

BRIQUETTING SOLUTIONS FOR MORE PROFITABLE WASTE HANDLING



MEET BRICKMAN

Fully automated Brickman briquette presses meet the challenges presented by waste handling at source in many businesses and organizations. A compaction ratio of up to 20:1 turns large amounts of waste into small briquettes for recycling. With over 1000 installations worldwide for small- or large-scale waste handling, we have built up a great deal of knowledge and experience with Brickman presses.

MEET THE CHALLENGE WITH BRICKMAN

Brickman rapidly minimizes the volume of waste material in a cost-effective way, diminishes the need for internal transportation and helps you keep aisles, passageways and other spaces free from clutter and thereby promoting unhindered rapid movement around your premises.

AUTOMATED AND USER-FRIENDLY SOLUTIONS

A Brickman press is simple to operate and there is no need to manually reduce the size of the waste material before loading it into the press. The briquettes do not require any binding.

There are no machine doors or lids to open or close when loading waste and the press can be fed while it is running, which facilitates automation and integration as part of a system solution. Safety is enhanced by no easy access to moving parts.



**DISPOSE OF THE WASTE
AND WALK AWAY.
BRICKMAN DOES
THE JOB FOR YOU!**

PERFECT IN YOUR ENVIRONMENT

Orwak offers a broad range of briquette presses providing great flexibility in size, capacity and type of waste material to process. Our briquette presses can be found wherever large amounts of waste accumulate and are ideal in:

Manufacturing industry
Logistic centers
Shopping centers
Department stores
Residential homes
Ferries

Printing industry
Warehouses
Breweries
Aluminum plants
Hospitals
Offshore

WHY BRICKMAN?

Automation: Material infeed and briquette outfeed are simple to automate and integrate in system solutions.

Time saving & convenient: No manual volume reduction, no binding of the briquettes means more productive use of time.

Unique compaction capacity: Compaction ratio up to 20:1. Highly compacted waste saves space and external transports.

Great logistics: Designed to be placed indoors next to the waste disposal stations. Compaction at source minimizes internal transports.

Safe working environment: Secure equipment with low sound emission.

CASE STUDY: GEKÅS SUPER STORE



Gekås in Ullared is the biggest store of its kind in Scandinavia and Sweden's most popular visitor attraction. It has about 5 million customers a year, who in total shop for 5 billion SEK.

ONE TRUCK DELIVERY EVERY 10 MINUTES

The store carries about 100,000 different items in the range and it expects a truck delivery every 10 minutes every day of the year. Gekås has more than 40,000 m² store space and another 30,000 m² warehouse space in immediate proximity to the store.

MINIMIZES THE ENVIRONMENTAL IMPACT

Gekås sells a lot of goods and naturally generates a lot of cardboard, empty boxes and empty plastic bags that must be taken care of and recycled in an effective and a sustainable way. Through a variety of measures, the aim is to minimize the environmental impact of the business's day-to-day operations.

RECYCLES 3000 TONS OF CARDBOARD

If the boxes were not disposed of quickly, they would block the warehouse and the deliveries of new goods into the store. About 3000 tons of cardboard and 250 tons of plastic are recycled per year. Inge Nilsson, Environmental Coordinator at Gekås, comments:

"If we would make new boxes of all the cardboard we recycle, we could produce more than 7 million a year! It means that if we clear out the entire store, it would be full of boxes from one end to the other".

THE FIRST SILENT BRICKMAN

Mr Nilsson tells us that when he started at Gekås in 2008, they had 4 Brickman briquette presses and now there are 10. They had 2 balers for plastic then and now they have 8 units, mainly of Orwak's model 3420. The latest addition is the Brickman briquette press of model 2000K - the silent version - from Orwak.

It is the first Brickman machine in the range with silent power-pack as an option for low sound emission and it is installed at Gekås:

**"YOU HARDLY HEAR IT RUNNING.
WHAT YOU HEAR IS THE RUSTLE
FROM THE CARDBOARD, WHEN IT
IS COMPACTED."**

9 FULL CONTAINERS PER DAY

Gekås uses a duct system to push the briquettes out of the building onto a conveyor belt, where they are dropped into 40 m³ containers. In the summer, the contractor picks up about 9 containers filled with cardboard briquettes every day.

REDUCES THE VOLUME BY 20 TIMES

It would be untenable to not be able to dispose of the cardboard quickly and easily and it is very important to have fast and reliable machines on site. Brickman 2000K compacts the cardboard and reduces it by about 20 times. It provides hard and firm briquettes that fit into the duct system.

ORWAK - A RESPONSIVE PARTNER

Inge Nilsson concludes: *"Thanks to the close cooperation with Orwak, we have outlined new solutions, new ideas, new machines. Their design engineers listen, think it through and live by the rule that 'it must be feasible'. We are constantly testing and developing new machines together with Orwak. Machines that are more adapted to us and our flows of material. It must go fast; it must work in a certain way and it must be easy to handle. The responsiveness from Orwak's side to our ideas is great."*

CASE STUDY: ICA SUPERMARKET



ICA Supermarket Olskroken in Gothenburg, Sweden, not only recycles but gets paid for its compacted cardboard.

140 TON CARDBOARD/YEAR...

Every day, goods are delivered packaged in boxes. This ICA store handles and recycles approximately 140 ton of cardboard per year, which accounts for around 80 % of all its waste management.

In the long run, it would have been unsustainable for the staff to manually handle all the waste, ICA Olskroken invested in Orwak's Brickman 300 briquette press that compacts corrugated cardboard into briquettes, which are then recycled. Johan Ekenberg, tells us more:

"From a practical standpoint, it would never have worked without waste compaction equipment. We simply had to find a way to streamline and improve our disposal of cardboard waste."

...TURNED INTO BRIQUETTES

The staff disposes of cardboard

on a daily basis and the location of the recycling station is important to ensure its optimal use. At ICA Olskroken, the briquette press is located at the loading bay, where goods are received and, where the waste is then emptied and stored in containers. Thanks to its compact design and low noise level, Brickman can be located indoors near the source of waste. Mr Ekenberg continues:

"As we handle very large volumes in a small space, the cardboard must be compacted. Our compact briquette press suits us really well, as we have so little space, where we handle the waste."

"We pay a fee to the waste collection company that collects the waste for recycling, but are then paid for the briquettes. In one year, I would say that the total transport cost is covered by what we receive from our recycling."

CASE STUDY: STADIUM LOGISTICS CENTER



"The briquette-press-solution is ideal and is well-adjusted to the conditions in this building!"

GIGANT WAREHOUSE

Stadium markets an extensive assortment of sports items and sports fashion clothing. There are about 170 Stadium stores in the Nordic region and naturally, it takes an enormous distribution center to constantly supply all stores with new products. The giant warehouse in Norrköping in Sweden has a floor space of 32,000 m² and is built in three stories.

700 TON CARDBOARD A YEAR

When the goods are delivered to the distribution center to be transported in smaller quantities to the stores, a huge amount of empty packaging material - close to 700 ton cardboard - is generated per year!

To handle the waste, Stadium has 6 briquette presses of Brickman 900K (a model replaced by 1200K in the Orwak range today) installed. With an impressive compaction ratio of up to 20:1 the cardboard is rapidly

processed into compact briquettes. With an infeed container of 2.0 m³, Brickman 900K is well prepared for a never ending stream of boxes!

Orwak got involved at an early stage and presented a solution how to organize the waste handling effectively.

CHUTES TRANSFER THE PACKAGING DOWN TO BRICKMAN ON THE FIRST FLOOR

Per Förander, in charge of the purchase: "The initial plan was to compact the cardboard in a large unit outdoors and to transport the cardboard there on conveyor belts, but no matter how we arranged the conveyors, they always seemed to get in the way of the forklifts, so we dropped the idea. All the Brickmans are installed on the first floor, but boxes from the second and the third floors are led through chutes to the presses on the first floor."

APPLICATION AREA BREWERIES & RECYCLING



Due to many Brickman installations in breweries and recycling centers, Orwak is experienced in briquetting aluminum cans and PET bottles.

Depending on the volumes, empty cans and bottles can successfully be compacted and briquetted in the small Brickman 300 as well as in the large high-capacity briquette presses Brickman 1200K and 2000K.

In the product range, you will also find Brickman 300 Stainless Steel, a model designed especially for filled

aluminum cans and PET bottles. Its critical parts are made of stainless steel.

In case the beverage containers are expected to contain any residue, you find a liquid tray for drainage on the list of optional accessories.



EXAMPLES OF OTHER APPLICATION AREAS



Even though cardboard, PET and aluminum cans are the main materials processed in Brickman, there are so many more application areas.

Aluminum/metal off cuts and flakes have the right qualities for being compacted into neat and dense briquettes. Brickman 300 has the capacity to briquette up to 300 kg aluminum flakes per hour.

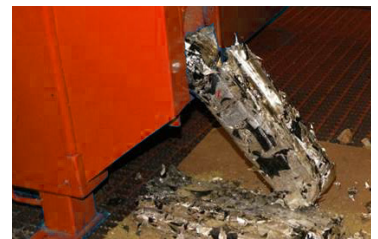
Aluminum flakes



Aluminum plates

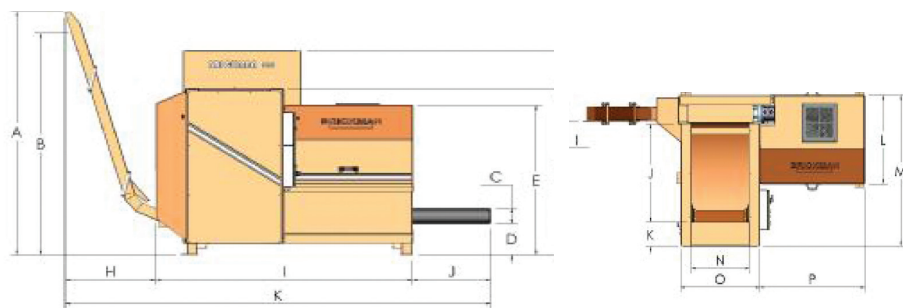


Scrap blister packs from the pharmaceutical industry is another type of material that is easy to briquette with good results in Brickman.

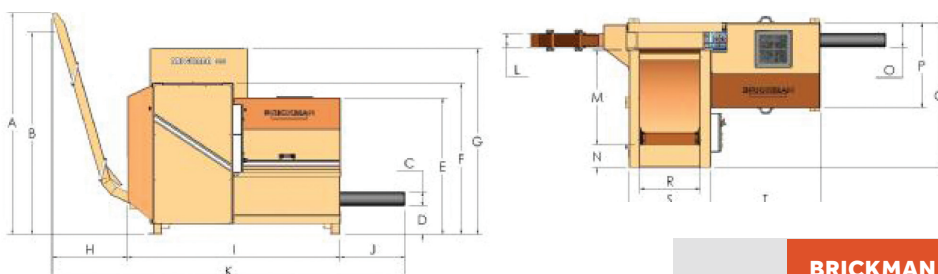


DIMENSIONS & SPECIFICATIONS

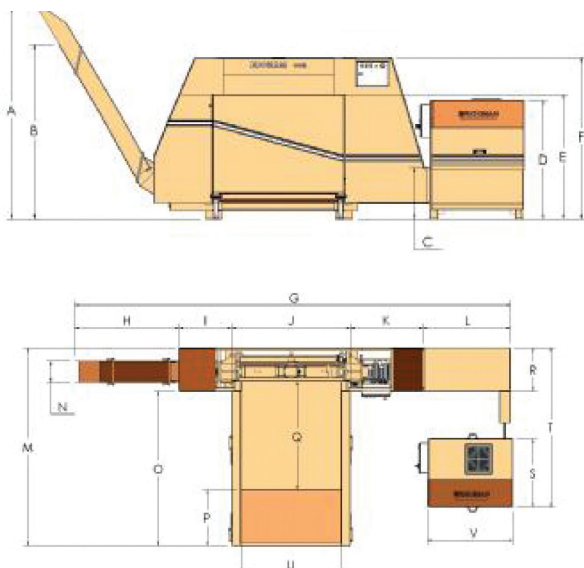
BRICKMAN 300 STANDARD



BRICKMAN 300 HEAVY DUTY & STAINLESS STEEL



BRICKMAN 1200K & 2000K



TECHNICAL DATA

BRICKMAN MODEL	PRESS FORCE	PRESSURE	HOPPER SIZE	CAPACITY	BRIQUETTE DIMENSIONS	BRIQUETTE DENSITY (CARDBOARD)	MACHINE WEIGHT
300 Standard	50,000 lbs	500 kg/cm ²	26 cubic ft	up to 250 kg/h (550 lbs)	3.25"x3.25"x 4"-12"	up to 600 kg/m ³	3520 lbs
300 Heavy Duty	50,000 lbs	500 kg/cm ²	26 cubic ft	up to 160 kg/h* (320 lbs) up to 300 kg/h* (660 lbs) up to 170 kg/h** (374 lbs)	3.25"x3.25"x 4"-12"	up to 600 kg/m ³	3520 lbs
300 Stainless Steel	50,000 lbs	500 kg/cm ²	26 cubic ft	up to 170 kg/h** (374 lbs)	3.25"x3.25"x 4"-12"	up to 600 kg/m ³	3520 lbs
1200K	50,000 lbs	62 kg/cm ²	70 cubic ft	up to 1100 kg/h (2420 lbs)	8" x 8" x 4"-12"	up to 400 kg/m ³	8360 lbs
2000K	50,000 lbs	62 kg/cm ²	70 cubic ft	up to 1500 kg/h (3300 lbs)	8" x 8" x 4"-12"	up to 400 kg/m ³	8800 lbs

*Alu cans up to 160 kg/h, Alu chips and shredded paper up to 300 kg/h, **PET

BRICKMAN 300 STANDARD (inches)

BRICKMAN 300 HEAVY DUTY/ STAINLESS STEEL (inches)

A	89,50	89,50
B	76,75	76,75
C	53,50	Ø5,71
D	59,00	16,75
E	74,00	53,50
F	33,50	59,00
G	86,25	74,00
H	119,50	33,50
I	5,50	86,25
J	950,00	26,00
K	8,25	145,75
L	33,50	5,50
M	56,75	37,50
N	23,75	8,25
O	32,50	9,75
P	43,25	33,50
Q	-	56,75
R	-	23,75
S	-	32,50
T	-	43,25

BRICKMAN 1200K (inches)

BRICKMAN 2000K (inches)

A	97,25	A	97,25
B	79,25	B	79,25
C	23,00	C	36,75
D	53,25	D	63,50
E	56,00	E	56,00
F	74,00	F	74,00
G	225,00	G	248,00
H	53,50	H	53,50
I	27,00	I	27,00
J	61,00	J	63,00
K	37,25	K	36,25
L	46,50	L	46,50
M	95,75	M	95,75
N	10,50	N	10,50
O	74,75	O	74,75
P	27,00	P	27,00
Q	53,25	Q	53,25
R	21,00	R	21,00
S	33,50	S	38,50
T	77,25	T	77,25
U	51,25	U	51,25
V	45,50	V	65,25

RIGHT CHOICE FOR YOUR MATERIAL



Our robust Brickman range is designed to deal effectively with a wide variety of different types of material. Please ask us for the right solution for your needs! For the most common materials, we make you the following recommendations:

CARDBOARD & PAPER

BRICKMAN 300 Standard
BRICKMAN 1200K
BRICKMAN 2000K

SHREDDED PAPER

BRICKMAN 300 Heavy Duty

DRY ALU CANS

BRICKMAN 300 Heavy Duty
BRICKMAN 1200K
BRICKMAN 2000K

DRY PET & PLASTIC

BRICKMAN 300 Heavy Duty
BRICKMAN 1200K
BRICKMAN 2000K

FILLED ALU CANS & PET BOTTLES

BRICKMAN 300 Stainless Steel

OPTIONAL ACCESSORIES FOR HIGH PERFORMANCE

We offer you a variety of options for adaption of the standard equipment to customized solutions and the list below only provides some suggestions of available accessories. Please contact us for advice and more details!

CHUTES

- Straight outlet chute (standard)
- Outlet chute, left drop
- Outlet chute, right drop
- Extended chute

HOPPERS

- Extended hopper

START SYSTEMS

- Photocells
- Ultra sonic sensors

COLLECTION ACCESSORIES

- Dust box
- Liquid tray

LOW SOUND EMISSION

- Silent powerpack
- Sound absorption plates

HEATING AND COOLING DEVICES

- Oil heater, thermostatically controlled
- Cooling fan



COMPACTION SOLUTIONS FOR MOST TYPES OF WASTE

ORWAK develops solutions for sorting and recycling waste materials that improve business efficiency, contribute to a cleaner working and natural environment to provide the best total waste handling economy.

We offer an innovative range of products that promotes sorting at source and make waste management more profitable.

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