made the decision to expand its WEEE recycling facility in Eindhoven, The Netherlands, the company initiated rigorous on-site testing of various types of sorting systems from numerous manufacturers during the planning phase of the project. According to Senior Process Engineer Paul Verhappen of Sims Recycling Solutions, "our tests showed that the systems provided by TiTech and CommoDaS achieved the best results, both individually and when coordinated into a joint system. In addition, the fact that the sorting machines came from the same supplier was also a factor in our decision. We felt that this was important to keeping the process of commissioning and maintaining the equipment as simple as possible."

**Sorting it all out**

The TiTech/CommoDaS installation is part of the newly constructed recycling facility for household appliances and IT equipment. In the first stage of the system the material flow passes through a CommoDaS Finder which sorts out all metals from the flow. Next the material goes to a TiTech near-infrared sensor sys-

tem that separates plastics by polymers (ABS, PP HIPS, and PCABS). Finally in the last stage a CommoDaS CombiSense system (with camera and metal sensors) removes any remaining inconsistencies in the sorted fractions and in addition creates high-quality monofractions such as circuit boards and stainless steel.

Example of the metals sorted out by the CommoDaS Finder system.



- Acquired by TOMRA in 2004 (TiTech) and 2006 (CommoDaS).
- Together TiTech and CommoDaS currently have an installed base of more than 1,700 units in 35 countries.
- Germany is the largest market for the two companies, representing approximately 40 percent of their installed base.



**TON KLUMPER**  
Vice President, Western and Eastern Europe  
Tomra Systems

Ton, who has held the responsibility for TOMRA's operations in deposit markets in Western Europe since August 2005, now will also assume the same responsibility for Eastern Europe. In addition, Ton will join TOMRA's Executive Group Management effective 1 July 2007.

Ton started his career with TOMRA in 1985 as Account Manager for TOMRA's sales and service subsidiary in The Netherlands. He then served as Managing Director of Halton Systems (1987-97), Tomra Netherlands (1997-2003), and Tomra Systems BeNeLux (2003-05).



**STEFAN BENGTSOON**  
Managing Director  
Presona AB

Stefan (53) took over Managing Director for Presona AB in May, a Tomra Group company headquartered in Ystad, Sweden.

Prior to joining Presona Stefan has worked within several management positions with Swedish and international companies, starting with Asea AB in 1979. When Stefan left Asea in 1987 he had the position as Director of Manufacturing for Asea's Transformer Division. In the period 1987 to 2000 he worked seven years as Vice President Operations with Pharmacia Diagnostics AB, and six years as President with Arjo Hospital Equipments AB. Stefan's most recent position was Vice President, Monitor Division, at Gambro AB.



**HÅKON VOLLDAL**  
Executive Vice President Business Development, North America  
Tomra North America Inc.

Since joining TOMRA in April 2004 Håkon has held a number of business development responsibilities as well as for the past two years the responsibility for investor relations. In September Håkon will take on a new position as Executive Vice President Business Development, North America reporting directly to Tomra North America President and Chief Executive Officer, Greg Knoll.

In this new and expanded role, Håkon will be a member of the North American Executive Leadership Team and be responsible for the areas of collection technology non-deposit solutions, M&A strategy, and other strategic growth initiatives within the region.



**ANNE-MARTHE LØKEN**  
Director, Business Development  
Tomra Systems ASA, Norway

Anne-Marthe joined the Business Development team in Asker on 1 May of this year, reporting to Senior Vice President Trond Johannessen.

Prior to joining TOMRA, she has worked in England, France and Germany, most recently as a consultant for McKinsey & Company in Berlin. She holds a MSc in European Business from the ESCP-EAP European School of Management and a bachelors degree from The Norwegian School of Management.



*TOMRA is a leading global provider of  
advanced solutions enabling recovery  
and recycling of materials.*

***Helping the world recycle***