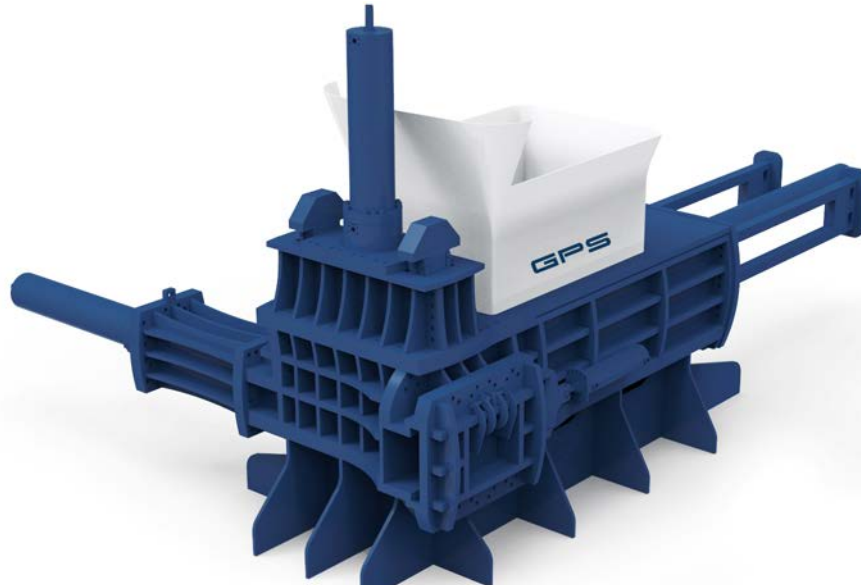


**SHEAR
BALE
SHRED**



Technical description

M 30-3C

Three compressions baler

The baler has continuing feeding and automatic working cycle

GARUTI
PROCESSING SOLUTIONS



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WHAT MAKES GPS BALERS THE BEST IN THE WORLD?

- Our machines are built for tough working conditions
- Very long life span
- Industrial, robust and flexible design
- Guaranteed capacities based on real performance
- Very high density of the end product
- Able to process a wide range of scrap metal
- More than 2000 references in the world
- 25 years of know-how and expertise
- Top quality to ensure to ensure long-term profitability
- Fast and efficient after-sales service
- All spare parts available in stock



M 30-3C BALER IN SUMMARY

THE 3 COMPRESSIONS BALER M 30-3C IS THE HIGHER PRODUCTIVITY MODEL OF ENTIRE RANGE

EVERAGE MONTHLY PRODUCTIVITY (BASED ON ONE SHIFT)

	Al	Fe	Cu	
• 30 3C 1x55 kW:	330-600	1000-1750	1150-1950	ton/month/1 shift
• 30 3C 2x55 kW:	500-840	1650-2500	1850-2850	ton/month /1 shift

UNIQUE ADVANTAGES OF 30 3C BALERS

- Just plug-in and run! The installation is very fast and the plant is ready to work immediately
- The three compressions automatic baler that provides the best ratio productivity / volume in the market
- Extremely compact
- Very small, but with robust and modern industrial design
- Compact design but every part is easily accessible for service
- This small plant is based on the same proven and reliable technology as our bigger installations
- The charging box has replaceable wear plates!
- The hopper is suitable with preexisting conveyor plants



CHOOSING THE MOST SUITABLE PLANT

M 30-3C – Standard model

The M 30-3C is a three compression axles baler with continuing feeding for the production of high density bales of scrap metals, cans, turnings, production scrap.

The baler is equipped with a pre-load hopper mounted on the top of charging box with photoelectric calls to control the feeding and the baling cycle.

The close of charging box is made by the horizontal cutting cover plate, equipped with replaceable blades that cut the surplus material. The cutting force is 140 ton.

The charging box is equipped with replaceable smooth wear plates (LL plates).

This axial, side and vertical compressions are operated by double-action cylinders that feature also a transducer for infinitely variable positioning.

The bale is ejected through the hydraulic side door by the side cylinder.

The hydraulic and the 55 kW power unit are assembled with the machine, making it very compact.

The high productivity and the opportunity to process typical industrial production scrap metal make this model perfect to be installed at the end of all productivity plant and also in typical scrap yard.

This is the ideal plant for the companies that are looking for an efficient and low-cost process management.

The restrictions of the scrap baling process are described on the section named PROCESS DESCRIPTION.



TECHNICAL SPECS

M 30-3C baler

1001

Horizontal cutting lid with interchangeable blades
Load opening 1950 x 1250 mm
Charging box dimensions 2600 x 1200 x 800 mm
Charging box volume 2.5 m³
Hardox replaceable anti wear plates, "LL" type
Power unit with 55 kW electric motor
SIEMENS processor
Automatic cycle
Pusher ram (first compression) 180 ton
Vertical ram (second compression) 140 ton
Side ram (third compression) 180 ton
Bale size 300 mm x 300 mm x Var. (300-500 mm)
Color RAL 5011

30 3C configurations

1002

Hopper type "A"

Hopper equipped with photocells for baler feed control
Upper dimensions: 2.150 x 1.450 mm
Lower dimensions: 1.950 x 1.250 mm
Height: 800 mm

1003

Hopper type "P"

Personalized hopper equipped with photocells for baler feed control
Upper dimensions: to be defined
Lower dimensions: 1.950 x 1.250 mm
Height: to be defined



Optionals

- 1004 **Liner plates type "LG"**
Castellated liner plates suitable for medium sized flat material and a max. thickness of 1 mm.
Hardox liner plates are replaceable.
- 1005 **Liner plates type "LO"**
Washboard stile liner plates for flat or small sized material with thickness of less than 1 mm.
The Hardox liner plates are replaceable.
- 1006 **Bale ejection slide**
The slide has a length of 300 mm and facilitates the ejection of the bale.
- 1007 **Bale ejection slide customised**
Bale ejection slide as per customer needs.
- 1008 **Customised color**
Colors other than RAL 5011.



PROCESS DESCRIPTION

General info

The quality of out-put depends on quality and dimensions of in-put material. Optimum results in terms of capacity, wear and purity of out-put material is achieved by a correct interaction of following process operations:

- Material preparing
- Pre-sorting
- Pre-processing of material
- Material loading
- (Pre-grinding of material)
- Compaction phase
- Use of recovered material

Material preparing

Already at this stage the productivity and the cost-effectiveness can be influenced. It's better to purchase or process just material batch appropriate for the baling and not so much mixed. It's important to not mix the material in the stocking phase.

Pre-sorting

The cost-effectiveness of the plant is very much dependent on the pre-sorting of material. This will determine both the hour capacity and the quality of end product. Therefore it is recommended to separate the cable into main types immediately on delivery.

At the same time foreign materials should be removed to not affect the quality and value of end product.

Pre-processing of material

Considerable quantity of material can be loaded directly in the hopper, taking care to overload the box making hard to cut the material during the closing of compaction box.



Material loading

The hopper can be loaded in different ways:

- Automatic loading by a connection with a pre-existing scrap disposing system.
Ideal system because it don't need manual operations.
- Belt conveyor
Material is loaded in the hopper of conveyor with a forklift or a grapple and then it falls inside the baler hopper.
- Crane with grapple
Material is loaded in the hopper with a grapple.
- Forklift with box tip-over system
Light material (i.e. cans or aluminum scrap) should be loaded directly in the hopper by a forklift.

Pre-grinding of material

Some materials need pre-grinding process to allow the baling and to have a good end product. It's possible to design the complete plan if needed

Compaction phase

Material falls from the top into the charging box through the hopper, equipped with photoelectric cells which control the feeding process.

As soon as the loaded material reaches the optimal quantity, the baling cycle starts.

1. Axial pre compression: the axial cylinder presses the material in the baling box and thanks to the attached cutting cover plate cuts the surplus material.
2. If needed, the axial cylinder draws back and opens the charging box again. The material, in the meantime collected into the pre-load pool, falls down into the charging box.
3. The axial cylinder operates a new pre compression as per points 1. and 2. The point 3 will be repeated respect to the number of pre compressions settled up by the operator, according to the kind of material has to be processed.
4. Vertical compression: the vertical cylinder reduces the height of the compaction box. The section of the compaction box now is mm 300 x 300.
5. Side compression: the side cylinder operates the last compression and produces a high density bale.



6. The bale is ejected by the side cylinder through the hydraulic ejection door.
7. Automatic setting back of the machine for a new cycle as per point 1.

Use of recovered material

Dimension of bale, its density and the quality of baled material set the value of end product and the opportunity of use.

Installation

The 30 3C baler is ready to use and need just to be placed and filled by hydraulic oil in few minutes. For transportation needs the machine is delivered with some components disassembled, easy to install during the placing of baler. The machines delivered with customized hopper and/or ejection slide should need more time to be installed.

The installation is made by the client and its technical dept. employee under the supervision of GPS Service or can be made totally by GPS Service dept.

Foundation

The plant should be installed inside a building on a flat floor. Alternatively the machine may be placed below ground.

Material that can NOT be processed

- Turnings with size < 5 mm
- Steel thickness > 40 mm

Material that can be processed with a reservation

- Steel thickness < 40 mm
- Fe thickness > 40 mm
- Big size scrap that could need the cutting before the baling
- Tyre wire of very small dimension



TECHNICAL DATA

3 COMPRESSIONS BALER

M 30-3C

Hopper inlet	840 x 740	mm
Compaction box	2600 x 1200 x 800	mm
Horizontal cutting cover plate	✓	
Replaceable blades	✓	
Welded steel alveolar structure	✓	
Ejection bale door	400 x 400	mm
Axial cylinder with position reader	✓	
Axial pushing	180	ton
Vertical pushing	140	ton
Side pushing	180	ton
Specific pressure on material	2055	N/cm ²
Bale dimension	300 x 300 x Var. (300-500)	mm
Dry cycle time with power unit 1 x 55 kW	40	sec
Dry cycle time with power unit 2 x 55 kW	27	sec
Oil waste filter with clogging gauge	✓	
Oil tank with level gauge	✓	
Oil tank with minimum oil level sensor	✓	
Oil tank with free thermostat	✓	
Oil tank capacity	2000	l
Oil cooling with air/oil exchanger and free thermostat	✓	
Main power unit	1 x 55 or 2 x 55	kW
Auxiliary power unit	1.5 + 1	kW
Maximum work pressure	270	bar
Piston pump	✓	
Electric and control panel IP65	✓	
Touch screen control panel	✓	
Hour counter	✓	
Emergency push button	✓	
Display diagnostic	✓	
Pre selection of compressions number	0-99	Nr.
Automatic/manual switch	✓	
Light and sound alarm	✓	
Overall dimensions	7700 x 5500 x 3500	mm
Weight	40000	kg



PRODUCTIVITY

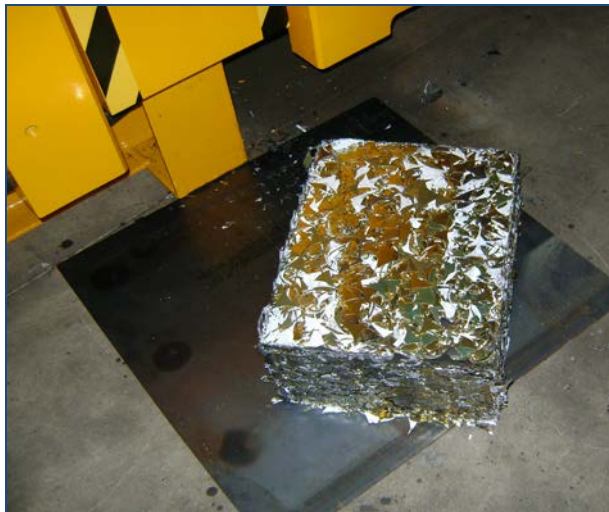
3 COMPRESSIONS BALER

M 30-3C

Productivity*	1 x 55 kW	2 x 55 kW	
	Bale/hour (one pre-compression)	90	
Time cycle with one pre-compression	40	27	Sec
Additional pre-compressions, each	15	11	Sec.
Al hour productivity	2-3.6	3-5	t/h
Fe hour productivity	6-10	10-15	t/h
Cu hour productivity	7-11.7	11-17	t/h
Al bale weight	25-40		Kg
Fe bale weight	85-120		Kg
Cu bale weight	90-130		Kg

* The productivity is based on continuing and constant feeding, with homogeneous material and a three pre-compressions cycle.

The productivity here accounted is based on theoretical production data. It can change noticeably respect to the kind of material processed, the feeding phase and the number of pre-compressions.

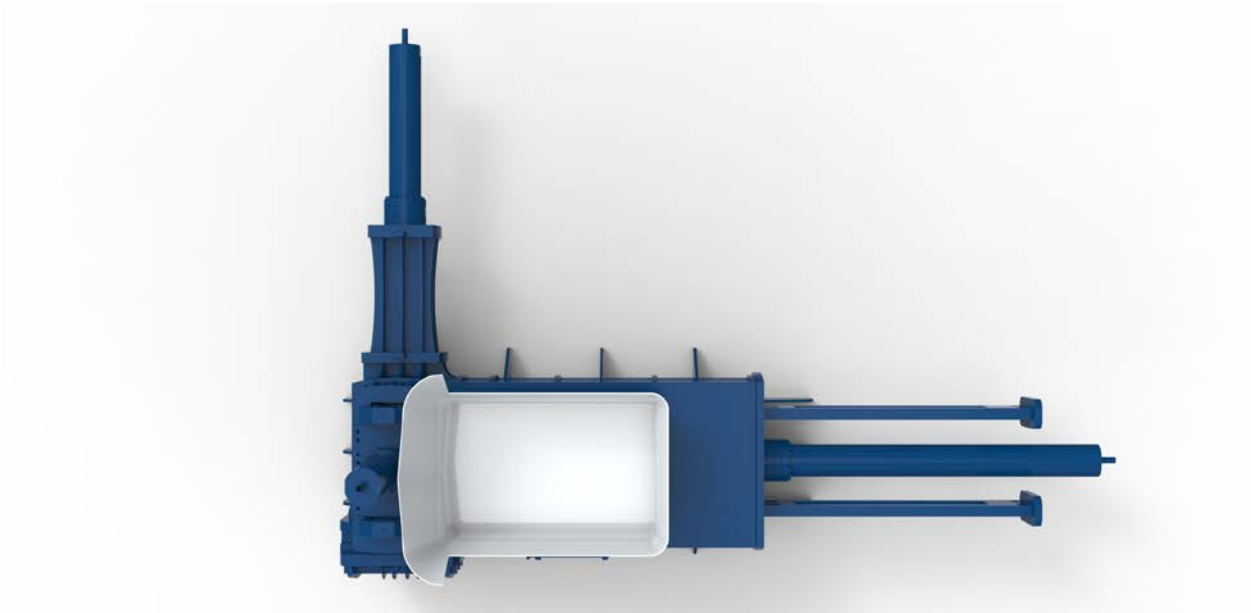


Comments:

The feeding way, the homogeneity of material dimension and alloy and other external factors can influence the performance of baler. After the installation is convenient to check the real plant productivity.



RENDERING



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