CK INTERNATIONAL

TWIN RAM

PRODUCT INFORMATION PACK

www.ckinternational.co.uk

International

ABOUT US

WE ARE A MARKET LEADER IN WASTE COMPACTION EQUIPMENT

At CK International, we manufacture and supply a large range of balers and compactors. We have listened to our customers and through innovation and design have developed solutions that satisfy their needs.

We are passionate about developing our people and as a result, we have created a team of experts which drives our customer-focused approach.

WHAT EQUIPMENT DO WE OFFER?

We manufacture one of the most extensive range of balers and compactors including fully automatic twin ram balers, semi-automatic horizontal balers and vertical balers at our factory in Dungannon.

Our expert engineering team can customise our machines to provide bespoke solutions for our customers.

WHAT MAKES CK DIFFERENT?

QUALITY

Our fabricators and engineers follow strict processes to ensure the highest standard of quality. A serial number is assigned to each individual machine so that machines can be traced from date of manufacture. We use highly regarded European components in our machines (for example: Schneider, Bosch)

CUSTOMER SERVICE

When we sign up new distributors we have a team that will always be on hand to offer support and help with any questions you may have. We offer sales and marketing packages for new distributors, competitive pricing and excellent lead times.

INNOVATION

Our engineering department is continually upgrading machines and innovating in response to requests from different markets. We pride ourselves on having the ability to customise machines accordingly.

AFTERSALES

We have an excellent aftersales technical team based in house at CK and a fully certified network of engineers. We have a wide range of spare parts to suit all machines which are available on request.

TWIN RAM FULLY AUTOMATIC BALERS

Twin Ram Balers are ideal for use in waste transfer stations or as part of a larger recycling MRF system where high volumes of various waste materials including RDF, SRF, plastic, PET, cardboard and paper are being processed. High throughputs of up to 40 tonne/hr are achievable.

Material can be fed into the machines using conveyor, loading shovel or selector grab. These fully automatic machines produce high density mill size bales, with bale weights of up to 1.4 tonnes. Twin Ram automatic balers can streamline bale production and dramatically increase profitability.

BENEFITS OF TWIN RAM SOLUTIONS

- Higher bale density
- Better bale structure
- Ability to switch material stream easily
- Choice of plastic, wire tying or direct wrap
- Flexibility in layout and design

CK INTERNATIONAL CUSTOMERS

Biffa · VEOLIA · Viridor · IKEA · HONDA · amazon · blue GROUP · B&M

CUSTOMER TYPES

Twin Ram Balers are ideal for use in waste transfer stations or as part of a larger recycling MRF system where high volumes of various waste materials including RDF, SRF, plastic, PET, cardboard and paper are being processed. High throughputs of up to 40 tonne/hr are achievable.

MUNICIPALITIES / LOCAL AUTHORITIES

- Have their own Material Recycling Facilities to recycle local waste
- Separate and bale within their own premises
- Material baled is usually Dry Mixed Recyclables (DMR)
- Benefits and savings need to be clearly laid out

In the UK recently, a key objective of government policy is to reduce the amount of waste that is disposed of in landfill and to encourage recycling. Local councils have high ambitions to increase their recycling rates and to eliminate the amount of waste sent to landfill.

INDEPENDENT WASTE RECYCLING COMPANIES

- Privately-owned companies who have transfer station or MRF
- Examples in UK are Mick George, R Collard, Re-Gen Waste
- Work on a regional basis
- Likely to process DMR, RDF, SRF
- Driven by profit, percentage savings
- Make decisions quicker

NATIONAL WASTE RECYCLING COMPANIES

- Examples in UK are Veoila, Biffa, Suez, Beauparc
- Have their own fleet and cover the whole country
- Service and back up driven
- Reliability is extremely important to them and they want hassle taken out of the operation
- Technical information is a priority with these customers
- Relationship and trust is key within this sector

MATERIAL TYPES

CARDBOARD/PAPER

PLASTIC FILM

PLASTIC BOTTLES

RDF & SRF

PP BAGS

MATTRESSES/CARPETS

STEEL & ALU CANS

RIGID PLASTICS

TWIN RAM MODELS

KEY FEATURES

	CKTR63	CKTR82	CKTR121	CKMTRB
TYPICAL CUSTOMER	• Local Authorities • Retail & distribution companies • Small Waste Recycler	• Local Authorities • Retail & distribution companies • Waste Recycling • RDF/SRF processors • EFW plants	• Local Authorities • Retail & distribution companies • Waste Recycling • RDF/SRF processors • EFW plants • Landfill Sites	• Recycling companies • Short-Term contracts • Immediate baling solution while awaiting planning • Landfill Sites
KEY FEATURES	• Small footprint • Ideal entry level • Low cost Twin Ram solution • Transportable in single container	• High density baler • Multiple materials • Ideal for handling PET, HDPE containers and cans	• Higher throughput • Ideal for bulky materials and loading with bucket/grab	• Mobility • High density • Fast set-up • Low cost

** All CK balers are narrow box balers for optimising transport*

BALER PERFORMANCE MONITORING

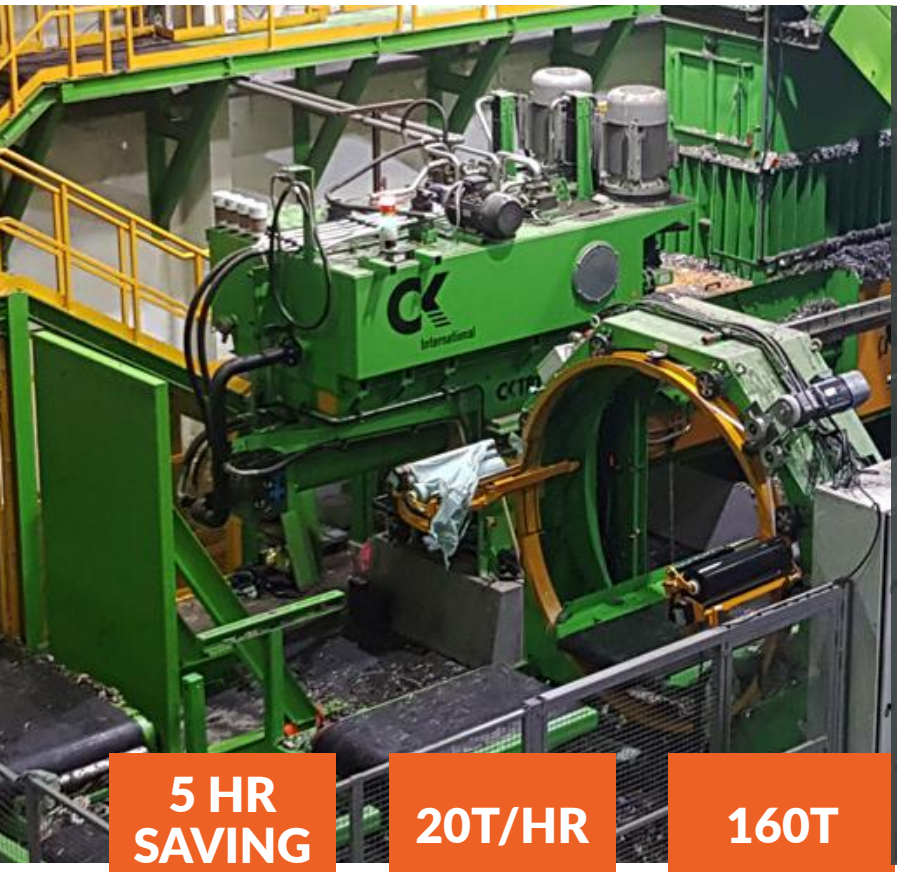
REMOTE MONITORING OF YOUR BALER'S PERFORMANCE CAN HELP YOU TO INCREASE PRODUCTIVITY, REDUCE DOWNTIME AND INCREASE CAPACITY.

We offer this solution with our twin ram machines which allows operators to access real-time information direct from their mobile device or desktop.

- Cloud-based software:
  - Access via internet
  - Proxy screen on pad or mobile
- Up-to-the-minute performance data
  - Number of bales produced
  - Up/downtime of baler
  - Number of straps
  - Number of hours of active production
- Bespoke screen layouts
- Bespoke programming available
- Data Management
- Downloadable Reports

CASE STUDY

CLIENT: RE-GEN WASTE
CUSTOMER TYPE: INDEPENDENT WASTE RECYCLER
LOCATION: NORTHERN IRELAND
MATERIAL: SRF/RDF



HOW RE-GEN WASTE REDUCED THEIR SHIP LOADING TIME BY UP TO 5 HRS

5 HR SAVING
SHIP LOADING TIME

20T/HR
MATERIAL THROUGHPUT

160T
COMPACTION FORCE

1.2T
BALE WEIGHT

25,000 T/YR
PROCESSED

THE CHALLENGE

The client had recently won a new contract to supply SRF to a cement factory in Europe. They required a machine to produce heavy, high density bales which could be stacked 7 or 8 high in the dock and could be easily loaded on the ship.

The throughput from their existing machine wasn't efficient and the running costs, regarding electricity consumption and consumables was costly.

They knew it was going to be difficult to find a machine that would fit the tight space they had and so they required a company that could work with their internal engineering team to design and customise a machine that fitted into the restricted area.

They also needed the project carried out in the quickest time possible.

THE SOLUTION

1 TWIN RAM FULLY AUTOMATIC BALER

A Twin Ram fully automatic baler which integrates into the MRF plant and Cross Wrap system.

2 BALE SIZE CONTROL SYSTEM

The baler monitors and controls material in-feed into the bale chamber. This guarantees consistent bale size.

3 CUSTOMISED TO SUIT

Our dedicated solutions engineering team worked closely with the Re-Gen team to understand their specific requirements within the new MRF.

4 PRE-PRESS COMPACTION

As SRF material is light and flocculent, the baler was designed with pre-press compaction to ensure as much material as possible, could be baled.

5 MOVING BALE TABLE

Bales are transferred from the baler to the wrapper via a moving bale table.

6 INSTALLATION OF THE AIR COOLER OUTSIDE BUILDING

This has resulted in clean, cool air pumping through the cooler.

7 INTEGRATED DATA MANAGEMENT SYSTEM

This ensures Re-Gen's team are able to remotely monitor the bale production, consistency and are aware of any real-time problems during production.

8 CONTROL PANEL IN A DEDICATED ROOM

The control panel was moved to a dedicated control room in an air conditioned container with cables running to the baler. This prevented any dust getting into the control panel and overheating due to the high ambient temperature in the plant.

THE BENEFITS

LARGER & MORE CONSISTENT BALES

Same bale lengths - all within 100mm

FASTER LOADING TIMES

The consistent bale lengths allows the material handlers to lift 2 or 4 bales at a time.

Bales with identical lengths are easily stacked, so loading in the ship's hull is faster.

GAINED MAX CAPACITY FROM MACHINE WORKING IN A HOT ENVIRONMENT

An air cooler was installed outside the building to ensure a supply of clean, cool air. As SRF waste can cause a lot of dust, this greatly reduces the risk of overheating.

REMOTE MONITORING

A key feature of the fully-automatic baler is an baler performance monitoring system. Re-Gen's team are now able to remotely monitor bale production, consistency and are aware of any real-time problems during production. This feature is vitally important when running such a large facility.

We have found CK to be value for money, reliable and their sales service & maintenance is excellent...since we purchased the baler a number of the parameters from our off takers have changed and CK International have been great with their after-sales services in changing and adapting their machine to suit our off takers requirements. To change densities, to ensure constant and consistent lengths. CK delivered the baler on time as per our schedule, which was of paramount importance to us because we actually had a boat booked before we had the plant installed. CK are... quick to react when we've had issues.

SHANE GARVEY, RE-GEN WASTE

CASE STUDY

CLIENT: BATH & NORTH EAST SOMERSET COUNCIL
CUSTOMER TYPE: LOCAL AUTHORITY
LOCATION: UK
MATERIAL: PLASTIC CANS, CARDBOARD & PAPER
MODEL: CKTR82-80T-74kW

IMPROVED BALE WEIGHTS & INCREASED PRODUCTIVITY AT COUNCIL WASTE RECYCLING FACILITY

+20%
INCREASE IN BALE WEIGHTS

X2
INCREASE IN CAPACITY

THE CHALLENGE

01

The council were operating a small Twin Ram baler which produced an American-style wide mouth bale. Once bales were loaded on the lorry the low bale weights meant the space was not optimised and lorry was below the required transport weight.

02

The footprint of the building was quite small. It was clear that any machine supplied would need customised to suit the space.

10,000 T/YR
PROCESSED

500KG
BALE WEIGHTS

THE SOLUTION

1 DESIGNED MACHINE TO FIT

Following a detailed site survey we were able to alter the layout of the baler and demounted the powerpack to ensure the machine fitted into the allocated area.

2 AUTOMATED BALE PUSH RAM

To ensure the bale was discharged in the right direction, we designed a bale transfer table which moved the bale through 90 degrees providing optimium process flow.

3 POWER PACK INSTALLED ON THE SIDE OF MACHINE

This ensured best use of the limited space available.

4 NEW CHAIN DRIVE CONVEYOR

We removed the existing conveyor and installed a chain drive conveyor into the existing pit.

5 RE-ENGINEERING OF THE PICKING CABIN

This provided more space to allow for an extra picker on the quality belt.

6 SUPPLY OF ACCESS LADDERS AND HAND RAILINGS

7 ADAPTED LENGTH OF CONVEYOR

We adapted the length of the conveyor coming from the plant to feed directly into the hopper.

THE BENEFITS

SHORT DOWNTIME

Installation work carried out over a weekend and fast set-up.

UP-TO-DATE, ACCURATE INFORMATION

They opted to use the CK Baler Performance Monitoring System which provides up-to-date, accurate information on the efficiency of their machine.
This data, such as bales produced per hour and quantity of wire used per bale, allows the council to determine the productivity and capacity of the baler.

BALES LOADED MORE EFFICIENTLY ON TO LORRIES

Due to improved bale weights and densities. This has also reduced forklift movements on site.

IMPROVED PRODUCTIVITY & REDUCED OVERTIME

They opted for a service package that provides regular maintance and rapid call-out cover over weekends and bank holidays. They are able to work through peaks in material over holidays periods within normal working hours without any overtime.

CK International knew exactly what we needed and how they could help us get the best out of this facility. They adapted equipment to suit us and our building which was crucial. The reliability of the unit is superb and the back-up service and response we receive from CK International gives us that extra confidence.
We have certainly increased productivity at the site and improved bale weights. The plastic and cardboard are now achieving weights of up to 500kg and 550kg per bale, respectively. In terms of capacity, the machine is consistently baling cardboard and paper at rate of up to 8 tonnes per hour and plastics at circa 5 tonnes per hour. The difference in weights and density of the waste material means bales are loaded more efficiently on to lorries, thus reducing forklift movements on site.
One of the added benefits for us is the remote management portal. This allows us to login remotely and monitor the productivity of the baler. In the current climate, this has been invaluable.

SIMON PORTER, HEAD OF FLEET & WASTE OPERATIONS, BATH & NORTH EAST SOMERSET COUNCIL

CASE STUDY

CLIENT: OOSTERVELD
LOCATION: NETHERLANDS
MATERIAL: LANDFILLED RDF WASTE
MODEL: FULLY AUTOMATIC TWIN RAM BALER

FLEXIBLE SOLUTION & IMPROVES FIRE SAFETY AT WASTE SITE

THE CHALLENGE

01 The customer wanted to improve fire safety and space at their customer's landfill site in Hengelo, Netherlands.

02 They also required equipment that could be easily transported between various projects.

THE SOLUTION

1 DEVELOPED AN INTEGRATED SYSTEM

CK International, Cross Wrap and Avermann Group all joined forces to design and develop a turnkey solution. This included an automatic twin ram baling system, conveyor and integrated plastic wrapping system. All made mobile.

2 TRANSFORMED AN AUTOMATIC TWIN RAM BALER INTO A MOBILE MACHINE

We re-developed our automatic twin ram model, the CKTR121-120T-74kW into a mobile machine. This model is designed to produce high density, large mill size bales of multiple materials. It offers options for wire tying or plastic strapping systems.

3 DESIGNED AN INTEGRATED CONVEYOR SYSTEM

The Avermann Group developed conveyors and integrated these into the new system.

4 INCORPORATED A PLASTIC WRAPPING SYSTEM

Cross Wrap also customised their plastic wrapping system into a mobile unit that integrates with the system.

5 MOUNTED EJECTOR RAM

Transport is made much easier with the mounted ejector ram on the rear of the main body.

6 ACCESS LADDERS, WALKWAYS AND HANDRAILS

The system came complete with access ladders, walkways and handrails.

THE BENEFITS

A TURNKEY SOLUTION OFFERING GREATER FLEXIBILITY

The customer now has a turnkey, off-the-shelf solution that they can move around the landfill site. For future, it can be easily transport to various projects.

IMPROVE FIRE SAFETY AT THE LANDFILL SITE

The most common cause of waste fires is an increase in the oxygen content of the waste. This oxygen increases bacterial activity and in turn raises the temperatures. These high density, compacted, wrapped bales have led to improved fire safety. The oxygen is significantly reduced as the bales are fully enclosed and tight.

EASY SET-UP AND INSTALLATION

The system can be dismantled and set up on-site within a day.

SPACE SAVING

This new machine has saved the customer space at their landfill site. It is ideal for projects where space is at a premium.

REDUCTION IN ENVIRONMENTAL AND ODOUR PROBLEMS

As they can bale on-site, the equipment gives them a neater environment and helps reduce environmental and odour problems that are common in a landfill.

One of our clients requested a baling solution that would improve fire safety and save space at their landfill site. Along with Avermann and CK International, we developed a mobile solution which would not only solve these problems but would also give them the flexibility to move the machine around the landfill site.

Having the ability to bale on-site helps them reduce environmental and odour nuisance and gives them a neater environment.

FRANK OOSTERVELD
OWNER OF OOSTERVELD

CASE STUDY

CLIENT: AMGEN CYMRU
CUSTOMER TYPE: LOCAL AUTHORITY
LOCATION: UK
MATERIAL: MRF
MODEL: CKTR82-120T-74kW

SEEING DOUBLE! TWO FULLY AUTOMATIC BALERS INSTALLED IN ONE OF THE LARGEST WASTE FACILITIES IN WALES

12,000T
PER ANNUM THROUGHPUT

2
TWIN RAM BALERS INSTALLED

THE CHALLENGE

01
They were operating two channel press balers. It was clear that these machines were not going to be sufficient to achieve the bale density that they now required.

02
They had seven different materials that they needed to bale and ensure that there would be no contamination with the changeover of materials.

7
DIFFERENT MATERIALS

THE SOLUTION

1 DESIGN IN COLLABORATION WITH PLANT BUILDER

We needed to be involved from the early stages of the design process. The material was designed to come from bunkers and into the balers via large Westeria conveyors. If there wasn't enough material coming off the conveyors, then the plant was designed to recirculate the waste until there was the right amount to make a full bale.

2 INSTALLATION OF TWO TWIN RAM BALERS

The baler supplied needed to able to handle a large amount of waste. It was decided that two **CKTR82 TWIN RAM BALERS** would be the best solution for this project – this would ensure that the bunkers were cleared quickly and at different times. The balers needed to cope with the high throughput alone and not negatively impact the running of the overall plant.

3 CHANGE LOCATION OF POWER PACKS

Space-saving was also a priority within the design of the plant. We were able to change the location of the power packs to ensure the equipment fitted into the optimum position.

4 DECOMMISSIONED PREVIOUS MACHINES

With regards to the channel press balers that were in the previous plant, we were able to decommission these machines, take them to the customer's other site and set them up there.

THE BENEFITS

HIGHER THROUGHPUT

One of the customer's key requirements in this project was to have improved throughputs. The throughput of 8T/hr has been achieved as promised.

UP-TO-DATE, ACCURATE INFORMATION

They opted to use the cloud-based CK Baler Performance Monitoring system which was integrated into the plant's SCADA system. The customer can now alter the materials that they are baling at the push of a button. They also have the capability of changing the material through this system. It allows the plant manager to view how many bales have been processed on a daily, monthly or annual basis and gives them a breakdown of material types baled and any downtime in the machines. This data is available on a web browser or mobile phone.

OPTIMISED LOADS FOR TRANSPORT

Due to improved bale weights and densities the customer can better optimise their loads for transport.

VERSATILITY TO BALE ALL MATERIALS ON SITE

These Twin Ram machines allow for the changeover of materials easily without any contamination.

The exceptional build quality of CK International's baling equipment is well-known, however, it was their experience and expertise that shone through with this project. They offered unique solutions and suggestions throughout this project which not only benefited the customer but also assisted our team. Their focus on providing exceptional customer support meant that we were confident they wouldn't let us or the customer down. We wouldn't hesitate to work alongside CK International again for any future projects. Their expertise in waste compaction equipment is invaluable.

TOM RUTHERFORD
BLUE MACHINERY (SOUTHERN) LTD

This has been a fantastic project for us. The knowledge and expertise from everyone involved has been really impressive. The new MRF has given us the versatility to bale all materials on-site. It has a processing capacity of 18-20 tonnes per hour and around 65,000 tonnes per annum - where previously we were processing around 32,000 tonnes per annum. With regards to our bales, we have greatly improved on our bale density and can better optimise loads for transport.

IAN MCALISTER
AMGEN'S OPERATIONS MANAGER

CASE STUDY
PROJECT IN PROGRESS

CLIENT: AES
CUSTOMER TYPE: NATIONAL WASTE RECYCLER
LOCATION: TULLAMORE, IRELAND
MATERIAL: DRY MIXED RECYCLABLES
MODEL: CKTR121-160T-110KW

€145,000 SAVINGS ON TRANSPORT COSTS

THE CHALLENGE

01 The customer was operating a channel press automatic baler. The baler was making light bales of PET and HDPE bottles providing shipping weights of 13 - 14 tonne per load. The plastics recyclers refused to accept these bales as they were too loose and a health and safety risk.

02 They were experiencing huge maintenance and repair costs. The tying system was playing up and missing ties. The baler was being serviced on a one-off service at €30,000 each year.

03 They required a machine that could switch materials often and achieve 12T throughput per hour.

1 MATERIAL ANALYSIS

The customer was processing 9 different materials. We analysed reports for the previous 6 months looking at all of the material that had went through the plant, taking into account container weights and throughputs. Based on experience of our machine performance, we could gauge how much heavier our bales would be and provided the customer with accurate projections.

2 COST SAVING CALCULATOR

We carried out a cost saving exercise which showed savings of €145,000 per year on transport costs by using our proposed Twin Ram model. We also showed a return on investment of 2.6 years. We also looked at savings on power consumption, consumable costs, throughput and container weights.

3 RETROFIT MACHINE UNDER EXISTING CONVEYORS

We designed this machine to fit under their existing conveyor system. This ensured best use of the limited space available.

4 REMOVE EXISTING BALER

We were able to remove the existing Bollegraaf machine and replace it with CK Twin Ram.

USEFUL RESOURCES

VIDEOS

https://vimeo.com/ckinternational
www.youtube.com/ckinternational

RE-GEN WASTE CASE STUDY
https://vimeo.com/477114765

GREEN CIRCLE POLYMERS
https://vimeo.com/499153741

MOBILE BALER ON LANDFILL SITE
https://vimeo.com/480677307

SRF BALING
https://vimeo.com/465288781

LOCAL AUTHORITY TESTIMONIAL
https://youtu.be/6tZhIu6gxbk

EBOOK

HOW TO ADD VALUE AND REDUCE COSTS IN A COUNCIL WASTE FACILITY
https://info.ckinternational.co.uk/how-to-add-value-and-reduce-costs-in-a-council-waste-facility

CK INTERNATIONAL LTD ARE A MARKET LEADER IN WASTE COMPACTION SOLUTIONS.

The company designs and manufactures a wide range of balers and compactors. Through innovation and design, they develop solutions that satisfy their customer's needs.

International

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